

PROJECT GENERAL NOTES

- 1. THE CONTRACT DOCUMENTS INCLUDE THE WORKING DRAWINGS, ANY ADDENDA, MODIFICATIONS, THE CONDITIONS OF THE CONSTRUCTION CONTRACT...
2. THE CONTRACT DOCUMENTS ARE INSTRUMENTS OF SERVICE AND SHALL REMAIN THE PROPERTY OF THE ARCHITECT...
3. THE WORK SHALL CONFORM WITH THE REQUIREMENTS OF ALL AGENCIES HAVING JURISDICTION...
4. FURNISH MEANS SUPPLY ONLY FOR OTHERS TO PUT IN PLACE...
5. PROVIDE MEANS FURNISH AND INSTALL, COMPLETE AND IN PLACE...
6. SIMILAR MEANS COMPATIBLE CHARACTERISTICS FOR CONDITIONS NOTED...
7. TYPICAL MEANS IDENTICAL FOR CONDITIONS NOTED...
8. DO NOT SCALE DRAWINGS, DIMENSIONS GOVERN...
9. HORIZONTAL DIMENSIONS INDICATED ARE TO AND FROM FINISHED FACE...
10. VERTICAL DIMENSIONS ARE FROM TOP OF FLOOR SLAB OR DECK...
11. DIMENSIONS ARE NOT ADJUSTABLE WITHOUT APPROVAL OF ARCHITECT...
12. ALL WORK SHALL BE ERECTED AND INSTALLED PLUMB, LEVEL, SQUARE...
13. COORDINATE AND PROVIDE BLOCKING/BACKING IN PARTITIONS...
14. MAKE ALL NECESSARY PROVISIONS FOR ITEMS TO BE FURNISHED...
15. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING CONTRACT DOCUMENTS...
16. GENERAL CONTRACTOR SHALL VERIFY THAT NO CONFLICTS EXIST...
17. GENERAL CONTRACTOR AND SUB-CONTRACTORS SHALL COORDINATE...
18. GENERAL CONTRACTOR SHALL PROVIDE MANUFACTURER'S SPECIFICATIONS...
19. EXERCISE EXTREME CARE AND PRECAUTION DURING CONSTRUCTION...
20. WITHIN FIVE (5) DAYS FROM CONTRACT DATE, PREPARE AND SUBMIT...
21. ALL WORK SHALL COMPLY WITH APPLICABLE CODES, ORDINANCES...
22. ABBREVIATIONS USED IN REFERRING TO STANDARDS THAT APPLY...
23. IN THE EVENT OF CONFLICTS BETWEEN DATA, SHOWINGS AND DRAWINGS...
24. ONLY NEW ITEMS OF RECENT MANUFACTURE, OF STANDARD QUALITY...
25. THE FINISHED WORK SHALL BE FIRM, WELL ANCHORED, IN TRUE ALIGNMENT...
26. ATTACHMENTS, CONNECTIONS, OR FASTENERS OF ANY NATURE...
27. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE DIMENSIONS...
28. NO WORK DEFECTIVE IN CONSTRUCTION OR QUALITY OR DEFICIENT...
29. MATERIALS AND WORKMANSHIP SPECIFIED BY REFERENCE...
30. CONTRACTOR SHALL WAIVE 'COMMON PRACTICE' AND 'COMMON USAGE'...
31. CONTRACTOR SHALL ORDER AND SCHEDULE DELIVERY OF MATERIALS...
32. IF AT ANY TIME BEFORE COMMENCEMENT OF WORK...
33. WITH REFERENCE TO CEILINGS, CONTRACTOR SHALL COORDINATE...
34. REFERENCES TO MARKS, BRANDS, QUALITY, ETC., IS TO ESTABLISH THE QUALITY...
35. CONTRACTOR SHALL APPLY FOR, PAY FOR, AND OBTAIN ALL REQUIRED PERMITS...
36. PROVIDE SHOP AND/OR SUBMITTALS FOR THE FOLLOWING ITEMS...
37. PRIOR TO SUBMITTING A QUOTATION FOR THIS WORK...
38. WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH APPLICABLE...
39. THE CONTRACTOR SHALL BE FREE OF DEFECTS FOR A PERIOD OF ONE (1) YEAR...
40. THE CONTRACTOR SHALL PROVIDE ALL LABOR, GOODS AND SERVICES...
41. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR DEBRIS REMOVAL...
42. CONTRACTOR SHALL BE RESPONSIBLE FOR KEYING ALL REQUIRED LOCK SETS...
43. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE FIRE...
44. THESE DRAWINGS ARE TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY...
45. FIELD INVESTIGATIONS SHALL BE MADE TO THE EXTENT NECESSARY...
46. THE EXIT AND EMERGENCY LIGHTS SHOWN ARE FOR GUIDANCE...
47. CONTRACTOR SHALL INSPECT ALL SUBSTRATES PRIOR TO INSTALLING FINISH MATERIALS...

2018 APPENDIX B
BUILDING CODE SUMMARY
FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)

Name of Project: NC WAKE BOATS
Address: 143 HOLLY SPRINGS CHURCH ROAD Zip Code: 27505
Proposed Use: SHOWROOM & WORKSHOP
Owner/Authorized Agent: DAVID TURNER Phone # (910) 928-1104 Email: david@ncwakeboats.com
Owned By: City / County Private
Code Enforcement Jurisdiction: City County MOORE

Table with columns: LEAD DESIGN PROFESSIONAL, DESIGNER, Architectural, Civil, Electrical, Fire Alarm, Plumbing, Mechanical, Fire Alarm, Structural Foundation, Retaining Walls, Other

2018 NC BUILDING CODE FOR: New Construction
2018 EXIST. BUILDING CODE FOR: Reconstruction
CONSTRUCTED: (date) CURRENT USE(S) (Ch. 3):
RENOVATED: (date) PROPOSED USE(S) (Ch. 3): B & S-1

Table with columns: FLOOR, EXIST. (GR SQ FT), NEW (GR SQ FT), SUB-TOTAL

ALLOWABLE AREA

Table with columns: STORY NO., DESCRIPTION AND USE, BLDG AREA PER STORY (ACTUAL), BLDG AREA TABLE 504.3 (A), AREA FOR FRONTAGE INCREASE (C), AREA FOR SPRINKLER INCREASE (D), ALLOWABLE AREA OR UNLIMITED (E), MAXIMUM BLDG AREA (F)

ALLOWABLE HEIGHT

Table with columns: Building Height in Feet, ALLOWABLE (TABLE 503), SHOWN ON PLANS, CODE REFERENCE

FIRE PROTECTION REQUIREMENTS

Table with columns: BUILDING ELEMENT, FIRE SEPARATION DISTANCE (FEET), RATING PROVIDED (REDUCED), DETAIL # AND SHEET #, DESIGN # FOR RATED ASSEMBLY, SHEET # FOR RATED PENETRATION, SHEET # FOR RATED JOINTS

LIFE SAFETY SYSTEM REQUIREMENTS

- Emergency Lighting: No Yes
Exit Signs: No Yes
Fire Alarm: No Yes
Smoke Detection Systems: No Yes Partial
Carbon Monoxide Detection: No Yes

LIFE SAFETY PLAN REQUIREMENTS

- Life Safety Plan Sheet #: CS
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 distances (1017)
Clear exit widths for each exit door
Actual, calculated occ. load capacity each exit door can accommodate based on egress width (1005.3)
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 (302)
The square footage of each smoke compartment for Occupancy Classification 1-2 (407.5)
Note any code exceptions or table notes that may have been utilized regarding the items above

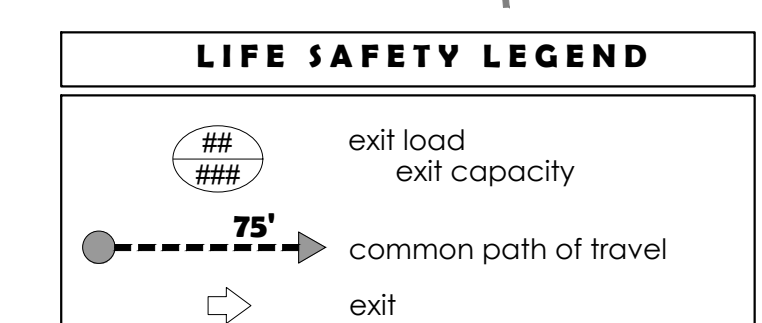
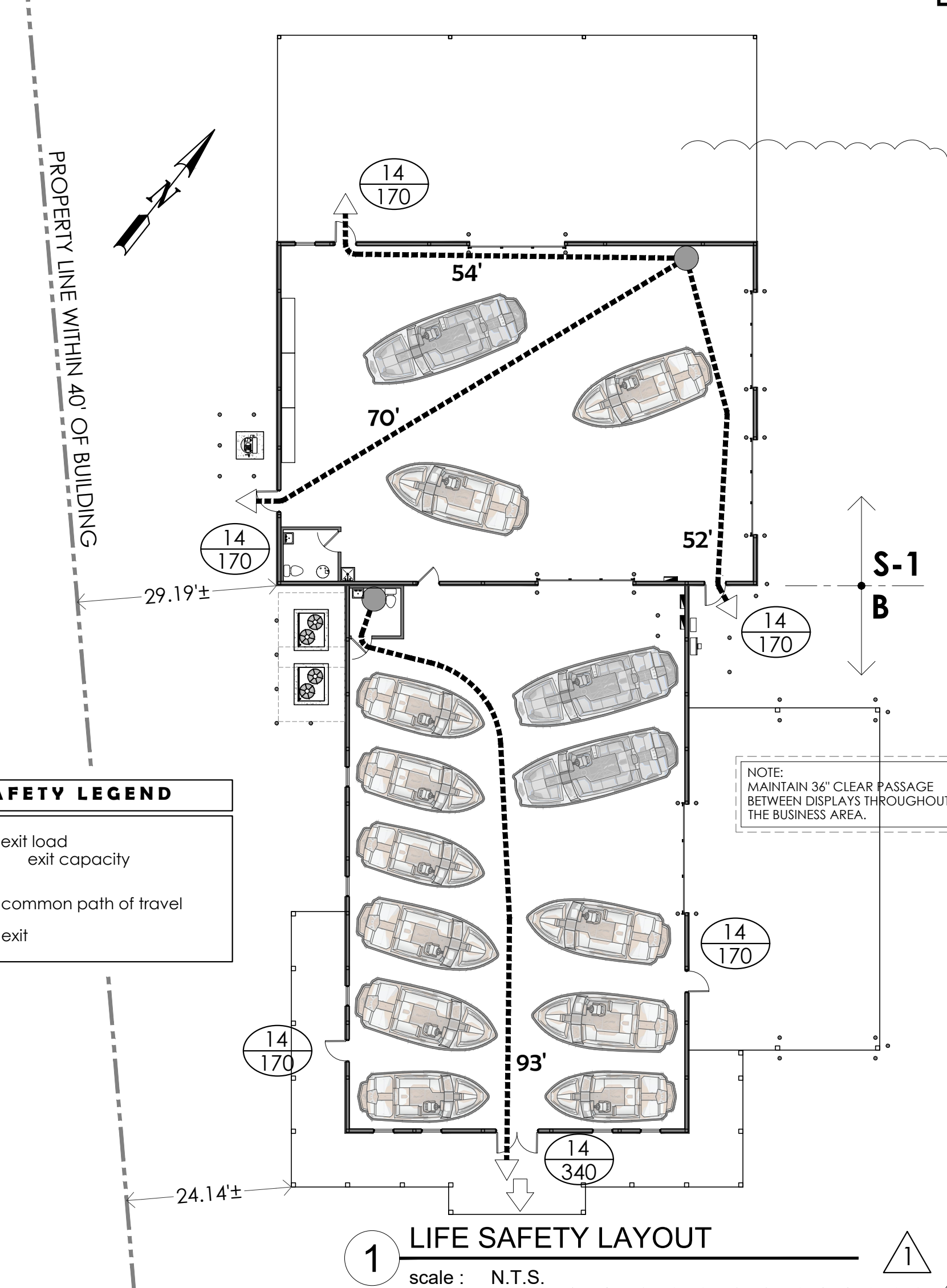
EXIT REQUIREMENTS

Table with columns: FLOOR, ROOM OR SPACE DESIGNATION, MINIMUM # OF EXITS, TRAVEL DISTANCE, ARRANGEMENT MEANS OF EGRESS

Table with columns: USE GROUP OR SPACE DESCRIPTION, EXIT WIDTH (a), EXIT WIDTH (b), CALCULATED OCCUPANT LOAD, EGRESS WIDTH PER OCCUPANT PER AREA (TABLE 1005.3), EGRESS WIDTH PER OCCUPANT PER AREA (TABLE 1005.3)

BONDING OF METAL VENEERS

ELECTRICAL CONTRACTOR SHALL PROVIDE ADEQUATE BONDING OF THE INSTALLED METAL VENEER PANELS, PURSUANT TO SECTION 250 OF THE 2020 NFPA-70 (NEC) WITH NORTH CAROLINA AMENDMENTS AND TO THE SATISFACTION OF THE LOCAL ELECTRICAL CODE OFFICIAL/INSPECTOR HAVING AUTHORITY.



LIFE SAFETY LAYOUT scale: N.T.S.

1 scale: N.T.S.

OCCUPANCY LOAD CALCULATION

Table with columns: description, sq. ft., use, occupancy, use, sq. ft., use, occupancy, use

plumbing facilities required

Table with columns: use, total, per gender, use, use, use, use, use, use, use, use

Table with columns: use, total, per gender, use, use, use, use, use, use, use, use

NC IECC Table C402.1.3

Table with columns: location, prescribed requirements, prescriptive



Broadway, NC

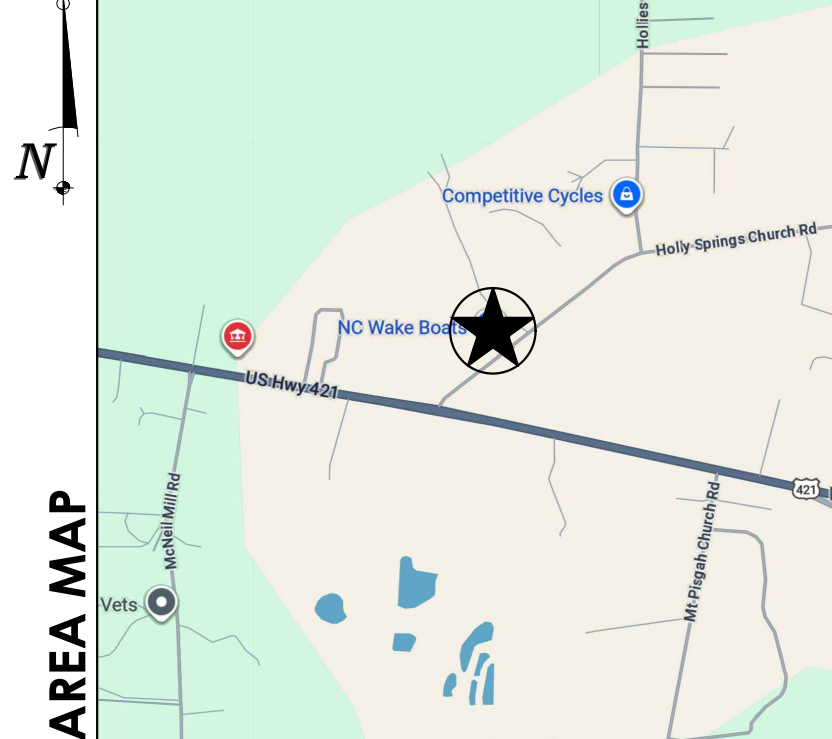
INDEX

Table with columns: STRUCTURAL, MECHANICAL, PLUMBING, ELECTRICAL, TRUSS

CONTACTS

Table with columns: Name, Title, Address, Phone, Email

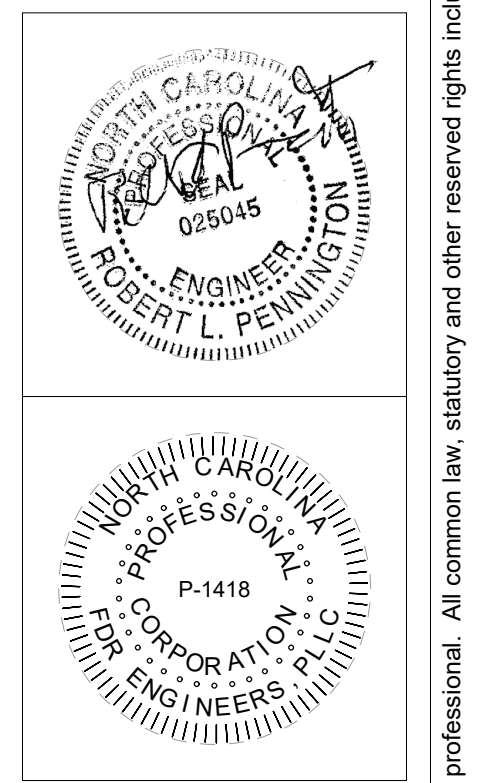
AREA MAP



LOCATION MAP



FDR Engineers, PLLC
19200 Strickland Road
Suite # 114
Raleigh, NC 27613
www.fdr-eng.com
(919) 957-5100



DESIGNED BY: SMB
DRAWN BY: SMB
APPROVED BY: RLP
PROJECT #: R2408270
DATE: 2024-10-23
Revision Date
0 for permit 11/08/24
1 BCO comments 01/23/25
Sheet

Ownership of Instruments of Service: All reports, plans, specifications, computer files, field data, notes and instruments prepared by the design professional shall remain the property of the design professional...



WAKEBOARD DEALERSHIP
SANFORD, NC

Project Name

FOUNDATION PLAN

Sheet Title

DESIGNED BY: AJI

DRAWN BY: AJI

APPROVED BY: HMM

PROJECT #: 24-067

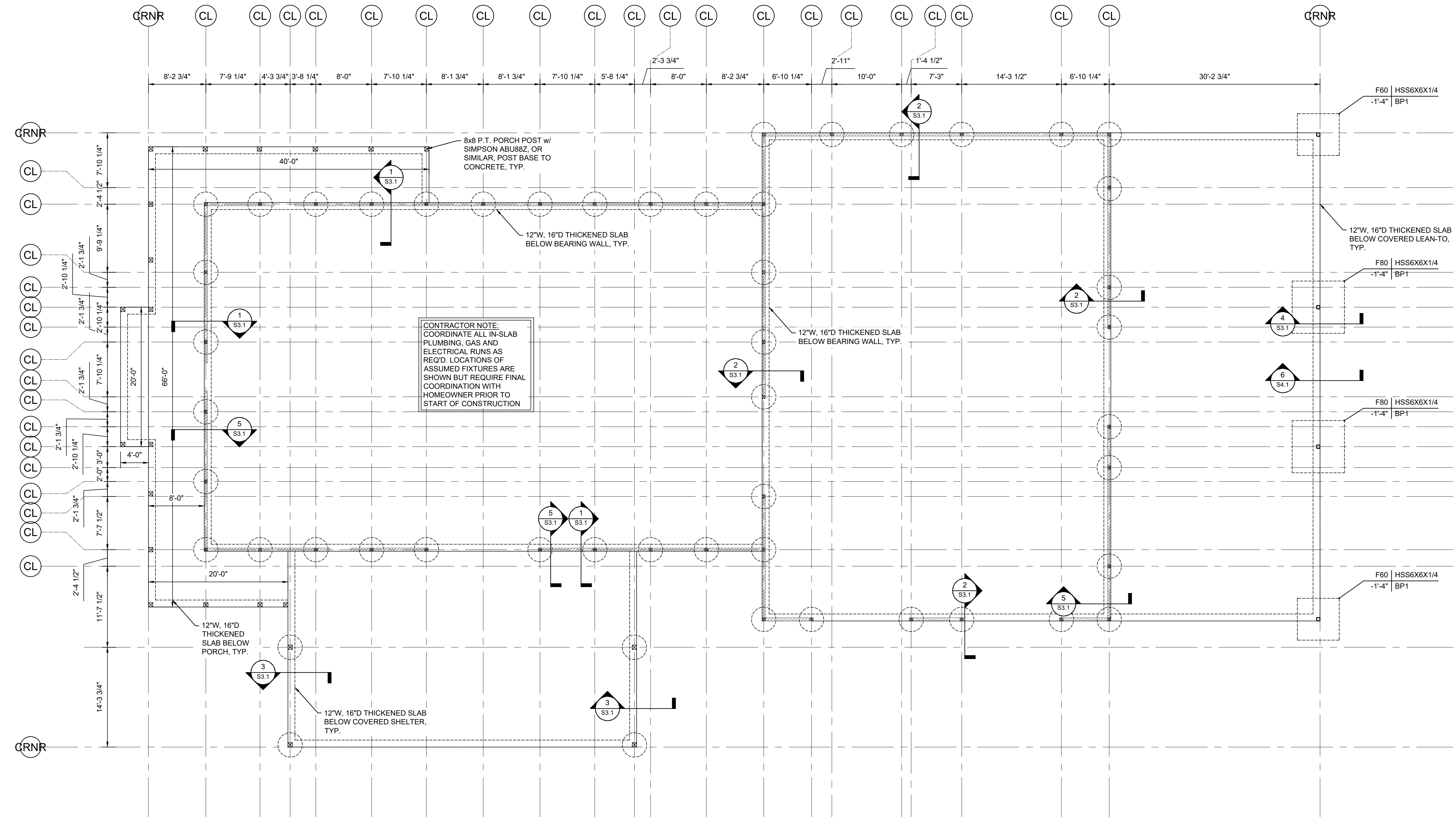
DATE: 11/27/2024

No.	Revision	Date

Sheet

S2.1

FOR PERMIT ONLY



CONTRACTOR NOTE:
COORDINATE ALL IN-SLAB
PLUMBING, GAS AND
ELECTRICAL RUNS AS
REQ'D. LOCATIONS OF
ASSUMED FIXTURES ARE
SHOWN BUT REQUIRE FINAL
COORDINATION WITH
HOMEOWNER PRIOR TO
START OF CONSTRUCTION

SPREAD FOOTING SCHEDULE		
MARK	SIZE	REINFORCING
F60	6'-0"x6'-0"x12"	(7)-#4 E.W. TOP & BOT
F80	8'-0"x8'-0"x12"	(9)-#4 E.W. TOP & BOT

1 FOUNDATION PLAN
Scale: 1/8" = 1'-0"

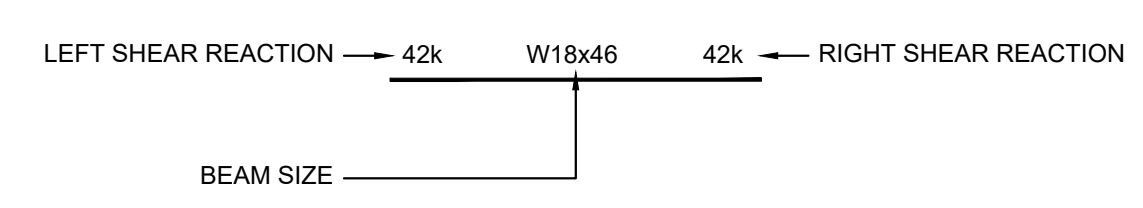
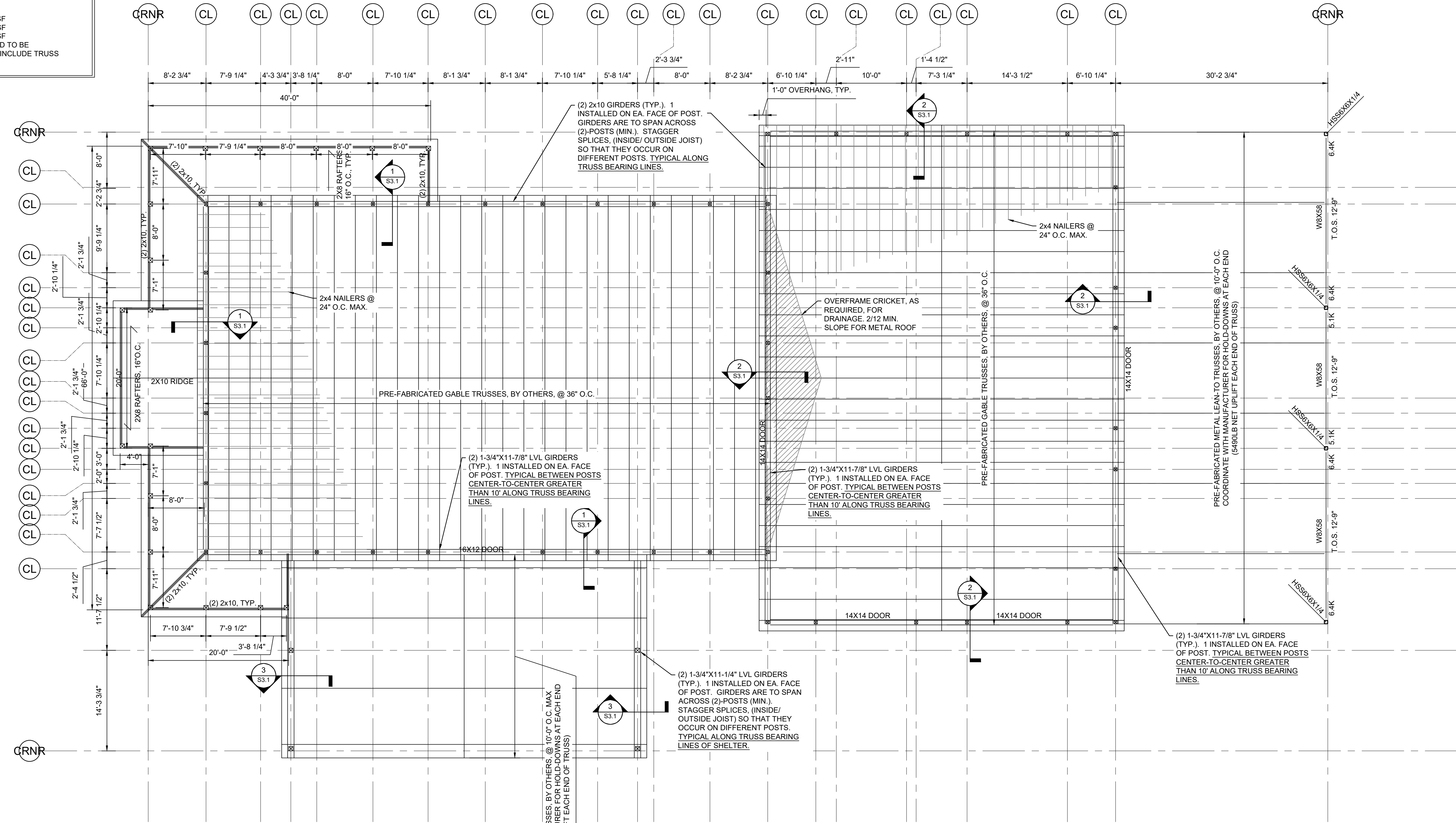
Ownership of Instruments of Service: All reports, plans, specifications, computer files, field data, notes and instruments prepared by the design professional as instruments of service shall remain the property of the design professional. All common law, statutory and other reserved rights including the copyright therein.

TRUSS DESIGN NOTES:

1. TRUSS MANUFACTURER SHALL BE RESPONSIBLE FOR FINAL TRUSS DESIGN, TO INCLUDE CALCULATIONS, LAYOUT, AND ALL NECESSARY BRACING AND BRIDGING DETAILS AS REQD. FOR PERMANENT STABILITY OF TRUSS SYSTEM.
2. TRUSSES AND THEIR COMPONENTS ARE TO BE DESIGNED TO RESIST THE COMPONENT AND CLADDING WIND PRESSURES OUTLINED ON SHEET S1.0.
3. TRUSSES ARE TO BE DESIGNED TO SUPPORT THE FOLLOWING SUPERIMPOSED LOADING UNLESS NOTED OTHERWISE:

TOP CHORD LL: 20 PSF
 TOP CHORD DL: 10 PSF*
 BOTTOM CHORD DL: 5 PSF*

NET UPLIFT (MAIN): 21.3PSF
 NET UPLIFT (SHELTER): 36.6PSF
 NET UPLIFT (LEAN-TO): 36.6PSF
 *DEAD LOADS ARE CONSIDERED TO BE SUPERIMPOSED, AND DO NOT INCLUDE TRUSS SELF-WEIGHT



*IF NO REACTIONS ARE PROVIDED, CONNECTIONS ARE TO BE DESIGNED FOR MINIMUM SHEAR REACTION OF 4k AND MINIMUM MOMENT REACTION OF 4k-ft

1 ROOF FRAMING PLAN
 Scale: 1/8" = 1'-0"

FRAMING PLAN NOTES:

1. [Hatched Area] DENOTES LOAD BEARING WALL. ALL EXTERIOR WALLS SHALL BE SHEATHED WITH 7/16" APA 2448 SPAN RATED OSB SHEATHING WITH EDGE BLOCKING. NAIL SHEATHING WITH 8d NAILS @ 6" O.C. AT PANEL EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS.
2. ALL EXTERIOR WALL FRAMING TO BE 2x6. ALL INTERIOR FRAMING TO BE 2x4, UNLESS NOTED OTHERWISE.
3. ALL ROOF SHEATHING SHALL BE APA 32/16 SPAN RATED SHEATHING, 19/32" THICK (5/8" NOMINAL). PROVIDE H-CLIPS, U.N.O.
4. (#) INDICATES NUMBER OF STUDS IN POST SUPPORTING FRAMING MEMBER. STUD POSTS SHALL EXTEND FROM BEARING DOWN TO SOLID FOUNDATION AND SHALL INCLUDE SOLID BLOCKING THROUGH FLOOR STRUCTURE DEPTH WHERE APPLICABLE. PROVIDE A MINIMUM OF (3) STUDS AT ALL BEAM BEARINGS UNLESS OTHERWISE NOTED ON PLAN.
5. ALL EXTERIOR, AND INTERIOR LOAD-BEARING HEADERS TO BE CONSTRUCTED w/ MIN. (2)-2x10 AND SUPPORTED BY (2) JACK STUDS AND (2) KING STUD UNLESS NOTED OTHERWISE.
6. PROVIDE SIMPSON H10A CLIPS AT THE ENDS OF ALL ROOF FRAMING MEMBERS U.N.O.

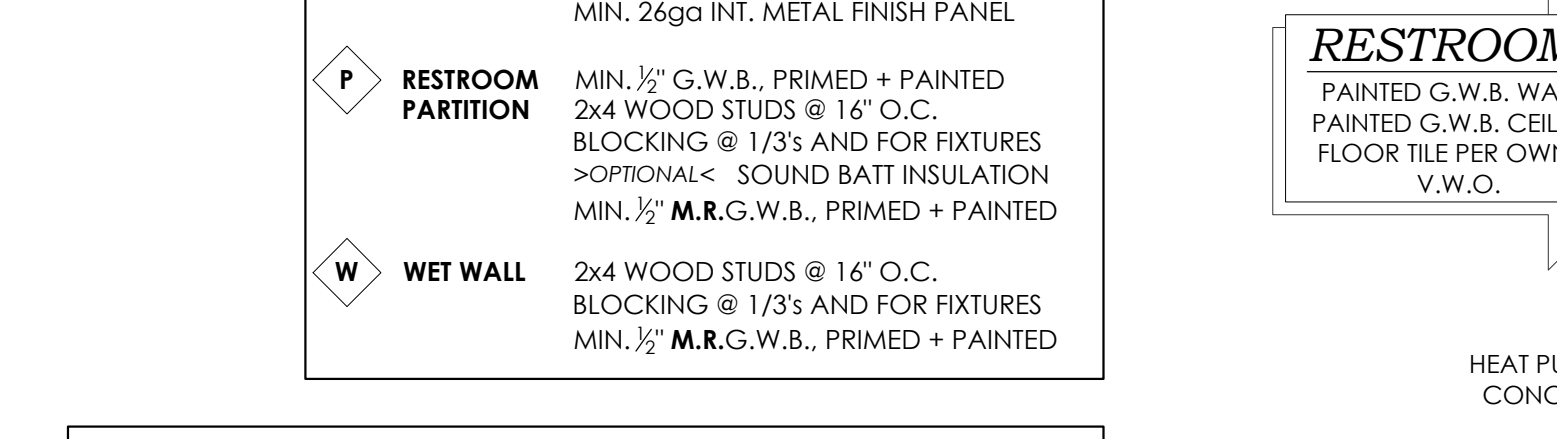
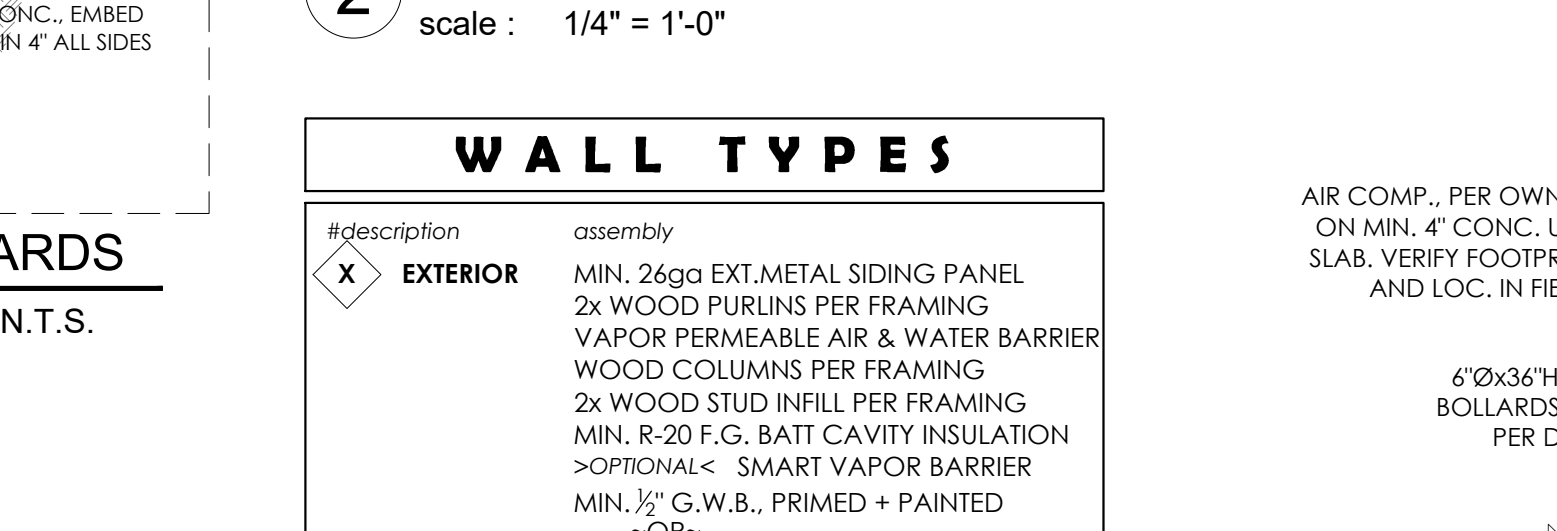
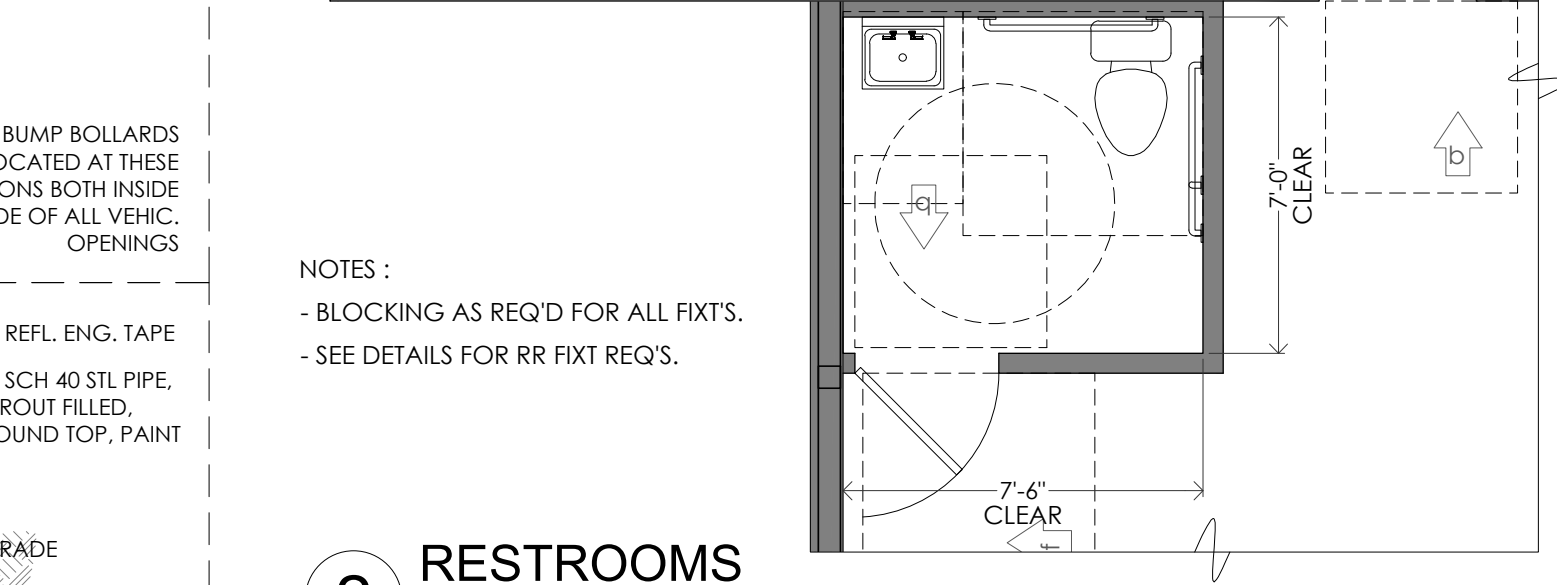
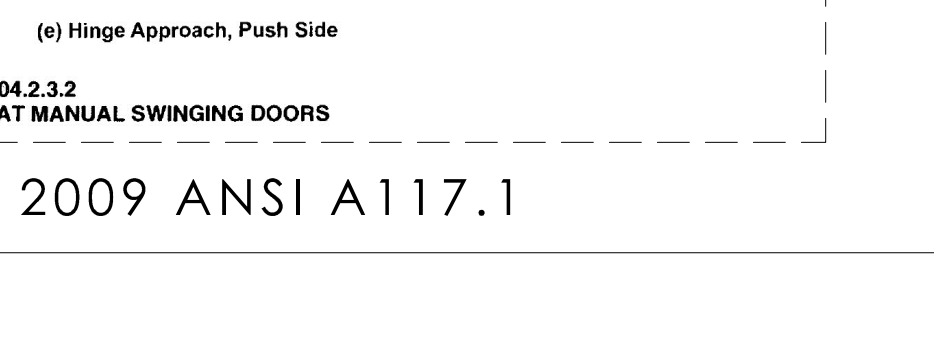
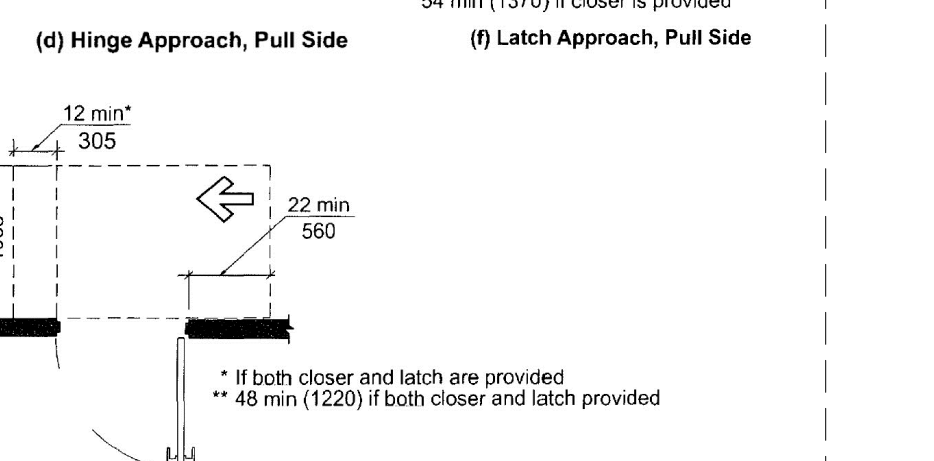
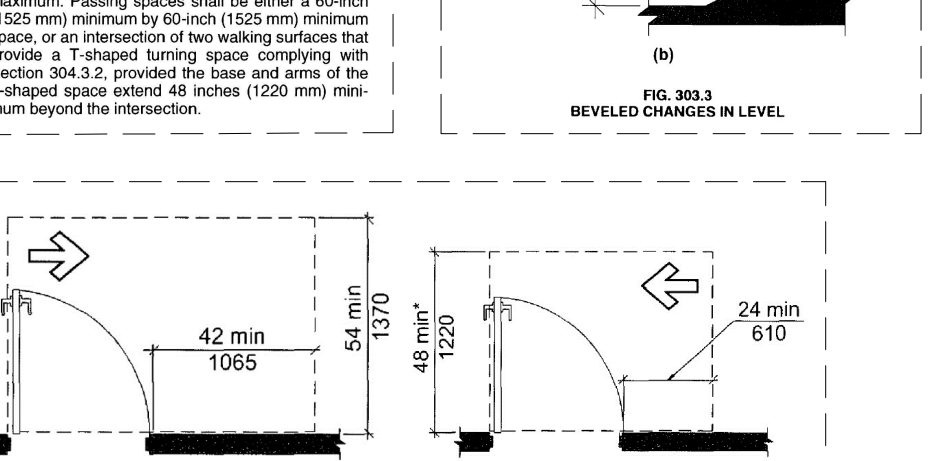
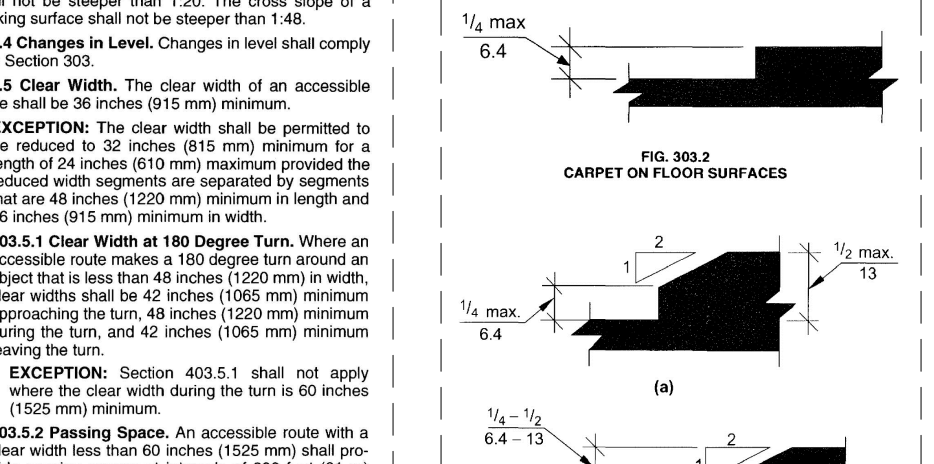
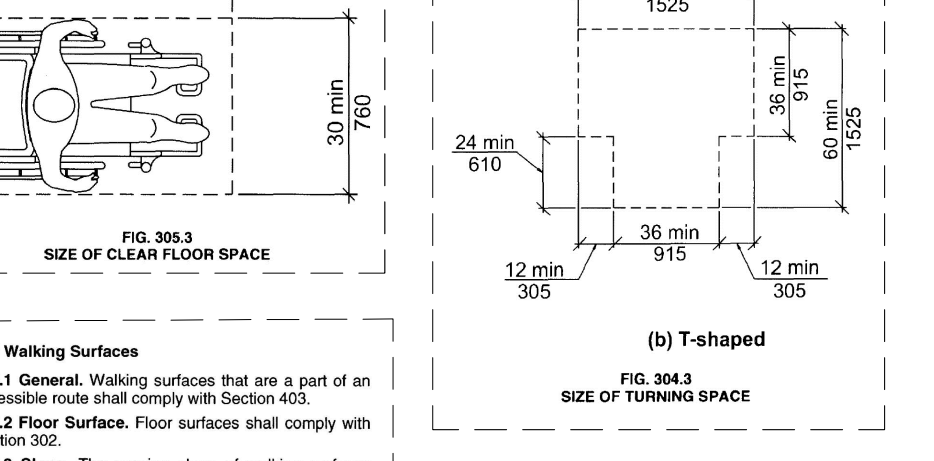
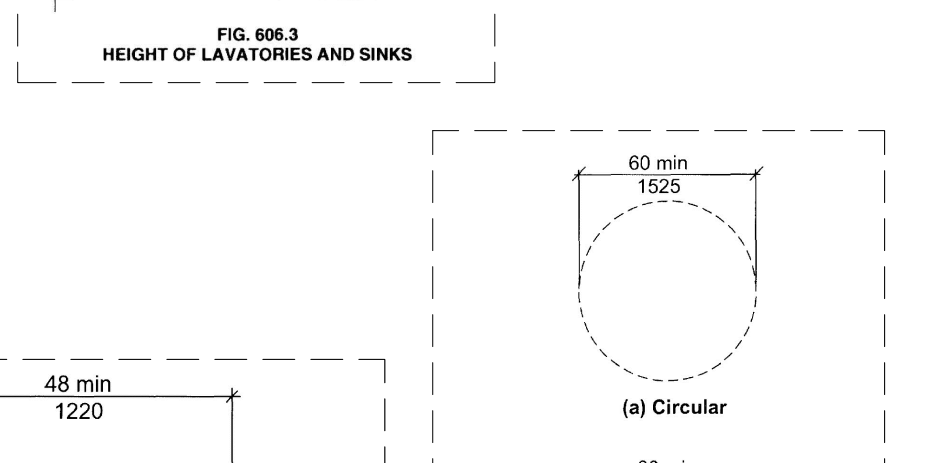
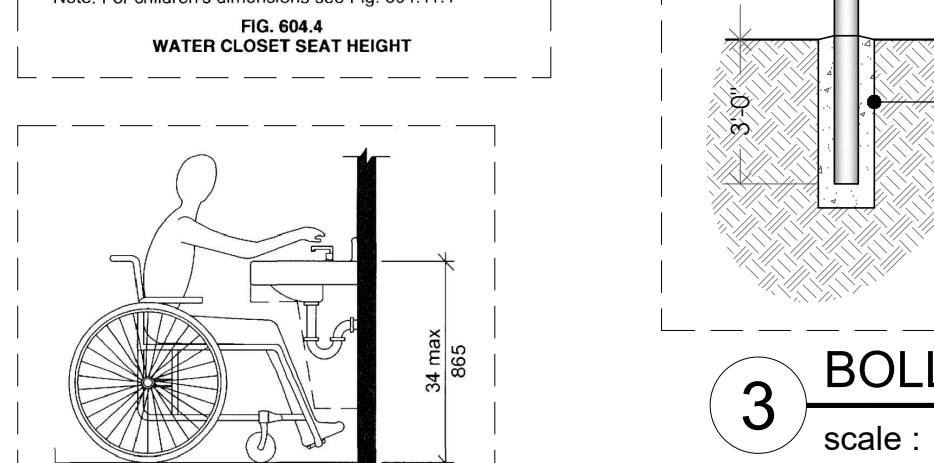
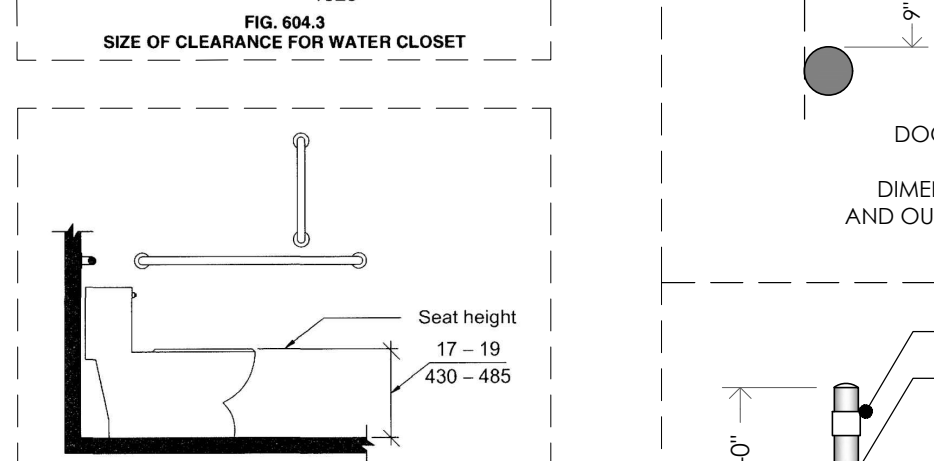
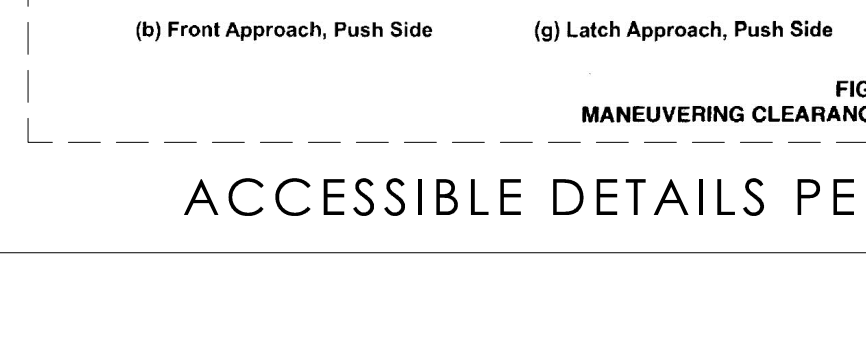
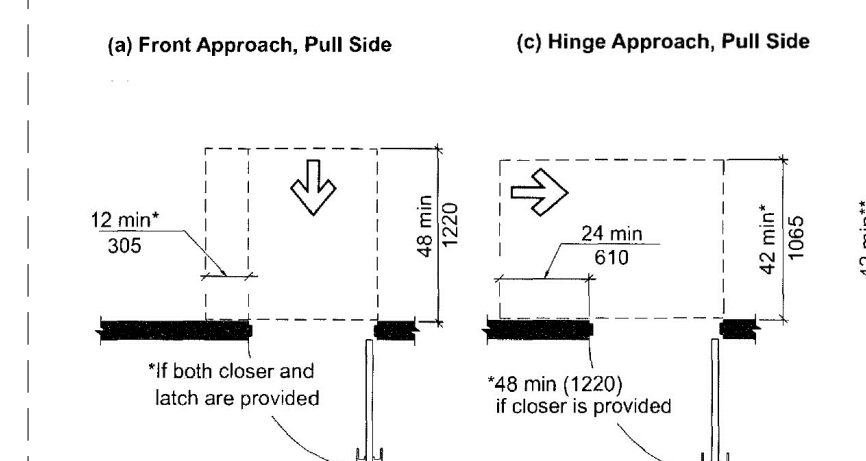
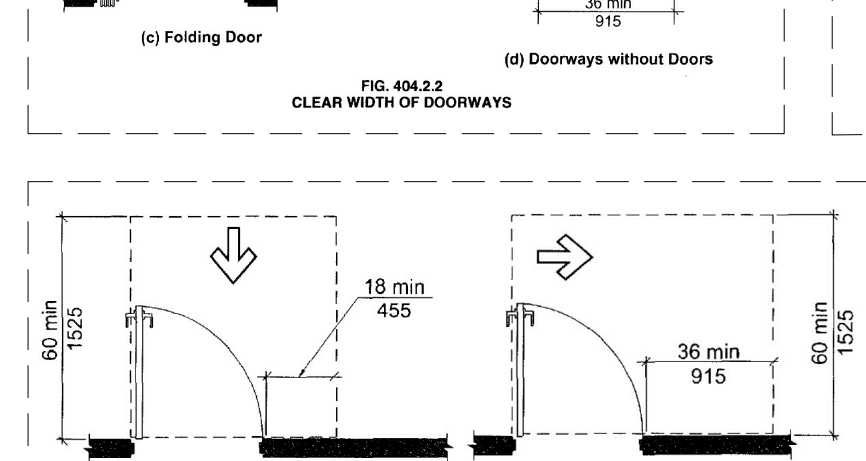
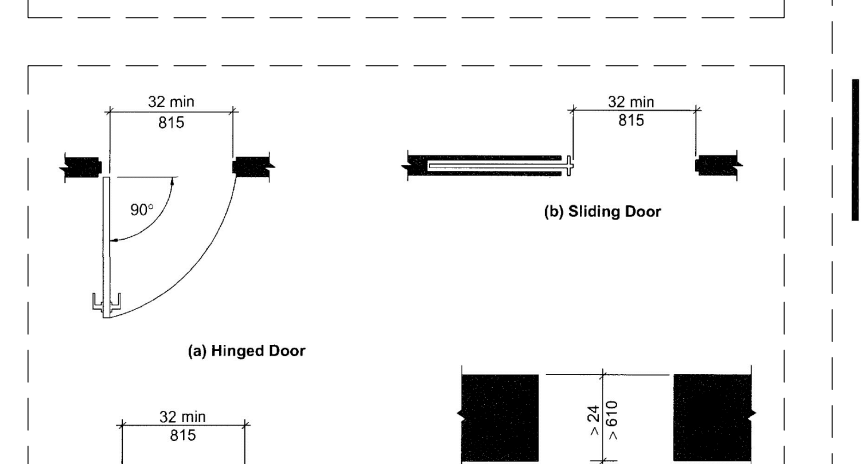
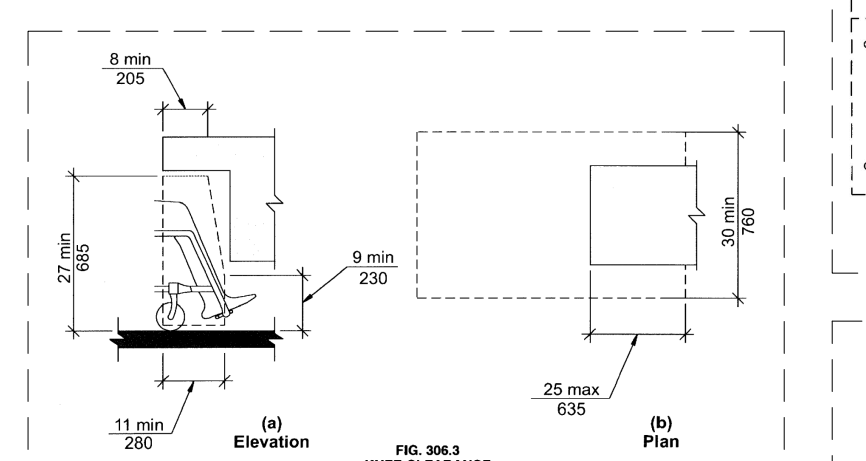
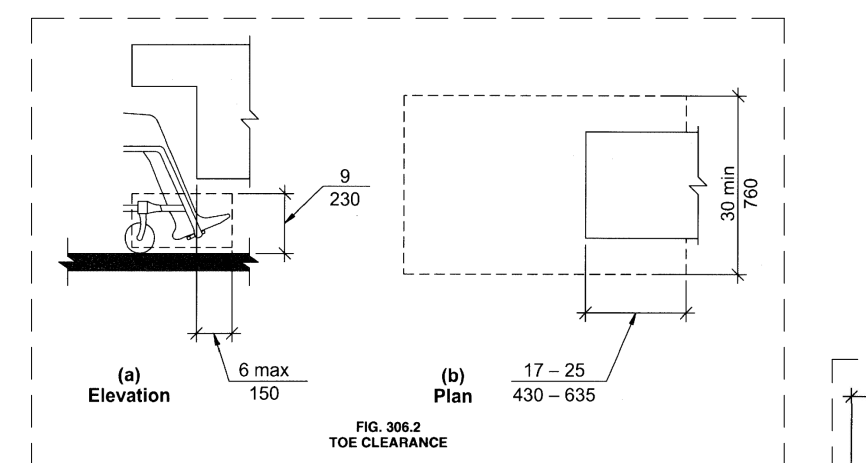
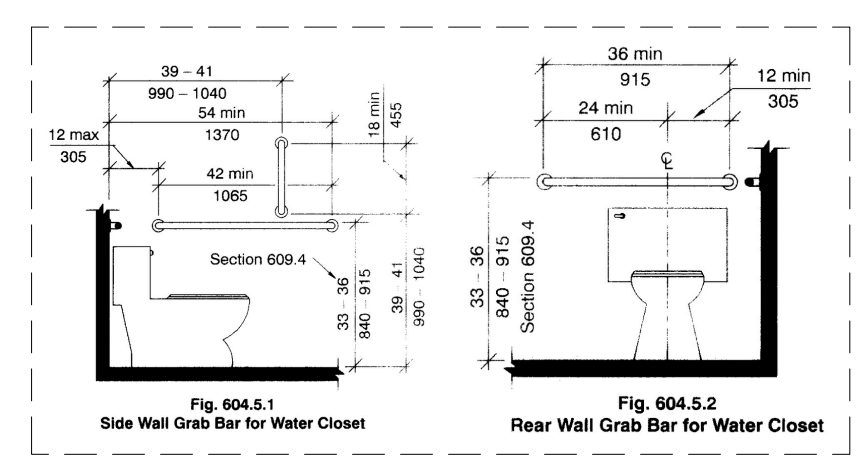
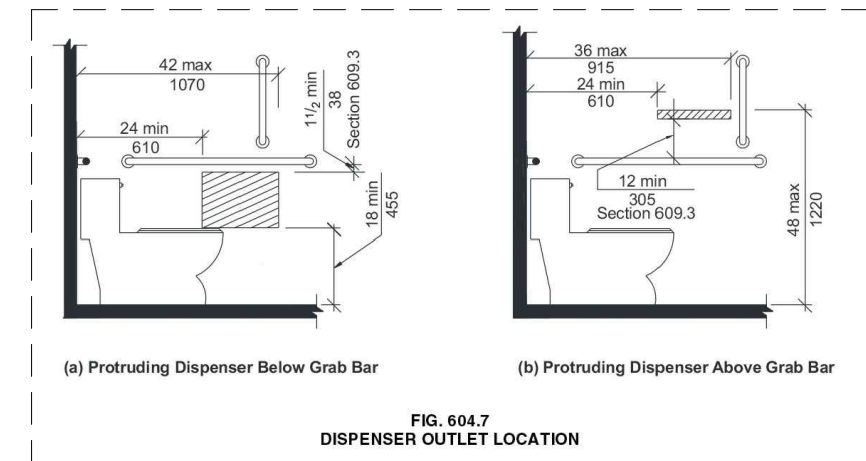


WAKEBOARD DEALERSHIP
 SANFORD, NC

Project Name	ROOF FRAMING PLAN	
Sheet Title	ROOF FRAMING PLAN	
DESIGNED BY:	AJI	
DRAWN BY:	AJI	
APPROVED BY:	HMH	
PROJECT #:	24-067	
DATE:	11/27/2024	
No.	Revision	Date
Sheet	S2.2	

FOR PERMIT ONLY

Ownership of Instruments of Service: All reports, plans, specifications, computer files, field data, notes and instruments prepared by the design professional as instruments of service shall remain the property of the design professional. All common law, statutory and other reserved rights including the copyright therein.

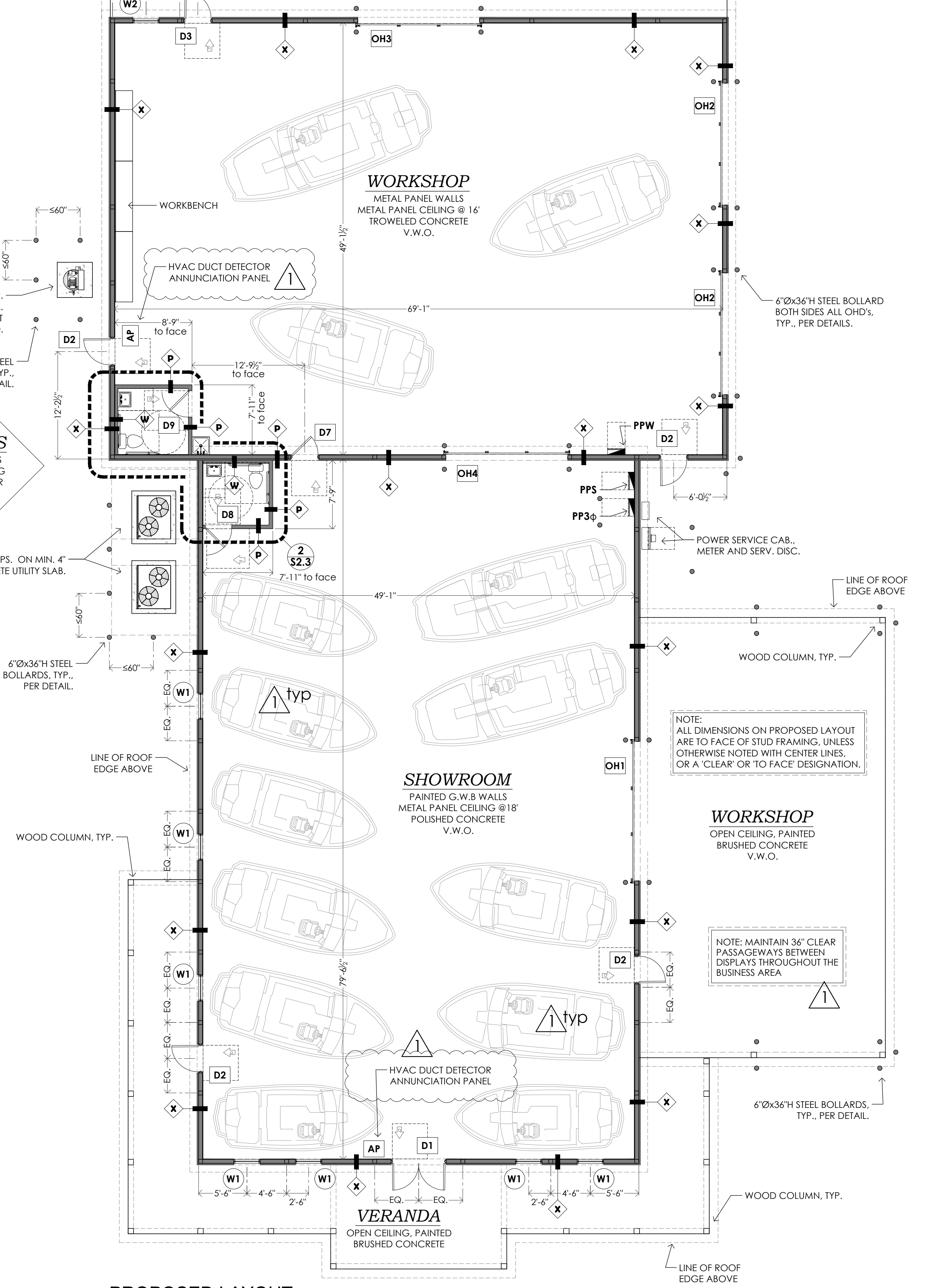
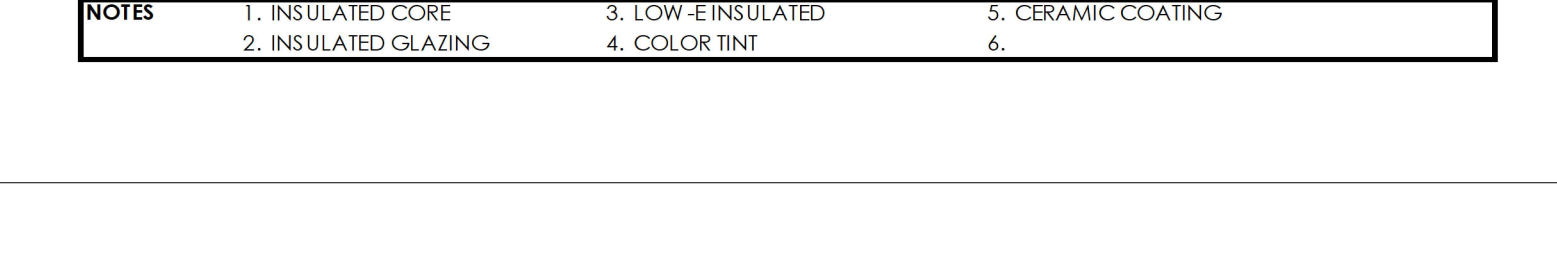
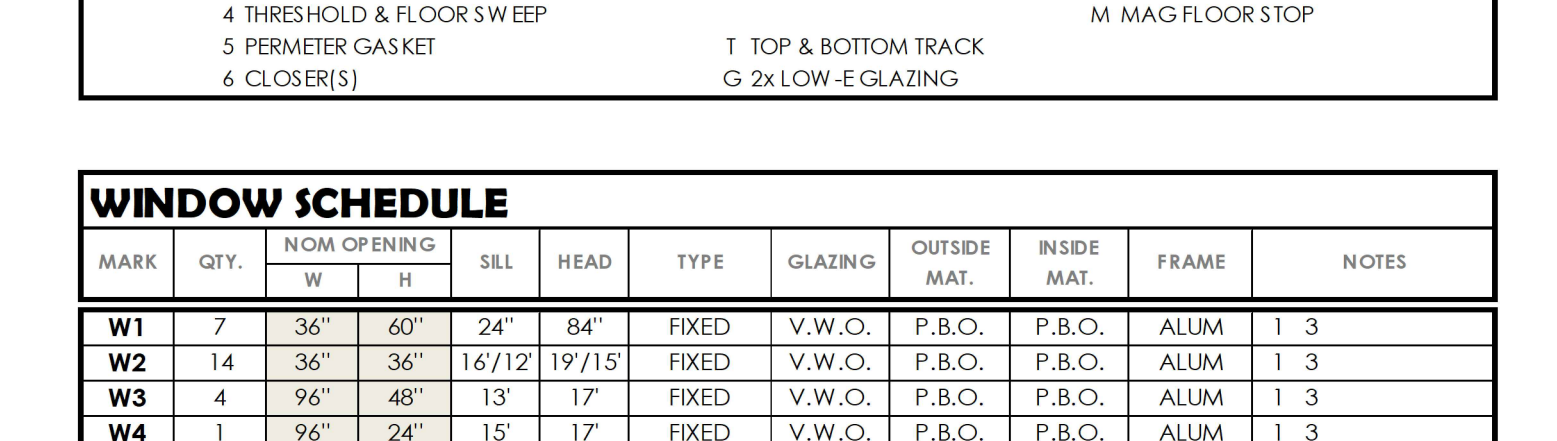
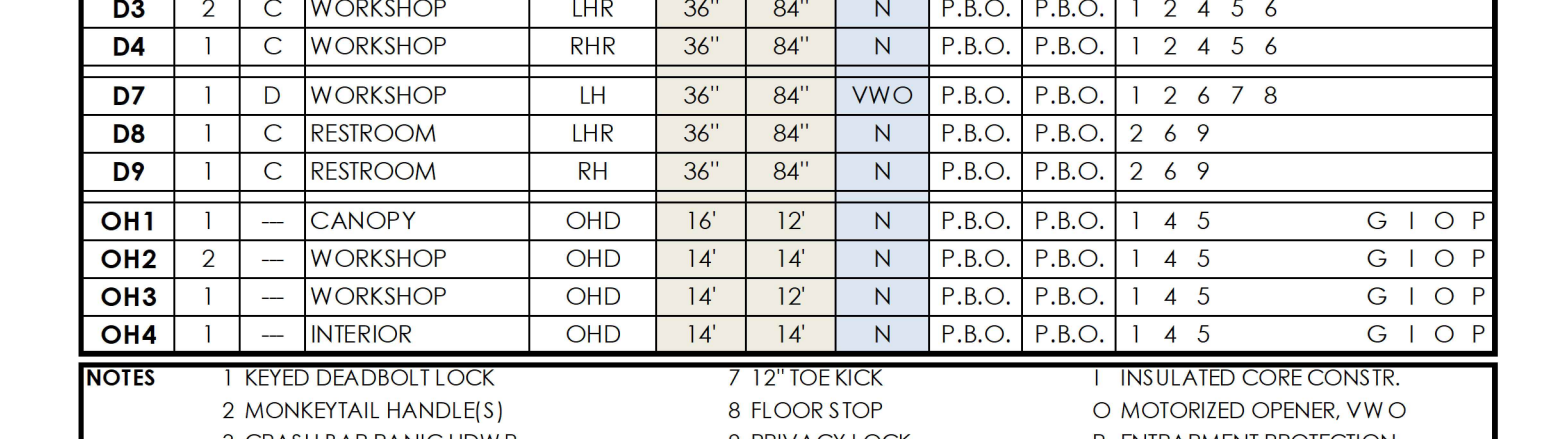


DOOR SCHEDULE

MARK	QTY.	TYPE	LOCATION	HAND	NOM. OPENING	GLAZ	FRAME	DOOR	NOTES		
					W	H					
D1	1	A	MAIN ENTRANCE	2x	72"	84"	Y	P.B.O.	P.B.O.	1 2 4 5 6	G
D2	2	B	SHOWROOM	LHR	36"	84"	Y	P.B.O.	P.B.O.	1 2 4 5 6	G
D3	2	C	WORKSHOP	LHR	36"	84"	N	P.B.O.	P.B.O.	1 2 4 5 6	G
D4	1	C	WORKSHOP	RHR	36"	84"	N	P.B.O.	P.B.O.	1 2 4 5 6	G
D7	1	D	WORKSHOP	LH	36"	84"	VVO	P.B.O.	P.B.O.	1 2 6 7 8	G
DB	1	C	RESTROOM	LHR	36"	84"	N	P.B.O.	P.B.O.	2 6 9	G
DP	1	C	RESTROOM	RH	36"	84"	N	P.B.O.	P.B.O.	2 6 9	G

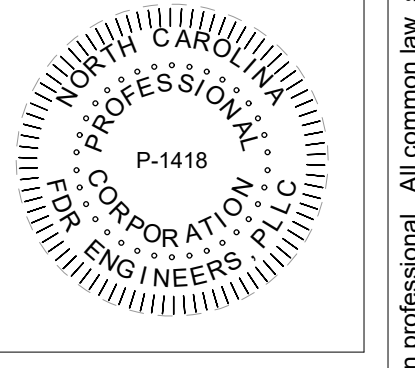
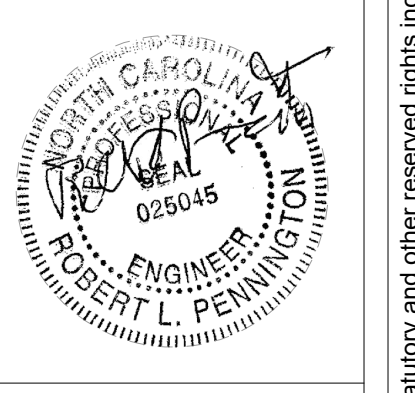
WINDOW SCHEDULE

MARK	QTY.	NOM. OPENING	SILL	HEAD	TYPE	GLAZING	OUTSIDE MAT.	INSIDE MAT.	FRAME	NOTES	
		W	H								
W1	7	36"	60"	24"	84"	FIXED	V.W.O.	P.B.O.	P.B.O.	ALUM	1 3
W2	14	36"	36"	16 1/2"	19 1/2"	FIXED	V.W.O.	P.B.O.	P.B.O.	ALUM	1 3
W3	4	96"	48"	13"	17"	FIXED	V.W.O.	P.B.O.	P.B.O.	ALUM	1 3
W4	1	96"	24"	15"	17"	FIXED	V.W.O.	P.B.O.	P.B.O.	ALUM	1 3



ACCESSIBLE DETAILS PER 2009 ANSI A117.1

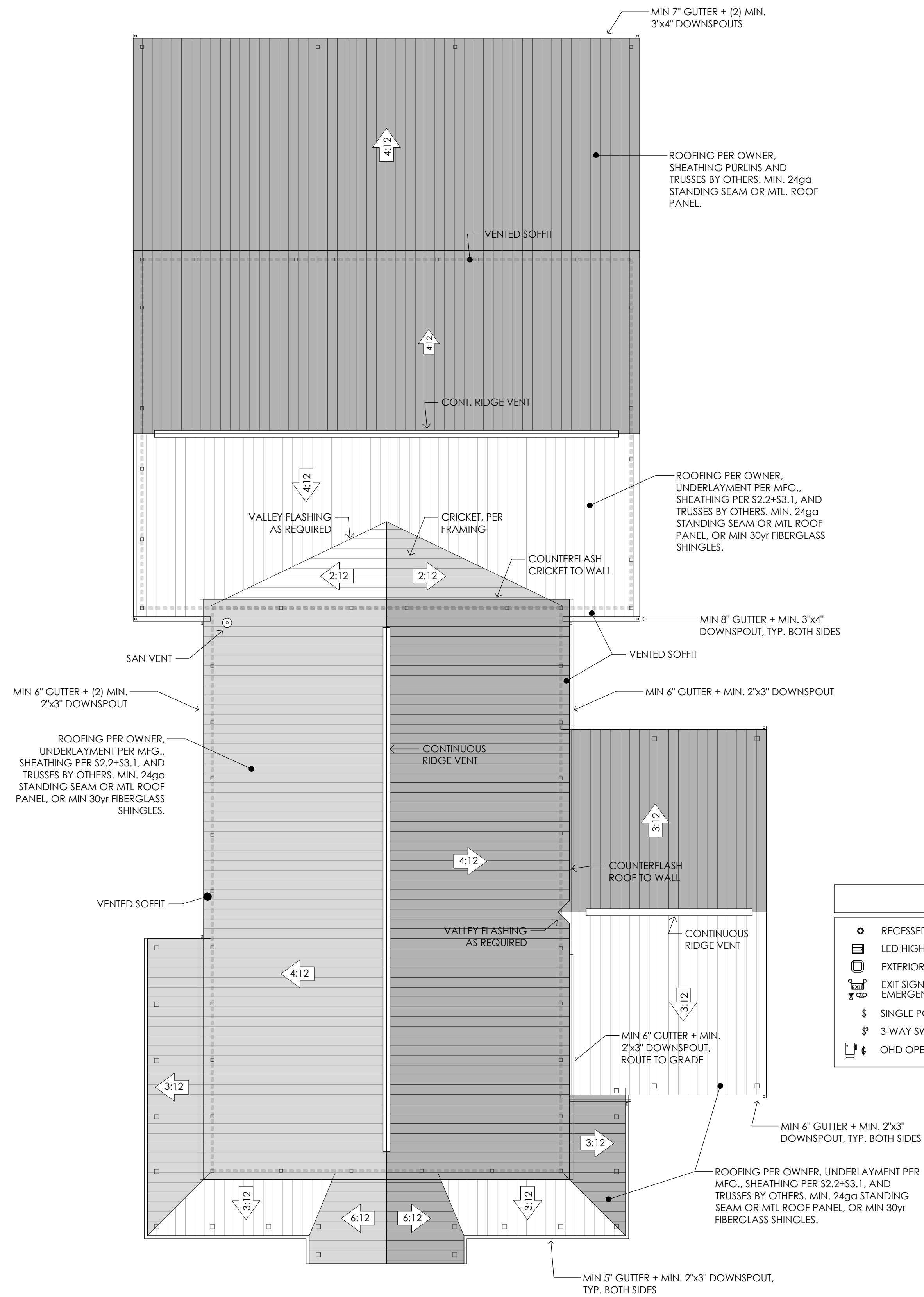
1 PROPOSED LAYOUT
scale: 1/8" = 1'-0"



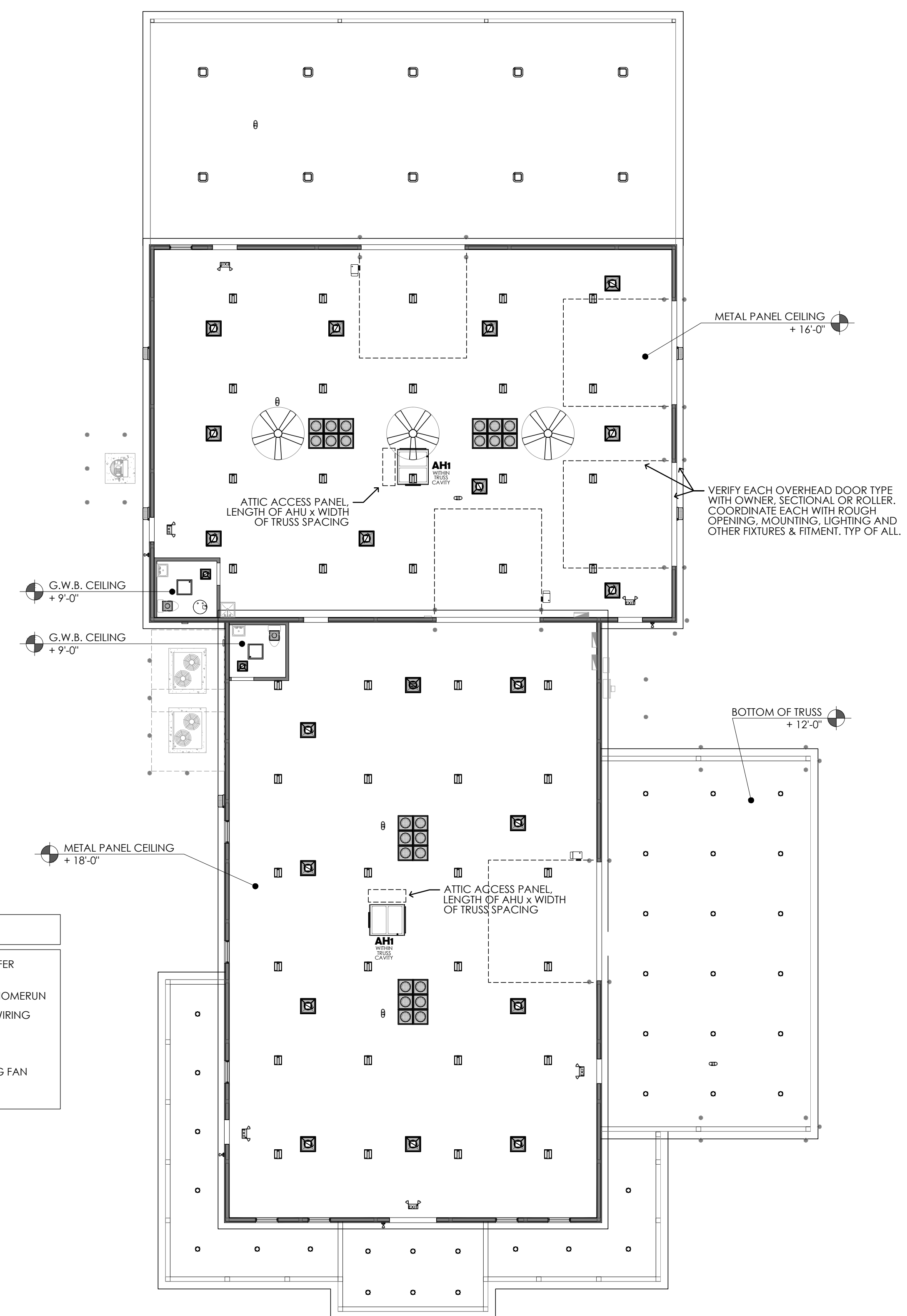
DESIGNED BY: SMB
DRAWN BY: SMB
APPROVED BY: RLP
PROJECT #: R2408270
DATE: 2024-10-23

#	Revision	Date
0	for permit	11/08/24
1	BCO comments	01/23/25

Sheet
S2.3



2 ROOF LAYOUT
scale : 3/32" = 1'-0"



1 REFLECTED CEILING LAYOUT
scale : 3/32" = 1'-0"

LIGHTING LEGEND

○	RECESSED DOWNLIGHT CAN	□	LED TROFFER FIXTURES
□	LED HIGH-BAY	—	CIRCUIT HOMERUN
□	EXTERIOR LED HIGH-BAY	PP-#	SWITCH WIRING
EXIT	EXIT SIGNAGE & EMERGENCY LIGHTING	⊙	CEILING FAN
⊙	SINGLE POLE SWITCH		
⊙	3-WAY SWITCH		
⊙	OHD OPENER & SWITCH		

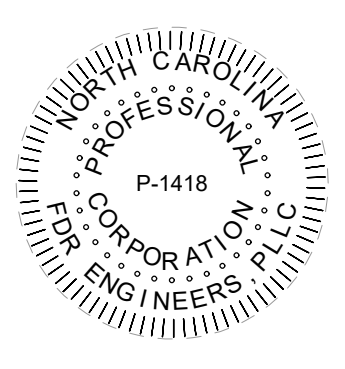
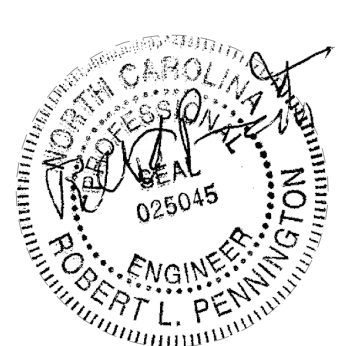
stormwater data per '18 NCPC Table 1106.1 100-year 1-hour rainfall 4 in/hr
per '18 NCPC Figure 1106.4 Vertical Walls 50%

by drainage areas	roof		volume			downspout			min. gutter W @ 0.8 W/H		
	area	adi. vert. wall length height	cu. ft.	cl. min.	g.p.m.	in. @	reqd.	prop.	size	in. @	
workshop N + lean-to	3,850	0 0	3,850 sf	1,283	21	160	3 x 4	2	2	1/8" (1%)	7"
workshop S	1,750	50 3	1,825 sf	608	10	76	2 x 3	2	2	1/8" (1%)	8"
showroom W	2,000	0 0	2,000 sf	667	11	83	2 x 3	2	2	1/8" (1%)	6"
showroom E	2,000	0 0	2,000 sf	667	11	83	2 x 3	2	2	1/8" (1%)	6"
side canopy N	725	25 3	763 sf	254	4	32	2 x 3	1	1	1/8" (1%)	5"
side canopy S	725	25 3	763 sf	254	4	32	2 x 3	1	1	1/8" (1%)	5"
veranda	1,092	96 3	1,236 sf	412	7	51	2 x 3	1	3	1/8" (1%)	5"

LIGHTING SCHEDULE

USE	TYPE	MANUF.	MODEL	LAMPS	Vg	V	DESCRIPTION
EXT. DOWNLIGHT	CAN	LITHONIA	LDN6 35/50 LD6AR	LED	35	120	NEW CONSTRUCTION 6" DOWNLIGHT CAN
WAREHOUSE	HIGH-BAY	LITHONIA	CPH6 15000LM SEF GCL	LED	96	120	HIGH BAY LED W MVOLT GANG TECHNOLOGY
EXT. CANOPY	HIGH-BAY	LITHONIA	SCNY LED ALO2 SW W 2 PFL	LED	5 130	120	HIGH BAY LED W MVOLT GANG TECHNOLOGY
2x2 TROFFER	CEILING	LITHONIA	2TL2 40L FW LP835	LED	40	120	2x2 LED TROFFER, 0.125" #12 ACRYLIC LENS, WHITE FINISH
EXTERIOR AREA	WALL	P.B.O.	P.B.O.	LED	5	90	ENCLOSED OR LIGHT SENS OR
EXIT + EM	STANDARD	LITHONIA	LHGM LED R HO	LED	10	120	EXIT + EMERG COMBO, WALL/CGL MTD, 90 MIN. BATT. BACK-UP, WHITE
EM	STANDARD	LITHONIA	ELMML	LED	8	120	HIGH BAY EXTER. WALL/CEILING MOUNTED, 90 MIN. BATTERY BACK-UP
EXT. EM	STANDARD	LITHONIA	ELA B T QWP LO30P	LED	28	120	EXTERIOR/WET RATED, 2 LAMPS, BLACK FINISH, 90 MIN. BATTERY BACK-UP.

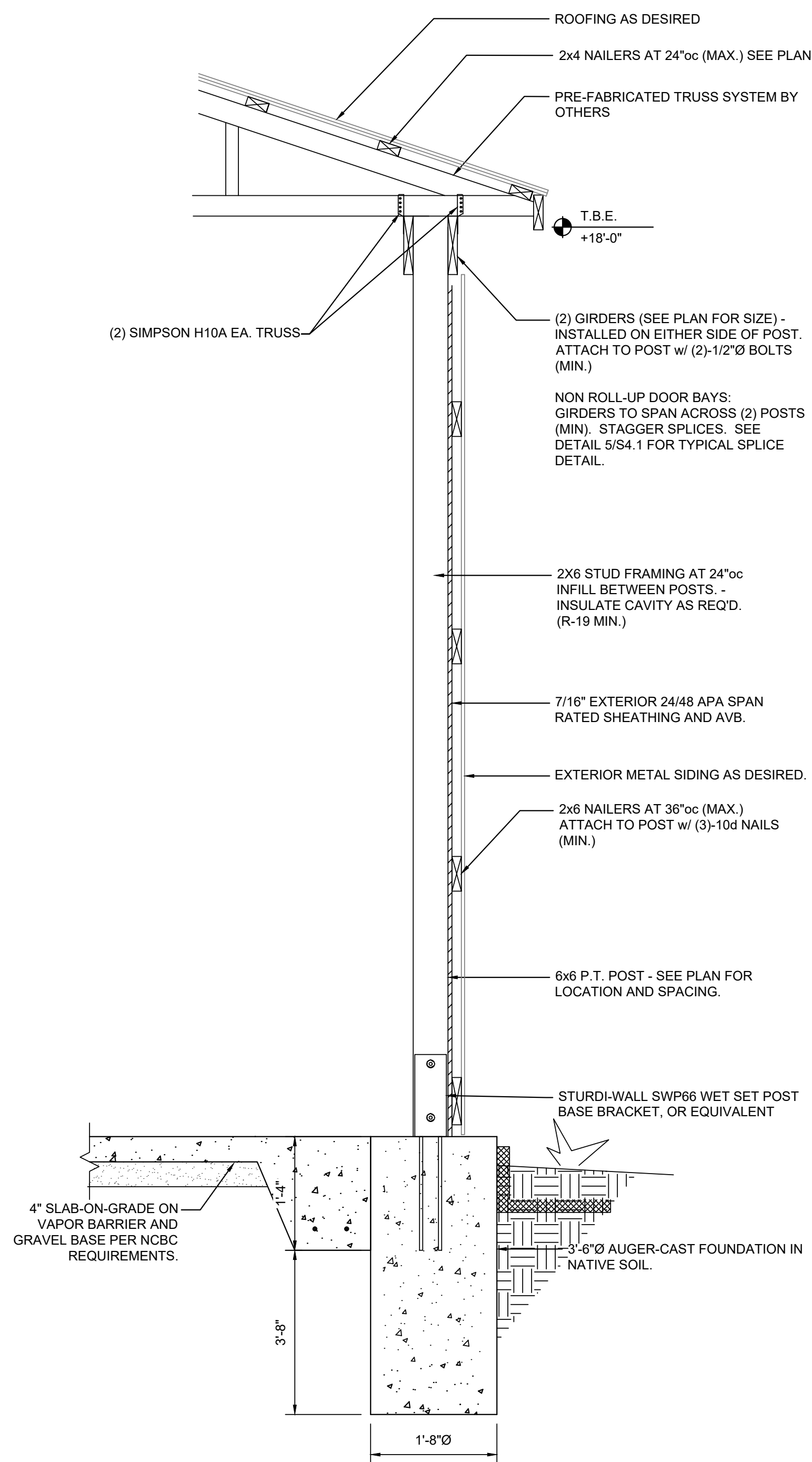
- LIGHT FIXTURE SUBSTITUTIONS ALLOWED WITH MATCHING PARAMETERS BY OWNER REQUEST, CODE COMPLIANCE AND AHJ APPROVAL.
- OFFICES, BREAK ROOMS, RESTROOMS AND OTHER BUSINESS AREAS TO BE MOTION ACTIVATED TO 50%, MANUAL ON TO 100%, 30min MOTION SHUTOFF, AND MANUAL OFF.
- TIME-SWITCH CONTROLS ARE PERMISSIBLE, PER OWNER, PROVIDED THAT PROGRAMMING IS 7-day CAPABLE AND NIGHT LIGHTING IS INCORPORATED.
- E.C. TO COORDINATE ALL EXIT SIGNAGE AND EGRESS LIGHTING LOCATIONS, SELECTIONS AND SPACING, PRIOR TO PLACING ORDER, WITH OWNER AND AHJ.



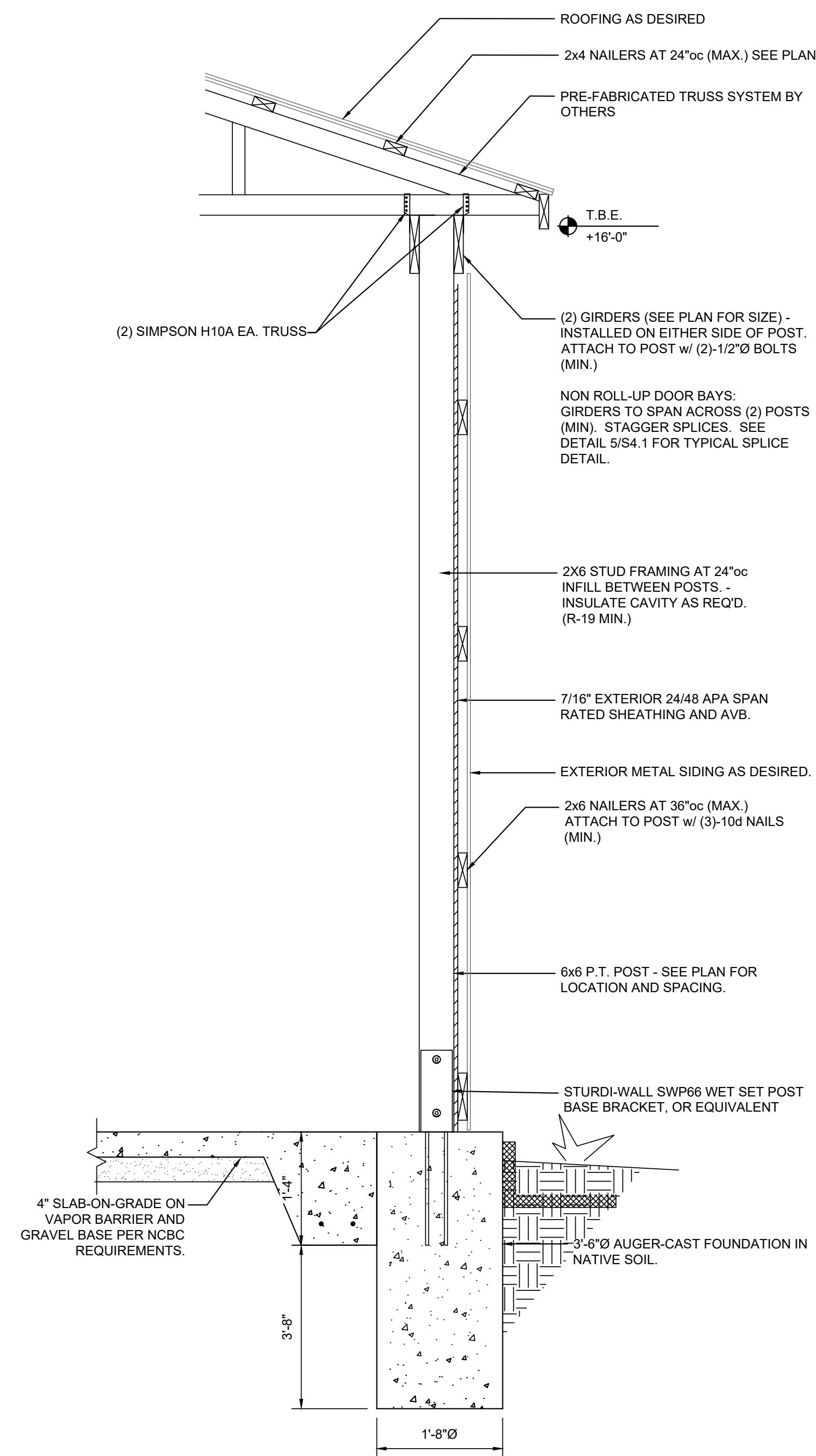
DESIGNED BY: SMB
DRAWN BY: SMB
APPROVED BY: RLP
PROJECT #: R2408270
DATE: 2024-10-23

#	Revision	Date
0	for permit	11/8/24

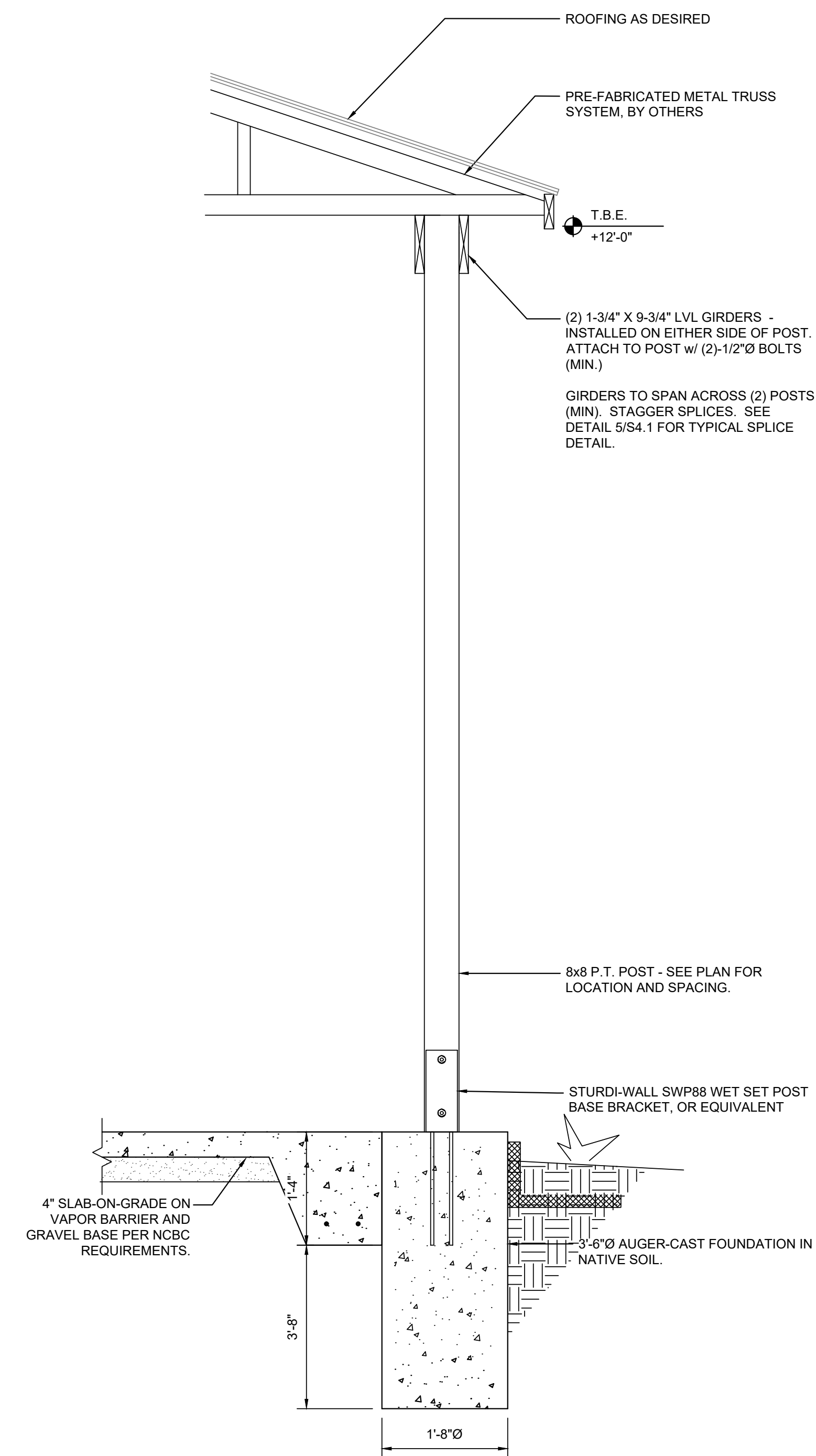
Ownership of Instruments of Service: All reports, plans, specifications, computer files, field data, notes and instruments prepared by the design professional as instruments of service shall remain the property of the design professional. All common law, statutory and other reserved rights including the copyright therein.



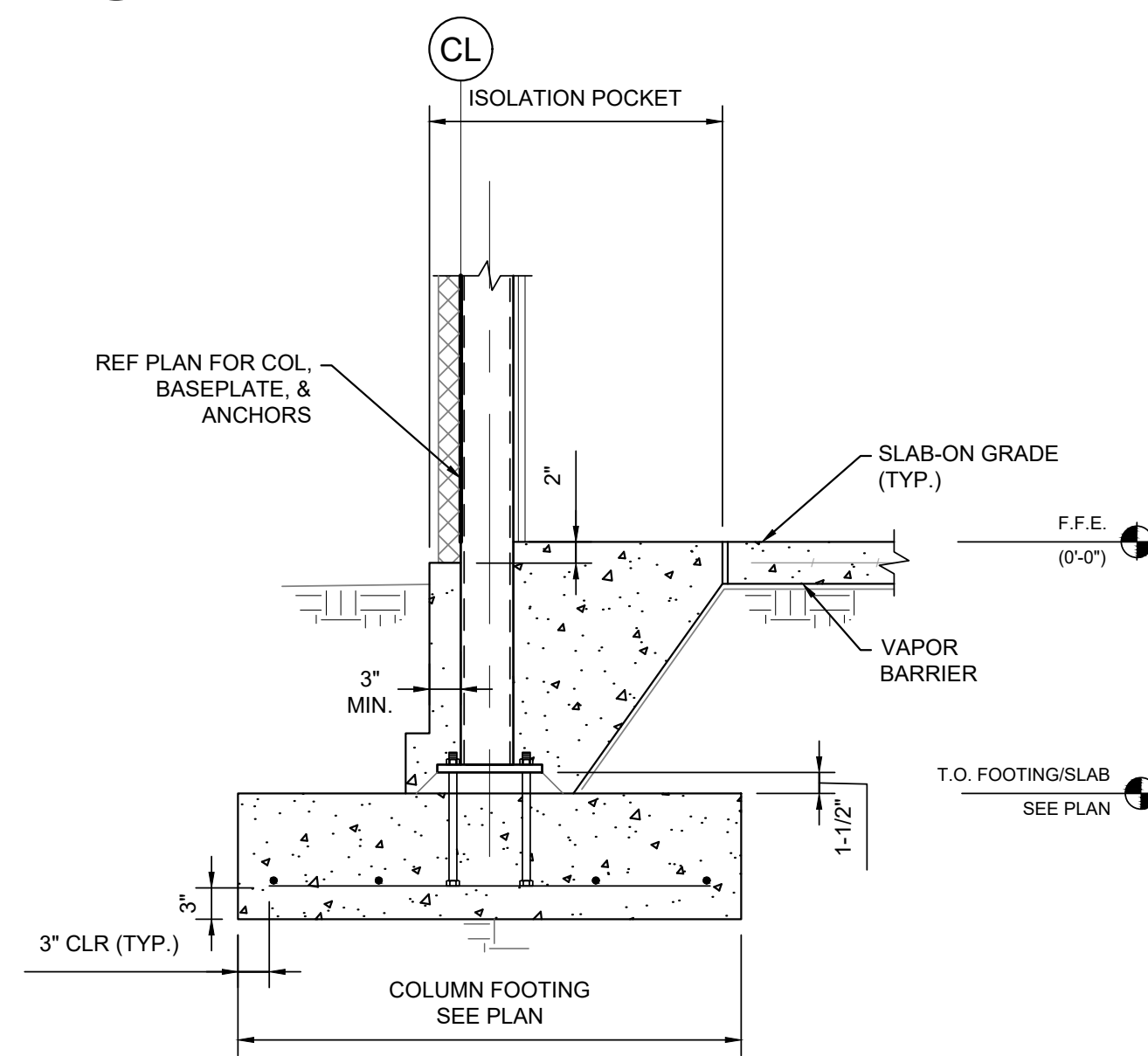
1 SECTION - POLE BARN WALL FRAMING
SCALE: 3/4" = 1'-0"



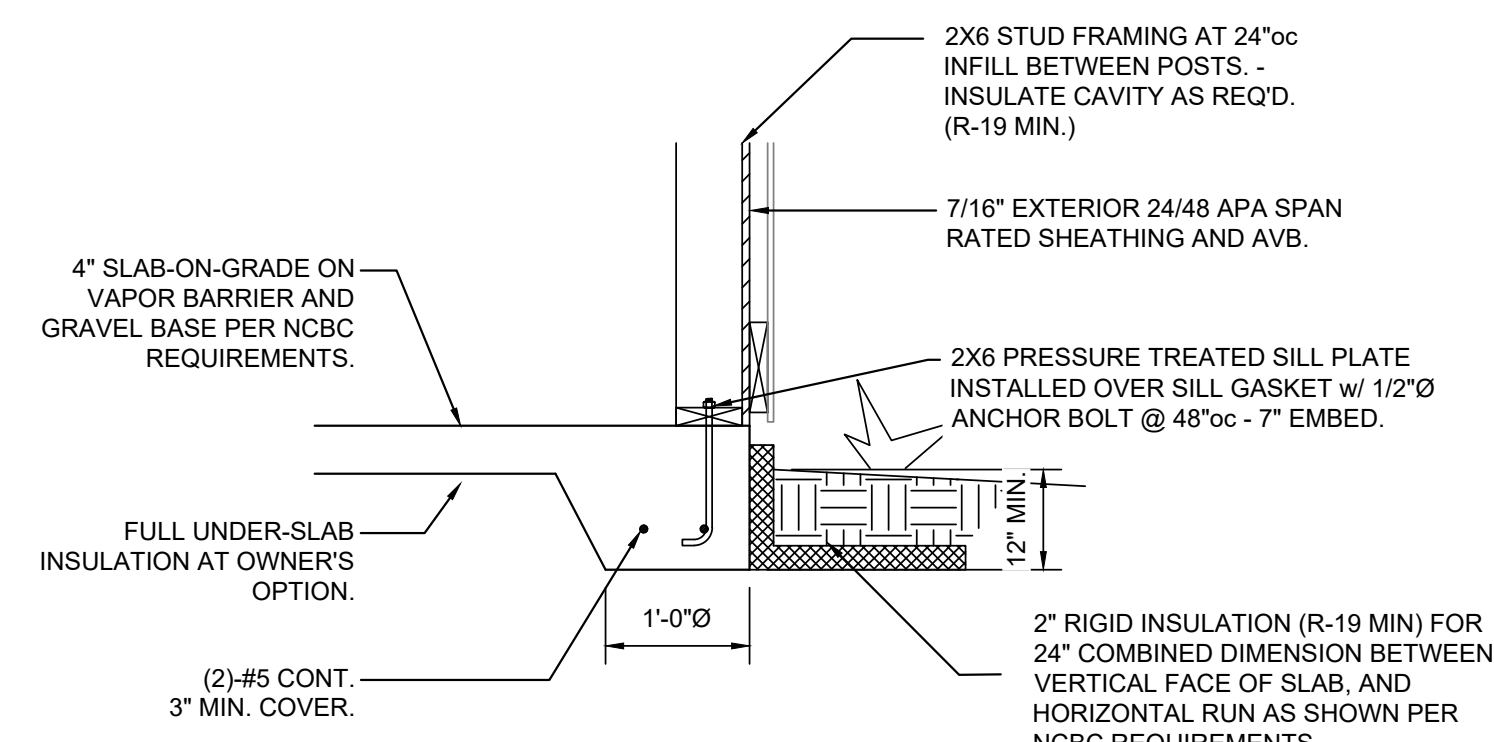
2 SECTION - POLE BARN WALL FRAMING
SCALE: 3/4" = 1'-0"



3 SHELTER - POLE BARN WALL FRAMING
SCALE: 3/4" = 1'-0"

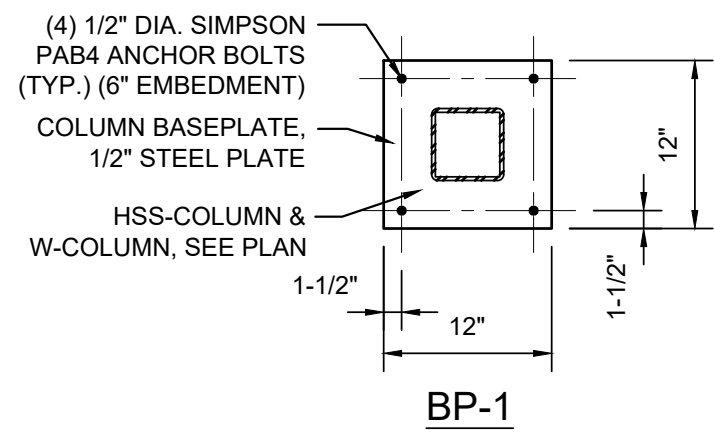


4 EXT. COLUMN FOOTING (TYP.)
SCALE: 3/4" = 1'-0"

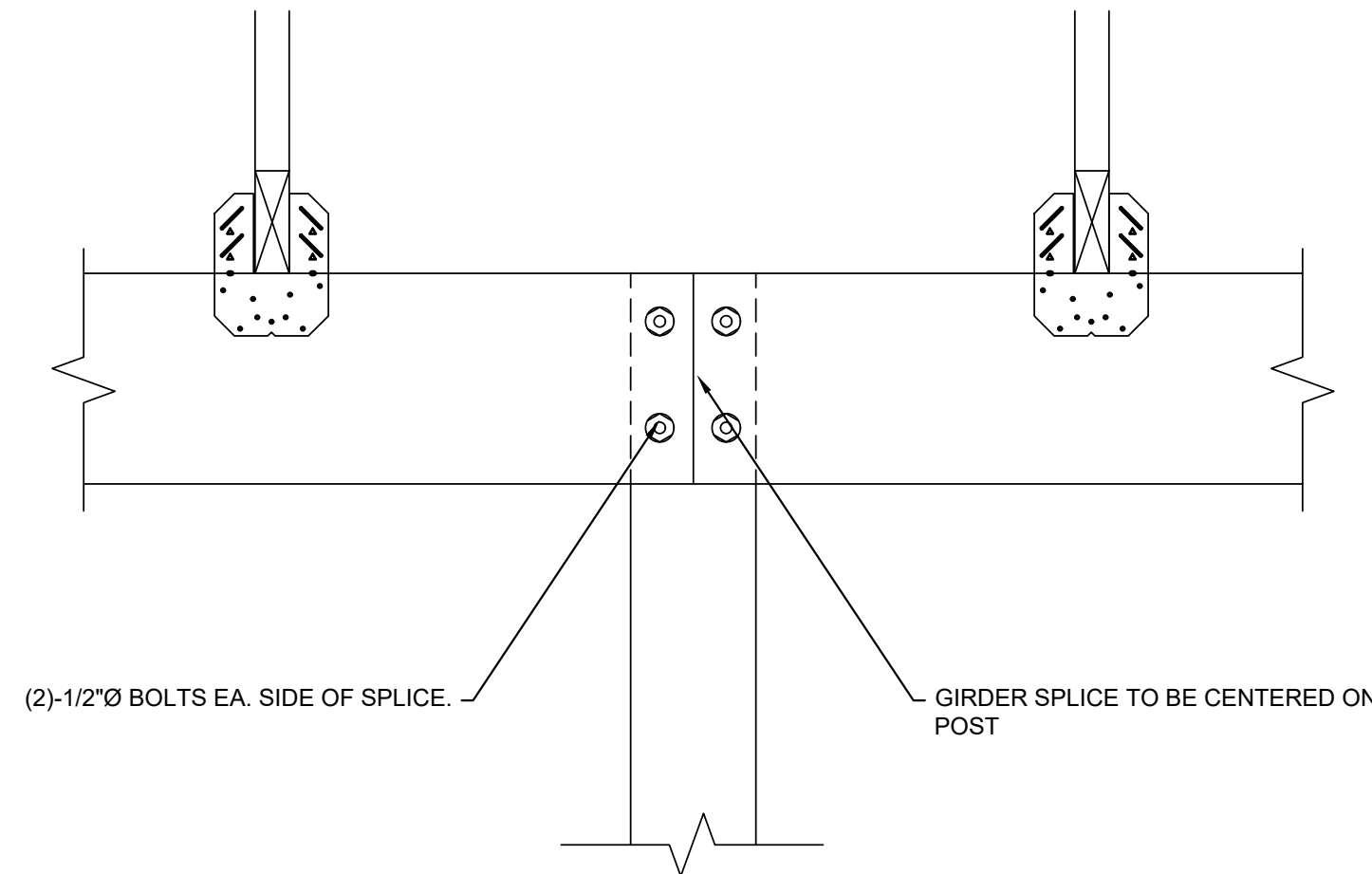


5 SECTION - PERIMETER SLAB ON GRADE
SCALE: 3/4" = 1'-0"

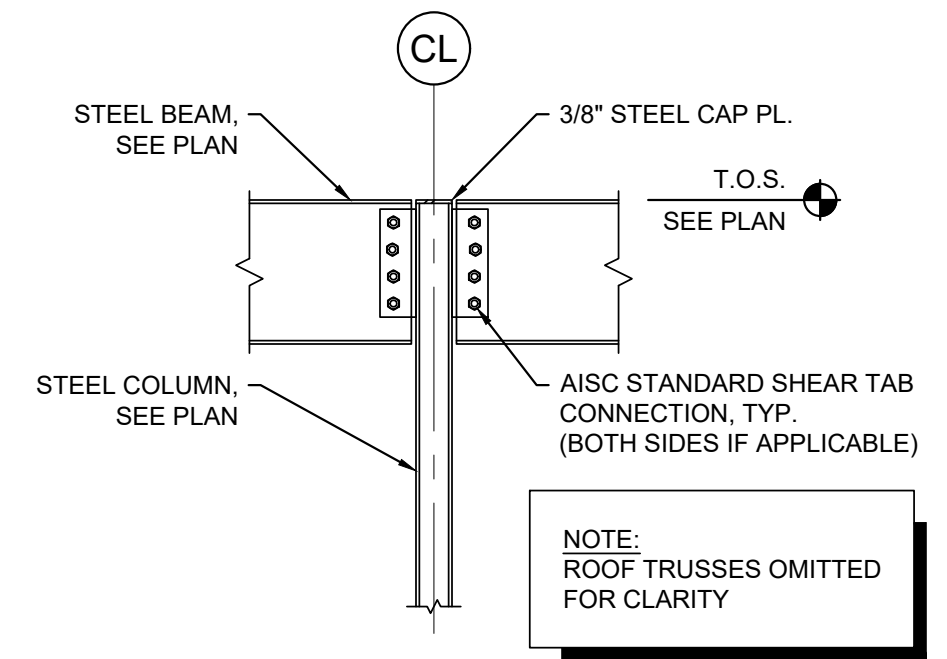
DESIGNED BY:	AJI	
DRAWN BY:	AJI	
APPROVED BY:	HMH	
PROJECT #:	24-067	
DATE:	11/27/2024	
No.	Revision	Date



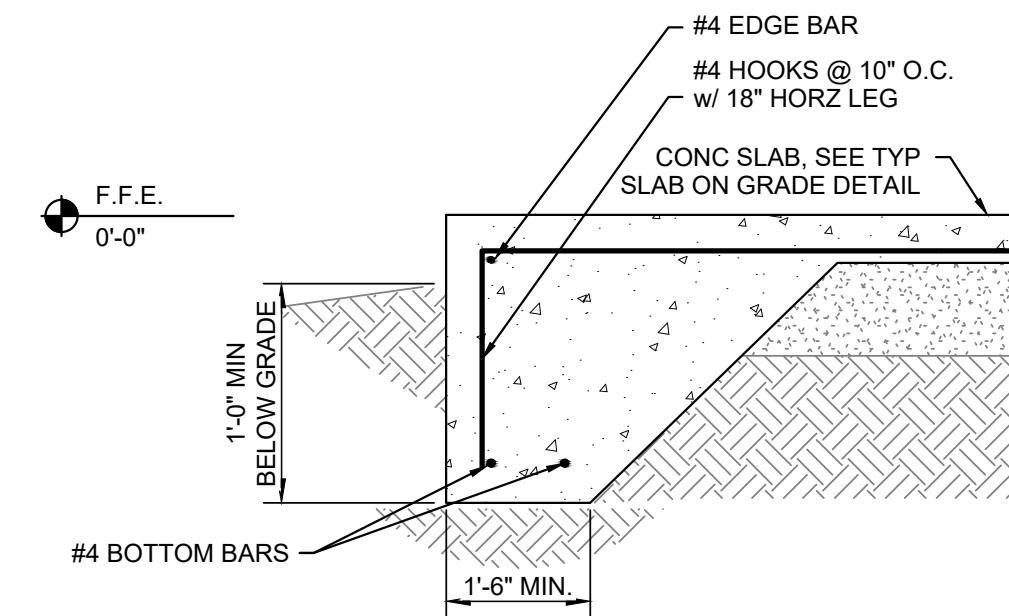
1 STEEL BASE PLATE DETAILS
SCALE: 3/4" = 1'-0"



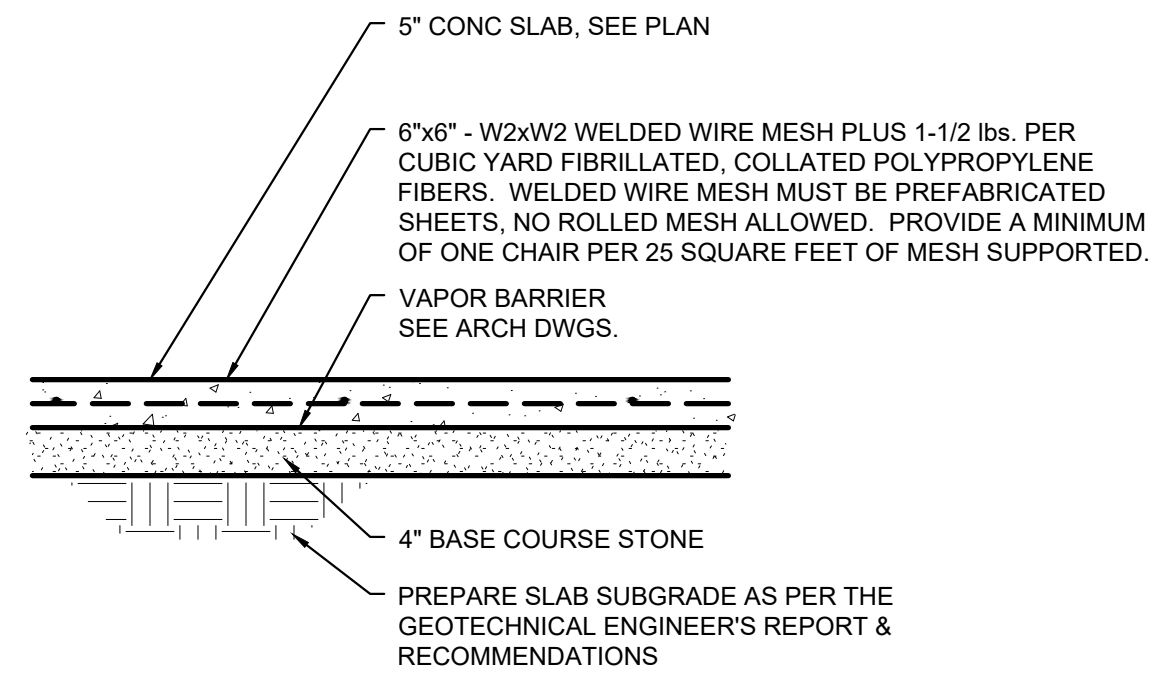
5 GIRDER SPLICE DETAIL
SCALE: 1-1/2" = 1'-0"



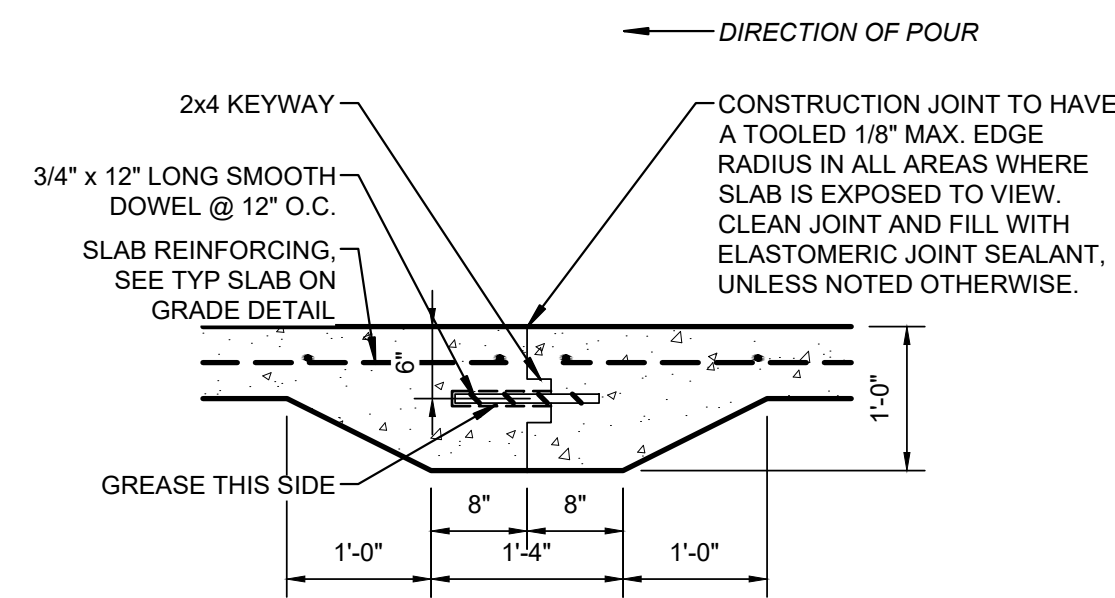
2 TYPICAL BEAM SHEAR CONNECTION
Scale: 3/4" = 1'-0"



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

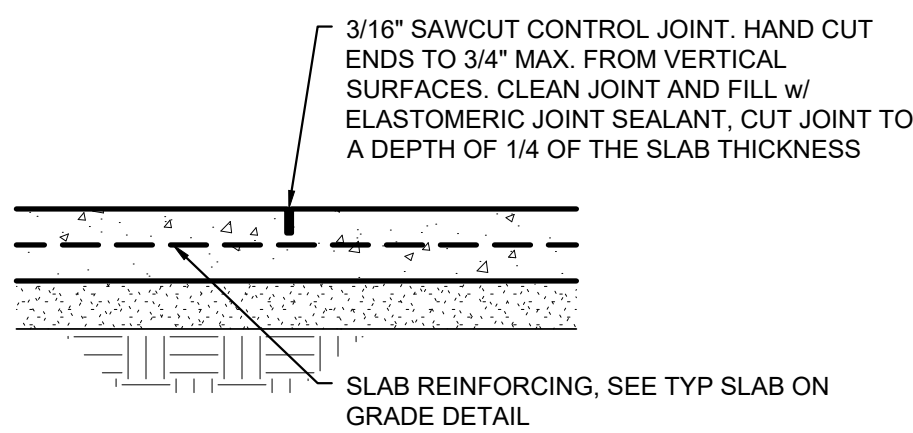


3 5" SLAB ON GRADE DETAIL
SCALE: 3/4" = 1'-0"



7 5" SLAB ON GRADE CONSTRUCTION JOINT
SCALE: 3/4" = 1'-0"

- NOTES:**
1. CONTRACTORS OPTION - USE REMOVABLE CONTROL JOINT MATERIAL SUCH AS "ZIP STRIP", "STRESSLOCK", OR APPROVED EQUAL.
 2. SLAB ON GRADE CONTROL JOINTS SHALL BE TOOLED OR SAWCUT. THE JOINT PATTERN SHALL BE APPROXIMATELY SQUARE AND LIMITED TO AN AREA NOT TO EXCEED 225 S.F. JOINTS SHALL BE CUT WITHIN 12 HOURS OF POURING SLAB. SEE PLAN FOR PROPOSED JOINT LAYOUT. FINAL JOINT LAYOUT TO BE DETERMINED BY THE GENERAL CONTRACTOR.

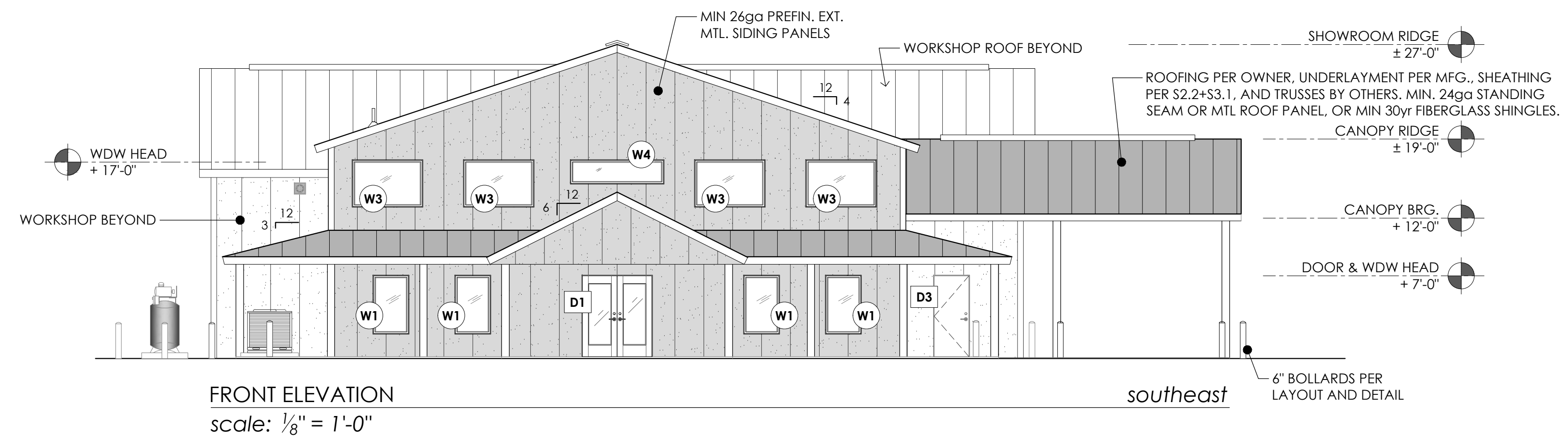


4 5" SLAB ON GRADE CONTROL JOINT
SCALE: 3/4" = 1'-0"

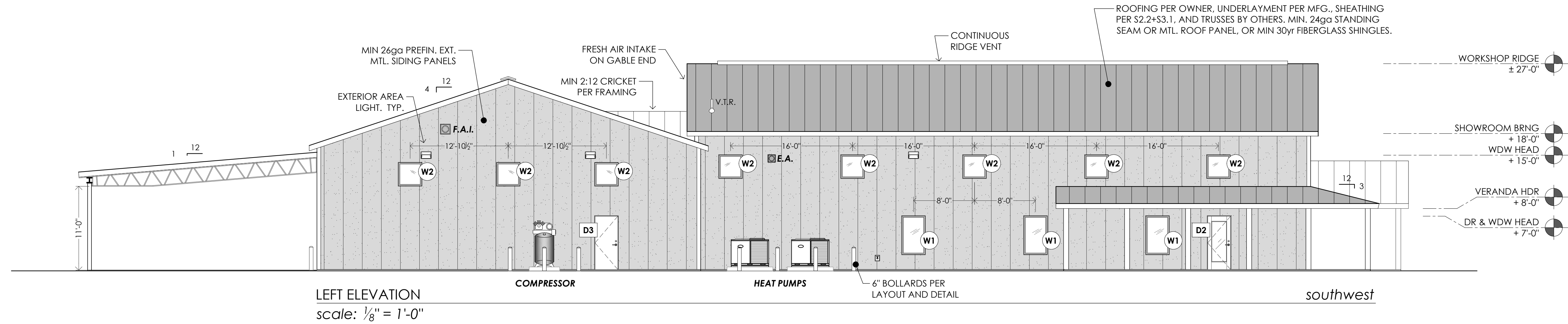


DOOR SCHEDULE										
MARK	QTY.	TYPE	LOCATION	HAND	NOM. OPENING		GLAZ.	FRAME MAT.	DOOR MAT.	NOTES
					W	H				
D1	1	A	MAIN ENTRANCE	2x	72"	84"	Y	P.B.O.	P.B.O.	1 2 4 5 6
D2	2	B	SHOWROOM	LHR	36"	84"	Y	P.B.O.	P.B.O.	1 2 4 5 6
D3	2	C	WORKSHOP	LHR	36"	84"	N	P.B.O.	P.B.O.	1 2 4 5 6
D4	1	C	WORKSHOP	RHR	36"	84"	N	P.B.O.	P.B.O.	1 2 4 5 6
D7	1	D	WORKSHOP	LH	36"	84"	VWO	P.B.O.	P.B.O.	1 2 6 7 8
D8	1	C	RESTROOM	LHR	36"	84"	N	P.B.O.	P.B.O.	2 6 9
D9	1	C	RESTROOM	RH	36"	84"	N	P.B.O.	P.B.O.	2 6 9
OH1	1	---	CANOPY	OHD	16'	12'	N	P.B.O.	P.B.O.	1 4 5
OH2	2	---	WORKSHOP	OHD	14'	14'	N	P.B.O.	P.B.O.	1 4 5
OH3	1	---	WORKSHOP	OHD	14'	12'	N	P.B.O.	P.B.O.	1 4 5
OH4	1	---	INTERIOR	OHD	14'	14'	N	P.B.O.	P.B.O.	1 4 5

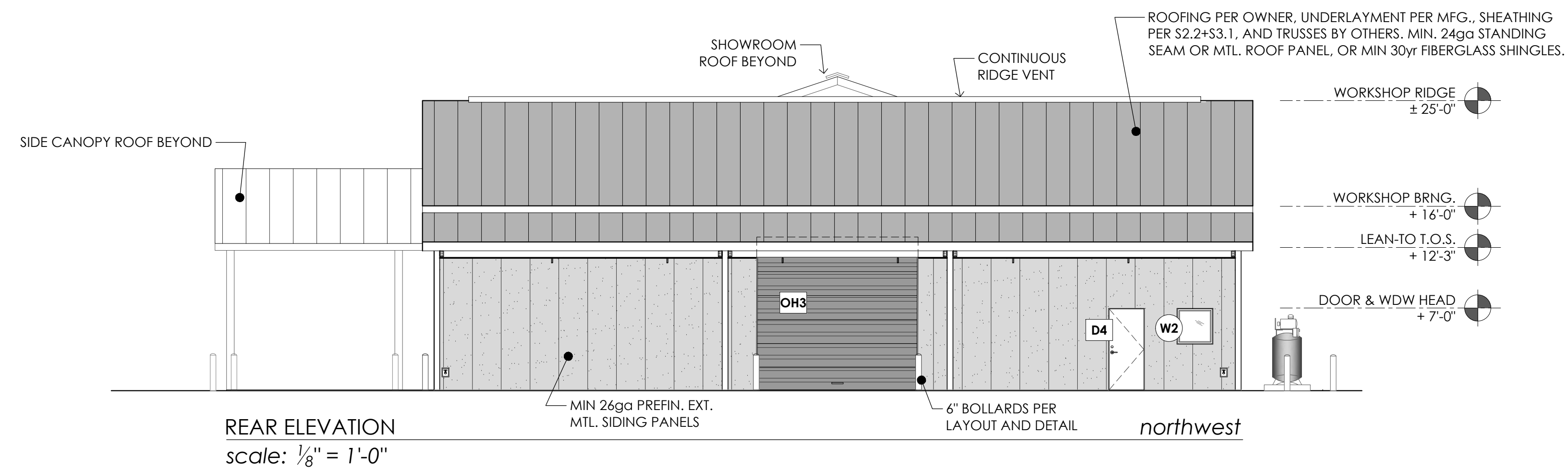
NOTES		
1 KEVED DEADBOLT LOCK	7 12' TOE KICK	1 INSULATED CORE CONSTR.
2 MONKEYTAIL HANDLE(S)	8 FLOOR STOP	O MOTORIZED OPENER, VWO
3 CRASH BAR PANIC HDWR	9 PRIVACY LOCK	P ENTRAPMENT PROTECTION
4 THRESHOLD & FLOOR SWEEP	T TOP & BOTTOM TRACK	M MAG FLOOR STOP
5 PERMIER GASKET	G 2x LOW-E GLAZING	
6 CLOSER(S)		



FRONT ELEVATION
scale: 1/8" = 1'-0"



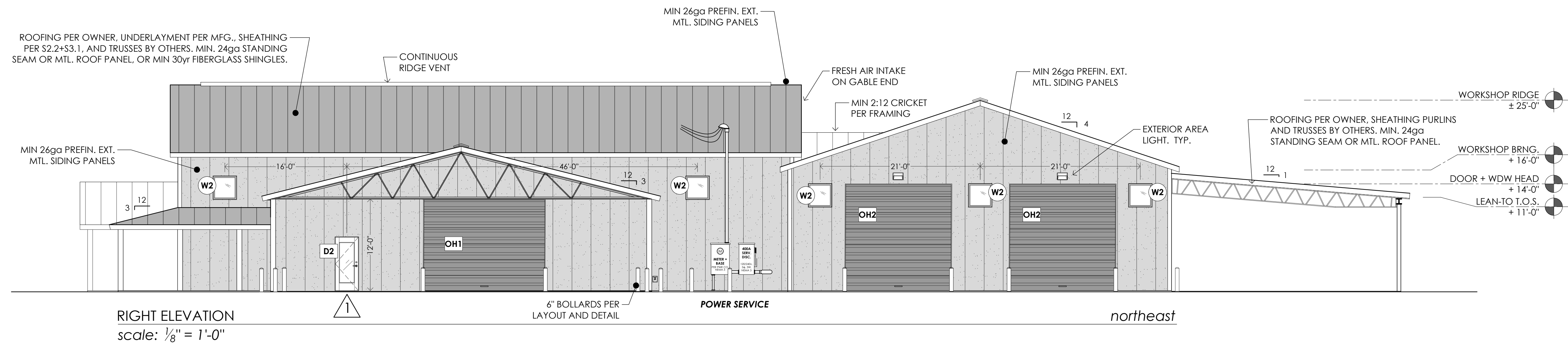
LEFT ELEVATION
scale: 1/8" = 1'-0"



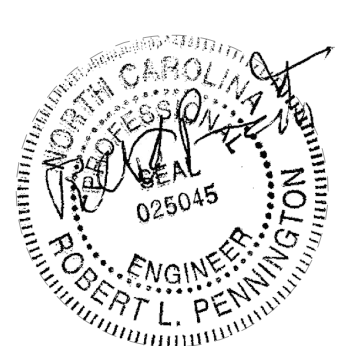
REAR ELEVATION
scale: 1/8" = 1'-0"

WINDOW SCHEDULE											
MARK	QTY.	NOM. OPENING		SEL	HEAD	TYPE	GLAZING	OUTSIDE MAT.	INSIDE MAT.	FRAME	NOTES
		W	H								
W1	7	36"	60"	24"	84"	FIXED	V.W.O.	P.B.O.	P.B.O.	ALUM	1 3
W2	14	36"	36"	16/12	19/15	FIXED	V.W.O.	P.B.O.	P.B.O.	ALUM	1 3
W3	4	96"	48"	13'	17'	FIXED	V.W.O.	P.B.O.	P.B.O.	ALUM	1 3
W4	1	96"	24"	15'	17'	FIXED	V.W.O.	P.B.O.	P.B.O.	ALUM	1 3

NOTES		
1. INSULATED CORE	3. LOW-E INSULATED	5. CERAMIC COATING
2. INSULATED GLAZING	4. COLOR TINT	6.



RIGHT ELEVATION
scale: 1/8" = 1'-0"



DESIGNED BY:	SMB
DRAWN BY:	SMB
APPROVED BY:	RLP
PROJECT #:	R2408270
DATE:	2024-10-23

#	Revision	Date
0	for permit	11/08/24
1	BCO comments	01/23/25

Ownership of Instruments of Service: All reports, plans, specifications, computer files, field data, notes and instruments prepared by the design professional as instruments of service shall remain the property of the design professional. All common law, statutory and other reserved rights including the copyright therein.

GENERAL MECHANICAL NOTES

GENERAL

- ALL WORK INDICATED ON DRAWINGS/SPECIFICATIONS SHALL BE INSTALLED WITH THE LATEST REQUIREMENTS OF THE CITY, COUNTY AND STATE BUILDING CODES AND THE AUTHORITY HAVING JURISDICTION.
- BRANCH ROUND DUCTWORK LOCATED ABOVE UNACCESSIBLE CEILING OR SERVING MORE THAN ONE DIFFUSER SHALL HAVE SCOOP OMITTED, AND FACE OPERATED DAMPER IN THE DIFFUSER UNLESS NOTED OTHERWISE.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL CEILING MOUNTED EQUIPMENT, IF AN ITEM IS NOT SHOWN ON THE R.C.P., PREPARE A DRAWING AND SUBMIT TO THE ARCHITECT FOR APPROVAL.
- COORDINATE ALL ROOF AND SLAB PENETRATIONS WITH STRUCTURAL ENGINEER.
- TRANSITION RECTANGULAR DUCTWORK ON THE BOTTOM AND THE SIDES, MAINTAIN DUCTWORK LEVEL AND AS HIGH AS POSSIBLE UNLESS NOTED OTHERWISE.
- FLEXIBLE DUCT RUNOUTS TO DIFFUSERS SHALL BE INSTALLED FREE OF KINKS AND SAGS. ALL DIFFUSER RUNOUTS SHALL BE SIZED TO MATCH THE INLET OF THE DIFFUSER SERVED. NO FLEXIBLE DUCTS TO EXCEED 14 LINEAR FEET.
- ALL DUCT CHANGES FROM SQUARE TO ROUND SHALL BE SMOOTH TRANSITIONS, SPINNS AT THE END OF CAPPED DUCTS ARE NOT ACCEPTABLE.
- PORTIONS OF DUCTWORK OR PIPING VISIBLE THROUGH GRILLES AND REGISTERS IN FINISHED AREAS SHALL BE PAINTED FLAT BLACK.
- CONTRACTOR SHALL COORDINATE VOLTAGE AND PHASE OF EACH PIECE OF EQUIPMENT WITH THE ELECTRICAL CONTRACTOR PRIOR TO ORDERING.
- MOUNT THERMOSTATS WHERE INDICATED ON PLANS 48" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE.
- DUCT SIZES ARE SHOWN AS INSIDE CLEAR DIMENSIONS, WHERE INTERNAL LINING IS CALLED FOR, DIMENSIONS SHALL BE INCREASED BY THE THICKNESS OF THE LINING.
- EXTEND CONDENSATE DRAIN TO NEAREST FLOOR DRAIN.
- ALL HOT WATER PIPING SHALL BE INSULATED.
- INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, (IE CONTROLS, REFRIGERANT SPECIALTIES ETC.)
- MECHANICAL CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER TRADES AVOID CONFLICTS.
- MECHANICAL CONTRACTOR SHALL COORDINATE DUCT ROUTING WITH STRUCTURAL BEAMS AND COLUMNS, ETC., SEE ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS DESIRED. CONTRACTOR SHALL FAMILIARIZE HIMSELF/HERSELF WITH PLANS AND PROVIDE A COMPLETE AND COORDINATED SYSTEM.
- DO NOT SCALE PLANS. PLANS ARE DIAGRAMMATIC AND SHOW THE GENERAL LOCATION OF DEVICES, EQUIPMENT, PIPE ROUTING, ETC., THE PLANS SHOW GENERAL INTENT ONLY. DUE TO THE SMALL SCALE OF PLANS, NOT ALL OFFSETS, ETC ARE SHOWN, THIS SYSTEM, SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, WALL SECTIONS, ETC.
- MECHANICAL CONTRACTOR SHALL PROVIDE TURNING VANES IN ALL SUPPLY AIR ELBOWS AND TEES.
- SUPPLY AND RETURN AIR DUCTS SHALL BE LINED 1/2" OUT FROM THE AIR HANDLING UNIT IN BOTH DIRECTIONS. ALL OTHER DUCT SHALL BE WRAPPED. SEE SPECIFICATIONS FOR INFORMATION ON LINING AND DUCT WRAP.
- DOORS TO ALL BATHROOMS SHALL BE UNDERCUT 3/4".
- SUBMIT 4 COPIES OF PRODUCT AND CAPACITY DATA FOR SPECIFIED EQUIPMENT TO THE ARCHITECT/ENGINEER BEFORE ORDERING EQUIPMENT. IF CONTRACTOR ELECTS TO IGNORE REQUIREMENT FOR SUBMITTAL INFORMATION, OR IF SUBMITTAL IS RECEIVED AFTER INSTALLATION OF EQUIPMENT, THEN CONTRACTOR ASSUMES ALL COSTS ASSOCIATED WITH SUBSTITUTION AND RESPONSIBILITY FOR OPERATION, FUNCTION AND COORDINATION OF EQUIPMENT PURCHASED.
- IF ALTERNATE EQUIPMENT IS USED OTHER THAN WHAT IS SPECIFIED ON THE DRAWINGS, THE CONTRACTOR SHALL COORDINATE THE EQUIPMENT WITH ALL OTHER TRADES. THE COORDINATION SHALL OCCUR PRIOR TO ROUGH-IN OF ANY TRADES EQUIPMENT. ALL REVISION WORK REQUIRED TO COORDINATE ANY EQUIPMENT SUBSTITUTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
- ALL PIPE PENETRATIONS THROUGH NON-RATED WALLS OR FLOORS SHALL BE SEALED WITH THE APPROPRIATE WALL/FLOOR MATERIALS PER THE ARCHITECTURAL SPECIFICATIONS. ALL PIPE PENETRATIONS THROUGH EXTERIOR WALLS SHALL BE SEALED WITH MATERIALS PER THE ARCHITECTURAL SPECIFICATIONS AND WATERPROOFED TO PREVENT MOISTURE FROM ENTERING THE BUILDING. ALL ROOF PENETRATIONS SHALL BE FLASHED AND MADE WATER TIGHT IN A MANNER THAT IS CONSISTENT WITH THE ROOF CONSTRUCTION AND APPROVED BY THE ROOF MATERIAL MANUFACTURER SO AS NOT TO VOID THE ROOF WARRANTY. ALL WALL, FLOOR AND ROOF PENETRATIONS AND SEALING OF PENETRATIONS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR.
- WHERE THE WORD "PROVIDE" IS USED, IT SHALL BE DEFINED TO MEAN THAT THE DEVICE/EQUIPMENT INDICATED SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR, UNLESS OTHERWISE NOTED.
- ALL MANUFACTURERS MINIMUM WORKING CLEARANCE RECOMMENDATIONS SHALL BE MAINTAINED ON ALL EQUIPMENT.
- THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT/ENGINEER A COMPLETE SET OF AS-BUILT PLANS INDICATING ALL CHANGES ENCOUNTERED DURING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND SHALL NOTIFY LOCAL INSPECTION DEPARTMENTS AS WORK PROGRESSES.
- MECHANICAL CONTRACTOR SHALL INSTALL 1" PHENOLIC ID TAGS WITH LETTERING ON ALL NEW EQUIPMENT, ID TAGS ARE TO BE READABLE FROM NORMAL PERSONNEL AREAS.
- ALL NAMEPLATES AND OTHER ITEMS SHALL BE CONNECTED TO APPROPRIATE MOUNTING SURFACES SUCH THAT THEY SHALL NOT BE DETACHED DURING TRANSPORT OR OTHER OPERATING CONDITIONS. NO GLUE ON NAMEPLATES, ETC., ARE ALLOWED UNLESS APPROVED BY ENGINEER.

PRODUCT AND EXECUTION

HANGERS AND SUPPORTS:

- WHERE SEVERAL PIPES RUN IN PARALLEL AND IN THE SAME PLANE, PIPES 2.5" AND SMALLER MAY BE SUPPORTED ON GANG OR MULTIPLE HANGERS, PIPES 3" AND LARGER SHALL BE SUPPORTED INDEPENDENTLY.
- COPPER PIPES SHALL BE SEPARATED FROM FERROUS SUPPORTS WITH COPPER-PLATED STEEL OR 4 psf SHEET LEAD.
- SUPPORTS FOR ALL PIPES 1.5" AND LARGER SHALL NOT BE LOCATED MORE THAN 10'-0" APART. PIPES SMALLER THAN 1.5" SHALL HAVE SUPPORTS LOCATED NOT MORE THAN 15'-0" APART. ALL PVC PIPES SHALL BE SUPPORTED AT 48" ON CENTERS.
- SUPPORT ALL PIPES INDEPENDENT OF EQUIPMENT. ADJUST HANGERS AND SUPPORTS SO THAT LOADING IS UNIFORM. ALL HANGER RODS SHALL BE SUSPENDED FROM STRUCTURE. DO NOT SUSPEND FROM OTHER PIPING, EQUIPMENT OR DUCTWORK.
- ALL DUCT HANGERS AND SUPPORTS SHALL BE IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS-METAL AND FLEXIBLE, 1995.

SLEEVES AND ESCUTCHEONS:

- PROVIDE SLEEVES WHERE PIPES PASS THRU WALLS, FLOORS AND ROOFS. ALL SLEEVES THRU OUTSIDE WALLS SHALL BE WATER TIGHT.
- SLEEVES FOR INSULATED PIPES PENETRATING NON-RATED CONSTRUCTION SHALL ALLOW FOR FULL THICKNESS OF PIPE AND INSULATION. THEY SHALL BE SIZED TO PROVIDE 3/4" CLEARANCE ON ALL SIDES OF PIPING, INCLUDING INSULATION TO ACCOMMODATE THERMAL MOVEMENT.
- PROVIDE ESCUTCHEONS WHERE PIPES PASS THRU WALLS, FLOORS AND CEILING IN FINISHED AREAS.

DUCTWORK:

- ALL SHEET METAL DUCTWORK, EXCEPT WHERE SPECIFIED OTHERWISE, SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS FOR APPLICABLE PRESSURE AND CLASS. ENTIRE AIR SYSTEM INSTALLATION SHALL BE RIGID AND FREE FROM RATTLES AND AIR NOISES. INTERIOR OF DUCTS SHALL BE SMOOTH.
- FLEXIBLE DUCT SHALL BE ALLOWED FOR CONSTRUCTION OF SUPPLY AIR DIFFUSERS TO MAIN DUCT SYSTEM. FLEXIBLE DUCT LENGTH SHALL BE LIMITED TO A MAXIMUM OF 10'-0". ALL FLEXIBLE DUCT SHALL BE UL LISTED, CLASS "1", FACTORY INSULATED WITH FIBERGLASS WITH A PROTECTIVE VAPOR BARRIER JACKET TO ACHIEVE A MINIMUM R-VALUE OF 5.0 HR-SI, FT. DEG. F/BTU AT 75 DEGREES F. FLEXIBLE DUCT SHALL CONNECT TO RIGID DUCT W/ SPIN-IN FITTING AND QUADRANT DAMPER.
- PROVIDE DOUBLE THICKNESS TURNING VANES FOR ALL MITERED TURNS. PROVIDE TURNING VANES FOR ALL RADII ELBOWS LESS THAN 1.5R. VANES SHALL BE PARALLEL TO AIRFLOW AND SHALL BE BRACED AS REQUIRED TO ELIMINATE VIBRATION. PROVIDE TAPERED CONNECTIONS AT ALL BRANCH LOCATIONS.
- CONTRACTOR SHALL PROVIDE ALL TRANSITIONS REQUIRED TO CONNECT DUCT TO EQUIPMENT OR COILS. TRANSITIONS MAY VARY FROM THOSE SHOWN ON DRAWINGS, DEPENDING ON EQUIPMENT PURCHASED.

DAMPERS:

- MANUAL DAMPERS: MANUAL DAMPERS SHALL BE PROVIDED AT ALL MAJOR BRANCH TAKE-OFFS FROM THE MAIN DUCT AND SPECIFICALLY WHERE LOCATED ON DRAWINGS. ALL DAMPERS SHALL BE LOCATED SUCH THAT THEY CAN BE EASILY ACCESSED. DAMPERS SHALL BE SINGLE-BLADE UP TO 8" HIGH AND MULTI-BLADE OVER 8" FREE AREA WHEN IN OPEN POSITION. DAMPER BLADES SHALL BE MINIMUM OF 1/4" STEEL AND QUADRANTS SHALL BE CADMIUM-PLATED STEEL WITH DAMPER POSITION INDICATOR. PROVIDE STAND-OFF BRACKETS, SIZED TO CLEAR THE INSULATION THICKNESS, FOR QUADRANTS INSTALLED ON INSULATED DUCTWORK.

DIFFUSERS:

- GRILLES, REGISTER AND DIFFUSERS SHALL BE PROVIDED WITH FRAMES, BORDERS AND MOUNTING ATTACHMENTS SUITABLE FOR INSTALLATION IN ACTUAL WALL, SOFFIT OR CEILING CONSTRUCTION IN WHICH THEY ARE INSTALLED. CONTRACTOR TO COORDINATE ACTUAL INSTALLATION WITH GENERAL CONTRACTOR AND/OR ARCHITECT PRIOR TO ORDERING DIFFUSERS.
- DIFFUSERS SHALL HAVE ROUND NECKS OR SHALL BE PROVIDED WITH SQUARE-TO-ROUND COLLARS WHERE CONNECTED TO ROUND OR FLEXIBLE DUCT.

DUCT INSULATION:

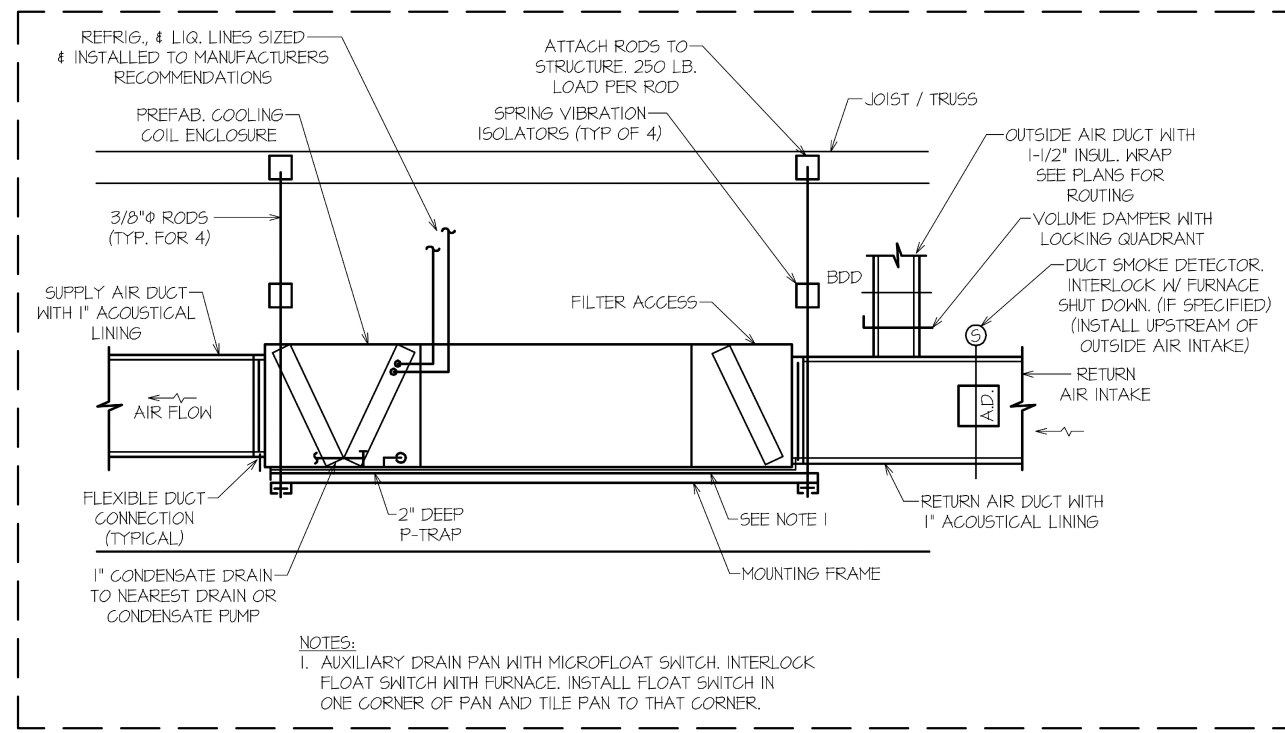
- ALL INSULATION AND ACCESSORIES LOCATED IN A RETURN AIR PLENUM, UNLESS SPECIFICALLY EXCEPTED ON PLANS SHALL HAVE A MAXIMUM COMPOSITE FLAME SPREAD RATING OF 25 AND A MAXIMUM SMOKE DEVELOPED RATING OF 50. NO FUGITIVE OR CORROSIVE TREATMENTS SHALL BE EMPLOYED TO IMPART FLAME RESISTANCE.
- DUCT INSULATION FOR SUPPLY DUCTS AND OUTSIDE AIR DUCTS MUST BE CLOSED CELL ELASTOMERIC. FIBERGLASS DUCT LINER IS NOT PERMITTED.

PIPING:

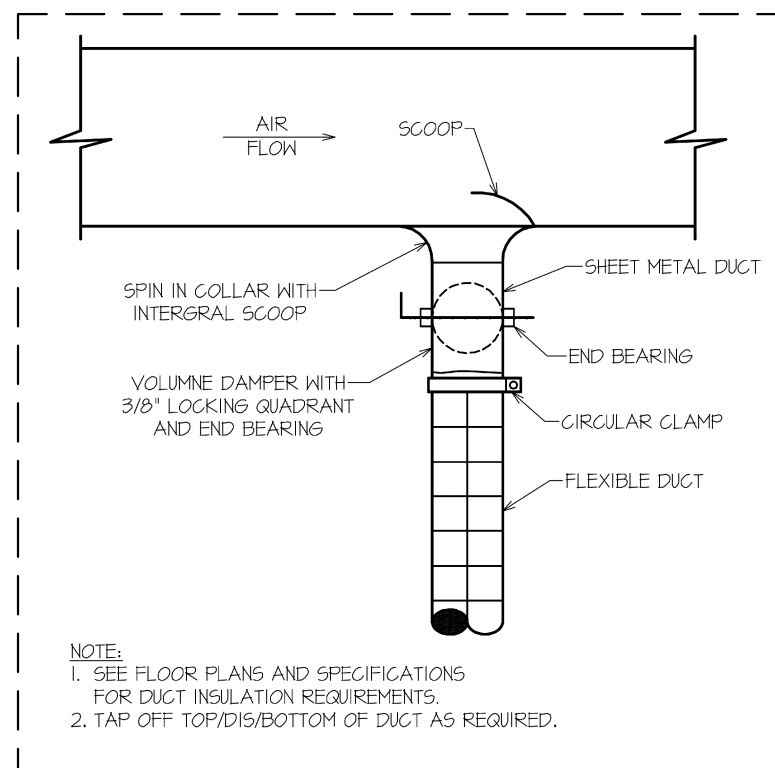
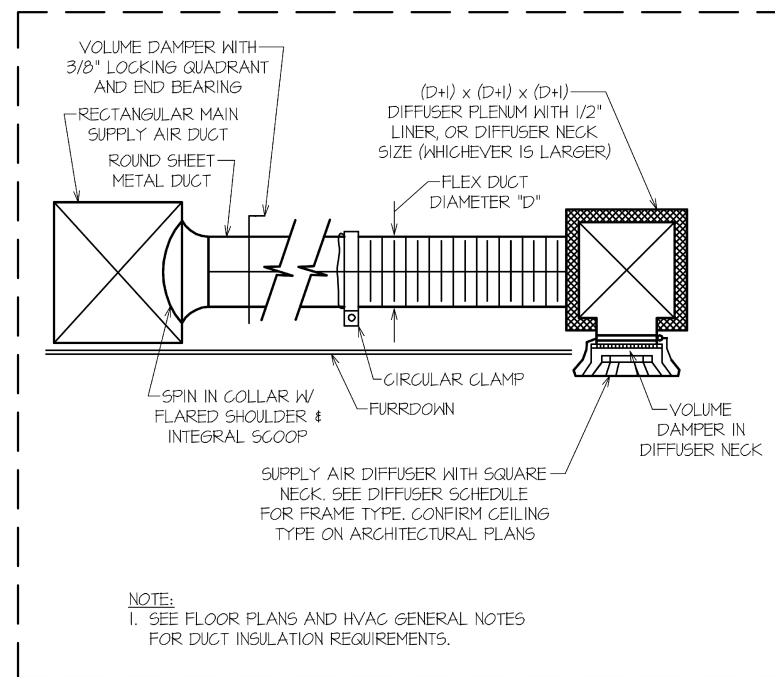
- GAS PIPING: SCHEDULE 40 ASTM A53 OR A120 OR A120T4C. INSTALL PER NFPA-54.
- REFRIGERANT PIPE SHALL BE DEHYDRATED AND SEALED TYPE A CR COPPER TUBING WITH WROUGHT COPPER FITTINGS AND BRAZED OR SILVER SOLDERED JOINTS. BLEED DRY NITROGEN THROUGH TUBE WHILE SOLDERING. TEST PIPING AT 300 psig WHILE INSPECTING FOR LEAKS. SIZE, INSTALL, EVACUATE, DEHYDRATE AND CHARGE REFRIGERANT PIPING PER RECOMMENDATIONS OF AC EQUIPMENT MANUFACTURER. INSULATE SUCTION WITH 1/2" THICK INSULATION. CONFIRM REFRIGERANT PIPE SIZES WITH MANUFACTURER FOR LENGTH OF RUN PRIOR TO INSTALLATION.

DUCT SMOKE DETECTORS:

- DUCT SMOKE DETECTORS SHALL BE PROVIDED ON ALL SYSTEMS CAPABLE OF SUPPLYING OVER 2000 CFM, IN ACCORDANCE WITH THE LATEST ADDITION OF THE BUILDING CODE, OR AS LOCATED ON PLANS.
- IN BUILDINGS WITH A FIRE ALARM SYSTEM, DUCT SMOKE DETECTORS SHALL BE PROVIDED BY FIRE ALARM INSTALLER TO VERIFY THAT DETECTORS WILL FUNCTION WITH FIRE ALARM SYSTEM. THE MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR FOR RESPONSIBILITY TO SUPPLY DETECTORS. DETECTORS SHALL BE INSTALLED BY MECHANICAL CONTRACTOR AND WIRED BY EITHER ELECTRICAL CONTRACTOR OR FIRE ALARM CONTRACTOR. DETECTORS SHALL BE WIRED THRU FIRE ALARM SYSTEM TO SHUT HVAC UNITS DOWN IN EVENT OF SMOKE DETECTION.



HORIZONTAL UNIT SUPPORT



ROUND DUCT TAKEOFF

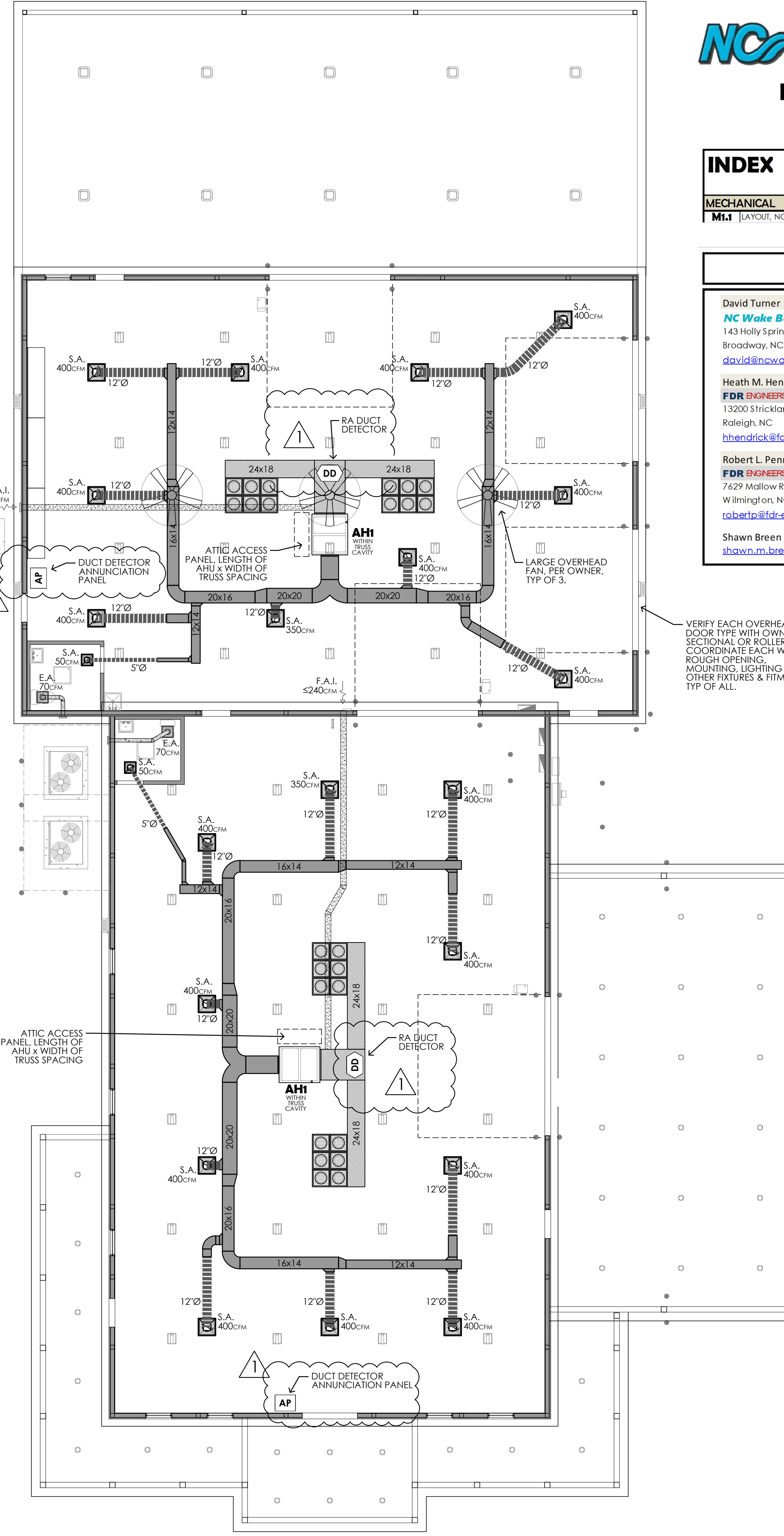
WakeBoats		TABULATED LOADS												MINIMUM SIZING			
area	FAI	cooling load in a R/Uth			heat load in a R/Uth			heat req'd in a R/Uth			max	min	max	min	net	net	
ton	ft ²	room	room	room	room	room	room	room	room	room	room	room	room	room	ton	ton	
October 25, 2024																	
Zone showroom	4000	240	57	79	45	12	51	32	24	34	31	20	14	20	31	7	10%
Zone workshop	3500	210	48	67	52	18	37	36	28	31	37	23	18	25	37	6	10%

REQUIRED FRESH AIR + EXHAUST TABULATION										
SHOWROOM		FAI + EXHAUST AIR TABULATION								
area	description	s.f.	net	density	calc.	actual	occ.	area	rate	
ft ²				lb/ft ³	cfm	cfm	cfm	cfm	EA rate	
Warehouses	showroom	4,000	-	-	-	0.06	-	-	240	
Toilet rooms - public	restroom	64	-	-	1	1	-	-	50	
		total required fresh air intake + exhaust air								240
										50

AIR HANDLER SCHEDULE										
KEY	MAKE	MODEL	NOM CFM	COOL	HEAT	FAN	ELECTRICAL DATA			NOTES
				NET	NET	HP	MCA	MOCOP	Voltage	
AH1	CARRIER	40RFGA12A2A5	4,000	112	106	2.4	8	15	230-3	1 2 3 4 5 6

HEAT PUMP + CONDENSER SCHEDULE												
KEY	MAKE	MODEL	NOM TONS	COOLING	HEATING	FAN	ELECTRIC			NOTES		
				NET	NET	HP	MCA	MOCOP	V			
HP1	CARRIER	38AUGQ12	10	112	15.3	106	3.4	12/1/2	39	50	230-3	1 2 3

NOTES:
 1. COOLING RATED PER ANSI STANDARD 110/20 AS RPT. A.M.S. O.D. AIR TEMP. 80°F D.B., 67°F W.B. ENTERING AIR TEMP., AND NOM. AIR QUANTITY LISTED.
 2. ALL UNITS SHALL BE ASGA CERT. AND ULL LABELED.
 3. INCL. LIQ. LINE SOLENOID VALVES, ACCUM. ETC. MAX T.E.L. IS 100'. IF DIST. CANNOT BE MET, CONTACT ENG. OR RECORD PRIOR TO INST. OF EQ.
 4. ALL UNITS ON SERVICE PADS OR SLAB TO RECEIVE BOTH NERVA BLOCKS AND ISOLATION PADS. UNITS SUSPENDED TO RECEIVE ISOLATION DAMPERS.



1 MECHANICAL LAYOUT
 scale: 1/8" = 1'-0"

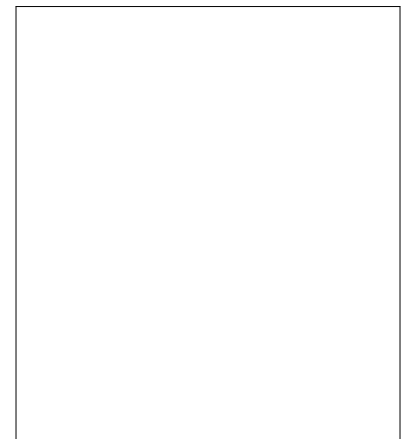
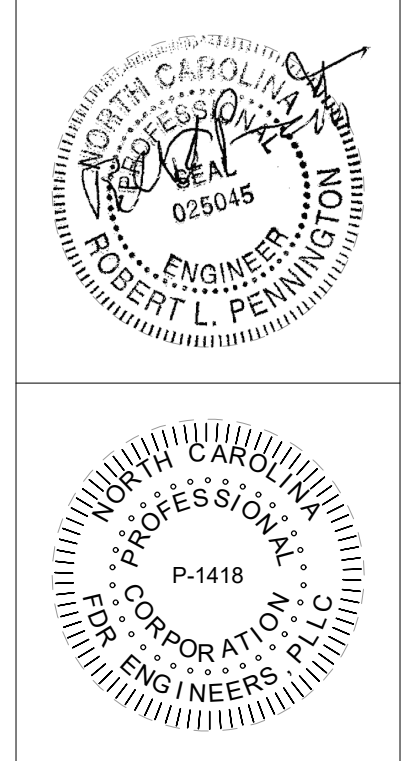


INDEX	
deferred - D	11/22/2024
no changes - 0	1/23/2025
changes - C	

CONTACTS

NAME	ROLE	CONTACT INFO
David Turner	OWNER	NC WakeBoats, 143 Holly Springs Church Road, Broadway, NC 27505, david@ncwakeboats.com, (919) 928-1104
Heath M. Hendrick	STRUCTURAL ENGINEER	FDR ENGINEERS, 13200 Strickland Road Ste. 114, Raleigh, NC, hendrick@fdr-eng.com, (919) 427-0501
Robert L. Pennington	APPX B & MPE ENGINEER	FDR ENGINEERS, 7629 Mallow Road, Wilmington, NC 28411, robertlp@fdr-eng.com, (910) 520-0278
Shawn Breen	APPX B & MPE PM	(860) 387-3017, shawn.m.breen@gmail.com

FDR ENGINEERS, PLLC
 13200 Strickland Road
 Suite # 114
 Raleigh, NC 27613
 www.fdr-eng.com
 (919) 957-5100



Project: 155 Holly Springs Church Road, Broadway, NC 27505

DESIGNED BY: SMB
 DRAWN BY: SMB
 APPROVED BY: RLP
 PROJECT #: R2408270
 DATE: 2024-10-23

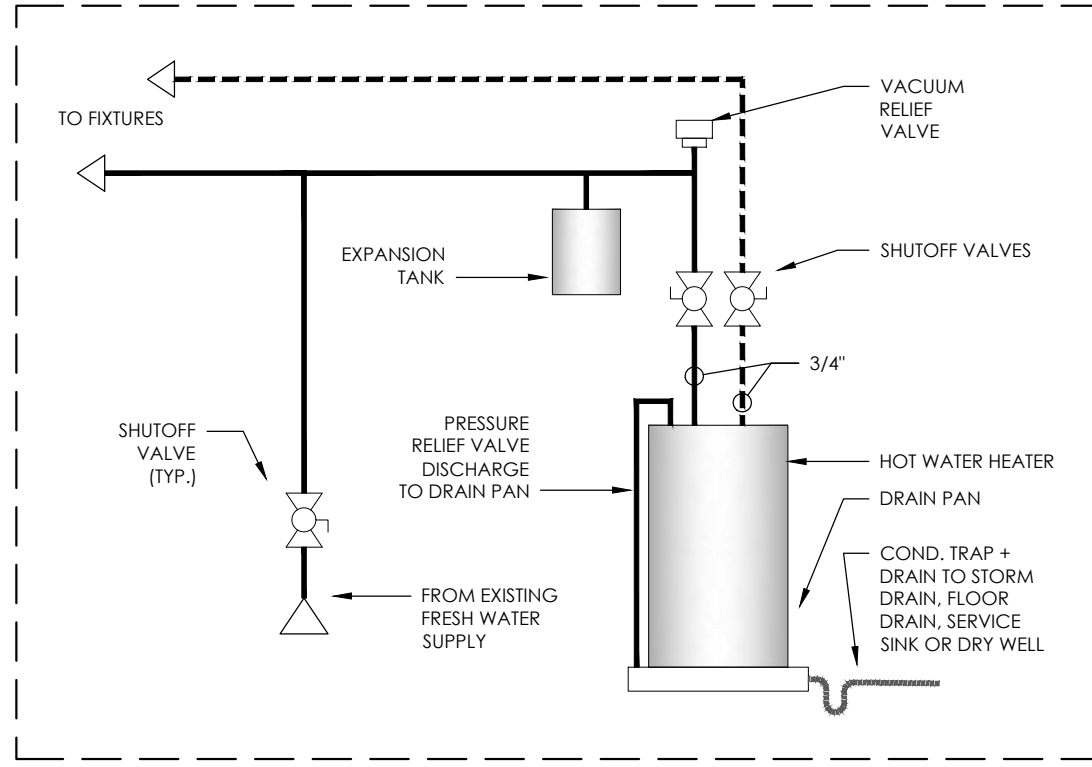
#	Revision	Date
0	for permit	11/08/24
1	BCO comments	01/23/25

Sheet: **M1.0**

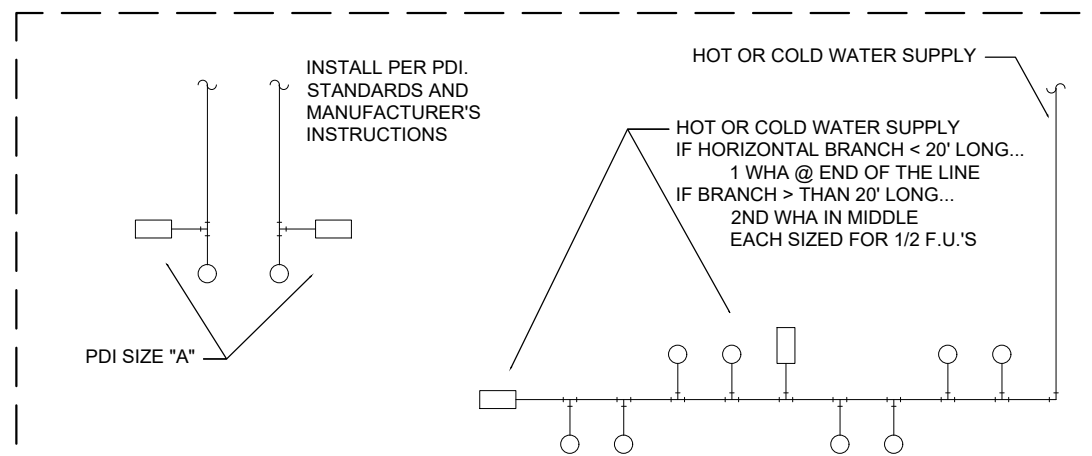
Ownership of Instruments of Service: All reports, plans, specifications, computer files, field data, notes and instruments prepared by the design professional as instruments of service shall remain the property of the design professional. All common law, statutory and other reserved rights including the copyright thereof.

PLUMBING NOTES

- ALL PLUMBING SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST ISSUE OF THE NATIONAL STANDARD PLUMBING CODE, THE NATIONAL FIRE CODE, AND ALL OTHER APPLICABLE CODES.
- ALL PLUMBING PIPING SHALL BE CLOSELY COORDINATED WITH STRUCTURAL SYSTEM, MECHANICAL SYSTEM AND ELECTRICAL SYSTEM TO INSURE PROPER COMPLIANCE WITH CODES AND INSURE THAT ALL TRADES WILL NOT CONFLICT WITH EACH OTHER.
- ALL SANITARY SEWER PIPING RUN BELOW GROUND OR FIRST FLOOR SLAB SHALL BE RUN AT 1/8" FT. PITCH UNLESS OTHERWISE REQUIRED BY CODE OR NOTED.
- ALL WATER PIPING SHALL BE PITCHED FOR DRAINAGE WITH DRAIN VALVES INSTALLED AT LOW POINT AND MANUAL AIR VALVES INSTALLED AT HIGH POINTS WHERE REQUIRED.
- PROVIDE ACCESS PANELS AS REQUIRED AT VALVE LOCATIONS TO PROVIDE ACCESS. COORDINATE TYPE AND LOCATION WITH GENERAL CONTRACTOR.
- ALL CLEANOUTS SHALL HAVE TOPS ESPECIALLY DESIGNED FOR PERTINENT FLOOR FINISHES SUCH AS CARPET, TILE, ETC. UNLESS OTHERWISE SPECIFIED.
- DO NOT SCALE DRAWINGS. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF DOORS, WINDOWS, WALLS, FIXTURES, ETC. AS REQUIRED.
- EXCEPT WHERE PIPE SPACE IS PROVIDED OR UNLESS OTHERWISE NOTED, ALL SUPPLY, WASTE AND VENT RISERS SHALL BE RUN IN WALLS AND PARTITIONS.
- VENTS WILL BE COLLECTED ABOVE THE CEILING AND EXTENDED THROUGH THE ROOF AS A SINGLE VENT AT THE POINTS INDICATED.
- P.C. SHALL PROVIDE A PRESSURE REDUCING VALVE WHERE WATER MAIN ENTERS BUILDING IF PRESSURE EXCEEDS 80 PSI.
- ALL MATERIALS AND THEIR INSTALLATIONS SHALL COMPLY WITH THE STATE AND LOCAL CODES, RULES, REGULATIONS, AND ORDINANCES.
- PIPING:
 - FURNISH AND INSTALL DIELECTRIC OR ISOLATION FITTINGS AT ALL POINTS WHERE COPPER PIPE CONNECTS TO WROUGHT IRON OR STEEL PIPE.
 - EXPOSED PIPE IN TOILET ROOMS: CHROME PLATED BRASS, AMERICAN BRASS COMPANY, OR EQUIVALENT. FURNISH AND INSTALL CHROME WALL PLATES.
 - PIPING UNDER FLOOR SLAB SHALL BE TYPE "K" SOFT TEMPER COPPER TUBING ASTM B-88 NO JOINTS SHALL BE PERMITTED UNDER FLOOR SLAB. ALL JOINTS UNDER GROUND SHALL BE MECHANICALLY CLEANED BEFORE BRAZING AND PASTE FLUX APPLIED.
 - PIPING ABOVE FLOOR SLAB SHALL BE TYPE "L" HARD DRAWN COPPER TUBING ASTM B-88 USE WROUGHT COPPER SWEAT FITTINGS. ALL JOINTS SHALL BE MADE WITH LEAD-FREE SOLDER AND PASTE FLUX AND MECHANICALLY CLEANED BEFORE SOLDERING.
 - PROVIDE PDI APPROVED WATER HAMMER ARRESTERS IN THE PIPING AS MAY BE REQUIRED TO ACCOMPLISH NOISELESS OPERATION OF THE SYSTEM UNDER ALL OPERATING CONDITIONS. PROVIDE ACCESS PANELS OF REQUIRED SIZES AND TYPES AS TO ACCESS ALL CLEANOUTS, VALVES, TRAPS, WATER HAMMER ARRESTERS, ETC. ACCESS PANELS AND COVERS SHALL BE APPROVED BY THE ARCHITECT OR OWNER.
 - SANITARY WASTE, AND VENT PIPING: PIPING SHALL BE SCHEDULE 40 PVC-DWV PIPE AND FITTINGS. PIPING IN EXPOSED AREAS SUCH AS LAVATORY P-TRAPS SHALL BE CHROME-PLATED BRASS. INTERIOR CONDENSATE DRAIN PIPING RUNNING HORIZONTAL SHALL BE INSULATED WITH 5/8" THICK ARMAFLEX. PLUMBING CONTRACTOR SHALL RUN ALL BUILDING CONDENSATE DRAINS.
- WATER SUPPLY AND WASTE WATER PIPING SHALL BE KEPT A MINIMUM OF TEN (10) FEET APART. WHEN PIPES CROSS OR COME CLOSER THAN TEN FEET FRESH WATER PIPING SHALL BE 16" ABOVE THE CROWN OF SANITARY PIPING.
- DRAWINGS AND RISERS ARE DIAGRAMMATICAL AND ARE NOT INTENDED TO SHOW REQUIRED FITTINGS AND OFFSETS REQUIRED FOR ACTUAL INSTALLATION.
- ALL HOSE BIBBS SHALL BE FREEZE PROOF AND PROVIDED WITH A NON-REMOVABLE VACUUM BREAKER.
- PIPE PENETRATIONS THROUGH FIRE RATED ASSEMBLIES SHALL BE IN METAL SLEEVES. ANNULAR SPACES BETWEEN SLEEVES AND PIPES SHALL BE SEALED AS REQUIRED BY THE LOCAL AUTHORITY.
- DIELECTRIC CONNECTIONS SHALL BE USED BETWEEN FERROUS AND NON-FERROUS PIPING.
- WATER HEATER SHALL BE FILLED WITH WATER AND PURGED AS SOON AS INSTALLED OR IN NO EXTENT LATER THAN GAS/ELECTRIC HOOK-UP. FURNISH A ONE YEAR MANUFACTURERS WARRANTY.
- CONTRACTOR SHALL FURNISH OWNER WITH SAMPLES OF FIXTURES FOR APPROVAL.
- SLIP JOINTS SHALL NOT BE USED FOR DRAIN CONNECTIONS IN CONCEALED LOCATIONS. USE SOLDERED OR SCREWED JOINTS ONLY.
- ALL FIXTURES SHALL BE COMPLETE AND INCLUDE ALL STOPS, VALVES, FAUCETS, DRAINS, TRAPS, TAIL PIECES, ESCUTCHEONS, AND SUPPLIES.
- PROVIDE CLEANOUTS AT THE BASE OF ALL WASTE STACKS, AT ALL CHANGES OF DIRECTION OF PIPING IN EXCESS OF 45° AND EVERY 50 FEET.
- ALL PIPING SHALL BE TESTED IN ACCORDANCE WITH INDUSTRY STANDARDS AND DOMESTIC WATER SHALL BE IN COMPLIANCE WITH CITY STANDARDS.
- ALL PIPING SHALL BE RUN IN AREAS NOT SUBJECT TO FREEZING TEMPERATURES. PIPING IN EXTERIOR WALLS SHALL BE INSULATED AND RUN ON THE CONDITIONED SIDE OF THE WALL INSULATION.
- PIPE PENETRATIONS OF RATED WALLS SHALL BE FIRE STOPPED AS NECESSARY TO MAINTAIN THE RATING OF THE WALL.
- VENT PIPES SHALL BE COMBINED SO THAT NO MORE THAN ONE ROOF PENETRATION PER UNIT STACK WILL BE REQUIRED, UNLESS APPROVED BY THE OWNER.
- BACKFLOW PREVENTERS SHALL BE INSTALLED IN EACH MAIN SUPPLY LINE TO BUILDINGS.



WATER HEATER TYPICAL INSTALLATION



SINGLE FIXTURE

PDI SIZE	PIPE SIZE	FIXTURE UNIT LOAD
A	1/2"	1 - 11
B	3/4"	12 - 32
C	1"	33 - 60
D	1-1/4"	61 - 113
E	1-1/2"	114 - 154
F	2"	155 - 330

MULTIPLE FIXTURES

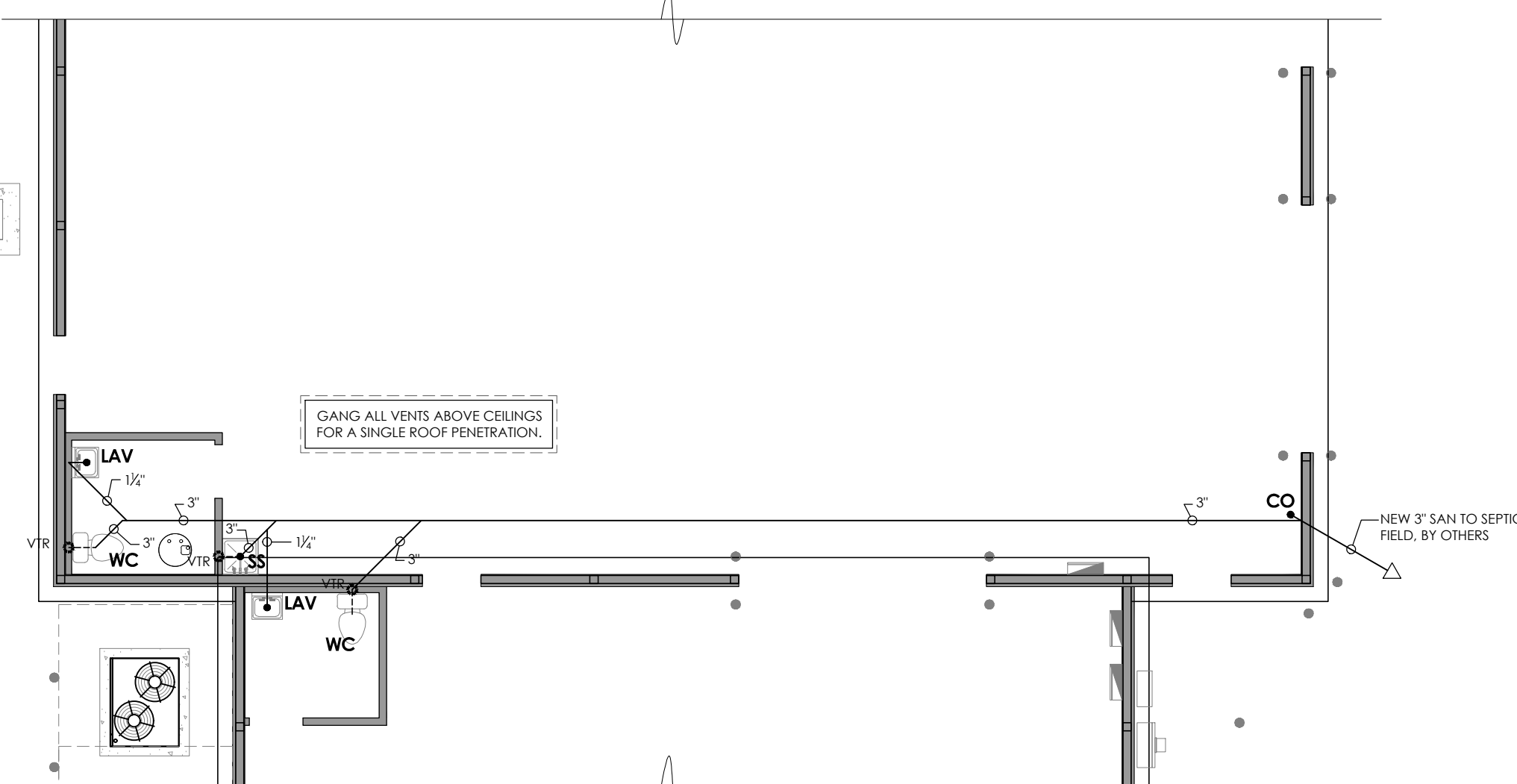
FIXTURE	COLD	HOT
VALVE WATER CLOSET	10	--
URINAL	5	--
SERVICE SINK	2.25	2.25
3 COMP SINK	2	2.0
LAVATORY / SINK	1.5	1.5
DRINKING FOUNTAIN	0.25	--

PLUMBING CONTRACTOR TO PROVIDE AIR CHAMBERS OR WATER HAMMER ARRESTERS BY SLOUX CHIEF, PRECISION PLUMBING PRODUCTS, WATTS OR APPROVED EQUIVALENT WITH PISTON AND O-RING CONSTRUCTION, HAVING ASSE # 1010 AND ANSI #A112.26.1M CERTIFICATION. INSTALL IN HORIZONTAL OR VERTICAL POSITION, BUT NEVER UPSIDE DOWN. INSTALL IN LINE WITH WATER FLOW DIRECTION IF POSSIBLE. SIZE THE UNITS AS SHOWN ON THE DRAWINGS AND / OR PER THE TABLES SHOWN ABOVE.

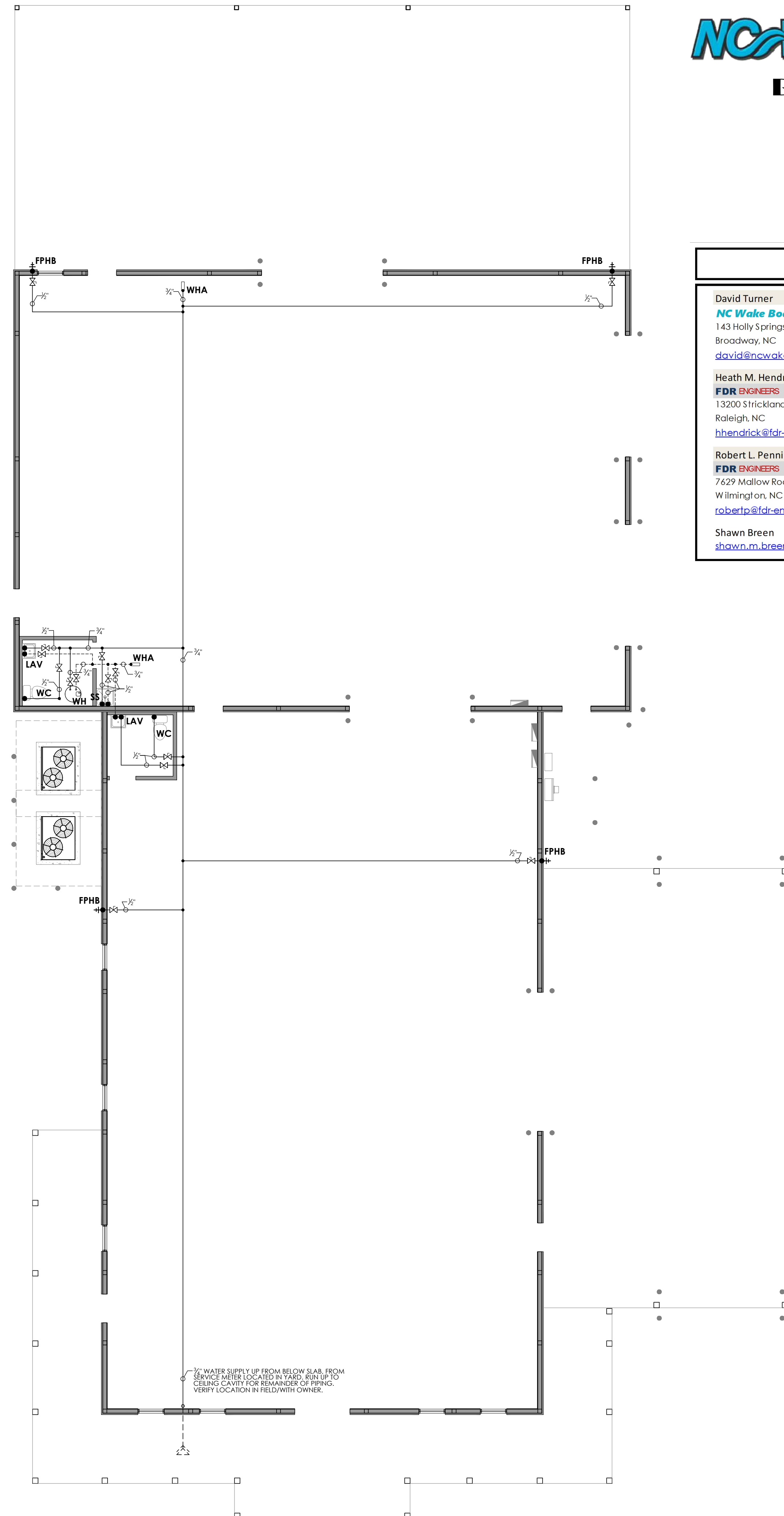
WATER HAMMER ARRESTOR SCHEDULE

DESIGN PARAMETERS NOTE:

- THE PLUMBING SUPPLY SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH **NSPC TABLE B.7.3.B TYPE K COPPER TUBING**. C.C. TO VERIFY ADEQUATE PRESSURE AND EXISTING CONDITIONS AND PROVIDE ANY ADDITIONAL APPURTANCES AS REQUIRED TO ACHIEVE A SATISFACTORY FUNCTIONING AND COMPLIANT SYSTEM.
- ALL RESTROOM LAVATORIES HAND SINKS TO RECEIVE 120° HOT WATER SUPPLIED BY ABOVE CEILING MIXING VALVE.
- INSTALL TRAP PRIMERS AS REQUIRED BY CURRENT **N.S.P.C.** AND ALL OTHER APPLICABLE CODES.
- ALL FIXTURE SUPPLY CONNECTIONS TO HAVE ACCESSIBLE MANUAL BALL TYPE SHUTOFF VALVES OR ACCESS PANEL TO SAME.
- REFER TO **N.S.P.C.** AND MANUF. SPECIFICATIONS FOR ALL SUPPLY, INLET, TRAP, AND DRAIN SIZES.
- ALL VENTING TO COMPLY WITH THE CURRENT **N.S.P.C.**



2 PARTIAL SANITARY LAYOUT
scale: 1/8" = 1'-0"



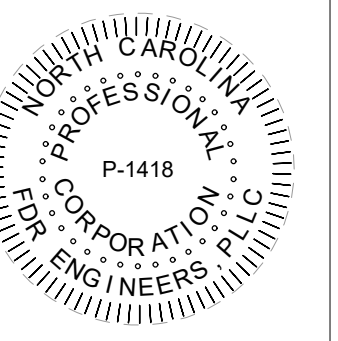
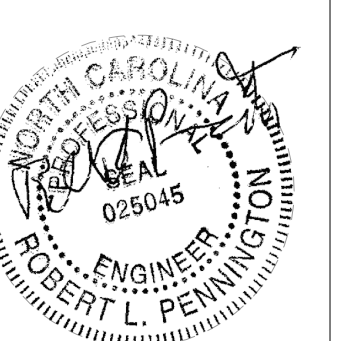
1 FW SUPPLY LAYOUT
scale: 1/8" = 1'-0"

NC WakeBoats
Broadway, NC

CONTACTS

Name	Role	Contact Info
David Turner	OWNER	(919) 928-1104
Heath M. Hendrick	STRUCTURAL ENGINEER	(919) 427-0501
Robert L. Pennington	APPX B & MPE ENGINEER	(910) 520-0278
Shawn Breen	APPX B & MPE PM	(860) 387-3017

FDR Engineers, PLLC
13200 Strickland Road
Suite #111
Raleigh, NC 27613
www.fdr-eng.com
(919) 957-5100



NC WakeBoats
155 Holly Springs Church Road
Broadway, NC 27505

DESIGNED BY: SMB
DRAWN BY: SMB
APPROVED BY: RLP
PROJECT #: R2408270
DATE: 2024-10-23

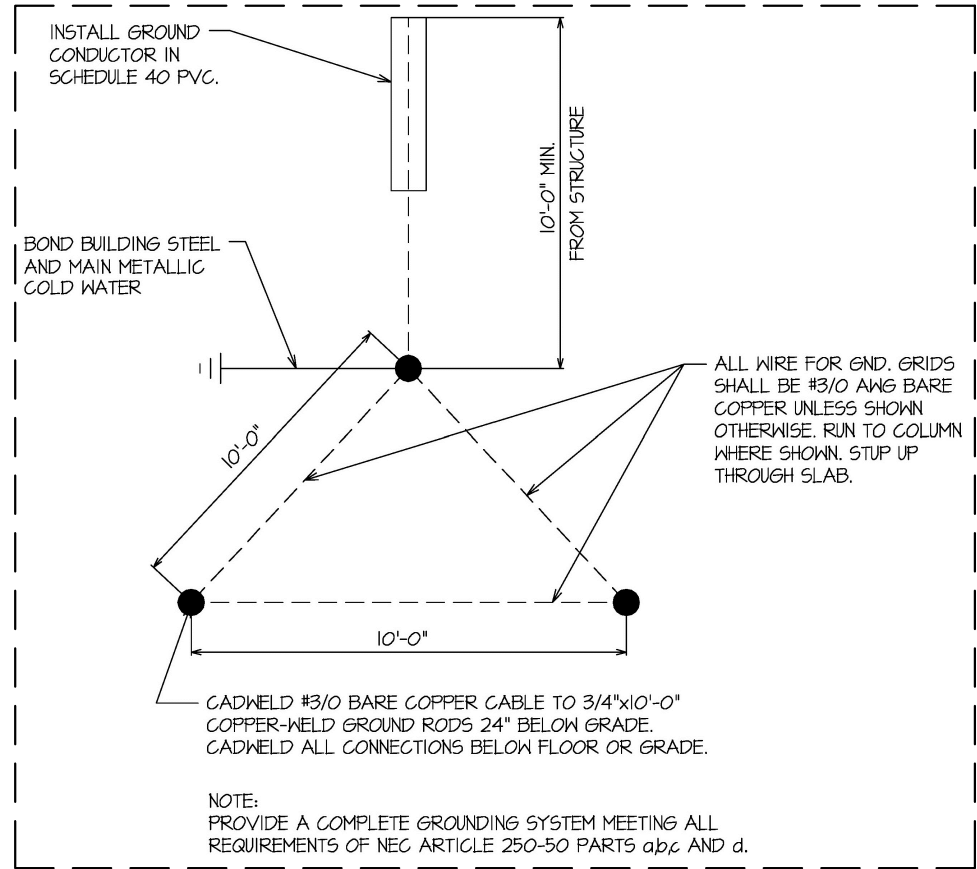
#	Revision	Date
0	for permit	11/8/24

Sheet
P1.0

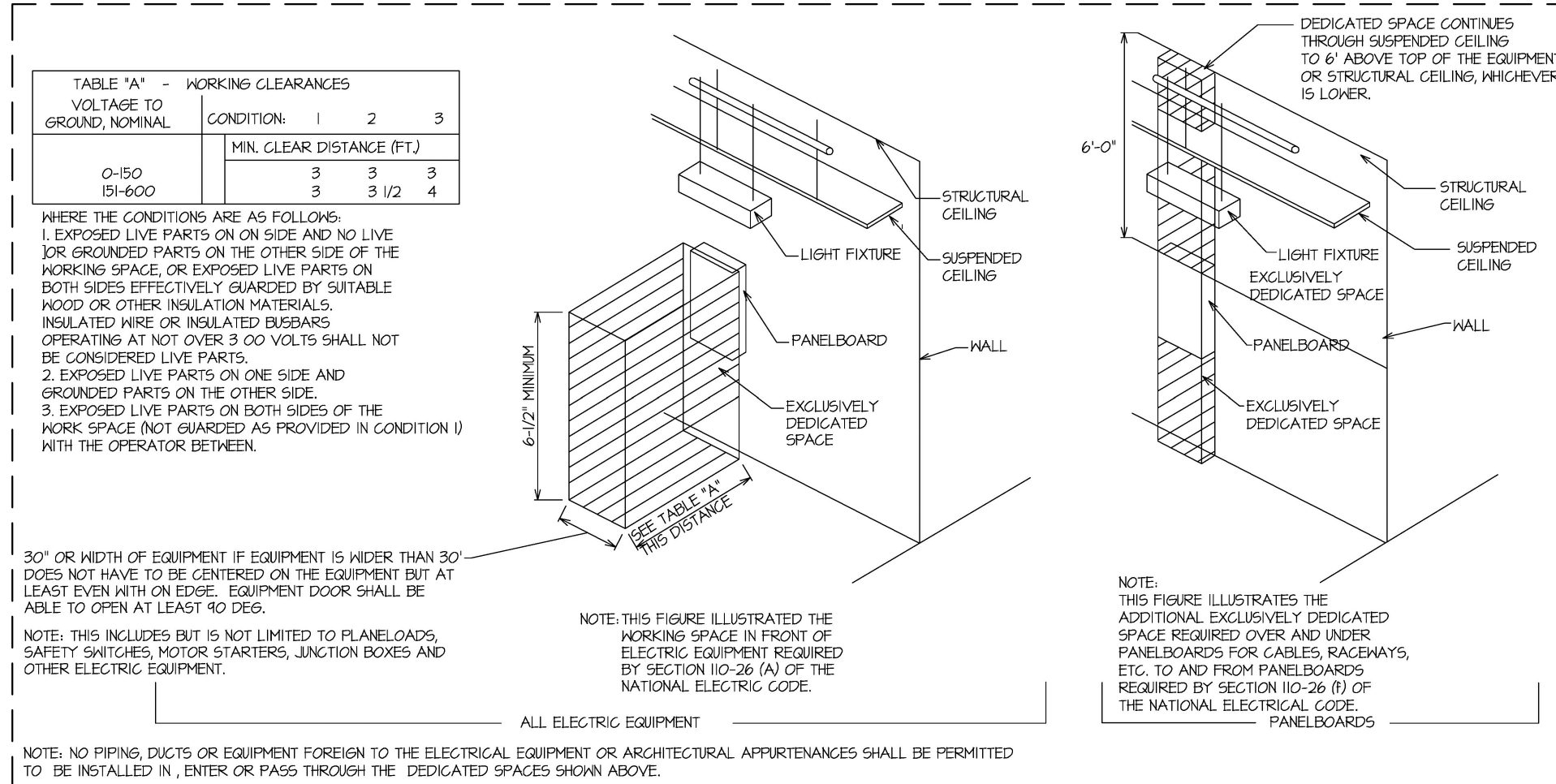
Ownership of Instruments of Service: All reports, plans, specifications, computer files, field data, notes and instruments prepared by the design professional as instruments of service shall remain the property of the design professional. All common law, statutory and other reserved rights including the copyright therein.

GENERAL ELECTRICAL NOTES

- PERFORM ALL WORK IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC) AND ALL OTHER APPLICABLE STATE AND LOCAL CODES.
- THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC ONLY. REFER TO ARCHITECTURAL DRAWINGS FOR BUILDING DIMENSIONS. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT EQUIPMENT LOCATIONS.
- FURNISH ALL LABOR, MATERIALS, SERVICES AND SKILLED SUPERVISION NECESSARY FOR THE INSTALLATION, TESTING, AND ADJUSTMENT OF ALL CIRCUITING AND ELECTRICAL EQUIPMENT SPECIFIED HEREIN, OR SHOWN OR NOTED ON THE DRAWINGS AND ITS DELIVERY TO THE BUILDING OWNER COMPLETE AND READY FOR USE. ALL ELECTRICAL WORK SHALL BE NEW EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS.
- THE CONTRACTOR SHALL CAREFULLY EXAMINE THE SITE AND SHALL COMPARE THE DRAWINGS WITH THE EXISTING ELECTRICAL INSTALLATION AND SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS WITH THE SCOPE OF THIS PROJECT.
- ARRANGE WORK SO THAT ELECTRICAL POWER AND COMMUNICATIONS ARE AVAILABLE TO EXISTING FACILITIES WITHIN THE BUILDING WHICH ARE TO REMAIN AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL SCHEDULE ALL INTERRUPTIONS AT THE CONVENIENCE OF THE BUILDING OWNER AND TENANT.
- MATERIALS AND EQUIPMENT SHALL CONFORM TO AND BE IN ACCORDANCE WITH THE LATEST APPLICABLE STANDARDS OF THE NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA) AND THE AMERICAN STANDARDS INSTITUTE (ANSI), WHERE STANDARDS HAVE BEEN ESTABLISHED FOR SPECIFIC ITEMS, AND EQUIPMENT AND INSPECTION CATEGORIES HAVE BEEN ESTABLISHED BY THE UNDERWRITERS' LABORATORY, THE MATERIALS AND EQUIPMENT SHALL BE LISTED AND BEAR THE UL LABEL.
- ELECTRICAL EQUIPMENT AND FIXTURES SHALL BE CONNECTED TO PROVIDE CIRCUIT CONTINUITY IN ACCORDANCE WITH APPLICABLE CODES WHETHER OR NOT EACH PIECE OF CONDUCTOR, CONDUIT, OR PROTECTIVE DEVICES ARE SHOWN BETWEEN EQUIPMENT AND FIXTURES AND POINT OF CIRCUIT ORIGIN.
- REMOVE ALL ELECTRICAL EQUIPMENT AND MATERIALS IN AREAS TO BE DEMOLISHED UNDER SCOPE OF WORK FOR THIS PROJECT. EXTEND, REVISE AND/OR RECTIFY EXISTING CIRCUITING AFFECTED BY DEMOLITION WORK AS REQUIRED AND AS NOTED ON THE DRAWINGS. ALL EXISTING ELECTRICAL EQUIPMENT, FIXTURES, ETC., NOT SPECIFICALLY DESIGNATED FOR REMOVAL ON THE DRAWINGS SHALL REMAIN.
- THE CONTRACTOR SHALL RELABEL ALL REVISED BRANCH CIRCUITS, PANEL BOARD DESIGNATIONS, ETC. BASED ON THE SCOPE OF WORK FOR THIS PROJECT AND SHALL UPDATE PANELBOARD DIRECTORIES ACCORDINGLY - FINAL DIRECTORIES TO BE TYPED.
- THE CONTRACTOR SHALL COORDINATE THE MOUNTING HEIGHTS OF ALL WALL MOUNTED ELECTRICAL AND TELECOMMUNICATIONS DEVICES WITH ARCHITECTURAL DRAWINGS AND DETAILS PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL VERIFY ALL DOOR SWINGS WITH ARCHITECTURAL DRAWINGS PRIOR TO INSTALLATION OF WALL SWITCHES. WALL SWITCHES SHALL BE LOCATED ON LOCK SIDE OF ALL DOORS UNLESS PHYSICALLY IMPOSSIBLE TO INSTALL IN THIS LOCATION OR INDICATED OTHERWISE ON DRAWINGS. VERIFY LOCATIONS OF WALL SWITCHES WITH ARCHITECT IN EVENT OF CONFLICTS!
- MULTIPLE WALL SWITCHES SHOWN IN ONE LOCATION ON DRAWINGS SHALL BE GANGED UNDER A COMMON COVERPLATE UNLESS OTHERWISE NOTED ON DRAWINGS. GANGING OF SWITCHES SHALL MEET ALL REQUIREMENTS OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC).
- CEILING GRID LAYOUTS WHERE SHOWN ON ELECTRICAL DRAWINGS ARE FOR INFORMATION ONLY. CONTRACTOR SHALL COORDINATE THE PLACEMENT AND MOUNTING HARDWARE REQUIREMENTS OF ALL LIGHTING FIXTURES IN ACCORDANCE WITH ARCHITECTURAL REFLECTED CEILING PLANS AND MECHANICAL/PLUMBING PLANS PRIOR TO INSTALLATION OF DEVICES.
- FURNITURE LAYOUTS WHERE SHOWN ON ELECTRICAL DRAWING ARE FOR INFORMATION ONLY. CONTRACTORS SHALL COORDINATE THE LOCATIONS OF ALL DEVICES WITH ARCHITECTURAL DRAWINGS AND DETAILS, AND ELECTRICAL DRAWINGS PRIOR TO INSTALLATION OF DEVICES.
- ALL WORK ASSOCIATED WITH ADDITIONS OR REVISIONS TO BASE BUILDING FIRE ALARM SYSTEM SHALL BE COORDINATED WITH BUILDING OWNER PRIOR TO START OF CONSTRUCTION.
- ALL AUDIO-VISUAL EQUIPMENT AND ASSOCIATED CABLING TO BE PROVIDED AND INSTALLED BY A/V EQUIPMENT SUPPLIER/INSTALLER. CONTRACTOR SHALL COORDINATE ALL A/V WORK WITH A/V CONSULTANT PRIOR TO START OF CONSTRUCTION.
- ALL WORK ASSOCIATED WITH TELECOMMUNICATIONS OR COMPUTER EQUIPMENT SHALL BE COORDINATED WITH THE BUILDING OWNER AND THE TELECOMMUNICATIONS EQUIPMENT/CABLING INSTALLER PRIOR TO START OF CONSTRUCTION.



POWER SERVICE GROUNDING GRID



POWER EQUIPMENT SERVICE AREAS

ELECTRICAL SYSTEM AND INSTALLATION NOTES

- ALL WORK SHALL CONFORM TO STATE, LOCAL, AND FEDERAL CODES, INCLUDING THE LATEST EDITIONS OF THE NATIONAL ELECTRICAL CODE AND THE INTERNATIONAL BUILDING CODE.
- MINIMUM WIRE SIZE SHALL BE 12AWG CU UNLESS OTHERWISE NOTED.
- HOMERUNS GREATER THAN 100 FEET SHALL BE 10AWG CU MINIMUM.
- ALL CIRCUITRY SHALL BE RUN IN EMT, IMC, OR RIGID CONDUIT.
- E.C. TO FURNISH AND INSTALL ALL NECESSARY MATERIALS AND LABOR TO ENSURE A COMPLETE AND OPERABLE SYSTEM.
- E.C. RESPONSIBLE FOR OBTAINING AND MAINTAINING ALL REQUIRED PERMITS, INSPECTIONS, LICENSES ETC., NECESSARY TO COMPLETE THIS PROJECT.
- PROVIDE RETURN DUCT MOUNTED SMOKE DETECTORS IN ALL CENTRAL AIR HANDLING UNITS, TO BE INTERLOCKED WITH FIRE ALARM PANEL (BY OTHERS).
- INSTALL NECESSARY CIRCUITS, WIRING, AND JUNCTION BOXES AS REQUIRED FOR COMPLETE SIGNAGE AND ACCENT ILLUMINATION. COORDINATE WITH INSTALLER.
- ALL LOW VOLTAGE WIRING TO BE RUN IN COLOR CODED SMURFF TUBES. BLUE FOR TV, RED FOR FIRE ALARM, AND YELLOW FOR TV/DATA.
- ALL CAN LIGHTS, RECEPTACLES, AND JUNCTION BOXES IN RATED ASSEMBLIES TO BE RATED WITH EITHER BOXES BUILT-UP TYPE-X CWB, 3M MPP+ UL RATED PUTTY, OR RATED FIXTURE(S).

ELECTRICAL FEEDS - 3ph						
BREAKER OR LOAD	FEEDS	GROUND	E.M.T.	FEEDS	GROUND	E.M.T.
THHN CU (194°F)						
SINGLE SET			2 SETS			
20 A	12 Awg	12 Awg	1/2"			
30 A	10 Awg	10 Awg	1/2"			
40 A	8 Awg	10 Awg	3/4"			
50 A	6 Awg	10 Awg	3/4"			
60 A	6 Awg	10 Awg	1"			
150 A	1/0	6 Awg	2"			
200 A	3/0	6 Awg	2"	3 Awg	8 Awg	1 1/4"
225 A	4/0	4 Awg	2"	2 Awg	6 Awg	1 1/4"
400 A	#500	3 Awg	3 1/2"	3/0	6 Awg	2"
600 A				#300	4 Awg	2 1/2"
800 A				#500	3 Awg	2 1/2"

NOTES
 FEEDERS PER '20 NEC Table 8.310.15(B)(2)(1)
 NEUTRAL ... '20 NEC same as feeders
 GROUND PER '20 NEC Table 250.66
 EMT CONDUIT PER '20 NEC Table C.1

BONDING OF METAL VENEERS

ELECTRICAL CONTRACTOR SHALL PROVIDE ADEQUATE BONDING OF THE INSTALLED METAL VENEER PANELS, PURSUANT TO SECTION 250 OF THE 2020 NFPA-70 (NEC) WITH NORTH CAROLINA AMENDMENTS AND TO THE SATISFACTION OF THE LOCAL ELECTRICAL CODE OFFICIAL/INSPECTOR HAVING AUTHORITY.

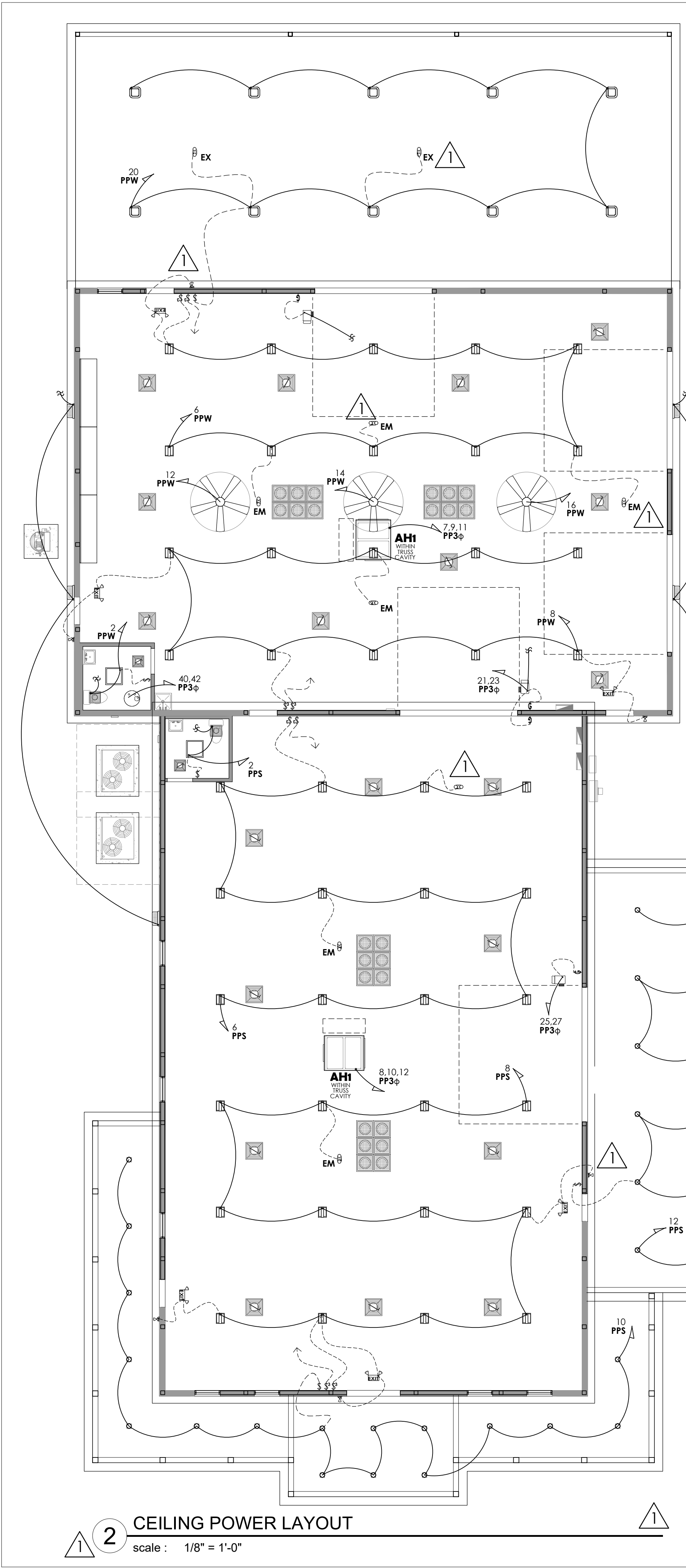
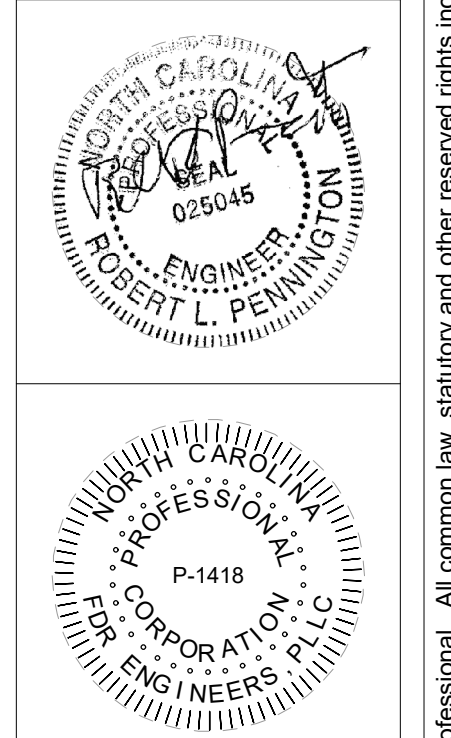
LIGHTING SCHEDULE

USE	TYPE	MANUF.	MODEL	LAMPS	V ₀	V	DESCRIPTION
EXT. DOWNLIGHT	CAN	LITHONIA	LDNA 35/30 06AR	LED	35	120	NEW CONSTRUCTION 6" DOWNLIGHT CAN
WAREHOUSE	HIGH-BAY	LITHONIA	CPHB 15000LM SEF GCL	LED	96	120	HIGH BAY LED W/ MVOLT GANGL TECHNOLOGY
EXT. CANOPY	HIGH-BAY	LITHONIA	SCN7 LED AL02 SSW2 PFL	LED	≤ 130	120	HIGH BAY LED W/ MVOLT GANGL TECHNOLOGY
2x2 TRIFLER	CEILING	LITHONIA	2L2 ADL FW LP3SS	LED	40	120	2x2 LED TRIFLER 0.135" #12 ACRYLIC LENS, WHITE FINISH
EXTERIOR AREA	WALL	P.B.O.	P.B.O.	LED	≤ 90	120	ENCLOSED, ON LIGHT SENSOR
EXIT + E.M.	STANDARD	LITHONIA	LHQML EDR HO	LED	10	120	EXIT + EMERG COMBO. WALL/CLG MTD. 90 MIN. BATT. BACK-UP, WHITE
EM EMERG.	HIGH-BAY	LITHONIA	ELMEL	LED	8	120	HIGH BAY EMERG. WALL/CLG MTD. 90 MIN. BATTERY BACK-UP
EX EMERG. EXT.	HIGH-BAY	LITHONIA	ELMEL + WPVS	LED	8	120	EXTERIOR HIGH BAY EMERG. WALL/CLG MTD. 90 MIN. BATTERY BACK-UP
REMOTE EMERG.	STANDARD	LITHONIA	ELA B T GWP L0309	LED	25	120	EXTERIOR/W/ET RATED 2 LAMPS, BLACK FINISH, 90 MIN. BATTERY BACK-UP

NOTE: LIGHT FIXTURE SUBSTITUTIONS ALLOWED WITH MATCHING PARAMETERS BY OWNER REQUEST, CODE COMPLIANCE AND AHJ APPROVAL. OFFICES, BREAK ROOMS, RESTROOMS AND OTHER BUSINESS AREAS TO BE MOTION ACTIVATED TO 50% MANUAL ON TO 100% 30min MOTION SHUTOFF, AND MANUAL OFF. TIME SWITCH CONTROLS ARE PERMISSIBLE PER OWNER PROVIDED THAT PROGRAMMING IS 3-50h CAPABLE AND NIGHT LIGHTING IS INCORPORATED. E.C. TO COORDINATE ALL EXIT SIGNAGE AND EGRESS LIGHTING LOCATIONS, SELECTIONS AND SPACING, PRIOR TO PLACING ORDER, WITH OWNER AND AHJ.

Load Designation / Use	VA per phase	Breaker	Ground	Wiring	L1, L3	Feeder	Ground	Breaker	VA per phase	Load Designation / Use	Panel				
1#	5172	30 A	10 Awg	6 Awg	12 Awg	10 Awg	30 A	5172	5172	HP	10#				
2#	1500	30 A	10 Awg	6 Awg	12 Awg	10 Awg	30 A	1500	1500	HP	10#				
3#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
4#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
5#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
6#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
7#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
8#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
9#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
10#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
11#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
12#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
13#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
14#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
15#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
16#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
17#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
18#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
19#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
20#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
21#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
22#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
23#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
24#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
25#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
26#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
27#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
28#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
29#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
30#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
31#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
32#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
33#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
34#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
35#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
36#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
37#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
38#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
39#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
40#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
41#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
42#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
43#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
44#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
45#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
46#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
47#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
48#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
49#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
50#	1500	15 A	12 Awg	12 Awg	12 Awg	12 Awg	15 A	1500	1500	HP	10#				
Subtotal Weight 1944L 12011 1830L									Subtotal Weight 1944L 12011 1830L		PP3p				
Demand 238.6 A									Connected 248.7 A		400 A				
Receptacles 6.04E+00 1.00 6.04E+00									Lighting 0.00 1.00 0.00		General Loads 38.70E+00 1.00 38.70E+00		Mechanical Equipment 2.91E+01 0.90 19.79E+01	Largest Load 15.00E+00 1.25 19.40E+01	Arrangement per Phase 248.7 207.6 248.7
Total Demand: 238.6 A									Total Connected: 248.7 A		400 A		3 phase, 3 wire		
											120/240V		100A AC		
											M.C.B.		Surface Mtg.		

Load Designation / Use	VA per phase	Breaker	Ground	Wiring	L1, L3	Feeder	Ground	Breaker	VA per phase	Load Designation / Use	Panel
1#	900	20 A	12 Awg	12 Awg	12 Awg	12 Awg	20 A	900	900	RESDOOR	2#
2#	900	20 A	12 Awg	12 Awg	12 Awg	12 Awg	20 A	900	900	RESDOOR	4#
3#	900	20 A	12 Awg	12 Awg	12 Awg	12 Awg	20 A	900	900	RESDOOR	4#
4#	900	20 A	12 Awg	12 Awg	12 Awg	12 Awg	20 A	900	900	RESDOOR	4#
5#	900	20 A	12 Awg	12 Awg	12 Awg	12 Awg	20 A	900	900	RESDOOR	4#
6#	900	20 A	12 Awg	12 Awg	12 Awg	12 Awg	20 A	900	900	RESDOOR	4#
7#	900	20 A	12 Awg	12 Awg	12 Awg	12 Awg	20 A	900	900	RESDOOR	4#
8#	900	20 A	12 Awg	12 Awg	12 Awg	12 Awg	20 A	900	900	RESDOOR	4#
9#	900	20 A	12 Awg	12 Awg	12 Awg	12 Awg	20 A	900	900	RESDOOR	4#
10#	900	20 A	12 Awg	12 Awg	12 Awg	12 Awg	20 A	900	900	RESDOOR	4#
11#	900	20 A	12 Awg	12							



#	Load Designation / Use	VA	FL	L3	Phase	Ground	Notes	L1 L3	Phase	Ground	Notes	VA	FL	L3	Phase	Ground	Notes	VA	FL	L3	Phase	Ground	Notes				
1	MPI	5179	50 A	10 Awg	4 AWG			8 Awg	10 Awg	50 A		5179	50 A	10 Awg	4 AWG			5179	50 A	10 Awg	4 AWG			MPI	M.P.		
2	M																								M	M.P.	
3	M																									M	M.P.
4	M																									M	M.P.
5	M																									M	M.P.
6	M																									M	M.P.
7	M																									M	M.P.
8	M																									M	M.P.
9	M																									M	M.P.
10	M																									M	M.P.
11	M																									M	M.P.
12	M																									M	M.P.
13	M																									M	M.P.
14	M																									M	M.P.
15	M																									M	M.P.
16	M																									M	M.P.
17	M																									M	M.P.
18	M																									M	M.P.
19	M																									M	M.P.
20	M																									M	M.P.
21	M																									M	M.P.
22	M																									M	M.P.
23	M																									M	M.P.
24	M																									M	M.P.
25	M																									M	M.P.
26	M																									M	M.P.
27	M																									M	M.P.
28	M																									M	M.P.
29	M																									M	M.P.
30	M																									M	M.P.
31	M																									M	M.P.
32	M																									M	M.P.
33	M																									M	M.P.
34	M																									M	M.P.
35	M																									M	M.P.
36	M																									M	M.P.
37	M																									M	M.P.
38	M																									M	M.P.
39	M																									M	M.P.
40	M																									M	M.P.
41	M																									M	M.P.
42	M																									M	M.P.
43	M																									M	M.P.
44	M																									M	M.P.
45	M																									M	M.P.

#	Load Designation / Use	VA	FL	L3	Phase	Ground	Notes	L1 L3	Phase	Ground	Notes	VA	FL	L3	Phase	Ground	Notes	VA	FL	L3	Phase	Ground	Notes				
1	RECEPTACLES - SOUTH	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330							RESTROOM	G.12	
2	RECEPTACLES - SOUTHWEST	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								RESTROOM	G.12
3	RECEPTACLES - SOUTHEAST	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								SHOP NORTH	L.10
4	RECEPTACLES - NORTH	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								SHOP SOUTH	L.10
5	RECEPTACLES - WEST	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								OVERHEAD PAN.	M.14
6	RECEPTACLES - EAST	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								OVERHEAD PAN.	M.14
7	RECEPTACLES - NORTHWEST	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								OVERHEAD PAN.	M.14
8	RECEPTACLES - SOUTHWEST	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								OVERHEAD PAN.	M.14
9	RECEPTACLES - EAST EXTERIOR	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								EXTERIOR AREA	L.18
10	RECEPTACLES - WEST EXTERIOR	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								EXTERIOR AREA	L.18
11	RECEPTACLES - VERANDA	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								REAR CANOPY	L.22
12	RECEPTACLES - SIDE CANOPY	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								REAR CANOPY	L.22
13	RECEPTACLES - VERANDA	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								REAR CANOPY	L.22
14	RECEPTACLES - SIDE CANOPY	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								REAR CANOPY	L.22
15	RECEPTACLES - VERANDA	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								REAR CANOPY	L.22
16	RECEPTACLES - SIDE CANOPY	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								REAR CANOPY	L.22
17	RECEPTACLES - VERANDA	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								REAR CANOPY	L.22
18	RECEPTACLES - SIDE CANOPY	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								REAR CANOPY	L.22
19	RECEPTACLES - VERANDA	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								REAR CANOPY	L.22
20	RECEPTACLES - SIDE CANOPY	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								REAR CANOPY	L.22
21	RECEPTACLES - VERANDA	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								REAR CANOPY	L.22
22	RECEPTACLES - SIDE CANOPY	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								REAR CANOPY	L.22
23	RECEPTACLES - VERANDA	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								REAR CANOPY	L.22
24	RECEPTACLES - SIDE CANOPY	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								REAR CANOPY	L.22
25	RECEPTACLES - VERANDA	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								REAR CANOPY	L.22
26	RECEPTACLES - SIDE CANOPY	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								REAR CANOPY	L.22
27	RECEPTACLES - VERANDA	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								REAR CANOPY	L.22
28	RECEPTACLES - SIDE CANOPY	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								REAR CANOPY	L.22
29	RECEPTACLES - VERANDA	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								REAR CANOPY	L.22
30	RECEPTACLES - SIDE CANOPY	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								REAR CANOPY	L.22
31	RECEPTACLES - VERANDA	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								REAR CANOPY	L.22
32	RECEPTACLES - SIDE CANOPY	540	20 A	12 Awg	12 Awg			12 Awg	12 Awg	20 A		330						330								REAR CANOPY	L.22
33	RECEPTACLES - VERANDA	540	20 A	12 Awg	12 Awg			12 Awg																			