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

MEAN ROOF HEIGHT: 19'-9" CLIMATE ZONE ZONE 3A ZONE 4A ZONE 5A FENESTRATION U-FACTOR SKYLIGHT U-FACTOR GLAZED FENESTRATION SHGC CEILING R-VALUE WALL R-VALUE FLOOR R-VALUE

"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 WIN	ID SPEED	OF 120 MB	ЧH, 3 SEO	OND GUST	(93 FAST	est Mile	EXPOSUR	E "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	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 WIN	ID SPEED	OF 130 M	PH, 3 SEO	OND GUST	(101 FAS	TEST MIL	E) EXPOSU	RE "B"
DESIGNED FOR WIN								RE "B" LOADS
	& CLA		DESIG		R THE		WING I	
COMPONENT	& CLA	DDING	DESIG	NED FO	35'-1" 18.2	FOLLO TO 40' -19.6	WING 1 40'-1" 18.7	OADS
COMPONENT MEAN ROOF	& CLA	DDING O 30'	DESIG 30'-1"	NED FO TO 35'	R THE 35'-1"	FOLLO TO 40'	WING 1 40'-1" 18.7	OADS TO 45'
COMPONENT MEAN ROOF ZONE 1	& CLA UP T 16.7	DDING O 30' -18.0	DESIG 30'-1" 17.5	NED FO TO 35' -18.9	35'-1" 18.2	FOLLO TO 40' -19.6 -22.9 -22.9	WING 40'-1" 18.7 18.7 18.7	OADS TO 45' -20.2 -23.5 -23.5
COMPONENT MEAN ROOF ZONE 1 ZONE 2	& CLA UP T 16.7 16.7	DDING O 30' -18.0 -21.0	DESIG 30'-1" 17.5 17.5	NED FO TO 35' -18.9 -22.1	35'-1" 18.2 18.2 18.2	FOLLO TO 40' -19.6 -22.9	WING 40'-1" 18.7 18.7 18.7	OADS TO 45' -20.2 -23.5

GUARD RAIL NOTES

* CRAWL SPACE WALL R-VALUE

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 expensive, while the considered are accepted to the control of the contro

R312.2 Height, Required guards at open-sided walking surfaces, including stairs, porches, balconies or landings, shall be not less than 36 inches (914) mm) high measured vertically above the adjacent walking surface, adjacent fixed seating or the line connecting the leading edges of the treads. Exceptions:

 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

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

HVAC: MAINSTREAM MECHANICAL ELECTRICAL: PIONEER PLUMBING: DOUBLE J

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

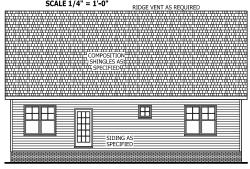
NET EREE CROSS VENTUATION NEEDED:

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.

COVERED PORCH & PATIO UDOR ROOF 12 COMPOSITION SHINGLES AS SPECIFIED COMPOSITION COMPO 9'-0" WIDE FALSE DORMER WITH
(3) 2'-0" X 3'-0"
WINDOWS, OVER FRAMED ON TO MAIN ROOF. TOP OF PLATE COMPOSITION SHINGLES AS SPECIFIED SUB FLOOR TOP OF PLATE SIDING AS FIRST FLOOR PLATE SHUTTERS AS SPECIFIED SUB FLOOR

FRONT ELEVATION

RIDGE VENT AS REQUIRED



REAR ELEVATION

SCALE 1/8" = 1'-0"



RIGHT SIDE ELEVATION

SQUARE FOOTAGE

LOT 2 ATKINS FARM ESTATES

TBD SPRING HILL CHURCH RD LILLINGTON, NC

30G

HEATED 1766 SQ FT. 400 SO FT. FIRST FLOOR PLAYROOM

HEATED OPTIONAL CAROLINA ROOM RECREATION ROOM 148 SQ FT. 304 SQ FT. 452 SQ FT.

UNHEATED FRONT PORCH GARAGE 188 SQ FT. 488 SQ FT. 676 SQ FT.

UNHEATED OPTIONAL

SCREENED PORCH DECK / PATIO 160 SQ FT. 108 SO FT. THIRD GARAGE

AIR LEAKAGE

Section N1102,4

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

2. Capping and sealing shafts or chases, including flue shafts.

3. Capping and sealing soffit or dropped ceiling areas.

SQUARE FOOTAGE HEATED FIRST FLOOR 1766 SQ.FT. PLAYBOOM 400 SQ.FT. HEATED OPTIONA 148 SQ.FT. 304 SQ.FT. 452 SQ.FT. UNHEATED TOTAL 676 SQ.FT

UNHEATED OPTIONAL

SCREPNED PORCH 160 SQ.FT

SCREPNED PORCH 160 SQ.FT

THIRD GAPAGE 292 SQ.FT

TOTAL 560 SQ.FT

MENSIONS AND CONDITION ORE CONSTRUCTION BEGIN

SEFORE CONSTRUCTION BEGINS
HAYNES HOME PLANS, INC.
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CONTRACTORS PRACTICES AND
PROCEDURES.
CODES AND CONDITIONS MAY
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ELEVATION

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SIDING AS SPECIFIED OPTIONAL SIDE LOAD: ARAGE DOOR

LEFT SIDE ELEVATION

SCALE 1/8" = 1'-0"

RIDGE VENT AS REQUIRED

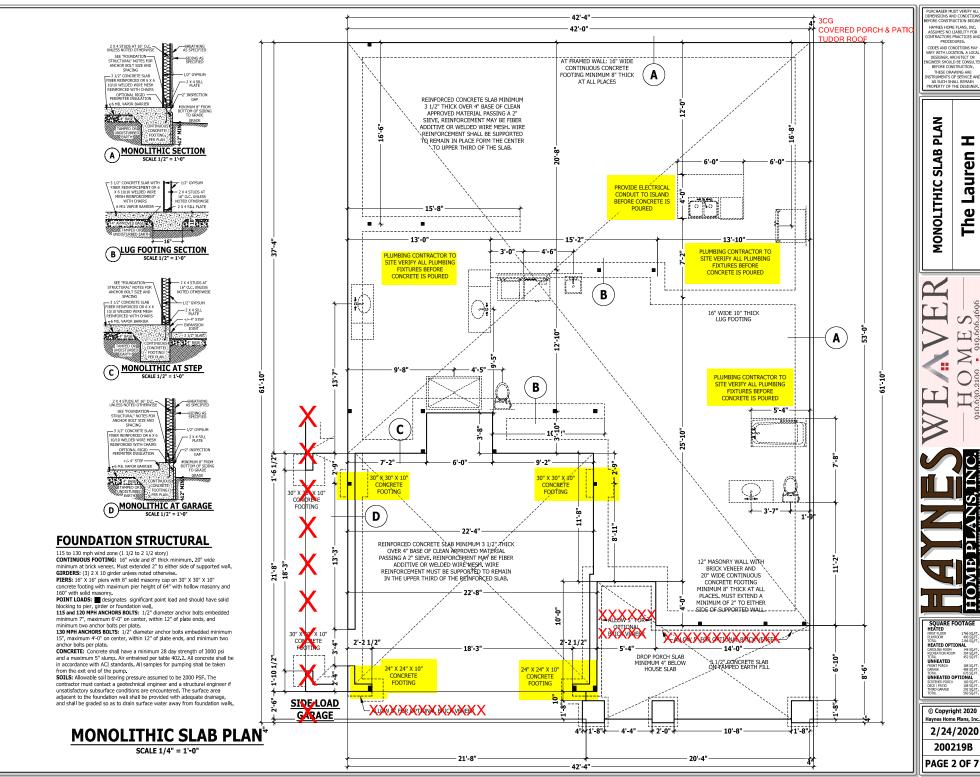
WINDOWS WITH SIDE LOAD

COMPOSITION THE SHINGLES AS

Harnett

REVISED

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

PROCEDURES.
CODES AND CONSTITIONS MAY
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SQUARE FOOTAGE HEATED FIRST FLOOR 1766 SQUET HEATED OPTIONA 148 90 FT. 304 90 FT. 452 90 FT. UNHEATED TOTAL 676 SQ.FT.

UNHEATED OPTIONAL

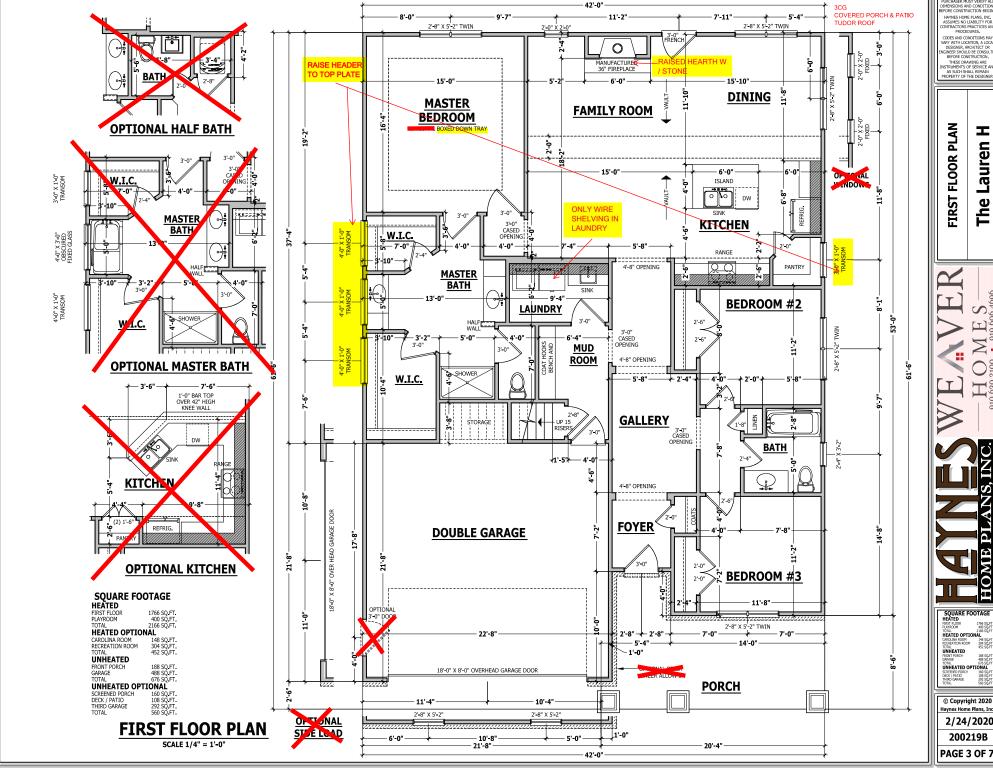
SCREINED PORCH 169 SQ.FT.

DECK / PATIO 188 SQ.FT.

THIRD GARAGE 292 SQ.FT.

TOTAL 560 SQ.FT.

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UNHEATED
FRONT PORCH 188 SQ.F
GARAGE 488 SQ.F
TOTAL 576 SQ.F
UNHEATED OPTIONAL
LONG STREET BORD 1 160 SQ.F

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PAGE 3 OF 7

STRUCTURAL NOTES

All construction shall conform to the latest requirements or 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: Havnes 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

ENGINEERED WOOD BEAMS:

Laminated veneer (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 Trainer solar united (TSC) = 10-2500 (31, 17-250, 12-250, 100 53). Laminated strand lumber (LSL) Pb-2250 PSI, Fv-400 PSI, E=1.55x106 PSI Instal al 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. S 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

CONCRETE AND SOILS: See foundation notes.

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

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.

GYPSIIM: 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.

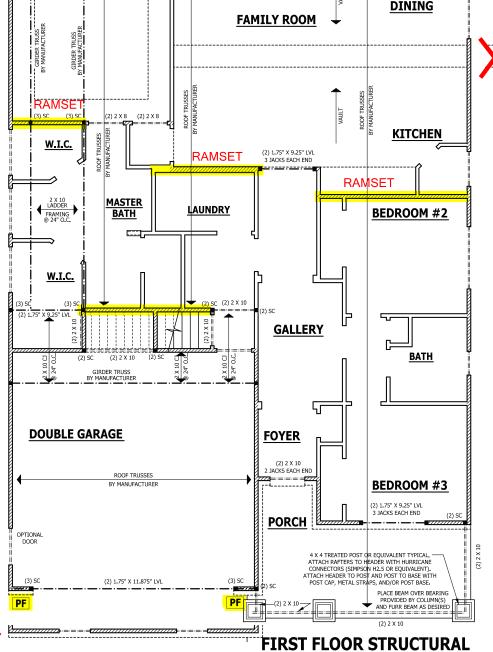
HD: 800 lbs hold down hold down device fastened to the edge

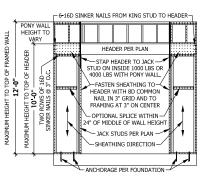
of the brace wall panel closets to the corner.

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 edges and 7" on center at edges and 7" on center at edges. 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"

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.

OP TONAL

PF

(2) 2 X 10

2 JACKS FACH END

MASTER

BEDROOM

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COVERED PORCH & PATIO

TUDOR ROOF

:=:=:=:=:=7

(2) 2 X 10

2 JACKS EACH END

SCALE 1/4" = 1'-0"

SQUARE FOOTAGE HEATED HEATED OPTIONA 148 90 FT 304 90 FT 452 90 FT UNHEATED UNHEATED OPTIONAL

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PAGE 4 OF 7

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

Plate Heights & Floor Systems. See elevation page(s) for plate heights

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		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

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" bots 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, 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 dear 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

Exceptions:

 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.

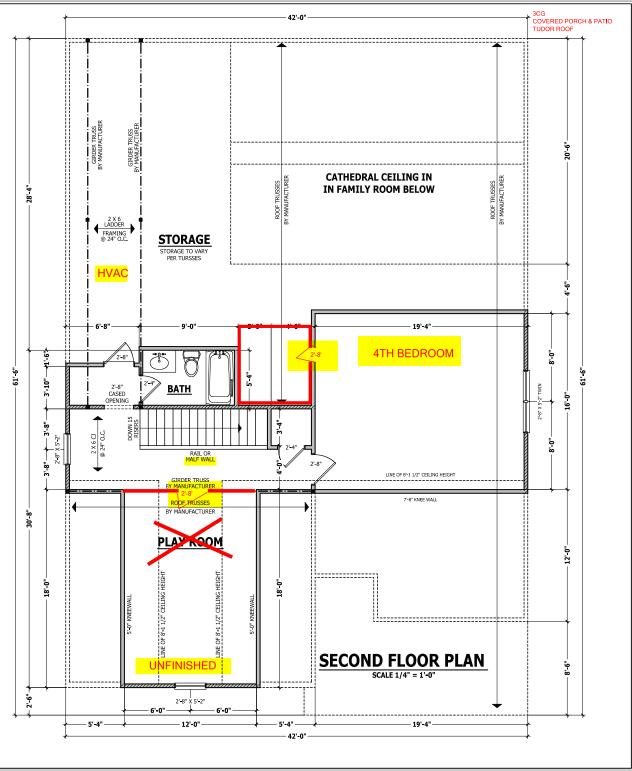
EXTERIOR HEADERS

- (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 **IINI ESS NOTED OTHERWISE** - NON LOAD BEARING HEADERS TO BE



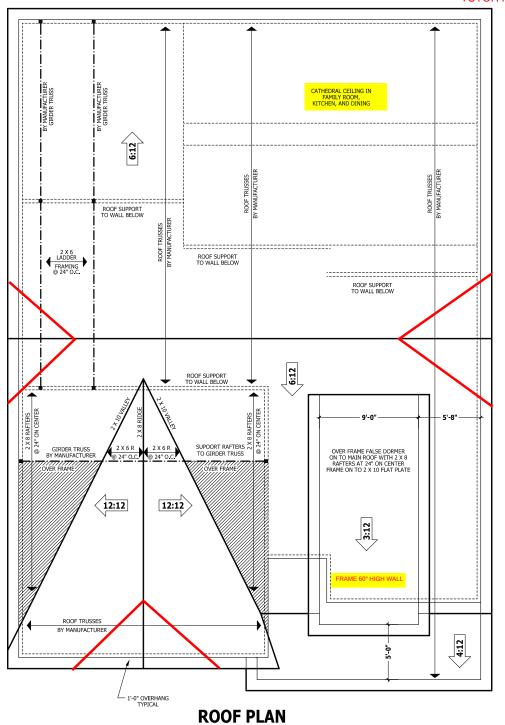
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THESE DRAWING ARE ISTRUMENTS OF SERVICE AND AS SUCH SHALL REMAIN PROPERTY OF THE DESIGNER.

PLAN I Lauren FLOOR SECOND The

SQUARE FOOTAGE HEATED HEATED OPTIONA UNHEATED UNHEATED OPTIONAL

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SCALE 1/4" = 1'-0"

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.

HEEL HEIGHT ABOVE FIRST FLOOR PLATE

HEEL HEIGHT ABOVE SECOND FLOOR PLATE

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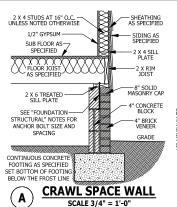
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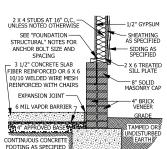
I The Lauren **ROOF PLAN**

SQUARE FOOTAGE HEATED FIRST FLOOR 1766 SQ.FT. PLAYBOOM 400 SQ.FT. HEATED OPTIONAL 148 SQ.FT. 304 SQ.FT. 452 SQ.FT. UNHEATED UNHEATED
FRONT PORCH 188 SQ.F1
GARAGE 488 SQ.F1
TOTAL 676 SQ.F1
UNHEATED OPTIONAL
STREET, BORDON 169 SQ. F1

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BELOW THE FROST LINE GARAGE STEM WALL D SCALE 3/4" = 1'-0"

DECK STAIR NOTES

SET BOTTOM OF FOOTIN

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 rovide 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 prace per Figure AM109.1

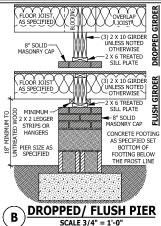
AM109.1.3. For freestanding decks without knee braces or diagonal bracing, lateral stability may be provided by embedding the post in accordance with Figure AM109.2

and the fol	lowing:									
POST SIZE	MAX TRIBUTARY AREA	MAX. POST HEIGHT	EMBEDMENT DEPTH	CONCRETE DIAMETER						
4 X 4	48 SF	4'-0"	2'-6"	1'-0"						
6 X 6	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.

SCALE 3/4" = 1'-0"



2 X 4 STUDS AT 16" O.C. — UNLESS NOTED OTHERWISE

SUB FLOOR AS-

SPECIFIED

AS SPECIFIED

2 X 6 TREATED

STLL PLATE

SEE "FOUNDATION

STRUCTURAL" NOTES FOR

ANCHOR BOLT SIZE AND

SPACING

CONTINUOUS CONCRETI

FOOTING AS SPECIFIED

BELOW THE FROST LINE

SET BOTTOM OF FOOTIN

8" SOLID -

8" CONCRET BLOCK

C

X X X X X X

1/2" GYPSUM

4" CONCRETE BLOCK

-4" BRICK VENEER

-6 MIL VAPOR BARRIER

TAMPED OR

UNDISTURBED

- COBBLED BRICK FOR SLAB SUPPOR

" CONCRET

EARTH

CRAWL SPACE AT GARAGE

SCALE 3/4" = 1'-0"

- 2 X 4 SOLE PLATE

ASHING MINIMUM 16" WIDE

SE TOUNDATION

FILLED PORCH SECTION WITH VENT

TACH JOIST WITH HANGER

F 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

R314.2 Smoke detection systems. Household fire alarm systems

installed as required by this section for smoke alarms, shall be

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

Exception: Where smoke alarms are provided meeting the

installed in accordance with NFPA 72 that include smoke alarms, or a combination of smoke detector and audible notification device

permitted. The household fire alarm system shall provide the same

approved supervising station and be maintained in accordance with

R314.3 Location. Smoke alarms shall be installed in the following

level of smoke detection and alarm as required by this section for smoke alarms. Where a household fire warning system is installed

the provisions of this code and the household fire warning equipment provisions of NFPA 72.

SECTION P314

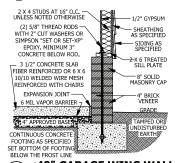
NEDA 72

requirements of Section R314.4.

In each sleeping room.

SCALE 1/2" = 1'-0'

3 1/2" SLAB



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

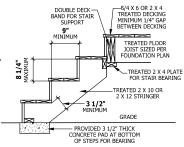
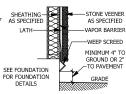


FIGURE AM110 TYPICAL DECK STAIR DETAIL

SCALE 3/4" = 1'-0"

WEEP SCREEDS



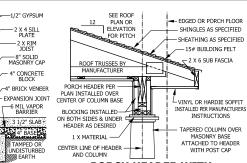
WEEP SCREED

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

2. Outside each separate sleeping area in the immediate vicinity of Building code. the bedrooms.

3. On each additional *story* of the *dwelling*, including *basements* R703.6.2.1 - A minimum 0.019-inch (0.5 mm) (No. 26 galvanized sheet gage), 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 corrosion-resistant weep screed or plastic veep screed, with a minimum vertical without an intervening door between the adjacent levels, a smoke attachment flange of 31/2 inches (89 mm) alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full *story* shall be provided at or below the foundation plate line on exterior stud walls below the upper level. in accordance with ASTM C 926. The weep When more than one smoke alarm is required to be installed within an individual dwelling unit the alarm devices shall be interconnected screed shall be placed a minimum of 4 inches (102 mm) above the earth or 2

in such a manner that the actuation of one alarm will activate all of inches (51 mm) above paved areas and the alarms in the individual unit shall be of a type that will allow trapped R314.4 Power source. Smoke alarms shall receive their primary power from the building wiring when such wiring is served from a water to drain to the exterior of the building. The weather-resistant barrier shal 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 Ian the attachment flance. The exterior lath. shall cover and terminate on the overcurrent protection. Smoke alarms shall be interconnected. attachment flange of the weep screed.



PORCH HEADER WITH TAPERED COLUMN

CARBON MONOXIDE ALARMS

SECTION R315

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

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 stainway.

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 adiacent treads. P311 7.4.2 Tread denth. The minimum tread denth 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.

R311,7,1 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:

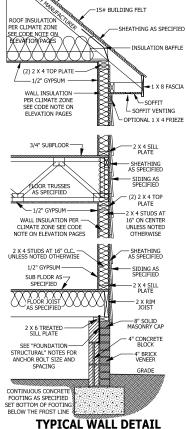
1. The use of a volute, turnout or starting easing shall be allowed over the owest tread.

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

R311.7.7.2 Continuity. Handrails for stairways shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than 11/2 inch (38 mm) between the wall and the handrails.

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

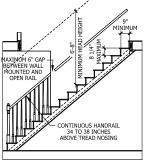
3. Two or more separate rails shall be considered continuous if the termination of the rails occurs within 6 inches (152 mm) of each other. If transitioning between a wall-mounted handrail and a guardrail/handrail, the wall-mounted rail must return into the wall.



12

PITCH PER ROOF PLAN

SHINGLES AS SPECIFIED



SCALE 3/4" = 1'-0"

TYPICAL STAIR DETAIL

CODES AND CONDITIONS MAY ARY WITH LOCATION, A LOCA DESIGNER, ARCHITECT OR SINEER SHOULD BE CONSUL' BEFORE CONSTRUCTION THESE DRAWING ARI

URCHASER MUST VERIFY AL

HAYNES HOME PLANS, INC. ASSUMES NO LIABILITY FOR ONTRACTORS PRACTICES AN

PROCEDURES.

I DETAILS Lauren **TYPICAL** The

SQUARE FOOTAGE HEATED

HEATED OPTIONA

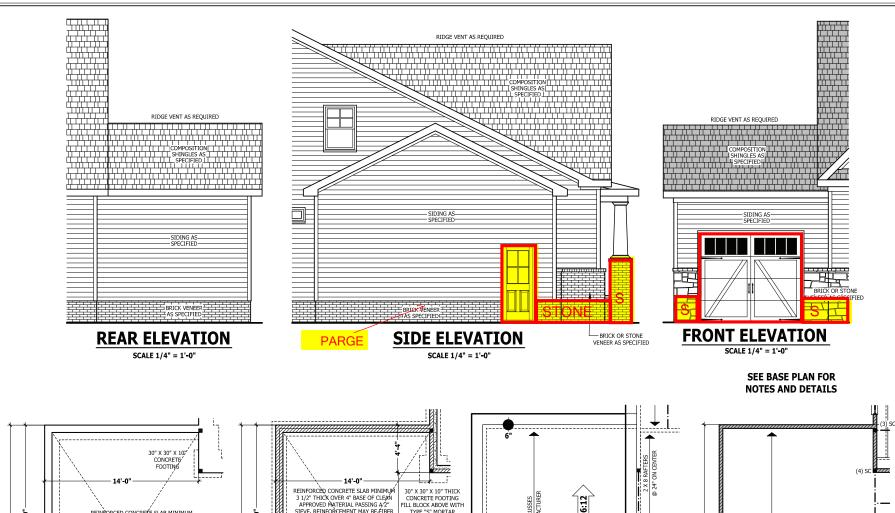
UNHEATED OPTIONAL

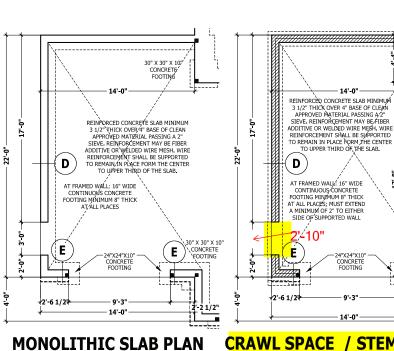
UNHEATED

148 90 FT 304 90 FT 452 90 FT

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PAGE 7 OF 7



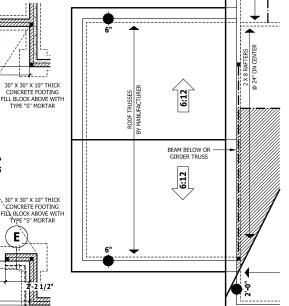


SCALE 1/4" = 1'-0"

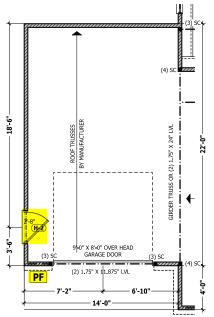


E

2 2 1/2







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

DIMENSIONS AND CONDITIONS
EFORE CONSTRUCTION BEGIN
HAYNES HOME PLANS, INC.
ASSUMES NO LIABILITY FOR
CONTRACTORS PRACTICES AND PROCEDURES. CODES AND CONDITIONS MAY VARY WITH LOCATION, A LOCAL DESIGNER, ARCHITECT OR IGINEER SHOULD BE CONSULTE BEFORE CONSTRUCTION

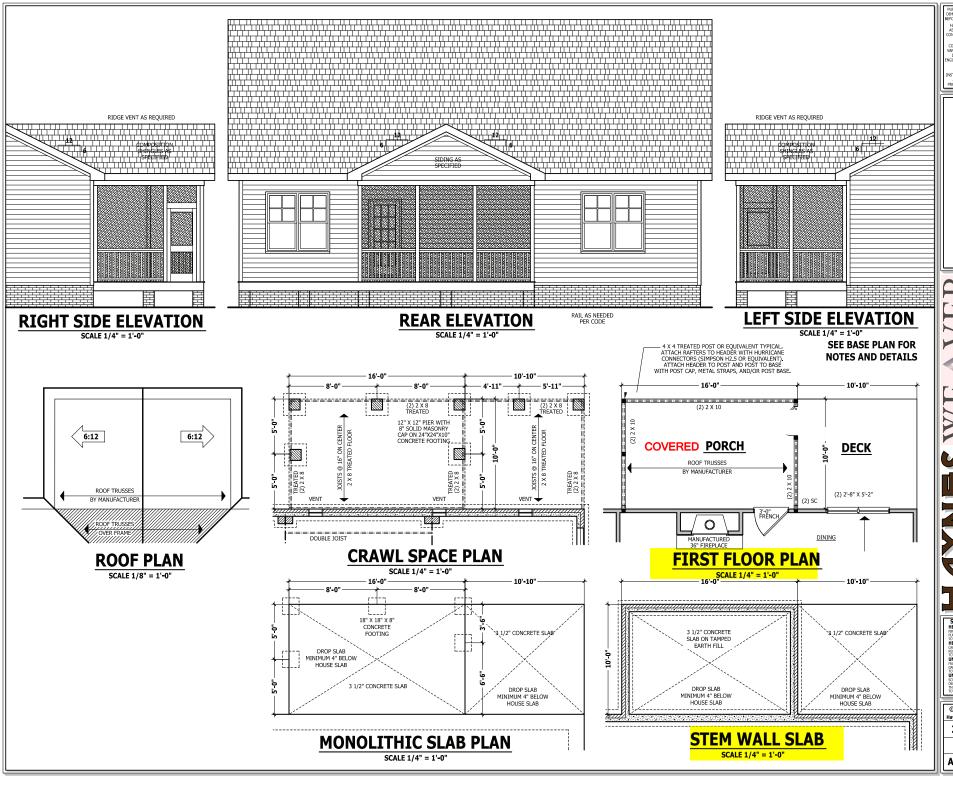
> THIRD GARAGE ADDENDUM I

The Lauren

HEATED OPTIONAL 148 SQ.FT. 304 SQ.FT. 452 SQ.FT.

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ADDENDUM



HAYNES HOME PLANS, INC. ASSUMES NO LIABILITY FOR CONTRACTORS PRACTICES AN CODES AND CONDITIONS MAY VARY WITH LOCATION, A LOCAL DESIGNER, ARCHITECT OR IGINEER SHOULD BE CONSULTE BEFORE CONSTRUCTION

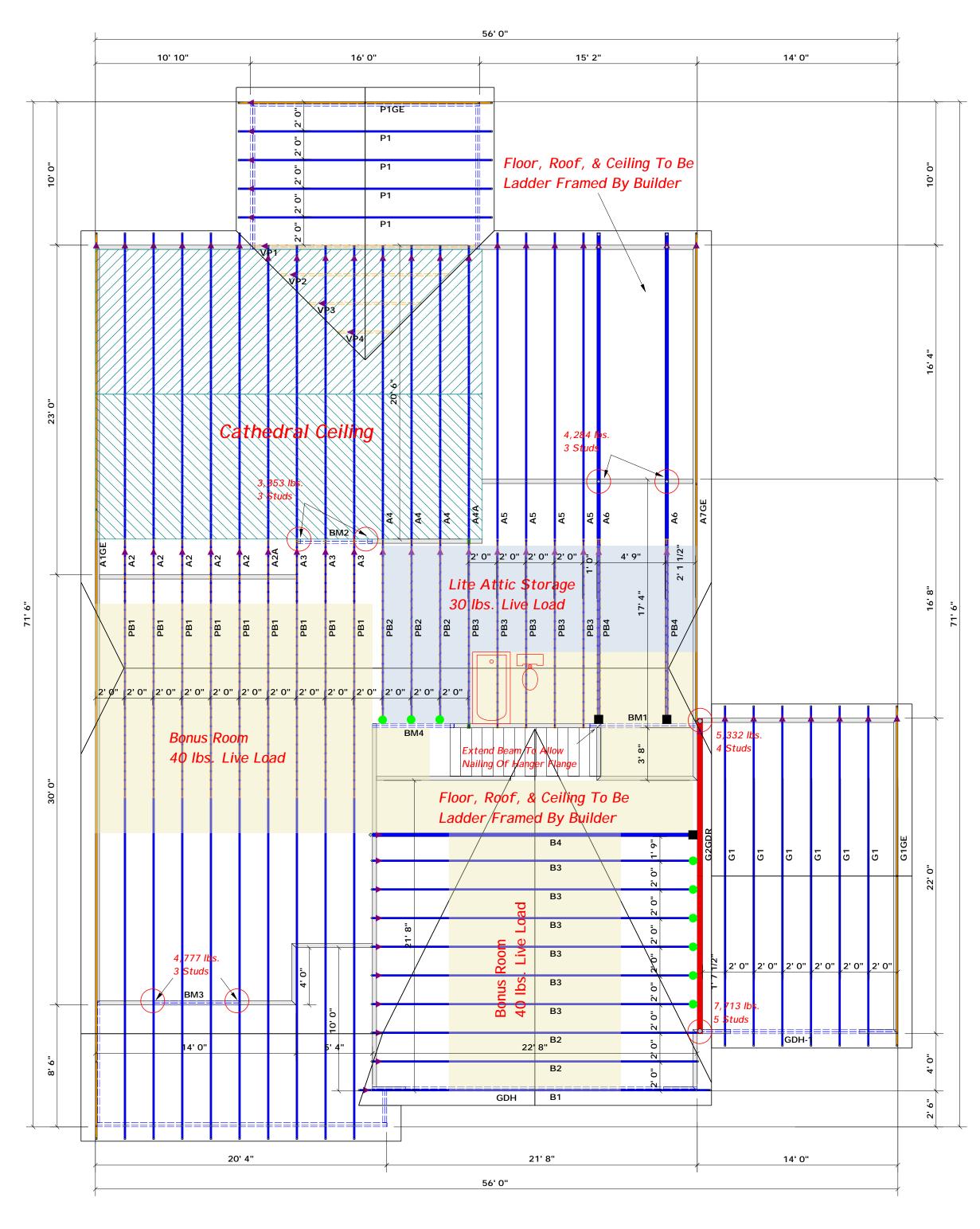
PORCH ADDENDUM

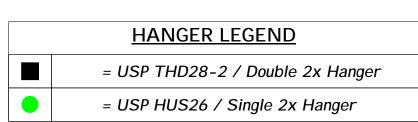
I The Lauren

HEATED OPTIONAL

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ADDENDUM





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

UND SUGGESTION
(UP TO)
(PEQUESTLES FOR

3400

6600 2

10200 3

13600 4

17000 5

BUILDER

PLAN

JOB NAME

SEAL DATE

QUOTE #

JOB #

Weaver Development

2/24/20

Quote #

J0421-2506

Lot 2 Atkins Farm Estates

The Lauren H / Elev. B / CP / 3 Car

LOAD CHART FOR JACK STUDS

(DANFO ON FRANKESOS 5(1) A (N))
NUMBER OF JACK STUDG REQUIRE(DIR) (A CND OF FEAGER/REGOER)

2550 1 5100 2

7650 3

10200 4 12750 5

15300 6

1700 1 3400 2

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

-- Denotes Reaction Greater than 3,000 lbs.

CITY / CO.

ADDRESS

DATE REV.

DRAWN BY

SALES REP.

MODEL

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

Lillington / Harnett

Model

04/21/21

Curtis Quick

Lenny Norris

Spring Hill Church Rd.

				
PlotID	Length	Product	Plies	Net Qty
BM1	8' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	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	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
BM4	6' 0"	2x10 SPF No.2	2	2
•				

THIS IS A TRUSS PLACEMENT DIAGRAM ONLY.

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

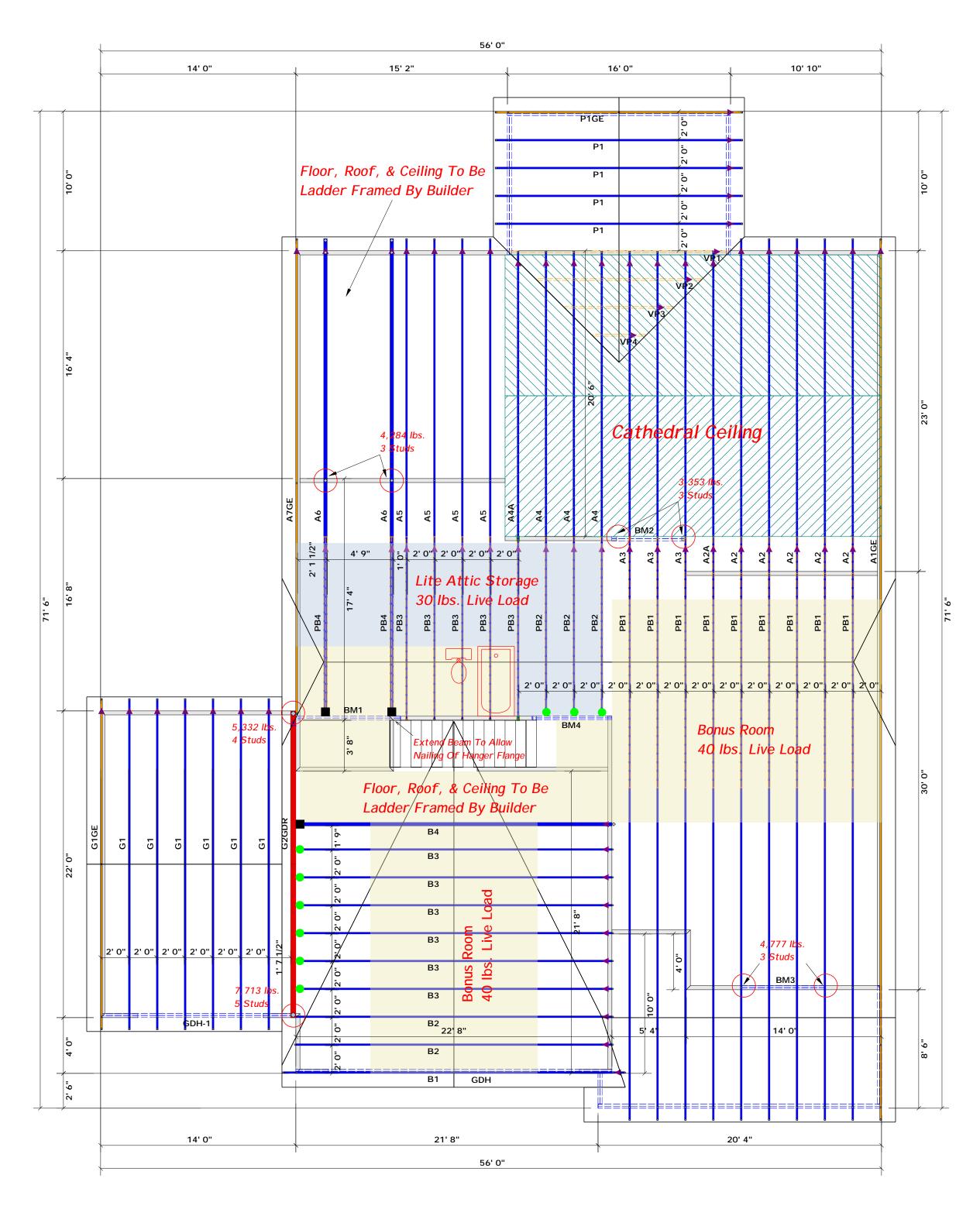
Bearing reactions less than or equal to 3000# are deemed to comply with the prescriptive Code requirements. The contractor shall refer to the attached Tables (derived from the prescriptive Code requirements) to determine the minimum foundation size and number of wood studs required to support reactions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

Curtis Quick

Curtis Quick



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



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

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

NOTE STATE OF THE STATE OF THE

6800 2

10200 3

13600 4

17000 5

> 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'

PlotID	Length	Product	Plies	Net Qty
BM1	8' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	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	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
BM4	6' 0"	2x10 SPF No.2	2	2

BUILDER	Weaver Development	CITY / CO.	Lillington / Harnett	THIS IS A TRUSS PLACEMENT DIAGRAM ONLY. These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on the placement drawing. The building designer
JOB NAME	Lot 2 Atkins Farm Estates	ADDRESS	Spring Hill Church Rd.	is responsible for temporary and permanent bracing of the roof and floor system and for the overall structure. The design of the truss support structure including headers, beams, walls, and columns is the responsibility of the building designer. For general guidance regarding bracing, consult BCSI-B1 and BCSI-B3 provided with the truss delivery package
PLAN	The Lauren H / Elev. B / CP / 3 Car	MODEL	Model	or online @ sbcindustry.com Bearing reactions less than or equal to 3000# are deemed to comply with the prescriptive Code requirements. The contractor shall refer to the attached Tables
SEAL DATE	2/24/20	DATE REV.	04/21/21	(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
QUOTE #	Quote #	DRAWN BY	Curtis Quick	specified in the attached Tables. A registered design professional shall be retained to design the support system for all reactions that exceed 15000#. Curtis Quick
JOB #	J0421-2506	SALES REP.	Lenny Norris	Curtis Quick



Fayetteville, N.C. 28309

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

Client: Weaver Development

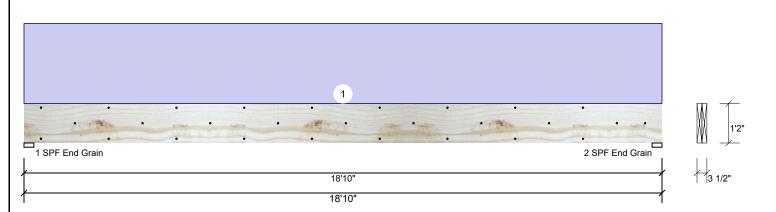
Project: Address:

5/28/2019

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

Project #:

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



Member Inform	nation						Reaction	ns UNPAT	TERNE	D lb (Uplift))		
Type:	Girder		Applicati	ion: I	Floor		Brg	Live	Dea	d Snow		Wind	Const
Plies:	2		Design I	Method:	ASD		1	0	245	7 0		0	0
Moisture Condition	Dry		Building	Code: I	BC 2012		2	0	245	7 0		0	0
Deflection LL:	360		Load Sh	aring: I	No								
Deflection TL:	240		Deck:	1	Not Checked								
Importance:	Normal												
Temperature:	Temp <= 100	O°F					Bearing						
							Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb
							1 - SPF End	3.500"	23%	2457 / 0	2457	Uniform	D
Analysis Result	S						Grain						_
Analysis Act	ual	Location	Allowed	Capacity	Comb.	Case	2-SPF	3.500"	23%	2457 / 0	2457	Uniform	D
Moment 110	11 ft-lb	9'5"	24299 ft-lb	0.453 (45%	%) D	Uniform	End Grain						
Unbraced 110	11 ft-lb	9'5"	11013 ft-lb	1.000 (100%)	D	Uniform							
Shear 209	3 lb	1'4 3/4"	9408 lb	0.222 (22%	6) D	Uniform							

Uniform

Design Notes

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

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.

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 approvals

 2 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

This design is valid until 11/15/2021

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

Manufacturer Info





Client:

Project: Address: Weaver Development

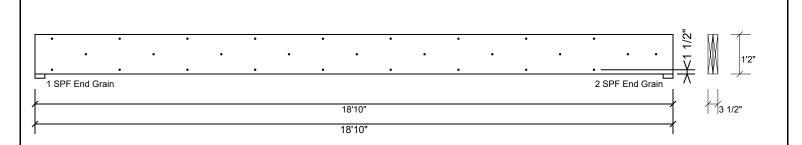
5/28/2019

Designer: Curtis Quick Job Name: The Lauren H Beams Page 2 of 10

Project #:

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

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		
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

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 11/15/2021



Client:

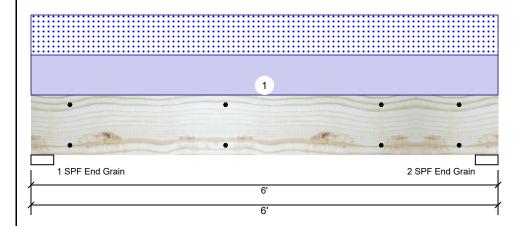
Project: Address: Weaver Development

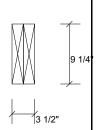
5/28/2019 Designer:

Curtis Quick Job Name: The Lauren H Beams

Project #:

Front Window Header Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED Level: Level





Page 3 of 10

Member Information

Туре:	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

Reactions UNPATTERNED Ib (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	2188	2166	0	0
2	0	2188	2166	0	0

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5571 ft-lb	3'	14423 ft-lb	0.386 (39%)	D+S	L
Unbraced	5571 ft-lb	3'	11027 ft-lb	0.505 (51%)	D+S	L
Shear	2902 lb	1'	7943 lb	0.365 (37%)	D+S	L
LL Defl inch	0.043 (L/1545)	3'	0.185 (L/360)	0.230 (23%)	S	L
TL Defl inch	0.087 (L/769)	3'	0.277 (L/240)	0.310 (31%)	D+S	L

Bearings

Bearing L	_ength	Cap. F	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF 3 End Grain	3.500"	41%	2188 / 2166	4354	L	D+S
2 - SPF 3 End Grain	3.500"	41%	2188 / 2166	4354	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

0 2010.0	a ololiaolilooo lake bacca oli e									
ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	722 PI F	0 PLF	722 PI F	0 PI F	0 PI F	A2

Self Weight 7 PI F

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

This design is valid until 11/15/2021

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

Manufacturer Info





Client:

Project: Address: Weaver Development

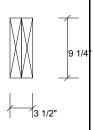
Date: 5/28/2019

Designer: Curtis Quick Job Name: The Lauren H Beams

Project #:

2-Ply - PASSED Level: Level **Kerto-S LVL** 1.750" X 9.250" **Front Window Header**

1/2" 1 SPF End Grain 2 SPF End Grain 6' 6'



Page 4 of 10

Multi-Ply Analysis

Fasten all plies using 2 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	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
- This design is valid until 11/15/2021

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





Client:

Project: Address: Weaver Development

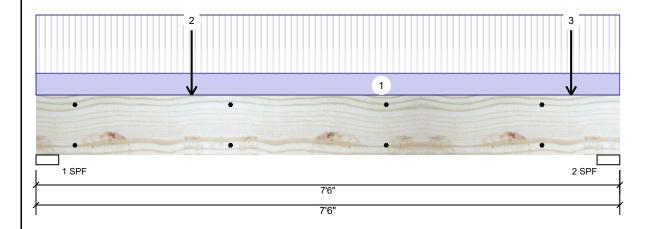
Date: 5/28/2019

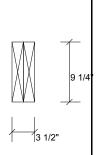
Designer: Curtis Quick Job Name: The Lauren H Beams

Project #:

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

Level: Level





Page 5 of 10

Member Information

Type: Plies: 2 Moisture Condition: Dry Deflection LL: 360 Deflection TL: 240 Importance: Normal Application: Floor Design Method: ASD

> **Building Code:** IBC 2012 Load Sharing: No

Deck: Not Checked

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. Case	Ld. Comb.
1 - SPF 3.500"	35% 959 / 876	1834 L	D+S
2 SDE 3.500"	52% 1384 / 1300	2684 I	D+S

Analysis Results

Temperature:

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.

Temp <= 100°F

- 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	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

This design is valid until 11/15/2021

Manufacturer Info Metsä Wood

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





Client: Weaver Development

Project: Address:

Date: 5/28/2019

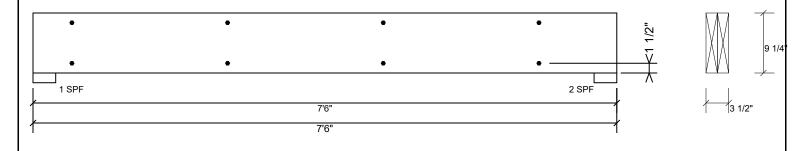
Designer: Curtis Quick Job Name: The Lauren H Beams Page 6 of 10

Project #:

1.750" X 9.250" **Kerto-S LVL**

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"

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

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 11/15/2021

Client:

Project: Address: Weaver Development

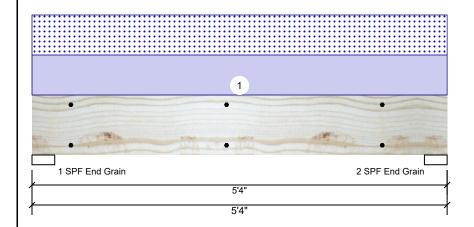
5/28/2019 Designer: Curtis Quick

Job Name: The Lauren H Beams

Project #:

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

Level: Level



Application:

Design Method:

Building Code:

Load Sharing:

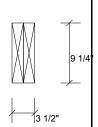
Deck:

ASD

No

IBC 2012

Not Checked



Page 7 of 10

Member Information

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

Temp <= 100°F

Reactions UNPATTERNED Ib (Uplift)

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

Bearings

Grain

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

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.

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
	Self Weight				7 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

This design is valid until 11/15/2021

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

Manufacturer Info



Client: Weaver Development

Project:

Address:

Date: 5/28/2019 Designer:

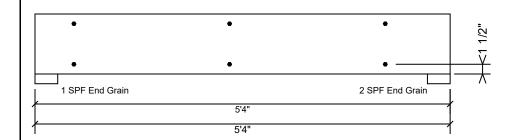
Curtis Quick Job Name: The Lauren H Beams

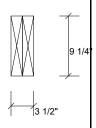
Project #:

Kerto-S LVL 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"

rasteri ali piles asirig E i	0113 01 3D 11 LL330 at L 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

This design is valid until 11/15/2021

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

Manufacturer Info







Client: Weaver Development

Project: Address: Date:

5/28/2019

Designer: Curtis Quick Job Name: The Lauren H Beams

Project #:

2.000" X 10.000" 2-Ply - PASSED S-P-F #2

Level: Level

Reactions UNPATTERNED Ib (Uplift)

Dead

782

782

Live

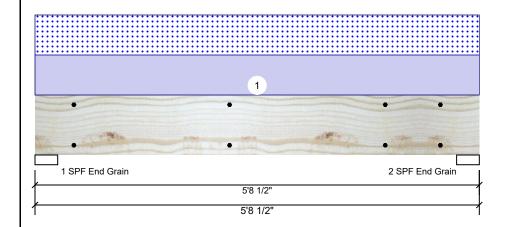
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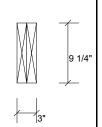
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Brg

1

2





Const

0

0

Page 9 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

Bearings								
Bearing	Length	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.		
1 - SPF End Grain	3.500"	35%	782 / 782	1564	L	D+S		
2 - SPF End Grain	3.500"	35%	782 / 782	1564	L	D+S		

Snow

782

782

Wind

0

0

Analysis Results

_							
	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
	Moment	1888 ft-lb	2'10 1/4"	3946 ft-lb	0.478 (48%)	D+S	L
	Unbraced	1888 ft-lb	2'10 1/4"	3629 ft-lb	0.520 (52%)	D+S	L
	Shear	1016 lb	1'	2872 lb	0.354 (35%)	D+S	L
	LL Defl inch	0.017 (L/3726)	2'10 1/4"	0.175 (L/360)	0.100 (10%)	S	L
	TL Defl inch	0.034 (L/1863)	2'10 1/4"	0.262 (L/240)	0.130 (13%)	D+S	L

Design Notes

- 1 Fasten all plies using 2 rows of SDW22300 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			Top	274 PI F	0 PI F	274 PI F	0 PI F	0 PI F	A4

This design is valid until 11/15/2021





Client: Project: Address:

Weaver Development

nent

Date: 5/28/2019

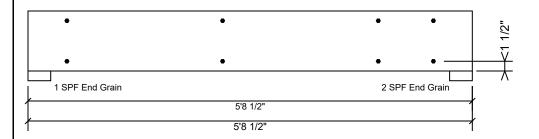
Designer: Curtis Quick

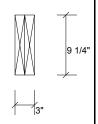
Job Name: The Lauren H Beams

Project #:

BM3 S-P-F #2 2.000" X 10.000"

2-Ply - PASSED Level: Level





Page 10 of 10

Multi-Ply Analysis

Fasten all plies using 2 rows of SDW22300 at 24" o.c.. Maximum end distance not to exceed 12"

0.0 % Capacity 0.0 PLF Load 255.0 PLF Yield Limit per Foot 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

Manufacturer Info

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