PLANS DESIGNED TO THE 2018 NORTH CAROLINA STATE RESIDENTIAL BUILDING CODE

MEAN ROOF HEIGHT: 19'-9	HEIGHT TO RIDGE: 27'-5"				
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 FUR WIN	EXPOSUR	E "B"						
COMPONENT	& CLA	DDING	DESIG	NED FO	OR THE	FOLLO	WING	LOADS
MEAN ROOF	OOF UP TO 30'			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 T	O 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		-19.0		-20.0		-20.7	20.4	-21.3			
ZONE 5	18.2	-24.0	19.1	-25.2	19.8	-26.2	20.4	-26.9			

GUARD RAIL NOTES

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.

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

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.

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

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.

ROOF VENTILATION

07/26/2021

SQUARE FOOTAGE OF ROOF TO BE VENTED = 2,477 SQ.FT.

NET FREE CROSS VENTILATION NEEDED:

Harnett

WITHOUT 50% TO 80% OF VENTING 3'-0" ABOVE EAVE = 16.51 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 = 8.26 SQ.FT.

SIDING AS SPECIFIED

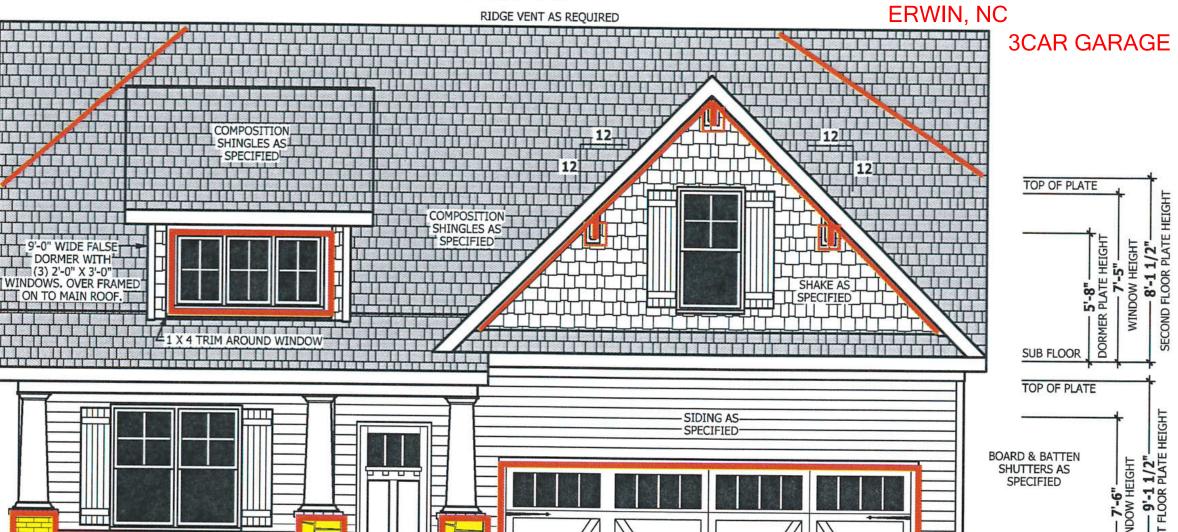
12

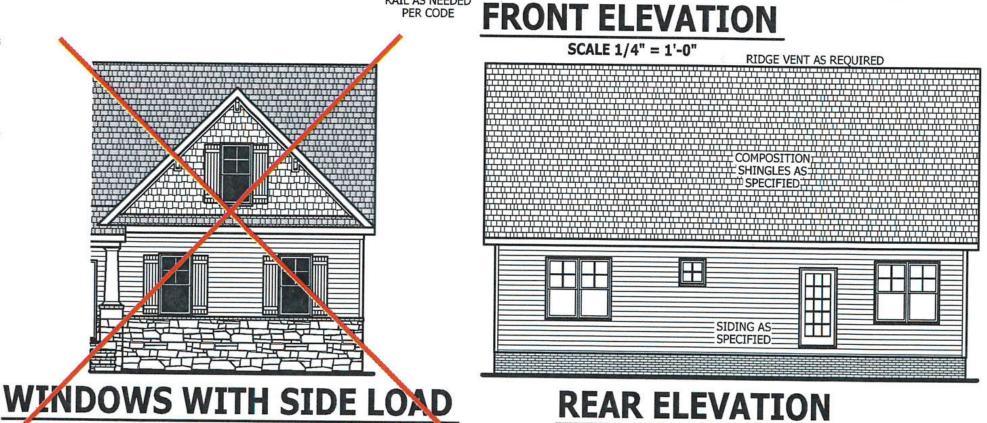
ALL WHITE/ BLACK GUTTERS

BRICK OR STONE

SCALE 1/8" = 1'-0"

3 SHINGLES AS



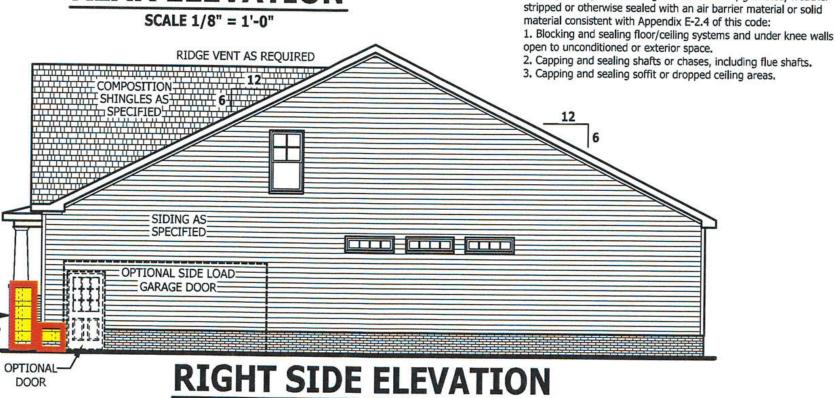


OR STONE --

VENEER AS SPECIFIED



REAR ELEVATION



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

SCALE 1/8" = 1'-0"

DIMENSIONS AND CONDITION HAYNES HOME PLANS, INC. ASSUMES NO LIABILITY FOR CONTRACTORS PRACTICES AND PROCEDURES.

LOT 2W WILLIAMS FARM

1937 JOSIE WILLIAMS RD

SUB FLOOR

N1102.4.1 Building thermal envelope. The building thermal envelope shall be durably sealed with an air barrier system to limit

allow for differential expansion and contraction. For all homes, where present, the following shall be caulked, gasketed, weather

infiltration. The sealing methods between dissimilar materials shall

CODES AND CONDITIONS MAY VARY WITH LOCATION, A LOCAL DESIGNER, ARCHITECT OR NGINEER SHOULD BE CONSULTED

BEFORE CONSTRUCTION. THESE DRAWING ARE INSTRUMENTS OF SERVICE AN AS SUCH SHALL REMAIN PROPERTY OF THE DESIGNER.

auren ELEVATION

ج

TOTAL 560 SQ.FT.

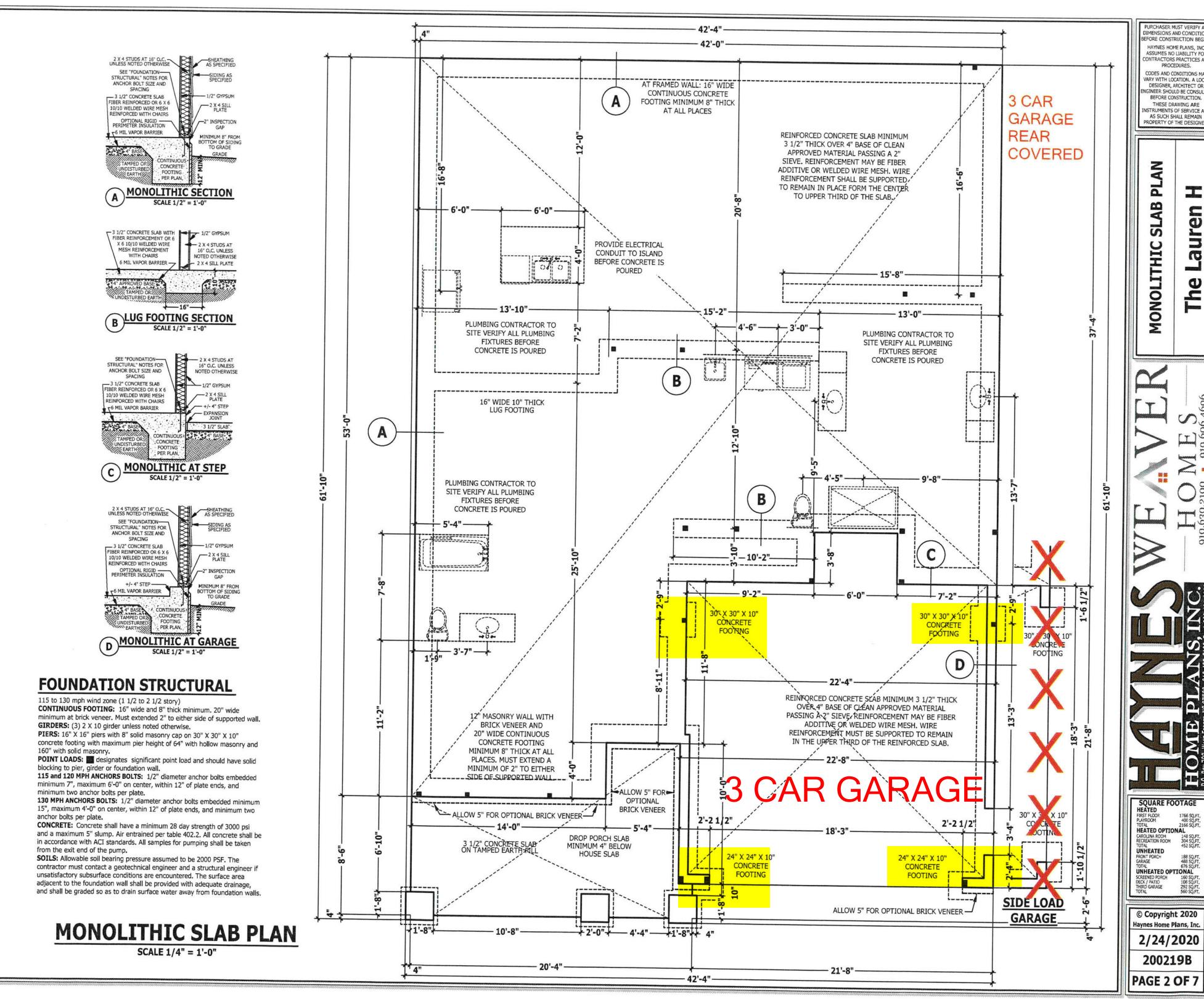
WHEATED FRONT PORCH 188 SQ.FT.
GARAGE 488 SQ.FT.
TOTAL 675 SQ.FT.

WHEATED OPTIONAL

SCREENED PORCH 160 SQ.FT.
THIRD GARAGE 292 SQ.FT.
TOTAL 560 SQ.FT.

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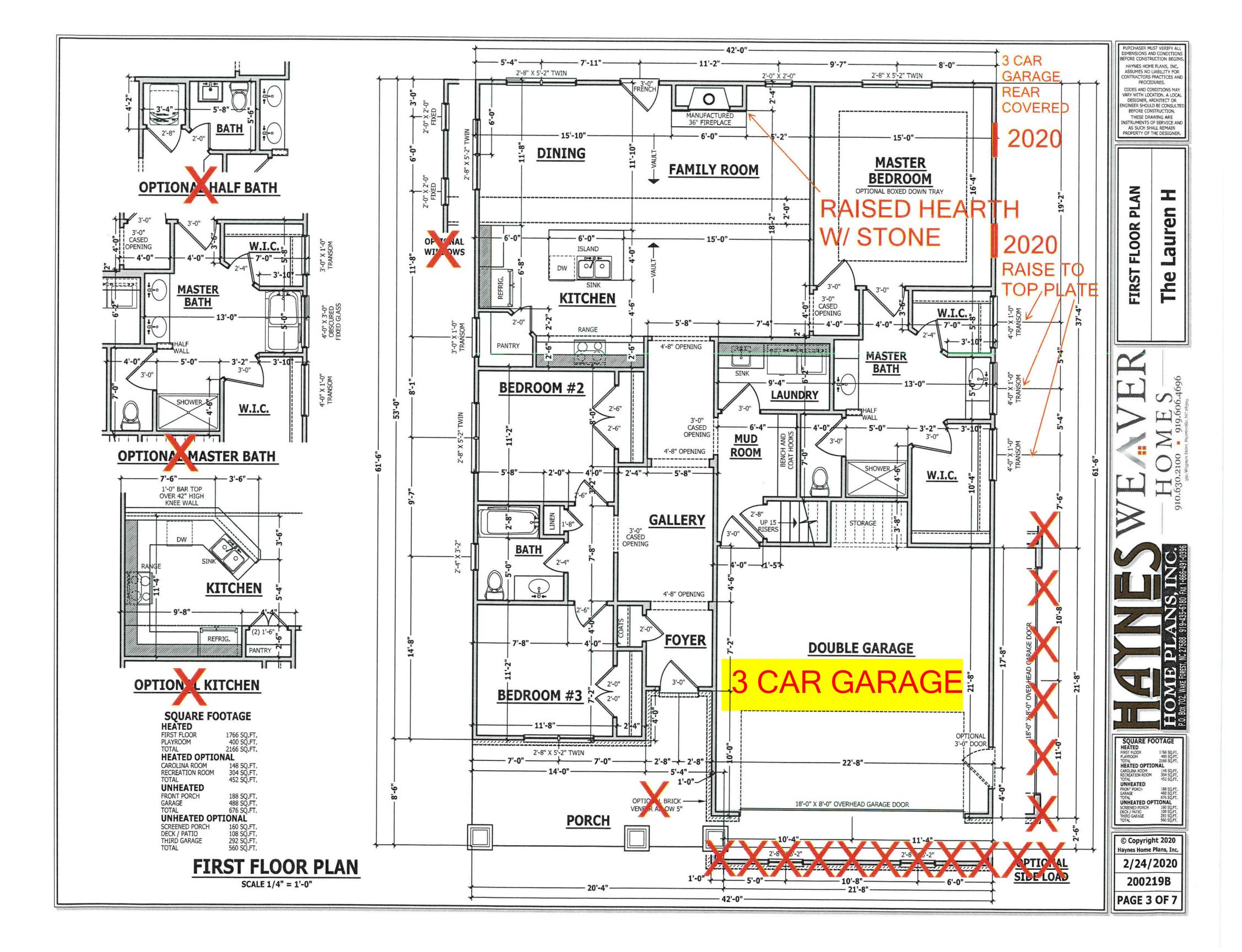
DIMENSIONS AND CONDITIONS SEFORE CONSTRUCTION BEGIN HAYNES HOME PLANS, INC. ASSUMES NO LIABILITY FOR CONTRACTORS PRACTICES ANI PROCEDURES.

CODES AND CONDITIONS MAY ARY WITH LOCATION, A LOCAL DESIGNER, ARCHITECT OR GINEER SHOULD BE CONSULTED BEFORE CONSTRUCTION.

THESE DRAWING ARE INSTRUMENTS OF SERVICE ANI AS SUCH SHALL REMAIN PROPERTY OF THE DESIGNER

FIRST FLOOR 1766 SQ.FT.
PLAYROOM 400 SQ.FT.
TOTAL 2166 SQ.FT.
HEATED OPTIONAL UNHEATED
FRONT PORCH 188 SQ.FT
GARAGE 488 SQ.FT
TOTAL 676 SQ.FT.
UNHEATED OPTIONAL
STREET POACH 160 SQ.FT.

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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
- NON LOAD BEARING HEADERS TO BE LADDER FRAMED

UNLESS NOTED OTHERWISE

STRUCTURAL NOTES

All construction shall conform to the latest requirements of the 2018 North Carolina Residential Building Code, plus all local codes and regulations. This document in no way shall be construed to supersede the code.

JOB SITE PRACTICES AND SAFETY: Haynes Home Plans, Inc. assumes no liability for contractors 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	DEAD LOAD	DEFLECTION
USE	(PSF)	(PSF)	(LL)
Attics without storage	10	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 other wise.

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 manufacture'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.

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 reasonability 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.

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.

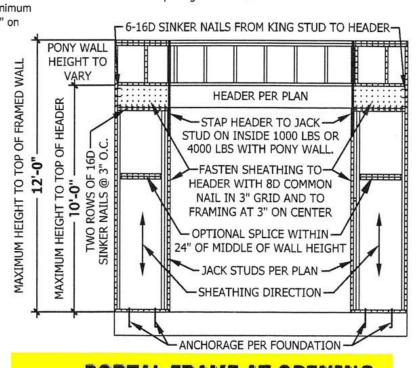
HD: 800 lbs hold down hold down device fastened to the edge of the brace wall panel closets to the corner.

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).

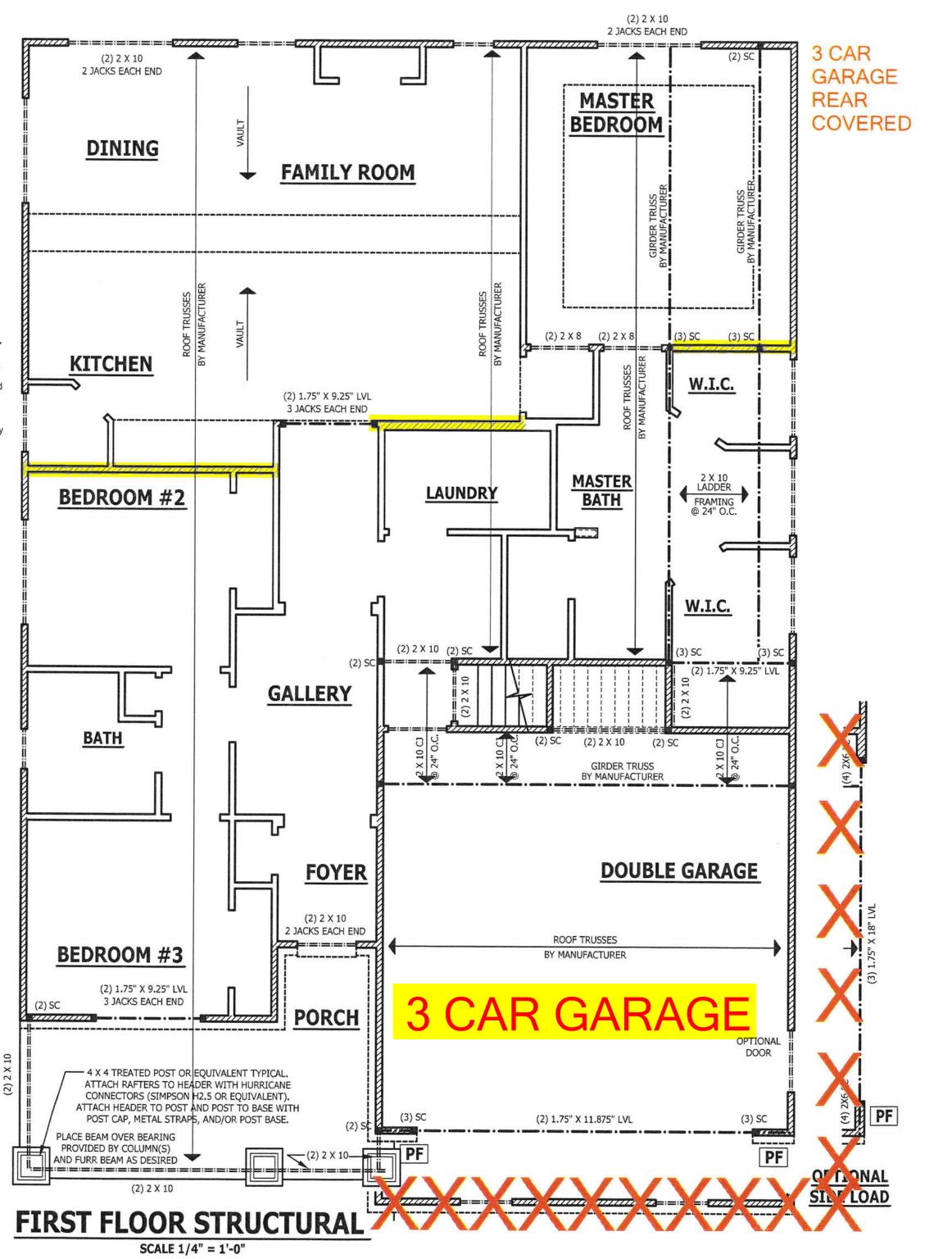
CS-SFB: Shall be minimum 1/2" structural fiber board nailed at 3" on center at edges and 3" on center at intermediate supports with 1 1/2" long x 0.12" diameter galvanized roofing nailes

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 fame per figure R602.10.1



PF PORTAL FRAME AT OPENING

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



PURCHASER MUST VERIFY ALL DIMENSIONS AND CONDITION BEFORE CONSTRUCTION BEGIN HAYNES HOME PLANS, INC. ASSUMES NO LIABILITY FOR

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SOUARE FOOTAGE

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ROOF TRUSS REQUIREMENTS

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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 other wise.

ENGINEERED WOOD BEAMS:

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ATTIC ACCESS

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.

EXTERIOR HEADERS

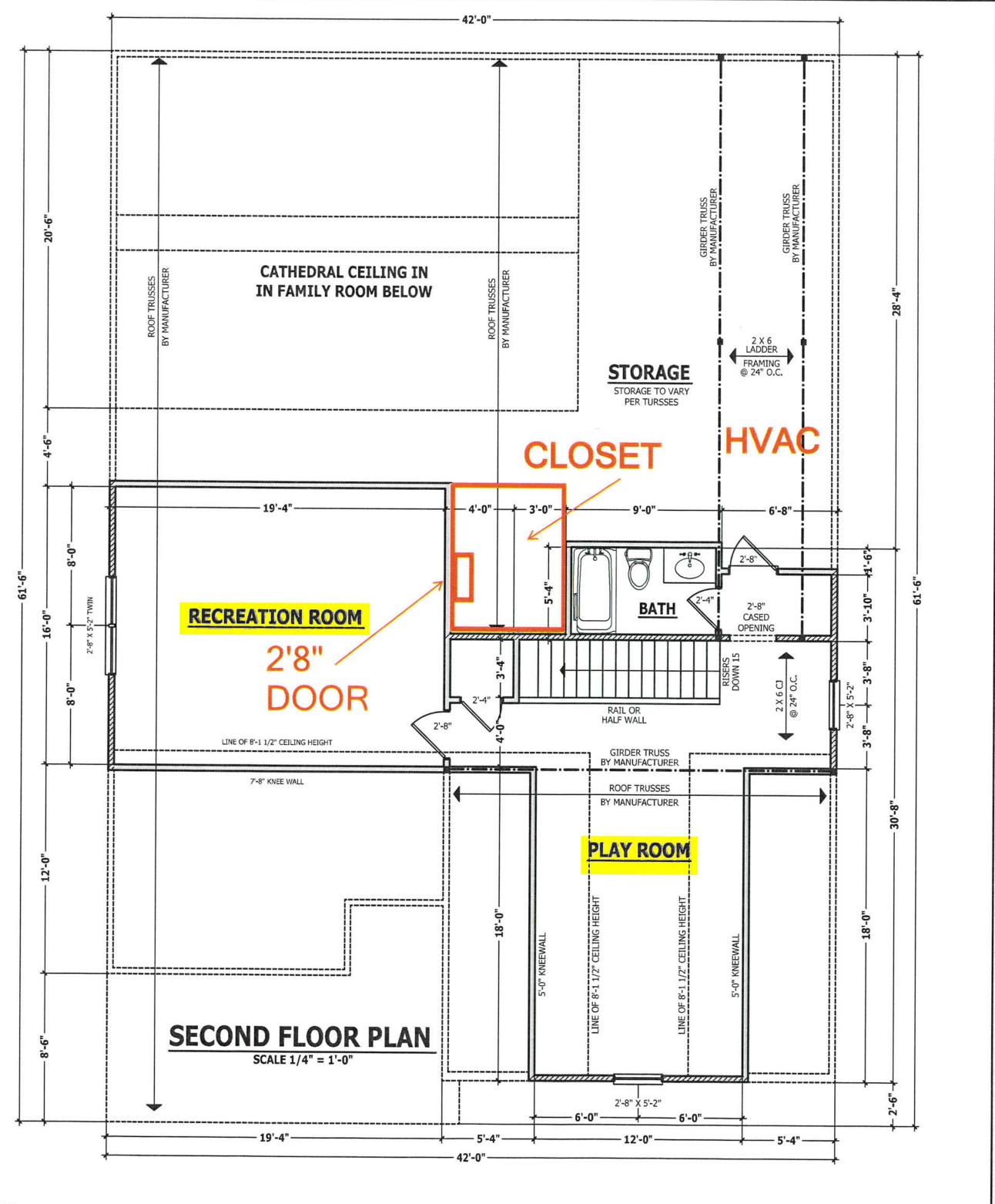
- (2) 2 X 6 WITH 1 JACK STUD EACH END UNLESS NOTED OTHERWISE

- 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



BEFORE CONSTRUCTION BEGIN HAYNES HOME PLANS, INC. ASSUMES NO LIABILITY FOR CONTRACTORS PRACTICES AND PROCEDURES.

CODES AND CONDITIONS MAY DESIGNER, ARCHITECT OR NGINEER SHOULD BE CONSULTE BEFORE CONSTRUCTION. THESE DRAWING ARE

INSTRUMENTS OF SERVICE AN PROPERTY OF THE DESIGNER.

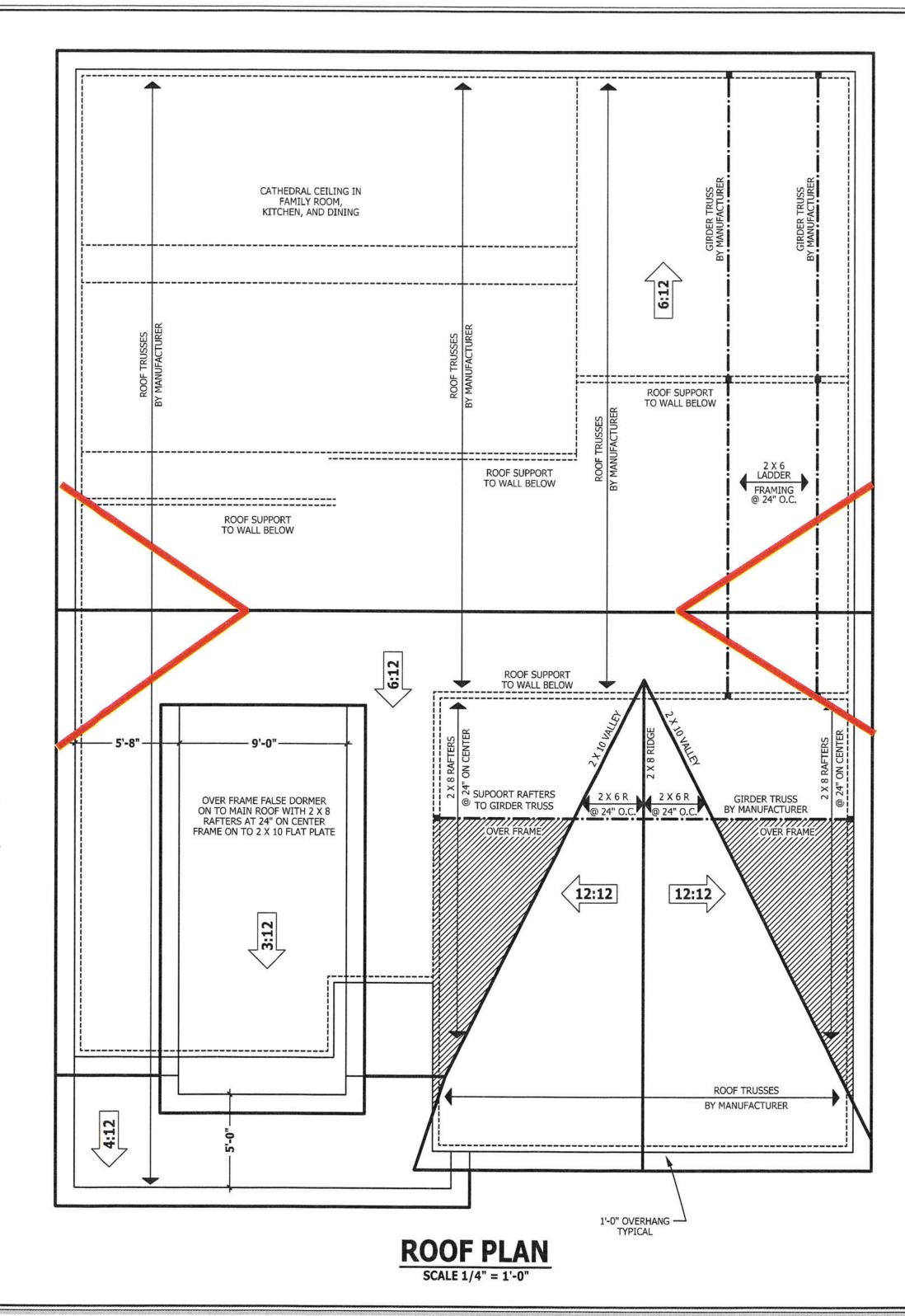
> PLAN FLOOR SECOND

SQUARE FOOTAGE FIRST FLOOR 1766 SO, FT PLAYROOM 400 SO, FT TOTAL 2166 SQ. FT HEATED OPTIONAL CAROLINA ROOM RECREATION ROOM UNHEATED FRONT PORCH GARAGE GARAGE 488 SQ.F TOTAL 676 SQ.F UNHEATED OPTIONAL SCREENED PORCH DECK / PATIO THIRD GARAGE TOTAL

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ROOF TRUSS REQUIREMENTS

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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 beints.

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

PURCHASER MUST VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE CONSTRUCTION BEGINS.

HAYNES HOME PLANS, INC. ASSUMES NO LIABILITY FOR CONTRACTORS PRACTICES AND PROCEDURES.

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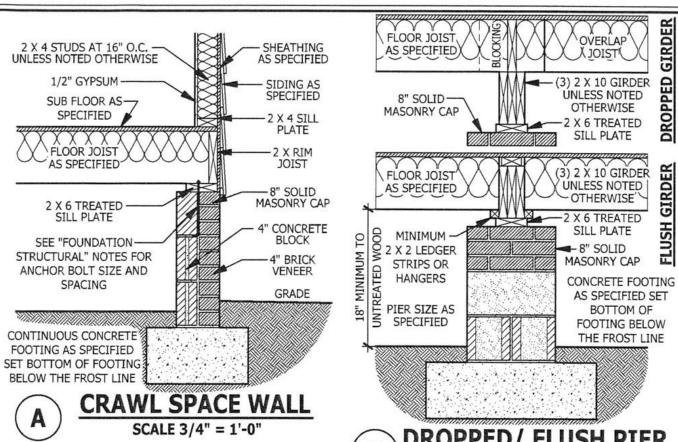
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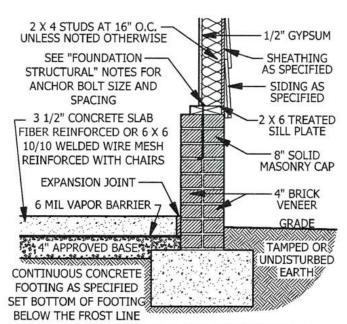
ROOF PLAN

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SQUARE FOOTAGE

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GARAGE STEM WALL 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 shall be attached with 3/8 inch galvanized bolts with nuts and washers to securely support stringers at the top.

DECK BRACING

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.

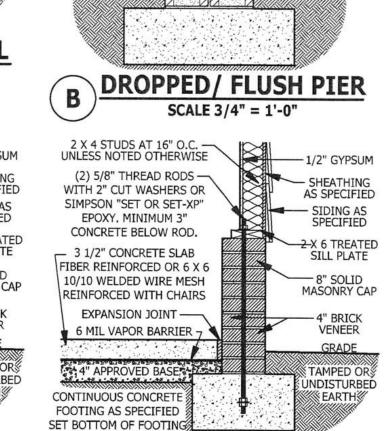
AM109.1.2. 4 x 4 wood knee braces may be provided on each column in both directions. The knee braces shall attach to each post at a point not less than 1/3 of the post length from the top of the post, and the braces shall be angled between 45 degrees and 60 degrees from the horizontal. Knee braces shall 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

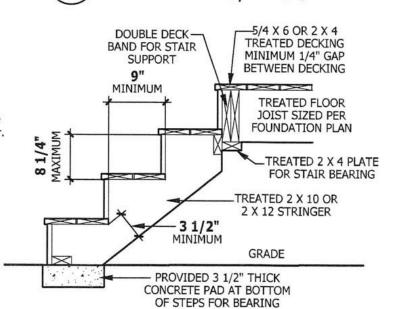
AM109.1.3. For freestanding decks without knee braces or diagonal bracing, lateral stability may be provided by embedding the post in accordance with Figure AM109.2

and the fo	llowing:			
POST SIZE	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.





<48" GARAGE WING WALL

SCALE 3/4" = 1'-0"

FIGURE AM110 TYPICAL DECK STAIR DETAIL

SCALE 3/4" = 1'-0"

STONE VEENER

AS SPECIFIED

VAPOR BARRIER

WEEP SCREED

MINIMUM 4" TO

GROUND OR 2"

-TO PAVEMENT

SHEATHING AS SPECIFIED

AS SPECIFIED

SEE FOUNDATION

FOR FOUNDATION

DETAILS

WEEP SCREED

SCALE 3/4" = 1'-0"

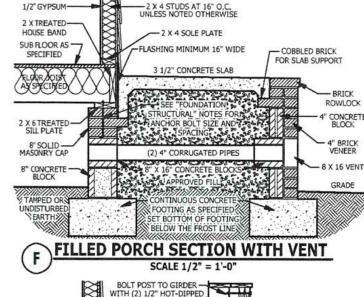
WEEP SCREEDS

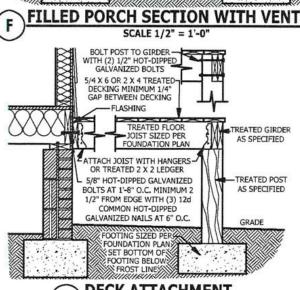
All weep screeds and stone veneer to be installed per manufactures instructions and per the 2012 North Carolina Residential

Building code. R703.6.2.1 - A minimum 0.019-inch (0.5 mm) (No. 26 galvanized sheet gage), corrosion-resistant weep screed or plastic weep screed, with a minimum vertical attachment flange of 31/2 inches (89 mm) shall be provided at or below the foundation plate line on exterior stud walls in accordance with ASTM C 926. The weep screed shall be placed a minimum of 4 inches (102 mm) above the earth or 2 inches (51 mm) above paved areas and shall be of a type that will allow trapped water to drain to the exterior of the shall cover and terminate on the attachment flange of the weep screed.

2 X 4 STUDS AT 16" O.C. UNLESS NOTED OTHERWISE -1/2" GYPSUM SEE ROOF - EDGED OR PORCH FLOOR PLAN OR SUB FLOOR AS-**ELEVATION** SPECIFIED SHINGLES AS SPECIFIED PLATE FOR PITCH -SHEATHING AS SPECIFIED FLOOR JOIST -15# BUILDING FELT AS SPECIFIED **ROOF TRUSSES BY MANUFACTURER** 4" CONCRETE 2 X 6 TREATED SILL PLATE PORCH HEADER PER -4" BRICK VENEER SEE "FOUNDATION PLAN INSTALLED OVER EXPANSION JOINT STRUCTURAL" NOTES FOR CENTER OF COLUMN BASE VINYL OR HARDIE SOFFIT ANCHOR BOLT SIZE AND -6 MIL VAPOR INSTALLED PER MANUFACTURERS **SPACING** BARRIER BLOCKING INSTALLED **INSTRUCTIONS** ON BOTH SIDES & UNDER 3 1/2" SLAB HEADER AS DESIRED TAPERED COLUMN OVER 4" BASE CONTINUOUS CONCRETE 1 X MATERIAL MASONRY BASE TAMPED OR ATTACHED TO HEADER FOOTING AS SPECIFIED CENTER LINE OF HEADER SET BOTTOM OF FOOTING **JNDISTURBED** WITH POST CAP AND COLUMN **≋EARTH** BELOW THE FROST LINE **PORCH HEADER WITH**

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





DECK ATTACHMENT SCALE 1/2" = 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 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 building. The weather-resistant barrier shall commercial source, and when primary power is interrupted, shall lap the attachment flange. The exterior lath 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.

CARBON MONOXIDE ALARMS

TAPERED COLUMN

SCALE 3/4" = 1'-0"

R315.1 Carbon monoxide alarms. In new construction, dwelling units shall be provided with an approved carbon monoxide alarm installed outside of each separate sleeping area in the immediate vicinity of the bedroom(s) as directed by the alarm manufacturer.

R315.2 Where required in existing dwellings. In existing dwellings, where interior alterations, repairs, fuel-fired appliance replacements, or additions requiring a permit occurs, or where one or more sleeping rooms are added or created, carbon monoxide alarms shall be provided in accordance with Section

R315.3 Alarm requirements. The required carbon monoxide alarms shall be audible in all bedrooms over background noise levels with all intervening doors closed. Single station carbon monoxide alarms shall be listed as complying with UL 2034 and shall be installed in accordance with this code and the manufacturer's installation instructions.

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

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:

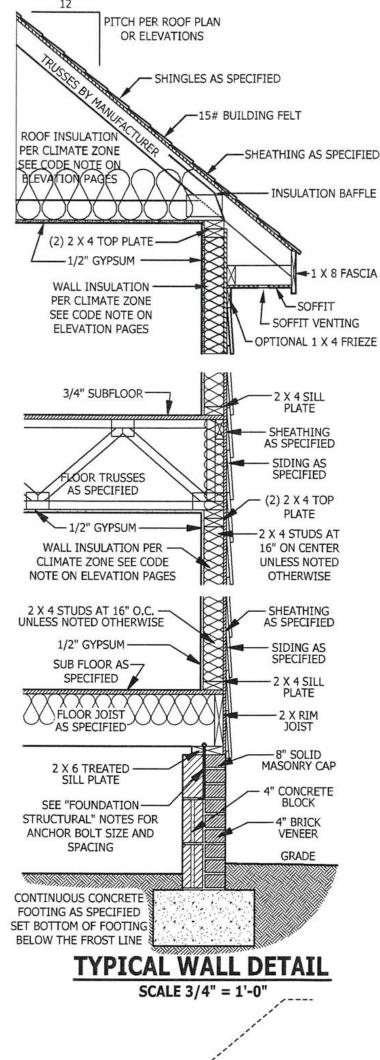
1. The use of a volute, turnout or starting easing shall be allowed over the lowest tread.

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 an individual dwelling unit the alarm devices shall be interconnected adjacent to a wall shall have a space of not less than 11/2 inch (38 mm) between the wall and the handrails.

> 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 STAIR DETAIL

CONTINUOUS HANDRAIL

34 TO 38 INCHES

ABOVE TREAD NOSING

MAXIMUM 6" GAP

BETWEEN WALL

MOUNTED AND

OPEN RAIL

SQUARE FOOTAGE HEATED OPTIONAL CAROLINA ROOM RECREATION ROOM TOTAL 452 SQ.F

UNHEATED

FRONT PORCH 188 SQ.F

GARAGE 488 SQ.F

TOTAL 676 SQ.F

UNHEATED OPTIONAL DECK / PATIO THIRD GARAGE

IMENSIONS AND CONDITION

EFORE CONSTRUCTION BEGI

HAYNES HOME PLANS, INC.

ASSUMES NO LIABILITY FOR

CONTRACTORS PRACTICES AN

PROCEDURES.

CODES AND CONDITIONS MA

DESIGNER, ARCHITECT OR

GINEER SHOULD BE CONSUL

BEFORE CONSTRUCTION.

THESE DRAWING ARE

NSTRUMENTS OF SERVICE AN

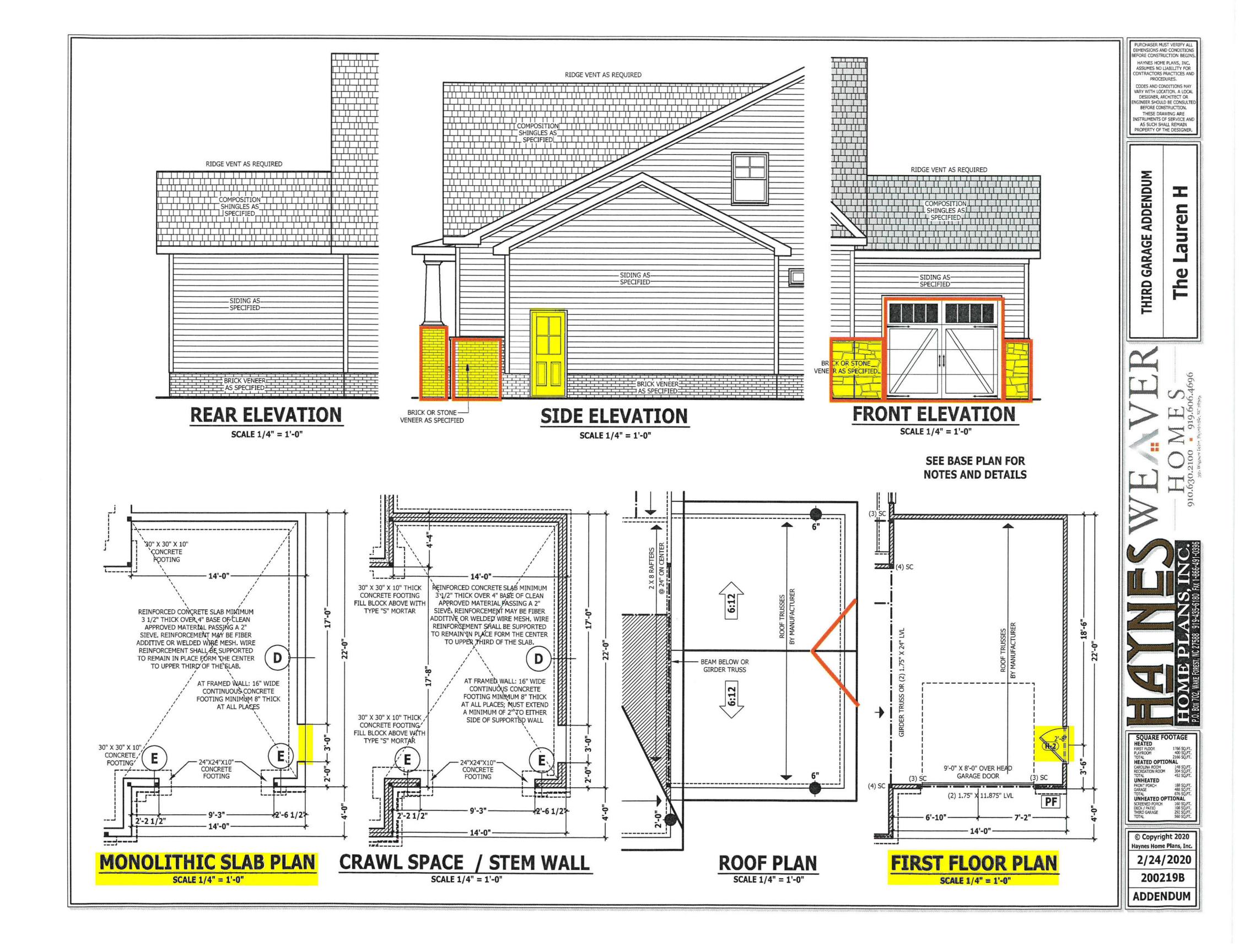
PROPERTY OF THE DESIGNER

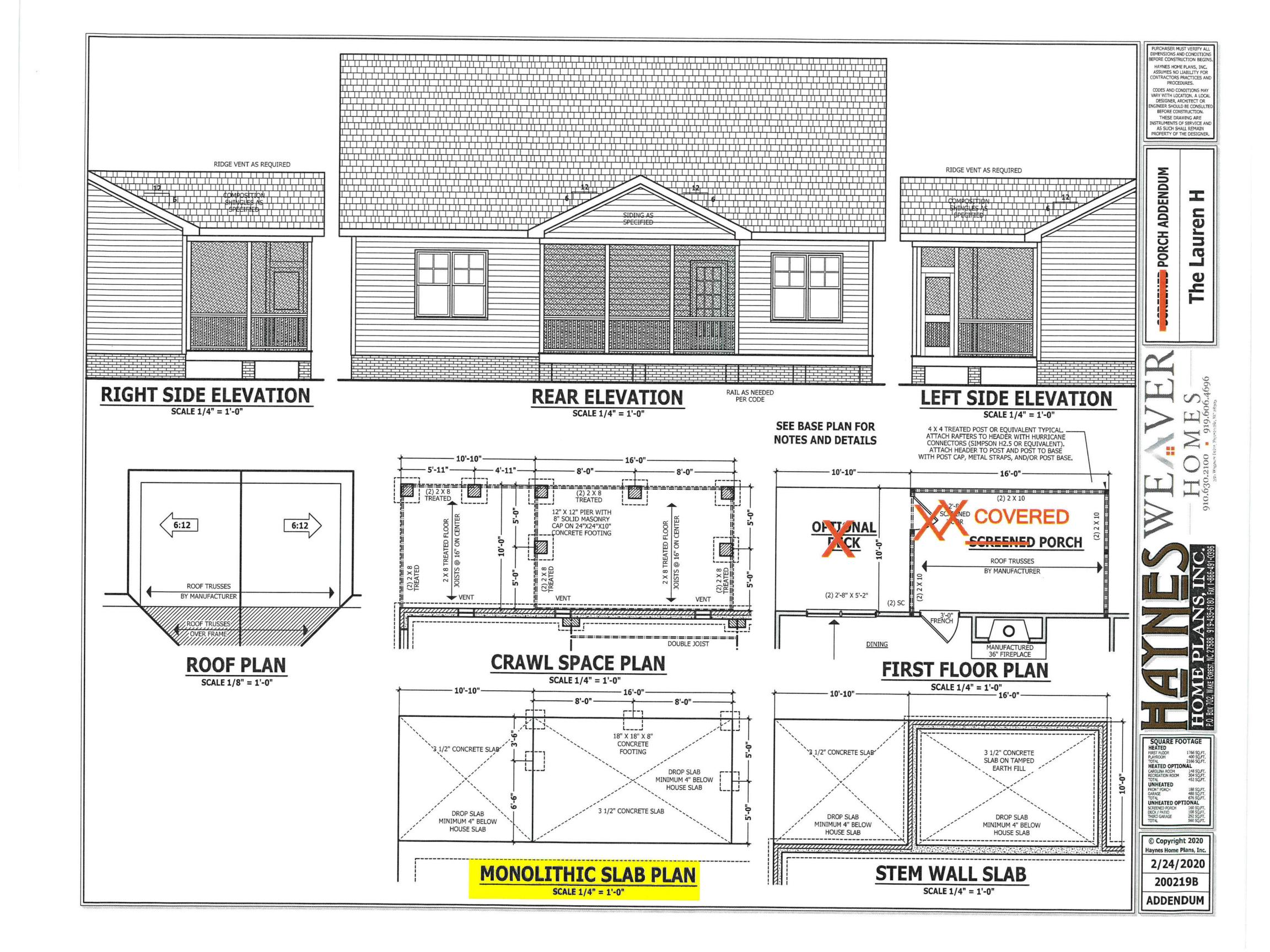
DETAIL

IYPICAL

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PAGE 7 OF 7





Client:

Weaver Development

Project:

5/7/2021 Date:

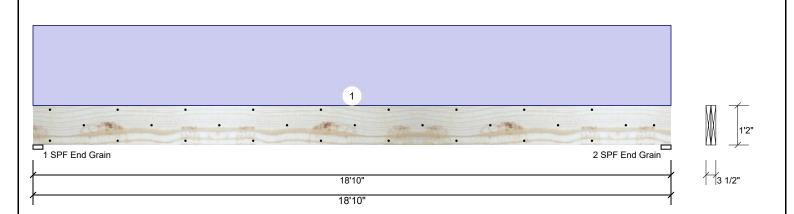
Input by: Curtis Quick Job Name: The Lauren H Beams Page 1 of 12

Project #:

2-Ply - PASSED **Kerto-S LVL** 1.750" X 14.000" **GDH**

Address:

Level: Level



Member Information Reactions UNPATTERNED Ib (Uplift) Application: Wind Type: Floor Brg Live Dead Snow Const Plies: 2 Design Method: ASD 2457 0 0 0 0 1 Moisture Condition: Dry **Building Code:** IBC 2012 2 0 2457 0 0 0 Deflection LL: 360 Load Sharing: No Deflection TL: 240 Deck: Not Checked Importance: Normal Temperature: Temp <= 100°F **Bearings** Bearing Length Cap. React D/L lb Total Ld. Case Ld. Comb. 1-SPF 3.500" 2457 / 0 2457 Uniform D End Grain Analysis Results 2 - SPF 3.500" 23% 2457 / 0 2457 Uniform D Comb. Analysis Actual Location Allowed Case Capacity End Moment 11011 ft-lb 9'5" 24299 ft-lb 0.453 (45%) D Uniform Grain Unbraced 11011 ft-lb 9'5" 11013 ft-lb 1.000 Uniform (100%)

Uniform

Uniform

Design Notes

Shear

1 Fasten all plies using 3 rows of SDW22338 at 24" o.c. Maximum end distance not to exceed 12"

1'4 3/4" 9408 lb

0.222 (22%) D

0 999.000 (L/0) 0.000 (0%)

9'5 1/16" 0.919 (L/240) 0.480 (48%) D

- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Simpson fasteners applied from a single side of the member use tip values where published.
- 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 9'7 1/2" o.c.
- 7 Bottom braced at bearings.

2093 lb

LL Defl inch 0.000 (L/999)

TL Defl inch 0.444 (L/497)

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			Тор	250 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
	Self Weight				11 PLF					

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.

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

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

Manufacturer Info

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



Client:

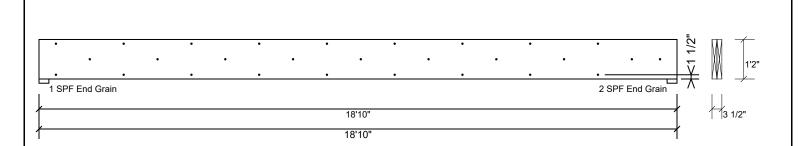
Project: Address: Weaver Development

Date: 5/7/2021 Input by:

Curtis Quick Job Name: The Lauren H Beams Page 2 of 12

Project #:

GDH Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED Level: Level



Multi-Ply Analysis

Fasten all plies using 3 rows of SDW22338 at 24" o.c.. Maximum end distance not to exceed 12"

1 3		
Capacity	0.0 %	
Load	0.0 PLF	
Yield Limit per Foot	382.5 PLF	
Yield Limit per Fastener	255.0 lb.	
Yield Mode	Lookup	
Edge Distance	1 1/2"	
Min. End Distance	6"	
Load Combination		
Duration Factor	1.00	

Notes

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.

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

Handling & Installation

- Handling & Installation

 1. UVI 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

For flat roofs provide proper drainage to prevent ponding

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Manufacturer Info

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



Client: Project: Address: Weaver Development

Date: 5/7/2021

Input by: Curtis Quick Job Name: The Lauren H Beams Page 3 of 12

Project #:

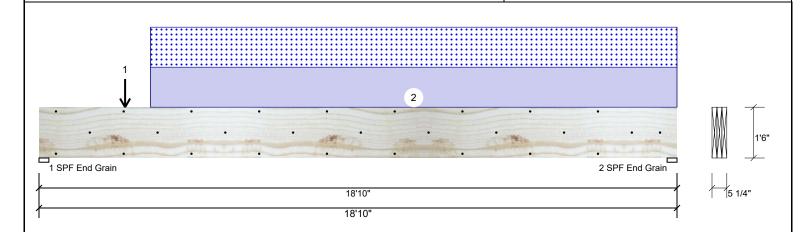
Kerto-S LVL GDH (Side Load)

1.750" X 18.000"

3-Ply - PASSED

End Grain 2 - SPF 3.500"

End Grain Level: Level



Member Information Reactions UNPATTERNED Ib (Uplift) Application: Brg Live Type: Floor Dead Snow Plies: 3 Design Method: ASD 0 3889 3691 1 Moisture Condition: Dry **Building Code:** IBC 2012 2 0 3812 3614 Deflection LL: 360 Load Sharing: Yes Deflection TL: 240 Deck: Not Checked Importance: Normal Temp <= 100°F Temperature: **Bearings** Bearing Length Cap. React D/L lb 1-SPF 3.500" 3889 / 3691

Analysis I	Results
------------	---------

•						
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	34254 ft-lb	9'2 1/8"	77108 ft-lb	0.444 (44%)	D+S	L
Unbraced	34254 ft-lb	9'2 1/8"	34270 ft-lb	1.000 (100%)	D+S	L
Shear	7544 lb	1'8 5/8"	23184 lb	0.325 (33%)	D+S	L
LL Defl inch	0.221 (L/998)	9'4"	0.613 (L/360)	0.360 (36%)	S	L
TL Defl inch	0.454 (L/486)	9'4"	0.920 (L/240)	0.490 (49%)	D+S	L

Design Notes

- 1 Fasten all plies using 3 rows of SDW22500 at 24" o.c. Maximum end distance not to exceed
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Simpson fasteners applied from a single side of the member use tip values where published.
- 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 5'9 3/8" o.c.
- 7 Bottom braced at 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	2-6-8		Тор	1493 lb	0 lb	1493 lb	0 lb	0 lb	В3
2	Part. Uniform	3-3-8 to 18-10-0		Тор	374 PLF	0 PLF	374 PLF	0 PLF	0 PLF	B2
	Self Weight				21 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.

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

Metsä Wood

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

Manufacturer Info

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This design is valid until 2/26/2023

Wind

Total Ld. Case

7580 L

7426 L

3812 / 3614

0

0

Const

0

0

Ld. Comb.

D+S

D+S

Client: Project: Address: Weaver Development

5/7/2021

Curtis Quick Job Name: The Lauren H Beams Page 4 of 12

Project #:

Input by:

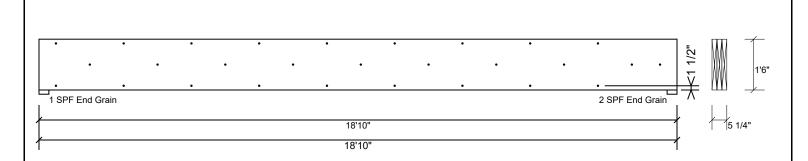
Date:

Kerto-S LVL **GDH (Side Load)**

1.750" X 18.000"

3-Ply - PASSED

Level: Level



Multi-Ply Analysis

Fasten all plies using 3 rows of SDW22500 at 24" o.c., Maximum end distance not to exceed 12"

1 3		
Capacity	0.0 %	
Load	0.0 PLF	
Yield Limit per Foot	382.5 PLF	
Yield Limit per Fastener	255.0 lb.	
Yield Mode	Lookup	
Edge Distance	1 1/2"	
Min. End Distance	6"	
Load Combination		
Duration Factor	1.00	

Notes

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.

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

Handling & Installation

- Handling & Installation

 1. UVI 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

For flat roofs provide proper drainage to prevent ponding

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Manufacturer Info

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Client: Weaver Development

Project: Address:

Date: 5/7/2021 Input by: Curtis Quick

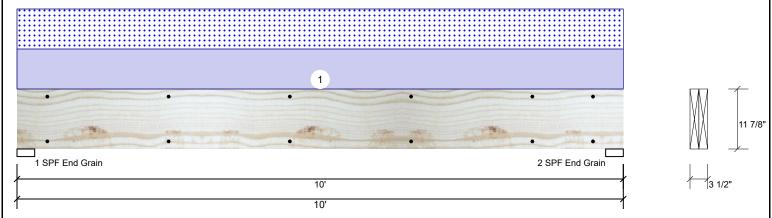
Job Name: The Lauren H Beams

Page 5 of 12

Project #:

1.750" X 11.875" 2-Ply - PASSED **Kerto-S LVL** GDH-1

Level: Level



Member Inforr	nation				Reaction	ns UNPAT	TERNED IL	(Uplift)		
Type:	Girder	Application:	Floor		Brg	Live	Dead	Snow	Wind	Const
Plies:	2	Design Method:	ASD		1	0	1196	1150	0	0
Moisture Condition	: Dry	Building Code:	IBC 2012		2	0	1196	1150	0	0
Deflection LL:	360	Load Sharing:	No							
Deflection TL:	240	Deck:	Not Checked							
Importance:	Normal									
Temperature:	Temp <= 100°F									
					Bearings	s				
					Bearing	Length	Cap. Rea	ct D/L lb	Total Ld. Case	Ld. Comb.
					1 - SPF End	3.500"	22% 11	96 / 1150	2346 L	D+S
Analysis Result	S				Grain					
Analysis Ac	ual Location	on Allowed Capac	city Comb.	Case	2 - SPF	3.500"	22% 11	96 / 1150	2346 L	D+S
Moment 534	0 ft-lb	5' 22897 ft-lb 0.233 ((23%) D+S	L	End Grain					

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5340 ft-lb	5'	22897 ft-lb	0.233 (23%)	D+S	L
Unbraced	5340 ft-lb	5'	9721 ft-lb	0.549 (55%)	D+S	L
Shear	1774 lb	8'9 3/8"	10197 lb	0.174 (17%)	D+S	L
LL Defl inch	0.051 (L/2238)	5'	0.318 (L/360)	0.160 (16%)	S	L
TL Defl inch	0.104 (L/1097)	5'	0.477 (L/240)	0.220 (22%)	D+S	L

Design Notes

- 1 Fasten all plies using 2 rows of SDW22338 at 24" o.c. Maximum end distance not to exceed
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Simpson fasteners applied from a single side of the member use tip values where published.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top braced at bearings.
- 7 Bottom braced at 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			Тор	230 PLF	0 PLF	230 PLF	0 PLF	0 PLF	G1
	Self Weight				9 PLF					

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.

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

 I. VIL 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

 Design assumes top edge is laterally restrained is provide lateral support at bearing points to avoid lateral displacement and rotation

Handling & Installation

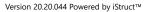
- For flat roofs provide proper drainage to prevent ponding

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Manufacturer Info

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





Client: Weaver Development

Project: Address:

Date: 5/7/2021 Input by: Curtis Quick

Job Name: The Lauren H Beams

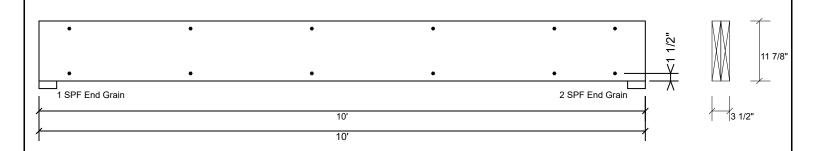
Page 6 of 12

Project #:

Kerto-S LVL GDH-1

1.750" X 11.875" 2-Ply - PASSED

Level: Level



Multi-Ply Analysis

Fasten all plies using 2 rows of SDW22338 at 24" o.c.. Maximum end distance not to exceed 12"

rasterrain pries asing E	10113 01 35 1122330 41 2 1	0.0 1110
Capacity	0.0 %	
Load	0.0 PLF	
Yield Limit per Foot	255.0 PLF	
Yield Limit per Fastener	255.0 lb.	
Yield Mode	Lookup	
Edge Distance	1 1/2"	
Min. End Distance	6"	
Load Combination		
Duration Factor	1.00	

Notes

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.

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

Handling & Installation

- Handling & Installation

 1. UVI 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

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

Manufacturer Info

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



This design is valid until 2/26/2023 CSD DESIGN

Client: Weaver Development

Project: Address:

Date: 5/7/2021

Input by: Curtis Quick Job Name: The Lauren H Beams

Project #:

1.750" X 9.250" 2-Ply - PASSED Kerto-S LVL BM1

Application:

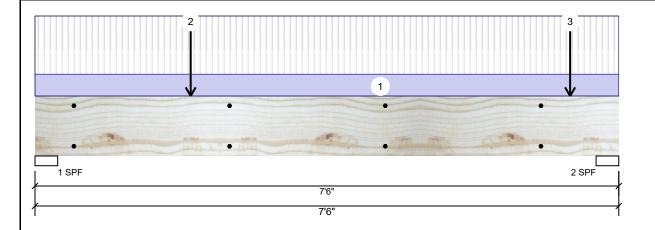
Design Method:

Building Code:

Load Sharing:

Deck:

Level: Level



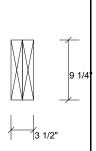
Floor

ASD

No

IBC 2012

Not Checked



Page 7 of 12

Member Information

Type: Plies: 2 Moisture Condition: Dry Deflection LL: 360 Deflection TL: 240 Importance: Normal

Temp <= 100°F Temperature:

Reactions UNPATTERNED Ib (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	150	959	876	0	0
2	150	1384	1300	0	0

Bearings

Bearing Length	Cap. React	D/L lb Total Ld. C	ase Ld. Comb.
1 - SPF 3.500"	35% 95	9 / 876 1834 L	D+S
2 - SPE 3500"	52% 1384	/ 1300 2684 I	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3204 ft-lb	2'	14423 ft-lb	0.222 (22%)	D+S	L
Unbraced	3204 ft-lb	2'	9592 ft-lb	0.334 (33%)	D+S	L
Shear	1812 lb	1'	7943 lb	0.228 (23%)	D+S	L
LL Defl inch	0.030 (L/2815)	3'4 1/16"	0.235 (L/360)	0.130 (13%)	S	L
TL Defl inch	0.063 (L/1338)	3'4 7/16"	0.352 (L/240)	0.180 (18%)	D+S	L

Design Notes

- 1 Fasten all plies using 2 rows of SDW22338 at 24" o.c. Maximum end distance not to exceed
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Simpson fasteners applied from a single side of the member use tip values where published.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top braced at bearings.
- 7 Bottom braced at bearings.
- 8 Lateral slenderness ratio based on single ply width

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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
1	Uniform			Тор	15 PLF	40 PLF	0 PLF	0 PLF	0 PLF	Floor
2	Point	2-0-0		Тор	1088 lb	0 lb	1088 lb	0 lb	0 lb	A6
3	Point	6-10-8		Тор	1088 lb	0 lb	1088 lb	0 lb	0 lb	A6
	Self Weight				7 PLF					

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.

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

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

Manufacturer Info

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



Client: Weaver Development

Project: Address:

Date: 5/7/2021 Input by:

Curtis Quick Job Name: The Lauren H Beams Page 8 of 12

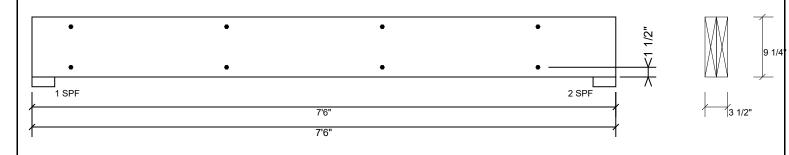
Project #:

Kerto-S LVL BM1

1.750" X 9.250"

2-Ply - PASSED

Level: Level





Fasten all plies using 2 rows of SDW22338 at 24" o.c.. Maximum end distance not to exceed 12"

Capacity Load 0.0 PLF Yield Limit per Foot 255.0 PLF Yield Limit per Fastener 255.0 lb. Yield Mode Lookup Edge Distance 1 1/2" Min. End Distance 6" Load Combination Duration Factor 1.00

Notes

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.

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

Handling & Installation

- Handling & Installation

 1. UVI 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

- For flat roofs provide proper drainage to prevent ponding

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www.metsawood.com/us ICC-ES: ESR-3633

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This design is valid until 2/26/2023 CSD DESIGN

Manufacturer Info



Client: Weaver Development

Project: Address:

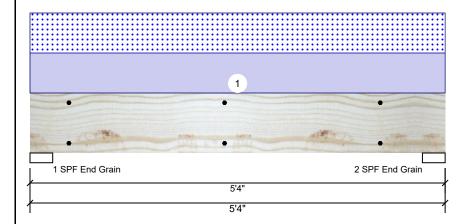
Date: 5/7/2021 Input by: Curtis Quick

Project #:

1.750" X 9.250" 2-Ply - PASSED **Kerto-S LVL** BM₂

Level: Level

Job Name: The Lauren H Beams



Application:

Design Method:

Building Code:

Load Sharing:

Deck:

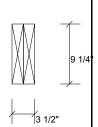
Floor

ASD

No

IBC 2012

Not Checked



Page 9 of 12

Member Information

Type: Plies: 2 Moisture Condition: Dry Deflection LL: 360 Deflection TL: 240 Importance: Normal Temp <= 100°F Temperature:

Reactions UNPATTERNED Ib (Uplift)

Bearings

Brg	Live	Dead	Snow	Wind	Const
1	0	1686	1667	0	0
2	0	1686	1667	0	0

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3735 ft-lb	2'8"	14423 ft-lb	0.259 (26%)	D+S	L
Unbraced	3735 ft-lb	2'8"	11811 ft-lb	0.316 (32%)	D+S	L
Shear	2095 lb	1'	7943 lb	0.264 (26%)	D+S	L
LL Defl inch	0.024 (L/2457)	2'8"	0.162 (L/360)	0.150 (15%)	S	L
TL Defl inch	0.048 (L/1221)	2'8"	0.244 (L/240)	0.200 (20%)	D+S	L

Design Notes

- 1 Fasten all plies using 2 rows of SDW22338 at 24" o.c. Maximum end distance not to exceed
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Simpson fasteners applied from a single side of the member use tip values where published.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top braced at bearings.
- 7 Bottom braced at bearings.
- 8 Lateral slenderness ratio based on single ply width.

Self Weight

l	Bearing	Length	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb
	1 - SPF End Grain	3.500"	31%	1686 / 1667	3353	L	D+S
	2 - SPF End Grain	3.500"	31%	1686 / 1667	3353	L	D+S
Γ							

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Тор	625 PLF	0 PLF	625 PLF	0 PLF	0 PLF	A2

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.

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

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

7 PI F

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

Manufacturer Info

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



Client:

Project: Address: Weaver Development

Date: 5/7/2021 Input by: Curtis Quick

Job Name: The Lauren H Beams

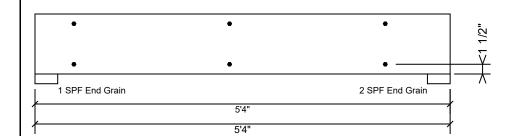
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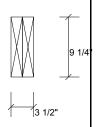
Kerto-S LVL BM₂

1.750" X 9.250"

2-Ply - PASSED

Level: Level





Page 10 of 12

Multi-Ply Analysis

Fasten all plies using 2 rows of SDW22338 at 24" o.c., Maximum end distance not to exceed 12"

rasterrain pines asing 2 rows	01 0D 1122000 at 21 0.c 1110
Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	255.0 PLF
Yield Limit per Fastener	255.0 lb.
Yield Mode	Lookup
Edge Distance	1 1/2"
Min. End Distance	6"
Load Combination	
Duration Factor	1.00

Notes

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.

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

Handling & Installation

- Handling & Installation

 1. UVI 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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Manufacturer Info

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



Client: Weaver Development

Project: Address:

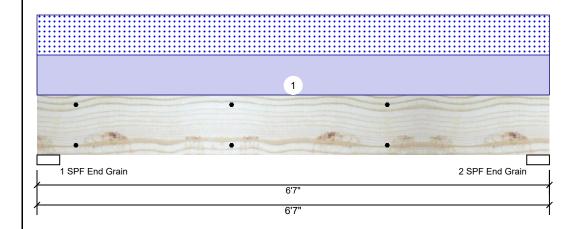
Date: 5/7/2021

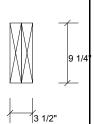
Input by: Curtis Quick Job Name: The Lauren H Beams

Project #:

1.750" X 9.250" 2-Ply - PASSED Kerto-S LVL BM₃

Level: Level





Page 11 of 12

Member Information

Type: Plies: 2 Moisture Condition: Dry Deflection LL: 360 Deflection TL: 240 Importance: Normal

Temp <= 100°F Temperature:

Reactions UNPATTERNED Ib (Uplift) Application:

Bearings

Brg	Live	Dead	Snow	Wind	Const
1	0	2400	2377	0	0
2	0	2400	2377	0	0

Deck:

Design Method:

Building Code:

Load Sharing:

ASD

No

IBC 2012

Not Checked

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6805 ft-lb	3'3 1/2"	14423 ft-lb	0.472 (47%)	D+S	L
Unbraced	6805 ft-lb	3'3 1/2"	10451 ft-lb	0.651 (65%)	D+S	L
Shear	3326 lb	1'	7943 lb	0.419 (42%)	D+S	L
LL Defl inch	0.062 (L/1194)	3'3 1/2"	0.204 (L/360)	0.300 (30%)	S	L
TL Defl inch	0.124 (L/594)	3'3 1/2"	0.306 (L/240)	0.400 (40%)	D+S	L

Design Notes

- 1 Fasten all plies using 2 rows of SDW22338 at 24" o.c. Maximum end distance not to exceed
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Simpson fasteners applied from a single side of the member use tip values where published.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top braced at bearings.
- 7 Bottom braced at bearings.
- 8 Lateral slenderness ratio based on single ply width.

Self Weight

Bearing Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF 3.500" End Grain	45%	2400 / 2377	4777	L	D+S
2 - SPF 3.500" End Grain	45%	2400 / 2377	4777	L	D+S

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Тор	722 PLF	0 PLF	722 PLF	0 PLF	0 PLF	A2

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.

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

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 2/26/2023

7 PI F

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

www.metsawood.com/us ICC-ES: ESR-3633

Manufacturer Info

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



Client:

Project: Address: Weaver Development

Date: 5/7/2021 Input by:

Curtis Quick Job Name: The Lauren H Beams

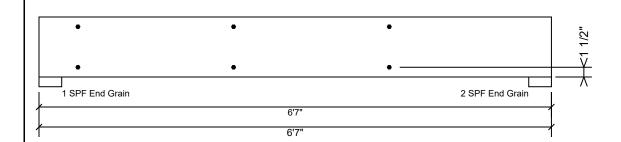
Project #:

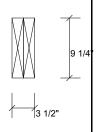
Kerto-S LVL BM3

1.750" X 9.250"

2-Ply - PASSED

Level: Level





Page 12 of 12

Multi-Ply Analysis

Fasten all plies using 2 rows of SDW22338 at 24" o.c., Maximum end distance not to exceed 12"

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	255.0 PLF
Yield Limit per Fastener	255.0 lb.
Yield Mode	Lookup
Edge Distance	1 1/2"
Min. End Distance	6"
Load Combination	
Duration Factor	1.00

Notes

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.

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

Handling & Installation

- Handling & Installation

 1. UVI 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

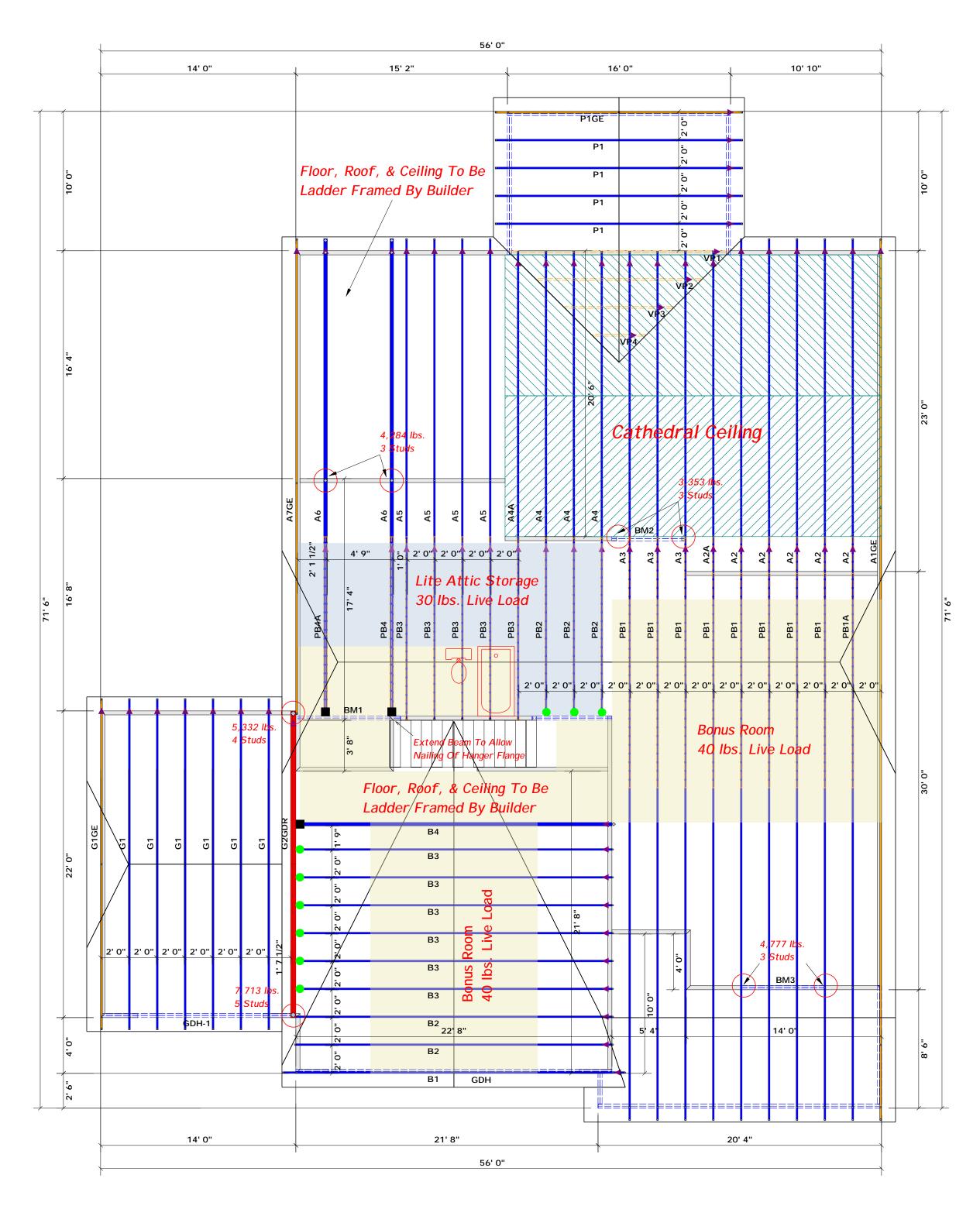
6. For flat roofs provide proper drainage to prevent ponding

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

Manufacturer Info

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





HANGER LEGEND = USP THD28-2 / Double 2x Hanger = USP HUS26 / Single 2x Hanger

Curtis Quick

Beam Legend PlotID Length **Product** Plies Net Qty BM1 8' 0" 1-3/4"x 9-1/4" LVL Kerto-S 2 All Truss Reactions are Less BM3 7' 0" 2 2 1-3/4"x 9-1/4" LVL Kerto-S 2 BM2 6' 0" 1-3/4"x 9-1/4" LVL Kerto-S GDH-1 14' 0" 1-3/4"x 11-7/8" LVL Kerto-S 2 2 GDH 23' 0" 1-3/4"x 14" LVL Kerto-S 2 2 **Truss Placement Plan**

▲ = Denotes Left End of Truss (Reference Engineered Truss Drawing) Do Not Erect Trusses Backwards

3400

6600 2

10200 3

13600 4

17000 5

JOB #

J0521-2783

LOAD CHART FOR JACK STUDS

(BASEN ON LABLES R502.5(1) λ (b)): NUMBER OF DIAGRAPHICS REQUIREDS RELIGIOUS OF PROCESSORS.

2550 1 5100 2

7650 3

10200 4 12750 5

15300 6

than 3,000 lbs. Unless Noted Otherwise.

-- Denotes Reaction Greater than 3,000 lbs.

SCALE: 3/16" = 1'

JOB NAME Lot 2W Williams Farm ADDRESS Lot 2W Williams Farm Lot 2W Williams Farm ADDRESS Lot 2W Williams Farm is responsible for temporary and permanent bracing of the row the overall structure. The design of the truss support structure walls, and columns is the responsibility of the building design regarding bracing, consult BCSI-B3 provided with or online @ sbcindustry.com	s to be incorporated into er. See individual design ing. The building designer
	of and floor system and for e including headers, beams, er. For general guidance
PLAN The Lauren H / Elev. B / CP / 3 Car MODEL Roof Bearing reactions less than or equal to 3000# are deem prescriptive Code requirements. The contractor shall re	er to the attached Tables
SEAL DATE 2/24/20 DATE REV. 05/07/21 (derived from the prescriptive Code requirements) to a foundation size and number of wood studs required to than 3000# but not greater than 15000#. A registered dealer than 15000# be retained to design the support system for any reaction.	support reactions greater sign professional shall on that exceeds those
QUOTE # Quote # DRAWN BY Curtis Quick specified in the attached Tables. A registered design pretained to design the support system for all reactions Curtis Quick	hat exceed 15000#.

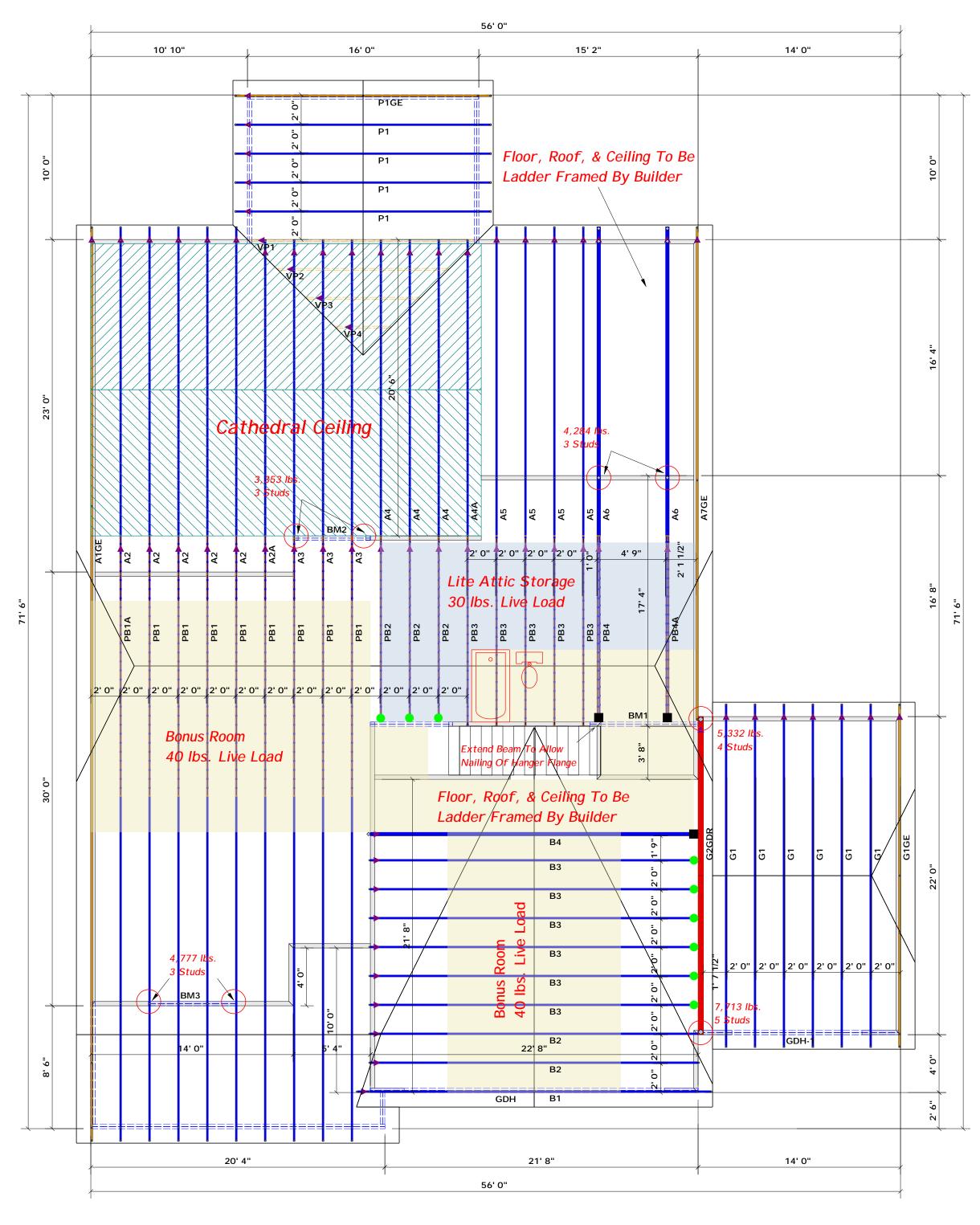
Lenny Norris

SALES REP.



Fayetteville, N.C. 28309

Phone: (910) 864-8787 Fax: (910) 864-4444



HANGER LEGEND

= USP THD28-2 / Double 2x Hanger

= USP HUS26 / Single 2x Hanger

Beam Legend PlotID Plies Net Qty Length Product BM1 8' 0" 1-3/4"x 9-1/4" LVL Kerto-S 2 BM3 7' 0" 1-3/4"x 9-1/4" LVL Kerto-S 2 2 BM2 6' 0" 1-3/4"x 9-1/4" LVL Kerto-S 2 GDH-1 14' 0" 1-3/4"x 11-7/8" LVL Kerto-S 2 2 GDH 23' 0" 1-3/4"x 14" LVL Kerto-S 2 2

= Denotes Left End of Truss(Reference Engineered Truss Drawing)Do Not Erect Trusses Backwards

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

-- Denotes Reaction Greater than 3,000 lbs.

Truss Placement Plan SCALE: 3/16" = 1'

_										
	LOAD CHART FOR JACK STUDS									
		ь))								
	No	NE S			A END OF					
			٠	1306	i		-			
	OND REACTION (UT FU)	(DISTUDS FOR JRIV HEADER		SND PENCTION (IP TO)	(1) STUDS FOR (P.N DADER		NS NACTOON (01 10)	REQIO SILIDS FUR (4) RLY HEADER		
	E	30		ñ	ģŝ		ń	<u>स</u> ्ट		
	1700	1		2550	1		3400	2		
	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								
	15200									

_				3CALL. 3/10 = 1	
	BUILDER	JILDER Weaver Development Co. Inc.		Harnett Co. / Harnett	THIS IS These tru the buildi sheets fo
	JOB NAME	Lot 2W Williams Farm	ADDRESS	Lot 2W Williams Farm	is respon the overa walls, and regarding
	PLAN	The Lauren H / Elev. B / CP / 3 Car	MODEL	Roof	Bearing prescript
	SEAL DATE	2/24/20	DATE REV.	05/07/21	(derived foundation than 300 be retain
	QUOTE #	Quote #	DRAWN BY	Curtis Quick	specified retained
	JOB #	J0521-2783	SALES REP.	Lenny Norris	Signa

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

conline @ sbcindustry.com

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

Curtis Quick

Curtis Quick

ROOF & FLOOR TRUSSES & BEAMS

соттесн

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