

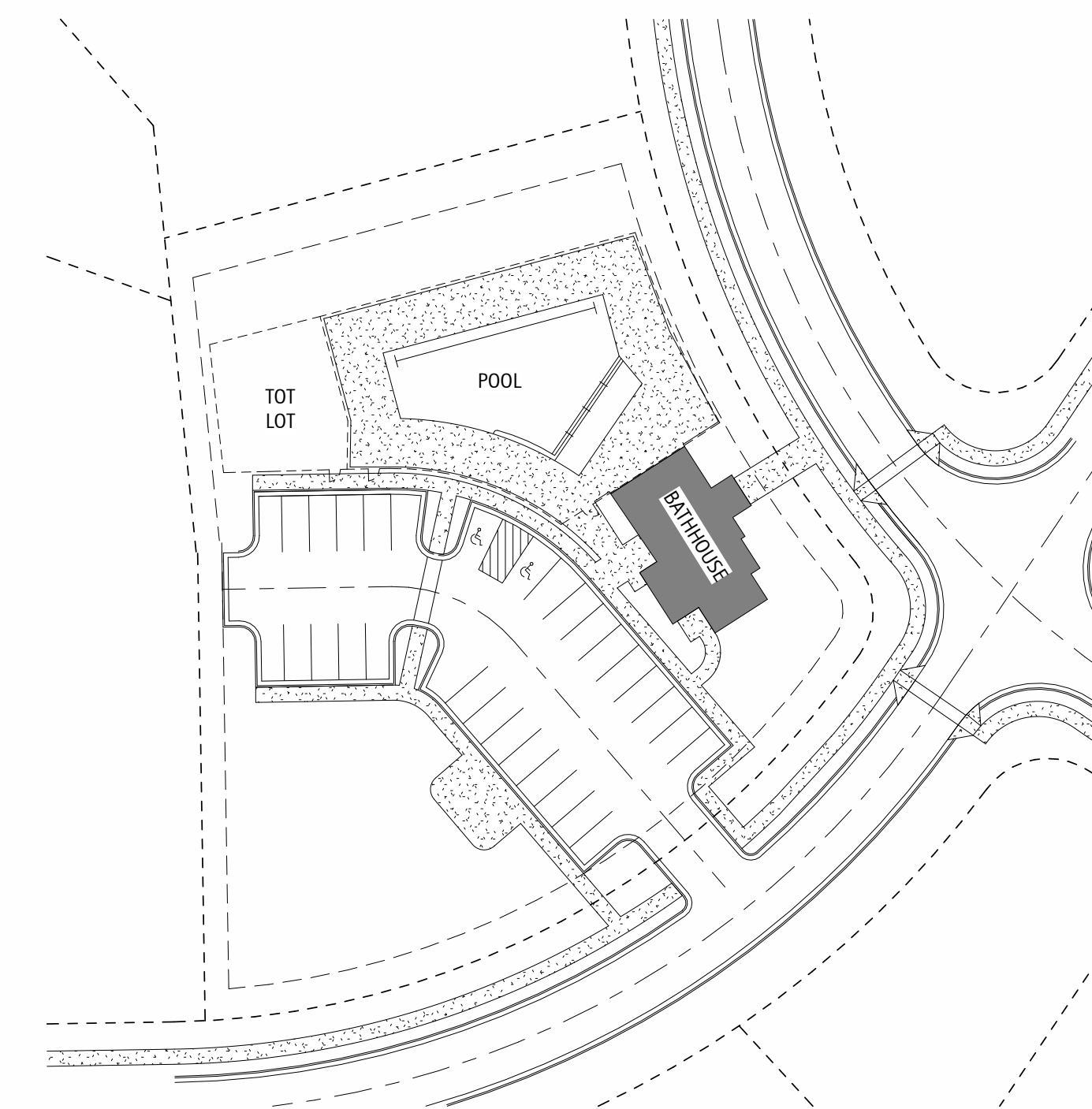
VICINITY MAP

# MATTHEWS RIDGE

# AMENITY

## BATHHOUSE & POOL

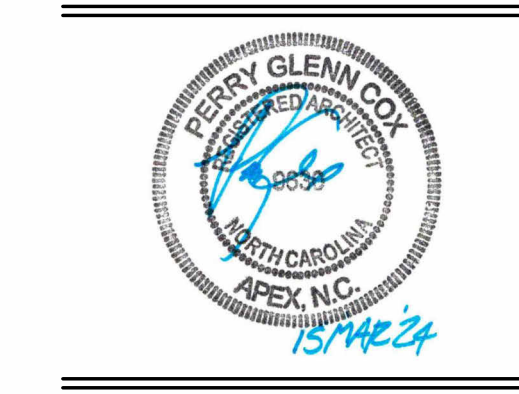
## HARNETT COUNTY, NORTH CAROLINA



SITE MAP



DRAWING INDEX						
SHEET NUMBER	SHEET NAME	REV 01	REV 02	REV 03	REV 04	REV 05
<b>0-GENERAL</b>						
G0.1	COVER SHEET					
G0.2	BUILDING CODE SUMMARY					
G0.3	LIFE SAFETY PLAN					
G0.4	GENERAL NOTES					
<b>1-ARCHITECTURAL</b>						
A1.0	FOUNDATION PLAN					
A1.1	FIRST FLOOR PLAN					
A1.2	REFLECTED CEILING PLAN					
A1.3	ROOF PLAN					
A2.0	EXTERIOR ELEVATIONS					
A2.1	EXTERIOR ELEVATIONS					
A3.0	BUILDING SECTIONS					
A3.1	WALL SECTIONS & DETAILS					
A4.0	ENLARGED PLANS & DETAILS					
A5.0	GENERAL BUILDING DETAILS					
A6.0	SCHEDULES & DETAILS					
<b>10-STRUCTURAL PLANS</b>						
S1	SLAB AND FOUNDATION PLAN					
S2	CEILING FRAMING PLAN					
S3	ROOF FRAMING PLAN					
S4	STRUCTURAL NOTES AND DETAILS					
<b>13-PLUMBING PLANS</b>						
P1	PLUMBING NOTES AND SCHEDULES					
P2	PLUMBING PLANS AND RISERS					
<b>15-MECHANICAL</b>						
M1	MECHANICAL NOTES & SCHEDULES					
<b>16-ELECTRICAL</b>						
E1	ELECTRICAL NOTES AND SCHEDULES					
E2	ELECTRICAL PLANS AND SCHEDULES					
<b>17-POOL</b>						
SP1.0	POOL DIMENSION & CONTROL JOINT PLAN					
SP2.0	OVERALL POOL LAYOUT					
SP3.0	PIPING & ELECTRICAL PLAN					
SP4.0	SECTIONS & DETAILS					
SP4.1	SECTIONS & DETAILS					
SP5.0	SPECIFICATIONS					
SP5.1	SPECIFICATIONS					
SP5.2	SPECIFICATIONS					



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

DATE	REVISION	NO.

SHEET DISCUSSION  
**COVER SHEET**

PROJECT #: 2023043  
DATE ISSUED: 03/13/2024  
DRAWING BY: JGM  
CHECKED BY: PGC / DSC

MATTHEWS RIDGE  
KB HOMES  
BATHHOUSE  
HARNETT COUNTY, NC



PO Box 3301, Henderson, NC 27536 | www.kilianengineering.com  
(P) 252.438.8778 | CORPORATE LICENSE C-2277



2506 RELIANCE AVE. APEX, NC 27539  
(P) 919.629.7290  
WWW.DCLUGSTON.COM



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



# APPENDIX B BUILDING CODE SUMMARY

## FOR ALL COMMERCIAL PROJECTS

Name of Project: Matthews Ridge Amenity  
 Address: Lillington, NC Zip Code: 27546  
 Owner or Authorized Agent: John Moxley Phone #: 919-691-1170  
 Email: brian@clugston.com Fax #:  
 Owned By:  Privately  City/County  State  
 Code Enforcement Jurisdiction:  City  County  City/County  
 Name of Jurisdiction: Town of Lillington / Harnett County

### PROJECT SUMMARY: A-3 New Building

**Building Description:** A-3, Seasonal Drain Down bath house Pool Amenity

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

Lead Design Professional/Project Coordinator:	John Moxley	919-691-1170	
DESIGNER:	FIRM	NAME	LICENSE #
Architectural:	Perry Cox Architect, PA	Perry Cox, AIA	9630
Civil:			
Electrical:	Kilian Engineering	Jacob L. Hamilton	048012
Fire Alarm:			
Plumbing:	Kilian Engineering	Jacob L. Hamilton	048012
Mechanical:	Kilian Engineering	Jacob L. Hamilton	048012
Sprinkler-Standpipe			
Structural:	Ross Linden Engineers	Brian Ross, PE	25539
Precast:			
Trusses:	Truss Builders	Eric A Gilbert, PE	036322
Retaining Walls >5' High			
Other:	Pool: Kilian Engineering	Jacob L. Hamilton	048012
Note:			

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 Business:   
 I-2 Condition  1  2 Educational:   
 I-3 Condition  1  2  3  4  5 Factory:  F-1  F-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

**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.

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

$$\text{---} + \text{---} + \text{---} = \text{---} < 1$$

### ALLOWABLE AREA AND HEIGHT CALCULATIONS

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

Exterior Wall	Actual Length	Open Length	lic Way or Open Space 30'
North			
South			
East			
West			
<b>Total</b>	<b>P</b>	<b>F</b>	<b>W</b>

INCREASE FRONTAGE      %

SPRINKLERS      %

FRONTAGE INCREASE FORMULA ALLOWABLE AREA FORMULA

$$I_r = 100 \left( \frac{F}{P} - 0.25 \right) \frac{W}{30}$$

BOTH BUILDING AND TENANT MUST BE INDICATED ON CHART BELOW

Story No.	DISCRIP. & USE	BLDG AREA TABLE 506.2 PER STORY (ACTUAL SF)	AREA FOR ALLOWABLE INCREASE (SF)	SPRINKLER INCREASE	ALLOWABLE FLOOR AREA	RATE OF ACTUAL/ALLOWABLE	MAXIMUM BUILDING SEPARATION REQUIRED
Main Level	A-3	1,722	6000	N/A	N/A	0.287	6000 SF

- 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  $I_r = 100 [F/P - 0.25] \times W/30 = \text{---} (\%)$
- 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 un-sprinklered 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 <u>VB</u>	Type <u>VB</u>	Type <u>VB</u>	403.3.1
Building Height in Feet	H = 40'-0"	N/A	H = 23'-8"	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 Types  NFPA 13  NFPA 13R  Partially Sprinklered  Special Suppression

Sprinklers:  Yes  No  
 Standpipes:  Yes  No  
 Fire District:  Yes  No  
 Building Height: 23.66 Feet  
 Basement:  Yes  No  
 Mezzanine:  Yes  No  
 High Rise:  Yes  No  
 Gross Building Area:       
 Life Safety Plan Sheet # (if provided): G0.3

FLOOR	EXISTING (SOFT)	NEW (SOFT)	SUB-TOTAL
First Floor	0	1,722	1,722

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)	REQ'D*	RATING PROVIDED (W/L * REDUCTION)	DETAIL # & SHEET #	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
<b>Bearing Walls Exterior</b>							
North	0	0					
East	0	0					
West	0	0					
South	0	0					
Interior Bering walls	0	0					
<b>Nonbearing Walls Exterior</b>							
North	0	0					
East	0	0					
West	0	0					
South	0	0					
Interior Bering walls	0	0					
Structural Frame, including columns, girders, trusses							
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**							
Roof Ceiling Assembly	0	0					
Columns Supporting Roof							
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	N/A	N/A					

\* 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	DEGREE OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)
N/A			

### 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  Fire 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 REQUIRED	SHOWN ON PLANS	TRAVEL DISTANCE		ARRANGEMENT MEANS OF EGRESS	
			ALLOWABLE TRAVEL DISTANCE (TABLE 1016.1)	ACTUAL TRAVEL DISTANCE SHOWN ON PLANS	REQUIRED DOORS	ACTUAL DISTANCE SHOWN ON PLANS
POOL DECK	2	2	200'-0"	158'-8"	67'-3"	75'-6"
BATHHOUSE	1	2	75'-0"	58'-8"	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)

### ASSEMBLY OCCUPANCY INFORMATION

Name	Type	Occupancy	Area	Load Factor	Load Count	Exit Width (inches)	Exit Quantity
COVERED PORCH	Assembly - Unconcentrated (tables and chairs)	627 SF	15 SF	42	8.4		
POOL	Swimming Pool water surface	2938 SF	50 SF	59	11.8		
POOL DECK 8'	Swimming Pool Deck	2042 SF	15 SF	137	27.4		
CLEAR							
POOL DECK	Swimming Pool Deck	2797 SF	15 SF	187	37.4		
Grand total				425	85		

- 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)

### 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
ENTRY	87 SF	0 SF		0.2					96
COVERED PORCH	627 SF	15 SF	42	0.2		8.4			
WOMENS	171 SF	0 SF		0.2					
MENS	123 SF	0 SF		0.2					
CHEM.	34 SF	300 SF	1	0.2		0.2			
STORAGE	189 SF	300 SF	1	0.2		0.2			
CLST.	9 SF	300 SF	1	0.2		0.2			
PUMP ROOM	174 SF	300 SF	1	0.2		0.2			
VESTIBULE	55 SF	0 SF		0.2					
FAMILY	39 SF	0 SF		0.2					
CLST	13 SF	0 SF		0.2					
Grand total	1521 SF		46	2		9.2		96	0

### OCCUPANT LOAD AND EXIT WIDTH POOL

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
POOL	2938 SF	50 SF	59	0.2		11.8			
POOL DECK 8'	2042 SF	15 SF	137	0.2		27.4			
CLEAR									
POOL DECK	2797 SF	15 SF	187	0.2		37.4		92	
Grand total	7778 SF		383			76.6		92	

### PLUMBING FIXTURE REQUIREMENTS

THIS SECTION IS REQUIRED FOR ALL PROJECTS

USE	WATERCLOSETS			URINALS	LAVATORIES			RINSE SHOWERS	DRINKING FOUNTAINS	
	Male	Female	Unisex		Male	Female	Unisex		REGULAR	ACCESSIBLE
SPACE										
EXIST'G										
NEW	2	3	1	2	2	2	1	1	1	1
Total Required	2	3	1	1	1	1	1	1	1	1
Total Provided	2	3	1	2	2	2	1	1	1	1

383 PERSONS / 2 = 192 M / 192 F  
 WATERCLOSETS: 192 MALE / 125 = 2 WC = 2 WC & 2 URINAL  
 192 FEMALE / 65 = 4 WC = 3 WC  
 LAVATORY: 192 MALE / 200 = 1 LAV = 2 LAV  
 192 FEMALE / 200 = 1 LAV = 2 LAV

### STRUCTURAL DESIGN LOADS

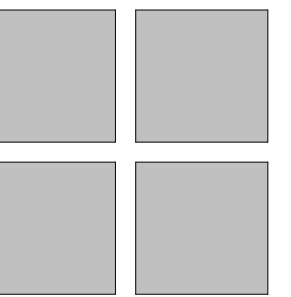
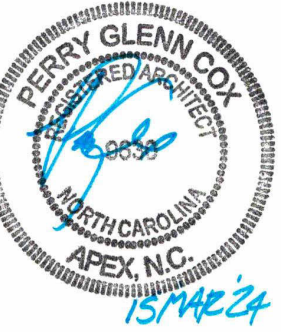
THIS SECTION IS REQUIRED FOR ALL PROJECTS

DESIGN LOADS:  
 Importance





D. CLUGSTON



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

DATE	
REVISION	
NO.	

SHEET DESCRIPTION  
**LIFE SAFETY PLAN**

PROJECT #:	2023043
DATE ISSUED:	03/13/2024
DRAWING BY:	JGM
CHECKED BY:	PGC / DSC

MATTHEWS RIDGE  
KB HOMES  
BATHHOUSE  
HARNETT COUNTY, NC

G0.3

OCCUPANCY SCHEDULE CLUBHOUSE					
Room Number	Room Name	Type	Occupancy		
			Area	Load Factor	Load Count
100	ENTRY	N/A	87 SF	0 SF	
101	COVERED PORCH	Assembly - Unconcentrated (tables and chairs)	627 SF	15 SF	42
102	VESTIBULE	N/A	55 SF	0 SF	
103	FAMILY	N/A	39 SF	0 SF	
103A	CLST	(none)	13 SF		
104	WOMENS	N/A	171 SF	0 SF	
104A	CLST.	Accessory Storage Areas, Mechanical Equipment Room	9 SF	300 SF	1
105	MENS	N/A	123 SF	0 SF	
109	PUMP ROOM	Accessory Storage Areas, Mechanical Equipment Room	174 SF	300 SF	1
109A	CHEM.	Accessory Storage Areas, Mechanical Equipment Room	34 SF	300 SF	1
110	STORAGE	Accessory Storage Areas, Mechanical Equipment Room	189 SF	300 SF	1
Grand total					46

OCCUPANCY SCHEDULE POOL					
Room Number	Room Name	Type	Occupancy		
			Area	Load Factor	Load Count
PL100	POOL	Swimming Pool water surface	2938 SF	50 SF	59
PL101	POOL DECK 8' CLEAR	Swimming Pool Deck	2042 SF	15 SF	137
PL102	POOL DECK	Swimming Pool Deck	2797 SF	15 SF	187
Grand total					383

**GENERAL PLUMBING NOTES:**

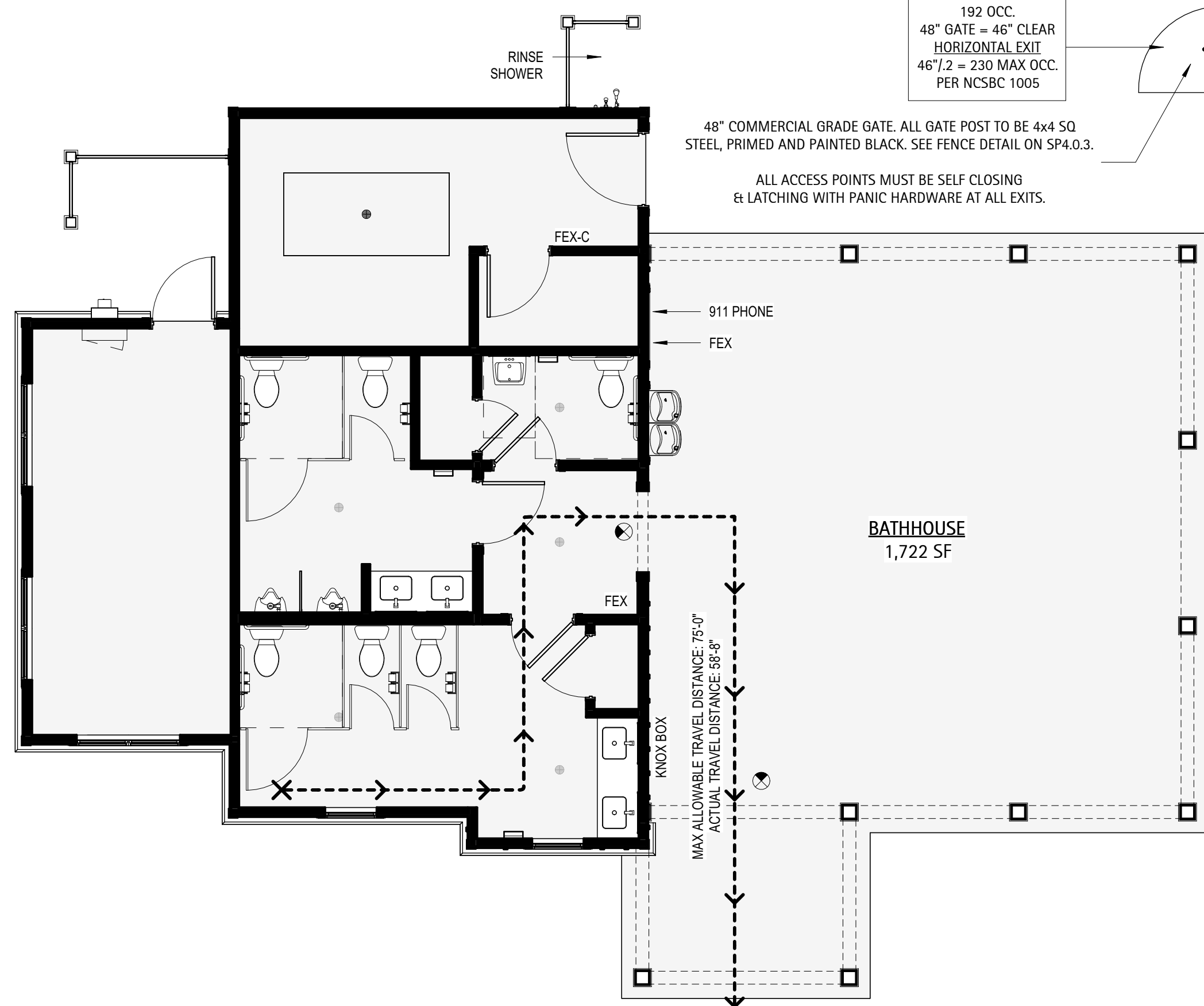
USE:  
OCCUPANT LOAD:  
REQUIRED MALE WATER CLOSETS:  
REQUIRED FEMALE WATER CLOSETS:  
REQUIRED UNISEX WATER CLOSETS:  
PROVIDED MALE WATER CLOSETS:  
PROVIDED FEMALE WATER CLOSETS:  
PROVIDED UNISEX WATER CLOSETS:

A-3 (ASSEMBLY)  
383 PPL / 2 = 192 PPL  
2 (1 PER 125 PPL)  
3 (1 PER 65 PPL)  
1 (NCSBC 1109.2.1)  
2 WC & 2 URINAL  
3 WC  
1 (NCSBC 1109.2.1)

**GENERAL PLUMBING NOTES:**

REQUIRED MALE LAVATORIES:  
REQUIRED FEMALE LAVATORIES:  
REQUIRED UNISEX LAVATORIES:  
PROVIDED MALE LAVATORIES:  
PROVIDED FEMALE LAVATORIES:  
REQUIRED UNISEX LAVATORIES:  
REQUIRED WATERCOOLERS:  
PROVIDED WATERCOOLERS:

1 (1 PER 200)  
1 (1 PER 200)  
1  
2  
2  
1  
2 (1 PER 500)  
2



LIFE SAFETY SYMBOL LEGEND	
	EMERGENCY EXIT
	SEMI-RECESSED 'ABC' TYPE FIRE EXTINGUISHER TO MEET NFPA-10 STANDARDS. MOUNT @ 15" MIN. - 48" MAX A.F.F.
	BRACKET MOUNTED WATER TYPE FIRE EXTINGUISHER TO MEET NFPA-10 STANDARDS. MOUNT @ 15" MIN. - 48" MAX A.F.F.
	INDICATES TRAVEL DIRECTION

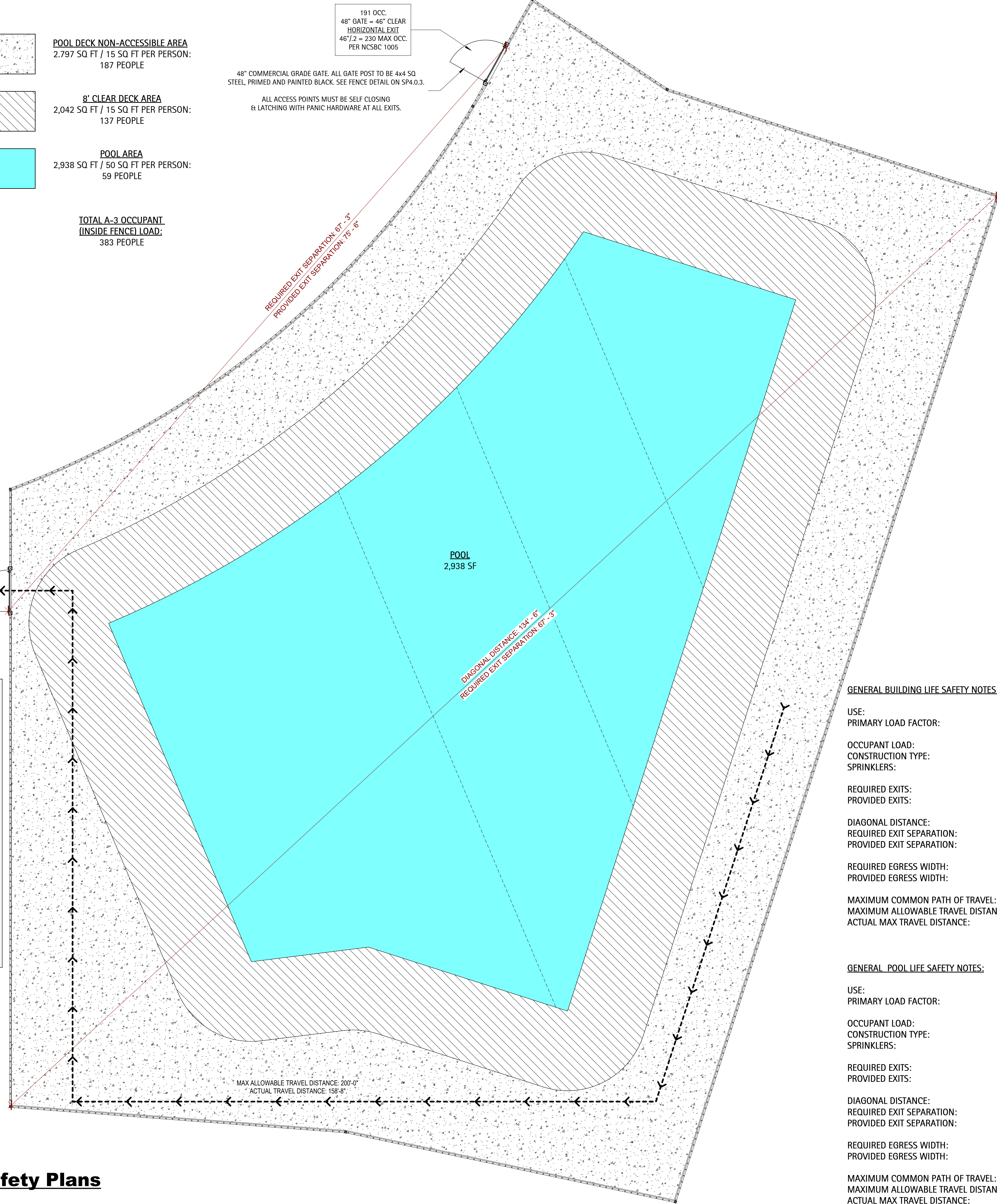
**Life Safety Plans**  
1/30.3 3/16" = 1'-0"

- POOL DECK NON-ACCESSIBLE AREA  
2,797 SQ FT / 15 SQ FT PER PERSON:  
187 PEOPLE
- 8' CLEAR DECK AREA  
2,042 SQ FT / 15 SQ FT PER PERSON:  
137 PEOPLE
- POOL AREA  
2,938 SQ FT / 50 SQ FT PER PERSON:  
59 PEOPLE
- TOTAL A-3 OCCUPANT (INSIDE FENCE) LOAD:**  
383 PEOPLE

191 OCC.  
48" GATE = 46" CLEAR  
HORIZONTAL EXIT  
46'7.2 = 230 MAX OCC.  
PER NCSBC 1005

48" COMMERCIAL GRADE GATE. ALL GATE POST TO BE 4x4 SQ STEEL, PRIMED AND PAINTED BLACK. SEE FENCE DETAIL ON SP4.0.3.

ALL ACCESS POINTS MUST BE SELF CLOSING & LATCHING WITH PANIC HARDWARE AT ALL EXITS.



**GENERAL BUILDING LIFE SAFETY NOTES:**

USE:  
PRIMARY LOAD FACTOR:  
OCCUPANT LOAD:  
CONSTRUCTION TYPE:  
SPRINKLERS:  
REQUIRED EXITS:  
PROVIDED EXITS:  
DIAGONAL DISTANCE:  
REQUIRED EXIT SEPARATION:  
PROVIDED EXIT SEPARATION:  
REQUIRED EGRESS WIDTH:  
PROVIDED EGRESS WIDTH:  
MAXIMUM COMMON PATH OF TRAVEL:  
MAXIMUM ALLOWABLE TRAVEL DISTANCE:  
ACTUAL MAX TRAVEL DISTANCE:

A-3 (ASSEMBLY)  
UNCONCENTRATED TABLES & CHAIRS (15 SF)  
46 PPL  
V-B  
NO  
1  
2  
N/A  
N/A - ONE EXIT REQUIRED  
N/A  
9.2"  
36"  
75'-0"  
75'-0"  
58'-8"

**GENERAL POOL LIFE SAFETY NOTES:**

USE:  
PRIMARY LOAD FACTOR:  
OCCUPANT LOAD:  
CONSTRUCTION TYPE:  
SPRINKLERS:  
REQUIRED EXITS:  
PROVIDED EXITS:  
DIAGONAL DISTANCE:  
REQUIRED EXIT SEPARATION:  
PROVIDED EXIT SEPARATION:  
REQUIRED EGRESS WIDTH:  
PROVIDED EGRESS WIDTH:  
MAXIMUM COMMON PATH OF TRAVEL:  
MAXIMUM ALLOWABLE TRAVEL DISTANCE:  
ACTUAL MAX TRAVEL DISTANCE:

A-3 (ASSEMBLY)  
UNCONCENTRATED TABLES & CHAIRS (15 SF)  
383 PPL  
V-B  
NO  
2  
2  
134'-6"  
134'-6"/2 = 67'-3"  
75'-6"  
76.6"  
92"  
75'-0"  
200'-0"  
158'-8"



# 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 made for 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 coordinated 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 conduits) 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.
- 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.

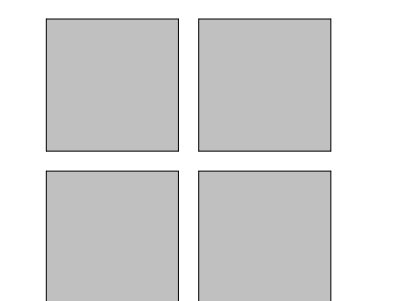
# GENERAL NOTES

- 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/or 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.

AC	ACQUSTIC	EG	EGG SHELL	KIT	KITCHEN	PBD	PARTICLE BOARD	TB	TACK BOARD
ACPL	ACQUSTICAL PLASTER	EXP	EXPPOSED	KPL	KICKPLATE	PC	PRECAST CONCRETE	T&G	TONGUE AND GROOVE
ACT	ACQUSTICAL CEILING TILE	EXPN	EXPANSION	LAM	LAMINATE	PG	PLATE GLASS	THK	THICK(NEDD)
ADH	ADHESIVE	EXT	EXTERIOR	LCOQ	LACQUER	PGL-L	PATTERNED GLASS - LAMINATED	THR	THRESHOLD (SADDLE)
ADJT	ADJUSTABLE	F	FIXED	LT	LIGHT	PLAM	PLASTIC LAMINATE	TM	TRAVERTINE MARBLE
ALT	ALTERNATE	FIN	FINISH	LTG	LIGHTING	PLAS	PLASTER	TPO	THERMOPLASTIC POLYFEN
AL	ALUMINUM	FR	FRAMELESS	LVR	LOUVER	PT	POINT/ PAINT	TPTN	TOILET PARTITION
AP	ACOUSTIC PANEL	FL	FLOOR	LT WT	LIGHT WEIGHT	PTD	PAPER TOWL DISPENSER	TYP	TYPICAL
APC	ACOUSTIC PANEL CEILING	FR	FRAME	M	MILLWORK (TYPE)	PTN	PARTITION	TZ	TERRAZZO
ASPH	ASPHALT	FRP	FIBRE REINFORCED PLASTIC	MAT	MATERIAL	PTR	PAPER TOWEL RECEPTOR	TZB	TERRAZZO BASE
AT	ASPHALT TILE	FRT	FIRE RESISTANT TREATMENT	MAS	MASONRY	PVC	POLYVINYL CHLORIDE	UNF	UNFINISHED
B	BASE	FWP	FABRIC WALL PANEL/PAPER	MH	MANHOLE	PWD	PLYWOOD	UON	UNLESS OTHERWISE NOTED
BD	BOARD	FXD	FIXED (INOPERABLE)	MIR	MIRROR	PWT	PORCELIN WALL TILE	UNO	UNLESS OTHERWISE NOTED
BIT	BITUMINOUS	GA	GAUGE, GAGE	MISC	MISCELLANEOUS	QT	QUARRY TILE	V	VENEER
BR	BROCK	GALV	GALVANIZED	ML	METAL LATH	RB	RUBBER BASE	VAR	VARIES
BRZ	BRONZE	GLS	GLASS (GLAZING)	MLDG	MOULDING	RC	RECESS-MOUNTED CABINET	VEST	VESTIBULE
CAB	CABINET	GL-L	GLASS-LAMINATED	MP	MILLWORK-PLASTIC LAMINATE	RCP	REFLECTED CEILING PLAN	VPLAS	VENEER PLASTER
CB	CERAMIC TILE BASE	GL-PS	GLASS PANEL SYSTEM	MT	MARBLE TILE	REFR	REFRIGERATOR	WA	WALL ART
CEM	CEMENT	GL-SS	GLASS STOREFRONT SYSTEM	MTL	METAL	RES	RESILIENT	WB	WOOD BASE
CER	CERAMIC	GL-T	GLASS TEMPERED	MULL	MULLION	RFG	ROOFING	WC	WOOD COVERING
CG	CORNER GAURD	GRG	GRANITE	MV	MILLWORK-WOOD VENEER	RM	ROOM	WD	WOOD
CI	CAST IRON	GRT	GLASSFIBRE REINFORCED GYPSUM	MWK	MILLWORK	RVL	REVEAL	WD-PS	WOOD PANEL SYSTE
CLG	CEILING	GT	GLAZED TILE	NIA	NOT APPLICABLE	SC	SEALED CONCRETE	WDV	WOOD VENEER
CLR	CLEAR	GWB	GYPSUM WALLBOARD	NF	NO FINISH	SF	SEAMLESS FLOORING / SPORT FLOORING	WDW	WINDOW
C-MAR	COMPOSITE MARBLE	GYP	GYPSUM CEILING PANEL	NM	NOMINAL	SMC	SURFACE-MOUNTED CABINET SPECIFICATIONS(S)	W	WALL HUNG
CONC	CONCRETE	HD	HEAVY DUTY	NR	NOT RATED	SS	STAINLESS STEEL	WMB	WALL MOUNTED BRACKET
COR	CORRIDOR	HM	HOLLOW METAL	NTS	NOT TO SCALE	SS SPEC	STAINLESS STEEL SERVICE SINK	WSCOT	WAINSCOT
CPT	CARPET	IGU	INSULATED GLASS UNIT	OPNG	OPENING	SSK	SOLID SURFACE MATERIAL	WT	WINDOW TREATMENT
CR	CROWN	INSUL	INSULATING/ INSULATION INTERIOR	OPS	OFFICE PARTITION SYSTEM	SSM	SOLID SURFACE MATERIAL		
CS	CONCRETE SEALER	INT				STL	STONE		
CT	CERAMIC TILE					STN	STONE		
DR	DOOR					SUSP	SUSPENDED		
DS	DOORSTOP/ DOWNSPOUT								

# ABBREVIATIONS

PBD	PARTICLE BOARD	TB	TACK BOARD
PC	PRECAST CONCRETE	T&G	TONGUE AND GROOVE
PG	PLATE GLASS	THK	THICK(NEDD)
PGL-L	PATTERNED GLASS - LAMINATED	THR	THRESHOLD (SADDLE)
PLAM	PLASTIC LAMINATE	TM	TRAVERTINE MARBLE
PLAS	PLASTER	TPO	THERMOPLASTIC POLYFEN
PNL	PANEL	TPTN	TOILET PARTITION
PT	POINT/ PAINT	TYP	TYPICAL
PTD	PAPER TOWL DISPENSER	TZ	TERRAZZO
PTN	PARTITION	TZB	TERRAZZO BASE
PTR	PAPER TOWEL RECEPTOR	UNF	UNFINISHED
PVC	POLYVINYL CHLORIDE	UON	UNLESS OTHERWISE NOTED
PWD	PLYWOOD	UNO	UNLESS OTHERWISE NOTED
PWT	PORCELIN WALL TILE	V	VENEER
QT	QUARRY TILE	VAR	VARIES
RB	RUBBER BASE	VEST	VESTIBULE
RC	RECESS-MOUNTED CABINET	VPLAS	VENEER PLASTER
RCP	REFLECTED CEILING PLAN	WA	WALL ART
REFR	REFRIGERATOR	WB	WOOD BASE
RES	RESILIENT	WC	WOOD COVERING
RFG	ROOFING	WD	WOOD
RM	ROOM	WD-PS	WOOD PANEL SYSTE
RVL	REVEAL	WDV	WOOD VENEER
SC	SEALED CONCRETE	WDW	WINDOW
SF	SEAMLESS FLOORING / SPORT FLOORING	W	WALL HUNG
SMC	SURFACE-MOUNTED CABINET SPECIFICATIONS(S)	WMB	WALL MOUNTED BRACKET
SS	STAINLESS STEEL	WSCOT	WAINSCOT
SSK	SERVICE SINK	WT	WINDOW TREATMENT
SSM	SOLID SURFACE MATERIAL		
STL	STONE		
STN	STONE		
SUSP	SUSPENDED		

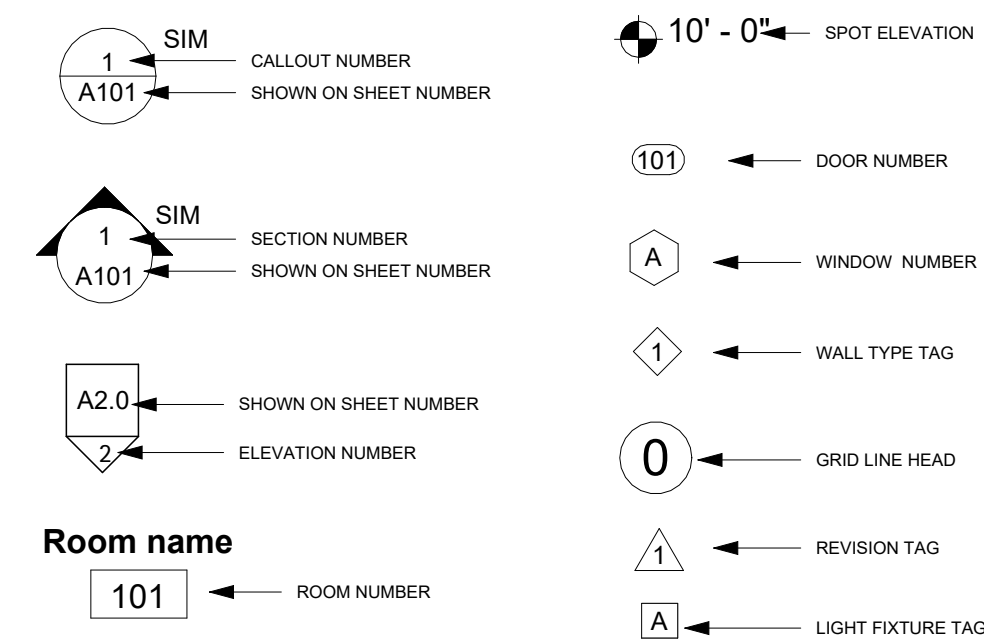


**Perry Cox architect, p.a.**  
 124 Salem Towne Court, Apex, NC 27502  
 P: 919.363.5411  
 www.pcoxdesign.com

# 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:  
 a. Wood in contact with concrete or masonry;  
 b. Sliding within 6" of the ground;  
 c. Wood exposed to weather.
- Install 5/8" Densglass sheathing behind all tub and shower walls, use water-resistant GWB for all bathroom ceilings UNO.

# SYMBOLS

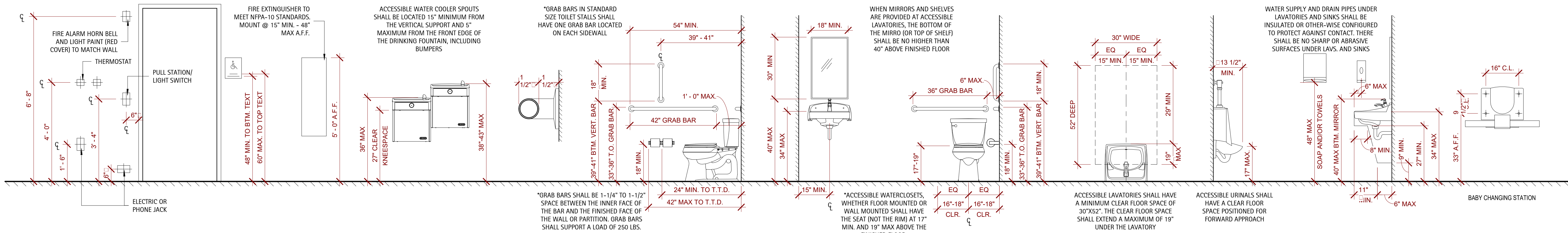


# INTERIOR FINISH NOTES

- 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 broom concrete finish. U.N.O.
- SEE STRUCTURAL DRAWINGS FOR ALL FOUNDATION SPECIFICATIONS.



# TYPICAL MOUNTING HEIGHTS

\*PROVIDE REQ'D BLOCKING FOR GRAB BARS, WALL HUNG TOILETS, AND ACCESSORIES DURING FRAMING

DATE	
REVISION	
NO.	

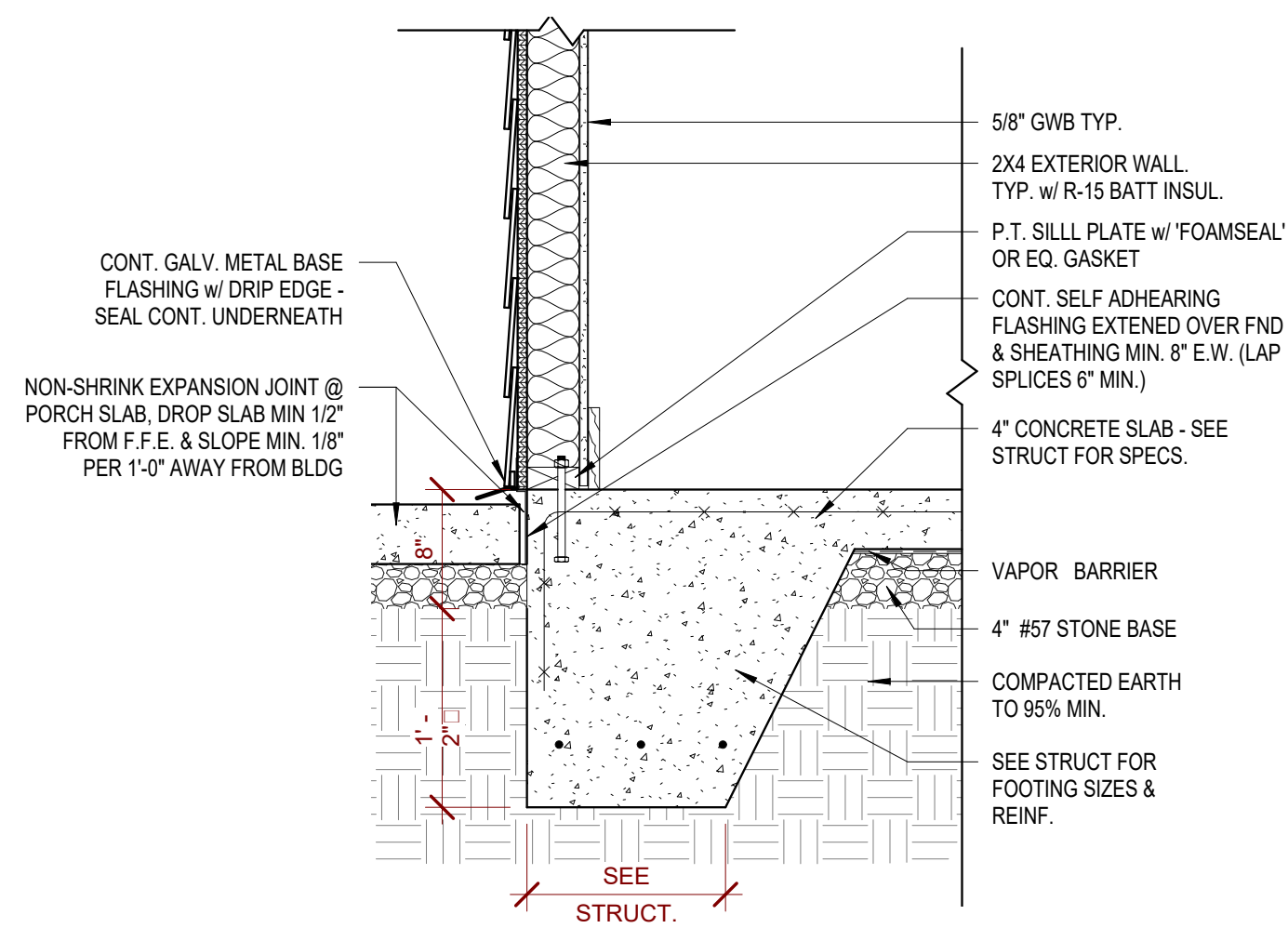
# GENERAL NOTES

PROJECT #: 2023043  
 DATE ISSUED: 03/13/2024  
 DRAWING BY: JGM  
 CHECKED BY: PGC / DSC

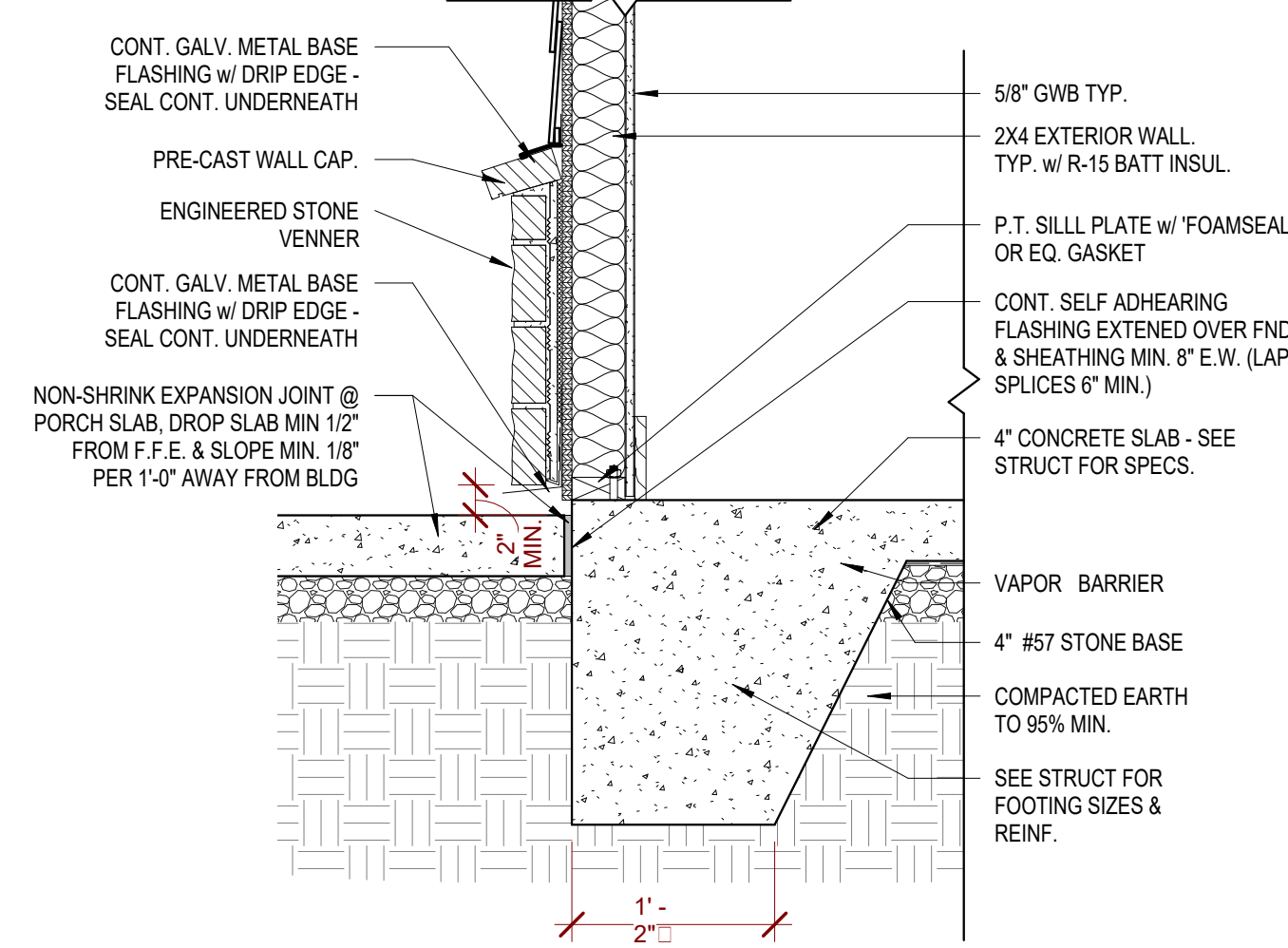
MATTHEWS RIDGE  
 KB HOMES  
 BATHHOUSE  
 HARNETT COUNTY, NC

G0.4

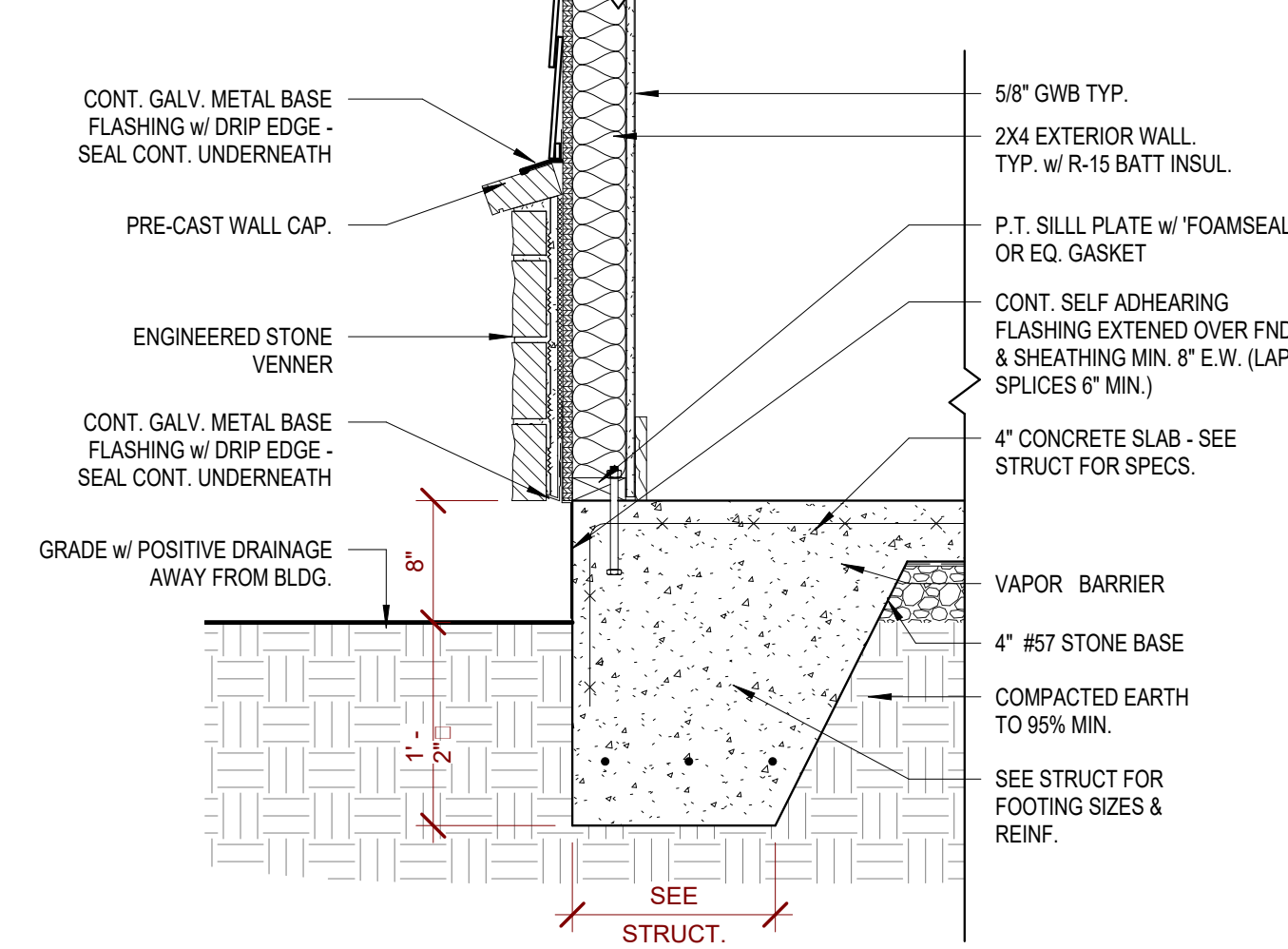




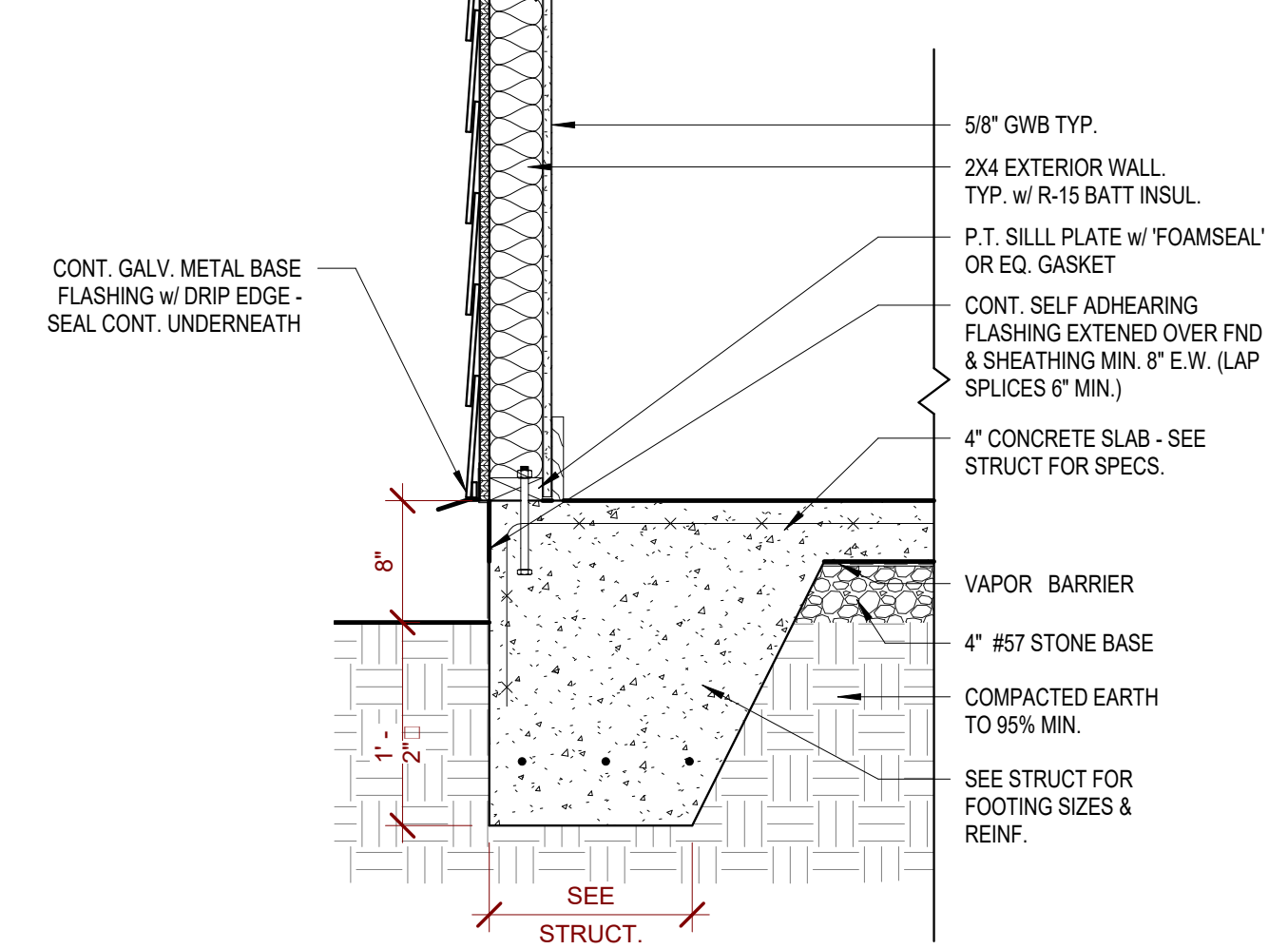
**7 Detail - Siding @ Sidewalks**  
1" = 1'-0"



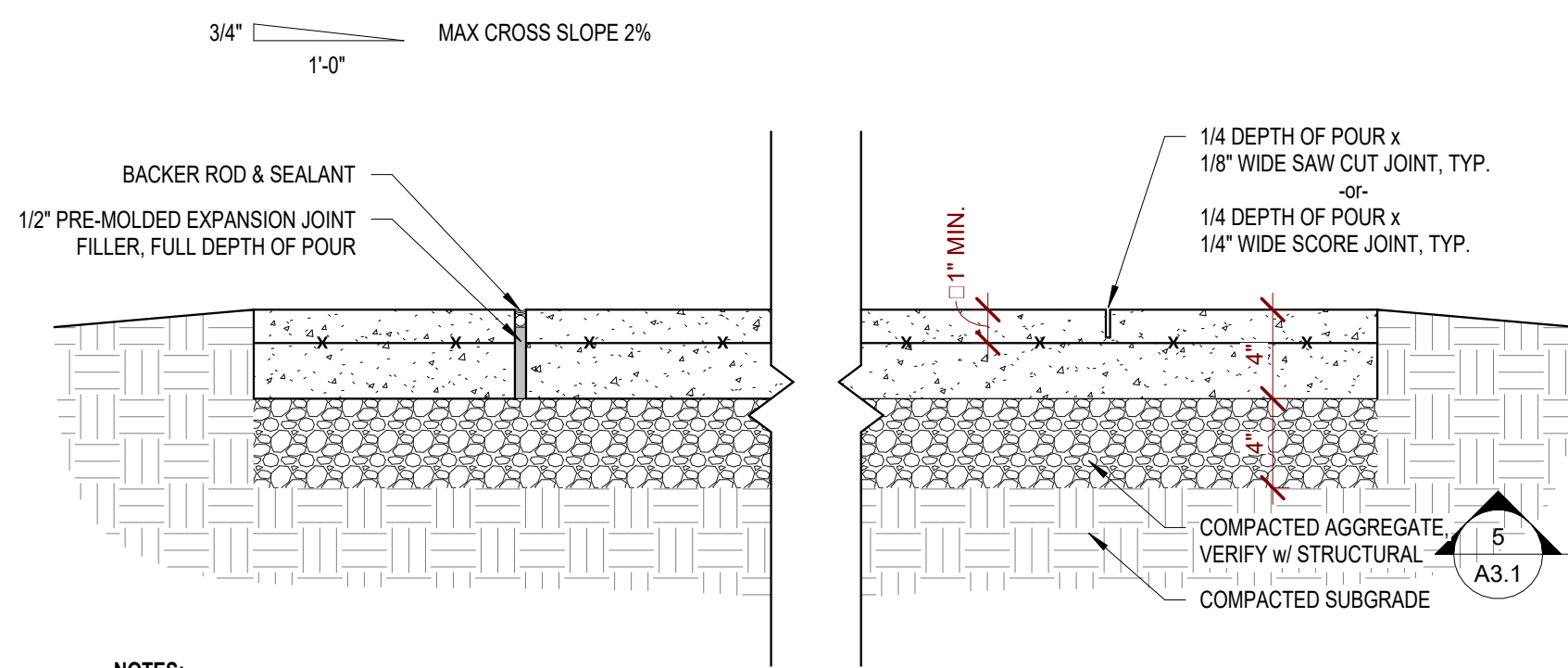
**6 Detail - Stone Vener @ Sidewalks**  
1" = 1'-0"



**5 Detail - Stone Vener @ Grade**  
1" = 1'-0"

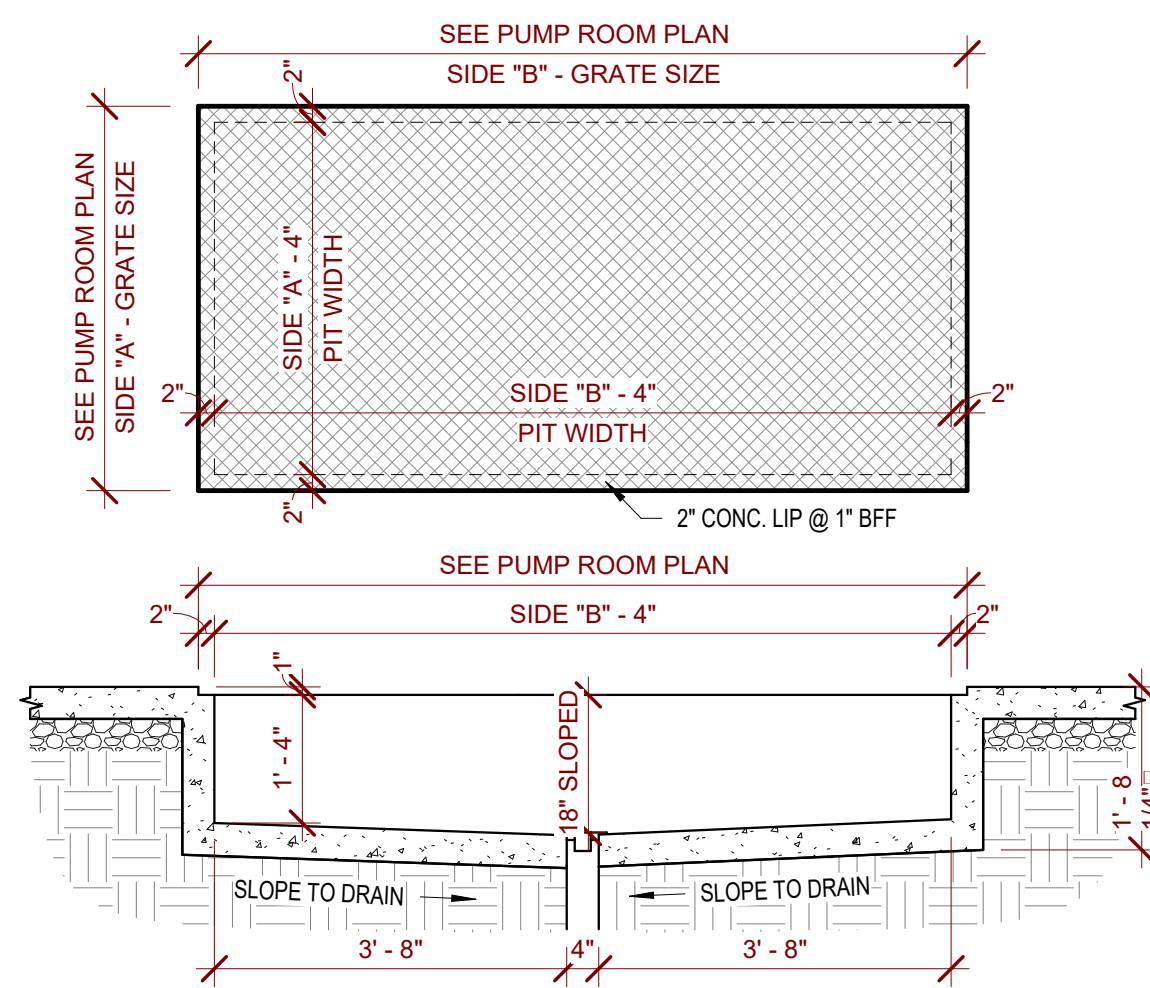


**4 Detail - Siding @ Grade**  
1" = 1'-0"

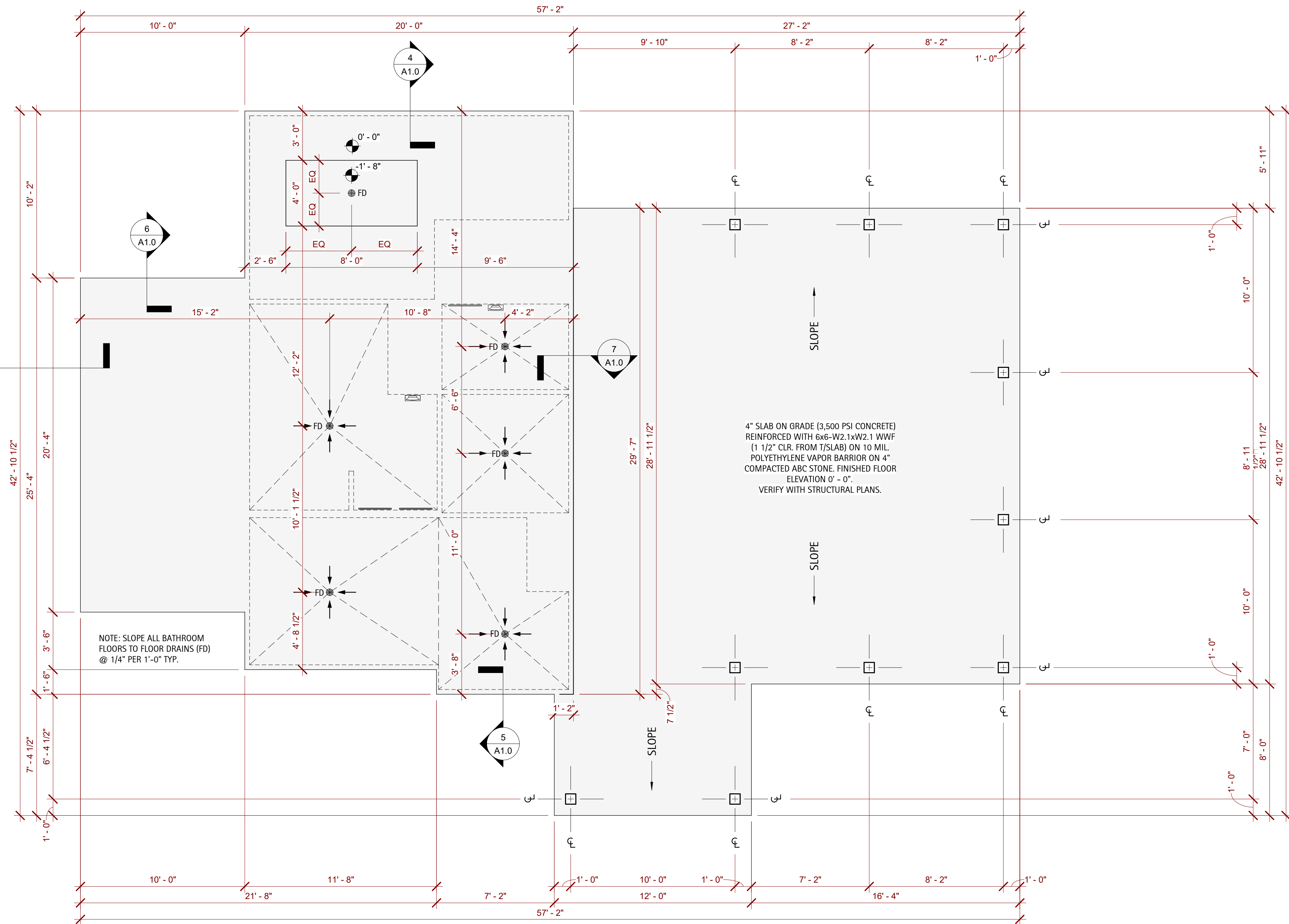


- NOTES:**
- ALL JOINTS TO BE CUT w/ WET WALK BEHIND SAW TO ENSURE ALL CUTS ARE PERPENDICULAR w/ FACE OF CONCRETE
  - MAXIMUM CONTROL JOINT SPACING SHALL BE 10 FT. IN EACH DIRECTION UNLESS SHOWN OTHERWISE ON PLAN, SEE STRUCT.
  - PROVIDE EXPANSION JOINT WHERE SLABS ARE POURED AGAINST VERTICAL SURFACES AND/OR DIFFERENT PAVING MATERIALS AND AS SPECIFIED ON PLANS OR 25'-0" MAX O.C.

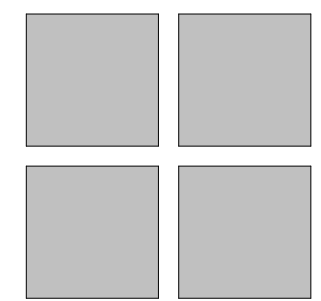
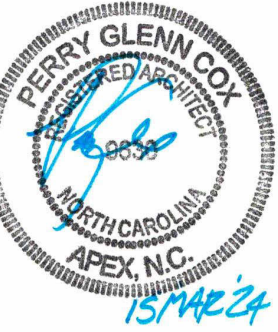
**3 Detail - Typ. Concrete Joints**  
1 1/2" = 1'-0"



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



**1 Foundation Plan**  
1/4" = 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  
**FOUNDATION PLAN**

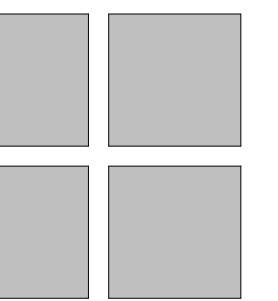
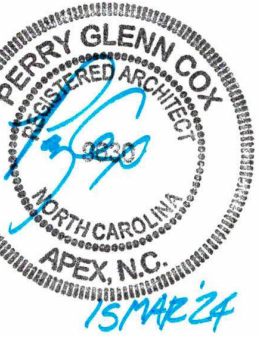
PROJECT #: 2023043  
DATE ISSUED: 03/13/2024  
DRAWING BY: JGM  
CHECKED BY: PGC / DSC

**MATTHEWS RIDGE  
KB HOMES  
BATHHOUSE  
HARNETT COUNTY, NC**





D. CLUGSTON



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

DATE

REVISION

NO.

SHEET DESCRIPTION

FIRST FLOOR PLAN

PROJECT #: 2023043

DATE ISSUED: 03/13/2024

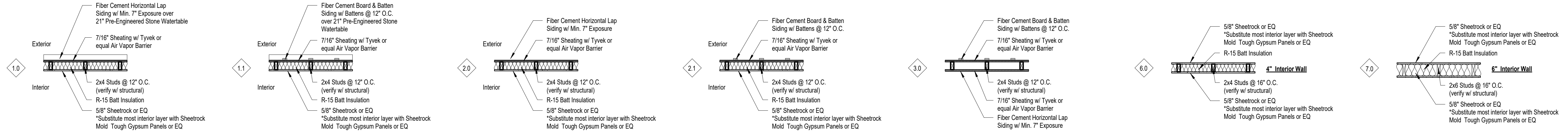
DRAWING BY: JGM

CHECKED BY: PGC / DSC

MATTHEWS RIDGE  
KB HOMES  
BATHHOUSE  
HARNETT COUNTY, NC

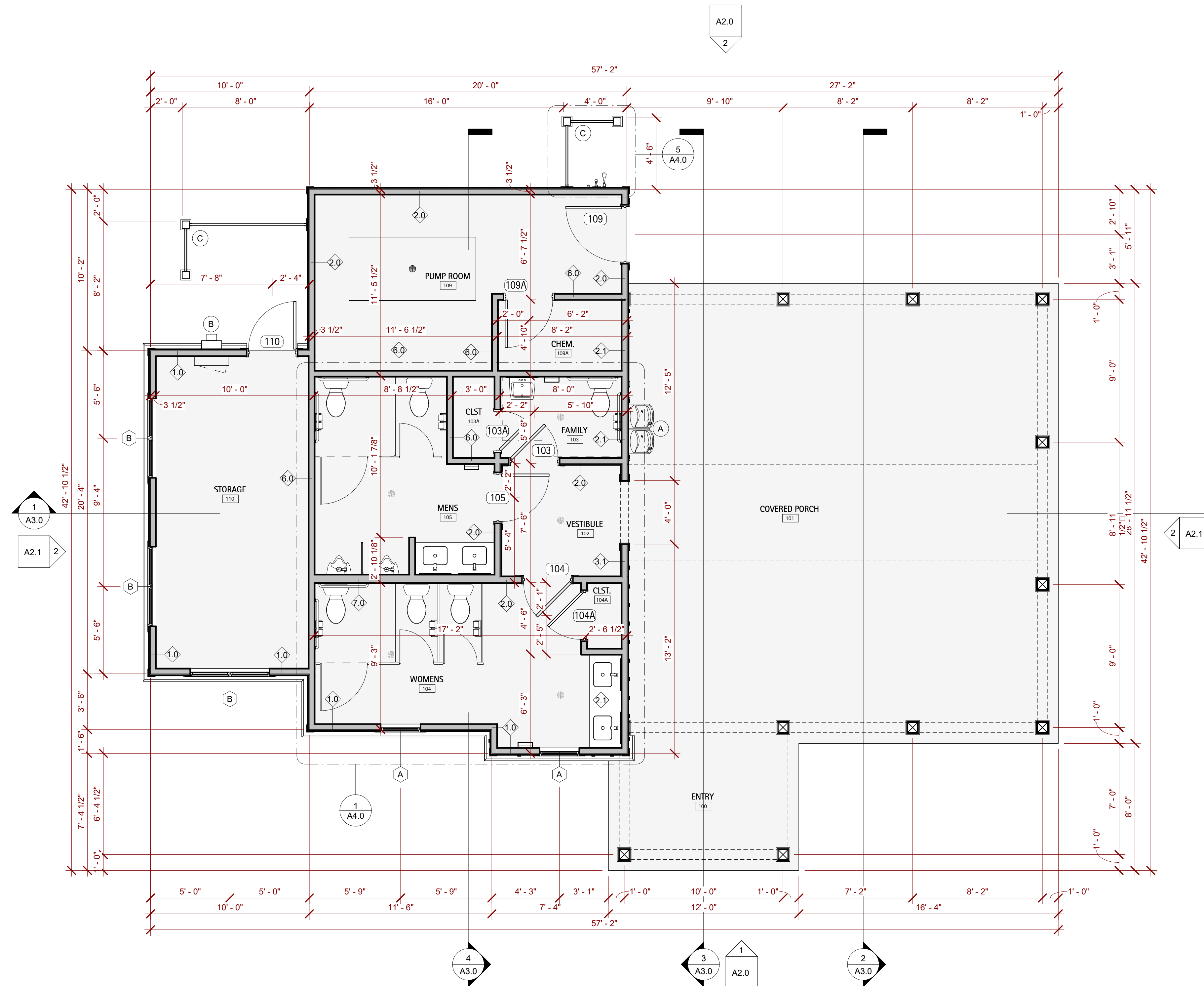
A1.1

### WALL TYPE DETAILS



### KEYNOTES

TAG	DISCRIPTION	PROVIDED BY
A	HIGH / LOW WATER COOLER. SEE PLUMBING PLANS FOR SELECTIONS. SEE TYPICAL MOUNTING HEIGHT DETAILS.	C.P.C.I
B	METER BASE & PANELS. PLACE PANEL IN STORAGE, PROVIDE SIGNAGE INDICATING REQUIRED CLEARANCES	C.P.C.I
C	TOJA GRID ENCLOSURE AT SHOWER AND TRASH ENCLOSURE, SEE TOJA GRID DETAILS	C.P.C.I



1 A1.1 First Floor Plan  
1/4" = 1'-0"



# REFLECTIVE CEILING NOTES

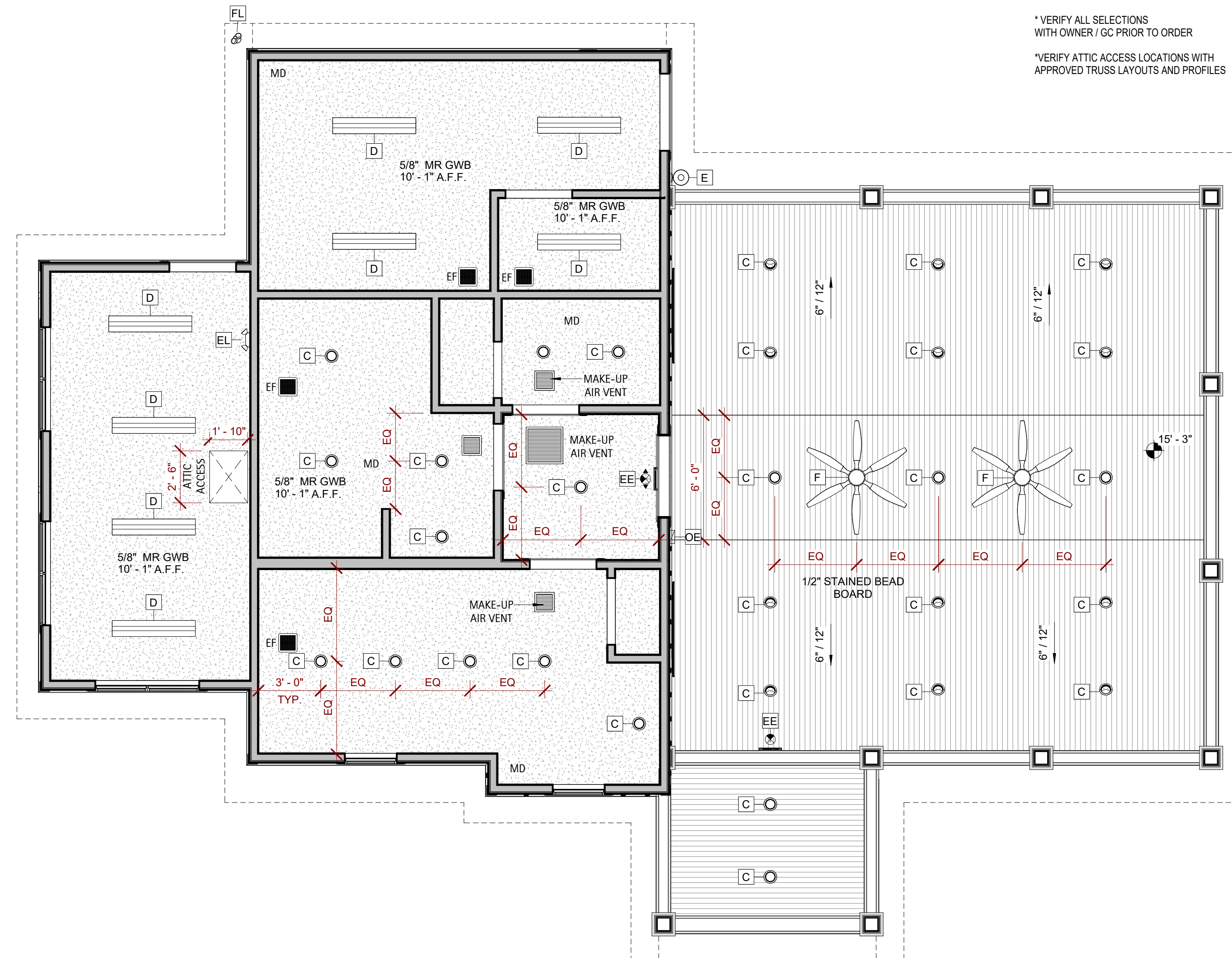
- 5/8" GWB typical - U.N.O - Mold tough in Wet areas
- Height of ceilings shall be measured from top of slab to finish face of GWB or face of ceiling grid as indicated on the Reflected Ceiling Plan, UON.
- All light fixtures are to be installed according to the Electrical Plans.
- Light fixture types, 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.
- 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.

### CEILING LEGEND

- MD - MOTION DETECTOR  
LOCATE IN CEILING
- FL - EXTERIOR FLOOD LIGHT
- EE - EMERGENCY EXIT SIGN w/ SPOTLIGHTS
- EL - EMERGENCY LIGHT w/ BATTERY BACK-UP
- OE - EXTERIOR EMERGENCY LIGHT
- EF - EXHAUST FAN
- A - NOT USED
- B - NOT USED
- C - 6" L.E.D. CAN LIGHT
- D - 1x4 TROFFER LIGHT
- E - EXTERIOR WALL SCONCE
- F - 72" FAN w/o LIGHT KIT

\*VERIFY ALL SELECTIONS WITH OWNER / GC PRIOR TO ORDER

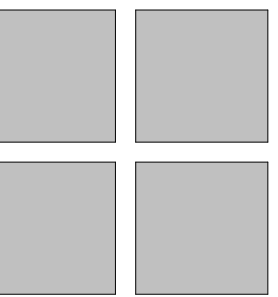
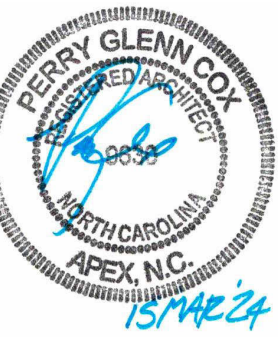
\*VERIFY ATTIC ACCESS LOCATIONS WITH APPROVED TRUSS LAYOUTS AND PROFILES



**1**  
A1.2  
**Reflected Ceiling Plan**  
1/4" = 1'-0"



**D. CLUGSTON**



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

DATE	
REVISION	
NO.	

SHEET DISCRPTION

**REFLECTED  
CEILING  
PLAN**

PROJECT #:	2023043
DATE ISSUED:	03/13/2024
DRAWING BY:	JGM
CHECKED BY:	PGC / DSC

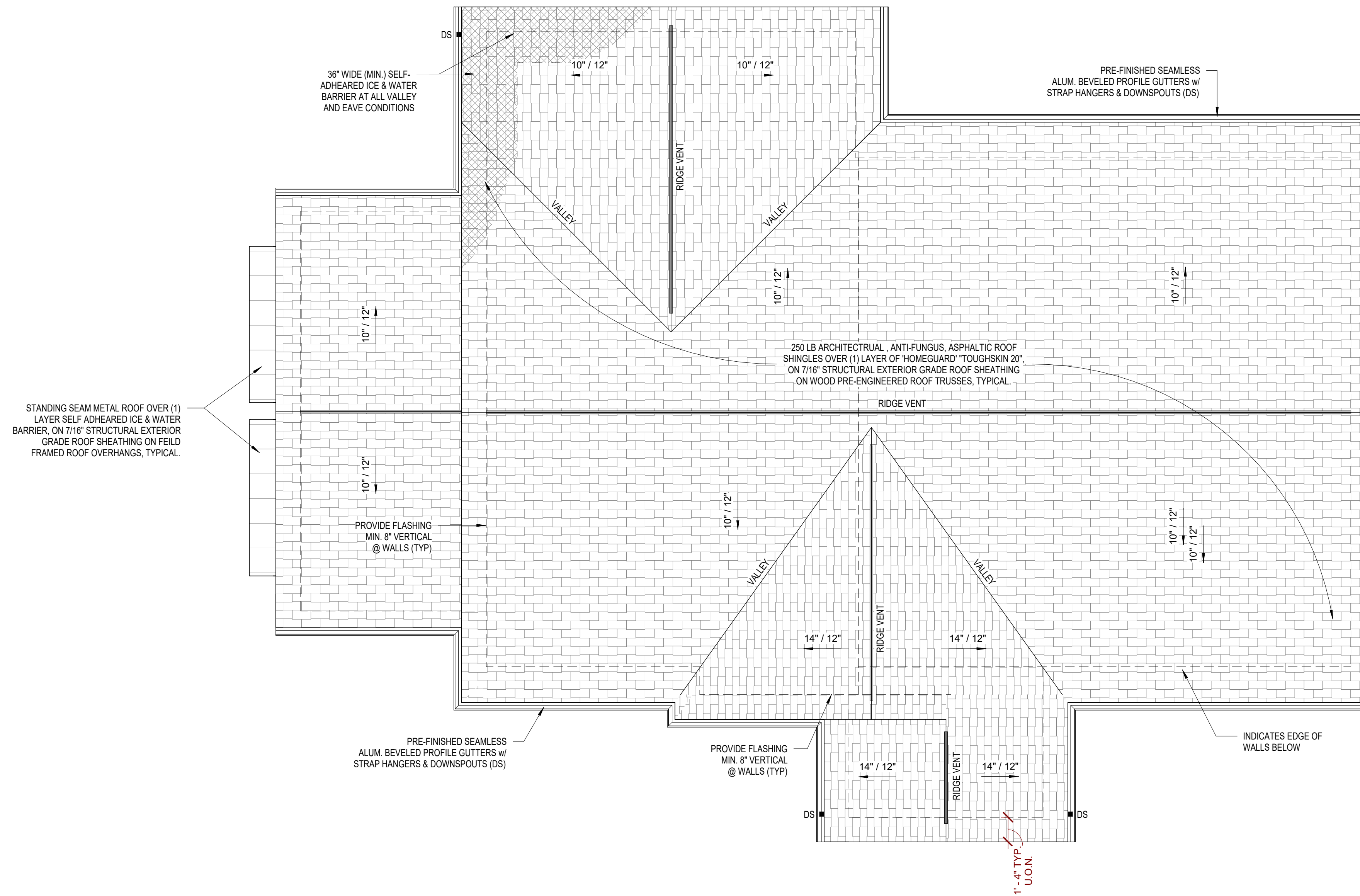
MATTHEWS RIDGE  
KB HOMES  
BATHHOUSE  
HARNETT COUNTY, NC

**A1.2**



# ROOF NOTES

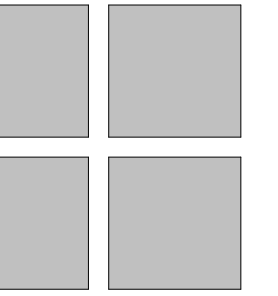
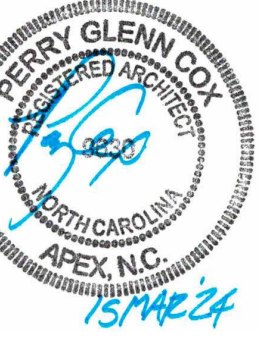
- Roof decks shall be covered with approved roof coverings secured to the building or structure in accordance with the NCSBC. Roof coverings shall be designed and installed in accordance with the building code and the approved manufacturer's instructions.
- Crickets or saddles shall be installed on the 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.
- Asphalt shingles shall only be used on roof slopes of 2:12 or greater.
- 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.
- Roof slopes from 4:12 or greater, underlayment shall be a minimum of one layer.
- 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)
- 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.
- Overhangs: Truss manufacturer to provide shorter gable end trusses where overhangs exceed 1'-0" to allow for outriggers to be framed over the top cord of the end truss and attached to the top cord of the secondary truss towards the interior of the gable. GC to verify prior to manufacturing of trusses.
- Light Location: Truss manufacturer to coordinate truss layout with reflected ceiling plans, electrical plans, and mechanical plans to avoid conflicts



**1**  
A1.3  
**Roof Plan**  
1/4" = 1'-0"



**D. CLUGSTON**



**Perry Cox**  
architect, p.a.

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

DATE

REVISION

NO.

SHEET DISCRPTION

**ROOF PLAN**

PROJECT #: 2023043

DATE ISSUED: 03/13/2024

DRAWING BY: JGM


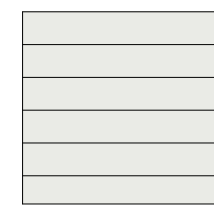
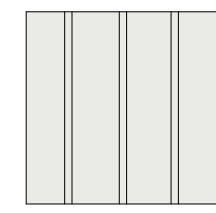
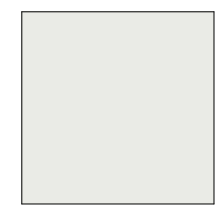
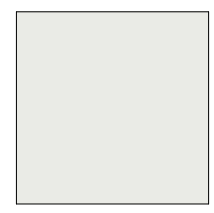

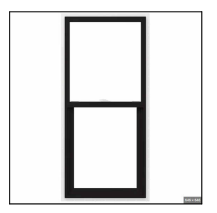


CHECKED BY: PGC / DSC

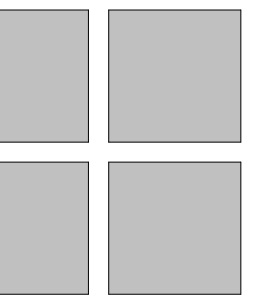
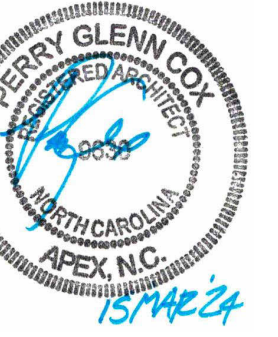
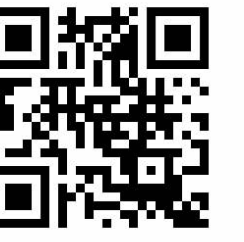
MATTHEWS RIDGE  
KB HOMES  
BATHHOUSE  
HARNETT COUNTY, NC

**A1.3**

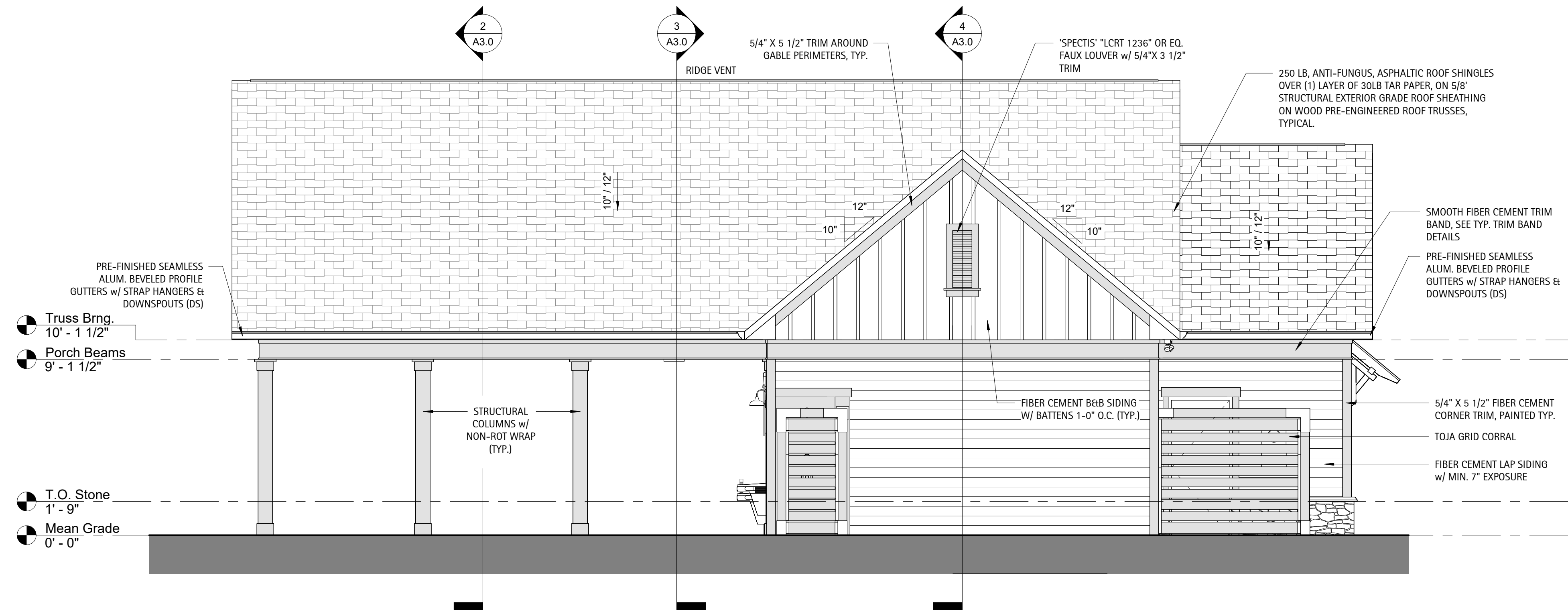


# MATERIAL LEGEND

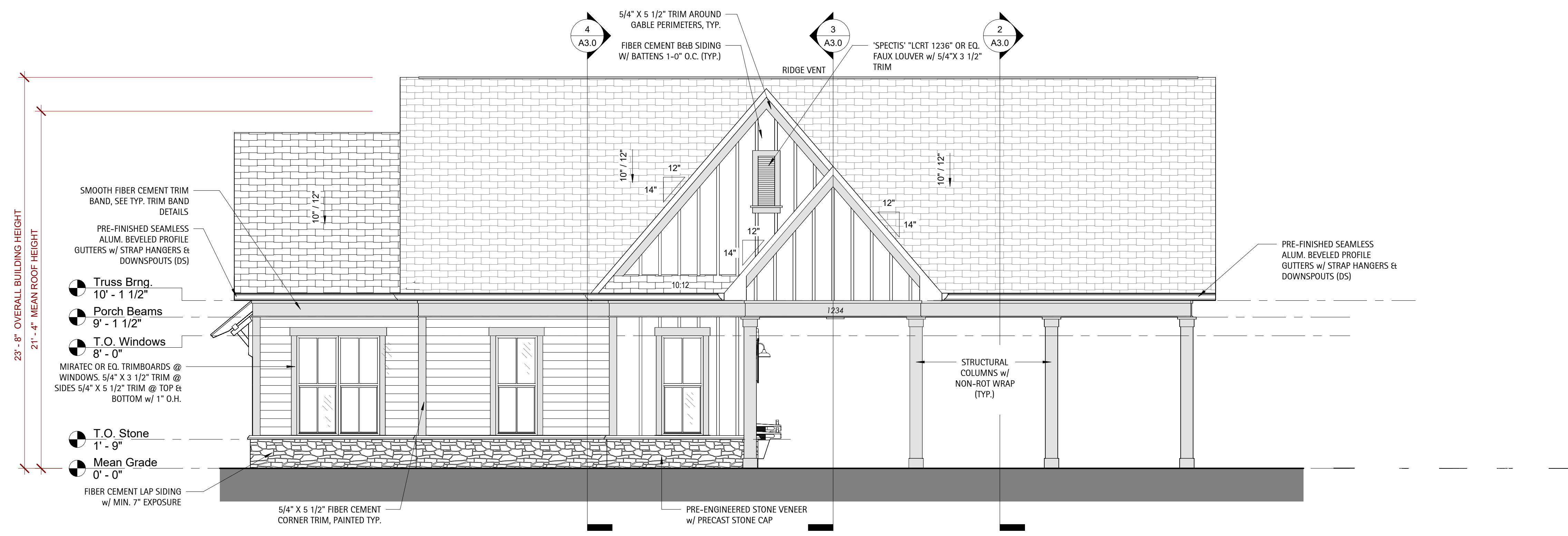
 <b>STONE VENEER</b> COLOR: PENNSYLVANIA LEDGESTONE BY STONECRAFT	 <b>HORIZONTAL SIDING</b> COLOR: ARTIC WHITE BY JAMES HARDIE	 <b>B&amp;B SIDING</b> COLOR: ARTIC WHITE BY JAMES HARDIE	 <b>EXTERIOR TRIM</b> COLOR: ARTIC WHITE FIBER CEMENT BY JAMES HARDIE -or- MIRATEC	 <b>COLUMNS</b> COLOR: ARTIC WHITE FIBER CEMENT BY JAMES HARDIE - or - MIRATEC	 <b>DOORS</b> COLOR: TRICORN BLACK SW 6258	 <b>WINDOWS</b> COLOR: BLACK PLY-GEM 1500 SERIES 2 OVER 2 GRID	 <b>GUTTERS &amp; DOWNSPOUT</b> COLOR: BLACK BEVELED PROFILE	 <b>ROOFING ASPHALT SHINGLE</b> COLOR: CAMBRIDGE WEATHERWOOD BY IKO
---	--	---	--	--	--	--	--	---



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



**2 Elevation - West**  
1/4" = 1'-0"



**1 Elevation - East**  
1/4" = 1'-0"

DATE	
REVISION	
NO.	

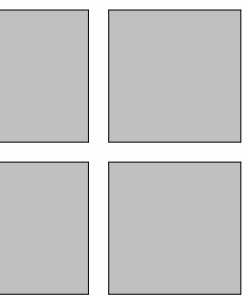
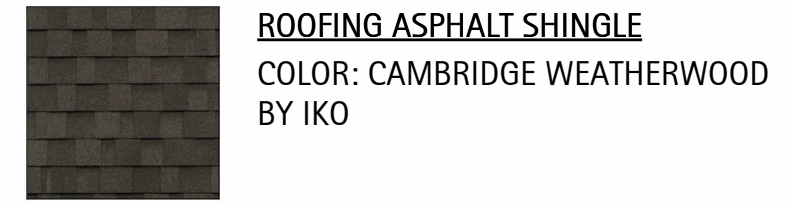
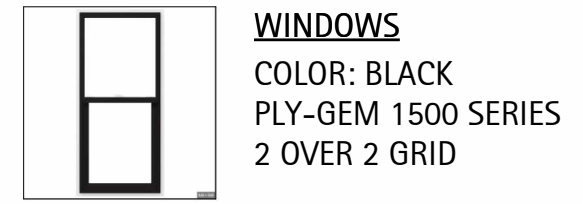
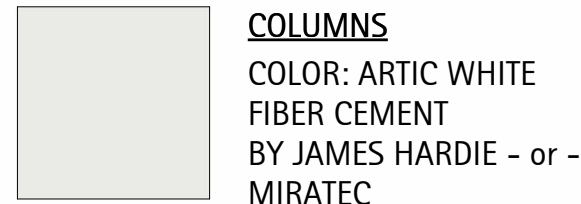
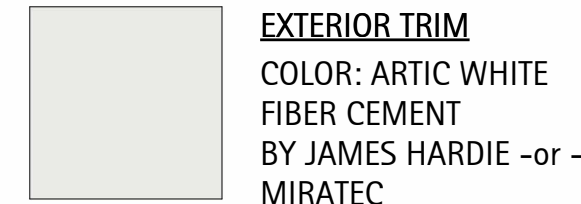
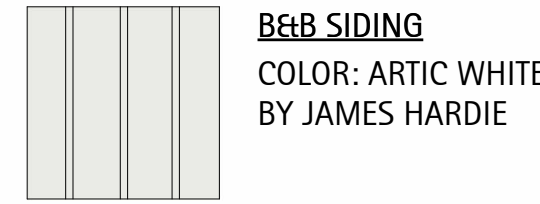
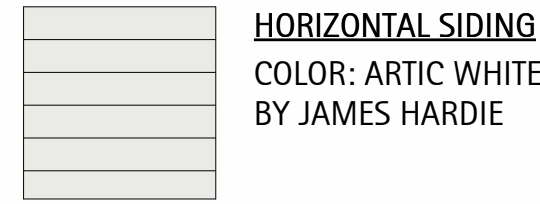
SHEET DISCRPTION  
**EXTERIOR ELEVATIONS**

PROJECT #:	2023043
DATE ISSUED:	03/13/2024
DRAWING BY:	JGM
CHECKED BY:	PGC / DSC

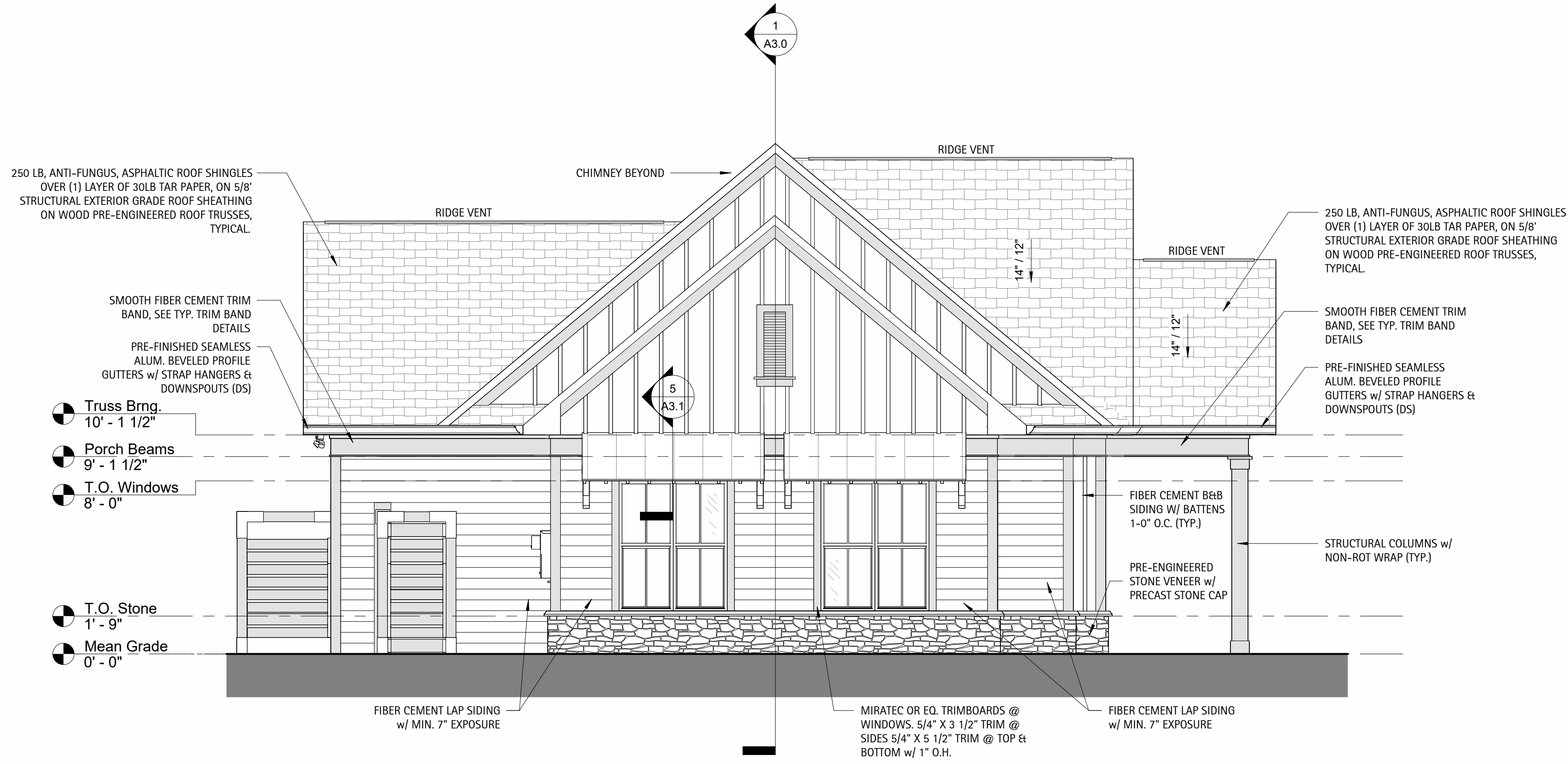
MATTHEWS RIDGE  
KB HOMES  
BATHHOUSE  
HARNETT COUNTY, NC

**A2.0**

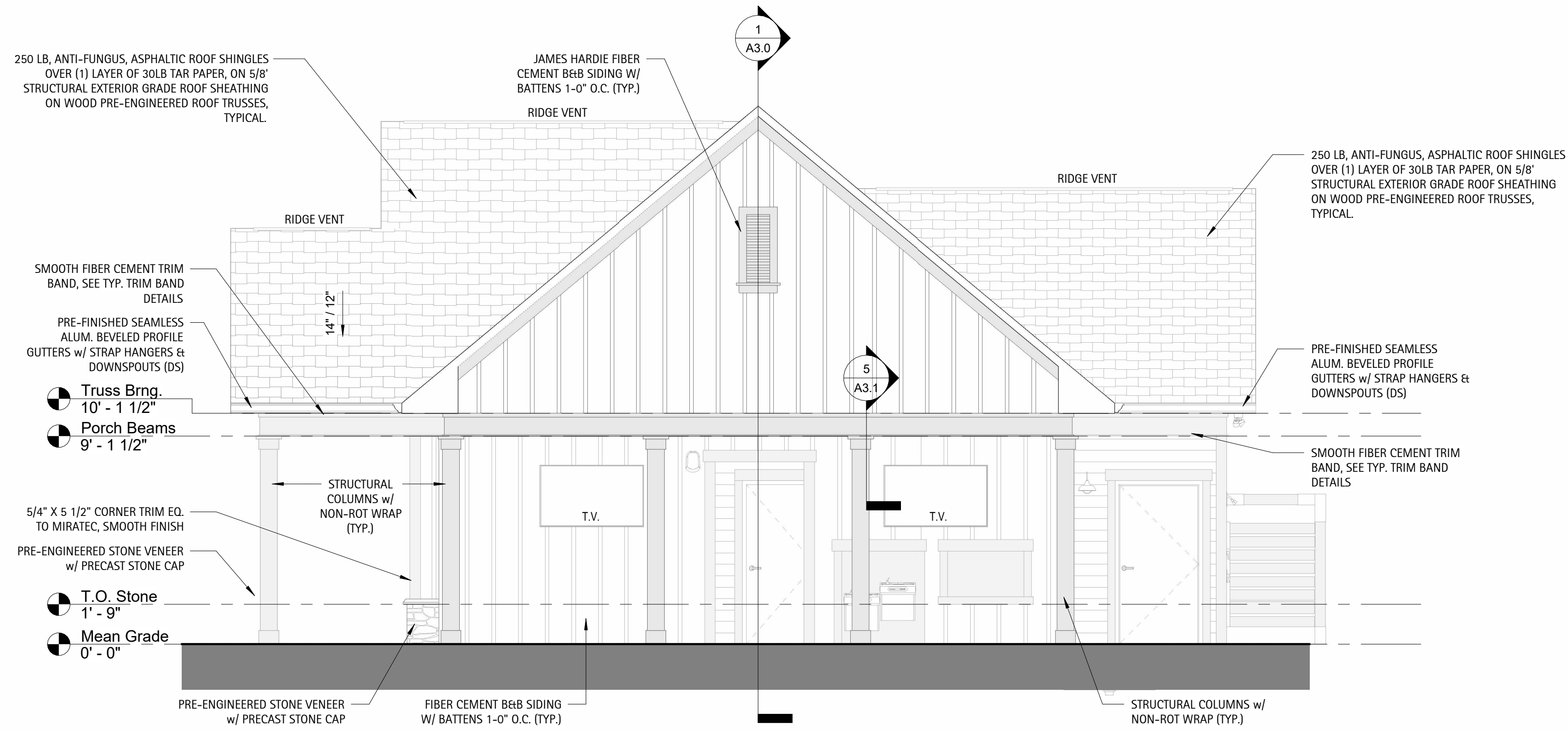




**Perry Cox**  
architect, p.a.  
124 Salem Towne Court, Apex, NC 27502  
P: 919.363.5411  
www.pcoxdesign.com



**2**  
A2.1  
**Elevation - North**  
1/4" = 1'-0"



**1**  
A2.1  
**Elevation - South**  
1/4" = 1'-0"

DATE

REVISION

NO.

SHEET DESCRIPTION  
**EXTERIOR ELEVATIONS**

PROJECT #: 2023043  
DATE ISSUED: 03/13/2024  
DRAWING BY: JGM  
CHECKED BY: PGC / DSC

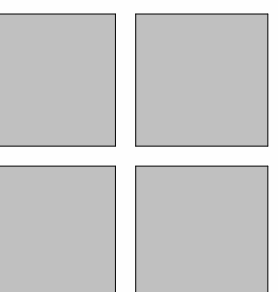
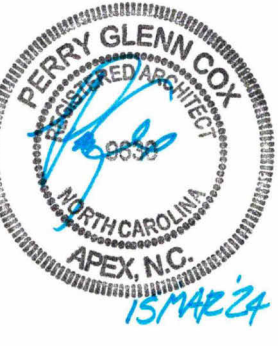
MATTHEWS RIDGE  
KB HOMES  
BATHHOUSE  
HARNETT COUNTY, NC

**A2.1**

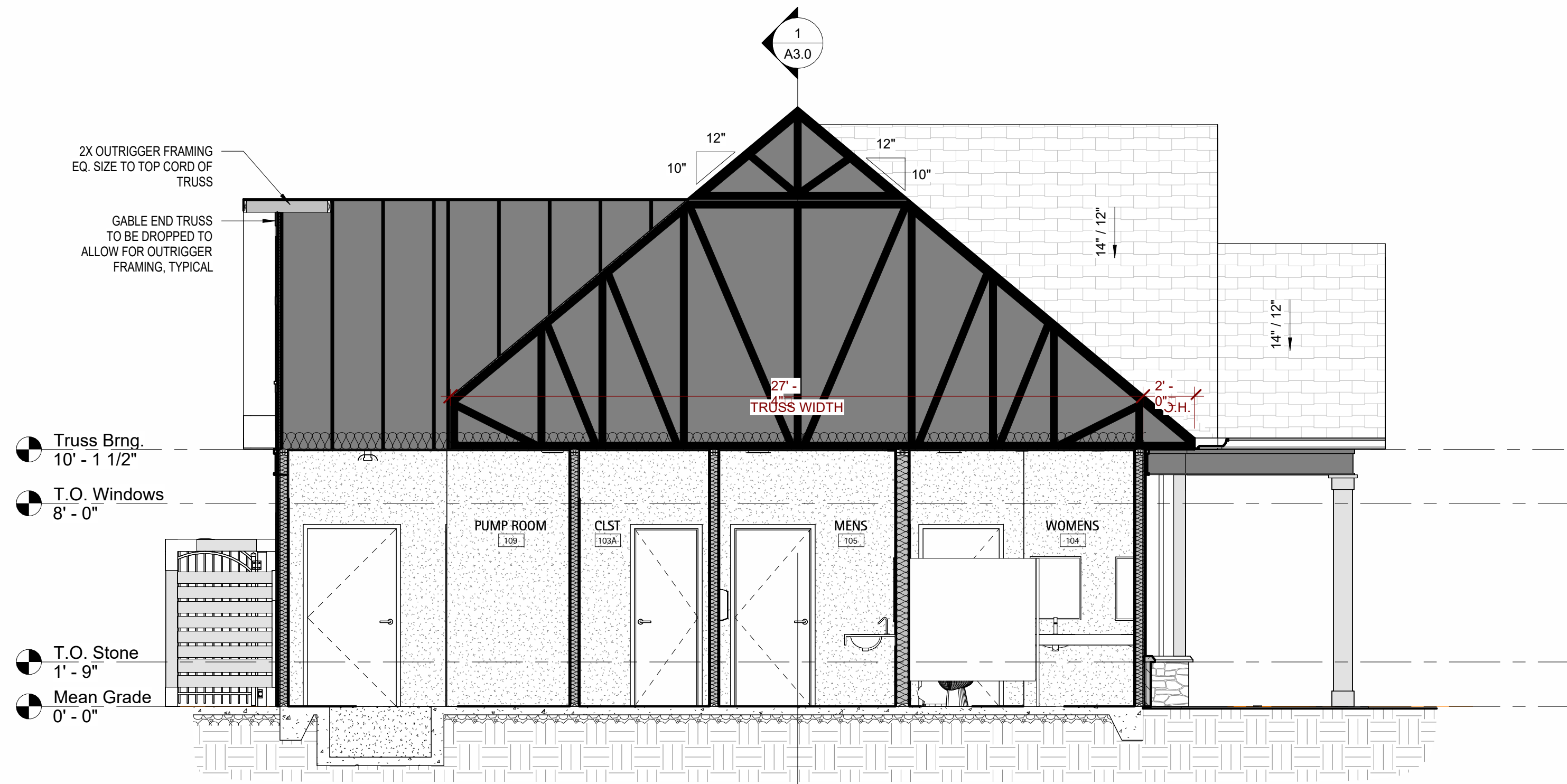




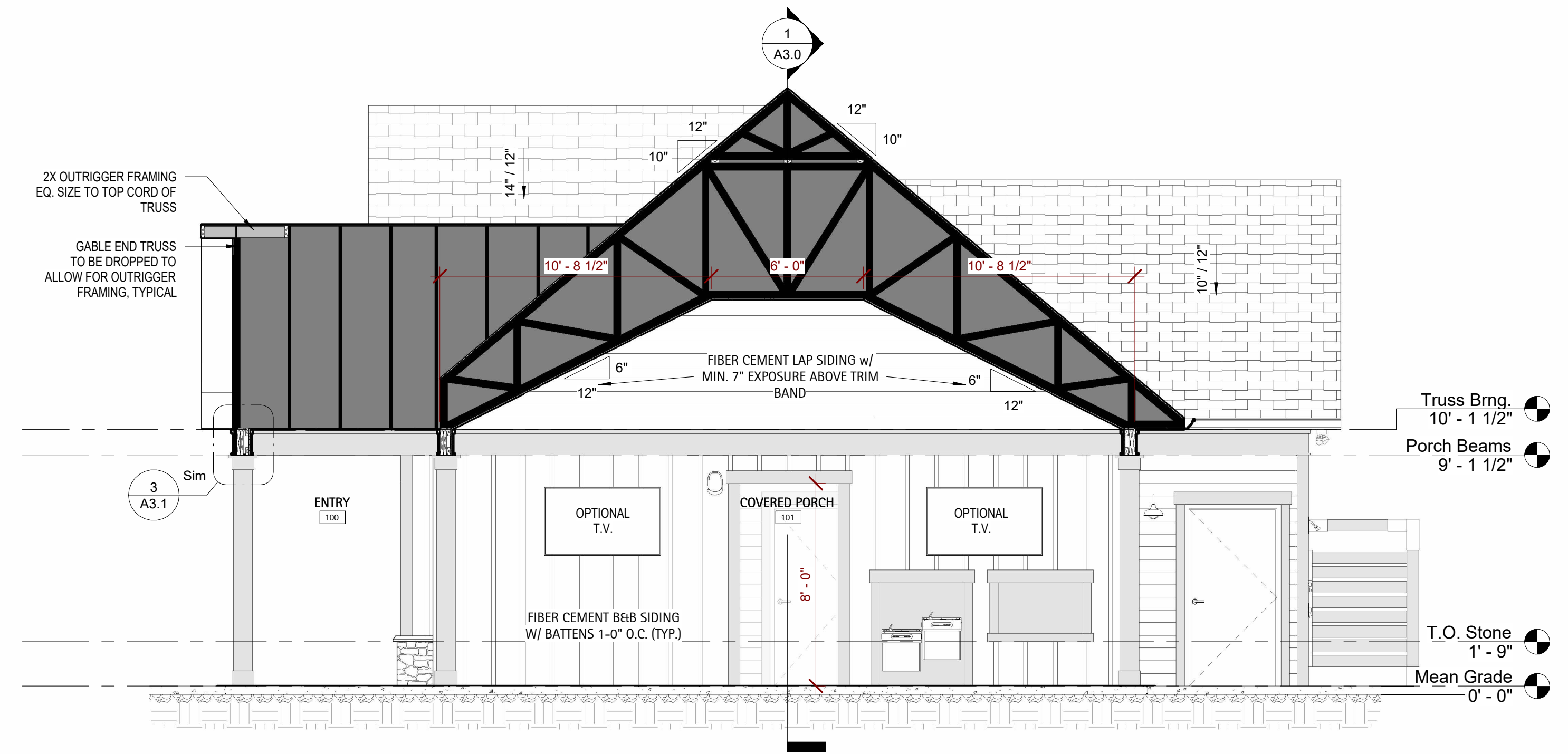
D. CLUGSTON



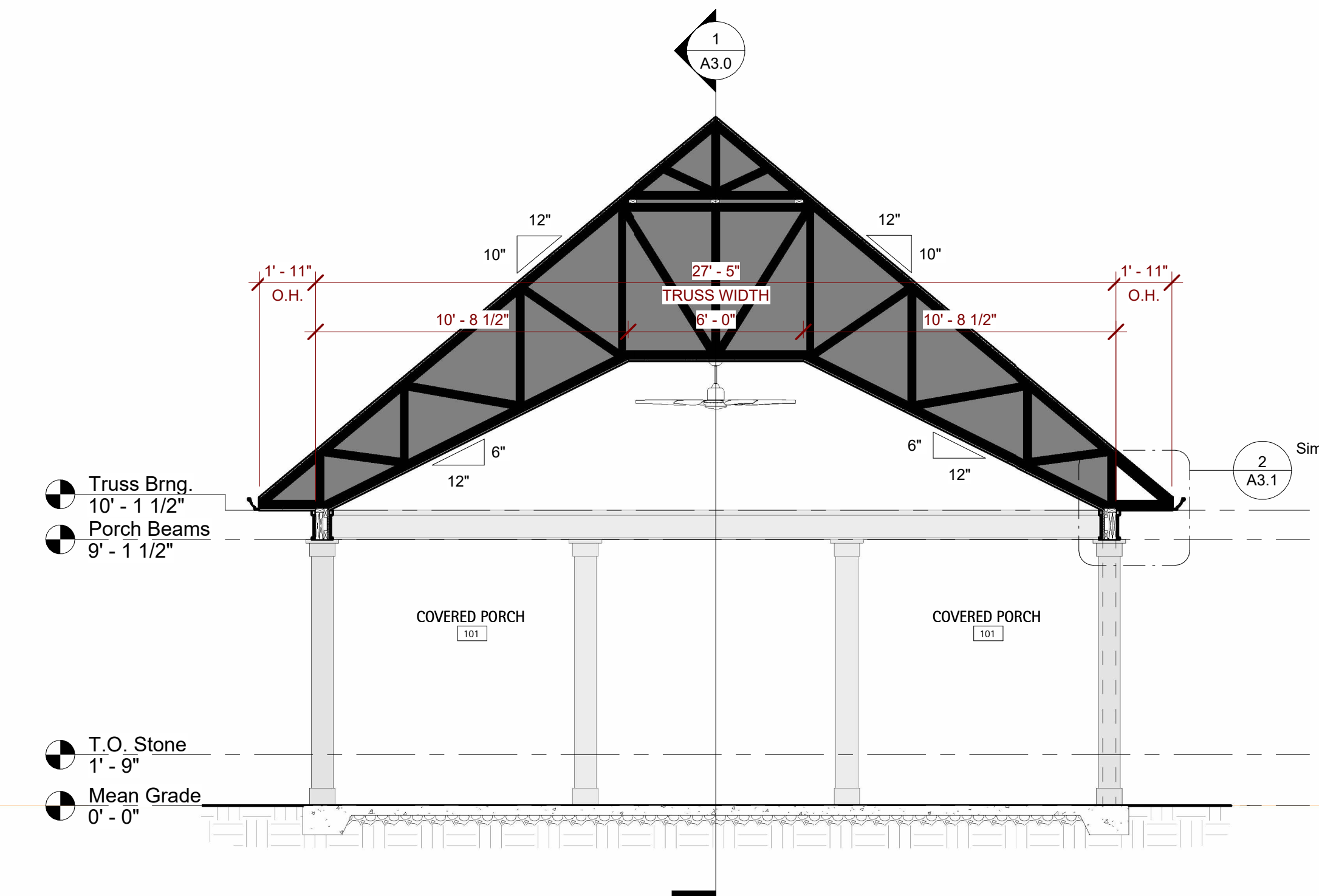
Perry Cox architect, p.a.  
124 Salem Towne Court, Apex, NC 27502  
P: 919.363.5411  
www.pcoxdesign.com



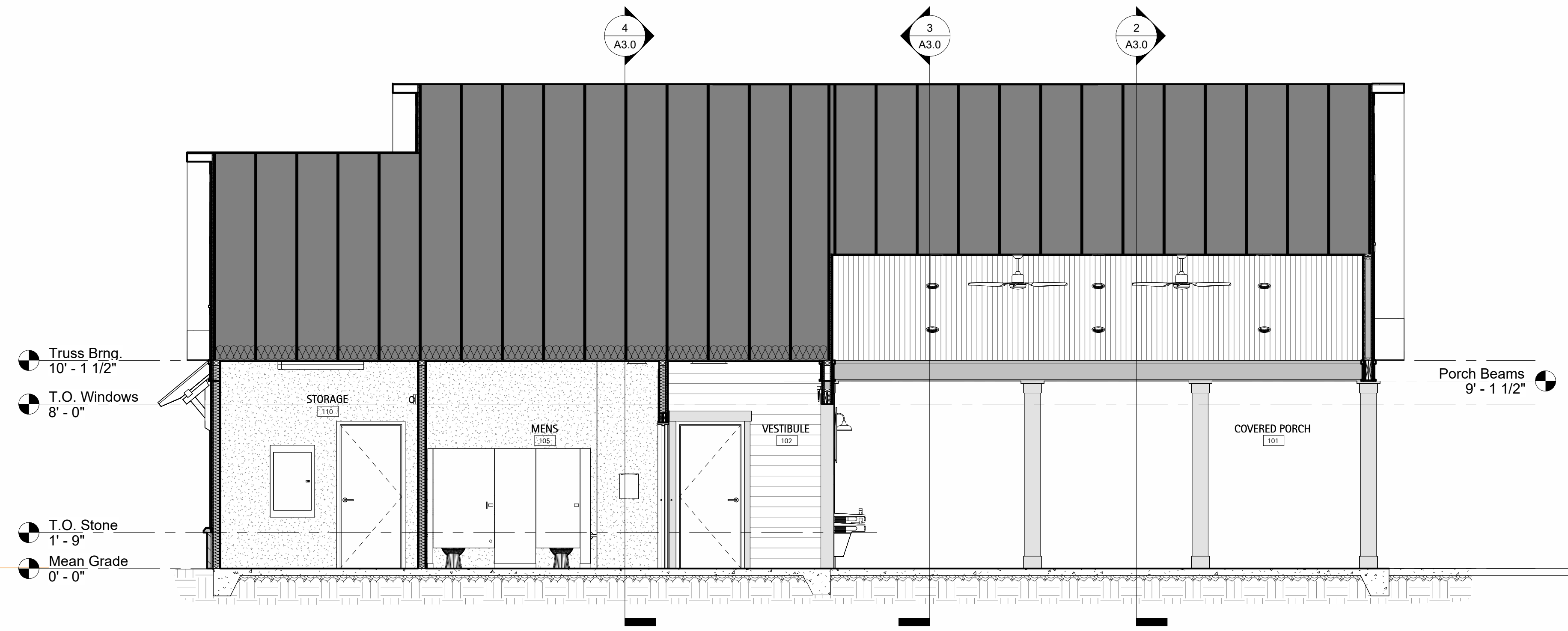
**4 Section - Through Restrooms**  
1/4" = 1'-0"



**3 Section - Through Entry**  
1/4" = 1'-0"



**2 Section - Through Porch**  
1/4" = 1'-0"



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

DATE	
REVISION	
NO.	

SHEET DISCRPTION  
**BUILDING SECTIONS**

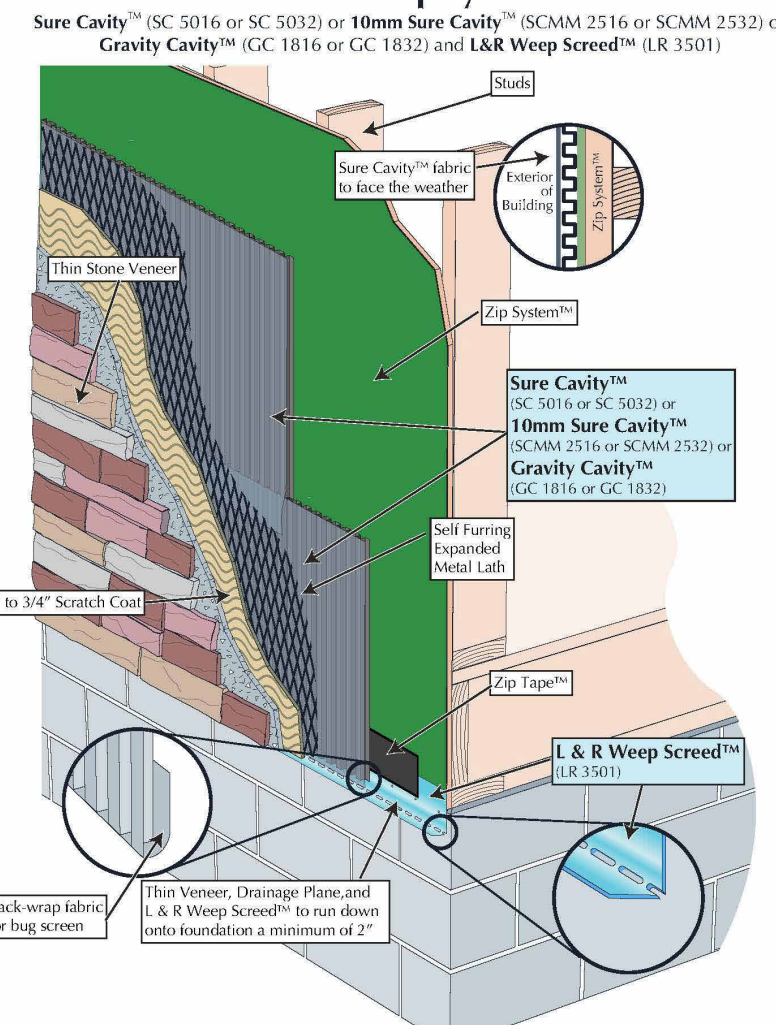
PROJECT #: 2023043  
DATE ISSUED: 03/13/2024  
DRAWING BY: JGM  
CHECKED BY: PGC / DSC

MATTHEWS RIDGE  
KB HOMES  
BATHHOUSE  
HARNETT COUNTY, NC

A3.0

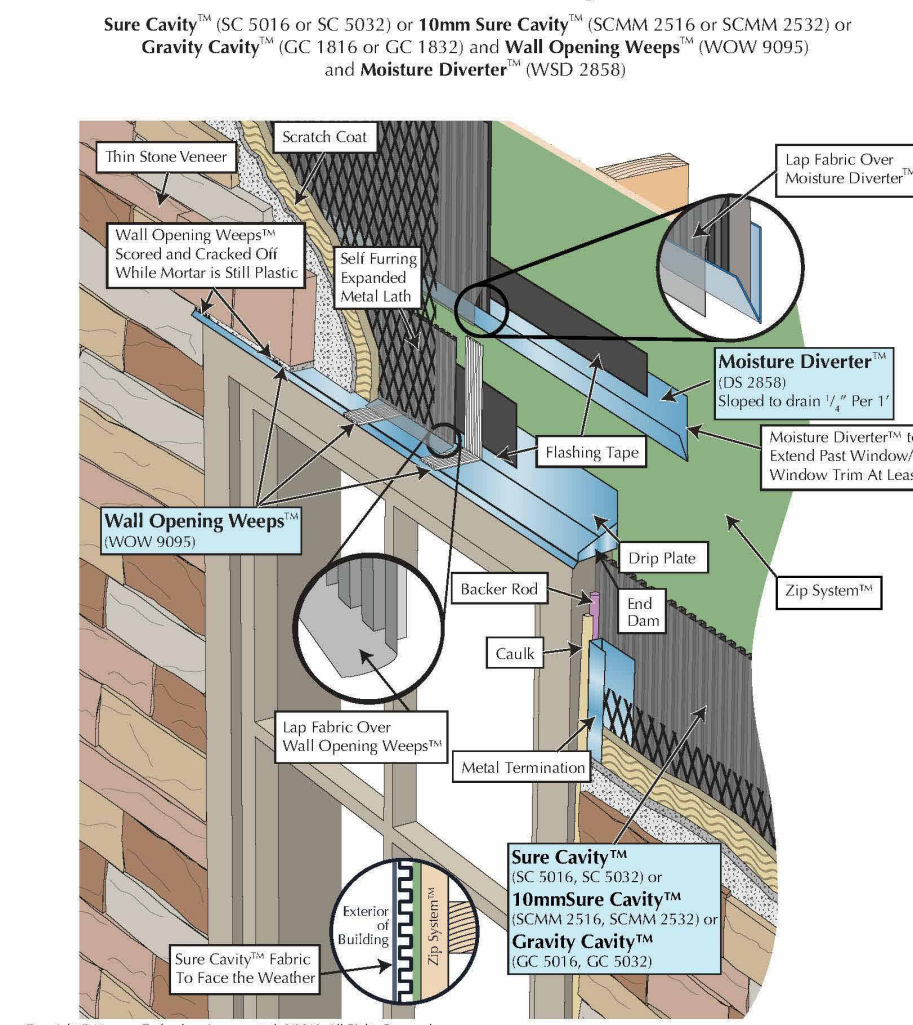


**L&R Weep Scream at Bottom of Thin Stone Veneer Wall With Zip System™**

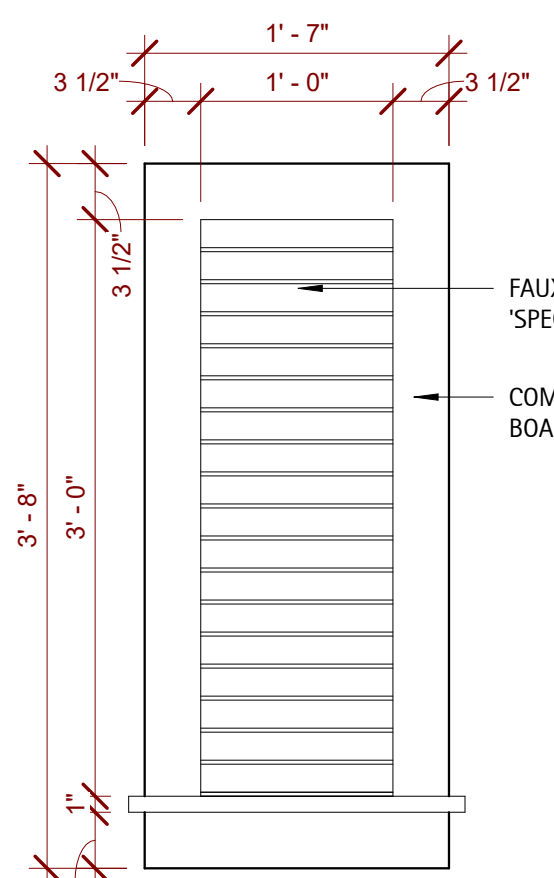


Copyright © 2018, Alamo Technology Incorporated. All Rights Reserved.  
 All details are created from research deemed to be reliable. However, A3.1 does not guarantee the accuracy or completeness of any information, nor shall it be held responsible for any errors, omissions, or damage arising out of the use of the information. These details are created with the understanding that A3.1 is providing information but is not attempting to make engineering or other professional service. Each service is required the assistance of an appropriate professional discipline. Use of this manual in strict conformance with local building codes and regulations. Consult local codebook officials prior to installation. It is the buyer's responsibility to ensure that all materials are used in strict conformance with local building codes and regulations.

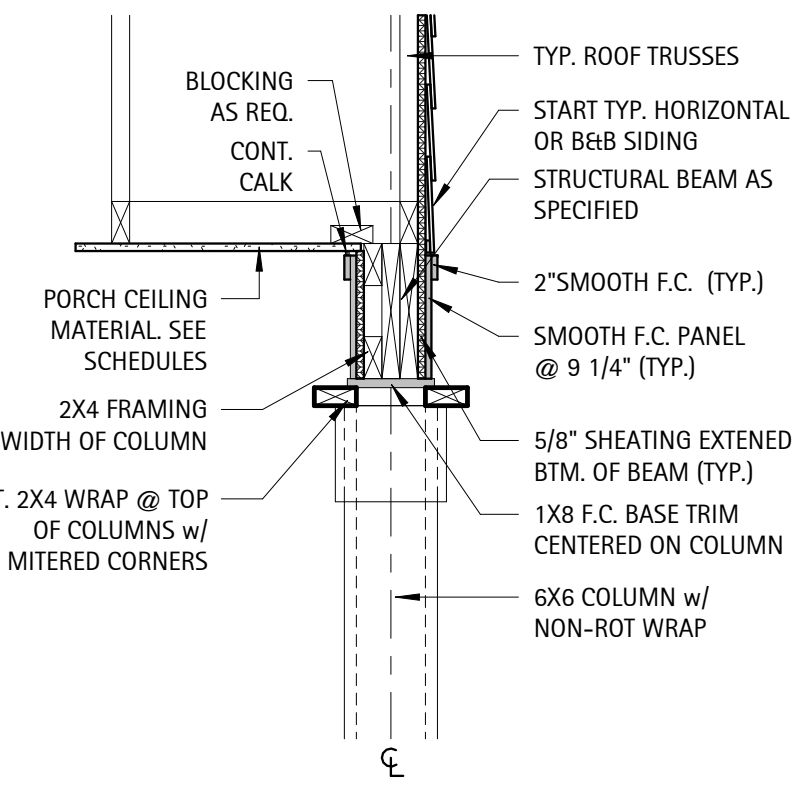
**Thin Stone Veneer with Drainage Plane and Weeps on Zip System™ with Moisture Diverter™ at Top of Window**



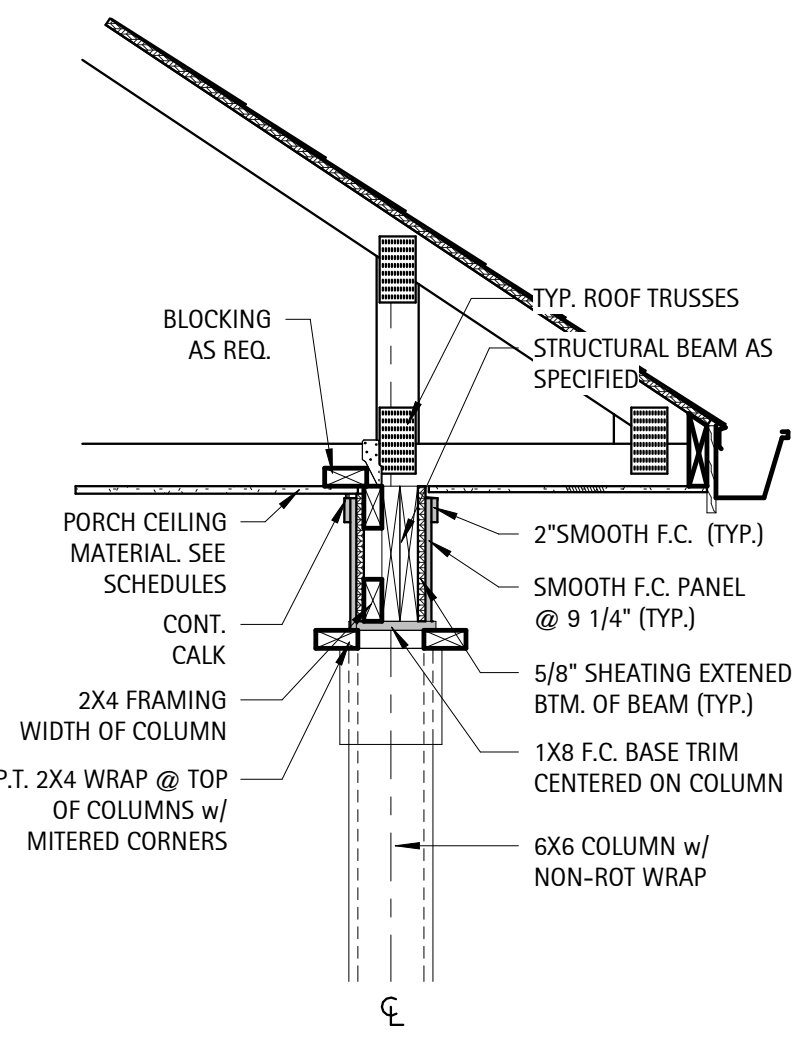
Copyright © 2018, Alamo Technology Incorporated. All Rights Reserved.  
 All details are created from research deemed to be reliable. However, A3.1 does not guarantee the accuracy or completeness of any information, nor shall it be held responsible for any errors, omissions, or damage arising out of the use of the information. These details are created with the understanding that A3.1 is providing information but is not attempting to make engineering or other professional service. Each service is required the assistance of an appropriate professional discipline. Use of this manual in strict conformance with local building codes and regulations. Consult local codebook officials prior to installation. It is the buyer's responsibility to ensure that all materials are used in strict conformance with local building codes and regulations.



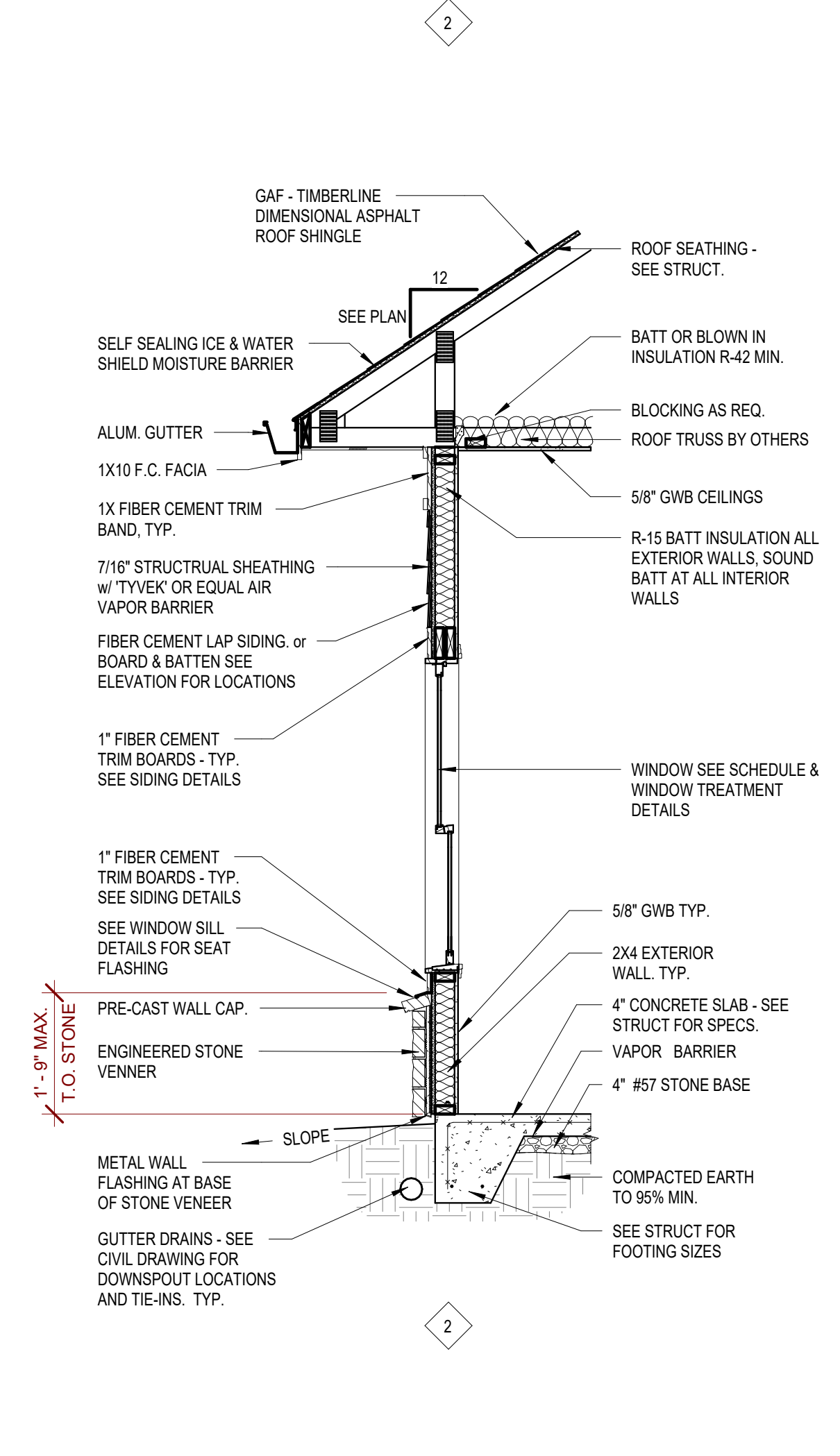
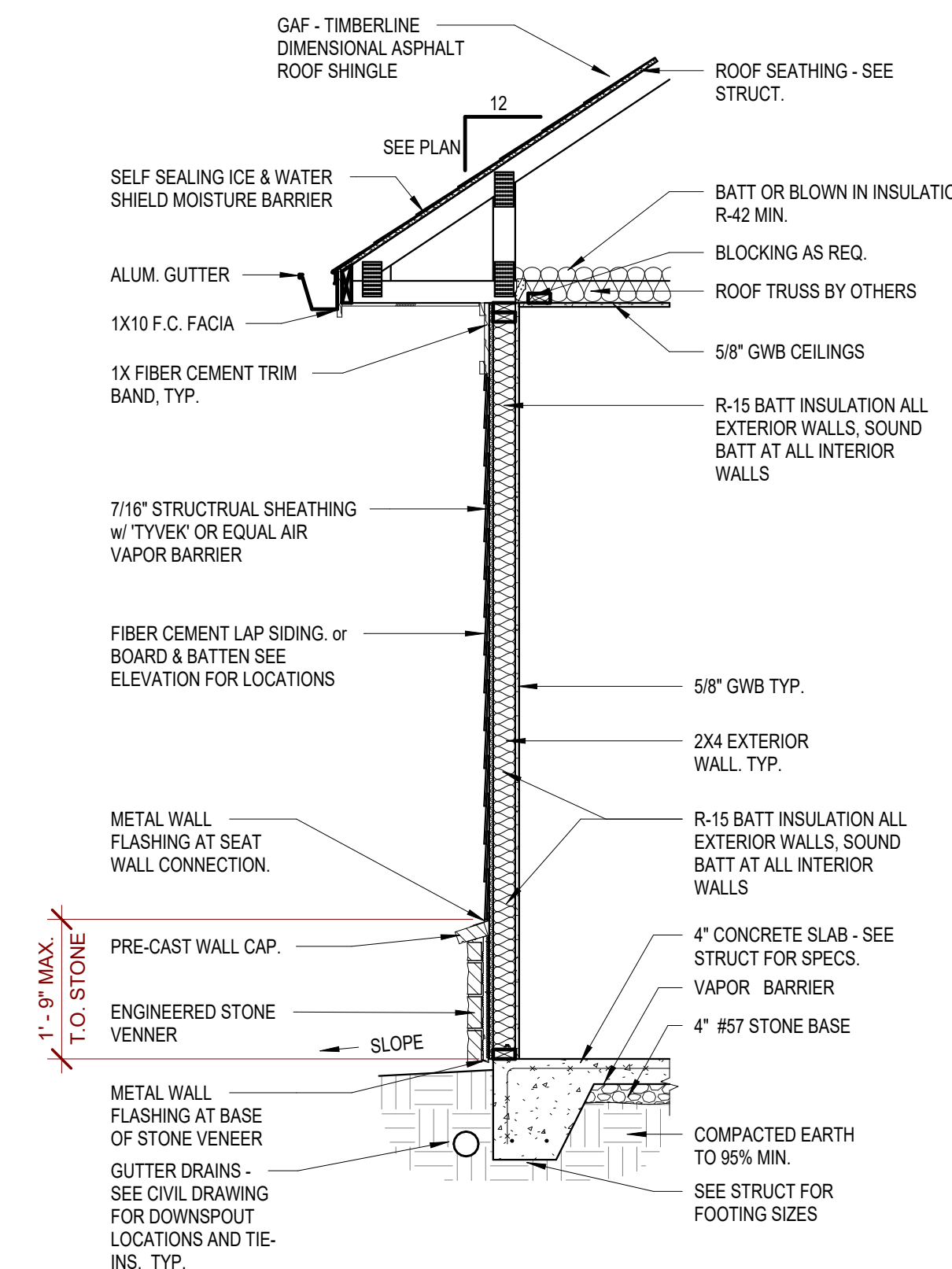
**4 Detail - Gable Vents**  
 1" = 1'-0"



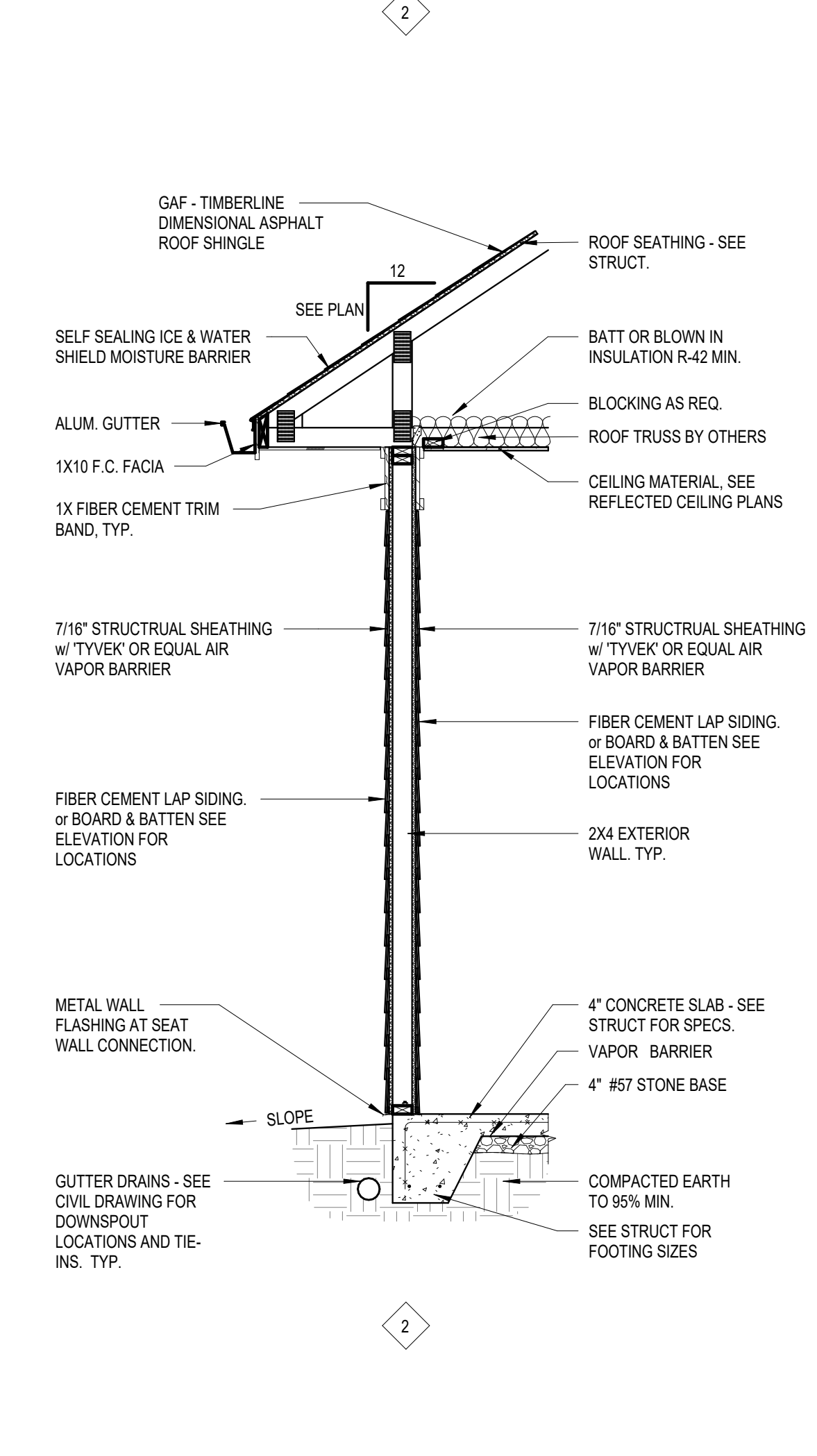
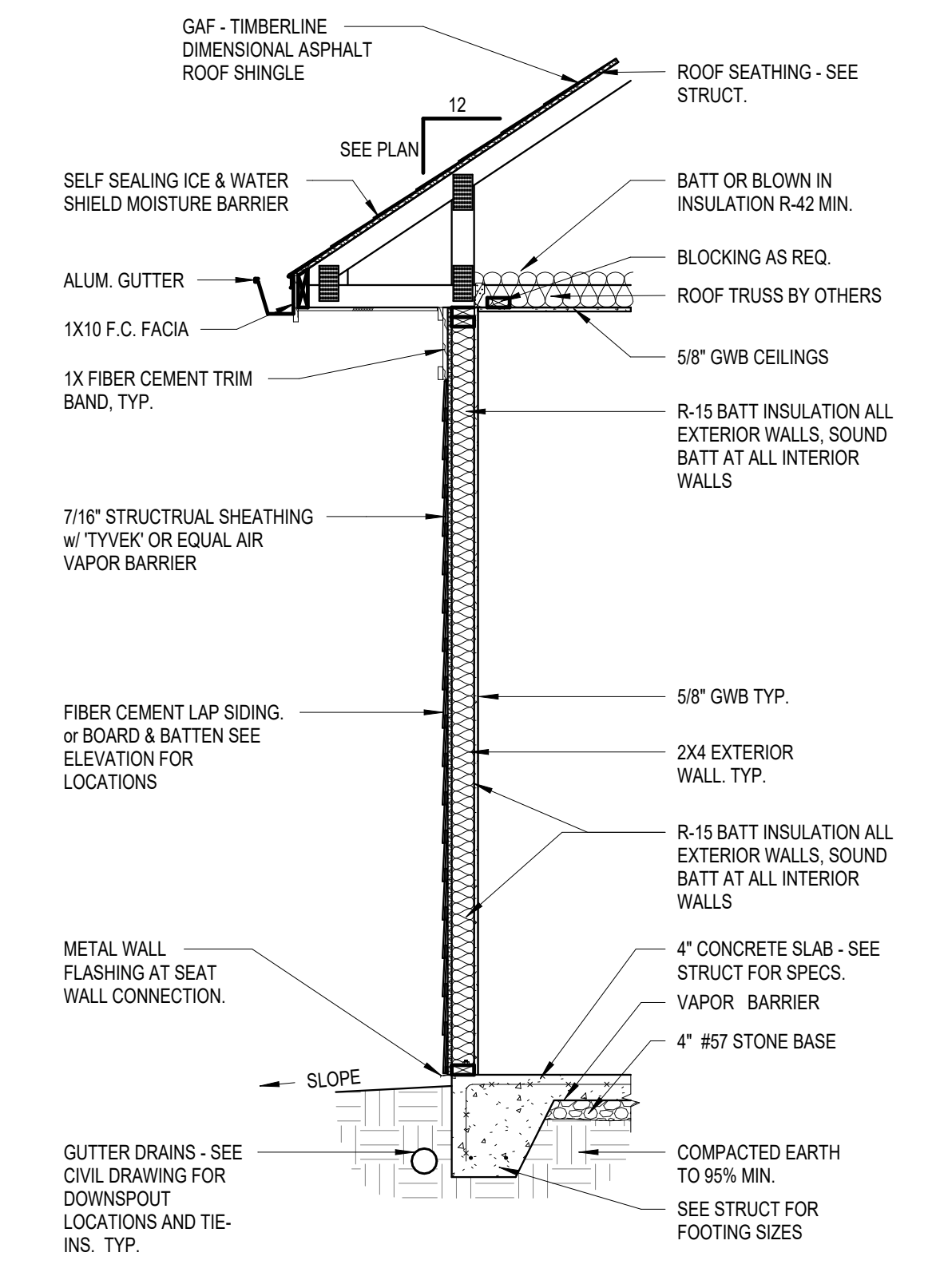
**3 Detail - Typ. Trim Band @ Gables**  
 3/4" = 1'-0"



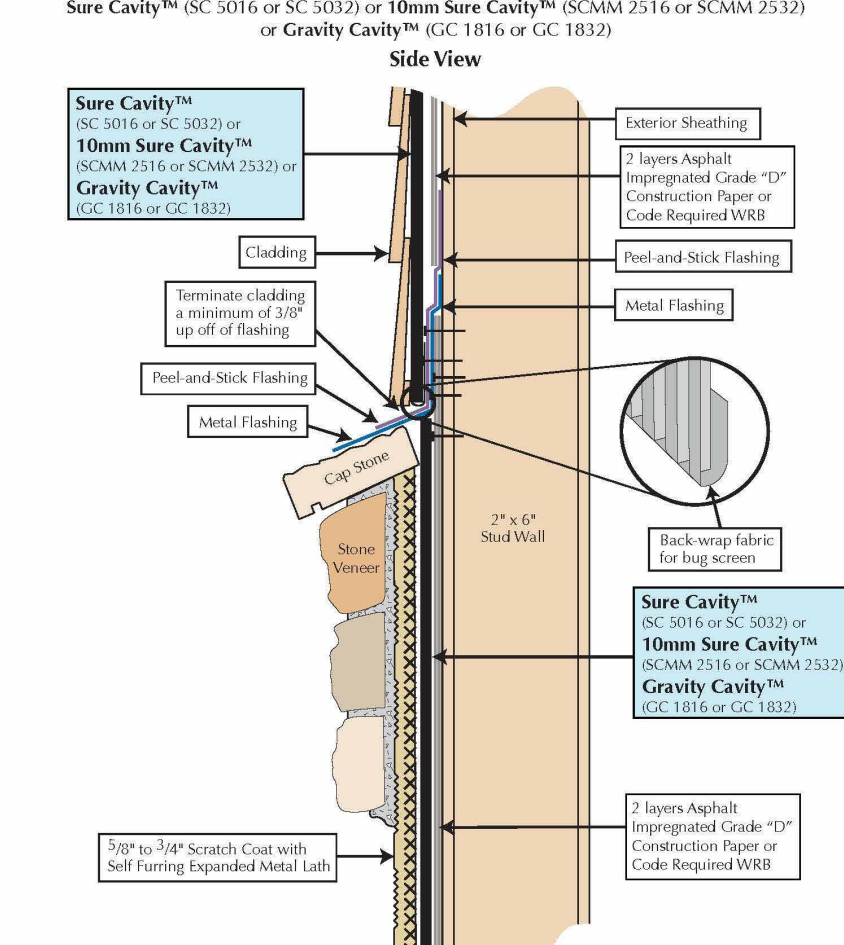
**2 Detail - Typ. Trim Band @ Soffits**  
 3/4" = 1'-0"



**1 Detail - Typ. Wall Sections**  
 1/2" = 1'-0"

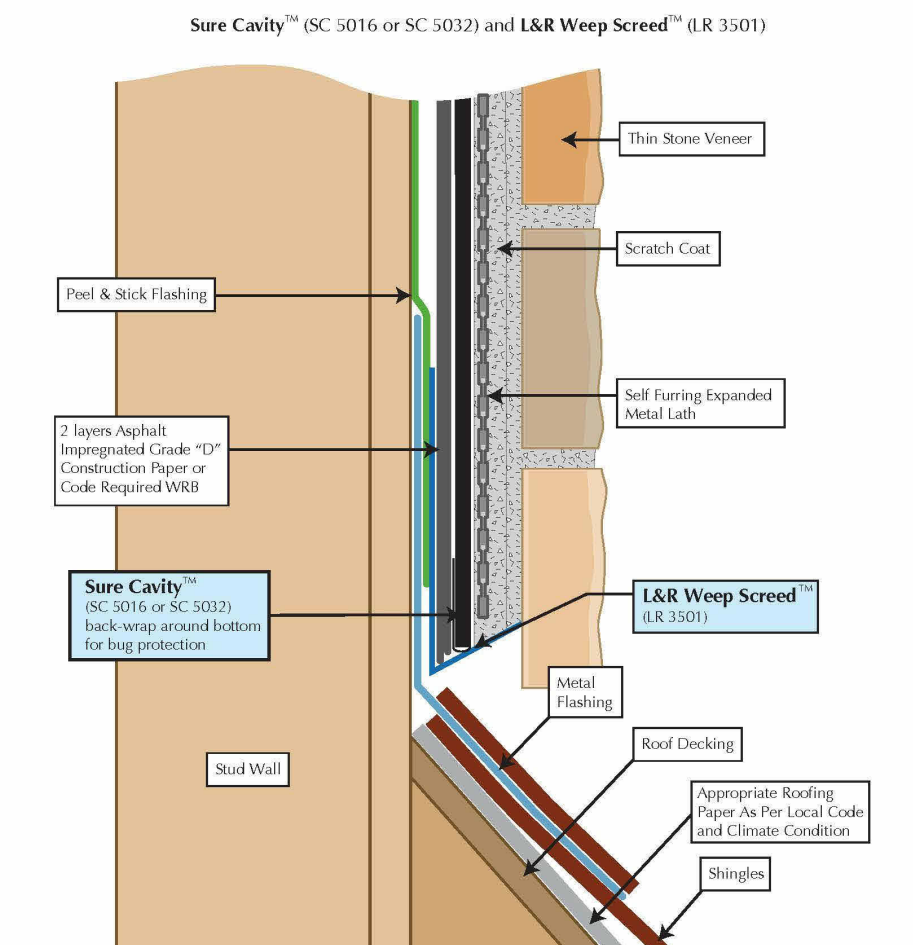


**Cladding Systems to Thin Stone Veneer Installation**



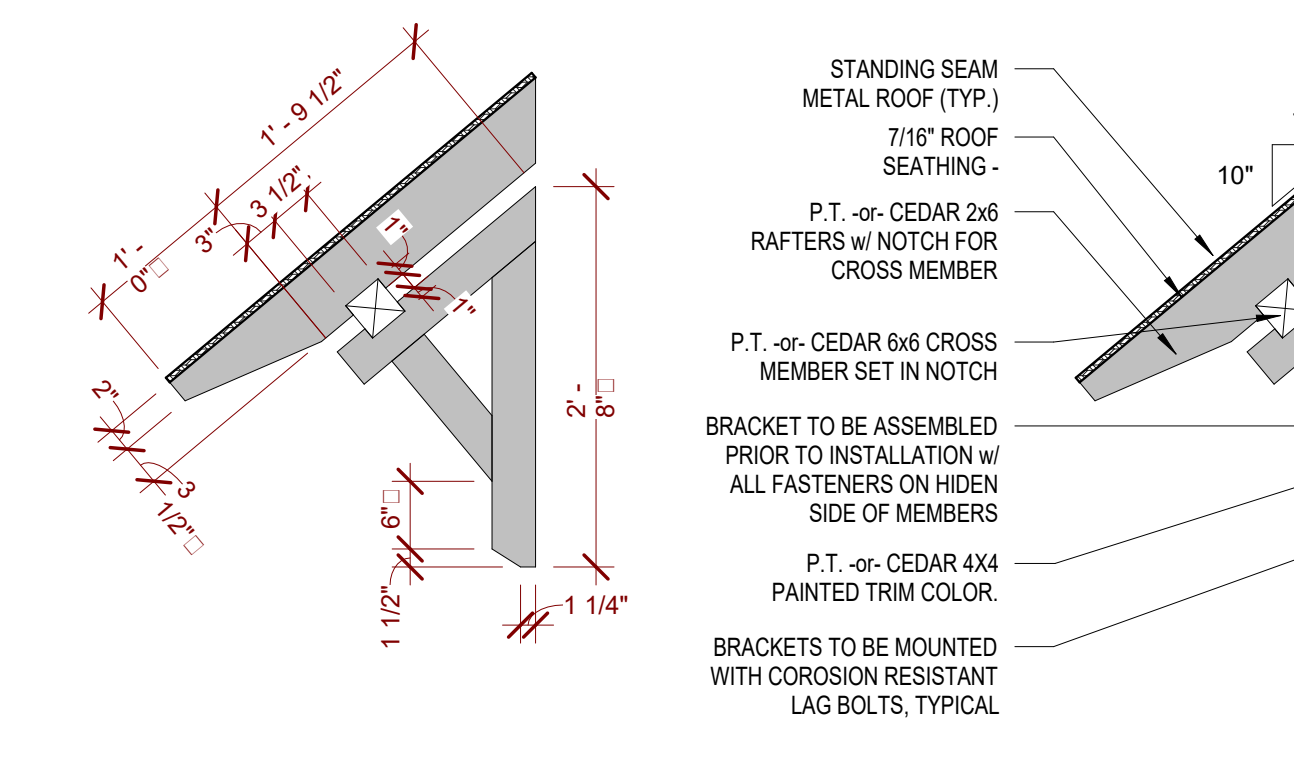
Copyright © 2018, Alamo Technology Incorporated. All Rights Reserved.  
 All details are created from research deemed to be reliable. However, A3.1 does not guarantee the accuracy or completeness of any information, nor shall it be held responsible for any errors, omissions, or damage arising out of the use of the information. These details are created with the understanding that A3.1 is providing information but is not attempting to make engineering or other professional service. Each service is required the assistance of an appropriate professional discipline. Use of this manual in strict conformance with local building codes and regulations. Consult local codebook officials prior to installation. It is the buyer's responsibility to ensure that all materials are used in strict conformance with local building codes and regulations.

**Thin Stone Veneer Side Wall to Roof Termination Detail**

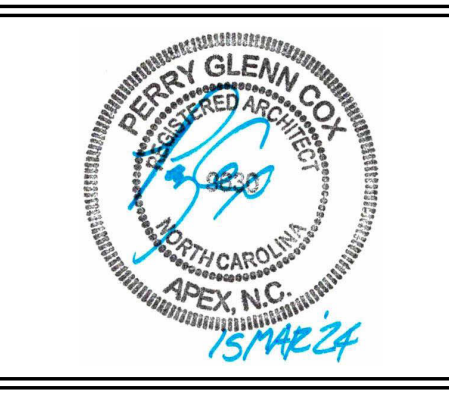
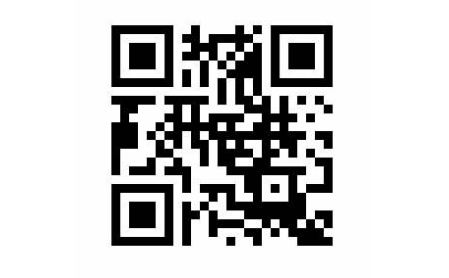


Copyright © 2018, Alamo Technology Incorporated. All Rights Reserved.  
 All details are created from research deemed to be reliable. However, A3.1 does not guarantee the accuracy or completeness of any information, nor shall it be held responsible for any errors, omissions, or damage arising out of the use of the information. These details are created with the understanding that A3.1 is providing information but is not attempting to make engineering or other professional service. Each service is required the assistance of an appropriate professional discipline. Use of this manual in strict conformance with local building codes and regulations. Consult local codebook officials prior to installation. It is the buyer's responsibility to ensure that all materials are used in strict conformance with local building codes and regulations.

**6 Detail - Stone Veneer**  
 1/2" = 1'-0"



**5 Detail - Decorative Roof Bracket**  
 3/4" = 1'-0"



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

DATE	REVISION	NO.

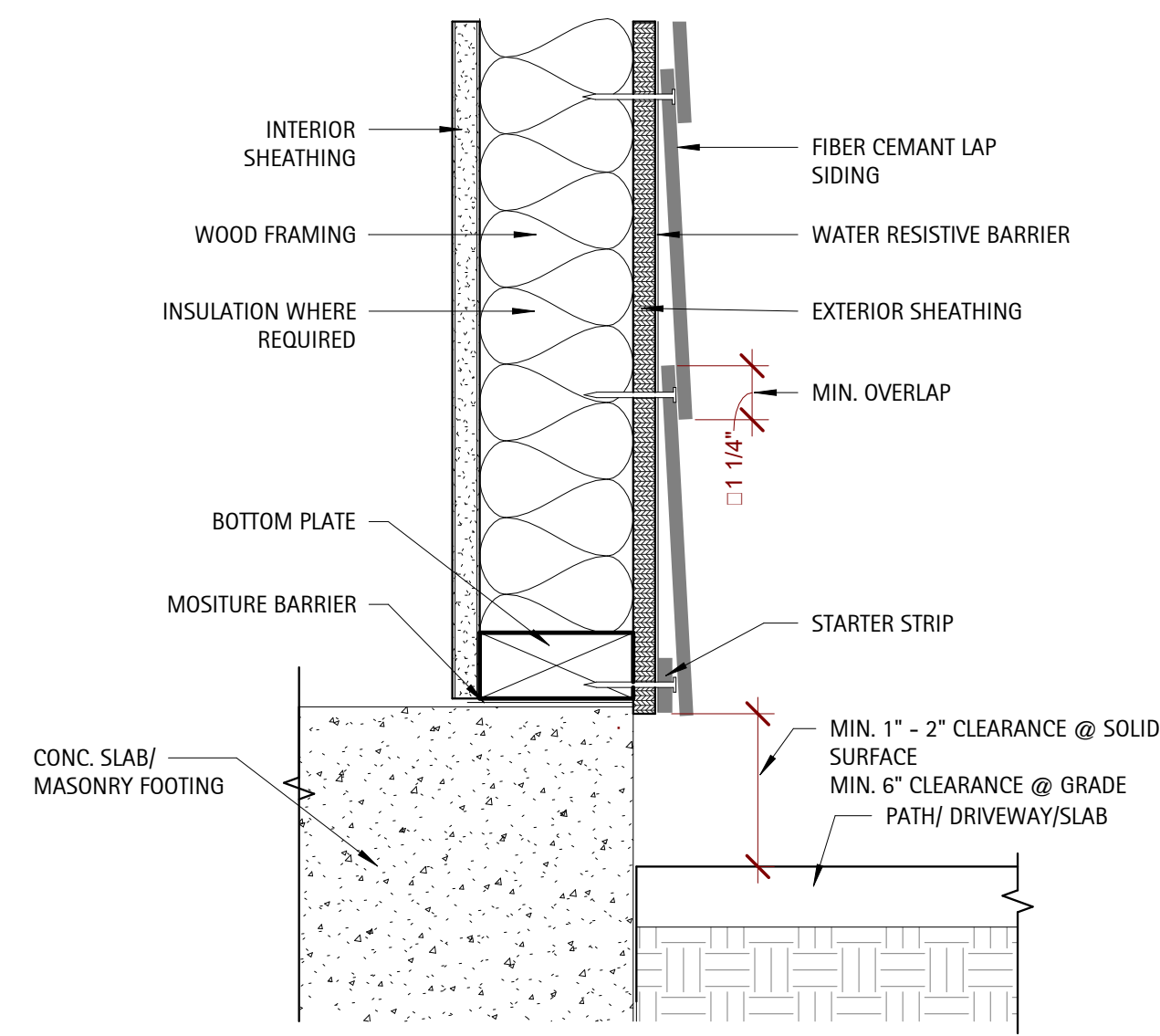
SHEET DISCRPTION  
**WALL SECTIONS & DETAILS**  
 PROJECT #: 2023043  
 DATE ISSUED: 03/13/2024  
 DRAWING BY: JGM  
 CHECKED BY: PGC / DSC

**MATTHEWS RIDGE**  
**KB HOMES**  
**BATHHOUSE**  
**HARNETT COUNTY, NC**

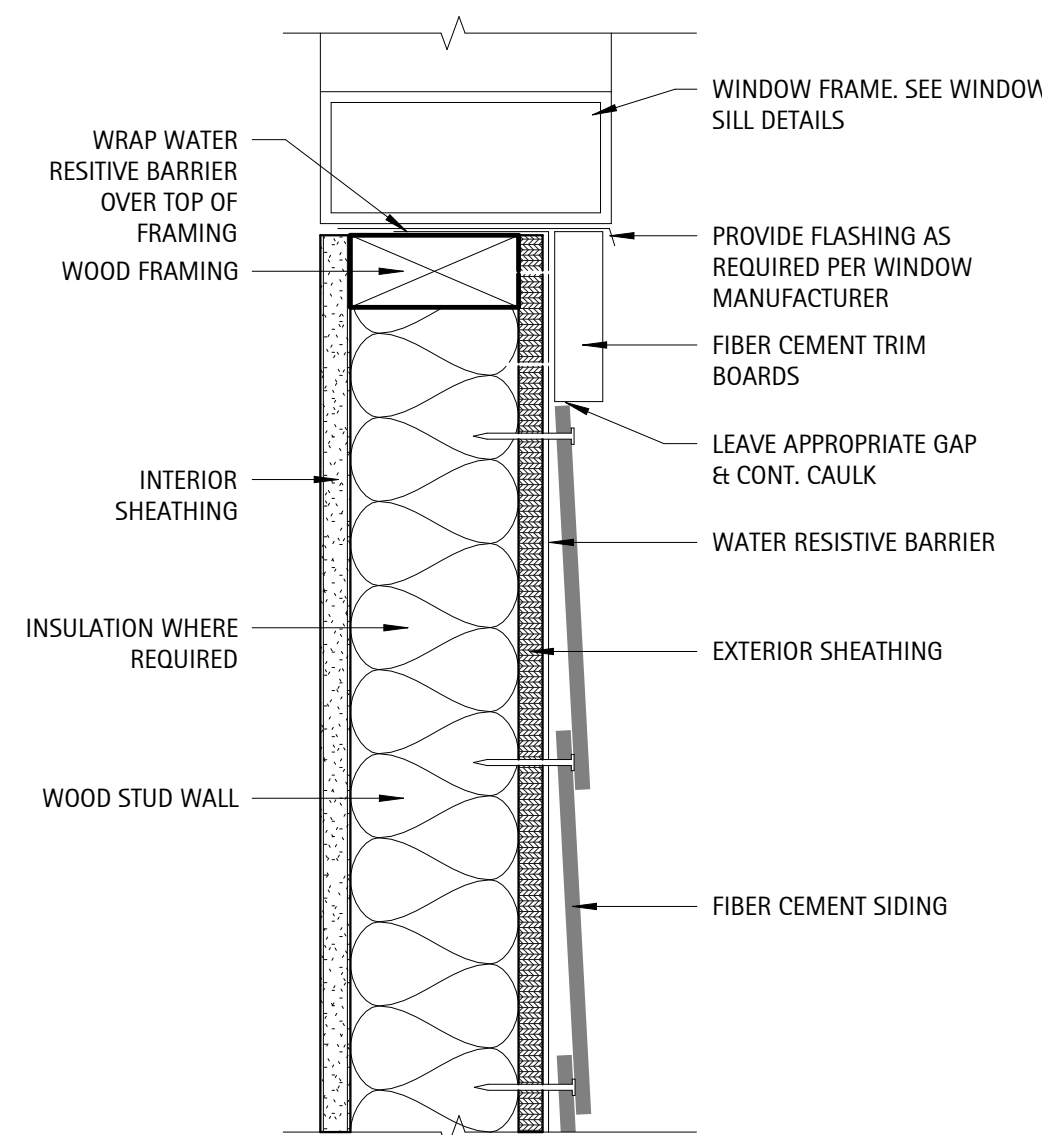




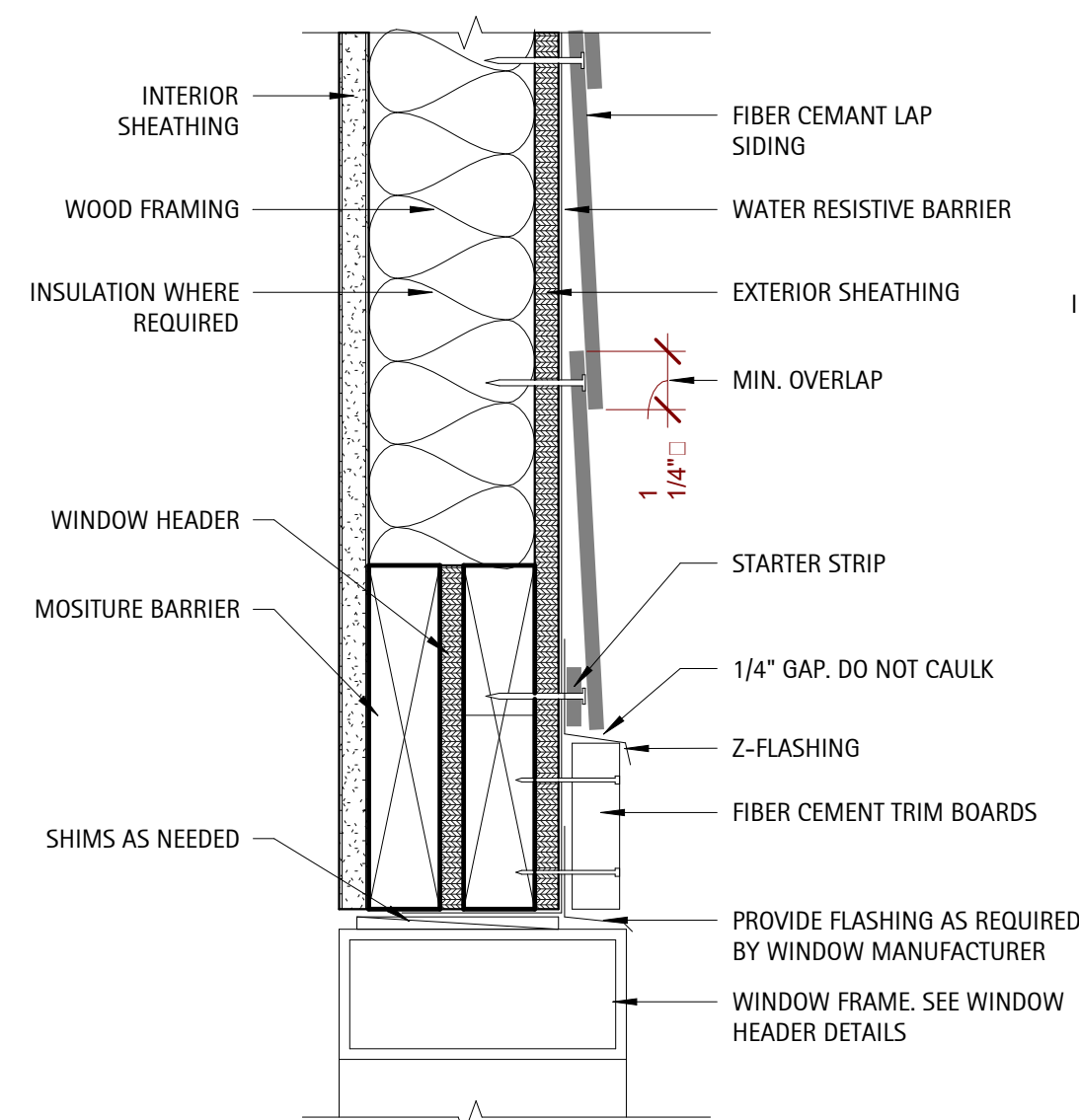




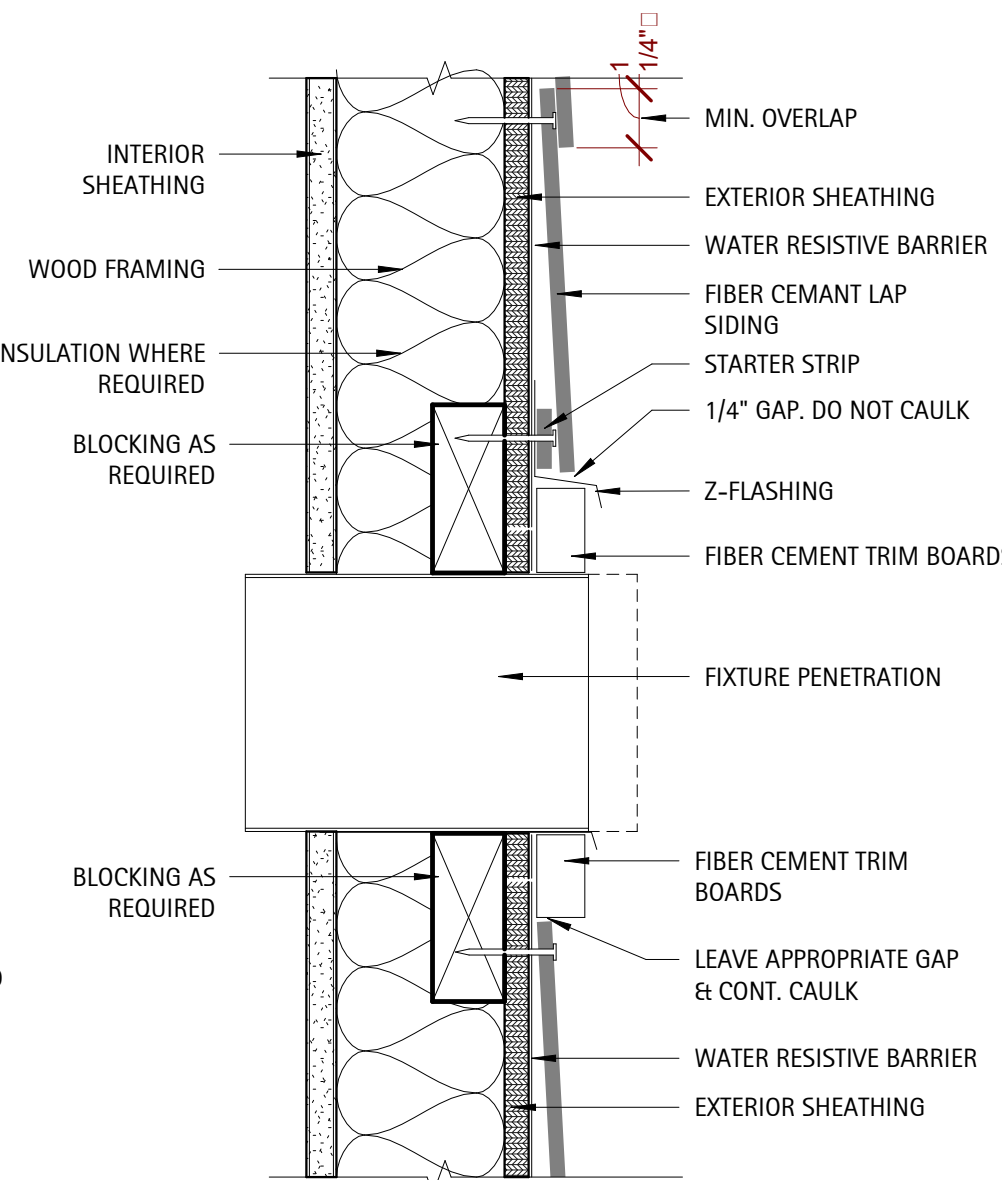
SIDING @ FOUNDATION



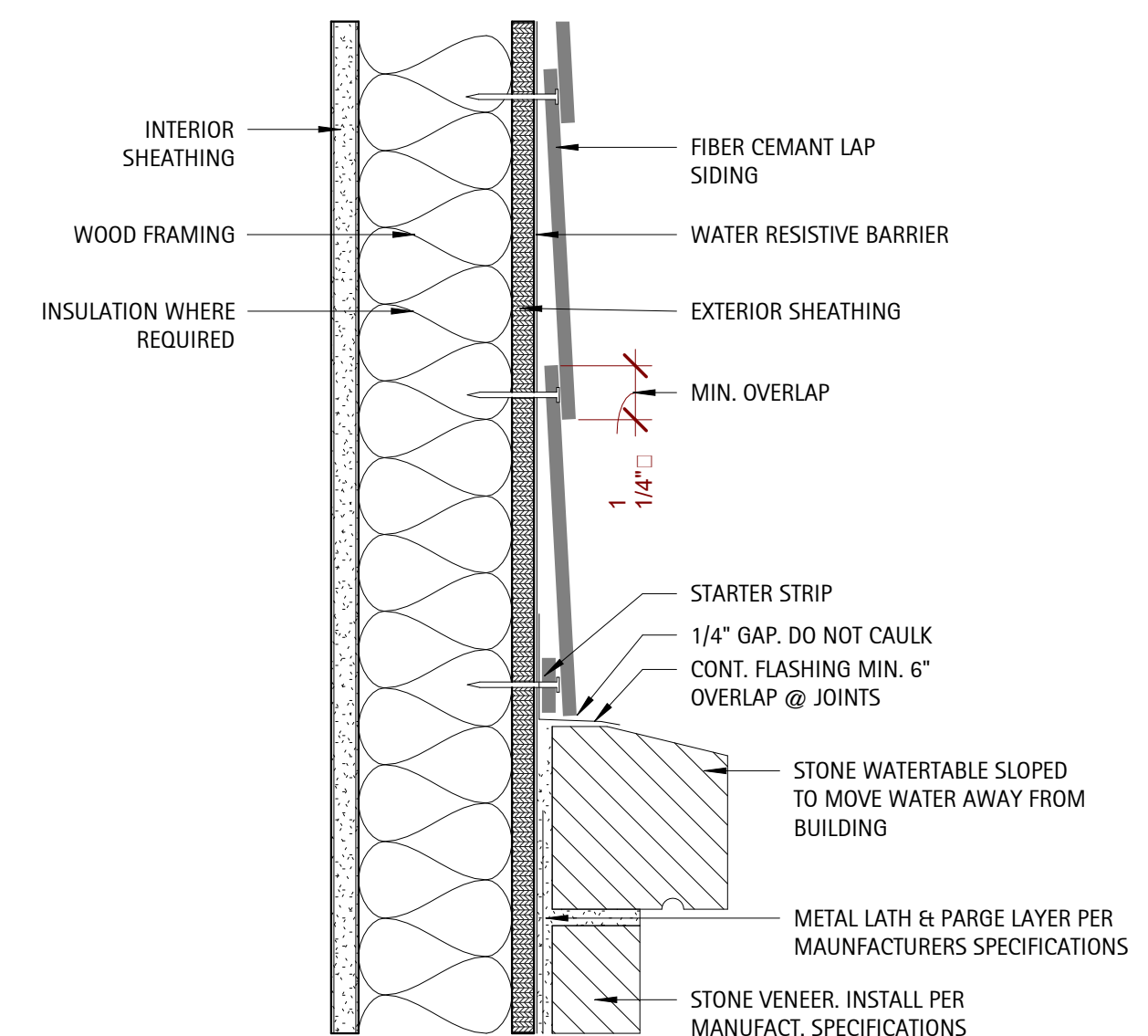
TYPICAL WINDOW SILL TRIM



TYPICAL WINDOW HEADER TRIM

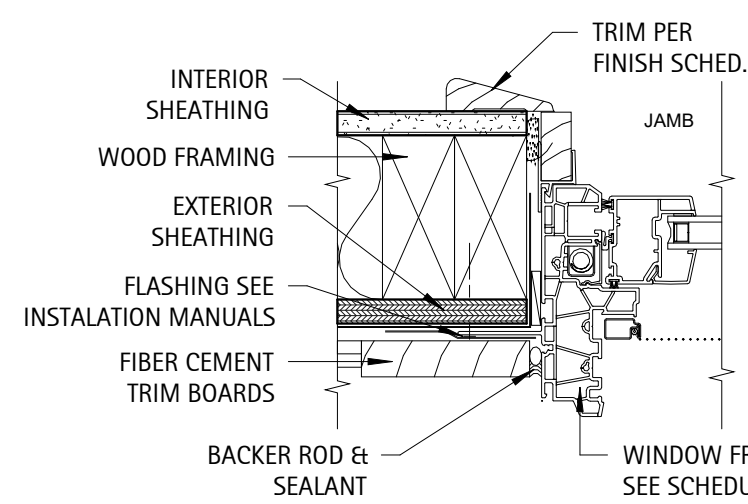


TYPICAL FIXTURE TRIM

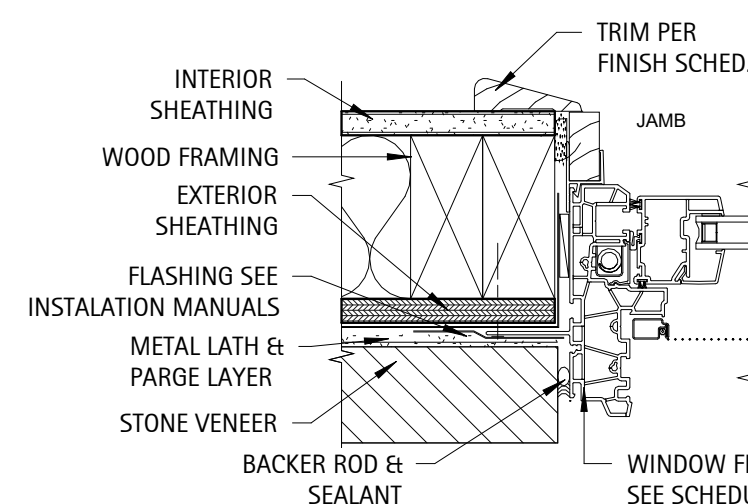


SIDING @ STONE VENEER

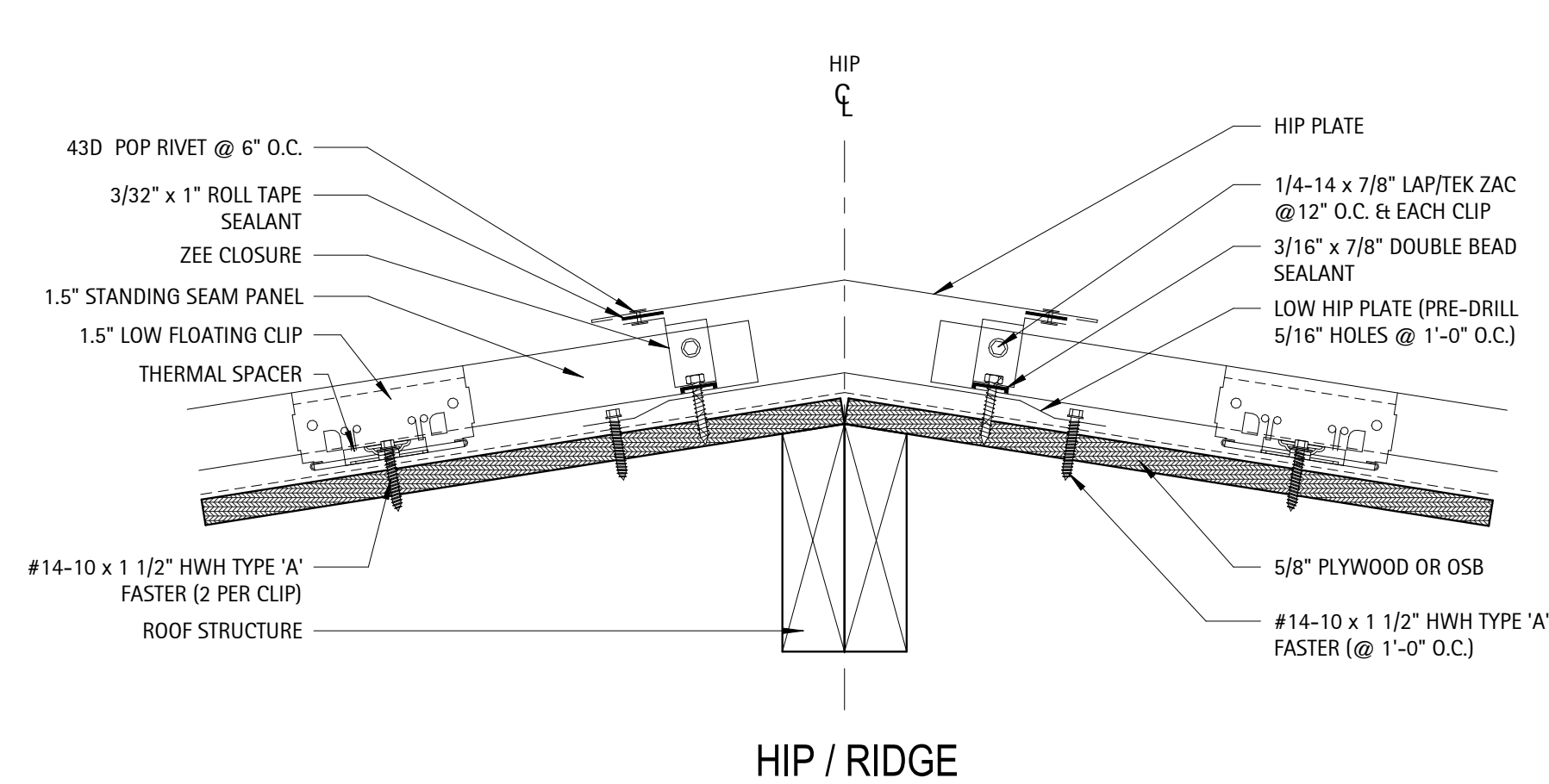
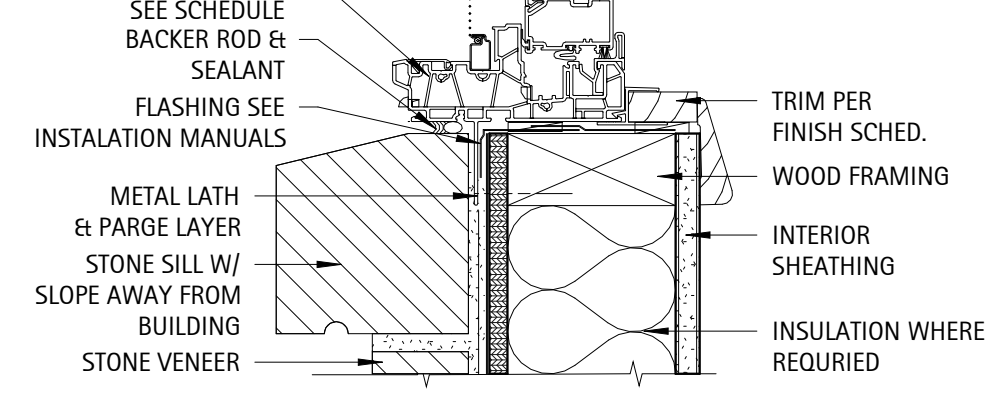
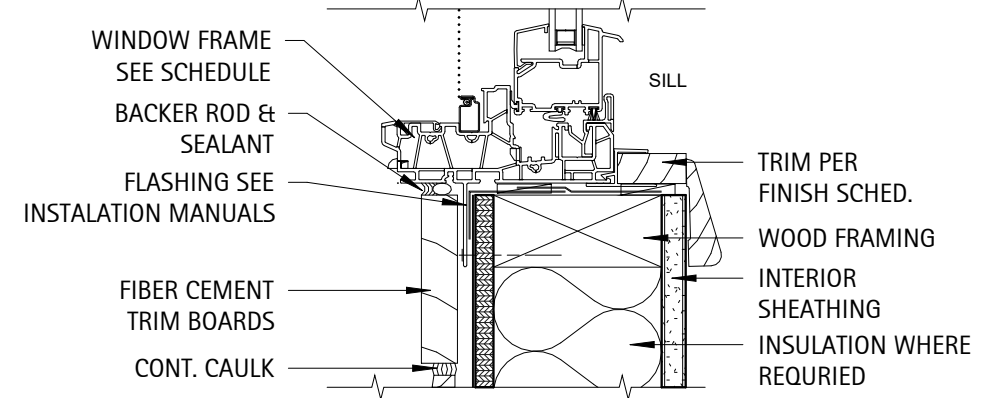
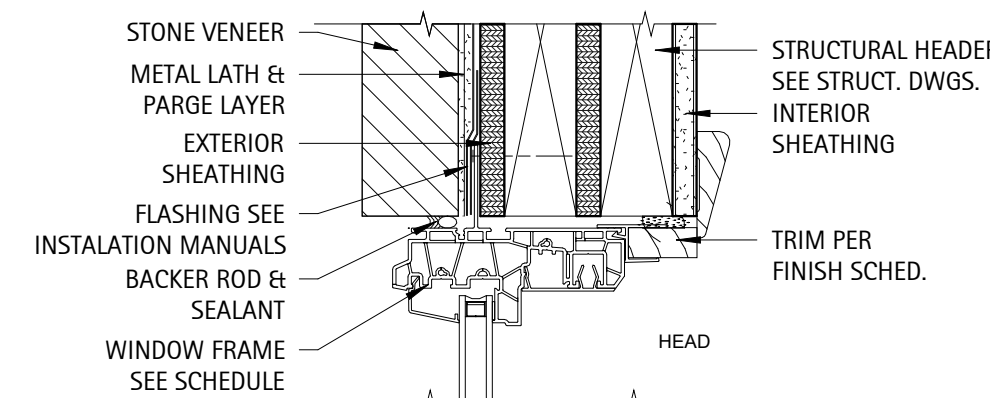
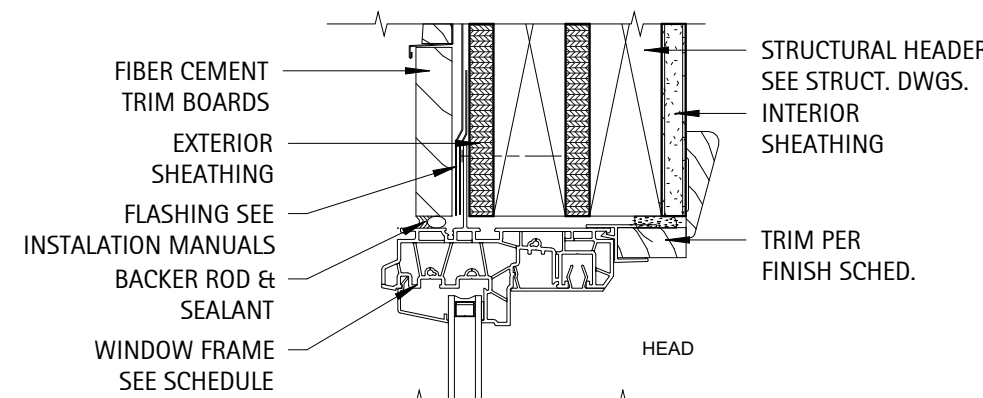
**3** AS.0 **Detail - Fiber Cement Siding**  
3" = 1'-0"



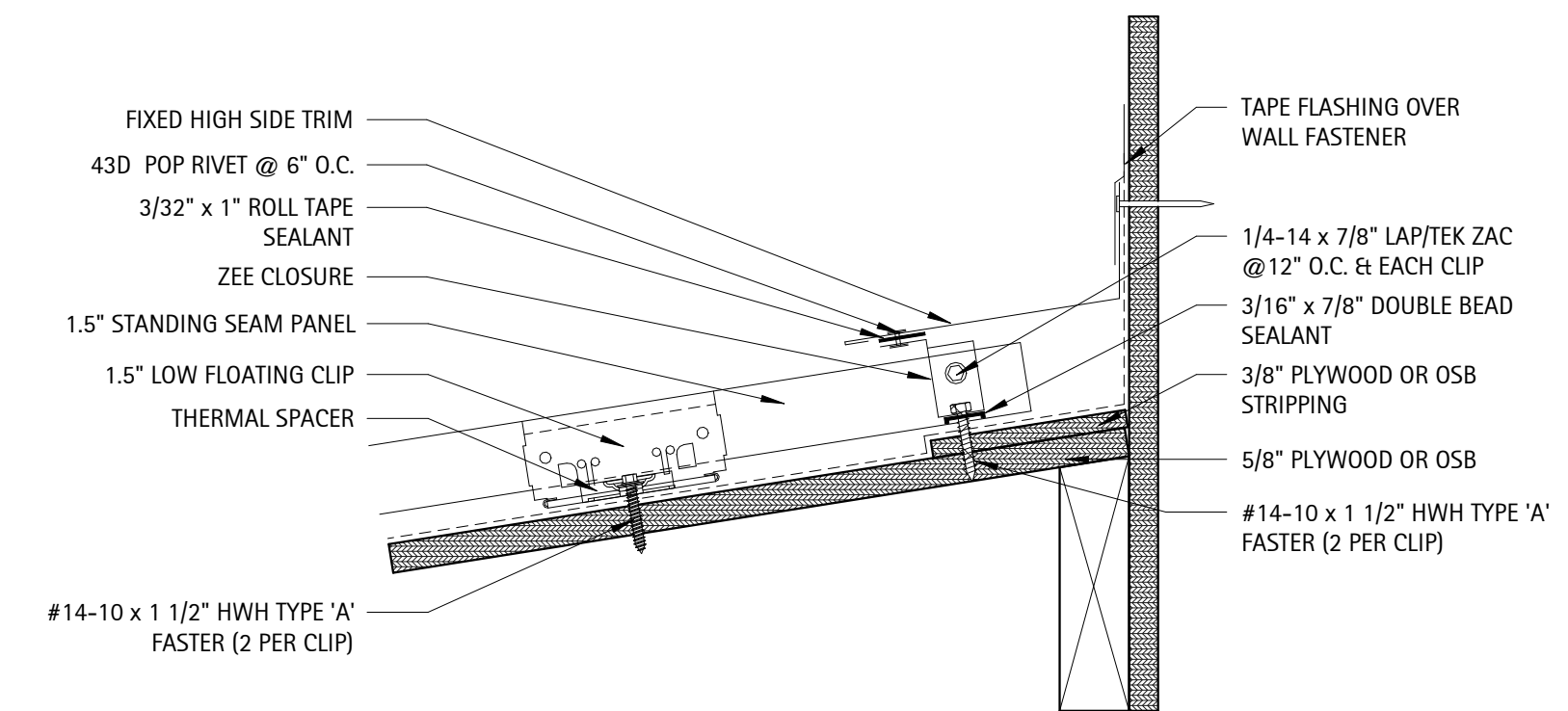
WINDOW TREATMENT @ SIDING



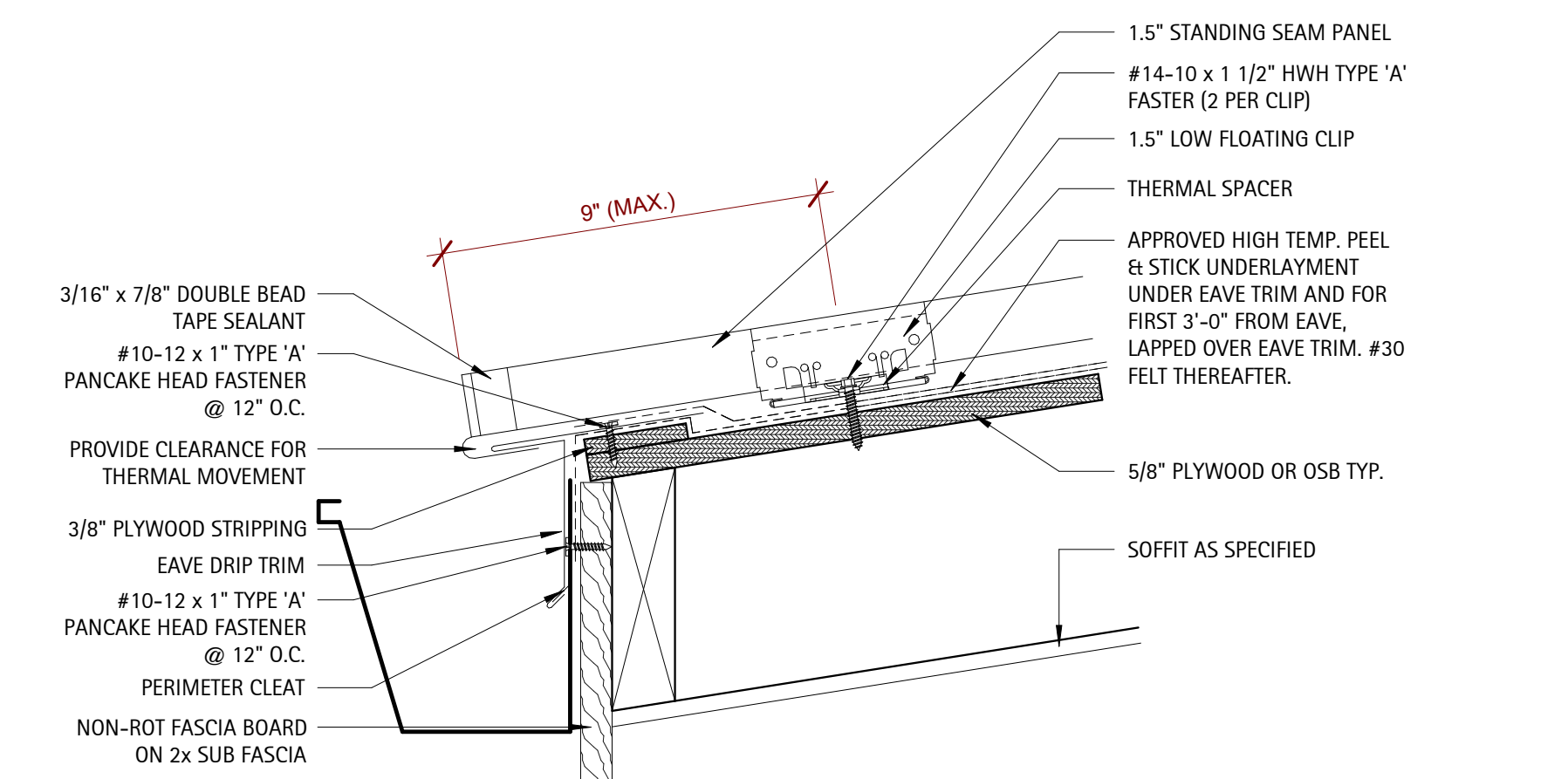
WINDOW TREATMENT @ STONE



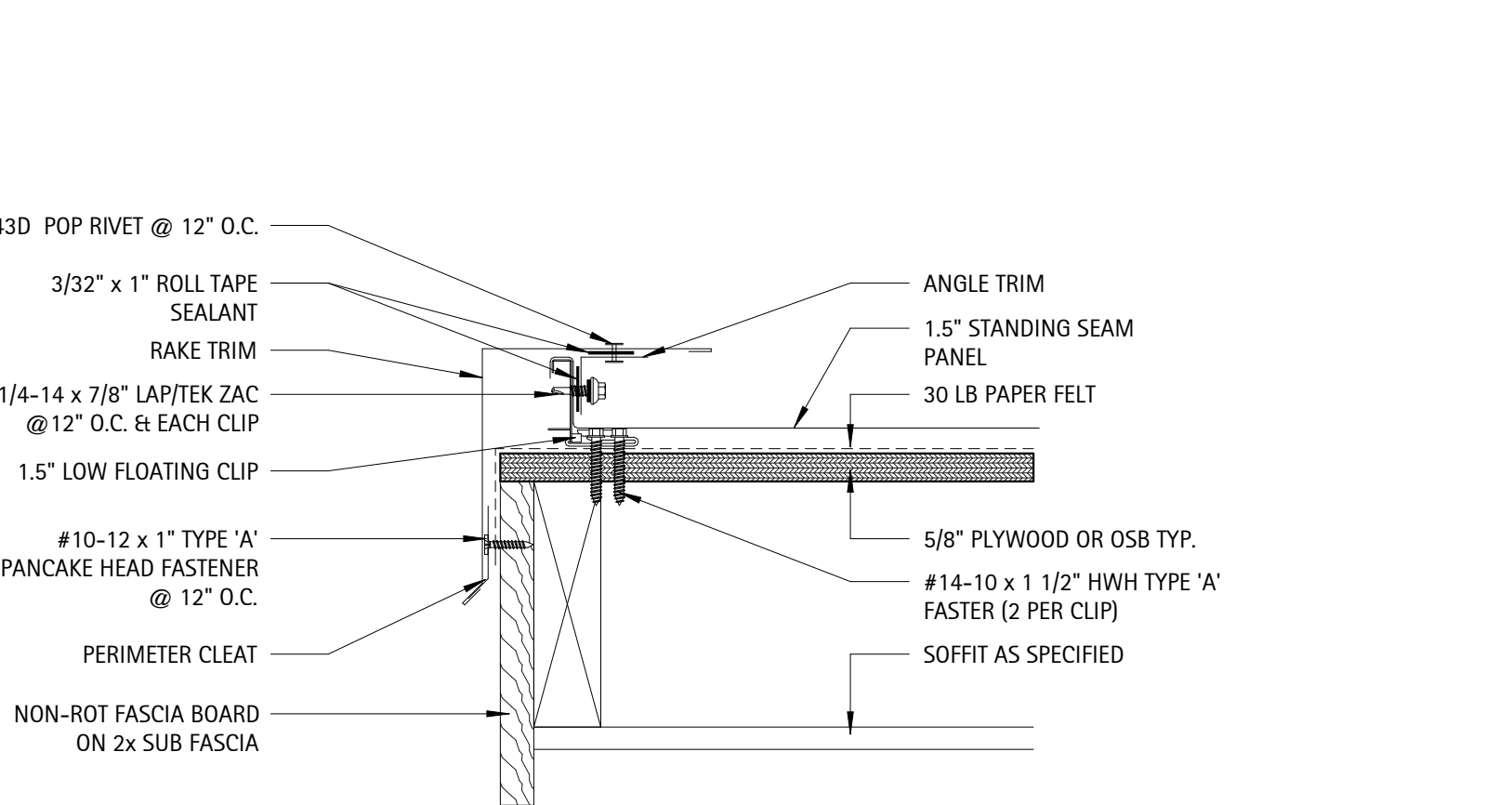
HIP / RIDGE



HIGH SIDE TIE-IN



EAVE WITH GUTTER



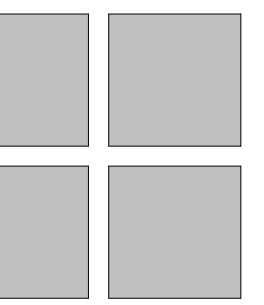
TYPICAL RAKE TRIM

**2** AS.0 **Detail - Window Treatments**  
3" = 1'-0"

**1** AS.0 **Detail - Standing Seam Roof**  
3" = 1'-0"



D. CLUGSTON



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

DATE	
REVISION	
NO.	

SHEET DESCRIPTION  
**GENERAL BUILDING DETAILS**

PROJECT #: 2023043  
DATE ISSUED: 03/13/2024  
DRAWING BY: JGM  
CHECKED BY: PGC / DSC

MATTHEWS RIDGE  
KB HOMES  
BATHHOUSE  
HARNETT COUNTY, NC

A5.0



# DOORS, FRAMES, HARDWARE NOTES

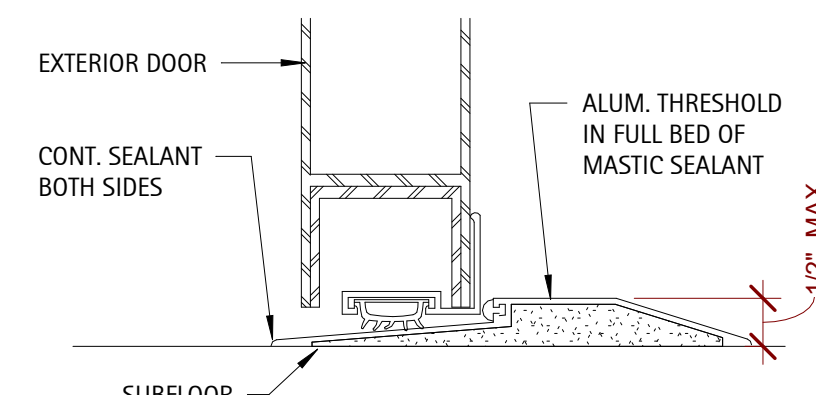
- Refer to Door and Hardware Schedule for extent, type and additional notes. Acceptable wood door manufacturers to be Weyerhaeuser, Eggers, Mohawk or Architect approved equal. General Contractor shall provide a hardware schedule and catalogue cuts for all finish hardware for approval by the Architect 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 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

CLUBHOUSE ROOM SCHEDULE									
Room Number	Room Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Ceiling Height	Crown	Millwork Finish	Comments
100	ENTRY	Concrete - Light Broom	1x8 Fiber Cement - Painted	M.R. GWB - Painted	Bead Board - Painted	10' - 1"	No	N/A	Slope all floors away from building walls at min 1/8" per 1'-0"
101	COVERED PORCH	Concrete - Light Broom	1x8 Fiber Cement - Painted	M.R. GWB - Painted	Bead Board - Painted	Vaulted	No	N/A	Slope all floors away from building walls at min 1/8" per 1'-0"
102	VESTIBULE	Concrete - Light Broom	1x8 Fiber Cement - Painted	N/A	Bead Board - Painted	10' - 1"	No	N/A	Slope floors to drain
103	FAMILY	Acrylic Chip - Broadcast	1x8 Fiber Cement - Painted	M.R. GWB - Painted	M.R. GWB - Painted	10' - 1"	No	N/A	Slope floors to drain
103A	CLST	Acrylic Chip - Broadcast	1x8 Fiber Cement - Painted	M.R. GWB - Painted	M.R. GWB - Painted	10' - 1"	No	N/A	
104	WOMENS	Acrylic Chip - Broadcast	1x8 Fiber Cement - Painted	M.R. GWB - Painted	M.R. GWB - Painted	10' - 1"	No	Cultured Marble	Slope floors to drain
104A	CLST.	Concrete - Light Broom	1x8 Fiber Cement - Painted	M.R. GWB - Painted	M.R. GWB - Painted	10' - 1"	No	N/A	Provide 5 shelves
105	MENS	Acrylic Chip - Broadcast	1x8 Fiber Cement - Painted	M.R. GWB - Painted	M.R. GWB - Painted	10' - 1"	No	Cultured Marble	Slope floors to drain
107	SHOWERS	Concrete - Light Broom	1x8 Fiber Cement - Painted	Hardie Panel - Painted	Hardie Soffit - Painted	10' - 1"	No	N/A	Slope floors to drain
108	TRASH CORRAL	Concrete - Light Broom	1x8 Fiber Cement - Painted	N/A	M.R. GWB - Painted	10' - 1"	No	N/A	Slope all floors away from building walls at min 1/8" per 1'-0"
109	PUMP ROOM	Concrete - Light Broom	1x8 Fiber Cement - Painted	M.R. GWB - Painted	M.R. GWB - Painted	10' - 1"	No	N/A	Slope floors to drain
109A	CHEM.	Concrete - Light Broom	1x8 Fiber Cement - Painted	M.R. GWB - Painted	M.R. GWB - Painted	10' - 1"	No	N/A	Provide non-rot chemical shelf @ 16" A.F.F.
110	STORAGE	Concrete - Light Broom	1x8 Fiber Cement - Painted	M.R. GWB - Painted	M.R. GWB - Painted	10' - 1"	No	N/A	

CLUBHOUSE DOOR SCHEDULE																										
Door Number	Style	Door			Rough Width	Rough Height	Door		Frame Material	Frame Finish	Fire Rating	Hardware										Comments				
		Width	Height	Thickness			Material	Finish				Push / Pull	Passage Set	Privacy Set	Office Set	Storage Set	Deadbolt	Panic Hardware	Closer	Weather strip	Threshold		FOB Access	Time Lock		
103	Type A	3' - 0"	7' - 0"	0' - 1 3/4"	3' - 2 1/2"	7' - 1 1/4"	HM	Painted	Metal	Painted	N/A	No	No	Yes	No	No	No	No	No	No	Yes	Yes	Yes	Yes	No	
103A	Type A	2' - 6"	7' - 0"	0' - 1 3/4"	2' - 8 1/2"	7' - 1 1/4"	HM	Painted	Metal	Painted	N/A	No	No	No	No	Yes	No	No	No	No	No	No	No	No	No	
104	Type A	3' - 0"	7' - 0"	0' - 1 3/4"	3' - 2 1/2"	7' - 1 1/4"	HM	Painted	Metal	Painted	N/A	No	Yes	No	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	No		
104A	Type A	3' - 0"	7' - 0"	0' - 1 3/4"	3' - 2 1/2"	7' - 1 1/4"	HM	Painted	Metal	Painted	N/A	No	No	No	No	Yes	No	No	No	No	No	No	No	No		
105	Type A	3' - 0"	7' - 0"	0' - 1 3/4"	3' - 2 1/2"	7' - 1 1/4"	HM	Painted	Metal	Painted	N/A	No	Yes	No	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	No		
109	Type B	3' - 6"	7' - 0"	0' - 1 3/4"	3' - 8 1/2"	7' - 1 1/4"	HM	Painted	Metal	Painted	N/A	No	No	No	No	Yes	No	No	Yes	Yes	Yes	Yes	No	No	Placards per NFPA 704	
109A	Type B	3' - 0"	7' - 0"	0' - 1 3/4"	3' - 2 1/2"	7' - 1 1/4"	HM	Painted	Metal	Painted	N/A	No	Yes	No	No	No	No	No	Yes	No	No	No	No	No	Placards per NFPA 704	
110	Type A	3' - 0"	7' - 0"	0' - 1 3/4"	3' - 2 1/2"	7' - 1 1/4"	HM	Painted	Metal	Painted	N/A	No	No	No	No	Yes	No	No	Yes	Yes	Yes	Yes	No	No		
G100	Type C	4' - 0"	6' - 0"				Alum.	Painted	Metal	Painted	N/A	No	No	No	No	No	No	Yes	Yes	No	No	Yes	Yes	Yes	Gate: See Pool Details	
G101	Type C	4' - 0"	6' - 0"				Alum.	Painted	Metal	Painted	N/A	No	No	No	No	No	No	Yes	Yes	No	No	Yes	Yes	Yes	Gate: See Pool Details	

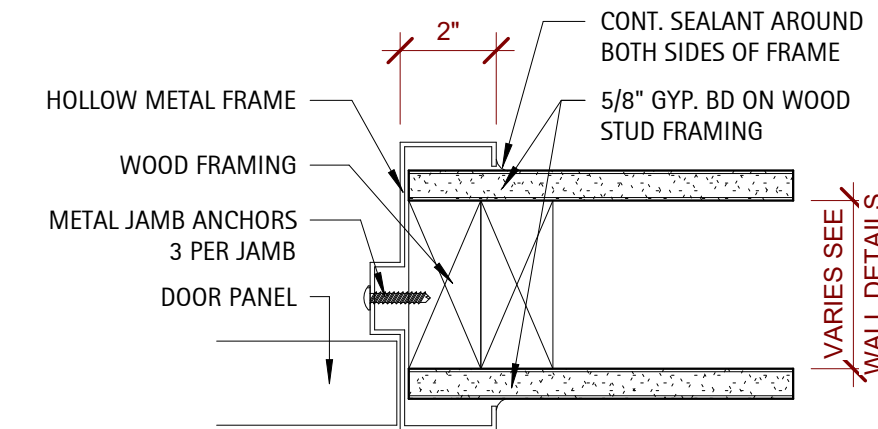
Grand total: 10

CLUBHOUSE WINDOW SCHEDULE									
Mark	Count	Size		Rough Width	Rough Height	Type	Finish	Head Height	Comments
		Width	Height						
A	2	2' - 6"	6' - 0"	2' - 6 1/2"	6' - 0 1/2"	Single Hung	Black	8' - 0"	2 over 2 Grid
B	3	5' - 0"	6' - 0"	5' - 0 1/2"	6' - 0 1/2"	<varies>	<varies>	<varies>	<varies>



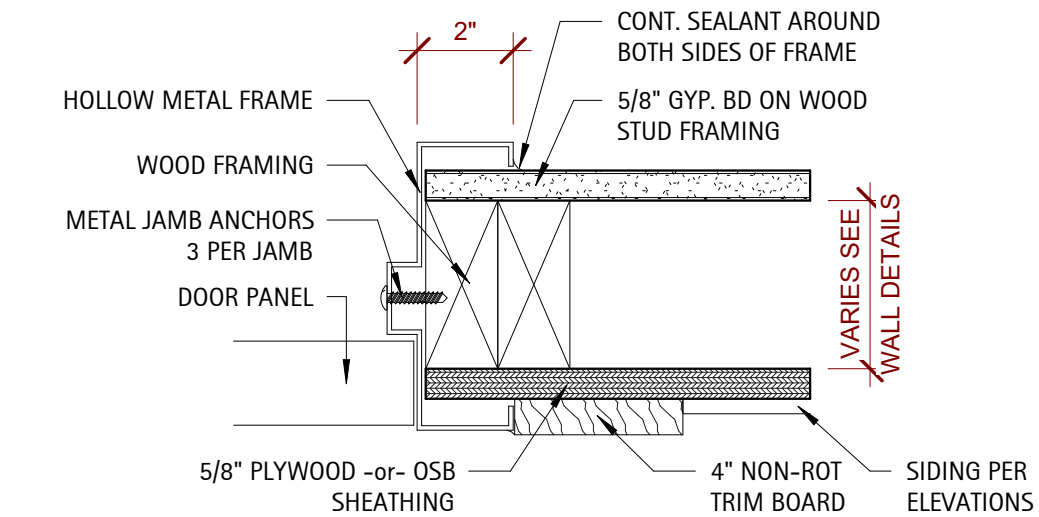
EXTERIOR DOORS THRESHOLD

**4** Detail - Typ. Threshold  
A6.0 6" = 1'-0"

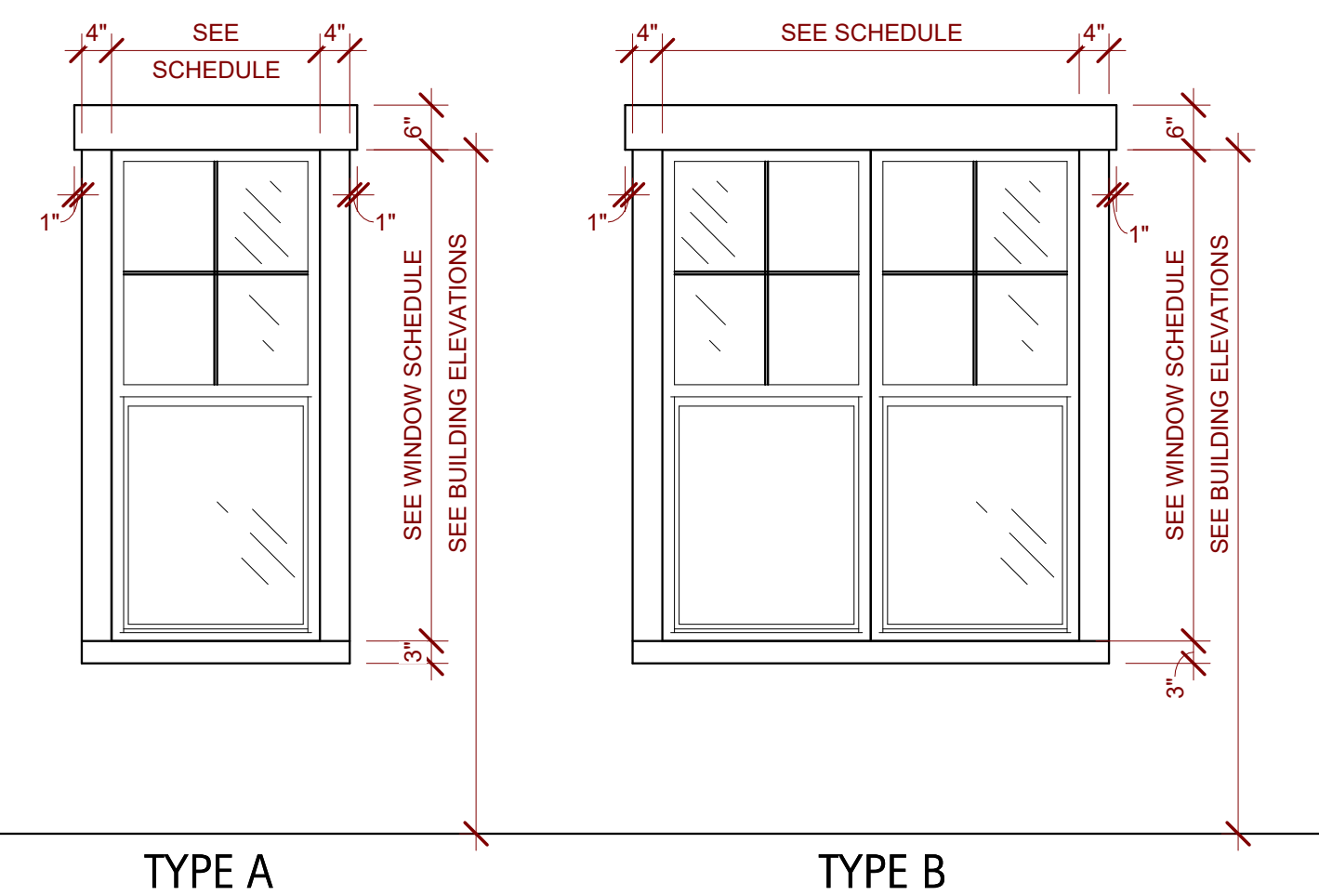


INTERIOR DOOR JAMB

**3** Detail - Typ. Door Jambs  
A6.0 3" = 1'-0"



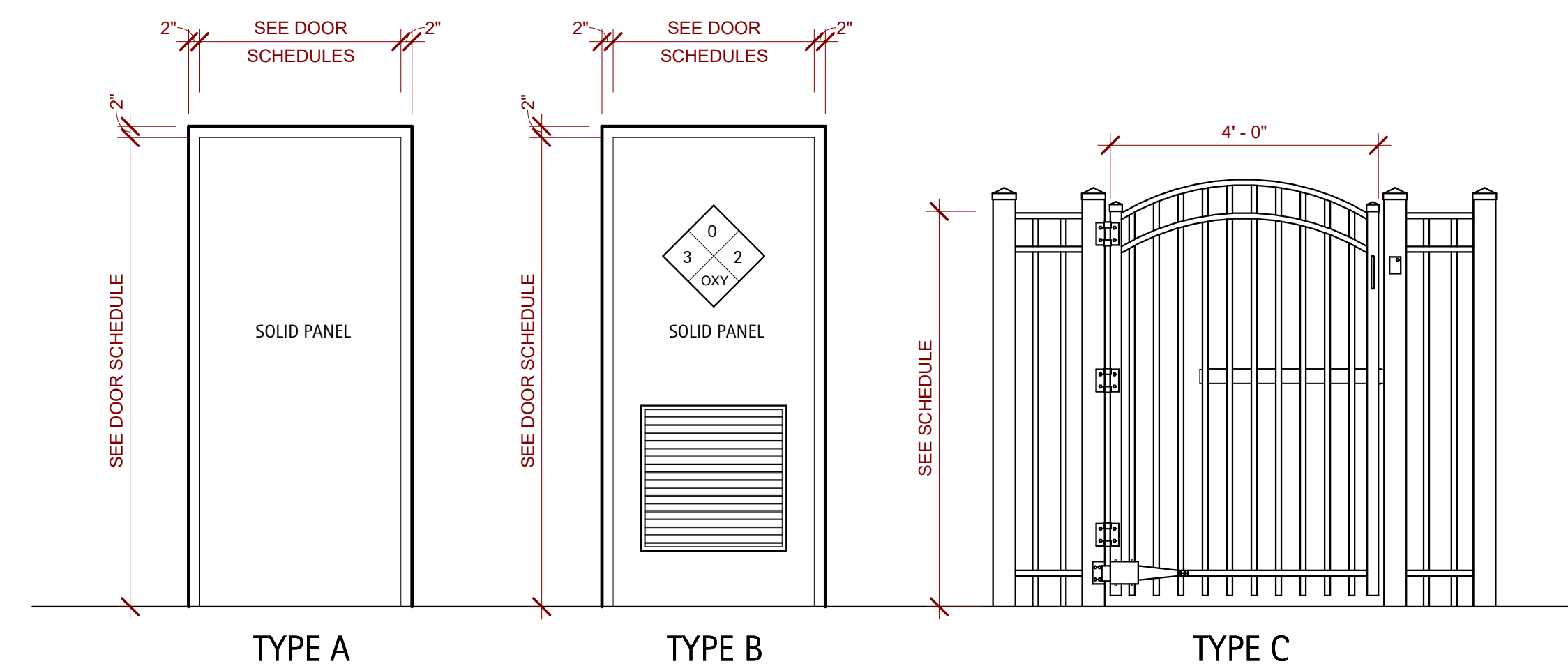
EXTERIOR DOOR JAMB



TYPE A

TYPE B

**2** Detail - Window Types  
A6.0 1/2" = 1'-0"



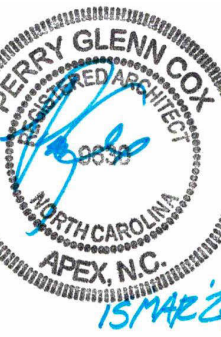
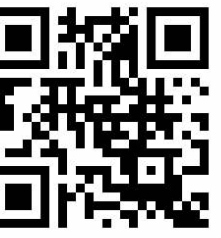
TYPE A

TYPE B

TYPE C

NOTE: SEE BUILDING ELEVATIONS FOR EXTERIOR TRIM DETAILS

**1** Detail - Door Frames  
A6.0 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.	

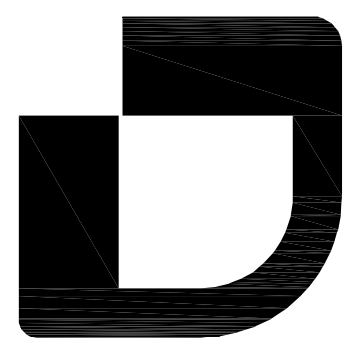
## SCHEDULES & DETAILS

PROJECT #: 2023043  
DATE ISSUED: 03/13/2024  
DRAWING BY: JGM  
CHECKED BY: PGC / DSC

MATTHEWS RIDGE  
KB HOMES  
BATHHOUSE  
HARNETT COUNTY, NC

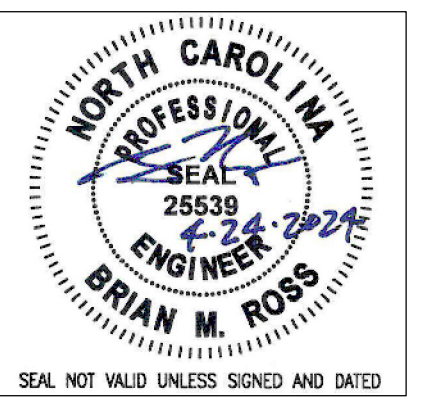
A6.0





D. CLUGSTON

ROSS LINDEN ENGINEERS PC  
709 W. JONES STREET, RALEIGH, NC 27603  
TEL: 919.832.5680 FAX: 919.832.5675  
WWW.ROSSLINDEN.COM NC LICENSE NO. C-2164



Copyright Ross Linden Engineers PC  
2024. All rights reserved.

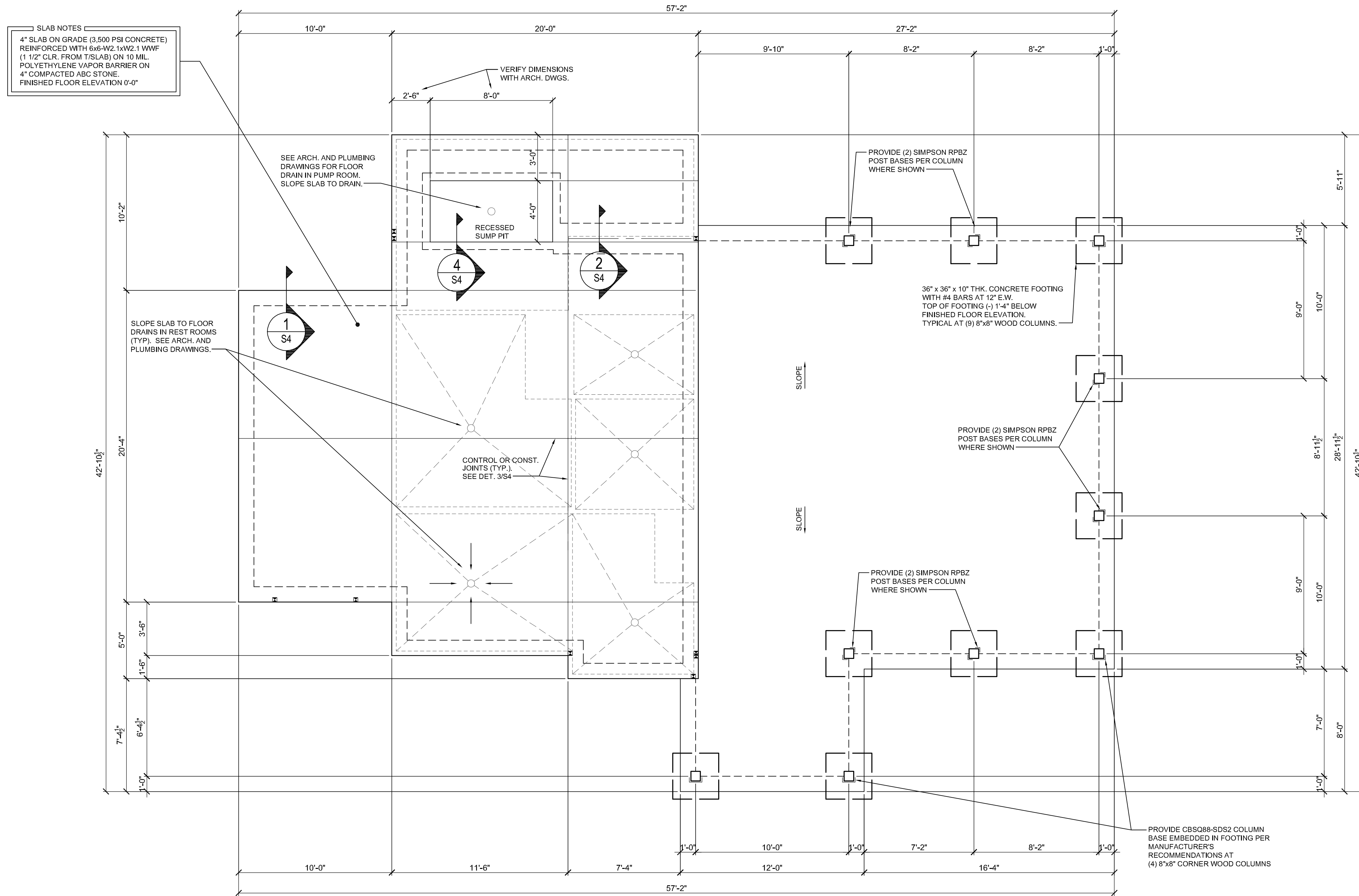
NO.	
REVISION	
DATE	

SHEET DESCRIPTION  
**SLAB AND FOUNDATION PLAN**

PROJECT #: C240109  
DATE ISSUED: 4/24/2024  
DRAWING BY: BR  
CHECKED BY: BR/JM

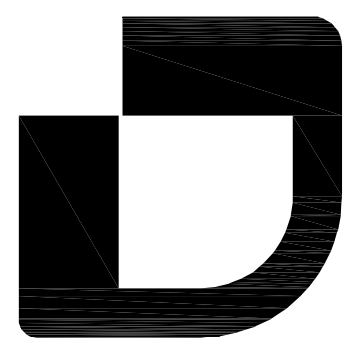
MATTHEWS RIDGE  
KB HOMES  
BATH HOUSE  
HARNETT COUNTY, NC

S1



1 SLAB AND FOUNDATION PLAN  
S1 1/4" = 1'-0"

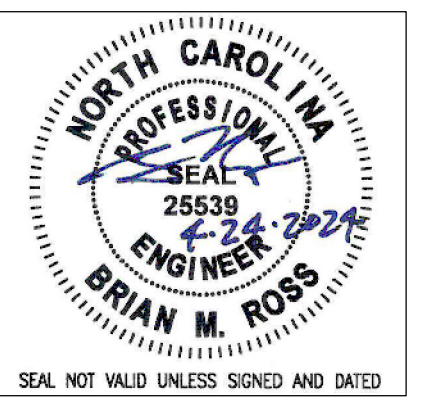




D. CLUGSTON

ROSS LINDEN ENGINEERS PC

709 W. JONES STREET RALEIGH, NC 27603  
TEL. 919.832.5680 FAX 919.832.5675  
WWW.ROSSLINDEN.COM NC LICENSE NO. C-2364



Copyright Ross Linden Engineers PC 2024. All rights reserved.

DATE	
REVISION	
NO.	

SHEET DESCRIPTION

CEILING FRAMING PLAN

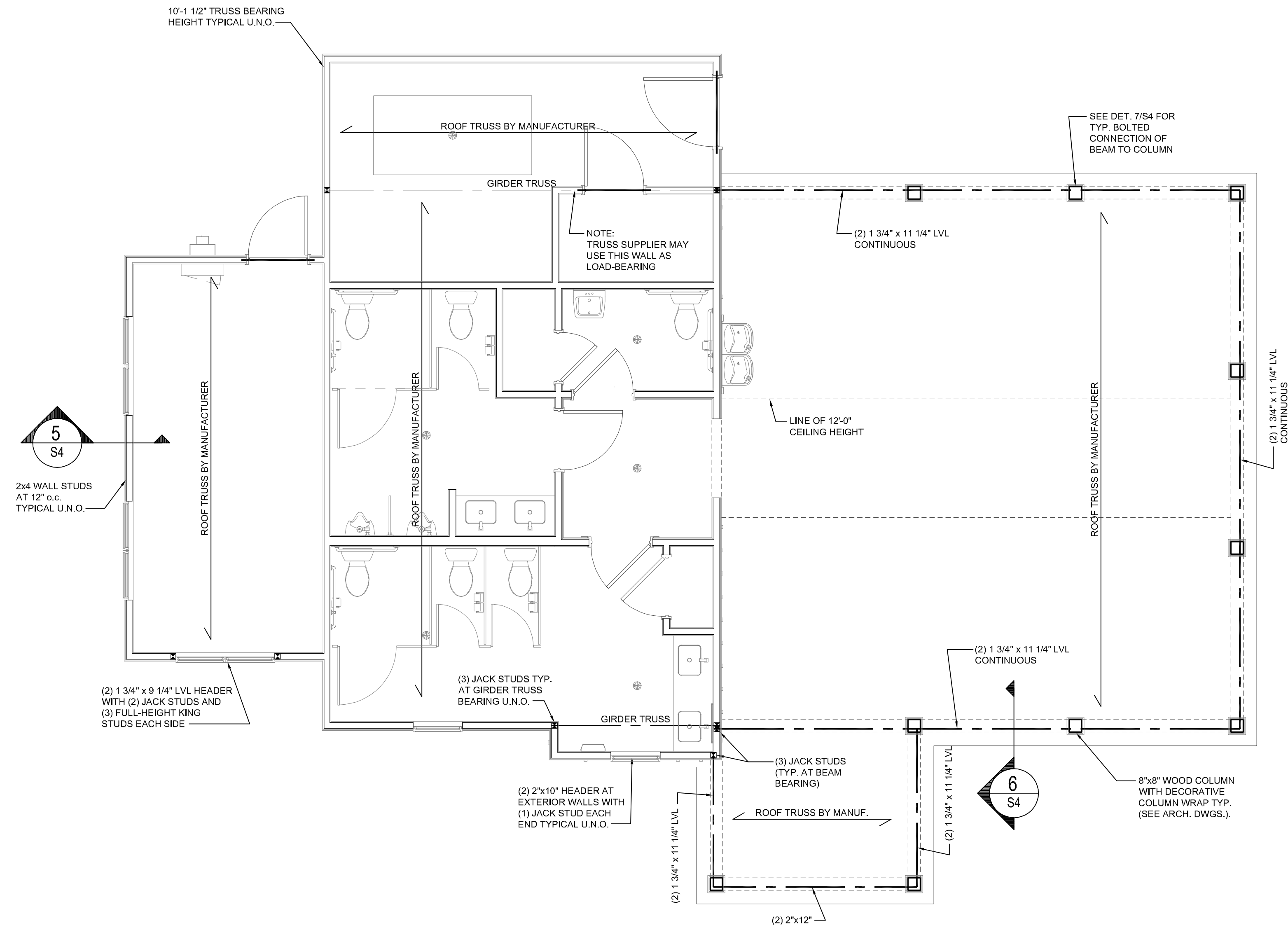
PROJECT #: C240109

DATE ISSUED: 4/24/2024

DRAWING BY: BR

CHECKED BY: BR/JM

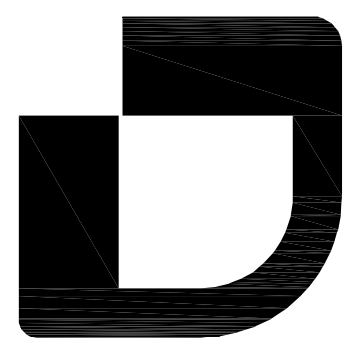
MATTHEWS RIDGE  
KB HOMES  
BATH HOUSE  
HARNETT COUNTY, NC



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



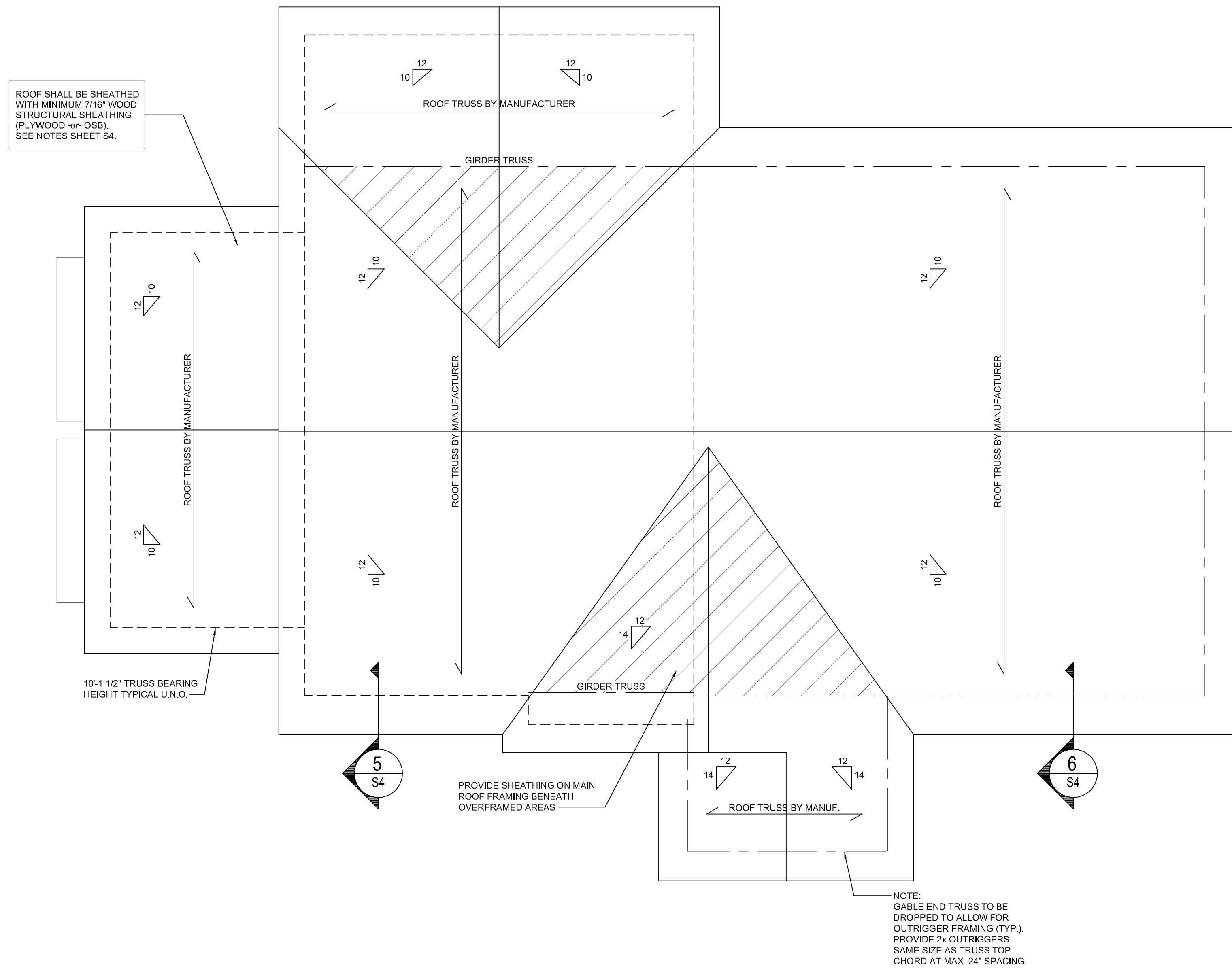




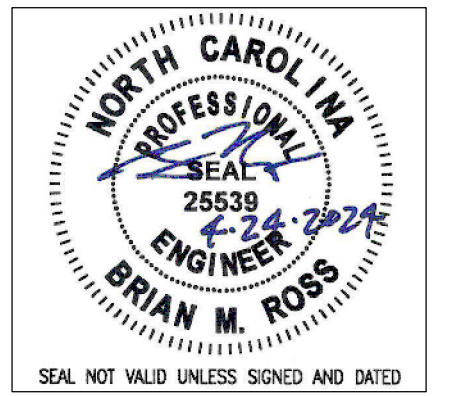
D. CLUGSTON

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



ROSS LINDEN ENGINEERS PC  
709 W. JONES STREET RALEIGH, NC 27603  
TEL: 919.832.5680 FAX: 919.832.5675  
WWW.ROSSLINDEN.COM NC LICENSE NO. C-2364




Copyright Ross Linden Engineers PC 2024. All rights reserved.

DATE	
REVISION	
NO.	

SHEET DESCRIPTION  
**ROOF FRAMING PLAN**

PROJECT #: C240109  
DATE ISSUED: 4/24/2024  
DRAWING BY: BR  
CHECKED BY: BR/JM

MATTHEWS RIDGE  
KB HOMES  
BATH HOUSE  
HARNETT COUNTY, NC

**1** ROOF FRAMING PLAN  
S3 1/4" = 1'-0" 







**GENERAL PLUMBING NOTES:**

**ADMINISTRATIVE:**

- THE FOLLOWING ABBREVIATIONS SHALL APPLY TO NOTES AND PARTICULARS:  
 PC - PLUMBING CONTRACTOR, EC - ELECTRICAL CONTRACTOR, MC - MECHANICAL CONTRACTOR, GC - GENERAL CONTRACTOR, FASC - FIRE ALARM SYSTEM CONTRACTOR.  
 \* "PROVIDE" MEANS TO FURNISH AND INSTALL. THE PLUMBING CONTRACTOR SHALL ALSO INSTALL MATERIALS FURNISHED BY OTHERS AND THE GENERAL CONTRACTOR.  
 3. THE PC SHALL BE RESPONSIBLE FOR A COMPLETE AND OPERATIONAL SYSTEM AS DESCRIBED BY THESE PLANS AND SPECIFICATIONS.  
 4. 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.  
 5. 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.  
 6. 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.  
 7. THE PC SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES, AND INSPECTIONS NECESSARY FOR THE COMPLETION OF THE WORK UNDER THIS CONTRACT.  
 8. DO NOT SCALE THESE DRAWINGS-REFER TO ARCHITECTURAL SHEETS FOR DIMENSIONS.  
 9. THESE PLANS ARE DIAGRAMMATIC. THE PC SHALL ADJUST THE LOCATIONS OF EQUIPMENT, FIXTURES, PIPING, ETC. TO ACCOMMODATE PLANNED AND ENCOUNTERED INTERFERENCES. THE DRAWINGS DO NOT SHOW ALL BENDS, OFFSETS, AND FITTINGS THAT MAY BE REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. THE PC SHALL MAKE ALLOWANCES FOR SUCH DEVIATIONS AND CONVENIENCIES 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.  
 10. 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.  
 11. THE PC SHALL PROVIDE FIRESTOPPING AT ALL PENETRATIONS OF RATED FLOOR/CILING 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.  
 12. SYSTEM TESTING SHALL BE PERFORMED BY PLUMBING CONTRACTOR IN ACCORDANCE WITH NORTH CAROLINA PLUMBING CODE, SECTIONS 312.2, 312.3, AND 312.5.  
 13. PC SHALL DISINFECT THE ENTIRE DOMESTIC WATER PIPING SYSTEM IN ACCORDANCE WITH THE AMERICAN WATER WORKS ASSOCIATION'S SPECIFICATIONS AND LOCAL HEALTH DEPARTMENT REGULATIONS.  
 14. AT THE COMPLETION OF WORK AND PRIOR TO ACCEPTANCE BY OWNER, THE PC SHALL CLEAN ALL EXPOSED FIXTURES, MATERIALS, AND EQUIPMENT UNDER THIS CONTRACT.  
 15. 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.  
 2. BALL VALVES SHALL HAVE BRASS BODY, FULL PORT, CHROME PLATED BALL WITH TEFELON SEATS, 150 PSI WSP, 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 SOLID-WEDGE 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.  
 3. 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 RETARDER. 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 FIRESTOP OR FIRESAFING MATERIALS ARE REQUIRED. INSULATION SHALL HAVE A FACTORY APPLIED ALL-SERVICE JACKET WITH SELF-SEALING LAP. WHITE-KRAFT 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 FOREGONE MATERIALS ARE REMOVED BEFORE APPLYING INSULATION MATERIALS. INSULATION SHALL BE BY KNAUF, ARMACELL, JOHNS-MANVILLE, OR OWENS-CORNING.  
 4. 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.  
 5. FAUCETS AND FIXTURE FITTINGS SHALL CONFORM TO ASME 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 DISPENSERS 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.  
 6. 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 AWWA C511. THE RELIEF OPENING SHALL DISCHARGE BY AIR GAP. AIR GAPS SHALL COMPLY WITH ASME A112.1.1 AND AIR GAP FITTINGS WITH ASME A112.1.3. DOUBLE CHECK VALVE ASSEMBLIES SHALL CONFORM TO ASSE 1015 OR AWWA C510. ACCESS TO BACKFLOW PREVENTERS SHALL BE PROVIDED AS SPECIFIED BY THE INSTALLATION INSTRUCTIONS OF THE APPROVED MANUFACTURER.  
 7. FOR BELOW GRADE SANITARY WASTE PIPING, PC SHALL USE SERVICE WEIGHT CAST IRON PIPE WITH COMPRESSION JOINTS (CISPI 301). SOILD 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. ALL 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.  
 9. PC SHALL PROVIDE ALL WATER HEATERS (WATTAQE)/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 NC PLUMBING CODE. ELECTRICAL CONNECTIONS SHALL BE BY ELECTRICAL CONTRACTOR. PC SHALL COORDINATE WITH EC ON ELECTRICAL CHARACTERISTICS OF THE EQUIPMENT PROVIDED.  
 10. ALL PUMPS SHALL BE RATED FOR TRANSPORT OF POTABLE WATER. PUMPS IN AN INDIVIDUAL WATER SUPPLY SYSTEM SHALL BE CONSTRUCTED AND INSTALLED SO AS TO PREVENT CONTAMINATION FROM ENTERING THE WATER SUPPLY SYSTEM.

**METHODS:**

- EXCEND 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 603.2. 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.  
 2. 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 PIECES 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.  
 3. 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 DECKING. 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 INSULATION MATERIAL TO PREVENT CONTACT WITH OTHER METALS. IN GENERAL, HANGERS SHALL BE CLEVIS TYPE, STANDARD WEIGHT. FOR PIPING, HANGER SPACING SHALL BE IN ACCORDANCE WITH TABLE 308.5 OF THE NC PLUMBING CODE. HANGERS AND ACCESSORIES SHALL BE GRINMEL, MASON, OR B-LINE.  
 4. 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 CEILINGS. 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 3/4 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. ANNUAL SPACES BETWEEN SLEEVES AND PIPES SHALL BE FILLED OR CAULKED IN AN APPROVED MANNER.  
 5. 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

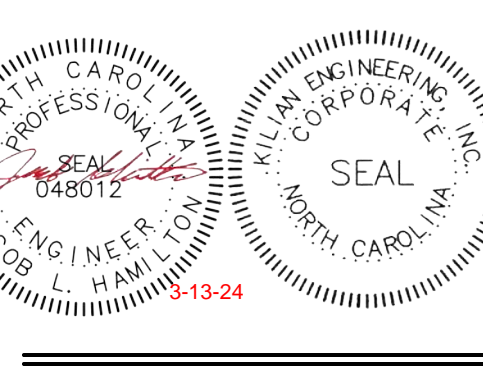
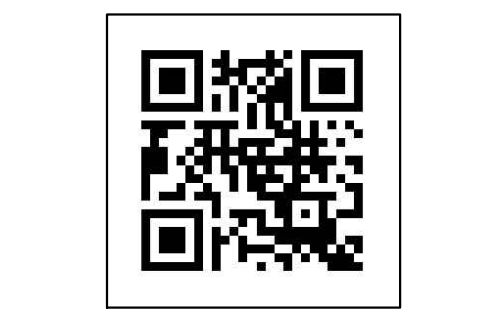
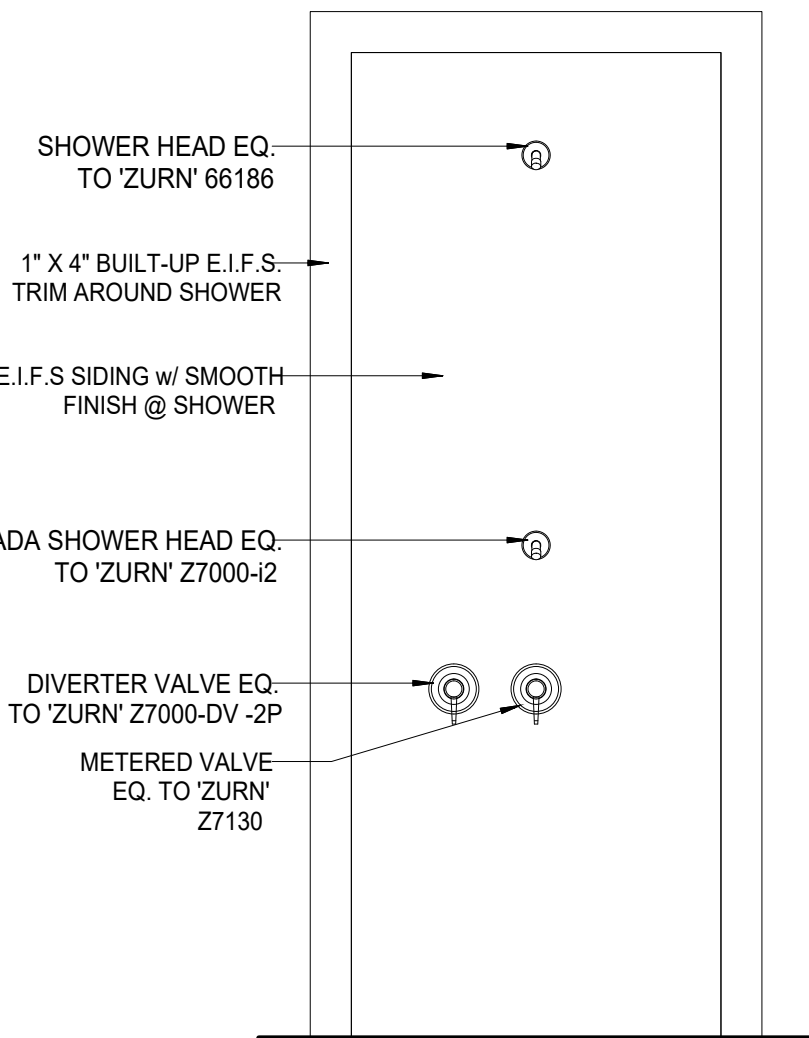
- THE HEATED SIDE OF THE WALL INSULATION. WATER PIPING INSTALLED IN AN UNCONDITIONED UTILITY ROOM OR UNCONDITIONED ATTIC SHALL BE INSULATED TO A MINIMUM OF R6.5 DETERMINED IN ACCORDANCE WITH ASTM C 177.  
 6. HOT WATER PROVIDED TO PUBLIC HAND-WASHING FACILITIES/LAVATORIES SHALL BE TEMPERED WATER DELIVERED THROUGH AN APPROVED WATER-TEMPERATURE LIMITING DEVICE THAT CONFORMS TO ASSE 1070 OR CSA B125.  
 7. INSULATE ALL EXPOSED WASTE AND SUPPLY PIPING UNDER LAVATORIES, SINKS, AND ELECTRIC WATER COOLERS WITH THE HANDI-LAV GUARD INSULATION KIT BY TRUEBRO OR EQUAL.  
 8. POTABLE WATER OUTLETS SHALL BE PROTECTED FROM BACKFLOW IN ACCORDANCE WITH 608.16. PRESSURE TYPE VACUUM BREAKERS SHALL CONFORM TO ASSE 1020 AND SPLIPOOF VACUUM BREAKERS SHALL COMPLY WITH ASSE 1056. HOSE-CONNECTION VACUUM BREAKERS SHALL CONFORM TO ASSE 1011, ASSE 1019, ASSE 1036, 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.  
 9. 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.  
 10. 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.  
 11. ADJUST STOPS AND VALVES FOR INTENDED FLOW RATE TO FIXTURES WITHOUT SLAMMING, NOISE, OR OVERFLOW.  
 12. 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.  
 13. 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. SOIL AND 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.  
 14. 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.  
 15. FOR WATER CLOSET WASTE CONNECTIONS, A 4 INCH BY 3 INCH SLOPE 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.  
 16. 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.  
 17. 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.  
 18. 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 LINSEED OIL. ENSURE CLEARANCE AT ALL CLEANOUTS FOR RODDING 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 RODDING.  
 19. DRAINAGE PIPING FOR FUTURE FIXTURES SHALL TERMINATE WITH AN APPROVED CAP OR PLUG.  
 20. AIR ADMITTANCE VALVES SHALL BE INSTALLED AFTER THE DWV 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.  
 21. 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 FLOOD LEVEL RIM OF THE WASTE RECEPTOR SHALL BE A MINIMUM OF TWICE THE EFFECTIVE OPENING OF THE INDIRECT WASTE PIPE.  
 22. 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.  
 23. 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-RIMMING 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 OOOZ OUT.  
 24. ALL VENT THRU THE ROOF (VTR) PENETRATIONS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR. PC SHALL PROVIDE FLASHING MATERIAL REQUIRED FOR VTRS. 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.

PLUMBING FIXTURE SCHEDULE						
SYMBOL	FIXTURE	MANUFACTURER	FITTING	HW	CW	WASTE
P1	TWO PIECE TANK TYPE WATER CLOSET	KOHLER 4369 OR EQUAL BY AMERICAN STANDARD OR TOTO	TWO-PIECE VITREOUS CHINA TOILET WITH HIGH-PROFILE TANK, KOHLER K-5309 ELONGATED FRONT BOWL AND CHROME TRIP LEVER. 1.28 GPF. PROVIDE SC534 OPEN FRONT SEAT LESS COVER. ASME 112.19.2 COMPLIANCE.	-	1/2"	3"
P1H	TWO PIECE TANK TYPE ADA WATER CLOSET	KOHLER 4369 OR EQUAL BY AMERICAN STANDARD OR TOTO	TWO-PIECE VITREOUS CHINA TOILET WITH HIGH-PROFILE TANK, KOHLER K-5309 ELONGATED FRONT BOWL AND CHROME TRIP LEVER. 1.28 GPF. PROVIDE SC534 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	AMERICAN STANDARD 9024001EC020 OR EQUAL	VITREOUS CHINA LAVATORY WITH BACKSPASH COMPLYING WITH ASME 112.19.2. TOP OF RIM SHALL BE 34 INCHES AFF FOR ADA. PROVIDE WITH LAG GUARD PROTECTORS FOR SUPPLY AND DRAIN LINES. PROVIDE JR SMITH 0700 (CONCEALED ARMS) WITH 19" ARMS 0800 (WALL SUPPORT PLATE). USE A METERING TYPE FAUCET SIMILAR TO CHICAGO 3300-E2805AB (VERIFY EXACT FAUCET WITH OWNER).	1/2"	1/2"	2"
P2A	UNDER MOUNT LAVATORY	KOHLER K-20000 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 LAG-GUARD PROTECTORS SUPPLY AND DRAIN LINES. USE A KOHLER K-103L77-SANL FAUCET (COORDINATE WITH EC FOR FAUCET POWER).	1/2"	1/2"	2"
P3	URINAL	KOHLER K-4991-ET OR EQUAL BY AMERICAN STANDARD OR TOTO	VITREOUS CHINA, WALL-MOUNTED, ADA COMPLIANT, LOW CONSUMPTION WASHOUT URINAL COMPLYING WITH ASME 112.19.2. 1 GPF. KOHLER K-76319 FLUSHOMETER VALVE OR EQUAL BY ZURN OR TOTO. TOP OF RIM SHALL BE 17 INCHES AFF FOR ADA.	-	3/4"	2"
P4	HAND SHOWER	AMERICAN STANDARD 1660.766 OR EQUAL	1.5 GPM 3-FUNCTION SHOWER W/ PAUSE FEATURE MEETING ADA AND ANSI 117.1, 90" WALL SUPPLY (AMERICAN STANDARD 8888.068), 59" MIN METAL SHOWER HOSE (AMERICAN STANDARD 8888.035), METERED SHOWER VALVE (SYMMONS 4-420), WALL SHOWER HEAD & DIVERTER (ZURN Z70000-12)(Z7000-DV-2P), AND ADJUSTABLE VERTICAL VALVE ROD. COORDINATE FINISH WITH OWNERS.	1/2"	1/2"	-
P5	DRINKING FOUNTAIN	ELKAY VRCLT85C	ADA COMPLIANT FOR ADULT AND CHILD. 8.0 GPH OF 50°F WATER AT 90°F AMBIENT. PROVIDE ACCESSORY APRON FOR ADA COMPLIANCE AS NECESSARY. VANDAL AND FROST RESISTANT.	-	3/8"	2"
P6	FLOOR DRAIN	WATTS FD-200-A OR EQUAL BY ZURN OR JR SMITH	ON GRADE EPOXY COATED CAST IRON FLOOR DRAIN WITH ANCHOR FLANGE, WEEP HOLES, ADJUSTABLE ROUND NICKEL BRONZE STRAINER, AND NO HUB OUTLET. PROVIDE TRAP PRIMER CONNECTION OPTION IF NOTED.	-	-	3"
P7	FREEZEPROOF HOSE BIBB	ZURN Z1346 OR EQUAL BY WOODFORD OR MIFAB	EXPOSED NON-FREEZE ANTI-SIPHON AUTOMATIC DRAINING WALL FAUCET COMPLETE WITH EXTERIOR CHROME FINISH, BRASS CASING, ALL BRONZE INTERIOR PARTS, Z1399-VB ANTI-SIPHON INTEGRAL VACUUM BREAKER, OPERATING ROD WITH FREE FLOATING COMPRESSION CLOSURE VALVE, REPLACEABLE SEAT WASHER, COMBINATION 1/2 FEMALE SOLDER INLET AND 1/2 MALE IN INLET CONNECTION STANDARD, AND 3/4 MALE HOSE CONNECTION.	-	1/2"	-
P8	INTERIOR HOSE BIBB	ZURN Z1341-BFP OR EQUAL BY MIFAB OR WOODFORD	PROVIDE CHECK VALVE AND ANTI-SIPHON PROTECTION IF NOT INTEGRAL TO UNIT	-	1/2"	-
P9	3/4" RPZ BACKFLOW PREVENTER	WATTS LF909 QT OR EQUAL BY CONBRACO 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 AWWA C511	-	3/4"	-
P10	1" RPZ BACKFLOW PREVENTER	WATTS LF909 QT OR EQUAL BY CONBRACO 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 AWWA C511	-	1"	-
P11	EXPANSION TANK	AMTROL ST-5 OR EQUAL BY WATTS OR BELL & GOSSETT	INSTALL ON COLD WATER LINE BETWEEN WATER HEATER AND RPZ	-	3/4"	-
P12	THERMOSTATIC MIXING VALVE	WATTS LFMMV OR EQUAL BY LAWLOR OR LEONARD VALVE	ASSE STANDARD 1069 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"	-
FCO	FLOOR CLEANOUT	ZURN, WATTS, JR SMITH	EPOXY COATED CAST IRON FLOOR CLEANOUT WITH ROUND ADJUSTABLE GASKETED NICKEL BRONZE TOP, REMOVABLE GAS TIGHT GASKETED BRASS CLEANOUT PLUG, AND NO HUB INLET.	-	-	4"
WCO	WALL CLEANOUT	ZURN, WATTS, OR JR SMITH	CAST IRON CLEANOUT FERRULE 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	
WATER CLOSET (FLUSH TANK)	PUBLIC	6	4.00	24.00	5.00	0.00	5.00	0.00	30.00
SHOWER	PUBLIC	1	2.00	2.00	3.00	3.00	4.00	3.00	4.00
LAVATORY	PUBLIC	5	1.00	5.00	1.50	1.50	2.00	7.50	10.00
URINAL (½" FLUSH VALVE)	PUBLIC	1	2.00	2.00	5.00	0.00	5.00	0.00	5.00
DRINKING FOUNTAIN	PUBLIC	1	0.50	0.50	0.25	0.00	0.25	0.00	0.25
DEMAND FIXTURE	GPM	QTY	TOTAL GPM		TOTAL DFU		33.5		
HOSE BIBBS	5	4	20.00		TOTAL WFSUS		10.5	49.3	
					GPM		15.40	29.10	
					OTHER FIXTURES' GPM		0.00	20.00	
					TOTAL GPM		15.40	49.10	
MINIMUM BUILDING DRAIN SIZE	4"								
MINIMUM WATER LINE SIZE	1"								

ELECTRIC WATER HEATER SCHEDULE											
MARK	MFG	MODEL	TANK VOL GALS	INPUT kW	RECOVERY GPH @ 60°ΔT	SET POINT °F	POWER VOLTAGE	CONNECTIONS PHASE	HOT COLD	OPTIONS	
WH-1	STATE	ES6-20-SOMS	20	4.5	30	110	240	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



NO.	REVISION	DATE

SHEET DISCRPTION  
**PLUMBING NOTES AND SCHEDULES**  
 PROJECT #: 230949  
 DATE ISSUED: 02/19/2024  
 DRAWING BY: JH  
 CHECKED BY: MWK/JLH

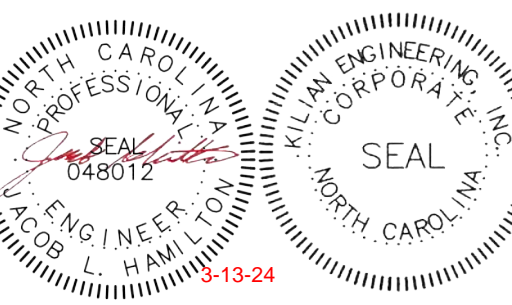
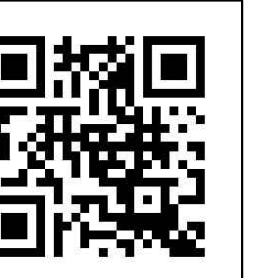
MATTHEWS RIDGE  
 KB HOMES  
 BATHHOUSE  
 HARNETT COUNTY, NC

**1011.7 OUTDOOR RINSE SHOWERS.** OUTDOOR RINSING SHOWERS SHALL PROVIDE AT LEAST TWO FIXED SHOWER HEADS. ONE FIXED SHOWER HEAD SHALL BE 48 INCHES (1220 MM) MINIMUM AND 54 INCHES (1370 MM) MAXIMUM ABOVE THE GROUND SURFACE, AND ONE FIXED SHOWER HEAD SHALL BE 72 INCHES (1830 MM) MINIMUM ABOVE THE GROUND SURFACE. **EXCEPTION:** A HAND HELD SHOWER SPRAY UNIT COMPLYING WITH 608.6 SHALL BE PERMITTED INSTEAD OF THE FIXED SHOWER HEAD 48 INCHES (1220 MM) MINIMUM AND 54 INCHES (1370 MM) MAXIMUM ABOVE GROUND SURFACE



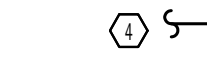


D. CLUGSTON



- SUPPLY PLAN HEX NOTES**
1. WATER HEATER MOUNTED ABOVE CEILING.
  2. ALL BLOCKING TO BE INSTALLED BY PLUMBING CONTRACTOR.
  3. PC TO COORDINATE WITH EC TO PROVIDE HEAT TRACE FOR THIS FIXTURE.
  4. CONTINUE 1" DOMESTIC WATER LINE TO BACKFLOW PREVENTION IN HOTBOX. PC TO PROVIDE 1" RPZ (P13) IN HOTBOX. SEE SITE PLAN BY OTHERS FOR HOTBOX AND METER LOCATIONS.
  5. VERIFY EXACT LOCATION OF YARD HYDRANT WITH ARCHITECT/GC.

CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



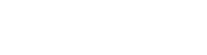
CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



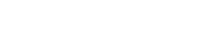
CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



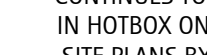
CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



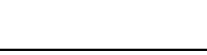
CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



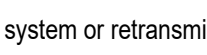
CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO RPZ (P10) IN HOTBOX ON SITE. SEE SITE PLANS BY OTHERS.

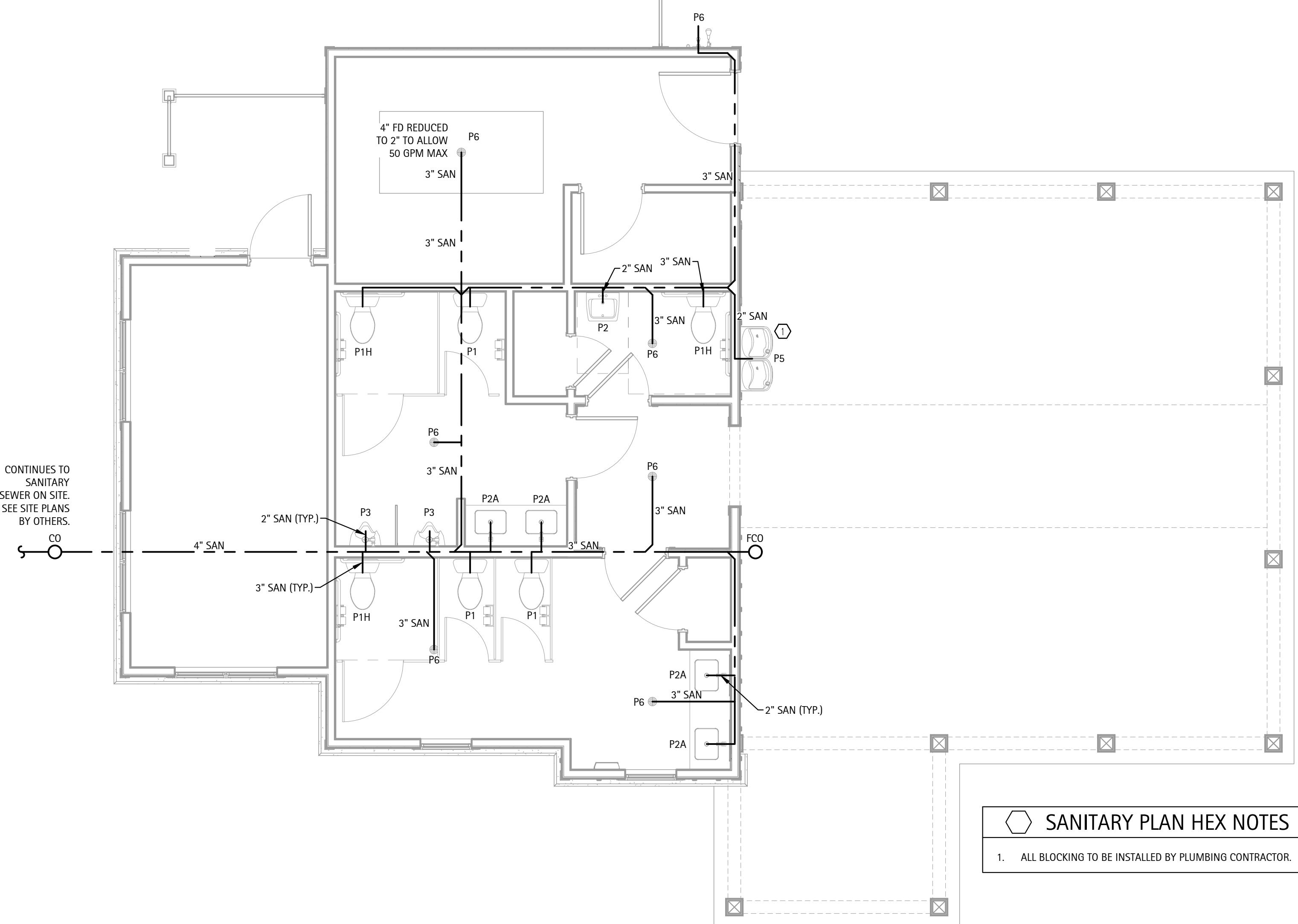
**Kilian Engineering, Inc.**  
 PO Box 3301, Healdson, NC 27536 | www.kilianengineering.com  
 (919) 458-8718 | CORPORATE LICENSE C-2277

DATE: \_\_\_\_\_  
 REVISION: \_\_\_\_\_  
 NO. \_\_\_\_\_

SHEET DISCUSSION  
**PLUMBING PLANS AND RISERS**  
 PROJECT #: 230949  
 DATE ISSUED: 02/19/2024  
 DRAWING BY: JH  
 CHECKED BY: MWK/JLH

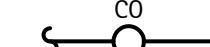
**MATTHEWS RIDGE  
 KB HOMES  
 BATHHOUSE  
 HARNETT COUNTY, NC**

P2



- SANITARY PLAN HEX NOTES**
1. ALL BLOCKING TO BE INSTALLED BY PLUMBING CONTRACTOR.

CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



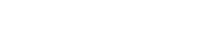
CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



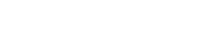
CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



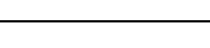
CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



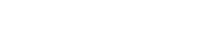
CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



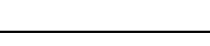
CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.



CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.

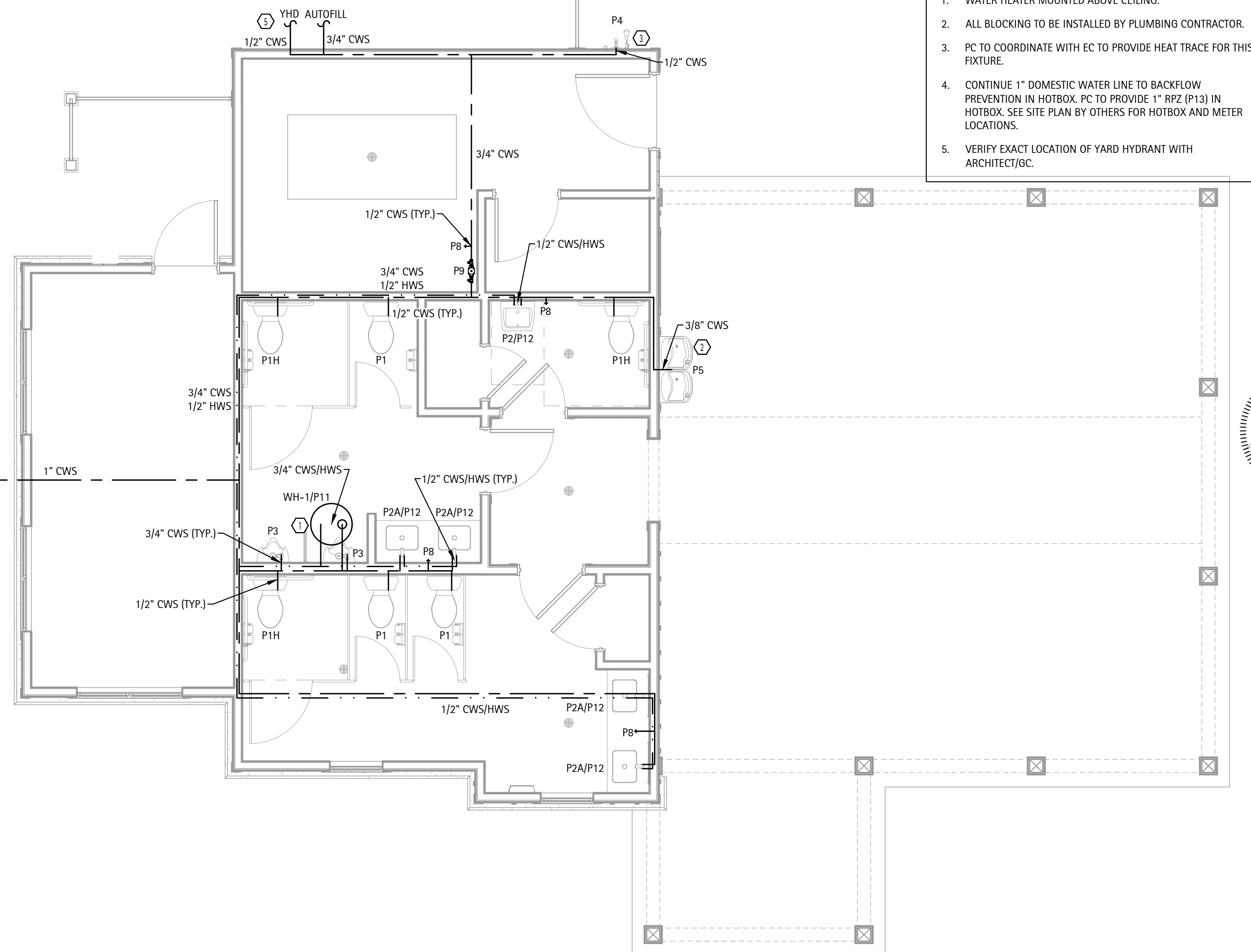


CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.

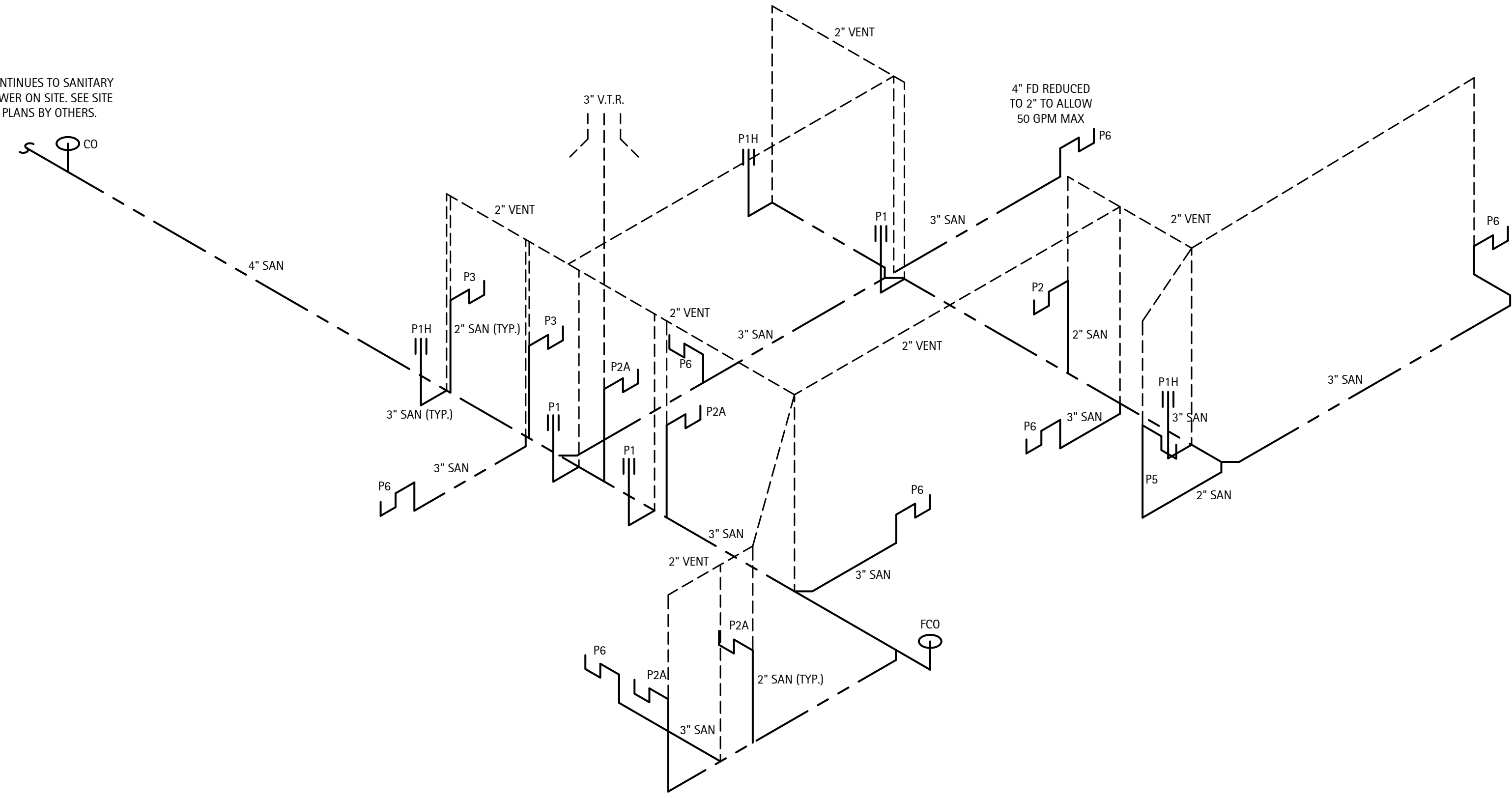


CONTINUES TO SANITARY SEWER ON SITE. SEE SITE PLANS BY OTHERS.

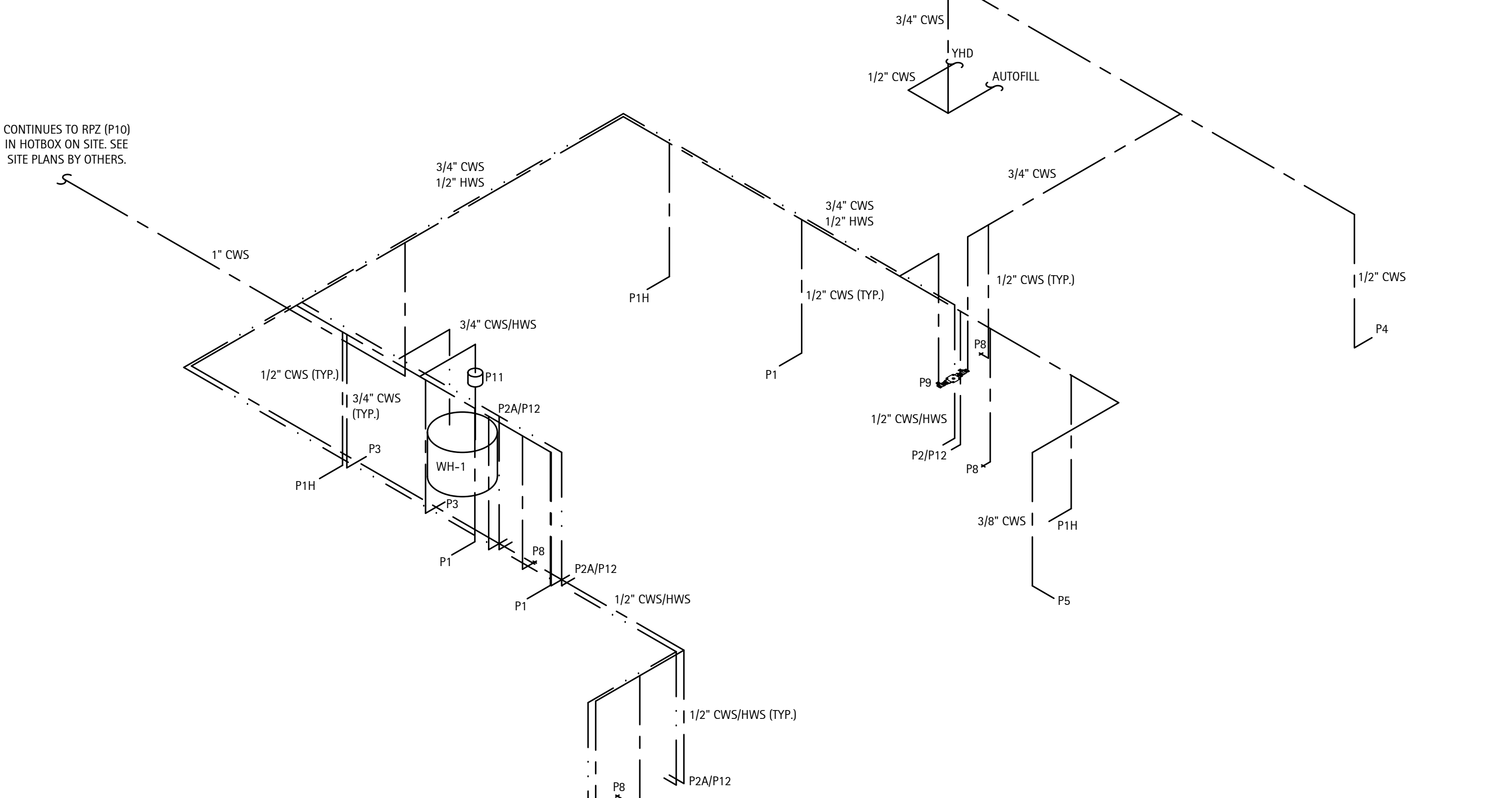
SANITARY PLAN: SCALE - 1/4" = 1' 0" 1



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



SANITARY RISER: NO SCALE 3



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 DIAGRAMMATIC. THE MC SHALL ADJUST THE LOCATIONS OF EQUIPMENT, DUCTS, REGISTERS, GRILLES, ETC. TO ACCOMMODATE PLANNED 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.
  - 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 BOUND 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. 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:
  - FOR DUCT BOARD, DUCT LINER AND FACTORY-MADE RIGID DUCTS NOT NORMALLY SUBJECTED TO COMPRESSION, THE NOMINAL INSULATION THICKNESS SHALL BE USED.
  - FOR DUCT WRAP, THE INSTALLED THICKNESS SHALL BE ASSUMED TO BE 75 PERCENT (25-PERCENT COMPRESSION) OF NOMINAL THICKNESS.
  - FOR FACTORY-MADE FLEXIBLE AIR DUCTS, THE INSTALLED THICKNESS SHALL BE DETERMINED BY DIVIDING THE DIFFERENCE BETWEEN THE ACTUAL OUTSIDE DIAMETER AND NOMINAL INSIDE DIAMETER BY TWO.
- DUCT LINER MAY BE SUBSTITUTED FOR EXTERIOR DUCT WRAP. DUCT LINER

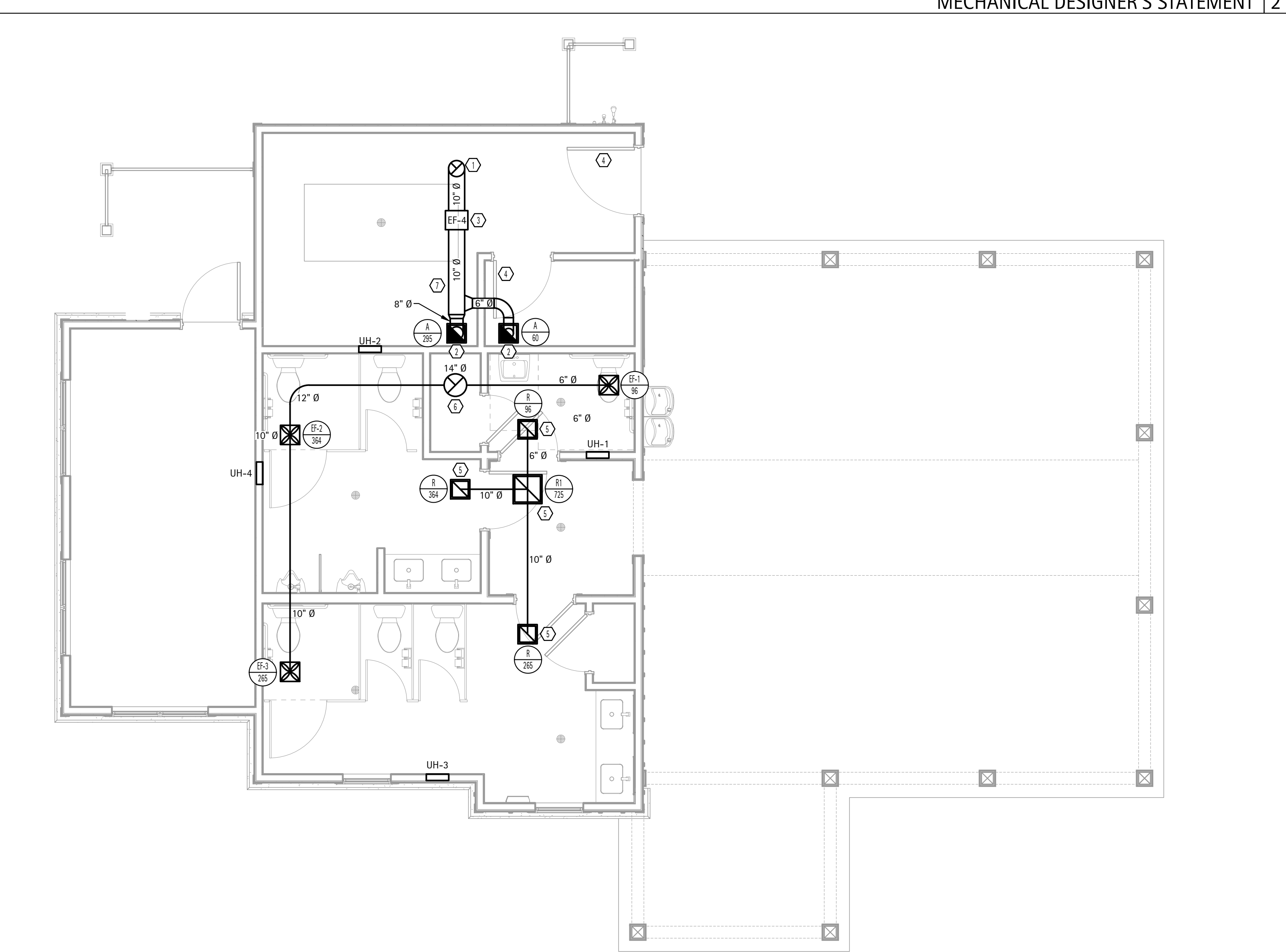
- INSULATION MATERIALS SHALL MEET THE REQUIREMENTS OF ASTM C 1071, AND ASTM G 21. EXTERIOR DUCT R-VALUE SHALL BE R-8 AND INTERIOR R-VALUE SHALL BE R-6 IN ACCORDANCE WITH THE 2018 NORTH CAROLINA ENERGY CONSERVATION CODE. NOMINAL DUCT SIZES SHALL BE ADJUSTED AS NECESSARY SO THAT FREE AREA DIMENSIONS ARE PRESERVED AS SHOWN ON THE PLANS. FABRICATION AND INSTALLATION SHALL CONFORM TO THE MANUFACTURER'S INSTALLATION RECOMMENDATIONS AND TO THE REQUIREMENTS OF THE LATEST EDITION OF THE NORTH AMERICAN INSULATION MANUFACTURERS ASSOCIATION FIBROUS GLASS DUCT LINER STANDARDS AND/OR SMACNA HVAC DUCT CONSTRUCTION STANDARDS. DUCT LINER SHALL HAVE A BLACK PIGMENTED MAT ON THE AIRSTREAM SIDE TO RESIST DAMAGE DURING INSTALLATION AND SERVICE. EDGES SHALL BE FACTORY COATED WITH BLACK PIGMENTED COATING TO COMPLY WITH SMACNA DCS REQUIREMENTS. ALL PORTIONS OF DUCT DESIGNATED TO RECEIVE DUCT LINER SHALL BE COMPLETELY COVERED WITH DUCT LINER. TRANSVERSE JOINTS SHALL BE NEATLY BUTTED AND THERE SHALL BE NO INTERRUPTIONS OR GAPS. THE BLACK PIGMENTED OR MAT FACED SURFACES SHALL FACE THE AIRSTREAM. DUCT LINER SHALL BE ADHERED TO THE SHEET METAL WITH 90 PERCENT COVERAGE OF ADHESIVE COMPLYING WITH REQUIREMENTS OF ASTM C 916. ALL EXPOSED LEADING EDGES AND TRANSVERSE JOINTS SHALL BE FACTORY COATED OR COATED WITH ADHESIVE DURING FABRICATION. DUCT LINER SHALL BE ADDITIONALLY SECURED WITH MECHANICAL FASTENERS, EITHER WELD-SECURED OR IMPACT DRIVEN, WHICH SHALL COMPRESS THE DUCT LINER SUFFICIENTLY TO HOLD IT FIRMLY IN PLACE. ADHESIVE BONDED PINS ARE NOT PERMITTED DUE TO LONG-TERM ADHESIVE AGING CHARACTERISTICS. LININGS SHALL BE INTERRUPTED AT THE AREA OF OPERATION OF A FIRE DAMPER AND AT A MINIMUM OF 6 INCHES UPSTREAM AND 6 INCHES DOWNSTREAM OF ELECTRIC RESISTANCE AND FUEL-BURNING HEATERS IN A DUCT SYSTEM. METAL NOSINGS OR SLEEVES SHALL BE INSTALLED OVER EXPOSED DUCT LINER THAT FACE OPPOSITE THE DIRECTION OF AIRFLOW. UPON COMPLETION OF INSTALLATION OF DUCT LINER AND BEFORE OPERATION IS TO COMMENCE, VISUALLY INSPECT SYSTEM AND VERIFY THAT THE DUCT LINER IS PROPERLY INSTALLED. OPEN ALL SYSTEM DAMPERS AND TURN ON FANS TO BLOW ALL SCRAPS AND OTHER LOOSE PIECES OF MATERIAL OUT OF THE DUCT SYSTEM. ALLOW FOR A MEANS OF REMOVAL OF SUCH MATERIAL.
- 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. ALL INSULATION SHALL HAVE FORMALDEHYDE EMISSIONS NOT GREATER THAN 0.05 PPM. 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.
- MASTIC USED TO SEAL DUCTWORK SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 181A-95 OR UL 181B-98. MAINTAIN AMBIENT TEMPERATURES AND CONDITIONS REQUIRED BY MANUFACTURER OF ADHESIVES, MASTICS, AND INSULATION CEMENTS. DO NOT INSTALL DUCT SEALANT WHEN TEMPERATURES ARE LESS THAN THOSE RECOMMENDED BY THE SEALANT MANUFACTURER.
- INSULATING PROPERTIES FOR ALL MATERIALS SHALL HAVE VOC CONTENT BELOW 20 GRAMS PER LITER AND WHICH MEET THE REQUIREMENTS OF THE MANUFACTURER OF THE PRODUCTS BEING ADHERED OR INVOLVED. ADHESIVES AND SEALANTS SHALL CONTAIN NO HEAVY METALS OR FORMALDEHYDE.
- FACTORY-MADE AIR DUCTS AND CONNECTORS SHALL COMPLY WITH UL 181-98.
- FLEXIBLE DUCT SHALL BE UL LISTED CLASS 0 OR CLASS 1, INSULATED, AND COMPLY WITH UL 181. FLEXIBLE DUCT SHALL BE FACTORY FORMED, COMPOSED OF SPIRAL WOUND CORROSION RESISTANT WIRE BONDED TO AN INNER FABRIC LINER. DUCT SHALL BE FACTORY INSULATED WITH A FOIL VAPOR BARRIER JACKET. CONNECT TO RIGID DUCT WITH SPIN-IN FITTING AND DAMPER. FLEXIBLE DUCTS AND AIR CONNECTORS SHALL NOT PASS THROUGH ANY FIRE RESISTANCE RATED ASSEMBLY.
- THE MC SHALL PROVIDE ALL DIFFUSERS GRILLES, LOUVERS, AND OTHER AIR DISTRIBUTION OUTLETS AND INLETS. LOUVERS, GRILLES, AND DIFFUSERS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. FOR LAY-IN CEILING, INSTALL SUPPORT FROM THE STRUCTURE FOR EACH DIFFUSER OR DAMPER. AIR DISTRIBUTION OUTLETS AND INLETS SHALL BE BY HART & COOLEY, PRICE, METAL-AIRE, NAILOR, OR CARNES.
- AIR FILTERS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 605-0 OF THE 2018 NC MECHANICAL CODE.
- THE MC SHALL PROVIDE ALL REFRIGERATION PIPING. ALL PIPE AND FITTINGS SHALL BE TYPE ACR HARD COPPER TUBING WITH SWEAT FITTINGS. REFRIGERATION LINES SHALL BE RUN NEATLY. WHERE A GROUP OF LINES ARE RUN, TRAPEZE HANGERS MAY BE USED. DO NOT USE CHAIN OR WIRE HANGERS. WRAP TUBING WITH RUBBER TAPE AT EACH CLAMP OR HANGER. FOR COVERED PIPES, HANGERS SHALL FIT AROUND THE OUTSIDE OF THE COVERING WITH 12 GAUGE GALVANIZED STEEL SHIELDS OF A LENGTH EQUAL TO THE OUTSIDE DIAMETER OF THE INSULATION AND COVERING 3/4 OF THE CIRCUMFERENCE OF THE INSULATION. SAGS SHALL NOT BE PERMISSIBLE. HORIZONTAL LINES SHALL PITCH DOWN NOT LESS THAN 1 INCH IN 40 FEET. INSULATE WITH 1 INCH CLOSED CELL ARMAFLEX TYPE INSULATION WITH A FLAME DENSITY RATING LESS THAN 25 AND A SMOKE DENSITY RATING LESS THAN 50. ALL JOINTS AND SPLICES IN INSULATION SHALL BE TAPED AND AIR TIGHT. SOLDER REFRIGERATION LINES USING 15 PERCENT SILVER SOLDER AND EVACUATE LINES TO 300 MICRONS. PROVIDE MOISTURE INDICATING SIGHT GLASS AND FILTER DRYER IN LIQUID LINE. PROVIDE OIL TRAPS AND DOUBLE RISERS IN REFRIGERANT SUCTION AND HOT GAS LINES WHERE REQUIRED TO PREVENT OIL SLUGGING AT THE COMPRESSOR AND INSURE PROPER LUBRICATION. MC SHALL BE RESPONSIBLE FOR SEALING LINE SET PENETRATIONS OF ANY RATED ASSEMBLIES IN ACCORDANCE WITH A SYSTEM LISTED IN THE UL DIRECTORY FOR THE SPECIFIC ASSEMBLY BEING PENETRATED. SEE ARCHITECTURAL PLANS FOR A LIST OF ALL UL FIRE RATED ASSEMBLIES.

**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 50 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

CHEMICAL STORAGE:	
34 SQFT X 10' HIGH CEILING = 340 CU. FT @ 10 ACH = 57 CFM	
*60 CFM PROVIDED	
PUMP ROOM:	
174 SQFT X 10'-11" HIGH CEILING = 1755 CU. FT @ 10 ACH = 292 CFM	
*295 CFM PROVIDED	

- HEX PLAN NOTES**
- EXHAUST DUCT TO TURTLEBACK VENT ON ROOF. PROVIDE WITH INSECT SCREEN. COORDINATE EXACT LOCATION WITH G.C.
  - LOUVERED EXHAUST GRILLE INSTALLED IN GYPSUM CEILING. TURN LOUVERED BLADES TOWARDS WALL
  - SUSPENDED INLINE EXHAUST FAN TO BE INSTALLED IN ATTIC. ENSURE ALL MANUFACTURER CLEARANCES ARE MAINTAINED. COORDINATE WITH G.C. TO PROVIDE ACCESS FOR MAINTENANCE.
  - DOOR WITH WEATHER PROOF LOUVER BY G.C. LOUVER TO BE 18"x18".
  - GRILLES AND DUCTWORK TO ALLOW FOR OUTSIDE AIR TO REDUCE NEGATIVE PRESSURE WHEN BATHROOM EXHAUST FANS ARE IN OPERATION.
  - MC TO COMBINE BATHROOM EXHAUST TO SINGLE 14" EXHAUST DUCT THROUGH ROOF TO TURTLEBACK VENT. MC TO FURNISH BACKDRAFT DAMPER AT EACH EXHAUST FAN PRIOR TO COMBINING DUCTS.
  - DUCTWORK FOR EF-4 TO BE CORROSION RESISTANT/PROOF.



EXHAUST FAN SCHEDULE								
MARK	MFG / MODEL #	TYPE	ESP (in WG)	CFM	VOLT/PH	FLA	SONES	NOTES
EF-1	GREENHECK SP-B110	CEILING	0.40	96	120/1	1.14	2.0	1-3
EF-2	GREENHECK SP-A410	CEILING	0.40	265	120/1	1.75	3.5	1-3
EF-3	GREENHECK SP-AS10	CEILING	0.40	364	120/1	3.30	4.0	1-3
EF-4	GREENHECK CSP-A390	INLINE	0.41	355	120/1	1.42	4.1	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	5145H	12X12	CEILING	ALUMINUM LOUVERED RETURN GRILLE	1
R	HART & COOLEY	RH45	12X12	SURFACE	ALUMINUM SURFACE MOUNT RETURN GRILLE	1
R1	HART & COOLEY	RH45	18X18	SURFACE	ALUMINUM SURFACE MOUNT RETURN GRILLE	1

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

ELECTRIC LINE HEATER SCHEDULE								
MARK	MFG / MODEL #	HEATER	VOLT/PH	HEAT		MOC/P		NOTES
				KW	AMPS	KW	AMPS	
UH-1	MARKEL / E3313T2SRPW	1.5	120/1	1.5	20.0	20.0	1-5	
UH-2,3	MARKEL / HF3315T2RWP	3.0	240/1	3.0	20.0	20.0	1-5	
UH-4	MARKEL / H3317T2RPW	4.8	240/1	4.8	20.0	20.0	1-5	

- BUILT-IN THERMOSTAT.
- BUILT-IN DISCONNECT SWITCH.
- PROVIDE WITH SURFACE MOUNTING SLEEVE KIT (BATHROOMS ONLY)
- BUILT IN SUMMER FAN SWITCH (BATHROOMS ONLY)
- CORROSION RESISTANT (PUMP ROOM ONLY)

**MECHANICAL SYSTEM, SERVICE SYSTEMS, AND EQUIPMENT**

METHOD OF COMPLIANCE THERMAL ZONE	PRESCRIPTIVE ZONE 4A
EXTERIOR DESIGN CONDITIONS	
HEATING DESIGN DRY BULB	23.1°F
COOLING DESIGN DRY BULB	91.7°F
COOLING DESIGN WET BULB	75.6°F
INTERIOR DESIGN CONDITIONS	
HEATING DESIGN DRY BULB	50°F
COOLING DESIGN DRY BULB	75°F
COOLING RELATIVE HUMIDITY	50%
FAMILY RESTROOM	
HEATING LOAD:	3,596 BTU/H
MENS RESTROOM	
HEATING LOAD:	11,053 BTU/H
WOMENS RESTROOM	
HEATING LOAD:	9,267 BTU/H
PUMP ROOM (HEATING DESIGN DRY BULB 50°F)	
HEATING LOAD:	9,775 BTU/H
MECHANICAL SPACING CONDITIONING SYSTEM:	
UNITARY	AIR COOLED DX
DESCRIPTION OF UNIT(S)	UNIT HEATERS
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.

**MECHANICAL DESIGNER'S STATEMENT | 2**

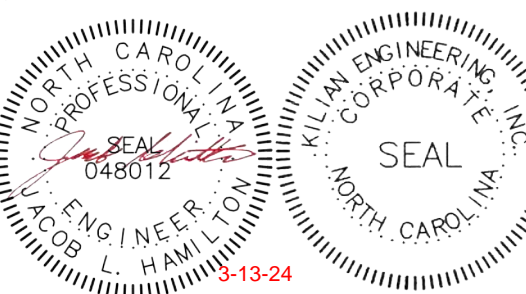
NO.	REVISION	DATE

SHEET DISCRPTION  
**MECHANICAL NOTES AND SCHEDULES**

PROJECT #: 230949  
DATE ISSUED: 02/19/2024  
DRAWING BY: JH  
CHECKED BY: MWK/JLH

MATTHEWS RIDGE  
KB HOMES  
BATHHOUSE  
HARNETT COUNTY, NC





DATE	
REVISION	
NO.	

SHEET DESCRIPTION

# ELECTRICAL NOTES AND SCHEDULES

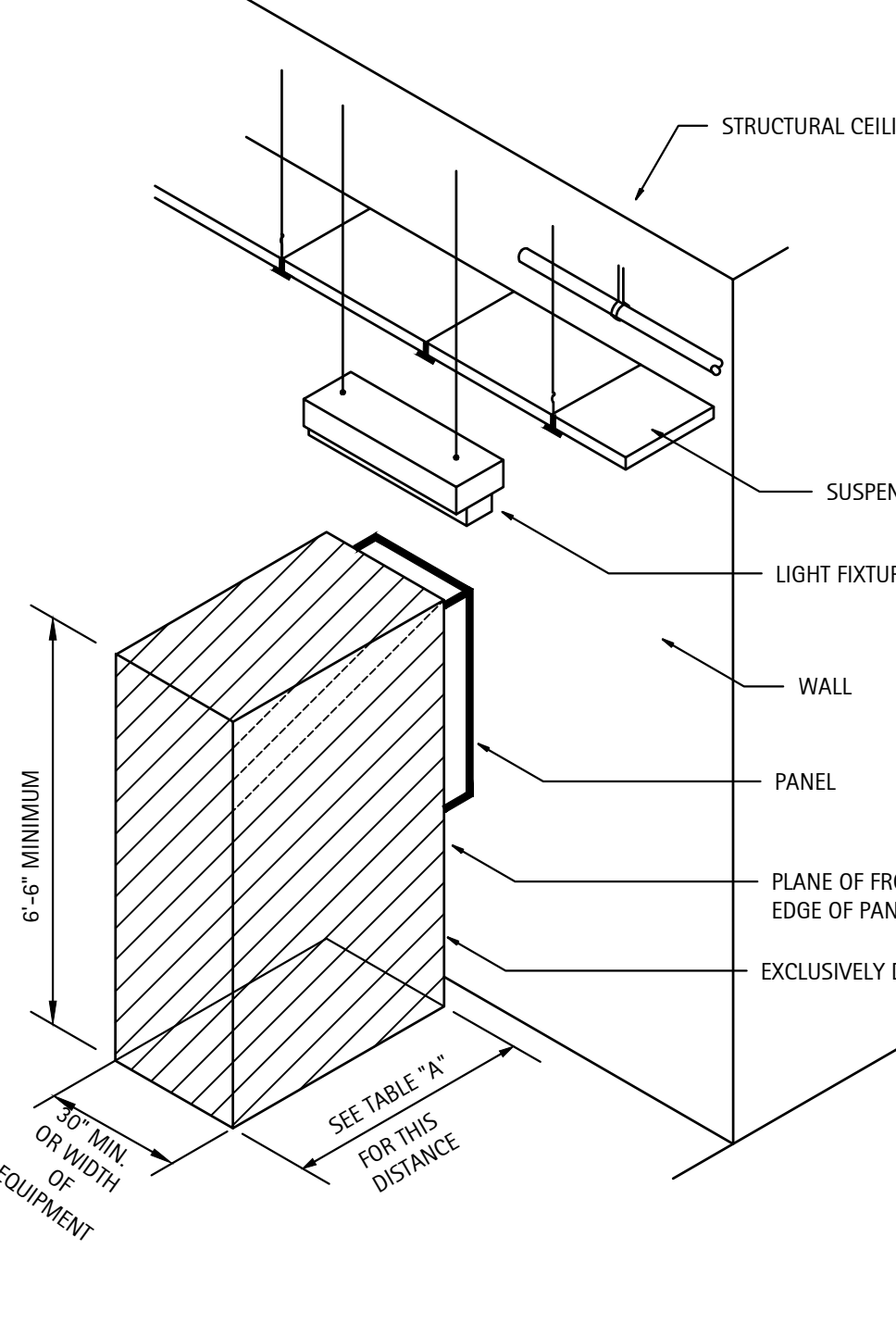
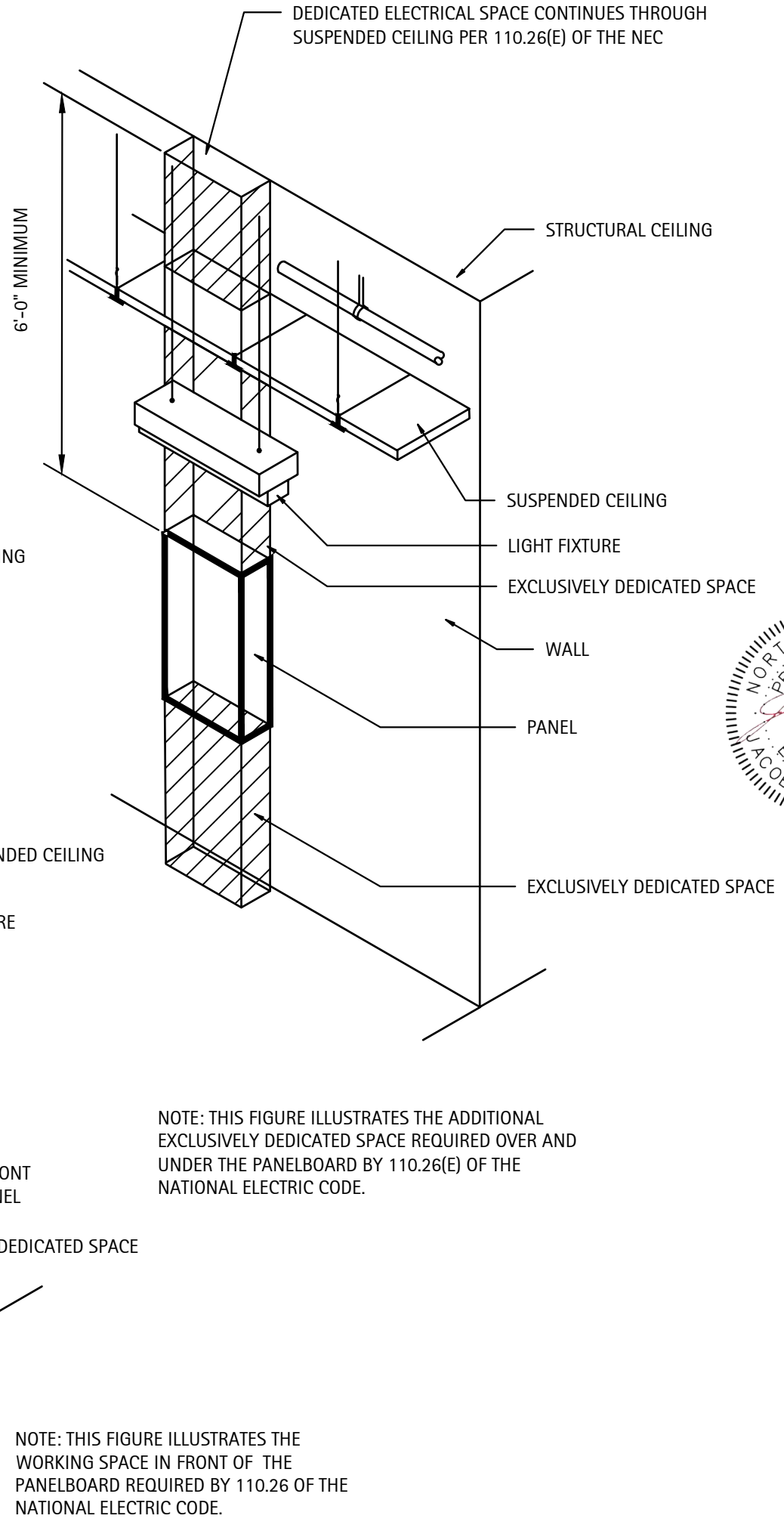
PROJECT #: 230949

DATE ISSUED: 02/19/2024

DRAWING BY: JH

CHECKED BY: MWK/JH

MATTHEWS RIDGE  
 KB HOMES  
 BATHHOUSE  
 HARNETT COUNTY, NC

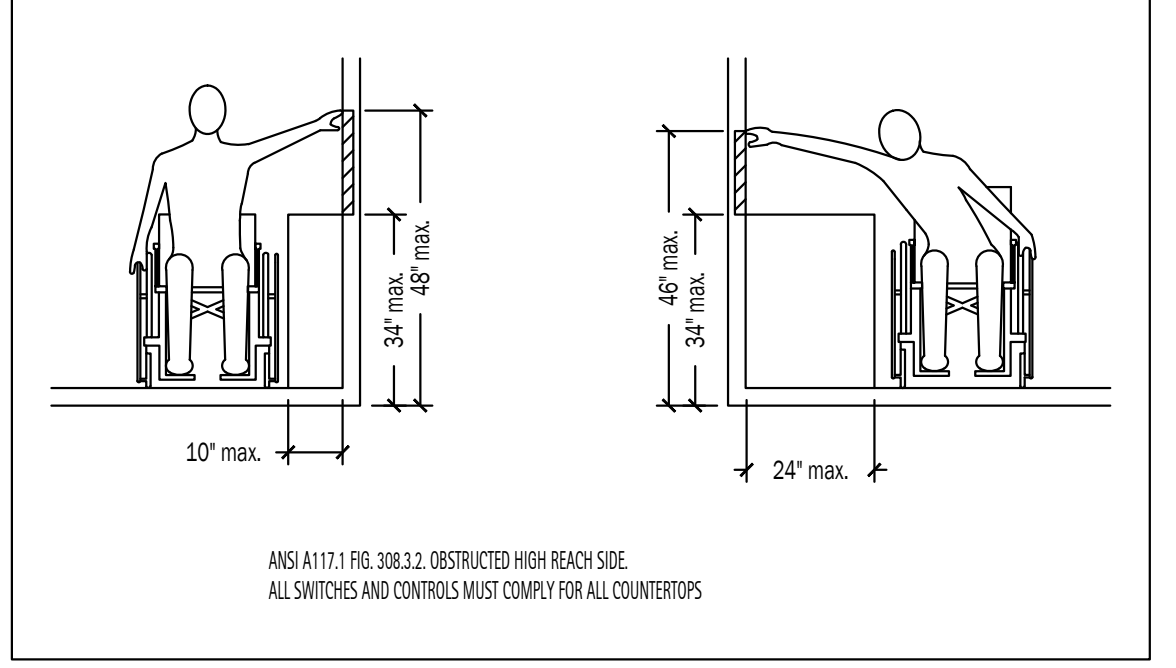


NOTE: WHERE THE CONDITIONS ARE AS FOLLOWS:

- CONDITION 1 - EXPOSED LIVE PARTS ON ONE SIDE OF THE WORKING SPACE AND NO LIVE OR GROUNDED 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 GROUNDED PARTS ON THE OTHER SIDE OF THE WORKING SPACE. CONCRETE, BRICK, OR TILE WALLS SHALL BE CONSIDERED AS GROUNDED.
- CONDITION 3 - EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORKING SPACE.

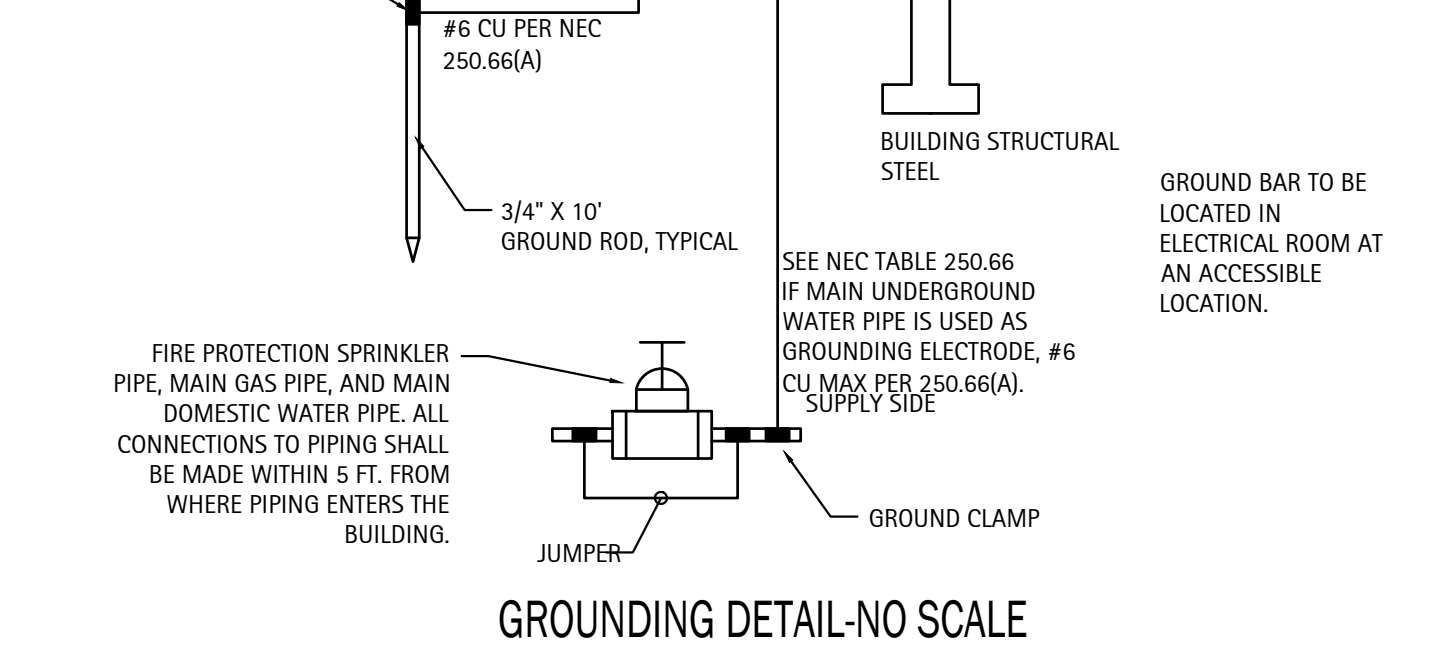
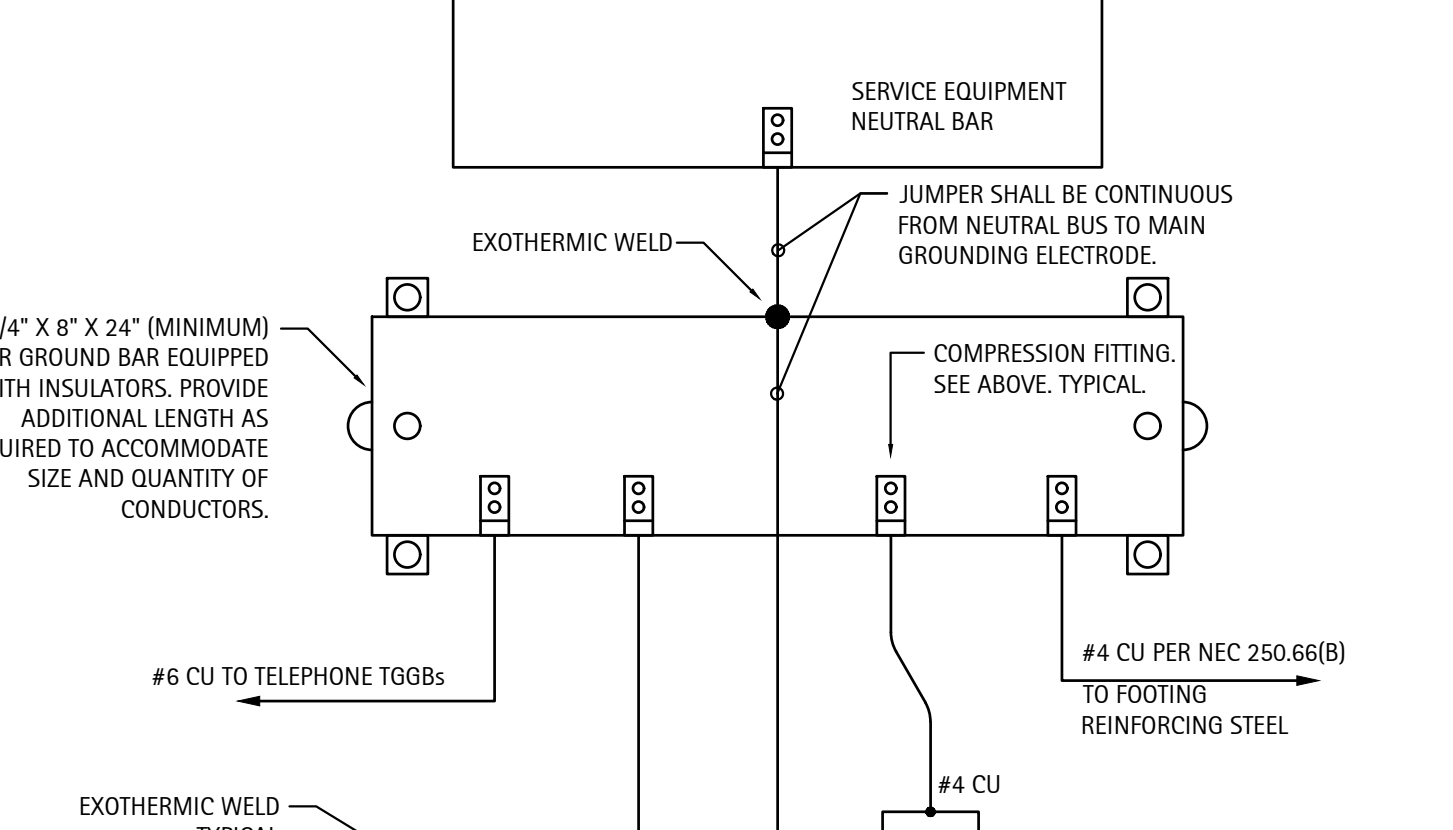
## REQUIRED CLEARANCES - NO SCALE

VOLTAGE TO GROUND, NOMINAL	MINIMUM CLEAR DISTANCE (FEET)		
	CONDITION 1	2	3
0-150	3	3	3
151-600	3	3-1/2	4



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. IVORY PLASTIC BODY WITH TOGGLE HANDLE. 120-277V, 20A. MEET FEDERAL SPECIFICATION W-C-596.
⚡	LOW VOLTAGE SWITCH	WATTSTOPPER LVS-1 LOW VOLTAGE MOMENTARY CONTROL SWITCH.
Ⓢ	Ceiling Occupancy Sensor	WATTSTOPPER, DT-300 LOW VOLTAGE OCCUPANCY SENSOR. 360° ULTRA SONIC AND INFRARED.
Ⓜ	POWER PACK	WATTSTOPPER, 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.
Ⓜ	SWITCHING PHOTOSENSOR	WATTSTOPPER, 1S-102, CONSULT OWNER FOR FOOT-CANDLE SET POINT.

SYMBOL	DESCRIPTION	REMARKS
Ⓜ	DUPLEX RECEPTACLE	NEMA 5-20R, HEAVY DUTY, COMMERCIAL GRADE, 125V, 20A COMPLYING WITH NEMA WD 6 AND WD 1. GFCI OR AFCI IF NOTED. 'WP' DENOTES WEATHERPROOF COVER. 'CH' 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. IF INSTALLATION, GFCI OR AFCI IF NOTED. 'WP' DENOTES WEATHERPROOF COVER. 'CH' DENOTES COUNTER HEIGHT, LISTED TAMPERPROOF IF NOTED. MEET FEDERAL SPECIFICATION W-C-596. MAY BE EITHER SIMPLEX, DUPLEX, OR QUAD.
Ⓜ	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.



MARK	DESCRIPTION	LOUVER/LENS	LAMPS		VOLTAGE	MAX INPUT WATTAGE	MOUNTING	REMARKS	MFG	MODEL
			TYPE	CCT						
A	4' x 2' LAMP VAPOR PROOF STRIP LIGHT	-	LED	-	120	64	SURFACE	2	EPCO	G-4-LED-FX-S-41-34
B	6\" CAN LIGHT	-	LED	-	120	12	RECESSED	2	LITHONIA	LDN6-35/15-106-WR-LSS-MVOLT
C	FLOOD LIGHT	-	LED	-	120	17	SURFACE	2	COOPER	MSS-15-3T-18
D	FAN W/O LIGHT KIT	-	-	-	120	67	SURFACE	2	ZOONIX	MA4660
E	EXTERIOR SCENCE	-	LED	3000K	120	9	SURFACE	2,3	PROGRESS LIGHTING	P5623-2030K9
EXH	LED EXIT/COMBO W/ BATTERY BACKUP	ACRYLIC	LED	N/A	120	3	VARIABLE	1,2	EELP	EDGC-1RC-W-RC-12V90-NI-3WLED
EMC	6\" CAN LIGHT W/ BATTERY BACKUP	-	LED	-	120	12	RECESSED	1,2	LITHONIA	LDN6-35/15-106-WR-LSS-MVOLT-ELSD
EM	DUAL HEAD EMERGENCY FIXTURE	ACRYLIC	LED	-	120	2	VARIABLE	1,2	EELP	XC-LED-2R-W-SS

1. FIXTURE SHALL HAVE BATTERY BACKUP FOR 90 MINUTE ILLUMINATION.
2. OR EQUAL BY COOPER, PHILIPS, DAY-BRITE LIGHTING, GE, LITHONIA, OR OWNER APPROVED SELECTION
3. FIXTURE TO BE DAMP/WET RATED

## GENERAL ELECTRICAL NOTES:

### ADMINISTRATIVE:

1. 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.
2. 'PROVIDE' MEANS TO FURNISH AND INSTALL. THE ELECTRICAL CONTRACTOR SHALL ALSO INSTALL MATERIALS AND EQUIPMENT FURNISHED BY OTHERS AND THE GENERAL CONTRACTOR AS REQUIRED.
3. 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. MINOR TOOLS, ACCESSORIES, AND DEVICES REASONABLY INFERRABLE AS NECESSARY FOR THE COMPLETION AND PROPER OPERATION OF ANY ELECTRICAL SYSTEM SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
4. 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.
5. THE ELECTRICAL CONTRACTOR SHALL BE PERMITTED TO APPROVE ALL PERMITS, FEES, AND INSPECTIONS NECESSARY FOR THE COMPLETION OF THE WORK UNDER THIS CONTRACT.
7. DO NOT SCALE THESE DRAWINGS-REFER TO ARCHITECTURAL SHEETS FOR DIMENSIONS.
8. TRADE NAMES AND MANUFACTURERS ARE SPECIFIED TO ESTABLISH A QUALITY STANDARD. SUBSTITUTIONS SHALL BE PERMITTED BY APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. ALL LISTED MODEL NUMBERS SHALL BE VERIFIED WITH THE MANUFACTURER FOR PROPER APPLICATION OF EQUIPMENT.
9. 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.
10. 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 JUMPERS AND SYSTEM BONDING JUMPERS SHALL BE INSTALLED IN ACCORDANCE WITH 250.28 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 GROUNDED IN ACCORDANCE WITH 250.30. RESISTANCE TO GROUND SHALL NOT EXCEED 25 OHMS; ADDITIONAL GROUNDING ELECTRODES SHALL BE AS NECESSARY.
11. 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.
12. ALL MATERIALS AND EQUIPMENT SHALL COMPLY WITH THE UNDERWRITERS LABORATORIES, INC. STANDARDS OR HAVE UL APPROVAL, OR BEAR THE EXAMINATION LISTING WHERE SUCH APPROVAL HAS BEEN ESTABLISHED FOR THE TYPE OF DEVICE IN QUESTION.
13. 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.
14. 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, PCBs (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.
15. ALL WORK SHALL CONFORM TO 2020 NATIONAL ELECTRIC CODE, 2018 STATE BUILDING CODE, AND ALL APPLICABLE LOCAL CODES.

### MATERIALS:

1. 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.
2. 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. ELECTRICALIAN 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.
4. OCCUPANCY SENSORS SHALL BE BY WATTSTOPPER, LUTRON, LEVITON, SENSOR SWITCH, HUBBELL, OR APPROVED EQUAL.
5. 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.
6. ALL WIRE, CONNECTORS, TERMINALS, AND LUGS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. WHERE CONDUCTORS ARE RUN IN PARALLEL, LUGS 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.
7. THE INSULATION TYPE FOR INTERIOR WIRING SHALL BE DUAL RATED THIN/THIN OR XHHW; ALL WIRING INSTALLED BELOW GRADE OR IN

14. 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 CERRO WIRE, INC, INDUSTRIAL WIRE & CABLE, INC, OR SOUTHWIRE COMPANY.
8. JOINTS IN SOLID CONDUCTORS SHALL BE SPLICED USING IDEAL "WIRE NUTS", 3M "SCOTCH LOCK", OR T&B "PIGTY" 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 SPICES AND TAPS, PROVIDED WITH UL APPROVED INSULATING COVERS, MAY BE USED INSTEAD OF MECHANICAL CONNECTORS PLUS TAPE. IN ALL CASES, CONDUCTORS SHALL BE CONTINUOUS FROM OUTLET TO OUTLET AND NO SPLICING SHALL BE MADE EXCEPT WITHIN OUTLET OR JUNCTION BOXES, TROUGHS, OR OUTLETS. WHERE CONCENTRIC, ECCENTRIC, OR OVERSIZED KNOCKOUTS ARE ENCOUNTERED, A GROUNDING TYPE INSULATED BUSHING SHALL BE PROVIDED.
9. 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. FINISH 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 CB2.11 FOR ELECTRONIC BALLAST PERFORMANCE. ALL BALLASTS SHALL BE UL LISTED AND MEET FEDERAL AND STATE EFFICIENCY REQUIREMENTS.
10. ALL CONDUIT, FITTINGS, COUPLINGS, AND SUPPORTS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. CONDUIT FITTINGS AND COUPLINGS SHALL BE BY APPLETON, RACO, OR O-2/GEDNEY. 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.
11. EMT SHALL BE MANUFACTURED IN ACCORDANCE WITH AMERICAN NATIONAL STANDARDS INSTITUTE-AMERICAN NATIONAL STANDARD FOR STEEL ELECTRICAL METALLIC TUBING (EMT), ANSI C80.3 AND UL 797. RIGID METAL CONDUIT SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI-AMERICAN NATIONAL STANDARD FOR ELECTRICAL RIGID STEEL CONDUIT (ERSC), ANSI C90.1 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.
12. METAL CONDUIT SHALL BE BY ALIATED 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.

### SPACES THAT WILL BE AT SIGNIFICANTLY DIFFERENT TEMPERATURES SHALL BE SEALED IN ACCORDANCE WITH 300.5(C), 300.7(A), AND 300.50(E) OF THE NEC. ROUTE CONDUIT IN AND UNDER SLAB FROM POINT-TO-POINT. ROUTE EXPOSED CONDUIT AND CONDUIT INSTALLED ABOVE ACCESSIBLE CEILINGS PARALLEL AND PERPENDICULAR TO WALLS. COMPLETELY AND THOROUGHLY SWAB ALL RACEWAYS BEFORE INSTALLING WIRE. PULL ALL CONDUCTORS INTO EACH RACEWAY AT ONE TIME. USE A SUITABLE WIRE PULLING LUBRICANT FOR BUILDING WIRE #4 AWG AND LARGER.

10. CABLES, RACEWAYS, OR BOXES, INSTALLED IN EXPOSED OR CONCEALED LOCATIONS UNDER METAL-CORRUGATED SHEET ROOF DECKING, SHALL BE INSTALLED AND SUPPORTED SO THERE IS NOT LESS THAN 1-1/2 in MEASURED FROM THE LOWEST SURFACE OF THE ROOF DECKING TO THE TOP OF THE CABLE, RACEWAY, OR BOX. A CABLE, RACEWAY, OR BOX SHALL NOT BE INSTALLED IN CONCEALED LOCATIONS IN 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. VAPORITITE BOXES SHALL BE TYPE GS. WHERE SURFACE MOUNTED BOXES ARE USED, THOSE BOXES AND THEIR FACERATES 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 IN 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.
12. 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, COMPILING, 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.
13. WHERE CONDUCTORS ARE RUN IN PARALLEL, THE EC SHALL COMPLY WITH NEC 310.4.
14. ISOLATED-GROUND TYPE RECEPTACLES SHALL BE INSTALLED IN ACCORDANCE WITH 250.146(D). ISOLATED GROUND RECEPTACLES SHALL BE ORANGE IN COLOR.
15. IN ASSEMBLY AREAS EXCEEDING 100 PERSONS OCCUPANCY, WIRING METHODS SHALL COMPLY WITH NEC 518.
16. 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.
17. 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.
18. ALL TELEPHONE AND COMMUNICATIONS OUTLETS AND RACEWAYS ARE ROUGH-INS ONLY. EACH TELEPHONE AND COMMUNICATIONS OUTLET SHALL BE 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.
19. ELECTRICAL CONTRACTOR SHALL INSTALL DISCONNECT SWITCHES IN SIGHT OF ALL HARDWIRED 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 NECESSARY 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.
21. 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.









D. CLUGSTON



Kilian Engineering, Inc.  
PO Box 3301, Henderson, NC 27536 | www.kilianengineering.com  
(919) 252-4388/8778 | CORPORATE LICENSE C-2277

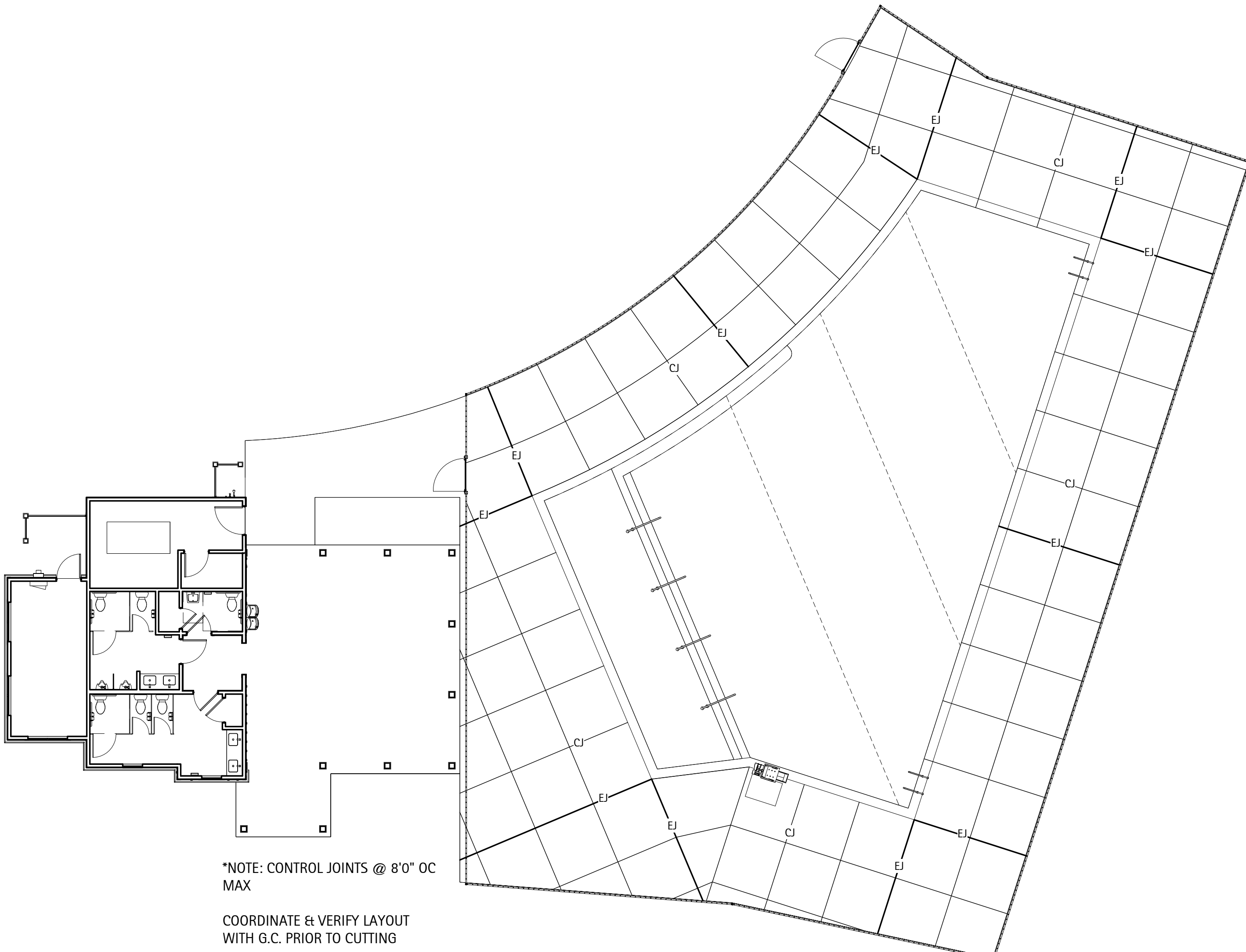
NO.	REVISION	DATE

SHEET DISCRPTION  
**POOL DIMENSION & CONTROL JOINT PLAN**

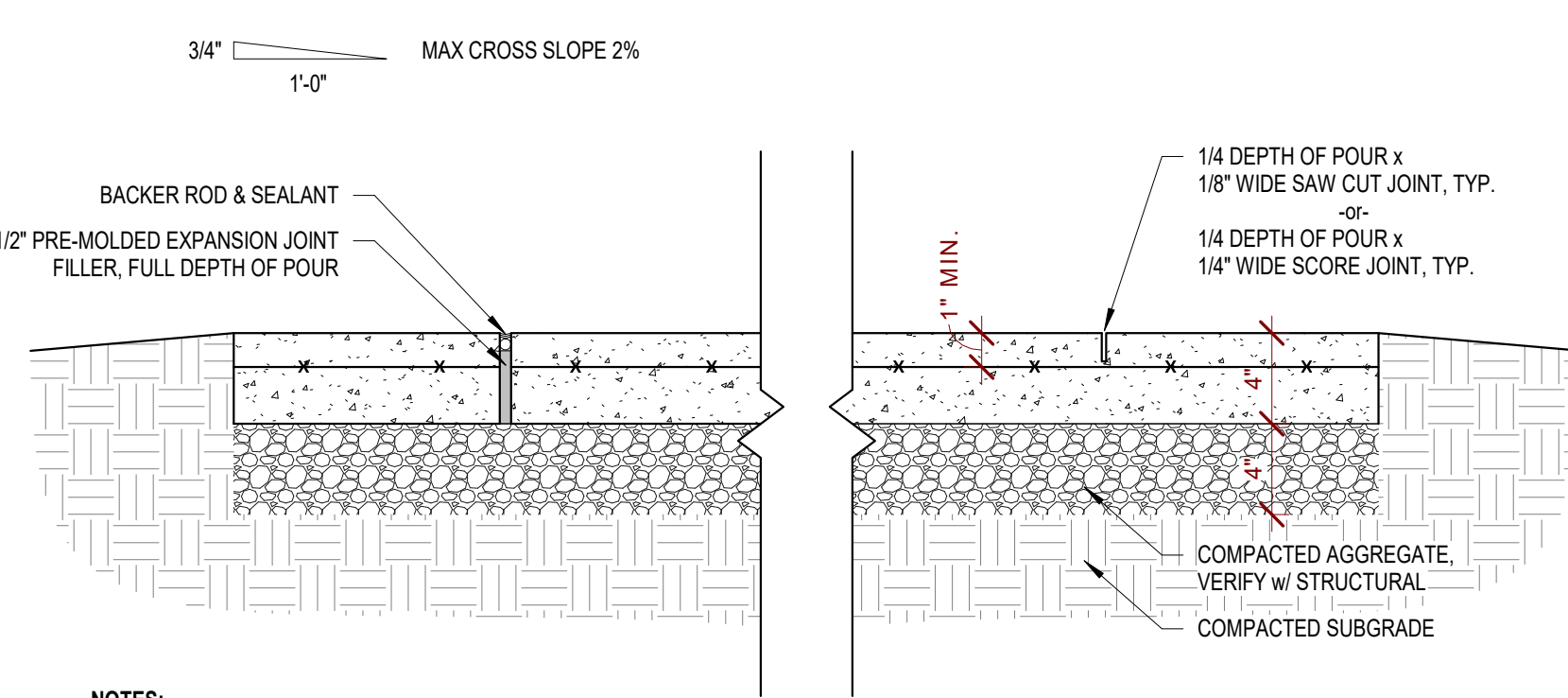
PROJECT #: 2023043  
DATE ISSUED: 03/13/2024  
DRAWING BY: JVD  
CHECKED BY: DSC/JLH

MATTHEWS RIDGE  
KB HOMES  
BATHHOUSE  
HARNETT COUNTY, NC

SP1.0

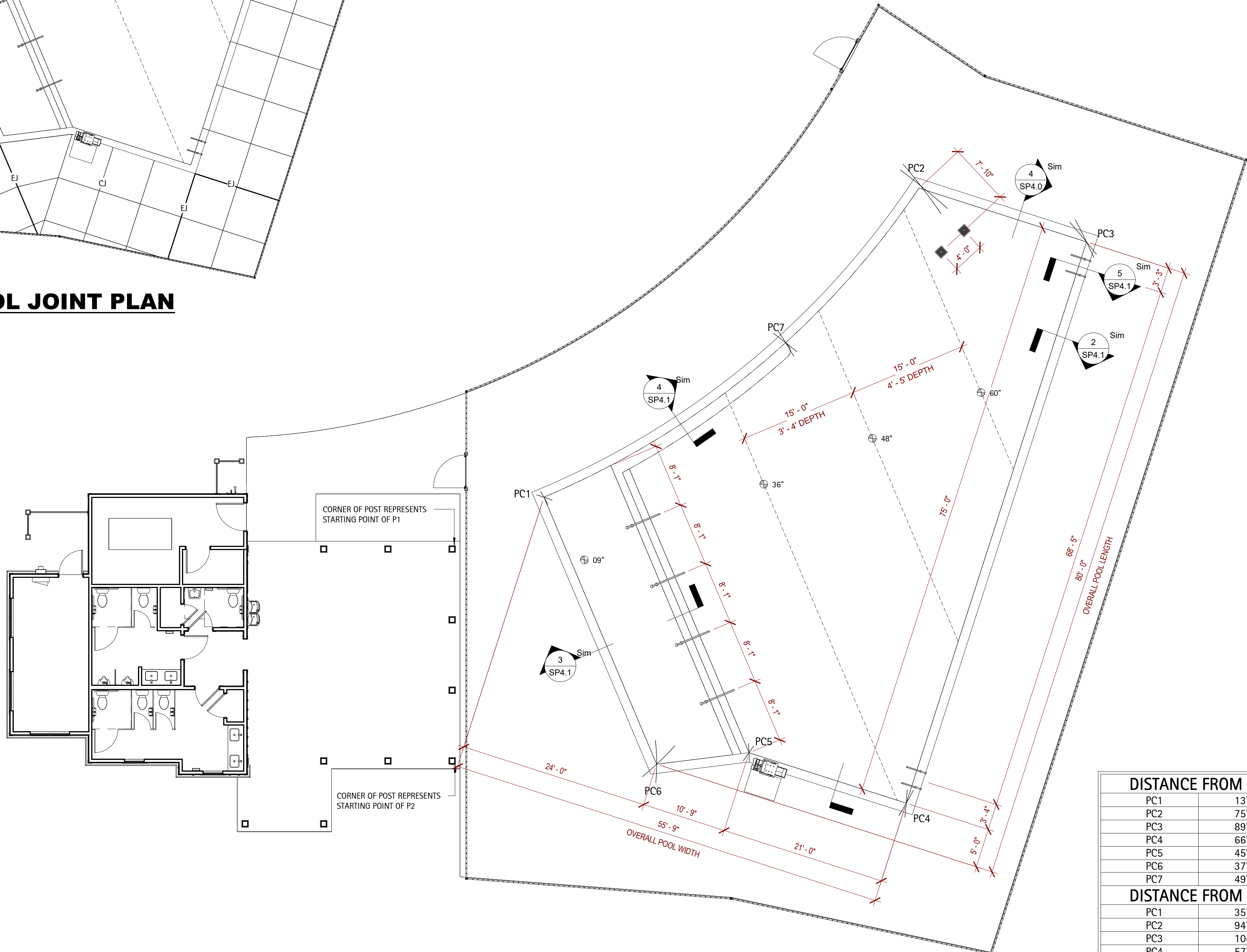


**2 POOL CONTROL JOINT PLAN**  
3/32" = 1'-0"



- NOTES:**
1. ALL JOINTS TO BE CUT w/ WET WALK BEHIND SAW TO ENSURE ALL CUTS ARE PERPENDICULAR w/ FACE OF CONCRETE
  2. MAXIMUM CONTROL JOINT SPACING SHALL BE 10 FT. IN EACH DIRECTION UNLESS SHOWN OTHERWISE ON PLAN. SEE STRUCT.
  3. PROVIDE EXPANSION JOINT WHERE SLABS ARE POURED AGAINST VERTICAL SURFACES AND/OR DIFFERENT PAVING MATERIALS AND AS SPECIFIED ON PLANS OR 25'-0" MAX O.C.

**3 Detail - Typ. Sawcut Control Pool Joint**  
1 1/2" = 1'-0"



**1 POOL DIMENSION PLAN**  
1/8" = 1'-0"

DISTANCE FROM P1	
PC1	13' 0"
PC2	75' 0"
PC3	89' 3"
PC4	66' 1"
PC5	45' 9"
PC6	37' 9"
PC7	49' 6"

DISTANCE FROM P2	
PC1	35' 9"
PC2	94' 5"
PC3	104' 3"
PC4	57' 8"
PC5	37' 6"
PC6	25' 9"
PC7	68' 1"

MAIN POOL DATA	
POOL DIMENSIONS:	55'-9" X 80'-0" OVERALL IRREGULAR SHAPE.
POOL DEPTHS:	9" SHELF w/ 3'-5"
POOL VOLUME:	74,233 GALLONS
SURFACE AREA:	2,938 SQFT.
PERIMETER:	244 LF
COPING:	BULLNOSE INDEPENDENT
REQUIRED FLOW:	206 GPM @ 65 TDH
DESIGN FLOW:	210 GPM @ 65 TDH
SHELL MATERIAL:	4000 PSI SHOTCRETE
INTERIOR FINISH:	QUARTZ PLASTER
BATHER LOAD:	196 PERSONS
BACKWASH TO:	SANITARY SEWER
WATER SOURCE:	IN-LINE AUTOFILL
PIPE SIZING:	
MAIN DRAINS:	(2) 4" SCH 40 PVC
SKIMMERS:	(9) 4" SCH 40 PVC
VACUUM LINE:	(2) 2" SCH 40 PVC
INLETS:	(13) 3" SCH 40 PVC
FILTER TYPE:	HIGH RATE SAND
SIZE PROVIDED:	2 @ 7.06 SF (EA) = 14.12
SIZE REQUIRED:	14.00 SF TOTAL
MEDIA CIRC. RATE:	15 GPM/SF
BACKWASH RATE:	15 GPM/SF
TURNOVER RATE:	6 HOURS



**POOL DECK EXIT REQUIREMENTS**

POOL DECK AREA = 4,839 SF. @ 15 SF PER PERSON DECK OCCUPANT LOAD IS 323.

POOL AREA IS 2,938 SF. @ 50 SF PER PERSON, POOL OCCUPANT LOAD IS 59.

TOTAL POOL & POOL DECK OCCUPANT LOAD OF 382 \* 0.2" EQUAL 76.4 INCHES REQUIRED. 96" SHOWN ON PLAN.

REQ'D EXIT SEPARATION = 134'-6" / 2 = 67'- 3". 75'- 6" SHOWN ON PLANS.

**BUILDING FIXTURE DATA**

TOTAL BATHER LOAD = 2,938/15 = 196 (50% - 50% SPLIT) = 98

CLUBHOUSE & PUMP HOUSE REQUIREMENTS: MINIMUM FIXTURE REQUIREMENTS ARE:

98 MEN  
 - 1 LAVATORIES  
 - 1 WATER CLOSET(S)  
 - 1 URINAL(S)

98 WOMEN  
 - 2 LAVATORIES  
 - 2 WATER CLOSET(S)  
 1 SHOWER IS REQUIRED

SEE ARCHITECTURAL PLANS BY OTHERS FOR RESTROOM LOCATION & LAYOUTS

**POOL CONSTRUCTION NOTES**

- SUBMISSION OF GROUNDING AND BONDING REPORT BY CONTRACTOR TO ENGINEER OF RECORD FOR REVIEW IS REQUIRED.
- SUBSTITUTIONS MUST BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO INSTALLATION.
- ANY COSTS INCURRED DUE TO DEVIATIONS FROM THE PLANS NECESSITATING DRAWING REVISIONS SHALL BE BORNE BY THE CONTRACTOR/OWNER.
- THE CONTRACTOR IS REQUIRED TO COMPREHENSIVELY DOCUMENT THE POOL CONSTRUCTION PROCESS, ENSURING THAT PICTURES ACCURATELY DEPICT THE LOCATION ON THE SITE BY INCLUDING IDENTIFIABLE BACKGROUND FEATURES. THIS DOCUMENTATION INCLUDES, BUT IS NOT LIMITED TO, PHOTOGRAPHING THE GROUNDING/BONDING OF ALL EQUIPMENT BEFORE THE SHOTCRETE IS POURED, RETAINING CUT SHEETS FOR ALL EQUIPMENT, AND COMPLETING ALL INSPECTION REPORTS, AMONG OTHER TASKS.
- PRIOR TO THE CONSTRUCTION OF THE POOL, THE CONTRACTOR IS REQUIRED TO CONSULT WITH THE ENGINEER OF RECORD OR A DESIGNATED ENGINEER TO COORDINATE THE NECESSARY SITE INSPECTIONS IN COMPLIANCE WITH NC 15A NCAC 18A .2500.
- SHOULD THE CONTRACTOR OR ANY SUBCONTRACTOR DEVIATE FROM THE APPROVED DESIGN PLANS, THEY SHALL INDEMNIFY AND HOLD HARMLESS THE ARCHITECT, ENGINEER OF RECORD AND DESIGNER TO THE FULLEST EXTENT PERMITTED BY LAW.

**POOL EQUIPMENT SCHEDULE**

TAG	COUNT	MANUFACTURER	MODEL	COMMENTS
1	1	PENTAIR	WHISPERFLO XFET-20	5.1 HP SELF-PRIMING PUMP W/ STRAINER BASKET +EXTRA BASKET
2	1	PENTAIR	147400	TANDEM FILTER PIPING KITS FOR 2 & 3 IN FILTERS
3	2	PENTAIR	TR-140 C3	36 INCH DIA HIGH RATE SAND FILTER W/ 7.06 SF OF MEDIA
4	1	PENTAIR	HC-3315	COMMERCIAL HIGH CAPACITY CHLORINE/BROMINE FEEDER
5	1	FLO VIS	FV-3-40	3 INCH COMMERCIAL INLINE FLOW METER
6	2	AQUASTAR	WAV12WR101 W/ FBS-50-812-4	12"x12" VGB SUCTION OUTLET COVER W/ A.S.A MFG FIBERGLASS SUMP
7	1	AQUASTAR	HVC101	SELF-CONTAINED HYDROSTATIC RELIEF VALVE
8	9	AQUASTAR	SKR101	WHITE COMMERCIAL GRADE SKIMMER
9	2	AQUASTAR	ES1022S12001 W/ VLK15T01	VACUUM LINE FITTING W/ LOCK CAP
10	1	AQUASTAR	GDD101	COMMERCIAL OVERFLOW DRAIN
11	10	AQUASTAR	ES1022S12001 W/ 8101	WALL RETURN INLET - DIRECTIONAL
12	3	AQUASTAR	ES1022S12001 W/ BP101	FLOOR RETURN INLET W/ BUBBLER PLATE FITTING
13	1	AQUASTAR	AFB101	FILL STAR - AUTOFILL LINE - WHITE
14	2	PENTAIR	LIGHT - 602104	1500W EQUIVALENCY WHITE SLOBRITE LED LIGHT
15	3	PENTAIR	LIGHT - 602145	300W EQUIVALENCY WHITE INTELLIBRITE LED LIGHT
16	3	INTERMATIC	PJB4175	4 LIGHT CONNECTION POOL & SPA JUNCTION BOX
17	4	SR SMITH	DMS-102B - MG	MARINE GRADE DECK MOUNTED HANDRAIL - STANDARD
18	2	SR SMITH	MG-10054	MARINE GRADE COMMERCIAL LADDER
HC	1	SR SMITH	MULTI-LIFT	ADA COMPLIANT MULTILIFT

**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 MUNICIPALITY)

**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 LIFESAIVING 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 WITH 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 SIGNAGE REQUIREMENTS**

POOL SIGNAGE TO BE POSTED IN THE MAIN POOL AREA:

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

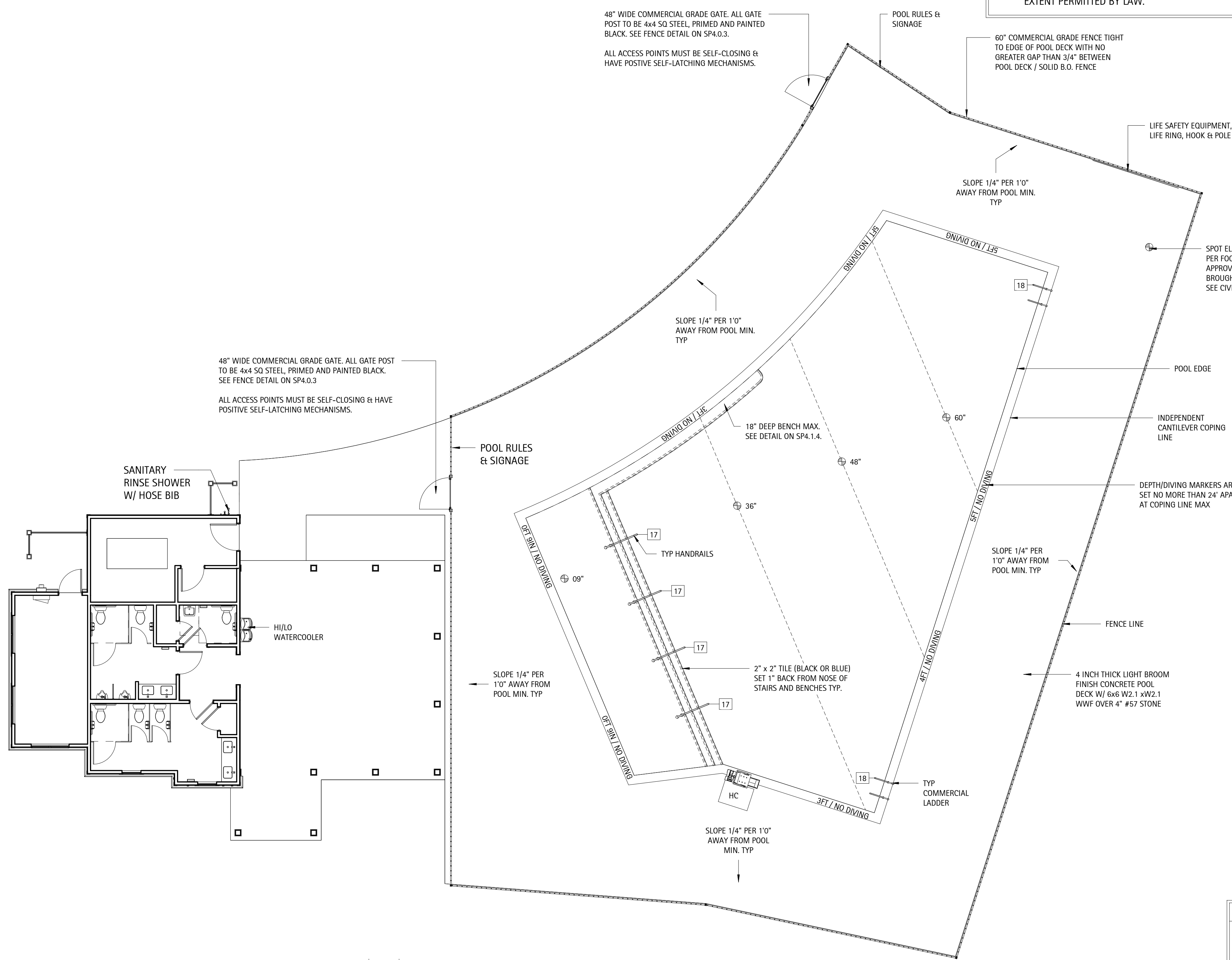
SIGN "B" - 1" TALL LETTERS - A MIN. OF (2) THIS PROJECT

**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.



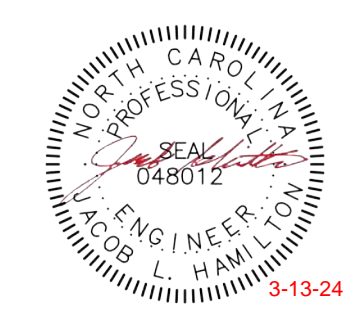
**POOL DESIGN NOTES**

- 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:	55'-9" X 80'-0" OVERALL IRREGULAR SHAPE.
POOL DEPTHS:	9" SHELF w/ 3'-5"
POOL VOLUME:	74,233 GALLONS
SURFACE AREA:	2,938 SQFT.
PERIMETER:	244 LF
COPING:	BULLNOSE INDEPENDENT
REQUIRED FLOW:	206 GPM @ 65 TDH
DESIGN FLOW:	210 GPM @ 65 TDH
SHELL MATERIAL:	4000 PSI SHOTCRETE
INTERIOR FINISH:	QUARTZ PLASTER
BATHER LOAD:	196 PERSONS
BACKWASH TO:	SANITARY SEWER
WATER SOURCE:	IN-LINE AUTOFILL
PIPE SIZING:	
MAIN DRAINS:	(2) 4" SCH 40 PVC
SKIMMERS:	(9) 4" SCH 40 PVC
VACUUM LINE:	(2) 2" SCH 40 PVC
INLETS:	(13) 3" SCH 40 PVC
FILTER TYPE:	HIGH RATE SAND
SIZE PROVIDED:	2 @ 7.06 SF (EA) = 14.12
SIZE REQUIRED:	14.00 SF TOTAL
MEDIA CIRC. RATE:	15 GPM/SF
BACKWASH RATE:	15 GPM/SF
TURNOVER RATE:	6 HOURS

**1**  
SP2.0  
**POOL LAYOUT PLAN**  
1/8" = 1'-0"



**Kilian Engineering, Inc.**  
 PO Box 3301, Healdson, NC 27538 | www.kilianengineering.com  
 (919) 524-4388/8778 | CORPORATE LICENSE C-2277

DATE	REVISION	NO.	SHEET DISCUPTION
			<b>OVERALL POOL LAYOUT</b>
			PROJECT #: 2023043
			DATE ISSUED: 03/13/2024
			DRAWING BY: JVD
			CHECKED BY: DSC/JLH

**MATTHEWS RIDGE  
 KB HOMES  
 BATHHOUSE  
 HARNETT COUNTY, NC**

**SP2.0**



**CHEMICAL STORAGE DATA**  
 CHEMICAL STORAGE REQUIREMENTS FOR A 74,233 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  
 +22 SF (1 SF PER 3,000)(64,233/3,000 = 21.41)  
 POOL REQUIRES A MIN OF 27 SF FOR CHEMICAL STORAGE.  
 -SEE BUILDING PLANS BY OTHERS FOR EXACT LAYOUT. 34 SF PROV.

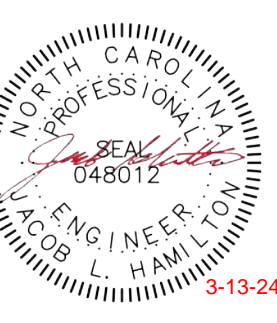
**PUMP ROOM & CHEMICAL ROOM NOTES**  
 A. ALL PUMPS, CHEMICAL FEEDING APPARATUS AND OTHER MECHANICAL AND ELECTRICAL EQUIPMENT SHALL BE ENCLOSED IN A WEATHERPROOF STRUCTURE WITH A MINIMUM CEILING HEIGHT OF SEVEN FEET.  
 B. THE EQUIPMENT ROOM SHALL BE PROVIDED WITH A DOOR WITH A PERMANENT LOCK THAT MUST BE KEPT LOCKED WHEN NOT IN USE BY THE POOL OPERATOR.  
 C. VALVES AND CONTROL DEVICES SHALL BE ACCESSIBLE AND VISIBLE TO THE POOL OPERATOR. AT LEAST THREE FEET OF CLEAR WALKWAY SHALL BE PROVIDED TO ALLOW ACCESS TO EQUIPMENT. DRAINAGE IN AND AROUND THE EQUIPMENT ROOM SHALL PRECLUDE THE POSSIBILITY OF WATER ENTERING OR ACCUMULATING ON ANY INTERIOR SURFACE OF THE ENCLOSURE. EQUIPMENT ROOM FLOORS SHALL BE SLOPED NOT LESS THAN 1/4" PER FOOT TOWARD THE DRAINS.  
 D. NATURAL CROSS DRAFT OR CONTINUOUS FORCED VENTILATION IS REQUIRED.  
 E. A PERMANENT MEANS OF ACCESS SHALL BE PROVIDED TO ALL EQUIPMENT ROOMS.  
 F. A HOSE BIB WITH AN APPROVED BACKFLOW PREVENTION DEVICE SHALL BE PROVIDED WITHIN 50 FEET OF THE EQUIPMENT ROOM.

**POOL EQUIPMENT SCHEDULE**

TAG	COUNT	MANUFACTURER	MODEL	COMMENTS
1	1	PEN TAIR	WHISPERFLO XFET-20	5.1 HP SELF-PRIMING PUMP W/ STRAINER BASKET +EXTRA BASKET
2	1	PEN TAIR	147400	TANDEM FILTER PIPING KITS FOR 2 & 3 IN FILTERS
3	2	PEN TAIR	TR-140 C3	36 INCH DIA HIGH RATE SAND FILTER W/ 7.06 SF OF MEDIA
4	1	PEN TAIR	HC-3315	COMMERCIAL HIGH CAPACITY CHLORINE/BROMINE FEEDER
5	1	FLO VIS	FV-3-40	3 INCH COMMERCIAL INLINE FLOW METER
6	2	AQUASTAR	WAV12WR101 W/ FBS-50-812-4	12"x12" VGB SUCTION OUTLET COVER W/ A.S.A MFG FIBERGLASS SUMP
7	1	AQUASTAR	HVC101	SELF-CONTAINED HYDROSTATIC RELIEF VALVE
8	9	AQUASTAR	SKR101	WHITE COMMERCIAL GRADE SKIMMER
9	2	AQUASTAR	ES1022SI12001 W/ VLK15T01	VACUUM LINE FITTING W/ LOCK CAP
10	1	AQUASTAR	GDD101	COMMERCIAL OVERFLOW DRAIN
11	10	AQUASTAR	ES1022SI2001 W/ 8101	WALL RETURN INLET - DIRECTIONAL
12	3	AQUASTAR	ES1022SI2001 W/ BP101	FLOOR RETURN INLET W/ BUBBLER PLATE FITTING
13	1	AQUASTAR	AFB101	FILLSTAR - AUTOFILL LINE - WHITE
14	2	PEN TAIR	LIGHT - 602104	190W EQUIVALENCY WHITE GLOBRITE LED LIGHT
15	3	PEN TAIR	LIGHT - 602145	300W EQUIVALENCY WHITE INTELLIBRITE LED LIGHT
16	3	INTERMATIC	PJB4175	4 LIGHT CONNECTION POOL & SPA JUNCTION BOX
17	4	SR SMITH	DMS-102B - MG	MARINE GRADE DECK MOUNTED HANDRAIL - STANDARD
18	2	SR SMITH	MG-10054	MARINE GRADE COMMERCIAL LADDER
HC	1	SR SMITH	MULTI-LIFT	ADA COMPLIANT MULTILIFT

**PUMP FLOW PIPE SIZING**  
 WHISPERFLO XFET 20 PUMP FLOW AT 65 FT OF WATER IS 210 GPM, WITH SPECIFIED:  
 4" MAIN DRAIN PIPING VELOCITY IS 5.29 FPS.  
 4" SKIMMER PIPING VELOCITY IS 5.29 FPS.  
 3" RETURN PIPING VELOCITY IS 9.11 FPS.

**UNDERWATER LIGHTING DATA**  
 MAIN POOL AREA: 2,938 SQFT.  
 2,938 SF x 0.5 WATTS = 1,469 WATTS  
 LIGHTING PROVIDED (12V LED EQ.)  
 2 GLOWBRITE @ 190 WATTS  
 3 INTELLIBRITE @ 300 WATTS  
 TOTAL LIGHTING PROVIDED: 1,580 WATTS



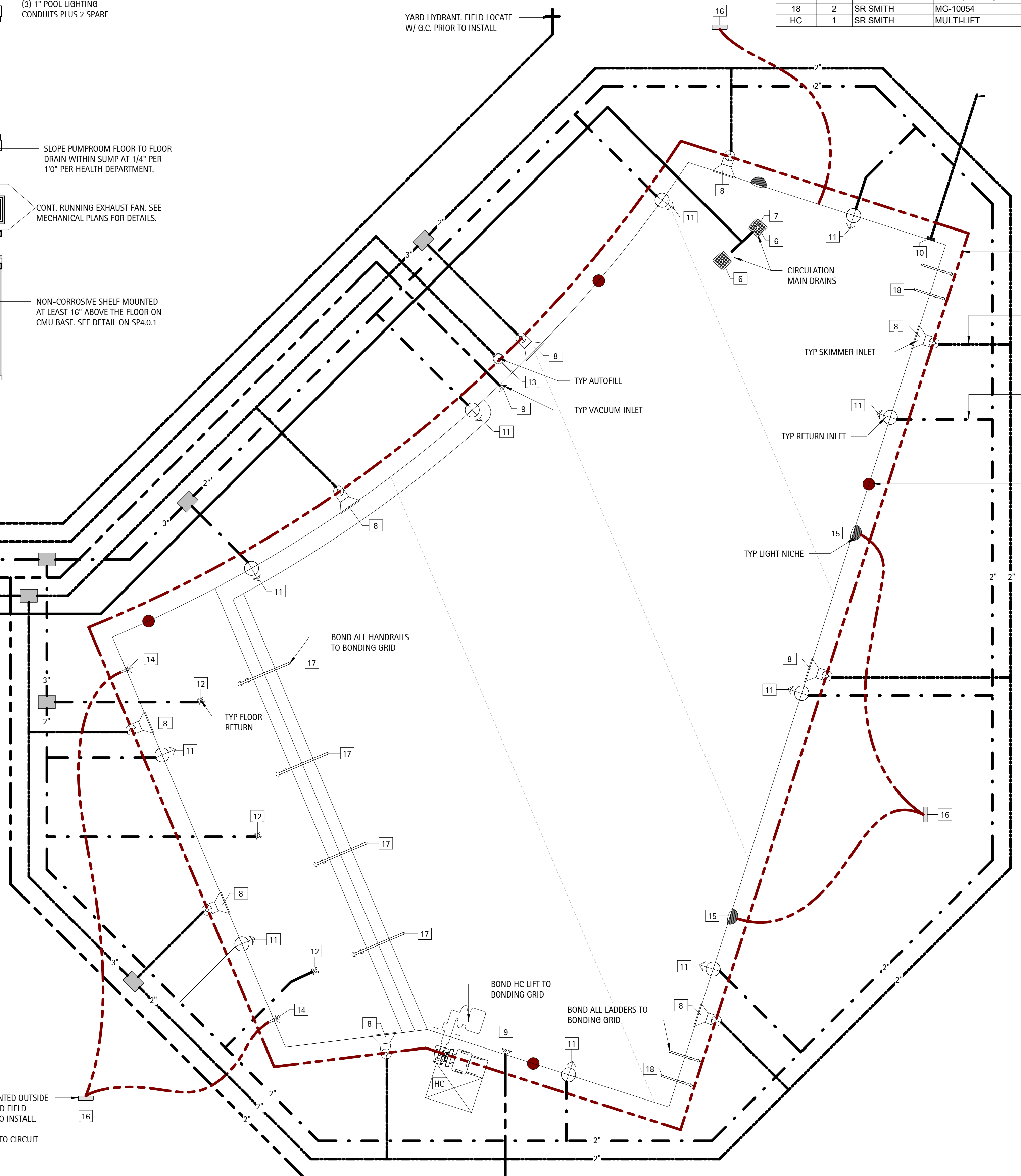
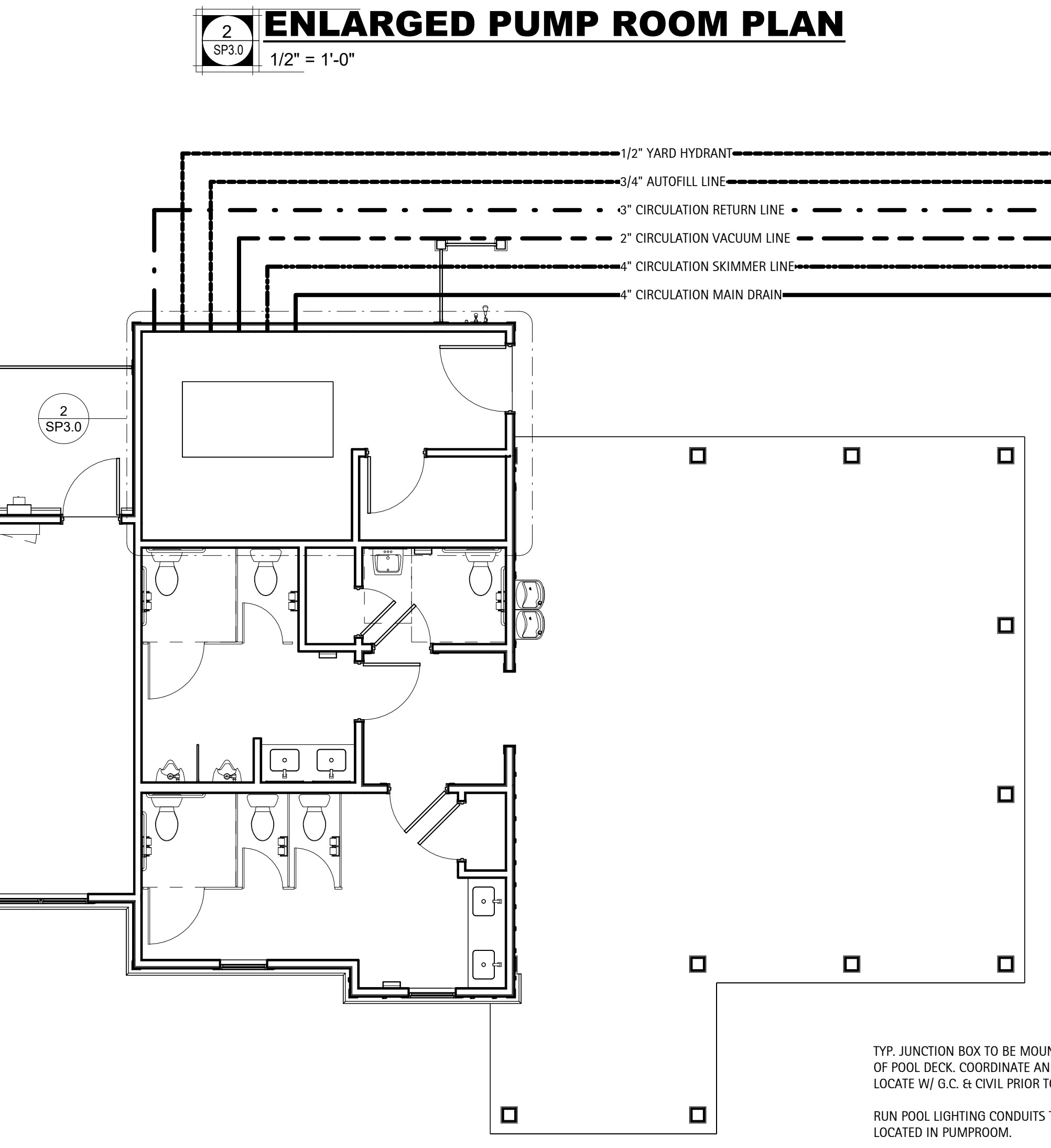
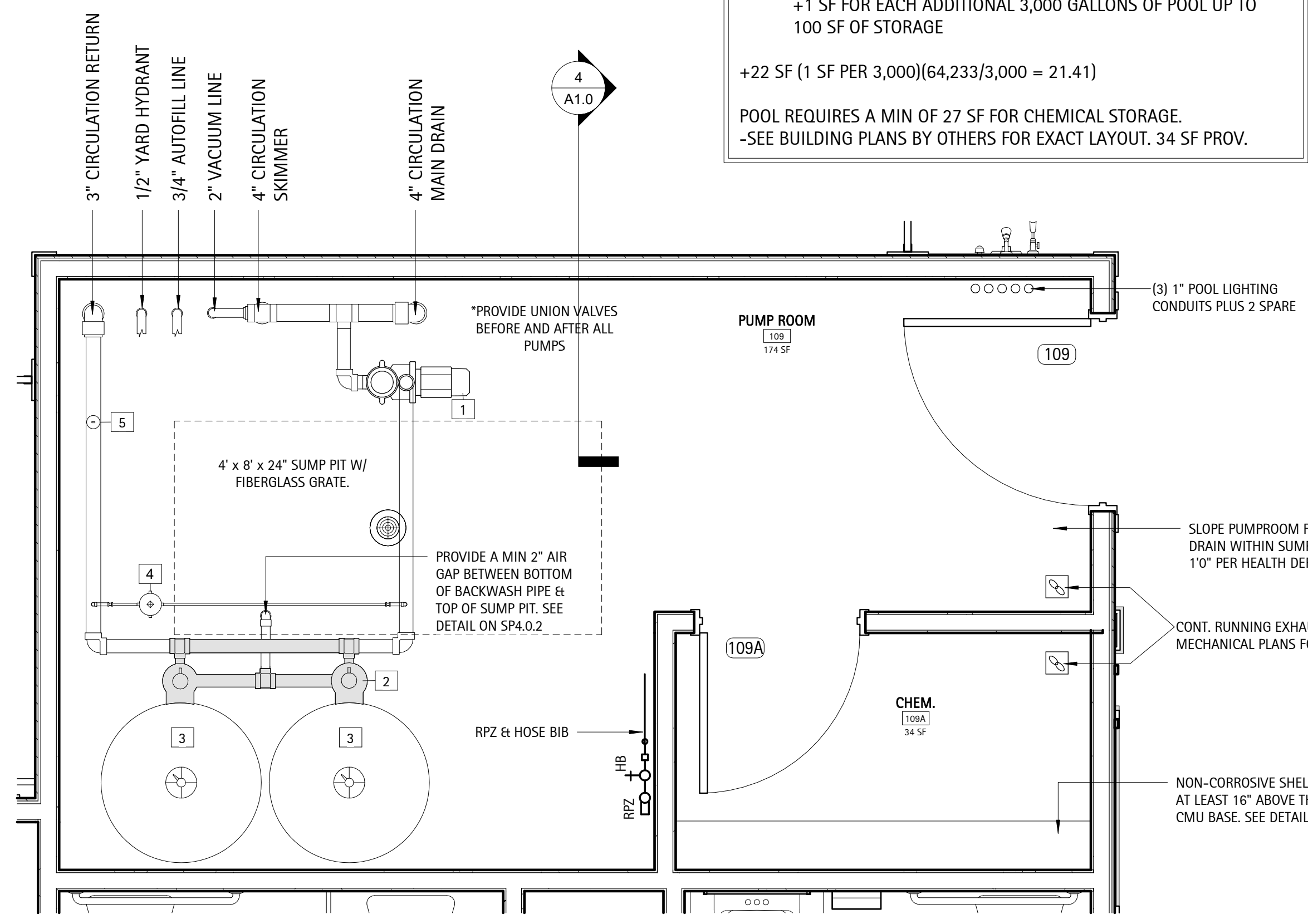
**Kilian Engineering, Inc.**  
 PO Box 3301, Henderson, NC 27536 | www.kilianengineering.com  
 (919) 458-8778 | CORPORATE LICENSE C-2277

NO.	REVISION	DATE

SHEET DISCUSSION  
**PIPING & ELECTRICAL PLAN**  
 PROJECT #: 2023043  
 DATE ISSUED: 03/13/2024  
 DRAWING BY: JVD  
 CHECKED BY: DSC/JLH

**MATTHEWS RIDGE  
 KB HOMES  
 BATHHOUSE  
 HARNETT COUNTY, NC**

**SP3.0**



PROVIDE A TILE LINE OVERFLOW DRAIN. FIELD LOCATE OVERFLOW DRAIN AFTER SITE COORDINATION WITH CIVIL & G.C. TO DETERMINE BEST DIRECTION TO RUN TO DAYLIGHT. ALIGN OVERFLOW DRAIN WITH WATERLINE TILE SO THAT NO HALF TILES ARE NEEDED.

DASH LINE INDICATES MIN 16" EXTENT OF EQUIPOTENTIAL BONDING GRID. SEE DETAIL ON SP4.1.1.

ALL SKIMMER BRANCH LINES ARE 2"

ALL RETURN BRANCH LINES ARE 2"

TYP BONDING GRID CONNECTION PER DETAIL ON SP4.1.1. - MIN (4) REQUIRED AND SPACED EQUALLY AROUND THE POOL.

**POOL SYMBOLS LEGEND**


REFER TO POOL PLUMBING SCHEDULE FOR SPECS.

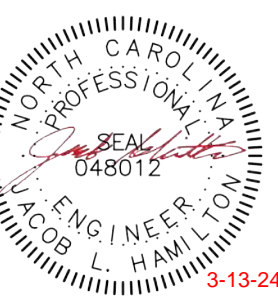
**MAIN POOL DATA**

POOL DIMENSIONS:	55'-9" X 80'-0" OVERALL IRREGULAR SHAPE.
POOL DEPTHS:	9" SHELF w/ 3'-5"
POOL VOLUME:	74,233 GALLONS
SURFACE AREA:	2,938 SQFT.
PERIMETER:	244 LF
COPING:	BULLNOSE INDEPENDENT
REQUIRED FLOW:	206 GPM @ 65 TDH
DESIGN FLOW:	210 GPM @ 65 TDH
SHELL MATERIAL:	4000 PSI SHOTCRETE
INTERIOR FINISH:	QUARTZ PLASTER
BATHER LOAD:	196 PERSONS
BACKWASH TO:	SANITARY SEWER
WATER SOURCE:	IN-LINE AUTOFILL
PIPE SIZING:	
MAIN DRAINS:	(2) 4" SCH 40 PVC
SKIMMERS:	(9) 4" SCH 40 PVC
VACUUM LINE:	(2) 2" SCH 40 PVC
INLETS:	(13) 3" SCH 40 PVC
FILTER TYPE:	HIGH RATE SAND
SIZE PROVIDED:	2 @ 7.06 SF (EA) = 14.12
SIZE REQUIRED:	14.00 SF TOTAL
MEDIA CIRC. RATE:	15 GPM/SF
BACKWASH RATE:	15 GPM/SF
TURNOVER RATE:	6 HOURS





D. CLUGSTON



Kilian Engineering, Inc. PO Box 3301, Healdson, NC 27536 | www.kilianengineering.com

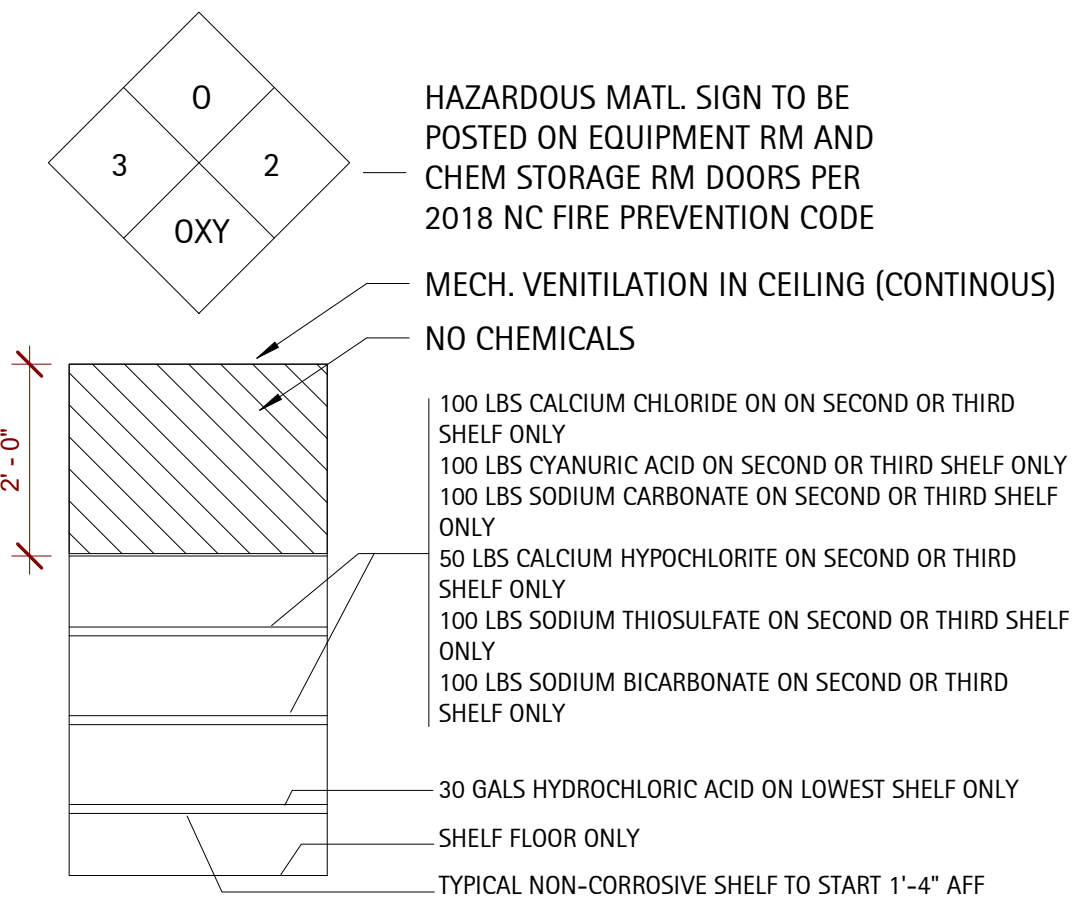
Table with 2 columns: NO., REVISION/DATE

SHEET DISCUSSION SECTIONS & DETAILS

PROJECT #: 2023043 DATE ISSUED: 03/13/2024 DRAWING BY: JVD CHECKED BY: DSC/JLH

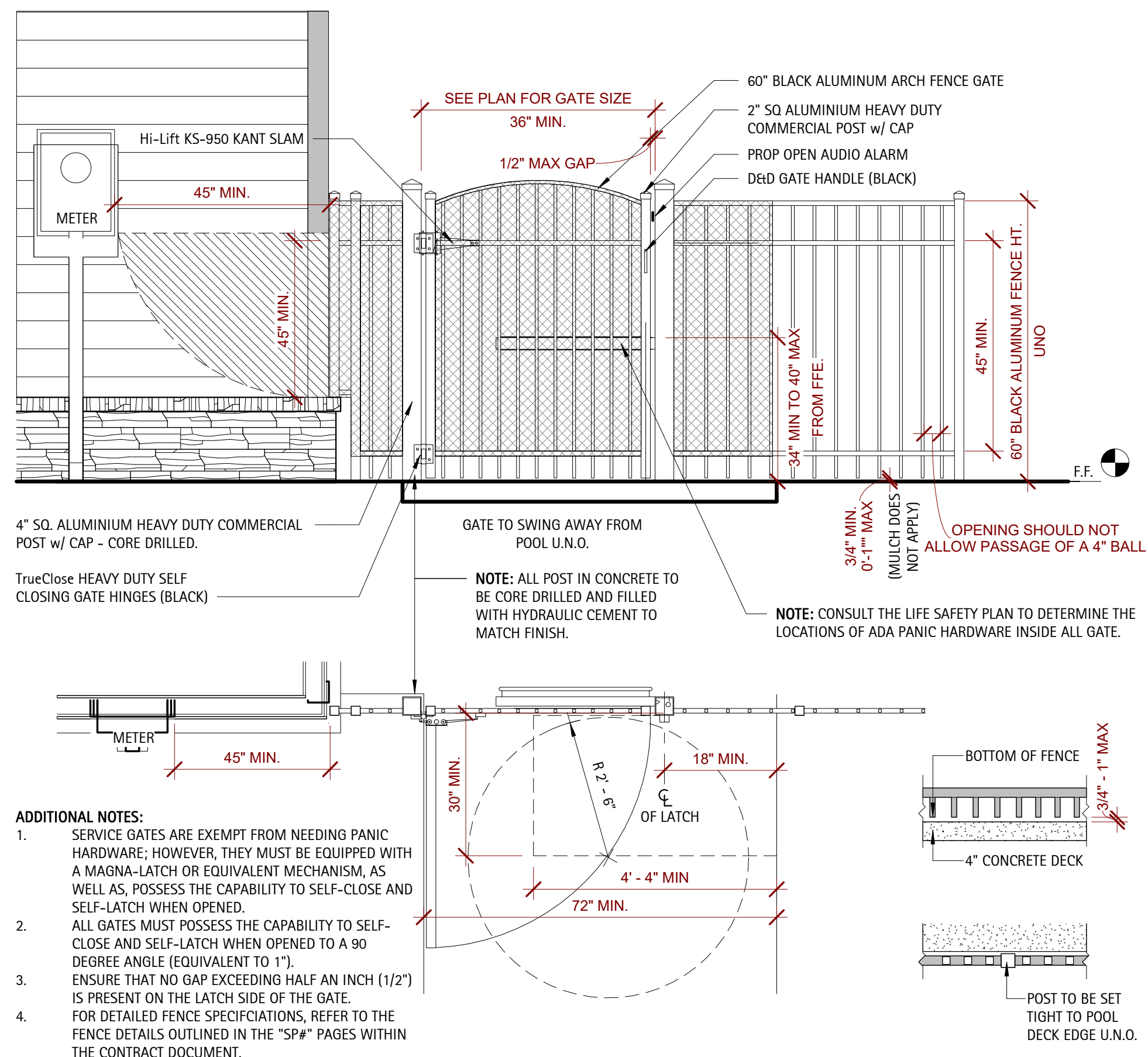
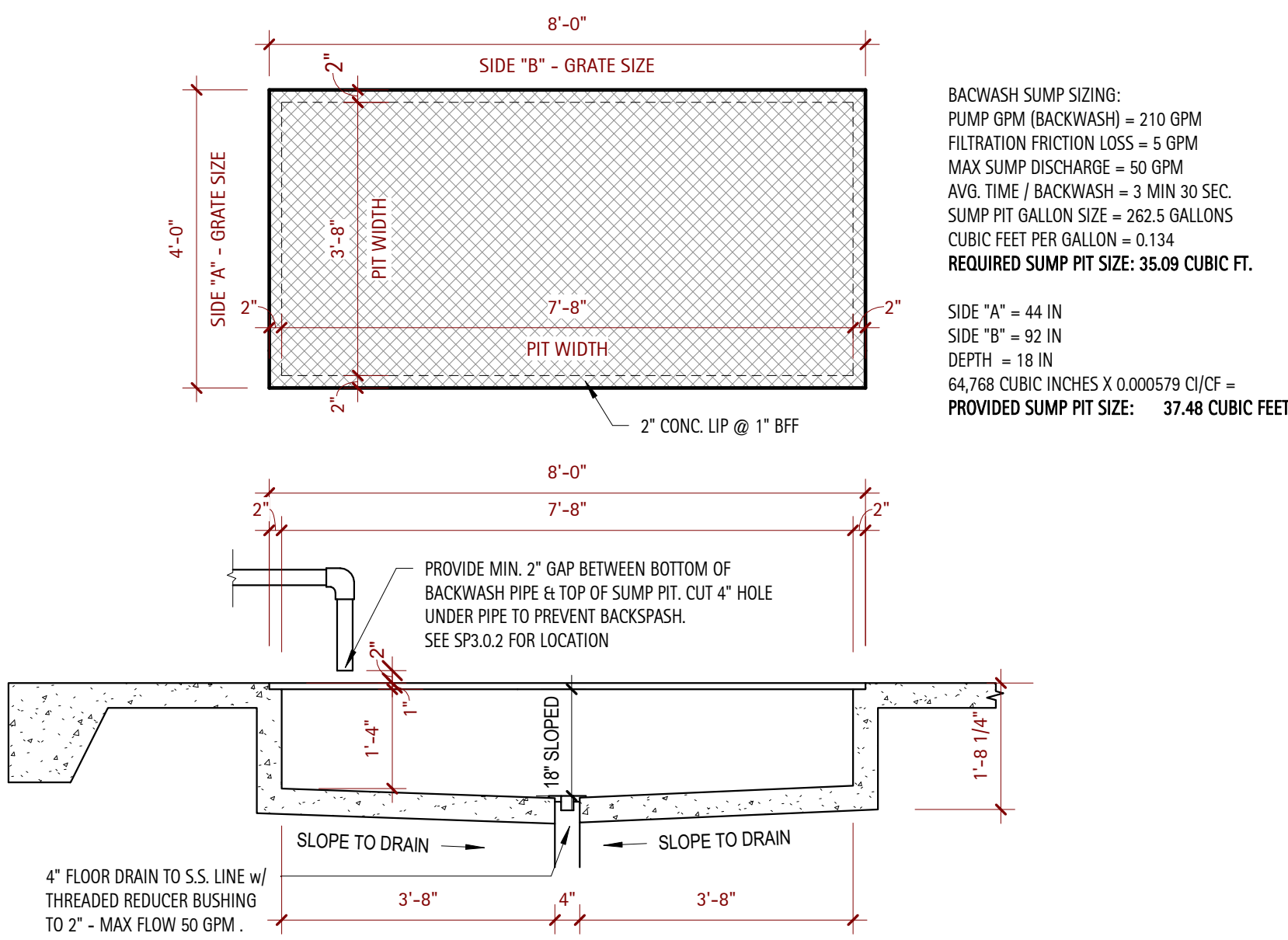
MATTHEWS RIDGE KB HOMES BATHHOUSE HARNETT COUNTY, NC

SP4.0



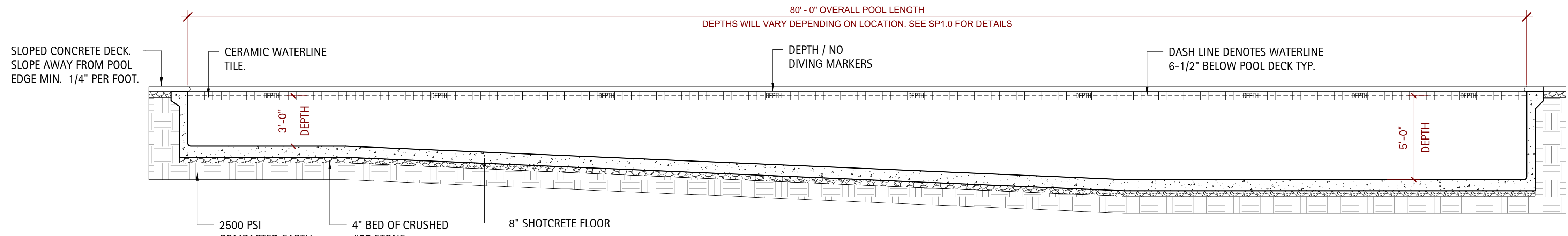
TYPICAL CHEMICAL ROOM SHELVEING w/ QUANTITIES A. Unless otherwise stated, all code references are to the 2018 North Carolina State Building Codes (NCSBC)...

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



3 DETAIL - TYP FENCE 1/2" = 1'-0"

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



4 DETAIL - MAIN POOL SECTION 1/4" = 1'-0"

Table with 2 columns: MAIN POOL DATA, POOL DIMENSIONS, POOL DEPTHS, POOL VOLUME, SURFACE AREA, PERIMETER, COPING, REQUIRED FLOW, DESIGN FLOW, SHELL MATERIAL, INTERIOR FINISH, BATHER LOAD, BACKWASH TO, WATER SOURCE, PIPE SIZING, MAIN DRAINS, SKIMMERS, VACUUM LINE, INLETS, FILTER TYPE, SIZE PROVIDED, SIZE REQUIRED, MEDIA CIRC. RATE, BACKWASH RATE, TURNOVER RATE.





D. CLUGSTON



Kilian Engineering, Inc. PO Box 3301, Healdston, NC 27536 | www.kilianengineering.com | (252) 438-8778 | CORPORATE LICENSE C-2277

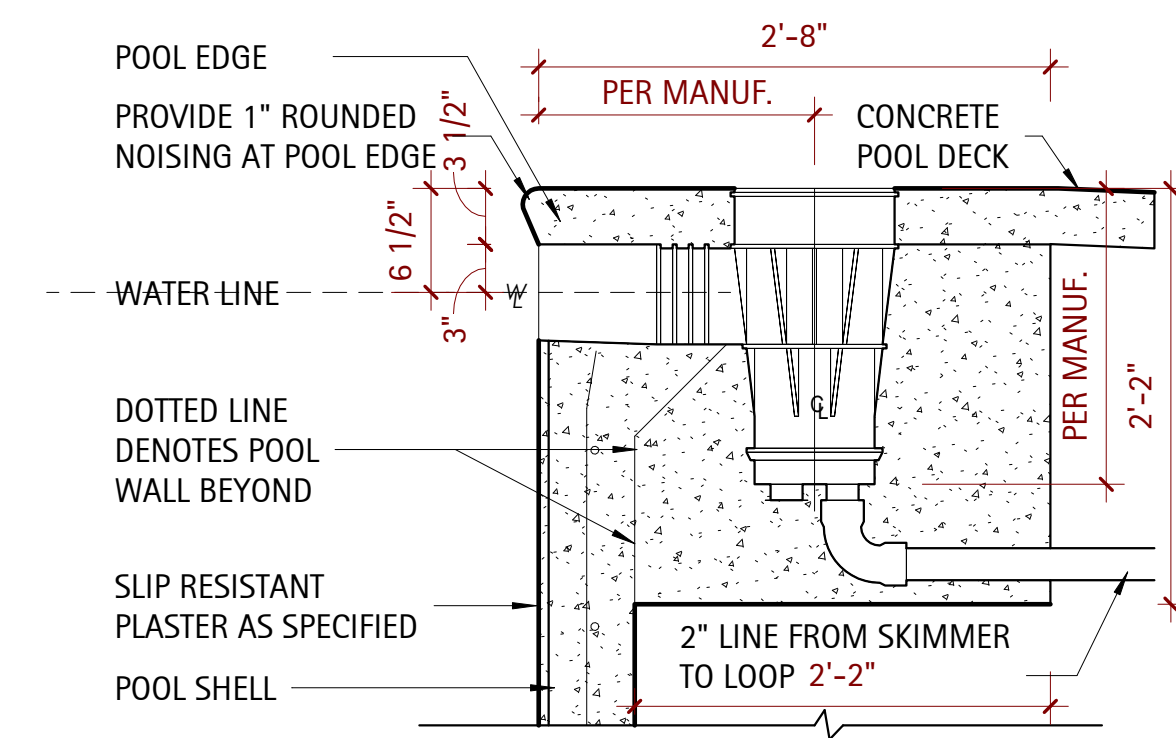
Table with columns for DATE, REVISION, and NO.

SHEET DISCUSSION SECTIONS & DETAILS

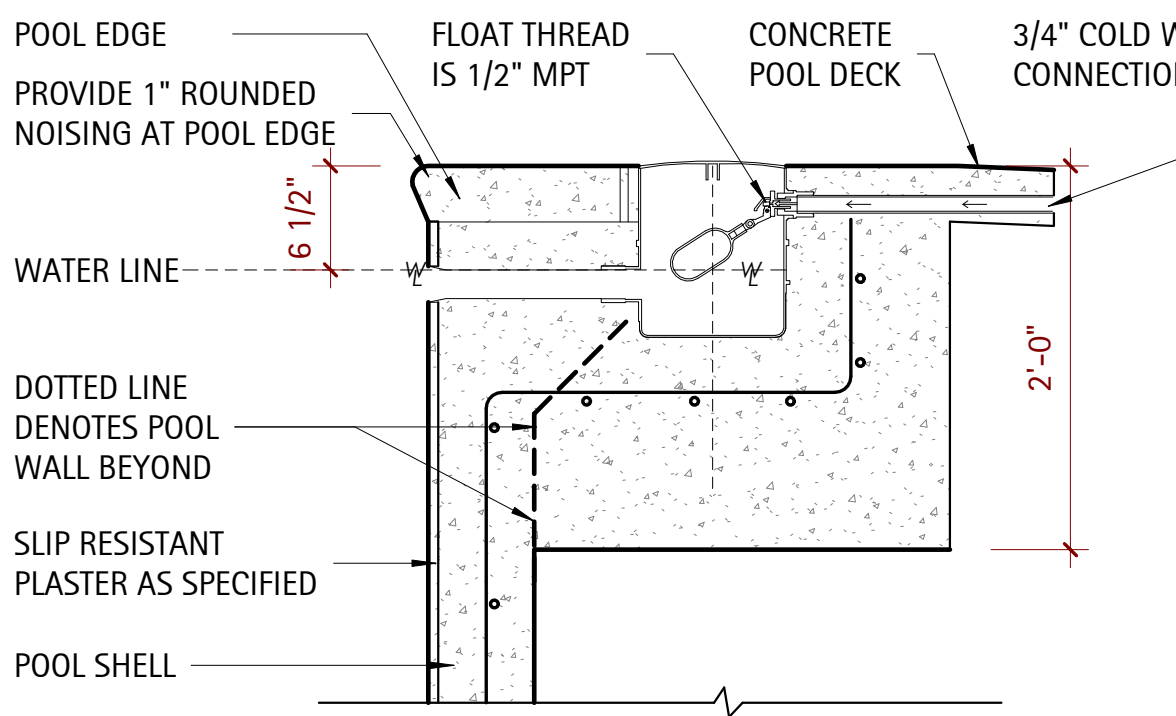
PROJECT #: 2023043 DATE ISSUED: 03/13/2024 DRAWING BY: JVD CHECKED BY: DSC/JLH

MATTHEWS RIDGE KB HOMES BATHHOUSE HARNETT COUNTY, NC

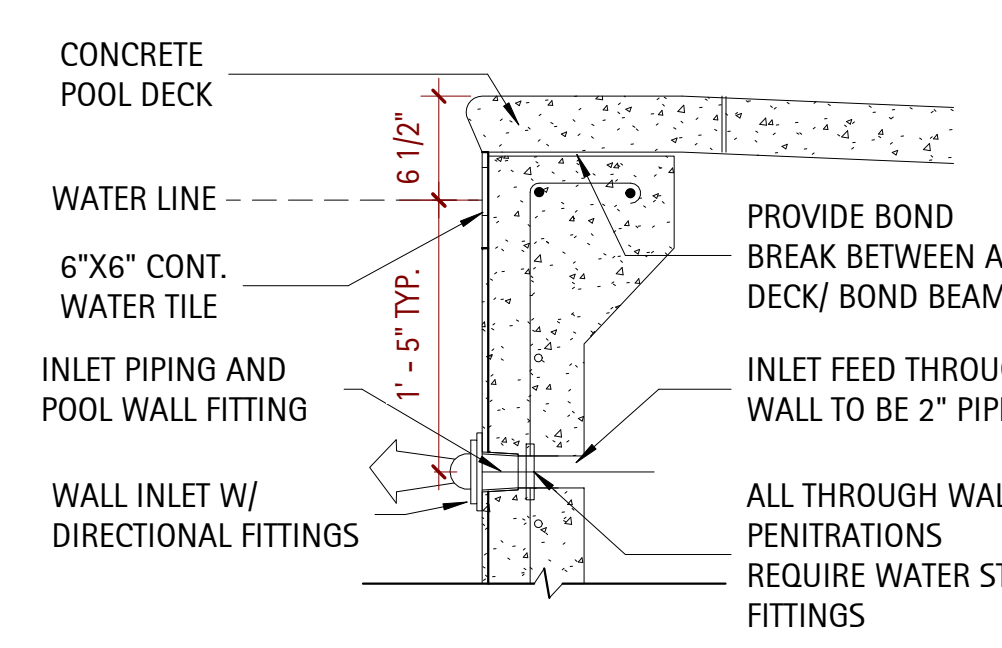
SP4.1



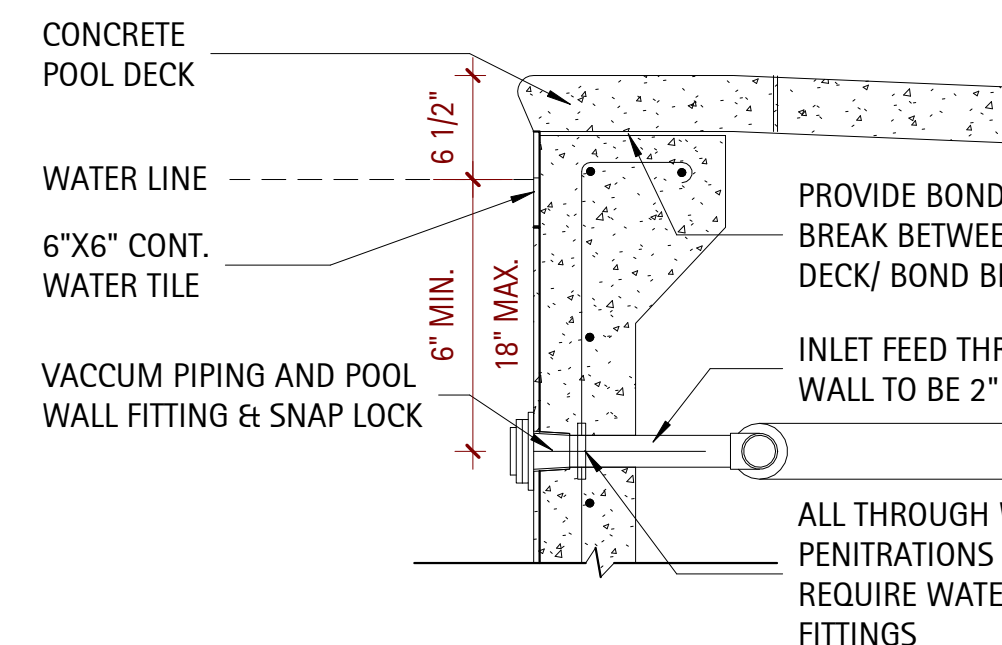
7 Detail - Pool Skimmer 1" = 1'-0"



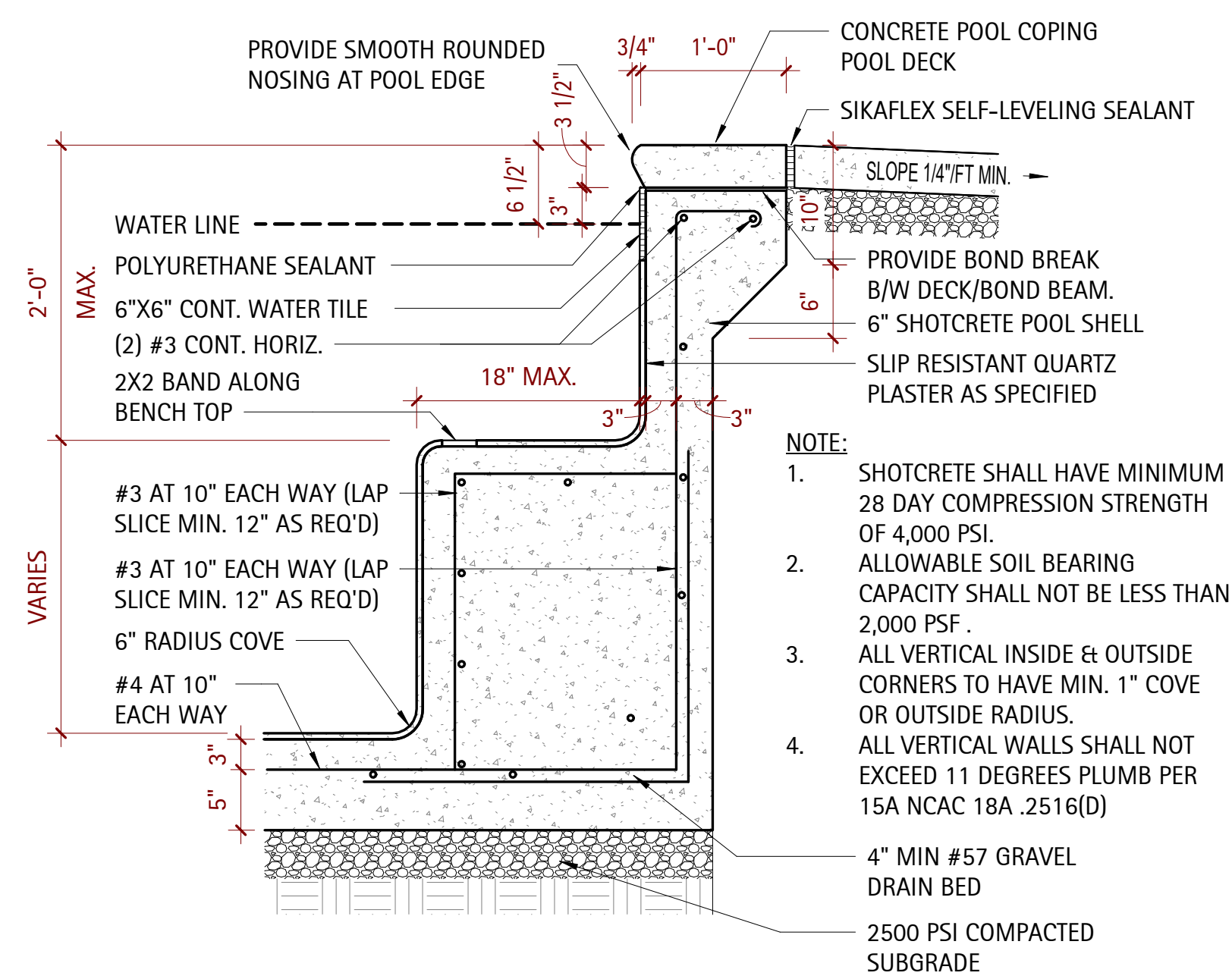
8 Detail - Pool Autofill 1" = 1'-0"



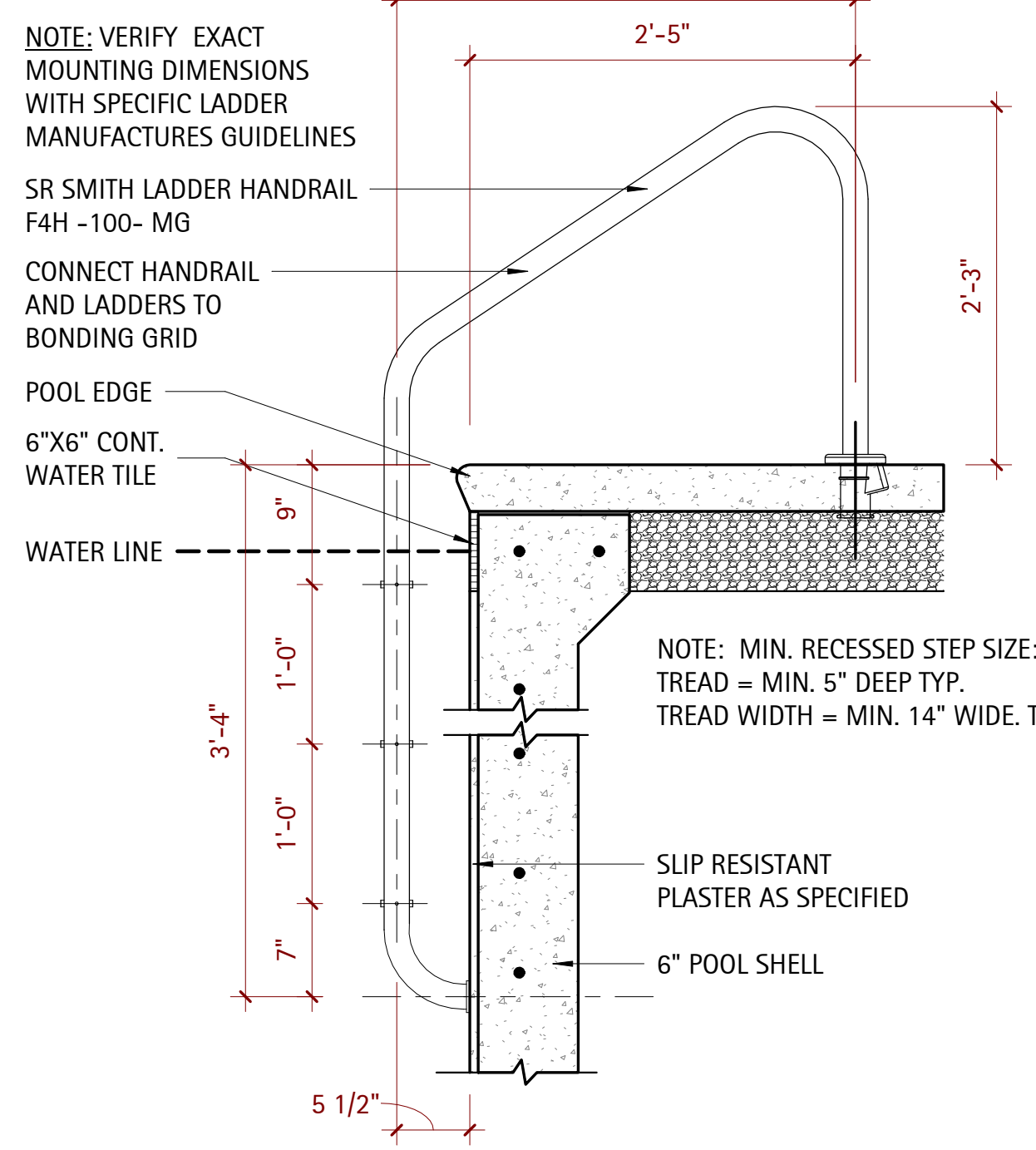
9 Detail - Return Inlet Detail 1" = 1'-0"



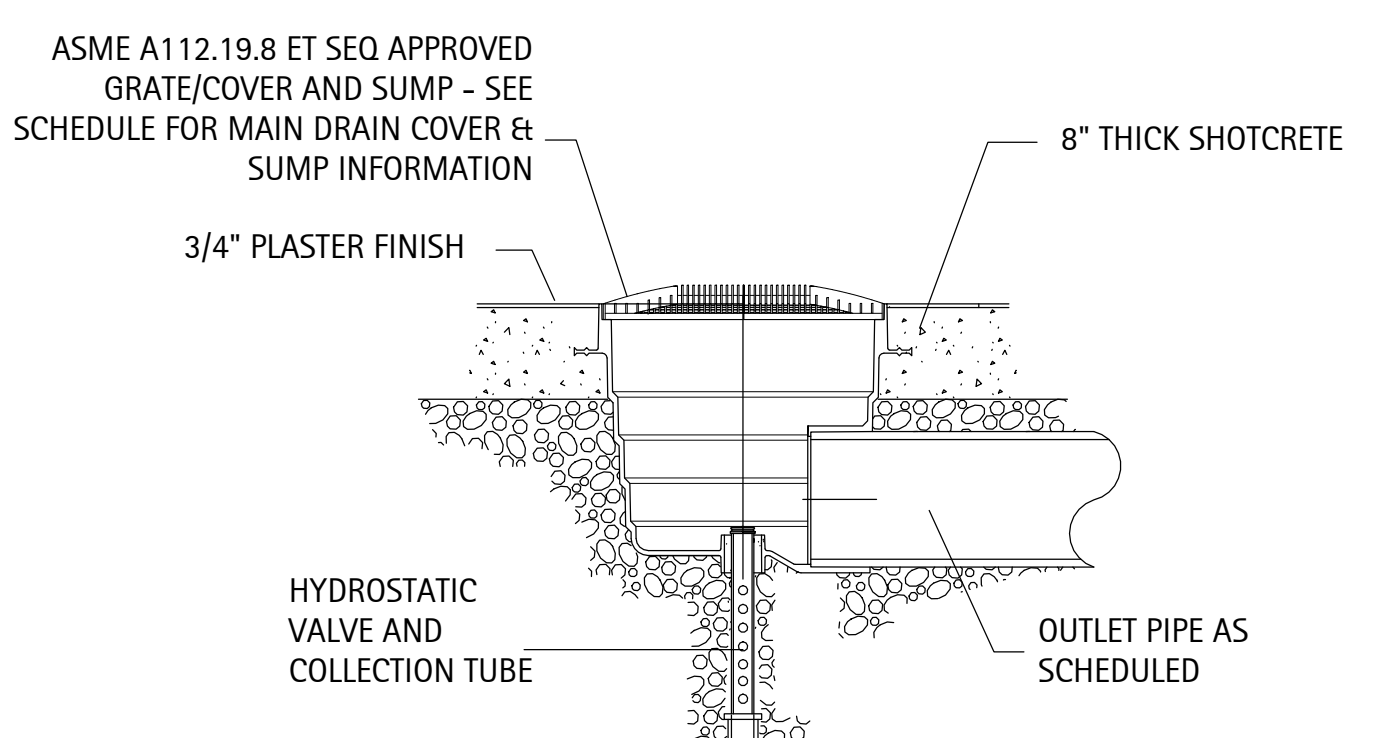
10 Detail - Vacuum Inlet Detail 1" = 1'-0"



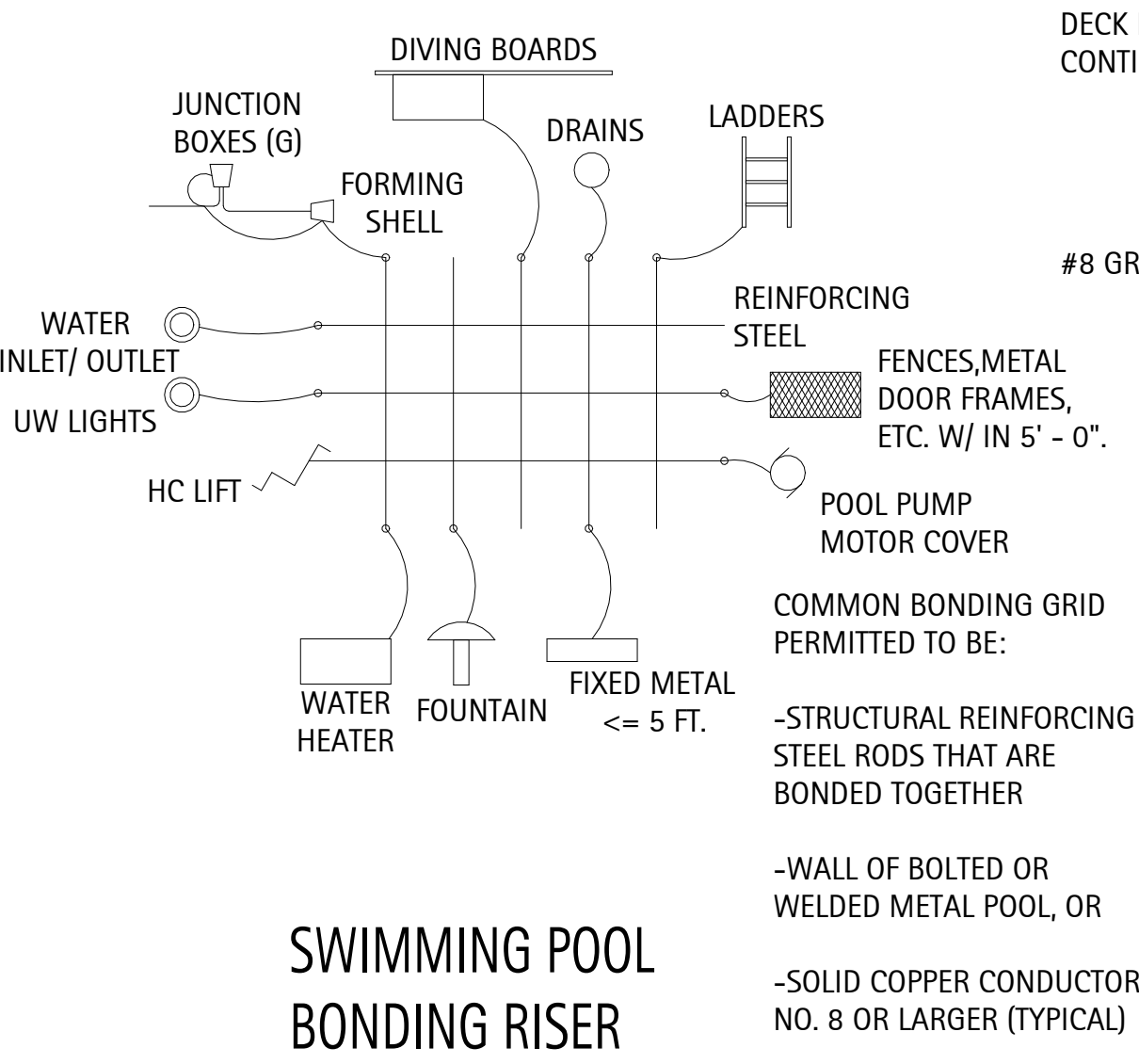
4 Detail - Pool Bench 1" = 1'-0"



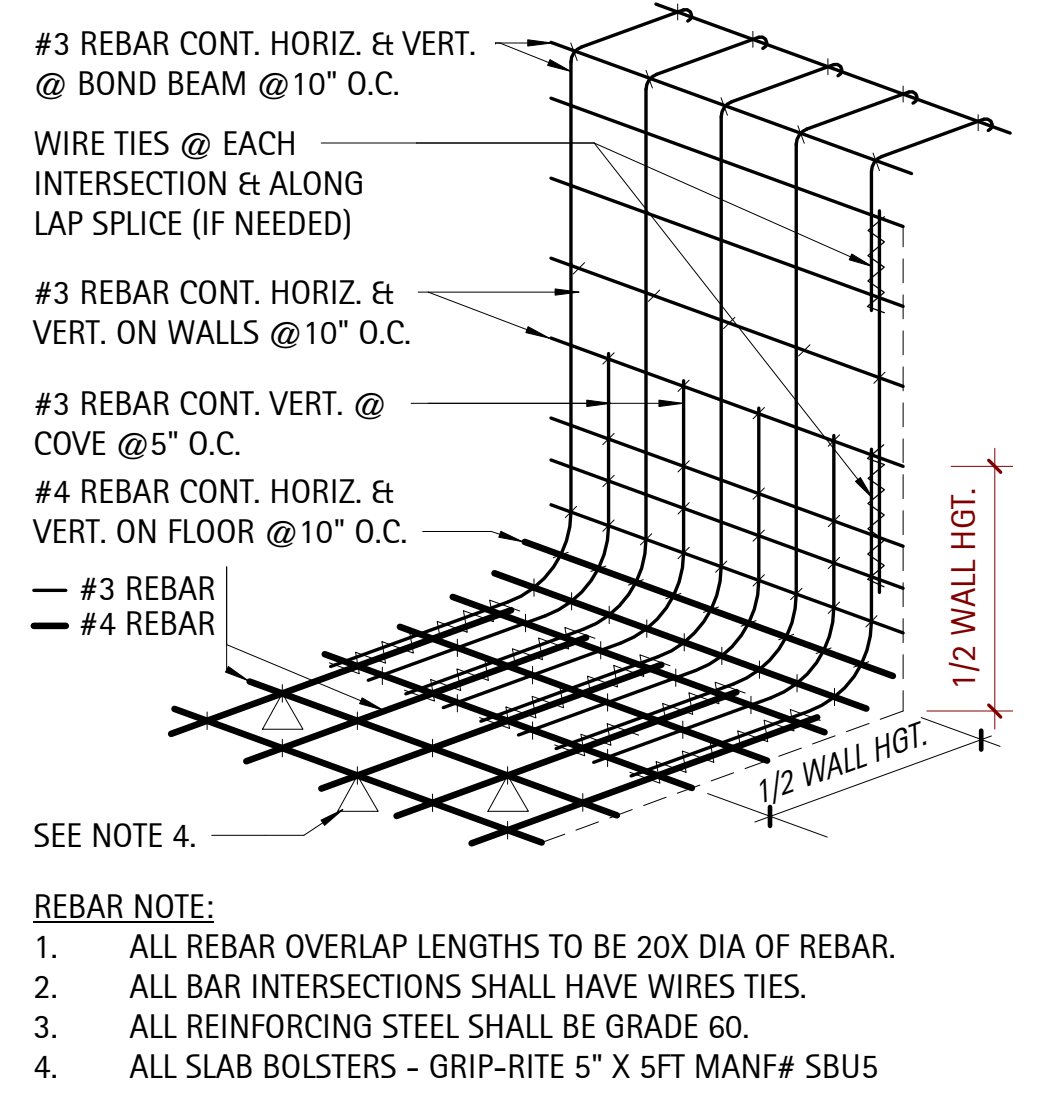
5 Detail - Commercial Ladder 1" = 1'-0"



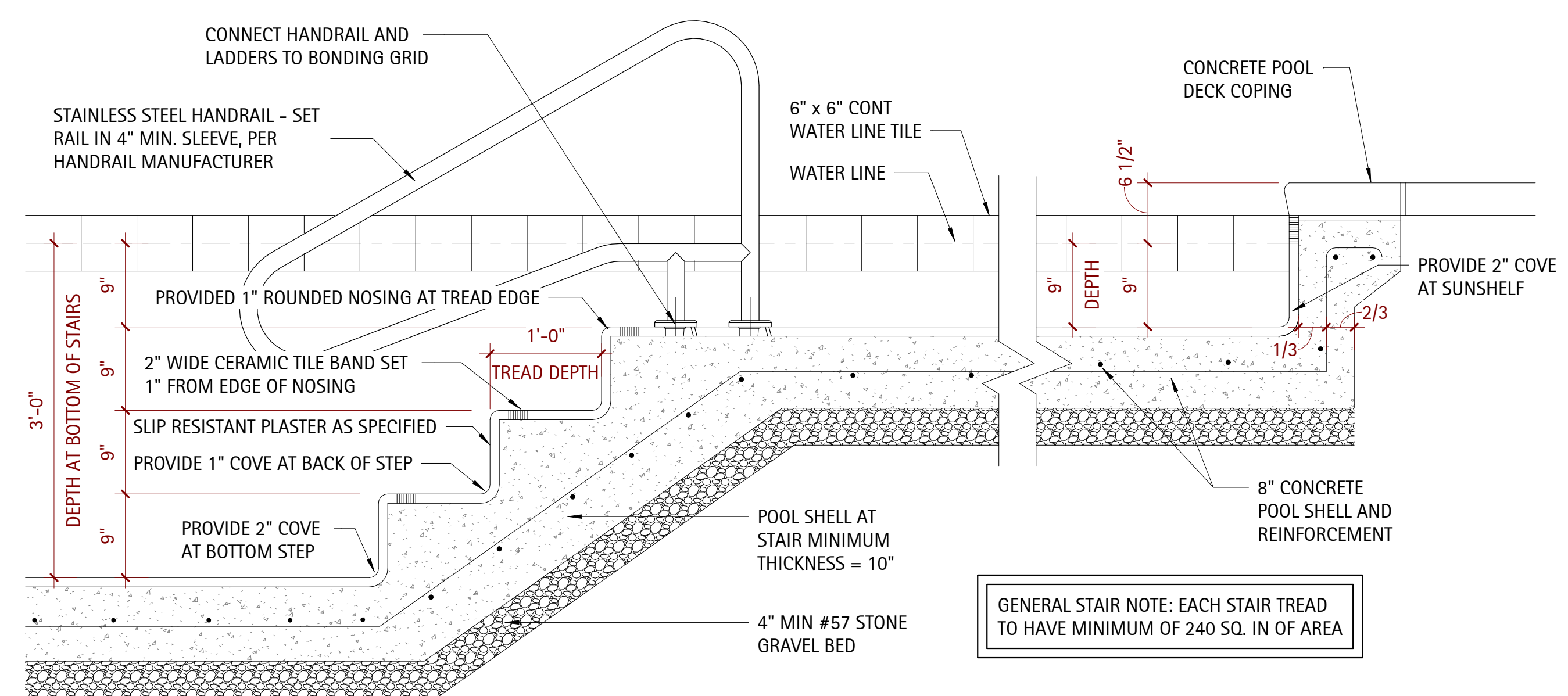
6 Detail - Main Drain 1" = 1'-0"



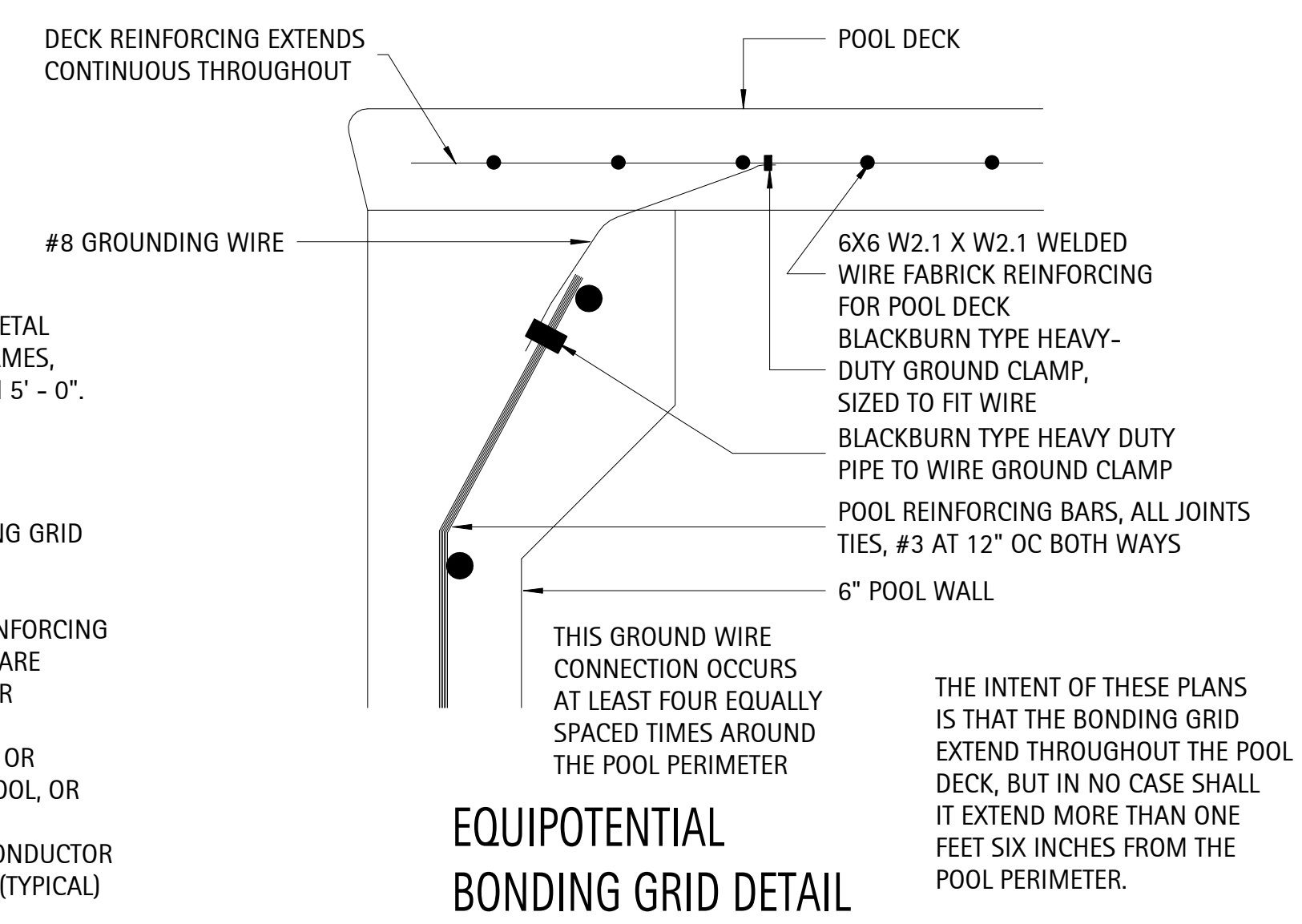
SWIMMING POOL BONDING RISER



2 Detail - Pool Wall 1" = 1'-0"



3 Detail - Pool Shelf w/ Step 1" = 1'-0"



EQUIPOTENTIAL BONDING GRID DETAIL



# WHISPERFLOXF<sup>®</sup>

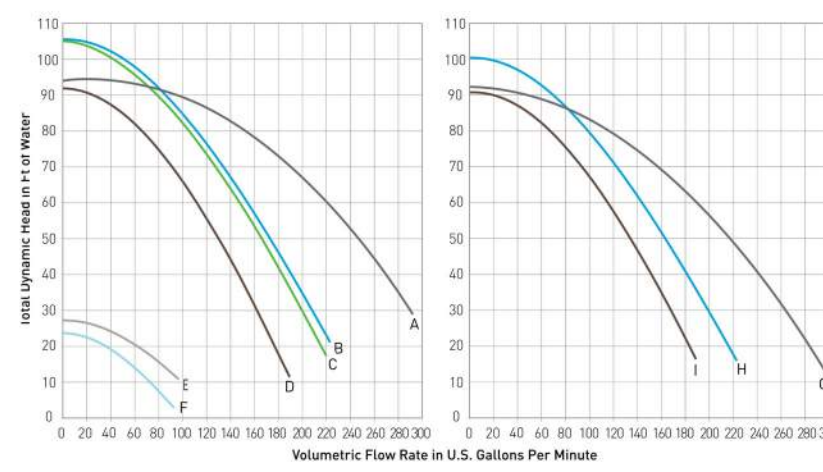
## HIGH PERFORMANCE PUMP



### KEY FEATURES

- Cam and Ramp™ Lid**  
Makes inspection and cleaning simple and quick
- Built-in handle**  
For easy installation
- Union connectors**  
2.5" or 3" union connectors included
- Oversized strainer basket**  
Extends time between cleanings
- TEFC/Super-Duty motor options**  
Provide superior performance and longevity

### PERFORMANCE CURVES



Performance Curve	Model	Description
A	XFET-20	5 HP, Single Speed Full Rated
B	XFET-20	5 HP, TEFC Super-Duty Single Speed
C	XFET-20	5 HP, 3-Phase Super-Duty Motor
D, E, F	XFET-12	3 HP, 2-Speed Full Rated
G	XFET-12	3 HP, TEFC Super-Duty Single Speed
H	XFET-12	3 HP, 3-Phase Super-Duty Motor
I	XF-12	3 HP, Single Speed Full Rated
J	XF-12	2 HP, Single Speed Full Rated
K	XFET-8	2 HP, Single Speed Full Rated
L	XFET-8	2 HP, TEFC Super-Duty Single Speed
M	XF-8	2 HP, Single Speed Full Rated
N, O	XFDS-8	2 HP, 2-Speed Full Rated
P	XFDS-8	2 HP, 2-Speed Full Rated
Q	XF-30	2.5 HP, 2-Speed Full Rated
R	XF-30	2.5 HP, Single Speed Full Rated
S	XF-30	2.5 HP, Single Speed Full Rated
T	XF-30	2.5 HP, Single Speed Full Rated
U	XF-30	2.5 HP, Single Speed Full Rated
V	XF-30	2.5 HP, Single Speed Full Rated
W	XF-30	2.5 HP, Single Speed Full Rated
X	XF-30	2.5 HP, Single Speed Full Rated
Y	XF-30	2.5 HP, Single Speed Full Rated
Z	XF-30	2.5 HP, Single Speed Full Rated

Pumps and replacement motors that are single speed and one (1) Total HP or greater cannot be sold, offered for sale, or installed in a residential pool for filtration use in California, Title 20 CCR sections 1801-1809.



1820 Hawkins Ave | Sanford, NC 27330 | United States | 800.831.7133 | pentair.com

All Pentair trademarks and logos are owned by Pentair, Inc. WhisperFloXF, WhisperFlo, Challenger and Cam and Ramp are trademarks and/or registered trademarks of Pentair Water Pool and Spa, Inc. and/or its affiliated companies in the United States and/or other countries. Pentair reserves the right to change specifications without prior notice. Pentair is an equal opportunity employer. P1-108-3/18 ©2018 Pentair Water Pool and Spa, Inc. All rights reserved.

### TAG 1 - CIRCULATION PUMP - WHISPERFLO XFET-20 - SINGLE SPEED FULL RATED

## WHEN ACCURACY IS CRITICAL, DON'T JUST TAKE OUR WORD FOR IT!

FlowVis<sup>®</sup> was the first - and is now the most - NSF 50 certified flow meter in the world! Because when accuracy matters, you should put your trust in the experts.



NSF 50 CERTIFIED L1

### FLOWVIS<sup>®</sup> MODELS

Feature	FV-5	FV-5-U	FV-2	FV-2-U	FV-2S	FV-3	FV-3-40	FV-4	FV-6	FV-8
NSF 50 Certified	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Pipe Size	1.5"	1.5"	2"	2"	2.5"	3"	3"	4"	6"	8"
Operating Range (GPM)	10-80	10-90	10-100	10-100	10-100	70-240	70-240	150-460	300-1000	600-1800
Average Accuracy	98.7%	98.7%	99.4%	99.0%	99.2%	98.9%	99.2%	99.5%	98.7%	N/A
NSF 50 Level	L1	L1	L1	L1	L1	L1	L1	L1	L1	L1

\*FlowVis<sup>®</sup> model FV-8 is available only with FlowVis<sup>®</sup> Digital upgrade included. For accuracy of this model, refer to the FV-8 information in the FlowVis<sup>®</sup> Digital table below.

### FLOWVIS<sup>®</sup> DIGITAL MODELS

Feature	FV-5	FV-5-U	FV-2	FV-2-U	FV-2S	FV-3	FV-3-40	FV-4	FV-6	FV-8
NSF 50 Certified	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Pipe Size	1.5"	1.5"	2"	2"	2.5"	3"	3"	4"	6"	8"
Operating Range (GPM)	10-80	10-90	10-100	10-100	10-100	70-240	70-240	150-460	300-1000	600-1800
Average Accuracy	98.6%	99.0%	98.8%	98.5%	98.3%	98.4%	98.0%	98.3%	98.9%	98.9%
NSF 50 Level	L1	L1	L1	L1	L1	L1	L1	L1	L1	L1

NOTE: FlowVis is the only NSF 50 certified Level 1 flow meter in the world today.

### Guide for NSF 50 Accuracy Levels

- Level 1 (L1):** Average of absolute values of all single point deviations must be ≤2%. Single point deviations shall not exceed ±4%.
- Level 2 (L2):** Average of absolute values of all single point deviations must be ≤5%. Single point deviations shall not exceed ±7.5%.
- Level 3 (L3):** Average of absolute values of all single point deviations must be ≤10%. Single point deviations shall not exceed ±12.5%.
- Level 4 (L4):** Average of absolute values of all single point deviations must be ≤12.5%. Single point deviations shall not exceed ±15%.
- Level 5 (L5):** Average of absolute values of all single point deviations must be ≤15%. Single point deviations shall not exceed ±20%.

4 FlowVis

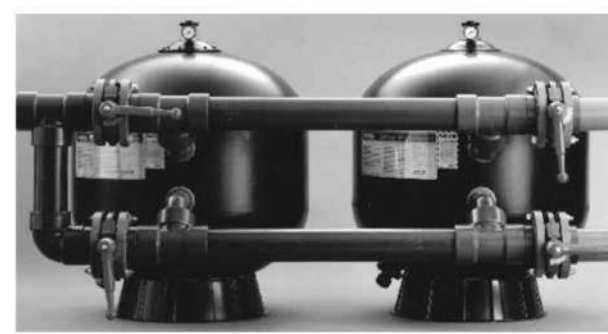
### TAG 5 - FLOWMETER - FV-3 - 3 INCH DIGITAL FLOWMETER

### FILTERS - COMMERCIAL

## SCH 40 & 80 FOR TR100C, TR140C, TR100C-3 & TR140C-3 TANDEM FILTER PIPING KITS FOR 2 & 3 IN. FILTERS

These Tandem Filter Piping Kits are designed specifically for use with the Triton<sup>®</sup> TR100C, TR140C, Triton TR100C-3 and TR140C-3 Sand Filters to make the best even better.

We are providing this additional service for your convenient one-stop shopping. Pipe and filters are all you need.



Tandem Filter Piping Kits for Triton TR100C, TR140C, TR100C-3 and TR140C-3 Sand Filters

### Ordering Information

Product	Model	Product	Model
<b>For Plumbing Two TR100C or TR140C Filters</b>			
146400	3 in. Two filter kit, SCH 40 (200 GPM)	146406	4 in. Single filter kit, SCH 40
146402	4 in. Two filter kit, SCH 40 (200 GPM)	146408	6 in. Single filter kit, SCH 40
146404	6 in. Two filter kit, SCH 40 (700 GPM)	146407	4 in. Single filter kit, SCH 80
146403	8 in. Two filter kit, SCH 80 (200 GPM)	146409	6 in. Single filter kit, SCH 80
146405	6 in. Two filter kit, SCH 80 (700 GPM)	<b>Adder Kits for TR100C-3 and TR140C-3 Filters</b>	
<b>For Plumbing Two TR100C-3 or TR140C-3 Filters</b>			
147400	3 in. Two filter kit, SCH 40 (200 GPM)	147406	4 in. Single filter kit, SCH 40
147402	4 in. Two filter kit, SCH 40 (200 GPM)	147408	6 in. Single filter kit, SCH 40
147404	6 in. Two filter kit, SCH 40 (700 GPM)	147407	4 in. Single filter kit, SCH 80
147401	3 in. Two filter kit, SCH 80 (200 GPM)	147409	6 in. Single filter kit, SCH 80
147403	4 in. Two filter kit, SCH 80 (200 GPM)	Note: All kits include hardware, fittings, gaskets.	
147405	6 in. Two filter kit, SCH 80 (700 GPM)	Note: All kits include hardware, fittings, gaskets and butterfly valves.	

Filters	Filter Area Sq. Ft.	Mainfold Pipe Dia.	Turnover Capacity				
			15 GPM	20 GPM	8 Hours	10 Hours	
<b>TANDEM TRITON 140C FILTER INSTALLATION</b>							
6 TR 140's	42.36	6 in.	635	—	228,600	304,800	381,000
		8 in.	—	847	304,920	406,560	508,200
		6 in.	741	—	266,760	355,680	444,600
7 TR 140's	49.42	8 in.	—	988	355,680	474,240	592,800
		6 in.	847	—	304,920	406,560	508,200
8 TR 140's	56.48	8 in.	—	1130	406,800	542,400	678,000

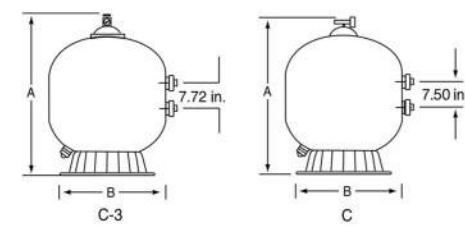
96

### TAG 2 - BACKWASH KIT - 147400 - TANDEM FILTER PIPING KITS FOR 2 ft & 3 IN FILTERS

## TRITON<sup>®</sup> C SERIES COMMERCIAL SAND FILTERS

### TRITON HD FILTER

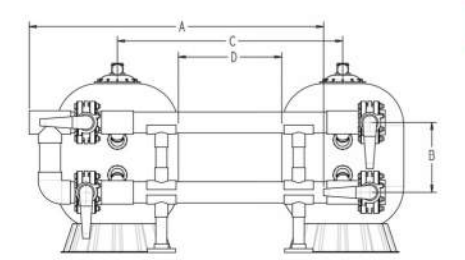
The Triton heavy duty (HD) filter is a thirty-inch fiberglass filter that offers a maximum operating pressure of 75 PSI. This filter is specifically designed for special high-pressure commercial applications that require up to 98 gpm, and is ideal for all heavy-duty commercial applications.



TR100 HD

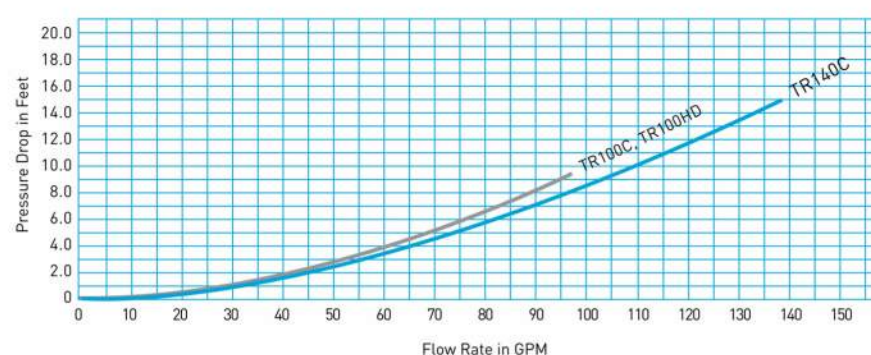
Model Number	Filter Area Sq. Ft.	Flow Rate 15 GPM/sq. ft.*	Turnover Capacity Gallons		Dimension		Sand Media Required
			4 Hours	8 Hours	A	B	
TR100C	4.91	7%	24,640	35,520	29 1/2"	30 1/2"	600 lbs. 450 lbs./750 lbs.
TR140C	7.06	10%	38,160	50,880	43 1/2"	38 1/2"	975 lbs. 450 lbs./775 lbs.
TR100C-3	4.91	7%	24,640	35,520	29 1/2"	30 1/2"	600 lbs. 450 lbs./750 lbs.
TR140C-3	7.06	10%	38,160	50,880	43 1/2"	38 1/2"	975 lbs. 450 lbs./775 lbs.

\*15 GPM/sq. ft. typical commercial flow rate.



Two Filter System	A	B	C	D	Total Wt.
3" - TR100C	82 1/2"	17 1/2"	48" Min.	18" Min.	2,300 lbs.
3" - TR140C	88 1/2"	17 1/2"	54" Min.	18" Min.	3,000 lbs.
4" - TR140C	95 1/2"	19 1/2"	54" Min.	18" Min.	2,300 lbs.
6" - TR140C	111 1/2"	24 1/2"	54" Min.	18" Min.	3,550 lbs.

Note: 4" piping needs to be rotated upward as shown at 25" so handle will clear the floor.



1420 HAWKINS AVE, SANFORD, NC 27330 800.831.7133 WWW.PENTAIRCOMMERCIAL.COM

All Pentair trademarks and logos are owned by Pentair, Inc. Triton<sup>®</sup> is a registered trademark of Pentair Water Pool and Spa, Inc. and/or its affiliated companies in the United States and/or other countries. Because we are continuously improving our products and services, Pentair reserves the right to change specifications without prior notice. Pentair is an equal opportunity employer.

1/13 Part # P1-151 ©2013 Pentair Water Pool and Spa, Inc. All rights reserved.

### TAG 3 - FILTER - TR140 C3 - 36" DIA HIGH RATE SAND FILTER

## RAINBOW<sup>™</sup> HIGH CAPACITY CHLORINE/ BROMINE FEEDERS



- Designed for ease of use and simple maintenance
- Drain valve allows easier draining for safer recharging or winterizing
- Standard threaded inlet and outlet fittings included for easy installation

### THE PERFORMANCE LEADER IN AUTOMATIC SANITIZATION FOR LARGE RESIDENTIAL AND COMMERCIAL POOLS

The INLET control valve side of the feeder connects to the plumbing on the discharge side of the pump, before the filter. The OUTLET side of the feeder connects to the pool return line after the filter and/or heater, pool cleaner, diverter valves, or any other installed equipment. Installation of a corrosion-resistant check valve such as #R172288 by Pentair between the feeder inlet and outlet and the equipment is strongly recommended to check backflow of chemicals. This helps ensure equipment longevity.

AVAILABLE FROM:



1420 HAWKINS AVE, SANFORD, NC 27330 800.831.7133 WWW.PENTAIRPOOL.COM

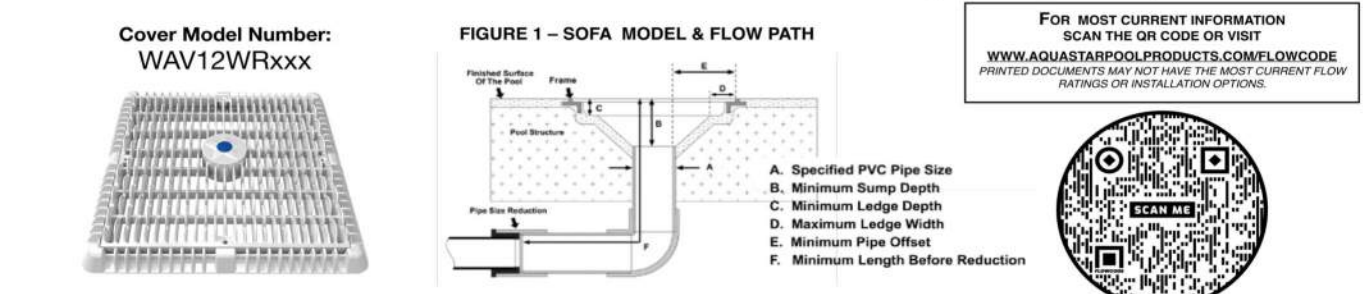
All Pentair trademarks and logos are owned by Pentair, Inc. Rainbow<sup>™</sup> is a trademark of Pentair Water Pool and Spa, Inc. and/or its affiliated companies in the United States and/or other countries. Because we are continuously improving our products and services, Pentair reserves the right to change specifications without prior notice. Pentair is an equal opportunity employer.

pumps • filters • heaters • heat pumps • automation • lighting • cleaners • sanitizers • water features • maintenance products

1/14 Part # RS-1012 ©2014 Pentair Water Pool and Spa, Inc. All rights reserved.

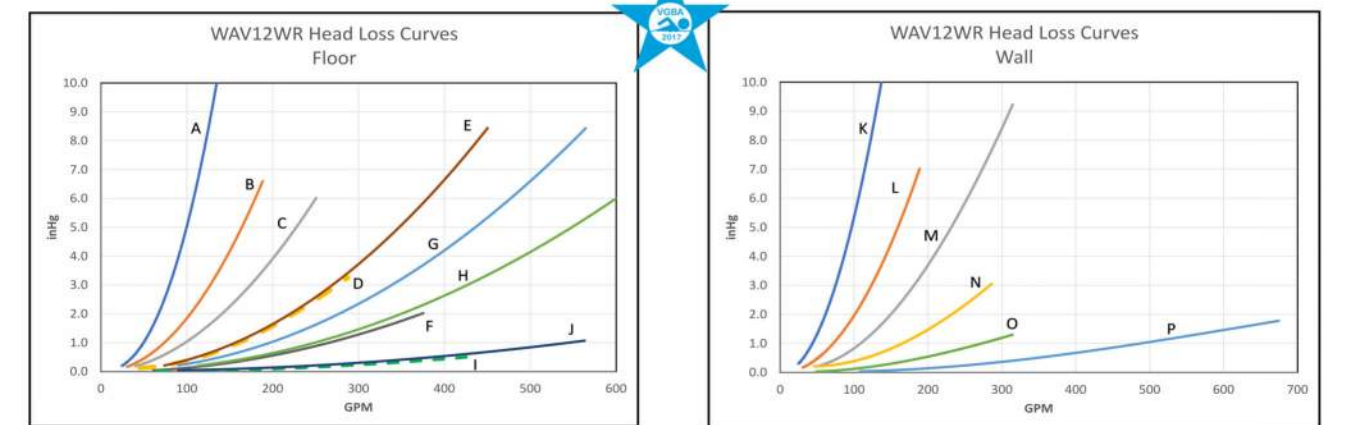
## VGBA-2017 PRODUCT SPECIFICATIONS Suction Outlet Fitting Assembly (SOFA) VGBA-2017 Flow Ratings, Sump Dimensions, Sump Flow Path Zone, and Head Loss Curves

**DIRECTIONS:** Please follow the SOFA specific flow rates, sump specifications, and flow path zone information below. The installation must conform to the minimum maximum requirements including the SOFA dimension defined in Figure 1. The flow path zone is defined by dimensions A through E. The installed sump may be manufactured or field-built and it may be larger/deeper than Figure 1. Please write the Cover Model Number, orientation, and SOFA Model Flow Rating on the VGBA DRAIN COVER IDENTIFICATION INFORMATION label that comes with each AquaStar Pool Products, Inc. drain cover.



SOFA Model No.	Pipe Size (Minimum)	Pipe Depth (Minimum)	Orientation (Head / Feet)	Flow Rating (GPM)	Head Loss Curve
WAV12WR-12t-A-1.5b_B3_C0.3_D0.7_E3.5_F16	1.5" (b)	3"	Floor (f)	126	A
WAV12WR-12t-A-2b_B3_C0.3_D0.7_E4.9_F16	2" (b)	3"	Floor (f)	150	B
WAV12WR-12t-A-2.5b_B3_C0.3_D0.7_E4.7_F16	2.5" (b)	3"	Floor (f)	200	C
WAV12WR-12t-A-3b_B3_C0.3_D0.7_E4.5_F16	3" (b)	3"	Floor (f)	230	D
WAV12WR-12t-A-3b_B5.6_C0.3_D0.7_E3_F16 [Sump P/N 12-358]	3" (s)	5.6"	Floor (f)	360	F
WAV12WR-12t-A-4b_B3_C0.3_D0.7_E3.75_F16 [Sump P/N 12-458]	4" (b)	3"	Floor (f)	300	E
WAV12WR-12t-A-4b_B5_C0.3_D0.7_E3_F16 [Sump P/N 12-358]	4" (s)	6"	Floor (f)	450	G
WAV12WR-12t-A-4s_B5_C0.3_D0.7_E3_F16 [Sump P/N 12-358]	4" (s)	6"	Floor (f)	450	H
WAV12WR-12t-A-6b_B3_C0.3_D0.7_E3_F16	6" (b)	3"	Floor (f)	340	I
WAV12WR-12t-A-6b_B10.5_C0.3_D0.7_E2.9_F16 [Sump P/N 12-658]	6" (b)	10.5"	Floor (f)	450	J
WAV12WR-12w-A-1.5b_B3_C0.3_D0.7_E3.5_F16	1.5" (b)	3"	Wall (w)	126	K
WAV12WR-12w-A-2b_B3_C0.3_D0.7_E3.5_F16	2" (b)	3"	Wall (w)	150	L
WAV12WR-12w-A-2.5b_B3_C0.3_D0.7_E4.7_F16	2.5" (b)	3"	Wall (w)	200	M
WAV12WR-12w-A-3b_B3_C0.3_D0.7_E4_F16	3" (b)	3"	Wall (w)	230	N
WAV12WR-12w-A-4b_B3_C0.3_D0.7_E3.75_F16 [Sump P/N 12-458]	4" (b)	3"	Wall (w)	250	O
WAV12WR-12w-A-4b_B10.5_C0.3_D0.7_E2.9_F16 [Sump P/N 12-658]	4" (b)	10.5"	Wall (w)	450	P

Note 1: "SOFA Model No." nomenclature: bottom pipe = (b), side pipe = (s). See Fig 1 for capital letters A through E.  
Note 2: Head loss inq is measured 16 to 24 inches from the finish surface of the pool. Reference Fig 1 dimension F.  
Note 3: [Sump P/N 12-358] are the part numbers marked inside these manufactured Sump Buckets. Use of these sumps is not required. Installing WAV12WR covers on field-built sumps is permitted. To order WAV12WRxxx product with these sumps, please see the catalog or visit www.aquastarpoolproducts.com.

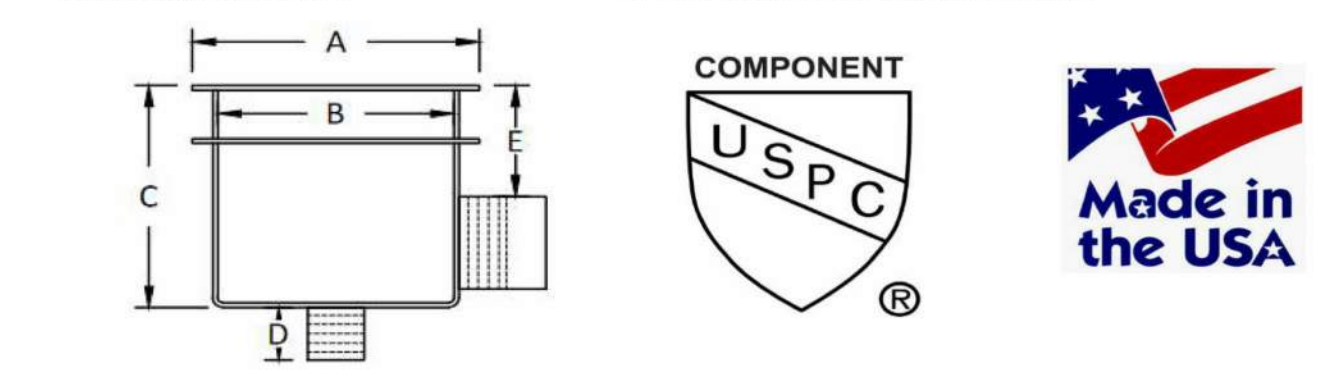


© 2021-2023 AquaStar Pool Products, Inc. All rights reserved. 06072023

### TAG 6 - MAIN DRAIN - WAV12WR101 - 12" X 12" ANTI-ENTRAPMENT MAIN DRAIN

## Fiberglass Field Built Sumps

- Premium fiberglass & resin for maximum structural strength
- Durable smooth gelcoat interior & pebble pipe
- \* Exterior perimeter FRP waterstop flange
- \* Non-Metallic: No grounding
- \* Rough sand exterior finish
- \* Custom configurations fabricated
- \* 2" Bottom flt. x flt. for hydro relief valve
- \* Threaded PVC SCH 40 pressure test plug for outlet (up to 8")
- \* All PVC connections are ASTM 2466 compliant
- \* Designed to ANSI/APSP/ICC-16:2017 for use only with noted SOFA (Suction Outlet Fitting Assembly) Covers



Field Built Sump Product Dimensions (Inches)						
Size (inches)	ASA Part #	A	B	C	D	E
9 x 9 x 12	FBS-50-809-3	11"	9"	12"	4.5"	6.5"
12 x 12 x 12	FBS-50-812-4	14"	12"	12"	4.5"	6.5"
12 x 12 x 18	FBS-50-812-18-6	14"	12"	18"	4.5"	10"
18 x 18 x 20	FBS-50-818-6	20"	18"	20"	4.5"	10"
18 x 18 x 24	FBS-50-818-24-8	20"	18"	24"	4.5"	13.5"
24 x 24 x 30	FBS-50-824-30-10	26"	24"	30"	4.5"	17"

Compatible SOFA for A.S.A. MFG FBS Sumps				
List A	List B1	List B2	List C	List D
9" x 9"	12" x 12" - 4"	12" x 12" - 6"	18" x 18" x 20"	18" x 18" x 24"

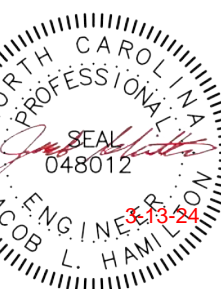








D. CLUGSTON



Kilian Engineering, Inc. PO Box 3301, Healderson, NC 27536 | www.kilianengineering.com

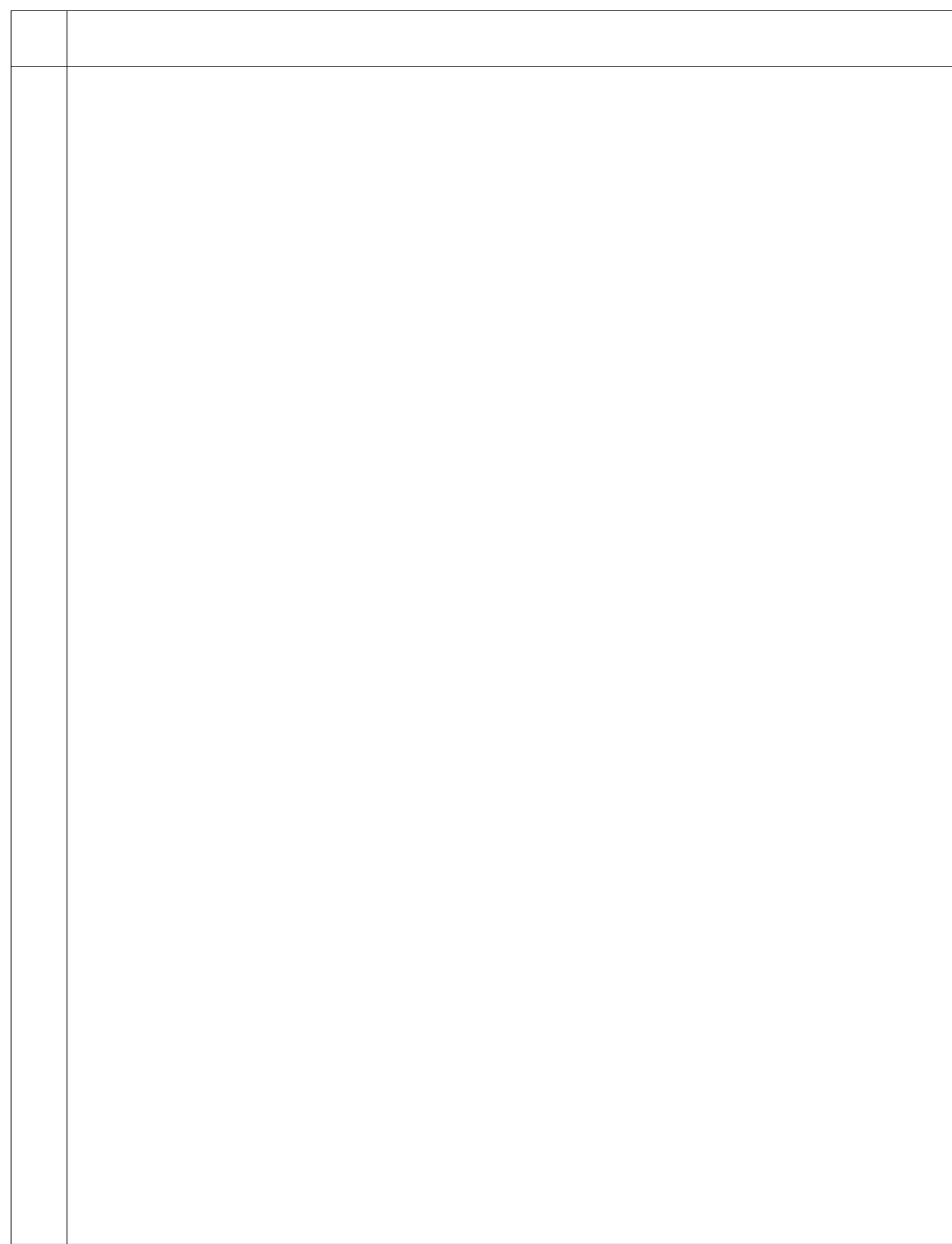
Table with columns: DATE, REVISION, NO.

SHEET DISCUSSION SPECIFICATIONS

PROJECT #: 2023043 DATE ISSUED: 03/13/2024 DRAWING BY: JVD CHECKED BY: DSC/JLH

MATTHEWS RIDGE KB HOMES BATHHOUSE HARNETT COUNTY, NC

SP5.2



ladders + rails

### Hand & Stair Rails

DMS-102

- Tubing: 1.90" OD
- Wall Thickness\*: .049" or .065"
- Stainless Steel: 304 or 316L Marine Grade\*\* (add --MG to part number)
- Bends: 6" Radius
- Options: Powder-coating and SealedSteel Salt Friendly
- Recommended Anchors: AS-100P or AS-100B (order separately)
- Recommended Escutcheon: EP-100F (order separately)
- Sold as a single rail
- \* Minimum rail thickness is .065 for Commercial
- \*\* Minimum requirement for salt pools is 316L Marine Grade

Model No.	Description	Shipping		
		Weight	Length	Width/Height
DMS-102A	54" Center Grab Rail, .049"	15 lbs - 19 lbs	59"	39" x 2"
		7 - 9kg	150cm	99cm x 5cm
DMS-102B	54" Center Grab Rail, .065"	15 lbs - 19 lbs	59"	39" x 2"
		7 - 9kg	150cm	99cm x 5cm
DMS-102P	54" Center Grab Rail, .049" w/welded mounting plate	15 lbs - 19 lbs	59"	39" x 2"
		7 - 9kg	150cm	99cm x 5cm

**SRSmith** www.srsmith.com / 800.824.4387  
Copyright © 2018, S.R. Smith, LLC. All rights reserved. For the latest version of this document, see srsmith.com

Junction Box - PJB4175

Item PJB4175

**PRODUCT DESCRIPTION**  
These polymer junction boxes are code compliant and provide safe, reliable connections for low-voltage lights. Specially designed for pools, pool-spa combinations, and landscape applications. Junction boxes are for outdoor use only.

**FEATURES**

- Accommodates flexible cords and non-metallic conduits from 1/2" to 1"
- Waterproof, moisture enclosure
- Easy access ground bar
- PA114 Multi-Post Mounting Bracket (sold separately)
- Complies with NEC Code 680.24 requirements for junction boxes
- 1-year warranty

**APPLICATIONS**

- Landscape Lighting
- Underwater Lighting

**TECHNICAL DATA**

General	
Model Number	PJB4175
Description	4 Light Connection Pool & Spa Junction Box
UPC Code	078275094048
Brand	Intermatic
Country of Origin (Intermatic)	INDIA
Warranty Period	1-Year limited

Control Specifications	
Number of Light Connectors	4

Mechanical Specifications	
Mounting Options	Bracket, Post, Nut, Wall

Dimensions	
Product Dimensions (H x W x D) in	8.75 x 5 x 4.625 in
Non-Metallic Conduit Size	1/2"-1"

Material Specifications	
Body Material	Plastic

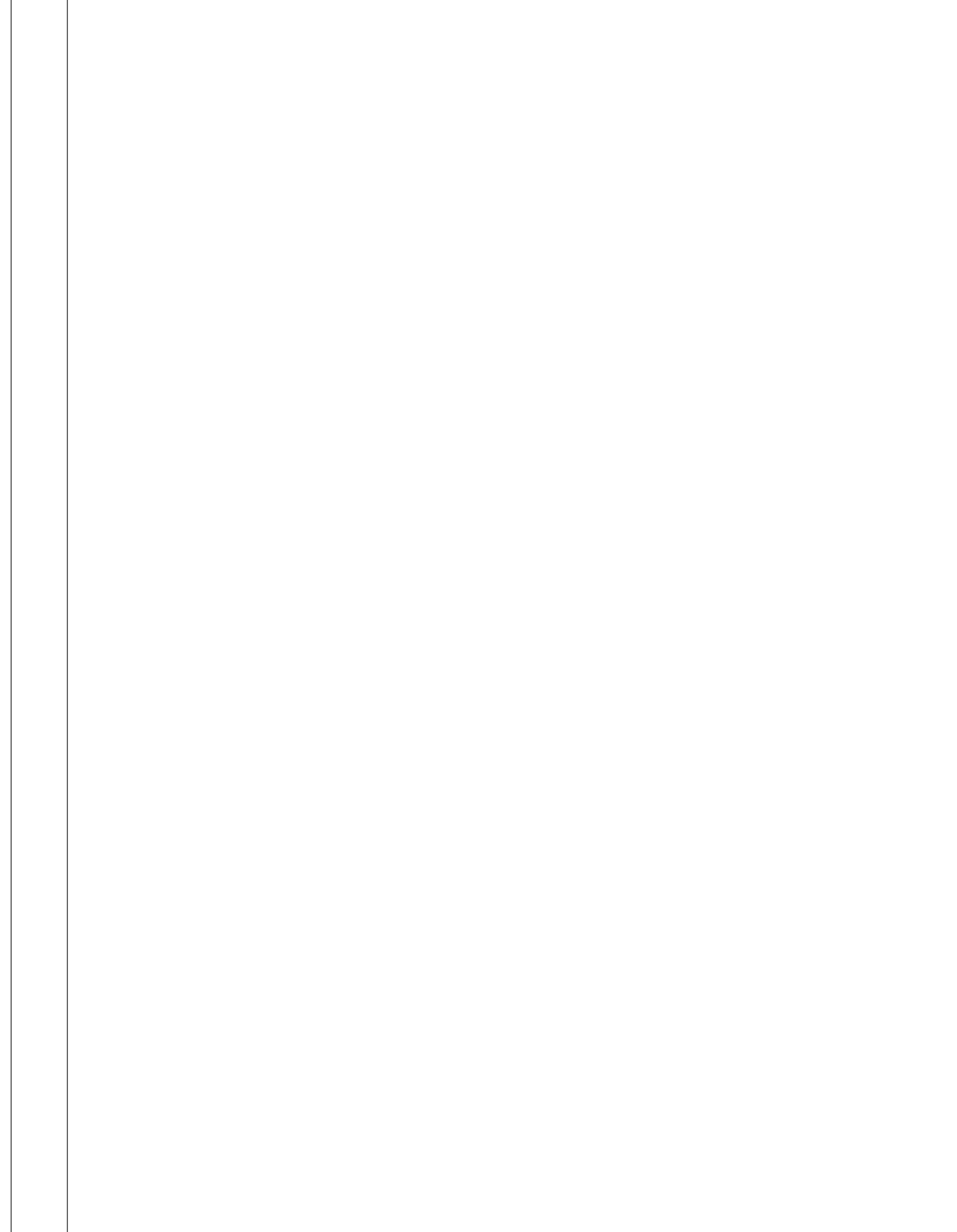
Electrical Specifications	
Number of Receptacle Knockouts	5

Packaging	
Unit Carton Dimensions (H x W x L) in	5.25 x 5 x 9 in

© 12/22/2022 1/3

TAG 16 - JUNCTION BOX - PJB4175 - 4 LIGHT CONNECTION POOL & SPA JUNCTION BOX

TAG 17 - HANDRAIL - DMS-102B-MG - MARINE GRADE DECK MOUNTED HANDRAILS - STANDARD



ladders + rails

### Standard Plus Ladder

**Stainless Steel Tread Ladder**

- Tubing: 1.90" OD
- Wall Thickness: .065", .109" or .145"
- Stainless Steel: 304
- Treads: LTF-103 (Stainless Steel)
- Bends: 4" Radius
- Options: Powder-coating and SealedSteel Salt Friendly (rails only)
- Recommended anchors: AS-200B for 1.50" and AS-100B for 1.90" (order separately)
- Recommended escutcheons: EP-150 for 1.50" and EP-100F for 1.90" (order separately)
- Call Customer Service at 800.824.4387 for availability of ladders of 1.50"OD tubing

Model No.	Description	Weight	Length	Width	Height
10037 to 10038*	23" 2-Step Ladder with .065", 109", 145" tubing	30, 42, 54 lbs	61"	29"	2"
10040 to 10042	23" 3-Step Ladder with .065", 109", 145" tubing	14, 20, 24kg	150cm	71cm	5cm
10043 to 10045	23" 4-Step Ladder with .065", 109", 145" tubing	36, 50, 62 lbs	70"	28"	2"
10046 to 10048	23" 5-Step Ladder with .065", 109", 145" tubing	16, 23, 28kg	177cm	71cm	5cm
10049 to 10051	23" 2-Step Ladder with .065", 109", 145" tubing	40, 58, 70 lbs	82"	28"	2"
10052 to 10054	23" 3-Step Ladder with .065", 109", 145" tubing	18, 26, 33kg	226cm	71cm	5cm
10055 to 10057	23" 4-Step Ladder with .065", 109", 145" tubing	46, 64, 78 lbs	90"	28"	2"
10058 to 10060	23" 5-Step Ladder with .065", 109", 145" tubing	21, 29, 35kg	229cm	71cm	5cm
10061 to 10063	23" 2-Step Ladder with .065", 109", 145" tubing	30, 44, 56 lbs	59"	39"	2"
10064 to 10066	23" 3-Step Ladder with .065", 109", 145" tubing	14, 20, 24kg	150cm	90cm	5cm
10067 to 10069	23" 4-Step Ladder with .065", 109", 145" tubing	36, 52, 64 lbs	85"	39"	2"
10070 to 10072	23" 5-Step Ladder with .065", 109", 145" tubing	16, 24, 29kg	216cm	90cm	5cm
10073 to 10075	23" 2-Step Ladder with .065", 109", 145" tubing	42, 58, 72 lbs	85"	39"	2"
10076 to 10078	23" 3-Step Ladder with .065", 109", 145" tubing	23, 26, 33kg	216cm	90cm	5cm
10079 to 10081	23" 4-Step Ladder with .065", 109", 145" tubing	48, 66, 80 lbs	85"	39"	2"
10082 to 10084	23" 5-Step Ladder with .065", 109", 145" tubing	22, 30, 36kg	216cm	90cm	5cm
10085 to 10087	23" 2-Step Ladder with .065", 109", 145" tubing	34, 48, 62 lbs	59"	39"	2"
10088 to 10090	23" 3-Step Ladder with .065", 109", 145" tubing	15, 22, 28kg	150cm	90cm	5cm
10091 to 10093	23" 4-Step Ladder with .065", 109", 145" tubing	38, 56, 70 lbs	76"	40"	2"
10094 to 10096	23" 5-Step Ladder with .065", 109", 145" tubing	17, 25, 32kg	193cm	102cm	5cm
10097 to 10099	23" 2-Step Ladder with .065", 109", 145" tubing	44, 64, 78 lbs	76"	40"	2"
10100 to 10102	23" 3-Step Ladder with .065", 109", 145" tubing	20, 29, 35kg	193cm	102cm	5cm
10103 to 10105	23" 4-Step Ladder with .065", 109", 145" tubing	50, 70, 88 lbs	76"	40"	2"
10106 to 10108	23" 5-Step Ladder with .065", 109", 145" tubing	23, 32, 40kg	193cm	102cm	5cm

**SRSmith** www.srsmith.com / 800.824.4387  
Copyright © 2018, S.R. Smith, LLC. All rights reserved. For the latest version of this document, see srsmith.com

TAG 18 - LADDER - MG-10054 - MARINE GRADE COMMERCIAL LADDER

pool access equipment

### multiLift™

A flanged pool lift, with left or right side mounting, and optional folding seat version.

- Third-party tested & verified ADA compliant
- Integrated armrests
- State of California compliant
- 350 lb/159kg lifting capacity
- Retrofit anchor jig is standard
- Optional folding seat assembly
- LiFOperator® Intelligent Controller
- Powder-coated stainless steel and aluminum construction

**ADA COMPLIANT**

**Lift Color**  
GRAY/PST

Due to printing technology actual color may differ.

New Construction Jig with Anchors 500-5000A

Wheel-A-Way mobility option provides flexibility to transport the lift if needed

Optional folding seat assembly

Model No.	Description	Weight	Length	Width	Height
575-0000	multiLift	200 lbs/91kg	59"	28"	2"
575-0000A	multiLift, no anchor	200 lbs/91kg	127cm	71cm	60cm

**Parts & Accessories**

- 1001H95 Battery
- 500-5200T Cover
- 500-5500 Wheel-A-Way
- 900-1000 Seat Belt
- 300-6700A Anchors, set of 4
- 300-6900 Retrofit Anchor Jig
- 300-6800A Anchor Bolts, set of 4
- 970-5000T Seat Saver Cover
- 900-4000 Stability Strip
- 170-3000A Armrest Replacement (pair)

**multiLift with Folding Seat**

Model No.	Description	Weight	Length	Width	Height
575-0100	multiLift with folding seat*	225 lbs/103kg			
575-0100N	multiLift with folding seat, no anchor*	225 lbs/103kg	50"	24"	29"
575-0105	multiLift with armrests and folding seat	230 lbs/104kg	127cm	61cm	71cm
575-0105N	multiLift with armrests and folding seat, no anchor	230 lbs/104kg			

**Parts & Accessories**

- 1001H95 Battery
- 500-5100RCT Folding Seat Cover
- 1460-6000T Folding Seat
- 900-2000 Stability Vest
- 900-4000 Seat Pad
- 970-0000T Seat Saver Cover
- 170-2320 Armrest Assembly, gray, left & right

**New Construction Guidelines**

Scenario	Pool Lift	Anchor Jig
Order pool lift and new construction jig at same time	575-3000	500-5000 (no anchors)
Order new construction jig ahead of pool lift	575-3000N	500-5000A (comes with anchors)

**SRSmith** P.O. Box 400, Carby, OR 97013  
P. 503.266.2231 TF 800.824.4387 srsmith.com  
© 2018 S.R. Smith. All rights reserved.

TAG HC - ADA LIFT - 575-0105 - MULTILIFT WITH FOLDING SEAT

pool access equipment

**SRSmith** www.srsmith.com / 800.824.4387  
Copyright © 2018, S.R. Smith, LLC. All rights reserved. For the latest version of this document, see srsmith.com

**SRSmith** P.O. Box 400, Carby, OR 97013  
P. 503.266.2231 TF 800.824.4387 srsmith.com  
© 2018 S.R. Smith. All rights reserved.

TAG HC - ADA LIFT - 575-0105 - MULTILIFT WITH FOLDING SEAT