

**BUILDING AREAS:**

<b>HEATED AREAS:</b>	
MAIN FLOOR	± 754.58 SQ FT
FIRST FLOOR	± 1151.67 SQ FT
<b>TOTAL HEATED</b>	<b>± 1906.25 SQ FT</b>
<b>UNHEATED AREAS:</b>	
FRONT PORCH	± 78.63 SQ FT
REAR PORCH	± 100.00 SQ FT
GARAGE	± 397.09 SQ FT
<b>TOTAL AREA:</b>	<b>± 2481.97 SQ FT</b>

# LYON Model

## Garage Left - Elevations A & B

STANDARD WITH OPTIONS

APRIL 7, 2023

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### OPTIONS

House Plan	Development	Lot #	Address	Garage Side	Total HSF	Total Under Roof
Lyon	Oakmont	338	189 Travelers Way	Left	1906.25	2481.97

#### EXTERIOR:

<input type="checkbox"/>	Elevation STD or A
<input checked="" type="checkbox"/>	Elevation B
<input type="checkbox"/>	Elevation C
<input type="checkbox"/>	Cement Siding
<input checked="" type="checkbox"/>	Vinyl Siding
<input type="checkbox"/>	Lap siding only
<input checked="" type="checkbox"/>	Board and Batten
<input checked="" type="checkbox"/>	Trellis
<input checked="" type="checkbox"/>	Shutters
<input type="checkbox"/>	3 Car Garage
<input type="checkbox"/>	Side Load
<input type="checkbox"/>	Garage Window Panels
<input type="checkbox"/>	Garage door from double car to single car garage
<input type="checkbox"/>	Garage Door to Back Yard
<input type="checkbox"/>	Covered Back Porch
<input type="checkbox"/>	Extended Porch
<input type="checkbox"/>	Side Lite
<input checked="" type="checkbox"/>	Stone Skirt
<input checked="" type="checkbox"/>	Stem
<input type="checkbox"/>	Crawl

#### INTERIOR:

<input type="checkbox"/>	Extra windows in living room
<input type="checkbox"/>	Optional Kitchen Layout
<input type="checkbox"/>	1st Floor Guest Suite
<input type="checkbox"/>	1st Floor Flex Room
<input checked="" type="checkbox"/>	Standard Electric Fireplace
<input type="checkbox"/>	Gas Fireplace
<input type="checkbox"/>	Shiplap Electric Fireplace
<input type="checkbox"/>	Shiplap Gas Fireplace
<input type="checkbox"/>	Bookshelves
<input type="checkbox"/>	Under Cab Lighting
<input type="checkbox"/>	Bonus Room
<input type="checkbox"/>	2nd Vanity in Secondary bathroom
<input type="checkbox"/>	Linen Room Door (Argyle Owner Suite Only)
<input type="checkbox"/>	Open Railing
<input type="checkbox"/>	Attic Stairs
<input type="checkbox"/>	Laundry Sink

#### ELECTRICAL:

<input type="checkbox"/>	Under Cab Lights
<input type="checkbox"/>	Second Vanity - Upstairs bathroom



FRONT ELEVATION OPTIONS

REVISIONS:  
REV A: 06.12.2023, BALCONY SIDE WALL TO STAIRS REMOVED.  
REV B: 06.22.2023, AC CHASE LOCATIONS REVISED.

**J.S. THOMPSON**  
ENGINEERING, INC.  
333 E. SIX FORKS RD, SUITE 180  
RALEIGH, NC 27609  
PHONE: (919) 789-9919  
FAX: (919) 789-9921  
N.C. LICENSE NO. C-1733

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Land Development and Construction  
(910) 688-7361 • www.ascotgrp.com

THE LYON  
COVER SHEET

DATE: 2023-04-07  
DRAWN BY: NS  
ENGINEER: NS  
CHECKED BY: NS  
Q.C. BY: NTS  
SCALE:  
SHEET NUMBER:  
**A0**



NOTE:  
 AC RETURN VENTS SHALL NOT BE PLACED WITHIN 10'  
 OF AN OPEN COMBUSTION CHAMBER, A DRAFT HOOD OF  
 ANOTHER APPLIANCE OR WITHIN 10' OF COOKING APPLIANCES.  
 CODE M.1602.2 / 601.5

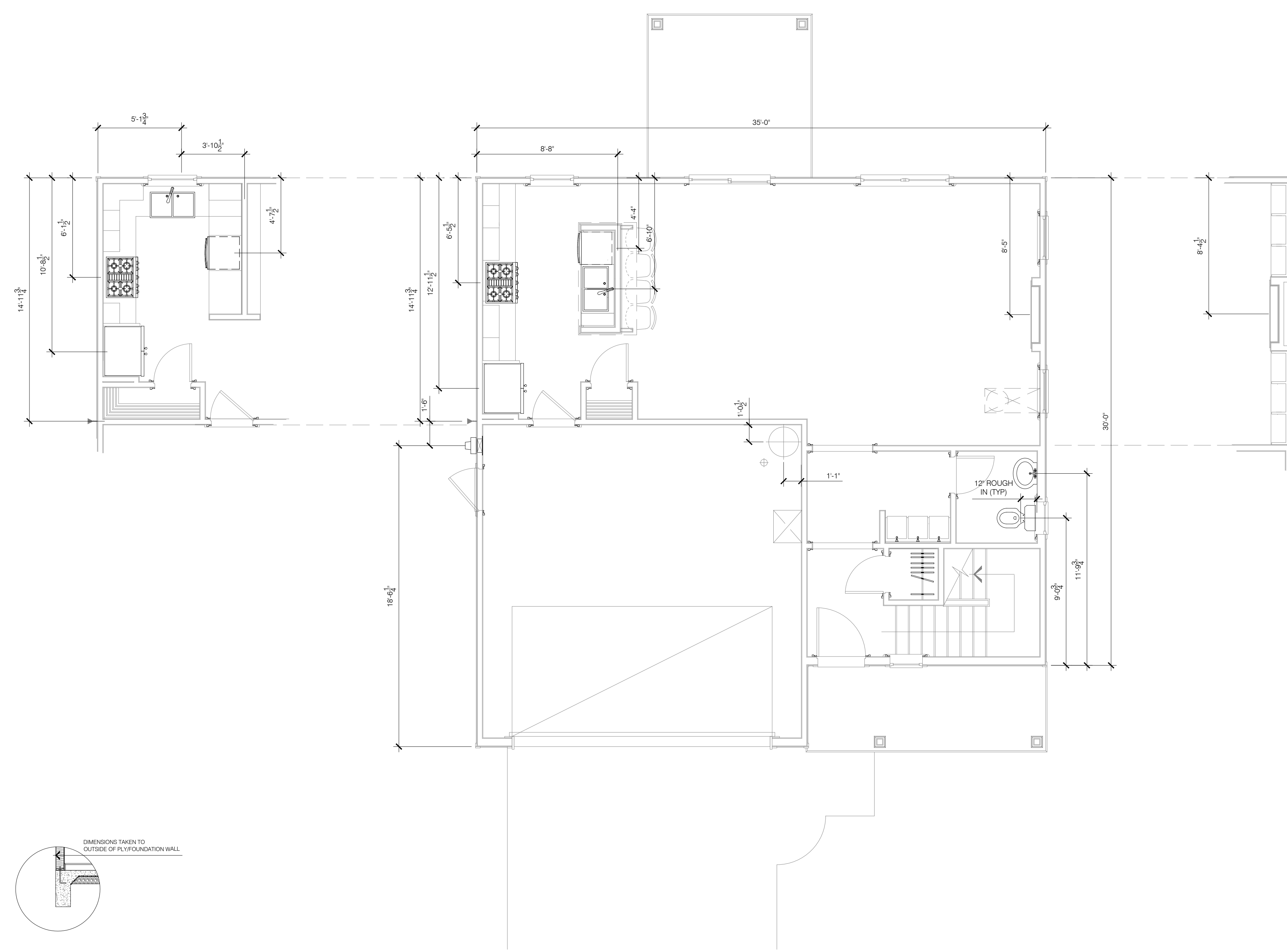
REVISIONS:  
 REV A: 06.13.2023, BALCONY SIDE WALL TO STAIRS REMOVED.  
 REV B: 06.22.2023, AC CHASE LOCATIONS REVISED, AC DESIGN ISSUES  
 IDENTIFIED AND CORRECTED.  
 REV C: 07.12.2023, RE-SWING DOORS UPDATED.  
 REV D: 11.27.2023, RE-SWING DOORS UPDATED.  
 REV E: 01.16.24 TUBS AND SHOWER FRAMING REVISED TO 60"  
 W8 OR WALL TO 6" & FRAMED ISLAND ADDED

**J.S. THOMPSON**  
 ENGINEERING, INC.  
 333 E. SIX FORKS RD., SUITE 180  
 RALEIGH, NC 27609  
 PHONE: (919) 789-9919  
 FAX: (919) 789-9921  
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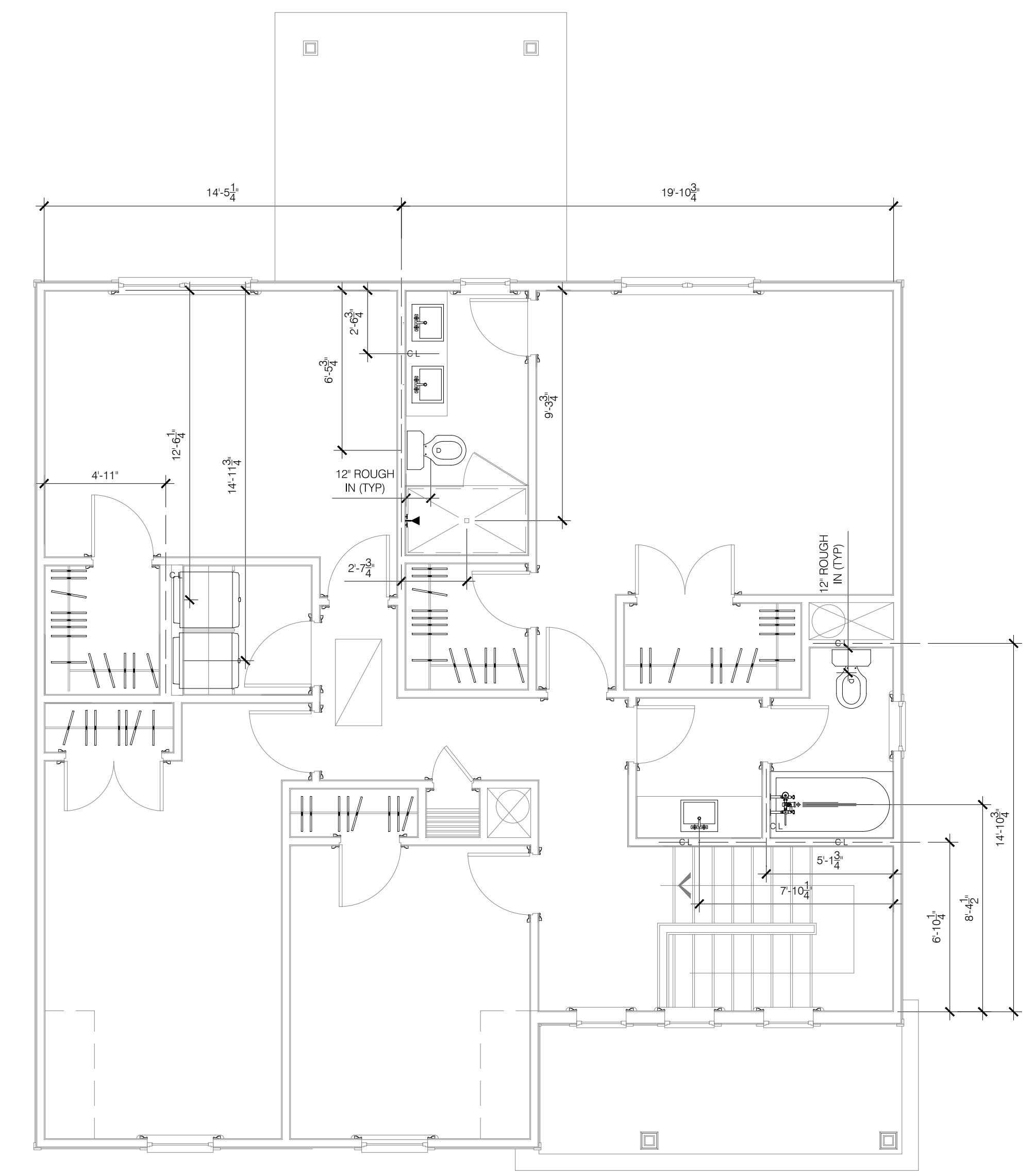
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THE LYON  
 PLUMBING FIXTURE LOCATION  
 PLANS

DATE: 2023-04-07  
 DRAWN BY: NS  
 ENGINEER: NS  
 CHECKED BY: NS  
 Q.C. BY: NS  
 SCALE: 1/4" = 1'-0"  
 SHEET NUMBER:  
**P1**



MAIN FLOOR  
 PLUMBING FIXTURE LOCATIONS PLANS - WITH OPTIONS  
 SCALE: 1/4" = 1'-0"



UPPER FLOOR

**BUILDING AREAS:**

HEATED AREAS:	
MAIN FLOOR	± 754.58 SQ FT
FIRST FLOOR	± 1151.67 SQ FT
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 OF AN OPEN COMBUSTION CHAMBER, A DRAFT HOOD OF  
 ANOTHER APPLIANCE OR WITHIN 10' OF COOKING APPLIANCES.  
 CODE M.1602.2 / 601.5

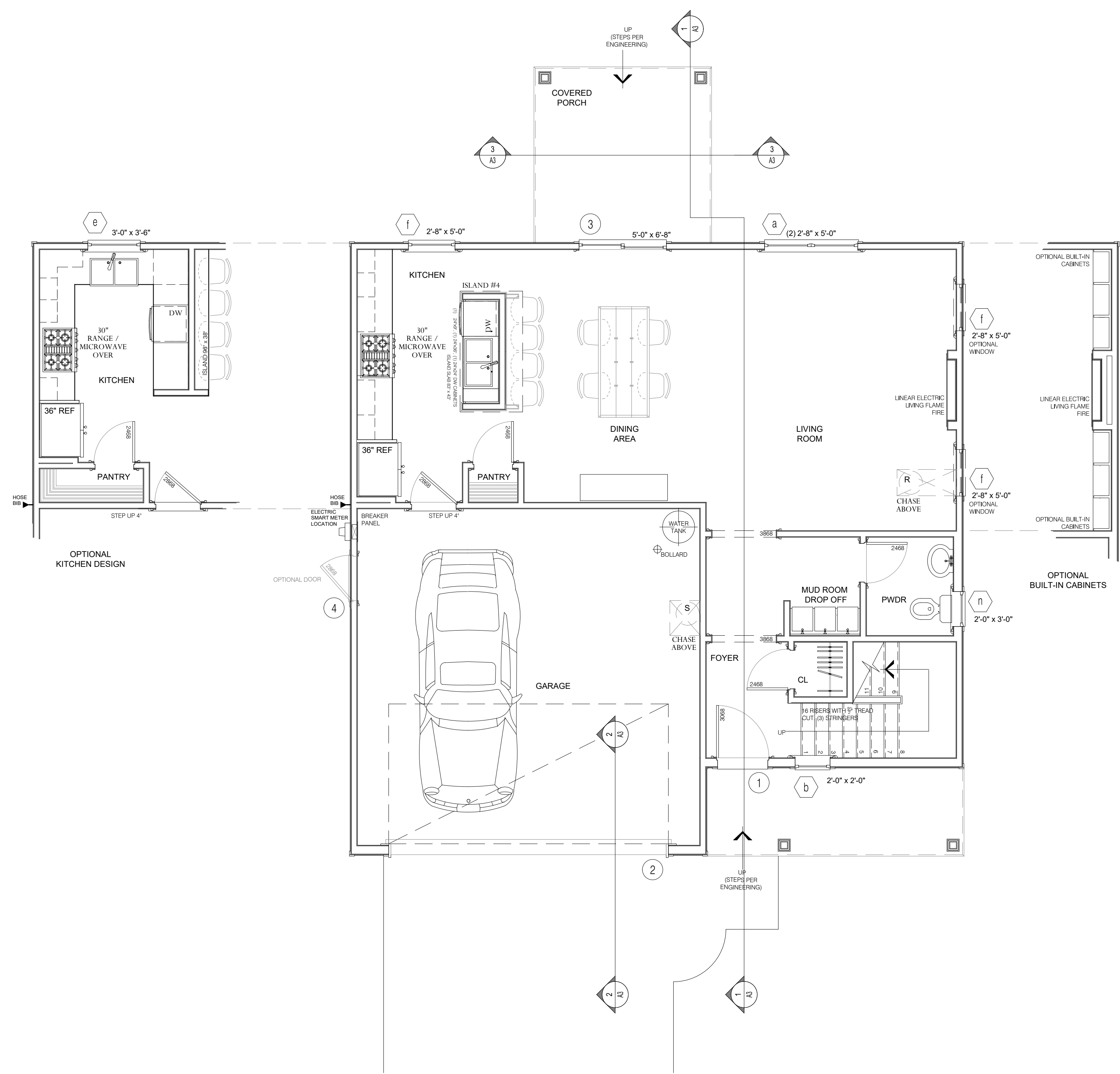
REVISIONS:  
 REV A: 06.12.2023, BALCONY SIDE WALL TO STAIRS REMOVED.  
 REV B: 06.22.2023, AC CHASE LOCATIONS REVISED, AC DESIGN ISSUES  
 IDENTIFIED AND CORRECTED, 60" VANITY, AC DESIGN ISSUES  
 REV C: 01.17.2024, 60" VANITY, AC DESIGN ISSUES IDENTIFIED  
 REV E: 01.16.24 TUBS AND SHOWER FRAMING REVISED TO 60".  
 W8x8 WALL TO 6" & FRAMED ISLAND ADDED

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 ENGINEERING, INC.  
 333 E. SIX FORKS RD., SUITE 180  
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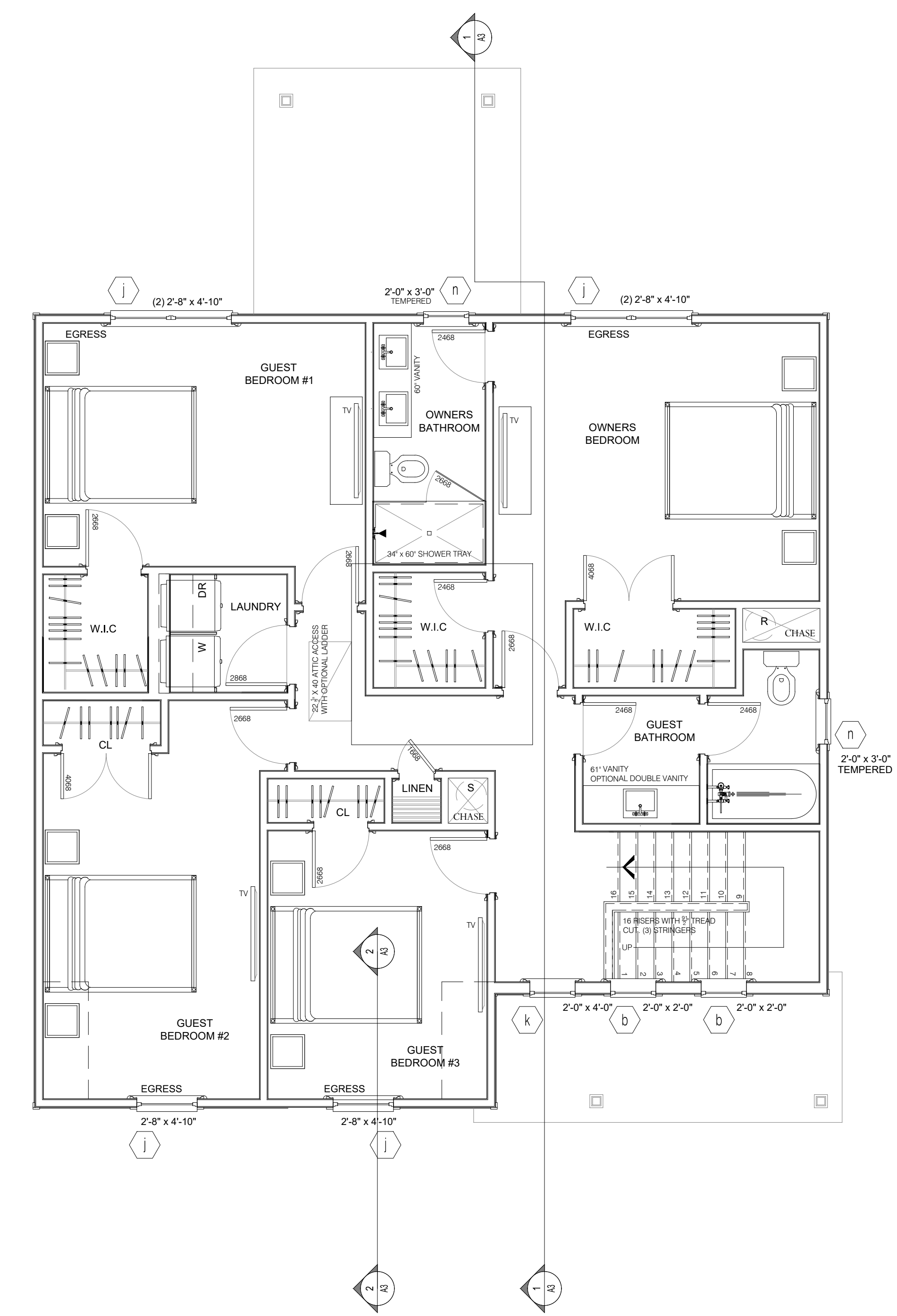
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THE LYON  
 FLOOR PLANS

DATE: 2023-04-07  
 DRAWN BY: NS  
 ENGINEER: NS  
 CHECKED BY: NS  
 Q.C. BY: NS  
 SCALE: 1/4" = 1'-0"  
 SHEET NUMBER:  
**A1**



MAIN FLOOR PLAN - WITH OPTIONS  
 SCALE: 1/4" = 1'-0"



UPPER FLOOR PLAN - WITH OPTIONS  
 SCALE: 1/4" = 1'-0"

NOTE:  
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 OF AN OPEN COMBUSTION CHAMBER, A DRAFT HOOD OR  
 ANOTHER APPLIANCE OR WITHIN 10' OF COOKING APPLIANCES.  
 CODE M.1602.2 / 601.5

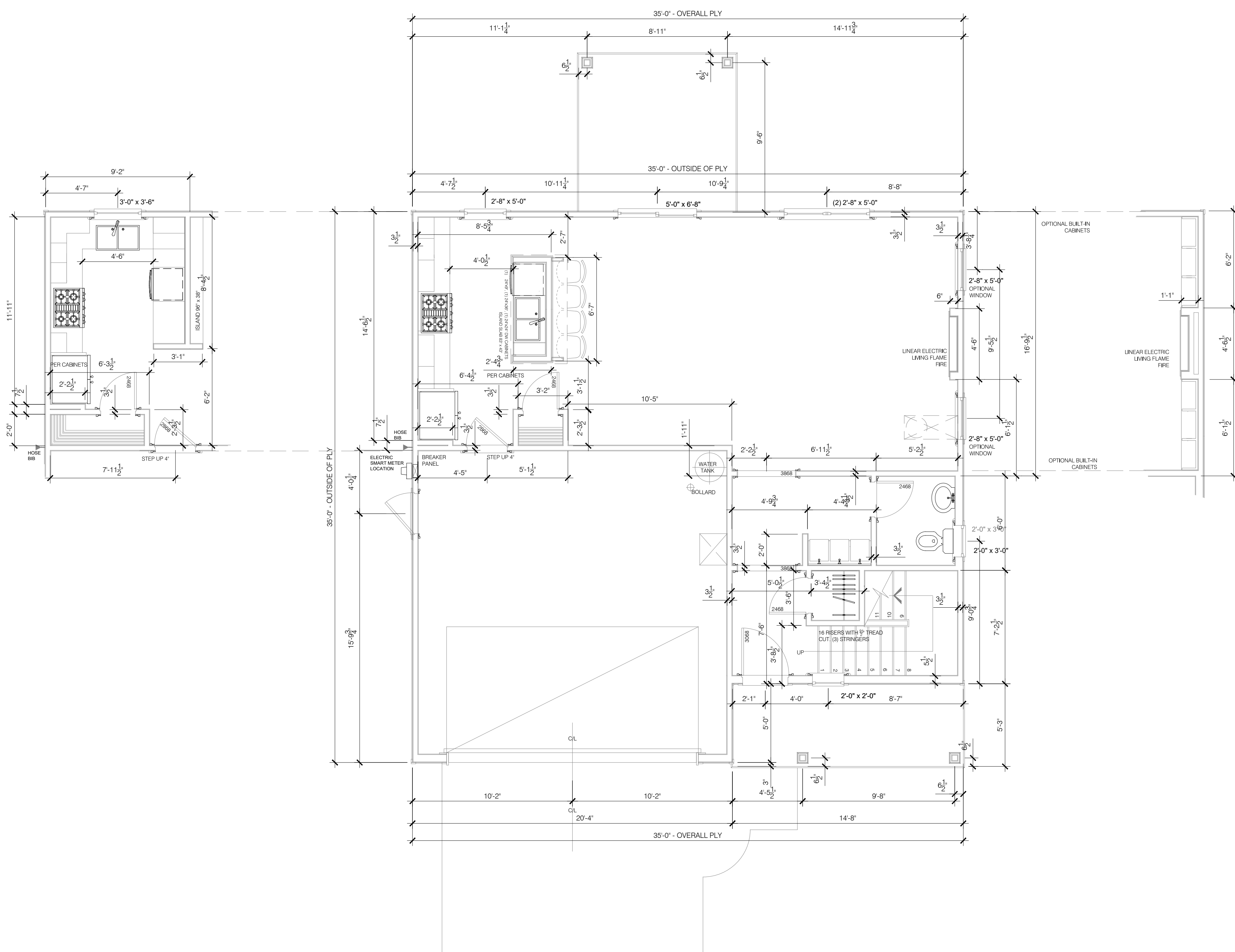
REVISIONS:  
 REV A: 06.12.2023, BALCONY SIDE WALL TO STAIRS REMOVED.  
 REV B: 06.22.2023, AC CHASE LOCATIONS REVISED.  
 REV C: 07.12.2023, AC CHASE LOCATIONS REVISED.  
 REV D: 07.12.2023, AC CHASE LOCATIONS REVISED.  
 REV E: 01.16.24 TUBS AND SHOWER FRAMING REVISED TO 6".  
 W8x8 WALL TO 6" & FRAMED ISLAND ADDED

**J.S. THOMPSON**  
 ENGINEERING, INC.  
 333 E. SIX FORKS RD., SUITE 180  
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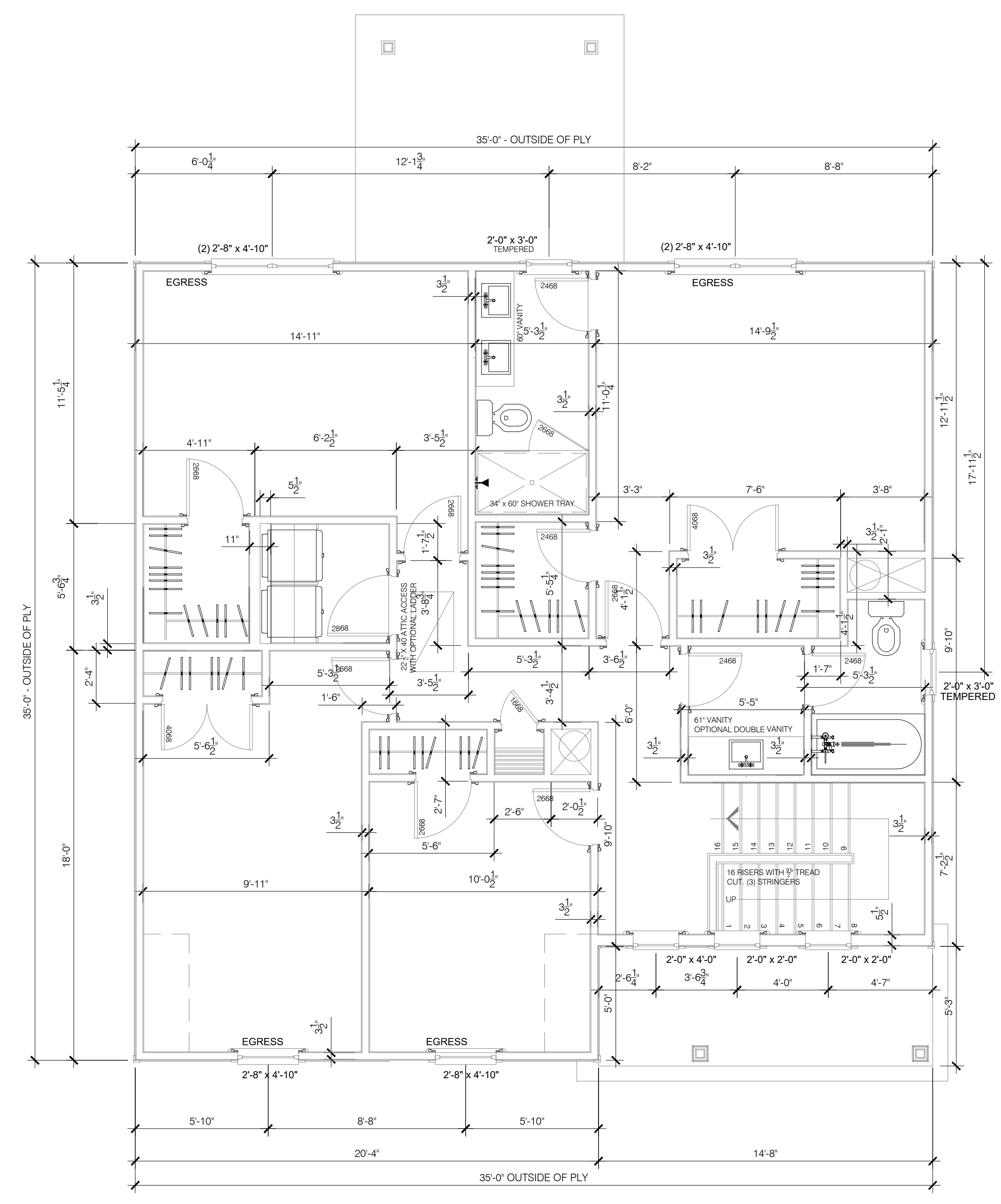
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THE LYON  
 DIMENSIONED FLOOR PLANS

DATE: 2023-04-07  
 DRAWN BY: NS  
 ENGINEER: NS  
 CHECKED BY: NS  
 Q.C. BY: NS  
 SCALE: 1/4" = 1'-0"  
 SHEET NUMBER:  
**A1.1**

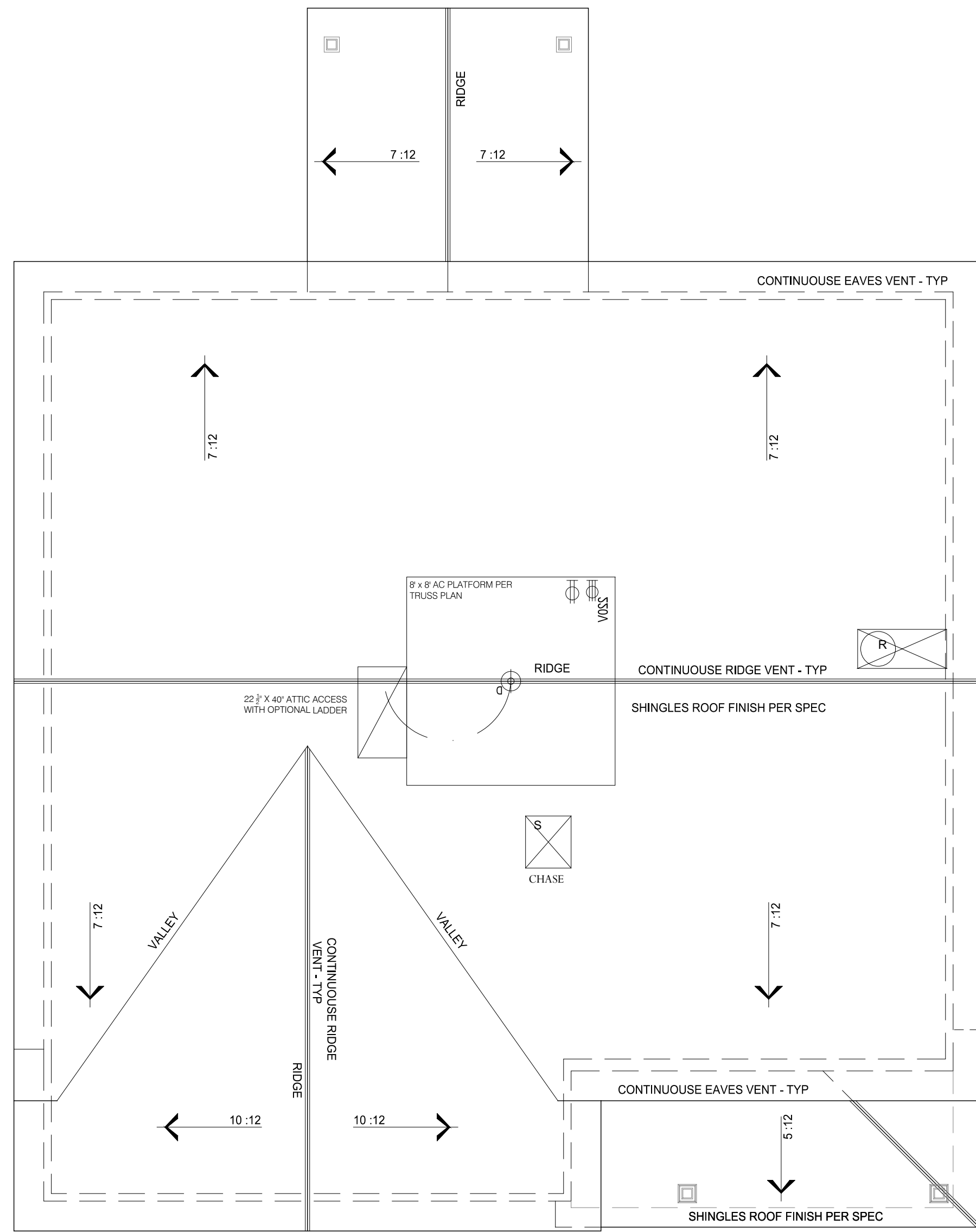


MAIN FLOOR PLAN - WITH OPTIONS  
 SCALE: 1/4" = 1'-0"

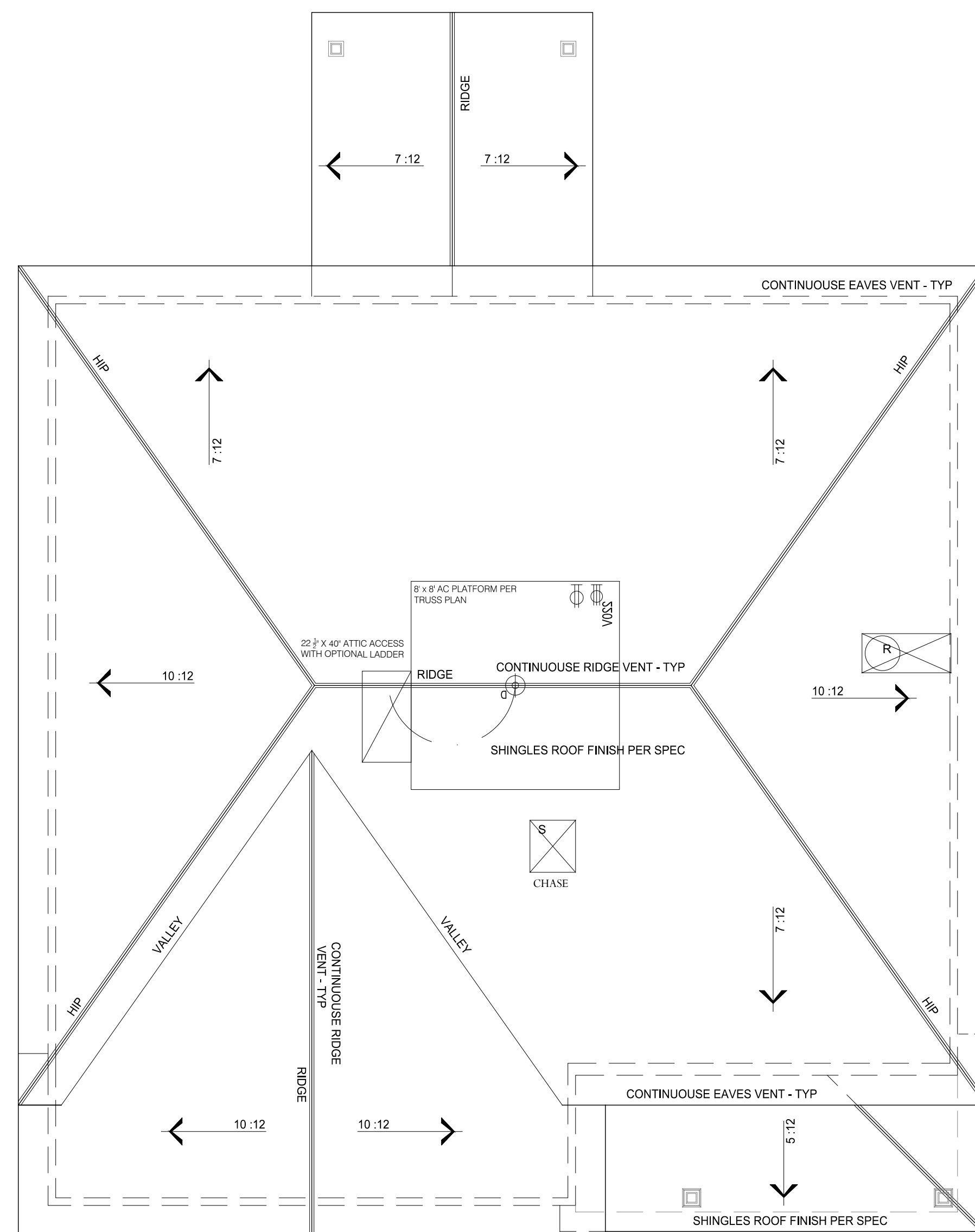


UPPER FLOOR PLAN - WITH OPTIONS  
 SCALE: 1/4" = 1'-0"





ELEVATION **A** ROOF PLAN - PER TRUSS DESIGN  
SCALE: 1/4" = 1'-0"



ELEVATION **B** ROOF PLAN - PER TRUSS DESIGN  
SCALE: 1/4" = 1'-0"

NOTE:  
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OF AN OPEN COMBUSTION CHAMBER, A DRAFT HOOD OR  
ANOTHER APPLIANCE OR WITHIN 10' OF COOKING APPLIANCES,  
CODE M.1602.2 / 601.5

REVISIONS:  
REV A: 06.12.2023, BALLOON SIDE WALL TO STAIRS REMOVED.  
REV B: 06.22.2023, AC CHASE LOCATIONS REVERSED.  
REV C: 09.11.2023, AC CHASES UPDATED TO ITX AC DESIGN ISSUES

**J.S. THOMPSON**  
ENGINEERING, INC.  
333 E. SIX FORKS RD., SUITE 180  
RALEIGH, NC 27609  
PHONE: (919) 789-9919  
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THE LYON  
ROOF PLANS  
ELEVATIONS A & B

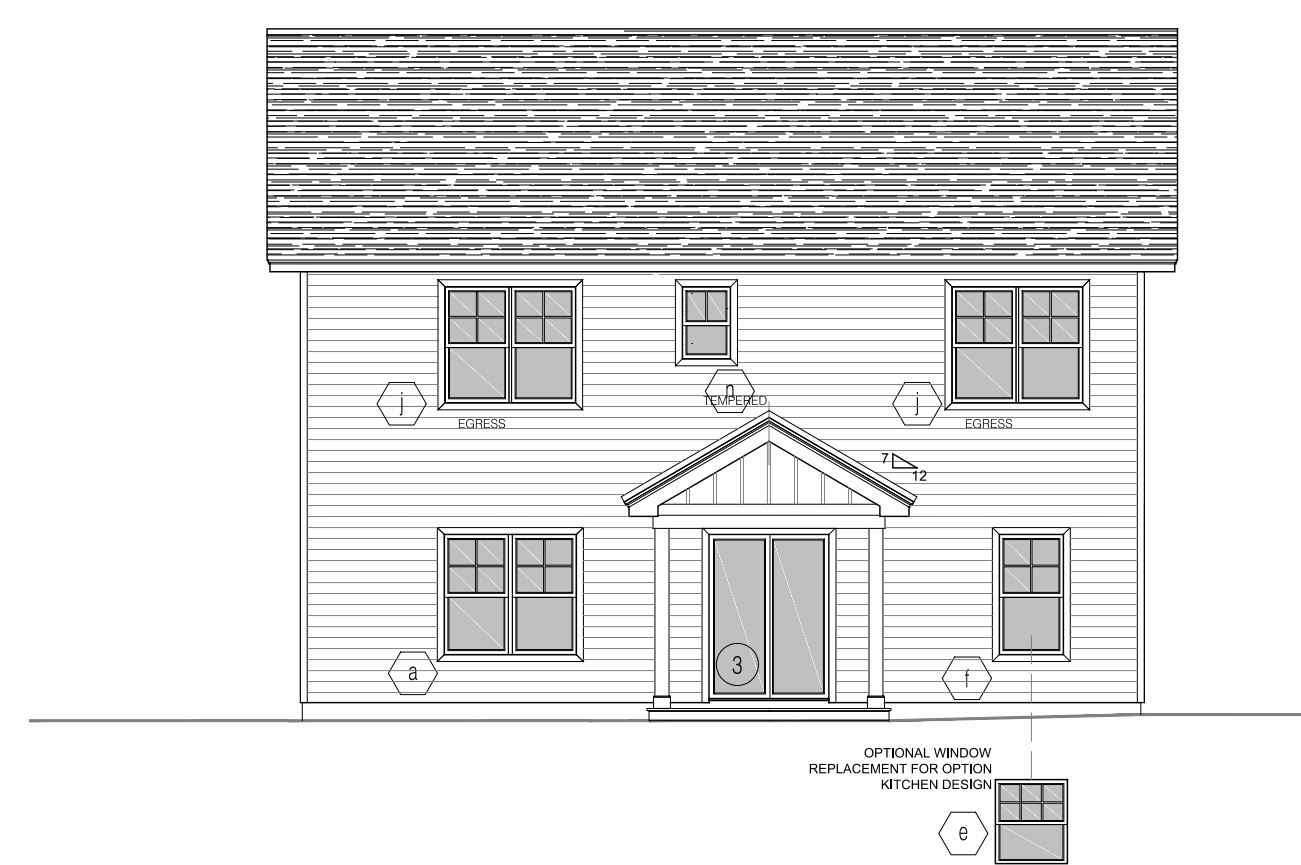
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DRAWN BY: NS  
ENGINEER: NS  
CHECKED BY: NS  
Q.C. BY: NS  
SCALE: 1/4"=1'-0"  
SHEET NUMBER:  
**A1.2**

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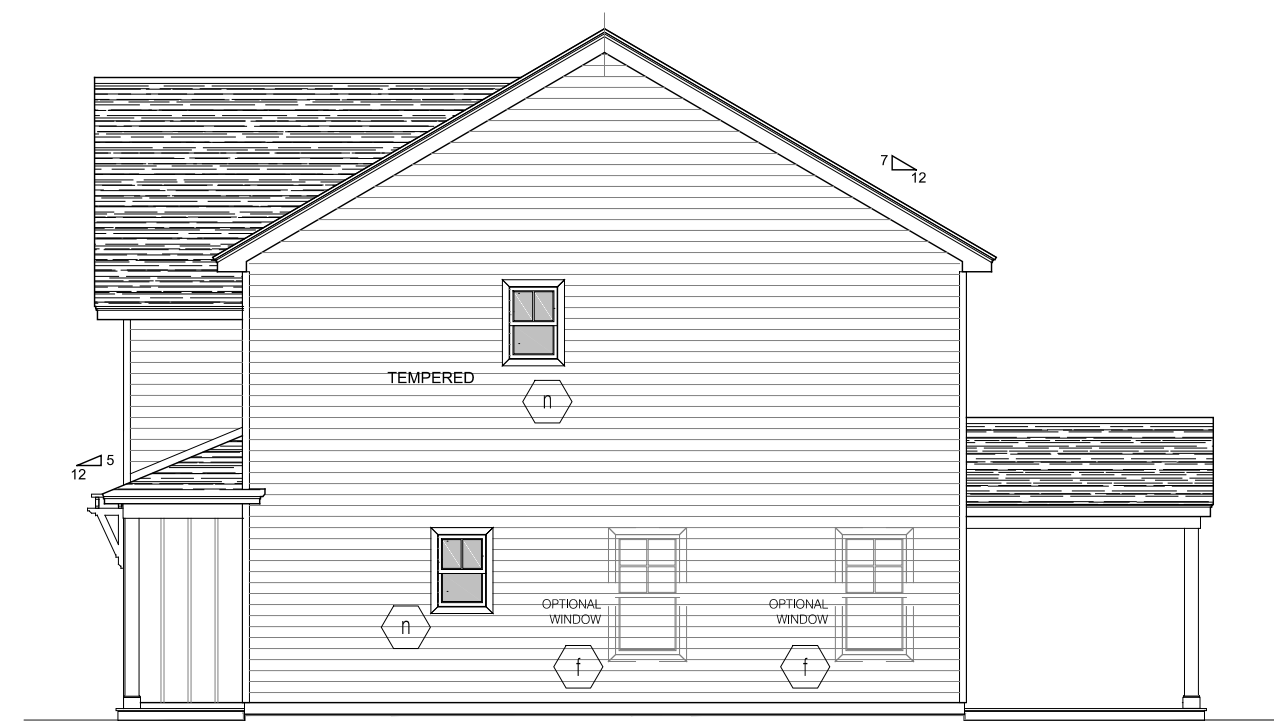




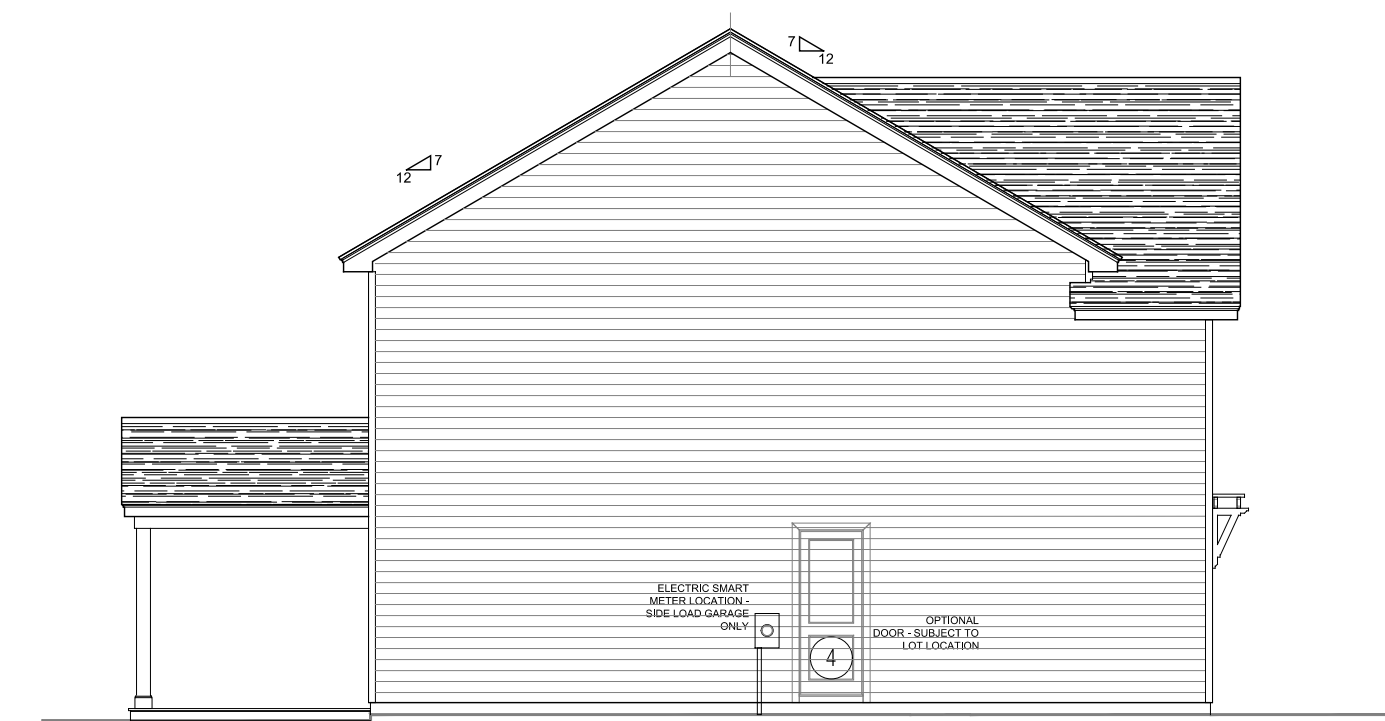
FRONT ELEVATION  
SCALE: 1/4" = 1'-0"



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



RIGHT SIDE ELEVATION  
SCALE: 1/8" = 1'-0"



LEFT SIDE ELEVATION  
SCALE: 1/8" = 1'-0"

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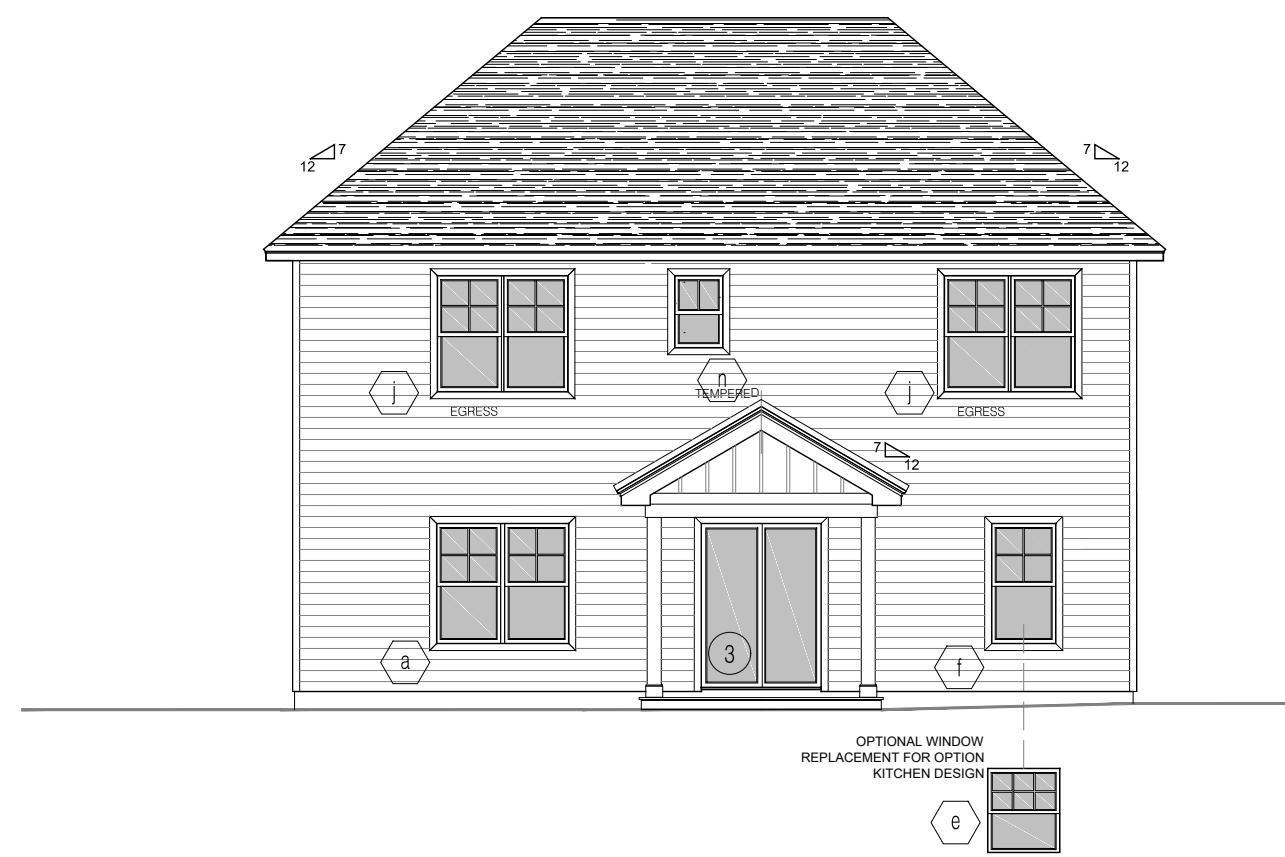
THE LYON  
ALL EXTERNAL ELEVATIONS  
ELEVATION A

DATE: 2023-04-07  
DRAWN BY: NS  
ENGINEER: NS  
CHECKED BY: NS  
Q.C. BY: NS  
SCALE: AS SHOWN  
SHEET NUMBER:  
**A2.a**

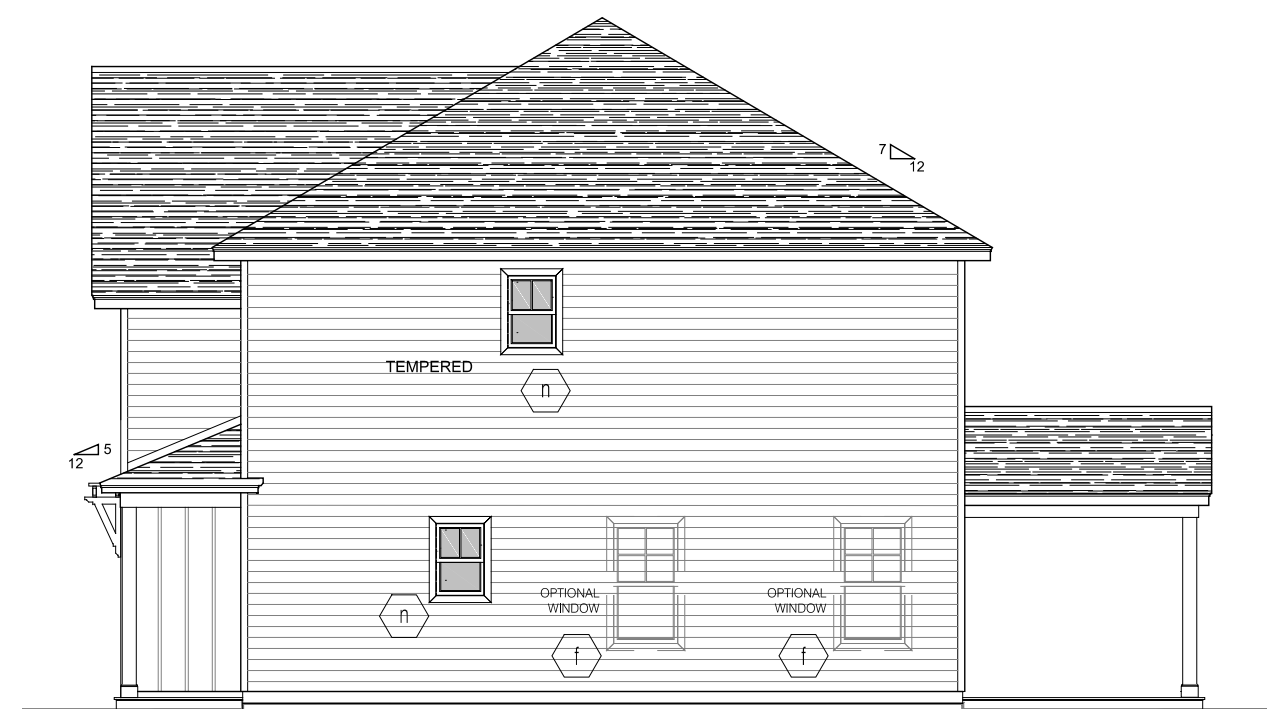




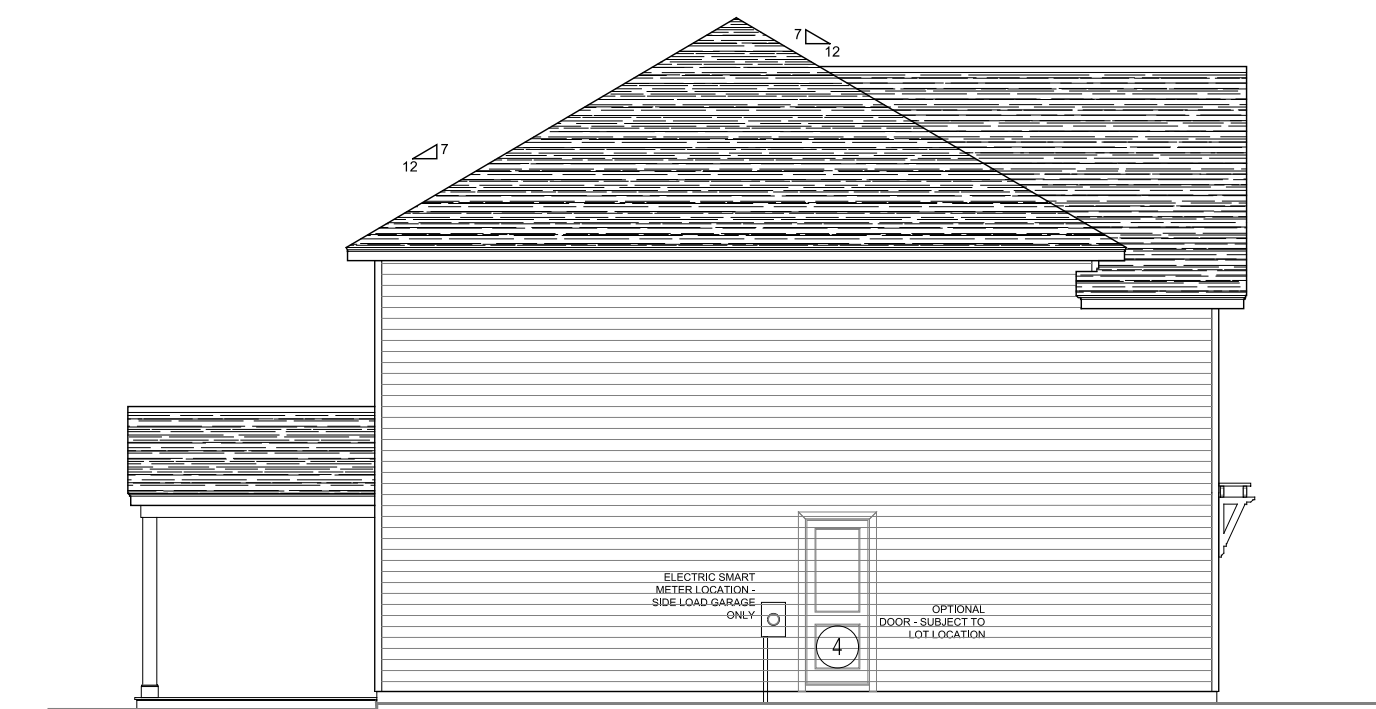
FRONT ELEVATION  
SCALE: 1/4" = 1'-0"



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



RIGHT SIDE ELEVATION  
SCALE: 1/8" = 1'-0"



LEFT SIDE ELEVATION  
SCALE: 1/8" = 1'-0"

REVISIONS:

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ENGINEERING, INC.  
333 E SIX FORKS RD, SUITE 180  
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THE LYON  
ALL EXTERNAL ELEVATIONS  
ELEVATION B

DATE: 2023-04-07  
DRAWN BY: NS  
ENGINEER: NS  
CHECKED BY: NS  
Q.C. BY: NS  
SCALE: AS SHOWN  
SHEET NUMBER: A2.b



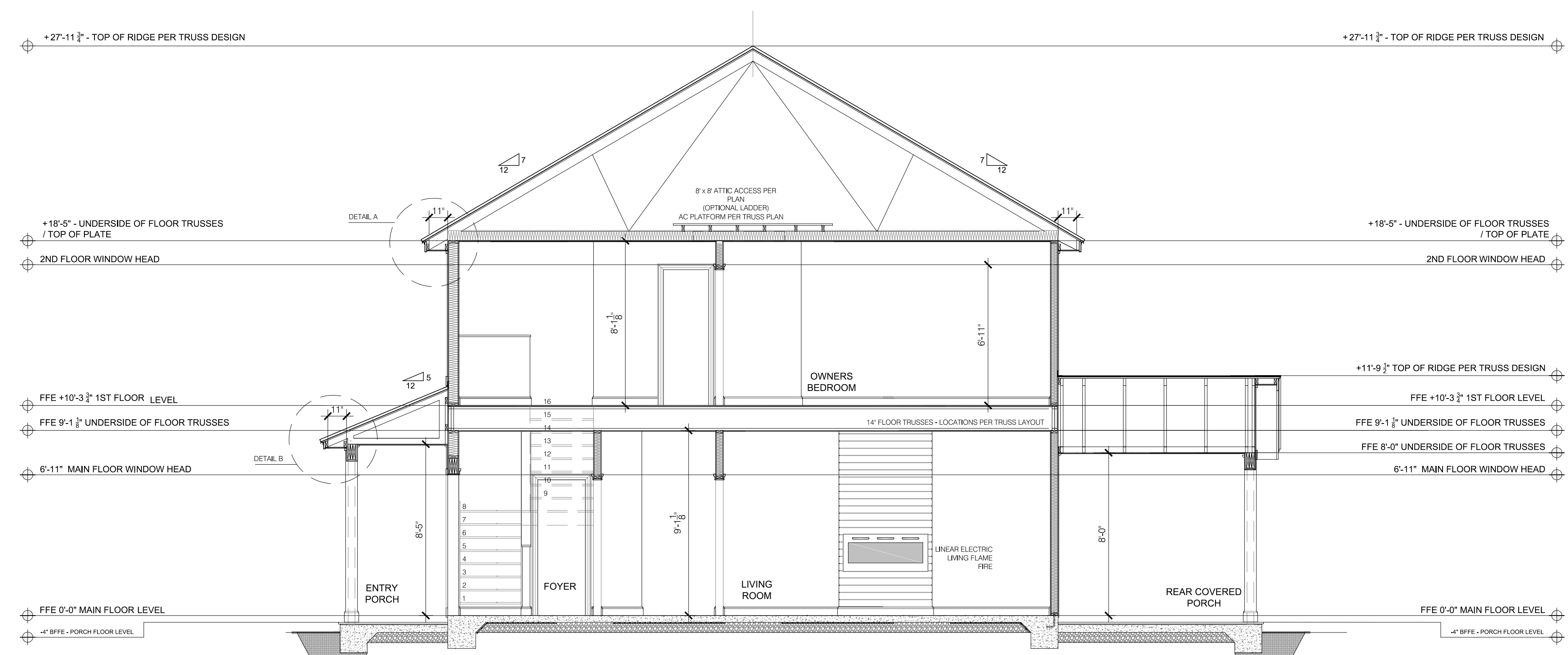
REVISIONS:

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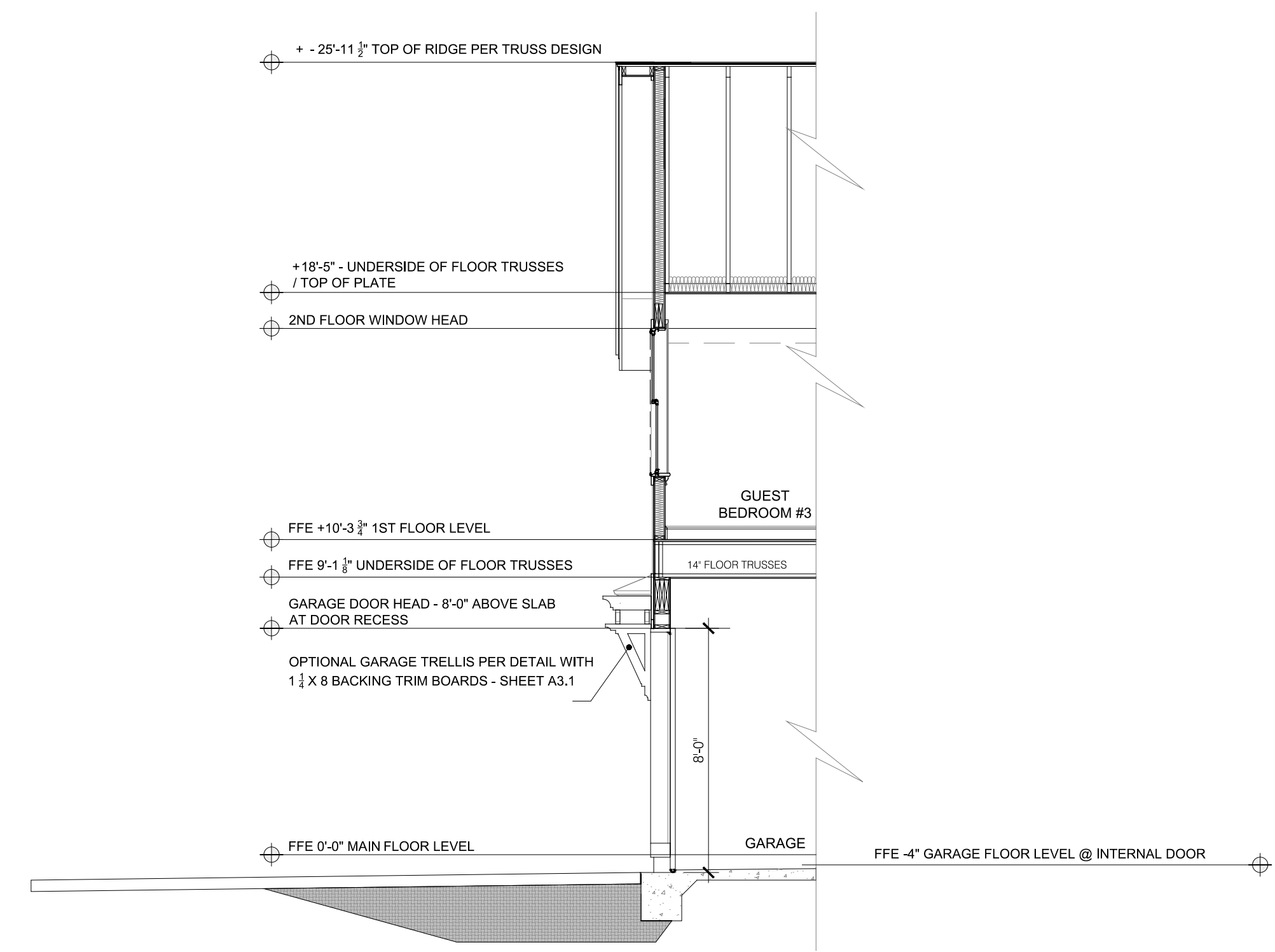
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THE LYON  
CONSTRUCTION SECTIONS

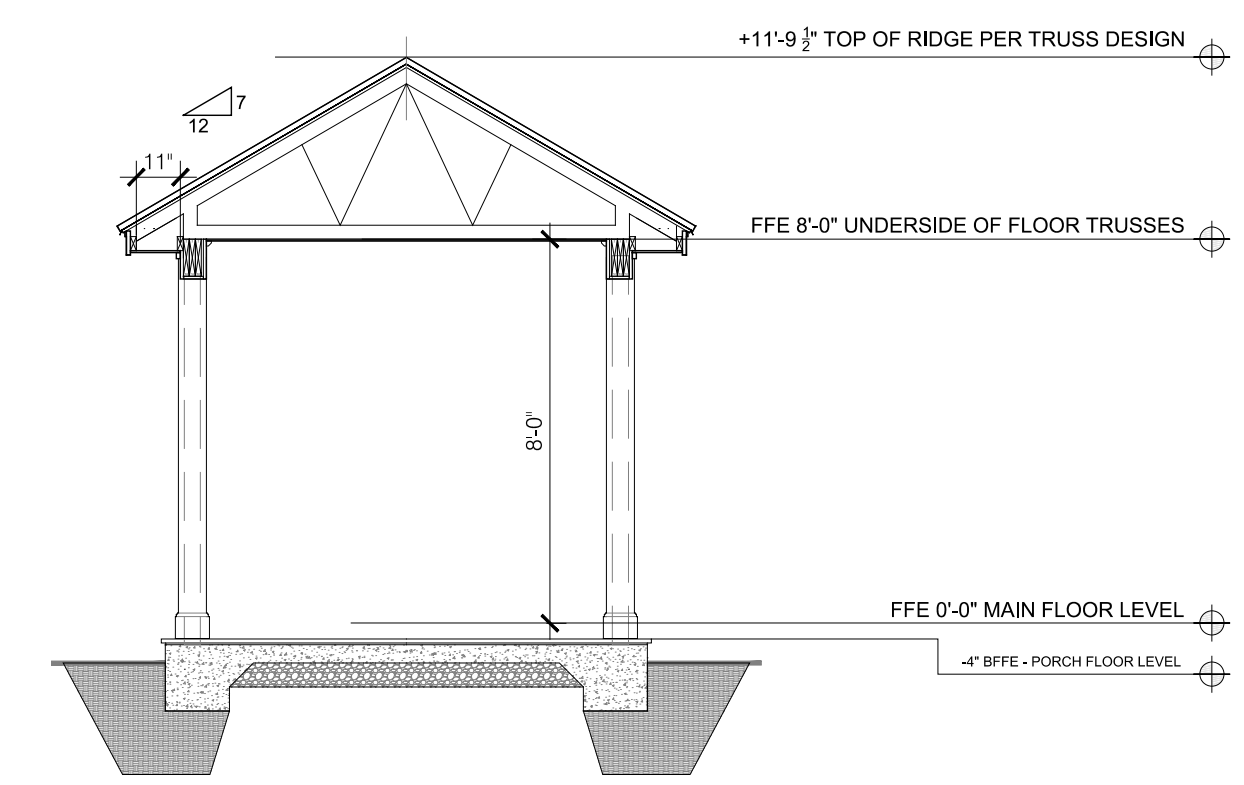
DATE: 2023-04-07  
DRAWN BY: NS  
ENGINEER: NS  
CHECKED BY: NS  
Q.C. BY: NS  
SCALE: 1/4" = 1'-0"  
SHEET NUMBER:  
**A3**



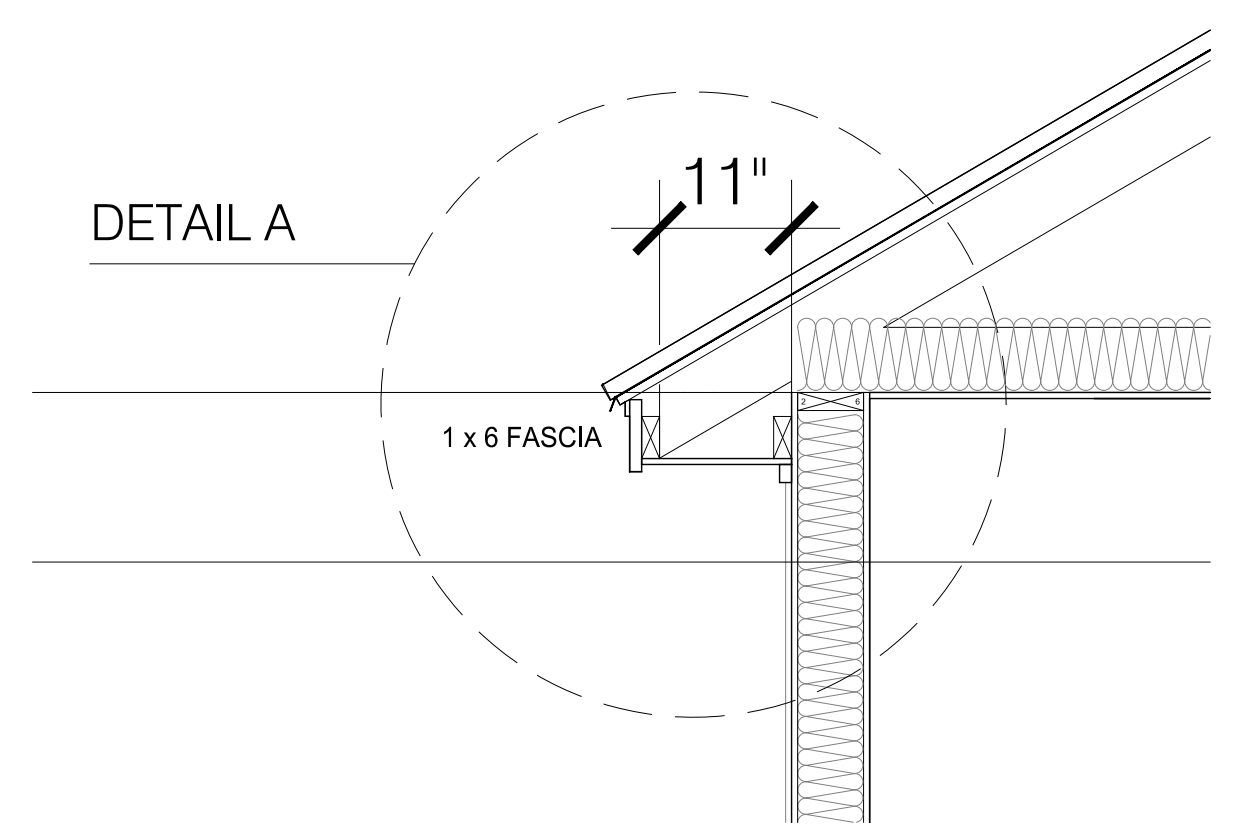
**BUILDING SECTION - 1**  
SCALE: 1/4" = 1'-0"



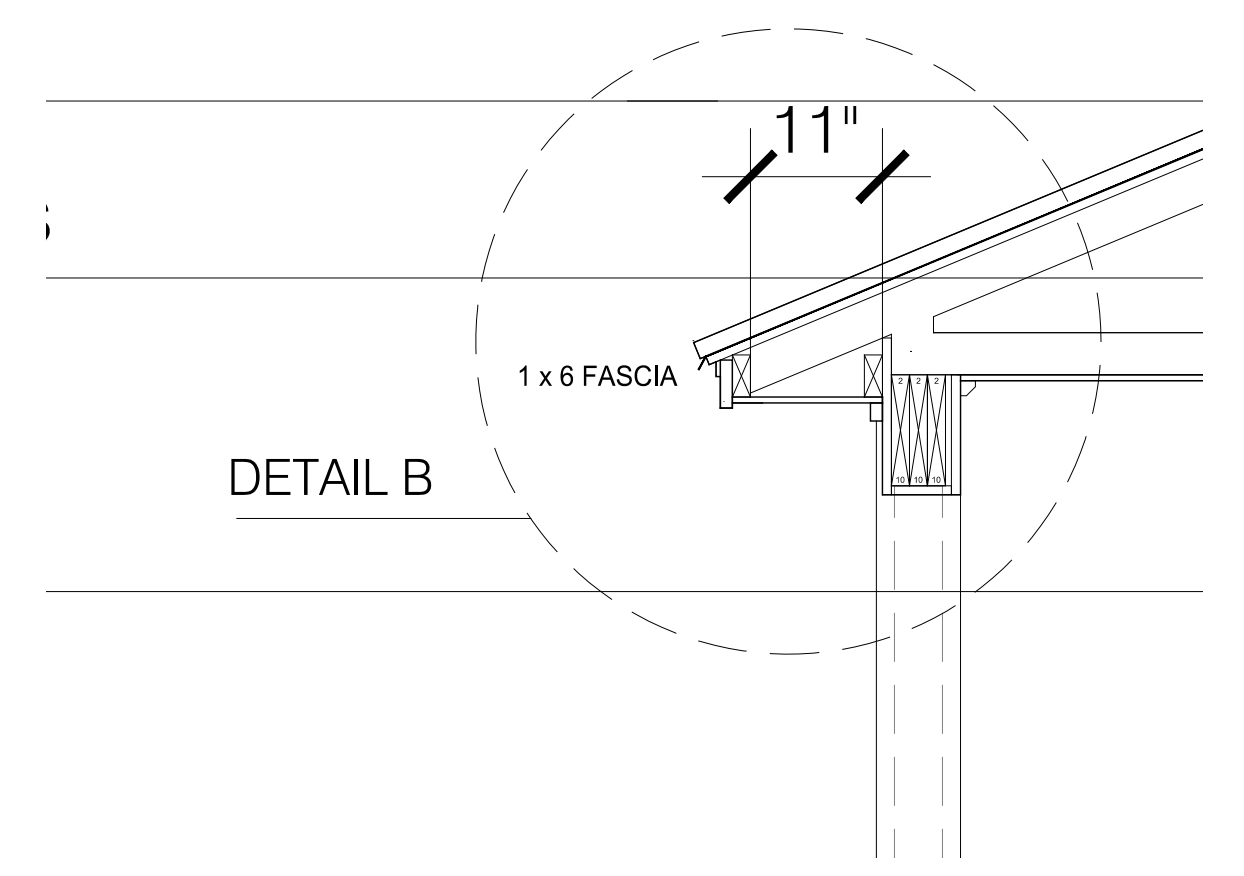
**BUILDING SECTION - 2**  
SCALE: 1/4" = 1'-0"



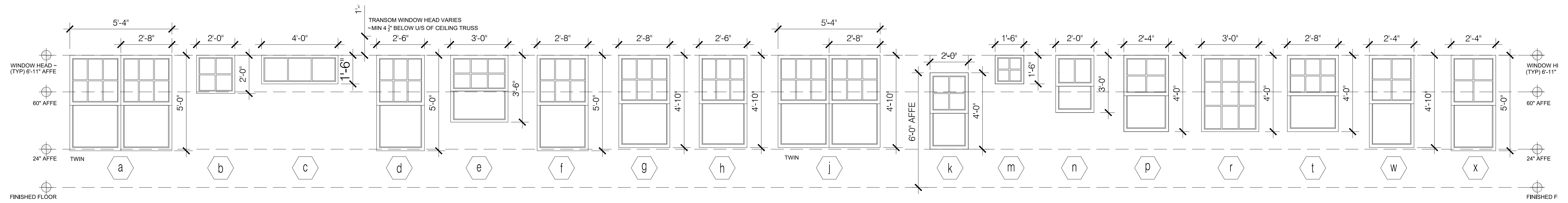
**BUILDING SECTION - 3**  
SCALE: 1/4" = 1'-0"



**DETAIL A**  
SCALE: 3/4" = 1'-0"



**DETAIL B**  
SCALE: 3/4" = 1'-0"



NOTES:  
 GLAZING IN WET AREAS WHEN A BATH TUB OR SHOWER IS INSTALLED SHALL BE TEMPERED GLASS WHEN THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60" MEASURED VERTICALLY ABOVE THE FINISHED FLOOR ELEVATION - PER CODE: R308.4.5.

WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS BELOW 24" MEASURED VERTICALLY ABOVE THE FINISHED FLOOR ELEVATION TEMPERED GLASS SHALL COMPLY WITH EITHER - PREVENTATIVE FALL DEVICES SHALL BE INSTALLED OR THE WINDOW OPENING SHALL BE RESTRICTED TO A 4" OPENING DIMENSION NOT ALLOWING A 4" SPHERE TO PASS, PER CODE: R312.2.1.

GLAZING WHERE THE BOTTOM EXPOSED EDGE OF GLAZING IS WITHIN 36" ABOVE THE PLANE OF THE STAIRCASE WALKING SURFACE, LANDINGS SHALL BE CONSIDERED A HAZARDOUS LOCATION, PER CODE: R308.4.6

WHERE GLAZING IS WITHIN 24" OF EITHER SIDE OF A DOOR IN A CLOSED POSITION SHALL BE CONSIDERED A HAZARDOUS LOCATION, PER CODE: R308.4.2

GLAZING ADJACENT TO A LANDING AT THE BOTTOM OF A STAIRWAY WHERE GLAZING IS LESS THAN 36" ABOVE THE LANDING AND WITHIN 60" HORIZONTAL ARC LESS THAN 180 DEGREES FROM THE BOTTOM STAIR NOSING IS CONSIDERED A HAZARDOUS LOCATION, PER CODE: 308.4.7

WINDOW & DOOR GLAZING PATTERNS, CODE NOTES  
 SCALE: 3/8" = 1'-0"

**GENERAL NOTES:**

- ALL WINDOWS SHALL BE IN DOUBLE GLAZED INSULATED LOW 'E' GLAZING
- ALL HARDWARE TO BE PER CLIENT/ASCOT CORPORATION SELECTIONS
- DETAIL SHOP DRAWINGS FOR ALL WINDOW TYPES SHALL BE APPROVED
- ALL PROFILES TO BE APPROVED BY ASCOT CORPORATION
- WINDOW DIMENSIONS AND GLAZING PATTERN ARE PER NOMINATED VINYL SIZE DOCUMENTATION COLORED VINYL SINGLE HUNG TILT & SLIDE & FIXED WINDOWS
- WINDOWS NOTED AS EGRESS SHALL COMPLY WITH THE RELEVANT BUILDING CODE REFERENCE. ALL WINDOWS SILLS LOWER THAN 24" ABOVE FINISHED FLOOR ELEVATIONS SHALL BE PROVIDED WITH FALL PREVENTATIVE DEVICES OR RESTRICTED TO ONLY ALLOW A 4" DIAMETER SPHERE TO PASS. NO WINDOW SILL SHALL BE HIGHER THAN 72" ABOVE ADJACENT GRADE.
- EGRESS WINDOWS SHALL HAVE A NET OPENING AREA OF NOT LESS THAN 5.0 SQFT (20' X 24" - (NORTH CAROLINA) FOR GRADE FLOOR EGRESS OR 5.7 SQFT TO UPPER EGRESS FLOORS. NO WINDOW SILL SHALL BE HIGHER THAN 44" ABOVE FINISHED FLOOR ELEVATION OR BELOW A MIN OF 24" ABOVE THE FINISHED FLOOR.
- CONTRACTOR/ASCOT CORPORATIONS SUPERINTENDENT SHALL VERIFY ALL MASONRY & FRAME OPENINGS BUILT ON SITE PRIOR TO WINDOW INSTALLATION.
- TEMPERED GLAZING SHALL BE PROVIDED AND INSTALLED WITH CRITICAL HAZARDOUS LOCATIONS PER LOCAL AND STATE CODES, AND AS NOTED ON PLANS AND ELEVATIONS HEREIN, UNLESS OTHERWISE AGREED WITH CODE OFFICIALS.
- GLAZING IN WET AREAS WHEN A BATH TUB OR SHOWER IS INSTALLED SHALL BE TEMPERED GLASS WHEN THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 60" MEASURED VERTICALLY ABOVE THE FINISHED FLOOR ELEVATION - PER CODE: R308.4.5

GENERAL NOTES  
 SCALE: NTS

EXTERNAL DOOR SCHEDULE		
MARK	SIZE (WxH)	LOCATION
1	3'-0" X 6'-8"	FRONT ENTRANCE - TEMPERED GLASS
2	16'-0" X 8'-0"	GARAGE DOOR WITH OPTIONAL GLAZING PANELS
3	5'-0" X 6'-8"	SLIDING GLASS DOORS - DINING AREA - TEMPERED GLASS
4	*2'-8" X 6'-8"	*OPTIONAL GARAGE DOOR

INTERNAL DOOR SCHEDULE			
SIZE	QUANTITY	DOOR TYPE	NOTES
*1'-6" X 6'-8"	1	SINGLE	LINEN CLOSET
4'-0" X 6'-8"	2	BY-SWING PAIR	OWNERS SUITE W.I.C, GUEST BEDROOM #2
2'-4" X 6'-8"	7	SINGLE	GUEST & OWNERS BATH, OWNERS W.I.C, CL, PWDR, PANTRY
2'-6" X 6'-8"	6	SINGLE	ALL BEDROOMS, CLOSETS
2'-6" X 6'-8"	1	SINGLE	GLASS SHOWER DOOR + GLAZED PANEL
2'-8" X 6'-8"	1	SINGLE	GARAGE FIRE DOOR - 20 MINUTE MIN
2'-8" X 6'-8"	1	SINGLE	LAUNDRY

WINDOW SCHEDULE					
MARK	RO SIZE (WxH)	WINDOW TYPE	LOCATION	QUANTITIES	NOTES
a	(2)2'-8" X 5'-0"	SINGLE HUNG	LIVING ROOM	(1)PAIR	
b	2'-0" X 2'-0"		FOYER, STAIRCASE	3	
c	NOT USED				
d	NOT USED				
e	*3'-0" X 3'-6"		*KITCHEN OPTION	*1	*OPTIONAL KITCHEN WINDOW - REPLACES (1) 1 WINDOW TO KITCHEN
f	*2'-8" X 5'-0"	SINGLE HUNG	KITCHEN	1 + *(2) OPTIONS	*OPTIONAL WINDOWS TO LIVING ROOM
g	NOT USED				
h	NOT USED				
j	2'-8" X 4'-10"	SINGLE HUNG	ALL BEDROOMS	6 (2)PAIRS, (2) SINGLES	EGRESS
k	2'-0" X 4'-0"	SINGLE HUNG	STAIRCASE	1	
m	NOT USED				
n	2'-0" X 3'-0"	SINGLE HUNG	MASTER BATHROOM, GUEST BATHROOM, PWDR	3	TEMPERED GLASS

SCHEDULES  
 SCALE: NTS

REVISIONS:  
 REV A: 11.27.2023, BY SWING DOORS UPDATED

**J.S. THOMPSON**  
 ENGINEERING, INC.  
 333 E. SIX FORKS RD., SUITE 180  
 RALEIGH, NC 27609  
 PHONE: (919) 789-9919  
 FAX: (919) 789-9921  
 N.C. LICENSE NO.: C-1733

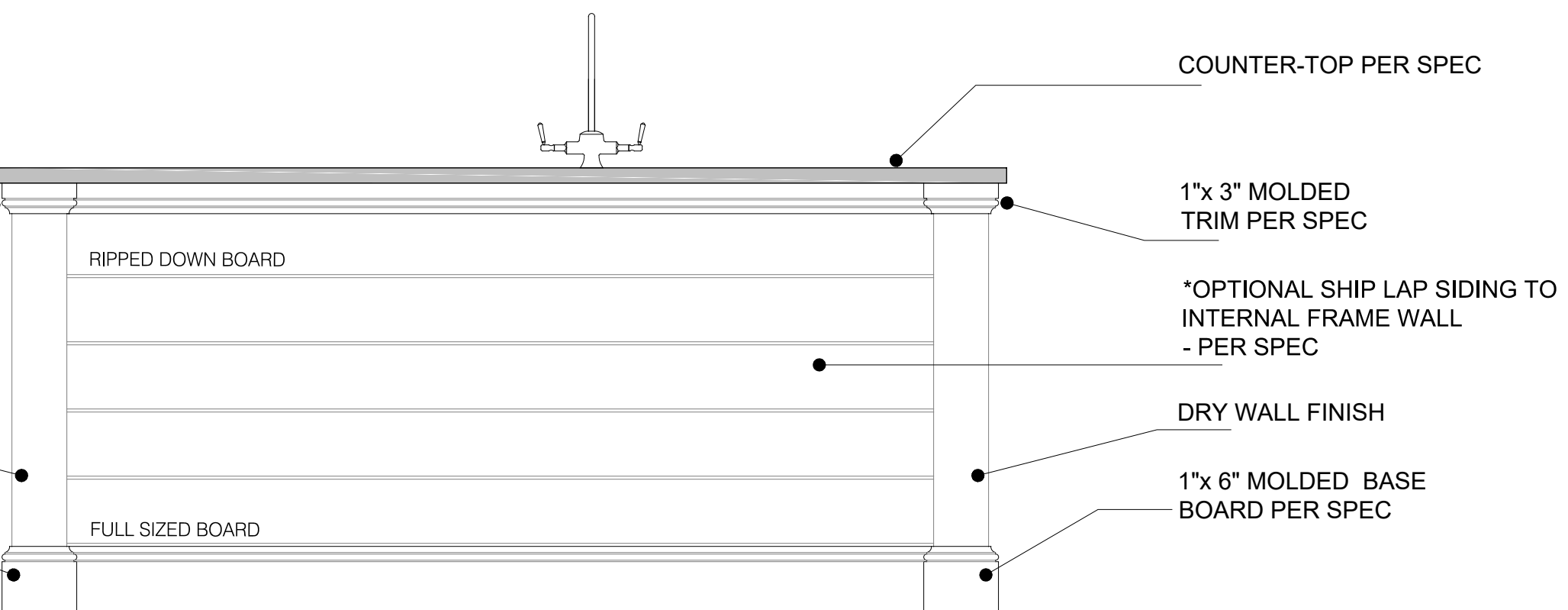
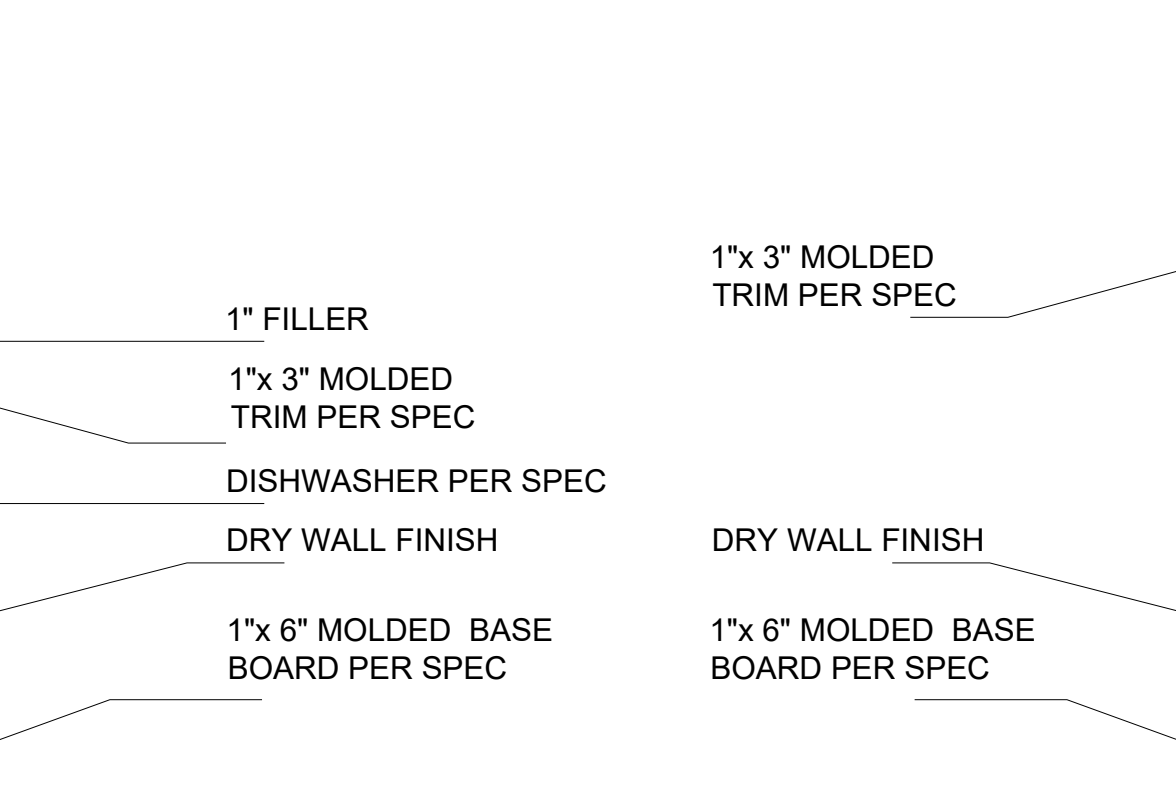
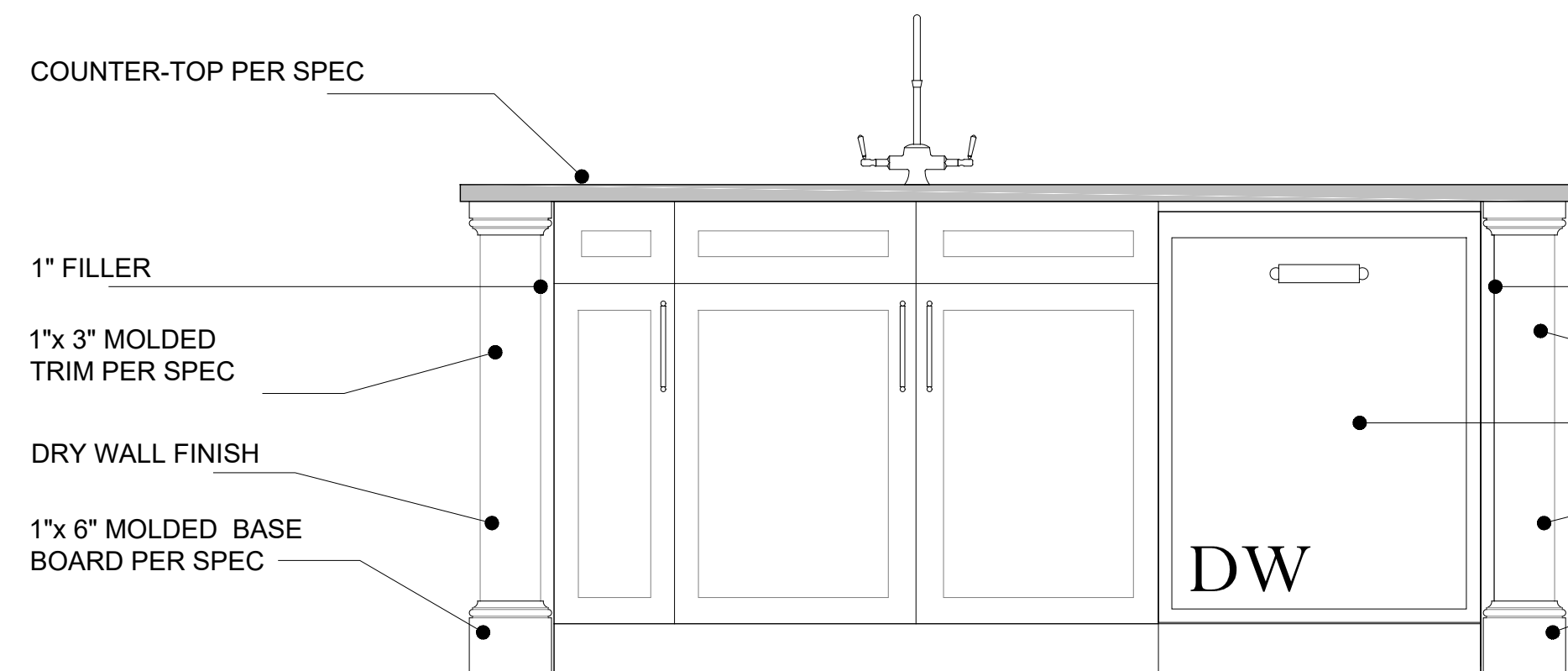
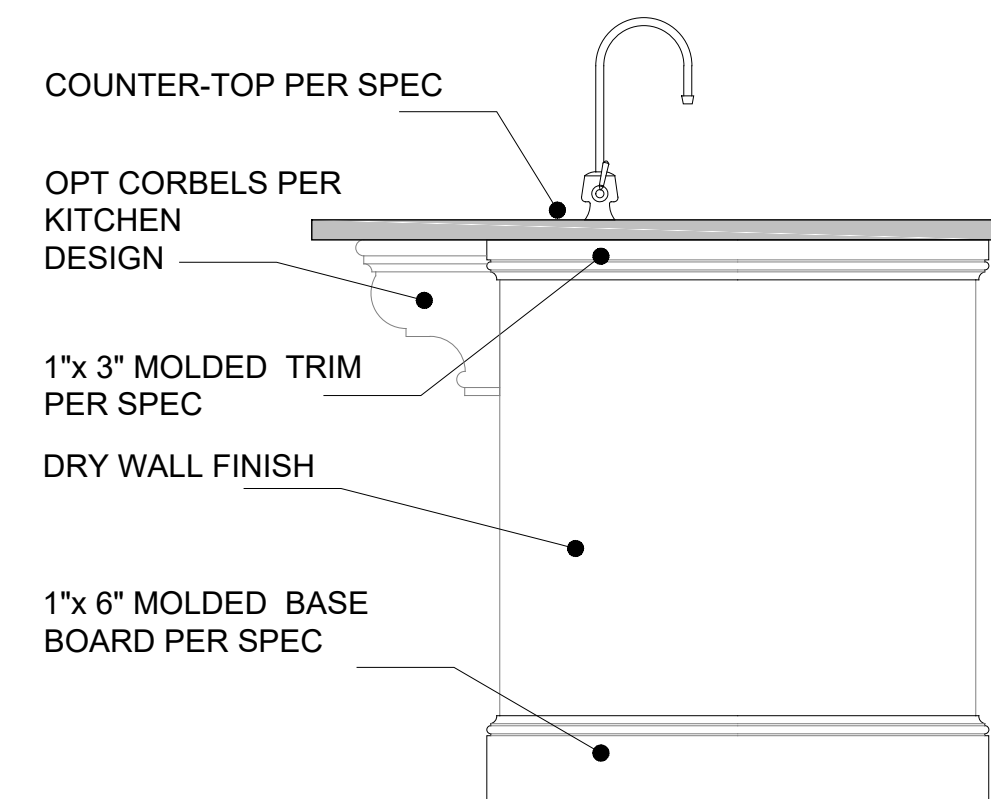
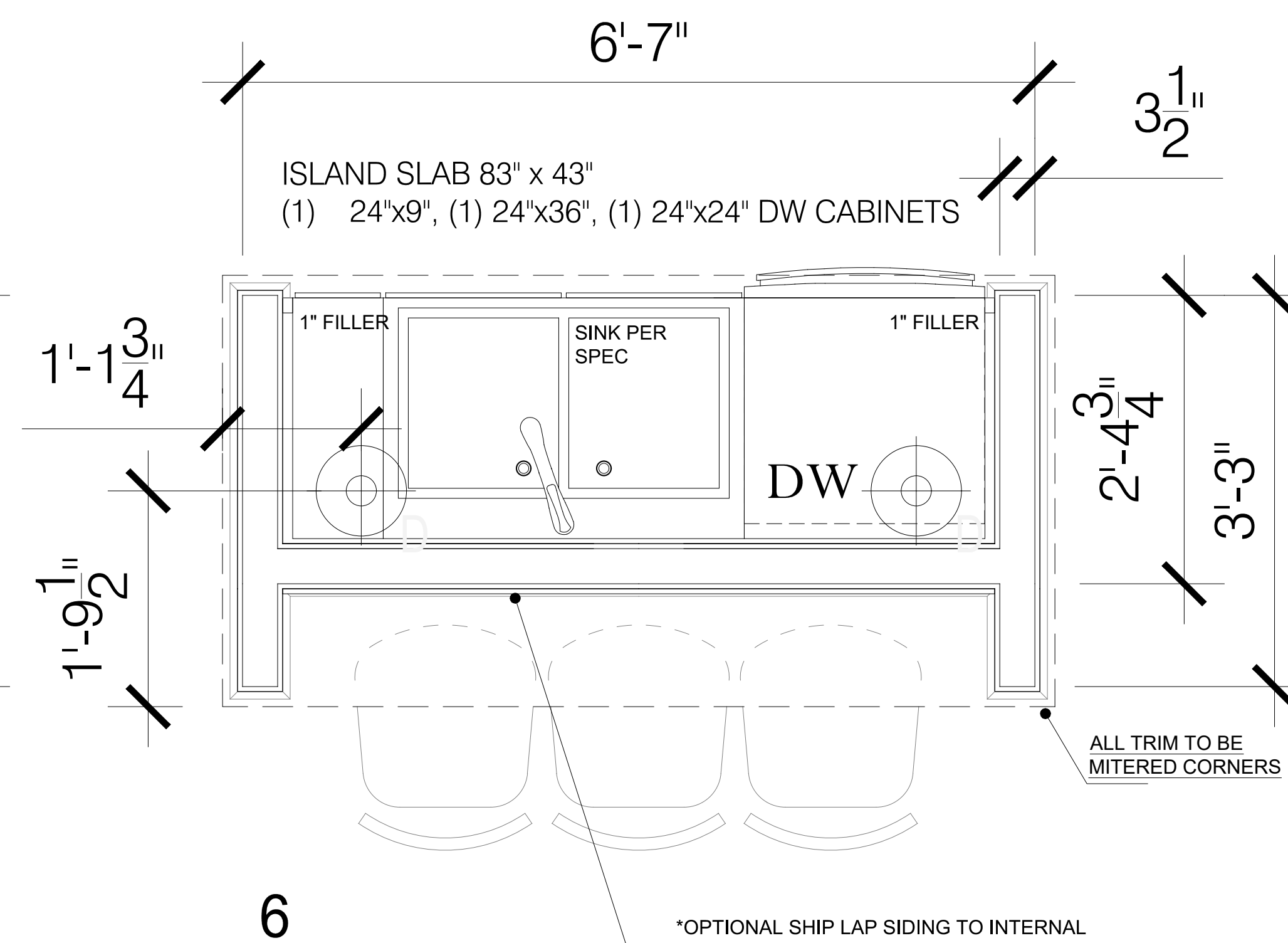
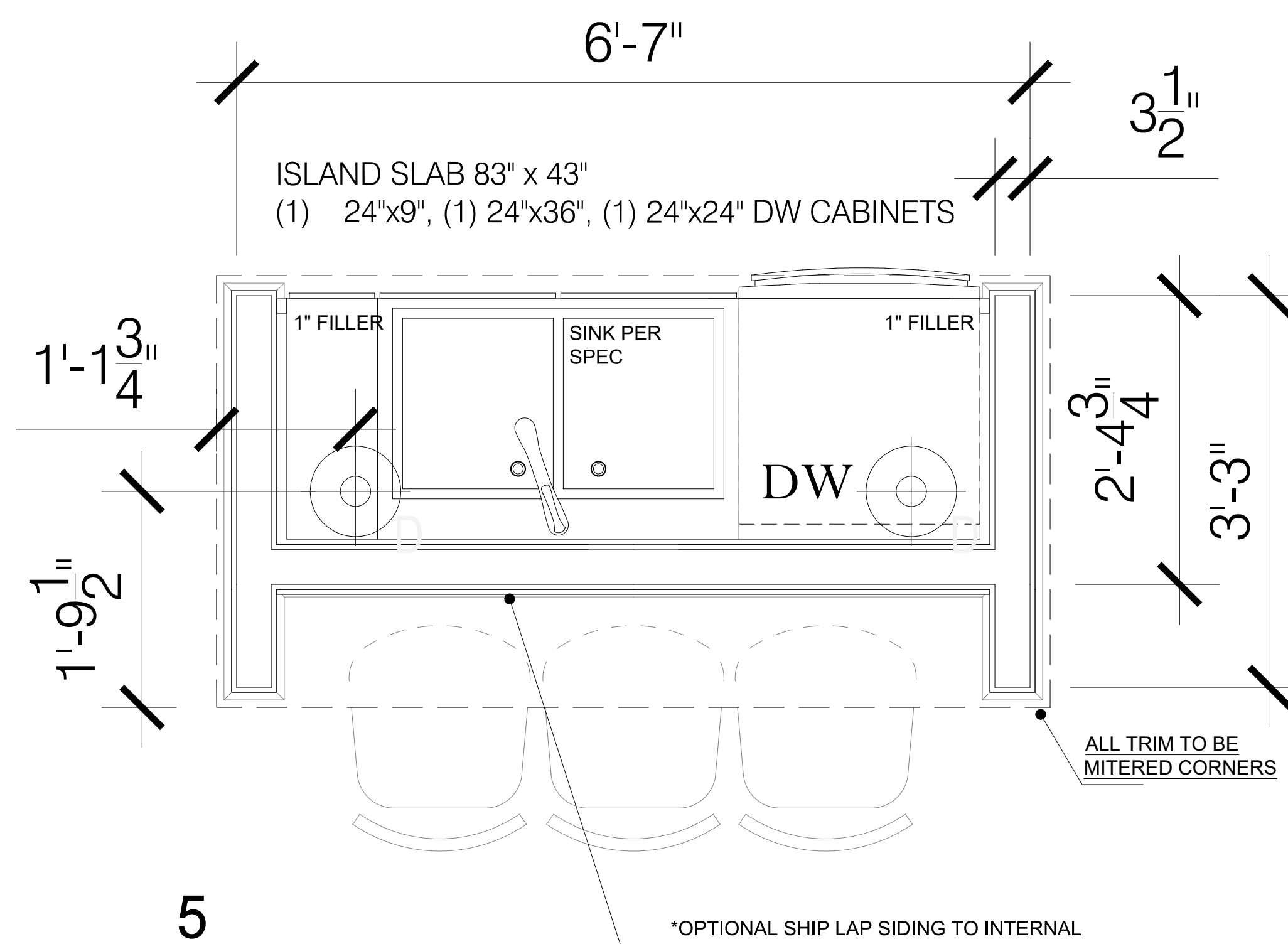
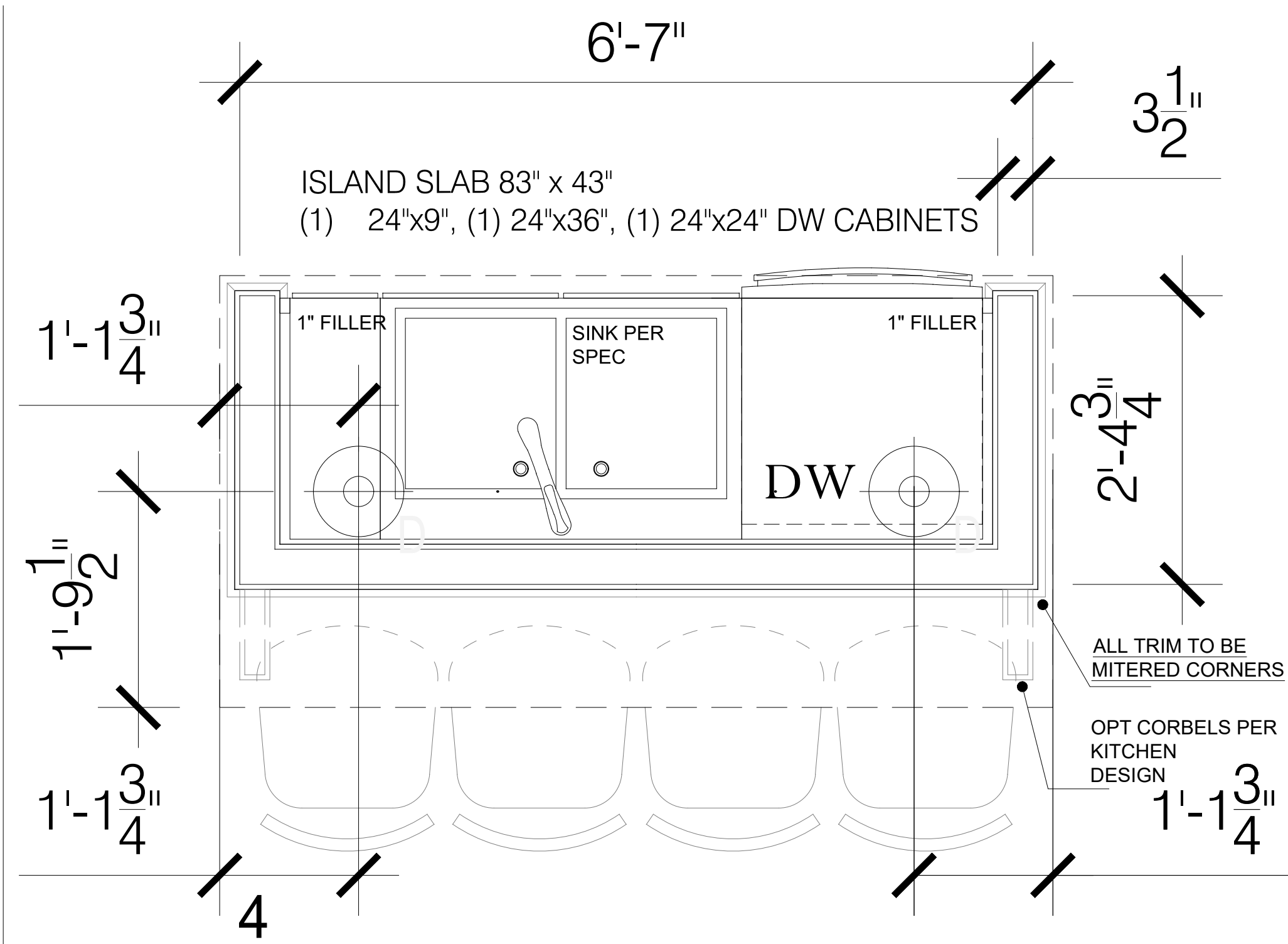
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 Land Development and Construction  
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THE LYON

WINDOW & DOOR SCHEDULES

DATE: 2023-04-07  
 DRAWN BY: NS  
 ENGINEER: NS  
 CHECKED BY: NS  
 Q.C. BY: NTS  
 SCALE:  
 SHEET NUMBER#:  
**A4**



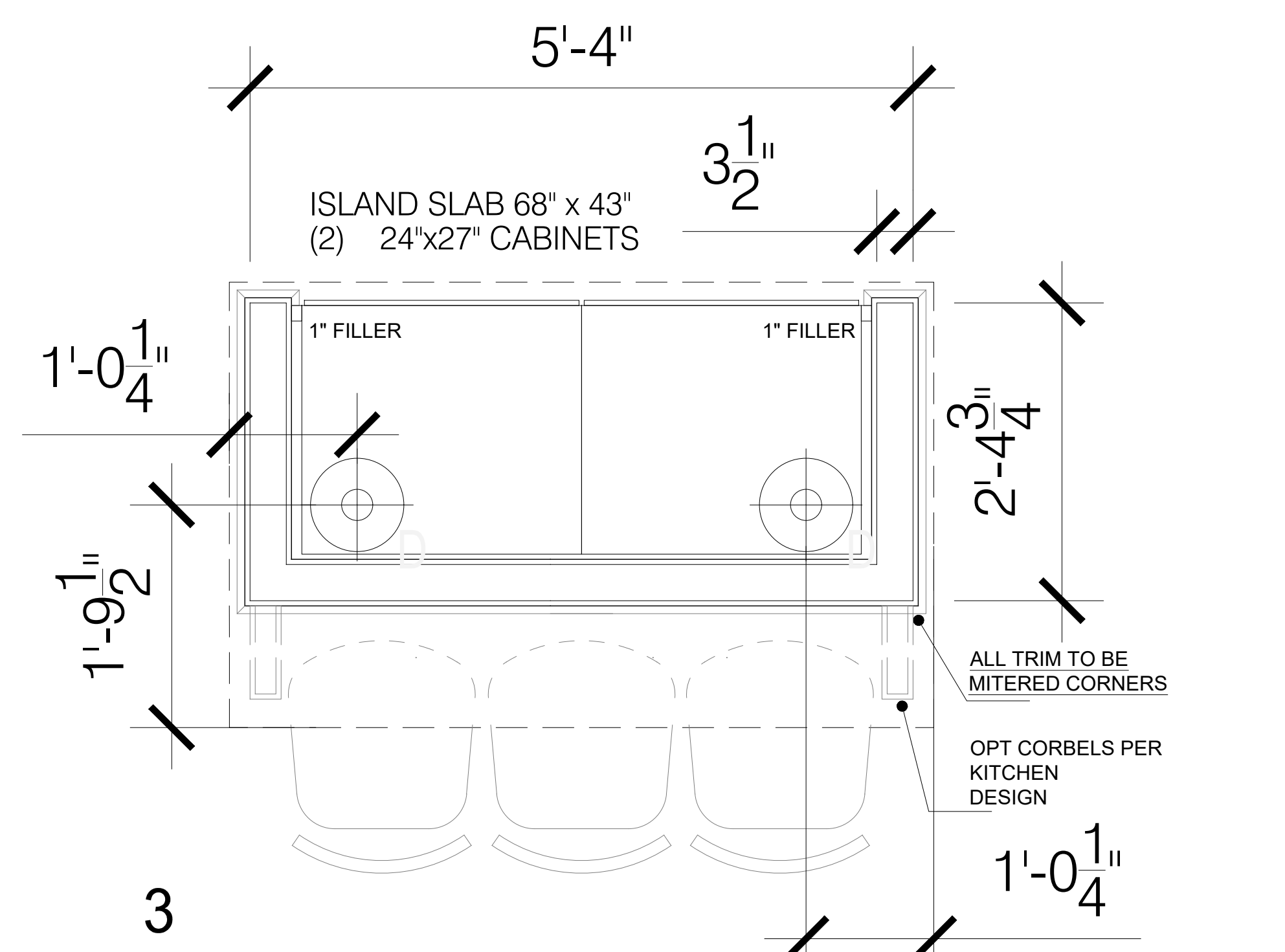
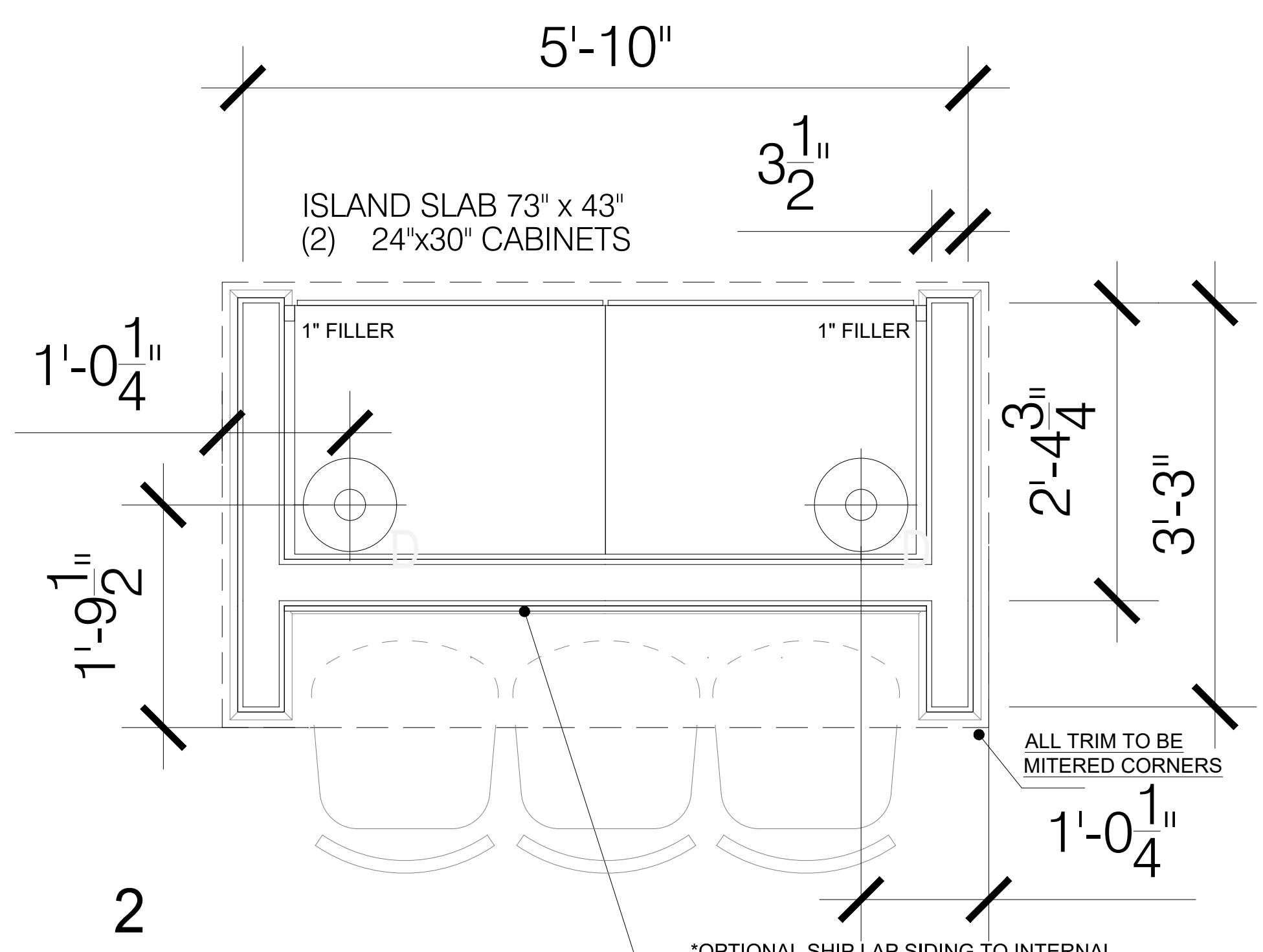
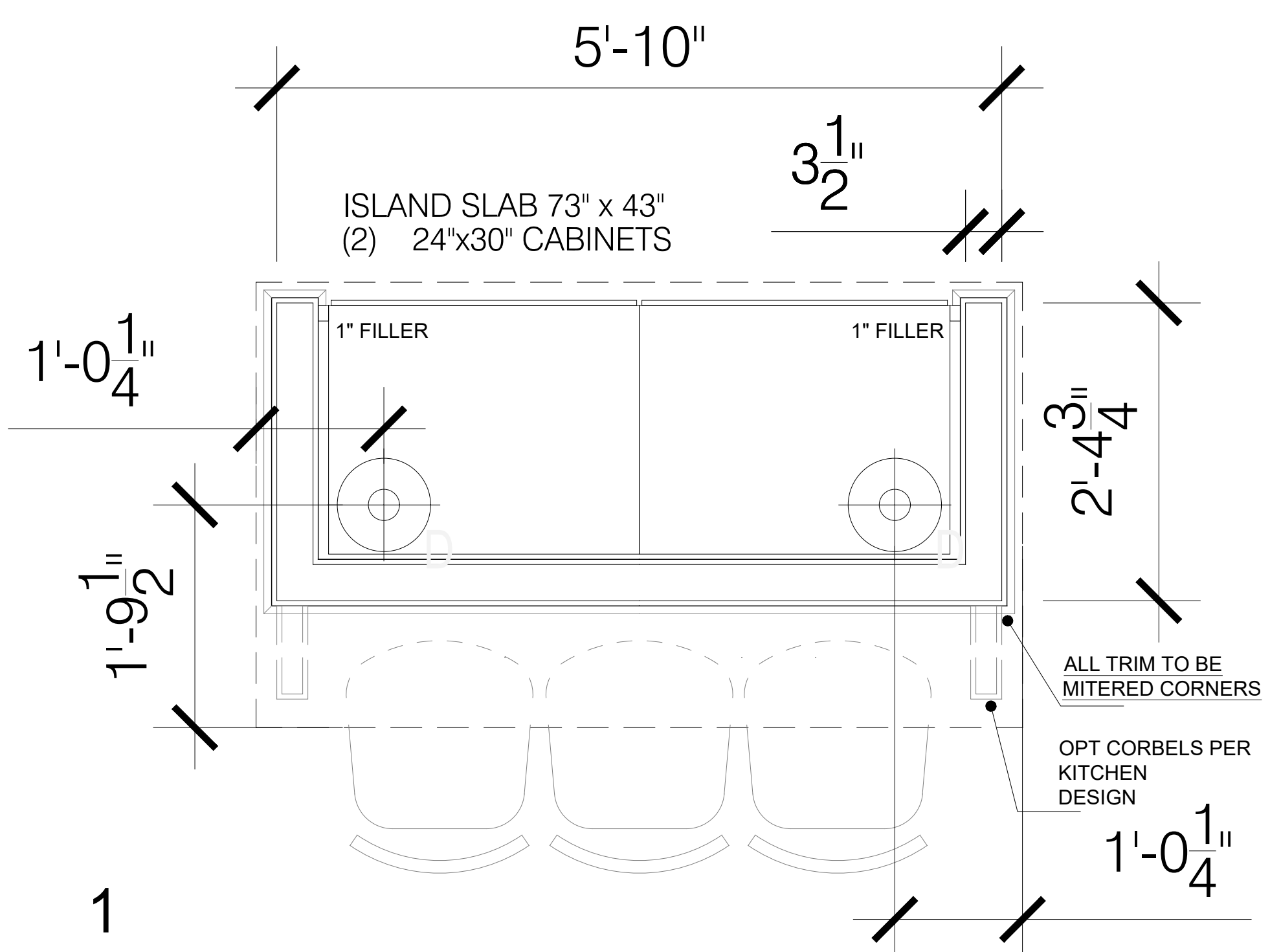


TYP. ISLAND SIDE WALL

TYP. ISLAND SINK-SIDE WALL

TYP. ISLAND BAR STOOL SIDE WALL

FRAMED KITCHEN ISLAND - TYP ELEVATIONS  
SCALE: 1" = 1'-0"



FRAMED KITCHEN ISLAND DESIGN OPTIONS  
SCALE: 1" = 1'-0"

REVISIONS:

**J.S. THOMPSON**  
ENGINEERING, INC.  
333 E. SIX FORKS RD., SUITE 180  
RALEIGH, NC 27609  
PHONE: (919) 789-9919  
FAX: (919) 789-9921  
N.C. LICENSE NO.: C-1733

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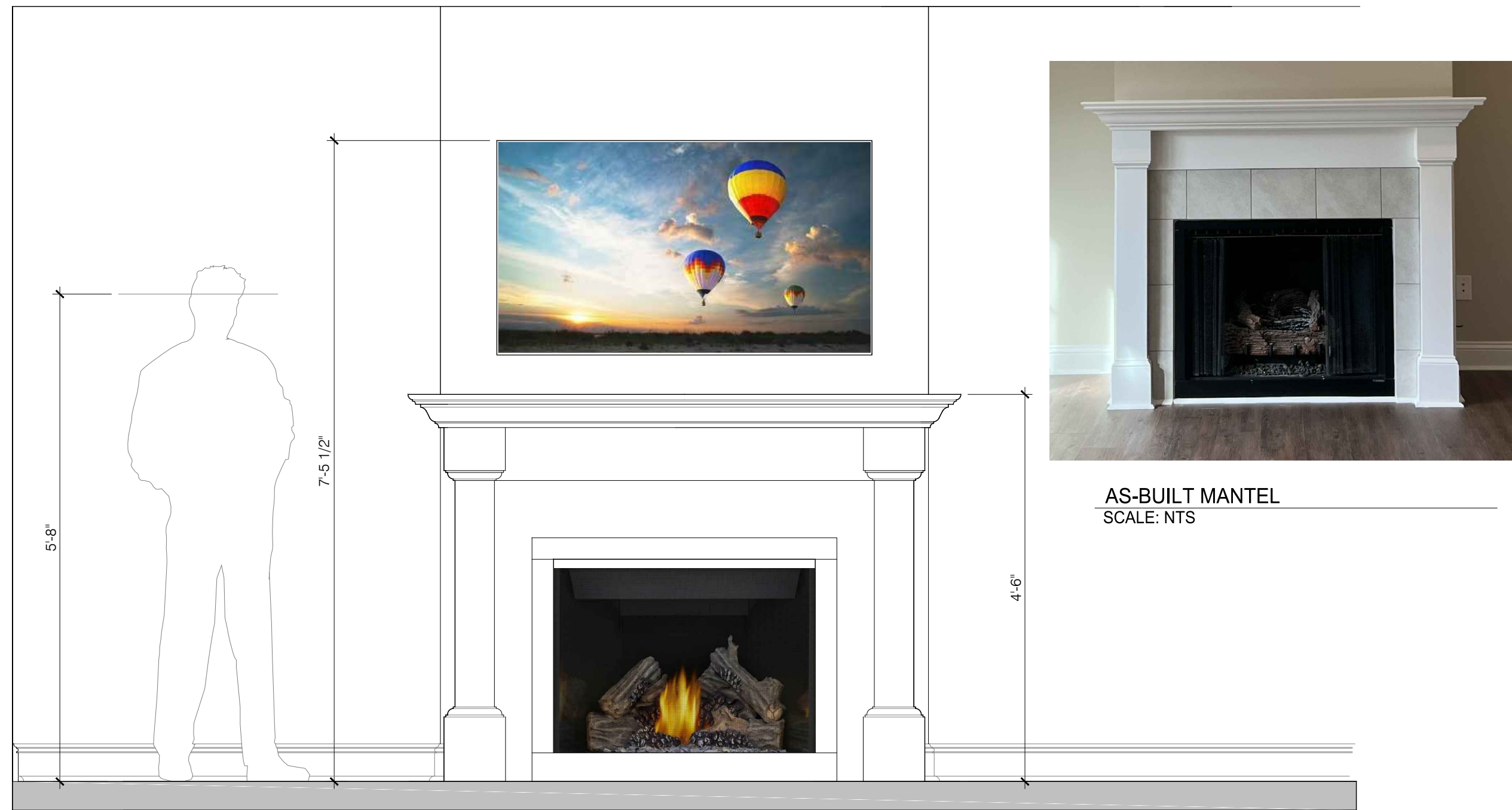
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THE LYON  
FRAMED KITCHEN ISLAND  
DESIGN OPTIONS

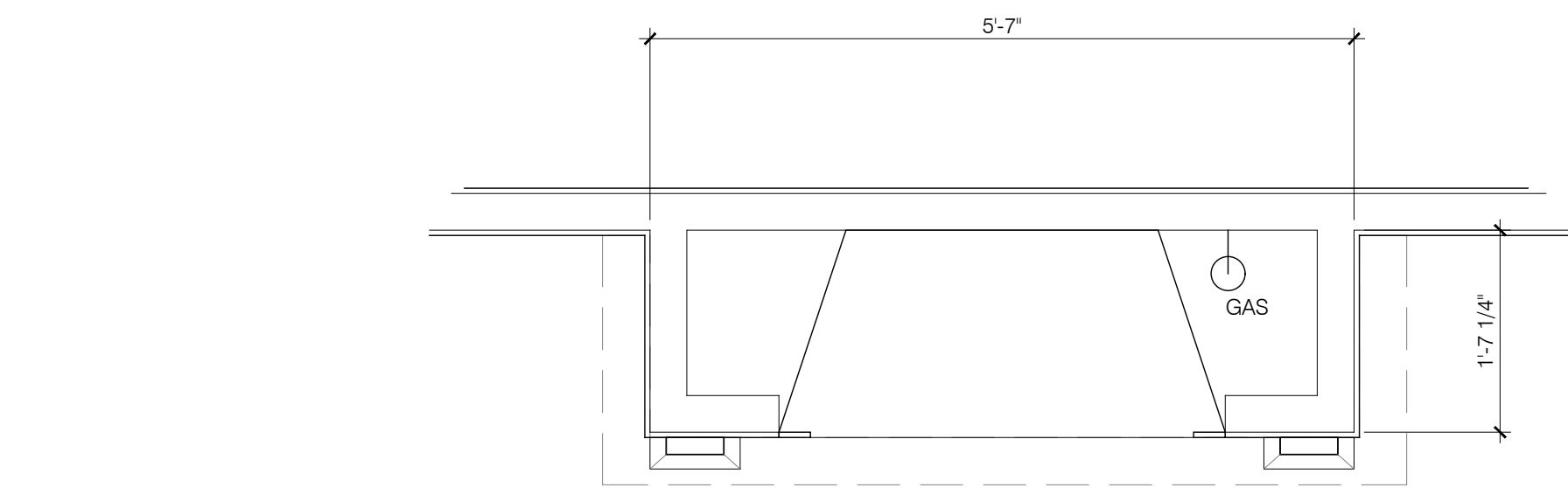
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DRAWN BY: [blank]  
ENGINEER: [blank]  
CHECKED BY: [blank]  
Q.C. BY: [blank]  
SCALE: AS SHOWN

SHEET NUMBER:  
**FR.8**





AS-BUILT MANTEL  
SCALE: NTS



GAS FIREPLACE AND SURROUND  
EXACTA 36 VENT FREE  
FIREBOX - BUF36

OPTION SELECTION #2: GAS FIRE AND FIRE SURROUND  
SCALE: 3/4" = 1'-0"

Specifications Exacta BUF36

**MONESSEN**  
LOVE AT FIRST LIGHT

Please consult the manufacturer's installation manual for all details and requirements before making a final design layout decision.

**Exacta 36**  
Vent Free Gas Firebox

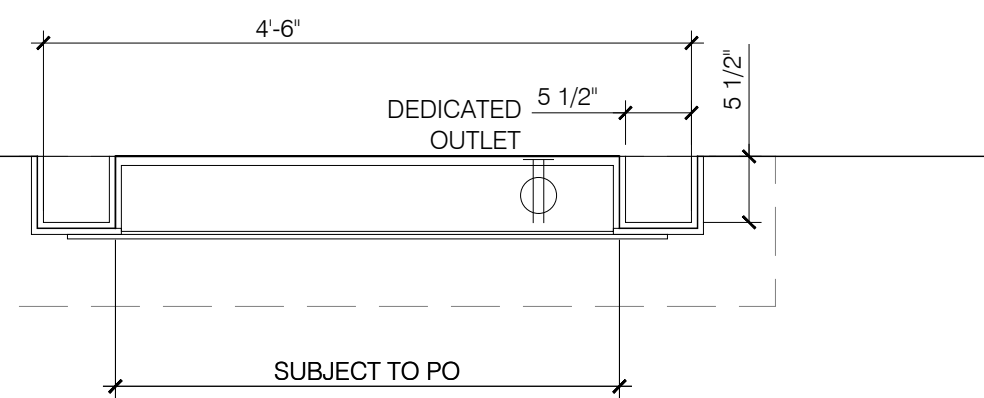
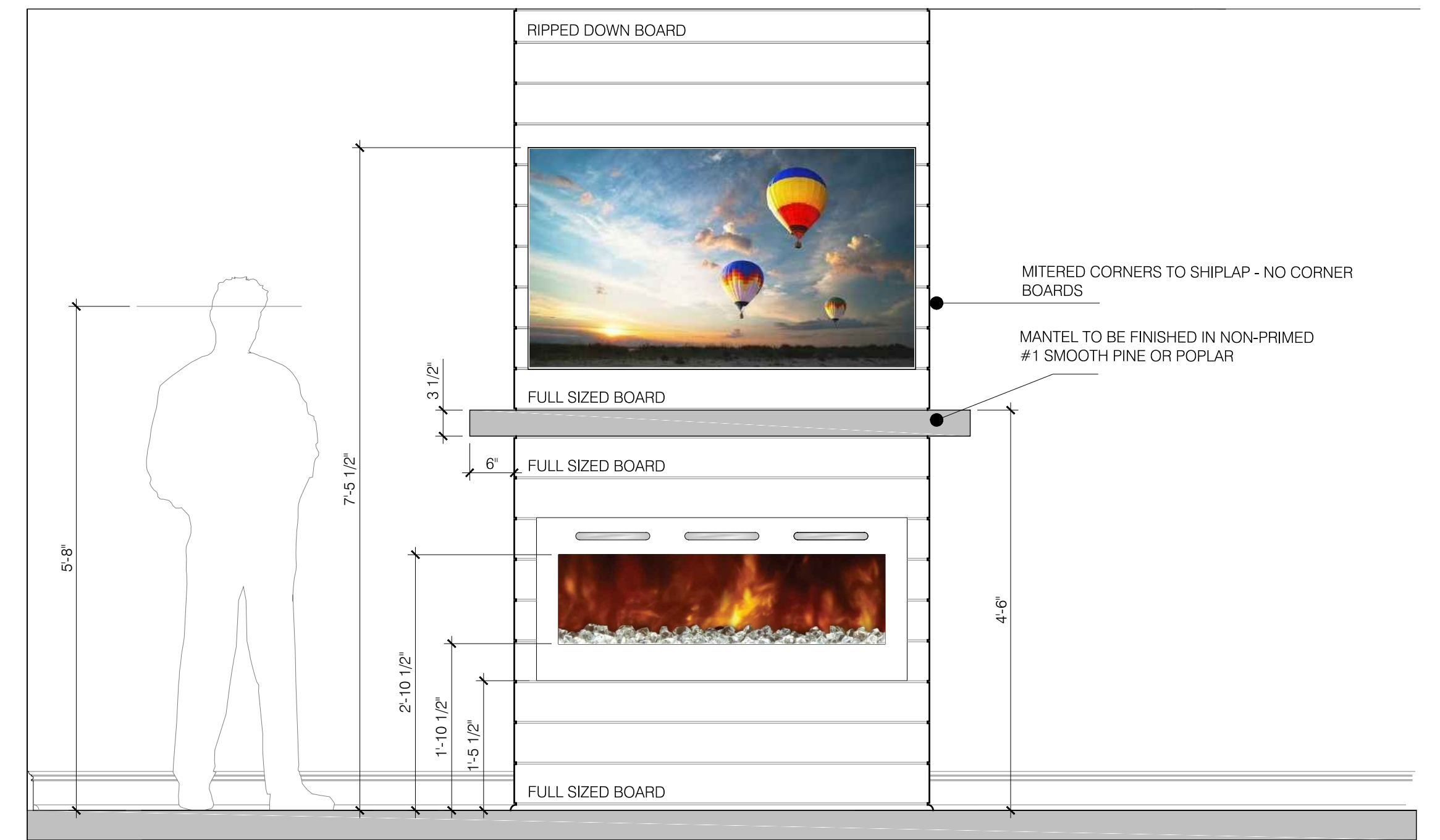
MODEL	FRONT WIDTH		BACK WIDTH		HEIGHT		DEPTH		VIEWING AREA
	Actual	Framing	Actual	Framing	Actual	Framing	Actual	Framing	
BUF36	42"	42-1/2"	31-1/4"	42-1/2"	34"	34-1/4"	20"	19-3/4"	36" x 27"

**FRONT VIEW** **TOP VIEW**

**LEFT SIDE VIEW** **RIGHT SIDE VIEW**

Additional information can be found online at [www.monessearth.com](http://www.monessearth.com)

EXACTA BUF36 SPEC SHEET #1  
SCALE: NTS



LINEAR ELECTRIC  
LIVING FLAME FIRE.  
MODEL/SPEC -TBD

OPTION SELECTION #1 ELECTRIC FIRE AND MANTEL - SHIPLAP FINISH  
SCALE: 3/4" = 1'-0"

Specifications Exacta BUF36

**FRAMING DIMENSIONS**

A	B	C	D	E	F
42-1/2"	34-1/4"	19-3/4"	50"	70-3/4"	36"
(1080mm)	(870mm)	(500mm)	(1270mm)	(1798mm)	(915mm)

**CLEARANCES TO COMBUSTIBLES**

**MINIMUM HEARTH DIMENSIONS**

**MANTEL LEG CLEARANCES**

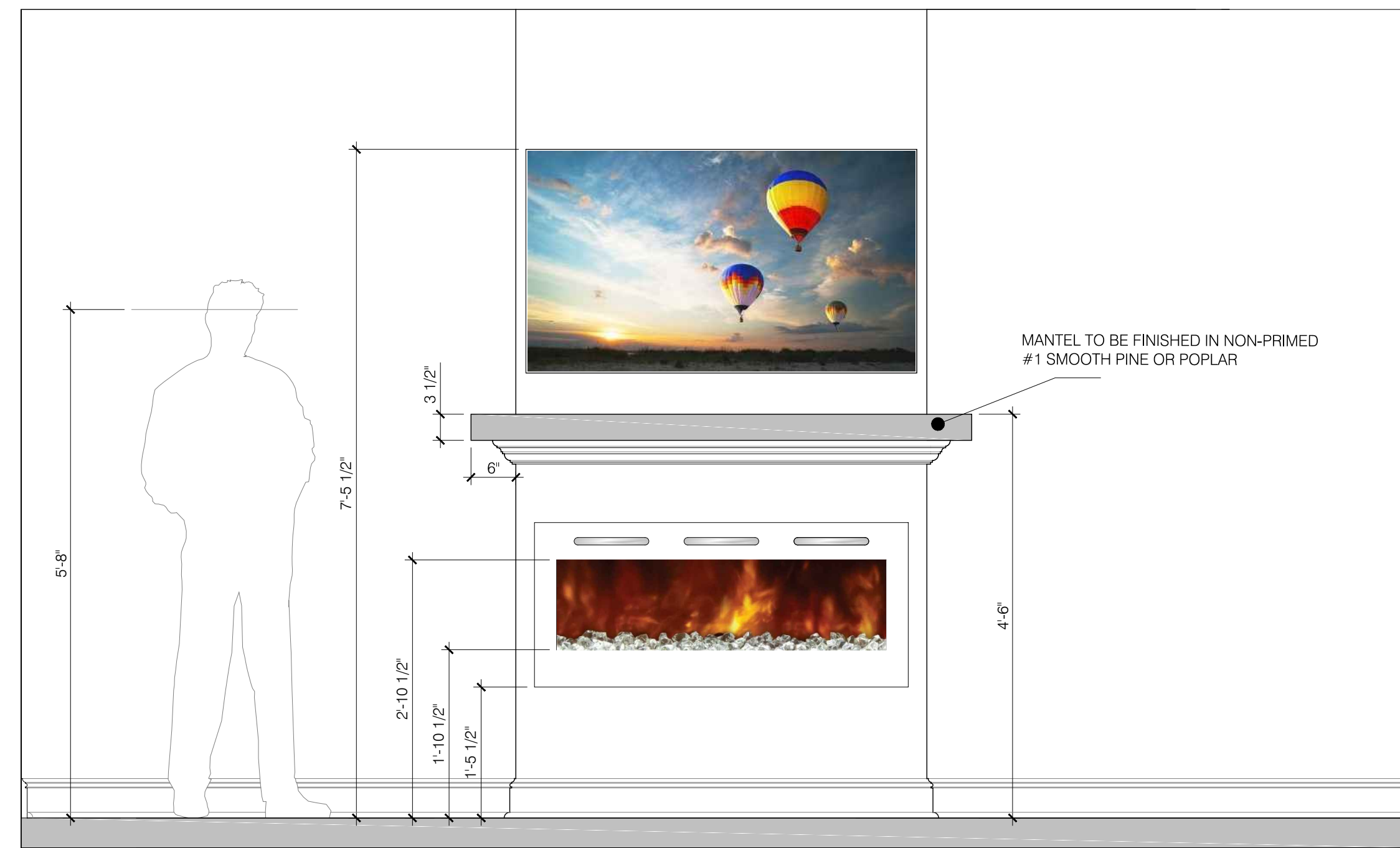
**PROJECT LISTING CODES**

US: 2019-2221 / NFPA54  
2019-2211

Product information provided is not complete and is subject to change without notice. Product installation must always comply with applicable codes and standards. Product is intended for use as shown. Product is not intended for use in any other application. Product is not intended for use in any other application. Product is not intended for use in any other application.

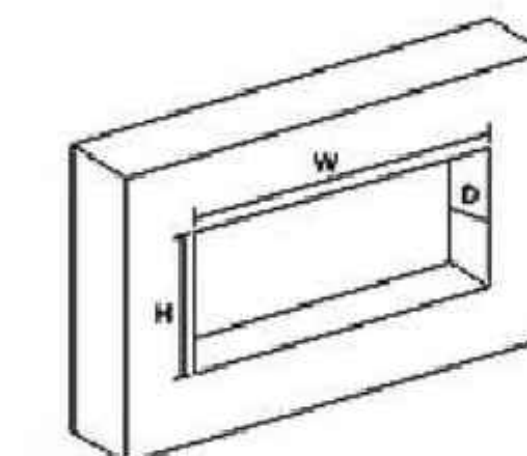
**MONESSEN**  
LOVE AT FIRST LIGHT  
(877) 652-4330 | [www.monessearth.com](http://www.monessearth.com)

EXACTA BUF36 SPEC SHEET #2  
SCALE: NTS



LINEAR ELECTRIC  
LIVING FLAME FIRE.  
MODEL/SPEC -TBD

STANDARD SELECTION: ELECTRIC FIRE AND MANTEL - DRYWALL FINISH  
SCALE: 3/4" = 1'-0"



**Framing Hole Size (Reference)**  
W: 37.7"-38"  
H: 20.5"  
D: 6"

DREAMFLAME 42" LINEAR FIRE SPEC DETAILS  
SCALE: NTS

REVISIONS:

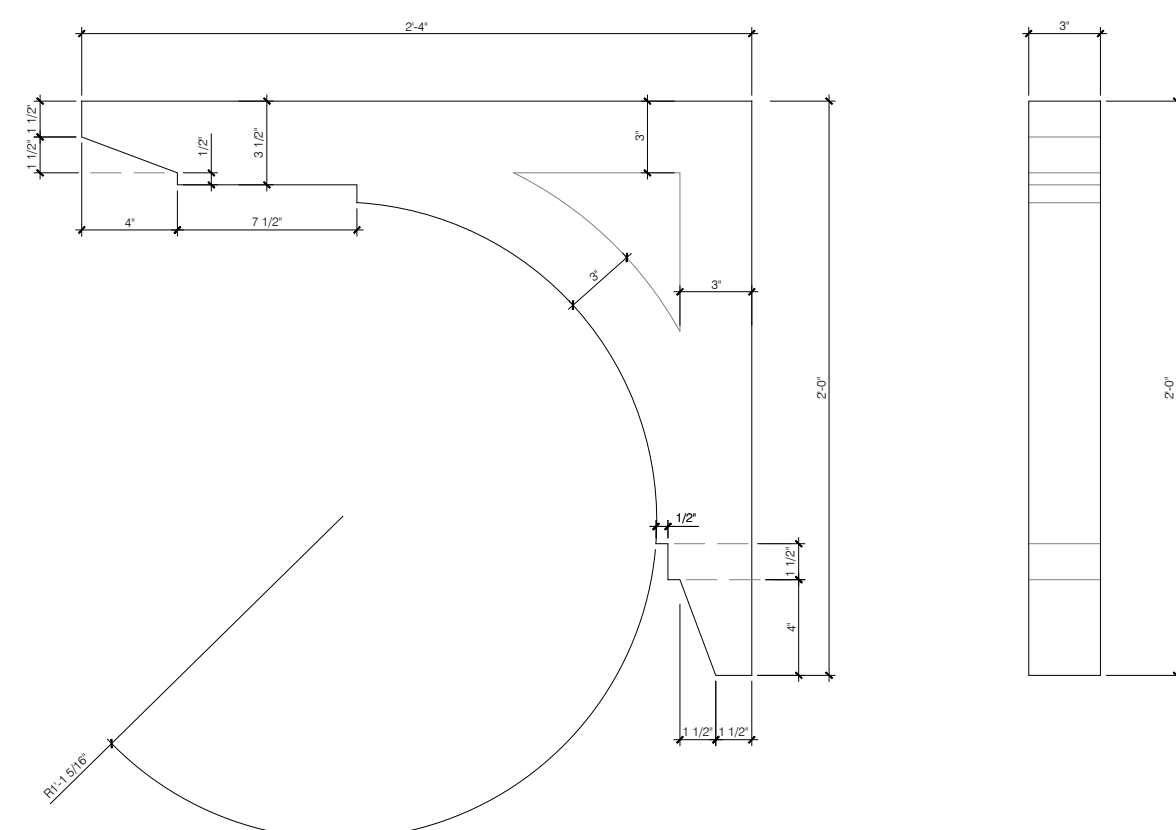
**J.S. THOMPSON**  
ENGINEERING, INC.  
333 E. SIX FORKS RD., SUITE 180  
RALEIGH, NC 27609  
PHONE: (919) 789-9919  
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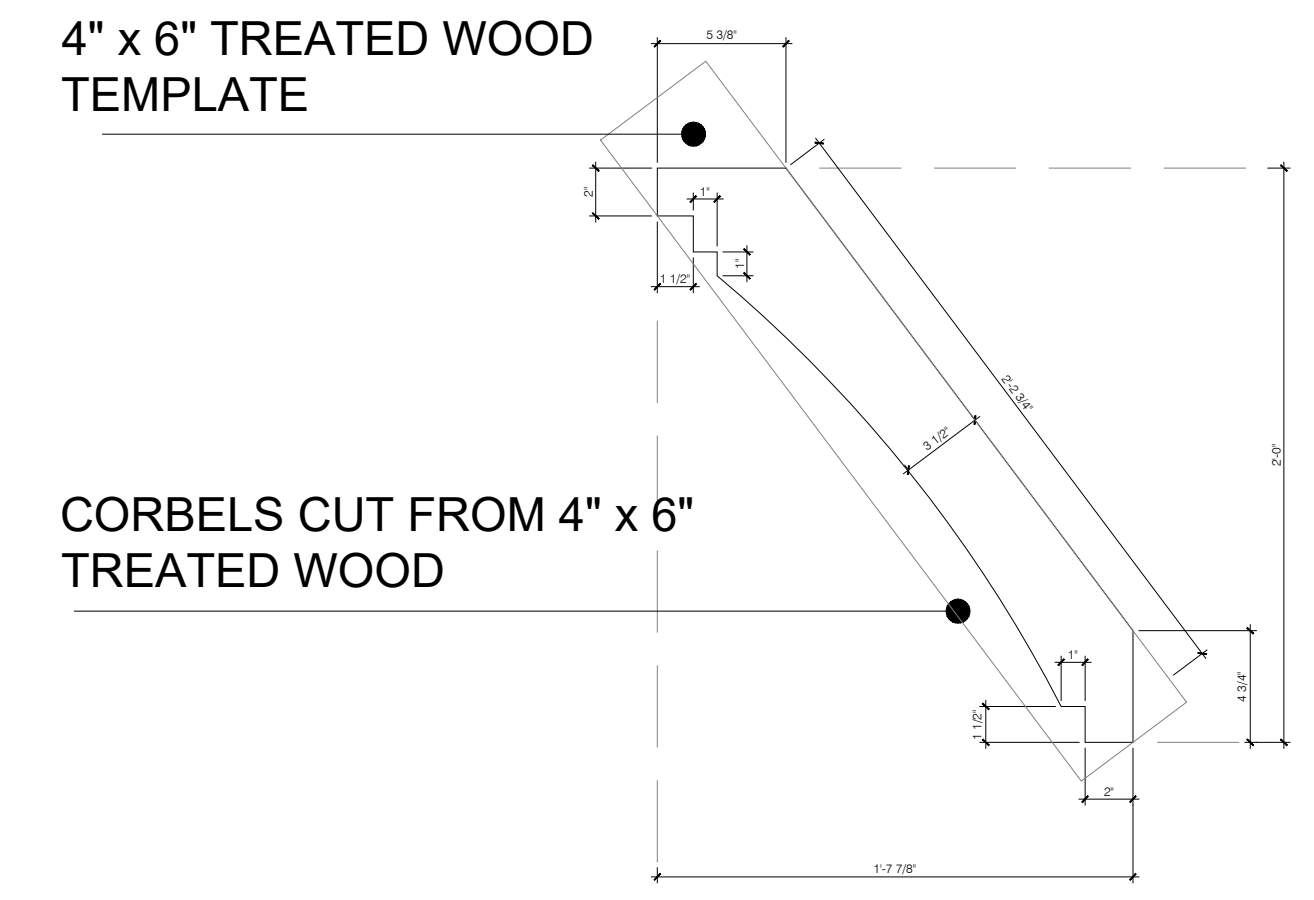
**THE LYON**  
ELECTRIC & GAS FIREPLACES  
MANTEL DETAILS

DATE: 2023-09-01  
DRAWN BY: JST  
ENGINEER BY: NS  
CHECKED BY: NS  
Q.C. BY: NS  
SCALE: 1/4" = 1'-0"  
SHEET NUMBER:  
**AD.3**

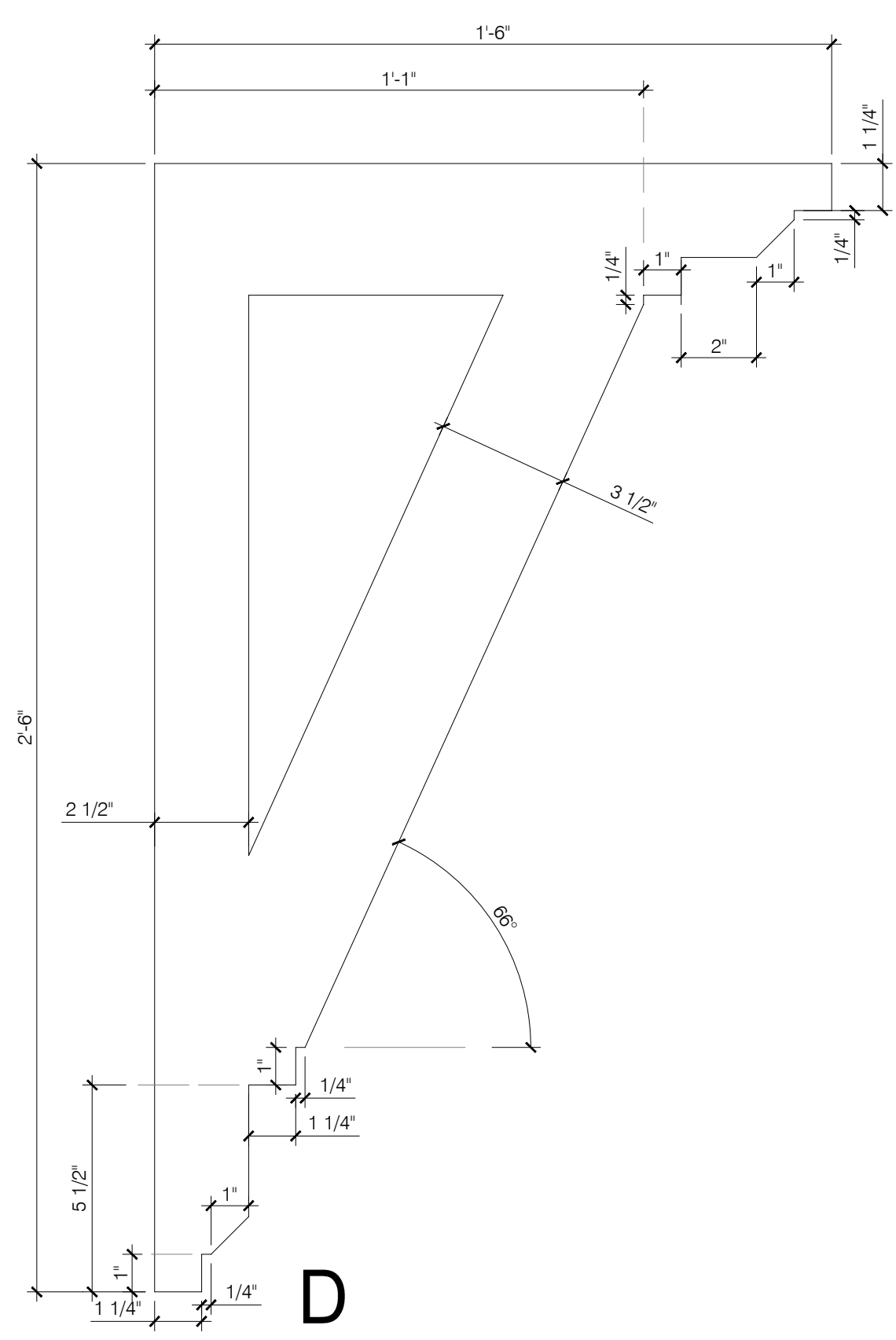
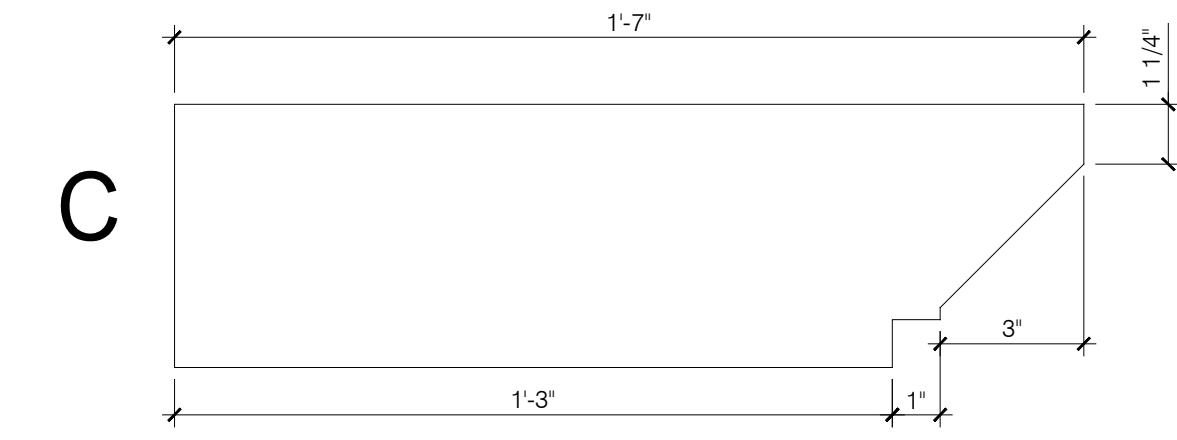
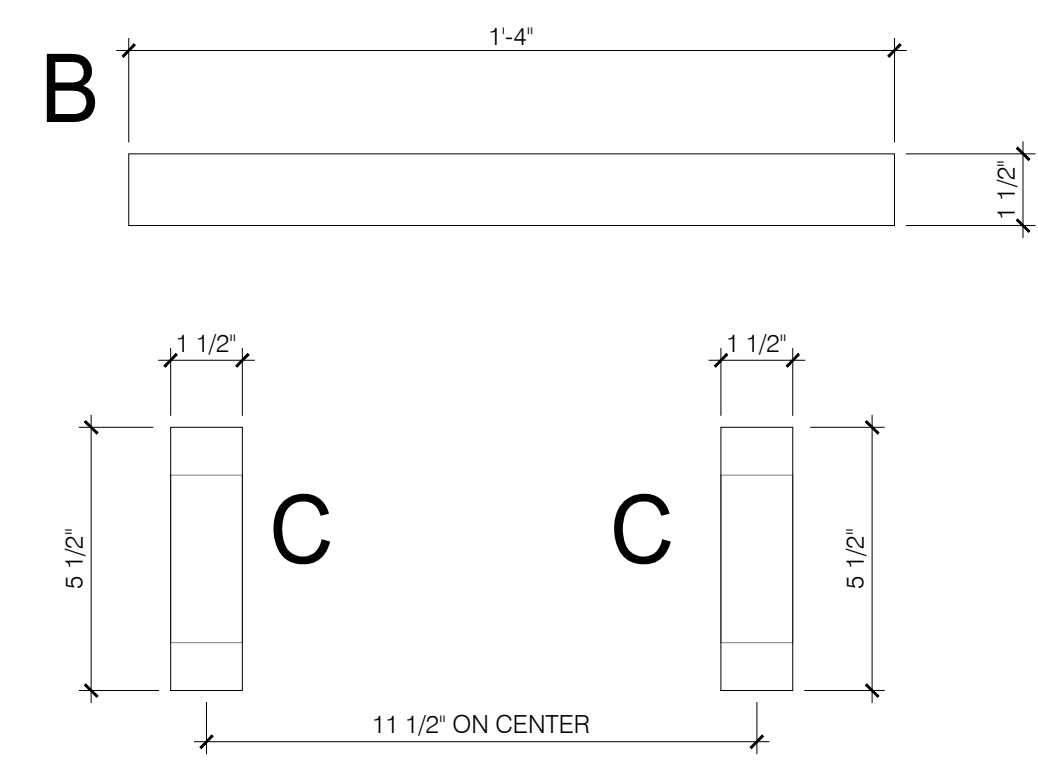
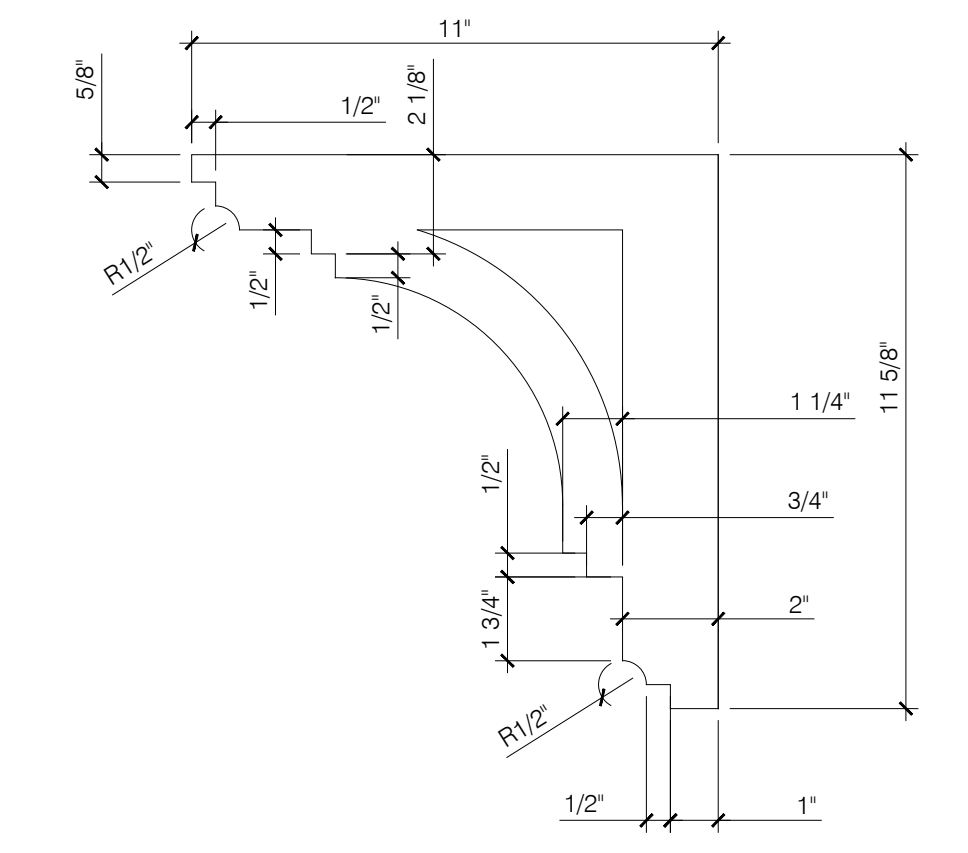




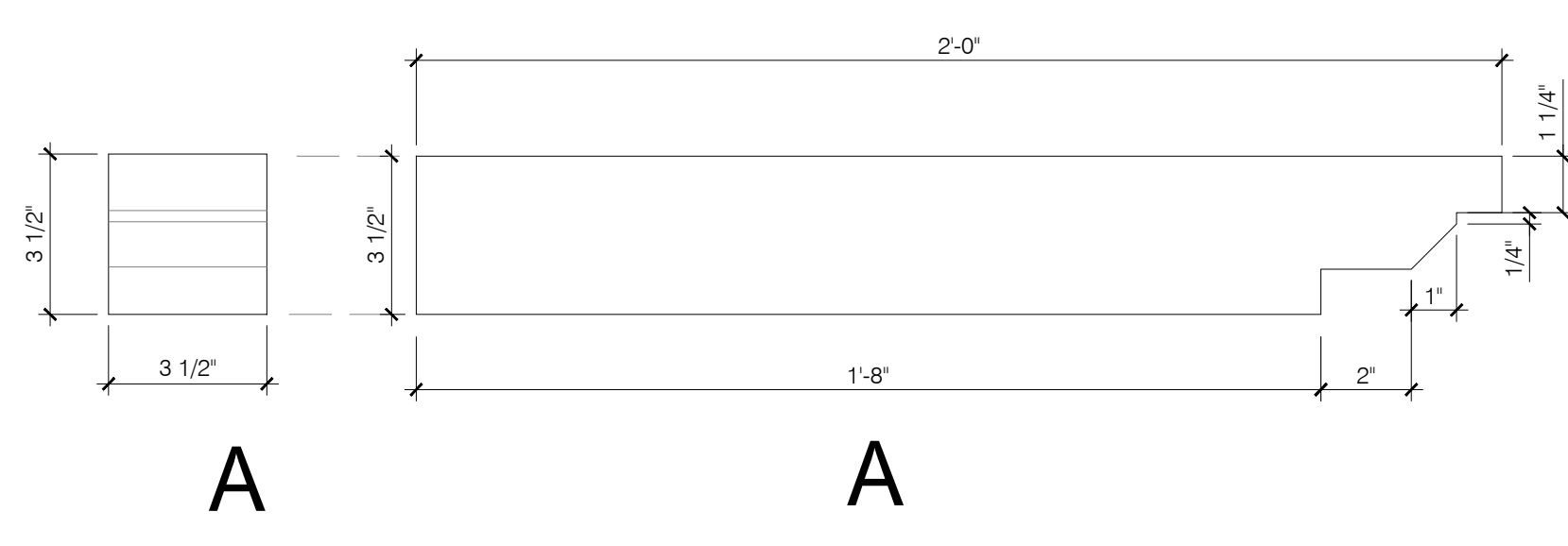
PORCH CORBEL PROFILE DETAILS  
SCALE: 1 1/2" = 1'-0"



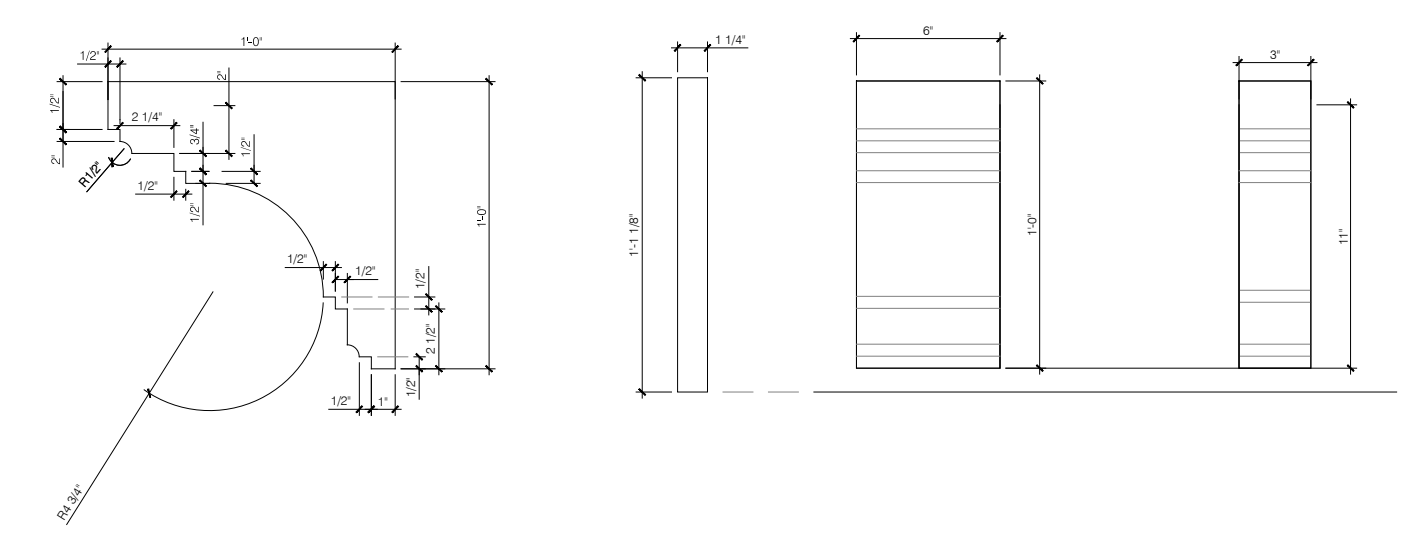
PORCH CORBEL PROFILE DETAILS  
SCALE: 3" = 1'-0"



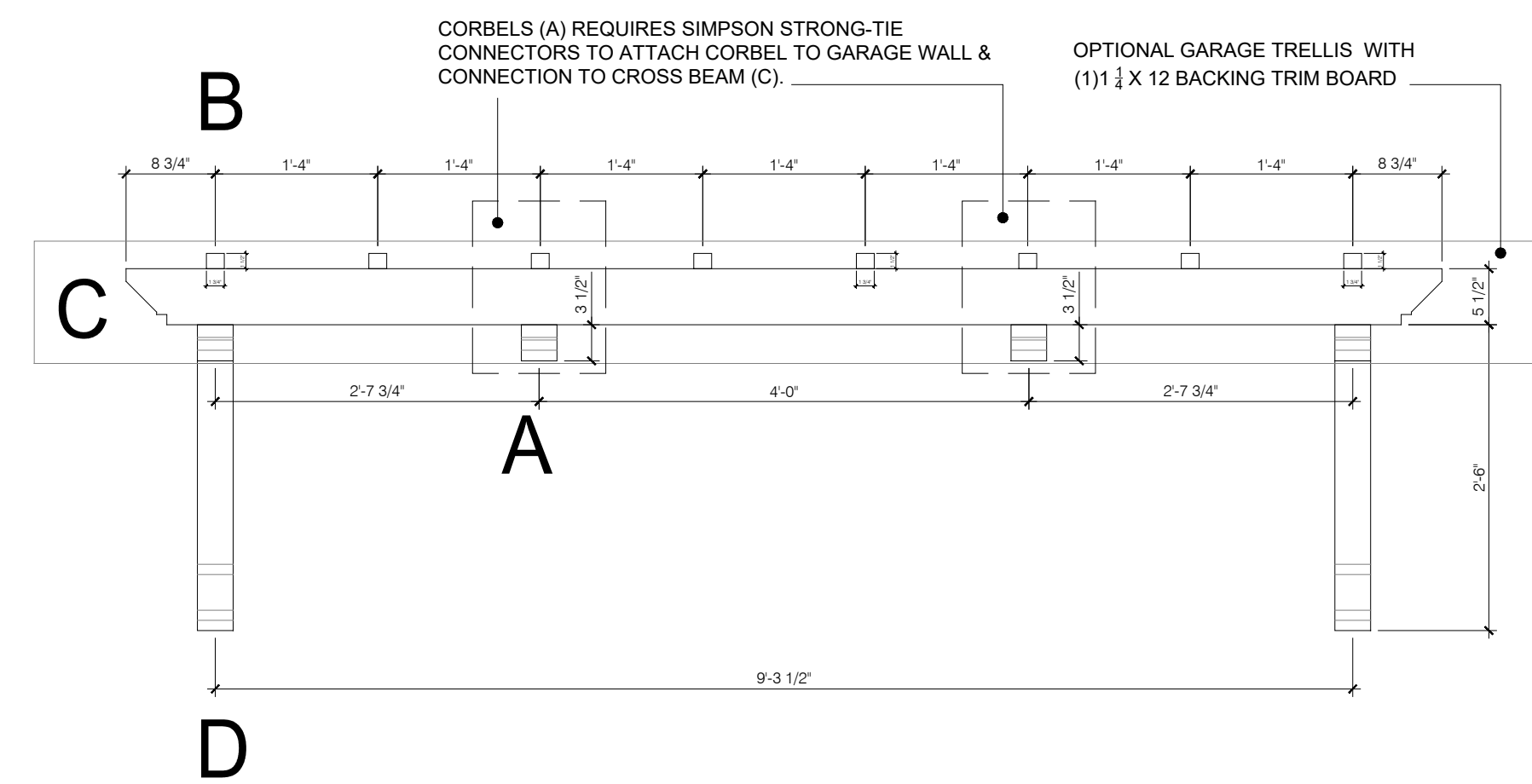
GARAGE EXTERNAL TRELLIS PROFILES  
SCALE: 3" = 1'-0"



GARAGE EXTERNAL TRELLIS DETAILS  
SCALE: 3/4" = 1'-0"



CORNICE MODILLION PROFILE DETAILS  
SCALE: 1 1/2" = 1'-0"



REVISIONS:

**J.S. THOMPSON**  
ENGINEERING, INC.  
333 E. SIX FORKS RD., SUITE 180  
RALEIGH, NC 27609  
PHONE: (919) 789-9919  
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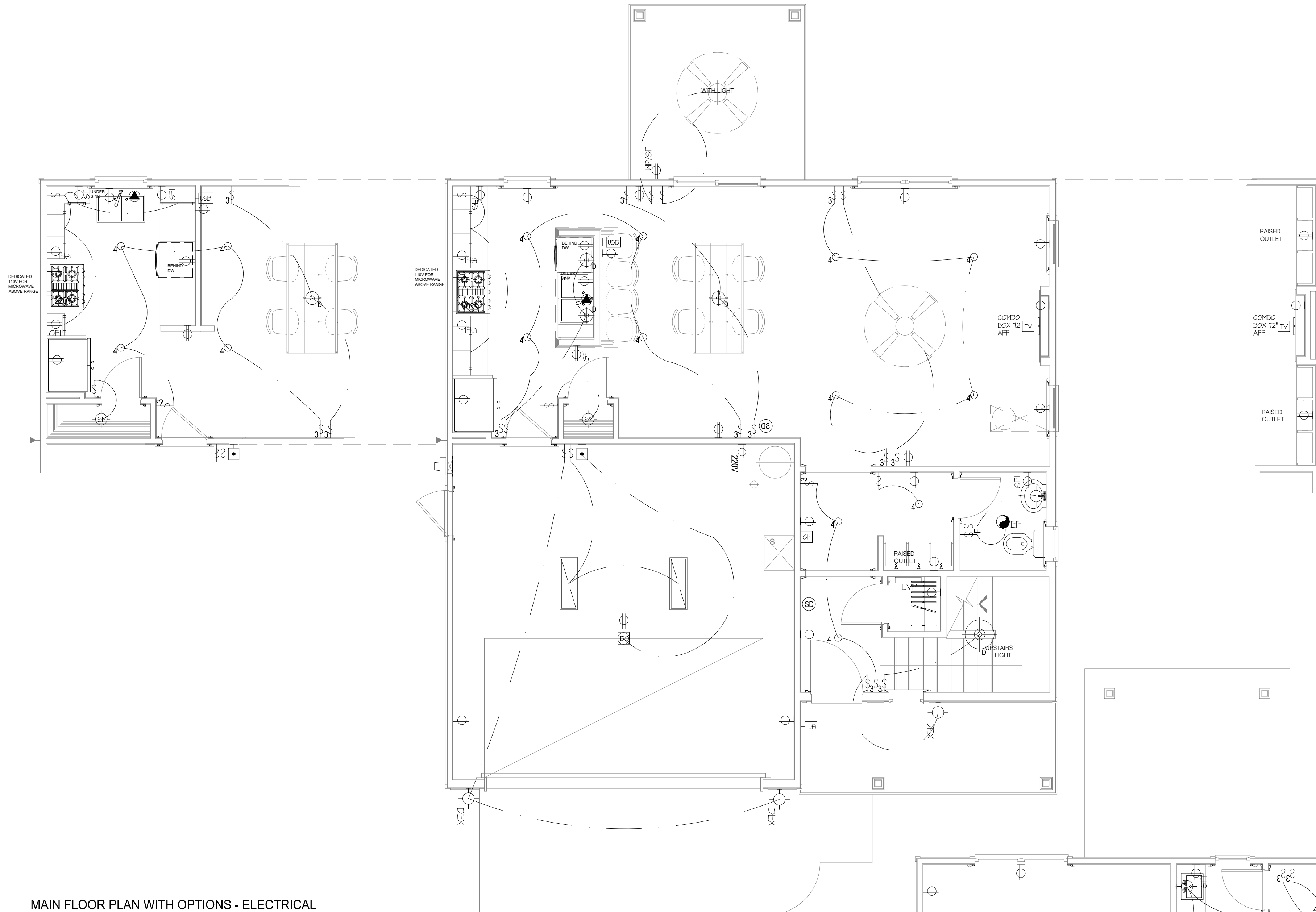
**THE LYON**  
EXTERNAL GARAGE TRELLIS, CORBELS, BRACKETS &  
MODILLION DETAILS

DATE: 2024-01-01  
DRAWN BY: NS  
ENGINEER: JST  
CHECKED BY: NS  
SCALE: AS SHOWN  
SHEET NUMBER:  
**AD.8**

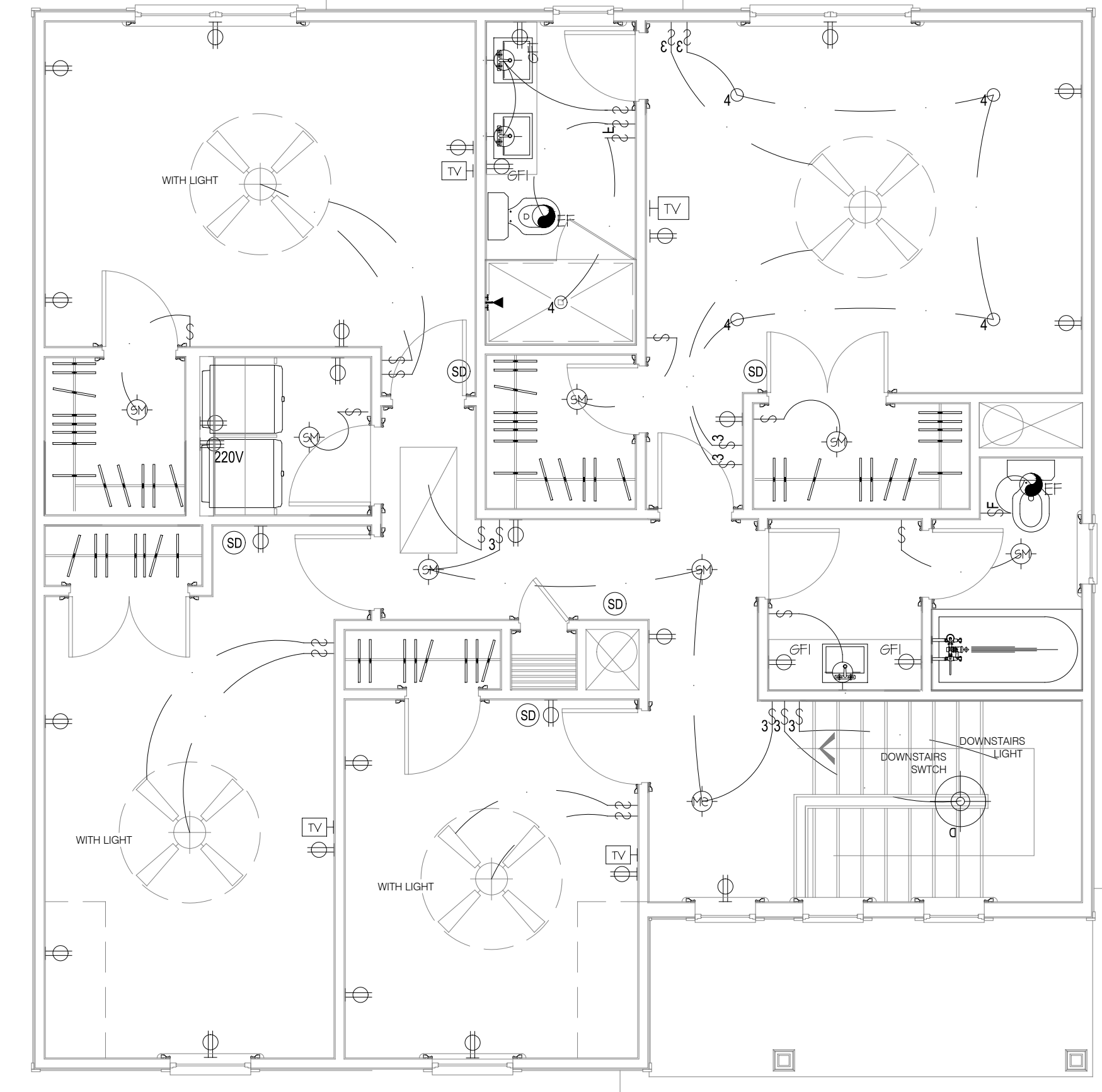
**ELECTRICAL NOTES:**

1. PROVIDE AND INSTALL CERTIFIED SMOKE DETECTORS AS REQUIRED BY NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) AND MEETING THE REQUIREMENTS OF ALL GOVERNING CODES. ALL SMOKE DETECTORS SHALL NOT BE LOCATED WITHIN THREE FEET OF A BATHROOM OR AN A/C SUPPLY.
2. PROVIDE AND INSTALL GROUND FAULT CIRCUIT INTERRUPTERS (GFI) AS REQUIRED BY NATIONAL ELECTRIC CODE (NEC) AND MEETING THE REQUIREMENTS OF ALL GOVERNING CODES.
3. HVAC CONTRACTOR TO VERIFY THERMOSTAT LOCATIONS.
4. ALL ELECTRICAL AND MECHANICAL EQUIPMENT (I.E. FURNACES, A/C UNITS, ELECTRICAL PANELS, AND WATER HEATERS) ARE SUBJECT TO RELOCATION PER FIELD CONDITIONS.
5. PROJECT WALK-THRU WITH SUPERINTENDENT AND ELECTRICAL CONTRACTOR TO BE SCHEDULED PRIOR TO ELECTRICAL ROUGH-IN.
6. REFER TO CABINET DRAWINGS AND LIGHTING DETAILS FOR POWER STUB-OUT LOCATIONS FOR BUILT-IN AND CABINET LIGHTING.
7. ALL ELECTRICAL PLANS AND LOCATIONS AS SHOWN ARE TO BE LAID OUT PER LOCAL AND STATE BUILDING CODES AND ANY RELEVANT INSPECTIONS.
8. ALL LIGHTING LOCATIONS SHALL BE REVIEWED AND COORDINATED WITH APPROVED FLOOR AND ROOF TRUSS LAYOUTS PRIOR TO INSTALLATION IN THE FIELD.

NOTE:  
AC RETURN VENTS SHALL NOT BE PLACED WITHIN 10'  
OF AN OPEN COMBUSTION CHAMBER, A DRAFT HOOD OF  
ANOTHER APPLIANCE OR WITHIN 10' OF COOKING APPLIANCES.  
CODE M.1602.2 / 601.5



MAIN FLOOR PLAN WITH OPTIONS - ELECTRICAL  
SCALE: 1/4" = 1'-0"



UPPER FLOOR PLAN WITH OPTIONS - ELECTRICAL  
SCALE: 1/4" = 1'-0"

STANDARD ELECTRICAL & LIGHTING KEY			
	WIRING CIRCUIT		WHIP FOR LIGHTING
	WIRING CIRCUIT LOW VOLTAGE		3" RECESSED INCANDESCENT CEILING LIGHT
	LIGHTING CONTROL		4" RECESSED INCANDESCENT CEILING LIGHT
	WALL SWITCH SINGLE POLE		4" RECESSED LED CEILING CAN LIGHT
	THREE-WAY SWITCH		4" VAPOR PROOF LED RECESSED CAN LIGHT
	FOUR-WAY SWITCH		JUNCTION BOX REINFORCED CEILING MOUNT
	FAN SWITCH		CEILING JUNCTION BOX
	DIMMER SWITCH		SURFACE MOUNTED LED CEILING LIGHT
	THREE-WAY DIMMER SWITCH		PENDANT LIGHT
	DIMMER SWITCH ON SYSTEM		CHANDELIER (REINFORCED CEILING MOUNT)
	SINGLE POLE SWITCH ON SYSTEM		WALL MOUNTED INCANDESCENT LIGHT FIXTURE
	PUSH BUTTON SWITCH (GARAGE DOOR)		DECORATIVE EXTERIOR SCONCE
	MOTORIZED SHADE (INTERIOR)		AIMABLE RECESSED DOWN LIGHT LOW VOLTAGE
	MOTORIZED SHUTTERS (EXTERIOR)		LED RECESSED DOWN LIGHT - PHOTO CELL
	DOOR BELL		PUCK LIGHT
	CHIMES		DOUBLE LAMP CEILING LIGHT (CLOSET)
	DUPLEX OUTLET		TRIPLE LAMP CEILING LIGHT (CLOSET)
	GROUND FAULT DUPLEX OUTLET ABOVE COUNTER		JAMB LIGHT FIXTURE
	GROUND FAULT INTERRUPTER DUPLEX OUTLET		TRACK LIGHT FIXTURE
	WEATHERPROOF GROUND FAULT DUPLEX OUTLET		FLUORESCENT FIXTURE-SURFACE MOUNT
	HALF-SWITCHED DUPLEX OUTLET		CEILING FAN (Add light where indicated)
	DEDICATED OUTLET		SINGLE FLOOD LIGHT
	220 VOLT OUTLET		PHOTO CELL DOUBLE FLOOD LIGHT
	FLOOR OUTLET		UC STRIP LIGHT
	HALF SWITCHED FLOOR OUTLET		STRIP LIGHT ABOVE CABINET
	TELEPHONE/DATA-FLOOR		TOE KICK STRIP LIGHT
	CLOCK BOX-WALL		UNDER CABINET LIGHT
	RECESSED TV COMBINATION BOX		PLUG MOLD
	TV CONNECTION		COVE LIGHTING-LINEAR
	TELEPHONE/DATA-WALL		TRANSFORMER
	ELECTRICAL OUTLET / USB COMBO		DRIVER
	DTV SHOWERING SYSTEM		DEMARICATION BOX
	KEYPAD-SYSTEM CONTROL		ELECTRIC METER
	THERMOSTAT		ELECTRIC PANEL
	KEYPAD FOR ALARM		DISCONNECT SWITCH
	HEAT DETECTOR		GAS METER
	LIGHT & EXHAUST FAN		WATER METER
	EXHAUST FAN		GAS VALVE
	LANDSCAPE LIGHTING (POWER/SWITCH LEG)		AIR SWITCH
	CARBON MONOXIDE/SMOKE DETECTOR COMBINATION UNIT		PIN LIGHT
	SPEAKER (OPTIONAL)		LOW VOLTAGE PANEL
	GARBAGE DISPOSAL		
	ELECTRIC DOOR OPERATOR (GARAGE)		

ELECTRICAL SYMBOLS LEGEND  
SCALE: NTS

REVISIONS:  
REV A: 04.17.2023, CAN LIGHT QUANTITY REDUCED  
REV B: 06.12.2023, BALLOON SIDE WALL TO STAIRS REMOVED.  
REV C: 07.11.2023, AC CHASES UPDATED TO FIX AC DESIGN ISSUES  
REV D: 08.11.2023, AC CHASES UPDATED TO FIX AC DESIGN ISSUES  
REV E: 01.16.24 TUBS AND SHOWER FRAMING REVISED TO 6\"/>

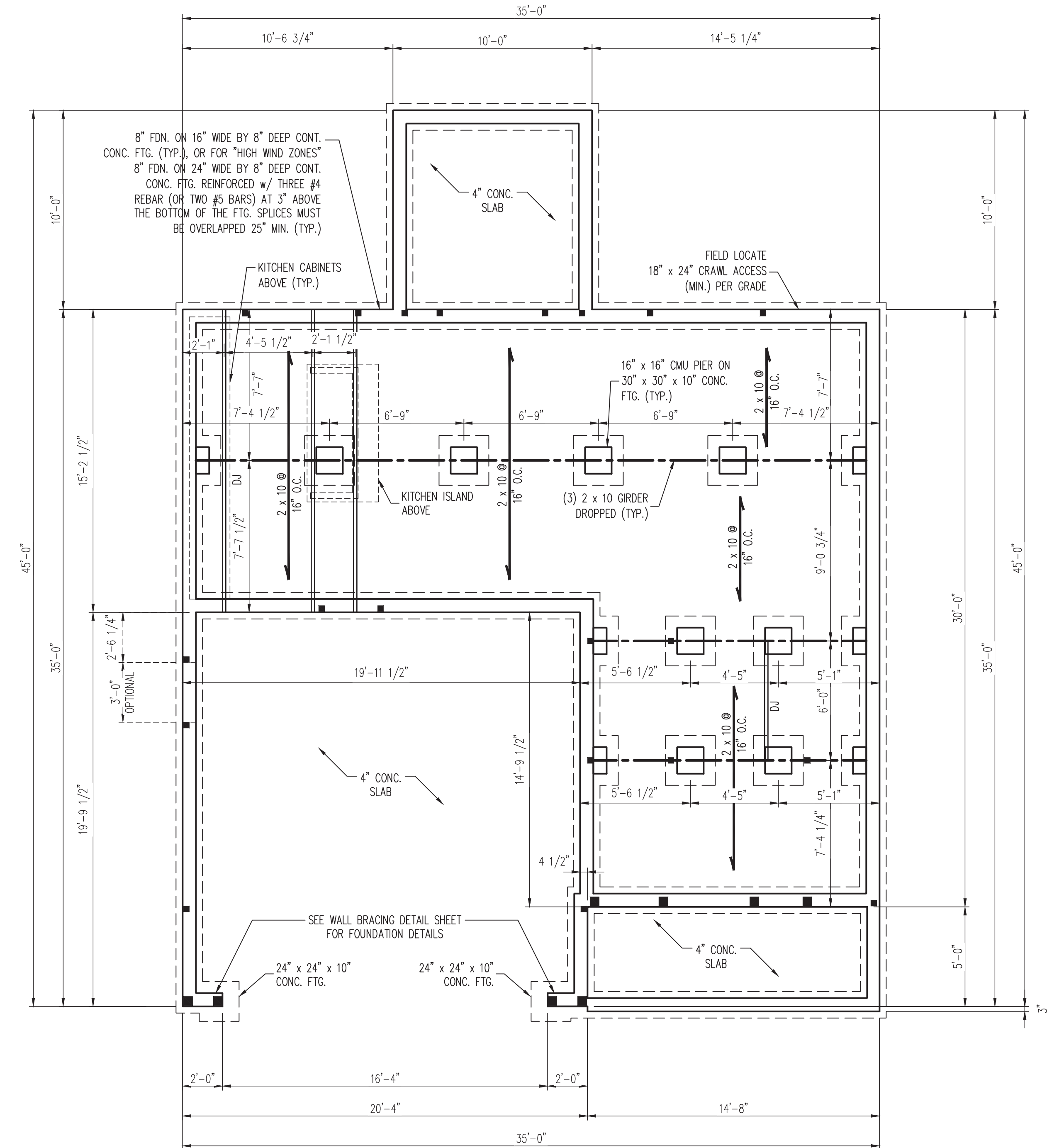
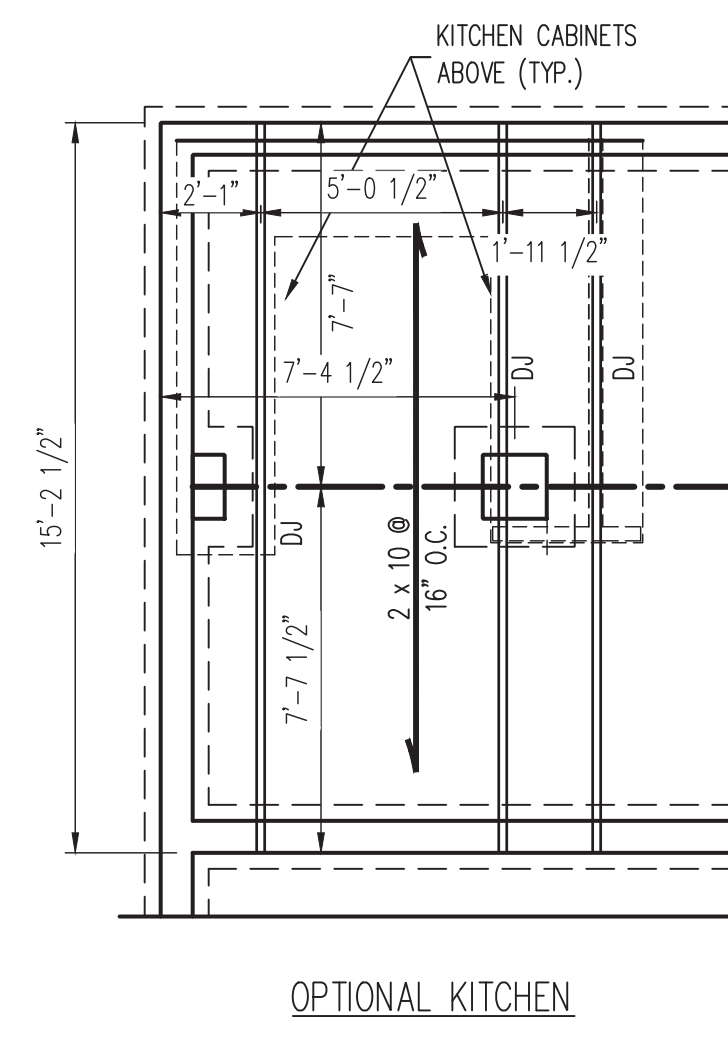
**J.S. THOMPSON**  
ENGINEERING, INC.  
333 E. SIX FORKS RD., SUITE 180  
RALEIGH, NC 27609  
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N.C. LICENSE NO.: C-1733

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THE LYON  
ELECTRICAL - MAIN & UPPER FLOOR PLANS

DATE: 2023-04-07  
DRAWN BY: NS  
ENGINEER: NS  
CHECKED BY: NS  
Q.C. BY: NS  
SCALE: AS SHOWN  
SHEET NUMBER: **E1**





- 150 MPH ULTIMATE DESIGN WIND SPEED  
NOTES FOR LESS THAN  
30' MEAN ROOF HEIGHT:**
- ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT INCLUDING ROOF SYSTEM.
  - STRUCTURAL DESIGN PER NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION WITH SPECIAL CONSIDERATION TO CHAPTER 45 ("HIGH WIND ZONES" FOR 150 MPH WINDS).
  - BUILDER IS TO PROVIDE FRAMING CONNECTIONS AS REQUIRED BY CHAPTER 45 ("HIGH WIND ZONES" FOR 150 MPH WINDS) OF THE NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.
  - FOUNDATION ANCHORAGE TO COMPLY WITH SECTION 4504 OF THE NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.
  - MEAN ROOF HEIGHT IS LESS THAN 30 FEET.
  - WALL CLADDING DESIGNED FOR +24.3 PSF AND -32 PSF (+/- INDICATE POSITIVE / NEGATIVE PRESSURE (TYP)).
  - ROOF CLADDING DESIGNED FOR +22.2 PSF AND -28 PSF FOR ROOF PITCHES 7/12 TO 12/12 AND +14 PSF AND -57 PSF FOR ROOF PITCHED 2.25/12 TO 7/12.
  - 7/16" OSB SHEATHING IS REQUIRED ON ALL EXTERIOR WALLS.
  - WALLS TO BE BRACED IN ACCORDANCE WITH SECTION 4502.10 OF THE NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION AND AS NOTED ON PLANS.
  - ENERGY EFFICIENCY COMPLIANCE AND INSULATION VALUES OF THE BUILDING TO BE IN ACCORDANCE WITH CHAPTER 11 OF THE NRCG, 2018 EDITION.

- 120 MPH ULTIMATE DESIGN WIND SPEED  
NOTES FOR LESS THAN  
30' MEAN ROOF HEIGHT:**
- ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT INCLUDING ROOF SYSTEM.
  - STRUCTURAL DESIGN PER NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.
  - INSTALL 1/2" ANCHOR BOLTS 6'-0" O.C. AND WITHIN 1'-0" FROM END OF EACH CORNER. ANCHOR BOLTS MUST EXTEND A MINIMUM OF 7" INTO MASONRY OR CONCRETE. LOCATE BOLT WITHIN MIDDLE THIRD OF PLATE WIDTH.
  - MEAN ROOF HEIGHT IS LESS THAN 30 FEET.
  - EXTERIOR WALLS DESIGNED FOR 120 MPH WINDS.
  - WALL CLADDING DESIGNED FOR +15.5 PSF AND -20 PSF (+/- INDICATE POSITIVE / NEGATIVE PRESSURE (TYP)).
  - ROOF CLADDING DESIGNED FOR +14.2 PSF AND -18 PSF FOR ROOF PITCHES 7/12 TO 12/12 AND +10 PSF AND -36 PSF FOR ROOF PITCHED 2.25/12 TO 7/12.
  - INSTALL 7/16" OSB SHEATHING ON ALL EXTERIOR WALLS OF ALL STORES IN ACCORDANCE WITH SECTION 6002.10.3 OF THE NRCG, 2018 EDITION. SEE THE WALL BRACING NOTES AND DETAILS SHEET FOR MORE INFORMATION.
  - ENERGY EFFICIENCY COMPLIANCE AND INSULATION VALUES OF THE BUILDING TO BE IN ACCORDANCE WITH CHAPTER 11 OF THE NRCG, 2018 EDITION.
  - REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

- STRUCTURAL NOTES:**
- ALL FRAMING LUMBER TO BE #2 SPF (UNO). ALL TREATED LUMBER TO BE #2 SYP (UNO).
  - PROVIDE DOUBLE OR TRIPLE JOIST UNDER ALL WALLS PARALLEL TO FLOOR JOISTS WHERE NOTED ON THE PLANS.
  - SQUARES DENOTE POINT LOADS WHICH REQUIRE SOLID BLOCKING TO GIRDER OR FOUNDATION.
  - SHADED PIERS TO BE FILLED SOLID.
  - INSTALL LADDER WIRE @ 16" O.C. TO SECURE MULTIPLE WYTHE FOUNDATION WALLS TOGETHER.
  - REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

**LEGEND**

CONT	CONTINUOUS
XJ	EXTRA JOIST
DJ	DOUBLE JOIST
TJ	TRIPLE JOIST
EA	EACH
FDN	FOUNDATION
FTG	FOOTING
OC	ON CENTER
SPF	SPRUCE PINE FIR
SYP	SOUTHERN YELLOW PINE
TRTD	PRESSURE TREATED
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE

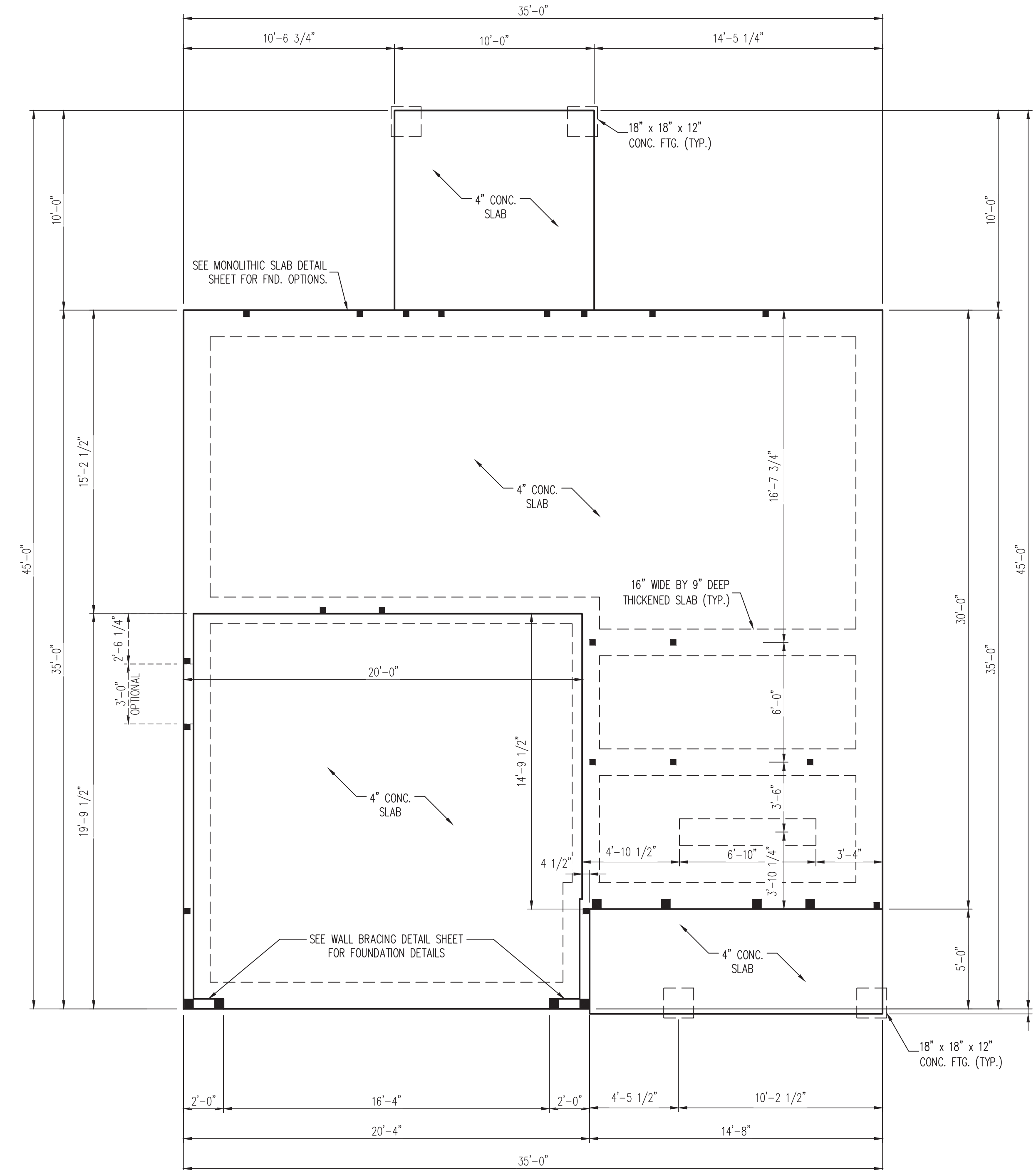
**J.S. THOMPSON  
ENGINEERING, INC**  
333 EAST SIX FORKS ROAD, SUITE 180 RALEIGH, NC 27609  
PHONE: (919) 789-9919 FAX: (919) 789-9921  
N.C. LICENSE NO.: C-1733

**LYON  
ASCOT GROUP**

DATE: MARCH 18, 2024  
SCALE: 1/4" = 1'-0"  
DRAWN BY: NS  
ENGINEERED BY: WFB



**S-1  
CRAWL  
FOUNDATION PLAN**



**150 MPH ULTIMATE DESIGN WIND SPEED  
NOTES FOR LESS THAN  
30' MEAN ROOF HEIGHT:**

- ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT INCLUDING ROOF SYSTEM.
- STRUCTURAL DESIGN PER NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION WITH SPECIAL CONSIDERATION TO CHAPTER 45 ("HIGH WIND ZONES" FOR 150 MPH WINDS).
- BUILDER IS TO PROVIDE FRAMING CONNECTIONS AS REQUIRED BY CHAPTER 45 ("HIGH WIND ZONES" FOR 150 MPH WINDS) OF THE NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.
- FOUNDATION ANCHORAGE TO COMPLY WITH SECTION 4504 OF THE NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.
- MEAN ROOF HEIGHT IS LESS THAN 30 FEET.
- WALL CLADDING DESIGNED FOR +24.3 PSF AND -32 PSF (+/- INDICATE POSITIVE / NEGATIVE PRESSURE (TYP)).
- ROOF CLADDING DESIGNED FOR +22.2 PSF AND -28 PSF FOR ROOF PITCHES 7/12 TO 12/12 AND +14 PSF AND -57 PSF FOR ROOF PITCHED 2.25/12 TO 7/12.
- 7/16" OSB SHEATHING IS REQUIRED ON ALL EXTERIOR WALLS.
- WALLS TO BE BRACED IN ACCORDANCE WITH SECTION R602.10 OF THE NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION AND AS NOTED ON PLANS.
- ENERGY EFFICIENCY COMPLIANCE AND INSULATION VALUES OF THE BUILDING TO BE IN ACCORDANCE WITH CHAPTER 11 OF THE NRCR, 2018 EDITION.

**120 MPH ULTIMATE DESIGN WIND SPEED  
NOTES FOR LESS THAN  
30' MEAN ROOF HEIGHT:**

- ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT INCLUDING ROOF SYSTEM.
- STRUCTURAL DESIGN PER NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.
- INSTALL 1/2" ANCHOR BOLTS 6'-0" O.C. AND WITHIN 1'-0" FROM END OF EACH CORNER. ANCHOR BOLTS MUST EXTEND A MINIMUM OF 7" INTO MASONRY OR CONCRETE. LOCATE BOLT WITHIN MIDDLE THIRD OF PLATE WIDTH.
- MEAN ROOF HEIGHT IS LESS THAN 30 FEET.
- EXTERIOR WALLS DESIGNED FOR 120 MPH WINDS.
- WALL CLADDING DESIGNED FOR +15.5 PSF AND -20 PSF (+/- INDICATE POSITIVE / NEGATIVE PRESSURE (TYP)).
- ROOF CLADDING DESIGNED FOR +14.2 PSF AND -18 PSF FOR ROOF PITCHES 7/12 TO 12/12 AND +10 PSF AND -36 PSF FOR ROOF PITCHED 2.25/12 TO 7/12.
- INSTALL 7/16" OSB SHEATHING ON ALL EXTERIOR WALLS OF ALL STORES IN ACCORDANCE WITH SECTION R602.10.3 OF THE NRCR, 2018 EDITION. SEE THE WALL BRACING NOTES AND DETAILS SHEET FOR MORE INFORMATION.
- ENERGY EFFICIENCY COMPLIANCE AND INSULATION VALUES OF THE BUILDING TO BE IN ACCORDANCE WITH CHAPTER 11 OF THE NRCR, 2018 EDITION.
- REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

**LEGEND**

CONT	CONTINUOUS
XJ	EXTRA JOIST
DJ	DOUBLE JOIST
TJ	TRIPLE JOIST
EA	EACH
FDN	FOUNDATION
FTG	FOOTING
OC	ON CENTER
SPF	SPRUCE PINE FIR
SYP	SOUTHERN YELLOW PINE
TRTD	PRESSURE TREATED
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE

**J.S. THOMPSON  
ENGINEERING, INC**  
333 EAST SIX FORKS ROAD, SUITE 180 RALEIGH, NC 27609  
PHONE: (919) 789-9919 FAX: (919) 789-9921  
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**LYON  
ASCOT GROUP**

DATE: MARCH 18, 2024  
SCALE: 1/4" = 1'-0"  
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ENGINEERED BY: WFB

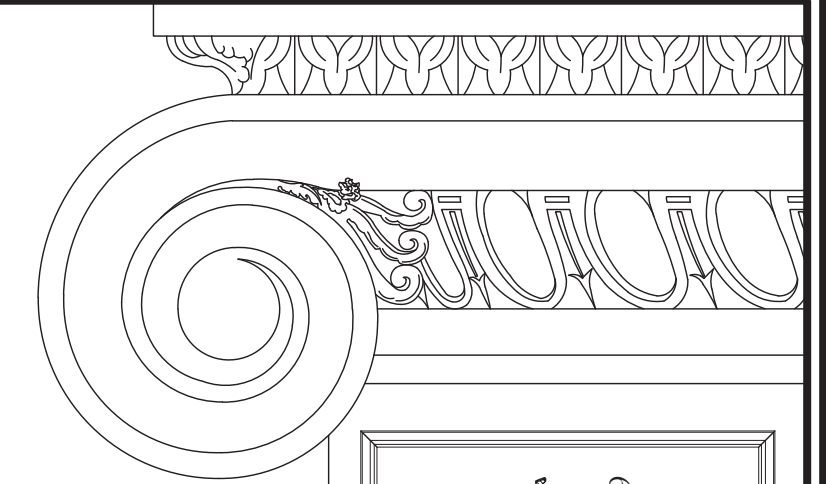
**SEAL  
33736  
ENGINEER  
MATTHEW G. STROTHER**

3/18/2024

**S-1  
MONO SLAB  
FOUNDATION PLAN**







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- BRACED WALL DESIGN NOTES:**
- BRACED WALL DESIGN PER SECTION R602.10.5 "WALL BRACING BY ENGINEERED DESIGN" OF THE NCR 2018 EDITION USING BRACING MATERIALS AND METHODS LISTED IN TABLE R602.10.1 ALONG WITH ALTERNATIVE MATERIALS AND METHODS THAT COMPLY WITH ACCEPTED ENGINEERING PRACTICE. BRACED WALL DESIGN IS NOT PRESCRIPTIVE.
  - SHEATH ALL EXTERIOR WALLS w/ 7/16" OSB TO PROVIDE CS-WSP WALL BRACING THAT WILL BRACE THE STRUCTURE FOR ALL LATERAL LOADS AS REQUIRED BY THE NCR 2018 EDITION.
  - CS-WSP REFERS TO "CONTINUOUSLY SHEATHED WOOD STRUCTURAL PANELS." CONTRACTOR IS TO INSTALL 7/16" OSB ON ALL EXTERIOR WALLS ATTACHED w/ 8d NAILS SPACED 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD.
  - GB REFERS TO "GYPSUM BOARD." CONTRACTOR IS TO INSTALL 1/2" (MIN.) GYPSUM BOARD ON BOTH SIDES OF WALL WHERE NOTED ON THE PLANS ATTACHED WITH 1 1/4" LONG #6 SCREWS OR 1 5/8" LONG 5d COOLER NAILS SPACED 7" O.C. ALONG PANEL EDGES AND IN THE FIELD.
  - BRACED WALL DESIGN APPLIED IN WIND ZONES UP TO 130 MPH. FOR HIGH WIND ZONES, BRACED WALLS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 45 OF THE NCR 2018 EDITION.
  - SEE NOTES AND DETAIL SHEETS FOR ADDITIONAL BRACED WALL INFORMATION.

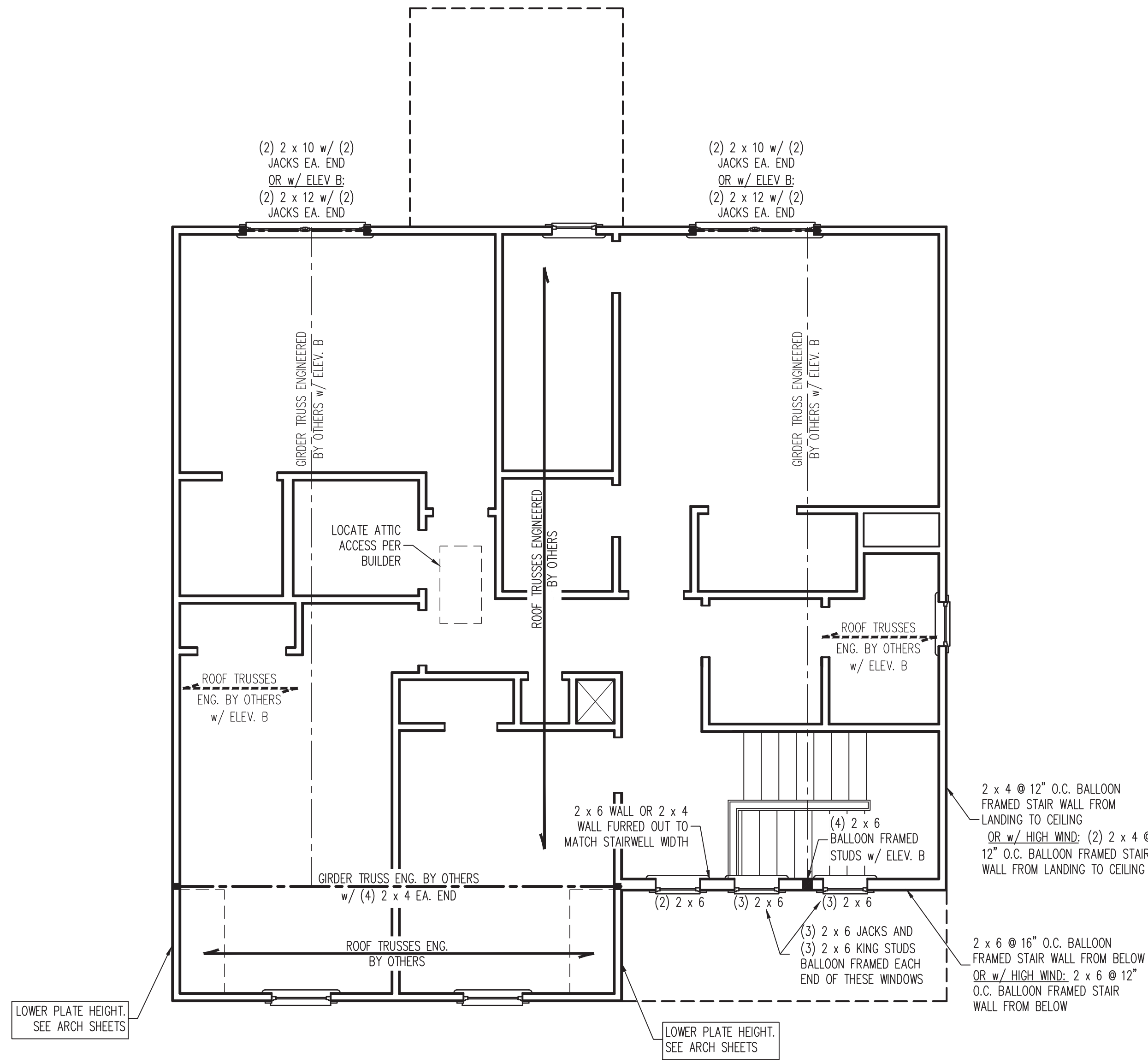
- STRUCTURAL NOTES:**
- ALL FRAMING LUMBER TO BE SPF #2 (UNO). ALL TREATED LUMBER TO BE SYP #2 (UNO.)
  - ALL LOAD BEARING HEADERS TO BE (2) 2 x 6 (UNO.)
  - WINDOW AND DOOR HEADERS TO BE SUPPORTED w/ (1) JACK STUD AND (1) KING STUD EA. END (UNO.). SEE TABLE R602.7.5 FOR ADDITIONAL KING STUD REQUIREMENTS.
  - SQUARES DENOTE POINT LOADS WHICH REQUIRE SOLID BLOCKING TO GIRDER OR FOUNDATION. ALL SQUARES TO BE (2) STUDS (UNO.)
  - FOR HIGH WIND ZONES, ALL EXTERIOR WALLS TO BE SHEATHED WITH 7/16" OSB SHEATHING WITH JOINTS BLOCKED AND SECURED WITH 8d NAILS AT 3" O.C. ALONG EDGES AND 6" O.C. IN THE FIELD.
  - FOR HIGH WIND ZONES, SECURE ALL EXTERIOR WALL SHEATHING PANELS TO DOUBLE TOP PLATES, BANDS, JOISTS, AND GIRDERS WITH (2) ROWS OF 8d NAILS STAGGERED AT 3" O.C. PANELS SHALL EXTEND 12" BEYOND CONSTRUCTION JOINTS AND SHALL OVERLAP GIRDERS AND DOUBLE SILL PLATES THEIR FULL DEPTH.
  - REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

TABLE R602.7.5  
MINIMUM NUMBER OF FULL HEIGHT KING STUDS AT EACH END OF HEADERS IN EXTERIOR WALLS

HEADER SPAN (FEET)	MINIMUM NUMBER OF FULL HEIGHT STUDS (KINGS)
UP TO 3'	1
> 3' TO 6'	2
> 6' TO 9'	3
> 9' TO 12'	4
> 12' TO 15'	5

**LEGEND**

CONT	CONTINUOUS
XT	EXTRA TRUSS
TS	TRUSS SUPPORT
EA	EACH
( )	NUMBER OF STUDS
DSP	DOUBLE STUD POCKET
TSP	TRIPLE STUD POCKET
OC	ON CENTER
SPF	SPRUCE PINE FIR
SYP	SOUTHERN YELLOW PINE
TRTD	PRESSURE TREATED
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE



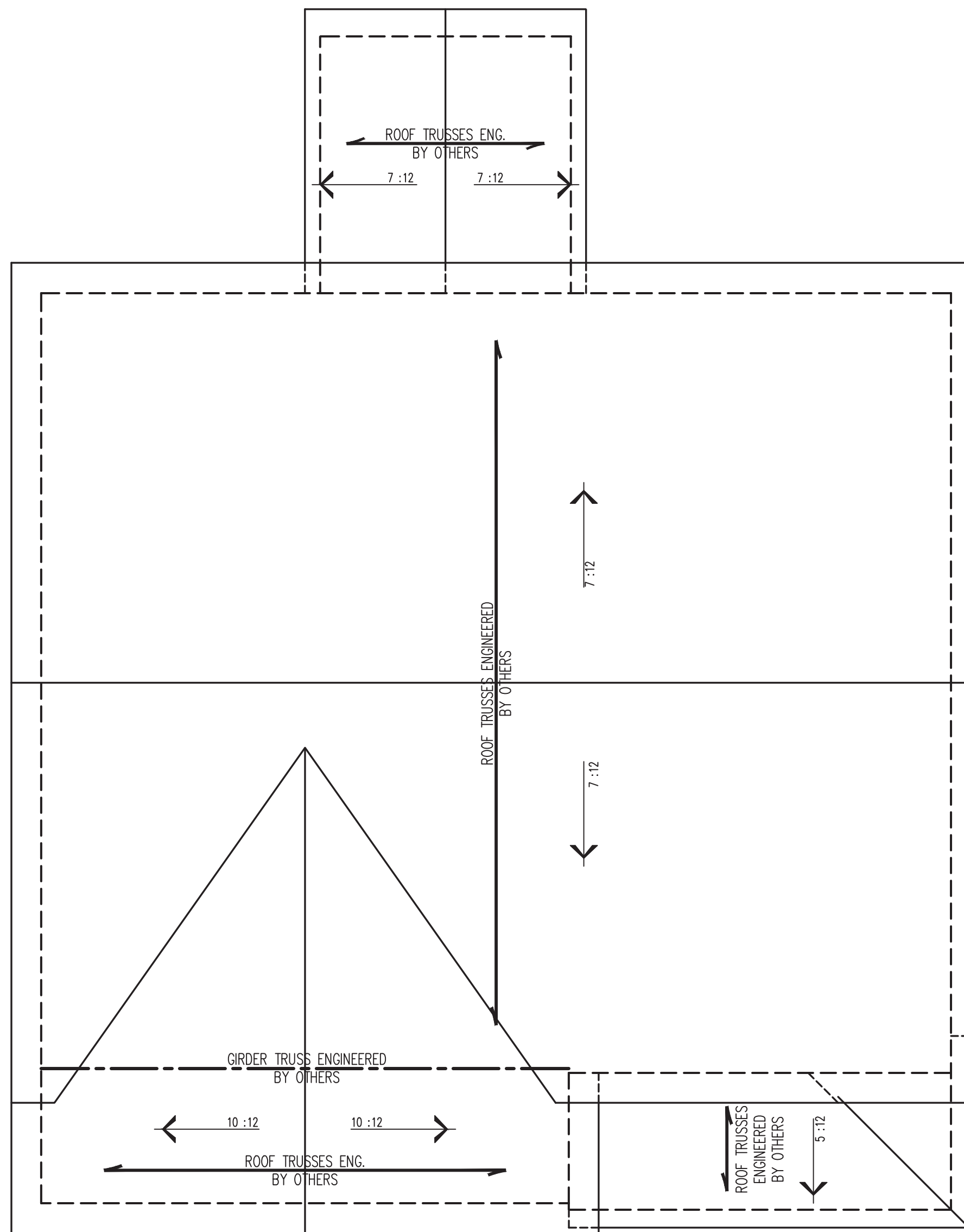
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 DRAWN BY: NS  
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S-3  
ATTIC FLOOR  
FRAMING PLAN





ELEVATION A

STRUCTURAL NOTES:

1. ALL FRAMING LUMBER TO BE #2 SPF (UNO).
2. CIRCLES DENOTE (3) 2 x 4 POSTS FOR ROOF SUPPORT.
3. FRAME DORMER WALLS ON TOP OF DOUBLE OR TRIPLE RAFTERS.
4. HIP SPLICES ARE TO BE SPACED A MIN. OF 8'-0". FASTEN MEMBERS WITH THREE ROWS OF 12d NAILS @ 16" O.C. (TYP.)
5. STICK FRAME OVER-FRAMED ROOF SECTIONS W/ 2 x 8 RIDGES, 2 x 6 RAFTERS @ 16" O.C. AND FLAT 2 x 10 VALLEYS OR USE VALLEY TRUSSES.
6. FASTEN FLAT VALLEYS TO RAFTERS OR TRUSSES WITH SIMPSON H2.5A HURRICANE TIES @ 32" O.C. MAX. PASS HURRICANE TIES THROUGH NOTCH IN ROOF SHEATHING. EACH RAFTER IS TO BE FASTENED TO THE FLAT VALLEY WITH A MIN. OF (6) 12d TOE NAILS.
7. REFER TO SECTION R802.11 OF THE 2018 NRC FOR REQUIRED UPLIFT RESISTANCE AT RAFTERS AND TRUSSES.
8. REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

NOTE: REFER TO ARCHITECTURAL DRAWINGS FOR ROOF PITCHES, PLATE HEIGHTS, DIMENSIONS, OVERHANG WIDTHS, AND ATTIC VENT CALCS.

LEGEND

XT	EXTRA TRUSS
TS	TRUSS SUPPORT
XR	EXTRA RAFTER
RS	RAFTER SUPPORT
CONT.	CONTINUOUS
EA	EACH
OC	ON CENTER
SPF	SPRUCE PINE FIR
SYP	SOUTHERN YELLOW PINE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE

**J.S. THOMPSON  
ENGINEERING, INC**  
333 EAST SIX FORKS ROAD, SUITE 180 RALEIGH, NC 27609  
PHONE: (919) 7899919 FAX: (919) 7899921  
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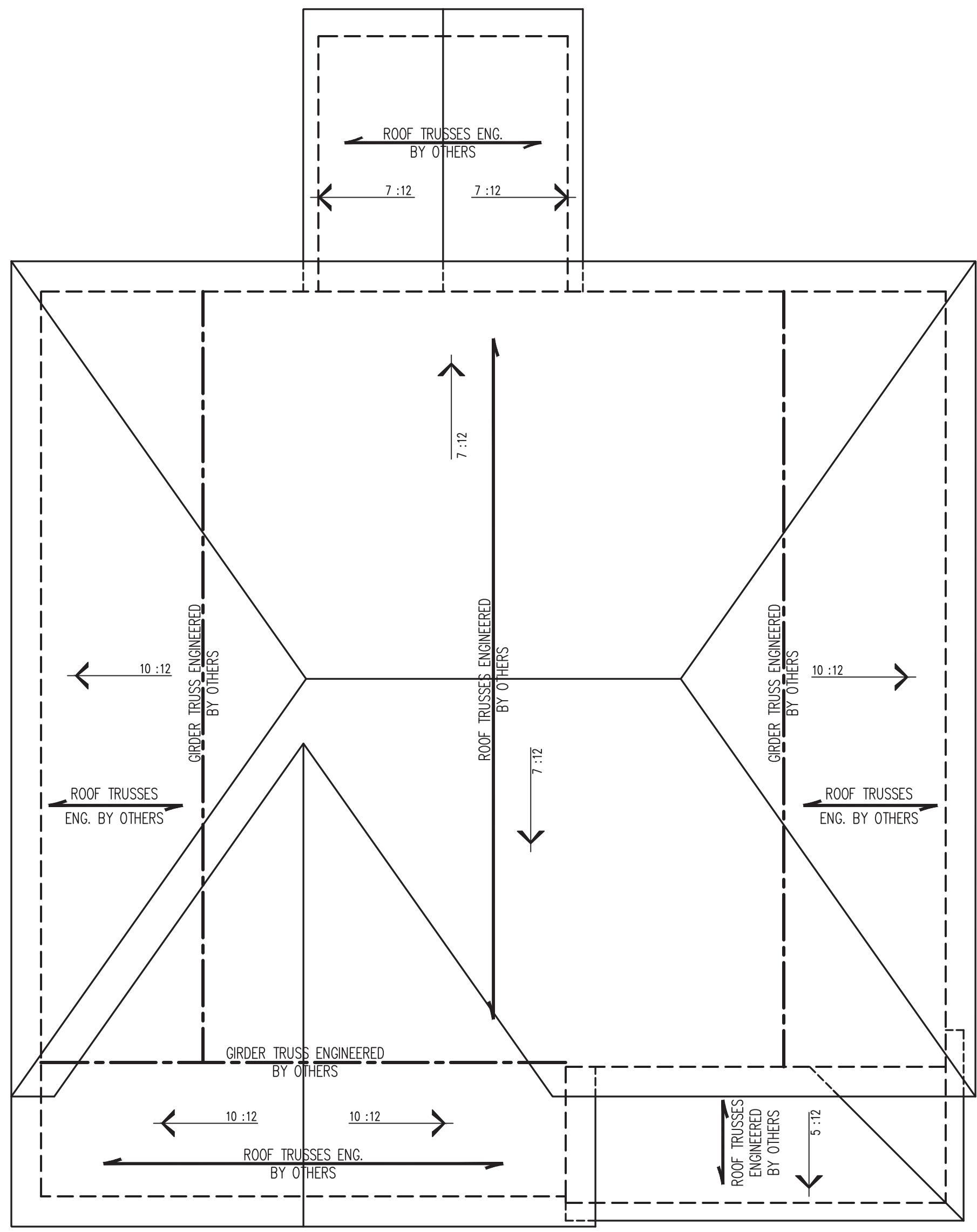
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S4a  
ROOF FRAMING  
PLAN



ELEVATION B

STRUCTURAL NOTES:

1. ALL FRAMING LUMBER TO BE #2 SPF (UNO).
2. CIRCLES DENOTE (3) 2 x 4 POSTS FOR ROOF SUPPORT.
3. FRAME DORMER WALLS ON TOP OF DOUBLE OR TRIPLE RAFTERS.
4. HIP SPLICES ARE TO BE SPACED A MIN. OF 8'-0". FASTEN MEMBERS WITH THREE ROWS OF 12d NAILS @ 16" O.C. (TYP.)
5. STICK FRAME OVER-FRAMED ROOF SECTIONS W/ 2 x 8 RIDGES, 2 x 6 RAFTERS @ 16" O.C. AND FLAT 2 x 10 VALLEYS OR USE VALLEY TRUSSES.
6. FASTEN FLAT VALLEYS TO RAFTERS OR TRUSSES WITH SIMPSON H2.5A HURRICANE TIES @ 32" O.C. MAX. PASS HURRICANE TIES THROUGH NOTCH IN ROOF SHEATHING. EACH RAFTER IS TO BE FASTENED TO THE FLAT VALLEY WITH A MIN. OF (6) 12d TOE NAILS.
7. REFER TO SECTION R802.11 OF THE 2018 NRC FOR REQUIRED UPLIFT RESISTANCE AT RAFTERS AND TRUSSES.
8. REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

NOTE: REFER TO ARCHITECTURAL DRAWINGS FOR ROOF PITCHES, PLATE HEIGHTS, DIMENSIONS, OVERHANG WIDTHS, AND ATTIC VENT CALCS.

LEGEND

XT	EXTRA TRUSS
TS	TRUSS SUPPORT
XR	EXTRA RAFTER
RS	RAFTER SUPPORT
CONT.	CONTINUOUS
EA	EACH
OC	ON CENTER
SPF	SPRUCE PINE FIR
SYP	SOUTHERN YELLOW PINE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE

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**ENGINEERING, INC**  
 333 EAST SIX FORKS ROAD, SUITE 180 RALEIGH, NC 27609  
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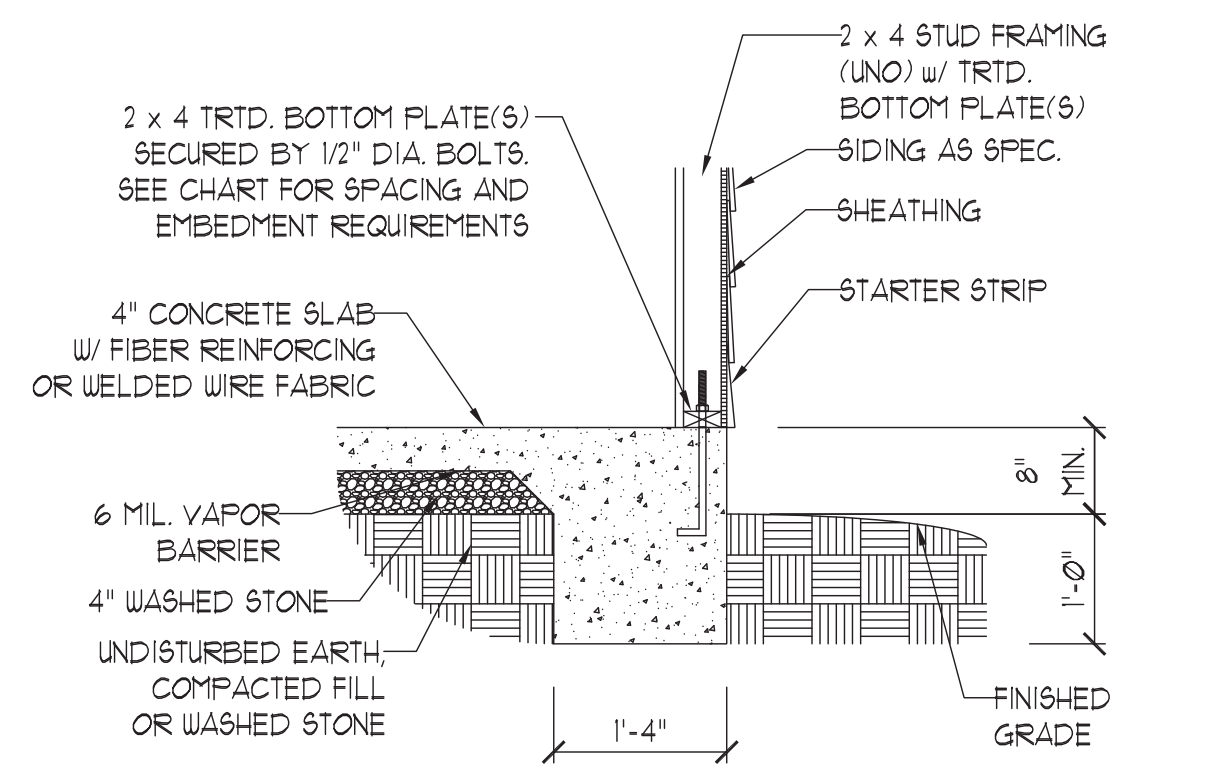


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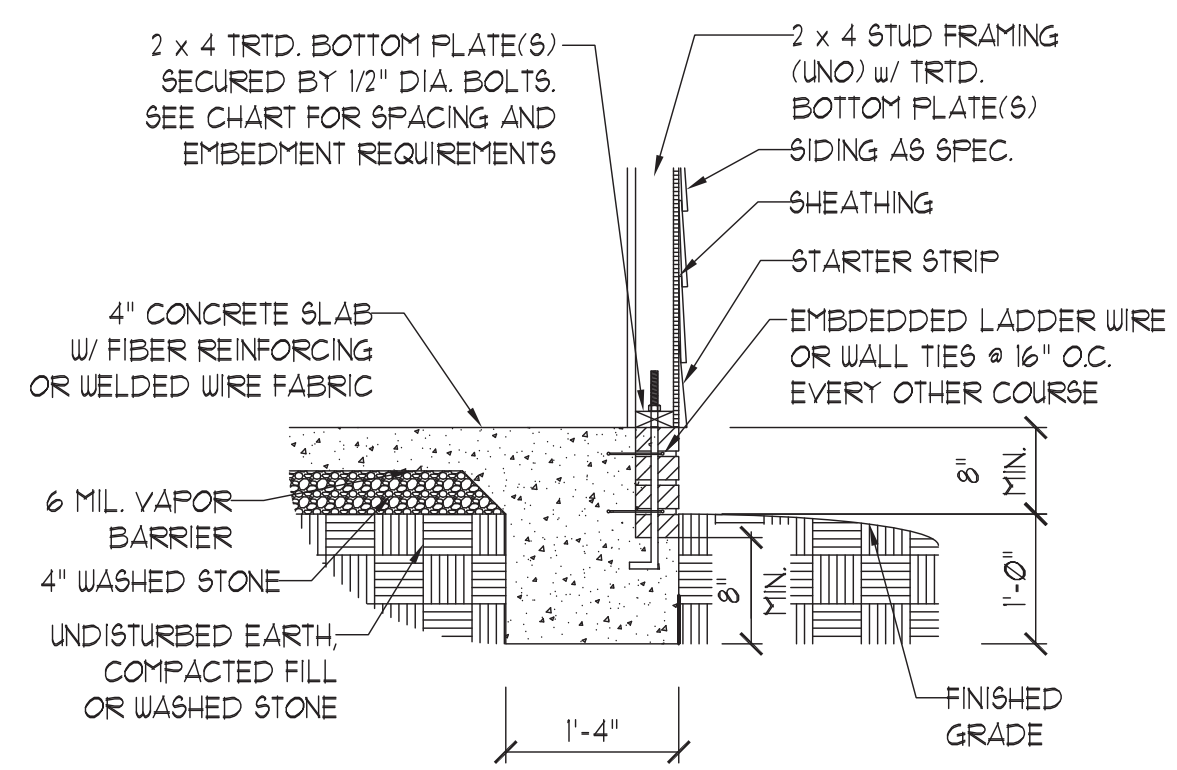
S4b  
 ROOF FRAMING  
 PLAN





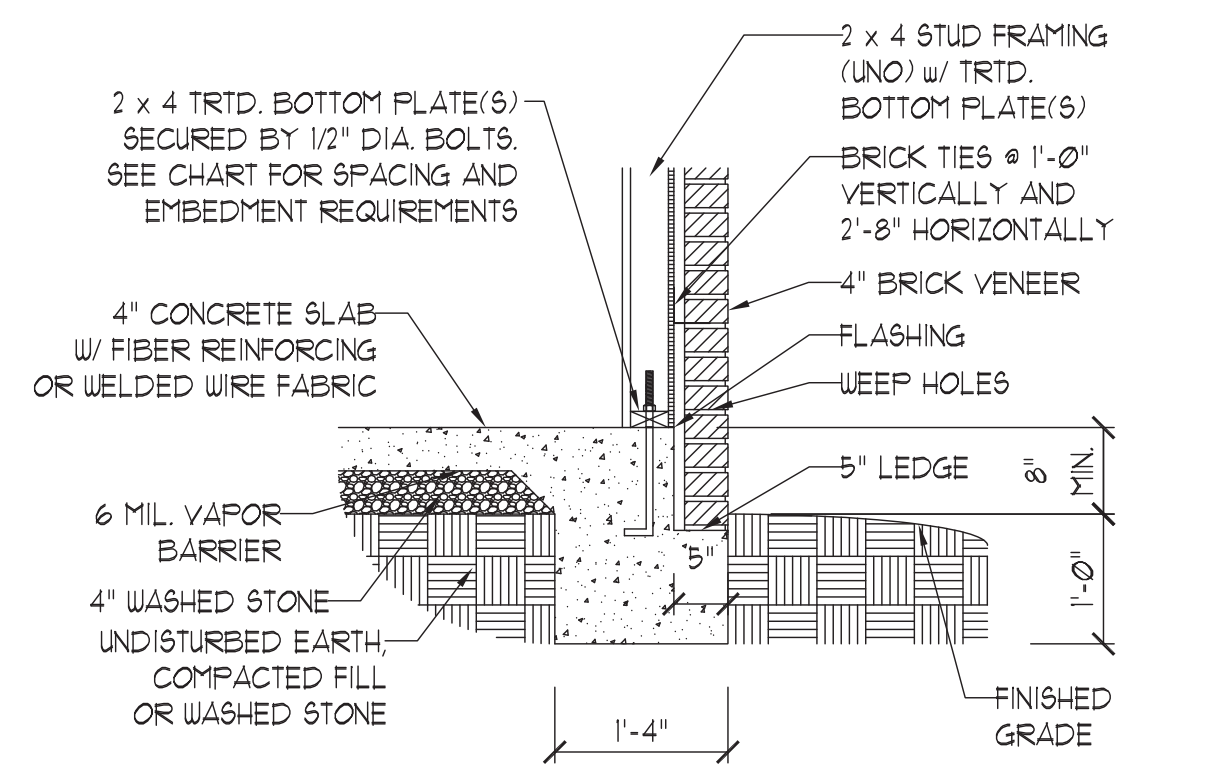
TYPICAL SLAB

①



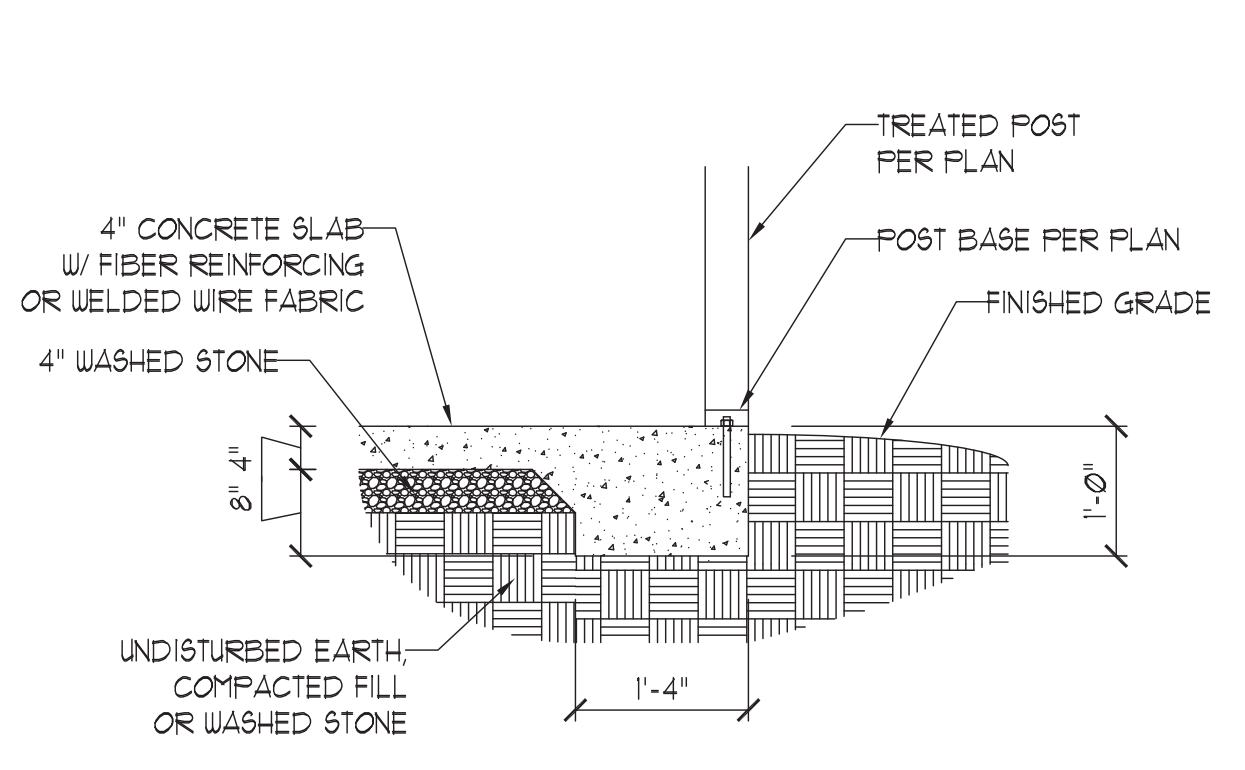
TYPICAL SLAB w/ BRICK LEDGE

②



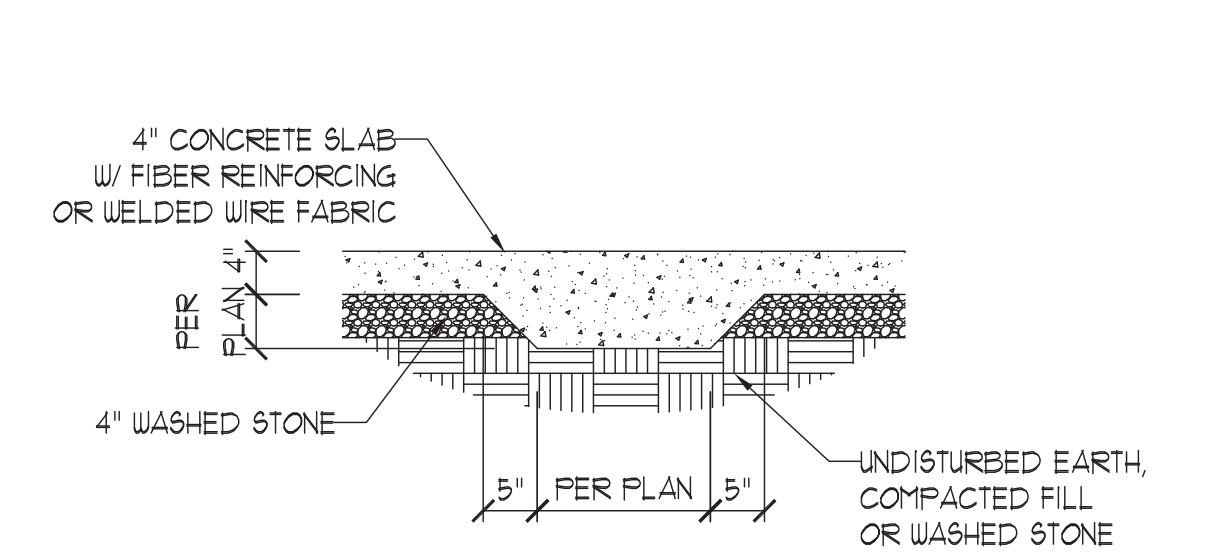
TYPICAL SLAB w/ BRICK VENEER LEDGE

③



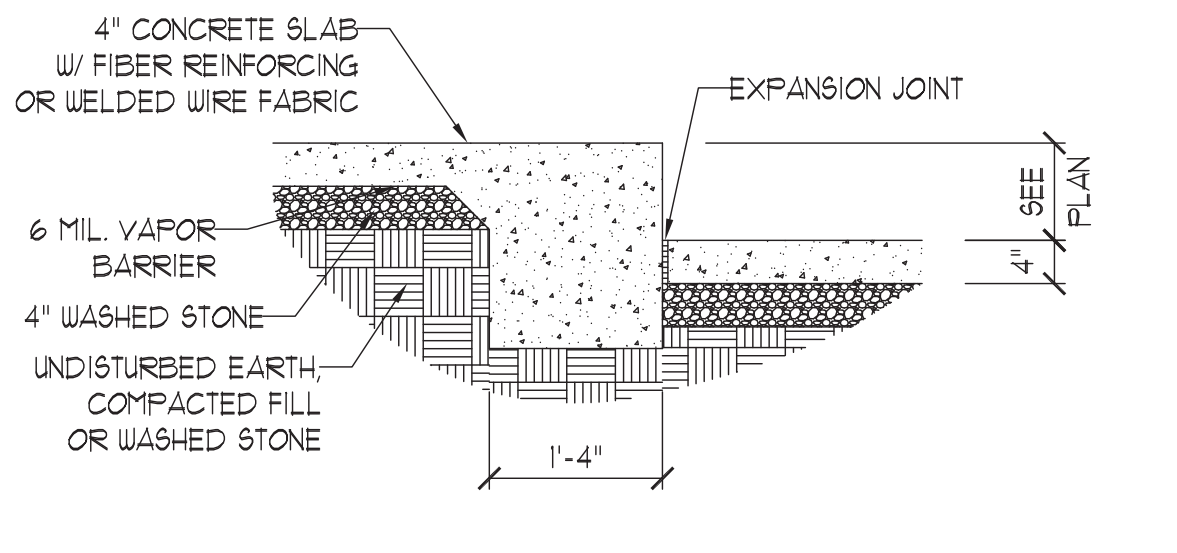
PORCH/SCREEN PORCH

④



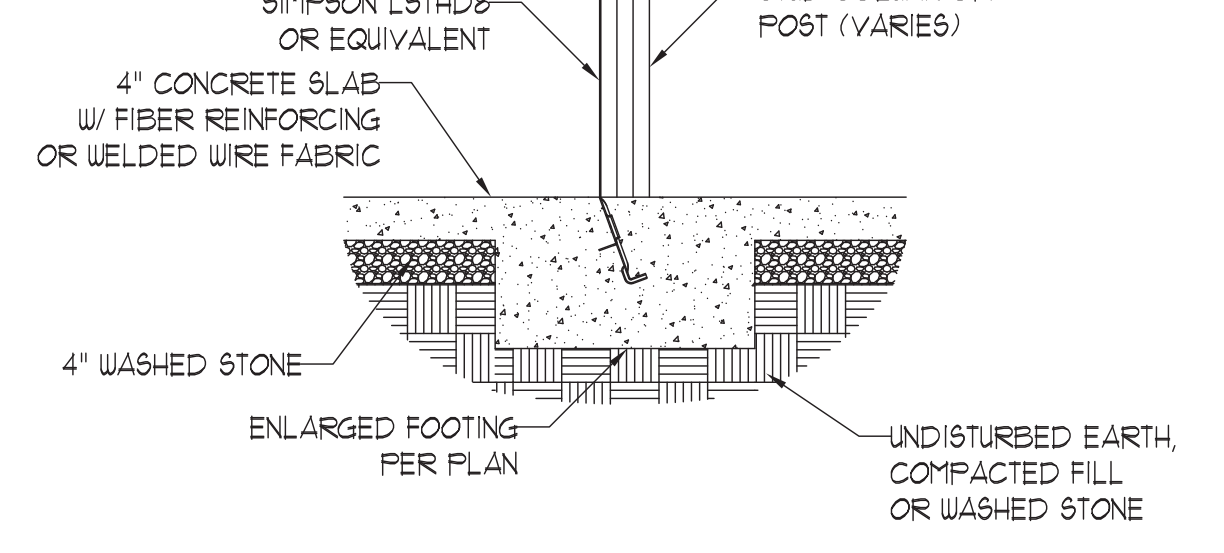
TYPICAL THICKENED SLAB

⑤



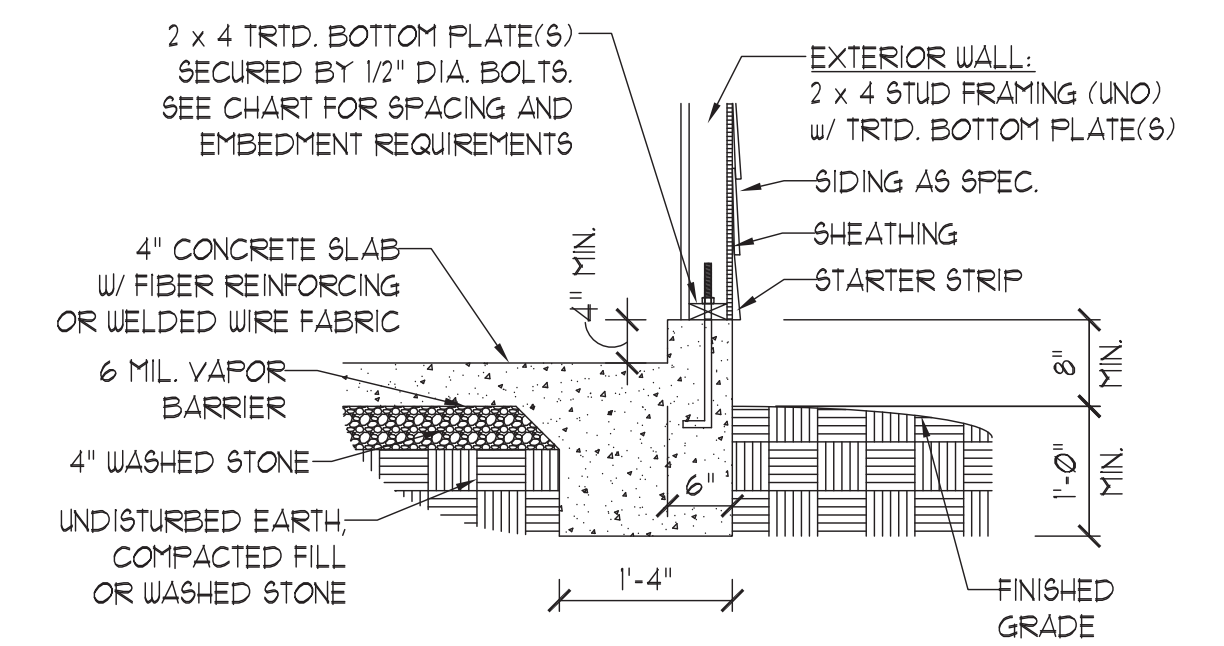
SLAB FLOOR CHANGE

⑥



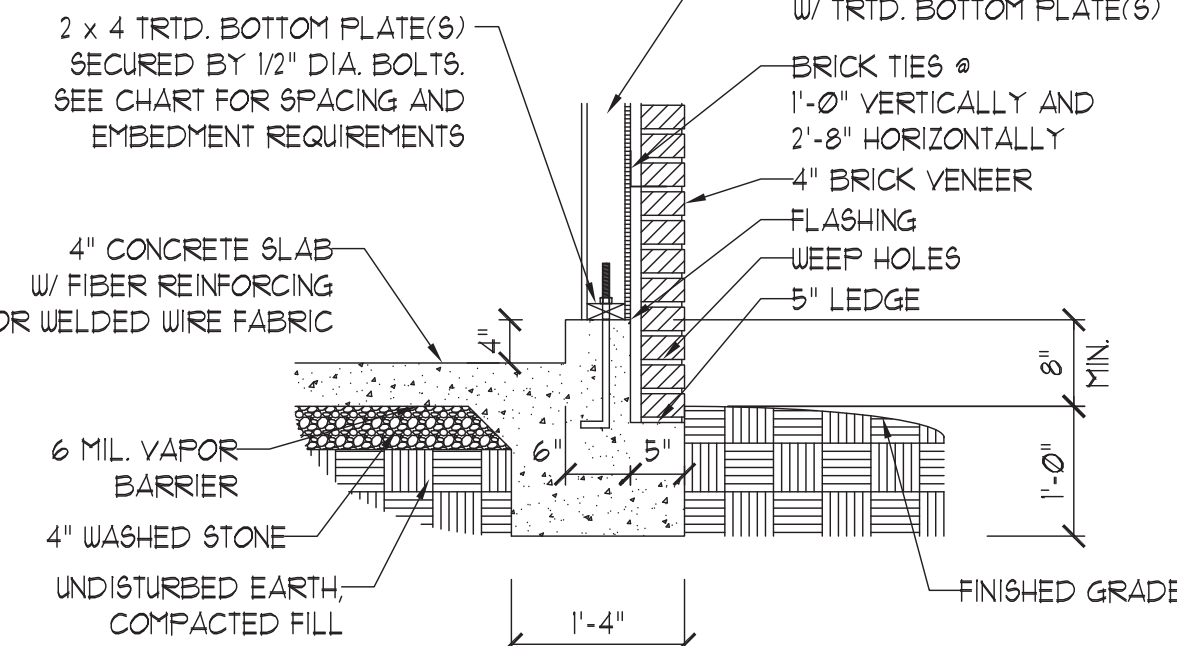
TYPICAL COLUMN TO SLAB CONNECTION

⑦



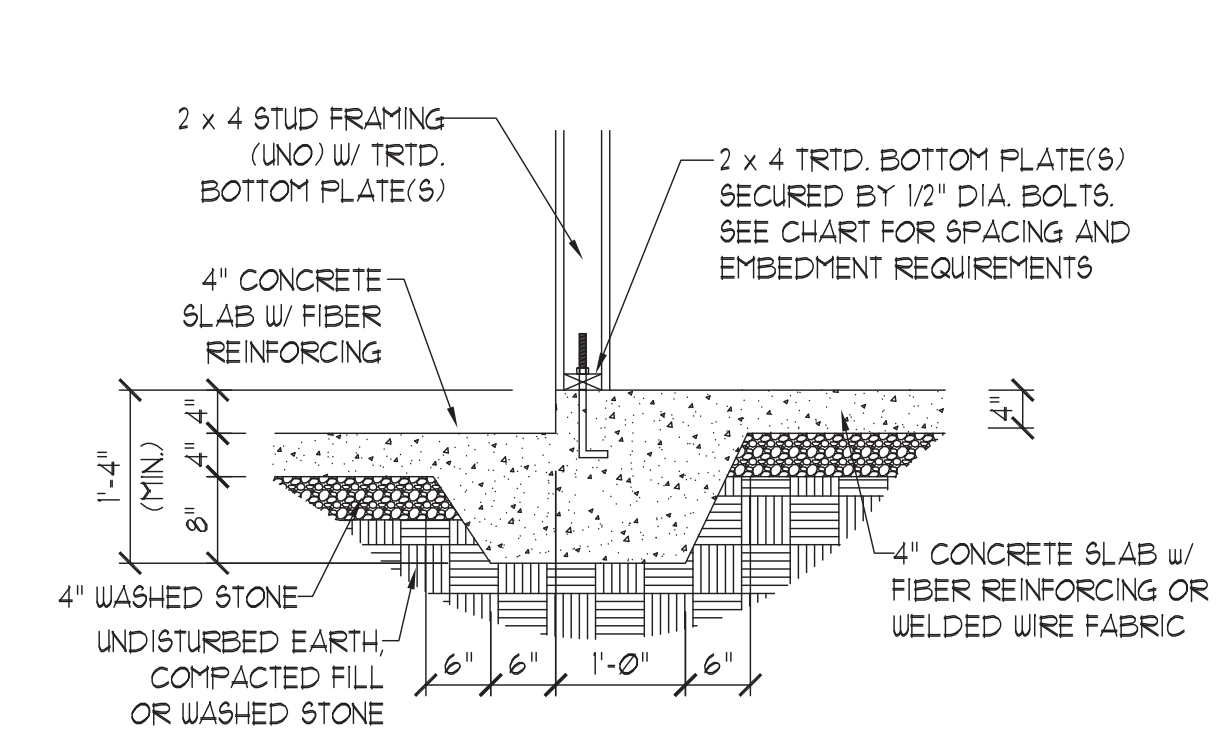
GARAGE CURB

⑧



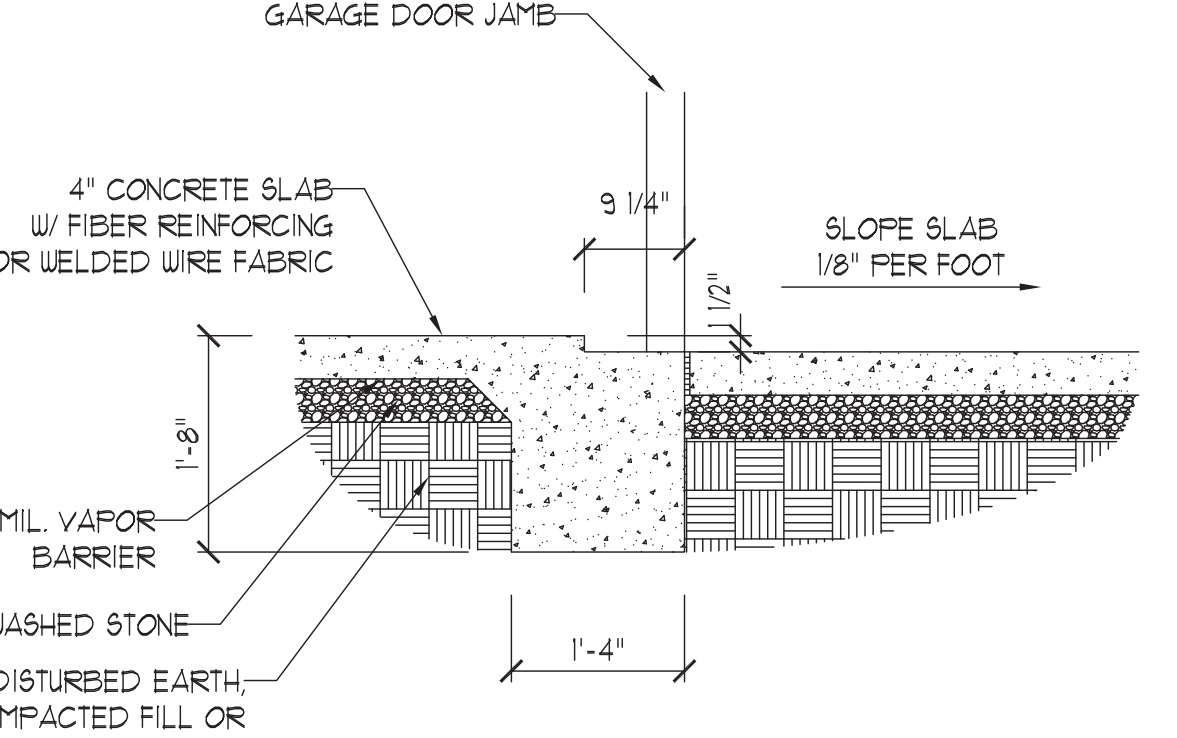
GARAGE CURB w/ BRICK LEDGE

⑨



STEP IN GARAGE

⑩



SLAB AT GARAGE DOOR

⑪

ANCHOR SPACING AND EMBEDMENT		
WIND ZONE	120 MPH	130 MPH
SPACING	6'-0" O.C. INSTALL MIN. (2) ANCHORS PER PLATE SECTION AND (1) ANCHOR WITHIN 12" OF CORNERS	4'-0" O.C. INSTALL MIN. (2) ANCHORS PER PLATE SECTION AND (1) ANCHOR WITHIN 12" OF CORNERS
EMBEDMENT	7"	15" INTO MASONRY 7" INTO CONCRETE

NOTE:  
THREADED ROD WITH EPOXY, SIMPSON TITEN HD, OR APPROVED ANCHORS SPACED AS REQUIRED TO PROVIDE EQUIVALENT ANCHORAGE TO 1/2" DIAMETER ANCHOR BOLTS MAY BE USED IN LIEU OF 1/2" ANCHOR BOLTS.

**J.S. THOMPSON ENGINEERING, INC.**  
333 EAST SIX FORKS ROAD, SUITE 180 RALEIGH, NC 27609  
PHONE: (919) 789-9919 FAX: (919) 789-9921  
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MONOLITHIC SLAB FOUNDATION DETAILS

Professional Engineer Seal for Matthew G. Strother, State of North Carolina, License No. 33736, dated 3/18/2024.

DATE: AUGUST 30, 2022  
SCALE: NTS  
DRAWN BY: JST  
ENGINEERED BY: JST

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FOUNDATION DETAILS







## GENERAL NOTES

- ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS INCLUDING ROOF RAFTERS, HIPs, VALLEYS, RIDGES, FLOORS, WALLS, BEAMS, HEADERS, COLUMNS, CANTILEVERS, OFFSET LOAD BEARING WALLS, PIERS, GIRDER SYSTEM AND FOOTING. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OF ARCHITECTURAL LAYOUT INCLUDING ROOF. ENGINEER'S SEAL DOES NOT APPLY TO I-JOIST OR FLOOR/ROOF TRUSS LAYOUT DESIGN AND ACCURACY.
- ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE NORTH CAROLINA RESIDENTIAL CODE (NRC), 2018 EDITION, PLUS ALL LOCAL CODES AND REGULATIONS. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR, AND WILL NOT HAVE CONTROL OF, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE CONSTRUCTION WORK. NOR WILL THE ENGINEER BE RESPONSIBLE FOR THE CONTRACTORS FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

- STRUCTURAL DESIGN BASED ON THE PROVISIONS OF THE NRC, 2018 EDITION (R301.4 - R301.7)

DESIGN CRITERIA:	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION (IN)
ATTIC WITH LIMITED STORAGE	20	10	L/240 (L/360 w/ BRITTLE FINISHES)
ATTIC WITHOUT STORAGE	10	10	L/360
DECKS	40	10	L/360
EXTERIOR BALCONIES	40	10	L/360
FIRE ESCAPES	40	10	L/360
HANDRAILS/GUARDRAILS	200	10	L/360
PASSENGER VEHICLE GARAGE	50	10	L/360
ROOMS OTHER THAN SLEEPING ROOM	40	10	L/360
SLEEPING ROOMS	30	10	L/360
STAIRS	40	10	L/360
WIND LOAD	(BASED ON TABLE R301.2(4) WIND ZONE AND EXPOSURE)		
GROUND SNOW LOAD: P <sub>g</sub>	20 (PSF)		

- I-JOIST SYSTEMS DESIGNED WITH 12 PSF DEAD LOAD AND DEFLECTION (IN) OF L/480
- FLOOR TRUSS SYSTEMS DESIGNED WITH 15 PSF DEAD LOAD

- FOR 115 AND 120 MPH WIND ZONES, FOUNDATION ANCHORAGE IS TO COMPLY WITH SECTION R403.1.6 OF THE NRC, 2018 EDITION. FOR 130 MPH, 140 MPH, AND 150 MPH WIND ZONES, FOUNDATION ANCHORAGE IS TO COMPLY WITH SECTION 4504 OF THE NRC, 2018 EDITION.

- ENERGY EFFICIENCY COMPLIANCE AND INSULATION VALUES OF THE BUILDING TO BE IN ACCORDANCE WITH CHAPTER 11 OF THE NRC, 2018 EDITION.

## FOOTING AND FOUNDATION NOTES

- FOUNDATION DESIGN BASED ON A MINIMUM ALLOWABLE BEARING CAPACITY OF 2000 PSF. CONTACT GEOTECHNICAL ENGINEER IF BEARING CAPACITY IS NOT ACHIEVED.
- FOR ALL CONCRETE SLABS AND FOOTINGS, THE AREA WITHIN THE PERIMETER OF THE BUILDING ENVELOPE SHALL HAVE ALL VEGETATION, TOP SOIL AND FOREIGN MATERIAL REMOVED. FILL MATERIAL SHALL BE FREE OF VEGETATION AND FOREIGN MATERIAL. THE FILL SHALL BE COMPACTED TO ASSURE UNIFORM SUPPORT OF THE SLAB, AND EXCEPT WHERE APPROVED, THE FILL DEPTHS SHALL NOT EXCEED 24" FOR CLEAN SAND OR GRAVEL. A 4" THICK BASED COURSE CONSISTING OF CLEAN GRADED SAND OR GRAVEL SHALL BE PLACED. A BASE COURSE IS NOT REQUIRED WHERE A CONCRETE SLAB IS INSTALLED ON WELL-DRAINED OR SAND-GRAVEL MIXTURE SOILS CLASSIFIED AS GROUP 1, ACCORDING TO THE UNITED SOIL CLASSIFICATION SYSTEM IN ACCORDANCE WITH TABLE R405.1 OF THE NRC, 2018 EDITION.
- PROPERLY DEWATER EXCAVATION PRIOR TO POURING CONCRETE WHEN BOTTOM OF CONCRETE SLAB IS AT OR BELOW WATER TABLE. IF APPLICABLE, 3/4" - 1" DEEP CONTROL JOINTS ARE TO BE SAWS WITHIN 4 TO 12 HOURS OF CONCRETE FINISHING AND WALL LOCATIONS HAVE BEEN MARKED. ADJUST WHERE NECESSARY.
- CONCRETE SHALL CONFORM TO SECTION R402.2 OF THE NRC, 2018 EDITION. CONCRETE REINFORCING STEEL TO BE ASTM A615 GRADE 60. WELDED WIRE FABRIC TO BE ASTM A185. MAINTAIN A MINIMUM CONCRETE COVER AROUND REINFORCING STEEL OF 3" IN FOOTINGS AND 1 1/2" IN SLABS. FOR POURED CONCRETE WALLS, CONCRETE COVER FOR REINFORCING STEEL MEASURED FROM THE INSIDE FACE OF THE WALL SHALL NOT BE LESS THAN 3/4". CONCRETE COVER FOR REINFORCING STEEL MEASURED FROM THE OUTSIDE FACE OF THE WALL SHALL NOT BE LESS THAN 1 1/2" FOR #5 BARS OR SMALLER, AND NOT LESS THAN 2" FOR #6 BARS OR LARGER.
- MASONRY UNITS TO CONFORM TO ACE 530/ASCE 5/TMS 402. MORTAR SHALL CONFORM TO ASTM C270.
- THE UNSUPPORTED HEIGHT OF MASONRY PIERS SHALL NOT EXCEED FOUR TIMES THEIR LEAST DIMENSION FOR UNFILLED HOLLOW CONCRETE MASONRY UNITS AND TEN TIMES THEIR LEAST DIMENSION FOR SOLID OR SOLID FILLED PIERS. PIERS MAY BE FILLED SOLID WITH CONCRETE OR TYPE M OR S MORTAR. PIERS AND WALLS SHALL BE CAPPED WITH 8" OF SOLID MASONRY.
- THE CENTER OF EACH OF THE PIERS SHALL BEAR IN THE MIDDLE THIRD OF ITS RESPECTIVE FOOTING. EACH GIRDER SHALL BEAR IN THE MIDDLE THIRD OF THE PIERS.
- ALL CONCRETE AND MASONRY FOUNDATION WALLS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF SECTION R404 OF THE NRC, 2018 EDITION OR IN ACCORDANCE WITH ACI 318, ACI 332, NCMA TR68-A OR ACE 530/ASCE 5/TMS 402. MASONRY FOUNDATION WALLS ARE TO BE REINFORCED PER TABLE R404.1.1(1), R404.1.1(2), R404.1.1(3), OR R404.1.1(4) OF THE NRC, 2018 EDITION. CONCRETE FOUNDATION WALLS ARE TO BE REINFORCED PER TABLE R404.1.1(5) OF THE NRC, 2018 EDITION. STEP CONCRETE FOUNDATION WALLS TO 2 x 6 FRAMED WALLS AT 16" O.C. WHERE GRADE PERMITS (UNO).

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## FRAMING NOTES

- ALL FRAMING LUMBER SHALL BE #2 SPF MINIMUM (F<sub>b</sub> = 875 PSI, F<sub>v</sub> = 375 PSI, E = 1600000 PSI) UNLESS NOTED OTHERWISE (UNO). ALL TREATED LUMBER SHALL BE #2 SYP MINIMUM (F<sub>b</sub> = 975 PSI, F<sub>v</sub> = 175 PSI, E = 1600000 PSI) UNLESS NOTED OTHERWISE (UNO).
- LAMINATED VENEER LUMBER (LVL) SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: F<sub>b</sub> = 2600 PSI, F<sub>v</sub> = 285 PSI, E = 1900000 PSI. LAMINATED STRAND LUMBER (LSL) SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: F<sub>b</sub> = 2325 PSI, F<sub>v</sub> = 310 PSI, E = 1550000 PSI. PARALLEL STRAND LUMBER (PSL) UP TO 7" DEPTH SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: F<sub>c</sub> = 2500 PSI, E = 1800000 PSI. PARALLEL STRAND LUMBER (PSL) MORE THAN 7" DEPTH SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: F<sub>c</sub> = 2900 PSI, E = 2000000 PSI. INSTALL ALL CONNECTIONS PER MANUFACTURER'S SPECIFICATIONS.
- STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS
 

A. W AND WT SHAPES:	ASTM A992
B. CHANNELS AND ANGLES:	ASTM A36
C. PLATES AND BARS:	ASTM A36
D. HOLLOW STRUCTURAL SECTIONS:	ASTM A500 GRADE B
E. STEEL PIPE:	ASTM A53, GRADE B, TYPE E OR S

- STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3 1/2" AND FULL FLANGE WIDTH (UNO). PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED AT THE BOTTOM FLANGE TO EACH SUPPORT AS FOLLOWS (UNO):

A. WOOD FRAMING	(2) 1/2" DIA. x 4" LONG LAG SCREWS
B. CONCRETE	(2) 1/2" DIA. x 4" WEDGE ANCHORS
C. MASONRY (FULLY GROUTED)	(2) 1/2" DIA. x 4" LONG SIMPSON TITEN HD ANCHORS
D. STEEL PIPE COLUMN	(4) 3/4" DIA. A325 BOLTS OR 3/16" FILLET WELD

LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDING THE JOISTS ARE TOE NAILED TO THE 2x NAILER ON TOP OF THE STEEL BEAM, AND THE 2x NAILER IS SECURED TO THE TOP OF THE STEEL BEAM w/ (2) ROWS OF SELF TAPPING SCREWS @ 16" O.C. OR (2) ROWS OF 1/2" DIAMETER BOLTS @ 16" O.C. IF 1/2" BOLTS ARE USED TO FASTEN THE NAILER, THE STEEL BEAM SHALL BE FABRICATED w/ (2) ROWS OF 9/16" DIAMETER HOLES @ 16" O.C.

- SQUARES DENOTE POINT LOADS WHICH REQUIRE SOLID BLOCKING TO GIRDER OR FOUNDATION. SHADED SQUARES DENOTE POINT LOADS FROM ABOVE WHICH REQUIRE SOLID BLOCKING TO SUPPORTING MEMBER BELOW.
- ALL LOAD BEARING HEADERS TO CONFORM TO TABLE R602.7(1) AND R602.7(2) OF THE NRC, 2018 EDITION OR BE (2) 2 x 6 WITH (1) JACK AND (1) KING STUD EACH END (UNO), WHICHEVER IS GREATER ALL HEADERS TO BE SECURED TO EACH JACK STUD WITH (4) 8d NAILS. ALL BEAMS TO BE SUPPORTED WITH (2) STUDS AT EACH BEARING POINT (UNO). INSTALL KING STUDS PER SECTION R602.7.5 OF THE NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.
- ALL BEAMS, HEADERS, OR GIRDER TRUSSES PARALLEL TO WALL ARE TO BEAR FULLY ON (1) JACK OR (2) STUDS MINIMUM OR THE NUMBER OF JACKS OR STUDS NOTED. ALL BEAMS OR GIRDER TRUSSES PERPENDICULAR TO WALL AND SUPPORTED BY (3) STUDS OR LESS ARE TO HAVE 1 1/2" MINIMUM BEARING (UNO). ALL BEAMS OR GIRDER TRUSSES PERPENDICULAR TO WALL AND SUPPORTED BY MORE THAN (3) STUDS OR OTHER NOTED COLUMN ARE TO BEAR FULLY ON SUPPORT COLUMN FOR ENTIRE WALL DEPTH (UNO). BEAM ENDS THAT BUTT INTO ONE ANOTHER ARE TO EACH BEAR EQUAL LENGTHS (UNO).
- FLITCH BEAMS SHALL BE BOLTED TOGETHER USING 1/2" DIAMETER BOLTS (ASTM A307) WITH WASHERS PLACED AT THREADED END OF BOLT. BOLTS SHALL BE SPACED AT 24" CENTERS (MAXIMUM), AND STAGGERED AT TOP AND BOTTOM OF BEAM (2" EDGE DISTANCE), WITH (2) BOLTS LOCATED AT 6" FROM EACH END (UNO).
- ALL I-JOIST OR TRUSS LAYOUTS ARE TO BE IN COMPLIANCE WITH THE OVERALL DESIGN SPECIFIED ON THE PLANS. ALL DEVIATIONS ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD PRIOR TO INSTALLATION.
- BRACED WALL PANELS SHALL BE CONSTRUCTED ACCORDING TO THE NORTH CAROLINA RESIDENTIAL CODE 2018 EDITION WALL BRACING CRITERIA. THE AMOUNT, LENGTH, AND LOCATION OF BRACING SHALL COMPLY WITH ALL APPLICABLE TABLES IN SECTION R602.10.
- PROVIDE DOUBLE JOIST UNDER ALL WALLS PARALLEL TO FLOOR JOISTS. PROVIDE SUPPORT UNDER ALL WALLS PARALLEL TO FLOOR TRUSSES OR I-JOISTS PER MANUFACTURER'S SPECIFICATIONS. INSTALL BLOCKING BETWEEN JOISTS OR TRUSSES FOR POINT LOAD SUPPORT FOR ALL POINT LOADS ALONG OFFSET LOAD LINES.
- FOR ALL HEADERS SUPPORTING BRICK VENEER THAT ARE LESS THAN 8'-0" IN LENGTH, REST A 6" x 4" x 5/16" STEEL ANGLE WITH 6" MINIMUM EMBEDMENT AT SIDES FOR BRICK SUPPORT (U.N.O.). FOR ALL HEADERS 8'-0" AND GREATER IN LENGTH, BOLT A 6" x 4" x 5/16" STEEL ANGLE TO HEADER WITH 1/2" LAG SCREWS AT 12" O.C. STAGGERED FOR BRICK SUPPORT. FOR ALL BRICK SUPPORT AT ROOF LINES, BOLT A 6" x 4" x 5/16" STEEL ANGLE TO (2) 2 x 10 BLOCKING INSTALLED w/ (4) 12d NAILS EA. PLY BETWEEN WALL STUDS WITH (2) ROWS OF 1/2" LAG SCREWS AT 12" O.C. STAGGERED AND IN ACCORDANCE WITH SECTION R703.8.2.1 OF THE NRC, 2018 EDITION.
- FOR STICK FRAMED ROOFS: CIRCLES DENOTE (3) 2 x 4 POSTS FOR ROOF MEMBER SUPPORT. HIP SPLICES ARE TO BE SPACED A MINIMUM OF 8'-0". FASTEN MEMBERS WITH THREE ROWS OF 12d NAILS AT 16" O.C. FRAME DORMER WALLS ON TOP OF DOUBLE OR TRIPLE RAFTERS AS SHOWN (UNO).
- FOR TRUSSED ROOFS: FRAME DORMER WALLS ON TOP OF 2 x 4 LADDER FRAMING AT 24" O.C. BETWEEN ADJACENT ROOF TRUSSES. STICK FRAME OVER-FRAMED ROOF SECTIONS WITH 2 x 8 RIDGES, 2 x 6 RAFTERS AT 16" O.C. AND FLAT 2 x 10 VALLEYS (UNO).
- ALL 4 x 4 AND 6 x 6 POSTS TO BE INSTALLED WITH 700 LB CAPACITY UPLIFT CONNECTORS TOP AND BOTTOM (UNO). POSTS MAY BE SECURED USING ONE SIMPSON H6 OR L7S12 UPLIFT CONNECTOR FASTENED TO THE BAND AT THE BOTTOM AND THE BEAM AT THE TOP OF EACH POST. ONE 16" SECTION OF SIMPSON CS16 COIL STRAPPING WITH (8) 8d HDG NAILS AT EACH END MAY BE USED IN LIEU OF EACH TWIST STRAP IF DESIRED. FOR MASONRY OR CONCRETE FOUNDATION USE SIMPSON POST BASE.

**J.S. THOMPSON  
ENGINEERING, INC**  
333 EAST SIX FORKS ROAD, SUITE 180, RALEIGH, NC 27609  
PHONE: (919) 789-9919 FAX: (919) 789-9921  
N.C. LICENSE NO.: C-1733

STANDARD STRUCTURAL NOTES

DATE: AUGUST 30, 2022

DRAWN BY: JST

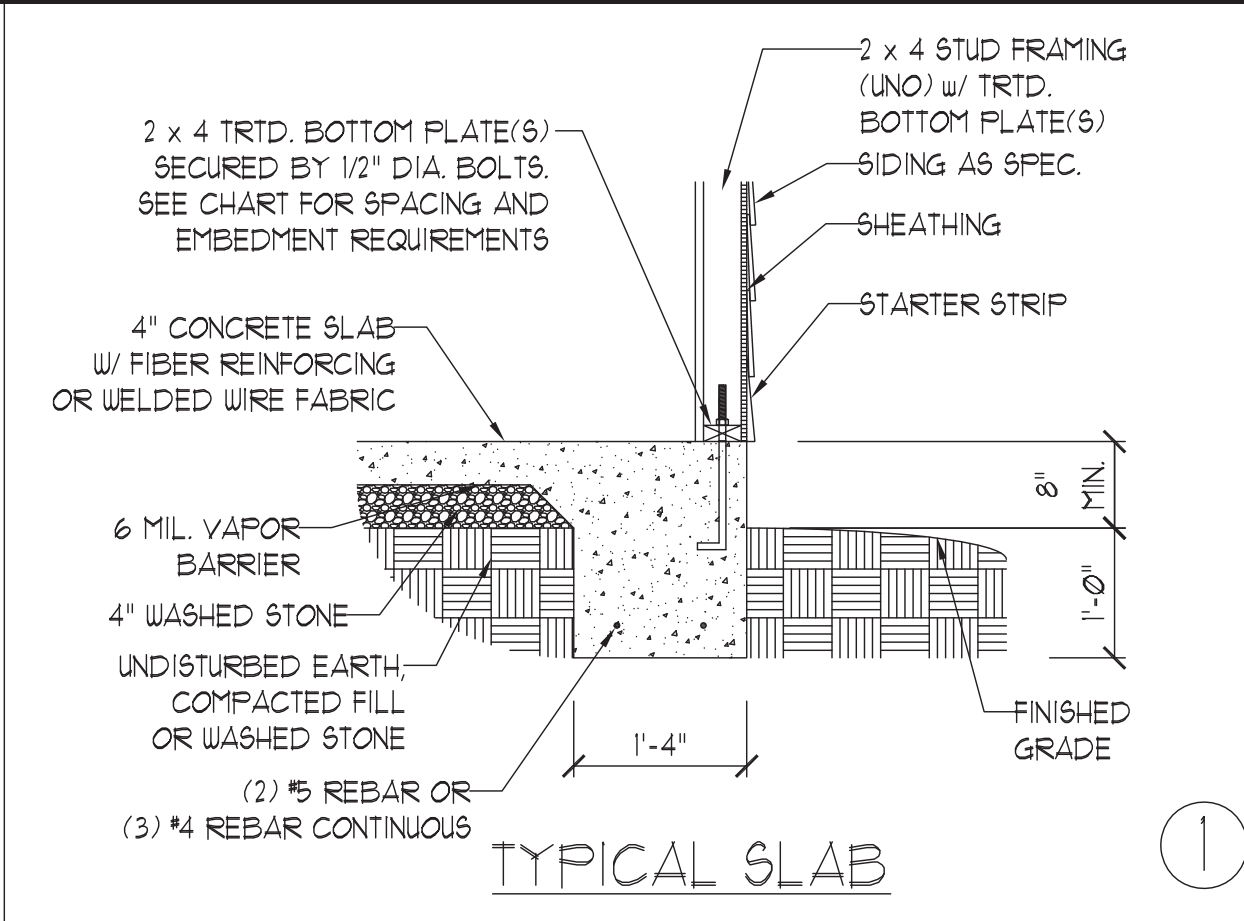
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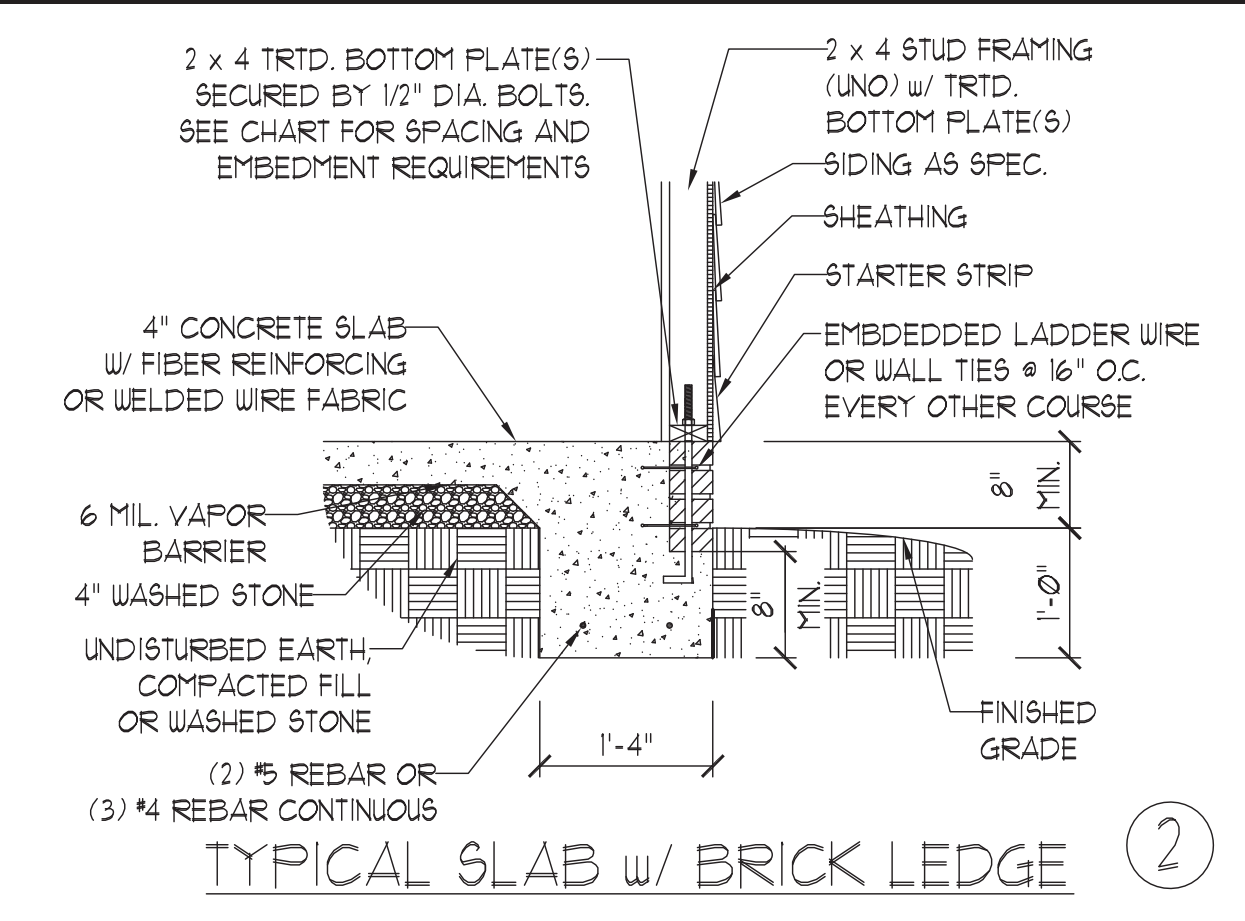
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STRUCTURAL  
NOTES

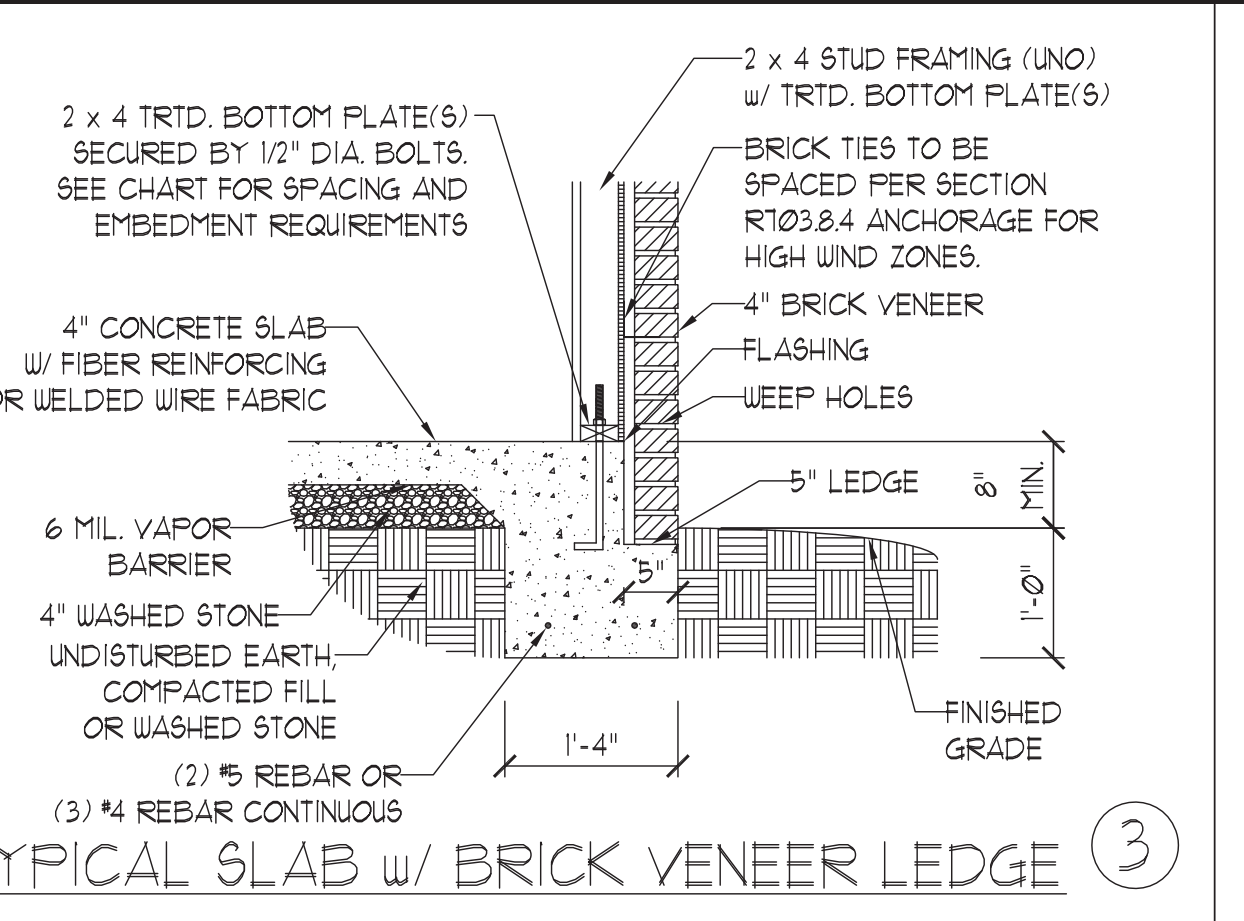




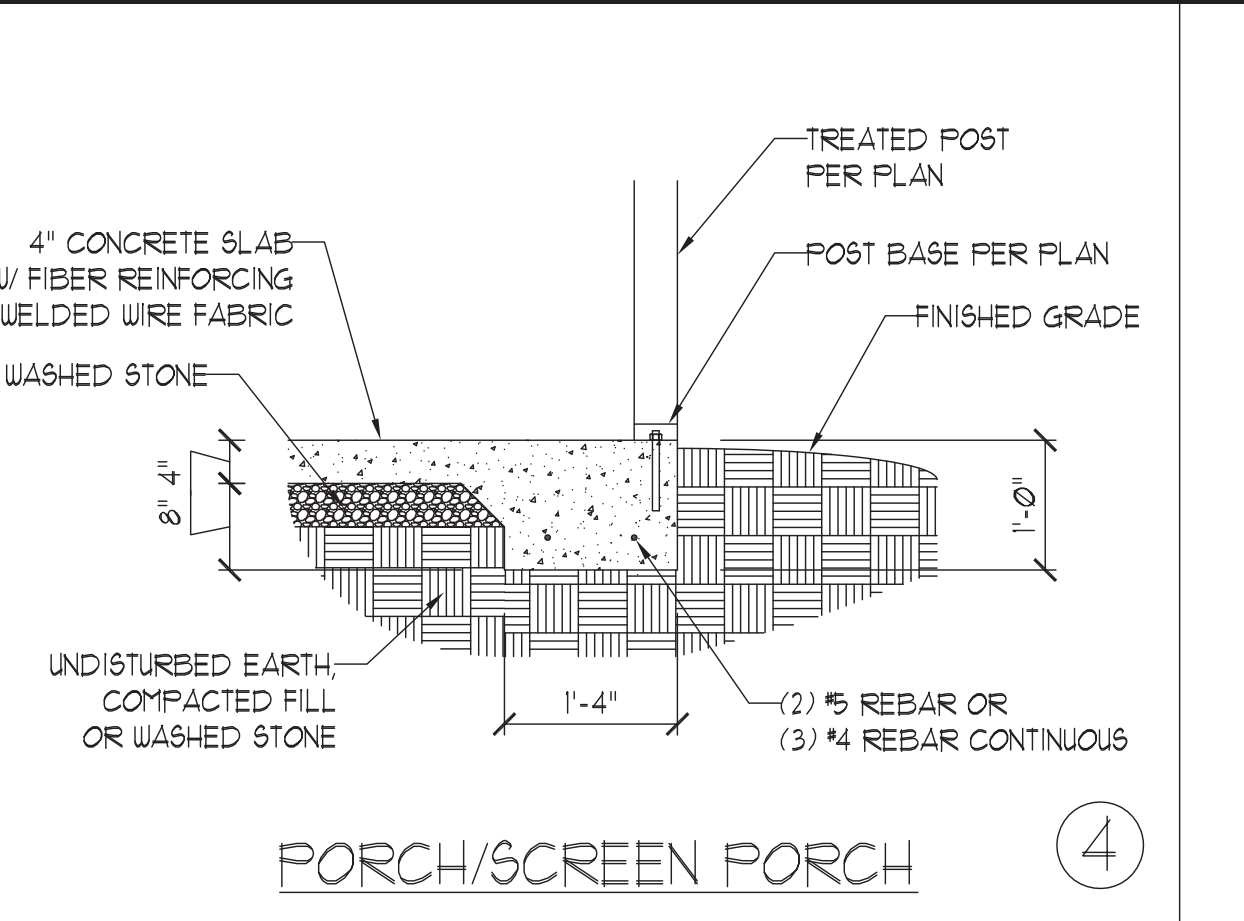
TYPICAL SLAB ①



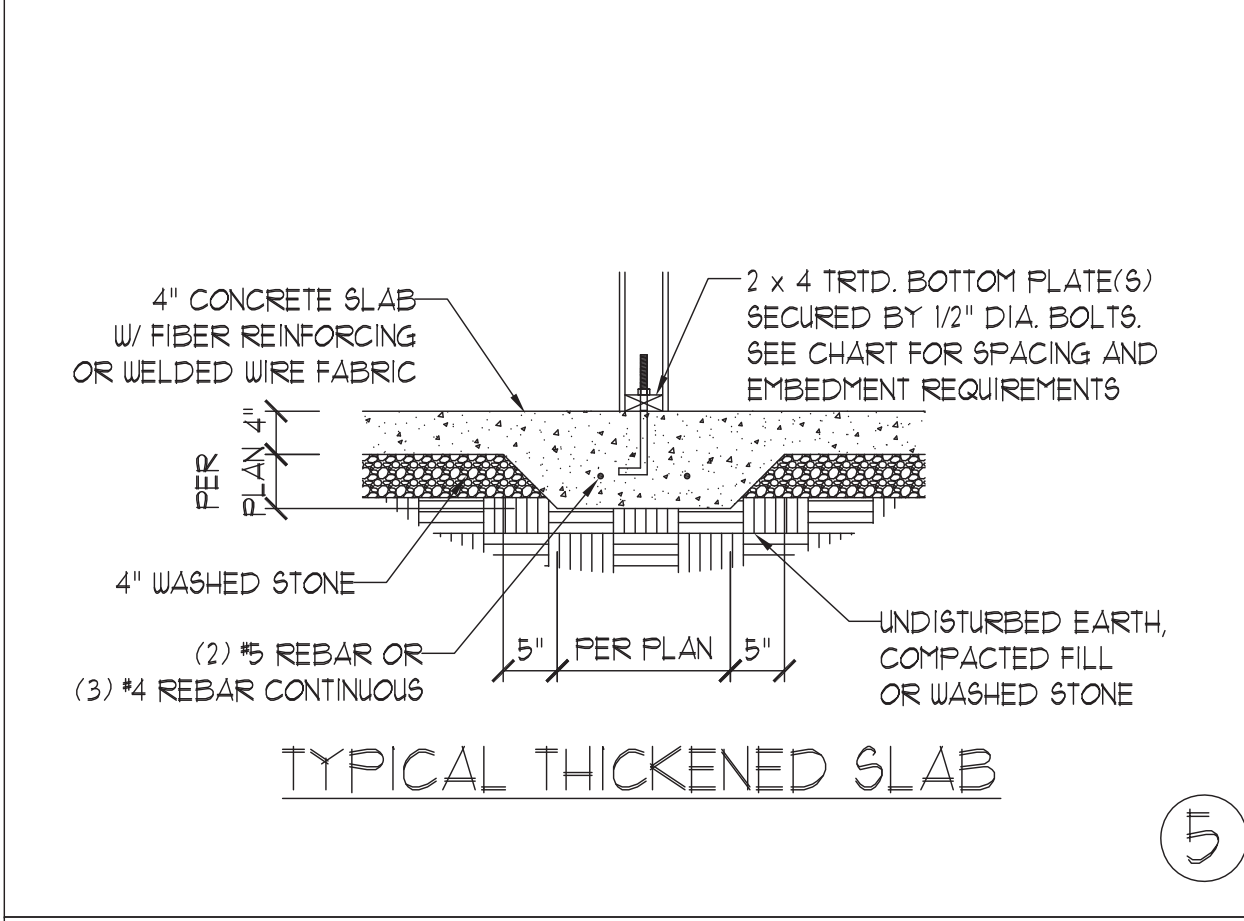
TYPICAL SLAB w/ BRICK LEDGE ②



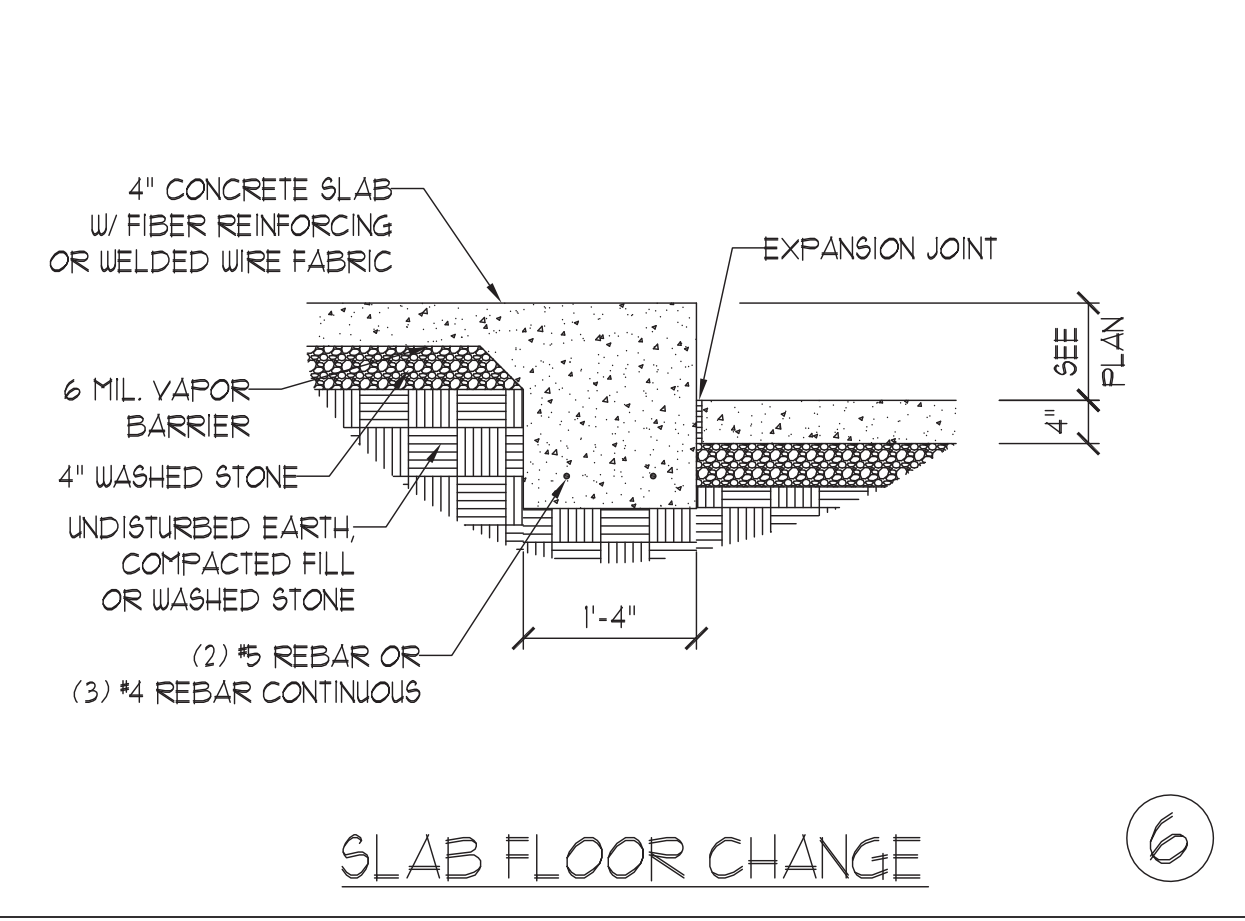
TYPICAL SLAB w/ BRICK VENEER LEDGE ③



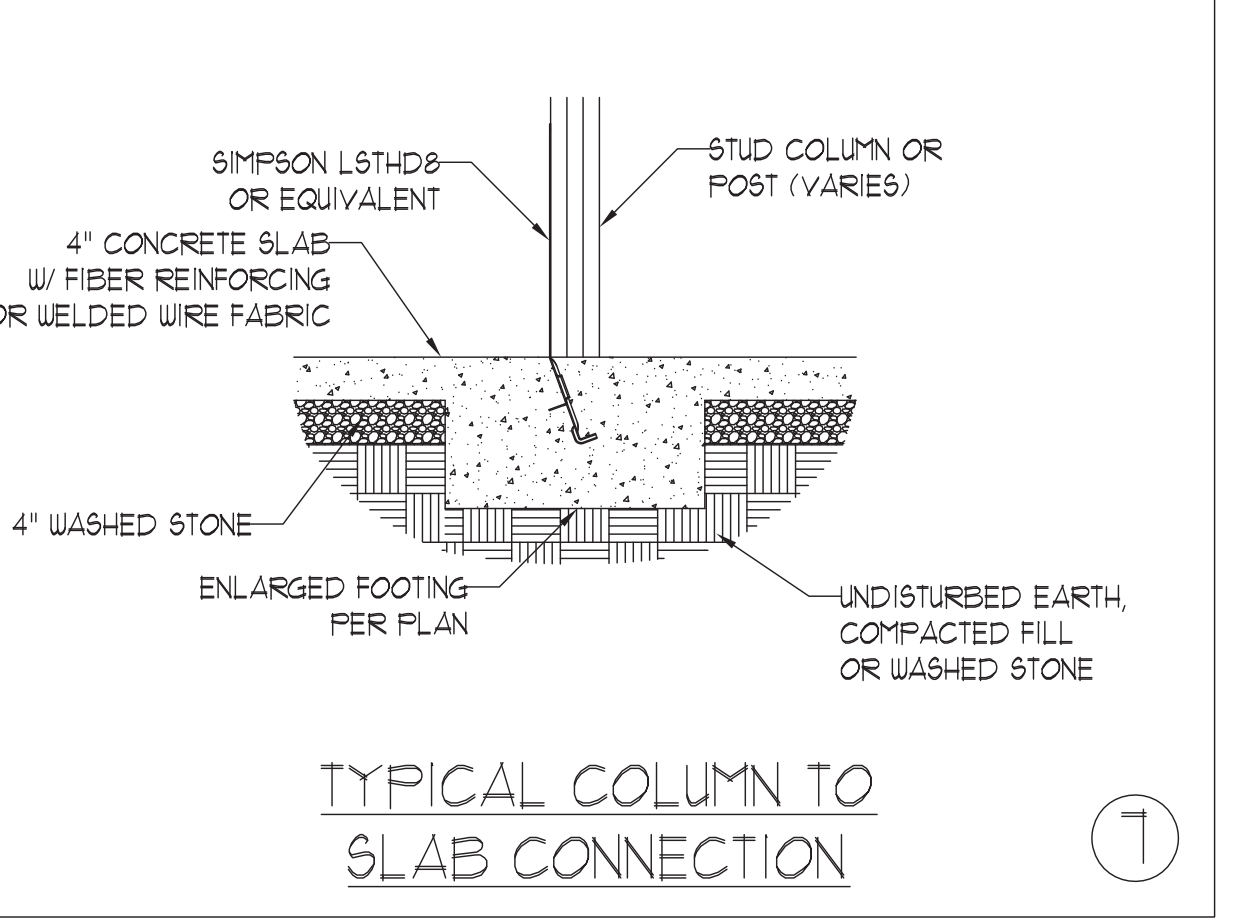
PORCH/SCREEN PORCH ④



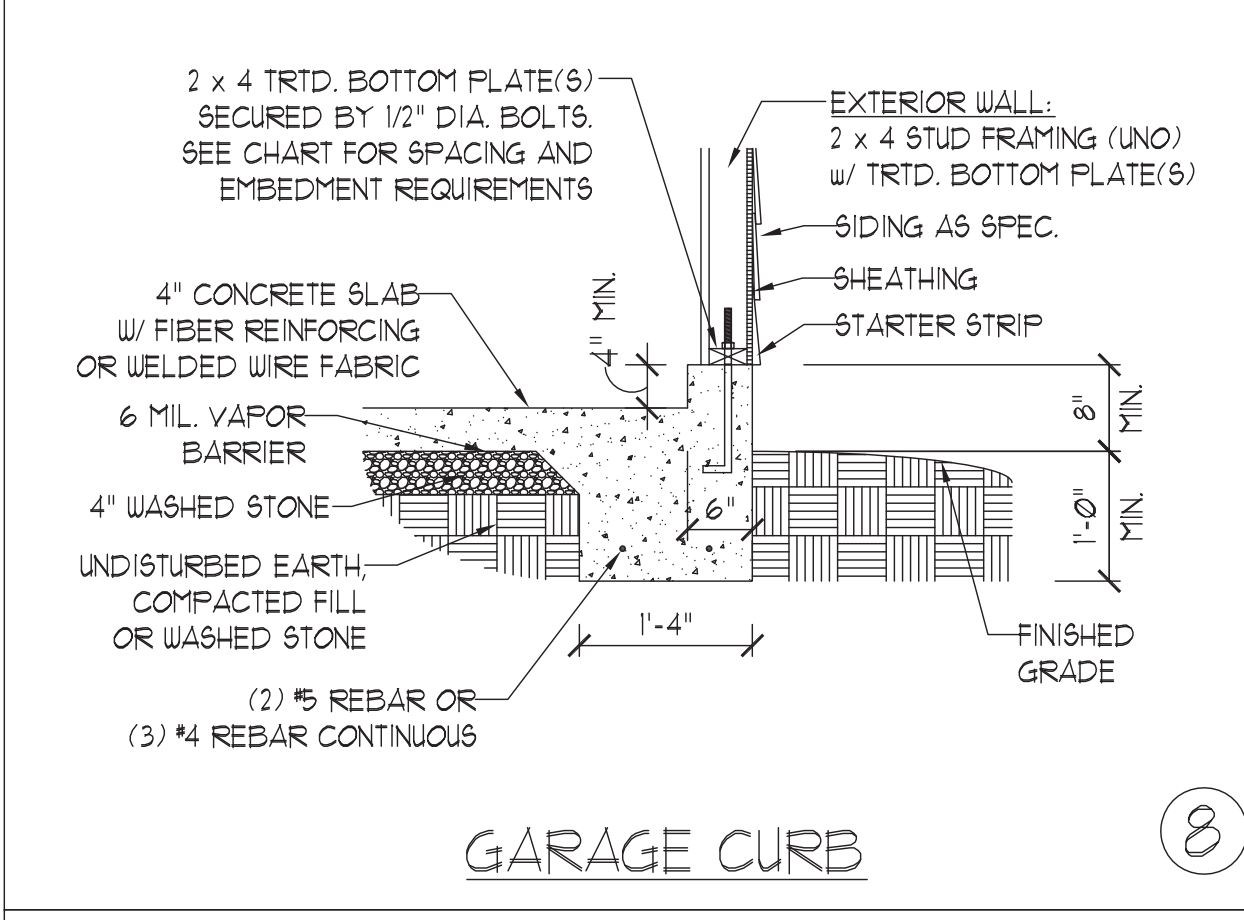
TYPICAL THICKENED SLAB ⑤



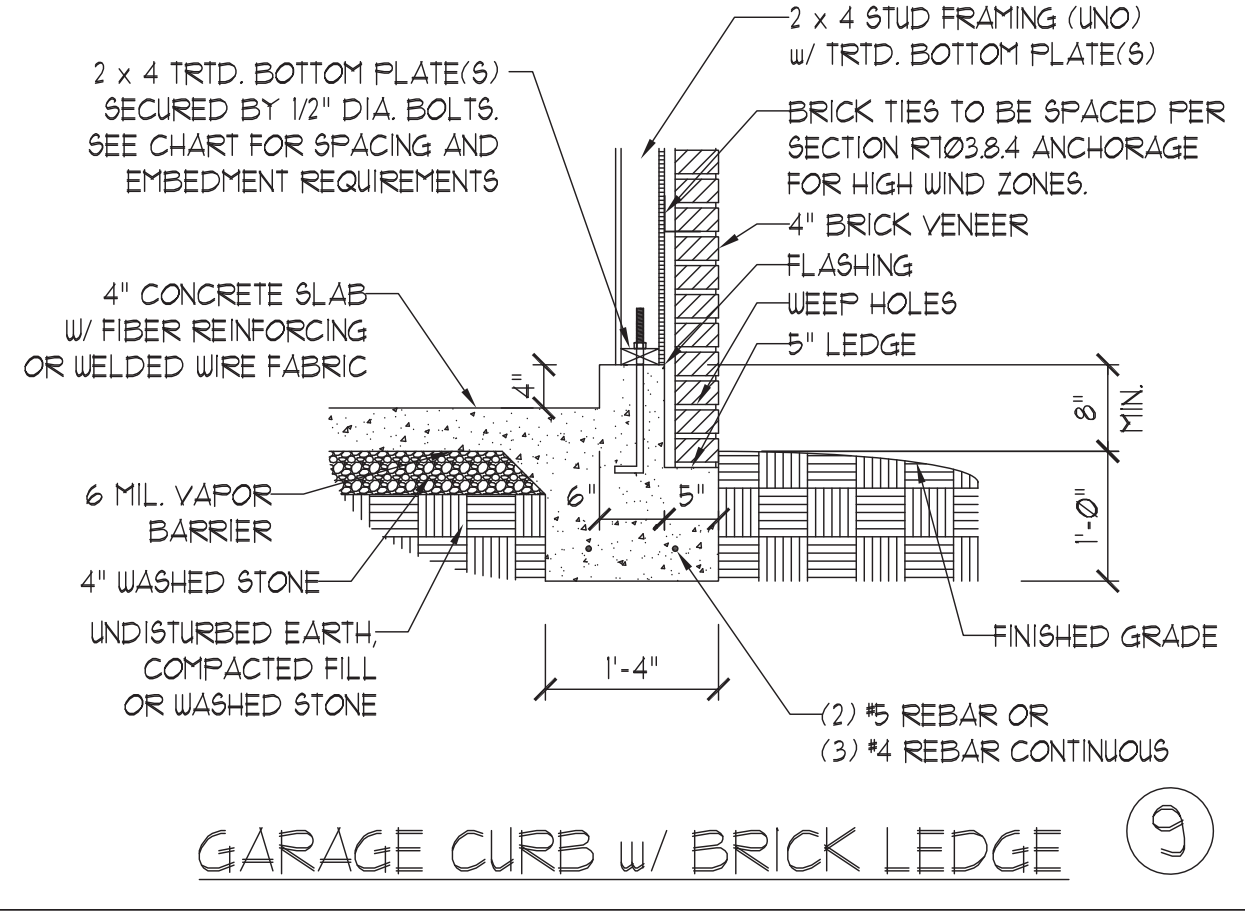
SLAB FLOOR CHANGE ⑥



TYPICAL COLUMN TO SLAB CONNECTION ⑦

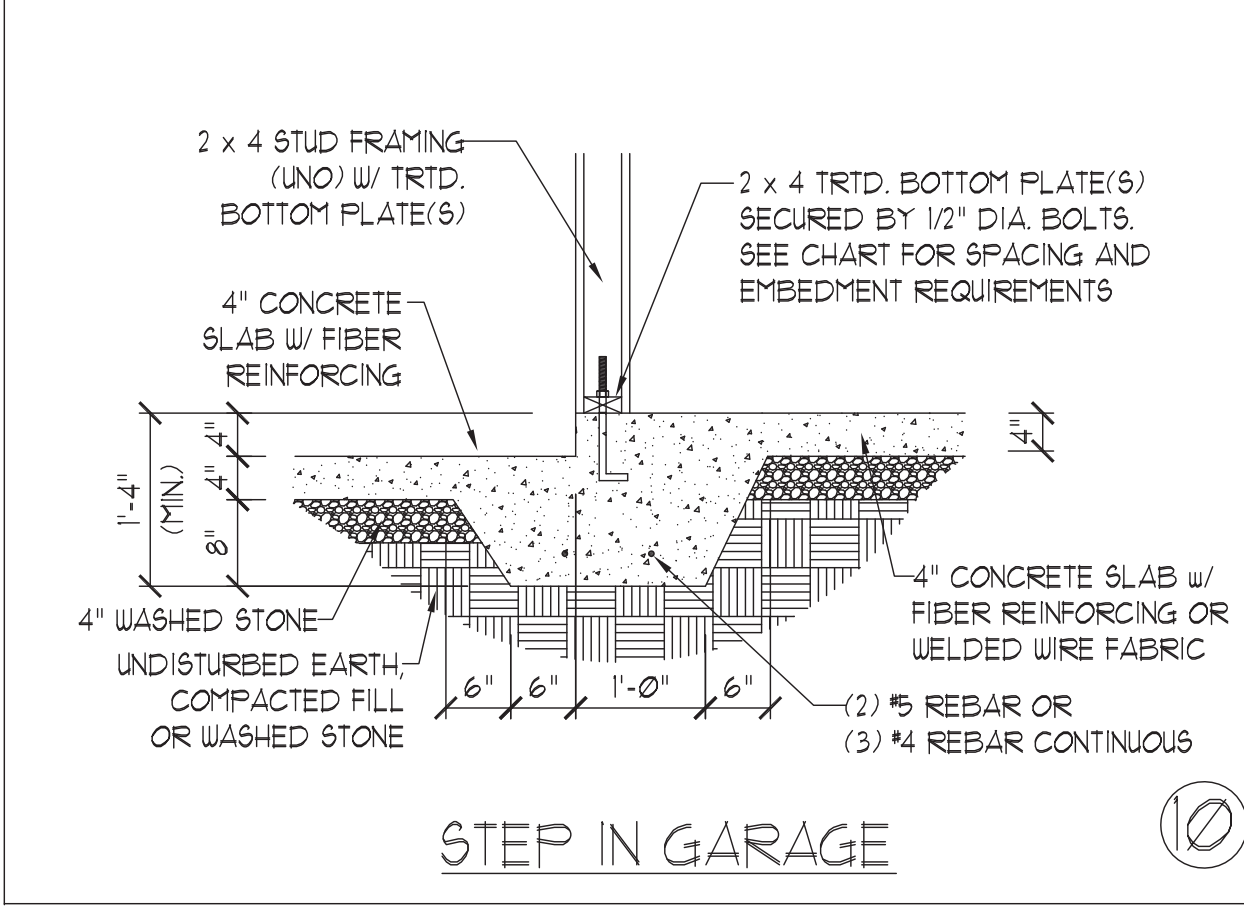


GARAGE CURB ⑧

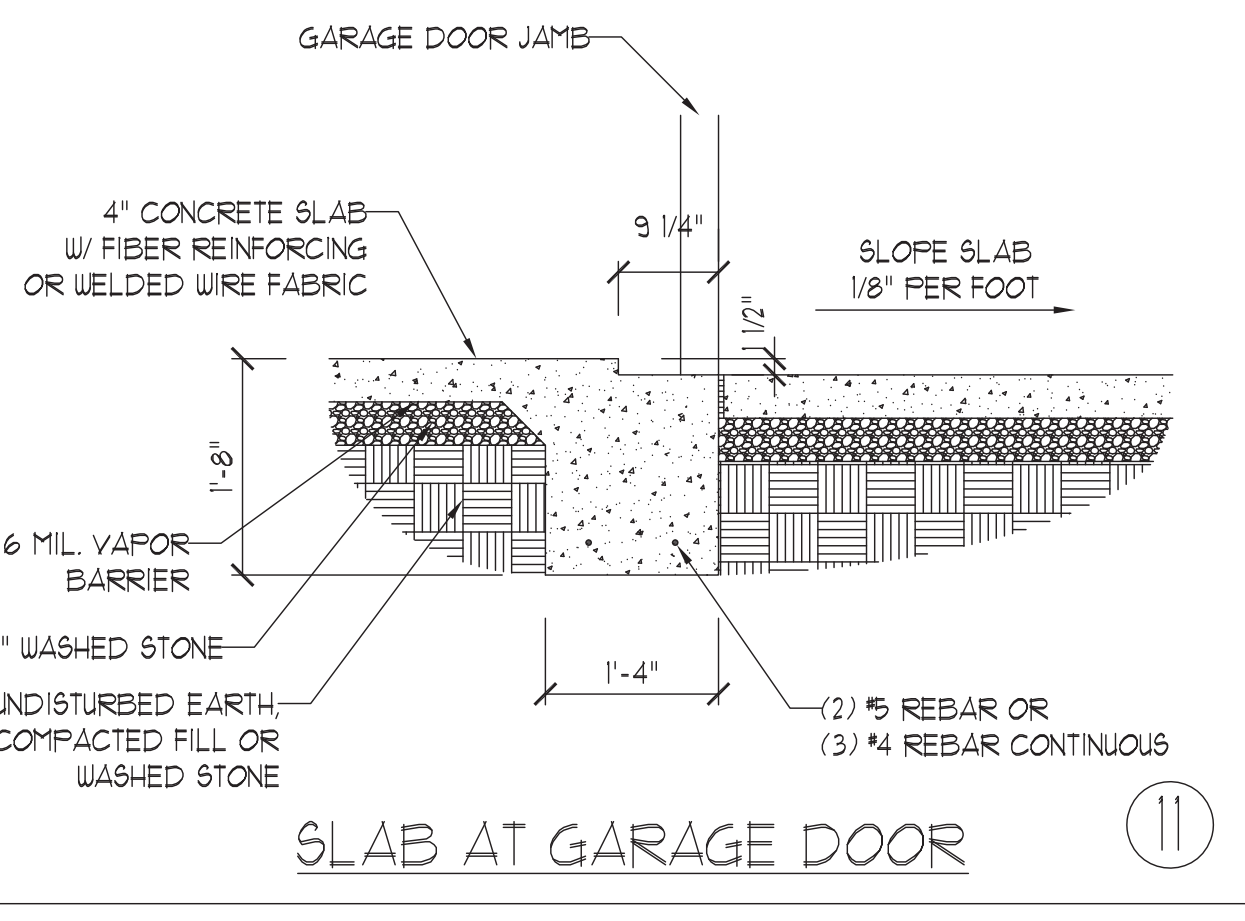


GARAGE CURB w/ BRICK LEDGE ⑨

NOTE:  
LOCATE REBAR 3" ABOVE BOTTOM OF FOOTING w/ MIN. 25" LAP SPLICE LENGTH.



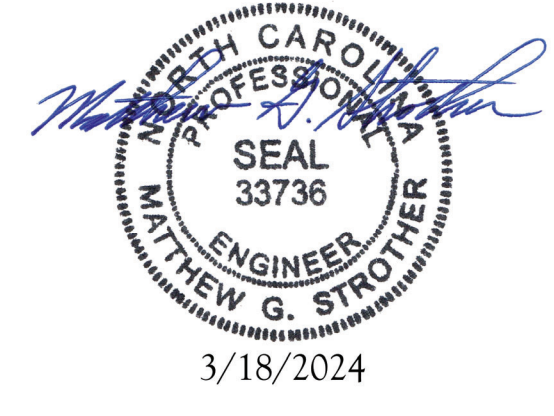
STEP IN GARAGE ⑩



SLAB AT GARAGE DOOR ⑪

ANCHOR SPACING AND EMBEDMENT		
WIND ZONE	140 MPH	150 MPH
SPACING	6'-0" O.C. w/ DBL. SILL PLATE OR 1'-9" O.C. w/ SINGLE SILL PLATE w/ 2" x 2" x 1/8" WASHERS INSTALL MIN. (2) ANCHORS PER PLATE SECTION AND (1) ANCHOR WITHIN 12" OF CORNERS	6'-0" O.C. w/ DBL. SILL PLATE OR 1'-6" O.C. w/ SINGLE SILL PLATE w/ 2" x 2" x 1/8" WASHERS INSTALL MIN. (2) ANCHORS PER PLATE SECTION AND (1) ANCHOR WITHIN 12" OF CORNERS
EMBEDMENT	7"	7"

NOTE:  
THREADED ROD WITH EPOXY, SIMPSON TITEN HD, OR APPROVED ANCHORS SPACED AS REQUIRED TO PROVIDE EQUIVALENT ANCHORAGE TO 1/2" DIAMETER ANCHOR BOLTS MAY BE USED IN LIEU OF 1/2" ANCHOR BOLTS.



**J.S. THOMPSON ENGINEERING, INC.**  
333 EAST SIX FORKS ROAD, SUITE 180 RALEIGH, NC 27609  
PHONE: (919) 789-9919 FAX: (919) 789-9921  
N.C. LICENSE NO.: C-1733

140 MPH - 150 MPH ULTIMATE DESIGN WIND SPEED  
MONOLITHIC SLAB FOUNDATION DETAILS

DATE: AUGUST 30, 2022  
SCALE: NTS  
DRAWN BY: JST  
ENGINEERED BY: JST

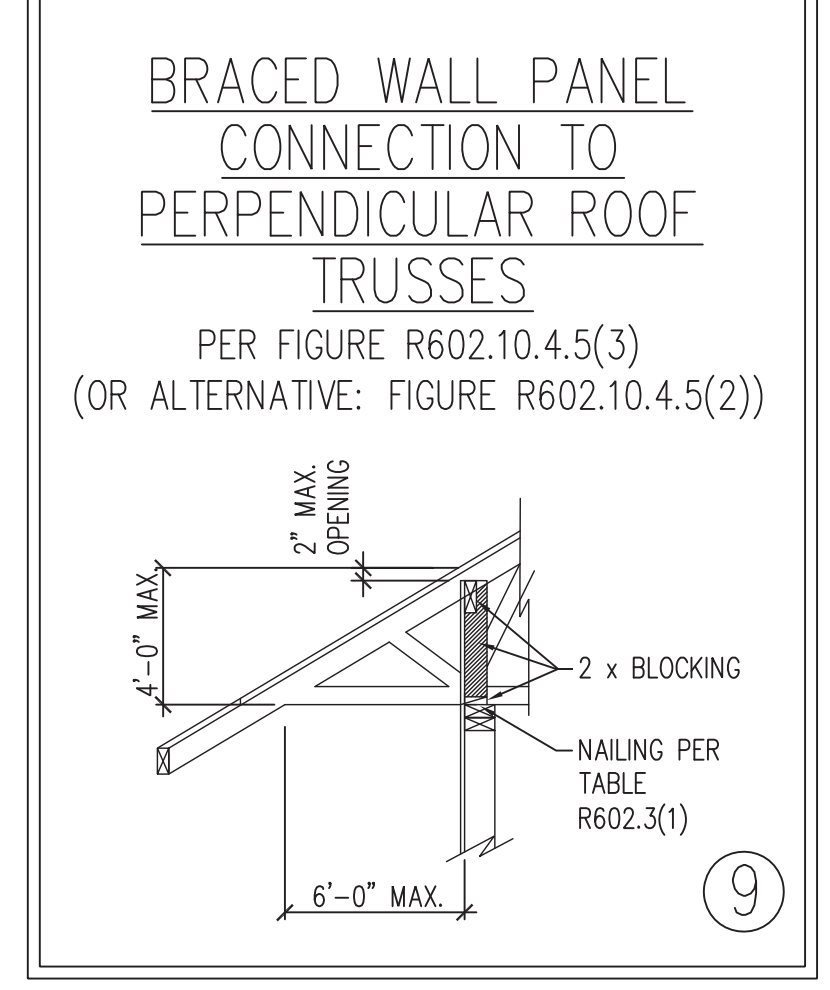
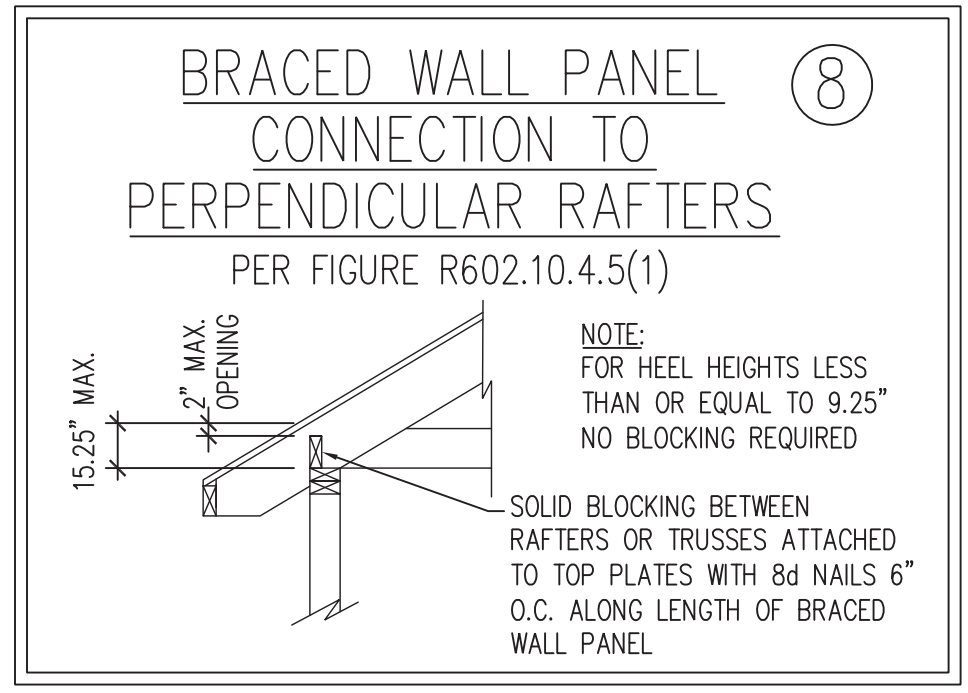
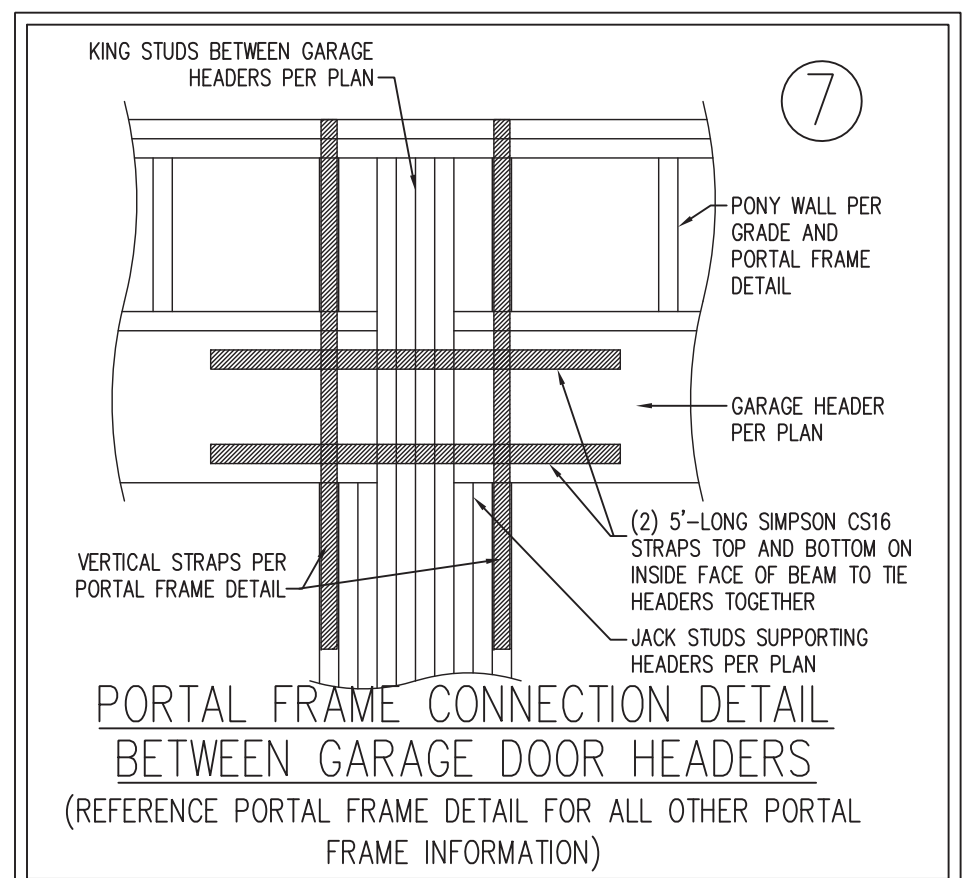
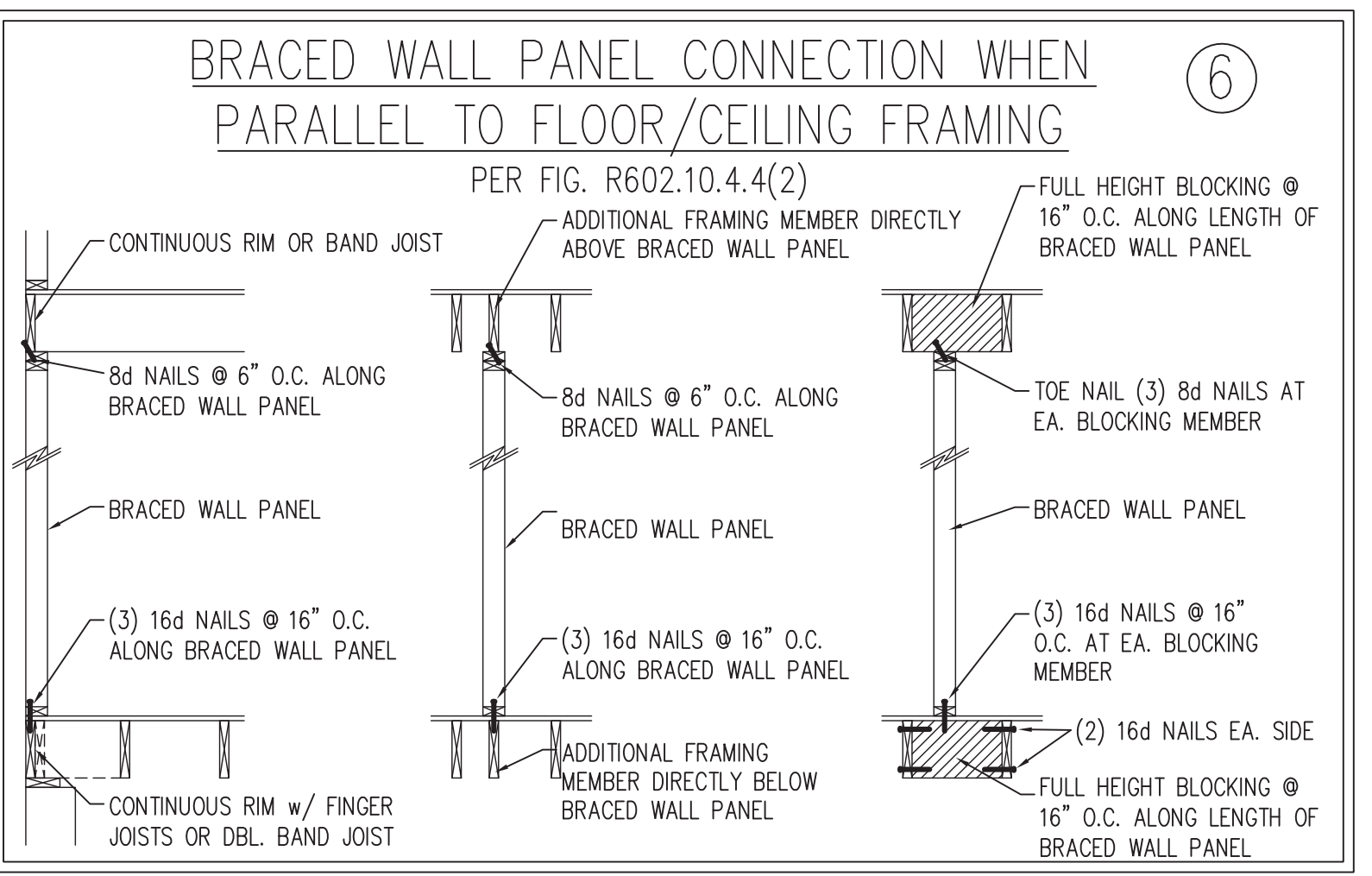
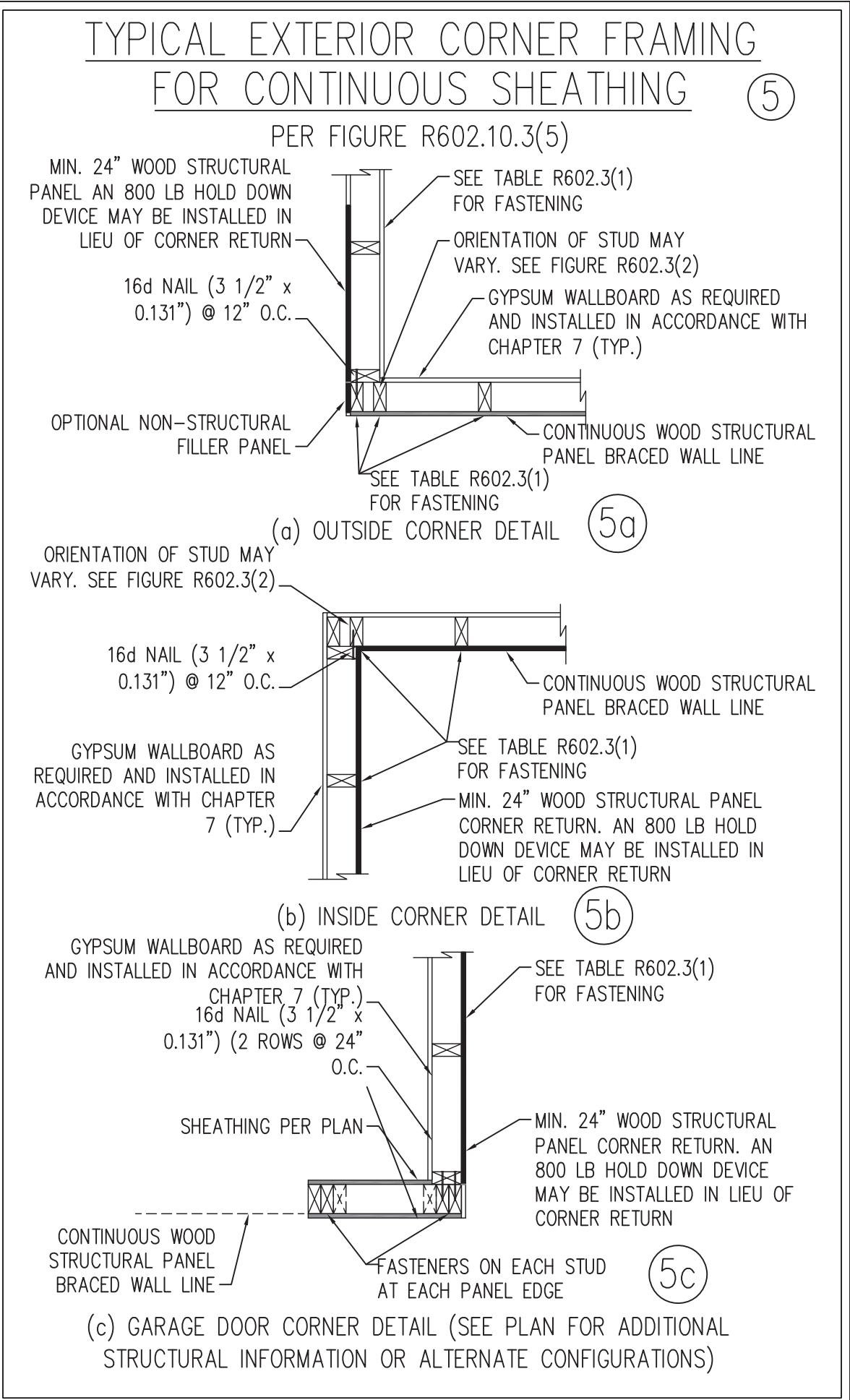
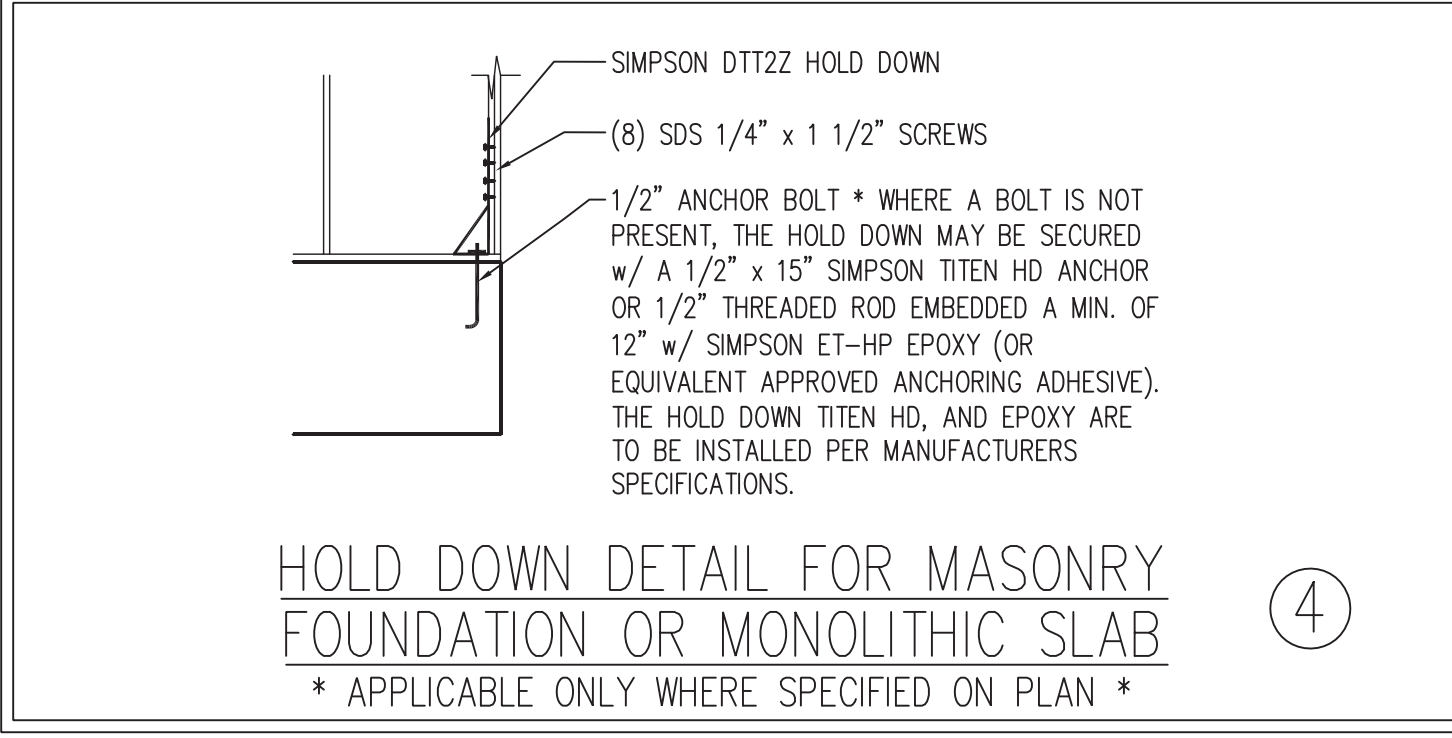
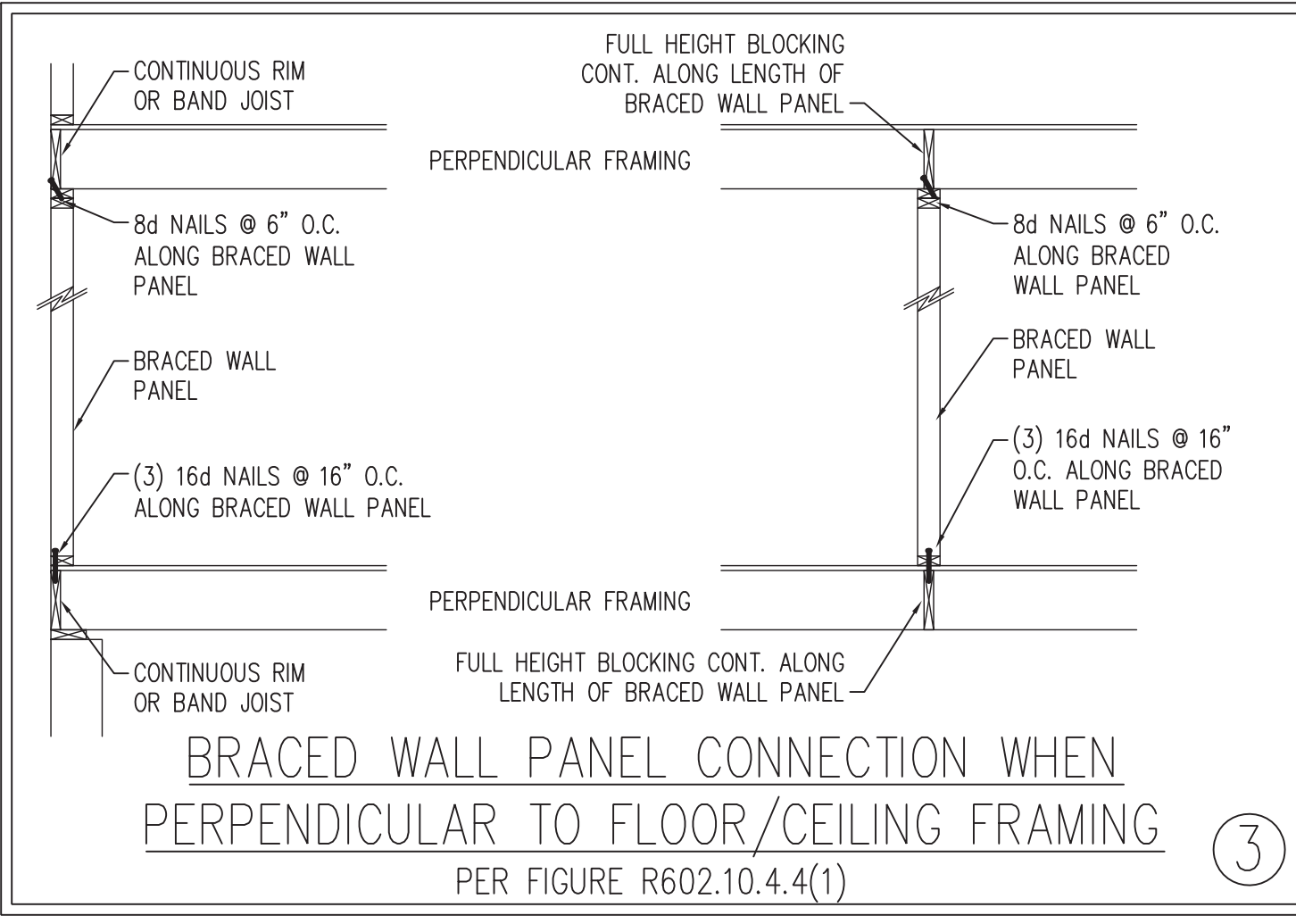
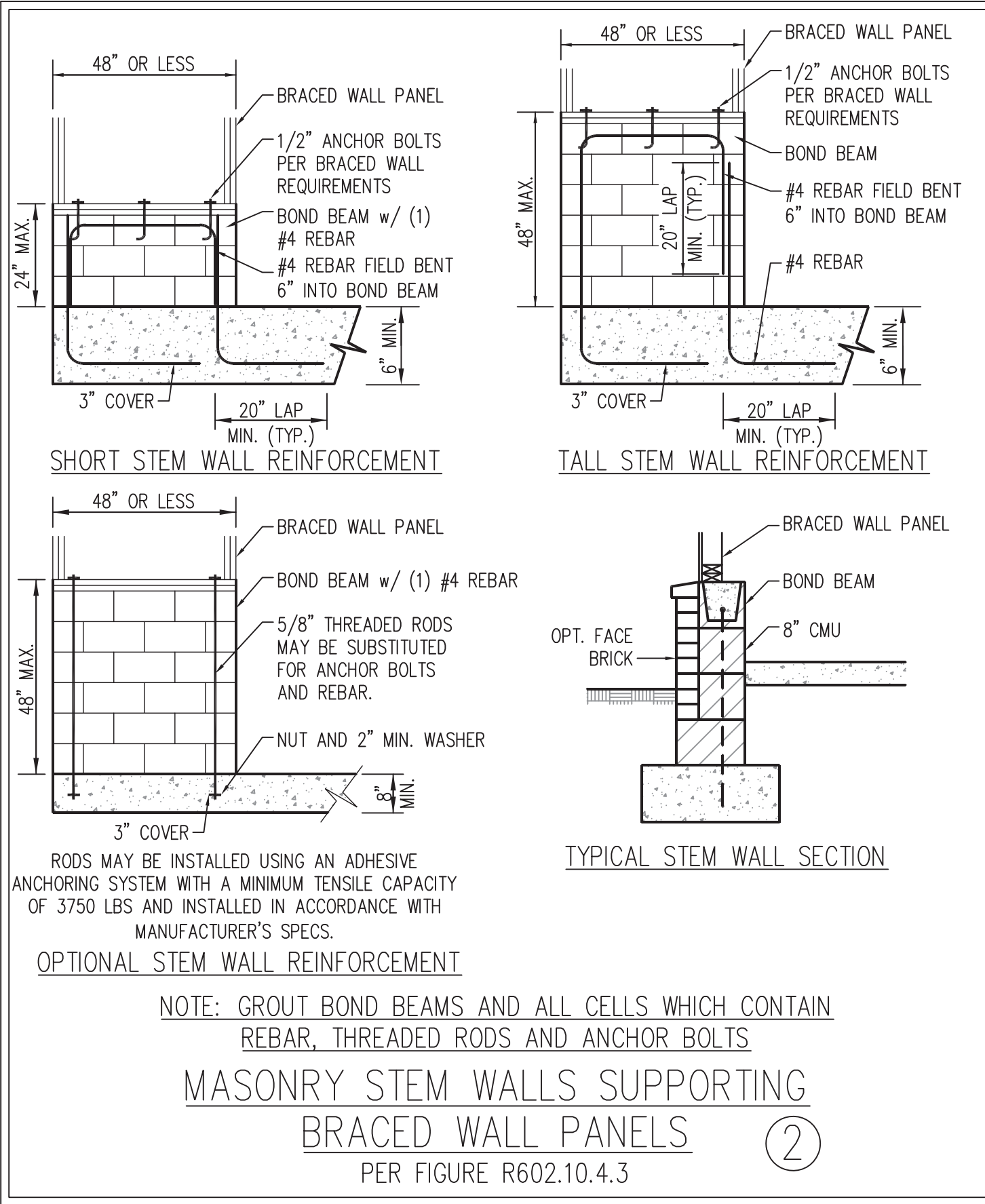
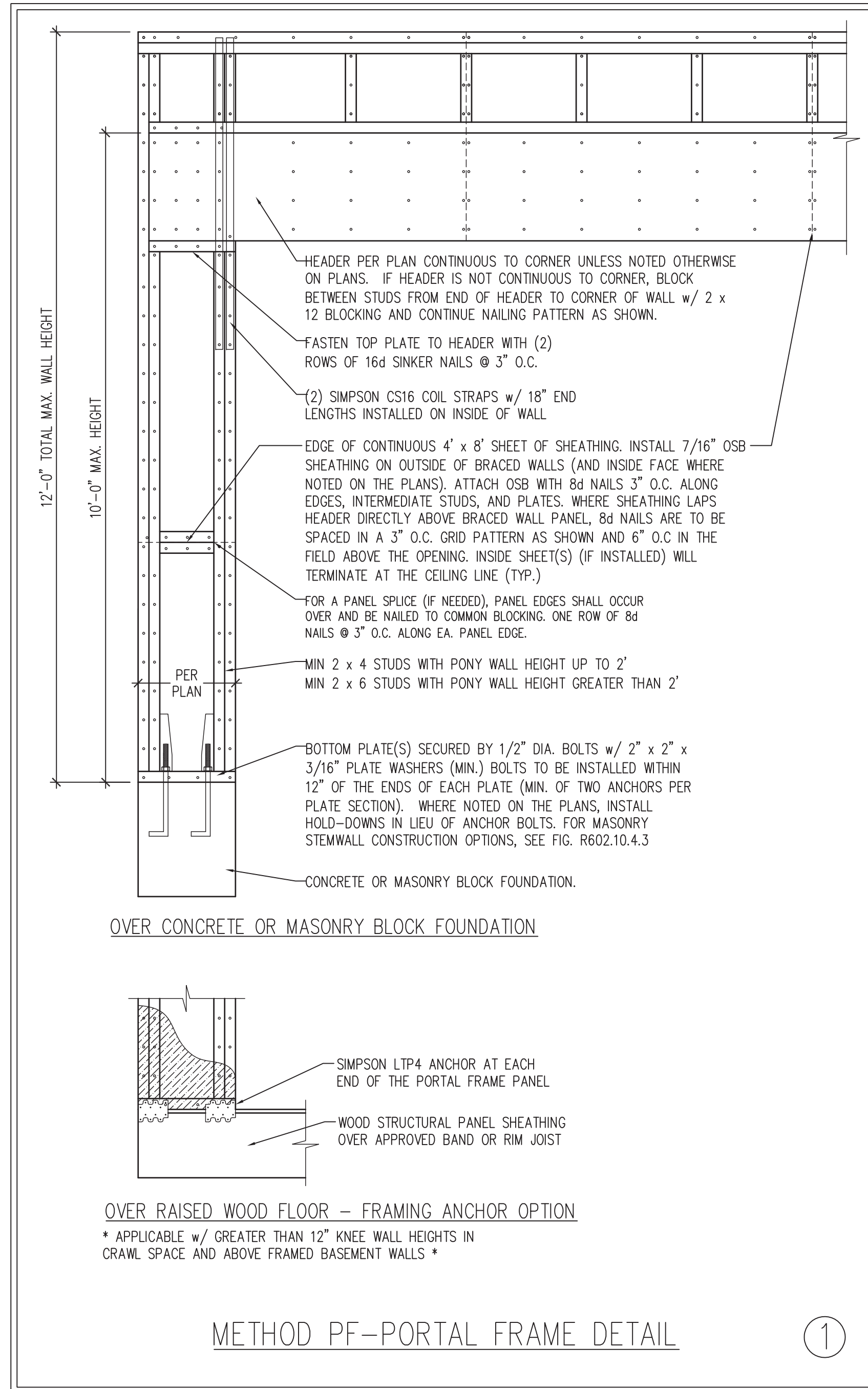
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FOUNDATION DETAILS



**GENERAL WALL BRACING NOTES:**

1. WALL BRACING DESIGNED IN ACCORDANCE WITH CHAPTER 6 AND CHAPTER 45 OF THE 2018 NC RESIDENTIAL BUILDING CODE (NRC). TABLES AND FIGURES REFERENCED ARE FROM THE 2018 NRC.
2. SEE THIS SHEET FOR GENERAL DETAILS. REFER TO THE 2018 NRC FOR ADDITIONAL INFORMATION AS NEEDED.
3. SEE STRUCTURAL SHEETS FOR BRACED WALL LOCATIONS, DIMENSIONS, HOLD DOWN TYPE AND LOCATIONS, AND ANY SPECIAL NOTES OR REQUIREMENTS.
4. ALL EXTERIOR WALLS ARE TO BE SHEATHED WITH 7/16" OSB WITH BLOCKING AT ALL SHEATHING JOINTS AND 8d NAILS AT 3" O.C. ALONG EDGES AND 6" O.C. IN THE FIELD UNLESS NOTED OTHERWISE.
5. SECURE ALL EXTERIOR WALL SHEATHING PANELS TO DOUBLE TOP PLATES, BAND JOISTS, AND ORDERS WITH (2) ROWS OF 8d NAILS STAGGERED AT 3" O.C. PANELS SHALL EXTEND 12" BEYOND CONSTRUCTION JOINTS AND SHALL OVERLAP GIRDERS AND SILL PLATES THEIR FULL DEPTH.
6. ALL EXTERIOR WALLS TO BE SHEATHED ON INSIDE FACE WITH 1/2" GYPSUM BOARD PER TABLE R702.3.5 (UNO).



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**J.S. THOMPSON ENGINEERING, INC.**  
333 EAST SIX FORKS ROAD, SUITE 180, RALEIGH, NC 27609  
PHONE: (919) 789-9919 FAX: (919) 789-9921  
N.C. LICENSE NO.: C-17133

140 MPH - 150 MPH ULTIMATE DESIGN WIND SPEED  
WALL BRACING NOTES AND DETAILS

DATE: AUGUST 30, 2022  
SCALE: NTS  
DRAWN BY: JST  
ENGINEERED BY: JST

D-2  
BRACED WALL NOTES AND DETAILS AND PF DETAIL



GENERAL NOTES

- ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS INCLUDING ROOF RAFTERS, HIPES, VALLEYS, RIDGES, FLOORS, WALLS, BEAMS, HEADERS, COLUMNS, CANTILEVERS, OFFSET LOAD BEARING WALLS, PIERS, GIRDER SYSTEM AND FOOTING. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OF ARCHITECTURAL LAYOUT INCLUDING ROOF. ENGINEER'S SEAL DOES NOT APPLY TO I-JOIST OR FLOOR/ROOF TRUSS LAYOUT DESIGN AND ACCURACY.
- ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE NORTH CAROLINA RESIDENTIAL CODE (NRC), 2018 EDITION, PLUS ALL LOCAL CODES AND REGULATIONS. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR, AND WILL NOT HAVE CONTROL OF, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE CONSTRUCTION WORK. NOR WILL THE ENGINEER BE RESPONSIBLE FOR THE CONTRACTORS FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- STRUCTURAL DESIGN BASED ON THE PROVISIONS OF THE NRC, 2018 EDITION (R301.4 - R301.7)

DESIGN CRITERIA:	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION (IN)
ATTIC WITH LIMITED STORAGE	20	10	L/240 (L/360 w/ BRITTLE FINISHES)
ATTIC WITHOUT STORAGE	10	10	L/360
DECKS	40	10	L/360
EXTERIOR BALCONIES	40	10	L/360
FIRE ESCAPES	40	10	L/360
HANDRAILS/GUARDRAILS	200	10	L/360
PASSENGER VEHICLE GARAGE	50	10	L/360
ROOMS OTHER THAN SLEEPING ROOM	40	10	L/360
SLEEPING ROOMS	30	10	L/360
STAIRS	40	10	L/360
WIND LOAD	(BASED ON TABLE R301.2(4) WIND ZONE AND EXPOSURE)		
GROUND SNOW LOAD: Pg	20 (PSF)		

- I-JOIST SYSTEMS DESIGNED WITH 12 PSF DEAD LOAD AND DEFLECTION (IN) OF L/480
- FLOOR TRUSS SYSTEMS DESIGNED WITH 15 PSF DEAD LOAD

- FOR 115 AND 120 MPH WIND ZONES, FOUNDATION ANCHORAGE IS TO COMPLY WITH SECTION R403.1.6 OF THE NRC, 2018 EDITION. FOR 130 MPH, 140 MPH, AND 150 MPH WIND ZONES, FOUNDATION ANCHORAGE IS TO COMPLY WITH SECTION 4504 OF THE NRC, 2018 EDITION.
- ENERGY EFFICIENCY COMPLIANCE AND INSULATION VALUES OF THE BUILDING TO BE IN ACCORDANCE WITH CHAPTER 11 OF THE NRC, 2018 EDITION.

FOOTING AND FOUNDATION NOTES

- FOUNDATION DESIGN BASED ON A MINIMUM ALLOWABLE BEARING CAPACITY OF 2000 PSF. CONTACT GEOTECHNICAL ENGINEER IF BEARING CAPACITY IS NOT ACHIEVED.
- FOR ALL CONCRETE SLABS AND FOOTINGS, THE AREA WITHIN THE PERIMETER OF THE BUILDING ENVELOPE SHALL HAVE ALL VEGETATION, TOP SOIL AND FOREIGN MATERIAL REMOVED. FILL MATERIAL SHALL BE FREE OF VEGETATION AND FOREIGN MATERIAL. THE FILL SHALL BE COMPACTED TO ASSURE UNIFORM SUPPORT OF THE SLAB, AND EXCEPT WHERE APPROVED, THE FILL DEPTHS SHALL NOT EXCEED 24" FOR CLEAN SAND OR GRAVEL. A 4" THICK BASED COURSE CONSISTING OF CLEAN GRADED SAND OR GRAVEL SHALL BE PLACED. A BASE COURSE IS NOT REQUIRED WHERE A CONCRETE SLAB IS INSTALLED ON WELL-DRAINED OR SAND-GRAVEL MIXTURE SOILS CLASSIFIED AS GROUP 1, ACCORDING TO THE UNITED SOIL CLASSIFICATION SYSTEM IN ACCORDANCE WITH TABLE R405.1 OF THE NRC, 2018 EDITION.
- PROPERLY DEWATER EXCAVATION PRIOR TO POURING CONCRETE WHEN BOTTOM OF CONCRETE SLAB IS AT OR BELOW WATER TABLE. IF APPLICABLE, 3/4" - 1" DEEP CONTROL JOINTS ARE TO BE SAWS WITHIN 4 TO 12 HOURS OF CONCRETE FINISHING AND WALL LOCATIONS HAVE BEEN MARKED. ADJUST WHERE NECESSARY.
- CONCRETE SHALL CONFORM TO SECTION R402.2 OF THE NRC, 2018 EDITION. CONCRETE REINFORCING STEEL TO BE ASTM A615 GRADE 60. WELDED WIRE FABRIC TO BE ASTM A185. MAINTAIN A MINIMUM CONCRETE COVER AROUND REINFORCING STEEL OF 3" IN FOOTINGS AND 1 1/2" IN SLABS. FOR POURED CONCRETE WALLS, CONCRETE COVER FOR REINFORCING STEEL MEASURED FROM THE INSIDE FACE OF THE WALL SHALL NOT BE LESS THAN 3/4". CONCRETE COVER FOR REINFORCING STEEL MEASURED FROM THE OUTSIDE FACE OF THE WALL SHALL NOT BE LESS THAN 1 1/2" FOR #5 BARS OR SMALLER, AND NOT LESS THAN 2" FOR #6 BARS OR LARGER.
- MASONRY UNITS TO CONFORM TO ACE 530/ASCE 5/TMS 402. MORTAR SHALL CONFORM TO ASTM C270.
- THE UNSUPPORTED HEIGHT OF MASONRY PIERS SHALL NOT EXCEED FOUR TIMES THEIR LEAST DIMENSION FOR UNFILLED HOLLOW CONCRETE MASONRY UNITS AND TEN TIMES THEIR LEAST DIMENSION FOR SOLID OR SOLID FILLED PIERS. PIERS MAY BE FILLED SOLID WITH CONCRETE OR TYPE M OR S MORTAR. PIERS AND WALLS SHALL BE CAPPED WITH 8" OF SOLID MASONRY.
- THE CENTER OF EACH OF THE PIERS SHALL BEAR IN THE MIDDLE THIRD OF ITS RESPECTIVE FOOTING. EACH GIRDER SHALL BEAR IN THE MIDDLE THIRD OF THE PIERS.
- ALL CONCRETE AND MASONRY FOUNDATION WALLS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF SECTION R404 OF THE NRC, 2018 EDITION OR IN ACCORDANCE WITH ACI 318, ACI 332, NCMA TR68-A OR ACE 530/ASCE 5/TMS 402. MASONRY FOUNDATION WALLS ARE TO BE REINFORCED PER TABLE R404.1.1(1), R404.1.1(2), R404.1.1(3), OR R404.1.1(4) OF THE NRC, 2018 EDITION. CONCRETE FOUNDATION WALLS ARE TO BE REINFORCED PER TABLE R404.1.1(5) OF THE NRC, 2018 EDITION. STEP CONCRETE FOUNDATION WALLS TO 2 x 6 FRAMED WALLS AT 16" O.C. WHERE GRADE PERMITS (UNO).

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FRAMING NOTES

- ALL FRAMING LUMBER SHALL BE #2 SPF MINIMUM (Fb = 875 PSI, Fv = 375 PSI, E = 1600000 PSI) UNLESS NOTED OTHERWISE (UNO). ALL TREATED LUMBER SHALL BE #2 SYP MINIMUM (Fb = 975 PSI, Fv = 175 PSI, E = 1600000 PSI) UNLESS NOTED OTHERWISE (UNO).
- LAMINATED VENEER LUMBER (LVL) SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: Fb = 2600 PSI, Fv = 285 PSI, E = 1900000 PSI. LAMINATED STRAND LUMBER (LSL) SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: Fb = 2325 PSI, Fv = 310 PSI, E = 1550000 PSI. PARALLEL STRAND LUMBER (PSL) UP TO 7" DEPTH SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: Fc = 2500 PSI, E = 1800000 PSI. PARALLEL STRAND LUMBER (PSL) MORE THAN 7" DEPTH SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: Fc = 2900 PSI, E = 2000000 PSI. INSTALL ALL CONNECTIONS PER MANUFACTURER'S SPECIFICATIONS.
- STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS
 

A. W AND WT SHAPES:	ASTM A992
B. CHANNELS AND ANGLES:	ASTM A36
C. PLATES AND BARS:	ASTM A36
D. HOLLOW STRUCTURAL SECTIONS:	ASTM A500 GRADE B
E. STEEL PIPE:	ASTM A53, GRADE B, TYPE E OR S

STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3 1/2" AND FULL FLANGE WIDTH (UNO). PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED AT THE BOTTOM FLANGE TO EACH SUPPORT AS FOLLOWS (UNO):

- |                            |  |
|----------------------------|--|
| A. WOOD FRAMING            | (2) 1/2" DIA. x 4" LONG LAG SCREWS               |
| B. CONCRETE                | (2) 1/2" DIA. x 4" WEDGE ANCHORS                 |
| C. MASONRY (FULLY GROUTED) | (2) 1/2" DIA. x 4" LONG SIMPSON TITEN HD ANCHORS |
| D. STEEL PIPE COLUMN       | (4) 3/4" DIA. A325 BOLTS OR 3/16" FILLET WELD    |

LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDING THE JOISTS ARE TOE NAILED TO THE 2x NAILER ON TOP OF THE STEEL BEAM, AND THE 2x NAILER IS SECURED TO THE TOP OF THE STEEL BEAM w/ (2) ROWS OF SELF TAPPING SCREWS @ 16" O.C. OR (2) ROWS OF 1/2" DIAMETER BOLTS @ 16" O.C. IF 1/2" BOLTS ARE USED TO FASTEN THE NAILER, THE STEEL BEAM SHALL BE FABRICATED w/ (2) ROWS OF 9/16" DIAMETER HOLES @ 16" O.C.

- SQUARES DENOTE POINT LOADS WHICH REQUIRE SOLID BLOCKING TO GIRDER OR FOUNDATION. SHADED SQUARES DENOTE POINT LOADS FROM ABOVE WHICH REQUIRE SOLID BLOCKING TO SUPPORTING MEMBER BELOW.
- ALL LOAD BEARING HEADERS TO CONFORM TO TABLE R602.7(1) AND R602.7(2) OF THE NRC, 2018 EDITION OR BE (2) 2 x 6 WITH (1) JACK AND (1) KING STUD EACH END (UNO), WHICHEVER IS GREATER ALL HEADERS TO BE SECURED TO EACH JACK STUD WITH (4) 8d NAILS. ALL BEAMS TO BE SUPPORTED WITH (2) STUDS AT EACH BEARING POINT (UNO). INSTALL KING STUDS PER SECTION R602.7.5 OF THE NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.
- ALL BEAMS, HEADERS, OR GIRDER TRUSSES PARALLEL TO WALL ARE TO BEAR FULLY ON (1) JACK OR (2) STUDS MINIMUM OR THE NUMBER OF JACKS OR STUDS NOTED. ALL BEAMS OR GIRDER TRUSSES PERPENDICULAR TO WALL AND SUPPORTED BY (3) STUDS OR LESS ARE TO HAVE 1 1/2" MINIMUM BEARING (UNO). ALL BEAMS OR GIRDER TRUSSES PERPENDICULAR TO WALL AND SUPPORTED BY MORE THAN (3) STUDS OR OTHER NOTED COLUMN ARE TO BEAR FULLY ON SUPPORT COLUMN FOR ENTIRE WALL DEPTH (UNO). BEAM ENDS THAT BUTT INTO ONE ANOTHER ARE TO EACH BEAR EQUAL LENGTHS (UNO).
- FLITCH BEAMS SHALL BE BOLTED TOGETHER USING 1/2" DIAMETER BOLTS (ASTM A307) WITH WASHERS PLACED AT THREADED END OF BOLT. BOLTS SHALL BE SPACED AT 24" CENTERS (MAXIMUM), AND STAGGERED AT TOP AND BOTTOM OF BEAM (2" EDGE DISTANCE), WITH (2) BOLTS LOCATED AT 6" FROM EACH END (UNO).
- ALL I-JOIST OR TRUSS LAYOUTS ARE TO BE IN COMPLIANCE WITH THE OVERALL DESIGN SPECIFIED ON THE PLANS. ALL DEVIATIONS ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD PRIOR TO INSTALLATION.
- BRACED WALL PANELS SHALL BE CONSTRUCTED ACCORDING TO THE NORTH CAROLINA RESIDENTIAL CODE 2018 EDITION WALL BRACING CRITERIA. THE AMOUNT, LENGTH, AND LOCATION OF BRACING SHALL COMPLY WITH ALL APPLICABLE TABLES IN SECTION R602.10.
- PROVIDE DOUBLE JOIST UNDER ALL WALLS PARALLEL TO FLOOR JOISTS. PROVIDE SUPPORT UNDER ALL WALLS PARALLEL TO FLOOR TRUSSES OR I-JOISTS PER MANUFACTURER'S SPECIFICATIONS. INSTALL BLOCKING BETWEEN JOISTS OR TRUSSES FOR POINT LOAD SUPPORT FOR ALL POINT LOADS ALONG OFFSET LOAD LINES.
- FOR ALL HEADERS SUPPORTING BRICK VENEER THAT ARE LESS THAN 8'-0" IN LENGTH, REST A 6" x 4" x 5/16" STEEL ANGLE WITH 6" MINIMUM EMBEDMENT AT SIDES FOR BRICK SUPPORT (U.N.O.). FOR ALL HEADERS 8'-0" AND GREATER IN LENGTH, BOLT A 6" x 4" x 5/16" STEEL ANGLE TO HEADER WITH 1/2" LAG SCREWS AT 12" O.C. STAGGERED FOR BRICK SUPPORT. FOR ALL BRICK SUPPORT AT ROOF LINES, BOLT A 6" x 4" x 5/16" STEEL ANGLE TO (2) 2 x 10 BLOCKING INSTALLED w/ (4) 12d NAILS EA. PLY BETWEEN WALL STUDS WITH (2) ROWS OF 1/2" LAG SCREWS AT 12" O.C. STAGGERED AND IN ACCORDANCE WITH SECTION R703.8.2.1 OF THE NRC, 2018 EDITION.
- FOR STICK FRAMED ROOFS: CIRCLES DENOTE (3) 2 x 4 POSTS FOR ROOF MEMBER SUPPORT. HIP SPLICES ARE TO BE SPACED A MINIMUM OF 8'-0". FASTEN MEMBERS WITH THREE ROWS OF 12d NAILS AT 16" O.C. FRAME DORMER WALLS ON TOP OF DOUBLE OR TRIPLE RAFTERS AS SHOWN (UNO).
- FOR TRUSSED ROOFS: FRAME DORMER WALLS ON TOP OF 2 x 4 LADDER FRAMING AT 24" O.C. BETWEEN ADJACENT ROOF TRUSSES. STICK FRAME OVER-FRAMED ROOF SECTIONS WITH 2 x 8 RIDGES, 2 x 6 RAFTERS AT 16" O.C. AND FLAT 2 x 10 VALLEYS (UNO).
- ALL 4 x 4 AND 6 x 6 POSTS TO BE INSTALLED WITH 700 LB CAPACITY UPLIFT CONNECTORS TOP AND BOTTOM (UNO). POSTS MAY BE SECURED USING ONE SIMPSON H6 OR LTS12 UPLIFT CONNECTOR FASTENED TO THE BAND AT THE BOTTOM AND THE BEAM AT THE TOP OF EACH POST. ONE 16" SECTION OF SIMPSON CS16 COIL STRAPPING WITH (8) 8d HDG NAILS AT EACH END MAY BE USED IN LIEU OF EACH TWIST STRAP IF DESIRED. FOR MASONRY OR CONCRETE FOUNDATION USE SIMPSON POST BASE.

**J.S. THOMPSON  
ENGINEERING, INC**  
333 EAST SIX FORKS ROAD, SUITE 180, RALEIGH, NC 27609  
PHONE: (919) 789-9919 FAX: (919) 789-9921  
N.C. LICENSE NO.: C-1733

STANDARD STRUCTURAL NOTES

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STRUCTURAL NOTES