

FRONT ELEVATION WITH SIDE LOAD GARAGE
SCALE 1/8" = 1'-0"

PLANS DESIGNED TO THE 2018 NORTH CAROLINA STATE RESIDENTIAL BUILDING CODE

MEAN ROOF HEIGHT: 25'-6" HEIGHT TO RIDGE: 29'-9"

CLIMATE ZONE	ZONE 3A	ZONE 4A	ZONE 5A
FENESTRATION U-FACTOR	0.35	0.35	0.35
SKYLIGHT U-FACTOR	0.55	0.55	0.55
GLAZED FENESTRATION SHGC	0.30	0.30	0.30
CEILING R-VALUE	38 or 30ci	38 or 30ci	38 or 30ci
WALL R-VALUE	15	15	19
FLOOR R-VALUE	19	19	30
* BASEMENT WALL R-VALUE	5/13	10/15	10/15
** SLAB R-VALUE	0	10	10
* CRAWL SPACE WALL R-VALUE	5/13	10/15	10/19

* 10/13" MEANS R-10 SHEATHING INSULATION OR R-13 CAVITY INSULATION
** INSULATION DEPTH WITH MONOLITHIC SLAB 24" OR FROM INSPECTION GAP TO BOTTOM OF FOOTING; INSULATION DEPTH WITH STEM WALL SLAB 24" OR TO BOTTOM OF FOUNDATION WALL

DESIGNED FOR WIND SPEED OF 120 MPH, 3 SECOND GUST (93 FASTEST MILE) EXPOSURE "B"

COMPONENT & CLADDING DESIGNED FOR THE FOLLOWING LOADS

MEAN ROOF	UP TO 30'	30'-1" TO 35'	35'-1" TO 40'	40'-1" TO 45'
ZONE 1	14.2 -15.0	14.9 -15.8	15.5 -16.4	15.9 -16.8
ZONE 2	14.2 -18.0	14.9 -18.9	15.5 -19.6	15.9 -20.2
ZONE 3	14.2 -18.0	14.9 -18.9	15.5 -19.6	15.9 -20.2
ZONE 4	15.5 -16.0	16.3 -16.8	16.9 -17.4	17.4 -17.9
ZONE 5	15.5 -20.0	16.3 -21.0	16.9 -21.8	17.4 -22.4

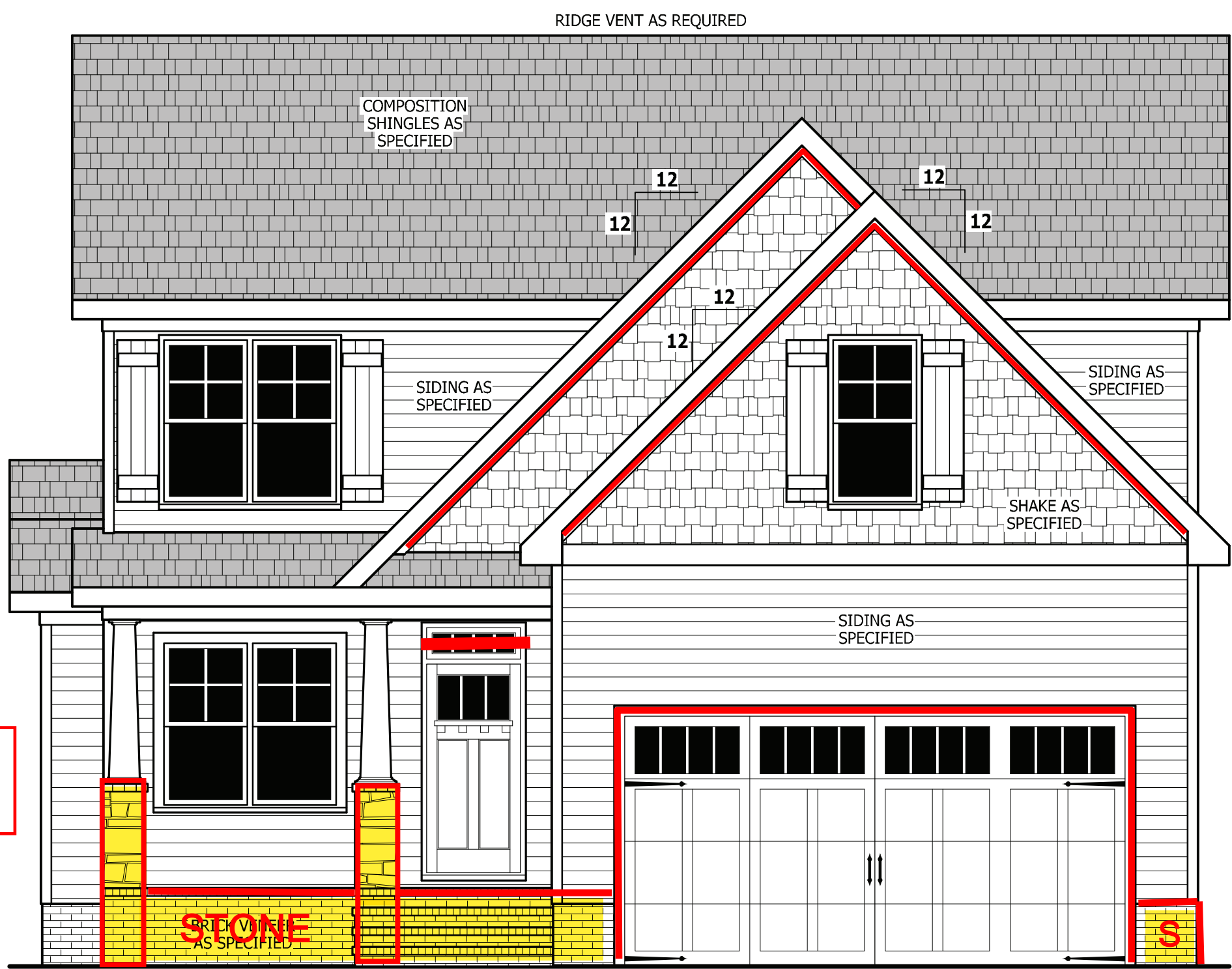
DESIGNED FOR WIND SPEED OF 130 MPH, 3 SECOND GUST (101 FASTEST MILE) EXPOSURE "B"

COMPONENT & CLADDING DESIGNED FOR THE FOLLOWING LOADS

MEAN ROOF	UP TO 30'	30'-1" TO 35'	35'-1" TO 40'	40'-1" TO 45'
ZONE 1	16.7 -18.0	17.5 -18.9	18.2 -19.6	18.7 -20.2
ZONE 2	16.7 -21.0	17.5 -22.1	18.2 -22.9	18.7 -23.5
ZONE 3	16.7 -21.0	17.5 -22.1	18.2 -22.9	18.7 -23.5
ZONE 4	18.2 -19.0	19.1 -20.0	19.8 -20.7	20.4 -21.3
ZONE 5	18.2 -24.0	19.1 -25.2	19.8 -26.2	20.4 -26.9

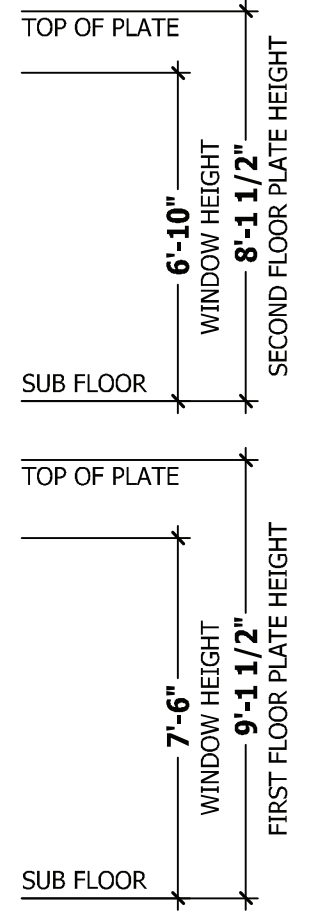


****STONE ON FRONT ELEVATION ONLY****



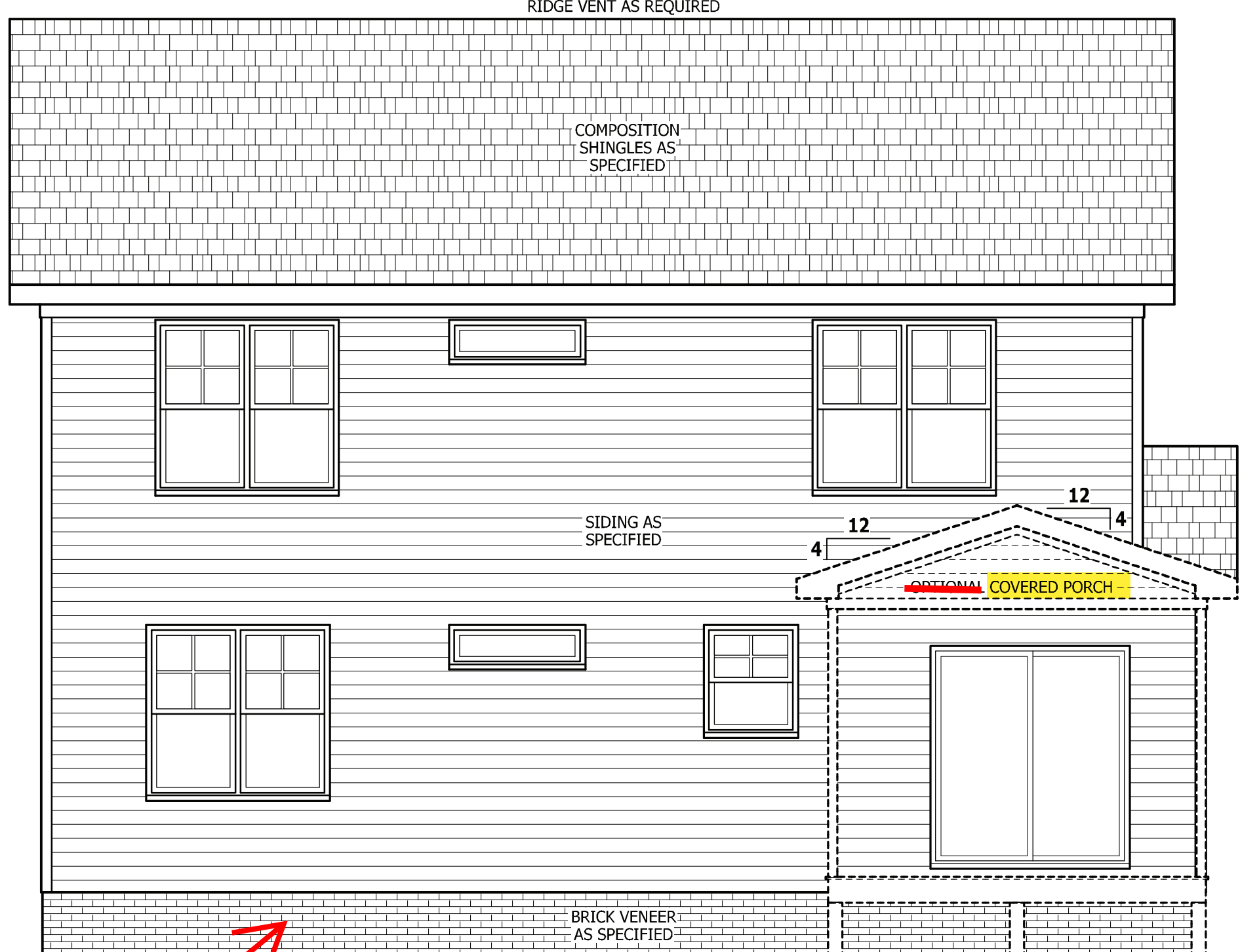
FRONT ELEVATION
SCALE 1/4" = 1'-0"

MITCHELL MANOR - LOT 9
208 MITCHELL MANOR DRIVE
ANGIER, NC 27501
3 CAR GARAGE

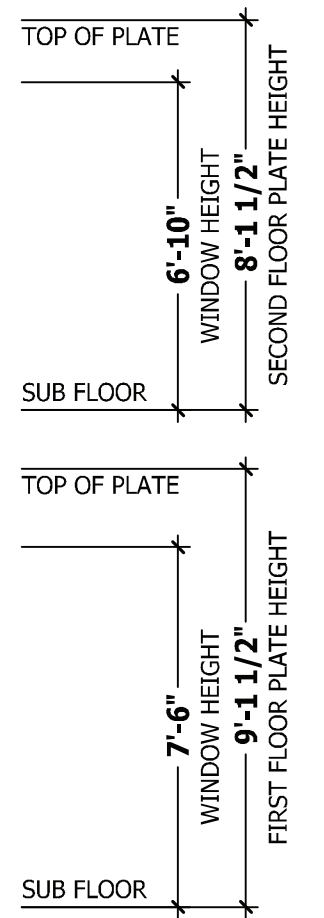


SQUARE FOOTAGE

HEATED	
FRST FLOOR	798 SQ.FT.
SECOND FLOOR	743 SQ.FT.
PLAYROOM	194 SQ.FT.
TOTAL	1735 SQ.FT.
UNHEATED	
GARAGE	400 SQ.FT.
FRONT PORCH	86 SQ.FT.
DECK/PORCH	120 SQ.FT.
TOTAL	606 SQ.FT.
UNHEATED OPTIONAL	
THIRD GARAGE	270 SQ.FT.
GARAGE	270 SQ.FT.



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



ROOF VENTILATION

SECTION R806
SQUARE FOOTAGE OF ROOF TO BE VENTED = 1,344 SQ.FT.
NET FREE CROSS VENTILATION NEEDED:
WITHOUT 50% TO 80% OF VENTING 3'-0" ABOVE EAVE = 8.96 SQ.FT.
WITH 50% TO 80% OF VENTING 3'-0" ABOVE EAVE; OR WITH CLASS I OR II VAPOR RETARDER ON WARM-IN-WINTER SIDE OF CEILING = 4.48 SQ.FT.

AIR LEAKAGE

Section N1102.4
N1102.4.1 Building thermal envelope. The building thermal envelope shall be durably sealed with an air barrier system to limit infiltration. The sealing methods between dissimilar materials shall allow for differential expansion and contraction. For all homes, where present, the following shall be caulked, gasketed, weather stripped or otherwise sealed with an air barrier material or solid material consistent with Appendix E-2.4 of this code:
1. Blocking and sealing floor/ceiling systems and under knee walls open to unconditioned or exterior space.
2. Capping and sealing shafts or chases, including flue shafts.
3. Capping and sealing soffit or dropped ceiling areas.

GUARD RAIL NOTES

SECTION R312
R312.1 Where required. Guards shall be located along open-sided walking surfaces, including stairs, ramps and landings, that are located more than 30 inches (762 mm) measured vertically to the floor or grade below at any point within 36 inches (914 mm) horizontally to the edge of the open side. Insect screening shall not be considered as a guard.
R312.2 Height. Required guards at open-sided walking surfaces, including stairs, porches, balconies or landings, shall be not less than 36 inches (914 mm) high measured vertically above the adjacent walking surface, adjacent fixed seating or the line connecting the leading edges of the treads.
Exceptions:
1. Guards on the open sides of stairs shall have a height not less than 34 inches (864 mm) measured vertically from a line connecting the leading edges of the treads.
2. Where the top of the guard also serves as a handrail on the open sides of stairs, the top of the guard shall not be not less than 34 inches (864 mm) and not more than 38 inches (965 mm) measured vertically from a line connecting the leading edges of the treads.
R312.3 Opening limitations. Required guards shall not have openings from the walking surface to the required guard height which allow passage of a sphere 4 inches (102 mm) in diameter.
Exceptions:
1. The triangular openings at the open side of a stair, formed by the riser, tread and bottom rail of a guard, shall not allow passage of a sphere 6 inches (153 mm) in diameter.
2. Guards on the open sides of stairs shall not have openings which allow passage of a sphere 4 3/8 inches (111 mm) in diameter.

PURCHASER MUST VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE CONSTRUCTION BEGINS. HAYNES HOME PLANS, INC. ASSUMES NO LIABILITY FOR CONTRACTORS PRACTICES AND PROCEDURES. CODES AND CONDITIONS MAY VARY WITH LOCATION. A LOCAL DESIGNER, ARCHITECT OR ENGINEER SHOULD BE CONSULTED BEFORE CONSTRUCTION. THESE DRAWINGS ARE INSTRUMENTS OF SERVICE AND AS SUCH SHALL REMAIN PROPERTY OF THE DESIGNER.

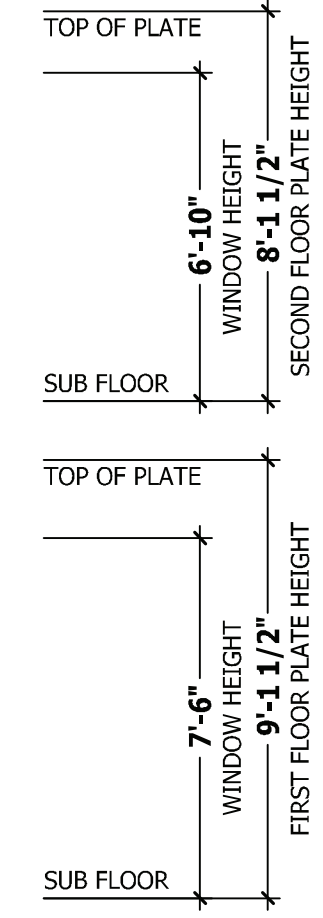
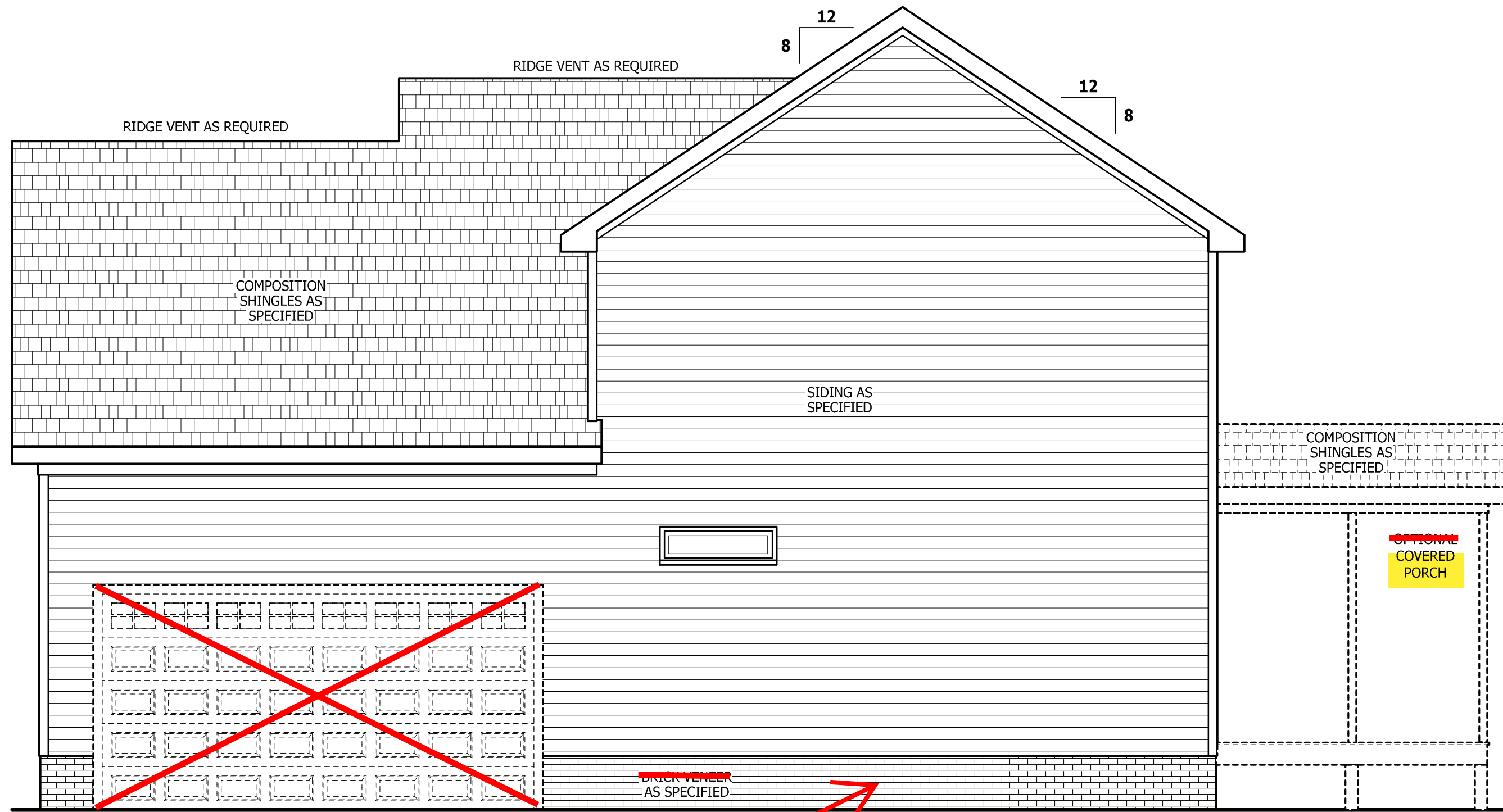
FRONT & REAR ELEVATIONS
NICHOLSON

HAYNES WEAVER HOMES
HOMES
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350 Wagoner Drive, Fayetteville, NC 28403
HAYNES HOME PLANS, INC.
P.O. Box 702, Wake Forest, NC 27588 919-485-6180 Fax 919-485-4911-4336

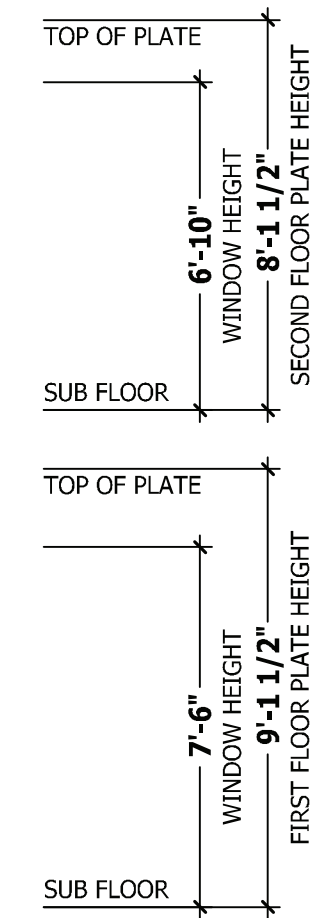
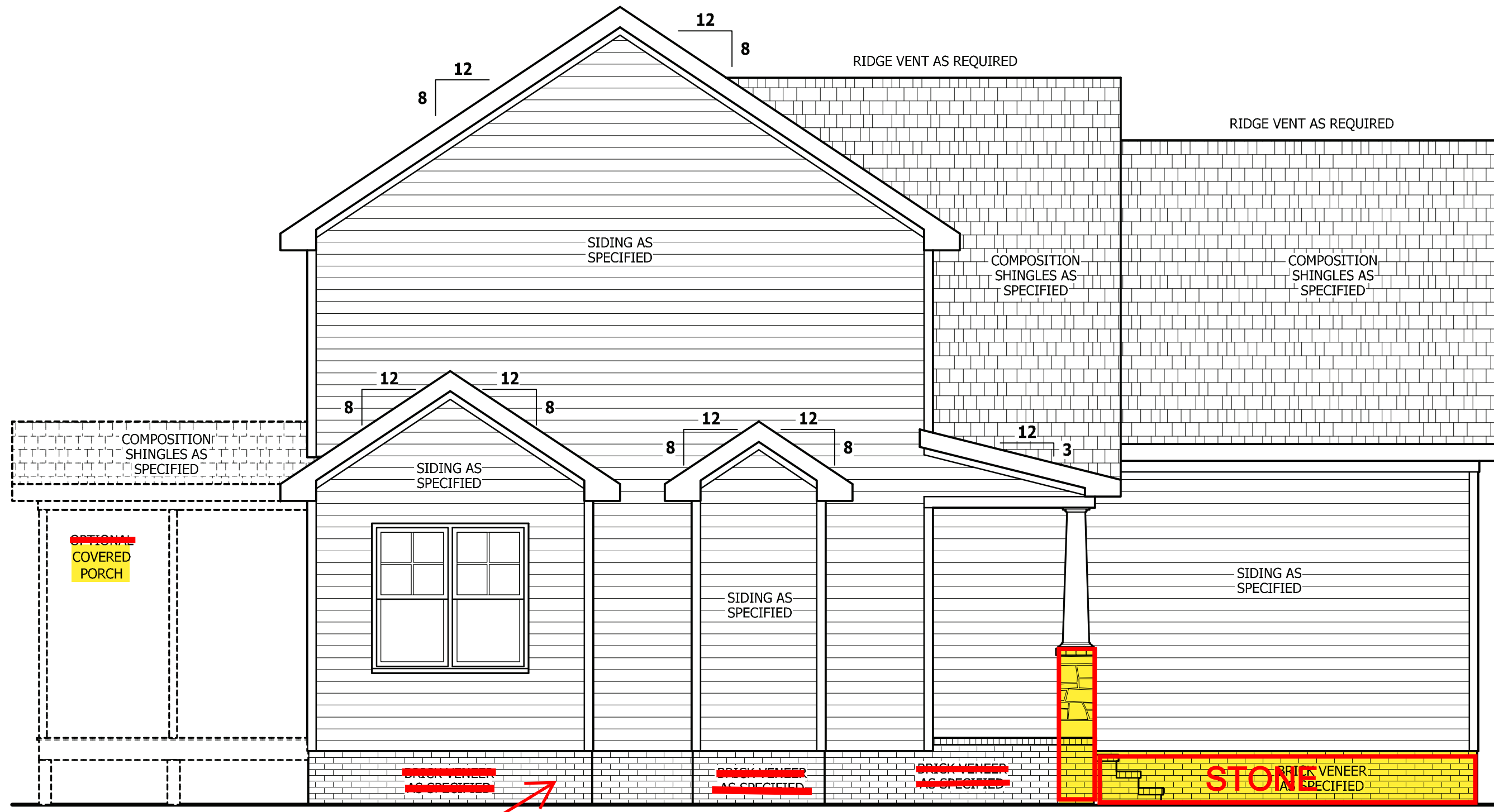
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FRONT PORCH	86 SQ.FT.
DECK/PORCH	120 SQ.FT.
TOTAL	606 SQ.FT.
UNHEATED OPTIONAL	
THIRD GARAGE	270 SQ.FT.
GARAGE	270 SQ.FT.

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



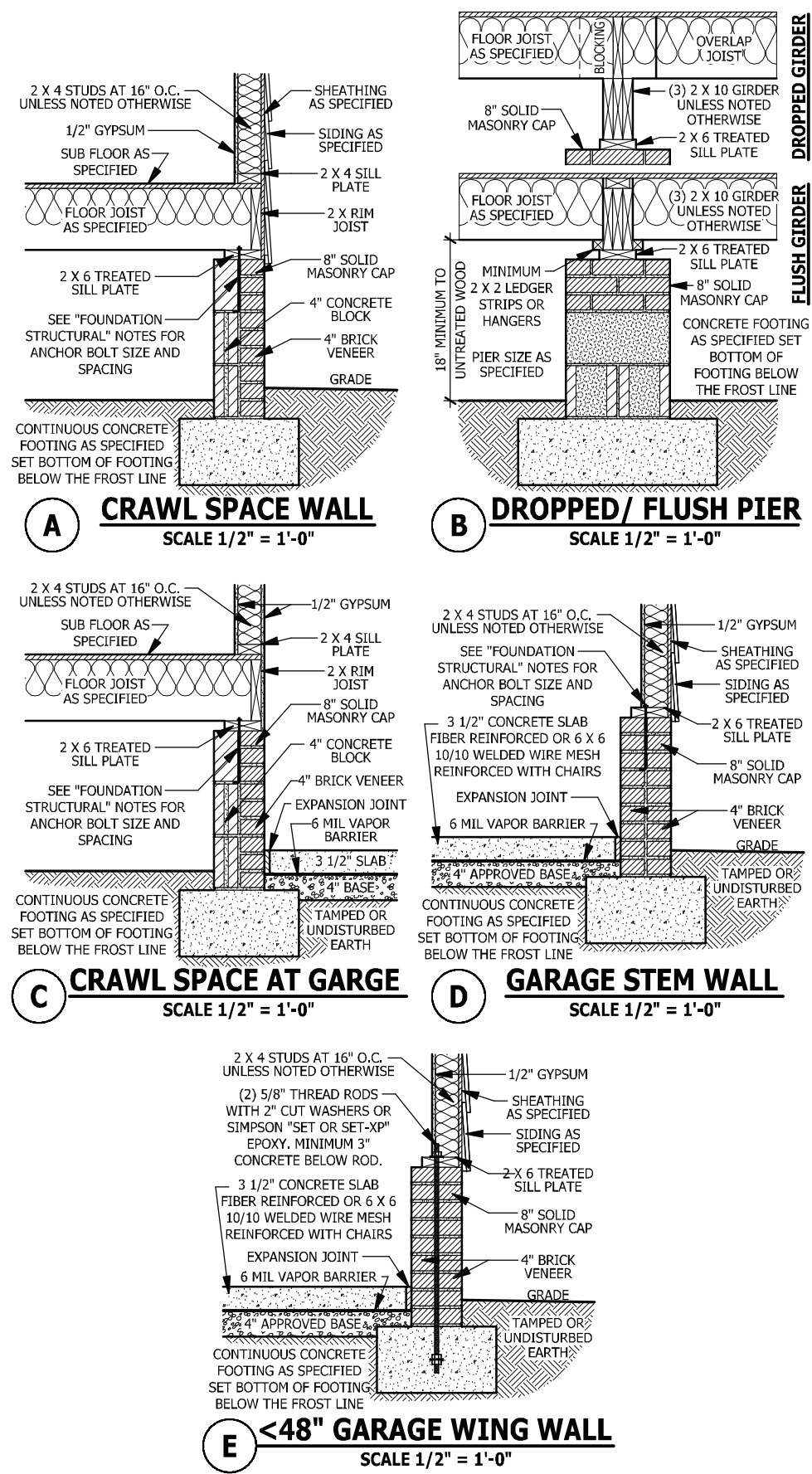
LEFT SIDE ELEVATION
 SCALE 1/4" = 1'-0"
 PARGE

LEFT & RIGHT ELEVATIONS
NICHOLSON

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3 CAR GARAGE

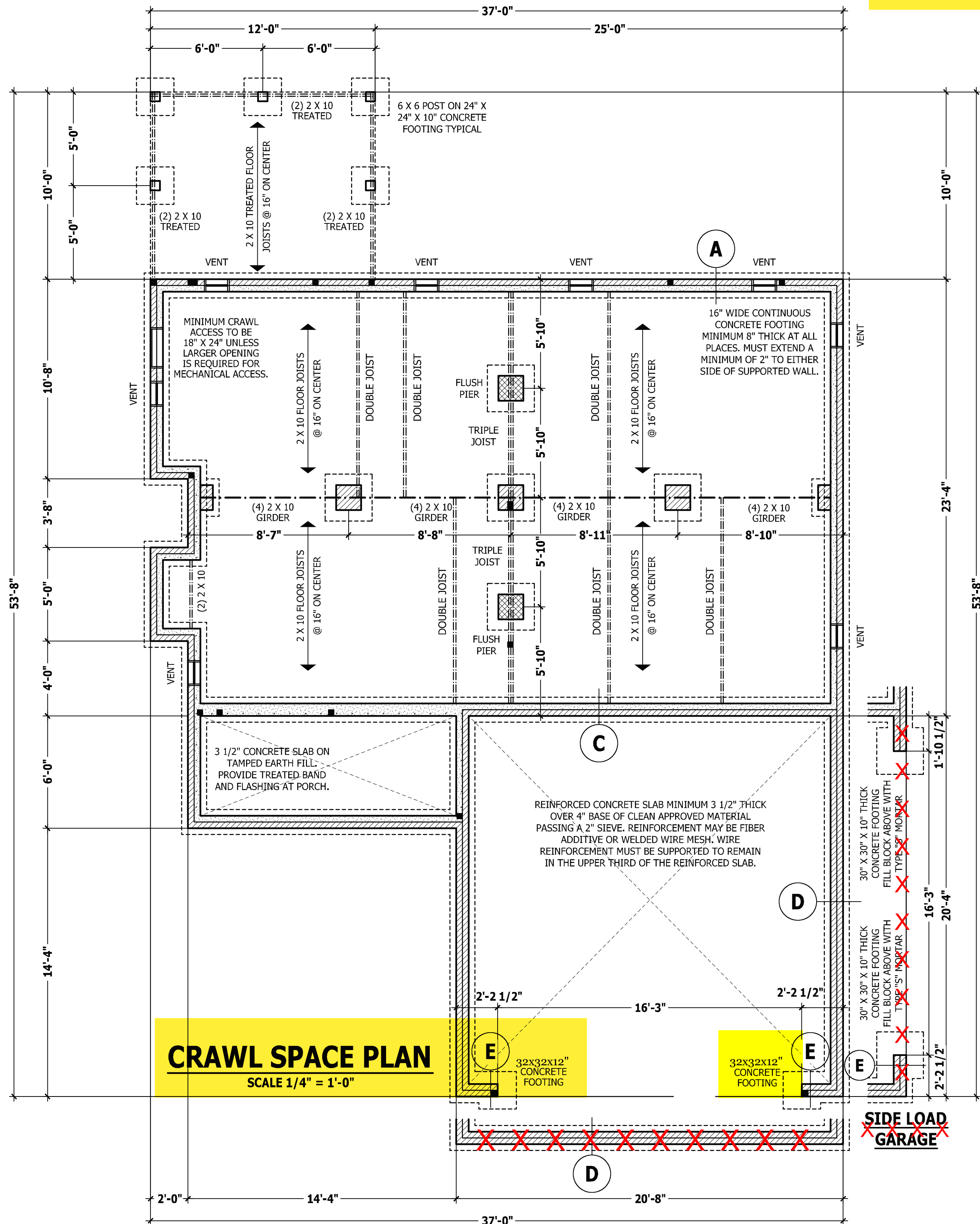


FOUNDATION STRUCTURAL

115 to 130 mph wind zone (1 1/2 to 2 1/2 story)
CONTINUOUS FOOTING: 16" wide and 8" thick minimum. 20" wide minimum at brick veneer. Must extend 2" to either side of supported wall.
GIRDERS: (3) 2 X 10 girder unless noted otherwise.
PIERS: 16" X 16" piers with 8" solid masonry cap on 30" X 30" X 10" concrete footing with maximum pier height of 64" with hollow masonry and 160" with solid masonry.
POINT LOADS: ■ designates significant point load and should have solid blocking to pier, girder or foundation wall.
115 and 120 MPH ANCHORS BOLTS: 1/2" diameter anchor bolts embedded minimum 7", maximum 6'-0" on center, within 12" of plate ends, and minimum two anchor bolts per plate.
130 MPH ANCHORS BOLTS: 1/2" diameter anchor bolts embedded minimum 15", maximum 4'-0" on center, within 12" of plate ends, and minimum two anchor bolts per plate.
CONCRETE: Concrete shall have a minimum 28 day strength of 3000 psi and a maximum 5" slump. Air entrained per table 402.2. All concrete shall be in accordance with ACI standards. All samples for pumping shall be taken from the exit end of the pump.
SOILS: Allowable soil bearing pressure assumed to be 2000 PSF. The contractor must contact a geotechnical engineer and a structural engineer if unsatisfactory subsurface conditions are encountered. The surface area adjacent to the foundation wall shall be provided with adequate drainage, and shall be graded so as to drain surface water away from foundation walls.

WALL VENTED CRAWL SPACES

UNDER-FLOOR SPACE (SECTION R408)
 SQUARE FOOTAGE OF FOUNDATION TO BE VENTED = 767 SQ.FT.
 WITHOUT CROSS VENTILATION AREA OF VENTING NEEDED = 5.11 SQ.FT.
 WITH CROSS VENTILATION AREA OF VENTING NEEDED = 0.51 SQ.FT.
 NOTE: NUMBER OF VENTS NEED WILL VARY DEPENDING ON VENTS USED AND CROSS VENTILATION.



CRAWL SPACE PLAN
 SCALE 1/4" = 1'-0"

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FOUNDATION PLAN
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WALL THICKNESSES

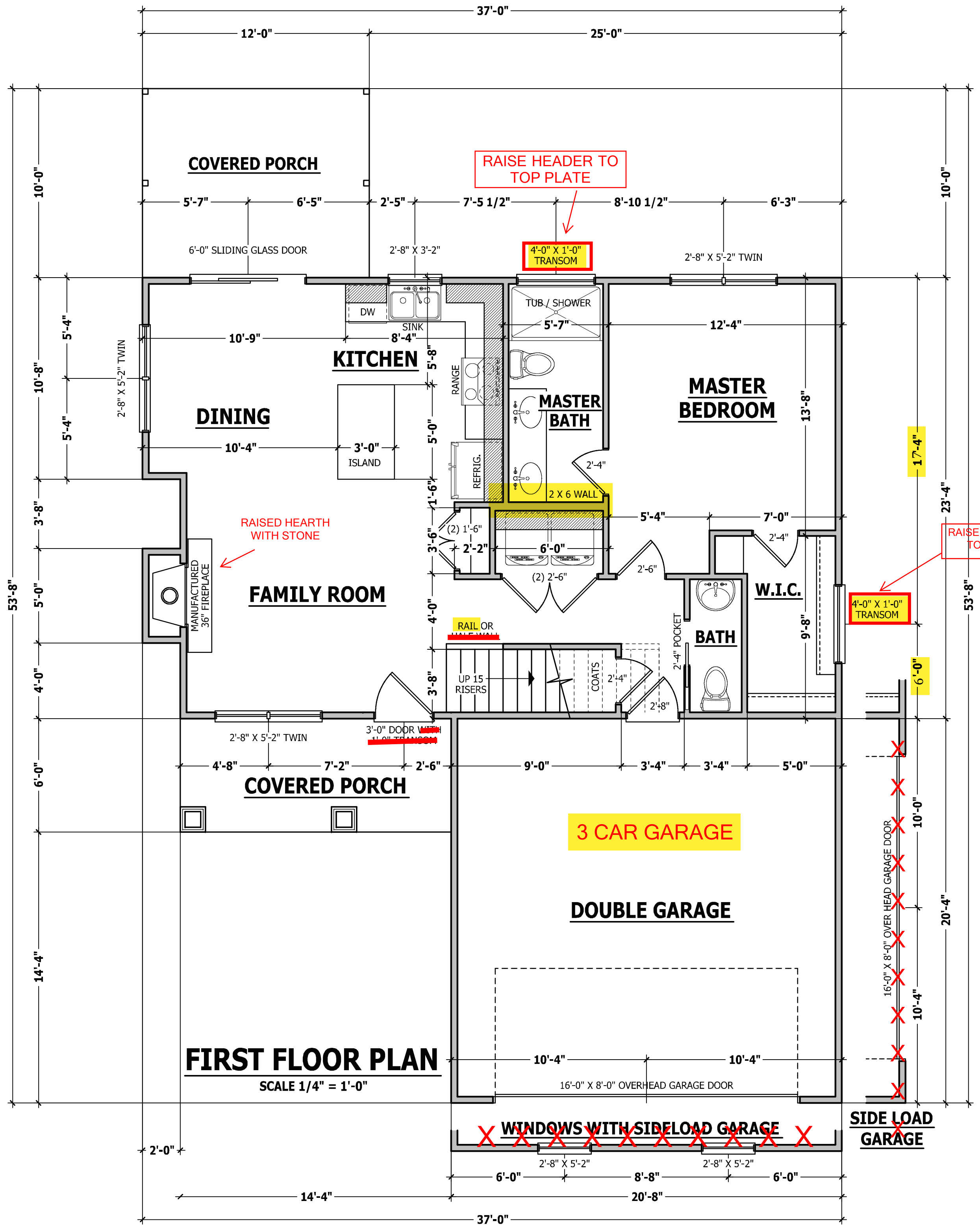
Exterior walls and walls adjacent to a garage area are drawn as 4" or as noted 2 X 6 are drawn as 6" to include 1/2" sheathing or gypsum. Subtract 1/2" for stud face.
 Interior walls are drawn as 3 1/2" or as noted 2 X 6 are drawn as 5 1/2", and do not include gypsum.

DWELLING / GARAGE SEPARATION

REFER TO SECTIONS R302.5, R302.6, AND R302.7
WALLS. A minimum 1/2" gypsum board must be installed on all walls supporting floor/ceiling assemblies used for separation required by this section.
STAIRS. A minimum of 1/2" gypsum board must be installed on the underside and exposed sides of all stairways.
CEILINGS. A minimum of 1/2" gypsum must be installed on the garage ceiling if there are no habitable room above the garage. If there are habitable room above the garage a minimum of 5/8" type X gypsum board must be installed on the garage ceiling.
OPENING PENETRATIONS. Openings between the garage and residence shall be equipped with solid wood doors not less than 1 3/8 inches (35 mm) in thickness, solid or honeycomb core steel doors not less than 1 3/8 inches (35 mm) thick, or 20-minute fire-rated doors.
DUCT PENETRATIONS. Ducts in the garage and ducts penetrating the walls or ceilings separating the dwelling from the garage shall be constructed of a minimum No. 26 gage (0.48 mm) sheet steel or other approved material and shall have no openings into the garage.
OTHER PENETRATIONS. Penetrations through the separation required in Section R302.6 shall be protected as required by Section R302.11, Item 4.

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FIRST FLOOR PLAN
 SCALE 1/4" = 1'-0"

STRUCTURAL NOTES

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JOB SITE PRACTICES AND SAFETY: Haynes Home Plans, Inc. assumes no liability for contractor practices and procedures or safety program. Haynes Home Plans, Inc. takes no responsibility for the contractor's failure to carry out the construction work in accordance with the contract documents. All members shall be framed, anchored, and braced in accordance with good construction practice and the building code.

DESIGN LOADS	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION (LL)
Attics without storage	10		L/240
Attics with limited storage	20	10	L/360
Attics with fixed stairs	40	10	L/360
Balconies and decks	40	10	L/360
Fire escapes	40	10	L/360
Guardrails and handrails	200	--	--
Guardrail in-fill components	50	--	--
Passenger vehicle garages	50	10	L/360
Rooms other than sleeping	40	10	L/360
Sleeping rooms	30	10	L/360
Stairs	40	--	L/360
Snow	20	--	--

FRAMING LUMBER: All non treated framing lumber shall be SPF #2 (Fb = 875 PSI) or SYP #2 (Fb = 750 PSI) and all treated lumber shall be SYP #2 (Fb = 750 PSI) unless noted otherwise.

ENGINEERED WOOD BEAMS:

Laminated veneer lumber (LVL) = Fb=2600 PSI, Fv=285 PSI, E=1.9x10⁶ PSI
Parallel strand lumber (PSL) = Fb=2900 PSI, Fv=290 PSI, E=2.0x10⁶ PSI
Laminated strand lumber (LSL) Fb=2250 PSI, Fv=400 PSI, E=1.55x10⁶ PSI
Install all connections per manufacturers instructions.

TRUSS AND I-JOIST MEMBERS: All roof truss and I-joist layouts shall be prepared in accordance with this document. Trusses and I-joists shall be installed according to the manufacturer's specifications. Any change in truss or I-joist layout shall be coordinated with Haynes Homes Plans, Inc.

LINTELS: Brick lintels shall be 3 1/2" x 3 1/2" x 1/4" steel angle for up to 6'-0" span, 6" x 4" x 5/16" steel angle with 6" leg vertical for spans up to 9'-0" unless noted otherwise, 3 1/2" x 3 1/2" x 1/4" steel angle with 1/2" bolts at 2'-0" on center for spans up to 18'-0" unless noted otherwise.

FLOOR SHEATHING: OSB or CDX floor sheathing minimum 1/2" thick for 16" on center joist spacing, minimum 5/8" thick for 19.2" on center joist spacing, and minimum 3/4" thick for 24" on center joist spacing.

ROOF SHEATHING: OSB or CDX roof sheathing minimum 3/8" thick for 16" on center rafters and 7/16" for 24" on center rafters.

CONCRETE AND SOILS: See foundation notes.

BRACE WALL PANEL NOTES

EXTERIOR WALLS: All exterior walls to be sheathed with CS-WSP or CS-SFB in accordance with section R602.10.3 unless noted otherwise.

GYPSUM: All interior sides of exterior walls and both sides 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.

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 their actual length. Method GB contributes 0.5 it's actual length. Method PF contributes 1.5 times its actual length.

HD: 800 lbs hold down hold down device fastened to the edge of the brace wall panel closest to the corner.

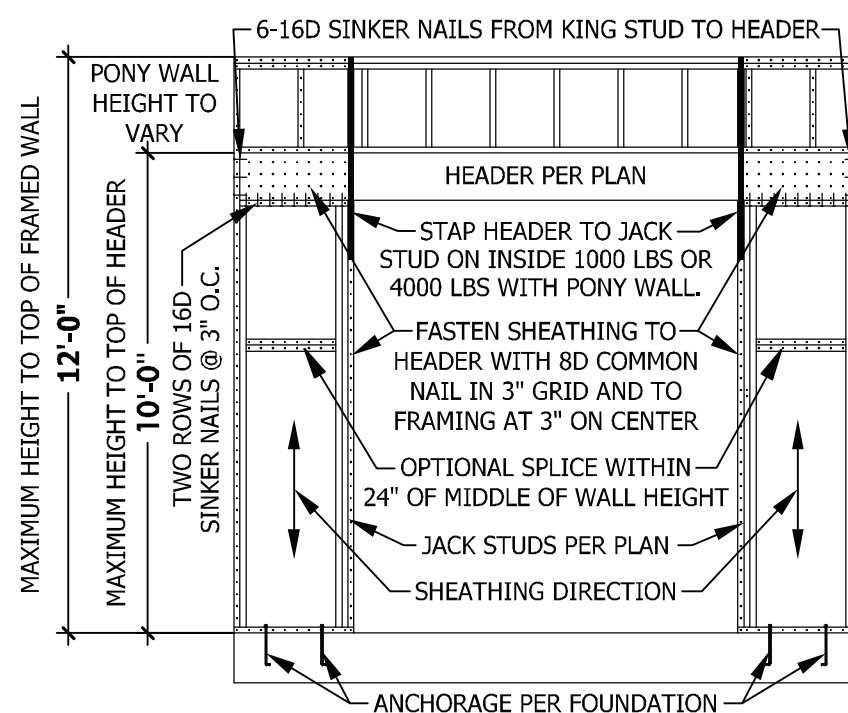
Methods Per Table R602.10.1

CS-WSP: Shall be minimum 3/8" OSB or CDX nailed at 6" on center at edges and 12" on center at intermediate supports with 6d common nails or 8d(2 1/2" long x 0.113" diameter).

CS-SFB: Shall be minimum 1/2" structural fiber board nailed at 3" on center at edges and 3" on center at intermediate supports with 1 1/2" long x 0.12" diameter galvanized roofing nails.

GB: Interior walls show as GB are to have minimum 1/2" gypsum board on both sides of the wall fastened at 7" on center at edges and 7" on center at intermediate supports with minimum 5d cooler nails or #6 screws.

PF: Portal frame per figure R602.10.1



PF

PORTAL FRAME AT OPENING

(METHOD PF PER FIGURE AND SECTION R602.10.1)
SCALE 1/4" = 1'-0"

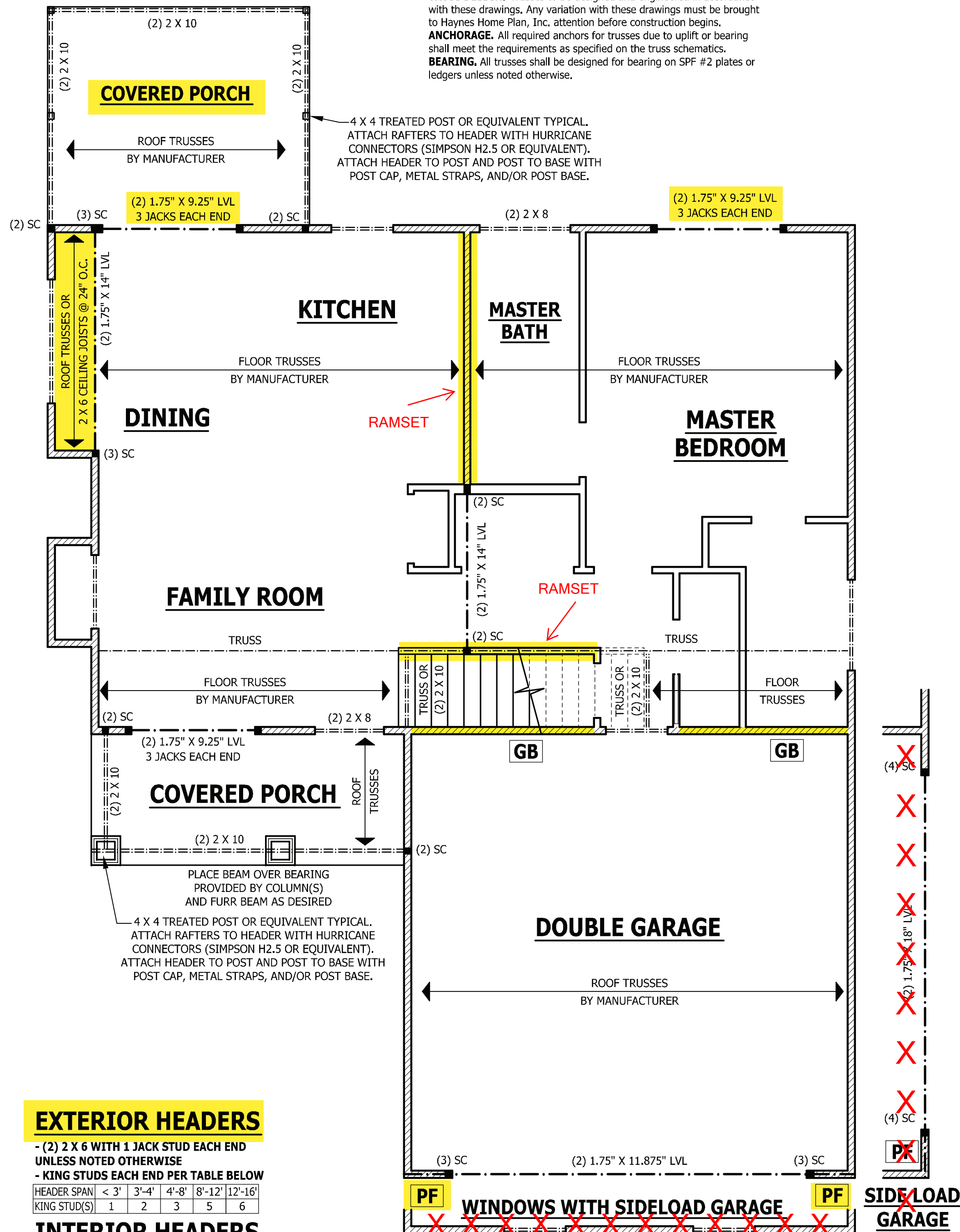
3 CAR GARAGE

ROOF TRUSS REQUIREMENTS

TRUSS DESIGN. Trusses to be designed and engineered in accordance with these drawings. Any variation with these drawings must be brought to Haynes Home Plan, Inc. attention before construction begins.

ANCHORAGE. All required anchors for trusses due to uplift or bearing shall meet the requirements as specified on the truss schematics.

BEARING. All trusses shall be designed for bearing on SPF #2 plates or ledgers unless noted otherwise.



EXTERIOR HEADERS

- (2) 2 X 6 WITH 1 JACK STUD EACH END
UNLESS NOTED OTHERWISE

- KING STUDS EACH END PER TABLE BELOW

HEADER SPAN	< 3'	3'-4'	4'-8'	8'-12'	12'-16'
KING STUD(S)	1	2	3	5	6

INTERIOR HEADERS

- LOAD BEARING HEADERS (2) 2 X 6 WITH 1 JACK STUD AND 1 KING STUD EACH END UNLESS NOTED OTHERWISE

- NON LOAD BEARING HEADERS TO BE LADDER FRAMED

FIRST FLOOR STRUCTURAL

SCALE 1/4" = 1'-0"

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FIRST FLOOR STRUCTURAL

NICHOLSON

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P.O. BOX 702, WAKE FOREST, NC 27788 919-485-6180 FAX 1-866-491-0396

SQUARE FOOTAGE

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PLAYROOM	194 SQ. FT.
TOTAL	1735 SQ. FT.
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4/7/2020

190717B

PAGE 5 OF 8

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Attics with fixed stairs	40	10	L/360
Balconies and decks	40	10	L/360
Fire escapes	40	10	L/360
Guardrails and handrails	200	--	--
Guardrail in-fill components	50	--	--
Passenger vehicle garages	50	10	L/360
Rooms other than sleeping	40	10	L/360
Sleeping rooms	30	10	L/360
Stairs	40	--	L/360
Snow	20	--	--

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Laminated strand lumber (LSL) Fb=2250 PSI, Fv=400 PSI, E=1.55x10⁶ PSI
Install all connections per manufacturers instructions.

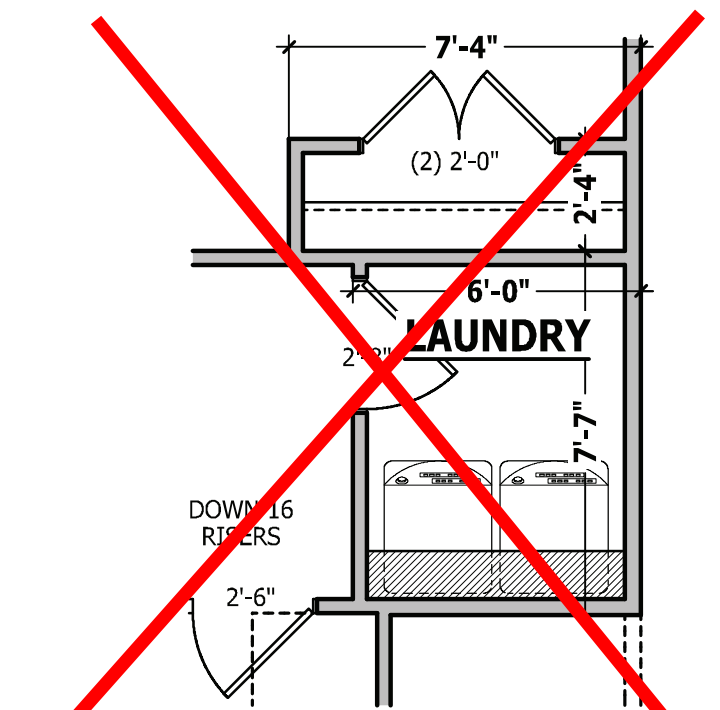
TRUSS AND I-JOIST MEMBERS: All roof truss and I-joist layouts shall be prepared in accordance with this document. Trusses and I-joists shall be installed according to the manufacturer's specifications. Any change in truss or I-joist layout shall be coordinated with Haynes Home Plans, Inc.

LINTELS: Brick lintels shall be 3 1/2" x 3 1/2" x 1/4" steel angle for up to 6'-0" span, 6" x 4" x 5/16" steel angle with 6" leg vertical for spans up to 9'-0" unless noted otherwise. 3 1/2" x 3 1/2" x 1/4" steel angle with 1/2" bolts at 2'-0" on center for spans up to 18'-0" unless noted otherwise.

FLOOR SHEATHING: OSB or CDX floor sheathing minimum 1/2" thick for 16" on center joist spacing, minimum 5/8" thick for 19.2" on center joist spacing, and minimum 3/4" thick for 24" on center joist spacing.

ROOF SHEATHING: OSB or CDX roof sheathing minimum 3/8" thick for 16" on center rafters and 7/16" for 24" on center rafters.

CONCRETE AND SOILS: See foundation notes.



OPTIONAL LAUNDRY ROOM

ATTIC ACCESS

SECTION R807

R807.1 Attic access. An attic access opening shall be provided to attic areas that exceed 400 square feet (37.16 m²) and have a vertical height of 60 inches (1524 mm) or greater. The net clear opening shall not be less than 20 inches by 30 inches (508 mm by 762 mm) and shall be located in a hallway or other readily accessible location. A 30-inch (762 mm) minimum unobstructed headroom in the attic space shall be provided at some point above the access opening. See Section M1305.1.3 for access requirements where mechanical equipment is located in attics.

Exceptions:

1. Concealed areas not located over the main structure including porches, areas behind knee walls, dormers, bay windows, etc. are not required to have access.
2. Pull down stair treads, stringers, handrails, and hardware may protrude into the net clear opening.

ROOF TRUSS REQUIREMENTS

TRUSS DESIGN. Trusses to be designed and engineered in accordance with these drawings. Any variation with these drawings must be brought to Haynes Home Plans, Inc. attention before construction begins.

ANCHORAGE. All required anchors for trusses due to uplift or bearing shall meet the requirements as specified on the truss schematics.

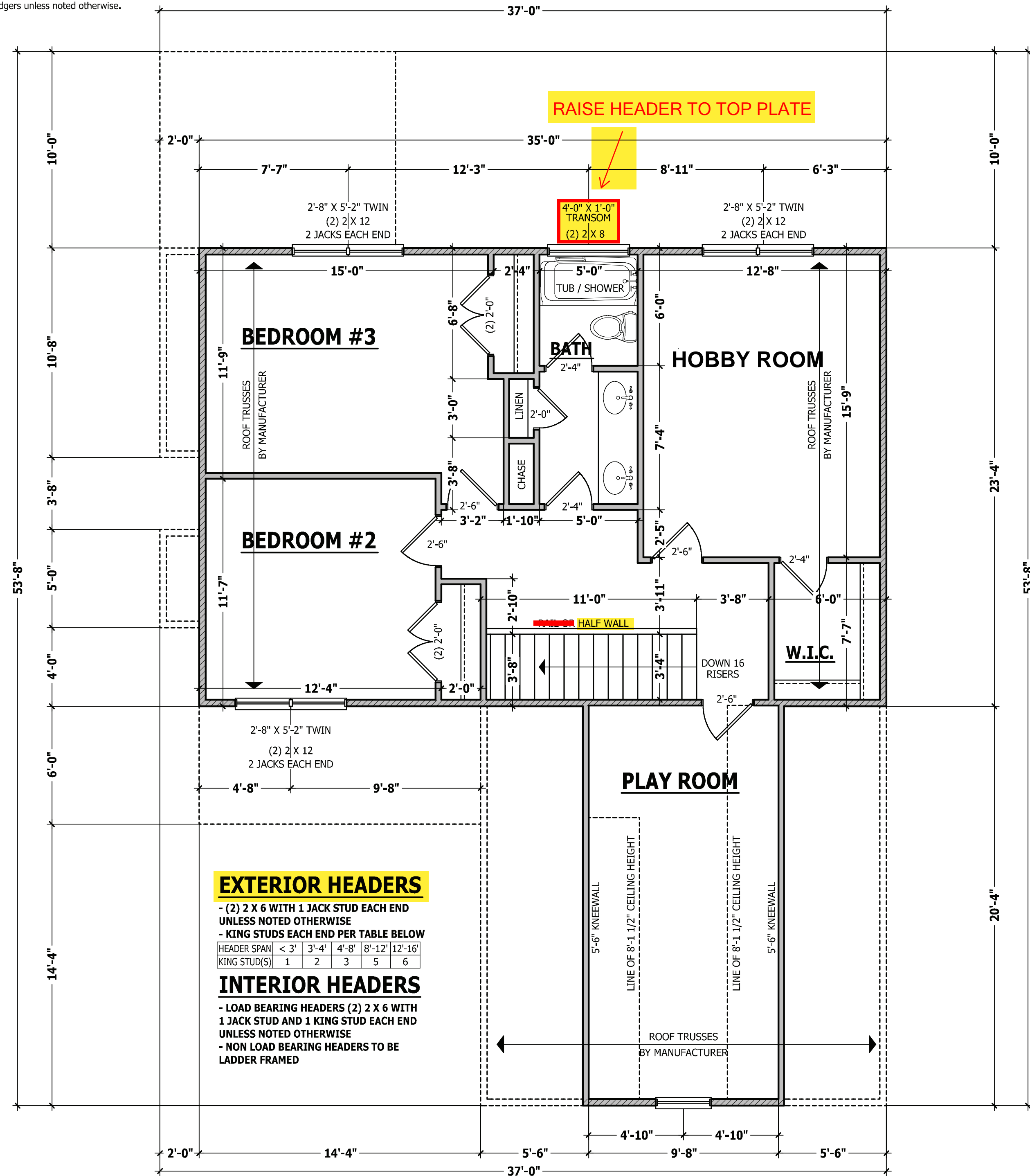
BEARING. All trusses shall be designed for bearing on SPF #2 plates or ledgers unless noted otherwise.

WALL THICKNESSES

Exterior walls and walls adjacent to a garage area are drawn as 4" or as noted 2 X 6 are drawn as 6" to include 1/2" sheathing or gypsum. Subtract 1/2" for stud face.

Interior walls are drawn as 3 1/2" or as noted 2 X 6 are drawn as 5 1/2", and do not include gypsum.

3 CAR GARAGE



EXTERIOR HEADERS

- (2) 2 X 6 WITH 1 JACK STUD EACH END UNLESS NOTED OTHERWISE
- KING STUDS EACH END PER TABLE BELOW

HEADER SPAN	< 3'	3'-4'	4'-8'	8'-12'	12'-16'
KING STUD(S)	1	2	3	5	6

INTERIOR HEADERS

- LOAD BEARING HEADERS (2) 2 X 6 WITH 1 JACK STUD AND 1 KING STUD EACH END UNLESS NOTED OTHERWISE
- NON LOAD BEARING HEADERS TO BE LADDER FRAMED

PURCHASER MUST VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE CONSTRUCTION BEGINS.
HAYNES HOME PLANS, INC. ASSUMES NO LIABILITY FOR CONTRACTOR PRACTICES AND PROCEDURES.
CODES AND CONDITIONS MAY VARY WITH LOCATION. A LOCAL DESIGNER, ARCHITECT OR ENGINEER SHOULD BE CONSULTED BEFORE CONSTRUCTION.
THESE DRAWINGS ARE INSTRUMENTS OF SERVICE AND AS SUCH SHALL REMAIN PROPERTY OF THE DESIGNER.

SECOND FLOOR PLAN
NICHOLSON

HAYNES WEAVER HOMES
HOME PLANS, INC.
P.O. BOX 702, WAKE FOREST, NC 27788 919-485-6180 FAX 1-866-491-0396
350 Wagoner Drive, Fayetteville, NC 28403
910.630.2100 • 919.606.4696

SQUARE FOOTAGE	
HEATED	
FIRST FLOOR	798 SQ. FT.
SECOND FLOOR	743 SQ. FT.
PLAYROOM	194 SQ. FT.
TOTAL	1735 SQ. FT.
UNHEATED	
GARAGE	400 SQ. FT.
FRONT PORCH	86 SQ. FT.
DECK/PORCH	120 SQ. FT.
TOTAL	606 SQ. FT.
UNHEATED OPTIONAL	
THIRD GARAGE	270 SQ. FT.
GARAGE	270 SQ. FT.

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4/7/2020

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PAGE 6 OF 8

SECOND FLOOR PLAN

SCALE 1/4" = 1'-0"

PURCHASER MUST VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE CONSTRUCTION BEGINS.
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 CODES AND CONDITIONS MAY VARY WITH LOCATION. A LOCAL DESIGNER, ARCHITECT OR ENGINEER SHOULD BE CONSULTED BEFORE CONSTRUCTION.
 THESE DRAWING ARE INSTRUMENTS OF SERVICE AND AS SUCH SHALL REMAIN PROPERTY OF THE DESIGNER.

ROOF TRUSS REQUIREMENTS

TRUSS DESIGN. Trusses to be designed and engineered in accordance with these drawings. Any variation with these drawings must be brought to Haynes Home Plan, Inc. attention before construction begins.

KNEE WALL AND CEILING HEIGHTS. All finished knee wall heights and ceiling heights are shown furred down 10" from roof decking for insulation. If for any reason the truss manufacturer fails to meet or exceed designated heel heights, finished knee wall heights, or finished ceiling heights shown on these drawings the finished square footage may vary. Any discrepancy must be brought to Haynes Home Plans, Inc. attention, so a suitable solution can be reached before construction begins. Any variation due to these conditions not being met is the responsibility of the truss manufacturer.

ANCHORAGE. All required anchors for trusses due to uplift or bearing shall meet the requirements as specified on the truss schematics.

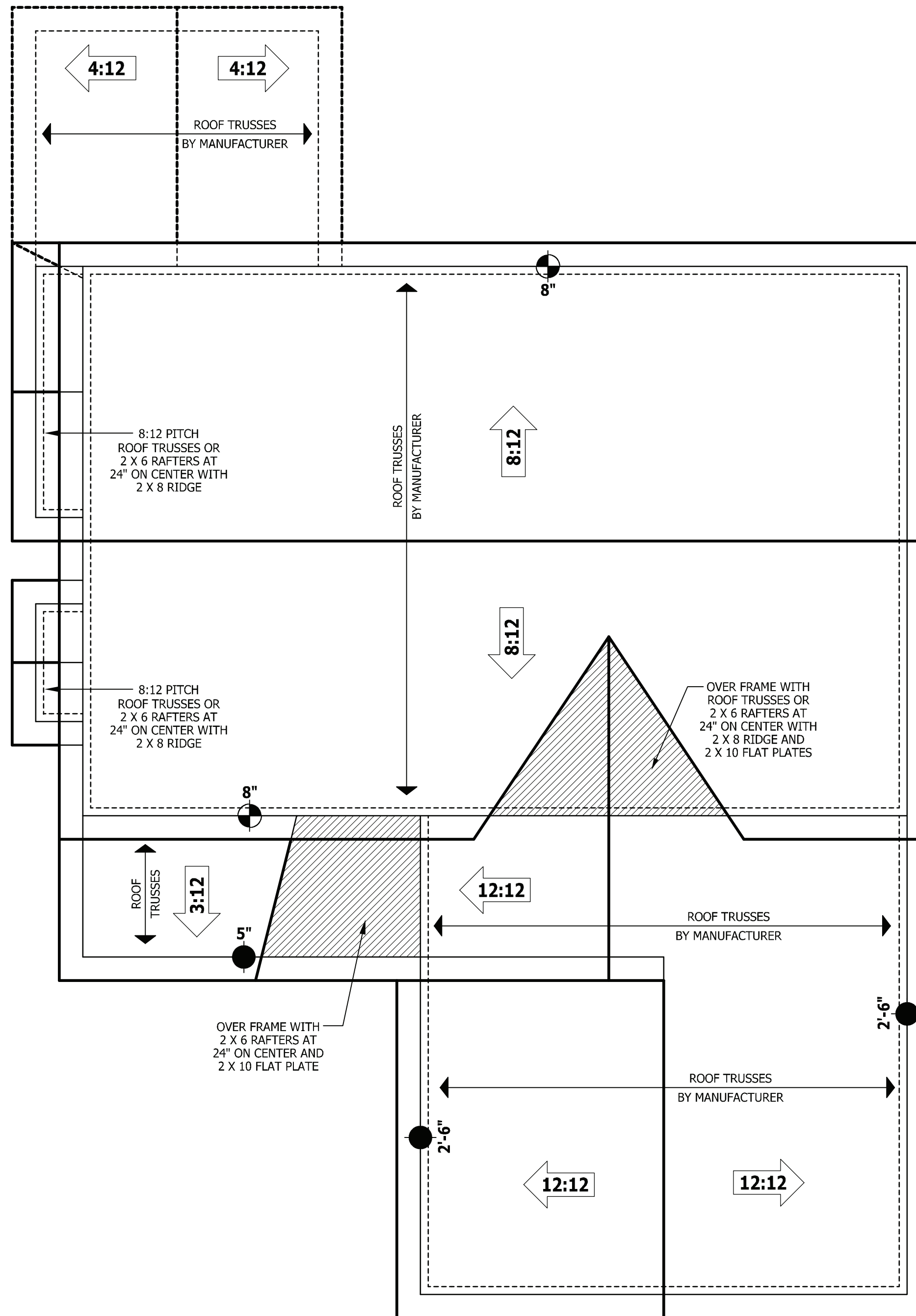
BEARING. All trusses shall be designed for bearing on SPF #2 plates or ledgers unless noted otherwise.

Plate Heights & Floor Systems. See elevation page(s) for plate heights and floor system thicknesses.

● HEEL HEIGHT ABOVE FIRST FLOOR PLATE

◐ HEEL HEIGHT ABOVE SECOND FLOOR PLATE

OPTIONAL COVERED PORCH



ROOF PLAN

SCALE 1/4" = 1'-0"

ROOF PLAN
 NICHOLSON

HAYNES WEAVER
 HOMES
 910.630.2100 • 919.606.4696
350 Waggoner Drive, Fayetteville, NC 28403

HAYNES HOME PLANS, INC.
 P.O. BOX 702, WAKE FOREST, NC 27588 919-485-6180 FAX 1-866-491-0396

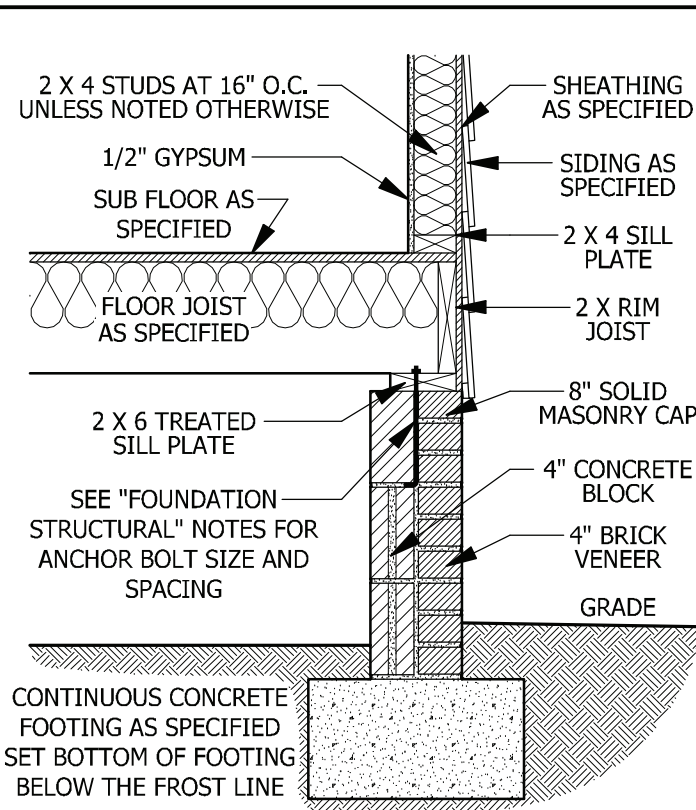
SQUARE FOOTAGE	
HEATED	
FIRST FLOOR	798 SQ. FT.
SECOND FLOOR	743 SQ. FT.
PLAYROOM	194 SQ. FT.
TOTAL	1735 SQ. FT.
UNHEATED	
GARAGE	400 SQ. FT.
FRONT PORCH	86 SQ. FT.
DECK/PORCH	120 SQ. FT.
TOTAL	606 SQ. FT.
UNHEATED OPTIONAL	
THIRD GARAGE	270 SQ. FT.
GARAGE	270 SQ. FT.

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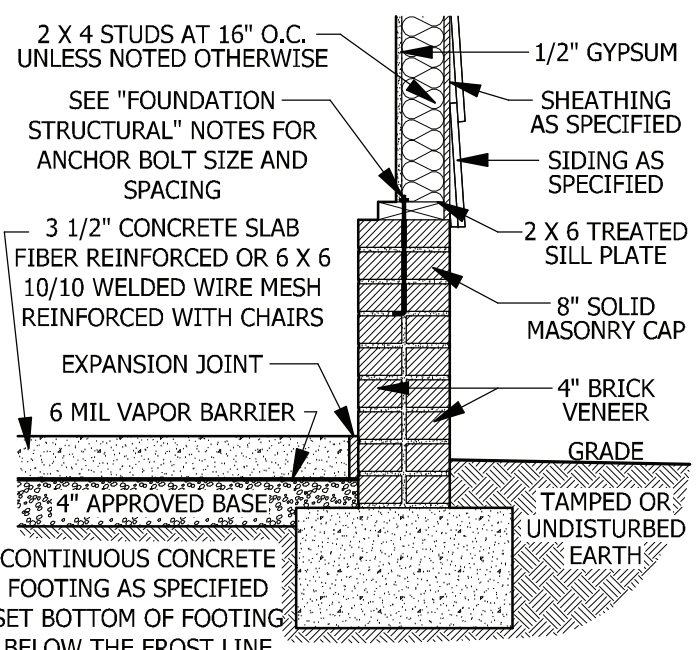
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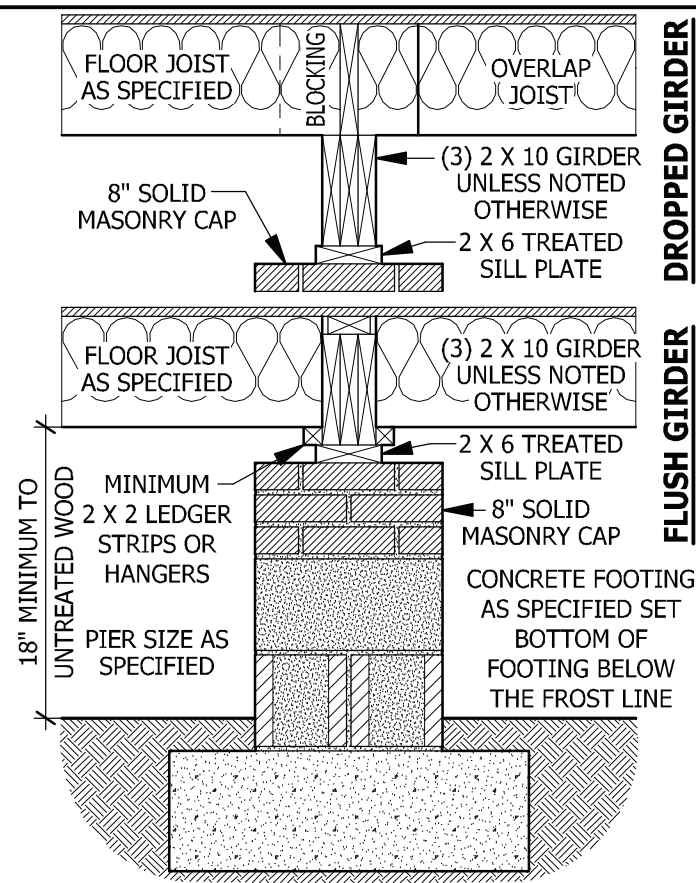
PAGE 7 OF 8



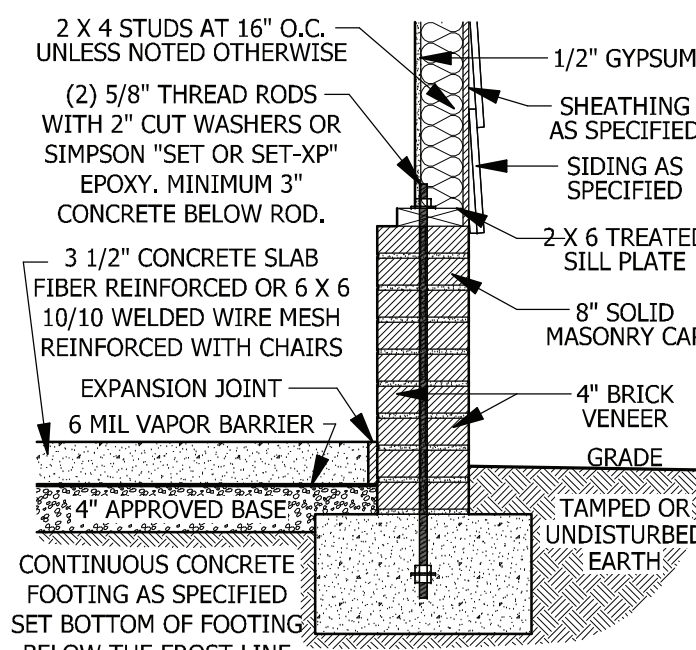
A CRAWL SPACE WALL
SCALE 3/4" = 1'-0"



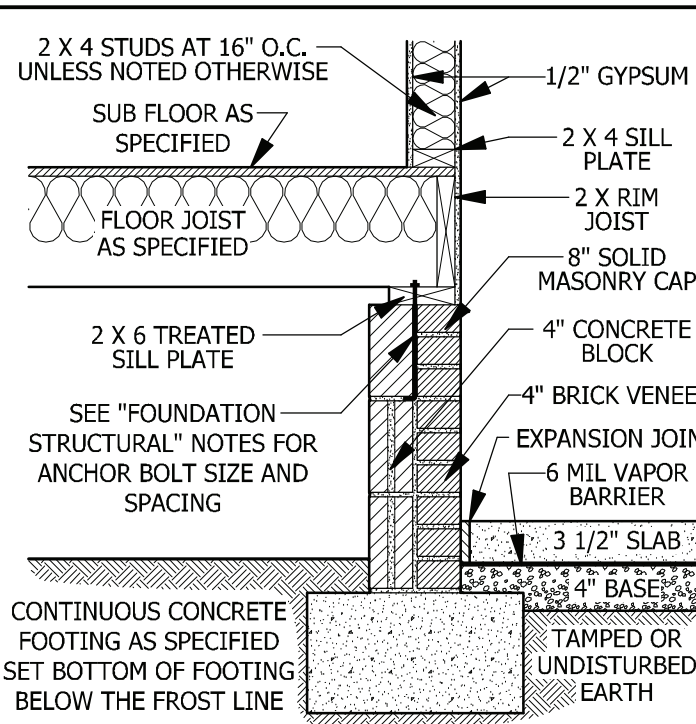
D GARAGE STEM WALL
SCALE 3/4" = 1'-0"



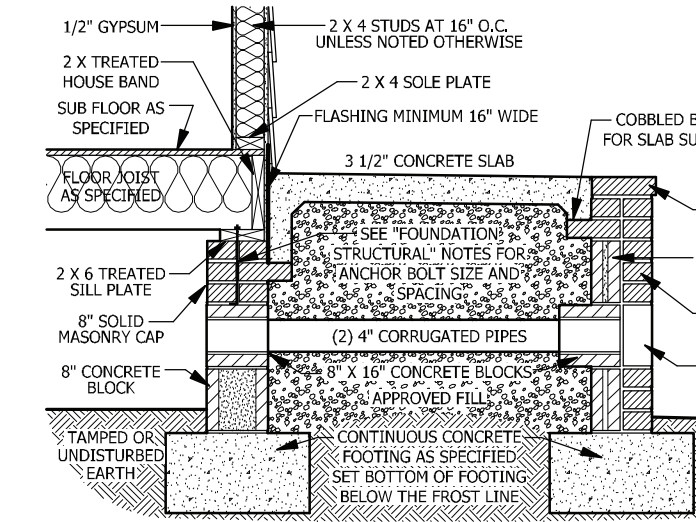
B DROPPED/ FLUSH PIER
SCALE 3/4" = 1'-0"



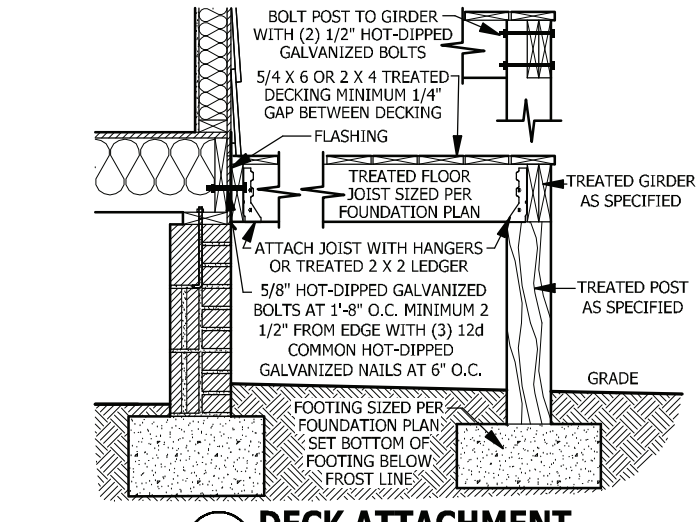
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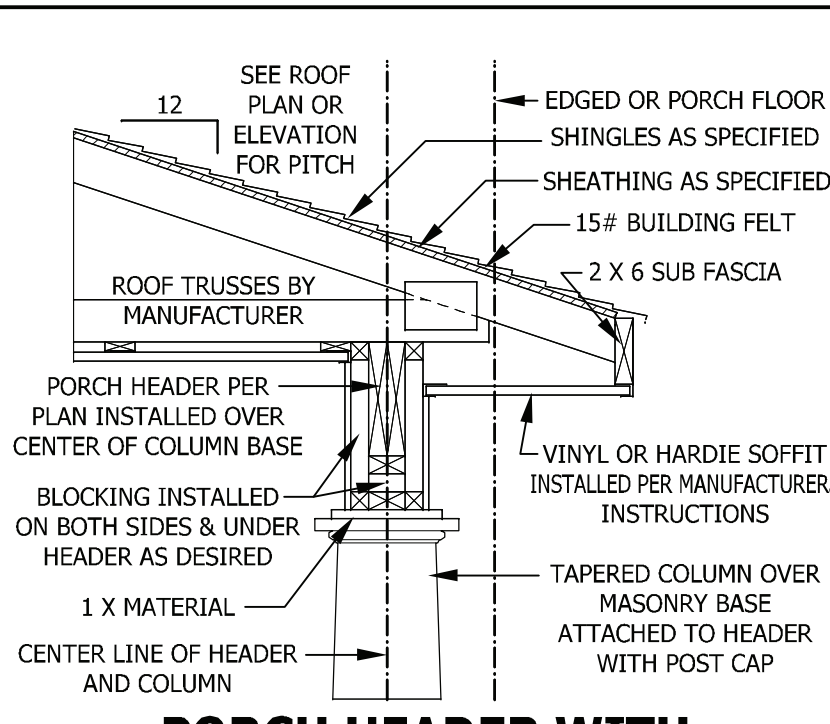
C CRAWL SPACE AT GARGE
SCALE 3/4" = 1'-0"



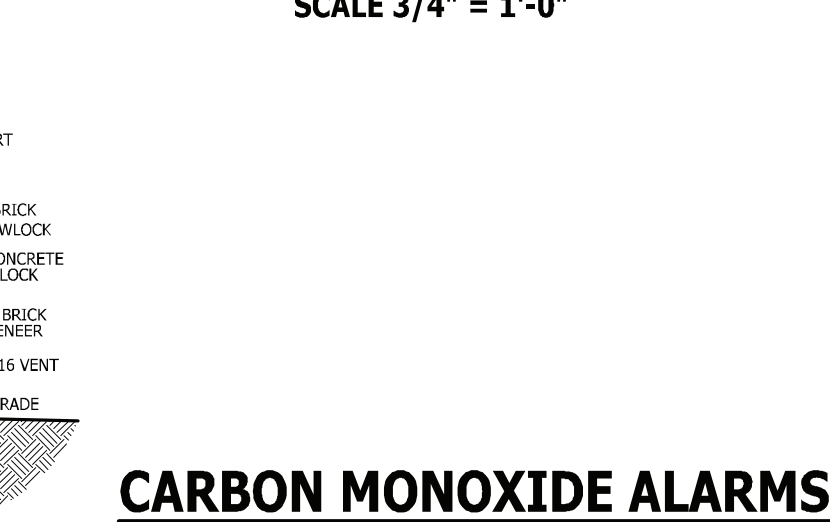
F FILLED PORCH SECTION WITH VENT
SCALE 1/2" = 1'-0"



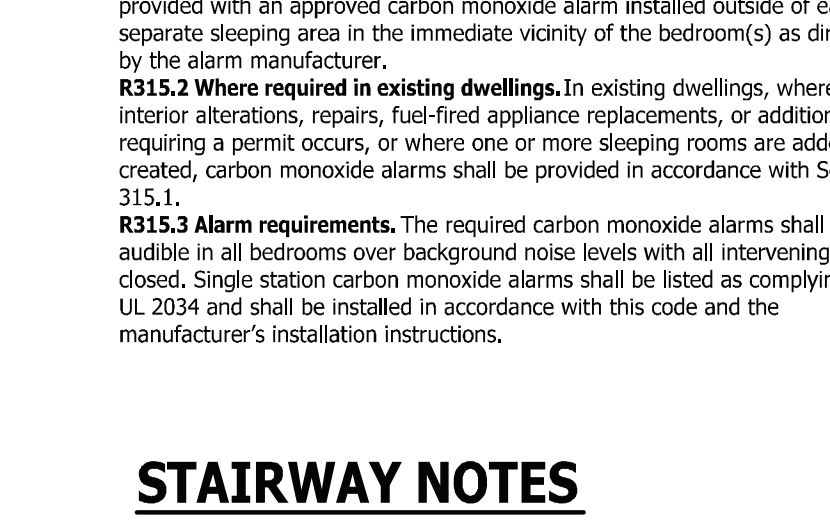
G DECK ATTACHMENT
SCALE 1/2" = 1'-0"



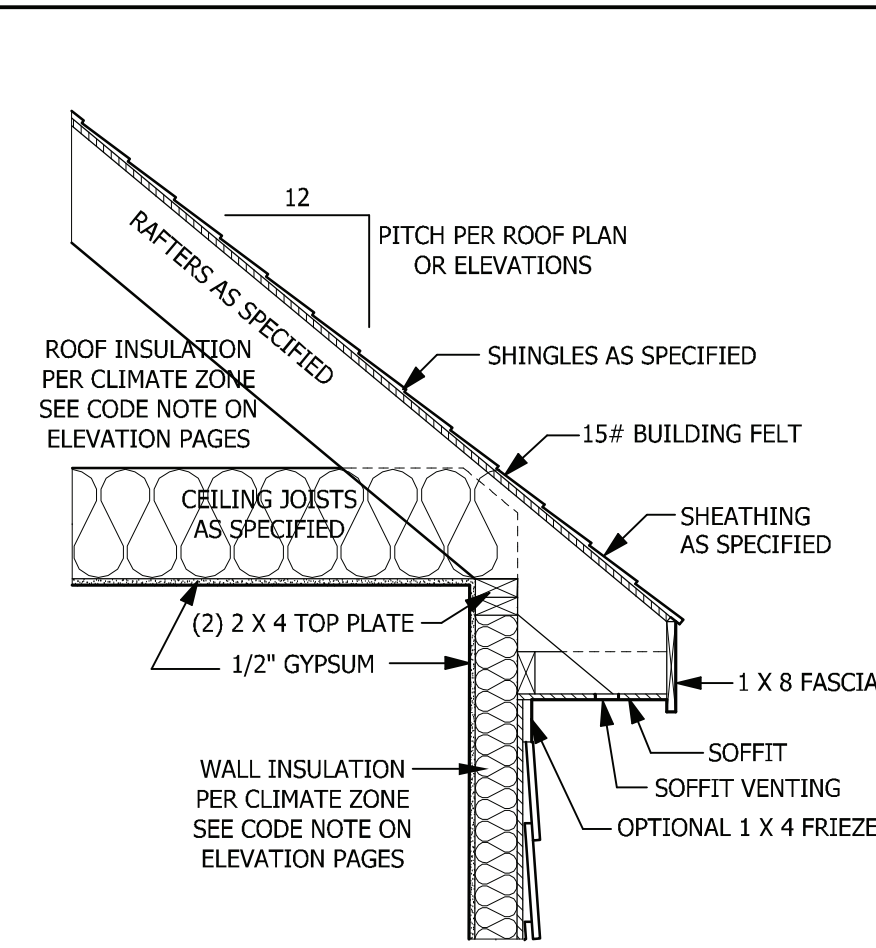
PORCH HEADER WITH TAPERED COLUMN
SCALE 3/4" = 1'-0"



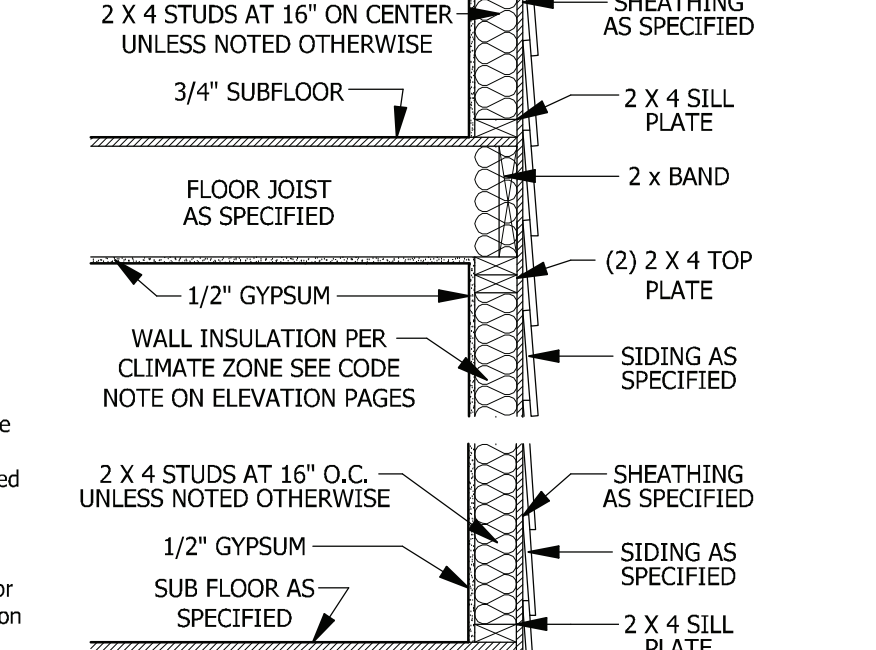
CARBON MONOXIDE ALARMS



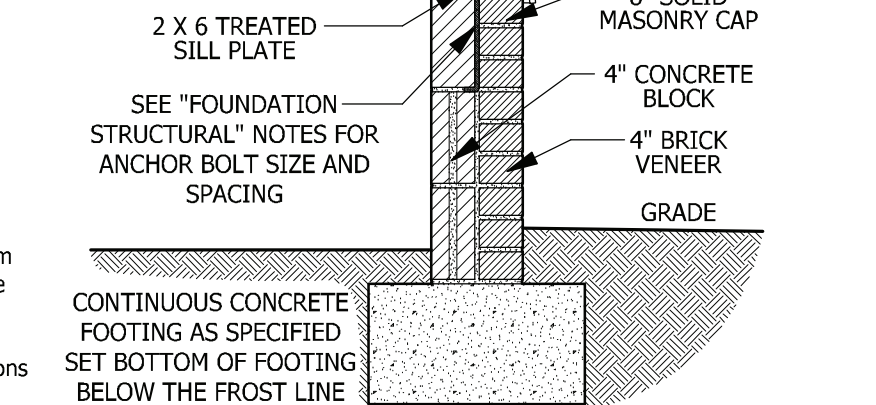
STAIRWAY NOTES



TYPICAL WALL DETAIL
SCALE 3/4" = 1'-0"



TYPICAL WALL DETAIL
SCALE 3/4" = 1'-0"



TYPICAL WALL DETAIL
SCALE 3/4" = 1'-0"

DECK STAIR NOTES

SECTION AM110
AM110.1 Stairs shall be constructed per Figure AM110. Stringer spans shall be no greater than 7 foot span between supports. Spacing between stringers shall be based upon decking material used per AM107.1. Each Stringer shall have minimum 3 1/2 inches between step cut and back of stringer. If used, suspended headers shall be attached with 3/8 inch galvanized bolts with nuts and washers to securely support stringers at the top.

DECK BRACING

SECTION AM109
AM109.1 Deck bracing. Decks shall be braced to provide lateral stability. The following are acceptable means to provide lateral stability.
AM109.1.1. When the deck floor height is less than 4'-0" above finished grade per Figure AM109 and the deck is attached to the structure in accordance with Section AM104, lateral bracing is not required.
AM109.1.2. 4 x 4 wood knee braces may be provided on each column in both directions. The knee braces shall attach to each post at a point not less than 1/3 of the post length from the top of the post, and the braces shall be angled between 45 degrees and 60 degrees from the horizontal. Knee braces shall be bolted to the post and the girder/double band with one 5/8 inch hot dipped galvanized bolt with nut and washer at both ends of the brace per Figure AM109.1
AM109.1.3. For freestanding decks without knee braces or diagonal bracing, lateral stability may be provided by embedding the post in accordance with Figure AM109.2 and the following:

POST SIZE	MAX. TRIBUTARY AREA	MAX. POST HEIGHT	EMBEDMENT DEPTH	CONCRETE DIAMETER
4 X 4	48 SF	4'-0"	2'-6"	1'-0"
6 X 6	120 SF	6'-0"	3'-6"	1'-8"

AM109.1.4. 2 x 6 diagonal vertical cross bracing may be provided in two perpendicular directions for freestanding decks or parallel to the structure at the exterior column line for attached decks. The 2 x 6's shall be attached to the posts with one 5/8 inch hot dipped galvanized bolt with nut and washer at each end of each bracing member per Figure AM109.3.
AM109.1.5. For embedment of piles in Coastal Regions, see Chapter 45.

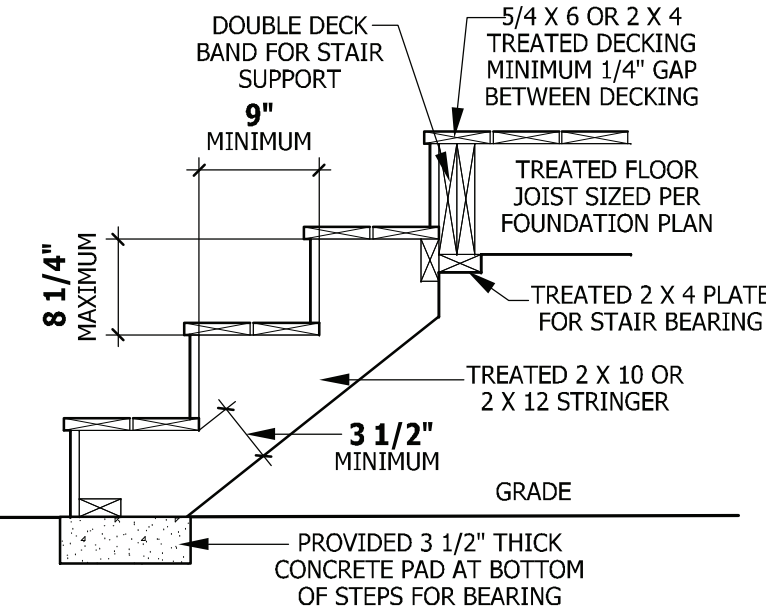
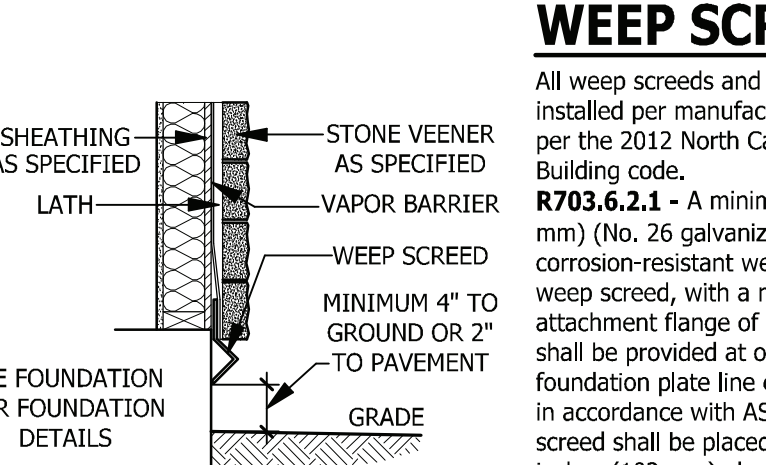


FIGURE AM110
TYPICAL DECK STAIR DETAIL
SCALE 3/4" = 1'-0"



WEEP SCREED
SCALE 3/4" = 1'-0"

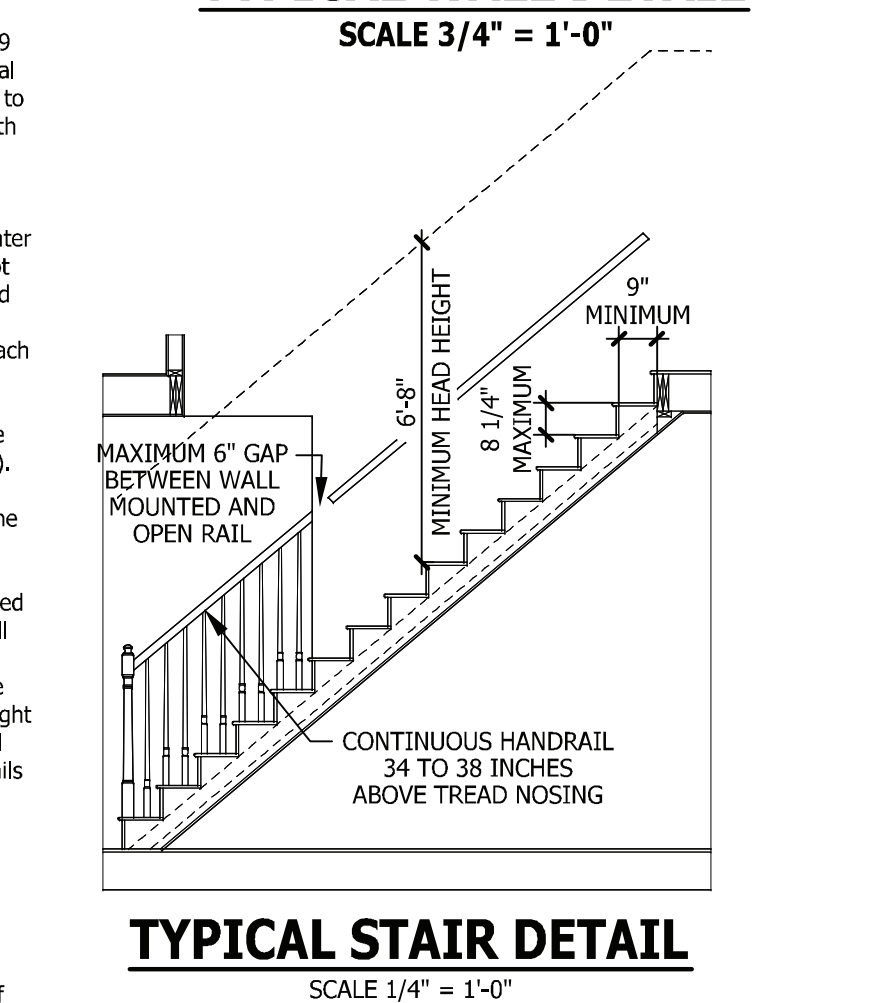
SMOKE ALARMS

SECTION R314
R314.1 Smoke detection and notification. All smoke alarms shall be listed in accordance with UL 217 and installed in accordance with the provisions of this code and the household fire warning equipment provisions of NFPA 72.
R314.2 Smoke detection systems. Household fire alarm systems installed in accordance with NFPA 72 that include smoke alarms, or a combination of smoke detector and audible notification device installed as required by this section for smoke alarms, shall be permitted. The household fire alarm system shall provide the same level of smoke detection and alarm as required by this section for smoke alarms. Where a household fire warning system is installed using a combination of smoke detector and audible notification device(s), it shall become a permanent fixture of the occupancy and owned by the homeowner. The system shall be monitored by an approved supervising station and be maintained in accordance with NFPA 72.
Exception: Where smoke alarms are provided meeting the requirements of Section R314.4.
R314.3 Location. Smoke alarms shall be installed in the following locations:
1. In each sleeping room.
2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.
3. On each additional story of the dwelling, including basements and habitable attics (finished) but not including crawl spaces, uninhabitable (unfinished) attics and uninhabitable (unfinished) attic-stories. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.
When more than one smoke alarm is required to be installed within an individual dwelling unit the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit.
R314.4 Power source. Smoke alarms shall receive their primary power from the building wiring when such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection. Smoke alarms shall be interconnected.

STAIRWAY NOTES

R311.7
R311.7.2 Headroom. The minimum headroom in all parts of the stairway shall not be less than 6 feet 8 inches (2032 mm) measured vertically from the sloped line adjoining the tread nosing or from the floor surface of the landing or platform on that portion of the stairway.
R311.7.4 Stair treads and risers. Stair treads and risers shall meet the requirements of this section. For the purposes of this section all dimensions and dimensioned surfaces shall be exclusive of carpets, rugs or runners.
R311.7.4.1 Riser height. The maximum riser height shall be 8 1/4 inches (210 mm). The riser shall be measured vertically between leading edges of the adjacent treads.
R311.7.4.2 Tread depth. The minimum tread depth shall be 9 inches (229 mm). The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. Winder treads shall have a minimum tread depth of 9 inches (229 mm) measured as above at a point 12 inches (305 mm) from the side where the treads are narrower. Winder treads shall have a minimum tread depth of 4 inches (102 mm) at any point.
R311.7.4.3 Profile. The radius of curvature at the nosing shall be no greater than 9/16 inch (14 mm). A nosing not less than 3/4 inch (19 mm) but not more than 1 1/4 inches (32 mm) shall be provided on stairways with solid risers.
R311.7.7 Handrails. Handrails shall be provided on at least one side of each continuous run of treads or flight with four or more risers.
R311.7.7.1 Height. Handrail height, measured vertically from the sloped plane adjoining the tread nosing, or finish surface of ramp slope, shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm).
Exceptions:
1. The use of a volute, turnout or starting easing shall be allowed over the lowest tread.
2. When handrail fittings or bendings are used to provide continuous transition between flights, the transition from handrail to guardrail, or used at the start of a flight, the handrail height at the fittings or bendings shall be permitted to exceed the maximum height.
R311.7.7.2 Continuity. Handrails for stairways shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than 1 1/2 inch (38 mm) between the wall and the handrails.
Exceptions:
1. Handrails shall be permitted to be interrupted by a newel post.
2. The use of a volute, turnout, starting easing or starting newel shall be allowed over the lowest tread.
3. Two or more separate rails shall be considered continuous if the termination of the rails occurs within 6 inches (152 mm) of each other. If transitioning between a wall-mounted handrail and a guardrail/handrail, the wall-mounted rail must return into the wall.

TYPICAL WALL DETAIL



TYPICAL STAIR DETAIL
SCALE 1/4" = 1'-0"

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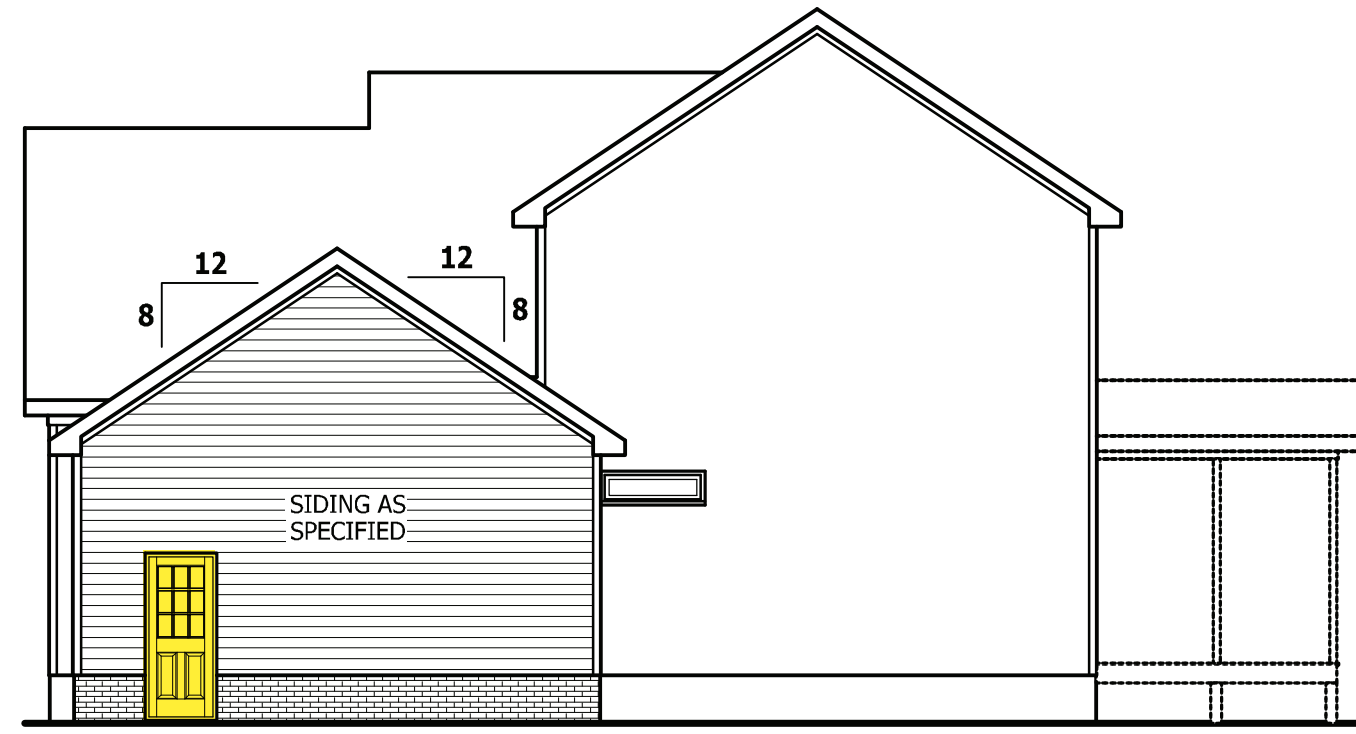
TYPICAL DETAILS
NICHOLSON

WEAVER HOMES
910.630.2100 • 919.606.4696
350 Weaverville Drive, Fayetteville, NC 28303

HAYNES HOME PLANS, INC.
P.O. Box 702, Wake Forest, NC 27588 919.485.6180 Fax 919.485.491-4396

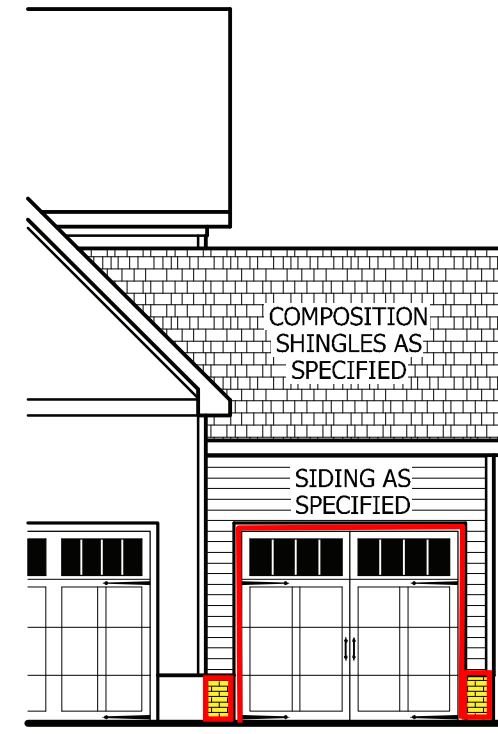
SQUARE FOOTAGE	
HEATED FIRST FLOOR	798 SQ. FT.
HEATED SECOND FLOOR	743 SQ. FT.
PLAYROOM	194 SQ. FT.
DECK/PORCH	120 SQ. FT.
TOTAL	1735 SQ. FT.
UNHEATED GARAGE	400 SQ. FT.
FRONT PORCH	86 SQ. FT.
DECK/PORCH	120 SQ. FT.
TOTAL	606 SQ. FT.
UNHEATED OPTIONAL THIRD GARAGE	270 SQ. FT.
UNHEATED OPTIONAL GARAGE	270 SQ. FT.

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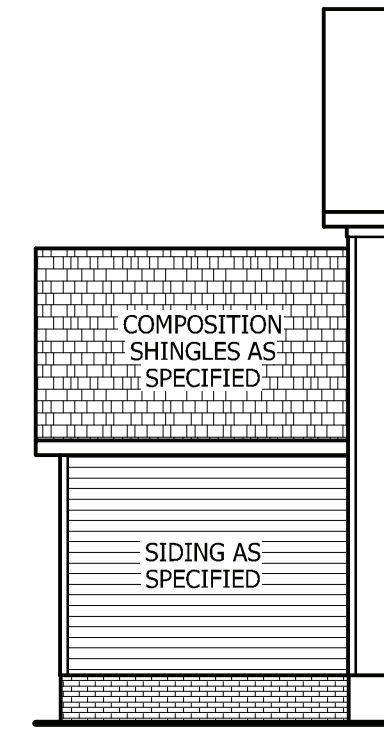
SIDE ELEVATION

SCALE 1/8" = 1'-0"



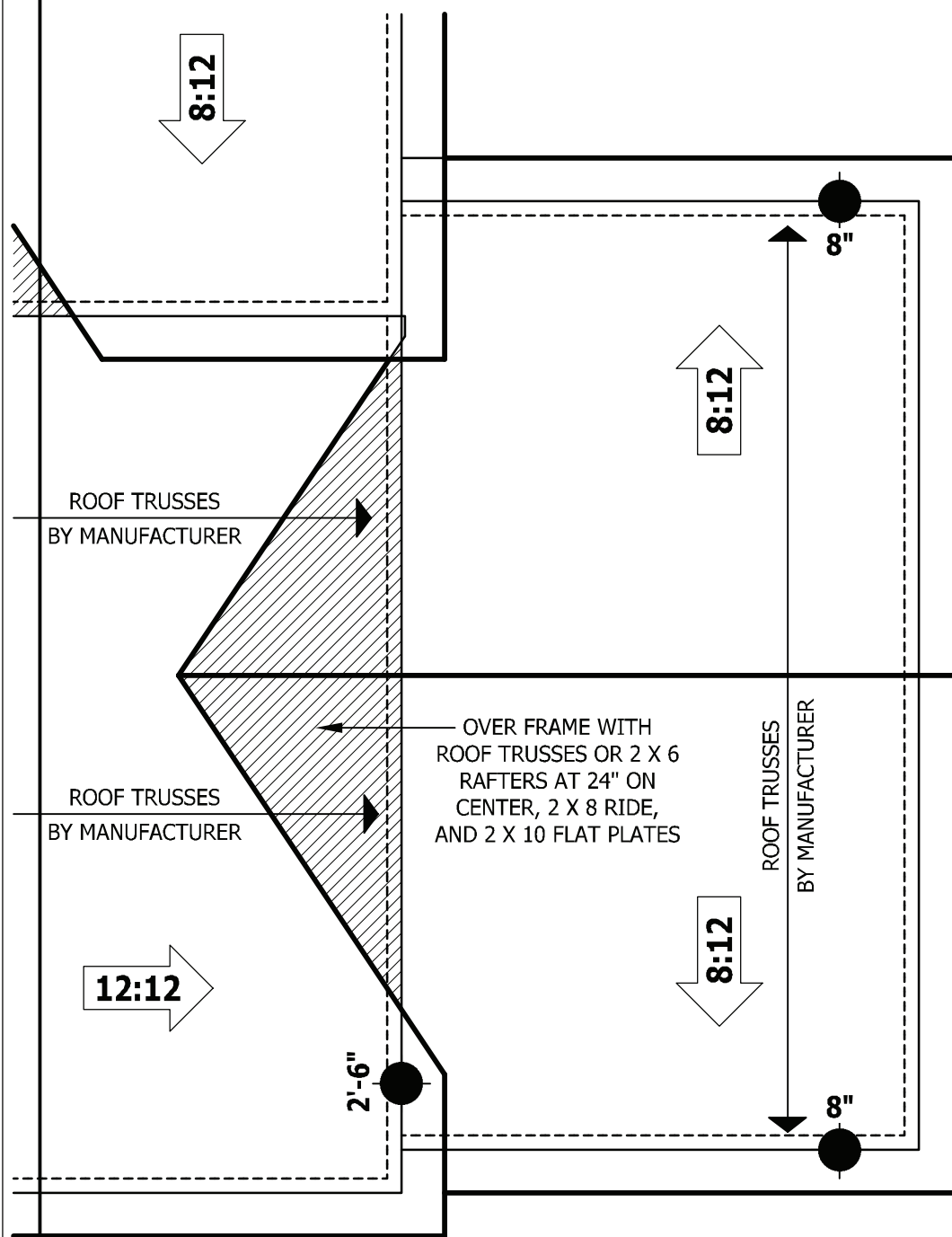
FRONT ELEVATION

SCALE 1/8" = 1'-0"



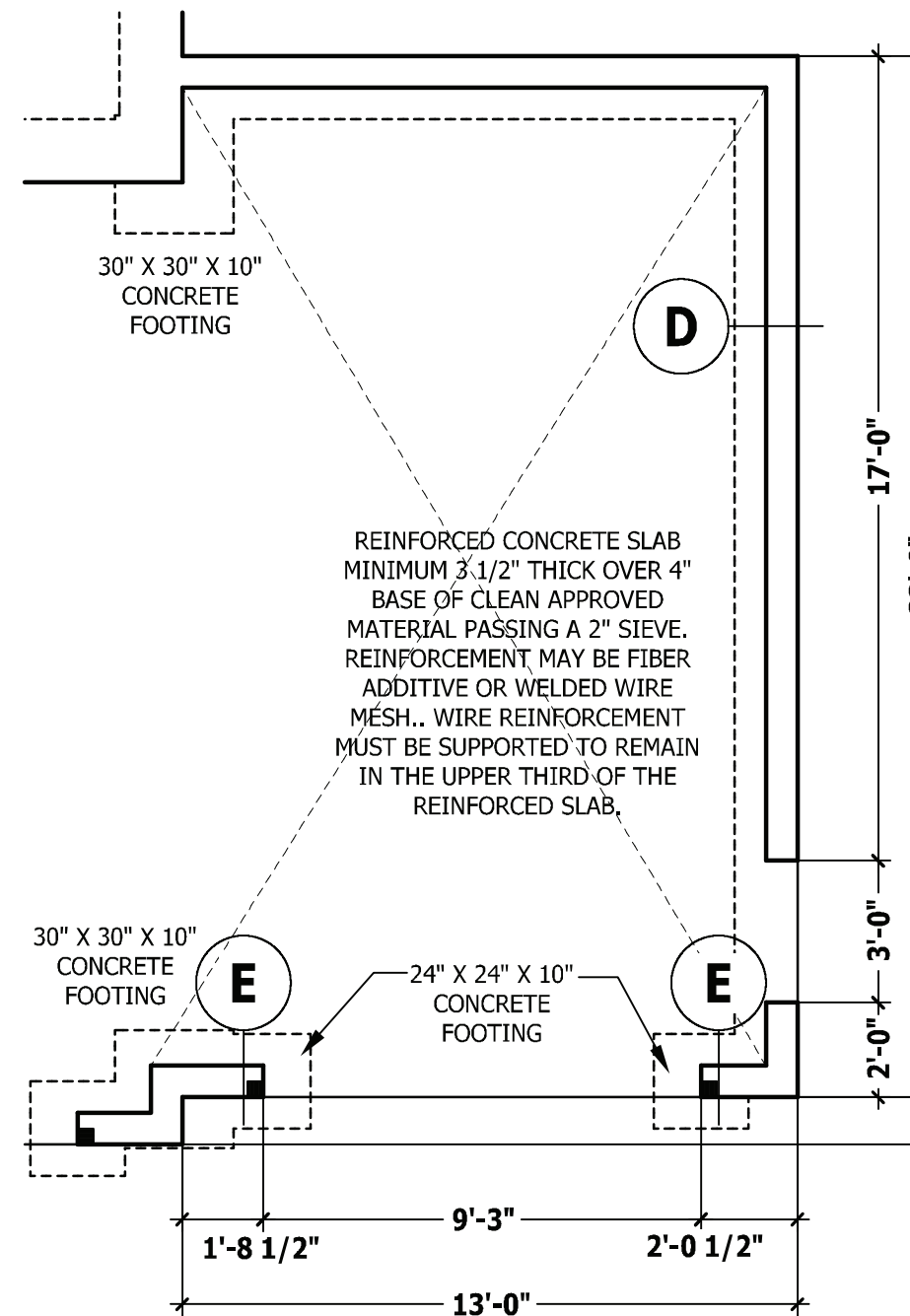
REAR ELEVATION

SCALE 1/8" = 1'-0"



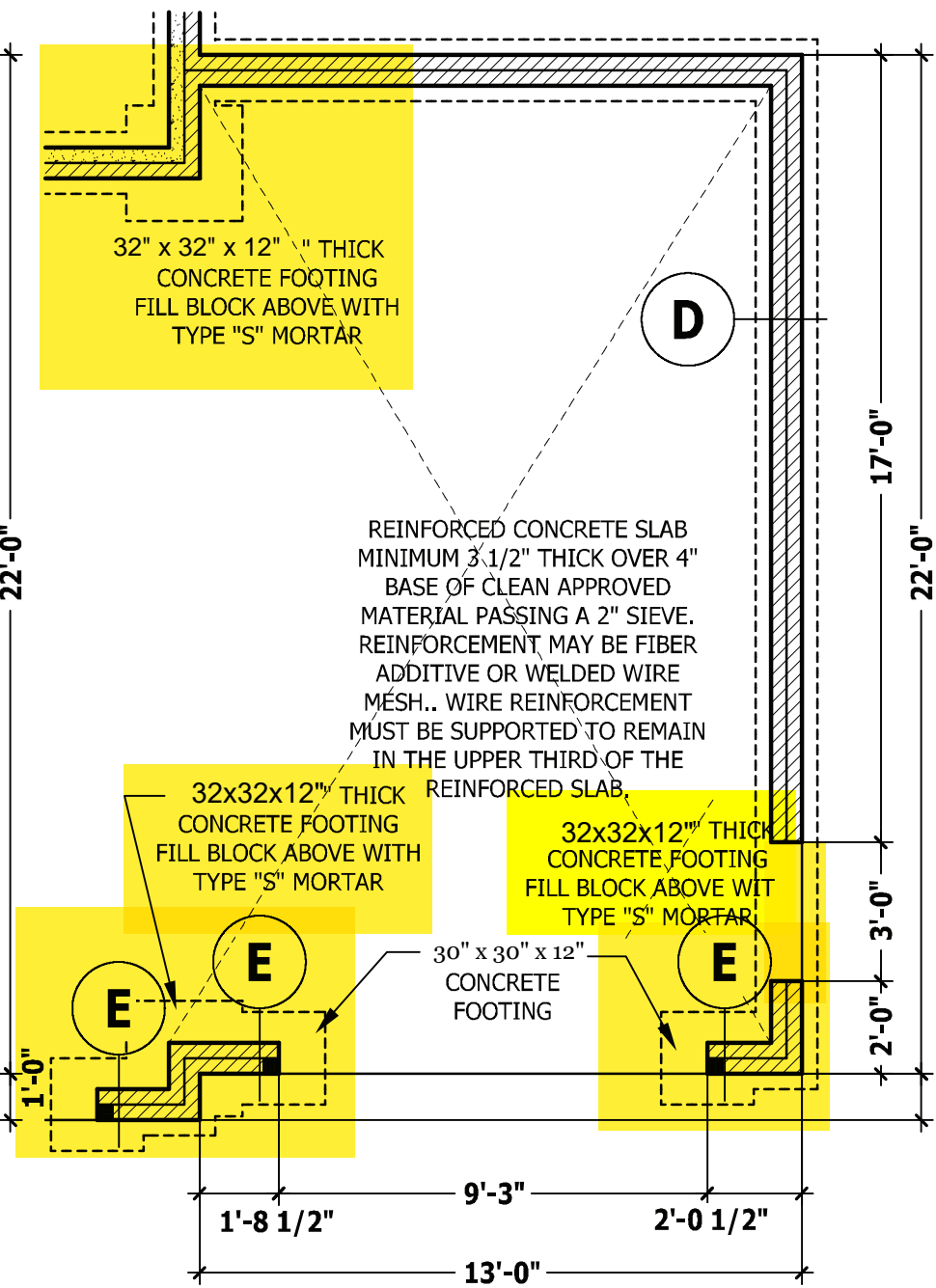
ROOF PLAN

SCALE 1/4" = 1'-0"



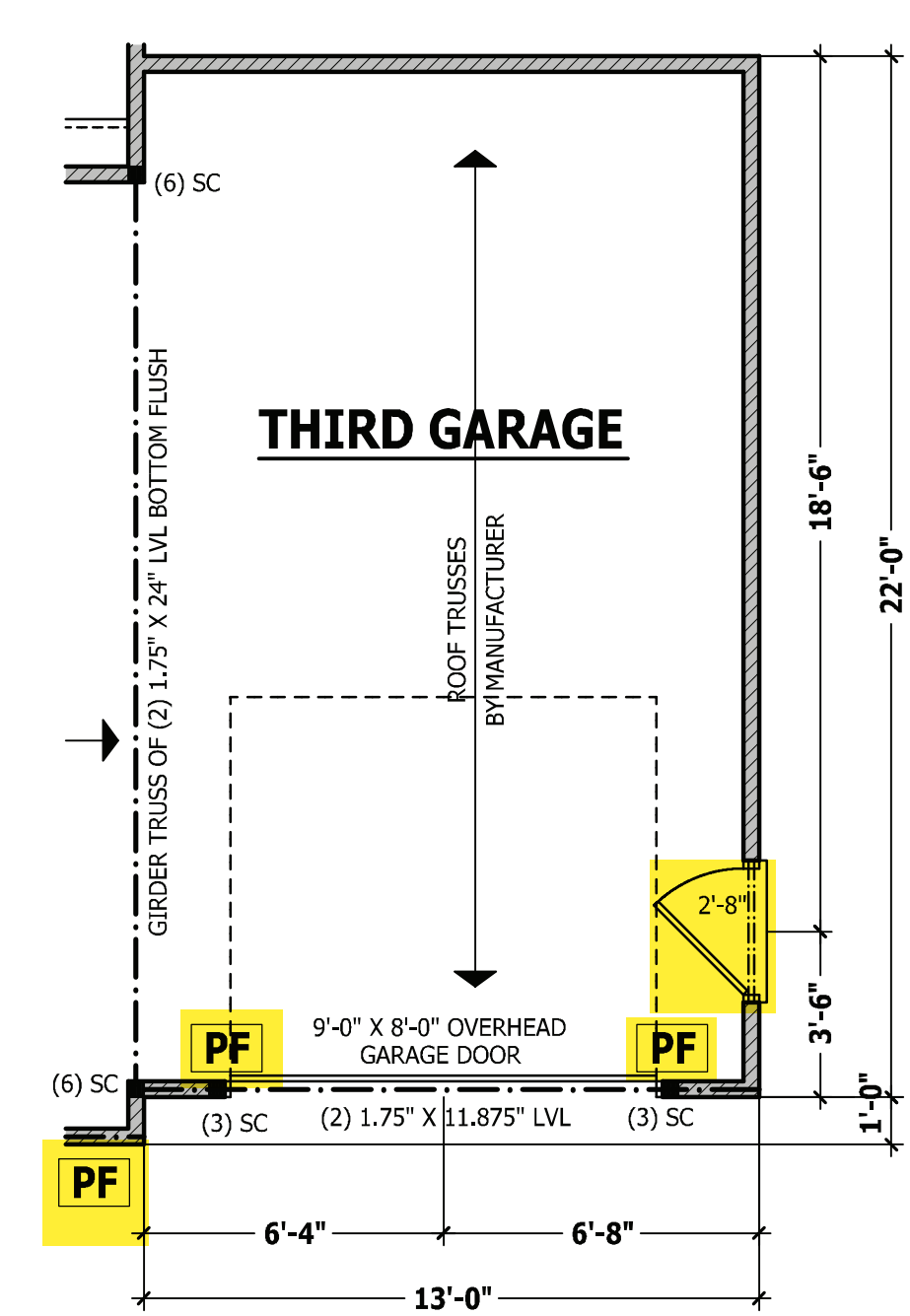
MONOLITHIC SLAB PLAN

SCALE 1/4" = 1'-0"



CRAWL SPACE / STEM WALL

SCALE 1/4" = 1'-0"



FIRST FLOOR PLAN

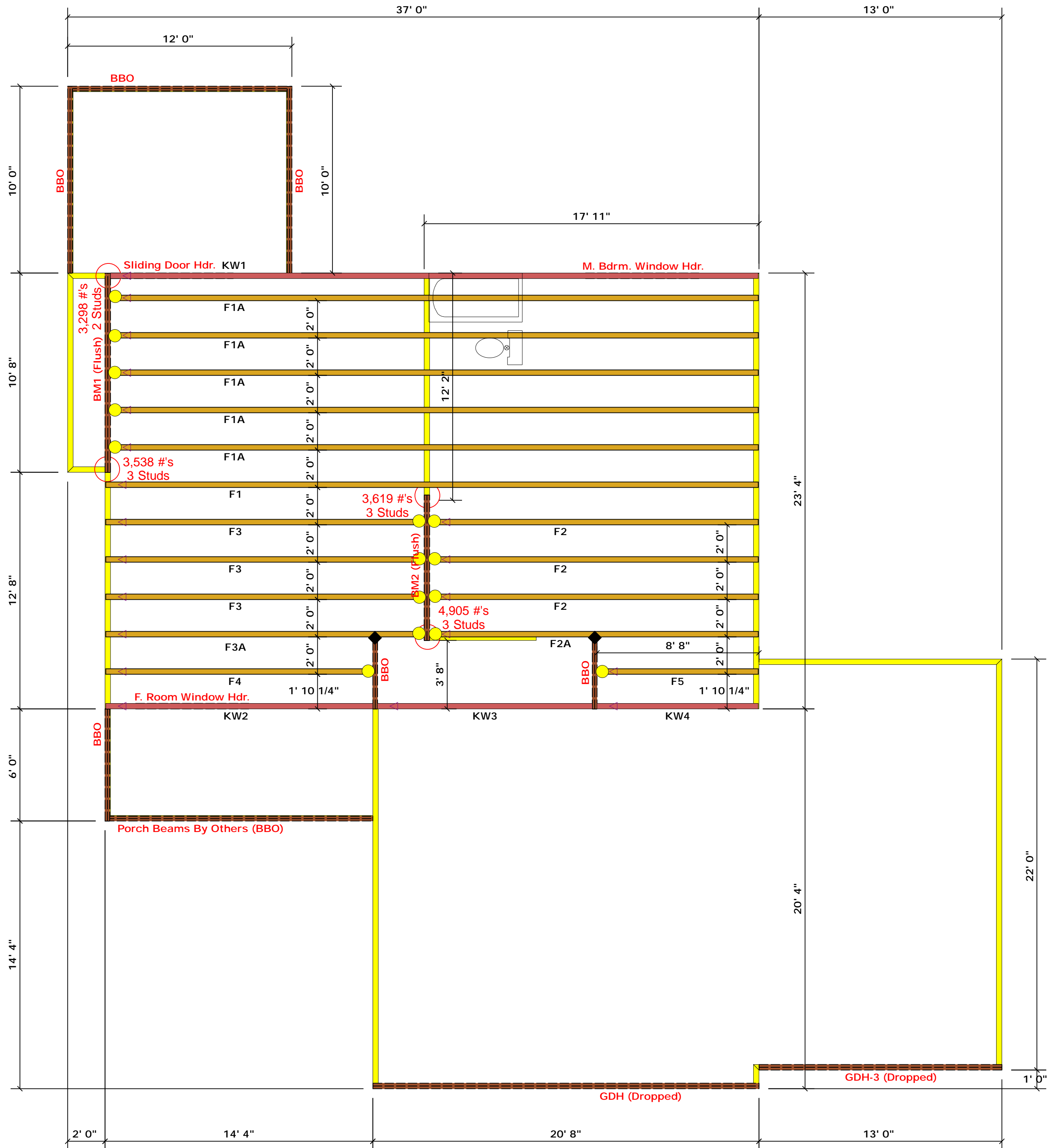
SCALE 1/4" = 1'-0"

THIRD CAR
NICHOLSON

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 HOME PLANS, INC.
 P.O. BOX 702, WAIVE FOREST, NC 27588 919-485-6180 FAX 1-866-491-0396
 910.630.2100 • 919.606.4696
 350 Weaverville Drive, Payetteville, NC 28903

SQUARE FOOTAGE	
HEATED	
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PLAYROOM	194 SQ. FT.
TOTAL	1735 SQ. FT.
UNHEATED	
GARAGE	400 SQ. FT.
FRONT PORCH	86 SQ. FT.
DECK/PORCH	120 SQ. FT.
TOTAL	606 SQ. FT.
UNHEATED OPTIONAL	
THIRD GARAGE	270 SQ. FT.
GARAGE	270 SQ. FT.

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 ADDENDUM

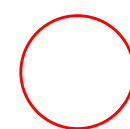


- = HUS410 (Qty. 15)
- ◆ = MSH422 (Qty. 2)

Truss Placement Plan SCALE: 1/4" = 1'-0"

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

Products					
PlotID	Length	Product	Plies	Net Qty	Fab Type
F. Room Window Hdr.	7' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2	FF
M. Bdrm. Window Hdr.	7' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2	FF
Sliding Door Hdr.	7' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2	FF
GDH (Dropped)	21' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2	FF
GDH-3 (Dropped)	13' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2	FF
BM1 (Flush)	11' 0"	1-3/4"x 14" LVL Kerto-S	2	2	FF
BM2 (Flush)	8' 0"	1-3/4"x 14" LVL Kerto-S	2	2	FF



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

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

LOAD CHART FOR JACK STUDS

NO. JACKS	UP TO	NO. JACKS	UP TO
1700	1	2550	1
3400	2	5100	2
5100	3	7650	3
6800	4	10200	4
8500	5	12750	5
10200	6	15300	6
11900	7		
13600	8		
15300	9		

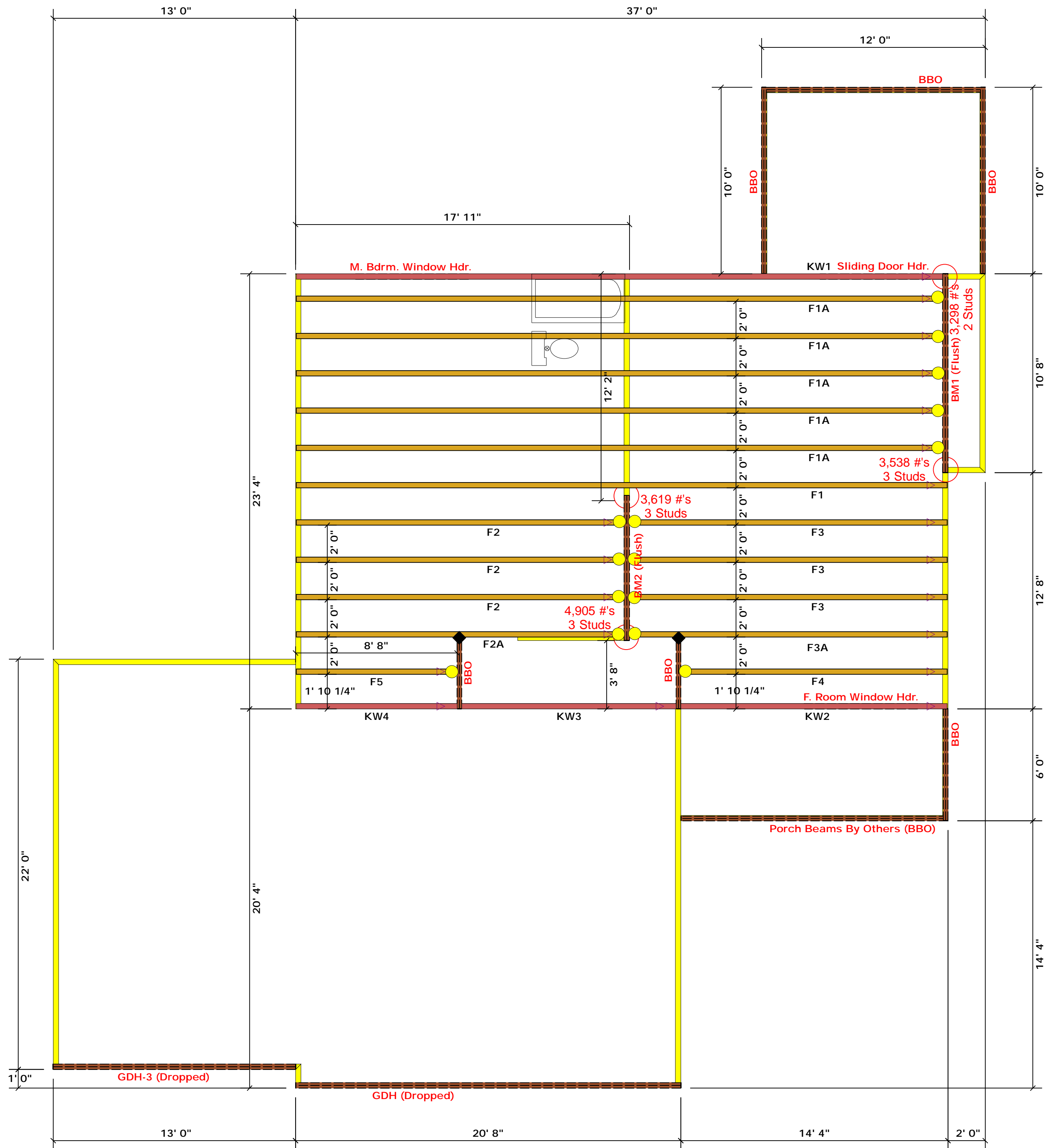
BUILDER	Weaver Development	CITY / CO.	Angier / Harnett
JOB NAME	Lot 9 Mitchell Manor	ADDRESS	208 Mitchell Manor Dr.
PLAN	Nicholson 3 Car (190717B)	MODEL	Floor
SEAL DATE	Seal Date	DATE REV.	/ /
QUOTE #	Quote #	DRAWN BY	Christine Shivy
JOB #	J1022-5009	SALES REP.	Lenny Norris

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 BCSH-B1 and BCSH-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

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



Truss Placement Plan SCALE: 1/4" = 1'-0"

● = HUS410 (Qty. 15)

◆ = MSH422 (Qty. 2)

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

Products					
PlotID	Length	Product	Plies	Net Qty	Fab Type
F. Room Window Hdr.	7' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2	FF
M. Bdrm. Window Hdr.	7' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2	FF
Sliding Door Hdr.	7' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2	FF
GDH (Dropped)	21' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2	FF
GDH-3 (Dropped)	13' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2	FF
BM1 (Flush)	11' 0"	1-3/4"x 14" LVL Kerto-S	2	2	FF
BM2 (Flush)	8' 0"	1-3/4"x 14" 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

NO. JACKS	SPACING	LOAD (LBS)	NO. JACKS	SPACING	LOAD (LBS)
1700	1	2550	1	3400	
3400	2	5100	2	6800	
5100	3	7650	3	10200	
6800	4	10200	4	13600	
8500	5	12750	5	17000	
10200	6	15300	6		
11900	7				
13600	8				
15300	9				

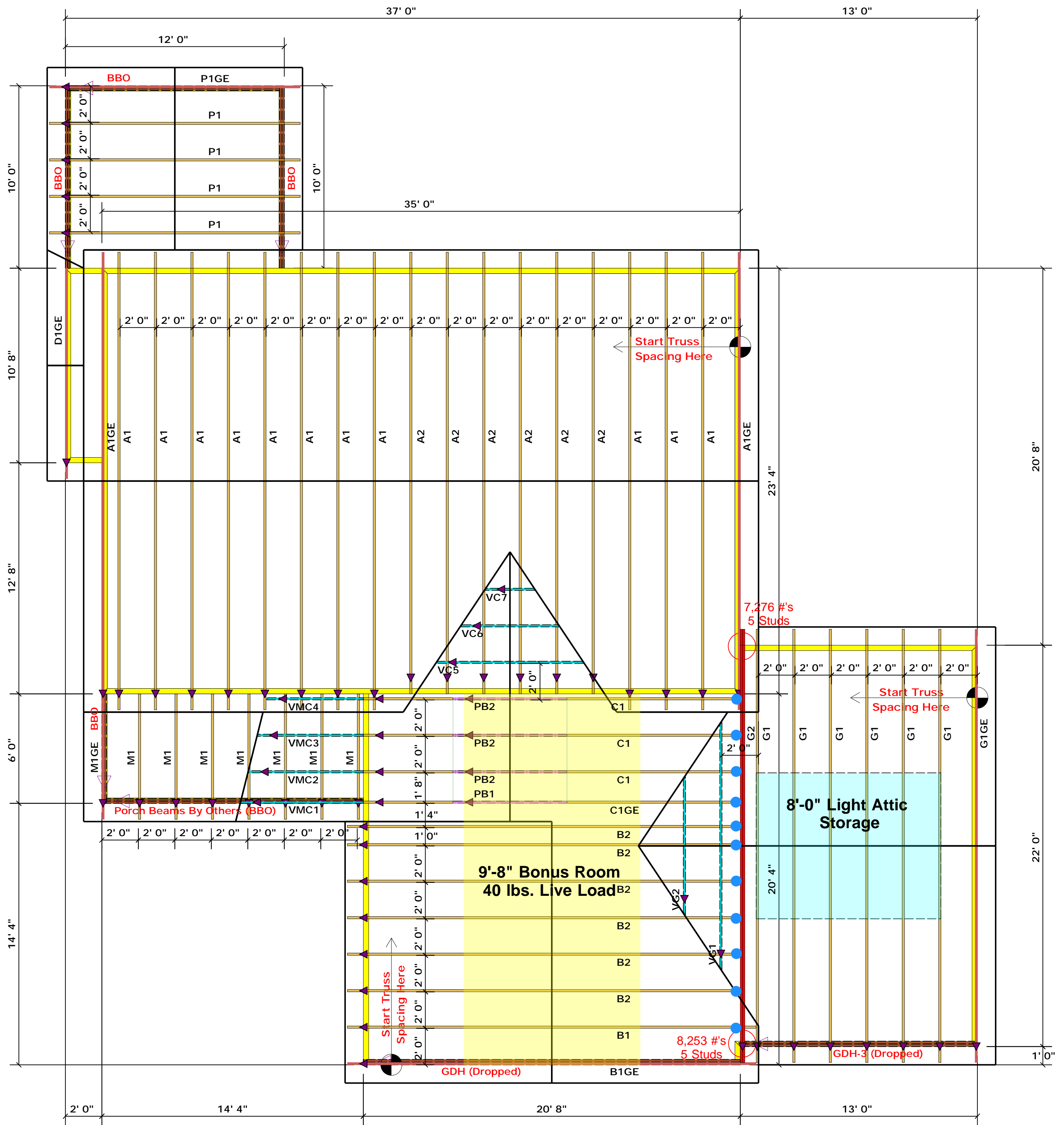
BUILDER	Weaver Development	CITY / CO.	Angier / Harnett
JOB NAME	Lot 9 Mitchell Manor	ADDRESS	208 Mitchell Manor Dr.
PLAN	Nicholson 3 Car (190717B)	MODEL	Floor
SEAL DATE	Seal Date	DATE REV.	/ /
QUOTE #	Quote #	DRAWN BY	Christine Shivy
JOB #	J1022-5009	SALES REP.	Lenny Norris

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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

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



● = HUS26 (Qty. 11)

▲ = 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

Truss Placement Plan
SCALE: 1/4" = 1'-0"

LOAD CHART FOR JACK STUDS

MEMBER SIZE	SPACING	MAXIMUM LOAD (LBS)
1700	1	2550
1700	2	5100
5100	3	7650
6800	4	10200
8500	5	12750
10200	6	15300
11900	7	
13600	8	
15300	9	

BUILDER	Weaver Development	CITY / CO.	Angier / Harnett
JOB NAME	Lot 9 Mitchell Manor	ADDRESS	208 Mitchell Manor Dr.
PLAN	Nicholson 3 Car (190717B)	MODEL	Roof
SEAL DATE	Seal Date	DATE REV.	/ /
QUOTE #		DRAWN BY	Christine Shivy
JOB #	J1022-5008	SALES REP.	Lenny Norris

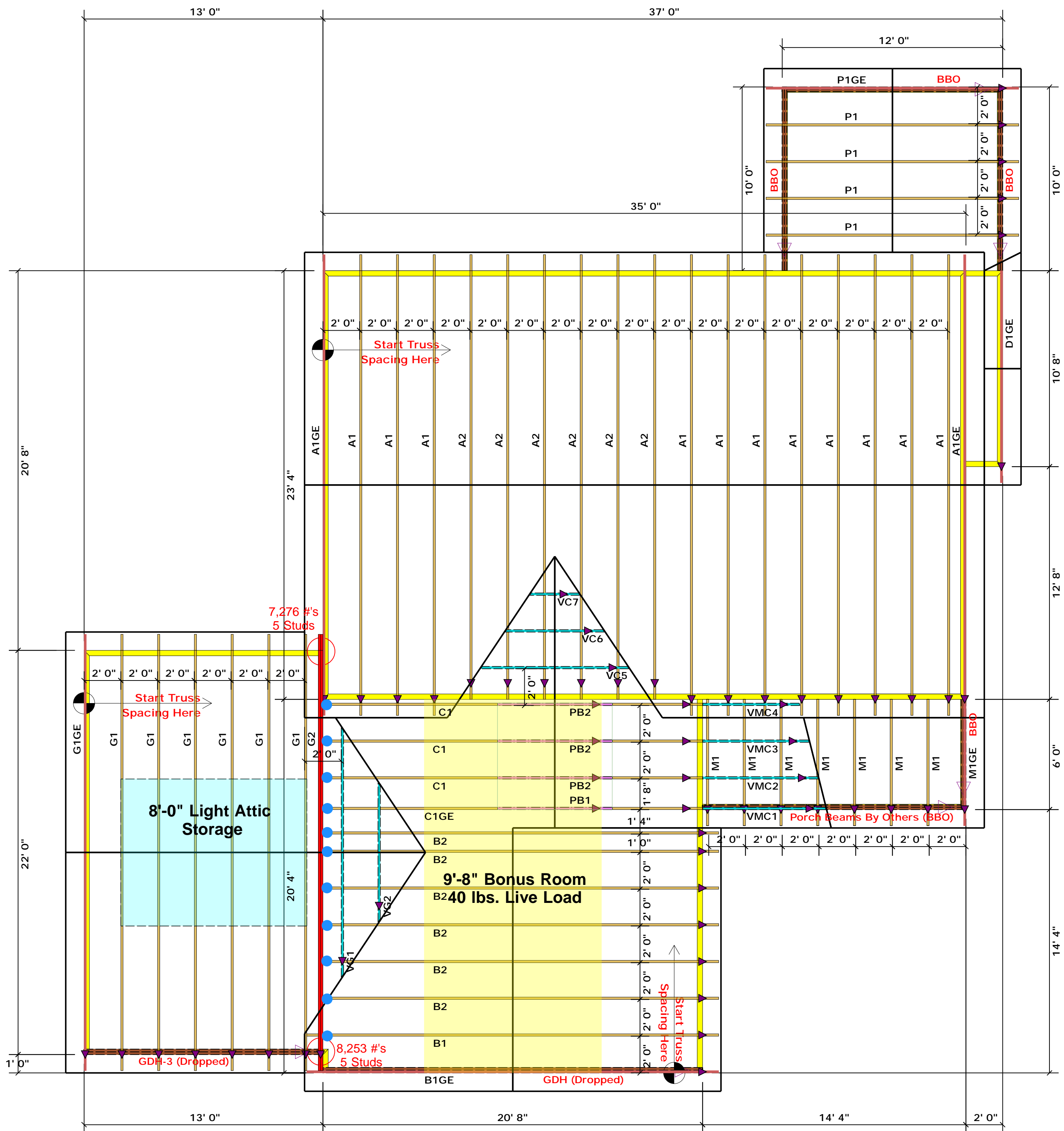
THIS IS A TRUSS PLACEMENT DIAGRAM ONLY. These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on the placement drawing. The building designer 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 BCSH-B1 and BCSH-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#.

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



Truss Placement Plan
SCALE: 1/4" = 1'-0"

● = HUS26 (Qty. 11)

▲ = 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

LOAD CHART FOR JACK STUDS

REACTION (UP TO 3000#)	NUMBER OF JACK STUDS REQUIRED	REACTION (UP TO 3000#)	NUMBER OF JACK STUDS REQUIRED
1700	1	2550	1
3400	2	5100	2
5100	3	7650	3
6800	4	10200	4
8500	5	12750	5
10200	6	15300	6
11900	7		
13600	8		
15300	9		

BUILDER	Weaver Development	CITY / CO.	Angier / Harnett
JOB NAME	Lot 9 Mitchell Manor	ADDRESS	208 Mitchell Manor Dr.
PLAN	Nicholson 3 Car (190717B)	MODEL	Roof
SEAL DATE	Seal Date	DATE REV.	/ /
QUOTE #		DRAWN BY	Christine Shivy
JOB #	J1022-5008	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 at 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#.

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 Christine Shivy

comtech
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 Fax: (910) 864-4444

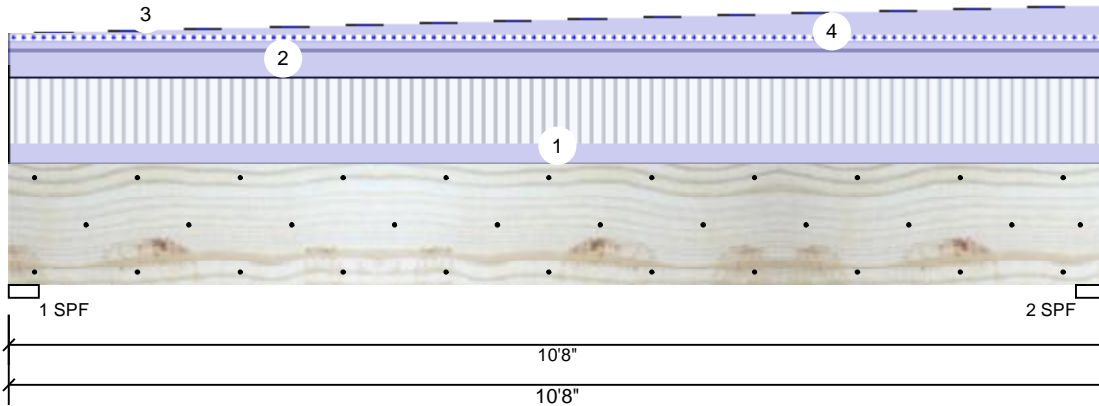


Client: Weaver Development
 Project: The Nicholson
 Address: The Nicholson

Date: 10/24/2022
 Input by: Christine Shivy
 Job Name: Nicholson
 Project #:

BM1 Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED

Level: Level



Member Information

Type:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	480
Deflection TL:	360
Importance:	Normal - II
Temperature:	Temp <= 100°F

Application:	Floor
Design Method:	ASD
Building Code:	IBC/IRC 2015
Load Sharing:	No
Deck:	Not Checked

Reactions UNPATTERNED Ib (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	1600	1698	213	0	0
2	Vertical	1600	1938	213	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	63%	1698 / 1600	3298	L	D+L
2 - SPF	3.500"	Vert	68%	1938 / 1600	3538	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	8351 ft-lb	5'5"	26999 ft-lb	0.309 (31%)	D+L	L
Unbraced	8351 ft-lb	5'5"	10599 ft-lb	0.788 (79%)	D+L	L
Shear	3001 lb	9'2 1/2"	10453 lb	0.287 (29%)	D+L	L
LL Defl inch	0.055 (L/2228)	5'4"	0.255 (L/480)	0.215 (22%)	L	L
TL Defl inch	0.117 (L/1043)	5'4 3/8"	0.340 (L/360)	0.345 (35%)	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 loads must be supported equally by all plies.
- 6 Top must be laterally braced at end bearings.
- 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			Near Face	100 PLF	300 PLF	0 PLF	0 PLF	0 PLF	F1A
2	Uniform			Top	125 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Exterior Wall Load
3	Tapered Start	0-0-0		Top	0 PLF	0 PLF	0 PLF	0 PLF	0 PLF	A1GE
	End	10-8-0		Top	130 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
4	Uniform			Top	40 PLF	0 PLF	40 PLF	0 PLF	0 PLF	2'-0" Roof Load
	Self Weight				11 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

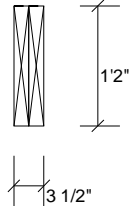
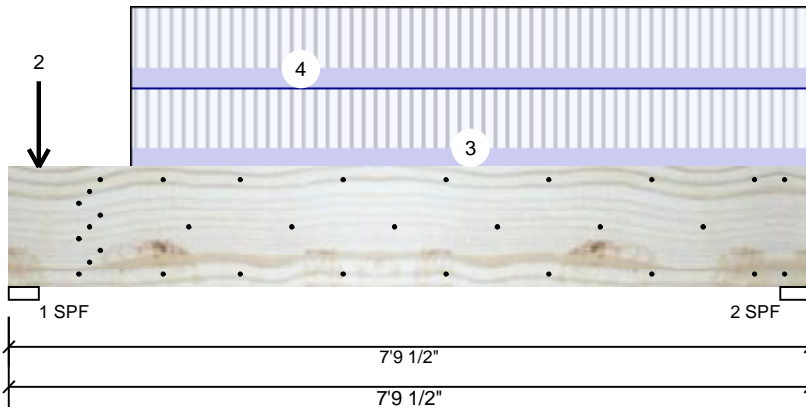
Metsä Wood
 301 Merritt 7 Building, 2nd Floor
 Norwalk, CT 06851
 (800) 622-5850
www.metsawood.com/us

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



BM2 Kerto-S LVL 1.750" X 14.000" 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 Ib (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	3644	1261	0	0	0
2	Vertical	2679	939	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	94%	1261 / 3644	4905	L	D+L
2 - SPF	3.500"	Vert	70%	939 / 2679	3619	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6133 ft-lb	3'11 1/2"	26999 ft-lb	0.227 (23%)	D+L	L
Unbraced	6133 ft-lb	3'11 1/2"	13870 ft-lb	0.442 (44%)	D+L	L
Shear	3460 lb	1'5 1/2"	10453 lb	0.331 (33%)	D+L	L
LL Defl inch	0.038 (L/2320)	3'11 1/8"	0.183 (L/480)	0.207 (21%)	L	L
TL Defl inch	0.051 (L/1717)	3'11 1/8"	0.244 (L/360)	0.210 (21%)	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 Concentrated load fastener specification is in addition to hanger fasteners if a hanger is present.
- 5 Girders are designed to be supported on the bottom edge only.
- 6 Top must be laterally braced at end bearings.
- 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	Point	0-3-8		Near Face	306 lb	917 lb	0 lb	0 lb	0 lb	F3A
2	Point	0-3-8		Far Face	264 lb	790 lb	0 lb	0 lb	0 lb	F2A
3	Part. Uniform	1-2-4 to 7-9-8		Near Face	115 PLF	344 PLF	0 PLF	0 PLF	0 PLF	F3
4	Part. Uniform	1-2-4 to 7-9-8		Far Face	119 PLF	355 PLF	0 PLF	0 PLF	0 PLF	F2
	Self Weight				11 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

Metsä Wood
 301 Merritt 7 Building, 2nd Floor
 Norwalk, CT 06851
 (800) 622-5850
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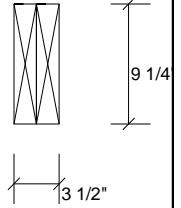
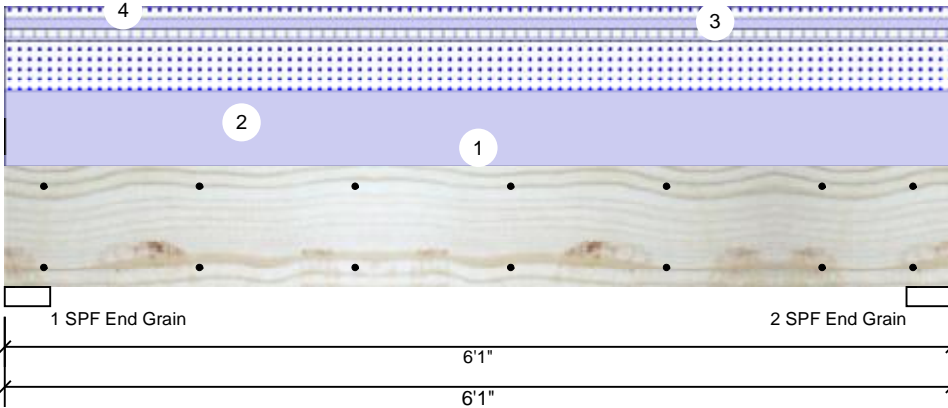




Client: Weaver Development
 Project: The Nicholson
 Address: The Nicholson

Date: 10/24/2022
 Input by: Christine Shivy
 Job Name: Nicholson
 Project #:

F. Room Window Hdr. Kerto-S LVL 1.750" X 9.250" 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 Ib (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	122	1375	928	0	0
2	Vertical	122	1375	928	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	22%	1375 / 928	2303	L	D+S
2 - SPF End Grain	3.500"	Vert	22%	1375 / 928	2303	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2995 ft-lb	3' 1/2"	14423 ft-lb	0.208 (21%)	D+S	L
Unbraced	2995 ft-lb	3' 1/2"	10944 ft-lb	0.274 (27%)	D+S	L
Shear	1504 lb	1' 3/4"	7943 lb	0.189 (19%)	D+S	L
LL Defl inch	0.019 (L/3521)	3' 1/2"	0.141 (L/480)	0.136 (14%)	S	L
TL Defl inch	0.048 (L/1418)	3' 1/2"	0.188 (L/360)	0.254 (25%)	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 end bearings.
- 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	125 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall Load
2	Uniform			Top	249 PLF	0 PLF	249 PLF	0 PLF	0 PLF	A1
3	Uniform			Top	15 PLF	40 PLF	0 PLF	0 PLF	0 PLF	1'-0" Floor Load
4	Uniform			Top	56 PLF	0 PLF	56 PLF	0 PLF	0 PLF	M1
	Self Weight				7 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 11/3/2024

Manufacturer Info

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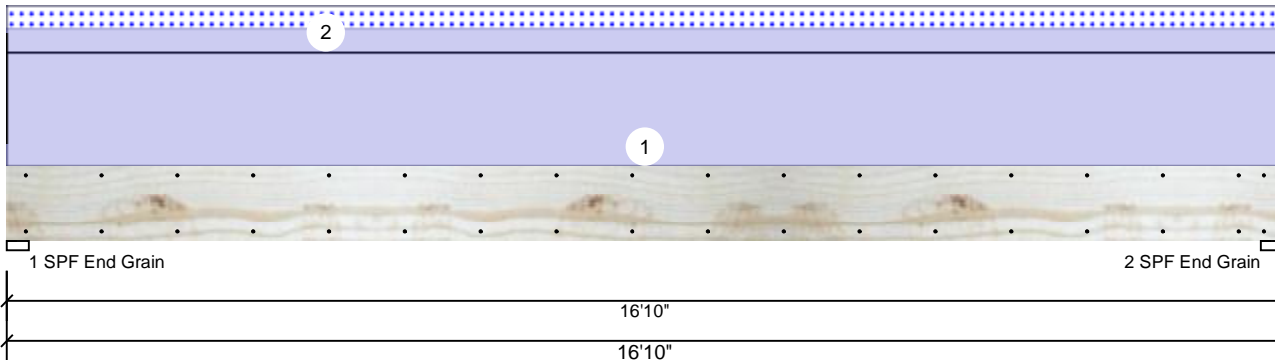


Client: Weaver Development
 Project: The Nicholson
 Address: The Nicholson

Date: 10/24/2022
 Input by: Christine Shivy
 Job Name: Nicholson
 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 Ib (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 Ib	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

- 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.
- Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- Refer to last page of calculations for fasteners required for specified loads.
- Girders are designed to be supported on the bottom edge only.
- Top loads must be supported equally by all plies.
- Top must be laterally braced at a maximum of 9'6 3/4" o.c.
- Bottom must be laterally braced at end bearings.
- 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 (Siding/Plywood, etc.)
2	Uniform Self Weight			Top	40 PLF 9 PLF	0 PLF	40 PLF	0 PLF	0 PLF	20" Roof Load

Notes

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Lumber

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

Handling & Installation

- LVL beams must not be cut or drilled
- Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
- Damaged Beams must not be used
- Design assumes top edge is laterally restrained
- 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



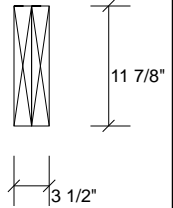
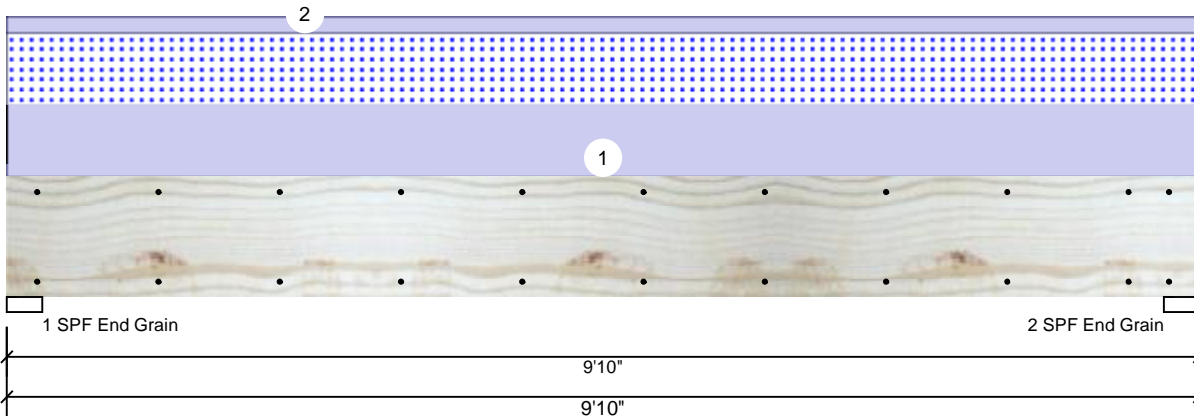


Client: Weaver Development
 Project: The Nicholson
 Address: The Nicholson

Date: 10/24/2022
 Input by: Christine Shivy
 Job Name: Nicholson
 Project #:

GDH-3 Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level



Member Information

Type:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	480
Deflection TL:	360
Importance:	Normal - II
Temperature:	Temp <= 100°F

Application:	Floor
Design Method:	ASD
Building Code:	IBC/IRC 2015
Load Sharing:	No
Deck:	Not Checked

Reactions UNPATTERNED Ib (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	1624	1283	0	0
2	Vertical	0	1624	1283	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	28%	1624 / 1283	2907	L	D+S
2 - SPF End Grain	3.500"	Vert	28%	1624 / 1283	2907	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6496 ft-lb	4'11"	22897 ft-lb	0.284 (28%)	D+S	L
Unbraced	6496 ft-lb	4'11"	9857 ft-lb	0.659 (66%)	D+S	L
Shear	2159 lb	1'3 3/8"	10197 lb	0.212 (21%)	D+S	L
LL Defl inch	0.054 (L/2068)	4'11"	0.234 (L/480)	0.232 (23%)	S	L
TL Defl inch	0.123 (L/913)	4'11"	0.312 (L/360)	0.394 (39%)	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 end bearings.
- 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	261 PLF	0 PLF	261 PLF	0 PLF	0 PLF	G1
2	Uniform			Top	60 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Exterior Loads
	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

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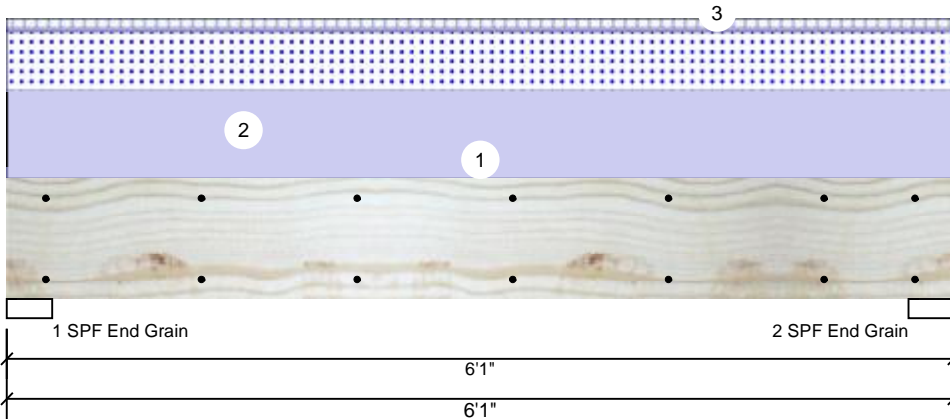


Client: Weaver Development
 Project: The Nicholson
 Address: The Nicholson

Date: 10/24/2022
 Input by: Christine Shivy
 Job Name: Nicholson
 Project #:

M. Bdrm. Window Hdr. Kerto-S LVL 1.750" X 9.250" 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 Ib (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	122	1205	757	0	0
2	Vertical	122	1205	757	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	19%	1205 / 757	1962	L	D+S
2 - SPF End Grain	3.500"	Vert	19%	1205 / 757	1962	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2552 ft-lb	3' 1/2"	14423 ft-lb	0.177 (18%)	D+S	L
Unbraced	2552 ft-lb	3' 1/2"	10944 ft-lb	0.233 (23%)	D+S	L
Shear	1282 lb	1' 3/4"	7943 lb	0.161 (16%)	D+S	L
LL Defl inch	0.016 (L/4312)	3' 1/2"	0.141 (L/480)	0.111 (11%)	S	L
TL Defl inch	0.041 (L/1664)	3' 1/2"	0.188 (L/360)	0.216 (22%)	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 end bearings.
- 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	125 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Exterior Wall Load
2	Uniform			Top	249 PLF	0 PLF	249 PLF	0 PLF	0 PLF	A1
3	Uniform			Top	15 PLF	40 PLF	0 PLF	0 PLF	0 PLF	10" Floor Load
	Self Weight				7 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 11/3/2024

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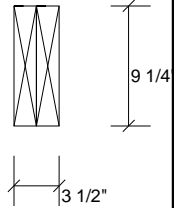
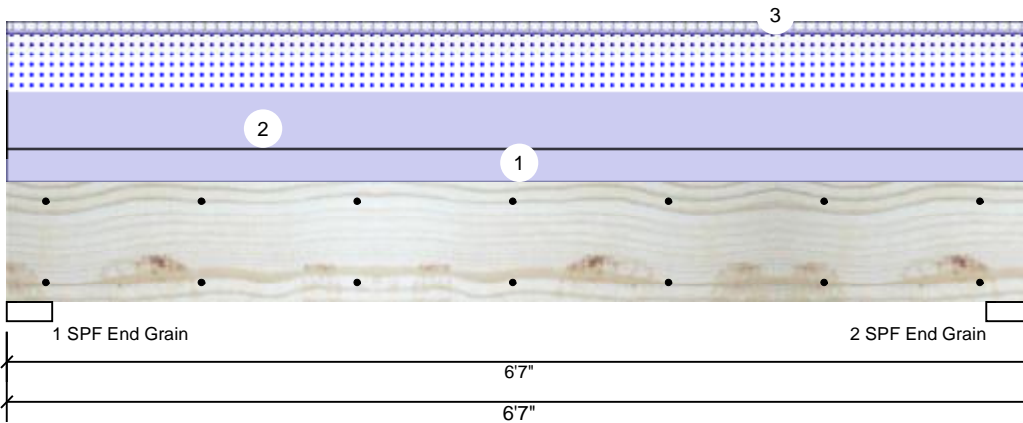


Client: Weaver Development
 Project: The Nicholson
 Address: The Nicholson

Date: 10/24/2022
 Input by: Christine Shivy
 Job Name: Nicholson
 Project #:

Sliding Door Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level



Member Information

Type:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	480
Deflection TL:	360
Importance:	Normal - II
Temperature:	Temp <= 100°F

Application:	Floor
Design Method:	ASD
Building Code:	IBC/IRC 2015
Load Sharing:	No
Deck:	Not Checked

Reactions UNPATTERNED Ib (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	132	1386	820	0	0
2	Vertical	132	1386	820	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	21%	1386 / 820	2206	L	D+S
2 - SPF End Grain	3.500"	Vert	21%	1386 / 820	2206	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3143 ft-lb	3'3 1/2"	14423 ft-lb	0.218 (22%)	D+S	L
Unbraced	3143 ft-lb	3'3 1/2"	10451 ft-lb	0.301 (30%)	D+S	L
Shear	1500 lb	1' 3/4"	7943 lb	0.189 (19%)	D+S	L
LL Defl inch	0.021 (L/3461)	3'3 1/2"	0.153 (L/480)	0.139 (14%)	S	L
TL Defl inch	0.057 (L/1286)	3'3 1/2"	0.204 (L/360)	0.280 (28%)	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.
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- 6 Top must be laterally braced at end bearings.
- 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	150 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Exterior Wall Load
2	Uniform			Top	249 PLF	0 PLF	249 PLF	0 PLF	0 PLF	A1
3	Uniform			Top	15 PLF	40 PLF	0 PLF	0 PLF	0 PLF	1'-0" Floor Load
	Self Weight				7 PLF					

Notes
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