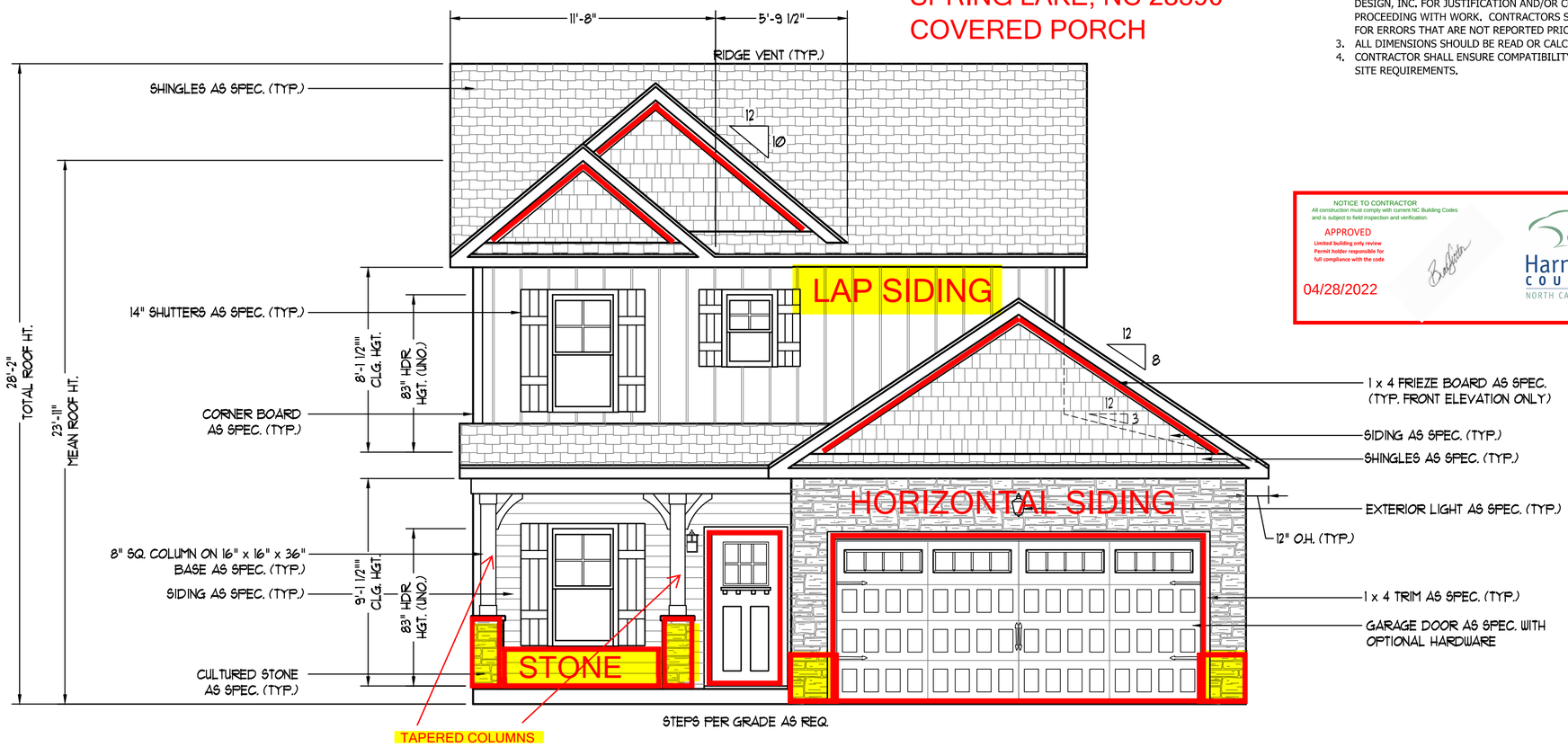
PLANS DESIGNED TO THE
2018 NORTH CAROLINA STATE
RESIDENTIAL BUILDING CODE.

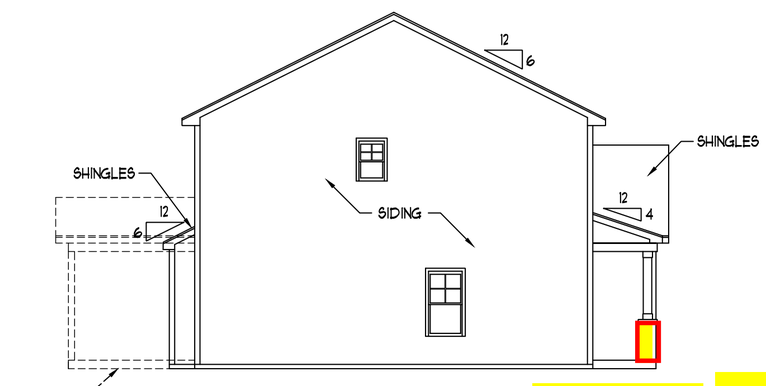
LOT 4 MCPHAIL FARM
TBD HAYES ROAD
SPRING LAKE, NC 28390
COVERED PORCH

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.

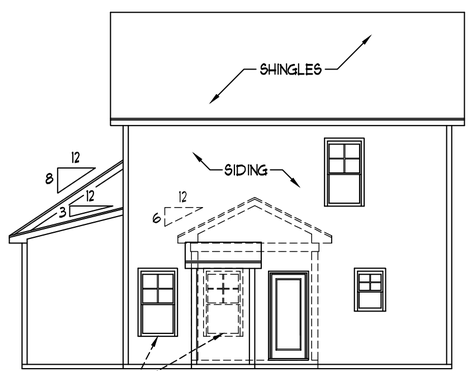


NOTICE TO CONTRACTOR
All construction must comply with current NC Building Codes and is subject to field inspection and verification.
APPROVED
Limited building only review
Permit holder responsible for full compliance with the code
04/28/2022
Harnett COUNTY NORTH CAROLINA

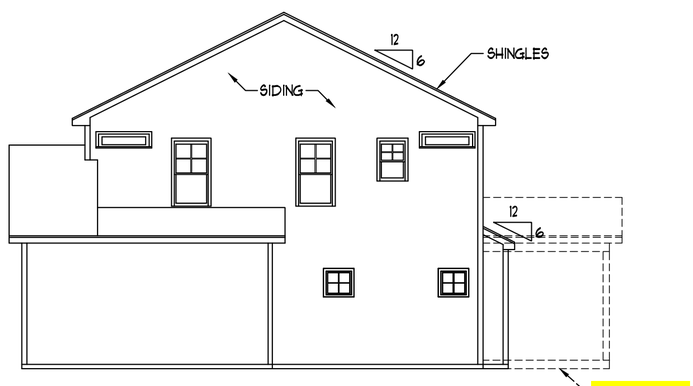
FRONT ELEVATION-C
SCALE: 1/4" = 1'-Ø"



LEFT ELEVATION
SCALE: 1/8" = 1'-Ø"



REAR ELEVATION
SCALE: 1/8" = 1'-Ø"



RIGHT ELEVATION
SCALE: 1/8" = 1'-Ø"

HVAC: CAROLINA COMFORT
ELECTRICAL: PIONEER
PLUMBING: DOUBLE J

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

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CAROLINA COLLECTION
MAGNOLIA-II

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REV.:
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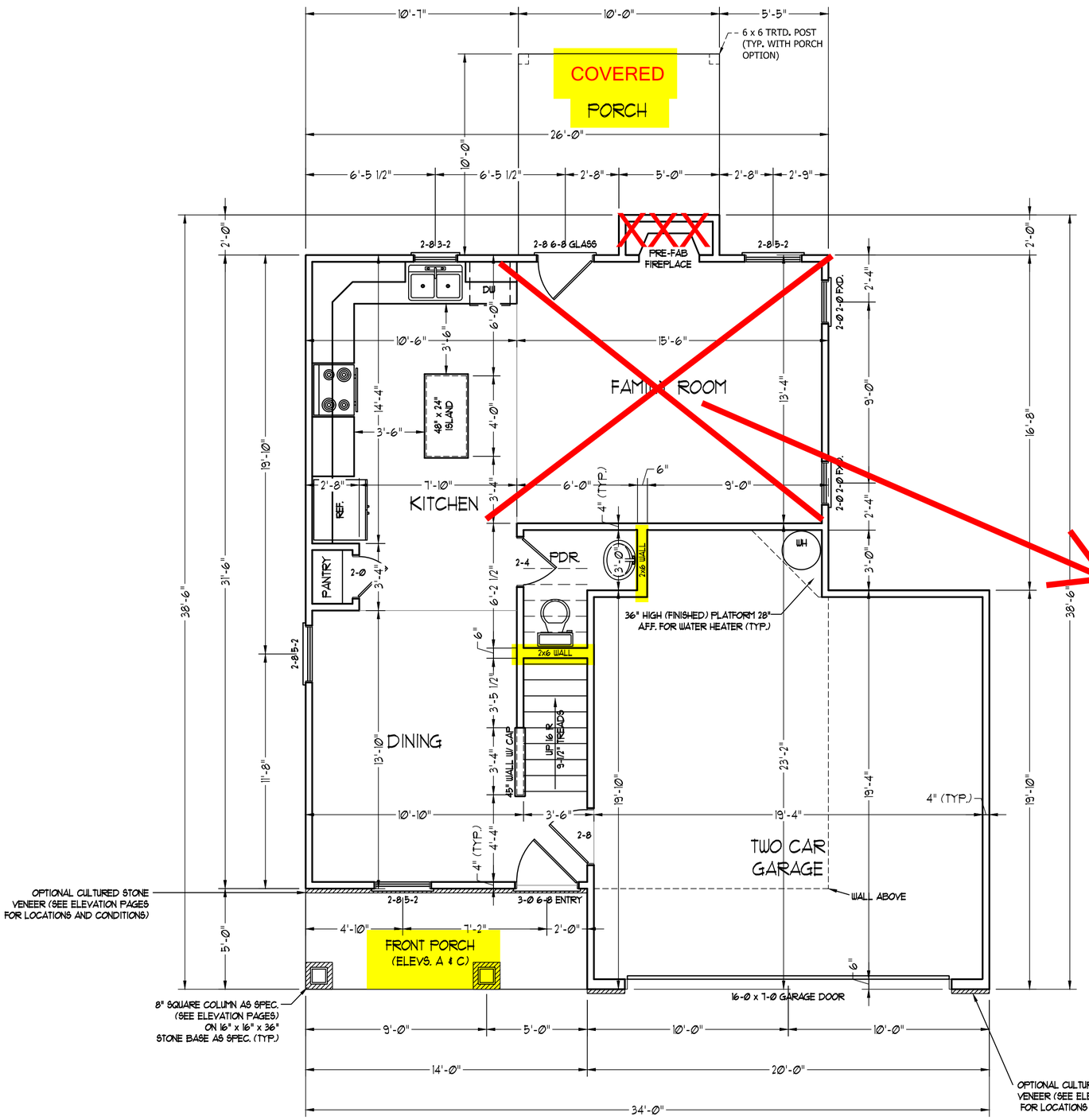
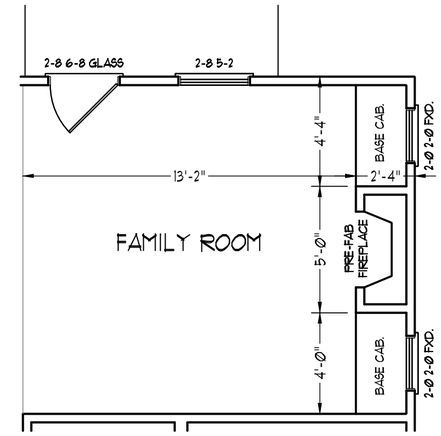
ENGINEERED BY:
REVIEWED BY:

C - ELEVATIONS
A-3

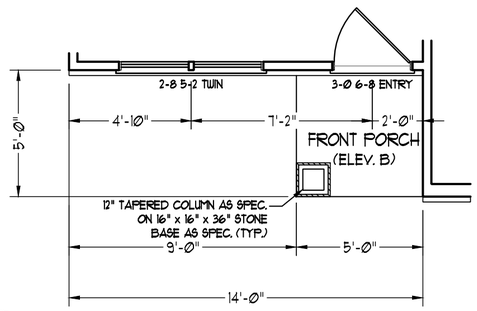
C:\Users\Wade\Documents\Projects\Westan-Weaver\Magnolia\Magnolia-II_2-21.dwg, 2/19/2021 1:52:20 PM

SQUARE FOOTAGE (I.F.S.)	
1st FLOOR:	581 SQ. FT.
2nd FLOOR:	747 SQ. FT.
TOTAL:	1328 SQ. FT.
GARAGE:	398 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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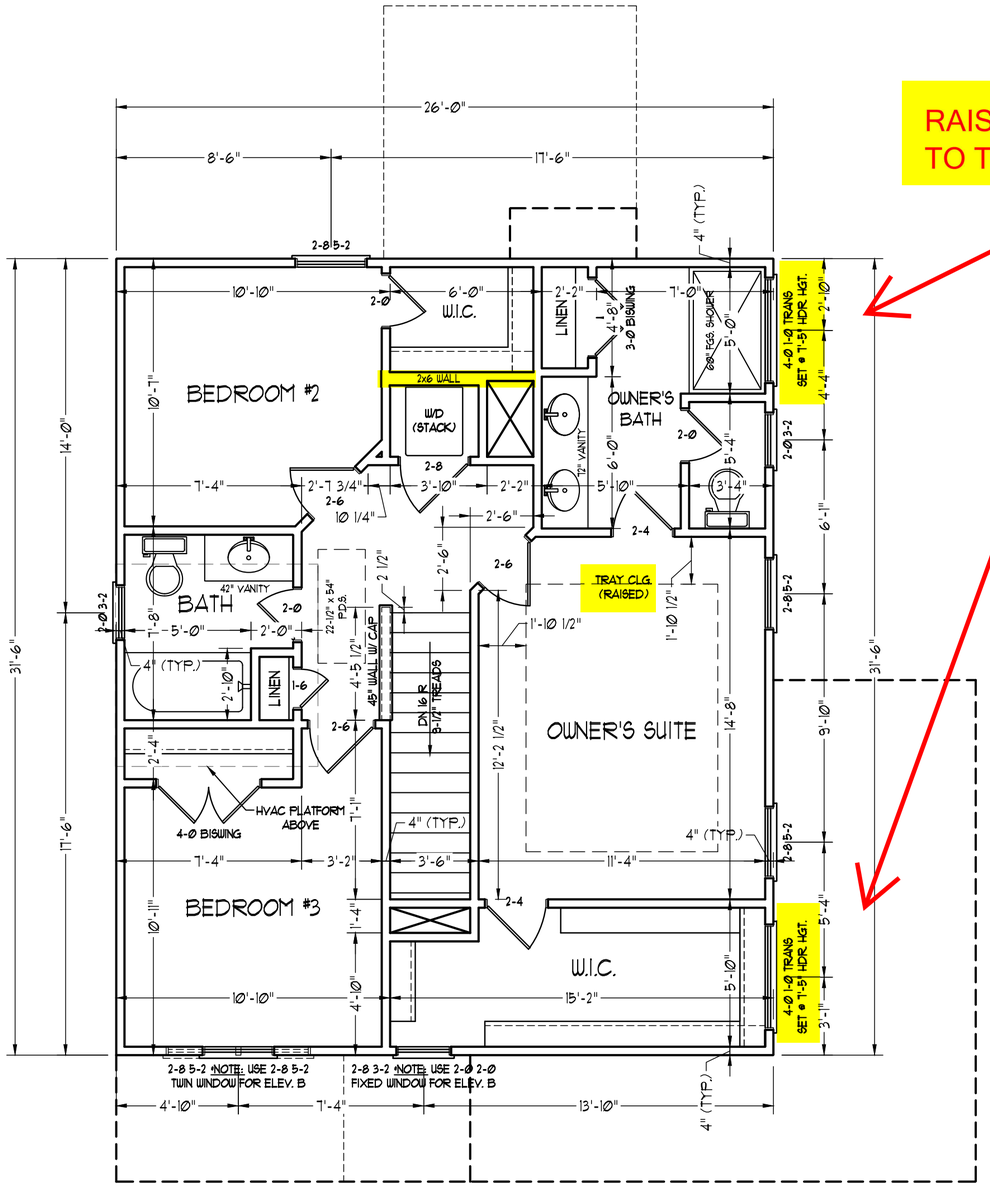
REVIEWED BY:

FIRST FLOOR PLAN
A-4



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REVIEWED BY:

SECOND FLOOR PLAN

A-5

ELECTRICAL LAYOUT NOTES:

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

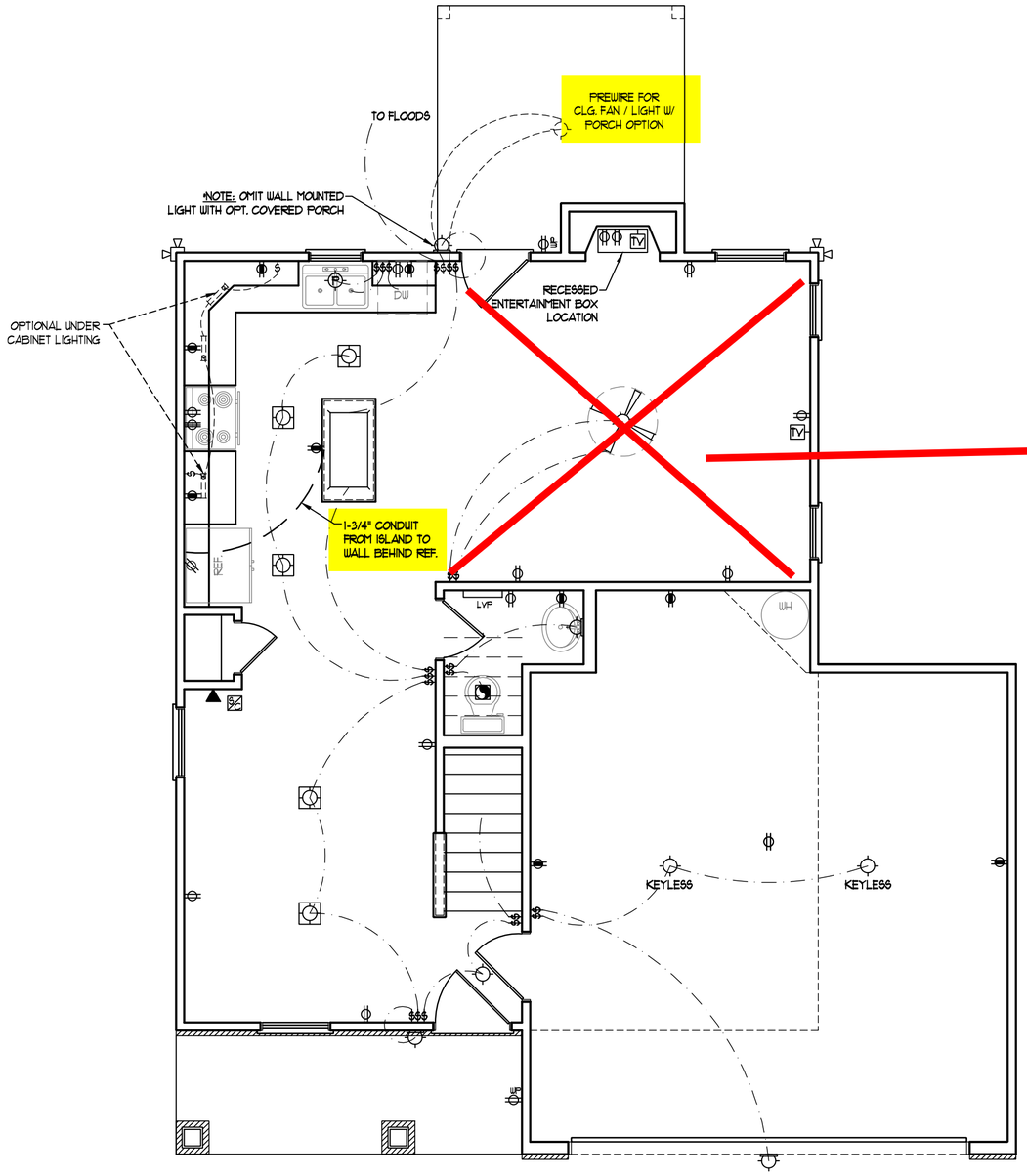
2.) VANITY LIGHTS TO BE SET @ 80" A.F.F. (TYP.)

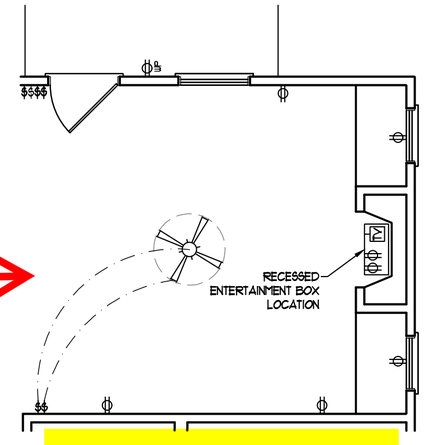
3.) ADDITIONAL EXTERIOR OUTLETS REQUIRED BY CODE TO BE LOCATED BY ELECTRICIAN.

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

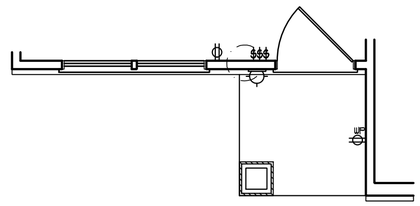
ELECTRICAL LEGEND

- 110 V OUTLET
- 110 V GFI OUTLET
- 110 V SWITCHED OUTLET
- BB 110 V BASEBOARD OUTLET
- 4-PLEX
- 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
- S SWITCH
- $_D$ DIMMER SWITCH
- TELEPHONE
- DATA
- TELEPHONE AND DATA
- TV TV CONNECTION
- TV/ TV/ DATA
- CD CONDUIT FOR COMPONENT WIRING
- SP SPEAKER
- SD 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:

FIRST FLOOR ELECTRICAL PLAN

E-1

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-PLEX
- COUNTER OR FLOOR MOUNTED
- COUNTER OR FLOOR MOUNTED 110V GFI
- WP WEATHERPROOF
- 220 V OUTLET
- 110 V DEDICATED CIRCUIT
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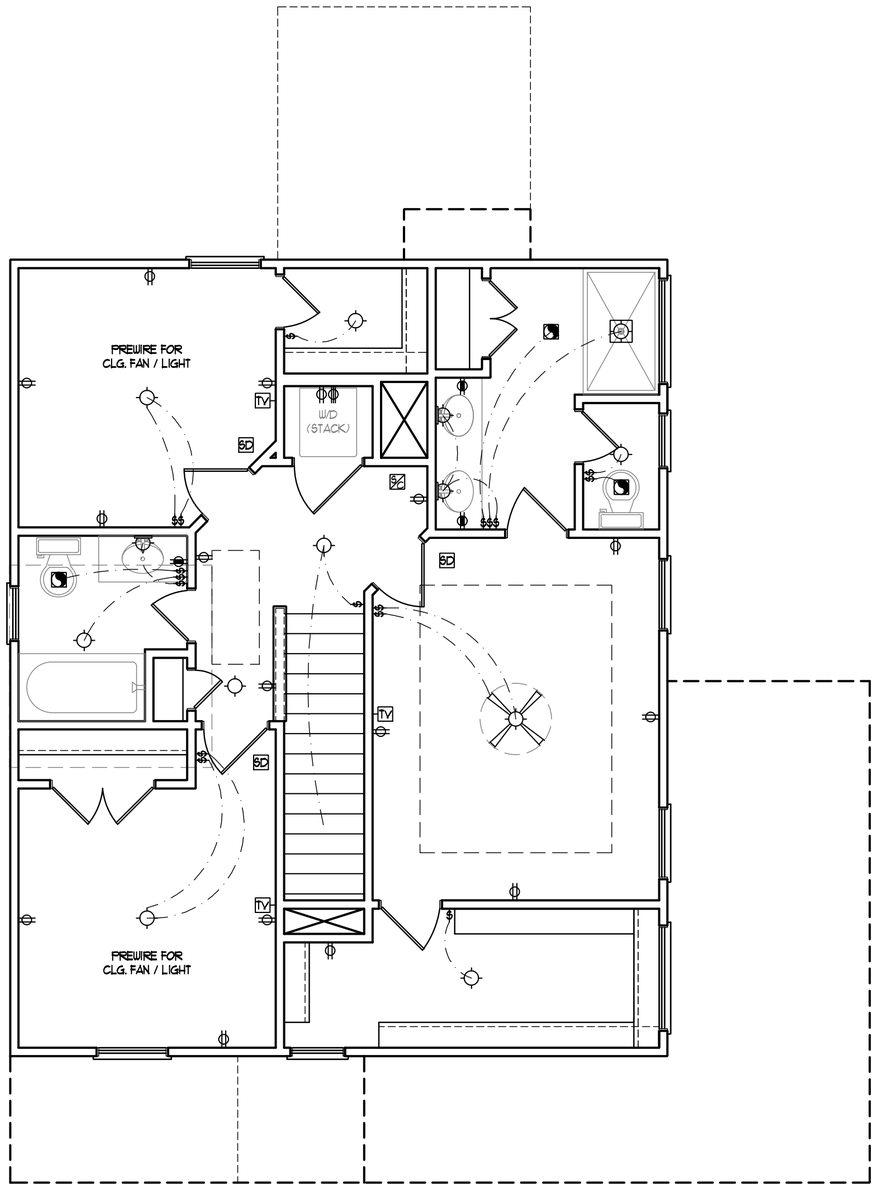
- SPECIAL PURPOSE (240 V, ETC.)
- WALL MOUNT LIGHT
- CEILING MOUNT LIGHT
- P PENDANT LIGHT
- RECESSED CAN LIGHT
- MINI CAN LIGHT
- EYEBALL LIGHT
- FLUORESCENT LIGHT
- UNDERCABINET LIGHT
- FLOOD LIGHT
- $ SWITCH
- $D DIMMER SWITCH
- TELEPHONE
- DATA
- TELEPHONE AND DATA
- TV TV CONNECTION
- TV/ DATA
- CD CONDUIT FOR COMPONENT WIRING
- SP SPEAKER
- SD 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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SECOND FLOOR
ELCTRICAL
PLAN

E-2

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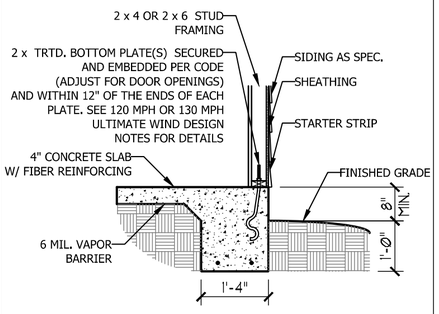
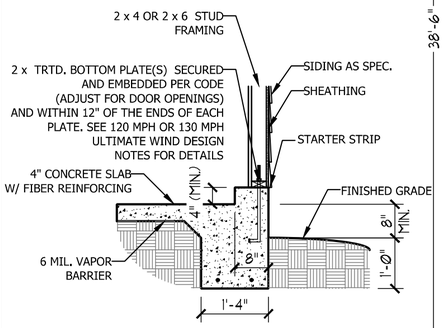
ULTIMATE DESIGN WIND SPEED NOTES FOR LESS THAN 30' MEAN ROOF HEIGHT:

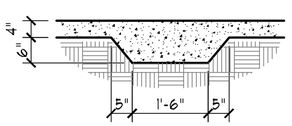
1. STRUCTURAL DESIGN PER NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.
2. FOR 120 MPH WIND ZONES INSTALL 1/2" ANCHOR BOLTS 6'-0" O.C. AND WITHIN 1'-0" FROM END OF EACH CORNER. ANCHOR BOLTS MUST EXTEND A MINIMUM OF 7" INTO CONCRETE OR 15" INTO MASONRY. LOCATE BOLT WITHIN MIDDLE THIRD OF PLATE WIDTH.
3. FOR 130 MPH WIND ZONES INSTALL 1/2" ANCHOR BOLTS 4'-0" O.C. AND WITHIN 1'-0" FROM END OF EACH CORNER. ANCHOR BOLTS MUST EXTEND 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. EXTERIOR WALLS DESIGNED FOR 120 OR 130 MPH WINDS.
6. INSTALL 7/16" OSB SHEATHING ON ALL EXTERIOR 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.



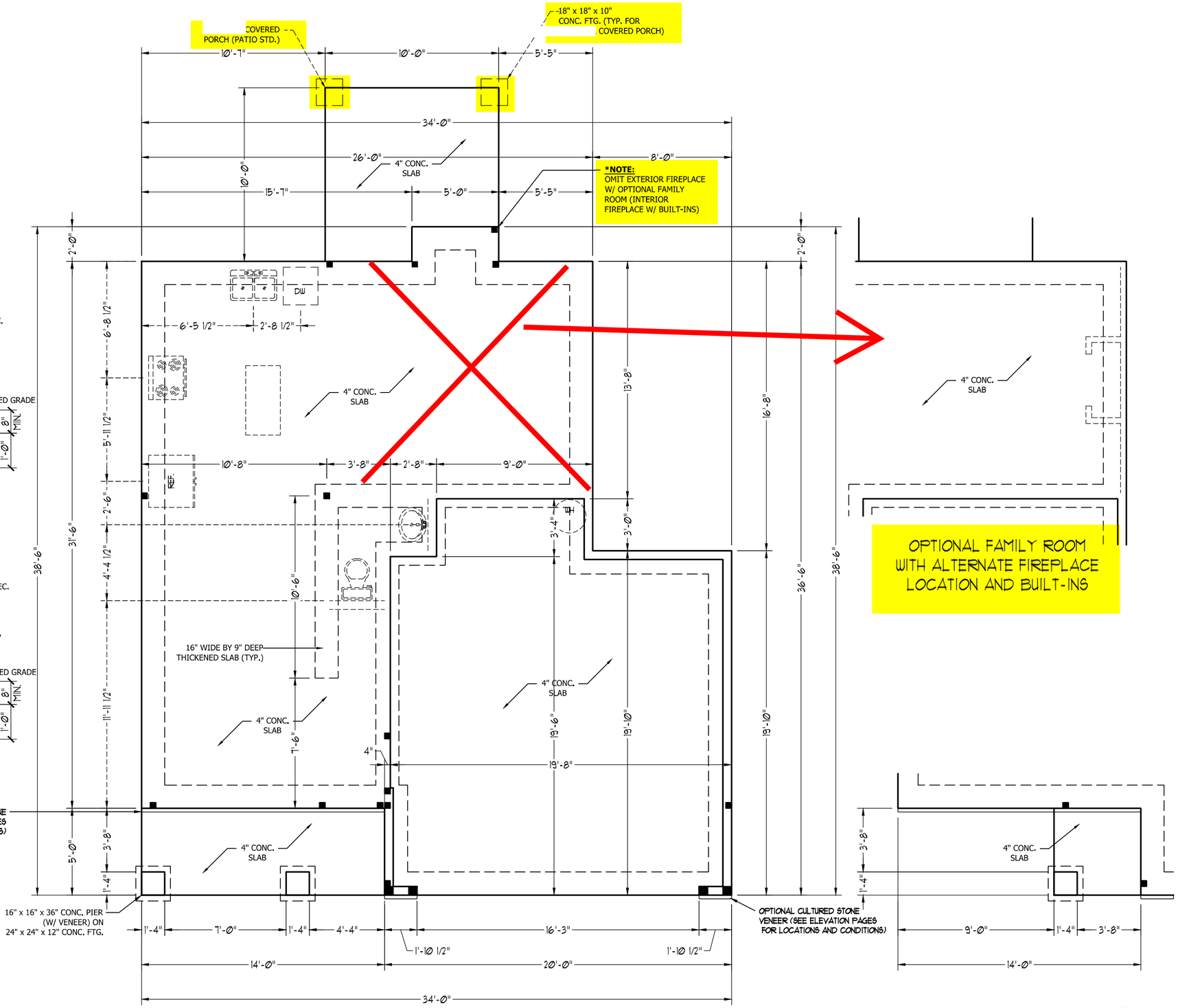
TYPICAL SLAB DETAIL



GARAGE CURB DETAIL



THICKENED SLAB DETAIL



~~FRONT PORCH ELEVATION B~~

SCALE NOTE: 18x24 PRINTS ARE TO SCALE AS NOTED.
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MONO SLAB FOUNDATION PLAN

S-1

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. INSTALL AN EXTRA 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.

BRACE WALL PANEL NOTES:

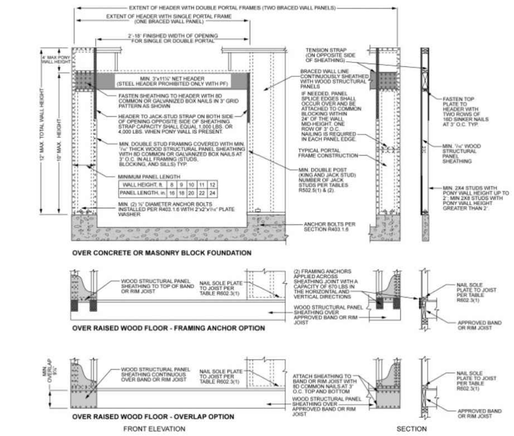
EXTERIOR WALLS: ALL EXTERIOR WALLS TO BE SHEALTHED WITH CS-WSP OR CS-SFB IN ACCORDANCE WITH SECTION R602.10.3 UNLESS NOTED OTHERWISE.

REQUIRED LENGTH OF BRACING: 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.

GYPSUM: ALL INTERIOR SIDES OF EXTERIOR 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.

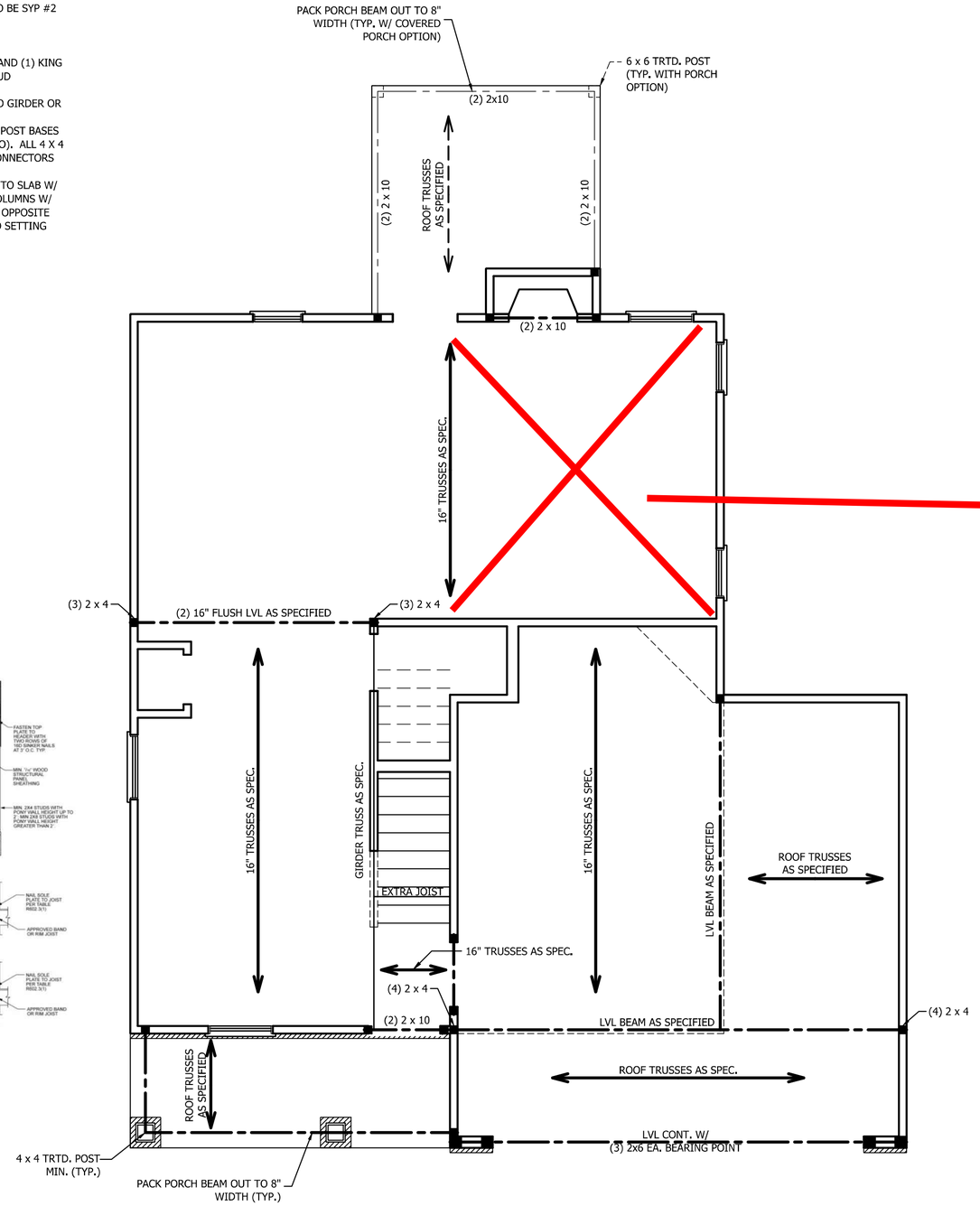
HD: 800 LBS HOLD DOWN DEVICE FASTENED TO THE EDGE OF THE BRACE WALL PANEL NEAREST TO THE CORNER

METHODS: PER TABLE R602.10.1

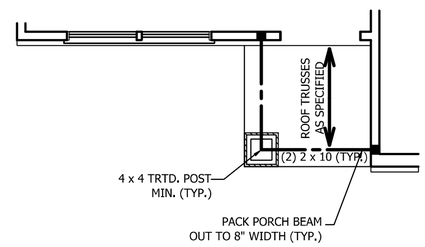


nch = 25.4 mm, 1 foot = 305 mm, 1 lb = 4.45 N.

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.
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ENGINEERED BY:
REVIEWED BY:

SECOND FLOOR FRAMING PLAN

S-2

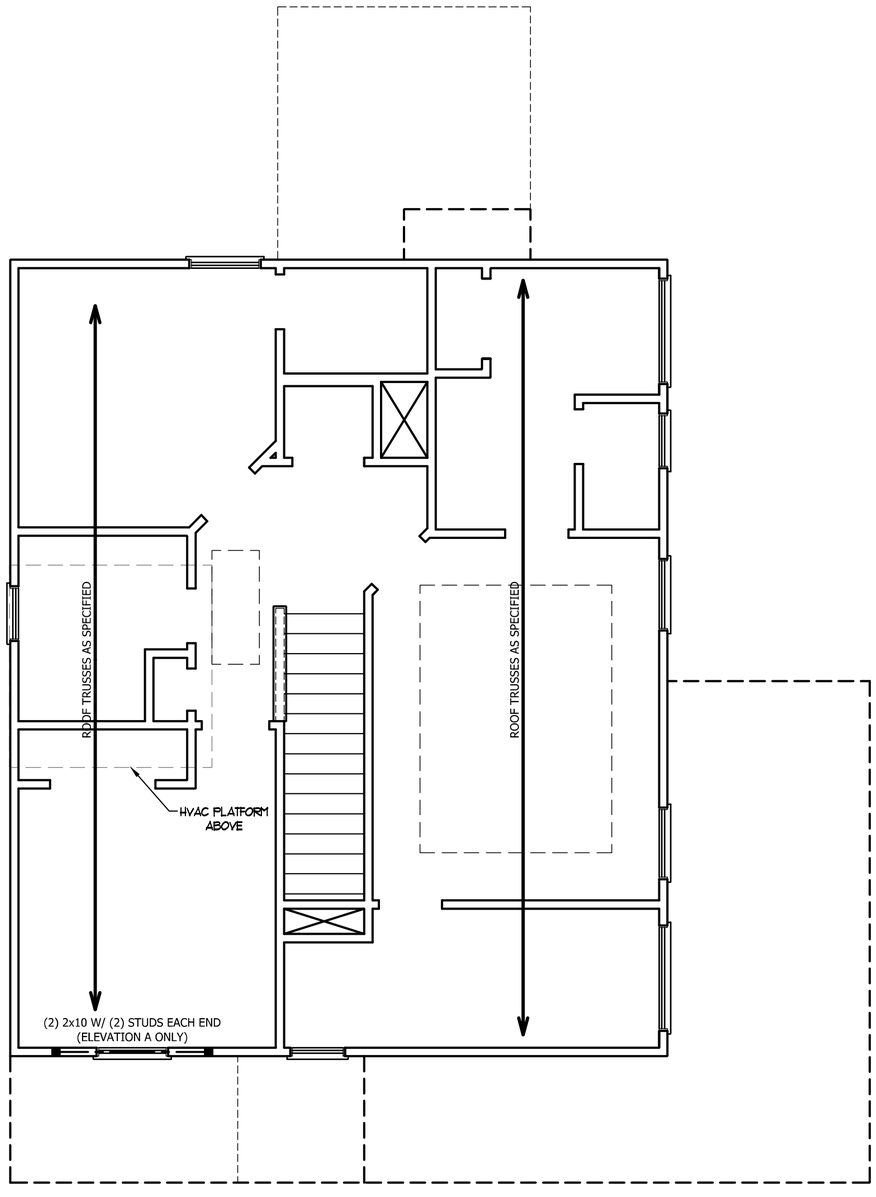

TABLE R602.7.5
MINIMUM NUMBER OF FULL HEIGHT STUDS
AT EACH END OF HEADERS IN EXTERIOR WALLS

HEADER SPAN (FEET)	MAXIMUM 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.
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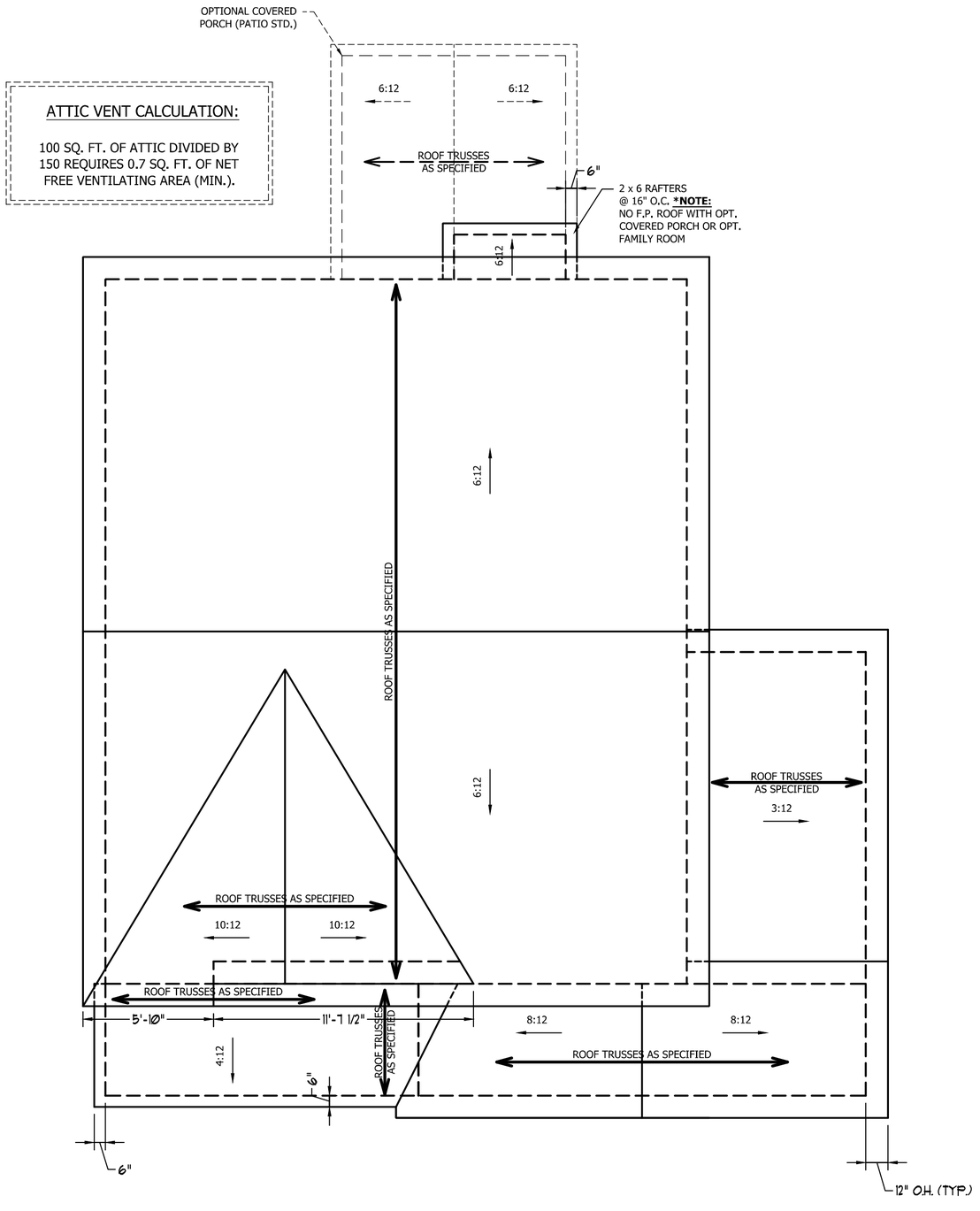
REVIEWED BY:

ATTIC FLOOR
FRAMING PLAN

S-3



ATTIC VENT CALCULATION:

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

ATTIC VENT CALCULATION:

1250 SQ. FT. OF ATTIC DIVIDED BY 150 REQUIRES 8.3 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.

ELEVATION C

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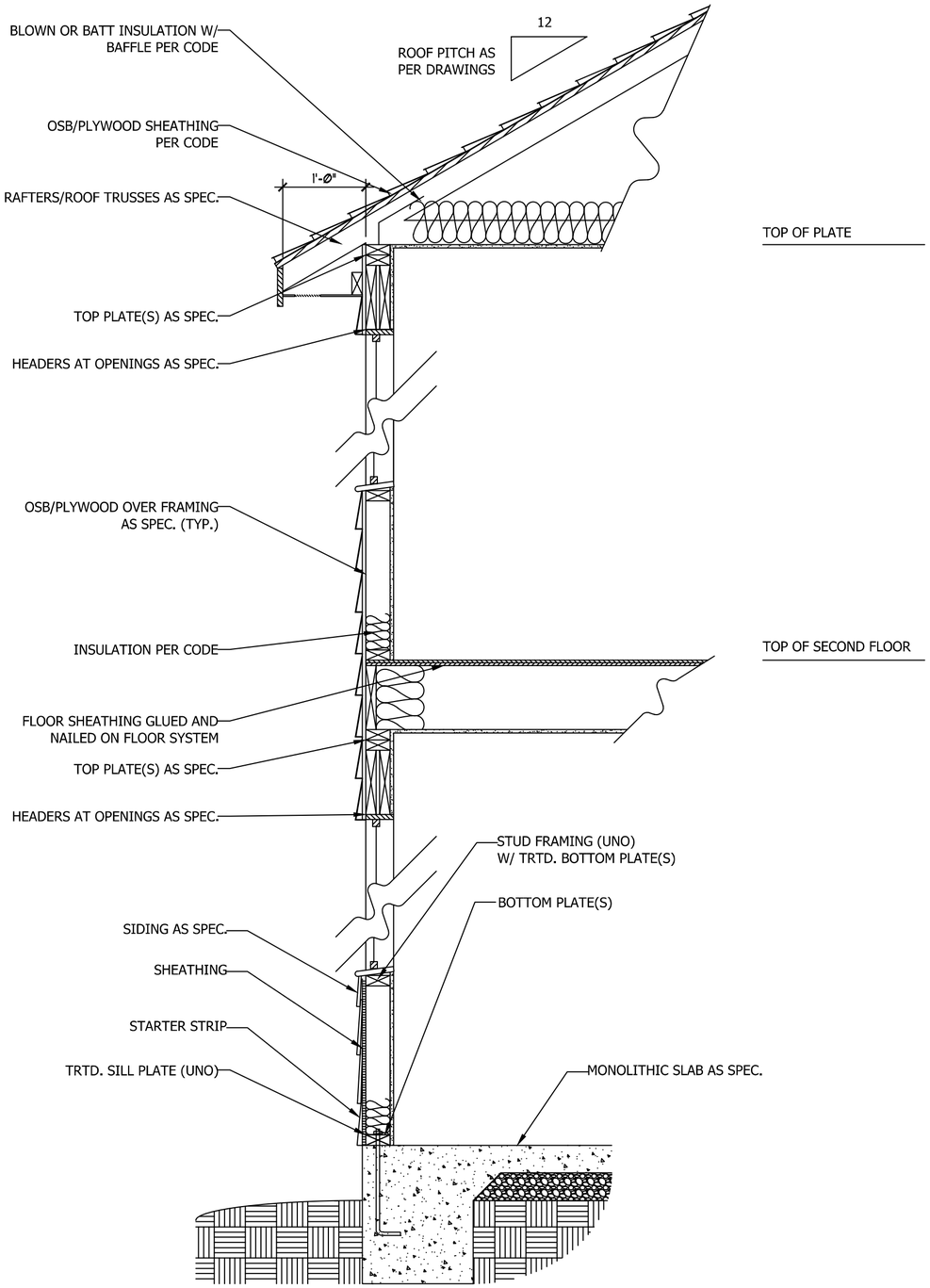
WEAVER HOMES
CAROLINA COLLECTION
MAGNOLIA-II

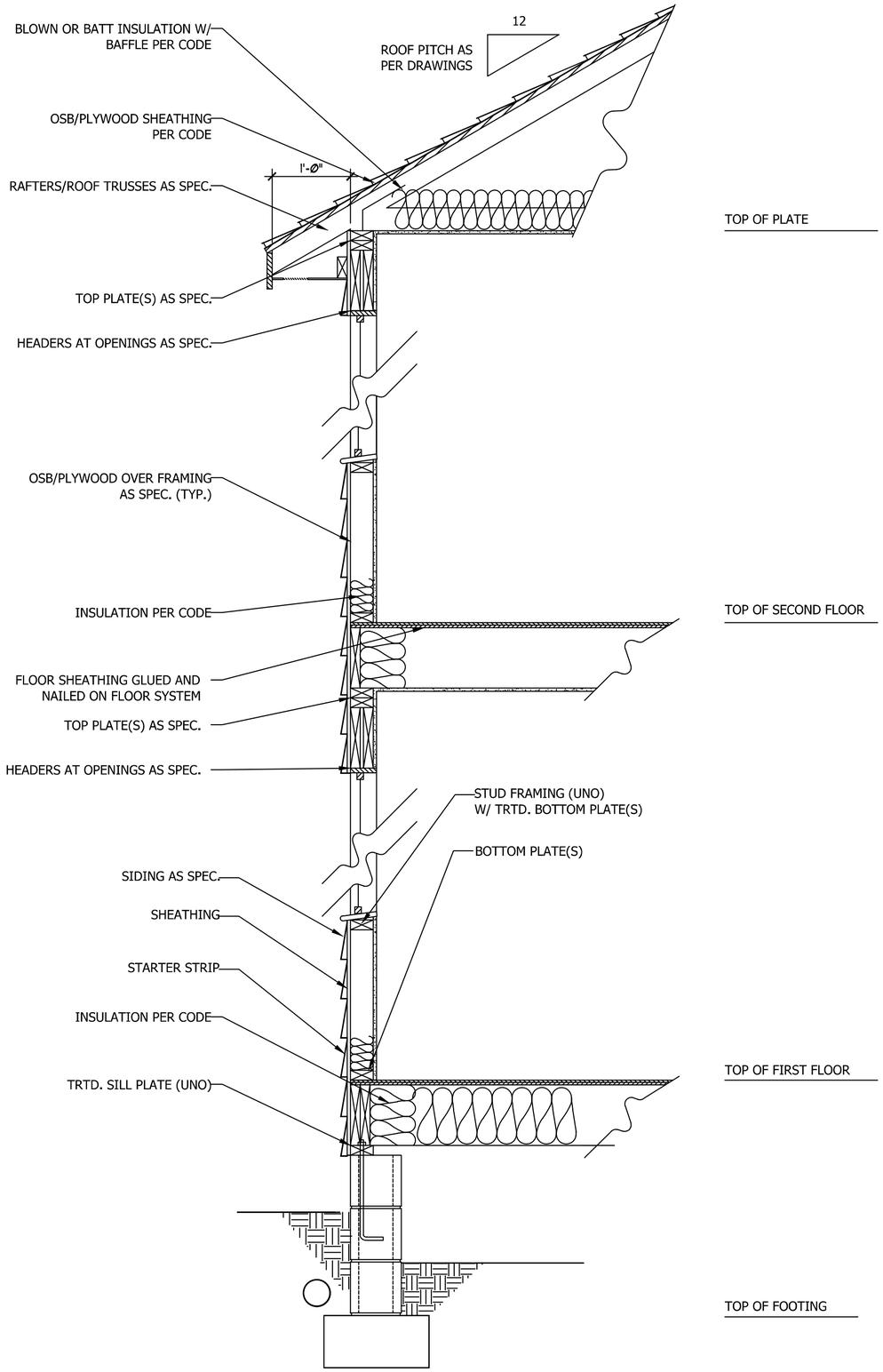
DATE: FEBRUARY 19, 2021
REV.:
SCALE: 1/4" = 1'-0"
DRAWN BY: WG
ENGINEERED BY:
REVIEWED BY:

ROOF PLAN
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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DATE: FEBRUARY 19, 2021
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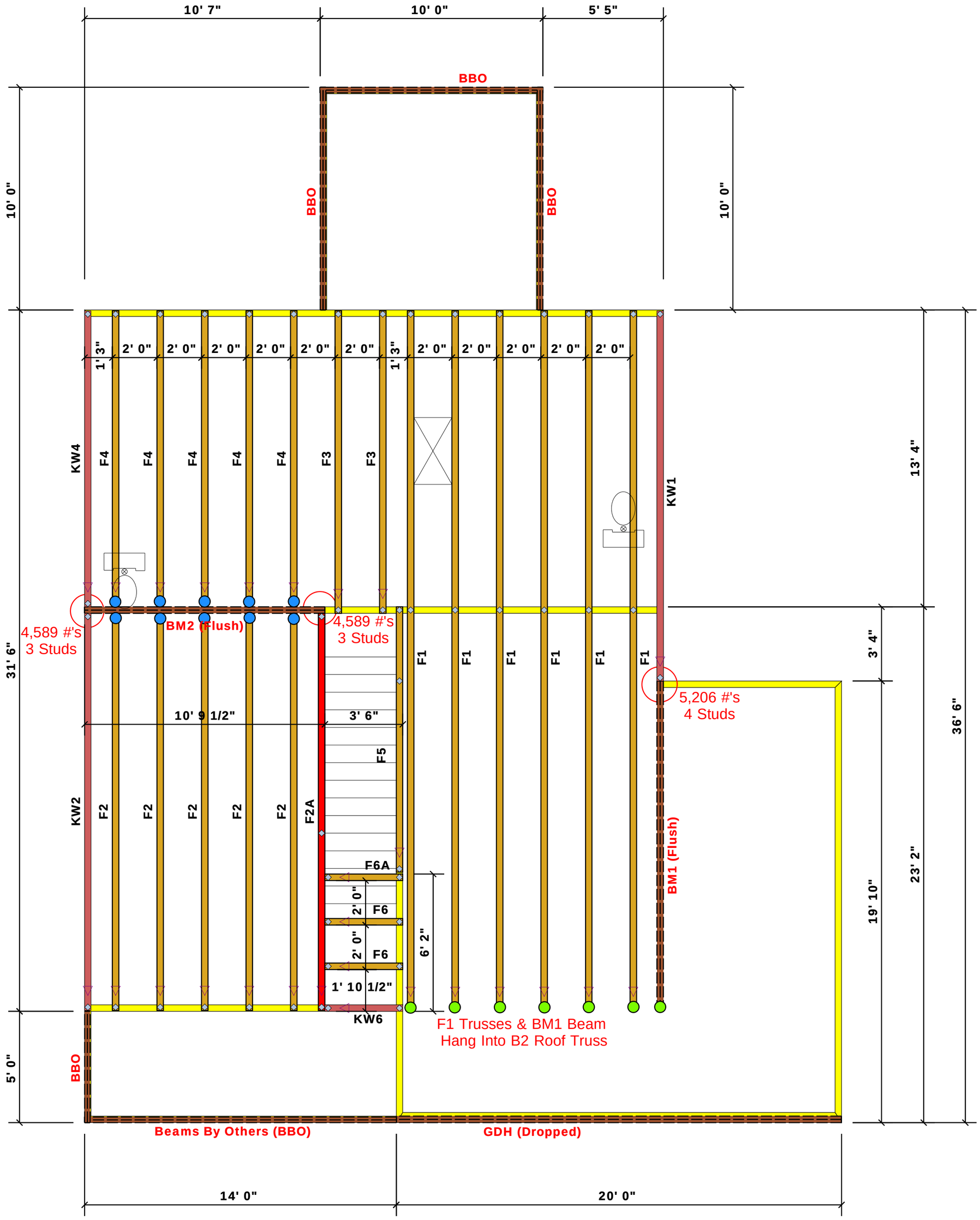
SCALE: 1/4" = 1'-0"
DRAWN BY: WG
ENGINEERED BY:
REVIEWED BY:

TYPICAL WALL SECTIONS

D-1



Connector Information					Nail Information	
Sym	Product	Manuf	Qty	Supported Member	Header	Truss
●	HUS410	USP	10	NA	16d/3-1/2"	16d/3-1/2"
●	THD410	USP	7	NA	16d/3-1/2"	10d/3"

Truss Placement Plan
SCALE: NTS

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

Products					
PlotID	Length	Product	Plies	Net Qty	Fab Type
GDH (Dropped)	20' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2	FF
BM1 (Flush)	15' 0"	1-3/4"x 16" LVL Kerto-S	2	2	FF
BM2 (Flush)	11' 0"	1-3/4"x 16" LVL Kerto-S	2	2	FF

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

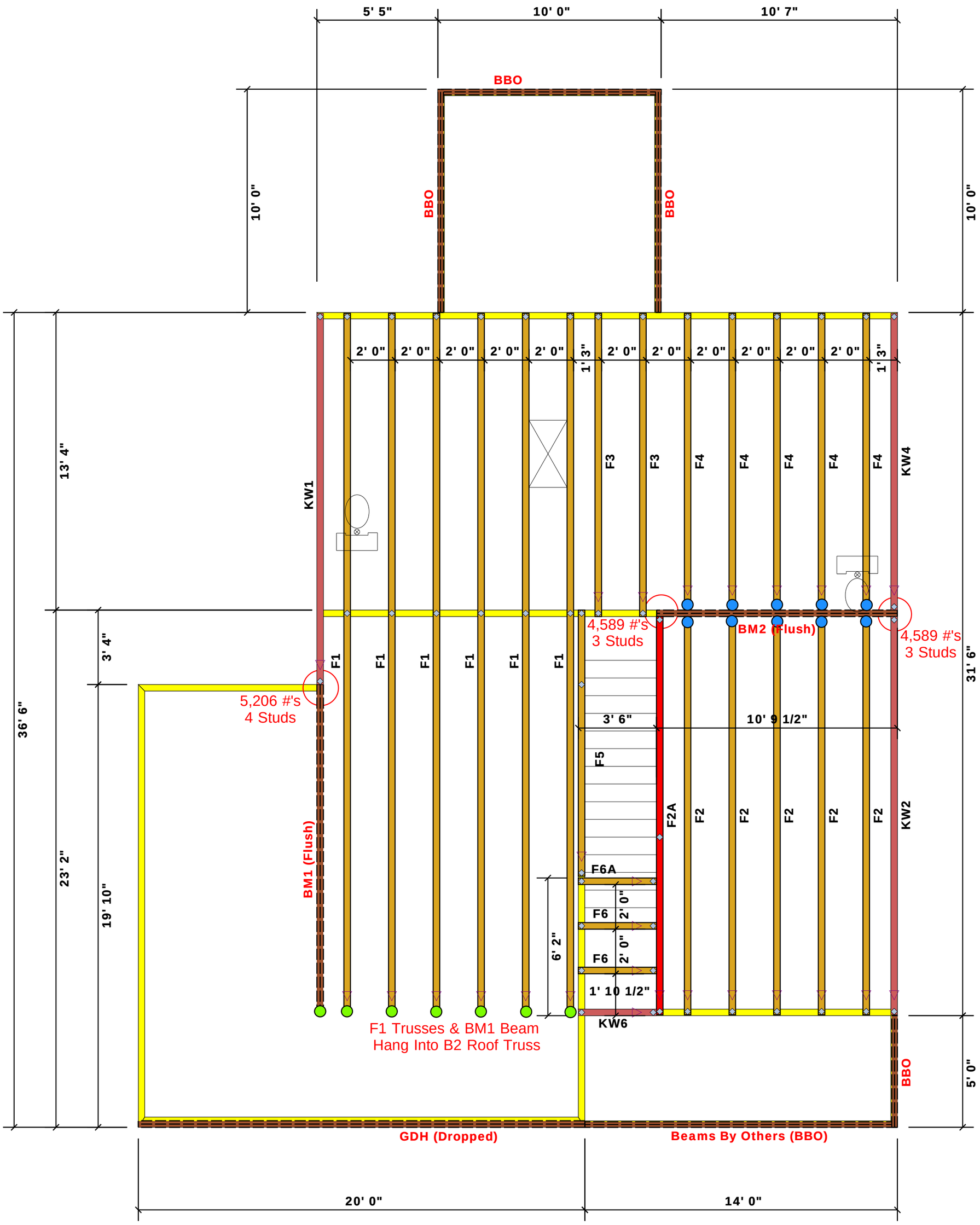
BUILDER	Weaver Development	CITY / CO.	Spring Lake / Harnett
JOB NAME	Lot 4 McPhail Farm	ADDRESS	Hayes Rd.
PLAN	Magnolia II "C"	MODEL	Floor
SEAL DATE	Seal Date	DATE REV.	/ /
QUOTE #	Quote #	DRAWN BY	Christine Shivy
JOB #	J0422-1801	SALES REP.	Lenny Norris

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

comTECH
ROOF & FLOOR TRUSSES & BEAMS
Reilly Road Industrial Park
Fayetteville, N.C. 28309
Phone: (910) 864-8787
Fax: (910) 864-4444



Connector Information					Nail Information	
Sym	Product	Manuf	Qty	Supported Member	Header	Truss
●	HUS410	USP	10	NA	16d/3-1/2"	16d/3-1/2"
●	THD410	USP	7	NA	16d/3-1/2"	10d/3"

Truss Placement Plan
SCALE: NTS

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

Products					
PlotID	Length	Product	Plies	Net Qty	Fab Type
GDH (Dropped)	20' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2	FF
BM1 (Flush)	15' 0"	1-3/4"x 16" LVL Kerto-S	2	2	FF
BM2 (Flush)	11' 0"	1-3/4"x 16" LVL Kerto-S	2	2	FF

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

BUILDER	Weaver Development	CITY / CO.	Spring Lake / Harnett
JOB NAME	Lot 4 McPhail Farm	ADDRESS	Hayes Rd.
PLAN	Magnolia II "C"	MODEL	Floor
SEAL DATE	Seal Date	DATE REV.	/ /
QUOTE #	Quote #	DRAWN BY	Christine Shivy
JOB #	J0422-1801	SALES REP.	Lenny Norris

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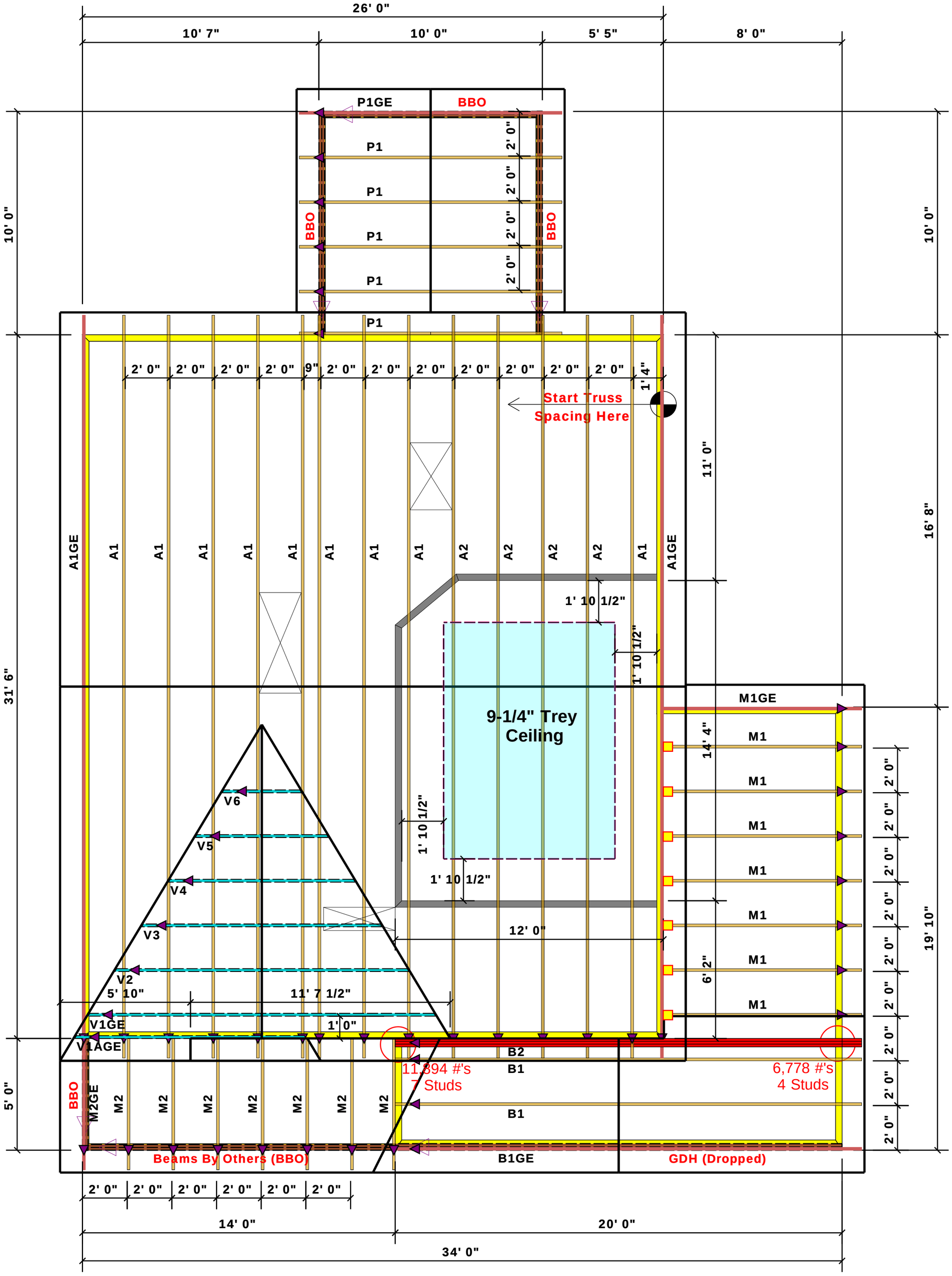

Connector Information					Nail Information	
Sym	Product	Manuf	Qty	Supported Member	Header	Truss
■	JUS24	USP	7	NA	10d/3"	10d/3"

▲= 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 1 ABOVE FLOOR)

NUMBER OF JACK STUDS REQUIRED @ EACH END OF HEADER/BEAM

LIVE & ACTION (LF / SF)	SIZE 2 x 4 (1 PLY) HEADER	BUILDING CODE (LF / SF)	SIZE 2 x 6 (1 PLY) HEADER	LIVE & ACTION (LF / SF)	SIZE 2 x 6 (2 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 Co. Inc.	CITY / CO.	Spring Lake / Harnett
JOB NAME	Lot 4 McPhail Farm	ADDRESS	Hayes Rd.
PLAN	Magnolia II "C"	MODEL	Roof
SEAL DATE	Seal Date	DATE REV.	/ /
QUOTE #	B0422-1802	DRAWN BY	Christine Shivy
JOB #	J0422-1800	SALES REP.	Lenny Norris

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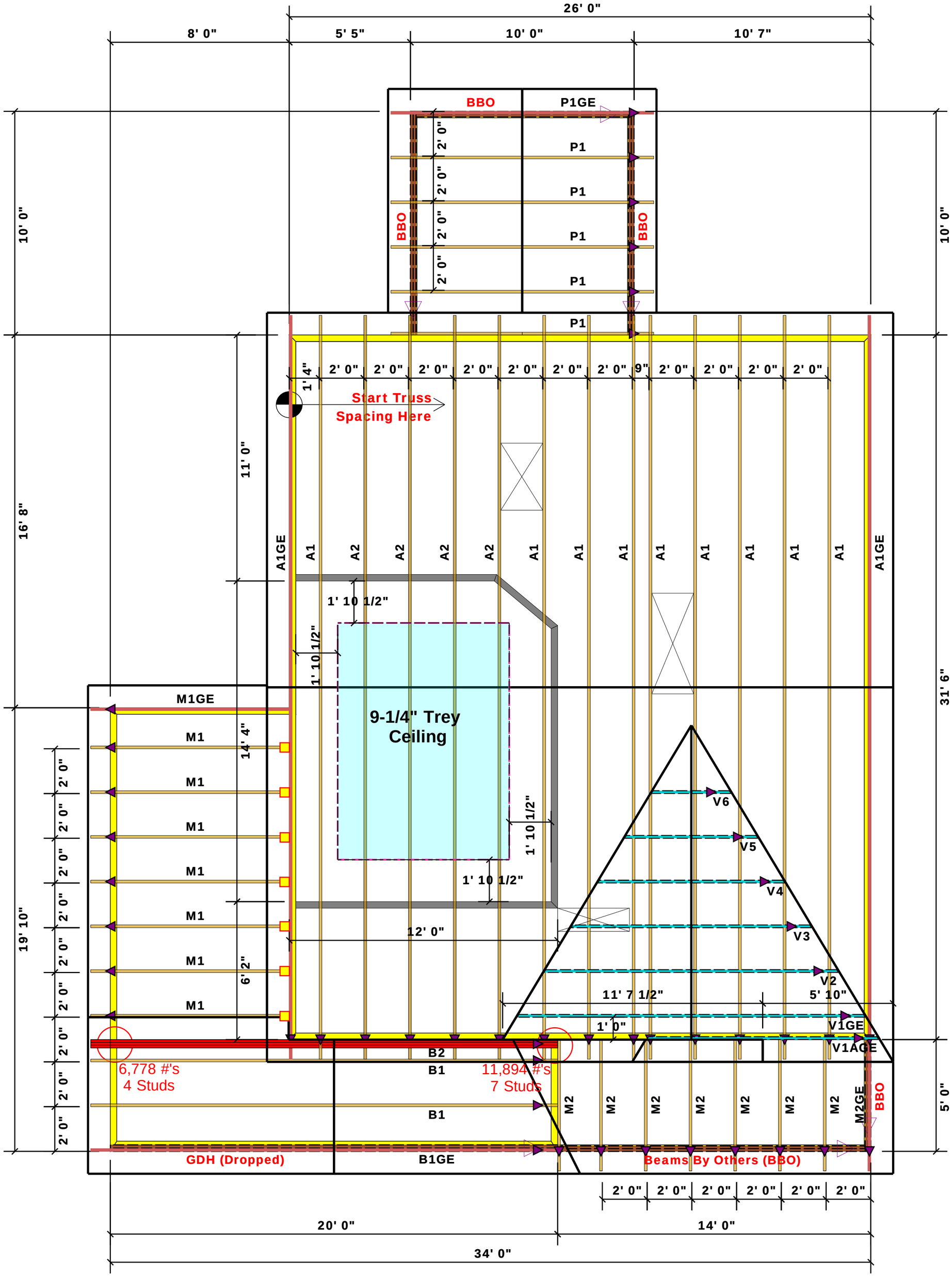

Connector Information					Nail Information	
Sym	Product	Manuf	Qty	Supported Member	Header	Truss
	JUS24	USP	7	NA	10d/3"	10d/3"

▲= 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) & (2))

NUMBER OF JACK STUDS REQUIRED FOR EACH END OF HEADER/BEAM

END REACTION (LB. TOT)	REQUIRED NUMBER OF JACK STUDS (EACH END)	END REACTION (LB. TOT)	REQUIRED NUMBER OF JACK STUDS (EACH END)	END REACTION (LB. TOT)	REQUIRED NUMBER OF JACK STUDS (EACH END)
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 Co. Inc.	CITY / CO.	Spring Lake / Harnett
JOB NAME	Lot 4 McPhail Farm	ADDRESS	Hayes Rd.
PLAN	Magnolia II "C"	MODEL	Roof
SEAL DATE	Seal Date	DATE REV.	/ /
QUOTE #	B0422-1802	DRAWN BY	Christine Shivy
JOB #	J0422-1800	SALES REP.	Lenny Norris

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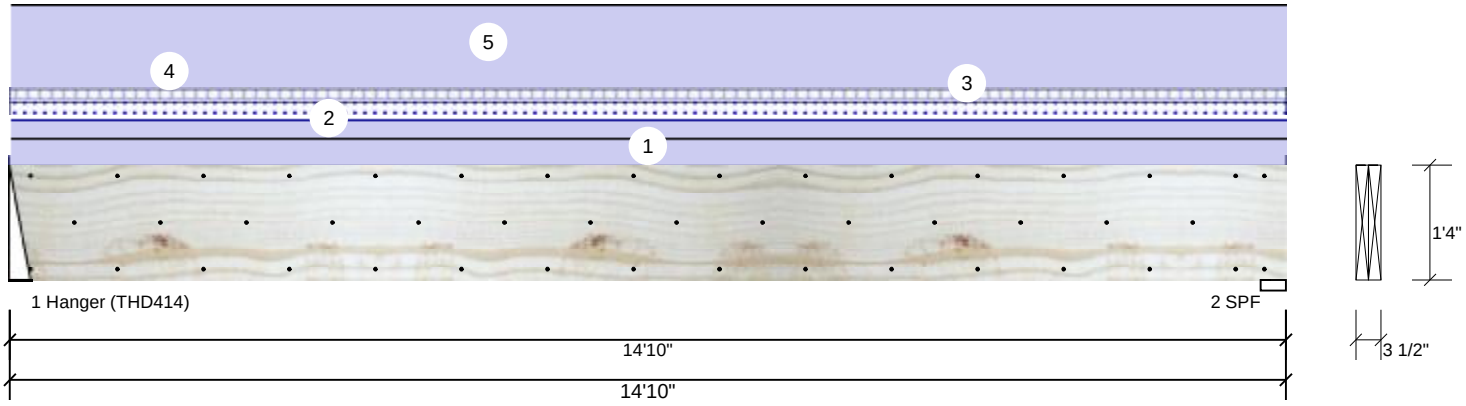
Fayetteville, N.C. 28309
Phone: (910) 864-8787
Fax: (910) 864-4444

Client:	Weaver Development	Date:	4/13/2022
Project:	Magnolia-II Elev. C	Input by:	Christine Shivy
Address:	Magnolia-II Elev. C	Job Name:	Magnolia-II Elev. C
		Project #:	

BM1 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 - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	296	4522	577	0	0
2	Vertical	298	4548	580	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	Vert	59%	4522 / 655	5177	L	D+0.75(L+S)
2 - SPF	3.500"	Vert	100%	4548 / 658	5206	L	D+0.75(L+S)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	15931 ft-lb	7'4 3/4"	31109 ft-lb	0.512 (51%)	D	Uniform
Unbraced	18237 ft-lb	7'4 3/4"	18273 ft-lb	0.998 (100%)	D+0.75(L+S)	L
Shear	3695 lb	1'7"	10752 lb	0.344 (34%)	D	Uniform
LL Defl inch	0.041 (L/4231)	7'4 13/16"	0.361 (L/480)	0.113 (11%)	0.75(L+S)	L
TL Defl inch	0.324 (L/535)	7'4 13/16"	0.481 (L/360)	0.673 (67%)	D+0.75(L+S)	L

Design Notes

1. Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2. Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
3. Refer to last page of calculations for fasteners required for specified loads.
4. Fill all hanger nailing holes.
5. Girders are designed to be supported on the bottom edge only.
6. Top loads must be supported equally by all plies.
7. Top must be laterally braced at a maximum of 6'5 1/8" o.c.
8. Bottom must be laterally braced at end bearings.
9. 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			Near Face	78 PLF	0 PLF	78 PLF	0 PLF	0 PLF	M1
3	Uniform			Far Face	15 PLF	40 PLF	0 PLF	0 PLF	0 PLF	Floor Load

Continued on page 2...

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

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 11/3/2024

Manufacturer Info

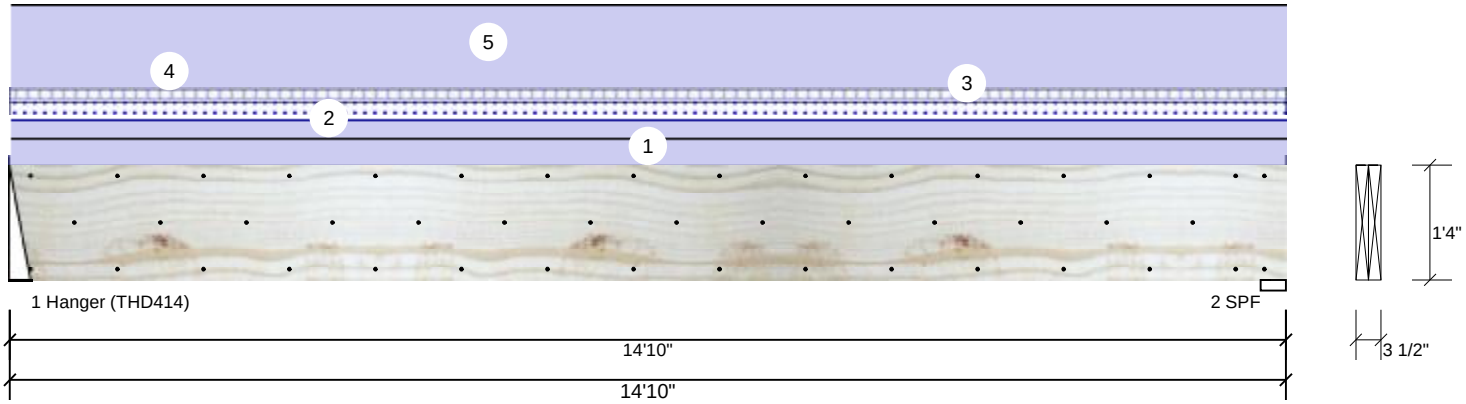
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us

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

Client:	Weaver Development	Date:	4/13/2022
Project:	Magnolia-II Elev. C	Input by:	Christine Shivy
Address:	Magnolia-II Elev. C	Job Name:	Magnolia-II Elev. C
		Project #:	

BM1 Kerto-S LVL 1.750" X 16.000" 2-Ply - PASSED

Level: Level



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ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
4	Uniform			Top	130 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Exterior Load
5	Uniform			Top	251 PLF	0 PLF	0 PLF	0 PLF	0 PLF	A1GE
	Self Weight				12 PLF					

Notes

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Lumber

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2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

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6. For flat roofs provide proper drainage to prevent ponding

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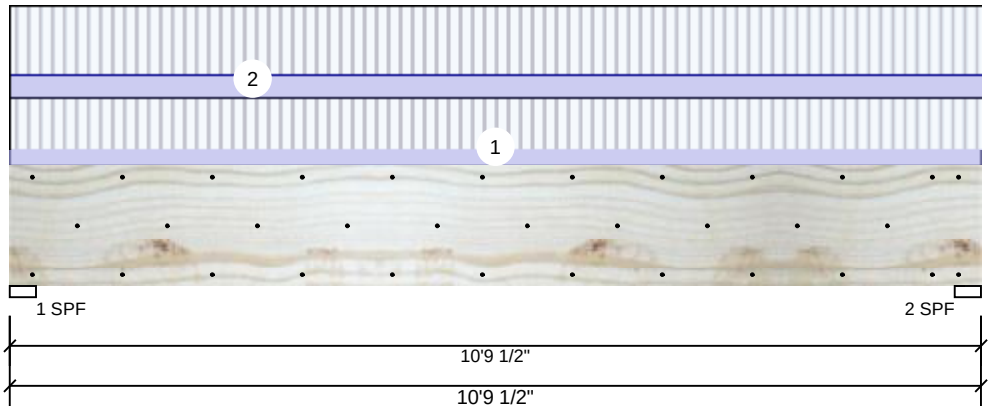
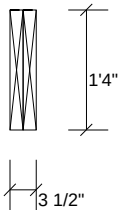
Client:	Weaver Development	Date:	4/13/2022
Project:	Magnolia-II Elev. C	Input by:	Christine Shivy
Address:	Magnolia-II Elev. C	Job Name:	Magnolia-II Elev. C
		Project #:	

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 - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

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

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	88%	1200 / 3389	4589	L	D+L
2 - SPF	3.500"	Vert	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"	11764 ft-lb	0.969 (97%)	D+L	L
Shear	4341 lb	1'7 1/2"	11947 lb	0.363 (36%)	D+L	L
LL Defl inch	0.085 (L/1457)	5'4 3/4"	0.259 (L/480)	0.329 (33%)	L	L
TL Defl inch	0.115 (L/1076)	5'4 3/4"	0.345 (L/360)	0.335 (33%)	D+L	L

Design Notes

1. Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2. Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
3. Refer to last page of calculations for fasteners required for specified loads.
4. Girders are designed to be supported on the bottom edge only.
5. Top must be laterally braced at end bearings.
6. Bottom must be laterally braced at end 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			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

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

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

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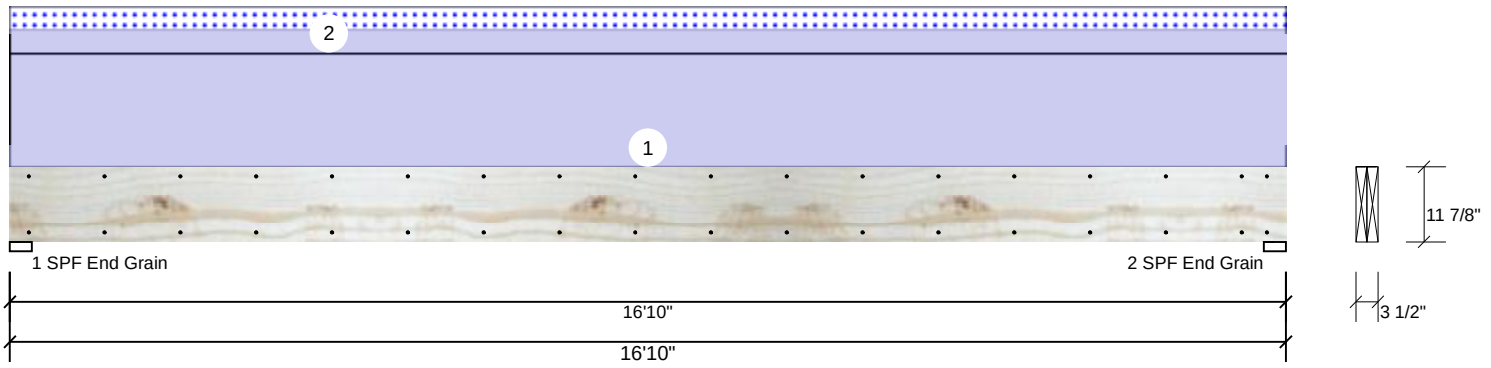
USA
28314
910-864-TRUS

Client:	Weaver Development	Date:	4/13/2022
Project:	Magnolia-II Elev. C	Input by:	Christine Shivy
Address:	Magnolia-II Elev. C	Job Name:	Magnolia-II 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 - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	2098	337	0	0
2	Vertical	0	2098	337	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	24%	2098 / 337	2434	L	D+S
2 - SPF End Grain	3.500"	Vert	24%	2098 / 337	2434	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	8354 ft-lb	8'5"	17919 ft-lb	0.466 (47%)	D	Uniform
Unbraced	9694 ft-lb	8'5"	9704 ft-lb	0.999 (100%)	D+S	L
Shear	1788 lb	1'3 3/8"	7980 lb	0.224 (22%)	D	Uniform
LL Defl inch	0.070 (L/2809)	8'5 1/16"	0.409 (L/480)	0.171 (17%)	S	L
TL Defl inch	0.506 (L/388)	8'5 1/16"	0.546 (L/360)	0.927 (93%)	D+S	L

Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
3 Refer to last page of calculations for fasteners required for specified loads.
4 Girders are designed to be supported on the bottom edge only.
5 Top loads must be supported equally by all plies.
6 Top must be laterally braced at a maximum of 9'6 3/4" o.c.
7 Bottom must be laterally braced at end bearings.
8 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

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

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 11/3/2024

Manufacturer Info

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