

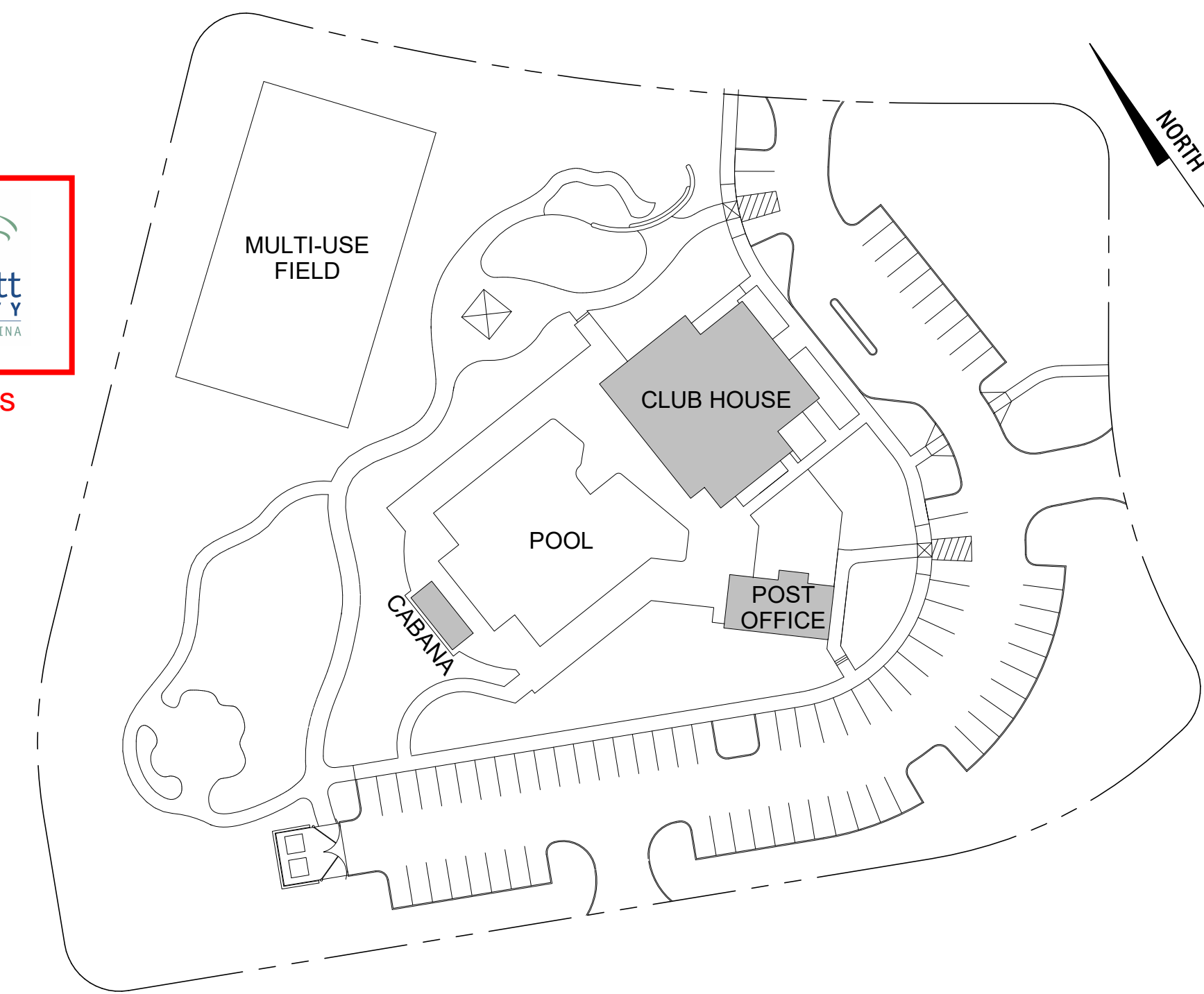
VICINITY MAP
NTS

Serenity

FUQUAY-VARINA NORTH CAROLINA

NOTICE TO CONTRACTOR
All construction shall conform with approved N.C. Building Codes and be subject to field inspection and verification.
Reviewed for Code Compliance
04/26/2022
Harnett County
NORTH CAROLINA

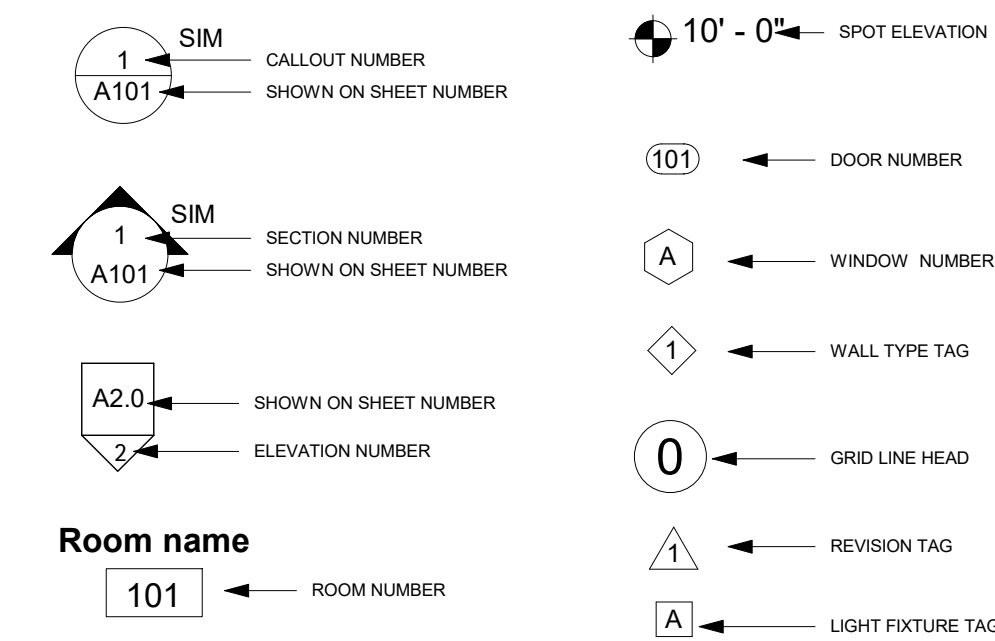
Pool only. See electrical notes



SITE LAYOUT
1" = 60'-0"



SYMBOLS



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HINE AQUATIC ENGINEERING
405 Willow Crest Drive
Winston-Salem, NC 27107
P: 336.769.4900

Kilian Engineering, Inc.
3821 POWHATAN RD. - CLAYTON, NC 27520
TEL 252.438.8778

ROSS LINDEN ENGINEERS PC
709 W. JONES STREET - RALEIGH, NC 27603
TEL 919.832.5680 FAX 919.832.5675
INFO@ROSSLINDEN.COM

D. CLUGSTON
THE BUILDING & DEVELOPMENT CO.
2506 RELIANCE AVE. APEX, NC 27539
(P) 919.629.7290
WWW.DCLUGSTON.COM

D. CLUGSTON
BUILDING & DEVELOPMENT CO.



Perry Cox
architect, p.a.
124 Salem Towne Court, Apex, NC 27502
P: 919.363.5411
www.pcoxdesign.com

DATE	
REVISION	
NO.	

SHEET DESCRIPTION
COVER SHEET

PROJECT #:	2018.037
DATE ISSUED:	12/14/2021
DRAWING BY:	JGM/BSJ
CHECKED BY:	PGC/DSC

**SERENITY AMENITY
GREENFIELD COMMUNITIES
CLUBHOUSE & POOL
Fuquay-Varina, NC**

G0.1

APPENDIX B BUILDING CODE SUMMARY

FOR ALL COMMERCIAL PROJECTS

Name of Project: Serenity Amenity
Address: Harnett County, North Carolina
Owner or Authorized Agent: Brian Jacobs
Zip Code: 27526
Phone #: 919.412.4711
City/County: Fuquay-Varina
State: NC
Code Enforcement Jurisdiction: City/County
Name of Jurisdiction: Town of Fuquay-Varina

PROJECT SUMMARY: 5000 sf Community Clubhouse and Pool (See sheet A8.0 for Post Office Appendix)

Building Description: A-3 UNHEATED - PRIVATE RECREATIONAL FACILITY WITH POOL FOR RESIDENCE ONLY

Scope of Work: New Building full scope of architectural, structural, plumbing, mechanical, electrical, and pool plans

Lead Design Professional/Project Coordinator: Brian Jacobs 919-412-4711

DESIGNER FIRM	NAME	LICENSE #	TELEPHONE #
Architectural: Perry Cox Architect, PA	Perry Cox, AIA	9630	919-393-5411
Civil: TMTLA Associates	John G. Baker	1994	919-484-8880
Electrical: Killian Engineering	Jacob Hamilton	048012	252-438-8778
Fire Alarm: Killian Engineering	Jacob Hamilton	048012	252-438-8778
Plumbing: Killian Engineering	Jacob Hamilton	048012	252-438-8778
Mechanical: Killian Engineering	Jacob Hamilton	048012	252-438-8778
Sprinkler-Standpipe: Ross Linden Engineers	Brian Ross, PE	25539	919-832-5680
Structural: Ross Linden Engineers	Brian Ross, PE	25539	919-832-5680
Precast: Truss Builders	Eric A Gilbert, PE	036322	919-467-9988
Trusses: Truss Builders	Eric A Gilbert, PE	036322	919-467-9988
Retaining Walls >5' High: Alan R. Hine, PE	Alan R. Hine, PE	7011	336-769-4900
Other: Pool	Alan R. Hine, PE	7011	336-769-4900

Note: Special Inspections and Inspectors to be listed at end of Appendix B

Building Code: 2018 North Carolina State Building Code (NCSBC) 2009 North Carolina State Building Code
 2009 NC Rehab 2006 NC Rehab 2006 North Carolina Building Code
 2009 Chapter 34 2006 Chapter 34 1995 Existing Building Code

New Building: New Building Shell Building First Time Interior Completion
 Addition Alteration to Shell

Existing Building: Renovation Interior Completion Tenant Alteration
 Reconstruction Repair Alteration to Shell
 Change of Use Tenant Change of Occupancy

Note: Zoning Review May Be Required for Change of Use or Occupancy

Original Occupancy: _____
Proposed Occupancy: A-3 Assembly

OCCUPANCY INFORMATION

Primary Occupancies:

Assembly: A-1 A-2 A-3 A-4 A-5

Hazardous: H-1 H-2 H-3 H-4 H-5

Institutional: I-1 Condition 1 2 3 4 5
 I-2 Condition 1 2 3 4 5
 I-3 Condition 1 2 3 4 5
 I-4

Mercantile:

Residential: R-1 R-2 R-3 R-4

Storage: S-1 Moderate S-2 Low High-piled
 Parking Garage: Open Enclosed Repair Garage

Utility and Miscellaneous:

Special Occupancies: 402 403 404 405 406 407 408 409 410 411
 412 413 414 415 416 417 418 419 420 421

Mixed Occupancy: No Yes Separation: _____ Hr. Exception: _____

Non-Separated Mixed Occupancy (508.3) - The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.

Separated Mixed Occupancy (508.3.3) - See below for area calculations for each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.

$$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \leq 1$$

ALLOWABLE AREA AND HEIGHT CALCULATIONS

THIS SECTION IS REQUIRED FOR NEW, ADDITION, CHANGE OF USE, AND INTERIOR COMPLETIONS

Exterior Wall	Actual Length	Open Length	Permitted by Code
North			
South			
East			
West			
Total	P	F	W

INCREASE FRONTAGE _____ %
 SPRINKLERS _____ %
 FRONTAGE INCREASE FORMULA ALLOWABLE AREA FORMULA
 $I_f = 100 \left[\frac{E - 0.25}{30} \right]$

BOTH BUILDING AND TENANT MUST BE INDICATED ON CHART BELOW

Story No.	DISCRIP- t USE	BLDG AREA TABLE 506.2 PER STORY	AREA FOR ALLOWABLE INCREASE (ACTUAL SF)	FRONTAGE INCREASE	SPRINKLER INCREASE	ALLOWABLE FLOOR AREA (ACTUAL SF)	RATE OF ACTUAL/ ALLOWABLE	MAXIMUM BUILDING AREA	SEPARATION RATING REQUIRED
Main Level	A3	5,000	6,000	N/A	N/A	N/A	0.83	6,000 SF	N/A

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

ALLOWABLE HEIGHT

MOST RESTRICTIVE (GROUP)	ALLOWABLE BUILDING HEIGHT (TABLE 504.3)	INCREASE FOR SPRINKLERS	ACTUAL BUILDING HEIGHT AS SHOWN ON PLANS	CODE REFERENCE
Type of Construction	Type VB	Type VB	Type VB	403.3.1
Building Height in Feet	H = 40'-0" FT	N/A	H = 30'-10"	403.3.1
Building Height in Stories	S = 1	N/A	S = 1	403.3.1

BUILDING DATA
 THIS SECTION IS REQUIRED FOR ALL PROJECTS

Construction Type: I-A I-B II-A II-B III-A III-B IV-HT V-A V-B

Mixed construction: Yes No
 Sprinklers: Yes No
 NFPA 13 NFPA 13R Partially Sprinklered Special Suppression

Types: _____
 Class: I II III Wet Dry
 (Appendix D) Floor Hazard
 Building Height: _____ Feet
 Basement: Yes No
 Mezzanine: Yes No
 High Rise: Yes No

Life Safety Plan Sheet # (if provided): **G0.3**

FLOOR	EXISTING (SQFT)	NEW (SQFT)	SUB-TOTAL
FIRST FLOOR		5,098	5,098

Area of Project Tenant/Alteration/Renovation: _____
 Area of Construction: _____

FIRE PROTECTION REQUIREMENTS

THIS SECTION IS REQUIRED FOR ALL PROJECTS

Life Safety Plan Sheet #, if Provided **G0.3**

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	REQ'D*	RATING PROVIDED (W/REDUCTION)	DETAIL # & SHEET #	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
Bearing Walls Exterior							
North	0	0					
East	0	0					
West	0	0					
South	0	0					
Interior Bearing walls	0	0					
Nonbearing Walls Exterior							
North	0	0					
East	0	0					
West	0	0					
South	0	0					
Interior Bearing walls	0	0					
Structural Frame, including columns, girders, trusses							
Floor construction, including supporting beams and joists	0	0					
List construction type:							
Floor Ceiling Assembly	0	0					
Columns Supporting Floors	0	0					
Roof construction, including supporting beams and joists**	0	0					
Roof Ceiling Assembly	0	0					
Columns Supporting Roof	0	0					
Shafts- Exit Enclosures	N/A	N/A					
Shafts- Other (describe)	N/A	N/A					
Corridor Separation	N/A	N/A					
Occupancy Separation	N/A	N/A					
Party/ Fire Wall Separation	N/A	N/A					
Incidental Use Separation	N/A	N/A					
Dwelling/ sleeping unit Separation	N/A	N/A					
Smoke Barrier Separation	N/A	N/A					
Tenant Separation							

* Indicate section number permitting reduction
 ** Indicated if using Table 601 Note C exception

PERCENTAGE OF WALL OPENING CALCULATIONS

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES/PROTECTION	DEGREE OF OPENINGS UP.NS	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)
>30'	UP.NS	NO LIMIT	NO LIMIT

WALL LEGENDS

THIS SECTION IS REQUIRED FOR ALL PROJECTS

CHECK IF THE FOLLOWING ARE PRESENT AND INDICATE BY A WALL LEGEND ON ALL PLANS

Fire Partitions 708 Fire Walls 705 Barriers 706 Smoke Partitions 710

Smoke Barriers 709 Shaft Enclosure 707

LIFE SAFETY SYSTEMS REQUIREMENTS

THIS SECTION IS REQUIRED FOR ALL PROJECTS

Emergency Lighting: Yes No
 Exit Signs: Yes No
 Fire Alarm: Yes No
 Smoke Detection Systems: Yes No
 Panic Hardware: Yes No

LIFE SAFETY PLAN REQUIREMENTS

- Life Safety Plan Sheet # **G0.3**
- Fire and/or smoke rated wall locations (Chapter 7)
 - Assumed and real property line locations (if not on the site plan)
 - Exterior wall opening area with respect to distance to assumed property lines (705.8)
 - Occupancy Use for each area as it relates to occupant load calculation (Table 1004.1.2)
 - Occupant loads for each area
 - Exit access travel distance (1017)
 - Common path of travel distances (Tables 1006.2.1 & 1006.3.2(1))
 - Dead end lengths (1020.4)
 - Clear exit widths for each exit door
 - Maximum calculated occupant load capacity each exit door accommodate based on egress width (1005.3)
 - Actual occupant load for each exit door
 - A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
 - Location of doors with panic hardware (1010.1.10)
 - Location of doors with delayed egress locks and the amount of delay (1010.1.9.7)
 - Location of doors with electromagnetic egress locks (1010.1.9.9)
 - Location of doors equipped with hold-open devices
 - Location of emergency escape windows (1030)
 - The square footage of each fire area (202)
 - The square footage of each smoke compartment for Occupancy Classification I-2 (407.5)
- Note any code exceptions or table notes that may have been utilized regarding the items above

EXIT REQUIREMENTS
 NUMBER AND ARRANGEMENT OF EXITS

THIS SECTION IS REQUIRED FOR ALL PROJECTS

FLOOR, ROOM AND/OR SPACE DESIGNATION	MINIMUM NUMBER OF EXITS REQUIRED	SHOWN ON PLANS	TRAVEL DISTANCE ALLOWABLE (TABLE 1016.1)	ACTUAL TRAVEL DISTANCE SHOWN ON PLANS	ARRANGEMENT OF EXITS REQUIRED BETWEEN EXITS	MEANS OF EGRESS DISTANCE SHOWN ON PLANS
CLUBHOUSE	2	3	200'	41'-5"	49'-7 1/2"	67'-5"

1. Corridor dead ends (Section 1017.3)
 2. Single exits (Section 1015.1; Section 1019.2)
 3. Common Path of Egress Travel (Section 1014.3)

OCCUPANT LOAD AND EXIT WIDTH CLUBHOUSE

Room Name	Area	Occupancy		Egress Width per Occupant (1005.3)		Required Width		Actual Width Shown	
		Load Factor	Load Count	Level	Stair	Level	Stair	Level	Stair
Front Covered Porch	668 SF	15 SF	45	0.2		9			
Entry Vestibule	131 SF	0 SF		0.2				68	
Great Room	1107 SF	15 SF	74	0.2		14.8		68	
Sales / Conference Room	264 SF	100 SF	3	0.2		0.6			
Poolside Covered Porch	776 SF	15 SF	52	0.2		10.4			
Fitness Room	540 SF	50 SF	11	0.2		2.2			
Fitness Vestibule	99 SF	0 SF		0.2				34	
UniSex	62 SF	0 SF		0.2					
Catering	186 SF	100 SF	2	0.2		0.4			
Closet	20 SF	300 SF	1	0.2		0.2			
Loft	287 SF	0 SF		0.2					
Courtyard Vestibule	129 SF	0 SF		0.2				34	
Mens Room	256 SF	0 SF		0.2					
Womens Room	354 SF	0 SF		0.2					
Grand total	4877 SF		188	2.8		37.6		204	0

1. See Table 1004.1.1 to determine whether net or gross area is applicable
 2. Minimum stairway width (Section 1009.1), min. corridor width (Section 1017.2); min. door width (Section 1008.1.1)
 3. Minimum width of exit passageway (Section 1021.2)
 4. The loss of 1 means of egress shall not reduce the available capacity to less than 50% of the total required (Section 1005.1)
 5. Assembly occupancies (Section 1025)

ASSEMBLY OCCUPANCY INFORMATION

Name	Type	Occupancy		Exit Width		Exit Quantity
		Area	Load Count	(inches)	Quantity	
Front Covered Porch	Assembly - Unconcentrated (tables and chairs)	668 SF	15 SF	45	9	
Great Room	Assembly - Unconcentrated (tables and chairs)	1107 SF	15 SF	74	14.8	
Poolside Covered Porch	Assembly - Unconcentrated (tables and chairs)	776 SF	15 SF	52	10.4	
Fitness Room	Exercise Rooms with Equipment	540 SF	50 SF	11	2.2	
Grand total				182	36.4	

PLUMBING FIXTURE REQUIREMENTS
 THIS SECTION IS REQUIRED FOR ALL PROJECTS

OCCUPANCY	WATERCLOSETS			URINALS			LAVATORIES			SHOWERS/TUBS		DRINKING FOUNTAINS	
	Male	Female	Unisex	Male	Female	Unisex	Male	Female	Unisex	Regular	Accessible	Regular	Accessible
A-3	2	6	1	2	3	3	1	2	3	3	3		
Total Required	2	7	1	2	3	3	1	2	3	3	3		
Total Provided	2	6	1	2	3	3	1	2	3	3	3		

1 Calculations are total amenity site plumbing requirements

899 PERSONS / 2 = 450 M / 430 F
 WATERCLOSETS: 450 MALE / 125 = 4 WC = 2 WC & 2 URINAL
 430 FEMALE / 85 = 5 WC = 3 WC & 1 FAMILY
 LAVATORY: 450 MALE / 200 = 3 LAV = 3 LAV
 430 FEMALE / 200 = 3 LAV = 3 LAV & 1 FAMILY

STRUCTURAL DESIGN LOADS
 THIS SECTION IS REQUIRED FOR ALL PROJECTS

DESIGN LOADS:

Importance Factors: Snow (I_s) _____
 Seismic (I_s) _____

Live Loads: Roof _____ psf
 Mezzanine _____ psf
 Floor _____ psf

Ground Snow Load: _____ psf
 Wind Load: Ultimate Wind Speed _____ mph (ASCE-7)
 Exposure Category _____

SEISMIC DESIGN CATEGORY: A B C D

Provide the following Seismic Design Parameters:

Risk Category (Table 1604.5) _____ %
 Spectral Response _____ %
 Site Classification: Field Test _____ Presumptive _____ Historical Data _____
 Bearing Wall _____ Dual w/ Special Moment Frame _____
 Building Frame _____ Dual w/ Intermediate R/C or Special Steel _____
 Moment Frame _____ Inverted Pendulum _____
 Simplified _____ Equivalent Lateral Force _____ Dynamic _____

Analysis Procedure: Architectural, Mechanical, Components anchored? Yes No

LATERAL DESIGN CONTROL: Earthquake Wind

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

MECHANICAL SUMMARY
 MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

THIS SECTION FOR NEW, ADDITION, CHANGE OF USE, AND INTERIOR COMPLETION

Thermal Zone:
 Winter Dry Bulb: _____
 Summer Dry Bulb: _____

Interior Design Conditions:
 Winter Dry Bulb: _____
 Summer Dry Bulb: _____
 Relative Humidity: _____

Building Heating Load:
 Unitary: _____
 Heating Efficiency: _____
 Cooling Efficiency: _____
 Size Category of Unit: _____

Boiler: _____
 Chiller: _____
 Size Category, if oversized, state reason: _____

List equipment efficiencies: _____

ACCESSIBLE PARKING

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED		TOTAL # ACCESSIBLE PROVIDED
	REQUIRED	PROVIDED	PERMITTED VAN SPACES WITH 132" ACCESS	8' ACCESS	
TOTAL					

ELECTRICAL SUMMARY
 THIS SECTION FOR NEW, ADDITION, CHANGE OF USE, AND INTERIOR COMPLETION

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance: Energy Code ASHRAE 90.1 Performance Prescriptive
 Performance Prescriptive

Lighting Schedule (each fixture type)
 Lamp type required in fixture _____
 Number of lamps in fixture _____
 Ballast type used in the fixture _____
 Number of ballasts in fixture _____
 Total wattage per fixture _____
 Total interior wattage _____
 Total exterior _____

Additional Efficiency Package Options
 (When using the 2018 NCECC; not required for ASHRAE 90.1)
 C406.2 More Efficient HVAC Equipment Performance
 C406.3 Reduced Lighting Power Density
 C406.4 Enhanced Digital Lighting Controls
 C406.5 On-site Renewable Energy
 C406.6 Dedicated Outdoor Air System
 C406.7 Reduced Energy Use in Service Water Heating

GENERAL NOTES

- The General Contractor shall be both licensed and bonded in North Carolina and shall provide documents upon the Architect's request.
- The Work shall be done in accordance with all rules and regulations of the North Carolina State Building Code 2018 along with city, county, and state regulations. The General Contractor is responsible for securing and paying for all permits required for the Work and for the scheduling of all required inspections during the course of the Work.
- General Contractor shall be responsible for the provisions for job safety. These drawings do not contain provisions for job safety.
- Dimensions are to face of framing unless otherwise noted.
- Do not scale drawings. Stated & written dimensions govern. The General Contractor shall verify all dimensions in the field and shall be responsible for their accuracy. No extra charge or compensation shall be allowed because of difference between actual dimensions and those indicated on the drawings, unless they contribute to a change in the scope of the Work. Any difference which may be found shall be submitted to the Architect for decision prior to ordering, manufacturing, or proceeding with the Work. Horizontal dimensions indicated are to/from face of finish, unless noted otherwise. Vertical dimensions are from top of floor slab except where noted to be above finished floor (AFF). Dimensions are not adjustable without approval of Architect unless noted +/-.
- General Contractor shall be responsible for comparing all dimensions in the construction documents and existing conditions in the field.
- Framing Subcontractor shall coordinate framing with locations of HVAC vents, plumbing and light fixtures so as to avoid conflict.
- The General Contractor shall provide protection and be responsible for any existing finishes to remain and shall repair or replace any damaged areas as a result of the work. All existing finishes to remain shall be cleaned at the completion of construction.
- All materials and systems shall be installed as per manufacturer's specifications and all construction shall be of industry standard or better. The Architect shall be ultimate judge of quality.
- Only new items of recent manufacture, of standard quality, free from defects, will be permitted in the Work, unless otherwise noted. Rejected items shall be removed immediately from the Work and replaced with items of the quality specified. Failure to remove rejected materials and equipment shall not relieve the General Contractor from the responsibility for quality of items used nor from any other obligation imposed on him by the Contract.
- General Contractor shall be responsible for notifying the Architect immediately of construction deviating from depicted or implied information here-in. In the event of conflict between data shown on drawings and data shown in the specification, the specification shall govern. Detail drawings take precedence over drawings of larger scope. Should the General Contractor at any time discover an error in a drawing or specification, or any discrepancy, or variation between dimensions on the drawings and measurements at site, or lack of dimensions or other information, the Contractor shall not proceed with the work affected until clarification has been made by the Architect. In case of an inconsistency between Drawings and Specifications or within either Document, not clarified by addendum, the more specific provision will take precedence over less specific; more specific will take precedence over less stringent; more expensive item will take precedence over less expensive. Better quality or greater quantity of Work shall be provided in accordance with Architect's interpretation. On Drawings, figures take precedence over scaled dimensions. Scaling of dimensions, if done, is done at the Contractor's own risk.
- General Contractor shall verify that no conflicts exist in locations of any and all mechanical, telephone, electrical, plumbing and sprinkler equipment (to include all piping, duct work, sprinklers structural members and conduit) and that clearances for installation and maintenance of above equipment is provided. Elements in conflict shall be determined and reviewed with the Architect prior to work proceeding. Contractor to coordinate new work with existing conditions.
- The General Contractor shall provide shop drawings for the Architect's review and approval for the following: All shop fabricated millwork, carpet layout, flooring, light fixtures, doors, misc. steel, metal fabrication, glass/glazing, sprinkler layouts, hardware. Shop drawings shall be submitted in the form of 3 sets of prints. Shop drawings shall not be reproductions of Contract Documents. Material Submittals (3 samples) shall be provided for wood, fasteners, acrylic, carpet, tile, base, paint, laminate and any other materials indicated in the shop drawing.
- The General Contractor shall provide the Architect with manufacturer's cut sheets and specifications for all equipment including but not limited to: light fixtures, plumbing equipment, electrical equipment, fans, supplementary heating and cooling elements, all hardware and security equipment. General contractor shall be responsible for verifying all field dimensions prior to ordering equipment and/or casework.
- The General Contractor shall not proceed with work for which he expects additional compensation beyond the contract amount with out written authorization from the Architect and Owner. Failure to obtain such authorization shall invalidate a claim for extra compensation. The Contractor shall not proceed with work which, if completed in strict conformance with the Construction Documents, will result in additional work beyond the scope of the Contract without written authorization from the Architect and Owner. Any field conditions that significantly vary from the Contract Documents or will result in additional work, shall be brought to the attention of the Architect prior to proceeding with work.
- Contractor shall include all x-ray and core drill costs. All core drilling of the slab shall be approved by the Landlord's Structural Engineer prior to proceeding with the Work. Contractor shall submit proposed locations to Architect and Structural Engineer for review prior to proceeding with the work.
- Patch, repair and install all fireproofing as required by code. Fireproof any new penetrations required by the work.
- General Contractor to coordinate and review size and location of all slab penetrations. All required penetrations shall be made in accordance with the Owner's standard approval procedures and methods. All penetrations shall be properly sealed according to the Architect and the Owner's requirements and applicable codes.
- The General Contractor shall continuously check architectural and structural clearances for accessibility of equipment and mechanical and electrical systems. No allowances of any kind will be made for the General Contractor's negligence to foresee means of installing equipment into position.
- The finished work shall be firm, well-anchored, in true alignment, plumb, level, with smooth, clean, uniform, appearance without waves, distortions, holes, marks cracks, stains, or discoloration. Joining shall be close fitting, neat and well scribed. The finished work shall have no exposed unsightly anchors or fasteners and shall not present hazardous, unsafe corners. All work shall have the provision for expansion, contraction and shrinkage as necessary to prevent cracks, buckling, and warping due to temperature and humidity conditions.
- Attachments, connections or fasteners of any nature are to properly and permanently be secured in conformance with best practice and the General Contractor is responsible for improving them accordingly. The drawings highlight special conditions only and by no means illustrate every connection. The Contractor is responsible for improving connection accordingly.
- General Contractor shall waive "Common Practice" and "Common Usage" as construction criteria wherever details and Contract Documents of governing codes, ordinances, etc. require quantity or better quality than common practice or common usage would require.

GENERAL NOTES

- The General Contractor shall submit shop drawings and submittals order and schedule delivery of materials in ample time to avoid delays in construction. If an item is found to be unavailable or to have a long lead time, the General Contractor shall notify Architect immediately with a proposed alternative.
- The General Contractor shall notify the Owner, the Landlord, and the Architect in writing of any deficiencies, errors, conflicts or omissions found in the construction documents and/or specifications prior to the commencement of the work in this area. Any unreported deficiencies will become the responsibility of the General Contractor to correct.
- The General Contractor shall exercise extreme care and precaution during the construction of the Work, and schedule work, to minimize disturbances to adjacent spaces and for structures and their occupants, property, public thoroughfares, etc. The General Contractor shall take precautions and be responsible for the safety of all building occupants from construction procedures. The General Contractor shall be responsible for any overtime costs incurred thereby.
- All debris shall be removed from the site on a daily basis when possible. Upon completion of the work, remove all debris from the building created by the work provided under this Contract and leave all areas clean. Trash is not permitted to be burned on site.
- All abandoned miscellaneous nails, hangers, staples, wires, conduits and debris shall be removed from the walls and areas of exposed ceilings. Remove all abandoned pipe sleeves in floor slabs. Patch existing slab as req. to maintain UL fire rating of floor slab where pipes and conduits have been removed.
- Slab penetrations less than 2" around new and existing piping, conduit, ductwork, etc. shall be filled with acoustic foam and/or sealant to ensure acoustical separation between floor slabs. Slab penetrations greater than 2" around new and existing piping, conduit, ductwork, etc. shall be filled with concrete. All piping, conduit, ductwork, etc. shall be wrapped with expansion material prior to filling with concrete. Expansion material shall be approved by the MEP Engineer.
- Contractor shall provide the Team with a construction schedule showing the proposed phasing. Any long lead items that will affect the Substantial Completion date shall be brought to the Architect's attention immediately.
- Provide protection for existing finishes to remain, including restrooms, lobbies and corridors and repair damages as a result of construction. Document any existing conditions or damages prior to the start of construction
- General Contractor shall be responsible for providing exhaust for dryers, bathrooms, and ranges to exterior with proper terminus (not to be located on street side elevation). Verify terminus type and location with owner prior to installation.
- The Architect shall not be responsible for constructed variations from the information contained here-in unless reviewed and approved by Architect.
- Do not scale drawings, but rather inquire of Architect. Reproduction of these drawings is prohibited unless written permission is obtained from the Architect.
- All Trades to caulk with Manicapality Approved "Fire Caulk" at all top plate penetrations.

MILLWORK NOTES

- Millwork shall be fabricated and installed by a qualified woodworker with experience in commercial applications of the scope of the job. The General Contractor shall submit shop drawings and hardware catalogue cuts of all millwork and hardware for review by Architect and in accordance with the Construction Documents. Shop drawings shall show the design and the dimensions and clearly indicate at a large scale to the Architect the method and means of construction. Fabrication of millwork shall not proceed until shop drawings have been reviewed by the Architect. Shop drawings shall be submitted with 3 sets of prints. Cabinet designer/ installer shall field measure area of work after installation of gypsum wallboard for proper fitting.
- The method of manufacturing, fabricating and installing millwork, equipment, and its structural components defined in the contract documents is representative and indicates design intent only. If the materials, details or dimensioned properties are at variance with the General Contractor's or manufacturer's recommendations, alternate details will be considered for review by the Architect. It is the responsibility of the General Contractor to guarantee that the millwork and equipment will have proper support, stability and fault-free performance and provide all necessary blocking. All work shall conform to American Woodworking Institute (AWI) standards for premium grade construction.
- All cabinets shall be of flush overlay construction with 4" satin chrome wire pulls UON. Interior surfaces of cabinets not exposed to view shall be melamine with plastic laminate edgebanding to match melamine. All cabinet exterior surfaces exposed to view shall be plastic laminate. All open cabinet shelving shall be plastic laminate with plastic laminate edgebanding to match. All counter supports shall be plastic laminate. All counters used as work surfaces and all paneling shall be balanced and have phenolic backer laminated to entire underside or back face. Cabinet doors shall have plastic laminate on all faces and edges. All casework shall comply with AWI Section 400 for premium grade construction.
- Millwork covered with plastic laminate shall be fabricated and assembled by skilled workmen to the satisfaction of the Architect. Exposed surfaces shall be free from dents, tool marks, warpage, buckling, or open joints. All joints, corners and mitered connections shall be made tightly so the edges are entirely concealed. It is the responsibility of the General Contractor to obtain accurate field measurements and to verify dimensions and to provide shop drawings to ensure an accurate fit.
- Only exposed hardware is specified in this document. The Contractor is to supply all other necessary hardware to complete the Work. All unspecified hardware shall be of the highest quality commercial grade heavy duty. The Contractor is to provide catalog cuts of all hardware for review by Architect. Provide plastic grommets at cabinetry and counters for wire management as noted in the drawings. Submit catalog and samples to Architect for approval.
- Install millwork to be plumb, level, true and straight with no distortions. Shim as required using concealed shims. Provide all required blocking at new or existing construction for installation of millwork. Scribe and cut millwork to fit adjoining work. Provide sealant to match adjacent surfaces at all gaps. All exposed anchors, nail heads, screw heads, chips, indentations or imperfection in the wood surface to be painted shall be filled, sanded, sealed and prepared for painting. All lumber, particle board, finish wood, plywood, blocking, etc. shall be fire retardant treated (FRT) where required by local building codes, as interpreted by the local Code Official. No exposed fasteners.
- The General Contractor shall be responsible for making certain that the millwork items are not delivered until areas are sufficiently dry so that the millwork will not be damaged by excessive changes in moisture content. All delivered units shall match the final approved shop drawings and samples. Units which are marked, chipped or otherwise damaged shall be repaired or replaced as determined by the Architect. Units shall be protected during shipment and installation. After installation of units in their proper location and substantial completion of the Work, all protection shall be removed and all surfaces thoroughly cleaned to the complete satisfaction of the Architect. Surfaces shall then be covered and protected.
- Wood cabinets, countertops, trim and rails are to comply with AWI Section 400 and other applicable American Woodworking Institute Standards (AWI) for custom grade.
- Install millwork in compliance with AWI Section 1700, Premium Grade unless otherwise indicated. Flush wood paneling shall conform to AWI Section 500, Premium. Wood veneer to have "AA" face with 3/4" MDF core. See drawings for species and cut. Veneer shall be book matched, balance match panel faces and sequence between adjacent panels. Exposed edges to be veneered same species and finish as face. Provide sound back of similar species.
- To the greatest extent possible, furnish millwork with shop applied finishes. Defer only final touch-up, cleaning, and polishing until after installation. Shop applied finishes shall comply with AWI 1500, Premium Grade, TR-2 catalyzed lacquer, semi-filled.

TILE NOTES

- Tile shall be installed by a qualified installer with experience in commercial applications. The General Contractor shall submit dimensioned shop drawings showing layout and 3 samples of each type and color of tile and grout selected for review by Architect and in accordance with the Construction Documents. Mount tiles on plywood backing and grout to demonstrate tile patterns.
- It is the responsibility of the General Contractor to obtain accurate field measurements and to verify dimensions. Any dimensions or field conditions which vary from the design intent of the drawings shall be brought to the attention of the Architect by the General Contractor for review prior to proceeding with work. It is the responsibility of the General Contractor to provide all necessary blocking.
- Tile shall be manufactured in compliance with Standard Grade Requirements of ANSI A137.1. Installation of tile shall be in compliance with requirements set forth in Handbook for Ceramic Tile Installation produced by the Tile Council of America. Provide all necessary caps, stops, returns, trimmers, and other shapes to complete installation (color and finish to match adjacent tile). Provide a quantity equal to 2% of each type and color of tile from same production run as installed material for at-site stock.
 - Floors: Thin set, TCA F122
 - Walls: Organic adhesive, TCA W242
 - Expansion Joints: TCA EJ171
 - Epoxy Adhesive: TCA F116
- For tile exhibiting color variations, blend tile in factory and package accordingly so that tile units taken from one package show the same range in colors as those taken from other packages and match approved samples. Where factory-mounted tile is required, provide back-face or edge-mounted tile assemblies as standard with manufacturer unless another mounting method is indicated.
- Natural Stone Tile Marble to meet requirements of ASTM C503 Granite; ASTM C615. Abrasive Resistance: ASTM C241; 12 Ha minimum. Marble Threshold, ASTM C503 to be White Georgia, Imperial Black or Antique Silver and Honed. Refer to Schedule of Finishes for size, finish and thickness.
- Thin Set Mortar: ANSI A118.1, Commercially prepared dry mixture of Portland cement, inert fillers, and chemical additive. Do not use water-based adhesive setting methods with green-colored stone. General Contractor to obtain setting instructions from supplier. Organic Adhesive: ANSI A138.1; Type 1, High performance, multi-purpose floor and wall adhesive. Epoxy Adhesive: factory prepared, 100% epoxy resin and hardener with sand or mineral filler material to complying with ANSI A118.3 for thin-set applications for chemical resistant, water cleanable quarry tile installations. Grout: Latex portland cement, ANSI A118.6, Commercially prepared dry mixture of portland cement, sand, mineral fillers, and chemical additives. Color: Refer to Schedule of Finishes
- Mix materials and prepare surface in accordance with manufacturer's recommendations. Grind or fill concrete substrates as needed to comply with TCA allowable variations. Areas scheduled to receive tile flooring shall receive membrane application. Crack Isolation Membrane to be one-part elastomeric seamless membrane, 30 mil (cured thickness), and no water permeability as manufactured by Custom or Mapei.
- Comply with manufacturer's instructions for installation of each material needed as well as ANSI and TCA requirements. Extend tile work into recesses and under or behind equipment and fixtures, to form a complete covering without interruptions, except as otherwise shown. Terminate work neatly at obstructions, edges and corners without disrupting pattern or joint alignments. Layout tile work and center tile fields in both directions in each space or on each wall area. Avoid tiles less than one half size. Align joints when adjoining tiles on floor, base, walls and trim that are the same size. Provide uniform joint widths at ceramic tile to be not less than 1/16" or greater than 1/8". Natural Stone Tile to be but jointed. Where stone tile abuts dissimilar flooring materials, provide terrazzo divider strips or other similar metal angle device to help prevent edge chipping caused by impact: Terrazzo Divider Strip or Schluter Trims #E100.
- Thin Set Application shall be per ANSI A108.5. Organic Adhesive Application shall be per ANSI A108.4. Use Latex portland cement grout conforming to ANSI A108.10. Tile shall be firmly set before grouting, allow a minimum of 48 hours. Remove mortar or adhesive from face and edges of tile.
- Provide expansion joints as follows: Natural Stone Tile same as grout joint; but not less than 1/4". Ceramic Tile not less than 1/8". Install expansion joints at 24' max. in each direction, where tile work abuts restraining surfaces such as perimeter walls, dissimilar floors, curbs, columns, and pipes, where changes occur in backing materials, at expansion, control, construction, cold and seismic joints in structure. Expansion joints shall be constructed during installation of tile. Do not cut joints after tile installation.
- Use clean water in initial cleaning. Remove surface laitance with a dry polishing cloth. Do not use acid in final cleaning of tile. Provide a non-yellowing, penetrating sealer on floor ceramic tile which does not leave a film or visible coating. Keep floor areas free from general traffic for at least 72 hours following installation. Protect walls from impact, vibrations and heavy hammering on adjacent and opposite walls.

INTERIOR FINISH NOTES

- Refer to Finish Schedule and Finish Plan for extent and type. All wall surfaces, metal frames, and trim shall be painted, UON. All surfaces to be painted shall be prepared for priming in accordance with the manufacturer's specifications.
- All painted surfaces shall receive 1 prime and 2 finish coats as follows:
 GWB surfaces - Interior eggshell latex paint
 GWB ceiling surfaces - Interior flat latex paint
 Hollow Metal/Wood - Odorless interior semi-gloss alkyd latex
- Paint is to be applied by a roller or brush on all surfaces. Only the prime coat may be spray applied. Provide a 12"x12" GWB sample for each color for Owner's approval prior to the start of the Work.
- Toilet and bathing room floors shall have a smooth, hard, non-absorbant surface that extends upward onto the walls at least 6"
- Walls within 2' of urinals and waterclosets shall have a smooth, hard, non-absorbant surface to the height of 4' above the finish floor. Verify material with room schedule and/or Architect

FLOOR FINISH NOTES

- Refer to Finish Plan & Schedule for extent and type of all floor finishes.
- GC to flashpatch floor to provide a level surface that shall not exceed 1/4" over 10 feet cumulative. At floor finish transitions flash patch to smooth transition of finished material to maintain level finished floor surface.
- All floors to slope to floor drains - 1/4" per 1'-0" U.N.O.
- All exterior floor slabs to receive a light brown concrete finish. U.N.O.
- SEE STRUCTURAL DRAWINGS FOR ALL FOUNDATION SPECIFICATIONS.



Project Information

Energy Code:	90.1 (2013) Standard
Project Title:	Serenity Clubhouse
Location:	Fuquay-Varina, North Carolina
Climate Zone:	4a
Project Type:	New Construction
Vertical Glazing / Wall Area:	21%
Performance Sim. Specs:	EnergyPlus 8.1.0.009 (EPW: USA_NC_Raleigh-Durham Intl AP 723060_TMY3.epw)

Construction Site: Harnett County Fuquay-Varina, NC 27526	Owner/Agent: Greenfield Communities LLC 8601 Six Forks Road Suite 270 Raleigh, NC 27615 919-383-5411 mrbubaker@greenfieldcommunities.com	Designer/Contractor: Perry Cox Perry Cox Architect, p.a. 124 Salem Towne Court Apex, NC 27502 919-383-5411 perry@pcoxdesign.com
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Building Area	Floor Area
1-Community Clubhouse (Exercise Center) - Nonresidential	3560

Envelope Assemblies	Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor _{req}
Floor 1: Slab-On-Grade-Unheated, (Bldg. Use 1 - Community Clubhouse) (c)		274	---	---	0.730	0.520
Roof 1: Attic Roof with Wood Joists, (Bldg. Use 1 - Community Clubhouse)		3560	42.0	0.0	0.024	0.021
Skylight 1: Metal Frame Glass, No Curt. Perf. Specs: Product ID 4mm Clear Glass, SHGC 0.78, VT 0.82, (Bldg. Use 1 - Community Clubhouse) (b)		9	---	---	0.480	0.500
NORTHEAST Exterior Wall 1: Wood-Framed, 16" o.c., (Bldg. Use 1 - Community Clubhouse)		1062	21.0	0.5	0.060	0.064
Window 1: VinylFiberglass Frame, Perf. Specs: Product ID Advanced Low-E, SHGC 0.37, VT 0.70, (Bldg. Use 1 - Community Clubhouse) (b)		107	---	---	0.250	0.350
Door 1: Glass (> 50% glazing)/Nonmetal Frame, Entrance Door, Perf. Specs: Product ID Advanced Low-E, SHGC 0.37, PF 0.80, VT 0.70, (Bldg. Use 1 - Community Clubhouse) (b)		48	---	---	0.250	0.350
SOUTHEAST Exterior Wall 3: Wood-Framed, 16" o.c., (Bldg. Use 1 - Community Clubhouse)		556	21.0	0.5	0.060	0.064
Window 3: VinylFiberglass Frame, Perf. Specs: Product ID Advanced Low-E, SHGC 0.37, VT 0.70, (Bldg. Use 1 - Community Clubhouse) (b)		21	---	---	0.250	0.350
Door 3: Insulated Metal, Swinging, (Bldg. Use 1 - Community Clubhouse)		21	---	---	0.600	0.500
SOUTHWEST Exterior Wall 4: Wood-Framed, 16" o.c., (Bldg. Use 1 - Community Clubhouse)		1108	21.0	0.5	0.060	0.064

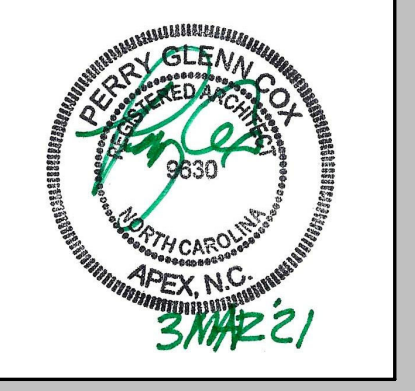
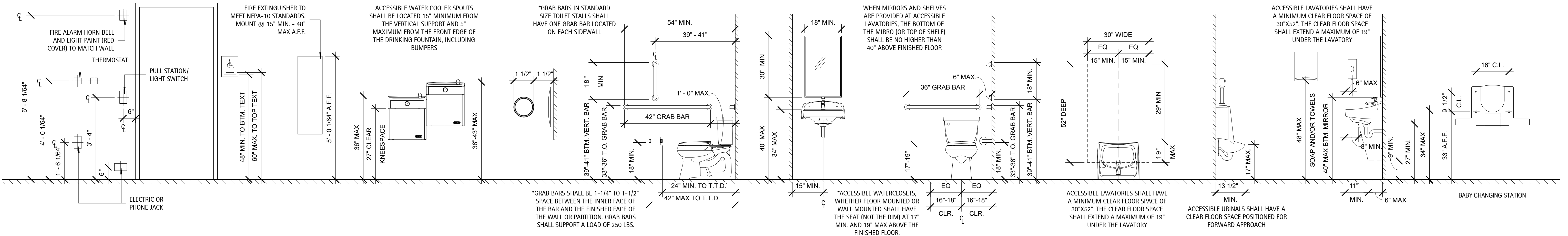
Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor _{req}
Clubhouse					
Window 4: VinylFiberglass Frame, Perf. Specs: Product ID Advanced Low-E, SHGC 0.37, PF 1.10, VT 0.70, (Bldg. Use 1 - Community Clubhouse) (b)	160	---	---	0.250	0.350
Window 5: VinylFiberglass Frame, Perf. Specs: Product ID Advanced Low-E, SHGC 0.37, VT 0.70, (Bldg. Use 1 - Community Clubhouse) (b)	56	---	---	0.250	0.350
Door 1 copy 1: Glass (> 50% glazing)/Nonmetal Frame, Entrance Door, Perf. Specs: Product ID Advanced Low-E, SHGC 0.37, PF 0.80, VT 0.70, (Bldg. Use 1 - Community Clubhouse) (b)	96	---	---	0.250	0.350
Door 3 copy 1: Insulated Metal, Swinging, (Bldg. Use 1 - Community Clubhouse)	42	---	---	0.600	0.500
NORTHWEST Exterior Wall 2: Wood-Framed, 16" o.c., (Bldg. Use 1 - Community Clubhouse)	623	21.0	0.5	0.060	0.064
Window 2: VinylFiberglass Frame, Perf. Specs: Product ID Advanced Low-E, SHGC 0.37, VT 0.70, (Bldg. Use 1 - Community Clubhouse) (b)	101	---	---	0.250	0.350
Door 2: Glass (> 50% glazing)/Nonmetal Frame, Entrance Door, Perf. Specs: Product ID Advanced Low-E, SHGC 0.37, VT 0.70, (Bldg. Use 1 - Community Clubhouse) (b)	24	---	---	0.250	0.350

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
 (b) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.
 (c) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.

Envelope PASSES: Design 1% better than code

Envelope Compliance Statement
 Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 90.1 (2013) Standard requirements in COMcheck Version 4.1.5.3 and to comply with any applicable mandatory requirements listed in the inspection checklist.

Perry Cox, Architect
 Name - Title: _____ Signature: _____ Date: _____



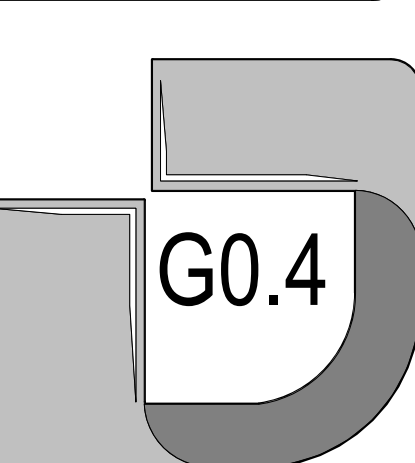
Perry Cox architect, p.a.
 124 Salem Towne Court, Apex, NC 27502
 P: 919.363.5411
 www.pcoxdesign.com

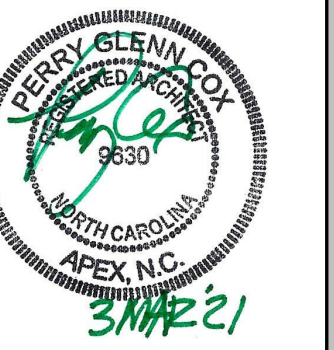
DATE	REVISION

SHEET DESCRIPTION
GENERAL NOTES

PROJECT #: 2018.037
 DATE ISSUED: 12/14/2021
 DRAWING BY: JGM/BSJ
 CHECKED BY: PGC/DSC

SERENITY AMENITY GREENFIELD COMMUNITIES CLUBHOUSE & POOL
 Fuquay-Varina, NC



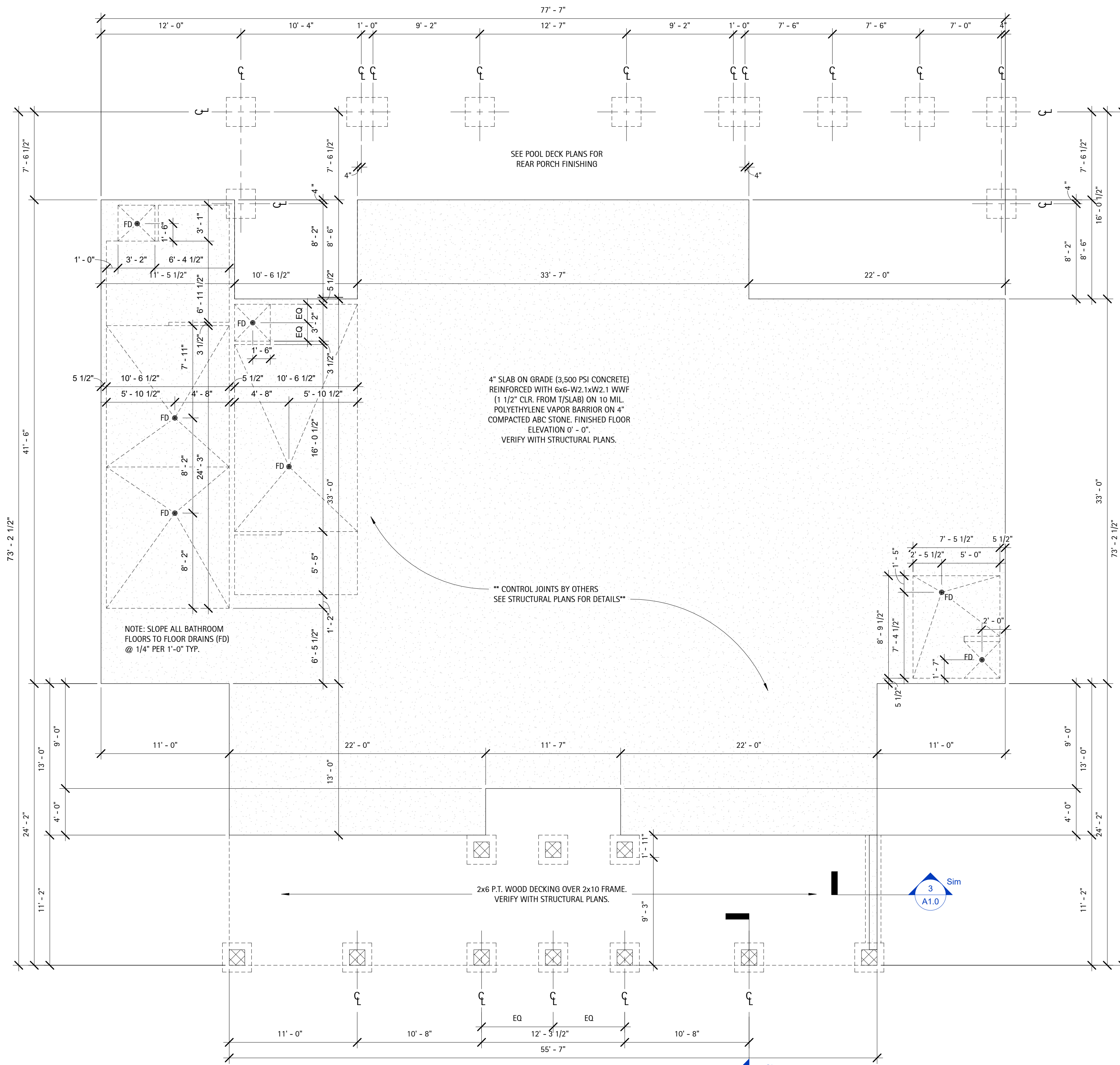


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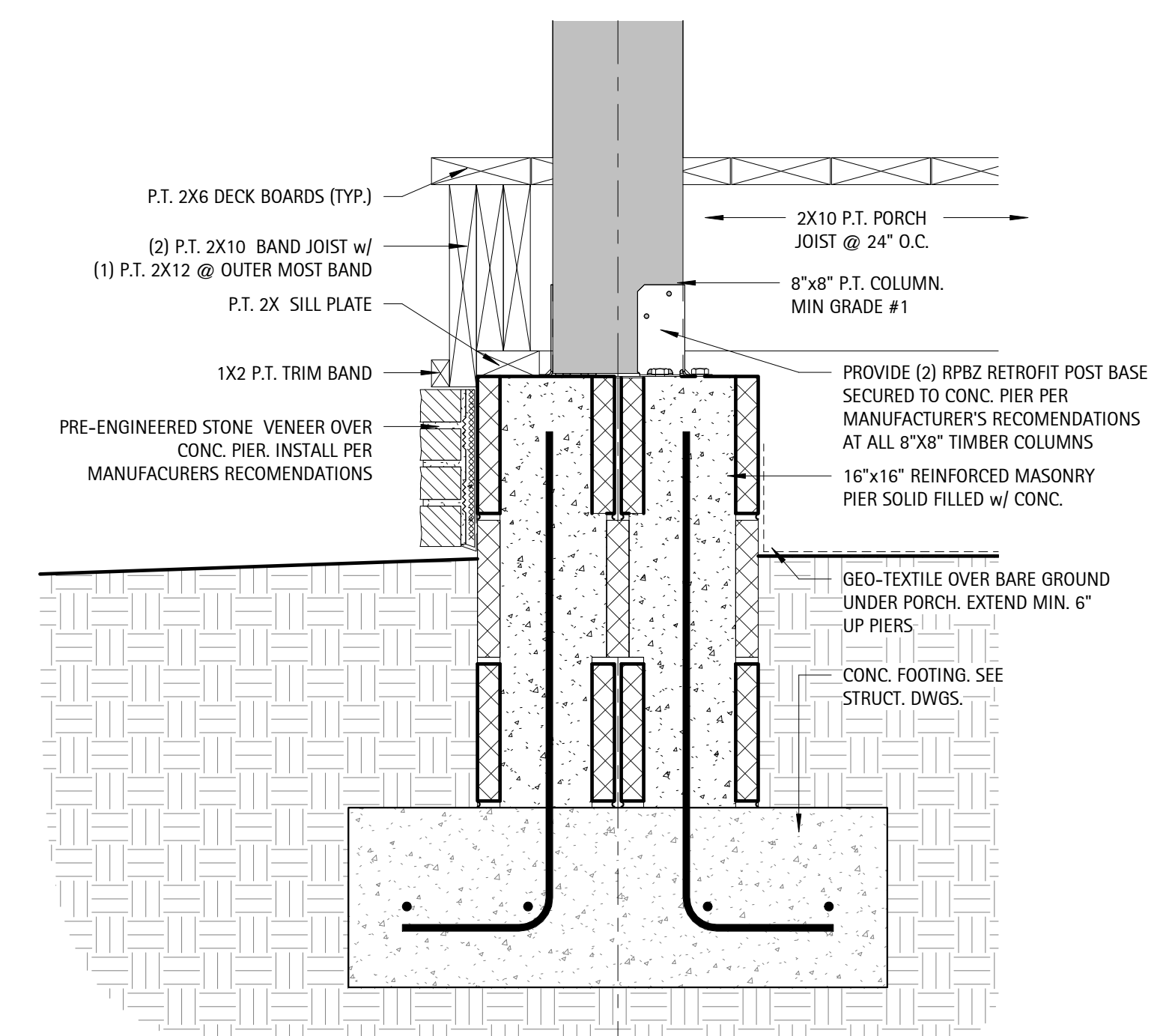
SHEET DESCRIPTION
FOUNDATION PLAN

PROJECT #:	2018.037
DATE ISSUED:	12/14/2021
DRAWING BY:	JGM/BSJ
CHECKED BY:	PGC/DSC

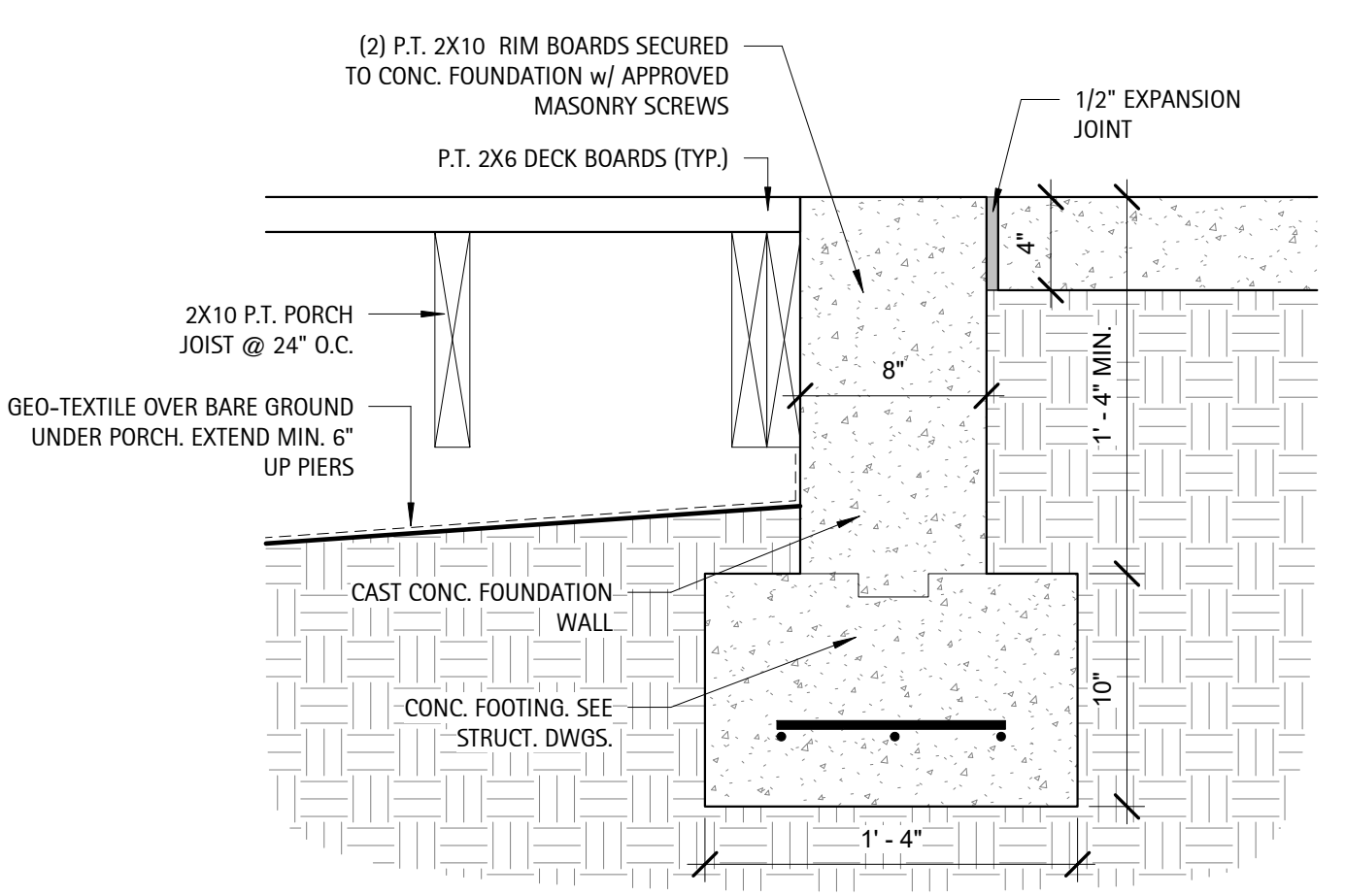
**SERENITY AMENITY
GREENFIELD COMMUNITIES
CLUBHOUSE & POOL**
Fuquay-Varina, NC



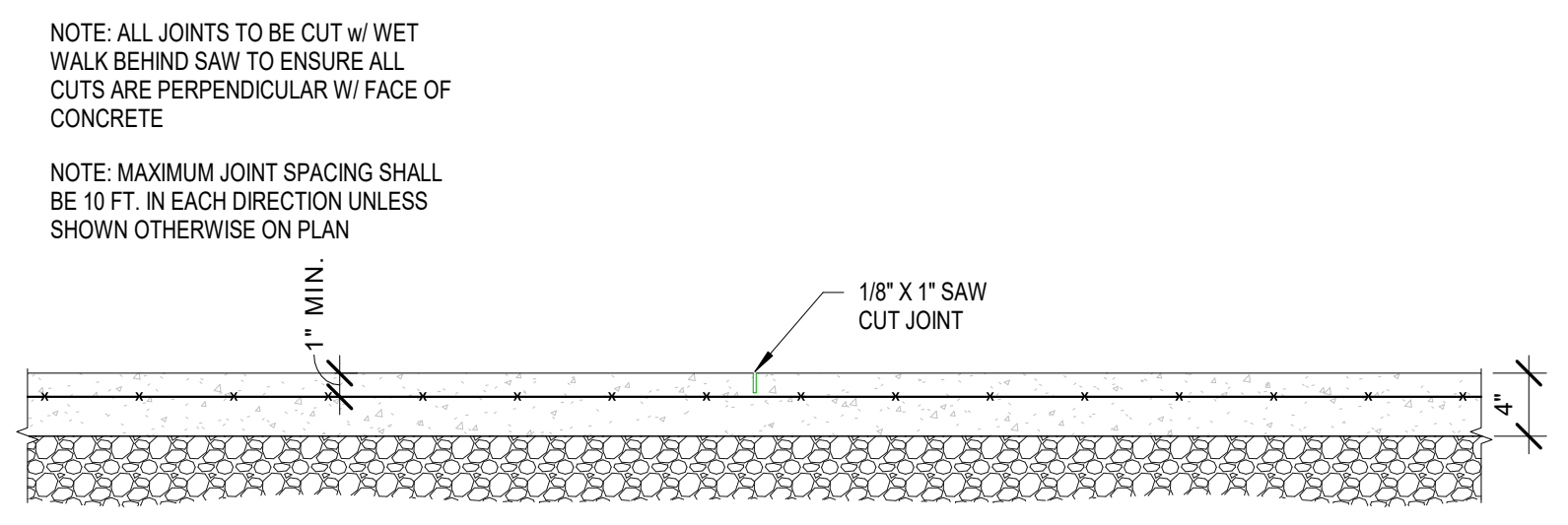
1 Club House - Foundation Plan
3/16" = 1'-0"



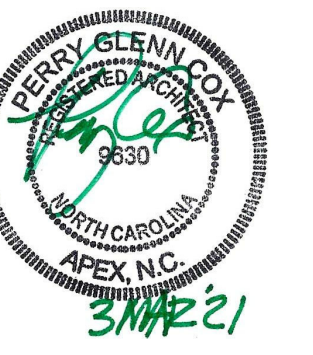
4 Detail - Typ. Masonry Pier
1 1/2" = 1'-0"



3 Detail - ADA Transition Concrete
1 1/2" = 1'-0"



2 Detail - Typ. Sawcut Control Joint
1" = 1'-0"



NO.	REVISION	DATE

SHEET DESCRIPTION
MAIN LEVEL PLAN

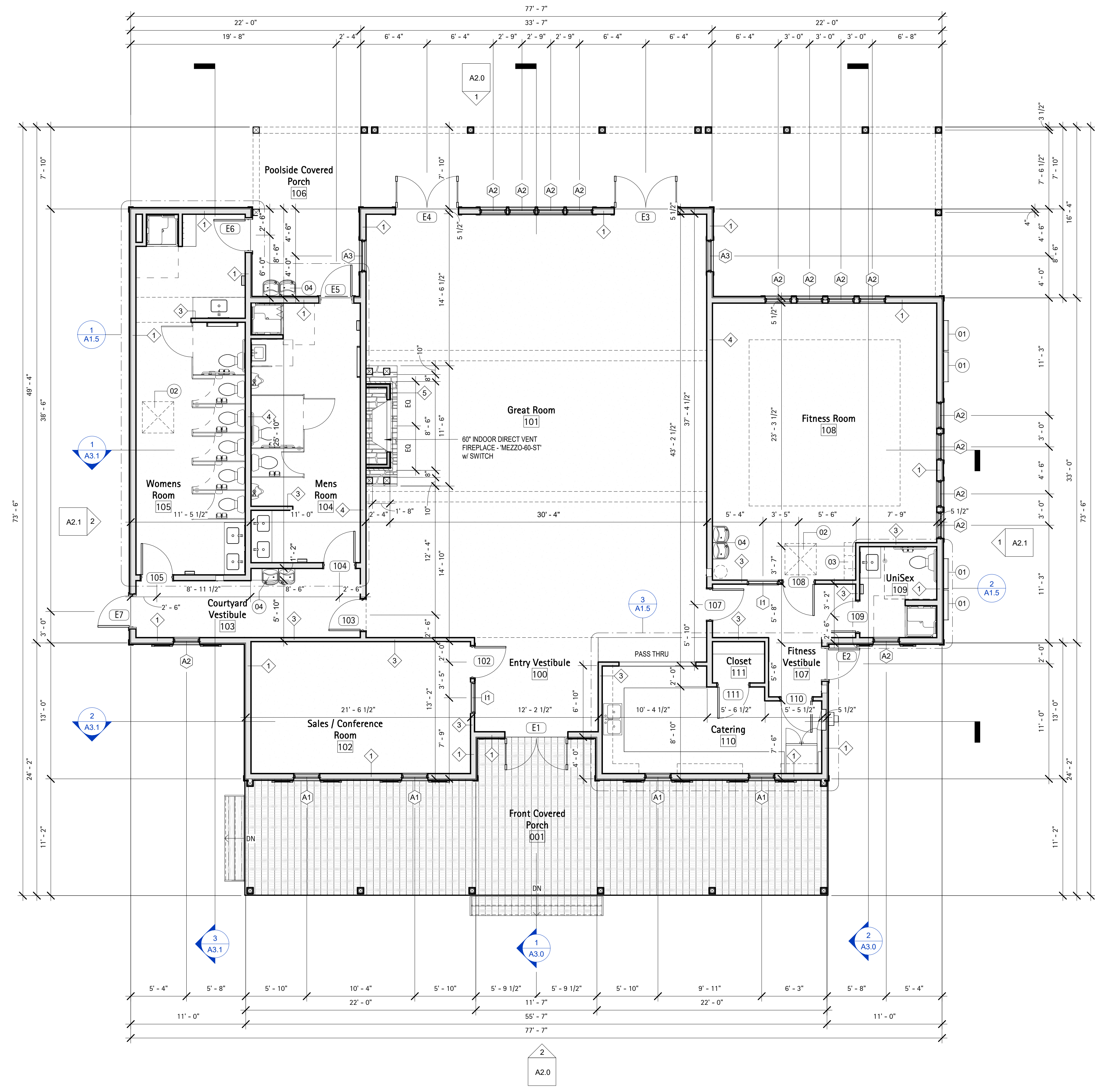
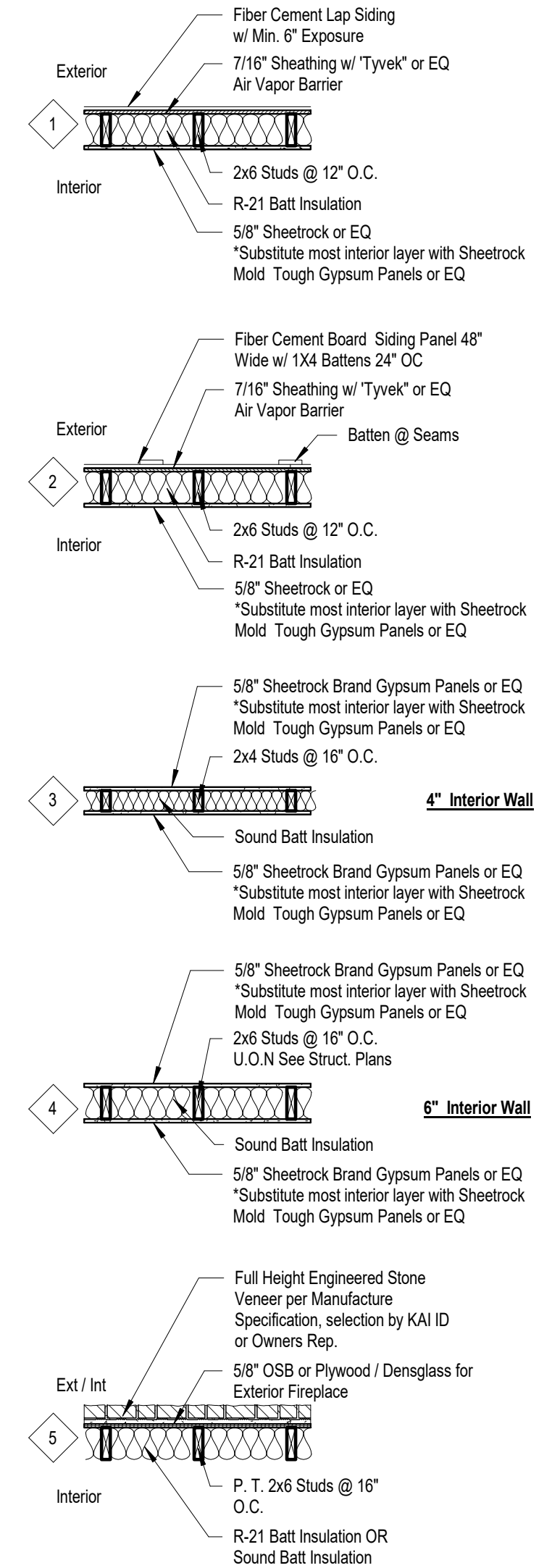
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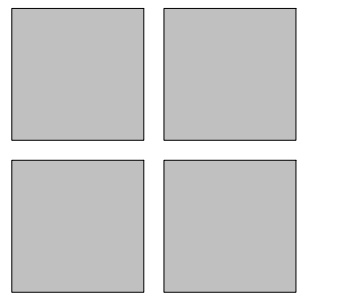
KEYNOTES

- 01 4'-0" x 8'-0" WALL MOUNTED VINE TRELLIS SEE GENERAL DETAILS
- 02 3'-0"x3'-0" ATTIC ACCESS HATCH. VERIFY LOCATION W/ TRUSS PACKAGE
- 03 CUBBIES TO BE SUPPLIED BY OWNERS
- 04 'ELKAY' TWO STATION H/I/O WATER COOLER

WALL TYPE DETAILS



1 Club House - Main Level
3/16" = 1'-0"



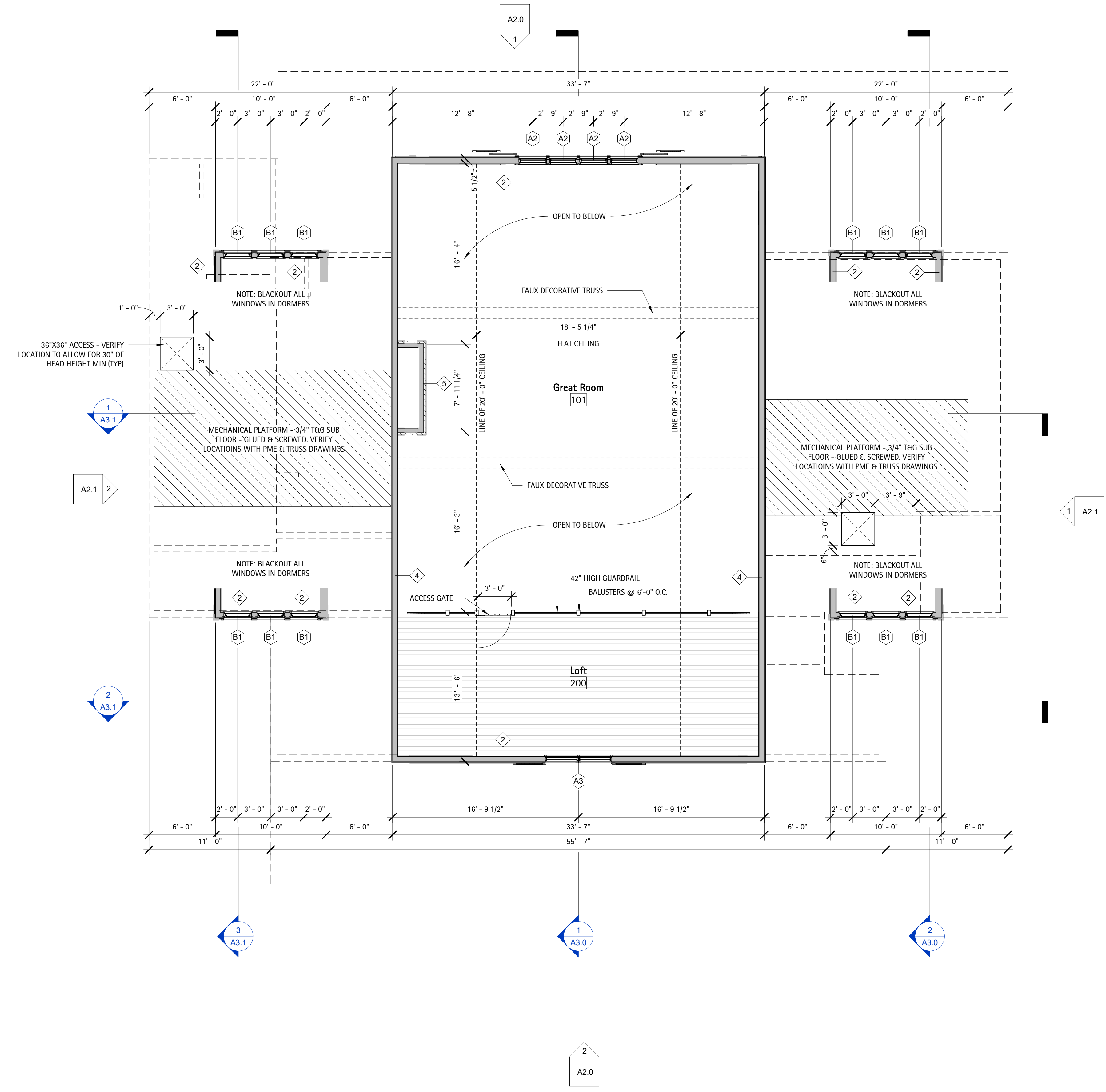
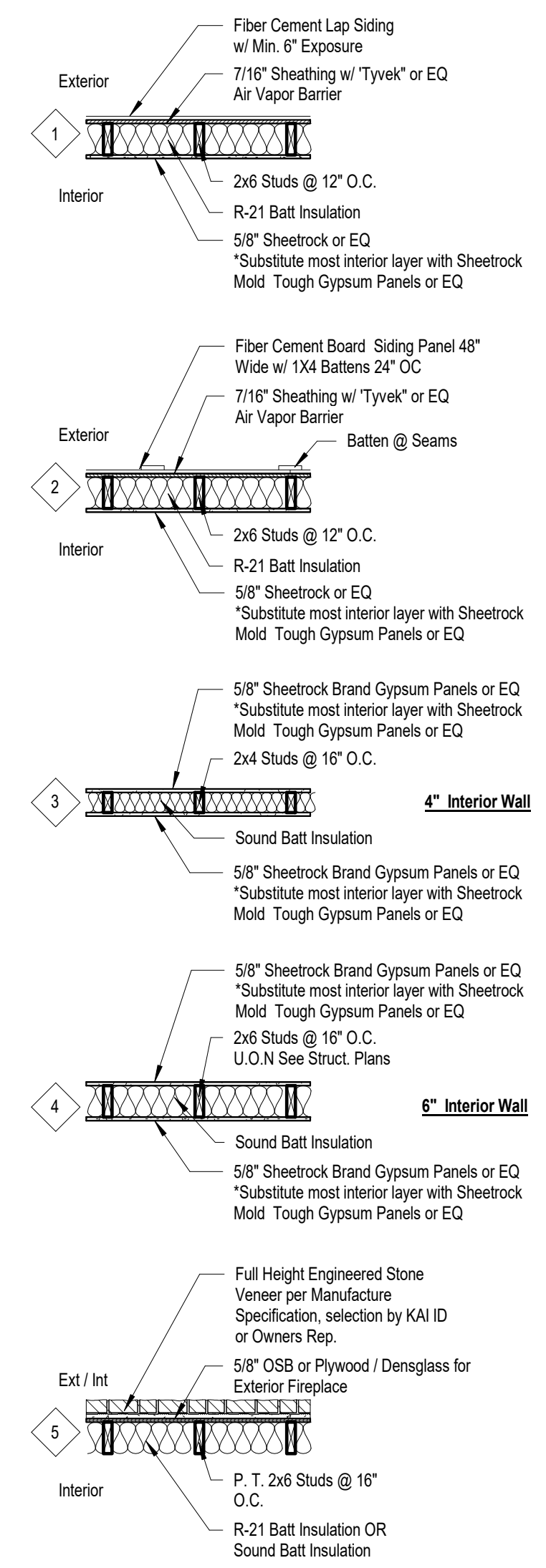
Perry Cox
architect, p.a.
124 Salem Towne Court, Apex, NC 27502
P: 919.363.5411
www.pcoxdesign.com

NO.	REVISION	DATE

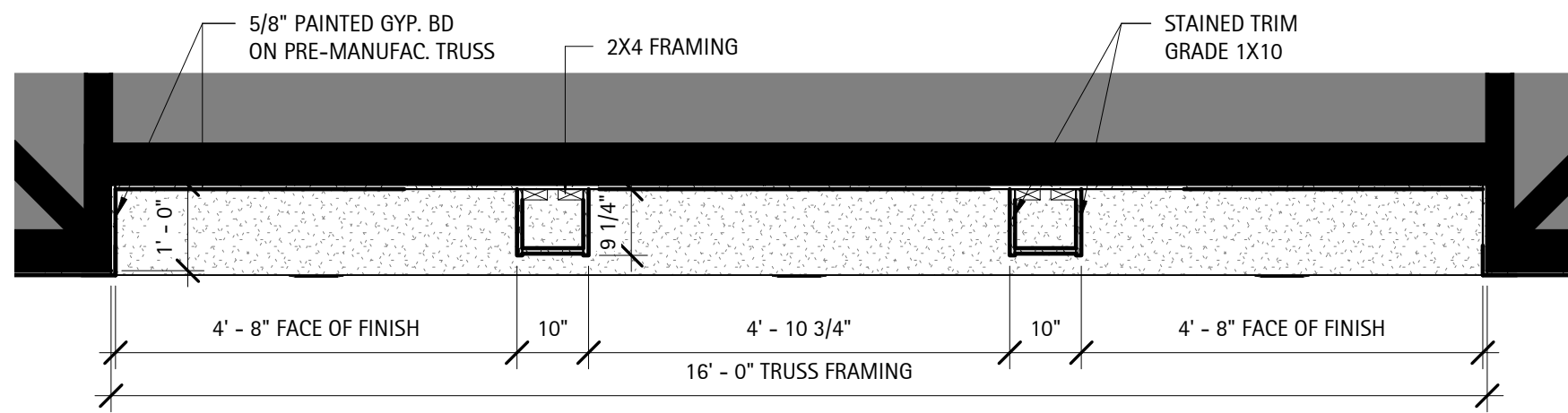
SHEET DESCRIPTION	
UPPER LEVEL PLAN	
PROJECT #:	2018.037
DATE ISSUED:	12/14/2021
DRAWING BY:	JGM/BSJ
CHECKED BY:	PGC/DSC

**SERENITY AMENITY
GREENFIELD COMMUNITIES
CLUBHOUSE & POOL
Fuquay-Varina, NC**

WALL TYPE DETAILS

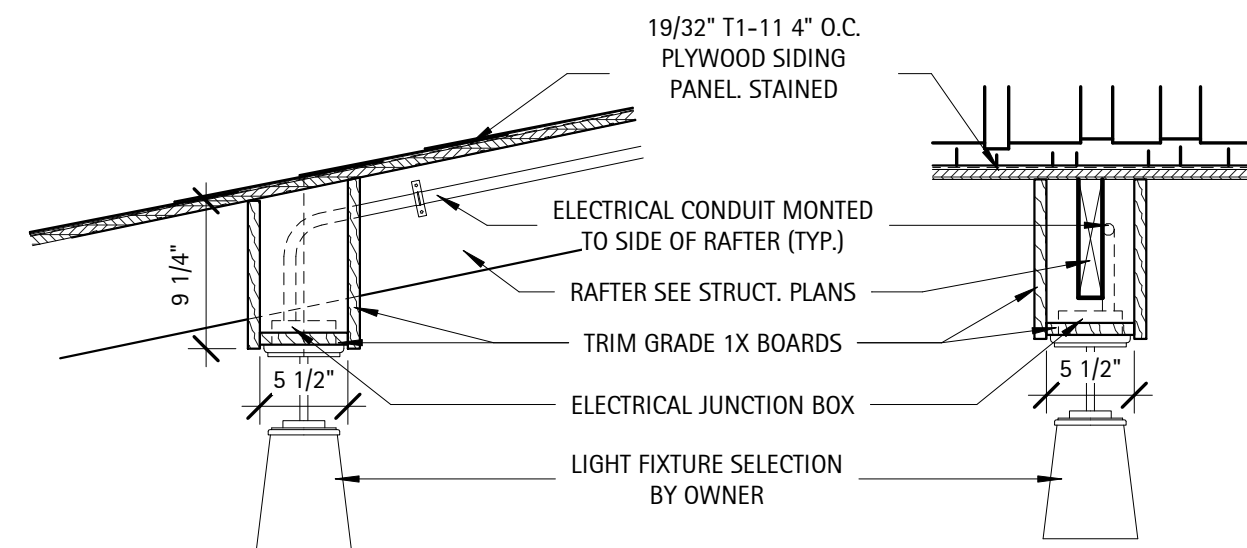


1 Club House - Upper Level Plan
3/16" = 1'-0"



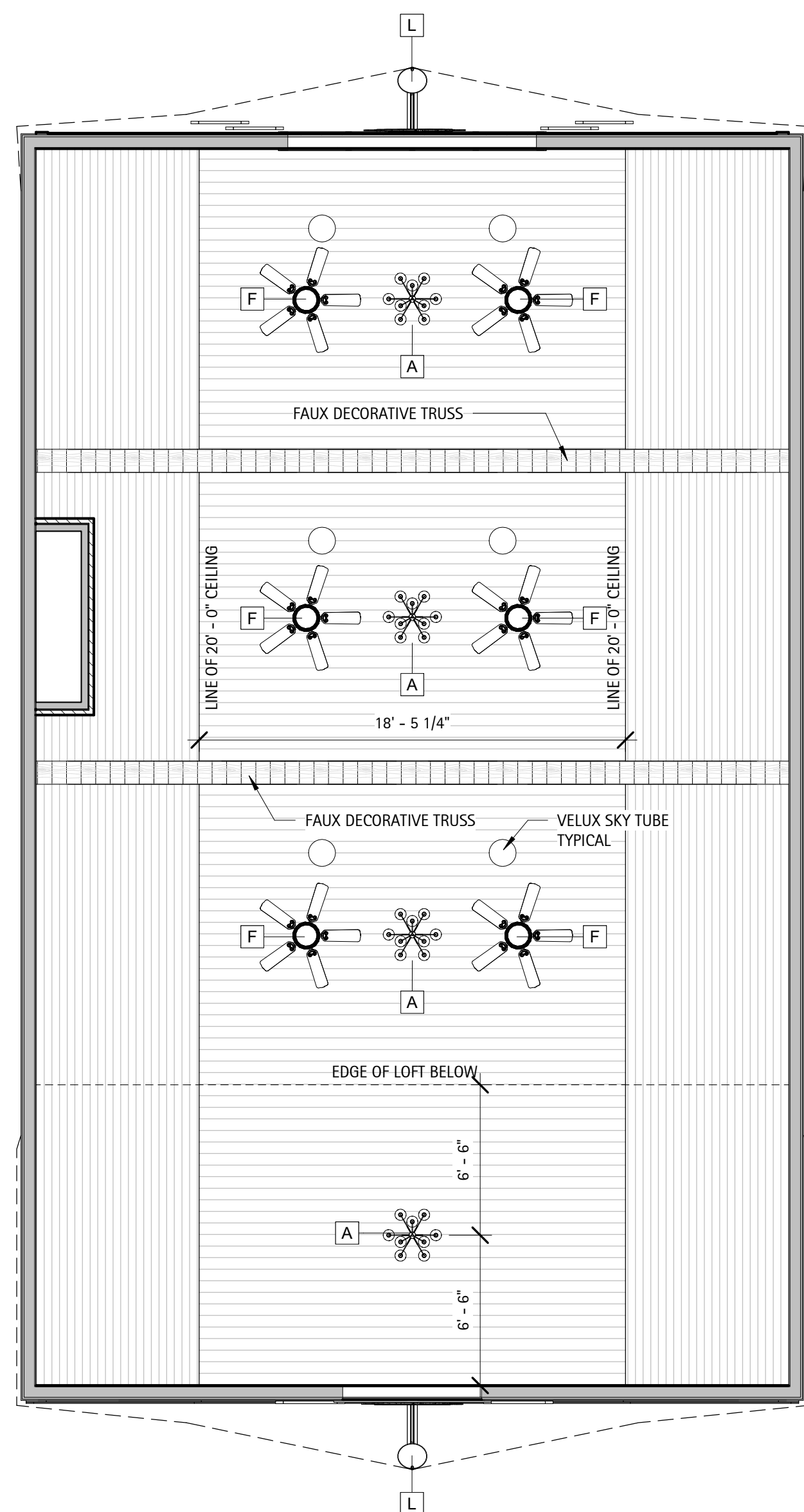
4 Detail - Fitness Roof Tray Ceiling

1/2" = 1'-0"



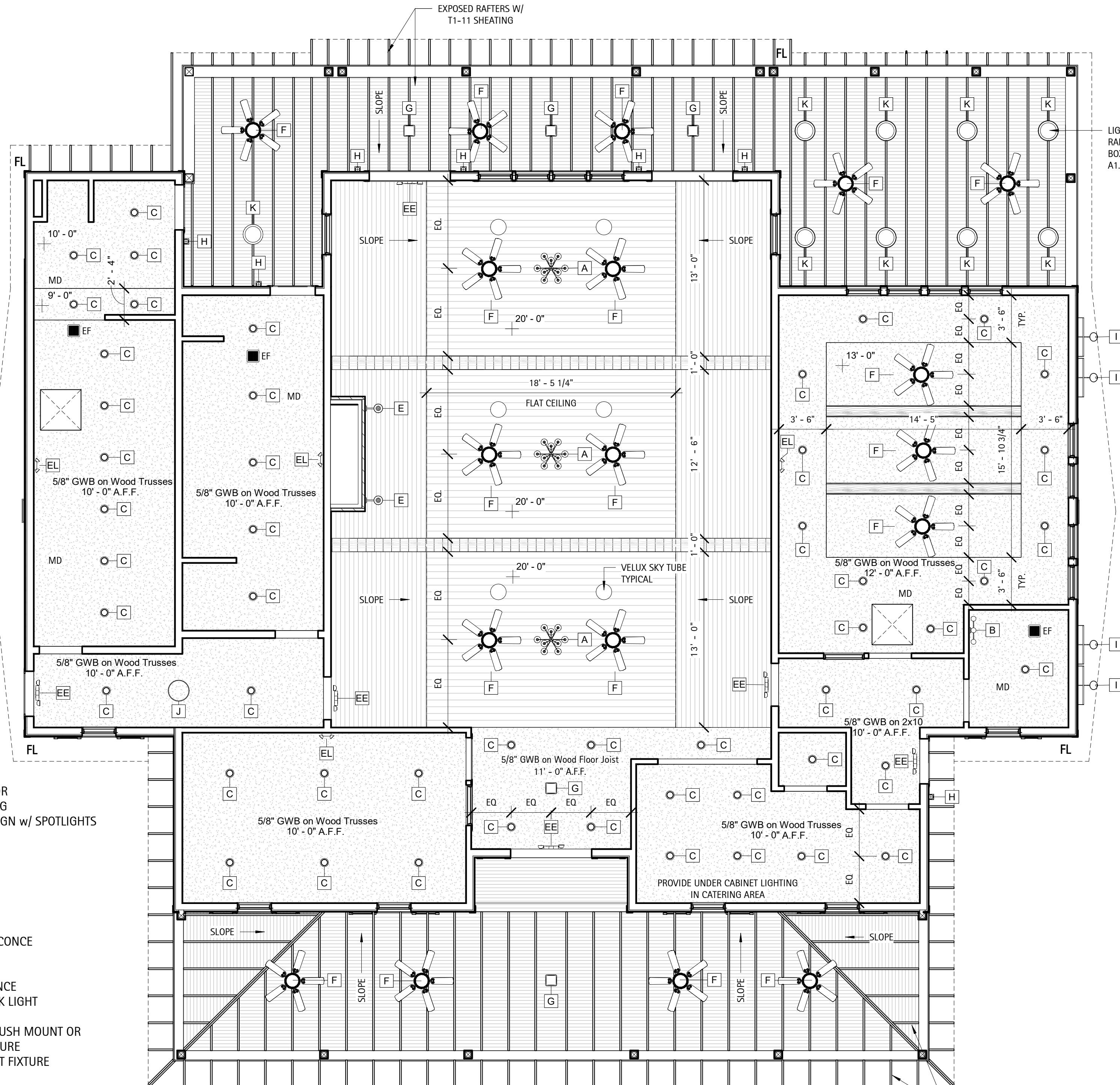
3 Detail - Junction Box at Rafter

1" = 1'-0"



2 Club House - Loft

3/16" = 1'-0"



- MD - MOTION DETECTOR LOCATE IN CEILING
- EE - EMERGENCY EXIT SIGN w/ SPOTLIGHTS
- EL - EMERGENCY LIGHT
- EF - EXHAUST FAN
- FL - FLOOD LIGHTS
- A - DECORATIVE LIGHT
- B - VANITY LIGHT
- C - CAN LIGHT
- D - 1X4 LED TROFFER
- E - DECORATIVE WALL SCONCE
- F - FAN w/o LIGHT KIT
- G - PENDANT LIGHT
- H - EXTERIOR WALL SCONCE
- I - EXTERIOR GOOSENECK LIGHT
- J - FLUSH MOUNT
- K - OWNER SELECTED FLUSH MOUNT OR PENDANT LIGHT FIXTURE
- L - CUSTOM GABLE LIGHT FIXTURE

* VERIFY ALL SELECTIONS WITH OWNER / GC PRIOR TO ORDER

REFLECTIVE CEILING NOTES

1. 5/8" GWB typical - U.N.O - Mold tough in Wet areas
2. Height of ceilings shall be measured from top of slab to finish face of GWB or face of ceiling grid as indicated on the Reflected Ceiling Plan, UON.
3. All light fixtures are to be installed according to the Electrical Plans.
4. Light fixture types, quantities and locations only are noted on Architectural Reflected Ceiling Plans. Specifications, switching, exit lights, emergency lighting, life safety equipment, and circuiting are noted on Engineering documents.
5. Dimensioned light fixtures are from finished face of partitions to centerline of fixture and from centerline of fixture to centerline of fixture. All fixtures shall be installed in center of ceiling tile unless noted otherwise. Any discrepancies with light fixtures, switches, thermostats, or diffusers as to location between architectural and engineering drawings or between the drawings and existing field conditions shall be clarified with the Architect before proceeding with installation.

1 Club House - Main Level

3/16" = 1'-0"



DATE	REVISION	NO.

SHEET DESCRIPTION

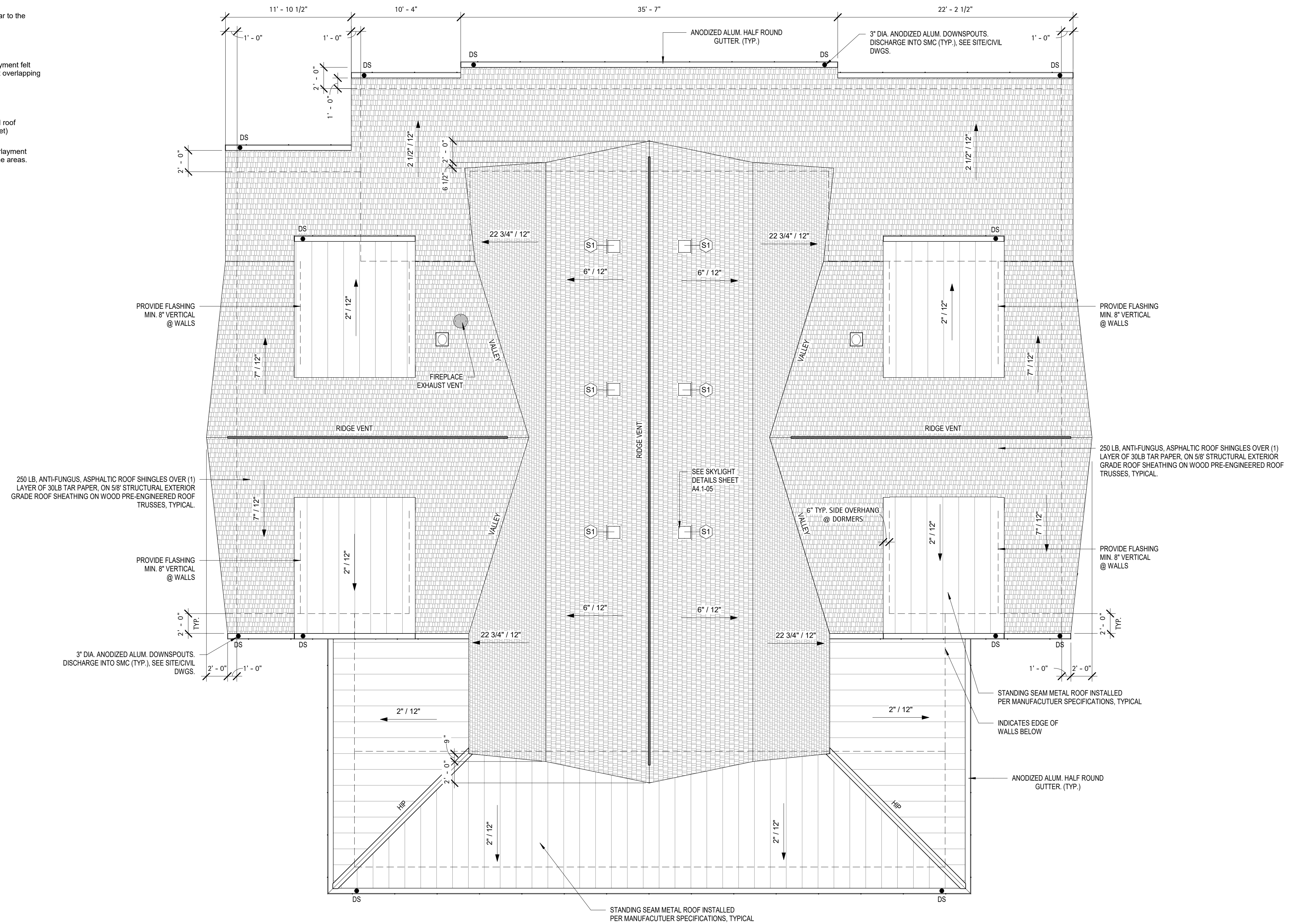
REFLECTED CEILING PLAN

PROJECT #:	2018.037
DATE ISSUED:	12/14/2021
DRAWING BY:	JGM/BSJ
CHECKED BY:	PGC/DSC

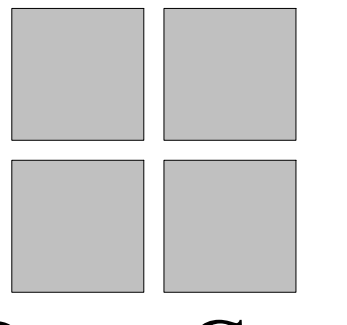
**SERENITY AMENITY
GREENFIELD COMMUNITIES
CLUBHOUSE & POOL**
Fuquay-Varina, NC

ROOF NOTES

1. Roof decks shall be covered with approved roof coverings secured to the building or structure in accordance with the NCSBC. Roof coverings shall be designed and installed in accordance with the building code and the approved manufacturer's instructions.
2. Crickets or saddles shall be installed on the ridge side of any chimney or penetration greater than 30 inches wide as measured perpendicular to the slope. Cricket or saddle coverings shall be sheet metal or of the same material as the roof covering.
3. Asphalt shingles shall only be used on roof slopes of 2:12 or greater.
4. Roof slopes from 2:12 to 4:12, underlayment shall be two layers applied in the following manner. Apply a minimum 19" wide strip of underlayment felt parallel with and starting at the eaves, fastened sufficiently to hold in place. Starting at the eave, apply 36-inch-wide sheets of underlayment overlapping successive sheets 19 inches minimum and fasten in place.
5. Roof slopes from 4:12 or greater, underlayment shall be a minimum of one layer.
6. Flashing shall be installed at the wall and roof intersections, at gutters, and wherever there is a change in roof slope or direction and around roof openings. Where flashing is of metal, the metal shall be corrosion resistant with a thickness of not less than 0.019in (No. 26 galvanized sheet)
7. Areas prone to ice formation along eaves causing a backup of water shall have an ice barrier that consists of at least (2) two layers of underlayment cemented together or of a self-adhering polymer-modified bitumen sheet. Extend ice barrier min. 18" each side of valleys and other ice prone areas.



1 Club House - Roof Plan
 A1.4 3/16" = 1'-0"



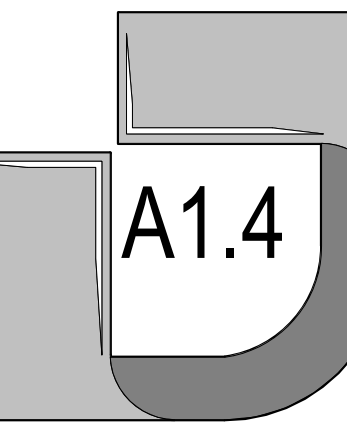
Perry Cox
 architect, p.a.
 124 Salem Towne Court, Apex, NC 27502
 P: 919.363.5411
 www.pcoxdesign.com

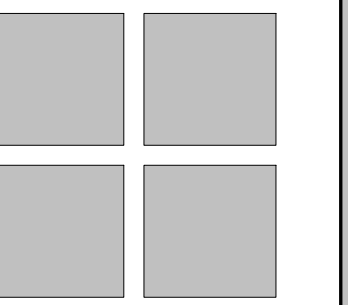
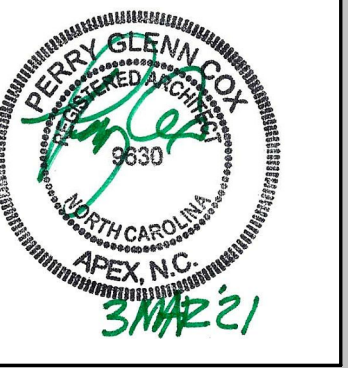
NO.	REVISION	DATE

SHEET DESCRIPTION
ROOF PLAN

PROJECT #: 2018.037
 DATE ISSUED: 12/14/2021
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 CHECKED BY: PGC/DSC

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 GREENFIELD COMMUNITIES
 CLUBHOUSE & POOL
 Fuquay-Varina, NC**





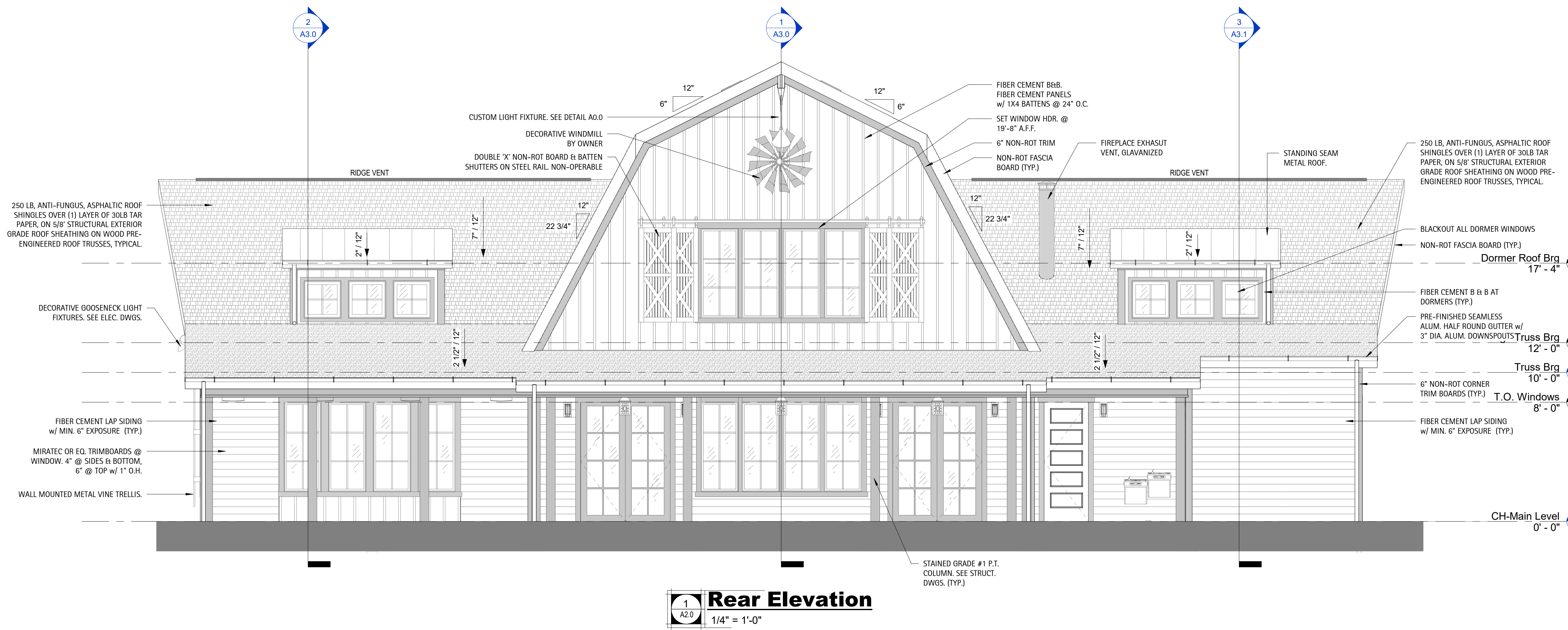
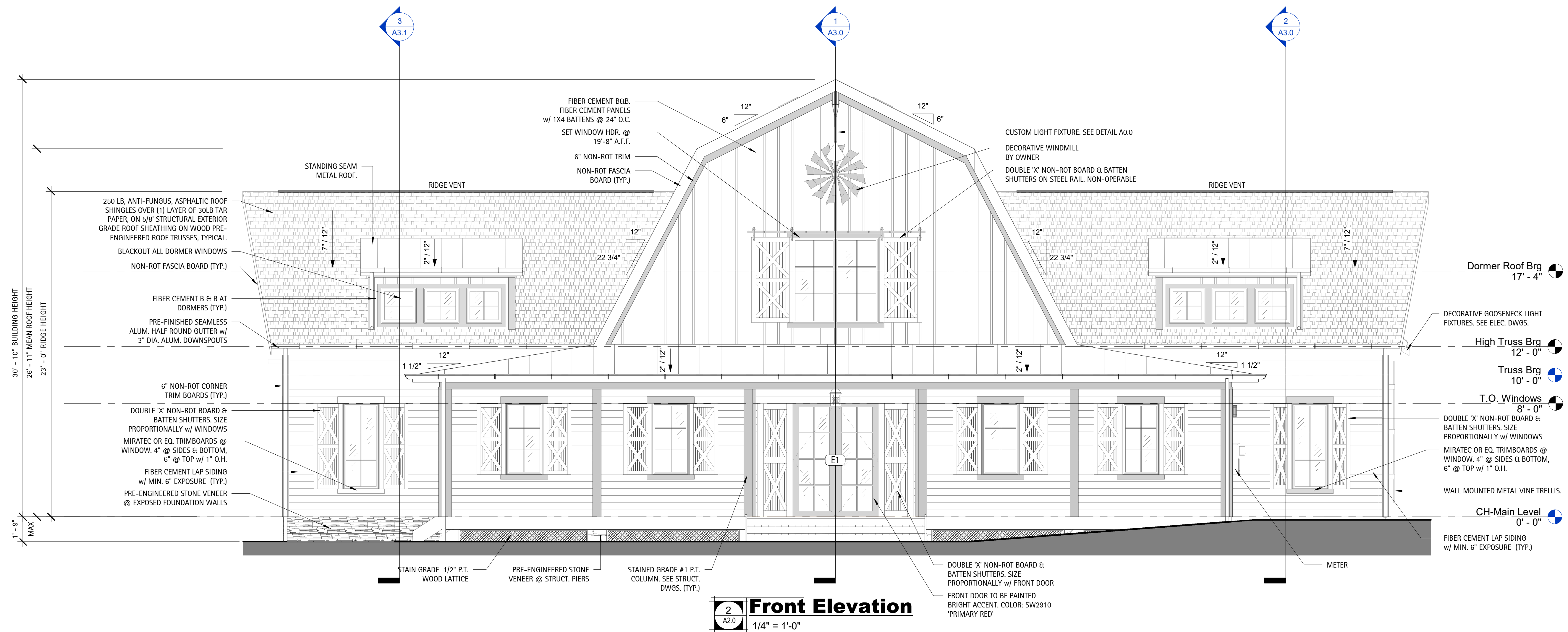
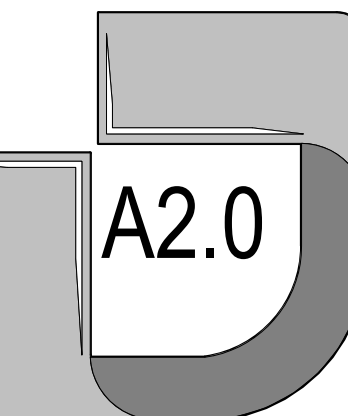
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architect, p.a.
124 Salem Towne Court, Apex, NC 27502
P: 919.363.5411
www.pcoxdesign.com

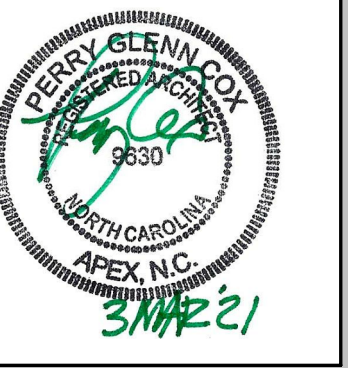
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SHEET DISCUSSION
CLUBHOUSE ELEVATIONS

PROJECT #: 2018.037
DATE ISSUED: 12/14/2021
DRAWING BY: JGM/BSJ
CHECKED BY: DSC/PBC

**SERENITY AMENITY
GREENFIELD COMMUNITIES
CLUBHOUSE & POOL**
Fuquay-Varina, NC



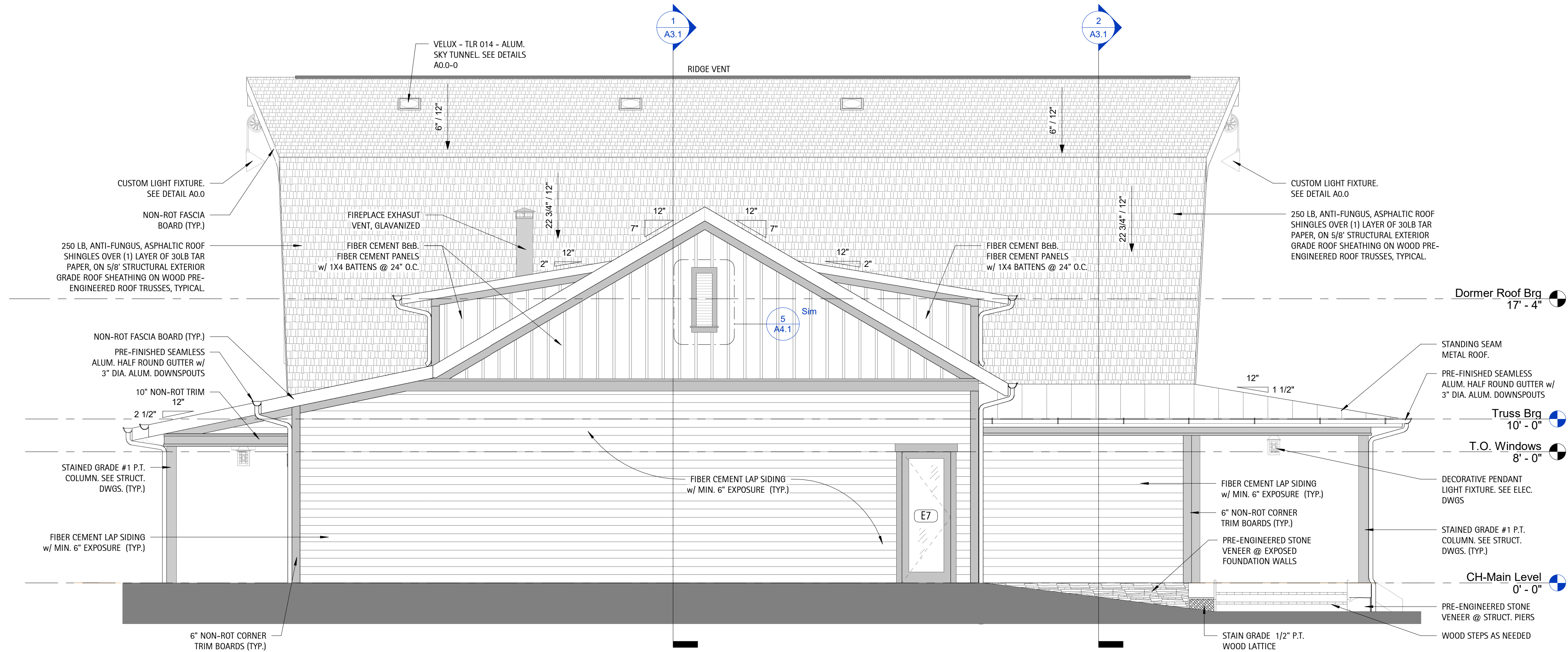


NO.	REVISION	DATE

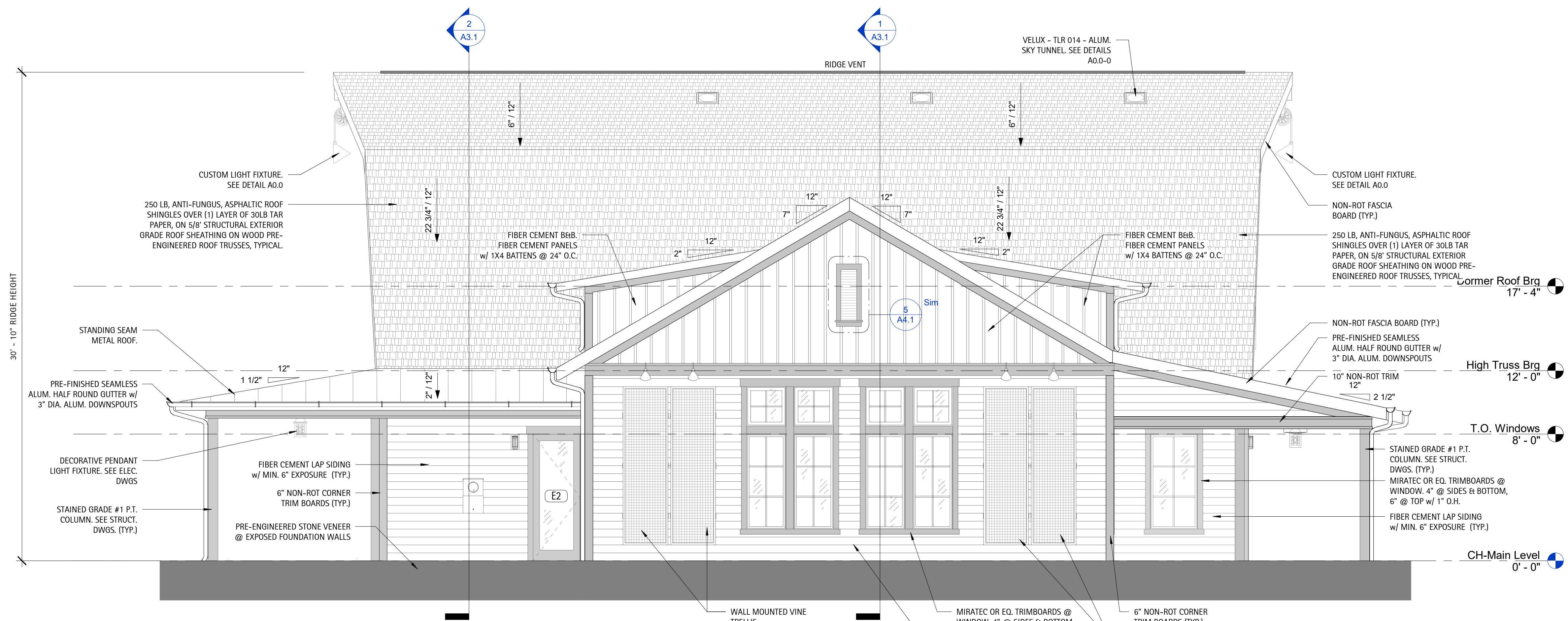
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CLUBHOUSE ELEVATIONS

PROJECT #:	2018.037
DATE ISSUED:	12/14/2021
DRAWING BY:	JGM/BSJ
CHECKED BY:	DSC/PGC

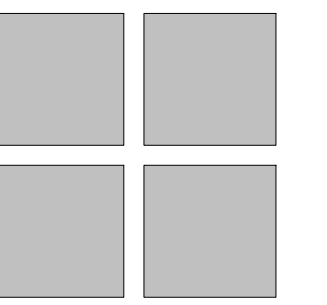
**SERENITY AMENITY
GREENFIELD COMMUNITIES
CLUBHOUSE & POOL
Fuquay-Varina, NC**



2
A2.1
Left Side Elevation
1/4" = 1'-0"



1
A2.1
Right Side Elevation
1/4" = 1'-0"



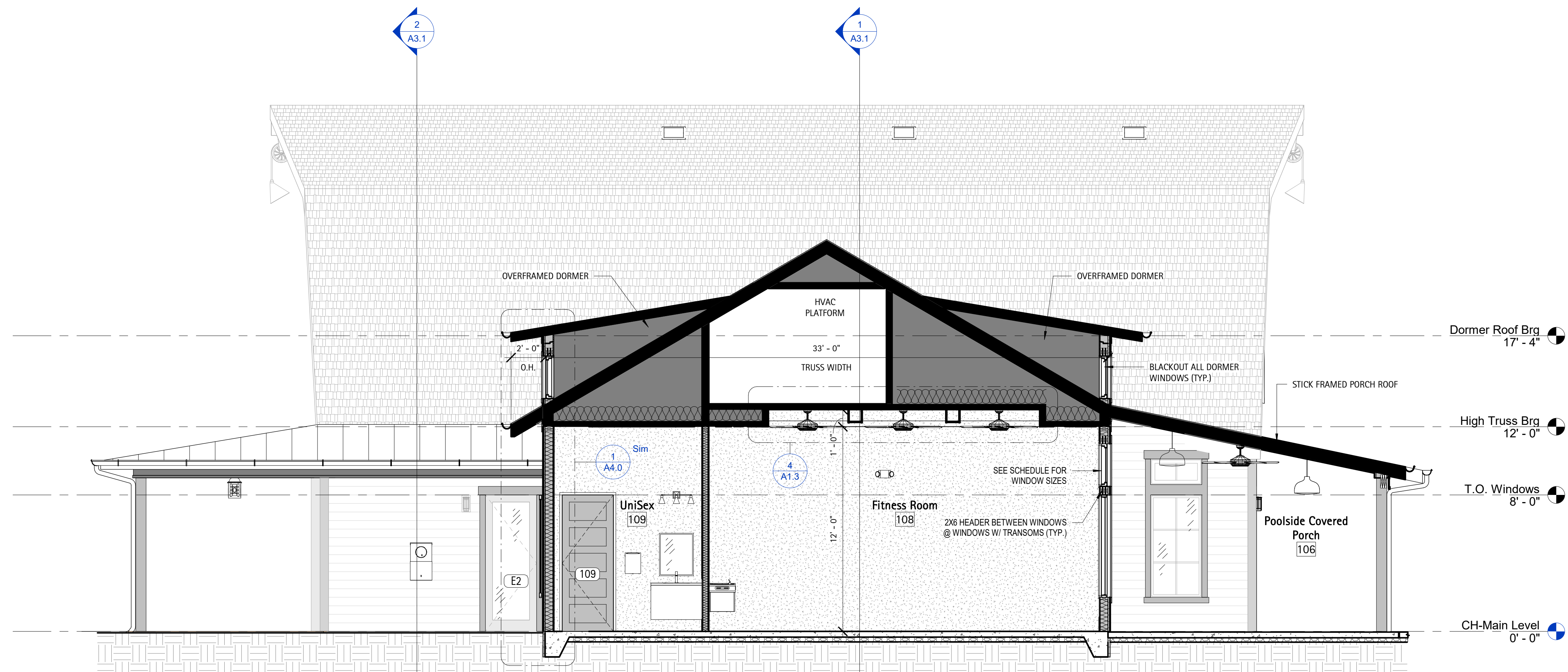
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124 Salem Towne Court, Apex, NC 27502
P: 919.363.5411
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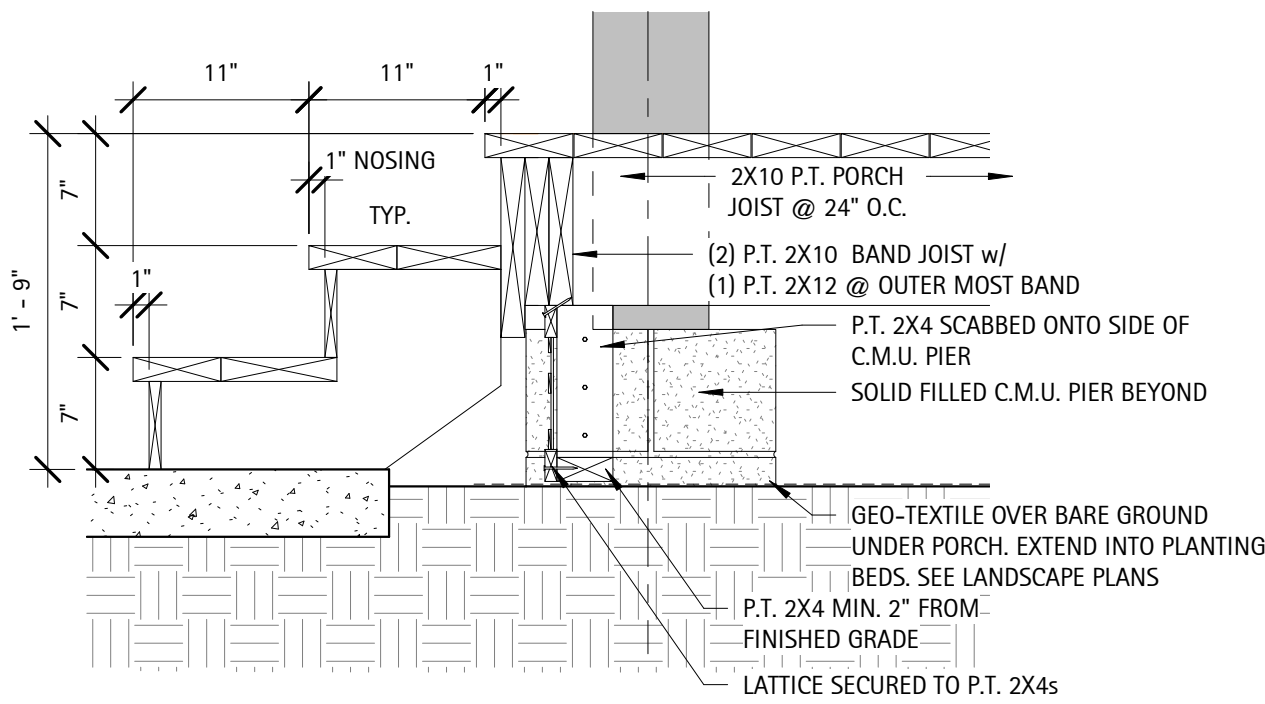
SHEET DESCRIPTION
BUILDING SECTIONS

PROJECT #: 2018.037
DATE ISSUED: 12/14/2021
DRAWING BY: JGM/BSJ
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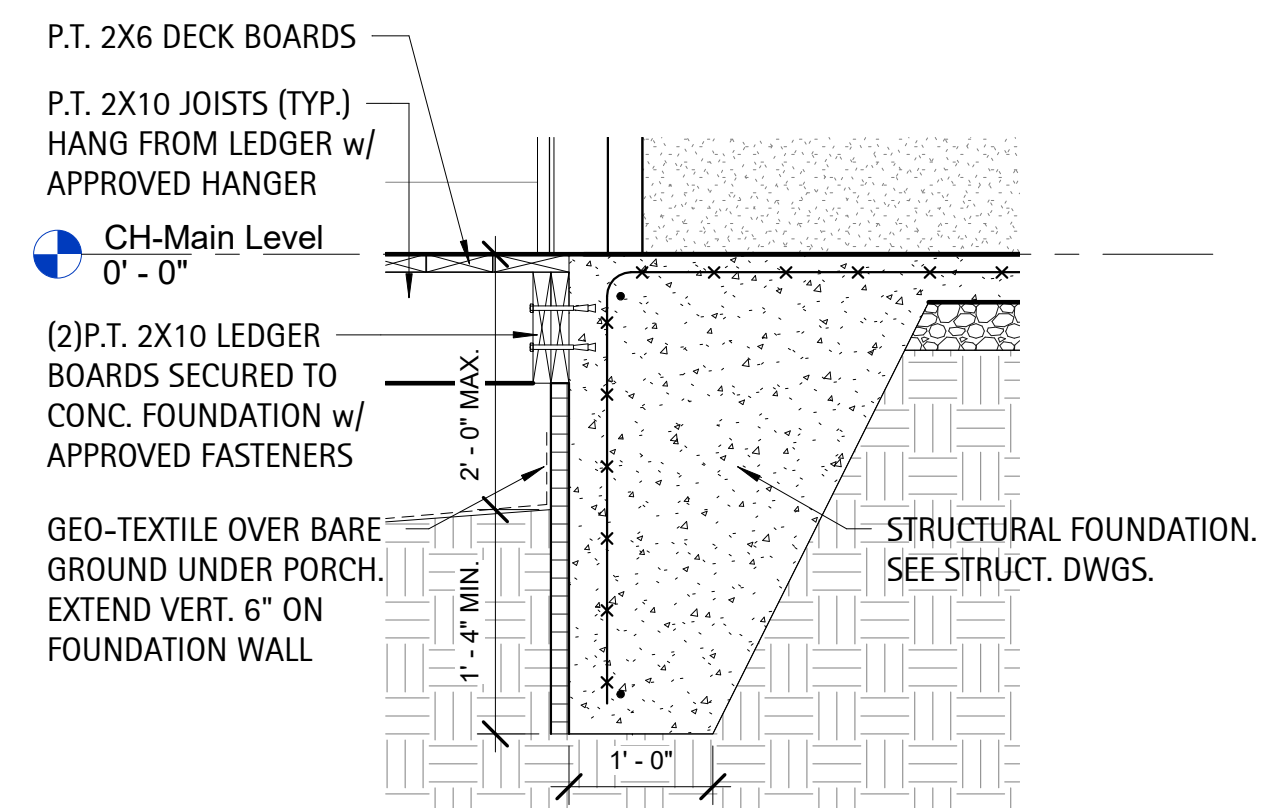
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GREENFIELD COMMUNITIES
CLUBHOUSE & POOL**
Fuquay-Varina, NC



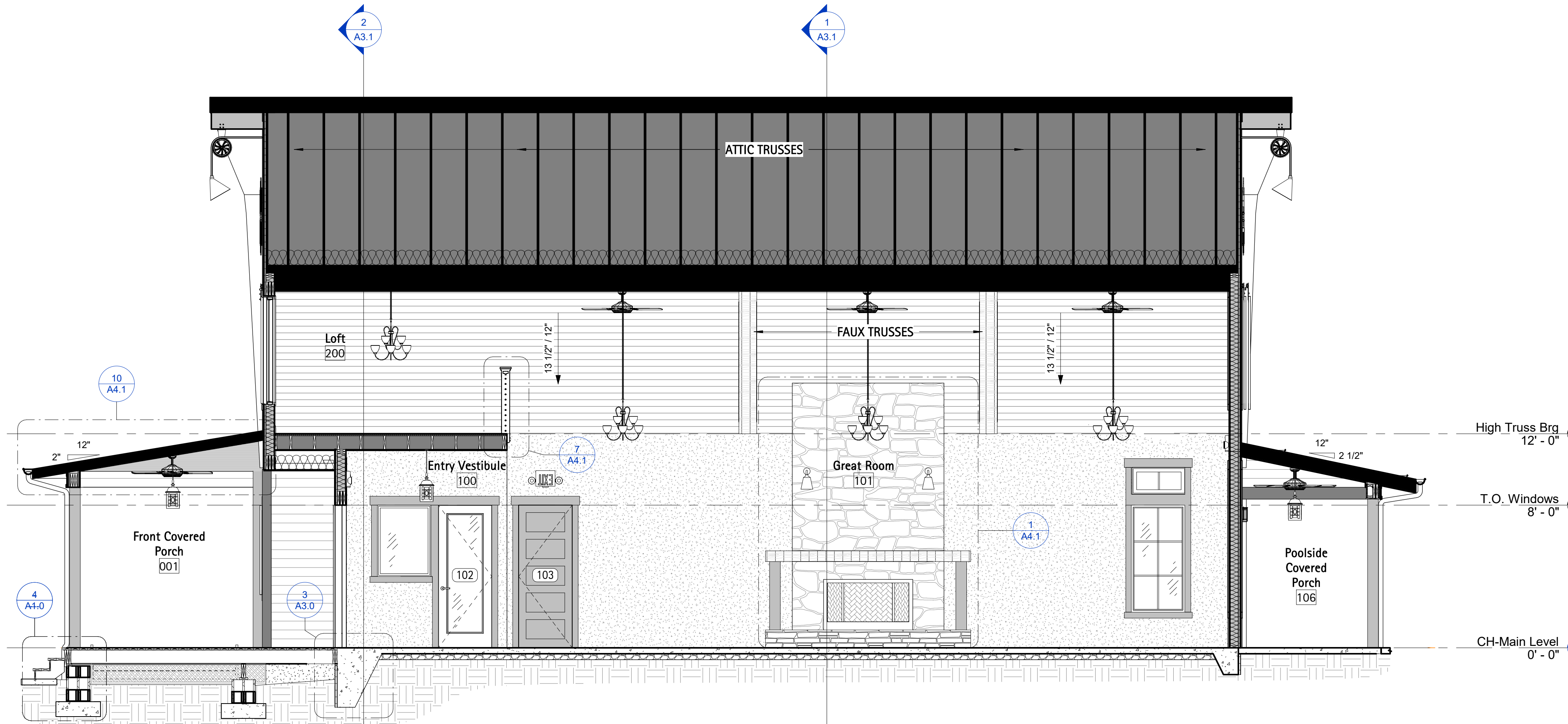
Section - CH Through Fitness Room
1/4" = 1'-0"



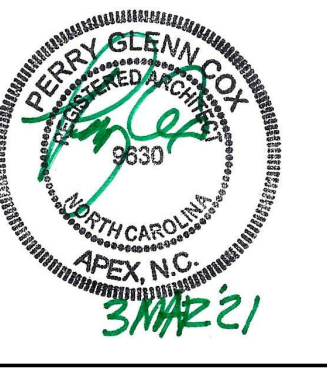
Detail - Typical Porch Steps
1" = 1'-0"



Detail - Ledger at Slab Edge
3/4" = 1'-0"



Section - CH Through Main Ridge
1/4" = 1'-0"

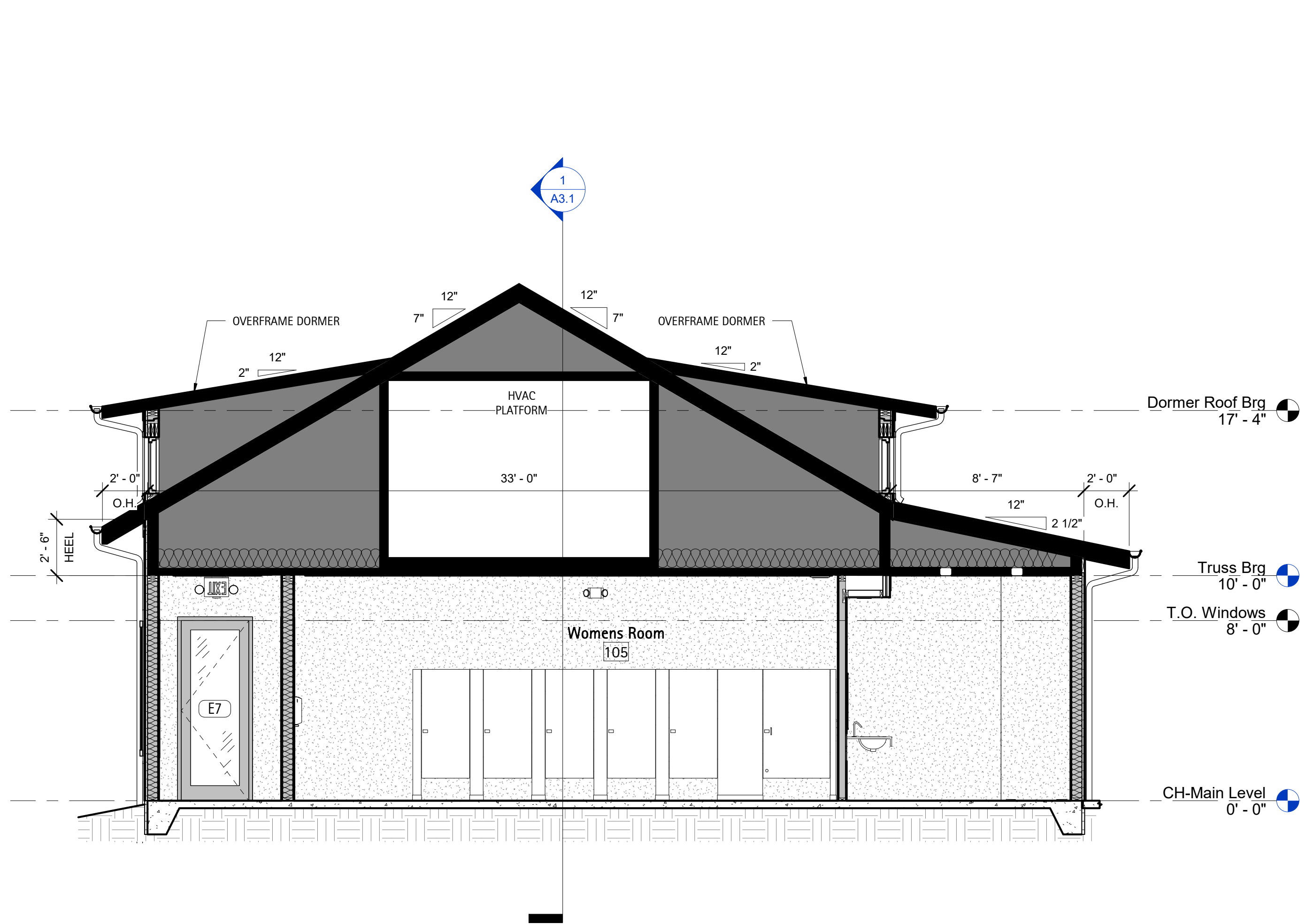


NO.	REVISION	DATE

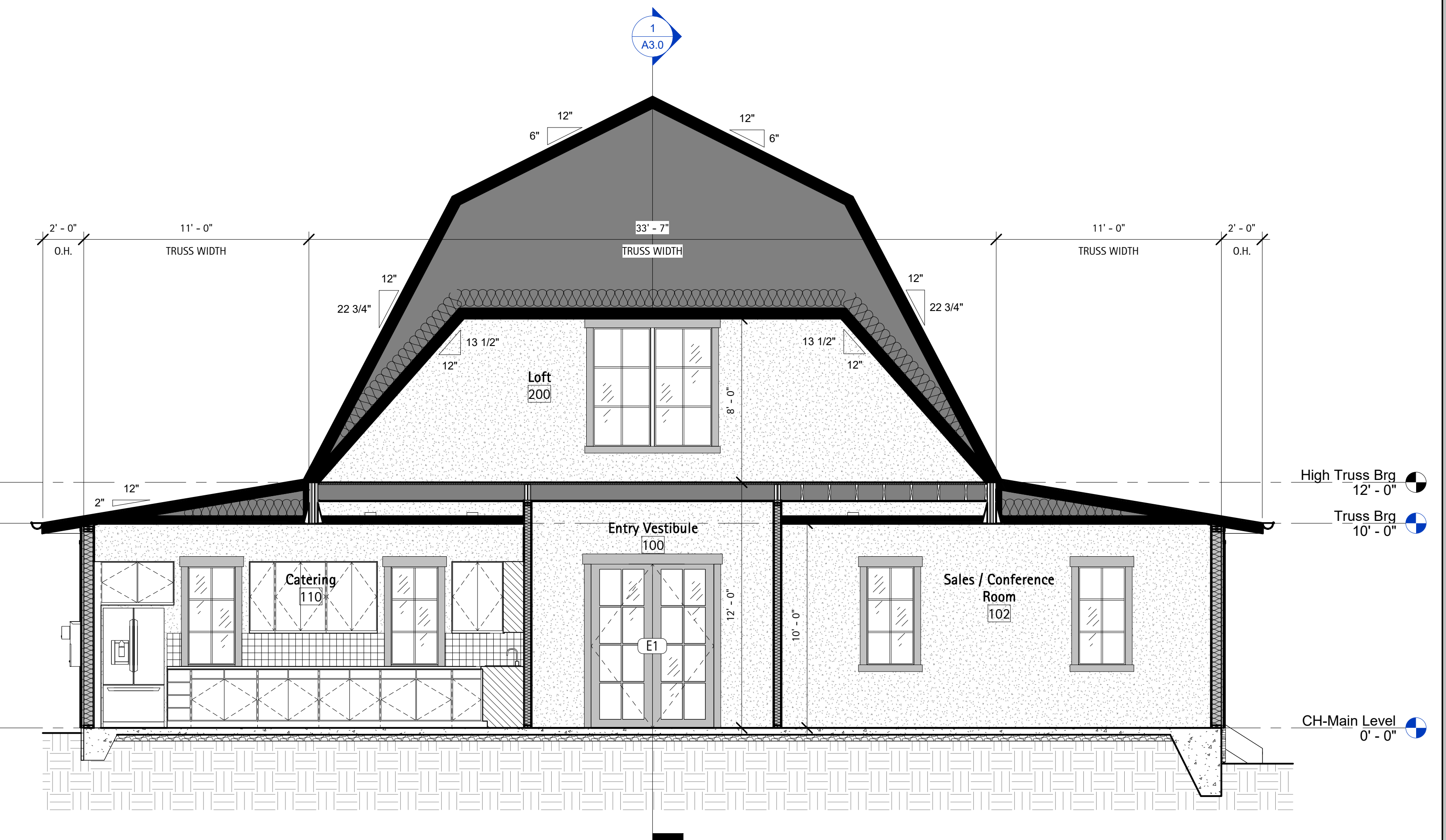
SHEET DESCRIPTION
BUILDING SECTIONS

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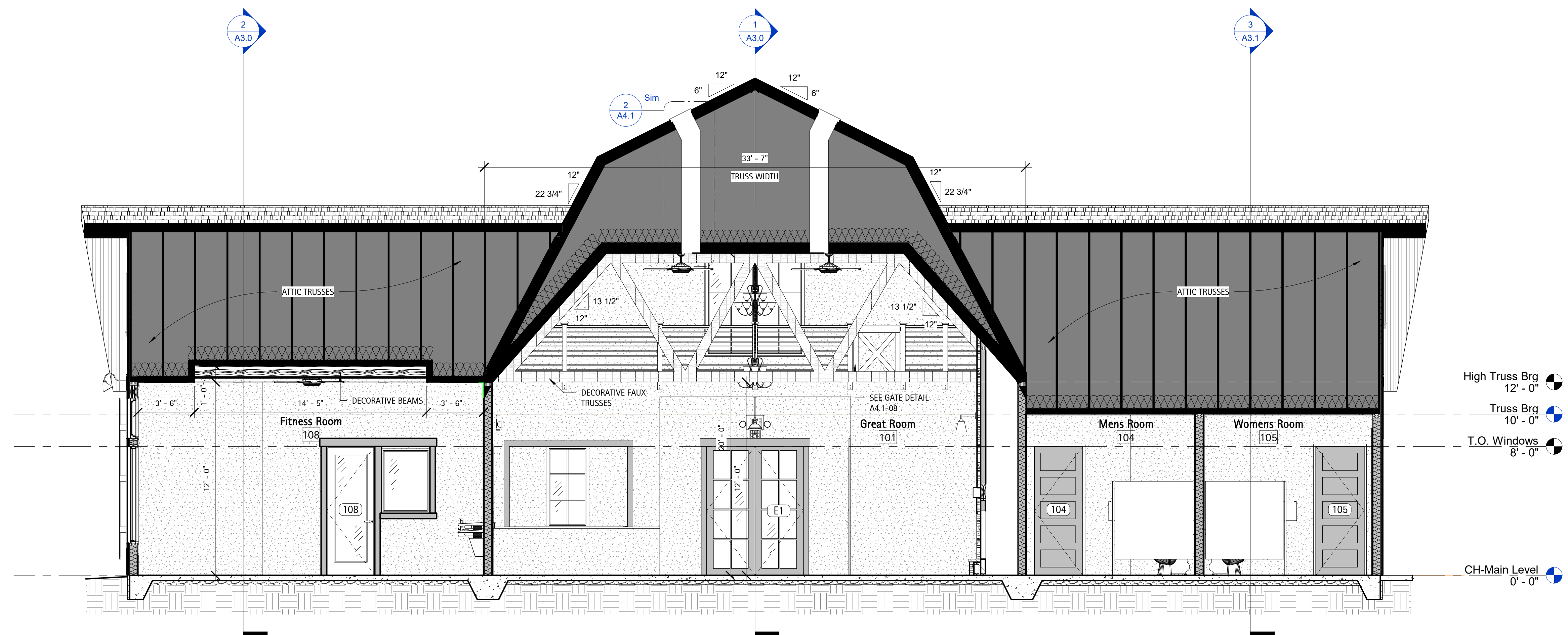
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3 Section - CH Through Restrooms
1/4" = 1'-0"



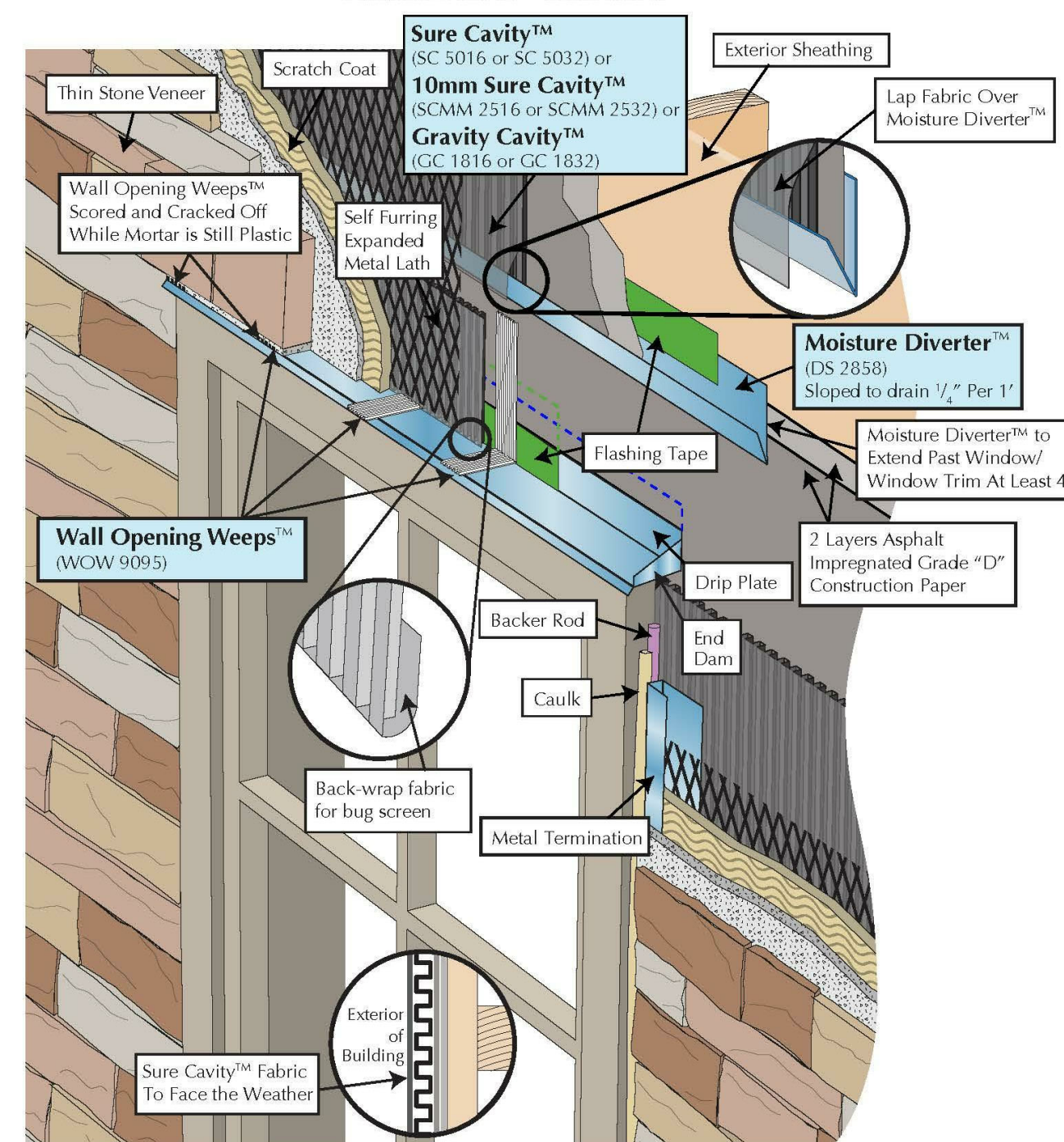
2 Section - CH Through Office/Catering
1/4" = 1'-0"



1 Section - CH Left to Right Facing Entry
1/4" = 1'-0"

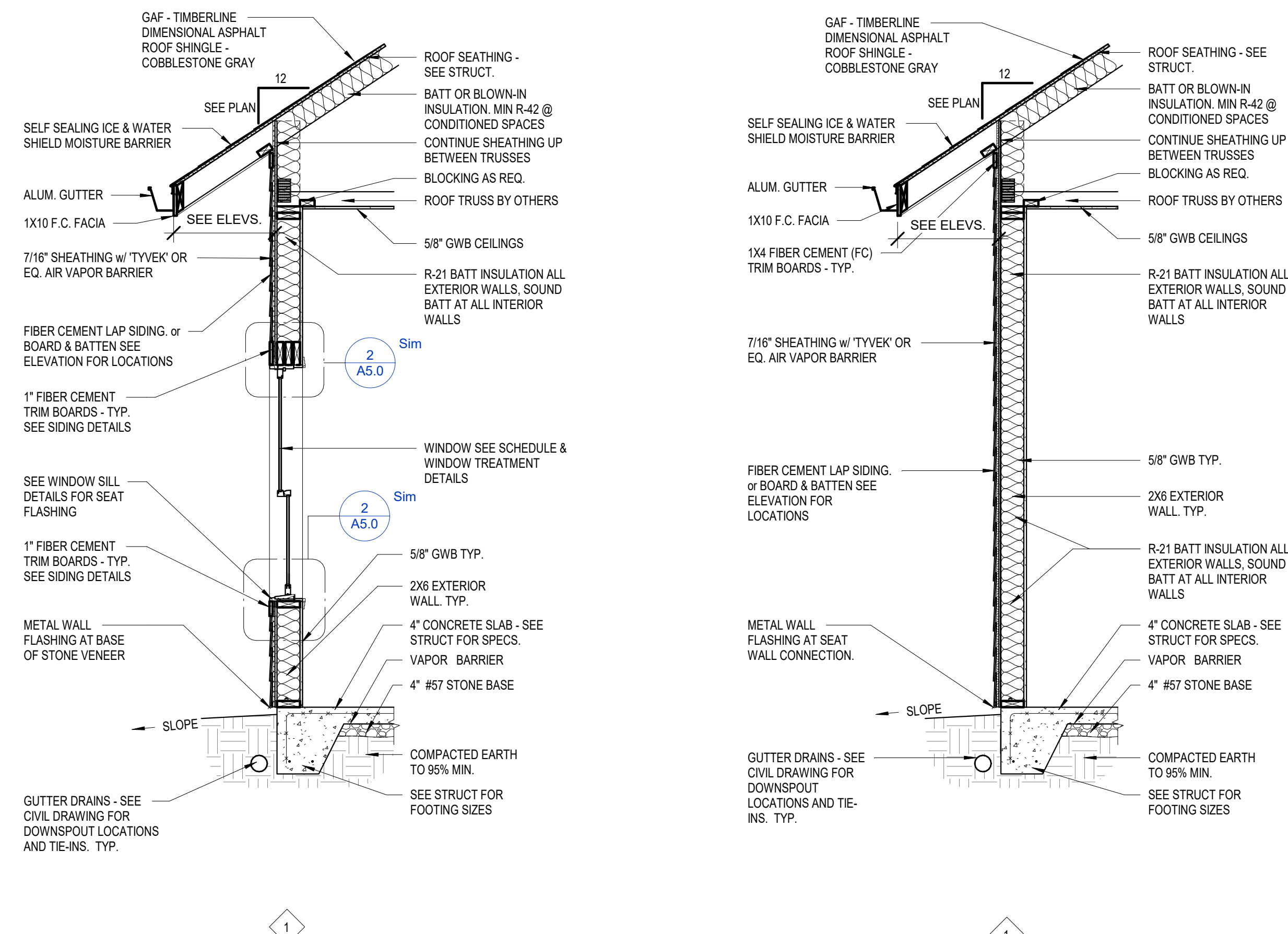
Thin Stone Veneer Weep Systems and Drainage Plane with Moisture Diverter™ at Top of Window

Sure Cavity™ (SC 5016 or SC 5032) or 10mm Sure Cavity™ (SCMM 2516 or SCMM 2532) or Gravity Cavity™ (GC 1816 or GC 1832) and Wall Opening Weeps™ (WOW 9095) and Moisture Diverter™ (WSD 2858)



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01TR03WD002

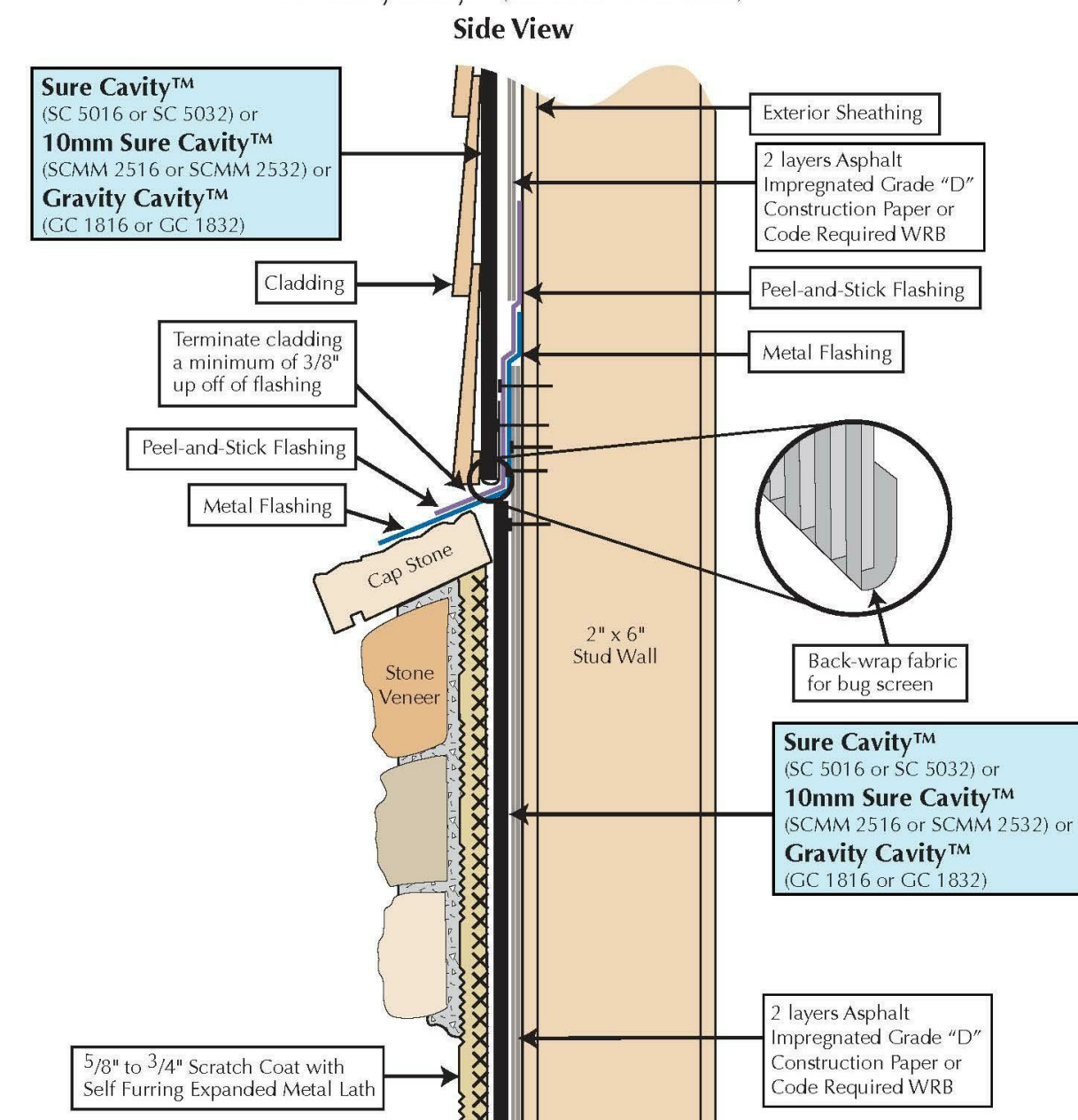


WALL SECTION NOTES

- 1 Bituminous Damp Proofing shall be applied to exterior foundations of all habitable spaces.
- 2 All treated lumber shall bear the designation AWPA C22. Pressure treated lumber shall be used in the following locations:
 - a. Wood in contact with concrete or masonry;
 - b. Siding within 6" of the ground;
 - c. Wood exposed to weather.
- 4 Install 5/8" Densglass sheathing behind all tub and shower walls, use water-resistant GWB for all bathroom ceilings UNO.

Cladding Systems to Thin Stone Veneer Installation

Sure Cavity™ (SC 5016 or SC 5032) or 10mm Sure Cavity™ (SCMM 2516 or SCMM 2532) or Gravity Cavity™ (GC 1816 or GC 1832)

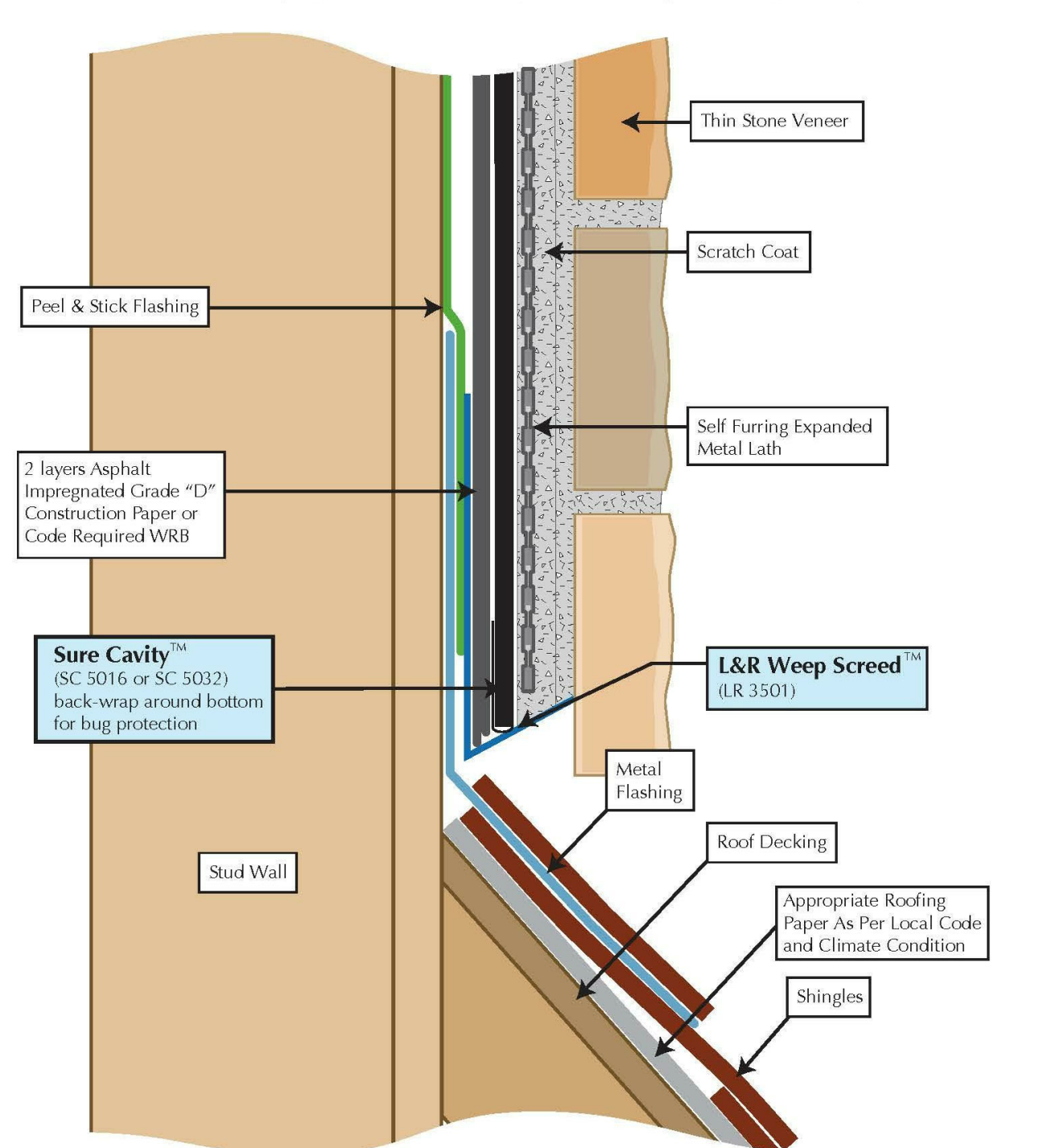


30TR06WD001

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Thin Stone Veneer Side Wall to Roof Termination Detail

Sure Cavity™ (SC 5016 or SC 5032) and L&R Weep Screenshot™ (LR 3501)

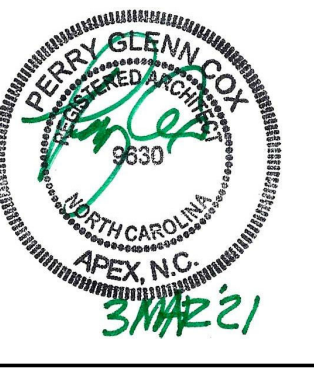


30TR07WD002

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2 Detail - Stone Veneer on Sheathing
 A4.0 12" = 1'-0"

1 Section - Typ. Exterior Walls
 A4.0 1/2" = 1'-0"



Perry Cox
 architect, p.a.
 124 Salem Towne Court, Apex, NC 27502
 P: 919.363.5411
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SHEET DESCRIPTION	
WALL SECTIONS & DETAILS	
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CLUBHOUSE & POOL
 Fuquay-Varina, NC

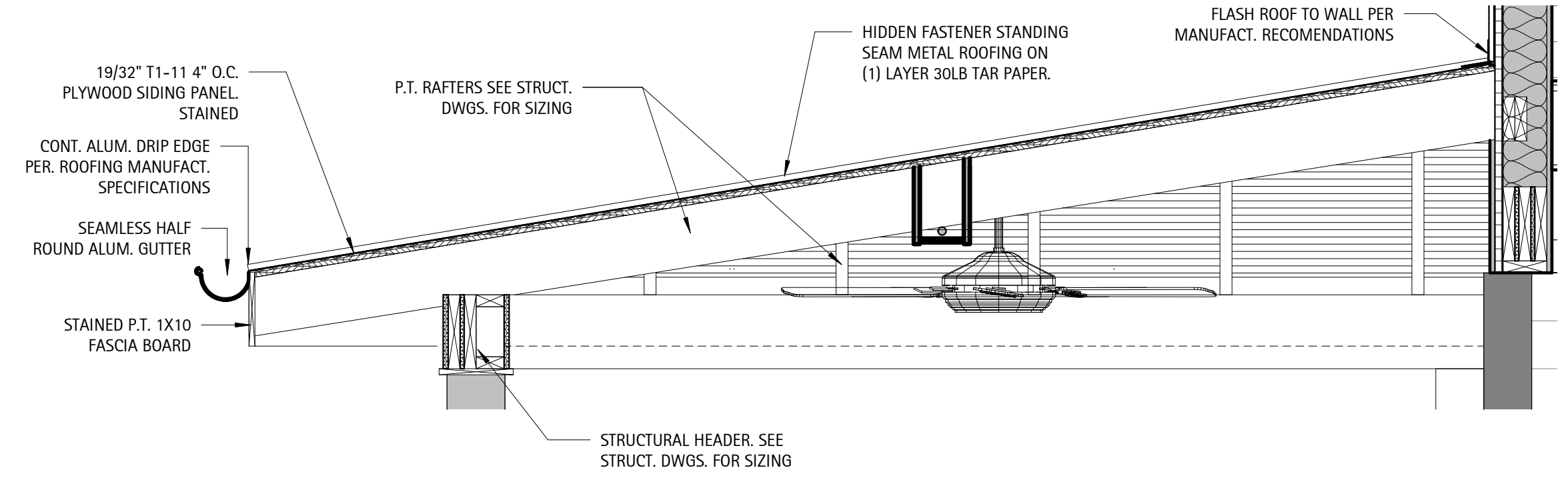
A4.0



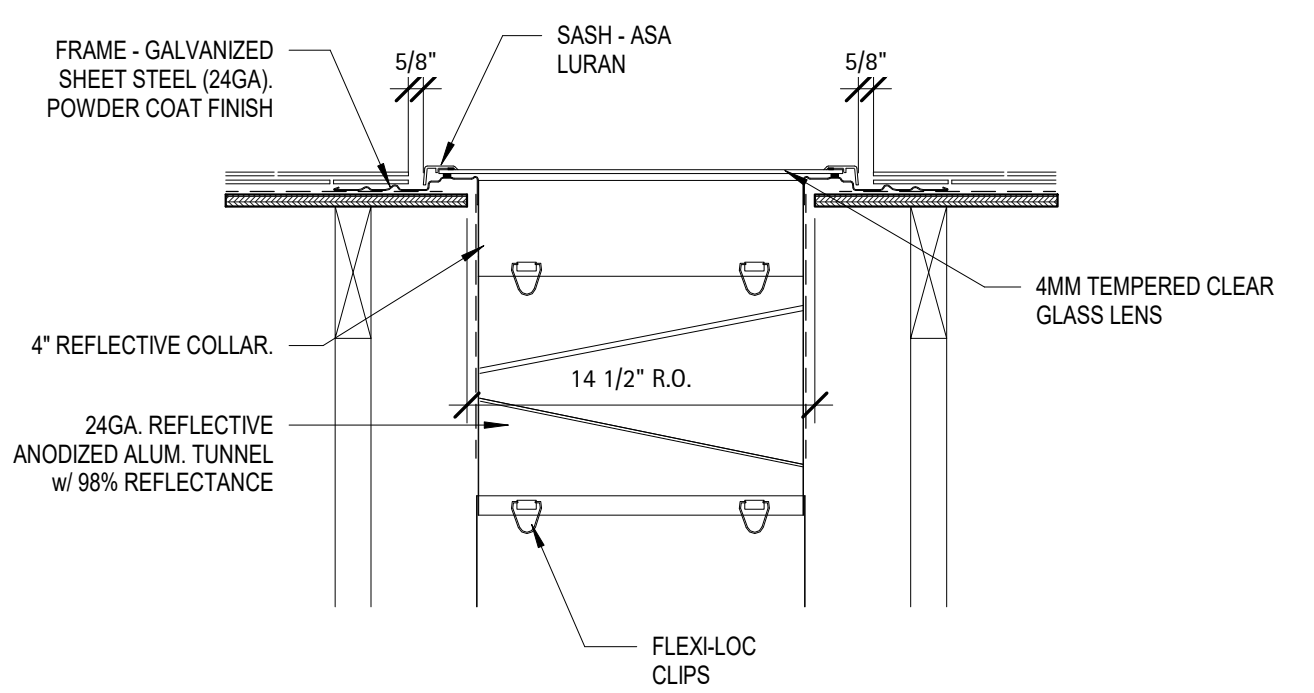
NO.	REVISION	DATE

SHEET DESCRIPTION	
BUILDING DETAILS	
PROJECT #:	2018.037
DATE ISSUED:	12/14/2021
DRAWING BY:	JGM/BSJ
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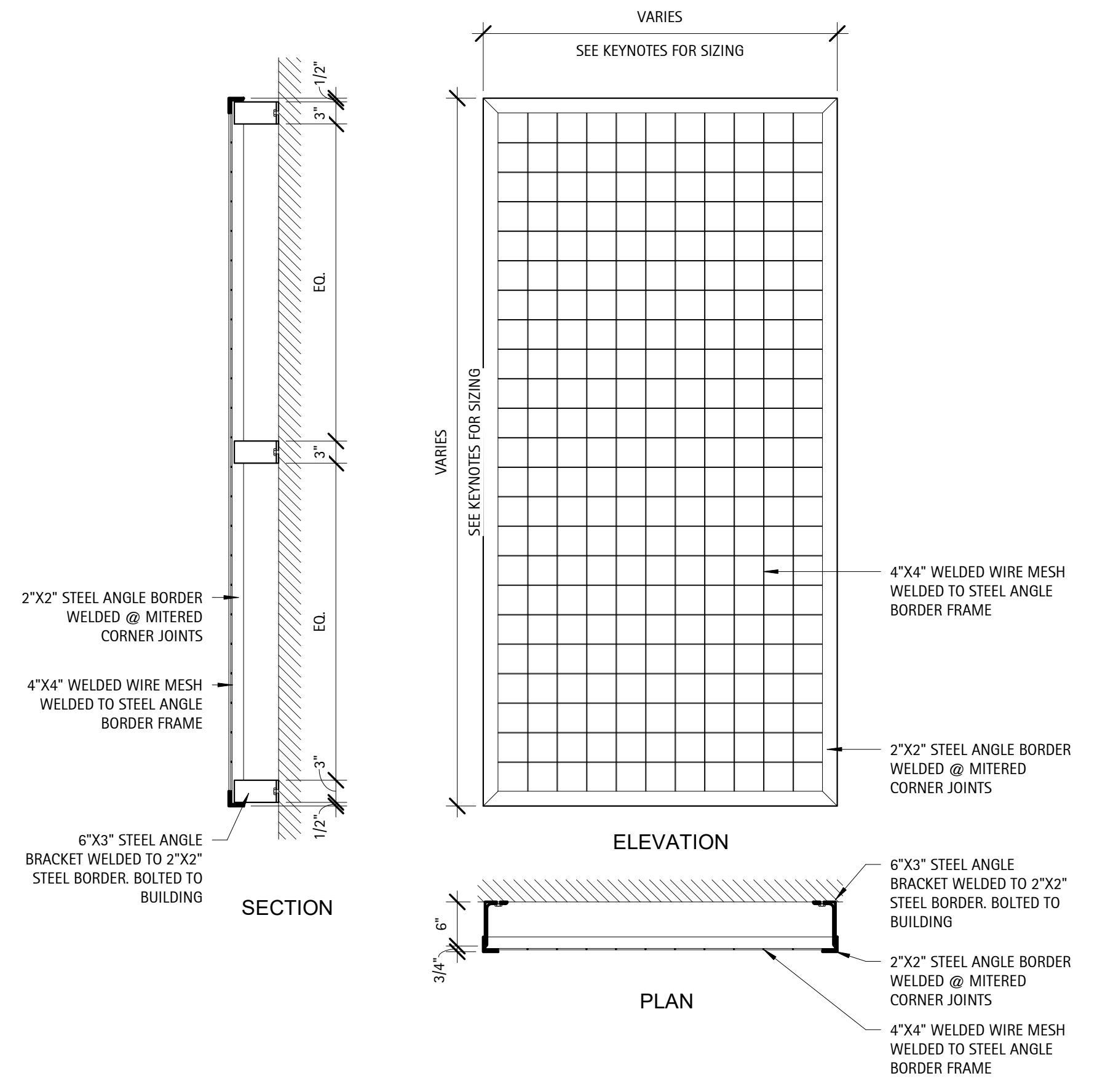
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GREENFIELD COMMUNITIES
CLUBHOUSE & POOL**
Fuquay-Varina, NC



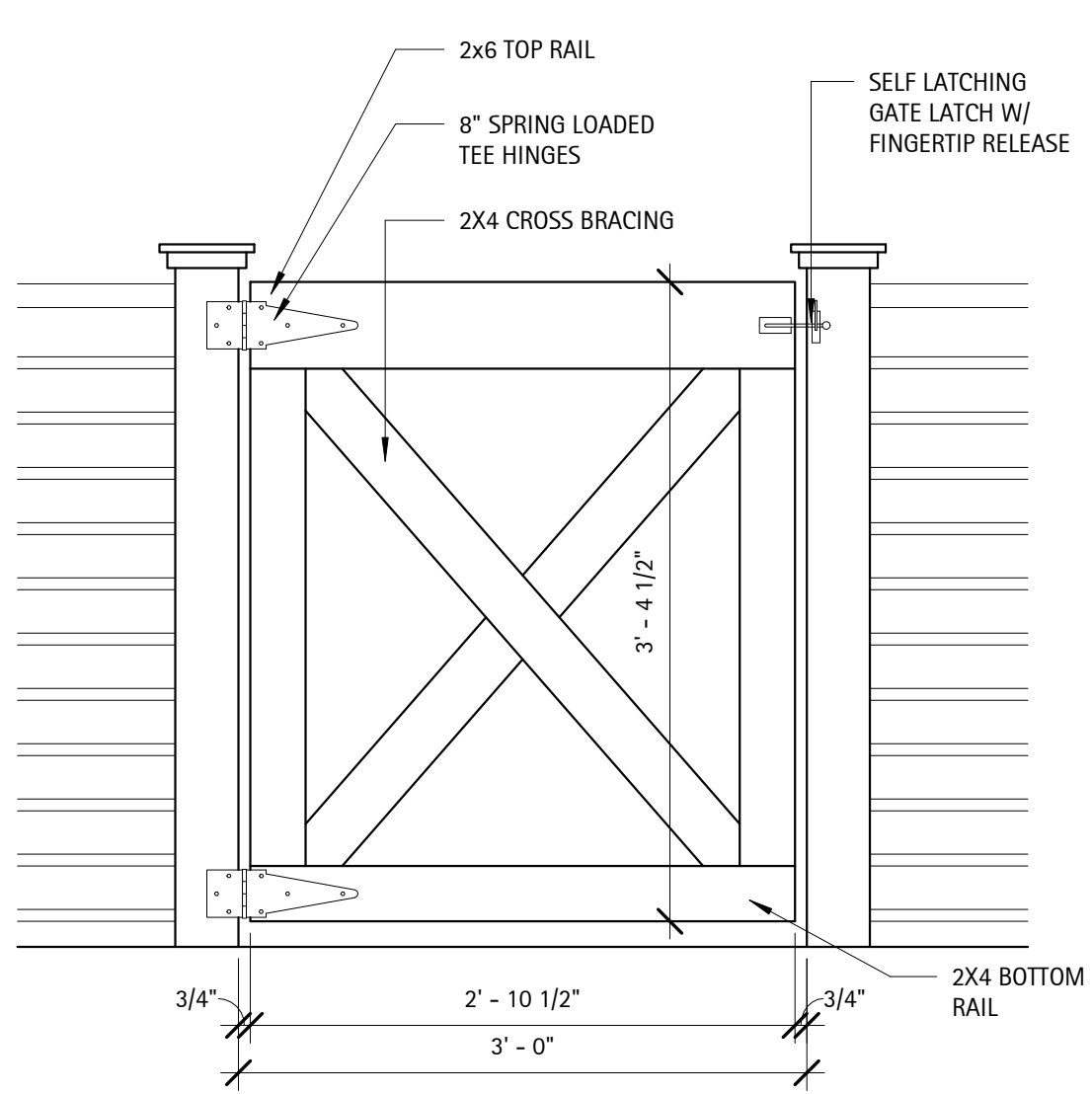
10 Detail - Typ. Porch Roof Framing
3/4" = 1'-0"



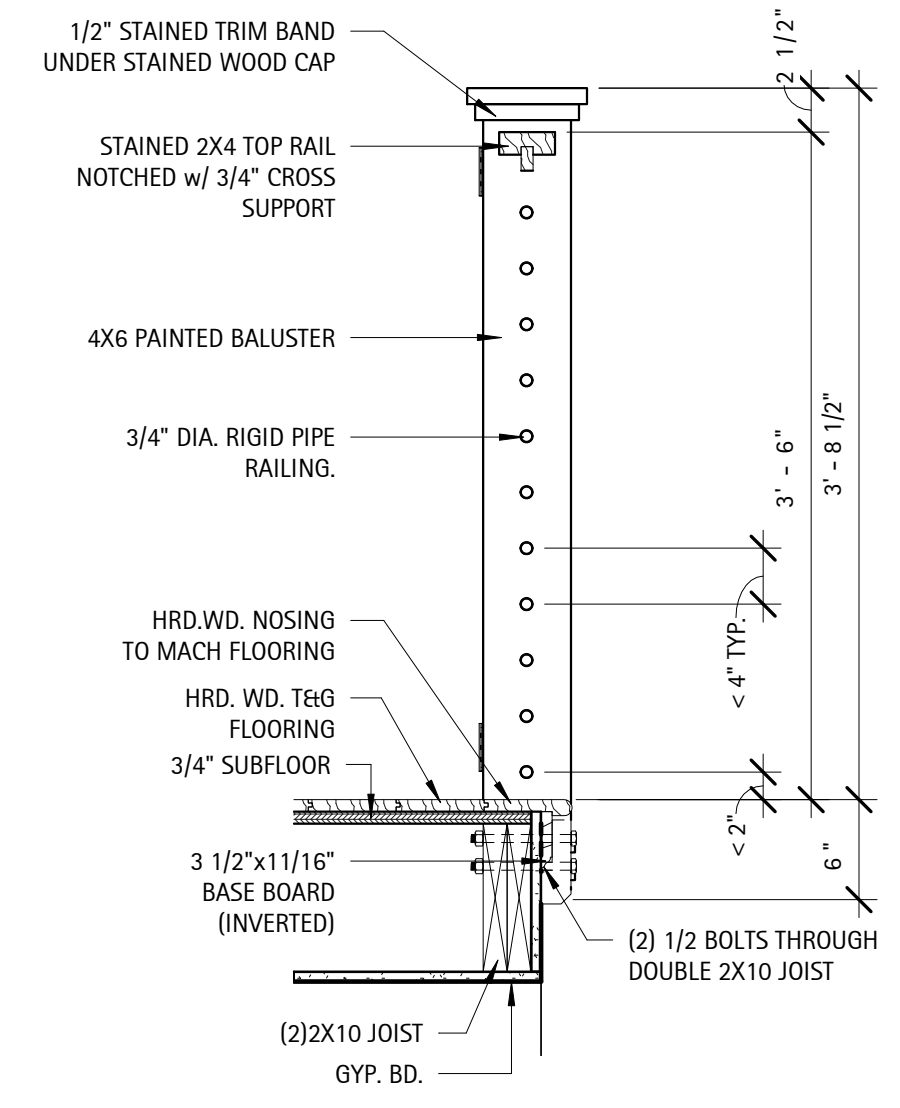
9 Detail - Skylight Roof Flashing
1 1/2" = 1'-0"



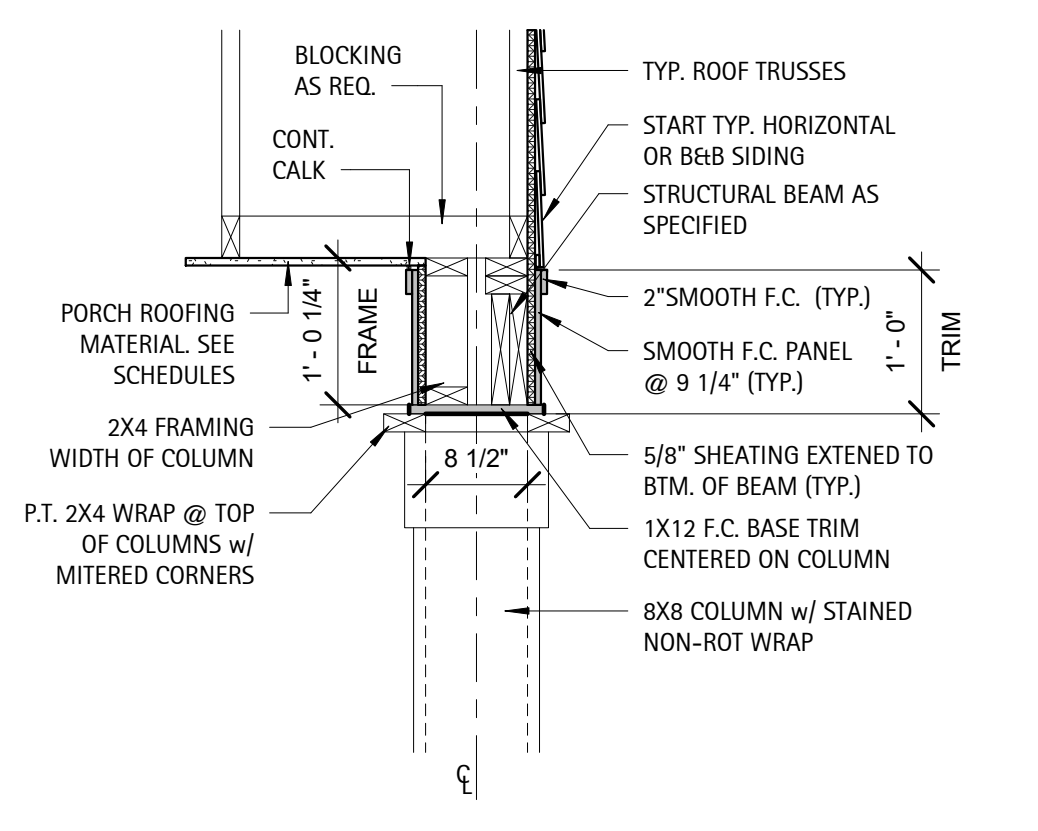
4 Detail - Wall Trellis
3/4" = 1'-0"



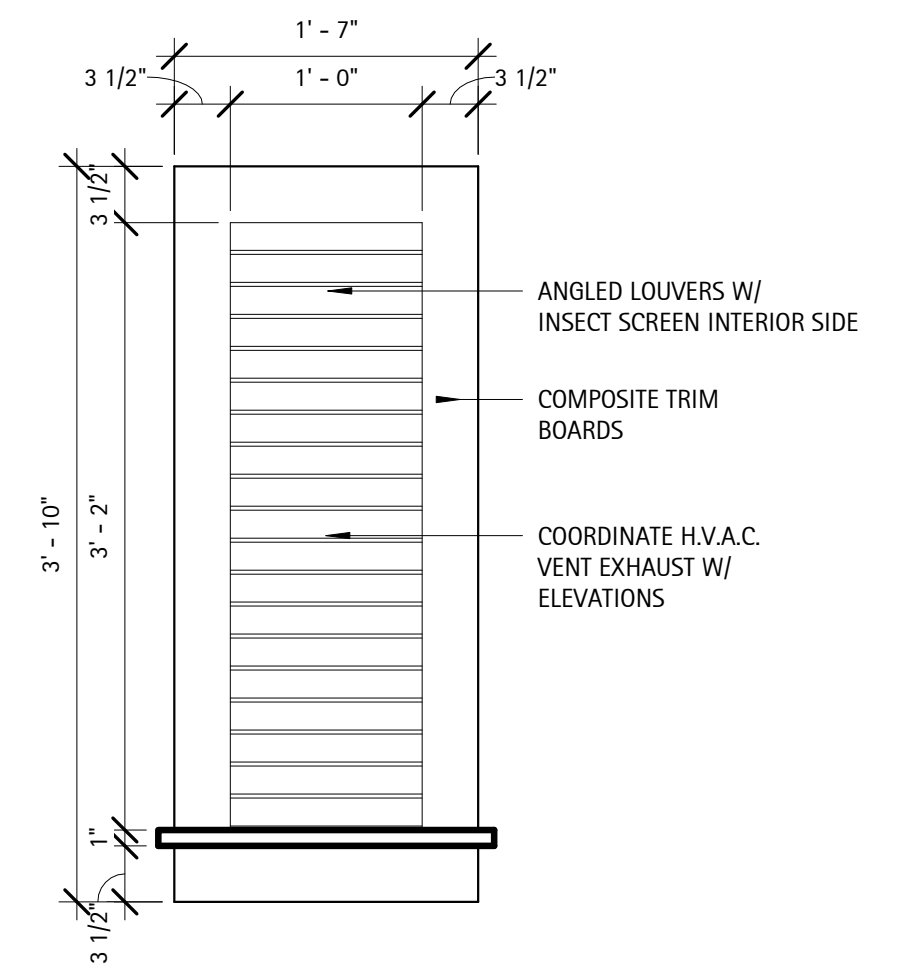
8 Detail - Loft Gate
1" = 1'-0"



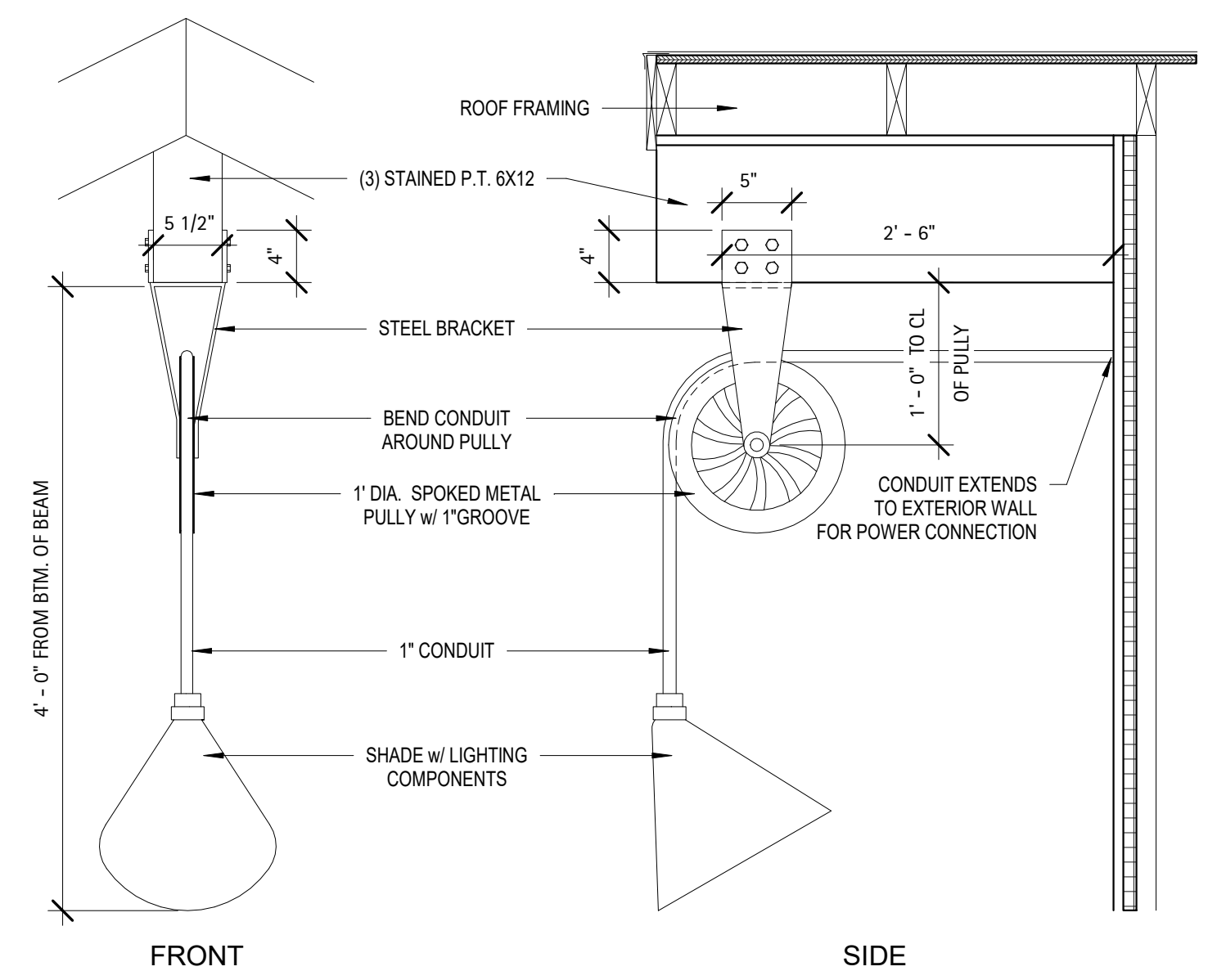
7 Detail - Loft Railing
1" = 1'-0"



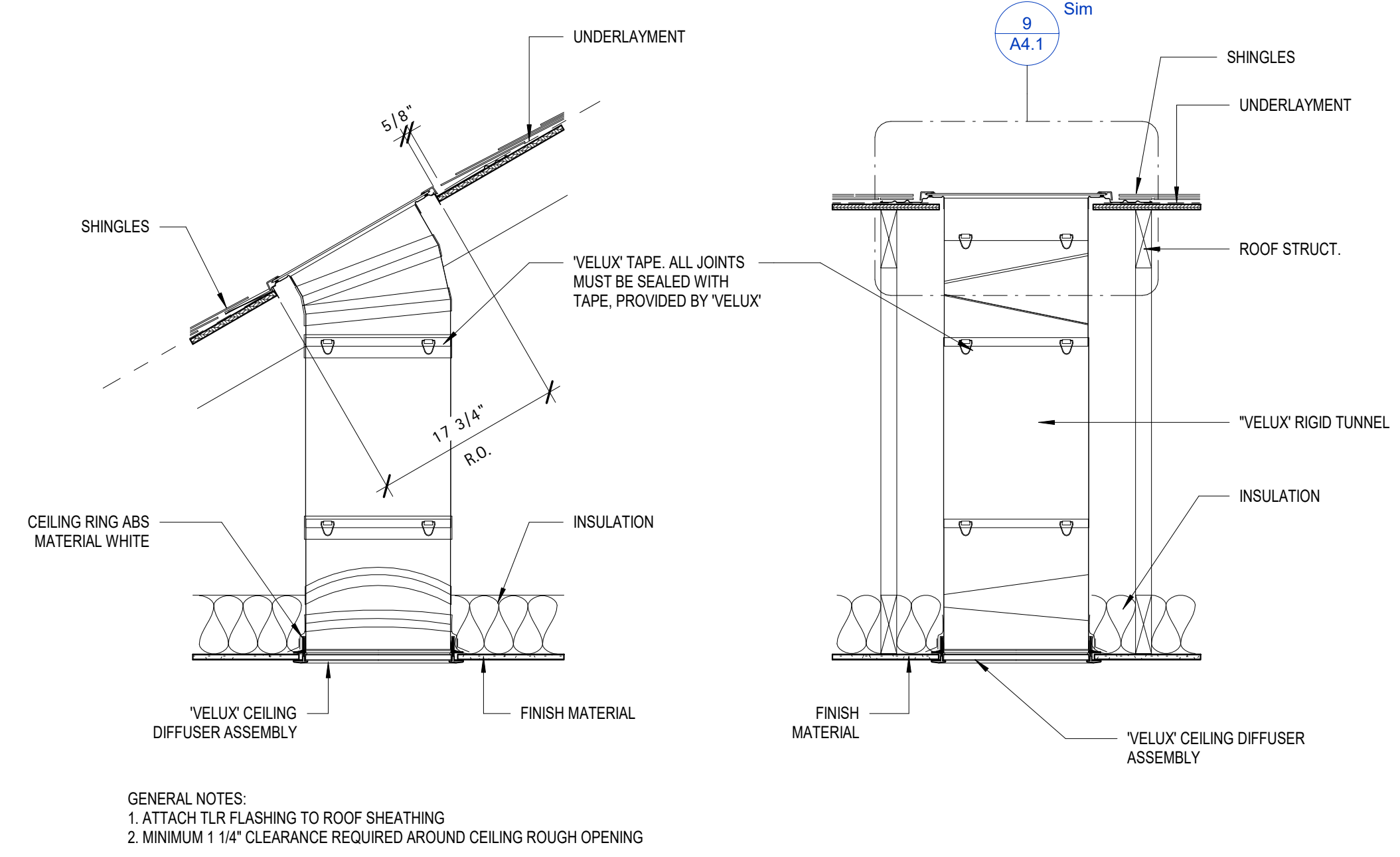
6 Detail - Typical Trim Band
3/4" = 1'-0"



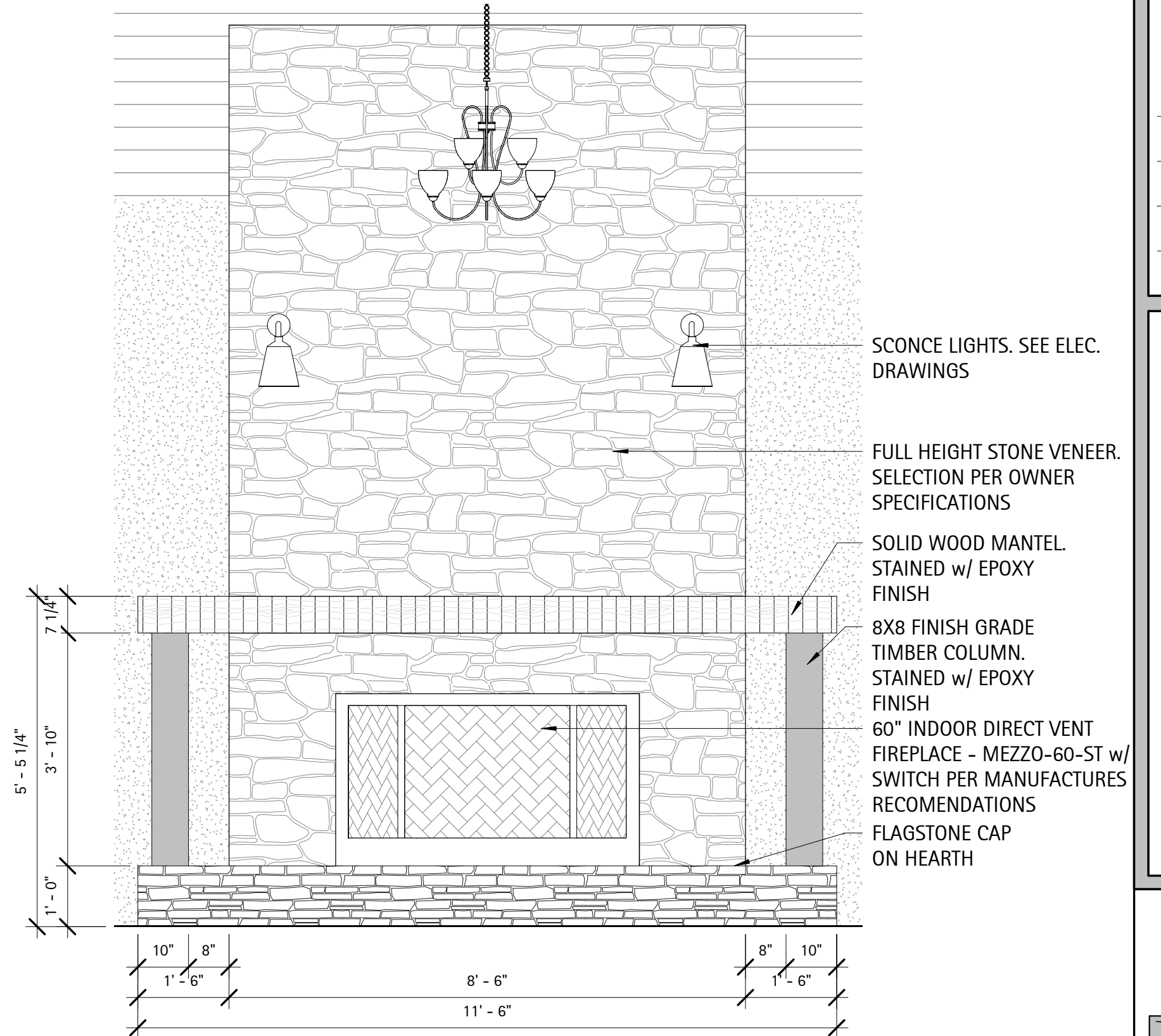
5 Detail - Gable Vents
1" = 1'-0"



3 Detail - Decorative Gable Light
1" = 1'-0"



2 Detail - Skylight
1" = 1'-0"



1 Elevation - Great Room Fireplace
1/2" = 1'-0"

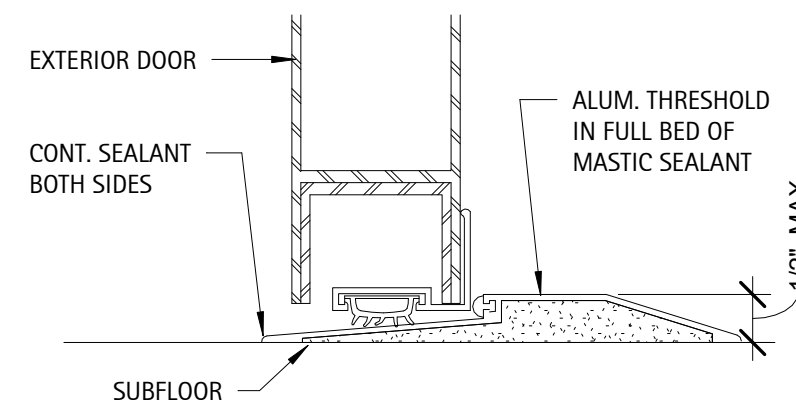


NO.	REVISION	DATE

SHEET DESCRIPTION
BUILDING DETAILS & MILLWORK

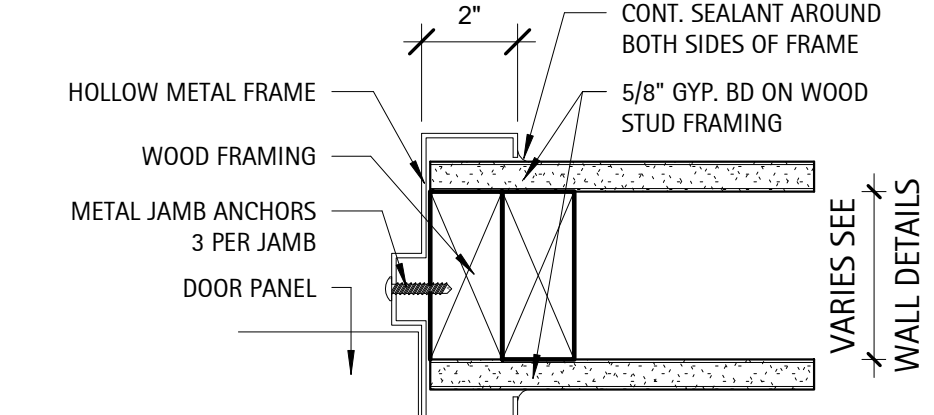
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Fuquay-Varina, NC



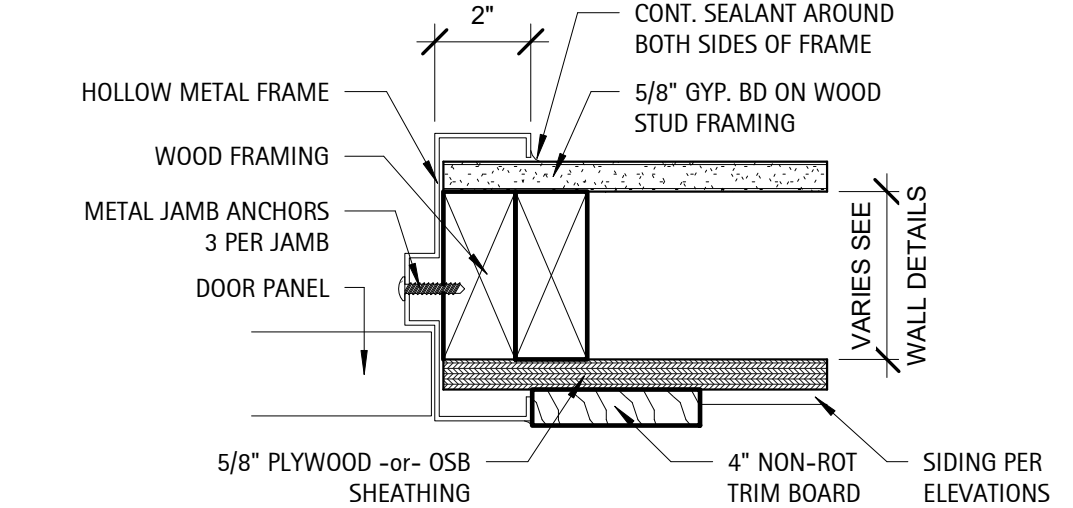
EXTERIOR DOORS THRESHOLD

8 Detail - Typ. Threshold
6" = 1'-0"

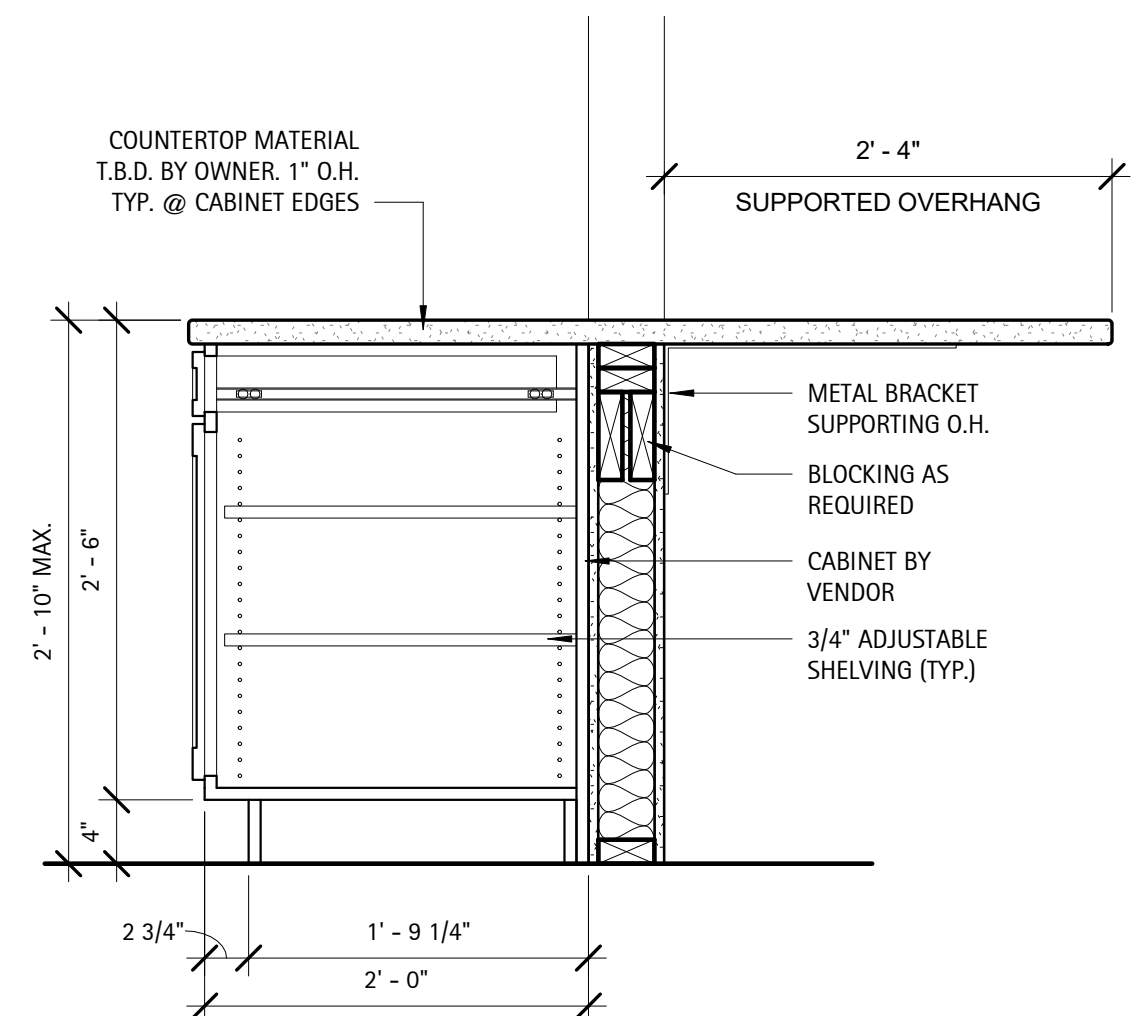


INTERIOR DOOR JAMB

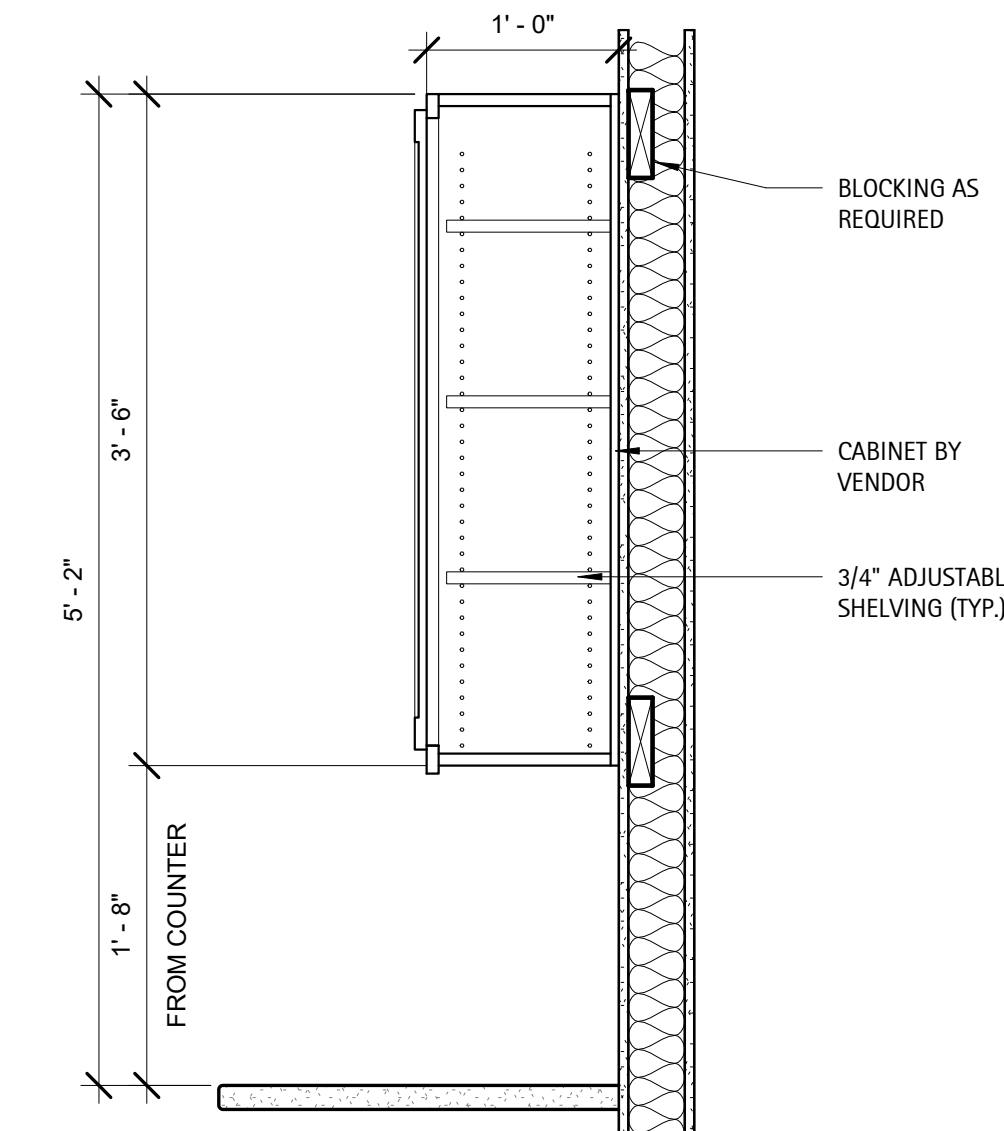
7 Detail - Typ. Door Jambs
3" = 1'-0"



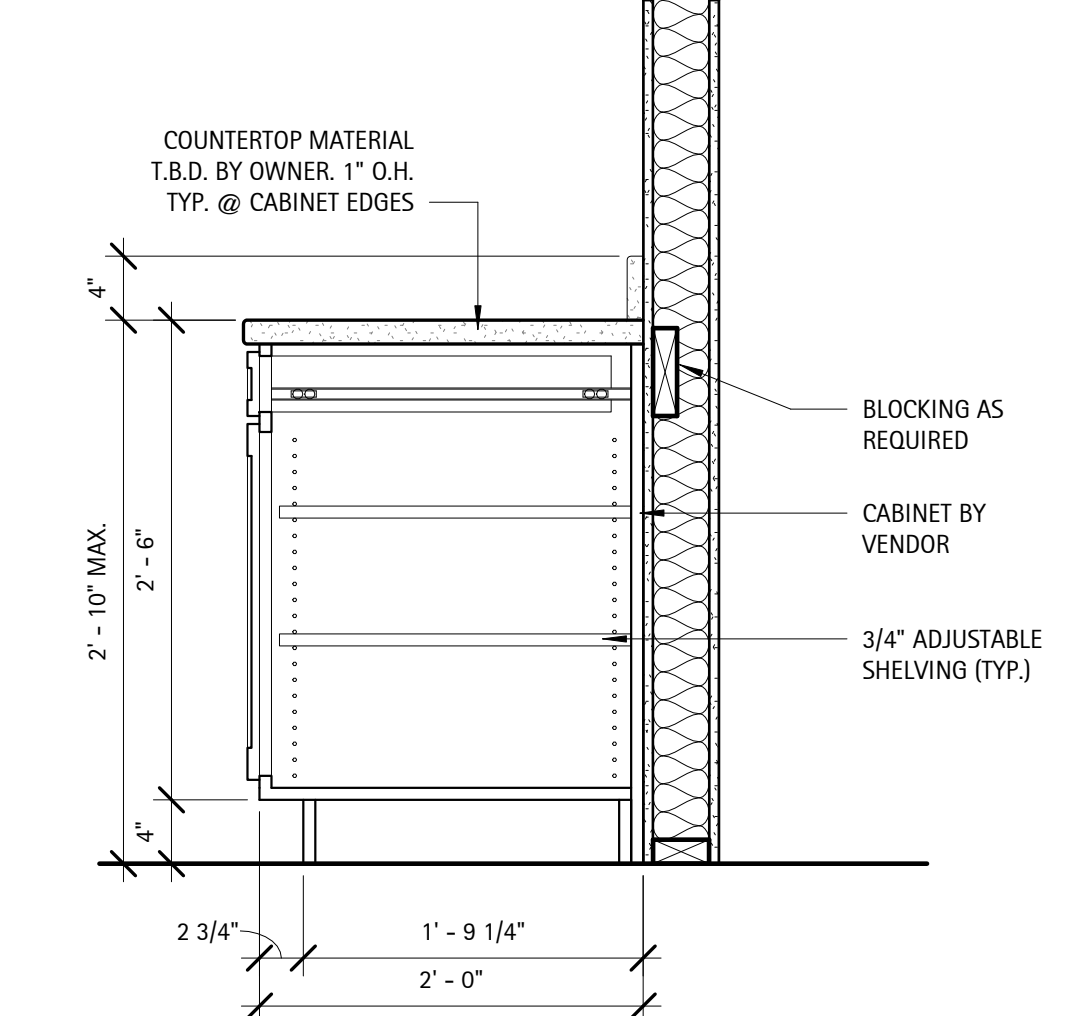
EXTERIOR DOOR JAMB



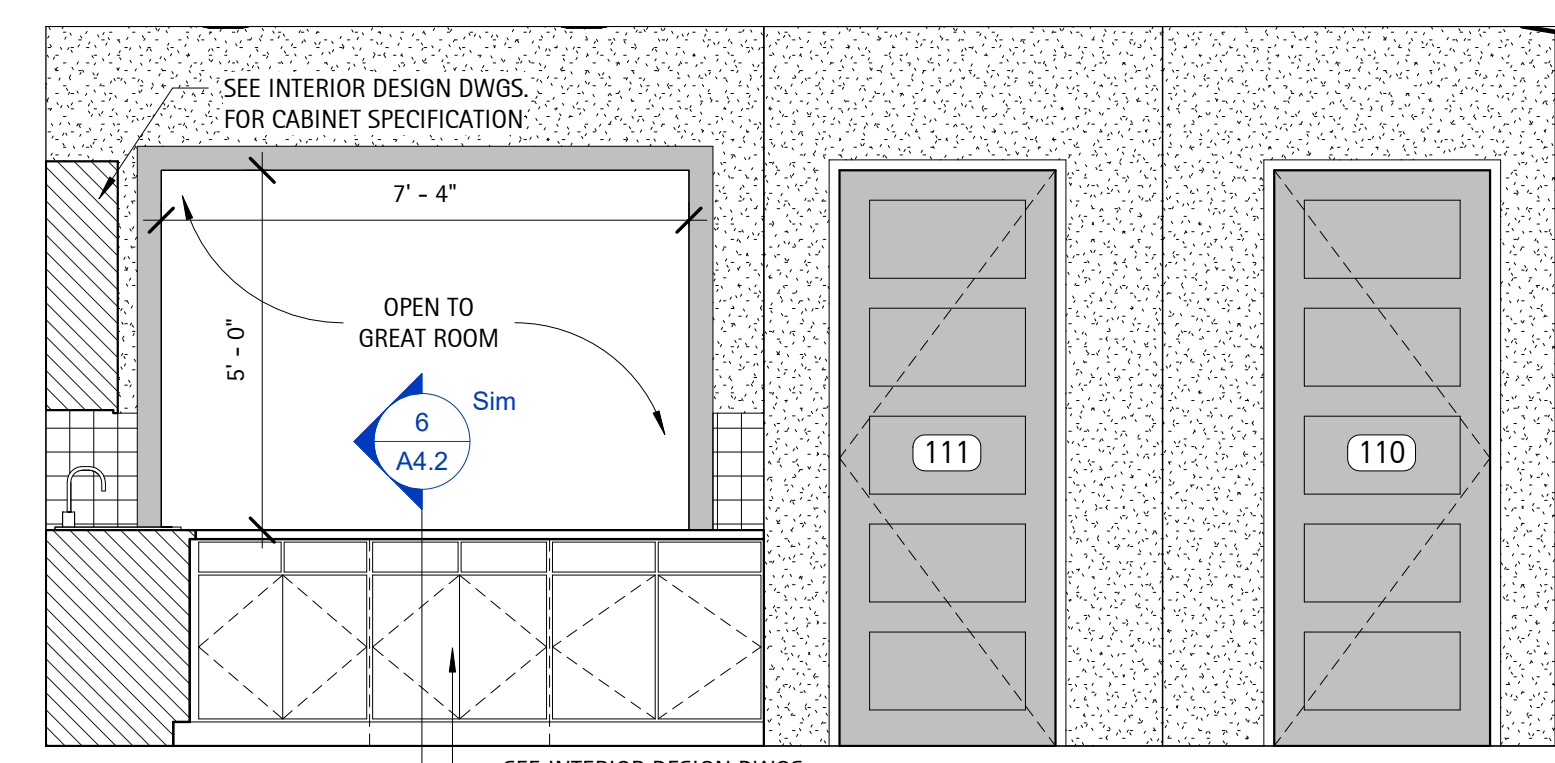
6 Detail - Cabinets @ Bar Overhang
1" = 1'-0"



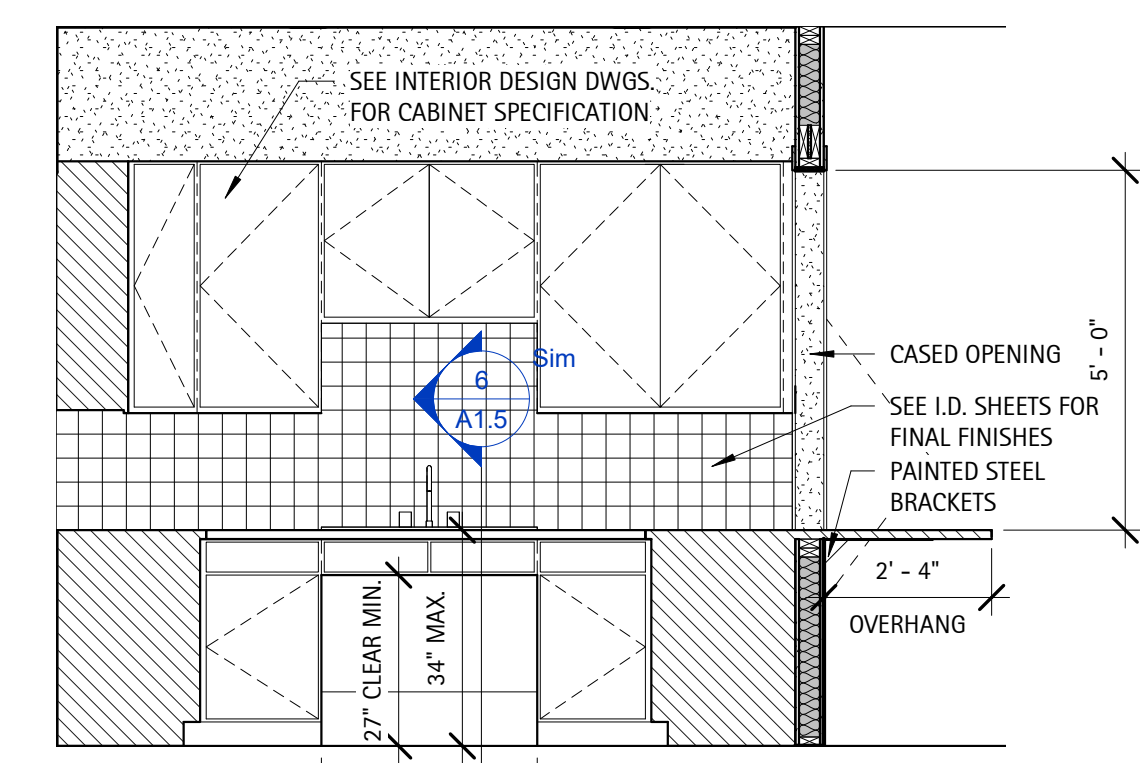
5 Detail - Typ. Upper Cabinets
1" = 1'-0"



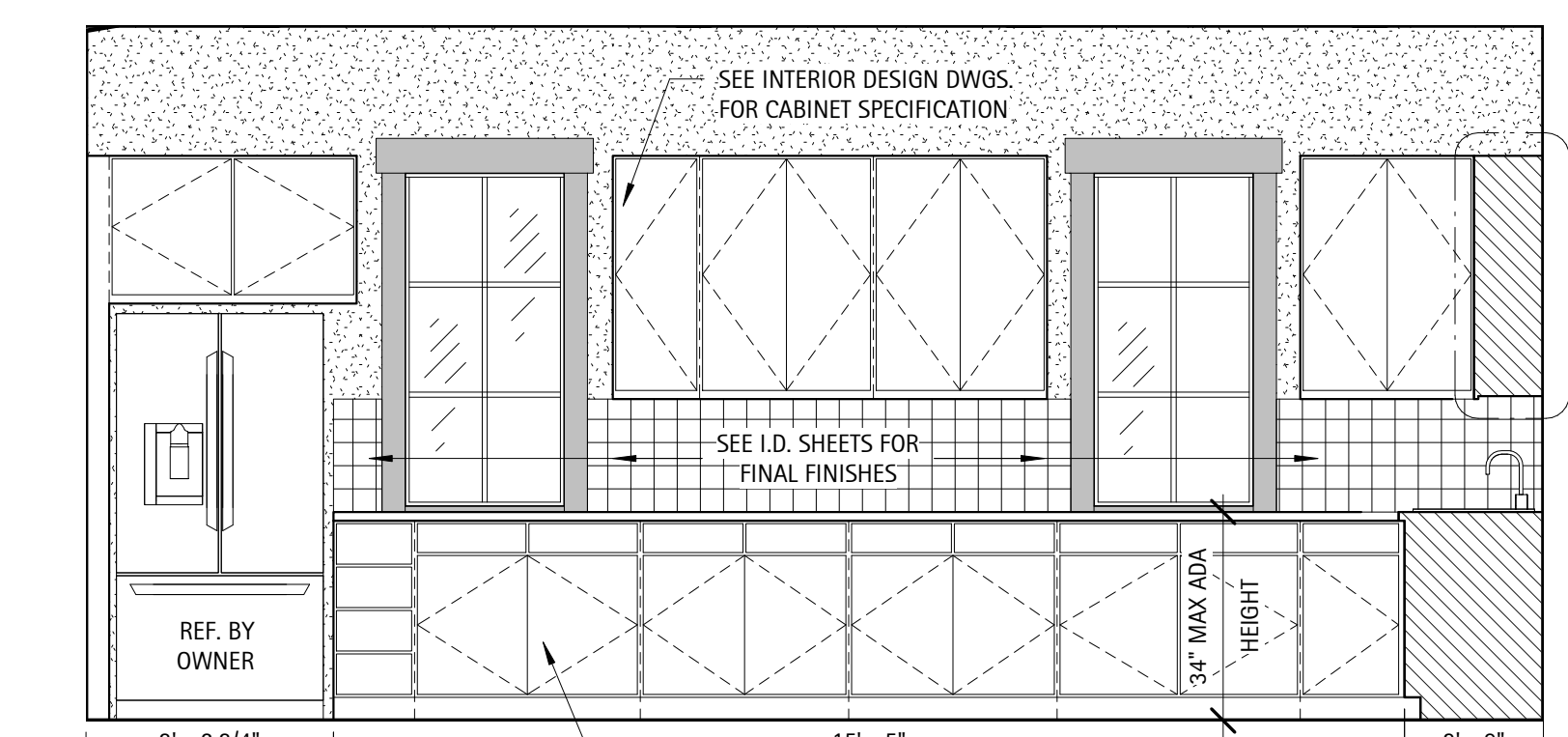
4 Detail - Typ. Base Cabinets
1" = 1'-0"



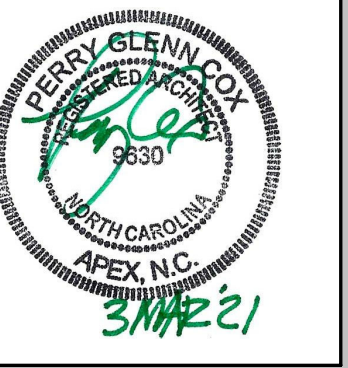
3 Millwork - Catering Opening Side
3/8" = 1'-0"



2 Millwork - Catering Sink Side
3/8" = 1'-0"



1 Millwork - Catering Ref. Side
3/8" = 1'-0"

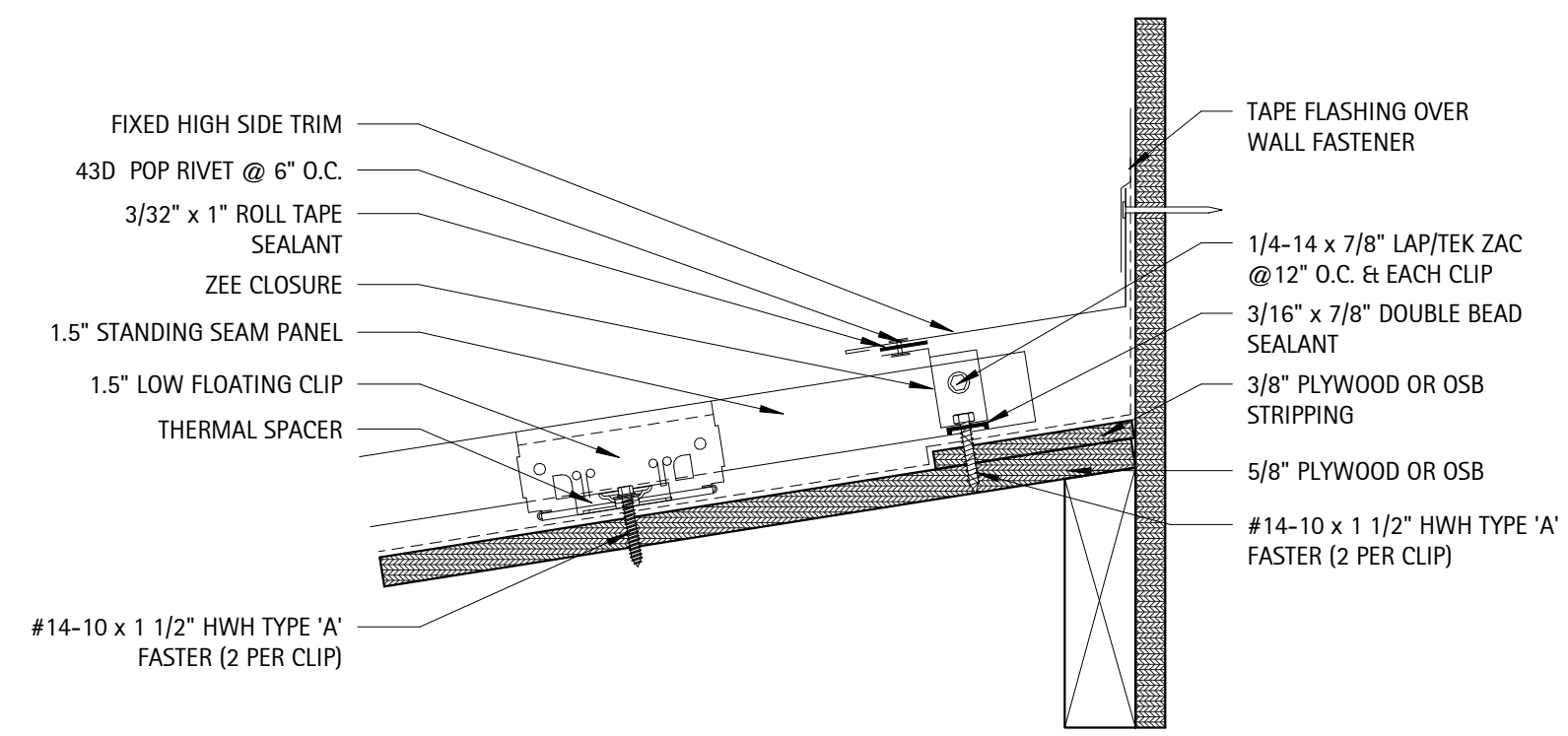


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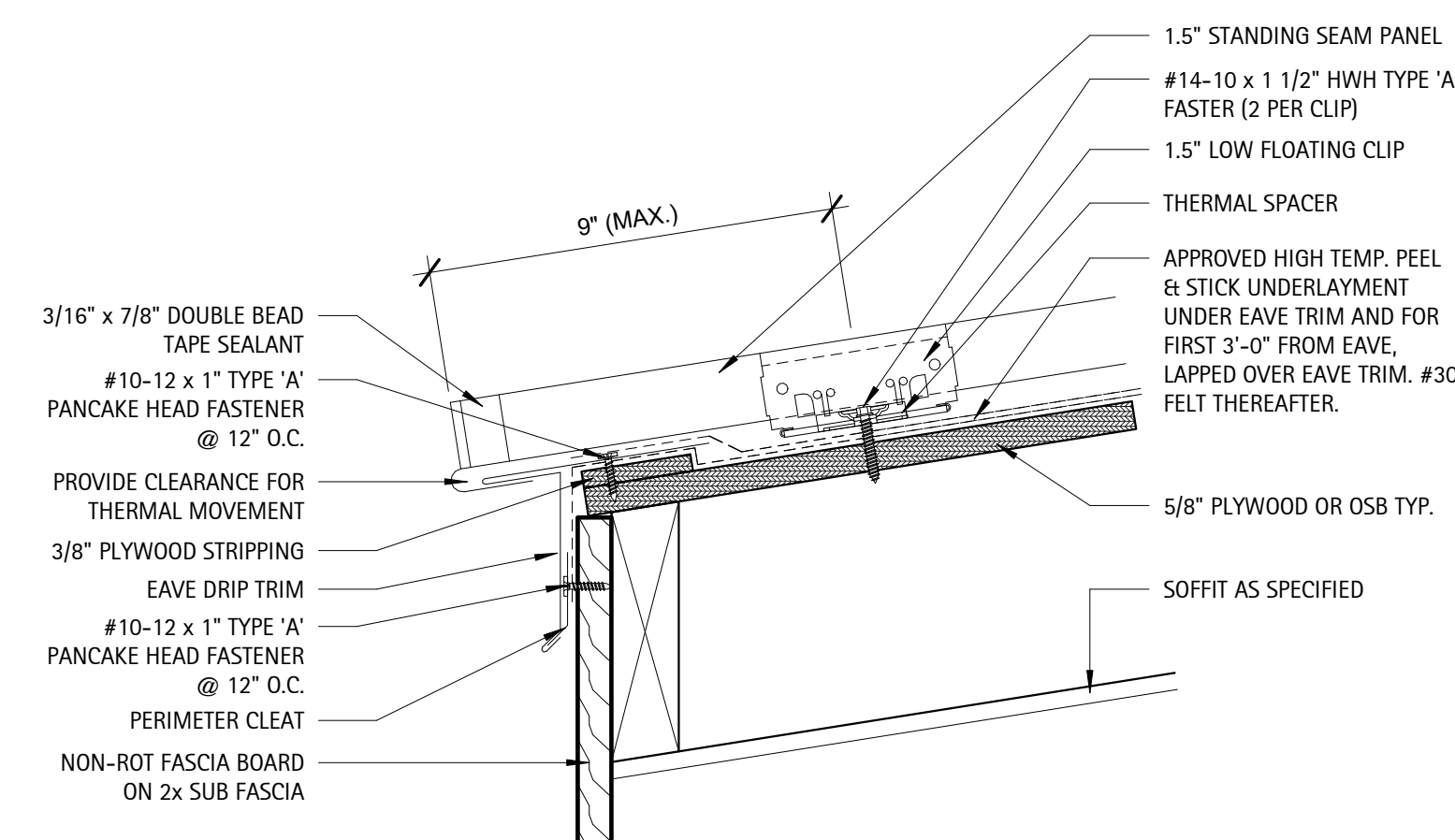
SHEET DESCRIPTION
GENERAL BUILDING DETAILS

PROJECT #: 2018.037
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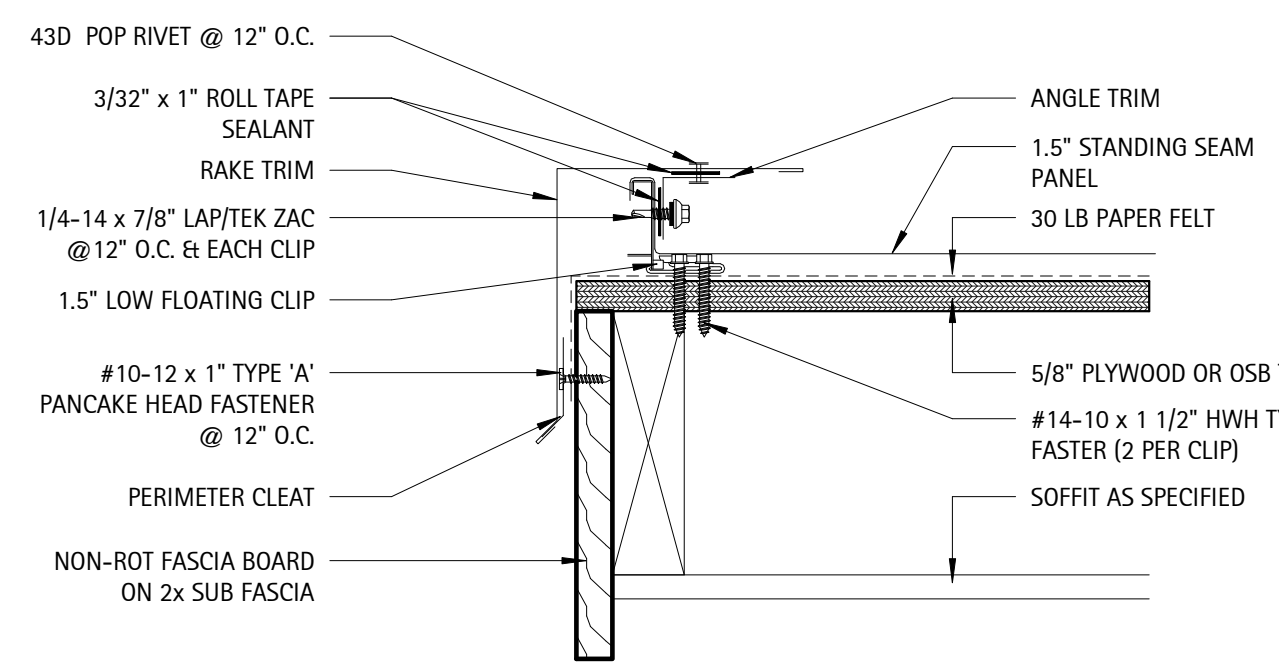
**SERENITY AMENITY
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Fuquay-Varina, NC**



HIGH SIDE TIE-IN

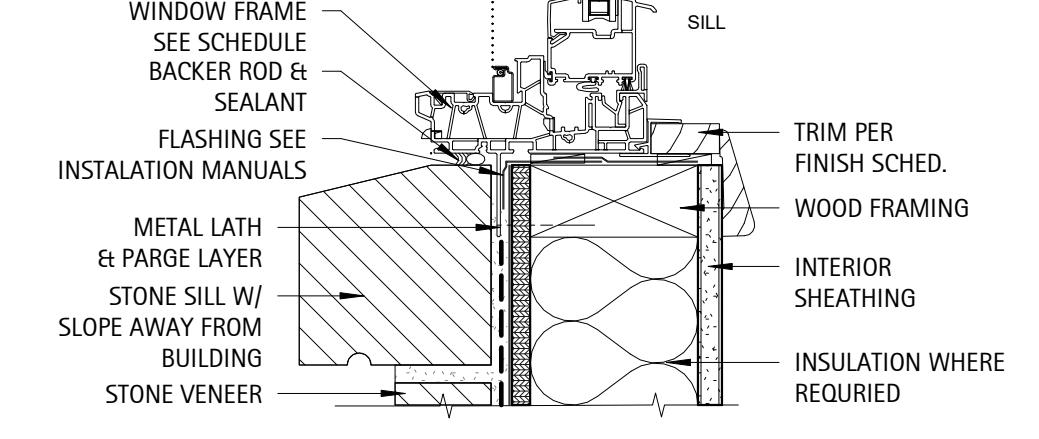
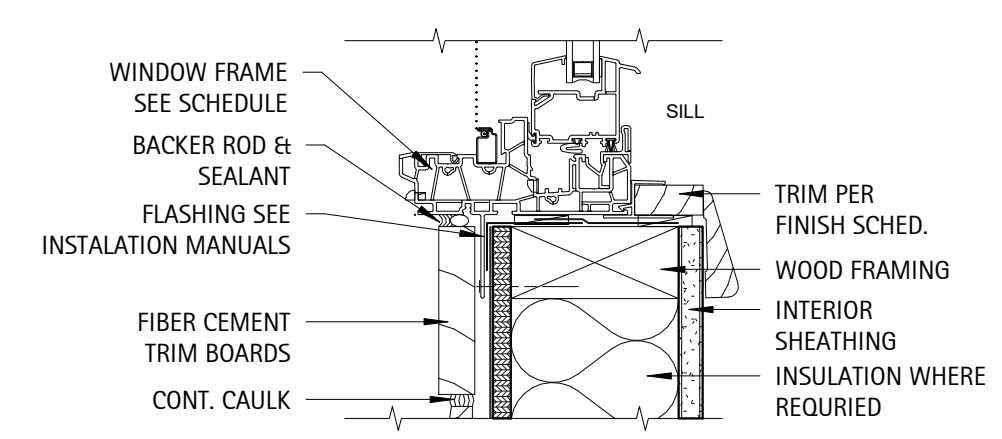
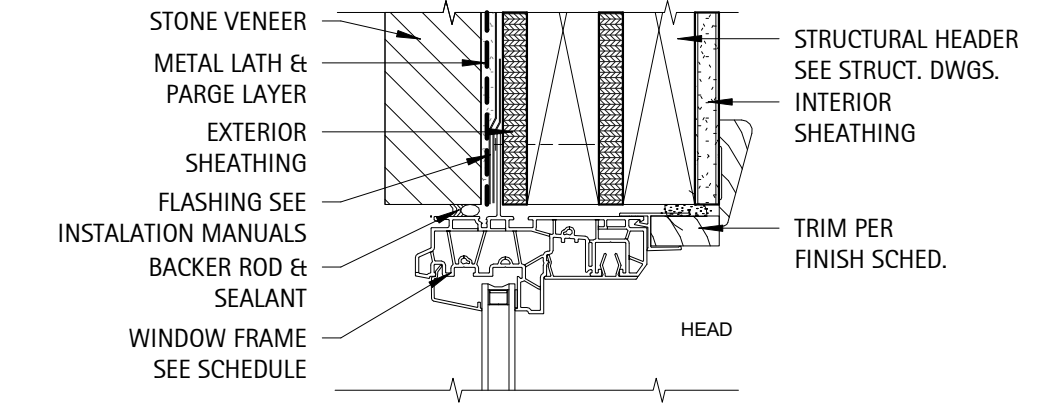
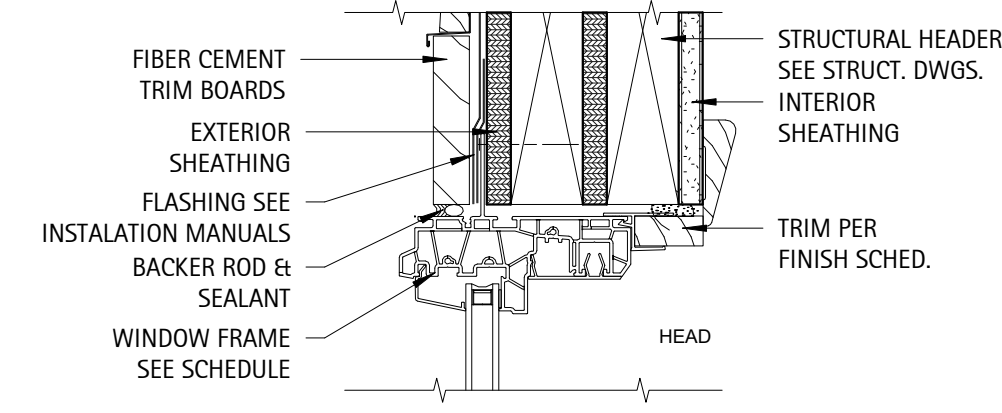
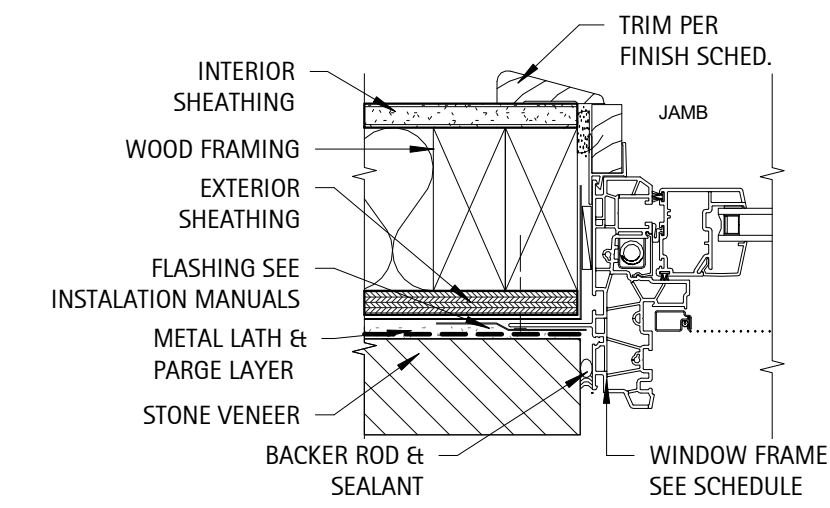
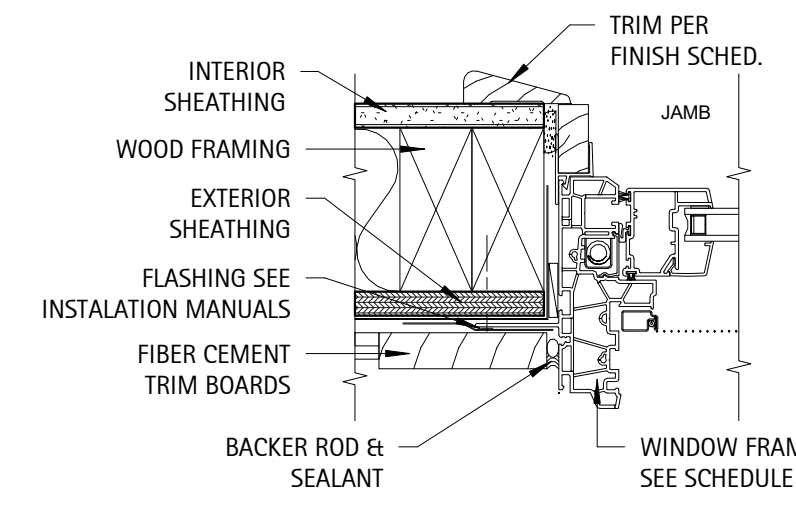


EAVE WITHOUT GUTTER



TYPICAL RAKE TRIM

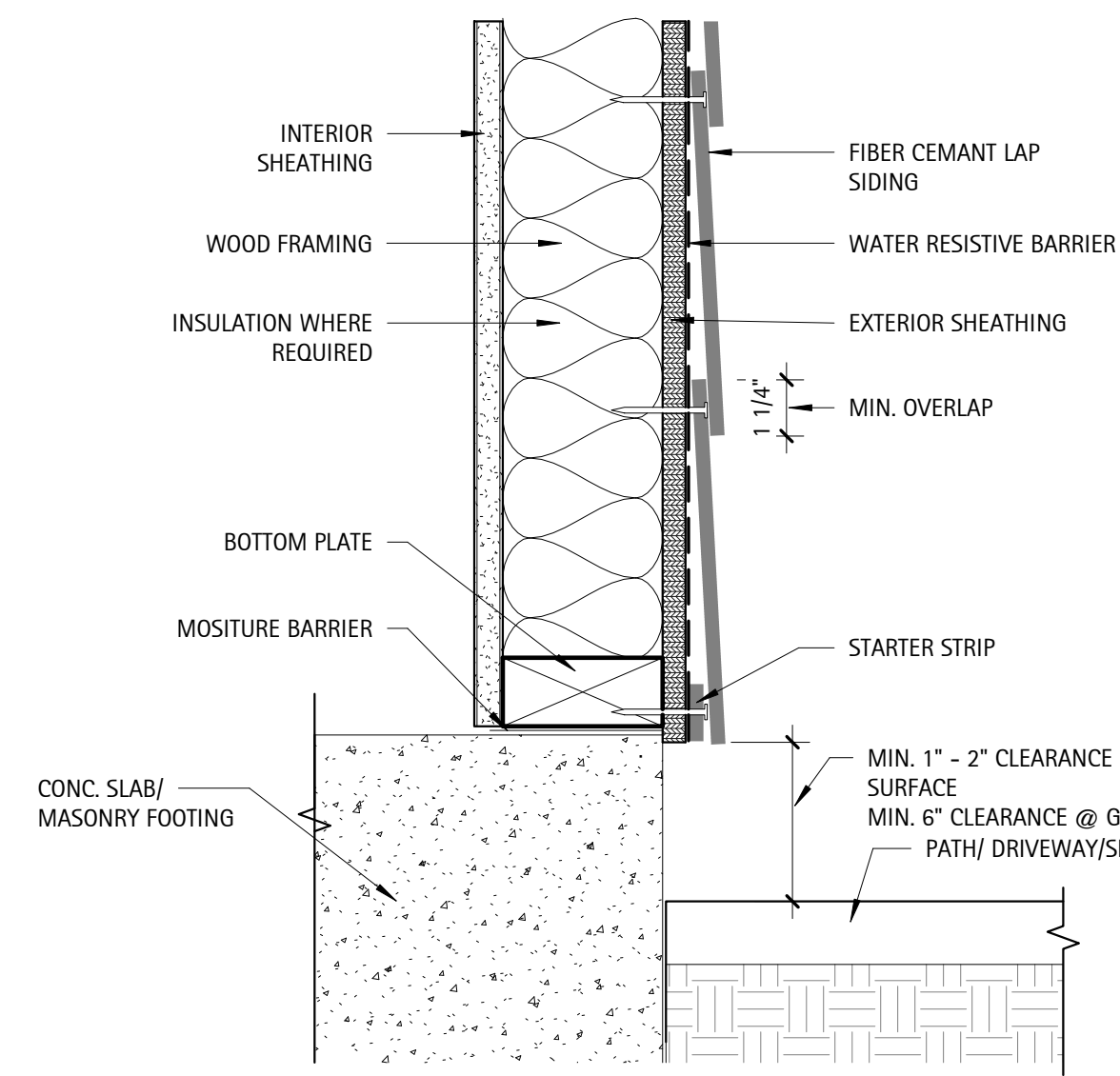
3
A5.0
Detail - Standing Seam Roof
3\"/>



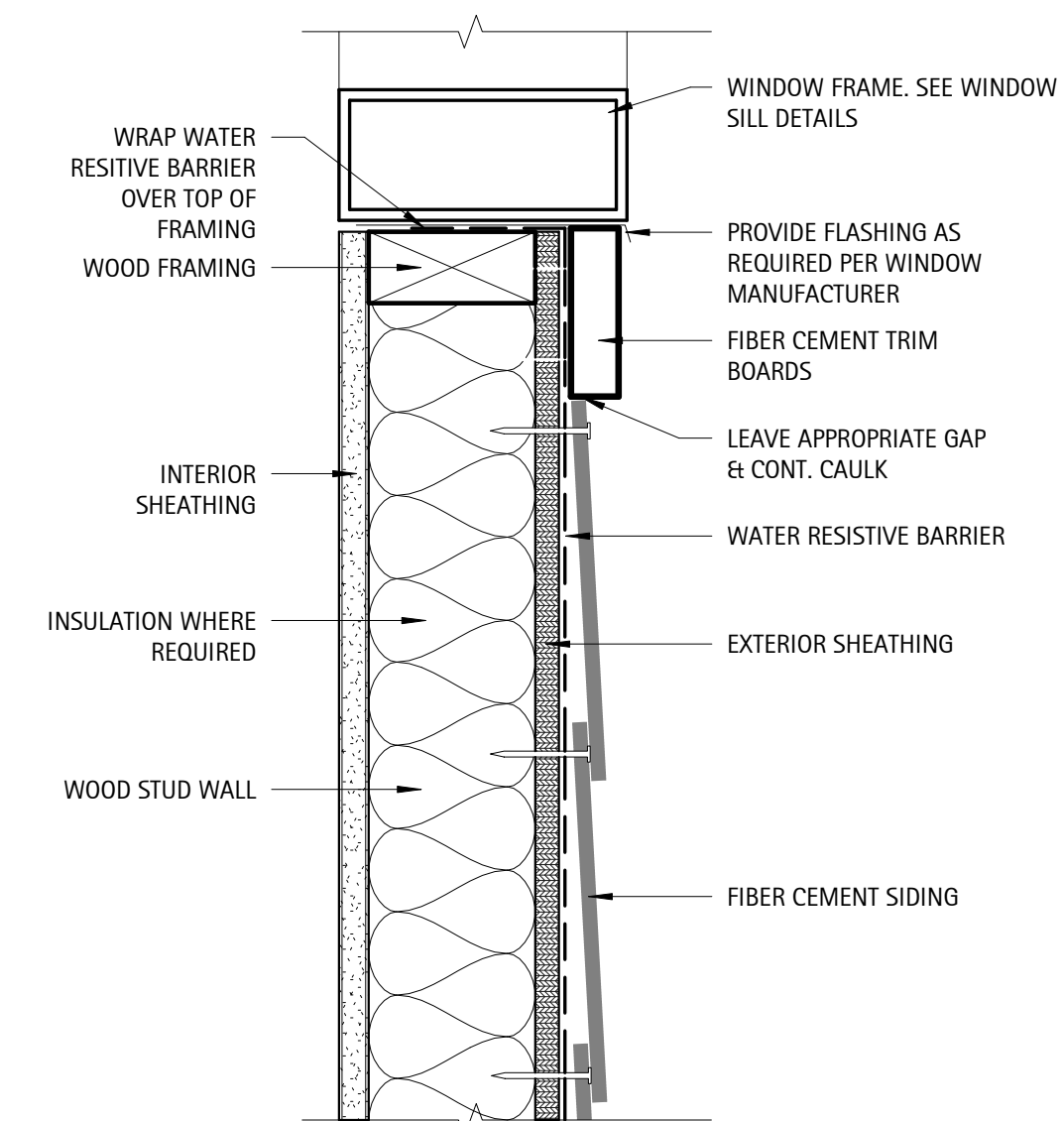
WINDOW TREATMENT @ SIDING

WINDOW TREATMENT @ STONE

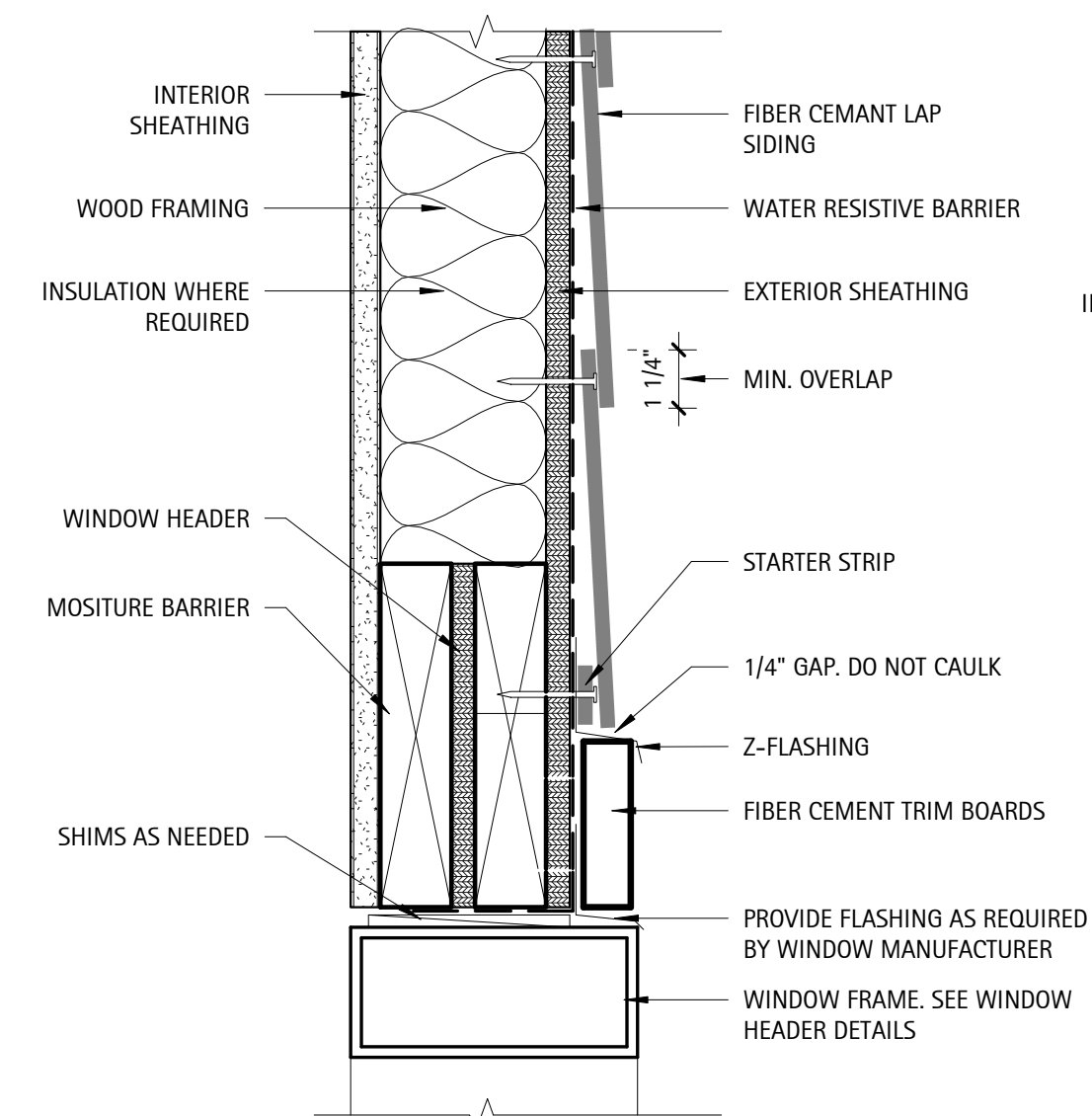
2
A5.0
Detail - Window Treatments
3\"/>



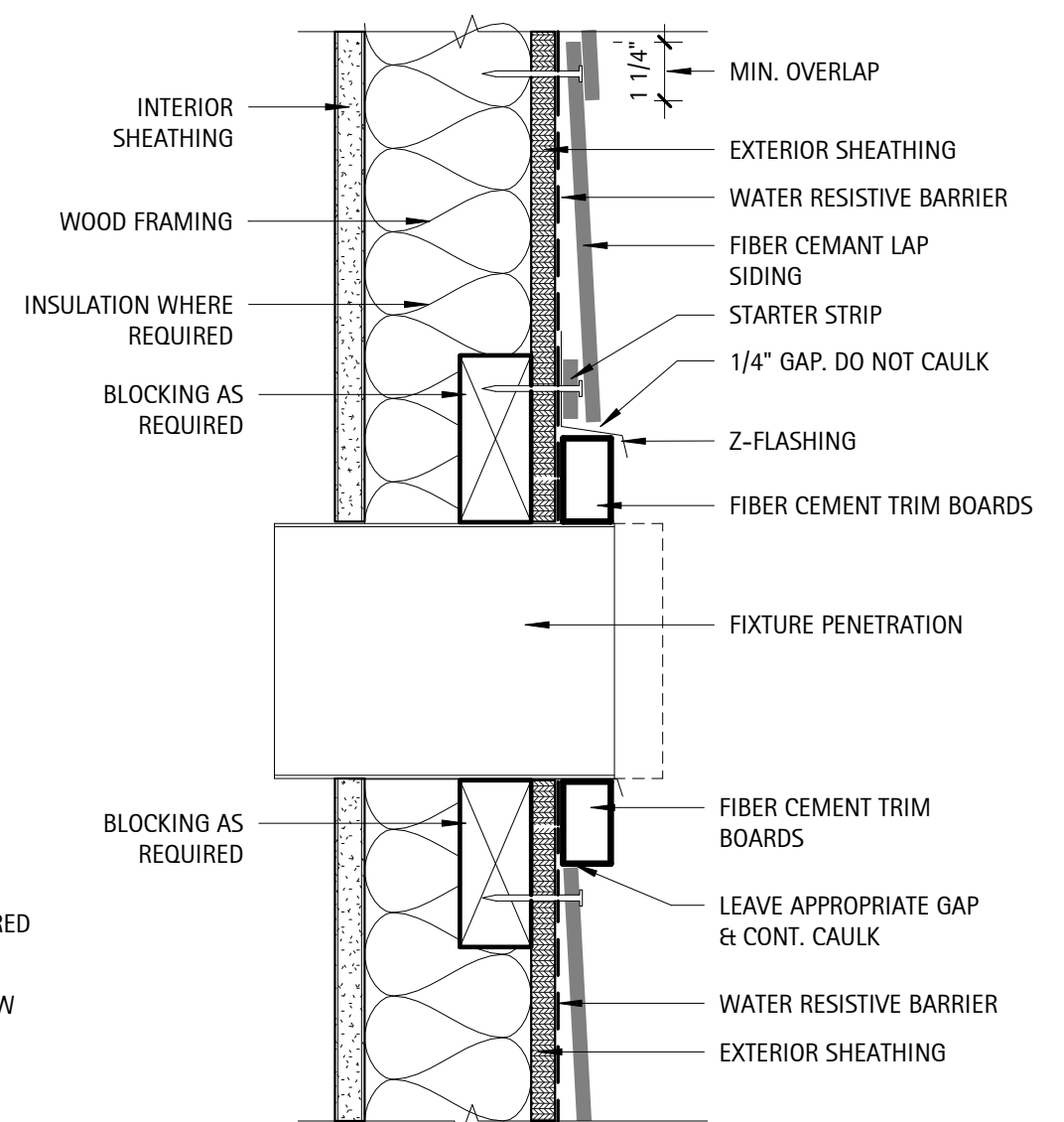
SIDING @ FOUNDATION



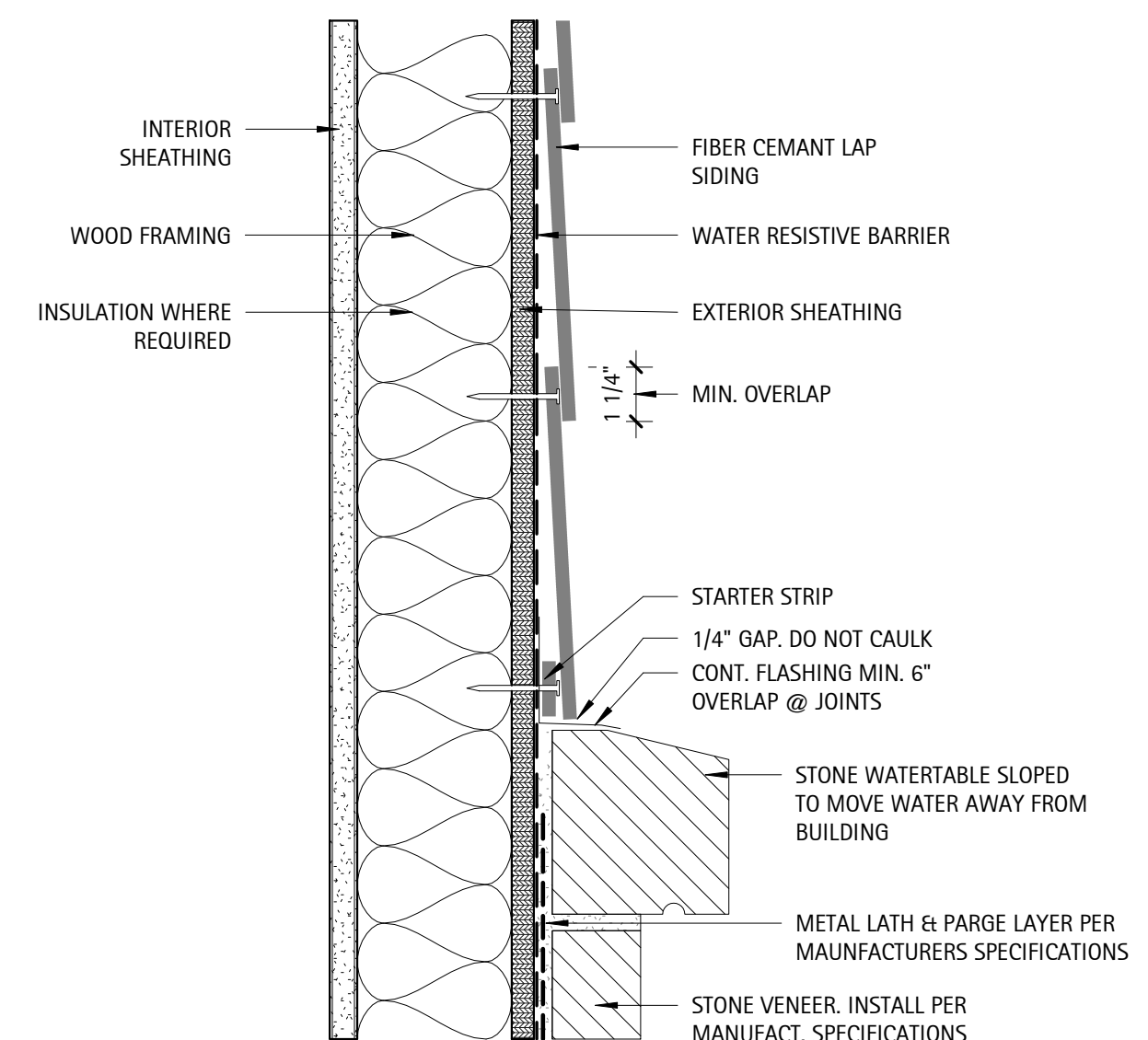
TYPICAL WINDOW SILL TRIM



TYPICAL WINDOW HEADER TRIM



TYPICAL FIXTURE TRIM

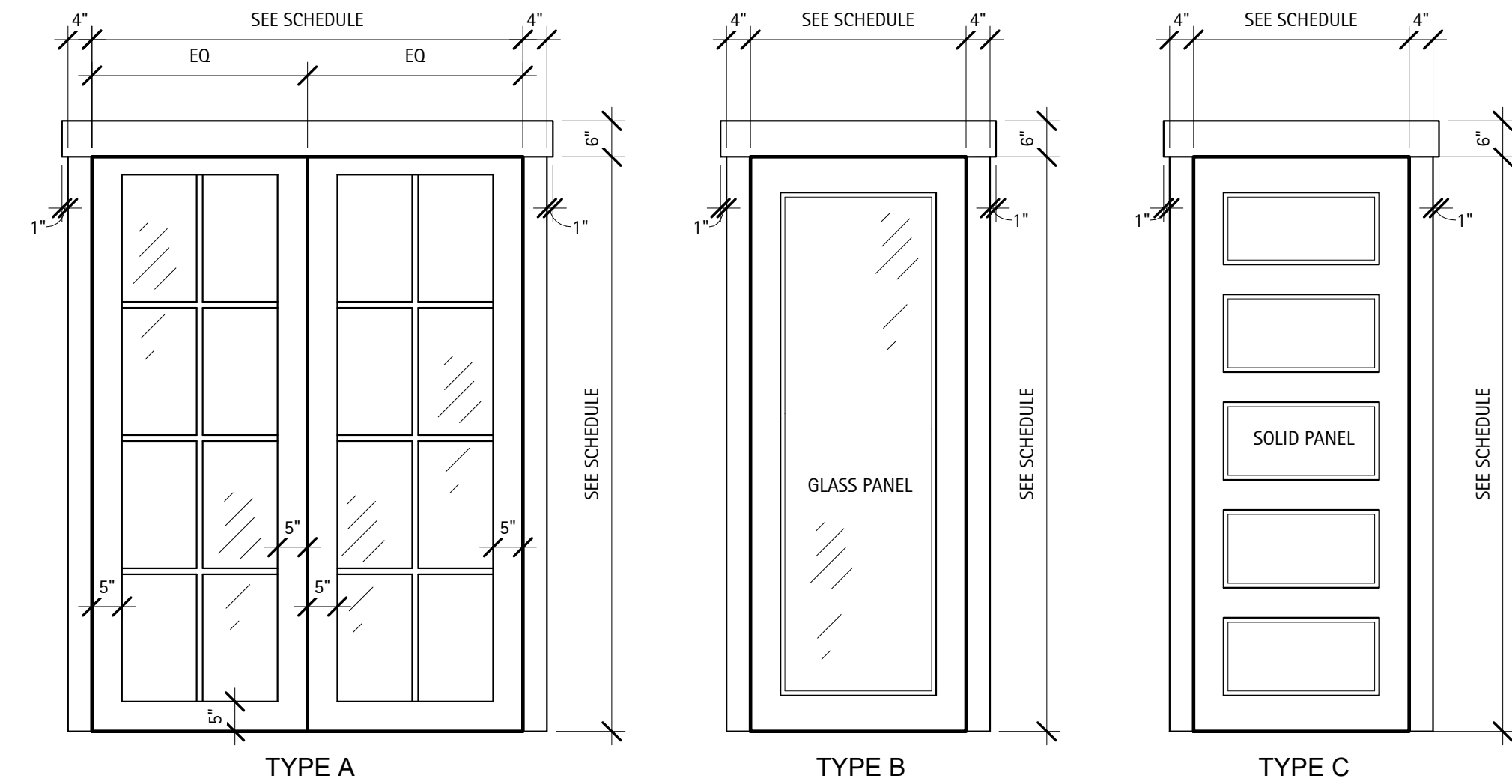


SIDING @ STONE VENEER

1
A5.0
Detail - Fiber Cement Siding
3\"/>

DOORS, FRAMES, HARDWARE NOTES

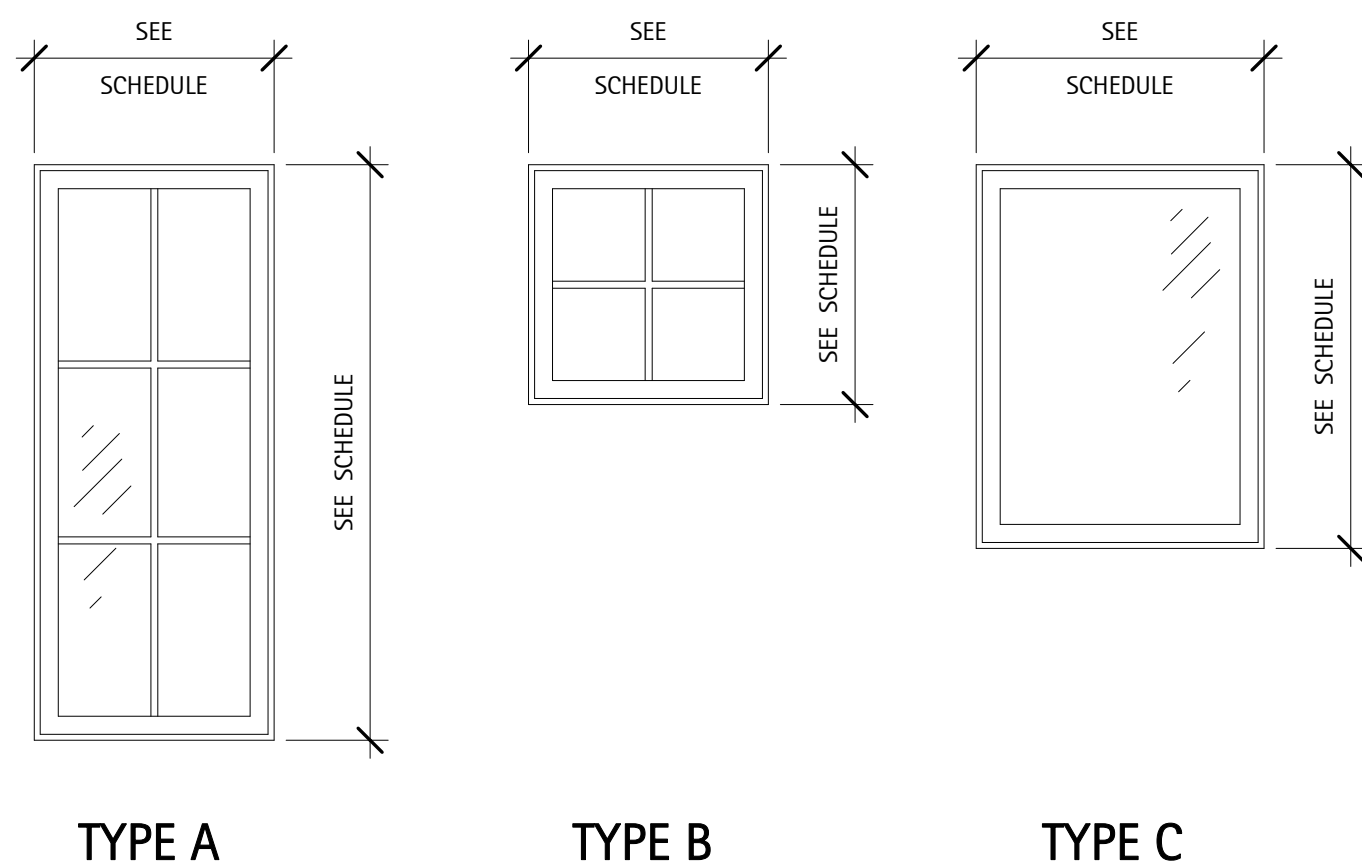
- Refer to Door and Hardware Schedule for extent, type and additional notes. Acceptable wood door manufacturers to be Weyerhaeuser, Eggers, Mohawk or Architect approved equal. General Contractor shall provide a hardware schedule and catalogue cuts for all finish hardware for approval by the Architect indicating location of hardware set, cross-referenced to indications on Drawings, manufacturer's name and product number, finish, and other similar information describing hardware to be provided. Items of hardware not definitely specified, but needed for satisfactory installation of hardware shall be provided. Such items shall be of type and quality suitable for service needed and comparable to adjacent hardware.
- All doors shall be set 6" off adjacent perpendicular wall, UON. Doors shall not be undercut, UON. All levers, pulls, and locks are to be provided per the schedule. All hinges and other miscellaneous exposed hardware shall be in similar and compatible finishes as indicated on Hardware Schedule.
- General Contractor shall coordinate keying system with Owner (Building Management), Landlord, and Architect. General Contractor shall coordinate security system with system vendor and scheduled hardware and the submittal of all security hardware specifications and cut sheets to the proper authorities for review and approval during building permit process.
- Provide hardware, door pulls, hinges, closers, electromagnetic devices, etc. needed to provide a full and complete installation. Provide silencers at metal frame doors. Provide floor mounted door stops unless existing conditions require wall mounted. Ensure adequate blocking for wall mounted stops. Submit to Architect for approval.
- Provide 4 1/2 x 4 1/2, full mortise, template, 5-knuckle, heavy duty, button tip hinges with non-rising loose pins and anti-friction, ball type bearing. Doors with locksets shall be furnished with non-removable pins hinges. Provide 1-1/2" pair hinges for doors up to 90" in height. Add 1 hinge for every additional 30" in height.
- Heavy duty cylindrical locksets and latchsets shall conform to ANSI A156.2, Series 4000, Grade 1. Functions as listed in schedule. Heavy duty mortise locksets and latchsets, levers shall conform to ANSI A156.13 Series, 1000, Grade 1. Overhead Closers shall be surface mounted or concealed overhead as noted in the hardware schedule and shall be heavy duty, fully hydraulic, rack and pinion action and sized to be in compliance with requirements for accessibility for handicapped and recommendations of manufacturer. Furnish complete with all necessary hardware. Furnish 2 keys per lock with a maximum of 8 keys per keyed alike set. Before final completion, adjust hardware so that doors operate in perfect order. Test and adjust hardware for quiet, smooth operation and adjust closers for proper operation. At final completion, properly tag and identify keys and deliver to Owner.
- All hardware shall be medium grade commercial if not otherwise noted or specified. See allowance per door.
- All interior egress doors and a minimum of one exterior egress door shall be readable openable from the egress side without use of a key or special knowledge.
- All Glazing within 24" of either side of a door in a closed position, and on the same wall plane shall be tempered. Tempered glass shall be installed by code in the following locations:
 - Door Glazing;
 - Glazing for bathroom fixture enclosures (showers, etc)
 - Glazing less than 60" above tub and shower drains;
 - Glazing within 24" of an adjacent door w/ sill less than 60 degrees;
 - Individual panels of Glazing greater than 9 sqft and sill less than 18" above floor and top edge greater than 36".
- Provide an interior door signage allowance of \$25.00 per door.
- Fire Extinguisher cabinets shall be similar to JL Industries Mod. Clear VU 1525F26 with a clear bubble and #10 S/S Finish, ADA approved and mounted. Place where shown on plans (FX)
- Door closers shall be LCN series 4040 or equivalent



NOTE: EXTERIOR GLASS DOORS TO HAVE 'ADVANCED LOW-E' GLAZING

3 Detail - Door Frames

1/2" = 1'-0"



2 Detail - Window Types

1/2" = 1'-0"

CLUB HOUSE ROOM SCHEDULE

Room Number	Room Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Ceiling Height	Crown	Comments
001	Front Covered Porch				STAINED T1-11	SLOPED		
100	Entry Vestibule			PAINTED GWB	PAINTED GWB	11'-0"		
101	Great Room			PAINTED GWB	TOUNGE & GROOVE	20'-0"		
102	Sales / Conference Room			PAINTED GWB	PAINTED GWB	10'-0"		
103	Courtyard Vestibule			PAINTED GWB	PAINTED GWB	10'-0"		
104	Mens Room			M.R. PAINTED GWB	M.R. PAINTED GWB	10'-0"		
105	Womens Room			M.R. PAINTED GWB	M.R. PAINTED GWB	10'-0"		
106	Poolside Covered Porch				TOUNGE & GROOVE	SLOPED		
107	Fitness Vestibule			PAINTED GWB	PAINTED GWB	10'-0"		
108	Fitness Room			PAINTED GWB	PAINTED GWB	12'-0"		
109	UniSex			M.R. PAINTED GWB	M.R. PAINTED GWB	12'-0"		
110	Catering			M.R. PAINTED GWB	M.R. PAINTED GWB	10'-0"		
111	Closet			PAINTED GWB	PAINTED GWB	10'-0"		
200	Loft			PAINTED GWB	STAINED T1-11	8'-0"		

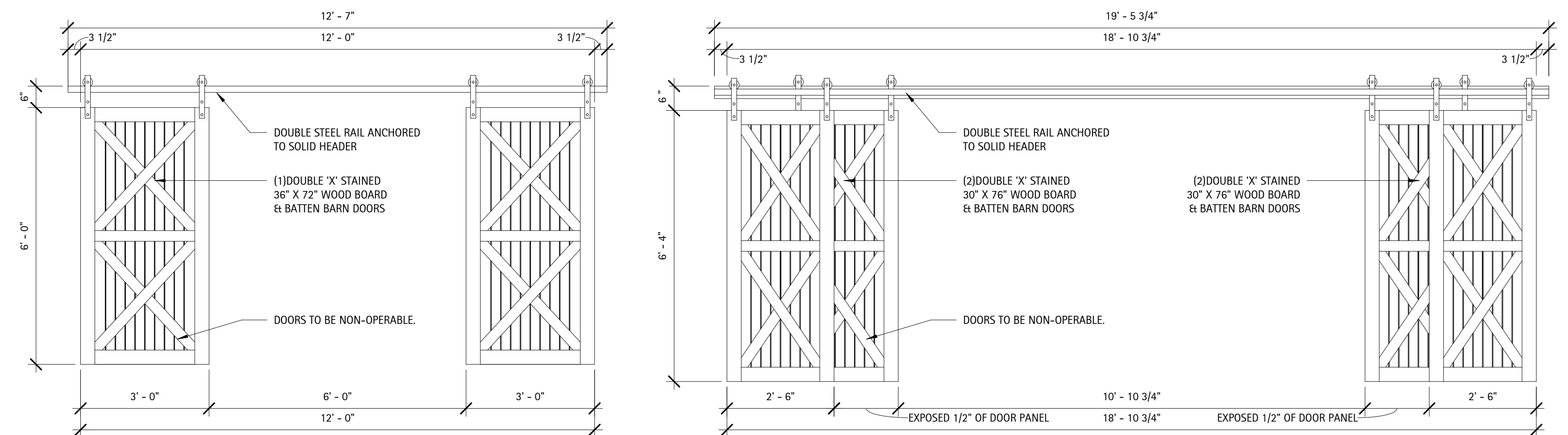
CLUBHOUSE DOOR SCHEDULE

Door Number	Style	Door			Rough Width	Rough Height	Door		Frame	Fire Rating	Hardware											Comments				
		Width	Height	Thickness			Material	Finish			Material	Push / Pull	Passage Set	Privacy Set	Office Set	Storage Set	Deadbolt	Panic Hardware	Closer	Weather strip	Threshold		FOB Access	Time Lock		
102	TYPE B	3'-0"	8'-0"	0'-1 3/4"	3'-2"	8'-1"	WOOD/GLASS	PAINT	METAL	-	No	No	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No
103	TYPE C	3'-0"	8'-0"	0'-1 3/4"	3'-2"	8'-1"	S.C. WOOD	PAINT	METAL	-	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	
104	TYPE C	3'-0"	8'-0"	0'-1 3/4"	3'-2"	8'-1"	S.C. WOOD	PAINT	METAL	-	Yes	No	No	No	No	No	Yes	No	Yes	No	No	No	No	No	No	
105	TYPE C	3'-0"	8'-0"	0'-1 3/4"	3'-2"	8'-1"	S.C. WOOD	PAINT	METAL	-	Yes	No	No	No	No	No	Yes	No	Yes	No	No	No	No	No	No	
107	TYPE C	3'-0"	8'-0"	0'-1 3/4"	3'-2"	8'-1"	S.C. WOOD	PAINT	METAL	-	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	
108	TYPE B	3'-0"	8'-0"	0'-1 3/4"	3'-2"	8'-1"	S.C. WOOD	PAINT	METAL	-	No	Yes	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	
109	TYPE C	3'-0"	8'-0"	0'-1 3/4"	3'-2"	8'-1"	S.C. WOOD	PAINT	METAL	-	No	No	Yes	No	No	No	No	No	Yes	No	No	No	No	No	No	
110	TYPE C	3'-0"	8'-0"	0'-1 3/4"	3'-2"	8'-1"	S.C. WOOD	PAINT	METAL	-	No	No	No	No	Yes	No	No	No	No	No	No	No	No	No	No	
111	TYPE C	3'-0"	8'-0"	0'-1 3/4"	3'-2"	8'-1"	S.C. WOOD	PAINT	METAL	-	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No	No	
E1	TYPE A	6'-0"	8'-0"	0'-2"	6'-2"	8'-1"	MTL/GLASS	PAINT	METAL	-	No	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	
E2	TYPE B	3'-0"	8'-0"	0'-2"	3'-2"	8'-1"	MTL/GLASS	PAINT	METAL	-	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
E3	TYPE A	6'-0"	8'-0"	0'-2"	6'-2"	8'-1"	MTL/GLASS	PAINT	METAL	-	Yes	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	
E4	TYPE A	6'-0"	8'-0"	0'-2"	6'-2"	8'-1"	MTL/GLASS	PAINT	METAL	-	Yes	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	
E5	TYPE C	3'-0"	8'-0"	0'-1 3/4"	3'-2"	8'-1"	INSUL. MTL.	PAINT	METAL	-	Yes	No	No	No	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	
E6	TYPE C	3'-0"	8'-0"	0'-1 3/4"	3'-2"	8'-1"	INSUL. MTL.	PAINT	METAL	-																
E7	TYPE B	3'-0"	8'-0"	0'-2"	3'-2"	8'-1"	MTL/GLASS	PAINT	METAL	-	No	No	No	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	

Grand total: 16

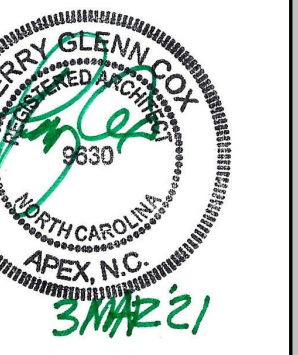
CLUBHOUSE WINDOW SCHEDULE

Mark	Count	Size		Rough Width	Rough Height	Type	Finish	Head Height	Comments
		Width	Height						
A1	4	2'-6"	5'-0"	2'-6 1/2"	5'-0 1/2"	TYPE A			
A2	18	2'-6"	6'-0"	2'-6 1/2"	6'-0 1/2"	TYPE A			
A3	4	3'-0"	6'-0"	3'-0 1/2"	6'-0 1/2"	TYPE A			
B1	20	2'-6"	2'-6"	2'-6 1/2"	2'-6 1/2"	TYPE B			
B2	4	2'-6"	1'-6"	2'-6 1/2"	1'-6 1/2"	TYPE B			
B3	2	3'-0"	1'-6"	3'-0 1/2"	1'-6 1/2"	TYPE B			
B4	2	6'-0"	1'-6"	6'-0 1/2"	1'-6 1/2"	TYPE B			
I1	2	3'-0"	4'-0"	3'-0 1/2"	4'-0 1/2"	TYPE C			INTERIOR WINDOW
S1	6	1'-2"		1'-2 1/2"	1'-5 3/4"	VELUX - TLR 014 - Alum. Sky Tunnel			



1 Detail - Track Shutters

1/2" = 1'-0"



Perry Cox
architect, p.a.
124 Salem Towne Court, Apex, NC 27502
P: 919.363.5411
www.pcoxdesign.com

DATE

REVISION

NO.

SHEET DESCRIPTION
SCHEDULES & DETAILS

PROJECT #: 2018.037
DATE ISSUED: 12/14/2021
DRAWING BY: JGM/BSJ
CHECKED BY: PGC/DSC

SERENITY AMENITY
GREENFIELD COMMUNITIES
CLUBHOUSE & POOL
Fuquay-Varina, NC



APPENDIX B BUILDING CODE SUMMARY

PROJECT SUMMARY: 1,147 sf Community Post Office and Pool Pump House

Building Description: A-3 UNHEATED - PRIVATE RECREATIONAL FACILITY WITH POOL FOR RESIDENCE ONLY

Scope of Work: New Building full scope of architectural, structural, plumbing, mechanical, electrical, and pool plans

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #
Architectural:	Perry Cox Architect, PA	Perry Cox, AIA	9630	919-393-5411
Civil:	TMTLA Associates	John G. Baker	1994	919-484-8880
Electrical:	Killian Engineering	Jacob Hamilton	048012	252-438-8778
Fire Alarm:	Killian Engineering	Jacob Hamilton	048012	252-438-8778
Plumbing:	Killian Engineering	Jacob Hamilton	048012	252-438-8778
Mechanical:	Killian Engineering	Jacob Hamilton	048012	252-438-8778
Sprinkler-Standpipe:	Ross Linden Engineers	Brian Ross, PE	25539	919-832-5680
Structural:	Truss Builders	Eric A Gilbert, PE	036322	919-467-9968
Trusses:	Truss Builders	Eric A Gilbert, PE	036322	919-467-9968
Retaining Walls >5' High:	Pool: A. R. Hine	Alan R. Hine, PE	7011	336-769-4900
Other:	Pool: A. R. Hine	Alan R. Hine, PE	7011	336-769-4900

Building Code: 2018 North Carolina State Building Code (NCSBC) 2009 North Carolina State Building Code
 2009 NC Rehab 2006 NC Rehab 2006 North Carolina Building Code
 2009 Chapter 34 2006 Chapter 34 1995 Existing Building Code

New Building: New Building Shell Building First Time Interior Completion
 Addition Alteration to Shell

Existing Building: Renovation Interior Completion Tenant Alteration
 Reconstruction Repair Alteration to Shell
 Change of Use Tenant Change of Occupancy

Note: Zoning Review May Be Required for Change of Use or Occupancy

Original Occupancy: A-3 Assembly
 Proposed Occupancy: A-3 Assembly

OCCUPANCY INFORMATION

Primary Occupancies:

Assembly: A-1 A-2 A-3 A-4 A-5

Hazardous: H-1 H-2 H-3 H-4 H-5

Institutional: I-1 Condition 1 2 3 4 5

I-2 Condition 1 2 3 4 5

I-3 Condition 1 2 3 4 5

I-4

Mercantile:

Residential: R-1 R-2 R-3 R-4

Storage: S-1 Moderate S-2 Low High-piled

Parking Garage: Open Enclosed Repair Garage

Utility and Miscellaneous:

Special Occupancies: 402 403 404 405 406 407 408 409 410 411

412 413 414 415 416 417 418 419 420 421

Mixed Occupancy: No Yes Separation: _____ Hr. Exception: _____

Non-Separated Mixed Occupancy (508.3) - The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.

Separated Mixed Occupancy (508.3.3) - See below for area calculations for each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.

$$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \leq 1$$

ALLOWABLE AREA AND HEIGHT CALCULATIONS

THIS SECTION FOR NEW, ADDITION, CHANGE OF USE, AND INTERIOR COMPLETIONS

Exterior Wall	Actual Length	Open Length	Open Space 30'
North			
South			
East			
West			
Total	P	F	W

INCREASE FRONTAGE _____ %
 SPRINKLERS _____ %
 FRONTAGE INCREASE FORMULA ALLOWABLE AREA FORMULA
 $I = 100 \left(\frac{F}{P} - 0.25 \right) \frac{W}{30}$

BOTH BUILDING AND TENANT MUST BE INDICATED ON CHART BELOW

Story No.	DISCRIP. & USE	BLDG AREA (TABLE 506.2)	AREA FOR INCREASE	SPRINKLER INCREASE	ALLOWABLE FLOOR AREA	RATE OF ALLOWABLE AREA	MAXIMUM BUILDING AREA	SEPARATION REQUIRED
Main Level	B	1147	9000	N/A	N/A	0.13	9000 SF	N/A

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

ALLOWABLE HEIGHT

MOST RESTRICTIVE (GROUP)	ALLOWABLE BUILDING HEIGHT (TABLE 504.3)	INCREASE FOR SPRINKLERS	ACTUAL BUILDING HEIGHT AS SHOWN ON PLANS	CODE REFERENCE
Type of Construction	Type_VB	Type_VB	Type_VB	403.3.1
Building Height in Feet	H = 40'-0" FT	N/A	H = 21'-8"	403.3.1
Building Height in Stories	S = 2	N/A	S = 1	403.3.1

BUILDING DATA

THIS SECTION REQUIRED FOR ALL PROJECTS

Construction Type: I-A I-B II-A II-B III-A III-B IV-HT V-A V-B

Mixed construction: Yes No Types: NFPA 13 NFPA 13R Partially Sprinklered Special Suppression

Standpipes: Yes No Class: I II III Wet Dry

Fire District: Yes No (Appendix D) Floor Hazard

Building Height: 30.83 Feet 1 Story

Basement: Yes No

Mezzanine: Yes No

High Rise: Yes No Life Safety Plan Sheet # (if provided): **G0.3**

FLOOR	EXISTING (SQFT)	NEW (SQFT)	SUB-TOTAL
FIRST FLOOR		1,147	1,147

Area of Project Tenant/Alteration/Renovation:
 Area of Construction:

FIRE PROTECTION REQUIREMENTS

THIS SECTION REQUIRED FOR ALL PROJECTS

Life Safety Plan Sheet #, if Provided: **G0.3**

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING PROVIDED (W/REDUCTION)	DETAIL # & SHEET #	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
Bearing Walls Exterior						
North	0	0				
East	0	0				
West	0	0				
South	0	0				
Interior Bearing walls	0	0				
Nonbearing Walls Exterior						
North	0	0				
East	0	0				
West	0	0				
South	0	0				
Interior Bearing walls	0	0				
Structural Frame, including columns, girders, trusses	0	0				
Floor construction, including supporting beams and joists. List construction type.	0	0				
Floor Ceiling Assembly	0	0				
Columns Supporting Floors	0	0				
Roof construction, including supporting beams and joists**	0	0				
Roof Ceiling Assembly	0	0				
Columns Supporting Roof	0	0				
Shafts- Exit Enclosures	N/A	N/A				
Shafts- Other (describe)	N/A	N/A				
Corridor Separation	N/A	N/A				
Occupancy Separation	N/A	N/A				
Party/ Fire Wall Separation	N/A	N/A				
Incidental Use Separation	N/A	N/A				
Dwelling sleeping unit Separation	N/A	N/A				
Smoke Barrier Separation	N/A	N/A				
Tenant Separation						

* Indicate section number permitting reduction
 ** Indicated if using Table 601 Note C exception

PERCENTAGE OF WALL OPENING CALCULATIONS

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES/PROTECTION	DEGREE OF OPENINGS (W/REDUCTION)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)
>30'	UP, NS	NO LIMIT	NO LIMIT

WALL LEGENDS

THIS SECTION REQUIRED FOR ALL PROJECTS

CHECK IF THE FOLLOWING ARE PRESENT AND INDICATE BY A WALL LEGEND ON ALL PLANS

- Fire Partitions 708 Fire Walls 705 Barriers 706 Smoke Partitions 710
 Smoke Barriers 709 Shaft Enclosure 707

LIFE SAFETY SYSTEMS REQUIREMENTS

THIS SECTION IS REQUIRED FOR ALL PROJECTS

- Emergency Lighting: Yes No
 Exit Signs: Yes No
 Fire Alarm: Yes No
 Smoke Detection Systems: Yes No
 Panic Hardware: Yes No

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet # **G0.3**

- Fire and/or smoke rated wall locations (Chapter 7)
- Assumed and real property line locations (if not on the site plan)
- Exterior wall opening area with respect to distance to assumed property lines (705.8)
- Occupancy Use for each area as it relates to occupant load calculation (Table 1004.1.2)
- Occupant loads for each area
- Exit access travel distance (1017)
- Common path of travel distances (Tables 1006.2.1 & 1006.3.2(1))
- Dead end lengths (1020.4)
- Clear exit widths for each exit door
- Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)
- Actual occupant load for each exit door
- A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
- Location of doors with panic hardware (1010.1.10)
- Location of doors with delayed egress locks and the amount of delay (1010.1.9.7)
- Location of doors with electromagnetic egress locks (1010.1.9.9)
- Location of doors equipped with hold-open devices
- Location of emergency escape windows (1030)
- The square footage of each fire area (202)
- The square footage of each smoke compartment for Occupancy Classification I-2 (407.5)
- Note any code exceptions or table notes that may have been utilized regarding the items above

EXIT REQUIREMENTS

NUMBER AND ARRANGEMENT OF EXITS

THIS SECTION IS REQUIRED FOR ALL PROJECTS

FLOOR, ROOM AND/OR SPACE DESIGNATION	MINIMUM NUMBER OF EXITS		TRAVEL DISTANCE		ARRANGEMENT		MEANS OF EGRESS	
	REQUIRED	SHOWN ON PLANS	ALLOWABLE TRAVEL DISTANCE (TABLE 1016.1)	ACTUAL TRAVEL DISTANCE SHOWN ON PLANS	REQUIRED BETWEEN EXIT DOORS	ACTUAL DISTANCE SHOWN ON PLANS	REQUIRED	ACTUAL
POST OFFICE	1	2	100'	45'-10"	N/A	N/A		

- Corridor dead ends (Section 1017.3)
- Single exits (Section 1015.1; Section 1019.2)
- Common Path of Egress Travel (Section 1014.3)

OCCUPANT LOAD AND EXIT WIDTH POST OFFICE

Room Name	Area	Occupancy		Egress Width per Occupant (1005.3)		Required Width		Actual Width Shown	
		Load Factor	Load Count	Level	Stair	Level	Stair	Level	Stair
Post Office	568 SF	100 SF	6	0.2		1.2		144	
Chem Room	51 SF	300 SF	1	0.2		0.2			
Pump Room	193 SF	300 SF	1	0.2		0.2		36	
Furniture Storage	147 SF	300 SF	1	0.2		0.2		60	
Courtyard	1876 SF								
Grand total	2836 SF		9	0.8		1.8		240	0

- See Table 1004.1.1 to determine whether net or gross area is applicable
- Minimum stairway width (Section 1009.1); min. corridor width (Section 1017.2); min. door width (Section 1008.1.1)
- Minimum width of exit passageway (Section 1021.2)
- The loss of 1 means of egress shall not reduce the available capacity to less than 50% of the total required (Section 1005.1)
- Assembly occupancies (Section 1025)

PLUMBING FIXTURE REQUIREMENTS

THIS SECTION IS REQUIRED FOR ALL PROJECTS

OCCUPANCY	WATERCLOSETS		URINALS		LAVATORIES		SHOWERS/TUBS		DRINKING FOUNTAINS	
	Male	Female	Male	Unisex	Male	Unisex	Regular	Accessible	Regular	Accessible
A-3'	2	6	1	2	3	3	1	2	3	3

Total Required: 2 7 1 2 3 3 1 2 1 1
 Total Provided: 2 6 1 2 3 3 1 2 3 3

1 Calculations are total amenity site plumbing requirements

859 PERSONS / 2 = 430 M / 430 F
 WATERCLOSETS: 430 MALE / 125 = 4 WC = 2 WC & 2 URINAL
 430 FEMALE / 65 = 7 WC = 6 WC + 1 FAMILY
 LAVATORY: 430 MALE / 200 = 3 LAV. = 3 LAV
 430 FEMALE / 200 = 3 LAV. = 3 LAV + 1 FAMILY

STRUCTURAL DESIGN LOADS

THIS SECTION IS REQUIRED FOR ALL PROJECTS

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

SEISMIC DESIGN CATEGORY: A B C D

Provide the following Seismic Design Parameters:
 Risk Category (Table 1604.5) _____
 Spectral Response _____
 Site Classification _____

Basic Structural System: Field Test Presumptive Historical Data
 Bearing Wall Dual w/ Special Moment Frame
 Building Frame Moment Frame Dual w/ Intermediate R/C or Special Steel
 Inverted Pendulum
 Simplified Equivalent Lateral Force Dynamic

Analysis Procedure: Architectural, Mechanical, Components anchored? Yes No Dynamic

LATERAL DESIGN CONTROL: Earthquake Wind

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

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

THIS SECTION FOR NEW, ADDITION, CHANGE OF USE, AND INTERIOR COMPLETION

- Thermal Zone:
 Winter Dry Bulb: _____
 Summer Dry Bulb: _____
- Interior Design Conditions:
 Winter Dry Bulb: _____
 Summer Dry Bulb: _____
 Relative Humidity: _____
- Building Heating Load:
 Unitary _____
 Heating Efficiency: _____
 Cooling Efficiency: _____
 Size Category of Unit: _____
- Boiler
 Size Category, If oversized, state reason: _____
- Chiller
 Size Category, If oversized, state reason: _____
- List equipment efficiencies: _____

ACCESSIBLE PARKING

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED		TOTAL # ACCESSIBLE PROVIDED
	REQUIRED	PROVIDED	REFUGED VAN SPACES WITH 132" ACCESS	8' ACCESS	
TOTAL					

ELECTRICAL SUMMARY

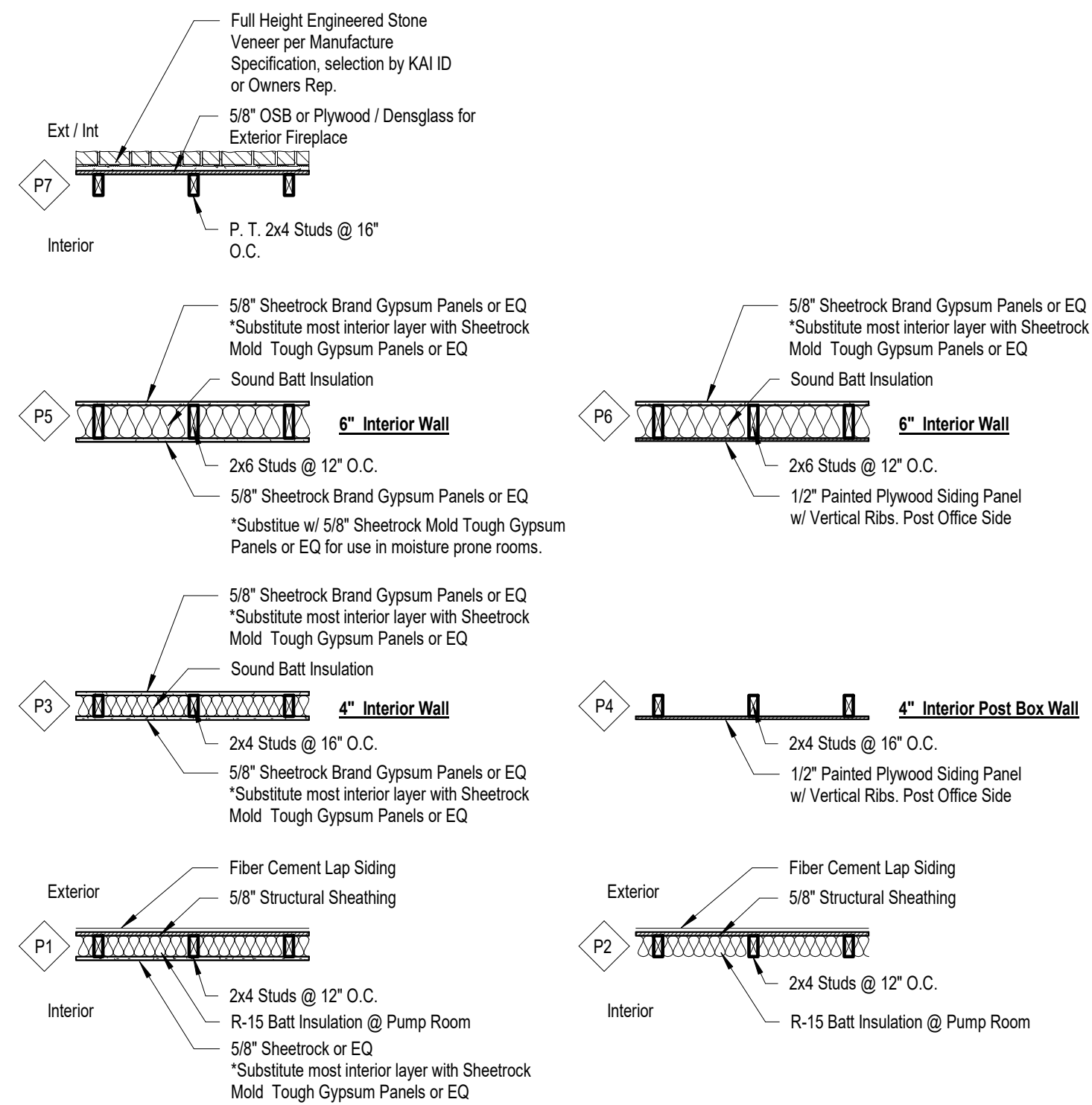
THIS SECTION FOR NEW, ADDITION, CHANGE OF USE, AND INTERIOR COMPLETION

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance: Energy Code ASHRAE 90.1 Performance Prescriptive

Lighting Schedule (each fixture type)
 Lamp type required in fixture
 Number of lamps in fixture
 Ballast type used in the fixture
 Number of ballasts in fixture
 Total wattage per fixture
 Total interior wattage
 Total exterior wattage

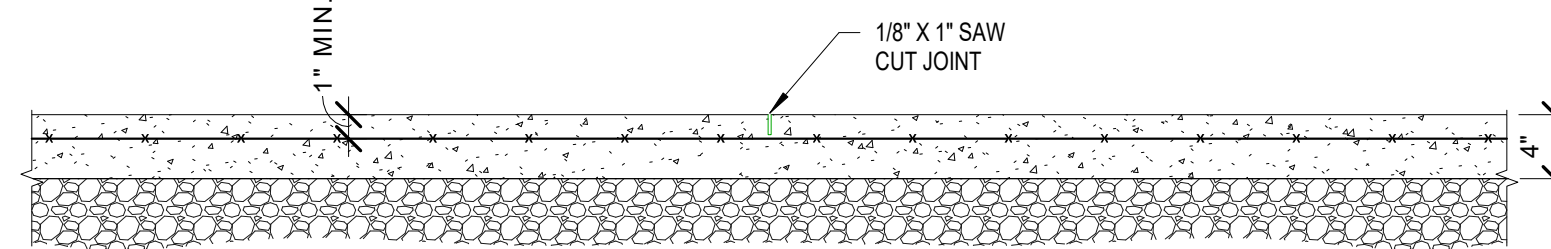
Additional Efficiency Package Options (When using the 2018 NCECC; not required for ASHRAE 90.1)
 C406.2 More Efficient HVAC Equipment Performance
 C406.3 Reduced Lighting Power Density
 C406.4 Enhanced Digital Lighting Controls
 C406.5 On-site Renewable Energy
 C406.6 Dedicated Outdoor Air System
 C406.7 Reduced Energy Use in Service Water Heating



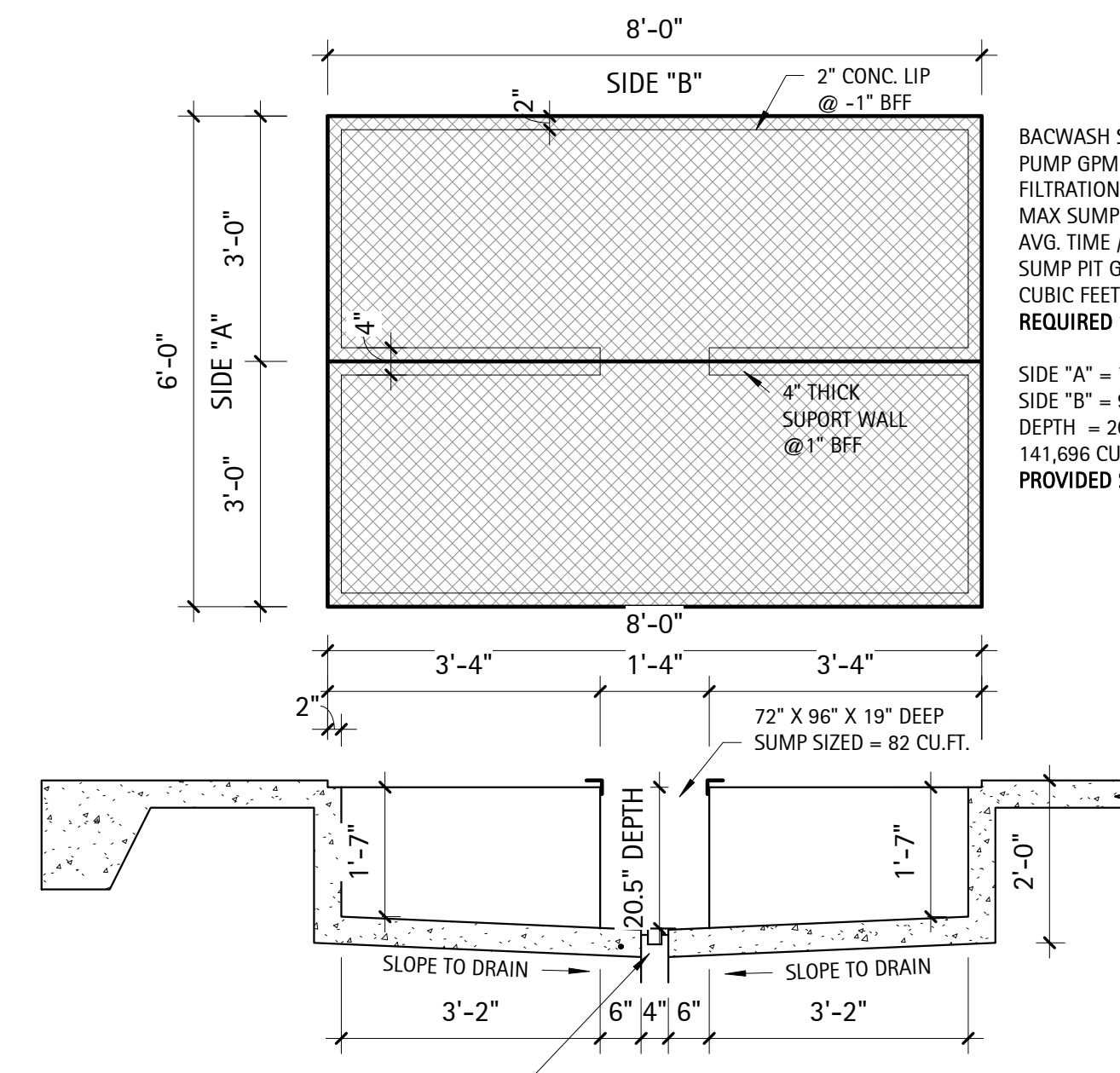
WALL TYPE DETAILS

NOTE: ALL JOINTS TO BE CUT W/ WET WALK BEHIND SAW TO ENSURE ALL CUTS ARE PERPENDICULAR W/ FACE OF CONCRETE

NOTE: MAXIMUM JOINT SPACING SHALL BE 10 FT. IN EACH DIRECTION UNLESS SHOWN OTHERWISE ON PLAN



6 Detail - Typ. Sawcut Control Joint
1" = 1'-0"

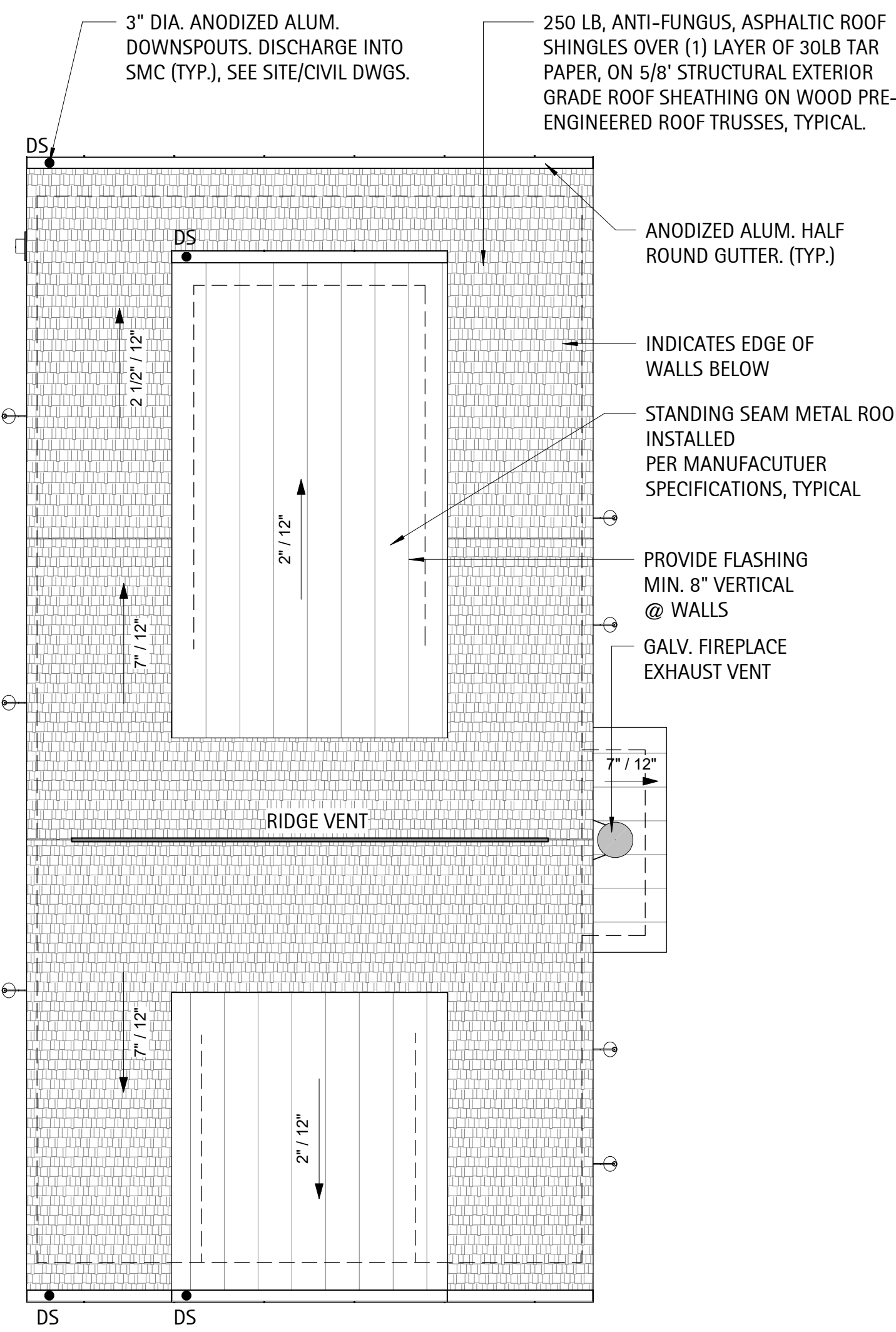


BACWASH SUMP SIZING:
PUMP GPM (BACWASH) = 136 GPM
FILTRATION FRICTION LOSS = 5 GPM
MAX SUMP DISCHARGE = 50 GPM
AVG. TIME / BACWASH = 7 MIN 30 SEC
SUMP PIT GALLON SIZE = 607.5 GALLONS
CUBIC FEET PER GALLON = 0.134
REQUIRED SUMP PIT SIZE: 81.21 CUBIC FT.

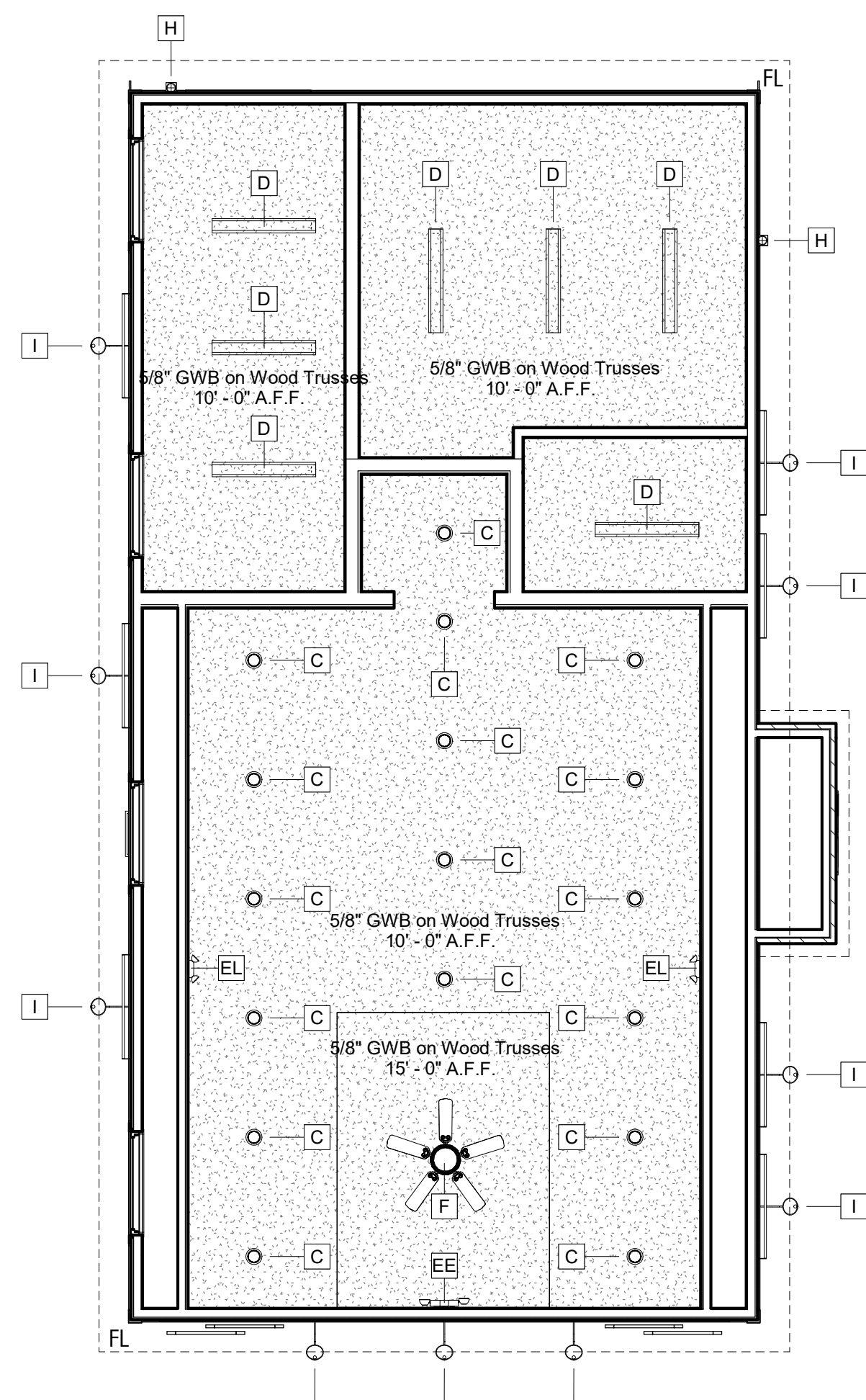
SIDE "A" = 72 IN
SIDE "B" = 96 IN
DEPTH = 20.5 IN
141,696 CUBIC INCHES X 0.000579 CU/CF =
PROVIDED SUMP PIT SIZE: 82.00004 CUBIC FEET

4" FLOOR DRAIN TO STORM DRAIN.
* INSTRUCTIONS SHOULD BE POSTED IN A CONSPICUOUS LOCATION REGARDING THE DISCHARGE OF POOL WATER INTO THE STORM DRAINAGE SYSTEM. ALL WATER DISCHARGE INTO STORM DRAINAGE MUST BE PROPERLY DECHLORINATED PRIOR TO DISCHARGE.

5 Detail - Sump Pit
1/2" = 1'-0"



4 Post Office - Roof Plan
3/16" = 1'-0"



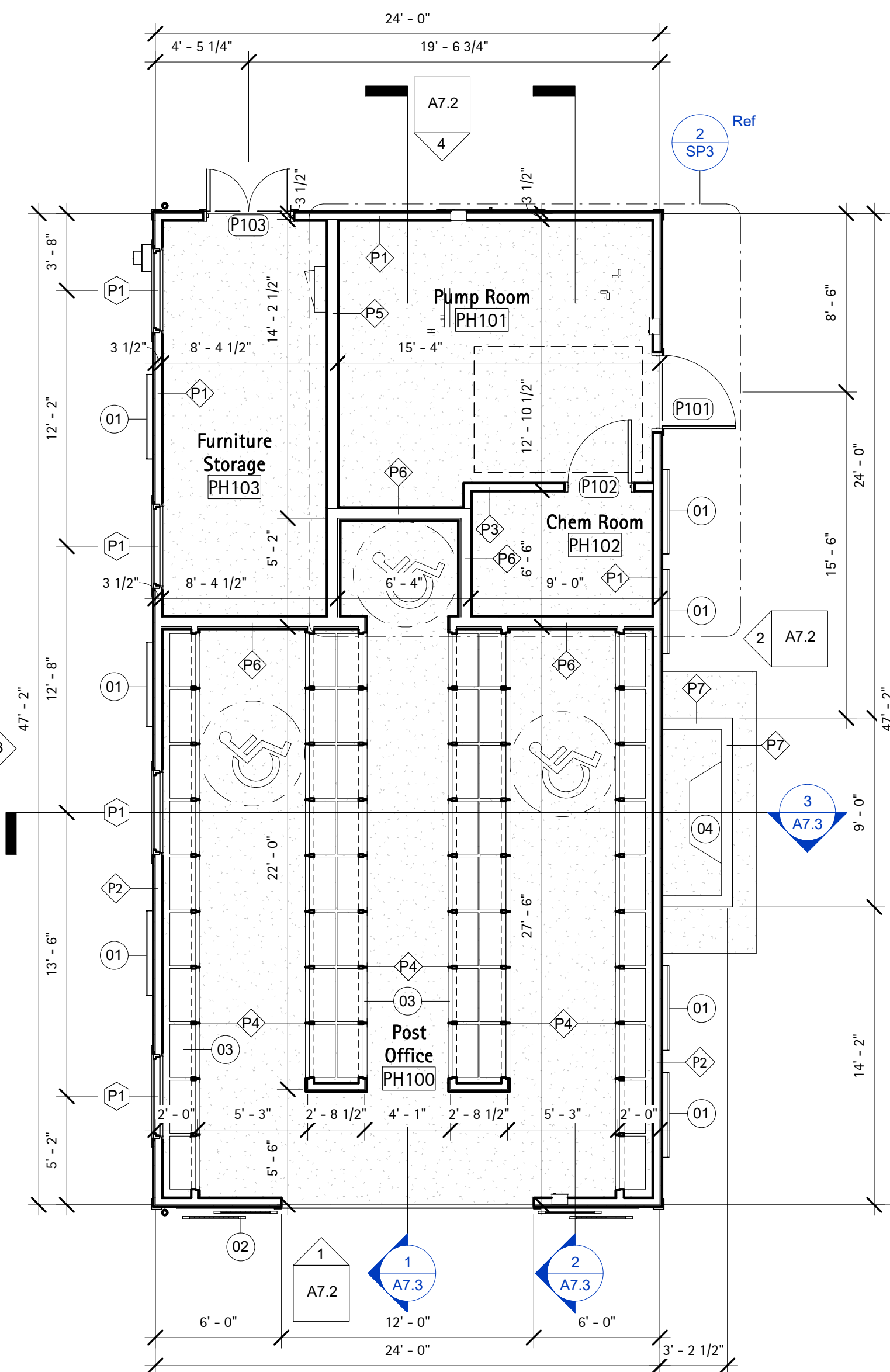
3 Post Office - Main Level
3/16" = 1'-0"

KEYNOTES

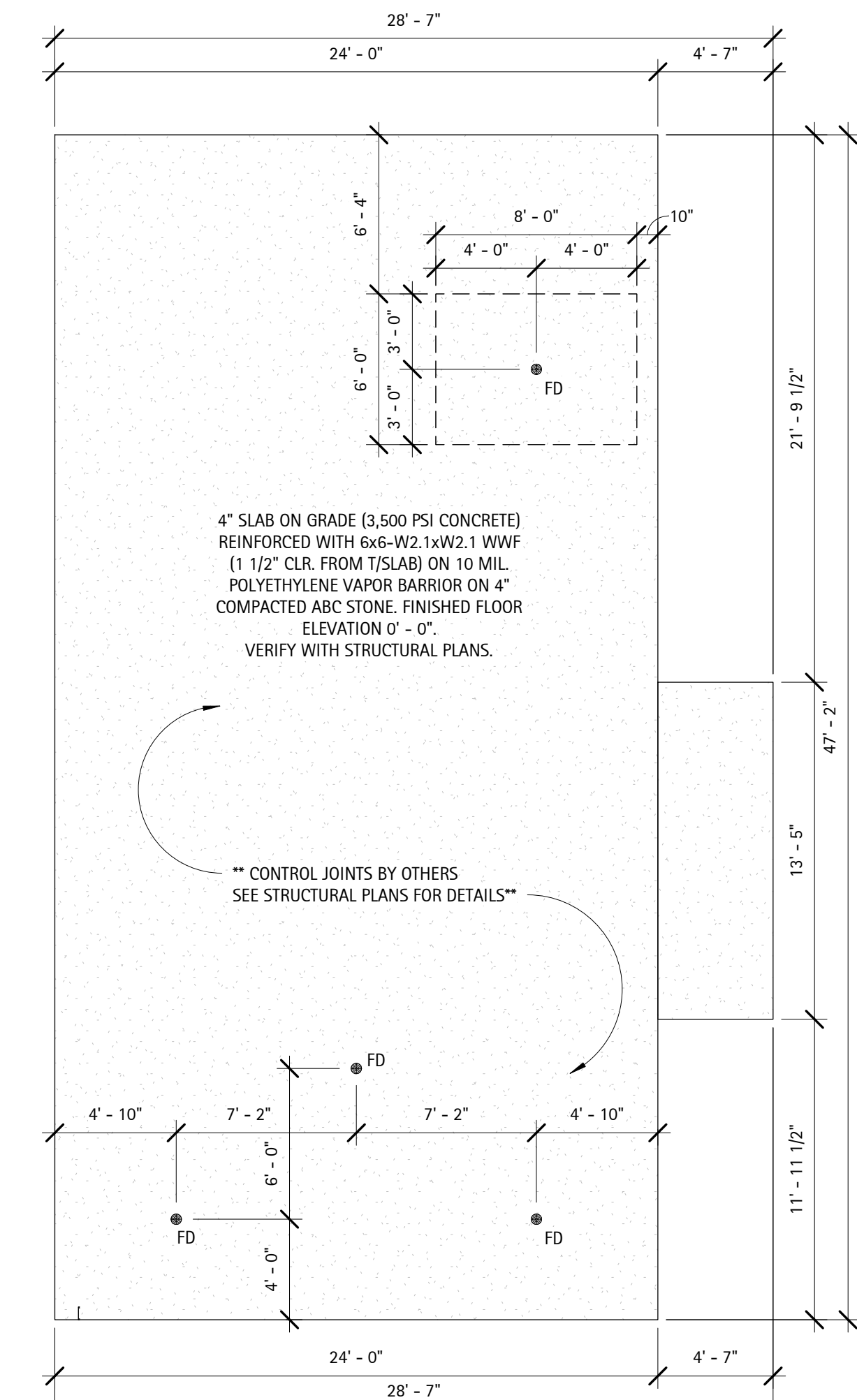
- 01 4'-0" x 8'-0" WALL MOUNTED VINE TRELLIS SEE GENERAL DETAILS
- 02 FIXED BARN DOORS ON METAL TRACK. SEE DETAIL
- 03 'FLORENCE' 20 UNIT FRONT LOAD MAIL BOX. EQUAL TO '4C16D-20'
- 04 42" GAS OUTDOOR FIREPLACE W/ LOGS AND WATERPROOF SWITCH

- MD - MOTION DETECTOR LOCATE IN CEILING
- EE - EMERGENCY EXIT SIGN w/ SPOTLIGHTS
- EL - EMERGENCY LIGHT
- FL - FLOOD LIGHTS
- A - DECORATIVE LIGHT
- B - VANITY LIGHT
- C - CAN LIGHT
- D - 1X4 LED TROFFER
- E - DECORATIVE WALL SCONCE
- F - FAN w/o LIGHT KIT
- G - PENDANT LIGHT
- H - EXTERIOR WALL SCONCE
- I - EXTERIOR GOOSENECK LIGHT
- J - FLUSH MOUNT

*VERIFY ALL SELECTIONS WITH OWNER / GC PRIOR TO ORDER



2 Post Office - Main Level
3/16" = 1'-0"



1 Post Office - Foundation Plan
3/16" = 1'-0"



Perry Cox
architect, p.a.
124 Salem Towne Court, Apex, NC 27502
P: 919.363.5411
www.pcoxdesign.com

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POST OFFICE PLANS

SHEET DISCUSSION
PROJECT #: 2018.037
DATE ISSUED: 12/14/2021
DRAWING BY: JGM/BSJ
CHECKED BY: PGC/DSC

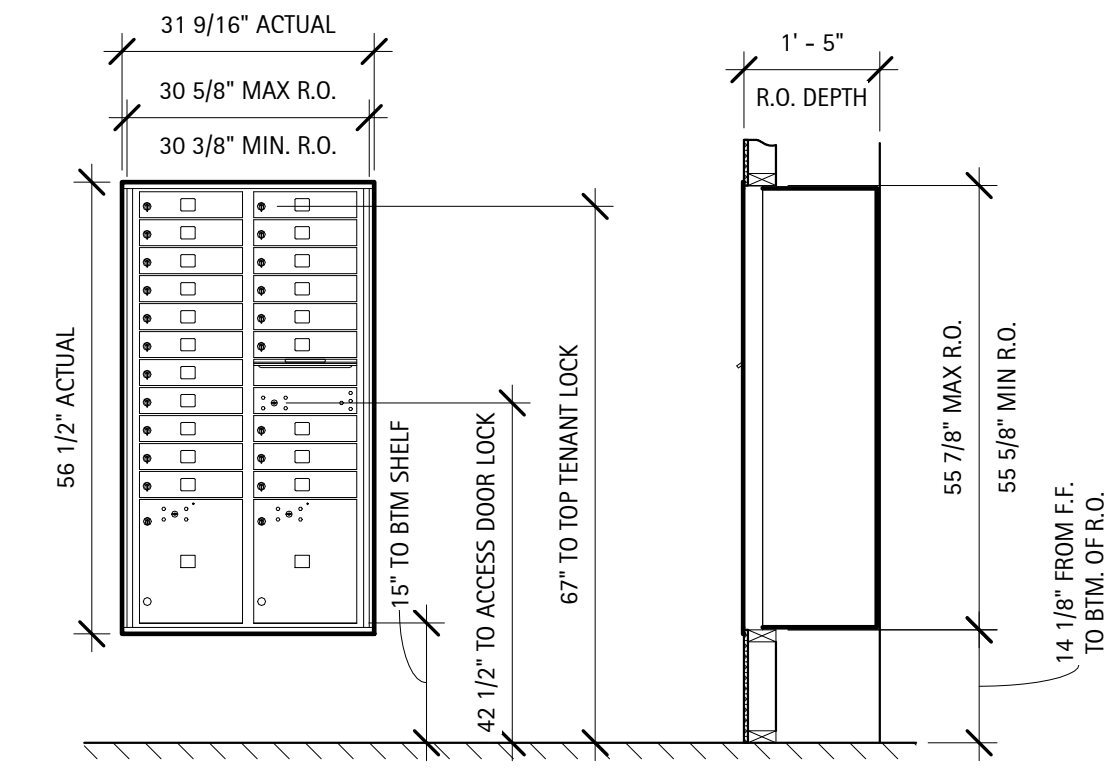
**SERENITY AMENITY
GREENFIELD COMMUNITIES
CLUBHOUSE & POOL
Fuquay-Varina, NC**

A7.1

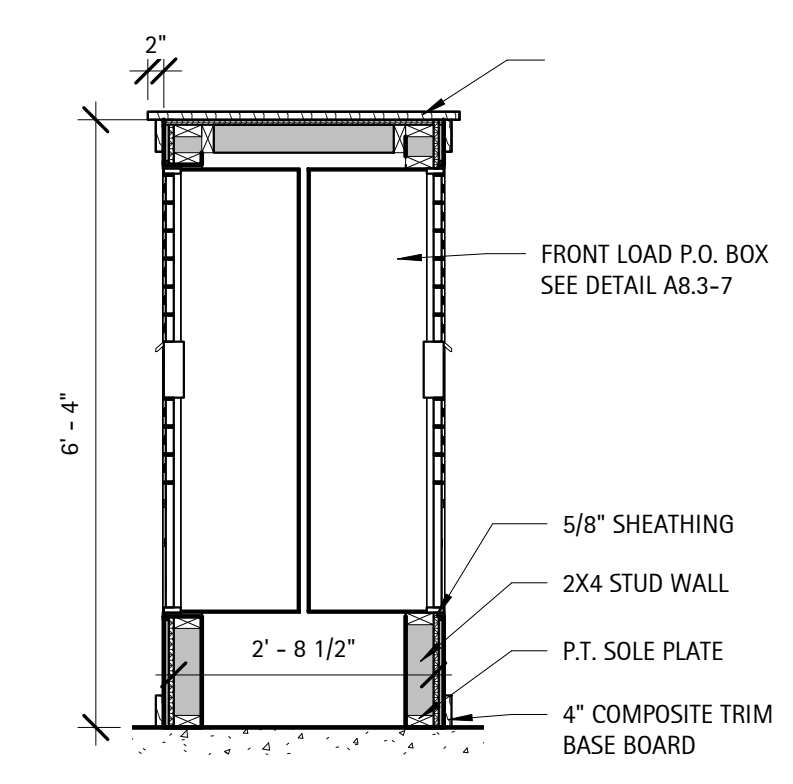


NO.	REVISION	DATE

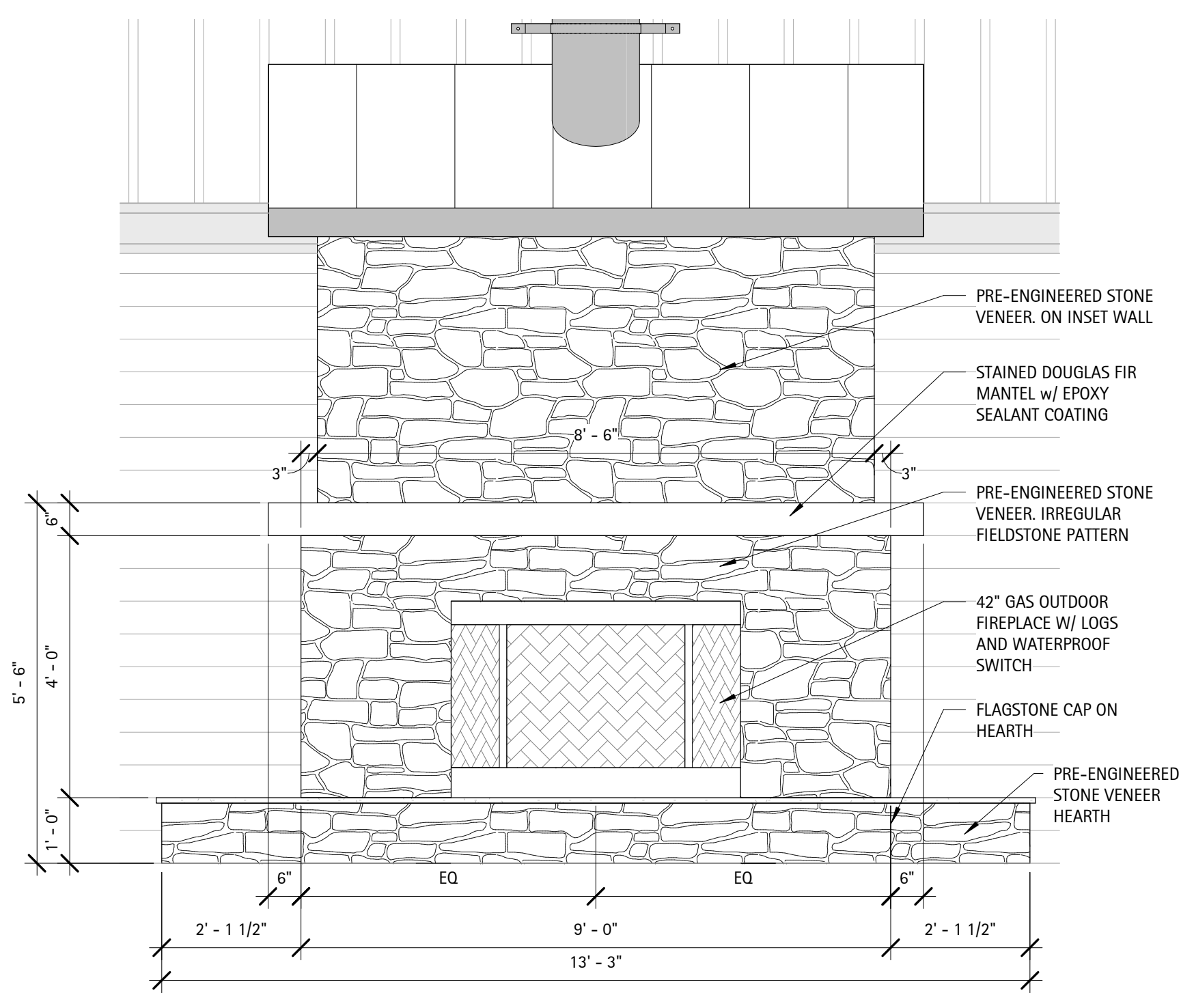
SHEET DESCRIPTION	
POST OFFICE SECTIONS & DETAILS	
PROJECT #:	2018.037
DATE ISSUED:	12/14/2021
DRAWING BY:	JGM/BSJ
CHECKED BY:	PGC/DSC



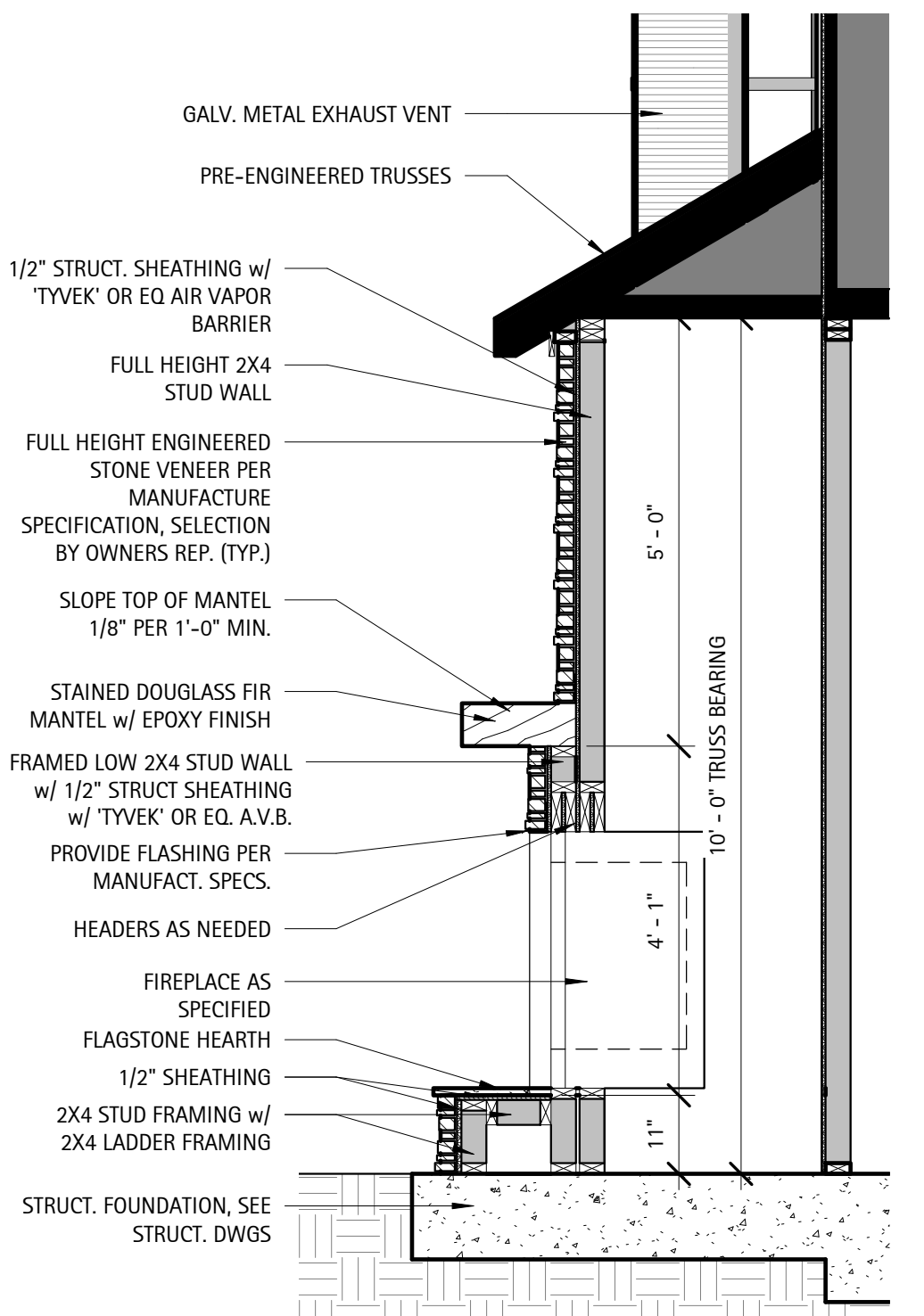
7 Detail - Front Load Mailbox
1/2" = 1'-0"



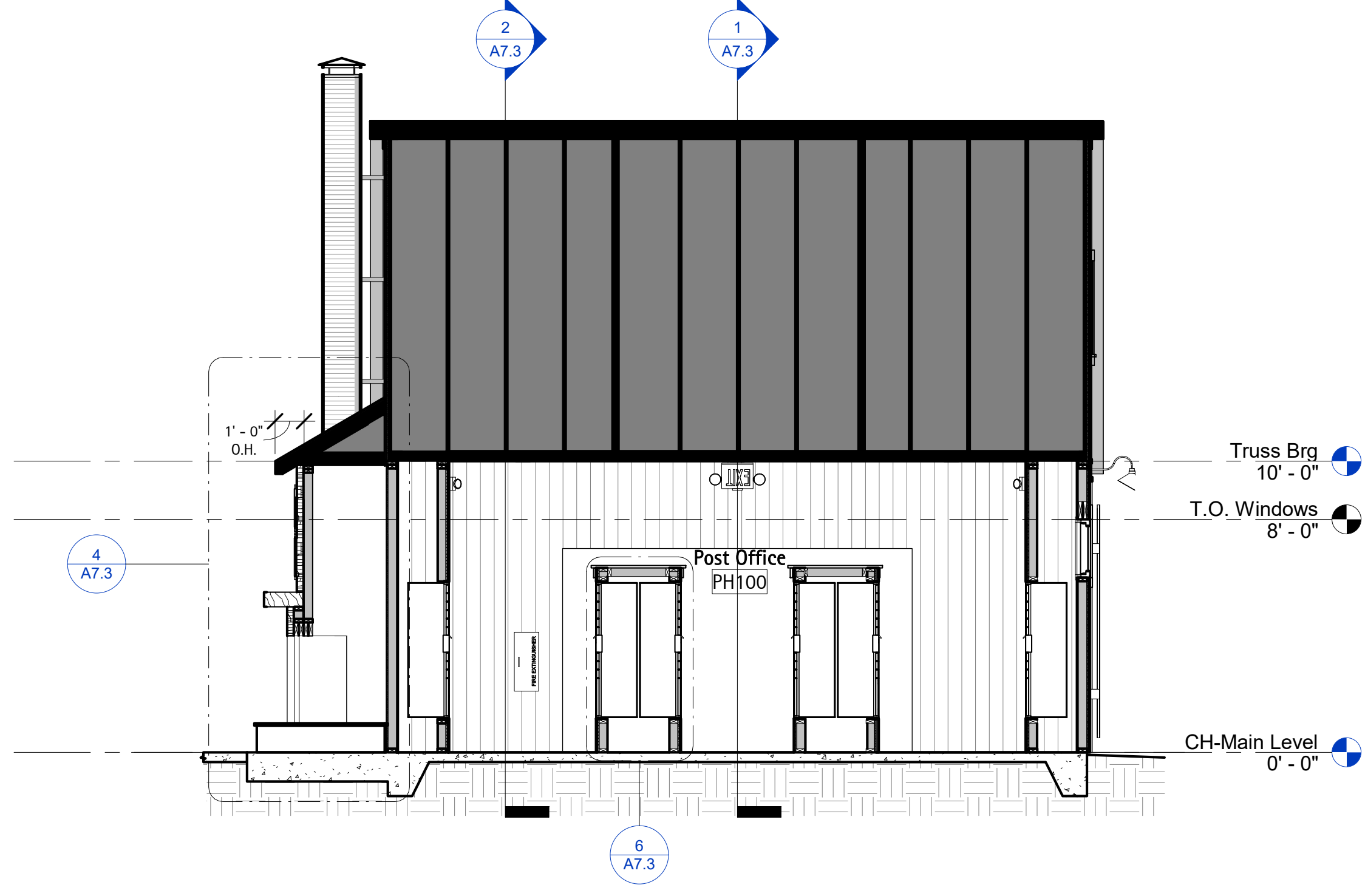
6 Section - Enlarged Postbox Island
1/2" = 1'-0"



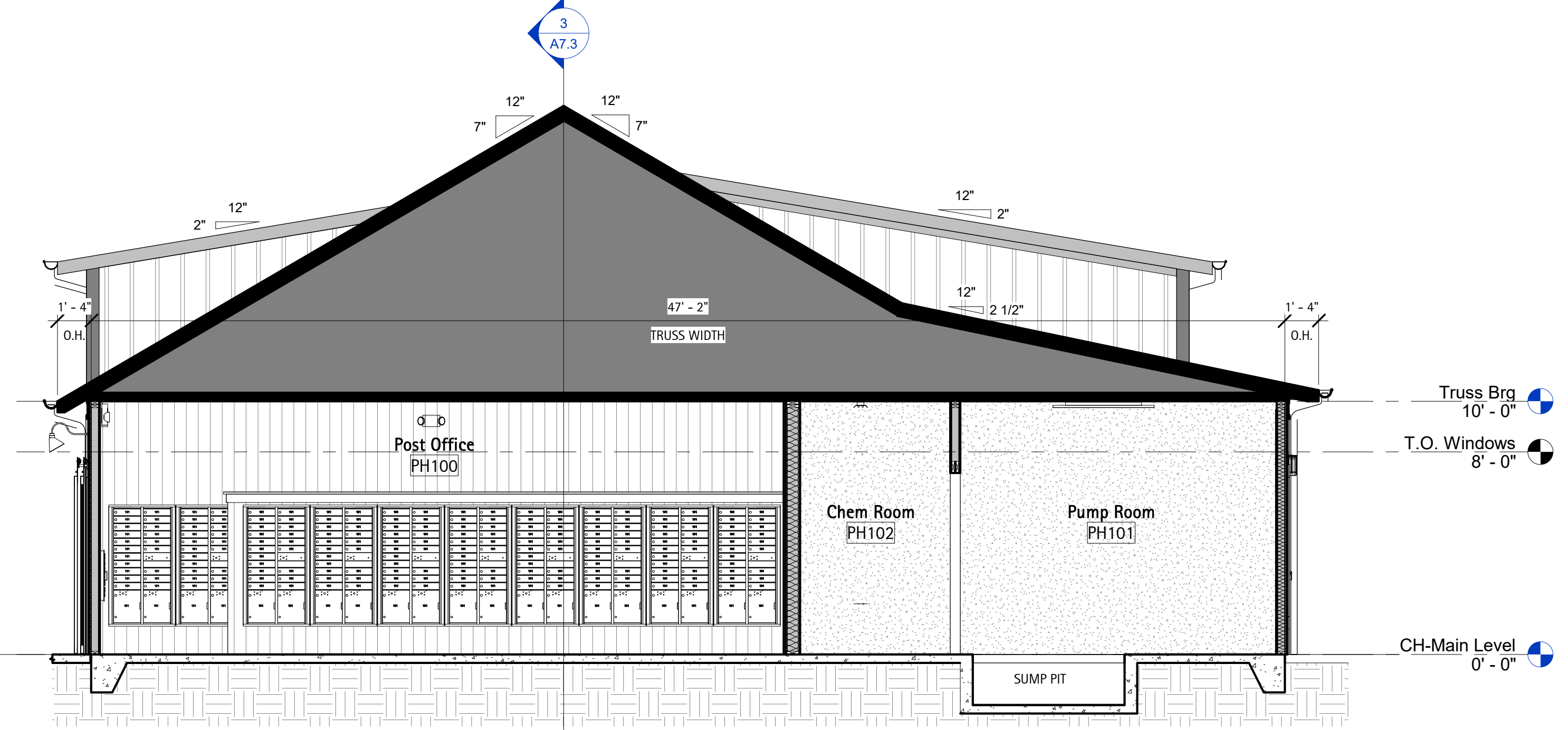
5 Elevation - Enlarged Exterior Fireplace
1/2" = 1'-0"



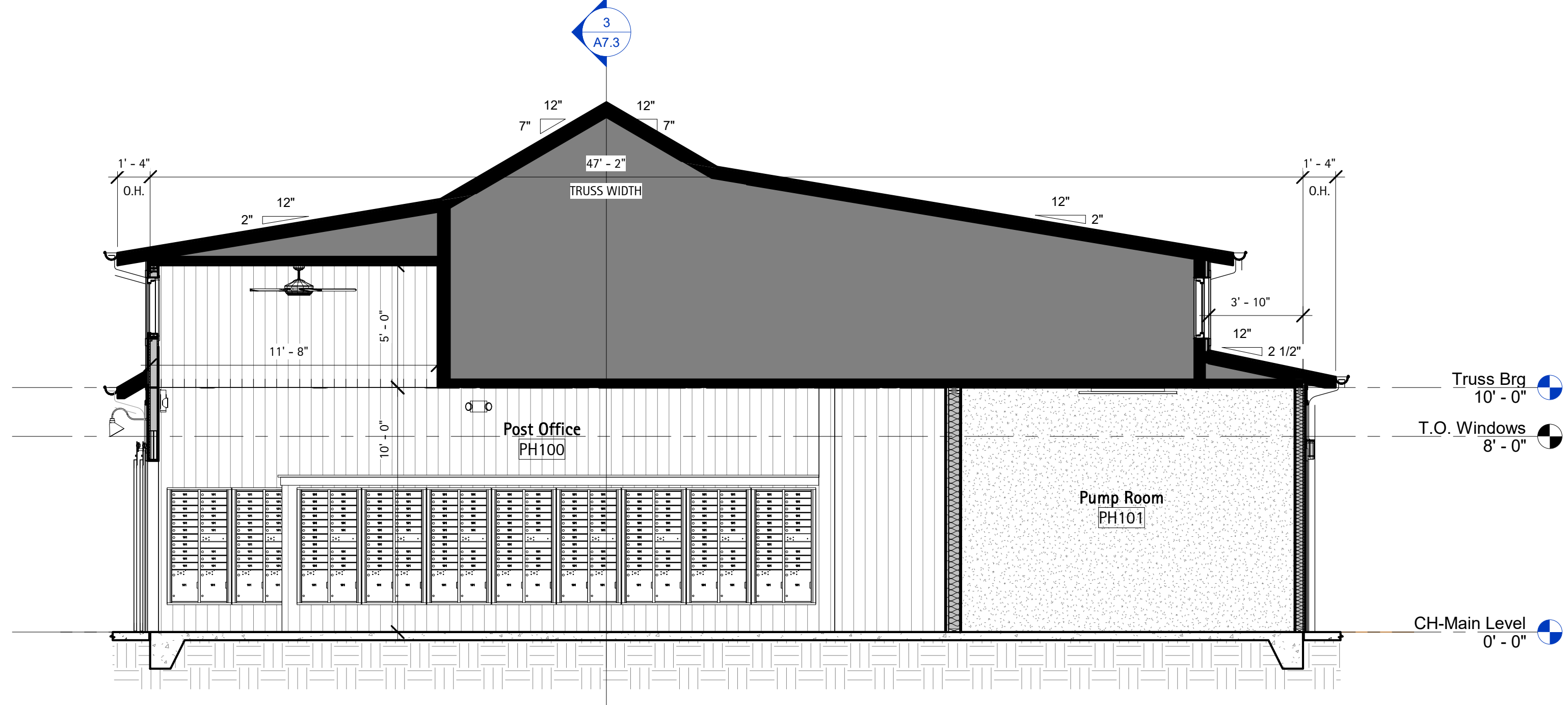
4 Section - Exterior Fireplace Framing
1/2" = 1'-0"



3 Section - Through Ridge
1/4" = 1'-0"



2 Section - Through Pump Room
1/4" = 1'-0"



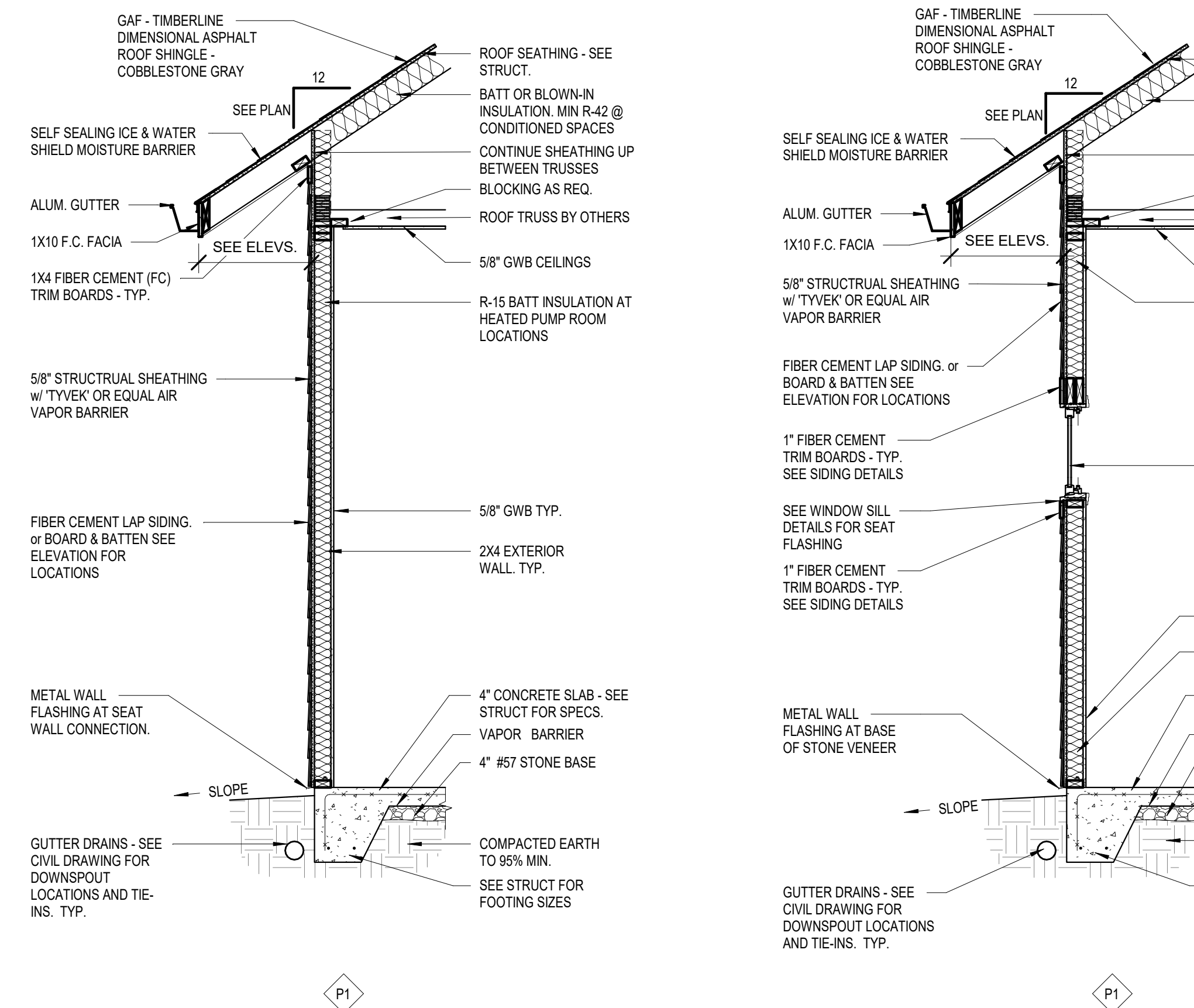
1 Section - Through Dormer
1/4" = 1'-0"

DOORS, FRAMES, HARDWARE NOTES

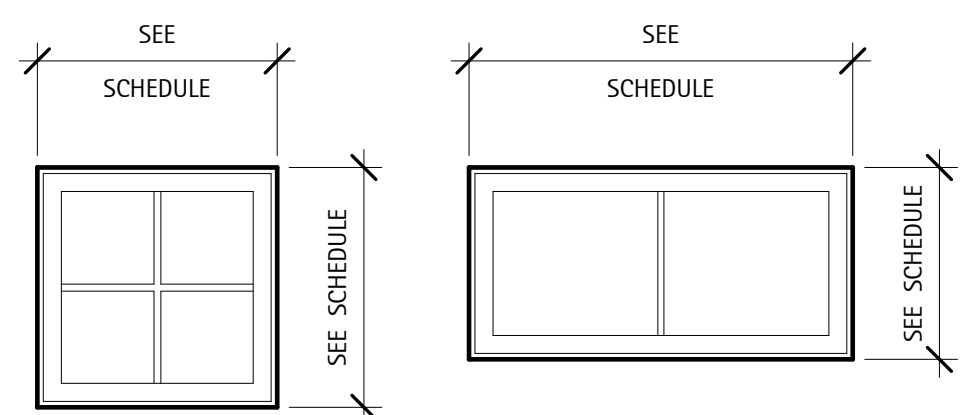
- Refer to Door and Hardware Schedule for extent, type and additional notes. Acceptable wood door manufacturers to be Weyerhaeuser, Eggers, Mohawk or Architect approved equal. General Contractor shall provide a hardware schedule and catalogue cuts for all finish hardware for approval by the Architect indicating location of hardware set, cross-referenced to indications on Drawings, manufacturer's name and product number, finish, and other similar information describing hardware to be provided. Items of hardware not definitely specified, but needed for satisfactory installation of hardware shall be provided. Such items shall be of type and quality suitable for service needed and comparable to adjacent hardware.
- All doors shall be set 6" off adjacent perpendicular wall, UON. Doors shall not be undercut, UON. All levers, pulls, and locks are to be provided per the schedule. All hinges and other miscellaneous exposed hardware shall be in similar and compatible finishes as indicated on Hardware Schedule.
- General Contractor shall coordinate keying system with Owner (Building Management), Landlord, and Architect. General Contractor shall coordinate security system with system vendor and scheduled hardware and the submittal of all security hardware specifications and cut sheets to the proper authorities for review and approval during building permit process.
- Provide hardware, door pulls, hinges, closers, electromagnetic devices, etc. needed to provide a full and complete installation. Provide silencers at metal frame doors. Provide floor mounted door stops unless existing conditions require wall mounted. Ensure adequate blocking for wall mounted stops. Submit to Architect for approval.
- Provide 4 1/2" x 4 1/2", full mortise, template, 5-knuckle, heavy duty, button tip hinges with non-rising loose pins and anti-friction, ball type bearing. Doors with locksets shall be furnished with non-removable pins hinges. Provide 1-1/2" pair hinges for doors up to 90" in height. Add 1 hinge for every additional 30" in height.
- Heavy duty cylindrical locksets and latchsets shall conform to ANSI A156.2, Series 4000, Grade 1. Functions as listed in schedule. Heavy duty mortise locksets and latchsets, levers shall conform to ANSI A156.13 Series, 1000, Grade 1. Overhead Closers shall be surface mounted or concealed overhead as noted in the hardware schedule and shall be heavy duty, fully hydraulic, rack and pinion action and sized to be in compliance with requirements for accessibility for handicapped and recommendations of manufacturer. Furnish complete with all necessary hardware. Furnish 2 keys per lock with a maximum of 8 keys per keyed alike set. Before final completion, adjust hardware so that doors operate in perfect order. Test and adjust hardware for quiet, smooth operation and adjust closers for proper operation. At final completion, properly tag and identify keys and deliver to Owner.
- All Hardware shall be medium grade commercial if not otherwise noted or specified. See allowance per door.
- All interior egress doors and a minimum of one exterior egress door shall be readable openable from the egress side without use of a key or special knowledge.
- All Glazing within 24" of either side of a door in a closed position, and on the same wall plane shall be tempered. Tempered glass shall be installed by code in the following locations:
 - Door Glazing;
 - Glazing for bathroom fixture enclosures (showers, etc)
 - Glazing less than 60" above tub and shower drains;
 - Glazing within 24" of an adjacent door w/ sill less than 60 degrees;
 - Individual panels of Glazing greater than 9 sqft and sill less than 18" above floor and top edge greater than 36".
- Provide an interior door signage allowance of \$25.00 per door.
- Fire Extinguisher cabinets shall be similar to J.L. Industries Mod. Clear VU 1525F26 with a clear bubble and #10 S/S Finish. ADA approved and mounted. Place where shown on plans (FX)
- Door closers shall be LCN series 4040 or equivalent

WALL SECTION NOTES

- Bituminous Damp Proofing shall be applied to exterior foundations of all habitable spaces.
- All treated lumber shall bear the designation AWPAC C22. Pressure treated lumber shall be used in the following locations:
 - Wood in contact with concrete or masonry;
 - Siding within 6" of the ground;
 - Wood exposed to weather.
- Install 5/8" Densglass sheathing behind all tub and shower walls, use water-resistant GWB for all bathroom ceilings UNO.

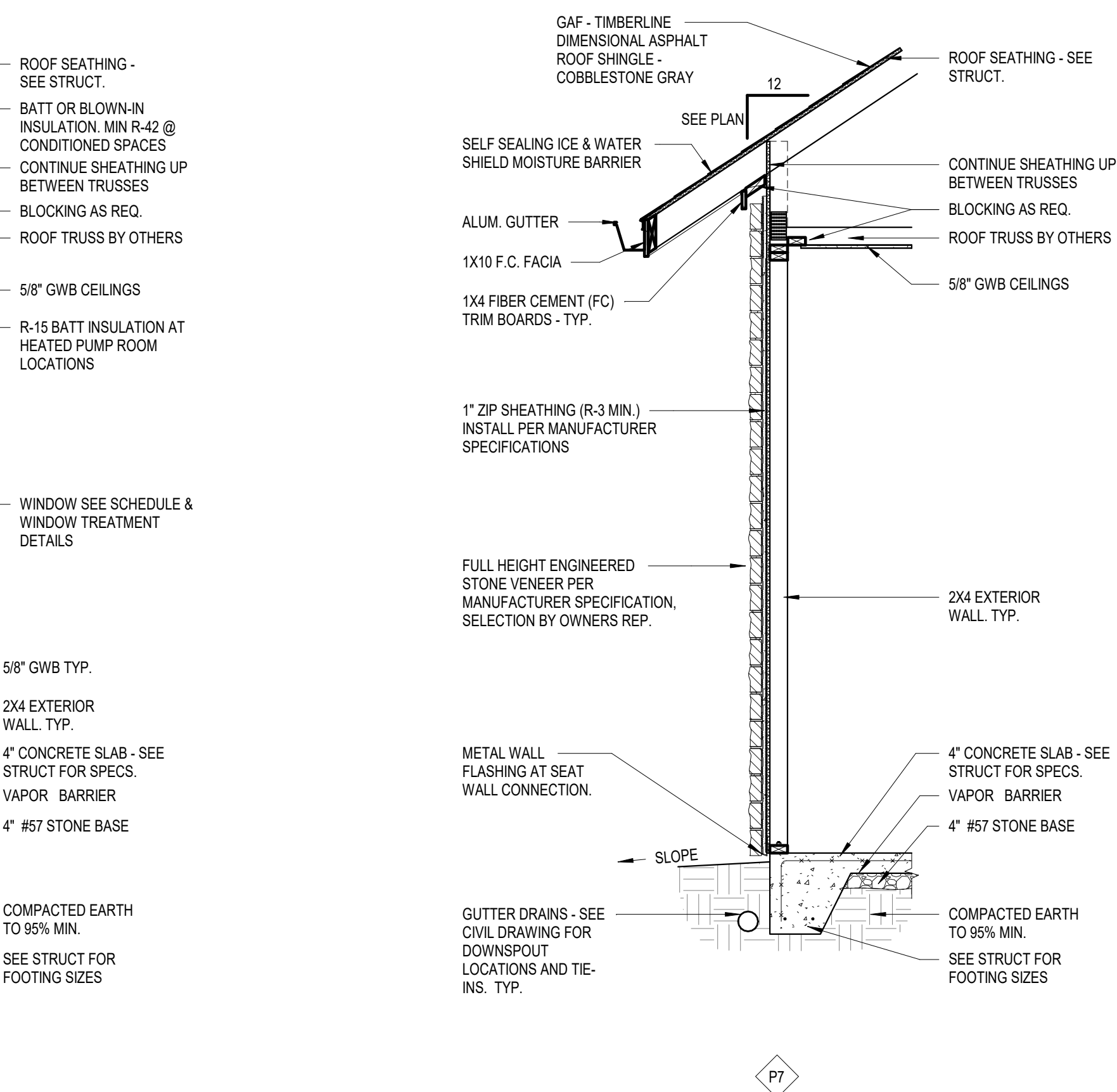


Section - Typ. Exterior Walls
 4
 A7.4
 1/2" = 1'-0"

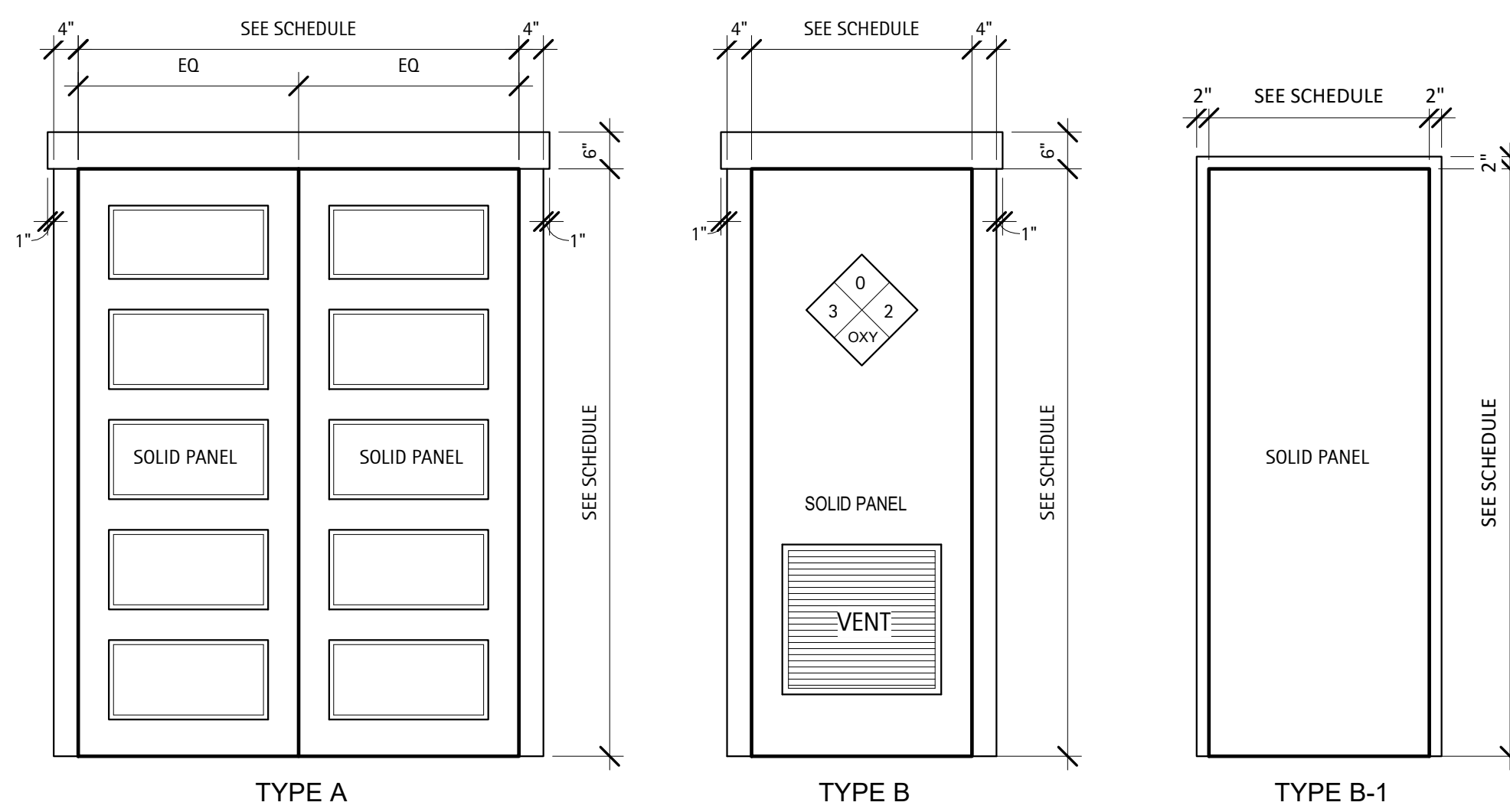


TYPE A **TYPE B**

Detail - Window Types
 3
 A7.4
 1/2" = 1'-0"

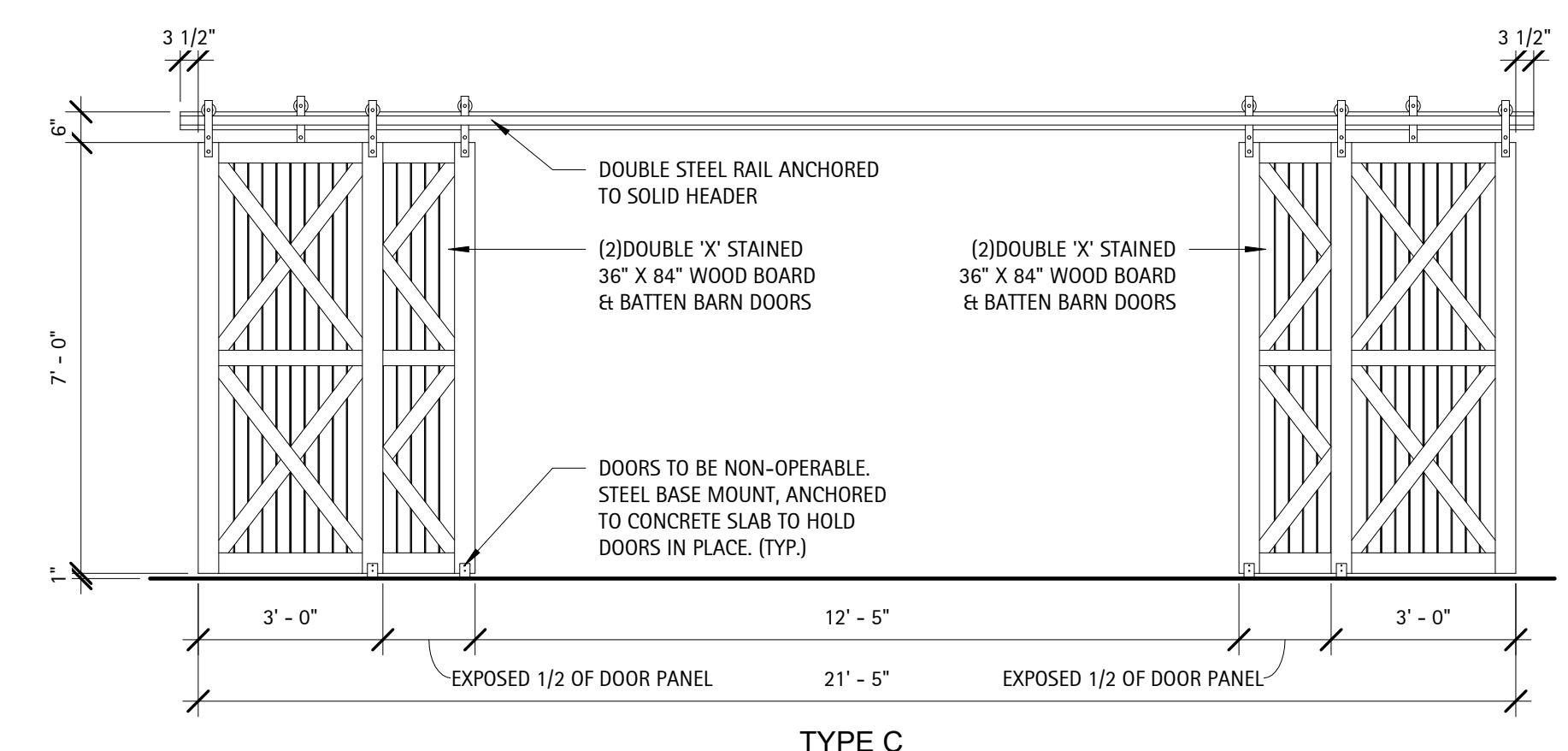


Detail - Door Frames
 2
 A7.4
 1/2" = 1'-0"



TYPE A **TYPE B** **TYPE B-1**

NOTE: EXTERIOR GLASS DOORS TO HAVE 'ADVANCED LOW-E' GLAZING



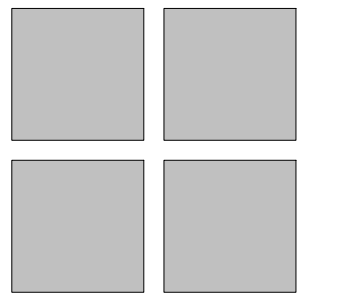
Detail - Post Office Barn Door
 1
 A7.4
 3/8" = 1'-0"

POST OFFICE ROOM SCHEDULE										
Room Number	Room Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Ceiling Height	Crown	Comments		
PH100	Post Office	SEALED CONC.- LIGHT BROOM FINISH	1X6 FIBER CEMENT	STAINED T1-11	M.R. PAINTED GWB	10'-0"				
PH101	Pump Room	SEALED CONC.- LIGHT BROOM FINISH	1X6 FIBER CEMENT	M.R. PAINTED GWB	M.R. PAINTED GWB	10'-0"				
PH102	Chem Room	SEALED CONC.- LIGHT BROOM FINISH	1X6 FIBER CEMENT	M.R. PAINTED GWB	M.R. PAINTED GWB	10'-0"				
PH103	Furniture Storage	SEALED CONC.- LIGHT BROOM FINISH	1X6 FIBER CEMENT	M.R. PAINTED GWB	M.R. PAINTED GWB	10'-0"				

POST OFFICE DOOR SCHEDULE																						
Door Number	Style	Door					Door		Frame	Fire Rating	Hardware										Comments	
		Width	Height	Thickness	Rough Width	Rough Height	Material	Finish			Material	Push / Pull	Passage Set	Privacy Set	Office Set	Storage Set	Deadbolt	Panic Hardware	Closer	Weather strip		Thresh old
P100	TYPE C	12' - 0"	7' - 0"	0' - 1 3/4"	12' - 2"	7' - 1"	WOOD	STAINED	METAL	-	No	No	No	No	No	No	No	No	No	No	No	FIXED IN OPEN POSITION
P101	TYPE B	3' - 6"	7' - 0"	0' - 1 3/4"	3' - 8"	7' - 1"	INSUL. MTL.	PAINT	METAL	-	No	No	No	No	Yes	No	No	Yes	Yes	Yes	No	No
P102	TYPE B-1	3' - 0"	7' - 0"	0' - 1 3/4"	3' - 2"	7' - 1"	INSUL. MTL.	PAINT	METAL	-	No	No	No	No	Yes	No	No	No	No	No	No	No
P103	TYPE A	4' - 0"	7' - 0"	0' - 2"	4' - 2"	7' - 1"	INSUL. MTL.	PAINT	METAL	-	No	No	No	No	Yes	No	No	No	Yes	Yes	No	No

Grand total: 4

POST OFFICE WINDOW SCHEDULE										
Mark	Count	Size		Rough Width	Rough Height	Type	Finish	Head Height	Comments	
		Width	Height							
P1	4	4' - 0"	2' - 0"	4' - 0 1/2"	2' - 0 1/2"	TYPE B		8'-0"		
P2	6	2' - 6"	2' - 6"	2' - 6 1/2"	2' - 6 1/2"	TYPE A		14'-6"		



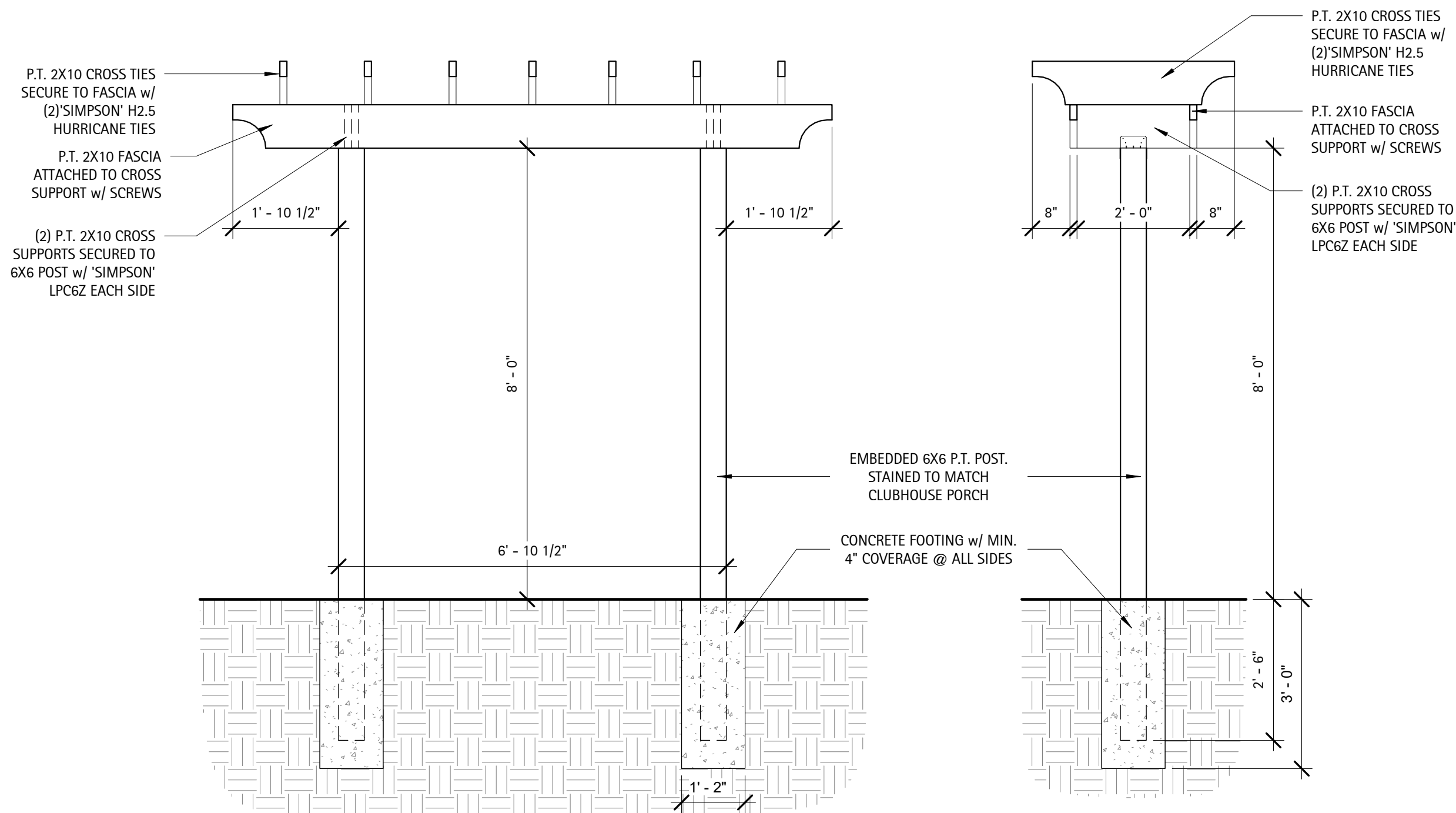
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 architect, p.a.
 124 Salem Towne Court, Apex, NC 27502
 P: 919.363.5411
 www.pcoxdesign.com

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REVISION	
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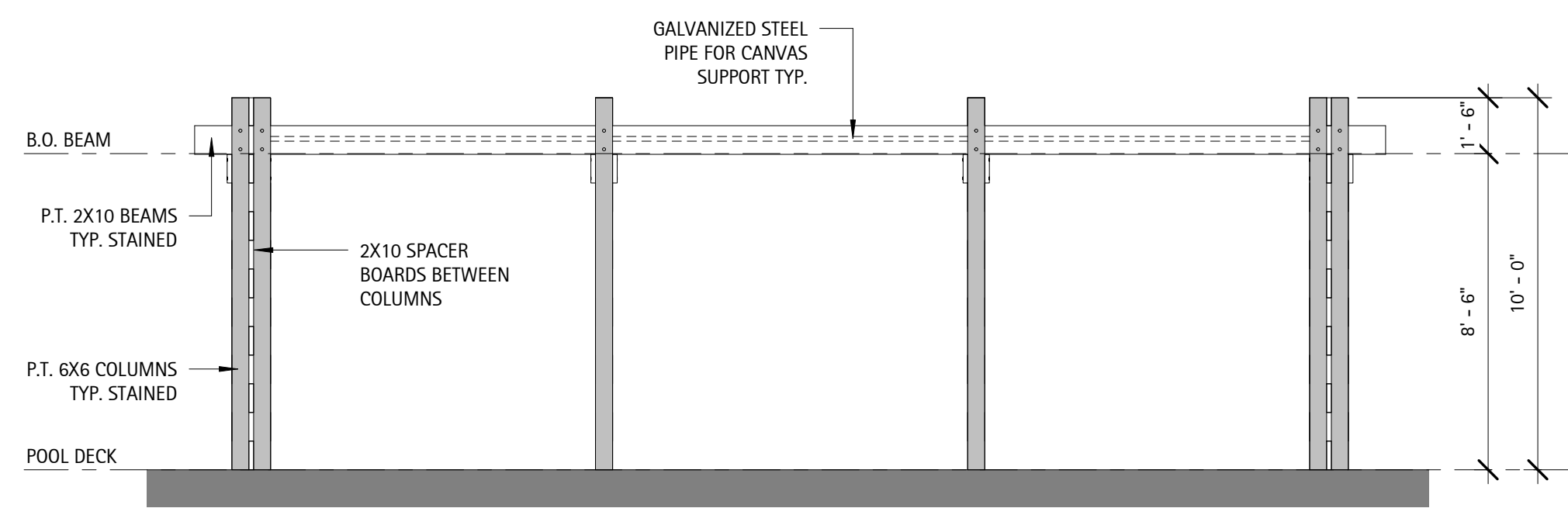
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POST OFFICE SCHEDULES
 PROJECT #: 2018.037
 DATE ISSUED: 12/14/2021
 DRAWING BY: JGM/BSJ
 CHECKED BY: PGC/DSC

SERENITY AMENITY GREENFIELD COMMUNITIES CLUBHOUSE & POOL
 Fuquay-Varina, NC

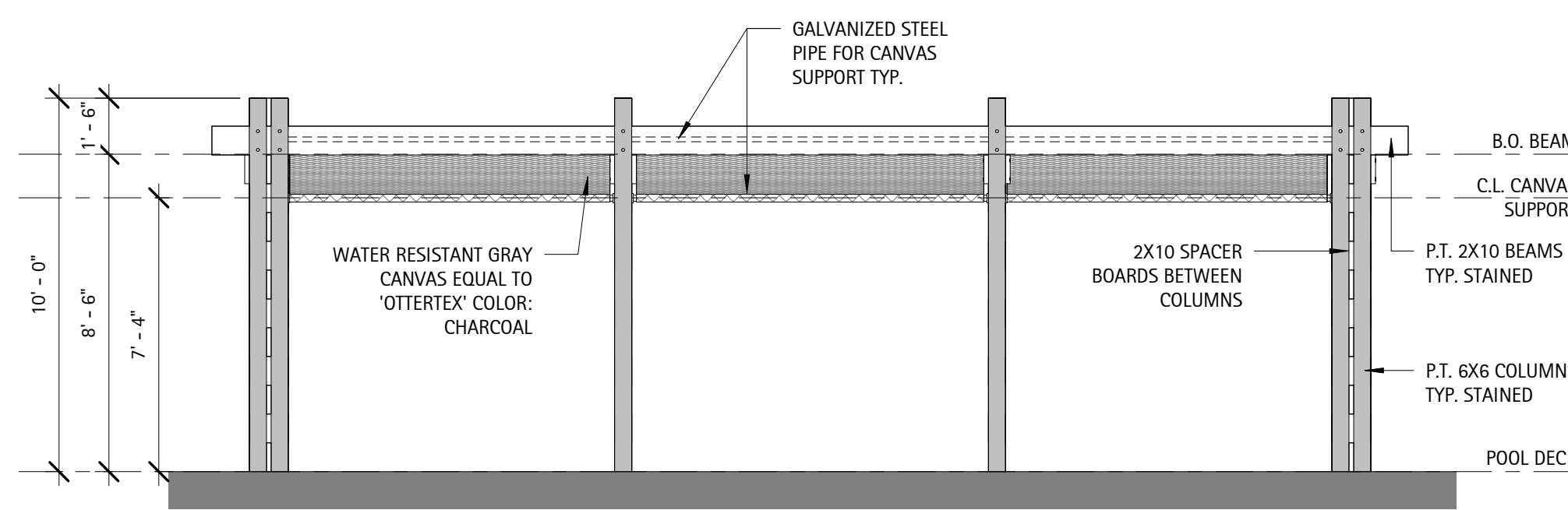




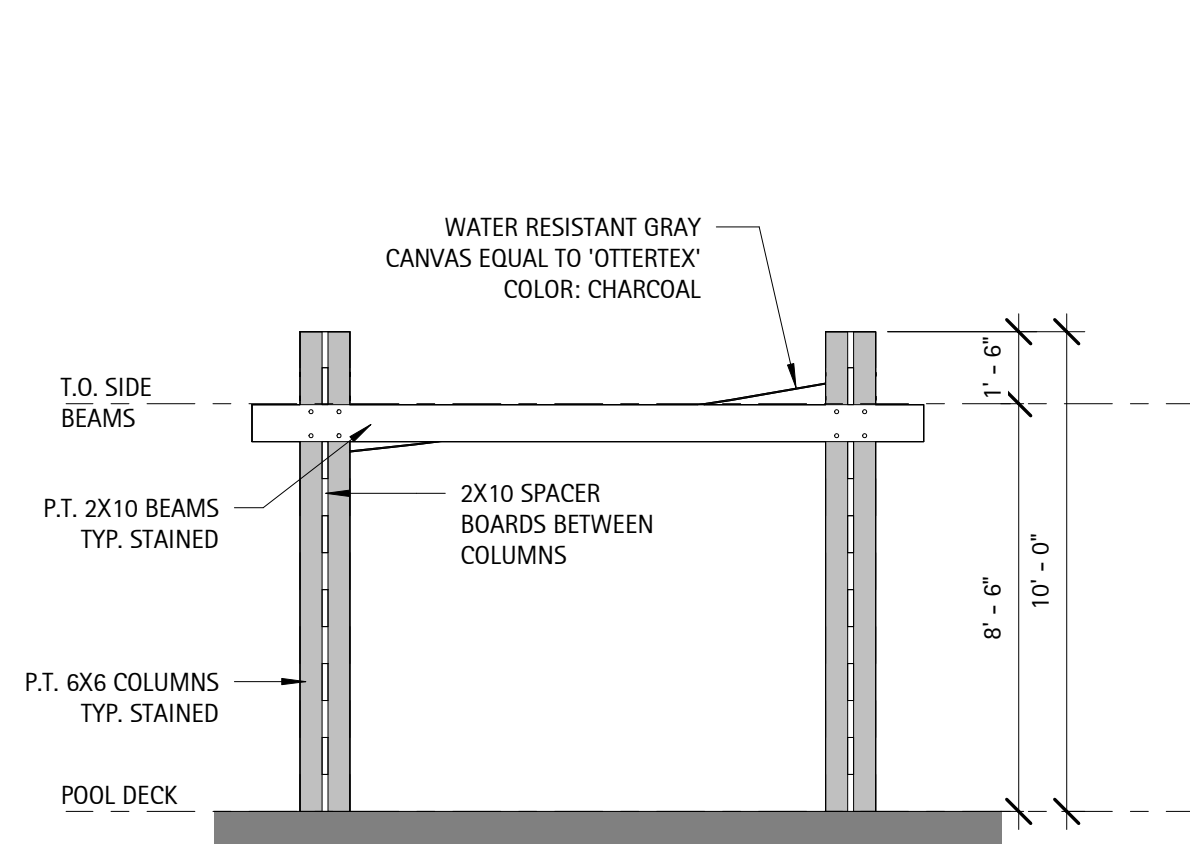
7 Detail - Courtyard Trellis
1/2" = 1'-0"



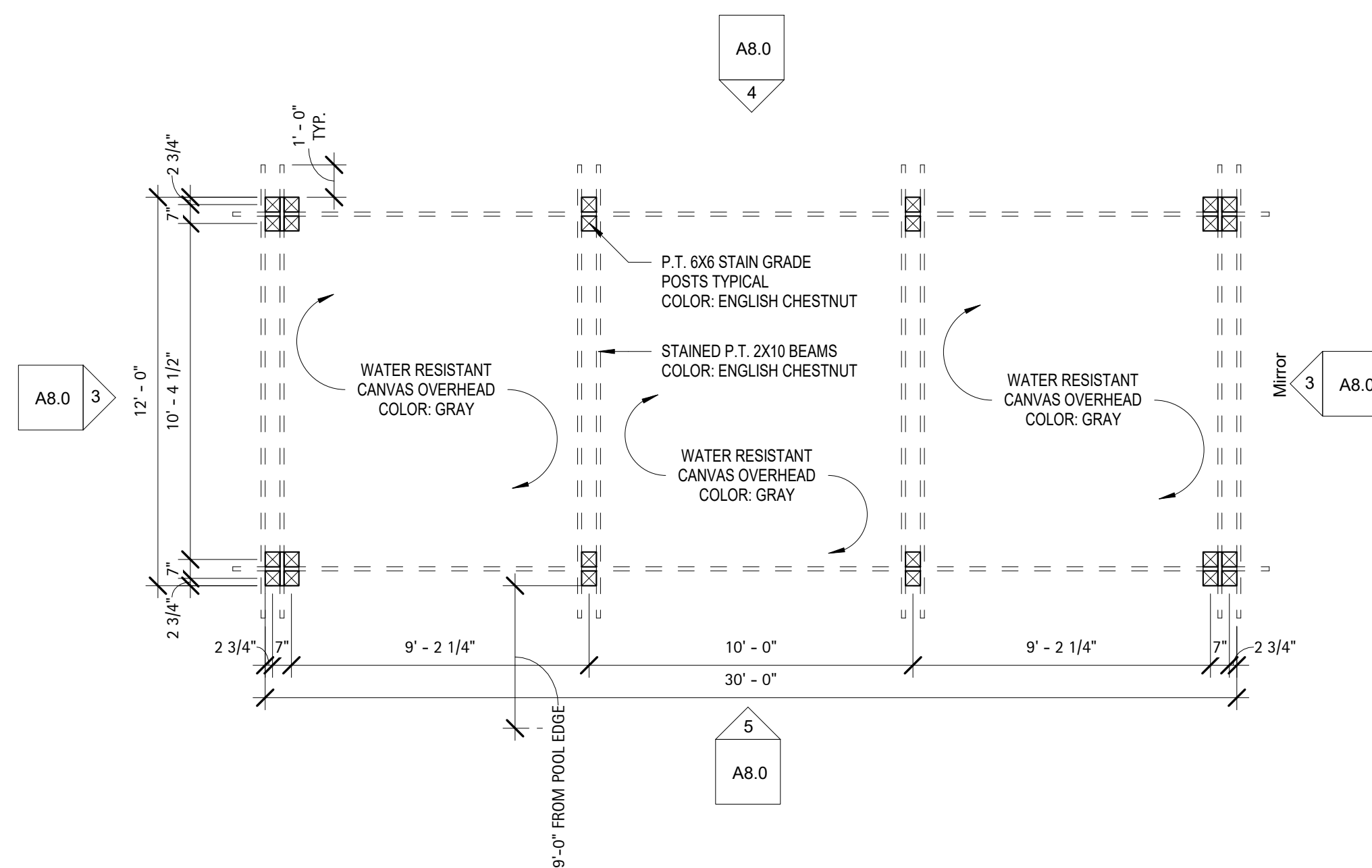
5 Cabana - Front Elevation
1/4" = 1'-0"



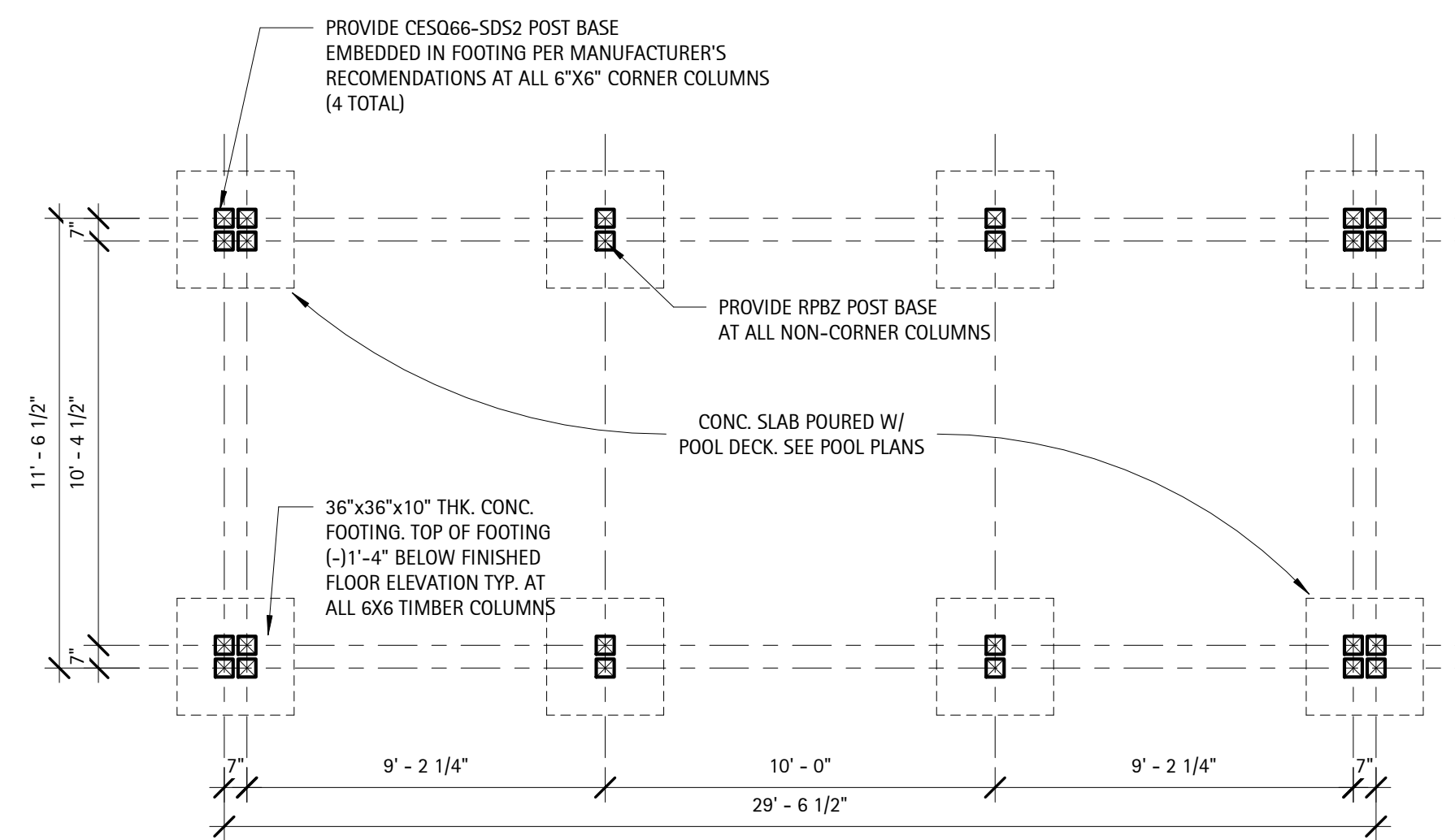
4 Cabana - Rear Elevation
1/4" = 1'-0"



3 Cabana - Typ. Side Elevation
1/4" = 1'-0"



2 Cabana - Main Level
1/4" = 1'-0"



1 Cabana - Foundation Plan
1/4" = 1'-0"

Building Code: 2018 North Carolina State Building Code (NCSBC) 2009 North Carolina State Building Code
 2009 NC Rehab 2006 NC Rehab 2006 North Carolina Building Code
 2009 Chapter 34 2006 Chapter 34 1995 Existing Building Code

New Building: New Building Addition Shell Building Alteration to Shell First Time Interior Completion

Existing Building: Renovation Reconstruction Interior Completion Repair Tenant Alteration Alteration to Shell
 Change of Use Tenant Change of Occupancy

Note: Zoning Review May Be Required for Change of Use or Occupancy

Original Occupancy: _____
 Proposed Occupancy: A-3 (ASSEMBLY)

OCCUPANCY INFORMATION

Primary Occupancies:

Assembly: A-1 A-2 A-3 A-4 A-5
 Hazardous: H-1 H-2 H-3 H-4 H-5
 Institutional: I-1 Condition 1 2 3 4 5
 I-2 Condition 1 2
 I-3 Condition 1 2
 I-4

Mercantile:
 Residential: R-1 R-2 R-3 R-4
 Storage: S-1 Moderate S-2 Low High-piled
 Parking Garage: Open Enclosed Repair Garage

Utility and Miscellaneous:

Special Occupancies: 402 403 404 405 406 407 408 409 410 411
 412 413 414 415 416 417 418 419 420 421

BOTH BUILDING AND TENANT MUST BE INDICATED ON CHART BELOW

Story No.	DISCRIP. & USE	BLDG AREA PER STORY (ACTUAL SF)	TABLE 506.2 ALLOWABLE AREA (SF)	AREA FOR INCREASE FRONTAGE	SPRINKLER INCREASE	ALLOWABLE FLOOR AREA	RATE OF ALLOWABLE	MAXIMUM BUILDING AREA	SEPARATION RATING REQUIRED
CABANA	A-3	360	6,000	N/A	N/A	N/A	0.06	6,000 SF	N/A

- Frontage area increases from Section 506.3 are computed thus:
 - Perimeter which fronts a public way or open space = _____ 20 feet minimum width = _____ (F)
 - Total Building Perimeter = _____
 - Ratio (F/P) = _____
 - W = Minimum _____ (W)
 - Percent of frontage = _____ 30 = _____ (%)
- Unlimited area applicable under _____
- Maximum Building Area = total num _____ building x D (maximum 3 stories) (506.2)
- The maximum area of open parking _____ must comply with Table 406.5.4
- Frontage increase is based on the unsprinklered area value in Table 506.2

ALLOWABLE HEIGHT

MOST RESTRICTIVE (GROUP)	ALLOWABLE BUILDING HEIGHT (TABLE 504.3)	INCREASE FOR SPRINKLERS	ACTUAL BUILDING HEIGHT AS SHOWN ON PLANS	CODE REFERENCE
Type of Construction	Type_VB	Type_VB	Type_VB	403.3.1
Building Height in Feet	H = 40'-0" FT	N/A	H = 10'-0"	403.3.1
Building Height in Stories	S = 1	N/A	S = 1	403.3.1

BUILDING DATA

THIS SECTION REQUIRED FOR ALL PROJECTS

Construction Type: I-A I-B II-A II-B III-A III-B IV-HT V-A V-B

Mixed construction: Yes No

Sprinklers: Yes No NFPA 13 NFPA 13R Partially Sprinklered Special Suppression

Standpipes: Yes No

Fire District: Yes No

Building Height: 10 Feet

Basement: Yes No

Mezzanine: Yes No

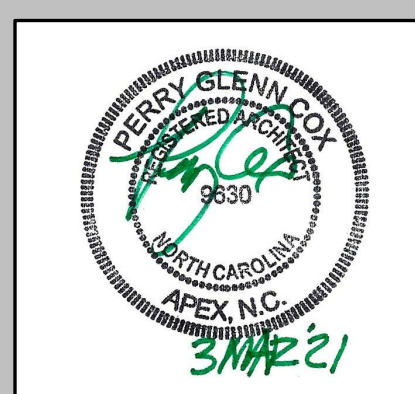
High Rise: Yes No

Class: I II III Wet Dry

(Appendix D) Floor Hazard

1 Story

Life Safety Plan Sheet # (if provided): G0.3



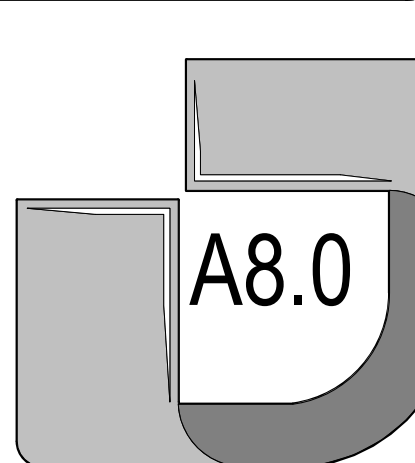
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 124 Salem Towne Court, Apex, NC 27502
 P: 919.363.5411
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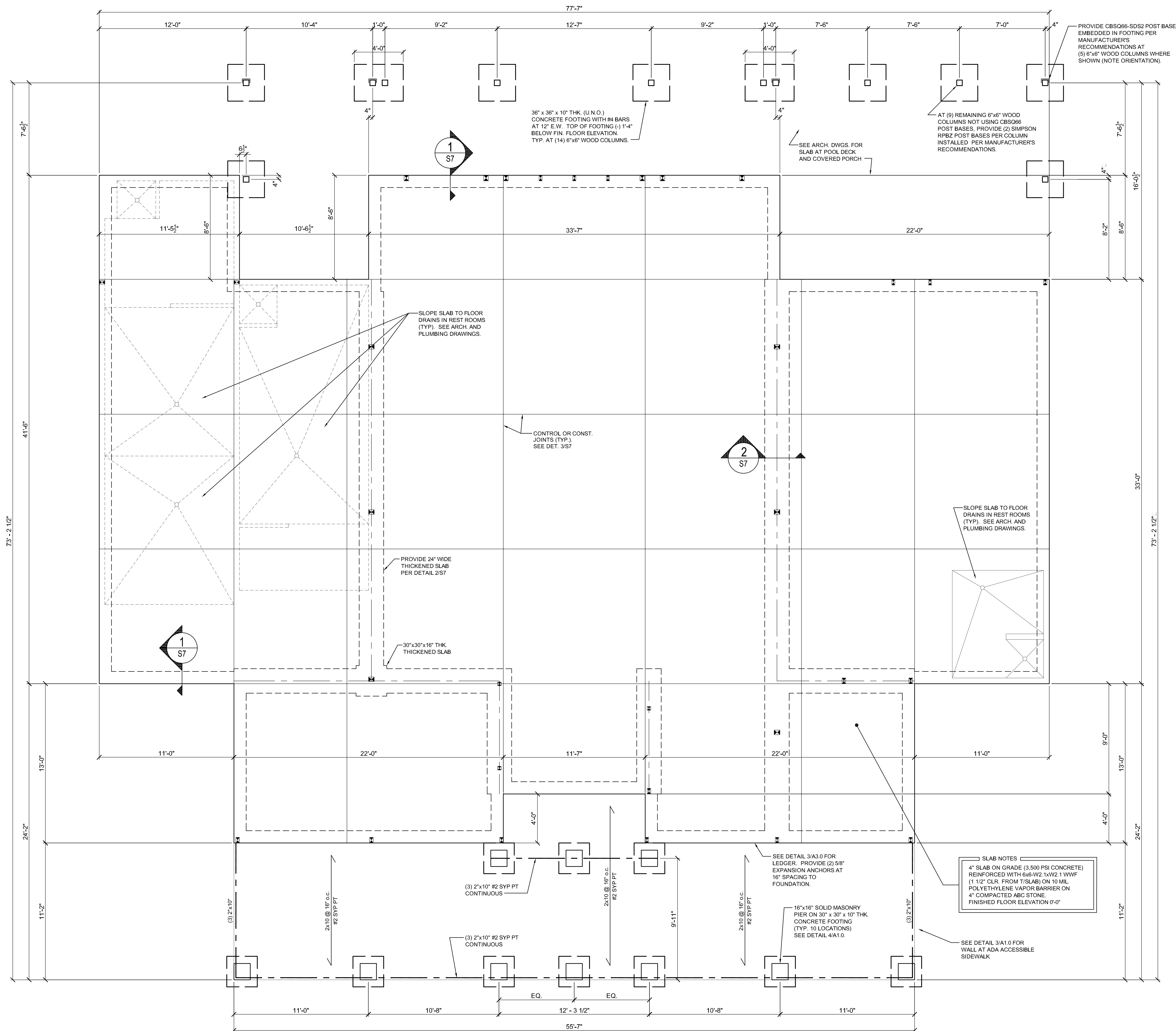
DATE	REVISION	NO.

SHEET DESCRIPTION
CABANA PLANS & ELEVATIONS

PROJECT #: 2018.037
 DATE ISSUED: 12/14/2021
 DRAWING BY: JGM/BSJ
 CHECKED BY: PGC/DSC

SERENITY AMENITY GREENFIELD COMMUNITIES CLUBHOUSE & POOL
 Fuquay-Varina, NC





PROVIDE CBS066-SD52 POST BASE EMBEDDED IN FOOTING PER MANUFACTURER'S RECOMMENDATIONS AT (5) 6"x6" WOOD COLUMNS WHERE SHOWN (NOTE ORIENTATION).

36" x 36" x 10" THK (U.N.O.) CONCRETE FOOTING WITH #4 BARS AT 12" E.W. TOP OF FOOTING (-) 1'-4" BELOW FIN. FLOOR ELEVATION. TYP. AT (14) 6"x6" WOOD COLUMNS.

AT (9) REMAINING 6"x6" WOOD COLUMNS NOT USING CBS066 POST BASES, PROVIDE (2) SIMPSON RPBZ POST BASES PER COLUMN INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

SEE ARCH. DWGS. FOR SLAB AT POOL DECK AND COVERED PORCH

SLOPE SLAB TO FLOOR DRAINS IN REST ROOMS (TYP.) SEE ARCH. AND PLUMBING DRAWINGS.

CONTROL OR CONST. JOINTS (TYP.) SEE DET. 3/S7

PROVIDE 24" WIDE THICKENED SLAB PER DETAIL 2/S7

30"x30"x16" THK THICKENED SLAB

SLOPE SLAB TO FLOOR DRAINS IN REST ROOMS (TYP.) SEE ARCH. AND PLUMBING DRAWINGS.

SLAB NOTES
 4" SLAB ON GRADE (3,500 PSI CONCRETE) REINFORCED WITH #6@12 W/W 1 W/W (1 1/2" CLR. FROM T/SLAB) ON 10 MIL POLYETHYLENE VAPOR BARRIER ON 4" COMPACTED ABC STONE. FINISHED FLOOR ELEVATION 0'-0"

SEE DETAIL 3/A1.0 FOR WALL AT ADA ACCESSIBLE SIDEWALK

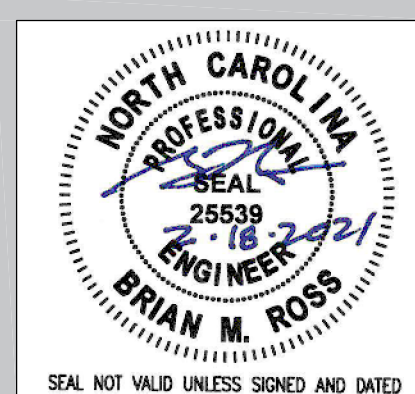
SEE DETAIL 3/A3.0 FOR LEDGER. PROVIDE (2) 5/8" EXPANSION ANCHORS AT 18" SPACING TO FOUNDATION.

16"x16" SOLID MASONRY PIER ON 30" x 30" x 10" THK CONCRETE FOOTING (TYP. 10 LOCATIONS) SEE DETAIL 4/A1.0.

1 SLAB AND FOUNDATION PLAN
 1/4" = 1'-0"



ROSS LINDEN ENGINEERS PC
 709 W. BINES STREET, RALEIGH, NC 27603
 TEL 919.832.5680 FAX 919.832.5675
 WWW.ROSSLINDEN.COM NCELP#016-C-2384



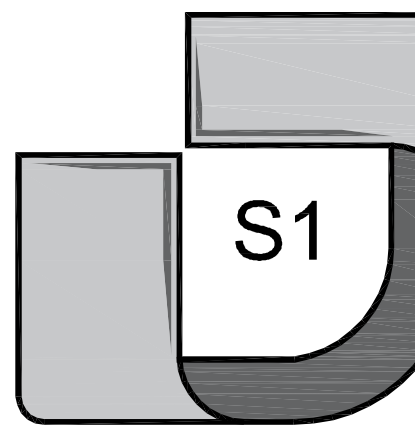
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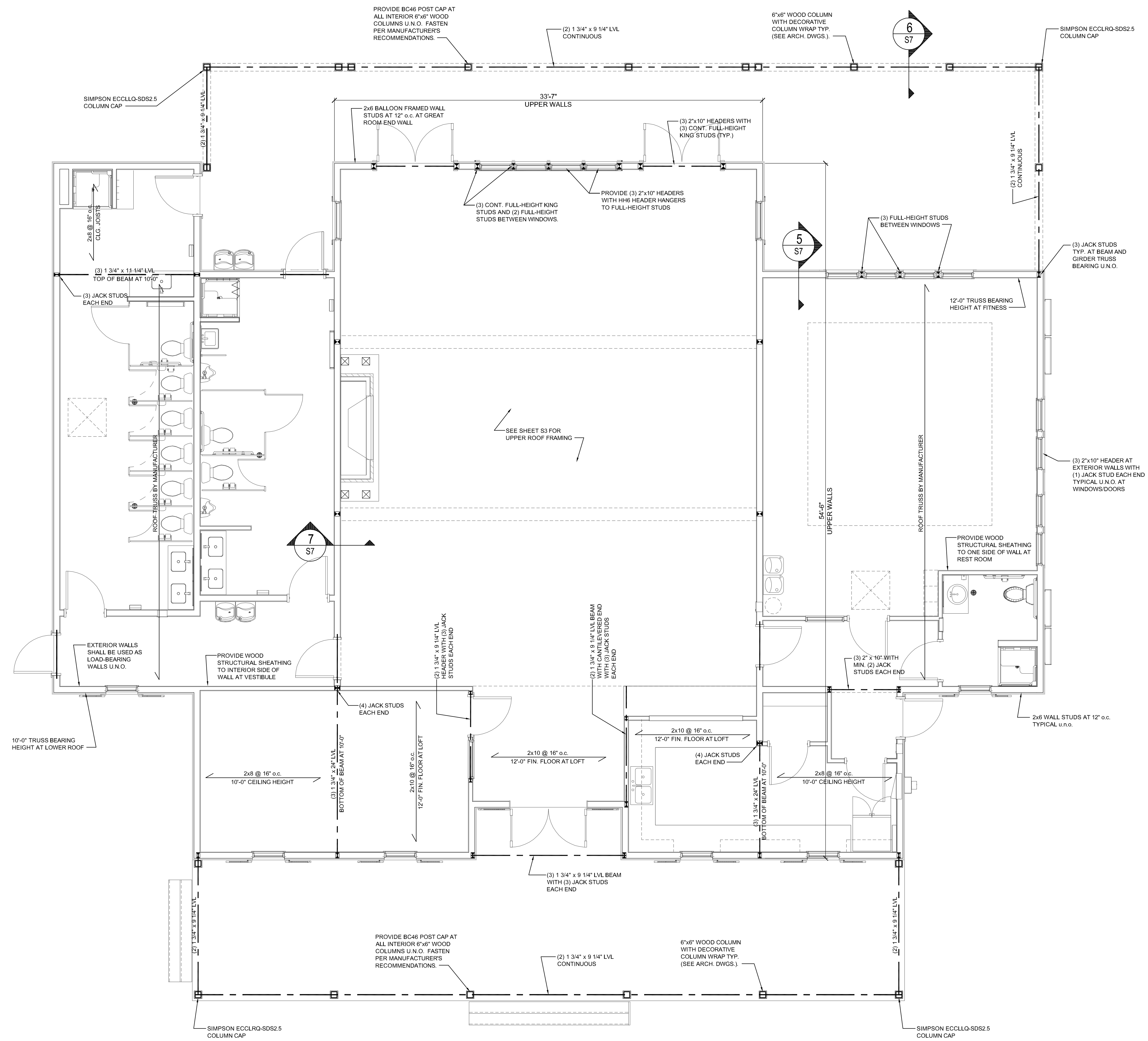
NO.	REVISION	DATE
1	VE REVISIONS	5/11/2021
2	REVISIONS	12/9/2021

SHEET DESCRIPTION
SLAB AND FOUNDATION PLAN

PROJECT #: C200803
 DATE ISSUED: 2/17/2020
 DRAWING BY: BMR
 CHECKED BY: BMR/BSJ

SERENITY AMENITY GREENFIELD COMMUNITIES CLUBHOUSE PLANS
 Fuquay-Varina, NC

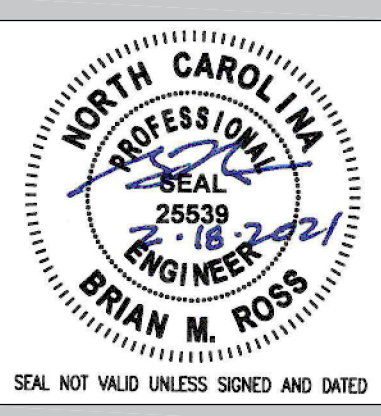




1 WALL AND LOWER CEILING FRAMING PLAN
 S2 1/4" = 1'-0"



ROSS LINDEN
 ENGINEERS PC
 709 W. BONES STREET, RALEIGH, NC 27603
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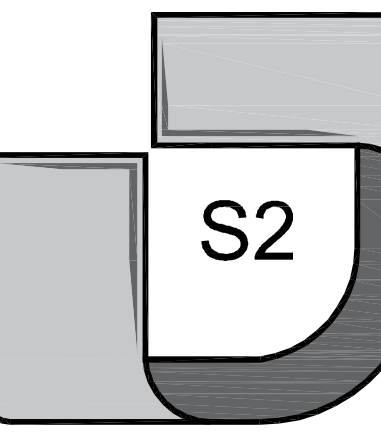
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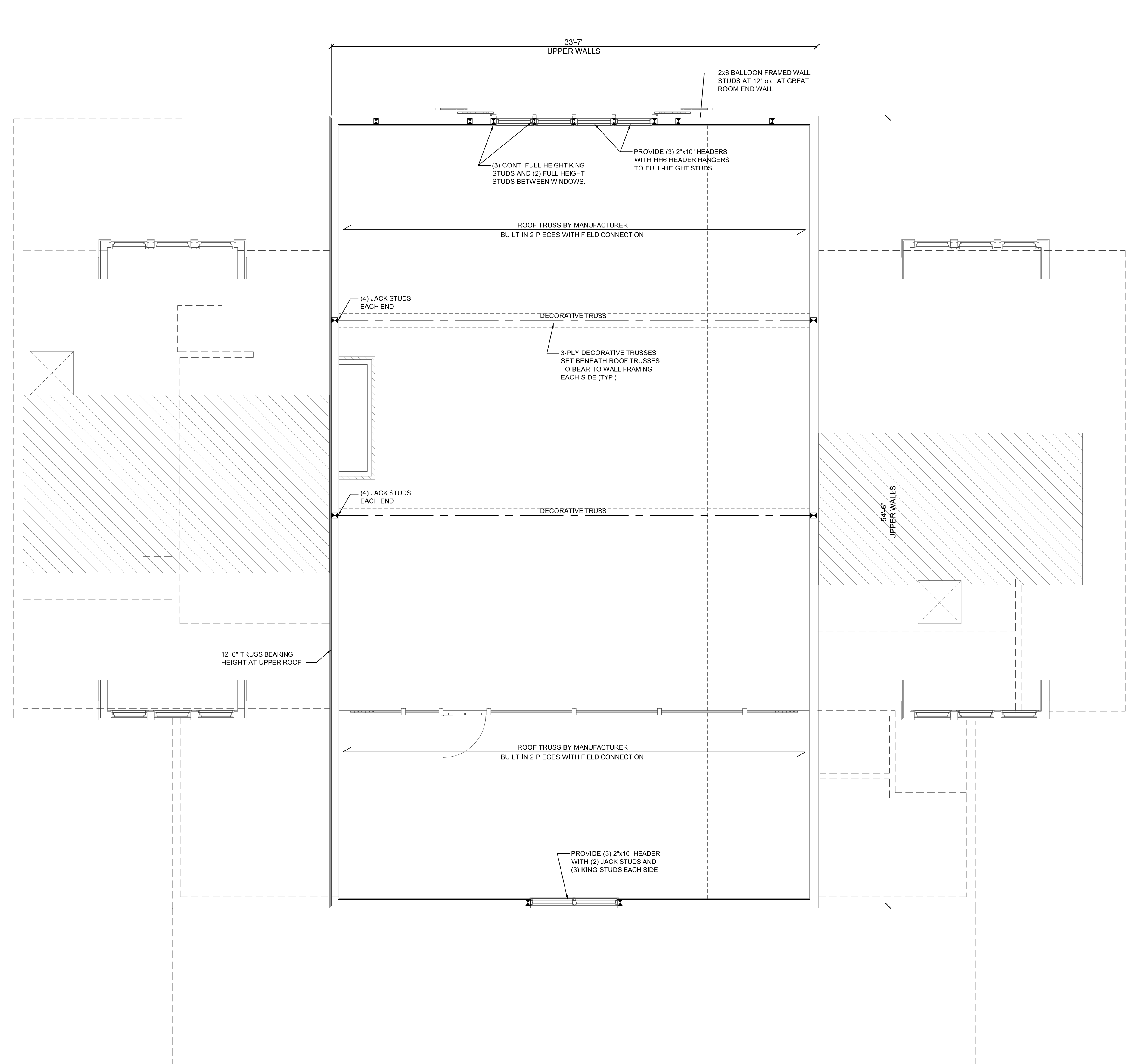
2	REVISIONS	12/9/2021
NO.	REVISION	DATE
A	REVISED WINDOWS	3/5/21
1	VE REVISIONS	5/11/2021

SHEET DESCRIPTION
LOWER CLG. FRAMING PLAN

PROJECT #: C200803
 DATE ISSUED: 2/17/2020
 DRAWING BY: BMR
 CHECKED BY: BMR/BSJ

SERENITY AMENITY GREENFIELD COMMUNITIES CLUBHOUSE PLANS
 Fuquay-Varina, NC





1 WALL AND UPPER CEILING FRAMING PLAN
 S3 1/4" = 1'-0"

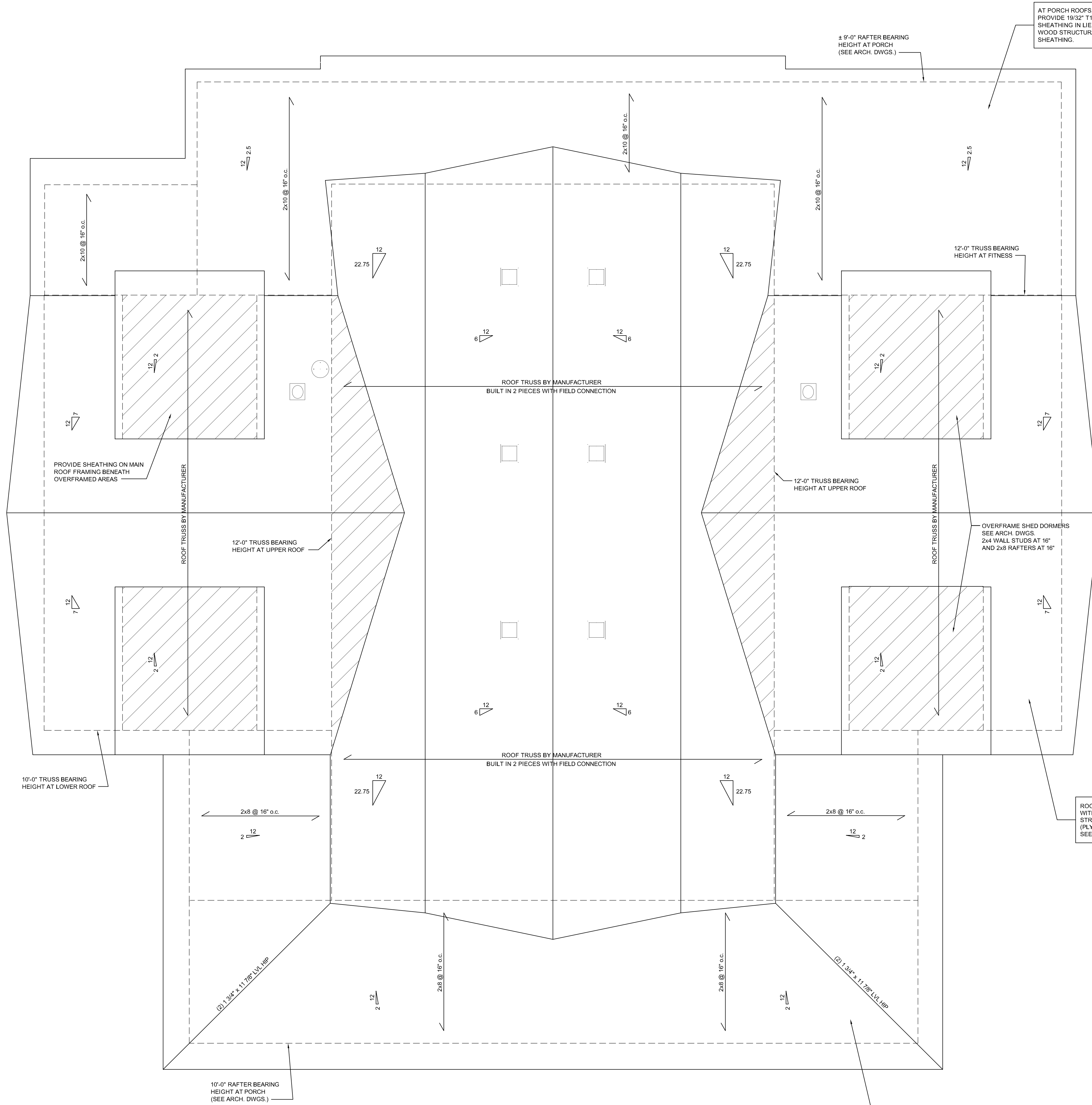


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NO.	REVISION	DATE

SHEET DESCRIPTION	
UPPER CLG. FRAMING PLAN	
PROJECT #:	C200803
DATE ISSUED:	2/17/2020
DRAWING BY:	BMR
CHECKED BY:	BMR/BSJ

**SERENITY AMENITY
 GREENFIELD COMMUNITIES
 CLUBHOUSE PLANS
 Fuquay-Varina, NC**



AT PORCH ROOFS,
PROVIDE 19/32" T1-11, 4" o.c.
SHEATHING IN LIEU OF 7/16"
WOOD STRUCTURAL
SHEATHING.

± 9'-0" RAFTER BEARING
HEIGHT AT PORCH
(SEE ARCH. DWGS.)

ROOF TRUSS SYSTEM
TRUSS LAYOUT AND PLACEMENT BY
MANUFACTURER TO COINCIDE WITH THE
SUPPORT LOCATIONS SHOWN. TRUSS
PROFILES SHALL BE ENGINEERED AND SEALED
BY THE TRUSS MANUFACTURER. TRUSS PLANS
SHALL BE PROVIDED FOR REVIEW AND
COORDINATED WITH THE ENGINEER OF
RECORD PRIOR TO CONSTRUCTION.
INSTALLATION SHALL BE IN ACCORDANCE WITH
THE MANUFACTURER'S INSTRUCTIONS.

DENOTES ROOF TRUSS
OVERFRAMED AREA.

PROVIDE SHEATHING ON MAIN
ROOF FRAMING BENEATH
OVERFRAMED AREAS

OVERFRAME SHED DORMERS
SEE ARCH DWGS.
2x4 WALL STUDS AT 16"
AND 2x8 RAFTERS AT 16"

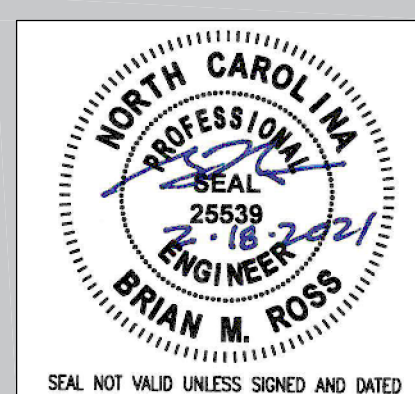
ROOF SHALL BE SHEATHED
WITH MINIMUM 7/16" WOOD
STRUCTURAL SHEATHING
(PLYWOOD or OSB).
SEE NOTES SHEET S7.

AT PORCH ROOFS,
PROVIDE 19/32" T1-11, 4" o.c.
SHEATHING IN LIEU OF 7/16"
WOOD STRUCTURAL
SHEATHING.

1 ROOF FRAMING PLAN
S4 1/4" = 1'-0"



ROSS LINDEN
ENGINEERS PC
709 W. BINES STREET, RALEIGH, NC 27603
TEL 919.832.5680 FAX 919.832.5675
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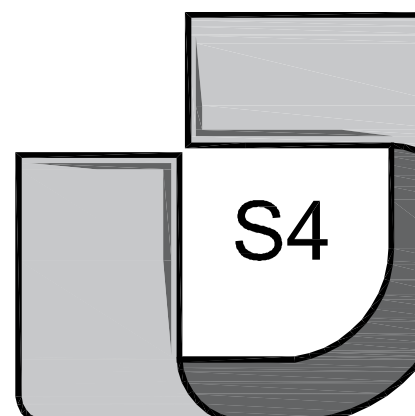


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NO.	REVISION	DATE
1	VE REVISIONS	5/11/2021

SHEET DISCRPTION	
ROOF FRAMING PLAN	
PROJECT #:	C200803
DATE ISSUED:	2/17/2020
DRAWING BY:	BMR
CHECKED BY:	BMR/BSJ

**SERENITY AMENITY
GREENFIELD COMMUNITIES
CLUBHOUSE PLANS**
Fuquay-Varina, NC

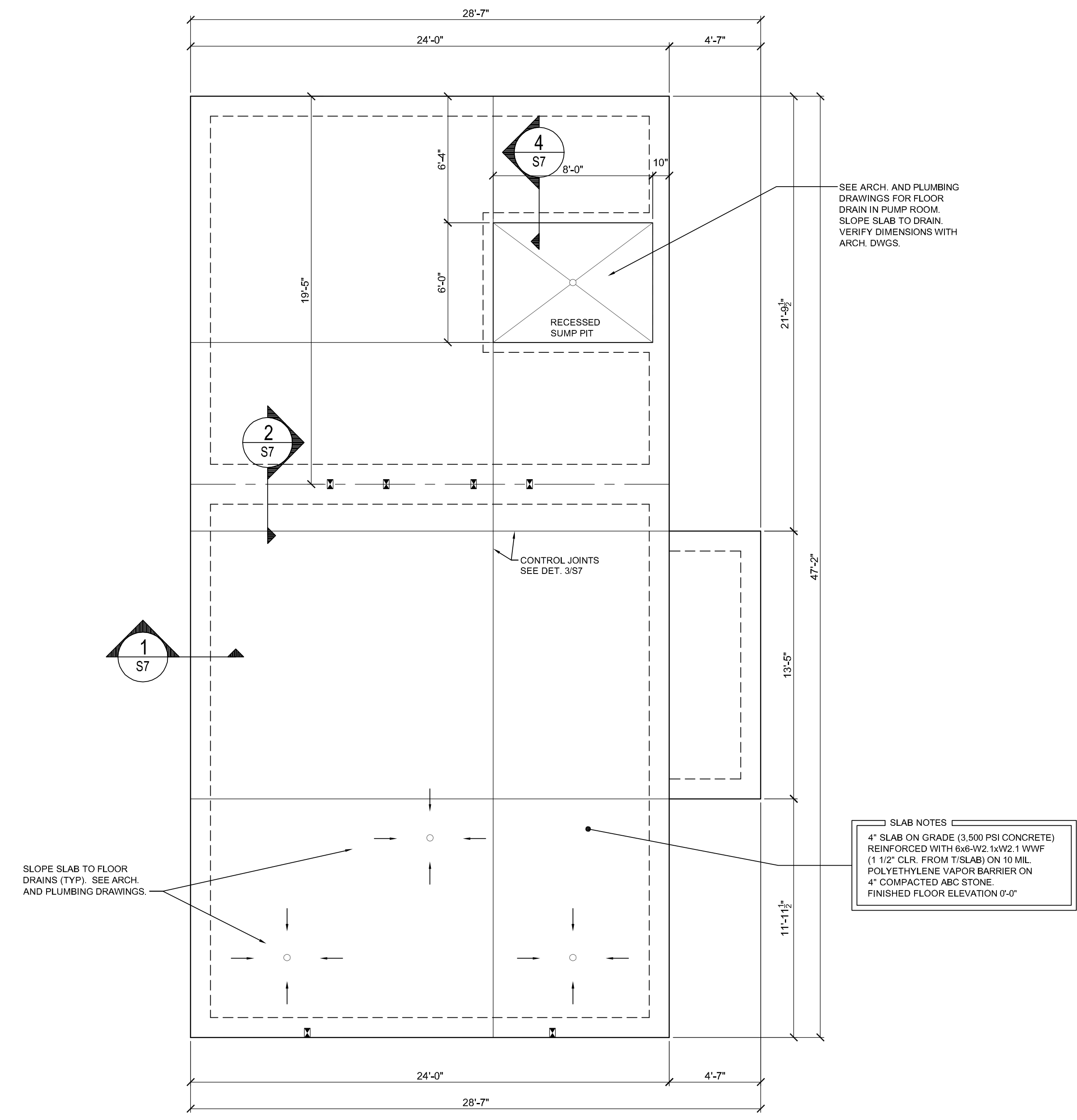


NO.	REVISION	DATE

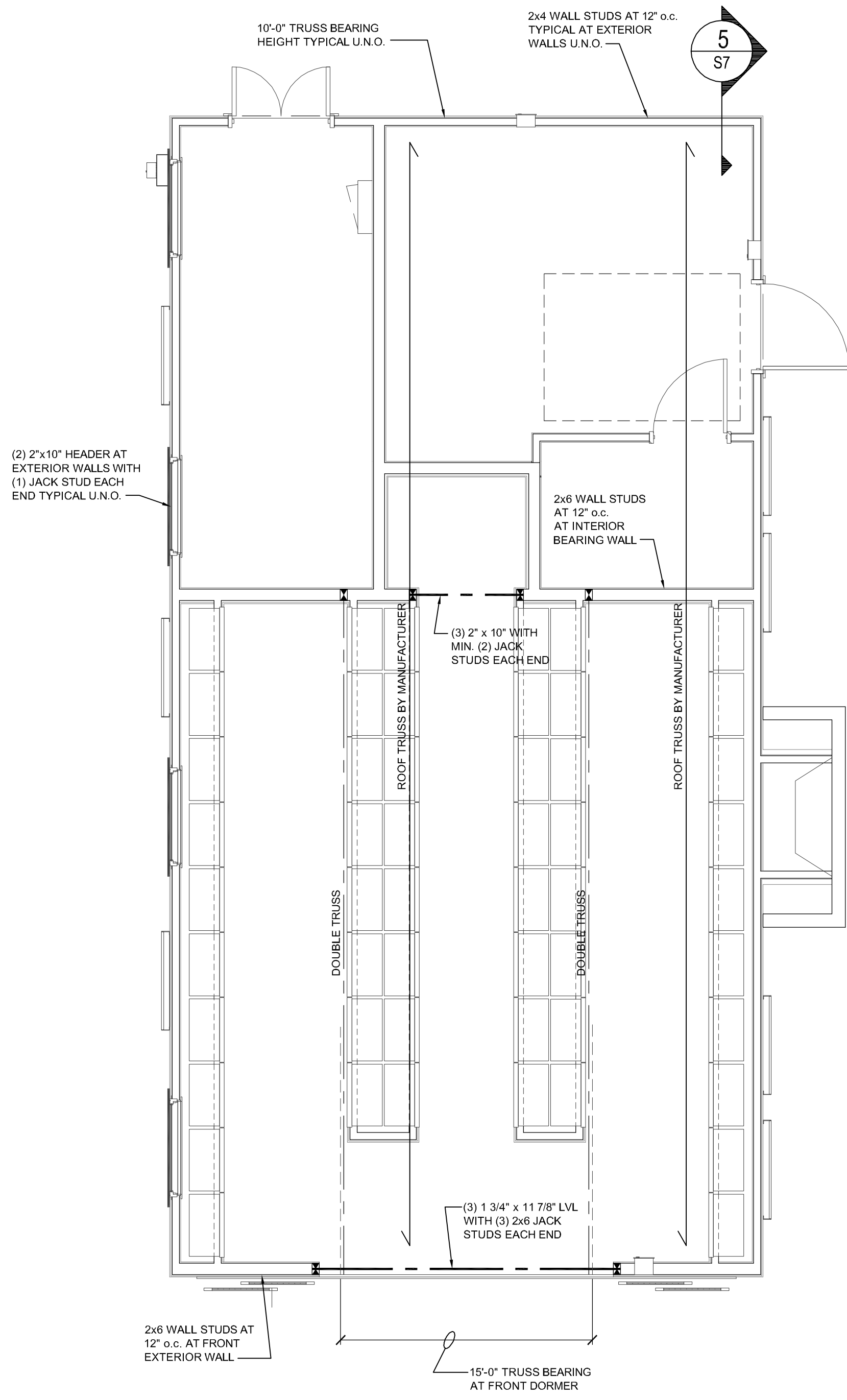
SHEET DESCRIPTION
SLAB AND FOUNDATION PLAN

PROJECT #: C200803
DATE ISSUED: 2/17/2020
DRAWING BY: BMR
CHECKED BY: BMR/BSJ

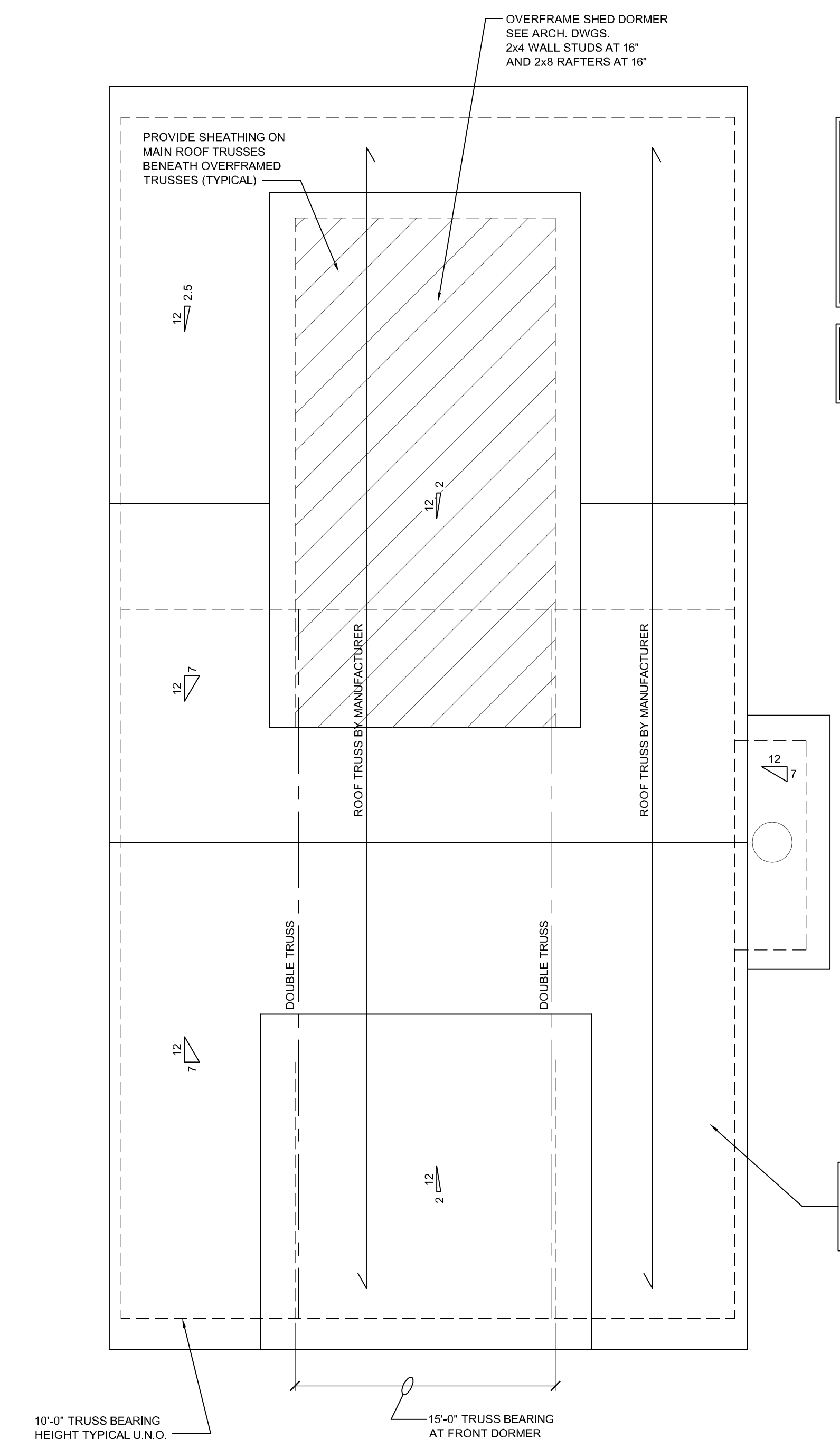
**SERENITY AMENITY
GREENFIELD COMMUNITIES
CLUBHOUSE PLANS**
Fuquay-Varina, NC



1
S5
1/4" = 1'-0"
SLAB AND FOUNDATION PLAN - POST OFFICE



1 WALL AND CEILING FRAMING PLAN - POST OFFICE
 S6 1/4" = 1'-0"



2 ROOF FRAMING PLAN - POST OFFICE
 S6 1/4" = 1'-0"



ROOF TRUSS SYSTEM
 TRUSS LAYOUT AND PLACEMENT BY
 MANUFACTURER TO COINCIDE WITH THE
 SUPPORT LOCATIONS SHOWN. TRUSS
 PROFILES SHALL BE ENGINEERED AND SEALED
 BY THE TRUSS MANUFACTURER. TRUSS PLANS
 SHALL BE PROVIDED FOR REVIEW AND
 COORDINATED WITH THE ENGINEER OF
 RECORD PRIOR TO CONSTRUCTION.
 INSTALLATION SHALL BE IN ACCORDANCE WITH
 THE MANUFACTURER'S INSTRUCTIONS.

DENOTES ROOF TRUSS
 OVERFRAMED AREA

ROOF SHALL BE SHEATHED
 WITH MINIMUM 7/16" WOOD
 STRUCTURAL SHEATHING
 (PLYWOOD OR OSB)
 SEE NOTES SHEET S7.

NO.	REVISION	DATE

SHEET DESCRIPTION
**FRAMING
 PLANS**

PROJECT #:	C200803
DATE ISSUED:	2/17/2020
DRAWING BY:	BMR
CHECKED BY:	BMR/BSJ

STRUCTURAL NOTES

I. GENERAL

- DESIGN CODES
 - NORTH CAROLINA BUILDING CODE, 2018 EDITION (AMENDED 2015 INTERNATIONAL BUILDING CODE)
 - ACI BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318-14)
 - AISC MANUAL OF STEEL CONSTRUCTION - ALLOWABLE STRESS DESIGN NINTH EDITION
 - ASCE 7-10 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
- DESIGN LOADS
 - LIVE LOADS: FLOOR: 100 PSF
ROOF: 20 PSF
 - ULTIMATE DESIGN WIND SPEED: 115 MPH
 - GROUND SNOW LOAD 15 PSF
 - SEISMIC DESIGN CATEGORY B
 - SITE CLASS D
 - S_{ds} = 0.181
 - S_{d1} = 0.131
- ALL ELEVATIONS ARE REFERENCED FROM FINISHED FLOOR ELEVATION OF 0'-0". SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
- DETAILED SHOP DRAWINGS SHALL BE PROVIDED FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
- ENGINEER'S SEAL APPLIES TO STRUCTURAL COMPONENTS ONLY AND DOES NOT CERTIFY ARCHITECTURAL LAYOUT OR DIMENSIONAL ACCURACY.
- ROSS LINDEN ENGINEERS PC ASSUMES NO LIABILITY FOR CHANGES OR MODIFICATIONS MADE TO THESE DRAWINGS BY OTHERS, OR FOR CONSTRUCTION METHODS, OR FOR ANY DEVIATION FROM THESE DRAWINGS.

II. CONCRETE

- UNLESS OTHERWISE NOTED, ALL CONCRETE SHALL HAVE THE FOLLOWING STRENGTH AND SLUMP REQUIREMENTS:
 - 3,500 PSI 28-DAY COMPRESSIVE STRENGTH, MAX. 5" SLUMP.
- ALL CONCRETE SHALL BE MOIST CURED PER ACI 301 OR CURED WITH AN APPROVED CURING COMPOUND. CONTRACTOR SHALL VERIFY THAT THE CURING COMPOUND IS COMPATIBLE WITH FLOOR COVERING ADHESIVES, COATINGS, OR TOPPING TO BE USED. CONCRETE SHALL BE CURED FOR A MINIMUM OF 7 DAYS.
- UNLESS OTHERWISE NOTED, ALL REINFORCING STEEL SHALL BE NEW BILLET STEEL, CONFORMING TO ASTM A-615, GRADE 60, DEFORMED.
- UNLESS OTHERWISE NOTED, ALL DETAILING, FABRICATION, AND PLACING OF REINFORCING STEEL SHALL CONFORM TO THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES. (ACI 315)
- ALL BAR SPLICES SHALL BE CLASS "B" TENSION SPLICES PER ACI 318-14, UNLESS OTHERWISE SHOWN.
- ANCHOR BOLTS TO BE ASTM A36 OR A307.
- CONTRACTOR SHALL REFER TO DRAWINGS OF OTHER TRADES AND VENDOR DRAWINGS FOR EMBEDDED ITEMS AND RECESSES NOT SHOWN ON THE STRUCTURAL DRAWINGS.
- ALL SPREAD FOOTINGS BEARING ON NATIVE SOIL OR STRUCTURAL FILL ARE DESIGNED FOR AN ALLOWABLE BEARING PRESSURE OF 2,500 PSF. A GEOTECHNICAL REPRESENTATIVE SHALL INSPECT ALL FOOTING EXCAVATIONS TO CONFIRM ALLOWABLE BEARING PRESSURES.
- PROVIDE TWO (2) #5 x 4'-0" LONG DIAGONAL BARS IN TOP FACE OF ALL SLABS (1" CLEAR) AT ALL RE-ENTRANT CORNERS. SEE PLAN FOR LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, PROTECTING, AND RELOCATING AS REQUIRED ALL SERVICE AND UTILITY LINES IN VICINITY OF THE WORK SITE.
- CONTRACTOR SHALL VERIFY ALL SIZES AND LOCATIONS OF ALL MECHANICAL AND ELECTRICAL OPENINGS AND EQUIPMENT PADS WITH THE MECHANICAL AND ELECTRICAL DETAILS AND SHOP DRAWINGS BY OTHERS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL OPENINGS AND SLEEVES FOR PROPER DISTRIBUTION FOR ALL UTILITIES THROUGHOUT THE BUILDING.
- ALL DOWELS WHICH ARE TO BE DRILLED AND GROUTED INTO EXISTING CONCRETE SHALL BE DONE WITH AN EPOXY GROUT. DRILL HOLE WITH DIAMETER 1/8" LARGER THAN DOWEL OR AS RECOMMENDED BY GROUT SUPPLIER. USE HIT-RE 500 V3 BY HILTI OR APPROVED EQUAL.

III. WOOD

- FRAMING LUMBER SHALL BE #2 SPRUCE PINE FIR (SPF) WITH THE FOLLOWING DESIGN PROPERTIES:
 - F_b = 875 PSI F_v = 70 PSI E = 1.4E6 PSI
- FRAMING LUMBER EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND, CONCRETE OR MASONRY SHALL BE #2 SOUTHERN YELLOW PINE (SPY) TREATED IN ACCORDANCE WITH AWPA C22 WITH THE FOLLOWING DESIGN PROPERTIES:
 - F_b = 1050 PSI F_v = 95 PSI E = 1.8E6 PSI
- ENGINEERED WOOD BEAMS SHALL BE LAMINATED VENEER LUMBER (LVL) OR PARALLEL STRAND LUMBER (PSL) WITH THE FOLLOWING MINIMUM DESIGN PROPERTIES:
 - F_b = 2600 PSI F_v = 285 PSI E = 1.9E6 PSI
- ENGINEERED WOOD BEAMS SHALL BE INSTALLED WITH ALL CONNECTIONS PER MANUFACTURER'S INSTRUCTIONS.
- SOLID BLOCKING SHALL BE PROVIDED AT ALL POINT LOADS TO TRANSFER LOADS THROUGH FLOOR LEVELS. COLUMNS SHALL BE CONTINUOUS TO THE FOUNDATION OR TO OTHER STRUCTURAL ELEMENTS.
- WOOD SILL PLATES SHALL BE ANCHORED TO THE FOUNDATION WITH 1/2" DIAMETER ANCHOR BOLTS SPACED A MAXIMUM OF 2'-8" O.C. AND WITHIN 12" FROM THE ENDS OF EACH PLATE SECTION. PROVIDE 1/2" DIAMETER HILTI HIT-RE 500 V3 INJECTION ADHESIVE ANCHORS WITH MINIMUM 4 1/2" EMBEDMENT INTO THE FOUNDATION AT ALL EXTERIOR, LOAD-BEARING, AND SHEAR WALLS AS SHOWN ON THE PLAN.
- ALL EXTERIOR WALLS SHALL BE SHEATHED WITH MINIMUM 7/16" WOOD STRUCTURAL SHEATHING (PLYWOOD -or- OSB) WITH BLOCKING AT ALL JOINTS. FASTEN ALL PANELS WITH 8d NAILS AT 3' O.C. AT ALL EDGES AND AT 6" O.C. AT INTERMEDIATE FRAMING. AT DOUBLE TOP PLATE, FASTEN PANELS WITH A DOUBLE ROW OF 8d NAILS STAGGERED AT 3' O.C. ALL FASTENERS SHALL HAVE 1/8" PENETRATION INTO THE FRAMING MEMBERS.
- PROVIDE MINIMUM 1/2" GYPSUM BOARD ON BOTH SIDES OF FULL-HEIGHT INTERIOR WALLS WITH INTERMEDIATE SUPPORT AT ALL JOINTS. FASTEN ALL PANELS WITH 1 1/4" SCREWS AT 7' O.C. AT TOP AND BOTTOM PLATES AND ALL STUDS. GYPSUM SHALL BE APPLIED PERPENDICULAR TO FRAMING.
- SEE TYPICAL WALL SECTION FOR ADDITIONAL INFORMATION.

IV. WOOD TRUSSES

- ENGINEERED ROOF TRUSS SYSTEMS SHALL BE PROVIDED FOR REVIEW AND COORDINATED WITH THE ENGINEER OF RECORD. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ROOF TRUSS DRAWINGS SHALL BE SIGNED AND SEALED BY THE MANUFACTURER AND REVIEWED BY THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION.
- ALL TRUSSES SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH BCSI 1-03 "GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING & BRACING OF METAL PLATE CONNECTED WOOD TRUSSES."
- THE TOP CHORD OF ALL ROOF TRUSSES SHALL BE SHEATHED WITH MINIMUM 7/16" WOOD STRUCTURAL SHEATHING (PLYWOOD -or- OSB). PROVIDE PLYWOOD EDGE CLIPS BETWEEN PANELS.
- PROVIDE PERMANENT BOTTOM CHORD TRUSS BRACING AND WEB MEMBER PLANE BRACING IN ACCORDANCE WITH BCSI-B2 "TRUSS INSTALLATION AND TEMPORARY BRACING" AND BCSI-B3 "WEB MEMBER PERMANENT BRACING/WEB REINFORCEMENT."

ABBREVIATIONS:

CONC	CONCRETE
CONT	CONTINUOUS
DBL	DOUBLE
DJ	DOUBLE JOIST
DSP	DOUBLE STUD POCKET
EA	EACH
FL PL	FLAT PLATE
FTG	FOOTING
HGR	HANGER
LVL	LAMINATED VENEER LUMBER
NTS	NOT TO SCALE
OC	ON CENTER
PT	PRESSURE TREATED
RS	RAFTER SUPPORT
SC	STUD COLUMN
SP	STUD POCKET
TJ	TRIPLE JOIST
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
XJ	EXTRA JOIST

STRUCTURAL DESIGN - CLUBHOUSE

DESIGN LOADS:	Occupancy Category	II
Importance Factors:	Wind (IW)	1.0
	Snow (IS)	1.0
	Seismic (IE)	1.0
Live Loads:	Roof	20 psf
	Loft	50 psf
	Floor	100 psf
Ground Snow Load:		15 psf
Wind Load:	Ultimate Wind Speed	115 mph (ASCE 7-10)
	Exposure Category	B
	Wind Base Shears (for MWFRS)	V _x = 19.2K V _y = 23.1K

SEISMIC DESIGN CATEGORY A B C D

Provide the following Seismic Design Parameters:

Spectral Response Acceleration SS 0.170 %g S1 0.082 %g
Site Classification D Field Test Presumptive Historical Data

Basic structural system (check one)
 Bearing Wall Dual w/Special Moment Frame
 Building Frame Dual w/Intermediate R/C or Special Steel
 Moment Frame Inverted Pendulum
Seismic base shear V_X = 3.6K V_Y = 3.6K
Analysis Procedure Simplified Equivalent Lateral Force Modal
Architectural, Mechanical, Components anchored?

Lateral design Control: Earthquake Wind

Soil Bearing Capacities:
Field Test (provide copy of test report) _____ psf
Presumptive Bearing capacity 2500 psf
Pile size, type, and capacity _____

STRUCTURAL DESIGN - POST OFFICE

DESIGN LOADS:	Occupancy Category	II
Importance Factors:	Wind (IW)	1.0
	Snow (IS)	1.0
	Seismic (IE)	1.0
Live Loads:	Roof	20 psf
	Mezzanine	N/A psf
	Floor	100 psf
Ground Snow Load:		15 psf
Wind Load:	Ultimate Wind Speed	115 mph (ASCE 7-10)
	Exposure Category	B
	Wind Base Shears (for MWFRS)	V _x = 8.9K V _y = 4.1K

SEISMIC DESIGN CATEGORY A B C D

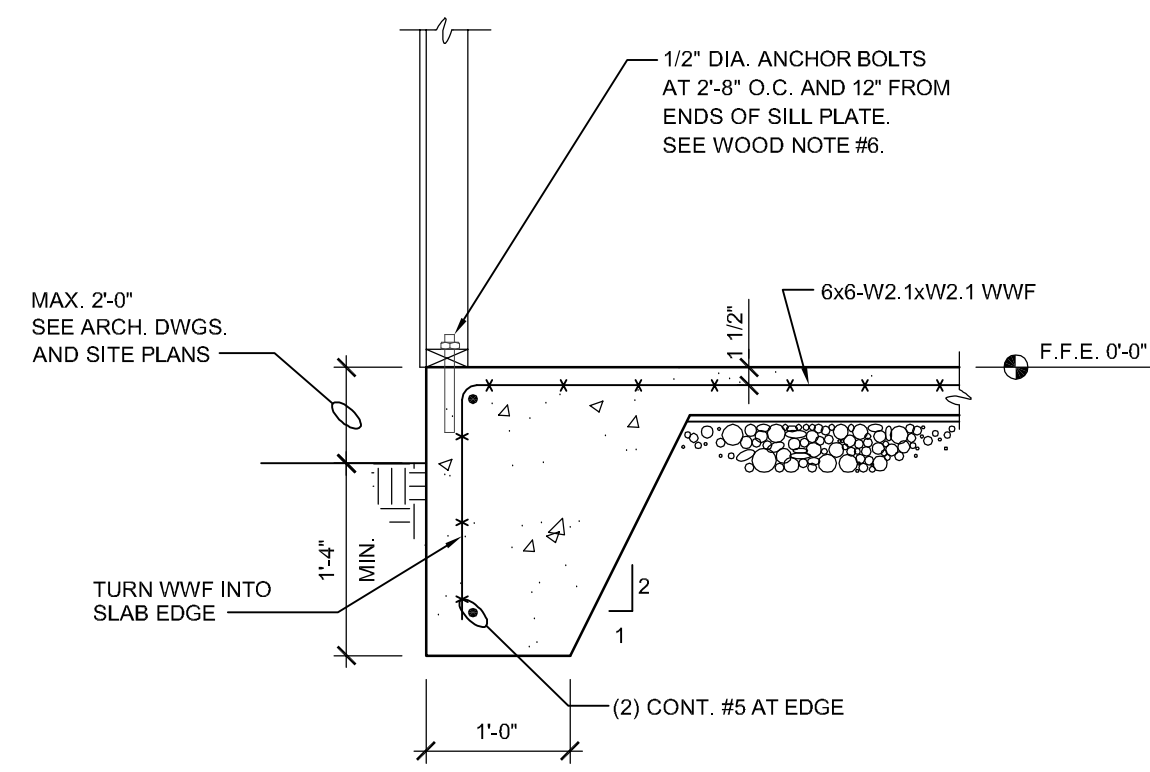
Provide the following Seismic Design Parameters:

Spectral Response Acceleration SS 0.170 %g S1 0.082 %g
Site Classification D Field Test Presumptive Historical Data

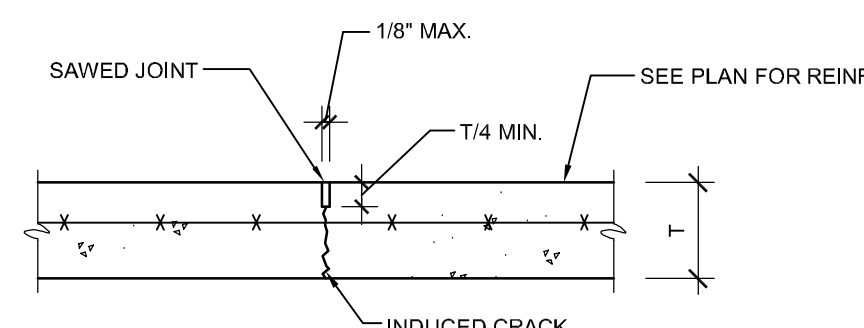
Basic structural system (check one)
 Bearing Wall Dual w/Special Moment Frame
 Building Frame Dual w/Intermediate R/C or Special Steel
 Moment Frame Inverted Pendulum
Seismic base shear V_X = 0.8K V_Y = 0.8K
Analysis Procedure Simplified Equivalent Lateral Force Modal
Architectural, Mechanical, Components anchored?

Lateral design Control: Earthquake Wind

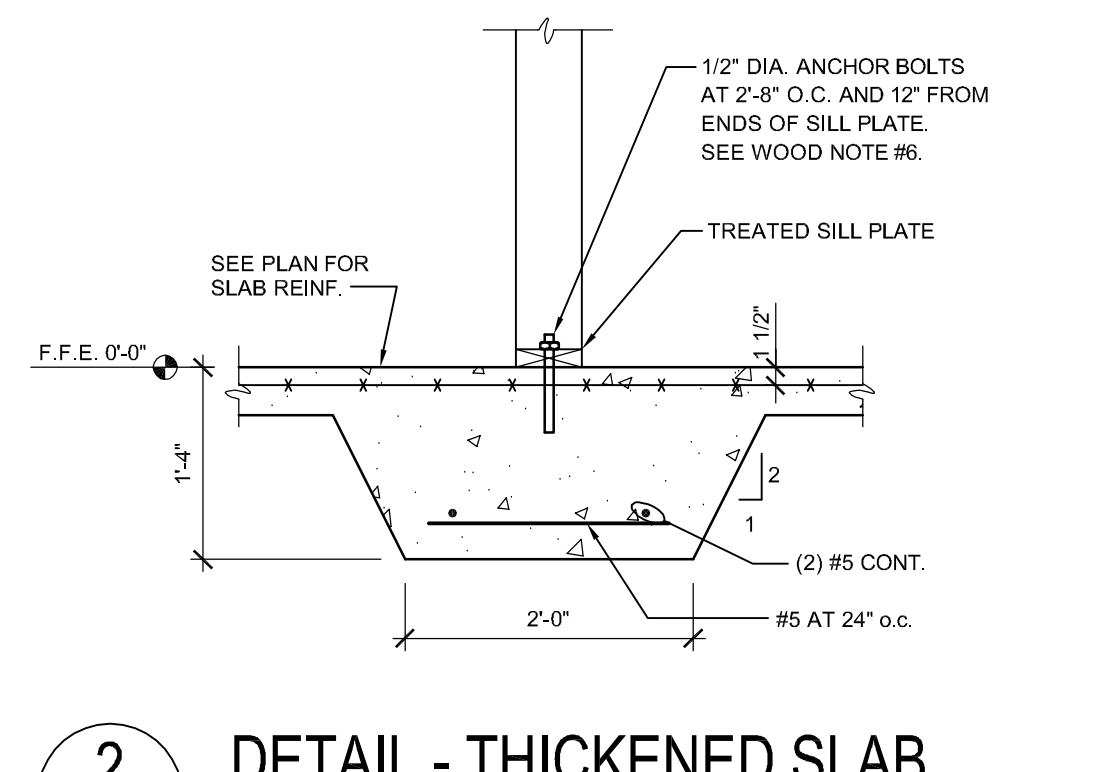
Soil Bearing Capacities:
Field Test (provide copy of test report) _____ psf
Presumptive Bearing capacity 2500 psf
Pile size, type, and capacity _____



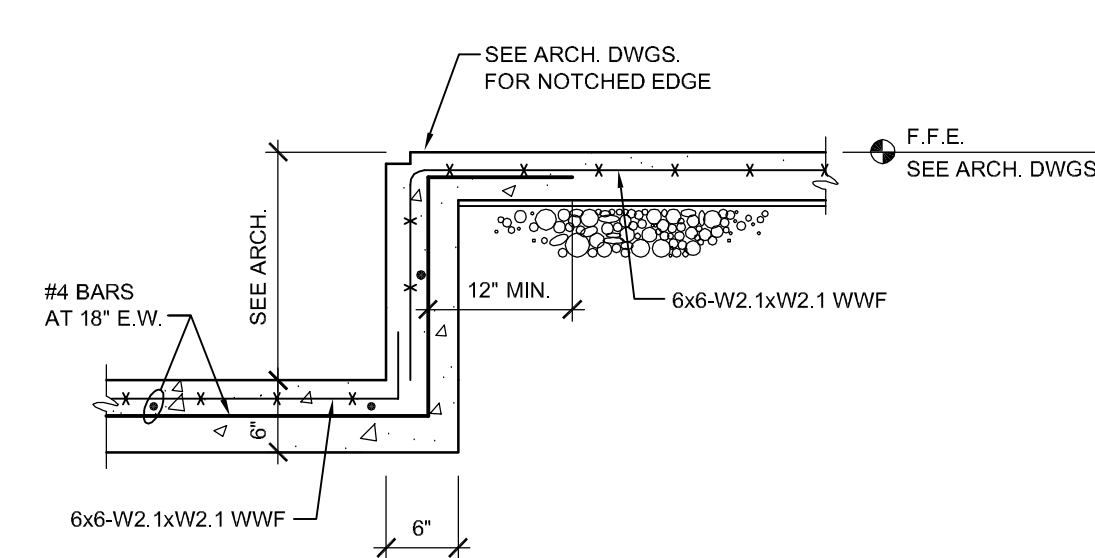
1 DETAIL - TYP. SLAB EDGE
S7 3/4" = 1'-0"



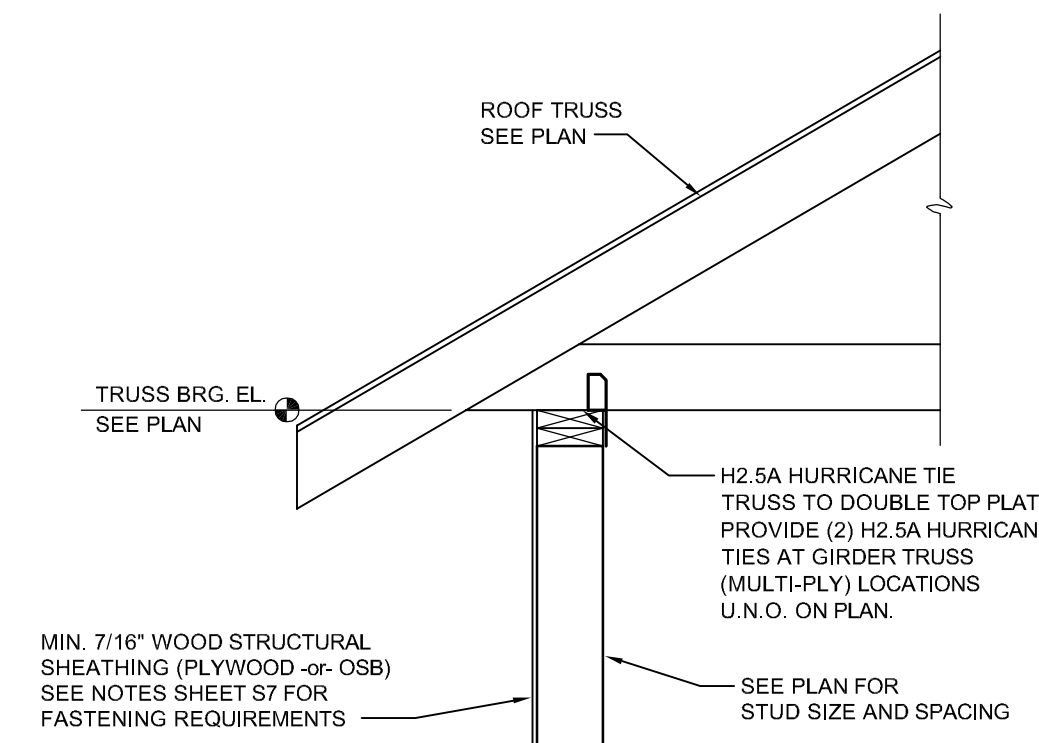
3 DETAIL - TYP. SLAB CONTROL JOINT
S4 1" = 1'-0"



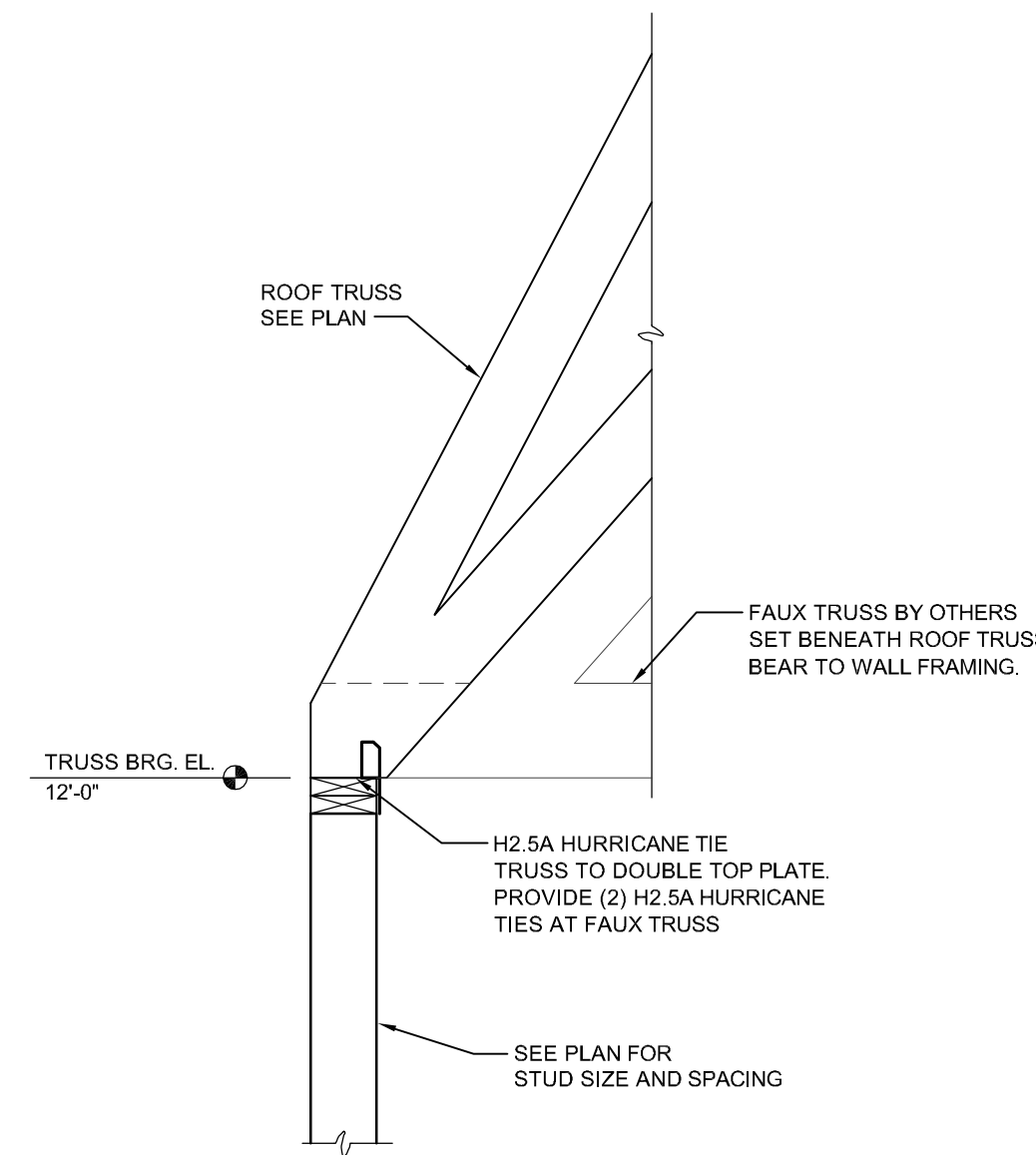
2 DETAIL - THICKENED SLAB
S7 3/4" = 1'-0"



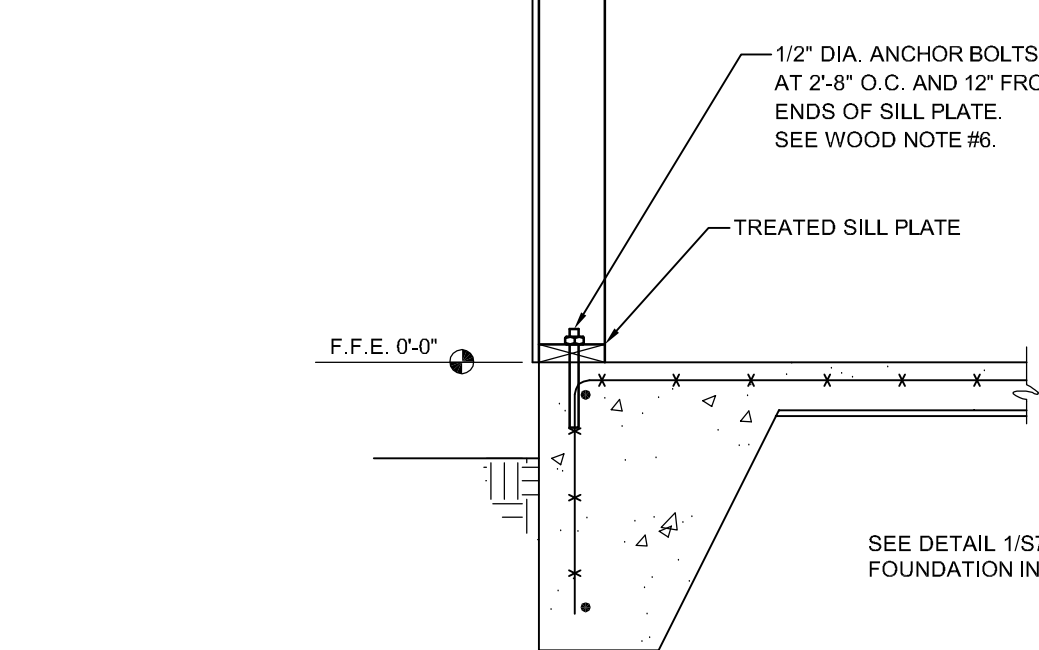
4 SECTION AT SUMP
S7 3/4" = 1'-0"



6 FRAMING SECTION
S7 3/4" = 1'-0"



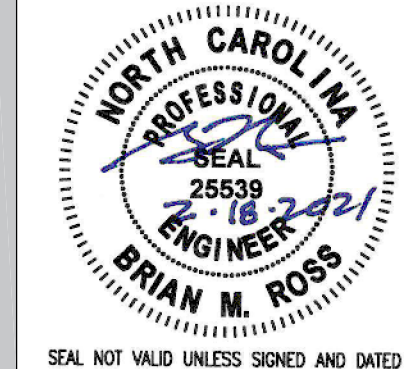
7 FRAMING SECTION
S7 3/4" = 1'-0"



5 TYPICAL WALL SECTION
S7 3/4" = 1'-0"



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709 W. BINES STREET, RALEIGH, NC 27603
TEL 919.832.5680 FAX 919.832.5675
WWW.ROSSLINDEN.COM NC REG NO. C-2184

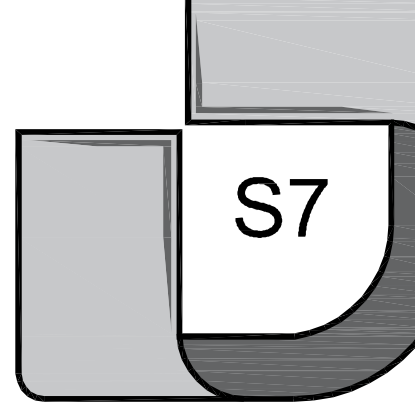


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NO.	REVISION	DATE

SHEET DESCRIPTION
STRUCTURAL NOTES AND DETAILS
PROJECT #: C200803
DATE ISSUED: 2/17/2020
DRAWING BY: BMR
CHECKED BY: BMR/BSJ

SERENITY AMENITY
GREENFIELD COMMUNITIES
CLUBHOUSE PLANS
Fuquay-Varina, NC



GENERAL PLUMBING NOTES:

ADMINISTRATIVE:

- THE FOLLOWING ABBREVIATIONS SHALL APPLY TO NOTES AND PLANS:
PC - PLUMBING CONTRACTOR, EC - ELECTRICAL CONTRACTOR, MC - MECHANICAL CONTRACTOR, GC - GENERAL CONTRACTOR, FSC - FIRE ALARM SYSTEM CONTRACTOR.
- "PROVIDE" MEANS TO FURNISH AND INSTALL. THE PLUMBING CONTRACTOR SHALL ALSO INSTALL MATERIALS FURNISHED BY OTHERS AND THE GENERAL CONTRACTOR.
- THE PC SHALL BE RESPONSIBLE FOR A COMPLETE AND OPERATIONAL SYSTEM AS DESCRIBED BY THESE PLANS AND SPECIFICATIONS.
- ALL MATERIALS AND EQUIPMENT SHALL BE DELIVERED TO THE SITE AND UNLOADED AT AN APPROVED LOCATION. PC SHALL PROTECT ALL MATERIALS AND EQUIPMENT FROM BREAKAGE, THEFT, AND THE ELEMENTS. ALL MATERIALS AND EQUIPMENT SHALL REMAIN THE PROPERTY OF THE PC UNTIL THE PROJECT HAS BEEN COMPLETED AND TURNED OVER TO THE OWNER.
- ALL MATERIALS USED SHALL BE NEW AND FREE OF DEFECTS. ANY MATERIALS FOUND TO BE DEFECTIVE SHALL BE REPLACED AT NO EXPENSE TO THE OWNER. ALL MATERIALS AND EQUIPMENT SHALL BEAR APPROVAL FROM UL OR AN APPROVED THIRD PARTY AGENCY, WHERE A MANUFACTURER AND MODEL NUMBER IS GIVEN, IT IS TO ESTABLISH A STANDARD OF QUALITY AND NOT TO LIMIT PRODUCTS TO A PARTICULAR MANUFACTURER. PRODUCTS DETERMINED TO BE EQUAL BY THE ENGINEER WILL BE ACCEPTED.
- THE PLUMBING SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE 2018 NORTH CAROLINA PLUMBING CODE AND ANY APPLICABLE LOCAL CODES. WHERE A CONFLICT EXISTS BETWEEN THE ABOVE REQUIREMENTS, THE CONTRACTOR SHALL OBTAIN CLARIFICATION FROM THE ENGINEER OR IN THE EVENT ANY PART OF THESE PLANS CONFLICTS WITH THE ABOVE REQUIREMENTS, THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES, AND INSPECTIONS NECESSARY FOR THE COMPLETION OF THE WORK UNDER THIS CONTRACT.
- DO NOT SCALE THESE DRAWINGS-REFER TO ARCHITECTURAL SHEETS FOR DIMENSIONS.
- THESE PLANS ARE DIAGNOSTIC. THE PC SHALL ADJUST THE LOCATIONS OF EQUIPMENT, FIXTURES, PIPING, ETC. TO ACCOMMODATE PLANNED AND UNEXPECTED INTERFERENCES. THE DRAWINGS DO NOT SHOW ALL BENDS, OFFSETS, AND FITTINGS THAT WILL BE REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. THE PC SHALL MAKE ALLOWANCES FOR SUCH DEVIATIONS AND CONTINGENCIES IN BID TO IMPLEMENT THEM WITHOUT ADDITIONAL COST TO THE OWNER. THE PC SHALL VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS. CONTRACTOR SHALL CONTACT THE ENGINEER TO RESOLVE ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THESE PLANS. TO AVOID POTENTIAL CONFLICTS, COORDINATE WITH OTHER TRADES PRIOR TO THE START OF CONSTRUCTION. ALL UNDERGROUND UTILITIES SHALL BE LOCATED PRIOR TO ANY DIGGING.
- TRENCHING, COMPACTION, AND BACKFILL SHALL BE BY PC AND SHALL BE IN ACCORDANCE WITH SECTION 306 OF THE NC PLUMBING CODE. UNDERGROUND LINES SHALL BE LOCATED SUCH THAT THEY DO NOT ENDANGER FOOTINGS OR FOUNDATION WALLS.
- THE PC SHALL PROVIDE FRESTOPPING AT ALL PENETRATIONS OF RATED FLOOR/CEILING ASSEMBLIES AND RATED WALL ASSEMBLIES TO PRESERVE OR RESTORE THE FIRE RESISTANCE RATING. SEAL ALL PENETRATIONS USING A UL LISTED SYSTEM FOUND IN THE UL DIRECTORY SPECIFIC TO THE UL LISTING OF THE ASSEMBLY BEING PENETRATED. SEE ARCHITECTURAL PLANS FOR UL RATED ASSEMBLIES SPECIFIC TO THE PROJECT.
- SYSTEM TESTING SHALL BE PERFORMED BY PLUMBING CONTRACTOR IN ACCORDANCE WITH NORTH CAROLINA PLUMBING CODE, SECTIONS 312.2, 312.3, AND 312.5.
- PC SHALL DISINFECT THE ENTIRE DOMESTIC WATER PIPING SYSTEM IN ACCORDANCE WITH THE AMERICAN WATER WORKS ASSOCIATION'S SPECIFICATIONS AND LOCAL HEALTH DEPARTMENT REGULATIONS.
- AT THE COMPLETION OF WORK AND PRIOR TO ACCEPTANCE BY OWNER, THE PC SHALL CLEAN ALL EXPOSED FIXTURES, MATERIALS, AND EQUIPMENT UNDER THIS CONTRACT.
- PC SHALL COORDINATE WITH THE GENERAL CONTRACTOR TO ENSURE ALL APPLICABLE CONSTRUCTION WASTE IS RECYCLED DURING THE CONSTRUCTION PHASE OF THE PROJECT.

MATERIALS:

- ALL OVERHEAD DOMESTIC WATER PIPING SHALL BE TYPE L COPPER WITH 95/5 LEAD FREE SOLDER, AND ALL BELOW GRADE WATER PIPING SHALL BE TYPE K COPPER WITH NO JOINTS. ALL PIPING SHALL HAVE MANUFACTURER'S NAME AND THE APPLICABLE STANDARD TO WHICH IT WAS MANUFACTURED CLEARLY MARKED ON EACH LENGTH. PIPING SHALL COMPLY WITH ASTM B-88. USE BRAZED JOINTS ON ALL COPPER PIPING 1-1/2" INCH AND LARGER. ** PC MAY USE PEX (ASTM F 877) WITH APPROVED FITTINGS (ASTM F 1807) WITH OWNER'S APPROVAL. *** CPVC PIPING (ASTM D 2846 OR ASTM F 441) WITH APPROVED FITTINGS (ASTM D 2846, ASTM F 438, OR ASTM F 439) MAY ALSO BE USED WHERE NOT LOCATED IN PLenums. ALL PLASTIC PIPE, FITTINGS, AND COMPONENTS SHALL BE THIRD PARTY CERTIFIED AS CONFORMING TO NSF 14. ALL PIPE AND PIPE FITTINGS, INCLUDING VALVES AND FAUCETS, USED IN THE WATER DISTRIBUTION SYSTEM SHALL HAVE A MAXIMUM LEAD CONTENT OF 25-PERCENT AND SHALL CONFORM TO NSF 61. HOT WATER DISTRIBUTION PIPE AND TUBING SHALL HAVE A MINIMUM PRESSURE RATING OF 100 PSI AT 180°F. COLD WATER DISTRIBUTION PIPE AND TUBING SHALL HAVE A MINIMUM PRESSURE RATING OF 160 PSI AT 73.4°F. DO NOT INSTALL PEX OR CPVC PIPING IN RETURN AIR PLenums.
- GATE VALVES SHALL HAVE BRASS BODY, FULL PORT, CHROME PLATED BALL WITH TEFLON SEATS, 150 PSI NSF, AND COMPLY WITH MSS SP-110. GATE VALVES SHALL HAVE BRONZE BODY, CLASS 150, AND COMPLY WITH MSS SP-80, TYPE 2 STANDARD. VALVE BODY SHALL BE ASTM B 62, BRONZE WITH INTEGRAL SEAT AND UNION RING BONNET. ENDS SHALL BE THREADED OR SOLDER WITH COPPER-SILICON BRONZE STEM AND SOLDER-BRONZE DISC. INSTALL VALVES IN LOCATIONS THAT PERMIT EASY ACCESS WITHOUT DAMAGE TO BUILDING OR FINISHED MATERIALS. PROVIDE ACCESS DOORS IF REQUIRED. VALVES SHALL BE BY NIBCO, WATTS, OR STOCKHAM.
- COLD WATER LINES SHALL BE INSULATED WITH 1/2" INCH THICK FIBROUS GLASS INSULATION WITH A FLAME DENSITY RATING LESS THAN 25 AND A SMOKE DENSITY RATING LESS THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84. HOT WATER LINES UP TO 2 INCHES DIAMETER SHALL HAVE 1 INCH THICK INSULATION CONFORMING TO THE SAME STANDARD. PIPING LARGER THAN 2 INCHES SHALL RECEIVE 1-1/2" INCH THICK INSULATION. CLOSED CELL RUBBER INSULATION MEETING THE SMOKE AND FLAME RATINGS ABOVE MAY BE SUBSTITUTED FOR FIBROUS GLASS TYPE IF SO DESIRED. INSULATION INSTALLED ON PIPING OPERATING BELOW AMBIENT TEMPERATURES MUST HAVE A CONTINUOUS VAPOR BARRIER. ALL JOINTS, SEAMS AND FITTINGS MUST BE SEALED. ON SYSTEMS OPERATING ABOVE AMBIENT, THE BUTT JOINTS SHOULD NOT BE SEALED. ON COLD SURFACES WHERE A VAPOR SEAL MUST BE MAINTAINED, INSULATION SHALL BE APPLIED WITH A CONTINUOUS, UNBROKEN MOISTURE AND VAPOR RETARDER. ALL HANGERS, SUPPORTS, ANCHORS, OR OTHER PROJECTIONS SECURED TO COLD SURFACES SHALL BE INSULATED AND VAPOR SEALED TO PREVENT CONDENSATION. ALL PIPE INSULATION SHALL BE CONTINUOUS THROUGH WALLS, CEILING OR FLOOR OPENINGS, OR SLEEVES EXCEPT WHERE FRESTOP OR PRESERVING MATERIALS ARE REQUIRED. INSULATION SHALL HAVE A FACTORY APPLIED ALL-SERVICE SACKET WITH SELF-SEALING LAP. WHITE-KHATT PAPER BONDED TO ALUMINUM FOIL AND REINFORCED WITH GLASS FIBERS; CONFORMING TO ASTM C 1136 TYPE 1; VAPOR RETARDER; WITH A SELF-SEALING ADHESIVE. VERIFY THAT PIPING HAS BEEN TESTED, SURFACES ARE CLEAN AND DRY, AND ALL FIBROUS MATERIALS ARE REMOVED BEFORE APPLYING INSULATION MATERIALS. INSULATION SHALL BE BY ANAFIX, ARNEXCEL, JONES-WALKER, OR CHEW-SEAL-CORING.
- ALL INSULATION CONTAINING FIBROUS MATERIALS EXPOSED TO AIRFLOW SHALL BE RATED FOR THAT EXPOSURE OR SHALL BE ENCAPSULATED. INSULATING PROPERTIES FOR ALL MATERIALS SHALL MEET OR EXCEED INDUSTRY STANDARDS. POLYSTYRENE PRODUCTS SHALL MEET ASTM C578 91. ALL INSULATION SHALL BE LOW-EMITTING WITH NOT GREATER THAN 0.05 PPM FORMALDEHYDE EMISSIONS. THE MAXIMUM FLAME SPREAD AND SMOKE DEVELOPED INDEX FOR INSULATION SHALL MEET THE REQUIREMENTS OF THE LOCAL CODES AND ORDINANCES ADOPTED BY THE JURISDICTION IN WHICH THE BUILDING IS LOCATED.
- FAUCETS AND FIXTURE FITTINGS SHALL CONFORM TO ASTM A112.18.1. FAUCETS AND FIXTURE FITTINGS THAT SUPPLY DRINKING WATER FOR HUMAN CONSUMPTION SHALL CONFORM TO THE REQUIREMENTS OF NSF 61, SECTION 9. FIXTURE FITTINGS, FAUCETS, AND DIVERTERS SHALL BE INSTALLED AND ADJUSTED SO THAT THE FLOW OF HOT WATER FROM THE FITTINGS CORRESPONDS TO THE LEFT HAND SIDE OF THE FIXTURE FITTING.
- BACKFLOW PREVENTION SHALL BE IN ACCORDANCE WITH SECTION 608.13 OF THE NC PLUMBING CODE AND THE LOCAL AUTHORITY HAVING JURISDICTION. REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTERS SHALL CONFORM TO ASSE 1013 OR ANMA CS11. THE RELIEF OPENING SHALL DISCHARGE BY AIR GAP. AIR GAPS SHALL COMPLY WITH ASME A112.1.1 AND AIR GAP FITTINGS WITH ASME A112.1.2. DOUBLE CHECK VALVE ASSEMBLIES SHALL CONFORM TO ASSE 1015 OR ANMA CS10. AIR GAPS AND DOUBLE CHECK VALVE ASSEMBLIES SHALL BE PROVIDED AS SPECIFIED BY THE INSTALLATION INSTRUCTIONS OF THE APPROVED MANUFACTURER.
- FOR BELOW GRADE SANITARY WASTE PIPING, PC SHALL USE SERVICE WEIGHT CAST IRON PIPE WITH COMPRESSION JOINTS (ASTM A 74). USE MINIMUM 2 INCH SIZE UNDERGROUND. SOLID WALL SCHEDULE 40 PVC (ASTM D 2665) WITH SCHEDULE 40 SOCKET TYPE PIPE FITTINGS (ASTM D 3311) MAY ALSO BE USED FOR PIPING. DO NOT USE APPLICATIONS WHERE THE WASTE WATER TEMPERATURE EQUALS OR EXCEEDS 140°F OR IF THE BUILDING HEIGHT EXCEEDS 75 FEET.
- FOR ABOVE GRADE SANITARY WASTE AND VENT PIPING, USE SERVICE WEIGHT CAST IRON NO-HUB TYPE WITH COUPLINGS (CSPI 301). SOLID WALL SCHEDULE 40 PVC (ASTM D 2665) WITH SCHEDULE 40 SOCKET TYPE FITTINGS (ASTM D 3311) MAY BE USED IF PERMITTED BY LOCAL CODE. EXCEPT IN BUILDINGS EXCEEDING 75 FEET IN HEIGHT, DO NOT INSTALL PVC IN RETURN AIR PLenums. KEEF VENT AND BRANCH VENT PIPES SHALL BE SO GRADED AND CONNECTED AS TO DRAIN BACK TO THE DRAINAGE PIPE BY GRAVITY. BRANCH VENTS EXCEEDING 40 FEET IN DEVELOPED LENGTH SHALL BE INCREASED BY ONE NOMINAL SIZE FOR THE ENTIRE DEVELOPED LENGTH OF THE PIPE.
- PC SHALL PROVIDE ALL WATER HEATERS (WATER/INPUT AND CAPACITY AS NOTED IN SCHEDULE). ALL WATER HEATERS SHALL BE THIRD PARTY CERTIFIED. PROVIDE PANS FOR WATER HEATERS IN ACCORDANCE WITH 504.7 OF THE PLUMBING CODE. ELECTRICAL CONNECTIONS SHALL BE BY ELECTRICAL CONTRACTOR. PC SHALL COORDINATE WITH EC ON ELECTRICAL CHARACTERISTICS OF THE EQUIPMENT PROVIDED.

METHODS:

- EXTEND DOMESTIC WATER PIPE FROM FIVE (5) FEET OUTSIDE THE BUILDING INTO THE BUILDING AS INDICATED ON THE PLANS AND INSTALL DOMESTIC WATER DISTRIBUTION PIPING TO ALL FIXTURES AND EQUIPMENT REQUIRING THE SAME. WATER SERVICE PIPE AND THE BUILDING SEWER SHALL BE SEPARATED BY 5 FEET OF UNDISTURBED OR COMPACTED EARTH IN ACCORDANCE WITH 504.2. PROVIDE ALL FITTINGS, VALVES, AND OTHER ACCESSORIES AS NECESSARY FOR A COMPLETE INSTALLATION. ALL DOMESTIC WATER PIPING SHALL BE CONCEALED IN FINISHED AREAS. ANY OPEN ENDS SHALL BE PROTECTED UNTIL FINAL CONNECTIONS ARE MADE.
- ABOVE GRADE DOMESTIC WATER PIPING SHALL BE SLOPED AT A MINIMUM OF 1/32" INCH PER FOOT AND ARRANGED TO DRAIN AT LOW POINTS. INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE, JOINTS, OR CONNECTED EQUIPMENT. ROUTE PIPING IN AN ORDERLY MANNER-PARALLEL OR PERPENDICULAR TO WALLS WHEN POSSIBLE-AND MAINTAIN GRADIENT. EACH SUPPLY BRANCH LINE SERVING MORE THAN ONE FIXTURE SHALL HAVE A SHUTOFF VALVE INSTALLED TO ISOLATE ALL FIXTURES AND PRECESS OF EQUIPMENT SUPPLIED BY THE BRANCH LINE. THE SHUTOFF VALVE SHALL BE LABELED AND LOCATED AS CLOSE TO THE CONNECTION TO THE SUPPLY MAIN AND RISER AS POSSIBLE. PROVIDE A FULL-OPEN VALVE ON THE BASE OF EVERY WATER RISER PIPE AND ON THE TOP OF EVERY WATER DOWN-FEED PIPE. PROVIDE VALVE HANDLE EXTENSIONS AS NECESSARY FOR INSULATION.
- IT SHALL BE THE RESPONSIBILITY OF THE PC TO SUSPEND AND SUPPORT ALL PIPING SYSTEMS FOLLOWING RECOGNIZED ENGINEERING PRACTICES AND USING STANDARD, COMMERCIALY ACCEPTED PIPE HANGERS AND SUSPENSION EQUIPMENT. ALL FIXTURES, DEVICES, AND EQUIPMENT SHALL BE SECURELY MOUNTED TO THE BUILDING STRUCTURE AND SHALL NOT RELY ON CEILING OR WALL SURFACES FOR SUPPORT. THE SUPPORT ATTACHMENT SHALL SUPPORT THE WEIGHT OF THE FIXTURE OR EQUIPMENT PLUS THE WEIGHT OF THE SUPPORT ATTACHMENT ITSELF. SUPPORT FROM THE TOP CHORD OF THE ROOF JOISTS, GIRDERS, AND BEAMS. THE BOTTOM CHORD IS NOT TO BE USED FOR EQUIPMENT AND PIPING SUPPORT. HANGERS SHALL NOT BE ATTACHED TO CORRUGATED STEEL, BECKING, USE STEEL HANGERS FOR STEEL AND PLASTIC PIPE AND COPPER OR COPPER-PLATED HANGERS FOR COPPER PIPE. PROVIDE PROTECTION FOR COPPER PIPING IN CONTACT WITH DISSIMILAR METALS. WHERE COPPER PIPING IS SUPPORTED ON HANGERS WITH OTHER PIPING, PROVIDE A PERMANENT ELECTROLYTIC ISOLATION MATERIAL TO PREVENT CONTACT WITH OTHER METALS. IN GENERAL, HANGERS SHALL BE CLEAR TYPE, STANDARD HEIGHT. FOR PIPING, HANGER SPACING SHALL BE IN ACCORDANCE WITH TABLE 308.5 OF THE NC PLUMBING CODE. HANGERS AND ACCESSORIES SHALL BE GRNELL, WASON, OR B-LINE.
- SLEEVE ALL PIPES PASSING THROUGH PARTITIONS, WALLS, AND FLOORS. SLEEVES IN FLOORS AND INTERIOR WALLS OF POURED IN PLACE CONCRETE, BRICK, TILE OR MASONRY SHALL BE SCHEDULE 40 STEEL PIPE. MACHINE CUT. SLEEVES IN GYPSUM BOARD WALLS SHALL BE 22 GAUGE, ROLLED GALVANIZED SHEET METAL. TACK WELD ON THE LONGITUDINAL SEAM. PROVIDE SLEEVES WHERE PIPES PASS THROUGH FLOORS AND WALLS ABOVE AND BELOW CEILING. PROVIDE SPLIT PIPE SLEEVES IN NEW WALLS BUILT UP AROUND EXISTING PIPES. TACK WELD SPLIT SLEEVES TOGETHER. SLEEVES IN WALLS SHALL BE INSTALLED FLUSH WITH THE WALL. SLEEVES IN FLOORS SHALL EXTEND 1/4" INCH ABOVE THE FLOOR-EXCEPT THEY SHALL BE FLUSH FOR 2 HOUR RATED FLOORS-AND SHALL BE FLUSH WITH THE STRUCTURE BELOW. EACH SLEEVE SHALL HAVE AN INSIDE DIAMETER 1 INCH LARGER THAN THE OUTSIDE DIAMETER OF THE COVERING OF EACH COVERED PIPE TO ALLOW CONTINUOUS INSULATION-BUT NOT LESS THAN TWO PIPE SIZES LARGER THAN EACH UNCOVERED. ANNULAR SPACES BETWEEN SLEEVES AND PIPES SHALL BE FILLED OR CAULKED IN AN APPROVED MANNER.
- THE TOP OF WATER PIPES INSTALLED BELOW GRADE OUTSIDE THE BUILDING SHALL BE BELOW THE FROST LINE OR A MINIMUM OF 12 INCHES BELOW FINISHED GRADE WHICHEVER IS GREATER. WATER

- PIPING INSTALLED IN A WALL EXPOSED TO THE EXTERIOR SHALL BE LOCATED ON THE HEATED SIDE OF THE WALL. INSULATION WATER PIPING INSTALLED IN AN UNCONDITIONED UTILITY ROOM OR UNCONDITIONED ATTIC SHALL BE INSULATED TO A MINIMUM OF R6.5 DETERMINED IN ACCORDANCE WITH ASTM C 177.
- HOT WATER PROVIDED TO PUBLIC HAND-WASHING FACILITIES/LAVATORIES SHALL BE TEMPERED WATER DELIVERED THROUGH AN APPROVED WATER-TEMPERATURE LIMITING DEVICE THAT CONFORMS TO ASSE 1070 OR CSA B125.3.
- INSULATE ALL EXPOSED WASTE AND SUPPLY PIPING UNDER LAVATORIES, SINKS, AND ELECTRIC WATER COOLERS WITH THE HAND-LAY GUARD INSULATION KIT BY TRUEBERG OR EQUAL.
- POTABLE WATER OUTLETS SHALL BE PROTECTED FROM BACKFLOW IN ACCORDANCE WITH 608.15. PRESSURE TYPE VACUUM BREAKERS SHALL CONFORM TO ASSE 1050 AND SPLIFROOF VACUUM BREAKERS SHALL COMPLY WITH ASSE 1056. HOSE-CONNECTION VACUUM BREAKERS SHALL CONFORM TO ASSE 1011, ASSE 1019, ASSE 1035, OR ASSE 1052. CONNECTIONS TO BEVERAGE DISPENSERS, COFFEE MACHINES, AND NON-CARBONATED BEVERAGE DISPENSERS SHALL BE PROTECTED BY A BACKFLOW PREVENTER IN ACCORDANCE WITH ASSE 1022.
- THE PC SHALL INSTALL WATER HAMMER ARRESTORS ON BRANCH LINES WITH QUICK CLOSING VALVES PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. WATER HAMMER ARRESTORS SHALL CONFORM TO ASSE 1010.
- THE PC SHALL PROVIDE CHECK VALVES AT ALL FIXTURES WITH THREADED OUTLETS AS REQUIRED BY CODE. TRAP PRIMERS SHALL BE PROVIDED AS SHOWN ON THE PLANS OR AS REQUIRED.
- ADJUST STOPS AND VALVES FOR INTENDED FLOW RATE TO FIXTURES WITHOUT SPLASHING, NOISE, OR OVERFLOW.
- BEFORE COMMENCING WORK, CHECK INVERT ELEVATIONS REQUIRED FOR SEWER CONNECTIONS, CONFIRM INVERTS, AND VERIFY THESE CAN BE PROPERLY CONNECTED TO WITH SLOPE FOR DRAINAGE AND COVER TO AVOID FREEZING. ONCE INVERTS AND FALL HAVE BEEN ESTABLISHED, EXTEND SANITARY SEWER PIPING TO 5 FEET OUTSIDE THE BUILDING AND INSTALL ALL DRAINS, STACKS, VENTS, FLOOR DRAINS, AND CLEANOUTS NECESSARY FOR A COMPLETE INSTALLATION.
- ALL SANITARY SEWER PIPING IS BELOW GRADE OR WITHIN WALLS UNLESS OTHERWISE NOTED. ALL SANITARY VENT PIPING IS ABOVE THE CEILING OR WITHIN WALLS UNLESS OTHERWISE NOTED. SANITARY WASTE PIPING SHALL BE INSTALLED TO PROVIDE PROTECTION AGAINST FREEZING PER 305.6.1. WASTE AND SOIL LINES LEAVING THE BUILDING MUST HAVE A MINIMUM COVER OF 3 INCHES.
- SOIL AND WASTE LINES 2-1/2 INCHES AND SMALLER SHALL BE SLOPED AT 1/4 INCH PER FOOT MINIMUM. SOIL AND WASTE LINES 3 INCHES TO 6 INCHES IN DIAMETER SHALL BE SLOPED AT 1/8 INCH PER FOOT MINIMUM.
- FOR WATER CLOSET WASTE CONNECTIONS, A 4 INCH BY 3 INCH CLOSET BEND SHALL BE ACCEPTABLE. WHERE A 3 INCH BEND IS UTILIZED ON WATER CLOSETS, A 4 INCH BY 3 INCH FLANGE SHALL BE INSTALLED TO RECEIVE THE FIXTURE HORN.
- FOR PLASTIC PIPE SIZES GREATER THAN 6 INCHES, AND OTHER PIPE SIZES GREATER THAN 4 INCHES, RESTRAINTS SHALL BE PROVIDED FOR DRAIN PIPES AT ALL CHANGES IN DIRECTION AND AT ALL CHANGES IN DIAMETER GREATER THAN TWO PIPE SIZES. BRACES, BLOCKS, RODDING, BACKFILL AND OTHER SUITABLE METHODS AS SPECIFIED BY THE COUPLING MANUFACTURER SHALL BE UTILIZED.
- BASES OF STACKS SHALL BE SUPPORTED BY THE BUILDING STRUCTURE, VIRGIN OR COMPACTED EARTH, OR OTHER SUITABLE MATERIAL TO SUPPORT THE WEIGHT OF THE PIPING.
- HORIZONTAL DRAIN PIPES SHALL HAVE CLEANOUTS IN ACCORDANCE WITH 708.10. EXTEND CLEANOUTS TO FINISHED FLOOR OR WALL SURFACE. LUBRICATE THREADED CLEANOUT PLUGS WITH A MIXTURE OF GRAPHITE AND LINED OIL. ENSURE CLEARANCE AT ALL CLEANOUTS FOR ROODING OF DRAINAGE SYSTEM. INSTALL FLOOR CLEANOUTS AT AN ELEVATION TO ACCOMMODATE FINISHED FLOOR. EVERY CLEANOUT SHALL BE INSTALLED TO ALLOW CLEANING IN THE DIRECTION OF FLOW OF THE DRAINAGE PIPE OR AT RIGHT ANGLES THERETO. CLEANOUTS ON 6 INCH AND SMALLER PIPES SHALL BE PROVIDED WITH A CLEARANCE OF NOT LESS THAN 18 INCHES FOR ROODING.
- DRAINAGE PIPING FOR FIXTURES SHALL TERMINATE WITH AN APPROVED CAP OR PLUG.
- AIR ADMITTANCE VALVES SHALL BE INSTALLED AFTER THE DOW TESTING REQUIRED BY SECTIONS 312.2 AND 312.3. PROVIDE ACCESS TO ALL AIR ADMITTANCE VALVES PER CODE. INSTALLATION OF ALL AIR ADMITTANCE VALVES SHALL CONFORM TO SECTION 917 OF THE NC PLUMBING CODE. AIR ADMITTANCE VALVES SHALL CONFORM TO ASSE 1050 OR 1051.
- INDIRECT WASTE PIPING THAT EXCEEDS 2 FEET IN DEVELOPED LENGTH MEASURED HORIZONTALLY, OR 4 FEET IN TOTAL DEVELOPED LENGTH, SHALL BE TRAPPED. THE AIR GAP BETWEEN THE INDIRECT WASTE PIPE AND THE FLOOR LEVEL RIM OF THE WASTE RECEPTOR SHALL BE A MINIMUM OF TWICE THE EFFECTIVE OPENING OF THE INDIRECT WASTE PIPE.
- THE PC SHALL PROVIDE UNIONS FOR DISASSEMBLY AND SERVICE OF ALL FIXTURES AND OTHER RELEVANT PLUMBING EQUIPMENT. UNIONS SHALL BE GROUND-JOINT WITH BRASS SEAT. PROVIDE INSULATING UNIONS AT EACH JUNCTION OF DISSIMILAR MATERIALS.
- THE PC SHALL ACCURATELY ROUGH-IN ALL FIXTURES ACCORDING TO MANUFACTURER'S INSTALLATION DIMENSIONS AND INSTRUCTIONS. OFFSET ADAPTERS AND FLEXIBLE CONNECTORS ARE NOT ACCEPTABLE. FLUSH HANDLES SHALL BE MOUNTED ON THE WIDE SIDE OF TOILET AREAS FOR ADA COMPLIANCE. INSTALL EACH FIXTURE WITH TRAP EASILY REMOVABLE FOR SERVICING AND CLEANING. SEAL FIXTURES TO WALL AND FLOOR SURFACES WITH SEALANT. SOLIDLY ATTACH WATER CLOSETS TO FLOOR WITH LAG SCREWS. SEAL ALL SELF-PRIMING LAVATORIES AND SINKS (VITREOUS CHINA AND STAINLESS STEEL) WITH A COMMERCIAL GRADE PLUMBER'S PUTTY OR ACRYLIC LATEX CAULK APPLIED TO THE UNDERSIDE OF THE FIXTURE. RIM IN A GENEROUS AMOUNT SO THAT WHEN FIXTURE IS SET, SEALANT SHALL OOOZE OUT.
- ALL VENT THROUGH THE ROOF (VTR) PENETRATIONS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR. PC SHALL PROVIDE FLASHING MATERIAL REQUIRED FOR VTR. JOINTS AT THE ROOF AND AROUND VENT PIPES SHALL BE MADE WATER TIGHT BY THE USE OF LEAD, COPPER, GALVANIZED STEEL, ALUMINUM, OR OTHER APPROVED FLASHINGS OR FLASHING MATERIAL. MAINTAIN MINIMUM 10 FEET FROM ALL OUTSIDE AIR INTAKES.

DO NOT TAP WATER LINE AHEAD OF RPZ.

PLUMBING FIXTURE SCHEDULE						
SYMBOL	FIXTURE	MANUFACTURER	FITTING	HW	CW	WASTE
P1	TWO PIECE TANK TYPE WATER CLOSET	KOHLER K-4421 OR EQUAL BY AMERICAN STANDARD OR TOTO	TWO-PIECE VITREOUS CHINA TOILET WITH HIGH-PROFILE TANK, KOHLER K-4309 ELONGATED FRONT BOWL AND CHROME TRIP LEVER. 1.28 GPF. PROVIDE KOHLER K-4731-C OPEN FRONT SEAT LESS COVER. ASME 112.19.2 COMPLIANCE.	-	1/2"	3"
PIH	TWO PIECE TANK TYPE ADA WATER CLOSET	KOHLER K-4421 OR EQUAL BY AMERICAN STANDARD OR TOTO	TWO-PIECE VITREOUS CHINA TOILET WITH HIGH-PROFILE TANK, KOHLER K-4309 ELONGATED FRONT BOWL AND CHROME TRIP LEVER. 1.28 GPF. PROVIDE KOHLER K-4731-C OPEN FRONT SEAT LESS COVER. ASME 112.19.2 COMPLIANCE. TOP OF SEAT SHALL BE 17-19 INCHES AFF FOR ADA. LEVER MOUNTED ON WIDE SIDE FOR ADA	-	1/2"	3"
P2	WALL MOUNT LAVATORY	TOTO LT307.4 OR EQUAL BY AMERICAN STANDARD OR KOHLER	VITREOUS CHINA LAVATORY WITH BACKSPASH COMPLYING WITH ASME 112.19.2. TOP OF RIM SHALL BE 34 INCHES AFF FOR ADA. PROVIDE WITH LAY-GUARD PROTECTORS FOR SUPPLY AND DRAIN LINES. PROVIDE JR SMITH 0700 (CONCEALED ARMS) WITH 19" ARMS 0800 (WALL SUPPORT PLATE). USE DELTA 871105 METERED FAUCET.	1/2"	1/2"	2"
P3	UNDER MOUNT LAVATORY	KOHLER K-2225 OR EQUAL BY AMERICAN STANDARD OR TOTO	VITREOUS CHINA SELF-RIMMING LAVATORY COMPLYING WITH ASME 112.19.2. MOUNT SO RIM IS 34 INCHES AFF AND 2 INCHES FROM FRONT EDGE. FOR ADA. PROVIDE WITH LAY-GUARD PROTECTORS SUPPLY AND DRAIN LINES. USE DELTA 871105 METERED FAUCET.	1/2"	1/2"	2"
P4	HI-EFFICIENCY URINAL	KOHLER K-4991-ET OR AMERICAN STANDARD	VITREOUS CHINA, WALL-MOUNTED, ADA COMPLIANT, ULTRA LOW CONSUMPTION WASHOUT URINAL COMPLYING WITH ASME 112.19.2. 0.125 GPF. USE KOHLER K-76319 FLUSHMETER OR EQUAL BY TOTO, ZURN, DR SLDAN. TOP OF RIM SHALL BE 15-1/4 INCHES AFF FOR ADA	-	3/4"	2"
P5	SHOWER	BARRIER FREE L55403845TD	ADA COMPLIANT TRANSFER SHOWER, LEFT SEAT, LEFT REVEAL, RIGHT PLUMBING. PROVIDE WITH GRAB BAR, FOLDING SEAT, MIXING VALVE, PRESSURE BALANCED, KOHLER K-197831-4 LEVER HANDLE, PREPLUMBED TREE TO SUPPLY ELBOW, SDAP DISH, PROVIDE KOHLER K-98362 SHOWER HEAD WITH FLOW SHUTOFF, SHOWER SPRAY HOSE, AND ALL OTHER ACCESSORIES FOR ADA COMPLIANCE. PROVIDE WITH SYMONS 4-420 SHOWER VALVE AND ZURN Z87300-CWD VALVE BODY. REFER TO OTHERS FOR EXACT ACCESSORY SPECS.	1/2"	1/2"	2"
P6	DRINKING FOUNTAIN	ELKAY VRCL85C OR APPROVED EQUAL	ADA COMPLIANT FOR ADULT AND CHILD, 8.0 GPH OF 50°F WATER @ 90°F AMBIENT, PROVIDE ACCESSORY APRON FOR ADA COMPLIANCE AS NECESSARY - WITH BOTTLE REFILLING STATION.	-	3/8"	2"
P7	FLOOR DRAIN	WATTS FD-200-A OR EQUAL BY ZURN, JR SMITH OR DWNER APPROVAL	IN GRANE EPDXY COATED CAST IRON FLOOR DRAIN WITH ANCHOR FLANGE, KEEP HOLES, ADJUSTABLE ROUND NICKEL BRONZE STRAINER, AND NO HUB OUTLET. PROVIDE TRAP PRIMER CONNECTION OPTION IF NOTED.	-	-	3"
P8	FREEZEPROOF HOSE BIBB	WOODFORD MODEL 68 OR EQUAL BY ZURN, MIFAB, OR DWNER APPROVAL	THE MODEL 68 IS A ASSE 1053 LISTED HYDRANT, WITH A ASSE 1052 DOUBLE CHECK BACKFLOW PREVENTER, COMES WITH A CHROME PLATED BRASS HEAD WITH STAINLESS STEEL COVER. IT DRAINS AUTOMATICALLY EVEN WITH AN ATTACHED HOSE, HAS A ONE-PIECE PLUNGER WHICH CONTROLS DRAIN AND FLOW FUNCTION. WORKS WITH PRESSURES UP TO 125 PSI, AND A MAX TEMPERATURE OF 150 DEGREES. TEE KEY FOR HYDRANT DOOR AND LOCK, EASIER TO INSTALL THAN STANDARD RECESSED BOX HYDRANT, WALL CLAMP IS INCLUDED, HEAD COVER FLIPS DOWN AND OUT OF THE WAY FOR UNOBSTRUCTED HYDRANT USE.	-	3/4"	-
P9	INTERIOR HOSE BIBB	WOODFORD MODEL 26 OR EQUAL BY ZURN OR MIFAB	PROVIDE CHECK VALVE AND ANTI-SIPHON PROTECTION IF NOT INTEGRAL TO UNIT	-	1/2"	-
P10	1 1/2" RPZ BACKFLOW PREVENTER	WATTS LF909M QT OR EQUAL BY CONBRACCI OR WILKINS	RPZ ASSEMBLY CONSISTING OF A PRESSURE DIFFERENTIAL RELIEF VALVE LOCATED IN A ZONE BETWEEN TWO POSITIVE SEATING CHECK VALVES. THE ASSEMBLY SHALL INCLUDE TWO TIGHTLY CLOSING SHUTOFF VALVES BEFORE AND AFTER THE ASSEMBLY, TEST COCKS AND A PROTECTIVE STRAINER UPSTREAM OF THE FIRST SHUTOFF VALVE. THE ASSEMBLY SHALL MEET THE REQUIREMENTS OF ASSE 1013 AND ANMA CS11	-	1 1/2"	-
P11	EXPANSION TANK	AMTRC ST-5 OR EQUAL BY WATTS OR BELL & GOSSETT	INSTALL ON COLD WATER LINE BETWEEN WATER HEATER AND RPZ	-	3/4"	-
P12	SINK DOUBLE BOWL	ELKAY LRA032319 OR EQUAL BY FRANKIE OR MOEN	TOP MOUNTED 18 GA STAINLESS STEEL. MAX BOWL DEPTH 6 INCHES FOR WHEEL CHAIR ACCESSIBILITY-USE BELLA FAUCET SET 140-18T (PC TO VERIFY WITH DWNER IF SPRAYER OPTION IS NEEDED) OR EQUAL BY CARTRIDGE DESIGN.	1/2"	1/2"	2"
P13	REFRIGERATOR VALVE BOX	DATEY OR APPROVED EQUAL	HIGH IMPACT POLYSTYRENE BOX WITH 1/4 TURN BRASS BALL VALVE. COMPLIANT WITH NSF 61, SECTION 9.	-	1/2"	-
P14	THERMOSTATIC MIXING VALVE	ZURN Z838701TD OR EQUAL BY LAULEX, LEONARD VALVE, DR WATTS	ASSE STANDARD 1089 OR 1070 APPROVED WITH 1/2" INCH FEMALE NPT INLET AND OUTLET CONNECTIONS, BRASS BODY, AND INTEGRAL MOUNTING HOLES. TAMPER RESISTANT THERMOPLASTIC ENCLOSURE. SINGLE REPLACEABLE CARTRIDGE DESIGN.	1/2"	1/2"	-
P15	FLOOR DRAIN	ZURN FDI OR EQUAL BY WATTS OR JR SMITH	IN GRANE EPDXY COATED CAST IRON FLOOR DRAIN WITH ANCHOR FLANGE, KEEP HOLES, ADJUSTABLE ROUND NICKEL BRONZE STRAINER, AND NO HUB OUTLET. PROVIDE TRAP PRIMER CONNECTION OPTION IF NOTED.	-	-	SEE PLAN
P16	3/4" RPZ BACKFLOW PREVENTER	WATTS LF909 OT OR EQUAL BY CONBRACCI OR WILKINS	RPZ ASSEMBLY CONSISTING OF A PRESSURE DIFFERENTIAL RELIEF VALVE LOCATED IN A ZONE BETWEEN TWO POSITIVE SEATING CHECK VALVES. THE ASSEMBLY SHALL INCLUDE TWO TIGHTLY CLOSING SHUTOFF VALVES BEFORE AND AFTER THE ASSEMBLY, TEST COCKS AND A PROTECTIVE STRAINER UPSTREAM OF THE FIRST SHUTOFF VALVE. THE ASSEMBLY SHALL MEET THE REQUIREMENTS OF ASSE 1013 AND ANMA CS11	-	3/4"	-
YHD	YARD HYDRANT	WOODFORD MODEL 54H-LL OR APPROVED EQUAL	AUTO DRAIN W. BACKFLOW PREVENTION. BURY DEPTH TO BE BELOW FROST LINE. COORDINATE WITH SITE CONDITIONS.	-	1"	-
FD	FLOOR CLEANOUT	ZURN, WATTS, JR SMITH	EPDXY COATED CAST IRON FLOOR CLEANOUT WITH ROUND ADJUSTABLE GASKETED NICKEL BRONZE TOP, REMOVABLE GAS TIGHT GASKETED BRASS CLEANOUT PLUG, AND NO HUB INLET.	-	-	4"
WCD	WALL CLEANOUT	ZURN, WATTS, DR JR SMITH	CAST IRON CLEANOUT FERRELL WITH THREADED BRASS COUNTERSUNK CLEANOUT PLUG, STAINLESS STEEL ACCESS COVER, AND VANDAL PROOF STAINLESS STEEL SCREW	-	-	4"

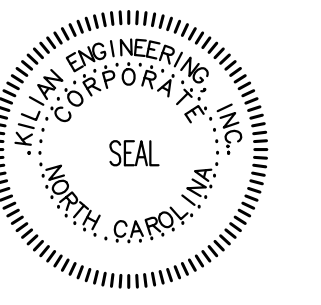
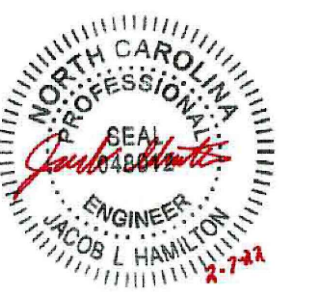
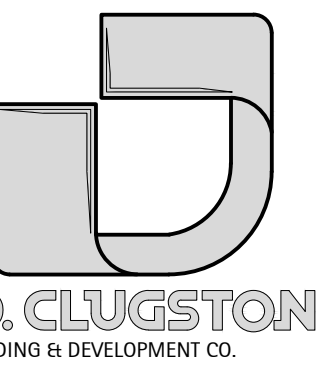
PLUMBING LINES SIZING TABLE									
FIXTURE TYPE	OCCUPANCY	QTY	DRAINAGE FIXTURE UNITS			WATER SUPPLY FIXTURE UNITS			
			EACH	TOTAL	CW	HW	CW & HW	HW TOTAL	TOTAL
WATER CLOSET (FLUSH TANK)	PUBLIC	9	4.00	36.00	5.00	0.00	5.00	0.00	45.00
SHOWER	PUBLIC	3	2.00	6.00	3.00	3.00	4.00	9.00	12.00
LAVATORY	PUBLIC	8	1.00	8.00	1.50	1.50	2.00	12.00	16.00
URINAL (3/4" FLUSH VALVE)	PUBLIC	2	2.00	4.00	5.00	0.00	5.00	0.00	10.00
DRINKING FOUNTAIN	PUBLIC	3	0.50	1.50	0.25	0.00	0.25	0.00	0.75
DEMAND FIXTURE	GPM	QTY	TOTAL GPM		TOTAL DFU		SS. 5		
HOSE BIBBS	5	6	30.00		TOTAL WFSUs	21.0	83.8		
YARD HYDRANT	1	1	1		GPM	19.98	39.14		
					OTHER FIXTURES' GPM	0.00	31.00		
					TOTAL GPM	19.98	70.14		
MINIMUM BUILDING DRAIN SIZE	4"								
MINIMUM WATER LINE SIZE	1-1/2"								

ELECTRIC WATER HEATER SCHEDULE											
MARK	MFG	MODEL	TANK VOL. GALS	INPUT kW	RECOVERY GPH @ 60°F IT	SET POINT °F	POWER VOLTAGE	CONNECTIONS PHASE	HEAT COIL	OPTIONS	
WH-1	STATE	PCE3020LSA	30	4.5	30	110	208	1	3/4	3/4	1-5
WH-2	STATE	PCE2010MSA	20	4.5	30	110	208	1	3/4	3/4	1-5

- PROVIDE GALVANIZED STEEL SAFETY PAN
- UL 174 LISTED
- PROVIDE ASME LISTED TEMPERATURE AND PRESSURE RELIEF VALVE
- MEET OR EXCEED ENERGY FACTOR REQUIREMENTS OF ASHRAE 90.1-2007 OR EQUAL BY A.O. SMITH, BRADFORD WHITE, OR STATE

LINETYPE LEGEND

- COLD WATER SUPPLY -----
- HOT WATER SUPPLY -----
- SANITARY SEWER LINE -----
- VENT LINE -----



NO.	REVISION	DATE
1	CODE COMMENTS	2-7-2022

**SHEET DESCRIPTION
PLUMBING NOTES
AND SCHEDULES**

PROJECT #: 20442
DATE ISSUED: 10-23-2020
DRAWING BY: DBAS
CHECKED BY: MWK/JLH

SERENITY AMENITIES
GREENFIELD COMMUNITIES
CLUBHOUSE
FLOUARY-VARINA, NC

NO.	REVISION	DATE

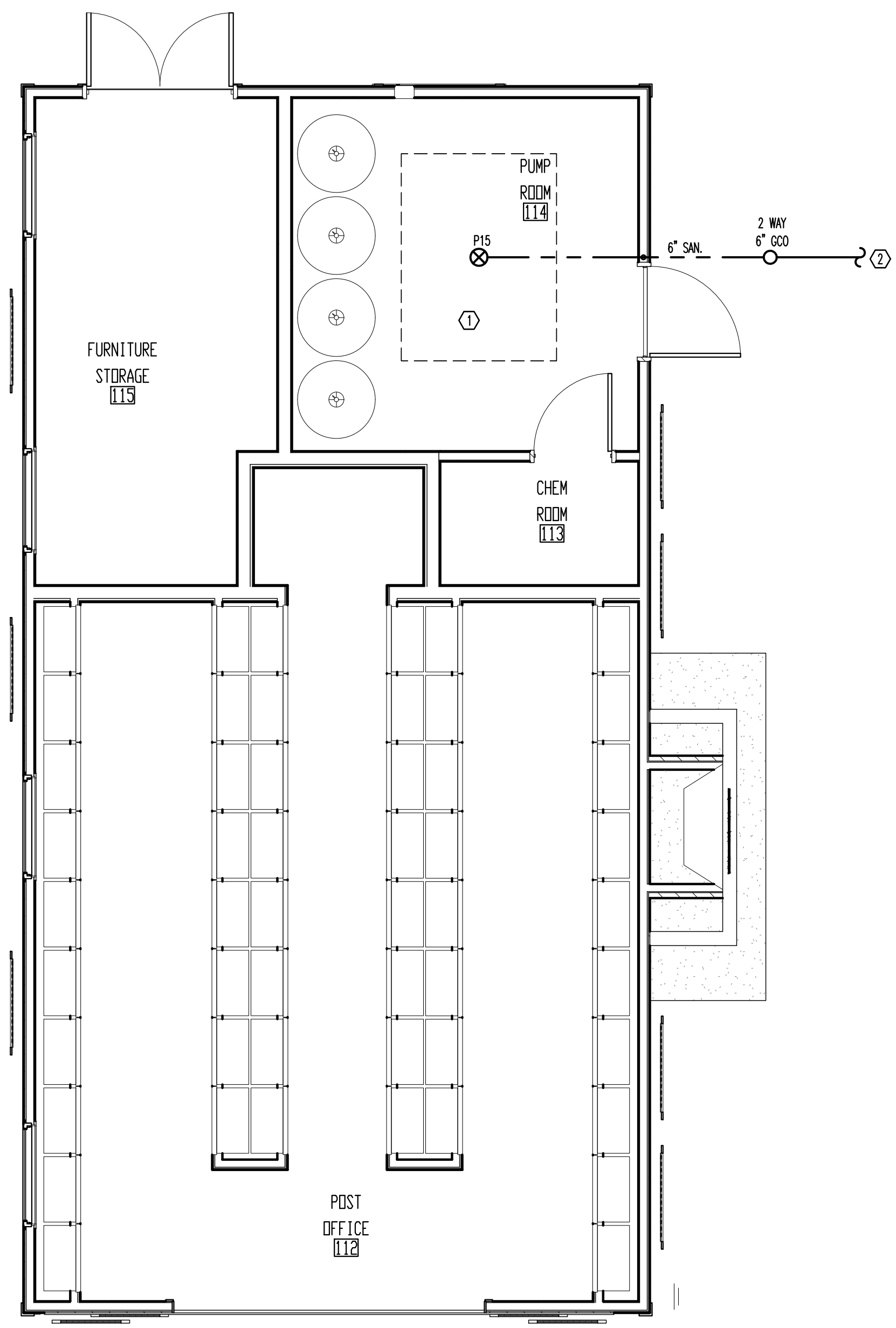
SHEET DESCRIPTION
POST OFFICE PLUMBING PLAN

PROJECT #: 20442
 DATE ISSUED: 10-23-2020
 DRAWING BY: DBAS
 CHECKED BY: MWK/JLH

SERENITY AMENITY
 GREENFIELD COMMUNITIES
 POST OFFICE
 FUQUAY-VARINA, NC

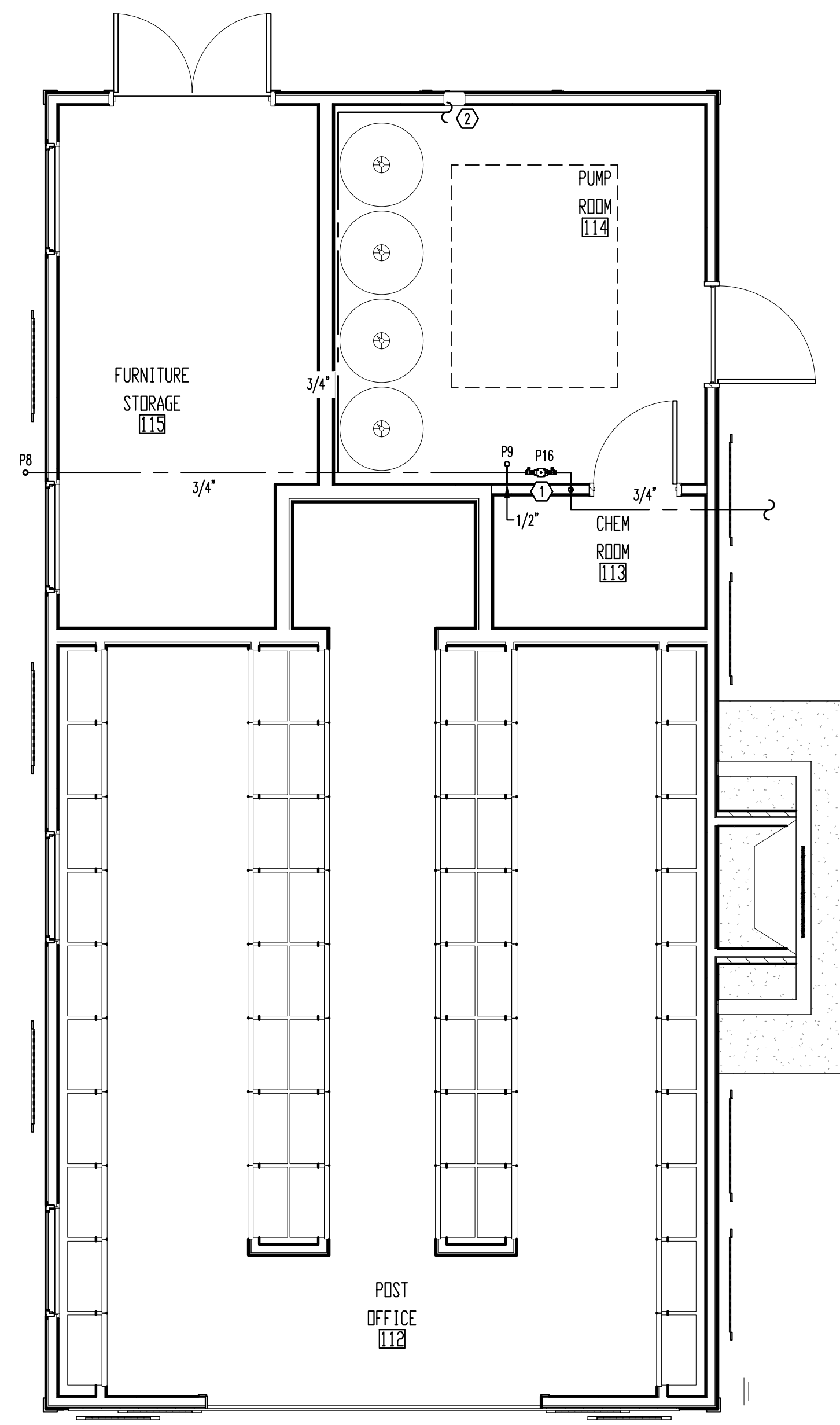
SANITARY PLAN HEX NOTES

1. SUMP PIT, COORDINATE EXACT LOCATION WITH POOL EQUIPMENT AND POOL CONTRACTOR.
2. SANITARY CONTINUES TO MAIN SANITARY SEWER TO CLUBHOUSE. SEE SITE UTILITY PLANS BY OTHERS.



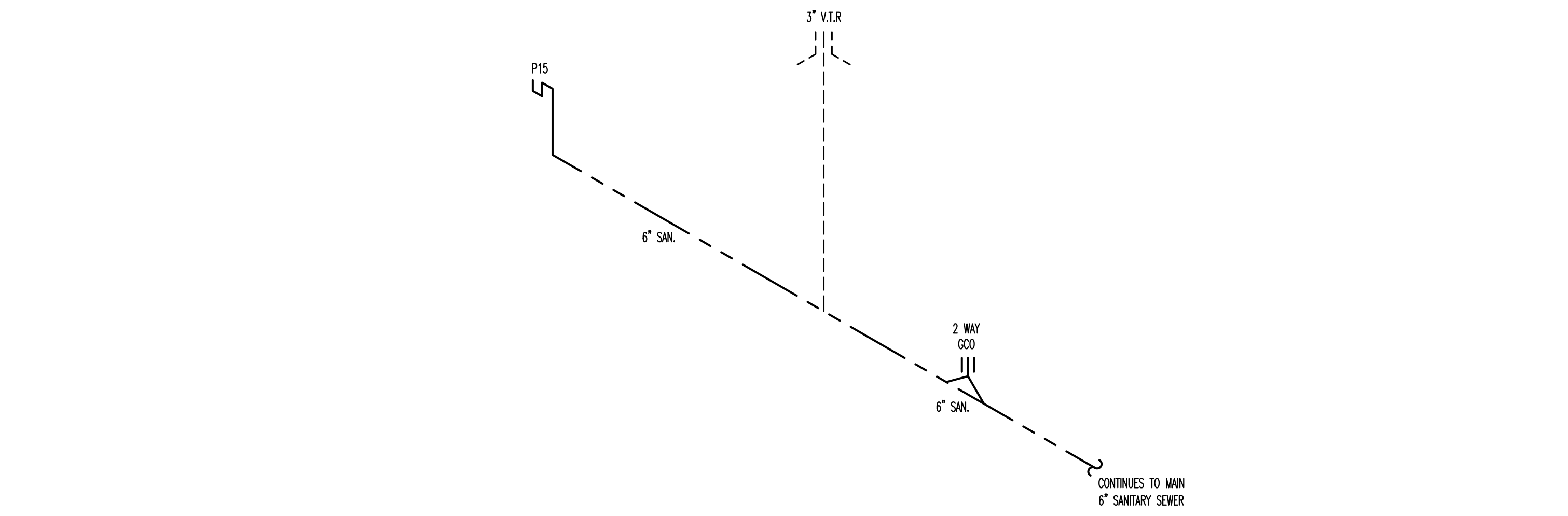
SUPPLY PLAN HEX NOTES

1. BACKFLOW PREVENTER, (P4), LOCATED ALONG WALL FOR POOL EQUIPMENT. DRAIN TO FLOOR DRAIN IN AREA. ENSURE REQUIRED CLEARANCES CAN BE MAINTAINED.
2. 3/4" CWS TO POOL EQUIPMENT. COORDINATE WITH POOL CONTRACTOR.
3. 3/4" CWS FROM MAIN 1-1/2" CWS TO CLUBHOUSE. REFER TO CLUBHOUSE SUPPLY PLAN FOR MORE DETAIL.

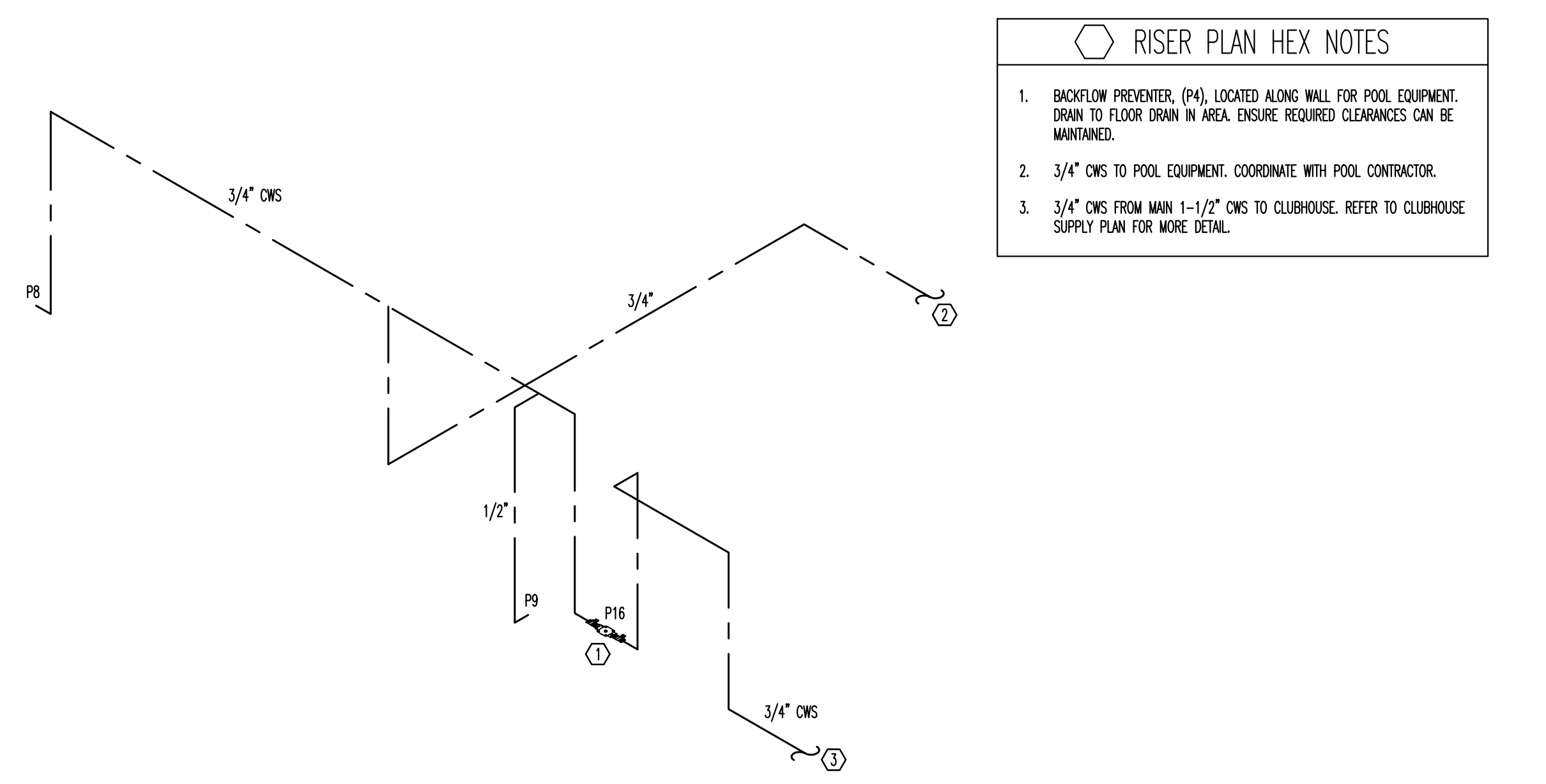


SANITARY PLAN: SCALE - 1/4" = 1'0" 1

WATER SUPPLY PLAN: SCALE - 1/4" = 1'0" 2



DWV RISER: NO SCALE 3



RISER PLAN HEX NOTES

1. BACKFLOW PREVENTER, (P4), LOCATED ALONG WALL FOR POOL EQUIPMENT. DRAIN TO FLOOR DRAIN IN AREA. ENSURE REQUIRED CLEARANCES CAN BE MAINTAINED.
2. 3/4" CWS TO POOL EQUIPMENT. COORDINATE WITH POOL CONTRACTOR.
3. 3/4" CWS FROM MAIN 1-1/2" CWS TO CLUBHOUSE. REFER TO CLUBHOUSE SUPPLY PLAN FOR MORE DETAIL.

DOMESTIC WATER SUPPLY RISER: NO SCALE 4

GENERAL MECHANICAL NOTES:

ADMINISTRATIVE:

- THE FOLLOWING ABBREVIATIONS SHALL APPLY TO NOTES AND PLANS:
 PC - PLUMBING CONTRACTOR, EC - ELECTRICAL CONTRACTOR,
 MC - MECHANICAL CONTRACTOR, GC - GENERAL CONTRACTOR,
 FASC - FIRE ALARM SYSTEM CONTRACTOR.
- "PROVIDE" MEANS TO FURNISH AND INSTALL. MC SHALL ALSO INSTALL MATERIALS FURNISHED BY OTHERS AND GENERAL CONTRACTOR AS SHOWN ON THE PLANS OR NECESSARY FOR A COMPLETE INSTALLATION.
- THE MC SHALL BE RESPONSIBLE FOR A COMPLETE AND OPERATING SYSTEM AS DESCRIBED BY THESE PLANS AND SPECIFICATIONS.
 ALL MATERIALS AND EQUIPMENT SHALL BE DELIVERED TO THE SITE AND UNLOADED BY THE CONTRACTOR AT AN APPROVED LOCATION. THE MC SHALL PROTECT ALL MATERIALS AND EQUIPMENT FROM BREAKAGE, THEFT, AND THE ELEMENTS. ALL MATERIALS AND EQUIPMENT SHALL REMAIN THE PROPERTY OF THE MC UNTIL THE PROJECT HAS BEEN COMPLETED AND TURNED OVER TO THE OWNER.
- THE MC SHALL INSTALL ALL MATERIALS AND EQUIPMENT IN ACCORDANCE WITH THE 2018 NORTH CAROLINA MECHANICAL AND BUILDING CODES AND ANY APPLICABLE LOCAL CODES. WHERE A CONFLICT EXISTS BETWEEN THE ABOVE REQUIREMENTS, THE MC SHALL OBTAIN CLARIFICATION FROM THE ENGINEER OR IN THE EVENT ANY PART OF THESE PLANS CONFLICTS WITH THE ABOVE REQUIREMENTS.
- THE MC SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES, AND INSPECTIONS NECESSARY FOR THE COMPLETION OF THE WORK UNDER THIS CONTRACT. DO NOT SCALE THESE DRAWINGS-REFER TO ARCHITECTURAL SHEETS FOR DIMENSIONS.
- THE MC SHALL VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS. THE MC SHALL CONTACT THE ENGINEER TO RESOLVE ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THESE PLANS. THE MC SHALL COORDINATE WITH OTHER TRADES PRIOR TO THE START OF CONSTRUCTION.
- ALL MECHANICAL MATERIALS SHALL BE NEW AND FREE OF DEFECT AND LISTED AND LABELED BY UL OR AN APPROVED THIRD PARTY AGENCY. ANY MATERIALS FOUND TO BE DEFECTIVE SHALL BE REPLACED BY THE MC WITHOUT ADDITIONAL COST TO THE OWNER. WHERE A MANUFACTURER AND MODEL NUMBER IS GIVEN, THE CITED EXAMPLE IS INTENDED TO ESTABLISH A STANDARD OF QUALITY AND NOT TO LIMIT PRODUCTS TO A PARTICULAR MANUFACTURER. SUCH EXAMPLES ARE USED TO CONVEY A GENERAL STYLE, TYPE, CHARACTER, AND QUALITY OF THE PRODUCT DESIRED; PRODUCTS DETERMINED TO BE EQUAL BY THE ENGINEER WILL BE ACCEPTED.
- THESE PLANS ARE DIAGNOSTIC. THE MC SHALL ADJUST THE LOCATIONS OF EQUIPMENT, DUCTS, REGISTER, GRILLES, ETC. TO ACCOMMODATE PLUMBING AND ENCOUNTERED INTERFERENCES. THE DRAWINGS DO NOT SHOW ALL BENDS, OFFSETS, AND FITTINGS THAT MAY BE REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. THE MC SHALL MAKE ALLOWANCES FOR SUCH DEVIATIONS AND CONTINGENCIES IN BID TO IMPLEMENT THEM WITHOUT ADDITIONAL COST TO THE OWNER.
- THE MC SHALL VERIFY THE FUNCTIONALITY AND OPERATION OF ALL EXISTING MECHANICAL EQUIPMENT IN THE AREA OF WORK. REPLACE FILTERS, LEAK TEST AND RECHARGE REFRIGERANT LINES, REPLACE OR LUBRICATE BEARINGS, CHECK LINKAGES AND ACTUATORS, AND PERFORM OTHER MAINTENANCE SERVICE AS NECESSARY TO GET THE EQUIPMENT IN PROPER ORDER.
- ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL POWER CONNECTIONS TO THE MECHANICAL EQUIPMENT. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONTROL WIRING.
- IT IS THE MC'S RESPONSIBILITY TO VERIFY THAT ITEMS FURNISHED FOR THIS CONTRACT WILL FIT IN THE SPACE AVAILABLE. THE MC SHALL MAKE FIELD MEASUREMENTS AS NECESSARY TO DETERMINE SPACE REQUIREMENTS. IF THE MC MUST ALTER EQUIPMENT DUE TO SPACE CONSIDERATIONS, THE MC SHALL PROVIDE SIZES AND SHAPES THAT FIT THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS.
- MC SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR REGARDING THE ELECTRICAL REQUIREMENTS OF ALL EQUIPMENT BEING PROVIDED.
- MAINTAIN CLEARANCES FOR ALL EQUIPMENT ACCORDING TO MANUFACTURER'S RECOMMENDATIONS FOR SERVICEABILITY. ALL ROOFTOP EQUIPMENT MUST BE A MINIMUM OF 10 FEET FROM ROOF EDGE.
- MC SHALL FURNISH A BOND SET OF OPERATING AND MAINTENANCE INSTRUCTIONS FOR ALL EQUIPMENT TO THE OWNER UPON COMPLETION OF THE PROJECT. MC SHALL PROVIDE ALL DOCUMENTATION TO THE OWNER AS NECESSARY TO SUBMIT FOR FACTORY WARRANTIES.
- CONTRACTOR SHALL PROTECT ALL HVAC EQUIPMENT FROM CONSTRUCTION AND SHEET ROCK DUST DURING CONSTRUCTION. ALL FILTERS SHALL BE REPLACED WITH NEW AT THE COMPLETION OF THE PROJECT.
- ALL EQUIPMENT INSTALLED ON ROOF MUST BE WITHIN THE ROOF SCREEN.
- IF A ROOF PENETRATION IS REQUIRED AND THE ROOF IS UNDER WARRANTY, USE THE AUTHORIZED ROOFER. PROVIDE DOCUMENTATION.
- ALL PIPING, WIRING, CONDUIT, INSULATION, EQUIPMENT, SUPPORTS, ETC. SHALL BE SUITABLE FOR INSTALLATION IN A RETURN PLenum AS NECESSARY. COORDINATE WITH OTHER TRADES ON LOCATIONS OF ALL PLenums.
- MC SHALL COORDINATE WITH THE GENERAL CONTRACTOR TO ENSURE ALL APPLICABLE CONSTRUCTION WASTE IS RECYCLED DURING THE CONSTRUCTION PHASE OF THE PROJECT.

MATERIALS:

- THE MC SHALL PROVIDE ALL DX UNITARY HEATING AND COOLING EQUIPMENT AS SCHEDULED ON THE DRAWINGS. AIR-COOLED SPLIT SYSTEM HEAT PUMPS AND AIR-CONDITIONERS SHALL BE BY TRANE, CARRIER, OR YORK. AIR-COOLED ROOFTOP PACKAGE HEAT PUMPS, GAS-ELECTRIC UNITS, AND AIR-CONDITIONERS SHALL BE BY TRANE, CARRIER, OR YORK. GAS FURNACES SHALL BE BY TRANE, CARRIER, OR YORK. THE MC SHALL PROVIDE FACTORY AND FIELD INSTALLED ACCESSORIES AS SCHEDULED OR AS NECESSARY FOR A COMPLETE AND OPERATIONAL HVAC SYSTEM.
- THE MC SHALL PROVIDE ALL EXHAUST AND SUPPLY FANS AS SCHEDULED. FANS SHALL BE BY GREENHECK, LOREN COOK, TWIN CITY, OR PENNBARRY.
- DUCTWORK IS SHOWN WITH FREE AREA DIMENSIONS. ALL DUCTWORK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH SMACNA LOW PRESSURE DUCT STANDARD, 2 INCH S.P.
- EXTERNAL DUCT INSULATION AND FACTORY-INSULATED FLEXIBLE DUCT SHALL BE LEGIBLY PRINTED OR IDENTIFIED AT INTERVALS NOT GREATER THAN 36 INCHES WITH THE NAME OF THE MANUFACTURER, THE THERMAL RESISTANCE R-VALUE AT THE SPECIFIED INSTALLED THICKNESS AND THE FLAME SPREAD AND SMOKE-DEVELOPED INDEXES OF THE COMPOSITE MATERIALS. ALL DUCT INSULATION PRODUCT R-VALUES SHALL BE BASED ON INSULATION ONLY, EXCLUDING AIR FILMS, VAPOR RETARDERS OR OTHER DUCT COMPONENTS, AND SHALL BE BASED ON TESTED C-VALUES AT 75°F MEAN TEMPERATURE AT THE INSTALLED THICKNESS, IN ACCORDANCE WITH RECOGNIZED INDUSTRY PROCEDURES. THE INSTALLED THICKNESS OF DUCT INSULATION USED TO DETERMINE ITS R-VALUES SHALL BE DETERMINED AS FOLLOWS:

METHODS:

- INSULATE DUCTWORK WITH FIBERGLASS DUCT WRAP. INSTALLED R-VALUE SHALL BE A MINIMUM R-6. COVERINGS AND LININGS, INCLUDING ADHESIVES WHEN USED, SHALL HAVE A FLAME SPREAD INDEX NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84. ALL NEW DUCTWORK SHALL RECEIVE INSULATION ON THE OUTSIDE. INSTALL DUCT WRAP INSULATION WITH FACING OUTSIDE SO THAT TAPE FLAP OVERLAPS INSULATION AND FACING OF ADJACENT PIECE OF DUCT WRAP. INSULATION SHALL BE TIGHTLY BUTTED. FOR RECTANGULAR DUCTS, INSTALL SO

- INSULATION IS NOT EXCESSIVELY COMPRESSED AT DUCT CORNERS. STAPLE SEAMS APPROXIMATELY 6 INCHES ON CENTER WITH OUTWARD CLINCHING STAPLES. SEAL SEAMS WITH PRESSURE SENSITIVE TAPE MATCHING THE FACING. FOR RECTANGULAR DUCTS 24 INCHES IN WIDTH OR GREATER, SECURE DUCT WRAP TO THE BOTTOM OF THE DUCT WITH MECHANICAL FASTENERS SPACED 18 INCHES ON CENTER TO PREVENT SAGGING OF INSULATION. ADJACENT SECTIONS OF DUCT WRAP SHALL BE TIGHTLY BUTTED WITH THE 2 INCH TAPE FLAP OVERLAPPING. ALL TEARS, PUNCTURES, ETC. OF THE DUCT WRAP INSULATION SHALL BE SEALED WITH TAPE OR MASTIC TO PROVIDE A VAPOR TIGHT SYSTEM. INSULATION SHALL BE BY KNAUF INSULATION, OWENS CORNING CORP. OR CERTAINTED CORPORATION.
- VERIFY THAT DUCT SURFACES ARE CLEAN, DRY AND FREE OF FOREIGN MATERIAL PRIOR TO INSULATING. DUCT COVERINGS SHALL NOT PENETRATE A WALL OR FLOOR REQUIRED TO HAVE A FIRE-RESISTANCE RATING OR REQUIRED TO BE FIRE BLOCKED.
- WHERE DUCTS ARE CONNECTED TO EXTERIOR WALL LOUVERS AND DUCT OUTLET IS SMALLER THAN LOWER FRAME, PROVIDE BLANK-OUT PANELS SEALING LOWER AREA AROUND DUCT. USE SAME MATERIAL AS DUCT, PAINTED BLACK ON EXTERIOR SIDE. SEAL TO LOUVER FRAME AND DUCT.
- DUCTS CONNECTING TO A FURNACE SHALL HAVE A CLEARANCE TO COMBUSTIBLES IN ACCORDANCE WITH THE FURNACE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- FOR STRUCTURES IN FLOOD HAZARD AREAS, DUCTS SHALL BE LOCATED ABOVE THE DESIGN FLOOD ELEVATION. DUCT SHALL NOT BE INSTALLED IN OR WITHIN 4 INCHES OF THE GROUND.
- PROVIDE DUCT ACCESS DOORS FOR INSPECTION AND CLEANING BEFORE AND AFTER FILTERS, COILS, FANS, AUTOMATIC DAMPERS, AT FIRE DAMPERS, COMBINATION FIRE AND SMOKE DAMPERS.
- CONSTRUCT T's, BENDS, AND ELBOWS WITH RADIUS OF NOT LESS THAN 1-1/2 TIMES THE WIDTH OF THE DUCT ON CENTERLINE. WHERE NOT POSSIBLE AND WHERE RECTANGULAR ELBOWS MUST BE USED, PROVIDE TURNING VANES. INCREASE DUCT SIZES GRADUALLY, NOT EXCEEDING 10 DEGREES DIVERGENCE; MAXIMUM OF 30 DEGREES DIVERGENCE UPSTREAM OF EQUIPMENT AND 45 DEGREES CONVERGENCE DOWNSTREAM.
- IT SHALL BE THE RESPONSIBILITY OF THE MC TO SUSPEND AND SUPPORT ALL EQUIPMENT, DUCTWORK, DIFFUSERS, AND OTHER MATERIALS FOLLOWING RECOGNIZED ENGINEERING PRACTICES AND USING STANDARD, COMMERCIALY ACCEPTED HANGERS AND SUSPENSION EQUIPMENT. ALL HVAC EQUIPMENT SHALL BE SECURELY MOUNTED TO THE BUILDING STRUCTURE AND SHALL NOT REST ON CEILING OR WALL SURFACES FOR SUPPORT. THE SUPPORT ATTACHMENT SHALL SUPPORT THE WEIGHT OF THE EQUIPMENT PLUS THE WEIGHT OF THE SUPPORT ATTACHMENT ITSELF. SUPPORT FROM THE TOP CHORD OF THE ROOF JOISTS, GIRDERS, AND BEAMS. THE BOTTOM CHORD IS NOT TO BE USED FOR EQUIPMENT OR PIPING SUPPORT. HANGERS SHALL NOT BE ATTACHED TO CORRUGATED STEEL DECKING.
- DUCTS SHALL BE SUPPORTED IN ACCORDANCE WITH SMACNA AT INTERVALS NOT EXCEEDING 10 FEET. DUCTS 36 INCHES OR LARGER SHALL HAVE TRAPEZE TYPE HANGERS SUSPENDED WITH THREADED ROD. SUPPORT DUCTS FROM BAR JOISTS, GIRDERS, OR BEAMS.
- CHECK LOCATIONS OF AIR OUTLETS AND INLETS AND MAKE NECESSARY ADJUSTMENTS IN POSITION TO CONFORM WITH ARCHITECTURAL FEATURES, SYMMETRY, AND LIGHTING ARRANGEMENT. COORDINATE WITH SPRINKLER CONTRACTOR IF APPLICABLE.
- PROVIDE BALANCING DAMPERS AT POINTS ON SUPPLY WHERE BRANCHES ARE TAKEN FROM LARGER DUCTS AS REQUIRED FOR AIR BALANCING. INSTALL MINIMUM 2 DUCT MOTORS FROM DUCT TAKE-OFF. PROVIDE BALANCING DAMPERS ON DUCT TAKE-OFFS TO DEFENSERS, AND REGISTERS, REGARDLESS OF WHETHER DAMPERS ARE SPECIFIED AS PART OF THE DIFFUSER OR REGISTER ASSEMBLY. ADJUST AIR HANDLING AND DISTRIBUTION SYSTEMS TO PROVIDE DESIGN SUPPLY, RETURN, AND EXHAUST AIR QUANTITIES AT SITE ALTITUDE.
- MC SHALL INSTALL FIRE DAMPERS AT EACH PENETRATION OF A RATED WALL AS INDICATED ON THE DRAWINGS OR AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION. FIRE DAMPERS SHALL BE UL LABELED (UL 555), CURTAIN TYPE, WITH INTEGRAL FACTORY SLEEVE AND BLADES LOCATED OUTSIDE THE AIR STREAM. INSTALLATION OF ALL FIRE DAMPERS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND SECTION 607 OF THE 2018 NC MECHANICAL CODE. PROVIDE ACCESS PANELS FOR TESTING AND SERVICE AS NECESSARY. MC SHALL PROVIDE RADIATION AND THERMAL BLANKETS FOR ALL PENETRATIONS OF RATED CEILING ASSEMBLIES. RADIATION DAMPERS SHALL BE UL LABELED (UL 555C) AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFIC INSTALLATION INSTRUCTIONS. FIRE DAMPERS, COMBINATION FIRE/SMOKE DAMPERS, AND CEILING RADIATION DAMPERS SHALL BE BY RUSKIN, MAILOR, OR LLOYD INDUSTRIES.
- MC SHALL INSTALL A SMOKE DETECTOR-UL LISTED FOR DUCT INSTALLATION (UL 2884) IN EACH UNIT'S RETURN UPSTREAM OF ANY FILTERS, OUTSIDE AIR CONNECTIONS, OR DECONTAMINATION EQUIPMENT. DUCT SMOKE DETECTORS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 72. DUCT SMOKE DETECTOR SUPERVISION SHALL COMPLY WITH 606.4.1 OF THE 2018 NC MECHANICAL CODE. IF THE BUILDING IS (TO BE) EQUIPPED WITH A FIRE ALARM SYSTEM, THE FIRE ALARM SYSTEM CONTRACTOR SHALL FURNISH AND WIRE ALL DUCT SMOKE DETECTORS. IF THE BUILDING IS NOT PROVIDED WITH A FIRE ALARM SYSTEM, THE MC SHALL FURNISH AND WIRE THE DUCT SMOKE DETECTORS AND A/V DEVICE. IT SHALL BE THE RESPONSIBILITY OF THE MC TO INSTALL ALL SMOKE DUCT DETECTORS PER NFPA AND MFG'S INSTALLATION INSTRUCTIONS REGARDLESS OF WHO FURNISHES THE DEVICES.
- MC SHALL INSTALL PROGRAMMABLE THERMOSTATS AS SHOWN ON THE PLANS. THERMOSTAT SHALL BE MOUNTED AT 48 INCHES AFF. THERMOSTATS SHALL MEET THE REQUIREMENTS OF SECTION C403.2.4 OF THE 2018 NORTH CAROLINA ENERGY CONSERVATION CODE.
- FRESH AIR INTAKES SHALL BE INSTALLED ON ALL UNITS AS SHOWN ON DRAWINGS. MAINTAIN 10 FEET OF DISTANCE BETWEEN FRESH AIR INTAKES AND ALL EXHAUST TERMINATIONS AND PLUMBING VENT THRU ROOFS.
- THERMOSTAT SHALL BE MOUNTED AT 48 INCHES AFF. THERMOSTATS SHALL MEET THE REQUIREMENTS OF SECTION C403.2.4 OF THE 2018 NORTH CAROLINA ENERGY CONSERVATION CODE.
- FRESH AIR INTAKES SHALL BE INSTALLED ON ALL UNITS AS SHOWN ON DRAWINGS. MAINTAIN 10 FEET OF DISTANCE BETWEEN FRESH AIR INTAKES AND ALL EXHAUST TERMINATIONS AND PLUMBING VENT THRU ROOFS.
- P-TRAPS MUST BE INSTALLED ON ALL UNITS. MC SHALL INSTALL AUXILIARY DRAIN PANS UNDER OVERHEAD AIR HANDLERS AND AN AUTOMATIC CUT-OFF FLOAT SWITCH FOR EACH P-TRAP AND CONDENSATE LINES SHALL BE 1 INCH. P-TRAPS AND CONDENSATE LINES MAY BE PVC WHERE NOT LOCATED IN PLenums; OTHERWISE, THEY SHALL BE TYPE M COPPER.
- INSTALL BACKDRAFT DAMPERS ON FRESH AIR AND EXHAUST DUCTS WHERE THEY PENETRATE THE THERMAL ENVELOPE PER NORTH CAROLINA ENERGY CONSERVATION CODE C402.5.5.

SPLIT SYSTEM HEAT PUMP SCHEDULE

MARK	MFG / MODEL #	NOMINAL CAPACITY	REF LINES		MOTORS		EFFICIENCY	ELECTRICAL			WEIGHT	REMARKS
			GAS	L10	COMPRESSOR	COND. FAN		SEER	V/PH	NCA		
			TONS		NDL	NDL				LBS		
HP-1,2	GUARDIAN / RHP14L60R23S	5	1-1/8	3/8	1	1	14	230/1	31.7	50	261	1,3-5,10-15

GAS FURNACE AND COOLING COIL SCHEDULE

MARK	MFG / MODEL #	COIL MODEL #	NOMINAL CAPACITY	AIR FLOW		FAN MOTORS		HEATING CAPACITY			COOLING CAPACITY			ELECTRICAL			WEIGHT	REMARKS
				NOMINAL SUPPLY	MIN. DA	ESP	INPUT	OUTPUT	STAGES	AFUE	EAT WB/DB	TOTAL	SENSIBLE	V/PH	NCA	MDCP		
				TONS	CFM	CFM	IN WG	MBH	MBH	NDL	%	*F	MBH	MBH				
GF-1,2	GUARDIAN / RGF1L130DC20MP12	CF64DXA1	5	2000	SEE TABLE	.6	130	104	1	80	67/80	54.9	42.0	120/1	13.7	20	136	2,6-10,13-15

- PROVIDE CONCRETE PAD FOR UNIT TO SIT ON
- PROVIDE DUCT DETECTOR IN RETURN DUCT. PROVIDE RELAY FOR KILLING POWER TO UNIT'S FAN
- PROVIDE HEAT STRIP OUTDOOR TEMPERATURE LOCKOUT TO PREVENT SUPPLEMENTAL HEAT OPERATION IN RESPONSE TO THE THERMOSTAT BEING CHANGED TO A WARMER SETTING. SET NO LOWER THAN 35°F AND NO HIGHER THAN 40°F
- PROVIDE HINGED ACCESS DOORS
- PROVIDE HAIL GUARDS FOR COIL
- REPLACE ALL FILTERS AT PROJECT'S COMPLETION
- PROVIDE CO2 SENSOR FOR MODULATING OUTSIDE AIR
- PROVIDE MOTORIZED OUTSIDE AIR DAMPER. CONNECT TO FAN RELAY AT AIR HANDLER
- PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT WITH NIGHT-TIME SET BACK
- CONSULT MANUFACTURER ON LINE SET LENGTHS EXCEEDING 60FT
- PROVIDE HARD START KIT
- HEATER RATED AT 240V
- OR EQUAL BY CARRIER, LENNOX, OR TRANE
- ANY EQUIPMENT SUBSTITUTIONS MUST EQUAL OR EXCEED EFFICIENCIES LISTED (RATINGS PER AIR)
- MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES

REGISTER & GRILLE SCHEDULE

MARK	MFG	MODEL #	SIZE	MOUNTING	DESCRIPTION	NOTES
A	HART & COOLEY	S SERIES	4"	SURFACE	STEEL SUPPLY DIFFUSER, 3 SLOTS	1
B	HART & COOLEY	HV	8X4	SURFACE	ALUMINUM, DOUBLE DEFLECTION C, WHITE	1,2
C	HART & COOLEY	HV	10X6	SURFACE	ALUMINUM, DOUBLE DEFLECTION C, WHITE	1,2
D	HART & COOLEY	HV	14X6	SURFACE	ALUMINUM, DOUBLE DEFLECTION C, WHITE	1,2
E	HART & COOLEY	TG/TGF	8X8	WALL	ALUMINUM TRANSFER GRILLE	1,2
R	HART & COOLEY	RES	10X10	SURFACE	RETURN GRILLE	1,2
R2	HART & COOLEY	RES	12X12	SURFACE	RETURN GRILLE	1,2
R3	HART & COOLEY	RES	14X14	SURFACE	RETURN GRILLE	1,2

- OR EQUAL BY PRICE, METAL-AIRE, CARNES, TITUS OR MAILOR.
- VERIFY WITH OWNER/ARCHITECT FOR DIFFUSER COLOR

RECTANGULAR/SQUARE TO ROUND DUCT EQUIVALENT

RECTANGULAR DUCT	ROUND DUCT
30" X26"	30"
20" X26"	24"
18" X18"	20"
18" X20"	20"
20" X16"	18"
16" X16"	16"
10" X16"	14"
10" X20"	16"
16" X14"	16"
16" X12"	14"

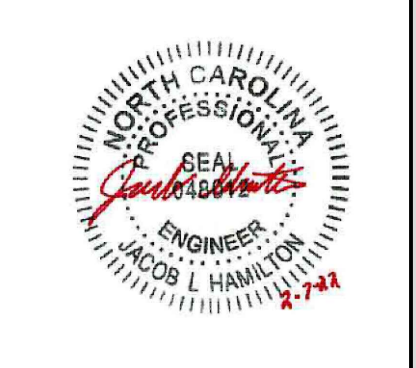
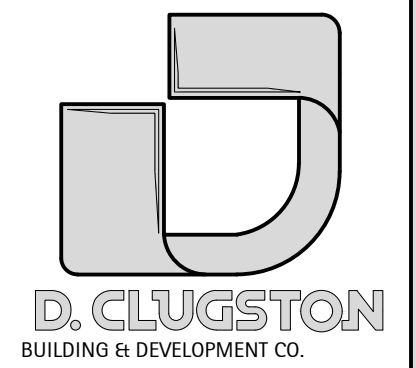
Ventilation Calculation (For Clubhouse)

Room Name(s)	Zone Type	Area (sq.ft.)	Rp	Ra	Default Occupancy	Pz	Ez	Airflow to Zone (cfm)
All Other Rooms	Office/Space	2085	5	0.06	5	10.43	0.8	2800
Fitness Room	Health/Weight Rooms	540	20	0.06	10	5.40	0.8	600
Bathroom/Shower Rooms	N/A	540	0	0	0	0.00	0.8	400
Corridors	Corridors	235	0	0.06	0	0.00	0.8	200
	N/A	0	0	0	0	0.00	0.8	0
			Maximum Zp:	0.2925				
			Ev:	0.8				
			Actual System Population:	25				
Uncorrected Intake		425 cfm						
Outdoor Air Intake		531 cfm						
Percent of Unit Air		13%						

EXHAUST FAN SCHEDULE

MARK	MFG / MODEL #	TYPE	ESP (in WD)	CFM	VOLT/PH	FLA	SDNES	NOTES
EF-1	GREENHECK CSPA700	INLINE	0.40	684	120/1	1.19	2.7	1-4
EF-2	GREENHECK SP-B110	CEILING	0.40	96	120/1	1.14	2.0	1-3

- PROVIDE WITH PITCHED ROOF CURB & CAP FOR FLAT OR SLIPPED ROOF OR HOODED WALL WITH BACKDRAFT DAMPER CAP AS APPLICABLE.
- PROVIDE WITH SQUARE TO ROUND DUCT ADAPTER AS NECESSARY
- OR EQUAL BY LOREN COOK OR PENNBARRY OR TWIN CITY OR GREENHECK
- EXHAUST FAN IS TO BE WIRED TO RUN CONTINUOUSLY DURING OCCUPIED HOURS.



Kilian Engineering, Inc.
 90 Bco. 3301, Henderson, NC 27536 | www.kilianengineering.com
 (717) 252-458-8778 | CORPORATE LICENSE C-2271

NO.	REVISION	DATE
1	CODE COMMENTS	2-7-2022

**SHEET DESCRIPTION
MECHANICAL NOTES
AND SCHEDULES**

PROJECT #: 20442
 DATE ISSUED: 10-23-2020
 DRAWING BY: DBAS
 CHECKED BY: MWJ/JLH

MECHANICAL SYSTEM, SERVICE SYSTEMS, AND EQUIPMENT

METHOD OF COMPLIANCE: PRESCRIPTIVE
 THERMAL ZONE: ZONE 3A

EXTERIOR DESIGN CONDITIONS:
 HEATING DESIGN DRY BULB: 23.1°F
 HEATING DESIGN WET BULB: 91.7°F
 COOLING DESIGN DRY BULB: 75.6°F
 COOLING DESIGN WET BULB: 75.6°F

INTERIOR DESIGN CONDITIONS:
 HEATING DESIGN DRY BULB: 70°F
 COOLING DESIGN DRY BULB: 75°F
 COOLING RELATIVE HUMIDITY: 50%

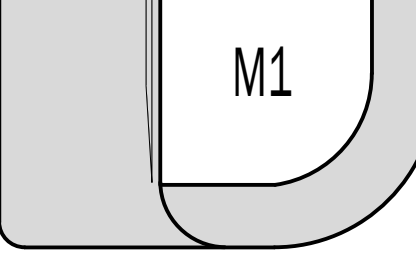
HEATING LOAD: 72,089 BTU/H
SENSIBLE COOLING LOAD: 78,344 BTU/H
LATENT COOLING LOAD: 25,794 BTU/H

MECHANICAL SPACING CONDITIONING SYSTEM:
 UNITARY DESCRIPTION (OF UNITS): AIR COOLED DX
 (2) 5 TON SPLIT SYSTEMS
 BOILER: N/A
 TOTAL BOILER OUTPUT: N/A
 CHILLER: N/A
 TOTAL CHILLER CAPACITY: N/A

EQUIPMENT EFFICIENCIES: SEE SCHEDULES
EQUIPMENT SCHEDULES WITH MOTORS, MECHANICAL SYSTEMS: SEE SCHEDULES

DESIGNER STATEMENT:
 TO THE BEST OF MY KNOWLEDGE, THE MECHANICAL DESIGN FOR THIS BUILDING COMPLIES WITH MECHANICAL AND EQUIPMENT REQUIREMENTS OF THE 2018 NORTH CAROLINA STATE BUILDING CODE AND 2018 NORTH CAROLINA ENERGY CONSERVATION CODE.

SERENITY AMENITY
 GREENFIELD COMMUNITIES
 CLUBHOUSE
 FLOUARY-WARINA, NC

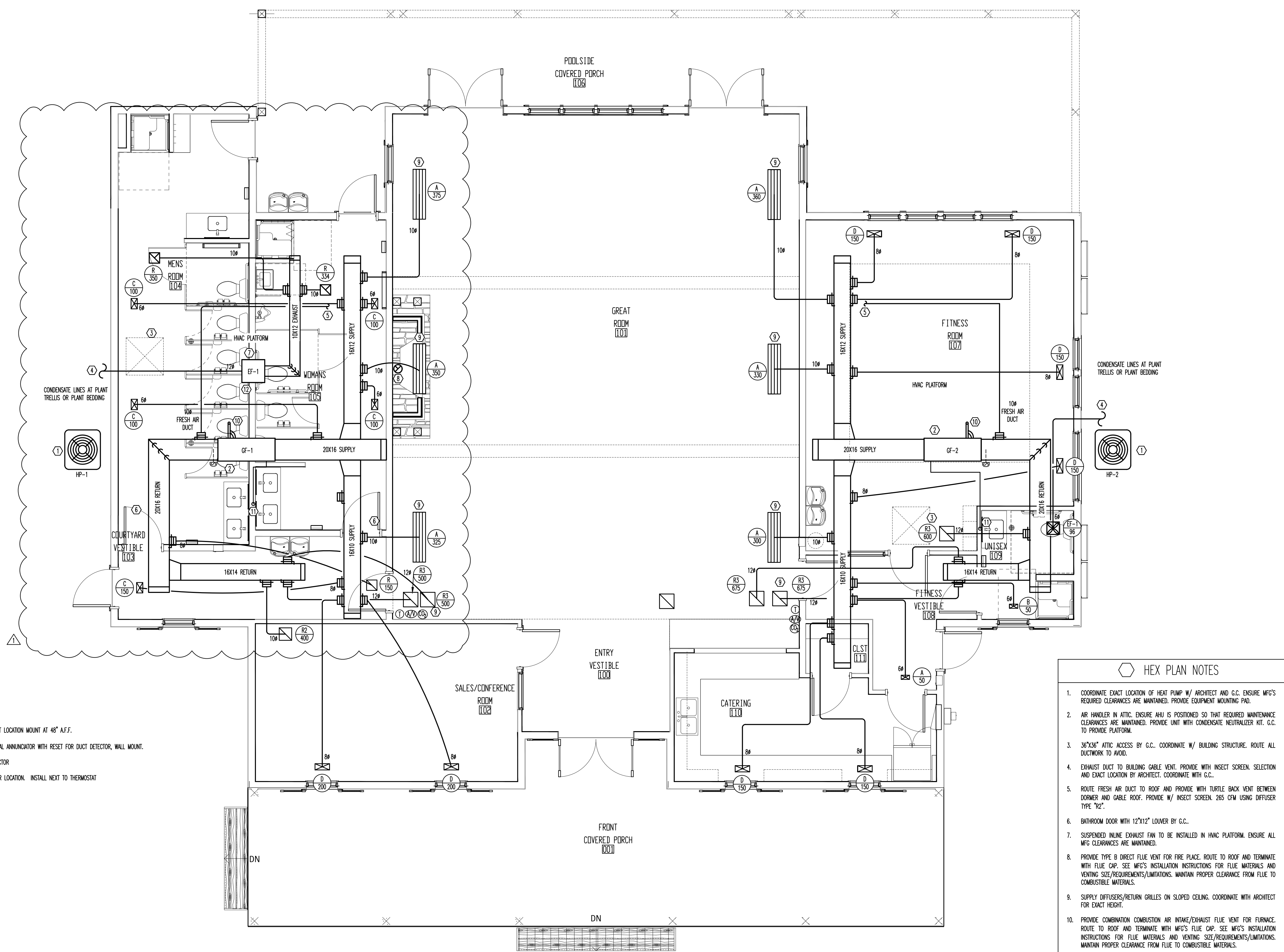


NO.	REVISION	DATE
1	CODE COMMENTS	2-7-2022

SHEET DESCRIPTION
MECHANICAL PLAN

PROJECT #:	20442
DATE ISSUED:	10-23-2020
DRAWING BY:	DBAS
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SERENITY AMENITY
 GREENFIELD COMMUNITIES
 CLUBHOUSE
 FLOUJAY-VARINA, NC



- ① THERMOSTAT LOCATION MOUNT AT 48" A.F.F.
- ② AUDIO VISUAL ANNUNCIATOR WITH RESET FOR DUCT DETECTOR, WALL MOUNT.
- ③ DUCT DETECTOR
- ④ CO₂ SENSOR LOCATION. INSTALL NEXT TO THERMOSTAT

- HEX PLAN NOTES**
- COORDINATE EXACT LOCATION OF HEAT PUMP W/ ARCHITECT AND G.C. ENSURE MFG'S REQUIRED CLEARANCES ARE MAINTAINED. PROVIDE EQUIPMENT MOUNTING PAD.
 - AIR HANDLER IN ATTIC. ENSURE AHU IS POSITIONED SO THAT REQUIRED MAINTENANCE CLEARANCES ARE MAINTAINED. PROVIDE UNIT WITH CONDENSATE NEUTRALIZER KIT. G.C. TO PROVIDE PLATFORM.
 - 36"x36" ATTIC ACCESS BY G.C. COORDINATE W/ BUILDING STRUCTURE. ROUTE ALL DUCTWORK TO AVOID.
 - EXHAUST DUCT TO BUILDING GABLE VENT. PROVIDE WITH INSECT SCREEN. SELECTION AND EXACT LOCATION BY ARCHITECT. COORDINATE WITH G.C.
 - ROUTE FRESH AIR DUCT TO ROOF AND PROVIDE WITH TURTLE BACK VENT BETWEEN DORMER AND GABLE ROOF. PROVIDE W/ INSECT SCREEN. 265 CFM USING DIFFUSER TYPE "R2".
 - BATHROOM DOOR WITH 12"x12" LOUVER BY G.C.
 - SUSPENDED INLINE EXHAUST FAN TO BE INSTALLED IN HVAC PLATFORM. ENSURE ALL MFG CLEARANCES ARE MAINTAINED.
 - PROVIDE TYPE B DIRECT FLUE VENT FOR FIRE PLACE. ROUTE TO ROOF AND TERMINATE WITH FLUE CAP. SEE MFG'S INSTALLATION INSTRUCTIONS FOR FLUE MATERIALS AND VENTING SIZE/REQUIREMENTS/LIMITATIONS. MAINTAIN PROPER CLEARANCE FROM FLUE TO COMBUSTIBLE MATERIALS.
 - SUPPLY DIFFUSERS/RETURN GRILLES ON SLOPED CEILING. COORDINATE WITH ARCHITECT FOR EXACT HEIGHT.
 - PROVIDE COMBINATION COMBUSTION AIR INTAKE/EXHAUST FLUE VENT FOR FURNACE. ROUTE TO ROOF AND TERMINATE WITH MFG'S FLUE CAP. SEE MFG'S INSTALLATION INSTRUCTIONS FOR FLUE MATERIALS AND VENTING SIZE/REQUIREMENTS/LIMITATIONS. MAINTAIN PROPER CLEARANCE FROM FLUE TO COMBUSTIBLE MATERIALS.
 - CONDENSATE DOWN WITHIN WALL TO TAILPIECE OF BATHROOM LAVATORY.
 - EXHAUST FAN TO RUN CONTINUOUSLY DURING OCCUPIED HOURS. FAN TO BE CONTROLLED VIA TIME CLOCK. VERIFY SETTINGS FOR TIME CLOCK WITH OWNER.

NO.	REVISION	DATE
1	CODE COMMENTS	2-7-2022

SHEET DESCRIPTION	
GAS PLAN AND RISER	
PROJECT #:	20442
DATE ISSUED:	10-23-2020
DRAWING BY:	DBAS
CHECKED BY:	MW/JLH

SERENITY AMENITY
 GREENFIELD COMMUNITIES
 CLUBHOUSE
 FLOUJAY-MARINA, NC

GENERAL GAS LINE PIPING NOTES

1. THE GAS PIPING CONTRACTOR (GPC) SHALL PROVIDE ALL MATERIALS AND LABOR AS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM AS DESCRIBED BY THESE PLANS AND SPECIFICATIONS.
2. THE GPC SHALL INSTALL ALL MATERIALS AND EQUIPMENT IN ACCORDANCE WITH THE 2018 NORTH CAROLINA FUEL GAS CODE AND ANY APPLICABLE LOCAL CODES. WHERE A CONFLICT EXISTS BETWEEN THE ABOVE REQUIREMENTS, THE MORE STRINGENT SHALL BE USED. THE CONTRACTOR SHALL OBTAIN CLARIFICATION FROM THE ENGINEER IN THE EVENT ANY PART OF THESE PLANS CONFLICTS WITH THE ABOVE REQUIREMENTS.
3. THE GPC SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES, AND INSPECTIONS NECESSARY FOR THE COMPLETION OF THE WORK UNDER THIS CONTRACT.
4. DO NOT SCALE THESE DRAWINGS—REFER TO ARCHITECTURAL SHEETS FOR DIMENSIONS.
5. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS. CONTRACTOR SHALL CONTACT THE ENGINEER TO RESOLVE ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THESE PLANS.
6. THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES PRIOR TO THE START OF CONSTRUCTION.
7. INSTALL A DRIP LEG IN GAS LINE AT EACH POINT WHERE CONDENSATE COULD COLLECT. ALL DRIP LEGS SHALL BE READILY ACCESSIBLE FOR CLEANING OR EMPTYING.
8. PIPING SHALL BE SCHEDULE 40 STEEL OR WROUGHT IRON AND COMPLY WITH ANSI/ASME B36.10, ASTM A 53, OR ASTM A 106.
9. ALL PIPES AND FITTINGS SHALL BE NEW, FREE OF DEFECTS, AND RATED FOR THE APPLICATION.
10. ALL PIPING SHALL BE INSTALLED SO AS NOT TO BE SUBJECT TO PHYSICAL DAMAGE.
11. PVC VENT PIPING SHALL NOT BE INSTALLED INDOORS.
12. THE TYPE OF PIPING JOINT USED SHALL BE SUITABLE FOR THE PRESSURE-TEMPERATURE CONDITIONS AND SHALL BE SELECTED CONSIDERING JOINT TIGHTNESS AND MECHANICAL STRENGTH UNDER THE SERVICE CONDITIONS.
13. PIPE JOINTS SHALL BE THREADED, FLANGED, BRAZED, OR WELDED.
14. FLEXIBILITY SHALL BE PROVIDED BY THE USE OF BENDS, LOOPS, OFFSETS, OR COUPLINGS OF THE SLIP TYPE. PROVISIONS SHALL BE MADE TO ABSORB THERMAL CHANGES BY THE USE OF EXPANSION JOINTS OF THE BELLOW TYPE OR BY THE USE OF "BALL" OR "SWIVEL" JOINTS. DO NOT USE EXPANSION JOINTS OF THE SLIP TYPE INSIDE THE BUILDING. PIPE ALIGNMENT GUIDES SHALL BE USED WITH EXPANSION JOINTS PER THE MFG.
15. ALL GAS PIPING SHALL BE LABELED TO INDICATE THE PRESSURE.
16. PIPE HANGERS AND SUPPORTS SHALL CONFORM TO ANSI/ASSP SP-58.
17. BENDS SHALL BE MADE ONLY WITH BENDING TOOLS AND PROCEDURES INTENDED FOR THAT PURPOSE. DO NOT BEND PIPE THROUGH AN ARC OF MORE THAN 90°. ALL BENDS SHALL BE SMOOTH AND FREE OF CRACKS, BUCKLING, OR OTHER EVIDENCE OF DAMAGE.
18. INSTALL GAS SHUTOFF VALVES UPSTREAM OF EACH GAS REGULATOR. VALVES SHALL BE READILY ACCESSIBLE AND NOT SUBJECT TO PHYSICAL DAMAGE.
19. WHERE A SEDIMENT TRAP IS NOT INCORPORATED AS PART OF THE APPLIANCE, A SEDIMENT TRAP SHALL BE INSTALLED DOWNSTREAM OF THE APPLIANCE SHUTOFF VALVE AS CLOSE TO THE INLET OF THE APPLIANCE AS PRACTICAL.
20. PRIOR TO ACCEPTANCE BY THE OWNER, ALL GAS PIPING INSTALLATIONS SHALL BE INSPECTED AND PRESSURE TESTED IN ACCORDANCE WITH SECTION 406 OF THE NC FUEL GAS CODE.

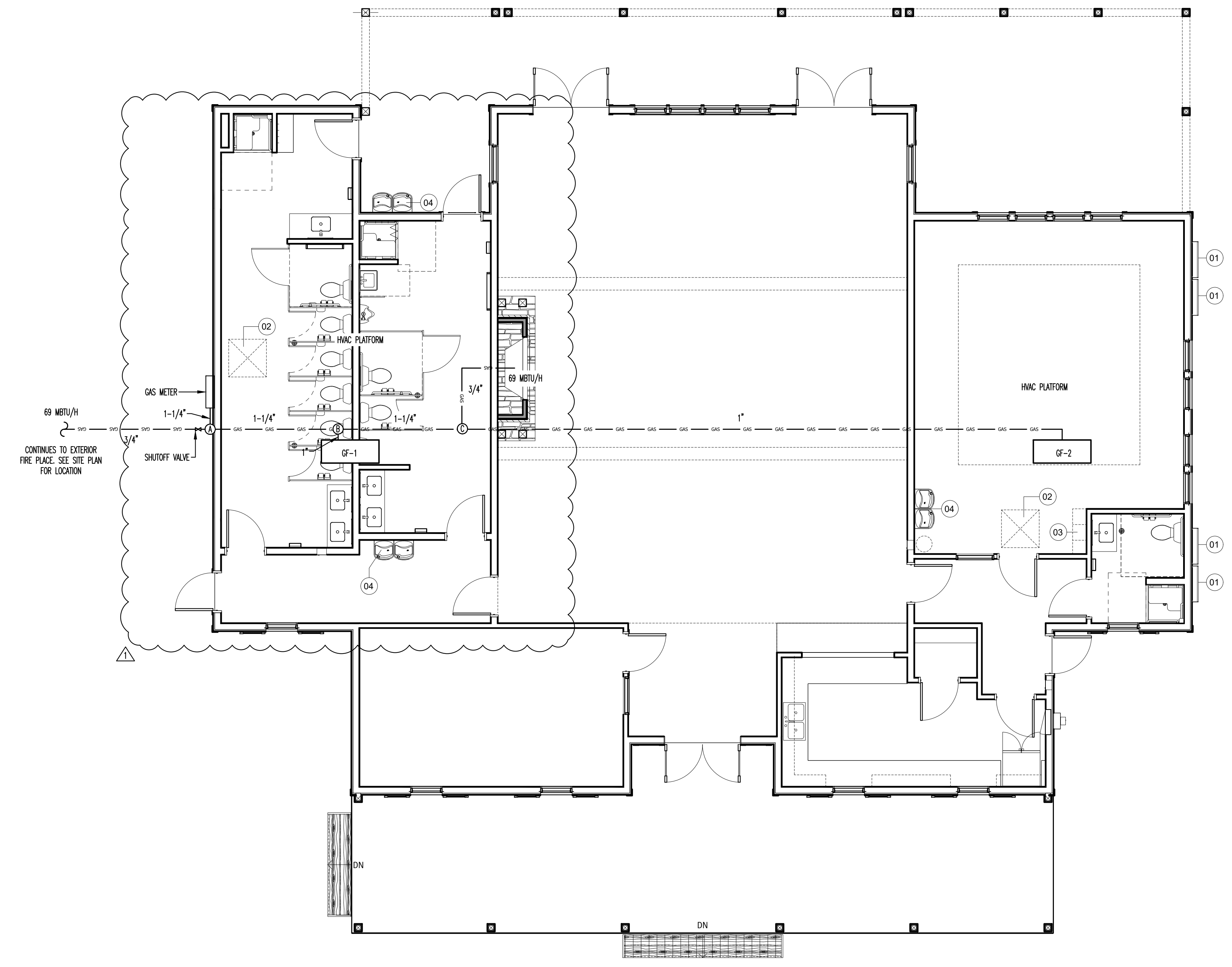
GAS LINE SIZING VERIFICATION TABLE
 PER 2018 NC FUEL GAS CODE TABLE 402.4(2)

SECTION	GAS LOAD		CAPACITY	PRESSURE
	MBTU/H	INCHES		
METER-A	398.0	1-1/4"	400.0	7"
A-B	329.0	1-1/4"	400.0	7"
A-FIRE(EXTERIOR)	69.0	3/4"	104.0	7"
B-GF-1	130	1"	195.0	7"
B-C	199.0	1-1/4"	400.0	7"
C-FIRE(INTERIOR)	69.0	3/4"	104.0	7"
C-GF-2	130.0	1"	195.0	7"

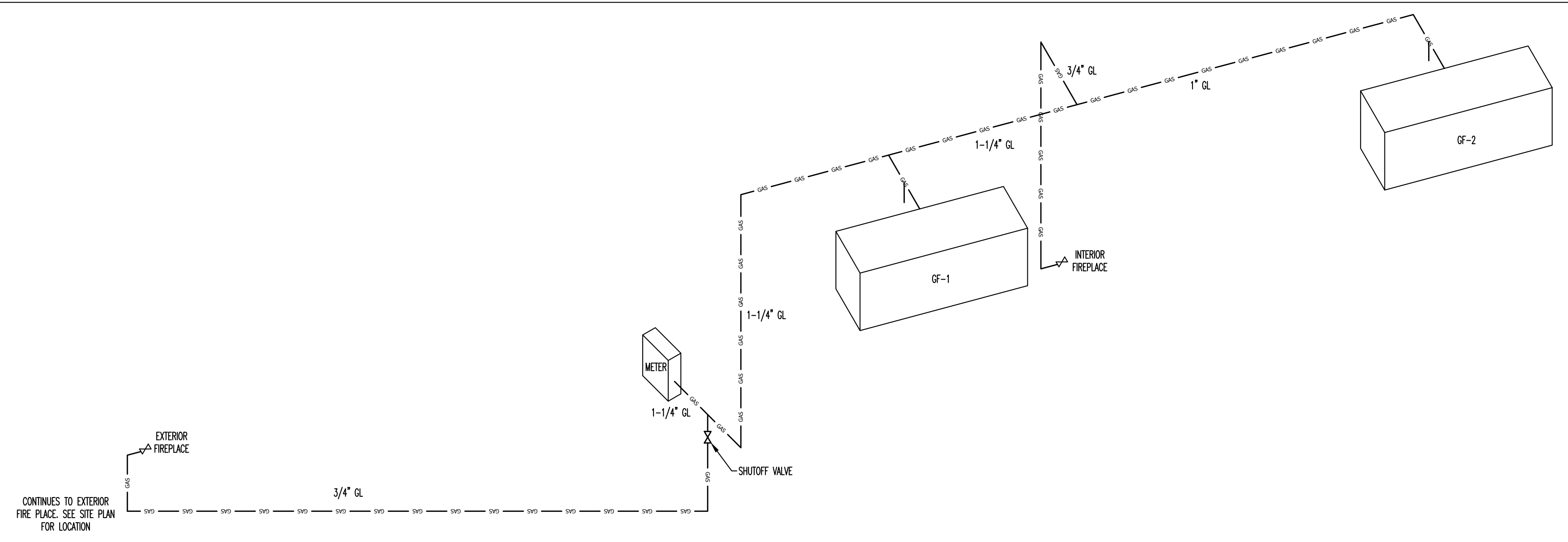
BASED ON 100' OF DEVELOPED LENGTH

PLAN NOTES

1. VERIFY EXACT BTU/H AND GAS LINE SIZE REQUIREMENTS OF FIRE PLACES PRIOR TO BEGINNING WORK. CONTACT ENGINEER IF DISCREPANCIES ARISE.



GAS PLAN: SCALE - 1/8" = 1'0" | 1



GAS RISER: NO SCALE | 2

ELECTRIC UNIT HEATER SCHEDULE							
MARK	MFG / MODEL #	AIR FLOW	HEATER	VOLT/PH	FLA	MDCP	NOTES
		CFM	KV		AMPS	AMPS	
UH-1,2	MARCEL / H3425T	245	5	240/1	20.8	25.0	1-6

- BUILT-IN THERMOSTAT SET TO 40°.
- BUILT-IN DISCONNECT SWITCH.
- PROVIDE WITH SURFACE MOUNTING SLEEVE KIT.
- UL LISTED.
- MOUNT HEATER AT 12" A.F.F.
- CORROSION RESISTANT.

EXHAUST FAN SCHEDULE								
MARK	MFG / MODEL #	TYPE	ESP (1/4 WG)	CFM	VOLT/PH	FLA	SDNES	NOTES
EF-3	GREENHECK B50-70-5	INLINE	0.35	405	120/1	9.8	23	1-6

- PROVIDE WITH PITCHED ROOF CURB & CAP FOR FLAT OR SLOPED ROOF, OR HOODED WALL WITH BACKDRAFT DAMPER CAP AS APPLICABLE.
- PROVIDE WITH SQUARE TO ROUND DUCT ADAPTER AS NECESSARY.
- OR EQUAL BY LOREN COOK OR PENNBARRY OR TWIN CITY.
- INTEGRAL DISCONNECT SWITCH.
- CORROSION RESISTANT.
- CONTINUOUS OPERATION.

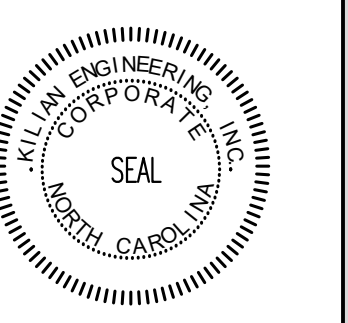
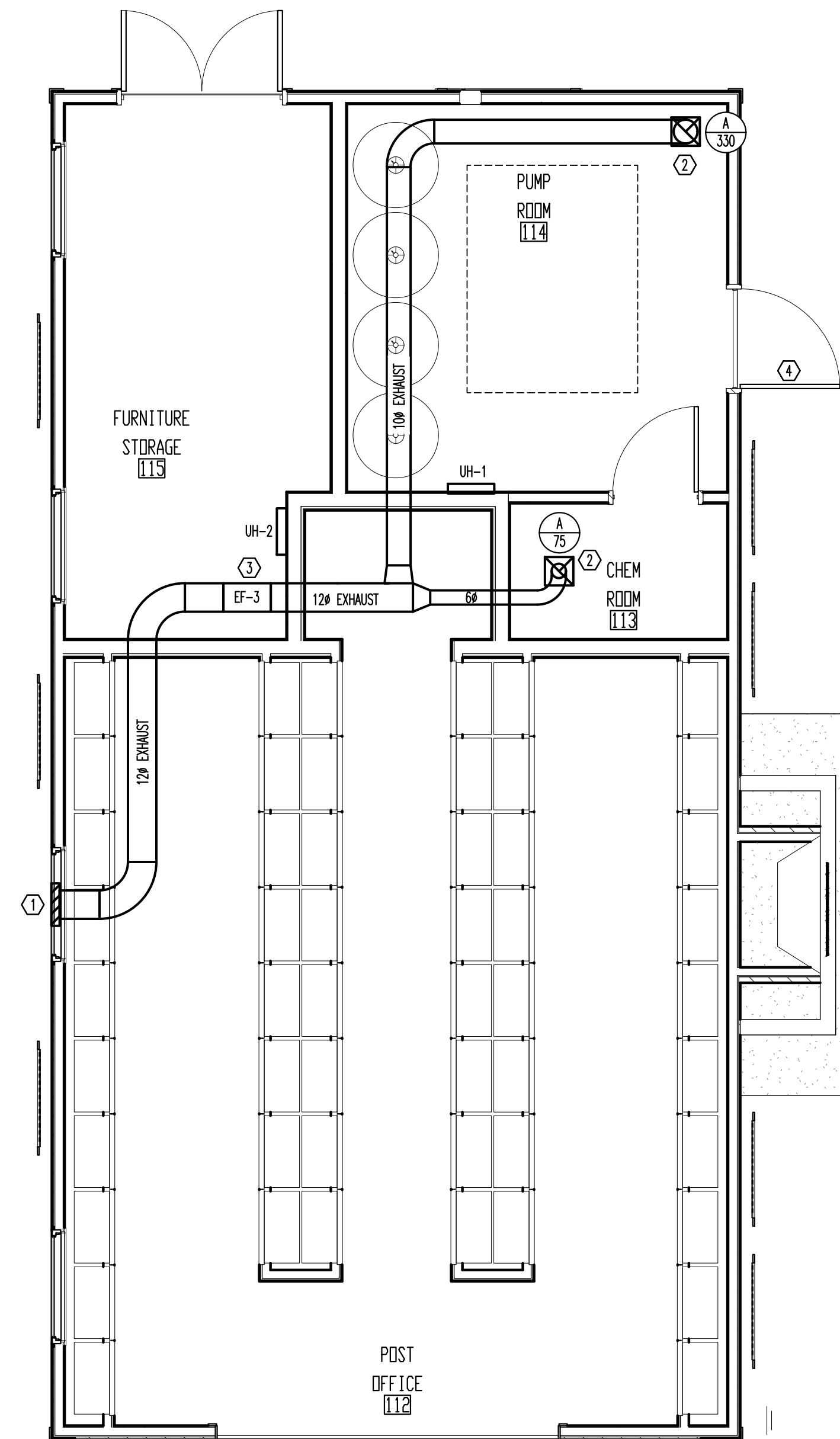
REGISTER & GRILLE SCHEDULE						
MARK	MFG	MODEL #	SIZE	MOUNTING	DESCRIPTION	NOTES
A	NAILOR	S145H	12X12	CEILING	ALUMINUM LOUVERED RETURN GRILLE	1

- OR EQUAL BY PRICE, METAL-AIRE, CARNES, TITUS OR HART AND COOLEY.

POST OFFICE MECHANICAL SCHEDULE 1

VENTILATION CALCS	
CHEMICAL STORAGE:	
37 SQFT X 10' HIGH CEILING = 370 CU. FT @ 10 ACH = 62 CFM	
*75 CFM PROVIDED	
PUMP ROOM:	
184 SQFT X 10' HIGH CEILING = 1840 CU. FT @ 10 ACH = 307 CFM	
*330 CFM PROVIDED	

HEX PLAN NOTES	
1.	EXHAUST DUCT TO BUILDING GABLE VENT. PROVIDE WITH INSECT SCREEN. SELECTION AND EXACT LOCATION BY ARCHITECT. COORDINATE WITH G.C.
2.	LOUVERED EXHAUST GRILLE INSTALLED IN GYPSUM CEILING. TURN LOUVERED BLADES TOWARDS WALL.
3.	SUSPENDED INLINE EXHAUST FAN TO BE INSTALLED IN ATTIC. ENSURE ALL MANUFACTURER CLEARANCES ARE MAINTAINED.
4.	PUMP EQUIPMENT DOOR WITH WEATHER PROOF LOUVER AND INSECT SCREEN BY G.C. LOUVER TO HAVE MINIMUM FREE AREA OF 240 SQIN.



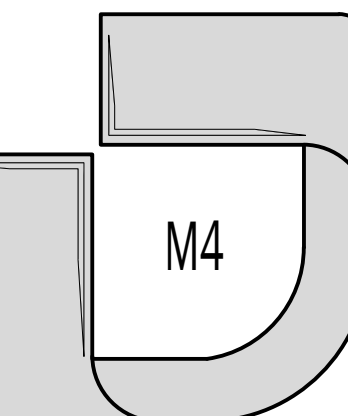
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 PO Box 3301, Henderson, NC 27536 | www.kilianengineering.com
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NO.	REVISION	DATE

SHEET DESCRIPTION
POST OFFICE MECHANICAL PLAN

PROJECT #: 20442
 DATE ISSUED: 2-7-22
 DRAWING BY: DBAS
 CHECKED BY: MWK/JLH

SERENITY AMENITY
 GREENFIELD COMMUNITIES
 POST OFFICE
 FLOUQUAY-VARINA, NC



GENERAL ELECTRICAL NOTES:

ADMINISTRATIVE:

- THE FOLLOWING ABBREVIATIONS SHALL APPLY TO NOTES AND PLANS:
PC - PLUMBING CONTRACTOR, EC - ELECTRICAL CONTRACTOR, MC - MECHANICAL CONTRACTOR, GC - GENERAL CONTRACTOR, FASC - FIRE ALARM SYSTEM CONTRACTOR.
- "PROVIDE" MEANS TO FURNISH AND INSTALL. THE ELECTRICAL CONTRACTOR SHALL ALSO INSTALL MATERIALS AND EQUIPMENT FURNISHED BY OTHERS AND THE GENERAL CONTRACTOR AS REQUIRED.
- EC SHALL PROVIDE LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY AND REASONABLY INCIDENTAL TO INSURE A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS. MAJOR ITEMS, ACCESSORIES, AND DEVICES REASONABLY INFERRABLE AS NECESSARY FOR THE COMPLETION AND PROPER OPERATION OF ANY ELECTRICAL SYSTEM SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
- WORKMANSHIP SHALL BE IN ACCORDANCE WITH NECA 1 "STANDARD PRACTICE FOR GOOD WORKMANSHIP IN ELECTRICAL CONTRACTING."
- ALL MATERIALS AND EQUIPMENT SHALL BE DELIVERED TO THE SITE AND UNLOADED BY THE ELECTRICAL CONTRACTOR AT AN APPROVED LOCATION. THE ELECTRICAL CONTRACTOR SHALL PROTECT ALL MATERIALS AND EQUIPMENT FROM BREAKAGE, THEFT, AND THE ELEMENTS. ALL MATERIALS AND EQUIPMENT SHALL REMAIN THE PROPERTY OF THE ELECTRICAL CONTRACTOR UNTIL THE PROJECT HAS BEEN COMPLETED AND TURNED OVER TO THE OWNER.
- THE ELECTRICAL CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES, AND INSPECTIONS NECESSARY FOR THE COMPLETION OF THE WORK UNDER THIS CONTRACT.
- DO NOT SCALE THESE DRAWINGS-REFER TO ARCHITECTURAL SHEETS FOR DIMENSIONS.
- TRADE NAMES AND MANUFACTURERS ARE SPECIFIED TO ESTABLISH A QUALITY STANDARD. SUBSTITUTES SHALL BE PERMITTED IF APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. ALL LISTED MODEL NUMBERS SHALL BE VERIFIED WITH THE MANUFACTURER FOR PROPER APPLICATION OF EQUIPMENT.
- THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS. THE ELECTRICAL CONTRACTOR SHALL CONTACT THE ENGINEER TO RESOLVE ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THESE PLANS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER TRADES PRIOR TO THE START OF CONSTRUCTION.
- GROUNDING AND BONDING SHALL BE PER NEC ARTICLE 250. THE RACEWAY SYSTEM SHALL NOT BE RELIED UPON FOR GROUNDING CONTINUITY. A GREEN EQUIPMENT GROUNDING CONDUCTOR, SIZED PER NEC TABLE 250-122, SHALL BE RUN IN ALL POWER RACEWAYS FOR NON-ISOLATED GROUND CIRCUITS PROVIDE ONE EQUIPMENT GROUNDING CONDUCTOR PER CONDUIT RUN FOR ISOLATED GROUND CIRCUITS, PROVIDE ONE NEUTRAL AND ONE ISOLATED GROUND WIRE FOR EACH CIRCUIT. IN ADDITION, PROVIDE ONE EQUIPMENT GROUNDING CONDUCTOR PER CONDUIT RUN MAIN BONDING JUNCTIONS AND SYSTEM BONDING JUNCTIONS SHALL BE INSTALLED IN ACCORDANCE WITH 250.308 OF THE NEC. FOR BUILDINGS OR STRUCTURES SUPPLIED BY FEEDERS OR BRANCH CIRCUITS, GROUNDING AND BONDING SHALL BE IN ACCORDANCE WITH 250.32. SEPARATELY DERIVED AC SYSTEMS SHALL BE GROUNDING IN ACCORDANCE WITH 250.30. RESISTANCE TO GROUND SHALL NOT EXCEED 25 OHMS; ADDITIONAL GROUNDING ELECTRODES SHALL BE INSTALLED PER 250.56 AS NECESSARY.
- THE ELECTRICAL CONTRACTOR SHALL ALSO COORDINATE WITH THE GENERAL CONTRACTOR REGARDING THE BONDING OF THE FOOTING REBAR, SO THAT IT WILL BE IN PLACE AND READY AT TIME OF FOOTING INSPECTION.
- ALL MATERIALS AND EQUIPMENT SHALL COMPLY WITH THE UNDERWRITERS LABORATORIES, INC. STANDARDS OR HAVE UL APPROVAL, OR BEAR UL RE-EXAMINATION LISTING WHERE SUCH APPROVAL HAS BEEN ESTABLISHED FOR THE TYPE OF DEVICE IN QUESTION.
- CONDUCTORS, FUSES, CIRCUIT BREAKERS, AND DISCONNECT SWITCHES SHOWN ON THESE PLANS HAVE BEEN SIZED FOR THE SPECIFIED EQUIPMENT. BEFORE ORDERING ELECTRICAL EQUIPMENT, THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER CONTRACTORS ON THE SITE AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES SHOULD CONDUCTOR, CIRCUIT BREAKER, OR FUSE SIZES REQUIRE CHANGE.
- THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR TO ENSURE THE FOLLOWING MATERIALS ARE RECYCLED DURING THE CONSTRUCTION PHASE OF THE PROJECT: LIGHT FIXTURES, INCLUDING PROPER DISPOSAL OF BALLASTS, FLUORESCENT LIGHT BULBS, AND TRANSFORMERS, WIRING AND ELECTRICAL EQUIPMENT, AND INSULATION. WASTE MATERIALS CONTAINING LEAD, ASBESTOS, FIBER (FLUORESCENT LAMP BALLASTS), OR OTHER HARMFUL SUBSTANCES SHALL BE HANDLED AND DISPOSED OF IN ACCORDANCE WITH FEDERAL AND STATE LAWS AND REQUIREMENTS CONCERNING HAZARDOUS WASTE.
- ALL WORK SHALL CONFORM TO 2020 NATIONAL ELECTRIC CODE, 2018 STATE BUILDING CODE, AND ALL APPLICABLE LOCAL CODES.

MATERIALS:

- THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY DISCONNECTS, SWITCHES, RECEPTACLES, TERMINALS, ETC. UNDER THE ELECTRICAL BID AND SHALL INCLUDE ALL NECESSARY CIRCUITS AND CONNECTIONS TO THE EQUIPMENT PROVIDED BY ALL SUPPLIERS, UNLESS NOTED OTHERWISE BY OTHER DISCIPLINES.
- ELECTRICAL CONTRACTOR SHALL PROVIDE ALL SERVICE ENTRANCE EQUIPMENT, SUB PANELS, AND OTHER ELECTRICAL DISTRIBUTION EQUIPMENT AS NECESSARY FOR A COMPLETE INSTALLATION. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH UTILITY REGARDING SERVICE AND METERING DETAILS. PRIOR TO ORDERING EQUIPMENT, THE ELECTRICAL CONTRACTOR SHALL OBTAIN THE AVAILABLE FAULT CURRENT OR TRANSFORMER SIZE AND IMPEDANCE FROM THE UTILITY AND CONTACT THE ENGINEER IF THE VALUE EXCEEDS THE EQUIPMENT SPECIFIED. PANEL BOARDS AND SWITCH BOARDS SHALL BE SQUARE D, CUTLER-HAMMER, SIEMENS, OR GE. BUSES SHALL BE COPPER UNLESS OTHERWISE APPROVED BY THE ENGINEER. RECESSED PANEL BOARDS SHALL BE INSTALLED FLUSH WITH THE WALL FINISH. METER BASES SHALL COMPLY WITH THE UTILITY'S SPECIFICATIONS AND SHALL BE MOUNTED AT A HEIGHT APPROVED BY THE UTILITY. ALL EQUIPMENT IDENTIFIED FOR SERVICE ENTRANCE USE SHALL BE SO LABELED AND UL LISTED FOR SUCH USE. ELECTRICAL CONTRACTOR SHALL INSTALL ALL ELECTRICAL EQUIPMENT WITH CLEARANCES PER NEC 110.26. ELECTRODIAL SHALL PERMANENTLY LABEL EQUIPMENT PER NEC 110.24.
- ENCLOSED SAFETY SWITCHES SHALL BE HEAVY DUTY TYPE BY SQUARE D, EATON, OR GE. ENCLOSED SWITCHES SHALL HAVE A HANDLE LOCKABLE IN THE OFF POSITION AND SHALL HAVE A HANDLE INTERLOCKED TO PREVENT OPENING THE FRONT COVER WHILE IN THE ON POSITION. ENCLOSED SWITCHES OF THE FUSIBLE TYPE SHALL BE FUSED IN ACCORDANCE WITH NAMEPLATE DATA WITH DUAL ELEMENT TYPE FUSES BY BUSSMAN, LITTELFUSE, OR MERSEN.
- OCCUPANCY SENSORS SHALL BE BY WATTSSTOPPER, LUTRON, LEVITON, SENSOR SWITCH, HUBBELL, OR APPROVED EQUAL.
- CIRCUIT BREAKERS SHALL BE MOLDED-CASE, THERMAL MAGNETIC TYPE WITH QUICK-MAKE, QUICK-BREAK MECHANISM, COMMON TRIP ON MULTI-POLE BREAKERS, AND UL LISTED FOR BOTH COPPER AND ALUMINUM CONDUCTORS. CIRCUIT BREAKERS IN PANELS SHALL BE SERIES RATED WITH THE MAIN BREAKER. FULLY RATED FOR THE SYSTEM, OR SERIES RATED WITH THE BREAKER FEEDING THE PANEL FROM THE FACTORY.
- ALL WIRE, CONNECTORS, TERMINALS, AND LUSS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. WHERE CONDUCTORS ARE RUN IN PARALLEL, LUSS SHALL BE LISTED FOR PARALLEL CONDUCTORS. PUSH WIRE CONNECTORS ARE NOT ALLOWED FOR BUILDING WIRE. PUSH CONNECTORS ARE ONLY ALLOWED, WHEN APPROVED, AS PART OF MANUFACTURED LISTED PRODUCTS. ALL WIRE SHALL BE INSTALLED IN CONDUIT UNLESS SPECIFICALLY NOTED OTHERWISE.
- THE INSULATION TYPE FOR INTERIOR WIRING SHALL BE DUAL RATED THIN/THIN OR XHHW; ALL WIRING INSTALLED BELOW GRADE OR IN MOIST OR WET LOCATIONS SHALL HAVE TYPE THIN OR XHHW INSULATION. INSULATION VOLTAGE RATING SHALL BE 600 VOLTS AND A MINIMUM TEMPERATURE RATING OF 75°C. CONDUCTORS SHALL BE SOLID OR STRANDED COPPER FOR #10 AWG AND #12 AWG, AND STRANDED COPPER FOR #8 AWG AND LARGER SIZES. ALL WIRING AND CABLE SHALL BE UL LISTED. ALL TERMINATIONS AND DEVICES SHALL BE RATED FOR USE WITH 75°C CONDUCTORS. FINAL CONNECTIONS TO ALL MOTORS AND EQUIPMENT SUBJECT TO VIBRATION OR MOVEMENT SHALL BE MADE WITH STRANDED

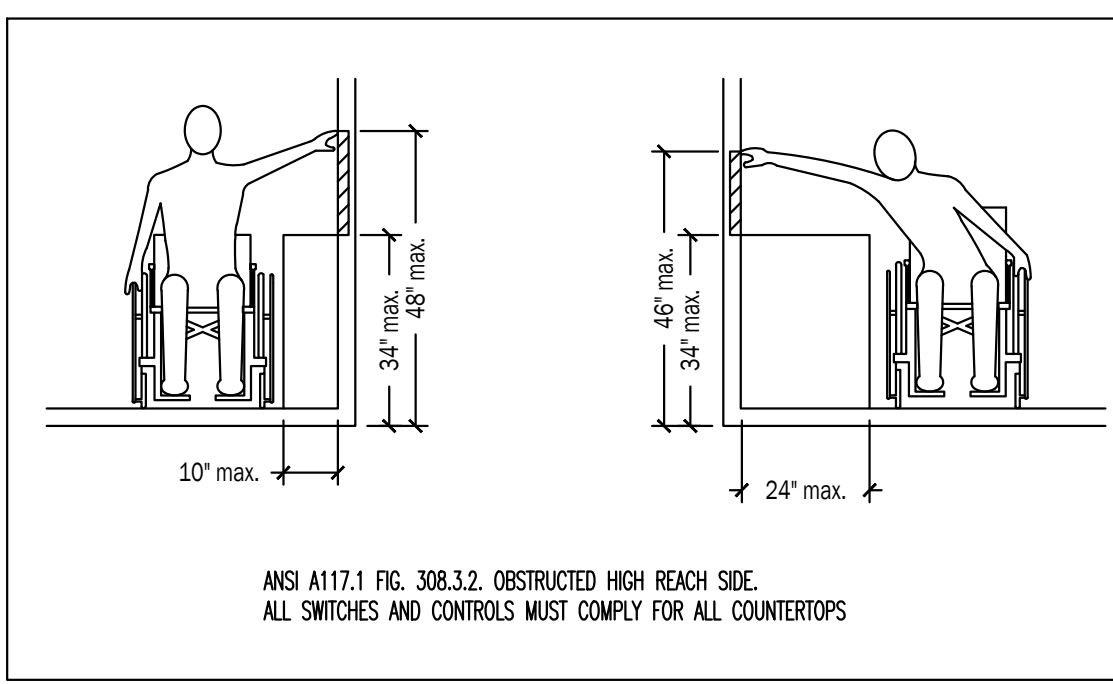
- COPPER CONDUCTORS, CONDUCTORS SHALL BE BY GERRD WIRE, INC., INDUSTRIAL WIRE & CABLE, INC. OR SOUTHWIRE COMPANY.
- JOINTS IN SOLID CONDUCTORS SHALL BE SPLICED USING IDEAL "WIRE NUTS", 3M "SCOTCH LOCK", OR TAB "PIGGY" CONNECTORS IN JUNCTION BOXES, OUTLET BOXES, AND LIGHTING FIXTURES. JOINTS IN STRANDED CONDUCTORS SHALL BE SPLICED BY APPROVED MECHANICAL CONNECTORS AND GUM RUBBER TAPE OR FRICTION TAPE. SOLDERLESS MECHANICAL CONNECTORS FOR SPLICES AND TAPS, PROVIDED WITH UL APPROVED INSULATING COVERS, MAY BE USED FOR MECHANICAL CONNECTORS PLUS TAPE. IN ALL CASES, CONDUITS SHALL BE CONTINUOUS FROM OUTLET TO OUTLET AND NO SPLICING SHALL BE MADE EXCEPT WITHIN OUTLET OR JUNCTION BOXES, TROUGHS, OR GUTTERS. WHERE CONCENTRIC, ECCENTRIC, OR OVERSIZED KNOCKOUTS ARE ENCOUNTERED, A GROUNDING TYPE INSULATED BUSHING SHALL BE PROVIDED.
- ALL LUMINAIRES SHALL BE LISTED. LUMINAIRES IN WET OR DAMP LOCATIONS SHALL BE MARKED AS SUITABLE FOR THE RESPECTIVE USE. EMERGENCY LIGHTING SHALL BE INSTALLED AS SHOWN. FINAL LOCATIONS OF ALL EXIT AND EMERGENCY LIGHTS SHALL BE VERIFIED WITH THE BUILDING INSPECTOR PRIOR TO INSTALLATION. ALL FLUORESCENT FIXTURES SHALL HAVE ELECTRONIC BALLASTS MEETING ANSI C82.11 FOR ELECTRONIC BALLAST PERFORMANCE. ALL BALLASTS SHALL BE UL LISTED AND MEET FEDERAL AND STATE EFFICIENCY REQUIREMENTS.
- ALL CONDUIT, FITTINGS, COUPLINGS, AND SUPPORTS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. CONDUIT FITTINGS AND COUPLINGS SHALL BE BY APPLETON, RACO, OR 0-2/GEENEY. COUPLINGS SHALL BE THREADED, SET-SCREW, OR COMPRESSION TYPE. INDENTER OR CRIMP TYPE ARE NOT PERMITTED. CONDUIT FITTINGS AT ALL ELECTRICAL BOXES INCLUDING PULL, JUNCTION, AND OUTLET BOXES, SHALL HAVE INSULATED THROATS TO PREVENT INSULATION SCORING. DIE CAST FITTINGS ARE NOT PERMITTED.
- EMT SHALL BE MANUFACTURED IN ACCORDANCE WITH AMERICAN NATIONAL STANDARDS INSTITUTE-AMERICAN NATIONAL STANDARD FOR STEEL ELECTRICAL METALLIC TUBING (EMT), AND C80.3 AND UL 797. RIGID METAL CONDUIT SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI-AMERICAN NATIONAL STANDARD FOR ELECTRICAL RIGID STEEL CONDUIT (RSCS), ANSI C80.1 AND UL 6. INTERMEDIATE METAL CONDUIT SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI-AMERICAN NATIONAL STANDARD FOR INTERMEDIATE METAL CONDUIT ANSI C80.6 AND UL 1242.
- METAL CONDUIT SHALL BE BY ALLED TUBING & CONDUIT, BECK MANUFACTURING, INC., OR WHEATLAND TUBE COMPANY. FLEXIBLE METAL CONDUIT, LIQUID-TIGHT FLEXIBLE METAL CONDUIT, AND NONMETALLIC CONDUIT SHALL BE BY AFC CABLE SYSTEMS, INC., ELECTRI-FLEX COMPANY, OR INTERNATIONAL METAL HOSE.

METHODS:

- EC SHALL REVIEW THE MECHANICAL PLANS TO ESTABLISH POINTS OF CONNECTION AND THE EXTENT OF THE ELECTRICAL WORK TO BE PROVIDED IN THE CONTRACT.
- ALL CIRCUIT BREAKERS FEEDING HVAC EQUIPMENT SHALL BE HACR BREAKERS. ALL BRANCH CIRCUIT CONDUCTORS SHALL BE MINIMUM #12 AWG IN 3/4 IN CONDUIT. EACH MULTI-WIRE BRANCH CIRCUIT SHALL BE PROVIDED WITH A MEANS TO SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS AT THE SOURCE PER NEC 210.4(B). GROUP ALL CONDUCTORS OF EACH MULTI-WIRE BRANCH CIRCUIT PER 210.4(D) WITH WIRE TIES OR SIMILAR MEANS. DO NOT EXCEED THREE WIREMANS PER CONDUIT. DO NOT INSTALL ISOLATED GROUND AND NON-ISOLATED GROUND CIRCUITS IN THE SAME CONDUIT. INSTALL CONDUCTORS OF DIFFERENT VOLTAGES IN SEPARATE CONDUITS.
- COLOR CODE CONDUCTORS PER NEC. FEEDERS SHALL BE IDENTIFIED IN ACCORDANCE WITH NEC 215.12. USE BLACK AND RED FOR PHASES A AND B RESPECTIVELY OR 120/240 VOLT SINGLE-PHASE SYSTEMS AND WHITE FOR THE NEUTRAL. THE IDENTIFICATION SHALL BE MADE AT EACH POINT WHERE A CONNECTION IS MADE. COLORS SHALL BE FACTORY APPLIED FOR CONDUCTORS #6 AWG AND SMALLER. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL BE GREEN IN COLOR AND MINIMUM #12 AWG. THE EC SHALL PROVIDE PLENUM RATED CABLE FOR ANY ELECTRICAL, TELEPHONE, COMMUNICATION, OR OTHER CABLE THAT ENTERS CEILING RETURN PLenums.
- LIGHT FIXTURES SHALL BE SUPPORTED INDEPENDENTLY OF THE SUSPENDED CEILING. COORDINATE LIGHTING LAYOUT WITH CEILING GRID, MECHANICAL EQUIPMENT, DUCTWORK AND SPRINKLER HEADS AS NECESSARY. SEE REFLECTED CEILING PLAN FOR DETAILS. FLUORESCENT FIXTURES UTILIZING DOUBLE-ENDED LAMPS MUST HAVE A DISCONNECTING MEANS COMPLYING WITH NEC 410.130(C).
- GROUND LIGHT SWITCHES AT 48 IN. AFF. MULTIPLE SWITCHES AT SAME LOCATION SHALL BE UNDER ONE WALL PLATE. VERIFY WALL PLATE COLOR AND MATERIAL WITH THE ARCHITECT/OWNER. INSTALL SWITCHES WITH OFF POSITION DOWN. ALL SWITCHES SHALL BE HEAVY DUTY, NYLON PLASTIC WITH TOGGLE HANDLE, RATED 120-277V AC, AND COMPLYING WITH NEMA WD 6 AND WD 1. SWITCHES SHALL BE BY COOPER WIRING DEVICES, LEVITON MANUFACTURING, PASS & SEYMOUR, OR HUBBELL. PROVIDE BOX DEVICE PARTITION/OVERS FOR MULTI-GANG BOXES FOR COMPLIANCE WITH NEC 404.8(B).
- ELECTRICAL CONTRACTOR SHALL PROVIDE FIRE-STOPPING AT ALL ELECTRICAL PENETRATIONS OF RATED FLOORS AND WALLS TO PRESERVE OR RESTORE THE FIRE-RESISTANCE RATING. SEAL PENETRATIONS USING A UL LISTED SYSTEM FOUND IN THE UL DIRECTORY SPECIFIC TO THE UL LISTING OF THE ASSEMBLY BEING PENETRATED. SEE ARCHITECTURAL PLANS FOR UL RATED ASSEMBLIES SPECIFIC TO THE PROJECT.
- ELECTRICAL CONTRACTOR SHALL PROVIDE GFCI RECEPTACLES IN KITCHENS, RESTROOMS, OUTDOORS, AND IN SHOP AREAS AS REQUIRED BY NEC. REFRIGERATORS AND WATER COOLERS MUST HAVE A DEDICATED GFCI BREAKER. EACH OUTDOOR HVAC UNIT MUST HAVE A GFCI RECEPTACLE WITH THE AVAILABLE FAULT CURRENT OR TRANSFORMER SIZE AND IMPEDANCE FROM THE UTILITY AND CONTACT THE ENGINEER IF THE VALUE EXCEEDS THE EQUIPMENT SPECIFIED. PANEL BOARDS AND SWITCH BOARDS SHALL BE SQUARE D, CUTLER-HAMMER, SIEMENS, OR GE. BUSES SHALL BE COPPER UNLESS OTHERWISE APPROVED BY THE ENGINEER. RECESSED PANEL BOARDS SHALL BE INSTALLED FLUSH WITH THE WALL FINISH. METER BASES SHALL COMPLY WITH THE UTILITY'S SPECIFICATIONS AND SHALL BE MOUNTED AT A HEIGHT APPROVED BY THE UTILITY. ALL EQUIPMENT IDENTIFIED FOR SERVICE ENTRANCE USE SHALL BE SO LABELED AND UL LISTED FOR SUCH USE. ELECTRICAL CONTRACTOR SHALL INSTALL ALL ELECTRICAL EQUIPMENT WITH CLEARANCES PER NEC 110.26. ELECTRODIAL SHALL PERMANENTLY LABEL EQUIPMENT PER NEC 110.24.
- ENCLOSED SAFETY SWITCHES SHALL BE HEAVY DUTY TYPE BY SQUARE D, EATON, OR GE. ENCLOSED SWITCHES SHALL HAVE A HANDLE LOCKABLE IN THE OFF POSITION AND SHALL HAVE A HANDLE INTERLOCKED TO PREVENT OPENING THE FRONT COVER WHILE IN THE ON POSITION. ENCLOSED SWITCHES OF THE FUSIBLE TYPE SHALL BE FUSED IN ACCORDANCE WITH NAMEPLATE DATA WITH DUAL ELEMENT TYPE FUSES BY BUSSMAN, LITTELFUSE, OR MERSEN.
- OCCUPANCY SENSORS SHALL BE BY WATTSSTOPPER, LUTRON, LEVITON, SENSOR SWITCH, HUBBELL, OR APPROVED EQUAL.
- CIRCUIT BREAKERS SHALL BE MOLDED-CASE, THERMAL MAGNETIC TYPE WITH QUICK-MAKE, QUICK-BREAK MECHANISM, COMMON TRIP ON MULTI-POLE BREAKERS, AND UL LISTED FOR BOTH COPPER AND ALUMINUM CONDUCTORS. CIRCUIT BREAKERS IN PANELS SHALL BE SERIES RATED WITH THE MAIN BREAKER. FULLY RATED FOR THE SYSTEM, OR SERIES RATED WITH THE BREAKER FEEDING THE PANEL FROM THE FACTORY.
- ALL WIRE, CONNECTORS, TERMINALS, AND LUSS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. WHERE CONDUCTORS ARE RUN IN PARALLEL, LUSS SHALL BE LISTED FOR PARALLEL CONDUCTORS. PUSH WIRE CONNECTORS ARE NOT ALLOWED FOR BUILDING WIRE. PUSH CONNECTORS ARE ONLY ALLOWED, WHEN APPROVED, AS PART OF MANUFACTURED LISTED PRODUCTS. ALL WIRE SHALL BE INSTALLED IN CONDUIT UNLESS SPECIFICALLY NOTED OTHERWISE.
- THE INSULATION TYPE FOR INTERIOR WIRING SHALL BE DUAL RATED THIN/THIN OR XHHW; ALL WIRING INSTALLED BELOW GRADE OR IN MOIST OR WET LOCATIONS SHALL HAVE TYPE THIN OR XHHW INSULATION. INSULATION VOLTAGE RATING SHALL BE 600 VOLTS AND A MINIMUM TEMPERATURE RATING OF 75°C. CONDUCTORS SHALL BE SOLID OR STRANDED COPPER FOR #10 AWG AND #12 AWG, AND STRANDED COPPER FOR #8 AWG AND LARGER SIZES. ALL WIRING AND CABLE SHALL BE UL LISTED. ALL TERMINATIONS AND DEVICES SHALL BE RATED FOR USE WITH 75°C CONDUCTORS. FINAL CONNECTIONS TO ALL MOTORS AND EQUIPMENT SUBJECT TO VIBRATION OR MOVEMENT SHALL BE MADE WITH STRANDED

- METAL-CORRUGATED, SHEET DECKING-TYPE ROOF. SEE NEC 300.4(E). THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL OUTLET, JUNCTION, PULL BOXES, FITTINGS, AND SUPPORTS. ALL OUTLET AND JUNCTION BOXES SHALL BE GALVANIZED STEEL TYPE BY APPLETON, STEEL CITY, OR RACO. EXTERIOR BOXES SHALL BE TYPE FS. VAPORITE BOXES SHALL BE TYPE GS. WHERE SURFACE MOUNTED BOXES ARE USED, THOSE BOXES AND THEIR FACEPLATES SHALL HAVE ROUNDED CORNERS. BOXES INSTALLED IN FLOORS SHALL BE RATED FOR THE APPLICATION. MOUNT JUNCTION AND OUTLET BOXES FLUSH WITH FINISH SURFACES UNLESS OTHERWISE NOTED. WHERE MOUNTING HEIGHTS ARE GIVEN, THEY SHALL BE MEASURED FROM THE FINISHED FLOOR TO THE CENTER OF THE BOX. ALL BOXES SHALL BE SIZED PER NEC ARTICLE 314. ALL OUTLET AND JUNCTION BOXES SHALL HAVE A COVER PLATE, PROVIDED BY THE ELECTRICAL CONTRACTOR. OUTLET BOXES IN RATED WALLS SHALL BE INSTALLED IN ACCORDANCE WITH NORTH CAROLINA BUILDING CODE 712.3.2 (MAXIMUM BOX SIZE IS 16 SQUARE INCHES AND MAXIMUM OF SIX (6) BOXES PER 100 SQUARE FEET). INSTALL OUTLET BOXES IN RATED WALLS SUCH THAT OPENINGS OCCUR IN ONE SIDE ONLY WITHIN ANY GIVEN STUD SPACE. ALL CLEARANCES BETWEEN THE OUTLET BOX AND THE GYPSUM BOARD SHALL BE FILLED WITH JOINT COMPOUND OR OTHER APPROVED FIRE STOP MATERIAL. FLUSH MOUNTED JUNCTION BOXES IN ADJACENT ROOMS SHALL NOT BE MOUNTED BACK-TO-BACK. SURFACE MOUNTED FIXTURES SHALL BE FED THROUGH FLUSH MOUNTED 4X4 OCTAGONAL OR SQUARE BOXES.
- ALL CONDUIT, BOXES, AND ELECTRICAL EQUIPMENT SHALL BE FIRMLY AND SECURELY FASTENED TO OR SUPPORTED FROM THE BUILDING STRUCTURAL MEMBERS OR EMBEDDED IN CONCRETE OR MASONRY. ELECTRICAL SUPPORTS SHALL NOT BE ATTACHED TO DUCTWORK, PIPING, OR THEIR SUPPORTS. HANGERS SHALL BE CATALOG ITEMS COMPATIBLE WITH AND SUITABLE FOR THE INTENDED USE. FOR METAL ROOF DECK INSTALLATIONS, 1 IN EMT CONDUIT MAXIMUM AND 4 IN JUNCTION BOXES MAXIMUM MAY BE SUPPORTED BY DECKING. THE SUSPENDED CEILING SYSTEM SHALL NOT BE USED FOR THE SUPPORT OF ELECTRICAL RACEWAY SYSTEMS OR SUPPORT OF COMMUNICATIONS OR DATA SYSTEMS WIRING. CONTRACTOR SHALL COMPLY WITH 1613 OF THE NORTH CAROLINA GENERAL CONSTRUCTION BUILDING CODE.
- ABANDONED CONDUIT AND BOXES SHALL HAVE ALL ELECTRICAL WIRING REMOVED COMPLETELY AND NOT JUST "MADE SAFE." CONDUIT AND BOXES SHALL BE REMOVED WHERE PRACTICAL WITHOUT CREATING ADDITIONAL DEMOLITION/RESTITUTION WORK FOR OTHER TRADES.
- WHERE CONDUCTORS ARE RUN IN PARALLEL, THE EC SHALL COMPLY WITH NEC 310.4.
- ISOLATED-GROUND TYPE RECEPTACLES SHALL BE INSTALLED IN ACCORDANCE WITH 250.146(D). ISOLATED GROUND RECEPTACLES SHALL BE ORANGE IN COLOR.
- ALL RECEPTACLES LOCATED WITHIN DWELLING UNITS SHALL HAVE AFCI PROTECTION IN ACCORDANCE WITH SECTION 210.12 OF THE NEC. RECEPTACLES IN DWELLING UNITS SHALL BE LISTED TAMPER-RESISTANT PER NEC 406.12.
- IN ASSEMBLY AREAS EXCEEDING 100 PERSONS OCCUPANCY, WIRING METHODS SHALL COMPLY WITH NEC 518.
- PROVIDE AN UNDERGROUND PVC CONDUIT SYSTEM FOR TELEPHONE SERVICE WITH PULL WIRES. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH TELEPHONE UTILITY REGARDING ADDITIONAL FACILITIES REQUIRED FOR THE SERVICE INSTALLATION.
- INSTALL ONE (1) 3/4 IN FIRE RETARDANT TREATED PLYWOOD BACKBOARD WHERE INDICATED ON THE DRAWINGS FOR THE USE BY THE TELEPHONE SYSTEM. PROVIDE A 120 VOLT RECEPTACLE ADJACENT TO THE TELEPHONE BOARD. GROUND ALL TELEPHONE AND COMMUNICATIONS CIRCUITS PER NEC 800.
- ALL TELEPHONE AND COMMUNICATIONS OUTLETS AND RACEWAYS ARE ROUGH-IN ONLY. EACH TELEPHONE AND COMMUNICATIONS OUTLET SHALL BE A 4 IN SQUARE BY 2-1/8 IN DEEP BOX WITH 3/4 IN KNOCK-OUTS AND A 3/4 IN CONDUIT STUBBED FROM THE OUTLET BOX TO ABOVE THE CEILING. PROVIDE A NON-METALLIC INSULATING BUSHING ON ALL CONDUITS STUBBED ABOVE THE CEILING. PROVIDE A BLANK COVER PLATE ON ALL OUTLET BOXES.
- ELECTRICAL CONTRACTOR SHALL INSTALL DISCONNECT SWITCHES IN SIGHT OF ALL HANDHELD EQUIPMENT AND APPLIANCES OR PROVIDE BREAKERS CAPABLE OF BEING LOCKED IN THE OPEN POSITION PER NEC 422.31. FOR MOTOR DRIVEN APPLIANCES, PROVIDE A DISCONNECTING MEANS PER NEC 422.31 AND 430 PART IX. WHERE AN INDIVIDUAL DISCONNECT SWITCH, CIRCUIT BREAKER, STARTER, ETC. IS SHOWN ON THE PLANS ADJACENT TO ITS LOAD AND NOT LOCATED ON A WALL, PROVIDE ACCESSIBLE MATERIALS AND LABOR TO SUPPORT THE DEVICE.
- ELECTRICAL CONTRACTOR SHALL FIELD IDENTIFY ALL SWITCH BOARD, PANEL BOARDS, CONTROL PANELS, METER SOCKETS, ETC., TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRICAL ARC FLASH HAZARDS PER 110.16 OF NEC.
- ELECTRICAL CONTRACTOR SHALL PROVIDE NAMEPLATES FOR IDENTIFICATION OF ALL EQUIPMENT, SWITCHES, PANELS, ETC. THE NAMEPLATES SHALL BE LAMINATED PHENOLIC PLASTIC, BLACK FRONT, AND BACK WITH WHITE CORE. WHITE ENGRAVED LETTERS (1/4 IN MINIMUM) ETCHED INTO THE WHITE CORE. ELECTRICAL CONTRACTOR SHALL PROVIDE A TYPE WRITTEN DIRECTORY CARD THAT ACCURATELY IDENTIFIES CIRCUITS INSIDE EACH PANEL. HANDWRITTEN LABELS ARE NOT ACCEPTABLE.

ELECTRICAL DESIGNER'S STATEMENT			
ELECTRICAL SYSTEM AND EQUIPMENT METHOD OF COMPLIANCE			
PRESCRIPTIVE ___X___ PERFORMANCE ___ ENERGY COST BUDGET ___			
LIGHTING SCHEDULE:			
LAMP TYPE REQUIRED IN FIXTURE:		SEE LIGHTING LEGEND	
NUMBER OF LAMPS PER FIXTURE:		SEE LIGHTING LEGEND	
BALLAST TYPE USED IN FIXTURE:		SEE LIGHTING LEGEND	
NUMBER OF BALLASTS IN FIXTURE:		SEE LIGHTING LEGEND	
TOTAL WATTAGE PER FIXTURE:		SEE LIGHTING LEGEND	
TOTAL INTERIOR WATTAGE SPECIFIED VS ALLOWED:	WATTS SPECIFIED	WATTS ALLOWED	
	4159.0	6032.00	
OCCUPANCY			
OCCUPANCY	AREA (sqf)	ALLOWANCE (W/sf)	WATTAGE ALLOWED
LEISURE	4900	1.01	4949.00
POST OFFICE	1083	1.00	1083.00
TOTAL	4900		6032.00
EQUIPMENT SCHEDULES WITH MOTORS (NOT USED FOR MECHANICAL SYSTEMS)			
MOTOR HORSEPOWER: N/A	NUMBER OF PHASES: N/A	MINIMUM EFFICIENCY: N/A	MOTOR TYPE: N/A
DESIGNER STATEMENT: TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THIS BUILDING COMPLIES WITH THE 2018 NORTH CAROLINA ENERGY CONSERVATION CODE.			
FOR THE ADDITIONAL PRESCRIPTIVE REQUIREMENT REQUIRED BY C406 OF 2018 NORTH CAROLINA ENERGY CONSERVATION CODE, WE ARE CHOOSING C406.3 - REDUCED LIGHTING POWER DENSITY.			
4159 W SPECIFIED <= 5429 W (6032 W ALLOWED X 90%)			



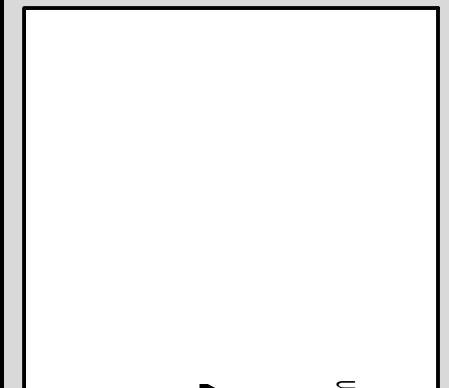
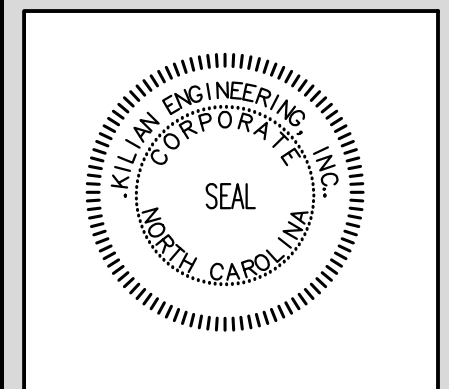
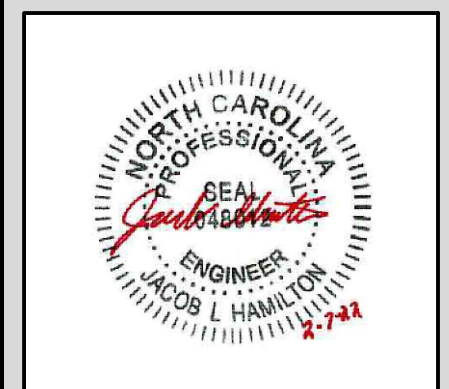
ANSI A117.1 FIG. 308.3.2. OBSTRUCTED HIGH REACH SIDE. ALL SWITCHES AND CONTROLS MUST COMPLY FOR ALL COUNTERTOPS

LIGHTING DEVICE LEGEND		
SYMBOL	DESCRIPTION	REMARKS
⚡	SINGLE POLE WALL SWITCH	HEAVY DUTY, AC ONLY, COMMERCIAL GRADE GENERAL USE SNAP SWITCH COMPLYING WITH NEMA WD 6 AND WD 1. THERY PLASTIC BODY WITH TOGGLE HANDLE. 120-277V, 20A. MEET FEDERAL SPECIFICATION W-C-596.
⚡	WALL MOUNTED OCCUPANCY SENSOR	WATTSSTOPPER DW-100 LINE VOLTAGE OCCUPANCY SENSOR. ULTRA SONIC AND INFRARED.
⚡	LOW VOLTAGE SWITCH	WATTSSTOPPER LVS-1 LOW VOLTAGE MOMENTARY CONTROL SWITCH.
⚡	CEILING OCCUPANCY SENSOR	WATTSSTOPPER, DT-300 LOW VOLTAGE OCCUPANCY SENSOR. 360° ULTRA SONIC AND INFRARED.
⚡	POWER PACK	WATTSSTOPPER, BZ-150 LOW VOLTAGE POWER PACK FOR CEILING PACK SENSORS.
⚡	JUNCTION BOX	GALVANIZED METAL BOX CONSTRUCTED IN ACCORDANCE WITH 314.40 OF THE NEC.
⚡	EXHAUST FAN	VENT FAN, 120V, CFM AS NOTED MC TO PROVIDE AND VENT, EC TO WIRE.

POWER DEVICE LEGEND		
SYMBOL	DESCRIPTION	REMARKS
▶	DATA AND TELEPHONE JACK	PHONE/DATA OUTLET. EC TO INSTALL 3/4" WITH PULL-STRING FROM OUTLET BOX TO ABOVE CEILING FOR FUTURE USE. JACKS AND COMMUNICATION CABLING BY OTHERS.
⊖	DUPLEX RECEPTACLE	NEMA 5-20R, HEAVY DUTY, COMMERCIAL GRADE, 125V, 20A COMPLYING WITH NEMA WD 6 AND WD 1. GFCI OR AFCI IF NOTED. 'VP' DENOTES WEATHERPROOF COVER. 'CP' DENOTES COUNTER HEIGHT. LISTED TAMPERPROOF IF NOTED. MEET FEDERAL SPECIFICATION W-C-596.
⊖	QUAD RECEPTACLE	QUAD RECEPTACLE OF SAME CHARACTERISTICS AS DUPLEX TYPE ABOVE.
⊖	DEDICATED RECEPTACLE	NEMA 5-20R, HEAVY DUTY, COMMERCIAL GRADE, 125V, 20A COMPLYING WITH NEMA WD 6 AND WD 1. UNLESS OTHERWISE NOTED ON PLANS, VERIFY PLUG TYPE PRIOR TO PURCHASE & INSTALLATION. GFCI OR AFCI IF NOTED. 'VP' DENOTES WEATHERPROOF COVER. 'CP' DENOTES COUNTER HEIGHT. LISTED TAMPERPROOF IF NOTED. MEET FEDERAL SPECIFICATION W-C-596. MAY BE EITHER SIMPLEX, DUPLEX, OR QUAD.
⊖	DUPLEX FLOOR RECEPTACLE	DUPLEX RECEPTACLE OF SAME CHARACTERISTICS AS ABOVE WITH BRASS COVER. MOUNT IN FLOOR. ALL FLOOR BOXES MUST BE LISTED FOR FLOOR APPLICATION.
⊖	TELEVISION JACK	TELEVISION OUTLET. EC TO INSTALL 3/4" WITH PULL-STRING FROM OUTLET BOX TO ABOVE CEILING FOR FUTURE USE. JACKS AND COMMUNICATION CABLING BY OTHERS.
⊖	FUSIBLE DISCONNECT SWITCH	HEAVY DUTY TYPE. TYPE 1 ENCLOSURE IN INTERIOR APPLICATIONS, TYPE 3R ENCLOSURE IN EXTERIOR APPLICATIONS. FUSE ACCORDING TO NAMEPLATE DATA.
⊖	DISCONNECT SWITCH	HEAVY DUTY TYPE. TYPE 1 ENCLOSURE IN INTERIOR APPLICATIONS, TYPE 3R ENCLOSURE IN EXTERIOR APPLICATIONS.
⊖	JUNCTION BOX	GALVANIZED METAL BOX CONSTRUCTED IN ACCORDANCE WITH 314.40 OF THE NEC.

LIGHT FIXTURE SCHEDULE											
MARK	DESCRIPTION	LOUVER/LENS	LAMPS			VOLTAGE	INPUT WATTAGE	MOUNTING	REMARKS	MFG	MODEL
			TYPE	QTY.	CCT						
A	6" CAN LIGHT	-	LED	1	-	120	12	RECESSED	2,3	JUNO	1022LED-64-09LM-64-90CR1-WH01
B	WALL SCNDCE 17.25"	-	LED	1	-	120	20	RECESSED	2,4	KICHLER	PAI COLLECTION 498768K
C	WALL SCNDCE 21.5"	-	LED	1	-	120	20	RECESSED	2,4	KICHLER	PAI COLLECTION 498768K
D	PENDANT LIGHT	-	LED	1	-	120	30	RECESSED	2,4	KICHLER	PAI COLLECTION 498798K
E	3 LIGHT VANITY	-	LED	3	-	120	11	WALL	2	KICHLER	459458K
F	DECORATIVE PENDANT	-	LED	9	-	120	100	PENDANT	2,4	KICHLER	4363902L18
G	INTERIOR FAN	-	-	-	-	120	91	SUSPENDED	2	KICHLER	33002558K
H	EXTERIOR FAN	-	LED	1	-	120	32	SUSPENDED	2	KICHLER	30030038K
I	FLOOD LIGHT	-	LED	2	-	120	25	WALL	2	LITHONIA	DLF-28H-40K-120-H0
J	GREAT ROOM PENDANT	-	LED	5	-	120	100	PENDANT	2,4	KICHLER	421958K
K	GOOSENECK WALL SCNDCE	-	LED	1	-	120	30	WALL	2,4	KICHLER	497758K
L	CUSTOM EXTERIOR FIXTURE	-	LED	1	-	120	30	WALL	2,4	PROVIDED BY OTHERS	
M	1X4 STRIP LIGHT	-	LED	1	3500K	120	35	SURFACE	2	EPCO	GALED-FX-SS534
N	FLUSH MOUNT LIGHT	-	LED	1	-	120	11	SURFACE	2	KICHLER	43878WHLED
O	LED STRIP	-	LED	-	-	120	2	SURFACE	2	COMMERCIAL ELECTRIC	17067
P	UNDERCOUNTER LIGHTING	-	LED	1	-	120	7	SURFACE	2	LITHONIA	UCES-361N-SW4-90CR1-WH-M6
EXH	LED EXIT/COMBO W/ BATTERY BACKUP	ACRYLIC	LED	MULT.	N/A	120	4	VARIABLES	1,2	EMERGI-LITE	LSN42N6C
EM	DUAL HEAD EMERGENCY FIXTURE	ACRYLIC	LED	MULT.	N/A	120	2	VARIABLES	1,2	EMERGI-LITE	V-EL-2LED
DE	EXTERIOR LED EMERGENCY LIGHT	POLYCARBONATE	LED	2	-	120	2	SURFACE	1,2	EMERGI-LITE	DW-LUX58

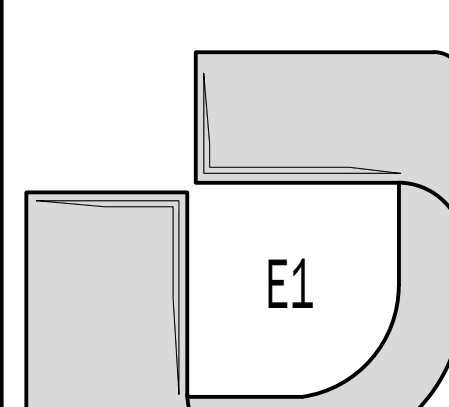
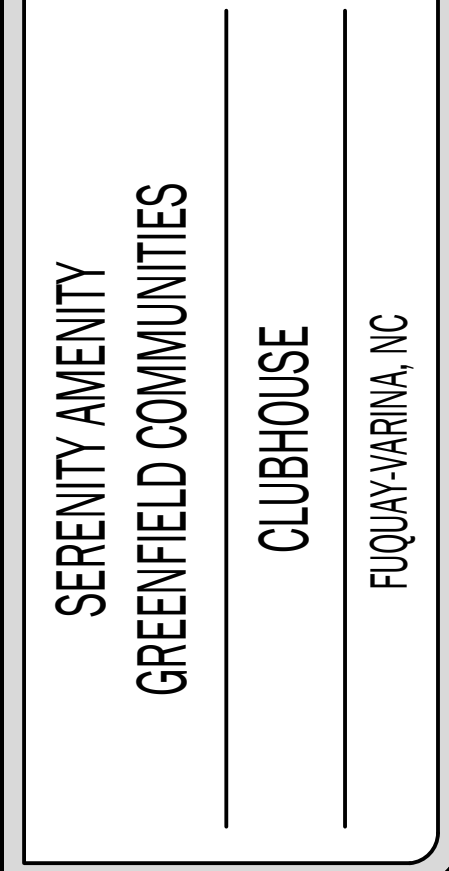
- FIXTURE SHALL HAVE BATTERY BACKUP FOR 90 MINUTE ILLUMINATION.
- OR EQUAL BY COOPER, PHILIPS, DAY-BRITE LIGHTING, OR OWNER APPROVED EQUAL.
- TRIM APPROVED AS WET/DAMP LOCATION LISTED
- LAMP WITH LED EQUIPMENT
- PROVIDE TYS-300-SS-120 OR EQUIVALENT LOW VOLTAGE TRANSFORMER FOR FIXTURE

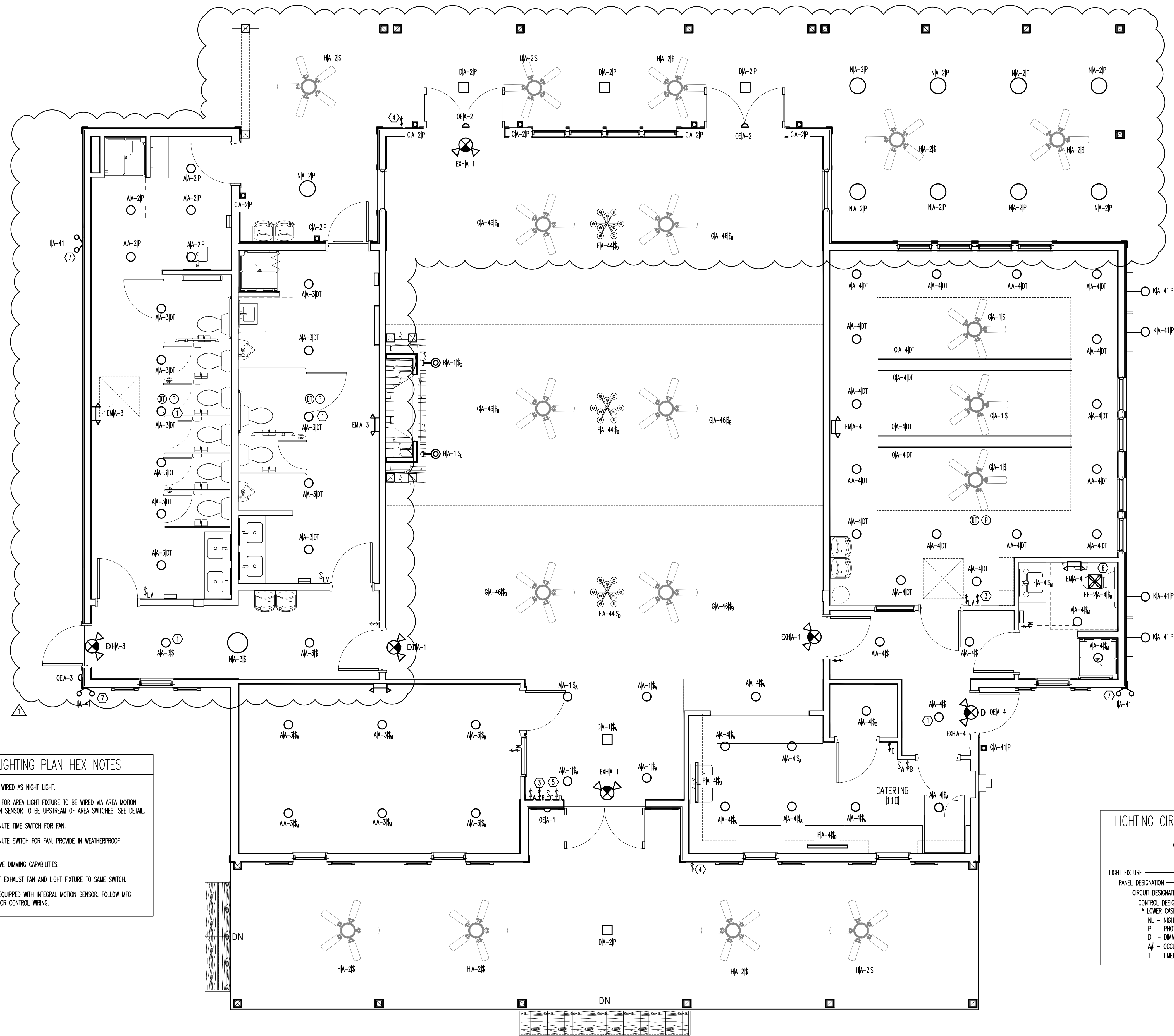


NO.	REVISION	DATE
1	CODE COMMENTS	2-7-2022

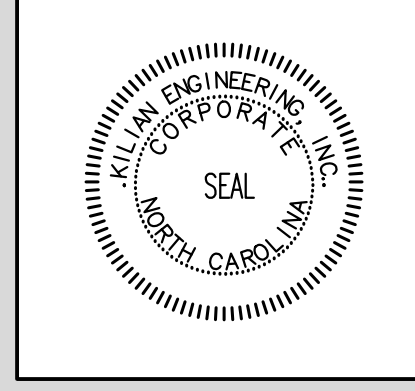
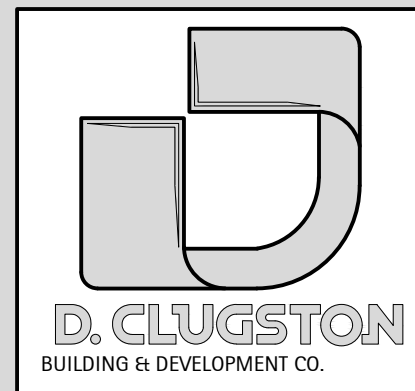
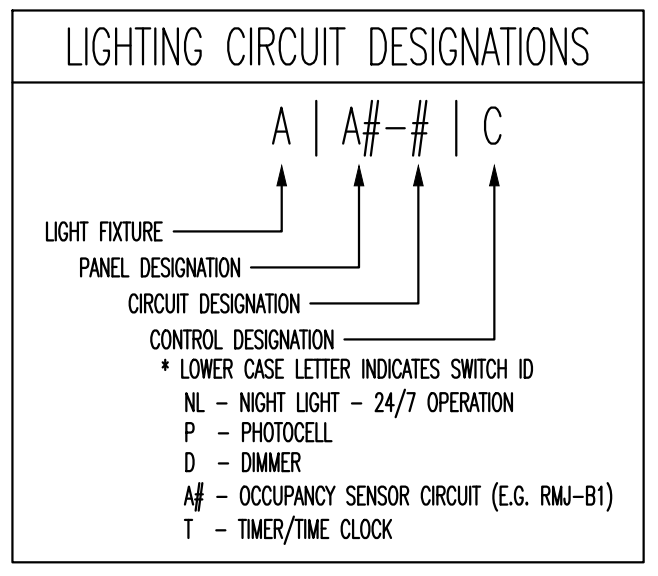
SHEET DESCRIPTION
ELECTRICAL NOTES AND SCHEDULES

PROJECT #:	20442
DATE ISSUED:	10-23-2020
DRAWING BY:	DBAS
CHECKED BY:	MWV/JLH





- LIGHTING PLAN HEX NOTES**
1. FIXTURE TO BE WIRED AS NIGHT LIGHT.
 2. POWER CIRCUIT FOR AREA LIGHT FIXTURE TO BE WIRED VIA AREA MOTION SENSOR. MOTION SENSOR TO BE UPSTREAM OF AREA SWITCHES. SEE DETAIL.
 3. PROVIDE 60 MINUTE TIME SWITCH FOR FAN.
 4. PROVIDE 60 MINUTE SWITCH FOR FAN. PROVIDE IN WEATHERPROOF ENCLOSURE.
 5. SWITCHES TO HAVE DIMMING CAPABILITIES.
 6. EC TO CONNECT EXHAUST FAN AND LIGHT FIXTURE TO SAME SWITCH.
 7. FLOOD LIGHTS EQUIPPED WITH INTEGRAL MOTION SENSOR. FOLLOW MFG INSTRUCTIONS FOR CONTROL WIRING.



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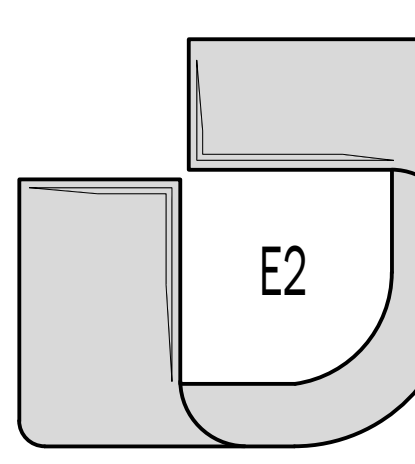
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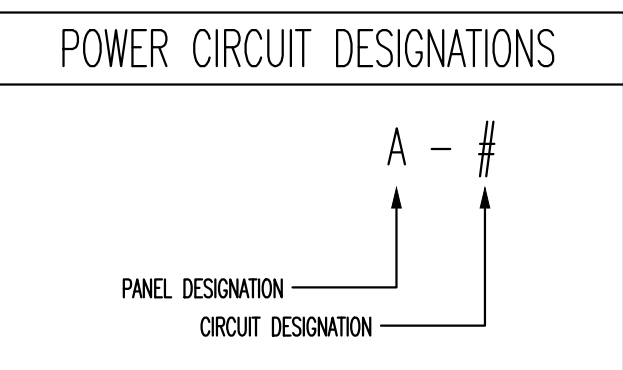
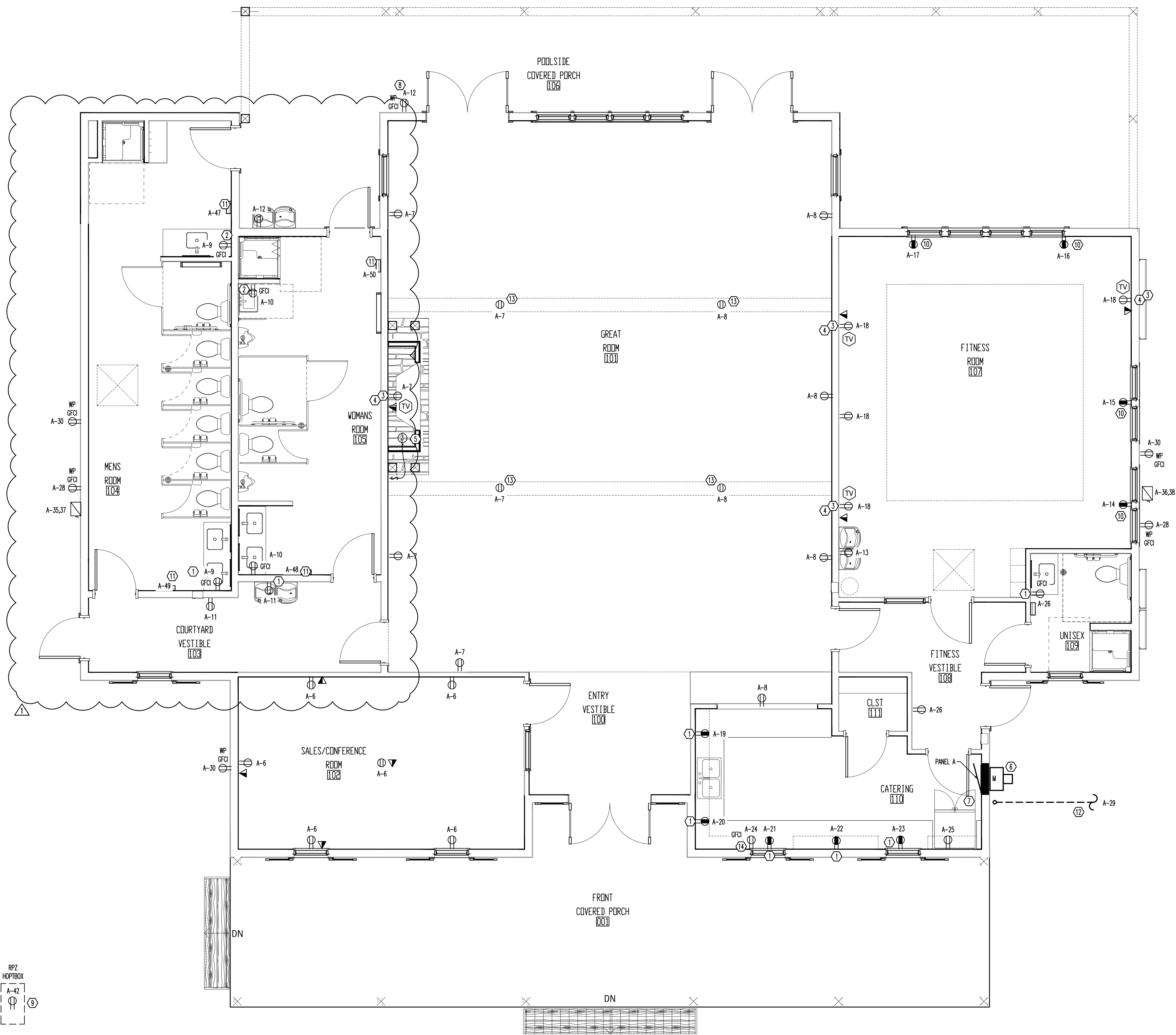
NO.	REVISION	DATE
1	CODE COMMENTS	2-7-2022

SHEET DESCRIPTION
FIRST FLOOR LIGHTING PLAN

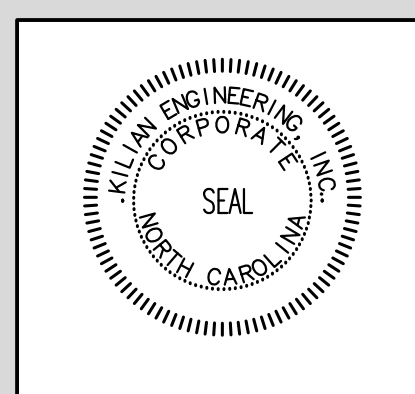
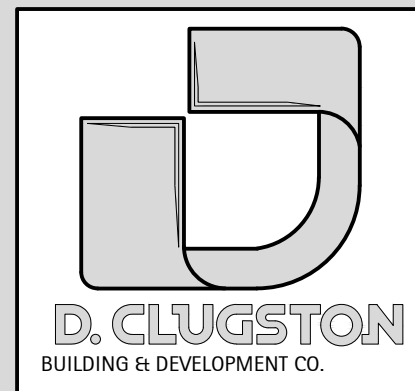
PROJECT #: 20442
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 GREENFIELD COMMUNITIES
 CLUBHOUSE
 FLOUJAY-VARINA, NC





- POWER PLAN HEX NOTES**
1. RECEPTACLE TO BE MOUNTED AT COUNTER HEIGHT.
 2. RECEPTACLE TO BE MOUNT 48" A.F.F.
 3. RECEPTACLE AND DATA BOX TO BE MOUNTED 96" A.F.F.
 4. E.C TO CONFIRM EXACT LOCATION OF TV OUTLET WITH OWNER PRIOR TO BEGINNING WORK.
 5. PROVIDE POWER FOR GAS FIREPLACE. COORDINATE REQUIREMENTS AND LOCATION WITH M.C.
 6. NEW METER BY UTILITY.
 7. NEW PANEL. SEE RISER FOR MORE DETAIL.
 8. E.C TO COORDINATE WITH POOL CONTRACTOR TO ENSURE A GFCI/WEATHER PROOF RECEPTACLE IS WITHIN 20' OF EDGE OF POOL (BUT NO CLOSER THAN 6') AS REQUIRE BY NEC 680.22(A)(1).
 9. PROVIDE RECEPTACLE AT BUILDING RPZ FOR HOT BOX HEAT TAPE. COORDINATE EXACT LOCATION WITH SITE PLANS AND P.C.
 10. PROVIDE POWER FOR FITNESS EQUIPMENT. COORDINATE EXACT REQUIREMENTS WITH MANUFACTURERS INSTRUCTIONS.
 11. PROVIDE JUNCTION BOX ABOVE CEILING FOR BATHROOM HAND DRYER. VERIFY EQUIPMENT REQUIREMENTS WITH PRODUCT MANUFACTURER.
 12. VERIFY WITH LANDSCAPE ARCHITECT AND G.C. WHICH SIDE OF BUILDING FOR IRRIGATION CIRCUIT TO COME FROM PRIOR TO BEGINNING WORK.
 13. VERIFY WITH G.C. FOR FINAL LOCATION OF FLOOR RECEPTABLES BASED ON INTERIOR DESIGN DRAWINGS.
 14. VERIFY EXACT LOCATION OF DISHWASHER WITH OWNER.



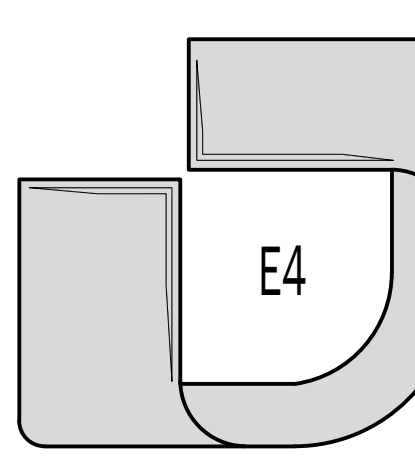
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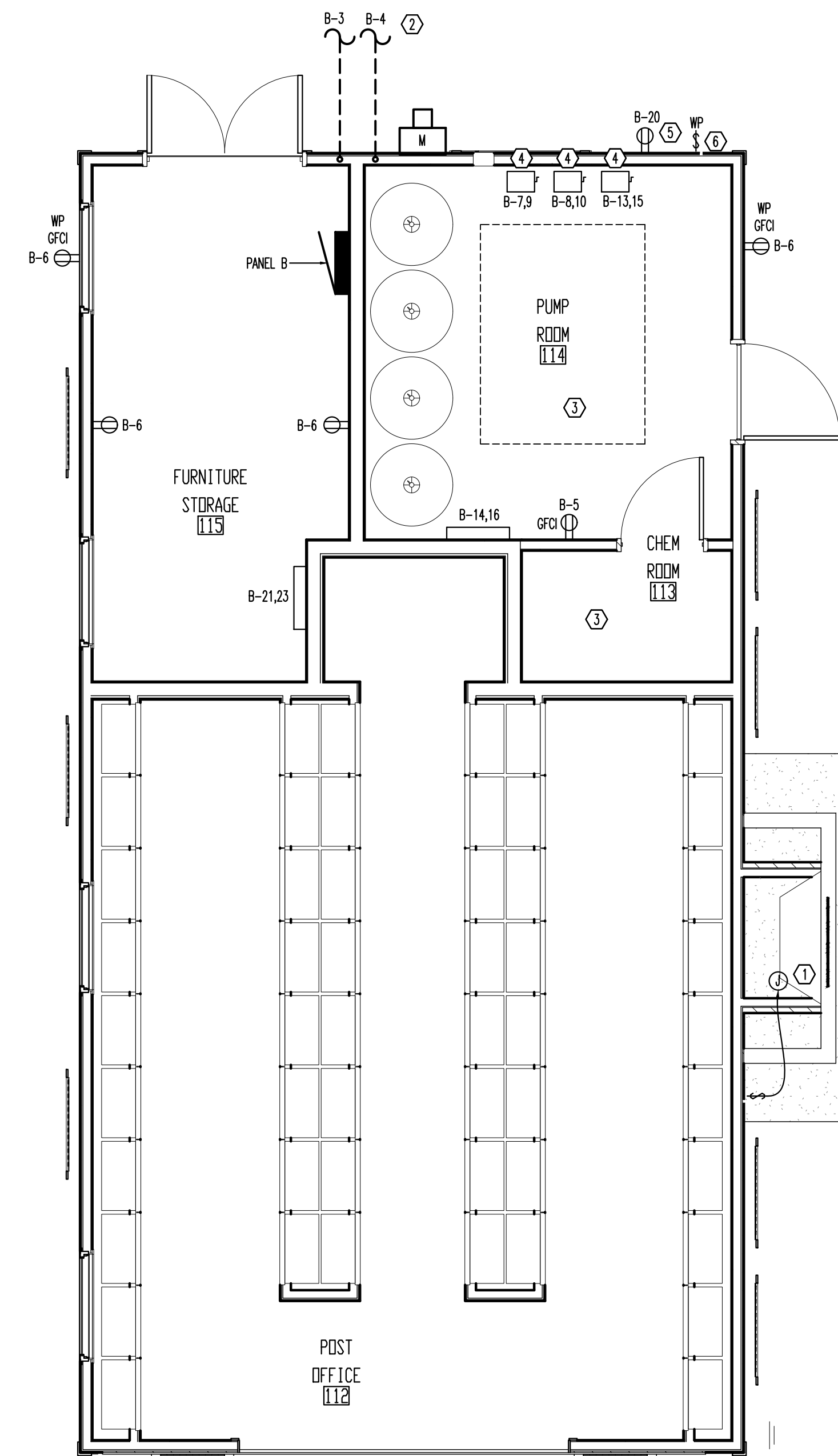
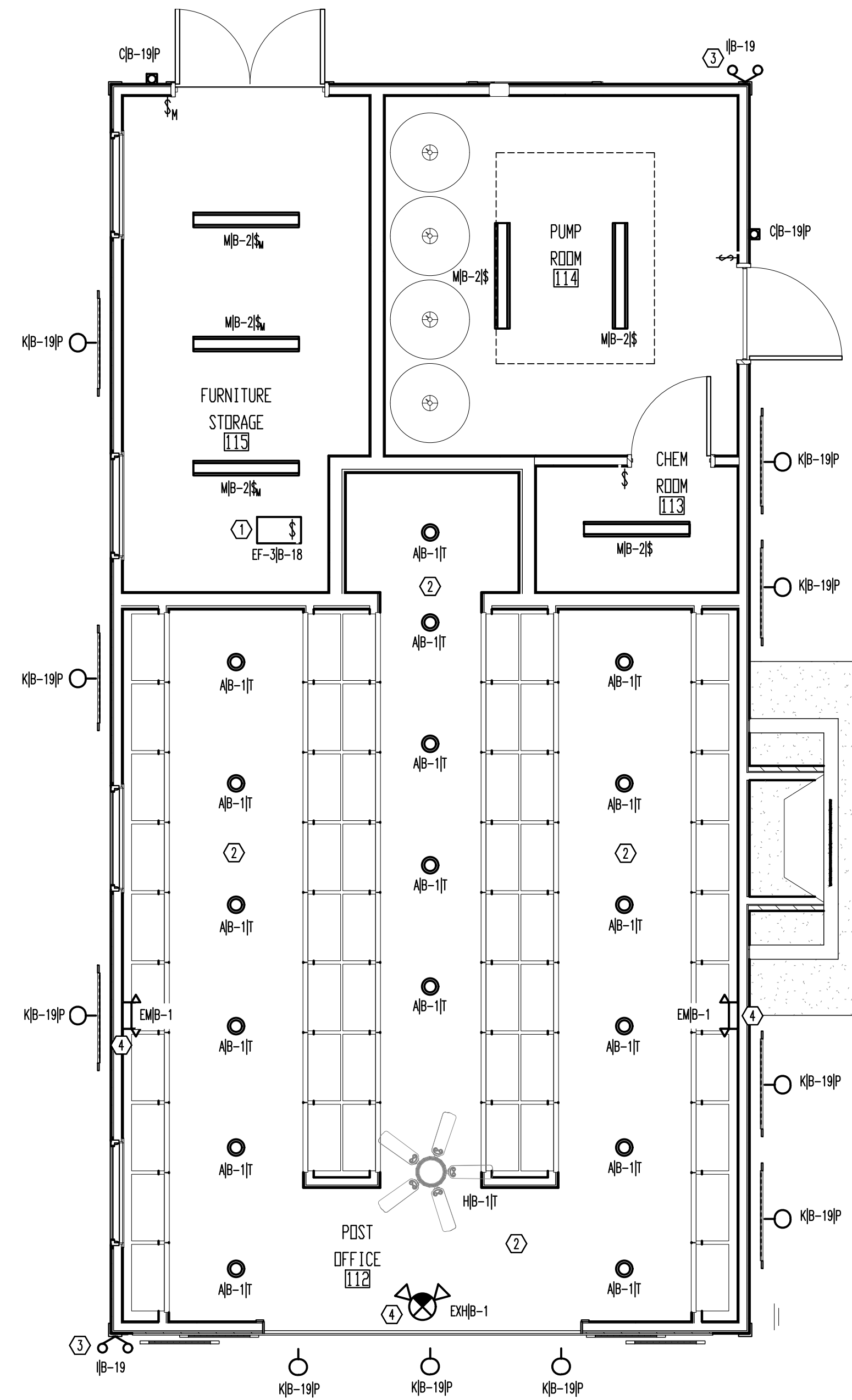
NO.	REVISION	DATE
1	CODE COMMENTS	2-7-2022

SHEET DESCRIPTION
FIRST FLOOR LIGHTING PLAN

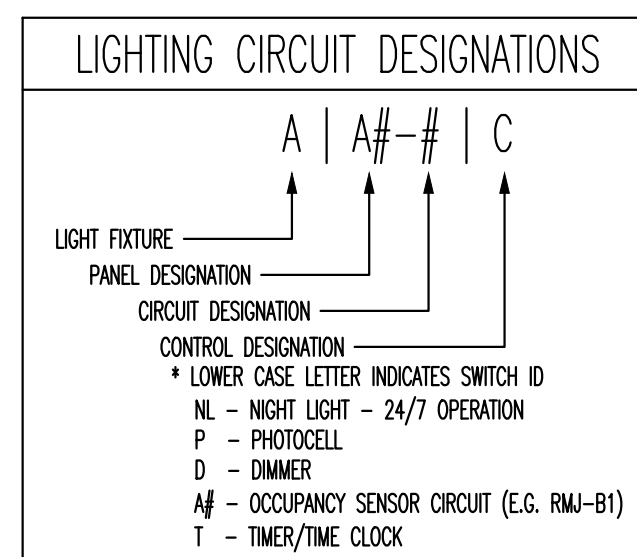
PROJECT #: 20442
 DATE ISSUED: 10-23-2020
 DRAWING BY: DBAS
 CHECKED BY: MWK/JLH

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 FUQUAY-VARINA, NC

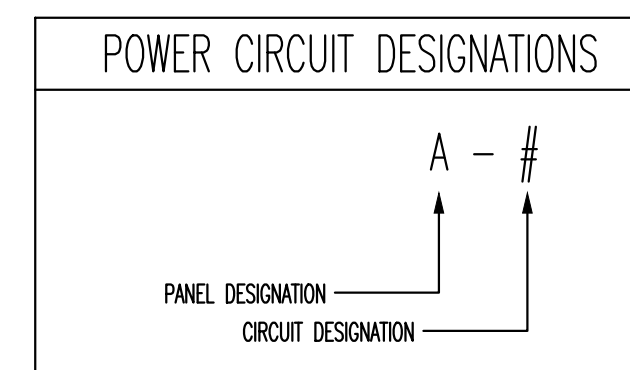




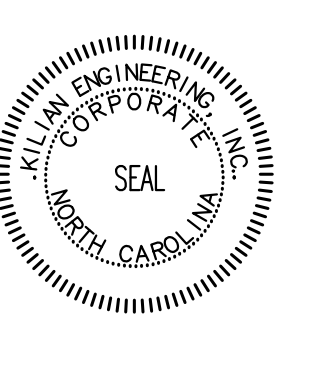
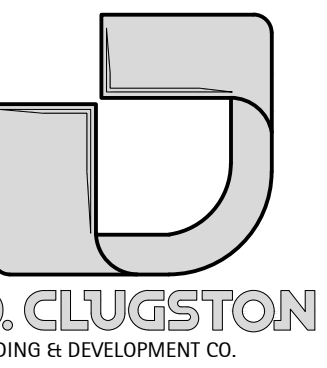
All electrical equipment located in pump room and chemical room shall be listed for use in corrosive environment



- LIGHTING PLAN HEX NOTES**
1. EXHAUST FAN SUSPENDED IN ATTIC TO BE WIRE FOR CONTINUOUS OPERATION. COORDINATE WITH M.C.
 2. LIGHTING CIRCUIT FOR POST OFFICE LIGHTS TO BE CONTROLLED VIA TIME CLOCK AT PANEL.
 3. FLOOD LIGHTS EQUIPPED WITH INTEGRAL MOTION SENSOR. FOLLOW MFG INSTRUCTIONS FOR CONTROL WIRING.
 4. VERIFY HEIGHT OF EGRESS LIGHTING WITH ARCHITECT DUE TO MAIL BOXES AND ENTRY HEIGHT.



- POWER PLAN HEX NOTES**
1. PROVIDE POWER FOR GAS FIREPLACE. COORDINATE REQUIREMENTS AND LOCATION WITH M.C.
 2. PROVIDE (2) 1" CONDUITS WITH CIRCUITS AS SHOWN TO POOL FOR POOL LIGHTS AND OTHER POOLSIDE EQUIPMENT. COORDINATE EXACT LOCATIONS WITH G.C. AND POOL CONTRACTOR. CIRCUIT TO CONTROLLED VIA TIME CLOCK AT PANEL.
 3. AREA IS CORROSIVE ENVIRONMENT PER NEC 680.14.
 4. PROVIDE POWER TO 60A NON-FUSED DISCONNECT FOR POOL PUMP. PUMP MUST HAVE GFCI PROTECTION. PROVIDE GFCI BREAKER IN NON-FUSED DISCONNECT. DISCONNECT MUST HAVE NEMA 4X RATED ENCLOSURE. COORDINATE EXACT LOCATION AND SPEC WITH G.C AND POOL CONTRACTOR BEFORE BEGINNING WORK. FINAL CONNECTIONS BY E.C.
 5. PROVIDE POWER TO EMERGENCY PHONE RECEPTACLE. FIELD VERIFY LOCATION WITH LOCAL A.H.U.
 6. PROVIDE EMERGENCY "PUSH IN" POWER OFF SWITCH FOR POOL PUMPS. VERIFY LOCATION WITH LOCAL A.H.U. WIRE TO SHUNT TRIP BREAKERS IN PANEL. SEE PANEL SCHEDULE.

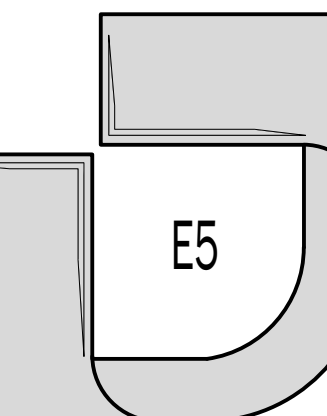


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NO.	REVISION	DATE

SHEET DESCRIPTION
POST OFFICE POWER AND LIGHTING PLANS
 PROJECT #: 20442
 DATE ISSUED: 2-7-22
 DRAWING BY: DBAS
 CHECKED BY: MWK/JLH

SERENITY AMENITY
 GREENFIELD COMMUNITIES
 POST OFFICE
 FLOUJAY-VARINA, NC



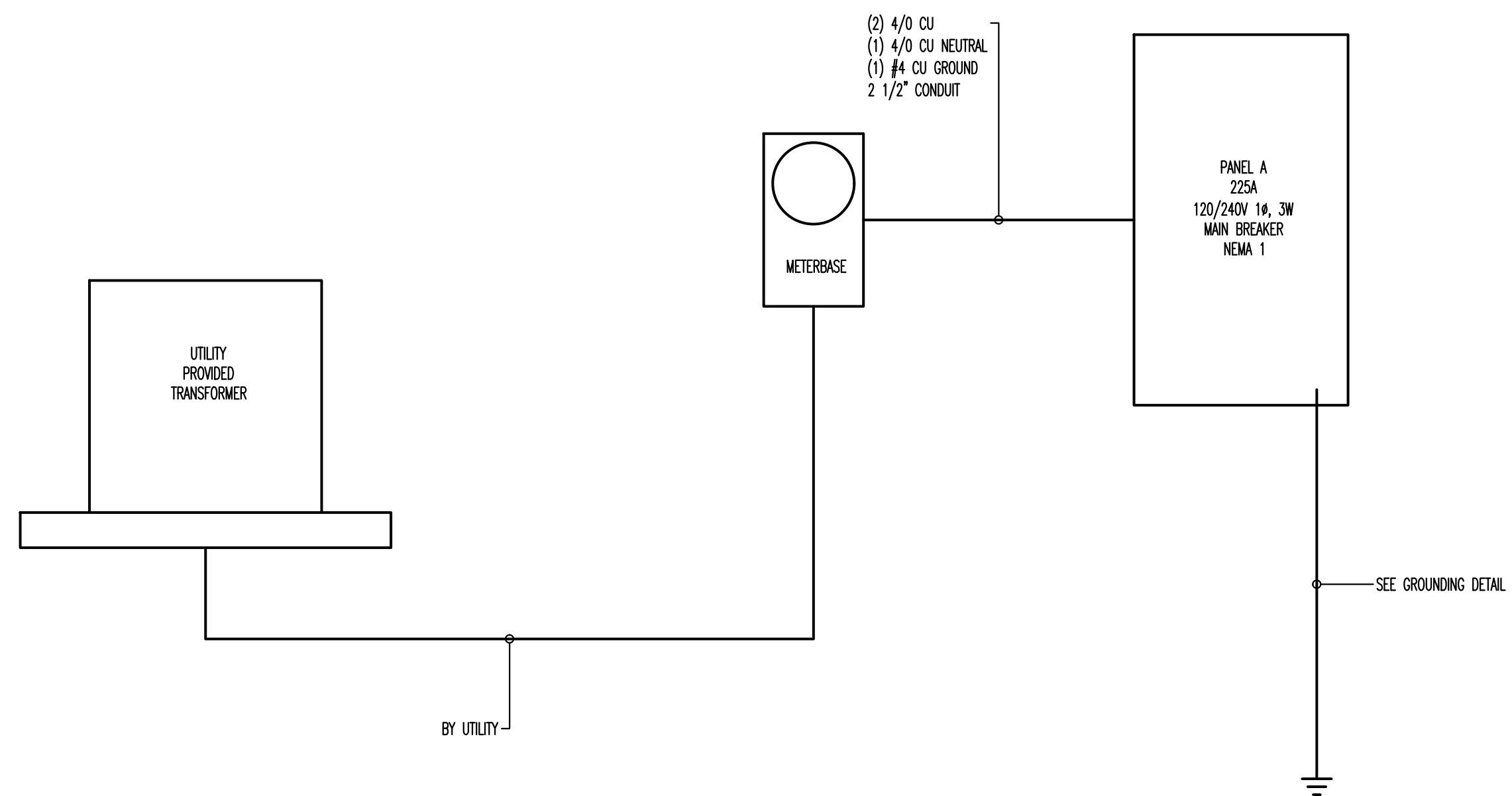
NEC ELECTRIC DEMAND SUMMARY 120/240V, 1P, 3W

EQUIPMENT	DEMAND FACTOR	KVA		LOAD KVA	NEC REFERENCE	NOTES/CALCULATIONS
		A	B			
LIGHTING	125%	4.29	4.29	8.58	220.12	4900 SF X 1.4 VA/SF X 1.25
RECEPTACLES < 10 KVA	100%	4.41	4.41	8.82	220.44	
RECEPTACLES > 10 KVA	50%	0.00	0.00	0.00	220.44	
HVAC	100%	8.94	8.94	17.87	--	BASED ON MCA
WATER HEATER	125%	5.63	5.63	11.25	422.13	STORAGE TANK <120 GAL @ 125%
DEMAND KVA PER PHASE		23.26	23.26			
DEMAND AMPS PER PHASE		194	194			

THE CALCULATED LIGHTING LOAD EXCEEDS THE CONNECTED LIGHTING LOAD.

PANEL A											
CKT	LOAD	BKR	LOAD		BKR	LOAD	CKT				
			KVA	PH				KVA			
1	GREAT ROOM ENTRY LIGHTING	20/1	0.28	A	0.82	20/1	COVERED PORCH LIGHTING	2			
3	BATHROOM/SALES LIGHTING	20/1	0.36	B	0.93	20/1	FITNESS/CATERING LIGHTING	4			
5	HVAC PLATFORM LIGHTING/RECEPT.	20/1	0.54	A	1.08	20/1	SALES RECEPTACLES	6			
7	GREAT ROOM RECEPTACLES	20/1	1.08	B	1.08	20/1	GREAT ROOM FLOOR RECEPTACLES	8			
9	MEN BATHROOM RECEPTACLES	20/1	0.36	A	0.36	20/1	WOMEN BATHROOM RECEPTACLES	10			
11	VESTIBLE EWC/RECEPTACLE	20/1	0.64	B	0.64	20/1	COVERED PORCH EWC/RECEPTACLE	12			
13	FITNESS EWC	20/1	0.48	A	0.18	20/1	CARDIO EQUIPMENT	14			
15	CARDIO EQUIPMENT	20/1	0.18	B	0.18	20/1	CARDIO EQUIPMENT	16			
17	CARDIO EQUIPMENT	20/1	0.18	A	0.54	20/1	FITNESS RECEPTACLES	18			
19	CATERING RECEPTACLE	20/1	0.18	B	0.18	20/1	CATERING RECEPTACLE	20			
21	CATERING RECEPTACLE	20/1	0.18	A	0.18	20/1	CATERING RECEPTACLE	22			
23	CATERING RECEPTACLE	20/1	0.18	B	0.60	20/1	DISHWASHER RECEPTACLE	24			
25	REFRIGERATOR RECEPTACLE	20/1	0.60	A	0.36	20/1	UNISEX/VESTIBLE RECEPTACLE	26			
27	SWITCHED LIGHT OUTLETS	20/1	0.54	B	0.36	20/1	EXTERIOR RECEPTACLES	28			
29	IRRIGATION	20/1	0.30	A	0.54	20/1	EXTERIOR RECEPTACLES	30			
31	WATER HEATER - 1	25/2	2.25	B	2.25	25/2	WATER HEATER - 2	32			
33			2.25	A	2.25			34			
35			3.65	B	3.65			36			
37	HP-1	50/2	3.65	A	3.65	50/2	HP-2	38			
39	GF-1	20/1	1.64	B	1.64	20/1	GF-2	40			
41	EXTERIOR LIGHTING	20/1	0.32	A	0.20	20/1	RPZ HEAT TRACE	42			
43	EXHAUST FAN 1	20/1	0.40	B	0.38	20/1	GREAT ROOM DECORATIVE PENDANTS	44			
45	GREAT ROOM PENDANTS	20/1	0.75	A	0.68	20/1	GREAT ROOM FANS	46			
47	HAND DRYER MEN	20/1	1.00	B	1.00	20/1	HAND DRYER WOMEN	48			
49	HAND DRYER MEN	20/1	1.00	A	1.00	20/1	HAND DRYER WOMEN	50			
51	SPACE		0.00	B	0.00		SPACE	52			
53	SPACE		0.00	A	0.00		SPACE	54			
			KVA	PH	AMPS						
			22.7	A	189						
			25.0	B	208						
			VOLTAGE/PHASE			120/240, 1P, 3W					
			BUS RATING			225A					
			MAIN CIRCUIT BREAKER RATING			MAIN BREAKER					
			AIC RATING			22K - EC TO VERIFY					
			SERVICE ENTRANCE RATED			YES					
			ENCLOSURE			NEMA 1					
			MOUNTING			RECESSED					

○ - INDICATES GFCI BREAKER



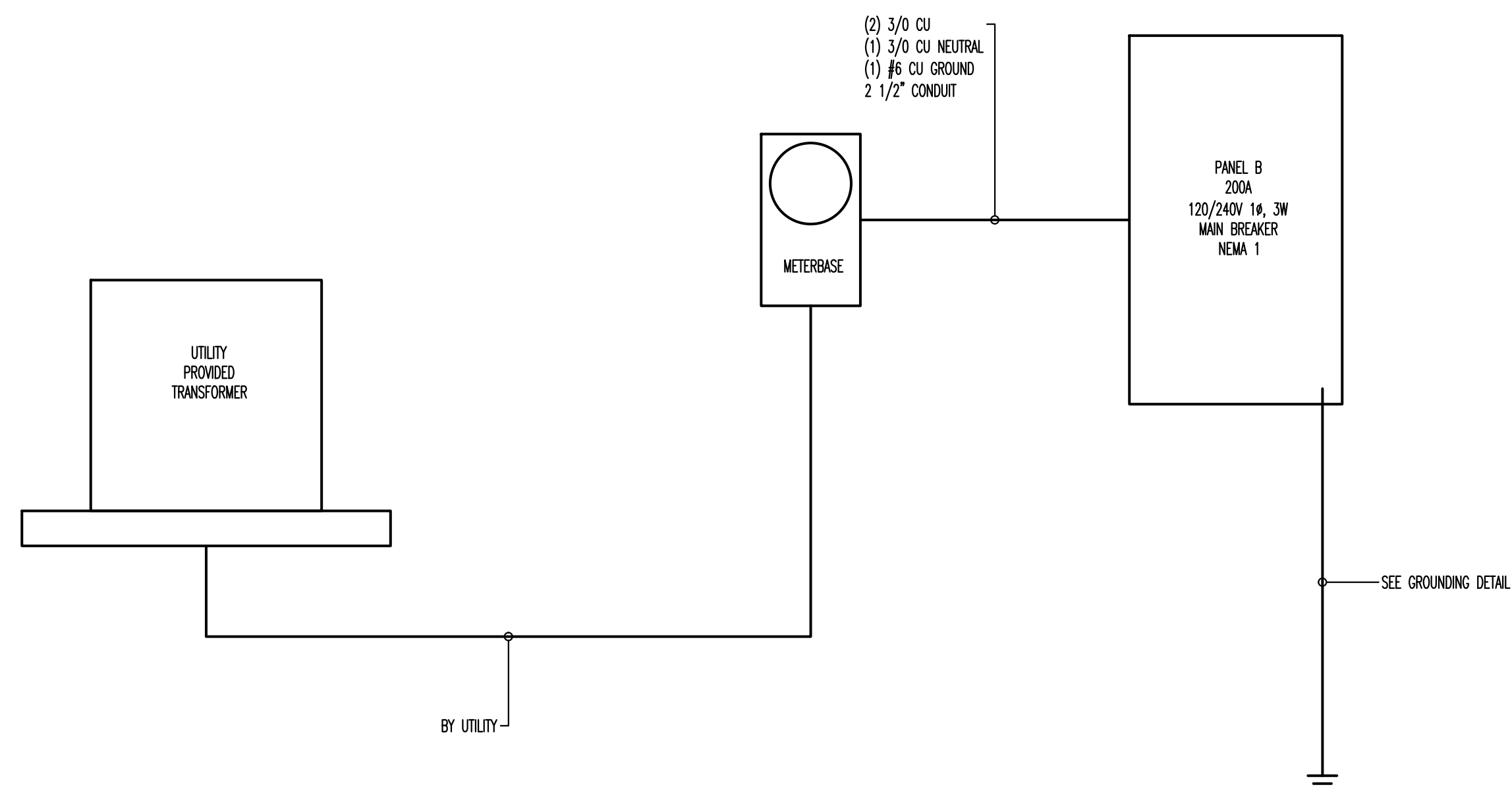
CLUBHOUSE PANEL SCHEDULE AND POWER RISER: NO SCALE | 1

PANEL B											
CKT	LOAD	BKR	LOAD		BKR	LOAD	CKT				
			KVA	PH				KVA			
1	POST OFFICE LIGHTS/FAN	20/1	0.30	A	0.26	20/1	STORAGE/CHEM/PUMP ROOM LIGHTS	2			
3	POOL LIGHTS/ACCESSORIES	20/1	0.48	B	0.48	20/1	POOL LIGHTS/ACCESSORIES	4			
5	PUMP ROOM RECEPTACLE	20/1	0.18	A	0.72	20/1	RECEPTACLES	6			
7			3.36	B	3.36			8			
9	5 HP POOL PUMP 1	60/2	3.36	A	3.36	60/2	5 HP POOL PUMP 2	10			
11	SHUNT TRIP		0.00	B	0.00		SHUNT TRIP	12			
13			3.36	A	2.50			14			
15	5 HP POOL PUMP 3	60/2	3.36	B	2.50	25/2	UNIT HEATER 1	16			
17	SHUNT TRIP		0.00	A	1.18	20/1	EXHAUST FAN 1	18			
19	EXTERIOR LIGHTING	20/1	0.49	B	0.18	20/1	EMERGENCY TELEPHONE RECEPTACLE	20			
21			2.50	A	0.00		SPACE	22			
23	UNIT HEATER 2	25/2	2.50	B	0.00		SPACE	24			
25	SPACE		0.00	A	0.00		SPACE	26			
27	SPACE		0.00	B	0.00		SPACE	28			
29	SPACE		0.00	A	0.00		SPACE	30			
31	SPACE		0.00	B	0.00		SPACE	32			
33	SPACE		0.00	A	0.00		SPACE	34			
35	SPACE		0.00	B	0.00		SPACE	36			
37	SPACE		0.00	A	0.00		SPACE	38			
39	SPACE		0.00	B	0.00		SPACE	40			
41	SPACE		0.00	A	0.00		SPACE	42			
			KVA	PH	AMPS						
			17.7	A	148						
			16.7	B	139						
			VOLTAGE/PHASE			120/240, 1P, 3W					
			BUS RATING			200A					
			MAIN CIRCUIT BREAKER RATING			MAIN BREAKER					
			AIC RATING			22K - EC TO VERIFY					
			SERVICE ENTRANCE RATED			YES					
			ENCLOSURE			NEMA 1					
			MOUNTING			SURFACE					

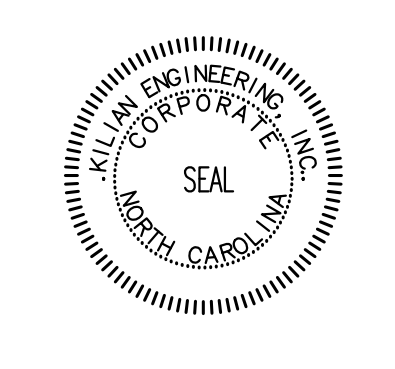
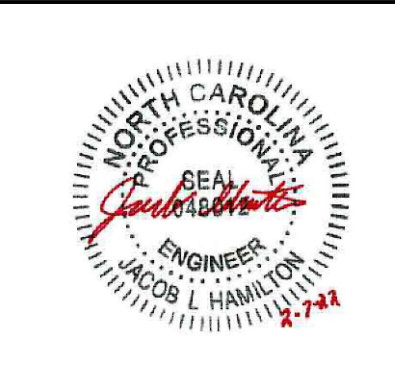
NEC ELECTRIC DEMAND SUMMARY 120/240V, 1P, 3W

EQUIPMENT	DEMAND FACTOR	KVA		LOAD KVA	NEC REFERENCE	NOTES/CALCULATIONS
		A	B			
LIGHTING	125%	1.08	1.08	2.17	220.12	1083 SF X 1.6 VA/SF X 1.25
RECEPTACLES < 10 KVA	100%	0.45	0.45	0.90	220.44	
HVAC	100%	5.00	5.18	10.18	--	BASED ON MCA
POOL EQUIPMENT	100%	10.08	10.08	20.16	--	BASED ON MOTOR SIZE
DEMAND KVA PER PHASE		16.61	16.79			
DEMAND AMPS PER PHASE		138	140			

THE CALCULATED LIGHTING LOAD EXCEEDS THE CONNECTED LIGHTING LOAD.



POST OFFICE PANEL SCHEDULE AND POWER RISER: NO SCALE | 2



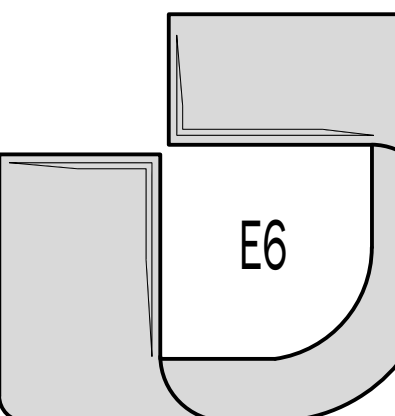
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 1000 W. Hargett Street, Suite 200
 Raleigh, NC 27601
 Phone: 919.876.8775
 Fax: 919.876.8776
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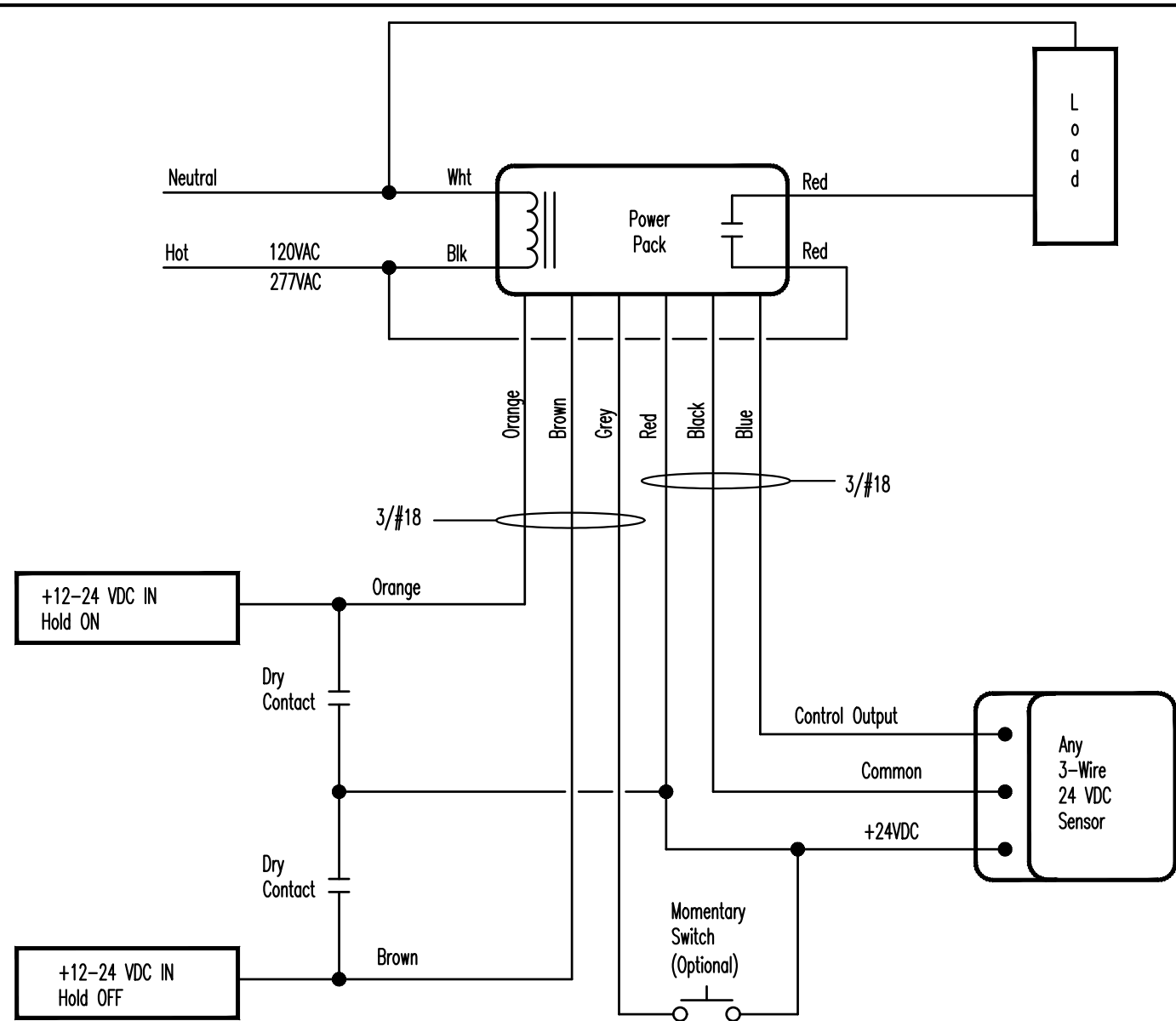
NO.	REVISION	DATE
1	CODE COMMENTS	2-7-2022

SHEET DESCRIPTION
PANEL SCHEDULE AND POWER RISER

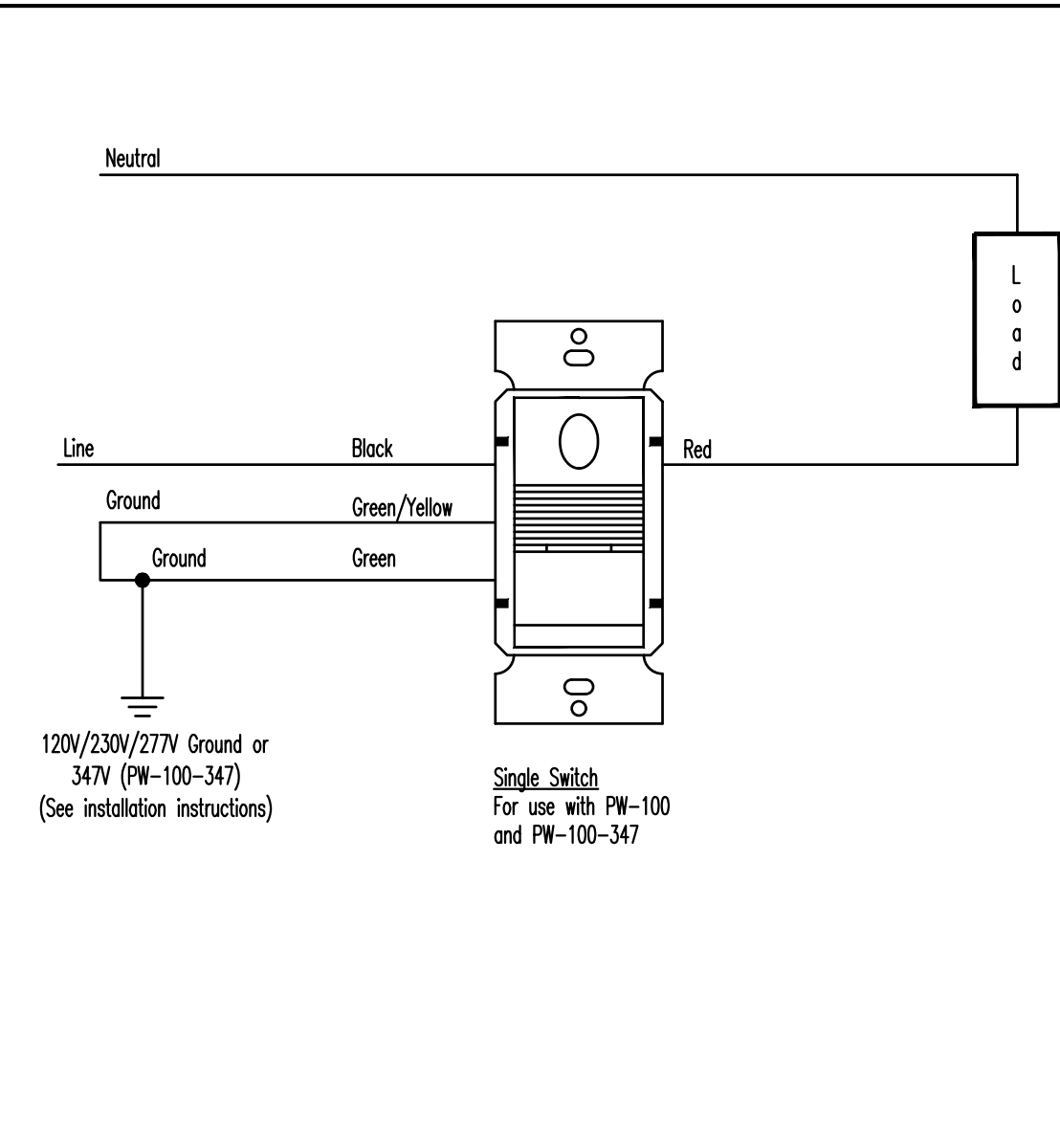
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 GREENFIELD COMMUNITIES
 CLUBHOUSE & POST OFFICE
 FLOUJAY-VARINA, NC

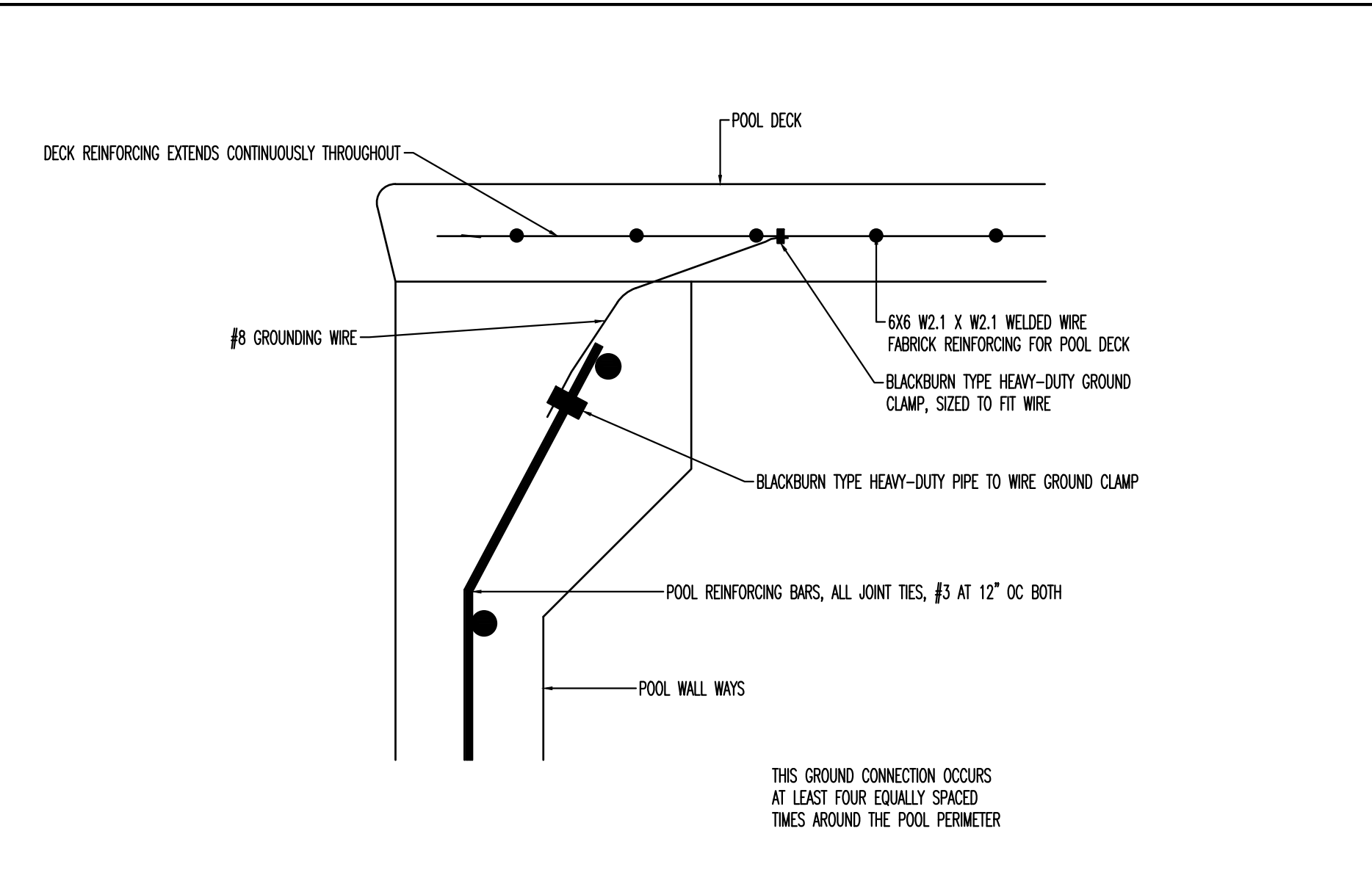




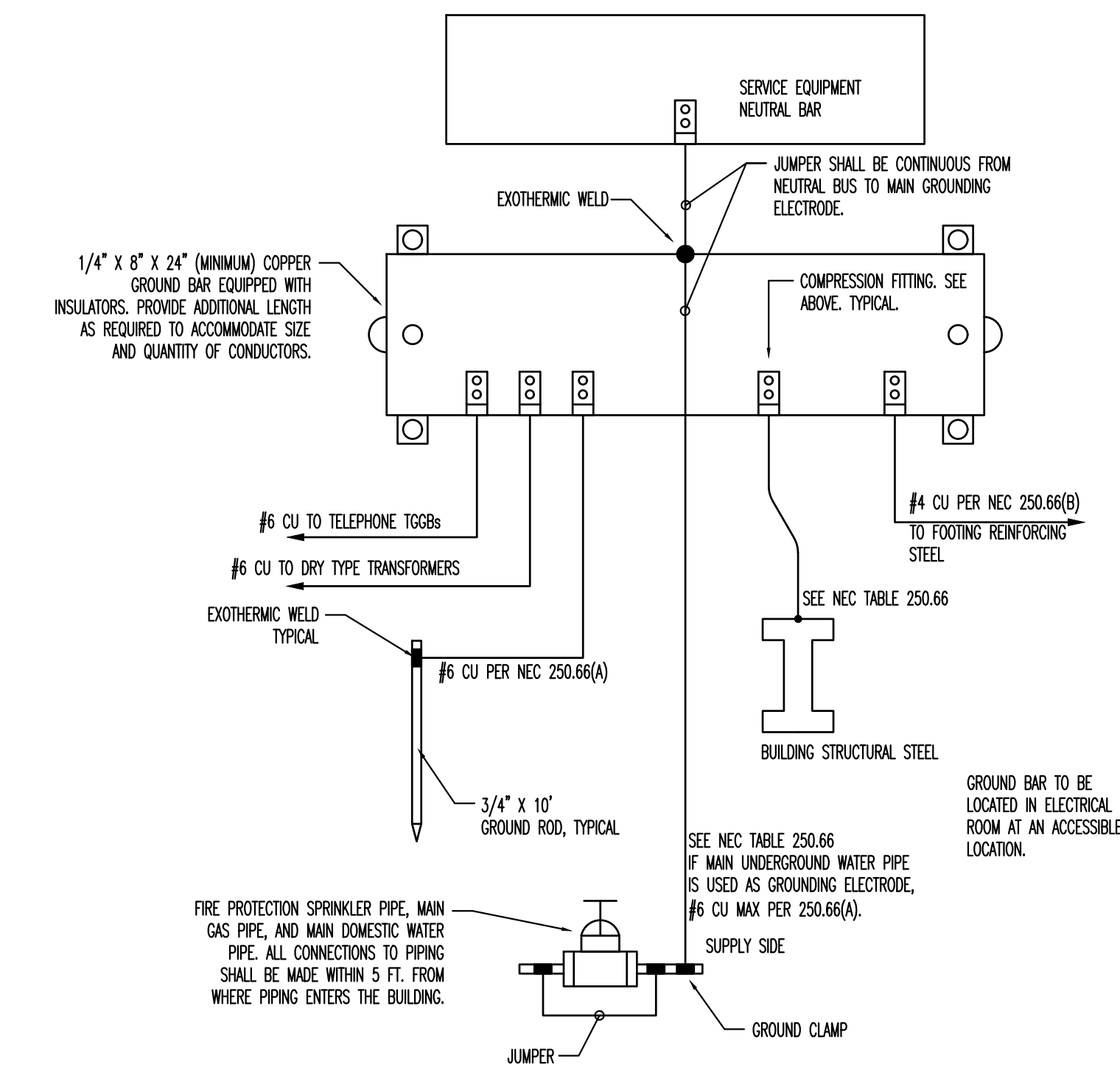
CEILING OCCUPANCY SENSOR WIRING - NO SCALE 1



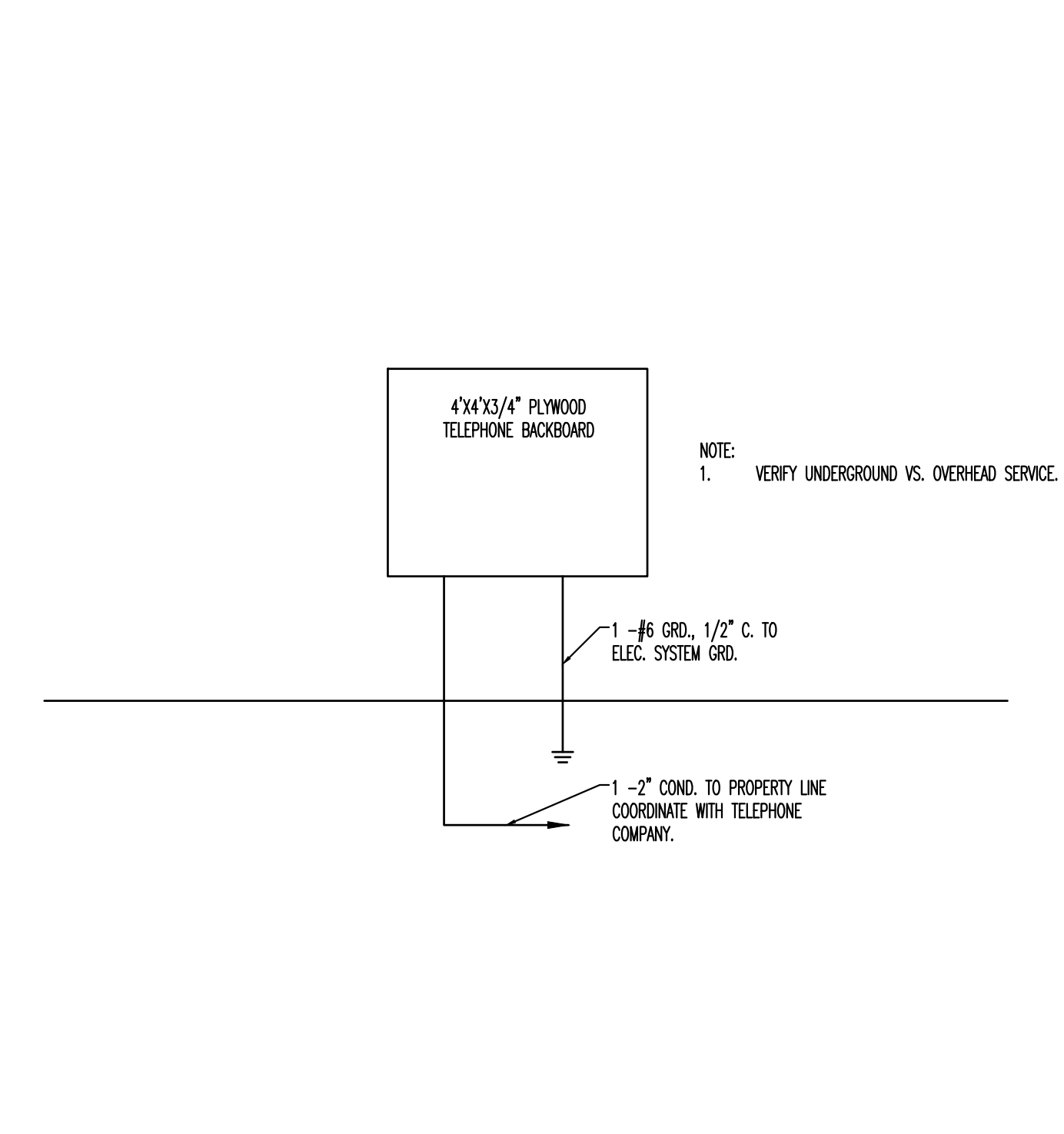
WALL OCCUPANCY SENSOR WIRING-NO SCALE 2



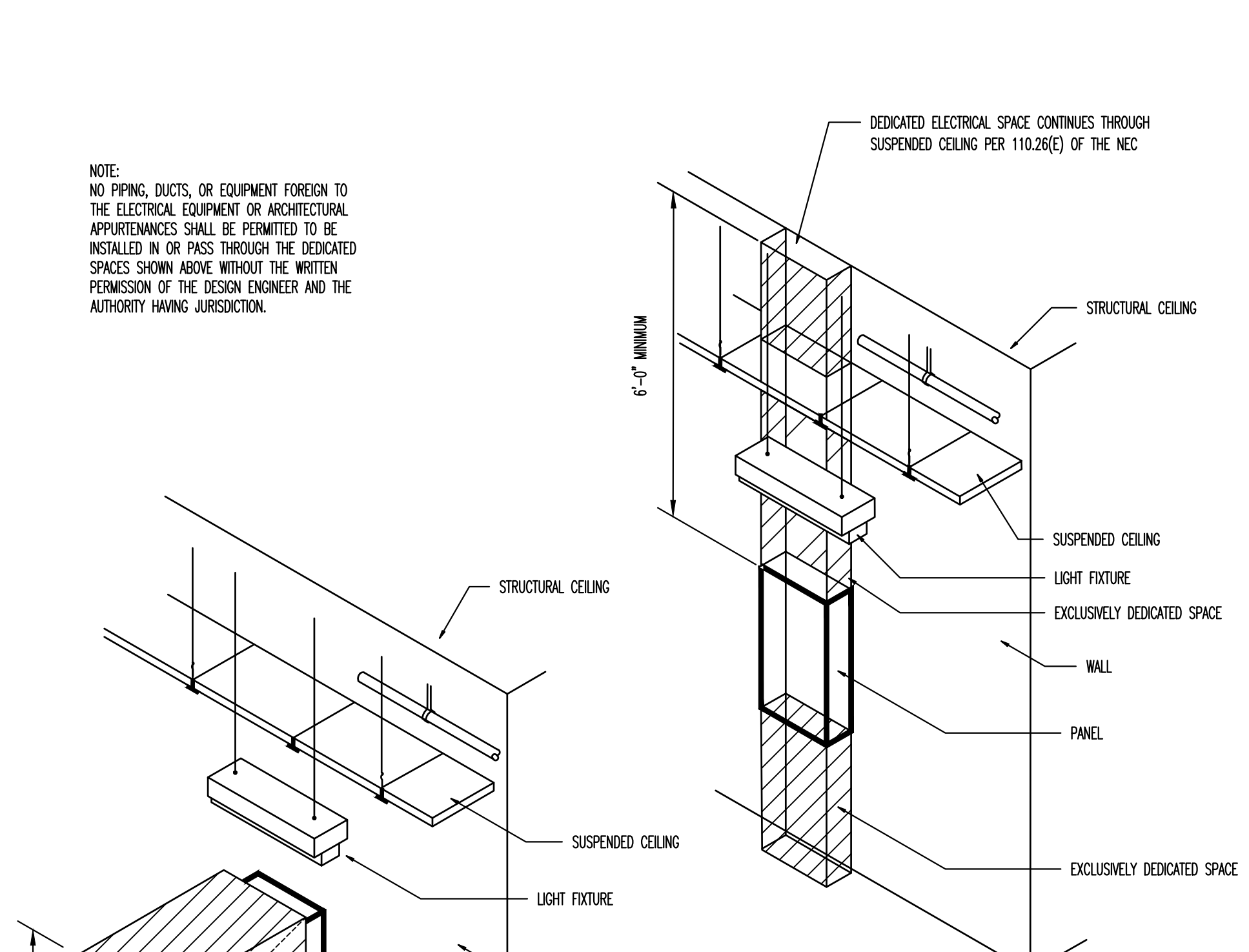
EQUIPOTENTIAL BONDING GRID DETAIL (BY OTHERS) - NO SCALE 3



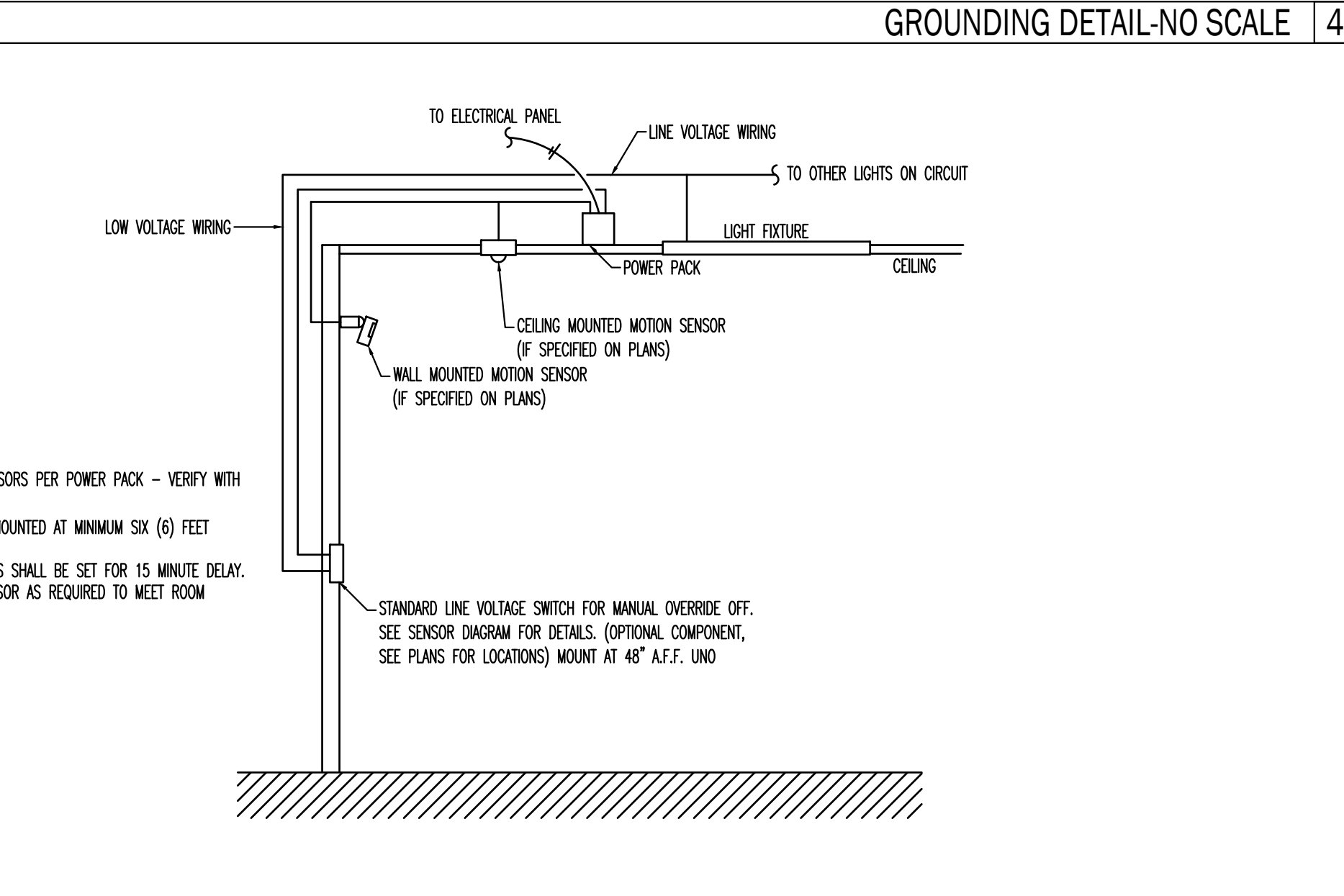
GROUNDING DETAIL-NO SCALE 4



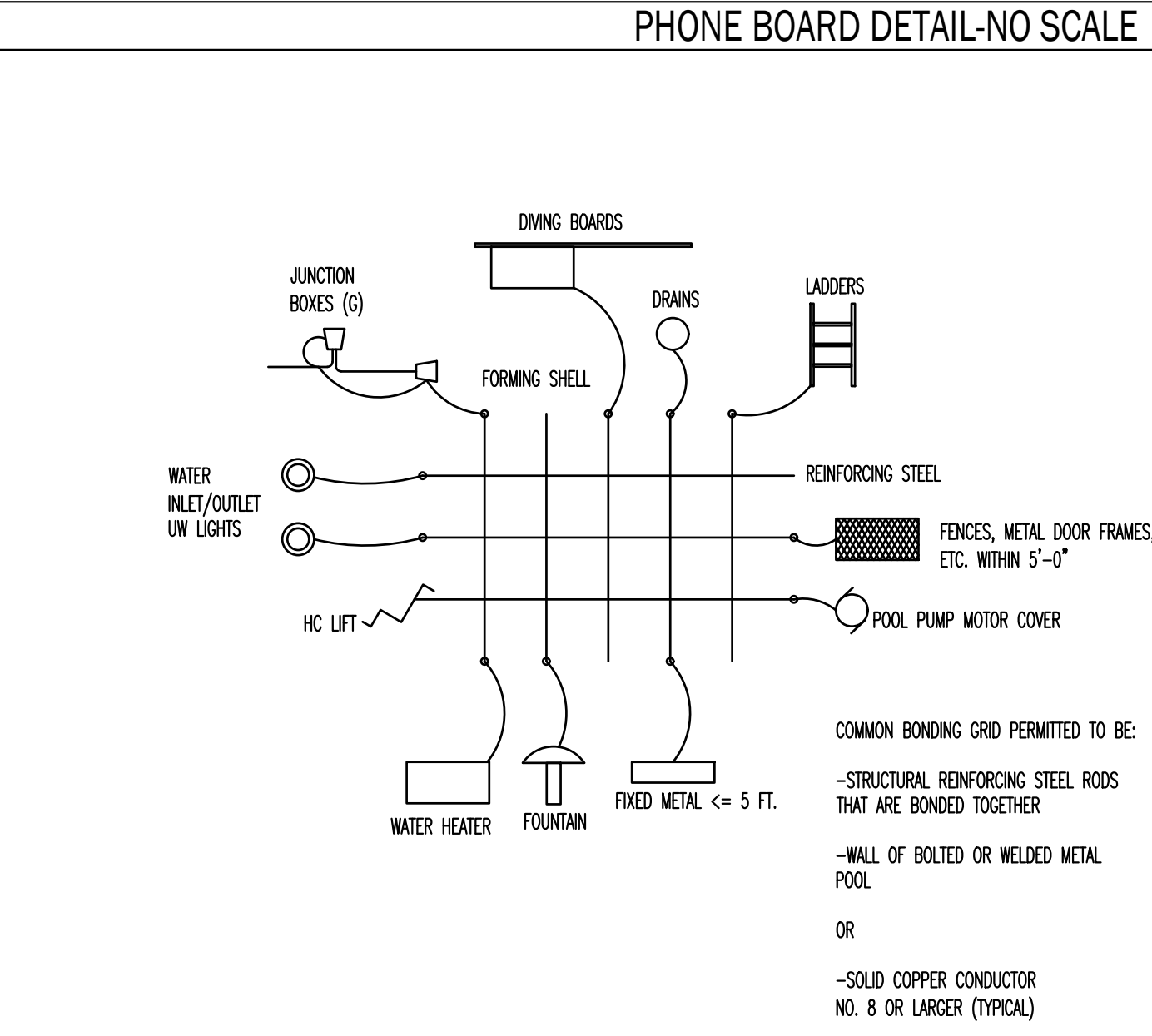
PHONE BOARD DETAIL-NO SCALE 5



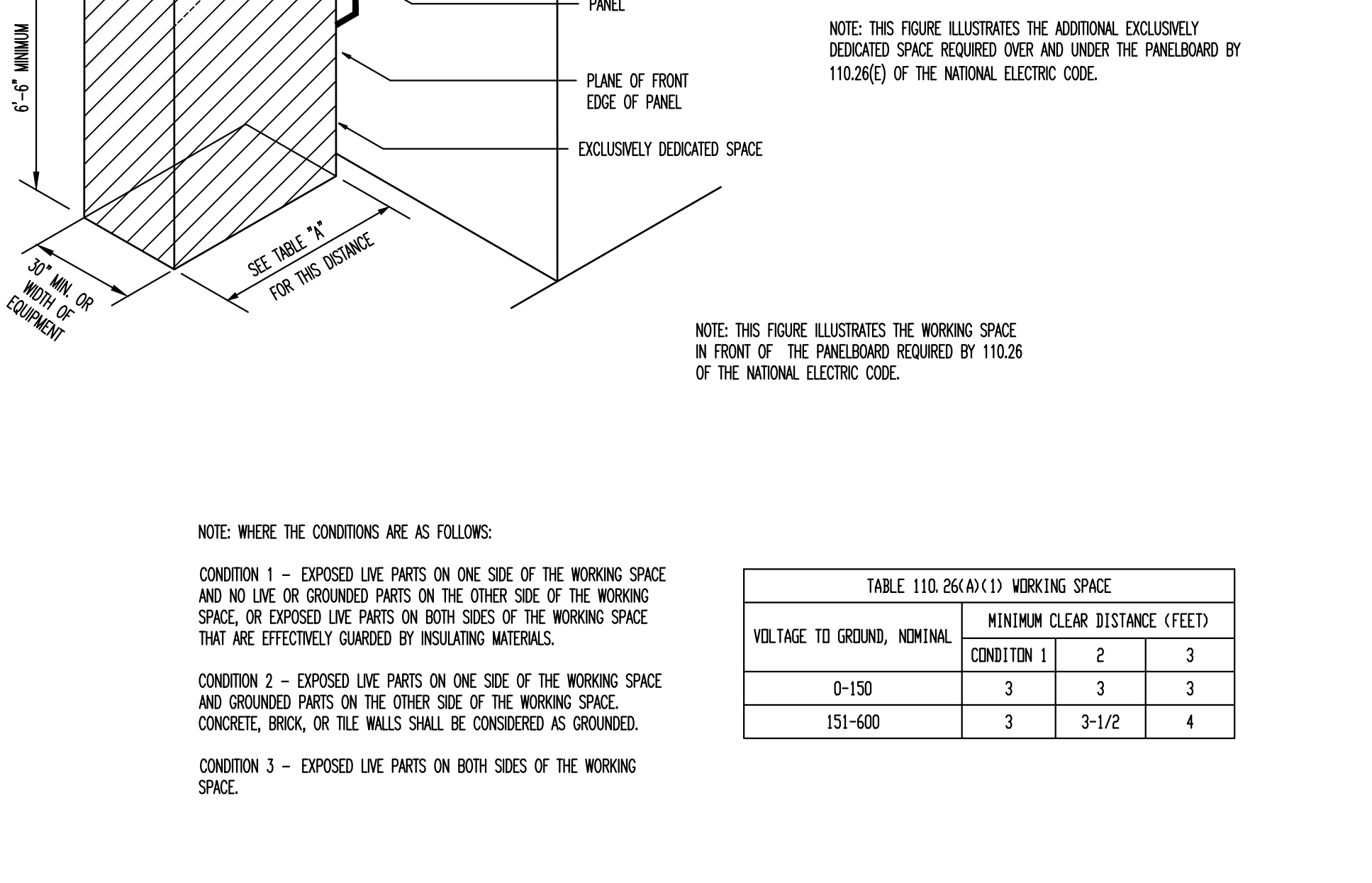
REQUIRED CLEARANCES-NO SCALE 8



TYPICAL MOTION SENSOR DIAGRAM WITH LINE VOLTAGE SWITCH-NO SCALE 6

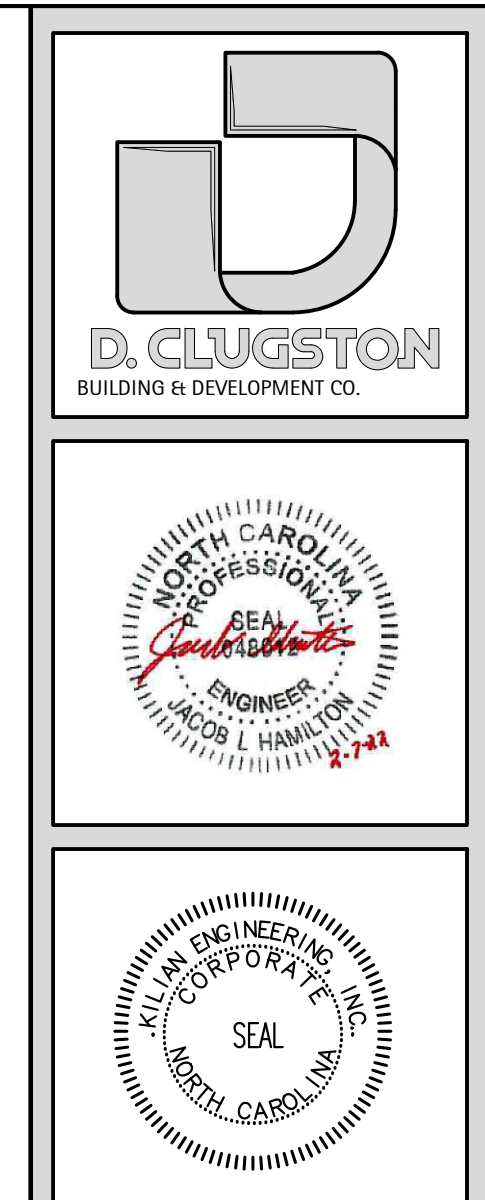


SWIMMING POOL BONDING RISER (BY OTHERS) - NO SCALE 7



NOTE: WHERE THE CONDITIONS ARE AS FOLLOWS:

- CONDITION 1 - EXPOSED LIVE PARTS ON ONE SIDE OF THE WORKING SPACE AND NO LIVE OR GROUNDING PARTS ON THE OTHER SIDE OF THE WORKING SPACE, OR EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORKING SPACE THAT ARE EFFECTIVELY GUARDED BY INSULATING MATERIALS.
- CONDITION 2 - EXPOSED LIVE PARTS ON ONE SIDE OF THE WORKING SPACE AND GROUNDING PARTS ON THE OTHER SIDE OF THE WORKING SPACE. CONCRETE, BRICK, OR TILE WALLS SHALL BE CONSIDERED AS GROUNDING.
- CONDITION 3 - EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORKING SPACE.



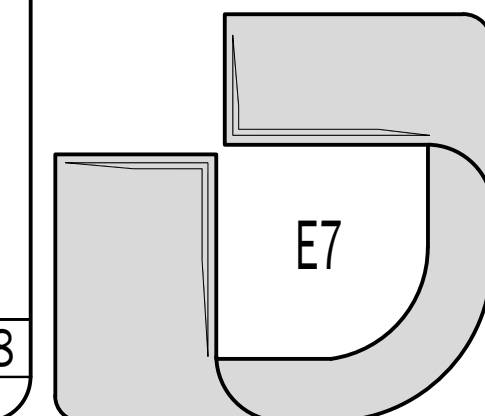
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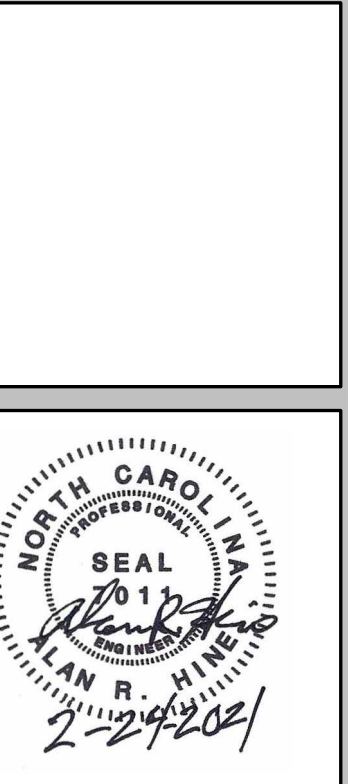
NO.	REVISION	DATE
1	CODE COMMENTS	2-7-2022

SHEET DESCRIPTION
ELECTRICAL DETAILS

PROJECT #: 20442
 DATE ISSUED: 10-23-2020
 DRAWING BY: DBAS
 CHECKED BY: MWJ/JLH

SERENITY AMENITY
 GREENFIELD COMMUNITIES
 CLUBHOUSE & POST OFFICE
 FUQUAY-VARINA, NC





Hines Aquatic Engineering
 PLLC P-1455
 Alan Hines, P.E.
 405 Willowcrest Dr.
 Winston-Salem, NC 27107
 Phone & Fax: (336) 760-4900

POOL EQUIPMENT SCHEDULE

TAG	COUNT	MANUFACTURER	MODEL	COMMENTS
1	3	PENTAIR	XFE-20	5 HP SELF-PRIMING PUMPS W/ STRAINER BASKET + EXTRA BASKET
2	4	PENTAIR	TR-140C	36" DIA HIGH RATE SAND FILTER W/ 7.06 SF OF MEDIA
3	4	PENTAIR	PAC-06-3080	3" PUSH PULL BACKWASH VALVE
4	1	VERSACHLOR	SYSTEM 3	CALCIUM HYPOCHLORITE TABLET CHLORINATION SYSTEM
5	1	BLUE-WHITE	F-30600F	6" COMMERCIAL FLOWMETER
6	2	AQUASTAR	12"10101D	12" x 12" ANTI-ENTRAPMENT SUCTION OUTLET COVER W/ 4" SOCKET DEEP PVC SUMP
7	2	HAYWARD	WC10338HF	18" x 18" ANTI-ENTRAPMENT SUCTION OUTLET COVER W/ DEEP PVC SUMP
8	2	AQUASTAR	HVC101	SELF-CONTAINED HYDROSTATIC VALVE ASSEMBLY
9	16	AQUASTAR	SKR101	COMMERCIAL SKIMMER - WHITE
10	2	AQUASTAR	ES1022S12001 W/ VLK15T01	VACUUM LINE FITTING W/ LOCK CAP
11	8	AQUASTAR	ES1022S12001 W/ BP101	RETURN FLOOR INLETS - DIRECTIONAL W/ BUBBLER PLATE (15 GPM DESIGN RATE)
12	7	PENTAIR	542044	ANTI-WAVE CUP ROPE ANCHOR - ANTI-WAVE BY HOA
13	2	AQUASTAR	4DIV101 / DIV101	4" ADJUSTABLE FLOOR RETURN FITTING W/ WATER STOP
14	22	AQUASTAR	ES1022S12001 W/ 4101	RETURN WALL FITTING W/ EYEBALL FITTING
15	1	AQUASTAR	GDD101	OVERFLOW DRAIN TO DAYLIGHT
16	8	PENTAIR	LIGHT - 601307	400 W EQUIVALENT INTELLIBRITE LED LOW VOLTAGE LIGHT
17	1	AQUASTAR	AFB101	AQUALEVEL - AUTOFILL LINE - WHITE
18	2	INTERMATIC	PJBSX2100	COMBO CONNECT JUNCTION BOX W/ 100 W TRANSFORMER
19	1	NATURAL STRUCTURES	1800-17-96	7" - 6" DIA MUSHROOM FEATURE (200 GPM AT 3" DIA) - BLUE CAP
20	2	SR SMITH	F4H - 100S - MG	MARINE GRADE DECK MOUNTED ADA HAND RAILS - 24" INSIDE CLEAR SPACE
21	3	SR SMITH	F4H-100- MG / 25578-000-000	MARINE GRADE HANDRAILS - W/ RECESSED STEPS
22	7	SR SMITH	DMS-101B - MG	MARINE GRADE DECK MOUNTED HANDRAILS
HC	1	SR SMITH	MULTI-LIFT	ADA COMPLIANT MULTILIFT WITH FOLDING SEAT

POOL SAFETY REQUIREMENTS

PROVIDE SAFETY PROVISIONS PER SECTION .2530. THE MINIMUM BEING:

- 12" LONG (MINIMUM) METAL POLE WITH A BODY HOOK SECURELY ATTACHED. THE POLE SHALL BE NON-TELESCOPING, NON-ADJUSTABLE & NON-COLLAPSIBLE.
- MINIMUM 1/4" DIA THROWING ROPE AS LONG AS 1-1/2 TIMES THE MAX WIDTH OF THE POOL OR 50', WHICHEVER IS LESS, ATTACHED TO A U.S. COAST GUARD APPROVED RING BUOY.
- TWO UNITS OF LIFESAVING EQUIPMENT MUST BE PROVIDED FOR ANY POOL THAT EXCEEDS 3,000 SQ FT (186 SQ M) OF TOTAL SURFACE AREA.

EMERGENCY TELEPHONE SERVICE:

- TELEPHONE CAPABLE OF DIRECTLY DIALING 911 OR OTHER EMERGENCY NOTIFICATION SYSTEM SHALL BE PROVIDED AND ACCESSIBLE TO ALL POOL USERS.
- THE TELEPHONE SHALL BE PERMANENTLY AFFIXED TO A LOCATION INSIDE THE POOL ENCLOSURE OR OUTSIDE THE ENCLOSURE WITHIN 75' OF THE BATHER ENTRANCE.
- THE TELEPHONE SHALL BE VISIBLE FROM WITHIN THE POOL ENCLOSURE OR A VISIBLE SIGN SHALL BE POSTED INDICATING THE LOCATION OF THE EMERGENCY PHONE.
- AT THE TELEPHONE - PROVIDE A SIGN WITH LEGIBLE LETTERS PROVIDING THE FOLLOWING INFORMATION.
 - DIALING INSTRUCTIONS
 - ADDRESS OF THE POOL LOCATION
 - TELEPHONE NUMBER OF THE POOL LOCATION.

SEE POOL HOUSE PLANS BY OTHERS FOR EXACT LOCATION OF THE TELEPHONE SERVICE.

POOL DECK EXIT REQUIREMENTS

POOL DECK AREA - 8,219 SF @ 15 SF PER PERSON
 DECK OCCUPANT LOAD IS 548.

POOL AREA IS 5,945 SF @ 50 SF PER PERSON,
 POOL OCCUPANT LOAD IS 119.

TOTAL OCCUPANT LOAD OF 667 * 0.2 EQUAL
 133.4 INCHES REQUIRED. 144" SHOWN ON PLAN.

REQ'D EXIT SEPARATION - 168' 0" / 2 = 84' 0"
 105' 8" SHOWN ON PLANS.

BUILDING FIXTURE DATA

TOTAL BATHER LOAD = 5945/15 = 396 PERSONS
 (50% - 50% SPLIT) = 198 PERSONS

CLUBHOUSE & PUMP HOUSE REQUIREMENTS:
 MINIMUM FIXTURE REQUIREMENTS ARE:

198 MEN
 - 2 LAVATORIES
 - 2 WATER CLOSET(S)
 - 2 URINAL(S)

198 WOMEN
 - 3 LAVATORIES
 - 3 WATER CLOSET(S)
 2 SHOWERS ARE REQUIRED

SEE ARCHITECTURAL PLANS BY OTHERS FOR RESTROOM LOCATION & LAYOUTS

POOL DESIGN NOTES

- SEE PLANS BY OTHERS FOR CONSTRUCTION OF BATHHOUSE, PUMP & CHEMICAL STORAGE ROOMS, SITE WORK, ETC.
- POOL IS DESIGNED FOR DAWN TO DUSK SWIMMING ONLY

MAIN POOL DATA

POOL DIMENSIONS:	85'-3" X 94'-9" OVERALL IRREGULAR SHAPE.
POOL DEPTHS:	9" SHELF W/ 3'-5"
POOL VOLUME:	149,057 GALLONS
SURFACE AREA:	5,945 SQ.FT.
PERIMETER:	355 LF
COPING:	BULLNOSE INDEPENDENT
TOTAL FLOW:	414 GPM @ 65 TDH
SHELL MATERIAL:	4000 PSI SHOTCRETE
INTERIOR FINISH:	QUARTZ PLASTER
BATHER LOAD:	396 PERSONS
BACKWASH TO:	STORM SEWER
WATER SOURCE:	IN-LINE AUTOFILL
PIPE SIZING:	
MAIN DRAINS:	(4) 6" SCH 40 PVC
SKIMMERS:	(16) 4" SCH 40 PVC
VACUUM LINE:	(2) 2" SCH 40 PVC
INLETS:	(23) 6" SCH 40 PVC
FILTER TYPE:	HIGH RATE SAND
SIZE PROVIDED:	4 @ 7.06 SF (EA) = 28.24
SIZE REQUIRED:	27.82 SF TOTAL
MEDIA CIRC. RATE:	20 GPM/SF
BACKWASH RATE:	20 GPM/SF
TURNOVER RATE:	6 HOURS

POOL DECK MARKINGS

DEPTH MARKINGS: IN LOCATIONS AS SHOWN ON THE DRAWINGS AND ADHERING TO THE FOLLOWING:

- LOCATED ON TOP OF POOL DECK AND AT OR ABOVE THE WATER SURFACE ON THE VERTICAL WALL
- SHALL BE IN ARABIC NUMERALS AT LEAST 4" HIGH AND OF A COLOR CONTRASTING W/ THE BACKGROUND.
- MARKINGS SHALL INDICATE THE DEPTH OF THE POOL IN FEET AND SHALL INCLUDE THE WORD "FEET" OR THE SYMBOL "FT" TO INDICATE THE UNIT OF MEASUREMENT. MARKINGS IN POOL DECK SHALL PROVIDE A SLIP RESISTANT WALKING SURFACE.
- NOT TO EXCEED 25'-0" IN SPACING ALONG THE PERIMETER OF THE POOL.
- "NO DIVING" MARKINGS: IN LOCATIONS AS SHOWN ON THE DRAWINGS AND ADHERING TO THE FOLLOWING:
 - NOT TO EXCEED 25'-0" IN SPACING. ALONG COPING EDGE. DENOTED IN ONE OF THE FOLLOWING MANNERS:
 - CONSISTING OF THE WORDS "NO DIVING" IN LETTERS AT LEAST 4" HIGH AND OF A COLOR CONTRASTING WITH THE BACKGROUND.
 - AT LEAST A 6"x6" IN SIZE INTERNATIONAL SYMBOL FOR NO DIVING IN RED AND BLACK ON A WHITE BACKGROUND. (VERIFY WITH MANICPALITY)

POOL DECK SIGNAGE REQUIREMENTS

POOL SIGNAGE TO BE POSTED IN THE MAIN POOL AREA:

SIGN "A" - 4" TALL LETTERS WARNING - NO LIFEGUARD ON DUTY

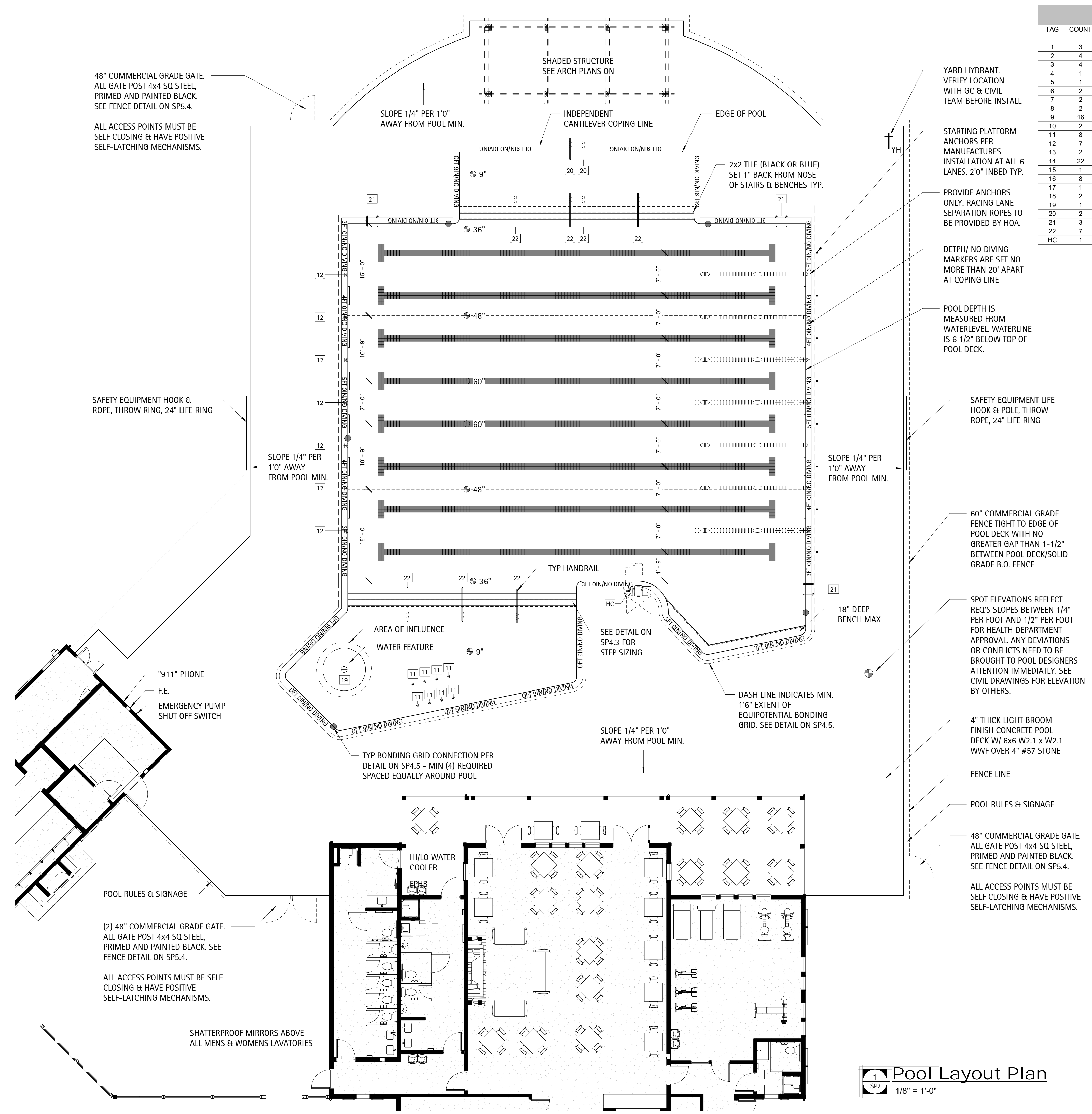
SIGN "B" - 1" TALL LETTERS - A MIN. OF (2) THIS PROJECT

POOL SAFETY RULES

- CHILDREN SHOULD NOT USE THE SWIMMING POOL WITHOUT ADULT SUPERVISION.
- ADULTS SHOULD NOT SWIM ALONE.
- PETS ARE PROHIBITED IN THE POOL AREA.
- GLASS CONTAINERS ARE PROHIBITED IN THE POOL AREA.
- NO DIVING IS ALLOWED IN POOL AREA

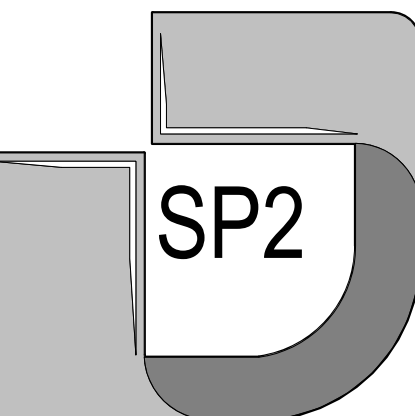
SIGN "C" - PROVIDE A SIGN VISIBLE UPON ENTERING THE POOL ENCLOSURE DIRECTING POOL USERS TO SHOWER BEFORE ENTERING THE POOL.

SIGN "D" - PROVIDE A SIGN STATING "POOL CLOSED" FOR EVERY POOL ENTRANCE. VERIFY WITH FINAL POOL ENCLOSURE DESIGN FOR FINAL NUMBER OF ENTRANCES.



1 SP2 Pool Layout Plan
 1/8" = 1'-0"

SERENITY AMENITY
 GREENFIELD COMMUNITIES
 CLUBHOUSE PLANS
 Fuquay-Varina, NC



DATE	REVISION	NO.

SHEET DESCRIPTION

Pool Piping & Electrical Plan

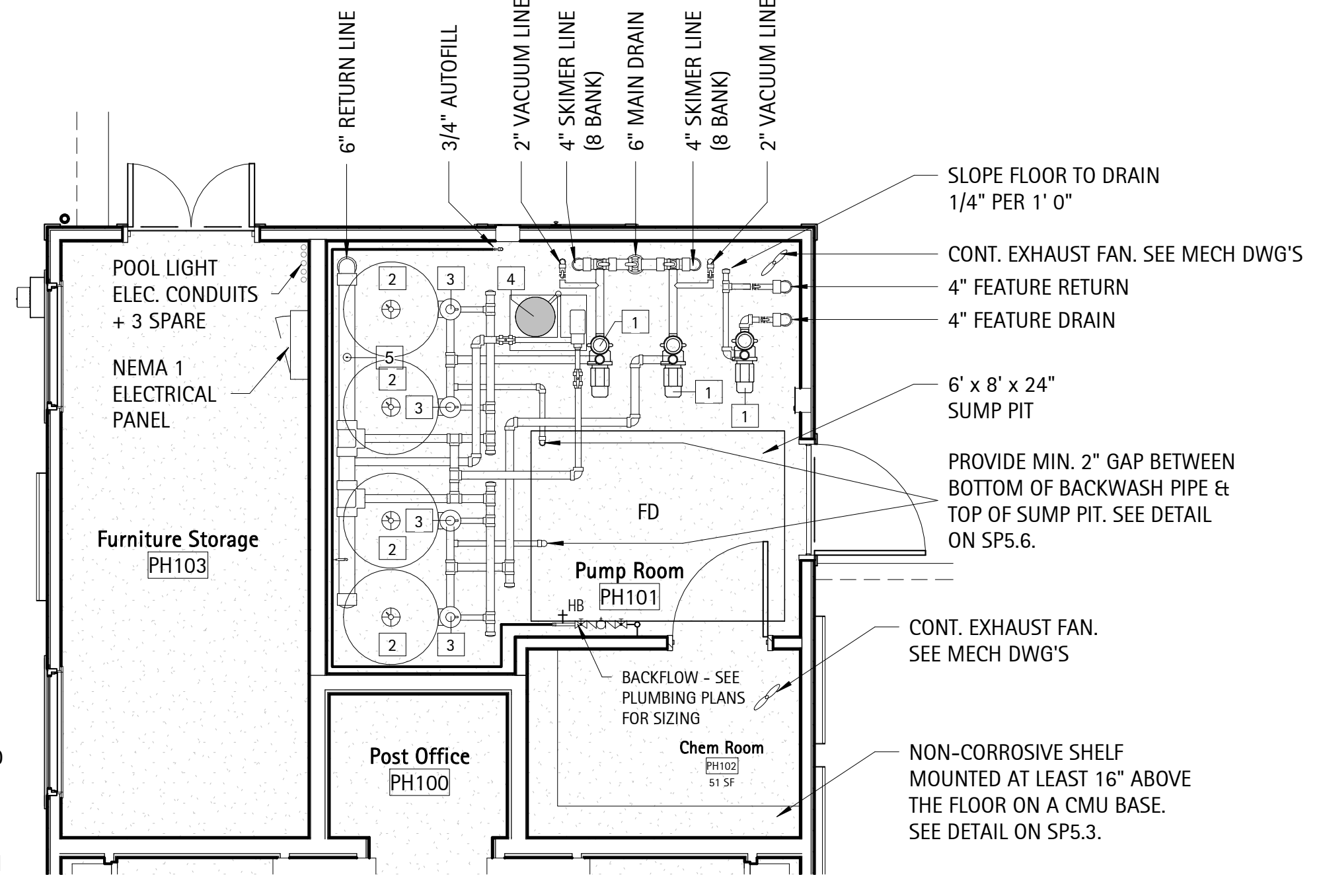
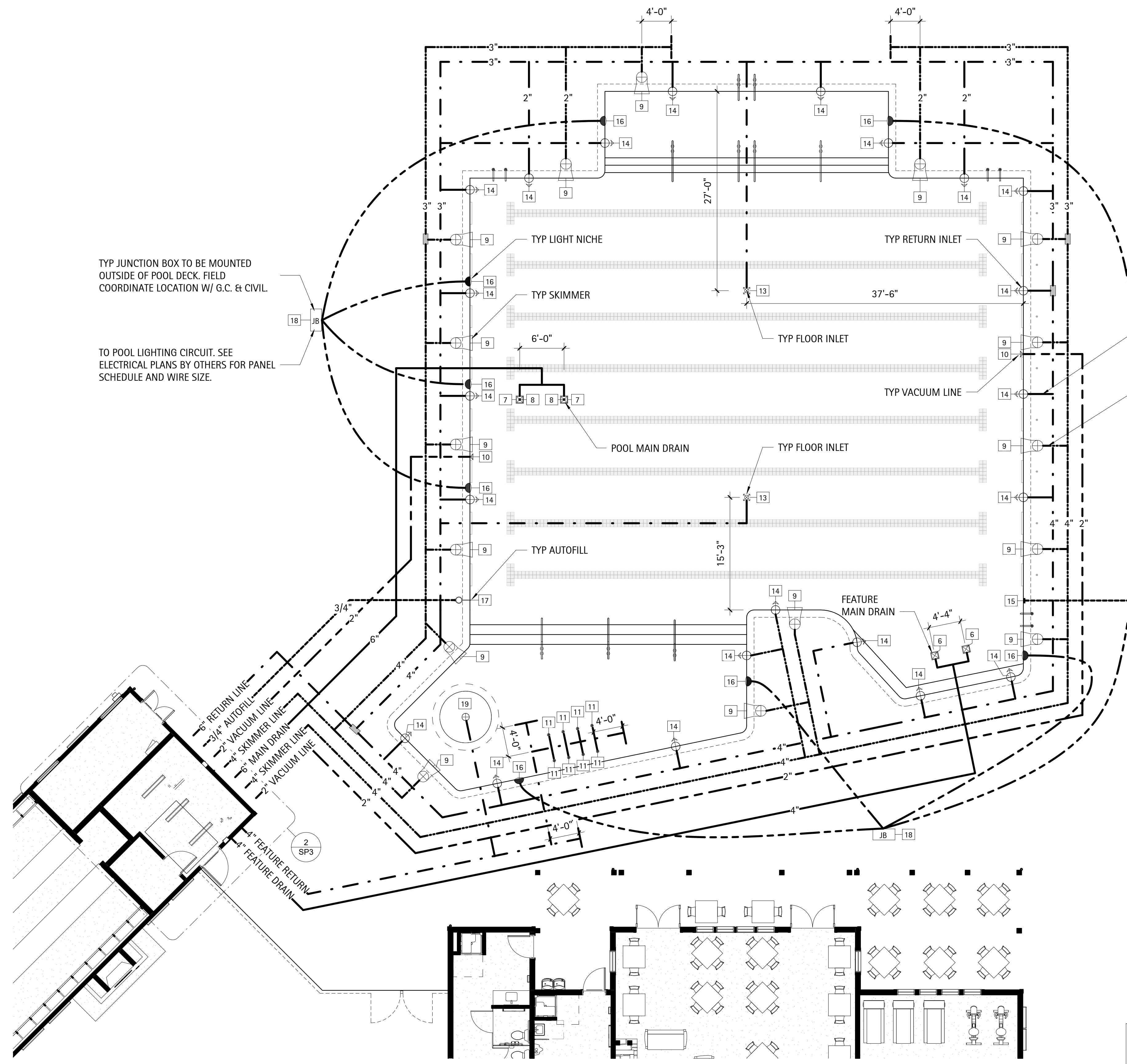
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GREENFIELD COMMUNITIES
CLUBHOUSE PLANS**

Fuquay-Varina, NC

POOL EQUIPMENT SCHEDULE

TAG	COUNT	MANUFACTURER	MODEL	COMMENTS
1	3	PENTAIR	XFE-20	5 HP SELF-PRIMING PUMPS W/ STRAINER BASKET + EXTRA BASKET
2	4	PENTAIR	TR-140C	36" DIA HIGH RATE SAND FILTER W/ 7.06 SF OF MEDIA
3	4	PENTAIR	PAC-06-3080	3" PUSH/PULL BACKWASH VALVE
4	1	VERSACHLOR	SYSTEM 3	CALCIUM HYPOCHLORITE TABLET CHLORINATION SYSTEM
5	1	BLUE-WHITE	F-306800P	6" COMMERCIAL FLOWMETER
6	2	AQUASTAR	1216101D	12" x 12" ANTI-ENTRAPMENT SUCTION OUTLET COVER W/ 4" SOCKET DEEP PVC SUMP
7	2	HAYWARD	WG1033BHF	18" x 18" ANTI-ENTRAPMENT SUCTION OUTLET COVER W/ DEEP PVC SUMP
8	2	AQUASTAR	HVC101	SELF-CONTAINED HYDROSTATIC VALVE ASSEMBLY
9	16	AQUASTAR	SKR101	COMMERCIAL SKIMMER - WHITE
10	2	AQUASTAR	ES1022S12001 W/ VLK15T01	VACUUM LINE FITTING W/ LOCK CAP
11	8	AQUASTAR	ES1022S12001 W/ BP101	RETURN FLOOR INLETS - DIRECTIONAL W/ BUBBLER PLATE (15 GPM DESIGN RATE)
12	7	PENTAIR	542044	ANTIWAVE CUP ROPE ANCHOR - ANTIWAVE BY HOA
13	2	AQUASTAR	4DIV101 / DIV0101	4" ADJUSTABLE FLOOR RETURN FITTING W/ WATER STOP
14	22	AQUASTAR	ES1022S12001 W/ 4101	RETURN WALL FITTING W/ EYEBALL FITTING
15	1	AQUASTAR	GDD101	OVERFLOW DRAIN TO DAYLIGHT
16	8	PENTAIR	LIGHT - 601307	400 W EQUIVALENT INTELLIBRITE LED LOW VOLTAGE LIGHT
17	1	AQUASTAR	AFB101	AQUALEVEL - AUTOFILL LINE - WHITE
18	2	INTERMATIC	PJBX52100	COMBO CONNECT JUNCTION BOX W/ 100 W TRANSFORMER
19	1	NATURAL STRUCTURES	1800-17-96	7" - 6" DIA MUSHROOM FEATURE (200 GPM AT 3" DIA) - BLUE CAP
20	2	SR SMITH	F4H - 100S - MG	MARINE GRADE DECK MOUNTED ADA HAND RAILS - 24" INSIDE CLEAR SPACE
21	3	SR SMITH	F4H-100 - MG / 25678-000-000	MARINE GRADE HANDRAILS - W/ RECESSED STEPS
22	7	SR SMITH	DMS-101B - MG	MARINE GRADE DECK MOUNTED HANDRAILS
HC	1	SR SMITH	MULTI-LIFT	ADA COMPLIANT MULTILIFT WITH FOLDING SEAT



Enlarged Pump Room Plan
1/4" = 1'-0"

PUMP FLOW PIPE SIZING

(2) XFE-20 (MAIN) PUMP FLOW AT 65 FT OF WATER IS 210 GPM EACH (420 TOTAL), WITH SPECIFIED:
6" MAIN DRAIN PIPING VELOCITY IS 4.66 FPS.
4" SKIMMER PIPING VELOCITY IS 5.29 FPS.
6" RETURN PIPING VELOCITY IS 4.66 FPS.

(1) XFE-20 (FEATURE) PUMP FLOW AT 65 FT OF WATER IS 210 GPM, WITH SPECIFIED:
4" MAIN DRAIN PIPING VELOCITY IS 5.29 FPS.
4" RETURN PIPING VELOCITY IS 5.29

UNDERWATER LIGHTING DATA

MAIN POOL AREA: 5,945 SQFT.
5,945 SF x 0.5 WATTS = 2,973 WATTS

LIGHTING PROVIDED (12V LED EQ.)
8 INTELLIBRITE @ 400 WATTS
TOTAL PROVIDED = 3,200 WATTS

CHEMICAL STORAGE DATA

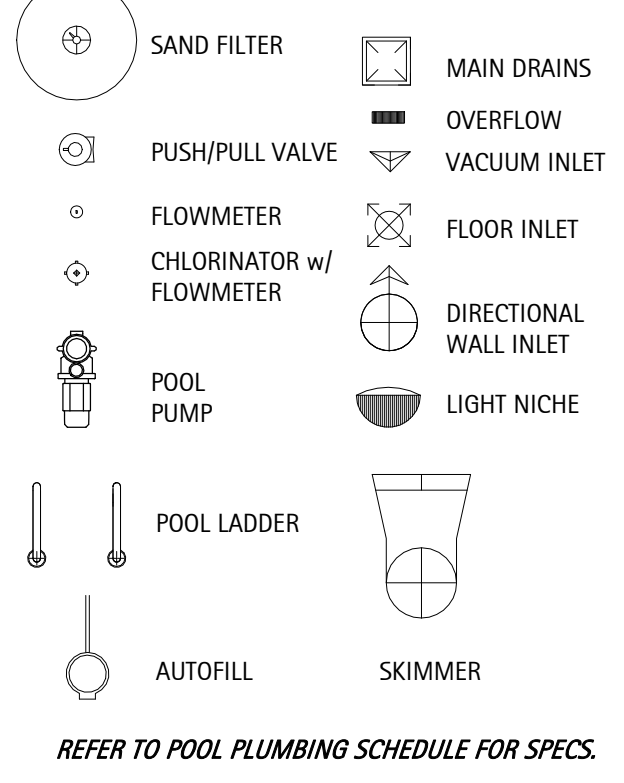
CHEMICAL STORAGE REQUIREMENTS FOR A 149,057 GALLON POOL ARE:

5 SF FOR FIRST 10,000 GALLONS OF POOL +
+1 SF FOR EACH ADDITIONAL 3,000 GALLONS OF POOL UP TO 100 SF OF STORAGE

+46 SF (1 SF PER 3,000)(139,057/3,000 = 46)

BUILDING PROVIDES MIN OF 51 SF FOR CHEMICAL STORAGE.
-SEE BUILDING PLANS BY OTHERS FOR EXACT LAYOUT. 51 SF PROV.

POOL SYMBOLS LEGEND



MAIN POOL DATA

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POOL VOLUME:	149,057 GALLONS
SURFACE AREA:	5,945 SQFT.
PERIMETER:	355 LF
COPING:	BULLNOSE INDEPENDENT
TOTAL FLOW:	414 GPM @ 65 TDH
SHELL MATERIAL:	4000 PSI SHOTCRETE
INTERIOR FINISH:	QUARTZ PLASTER
BATHER LOAD:	396 PERSONS
BACKWASH TO:	STORM SEWER
WATER SOURCE:	IN-LINE AUTOFILL

PIPE SIZING:	
MAIN DRAINS:	(4) 6" SCH 40 PVC
SKIMMERS:	(16) 4" SCH 40 PVC
VACUUM LINE:	(2) 2" SCH 40 PVC
INLETS:	(23) 6" SCH 40 PVC
FILTER TYPE:	HIGH RATE SAND
SIZE PROVIDED:	4 @ 7.06 SF (EA) = 28.24
SIZE REQUIRED:	27.82 SF TOTAL
MEDIA CIRC. RATE:	20 GPM/SF
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TURNOVER RATE:	6 HOURS

Pool Piping Plan
1/8" = 1'-0"

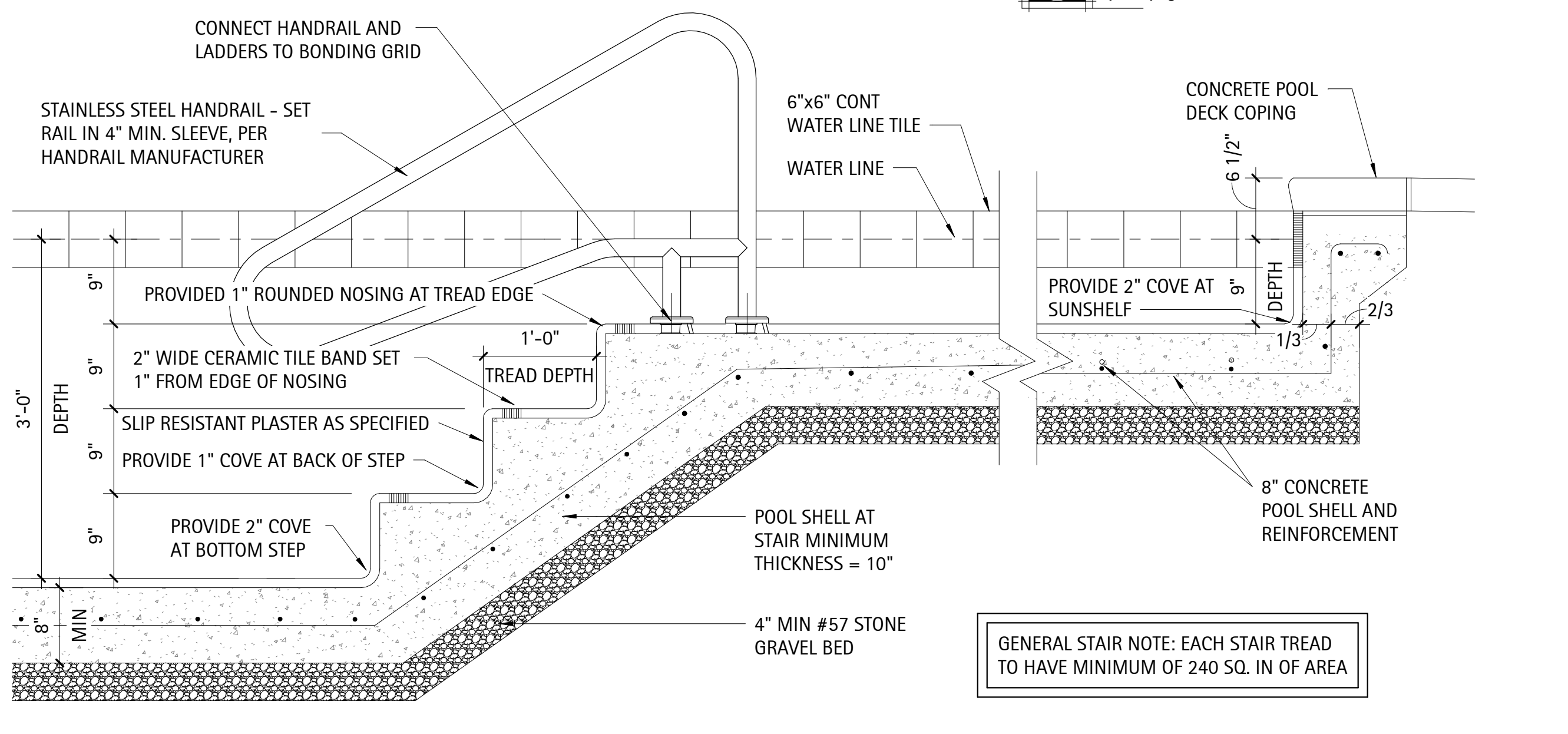
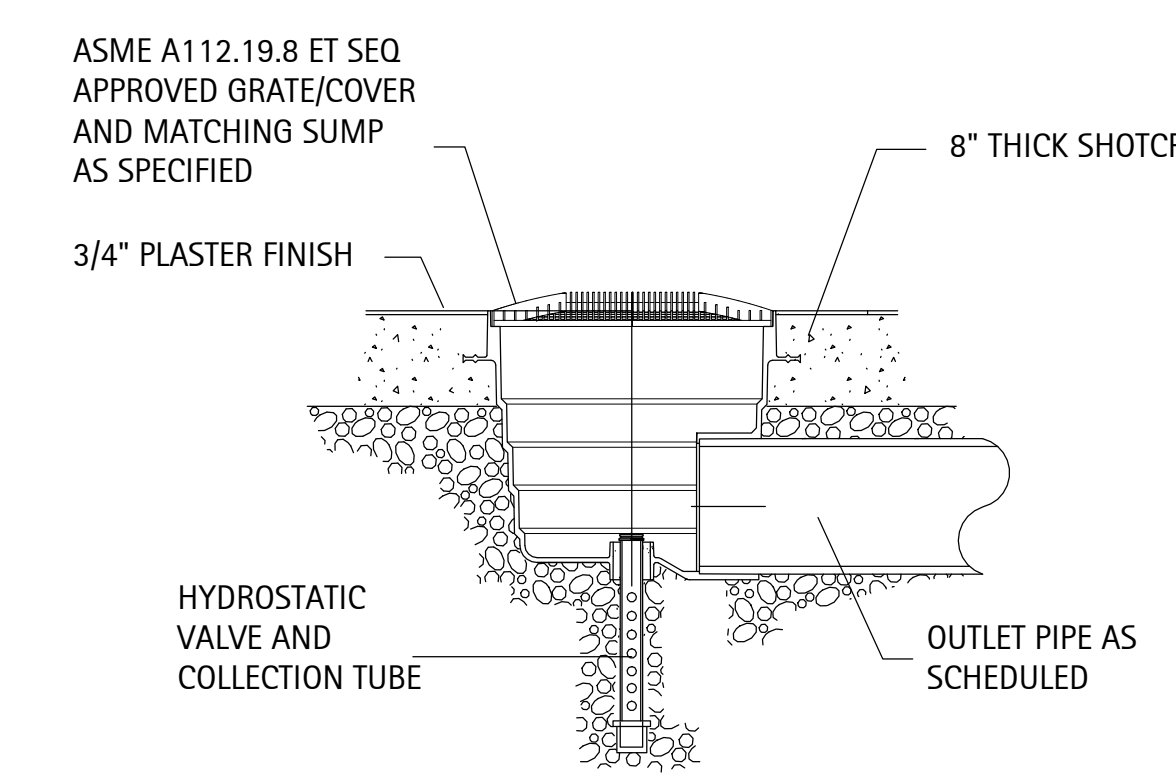
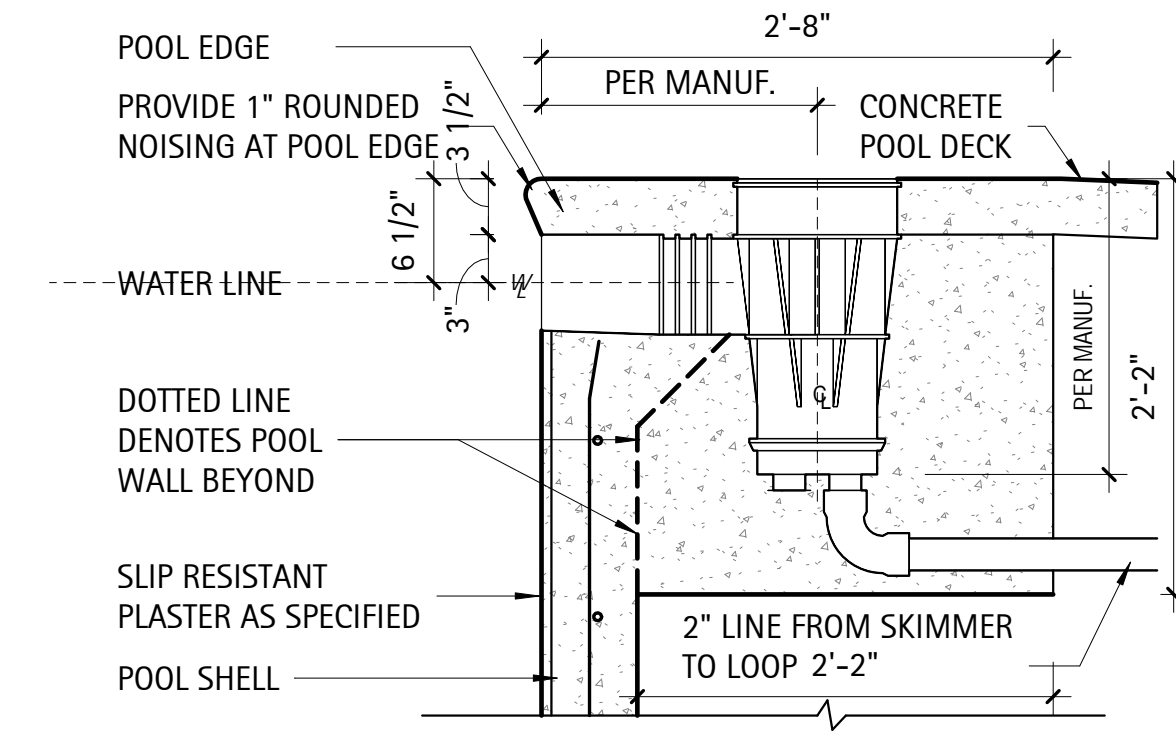
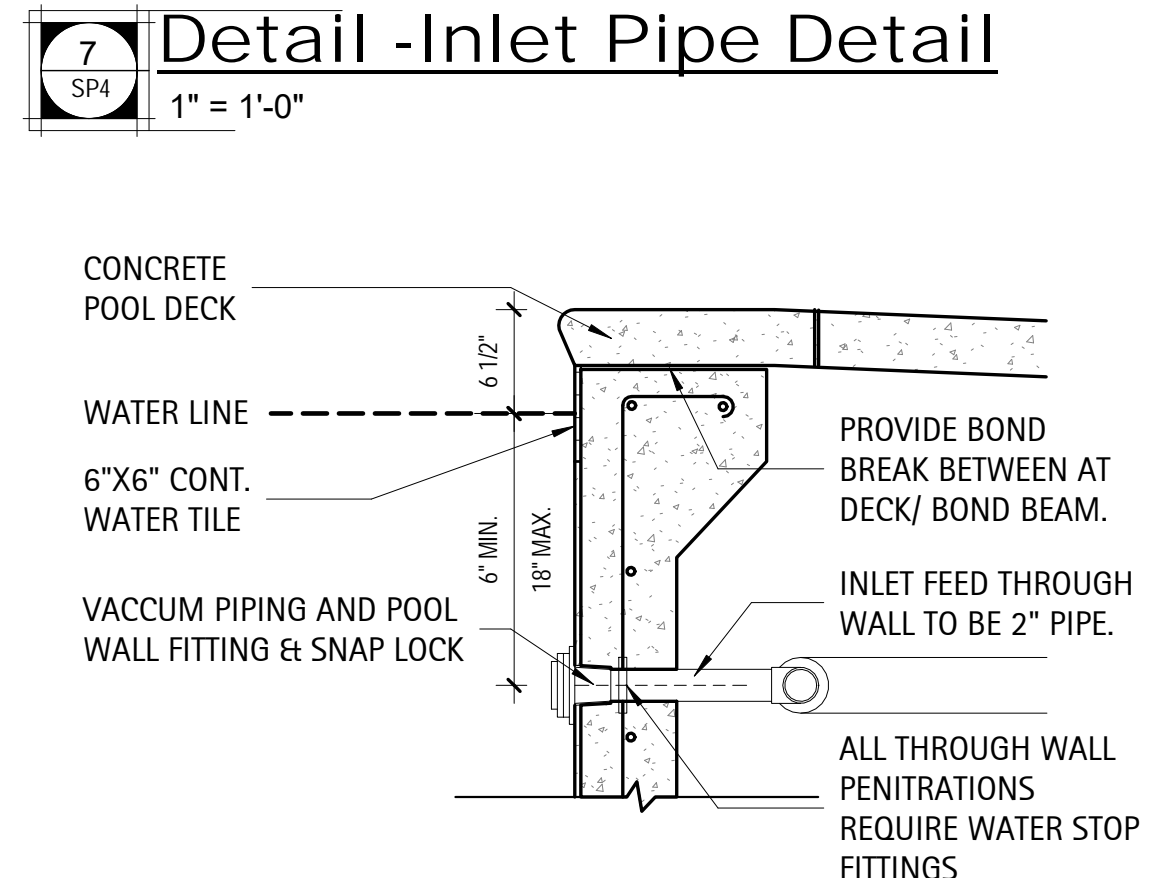
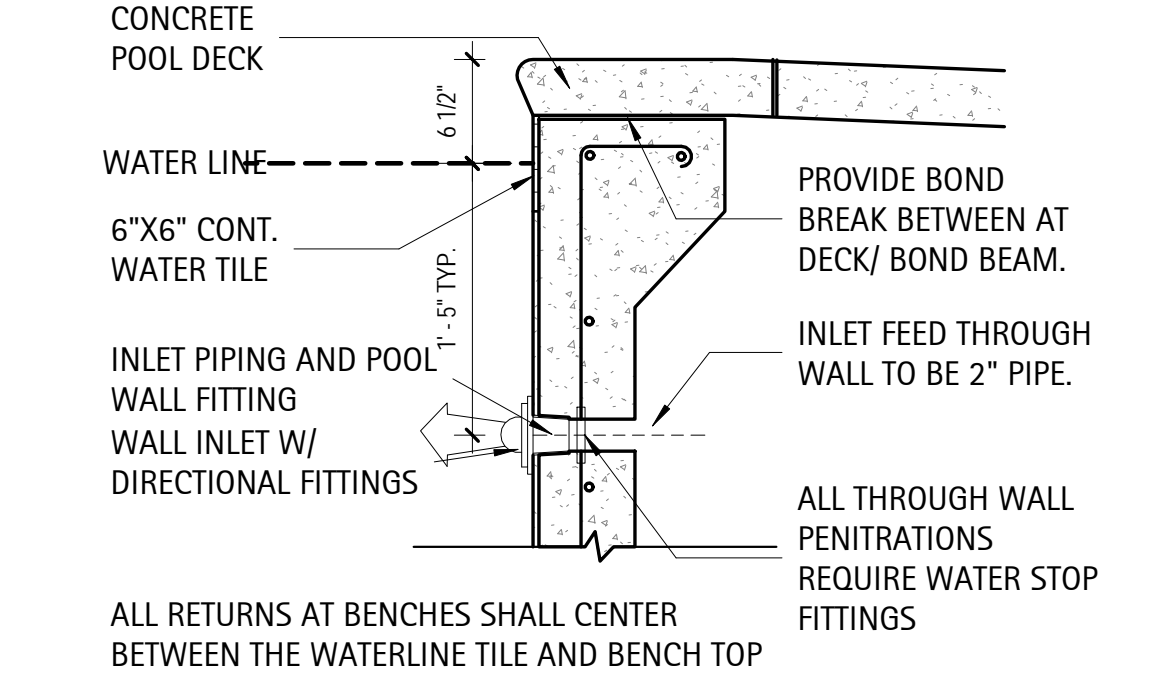
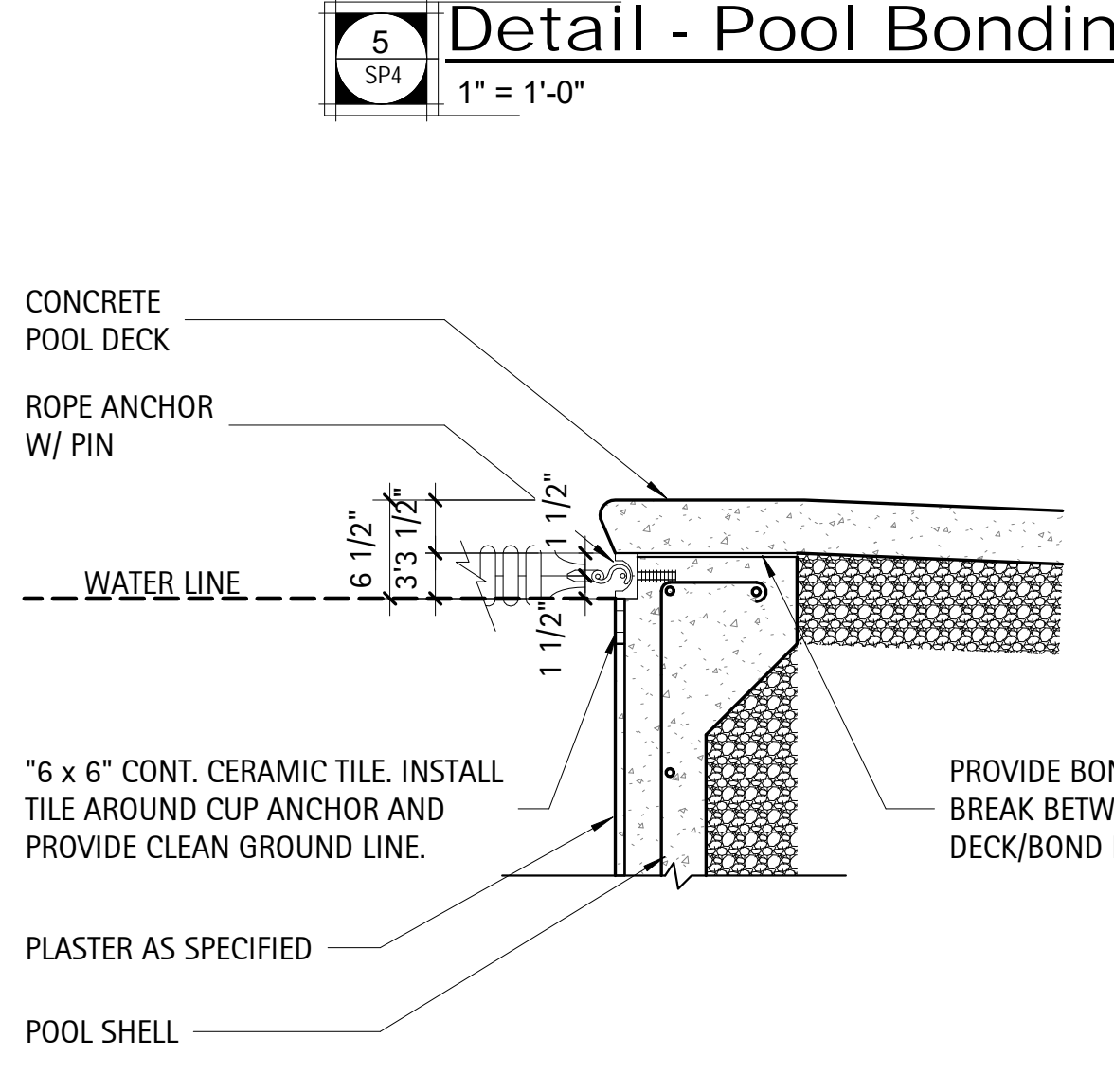
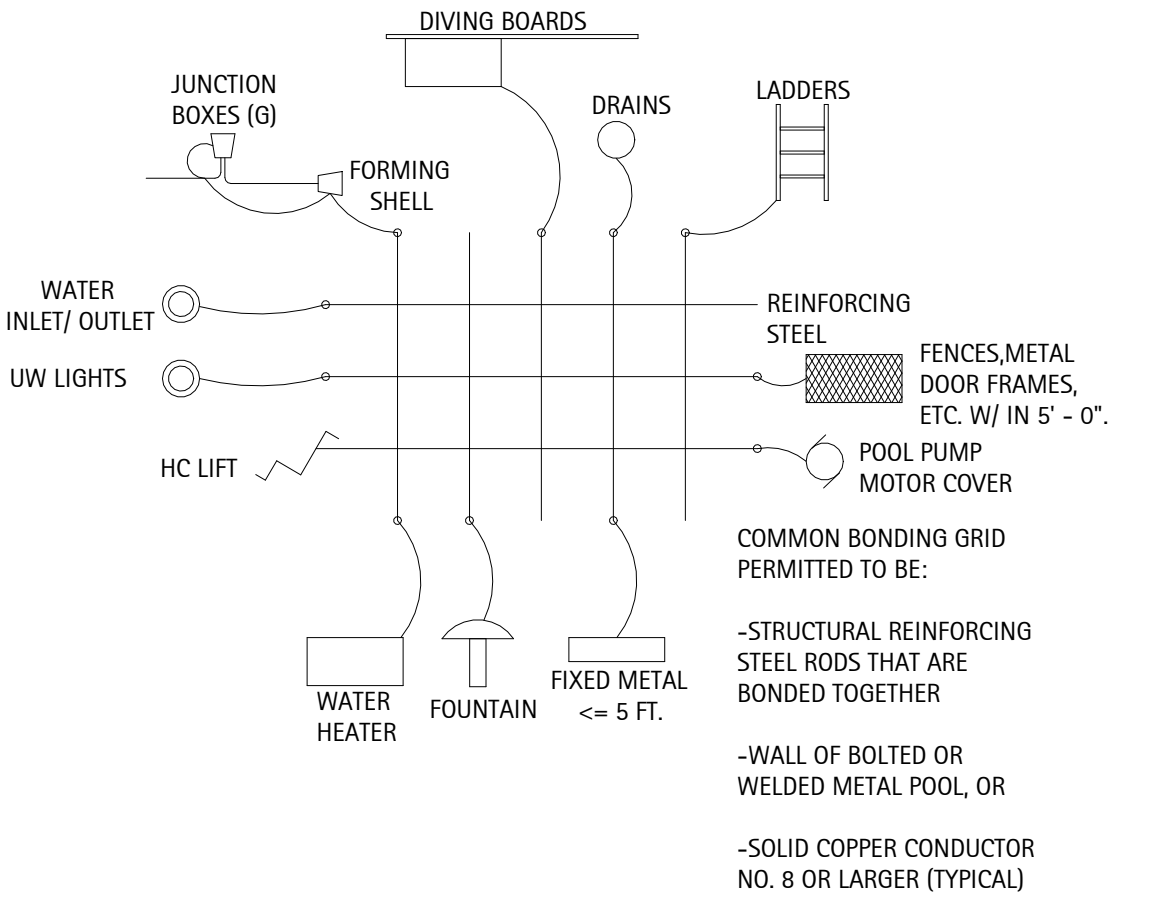
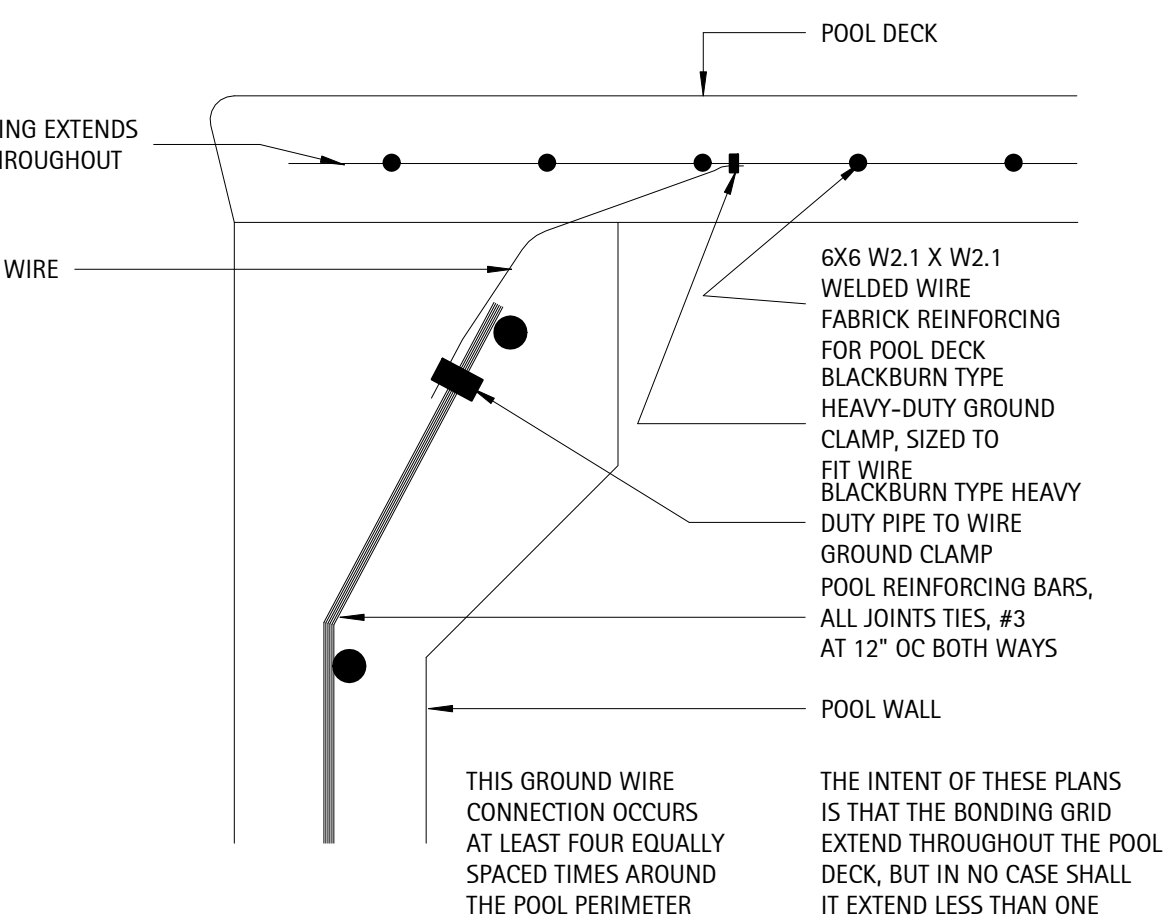
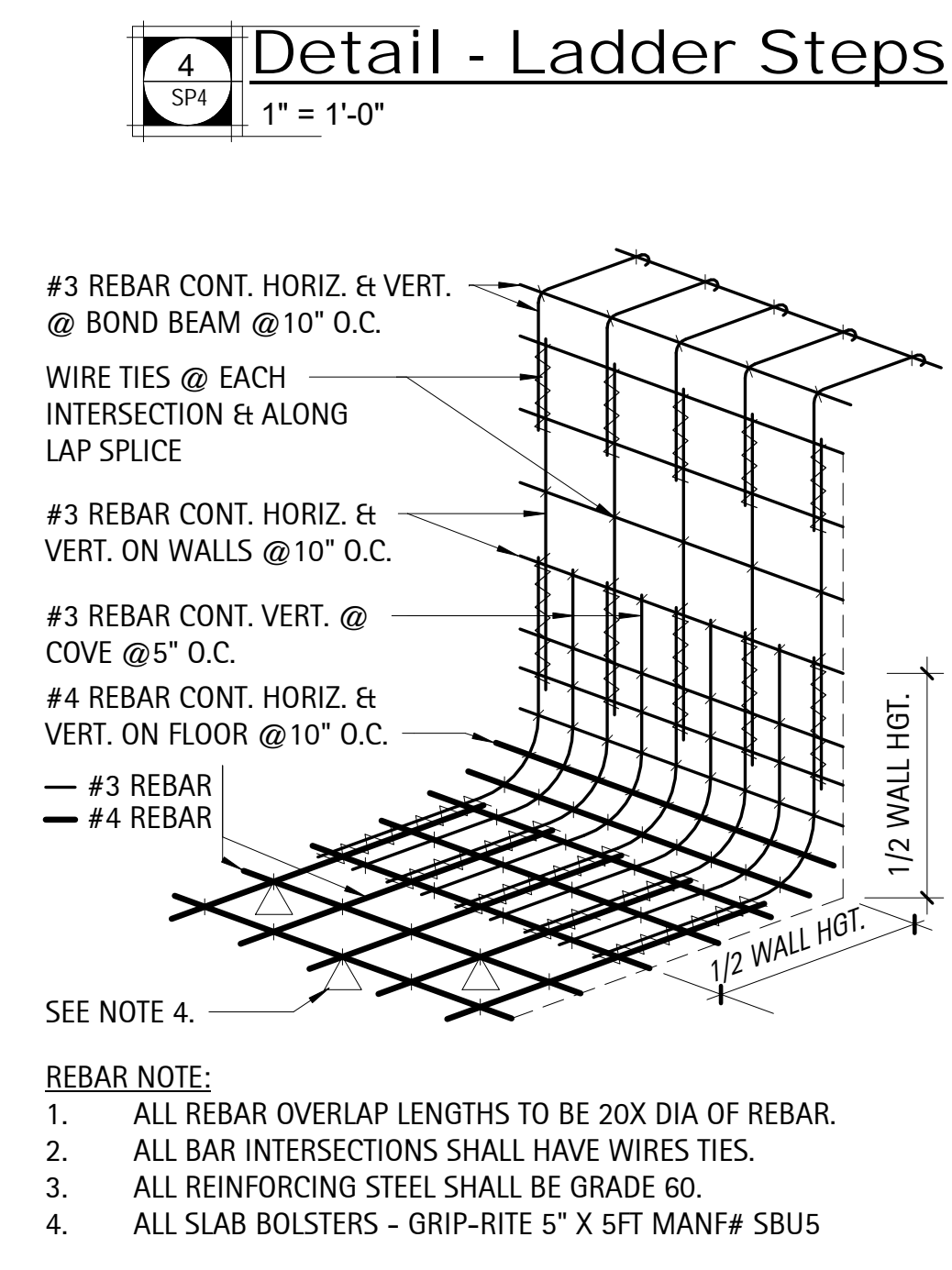
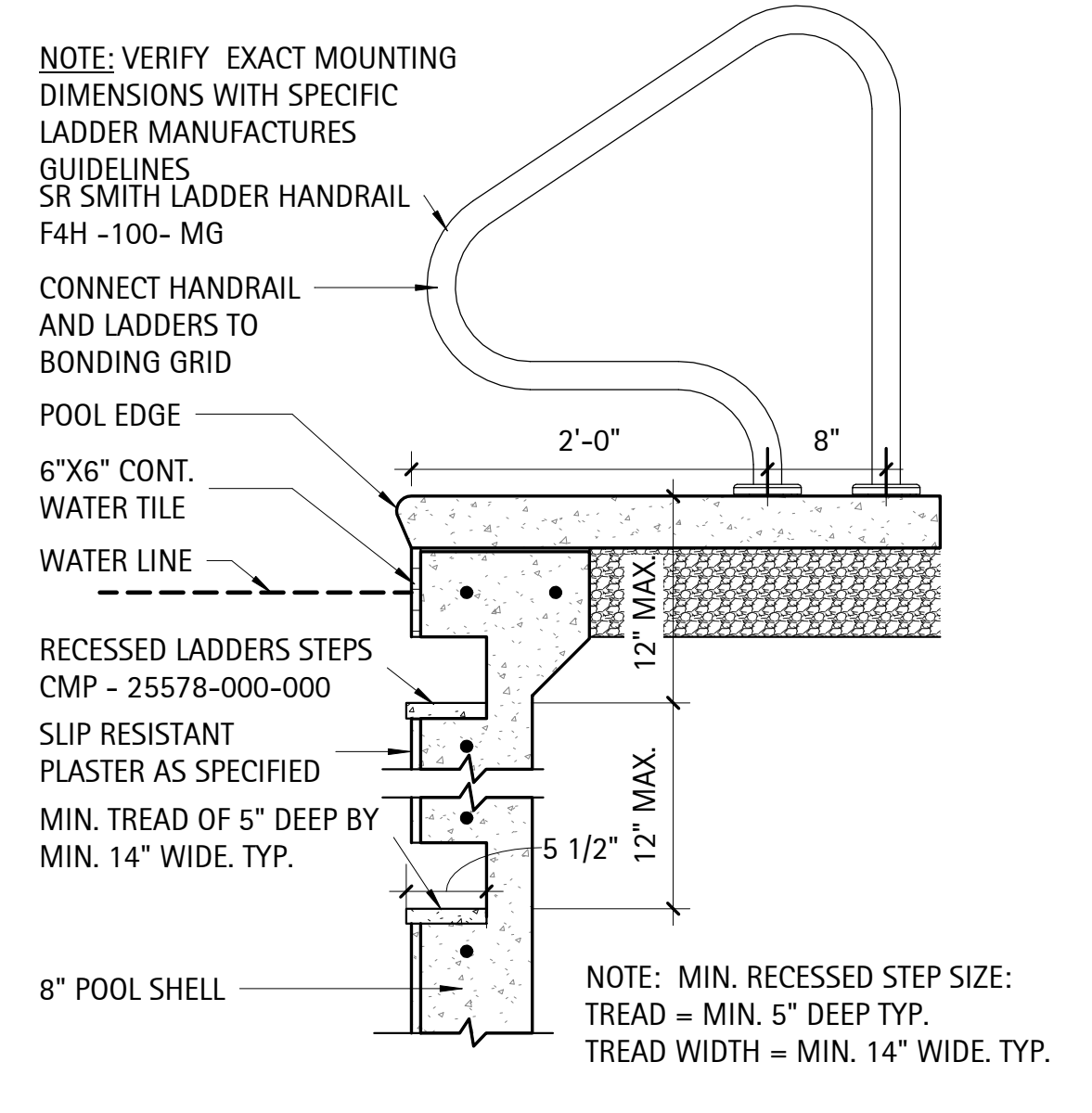
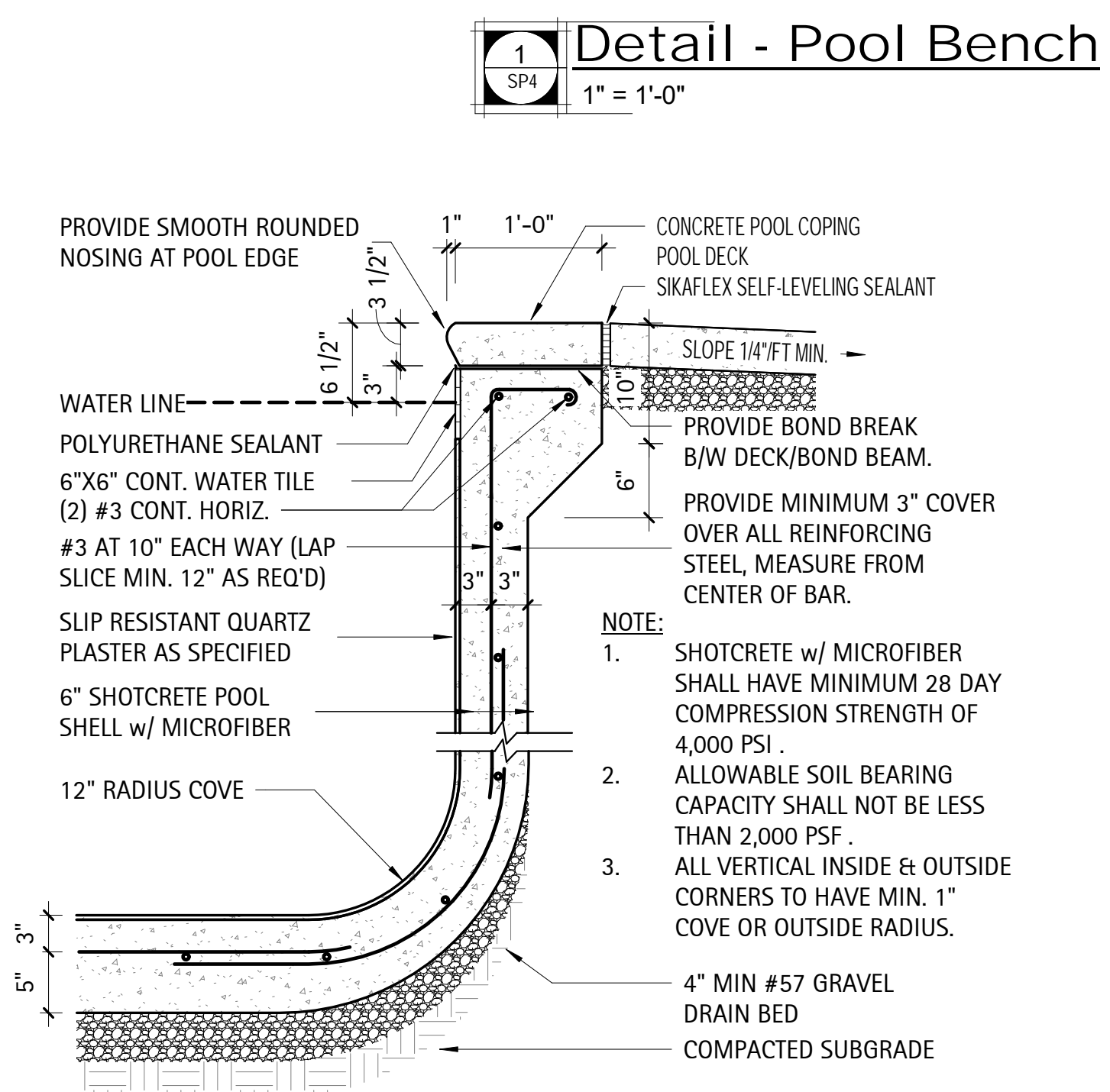
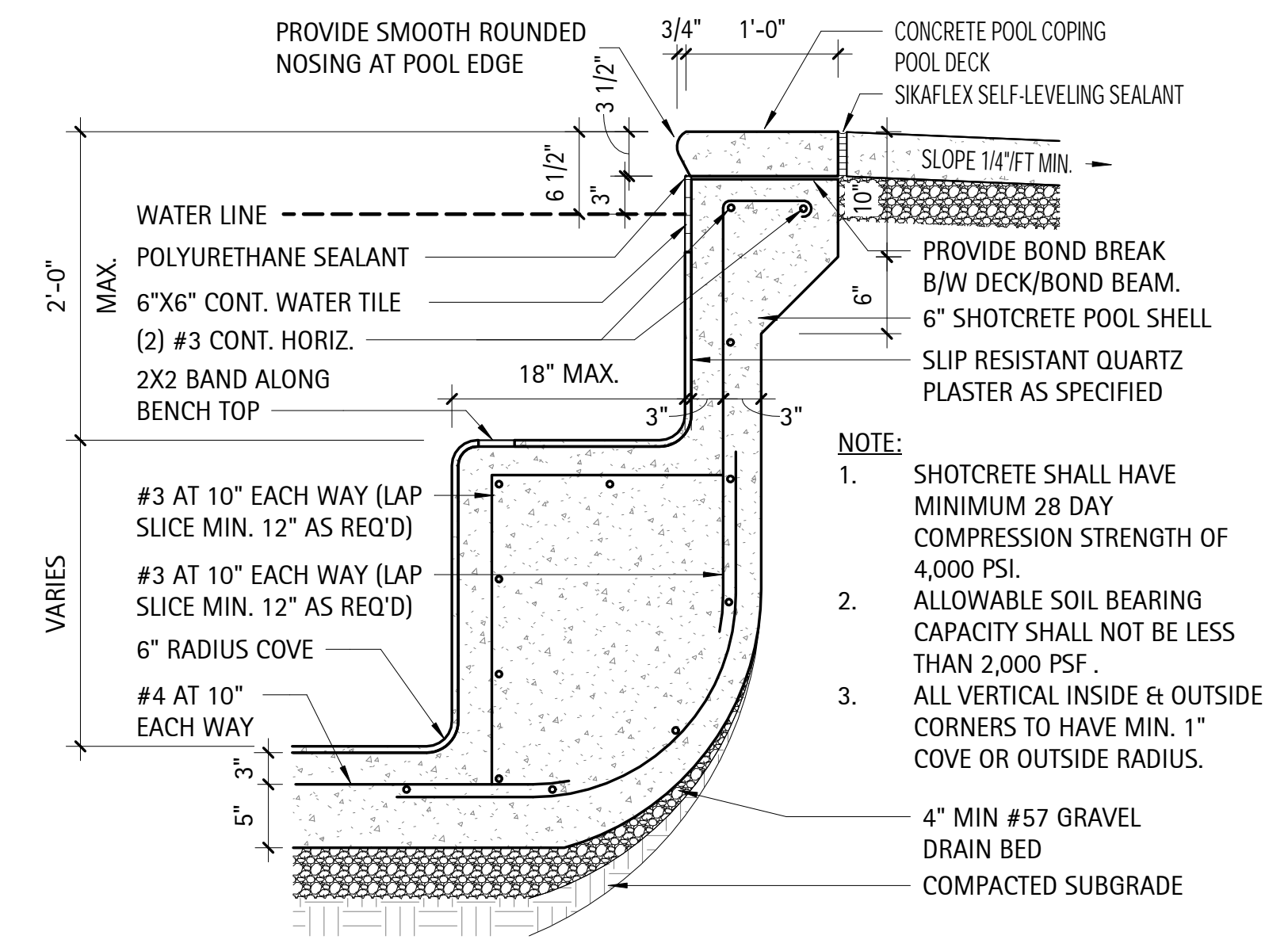
NO.	REVISION	DATE

SHEET DESCRIPTION

Sections & Details

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Fuquay-Varina, NC

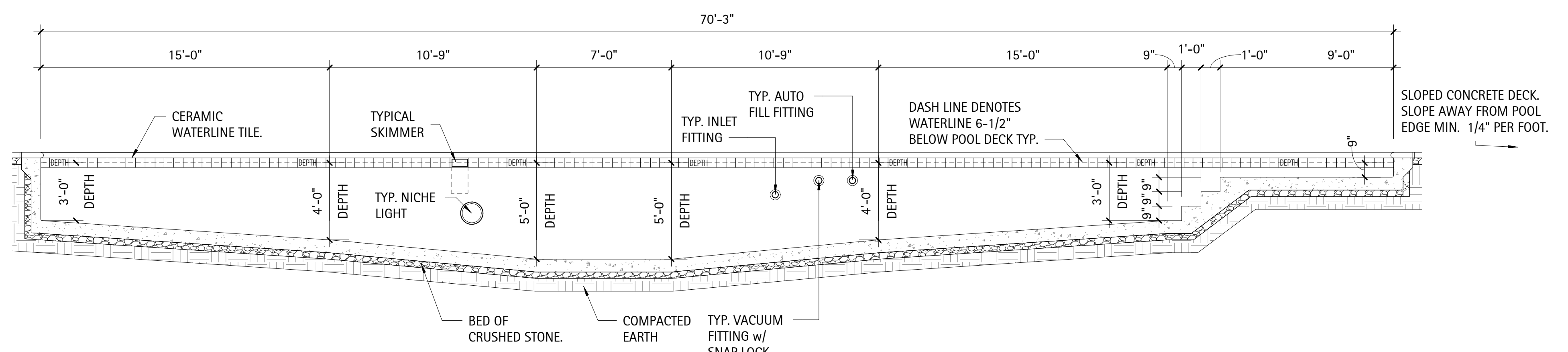


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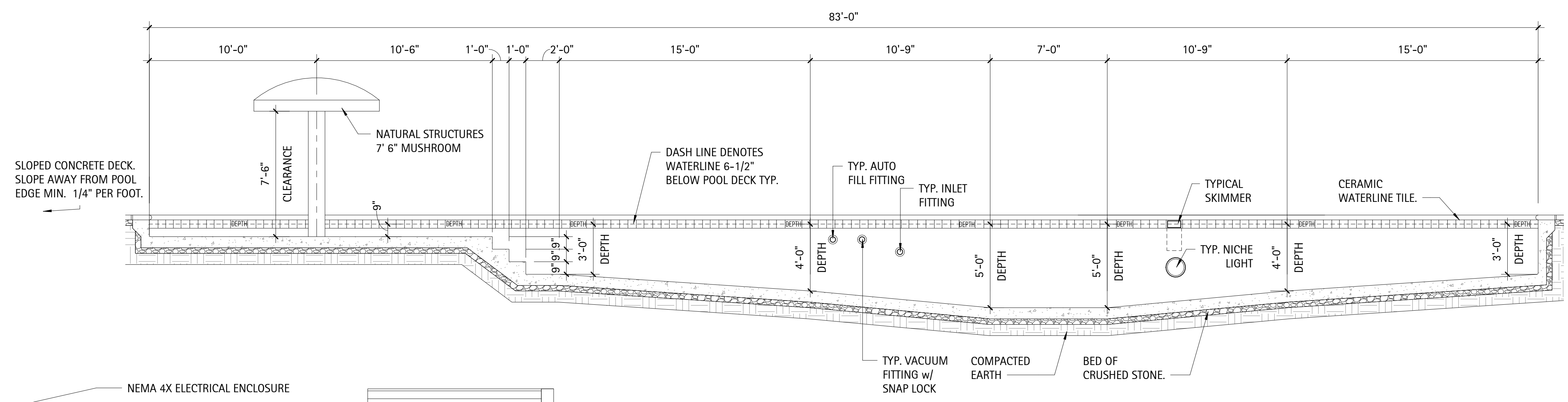
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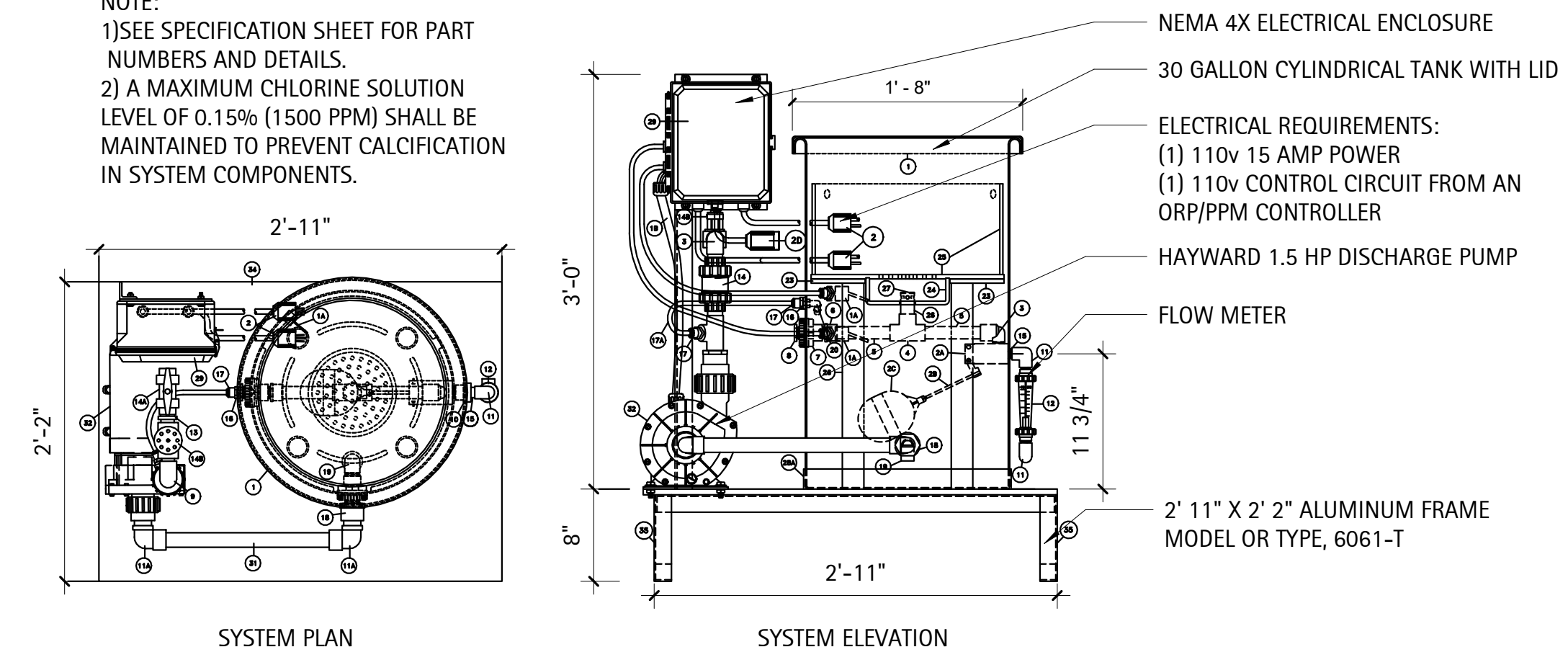


1 Section - Pool w/ Lounge Shelf
1/4" = 1'-0"

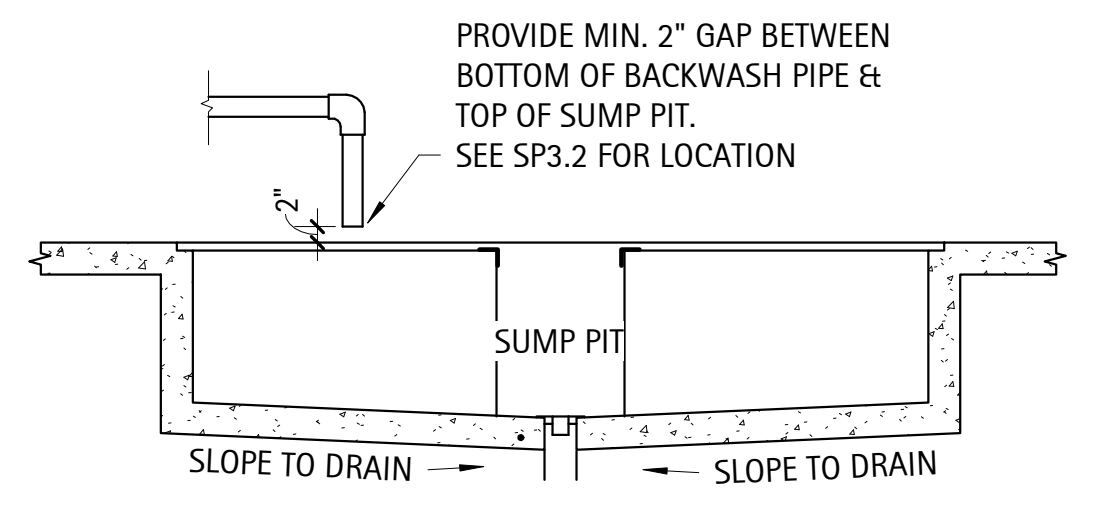


2 Section - Pool w/ Kids Shelf
1/4" = 1'-0"

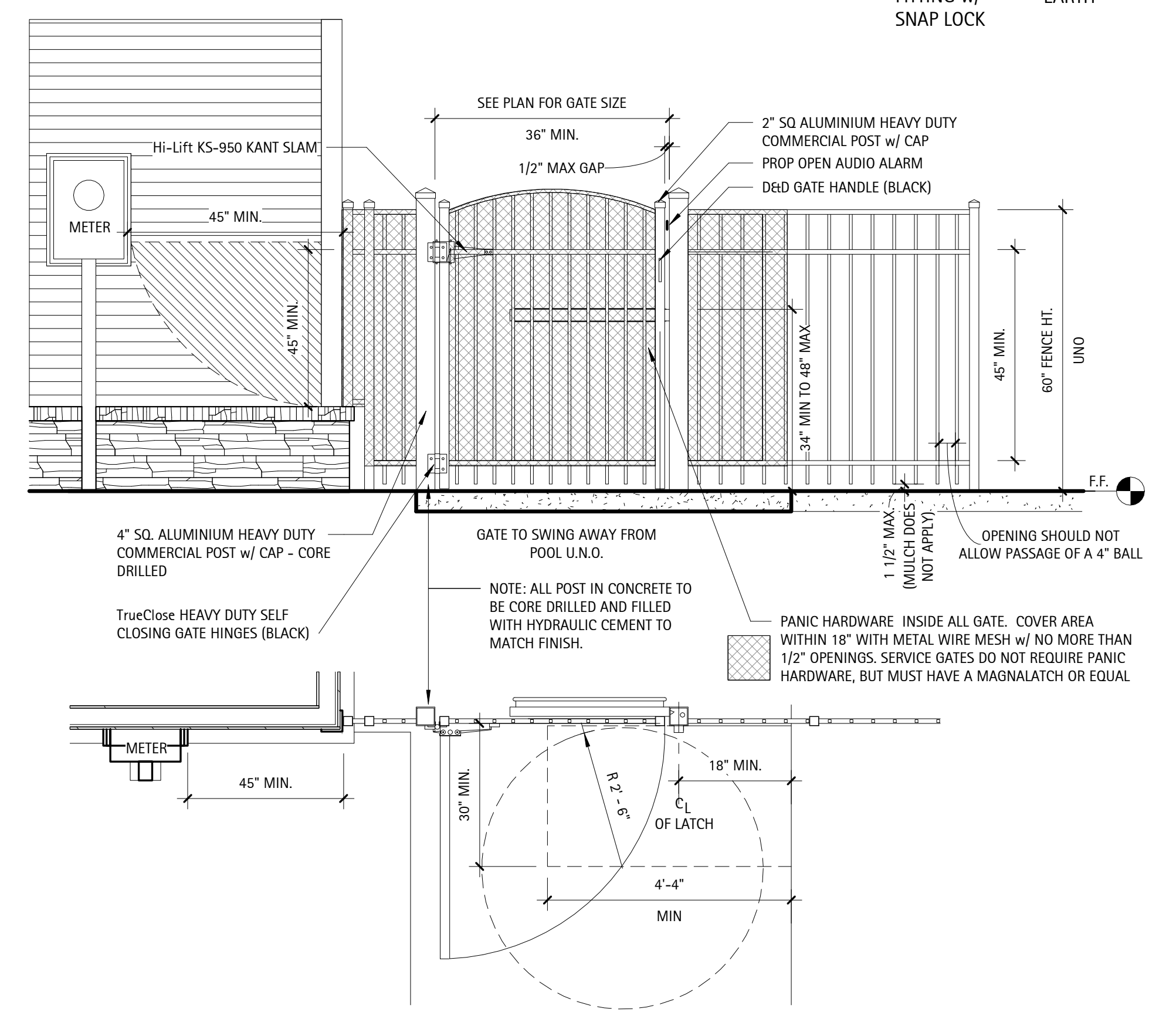
NOTE:
1) SEE SPECIFICATION SHEET FOR PART NUMBERS AND DETAILS.
2) A MAXIMUM CHLORINE SOLUTION LEVEL OF 0.15% (1500 PPM) SHALL BE MAINTAINED TO PREVENT CALCIFICATION IN SYSTEM COMPONENTS.



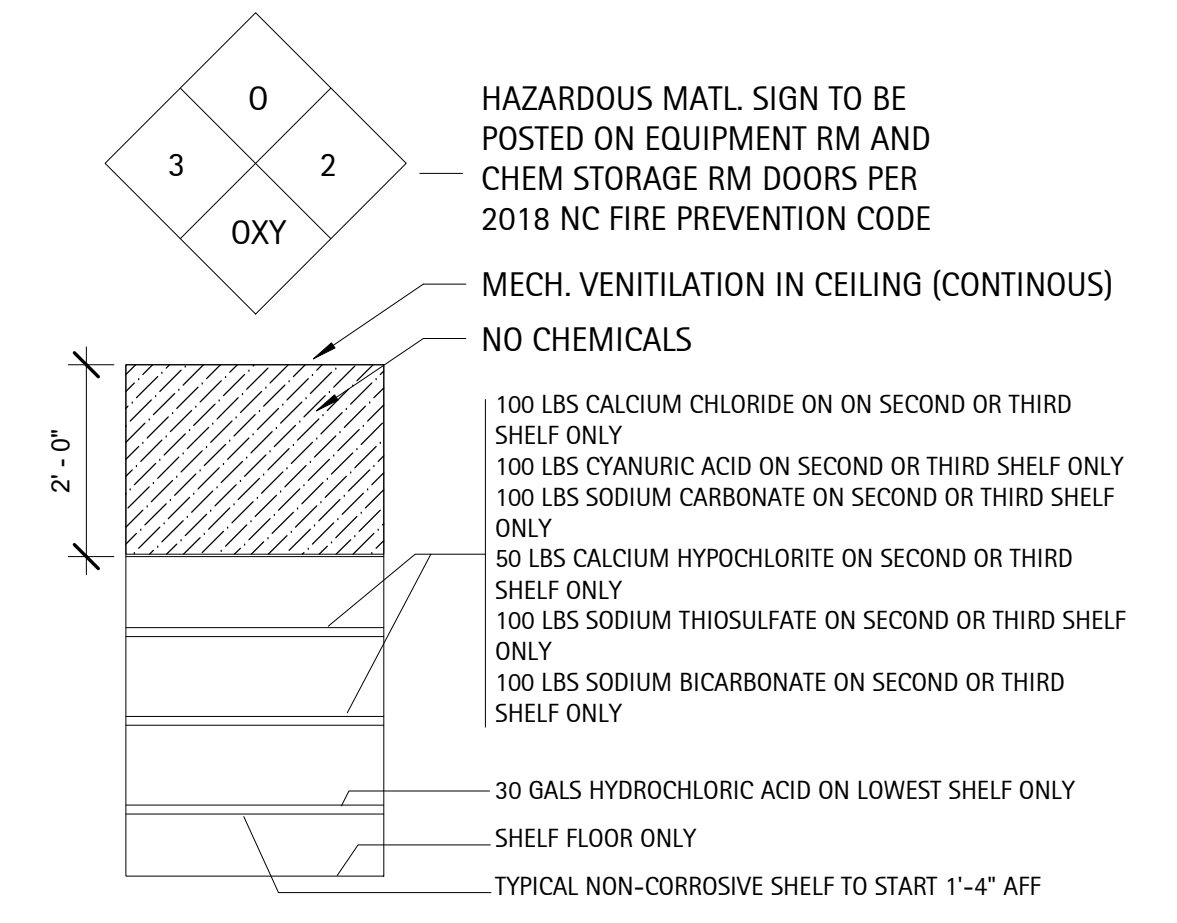
5 Detail - VersaChlor System 3
1" = 1'-0"



6 Detail - 2" Air Gap
1/2" = 1'-0"



4 Detail - Fence
1/2" = 1'-0"



TYPICAL CHEMICAL ROOM SHELVEING w/ QUANTITIES

A. Unless otherwise stated, all code references are to the 2018 North Carolina State Building Codes (NCSBC).
B. North Carolina Building Code (NCSBC) applicable portions include but are not limited to:
1. Chapter 3, Section 307 and Tables 307.1(1), 307.1(2)
2. Chapter 4, Section 414, 415 and Tables 414.2.2, 414.2.5, 415.8.2.1.1
C. North Carolina Fire Code (NCFPC) applicable portions include but are not limited to:
1. NCFPC, Chapter 18, Tables 1804.2.2.1, 1805.2.2
2. NCFPC, Chapters 27 through 44.
3. Appendices E and F

3 Detail - Chemical Storage
1/2" = 1'-0"

