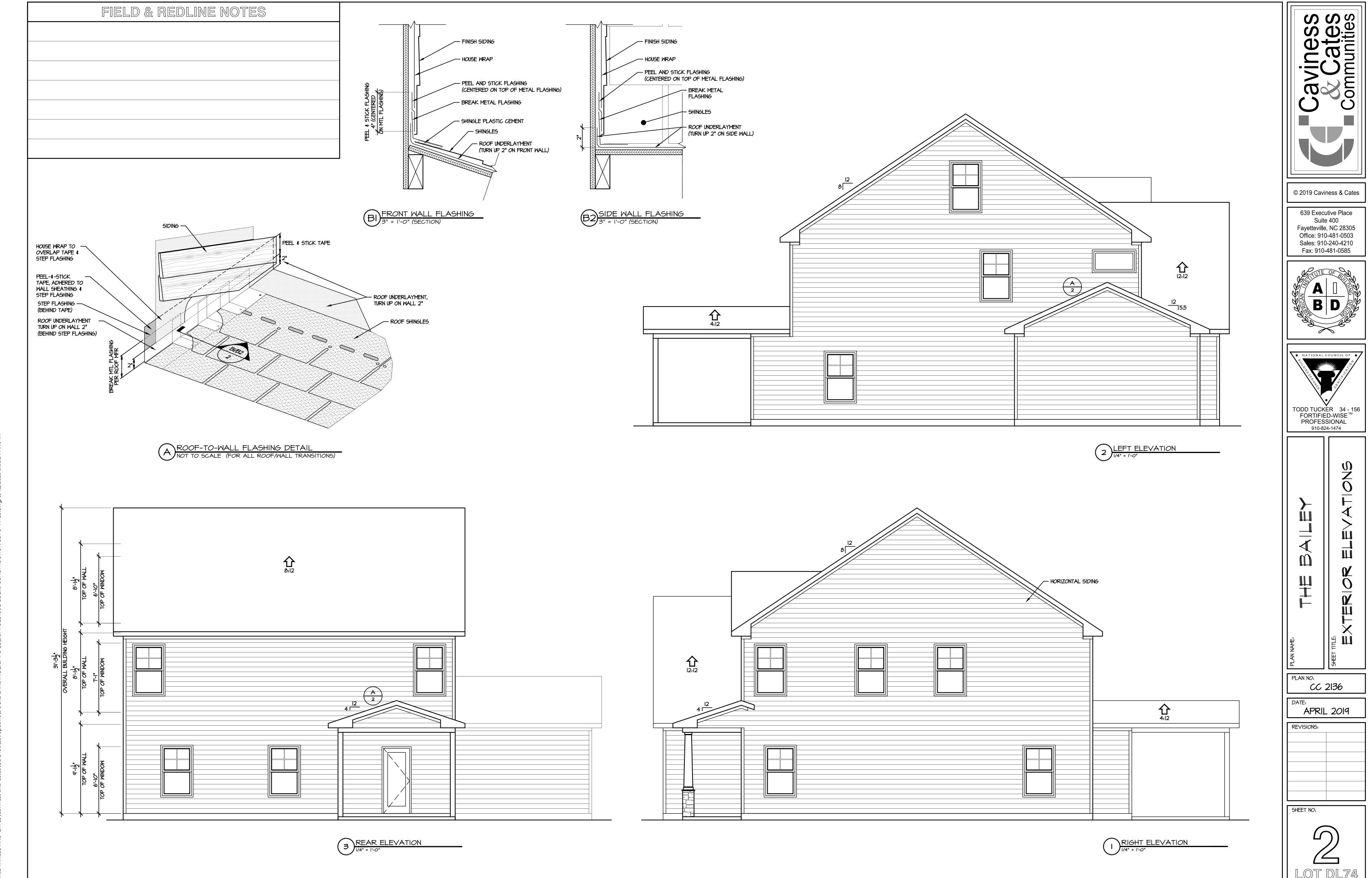
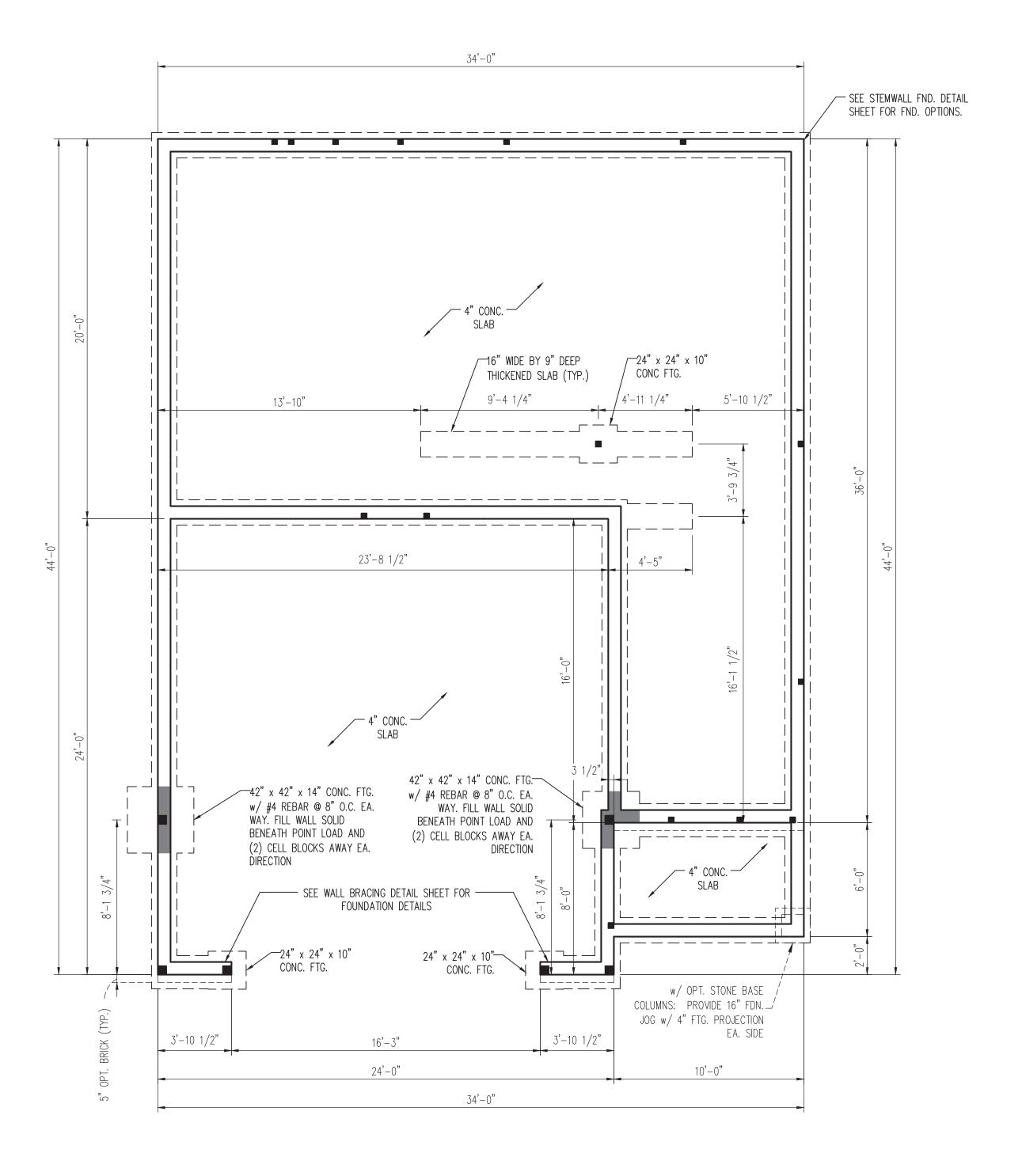
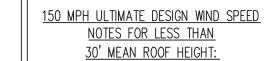


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D.CAVINESS AND CATES Caviness and Cates CC 2136/Lot Specific/DUCKS LANDING DL74 CG 101 74 CC 136C GL 2x6 CONSTRUCTION SET 5-11-25 dwg. 5/12/2025 9:08:34 AM.





- 1. ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT INCLUDING ROOF SYSTEM.
- 2. STRUCTURAL DESIGN PER NORTH CAROLINA
 RESIDENTIAL CODE, 2018 EDITION WITH SPECIAL
 CONSIDERATION TO CHAPTER 45 ("HIGH WIND
 ZONES" FOR 150 MPH WINDS).
- 3. 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.
 4. FOUNDATION ANCHORAGE TO COMPLY WITH
 SECTION 4504 OF THE NORTH CAROLINA
 RESIDENTIAL CODE, 2018 EDITION.
- 5. MEAN ROOF HEIGHT IS LESS THAN 30 FEET.
 6. WALL CLADDING DESIGNED FOR +24.3 PSF AND
 -32 PSF (+/- INDICATE POSITIVE / NEGATIVE
 PRESSURE (TYP).
- 7. 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.
- 8. 7/16" OSB SHEATHING IS REQUIRED ON ALL EXTERIOR WALLS.
- 9. WALLS TO BE BRACED IN ACCORDANCE WITH
 SECTION R602.10 OF THE NORTH CAROLINA
 RESIDENTIAL CODE, 2018 EDITION AND AS NOTED
 ON PLANS.
- O. ENERGY EFFICIENCY COMPLIANCE AND INSULATION VALUES OF THE BUILDING TO BE IN ACCORDANCE WITH CHAPTER 11 OF THE NCRC, 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.

 2. STRUCTURAL DESIGN PER NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.

 3. 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.
- 4. MEAN ROOF HEIGHT IS LESS THAN 30 FEET.
 5. EXTERIOR WALLS DESIGNED FOR 120 MPH WNDS.
 6. WALL CLADDING DESIGNED FOR +15.5 PSF AND -20 PSF (+/- INDICATE POSITIVE / NEGATIVE
- PSF (+/- INDICATE POSITIVE / NEGATIVE PRESSURE (TYP).

 7. 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
- PSF AND -36 PSF FOR ROOF PITCHED 2.25/12 TO 7/12.

 8. INSTALL 7/16" OSB SHEATHING ON ALL EXTERIOR WALLS OF ALL STORIES IN ACCORDANCE WITH SECTION R602.10.3 OF THE NCRC, 2018 EDITION.
- SEE THE WALL BRACING NOTES AND DETAILS SHEET FOR MORE INFORMATION.

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

 10. 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	

DATE: OCTOBER 28 2022

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

DRAWN BY: CAVINESS & CATES

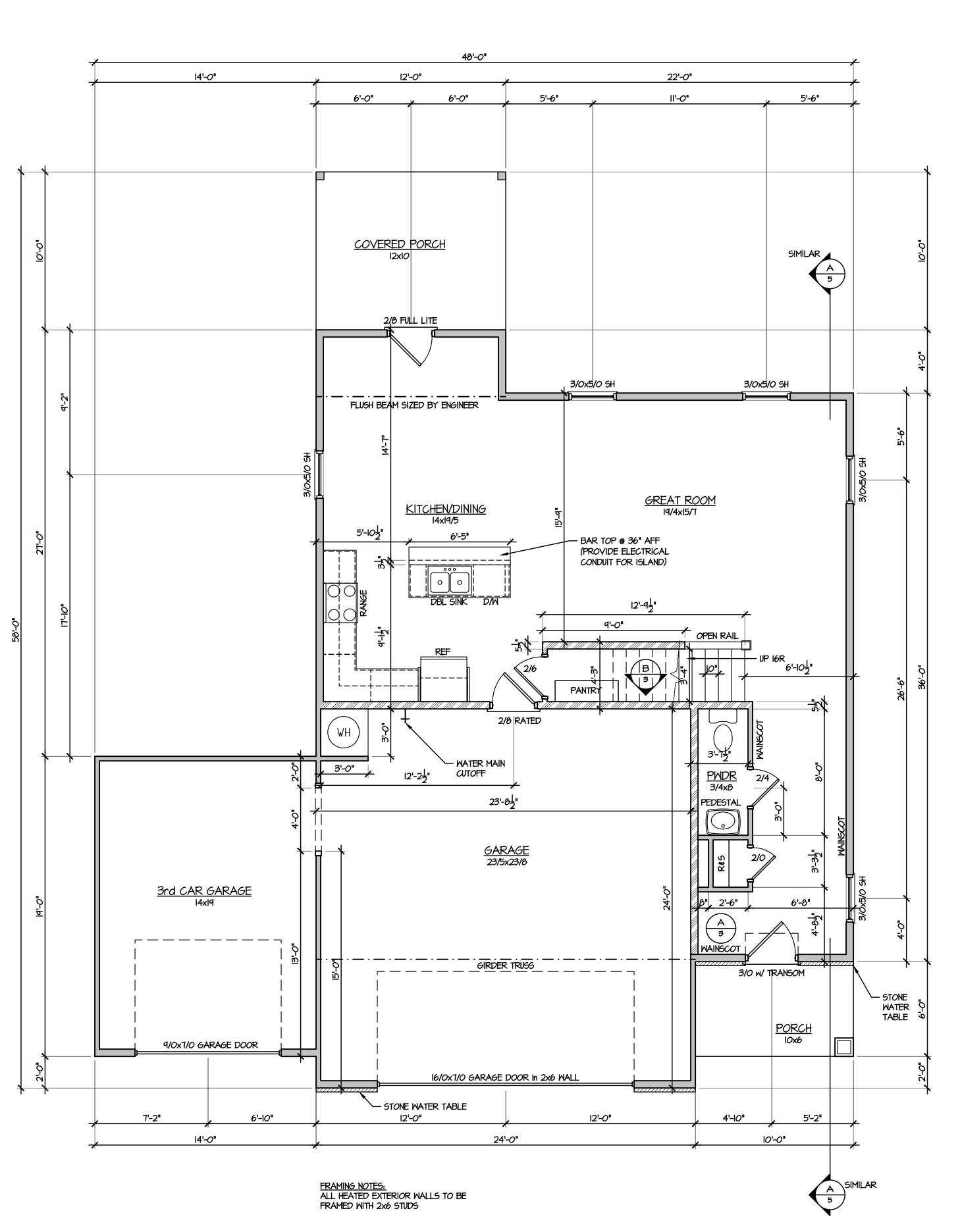
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ENGINEERED BY: JAG

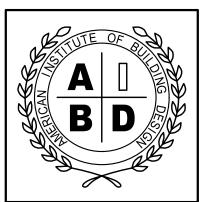


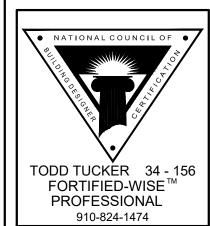
S-1c stem wall foundation plan





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PLAN NO: CC 2136

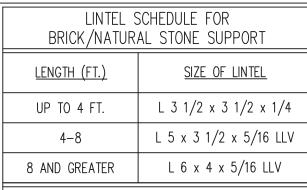
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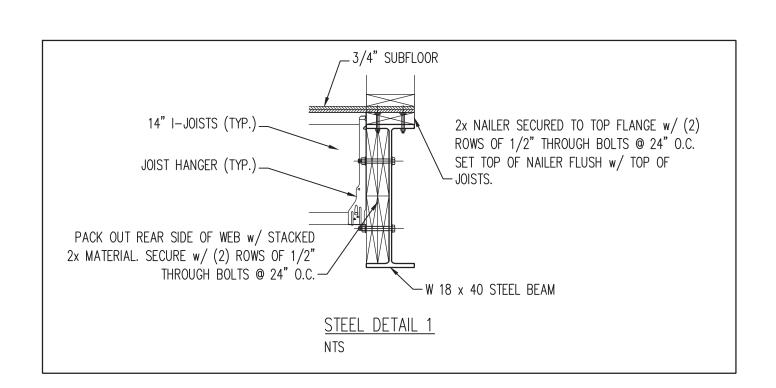
FIRST FLOOR PLAN

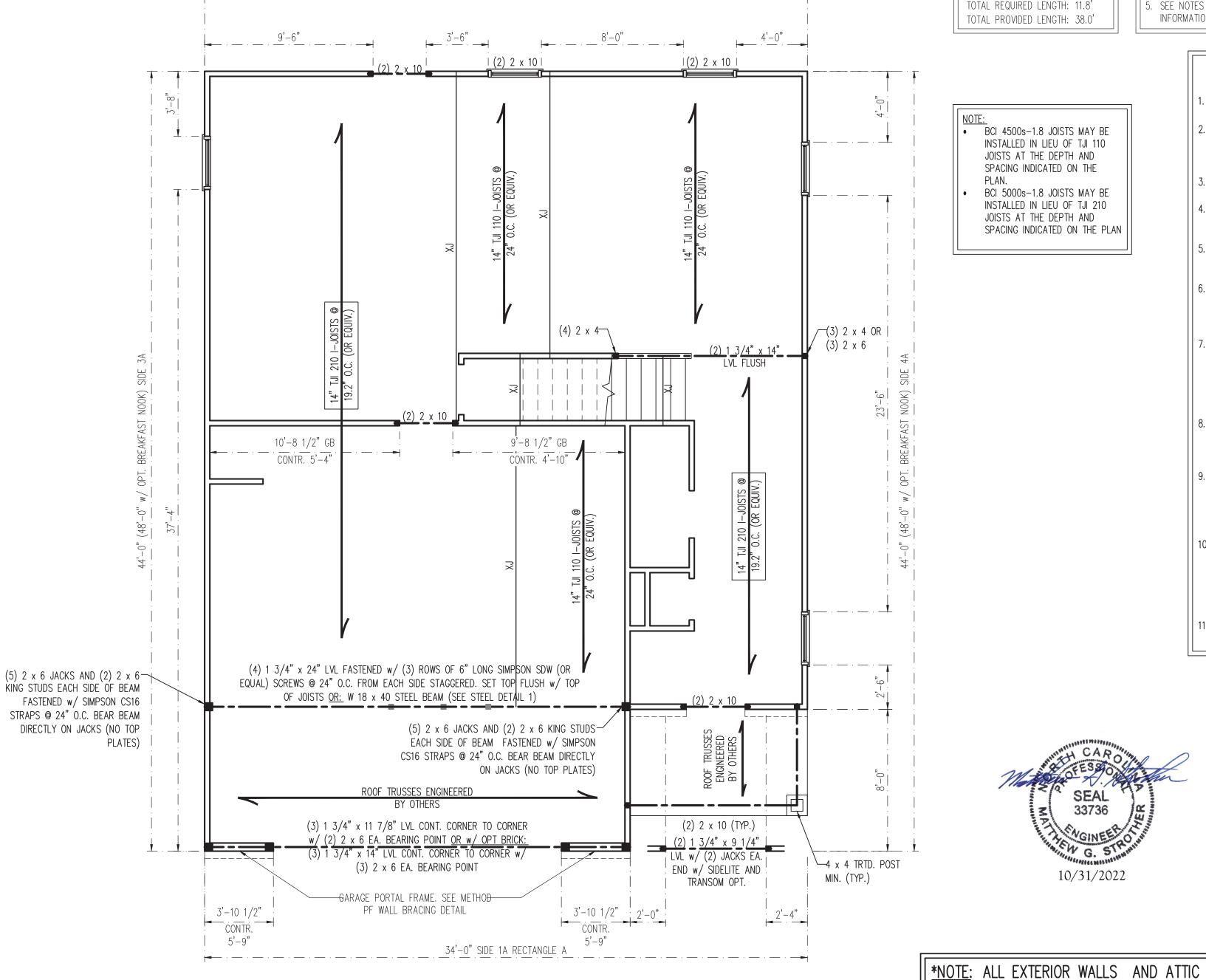
34'-0" SIDE 2A



BRICK SUPPORT NOTES:

- LINTEL SCHEDULE APPLIES TO ALL OPENINGS IN BRICK VENEER (UNO). SEE ARCH DWGS. FOR SIZE AND LOCATION OF OPENINGS.
- 2. (LLV) = LONG LEG VERTICAL
- 3. LENGTH = CLEAR OPENING 4. EMBED ALL ANGLE IRONS MIN. 4" EACH SIDE INTO
- VENEER TO PROVIDE BEARING. 5. FOR ALL HEADERS 8'-0" AND GREATER IN
- LENGTH, ATTACH STEEL ANGLE TO HEADER W/ 1/2" LAG SCREWS @ 12" O.C. STAGGERED. . FOR ALL BRICK SUPPORT @ ROOF LINES, FASTEN
- (2) 2 x 10 BLOCKING BETWEEN STUDS w/ (4) 12d NAILS PER PLY. FASTEN A 6" x 4" x 5/16" STEEL ANGLE TO (2) 2 x 10 BLOCKING w/(2)1/2" LAG SCREWS @ 12" O.C. STAGGERED. SEE SECTION R703.8.2.1 OF THE 2018 NCRC FOR ADDITIONAL BRICK SUPPORT INFORMATION.
- PRECAST REINFORCED CONCRETE LINTELS ENGINEERED BY OTHERS MAY BE USED IN LIEU OF STEEL LINTELS.







RECTANGLE A <u>SIDE 1A (FRONT LOAD)</u> METHOD: CS-WSP/GB/PF TOTAL REQUIRED LENGTH: 16.0' TOTAL PROVIDED LENGTH: 22.73' SIDE 2A

METHOD: CS-WSP TOTAL REQUIRED LENGTH: 16.0' TOTAL PROVIDED LENGTH: 18.67' <u>SIDE 3A (SIDE LOAD)</u> METHOD: CS-WSP/PF TOTAL REQUIRED LENGTH: 11.8' TOTAL PROVIDED LENGTH: 26.71' SIDE 4A

BCI 4500s-1.8 JOISTS MAY BE

INSTALLED IN LIEU OF TJI 110

JOISTS AT THE DEPTH AND

SPACING INDICATED ON THE

BCI 5000s-1.8 JOISTS MAY BE

INSTALLED IN LIEU OF TJI 210

SPACING INDICATED ON THE PLAN

JOISTS AT THE DEPTH AND

METHOD: CS-WSP TOTAL REQUIRED LENGTH: 11.8' TOTAL PROVIDED LENGTH: 38.0'

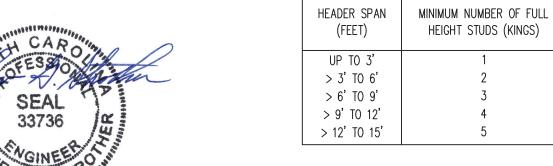
BRACED WALL DESIGN NOTES:

- 1. BRACED WALL DESIGN PER SECTION R602.10 OF THE NCRC 2018 EDITION. 2. CS-WSP REFERS TO "CONTINUOUS SHEATHING - 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 WALL BOARD WHERE NOTED ON THE PLANS. FASTEN GB WITH 1 1/4" SCREWS OR 1 5/8" NAILS SPACED 7" O.C. ALONG PANEL EDGES AND IN THE FIELD INCLUDING TOP AND BOTTOM PLATES. BRACED WALL DESIGN APPLIED IN WIND ZONES UP TO 130 MPH. FOR HIGH
- WIND ZONES, BRACE WALLS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 45 OF THE NCRC 2018 EDITION. 5. 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 SPF #2 OR SYP #2 (KILN DRIED) (UNO). HEADERS HAVE BEEN DESIGNED BASED ON CALCULATED LOADS. CODE TABLES HAVE NOT BEEN USED.
- 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
- SUBSTITUTED WITH THOSE MANUFACTURED BY USP STRUCTURAL CONNECTORS PROVIDED THAT THE LOAD CAPACITY AND FUNCTION IS EQUIVALENT.
- I. 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



	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	

DATE: OCTOBER 28 2022 SCALE: 1/4" = 1'-0" DRAWN BY: CAVINESS & CATES ENGINEERED BY: JAG

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S-2 SECOND FLOOR FRAMING PLAN

INSTALL AN EXTRA JOIST UNDER WALLS PARALLEL TO FLOOR JOISTS WHERE NOTED ON THE PLANS.

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

). 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.)

10. 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.

10/31/2022

WALLS ARE TO BE 2 x 4 @ 16" O.C. MIN.

WALLS MAY BE CONSTRUCTED IN LIEU OF

2 x 4 WALLS (UNO). ALL INTERIOR LOAD

BEARING WALLS ARE TO BE 2 x 4 @ 16"

INTERIOR WALLS ARE TO BE 2 x 4 @ 24"

(UNO). 2 x 6 @ 24" O.C. EXTERIOR

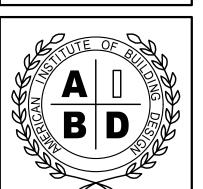
O.C. (UNO) AND NON-LOAD BEARING

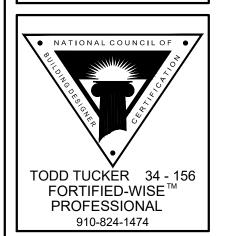
0.C. (UNO).

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MA BONUS

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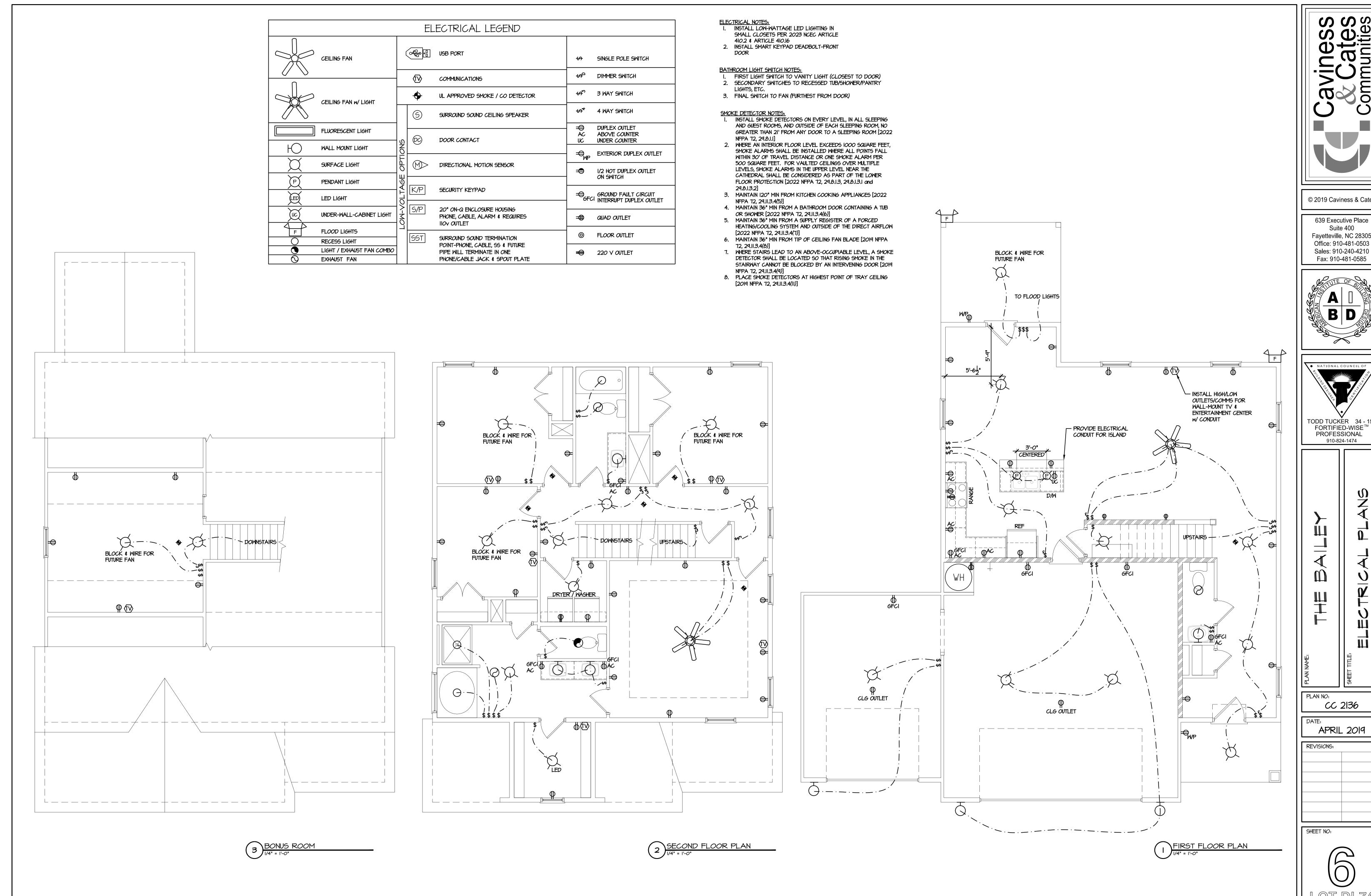
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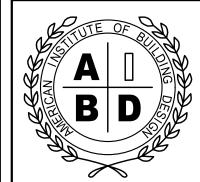
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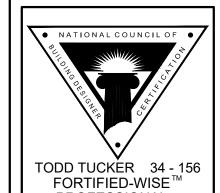


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PROFESSIONAL 910-824-1474

CC 2136

APRIL 2019



REMOVE NON-STRUCTURAL WEB OF TRUSSES —

SET AND BRACED

w/ OPTIONAL THIRD FLOOR BONUS ROOM

BEARING

FRAME DOWN 6"

OVER STAIRWELL AFTER TRUSSES HAVE BEEN

BELOW TOP

ROOF TRUSSES ENGINEERED

*NOTE: ALL EXTERIOR WALLS AND ATTIC WALLS ARE TO BE 2 x 4 @ 16" O.C. MIN. (UNO). 2 x 6 @ 24" O.C. EXTERIOR WALLS MAY BE CONSTRUCTED IN LIEU OF 2 x 4 WALLS (UNO). ALL INTERIOR LOAD BEARING WALLS ARE TO BE 2 x 4 @ 16" O.C. (UNO) AND NON-LOAD BEARING INTERIOR WALLS ARE TO BE 2 x 4 @ 24" O.C. (UNO).

BRACED WALL DESIGN NOTES:

- 1. BRACED WALL DESIGN PER SECTION R602.10 OF THE NCRC 2018 EDITION. 2. CS-WSP REFERS TO "CONTINUOUS SHEATHING - 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. 3. *GB REFERS TO "GYPSUM BOARD" CONTRACTOR IS TO INSTALL 1/2" (MIN.) GYPSUM WALL BOARD WHERE NOTED ON THE PLANS. FASTEN GB WITH 1 1/4" SCREWS OR 1 5/8" NAILS SPACED 7" O.C. ALONG PANEL EDGES AND IN THE FIELD INCLUDING TOP AND BOTTOM PLATES.
- 4. BRACED WALL DESIGN APPLIED IN WIND ZONES UP TO 130 MPH. FOR HIGH WIND ZONES, BRACE WALLS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 45 OF THE NCRC 2018 EDITION. 5. SEE NOTES AND DETAIL SHEETS FOR ADDITIONAL BRACED WALL

INFORMATION.

- 1. PER SECTION R602.10.3.2 OF THE 2018 NCRC, THE AMOUNT OF BRACING ON THE SECOND FLOOR EXCEEDS THE AMOUNT REQUIRED FOR THE FIRST FLOOR AND NO BRACED WALL ANALYSIS IS REQUIRED.
- 2. SHEATH ALL EXTERIOR WALLS WITH 7/16" OSB SHEATHING ATTACHED WITH 8d NAILS AT 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD.

STRUCTURAL NOTES:

- ALL FRAMING LUMBER TO BE #2 SPF (UNO). 2. ALL LOAD BEARING HEADERS TO BE (2) 2 x 6
- . 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
- 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

SOLID BLOCKING TO GIRDER OR FOUNDATION.

- 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
- SPECIFIED SIMPSON STRONG-TIE PRODUCTS MAY BE SUBSTITUTED WITH THOSE MANUFACTURED BY USP STRUCTURAL CONNECTORS PROVIDED THAT THE LOAD CAPACITY AND FUNCTION IS EQUIVALENT.

CONT CONTINUOUS

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

	1	
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	

LEGEND

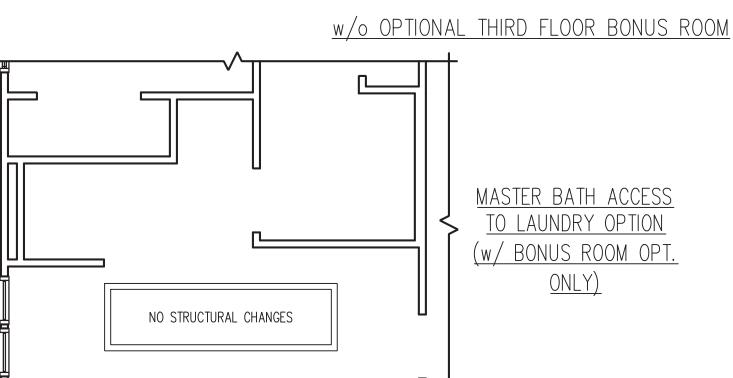
DATE: OCTOBER 28 2022 SCALE: 1/4" = 1'-0" DRAWN BY: CAVINESS & CATES ENGINEERED BY: JAG

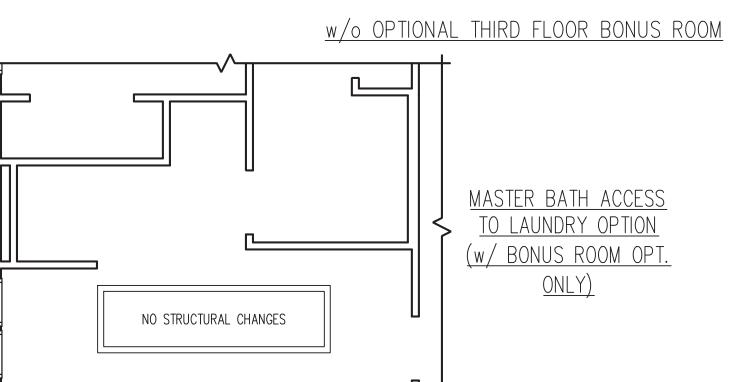
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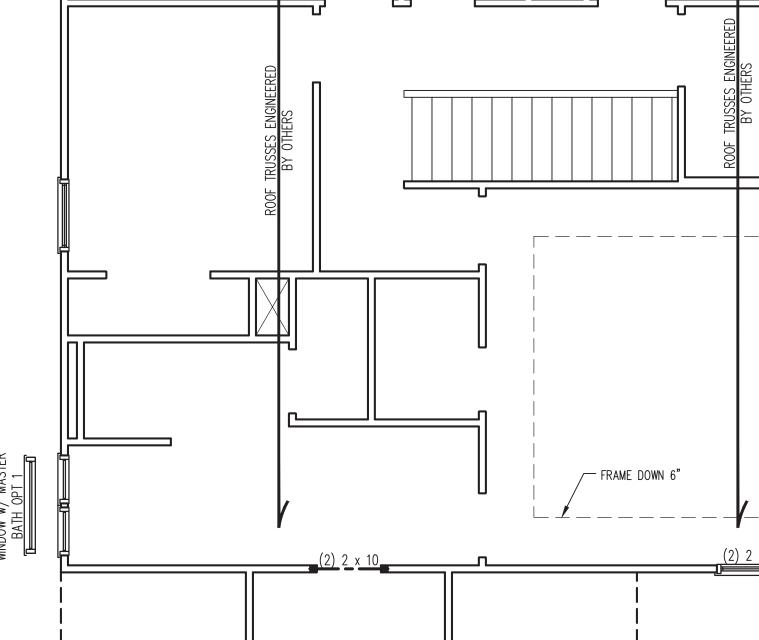
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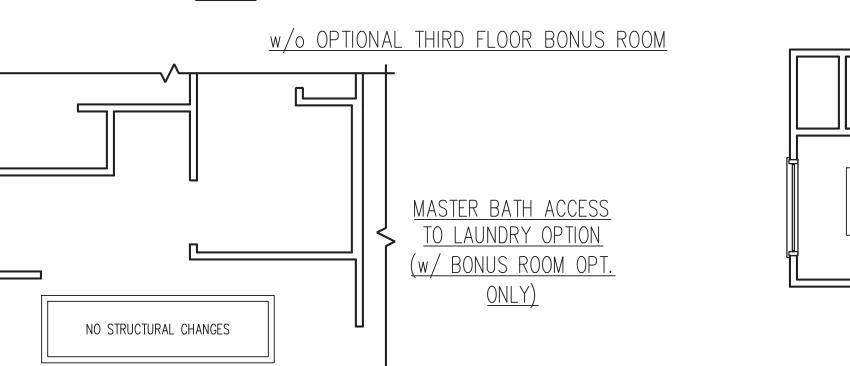
S-3 ATTIC FLOOR FRAMING PLAN

ROOF TRUSSES ENGINEERED BY OTHERS --------*---*-













NO STRUCTURAL CHANGES

MASTER BATH OPTION 2

BRACED WALL DESIGN NOTES:

- BRACED WALL DESIGN PER SECTION R602.10 OF THE NCRC 2018 EDITION.
 CS-WSP REFERS TO "CONTINUOUS SHEATHING 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.
- 3. *GB REFERS TO "GYPSUM BOARD" CONTRACTOR IS TO INSTALL 1/2" (MIN.) GYPSUM WALL BOARD WHERE NOTED ON THE PLANS. FASTEN GB WITH 1 1/4" SCREWS OR 1 5/8" NAILS SPACED 7" O.C. ALONG PANEL EDGES AND IN THE FIELD INCLUDING TOP AND BOTTOM PLATES.
- 4. BRACED WALL DESIGN APPLIED IN WIND ZONES UP TO 130 MPH. FOR HIGH WIND ZONES, BRACE WALLS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 45 OF THE NCRC 2018 EDITION.

 5. SEE NOTES AND DETAIL SHEETS FOR ADDITIONAL BRACED WALL

NOTE

INFORMATION.

- 1. PER TABLE R602.10.3 OF THE 2018 NCRC, THE 3RD FLOOR IS CONTAINED WHOLLY WITHIN THE ROOF SYSTEM AND WALL BRACING ANALYSIS IS NOT REQUIRED ON THE 3RD FLOOR. IN ADDITION, THE 3RD FLOOR NEED NOT BE CONSIDERED A STORY IN THE FIRST OR SECOND FLOOR WALL BRACING ANALYSIS.
- 2. SHEATH ALL EXTERIOR WALLS WITH 7/16" OSB SHEATHING ATTACHED WITH 8d NAILS AT 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD.

STRUCTURAL NOTES:

- 1. ALL FRAMING LUMBER TO BE #2 SPF (UNO).
 2. ALL LOAD BEARING HEADERS TO BE (2) 2 x 6
- 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. 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	HEADENS IN EXTENION WAL
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		

*NOTE: ALL EXTERIOR WALLS AND ATTIC WALLS ARE TO BE 2 x 4 @ 16" O.C. MIN. (UNO). 2 x 6 @ 24" O.C. EXTERIOR WALLS MAY BE CONSTRUCTED IN LIEU OF 2 x 4 WALLS (UNO). ALL INTERIOR LOAD BEARING WALLS ARE TO BE 2 x 4 @ 16" O.C. (UNO) AND NON-LOAD BEARING INTERIOR WALLS ARE TO BE 2 x 4 @ 24" O.C. (UNO).

DATE: OCTOBER 28 2022

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

DRAWN BY: CAVINESS & CATES

ENGINEERED BY: JAG

CEILING FRAMING PLAN

- REMOVE MON-STRUCTURAL WEB OF TRUSSES OWN STANKEL ATTER TRUSSES HAVE BEEN SET AND BRACED

GREAT AND BRACED

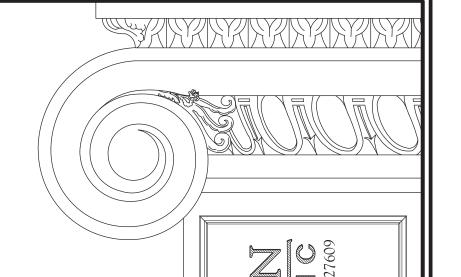
GREAT TRUSSES HAVE BEEN SET AND BRACED

GREAT TRUSSES HAVE BRACED

GR

OPTIONAL BONUS ROOM





STRUCTURAL NOTES:

- ALL FRAMING LUMBER TO BE #2 SPF (UNO). 2. CIRCLES DENOTE (3) 2 x 4 POSTS FOR ROOF
- FRAME DORMER WALLS ON TOP OF DOUBLE OR

12d NAILS @ 16" O.C. (TYP.)

(6) 12d TOE NAILS.

- TRIPLE RAFTERS. 4. HIP SPLICES ARE TO BE SPACED A MIN. OF 8'-0". FASTEN MEMBERS WITH THREE ROWS OF
- 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. 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
- REFER TO SECTION R802.11 OF THE 2018 NCRC FOR REQUIRED UPLIFT RESISTANCE AT RAFTERS AND TRUSSES.
- REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

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

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

_		
		LEGEND
	XT	EXTRA TRUSS
	TS	TRUSS SUPPORT
	CONT	CONTINUOUS
	EA	EACH
	OC	ON CENTER
	SPF	SPRUCE PINE FIR
	SYP	SOUTHERN YELLOW PINE
	TYP	TYPICAL
	UNO	UNLESS NOTED OTHERWISE
L		<u> </u>

10/31/2022

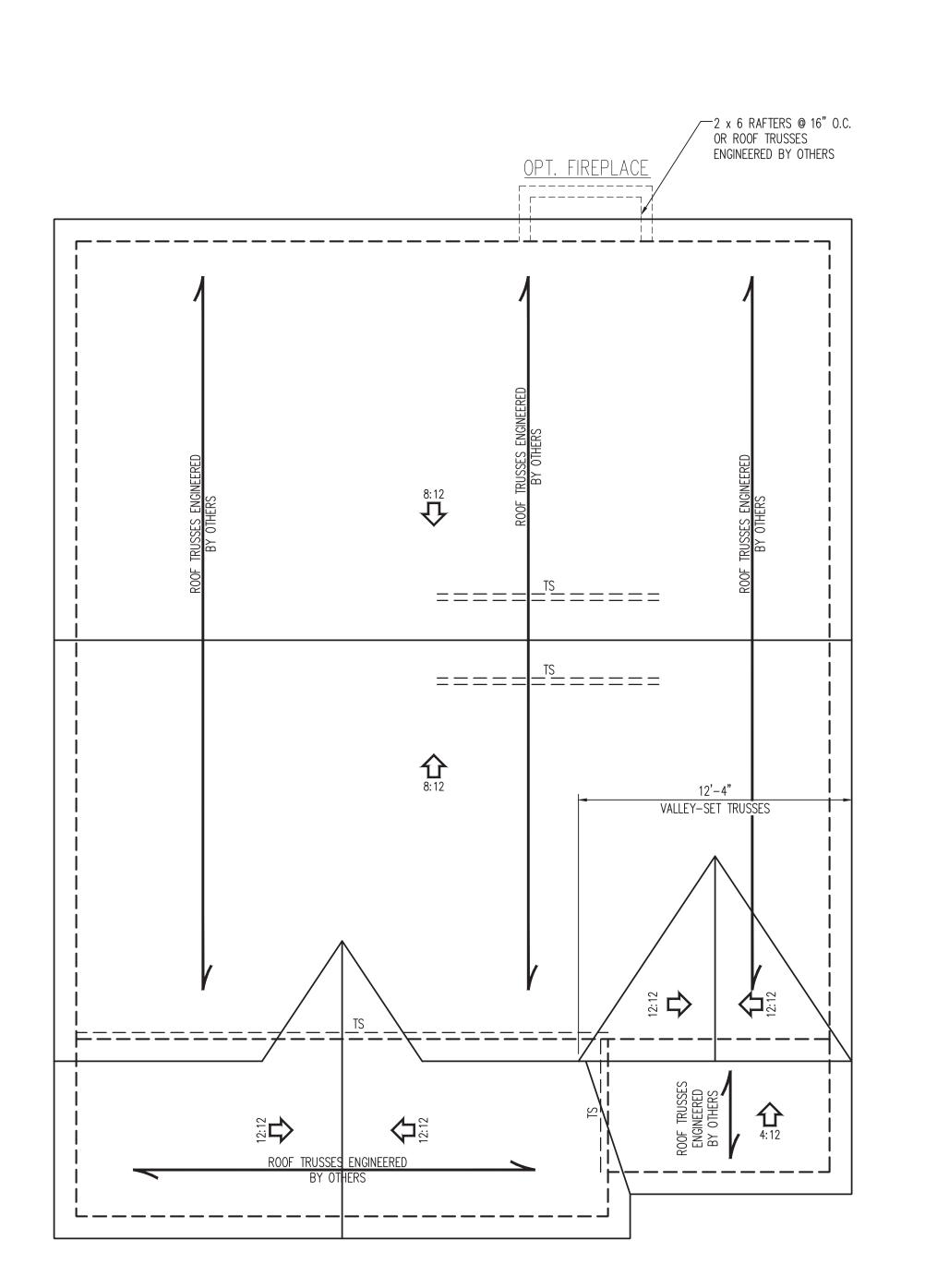
DATE: OCTOBER 28 2022

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

DRAWN BY: CAVINESS & CATES ENGINEERED BY: JAG

S-5

ROOF FRAMING



OPT. FIREPLACE _____ i ______ 8:12 12'-4"
VALLEY-SET TRUSSES 12:12 12:12

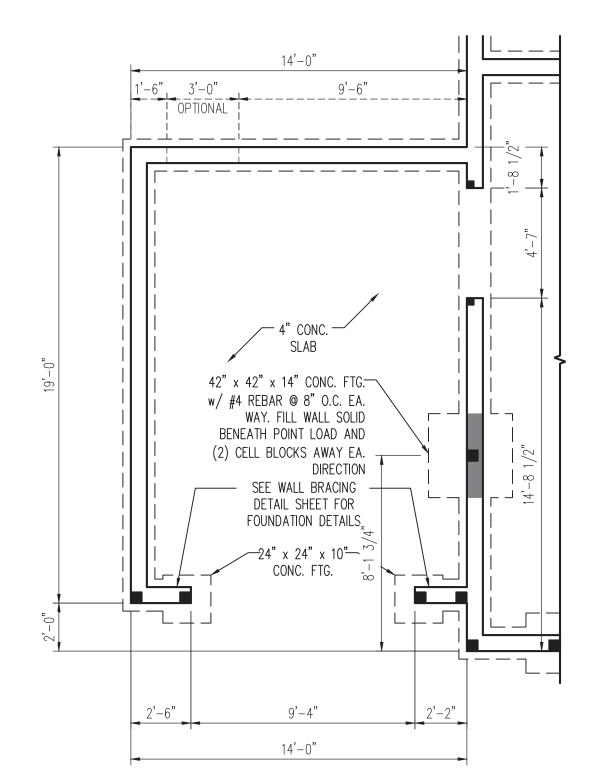
/─2 x 6 RAFTERS @ 16" O.C.

ENGINEERED BY OTHERS

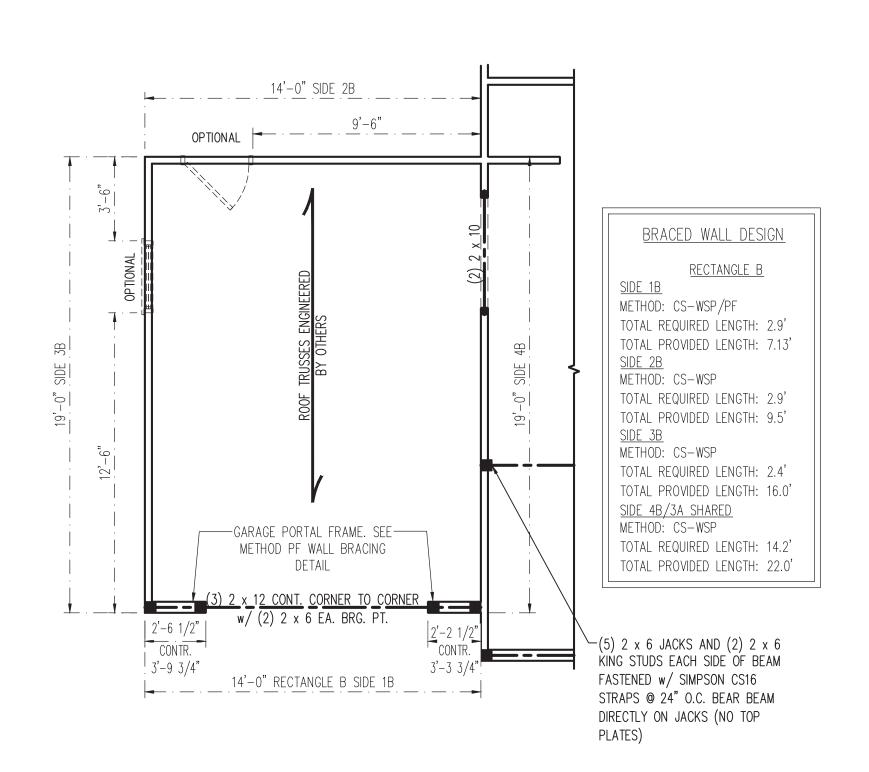
OR ROOF TRUSSES

ROOF PLAN w/ OPTIONAL BONUS ROOM

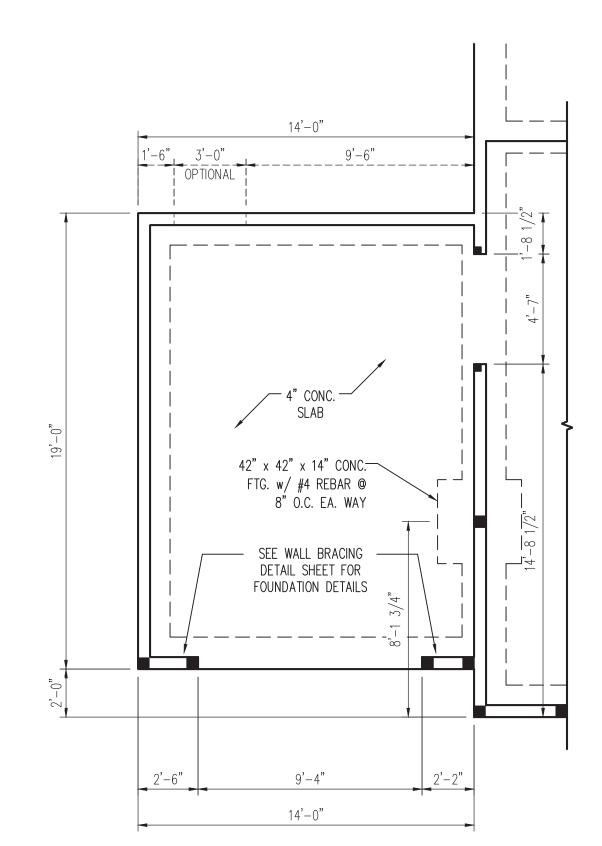
ROOF PLAN w/o OPTIONAL BONUS ROOM



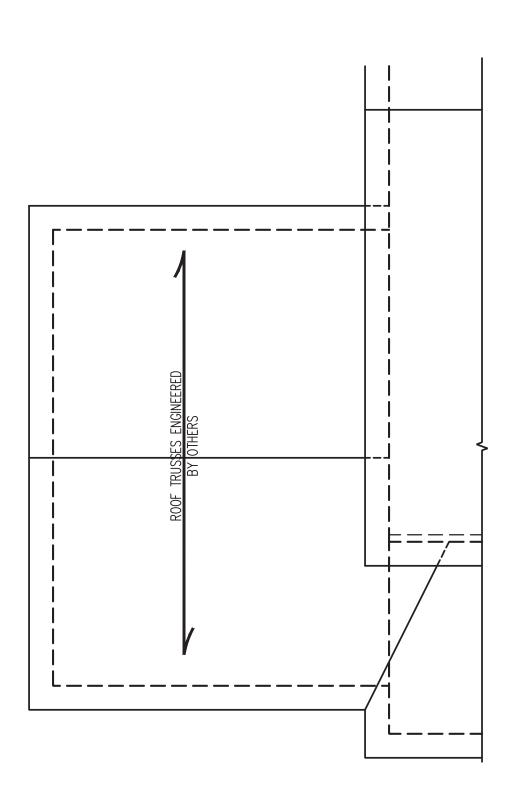
CRAWL SPACE AND STEM WALL



FRAMING PLAN



MONO SLAB



SEAL 33736

SEAL 33736

CAVINESS & CATES

DATE: OCTOBER 28 2022

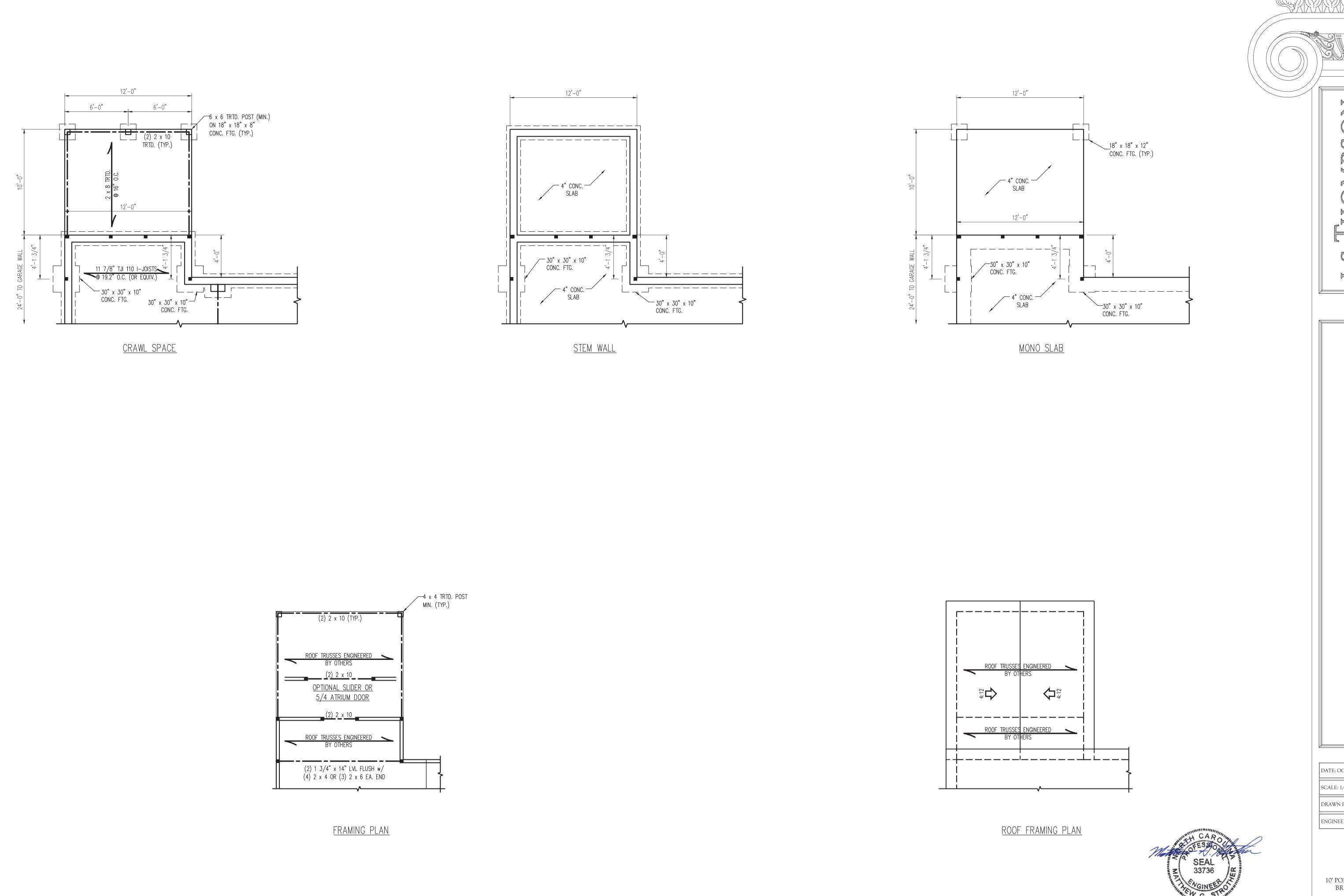
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ENGINEERED BY: JAG

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

S-8 THIRD CAR GARAGE

ROOF FRAMING PLAN



ENC. LICENSE NO.: C.1733

CAVINESS & CATES

DATE: OCTOBER 28 2022

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

DRAWN BY: CAVINESS & CATES

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S-11a
10' PORCH w/ EXTENDED
BREAKFAST NOOK

ENGINE RRING, NC 276(3)33 EAST SIX FORKS ROAD, SUITE 180 RALEIGH, NC 276(19) 789-9919 FAX: (919) 789-9921

STEM WALL FOUNDATION DETAILS

DATE: AUGUST 30, 2022

SCALE: NTS

DRAWN BY: JST

ENGINEERED BY: JST

FOUNDATION

DETAILS

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MASONRY STEMWALL SPECIFICATIONS MASONRY WALL TYPE WALL HEIGHT 4" BRICK AND 4" BRICK AND (FEET) 12" CMU 2 AND UNGROUTED GROUT SOLID UNGROUTED UNGROUTED BELOW GROUT SOLID UNGROUTED UNGROUTED UNGROUTED GROUT SOLID w/ #4 GROUT SOLID w/ #4 GROUT SOLID GROUT SOLID REBAR @ 48" O.C. REBAR @ 64" O.C. GROUT SOLID w/ #4 GROUT SOLID w/ #4 GROUT SOLID w/ #4 NOT APPLICABLE REBAR @ 36" O.C. REBAR @ 36" O.C. REBAR @ 64" O.C. GROUT SOLID w/ #4 GROUT SOLID w/ #4 GROUT SOLID w/ #4 NOT APPLICABLE REBAR @ 24" O.C. REBAR @ 24" O.C. REBAR @ 64" O.C. 7 AND ENGINEERED DESIGN BASED ON SITE CONDITIONS GREATER

STRUCTURAL NOTES:

- 1) WALL HEIGHT MEASURED FROM TOP OF FOOTING TO TOP OF THE WALL.
- 2) TIE MULTIPLE WYTHES TOGETHER WITH LADDER WIRE AT 16" O.C. VERTICALLY.
- 3) CHART APPLICABLE FOR HOUSE FOUNDATION <u>ONLY.</u> CONSULT ENGINEER FOR DESIGN OF GARAGE FOUNDATION NOT COMMON TO HOUSE.
- 4) BACKFILL OF CLEAN #57 / #67 WASHED STONE IS ALLOWABLE.
- 5) BACKFILL OF WELL DRAINED OR SAND GRAVEL MIXTURE SOILS (45 PSF/FT BELOW GRADE) CLASSIFIED AS GROUP I ACCORDING TO UNIFIED SOILS CLASSIFICATION SYSTEM IN ACCORDANCE WITH <u>TABLE R405.1</u> OF THE 2018 NORTH CAROLINA RESIDENTIAL CODE ARE ALLOWABLE.
- 6) PREP SLAB PER <u>R506.2.1</u> AND <u>R506.2.2</u> BASE AND <u>EXCEPTION</u> OF 2018 NORTH CAROLINA RESIDENTIAL CODE.
- 7) MINIMUM 24" LAP SPLICE LENGTH.
- 8) LOCATE REBAR IN CENTER OF FOUNDATION WALL.
- 9) WHERE REQUIRED, FILL BLOCK SOLID WITH TYPE "S" MORTAR OR 3000 PSI GROUT. USE OF "LOW LIFT GROUTING" METHOD REQUIRED WHEN FILLING WALLS WITH GROUT AT HEIGHTS OF 5' AND GREATER.

THICKENED SLAB NOT REQUIRED 4" CONCRETE SLAB W/ FIBER REINFORCING OR WELDED WIRE FABRIC 6 MIL. VAPOR BARRIER 4" WASHED STONE UNDISTURBED EARTH, COMPACTED FILL OR WASHED STONE TOP TWO COURSES OF STEM WALL AND ALL CELLS W/ REINFORCEMENT TO BE FILLED SOLID. LADDER WIRE FILLED SOLID. LADDER WIRE EVERY OTHER COURSE EVERY OTHER EVERY OTHER COURSE EVERY OTHER COURSE EVERY OTHER COURSE EVERY OTHER COURSE EVERY OTHER EVERY	EMBEDMENT REQUIREMENTS ## CONCRETE SLAB ## CONCRETE SLAB ## FIBER REINFORCING OR WELDED WIRE FABRIC ## WASHED STONE UNDISTURBED EARTH, COMPACTED FILL OR WASHED STONE TOP TWO COURSES OF STEM WALL AND ALL CELLS W/ REINFORCEMENT TO BE FILLED SOLID. ## WASHED STONE ## WALL REINFORCEMENT, SEE CHART FOR SPACING
STEM WALL FDN. DETAIL 1	STEM WALL FDN. W/ BRICK AND CURB (2)
2 x 4 STUD FRAMING (UNO) W/ TRTD. BOTTOM PLATE(S) 2 x 4 TRTD. BOTTOM PLATE(S) 9ECURED BY 1/2" DIA. BOLT9. SEE CHART FOR SPACING AND EMBEDMENT REQUIREMENTS 4" CONCRETE SLAB W/ FIBER REINFORCING OR WELDED WIRE FABRIC 6 MIL. VAPOR BARRIER 4" WASHED STONE UNDISTURBED EARTH, COMPACTED FILL OR WASHED STONE TOP TWO COURSES OF STEM WALL AND ALL CELLS W/ REINFORCEMENT TO BE FILLED SOLID. BRICK TIES ® II-O" VERTICALLY AND 2'-8" HORIZONTALLY 4" BRICK VENEER 4" BRICK VENEER 4" BRICK VENEER LADDER WIRE EVERYMOTHER COURSE COMPACTED FILL OR WASHED STONE TOP TWO COURSES OF STEM WALL AND ALL CELLS W/ REINFORCEMENT TO BE FILLED SOLID.	2 x 4 STUD FRAMING (UNO) W/ TRTD. BOTTOM PLATE(5) SECURED BY 1/2" DIA. BOLTS. SEE CHART FOR SPACING AND EMBEDMENT REQUIREMENTS 4" CONCRETE SLAB W/ FIBER REINFORCING OR WELDED WIRE FABRIC 4" WASHED STONE UNDISTURBED EARTH COMPACTED FILL OR WASHED STONE TOP TWO COURSES OF STEM WALL AND ALL CELLS W/ REINFORCEMENT TO BE FILLED SOLID. 5HEATHING SHEATHING SHEATHING 9IDING AS SPEC. FLASHING OPTIONAL 4" BRICK VENEER WATERTABLE WEEP HOLES WEEP HOLES WALL REINFORCEMENT, SEE CHART FOR SPACING FOR OPTIONAL BRICK WATERTABLE, INCREASE TO 20" WIDE BY 8" DEEP CONT. CONC. FTG.
	STEM WALL FDN. W/ OPTIONAL

-SIDING AS SPEC.

2 x 4 STUD FRAMING (UNO)— W/ TRTD. BOTTOM PLATE(S)

2 x 4 TRTD. BOTTOM PLATE(S)-

SECURED BY 1/2" DIA. BOLTS.

SEE CHART FOR SPACING AND

BRICK TIES @

1'-0" VERTICALLY AND

4

BRICK WATERTABLE DETAIL

LIEU OF 1/2" ANCHOR BOLTS.

2'-8" HORIZONTALLY

-4" BRICK VENEER

FLASHING

2 x 4 STUD FRAMING (UNO)— W/ TRTD. BOTTOM PLATE(S)

2 x 4 TRTD. BOTTOM PLATE(S)—

SECURED BY 1/2" DIA. BOLTS.

SEE CHART FOR SPACING AND

EMBEDMENT REQUIREMENTS

	ANCHOR SPACING AND	NOTE:				
WIND ZONE	120 MPH	130 MPH	THREADED ROD WITH EPOXY,			
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	SIMPSON TITEN HD, OR APPROVED ANCHORS SPACED AS REQUIRED TO PROVIDE EQUIVALENT ANCHORAGE TO 1/2" DIAMETER ANCHOR BOLTS MAY BE USED IN			

15" INTO MASONRY

1" INTO CONCRETE

STEM WALL FDN. W/ BRICK DETAIL

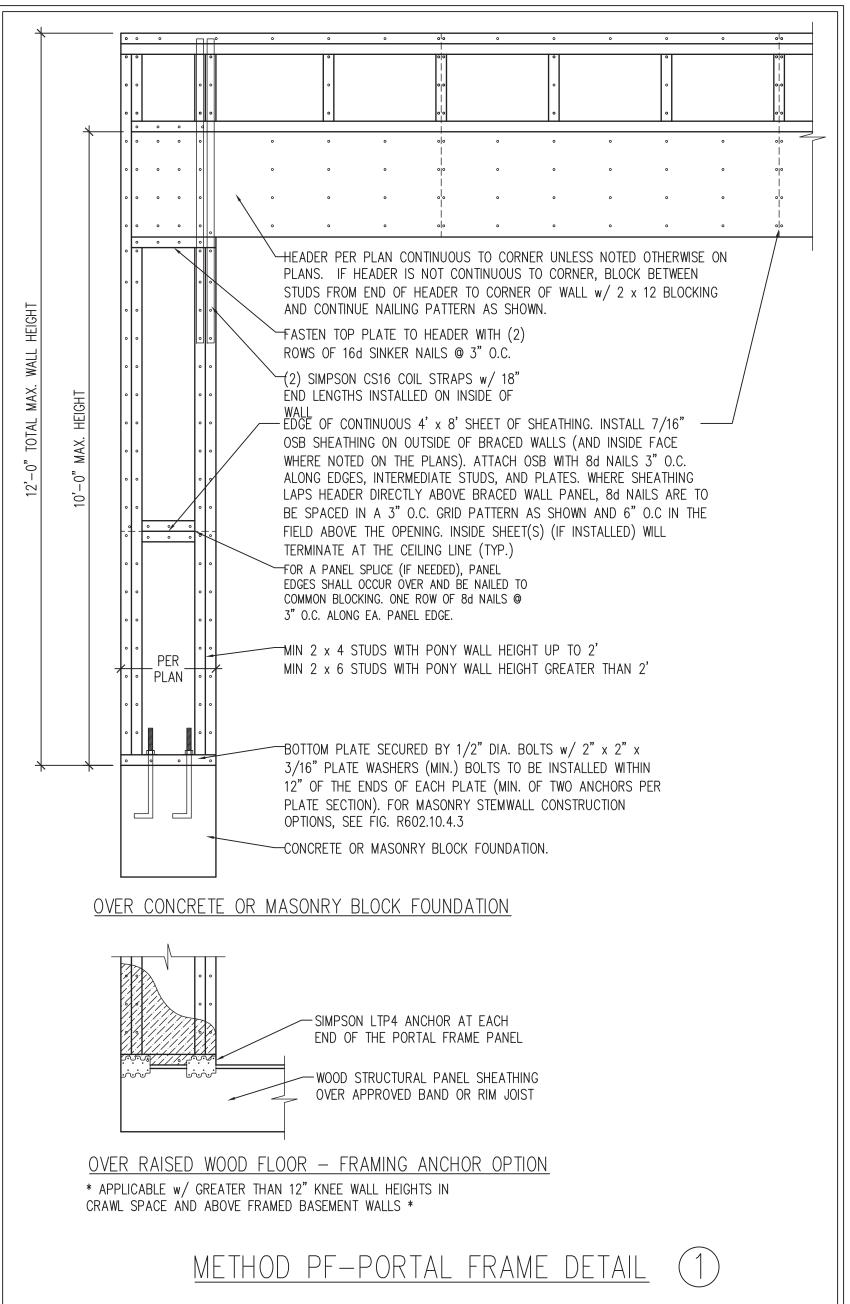
EMBEDMENT

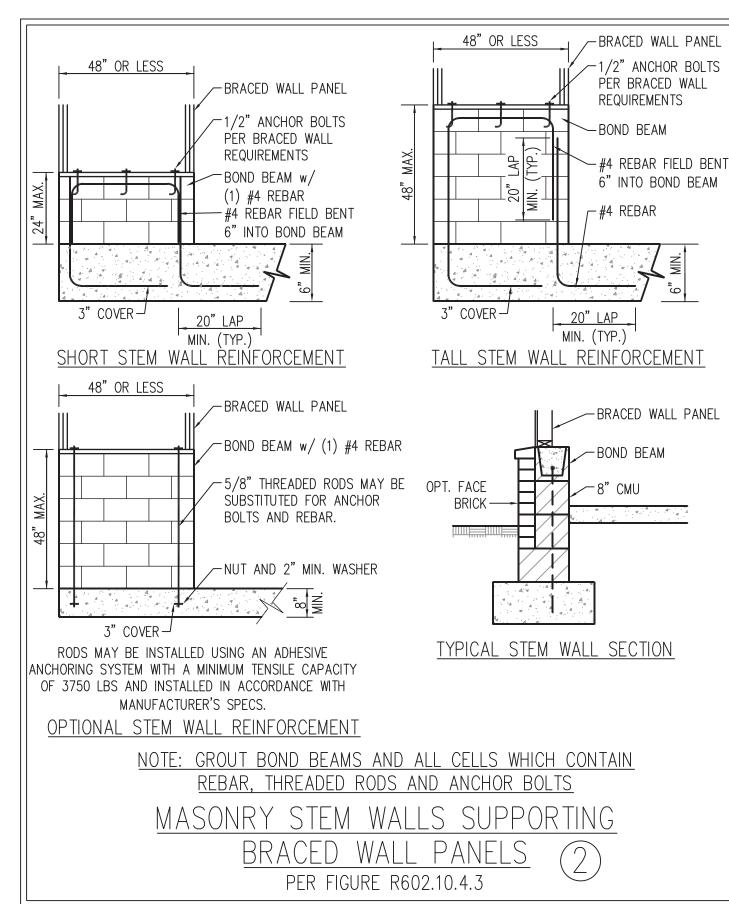
SEAL 33736

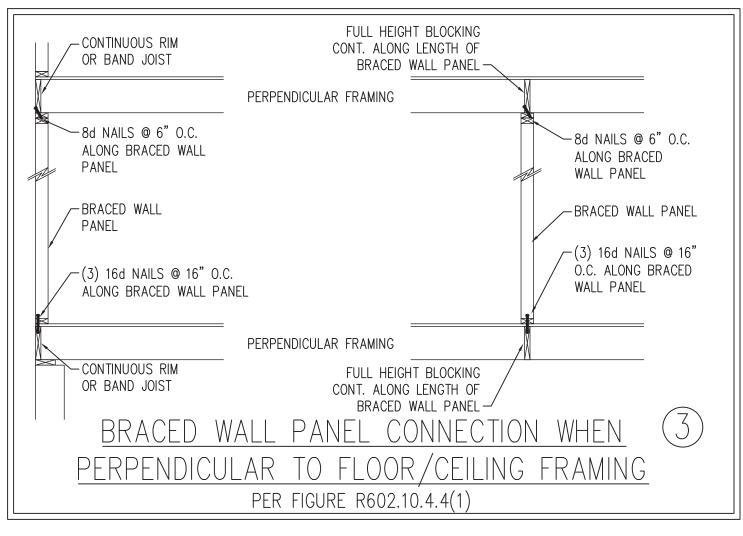
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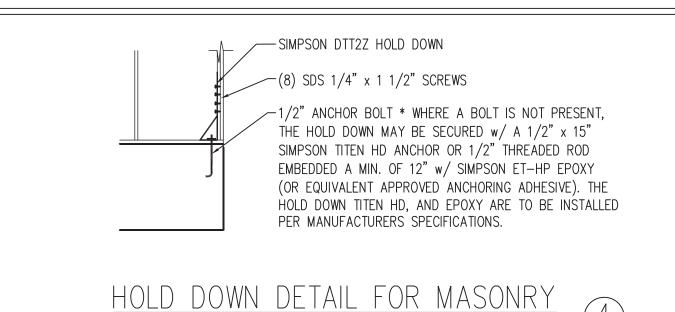
MORE TO THE STRUCTURE OF THE STRU

- WALL BRACING DESIGNED IN ACCORDANCE WITH CHAPTER 6 OF THE 2018 NC RESIDENTIAL BUILDING CODE (NCRC). TABLES AND FIGURES REFERENCED ARE FROM THE 2018 NCRC.
- SEE THIS SHEET FOR GENERAL DETAILS. REFER TO THE 2018 NCRC FOR ADDITIONAL INFORMATION AS NEEDED BRACED EXTERIOR WALLS SUPPORTING ROOF TRUSSES AND RAFTERS, INCLUDING STORIES BELOW THE TOP FLOOR, HAVE BEEN DESIGNED PER R602.3.5 (3). WALL SHEATHING AND FASTENERS HAVE BEEN DESIGNED TO RESIST COMBINED UPLIFT AND SHEAR FORCES IN ACCORDANCE WITH ACCEPTED ENGINEERED PRACTICE.
- . SEE STRUCTURAL SHEETS FOR BRACED WALL LOCATIONS, DIMENSIONS, HOLD DOWN TYPE AND LOCATIONS, BRACED WALL LINE KEY WITH WALL DESIGN SUMMARY OF REQUIRED/PROVIDED TOTALS FOR EACH WALL LINE AND ANY SPECIAL NOTES OR REQUIREMENTS 5. ALL EXTERIOR WALLS ARE TO BE SHEATHED WITH CS-WSP IN ACCORDANCE WITH SECTION R602.10.3 UNLESS NOTED OTHERWISE.
- 6. ALL EXTERIOR AND INTERIOR WALLS TO HAVE 1/2" GYPSUM INSTALLED. WHEN NOT USING METHOD "GB", GYPSUM TO BE FASTENED PER TABLE R702.3.5. METHOD GB TO BE FASTENED PER TABLE R602.10.1
- 7. CS-WSP REFERS TO THE "CONTINUOUS SHEATHING WOOD STRUCTURAL PANELS" WALL BRACING METHOD. 7/16" OSB SHEATHING IS TO BE INSTALLED ON ALL EXTERIOR WALLS ATTACHED w/ 6d COMMON NAILS OR 8d (2 1/2" LONG x 0.113" DIAMETER) NAILS SPACED 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD (U.N.O.).
- B. GB REFERS TO THE "GYPSUM BOARD" WALL BRACING METHOD. 1/2" (MIN.) GYPSUM WALL BOARD IS TO BE INSTALLED ON BOTH SIDES OF THE BRACED WALL FASTENED WITH 1 1/4" SCREWS OR 1 5/8" NAILS SPACED 7" O.C. ALONG PANEL EDGES INCLUDING TOP AND BOTTOM PLATES AND INTERMEDIATE SUPPORTS (U.N.O.). VERIFY ALL FASTENER OPTIONS FOR 1/2" AND 5/8" GYPSUM PRIOR TO CONSTRUCTION. FOR INTERIOR FASTENER OPTIONS SEE TABLE R702.3.5. FOR EXTERIOR FASTENER OPTIONS SEE TABLE R602.3(1). EXTERIOR GB TO BE INSTALLED VERTICALLY.
- REQUIRED BRACED WALL LENGTH FOR EACH SIDE OF THE CIRCUMSCRIBED RECTANGLE ARE INTERPOLATED PER TABLE R602. 10.3. METHOD CS-WSP CONTRIBUTES ITS ACTUAL LENGTH, METHOD GB CONTRIBUTES .5 ITS ACTUAL LENGTH, AND METHOD PF CONTRIBUTES 1.5 TIMES ITS ACTUAL LENGTH.



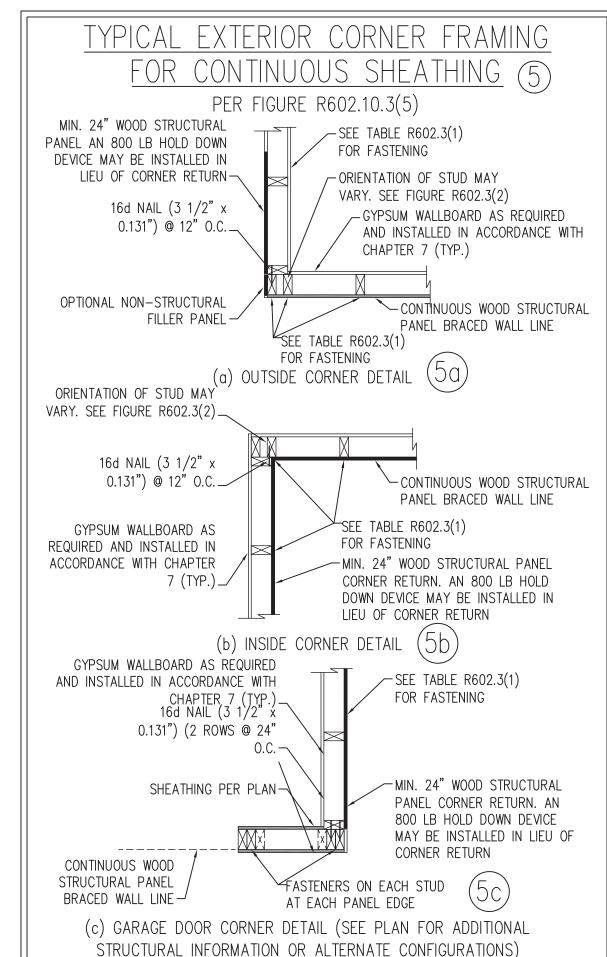


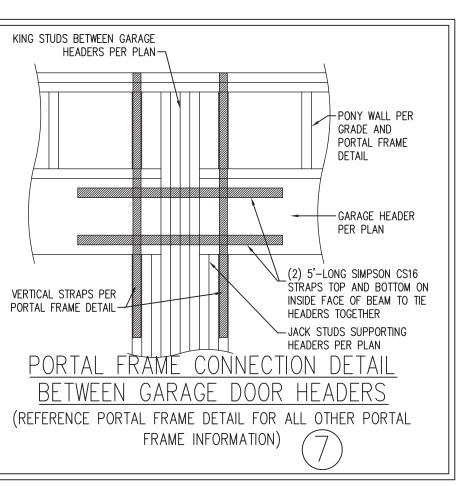


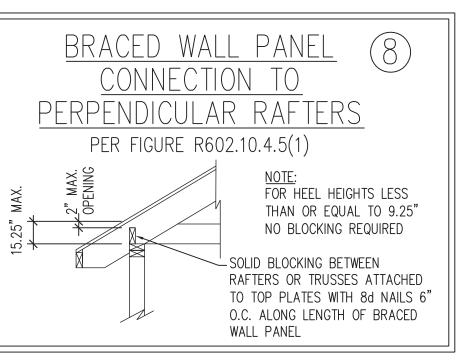


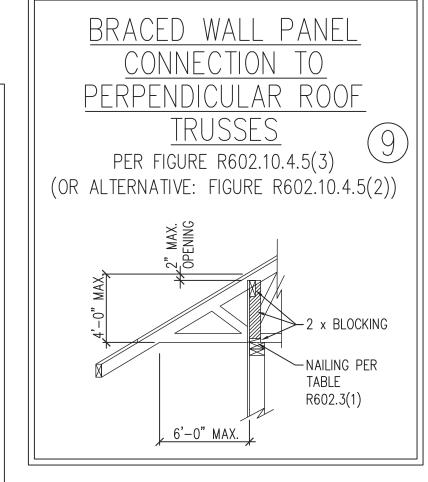
FOUNDATION OR MONOLITHIC SLAB

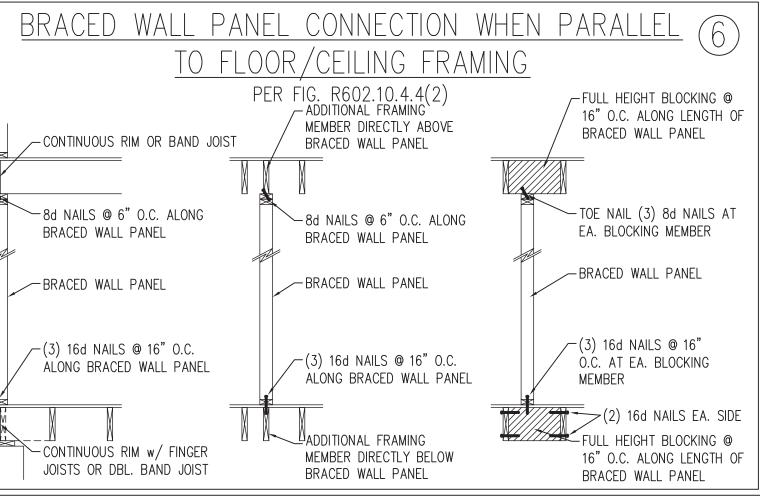
* APPLICABLE ONLY WHERE SPECIFIED ON PLAN *



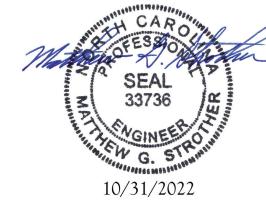








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ANI BRACING NOTES

DATE: AUGUST 30, 2022

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

DRAWN BY: JST

ENGINEERED BY: JST

BRACED WALL NOTES AND DETAILS AND PF DETAIL

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 (NCRC), 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 NCRC, 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) WIN	ND 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 NCRC, 2018 EDITION. FOR 130 MPH, 140 MPH, AND 150 MPH WIND ZONES, FOUNDATION ANCHORAGE IS TO COMPLY WITH SECTION 4504 OF THE NCRC, 2018 EDITION.
- 5. ENERGY EFFICIENCY COMPLIANCE AND INSULATION VALUES OF THE BUILDING TO BE IN ACCORDANCE WITH CHAPTER 11 OF THE NCRC, 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 NCRC, 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 NCRC, 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.

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- 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 NCRC, 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 NCRC, 2018 EDITION. CONCRETE FOUNDATION WALLS ARE TO BE REINFORCED PER TABLE R404.1.1(5) OF THE NCRC, 2018 EDITION. STEP CONCRETE FOUNDATION WALLS TO 2 x 6 FRAMED WALLS AT 16" O.C. WHERE GRADE PERMITS (UNO).

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

B. CONCRETE

C. MASONRY (FULLY GROUTED)

D. STEEL PIPE COLUMN

(2) 1/2" DIA. x 4" LONG LAG SCREWS

(2) 1/2" DIA. x 4" WEDGE ANCHORS

(2) 1/2" DIA. x 4" LONG SIMPSON TITEN HD ANCHORS

(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 NCRC, 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 NCRC, 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.



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STANDARD STRUCTURAL NOTES

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