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

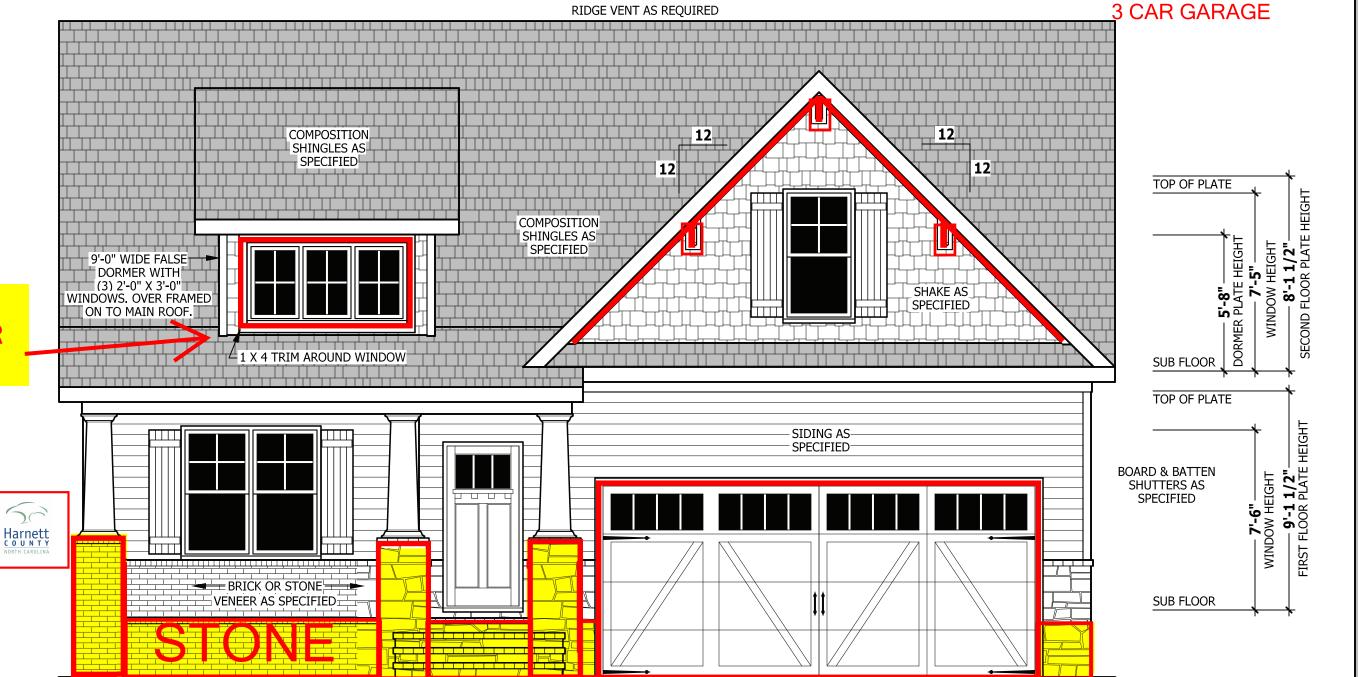
MEAN ROOF HEIGHT: 19'-9" HEIGHT TO RIDGE: 27'-5" CLIMATE ZONE ZONE 3A ZONE 4A ZONE 5A GLAZED FENESTRATION SHG EILING R-VALUE WALL R-VALUE OOR R-VALUE * Basement Wall R-Value * SLAB R-VALUE * CRAWL SPACE WALL R-VALUE | 5/13

- * "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 T	O 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			
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 WIN	ID SPEED	OF 130 MF	PH, 3 SECO	OND GUST	(101 FAS	TEST MILE	E) EXPOSU	RE "B"
COMPONENT	& CLA	DDING	DESIG	NED FO	R THE	FOLLO	WING I	_OADS
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		-22.9	18.7	-23.5
ZONE 3 ZONE 4	16.7 18.2	-21.0 -19.0 -24.0		-22.1 -20.0 -25.2	19.8			

DORMER



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. **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

2. $\ensuremath{\textit{Guards}}$ 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

SQUARE FOOTAGE OF ROOF TO BE VENTED = 2,477 SQ.FT. NET FREE CROSS VENTILATION NEEDED:

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.

**** STONE ON FRONT FACE ONL'

SIDING AS SPECIFIED=

RAIL AS NEEDED

VENEER AS SPECIFIED

OPTIONAL-

DOOR

WINDOWS WITH SIDE LOAD

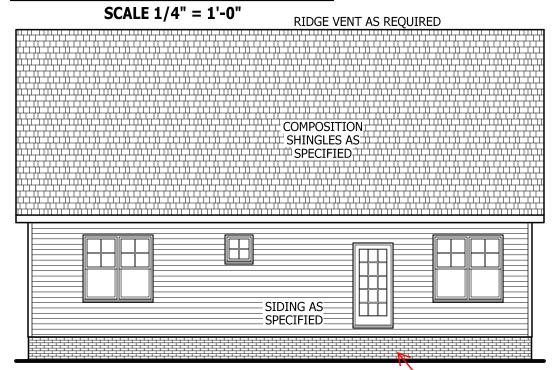
SCALE 1/8" = 1'-0"

RIDGE VENT AS REQUIRED

3 SHINGLES AS

 ${\tt COMPOSITION}{\tt eta}$

字SPECIFIED共



FRONT ELEVATION

REAR ELEVATION

RIDGE VENT AS REQUIRED

SCALE 1/8" = 1'-0"

3. Capping and sealing soffit or dropped ceiling areas. COMPOSITION SHINGLES AS SPECIFIED SIDING AS: SPECIFIED= TIONAL SIDE LUAD

HVAC: CERTIFIED HEATING & AIR PLUMBING: DOUBLE J ELECTRICAL: PIONEER

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

PARGE

RIGHT SIDE ELEVATION **PARGE**

PARGE

SCALE 1/8" = 1'-0"

PURCHASER MUST VERIFY ALL IMENSIONS AND CONDITIONS SEFORE CONSTRUCTION BEGINS HAYNES HOME PLANS, INC. ASSUMES NO LIABILITY FOR CONTRACTORS PRACTICES AND

LOT 11 MITCHELL MANOR I

TBD MITCHELL MANOR DR

SOUARE FOOTAGE

HEATED OPTIONAL

UNHEATED OPTIONAL

N1102.4.1 Building thermal envelope. The building thermal

allow for differential expansion and contraction. For all homes,

material consistent with Appendix E-2.4 of this code:

open to unconditioned or exterior space.

where present, the following shall be caulked, gasketed, weather stripped or otherwise sealed with an air barrier material or solid

envelope shall be durably sealed with an air barrier system to limit infiltration. The sealing methods between dissimilar materials shall

400 SQ.FT. 2166 SQ.FT.

148 SQ.FT. 304 SQ.FT.

452 SQ.FT.

188 SQ.FT.

488 SQ.FT.

676 SQ.FT.

160 SQ.FT.

108 SQ.FT.

292 SQ.FT.

560 SQ.FT.

HEATED

FIRST FLOOR

CAROLINA ROOM

UNHEATED

FRONT PORCH

SCREENED PORCH

DECK / PATIO

THIRD GARAGE

GARAGE

AIR LEAKAGE

Section N1102.4

RECREATION ROOM

PLAYROOM

ANGIER, NC 27501

PROCEDURES. CODES AND CONDITIONS MAY ARY WITH LOCATION. A LOCAL DESIGNER, ARCHITECT OR

GINEER SHOULD BE CONSULTED BEFORE CONSTRUCTION, THESE DRAWING ARE NSTRUMENTS OF SERVICE AND AS SUCH SHALL REMAIN PROPERTY OF THE DESIGNER.

I Lauren ELEVATION

The

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200219B

1. Blocking and sealing floor/ceiling systems and under knee walls 2. Capping and sealing shafts or chases, including flue shafts. FIRST FLOOR 1766 SO.FT.
PLAYROOM 400 SQ.FT.
TOTAL 2166 SQ.FT.
HEATED OPTIONAL

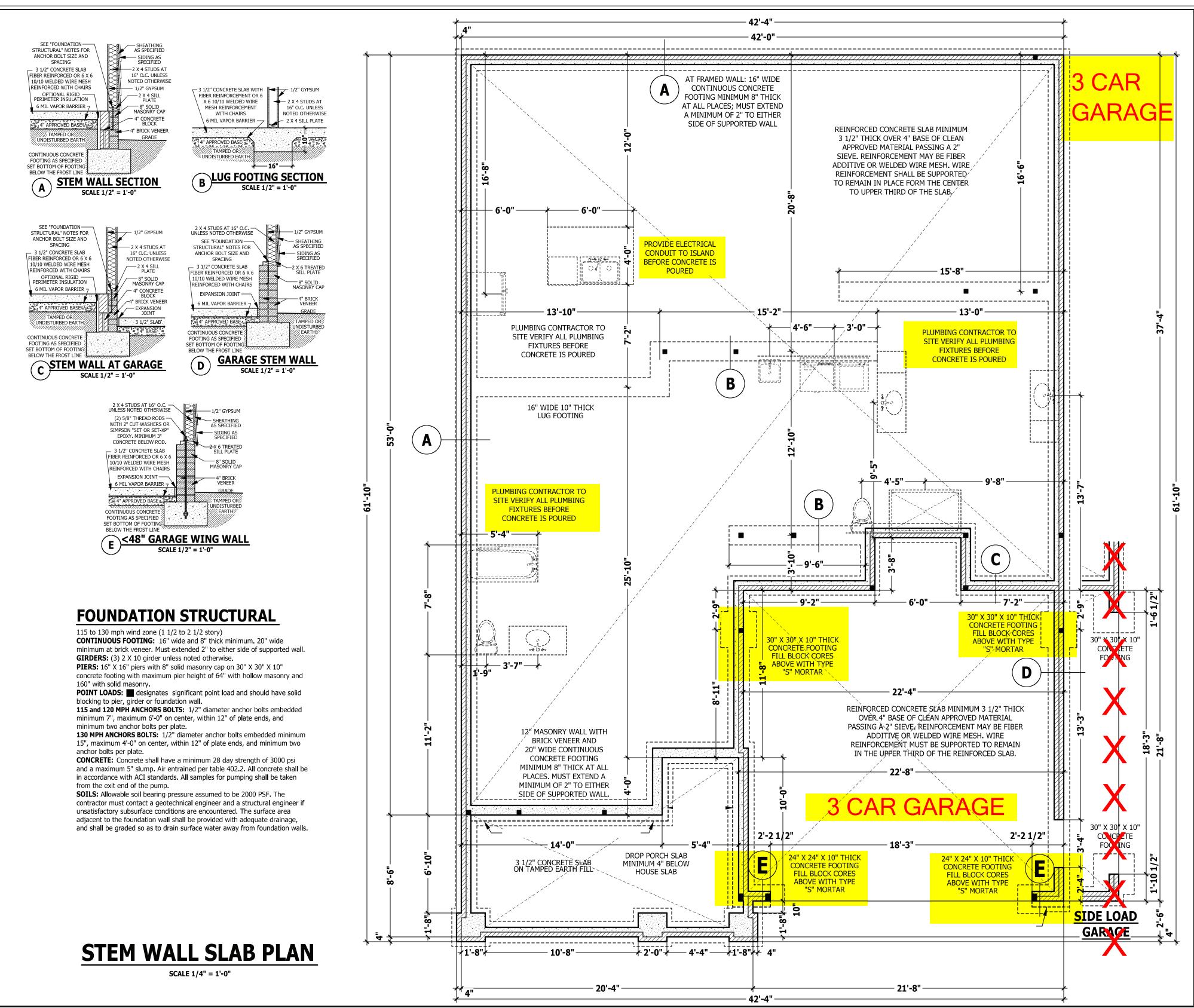
CAROLINA ROOM RECREATION ROOM TOTAL UNHEATED TOTAL 676 SQ, FT.

UNHEATED OPTIONAL

SCREENED PORCH 160 SQ, FT.
DECK / PATIO 108 SQ, FT.
THIRD GARAGE 292 SQ, FT.
TOTAL 560 SQ, FT.

Haynes Home Plans, Inc.

PAGE 1 OF 7



PURCHASER MUST VERIFY ALL SEFORE CONSTRUCTION BEGINS HAYNES HOME PLANS, INC. ASSUMES NO LIABILITY FOR CONTRACTORS PRACTICES AND

PROCEDURES. CODES AND CONDITIONS MAY ARY WITH LOCATION. A LOCAL DESIGNER, ARCHITECT OR IGINEER SHOULD BE CONSULTED

BEFORE CONSTRUCTION. THESE DRAWING ARE NSTRUMENTS OF SERVICE AND

AS SUCH SHALL REMAIN PROPERTY OF THE DESIGNER.

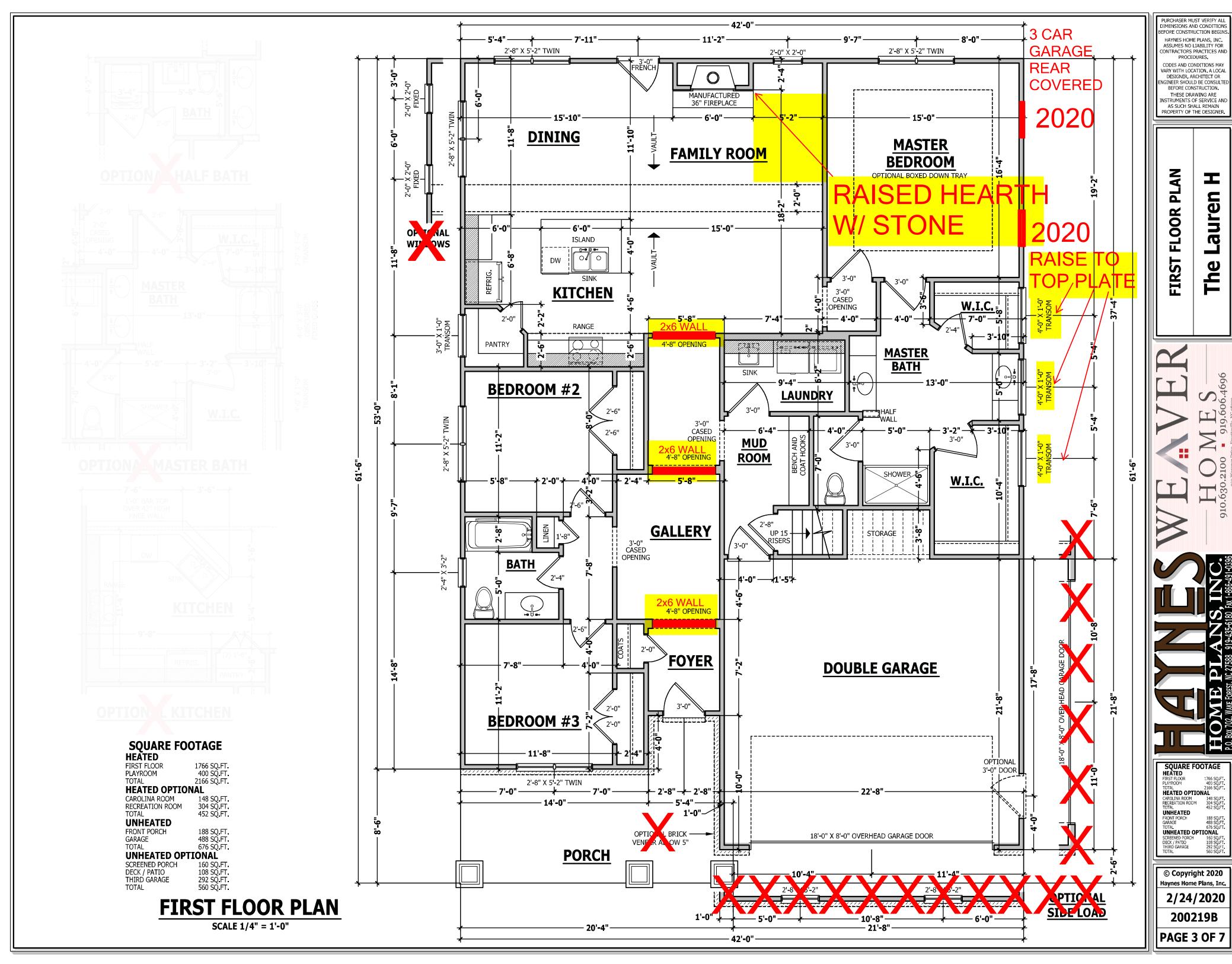
PLAN SLAB Lauren WALL **O** STEM

FIRST FLOOR 1766 SQ.FT.
PLAYROOM 400 SQ.FT.
TOTAL 2166 SQ.FT.
HEATED OPTIONAL CAROLINA ROOM RECREATION ROOM TOTAL UNHEATED UNHEATED OPTIONAL

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PAGE 2 OF 7



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

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
Canal	70	1	1

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

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

5/8" thick for 19.2" on center joist spacing, and minimum 3/4"

center rafters. **CONCRETE AND SOILS:** See foundation notes.

ROOF TRUSS REQUIREMENTS

(2) 2 X 10

2 JACKS EACH END

SCALE 1/4" = 1'-0"

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.

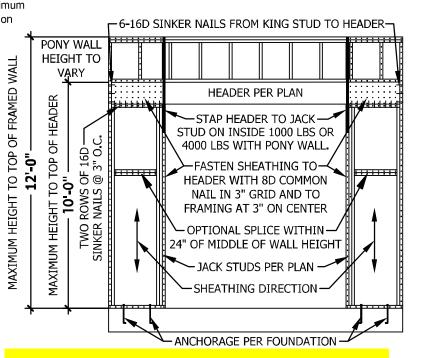
REQUIRED LENGTH OF BRACING: Required brace wall length for each side of the circumscribed rectangle are interpolated per table R602.10.3. Methods CS-WSP and CS-SFB contribute their actual length. Method GB contributes 0.5 it's actual length. Method PF contributes 1.5 times its actual length.

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

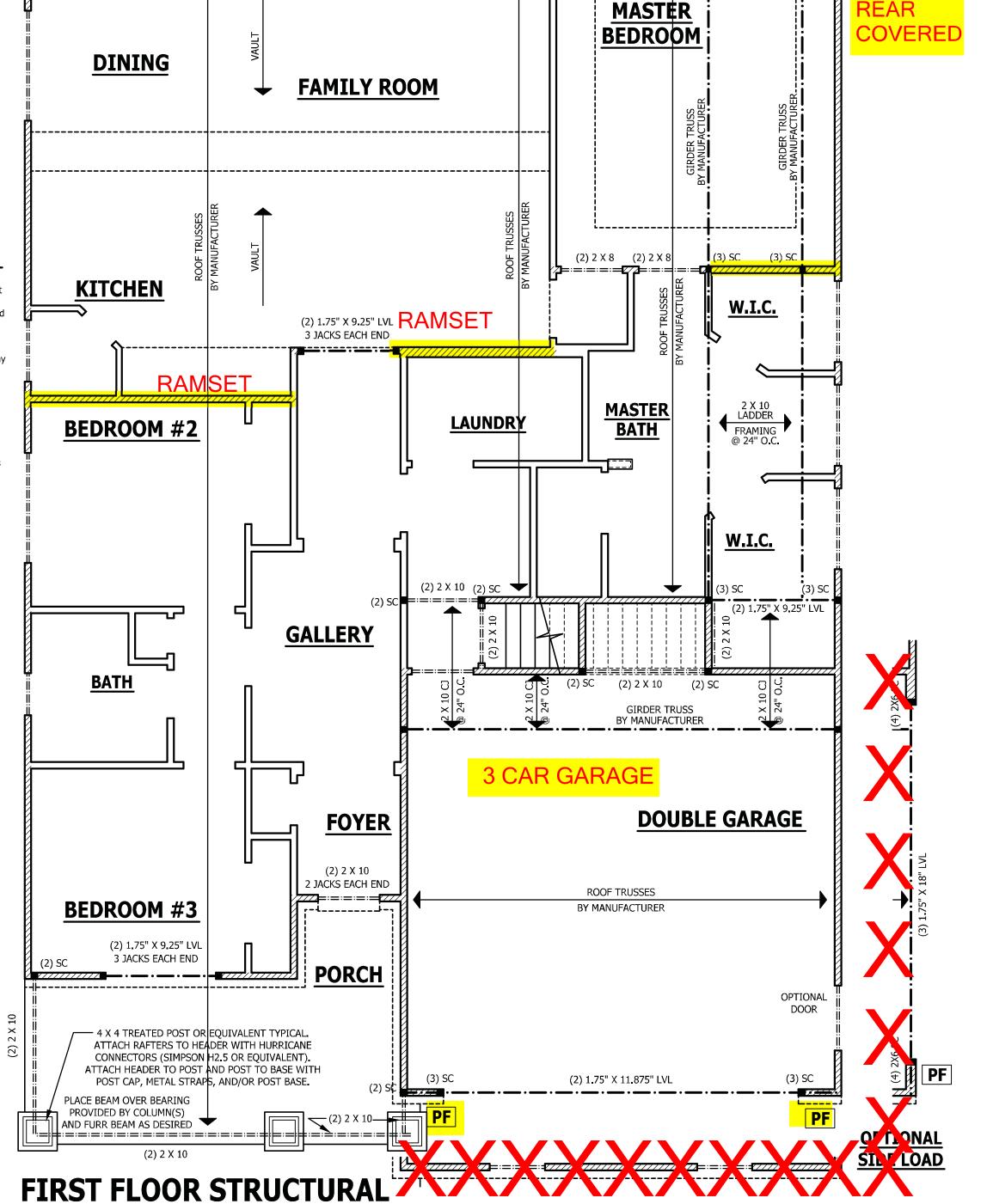
GB: Interior walls show as GB are to have minimum 1/2" gypsum board on both sides of the wall fastened at 7" on center at edges and 7" on center at intermediate supports with minimum 5d cooler nails or #6 screws. **PF:** Portal fame per figure R602.10.1



PORTAL FRAME AT OPENING

METHOD PF PER FIGURE AND SECTION R602.10.1)

SCALE 1/4" = 1'-0"



(2) 2 X 10 2 JACKS EACH END 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.

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THESE DRAWING ARE NSTRUMENTS OF SERVICE AI AS SUCH SHALL REMAIN PROPERTY OF THE DESIGNE

FLOOR STRUCTURAL
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PAGE 4 OF 7

ROOF TRUSS REQUIREMENTS

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

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DESIGN LOADS	LIVE LOAD	DEAD LOAD	DEFLECTION
USE	(PSF)	(PSF)	(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 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.

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.

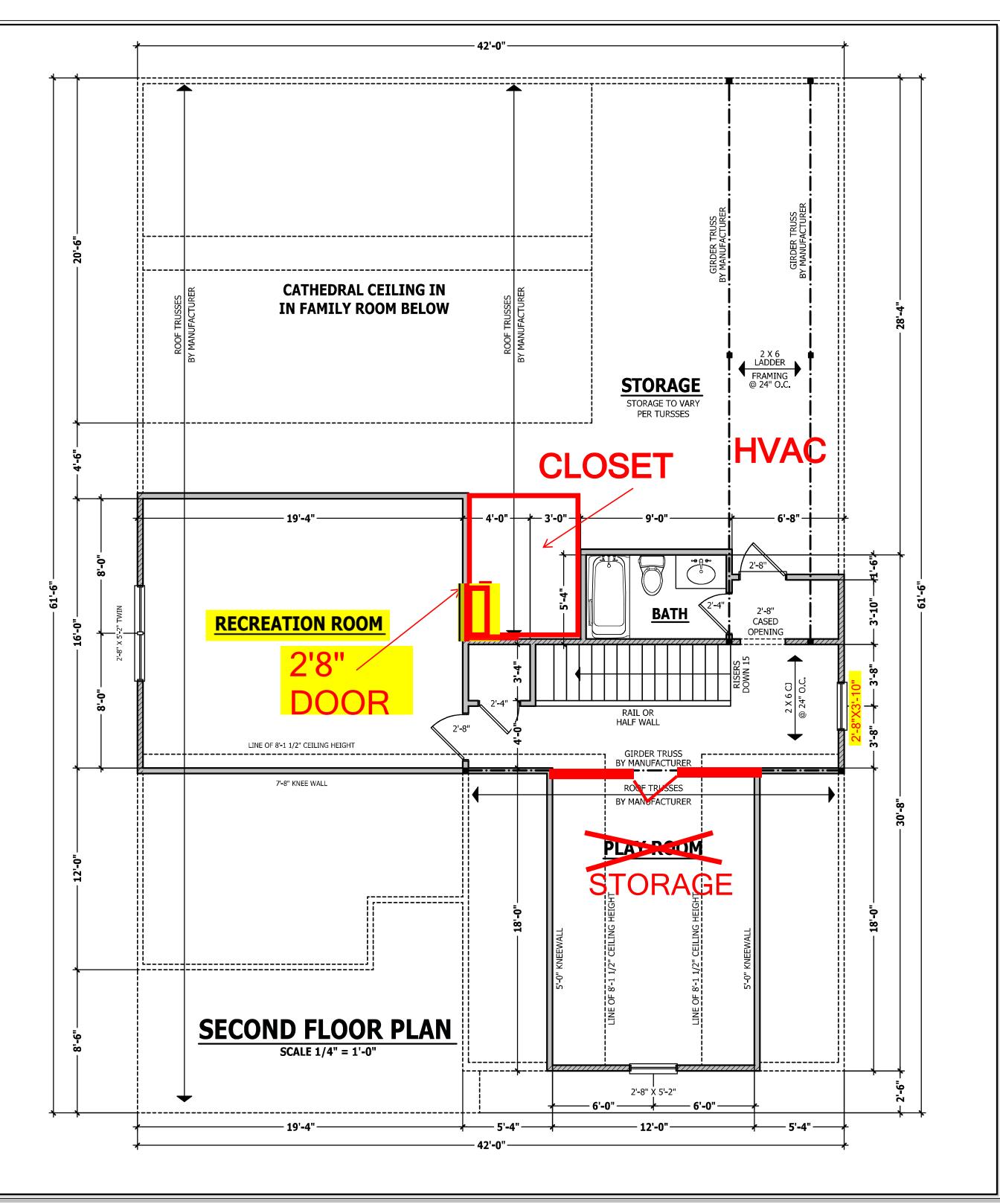
EXTERIOR HEADERS

- (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 CONTRACTORS PRACTICES AND

PROCEDURES. CODES AND CONDITIONS MAY VARY WITH LOCATION, A LOCAL DESIGNER, ARCHITECT OR ENGINEER SHOULD BE CONSULTED BEFORE CONSTRUCTION. THESE DRAWING ARE AS SUCH SHALL REMAIN

PROPERTY OF THE DESIGNER.

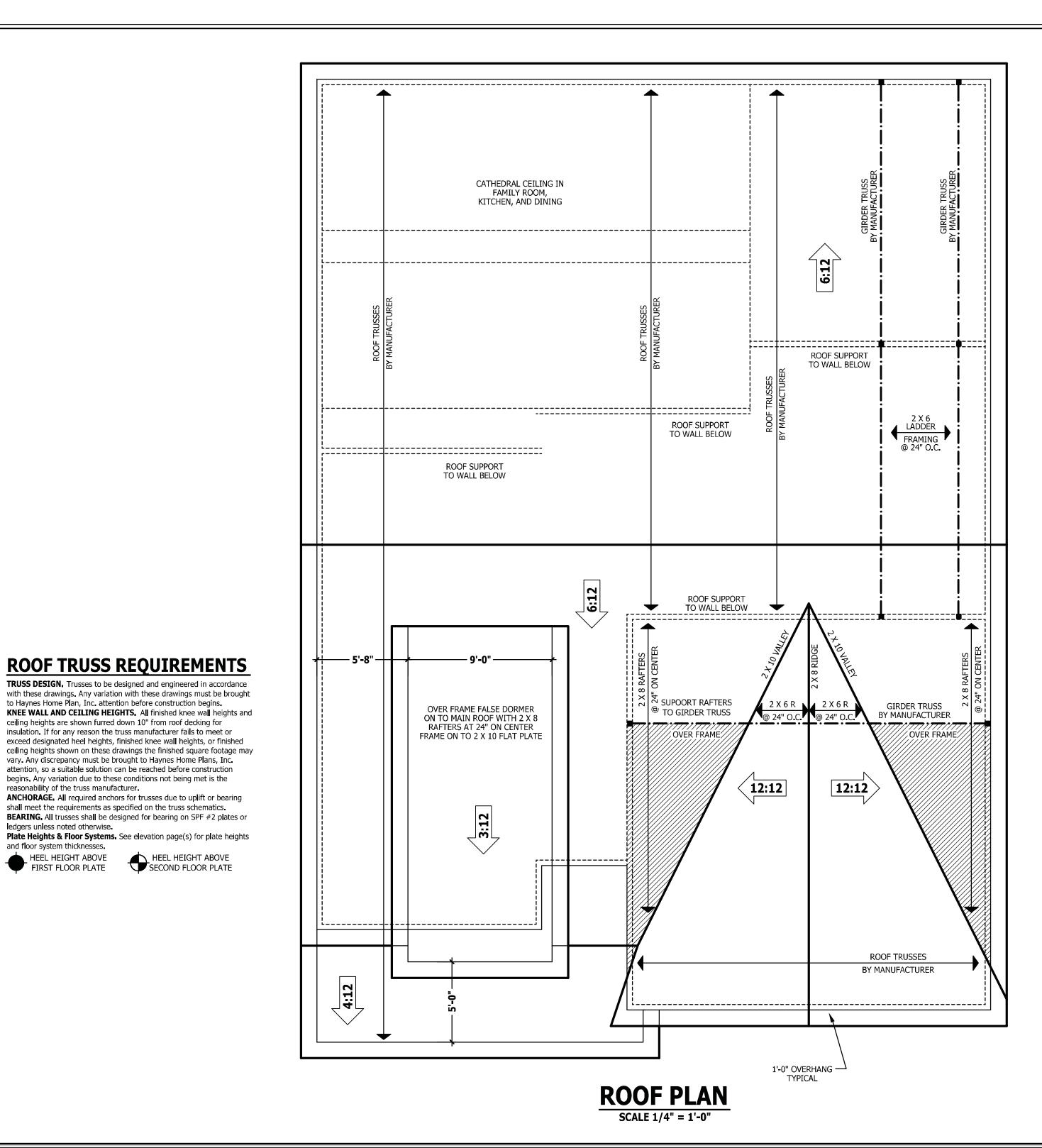
PLAN Lauren FLOOR

ECOND **(1)** S

FIRST FLOOR 1766 SQ.FT.
PLAYROOM 400 SQ.FT.
TOTAL 2166 SQ.FT. **HEATED OPTIONAL** UNHEATED FRONT PORCH GARAGE UNHEATED OPTIONAL

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PAGE 5 OF 7



to Haynes Home Plan, Inc. attention before construction begins.

ceiling heights are shown furred down 10" from roof decking for

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

shall meet the requirements as specified on the truss schematics.

HEEL HEIGHT ABOVE SECOND FLOOR PLATE

reasonability of the truss manufacturer.

ledgers unless noted otherwise.

and floor system thicknesses.

HEEL HEIGHT ABOVE FIRST FLOOR PLATE

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 DRAWING ARE INSTRUMENTS OF SERVICE AND AS SUCH SHALL REMAIN PROPERTY OF THE DESIGNER.

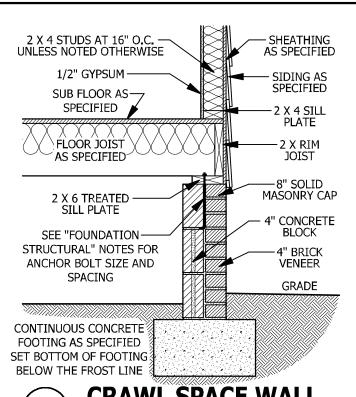
ROOF PLAN

Lauren

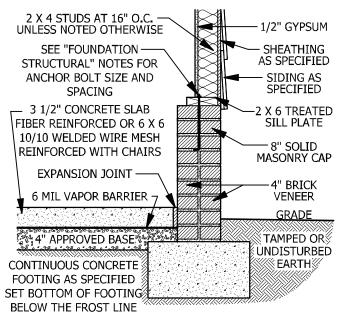
| SQUARE FOOTAGE | HEATED | FIRST FLOOR | 1766 SQ.FT. | PLAYPOOM | 400 SQ.FT. | 2166 SQ.FT. | HEATED OPTIONAL | CAROLINA ROOM | 148 SQ.FT. | RECREATION ROOM | 304 SQ.FT. | TOTAL | 452 SQ.FT. | UNHEATED | FRONT PORCH | 488 SQ.FT. | GARAGE | 488 SQ.FT. | TOTAL | 576 Sq.FT. | UNHEATED OPTIONAL | SCREENED PORCH | 160 SQ.FT. | THIRD GARAGE | 292 SQ.FT. | TOTAL | 560 SQ

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PAGE 6 OF 7









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

SECTION AM109

AM109.1 Deck bracing. Decks shall be braced to provide lateral stability. The following are acceptable means to

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

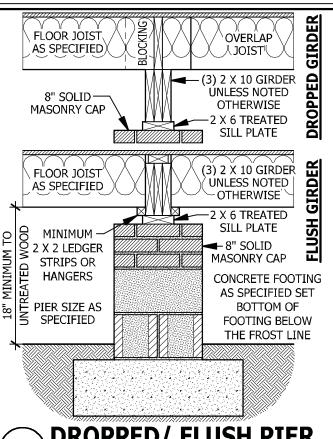
brace per Figure AM109.1

AM109.1.3. For freestanding decks without knee braces or AS SPECIFIED

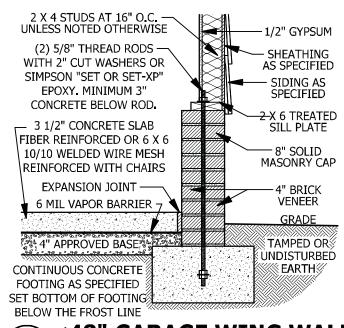
SHEATHING
AS SPECIFIED diagonal bracing, lateral stability may be provided by embedding the post in accordance with Figure AM109.2 and the following:

POST SIZE	MAX TRIBUTARY AREA	MAX. POST HEIGHT	EMBEDMENT DEP T H	CONCRETE DIAMETER			
4 X 4	48 SF	4'-0"	2'-6"	1'-0"			
6 X 6	120 SF	6'-0"	1'-8"				
AM100 1 4 2 v 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.



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



<48" GARAGE WING WALL SCALE 3/4" = 1'-0"

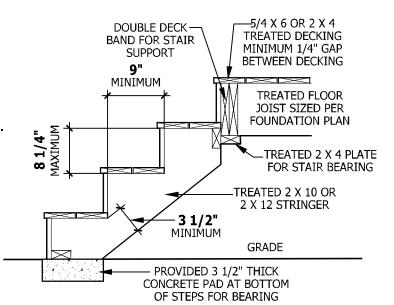


FIGURE AM110 **TYPICAL DECK STAIR DETAIL**

SCALE 3/4" = 1'-0"

STONE VEENER

AS SPECIFIED

-VAPOR BARRIER

-WEEP SCREED

MINIMUM 4" TO

GROUND OR 2"

-TO PAVEMENT

GRADE

SEE FOUNDATION

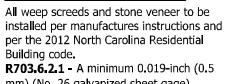
FOR FOUNDATION

DETAILS

WEEP SCREED

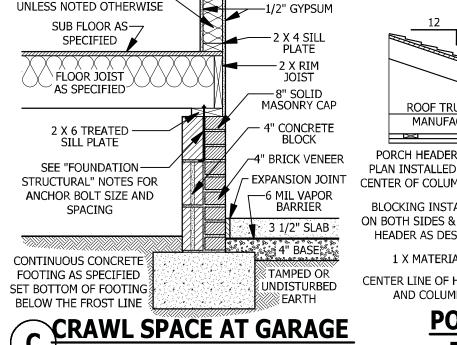
SCALE 3/4" = 1'-0"

WEEP SCREEDS



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 lap the attachment flange. The exterior lath shall cover and terminate on the

attachment flange of the weep screed.



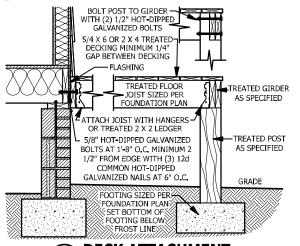
2 X 4 STUDS AT 16" O.C. -

8" CONCRETE : BLOCK

SCALE 3/4" = 1'-0"1/2" GYPSUM--2 X 4 STUDS AT 16" O.C. UNLESS NOTED OTHERWISH 2 X TREATED-HOUSE BAND - 2 X 4 SOLE PLATE SUB FLOOR AS -LASHING MINIMUM 16" WIDE - COBBLED BRICK 3 1/2" CONCRETE SLAB

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

EOOTING AS SPECIFIED



DECK ATTACHMENT

SMOKE ALARMS

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 NEPA 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 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

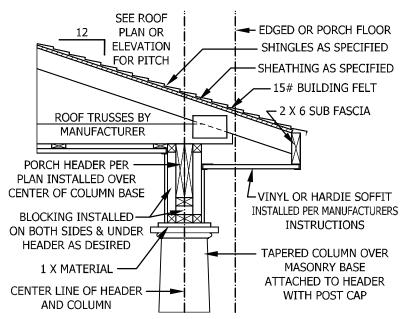
locations: 1. In each sleeping room.

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 between the wall and the handrails. 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 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.



PORCH HEADER WITH TAPERED COLUMN

SCALE 3/4" = 1'-0"

CARBON MONOXIDE ALARMS

- 8 X 16 VENT

GRADE

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

R311.7.2 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 device(s), it shall become a permanent fixture of the occupancy and 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**

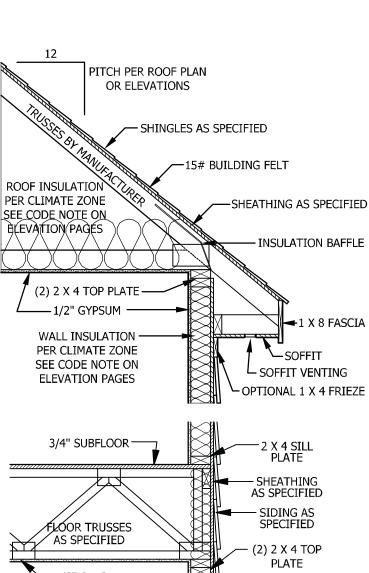
1. The use of a volute, turnout or starting easing shall be allowed over the lowest tread.

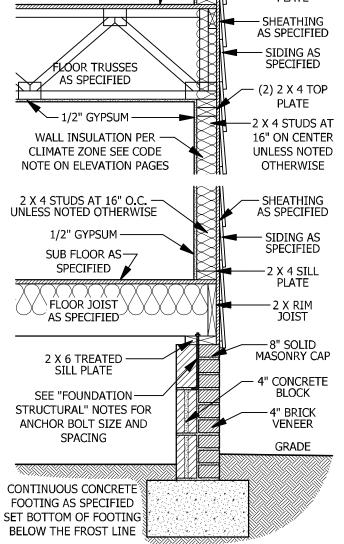
2. When handrail fittings or bendings are used to provide continuous transition between flights, the transition from handrail to guardrail, or used at the start of a flight, the handrail height at the fittings or bendings shall be permitted to exceed the maximum height.

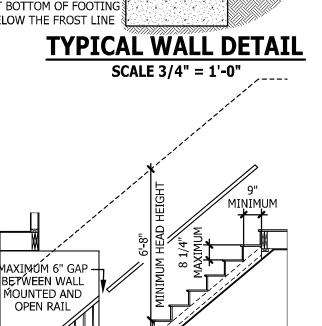
R311.7.7.2 Continuity. Handrails for stairways shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. 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) Exceptions:

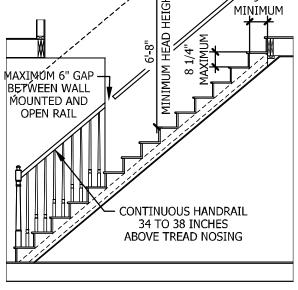
1. Handrails shall be permitted to be interrupted by a newel post. 2. The use of a volute, turnout, starting easing or starting newel shall be allowed over the lowest tread.

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 STAIR DETAIL

SCALE 1/4" = 1'-0"

SQUARE FOOTAGE FIRST FLOOR 1766 SQ.FT PLAYROOM 400 SQ.FT TOTAL 2166 SQ.FT. **HEATED OPTIONAL** CAROLINA ROOM RECREATION ROOM UNHEATED FRONT PORCH GARAGE UNHEATED OPTIONAL

PURCHASER MUST VERIFY ALI IMENSIONS AND CONDITION

BEFORE CONSTRUCTION BEGINS

HAYNES HOME PLANS, INC.

CONTRACTORS PRACTICES AND

PROCEDURES.

CODES AND CONDITIONS MA

VARY WITH LOCATION, A LOCAL

DESIGNER, ARCHITECT OR

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BEFORE CONSTRUCTION.

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AS SUCH SHALL REMAIN

PROPERTY OF THE DESIGNER

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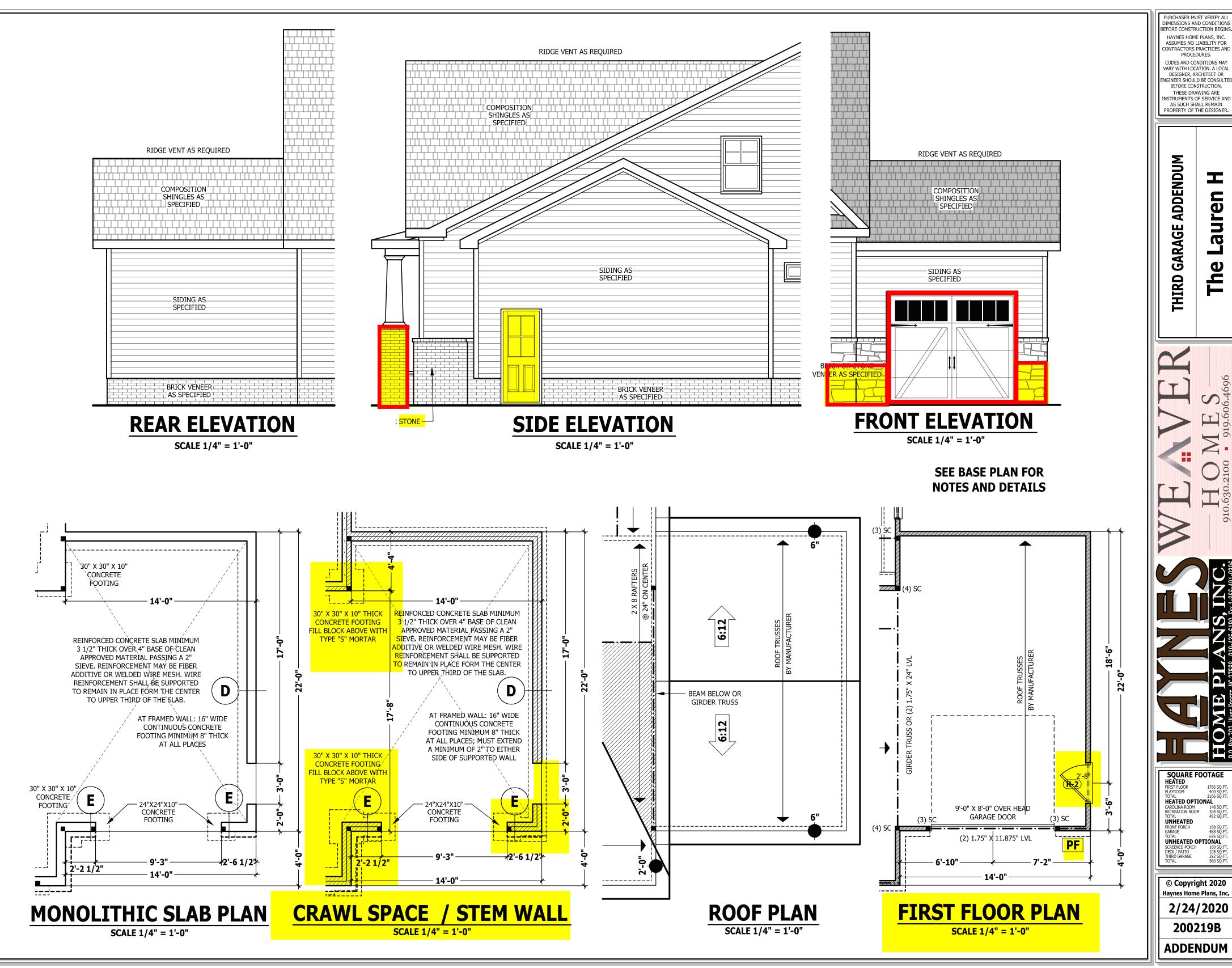
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2/24/2020 200219B **PAGE 7 OF 7**



PURCHASER MUST VERIFY ALL EFORE CONSTRUCTION BEGIN: ASSUMES NO LIABILITY FOR CONTRACTORS PRACTICES AND

CODES AND CONDITIONS MAY DESIGNER, ARCHITECT OR IGINEER SHOULD BE CONSULTE BEFORE CONSTRUCTION.

THESE DRAWING ARE NSTRUMENTS OF SERVICE AND AS SUCH SHALL REMAIN PROPERTY OF THE DESIGNER.

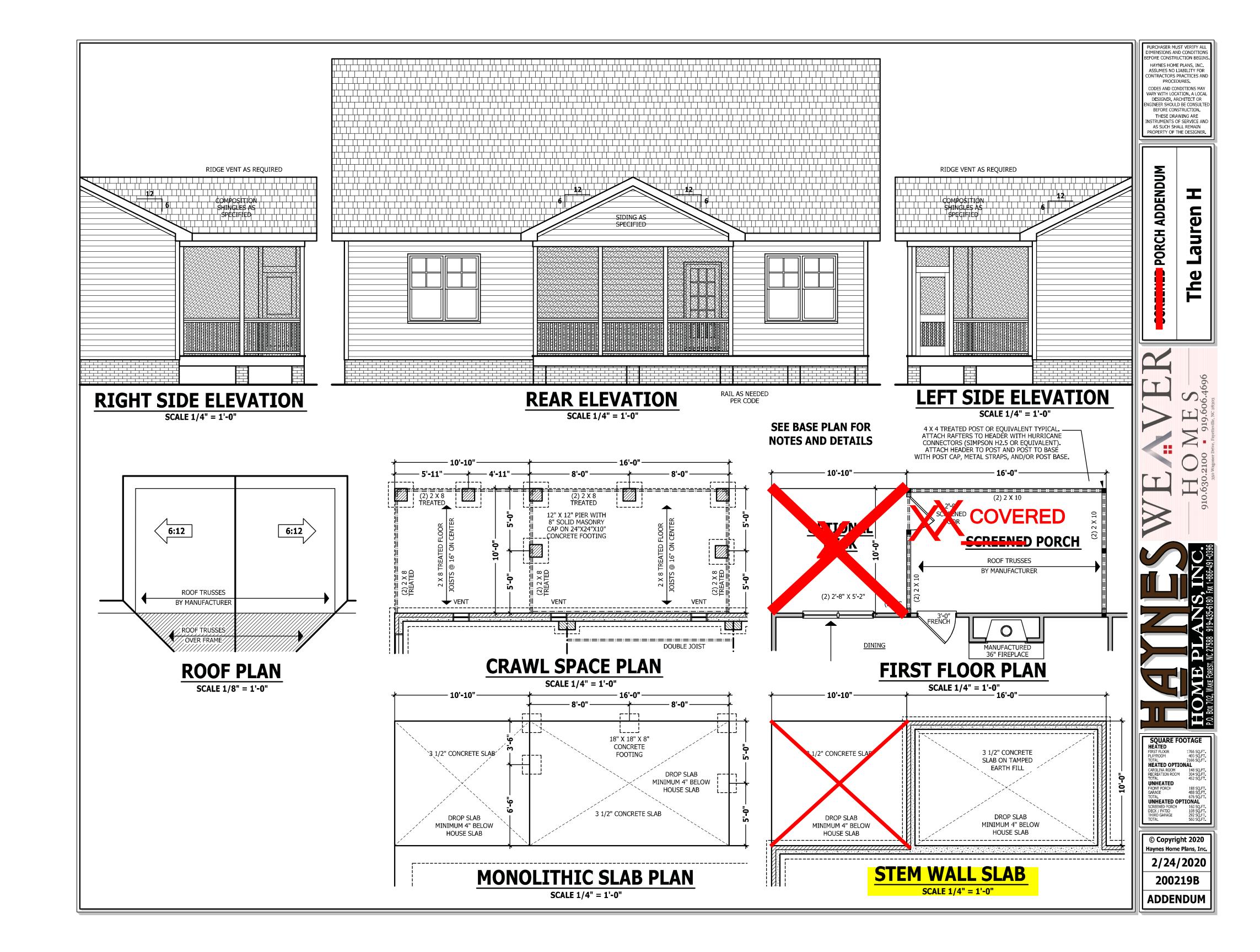
Lauren The

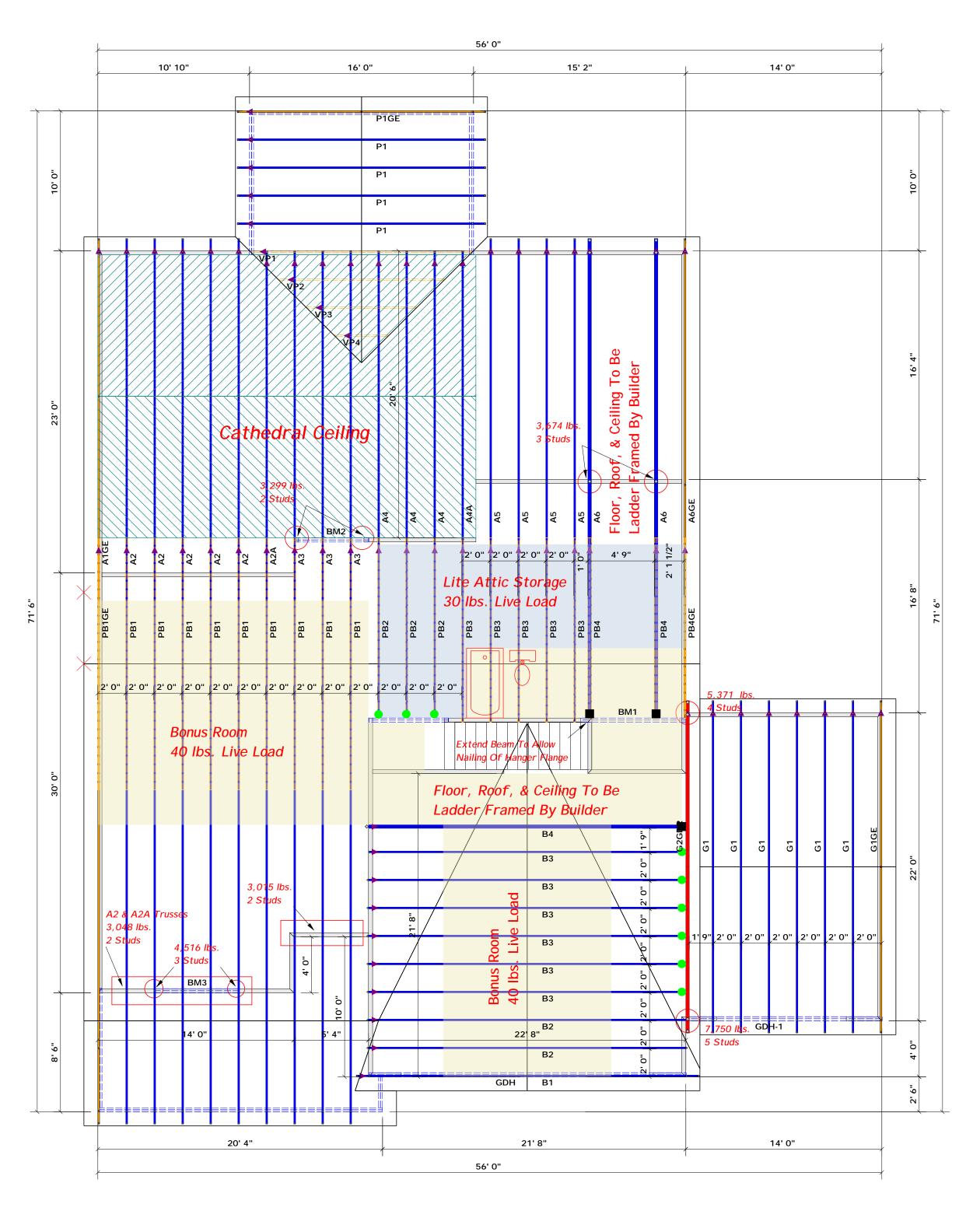
FIRST FLOOR 1766 SQ.FT.
PLAYROOM 400 SQ.FT.
TOTAL 2166 SQ.FT.
HEATED OPTIONAL UNHEATED FRONT PORCH FRONT PORCH 188 SQ.FT.
GARAGE 488 SQ.FT.
TOTAL 676 SQ. FT.
UNHEATED OPTIONAL
SCREENED PORCH 160 SQ.FT.
DECK / PATIO 188 SQ.FT.
THIRD GARAGE 292 SQ.FT.
TOTAL 560 SQ.FT.

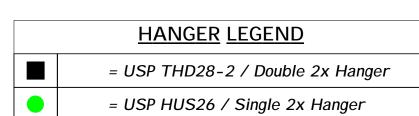
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2/24/2020

200219B







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

6800 2

10200 3

13600 4

17000 5

LOAD CHART FOR JACK STUDS

(0.45% ON MALES (\$10,00) A 60)

MALES OF JACK STUDS REQUIRED & CA CAS OF FEADER/SERVER.

2550 1 5100 2

7650 3

10200 4 12750 5

15300 6

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

-- Denotes Reaction Greater than 3,000 lbs.

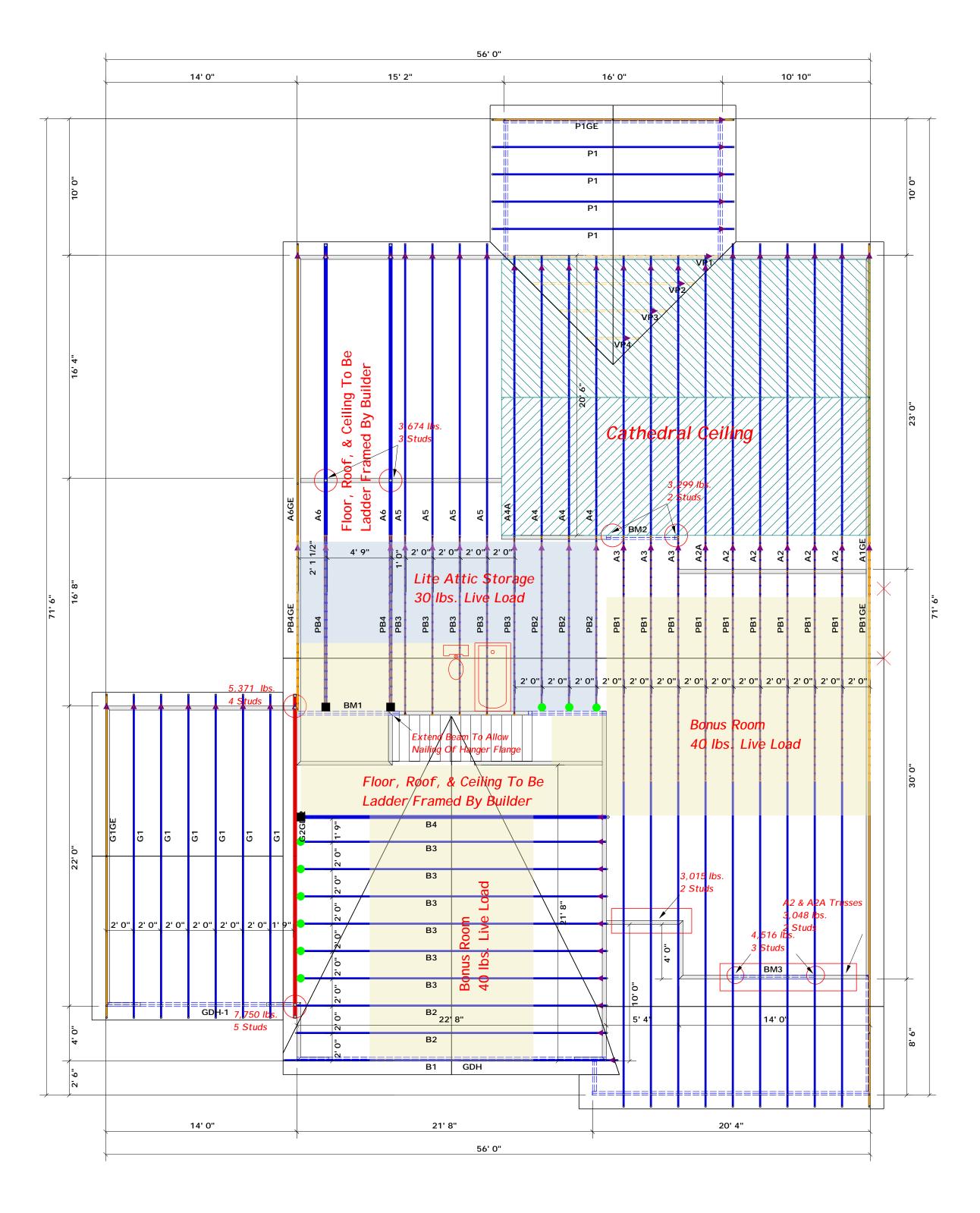
<u>Truss Placement Plan</u> SCALE: 3/16" = 1'

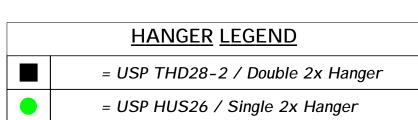
Beam Legend					
PlotID	Length	Product	Plies	Net Qty	Fab Type
BM1	8' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2	FF
BM3	7' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2	FF
BM2	6' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2	FF
GDH-1	14' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2	FF
GDH	23' 0"	1-3/4"x 14" LVL Kerto-S	2	2	FF

BUILDER	Weaver Development	CITY / CO.	Angier / Harnett	THIS IS A TRUSS PLACEMENT DIAGRAM ONLY. These trusses are designed as individual building components to be in the building design at the specification of the building designer. See in sheets for each truss design identified on the placement drawing. The I
JOB NAME	Lot 11 Michell Manor	ADDRESS	Michell Manor Drive	is responsible for temporary and permanent bracing of the roof and flo the overall structure. The design of the truss support structure includin walls, and columns is the responsibility of the building designer. For g regarding bracing, consult BCSI-B1 and BCSI-B3 provided with the trus
PLAN	Lauren H / Elev. A / 3 Car / BR	MODEL	Roof	or online @ sbcindustry.com Bearing reactions less than or equal to 3000# are deemed to corprescriptive Code requirements. The contractor shall refer to the
SEAL DATE	2/24/20	DATE REV.	01/04/22	(derived from the prescriptive Code requirements) to determine foundation size and number of wood studs required to support r than 3000# but not greater than 15000#. A registered design profile be retained to design the support system for any reaction that experiences are supported by the support system for any reaction that experiences are supported by the support system for any reaction that experiences are supported by the support system for any reaction that experiences are supported by the support system for any reaction that experiences are supported by the support system for any reaction that experiences are supported by the support system for any reaction that experiences are supported by the support system for any reaction that experiences are supported by the support system for any reaction that experiences are supported by the support system for any reaction that experiences are supported by the support system for any reaction that experiences are supported by the support system for any reaction that experiences are supported by the support system for any reaction that experiences are supported by the support system for any reaction that experiences are supported by the support system for any reaction that experiences are supported by the support system for any reaction that experiences are supported by the support system for any support system for any system for any support system for any syste
QUOTE #	Quote #	DRAWN BY	Curtis Quick	specified in the attached Tables. A registered design profession: retained to design the support system for all reactions that exce
JOB #	J1221-7126	SALES REP.	Lenny Norris	SignatureCurtis Quick

ROOF & FLOOR TRUSSES & BEAMS

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





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

3400 1

6600 2

10200 3

13600 4

17000 5

LOAD CHART FOR JACK STUDS

(BANE) ON FABRE (2025)) \$ (b)) NUMBER OF JACK STUDG REQUIRE(DIS) CA CND OF PEADER/STROES

> 2550 1 5100 2

7650 3

10200 4 12750 5

15300 6

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'

Angier / Harnett

Roof

01/04/22

Curtis Quick

Lenny Norris

Michell Manor Drive

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

	BUILDER	Weaver Development	CITY / CO.
	JOB NAME	Lot 11 Michell Manor	ADDRESS
	PLAN	Lauren H / Elev. A / 3 Car / BR	MODEL
	SEAL DATE	2/24/20	DATE REV.
	QUOTE #	Quote #	DRAWN BY
-	JOB #	J1221-7126	SALES REP.

THIS IS A TRUSS PLACEMENT DIAGRAM O These trusses are designed as individual building cor the building design at the specification of the building sheets for each truss design identified on the placeme is responsible for temporary and permanent bracing or the overall structure. The design of the truss support s walls, and columns is the responsibility of the building regarding bracing, consult BCSI-B1 and BCSI-B3 provi or online @ sbcindustry.com	nponents to be incorporated into designer. See individual design int drawing. The building designer f the roof and floor system and for structure including headers, beams, designer. For general guidance			
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#.				
SignatureCurtis (Quick			

Curtis Quick



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

Client:

Project: Address: Weaver Development

5/10/2021

Input by: Curtis Quick Job Name: The Lauren H Beams Page 1 of 10

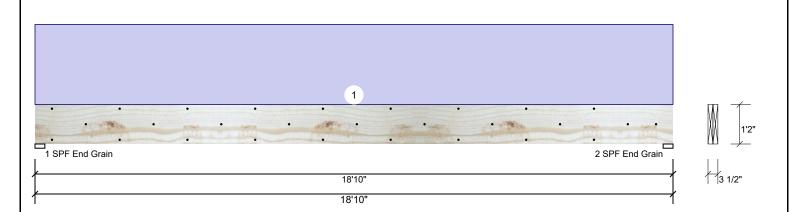
Project #:

2 - SPF 3.500"

End Grain 23%

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

Level: Level



Member Inforn	nation			Reaction	ons UNPAT	TERNED II	b (Uplift)
Type:	Girder	Application:	Floor	Brg	Live	Dead	Snow
Plies:	2	Design Method:	ASD	1	0	2457	0
Moisture Condition:	Dry	Building Code:	IBC 2012	2	0	2457	0
Deflection LL:	360	Load Sharing:	No				
Deflection TL:	240	Deck:	Not Checked				
Importance:	Normal						
Temperature:	Temp <= 100°F						
				Bearing	gs		
				Bearin	g Length	Cap. Rea	ct D/L lb
				1 - SPI	F 3.500"	23%	2457 / 0
				End			
nalysis Results	s			Grain			

Ana	lysis	Results	
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Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	11011 ft-lb	9'5"	24299 ft-lb	0.453 (45%)	D	Uniform
Unbraced	11011 ft-lb	9'5"	11013 ft-lb	1.000 (100%)	D	Uniform
Shear	2093 lb	1'4 3/4"	9408 lb	0.222 (22%)	D	Uniform
LL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
TL Defl inch	0.444 (L/497)	9'5 1/16"	0.919 (L/240)	0.480 (48%)	D	Uniform

Design Notes

- 1 Fasten all plies using 3 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 must be laterally braced at a maximum of 9'7 1/2" o.c.
- 7 Bottom braced at bearings.
- 8 Lateral slenderness ratio based on single ply width.

·	g	p.,								
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 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

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

Wind

Total Ld. Case

2457 Uniform

2457 Uniform

0

0

2457 / 0

Const

0

0

Ld. Comb.

D

D



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

Client: Weaver Development

Project: Address: Date:

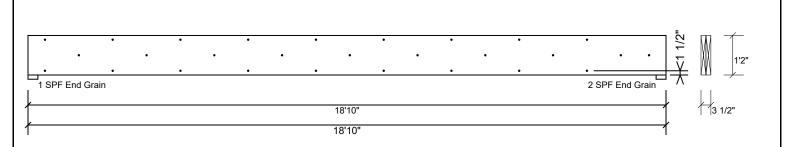
5/10/2021 Input by: Curtis Quick Job Name: The Lauren H Beams Page 2 of 10

Project #:

Level: Level

GDH Kerto-S LVL 1.750" X 14.000"

2-Ply - PASSED



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
- - This design is valid until 2/26/2023

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



CSD DESIGN

Client: Weaver Development

Project: Address:

Date: 5/10/2021

Input by: Curtis Quick Job Name: The Lauren H Beams Page 3 of 10

11 7/8'

Wind

Total Ld. Case

2346 L

2346 L

1196 / 1150

1196 / 1150

0

0

Const

0

0

Ld. Comb.

D+S

D+S

Project #:

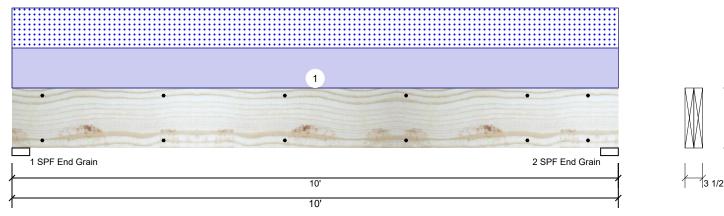
1-SPF 3.500"

End Grain 2 - SPF 3.500"

End Grain

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

Level: Level



Member Information Reactions UNPATTERNED Ib (Uplift) Application: Brg Live Type: Floor Dead Snow Plies: 2 Design Method: ASD 0 1196 1150 1 Moisture Condition: Dry **Building Code:** IBC 2012 2 0 1196 1150 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

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

Self Weight

		5 1 7								
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

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

9 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: Weaver Development

Project: Address:

Date: 5/10/2021

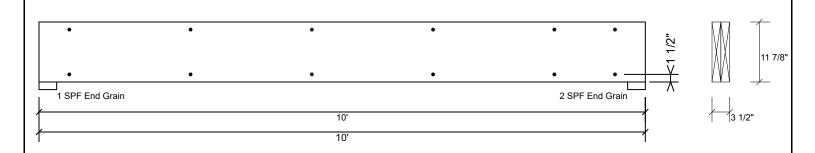
Input by: Curtis Quick Job Name: The Lauren H Beams Page 4 of 10

Project #:

1.750" X 11.875" **Kerto-S LVL** GDH-1

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"

aston an phos asing =		0.0
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



Client: Weaver Development

Project: Address:

Date: 5/10/2021 Input by: Curtis Quick

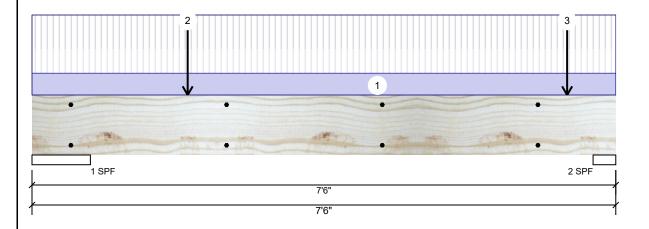
Job Name: The Lauren H Beams

Project #:

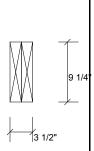
1.750" X 9.250" Kerto-S LVL BM1

2-Ply - PASSED

Level: Level



IBC 2012



Page 5 of 10

Member Information

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

Application: Floor Design Method: ASD **Building Code:**

> Load Sharing: No

Deck: Not Checked

Reactions UNPATTERNED Ib (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	159	1025	937	0	0
2	141	1318	1239	0	0

Bearings

Bearing Length	Cap. React D/L I	b Total Ld. Case	Ld. Comb.
1 - SPF 9.000"	15% 1025 / 93	7 1961 L	D+S
0 ODE 3 500"	400/ 1210 / 122	0 0557 1	Dic

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2535 ft-lb	2'	14423 ft-lb	0.176 (18%)	D+S	L
Unbraced	2535 ft-lb	2'	10012 ft-lb	0.253 (25%)	D+S	L
Shear	1929 lb	1'5 1/2"	7943 lb	0.243 (24%)	D+S	L
LL Defl inch	0.022 (L/3655)	3'7 1/4"	0.219 (L/360)	0.100 (10%)	S	L
TL Defl inch	0.046 (L/1730)	3'7 9/16"	0.329 (L/240)	0.140 (14%)	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

o Eateral sichletiness 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	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					

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- 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

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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: 5/10/2021

Input by: Curtis Quick Job Name: The Lauren H Beams Page 6 of 10

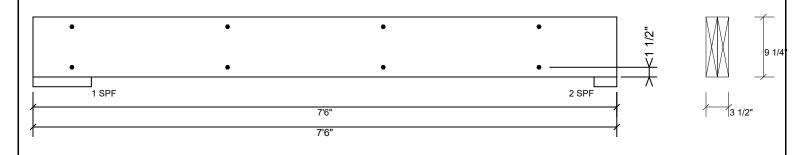
Project #:

Kerto-S LVL BM1

1.750" X 9.250"

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"

1		
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

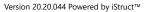
 5. Provide lateral support at bearing points to avoid lateral displacement and rotation
- 6. For flat roofs provide proper drainage to prevent ponding

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Manufacturer Info

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Client:

Project: Address: Weaver Development

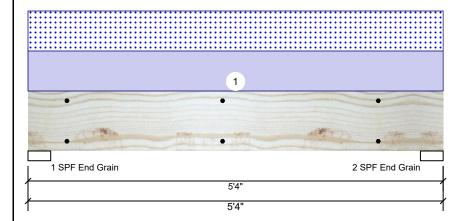
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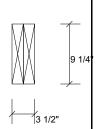
Curtis Quick Job Name: The Lauren H Beams

Project #:

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

Level: Level





Page 7 of 10

Member Information

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

Application: Design Method: ASD **Building Code:** IBC 2012

Load Sharing: No

Deck: Not Checked

Reactions UNPATTERNED I	lb (Uplift)
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Brg	Live	Dead	Snow	Wind	Const
1	0	1659	1640	0	0
2	0	1659	1640	0	0

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3675 ft-lb	2'8"	14423 ft-lb	0.255 (25%)	D+S	L
Unbraced	3675 ft-lb	2'8"	11811 ft-lb	0.311 (31%)	D+S	L
Shear	2062 lb	4'4"	7943 lb	0.260 (26%)	D+S	L
LL Defl inch	0.023 (L/2497)	2'8"	0.162 (L/360)	0.140 (14%)	S	L
TL Defl inch	0.047 (L/1241)	2'8"	0.244 (L/240)	0.190 (19%)	D+S	L

Bearings

Bearing Length	Cap. I	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF 3.500" End Grain	31%	1659 / 1640	3299	L	D+S
2 - SPF 3.500" End Grain	31%	1659 / 1640	3299	L	D+S

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

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	615 PLF	0 PLF	615 PLF	0 PLF	0 PLF	A2

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- 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

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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: 5/10/2021 Input by:

Curtis Quick Job Name: The Lauren H Beams

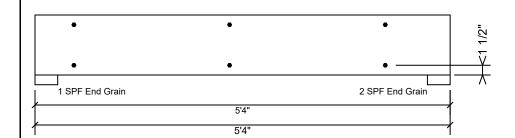
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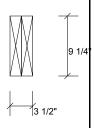
Kerto-S LVL BM₂

1.750" X 9.250"

2-Ply - PASSED

Level: Level





Page 8 of 10

Multi-Ply Analysis

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

rasterran phes asing E i	0113 01 3D 1122330 at 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

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Manufacturer Info



Client:

Project: Address: Weaver Development

Date: 5/10/2021 Input by:

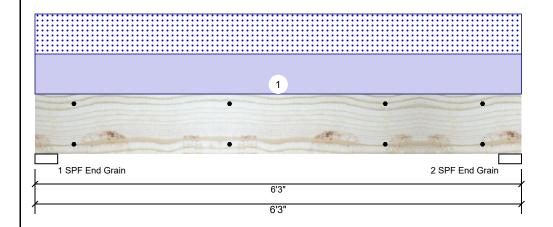
Curtis Quick Job Name: The Lauren H Beams

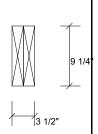
Project #:

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

Level: Level

Deartions UNIDATTEDNIED IL (Unitt)





Page 9 of 10

Member Information

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

Application: Design Method: ASD **Building Code:** IBC 2012 Load Sharing: No Deck: Not Checked

Reaction	SUNPAI	I EKNED ID	(Uplift)			
Brg	Live	Dead	Snow	Wind	Const	
1	0	2363	2341	0	0	
2	0	2363	2341	0	0	

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6311 ft-lb	3'1 1/2"	14423 ft-lb	0.438 (44%)	D+S	L
Unbraced	6311 ft-lb	3'1 1/2"	10779 ft-lb	0.586 (59%)	D+S	L
Shear	3199 lb	1'	7943 lb	0.403 (40%)	D+S	L
LL Defl inch	0.052 (L/1330)	3'1 1/2"	0.193 (L/360)	0.270 (27%)	S	L
TL Defl inch	0.105 (L/662)	3'1 1/2"	0.290 (L/240)	0.360 (36%)	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

Bearings	}					
Bearing	Length	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	44%	2363 / 2341	4704	L	D+S
2 - SPF End Grain	3.500"	44%	2363 / 2341	4704	L	D+S

ID Load Type Location Trib Width Side Dead 0.9 Snow 1.15 Wind 1.6 Const. 1.25 Comments 0 PLF A2 749 PLF 0 PLF 749 PLF 0 PLF Uniform Top

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 LVL not to be treated with fire retardant or corrosive

Handling & Installation

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 Provide lateral support at bearing points to avoid
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- 6. For flat roofs provide proper drainage to prevent ponding

7 PLF

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This design is valid until 2/26/2023

Manufacturer Info

Client:

Project: Address: Weaver Development

Date: 5/10/2021

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

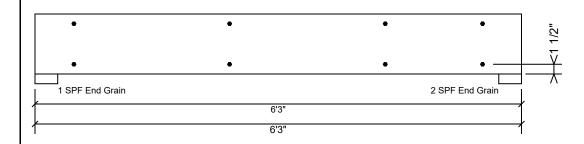
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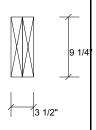
Kerto-S LVL BM3

1.750" X 9.250"

2-Ply - PASSED

Level: Level





Page 10 of 10

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
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Handling & Installation

- Handling & Installation

 1. UVI beams must not be cut or drilled

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6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 2/26/2023

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