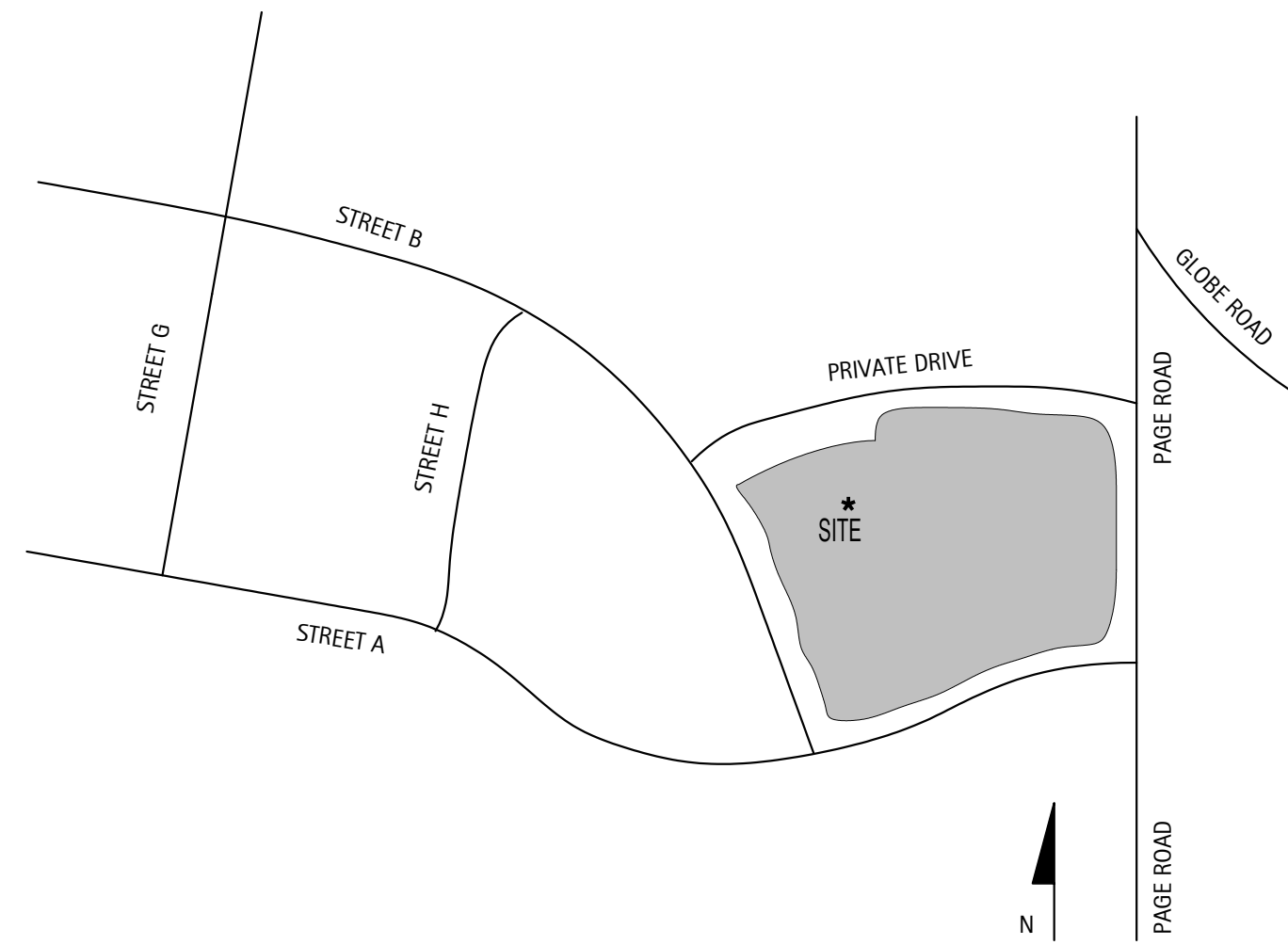
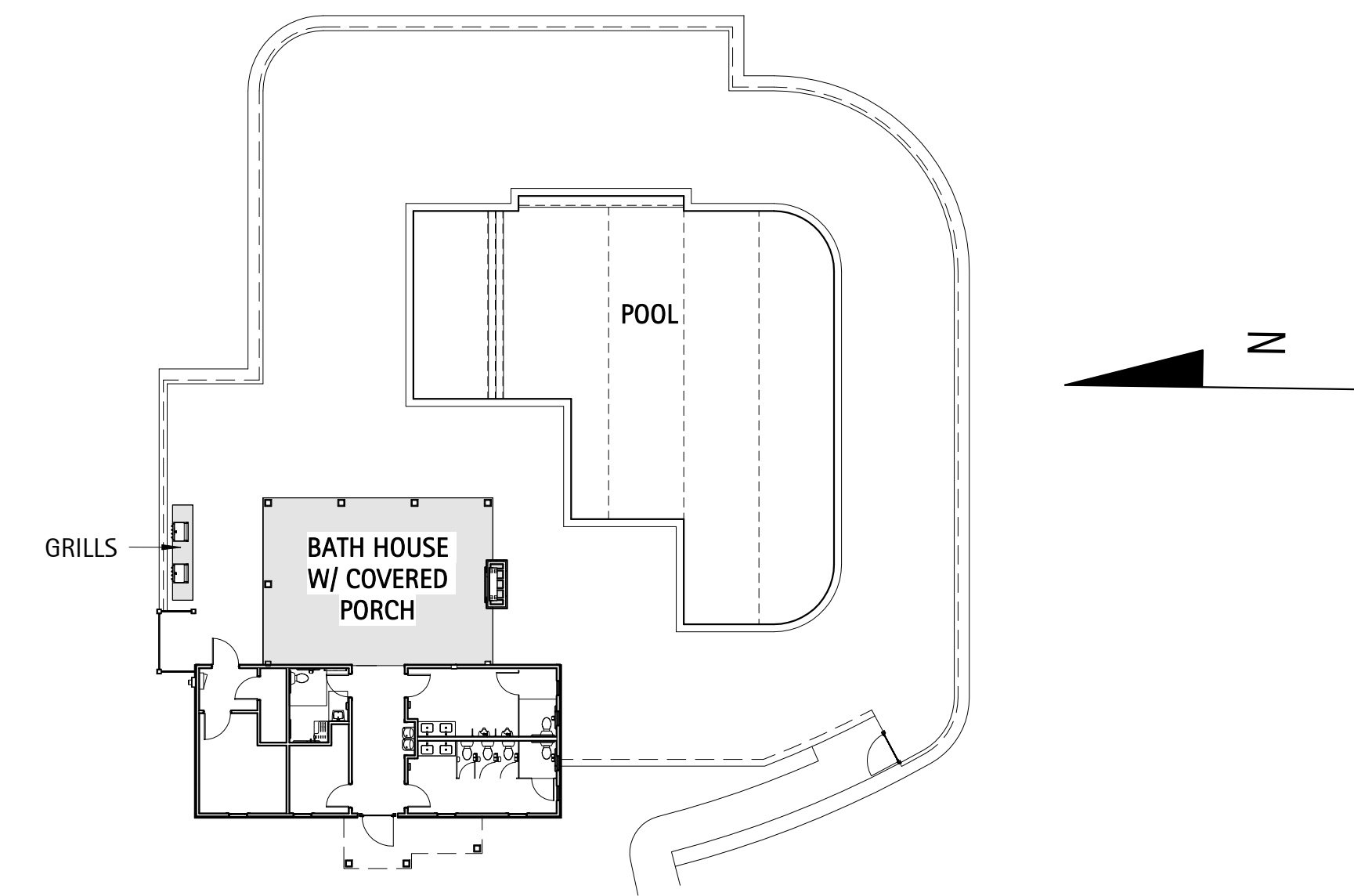


SHERRI DOWNS AMENITY CENTER

BATHHOUSE & POOL ANGIER, NC



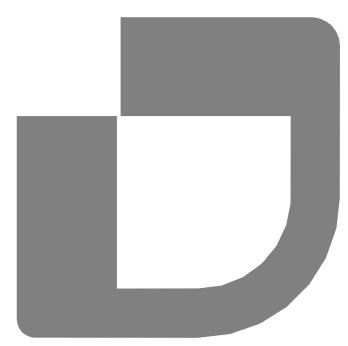
2 VICINITY MAP
G0.1 1" = 100'-0"



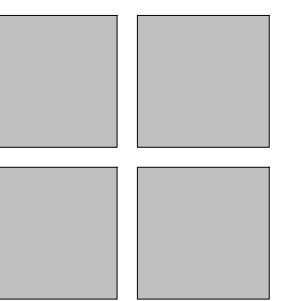
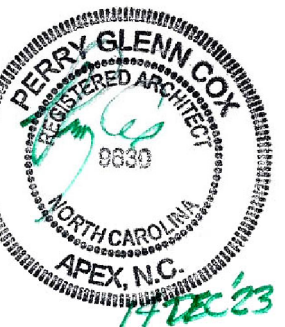
1 SITE PLAN
G0.1 1" = 20'-0"



DRAWING INDEX1						
SHEET NUMBER	SHEET NAME	REV 01	REV 02	REV 03	REV 04	REV 05
0 - GENERAL						
G0.1	COVER SHEET					
G0.2	CODE SUMMARY					
G0.3	LIFE SAFETY PLAN					
G0.4	GENERAL NOTES					
1 - ARCHITECTURAL						
A1.0	FOUNDATION & FLOOR PLANS					
A1.1	CEILING & ROOF PLANS					
A2.0	EXTERIOR ELEVATIONS					
A3.0	BUILDING SECTIONS & DETAILS					
A3.1	ENLARGED PLANS & WALL SECTIONS					
A4.0	GENERAL DETAILS					
A4.1	GENERAL DETAILS					
A5.0	SCHEDULES & GENERAL DETAILS					
10 - STRUCTURAL PLANS						
S1	SLAB & FOUNDATION PLAN					
S2	FRAMING PLANS					
S3	STRUCTURAL NOTES & DETAILS					
13 - PLUMBING PLANS						
P1	PLUMBING NOTES & SCHEDULES					
P2	SANITARY SEWER AND WATER SUPPLY PLANS					
P3	SANITARY SEWER AND WATER RISER PLANS					
15 - MECHANICAL PLANS						
G1	GAS PLAN AND RISER					
M1	MECHANICAL NOTES, SCHEDULES, AND PLAN					
16 - ELECTRICAL PLANS						
E1	ELECTRICAL NOTES AND SCHEDULES					
E2	LIGHTING & POWER PLANS					
E3	PANEL SCHEDULE AND POWER RISER					
17 - POOL						
SP1.0	POOL DIMENSION PLAN					
SP2.0	POOL LAYOUT PLAN					
SP3.0	POOL PIPING AND ELECTRICAL PLAN					
SP4.0	POOL SECTIONS & DETAILS					
SP4.1	SECTIONS & DETAILS					
SP5.0	SPECIFICATIONS					
SP5.1	SPECIFICATIONS					
SP5.2	SPECIFICATIONS					



D. CLUGSTON



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DATE

REVISION

NO.

SHEET DISCUSSION
COVER SHEET

PROJECT #: 2023005
DATE ISSUED: 12/11/2023
DRAWING BY: JVD
CHECKED BY: PGC/DSC

SHERRI DOWNS AMENITY
LENNAR HOMES
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115 YOUNG STREET SUITE C -
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TEL 252.438.8778

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G0.1

APPENDIX B BUILDING CODE SUMMARY

FOR ALL COMMERCIAL PROJECTS

Name of Project: Sherris Downs Amenity Center
 Address: Rawls Church Rd. Zip Code: 27501
 Owner or Authorized Agent: John Moxley Phone #: 919-691-1170
 Email: john@dclugston.com Fax #:
 Owned By: Privately City/County State
 Code Enforcement Jurisdiction: City County City/County
 Name of Jurisdiction: Harnett County, North Carolina

PROJECT SUMMARY: 1,723 SF Bath house and 2,257 SF Pool
Building Description: A-3 UNHEATED - PRIVATE RECREATIONAL FACILITY FOR RESIDENCE ONLY, WITH A SEASONAL DRAIN DOWN BUILDING, DESIGNED FOR USE FROM DAWN TO DUSK
Scope of Work: New Building full scope of architectural, structural, plumbing, mechanical, electrical, and pool plans.

Lead Design Professional/Project Coordinator: Brian Jacobs 919-412-4711
 DESIGNER FIRM NAME LICENSE # TELEPHONE #
 Architectural: Perry Cox Architect, PA Perry Cox, AIA 9630 919-393-5411
 Civil: _____
 Electrical: Killian Engineering Jacob L. Hamilton 048012 252-438-8778
 Fire Alarm: Killian Engineering Jacob L. Hamilton 048012 252-438-8778
 Plumbing: Killian Engineering Jacob L. Hamilton 048012 252-438-8778
 Mechanical: Killian Engineering Jacob L. Hamilton 048012 252-438-8778
 Sprinkler Standpipe: _____
 Structural: Ross Linden Engineers Brian Ross, PE 25539 919-832-5680
 Precast: _____
 Trusses: Truss Builders Eric A Gilbert, PE 036322 919-467-9988
 Retaining Walls >5' High: _____
 Other: Pool: Killian Engineering Jacob L. Hamilton 048012 252-438-8778
 Note: Special Inspections and Inspectors to be listed at end of Appendix B

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

New Building: New Building Shell Building First Time Interior Completion
 Addition Alteration to Shell
 Existing Building: Renovation Interior Completion Tenant Alteration
 Reconstruction Repair Alteration to Shell
 Change of Use Tenant Change of Occupancy
 Note: Zoning Review May Be Required for Change of Use or Occupancy
 Original Occupancy: _____
 Proposed Occupancy: A-3 Assembly

OCCUPANCY INFORMATION

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

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

ALLOWABLE AREA AND HEIGHT CALCULATIONS

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

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

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

BOTH BUILDING AND TENANT MUST BE INDICATED ON CHART BELOW

Story No.	DISCRIP. & USE	BLDG AREA TABLE 506.2 PER STORY	ALLOWABLE AREA (SF)	AREA FOR INCREASE FRONTAGE	SPRINKLER INCREASE	ALLOWABLE FLOOR AREA	RATE OF ALLOWABLE AREA	MAXIMUM BUILDING AREA	SEPARATION REQUIRED	RATING
Main Level	A3	1,723	6000	N/A	N/A	N/A	0.267	6000 SF	N/A	N/A

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

ALLOWABLE HEIGHT

MOST RESTRICTIVE (GROUP)	ALLOWABLE BUILDING HEIGHT (TABLE 504.3)	INCREASE FOR SPRINKLERS	ACTUAL BUILDING HEIGHT AS SHOWN ON PLANS	CODE REFERENCE
Type of Construction	Type_VB	Type_VB	Type_VB	403.3.1
Building Height in Feet	H = 40'-0" FT	N/A	H = 21'-6"	403.3.1
Building Height in Stories	S = 7	N/A	S = 7	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 _____
 Sprinklers: Yes No NFPA 13 NFPA 13R Partially Sprinklered Special Suppression
 Standpipes: Yes No Class: I II III Wet Dry
 Fire District: Yes No (Appendix D) Floor Hazard
 Building Height: 21'-6"
 Basement: Yes No
 Mezzanine: Yes No
 High Rise: Yes No
 Life Safety Plan Sheet # (if provided): _____ G0.3
Gross Building Area:

FLOOR	EXISTING (SQFT)	NEW (SQFT)	SUB-TOTAL
MAIN LEVEL	N/A	1,723	1,723

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

FIRE PROTECTION REQUIREMENTS

THIS SECTION REQUIRED FOR ALL PROJECTS
 Life Safety Plan Sheet #, if Provided _____ G0.3

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING PROVIDED (W/REDUCTION)	DETAIL # & SHEET #	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
Bearing Walls Exterior						
North	>30'	0				
East	>30'	0				
West	>30'	0				
South	>30'	0				
Interior Bearing walls	0					
Nonbearing Walls Exterior						
North	>30'	0				
East	>30'	0				
West	>30'	0				
South	>30'	0				
Interior Bearing walls	0					
Structural Frame, including columns, girders, trusses						
Floor construction, including supporting beams and joists. List construction type.	0					
Floor Ceiling Assembly	0					
Columns Supporting Floors	0					
Roof construction, including supporting beams and joists**	0					
Roof Ceiling Assembly	0					
Columns Supporting Roof	0					
Shafts- Exit Enclosures	N/A					
Shafts- Other (describe)	N/A					
Corridor Separation	N/A					
Occupancy Separation	N/A					
Party/ Fire Wall Separation	N/A					
Incidental Use Separation	N/A					
Dwelling/ sleeping unit Separation	N/A					
Smoke Barrier Separation	N/A					
Tenant Separation						

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

PERCENTAGE OF WALL OPENING CALCULATIONS

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES/PROTECTION	DEGREE OF OPENINGS (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)
>30'	NS, UP	NO LIMIT	NO LIMIT

WALL LEGENDS

THIS SECTION REQUIRED FOR ALL PROJECTS
 CHECK IF THE FOLLOWING ARE PRESENT AND INDICATE BY **AWALL 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 BETWEEN EXIT DOORS	ACTUAL SHOWN ON PLANS
AMENITY	2	2	200'	135'-3"	63'-6"	69'-7"

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

OCCUPANT LOAD AND EXIT WIDTH 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
MENS	180 SF	0	0	0.2					
WOMENS	191 SF	0	0	0.2					
FAMILY	72 SF	300 SF	1	0.2		0.2			
CHEM.	36 SF	300 SF	1	0.2		0.2			
PUMP ROOM	140 SF	300 SF	1	0.2		0.2			
STORAGE	80 SF	0 SF		0.2					
ELEC.	45 SF	300 SF	1	0.2		0.2			
COVERED PORCH	660 SF	15 SF	44	0.2		8.8			
HALL	143 SF	0 SF		0.2				46	
COVERED ENTRY	99 SF	0 SF		0.2					
POOL	2256 SF	50 SF	46	0.2		9.2			
CLR DECK AREA	1925 SF	15 SF	129	0.2		25.8			
POOL DECK	3530 SF	15 SF	236	0.2		47.2		46	
TRASH	36 SF	0 SF		0.2					
Grand total				2.8		91.8		92	0

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

ASSEMBLY OCCUPANCY INFORMATION

Name	Type	Occupancy		Exit Width (Inches)	Exit Quantity
		Area	Load Count		
COVERED PORCH	Assembly - Unconcentrated (tables and chairs)	660 SF	44	8.8	1
POOL	Swimming Pool water surface	2256 SF	46	9.2	
CLR DECK AREA	Swimming Pool Deck	1925 SF	129	25.8	
POOL DECK	Swimming Pool Deck	3530 SF	236	47.2	1
Grand total				91	

PLUMBING FIXTURE REQUIREMENTS

THIS SECTION IS REQUIRED FOR ALL PROJECTS

USE	WATERCLOSETS			URINALS	LAVATORIES		RINSE SHOWERS	DRINKING FOUNTAINS	
	Male	Female	Unisex		Male	Female		REGULAR	ACCESSIBLE
SPACE	EXISTING								
	NEW	1	4	1	2	2	2	1	1
Total Required		1	4	1	1	2	2	1	1
Total Provided		1	4	1	2	2	3	2	1

459 PERSONS / 2 = 230 M / 230 F
 WATERCLOSETS: 230 MALE / 125 = 2 WC = 1 WC & 2 URINAL
 230 FEMALE / 65 = 3 WC = 2 WC + 1 FAMILY WC
 LAVATORY: 230 MALE / 200 = 2 LAV = 2 LAV
 230 FEMALE / 200 = 2 LAV = 2 LAV + 1 FAMILY WC

STRUCTURAL DESIGN LOADS

THIS SECTION IS REQUIRED FOR ALL PROJECTS

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

SEISMIC DESIGN CATEGORY: A B C D
 Provide the following Seismic Design Parameters:
 Risk Category (Table 1601.1) _____
 Spectral Response Acceleration Coefficient (S_a) _____
 Site Classification (Table 1601.1) _____
 Data Source: Field Test _____ Presumptive _____ Historical Data _____
Basic Structural System: Bearing Wall _____ Dual w/ Special Moment Frame _____
 Building Frame _____ Dual w/ Intermediate R/C or Special Steel _____
 Moment Frame _____ Inverted Pendulum _____
 Simplified _____ Equivalent Lateral Force _____ Dynamic _____
 Analysis Procedure: Architectural, Mechanical, Components anchored? Yes No

LATERAL DESIGN CONTROL: Earthquake _____ Wind _____

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

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT
 THIS SECTION FOR NEW, ADDITION, CHANGE OF USE, AND INTERIOR COMPLETION

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

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

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

Boiler _____
 Size Category, If oversized, state reason: _____

Chiller _____
 Size Category, If oversized, state reason: _____

List equipment efficiencies: _____

SEE MECHANICAL DWGS.

ACCESSIBLE PARKING

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED		TOTAL # ACCESSIBLE PROVIDED
	REQUIRED	PROVIDED	REGULATORY (15% MIN)	VAN SPACES WITH 132" ACCESS B' ACCESS	
TOTAL					

SEE CIVIL DWGS.

ELECTRICAL SUMMARY

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

ELECTRICAL SYSTEM AND EQUIPMENT

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

Lighting Schedule (each fixture type)
 Lamp type required in fixture _____
 Number of lamps in fixture _____
 Ballast type used in the fixture _____
 Number of ballasts in fixture _____
 Total wattage _____
 Total intensity _____ (whole building or space by space)
 Total exterior lighting _____ specified vs. allowed

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

SEE ELECTRICAL DWGS.

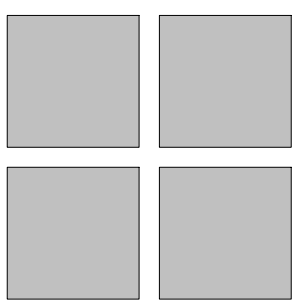
ENERGY SUMMARY

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

ENERGY REQUIREMENTS:</



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DATE

REVISION

NO.

SHEET DESCRIPTION

LIFE SAFETY PLAN

PROJECT #: 2023005

DATE ISSUED: 12/11/2023

DRAWING BY: JVD

CHECKED BY: DSCJ/PGC

SHERRI DOWNS AMENITY
LENNAR HOMES
AMENITY & POOL
ANGIER, NC

G0.3

BUILDING OCCUPANCY SCHEDULE					
Room Number	Room Name	Area	Occupancy		
			Type	Load Factor	Load Count
100	COVERED ENTRY	99 SF	N/A	0 SF	
101	HALL	143 SF	N/A	0 SF	
102	STORAGE	80 SF	N/A	0 SF	
103	WOMENS	191 SF	N/A	0 SF	
104	FAMILY	72 SF	Accessory Storage Areas, Mechanical Equipment Room	300 SF	1
105	MENS	180 SF	N/A	0 SF	
106	COVERED PORCH	660 SF	Assembly - Unconcentrated (tables and chairs)	15 SF	44
107	ELEC.	45 SF	Accessory Storage Areas, Mechanical Equipment Room	300 SF	1
108	PUMP ROOM	140 SF	Accessory Storage Areas, Mechanical Equipment Room	300 SF	1
109	CHEM.	36 SF	Accessory Storage Areas, Mechanical Equipment Room	300 SF	1
110	TRASH	36 SF	(none)		
					48

OCCUPANCY SCHEDULE POOL						
Room Number	Room Name	Occupancy Area	Type	Occupancy		
				Load Factor	Load Count	
PL100	POOL	2256 SF	Swimming Pool water surface	50 SF	46	
PL101	CLR DECK AREA	1925 SF	Swimming Pool Deck	15 SF	129	
PL102	POOL DECK	3530 SF	Swimming Pool Deck	15 SF	236	
Grand total					7111 SF	411

GENERAL LIFE SAFETY NOTES:

USE: A-3 (ASSEMBLY)
 PRIMARY LOAD FACTOR: UNCONCENTRATED TABLES & CHAIRS (15 SF)
 OCCUPANT LOAD: 459 PPL
 CONSTRUCTION TYPE: V-B
 SPRINKLERS: NO

REQUIRED EXITS: 2
 PROVIDED EXITS: 2

DIAGONAL DISTANCE: 127'-2"
 REQUIRED EXIT SEPARATION: 127'-2" / 2 = 63'-6"
 PROVIDED EXIT SEPARATION: 69'-7"

REQUIRED EGRESS WIDTH: 91.8"
 PROVIDED EGRESS WIDTH: 92"

MAXIMUM COMMON PATH OF TRAVEL: 75'-0"
 MAXIMUM ALLOWABLE TRAVEL DISTANCE: 200'-0"
 ACTUAL MAX TRAVEL DISTANCE: 135'-3"

GENERAL PLUMBING NOTES:

USE: A-3 (ASSEMBLY)
 OCCUPANT LOAD: 459 PPL / 2 = 230 PPL

REQUIRED MALE WATER CLOSETS: 2 (1 PER 125 PPL)
 REQUIRED FEMALE WATER CLOSETS: 4 (1 PER 65 PPL)
 PROVIDED MALE WATER CLOSETS: 1 WC & 2 URINAL
 PROVIDED FEMALE WATER CLOSETS: 4 WC + 1 FAMILY

REQUIRED MALE LAVATORIES: 2 (1 PER 200)
 REQUIRED FEMALE LAVATORIES: 2 (1 PER 200)
 PROVIDED MALE LAVATORIES: 2
 PROVIDED FEMALE LAVATORIES: 2

REQUIRED WATERCOOLERS: 1 (1 PER 500)
 PROVIDED WATERCOOLERS: 2

REQUIRED SERVICE SINKS: 1
 PROVIDED SERVICE SINKS: 1 (HOSE BIB)

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

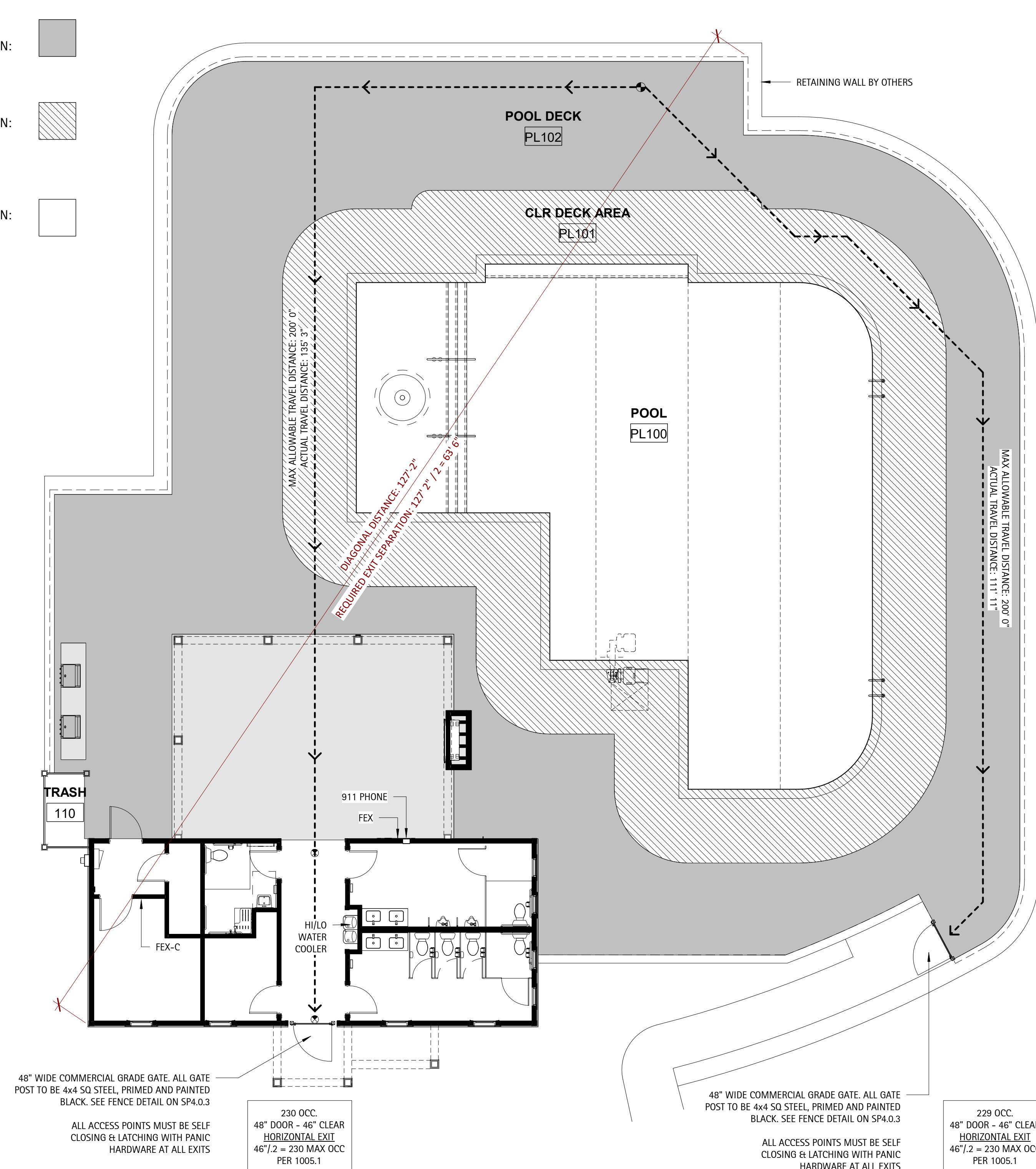
POOL DECK AREA
 3,529 SQ FT / 15 SQ FT PER PERSON:
 236 PEOPLE

8' CLEAR DECK AREA
 1,925 SQ FT / 15 SQ FT PER PERSON:
 129 PEOPLE

POOL AREA
 2,256 SQ FT / 50 SQ FT PER PERSON:
 46 PEOPLE

BATH HOUSE:
 48 PEOPLE

TOTAL A-3 OCCUPANT (INSIDE FENCE) LOAD:
 459 PEOPLE



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

230 OCC.
 48" DOOR - 46" CLEAR
 HORIZONTAL EXIT
 46"/2 = 230 MAX OCC
 PER 1005.1

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

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

229 OCC.
 48" DOOR - 46" CLEAR
 HORIZONTAL EXIT
 46"/2 = 230 MAX OCC
 PER 1005.1

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

1 Life Safety Plan
 G0.3 1/8" = 1'-0"

GENERAL NOTES

- 1 The General Contractor shall be both licensed and bonded in North Carolina and shall provide documents upon the Architect's request.
- 2 The Work shall be done in accordance with all rules and regulations of the North Carolina State Building Code 2006 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.
- 3 General Contractor shall be responsible for the provisions for job safety. These drawings do not contain provisions for job safety.
- 4 Dimensions are to face of framing unless otherwise noted.
- 5 Do not scale drawings. State & written dimensions govern. The General Contractor shall verify all dimensions in the field and shall be responsible for their accuracy. No extra charge or compensation shall be allowed because of difference between actual dimensions and those indicated on the drawings, unless they contribute to a change in the scope of the Work. Any difference which may be found shall be submitted to the Architect for decision prior to ordering, manufacturing, or proceeding with the Work. Horizontal dimensions indicated are to/ffrom 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 +/-.
- 6 General Contractor shall be responsible for comparing all dimensions in the construction documents and existing conditions in the field.
- 7 Framing Subcontractor shall coordinated framing with locations of HVAC vents, plumbing and light fixtures so as to avoid conflict.
- 8 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.
- 9 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.
- 10 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.
- 11 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 precedent 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.
- 12 General Contractor shall verify that no conflicts exist in locations of any and all mechanical, telephone, electrical, plumbing and sprinkler equipment (to include all piping, duct work, sprinklers structural members and conduit) and that clearances for installation and maintenance of above equipment is provided. Elements in conflict shall be determined and reviewed with the Architect prior to work proceeding. Contractor to coordinate new work with existing conditions.
- 13 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.
- 14 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.
- 15 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.
- 16 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.
- 17 Patch, repair and install all fireproofing as required by code. Fireproof any new penetrations required by the work.
- 18 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.
- 19 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.
- 21 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.
- 22 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.
- 23 General Contractor shall waive "Common Practice" and "Common Usage" as construction criteria wherever details and Contract Documents of governing codes, ordinances, etc. require quantity or better quality than common practice or common usage would require.

GENERAL NOTES

- 24 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.
- 25 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.
- 26 The General Contractor shall exercise extreme care and precaution during the construction of the Work, and schedule work, to minimize disturbances to adjacent spaces and for structures and their occupants, property, public thoroughfares, etc. The General Contractor shall take precautions and be responsible for the safety of all building occupants from construction procedures. The General Contractor shall be responsible for any overtime costs incurred thereby.
- 27 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.
- 28 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.
- 29 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.
- 30 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.
- 31 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
- 32 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 laction with owner prior to installation.
- 33 The Architect shall not be responsible for constructed variations from the information contained here-in unless reviewed and approved by Architect.
- 34 Do not scale drawings, but rather inquire of Architect. Reproduction of these drawings is prohibited unless written permission is obtained from the Architect.
- 35 All Trades to caulk with Manicapality Approved "Fire Caulk" at all top plate penetrations.

FLOOR FINISH NOTES

1. Refer to Finish Plan & Schedule for extent and type of all floor finishes.
2. 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.
3. All floors to slope to floor drains - 1/4" per 1'-0" U.N.O
4. All exterior floor slabs to receive a light broom concrete finish. U.N.O.
5. SEE STRUCTURAL DRAWINGS FOR ALL FOUNDATION SPECIFICATIONS.

INTERIOR FINISH NOTES

1. 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.
2. 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 alkylid latex
3. 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.
4. Toilet and bathing room floors shall have a smooth, hard, non-absorbant surface that extends upward onto the walls at least 6"
5. 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

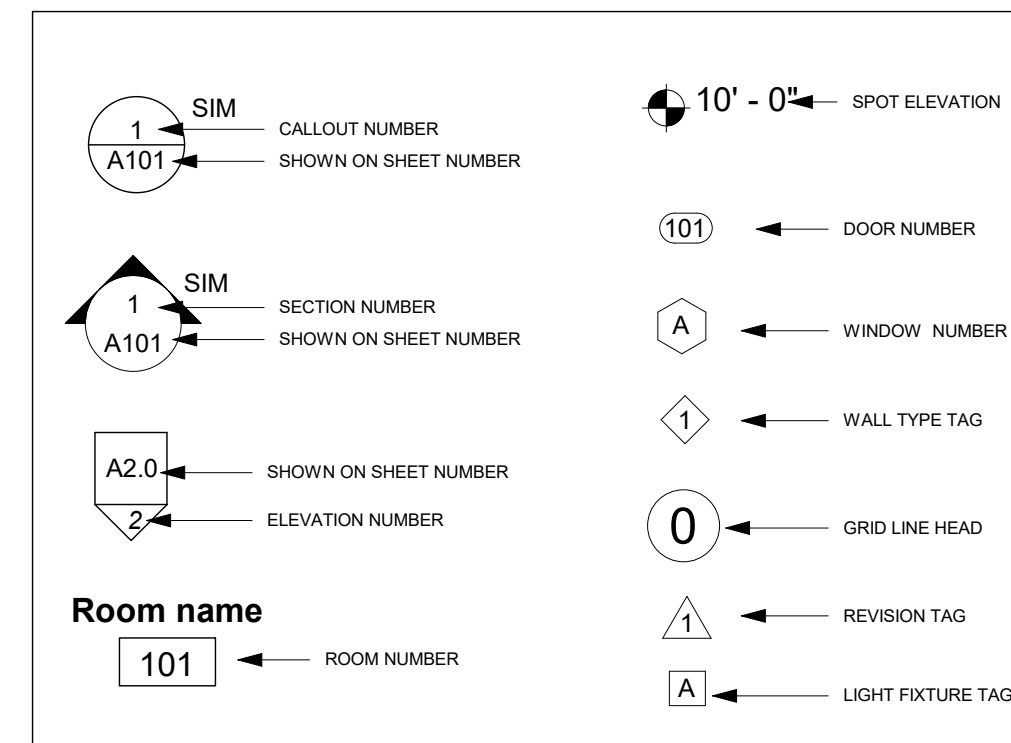
WALL SECTION NOTES

- 1 Bituminous Damp Proofing shall be applied to exterior foundations of all habitable spaces.
- 2 All treated lumber shall bear the designation AWPAC22. Pressure treated lumber shall be used in the following locations:
a. Wood in contact with concrete or masonry;
b. Siding within 6" of the ground;
c. Wood exposed to weather.
- 3 Provide the minimum insulation levels, required in all zone 7 areas as applicable: (All insulation to meet Chapter 26 requirements)
a. Walls R-13 Minimum
b. Ceilings/ Roofs R-30 Minimum;
- 4 Install 5/8" Densglass sheathing behind all tub and shower walls, use water-resistant GWB for all bathroom ceilings UONO.

ABBREVIATIONS

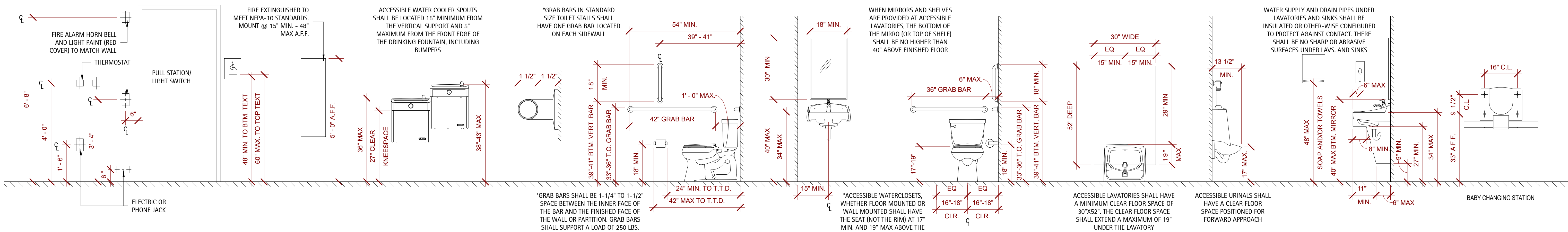
AC ACPL ACT ADH ADJT ALT AL AP APC ASPH AT	ACOUSTIC ACOUSTICAL PLASTER ACOUSTICAL CEILING TILE ADHESIVE ADJUSTABLE ALTERNATE ALUMINUM ACOUSTIC PANEL ACOUSTIC PANEL CEILING ASPHALT ASPHALT TILE	B BD BIT BR BRZ	BASE BOARD BITUMINOUS BRICK BRONZE	CAB CB CEM CER CG CI CLG CLR C-MAR CONO COR CPT CPR CS CT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



REFERENCED BUILDING CODES

- BUILDING: 2018 NORTH CAROLINA STATE BUILDING CODE
- ENERGY: 2018 NORTH CAROLINA ENERGY CONSERVATION CODE
- FIRE: 2018 NORTH CAROLINA FIRE PREVENTION CODE
- PLUMBING: 2018 NORTH CAROLINA STATE PLUMBING CODE
- MECHANICAL: 2018 NORTH CAROLINA STATE MECHANICAL CODE
- ELECTRICAL: 2020 NATIONAL ELECTRICAL CODE
- ACCESSIBILITY: 2009 ANSI A117.1
- POOL: 2015 INTERNATIONAL SWIMMING POOL AND SPA CODE
NC DENR - 15A NCAC 18A.2500

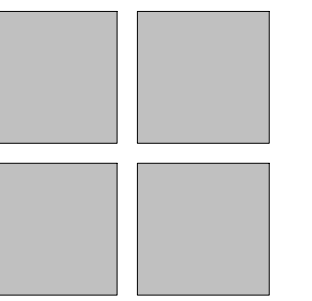


TYPICAL MOUNTING HEIGHTS

*PROVIDE READY BLOCKING FOR GRAB BARS, WALL HUNG TOILETS, AND ACCESORIES DURING FRAMING



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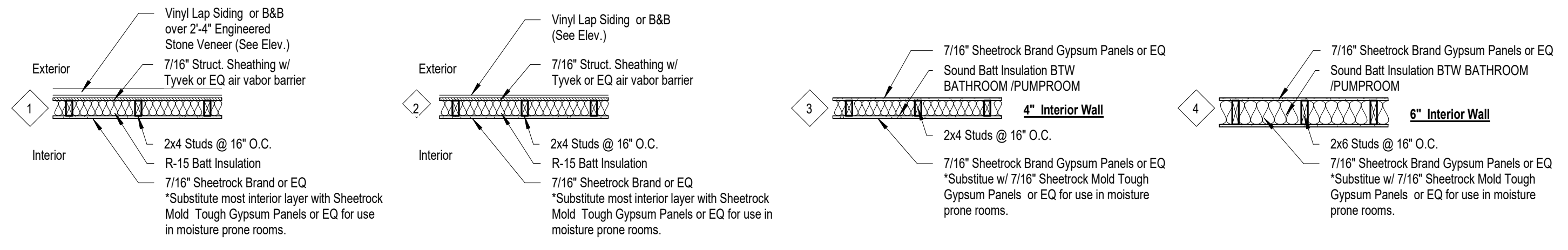
SHEET DISCRPTION

GENERAL NOTES

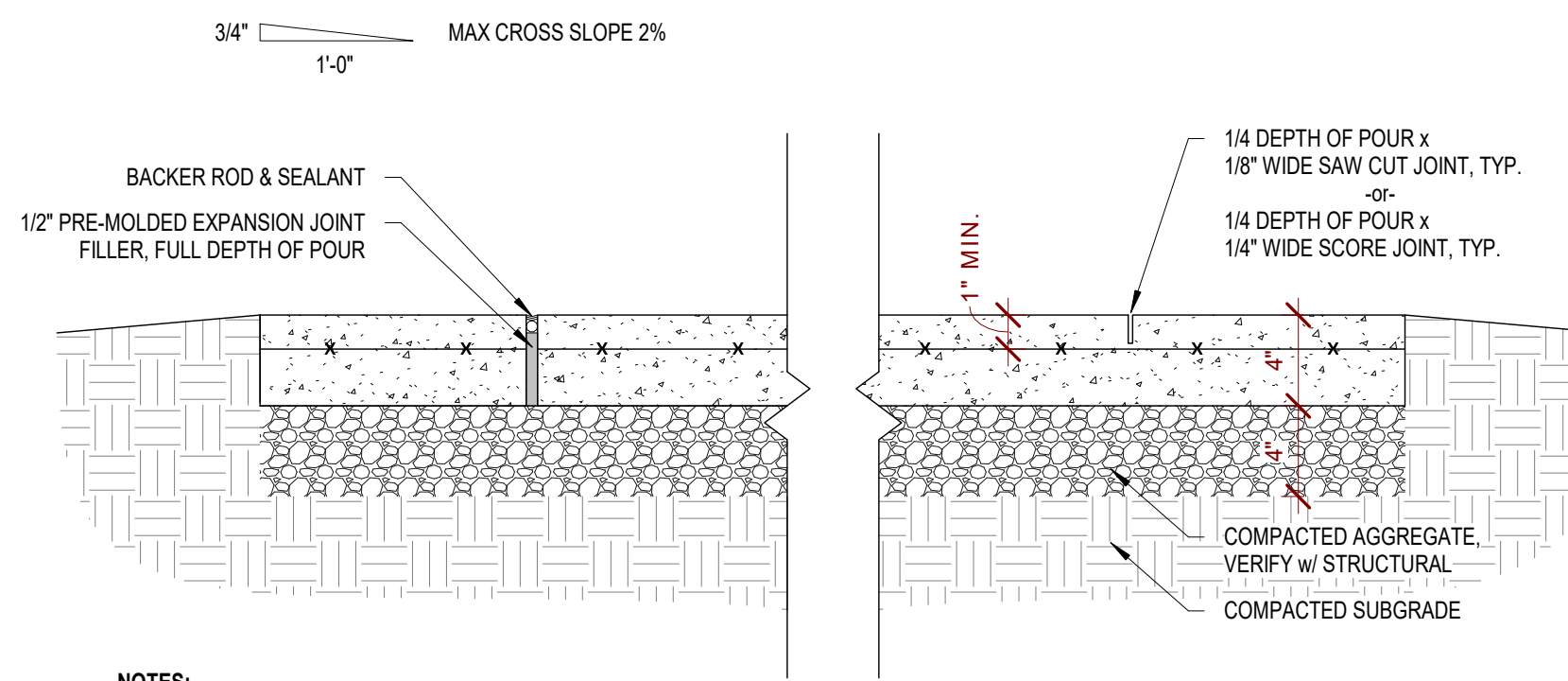
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DATE ISSUED: 12/11/2023
DRAWING BY: JVD
CHECKED BY: DSCJ/PGC

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LENNAR HOMES
AMENITY & POOL
ANGIER, NC**

G0.4

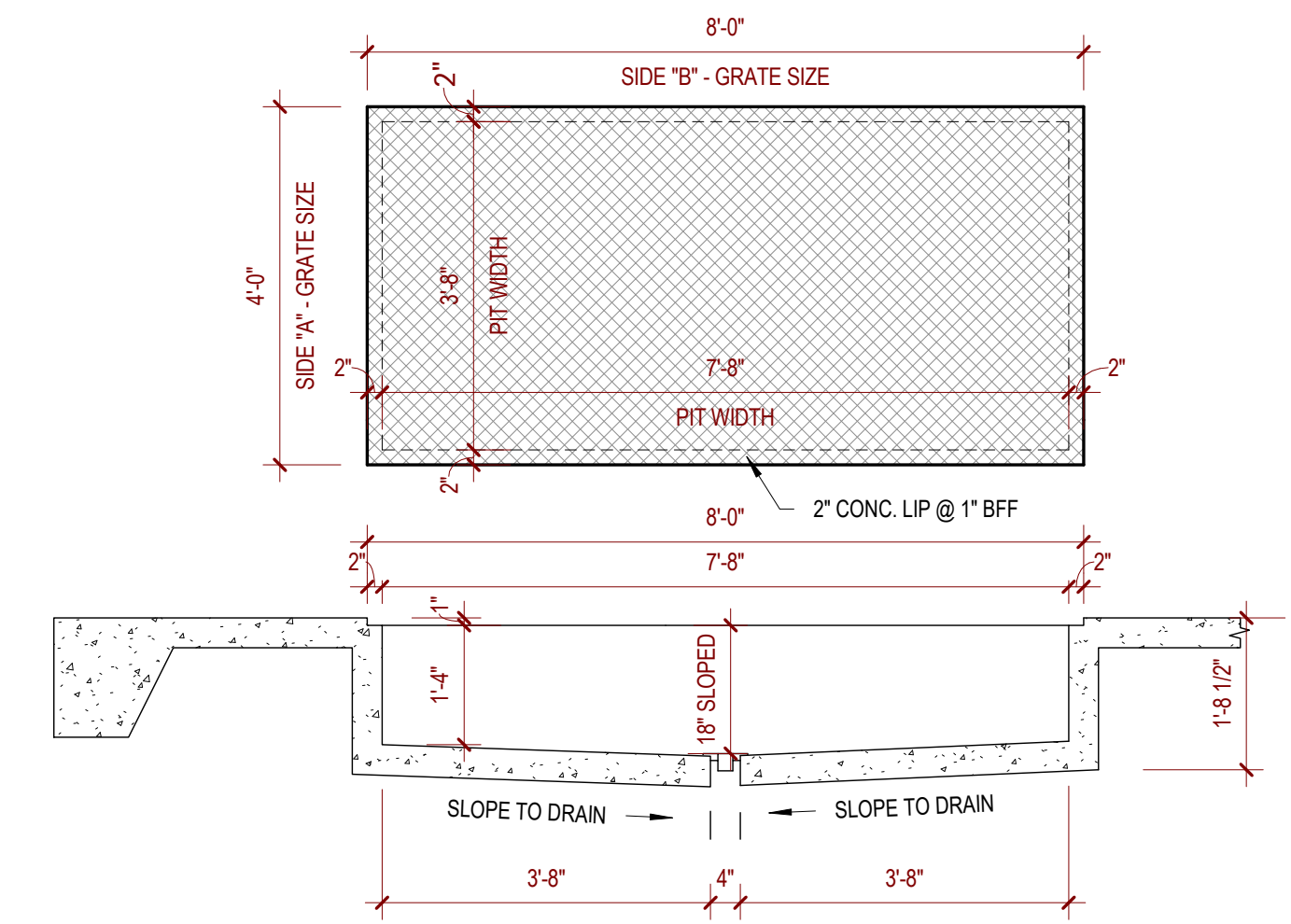


Wall Type Details



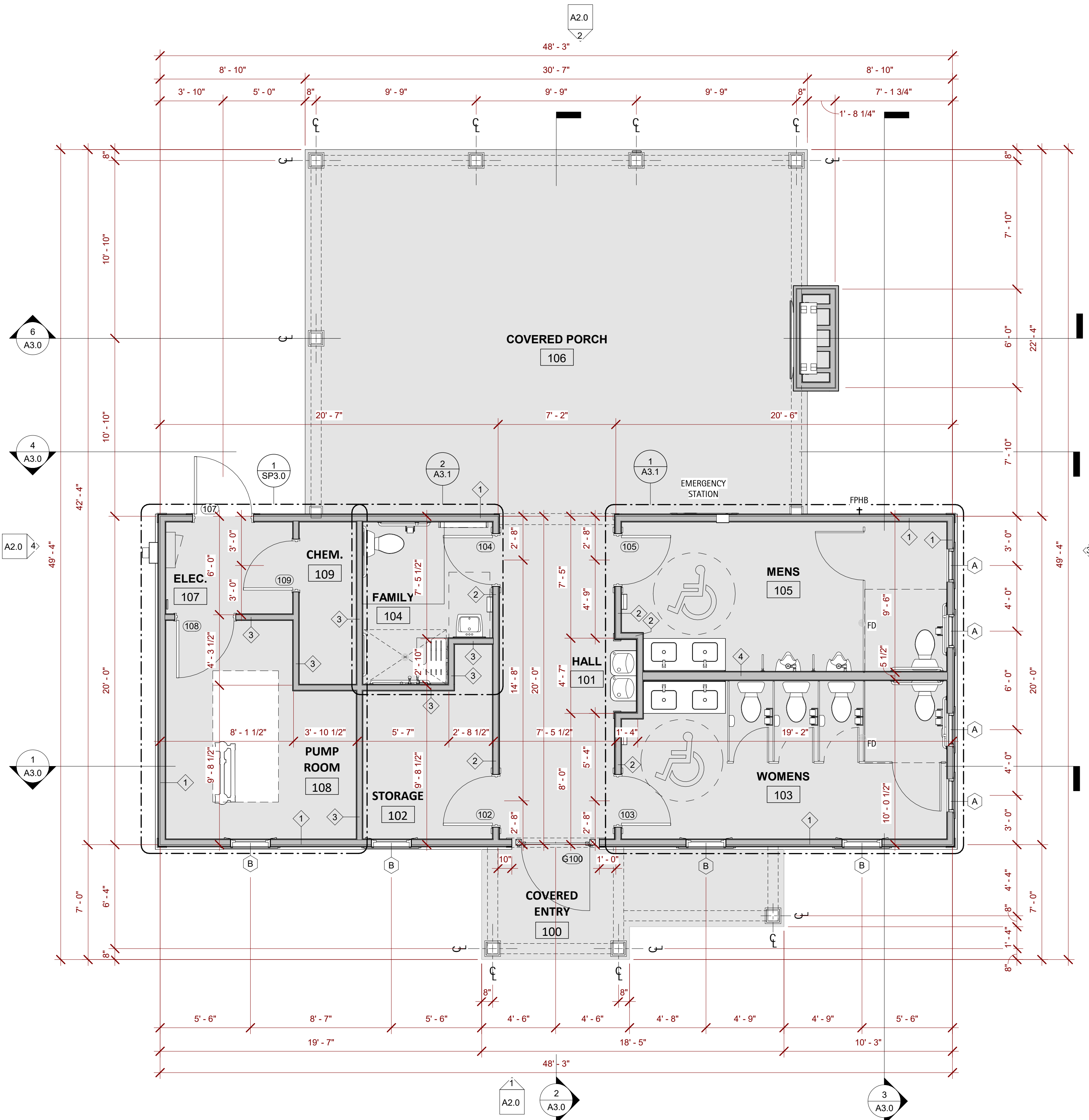
NOTES:

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.

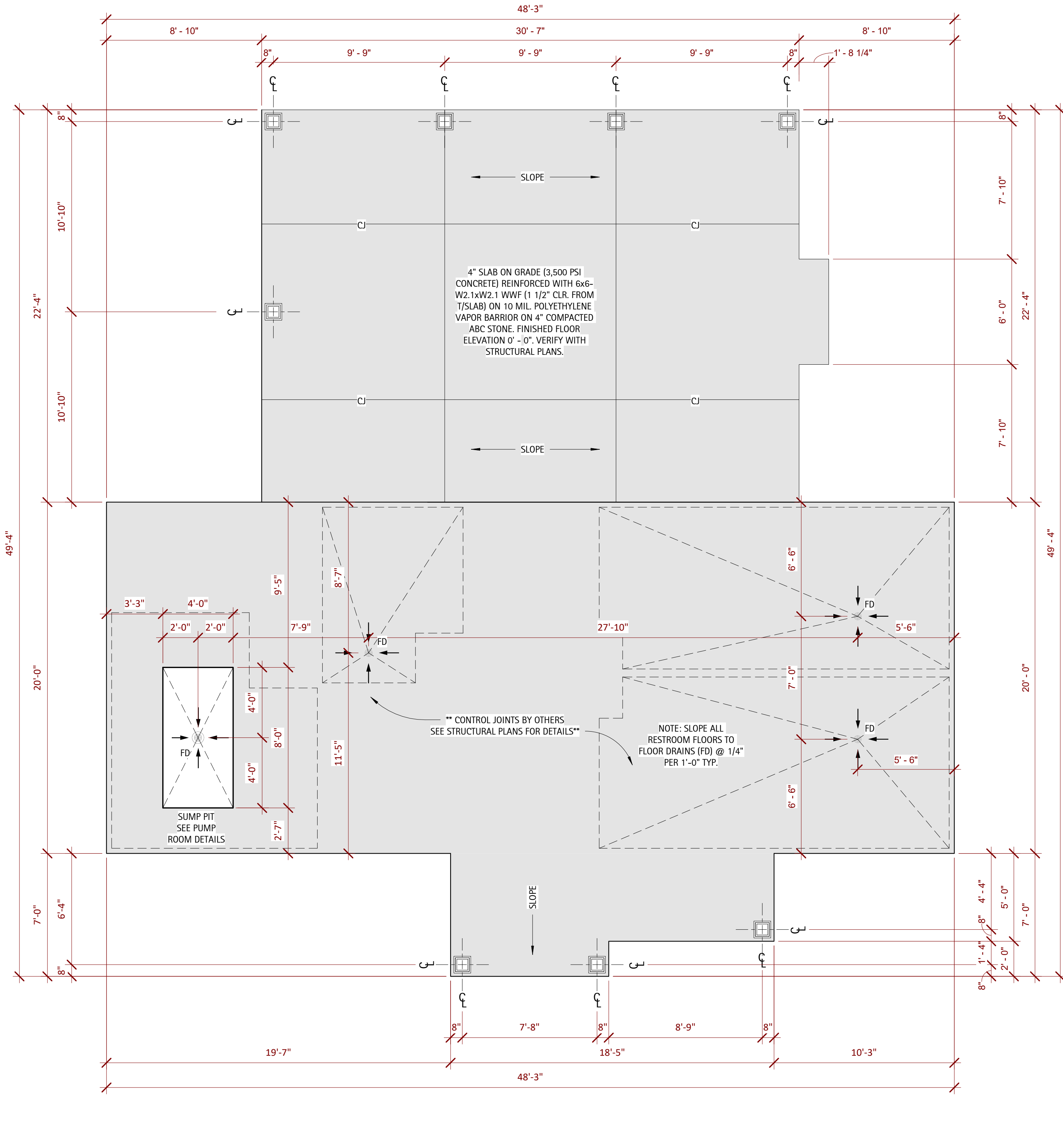


3 Detail - Sump Pit
1/2" = 1'-0"

4 Detail - Typ Concrete Joints
1 1/2" = 1'-0"



2 Ground Floor Plan
1/4" = 1'-0"



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



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SHEET DISCUSSION
FOUNDATION & FLOOR PLANS

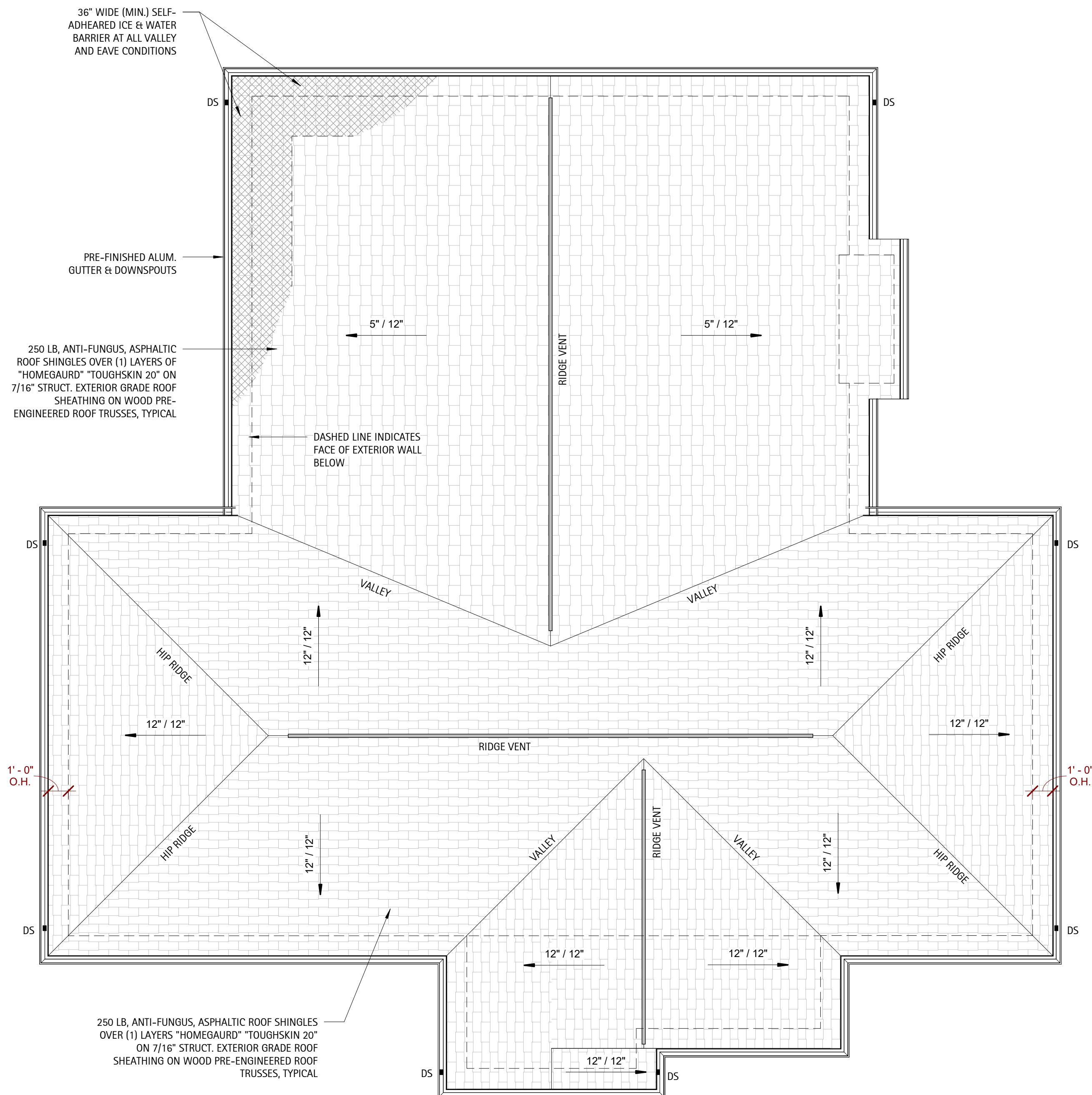
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ROOF NOTES

1. Roof decks shall be covered with approved roof coverings secured to the building or structure in accordance with the NCSBC. Roof coverings shall be designed and installed in accordance with the building code and the approved manufacturer's instructions.
2. Crickets or saddles shall be installed on the ridge side of any chimney or penetration greater than 30 inches wide as measured perpendicular to the slope. Cricket or saddle coverings shall be sheet metal or of the same material as the roof covering.
3. Asphalt shingles shall only be used on roof slopes of 2:12 or greater.
4. Roof slopes from 2:12 to 4:12, underlayment shall be two layers applied in the following manner. Apply a minimum 19" wide strip of underlayment felt parallel with and starting at the eaves, fastened sufficiently to hold in place. Starting at the eave, apply 36-inch-wide sheets of underlayment overlapping successive sheets 19 inches minimum and fasten in place.
5. Roof slopes from 4:12 or greater, underlayment shall be a minimum of one layer.
6. Flashing shall be installed at the wall and roof intersections, at gutters, and wherever there is a change in roof slope or direction and around roof openings. Where flashing is of metal, the metal shall be corrosion resistant with a thickness of not less than 0.019in (No. 26 galvanized sheet)
7. Areas prone to ice formation along eaves causing a backup of water shall have an ice barrier that consists of at least (2) two layers of underlayment cemented together or of a self-adhering polymer-modified bitumen sheet. Extend ice barrier min. 18" each side of valleys and other ice prone areas.
8. 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.
9. Light Location: Truss manufacturer to coordinate truss layout with reflected ceiling plans, electrical plans, and mechanical plans to avoid conflicts
10. Mechanical, Electrical, and Plumbing or other trades shall ensure that all roof penetrations are to the rear of the structure.
11. Roof shall provide natural venting per NCSBC 1203.1 or be provided with mechanical venting per the International Mechanical Code.



2 Roof Plan
1/4" = 1'-0"

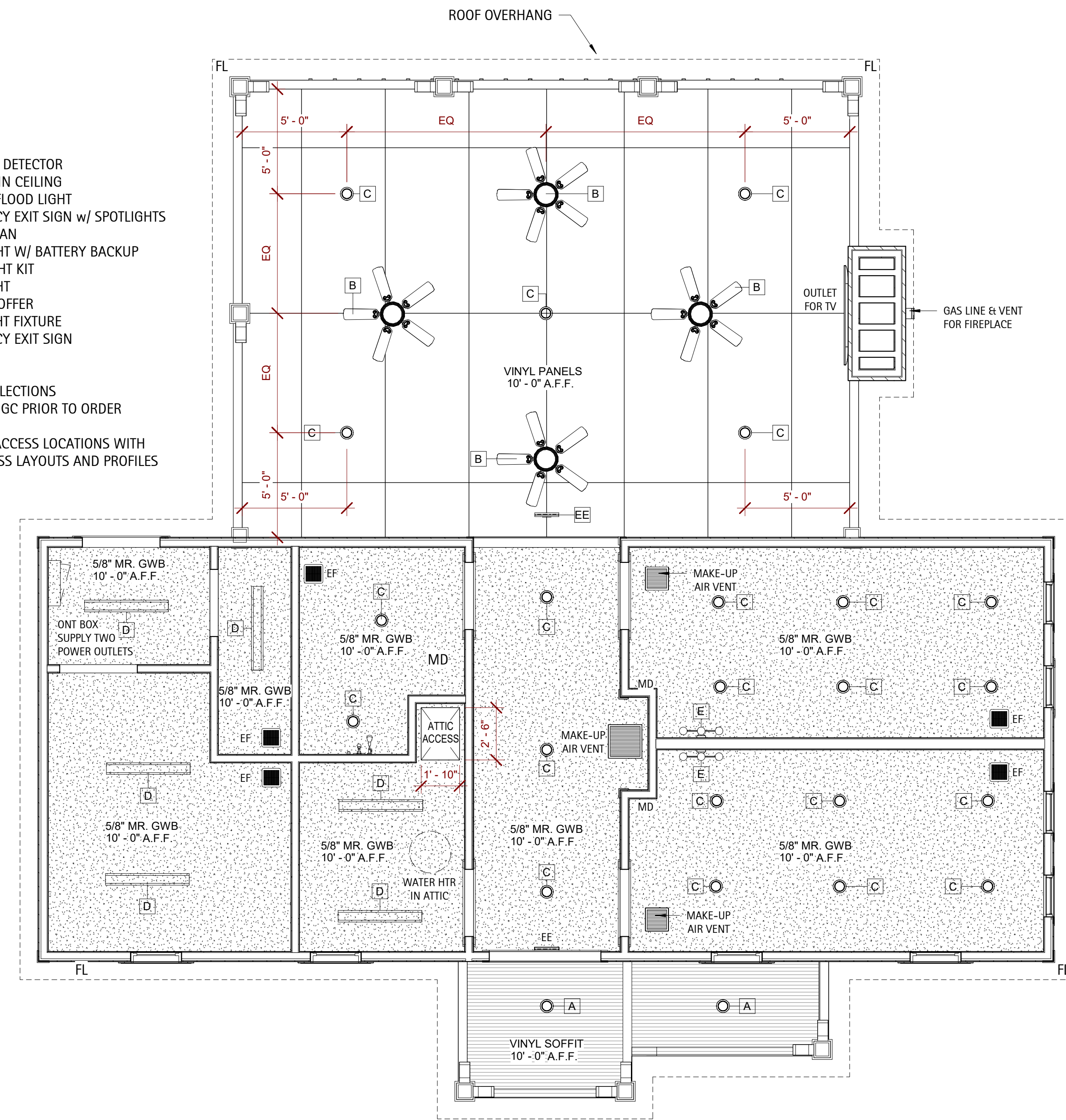
REFLECTIVE CEILING NOTES

1. Borders at lay-in acoustical ceiling panels shall be cut to match factory edge profile. No exposed fasteners shall be permitted including pop rivets and tappets.
2. Height of ceilings shall be measured from top of slab to finish face of GWB or face of ceiling grid as indicated on the Reflected Ceiling Plan, UON.
3. All light fixtures are to be installed according to the Architectural Reflected Ceiling Plan.
4. Light fixture types, quantities and locations only are noted on Architectural Reflected Ceiling Plans. Specifications, switching, exit lights, emergency lighting, life safety equipment, and circuiting are noted on Engineering documents.
5. Dimensioned light fixtures are from finished face of partitions to centerline of fixture and from centerline of fixture to centerline of fixture. All fixtures shall be installed in center of ceiling tile unless noted otherwise. Any discrepancies with light fixtures, switches, thermostats, or diffusers as to location between architectural and engineering drawings or between the drawings and existing field conditions shall be clarified with the Architect before proceeding with installation.

- MD - MOTION DETECTOR
LOCATE IN CEILING
- FL - EXTERIOR FLOOD LIGHT
- EE - EMERGENCY EXIT SIGN w/ SPOTLIGHTS
- EF - EXHAUST FAN
- A - 6" CAN LIGHT W/ BATTERY BACKUP
- B - FAN W/ LIGHT KIT
- C - 6" CAN LIGHT
- D - 1X4 LED TROFFER
- E - VANITY LIGHT FIXTURE
- EE - EMERGENCY EXIT SIGN

* VERIFY ALL SELECTIONS WITH OWNER / GC PRIOR TO ORDER

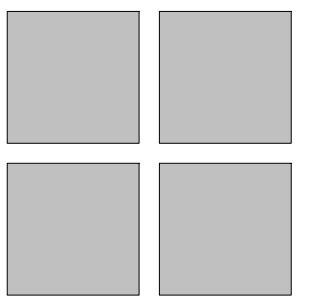
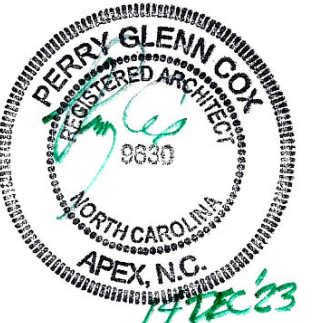
*VERIFY ATTIC ACCESS LOCATIONS WITH APPROVED TRUSS LAYOUTS AND PROFILES



1 Reflected Ceiling Plan
1/4" = 1'-0"



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SHEET DISCUSSION
CEILING & ROOF PLANS

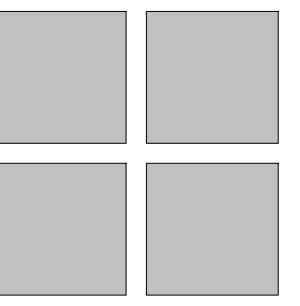
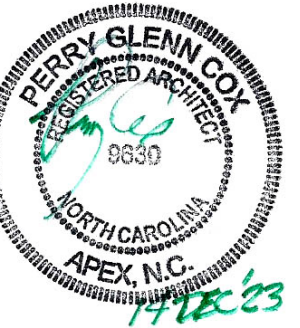
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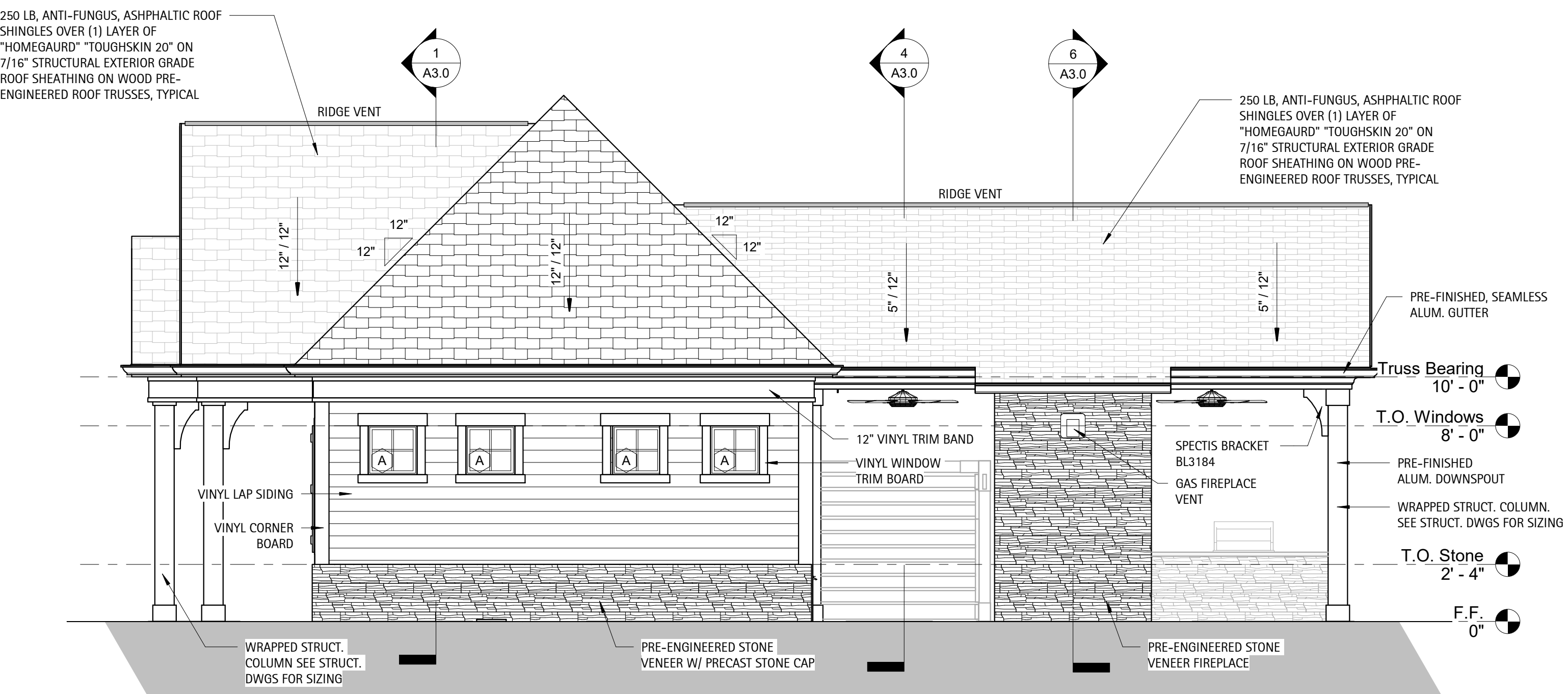
SHEET DISCUSSION

EXTERIOR ELEVATIONS

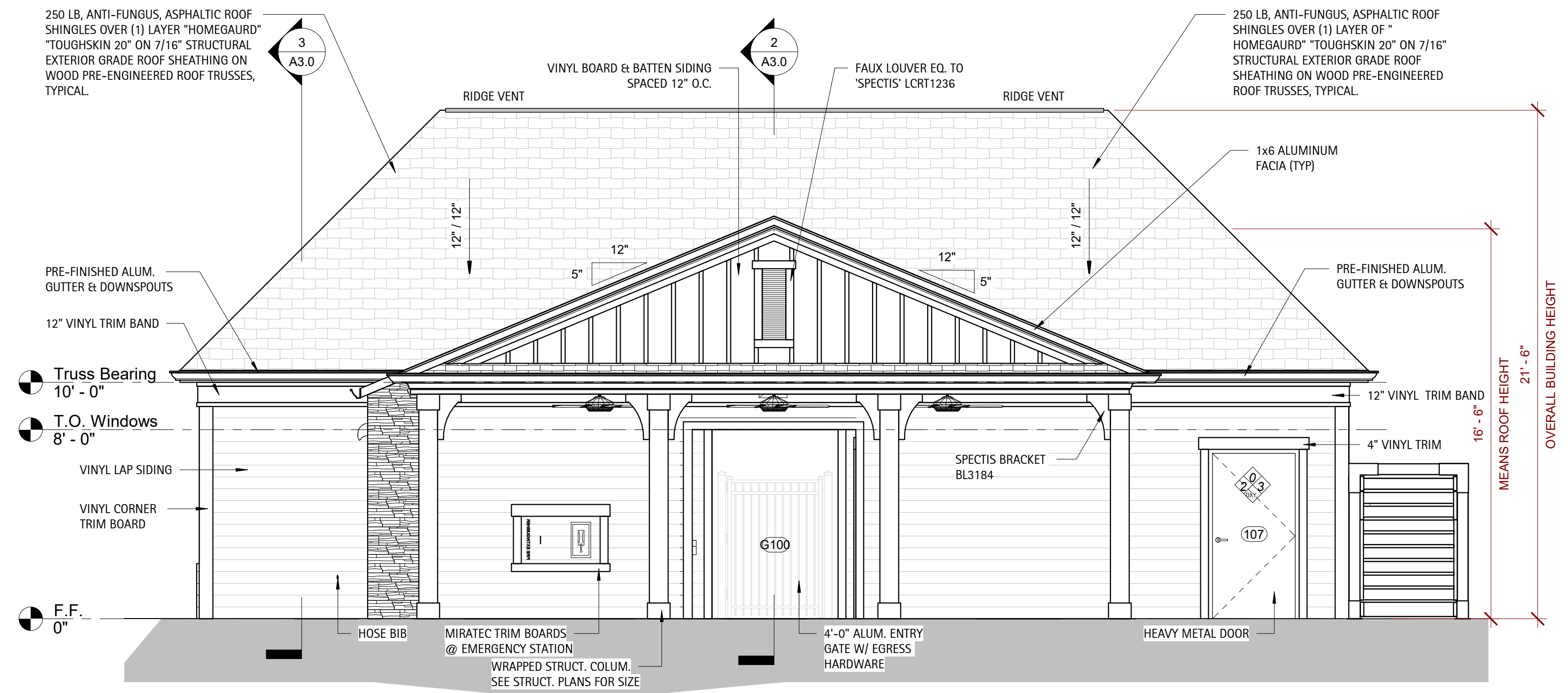
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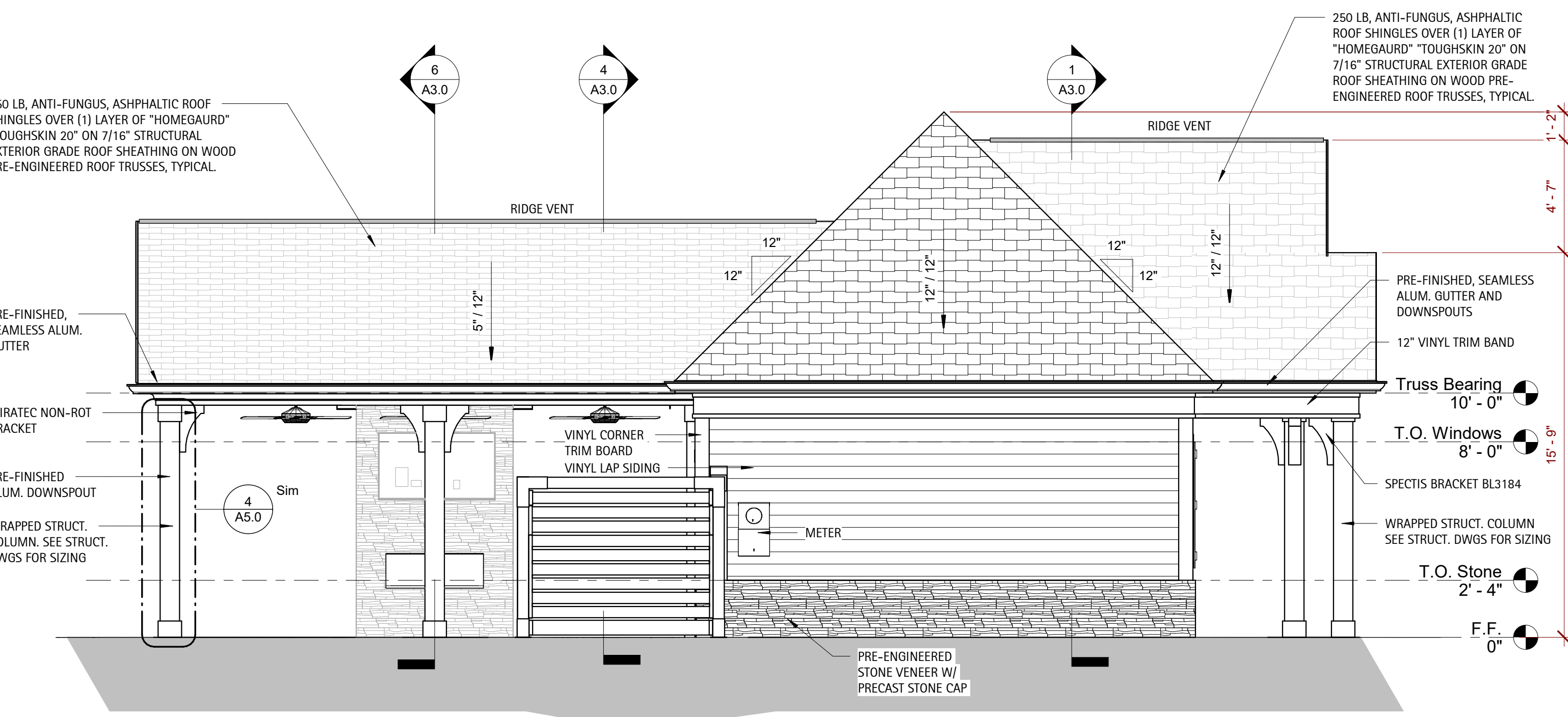
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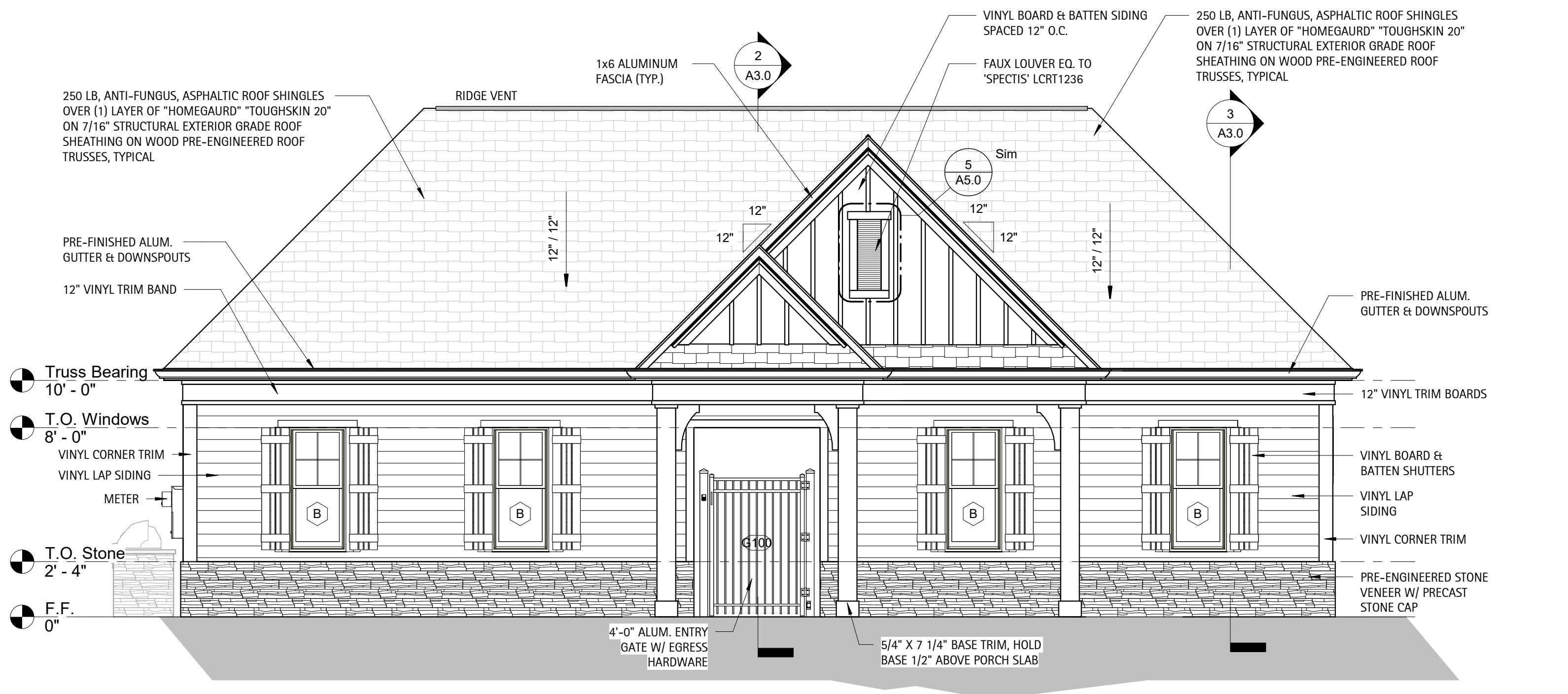
3 A2.0 Left Side Elevation
1/4" = 1'-0"



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



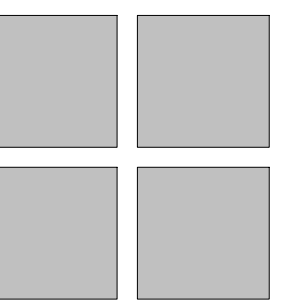
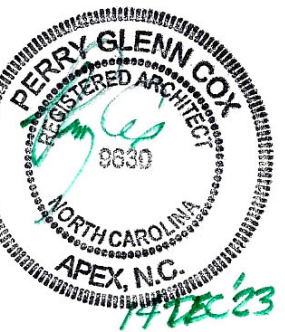
4 A2.0 Right Side Elevation
1/4" = 1'-0"



1 A2.0 Front Elevation
1/4" = 1'-0"



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SHEET DISCUSSION

BUILDING SECTIONS & DETAILS

PROJECT #: 2023005

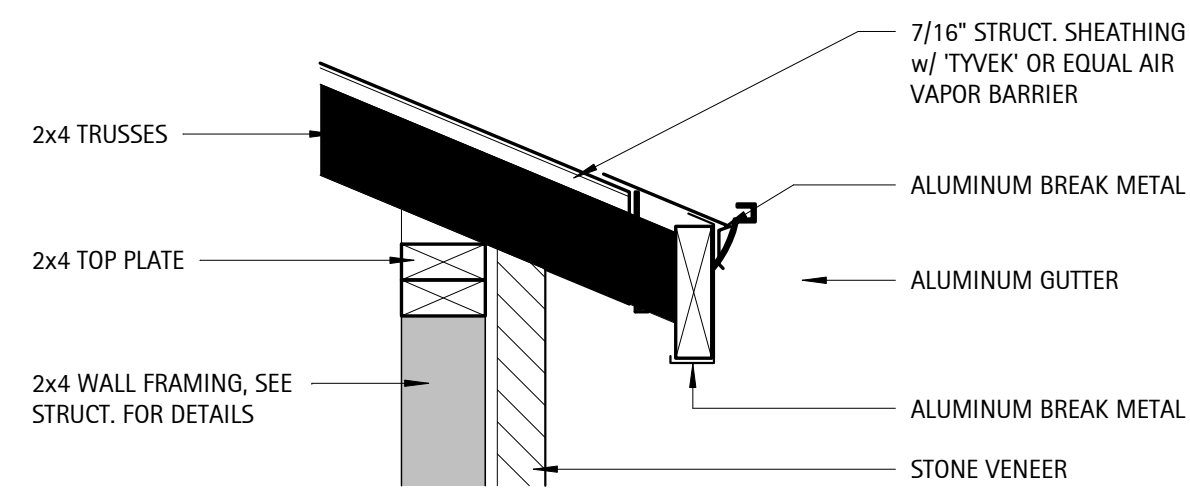
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DRAWING BY: JVD/BSJ

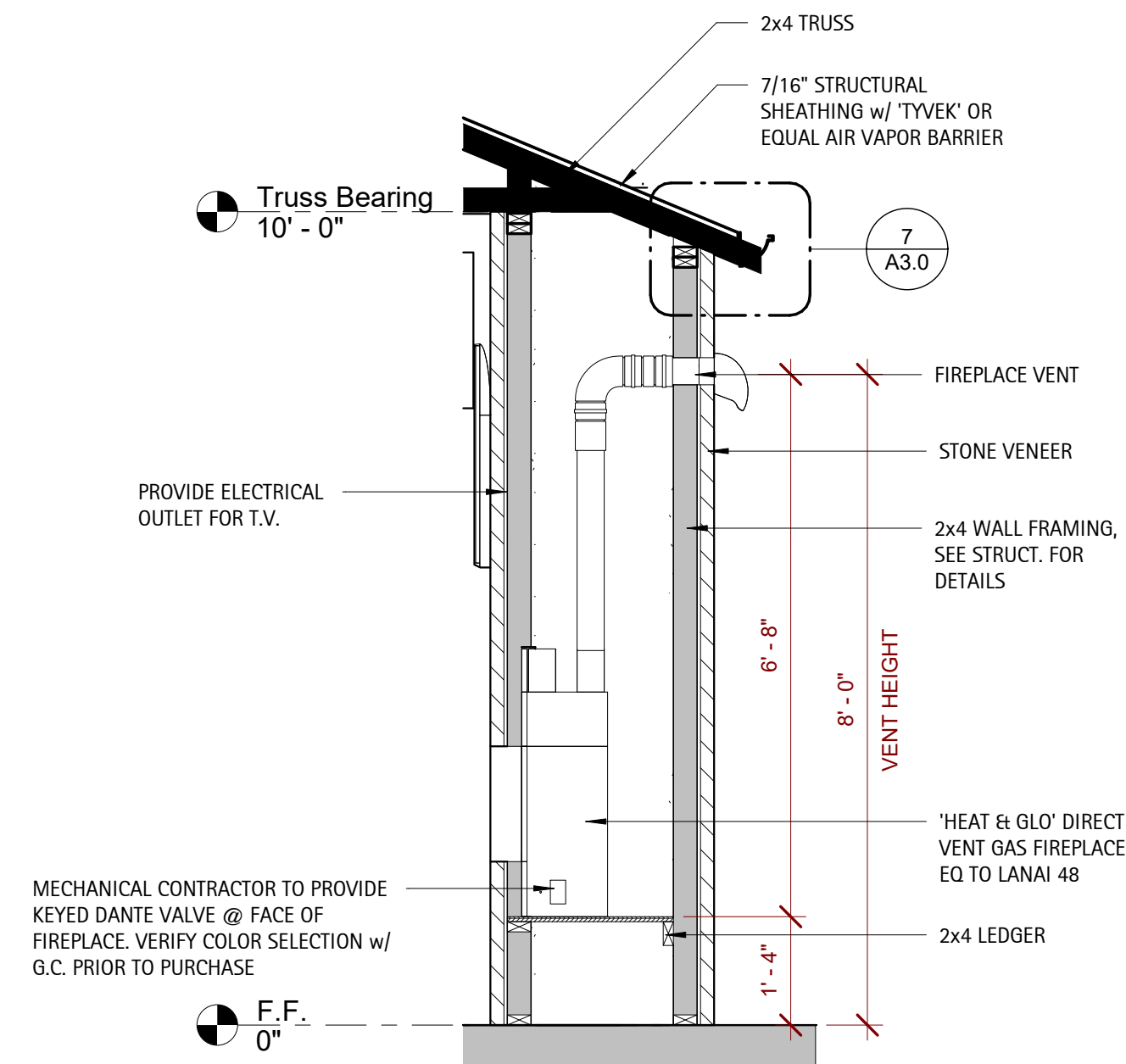
CHECKED BY: PGC/DSC

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ANGIER, NC

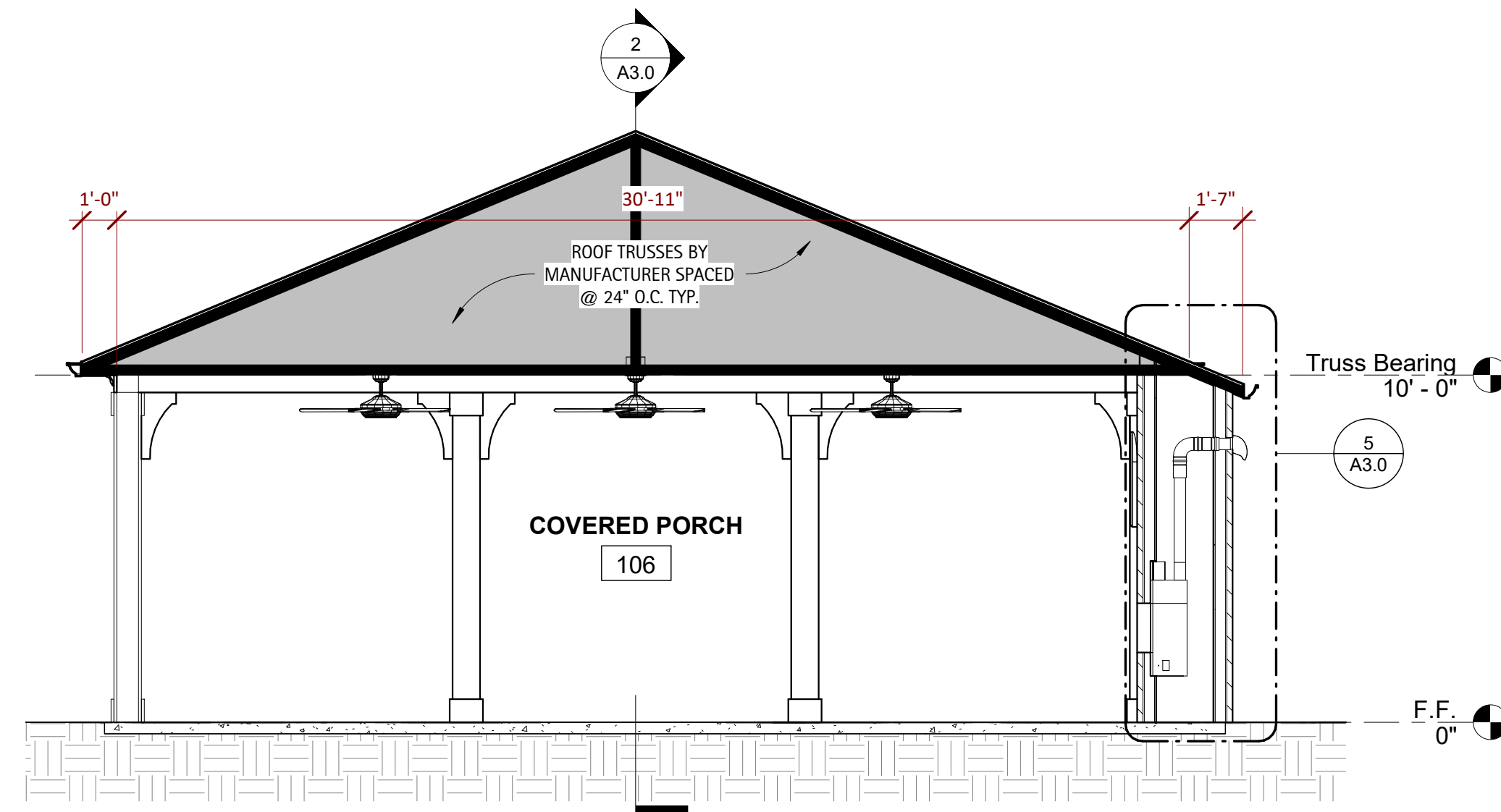
A3.0



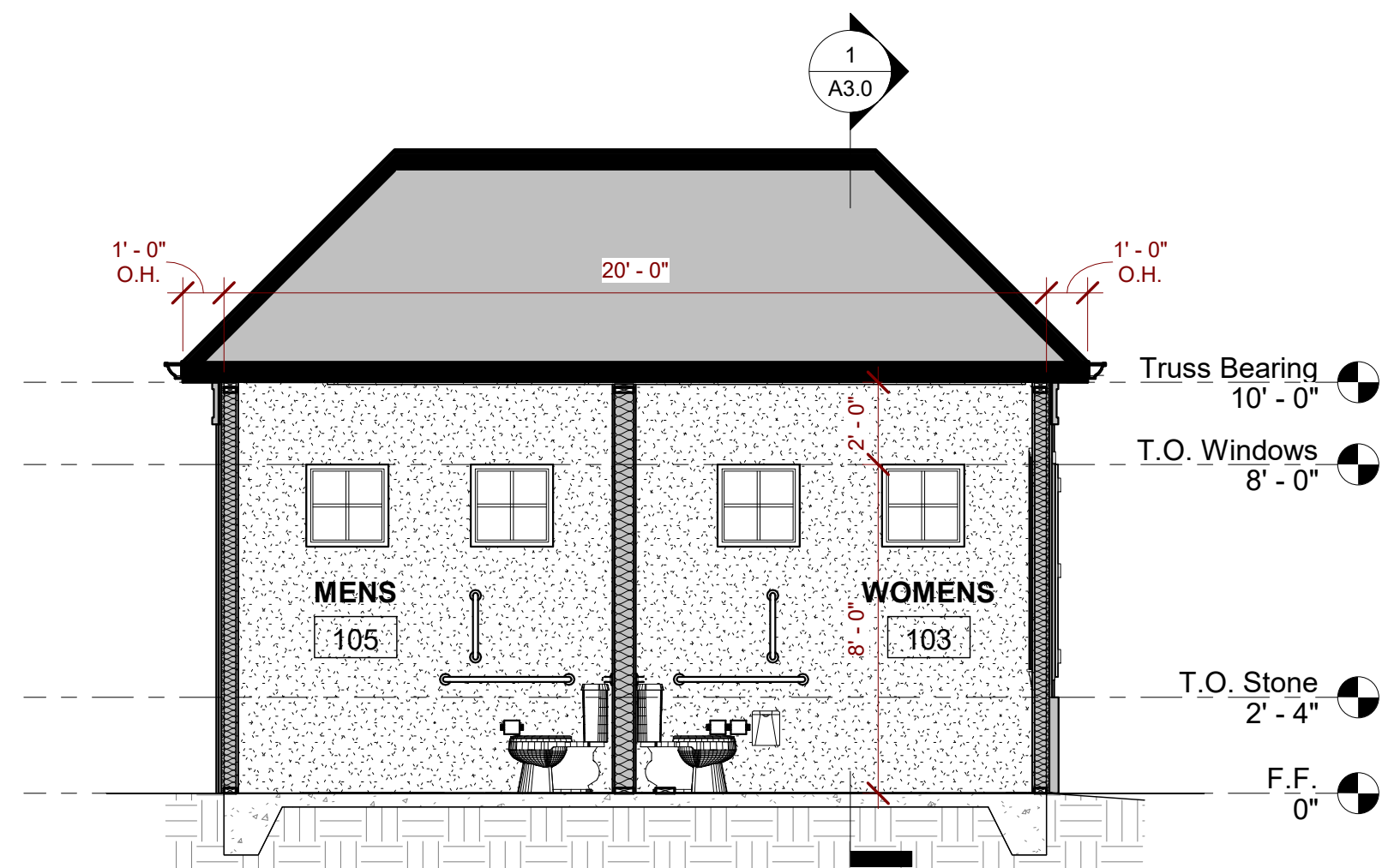
Section - Enlarged Fireplace Truss
1 1/2" = 1'-0"



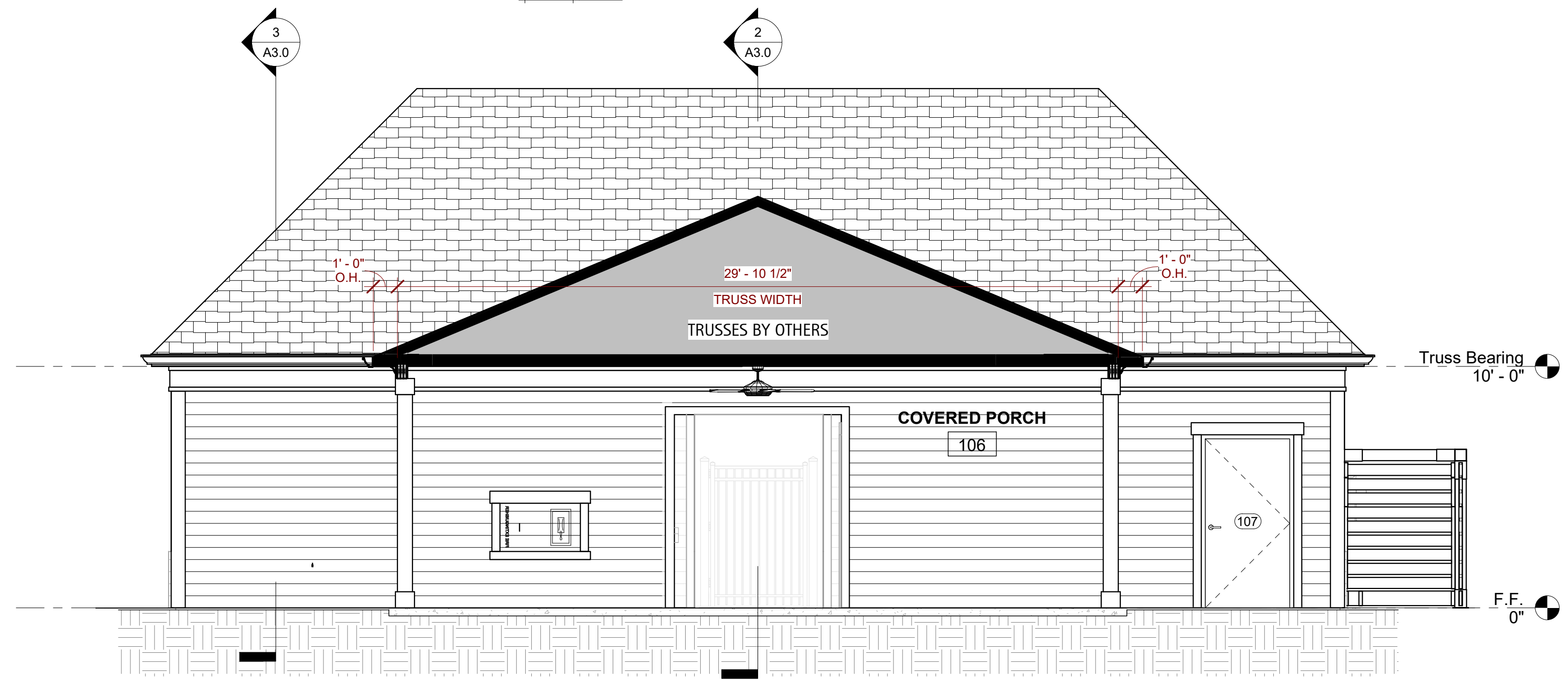
Section - Enlarged Fireplace
1/2" = 1'-0"



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



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



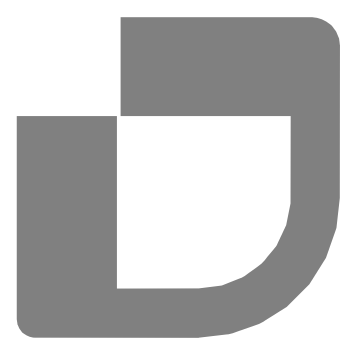
Section - Through Rear Porch
1/4" = 1'-0"



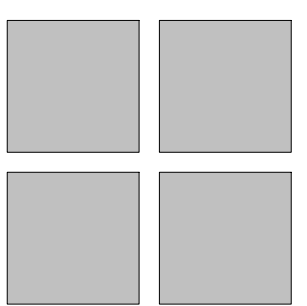
Section - Through Ridge
1/4" = 1'-0"



Section - To Front
1/4" = 1'-0"



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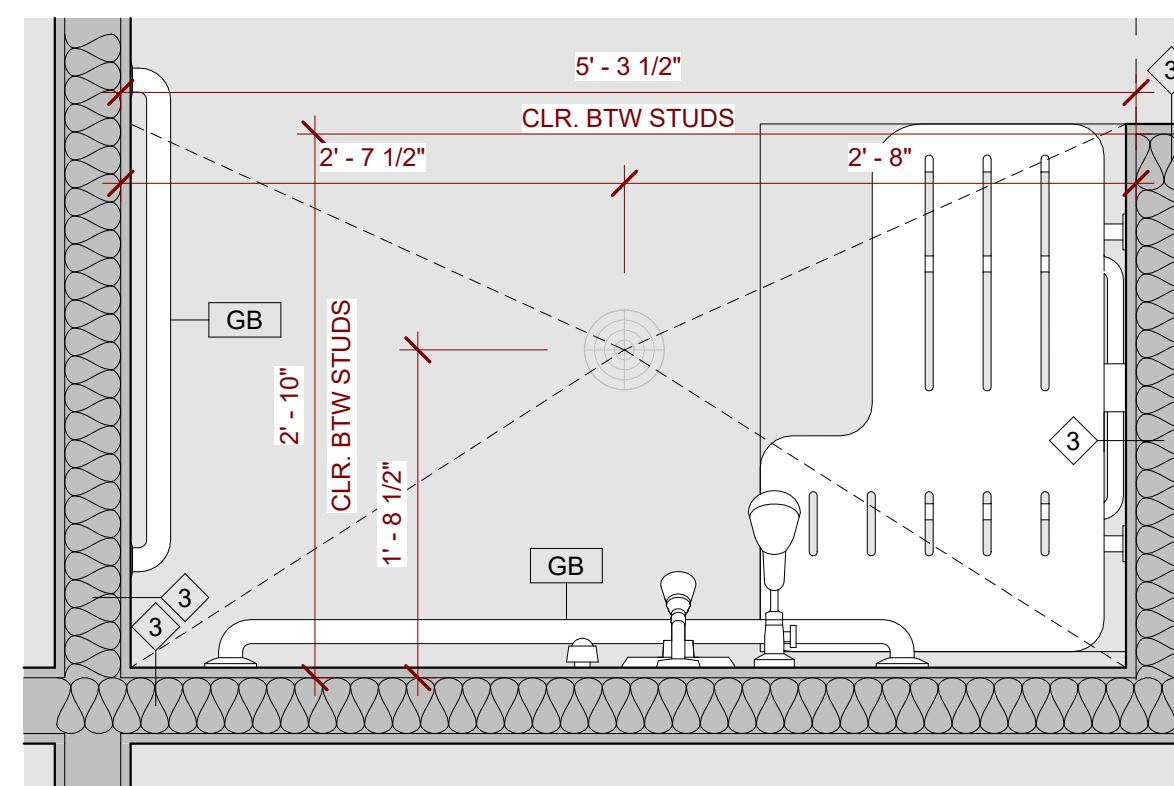


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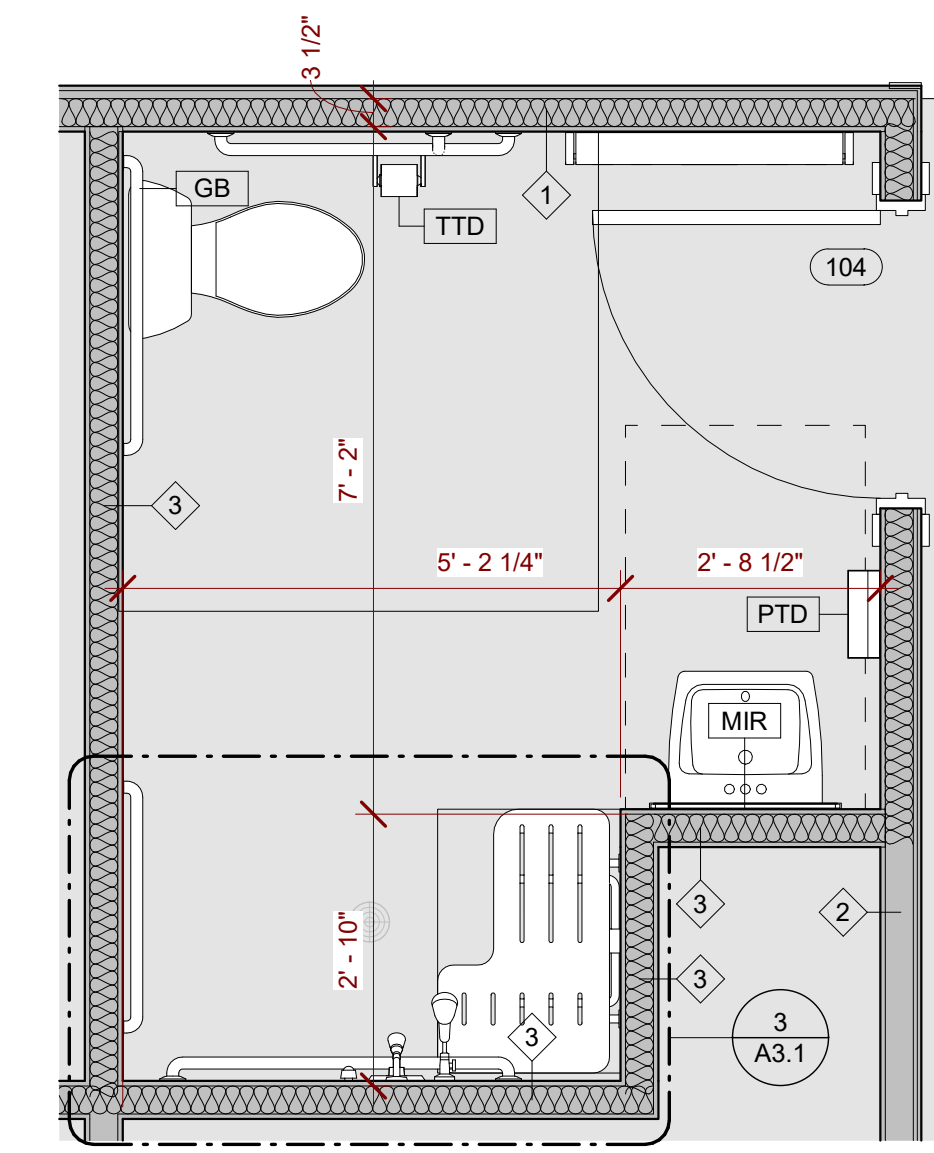
MARK	ITEM	MANUFACTURER	MODEL NUMBER
TTD	SURFACE MOUNTED DUAL ROLL TOILET TISSUE HOLDER	AMERICAN SPECIALTIES, INC	0715
GB	GRAB BAR - 1 1/2" DIA., S/S, PREENED GRIP, SNAP FLANGE 36", 42" & 18"	AMERICAN SPECIALTIES, INC	3800 TYPE-01
MIR	INTERLOK S.S. FRAMED MIRROR W/ SHATTER RESISTANT GLASS	AMERICAN SPECIALTIES, INC	0600
CH	SURFACE MOUNTED COAT HOOK	AMERICAN SPECIALTIES, INC	0714
PTD	SURFACE MOUNTED PAPER TOWEL DISPENSER - BATTERY TOUCHLESS HARWIRE	AMERICAN SPECIALTIES, INC	8523A
SD	SURFACE MOUNTED S.S. AUTOMATIC LIQUID/GEL SOAP DISPENSER - BATTERY POWERED	AMERICAN SPECIALTIES, INC	0360
SN	SURFACE MOUNTED SANITARY NAPKIN DISPOSAL (WOMEN'S TOILET ONLY)	AMERICAN SPECIALTIES, INC	0852
CS	SURFACE MOUNTED BABY CHANGING STATION	AMERICAN SPECIALTIES, INC	9012
TP	TOILET PARTITION - FLOOR SUPPORTED W/ HEADRAIL, POWDER COATED STEEL FINISH	GENERAL PARTITIONS	SERIES 40-5

NOTE SEE SHEET GO.4 FOR TYPICAL MOUNTING HEIGHTS & CLEARANCES

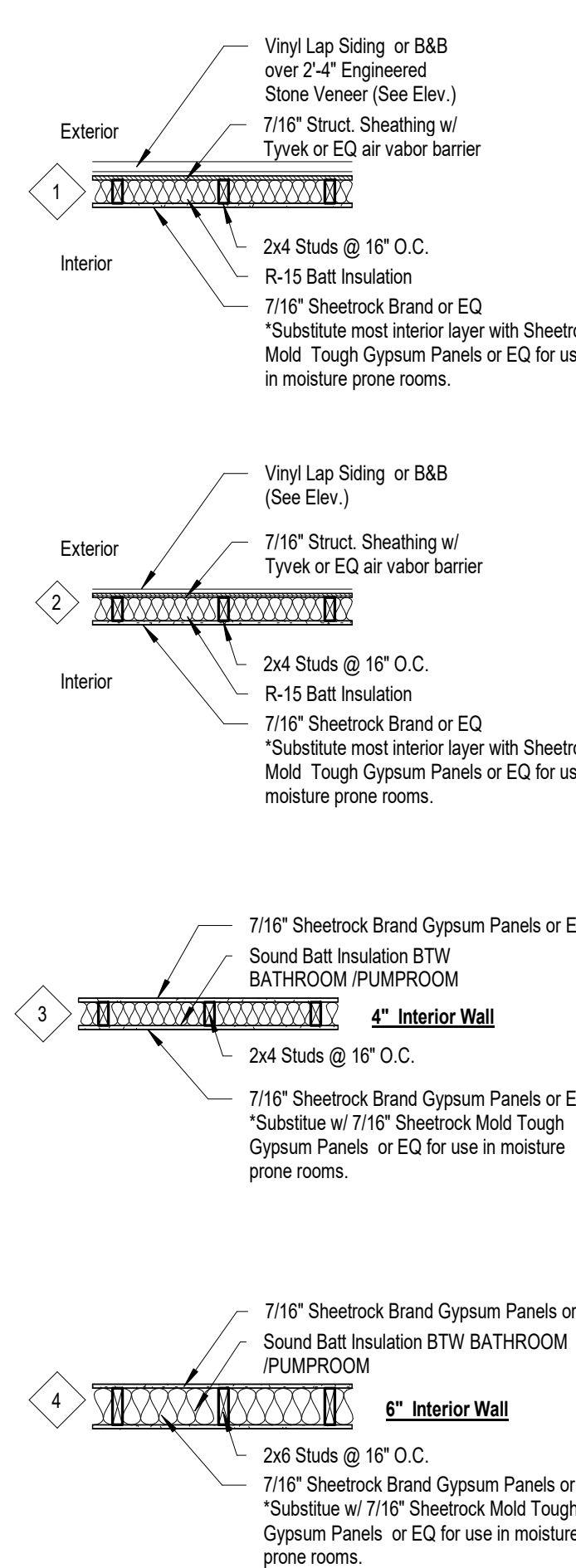
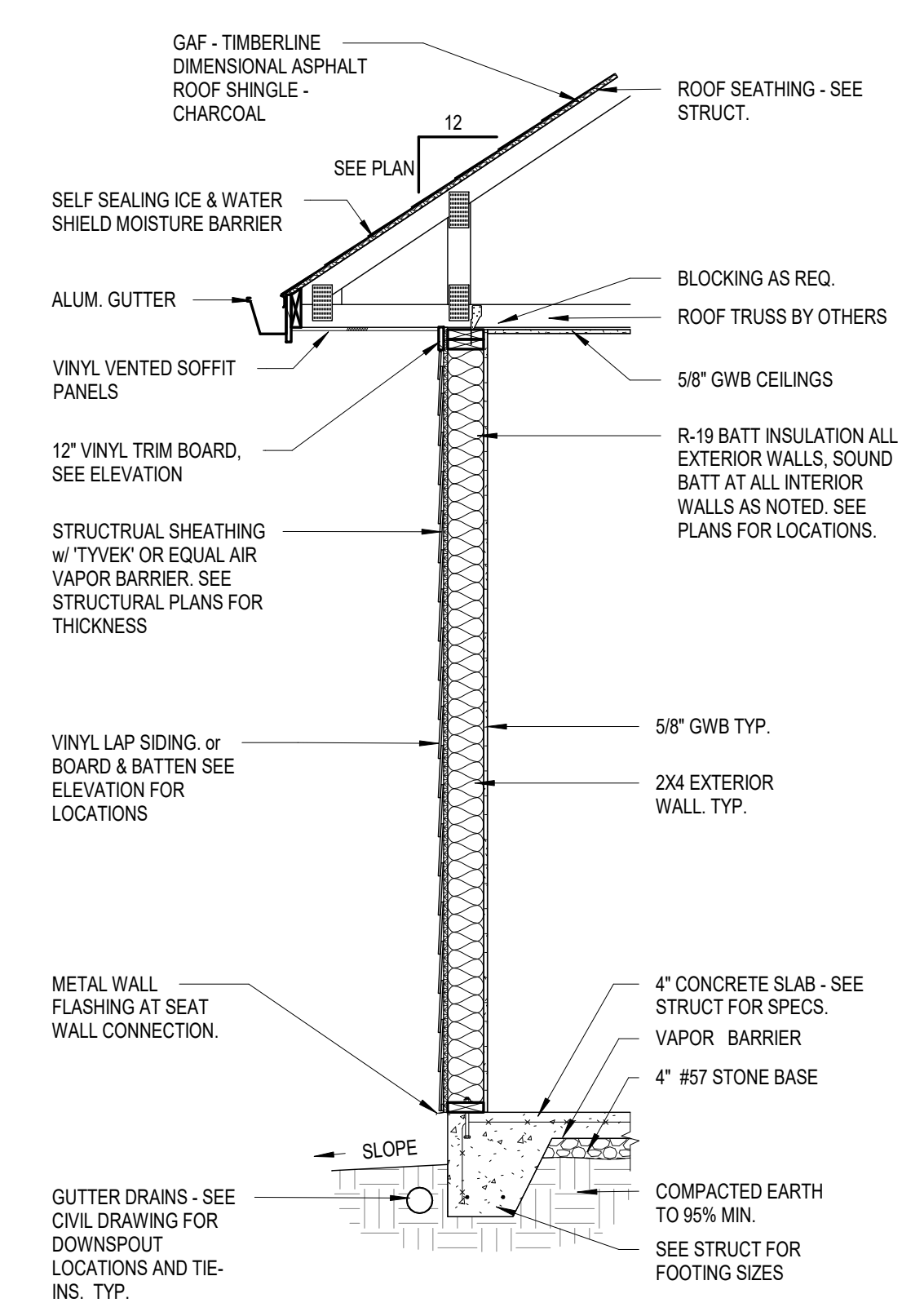
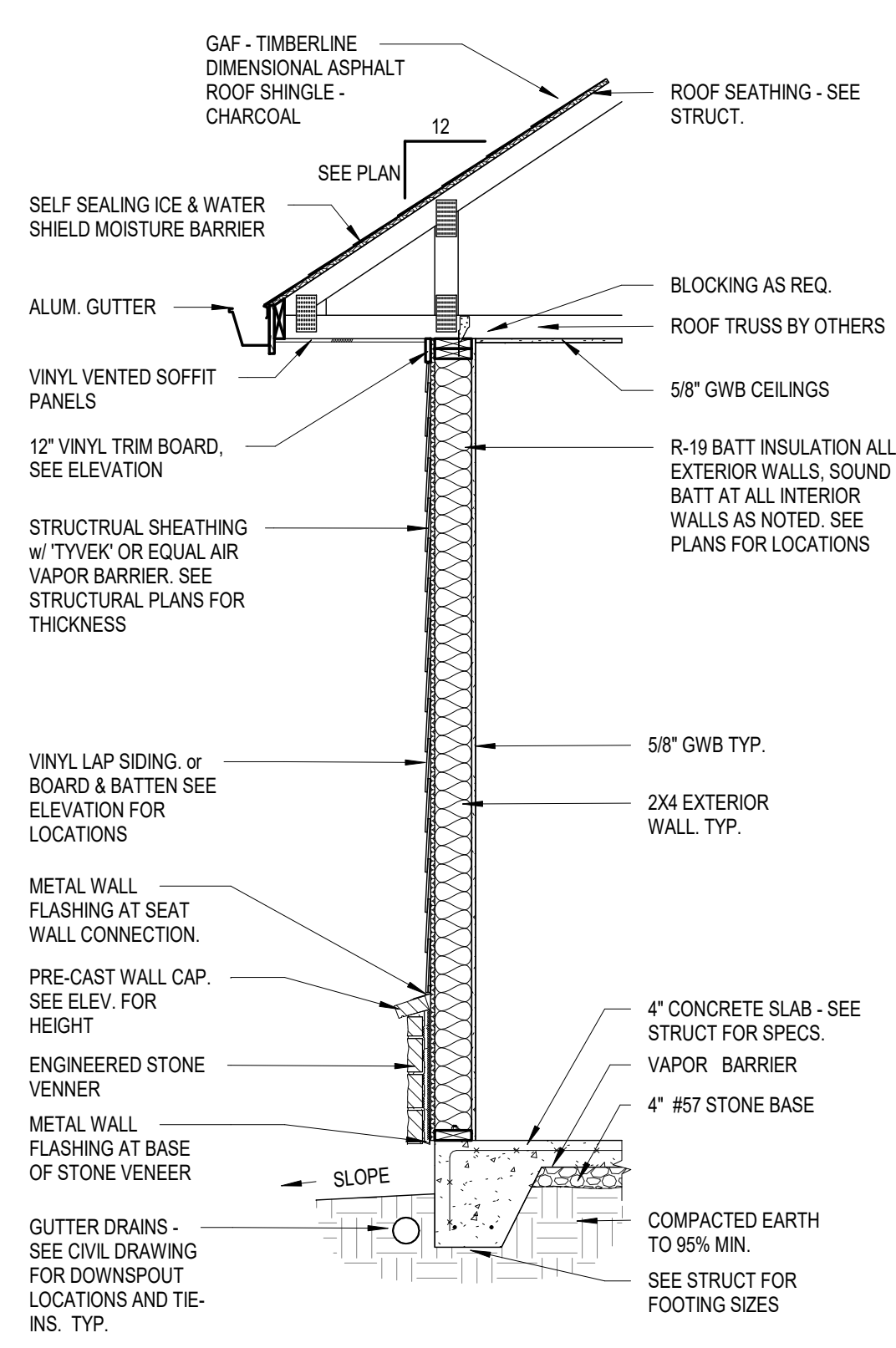
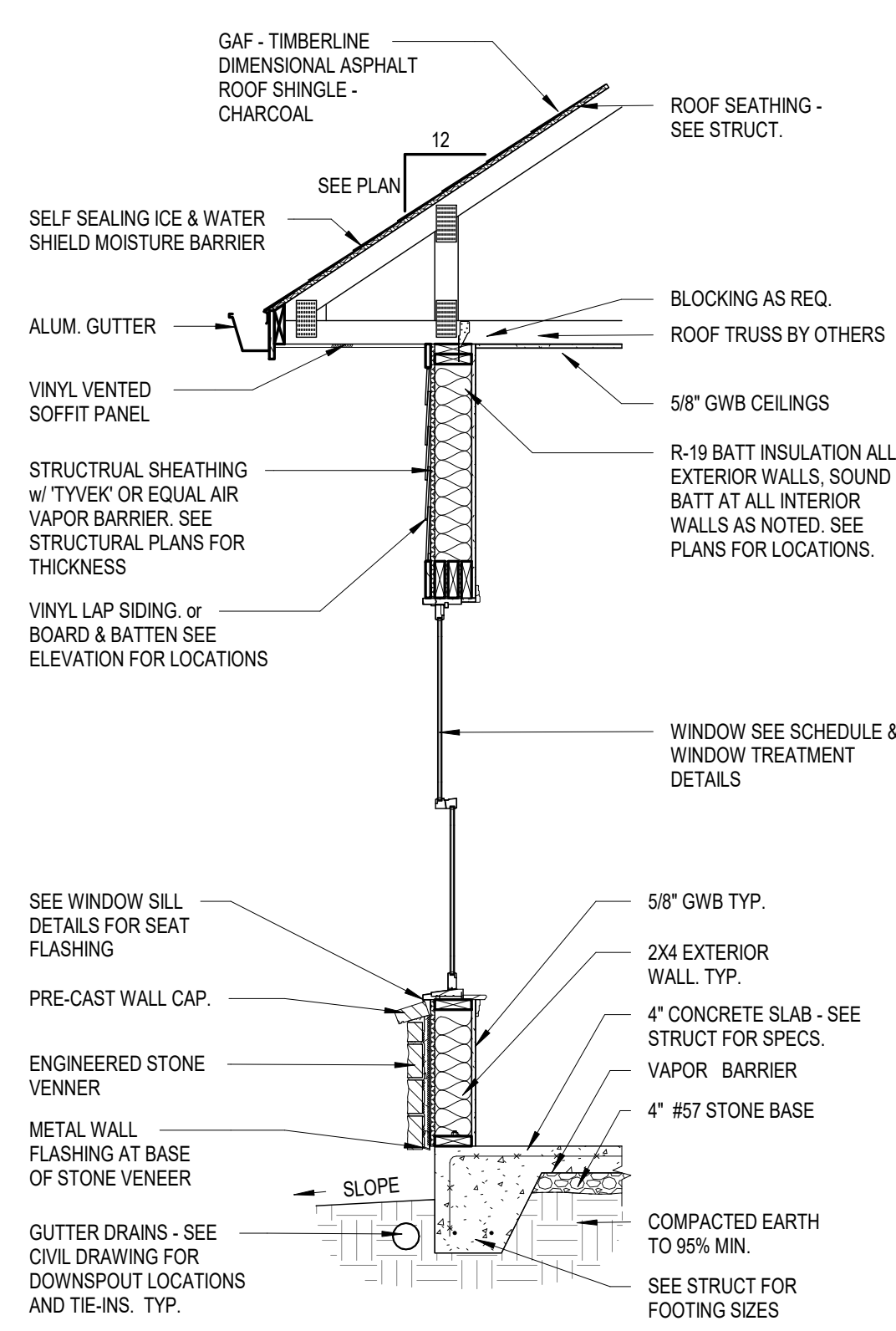
NOTES:
HORIZONTAL GRAB BARS SHALL BE PROVIDED ACROSS THE CONTROL WALL AND ON THE BACK WALL TO A POINT OF 18" FROM CONTROL WALL.
VERTICAL GRAB BAR OF 18" MIN. LENGTH SHALL BE PROVIDED ON THE CONTROL END WALL 3" MIN. & 6" MAX. ABOVE THE HORIZONTAL GRAB BAR, AND 4" MAX. INWARD FROM THE FRONT EDGE OF SHOWER.
ALL GRAB BARS SHALL COMPLY WITH SECTION 609 OF THE ICC A117.1-2009



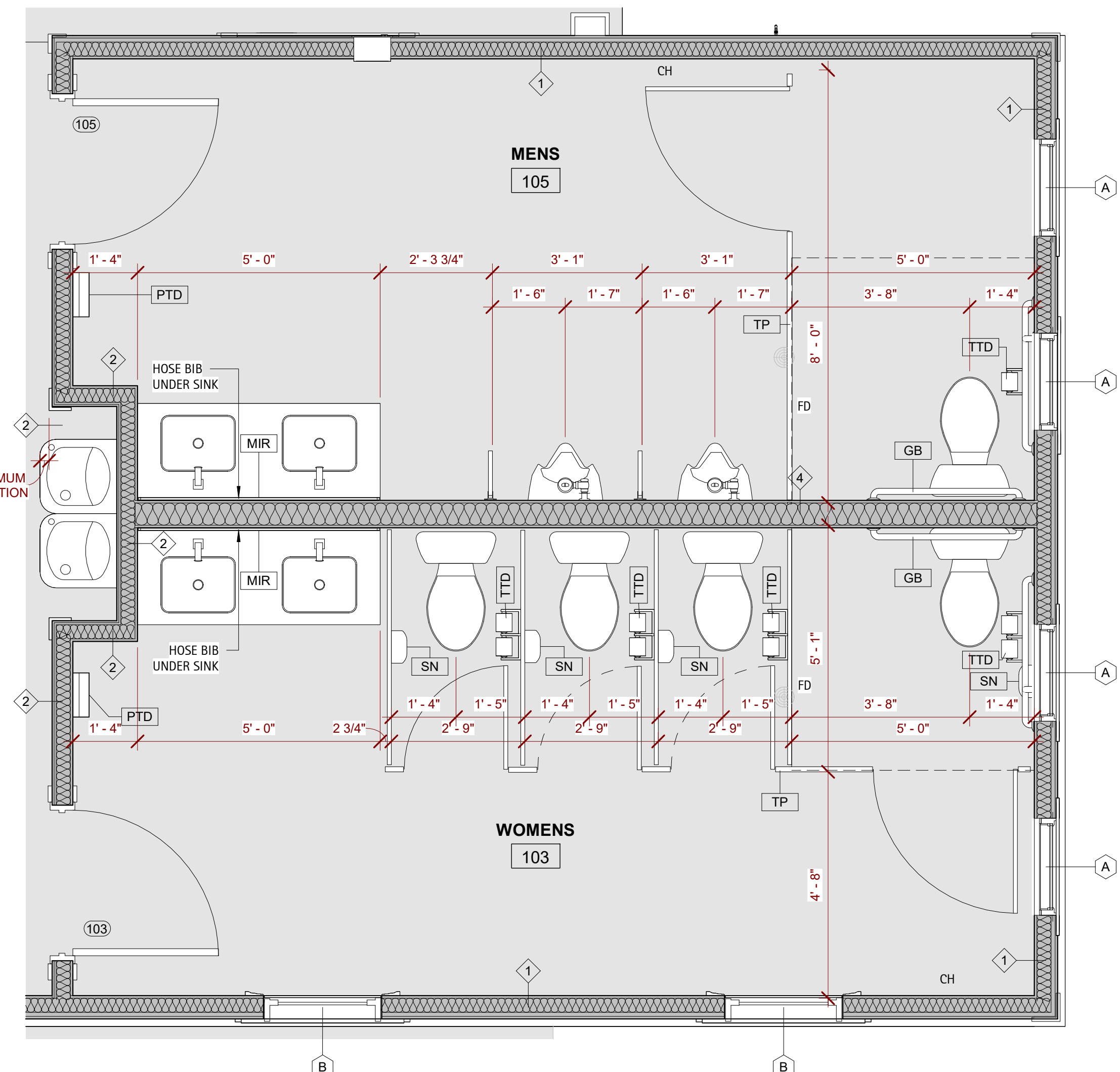
3 Sanitary Shower
1" = 1'-0"



2 Enlarged Family RR Plan
1/2" = 1'-0"



Wall Type Details



1 Enlarged Restroom Plan
1/2" = 1'-0"

4 Wall Section Detail - Slab/Truss
1/2" = 1'-0"

DATE

REVISION

NO.

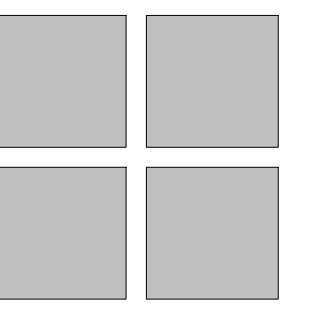
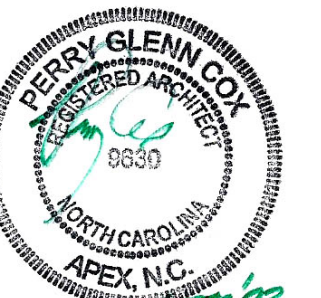
SHEET DISCRPTION
ENLARGED PLANS & WALL SECTIONS
PROJECT #: 2023005
DATE ISSUED: 12/11/2023
DRAWING BY: JVD
CHECKED BY: DSCJ/PGC

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A3.1



D. CLUGSTON



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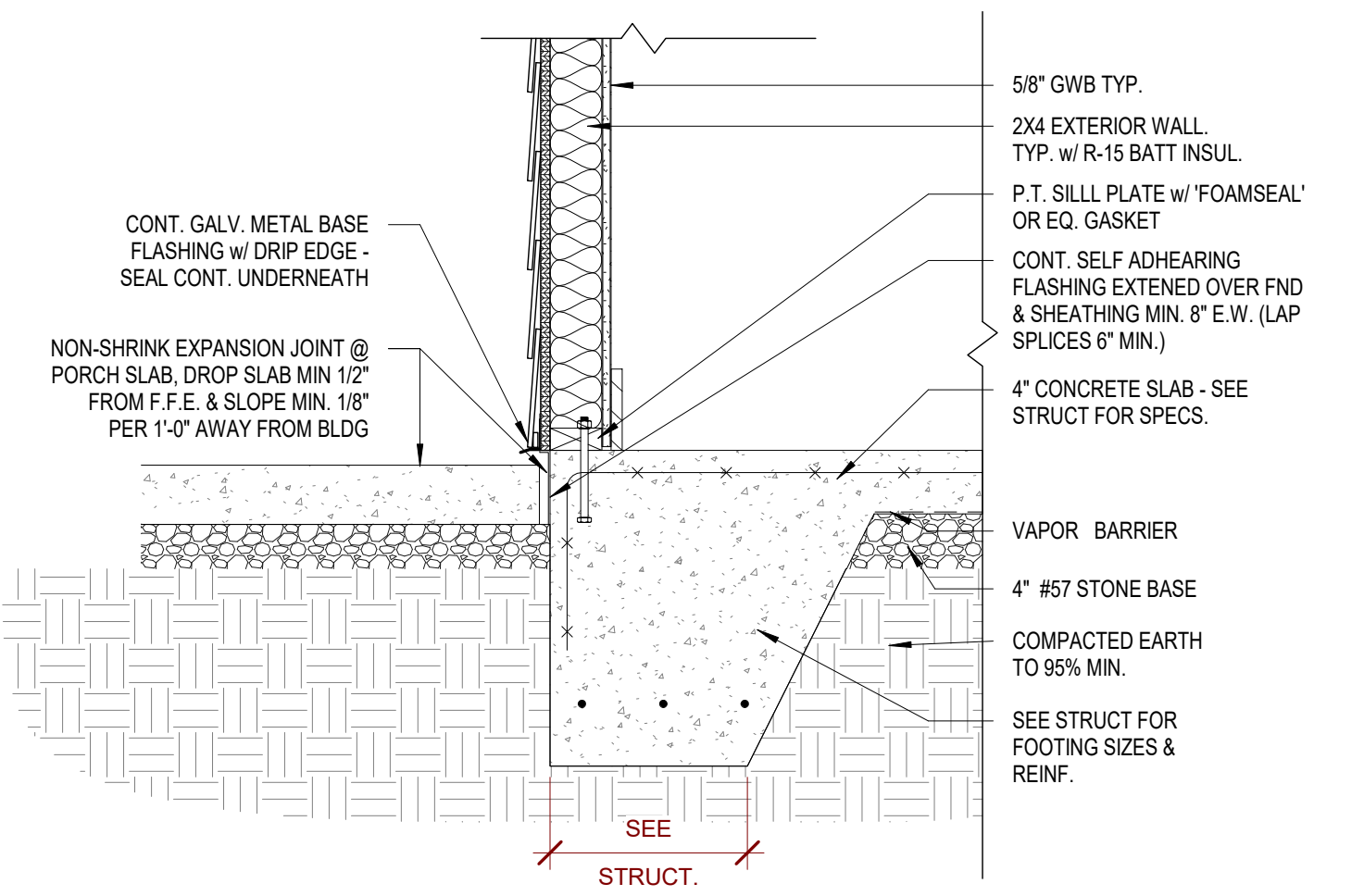
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SHEET DISCUSSION GENERAL DETAILS

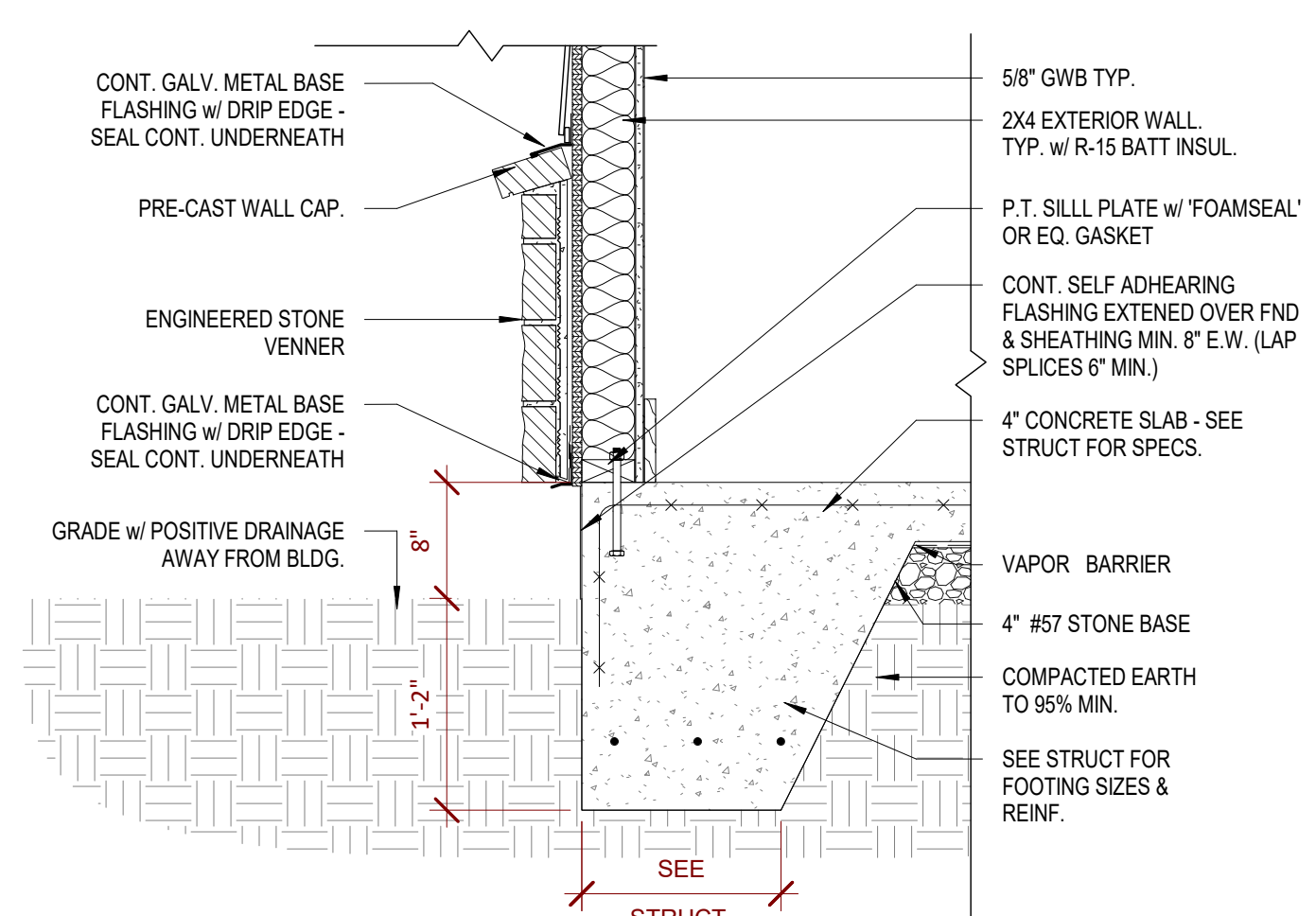
PROJECT #: 2023005 DATE ISSUED: 12/11/2023 DRAWING BY: JGM/JVD CHECKED BY: DSC/PGC

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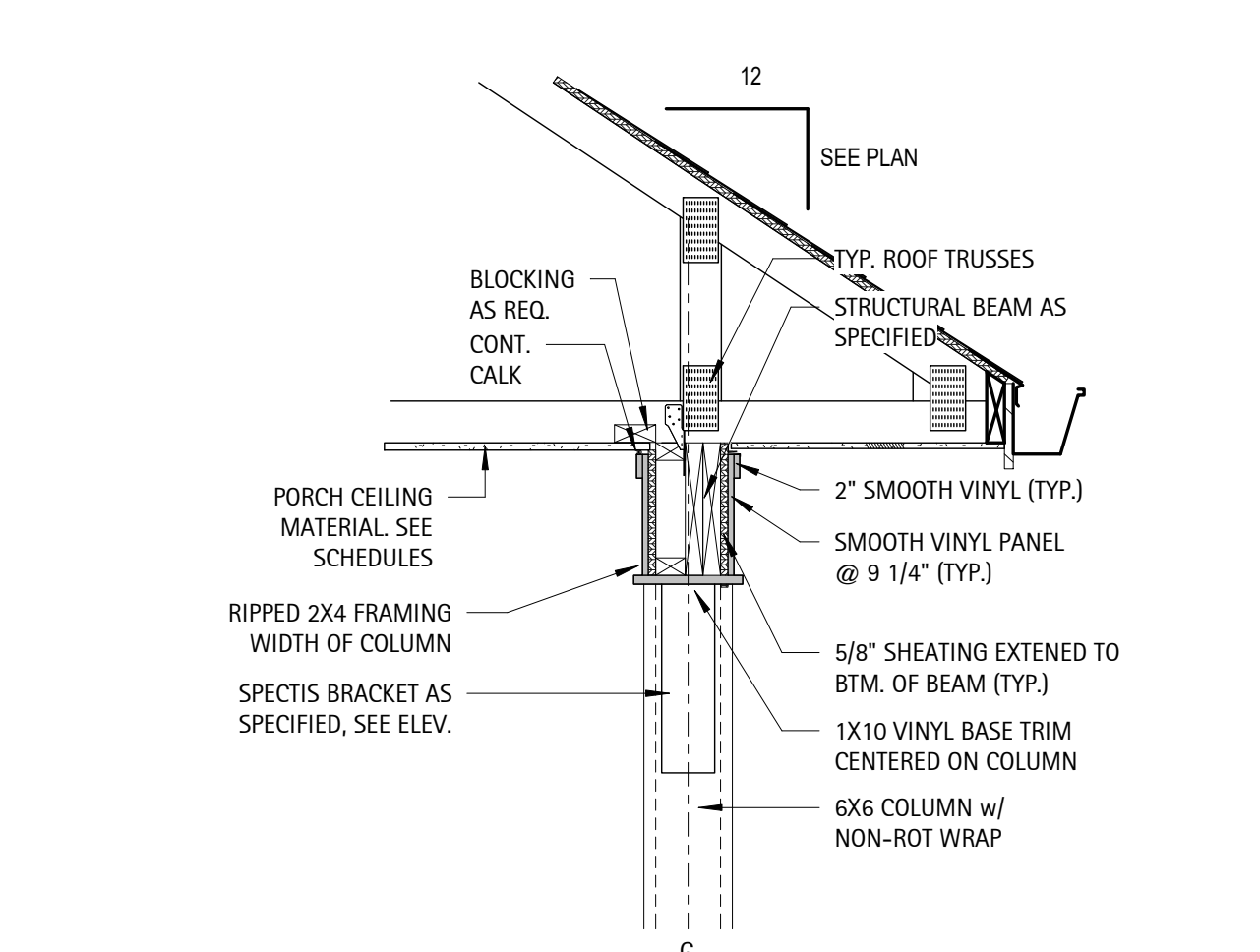
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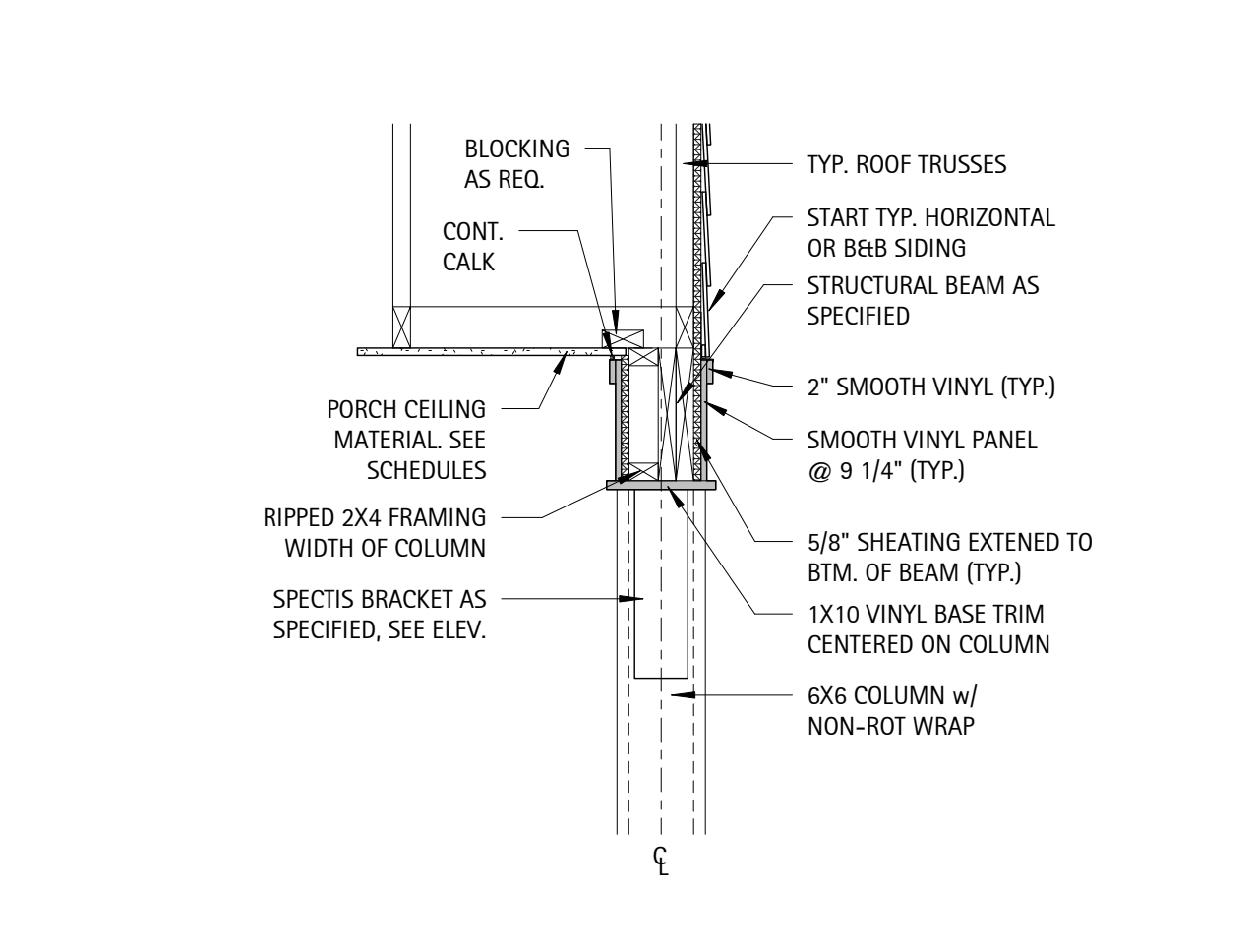
10 A4.0 Detail - Typ Turn Down @ Sidewalks 1" = 1'-0"



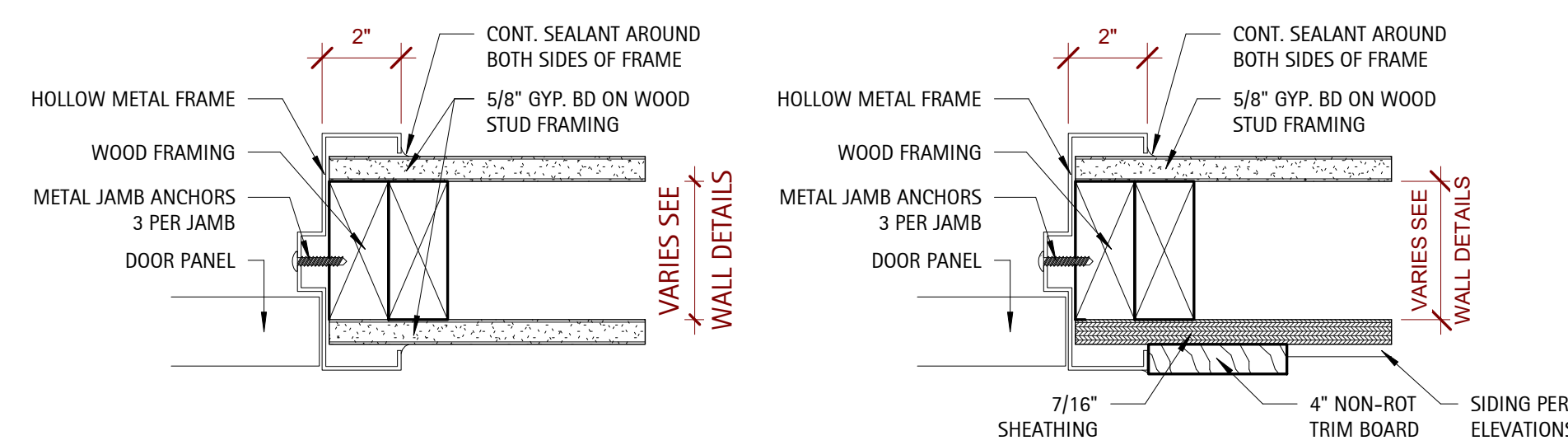
6 A4.0 Detail - Turn Down Slab @ Grade 1" = 1'-0"



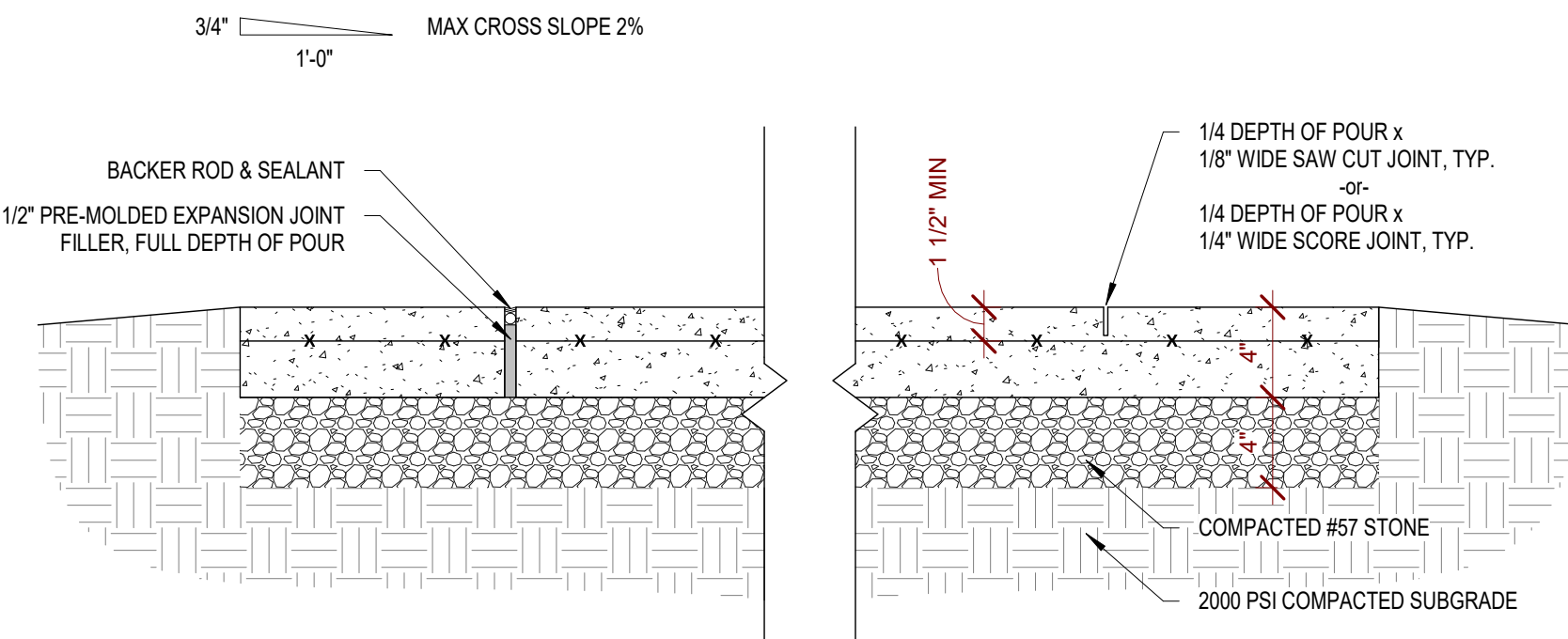
3 A4.0 Detail - Typ Trim Band @ Soffits 3/4" = 1'-0"



2 A4.0 Detail - Typ Trim Band @ Gable 3/4" = 1'-0"

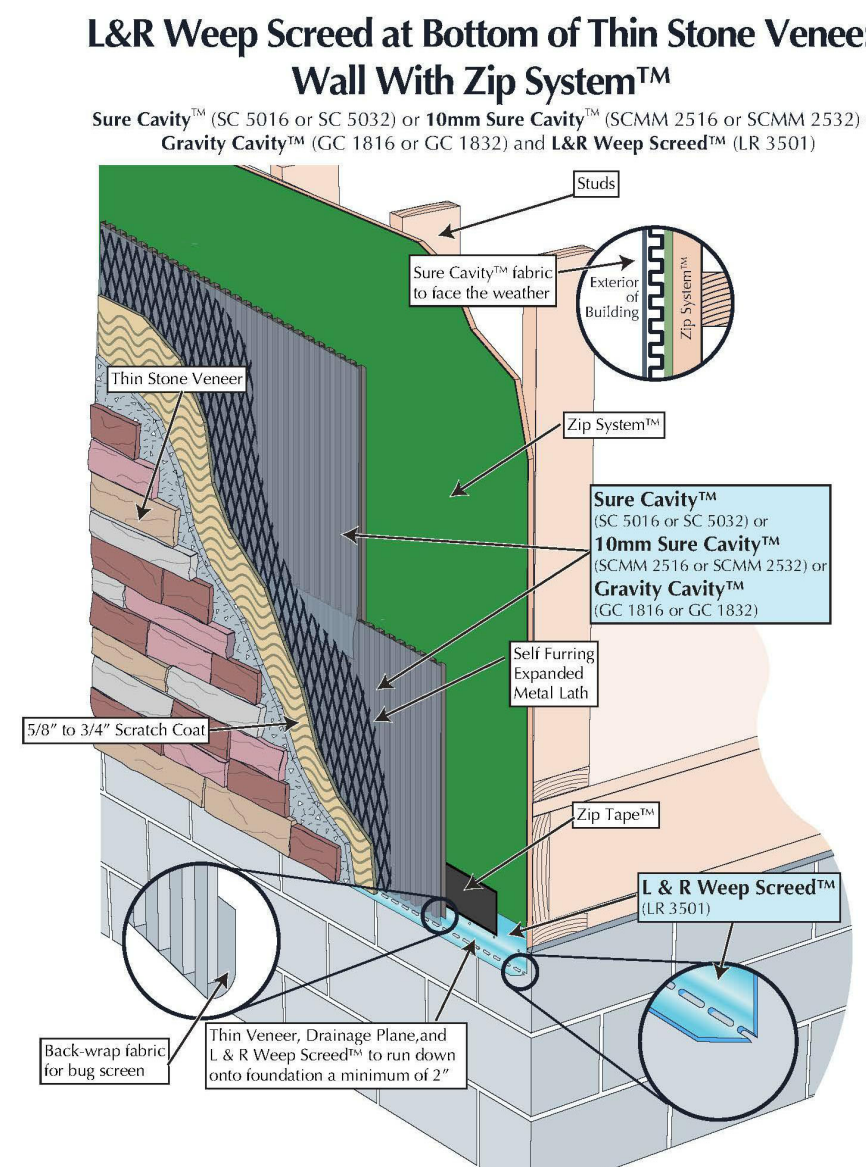


INTERIOR DOOR JAMB EXTERIOR DOOR JAMB

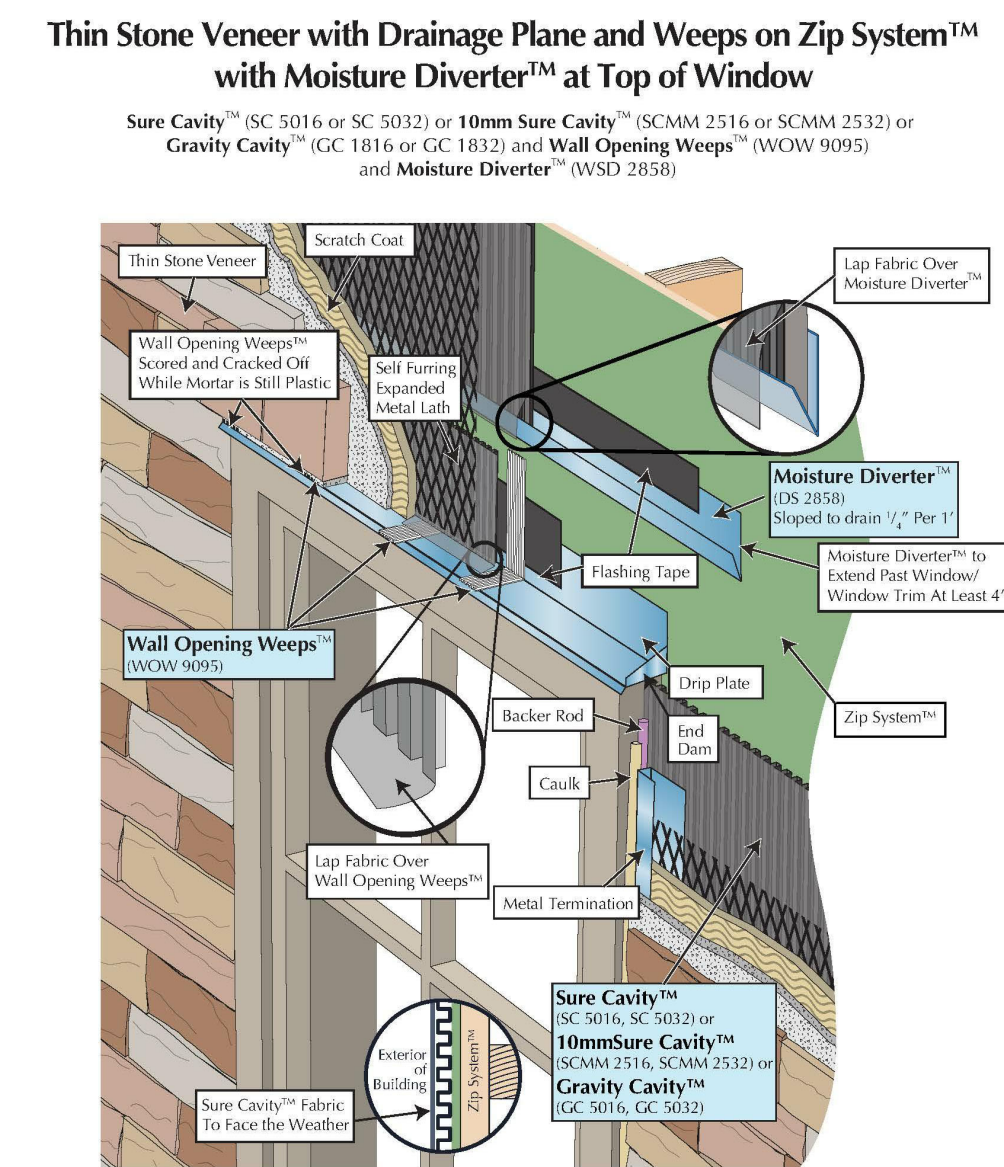


5 A4.0 Detail - Typ. Sawcut Control Joint 1 1/2" = 1'-0"

- 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/OR SPECIFIED ON PLANS OR 25'-0" MAX O.C.

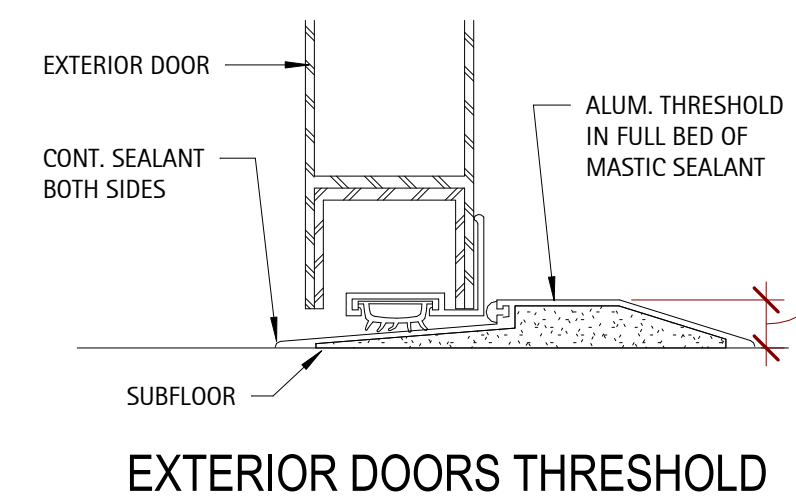


L&R Weep Screenshot at Bottom of Thin Stone Veneer Wall With Zip System

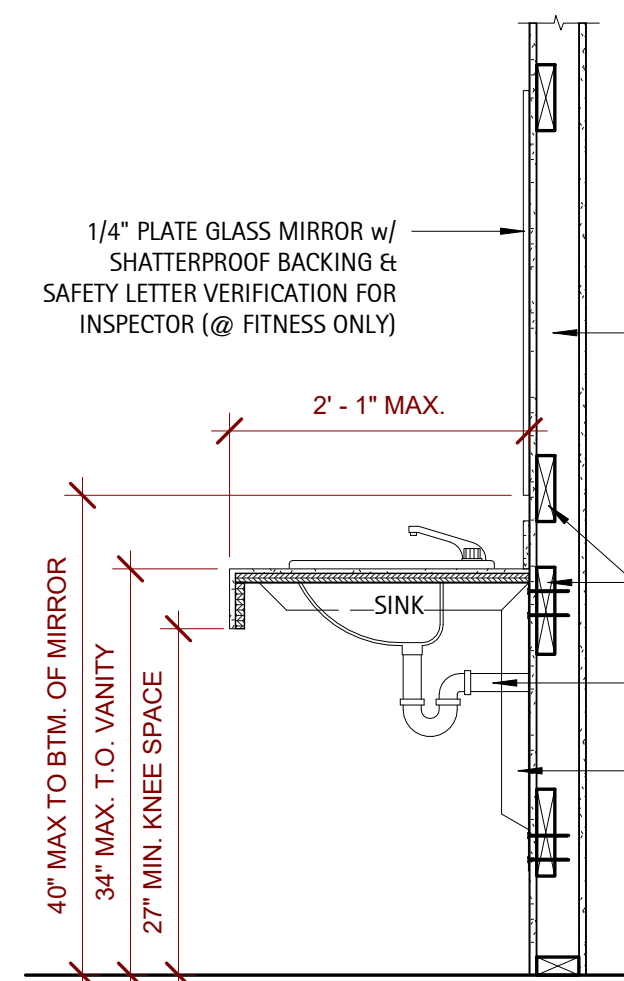


Thin Stone Veneer with Drainage Plane and Weeps on Zip System with Moisture Diverter at Top of Window

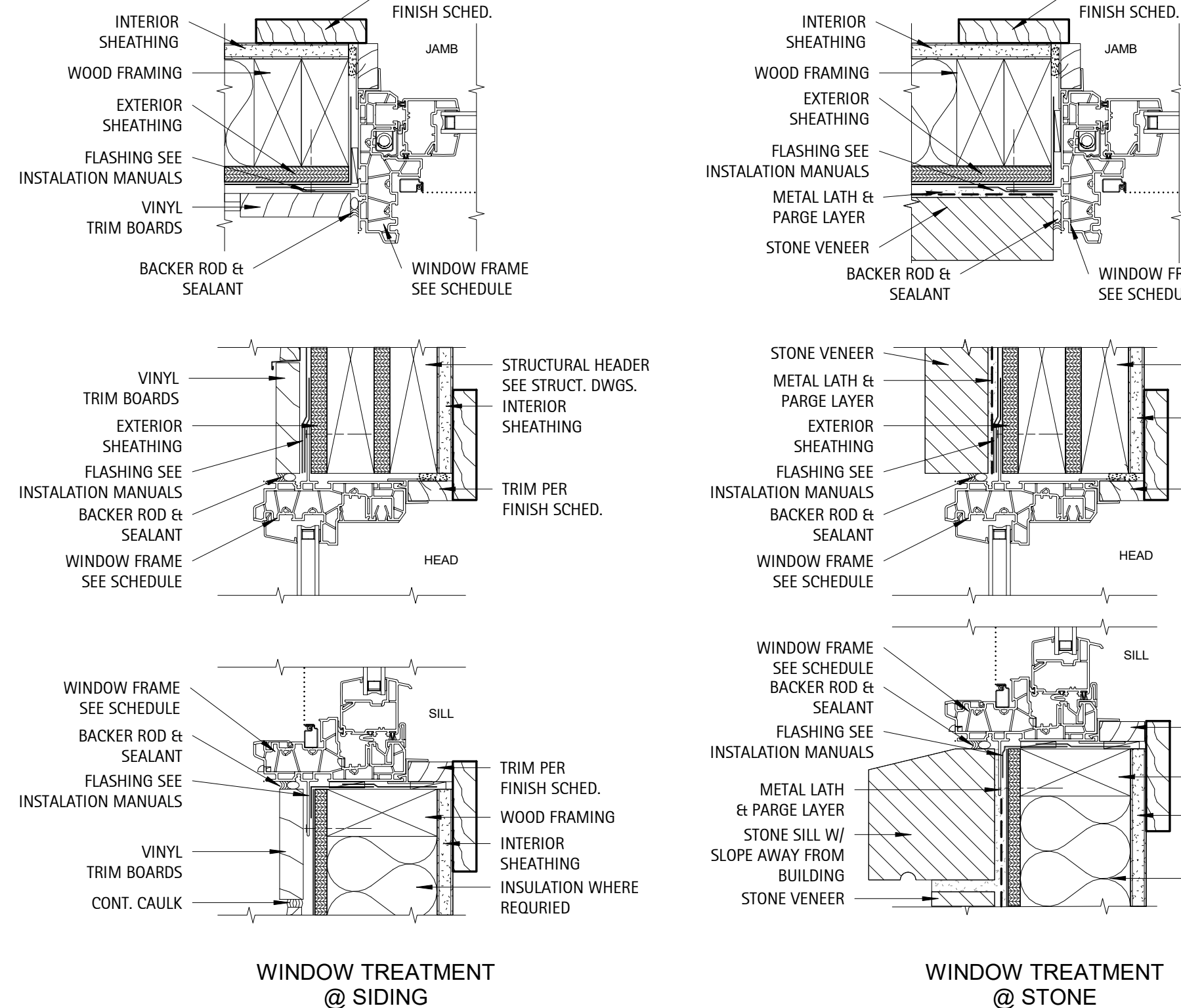
9 A4.0 Detail - Typ. Door Jambs 3" = 1'-0"



8 A4.0 Detail - Typ. Threshold 6" = 1'-0"

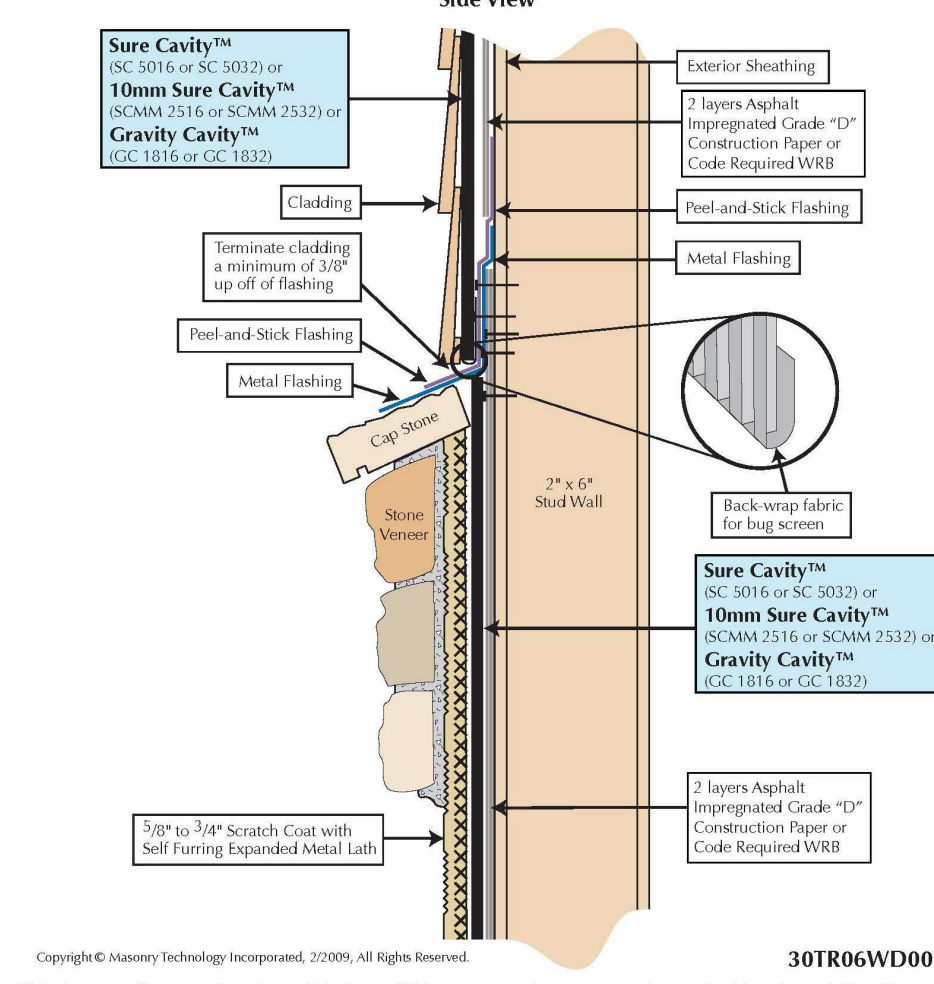


7 A4.0 Detail - Typ. Vanity Section 3/4" = 1'-0"



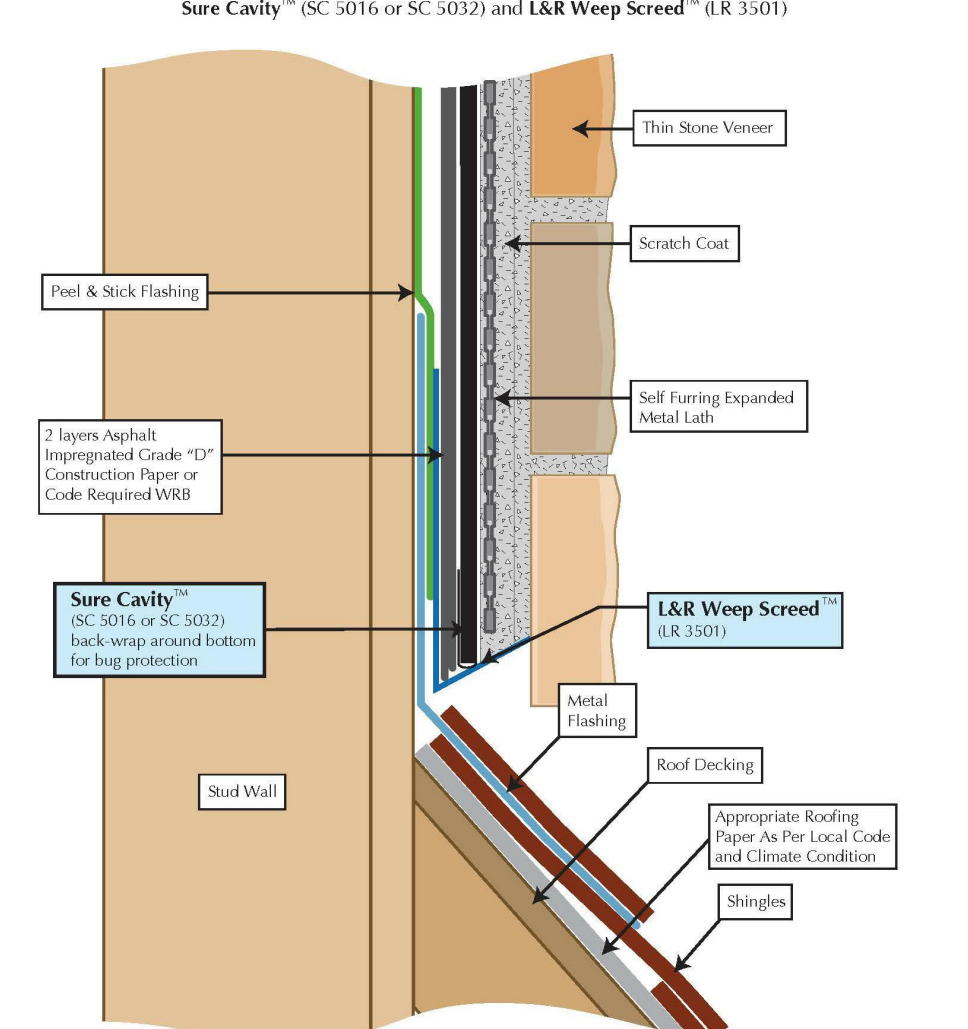
4 A4.0 Detail - Window Treatments 3" = 1'-0"

Cladding Systems to Thin Stone Veneer Installation

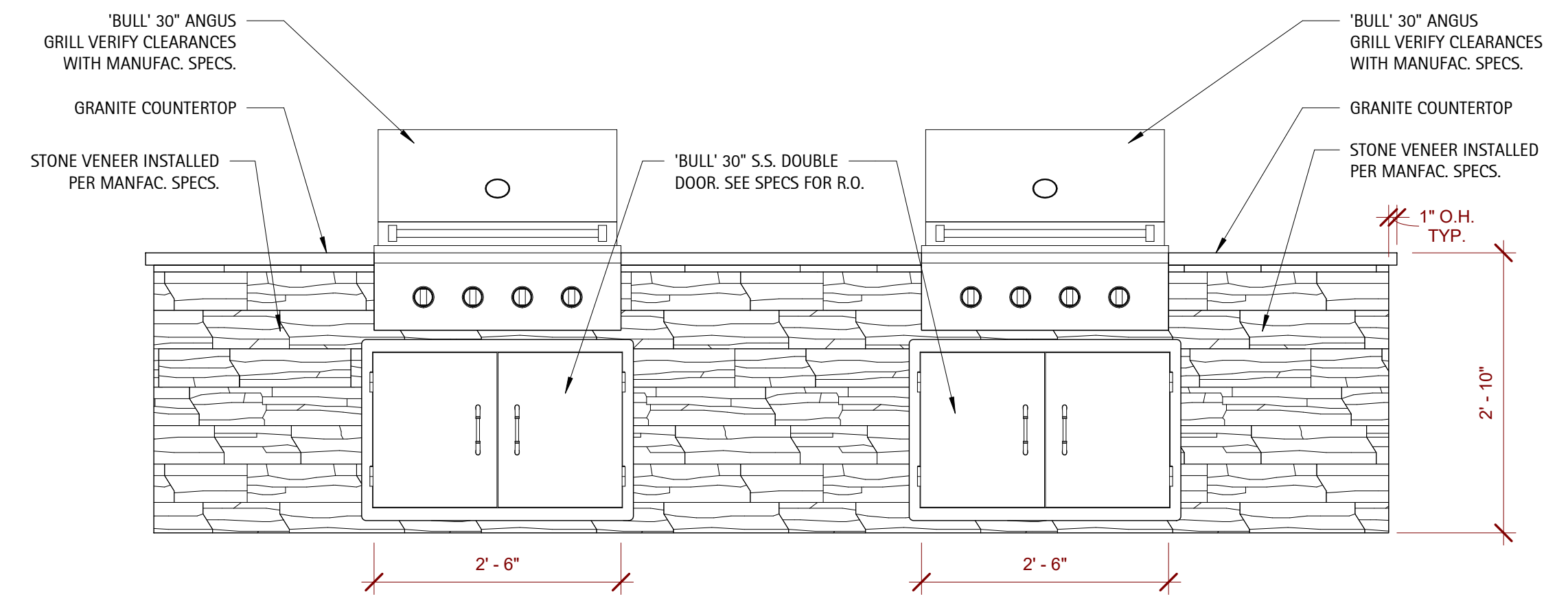


30TR06WD001

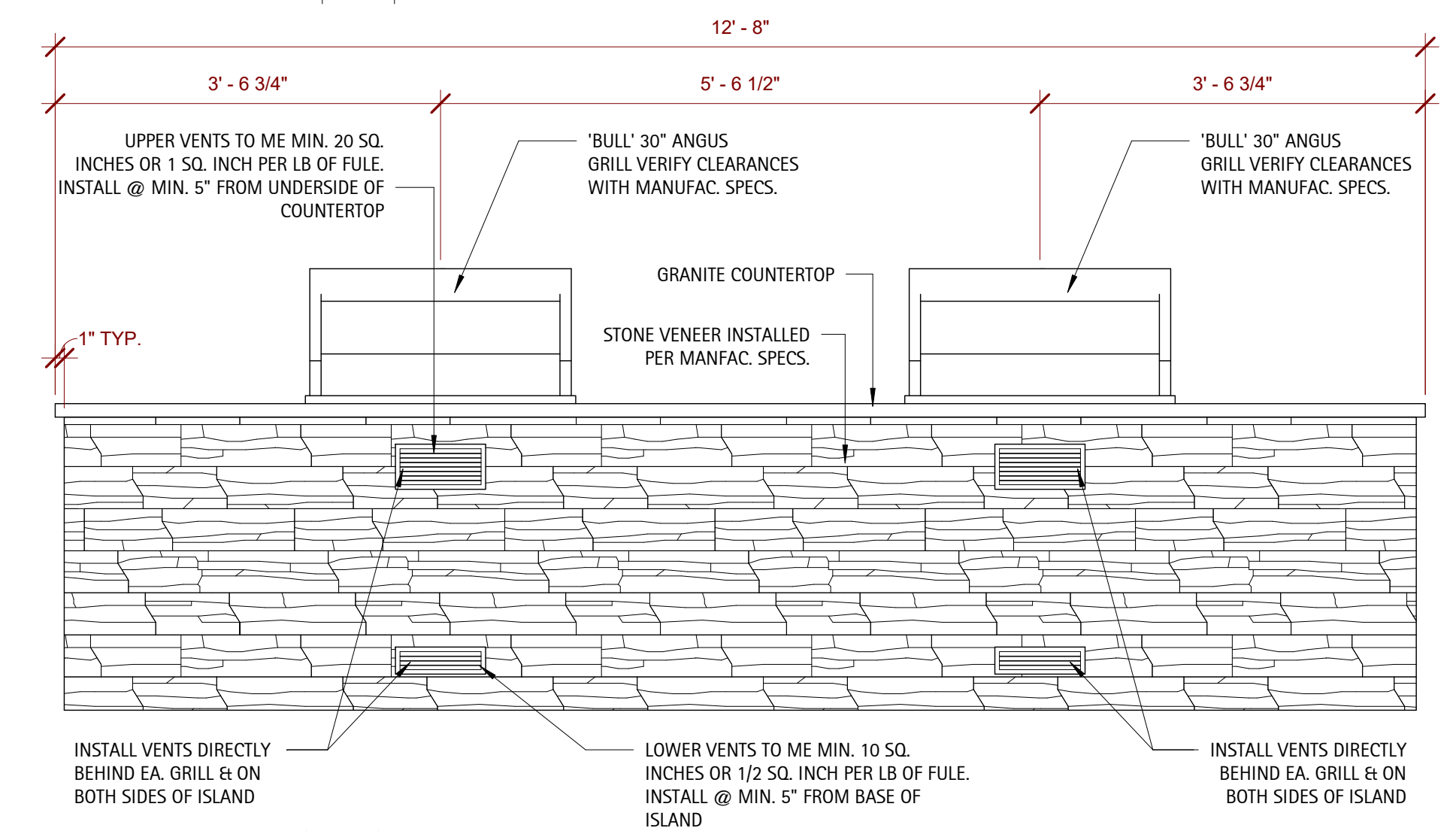
Thin Stone Veneer Side Wall to Roof Termination Detail



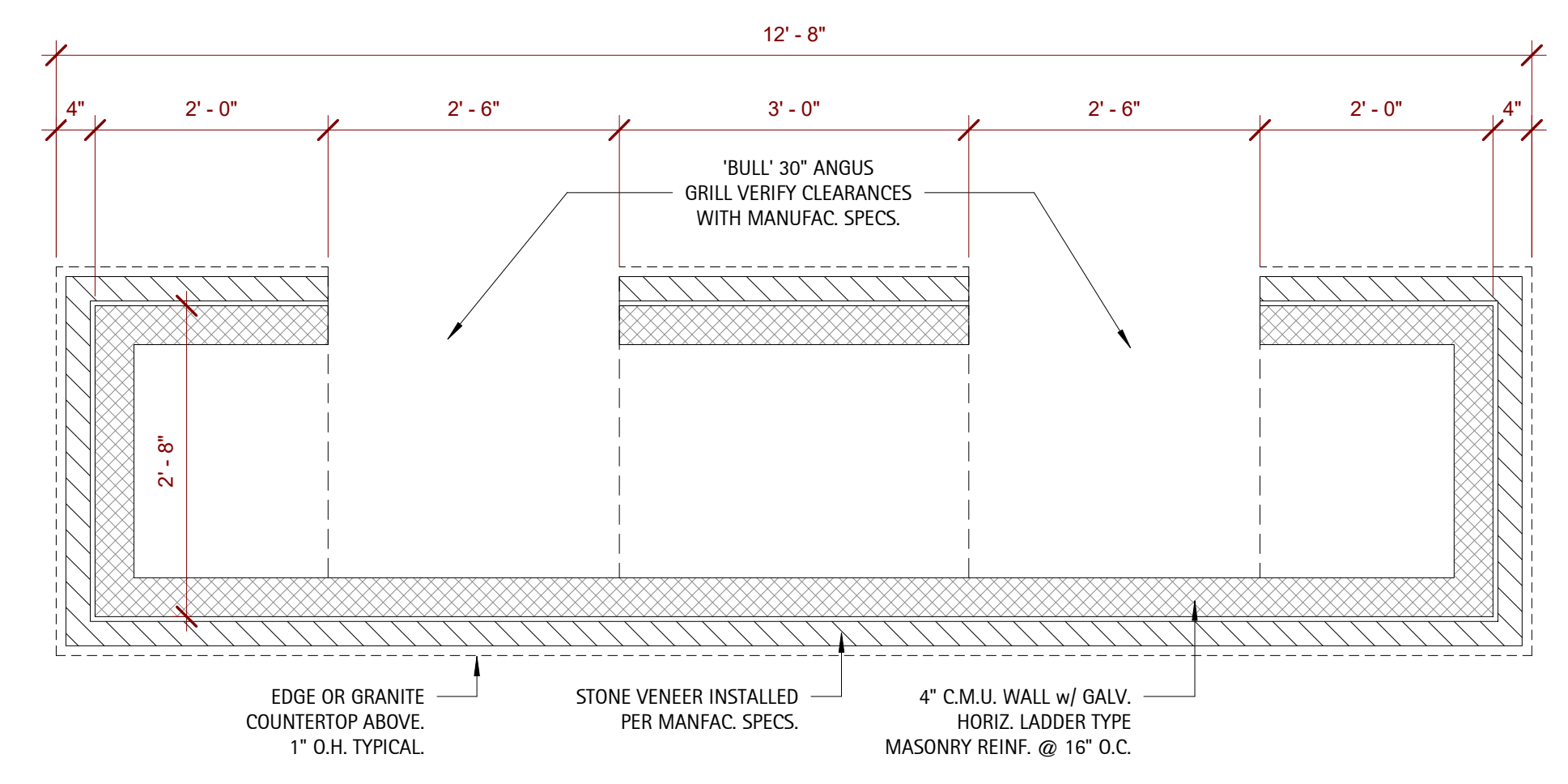
30TR07VD002



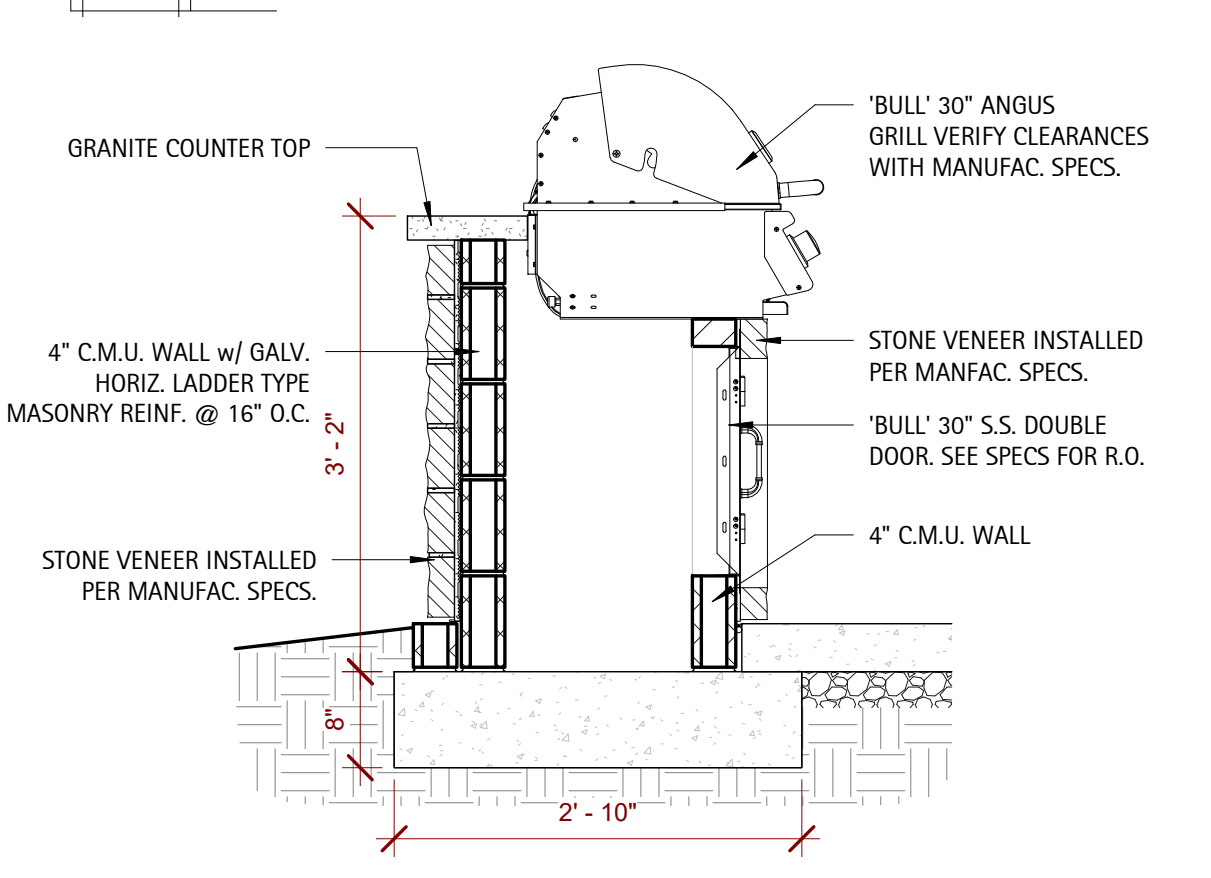
4 Detail - Typ. Grill Front Elevation
3/4" = 1'-0"



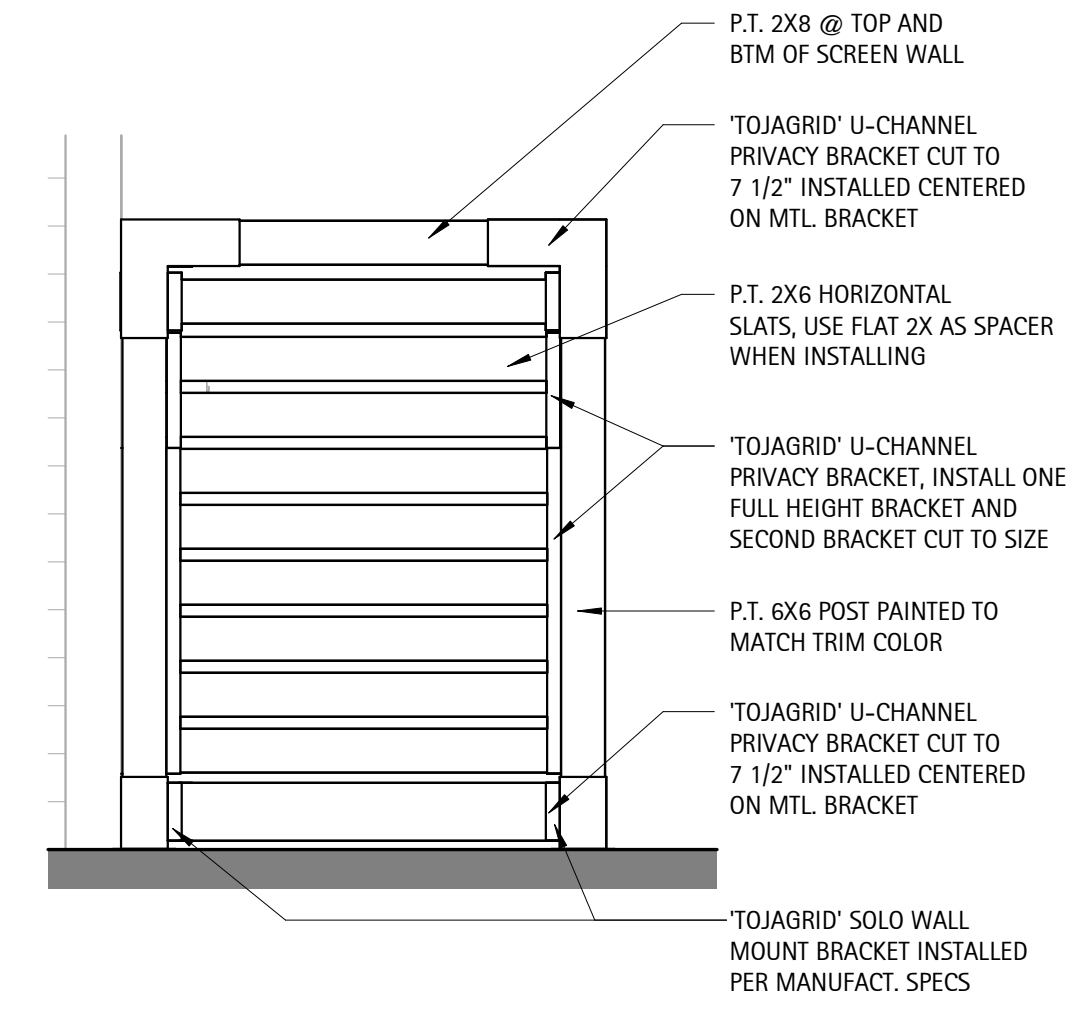
3 Detail - Typ. Grill Rear Elevation
3/4" = 1'-0"



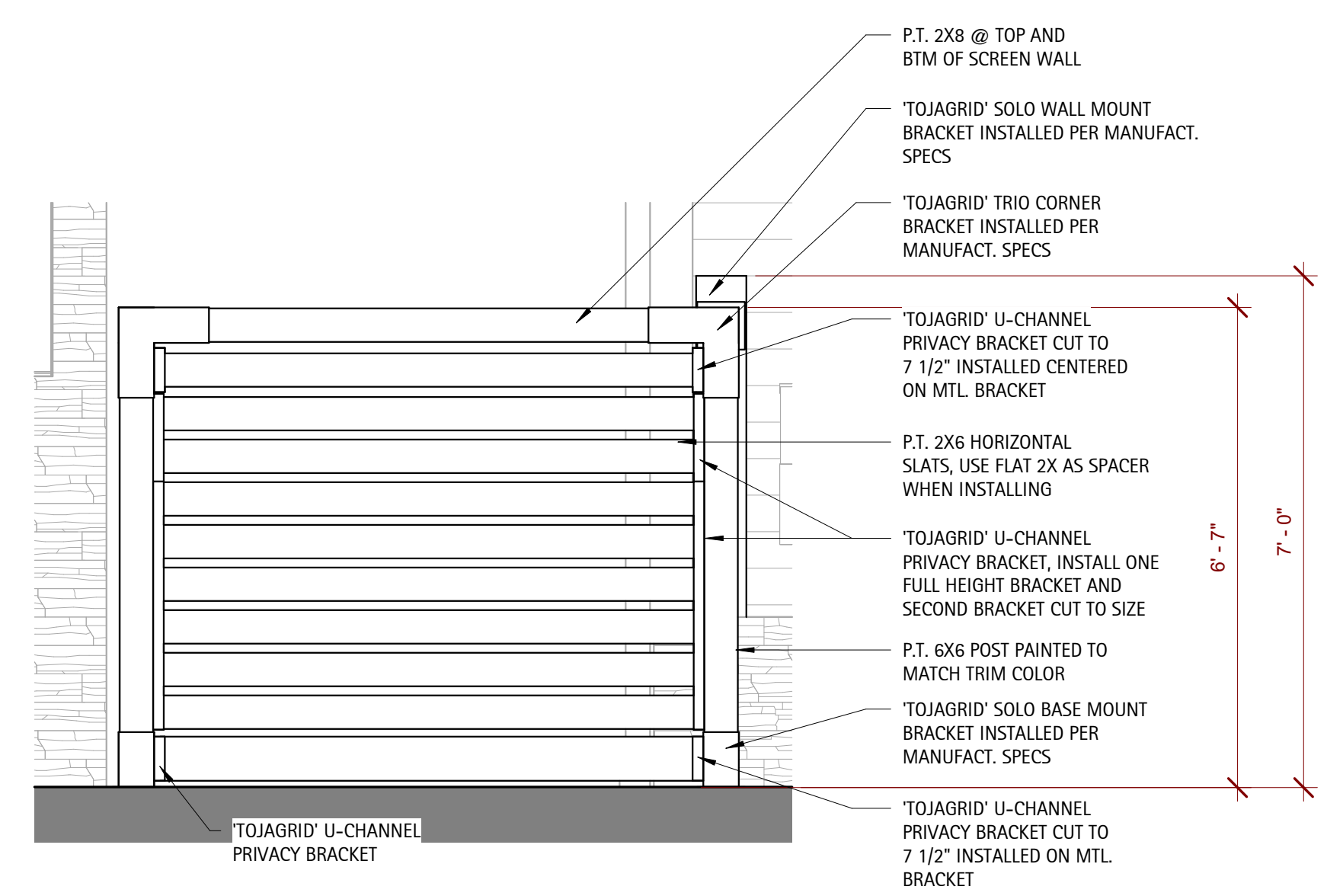
2 Detail - Grill Island Plan View
3/4" = 1'-0"



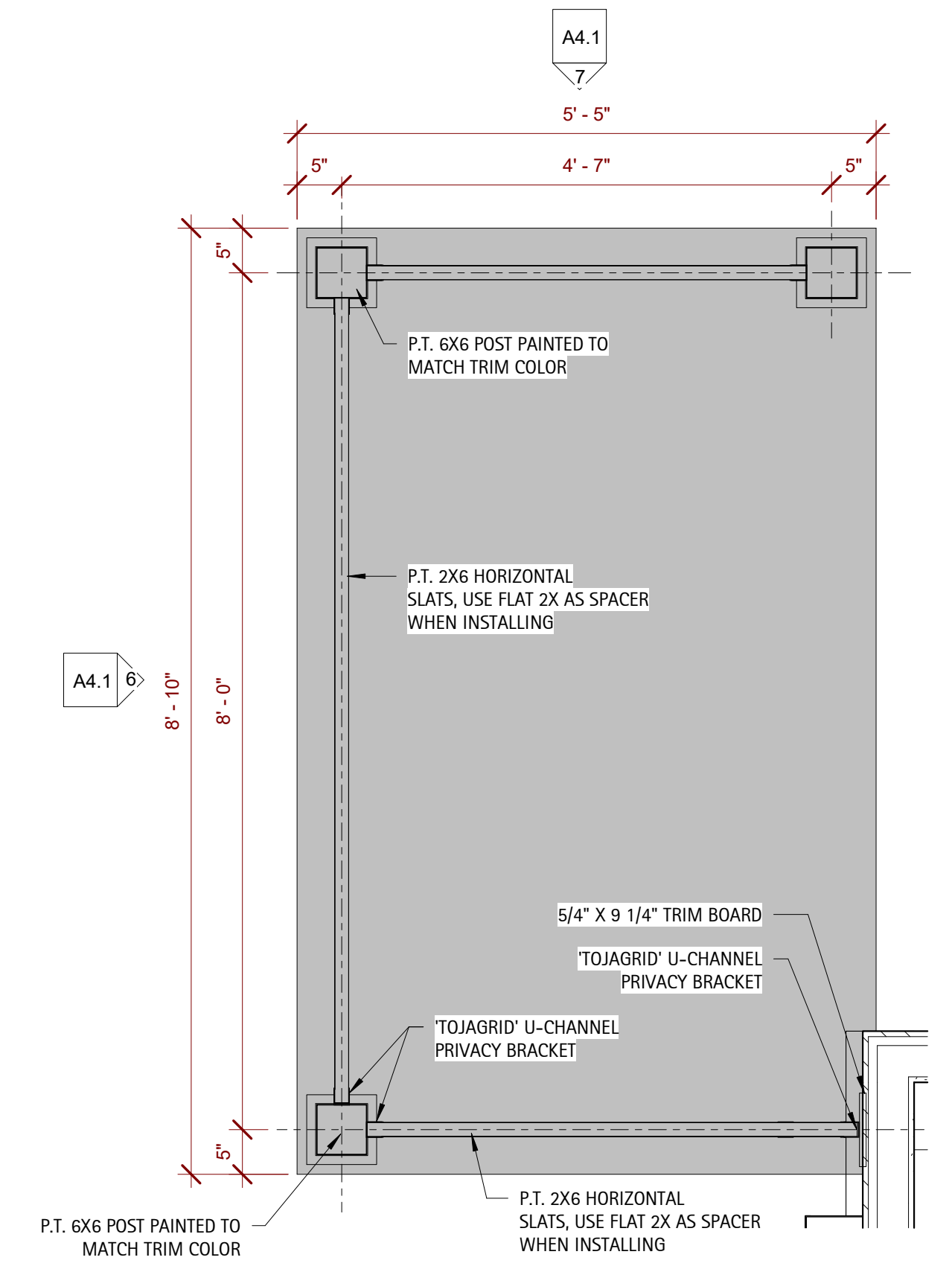
1 Detail - Grill Section View
3/4" = 1'-0"



7 Trash Corral Side Elevation
1/2" = 1'-0"



6 Trash Corral Front Elevation
1/2" = 1'-0"



5 Trash Corral Floor Plan
3/4" = 1'-0"



DATE	
REVISION	
NO.	

SHEET DISCRPTION
GENERAL DETAILS

PROJECT #:	2023005
DATE ISSUED:	12/11/2023
DRAWING BY:	Author
CHECKED BY:	Checker

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ANGIER, NC**

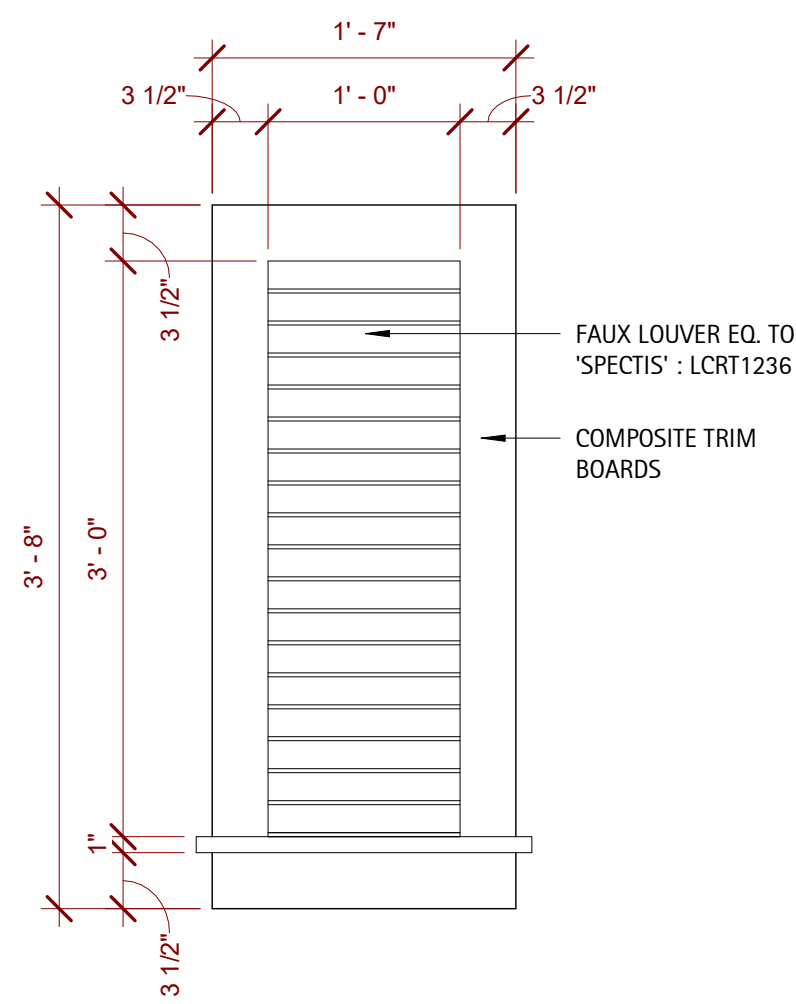
DOORS, FRAMES, HARDWARE NOTES

- 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".
- Fire Extinguisher cabinets shall be similar to ULINE Outdoor Cabinet H-7269 with a clear bubble and A#10 S/S Finish, ADA approved and mounted. Place where shown on plans (FX)
- Door closers shall be LCN series 4040 or equivalent

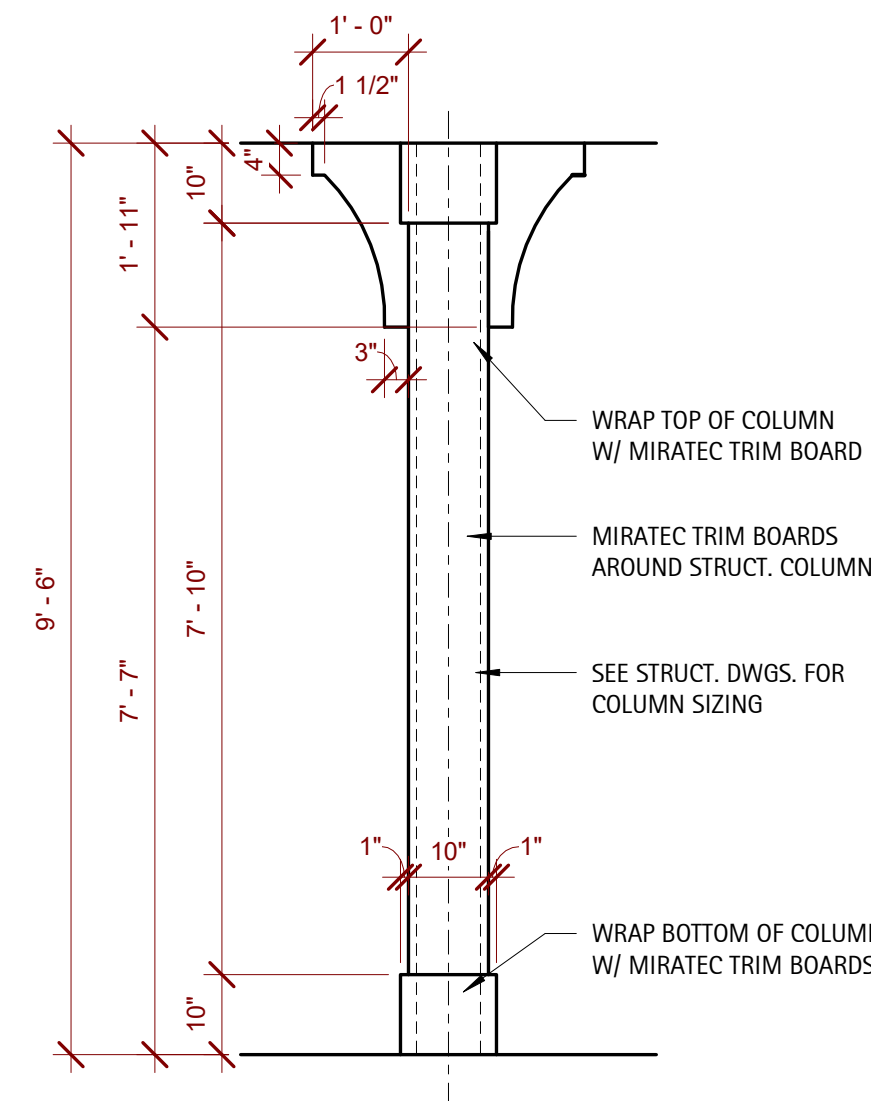
ROOM SCHEDULE									
Room Number	Room Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Ceiling Height	Crown Finish	Crown	Comments
100	COVERED ENTRY	Concrete - Light Broom	N/A	N/A	Hardie Panels or EQ - Painted	10'-0"	N/A	No	Slope floor away from building min. 1/8" per 1'-0"
101	HALL	Concrete - Light Broom	N/A	N/A	MR GWB - Painted	10'-0"	N/A	No	Slope floor away from building min. 1/8" per 1'-0"
102	STORAGE	Acrylic Chip Flooring	1x6 Fiber Cement - Painted	MR GWB - Painted	MR GWB - Painted	10'-0"	1x6 Fiber Cement - Painted	Yes	Slope floor to drain
103	WOMENS	Acrylic Chip Flooring	1x6 Fiber Cement - Painted	MR GWB - Epoxy Painted at WC	MR GWB - Painted	10'-0"	1x6 Fiber Cement - Painted	Yes	Slope floor to drain
104	FAMILY	Concrete - Light Broom	1x6 Fiber Cement - Painted	MR GWB - Epoxy Painted at WC	MR GWB - Painted	10'-0"	1x6 Fiber Cement - Painted	Yes	Slope floor to drain
105	MENS	Acrylic Chip Flooring	1x6 Fiber Cement - Painted	MR GWB - Epoxy Painted at Urinal	MR GWB - Painted	10'-0"	1x6 Fiber Cement - Painted	Yes	Slope floor to drain
106	COVERED PORCH	Concrete - Light Broom	N/A	N/A	Hardie Panels or EQ - Painted	10'-0"	N/A	No	Slope floor away from building min. 1/8" per 1'-0"
107	ELEC.	Concrete - Light Broom	1x6 Fiber Cement - Painted	MR GWB - Painted	MR GWB - Painted	10'-0"	1x6 Fiber Cement - Painted	Yes	
108	PUMP ROOM	Concrete - Light Broom	1x6 Fiber Cement - Painted	MR GWB - Painted	MR GWB - Painted	10'-0"	1x6 Fiber Cement - Painted	Yes	See Plans for sump pump layout. Slope floors to drain.
109	CHEM.	Concrete - Light Broom	1x6 Fiber Cement - Painted	MR GWB - Painted	MR GWB - Painted	10'-0"	1x6 Fiber Cement - Painted	Yes	Provide non-rot chemical shelf at 16" A.F.F.
110	TRASH	Concrete - Light Broom	N/A	N/A	N/A		N/A		

DOOR SCHEDULE																					
Door Number	Style	Door			Rough Width	Rough Height	Door		Fire Rating	Hardware										Comments	
		Width	Height	Thickness			Material	Finish		Frame Material	Passage Set	Privacy Set	Push Pull	Deadbolt	Panic Hardware	Closer	Kick Plate	Weatherstrip	Threshold		
102	TYPE A	3'-0"	7'-0"	1 3/4"	3'-2 1/2"	7'-1 1/4"	HM	PAINT	METAL	N/A	No	No	No	No	No	Yes	No	Yes	Yes	Yes	Storage Set
103	TYPE A	3'-0"	7'-0"	1 3/4"	3'-2 1/2"	7'-1 1/4"	HM	PAINT	METAL	N/A	Yes	No	No	Yes	No	Yes	No	Yes	Yes	Yes	
104	TYPE A	3'-0"	7'-0"	1 3/4"	3'-2 1/2"	7'-1 1/4"	HM	PAINT	METAL	N/A	No	Yes	No	Yes	No	Yes	No	Yes	Yes	Yes	
105	TYPE A	3'-0"	7'-0"	1 3/4"	3'-2 1/2"	7'-1 1/4"	HM	PAINT	METAL	N/A	Yes	No	No	Yes	No	Yes	No	Yes	Yes	Yes	
107	TYPE C	3'-6"	7'-0"	1 3/4"	3'-8 1/2"	7'-1 1/4"	HM	PAINT	METAL	N/A	No	No	No	No	No	Yes	No	Yes	Yes	Yes	Storage Set - Provide Electrical Room Placard
108	TYPE C	3'-6"	7'-0"	1 3/4"	3'-8 1/2"	7'-1 1/4"	HM	PAINT	METAL	N/A	Yes	No	No	No	No	Yes	No	No	No	No	Placards Per NFPA704
109	TYPE C	3'-0"	7'-0"	1 3/4"	3'-8 1/2"	7'-1 1/4"	HM	PAINT	METAL	N/A	Yes	No	No	No	No	No	No	No	No	No	Placards Per NFPA704
G100	TYPE B	5'-0"	6'-0"	6'-0"			ALUM	PAINT	METAL	N/A	No	No	No	No	Yes	Yes	No	No	No	No	Gate - See Pool Plans For Details (FOB)
G102	TYPE B	5'-0"	6'-0"	6'-0"			ALUM	PAINT	METAL	N/A	No	No	No	No	Yes	Yes	No	No	No	No	Gate - See Pool Plans For Details (FOB)
Grand total: 9																					

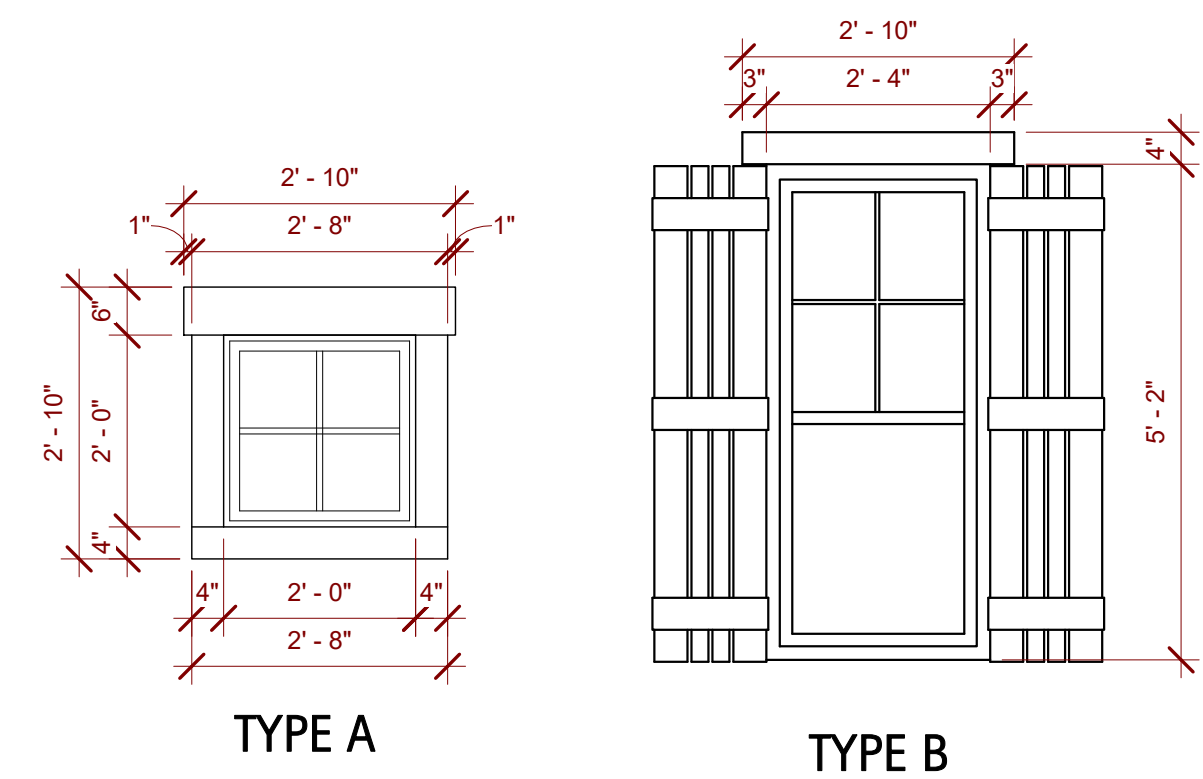
WINDOW SCHEDULE									
Mark	Size		Rough Width	Rough Height	Type	Finish	Head Height	Comments	
	Width	Height							
A	2'-0"	2'-0"	2'-0 1/2"	2'-0 1/2"	FIXED		8'-0"		OBSCURE/FROSTED GLASS
B	2'-4"	5'-2"	2'-4 3/4"	5'-2 3/4"	FIXED		8'-0"		OBSCURE/FROSTED GLASS



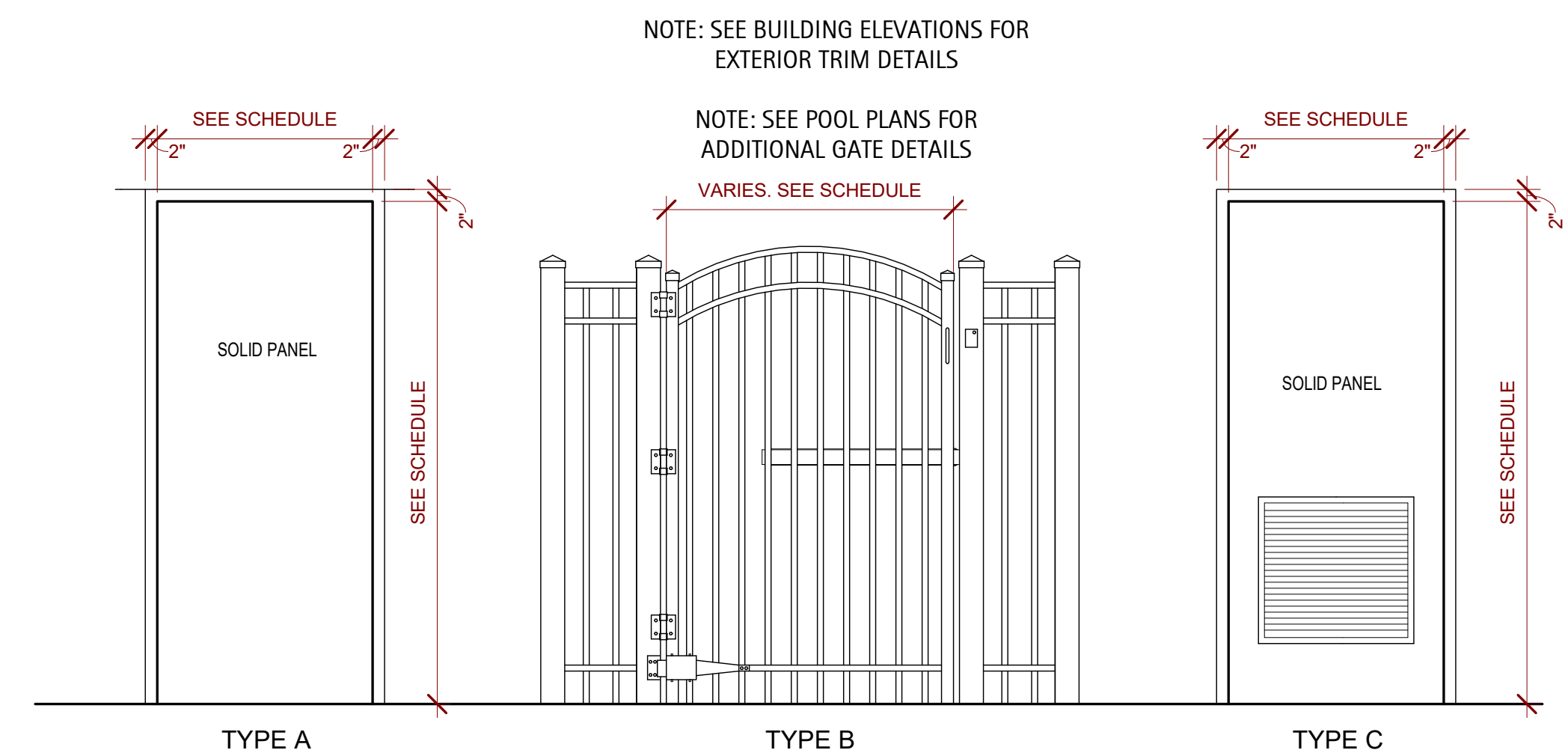
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A5.0
Detail - Typ. Faux Louver
1" = 1'-0"



4
A5.0
Detail - Typ. Column
1/2" = 1'-0"



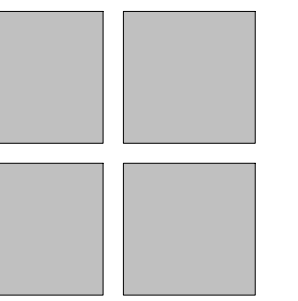
3
A5.0
Detail - Window Types
1/2" = 1'-0"



1
A5.0
Detail - Door Types
1/2" = 1'-0"



D. CLUGSTON



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architect, p.a.
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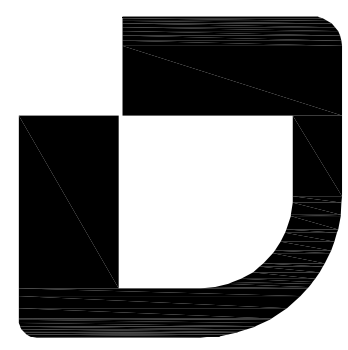
DATE	
REVISION	
NO.	

SHEET DISCUSSION
SCHEDULES & GENERAL DETAILS

PROJECT #: 2023005
DATE ISSUED: 12/11/2023
DRAWING BY: JGM/JVD
CHECKED BY: DSCJ/PGC

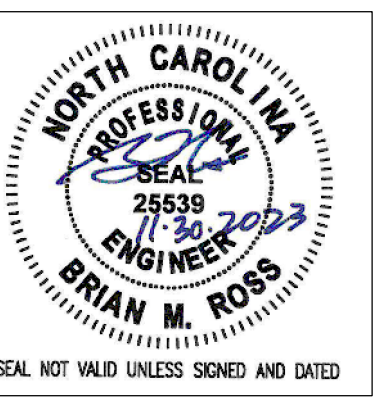
**SHERRI DOWNS AMENITY
LENNAR HOMES
AMENITY & POOL
ANGIER, NC**

A5.0



D. CLUGSTON

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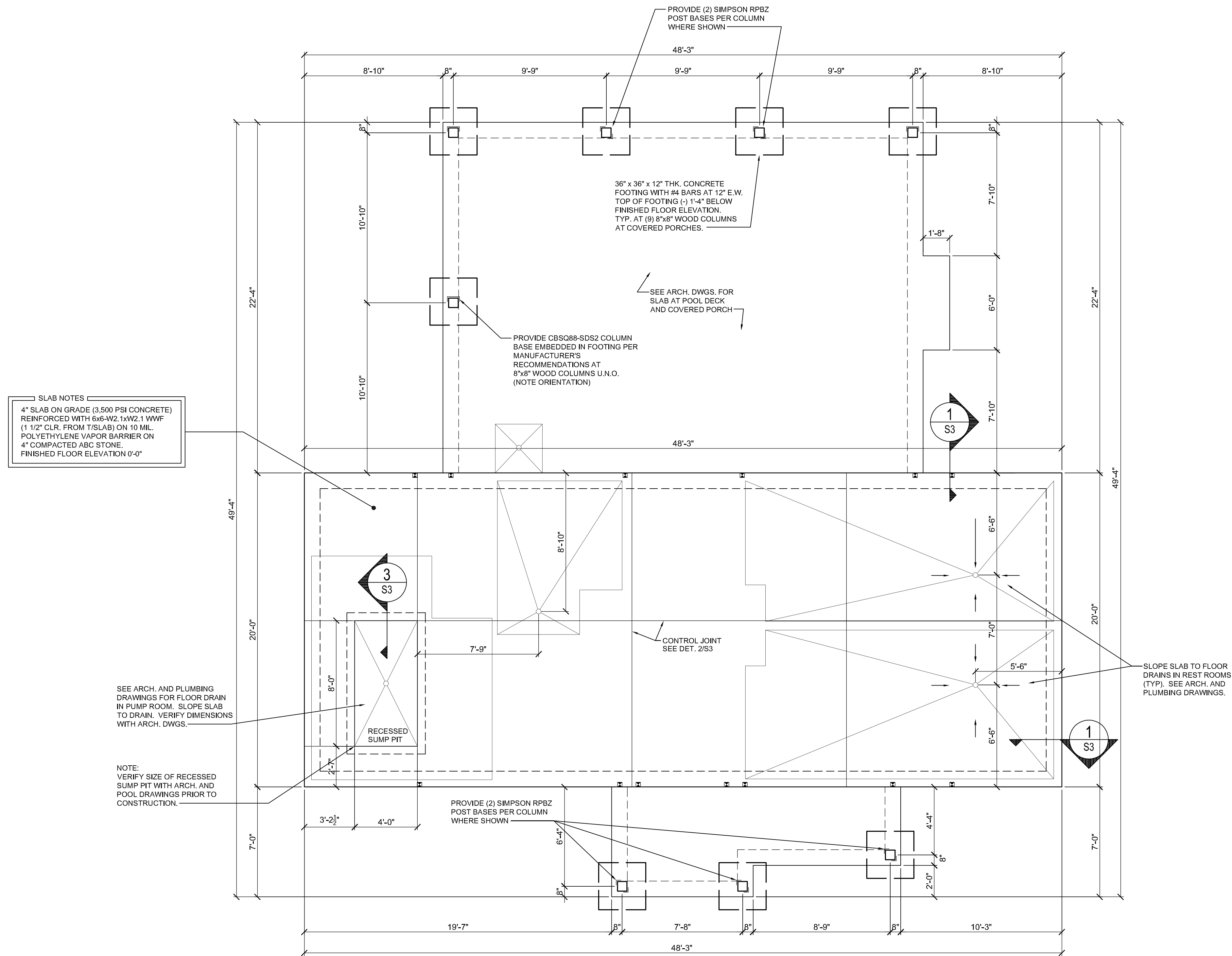
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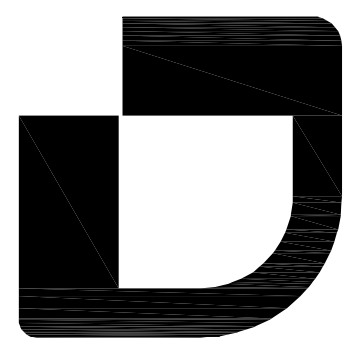
SHEET DESCRIPTION
SLAB AND FOUNDATION PLAN

PROJECT #: C230610
DATE ISSUED: 11/30/2023
DRAWING BY: BR
CHECKED BY: BR/JD

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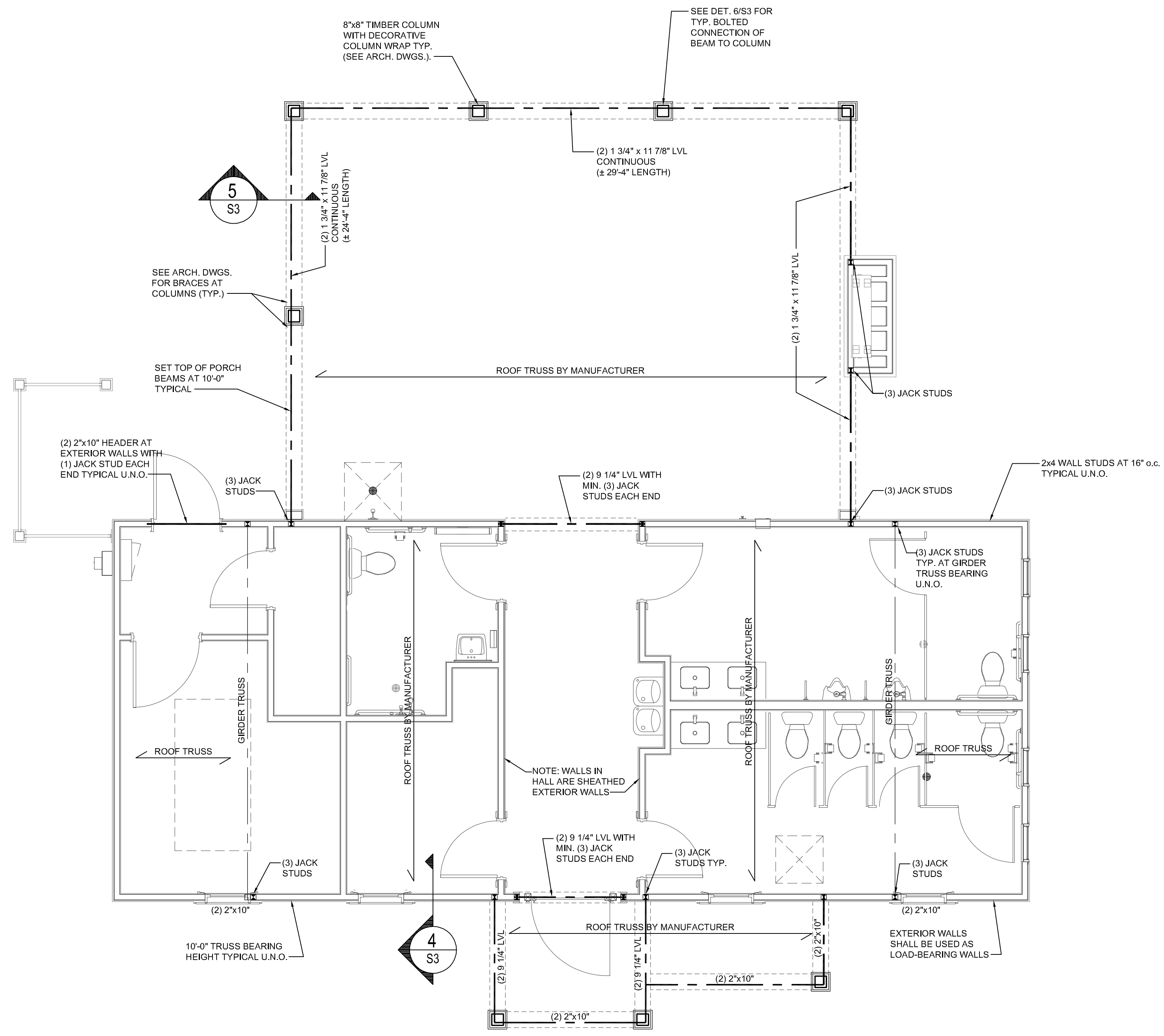
1 SLAB AND FOUNDATION PLAN
S1 1/4" = 1'-0"



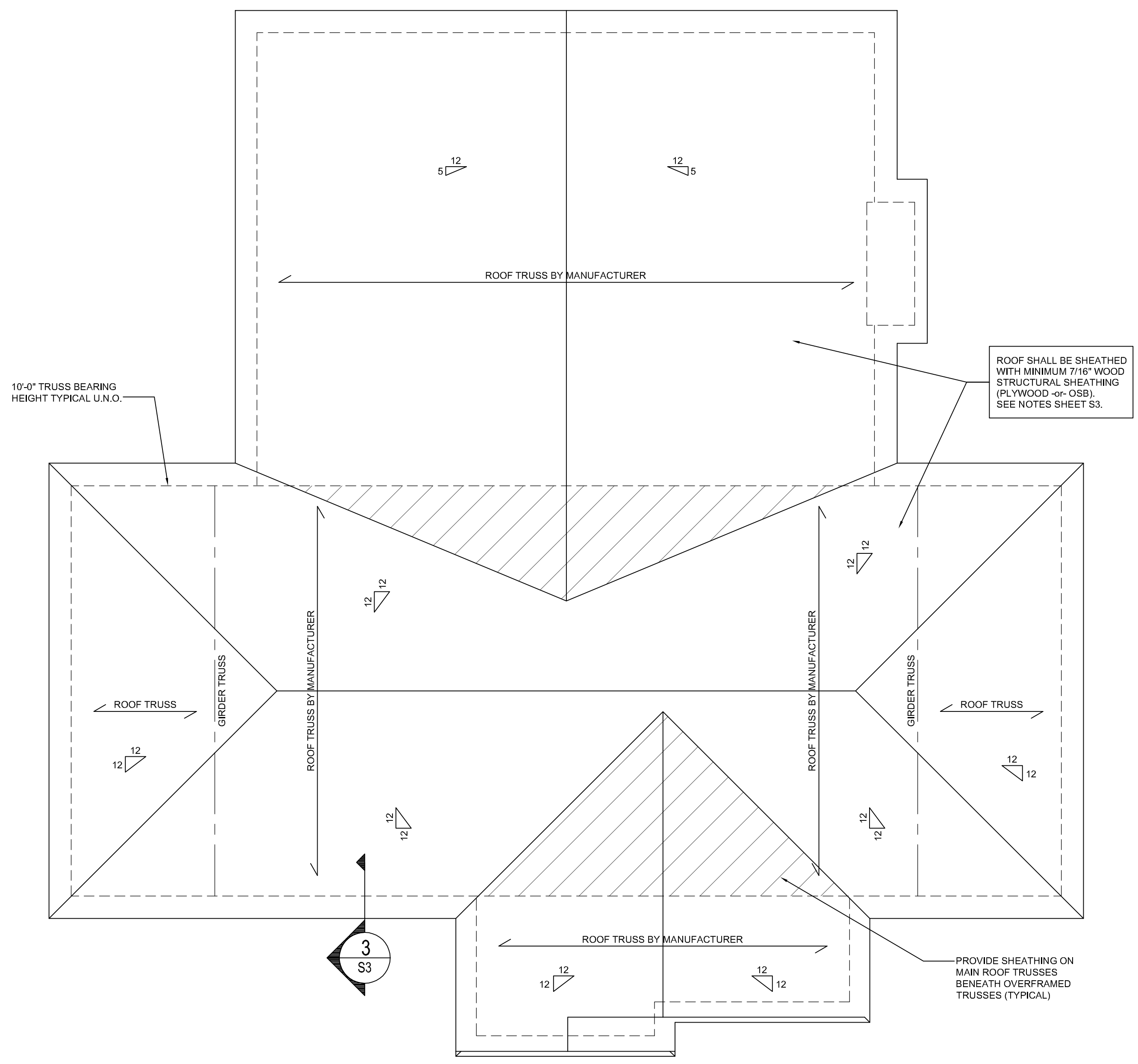
D. CLUGSTON

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



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



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

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NO.	REVISION	DATE

SHEET DESCRIPTION
FRAMING PLANS

PROJECT #: C230610
DATE ISSUED: 11/30/2023
DRAWING BY: BR
CHECKED BY: BR/JD

SHERRI DOWNS AMENITY
LENNAR HOMES
AMENITY & POOL
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STRUCTURAL NOTES

I. GENERAL

1. DESIGN CODES

NORTH CAROLINA BUILDING CODE, 2018 EDITION (AMENDED 2015 INTERNATIONAL BUILDING CODE)

ACI BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318-14)

AISC MANUAL OF STEEL CONSTRUCTION - ALLOWABLE STRESS DESIGN NINTH EDITION

ASCE 7-10 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES

2. DESIGN LOADS

LIVE LOADS: FLOOR: 100 PSF
ROOF: 20 PSF

ULTIMATE DESIGN WIND SPEED: 116 MPH

GROUND SNOW LOAD 15 PSF

SEISMIC DESIGN CATEGORY B

SITE CLASS D
S_s = 0.235
S₁ = 0.088

3. ALL ELEVATIONS ARE REFERENCED FROM FINISHED FLOOR ELEVATION OF 0'-0". SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.

4. DETAILED SHOP DRAWINGS SHALL BE PROVIDED FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

5. ENGINEER'S SEAL APPLIES TO STRUCTURAL COMPONENTS ONLY AND DOES NOT CERTIFY ARCHITECTURAL LAYOUT OR DIMENSIONAL ACCURACY.

6. ROSS LINDEN ENGINEERS PC ASSUMES NO LIABILITY FOR CHANGES OR MODIFICATIONS MADE TO THESE DRAWINGS BY OTHERS, OR FOR CONSTRUCTION METHODS, OR FOR ANY DEVIATION FROM THESE DRAWINGS.

II. CONCRETE

1. UNLESS OTHERWISE NOTED, ALL CONCRETE SHALL HAVE THE FOLLOWING STRENGTH AND SLUMP REQUIREMENTS:
3,500 PSI 28-DAY COMPRESSIVE STRENGTH, MAX. 5" SLUMP.

2. ALL CONCRETE SHALL BE MOIST CURED PER ACI 301 OR CURED WITH AN APPROVED CURING COMPOUND. CONTRACTOR SHALL VERIFY THAT THE CURING COMPOUND IS COMPATIBLE WITH FLOOR COVERING ADHESIVES, COATINGS, OR TOPPING TO BE USED. CONCRETE SHALL BE CURED FOR A MINIMUM OF 7 DAYS.

3. UNLESS OTHERWISE NOTED, ALL REINFORCING STEEL SHALL BE NEW BILLET STEEL, CONFORMING TO ASTM A-615, GRADE 60, DEFORMED.

4. UNLESS OTHERWISE NOTED, ALL DETAILING, FABRICATION, AND PLACING OF REINFORCING STEEL SHALL CONFORM TO THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES. (ACI 315)

5. ALL BAR SPLICES SHALL BE CLASS "B" TENSION SPLICES PER ACI 318-08, UNLESS OTHERWISE SHOWN.

6. ANCHOR BOLTS TO BE ASTM A36 OR A307.

7. CONTRACTOR SHALL REFER TO DRAWINGS OF OTHER TRADES AND VENDOR DRAWINGS FOR EMBEDDED ITEMS AND RECESSES NOT SHOWN ON THE STRUCTURAL DRAWINGS.

8. ALL SPREAD FOOTINGS BEARING ON NATIVE SOIL OR STRUCTURAL FILL ARE DESIGNED FOR AN ALLOWABLE BEARING PRESSURE OF 2,500 PSF. A GEOTECHNICAL REPRESENTATIVE SHALL INSPECT ALL FOOTING EXCAVATIONS TO CONFIRM ALLOWABLE BEARING PRESSURES.

9. PROVIDE TWO (2) #5 x 4'-9" LONG DIAGONAL BARS IN TOP FACE OF ALL SLABS (1" CLEAR) AT ALL RE-ENTRANT CORNERS. SEE PLAN FOR LOCATIONS.

10. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, PROTECTING, AND RELOCATING AS REQUIRED ALL SERVICE AND UTILITY LINES IN VICINITY OF THE WORK SITE.

11. CONTRACTOR SHALL VERIFY ALL SIZES AND LOCATIONS OF ALL MECHANICAL AND ELECTRICAL OPENINGS AND EQUIPMENT PADS WITH THE MECHANICAL AND ELECTRICAL DETAILS AND SHOP DRAWINGS BY OTHERS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL OPENINGS AND SLEEVES FOR PROPER DISTRIBUTION FOR ALL UTILITIES THROUGHOUT THE BUILDING.

12. ALL DOWELS WHICH ARE TO BE DRILLED AND GROUTED INTO EXISTING CONCRETE SHALL BE DONE WITH AN EPOXY GROUT. DRILL HOLE WITH DIAMETER 1/8" LARGER THAN DOWEL OR AS RECOMMENDED BY GROUT SUPPLIER. USE HIT-RE 500 V3 BY HILTI OR APPROVED EQUAL.

III. WOOD

1. FRAMING LUMBER SHALL BE #2 SPRUCE PINE FIR (SPF) WITH THE FOLLOWING MINIMUM DESIGN PROPERTIES:
F_b = 800 PSI F_v = 175 PSI E = 1.4E6 PSI

2. FRAMING LUMBER EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND, CONCRETE OR MASONRY SHALL BE #2 SOUTHERN YELLOW PINE (SPY) TREATED IN ACCORDANCE WITH AWPA C22 WITH THE FOLLOWING DESIGN PROPERTIES:
F_b = 800 PSI F_v = 175 PSI E = 1.4E6 PSI

3. ENGINEERED WOOD BEAMS SHALL BE LAMINATED VENEER LUMBER (LVL) OR PARALLEL STRAND LUMBER (PSL) WITH THE FOLLOWING MINIMUM DESIGN PROPERTIES:
F_b = 2600 PSI F_v = 285 PSI E = 1.9E6 PSI

4. ENGINEERED WOOD BEAMS SHALL BE INSTALLED WITH ALL CONNECTIONS PER MANUFACTURER'S INSTRUCTIONS.

5. SOLID BLOCKING SHALL BE PROVIDED AT ALL POINT LOADS TO TRANSFER LOADS THROUGH FLOOR LEVELS. COLUMNS SHALL BE CONTINUOUS TO THE FOUNDATION OR TO OTHER STRUCTURAL ELEMENTS.

6. WOOD SILL PLATES SHALL BE ANCHORED TO THE FOUNDATION WITH 1/2" DIAMETER ANCHOR BOLTS SPACED A MAXIMUM OF 2'-8" O.C. AND WITHIN 12" FROM THE ENDS OF EACH PLATE SECTION. PROVIDE 1/2" DIAMETER HILTI HIT-RE 500 V3 INJECTION ADHESIVE ANCHORS WITH MINIMUM 4 1/2" EMBEDMENT INTO THE FOUNDATION AT ALL EXTERIOR, LOAD-BEARING, AND SHEAR WALLS AS SHOWN ON THE PLAN.

7. ALL EXTERIOR WALLS SHALL BE SHEATHED WITH MINIMUM 7/16" WOOD STRUCTURAL SHEATHING (PLYWOOD -OR- OSB) WITH BLOCKINGS AT ALL JOINTS. FASTEN ALL PANELS WITH 8d NAILS AT 3" O.C. AT ALL EDGES AND AT 6" O.C. AT INTERMEDIATE FRAMING. AT DOUBLE TOP PLATE, FASTEN PANELS WITH A DOUBLE ROW OF 8d NAILS STAGGERED AT 3" O.C. ALL FASTENERS SHALL HAVE 1 3/8" PENETRATION INTO THE FRAMING MEMBERS.

8. PROVIDE MINIMUM 1/2" GYPSUM BOARD ON BOTH SIDES OF FULL-HEIGHT INTERIOR WALLS WITH INTERMEDIATE SUPPORT AT ALL JOINTS. FASTEN ALL PANELS WITH 1 1/4" SCREWS AT 7" O.C. AT TOP AND BOTTOM PLATES AND ALL STUDS. GYPSUM SHALL BE APPLIED PERPENDICULAR TO FRAMING.

9. SEE TYPICAL WALL SECTION FOR ADDITIONAL INFORMATION.

IV. WOOD TRUSSES

1. ENGINEERED ROOF TRUSS SYSTEMS SHALL BE PROVIDED FOR REVIEW AND COORDINATED WITH THE ENGINEER OF RECORD. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ROOF TRUSS DRAWINGS SHALL BE SIGNED AND SEALED BY THE MANUFACTURER AND REVIEWED BY THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION.

2. ALL TRUSSES SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH BCSP 1403 GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING & BRACING OF METAL PLATE CONNECTED WOOD TRUSSES."

3. THE TOP CHORD OF ALL ROOF TRUSSES SHALL BE SHEATHED WITH MINIMUM 7/16" WOOD STRUCTURAL SHEATHING (PLYWOOD -OR- OSB). PROVIDE PLYWOOD EDGE CLIPS BETWEEN PANELS.

4. PROVIDE PERMANENT BOTTOM CHORD TRUSS BRACING AND WEB MEMBER PLANE BRACING IN ACCORDANCE WITH BCSP-B2 "TRUSS INSTALLATION AND TEMPORARY BRACING" AND BCSP-B3 "WEB MEMBER PERMANENT BRACING" WEB REINFORCEMENT."

ABBREVIATIONS

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

DESIGN LOADS:

Occupancy Category	II	
Importance Factors:	Wind (IW)	1.0
	Snow (IS)	1.0
	Seismic (IE)	1.0
Live Loads:	Roof	20 psf
	Mezzanine	N/A psf
	Floor	100 psf
Ground Snow Load:	15 psf	
Wind Load:	Ultimate Wind Speed	116 mph (ASCE 7-10)
	Exposure Category	B
	Wind Base Shears (for MWFRS)	V _x = 3.6K V _y = 6.5K

SEISMIC DESIGN CATEGORY A B C D

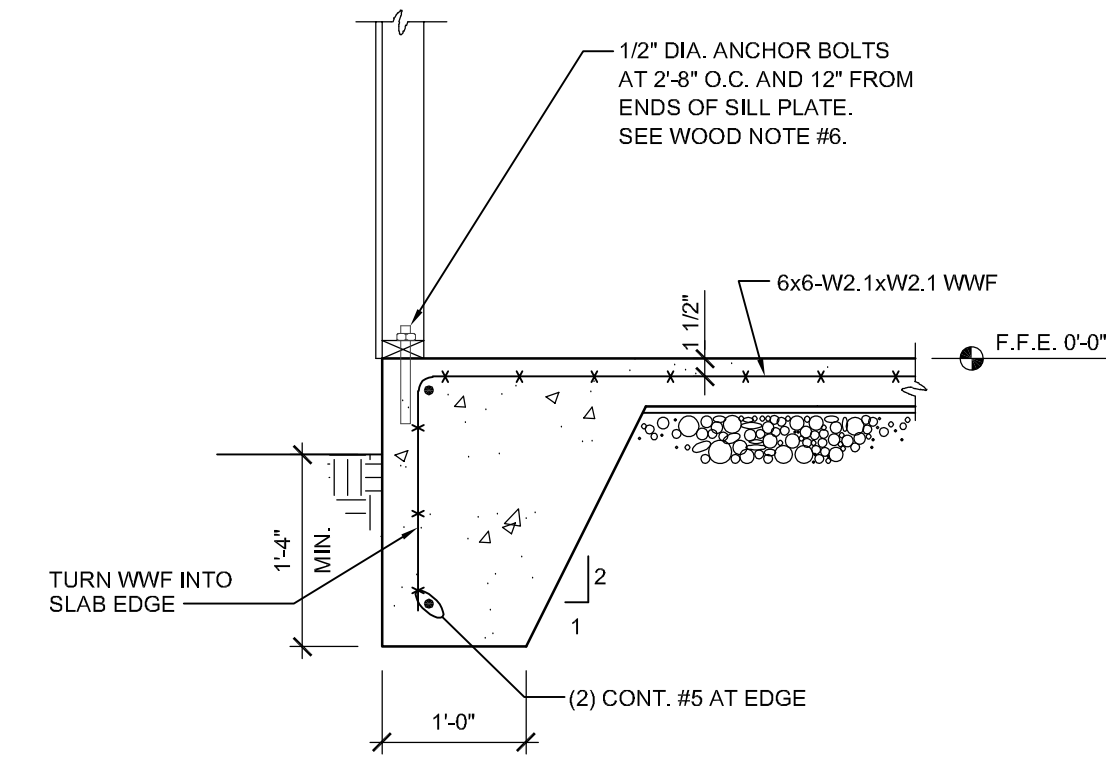
Provide the following Seismic Design Parameters:

Spectral Response Acceleration S_S 0.235 %g S₁ 0.088 %g
Site Classification D Field Test Presumptive Historical Data

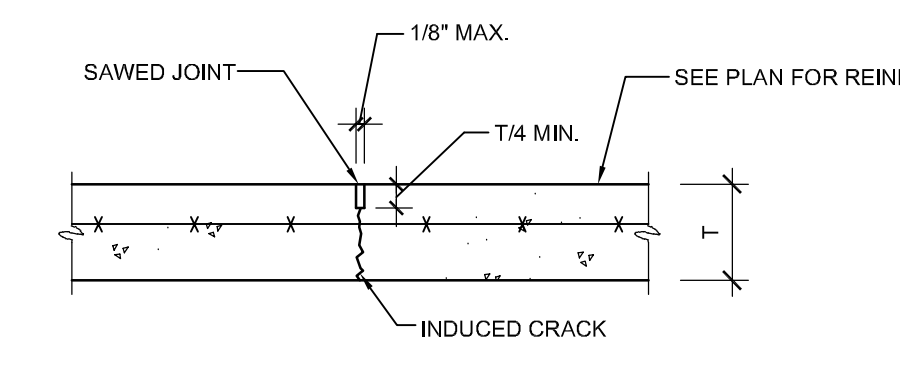
Basic structural system (check one)
 Bearing Wall Dual w/Special Moment Frame
 Building Frame Dual w/Intermediate R/C or Special Steel Moment Frame Inverted Pendulum
Seismic base shear V_X = 4.0K V_Y = 1.0K
Analysis Procedure Simplified Equivalent Lateral Force Modal
Architectural, Mechanical, Components anchored?

Lateral design Control: Earthquake Wind

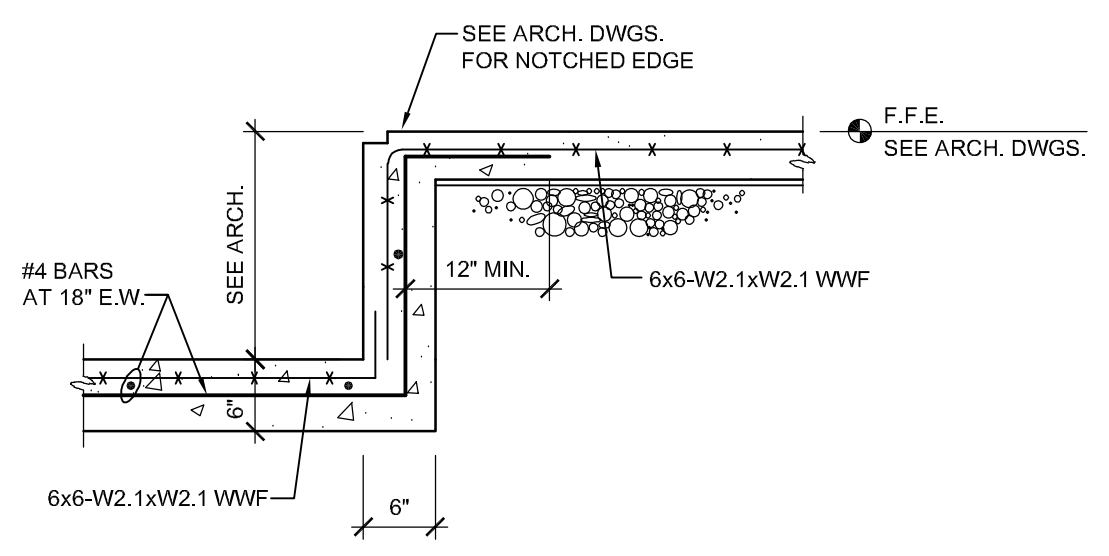
Soil Bearing Capacities:
Field Test (provide copy of test report) _____ psf
Presumptive Bearing capacity 2500 psf
Pile size, type, and capacity _____



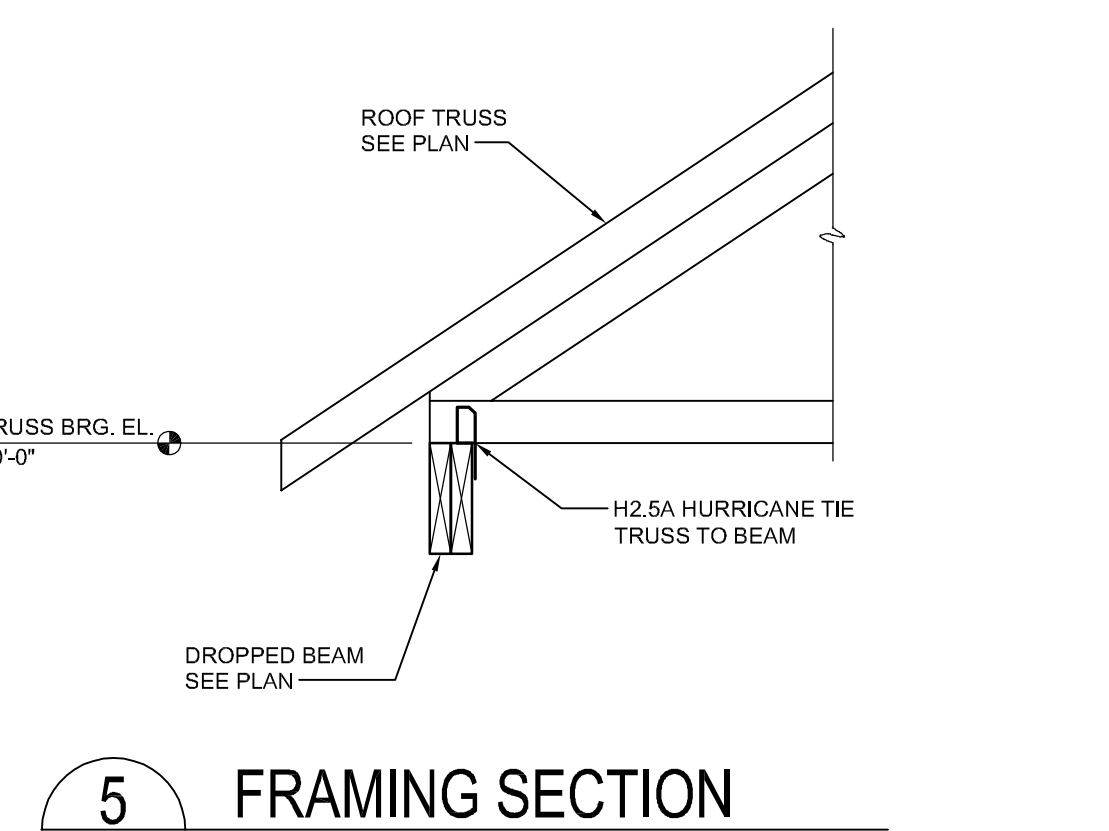
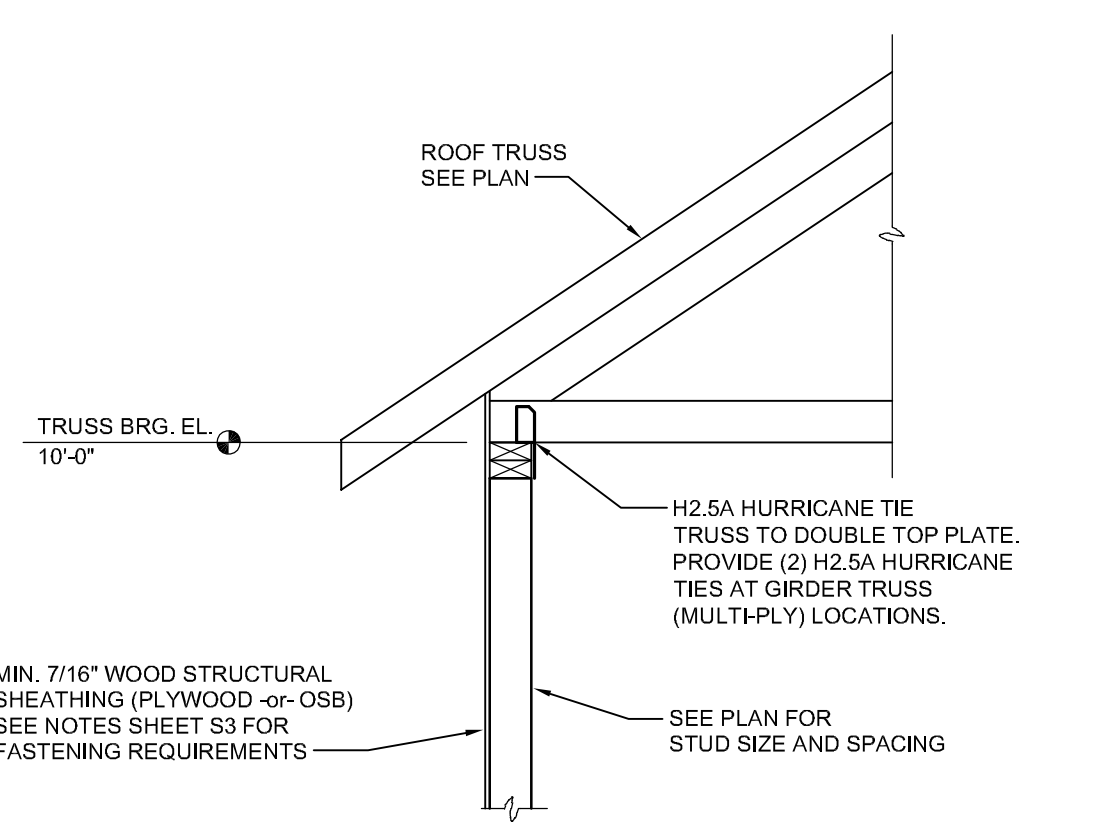
1 DETAIL - TYP. SLAB EDGE
S3 3/4" = 1'-0"



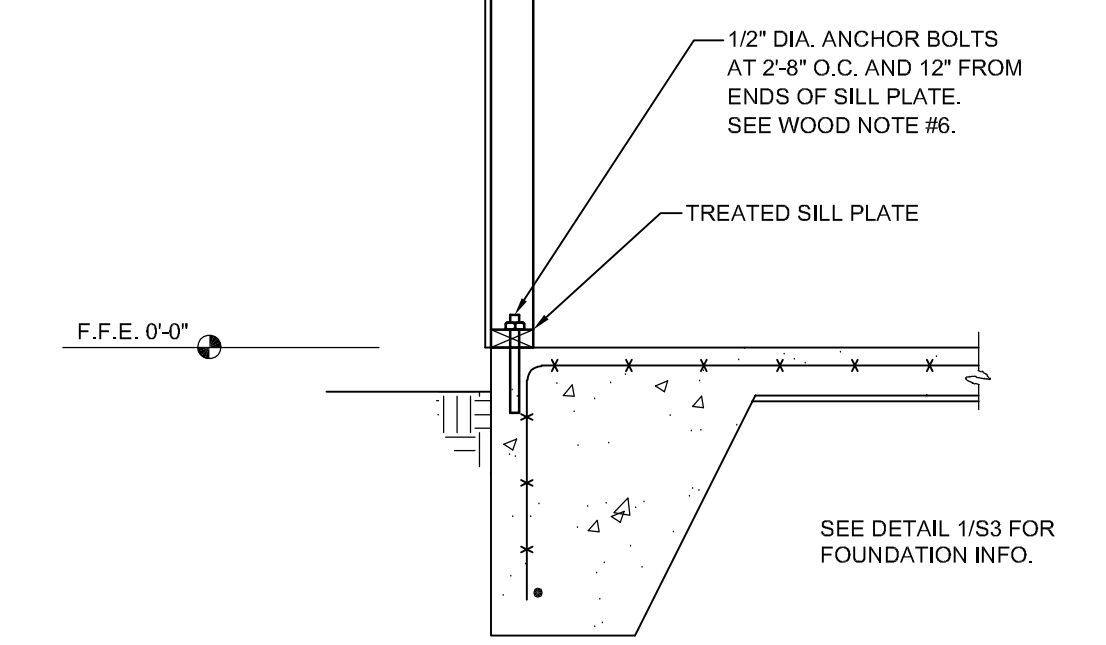
2 DETAIL - TYP. SLAB CONTROL JOINT
S3 1" = 1'-0"



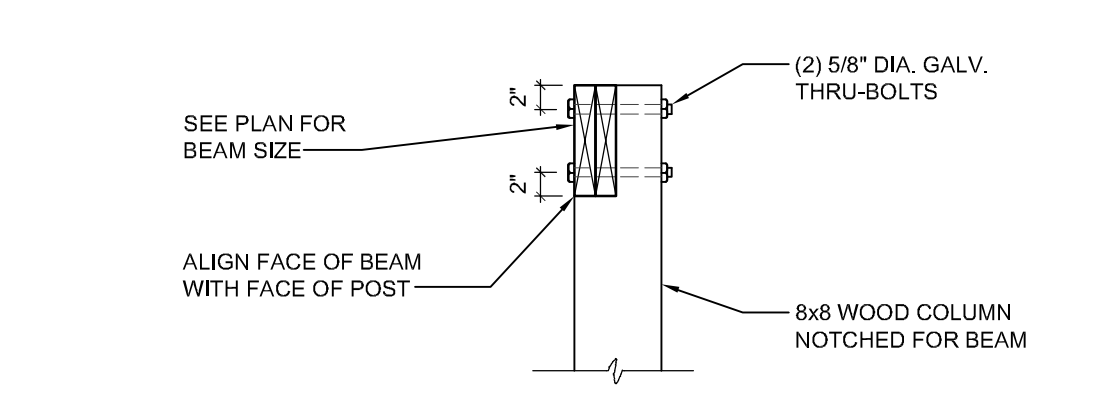
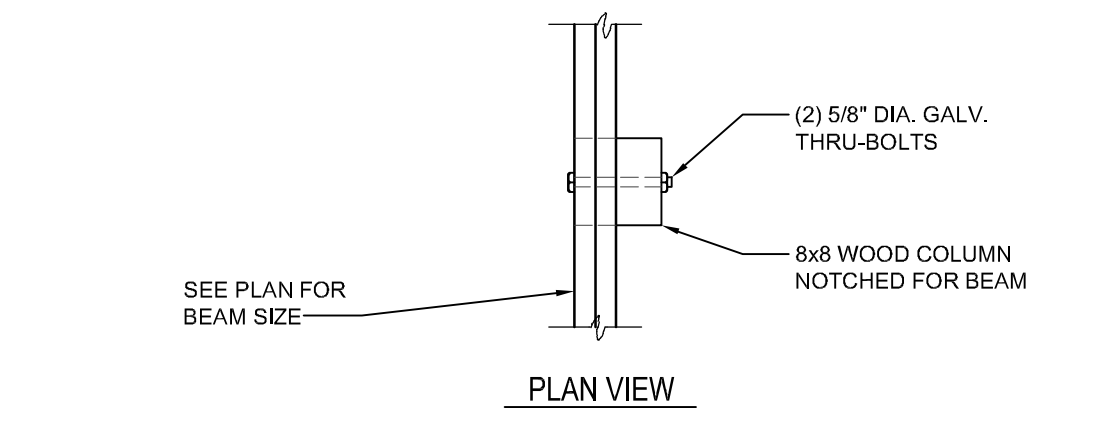
3 SECTION AT SUMP
S3 3/4" = 1'-0"



5 FRAMING SECTION
S3 3/4" = 1'-0"



4 TYPICAL WALL SECTION
S3 3/4" = 1'-0"



6 CONNECTION DETAIL
S3 3/4" = 1'-0"

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DATE	
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SHEET DISCRPTION

STRUCTURAL NOTES AND DETAILS

PROJECT #: C230610
DATE ISSUED: 11/30/2023
DRAWING BY: BR
CHECKED BY: BR/JD

**SHERRI DOWNS AMENITY
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ANGIER, NC**

GENERAL PLUMBING NOTES:

ADMINISTRATIVE:

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

MATERIALS:

- ALL OVERHEAD DOMESTIC WATER PIPING SHALL BE TYPE L COPPER WITH 95% 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 436, OR ASTM F 439) MAY ALSO BE USED WHERE NOT LOCATED IN 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 RATINGS OF 100 PSI AT 180°F. COLD WATER DISTRIBUTION PIPE AND TUBING SHALL HAVE A MINIMUM PRESSURE RATINGS OF 160 PSI AT 73.4°F. DO NOT INSTALL PEX OR CPVC PIPING IN RETURN AIR PLENUMS.
- BALL VALVES SHALL HAVE BRASS BODY, FULL PORT, CHROME PLATED BALL, WITH TEFLON SEATS, 150 PSI WSP, AND COMPLY WITH MSS SP-110. GATE VALVES SHALL HAVE BRONZE BODY, CLASS 150, AND COMPLY WITH MSS SP-90, 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 STOCHAM.
- 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 FIRE-RATING 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 FOREIGN MATERIALS ARE REMOVED BEFORE APPLYING INSULATION MATERIALS. INSULATION SHALL BE BY KNAUF, ARMACEL, JOHNS-MANVILLE, OR OWENS-CORNING.
- ALL INSULATION CONTAINING FIBROUS MATERIALS EXPOSED TO AIRFLOW SHALL BE RATED FOR THAT EXPOSURE OR SHALL BE ENCAPSULATED.
- INSULATING PROPERTIES FOR ALL MATERIALS SHALL MEET OR EXCEED INDUSTRY STANDARDS. POLYSTYRENE PRODUCTS SHALL MEET ASTM C578 91. ALL INSULATION SHALL BE LOW-EMITTING WITH NOT GREATER THAN 0.05 PPM FORMALDEHYDE EMISSIONS. THE MAXIMUM FLAME SPREAD AND SMOKE DEVELOPED INDEX FOR INSULATION SHALL MEET THE REQUIREMENTS OF THE LOCAL CODES AND ORDINANCES ADOPTED BY THE JURISDICTION IN WHICH THE BUILDING IS LOCATED.
- FAUCETS AND FIXTURE FITTINGS SHALL CONFORM TO 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 DIVERTERS SHALL BE INSTALLED AND ADJUSTED SO THAT THE FLOW OF HOT WATER FROM THE FITTINGS CORRESPONDS TO THE LEFT HAND SIDE OF THE FIXTURE FITTING. BACKFLOW PREVENTION SHALL BE IN ACCORDANCE WITH SECTION 608.13 OF THE NC PLUMBING CODE AND THE LOCAL AUTHORITY HAVING JURISDICTION. REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTERS SHALL CONFORM TO ASSE 1013 OR 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 EXCEEDING 75 FEET IN HEIGHT, DO NOT INSTALL ACCESS TO BACKFLOW PREVENTERS SHALL BE PROVIDED AS SPECIFIED BY THE INSTALLATION INSTRUCTIONS OF THE APPROVED MANUFACTURER.
- FOR BELOW GRADE SANITARY WASTE PIPING, PC SHALL USE SERVICE WEIGHT CAST IRON PIPE WITH COMPRESSION JOINTS (ASTM A 74). USE MINIMUM 2 INCH SIZE UNDERGROUND. SOLID WALL SCHEDULE 40 APC (ASTM D 2665) WITH SCHEDULE 40 SOCKET TYPE PIPE FITTINGS (ASTM D 3311) MAY ALSO BE USED. DO NOT USE PVC PIPE FOR APPLICATIONS WHERE THE WASTE WATER TEMPERATURE EQUALS OR EXCEEDS 140°F OR IF THE BUILDING HEIGHT EXCEEDS 75 FEET.
- FOR ABOVE GRADE SANITARY WASTE AND VENT PIPING, USE SERVICE WEIGHT CAST IRON NO-HUB TYPE WITH COUPLINGS (CISPI 301). SOLID WALL SCHEDULE 40 PVC (ASTM D 2665) WITH SCHEDULE 40 SOCKET TYPE FITTINGS (ASTM D 3311) MAY BE USED IF PERMITTED BY LOCAL CODE, EXCEPT IN BUILDINGS EXCEEDING 75 FEET IN HEIGHT. DO NOT INSTALL PVC IN RETURN AIR PLENUMS. ALL 1/2 INCH AND BRANCH VENT PIPES SHALL BE SO GRADED AND CONNECTED AS TO DRAIN BACK TO THE DRAINAGE PIPE BY GRAVITY. BRANCH VENTS EXCEEDING 40 FEET IN DEVELOPED LENGTH SHALL BE INCREASED BY ONE NOMINAL SIZE FOR THE ENTIRE DEVELOPED LENGTH OF THE PIPE.
- PC SHALL PROVIDE ALL WATER HEATERS (WATTAGE/INPUT AND CAPACITY AS NOTED IN SCHEDULES) WITH ANTI SCALDING PROTECTION. IF NOT 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.
- 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:

- EXTEND DOMESTIC WATER PIPE FROM FIVE (5) FEET OUTSIDE THE BUILDING INTO THE BUILDING AS INDICATED ON THE PLANS AND INSTALL DOMESTIC WATER DISTRIBUTION PIPING TO ALL FIXTURES AND EQUIPMENT REQUIRING THE SAME. WATER SERVICE PIPE AND THE BUILDING SEWER SHALL BE SEPARATED BY 5 FEET OR 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.
- 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 JILL-OPEN VALVE ON THE BASE OF EVERY WATER RISER PIPE AND ON TOP OF EVERY WATER DOWN-FEED PIPE. PROVIDE VALVE HANDLE EXTENSIONS AS NECESSARY FOR INSULATION.
- IT SHALL BE THE RESPONSIBILITY OF THE PC TO SUSPEND AND SUPPORT ALL PIPING SYSTEMS FOR WHICH THE ENGINEER RECOGNIZES 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 ISOLATION 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 GRINNEL, MASON, OR B-LINE.
- SLEEVE ALL PIPES PASSING THROUGH PARTITIONS, WALLS, AND FLOORS. SLEEVES IN FLOORS AND INTERIOR WALLS OF POURED IN PLACE CONCRETE, BRICK, TILE, OR MASONRY SHALL BE SCHEDULE 40 STEEL PIPE, MACHINE CUT. SLEEVES IN GYPSUM BOARD WALLS SHALL BE 22 GAUGE, ROLLED GALVANIZED SHEET METAL. TACK WELD ON THE LONGITUDINAL SEAM. PROVIDE SLEEVES WHERE PIPES PASS THROUGH FLOORS AND WALLS ABOVE AND BELOW 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. ANNULAR SPACES BETWEEN SLEEVES AND PIPES SHALL BE FILLED OR CAULKED IN AN APPROVED MANNER.
- THE TOP OF WATER PIPES INSTALLED BELOW GRADE OUTSIDE THE BUILDING SHALL BE BELOW THE FROST LINE OR A MINIMUM OF 12 INCHES BELOW FINISHED GRADE WHICHEVER IS GREATER. WATER PIPING INSTALLED IN A WALL EXPOSED TO THE EXTERIOR SHALL BE LOCATED ON

- THE HEATED SIDE OF THE WALL INSULATION. WATER PIPING INSTALLED IN AN UNCONDITIONED UTILITY ROOM OR UNCONDITIONED ATTIC SHALL BE INSULATED TO A MINIMUM OF R-6.5 DETERMINED IN ACCORDANCE WITH ASTM C 177.
- HOT WATER PROVIDED TO PUBLIC HAND-WASHING FACILITIES/LAVATORIES SHALL BE TEMPERED WATER DELIVERED THROUGH AN APPROVED WATER-TEMPERATURE LIMITING DEVICE THAT CONFORMS TO ASSE 1070 OR CSA B126.3.
- INSULATE ALL EXPOSED WASTE AND SUPPLY PIPING UNDER LAVATORIES, SINKS, AND ELECTRIC WATER COOLERS WITH THE HAND-LAV GUARD INSULATION KIT BY TRUEBRO OR EQUAL.
- POTABLE WATER OUTLETS SHALL BE PROTECTED FROM BACKFLOW IN ACCORDANCE WITH 608.15. PRESSURE TYPE VACUUM BREAKERS SHALL CONFORM TO ASSE 1020 AND SPLIPROOF VACUUM BREAKERS SHALL COMPLY WITH ASSE 1056. HOSE-CONNECTION VACUUM BREAKERS SHALL CONFORM TO ASSE 1011, ASSE 1019, ASSE 1025, OR ASSE 1052. CONNECTIONS TO BEVERAGE DISPENSERS, COFFEE MACHINES, AND NON-CARBONATED BEVERAGE DISPENSERS SHALL BE PROTECTED BY A BACKFLOW PREVENTER IN ACCORDANCE WITH ASSE 1022.
- THE PC SHALL INSTALL WATER HAMMER ARRESTORS ON BRANCH LINES WITH QUICK CLOSING VALVES PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. WATER HAMMER ARRESTORS SHALL CONFORM TO ASSE 1010.
- THE PC SHALL PROVIDE CHECK VALVES AT ALL FIXTURES WITH THREADED OUTLETS AS REQUIRED BY CODE. TRAP PRIMERS SHALL BE PROVIDED AS SHOWN ON THE PLANS OR AS REQUIRED.
- ADJUST STOPS AND VALVES FOR INTENDED FLOW RATE TO FIXTURES WITHOUT SPLASHING, NOISE, OR OVERFLOW.
- BEFORE COMMENCING WORK, CHECK INVERT ELEVATIONS REQUIRED FOR SEWER CONNECTIONS, CONFIRM INVERTS, AND VERIFY THESE CAN BE PROPERLY CONNECTED TO WITH SLOPE FOR DRAINAGE AND COVER TO AVOID FREEZING. ONCE INVERTS AND FALL HAVE BEEN ESTABLISHED, EXTEND SANITARY SEWER PIPING TO 5 FEET OUTSIDE THE BUILDING AND INSTALL ALL DRAINS, STACKS, VENTS, FLOOR DRAINS, AND CLEANOUTS NECESSARY FOR A COMPLETE INSTALLATION.
- ALL SANITARY SEWER PIPING IS BELOW GRADE OR WITHIN WALLS UNLESS OTHERWISE NOTED. ALL SANITARY VENT PIPING IS ABOVE THE CEILING OR WITHIN WALLS UNLESS OTHERWISE NOTED. 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.
- SOIL AND WASTE LINES 2-1/2 INCHES AND SMALLER SHALL BE SLOPED AT 1/4 INCH PER FOOT MINIMUM. SOIL AND WASTE LINES 3 INCHES TO 6 INCHES IN DIAMETER SHALL BE SLOPED AT 1/8 INCH PER FOOT MINIMUM.
- FOR WATER CLOSET WASTE CONNECTIONS, A 4 INCH BY 3 INCH CLOSURE BEND SHALL BE ACCEPTABLE. WHERE A 3 INCH BEND IS UTILIZED ON WATER CLOSETS, A 4 INCH BY 3 INCH FLANGE SHALL BE INSTALLED TO RECEIVE THE FIXTURE HORN.
- FOR PLASTIC PIPE SIZES GREATER THAN 6 INCHES, AND OTHER PIPE SIZES GREATER THAN 4 INCHES, RESTRAINTS SHALL BE PROVIDED FOR DRAIN PIPES AT ALL CHANGES IN DIRECTION AND AT ALL CHANGES IN DIAMETER GREATER THAN TWO PIPE SIZES. BRACES, BLOCKS, RODDING, BACKFILL AND OTHER SUITABLE METHODS AS SPECIFIED BY THE COUPLING MANUFACTURER SHALL BE UTILIZED.
- BASES OF STACKS SHALL BE SUPPORTED BY THE BUILDING STRUCTURE, VIRGIN OR COMPACTED EARTH, OR OTHER SUITABLE MATERIAL TO SUPPORT THE WEIGHT OF THE PIPING.
- HORIZONTAL DRAIN PIPES SHALL HAVE CLEANOUTS IN ACCORDANCE WITH 708.10. EXTEND CLEANOUTS TO FINISHED FLOOR OR WALL SURFACE. LUBRICATE THREADED CLEANOUT PLUGS WITH A MIXTURE OF GRAPHITE AND LINED OIL. ENSURE CLEARANCE AT ALL CLEANOUTS FOR 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.
- DRAINAGE PIPING FOR FUTURE FIXTURES SHALL TERMINATE WITH AN APPROVED CAP OR PLUG.
- 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.
- 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.
- THE PC SHALL PROVIDE UNIONS FOR DISASSEMBLY AND SERVICE OF ALL FIXTURES AND OTHER RELEVANT PLUMBING EQUIPMENT. UNIONS SHALL BE GROUND-JOINT WITH BRASS SEAT. PROVIDE INSULATING UNIONS AT EACH JUNCTION OF DISSIMILAR MATERIALS.
- THE PC SHALL ACCURATELY ROUGH-IN ALL FIXTURES ACCORDING TO MANUFACTURER'S INSTALLATION DIMENSIONS AND INSTRUCTIONS. OFFSET ADAPTERS AND FLEXIBLE CONNECTORS ARE NOT ACCEPTABLE. FLUSH HANDLES SHALL BE MOUNTED ON THE WIDE SIDE OF TOILET AREAS FOR ADA COMPLIANCE. INSTALL EACH FIXTURE WITH TRAP EASILY REMOVABLE FOR SERVICING AND CLEANING. SEAL FIXTURES TO WALL AND FLOOR SURFACES WITH SEALANT. SOLIDLY ATTACH WATER CLOSETS TO FLOOR WITH LAG SCREWS. SEAL ALL SELF-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 OOOZE OUT.
- 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"
PH	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 9024001EC.020 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 LAV-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 LAV-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)(Z7000-0V-2P), AND ADJUSTABLE VERTICAL VALVE ROD. COORDINATE FINISH WITH OWNERS.	1/2"	1/2"	-
P5	DRINKING FOUNTAIN	ELKAY VRC1FRODSC	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 WOODMONT OR MIFAB	EXPOSED NON-FREEZE ANTI-SIPHON AUTOMATIC DRAINING WALL FAUCET COMPLETE WITH EXTERIOR CHROME FINISH, BRASS CASING, ALL BRONZE INTERIOR PARTS, Z1399-V8 ANTI-SIPHON INTEGRAL VACUUM BREAKER, OPERATING ROD WITH FREE FLOATING COMPRESSION CLOSURE VALVE. REPLACEABLE SEAT WASHER COMBINATION 1/2 FEMALE SOLIDER INLET AND 1/2 MALE IP 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 L909 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 L9099 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 L1MMV 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"
AAV	AIR ADMITTANCE VALVE	STUDDOR REDIVENT OR APPROVED EQUAL	ANGI/ASSE 1051 LISTED. NSF STANDARD 14. PROVIDE PVC OR ABS CONNECTOR AS NECESSARY CONNECT VALVE TO PIPING PER MANUFACTURER. INSTALL IN THE VERTICAL, UPRIGHT POSITION AFTER ROUGH-IN AND PRESSURE TESTING OF THE SYSTEM. PROVIDE WALL BOX IF NOT ABOVE CEILING OR OTHERWISE CONCEALED.	-	-	2"

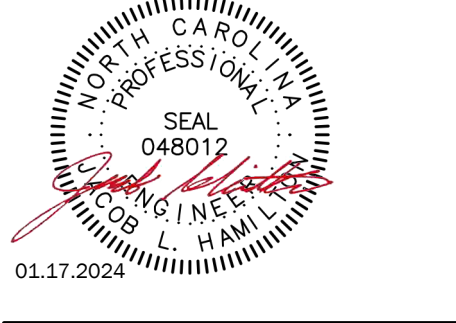
PLUMBING LINES SIZING TABLE									
FIXTURE TYPE	OCCUPANCY	QTY	DRAINAGE FIXTURE UNITS		WATER SUPPLY FIXTURE UNITS				
			EACH	TOTAL	CW	HW	CW & HW	HW TOTAL	TOTAL
WATER CLOSET (FLUSH TANK)	PUBLIC	5	4.00	20.00	5.00	0.00	5.00	0.00	25.00
SHOWER	PUBLIC	1	2.00	2.00	3.00	3.00	4.00	3.00	4.00
LAVATORY	PUBLIC	5	1.00	5.00	1.50	1.50	2.00	7.50	10.00
URINAL (¾" FLUSH VALVE)	PUBLIC	2	2.00	4.00	5.00	0.00	5.00	0.00	10.00
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			31.5
HOSE BIBBS		5	5	25.00		TOTAL WFSUs	10.5	49.3	
						GPM	15.00	29.00	
						OTHER FIXTURES' GPM	0.00	5.00	
						TOTAL GPM	15.00	34.00	
MINIMUM BUILDING DRAIN SIZE	4"	ONLY ONE HOSE BIBB IN USE AT A TIME							
MINIMUM WATER LINE SIZE	1"								

ELECTRIC WATER HEATER SCHEDULE											
MARK	MFG	MODEL	TANK VOL	INPUT	RECOVERY	SET POINT	POWER		CONNECTIONS	OPTIONS	
			GALS	KW	GPH @ 60°ΔT	°F	VOLTAGE	PHASE	HOT		COLD
WH-2	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, BROADFORD WHITE, OR STATE

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

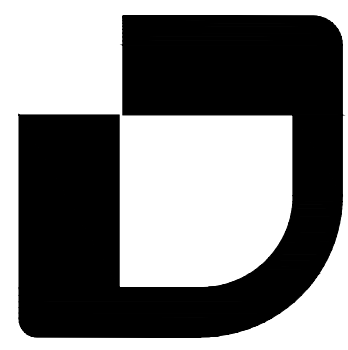
DO NOT TAP WATER LINE AHEAD OF RPZ.



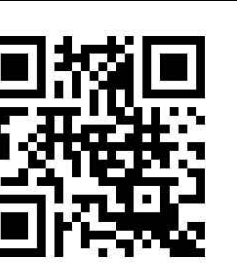
NO.	REVISION	DATE	SHEET DESCRIPTION	
			OWNER CHANGES	DATE
1		01/15/24	PLUMBING NOTES AND SCHEDULES	

PROJECT #: 230913
 DATE ISSUED: 01/15/2024
 DRAWING BY: JH
 CHECKED BY: MWK/JLH

**SHERRI DOWNS AMENITY
 LENNAR HOMES
 AMENITY & POOL
 ANGLIER, NC**



D. CLUGSTON



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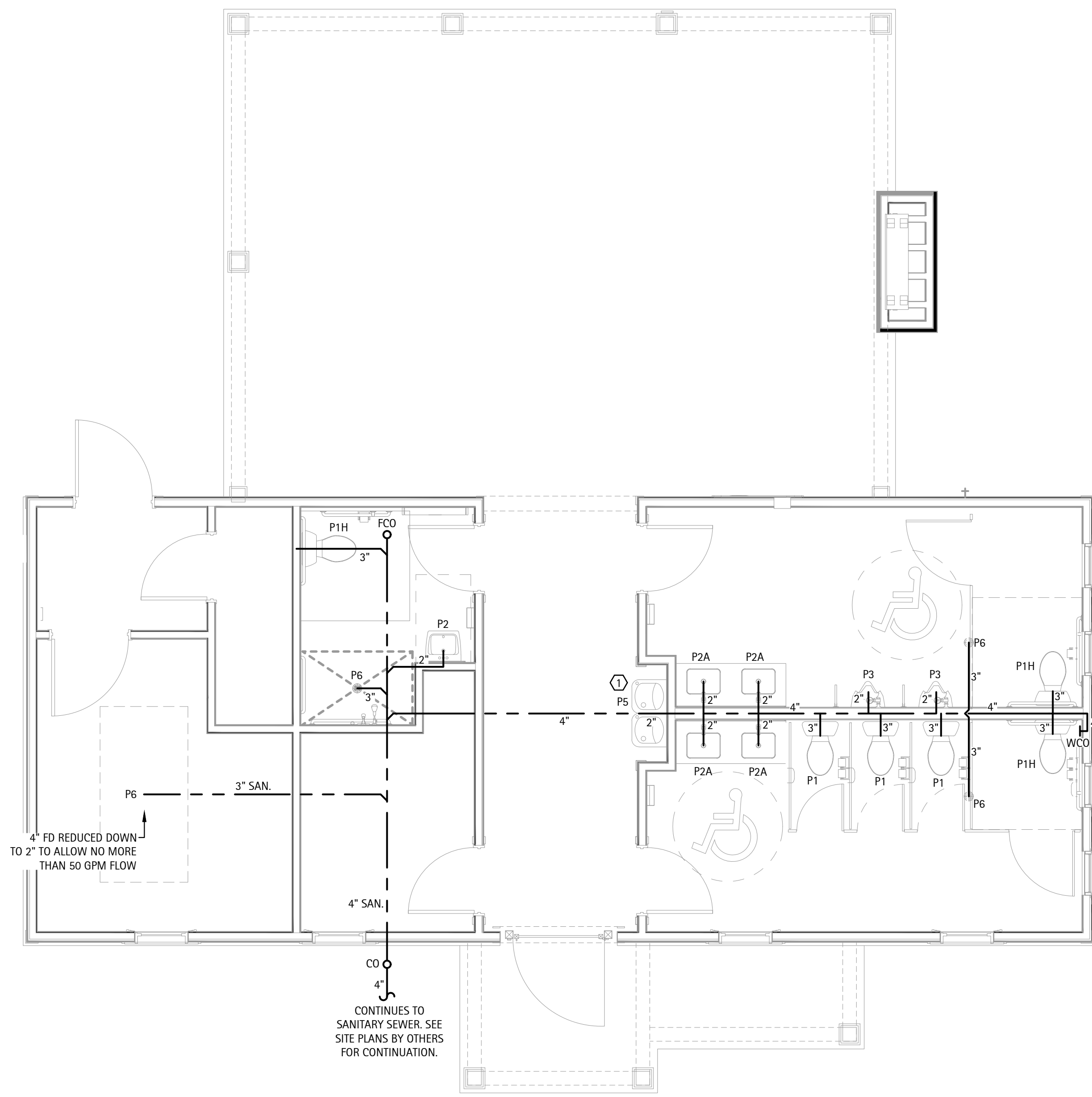
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DATE	01.15.24

SHEET DISCUSSION
SANITARY SEWER AND WATER SUPPLY PLANS

PROJECT #:	230913
DATE ISSUED:	01/15/2024
DRAWING BY:	JH
CHECKED BY:	MW/JLH

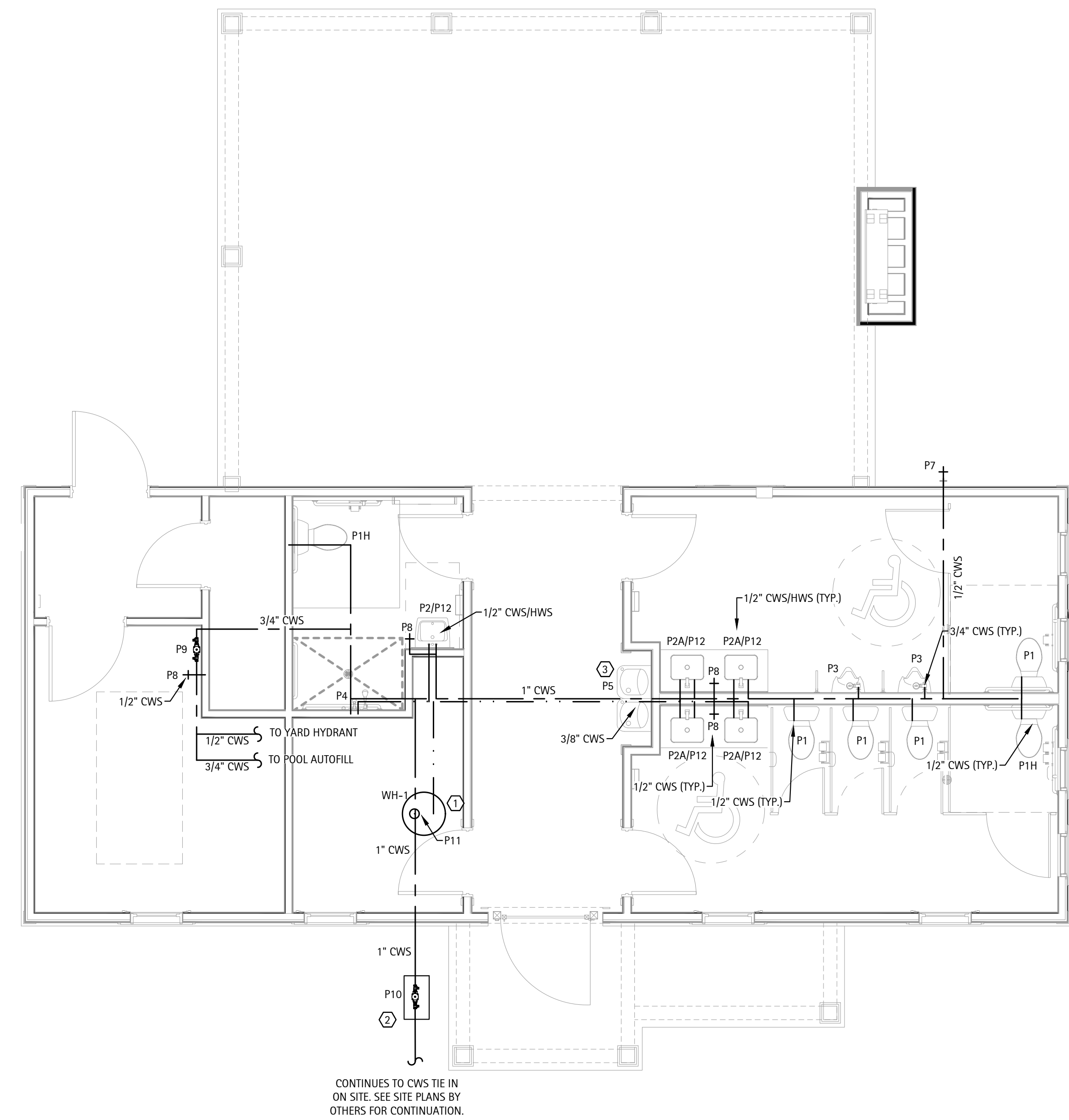
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AMENITY & POOL
ANGIER, NC

P2



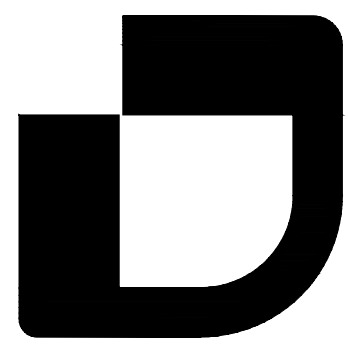
SANITARY PLAN HEX NOTES

1. PC TO INSTALL ALL BLOCKING.



SUPPLY PLAN HEX NOTES

1. WATER HEATER LOCATED ABOVE CEILING IN ATTIC SPACE. SEE DETAIL ON P3 FOR MOUNTING.
2. RPZ IN HOTBOX ON SITE. SHOWN HERE FOR REFERENCE ONLY. CONSULT SITE PLANS BY OTHERS FOR EXACT LOCATION.
3. PC TO INSTALL ALL BLOCKING.



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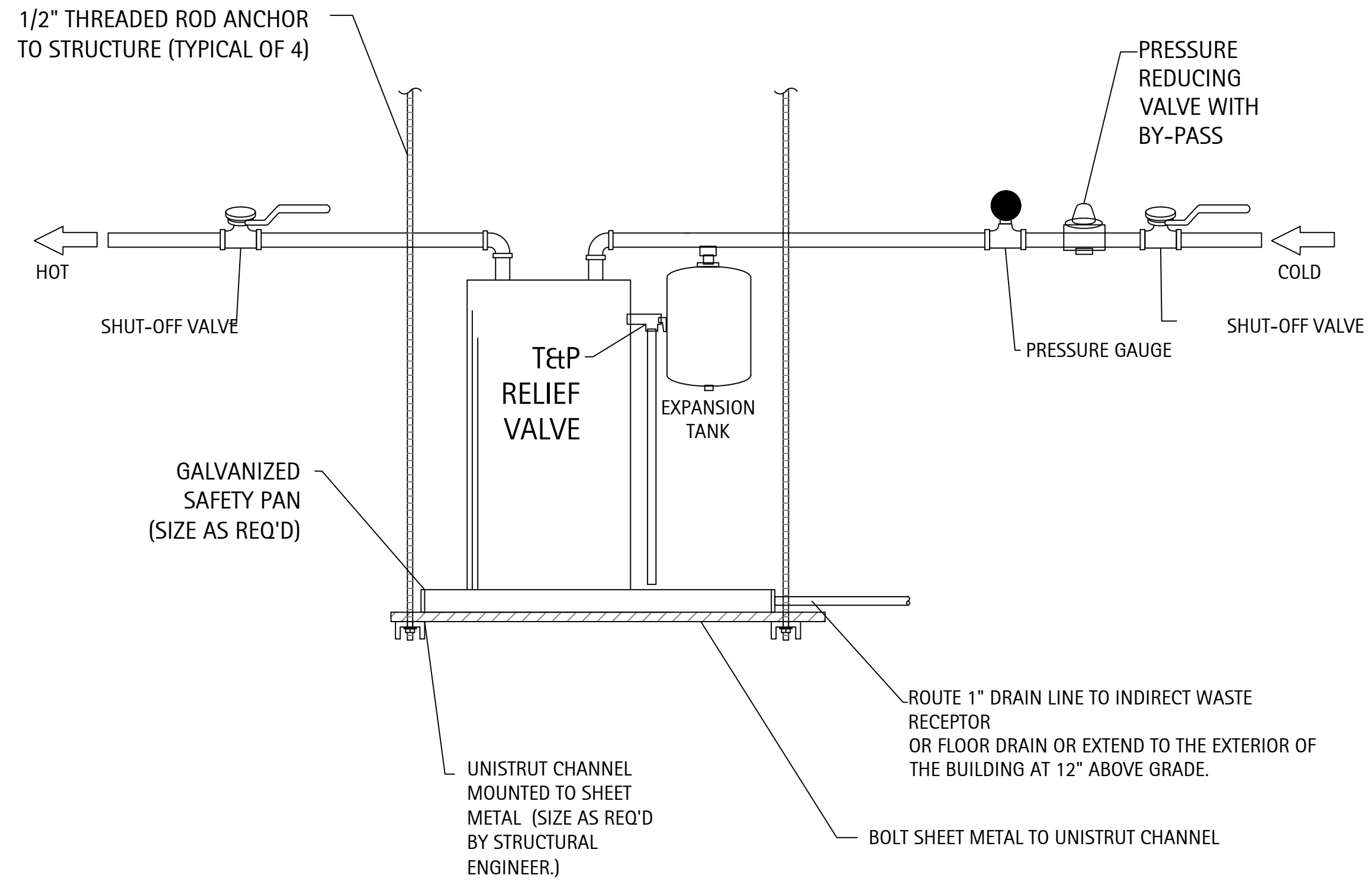
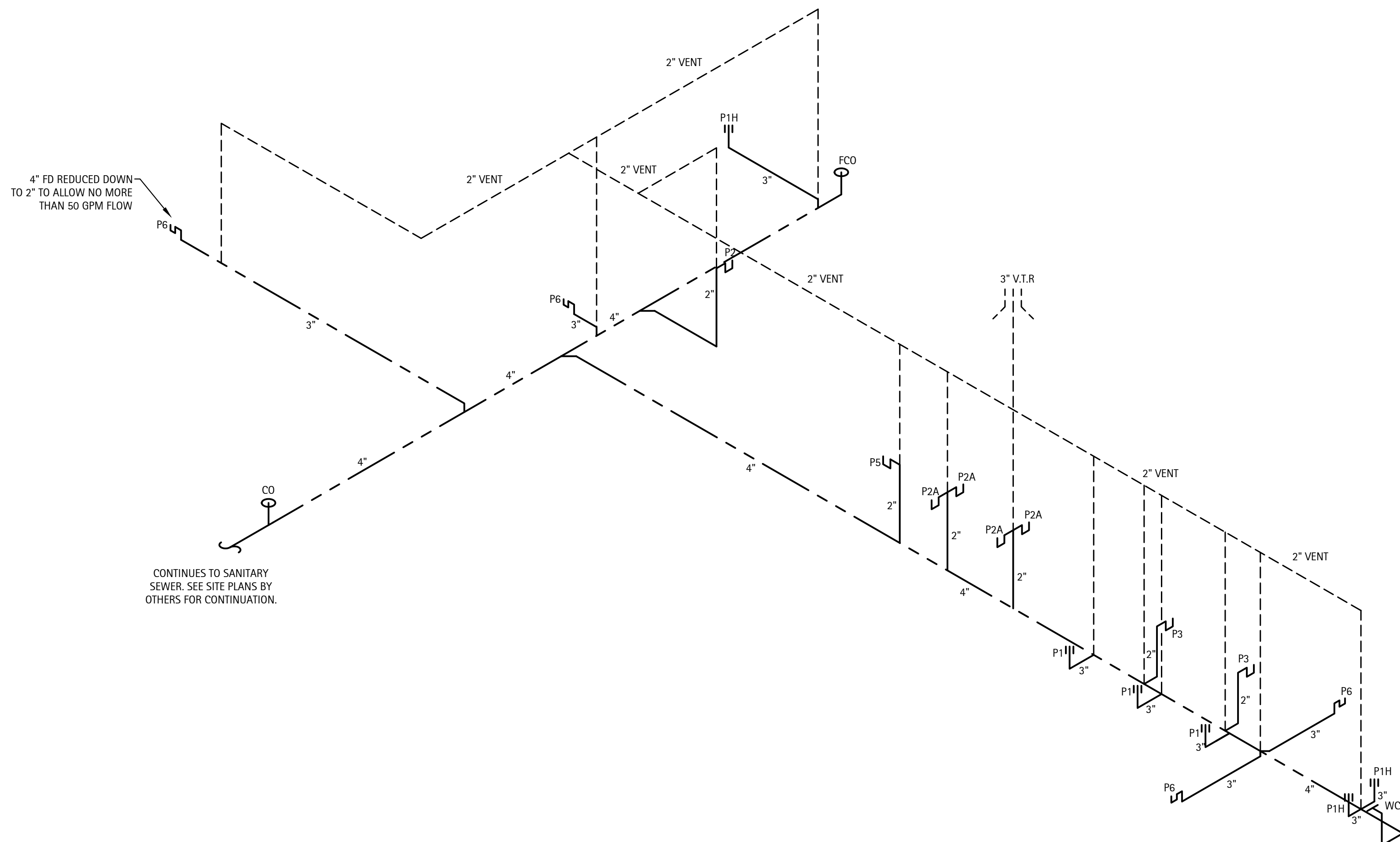
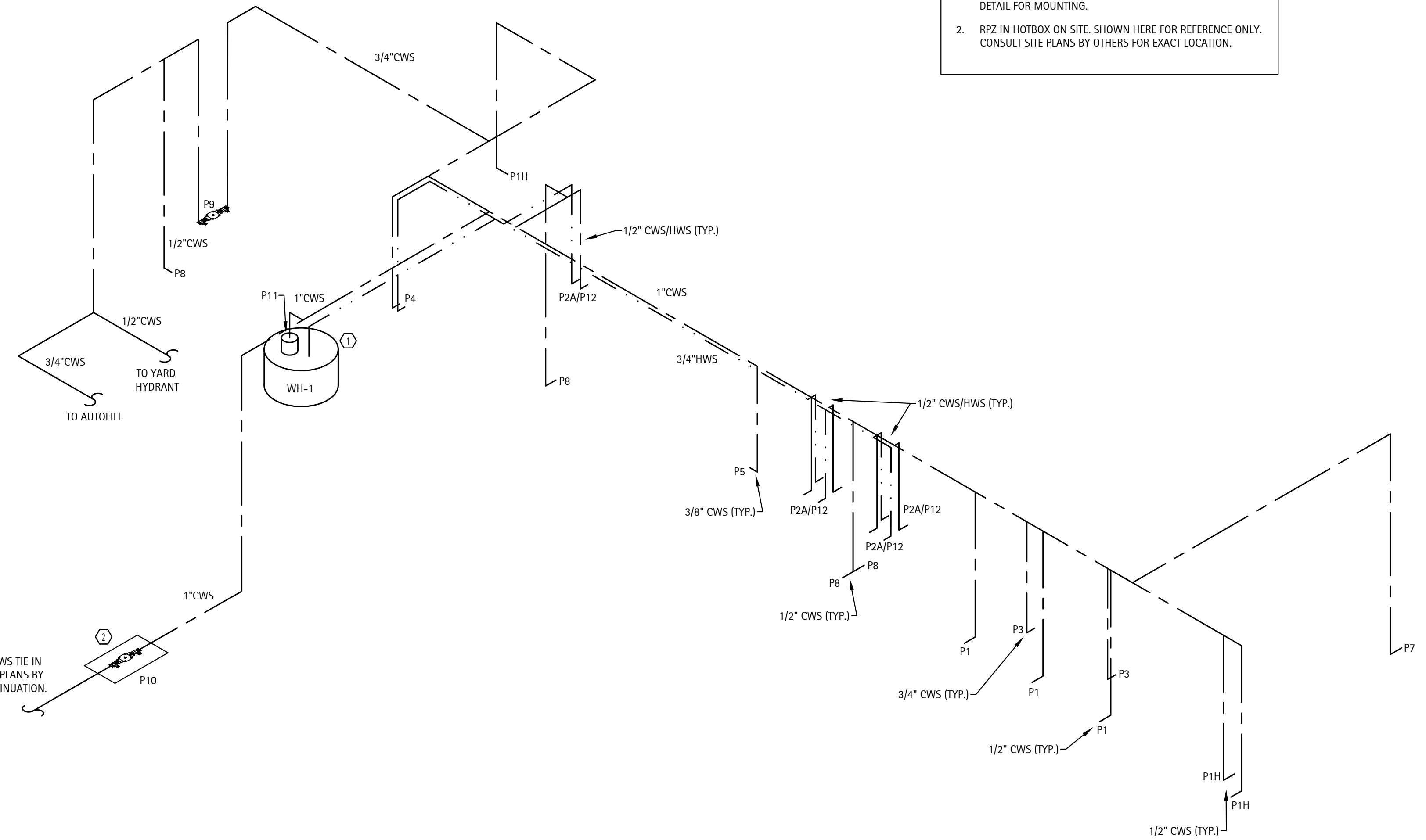
SHEET DISCRPTION

SANITARY SEWER AND WATER SUPPLY RISERS

PROJECT #:	230913
DATE ISSUED:	01/15/2024
DRAWING BY:	JH
CHECKED BY:	MWK/JLH

SHERRI DOWNS AMENITY
LENNAR HOMES
AMENITY & POOL
ANGIER, NC

- SUPPLY PLAN HEX NOTES**
1. WATER HEATER LOCATED ABOVE CEILING IN ATTIC SPACE. SEE DETAIL FOR MOUNTING.
 2. RPZ IN HOTBOX ON SITE. SHOWN HERE FOR REFERENCE ONLY. CONSULT SITE PLANS BY OTHERS FOR EXACT LOCATION.



ELECTRIC WATER HEATER ABOVE CEILING DETAIL - NO SCALE

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 AND SMOKE CONTROL 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. AFTER 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.
- 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 SYMMETRY, AND LIGHTING ARRANGEMENT. COORDINATE WITH SPRINKLER CONTRACTOR IF APPLICABLE.
- 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.
- ALL ADHESIVES AND SEALANTS 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 181-96.
- 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 SPRAY-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 OF THE 2018 NC MECHANICAL CODE.
- THE MC SHALL PROVIDE ALL REFRIGERATION PIPING, ALL PIPE AND FITTINGS SHALL BE TYPE ACP 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 ASSEMBLY 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 SO INSULATION IS NOT EXCESSIVELY COMPRESSED AT DUCT CORNERS. STAPLE SEAMS APPROXIMATELY 6 INCHES ON CENTER WITH OUTWARD CLINCHING STAPLES. SEAL SEAMS WITH PRESSURE SENSITIVE TAPE MATCHING THE FACING. FOR RECTANGULAR DUCTS 24 INCHES IN WIDTH OR GREATER, SECURE DUCT WRAP TO THE BOTTOM OF THE DUCT WITH MECHANICAL FASTENERS SPACED 18 INCHES ON CENTER TO PREVENT SAGGING OF INSULATION. ADJACENT SECTIONS OF DUCT WRAP SHALL BE TIGHTLY BUTTED WITH THE 2 INCH TAPE FLAP OVERLAPPING. ALL TEARS, PUNCTURES, ETC. OF THE DUCT WRAP INSULATION SHALL BE SEALED WITH TAPE OR MASTIC TO PROVIDE A VAPOR TIGHT SYSTEM. INSULATION SHALL BE BY KNAUF INSULATION, OWENS CORNING CORP, OR CERTAINTED CORPORATION.
- VERIFY THAT DUCTS HAVE BEEN TESTED BEFORE APPLYING INSULATION MATERIALS. VERIFY THAT DUCT SURFACES ARE CLEAN, DRY AND FREE OF FOREIGN MATERIAL PRIOR TO INSULATING. DUCT COVERINGS SHALL NOT PENETRATE A WALL OR FLOOR REQUIRED TO HAVE A FIRE-RESISTANCE RATING OR REQUIRED TO BE FIRE BLOCKED.
- WHERE DUCTS ARE CONNECTED TO EXTERIOR WALL LOUVERS AND DUCT OUTLET IS SMALLER THAN LOUVER FRAME, PROVIDE BLANK-OUT PANELS SEALING LOUVER AREA AROUND DUCT. USE SAME MATERIAL AS DUCT. PAINTED BLACK ON EXTERIOR SIDE; SEAL TO LOUVER FRAME AND DUCT.
- PROVIDE DUCT ACCESS DOORS FOR INSPECTION AND CLEANING BEFORE AND AFTER FILTERS, COILS, FANS, AUTOMATIC DAMPERS, AT FIRE DAMPERS, COMBINATION FIRE AND SMOKE DAMPERS.
- CONSTRUCT T's, BENDS, AND ELBOWS WITH RADI OF NOT LESS THAN 1-1/2 TIMES THE WIDTH OF THE DUCT ON CENTERLINE. WHERE NOT POSSIBLE AND WHERE RECTANGULAR ELBOWS MUST BE USED, PROVIDE TURNING VANES.
- INCREASE DUCT SIZES GRADUALLY, NOT EXCEEDING 15 DEGREES DIVERGENCE; MAXIMUM OF 30 DEGREES DIVERGENCE UPSTREAM OF EQUIPMENT AND 45 DEGREES CONVERGENCE DOWNSTREAM.
- IT SHALL BE THE RESPONSIBILITY OF THE MC TO SUSPEND AND SUPPORT ALL EQUIPMENT, DUCTWORK, DIFFUSERS, AND OTHER MATERIALS FOLLOWING RECOGNIZED ENGINEERING PRACTICES AND USING STANDARD, COMMERCIALY ACCEPTED HANGERS AND SUSPENSION EQUIPMENT. ALL HVAC EQUIPMENT SHALL BE SECURELY MOUNTED TO THE BUILDING STRUCTURE AND SHALL NOT RELY ON CEILING OR WALL SURFACES FOR SUPPORT. THE SUPPORT ATTACHMENT SHALL SUPPORT THE WEIGHT OF THE EQUIPMENT PLUS THE WEIGHT OF THE SUPPORT ATTACHMENT ITSELF. SUPPORT FROM THE TOP CHORD OF THE ROOF JOISTS, GIRDERS, AND BEAMS. THE BOTTOM CHORD IS NOT TO BE USED FOR EQUIPMENT OR PIPING SUPPORT. HANGERS SHALL NOT BE ATTACHED TO CORRUGATED STEEL DECKING.

- DUCTS SHALL BE SUPPORTED IN ACCORDANCE WITH SMACNA AT INTERVALS NOT EXCEEDING 10 FEET. DUCTS 36 INCHES OR LARGER SHALL HAVE TRAPEZE TYPE HANGERS SUSPENDED WITH THREADED ROD. SUPPORT DUCTS FROM BAR JOISTS, GIRDERS, OR BEAMS.
- CHECK LOCATIONS OF AIR OUTLETS AND INLETS AND MAKE NECESSARY ADJUSTMENTS IN POSITION TO CONFORM WITH ARCHITECTURAL FEATURES, SYMMETRY, AND LIGHTING ARRANGEMENT. COORDINATE WITH SPRINKLER CONTRACTOR IF APPLICABLE.
- PROVIDE BALANCING DAMPERS AT POINTS ON SUPPLY WHERE BRANCHES ARE TAKEN FROM LARGER DUCTS AS REQUIRED FOR AIR BALANCING. INSTALL MINIMUM 2 DUCT WIDTHS FROM DUCT TAKE-OFF. PROVIDE BALANCING DAMPERS ON DUCT TAKE-OFFS TO DIFFUSERS, AND REGISTERS, REGARDLESS OF WHETHER DAMPERS ARE SPECIFIED AS PART OF THE DIFFUSER OR REGISTER ASSEMBLY. ADJUST AIR HANDLING AND DISTRIBUTION SYSTEMS TO PROVIDE DESIGN SUPPLY, RETURN, AND EXHAUST AIR QUANTITIES AT SITE ALTITUDE.
- MC SHALL INSTALL FIRE DAMPERS AT EACH PENETRATION OF A RATED WALL AS INDICATED ON THE DRAWINGS OR AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION. FIRE DAMPERS SHALL BE UL LABELED (UL 555), CURTAIN TYPE, WITH INTEGRAL FACTORY SLEEVE AND BLADES LOCATED OUTSIDE THE AIR STREAM. INSTALLATION OF ALL FIRE DAMPERS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND SECTION 607 OF THE 2018 NC MECHANICAL CODE. PROVIDE ACCESS PANELS FOR TESTING AND SERVICE AS NECESSARY. MC SHALL PROVIDE RADIATION DAMPERS AND THERMAL BLANKETS FOR ALL PENETRATIONS OF RATED CEILING ASSEMBLIES. RADIATION DAMPERS SHALL BE UL LABELED (UL 555C) AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFIC INSTALLATION INSTRUCTIONS. FIRE DAMPERS, COMBINATION FIRE/SMOKE DAMPERS, AND CEILING RADIATION DAMPERS SHALL BE BY RUSKIN, NAILOR, OR LOYD INDUSTRIES.
- MC SHALL INSTALL PROGRAMMABLE THERMOSTATS AS SHOWN ON THE PLANS. THERMOSTAT SHALL BE MOUNTED AT 48 INCHES AFF. THERMOSTATS SHALL MEET THE REQUIREMENTS OF SECTION C403.2.4 OF THE 2018 NORTH CAROLINA ENERGY CONSERVATION CODE.
- FRESH AIR INTAKES SHALL BE INSTALLED ON ALL UNITS AS SHOWN ON DRAWINGS. MAINTAIN 10 FEET OF DISTANCE BETWEEN FRESH AIR INTAKES AND ALL EXHAUST TERMINATIONS AND PLUMBING WENT THRU ROOFS.
- MC SHALL INSTALL ALL EXHAUST FANS AND VENT TO THE BUILDING'S EXTERIOR. EC SHALL SWITCH FANS WITH LIGHTS OR ON SEPARATE SWITCH AS SHOWN.
- P-TRAPS MUST BE INSTALLED ON ALL UNITS. MC SHALL INSTALL AUXILIARY DRAIN PANS UNDER OVERHEAD AIR HANDLERS AND AN AUTOMATIC CUT-OFF FLOAT SWITCH FOR EACH. P-TRAPS AND CONDENSATE LINES SHALL BE 1 INCH. P-TRAPS AND CONDENSATE LINES MAY BE PVC WHERE NOT LOCATED IN PLENUMS; OTHERWISE, THEY SHALL BE TYPE M COPPER. INSTALL BACKDRAFT DAMPERS ON FRESH AIR AND EXHAUST DUCTS WHERE THEY PENETRATE THE THERMAL ENVELOPE PER NORTH CAROLINA ENERGY CONSERVATION CODE C402.5.5.

VENTILATION CALCS

CHEMICAL STORAGE:

34 SQFT X 10' HIGH CEILING = 340 CU. FT @ 10 ACH = 57 CFM

*60 CFM PROVIDED

PUMP ROOM:

138 SQFT X 10' HIGH CEILING = 1380 CU. FT @ 10 ACH = 230 CFM

*240 CFM PROVIDED

HEX PLAN NOTES

- EXHAUST DUCT TO TURTLE BACK ROOF VENT ON BACK SIDE OF ROOF PITCH. PROVIDE W/ 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.
- COMBINE BATHROOM EXHAUST TO ONE 12" EXHAUST DUCT. PROVIDE BACKDRAFT DAMPER AT EACH FAN PRIOR TO COMBINING.
- EXHAUST FAN TO BE WIRED FOR CONTINUOUS OPERATION.
- ALL EQUIPMENT IN PUMP/CHEM ROOM IS TO BE CORROSION RESISTANT/PROOF.
- PROVIDE COMBINATION COMBUSTION AIR INTAKE/EXHAUST FLUE VENT FOR FURNACE. ROUTE TO ROOF AND TERMINATE WITH MFG'S FLUE CAP. SEE MFG'S INSTALLATION INSTRUCTIONS FOR FLUE MATERIALS AND VENTING SIZE/REQUIREMENTS/LIMITATIONS. MAINTAIN PROPER CLEARANCE FROM FLUE TO COMBUSTIBLE MATERIALS.

EXHAUST FAN SCHEDULE								
MARK	MFG / MODEL #	TYPE	ESP (in WG)	CFM	VOLT/PH	FLA	SONES	NOTES
EF-1	GREENHECK SP-A200	CEILING	0.40	179	120/1	0.43	3.0	1-3
EF-2	GREENHECK SP-A410	CEILING	0.40	265	120/1	1.75	3.5	1-3
EF-3	GREENHECK SP-A510	CEILING	0.40	364	120/1	3.30	4.0	1-3
EF-4	GREENHECK SQ-90-VG	INLINE	0.40	300	120/1	1.5	6.1	1-6

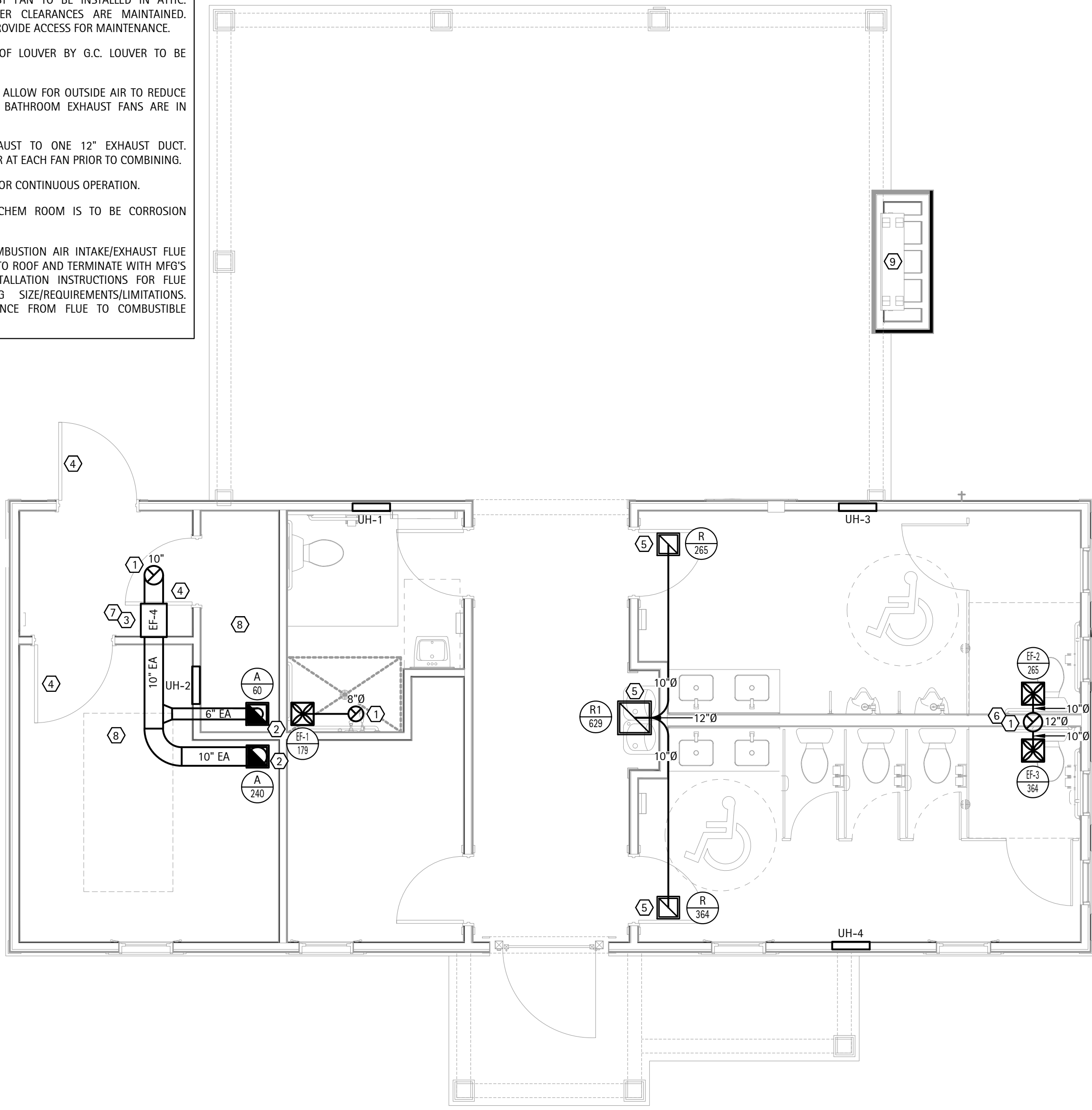
- PROVIDE WITH PITCHED ROOF CURB & CAP FOR FLAT OR SLOPED ROOF,OR HOODED WALL WITH BACKDRAFT DAMPER CAP AS APPLICABLE.
- PROVIDE WITH SQUARE TO ROUND DUCT ADAPTER AS NECESSARY
- OR EQUAL BY LOREN COOK OR PENNBARRY OR TWIN CITY
- WIRED TO RUN CONTINUOUSLY
- CORROSION RESISTANT/PROOF
- INTEGRAL DISCONNECT

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 UNIT HEATER SCHEDULE							
MARK	MFG / MODEL #	HEATER	VOLT/PH	HEAT		MOC/P	NOTES
				KW	AMPS		
UH-1	MARKEL / HF3316T2SRPW	2.0	240/1	2.0	20.0		1-4
UH-2,3	MARKEL / HF3315T2SRPW	3.0	240/1	3.0	20.0		1-4
UH-4	MARKEL / H3317T2RPW	4.8	240/1	4.8	30.0		1-4

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



MECHANICAL SYSTEM, SERVICE SYSTEMS, AND EQUIPMENT

METHOD OF COMPLIANCE THERMAL ZONE PRESCRIPTIVE ZONE 4A

EXTERIOR DESIGN CONDITIONS HEATING DESIGN DRY BULB 20.4°F COOLING DESIGN DRY BULB 95.0°F COOLING DESIGN WET BULB 75.5°F

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

MENS BATHROOM HEATING LOAD: 8,542 BTU/H

WOMENS BATHROOM HEATING LOAD: 11,747 BTU/H

PUMP ROOM HEATING LOAD: 8,057 BTU/H

UNISEX BATHROOM HEATING LOAD: 5,865 BTU/H

MECHANICAL SPACING CONDITIONING SYSTEM:

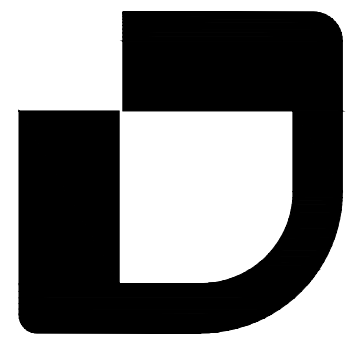
UNITARY DESCRIPTION OF UNIT(S) AIR COOLED DX UNIT HEATERS BOILER N/A TOTAL BOILER OUTPUT N/A CHILLER N/A TOTAL CHILLER CAPACITY N/A

EQUIPMENT EFFICIENCIES: SEE SCHEDULES

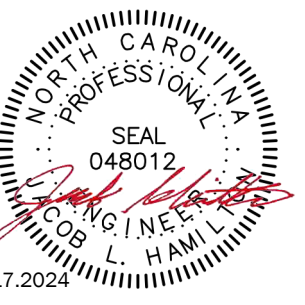
EQUIPMENT SCHEDULES WITH MOTORS (MECHANICAL SYSTEMS):SEE SCHEDULES

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.



D. CLUGSTON



01.17.2024

Kilian Engineering, Inc.



NO.

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REVISION

OWNER CHANGES

DATE

01/15/24

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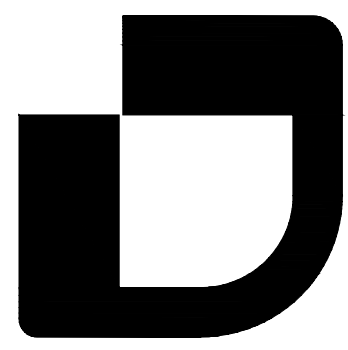
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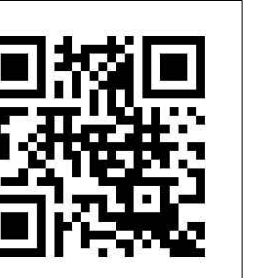
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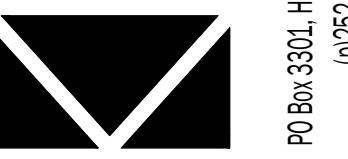


D. CLUGSTON



01.17.2024

Kilian Engineering, Inc.



PO Box 3301, Healdson, NC 27536 | www.kilianengineering.com
(919) 452-4588, 8718 | CORPORATE LICENSE C-227

DATE
01/15/24

REVISION
OWNER CHANGES

NO.
1

SHEET DISCUSSION

GAS PLAN AND RISER

PROJECT #: 230913

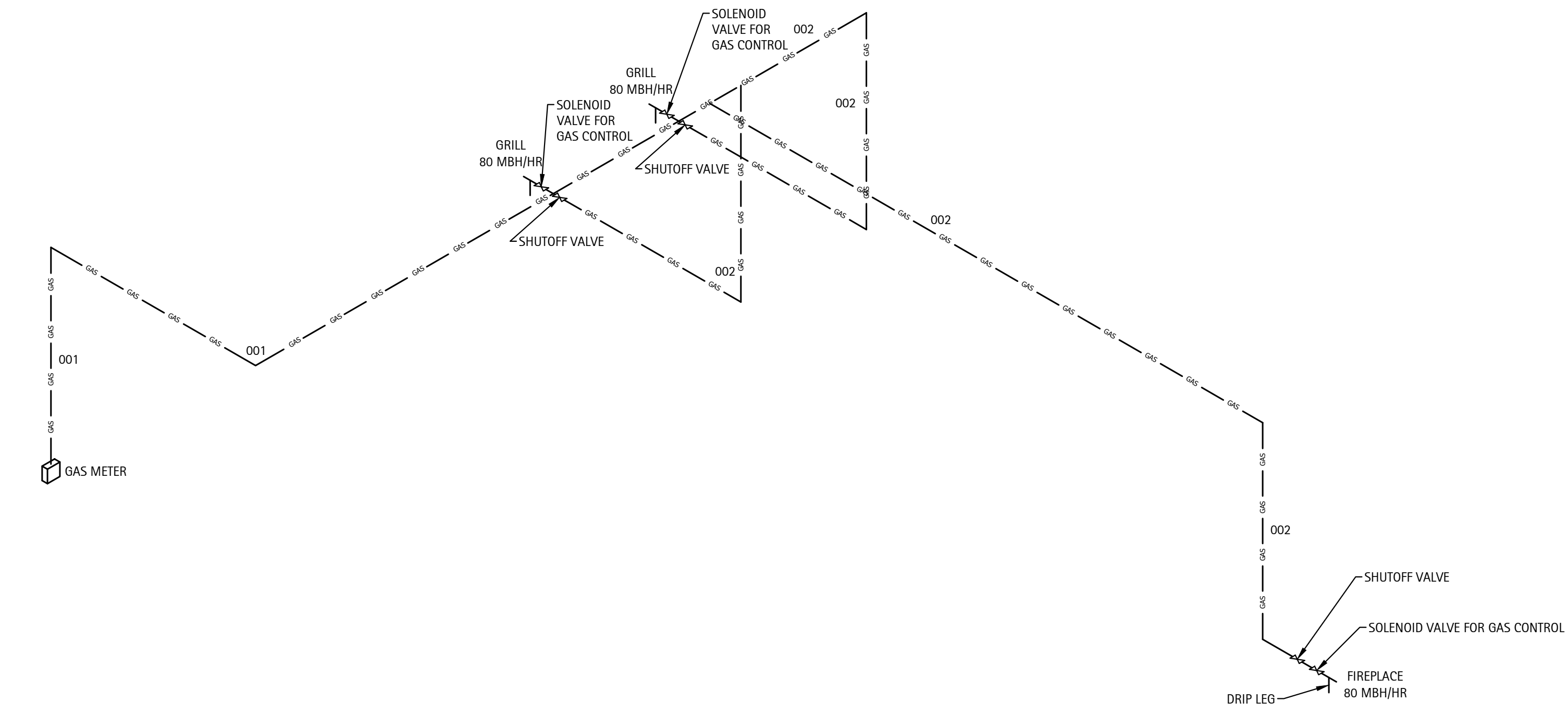
DATE ISSUED: 01/15/2024

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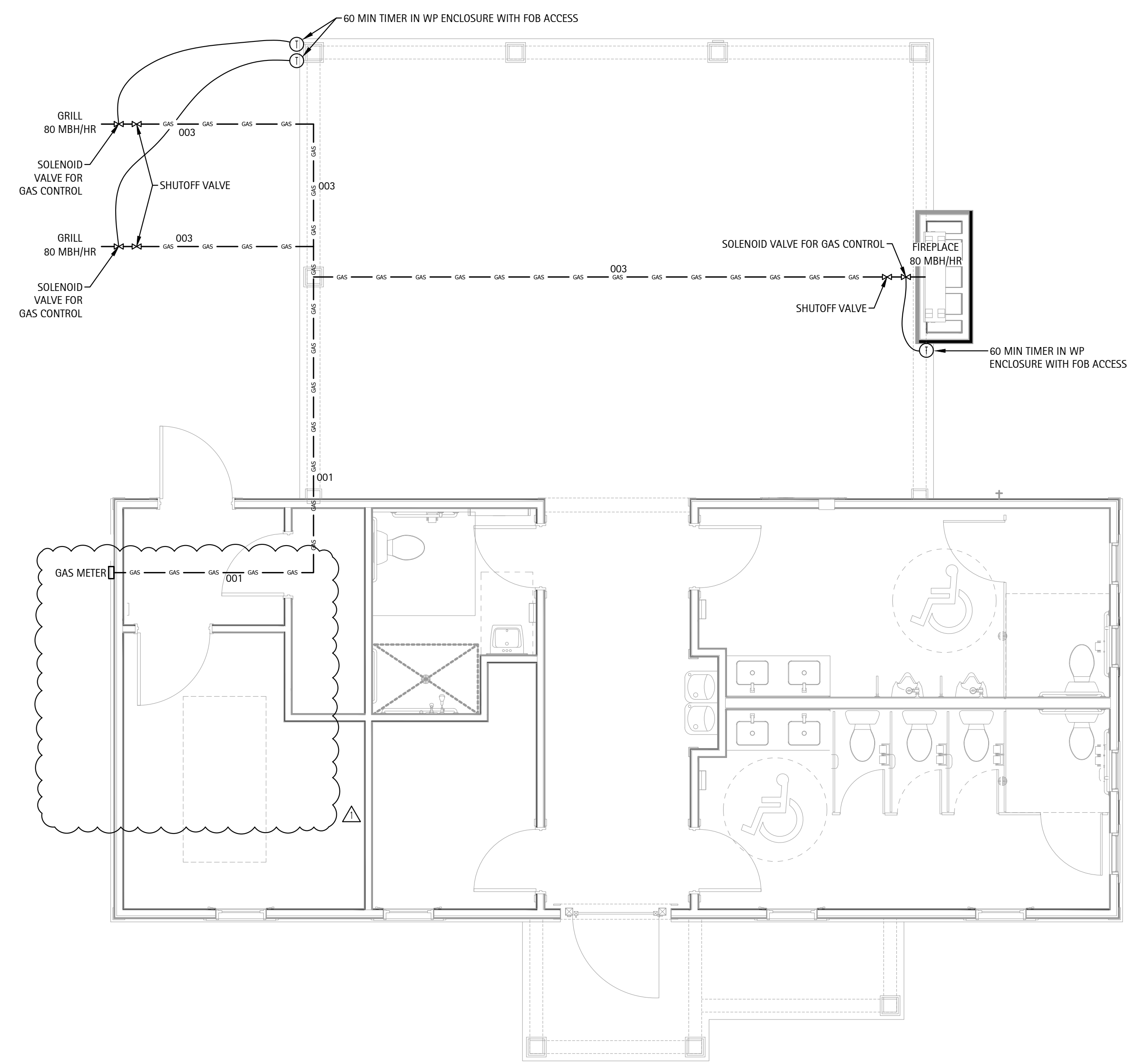
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SHERRI DOWNS AMENITY
LENNAR HOMES
AMENITY & POOL
ANGIER, NC

G1



GAS RISER: NO SCALE

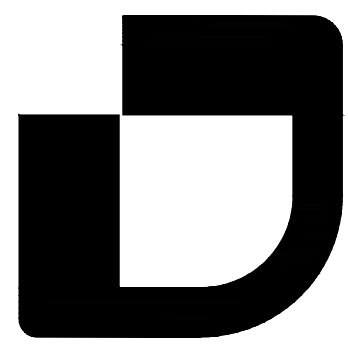


GENERAL GAS LINE PIPING NOTES

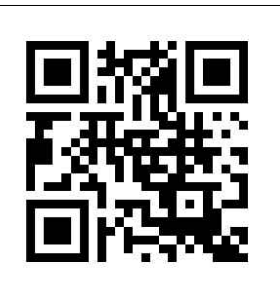
- 1. THE GAS PIPING CONTRACTOR (GPC) SHALL PROVIDE ALL MATERIALS AND LABOR AS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM AS DESCRIBED BY THESE PLANS AND SPECIFICATIONS.
2. THE GPC SHALL INSTALL ALL MATERIALS AND EQUIPMENT IN ACCORDANCE WITH THE 2018 NORTH CAROLINA FUEL GAS CODE AND ANY APPLICABLE LOCAL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

GAS LINE SIZING VERIFICATION TABLE PER 2018 NC FUEL GAS CODE TABLE 402.4(15)
Table with 4 columns: SECTION, GAS LOAD (MBTU/H), LINE SIZE (EHD), CAPACITY (CFH), PRESSURE (IN WG). Rows for sections 001, 002, and 003.

BASED ON 100' OF DEVELOPED LENGTH



D. CLUGSTON



Kilian Engineering, Inc. PO Box 3301, Healdston, NC 27536

Table with 2 columns: NO., REVISION/OWNER CHANGES. Row 1: 1, DATE 01/15/24

SHEET DESCRIPTION

ELECTRICAL NOTES AND SCHEDULES

PROJECT #: 230913 DATE ISSUED: 01/15/2024 DRAWING BY: JH CHECKED BY: MWK/JLH

SHERRI DOWNS AMENITY LENNAR HOMES AMENITY & POOL ANGLER, NC



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. 4. WORKMANSHIP SHALL BE IN ACCORDANCE WITH NECA 1 'STANDARD PRACTICE FOR GOOD WORKMANSHIP IN ELECTRICAL CONTRACTING.' 5. ALL MATERIALS AND EQUIPMENT SHALL BE DELIVERED TO THE SITE AND UNLOADED BY THE ELECTRICAL CONTRACTOR AT AN APPROVED LOCATION. 6. THE ELECTRICAL CONTRACTOR SHALL OBTAIN AND PAY FOR 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. 9. THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS. 10. GROUNDING AND BONDING SHALL BE PER NEC ARTICLE 250. THE RACEWAY SYSTEM SHALL NOT BE RELIED UPON FOR GROUNDING CONTINUITY. 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. 13. CONDUCTORS, FUSES, CIRCUIT BREAKERS, AND DISCONNECT SWITCHES SHOWN ON THESE PLANS HAVE BEEN SIZED FOR THE SPECIFIED EQUIPMENT. 14. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER CONTRACTORS ON THE SITE AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES SHOULD CONDUIT, CIRCUIT BREAKER, OR FUSE SIZES REQUIRE CHANGE. 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. 3. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH UTILITY REGARDING SERVICE AND METERING DETAILS. 4. OCCUPANCY SENSORS SHALL BE BY WATSTOPPER, 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. 6. ALL WIRE, CONNECTORS, TERMINALS, AND LUGS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. 7. THE INSULATION TYPE FOR INTERIOR WIRING SHALL BE DUAL RATED THIN/THIN OR XHHW; ALL WIRING INSTALLED BELOW GRADE OR IN

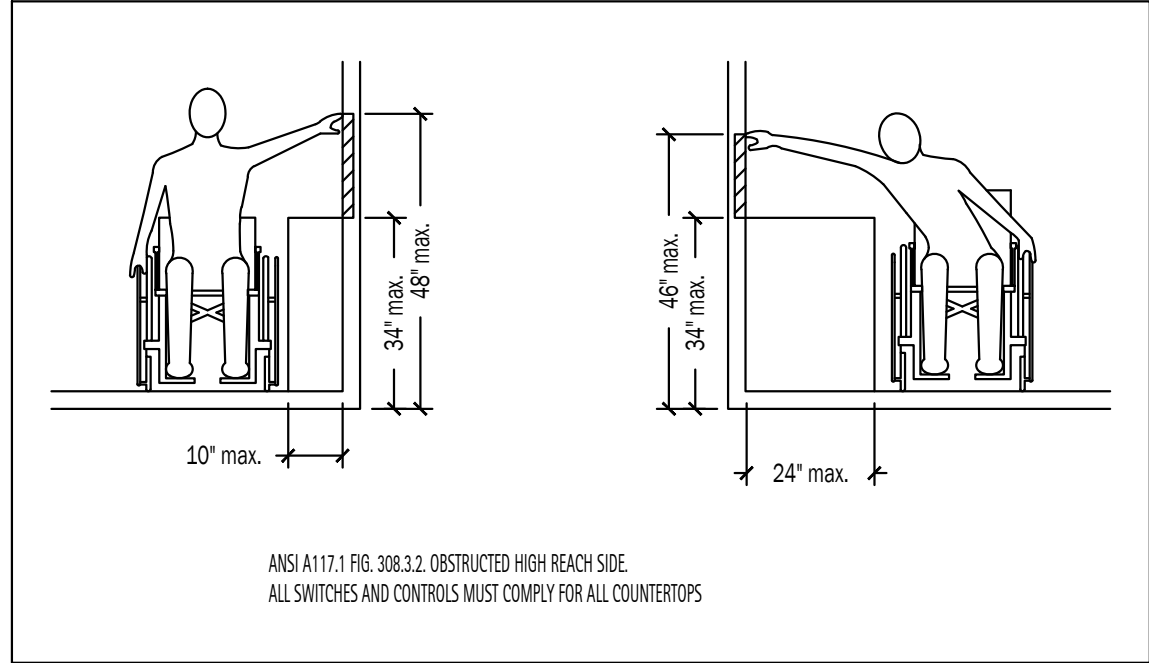
MOIST OR WET LOCATIONS SHALL HAVE TYPE THHN OR XHHW INSULATION. INSULATION VOLTAGE RATING SHALL BE 600 VOLTS AND A MINIMUM TEMPERATURE RATING OF 75°C. CONDUCTORS SHALL BE SOLID OR STRANDED COPPER FOR #10 AWG AND #12 AWG, AND STRANDED COPPER FOR #8 AWG AND LARGER SIZES. 10. CABLES, RACEWAYS, OR BOXES, 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. 11. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL OUTLET, JUNCTION, PULL BOXES, FITTINGS, AND SUPPORTS. 12. ALL CONDUIT, FITTINGS, COUPLINGS, AND SUPPORTS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. 13. ALL CONDUIT, FITTINGS, COUPLINGS, AND SUPPORTS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. 14. METAL CONDUIT SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI-AMERICAN NATIONAL STANDARD FOR ELECTRICAL RIGID STEEL CONDUIT (ERSC), ANSI C80.1 AND UL 6. 15. METAL CONDUIT SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI-AMERICAN NATIONAL STANDARD FOR INTERMEDIATE METAL CONDUIT ANSI C80.6 AND UL 1242. 16. METAL CONDUIT SHALL BE BY ALIED TUBING & CONDUIT, BECK MANUFACTURING, INC., OR WHEATLAND TUBE COMPANY. 17. METAL CONDUIT, LIQUID TIGHT FLEXIBLE METAL CONDUIT, AND NONMETALLIC CONDUIT SHALL BE BY AFC CABLE SYSTEMS, INC. ELECTRI-FLEX COMPANY, OR INTERNATIONAL METAL HOSE.

METHODS:

- 1. EC SHALL REVIEW THE MECHANICAL PLANS TO ESTABLISH POINTS OF CONNECTION AND THE EXTENT OF THE ELECTRICAL WORK TO BE PROVIDED IN THE CONTRACT. 2. ALL CIRCUIT BREAKERS FEEDING HVAC EQUIPMENT SHALL BE HACR BREAKERS. 3. COLOR CODE CONDUCTORS PER NEC. FEEDERS SHALL BE IDENTIFIED IN ACCORDANCE WITH NEC 215.12. 4. ALL LIGHT FIXTURES SHALL BE SUPPORTED INDEPENDENTLY OF THE SUSPENDED CEILING. 5. ELECTRICAL CONTRACTOR SHALL PROVIDE FIRE-STOPPING AT ALL ELECTRICAL PENETRATIONS OF RATED FLOORS AND WALLS TO PRESERVE OR RESTORE THE FIRE-RESISTANCE RATING. 6. ELECTRICAL CONTRACTOR SHALL PROVIDE GFCI RECEPTACLES IN KITCHENS, RESTROOMS, OUTDOORS, AND IN SHOP AREAS AS REQUIRED BY NEC. 7. ELECTRICAL CONTRACTOR SHALL PROVIDE GFCI RECEPTACLES IN KITCHENS, RESTROOMS, OUTDOORS, AND IN SHOP AREAS AS REQUIRED BY NEC. 8. ELECTRICAL CONTRACTOR SHALL PROVIDE FIRE-STOPPING AT ALL ELECTRICAL PENETRATIONS OF RATED FLOORS AND WALLS TO PRESERVE OR RESTORE THE FIRE-RESISTANCE RATING. 9. ELECTRICAL CONTRACTOR SHALL PROVIDE GFCI RECEPTACLES IN KITCHENS, RESTROOMS, OUTDOORS, AND IN SHOP AREAS AS REQUIRED BY NEC. 10. ELECTRICAL CONTRACTOR SHALL PROVIDE FIRE-STOPPING AT ALL ELECTRICAL PENETRATIONS OF RATED FLOORS AND WALLS TO PRESERVE OR RESTORE THE FIRE-RESISTANCE RATING. 11. ELECTRICAL CONTRACTOR SHALL PROVIDE FIRE-STOPPING AT ALL ELECTRICAL PENETRATIONS OF RATED FLOORS AND WALLS TO PRESERVE OR RESTORE THE FIRE-RESISTANCE RATING. 12. ELECTRICAL CONTRACTOR SHALL PROVIDE FIRE-STOPPING AT ALL ELECTRICAL PENETRATIONS OF RATED FLOORS AND WALLS TO PRESERVE OR RESTORE THE FIRE-RESISTANCE RATING. 13. ELECTRICAL CONTRACTOR SHALL PROVIDE FIRE-STOPPING AT ALL ELECTRICAL PENETRATIONS OF RATED FLOORS AND WALLS TO PRESERVE OR RESTORE THE FIRE-RESISTANCE RATING. 14. ELECTRICAL CONTRACTOR SHALL PROVIDE FIRE-STOPPING AT ALL ELECTRICAL PENETRATIONS OF RATED FLOORS AND WALLS TO PRESERVE OR RESTORE THE FIRE-RESISTANCE RATING. 15. ELECTRICAL CONTRACTOR SHALL PROVIDE FIRE-STOPPING AT ALL ELECTRICAL PENETRATIONS OF RATED FLOORS AND WALLS TO PRESERVE OR RESTORE THE FIRE-RESISTANCE RATING. 16. ELECTRICAL CONTRACTOR SHALL PROVIDE FIRE-STOPPING AT ALL ELECTRICAL PENETRATIONS OF RATED FLOORS AND WALLS TO PRESERVE OR RESTORE THE FIRE-RESISTANCE RATING. 17. ELECTRICAL CONTRACTOR SHALL PROVIDE FIRE-STOPPING AT ALL ELECTRICAL PENETRATIONS OF RATED FLOORS AND WALLS TO PRESERVE OR RESTORE THE FIRE-RESISTANCE RATING. 18. ELECTRICAL CONTRACTOR SHALL PROVIDE FIRE-STOPPING AT ALL ELECTRICAL PENETRATIONS OF RATED FLOORS AND WALLS TO PRESERVE OR RESTORE THE FIRE-RESISTANCE RATING. 19. ELECTRICAL CONTRACTOR SHALL PROVIDE FIRE-STOPPING AT ALL ELECTRICAL PENETRATIONS OF RATED FLOORS AND WALLS TO PRESERVE OR RESTORE THE FIRE-RESISTANCE RATING. 20. ELECTRICAL CONTRACTOR SHALL PROVIDE FIRE-STOPPING AT ALL ELECTRICAL PENETRATIONS OF RATED FLOORS AND WALLS TO PRESERVE OR RESTORE THE FIRE-RESISTANCE RATING.

SPACES THAT WILL BE AT SIGNIFICANTLY DIFFERENT TEMPERATURES SHALL BE SEALED IN ACCORDANCE WITH 300.5(E), 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. 11. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL OUTLET, JUNCTION, PULL BOXES, FITTINGS, AND SUPPORTS. 12. ALL CONDUIT, FITTINGS, COUPLINGS, AND SUPPORTS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. 13. ALL CONDUIT, FITTINGS, COUPLINGS, AND SUPPORTS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. 14. METAL CONDUIT SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI-AMERICAN NATIONAL STANDARD FOR ELECTRICAL RIGID STEEL CONDUIT (ERSC), ANSI C80.1 AND UL 6. 15. METAL CONDUIT SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI-AMERICAN NATIONAL STANDARD FOR INTERMEDIATE METAL CONDUIT ANSI C80.6 AND UL 1242. 16. METAL CONDUIT SHALL BE BY ALIED TUBING & CONDUIT, BECK MANUFACTURING, INC., OR WHEATLAND TUBE COMPANY. 17. METAL CONDUIT, LIQUID TIGHT FLEXIBLE METAL CONDUIT, AND NONMETALLIC CONDUIT SHALL BE BY AFC CABLE SYSTEMS, INC. ELECTRI-FLEX COMPANY, OR INTERNATIONAL METAL HOSE.

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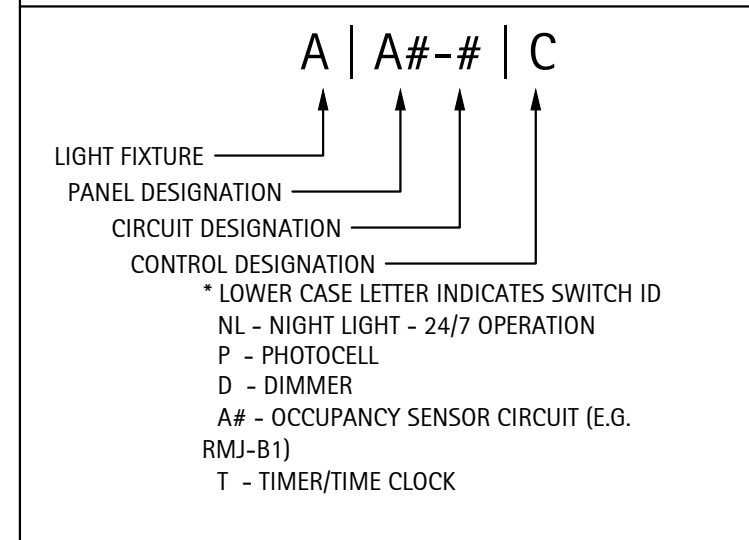
LIGHTING DEVICE LEGEND table with columns: SYMBOL, DESCRIPTION, REMARKS. Includes symbols for single pole wall switch, wall mounted occupancy sensor, low voltage switch, 3-way switch, ceiling occupancy sensor, power pack, junction box, and exhaust fan.

POWER DEVICE LEGEND table with columns: SYMBOL, DESCRIPTION, REMARKS. Includes symbols for data and telephone jack, duplex receptacle, quad receptacle, disconnect switch, and junction box.

LIGHT FIXTURE SCHEDULE table with columns: MARK, DESCRIPTION, LOUVER/LENS, LAMPS (TYPE, QTY, CCT), VOLTAGE, MAX INPUT WATTAGE, MOUNTING, REMARKS, MFG, MODEL.

- 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. TO BE LAMPED WITH LED EQUIVALENT BULB. 4. VERIFY FINISH COLORS WITH ARCHITECT/GC PRIOR TO PURCHASING.

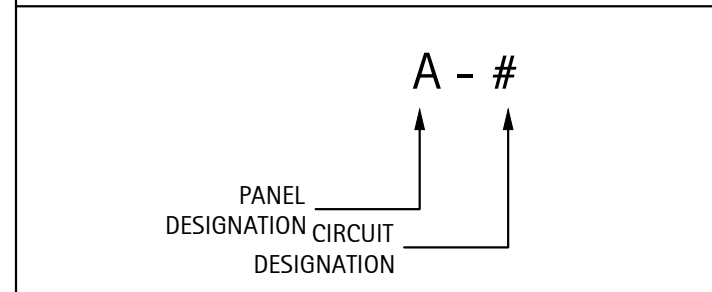
LIGHTING CIRCUIT DESIGNATIONS



LIGHTING PLAN HEX NOTES

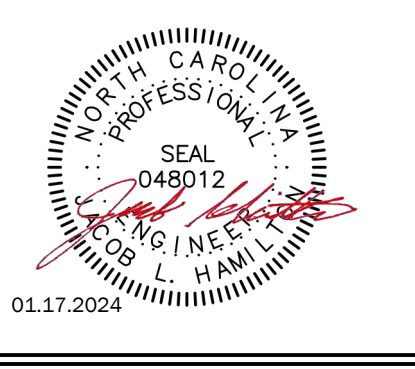
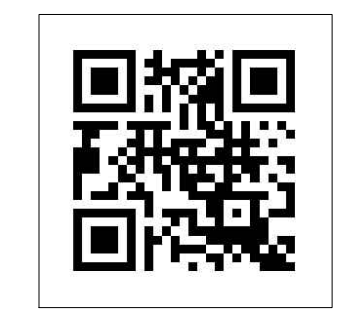
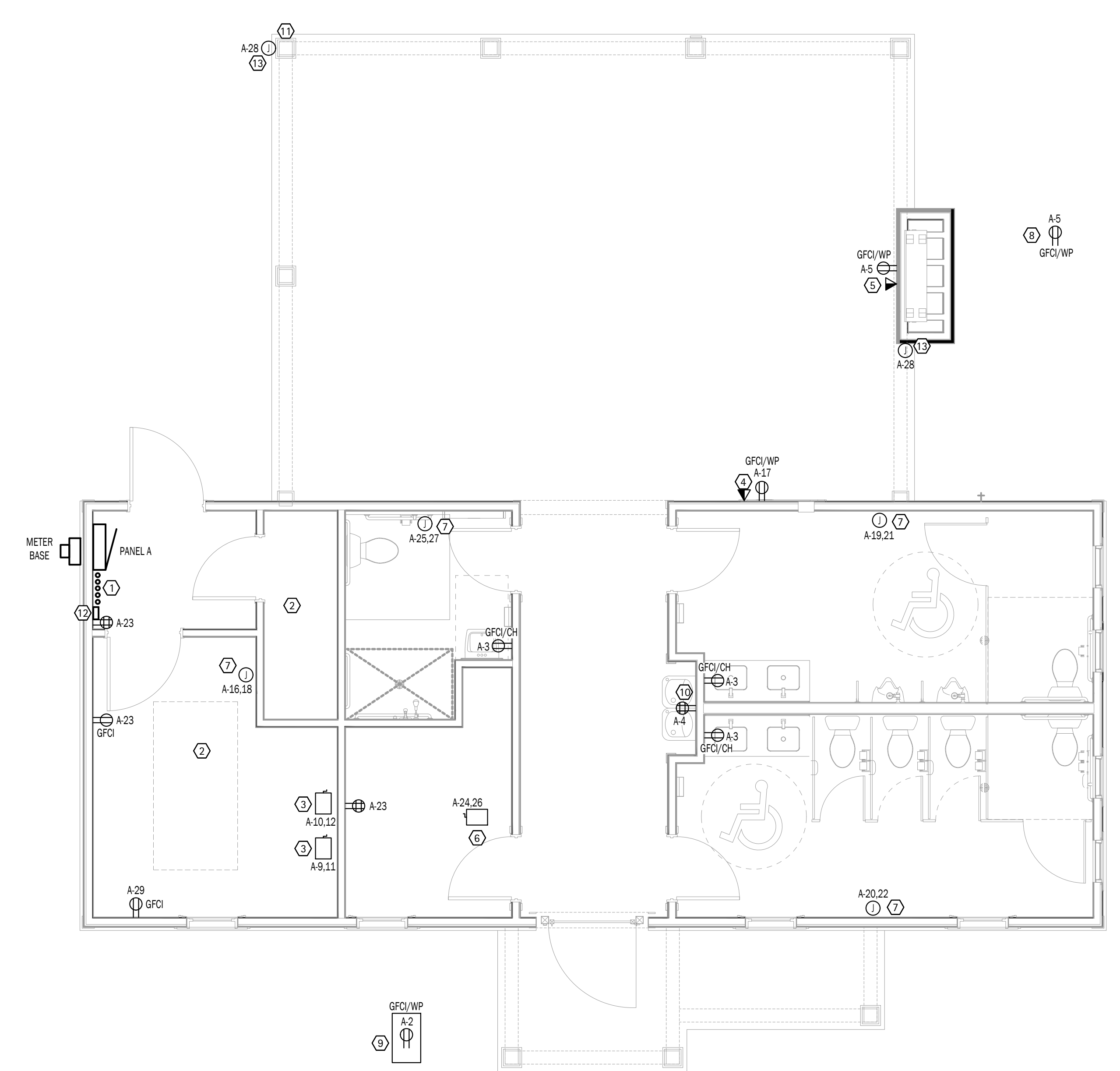
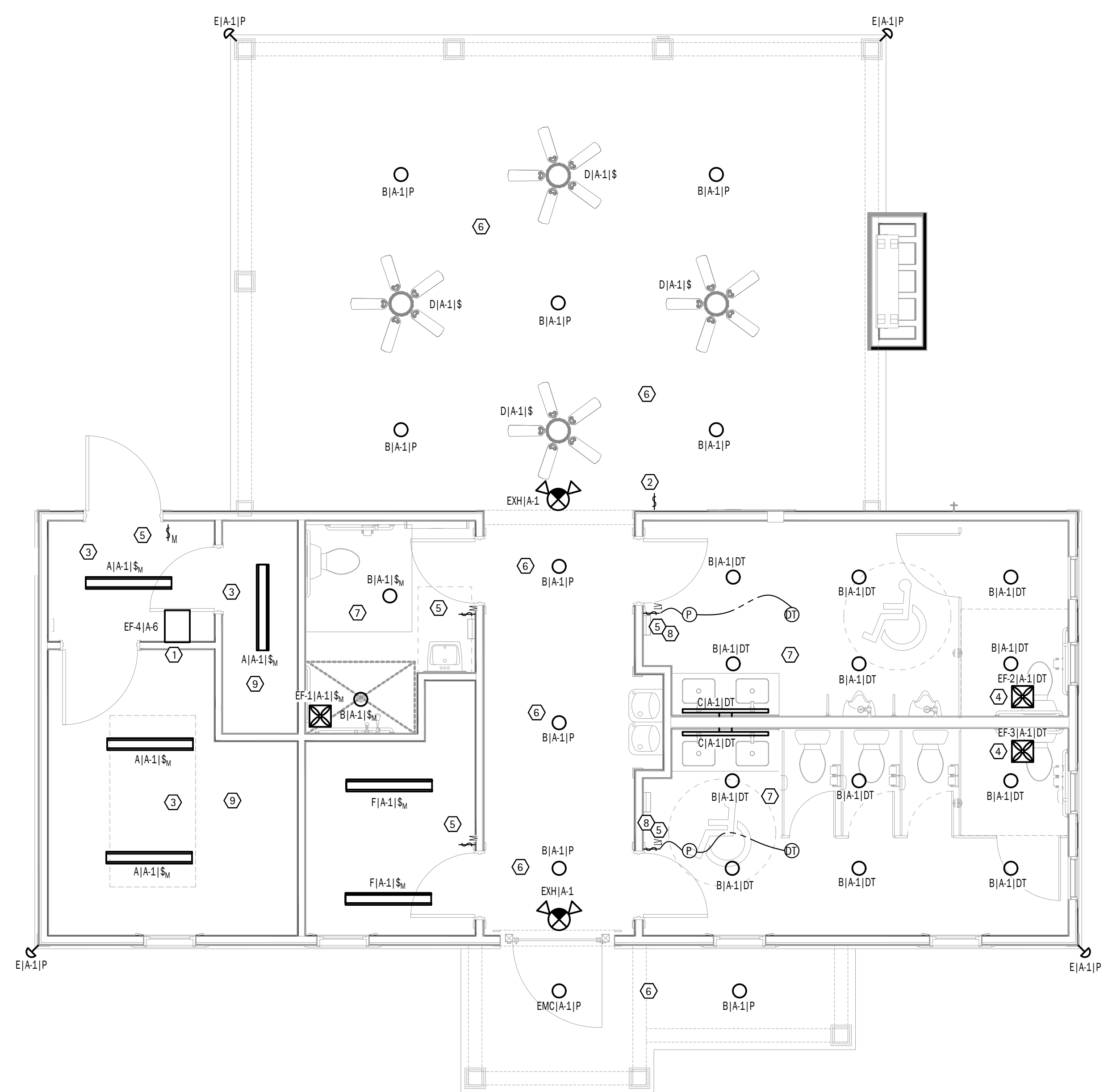
1. EXHAUST FAN SUSPENDED IN ATTIC TO BE WIRED FOR CONTINUOUS OPERATION. COORDINATE WITH M.C.
2. PROVIDE 60 MINUTE SWITCH FOR FANS. PROVIDE IN WEATHERPROOF ENCLOSURE.
3. ELECTRICAL PUMP AND CHEM. ROOM LIGHTS TO BE TIED TO SAME OCCUPANCY SENSOR FOR OPERATION.
4. EC TO THE EXHAUST FAN AND LIGHTING FIXTURES TO SAME CONTROL SWITCH/OCCUPANCY SENSOR FOR OPERATION.
5. MOTION SENSOR TO BE SET ON 20 MINUTE TIMER.
6. PORCH/HALL LIGHTING FIXTURE CONTROLLED VIA PHOTOCELL LOCATED ON NORTH FACE OF BUILDING.
7. EGRESS LIGHTING EXEMPT FROM RESTROOMS PER NC BUILDING CODE 1008.3.3.
8. PROVIDE LOW VOLTAGE OVERRIDE SWITCH AS SHOWN.
9. AREA IS CORROSIVE ENVIRONMENT PER NEC 680.14. FOLLOW WIRING METHODS IN NEC 680.14(B). ALL EQUIPMENT TO BE LISTED AS SUCH.

POWER CIRCUIT DESIGNATIONS



POWER PLAN HEX NOTES

1. PROVIDE (2) 1" CONDUITS WITH CIRCUITS AS SHOWN TO POOL FOR POOL LIGHTS AND OTHER POOLSIDE EQUIPMENT. PROVIDE (3) 1" CONDUITS FROM SPARE POOL CIRCUITS AS SHOWN AND CAP RIGHT OUTSIDE ELECTRICAL ROOM. COORDINATE EXACT LOCATIONS WITH G.C. AND POOL CONTRACTOR. CIRCUIT TO BE CONTROLLED VIA TIME CLOCK AT PANEL. POOL LIGHTS TO BE WIRED VIA INTERMATIC JUNCTION BOX TRANSFORMER (MODEL PJBX52100). REFER TO PANEL SCHEDULE FOR CIRCUIT DESIGNATIONS.
2. AREA IS CORROSIVE ENVIRONMENT PER NEC 680.14. FOLLOW WIRING METHODS IN NEC 680.14(B).
3. PROVIDE POWER TO NON-FUSED DISCONNECT FOR POOL AND FEATURE PUMPS. PUMPS MUST HAVE GFCI PROTECTION. PROVIDE GFCI PROTECTION AT MEANS OF DISCONNECT. DISCONNECT MUST HAVE NEMA 4X RATED ENCLOSURE. COORDINATE EXACT LOCATION AND SPEC WITH G.C. AND POOL CONTRACTOR BEFORE BEGINNING WORK. VERIFY EXACT FLA AND MOCIP WITH EXACT PUMP MODEL. FINAL CONNECTIONS BY E.C.
4. PROVIDE POWER TO EMERGENCY PHONE RECEPTACLE. FIELD VERIFY LOCATION WITH LOCAL AHJ.
5. RECEPTACLE TO BE MOUNTED AT TV HEIGHT.
6. WATER HEATER DISCONNECT LOCATED ABOVE CEILING.
7. FLUSH MOUNT JUNCTION BOX FOR UNIT HEATER.
8. E.C. TO COORDINATE WITH POOL CONTRACTOR TO ENSURE A GFCI/WEATHER PROOF RECEPTACLE IS WITHIN 20' OF EDGE OF POOL (BUT NO CLOSER THAN 6') AS REQUIRED BY NEC 680.22(A)(1). PROVIDE ON CIRCUIT 5 IN PANEL A.
9. GFCI/WP RECEPTACLE IN HOTBOX FOR FREEZE PROTECTION. VERIFY EXACT LOCATION OF HOTBOX WITH UTILITY PLANS BY OTHERS.
10. GFCI PROTECTED BY BREAKER AT PANEL.
11. REMOTE TIMER PUSH BUTTON FOR FEATURE PUMP. VERIFY INSTALLATION LOCATION WITH GC PRIOR TO ROUGH-IN. SEE POOL PLANS FOR EXACT MODEL AND ADDITIONAL INFORMATION.
12. ONT BOX IN THIS LOCATION. E.C. TO COORDINATE WITH ISP FOR INSTALLATION AND INTERNET CONNECTION.
13. PROVIDE POWER FOR GRILL AND FIREPLACE SOLENOID VALVE TIMERS.



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NO.	REVISION	DATE
1	OWNER CHANGES	01-15-24

SHEET DISCUSSION
LIGHTING AND POWER PLANS
 PROJECT #: 230913
 DATE ISSUED: 01/15/2024
 DRAWING BY: JH
 CHECKED BY: MWK/JLH

**SHERRI DOWNS AMENITY
 LENNAR HOMES
 AMENITY & POOL
 ANGLIER, NC**

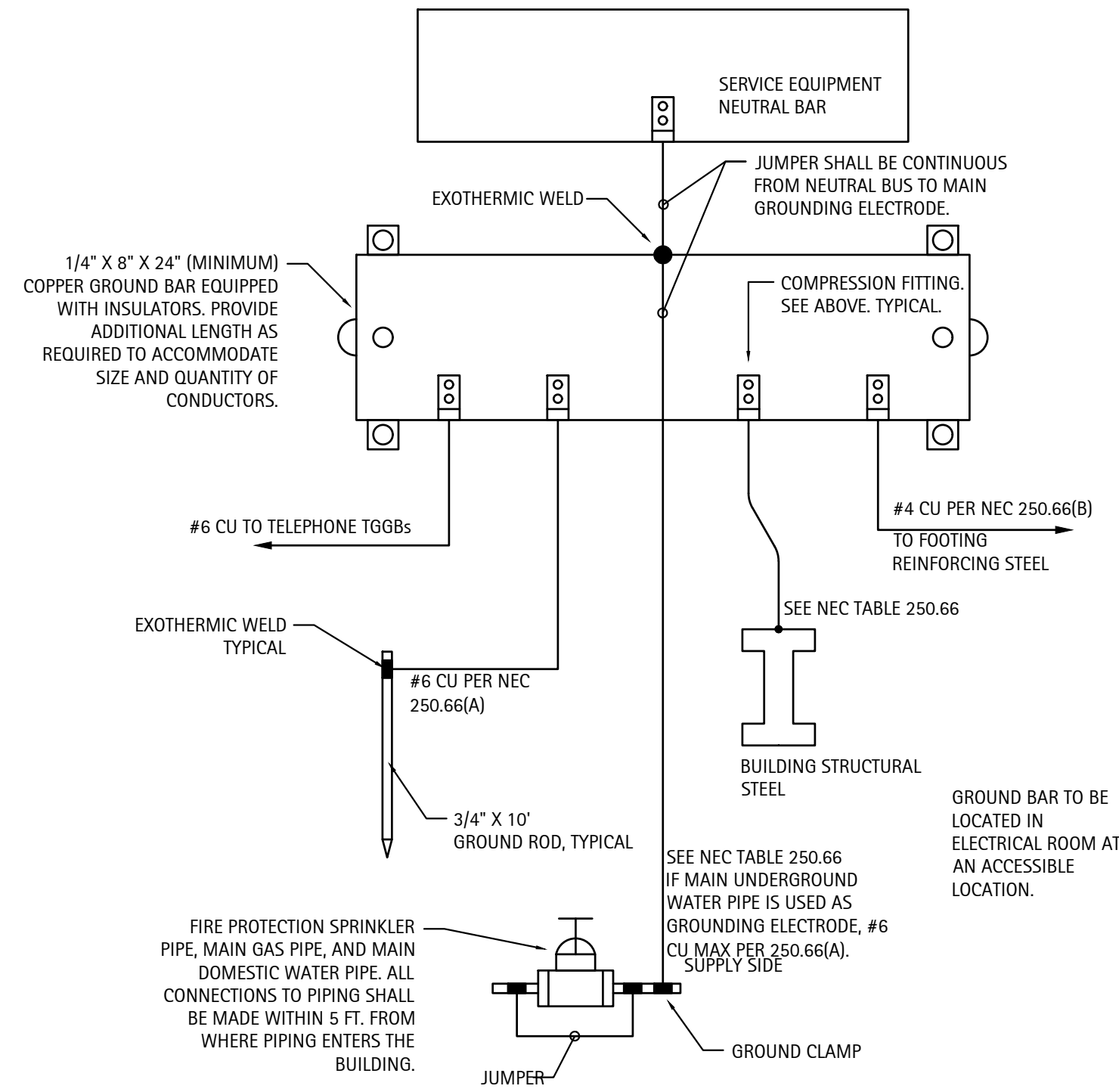
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PANEL A									
CKT	LOAD	BKR	LOAD kVA	PH	LOAD kVA	BKR	LOAD	CKT	
1	LIGHTS	20/1	1.68	A	0.18	20/1	HOTBOX RECEPTACLE	2	
3	BATHROOM RECEPTACLES	20/1	0.54	B	0.36	20/1	WATER FOUNTAIN	④	
5	EXTERIOR RECEPTACLES	20/1	0.36	A	0.18	20/1	EF-4	6	
⑦	POOL LIGHTS AND ACCESSORIES	20/1	1.20	B	1.20	20/1	POOL LIGHTS AND ACCESSORIES	⑧	
9			2.26	A	2.26			10	
11	POOL PUMP	40/2	2.26	B	2.26	40/2	FEATURE PUMP	12	
13	POOL SPARE	20/1	0.00	A	0.00	20/1	POOL SPARE	14	
15	POOL SPARE	20/1	0.00	B	1.50	20/2	UNIT HEATER 2	16	
17	EMERGENCY PHONE RECEPT.	20/1	0.18	A	1.50			18	
19			1.50	B	2.40			20	
21	UNIT HEATER 3	20/2	1.50	A	2.40	30/2	UNIT HEATER 4	22	
23	STORAGE RECEPT.	20/1	0.90	B	2.25	30/2	WATER HEATER	24	
25			1.00	A	2.25			26	
27	UNIT HEATER 1	20/2	1.00	B	0.24	20/1	GRILL AND FIREPLACE TIMERS	28	
29	CHLORINATOR	20/1	0.18	A	0.00		SPACE	30	
31	SPACE		0.00	B	0.00		SPACE	32	
33	SPACE		0.00	A	0.00		SPACE	34	
35	SPACE		0.00	B	0.00		SPACE	36	
37	SPACE		0.00	A	0.00		SPACE	38	
39	SPACE		0.00	B	0.00		SPACE	40	
41	SPACE		0.00	A	0.00		SPACE	42	
			kVA	PH	AMPS				
			15.9	A	133				
			17.6	B	147				
VOLTAGE/PHASE			120/240,1P,3W						
BUS RATING			200A						
MAIN CIRCUIT BREAKER RATING			200A MAIN BREAKER						
AIC RATING			22k - EC TO VERIFY						
SERVICE ENTRANCE RATED			YES						
ENCLOSURE			NEMA 1						
MOUNTING			SURFACE						

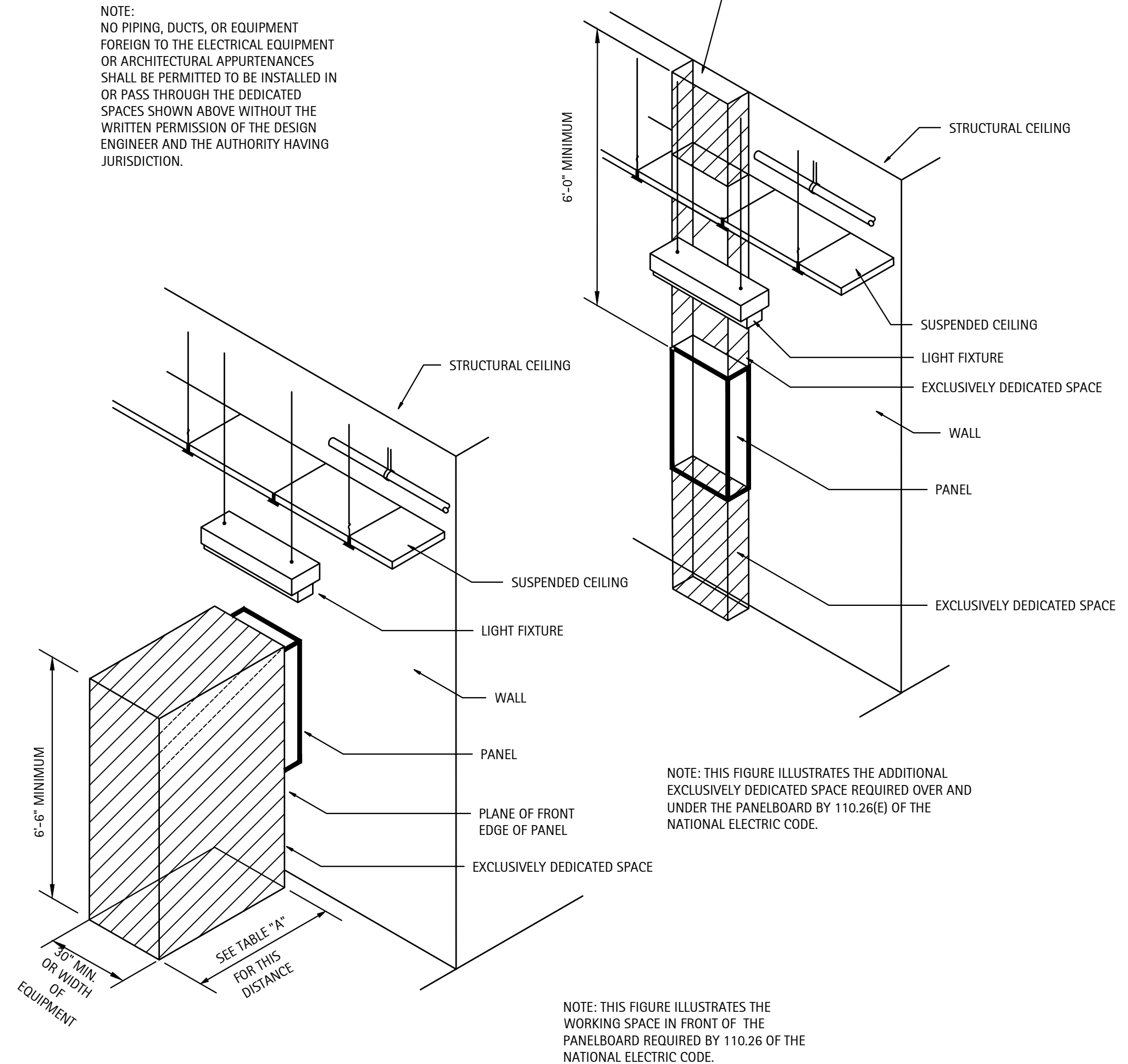
○ - DENOTES GFCI BREAKER

NEC ELECTRIC DEMAND SUMMARY 120/240V,1P,3W						
EQUIPMENT	DEMAND FACTOR	kVA		LOAD kVA	NEC REFERENCE	NOTES/CALCULATIONS
		A	B			
LIGHTING	125%	0.64	0.64	1.29	220.12	919 5F X 1.4 VA/SF
RECEPTACLES < 10 kVA	100%	0.90	1.80	2.70	220.44	
HVAC	100%	7.32	6.64	13.96	---	BASED ON MCA
WATER HEATER	125%	2.81	2.81	5.63	422.13	STORAGE TANK <120 GAL @ 125%
POOL EQUIPMENT	100%	5.08	7.48	12.55	430.24	LARGEST MOTOR @ 125%
DEMAND kVA PER PHASE		16.75	19.37			
DEMAND AMPS PER PHASE		140	161			

THE CALCULATED LIGHTING LOAD EXCEEDS THE CONNECTED LIGHTING LOAD.



GROUNDING DETAIL-NO SCALE



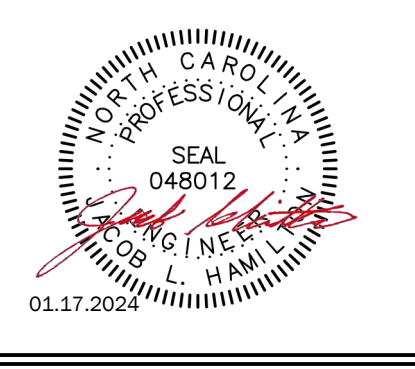
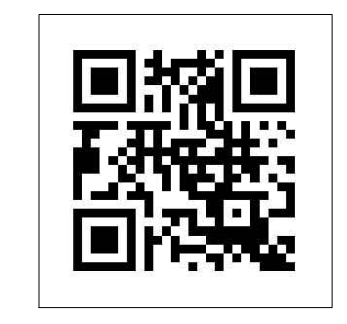
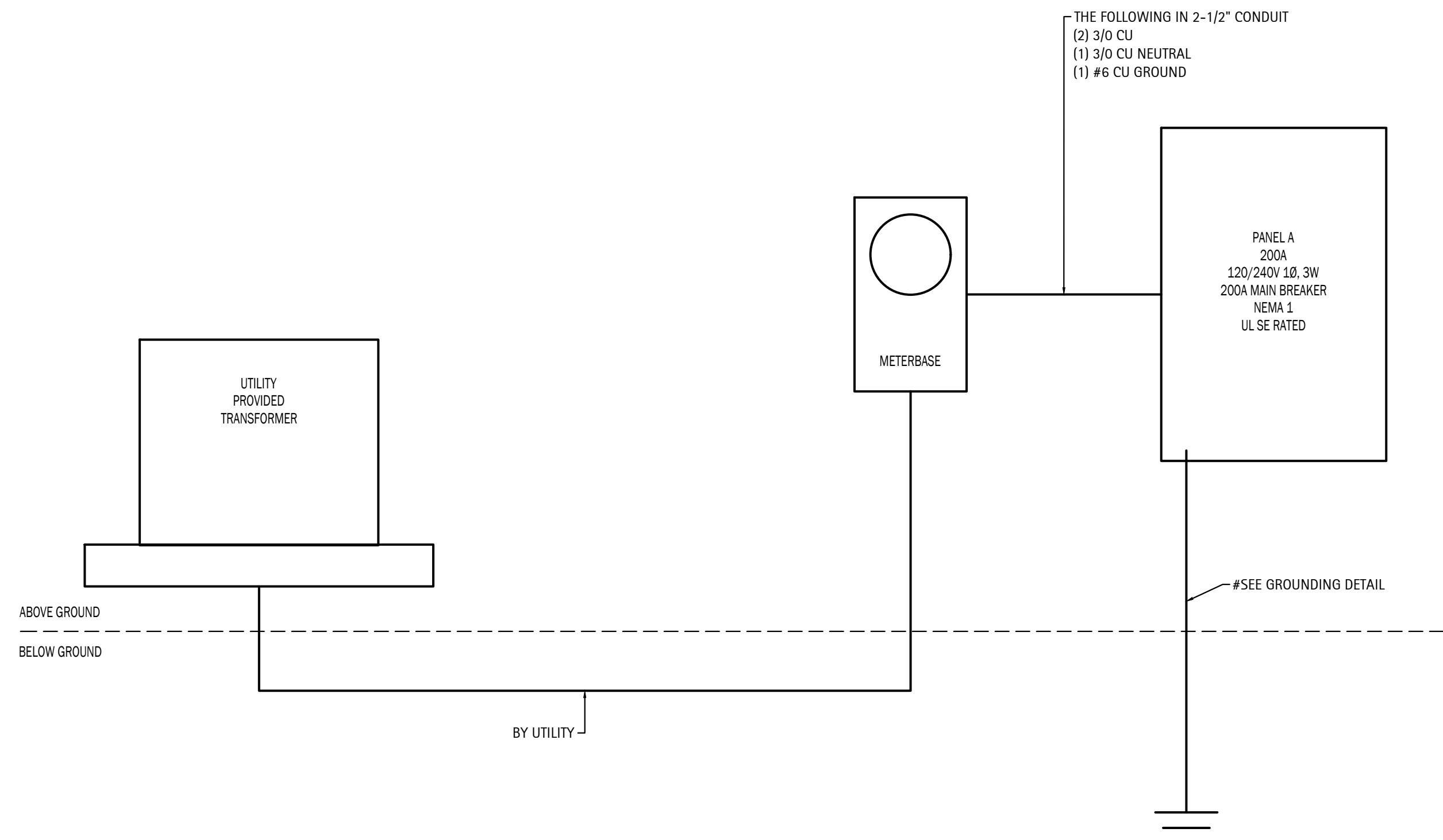
NOTE: WHERE THE CONDITIONS ARE AS FOLLOWS:

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.

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



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 PO Box 3301, Healdston, NC 27536 | www.kilianengineering.com
 (919) 458-8778 | CORPORATE LICENSE C-2277

NO.	REVISION	DATE
1	OWNER CHANGES	01.15.24

SHEET DISCRPTION
PANEL SCHEDULE AND POWER RISER

PROJECT #: 230913
 DATE ISSUED: 01/15/2024
 DRAWING BY: JH
 CHECKED BY: MWK/JLH

**SHERRI DOWNS AMENITY
 LENNAR HOMES
 AMENITY & POOL
 ANGLIER, NC**





Health & Human Services

☎ 919 856 7400
☎ 919 743 4772

Environmental Health and Safety
P.O. Box 550 • Raleigh, NC 27602
336 Fayetteville St. • Raleigh, NC 27601
wake.gov

8/12/2024

Michael Little
Poythress Commercial Contractors
mike@poythress.com

Re: **Sherri Downs Amenity & Pool**
HSIPOP-127231-2024

Dear Mr. Little,

This department has reviewed the plans submitted for the **Sherri Downs Amenity & Pool** to be constructed in **424 Morning Light Drive, Angier, NC**. The plans were received by this department **June 20, 2024**.

This plan review was conducted in accordance with the current North Carolina Rules Governing Public Swimming Pools (15A NCAC 18A .2500) and Wake County Department of Environmental Services Regulations Governing Swimming Pools.

The plan cannot be approved as submitted for the following reasons:

- The new proposed flow meter is capable of measuring flows 1.5 times of the design flow. However, the spec on the flow meter states it is to be installed on a 4" pipe to maintain a more accurate reading and the return piping on the plans is a 3" pipe. Please change the piping on the pool plans to reflect the correct piping. .2518 (g) **Please see last page for comments.**

Please submit revised plans, with the necessary changes as referenced in the above items, by uploading documents to the Permit Portal. ***Please email when documents have been uploaded – the system does not notify me.*** Once the revised plans are received, they will be approved or disapproved within 30 days in accordance with NC Rule .2509 (c).

Plans for swimming pools shall be approved by this department prior to construction in accordance with Rule .2509 (a).

You have a right to a formal appeal of this decision. To pursue a formal appeal, you must file a petition for a contested case hearing with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, NC 27699-6714. To get a copy of a petition form, you may write the Office of Administrative Hearings or call the office at (919) 733-0926. The petition for a contested case hearing must be filed in accordance with the provisions of North Carolina General Statutes 130A-24 and 150B-23 and all other applicable provisions of Chapter 150B.

PLEASE NOTE: If you wish to pursue a formal appeal, you must file the petition form with the Office of Administrative Hearings **WITHIN 30 DAYS OF THE DATE OF THIS LETTER**. Meeting the 30-

day deadline is critical to your right to a formal appeal. Do not wait for the outcome of any informal review or appeal if you wish to file a formal appeal.

If you file a petition for a contested case hearing with the Office of Administrative Hearings, you are required by Law (N.C. General Statutes 150B-23) to serve a copy of your petition on the state agency that is a party to the action. The state agency party in this case is the North Carolina Department of Environment and Natural Resources. Service must be made in accordance with Rule 4 of the North Carolina Rules of Civil Procedure and 26 NCAC 3 .0102(a)(3). You must send the copy to: Office of General Counsel, N.C. Department of Environment and Natural Resources, 1601 Mail Service Center, Raleigh, NC 27699-1601. Do NOT send the copy of your petition to your local health department. Sending a copy of your petition to the local health department will NOT satisfy the legal requirements in N.C. General Statute 150B-23 that you serve a copy on the state agency that is a party to this action. You may also request an informal review of this decision in accordance with 15A NCAC 18A .2643. You may call or write the local health department if you need any additional information or assistance.

If you have any questions regarding this matter or if I can provide any additional clarification or assistance, please call me at (919)868-2570 or email me at jennifer.edwards@wake.gov .

Sincerely,

Jennifer Edwards 2239

Jennifer Edwards, REHS

Environmental Consultant

Wake County Government

Wake County Health & Human Services / Plan Review and Recreational Sanitation Section

[Jennifer.edwards@wake.gov](mailto:jennifer.edwards@wake.gov)

919.868.2570 mobile

336 Fayetteville Street, Raleigh, NC 27601

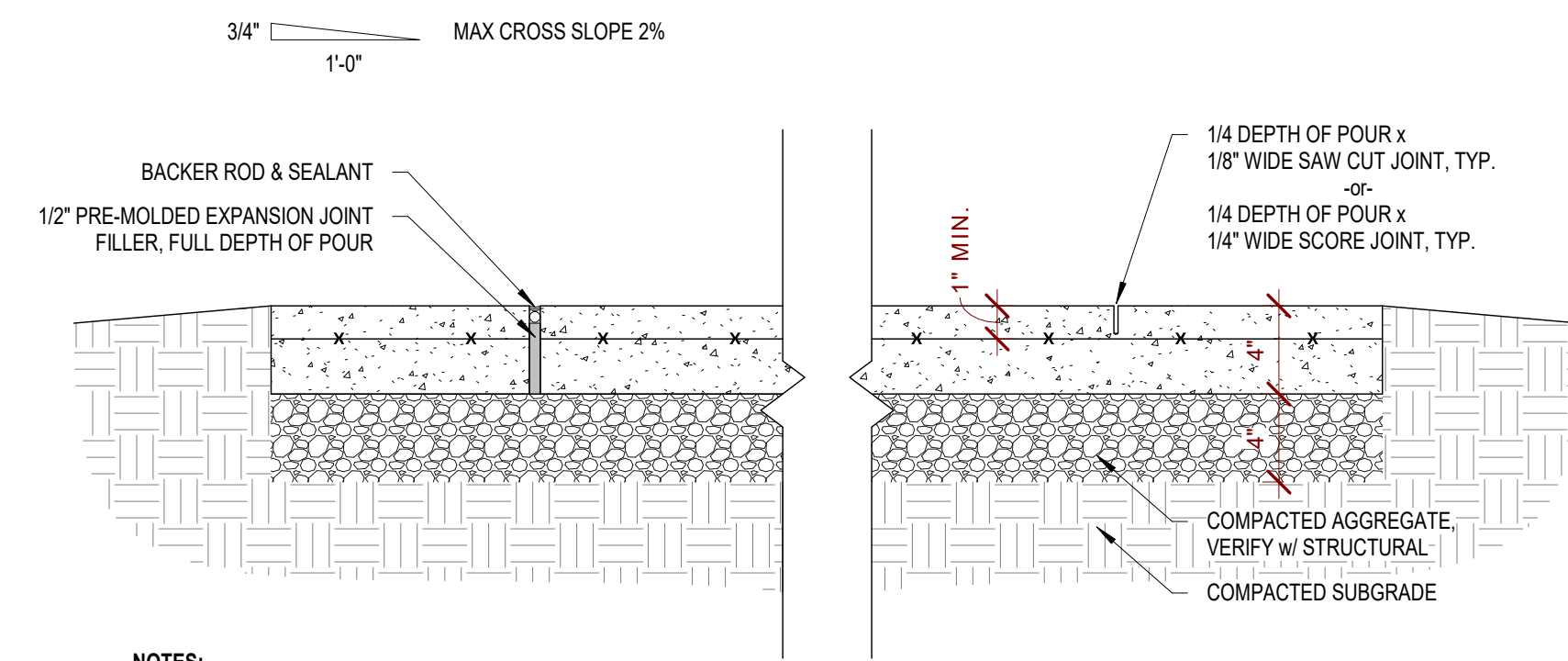
www.wake.gov/food

www.wake.gov/pools

Wake County Health & Human Services would like your feedback. In order to participate, please [CLICK HERE!](#)

cc: Perry Glenn Cox
Brian M. Ross
Jacob L. Hamilton

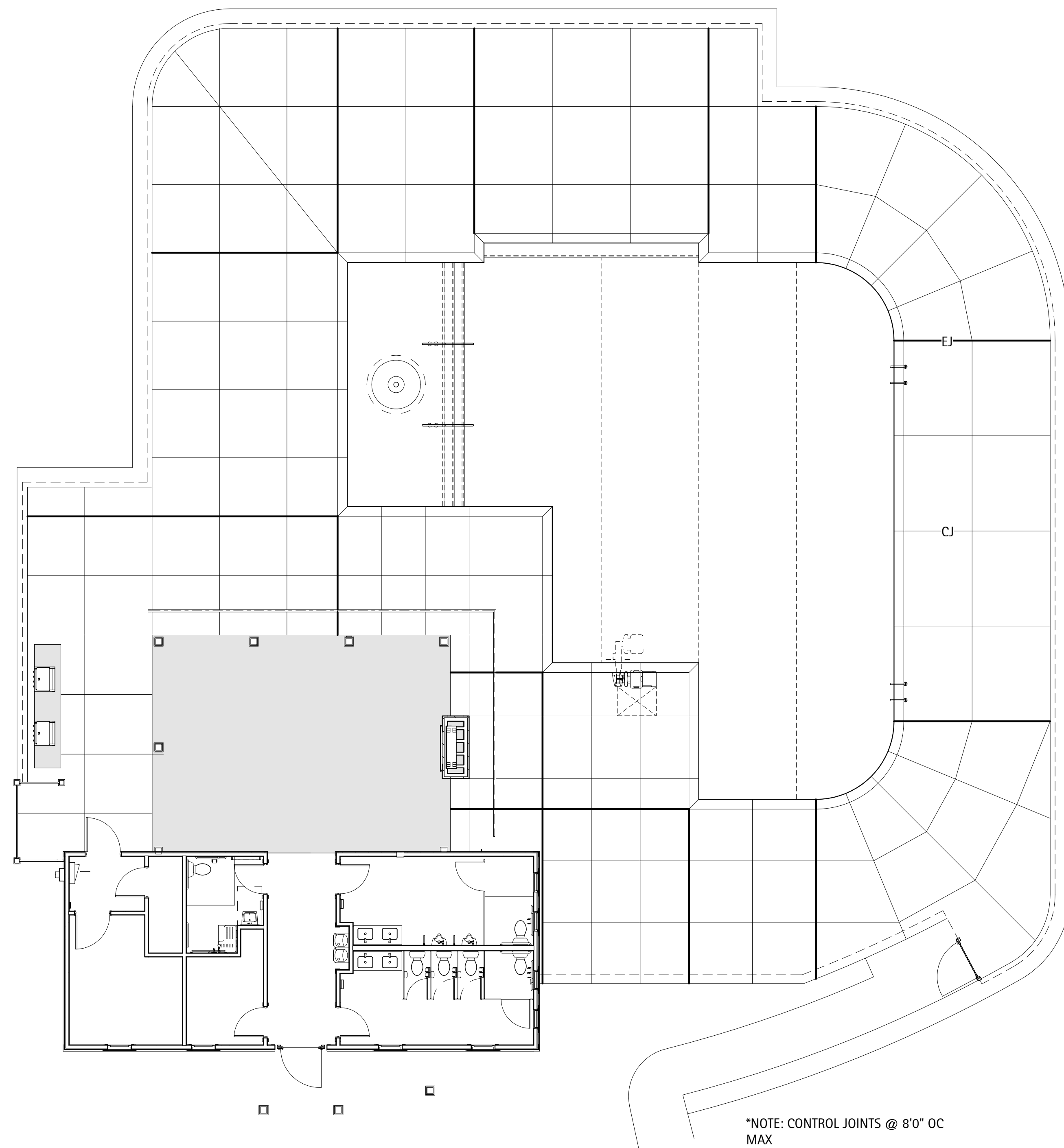
The 4" line will be installed on the return lines in the pumphouse and then reduced to a 3" line just outside the pumphouse. Revisions were only made on the enlarged pumphouse plan.



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.

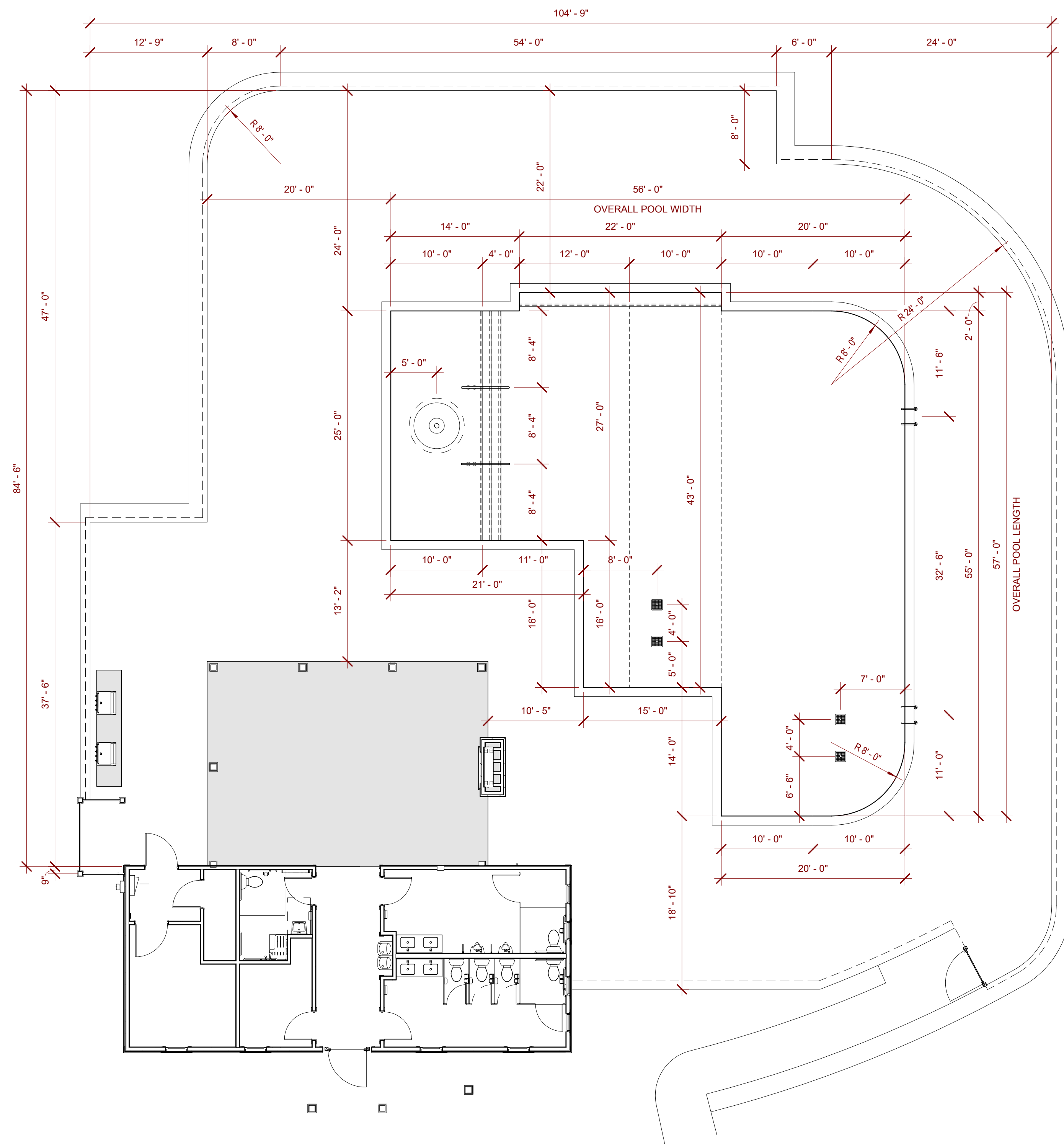
3 Detail - Typ. Pool Sawcut Control Joint
1 1/2" = 1'-0"



*NOTE: CONTROL JOINTS @ 8'0" OC MAX

COORDINATE & VERIFY LAYOUT WITH G.C. PRIOR TO CUTTING

2 Pool Control Joint Plan
1/8" = 1'-0"



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



D. CLUGSTON



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NO.	REVISION	DATE

SHEET DISCUSSION
POOL DIMENSION PLAN

PROJECT #: 2023005
DATE ISSUED: 12/11/2023
DRAWING BY: JVD/BSJ
CHECKED BY: DSC/JLH

**SHERRI DOWNS AMENITY
LENNAR HOMES
AMENITY & POOL
ANGIER, NC**

SP1.0

BUILDING FIXTURE DATA

TOTAL BATHER LOAD = 2,256/15 = 151
 - MAIN POOL = 76 (50%-50% SPLIT)

CLUBHOUSE & PUMP HOUSE REQUIREMENTS:
 76 MEN, MIN. FIXTURES REQUIRED ARE:
 -ONE LAVATORIES
 -ONE WATER CLOSET + 1 URINAL
 76 WOMEN, MIN FIXTURES ARE
 -TWO LAVATORIES
 -TWO WATER CLOSET
 1 SHOWER IS REQUIRED.

SEE ARCHITECTURAL PLANS BY OTHERS FOR DESIGN OF BUILDING RESTROOMS

POOL DECK EXIT REQUIREMENTS

POOL DECK AREA = 5,455 SF. @ 15 SF PER PERSON
 DECK OCCUPANT LOAD IS 364.

POOL AREA IS 2,256 SF. @ 50 SF PER PERSON,
 POOL OCCUPANT LOAD IS 46.

TOTAL POOL & POOL DECK OCCUPANT LOAD IS 410 PERSONS. SEE LIFE SAFETY PLAN BY OTHERS FOR EXIT WIDTH REQUIREMENTS & BUILDING OCCUPANCY.

POOL EQUIPMENT SCHEDULE

TAG	COUNT	MANUF.	MODEL	COMMENTS
1	1	PENTAIR	WHISPERFLOXF VS	5 HP SELF-PRIMING PUMP W/ STRAINER BASKET + EXTRA STRAINER BASKET
2	1	PENTAIR	XFET-20	5 HP SELF-PRIMING PUMP W/ STRAINER BASKET + EXTRA BASKET
3	1	PENTAIR	147402 W/ 147406	TANDEM FILTER PIPING KITS FOR 2 & 3 IN FILTERS
4	2	Pentair	TR-140 C3	36" DIA HIGH RATE SAND FILTER W/ 7.06 SQ FT OF MEDIA
5A	1	PENTAIR	520977 (COMSYS-16)	COMMERCIAL INTELLICHLOR SALT CHLORINE GENERATOR
5B	1	PENTAIR	HC-3315	HIGH CAPACITY CHLORINE/BROMINE FEEDER (BACKUP CHLORINATOR)
6	2	FLOVIS	FV-4-40	4" IN-LINE COMMERCIAL FLOWMETER
7	4	AQUASTAR	WAV12WR101 W/ FBS-50-812-4	12"x12" VGB SUCTION OUTLET COVER W/ A.S.A MFG FIBERGLASS SUMP
8	1	AQUASTAR	HVC101	SELF-CONTAINED HYDROSTATIC RELIEF VALVE
9	6	AQUASTAR	SKR101	WHITE COMMERCIAL GRADE SKIMMER
10	1	AQUASTAR	ES1022SI2001 W/ VLK15T01	VACUUM LINE FITTING W/ LOCK GAP
11	1	AQUASTAR	GDD101	COMMERCIAL OVERFLOW DRAIN
12	8	AQUASTAR	ES1022SI2001 W/ 8101	DIRECTIONAL WALL RETURN INLET
13	2	AQUASTAR	ES1022SI2001 W/ BP101	FLOOR RETURN INLET W/ BUBBLER PLATE FITTING
14	1	AQUASTAR	AFB101	FILLSTAR - AUTOFILL LINE - WHITE
15	1	NAT. STRUCT.	1800-18-96	50" DIA MUSHROOM SPRAY FOUNTAIN (193 GPM REQUIRED FLOW)
16	4	PENTAIR	601107	300W EQUIVALENCY WHITE INTELLIBRITE WHITE LED LIGHTS
17	2	INTERMATIC	PJB4175	4 LIGHT CONNECTION POOL & SPA JUNCTION BOX
18	2	SR SMITH	DMS-102B - MG	MARINE GRADE DECK MOUNTED HANDRAIL - STANDARD
19	2	SR SMITH	10054-MG	MARINE GRADE DECK MOUNTED COMMERCIAL LADDER
20	1	PENTAIR	RCS1	COMPOOL REMOTE SWITCH WALL GANG PLATE - TIMER PUSH BUTTON FOR FEATURE
21	1	INTERMATIC	ET90115CR	ELECTRIC TIMER FOR FEATURE PUMP
HC	1	SR SMITH	MULTI-LIFT	ADA COMPLIANT MULTILIFT

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 SAFETY REQUIREMENTS

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

A. (2) 12' LONG, MIN., METAL POLES AND BODY HOOKS SECURELY ATTACHED. THE POLE SHALL BE NON-TELESCOPING, NON-ADJUSTABLE & NON-COLLAPSIBLE.

B. (2) U.S. COAST GUARD APPROVED RING BUOYS WITH 50'-0" OF 1/4" DIAMETER THROWING ROPE.

EMERGENCY TELEPHONE SERVICE:

A. TELEPHONE CAPABLE OF DIRECTLY DIALING 911 OR OTHER EMERGENCY NOTIFICATION SYSTEM SHALL BE PROVIDED.

B. THE TELEPHONE SHALL BE PERMANENTLY AFFIXED TO A LOCATION INSIDE THE POOL ENCLOSURE OR OUTSIDE THE ENCLOSURE WITHIN 75' OF THE BATHER ENTRANCE.

C. THE TELEPHONE SHALL BE VISIBLE FROM WITH THE POOL ENCLOSURE OR A VISIBLE SIGN SHALL BE POSTED INDICATING THE LOCATION OF THE EMERGENCY PHONE.

D. 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.

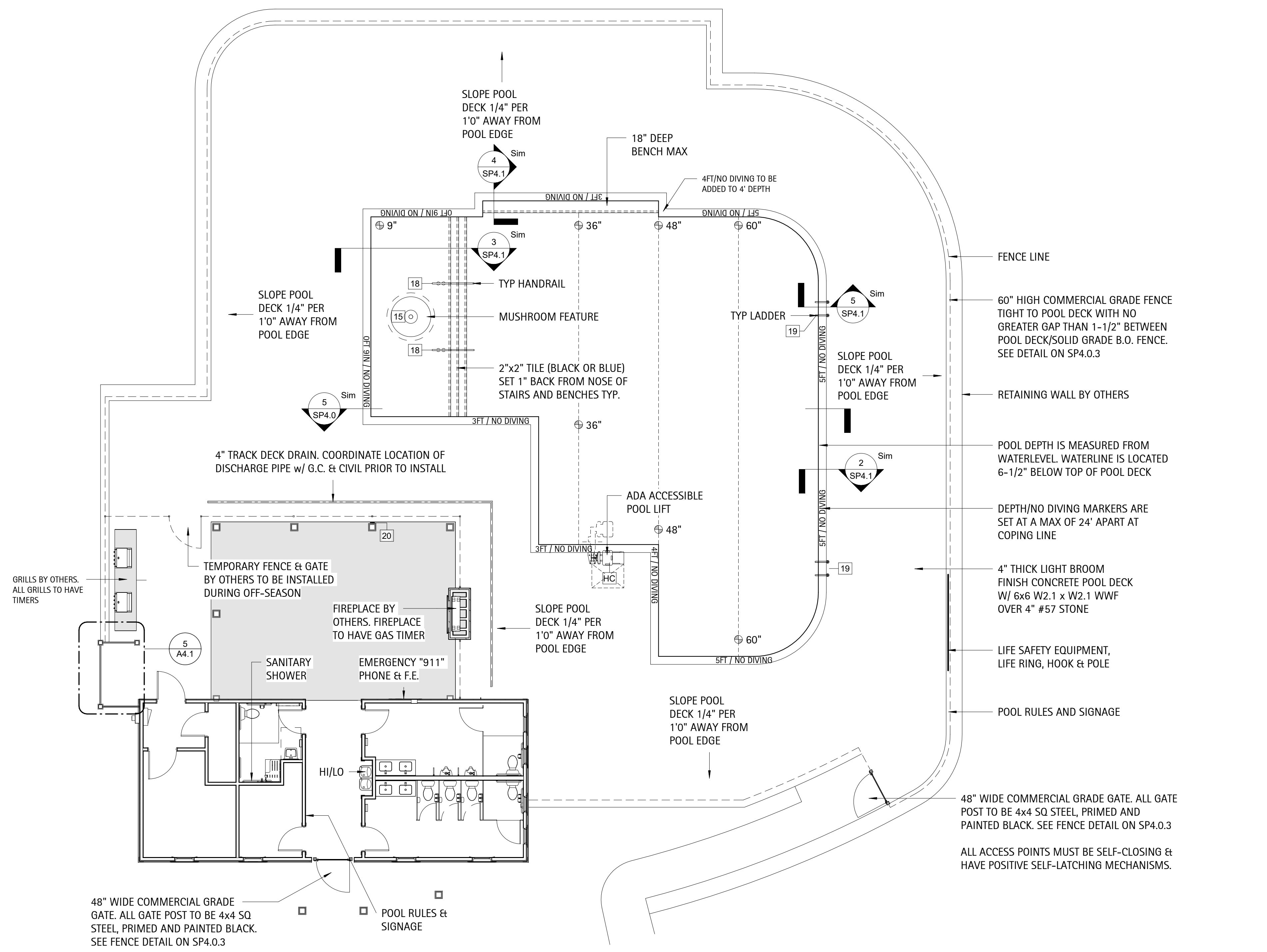
POOL DECK MARKINGS

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.
- LETTER COLOR TO CONTRAST WITH BACKGROUND.
- MARKINGS SHALL INDICATE THE DEPTH OF THE POOL IN FEET AND SHALL INCLUDE THE WORD "FEET" OR THE SYMBOL "FT".
- MARKINGS IN POOL DECK SHALL PROVIDE A SLIP RESISTANT WALKING SURFACE.
- NOT TO EXCEED 25'-0" IN SPACING ALONG THE PERIMETER OF THE POOL.

"ND" OR "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)



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

POOL SYMBOLS LEGEND

	SAND FILTER		MAIN DRAINS
	PUSH/PULL VALVE		OVERFLOW
	FLOWMETER		VACUUM INLET
	CHLORINATOR w/ FLOWMETER		FLOOR INLET
	POOL PUMP		DIRECTIONAL WALL INLET
	POOL LADDER		LIGHT NICHE
	AUTOFILL		SKIMMER

REFER TO POOL PLUMBING SCHEDULE FOR SPECS.

POOL DESIGN NOTES

A. SEE PLANS BY OTHERS FOR CONSTRUCTION OF BATHHOUSE, PUMP & CHEMICAL STORAGE ROOMS, SITE WORK, ETC.

B. POOL DESIGNED FOR DAWN TO DUSK SWIMMING ONLY

MAIN POOL DATA

POOL DIMENSIONS: 57'-0" X 56'-0" OVERALL IRREGULAR SHAPE.

POOL DEPTHS: 9" SHELF w/ 3'-5'

POOL VOLUME: 61,238 GALLONS

SURFACE AREA: 2,256 SQFT.

PERIMETER: 220 LF

COPING: BULLNOSE INDEPENDENT

REQUIRED FLOW: 170 GPM @ 65 TDH

DESIGN FLOW: 190 GPM @ 65 TDH

FEATURE FLOW: 210 GPM @ 65 TDH

SHELL MATERIAL: 4000 PSI SHOTCRETE

INTERIOR FINISH: KONA QUARTZ PLASTER

BATHER LOAD: 151 PERSONS

BACKWASH TO: SANITARY SEWER

WATER SOURCE: IN-LINE AUTOFILL

PIPE SIZING:

CIRC MAIN DRAINS: (2) 3" SCH 40 PVC

FEAT MAIN DRAINS: (2) 4" SCH 40 PVC

CIRC SKIMMERS: (6) 3" SCH 40 PVC

VACUUM LINE: (2) 2" SCH 40 PVC

INLETS: (11) 3" SCH 40 PVC

FILTER TYPE: HIGH RATE SAND

SIZE PROVIDED: 2 @ 7.06 SF (EA) = 14.12

SIZE REQUIRED: 12.67 SF TOTAL

MEDIA CIRC. RATE: 15 GPM/SF

BACKWASH RATE: 15 GPM/SF

TURNOVER RATE: 6 HOURS



DATE: _____

REVISION: _____

NO.: _____

SHEET DISCUPTION
POOL LAYOUT PLAN

PROJECT #: 2023005

DATE ISSUED: 12/11/2023

DRAWING BY: JVD/BSJ

CHECKED BY: DSC/JLH

SHERRI DOWNS AMENITY
 LENNAR HOMES
 AMENITY & POOL
 ANGIER, NC

SP2.0

CHEMICAL STORAGE DATA

CHEMICAL STORAGE REQUIREMENTS FOR A 61,238 GALLON POOL ARE:

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

+ 17.08 (18) SF (1 SF PER 51,238/3000)
= 24 SF REQUIRED. (36 SF PROVIDED)

POOL REQUIRES A MIN. OF 24 SF FOR CHEMICAL STORAGE.
SEE BUILDING PLANS BY OTHERS FOR EXACT LAYOUT.

PUMP FLOW PIPE SIZING

CIRCULATION:
WHISPERFLOX VS PUMP FLOW AT 65 FT OF WATER IS 190 GPM, WITH SPECIFIED:
4" MAIN DRAIN PIPING VELOCITY IS 4.79 FPS.
4" SKIMMER PIPING VELOCITY IS 4.79 FPS.
3" RETURN PIPING VELOCITY IS 8.25 FPS.

FEATURE:
XFET-20 PUMP FLOW AT 65 FT OF WATER IS 210 GPM, WITH SPECIFIED:
4" MAIN DRAIN PIPING VELOCITY IS 5.29 FPS.
3" RETURN PIPING VELOCITY IS 9.12 FPS.

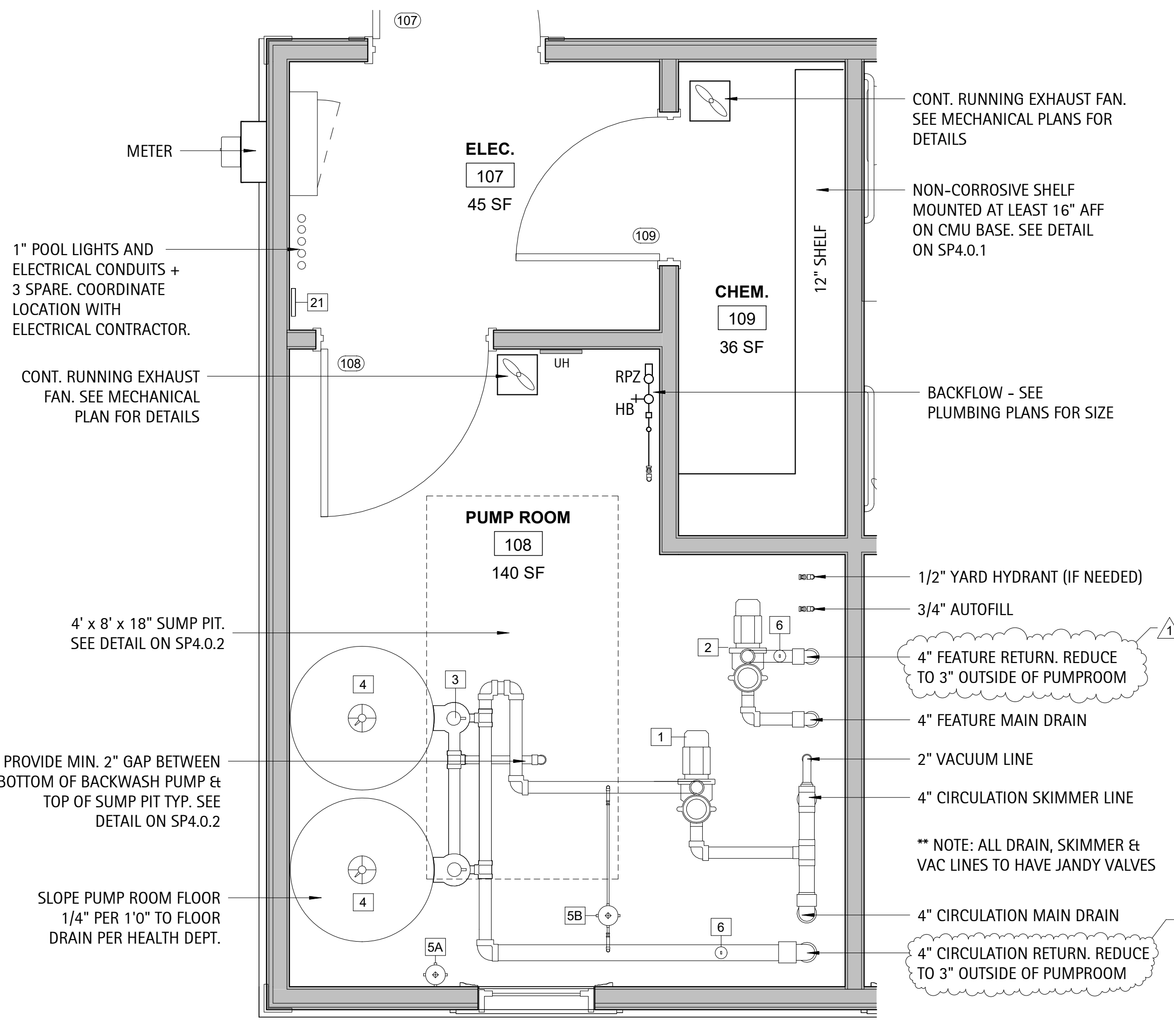
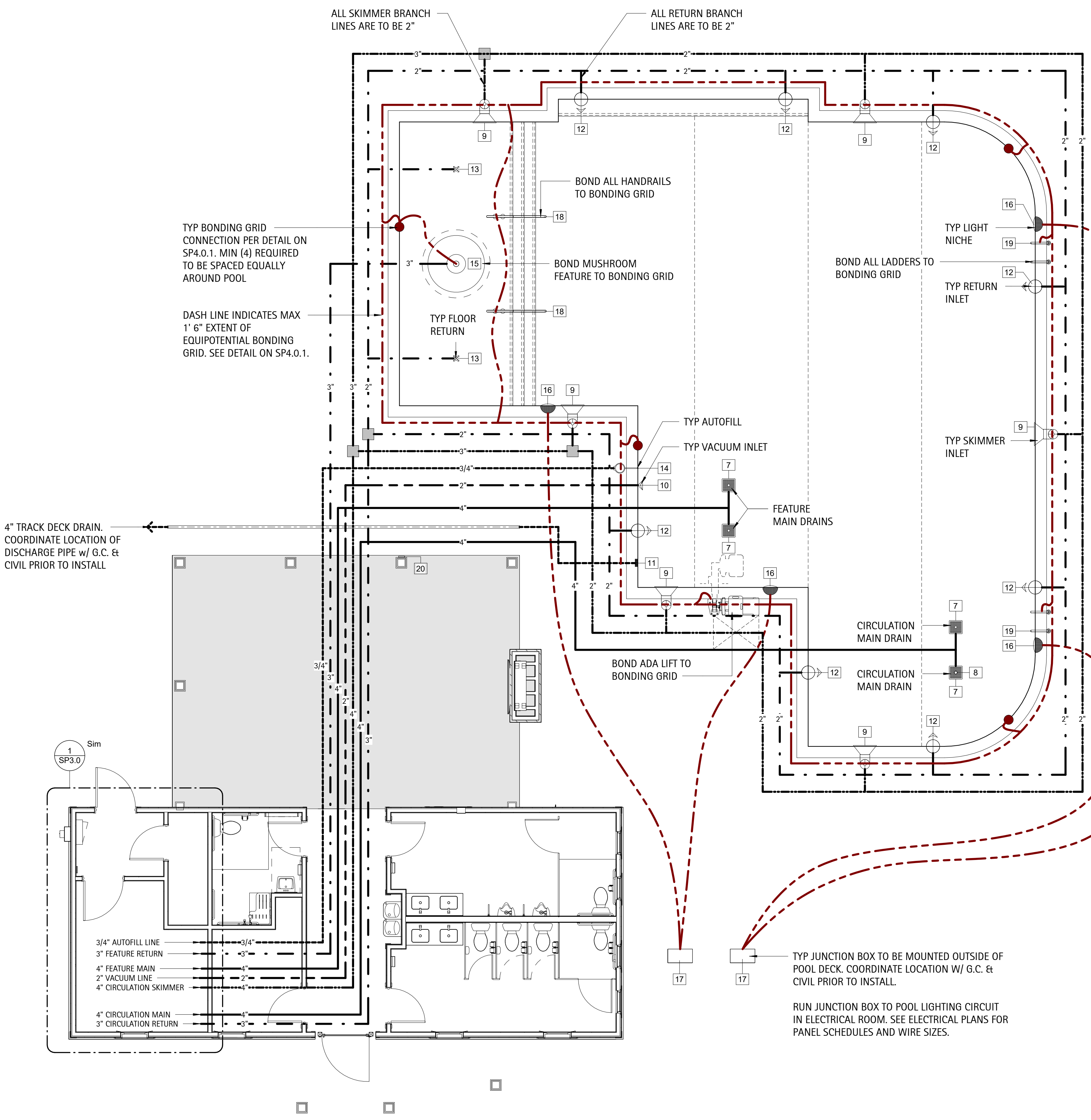
POOL EQUIPMENT SCHEDULE

TAG	COUNT	MANUF.	MODEL	COMMENTS
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2	1	PENTAIR	XFET-20	5 HP SELF-PRIMING PUMP W/ STRAINER BASKET + EXTRA BASKET
3	1	PENTAIR	147402 W/ 147406	TANDEM FILTER PIPING KITS FOR 2 & 3 IN FILTERS
4	2	Pentair	TR-140 C3	36" DIA HIGH RATE SAND FILTER W/ 7.06 SQ FT OF MEDIA
5A	1	PENTAIR	520977 (COMSYS-16)	COMMERCIAL INTELLICHLOR SALT CHLORINE GENERATOR
5B	1	PENTAIR	HC-3315	HIGH CAPACITY CHLORINE/BROMINE FEEDER (BACKUP CHLORINATOR)
6	2	FLOVIS	FV-4-40	4" INLINE COMMERCIAL FLOWMETER
7	4	AQUASTAR	WAV12WR101 W/ FBS-50-812-4	12"x12" VGB SUCTION OUTLET COVER W/ A.S.A MFG FIBERGLASS SUMP
8	1	AQUASTAR	HVC101	SELF-CONTAINED HYDROSTATIC RELIEF VALVE
9	6	AQUASTAR	SKR101	WHITE COMMERCIAL GRADE SKIMMER
10	1	AQUASTAR	ES1022SI2001 W/ VLK15T01	VACUUM LINE FITTING W/ LOCK CAP
11	1	AQUASTAR	GDD101	COMMERCIAL OVERFLOW DRAIN
12	8	AQUASTAR	ES1022SI2001 W/ 8101	DIRECTIONAL WALL RETURN INLET
13	2	AQUASTAR	ES1022SI2001 W/ BP101	FLOOR RETURN INLET W/ BUBBLER PLATE FITTING
14	1	AQUASTAR	AFB101	FILL STAR - AUTOFILL LINE - WHITE
15	1	NAT. STRUCT.	1800-18-96	50" DIA MUSHROOM SPRAY FOUNTAIN (193 GPM REQUIRED FLOW)
16	4	PENTAIR	601107	300W EQUIVALENCY WHITE INTELLIBRITE LIGHTS
17	2	INTERMATIC	PJB4175	4 LIGHT CONNECTION POOL & SPA JUNCTION BOX
18	2	SR SMITH	DMS-102B - MG	MARINE GRADE DECK MOUNTED HANDRAIL - STANDARD
19	2	SR SMITH	10054-MG	MARINE GRADE DECK MOUNTED COMMERCIAL LADDER
20	1	PENTAIR	RCS1	COMPOOL REMOTE SWITCH WALL GANG PLATE - TIMER PUSH BUTTON FOR FEATURE
21	1	INTERMATIC	ET90115CR	ELECTRIC TIMER FOR FEATURE PUMP
HC	1	SR SMITH	MULTI-LIFT	ADA COMPLIANT MULTILIFT

UNDERWATER LIGHTING DATA

MAIN POOL AREA: 2,257 SQFT.
2,257 SF x 0.5 WATTS = 1,128.5 WATTS

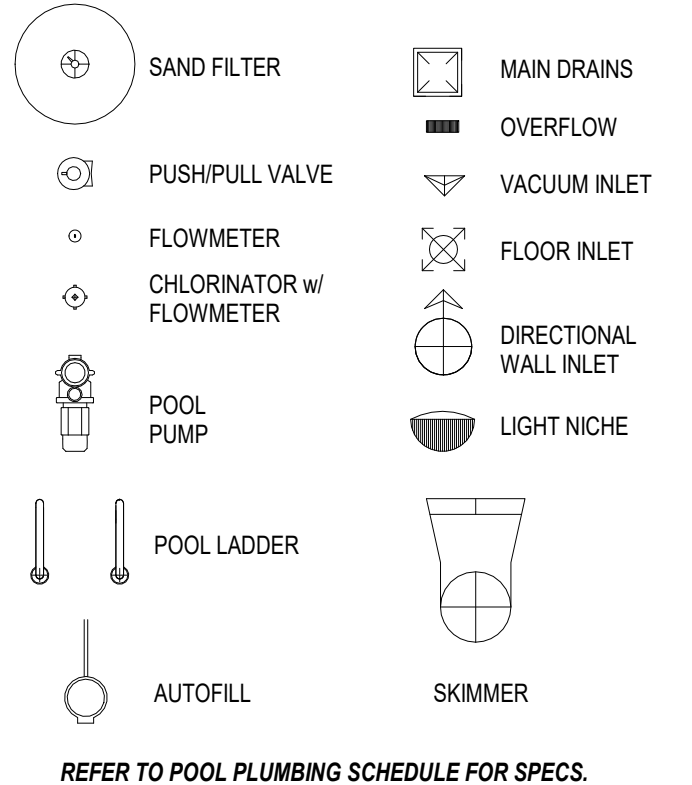
LIGHTING PROVIDED (12V LED EQ.)
4 INTELLIBRITE @ 300W EQUIV = 1,200 WATTS



Enlarged Pump Room Plan
1/2" = 1'-0"

Pool Return Piping Plan
3/16" = 1'-0"

POOL SYMBOLS LEGEND



MAIN POOL DATA

POOL DIMENSIONS: 57'-0" X 56'-0" OVERALL
IRREGULAR SHAPE.

POOL DEPTHS: 9" SHELF w/ 3'-5"

POOL VOLUME: 61,238 GALLONS

SURFACE AREA: 2,256 SQFT.

PERIMETER: 220 LF

COPING: BULLNOSE INDEPENDENT

REQUIRED FLOW: 170 GPM @ 65 TDH

DESIGN FLOW: 190 GPM @ 65 TDH

FEATURE FLOW: 210 GPM @ 65 TDH

SHELL MATERIAL: 4000 PSI SHOTCRETE

INTERIOR FINISH: KONA QUARTZ PLASTER

BATHER LOAD: 151 PERSONS

BACKWASH TO: SANITARY SEWER

WATER SOURCE: IN-LINE AUTOFILL

PIPE SIZING:

CIRC MAIN DRAINS: (2) 3" SCH 40 PVC

FEAT MAIN DRAINS: (2) 4" SCH 40 PVC

CIRC SKIMMERS: (6) 3" SCH 40 PVC

VACUUM LINE: (2) 2" SCH 40 PVC

INLETS: (11) 3" SCH 40 PVC

FILTER TYPE: HIGH RATE SAND

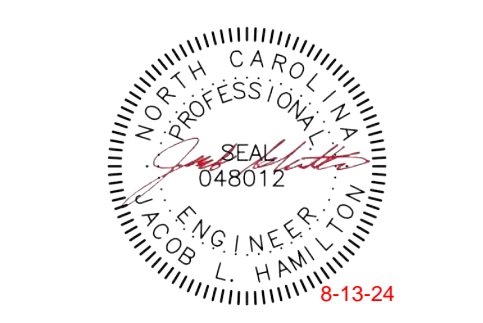
SIZE PROVIDED: 2 @ 7.06 SF (EA) = 14.12

SIZE REQUIRED: 12.67 SF TOTAL

MEDIA CIRC. RATE: 15 GPM/SF

BACKWASH RATE: 15 GPM/SF

TURNOVER RATE: 6 HOURS



Kilian Engineering, Inc.
Professional Engineer
No. 048012
Kilian Engineering, Inc.
PO Box 3301, Healdson, NC 27536 | www.kilianengineering.com
(919) 438-8778 | CORPORATE LICENSE C-2277

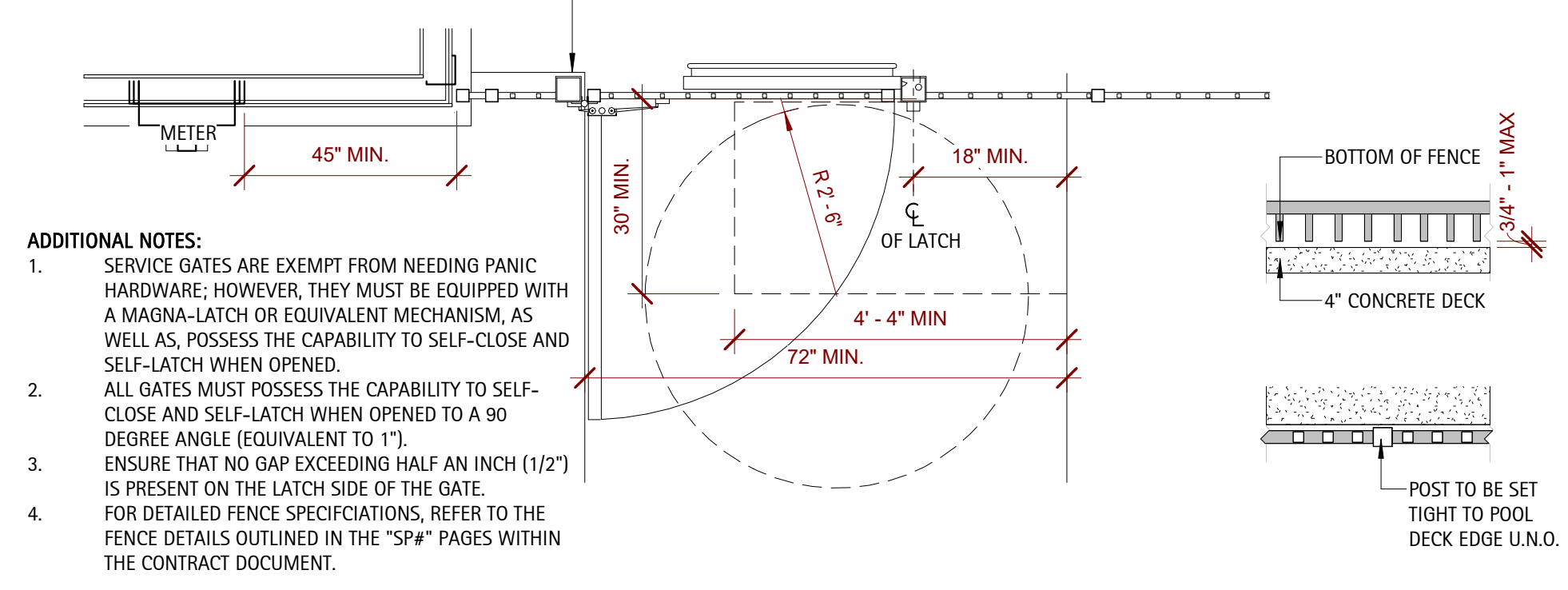
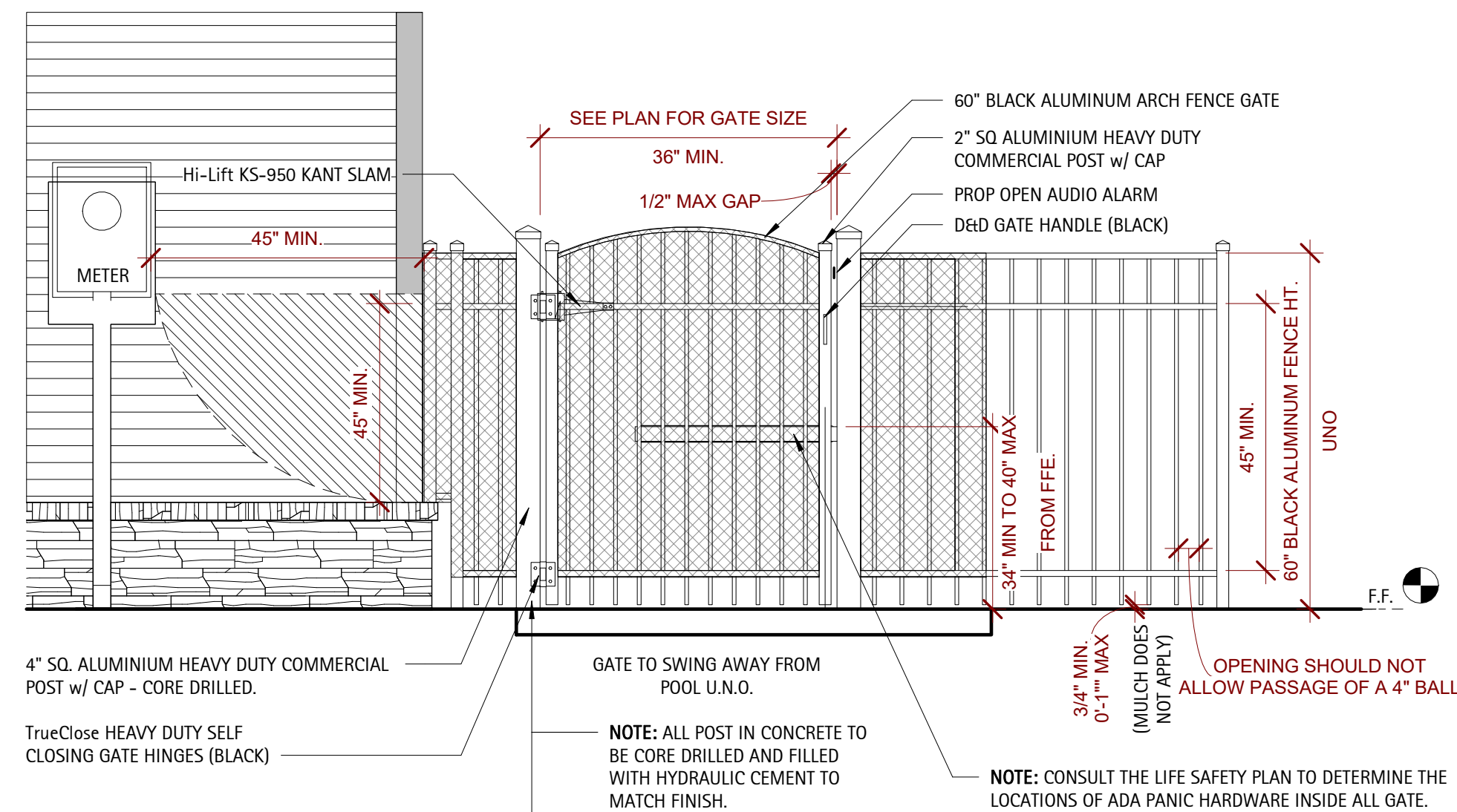
DATE	REVISION	NO.	HEALTH
08/13/24		1	

SHEET DISCUSSION
POOL PIPING AND ELECTRICAL PLAN

PROJECT #: 2023005
DATE ISSUED: 12/11/2023
DRAWING BY: JVD/BSJ
CHECKED BY: DSC/JLH

**SHERRI DOWNS AMENITY
LENNAR HOMES
AMENITY & POOL
ANGIER, NC**

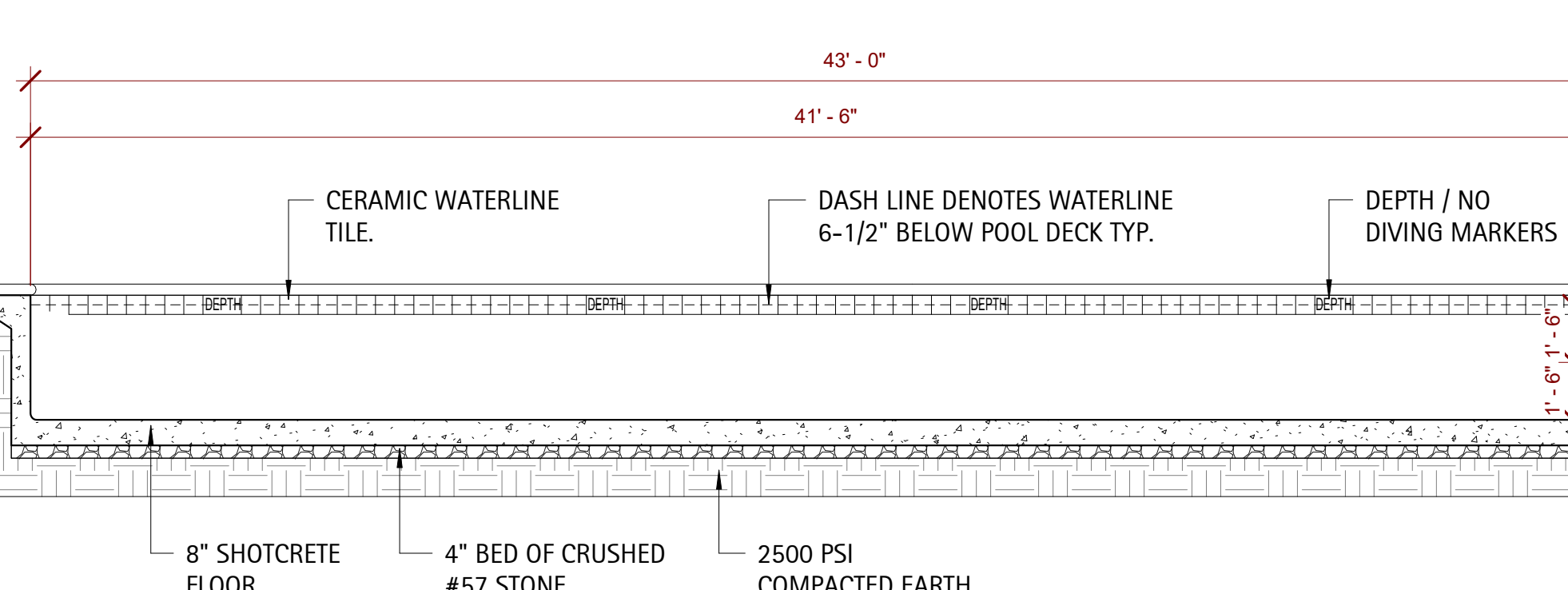
SP3.0



3 SP4.0
1/2" = 1'-0"

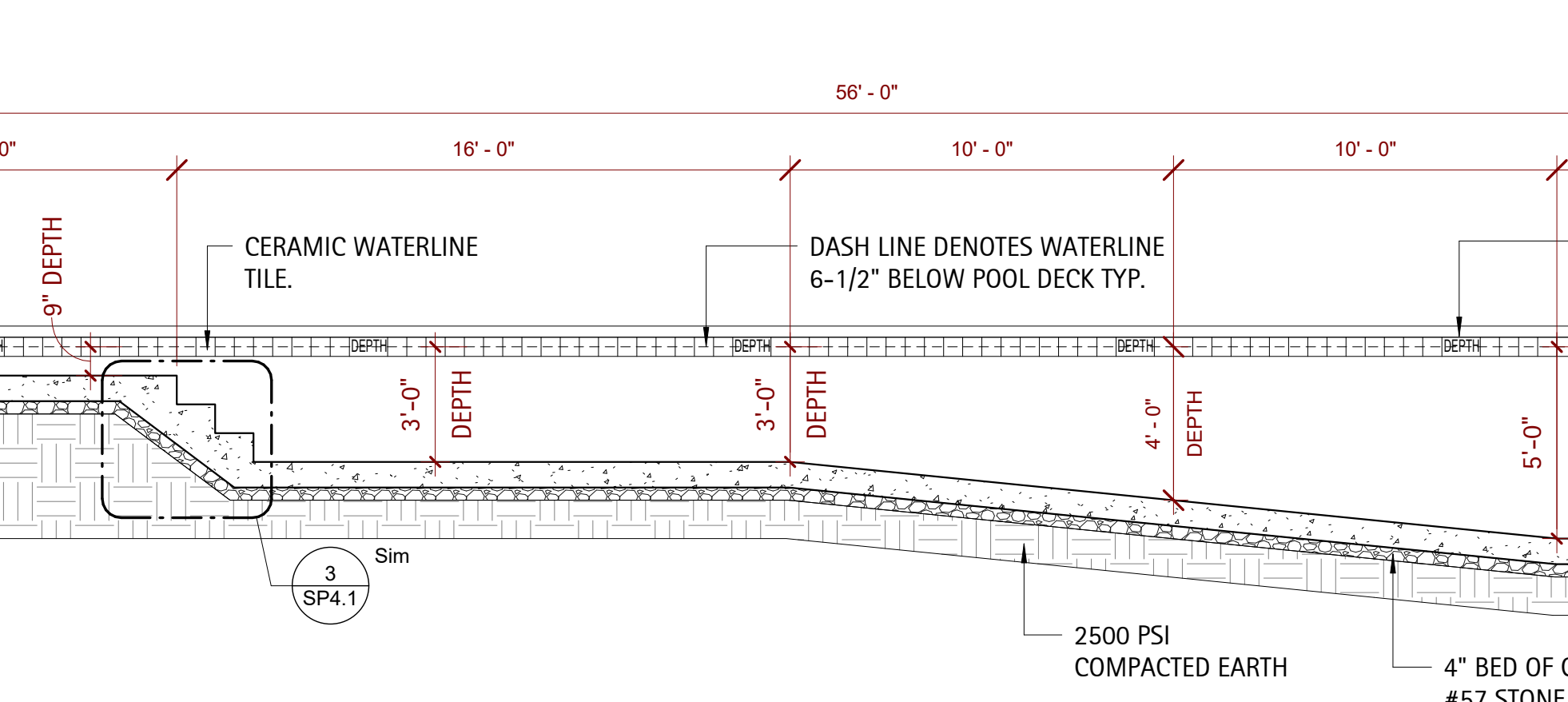
Detail - Fence

ADDITIONAL NOTES:
 1. SERVICE GATES ARE EXEMPT FROM NEEDING PANIC HARDWARE; HOWEVER, THEY MUST BE EQUIPPED WITH A MAGNA-LATCH OR EQUIVALENT MECHANISM, AS WELL AS, POSSESS THE CAPABILITY TO SELF-CLOSE AND SELF-LATCH WHEN OPENED.
 2. ALL GATES MUST POSSESS THE CAPABILITY TO SELF-CLOSE AND SELF-LATCH WHEN OPENED TO A 90 DEGREE ANGLE (EQUIVALENT TO 1°).
 3. ENSURE THAT NO GAP EXCEEDING HALF AN INCH (1/2") IS PRESENT ON THE LATCH SIDE OF THE GATE.
 4. FOR DETAILED FENCE SPECIFICATIONS, REFER TO THE FENCE DETAILS OUTLINED IN THE "SP#" PAGES WITHIN THE CONTRACT DOCUMENT.



4 SP4.0
1/4" = 1'-0"

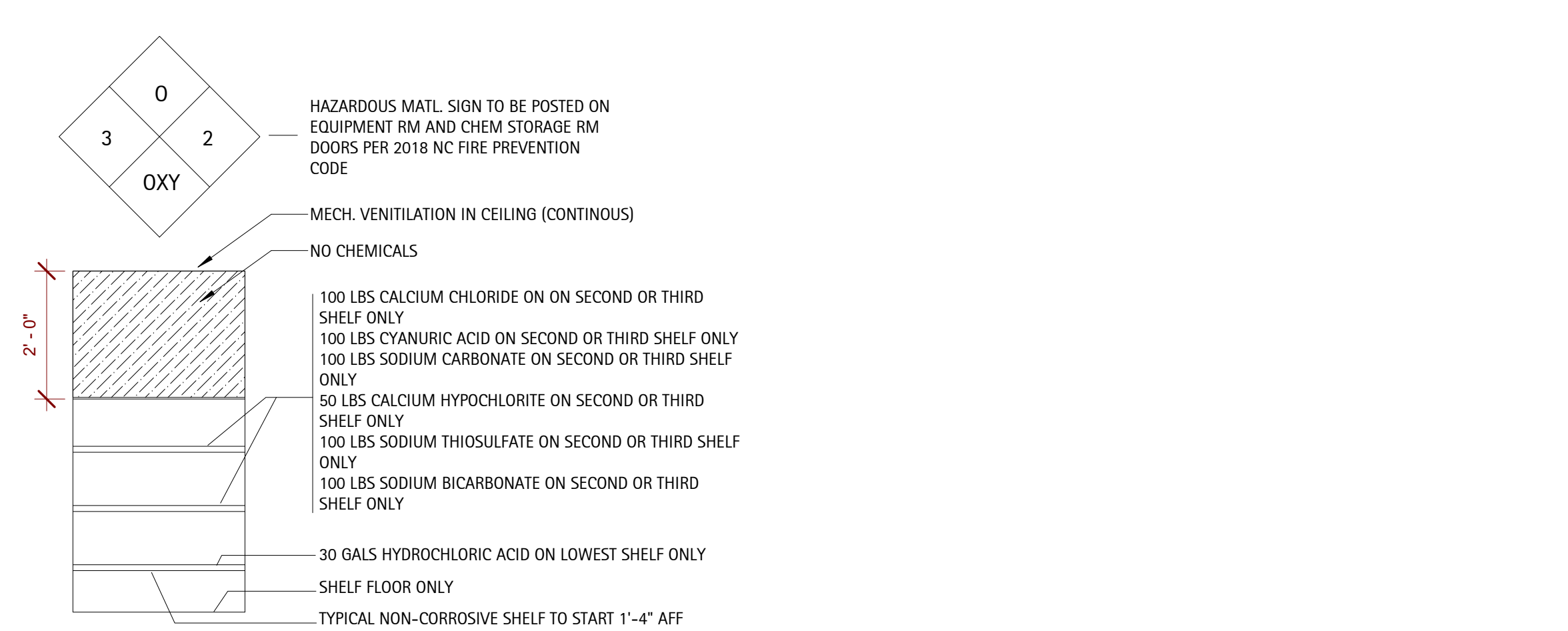
Detail - 3' Depth & Bench



5 SP4.0
1/4" = 1'-0"

Detail - Main Pool Section

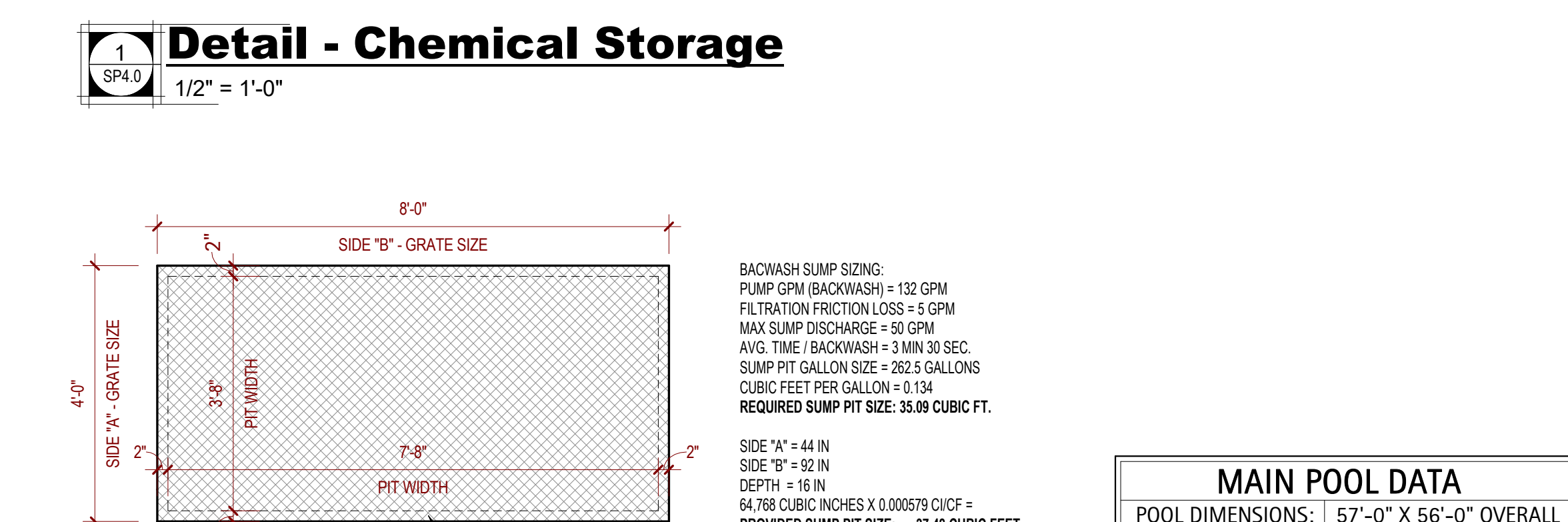
POOL EQUIPMENT SCHEDULE				
TAG	COUNT	MANUF.	MODEL	COMMENTS
1	1	PENTAIR	WHISPERFLOX VS	5 HP SELF-PRIMING PUMP W/ STRAINER BASKET + EXTRA STRAINER BASKET
2	1	PENTAIR	XFET-20	5 HP SELF-PRIMING PUMP W/ STRAINER BASKET + EXTRA BASKET
3	1	PENTAIR	14740Z W/ 147406	TANDEM FILTER PIPING KITS FOR 2 & 3 IN FILTERS
4	2	Pentair	TR-140 C3	36" DIA HIGH RATE SAND FILTER W/ 7.06 SQ FT OF MEDIA
5A	1	PENTAIR	S20977 (COMSYS-16)	COMMERCIAL INTELICHLOR SALT CHLORINE GENERATOR
6	2	FLOVIS	FV-4.40	HIGH CAPACITY CHLORINE/BROMINE FEEDER (BACKUP CHLORINATOR)
7	4	AQUASTAR	WAV12WR101 W/ FBS-50-812-4	12"x12" VGB SUCTION OUTLET COVER W/ A S.A MFG FIBERGLASS SUMP
8	1	AQUASTAR	HVC101	SELF-CONTAINED HYDROSTATIC RELIEF VALVE
9	6	AQUASTAR	SKR101	WHITE COMMERCIAL GRADE SKIMMER
10	1	AQUASTAR	ES1022SI2001 W/ VLK15T01	VACUUM LINE FITTING W/ LOCK CAP
11	1	AQUASTAR	GDD101	COMMERCIAL OVERFLOW DRAIN
12	8	AQUASTAR	ES1022SI2001 W/ 8101	DIRECTIONAL WALL RETURN INLET
13	2	AQUASTAR	ES1022SI2001 W/ BP101	FLOOR RETURN INLET W/ BUBBLER PLATE FITTING
14	1	AQUASTAR	AFB101	FILLSTAR - AUTOFILL LINE - WHITE
15	1	NAT. STRUCT.	1800-18-06	90" DIA MUSHROOM SPRAY FOUNTAIN (193 GPM REQUIRED FLOW)
16	4	PENTAIR	601107	300W EQUIVALENCY WHITE INTELLIBRITE WHITE LED LIGHTS
17	2	INTERMATIC	PJB4175	4 LIGHT CONNECTION POOL & SPA JUNCTION BOX
18	2	SR SMITH	DMS-102B - MG	MARINE GRADE DECK MOUNTED HANDRAIL - STANDARD
19	2	SR SMITH	10054-MG	MARINE GRADE DECK MOUNTED COMMERCIAL LADDER
20	1	PENTAIR	RCS1	COMPOOL REMOTE SWITCH WALL GANG PLATE - TIMER PUSH BUTTON FOR FEATURE
21	1	INTERMATIC	ET90115CR	ELECTRIC TIMER FOR FEATURE PUMP
HC	1	SR SMITH	MULTI-LIFT	ADA COMPLIANT MULTILIFT



1 SP4.0
1/2" = 1'-0"

Typical Chemical Room Shelving w/ Quantities

A. Unless otherwise stated, all code references are to the 2018 North Carolina State Building Codes (NCSBC).
 B. North Carolina Building Code (NCBC) applicable portions include but are not limited to:
 1. Chapter 3, Section 307 and Tables 307.7(1), 307.1(2)
 2. Chapter 4, Section 414, 415 and Tables 414.2.2, 414.2.5, 415.8.2.1.1
 C. North Carolina Fire Code (NCFPC) applicable portions include but are not limited to:
 1. NCFPC, Chapter 18, Tables 1804.2.2.1, 1805.2.2
 2. NCFPC, Chapters 27 through 44.
 3. Appendices E and F



2 SP4.0
1/2" = 1'-0"

Detail - Sump Pit w/ 2" Air Gap

BACKWASH SUMP SIZING:
 PUMP GPM (BACKWASH) = 132 GPM
 FILTRATION FRICTION LOSS = 5 GPM
 MAX SUMP DISCHARGE = 60 GPM
 AVG. TIME / BACKWASH = 3 MIN 30 SEC.
 SUMP PIT GALLON SIZE = 262.5 GALLONS
 CUBIC FEET PER GALLON = 0.134
 REQUIRED SUMP PIT SIZE: 35.19 CUBIC FT.

SIDE "A" = 44 IN
 SIDE "B" = 92 IN
 DEPTH = 16 IN
 64,780 CUBIC INCHES X 0.000579 C/CF =
 PROVIDED SUMP PIT SIZE: 37.48 CUBIC FEET

MAIN POOL DATA	
POOL DIMENSIONS:	57'-0" X 56'-0" OVERALL
POOL DEPTHS:	IRREGULAR SHAPE.
POOL VOLUME:	61,238 GALLONS
SURFACE AREA:	2,256 SQFT.
PERIMETER:	220 LF
COPING:	BULLNOSE INDEPENDENT
REQUIRED FLOW:	170 GPM @ 65 TDH
DESIGN FLOW:	190 GPM @ 65 TDH
FEATURE FLOW:	210 GPM @ 65 TDH
SHELL MATERIAL:	4000 PSI SHOTCRETE
INTERIOR FINISH:	KONA QUARTZ PLASTER
BATHER LOAD:	151 PERSONS
BACKWASH TO:	SANITARY SEWER
WATER SOURCE:	IN-LINE AUTOFILL
PIPE SIZING:	
CIRC MAIN DRAINS:	(2) 3" SCH 40 PVC
FEAT MAIN DRAINS:	(2) 4" SCH 40 PVC
CIRC SKIMMERS:	(6) 3" SCH 40 PVC
VACUUM LINE:	(2) 2" SCH 40 PVC
INLETS:	(11) 3" SCH 40 PVC
FILTER TYPE:	HIGH RATE SAND
SIZE PROVIDED:	2 @ 7.06 SF (EA) = 14.12
SIZE REQUIRED:	12.67 SF TOTAL
MEDIA CIRC. RATE:	15 GPM/SF
BACKWASH RATE:	15 GPM/SF
TURNOVER RATE:	6 HOURS



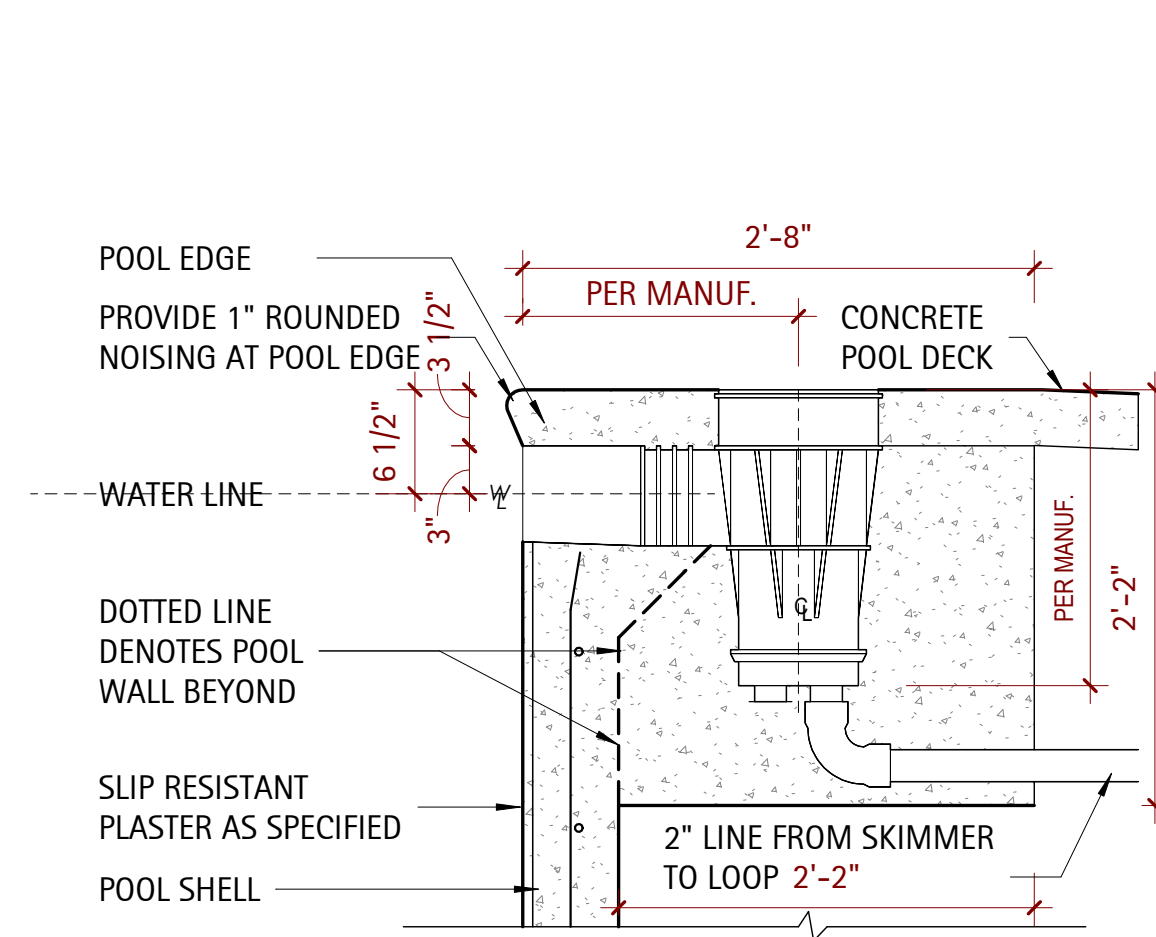
DATE	REVISION	NO.

SHEET DISCUSSION
POOL SECTIONS & DETAILS

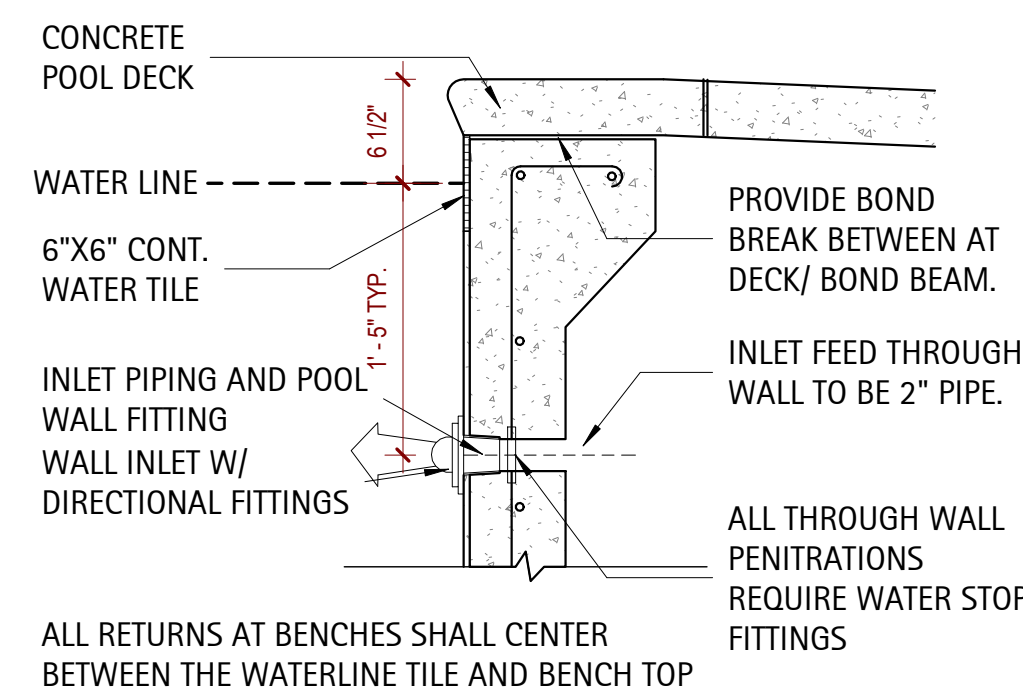
PROJECT #: 2023005
 DATE ISSUED: 12/11/2023
 DRAWING BY: JVD/BSJ
 CHECKED BY: DSC/JLH

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 ANGIER, NC**

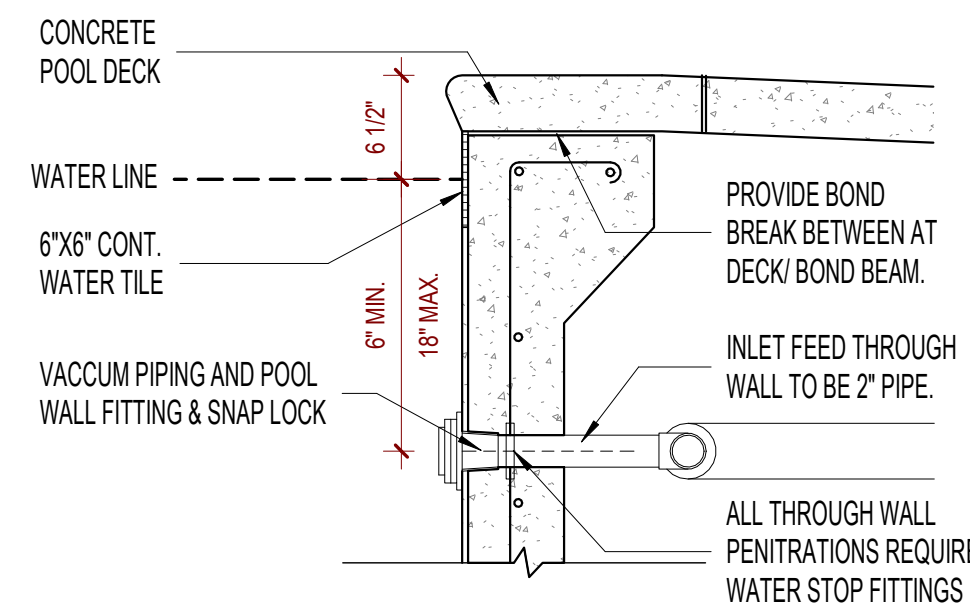
SP4.0



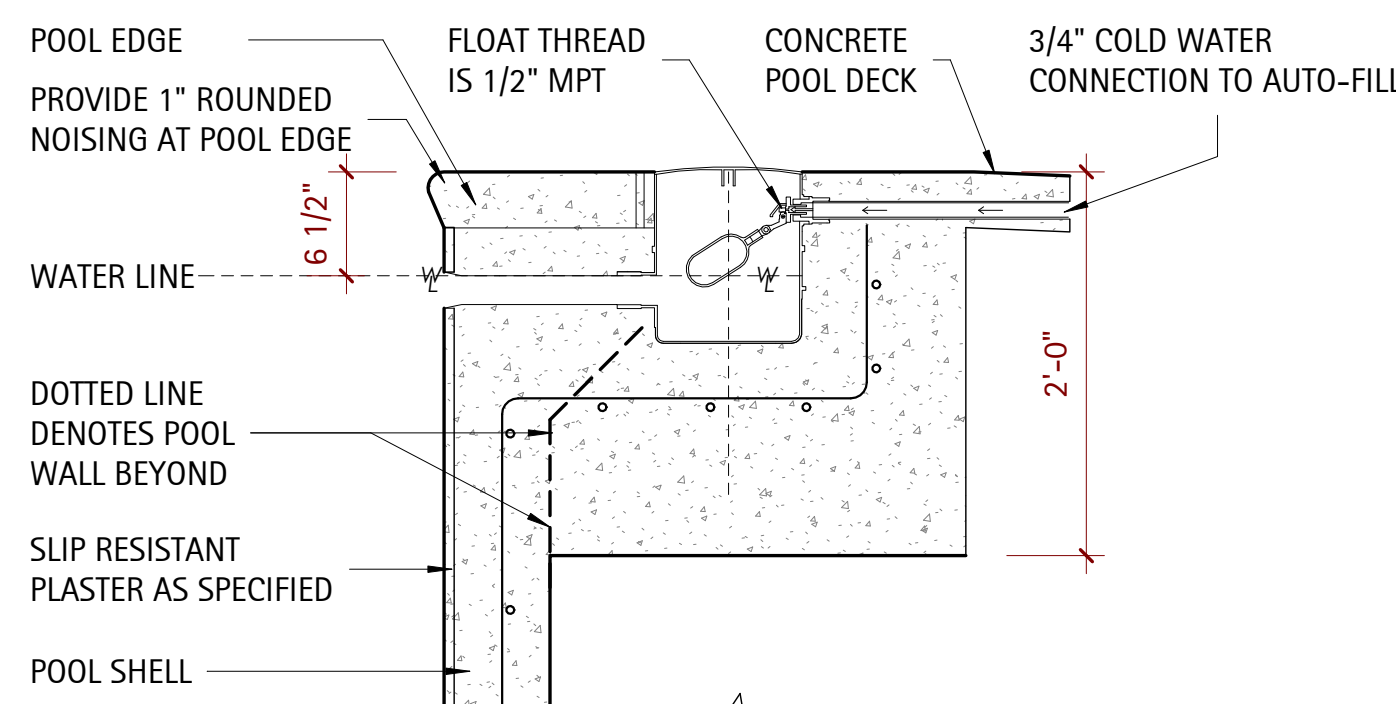
7 Detail - Pool Skimmer
SP4.1 1" = 1'-0"



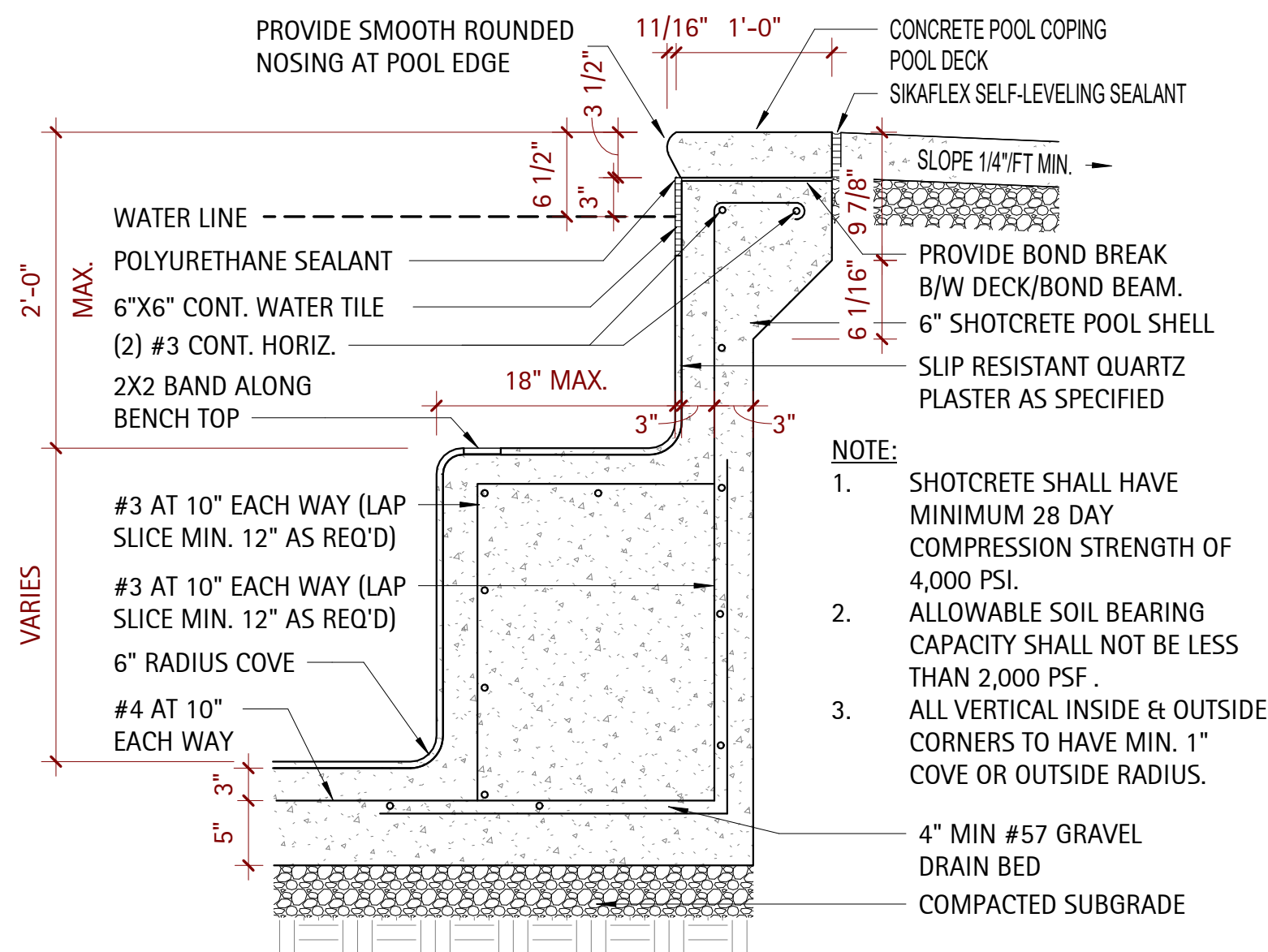
8 Detail - Inlet Pipe Detail
SP4.1 1" = 1'-0"



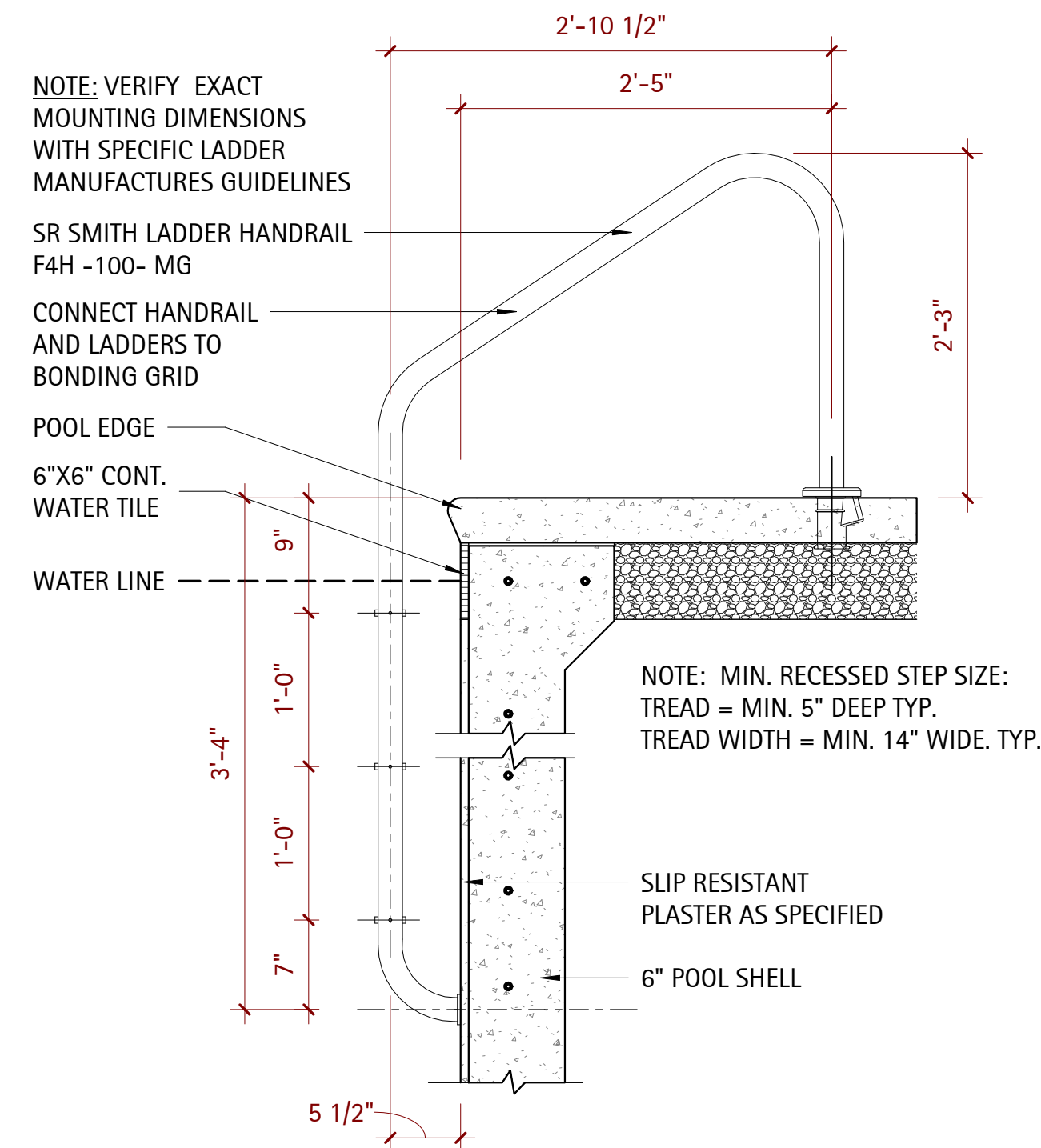
9 Detail - Vacuum Line
SP4.1 1" = 1'-0"



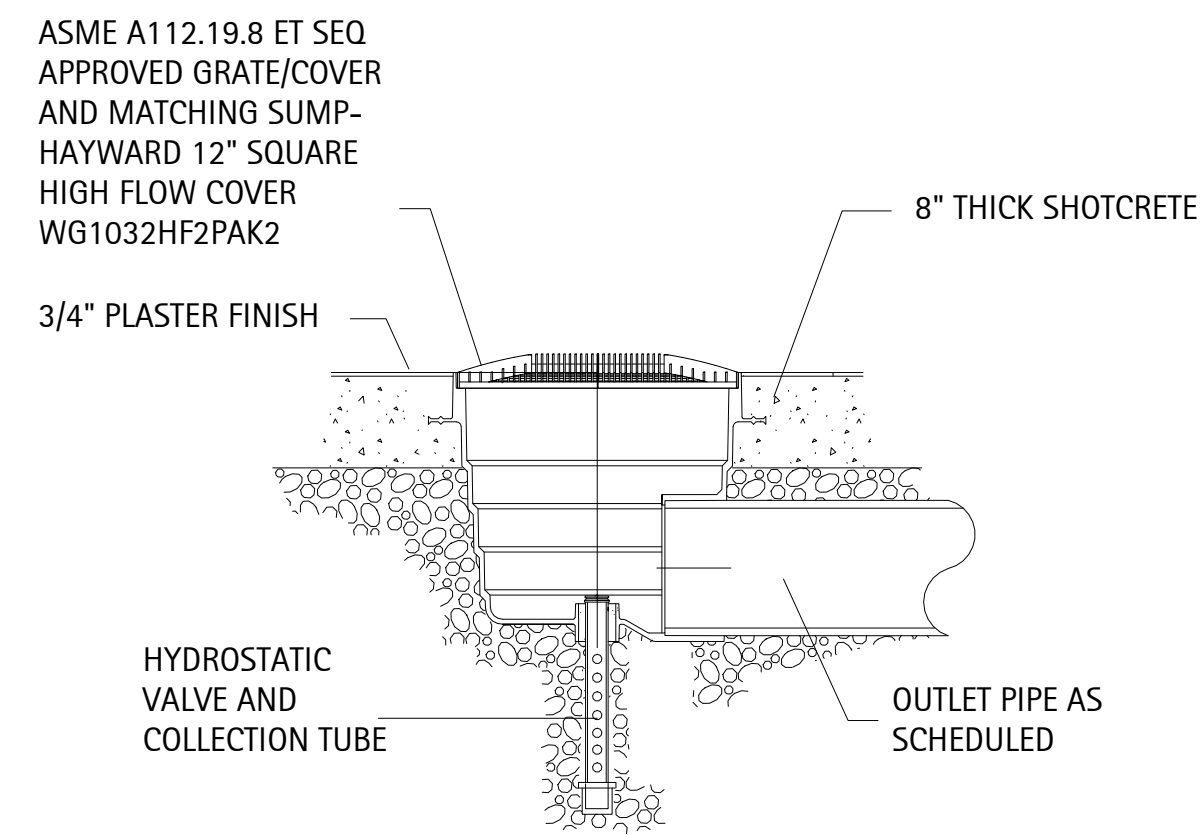
10 Detail - Pool Autofill
SP4.1 1" = 1'-0"



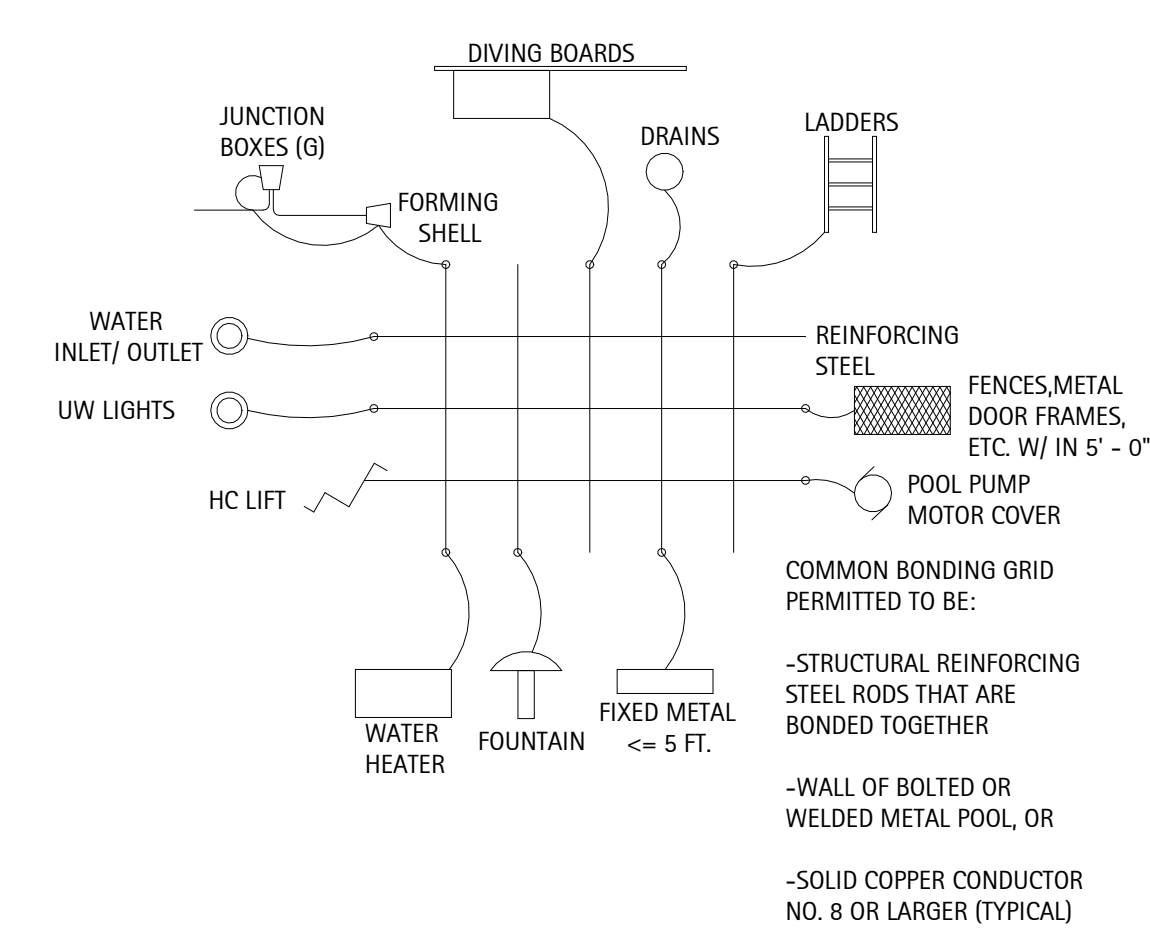
4 Detail - Pool Bench
SP4.1 1" = 1'-0"



5 Detail - Commercial Ladder
SP4.1 1" = 1'-0"

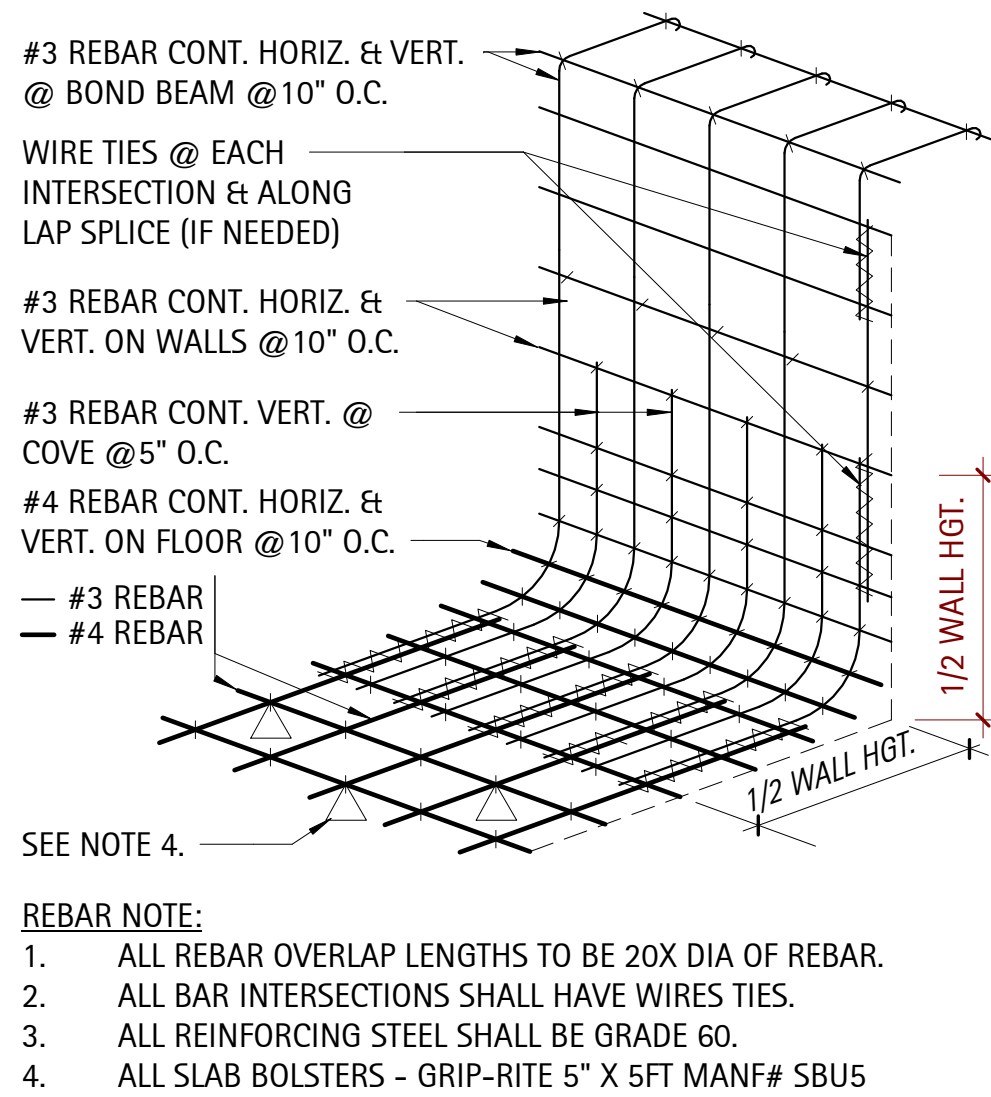


6 Detail - Main Drains
SP4.1 1" = 1'-0"

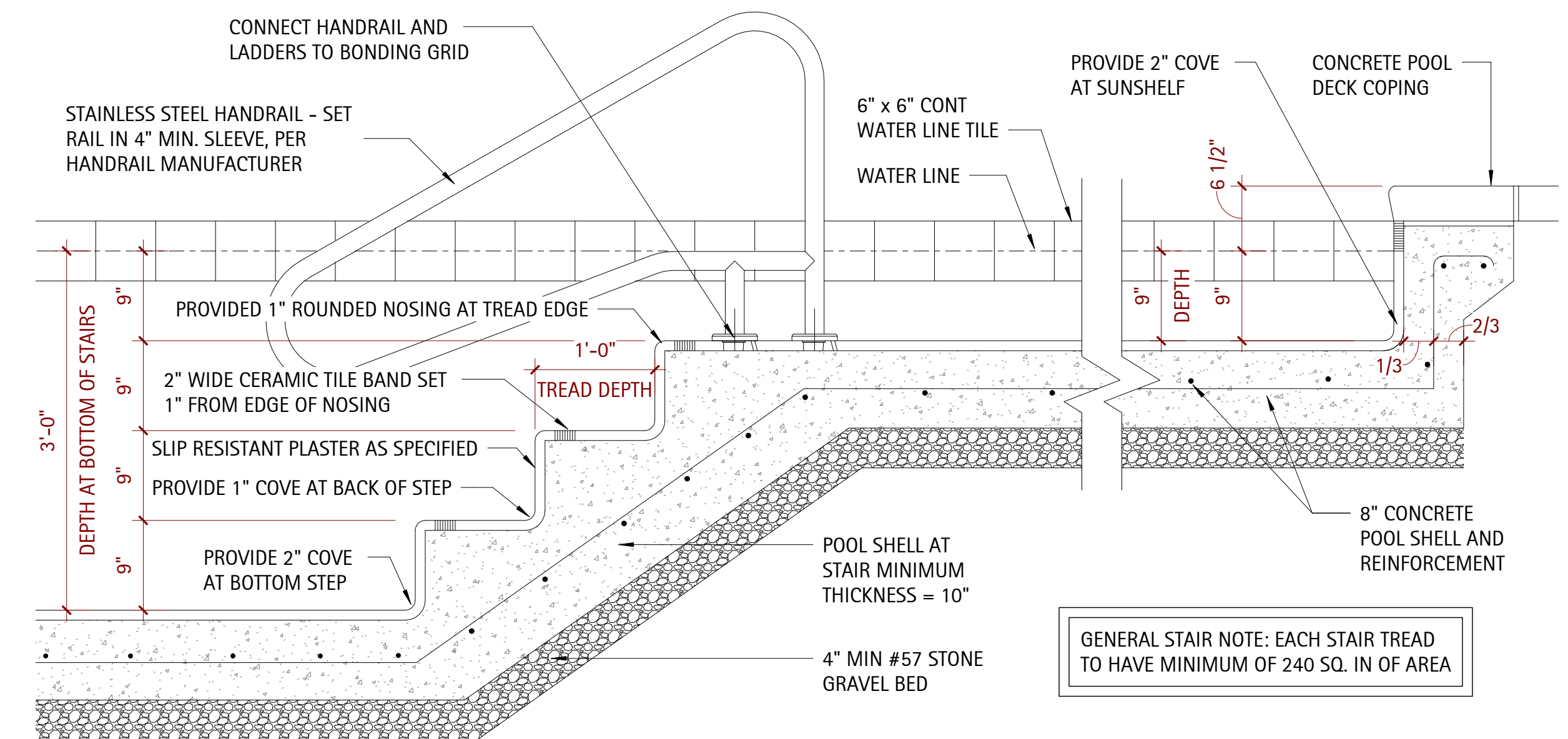
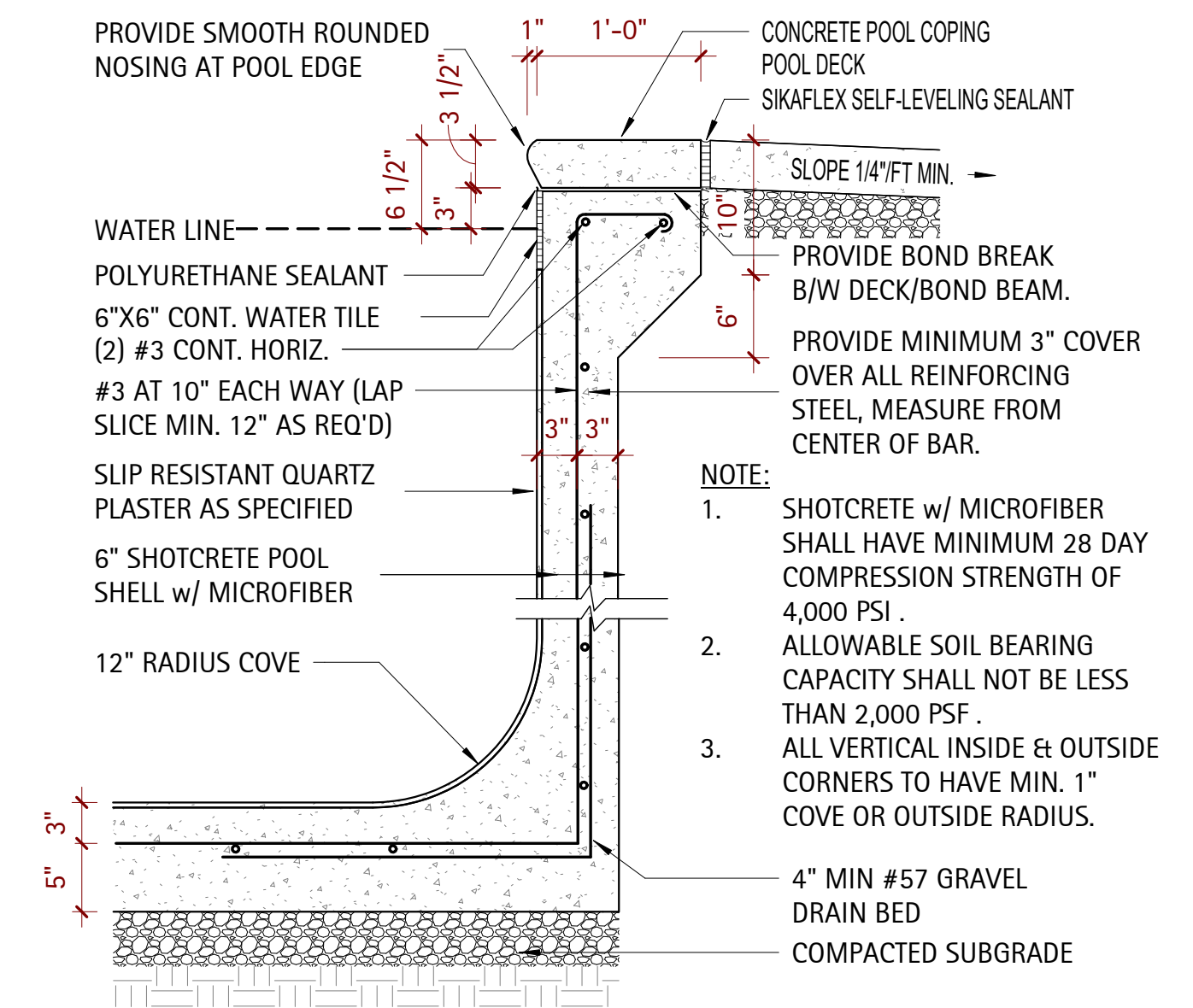


SWIMMING POOL BONDING RISER

1 Detail - Pool Bonding
SP4.1 1" = 1'-0"



2 Detail - Pool Wall
SP4.1 1" = 1'-0"



3 Detail - Pool Shelf & Steps
SP4.1 1" = 1'-0"

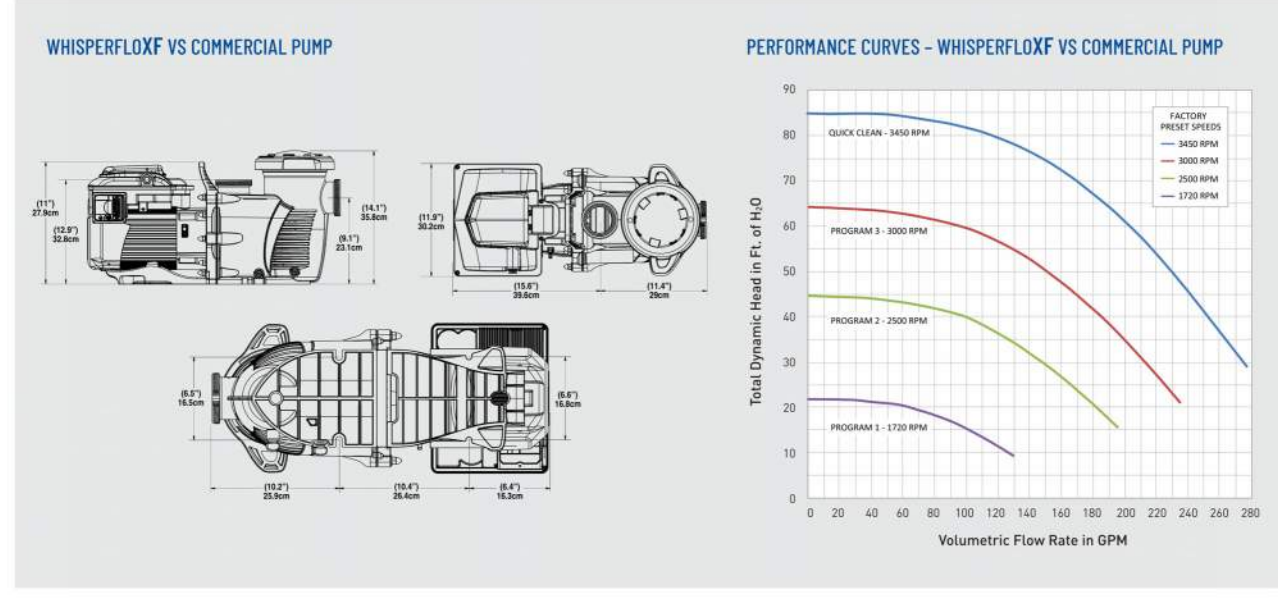


DATE	REVISION	NO.

SECTIONS & DETAILS

PROJECT #:	2023005
DATE ISSUED:	12/11/2023
DRAWING BY:	JVD/BSJ
CHECKED BY:	DSC/JLH

**SHERRI DOWNS AMENITY
LENNAR HOMES
AMENITY & POOL
ANGIER, NC**



MATERIALS AND DESIGN

Pump Body
 Volute type back pull out design for ease of working on impeller, diffuser and seal.

- Port Size
 - Inlet (suction): 2.5" union can be adapted to 3 inches.
 - Outlet (discharge): 2.5" union can be adapted to 3 inches.
- Material
 - 30% glass filled polypropylene materials.
 - 1/4" NPT thermoplastic drain plug of thumbscrew (no tool required) design on the strainer for winterizing.
- Impeller
 - Noryl glass filled PPD resin enclosed design for corrosion prevention and maximum flow efficiency.
 - Threaded brass with stainless steel locking screws.
- Diffuser
 - Glass filled noryl thermoplastic material with bronze impeller wear ring.
 - Hydraulic isolator design for maximum efficiency.
- Seal plate
 - Fiberglass reinforced modified PPE thermoplastic material.
- Mechanical Seal
 - Ceramic and carbon seal.
 - Stainless steel and EPDM materials.
- Base
 - Fiberglass reinforced modified PPE thermoplastic with slotted holes for easy mounting.
- Gaskets
 - Buna N rubber compression resistant.
- Bolts, Nuts, and Washers
 - Stainless steel and brass with nickel plating.
- Corrosion Prevention
 - All thermoplastic pump body for maximum hydraulic performance, noise reduction and corrosion prevention.

Hair and Lint Strainer

- Basket
 - HDPE (polyethylene) basket colored white for easy debris removal.
 - Securely positioned below the suction inlet of the trap, with access for inspection and cleaning through the removable lid.
- Lid
 - Clear polycarbonate thermoplastic lid for easy view into the basket area.
- Lid Locking Ring
 - Cam and Ramp™ Lid and Locking Ring allow for quick and easy access to the basket.
 - O-ring seal

Motor

- Frame and Type
 - NEMA Rated 56 Frame totally enclosed fan-cooled construction.
 - Variable speed induction motor.
- Shaft
 - 300 series stainless steel construction.
- Thermal Overload Protection
 - Thermal overload protection provided by the integral motor control.
- Sealed Bearings
 - Lubricated, double sealed, stainless steel, single row ball bearings.

Electrical

- 208-230/277-480V single phase.
- 208-480V three phase.
- 50/60Hz.
- WEF 5.0 THP 5.0.
- Single part number to cover all voltage ranges.

Pump Maximum Thermal Limits

- Ambient air temperature: 122° F (50° C).
- Liquid temperature: 104° F (40° C).

WHISPERFLOX[®] HIGH PERFORMANCE PUMP



KEY FEATURES

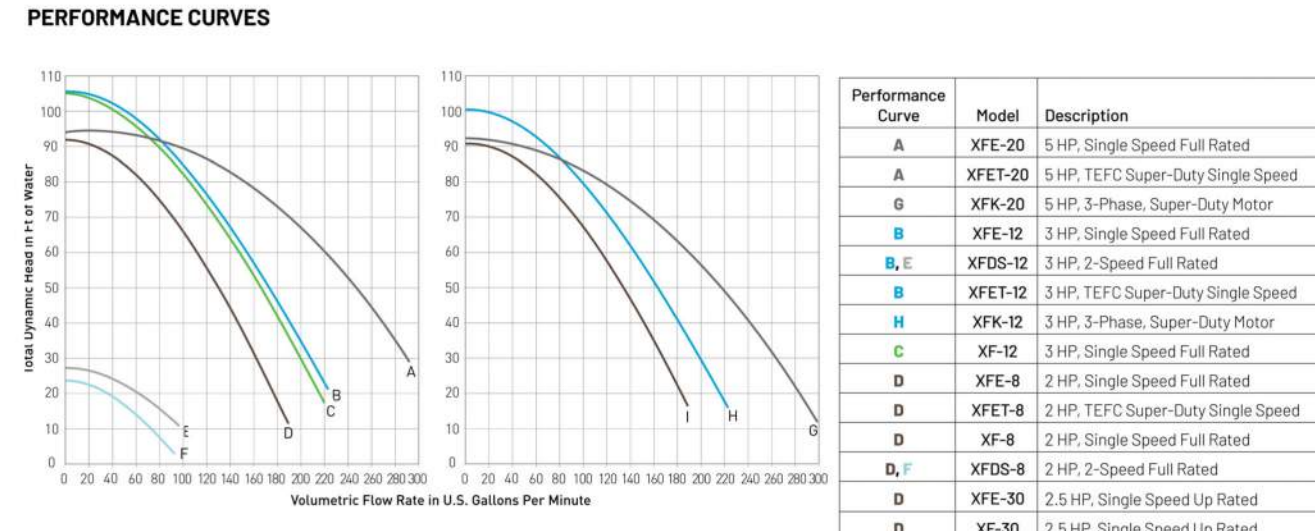
Cam and Ramp™ Lid
 Makes inspection and cleaning simple and quick

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	XFE-20	5 HP, Single Speed Full Rated
A	XFE-20	5 HP, TEFC Super-Duty Single Speed
B	XFK-20	5 HP, 3-Phase, Super-Duty Motor
B	XFE-12	3 HP, Single Speed Full Rated
B	XFE-12	3 HP, TEFC Super-Duty Single Speed
H	XFK-12	3 HP, 3-Phase, Super-Duty Motor
C	XF-12	3 HP, Single Speed Full Rated
D	XFE-8	2 HP, Single Speed Full Rated
D	XFE-8	2 HP, TEFC Super-Duty Single Speed
D	XF-8	2 HP, Single Speed Full Rated
D,L,F	XFD-8	2 HP, 2-Speed, Up Rated
D	XF-30	2.5 HP, Single Speed Up Rated
D,L,F	XFD-30	2.5 HP, 2-Speed, Up Rated
I	XFK-8	2 HP, 3-Phase, Super-Duty Motor

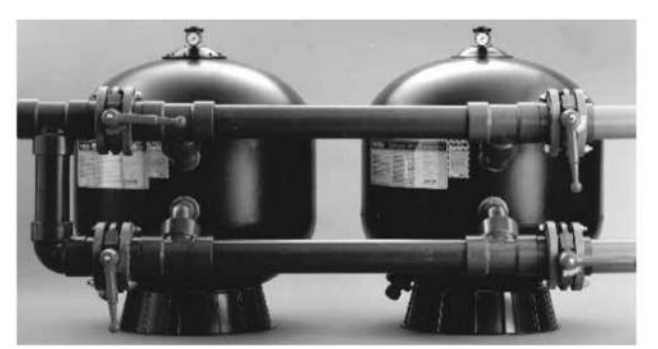
Pumps and replacement motors that are single speed and total 1/2 Total HP or greater cannot be sold, offered for sale, or installed in a residential pool for filtration use in California. Title 20 CCR sections 8001-8009.

1620 Hawkins Ave | Sanford, NC 27330 | United States | 800.831.7133 | pentair.com

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™ 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 fittings are all you need.



Pipe is not included in kits.

Ordering Information

Product	Model	Product	Model
For Plumbing Two TR100C or TR140C Filters			
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 (300 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	4 in. Two filter kit, SCH 80 (300 GPM)	146409	6 in. Single filter kit, SCH 80
146405	6 in. Two filter kit, SCH 80 (700 GPM)	Adapter Kits for TR100C-3 and TR140C-3 Filters	
For Plumbing Two TR100C-3 or TR140C-3 Filters			
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 (300 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 (300 GPM)	Note: All kits include hardware, fittings, gaskets.	
147405	6 in. Two filter kit, SCH 80 (700 GPM)		

Turnover Capacity

Filters	Filter Area Sq. Ft.	Manifold Pipe Dia.	Turnover Capacity		
			15 GPM	20 GPM	8 Hours
TANDEM TRITON 140C FILTER INSTALLATION					
6 TR 140"	42.36	6 in.	635	—	228,600
		8 in.	—	847	304,800
7 TR 140"	49.42	6 in.	741	—	266,760
		8 in.	—	988	355,680
8 TR 140"	56.48	8 in.	847	—	304,920
		8 in.	—	1130	406,800

TRITON™ C SERIES COMMERCIAL SAND FILTERS

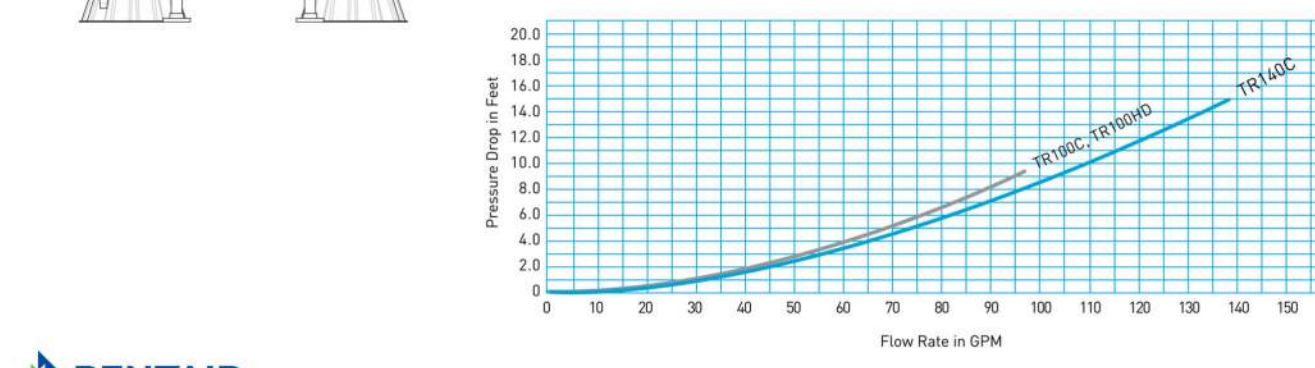
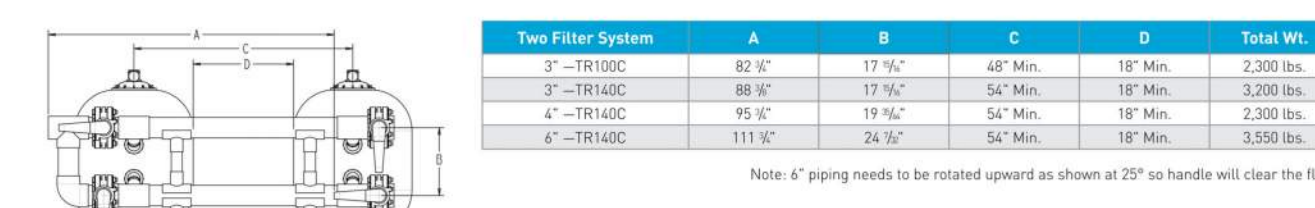
TRITON HD FILTER
 The Triton heavy duty (HD) filter is a thirty-inch fiberglass filter that offers a maximum operating pressure of 75 PSI. This filter is specifically designed for special high-pressure commercial applications that require up to 98 gpm, and is ideal for all heavy-duty commercial applications.



Triton Commercial Series Sand Filter Specifications

Model Number	Filter Area Sq. Ft.	Flow Rate 15 GPM/ft. sq. *	Turnover Capacity Gallons 8 Hours	Turnover Capacity Gallons 24 Hours	Dimension A	Dimension B	Sand	Media Required
TR100C	4.91	74	29,440	25,500	29 1/2"	38 1/2"	400 lbs.	420 lbs/570 lbs.
TR140C	7.06	106	38,140	30,880	43 1/2"	54 1/2"	625 lbs.	450 lbs/775 lbs.
TR100C-3	4.91	74	29,440	25,500	29 1/2"	38 1/2"	400 lbs.	450 lbs/775 lbs.
TR140C-3	7.06	106	38,140	30,880	43 1/2"	54 1/2"	625 lbs.	450 lbs/775 lbs.

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



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

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11/23 Part # P1-508 ©2013 Pentair Water Pool and Spa, Inc. All rights reserved.

TAG 1 - CIRCULATION PUMP - WHISPERFLOX VS - 5HP SELF-PRIMING PUMP W/ STRAINER BASKET

TAG 2 - FEATURE PUMP - XFE-20 - 5HP SELF-PRIMING PUMP W/ STRAINER BASKET

TAG 3 - BACKWASH KIT - 147400 - TANDEM FILTER BACKWASH PIPING KIT

TAG 4 - FILTER - TR-140 C3 - 36" DIA HIGH RATE SAND FILTER

COMMERCIAL INTELLICHLOR[®] SALT CHLORINE GENERATOR

WHY CHOOSE THE COMMERCIAL INTELLICHLOR GENERATOR?

- Cell blades are rated for 10,000 hours of operation, under normal operating conditions.
- Built-in intelligence—primary cell reads salt levels and communicates to all secondary cells.
- Full diagnostic capabilities, including cell tracking that communicates remaining hours of cell life in real-time. Captures all performance data daily: production settings, hours of operation, chlorine output, cell cleaning cycles, salt readings and water temperature variations.
- Works with ORP control system to generate chlorine on demand*.
- All power centers are pre-wired for 220 VAC and ORP and conveniently mounted on backboards.
- Manifold CIC 2 lb output cells in combinations that produce from 4 lbs to 16 lbs of chlorine per day.
- One-year limited warranty
- Cells have commercial coating for maximum performance.



Possible Power Center and Manifold Configurations

Part Number	Description	Number of Primary (P) and Secondary (S) IC60 cells	Number of Primary Power Centers (520978)	Number of Secondary Power Centers (520956)	Chlorine per day (lbs)
520970	COMSYS-2	1P	1	0	2
520971	COMSYS-4	1P 1S	1	1	4
520972	COMSYS-6	1P 2S	1	2	6
520973	COMSYS-8	1P 3S	1	3	8
520974	COMSYS-10	1P 4S	1	4	10
520975	COMSYS-12	1P 5S	1	5	12
520976	COMSYS-14	1P 6S	1	6	14
520977	COMSYS-16	1P 7S	1	7	16

- 120 GPM minimum per manifold.
- Power Centers are mounted on PVC boards and pre-wired for 220 VAC and ORP.

*Compatible with all pH/ORP chemical control systems from Pentair Commercial Aquatics.
 *Cades for commercial pools typically require 2 lbs of chlorine production per every 15,000 gallons. Please consult your local codes for chlorine production requirements.

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

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RAINBOW[™] 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:

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

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

FlowVis[®] 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.

FLOWVIS[®] MODELS

Feature	FV-5	FV-5-U	FV-2	FV-2-U	FV-2.5	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	10-10	10-10	10-10	10-240	10-240	150-460	300-1000	600-1800
Average Accuracy	98.7%	98.7%	99.4%	99.0%	99.2%	98.9%	99.2%	99.6%	98.7%	N/A*
NSF 50 Level	L1	L1	L1	L1	L1	L1	L1	L1	L1	L1

*FlowVis[®] model FV-8 is available only with FlowVis[®] Digital upgrade included. For accuracy of this model, refer to the FV-8 information in the FlowVis Digital table below.

FLOWVIS[®] DIGITAL MODELS

Feature	FV-5	FV-5-U	FV-2	FV-2-U	FV-2.5	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	10-10	10-10	10-10	10-240	10-240	150-460	300-1000	600-1800
Average Accuracy	98.6%	99.0%	98.8%	98.5%	98.3%	98.4%	98.0%	98.7%	98.9%	98.9%
NSF 50 Level	L1	L1	L1	L1	L1	L1	L1	L2	L3	L3

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

Guide for NSF 50 Accuracy Levels

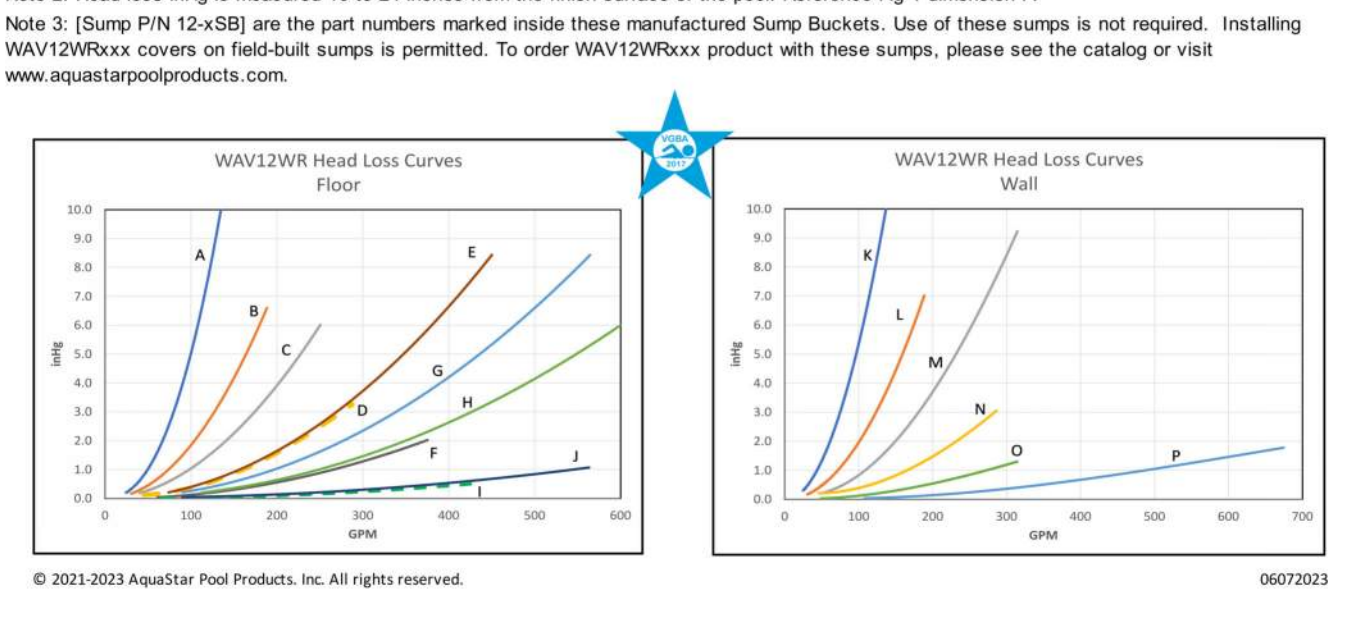
Level 1 (L1): Average of absolute values of all single point deviations must be ≤2%. Single point deviations shall not exceed ≤4%.
Level 2 (L2): Average of absolute values of all single point deviations must be ≤5%. Single point deviations shall not exceed ≤15%.
Level 3 (L3): Average of absolute values 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

SOFA Model No.

SOFA Model No.	Pipe Size (Nominal)	Pipe Depth (Minimum)	Orientation (Wall / Floor)	Flow Rating (GPM)	Head Loss Curve
WAV12WR-12J-A-1.5b_B3_C0_3_D0_7_E3_5_F16	1.5" (b)	3"	Floor (f)	126	A
WAV12WR-12J-A-2b_B3_C0_3_D0_7_E4_9_F16	2" (b)	3"	Floor (f)	150	B
WAV12WR-12J-A-2.5b_B3_C0_3_D0_7_E4_7_F16	2.5" (b)	3"	Floor (f)	200	C
WAV12WR-12J-A-3b_B3_C0_3_D0_7_E4_5_F16	3" (b)	3"	Floor (f)	230	D
WAV12WR-12J-A-3a_B5_6_C0_3_D0_7_E3_F16 [Sump P/N 12-35B]	3" (a)	5.6"	Floor (f)	360	E
WAV12WR-12J-A-4b_B3_C0_3_D0_7_E3_7_5_F16	4" (b)	3"	Floor (f)	300	F
WAV12WR-12J-A-4a_B6_C0_3_D0_7_E3_F16 [Sump P/N 12-35B]	4" (a)	6"	Floor (f)	450	G
WAV12WR-12J-A-4.2.5b_B6_C0_3_D0_7_E3_F16 [Sump P/N 12-35B]	4" (a), 2.5" (b)	6"	Floor (f)	450	H
WAV12WR-12J-A-6b_B3_C0_3_D0_7_E3_F16	6" (b)	3"	Floor (f)	440	I
WAV12WR-12J-A-6a_B10_5_C0_3_D0_7_E2_9_F16 [Sump P/N 12-65B]	6" (a)	10.5"	Floor (f)	350	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_5_F16	3" (b)	3"	Wall (w)	230	N
WAV12WR-12W-A-4b_B3_C0_3_D0_7_E3_7_5_F16 [Sump P/N 12-45B]	4" (b)	3"	Wall (w)	250	O
WAV12WR-12W-A-6b_B10_5_C0_3_D0_7_E2_9_F16 [Sump P/N 12-65B]	6" (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 in Hg is measured 16 to 24 inches from the finish surface of the pool. Reference Fig 1 dimension F.
 Note 3: [Sump P/N 12-45B] are the part numbers marked inside these manufactured Sump Buckets. Use of these sumps is not required. Installing WAV12WRxxx covers on field-built sumps is permitted. To order WAV12WRxxx product with these sumps, please see the catalog or visit www.aquastarpoolproducts.com.

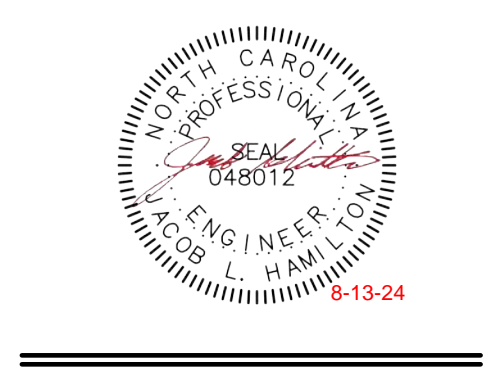


TAG 5A - SALT SYSTEM - 520977 (COMSYS-16) - COMMERCIAL INTELLICHLOR SALT CHLORINE GENERATOR

TAG 5B - CHLORINATION SYSTEM - HC3315 - CALCIUM HYPOCHLORITE TABLET SYSTEM

TAG 6 - FLOWMETER - FV-4-40 - 4 INCH DIGITAL FLOWMETER

TAG 7 - CIRCULATION & FEATURE MAIN DRAIN - WAV12WR101 - 12" X 12" ANTI-ENTRAPMENT MAIN DRAIN



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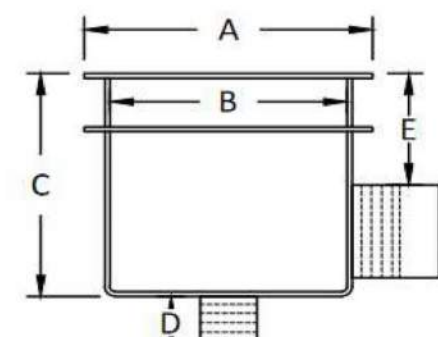
DATE	REVISION	NO.	SHEET DISCRPTION
			SPECIFICATIONS
			PROJECT #: 2023005
			DATE ISSUED: 12/11/2023
			DRAWING BY: JVD/BSJ
			CHECKED BY: DSC/JJH

**SHERRI DOWNS AMENITY
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 ANGIER, NC**

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 flange 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



Size (inches)	ASA Part #	A	B	C	D	E	SOFA Outlet ft x soc	SOFA List
9 x 9 x 12	FBS-50-809-3	11"	9"	12"	4.5"	6.5"	3"	A
12 x 12 x 12	FBS-50-812-4	14"	12"	12"	4.5"	6.5"	4"	B1
12 x 12 x 18	FBS-50-812-18-6	14"	12"	18"	4.5"	10"	6"	B2
18 x 18 x 24	FBS-50-818-6	20"	18"	20"	4.5"	10"	6"	C
18 x 18 x 24	FBS-50-818-24-8	20"	18"	24"	4.5"	13.5"	8"	D
24 x 24 x 30	FBS-50-824-30-10	26"	24"	30"	4.5"	17"	10" soc x soc	E

List A	List B1	List B2	List C	List D	List E
9" x 9"	12" x 12" - 4"	12" x 12" - 6"	18" x 18" x 20"	18" x 18" x 24"	24" x 24"
Aquastar 9W9FXXX WAV9WROXX 9W4DXXX	Aquastar 12W9FXXX WAV12WROXX 12W6XXX	Aquastar 12W9FXXX WAV12WROXX 12W6XXX	Aquastar 18W9FXXX WAV18WROXX 18W6XXX SUN18W9ROXX	Aquastar 18W9FXXX WAV18WROXX 18W6XXX SUN18W9ROXX	Aquastar 24W9FXXX WAV24WROXX
Waterway 640-4780V 640-4720V 640-4720V 640-4720V 640-4720V 640-4780V WG1032HF	Waterway 640-4720V 640-4720V 640-4720V 640-4720V 640-4720V 640-4780V WG1032HF	Waterway 640-4720V 640-4720V 640-4720V 640-4720V 640-4720V 640-4780V WG1032HF	Waterway 640-4720V 640-4720V 640-4720V 640-4720V 640-4720V 640-4780V WG1032HF	Waterway 640-4720V 640-4720V 640-4720V 640-4720V 640-4720V 640-4780V WG1032HF	Waterway 640-4720V 640-4720V 640-4720V 640-4720V 640-4720V 640-4780V WG1032HF

- All Field Built Sumps shall be installed in accordance with the manufacturer's installation instructions.
- All SOFA covers shall be installed in accordance with the manufacturer's installation instructions.
- The A.S.A. MFG Inc. Fiberglass Field Built Sump is intended only to be installed in a reinforced concrete pool structure.
- Any field modifications made to the SOFA and not authorized by the manufacturer's installation instructions shall void the SOFA certification. No modification shall be made to the SOFA structure or flow path unless a new configuration has been certified as a new SOFA.
- Fiberglass Field Built Sump Life = Life of the Aquatic Center.

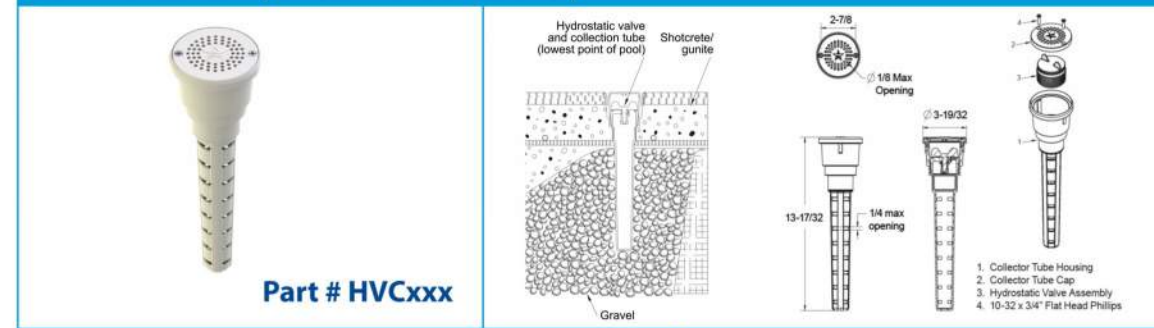
Notes: SOFA = Suction Outlet Fitting Assembly
Compatible based on manufacturer's specifications at the time of publication. Subject to change. See Manufacturer's website for updates.

A.S.A. MFG Inc. 14789 SW 111th St. Dunnellon, FL 34432 352-465-0236 Fax 352-465-0239 email: info@asamfg.com

TAG 7 - MAIN DRAIN SUMPS - FBS-50-812-4 - A.S.A FIBERGLASS SUMPS

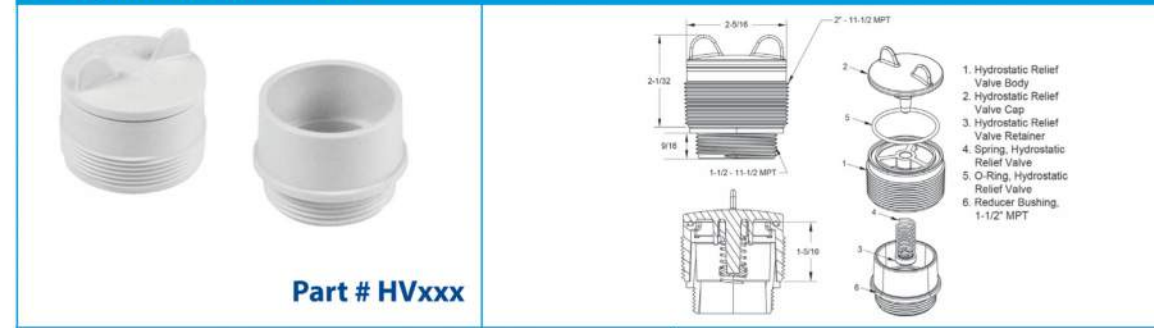
AQUASTAR Hydrstatic Relief Valves

Self-Contained Hydrostatic Valve Assembly



- Part # HVCxxx**
- FEATURES**
- Self-contained unit has a built-in collector tube
 - Installs directly into the pool finish with no additional plumbing connection required
 - Helps prevent swimming pool damage due to hydrostatic pressure beneath the pool shell when the pool is drained
- 12 per case
- STANDARD COLORS**
- HVC101
 - HVC102
 - HVC103
 - HVC104
 - HVC105
 - HVC108
- HVC05xxx - Cap and Screws

2" Hydrostatic Relief Valve



- Part # HVxxx**
- FEATURES**
- Equalizes pressure for high water tables
 - Fits enable easy twist for installation and removal
 - Fits any Aquastar and most other manufacturers' 2" threads
 - Manufactured from superior UV-resistant engineered polymer
 - Includes 2" x 1 1/2" reducer bushing
 - Reducer bushing must be glued into hydrostatic relief valve using ABS glue
- 25 per case
- STANDARD COLORS**
- HV101
 - HV102
 - HV103
 - HV104
 - HV105
 - HV108

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TAG 8 - HYDROSTATIC RELIEF - HVC101 - HYDROSTATIC RELIEF VALVE ASSEMBLY

FLOW STAR SKIMMER WITH WATER STOP FACE, FLOAT ASSEMBLY, BASKET, LID AND ADJUSTABLE COLLAR

Built in conformance with NSF 50 and SP3 3 standards

- FEATURES**
- Adjustable collar
 - New wave dip lock secures the clips in the weir door
 - Self-contained pump, water trap on the faceplate to prevent water leaks
 - Large self-contained basket with lock-in feature (will not float)
 - Underwater dampers on the faceplate for noise reduction on weir plate - especially on windy days
 - Super strong engineered polymer upper housing
 - Extra heavy duty PVC lower unit (no treatment glue required)
 - 2 1/2" outside dip and 2" inside dip (standard skimmer)
 - 2" threads for pressure testing (inside skimmer)
 - Built-in overflow or fill line knock-out
 - Upper housing has pre-cut water outlets with pre-drilled holes for use
 - Skimmer Lid and Collar (1/4" UV treated)
 - NSF 50 approved for commercial use, 2" GPM, max. 55 GPM max - approved for residential use up to 100 GPM
 - See page 212 for code compliance and sizing
 - Optional custom name/logo engraved on the lid (requires minimum 500 piece quantity)
 - See page 157 for Skimmer with Closure Port 1 per case
- Three lid options available (sold separately):**
round, square or snap-in round/square
- Optional vacuum plate with snap-in lug can be glued in under lid for easy storage p/n 5K61101
- Optional IFB adapter converts skimmer fittings to 1/2" or 3/4" size for improved hydraulics and code compliance p/n 5K61101
- Optional IFB adapter converts skimmer fittings to 1/2" or 3/4" size for improved hydraulics and code compliance p/n 5K61101

- Part # SKR1xx**
- For vinyl and fiberglass options, see pages 138-143
- STANDARD COLORS**
- SKR101 - White
 - SKR102 - Black
 - SKR103 - Light Gray
 - SKR104 - Blue
 - SKR105 - Dark Gray
 - SKR108 - Tan
- Snap-in Round/Square Lid and Collar (sold separately) p/n 5K64xxx
- Available without lid and collar SKR1L101 (white only)
- Skimmer Body
 - 2" Port Plug
 - Float Assembly
 - Basket
 - Basket Rod
 - Collar
 - Lid
 - Weir Assembly
 - Weir Clip, Qty 2

112

TAG 9 - SKIMMER - SKR101 - COMMERCIAL GRADE SKIMMER

Large Wall Fitting (Fits Inside 2" Pipe)

FEATURES

- Fits inside 2" pipe, 1 1/2" FPT in the front face
- Large flange camouflages pipe and surface construction variations
- See also decorative cover p/n DCxxx to make existing 1022s like new with different colors
- Manufactured from engineered polymer
- UV resistant ABS material
- 250 per case
- Also available in Clear (p/n ES1022S2000)

Part # ES1022S20xx

- STANDARD COLORS** ■ 01 ■ 02 ■ 03
- 39 ProStar # VLK15Txx**
REPLACES # W400WRP
- 40 ProStar # HWN153**
REPLACES # AXW574P
- 41 ProStar # HWN158**
REPLACES # AXW092
- 42 ProStar # SZTHxx**
REPLACES # V109
- 43 ProStar # SZTHxx**
REPLACES # V032
- 44 ProStar # HWN163xx**
REPLACES # AXV14604
- Safety Vacuum Lock Wall Fitting (1 1/2" NPT)
Part # VLK15Txx (2" NPT)
Meets SP3-4-2008 Standard
- Flow Gauge
- Hose Connector
- 4-Foot Regular Hose
- 4-Foot Leader Hose
- 4-Foot Regular Hose
- Wing Kit and Pool Shovel

TAG 10 - VACUUM LOCK - VLK15T01 - SAFETY VACUUM LOCK CAP

AQUASTAR 2" X 4" GUTTER DECK DRAIN (FITS 2" PIPE)

A Safe Drain Is No Accident™

FEATURES

- Fits over 2" pipe
- 1 1/2" threaded FPT inside for pressurizing/waterline
- Manufactured from engineered polymer
- UV resistant PVC material (p/n GDD101 is manufactured from engineered polymer UV-resistant ABS material)
- 1 1/2" reducer bushing available p/n BU101-2x1.5
- 1 1/2" stackable extender available p/n PE20101
- Stainless steel screws
- Also available as grate only with two screws
- CAUTION: Not to be used as a suction outlet under any circumstances
- 25 per case
- Grate only p/n GDDLxxx
- 25 per case

Part # GDDxxx

STANDARD COLORS

- 101
- 104
- 102
- 105
- 103
- 108

1. 2" x 4" gutterdeck drain body
2. 2" x 4" gutterdeck drain cover
3. 1/2" x 3/4" flat head Phillips screw, qty 2

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TAG 11 - OVERFLOW DRAIN - GDD101 - COMMERCIAL OVERFLOW DRAIN

Large Wall Fitting (Fits Inside 2" Pipe)

FEATURES

- Fits inside 2" pipe, 1 1/2" FPT in the front face
- Large flange camouflages pipe and surface construction variations
- See also decorative cover p/n DCxxx to make existing 1022s like new with different colors
- Manufactured from engineered polymer
- UV resistant ABS material
- 250 per case
- Also available in Clear (p/n ES1022S2000)

Part # ES1022S20xx

Three-Piece Directional Eyeball Fitting 1 1/2" MPT

FEATURES

- Screws into 1 1/2" FPT
- Manufactured from engineered polymer
- UV resistant ABS material
- 250 per case
- Eyeball offset also part #:
- 1" - 81xx, 1 1/2" - 82xx, 2" - 83xx, 3" - 84xx (see 8201 white 1/2" offset)
- Also available in clear (p/n 8110, 8200, 8300, 8400)

Part # 81xx, 82xx, 83xx, 84xx

- Directional Return Body, 1 1/2"
- Directional Return Eyeball
- Standard Eyeball Locking Ring

TAG 12 - RETURN INLET - 8101 - WALL RETURN INLET FITTING

AQUASTAR BUBBLER PLATE

A Safe Drain Is No Accident™

FEATURES

- Available in six standard colors
- No exposed components
- Installs flush with bottom of pool/spa

Part # BPxxx

STANDARD COLORS

- 101
- 104
- 102
- 105
- 103
- 108

1.5" straight pipe thread
11.5 TPI

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TAG 13 - FLOOR RETURN - BP101 - RETURN INLET FITTING W/ BUBBLER PLATE

AQUASTAR FillStar™ Water Level Control System for Pools and Spas

A Safe Drain Is No Accident™

FEATURES

- Can be installed alone or with drain/vacuum pool or spa at all times
- Easy to install
- Overflow protection and adjustable presets
- Uses the same size lid and collar as Aquastar skimmers
- Includes a 2" to 1 1/2" adapter
- 1/4" plug included if overflow is not needed
- 1/4" water supply inlet
- Valve is made of high-strength engineered resin
- Float is injection-molded; thread is pre-molded
- All fittings are made of PVC
- No transition glue needed
- Float thread is 1/2" MPT
- 1 per case

Part # AFBxxx

Also available float only part # AFBV

STANDARD COLORS

- AFB101 - White
- AFB102 - Black
- AFB103 - Light Gray
- AFB104 - Blue
- AFB105 - Dark Gray
- AFB108 - Tan

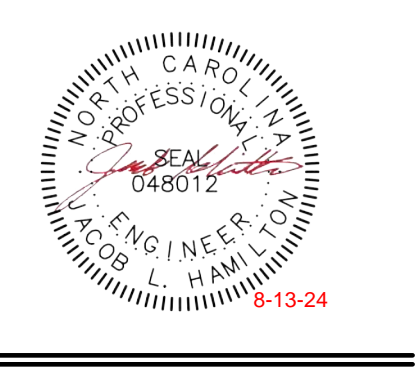
Also available without lid and collar p/n AFBNxxx

Also available cover only p/n 5K61101

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TAG 14 - AUTOFILL - AFB101 - FILLSTAR AUTOFILL



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Professional Engineer
No. 048012
Professional Seal
Kilian Engineering, Inc.
PO Box 3301, Healdston, NC 27538 | www.kilianengineering.com
(919) 438-8778 | CORPORATE LICENSE C-2277

DATE

REVISION

NO.

SHEET DISCUSSION SPECIFICATIONS

PROJECT #:	2023005
DATE ISSUED:	12/11/2023
DRAWING BY:	JVD/BSJ
CHECKED BY:	DSC/JLH

**SHERRI DOWNS AMENITY
LENNAR HOMES
AMENITY & POOL
ANGIER, NC**

SP5.1



Mushroom Spray Fountain Model 1800-18

Specifications

Model: 1800-18-96
Size: 5' 0" Diameter

Features

- Fiberglass dome
- 10" Diameter fiberglass stem
- Water flow: 60-267 gpm (spec)
- Variety of colors

Height Options

Model Number	Clearance
1800-18-84	7' 0"
1800-18-90	7' 6"
1800-18-96	8' 0"
1800-18-102	8' 6"
1800-18-120	10' 0"

GPM required for Curtain

Length of Curtain in Feet	GPM	Minimum Feed Pipe Size
8	267	4"
5.5	193	3"
3.5	133	2.5"
1.5	100	2"
Rain Sprinkle	60	1.5"



PO Box 270, Baker City, OR 97814 (541) 523-0224 (800) 252-8475 www.naturalstructures.com - info@naturalstructures.com

May 2020

TAG 15 - MUSHROOM FEATURE - 1800-18-96 - 5' 0" DIA MUSHROOM FEATURE (193 GPM)

INTELLIBRITE® 5G WHITE LED

UNDERWATER LED LIGHTS FOR SWIMMING POOLS AND SPAS



Featured Highlights

- The brightest most energy efficient white LED pool light on the market
- Energy efficient utilizing up to 84% less energy than comparable incandescent lights
- Superior lens geometry and innovative reflector design combine to create a wider beam and more uniform light distribution
- Pool lens can be rotated to 180 degrees to provide wide beam pattern (standard) or narrow beam pattern
- Compatible with Pentair Stainless steel and plastic niches
- Available in 120V and 12V versions
- Available in 300W, 400W, and 500W incandescent equivalencies



IntelliBrite® 5g White LED light offers a brighter, more energy efficient alternative to incandescent white lighting. Utilizing its array of LEDs, it is also ideal for commercial applications.

Ordering Information for Pool Lights

Product	Voltage	Cord Length (ft.)	Incandescent Equivalency	Carton Qty.	Carton Wt. (Lbs.)
INTELLIBRITE 5g WHITE POOL LIGHTS - 500 WATT EQUIVALENT 120 VOLT					
481100	120V	30 ft.	300W Equivalency	1	
481101	120V	50 ft.	300W Equivalency	1	
481102	120V	100 ft.	300W Equivalency	1	
481103	120V	150 ft.	300W Equivalency	1	
481104	120V	250 ft.	300W Equivalency	1	
INTELLIBRITE 5g WHITE POOL LIGHTS - 500 WATT EQUIVALENT 12V VOLT					
481105	12V	30 ft.	300W Equivalency	1	
481106	12V	50 ft.	300W Equivalency	1	
481107	12V	100 ft.	300W Equivalency	1	
481108	12V	150 ft.	300W Equivalency	1	
481109	12V	250 ft.	300W Equivalency	1	
INTELLIBRITE 5g WHITE POOL LIGHTS - 400 WATT EQUIVALENT 120 VOLT					
481200	120V	30 ft.	400W Equivalency	1	
481201	120V	50 ft.	400W Equivalency	1	
481202	120V	100 ft.	400W Equivalency	1	
481203	120V	150 ft.	400W Equivalency	1	
481204	120V	250 ft.	400W Equivalency	1	
INTELLIBRITE 5g WHITE POOL LIGHTS - 400 WATT EQUIVALENT 12V VOLT					
481205	12V	30 ft.	400W Equivalency	1	
481206	12V	50 ft.	400W Equivalency	1	
481207	12V	100 ft.	400W Equivalency	1	
481208	12V	150 ft.	400W Equivalency	1	
INTELLIBRITE 5g WHITE POOL LIGHTS - 300 WATT EQUIVALENT 120 VOLT					
481300	120V	30 ft.	300W Equivalency	1	
481301	120V	50 ft.	300W Equivalency	1	
481302	120V	100 ft.	300W Equivalency	1	
481303	120V	150 ft.	300W Equivalency	1	
481304	120V	250 ft.	300W Equivalency	1	
INTELLIBRITE 5g WHITE POOL LIGHTS - 300 WATT EQUIVALENT 12V VOLT					
481305	12V	30 ft.	300W Equivalency	1	
481306	12V	50 ft.	300W Equivalency	1	
481307	12V	100 ft.	300W Equivalency	1	
481308	12V	150 ft.	300W Equivalency	1	

Please refer to page 117 for CSA listed IntelliBrite Pool Lights.



99

Junction Box - PJB4175



Junction Box - 4 Light Connection Pool & Spa Junction Box

Item PJB4175



PRODUCT DESCRIPTION

These stainless steel 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"
- Water-tight, moisture enclosure
- Easy access ground bar
- PA14 Wall/Floor 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	078275084048
Brand	Intermatic
Country of Origin (Intermatic)	INDIA
Warranty Period	1-Year limited
Control Specifications	
Number of Light Connections	4
Mechanical Specifications	
Mounting Options	Bracket; Post; Rail; Wall
Dimensions	
Product Dimensions (H x W x D) in	8.75 x 5.4 x 8.25 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 8 in
Standards and Certifications	

Technical specifications and other information are subject to change without notice. Images can vary from original.

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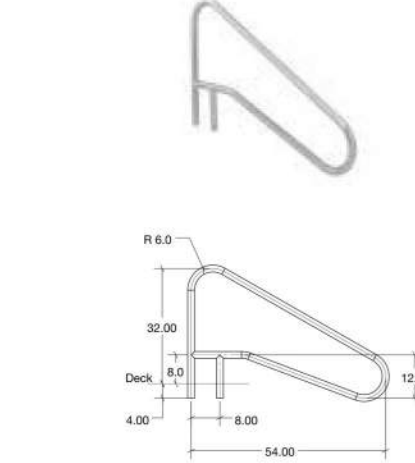
TAG 15 - MUSHROOM FEATURE - 1800-18-96 - 5' 0" DIA MUSHROOM FEATURE (193 GPM)

TAG 16 - LIGHT - 601107 - 300W EQUIVALENCY INTELLIBRITE WHITE LED LIGHTS

TAG 17 - JUNCTION BOX - PJB4175 - 4 LIGHT CONNECTION POOL & SPA JUNCTION BOX

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 Escutcheons: 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

DMS-102

Model No.	Description	Weight	Length	Width	Height
DMS-102A	54" Center Grab Rail, .049"	15 lbs - 19 lbs	59"	39"	2"
DMS-102B	54" Center Grab Rail, .065"	15 lbs - 19 lbs	59"	39"	2"
DMS-102P	54" Center Grab Rail, .049" w/welded mounting plate	15 lbs - 19 lbs	59"	39"	2"



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TAG 18 - HANDRAILS - DMS-102B-MG - MARINE GRADE DECK MOUNTED HANRAIL - STANDARD

Standard Plus Ladder

Stainless Steel Tread Ladder

- Tubing: 1.90" OD
- Wall Thickness: .065", .109" or .145"
- Stainless Steel: 304
- Treads: LTFD-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 1.50" (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	Height	Length	Width	Height
10037 to 10039	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	36, 50, 62 lbs	70"	28"	2"
10043 to 10045	23" 4-Step Ladder with .065", .109", .145" tubing	40, 58, 70 lbs	80"	28"	2"
10046 to 10048	23" 5-Step Ladder with .065", .109", .145" tubing	46, 64, 78 lbs	90"	28"	2"
10049 to 10051	23" 6-Step Ladder with .065", .109", .145" tubing	52, 70, 84 lbs	100"	28"	2"
10052 to 10054	23" 7-Step Ladder with .065", .109", .145" tubing	58, 76, 90 lbs	110"	28"	2"
10055 to 10057	23" 8-Step Ladder with .065", .109", .145" tubing	64, 82, 96 lbs	120"	28"	2"
10058 to 10060	23" 9-Step Ladder with .065", .109", .145" tubing	70, 88, 102 lbs	130"	28"	2"
10061 to 10063	23" 10-Step Ladder with .065", .109", .145" tubing	76, 94, 108 lbs	140"	28"	2"
10064 to 10066	23" 11-Step Ladder with .065", .109", .145" tubing	82, 100, 116 lbs	150"	28"	2"
10067 to 10069	23" 12-Step Ladder with .065", .109", .145" tubing	88, 106, 122 lbs	160"	28"	2"
10070 to 10072	30" 5-Step Ladder with .065", .109", .145" tubing	50, 70, 86 lbs	76"	40"	2"
10073 to 10075	30" 6-Step Ladder with .065", .109", .145" tubing	56, 76, 92 lbs	86"	40"	2"
10076 to 10078	30" 7-Step Ladder with .065", .109", .145" tubing	62, 82, 98 lbs	96"	40"	2"
10079 to 10081	30" 8-Step Ladder with .065", .109", .145" tubing	68, 88, 104 lbs	106"	40"	2"
10082 to 10084	30" 9-Step Ladder with .065", .109", .145" tubing	74, 94, 110 lbs	116"	40"	2"
10085 to 10087	30" 10-Step Ladder with .065", .109", .145" tubing	80, 100, 116 lbs	126"	40"	2"
10088 to 10090	30" 11-Step Ladder with .065", .109", .145" tubing	86, 106, 122 lbs	136"	40"	2"
10091 to 10093	30" 12-Step Ladder with .065", .109", .145" tubing	92, 112, 128 lbs	146"	40"	2"

Note: Stairs extend 5/16" from the pool wall. Frame is secured to the pool deck with two anchor sockets on 20" centers. The lower end of the frame is bent to meet the pool wall and fitted with two white rubber bumpers (WB98-100A for 1.50" and WB98-100B for 1.90"). Example: 10037=.065", 10038=.109", 10039=.145" tubing



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TAG 19 - LADDER - 10054-MG - MG DECK MOUNTED COMMERCIAL LADDER

TAG 21 - FEATURE TIMER - ET90115CR - ELECTRIC TIMER FOR FEATURE PUMP

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
- LifeOperator® Intelligent Controller
- Powder-coated stainless steel and aluminum construction



Lift Color

GRAY HST

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"	29"	2"
575-0000N	multiLift, no anchor	127cm	71cm	96cm	

Model No.	Description	Weight	Length	Width	Height
575-0100	multiLift with folding seat	225 lbs/102kg	59"	24"	28"
575-0100N	multiLift with folding seat, no anchor*	225 lbs/102kg	59"	24"	28"
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	127cm	61cm	71cm

- Note:
- Includes battery, charger, battery console cover, water-resistant hand control, footrest, seat belt assembly and retrofit anchor jig.
 - * Models without armrests are not compliant with State of California requirements.
- Parts & Accessories
- 1001495 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
 - 900-6000 Stability Strap
 - 170-3000A Armrest Replacement (pair)
 - 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	575-0000	500-5000 (no anchors)
Order new construction jig ahead of pool lift	575-0000N	500-5000A (comes with anchors)



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



QUALITY POOLS GROUP
3550 Hwy 51 North, Ft. Mill SC, 29715 (704) 441-8773 QualityPoolsGroup.com

L* a* b*, RGB and HLC Values

Reference: RAL 9002
Range: RAL Classic
QPG Kona Coast Quartz Pool Plaster

L 74.32	
a* -47.09	
b* -85.25	
H 102	
L 85	
C 5	
sRGB: 196, 235, 242	
LRV: Approx. 74	
Light Reflectance Value	

The L* a* b* (together with the corresponding HLC, RGB and CYMK) values are based on the average of various measurements using various spectrophotometers using D65 light with a standard observer according to CIE 1964 which may be updated or modified by any other relevant available information. They are not necessarily the L* a* b* figures intended by any standard and should therefore only be used as a guide. For more information or details please contact the relevant company, standards authority or organization listed here or refer to the color publications available on this site.

The colours depicted are also for guidance only. The displayed colour will depend on your monitor, browser and angle of the screen and pearl or metallic colours cannot be shown adequately. The finished colour, therefore, may not be as shown here.

The sRGB conversion system used is IEC 61966-2-1 D50 adapted which may differ from other conversions.

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POOL PLASTER SPECIFICATION & L