

D:\CAVINESS AND CATES\Caviness and Cates\CC 1644-NEW PLAN\LOT SPECIFIC\DU24 F-GRD\DU24 CC1644F GR 2-6 CONSTRUCTION SET 7-23-25.dwg, 7/24/2025 9:52:22 AM, 1:1

REDLINE NOTES

LIST OF ABBREVIATIONS

ACCESS	ACCESS TO ATTIC OR CRAWL SPACE	DN	DISH WASHER	PCKT	POCKET DOOR	T.C.	TOP CHORD
AFF	ABOVE FLOOR	EQ	EQUAL	PERF	PERFORATED	TOW	TOP OF WALL
ASL	ABOVE SEA LEVEL	FDN	FOUNDATION VENT	PL	PLATE	TRANS	TRANSOM
BD	BOARD	FV	FOUNDATION VENT	PL	PRESSURE TREATED FOR EXPOSURE	TYP	TYPICAL
BDRM	BEDROOM	GL	GLASS (DOOR)	PL	POINT LOAD (SOLID BLOCK)	UON	UNLESS OTHERWISE NOTED
BM	BEAM	HB	HOSE BIB	R#5	ROD & SHELF (CLOSETS)	V.B.	VAPOR BARRIER
CAB	CABINETS / CABINETS	HDR	DOOR / WINDOW / OPENING HEADER	REF	REFRIGERATOR	VAN	VANITY
C.J	CONTROL JOINT	HJ	WATER/ELECTRICAL HOOK UPS	REIN	REINFORCEMENT	W	WIDE
CL	CENTERLINE	HVAC	HEATING, VENTING & AIR CONDITION	RH	ROOM	W	WITH
CMU	CONCRETE MASONRY UNIT	KHALL	KNEEWALL	SEG	SEGMENTED	WP	WATER PROOF
CO	CLEAR OPENING	LVL	LAMINATED VENEER LUMBER	SHWR	SHOWER	MV	MAIN WATER VALVE SHUTOFF
COL	COLUMN	MANF	MANUFACTURED	SHLV(S)	SHELVES(S)	#SP	NUMBER OF STUD POCKETS @ WINDOW/DOOR JAMB
CONC	CONCRETE	MAS	MASONRY	SQ	SQUARE		
CSMT	CASEMENT	MM	MICRONAVE	SS	STAINLESS STEEL		
D/W or W/D DRYER & WASHER (WASHER ON LEFT)		OC	ON CENTER	SST	SIMPSON STRONG-TIE OR EQUAL		
DIAM	DIAMETER	OH	OVERHANG	SUBFLR	SUB-FLOOR		
DH/SH	DOUBLE HUNG / SINGLE HUNG WINDOW	OPNG	OPENING	SYP	SOUTHERN YELLOW PINE		
DN	DOWN	OFT	OPTIONAL				
DR	DOOR(S)						

SUMMARY

<b>PROJECT INFO</b>	
NAME OF PROJECT:	LOT 24 DUCKS LANDING / CC1644F
PROJECT ADDRESS:	339 HOOKBILL LANE
PROPOSED USE:	RESIDENTIAL
CONTACT:	CAVINESS & CATES, INC
<b>CODE COMPLIANCE:</b>	
MUNICIPALITY:	2018 NC STATE RESIDENTIAL BUILDING CODE
GAS COMMUNITY:	HARNETT COUNTY
DESIGNER:	NO
<b>SPACE DATA:</b>	
FIRST FLOOR:	684 SF
SECOND FLOOR:	960 SF
TOTAL HEATED:	1644 SF
FRONT PORCH:	24 SF
GARAGE:	212 SF
TOTAL UNDER ROOF:	1840 SF
OVERALL BUILDING HEIGHT 24'-0" WITH SLAB FOUNDATION	
<b>DESIGN LOADS</b>	
ROOF LOADS:	20 PSF LIVE, 20 PSF DEAD
ATTIC LOADS:	20 PSF LIVE, WHERE INDICATED (SEE TRUSS DWGS)
FIRST FLOOR:	40 PSF LIVE, 10 PSF DEAD
UPPER FLOORS:	30 PSF LIVE, 15 PSF DEAD
WIND LOAD:	FOR ASCE 7-10, RISK CATEGORY II, EXPOSURE 'B', 120 mph
ALL GARAGE PORTAL WALLS TO BE FRAMED WITH 2x6 STUDS	

ATTIC VENT CALCULATIONS R206

ATTIC AREA: 360 S.F.	FRONT PORCH ROOF AREA: 24 SF
RIDGE VENTS*: 34 L.F. / 5 S.F. (55%)	R206.2 EXCEPTIONS 1 & 2
SOFFIT VENT*: 60 L.F. / 4 S.F. (45%)	
RATIO: $\frac{9}{960} = \frac{1}{107}$	

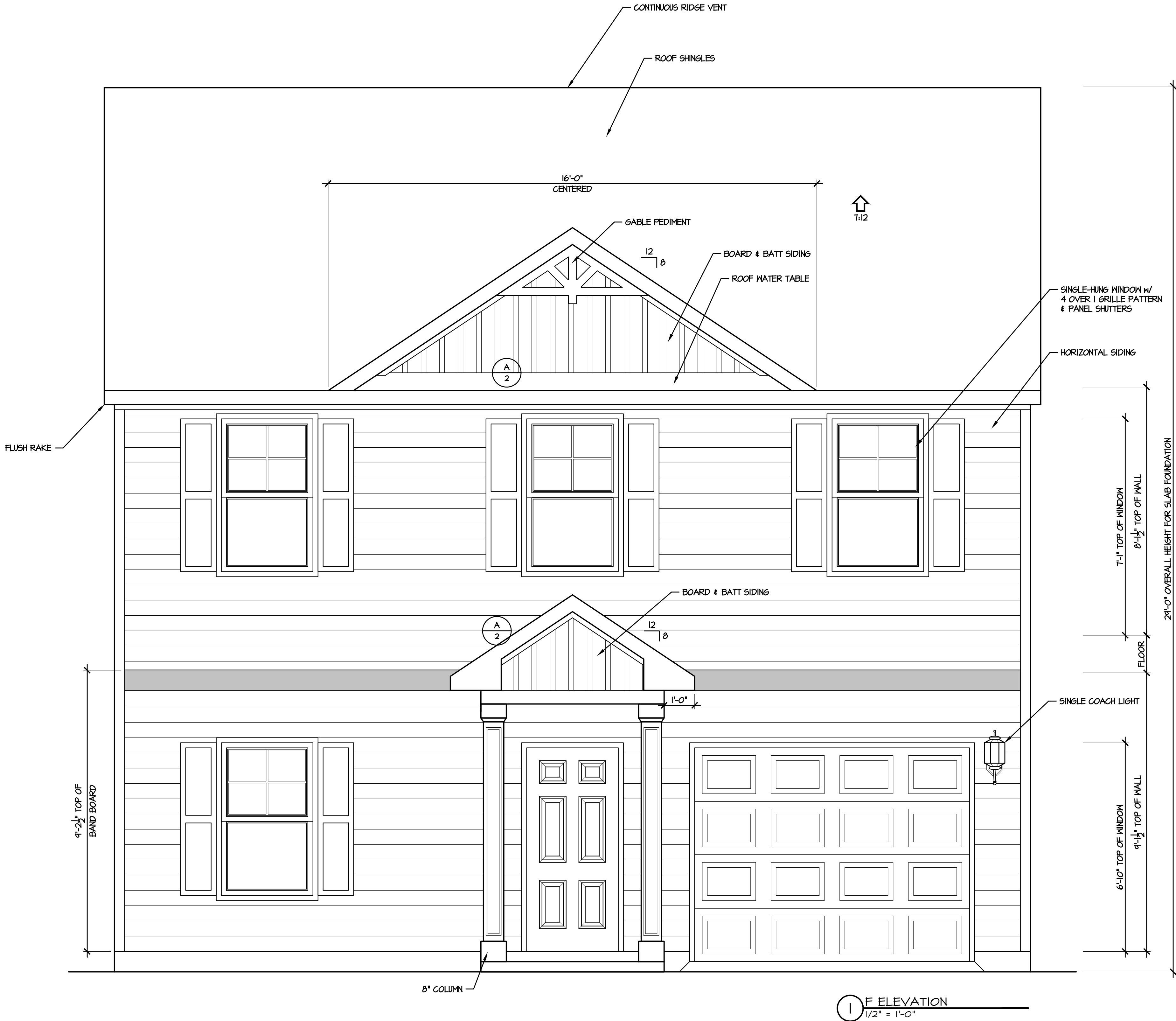
\* CALCS BASED ON VENT FREE AREA OF 18 S.I. FOR RIDGE & 9 S.I. FOR SOFFIT (PLF)

ENERGY COMPLIANCE (CHAPTER ELEVEN)

CLIMATE ZONE:	4A HARNETT COUNTY
CHAPTER II ENERGY EFFICIENCY COMPLIANCE (CHECK ONE)	
<input checked="" type="checkbox"/> PRESCRIPTIVE CODE	
<input type="checkbox"/> PERFORMANCE	
CEILING INSULATION:	R30
WALL INSULATION:	R15 FOR ZONE 3 / R19 FOR ZONE 4
FLOOR INSULATION:	R19 FOR CRAWL SPACE / R10 FOR SLAB

LIST OF SYMBOLS

SECTION SHEET	SECTION MARK	↑ 12:12	SLOPE UP PITCH
SECTION SHEET	DETAIL MARK	[Hatched Box]	EARTH
[Circle with X]	TITLE MARK	[Wavy Lines]	INSULATION
[Diagonal Lines]	INTERIOR BEARING WALL	[Solid Grey]	STANDARD WALL

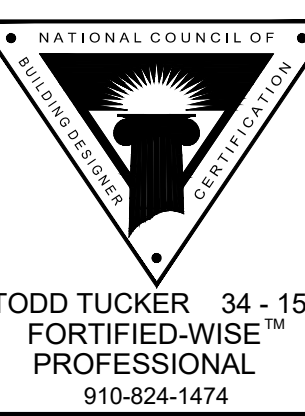
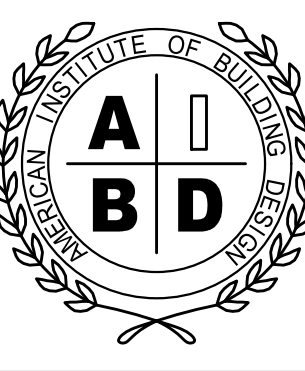


1 F ELEVATION  
1/2" = 1'-0"



© 2025 Caviness & Cates

639 Executive Place  
Suite 400  
Fayetteville, NC 28305  
Office: 910-481-0503  
Sales: 910-240-4210  
Fax: 910-481-0585



PLAN NUMBER: CC1644  
SHEET TITLE: FRONT ELEVATION / DATA

PLAN NO: CC1644

DATE: MAY 2025

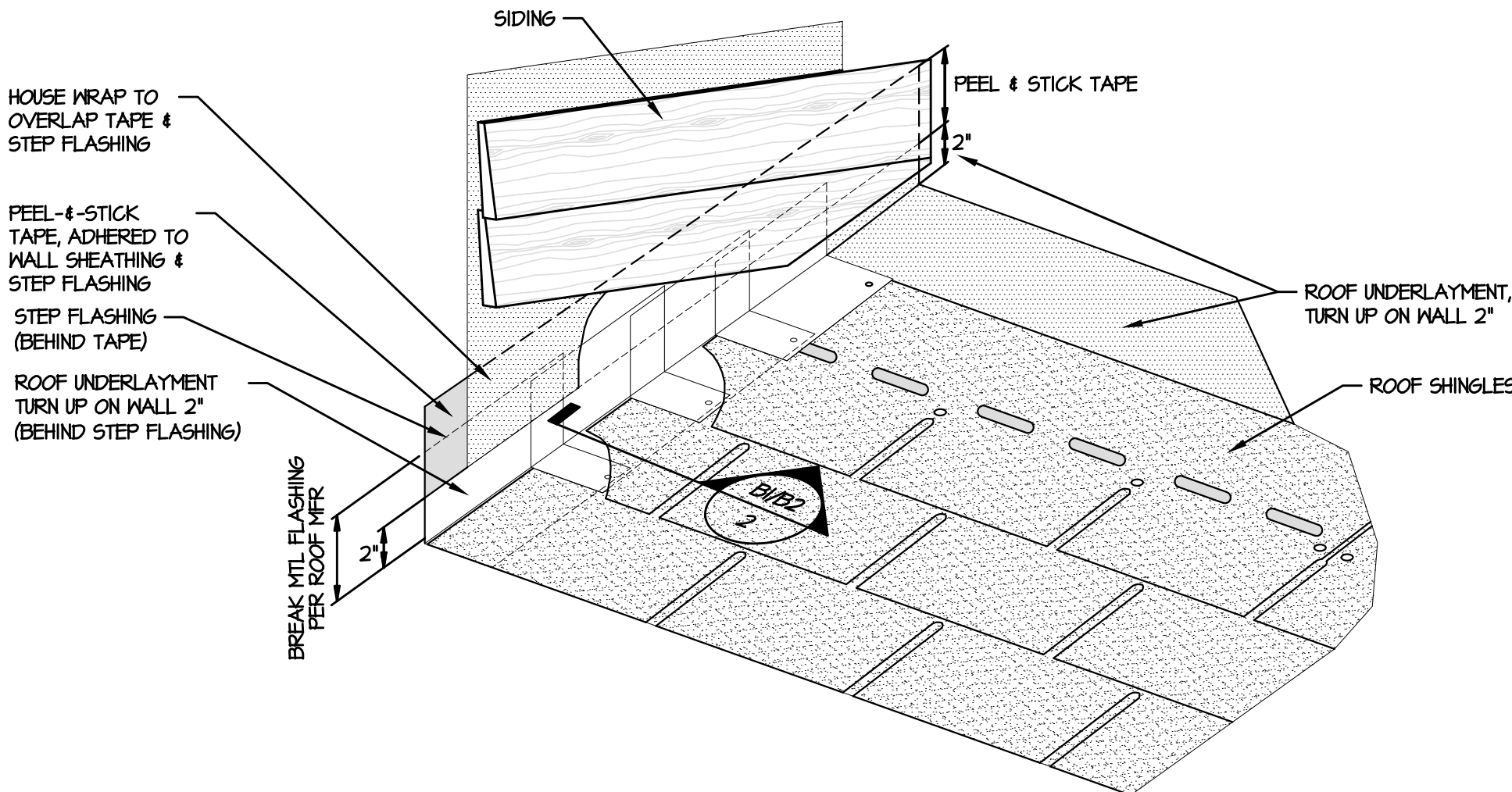
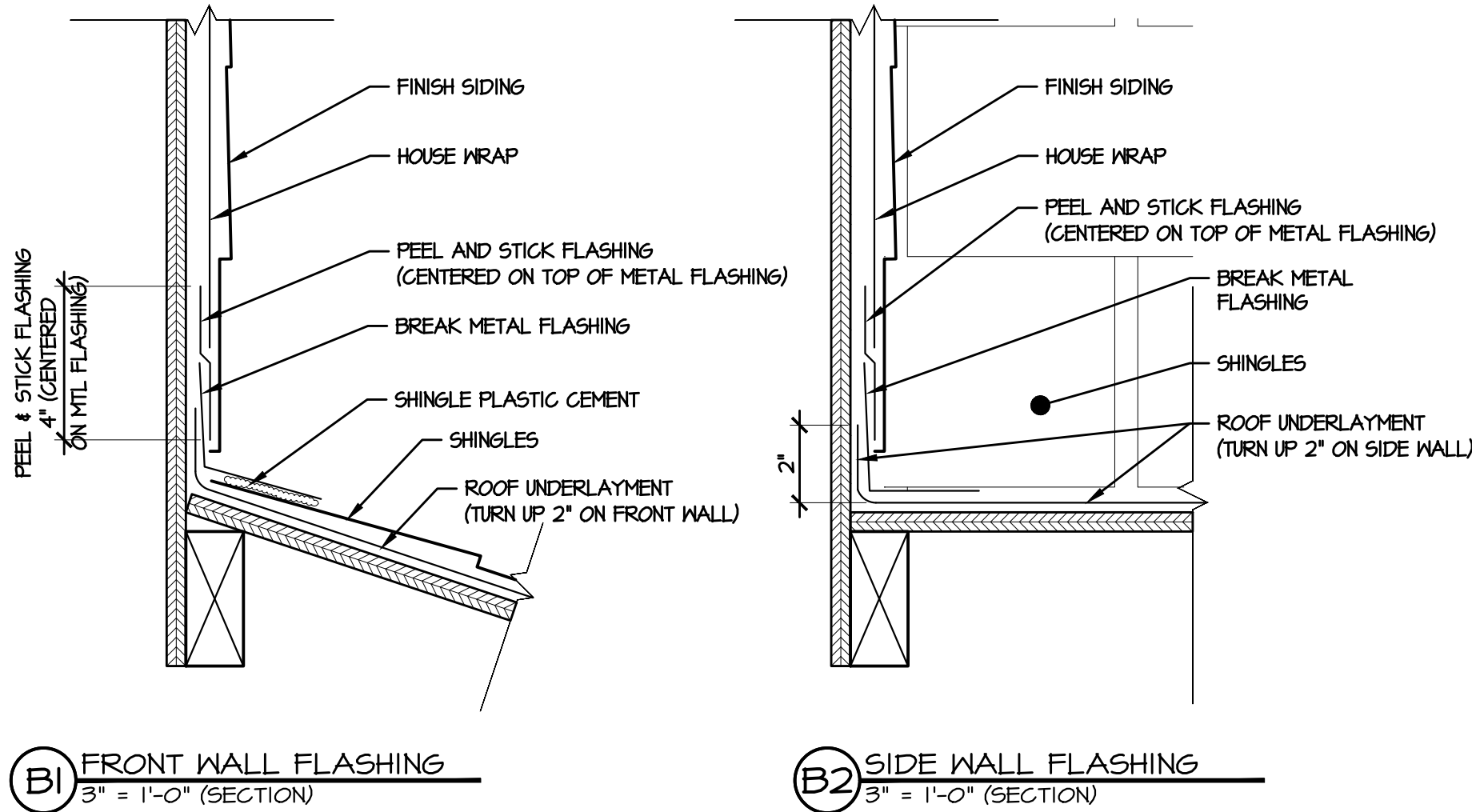
REVISIONS:	

SHEET NO:

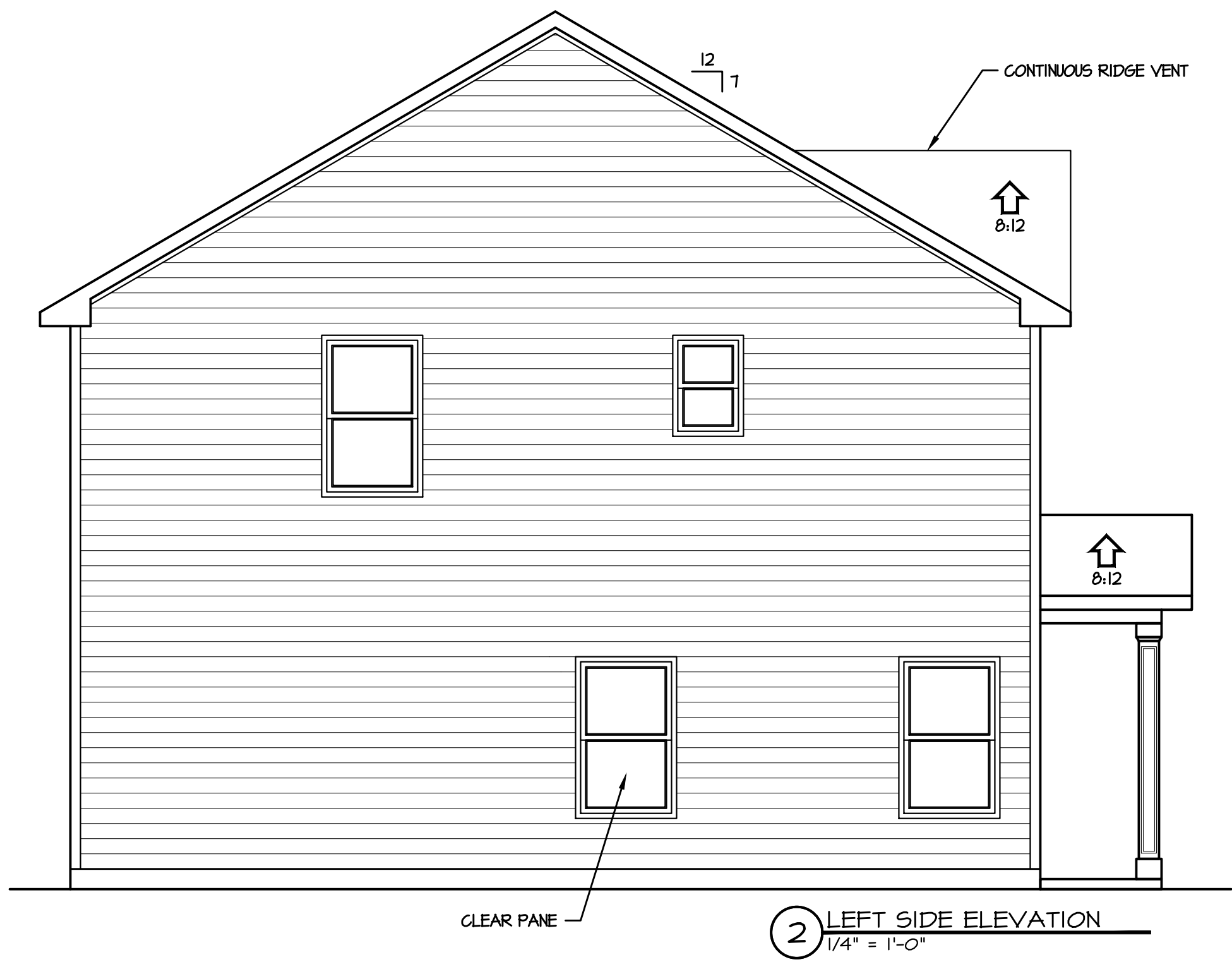
1  
LOT DU24

D:\CAVINNESS AND CATES\Caviness and Cates\CC 1644-NEW PLAN\LOT SPECIFIC\DUCKS LANDING\DU24 F-GRID\DU24 CC1644 F-GR 26 CONSTRUCTION SET 7-23-25.dwg, 7/24/2025 9:52:22 AM, 1:1

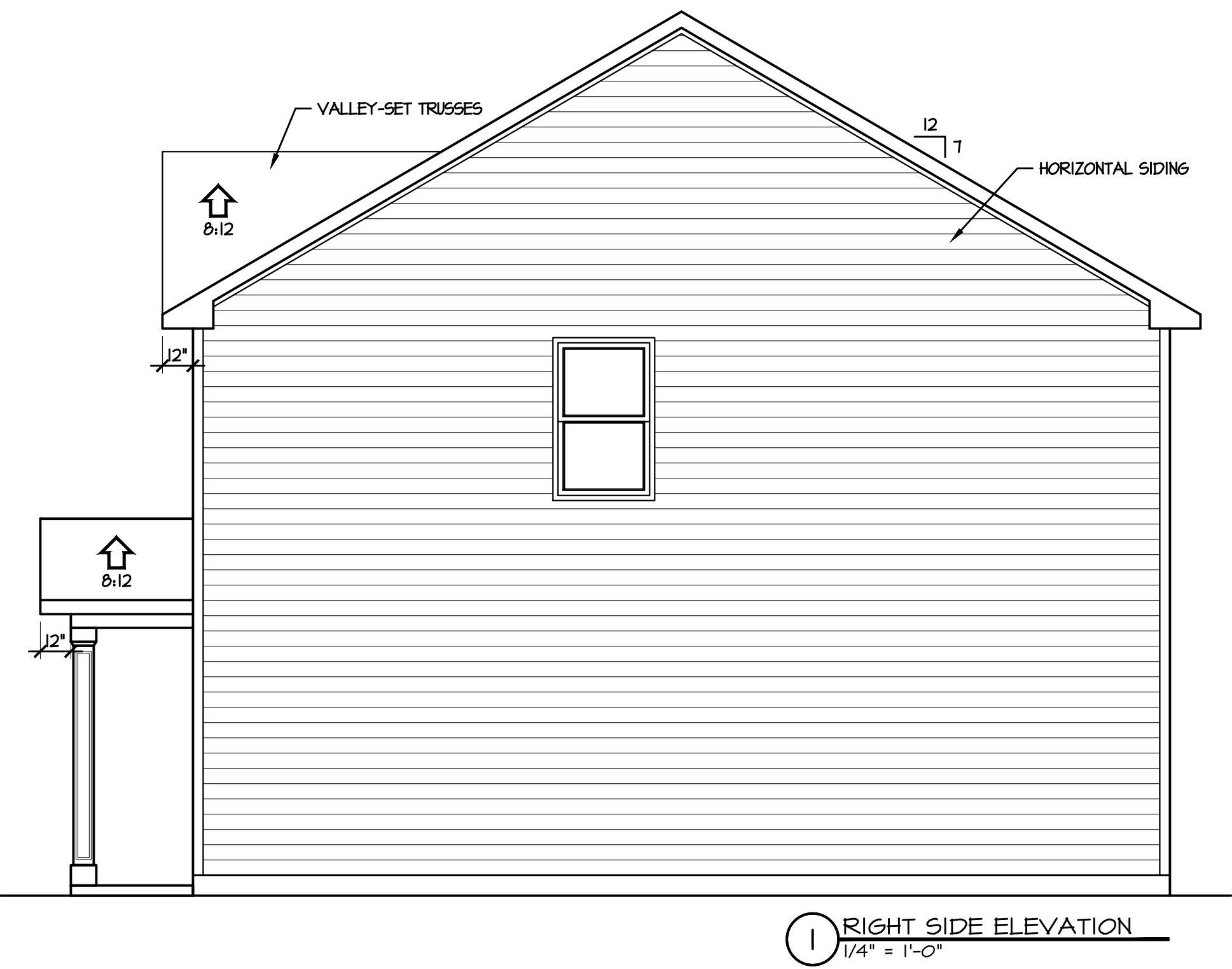
REDLINE NOTES



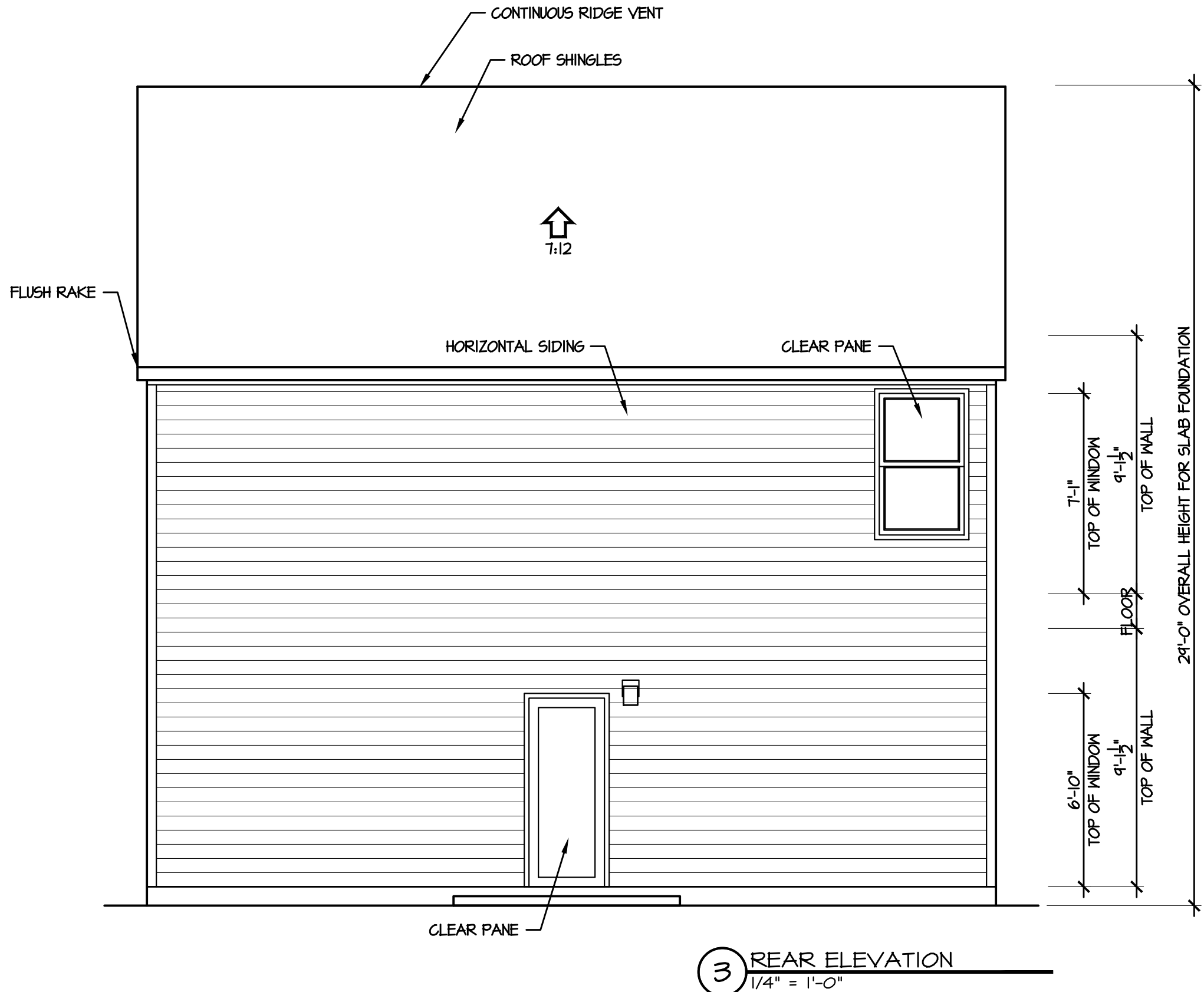
A ROOF-TO-WALL FLASHING DETAIL  
NOT TO SCALE (FOR ALL ROOF/WALL TRANSITIONS)



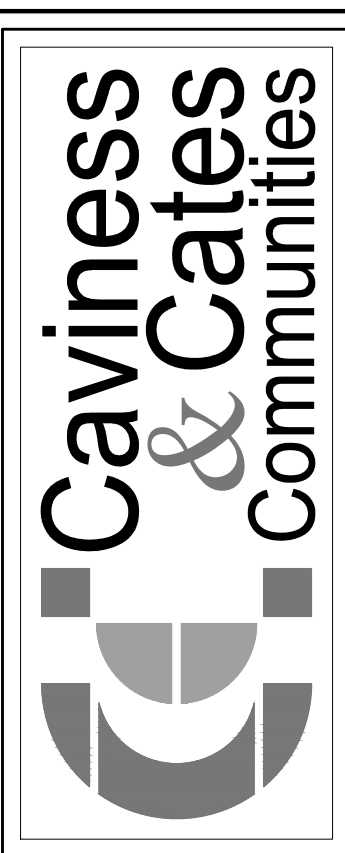
2 LEFT SIDE ELEVATION  
1/4" = 1'-0"



1 RIGHT SIDE ELEVATION  
1/4" = 1'-0"

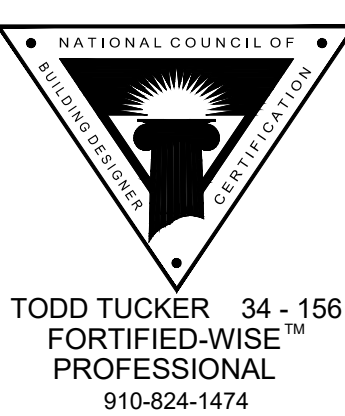


3 REAR ELEVATION  
1/4" = 1'-0"



© 2025 Caviness & Cates

639 Executive Place  
Suite 400  
Fayetteville, NC 28305  
Office: 910-481-0503  
Sales: 910-240-4210  
Fax: 910-481-0585



PLAN NAME/NUMBER: CC1644

SHEET TITLE: ELEVATIONS / ROOF DETAILS

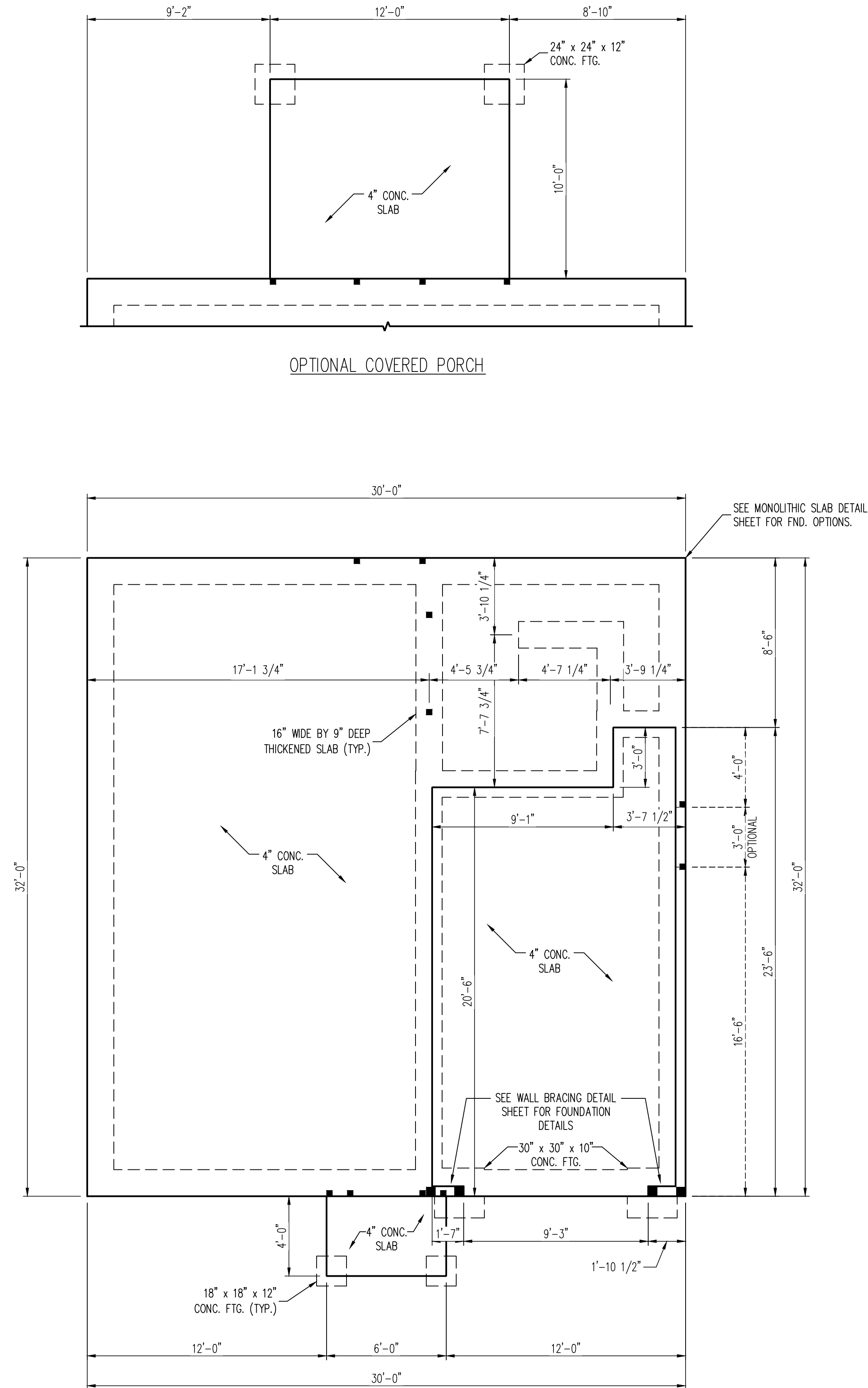
PLAN NO: CC1644

DATE: MAY 2025

REVISIONS:	

SHEET NO:

2  
LOT DU24



- 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 STORIES IN ACCORDANCE WITH SECTION R602.10.3 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.

- 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 NRCG, 2018 EDITION.

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



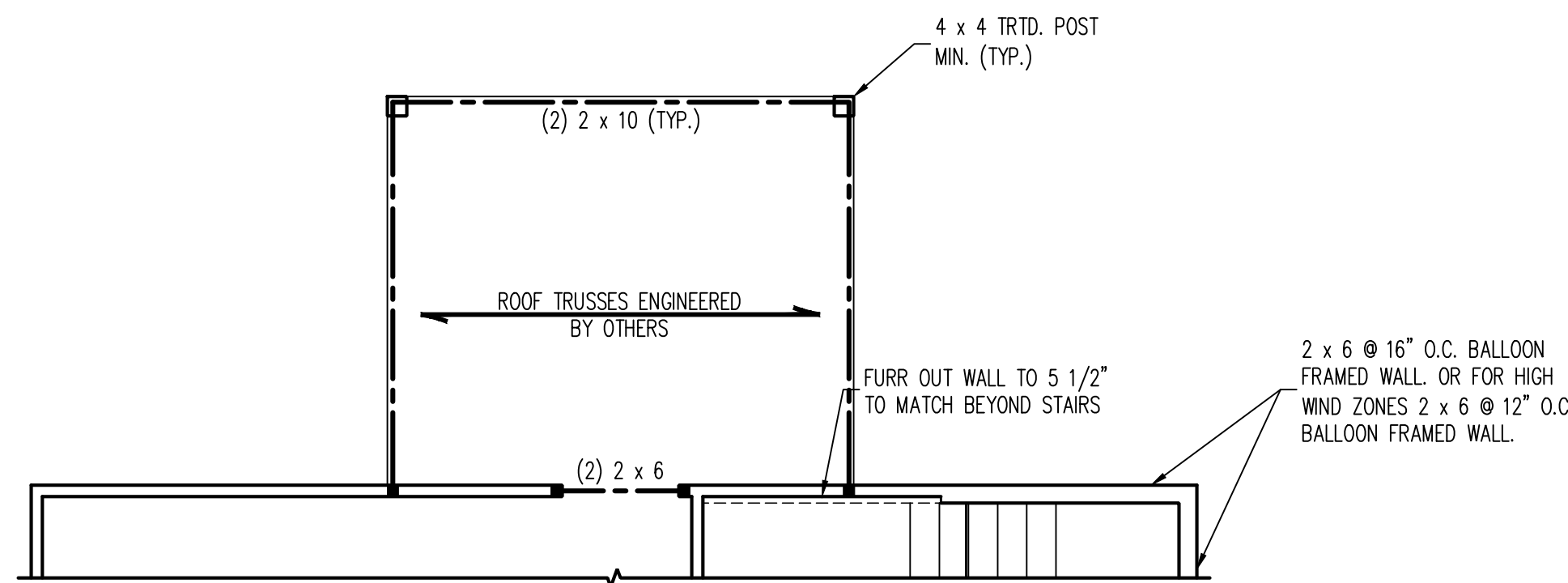
J.S. THOMPSON  
ENGINEERING, INC.  
333 EAST SIX FORKS ROAD, SUITE 180 RALEIGH, NC 27609  
PHONE: (919) 789-9919 FAX: (919) 789-9921  
N.C. LICENSE NO.: C-1733

CC 1644  
CAVINESS AND CATES

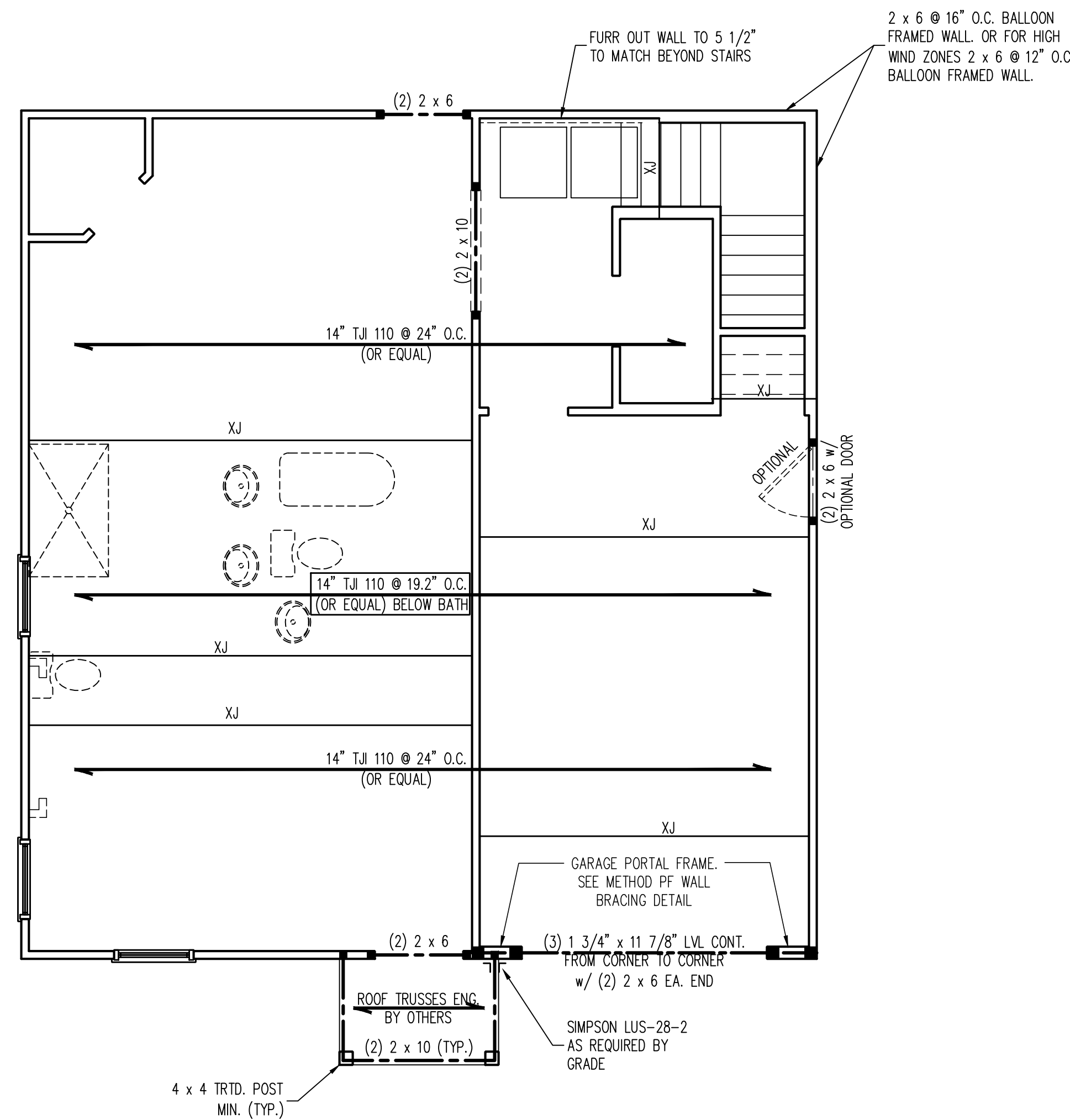
DATE: JULY 2, 2025  
SCALE: 1/4" = 1'-0"  
DRAWN BY: TT  
ENGINEERED BY: JAG

S-1  
MONO SLAB  
FOUNDATION PLAN





OPTIONAL COVERED PORCH



NOTE:

- BOI 4500s-1.8 JOISTS MAY BE INSTALLED IN LIEU OF TJI 110 JOISTS AT THE DEPTH AND SPACING INDICATED ON THE PLAN.

- BRACED WALL DESIGN NOTES:
- BRACED WALL DESIGN PER SECTION R602.10.5 "WALL BRACING BY ENGINEERED DESIGN" OF THE NRC 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 NRC 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 NRC 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.)
  - PROVIDE AN EXTRA JOIST UNDER ALL WALLS PARALLEL TO FLOOR JOISTS WHERE NOTED ON THE PLANS.
  - WINDOW AND DOOR HEADERS TO BE SUPPORTED w/ (1) JACK STUD AND (1) KING STUD EA. END (UNO.). SEE KING STUD TABLES 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.
  - SPECIFIED SIMPSON STRONG-TIE PRODUCTS MAY BE SUBSTITUTED WITH THOSE MANUFACTURED BY USP STRUCTURAL CONNECTORS PROVIDED THAT THE LOAD CAPACITY AND FUNCTION IS EQUIVALENT.
  - ALL 4 x 4 POSTS SHALL BE ANCHORED TO SLABS w/ SIMPSON ABU44 POST BASES (OR EQUAL) AND 6 x 6 POSTS w/ ABU66 POST BASES (OR EQUAL) (UNO). ALL 4 x 4 AND 6 x 6 POSTS TO BE INSTALLED WITH 700 LB CAPACITY UPLIFT CONNECTORS AT TOP AND BOTTOM (UNO.)
  - FOR FIBERGLASS, ALUMINUM, OR COLUMN ENG. BY OTHERS, SECURE TO SLAB w/ (2) METAL ANGLES USING 2" CONC. SCREWS. FASTEN ANGLES TO COLUMNS w/ 1/4" THROUGH BOLTS w/ NUTS AND WASHERS. LOCATE ANGLES ON OPPOSITE SIDES OF COLUMN. THROUGH BOLTS MUST BE INSTALLED PRIOR TO SETTING COLUMN.
  - REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

MINIMUM NUMBER OF FULL HEIGHT KING STUDS AT EACH END OF HEADERS IN EXTERIOR WALLS IN 150 MPH WIND ZONES	
HEADER SPAN (FEET)	MINIMUM NUMBER OF FULL HEIGHT STUDS (KINGS)
UP TO 3'	2
> 3' TO 6'	3
> 6' TO 9'	4
> 9' TO 12'	5
> 12' TO 15'	6

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
XJ	EXTRA JOIST
DJ	DOUBLE JOIST
TJ	TRIPLE JOIST
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

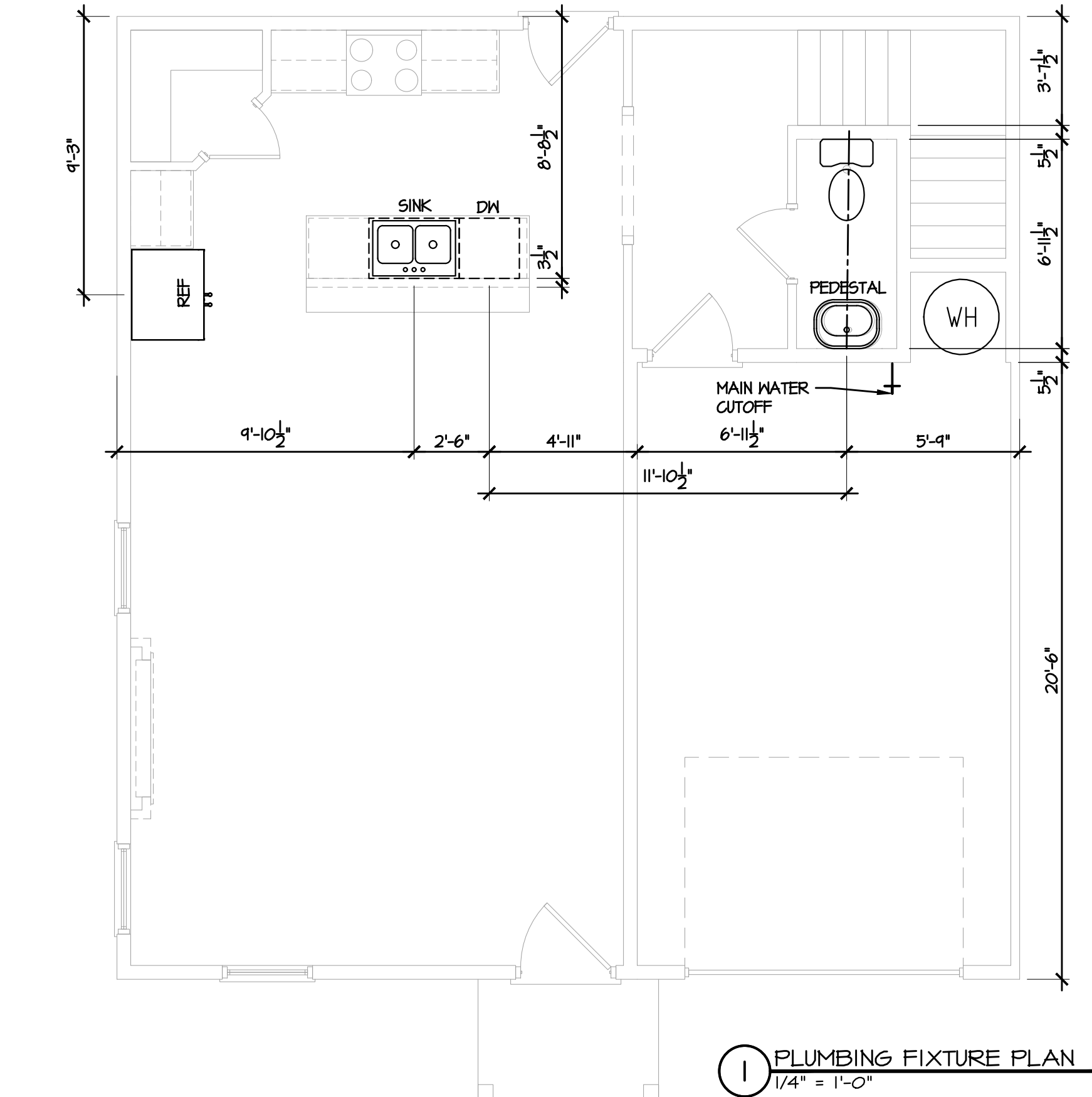
**J.S. THOMPSON  
ENGINEERING, INC**  
333 EAST SIX FORKS ROAD, SUITE 180 RALEIGH, NC 27609  
PHONE: (919) 7899919 FAX: (919) 7899921  
N.C. LICENSE NO.: C-1733

CC 1644  
CAVINESS AND CATES

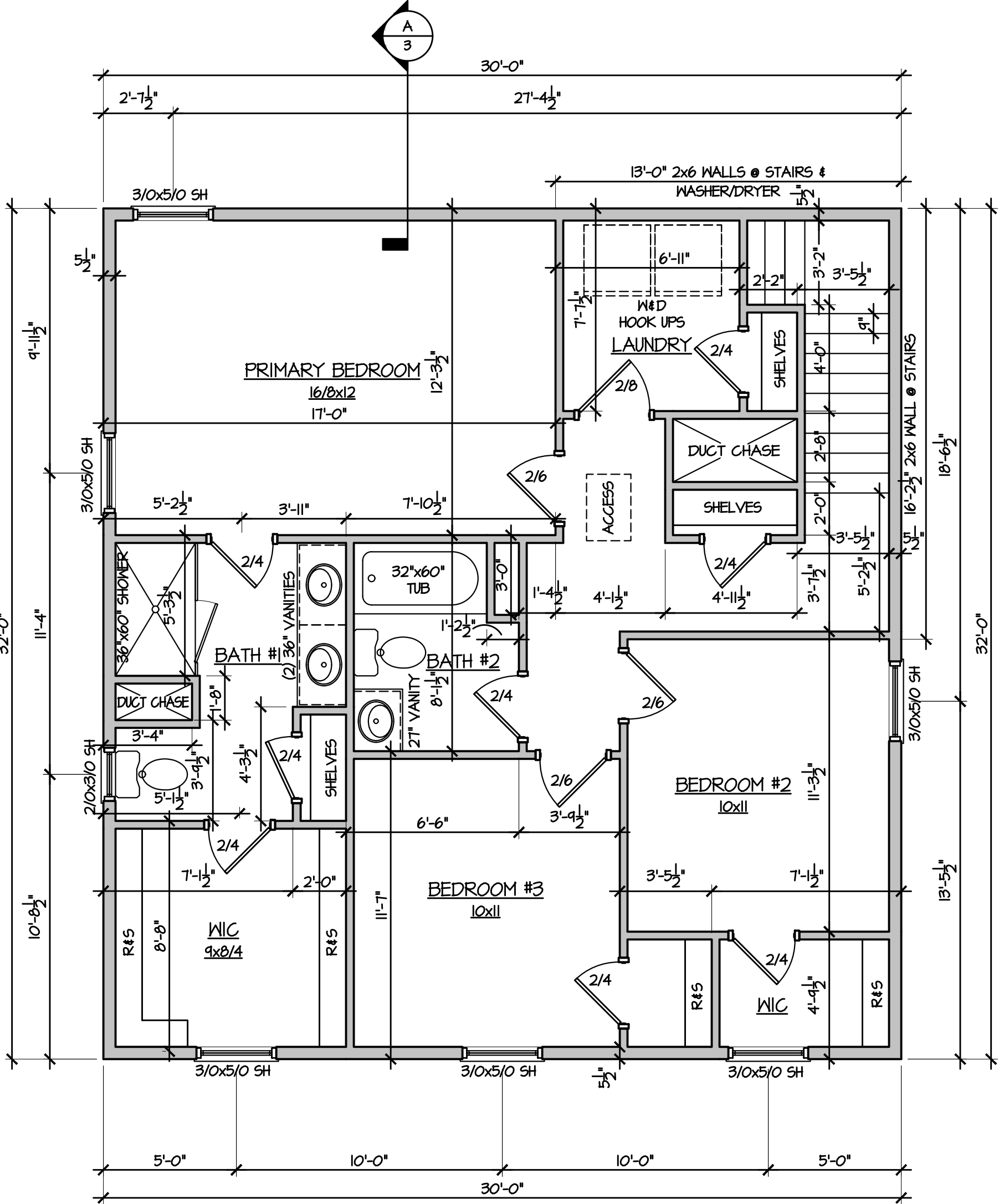
DATE: JULY 2, 2025  
SCALE: 1/4" = 1'-0"  
DRAWN BY: TT  
ENGINEERED BY: JAG

S-2  
SECOND FLOOR  
FRAMING PLAN

D:\Caviness and Cates\Caviness and Cates\CC 1644-NEW PLAN\LOT SPECIFIC\DU24 F.GRD\DU24 CC1644F GR 2x6 CONSTRUCTION SET 7-23-25.dwg, 7/24/2025 9:52:23 AM, 1:1

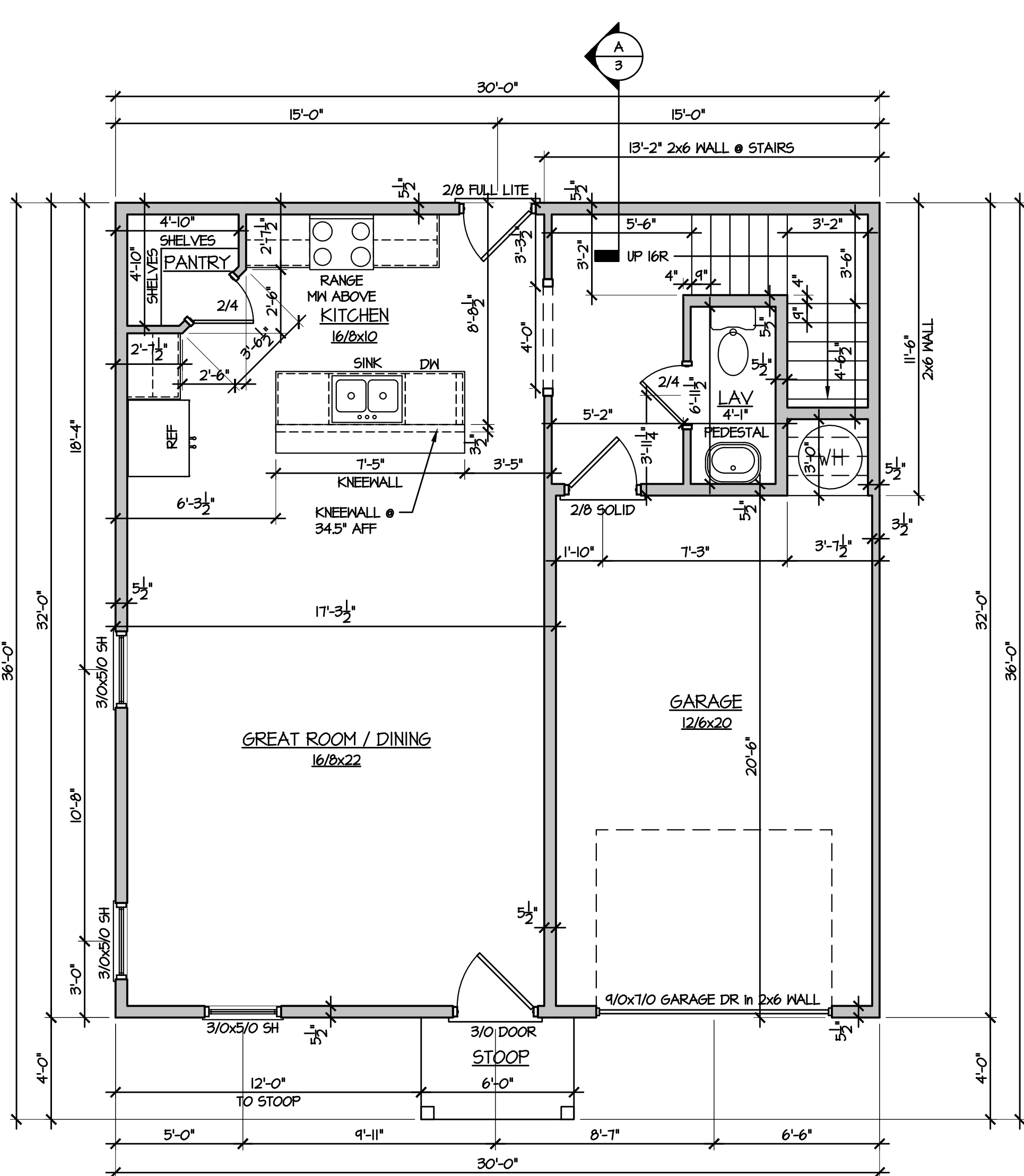


1 PLUMBING FIXTURE PLAN  
1/4" = 1'-0"



FRAMING NOTE:  
ALL EXTERIOR HEATED WALLS TO BE  
FRAMED WITH 2x6 STUDS

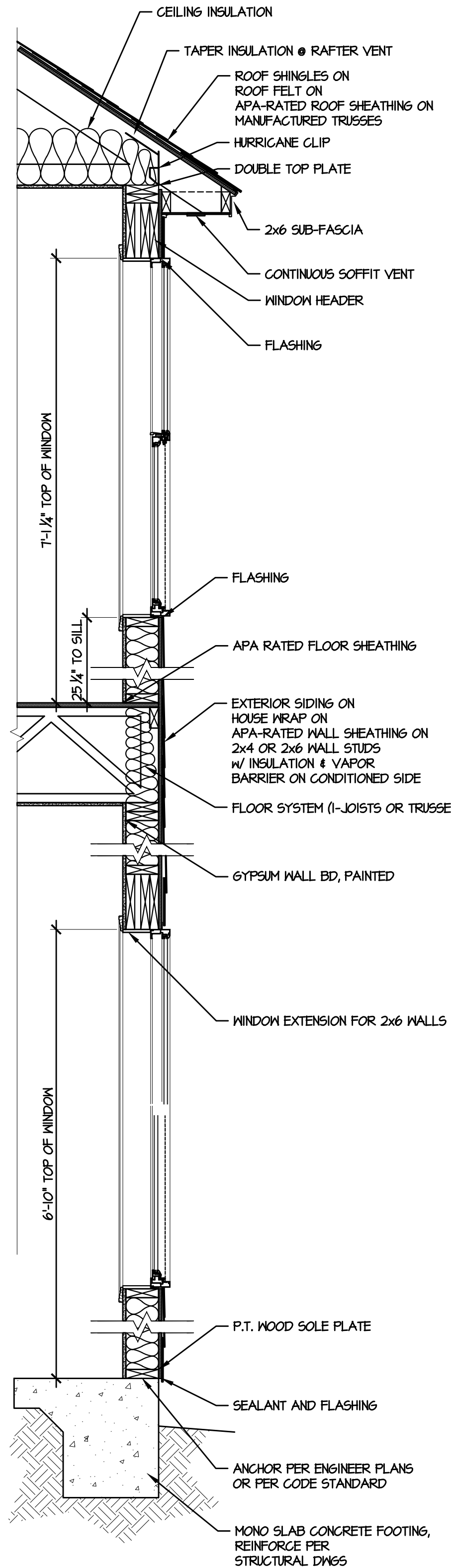
3 SECOND FLOOR FRAMING PLAN  
1/4" = 1'-0"



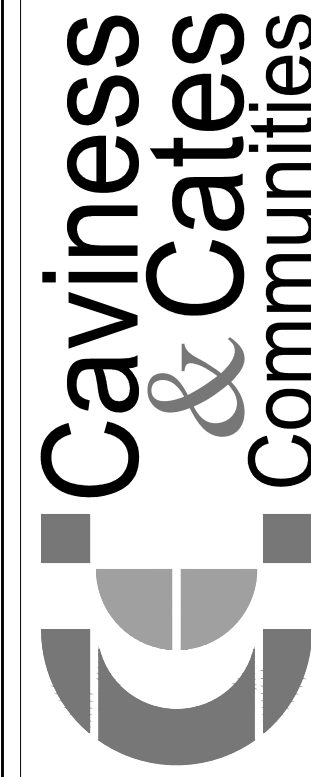
FRAMING NOTE:  
ALL EXTERIOR HEATED WALLS TO BE  
FRAMED WITH 2x6 STUDS

2 FIRST FLOOR FRAMING PLAN  
1/4" = 1'-0"

## REDLINE NOTES

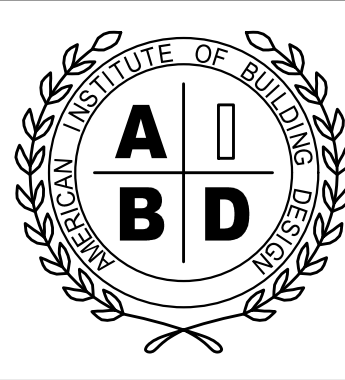


A TYPICAL WALL SECTION  
3/4" = 1'-0" TWO STORY



© 2025 Caviness & Cates

639 Executive Place  
Suite 400  
Fayetteville, NC 28305  
Office: 910-481-0503  
Sales: 910-240-4210  
Fax: 910-481-0585



NATIONAL COUNCIL OF  
EXPERIMENTAL TESTING  
TODD TUCKER 34 - 156  
FORTIFIED-WISE™  
PROFESSIONAL  
910-824-1474

PLAN NAME/NUMBER:

CC1644

PLAN NO:

CC1644

DATE:

MAY 2025

REVISIONS:

SHEET NO:

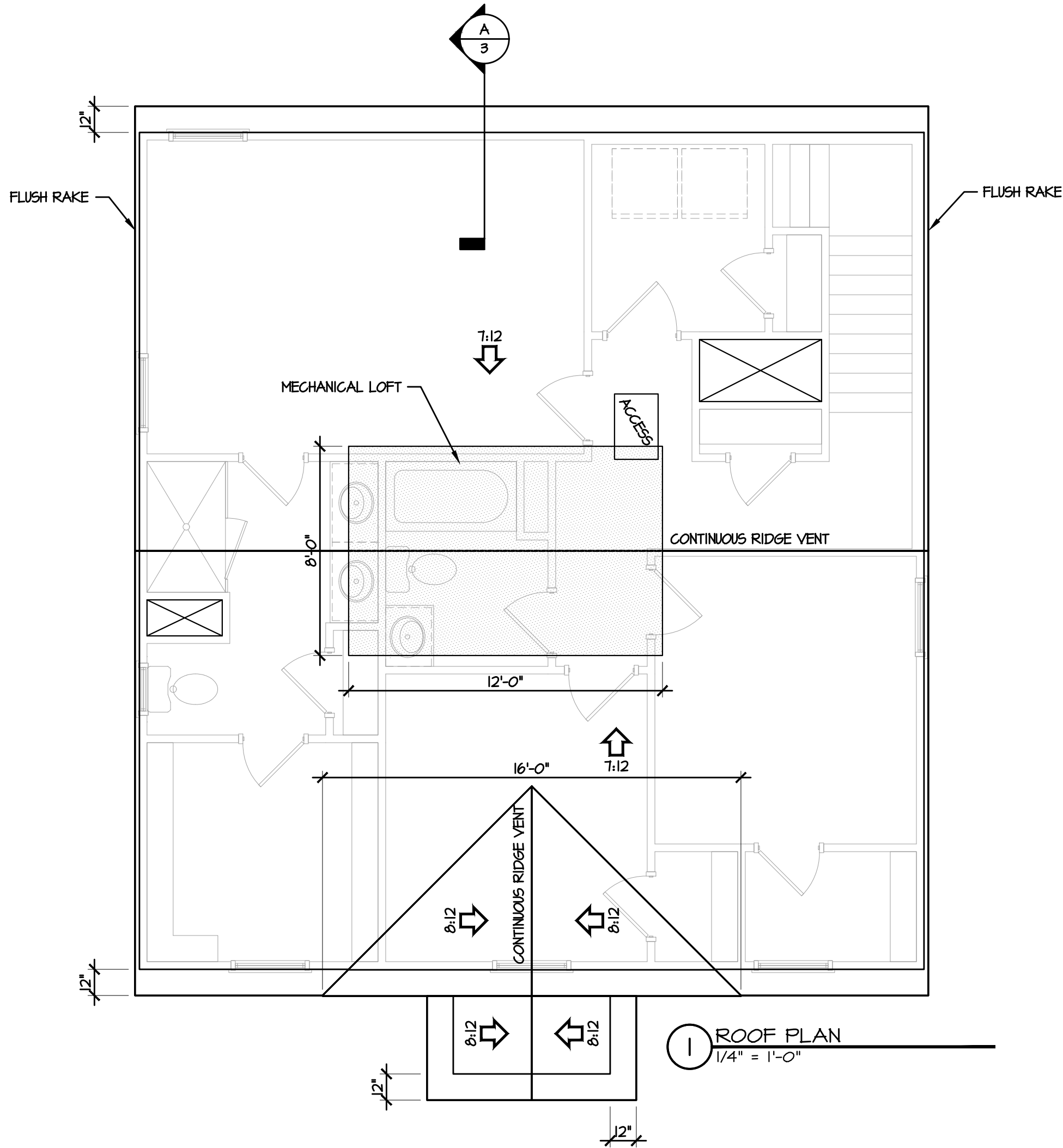
3


LOT DU24

SHEET TITLE:  
PLUMBING FIXTURE / FRAMING PLANS / SECTION

D:\CAVINESS AND CATES\Caviness and Cates\CC 1644-NEW PLAN\LOT SPECIFIC\DUCKS LANDING\DU24 F-GRD\DU24 CC1644F GR 26 CONSTRUCTION SET 7-23-25.dwg, 7/24/2025 9:52:23 AM, 1:1

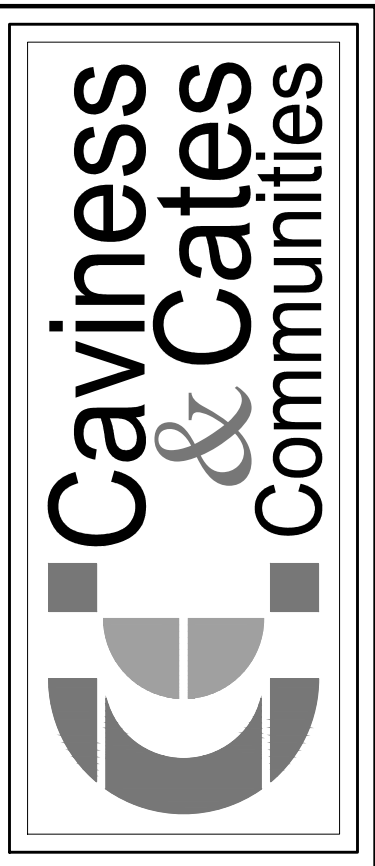
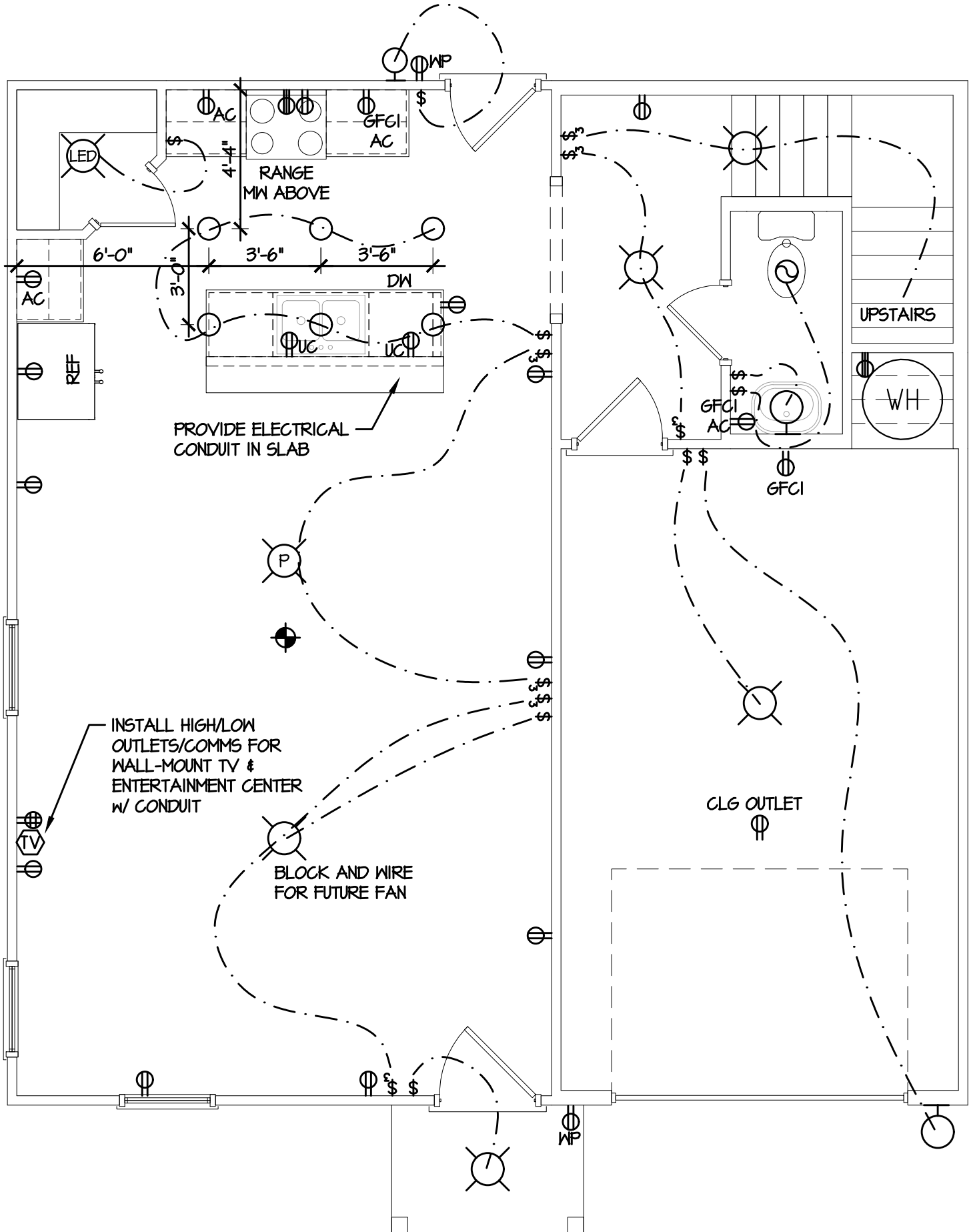
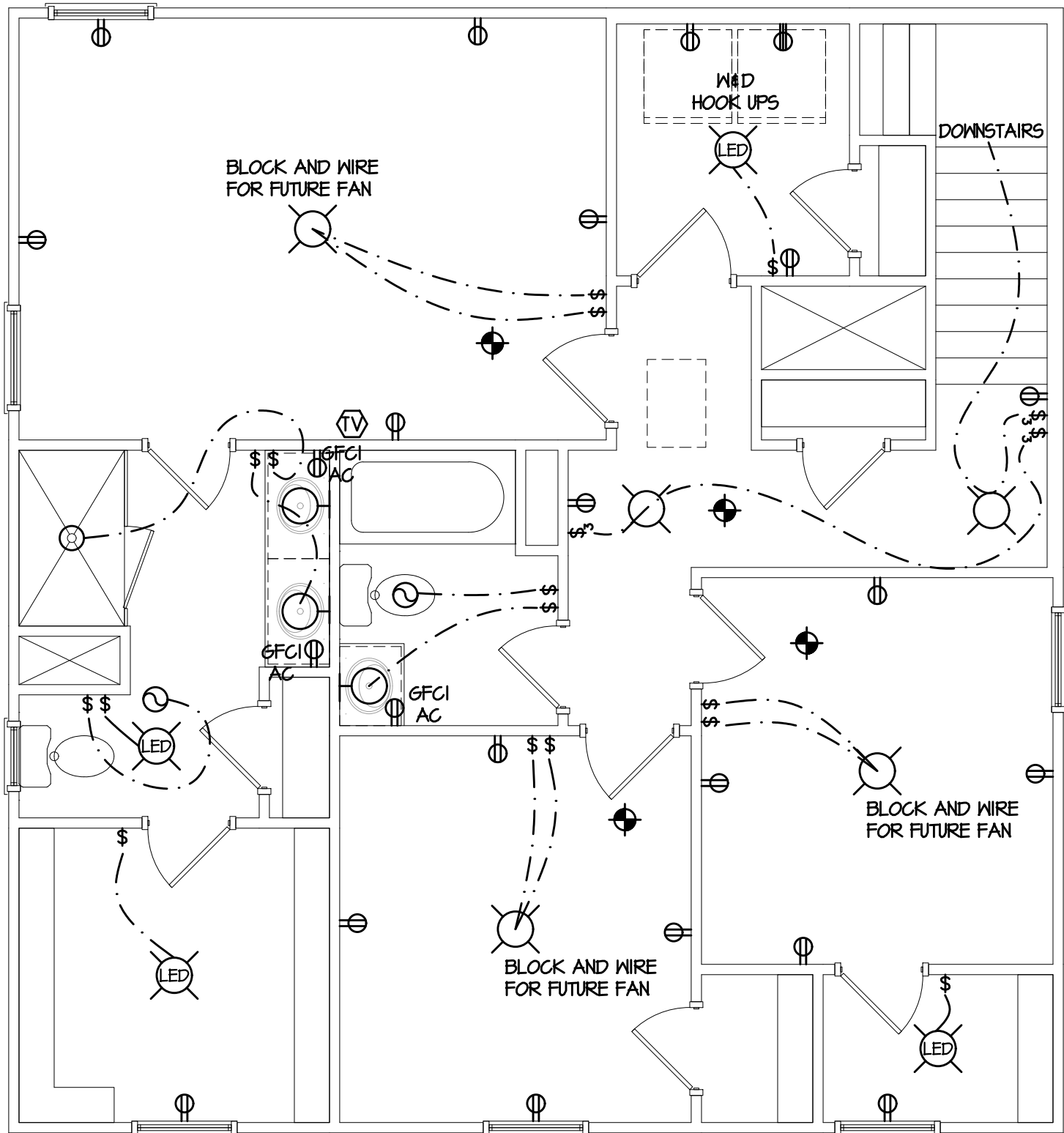
REDLINE NOTES



ELECTRICAL LEGEND		
	CEILING FAN	USB PORT
	CEILING FAN w/ LIGHT	COMMUNICATIONS
	FLUORESCENT LIGHT	UL APPROVED SMOKE / CO DETECTOR
	WALL MOUNT LIGHT	SURROUND SOUND CEILING SPEAKER
	SURFACE LIGHT	DOOR CONTACT
	PENDANT LIGHT	DIRECTIONAL MOTION SENSOR
	LED LIGHT	SECURITY KEYPAD
	UNDER-WALL-CABINET LIGHT	 20" ON-Q ENCLOSURE HOUSING PHONE, CABLE, ALARM & REQUIRES 110V OUTLET
	FLOOD LIGHTS	SURROUND SOUND TERMINATION POINT-PHONE, CABLE, SS & FUTURE PIPE WILL TERMINATE IN ONE PHONE/CABLE JACK & SPOUT PLATE
	RECESS LIGHT	SINGLE POLE SWITCH
	LIGHT / EXHAUST FAN COMBO	DIMMER SWITCH
	EXHAUST FAN	3 WAY SWITCH
LOW-VOLTAGE OPTIONS		4 WAY SWITCH
		DUPLEX OUTLET ABOVE COUNTER UNDER COUNTER
		EXTERIOR DUPLEX OUTLET
		1/2 HOT DUPLEX OUTLET ON SWITCH
		GFCI INTERRUPT DUPLEX OUTLET
		QUAD OUTLET
		FLOOR OUTLET
		220 V OUTLET

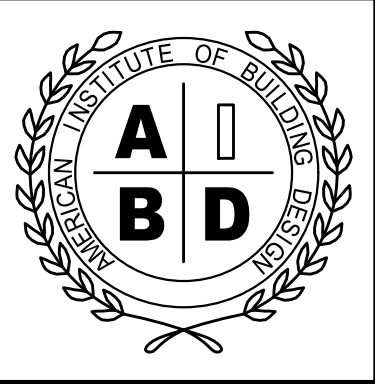
- ELECTRICAL NOTES:**
1. INSTALL LOW-VOLTAGE LED LIGHTING IN SMALL CLOSETS PER 2023 NCEC ARTICLE 410.2 & ARTICLE 410.16
- BATHROOM LIGHT SWITCH NOTES:**
1. FIRST LIGHT SWITCH TO VANITY LIGHT (CLOSEST TO DOOR)
  2. SECONDARY SWITCHES TO RECESSED TUB/SHOWER/PANTRY LIGHTS, ETC.
  3. FINAL SWITCH TO FAN (FURTHEST FROM DOOR)

- SMOKE DETECTOR NOTES:**
1. INSTALL SMOKE DETECTORS ON EVERY LEVEL, IN ALL SLEEPING AND GUEST ROOMS, AND OUTSIDE OF EACH SLEEPING ROOM NO GREATER THAN 21' FROM ANY DOOR TO A SLEEPING ROOM [2022 NFPA T2, 24.8.1.1]
  2. WHERE AN INTERIOR FLOOR LEVEL EXCEEDS 1000 SQUARE FEET, SMOKE ALARMS SHALL BE INSTALLED WHERE ALL POINTS FALL WITHIN 30' OF TRAVEL DISTANCE OR ONE SMOKE ALARM PER 500 SQUARE FEET. FOR VAULTED CEILING OVER MULTIPLE LEVELS, SMOKE ALARMS IN THE UPPER LEVEL NEAR THE CATHEDRAL SHALL BE CONSIDERED AS PART OF THE LOWER FLOOR PROTECTION [2022 NFPA T2, 24.8.1.3, 24.8.1.3.1 and 24.8.1.3.2]
  3. MAINTAIN 120" MIN FROM KITCHEN COOKING APPLIANCES [2022 NFPA T2, 24.11.3.4(5)]
  4. MAINTAIN 36" MIN FROM A BATHROOM DOOR CONTAINING A TUB OR SHOWER [2022 NFPA T2, 24.11.3.4(6)]
  5. MAINTAIN 36" MIN FROM A SUPPLY REGISTER OF A FORCED HEATING/COOLING SYSTEM AND OUTSIDE OF THE DIRECT AIRFLOW [2022 NFPA T2, 24.11.3.4(7)]
  6. MAINTAIN 36" MIN FROM TIP OF CEILING FAN BLADE [2019 NFPA T2, 24.11.3.4(8)]
  7. WHERE STAIRS LEAD TO AN ABOVE-OCCUPIABLE LEVEL, A SMOKE DETECTOR SHALL BE LOCATED SO THAT RISING SMOKE IN THE STAIRWAY CANNOT BE BLOCKED BY AN INTERVENING DOOR [2019 NFPA T2, 24.11.3.4(9)]
  8. PLACE SMOKE DETECTORS AT HIGHEST POINT OF TRAY CEILING [2019 NFPA T2, 24.11.3.4(10)]



© 2025 Caviness & Cates

639 Executive Place  
Suite 400  
Fayetteville, NC 28305  
Office: 910-481-0503  
Sales: 910-240-4210  
Fax: 910-481-0585



TODD TUCKER 34 - 156  
FORTIFIED-WISE™  
PROFESSIONAL  
910-824-1474

PLAN NAME/NUMBER:  
**CC1644**

SHEET TITLE:  
**ELECTRICAL & ROOF PLANS**

PLAN NO:  
**CC1644**

DATE:  
**MAY 2025**

REVISIONS:

SHEET NO:

**4**  
LOT DU24



J.S. THOMPSON  
ENGINEERING, INC  
333 EAST SIX FORKS ROAD, SUITE 180 RALEIGH, NC 27609  
PHONE: (919) 7899919 FAX: (919) 7899921  
N.C. LICENSE NO.: C-1733

CC 1644  
CAVINESS AND CATES

DATE: JULY 2, 2025

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

DRAWN BY: TT

ENGINEERED BY: JAG

S-3  
ATTIC FLOOR  
FRAMING PLAN

BRACED WALL DESIGN NOTES:

1. BRACED WALL DESIGN PER SECTION R602.10.5 "WALL BRACING BY ENGINEERED DESIGN" OF THE NCRC 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.
2. 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 NCRC 2018 EDITION.
3. 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.
4. 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.
5. 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 NCRC 2018 EDITION.
6. SEE NOTES AND DETAIL SHEETS FOR ADDITIONAL BRACED WALL INFORMATION.

STRUCTURAL NOTES:

1. ALL FRAMING LUMBER TO BE #2 SPF (UNO).
2. ALL LOAD BEARING HEADERS TO BE (2) 2 x 6 (UNO).
3. 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.
4. SQUARES DENOTE POINT LOADS WHICH REQUIRE SOLID BLOCKING TO GIRDER OR FOUNDATION. SQUARES TO BE (2) STUDS (UNO.)
5. 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.
6. 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 ORDERS AND DOUBLE SILL PLATES THEIR FULL DEPTH.
7. SPECIFIED SIMPSON STRONG-TIE PRODUCTS MAY BE SUBSTITUTED WITH THOSE MANUFACTURED BY USP STRUCTURAL CONNECTORS PROVIDED THAT THE LOAD CAPACITY AND FUNCTION IS EQUIVALENT.
8. 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'	2
> 3' TO 6'	3
> 6' TO 9'	4
> 9' TO 12'	5
> 12' TO 15'	6

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

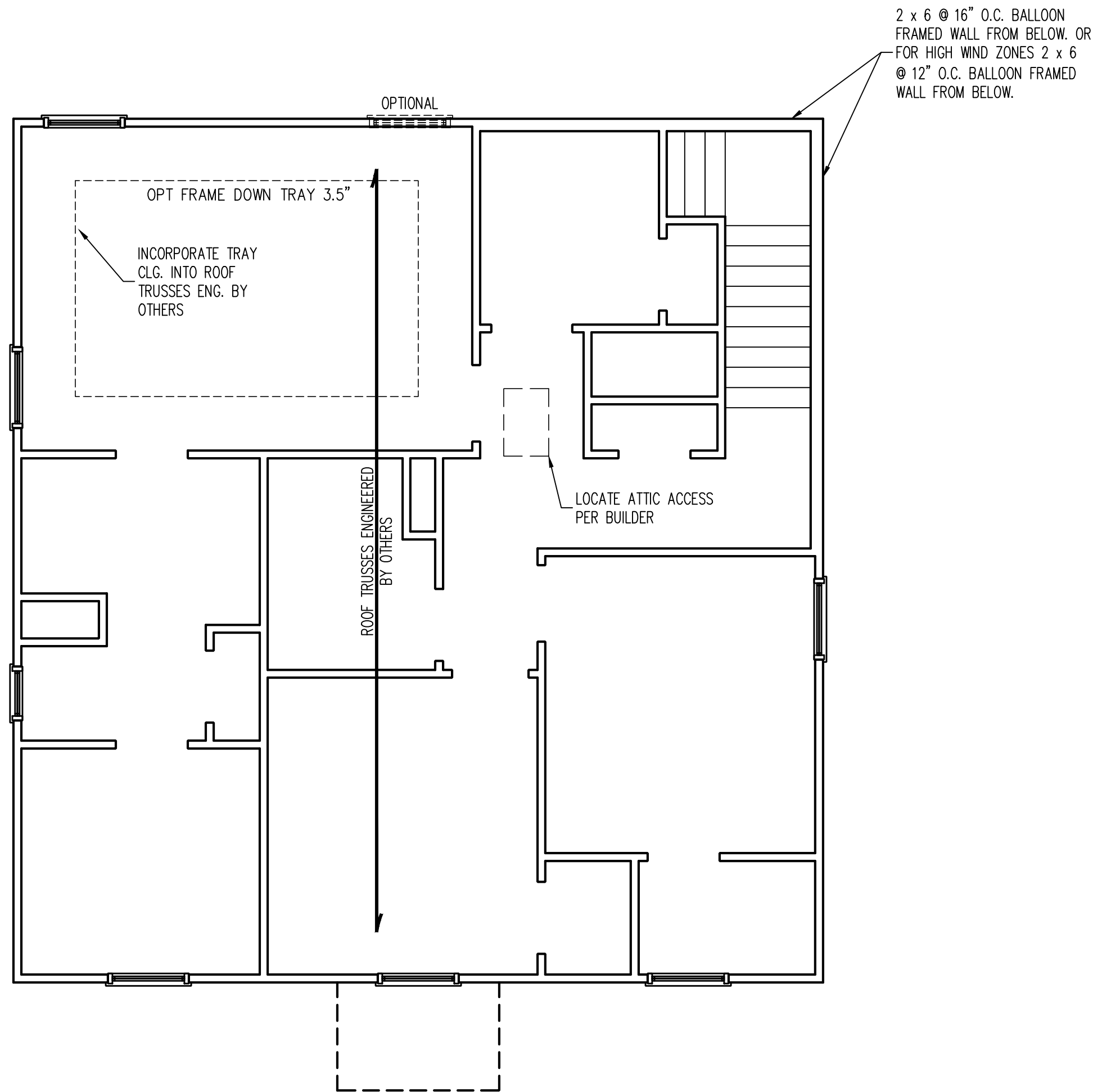
HEADER SPAN (FEET)	MINIMUM NUMBER OF FULL HEIGHT STUDS (KINGS)
UP TO 3'	1
> 3' TO 6'	2
> 6' TO 9'	3
> 9' TO 12'	4
> 12' TO 15'	5

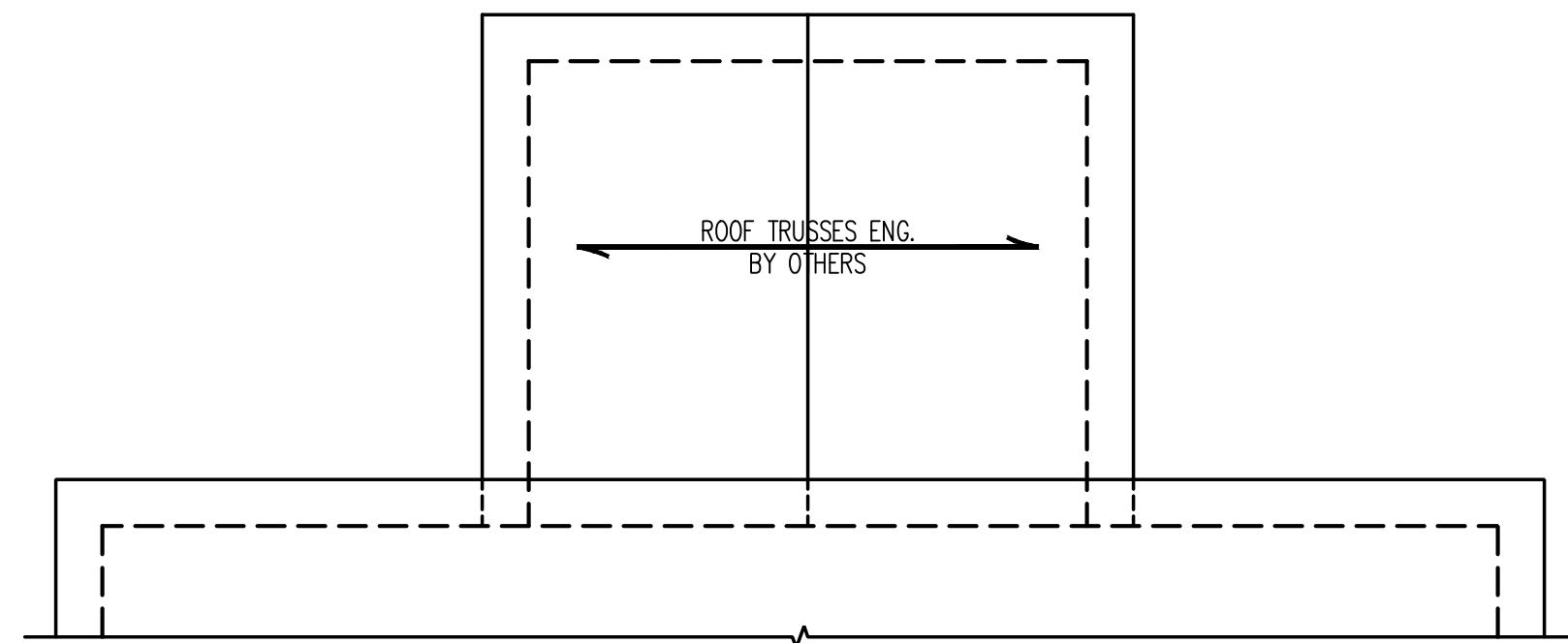
LEGEND

CONT	CONTINUOUS
XJ	EXTRA JOIST
DJ	DOUBLE JOIST
TJ	TRIPLE JOIST
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

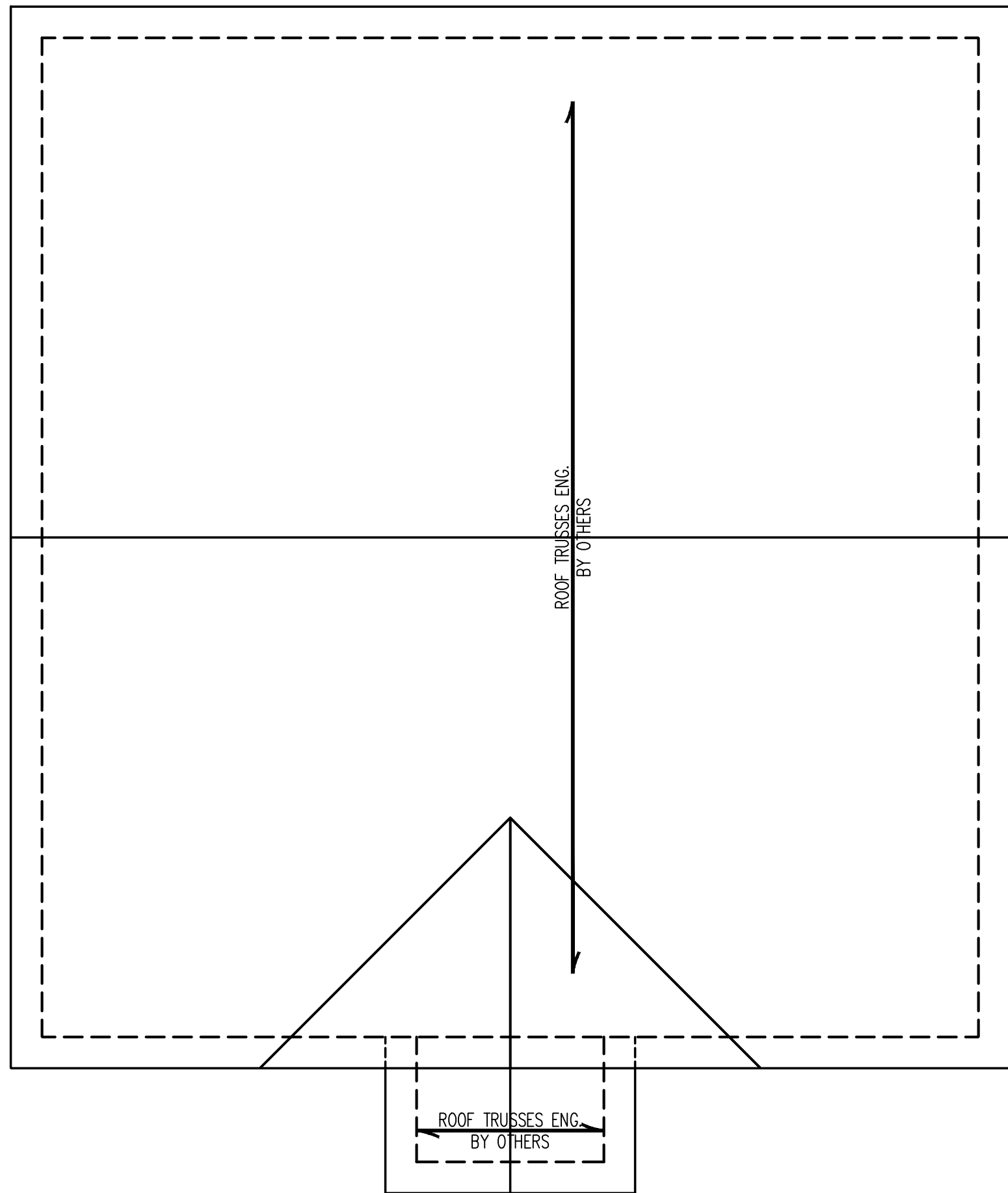


7/2/2025





OPTIONAL COVERED PORCH



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 SPICES 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. IN HIGH WIND ZONES, SECURE EA. RAFTER OR TRUSS TO BEARING WALL WITH SIMPSON H10 HURRICANE TIE (OR EQUAL) UNLESS NOTED OTHERWISE BY TRUSS ENGINEER BASE ON DESIGN UPLIFT FOR EA. TRUSS. REFER TO SECTION R405.8 OF THE 2018 NRC TO ENSURE COMPLIANCE WITH REQUIRED UPLIFT AND LATERAL CONNECTIONS.
8. REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

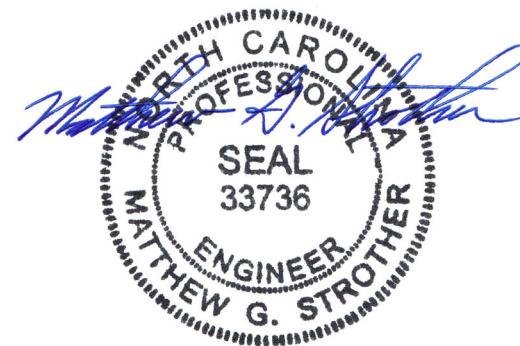
NOTE: REFER TO ARCHITECTURAL DRAWINGS FOR ROOF PITCHES, PLATE HEIGHTS, DIMENSIONS, OVERHANG WIDTHS, AND ATTIC VENT CALC.

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  
N.C. LICENSE NO.: C-1733

CC 1644  
CAVINESS AND CATES



7/2/2025

DATE: JULY 2, 2025

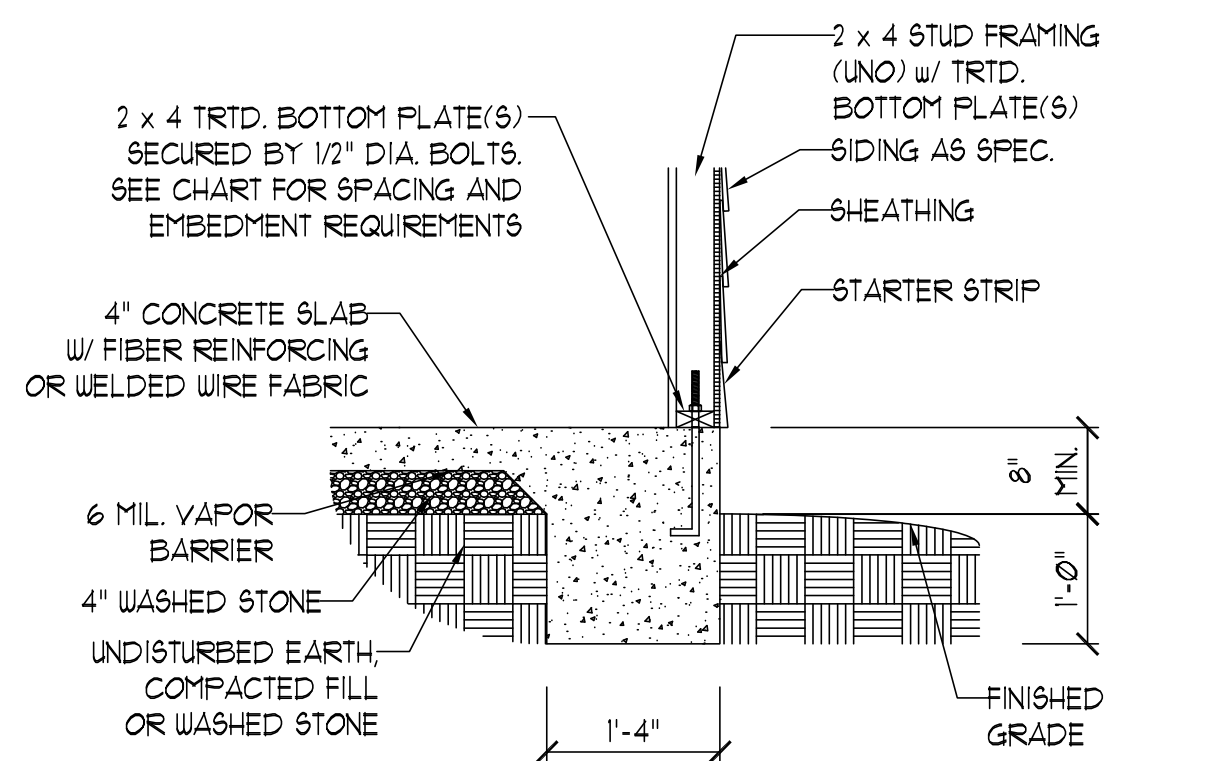
SCALE: 1/4" = 1'-0"

DRAWN BY: TT

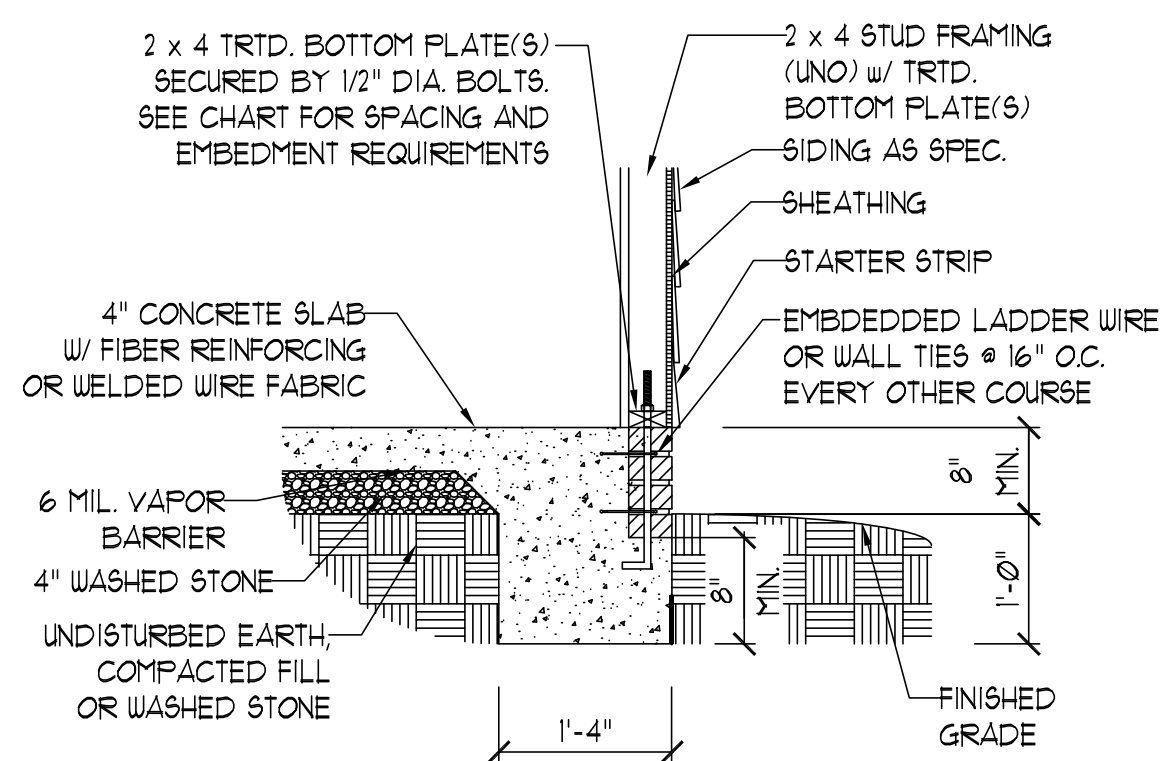
ENGINEERED BY: JAG

**S-4**  
ROOF FRAMING  
PLAN

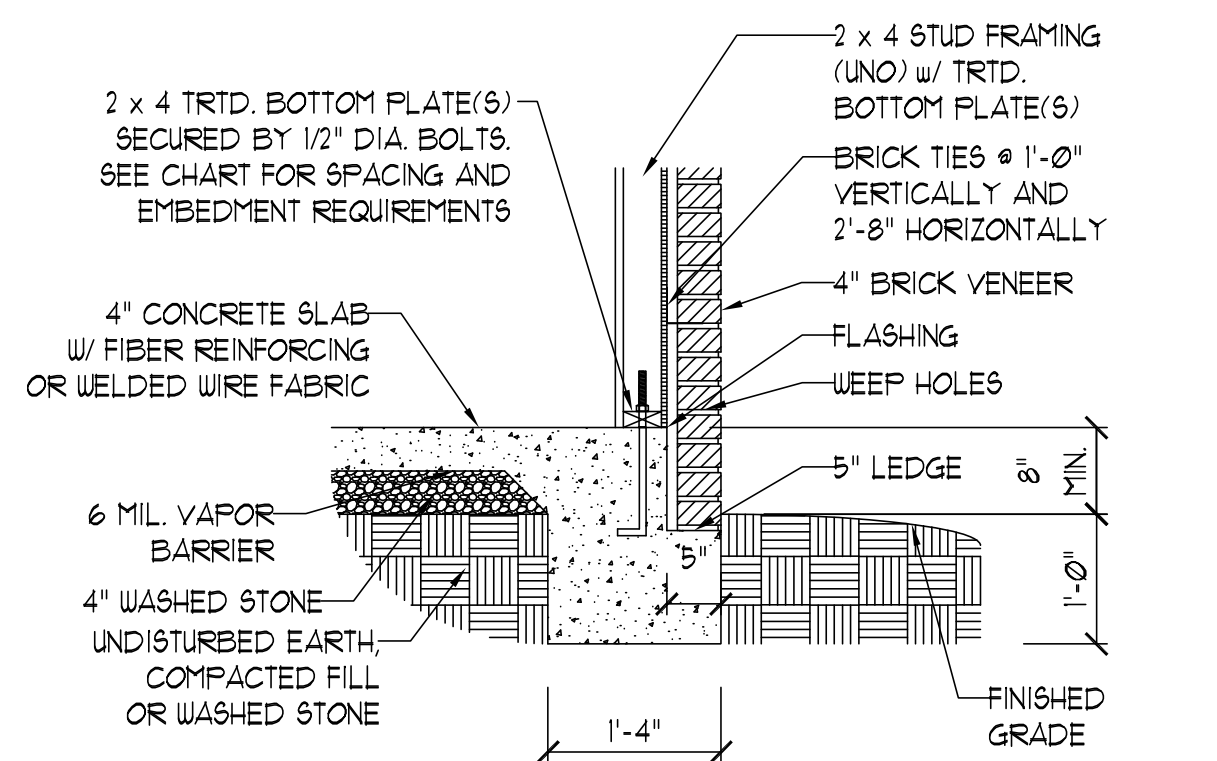




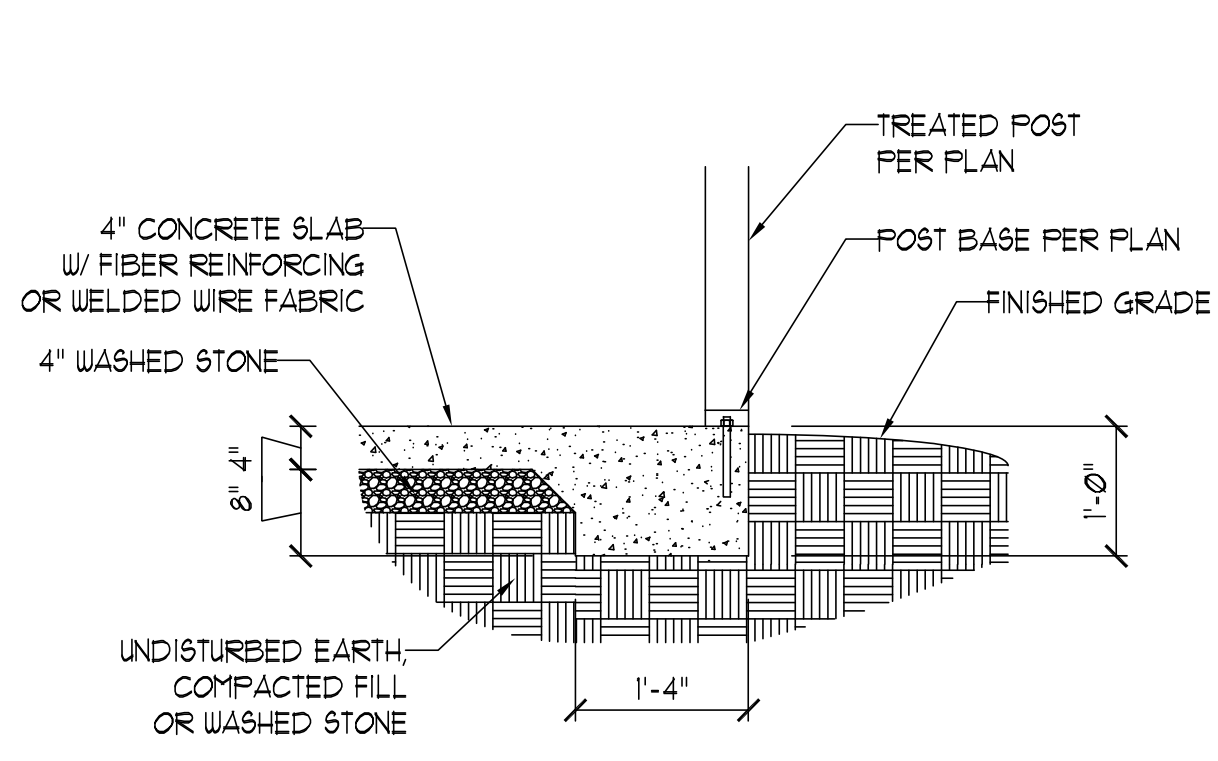
TYPICAL SLAB



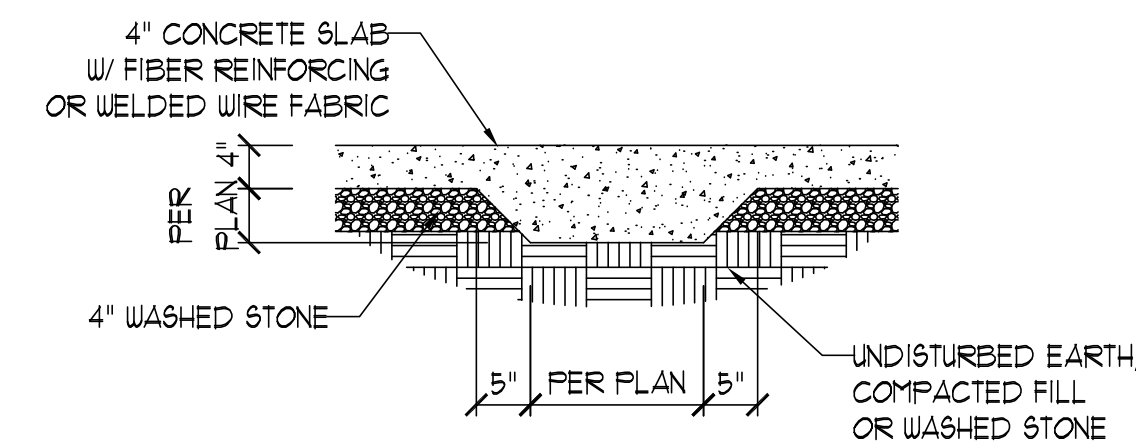
TYPICAL SLAB w/ BRICK LEDGE



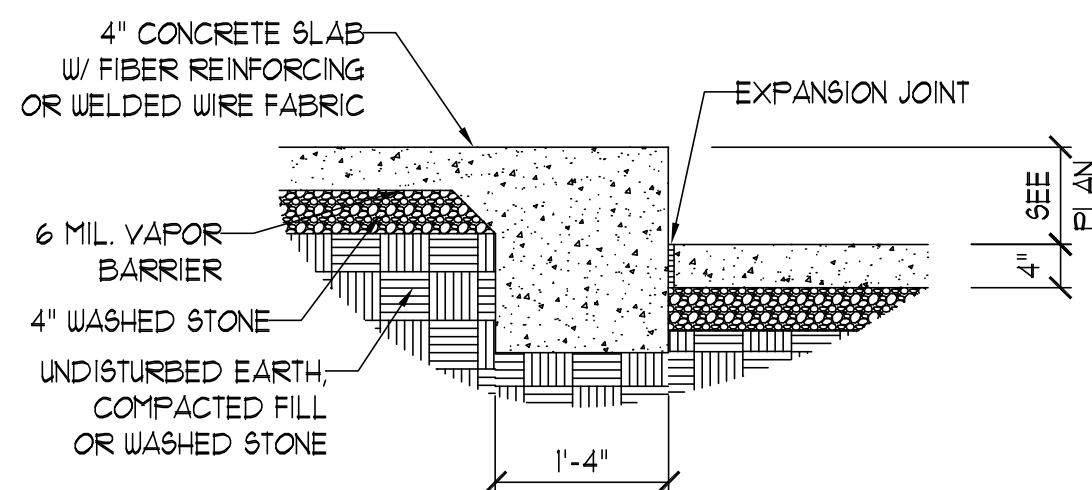
TYPICAL SLAB w/ BRICK VENEER LEDGE



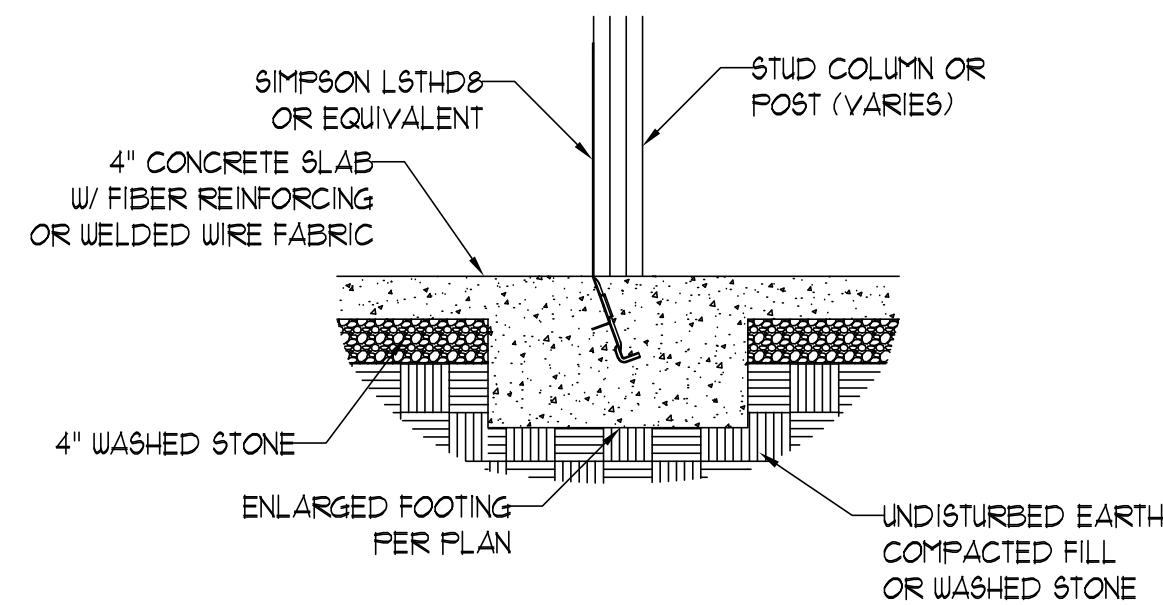
PORCH/SCREEN PORCH



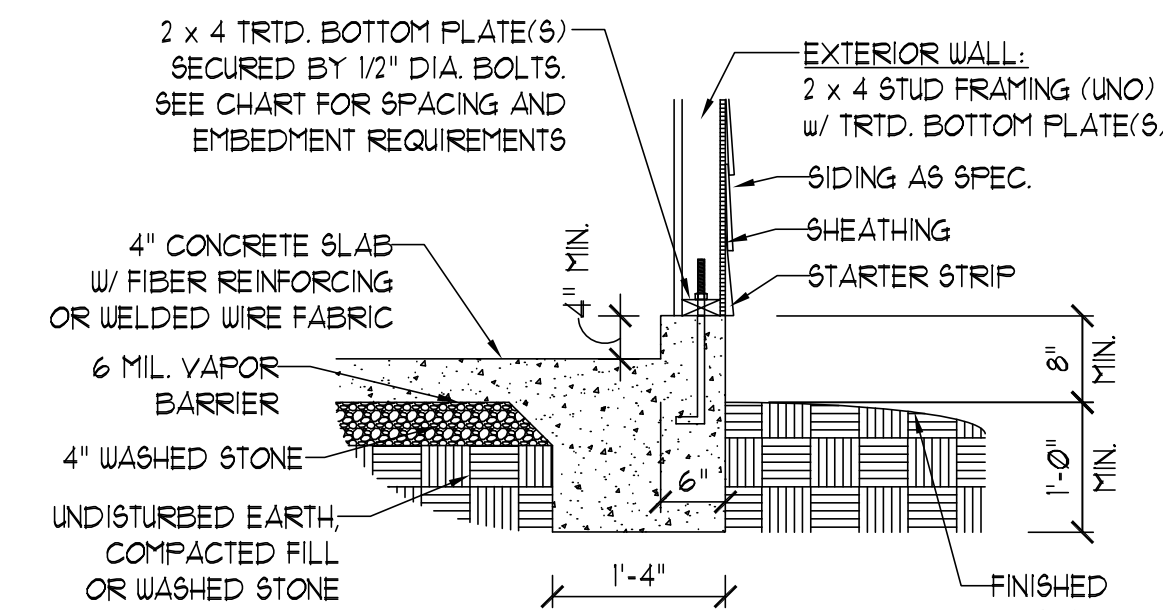
TYPICAL THICKENED SLAB



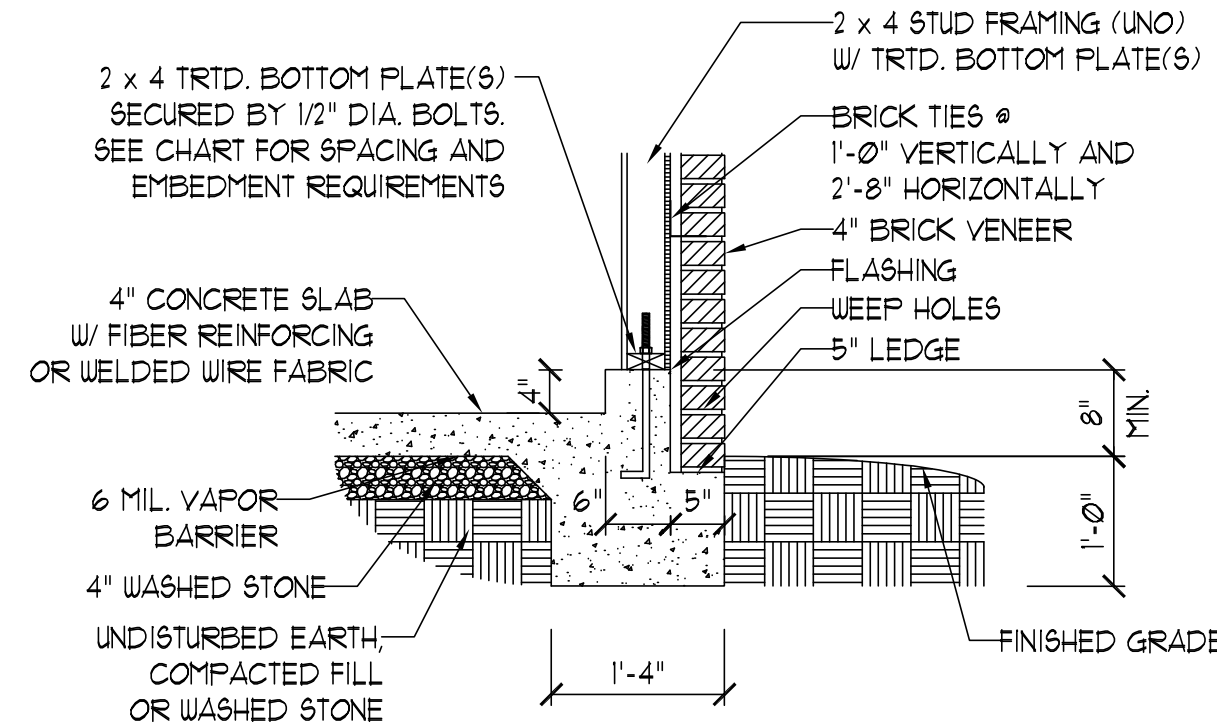
SLAB FLOOR CHANGE



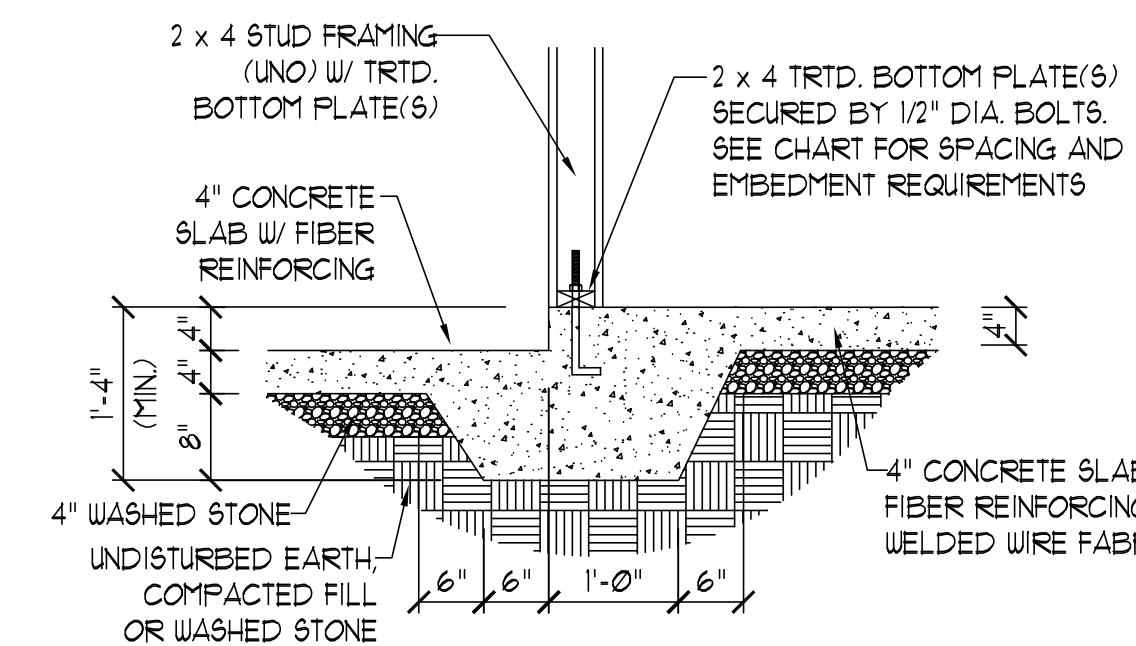
TYPICAL COLUMN TO  
SLAB CONNECTION



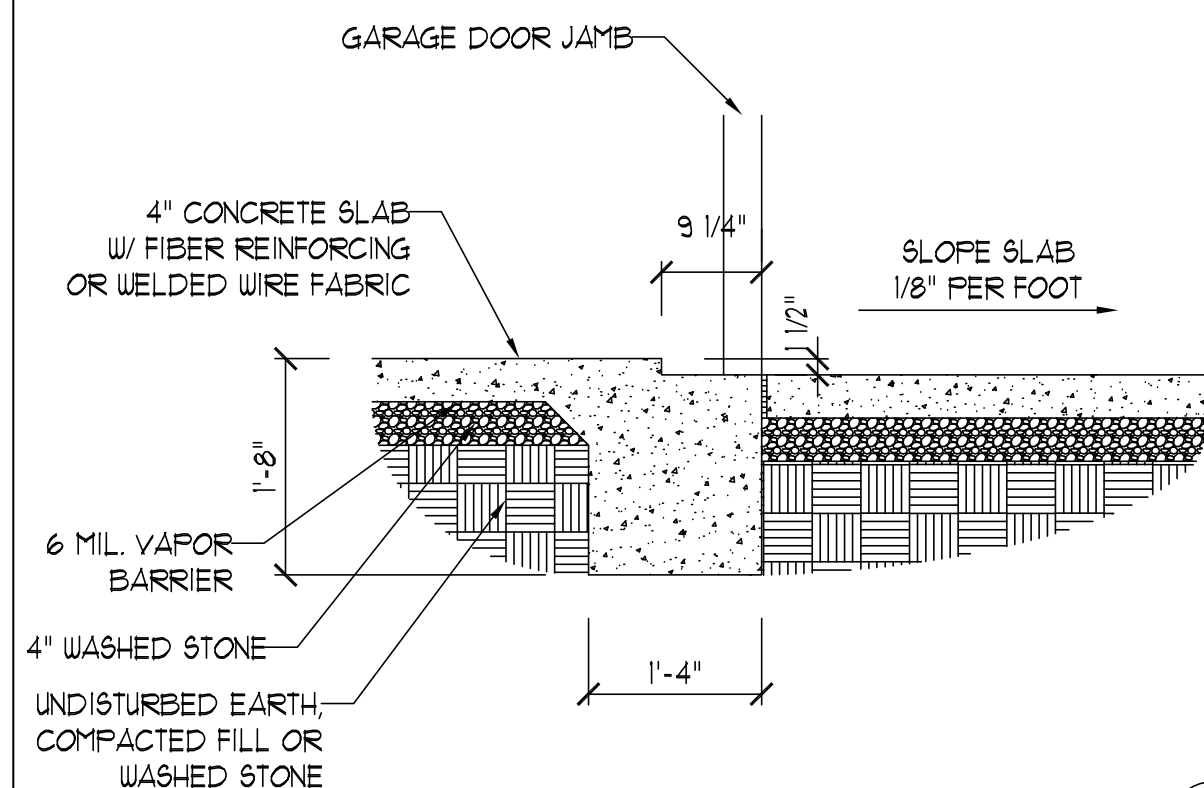
GARAGE CURB



GARAGE CURB w/ BRICK LEDGE



STEP IN GARAGE



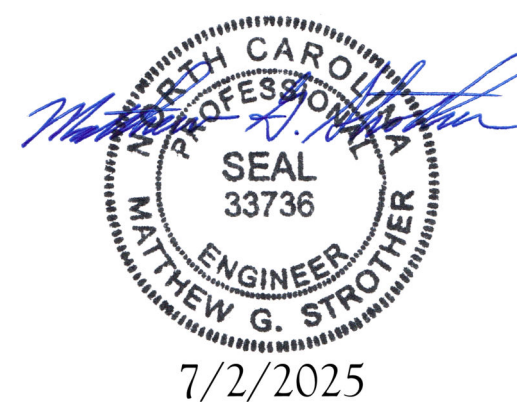
SLAB AT GARAGE DOOR

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.



7/2/2025

This sealed page is to be used in conjunction with a full plan set engineered by J.S. Thompson Engineering, Inc. only. Use of this individual sealed page within architectural pages or shop drawings by others is a punishable offense under N.C. Statute § 89C-23

**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

MONOLITHIC SLAB  
FOUNDATION DETAILS

DATE: AUGUST 30, 2022

SCALE: NTS

DRAWN BY: JST

ENGINEERED BY: JST

FOUNDATION  
DETAILS



GENERAL NOTES

1. 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.
2. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE NORTH CAROLINA RESIDENTIAL CODE (NRCR), 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.

3. STRUCTURAL DESIGN BASED ON THE PROVISIONS OF THE NRCR, 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
4. FOR 115 AND 120 MPH WIND ZONES, FOUNDATION ANCHORAGE IS TO COMPLY WITH SECTION R403.1.6 OF THE NRCR, 2018 EDITION. FOR 130 MPH, 140 MPH, AND 150 MPH WIND ZONES, FOUNDATION ANCHORAGE IS TO COMPLY WITH SECTION 4504 OF THE NRCR, 2018 EDITION.
5. ENERGY EFFICIENCY COMPLIANCE AND INSULATION VALUES OF THE BUILDING TO BE IN ACCORDANCE WITH CHAPTER 11 OF THE NRCR, 2018 EDITION.

FOOTING AND FOUNDATION NOTES

1. FOUNDATION DESIGN BASED ON A MINIMUM ALLOWABLE BEARING CAPACITY OF 2000 PSF. CONTACT GEOTECHNICAL ENGINEER IF BEARING CAPACITY IS NOT ACHIEVED.
2. 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 NRCR, 2018 EDITION.
3. 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 SAWED WITHIN 4 TO 12 HOURS OF CONCRETE FINISHING AND WALL LOCATIONS HAVE BEEN MARKED. ADJUST WHERE NECESSARY.
4. CONCRETE SHALL CONFORM TO SECTION R402.2 OF THE NRCR, 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.
5. MASONRY UNITS TO CONFORM TO ACE 530/ASCE 5/TMS 402. MORTAR SHALL CONFORM TO ASTM C270.
6. 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. PERS MAY BE FILLED SOLID WITH CONCRETE OR TYPE M OR S MORTAR. PIERS AND WALLS SHALL BE CAPPED WITH 8" OF SOLID MASONRY.
7. 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.
8. ALL CONCRETE AND MASONRY FOUNDATION WALLS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF SECTION R404 OF THE NRCR, 2018 EDITION OR IN ACCORDANCE WITH ACI 318, ACI 332, NOMA 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 NRCR, 2018 EDITION. CONCRETE FOUNDATION WALLS ARE TO BE REINFORCED PER TABLE R404.1.1(5) OF THE NRCR, 2018 EDITION. STEP CONCRETE FOUNDATION WALLS TO 2 x 6 FRAMED WALLS AT 16" O.C. WHERE GRADE PERMITS (UNO).

This sealed page is to be used in conjunction with a full plan set engineered by J.S. Thompson Engineering, Inc. only. Use of this individual sealed page within architectural pages or shop drawings by others is a punishable offense under N.C. Statute § 89C-23

FRAMING NOTES

1. 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).
2. 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.
3. 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 |

4. 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.

5. 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.
6. ALL LOAD BEARING HEADERS TO CONFORM TO TABLE R602.7(1) AND R602.7(2) OF THE NRCR, 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.
7. 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).
8. 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).
9. 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.
10. 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.
11. 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.
12. 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 NRCR, 2018 EDITION.
13. 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).
14. 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).
15. 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) 7899919 FAX: (919) 7899921  
N.C. LICENSE NO.: C-1733

STANDARD STRUCTURAL NOTES

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

STRUCTURAL  
NOTES