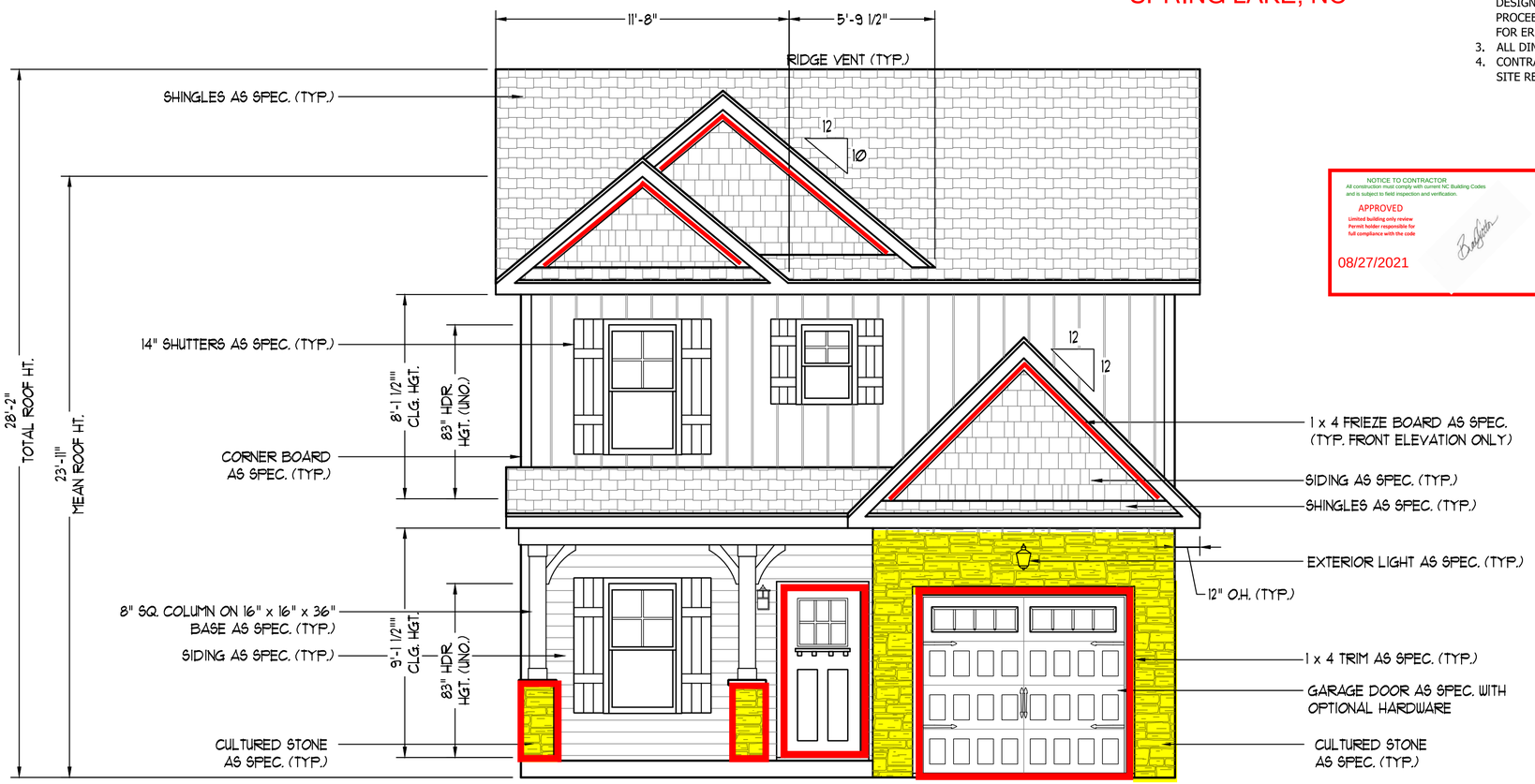
PLANS DESIGNED TO THE
2018 NORTH CAROLINA STATE RESIDENTIAL BUILDING CODE.

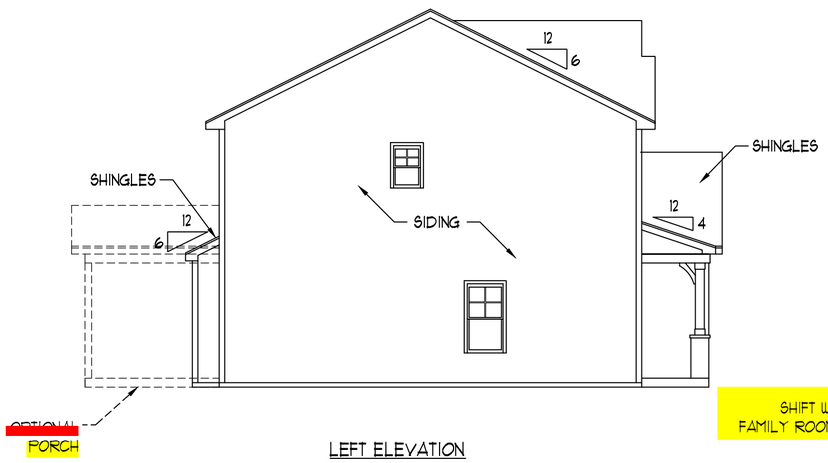
LOT 74 THOMAS FARM
TBD OVERHILLS RD
SPRING LAKE, NC

GENERAL NOTES
1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AND REGULATIONS.
2. CONTRACTOR SHALL THOROUGHLY REVIEW ALL SHEETS IN PLAN SET AND VERIFY ALL DETAILS AND DIMENSIONS BEFORE BEGINNING CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO RENAISSANCE RESIDENTIAL DESIGN, INC. FOR JUSTIFICATION AND/OR CORRECTION BEFORE PROCEEDING WITH WORK. CONTRACTORS SHALL ASSUME RESPONSIBILITY FOR ERRORS THAT ARE NOT REPORTED PRIOR TO CONSTRUCTION.
3. ALL DIMENSIONS SHOULD BE READ OR CALCULATED AND NEVER SCALED.
4. CONTRACTOR SHALL ENSURE COMPATIBILITY OF THE BUILDING WITH ALL SITE REQUIREMENTS.

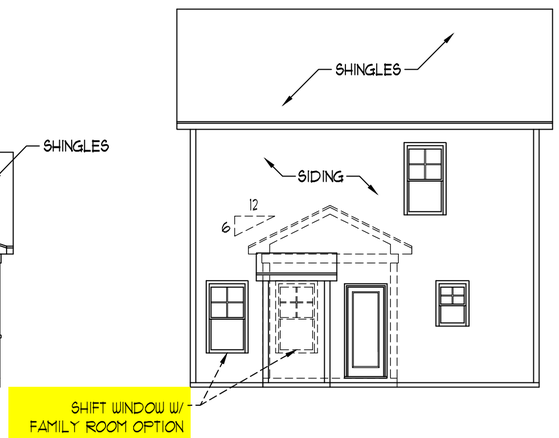


NOTICE TO CONTRACTOR
All construction must comply with current NC Building Codes and is subject to field inspection and verification.
APPROVED
Limited building only review
Permit holder responsible for full compliance with the code
08/27/2021
Harnett COUNTY NORTH CAROLINA

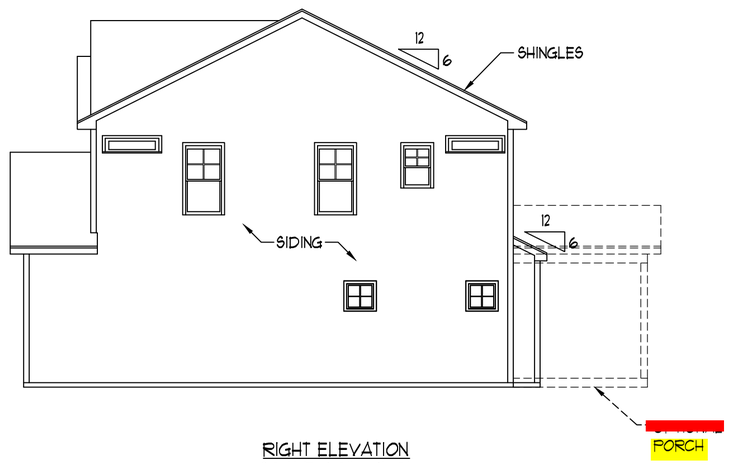
FRONT ELEVATION-C
SCALE: 1/4" = 1'-0"



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



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



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

HVAC: MAINSTREAM
ELECTRICAL: PIONEER
PLUMBING: DOUBLE J

SCALE NOTE: 18x24 PRINTS ARE TO SCALE AS NOTED.
11x17 PRINTS ARE NOT TO SCALE

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MAGNOLIA

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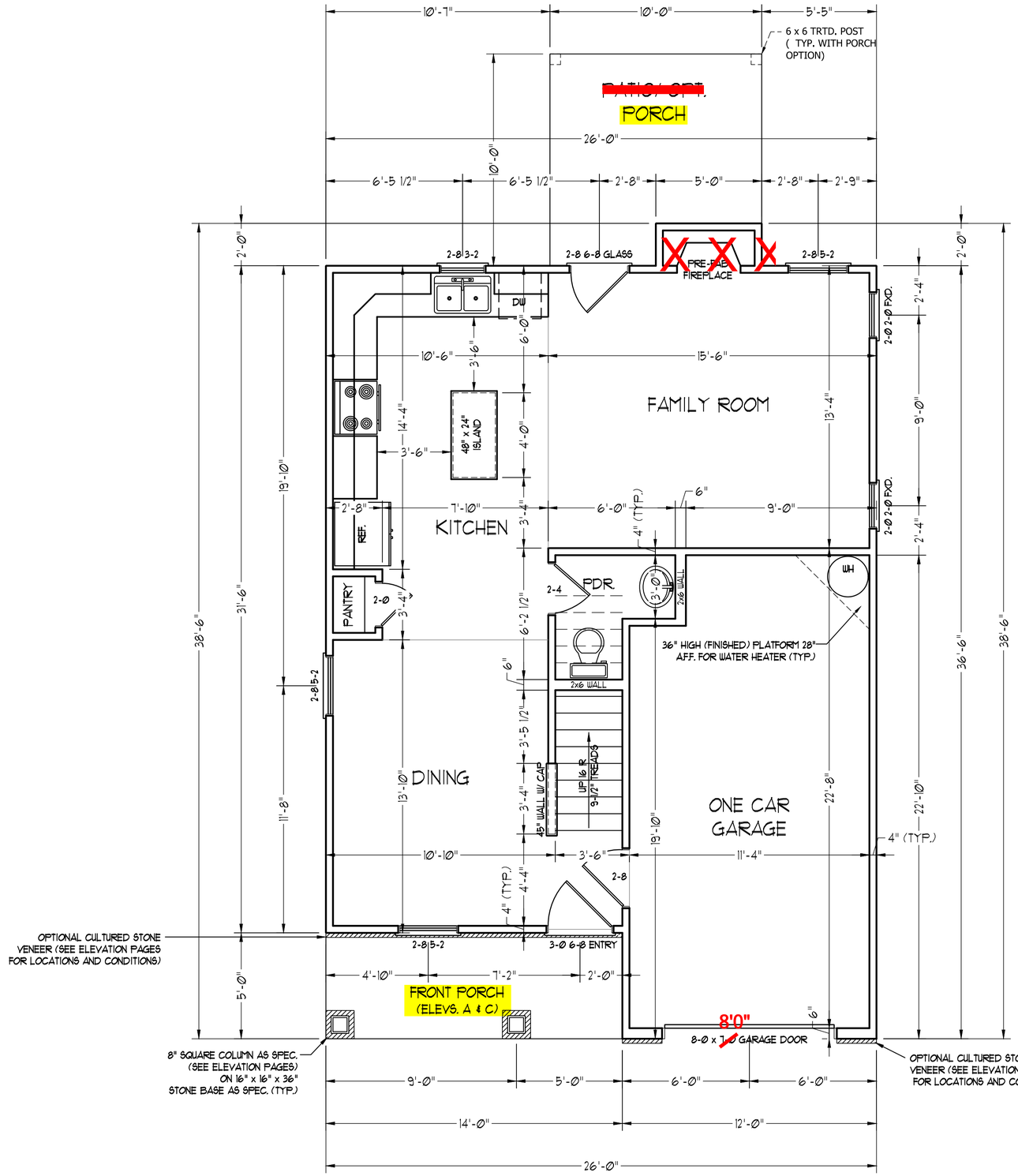
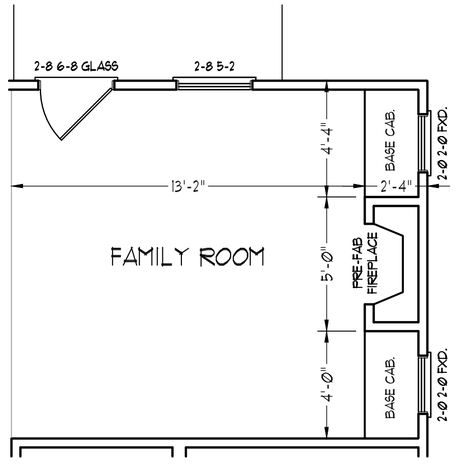
REV.:
SCALE: 1/4" = 1'-0"
DRAWN BY: WG
ENGINEERED BY:
REVIEWED BY:

C - ELEVATIONS
A-3

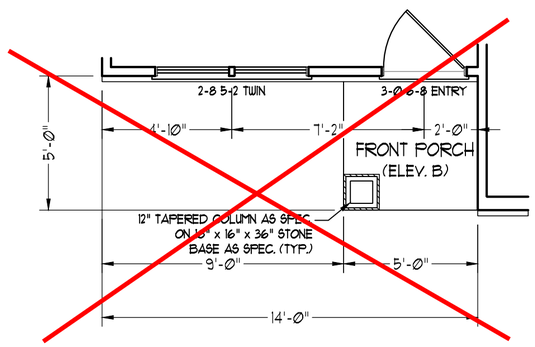
C:\Users\Wade\Documents\Projects\Westan-Weaver\Magnolia\Magnolia_6-30-20.dwg, 7/22/2020 6:45:34 AM

SQUARE FOOTAGE (I.F.S.)	
1st FLOOR:	581 SQ. FT.
2nd FLOOR:	747 SQ. FT.
TOTAL:	1328 SQ. FT.
GARAGE:	246 SQ. FT.
FRONT PORCH (ELEV.-A&C):	70 SQ. FT.
FRONT PORCH (ELEV.-B):	25 SQ. FT.
STD. REAR PATIO:	100 SQ. FT.
OPT. REAR PORCH:	100 SQ. FT.





OPTIONAL FAMILY ROOM WITH ALTERNATE FIREPLACE LOCATION AND BUILT-INS



FRONT PORCH AND DINING ROOM WINDOW ELEVATION B

SCALE NOTE: 18x24 PRINTS ARE TO SCALE AS NOTED.
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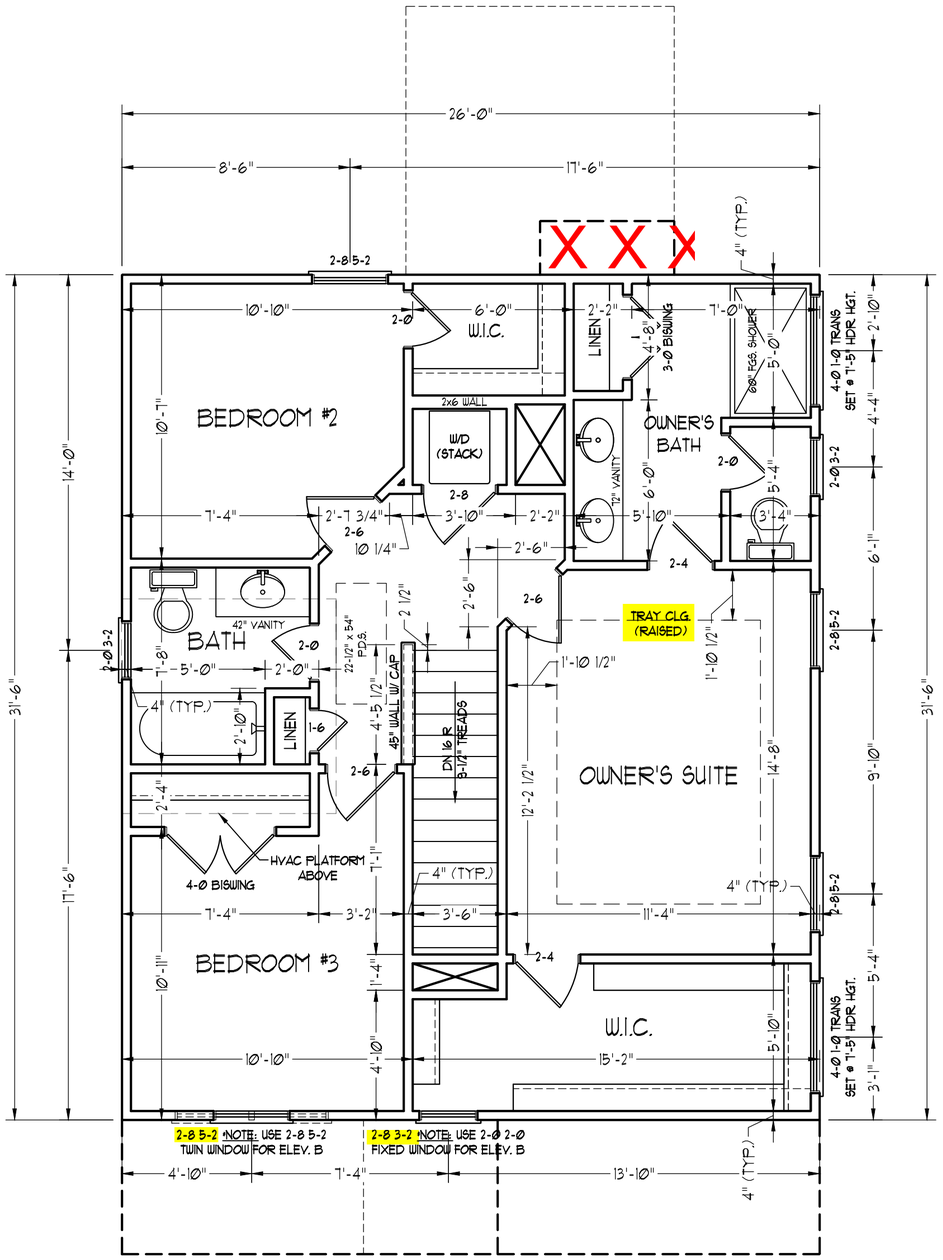
REVIEWED BY:

FIRST FLOOR PLAN

A-4



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ENGINEERED BY:
REVIEWED BY:

SECOND F LOOR P LAN

A-5

ELECTRICAL LAYOUT NOTES:

1.) BLOCK AND WIRE FOR ALL CEILING FANS PER PLAN.

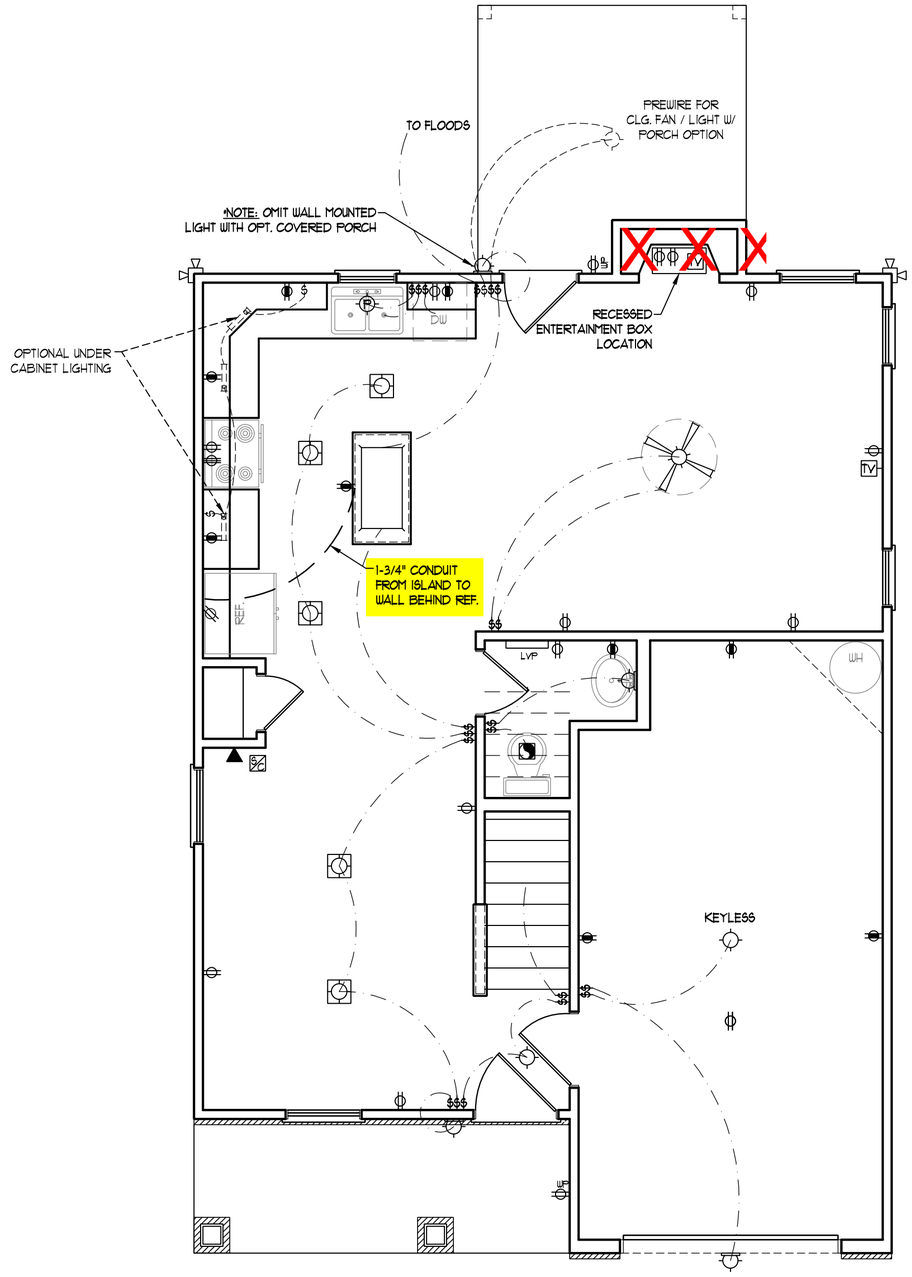
2.) VANITY LIGHTS TO BE SET @ 80" A.F.F. (TYP.)

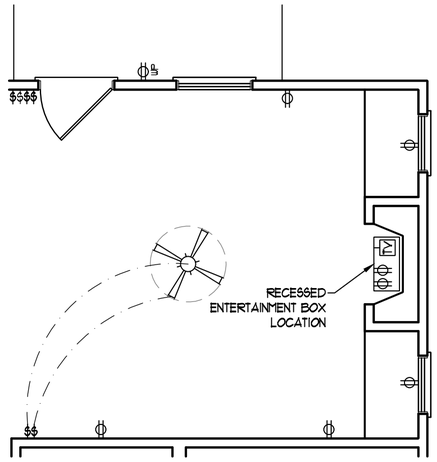
3.) ADDITIONAL EXTERIOR OUTLETS REQUIRED BY CODE TO BE LOCATED BY ELECTRICIAN.

4.) PLACE SWITCHES 8" (MIN.) FROM ROUGH OPENINGS.

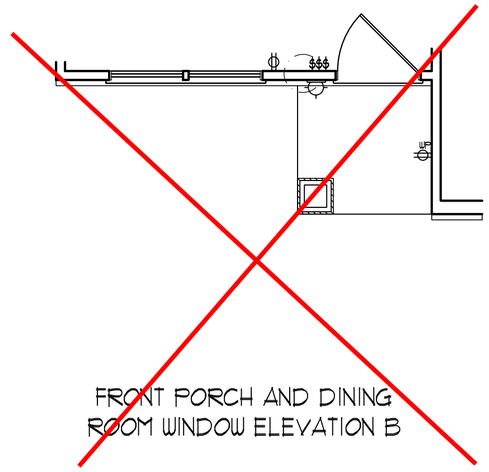
ELECTRICAL LEGEND

- 110 V OUTLET
- 110 V GFI OUTLET
- 110 V SWITCHED OUTLET
- BB 110 V BASEBOARD OUTLET
- 4-FLEX
- COUNTER OR FLOOR MOUNTED
- COUNTER OR FLOOR MOUNTED 110V GFI
- WP WEATHERPROOF
- 220 V OUTLET
- 110 V DEDICATED CIRCUIT
- 220 V DEDICATED CIRCUIT
- SPECIAL PURPOSE (240 V, ETC.)
- WALL MOUNT LIGHT
- CEILING MOUNT LIGHT
- P PENDANT LIGHT
- RECESSED CAN LIGHT
- MINI CAN LIGHT
- EYEBALL LIGHT
- FLUORESCENT LIGHT
- UNDERCABINET LIGHT
- FLOOD LIGHT
- $ SWITCH
- $D DIMMER SWITCH
- TELEPHONE
- DATA
- TELEPHONE AND DATA
- TV TV CONNECTION
- TV/ DATA
- CD CONDUIT FOR COMPONENT WIRING
- SP SPEAKER
- 110 V SMOKE/ CM DETECTOR
- SD 110 V SMOKE DETECTOR
- EXHAUST FAN
- LVP LOW VOLTAGE PANEL
- ALARM ALARM PANEL
- CEILING FAN
- CEILING FAN W/ LIGHT





OPTIONAL FAMILY ROOM WITH ALTERNATE FIREPLACE LOCATION AND BUILT-INS



FRONT PORCH AND DINING ROOM WINDOW ELEVATION B

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ENGINEERED BY:
REVIEWED BY:

F IRST F LOOR
ELECTRICAL
P LAN

E-1

ELECTRICAL LAYOUT NOTES:

1.) BLOCK AND WIRE FOR ALL CEILING FANS PER PLAN.

2.) VANITY LIGHTS TO BE SET @ 90" A.F.F. (TYP.)

3.) ADDITIONAL EXTERIOR OUTLETS REQUIRED BY CODE TO BE LOCATED BY ELECTRICIAN.

4.) PLACE SWITCHES 8" (MIN.) FROM ROUGH OPENINGS.

ELECTRICAL LEGEND

- 110 V OUTLET
- 110 V GFI OUTLET
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- 4-PLEX
- COUNTER OR FLOOR MOUNTED
- COUNTER OR FLOOR MOUNTED 110V GFI
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- 220 V OUTLET
- 110 V DEDICATED CIRCUIT
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- WALL MOUNT LIGHT
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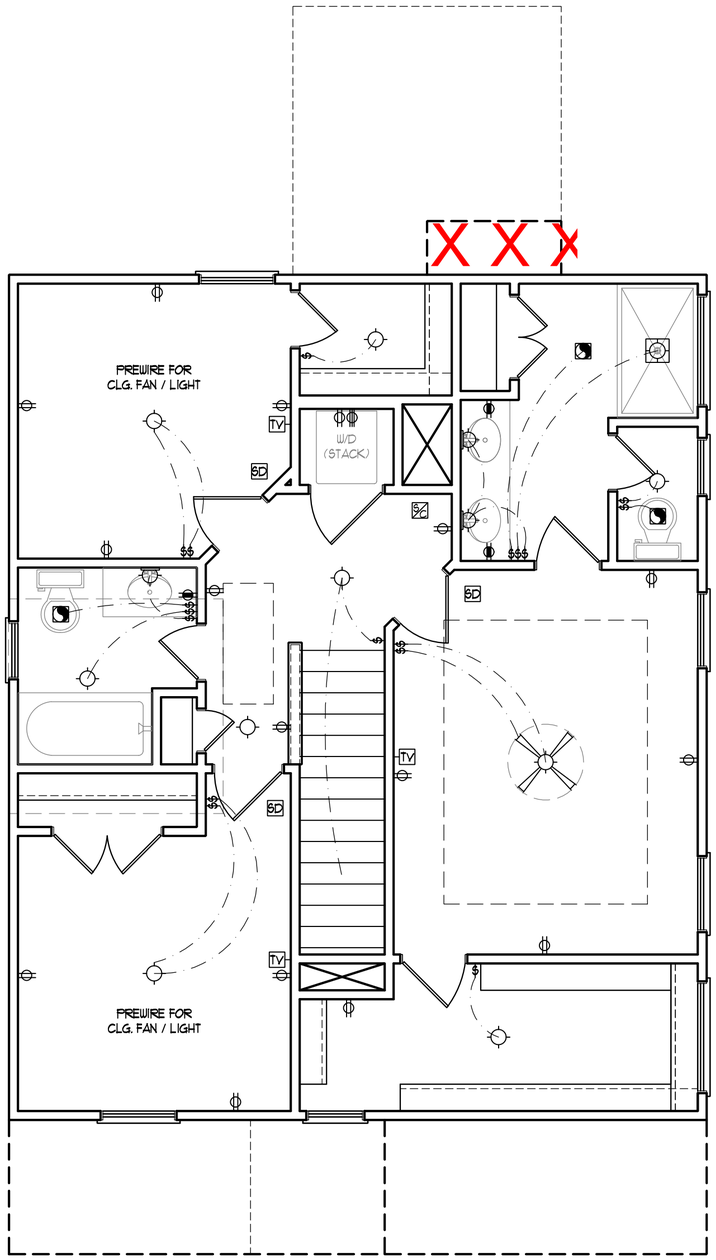
- TELEPHONE
- DATA
- TELEPHONE AND DATA
- TV TV CONNECTION
- TV/ TV/ DATA
- CD CONDUIT FOR COMPONENT WIRING
- SP SPEAKER
- CO 110 V SMOKE/ CO DETECTOR
- SD 110 V SMOKE DETECTOR
- EXHAUST FAN
- LVP LOW VOLTAGE PANEL
- ALARM ALARM PANEL
- CEILING FAN
- CEILING FAN W/ LIGHT



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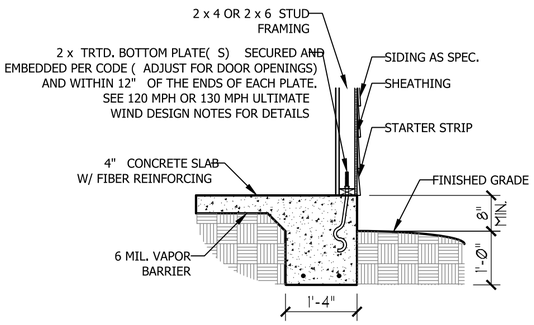
P LAN

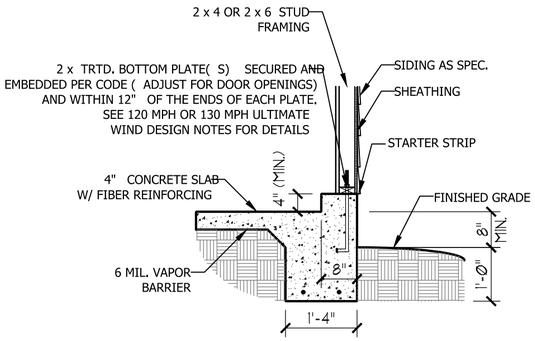
E-2

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

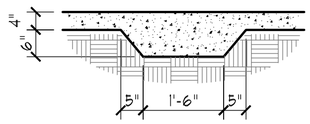
1. STRUCTURAL DESIGN PER NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.
2. FOR 120 MPH WIND Z ONES INSTALL 1/2" ANCHOR BOLTS 6' -0" O.C. AND WITHIN 1' -0" FROM END OF EACH CORNER. ANCHOR BOLTS MUST EX TEND A MINIMUM OF 7" INTO CONCRETE OR 15" INTO MASONRY. LOCATE BOLT WITHIN MIDDLE THIRD OF PLATE WIDTH.
3. FOR 130 MPH WIND Z ONES INSTALL 1/2" ANCHOR BOLTS 4' -0" O.C. AND WITHIN 1' -0" FROM END OF EACH CORNER. ANCHOR BOLTS MUST EX TEND A MINIMUM OF 7" INTO CONCRETE OR 15" INTO MASONRY. LOCATE BOLT WITHIN MIDDLE THIRD OF PLATE WIDTH.
4. MEAN ROOF HEIGHT IS LESS THAN 30 FEET.
5. EX TERIOR WALLS DESIGNED FOR 120 OR 130 MPH WINDS.
6. INSTALL 7/16" OSB SHEATHING ON ALL EX TERIOR WALLS OF ALL STORIES IN ACCORDANCE WITH SECTION R602.10.3 OF THE NCRC, 2018 EDITION.
7. ENERGY EFFICIENCY COMPLIANCE AND INSULATION VALUES OF THE BUILDING TO BE IN ACCORDANCE WITH CHAPTER 11 OF THE NCRC, 2018 EDITION.



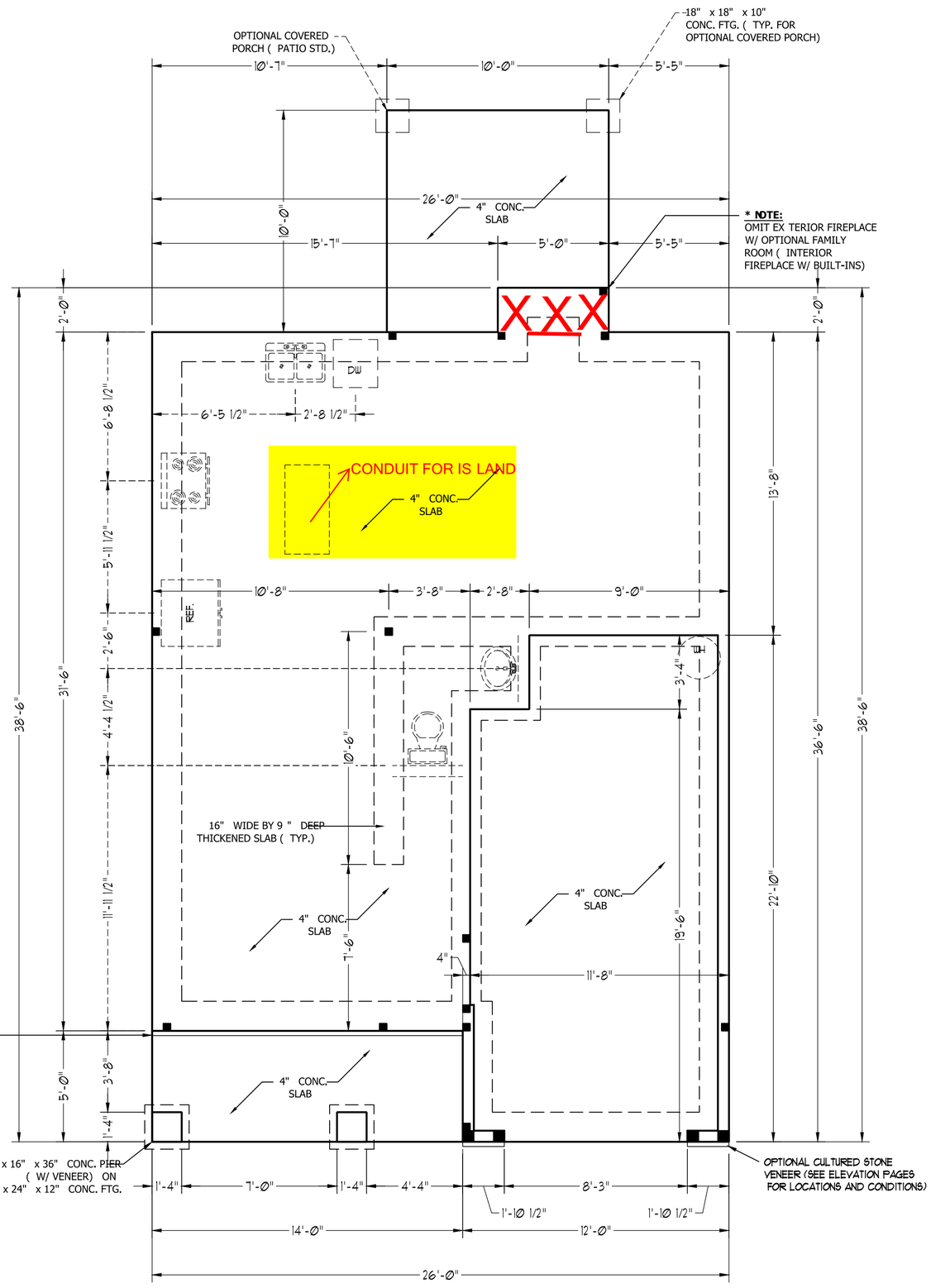
TYPICAL SLAB DETAIL

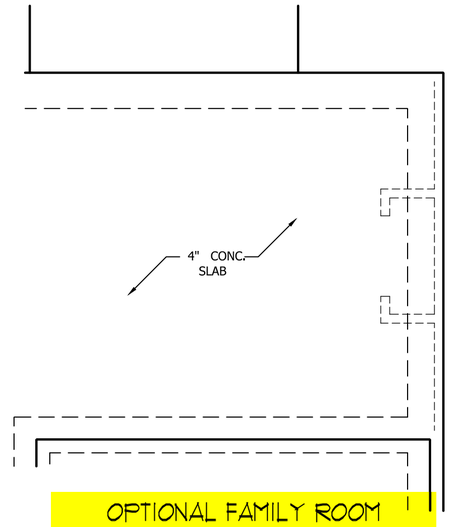


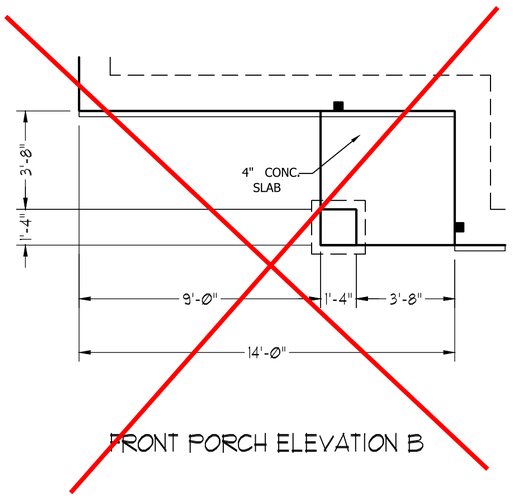
GARAGE CURB DETAIL



THICKENED SLAB DETAIL







FRONT PORCH ELEVATION B

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ENGINEERED BY:
REVIEWED BY:

MONO SLAB
F OUNDATION
P LAN

S-1

MASONRY STEM WALL SPECIFICATIONS				
WALL HEIGHT (FEET)	MASONRY WALL TYPE			
	8" CMU	4" BRICK AND 4" CMU	4" BRICK AND 8" CMU	12" CMU
2' OR LESS	UNGROUTED	GROUT SOLID	UNGROUTED	UNGROUTED
3'	UNGROUTED	GROUT SOLID	UNGROUTED	UNGROUTED
4'	GROUT SOLID	GROUT SOLID w/ # 4 REBAR @ 48" O.C.	GROUT SOLID	GROUT SOLID w/ # 4 REBAR @ 64" O.C.
5'	GROUT SOLID w/ # 4 REBAR @ 36" O.C.	N/A	GROUT SOLID w/ # 4 REBAR @ 36" O.C.	GROUT SOLID w/ # 4 REBAR @ 64" O.C.
6'	GROUT SOLID w/ # 4 REBAR @ 24" O.C.	N/A	GROUT SOLID w/ # 4 REBAR @ 24" O.C.	GROUT SOLID w/ # 4 REBAR @ 64" O.C.
7' OR MORE	ENGINEERED BASED ON SITE CONDITIONS			

STRUCTURAL NOTES:

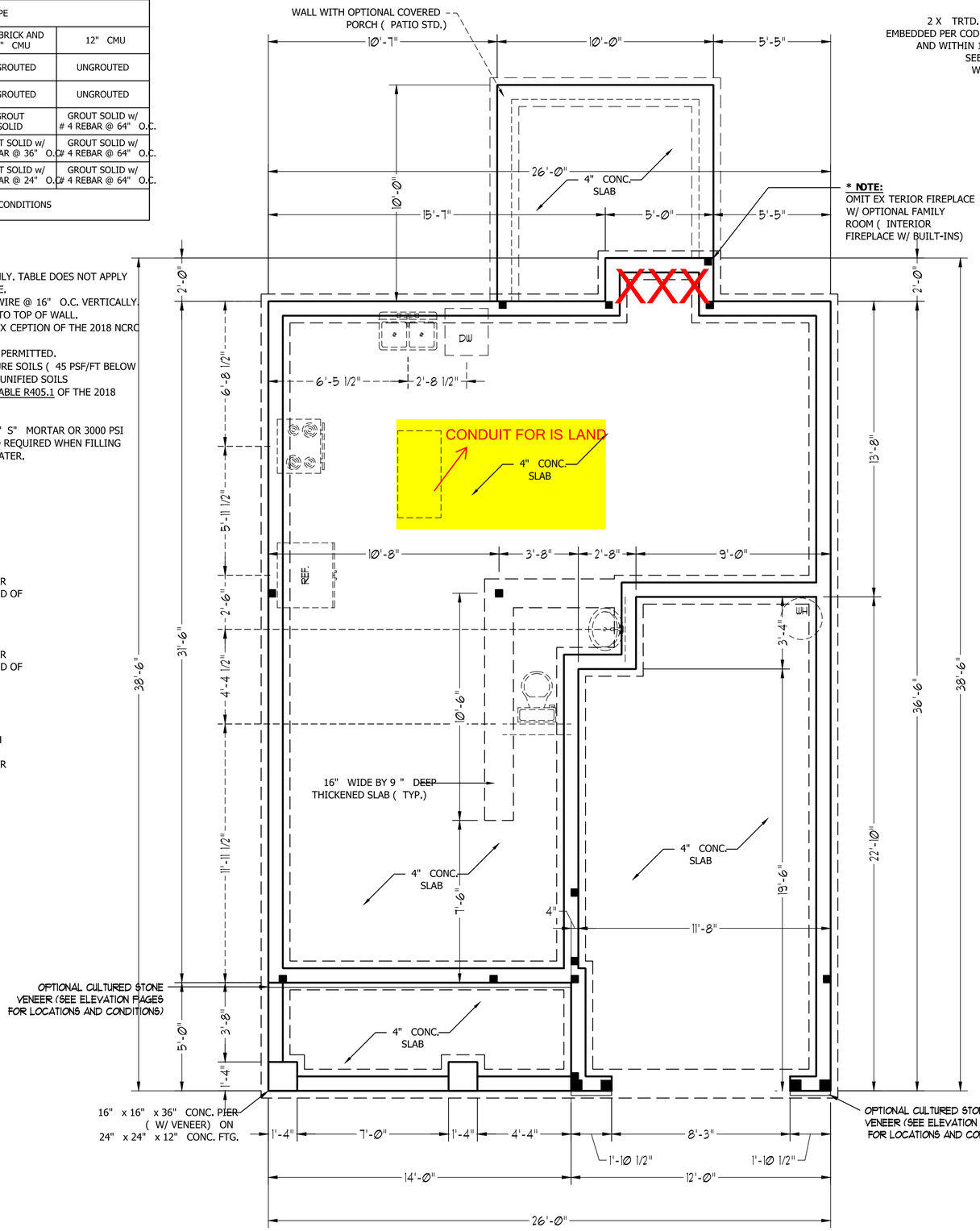
1. TABLE ABOVE APPLIES TO HOUSE FOUNDATION ONLY. TABLE DOES NOT APPLY TO GARAGE FOUNDATION NOT COMMON TO HOUSE.
2. TIE MULTIPLE WYTHES TOGETHER WITH LADDER WIRE @ 16" O.C. VERTICALLY.
3. WALL HGT. IS MEASURED FROM TOP OF FOOTING TO TOP OF WALL.
4. PREP SLAB PER R506.2.1 AND R505.2.2 BASE AND EX CEPTION OF THE 2018 NCRC
5. MINIMUM 24" LAP SPLICE LENGTH.
6. BACKFILL OF CLEAN # 57/ # 67 WASHED STONE IS PERMITTED.
7. BACKFILL OF WELL DRAINED SAND-GRAVEL MIX TURE SOILS (45 PSF/FT BELOW GRADE) CLASSIFIED AS GROUP 1 ACCORDING TO UNIFIED SOILS CLASSIFICATION SYSTEM IN ACCORDANCE WITH TABLE R405.1 OF THE 2018 NCRC ARE ALLOWABLE.
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.

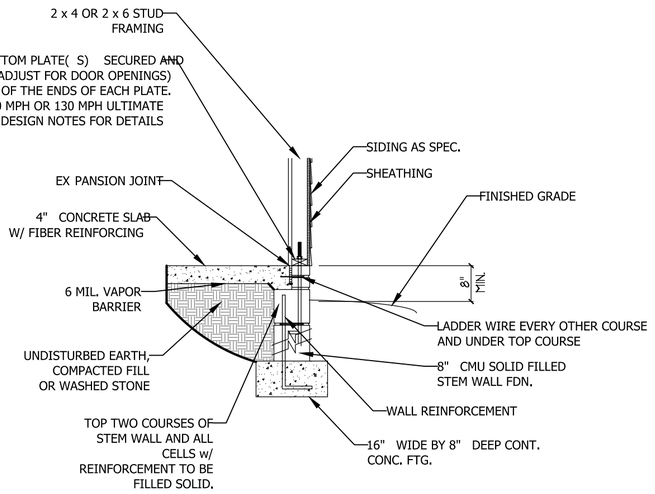
ULTIMATE DESIGN WIND SPEED NOTES FOR LESS THAN 30' MEAN ROOF HEIGHT:

1. STRUCTURAL DESIGN PER NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.
2. FOR 120 MPH WIND Z ONES INSTALL 1/2" ANCHOR BOLTS 6' -0" O.C. AND WITHIN 1' -0" FROM END OF EACH CORNER. ANCHOR BOLTS MUST EX TEND A MINIMUM OF 7" INTO CONCRETE OR 15" INTO MASONRY. LOCATE BOLT WITHIN MIDDLE THIRD OF PLATE WIDTH.
3. FOR 130 MPH WIND Z ONES INSTALL 1/2" ANCHOR BOLTS 4' -0" O.C. AND WITHIN 1' -0" FROM END OF EACH CORNER. ANCHOR BOLTS MUST EX TEND A MINIMUM OF 7" INTO CONCRETE OR 15" INTO MASONRY. LOCATE BOLT WITHIN MIDDLE THIRD OF PLATE WIDTH.
4. MEAN ROOF HEIGHT IS LESS THAN 30 FEET.
5. EX TERIOR WALLS DESIGNED FOR 120 OR 130 MPH WINDS.
6. INSTALL 7/16" OSB SHEATHING ON ALL EX TERIOR WALLS OF ALL STORIES IN ACCORDANCE WITH SECTION R602.10.3 OF THE NCRC, 2018 EDITION.
7. ENERGY EFFICIENCY COMPLIANCE AND INSULATION VALUES OF THE BUILDING TO BE IN ACCORDANCE WITH CHAPTER 11 OF THE NCRC, 2018 EDITION.

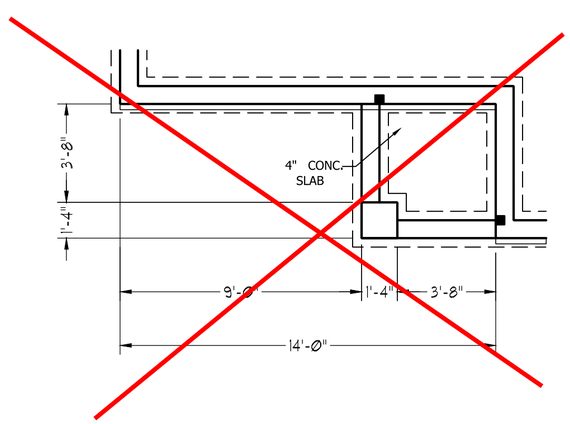
ANCHOR SPACING AND EMBEDMENT		
WIND Z ONE	120 MPH	130 MPH
SPACING	6' -0" O.C.	4' -0" O.C.
EMBEDMENT	7"	7" INTO CONCRETE 15" INTO MASONRY

NOTE: HORIZ ONTAL FOOTING REBAR REQUIRED IN HIGH WIND Z ONES ONLY (140-150 MPH)





STEM WALL FDN. DETAIL



FRONT PORCH ELEVATION B

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DRAWN BY: WG
ENGINEERED BY:
REVIEWED BY:

STEMWALL SLAB F OUNDATION P LAN

S-1

STRU CTU RAL NOTES:

1. ALL FRAMING LUMBER TO BE SPF # 2 (UNO) . ALL TREATED LUMBER TO BE SYP # 2 (UNO.)
2. ALL LOAD BEARING HEADERS TO BE (2) 2 x 6 (UNO) .
3. INSTALL AN EX TRA JOIST UNDER WALLS PARALLEL TO FLOOR JOISTS
4. 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.
5. SQUARES DENOTE POINT LOADS WHICH REQUIRE SOLID BLOCKING TO GIRDER OR FOUNDATION. ALL SQUARES TO BE (2) STUDS (UNO.)
6. 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 (UNO.)
7. 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.

B RACE WALL PANEL NOTES:

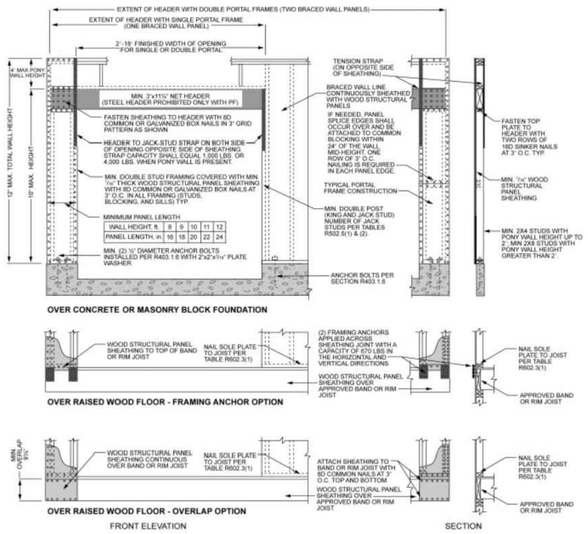
EX TERIOR WALLS: ALL EX TERIOR WALLS TO BE SHEALTHED WITH CS-WSP OR CS-SFB IN ACCORDANCE WITH SECTION R602.10.3 UNLESS NOTED OTHERWISE.

REQU IREDLENG THOF B RACIN : REQUIRED BRACE WALL LENGTH FOR EACH SIDE OF THE CIRCUMSCRIBED RECTANGLE ARE INTERPOLATED PER TABLE R602.10.3. METHODS CS-WSP AND CS-SFB CONTRIBUTE THIER ACTUAL LENGTH. METHOD GB CONTRIBUTES 0.5 ITS ACTUAL LENGTH. METHOD PF CONTRIBUTES 1.5 TIMES ITS ACTUAL LENGTH.

G Y PSU M: ALL INTERIOR SIDES OF EX TERIOR WALLS AND BOTH SIDES OF 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.

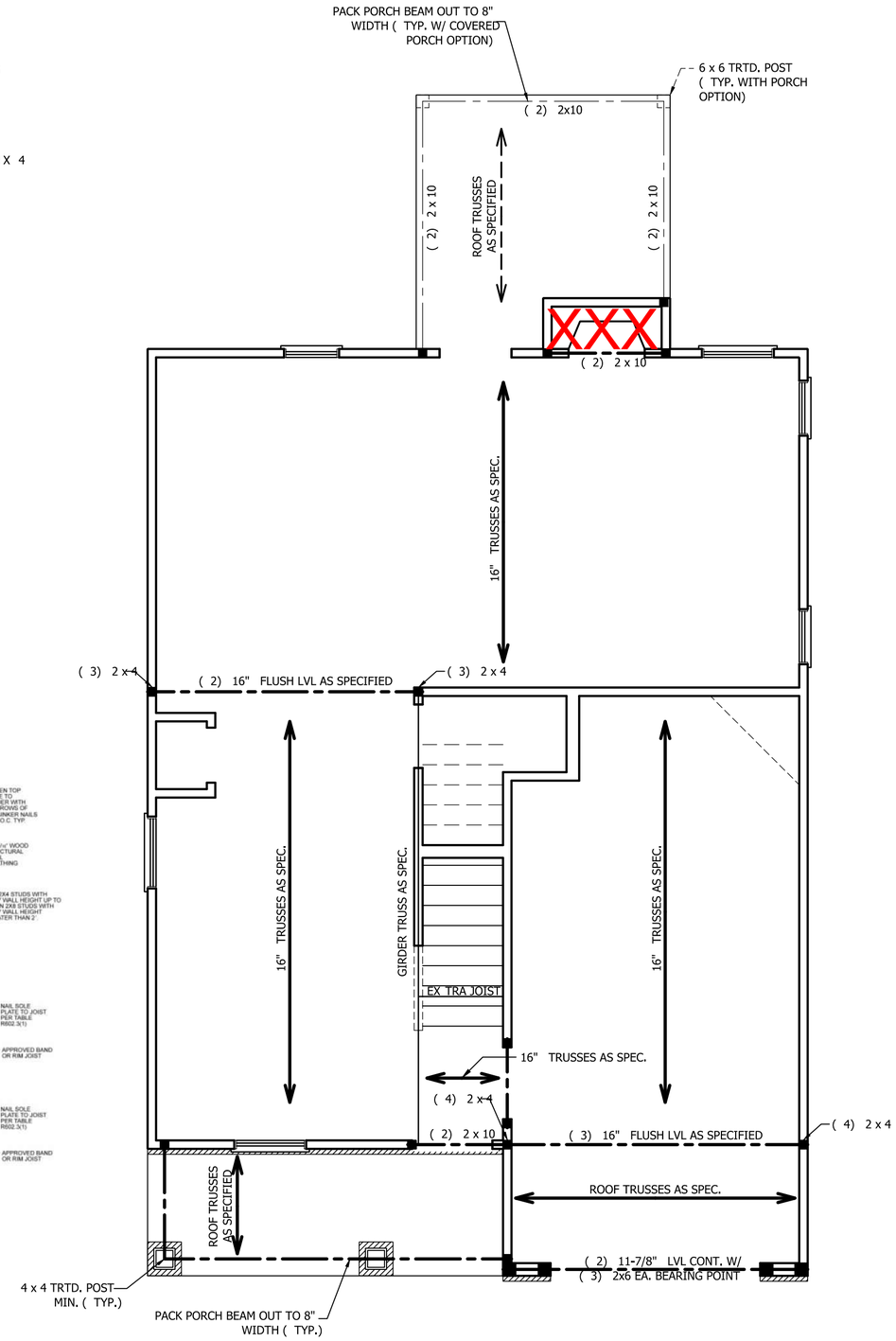
HD: 800 LBS HOLD DOWN DEVICE FASTENED TO THE EDGE OF THE BRACE WALL PANEL NEAREST TO THE CORNER

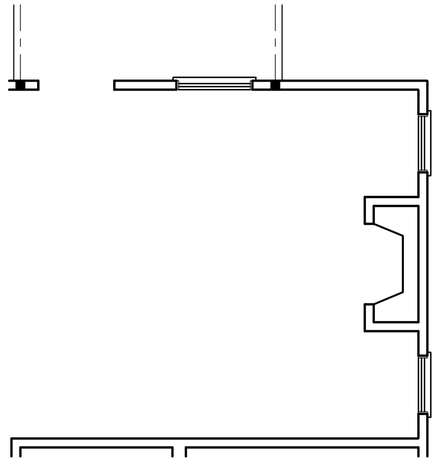
METHODS: PER TABLE R602.10.1



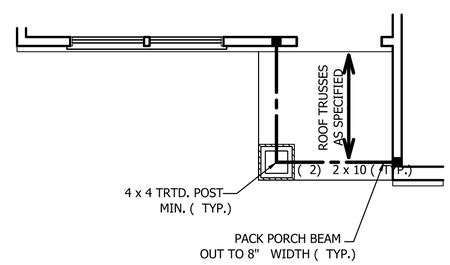
nch = 25.4 mm, 1 foot = 305 mm, 1 lb = 4.45 N.

FIGURE R602.10.1
METHOD PF—PORTAL FRAME CONSTRUCTION





OPTIONAL FAMILY ROOM WITH ALTERNATE FIREPLACE LOCATION AND BUILT-INS



FRONT PORCH AND DINING ROOM WINDOW ELEVATION B

SCALE NOTE: 18x24 PRINTS ARE TO SCALE AS NOTED.
11x17 PRINTS ARE NOT TO SCALE

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CAROLINA COLLECTION
MAGNOLIA

DATE: JUNE 30, 2020
REV.:
SCALE: 1/4" = 1'-0"
DRAWN BY: WG
ENGINEERED BY:
REVIEWED BY:

SECOND F LOOR
F RAMING P LAN

S-2

C:\Users\Wade\Documents\Projects\Westan-Weaver\Magnolia\Magnolia_6-30-20.dwg, 7/22/2020 6:45:40 AM

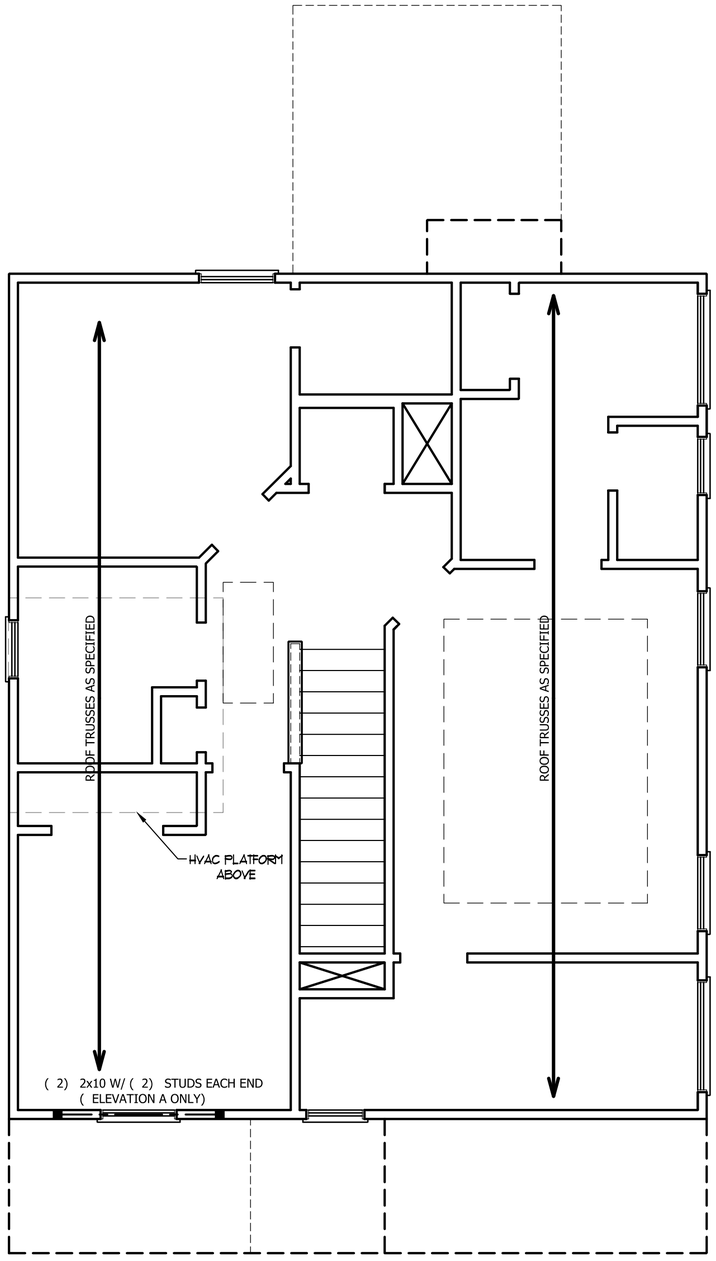

TABLE R602.7.5
MINIMUM NUMBER OF FULL HEIGHT STUDS
AT EACH END OF HEADERS IN EX TERIOR WALLS

HEADER SPAN (FEET)	MAX IMUM STUD SPACING (INCHES) (PER TABLE R602.3(5)	
	16	24
UP TO 3'	1	1
4'	2	1
8'	3	2
12'	5	3
16'	6	4

STRUCTURAL NOTES:

1. ALL FRAMING LUMBER TO BE SPF # 2 (UNO) . ALL TREATED LUMBER TO BE SYP # 2 (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. ALL SQUARES TO BE (2) STUDS (UNO.)

DSP - DOUBLE STUD POCKET
TSP - TRIPLE STUD POCKET

SCALE NOTE: 18x24 PRINTS ARE TO SCALE AS NOTED.
11x17 PRINTS ARE NOT TO SCALE

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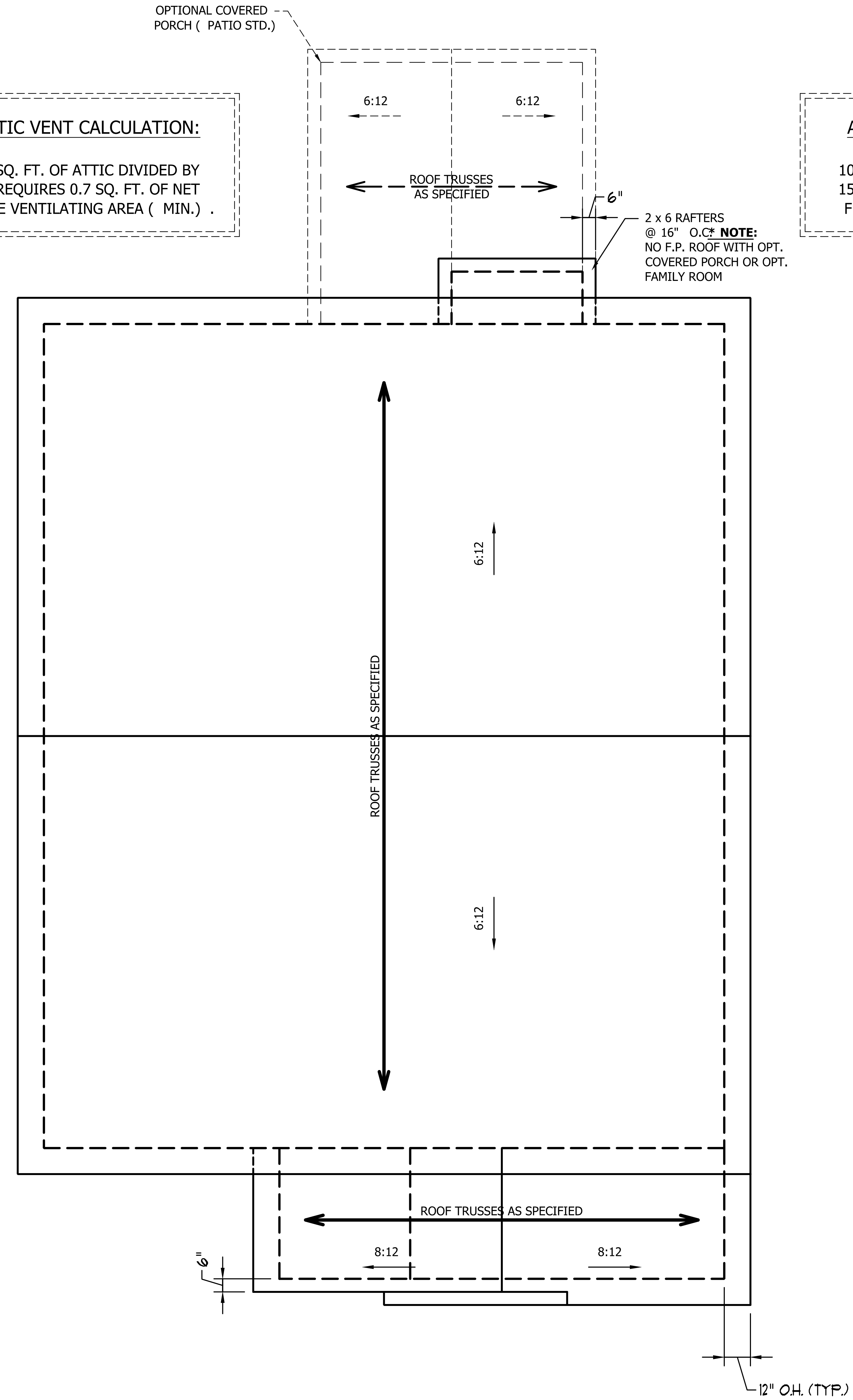
ENGINEERED BY:
REVIEWED BY:

ATTIC F LOOR
F RAMING P LAN

S-3

ATTIC VENT CALCULATION:

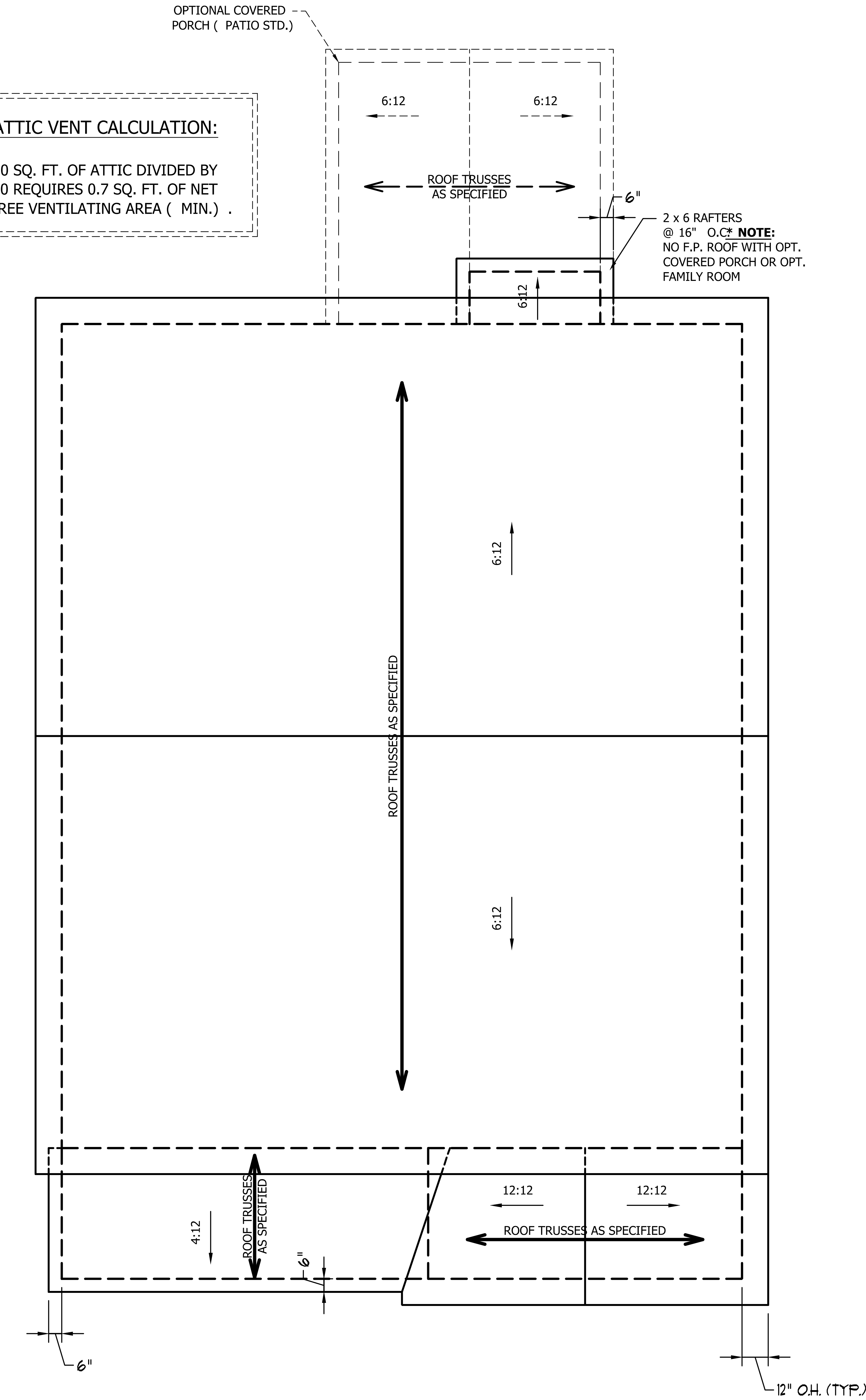
100 SQ. FT. OF ATTIC DIVIDED BY 150 REQUIRES 0.7 SQ. FT. OF NET FREE VENTILATING AREA (MIN.) .



ELEVATION B

ATTIC VENT CALCULATION:

100 SQ. FT. OF ATTIC DIVIDED BY 150 REQUIRES 0.7 SQ. FT. OF NET FREE VENTILATING AREA (MIN.) .



ELEVATION A

ATTIC VENT CALCULATION:

1077 SQ. FT. OF ATTIC DIVIDED BY 150 REQUIRES 7.2 SQ. FT. OF NET FREE VENTILATING AREA (MIN.) .

STRUCTURAL NOTES:

1. ALL FRAMING LUMBER TO BE # 2 SPF (UNO) .
2. HIP SPLICES ARE TO BE SPACED A MIN. OF 8' -0" . FASTEN MEMBERS WITH THREE ROWS OF 12d NAILS @ 16" O.C. (TYP.)
3. 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.
4. 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.
5. REFER TO SECTION R802.11 OF THE 2018 NCRC FOR REQUIRED UPLIFT RESISTANCE AT RAFTERS AND TRUSSES.

SCALE NOTE: 18x24 PRINTS ARE TO SCALE AS NOTED.
11x17 PRINTS ARE NOT TO SCALE

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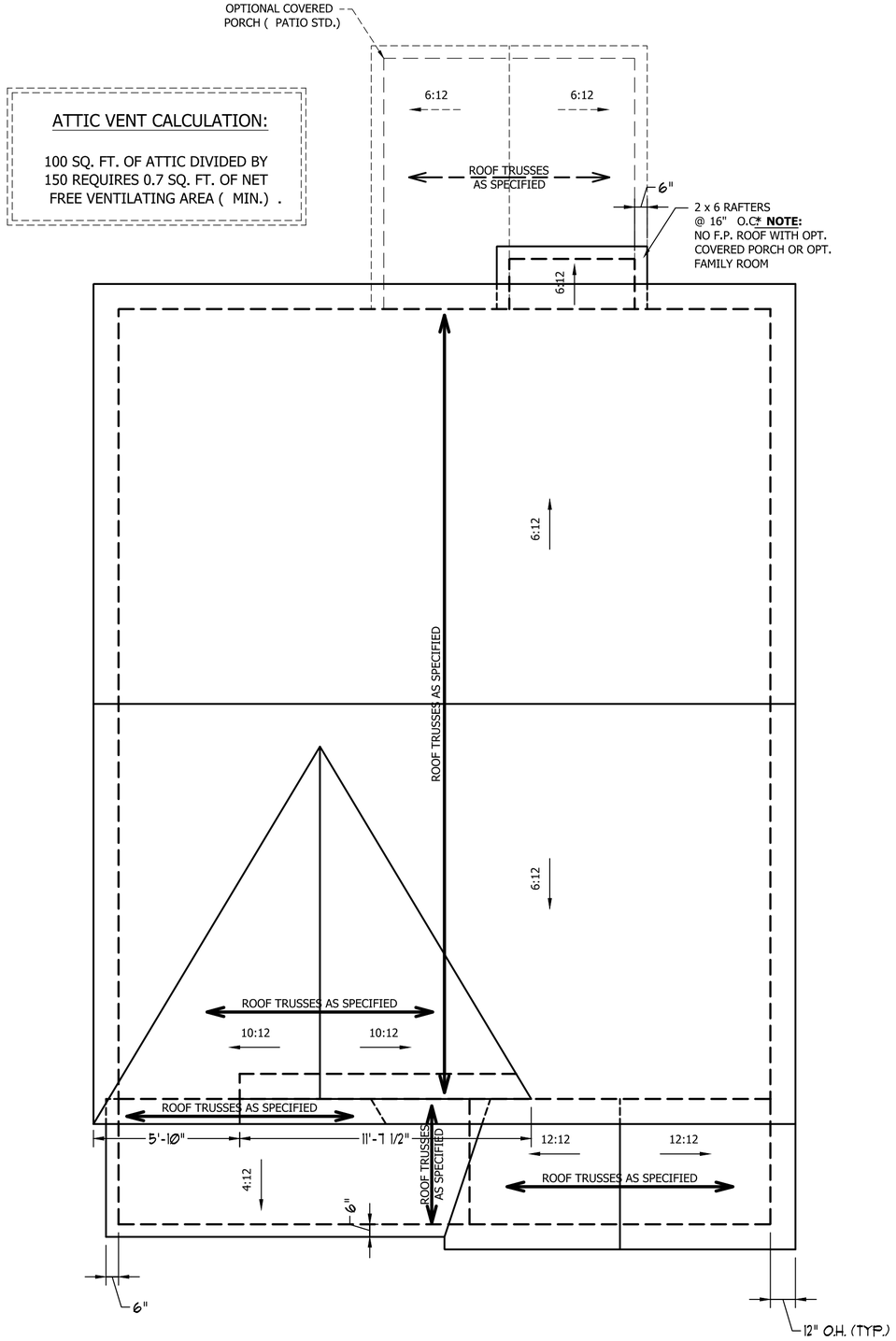
ENGINEERED BY:
REVIEWED BY:

ROOF PLAN
ELEVATIONS
A & B

S-3



ELEVATION C

ATTIC VENT CALCULATION:

1040 SQ. FT. OF ATTIC DIVIDED BY 150 REQUIRES 6.9 SQ. FT. OF NET FREE VENTILATING AREA (MIN.) .

STRUCTURAL NOTES:

1. ALL FRAMING LUMBER TO BE # 2 SPF (UNO) .
2. HIP SPLICES ARE TO BE SPACED A MIN. OF 8' -0" . FASTEN MEMBERS WITH THREE ROWS OF 12d NAILS @ 16" O.C. (TYP.)
3. 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.
4. 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.
5. REFER TO SECTION R802.11 OF THE 2018 NCRC FOR REQUIRED UPLIFT RESISTANCE AT RAFTERS AND TRUSSES.

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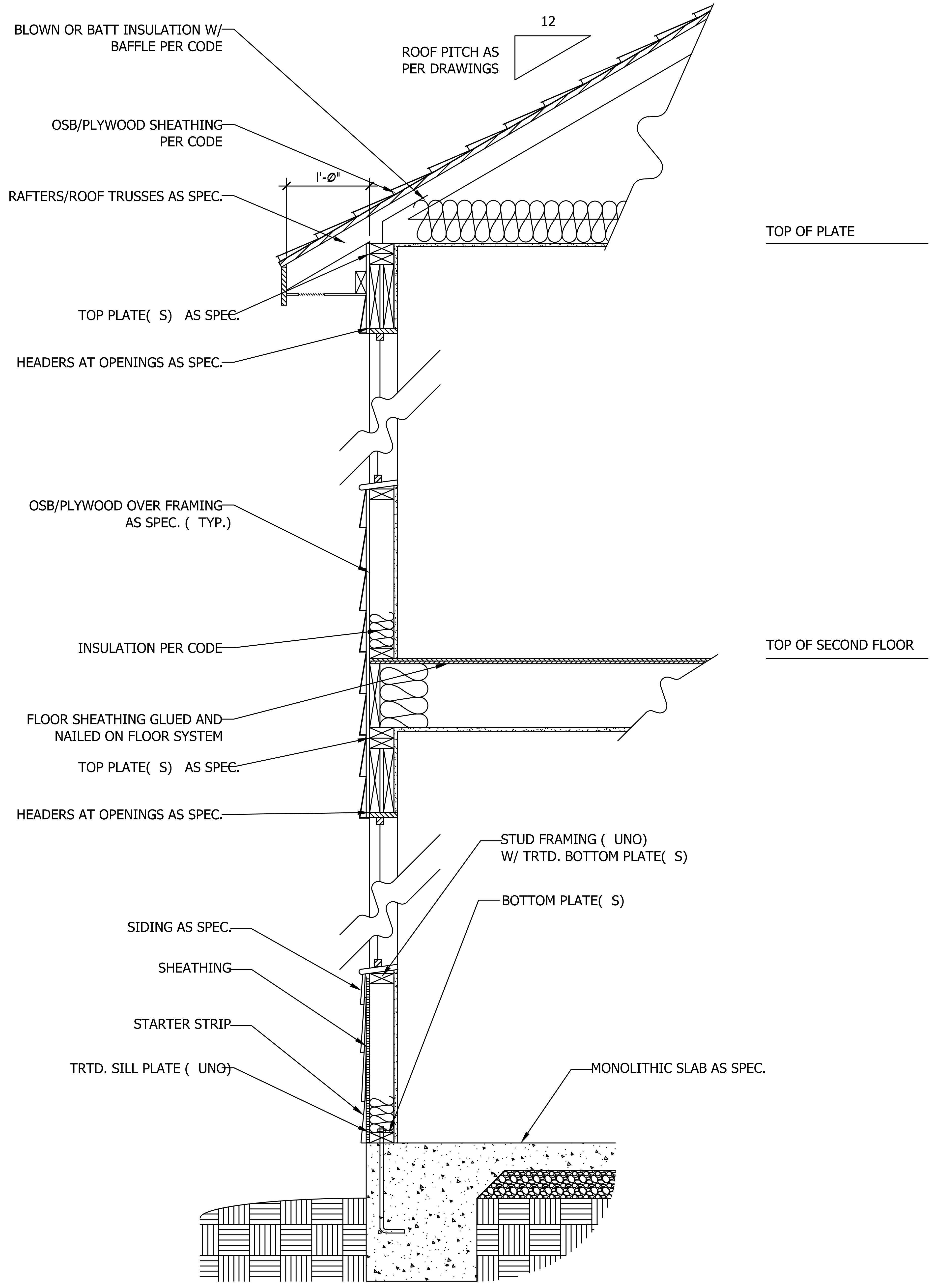
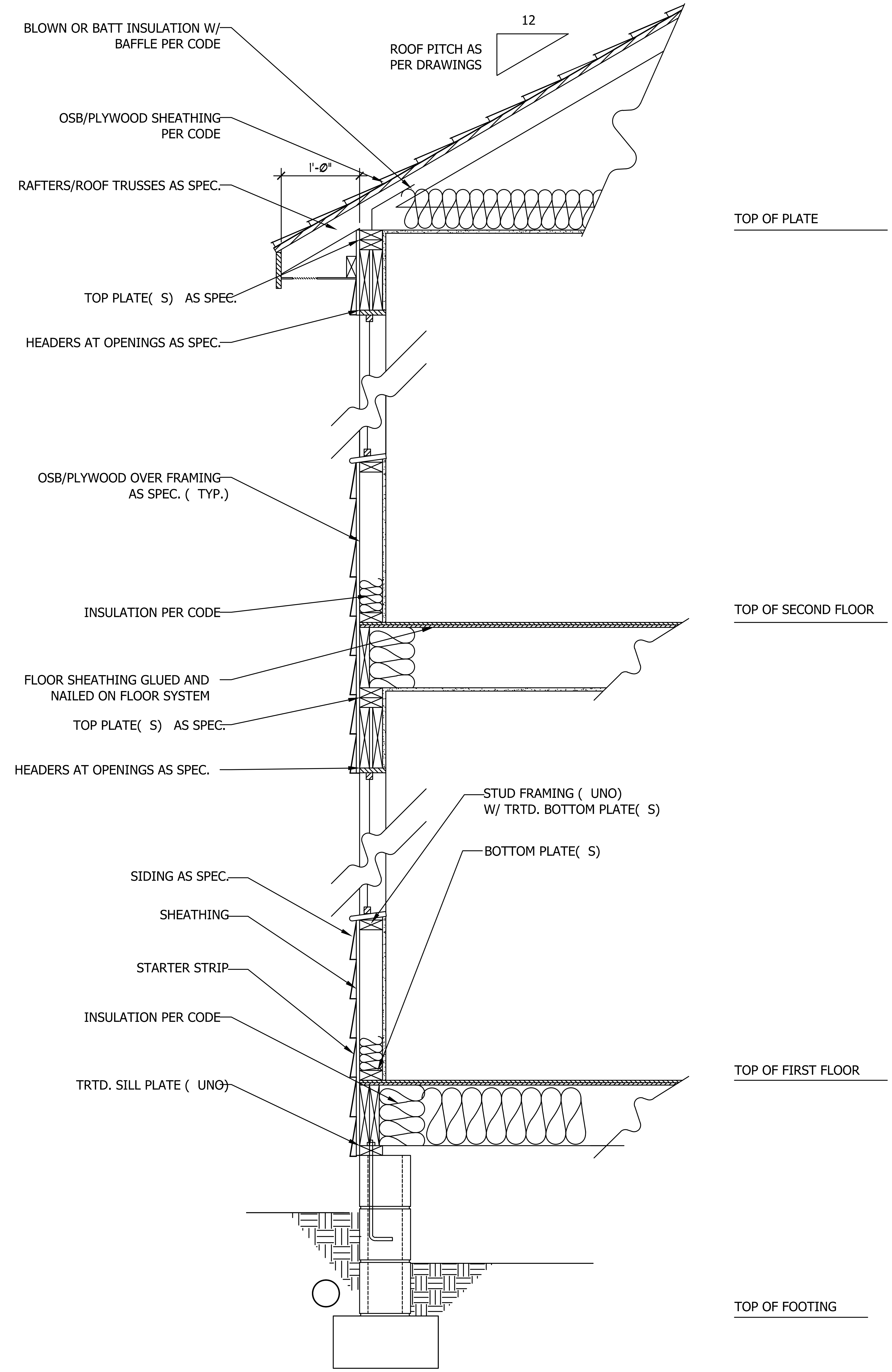
ENGINEERED BY:
REVIEWED BY:

ROOF P LAN
ELEVATION - C

S-4



WALL SECTION W/ SLAB
W/ STD. SIDING SHOWN (NTS)



WALL SECTION W/ CRAWL SPACE
W/ STD. SIDING SHOWN (NTS)

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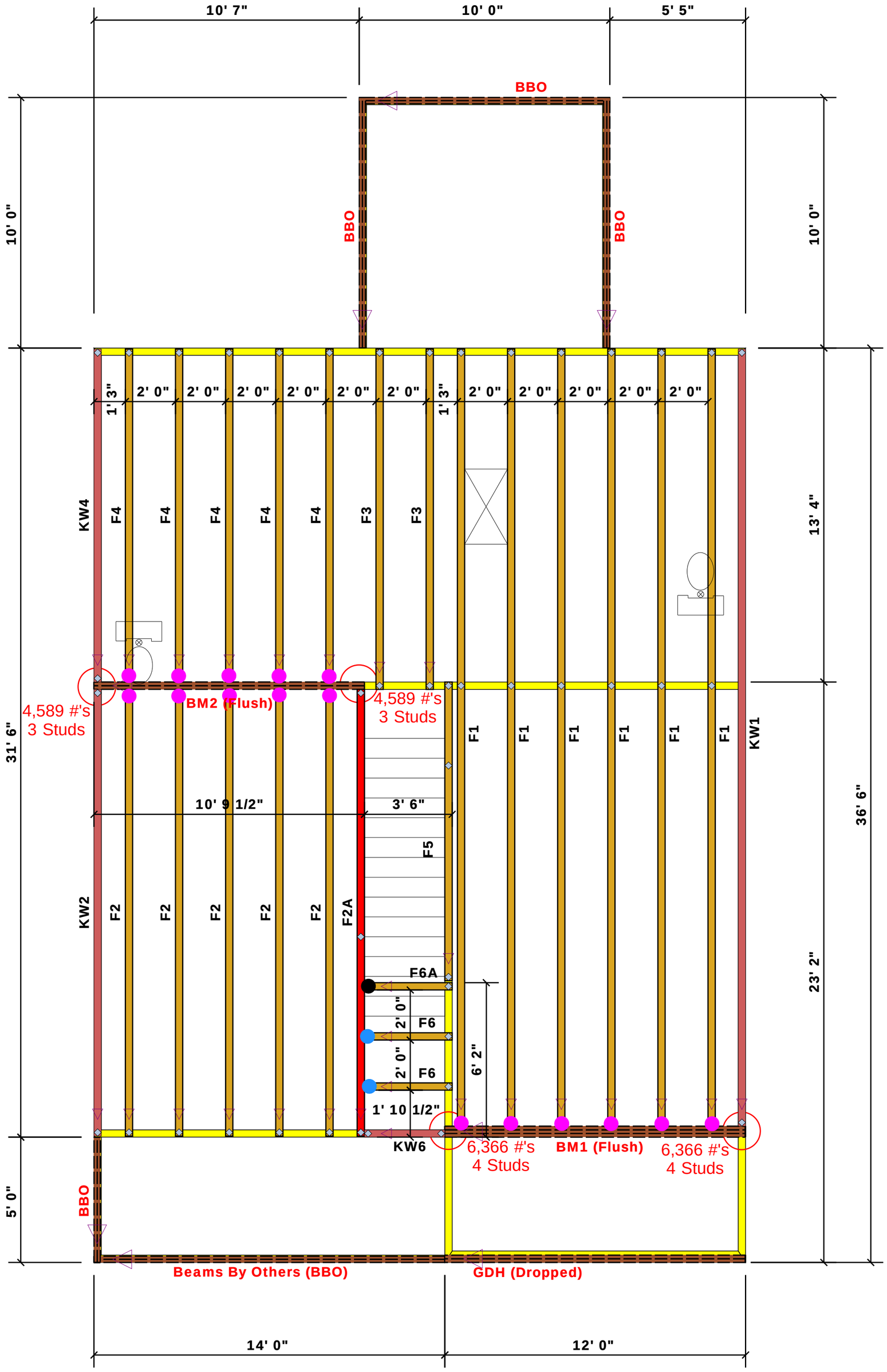
DRAWN BY: WG
ENGINEERED BY:
REVIEWED BY:

TYP ICAL WALL SECTIONS

D-1



= HUS410 (Qty. 16)

= MSH422 (Qty. 2)

= MSH422IF (Qty. 1)

Truss Placement Plan
SCALE: NTS

▲= Denotes Left End of Truss
(Reference Engineered Truss Drawing)

All Truss Reactions are Less than 3,000 lbs. Unless Noted Otherwise.

○ *- - Denotes Reaction Greater than 3,000 lbs. Reaction / # of Studs*

Products					
PlotID	Length	Product	Plies	Net Qty	Fab
GDH (Dropped)	12' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2	FF
BM1 (Flush)	12' 0"	1-3/4"x 16" LVL Kerto-S	3	3	FF
BM2 (Flush)	11' 0"	1-3/4"x 16" LVL Kerto-S	2	2	FF

LOAD CHART FOR JACK STUDS

1700	1	2550	1	3400	1
3400	2	5100	2	6800	2
5100	3	7650	3	10200	3
6800	4	10200	4	13600	4
8500	5	12750	5	17000	5
10200	6	15300	6		
11900	7				
13600	8				
15300	9				

BUILDER	Weaver Development	CITY / CO.	Spring Lake / Harnett
JOB NAME	Lot 74 Thomas Farm	ADDRESS	Overhills Rd
PLAN	Magnolia Elev. C	MODEL	Floor
SEAL DATE	Seal Date	DATE REV.	/ /
QUOTE #	Quote #	DRAWN BY	Christine Shivy
JOB #	J0721-4526	SALES REP.	Lenny Norris

THIS IS A TRUSS PLACEMENT DIAGRAM ONLY.
These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor system and for the overall structure. The design of the truss support structure including headers, beams, walls, and columns is the responsibility of the building designer. For general guidance regarding bracing, consult BCSI-B1 and BCSI-B3 provided with the truss delivery package or online @ sbcindustry.com

Bearing reactions less than or equal to 3000# are deemed to comply with the prescriptive Code requirements. The contractor shall refer to the attached Tables (derived from the prescriptive Code requirements) to determine the minimum foundation size and number of wood studs required to support reactions greater than 3000# but not greater than 15000#. A registered design professional shall be retained to design the support system for any reaction that exceeds those specified in the attached Tables. A registered design professional shall be retained to design the support system for all reactions that exceed 15000#.

Signature Christine Shivy
Christine Shivy

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Fayetteville, N.C. 28309
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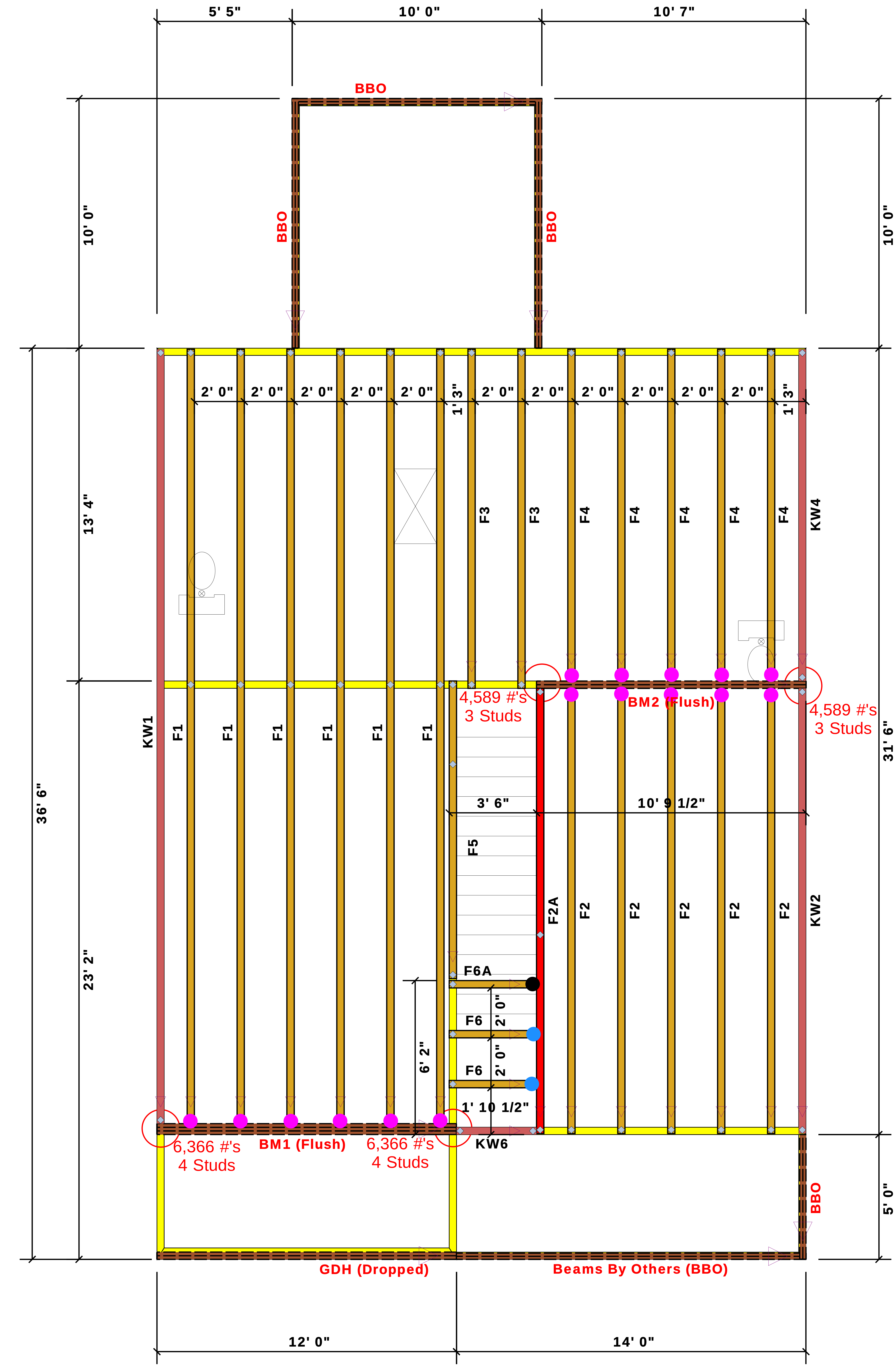

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● = MSH422 (Qty. 2)

● = MSH422IF (Qty. 1)

Truss Placement Plan
SCALE: NTS

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Products					
PlotID	Length	Product	Plies	Net Qty	Fab
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BM1 (Flush)	12' 0"	1-3/4"x 16" LVL Kerto-S	3	3	FF
BM2 (Flush)	11' 0"	1-3/4"x 16" LVL Kerto-S	2	2	FF

LOAD CHART FOR JACK STUDS
(BASED ON TABLES R502.5(1) & (b))
NUMBER OF JACK STUDS REQUIRED @ EA END OF HEADER/GIRDER

END REACTION (UP TO)	REQ'D STUDS FOR (1) PLY HEADER	END REACTION (UP TO)	REQ'D STUDS FOR (2) PLY HEADER	END REACTION (UP TO)	REQ'D STUDS FOR (3) PLY HEADER
1700	1	2550	1	3400	1
3400	2	5100	2	6800	2
5100	3	7650	3	10200	3
6800	4	10200	4	13600	4
8500	5	12750	5	17000	5
10200	6	15300	6		
11900	7				
13600	8				
15300	9				

BUILDER	Weaver Development	CITY / CO.	Spring Lake / Harnett
JOB NAME	Lot 74 Thomas Farm	ADDRESS	Overhills Rd
PLAN	Magnolia Elev. C	MODEL	Floor
SEAL DATE	Seal Date	DATE REV.	/ /
QUOTE #	Quote #	DRAWN BY	Christine Shivy
JOB #	J0721-4526	SALES REP.	Lenny Norris

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Signature Christine Shivy
Christine Shivy

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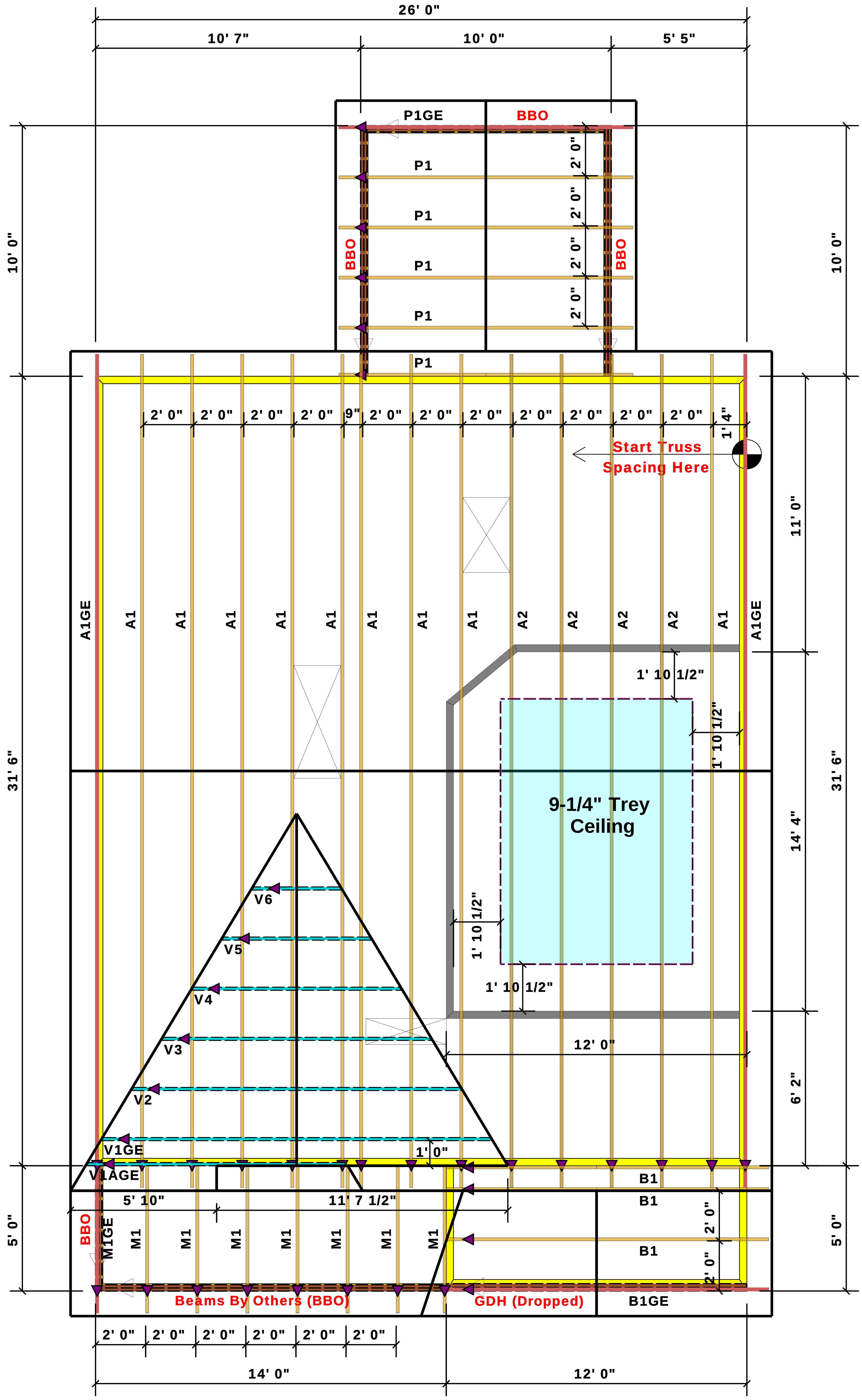

All Truss Reactions are Less than 3,000 lbs. Unless Noted Otherwise.

-- Denotes Reaction Greater than 3,000 lbs.
Reaction / # of Studs

▲= Denotes Left End of Truss
(Reference Engineered Truss Drawing)

Truss Placement Plan
SCALE: NTS

LOAD CHART FOR JACK STUDS
(BASED ON TABLES R502.5(1) & (b))
NUMBER OF JACK STUDS REQUIRED @ EA END OF HEADER/GIRDER

END REACTION (UP TO)	REQ'D STUDS FOR (1) PLY HEADER	END REACTION (UP TO)	REQ'D STUDS FOR (2) PLY HEADER	END REACTION (UP TO)	REQ'D STUDS FOR (3) PLY HEADER
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3400	2	5100	2	6800	2
5100	3	7650	3	10200	3
6800	4	10200	4	13600	4
8500	5	12750	5	17000	5
10200	6	15300	6		
11900	7				
13600	8				
15300	9				

BUILDER	Weaver Development	CITY / CO.	Spring Lake / Harnett
JOB NAME	Lot 74 Thomas Farm	ADDRESS	Overhills Rd
PLAN	Magnolia Elev. C	MODEL	Roof
SEAL DATE	Seal Date	DATE REV.	/ /
QUOTE #	Quote #	DRAWN BY	Christine Shivy
JOB #	J0721-4525	SALES REP.	Lenny Norris

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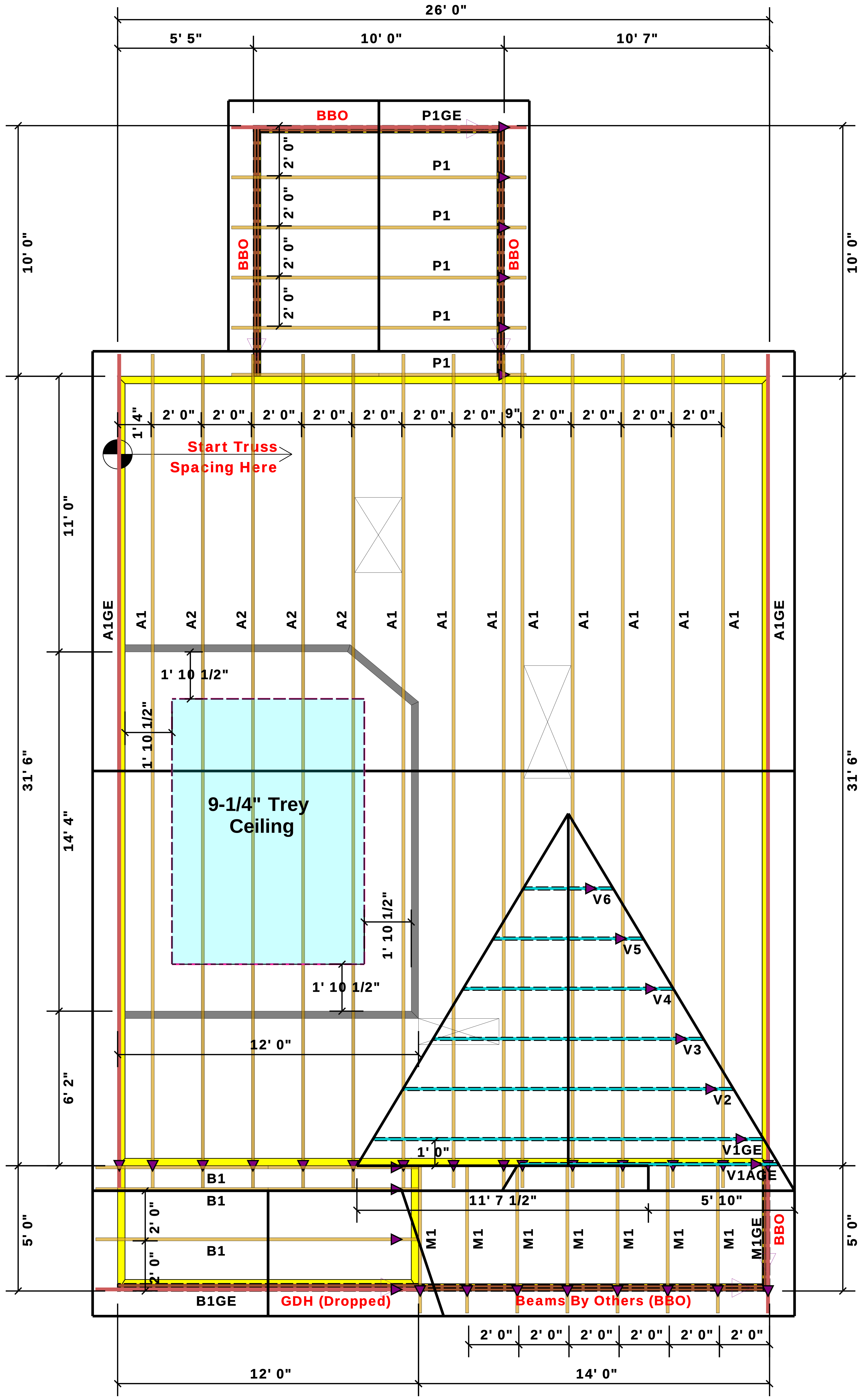

▲ = Denotes Left End of Truss
(Reference Engineered Truss Drawing)

Truss Placement Plan
SCALE: NTS

All Truss Reactions are Less than 3,000 lbs. Unless Noted Otherwise.

◯ *-- Denotes Reaction Greater than 3,000 lbs.*
Reaction / # of Studs

LOAD CHART FOR JACK STUDS
(BASED ON TABLES R502.5(1) & (b))
NUMBER OF JACK STUDS REQUIRED @ EA END OF HEADER/GIRDER

END REACTION (UP TO)	REQ'D STUDS FOR (2) PLY HEADER	END REACTION (UP TO)	REQ'D STUDS FOR (3) PLY HEADER	END REACTION (UP TO)	REQ'D STUDS FOR (4) PLY HEADER
1700	1	2550	1	3400	1
3400	2	5100	2	6800	2
5100	3	7650	3	10200	3
6800	4	10200	4	13600	4
8500	5	12750	5	17000	5
10200	6	15300	6		
11900	7				
13600	8				
15300	9				

BUILDER	Weaver Development	CITY / CO.	Spring Lake / Harnett
JOB NAME	Lot 74 Thomas Farm	ADDRESS	Overhills Rd
PLAN	Magnolia Elev. C	MODEL	Roof
SEAL DATE	Seal Date	DATE REV.	/ /
QUOTE #	Quote #	DRAWN BY	Christine Shivy
JOB #	J0721-4525	SALES REP.	Lenny Norris

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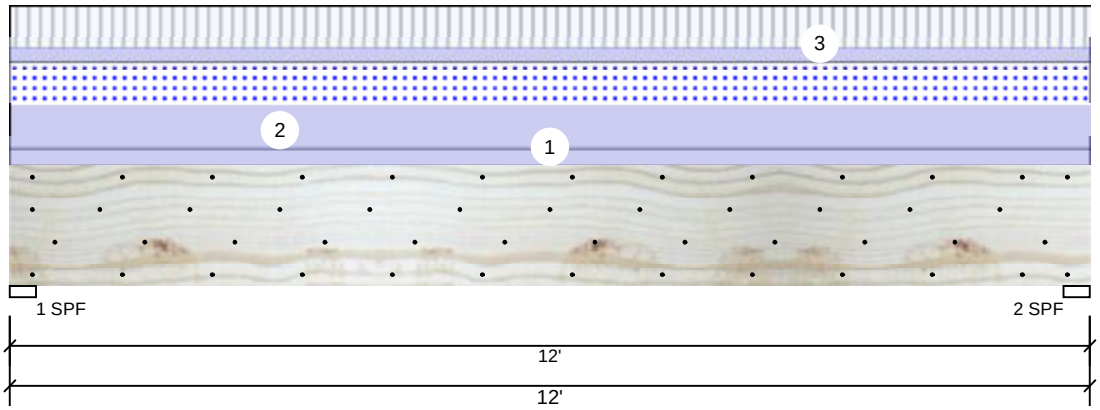
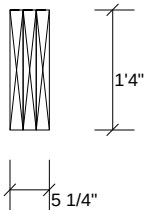
Fax: (910) 864-4444

Client:	Weaver Homes	Date:	1/25/2021
Project:	Magnolia Elev. C	Input by:	Christine Shivy
Address:	Magnolia Elev. C	Job Name:	Magnolia Elev. C
		Project #:	

BM1 Kerto-S LVL 1.750" X 16.000" 3-Ply - PASSED

Level: Level





Member Information

Type:	Girder	Application:	Floor
Plies:	3	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	Yes
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	1932	3454	1950	0	0
2	1932	3454	1950	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	82%	3454 / 2912	6366	L	D+0.75(L+S)
2 - SPF	3.500"	82%	3454 / 2912	6366	L	D+0.75(L+S)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	17729 ft-lb	6'	62010 ft-lb	0.286 (29%)	D+0.75(L+S)	L
Unbraced	17729 ft-lb	6'	17732 ft-lb	1.000 (100%)	D+0.75(L+S)	L
Shear	4565 lb	1'6 5/8"	17920 lb	0.255 (25%)	D+L	L
LL Defl inch	0.066 (L/2116)	6'	0.289 (L/480)	0.230 (23%)	0.75(L+S)	L
TL Defl inch	0.143 (L/968)	6'	0.385 (L/360)	0.370 (37%)	D+0.75(L+S)	L

Design Notes

1. Fasten all plies using 4 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
2. Refer to last page of calculations for fasteners required for specified loads.
3. Girders are designed to be supported on the bottom edge only.
4. Top loads must be supported equally by all plies.
5. Top must be laterally braced at a maximum of 10'4 1/8" o.c.
6. Bottom braced at bearings.
7. Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	125 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Exterior Wall
2	Uniform			Top	325 PLF	0 PLF	325 PLF	0 PLF	0 PLF	A2
3	Uniform			Far Face	107 PLF	322 PLF	0 PLF	0 PLF	0 PLF	F1
	Self Weight				19 PLF					

Notes

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Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 1/8/2023

Manufacturer Info

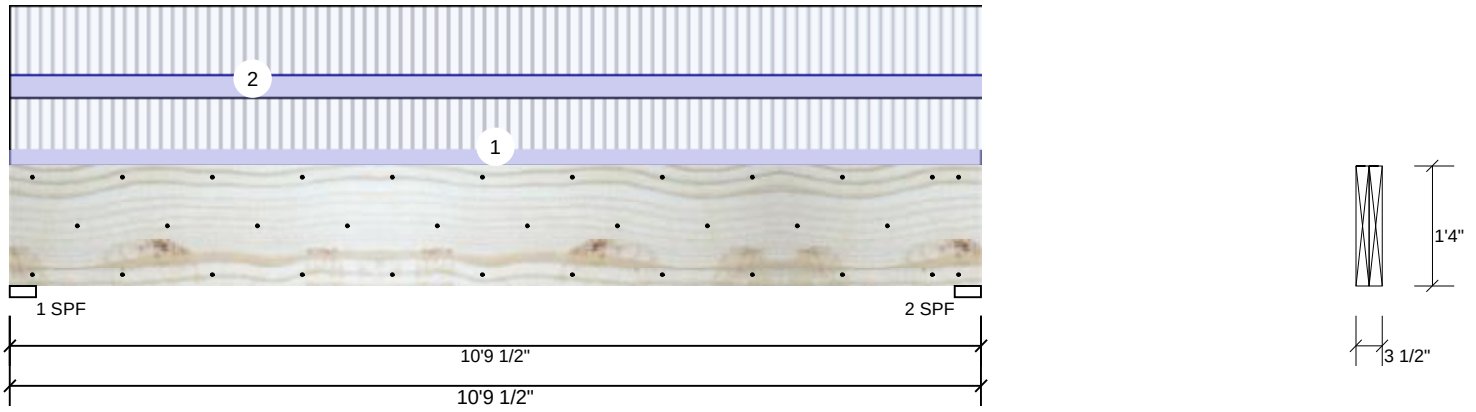
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us
ICC-ES: ESR-3633

Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS

Client:	Weaver Homes	Date:	1/25/2021
Project:	Magnolia Elev. C	Input by:	Christine Shivy
Address:	Magnolia Elev. C	Job Name:	Magnolia Elev. C
		Project #:	

BM2 Kerto-S LVL 1.750" X 16.000" 2-Ply - PASSED

Level: Level



Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	3389	1200	0	0	0
2	3389	1200	0	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	88%	1200 / 3389	4589	L	D+L
2 - SPF	3.500"	88%	1200 / 3389	4589	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	11397 ft-lb	5'4 3/4"	34565 ft-lb	0.330 (33%)	D+L	L
Unbraced	11397 ft-lb	5'4 3/4"	11746 ft-lb	0.970 (97%)	D+L	L
Shear	4386 lb	1'6 5/8"	11947 lb	0.367 (37%)	D+L	L
LL Defl inch	0.085 (L/1457)	5'4 3/4"	0.259 (L/480)	0.330 (33%)	L	L
TL Defl inch	0.115 (L/1076)	5'4 3/4"	0.345 (L/360)	0.330 (33%)	D+L	L

Design Notes

1 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
2 Refer to last page of calculations for fasteners required for specified loads.
3 Girders are designed to be supported on the bottom edge only.
4 Top braced at bearings.
5 Bottom braced at bearings.
6 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Far Face	89 PLF	267 PLF	0 PLF	0 PLF	0 PLF	F4
2	Uniform			Near Face	121 PLF	361 PLF	0 PLF	0 PLF	0 PLF	F2
	Self Weight				12 PLF					

Notes

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Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 1/8/2023

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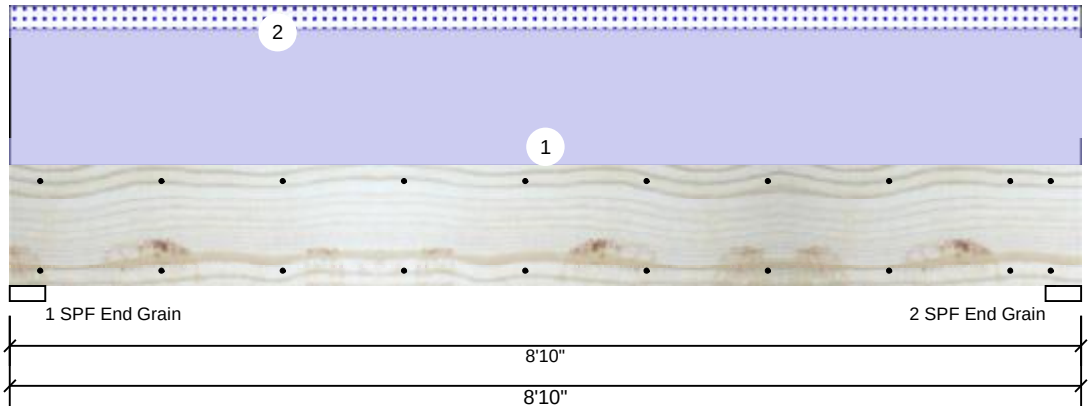
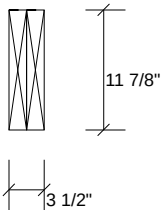
Client:	Weaver Homes	Date:	1/25/2021
Project:	Magnolia Elev. C	Input by:	Christine Shivy
Address:	Magnolia Elev. C	Job Name:	Magnolia Elev. C
		Project #:	

GDH Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level





Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	1101	177	0	0
2	0	1101	177	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	12%	1101 / 177	1277	L	D+S
2 - SPF End Grain	3.500"	12%	1101 / 177	1277	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2185 ft-lb	4'5"	17919 ft-lb	0.122 (12%)	D	Uniform
Unbraced	2536 ft-lb	4'5"	10756 ft-lb	0.236 (24%)	D+S	L
Shear	797 lb	7'7 3/8"	7980 lb	0.100 (10%)	D	Uniform
LL Defl inch	0.006 (L/18257)	4'5 1/16"	0.209 (L/480)	0.030 (3%)	S	L
TL Defl inch	0.040 (L/2525)	4'5 1/16"	0.279 (L/360)	0.140 (14%)	D+S	L

Design Notes

1. Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
2. Refer to last page of calculations for fasteners required for specified loads.
3. Girders are designed to be supported on the bottom edge only.
4. Top loads must be supported equally by all plies.
5. Top braced at bearings.
6. Bottom braced at bearings.
7. Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	200 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Exterior Loads
2	Uniform			Top	40 PLF	0 PLF	40 PLF	0 PLF	0 PLF	2'-0" Gable End
	Self Weight				9 PLF					

Notes

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Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
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