\* "10/13" MEANS R-10 SHEATHING INSULATION OR R-13 CAVITY INSULATION

\*\* INSULATION DEPTH WITH MONOLITHIC SLAB 24" OR FROM INSPECTION GAP TO BOTTOM OF FOOTING; INSULATION DEPTH WITH STEM WALL SLAB 24" OR TO BOTTOM OF FOUNDATION WALL

DESIGNED FOR WIND SPEED OF 120 MPH, 3 SECOND GUST (93 FASTEST MILE) EXPOSURE "B"  COMPONENT & CLADDING DESIGNED FOR THE FOLLOWING LOADS  MEAN ROOF UP TO 30' 30'-1" TO 35' 35'-1" TO 40' 40'-1" TO 45'  ZONE 1 14.2 -15.0 14.9 -15.8 15.5 -16.4 15.9 -16.8  ZONE 2 14.2 -18.0 14.9 -18.9 15.5 -19.6 15.9 -20.2  ZONE 3 14.2 -18.0 14.9 -18.9 15.5 -19.6 15.9 -20.2  ZONE 4 15.5 -16.0 16.3 -16.8 16.9 -17.4 17.4 -17.9								
COMPONENT								
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
70NF 5	15.5	-20.0	16.3	-21.0	16.9	-21.8	17 4	-22 4

# **ROOF VENTILATION**

**R806.1 Ventilation required.** Enclosed *attics* and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters shall have cross ventilation for each separate space by ventilating openings protected against the entrance of rain or snow. Ventilation openings shall have a least dimension of 1/16 inch (1.6 mm) minimum and 1/4 inch (6.4 mm) maximum. Ventilation openings having a least dimension larger than 1/4 inch (6.4 mm) shall be provided with corrosion-resistant wire doth screening, hardware cloth, or similar material with openings having a least dimension of 1/16 inch (1.6 mm) minimum and 1/4 inch (6.4 mm) maximum. Openings in roof framing members shall conform to the requirements of Section R802.7.

**R806.2 Minimum area.** The total net free ventilating area shall not be less than 1/150 of the area of the space ventilated except that reduction of the total area to 1/300 is permitted provided that at least 50 percent and not more than 80 percent of the required ventilating area is provided by ventilators located in the upper portion of the space to be ventilated at least 3 feet (914 mm) above the eave or cornice vents with the balance of the required ventilation provided by eave or cornice vents. As an alternative, the net free cross-ventilation area may be reduced to 1/300 when a Class I or II vapor retarder is installed on the warm-in-winter side of the ceiling. Exceptions:

1. Enclosed attic/rafter spaces requiring less than 1 square foot (0.0929 m2) of ventilation may be vented with continuous soffit ventilation only. 2. Enclosed attic/rafter spaces over unconditioned space may be vented with continuous soffit vent only.

SQUARE FOOTAGE OF ROOF TO BE VENTED = 2,402 SQ.FT.

NET FREE CROSS VENTILATION NEEDED:

WITHOUT 50% TO 80% OF VENTING 3'-0" ABOVE EAVE = 16.01 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 = 8.0 SQ.FT.

## **GUARD RAIL NOTES**

Z:\Builder\TLE Homes\210801B Mt Olive\210801B Mt Olive-Stick.

**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 the treads.

#### Exceptions:

- 1. Guards on the open sides of stairs shall have a height not less than 34 inches (864 mm) measured vertically from a line connecting the leading edges of the treads.
- 2. Where the top of the *guard* also serves as a handrail on the open sides of stairs, the top of the *guard* shall not be not less than 34 inches (864 mm) and not more than 38 inches (965 mm) measured vertically from a line connecting the leading edges of the treads.

**R312.3 Opening limitations.** Required *quards* shall not have openings from the walking surface to the required *guard* height which allow passage of a sphere 4 inches (102 mm)in diameter.

#### Exceptions:

- 1. The triangular openings at the open side of a stair, formed by the riser, tread and bottom rail of a *guard*, shall not allow passage of a sphere 6 inches (153 mm) in diameter.
- 2. Guards on the open sides of stairs shall not have openings which allow passage of a sphere 43/8 inches (111 mm) in diameter.

## **AIR LEAKAGE**

#### Section N1102.4

 $\textbf{N1102.4.1 Building thermal envelope.} \ \mathsf{The \ building \ thermal}$ 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:

BRICK VENEER

AS SPECIFIED

- 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.



# **FRONT ELEVATION**

SCALE 1/4" = 1'-0"

RIDGE VENT AS REQUIRED



BRICK VENEER

AS SPECIFIED

# **REAR ELEVATION**

SCALE 1/4" = 1'-0"

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**ELEVATIONS** Olive REAR Mount **∞ FRONT** 

APPROVED

11/02/2021



SQUARE FOOTAGE HEATED FIRST FLOOR SECOND FLOOR PLAYROOM TOTAL UNHEATED

GARAGE FRONT PORCH REAR PORCH STORAGE TOTAL

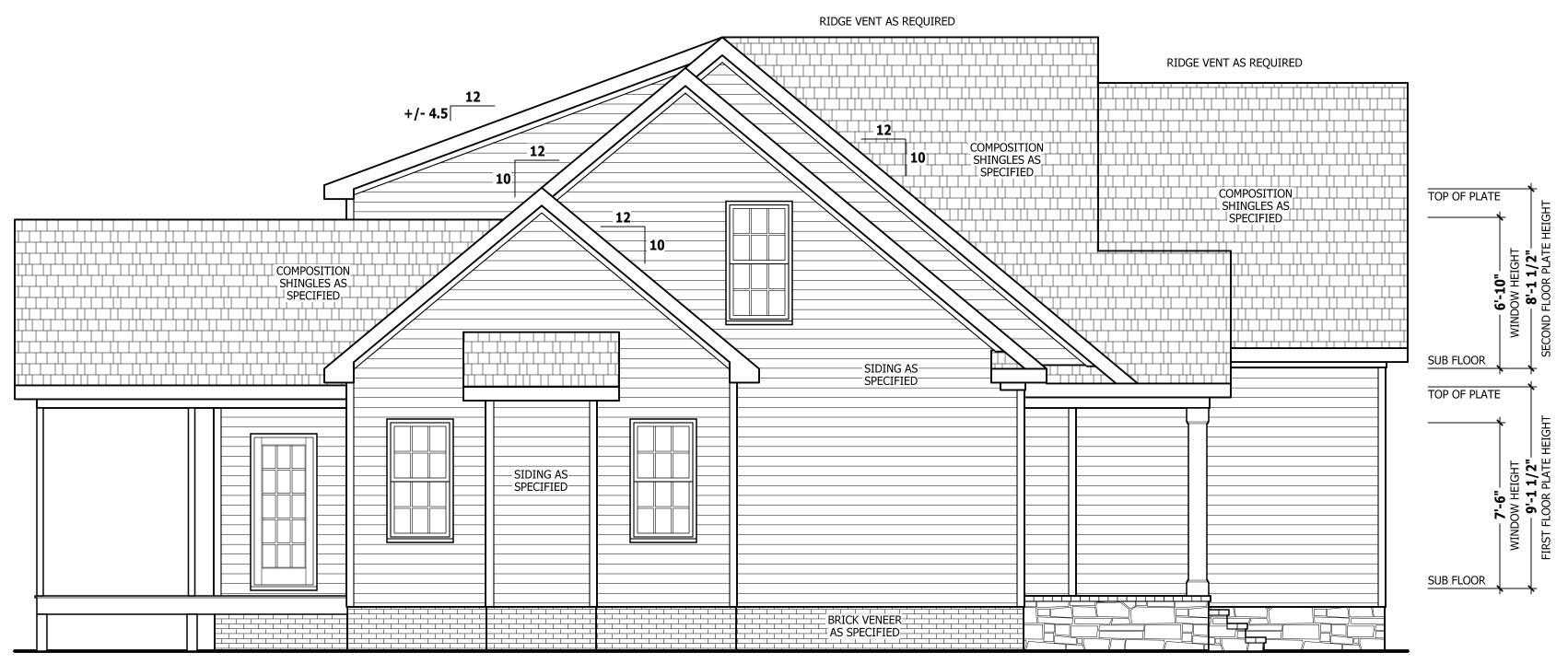
SUB FLOOR

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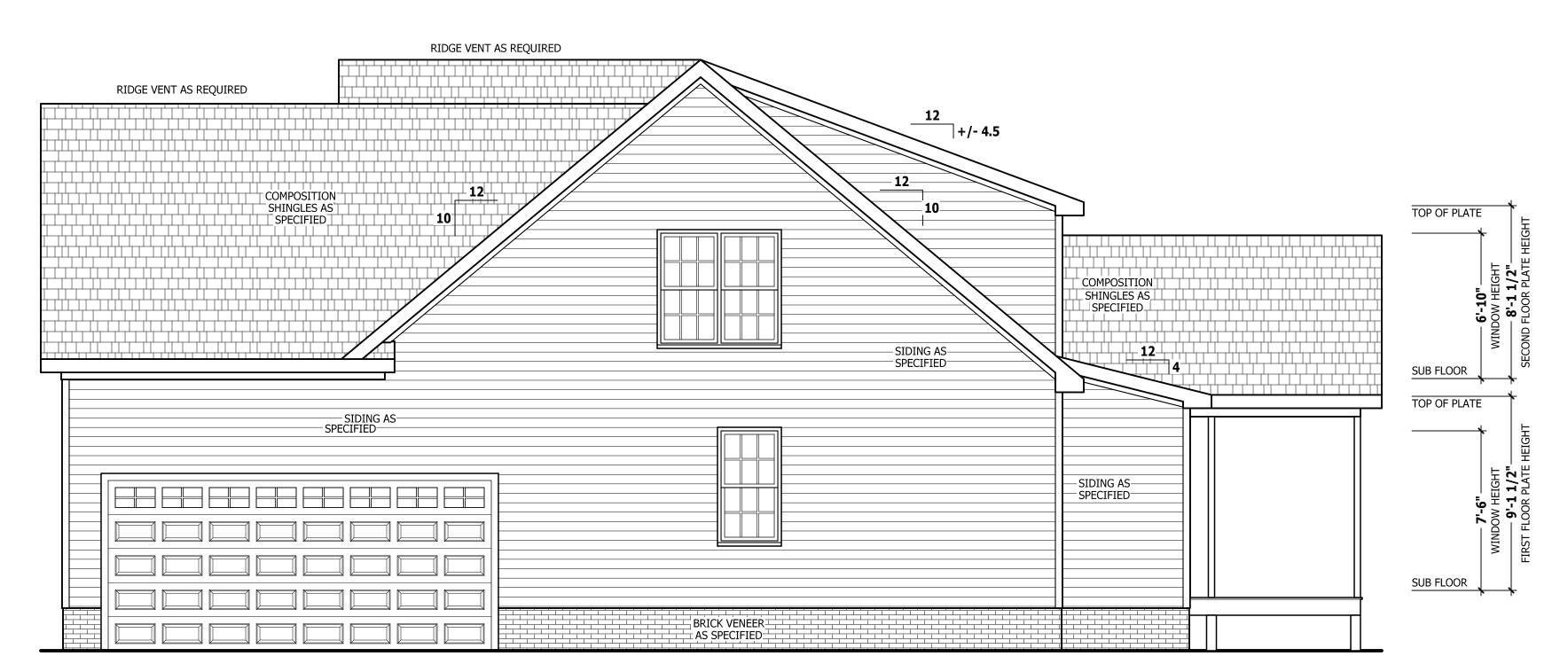
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SCALE 1/4" = 1'-0"



# RIGHT SIDE ELEVATION

SCALE 1/4" = 1'-0"

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**ELEVATIONS** Olive Mount **RIGHT** ∞

LEFT



 SQUARE FOOTAGE

 HEATED
 1672 SQ.FT.

 FIRST FLOOR
 552 SQ.FT.

 SECOND FLOOR
 552 SQ.FT.

 PLAYROOM
 493 SQ.FT.

 TOTAL
 2717 SQ.FT.

 UNHEATED
 6ARAGE

 GARAGE
 481 SQ.FT.

481 SQ.FT. 135 SQ.FT. 194 SQ.FT. 265 SQ.FT. 1075 SQ.FT. GARAGE FRONT PORCH REAR PORCH STORAGE TOTAL

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**PLAN** Olive **FOUNDATION** Mount

SQUARE FOOTAGE HEATED

FIRST FLOOR SECOND FLOOR PLAYROOM UNHEATED

GARAGE FRONT PORCH REAR PORCH STORAGE

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PLAN **Mount Olive** FLOOR

SQUARE FOOTAGE HEATED

FIRST FLOOR SECOND FLOOR PLAYROOM TOTAL UNHEATED

GARAGE FRONT PORCH REAR PORCH STORAGE TOTAL

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# **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 (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 7/16" thick. **CONCRETE AND SOILS:** See foundation notes.

## **BRACE WALL PANEL NOTES**

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

**GYPSUM:** All interior sides of exterior walls and both sides interior walls to have 1/2" gypsum installed. When not using method GB gypsum to be fastened per table R702.3.5. Method GB to be fastened per table R602.10.1.

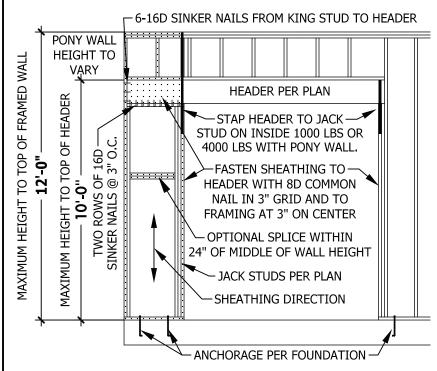
**REQUIRED LENGTH OF BRACING:** Required brace wall length for each side of the circumscribed rectangle are interpolated per table R602.10.3. Methods CS-WSP and CS-SFB contribute their actual length. Method GB contributes 0.5 it's actual length. Method PF contributes 1.5 times its actual length.

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

#### **Methods** Per Table R602.10.1

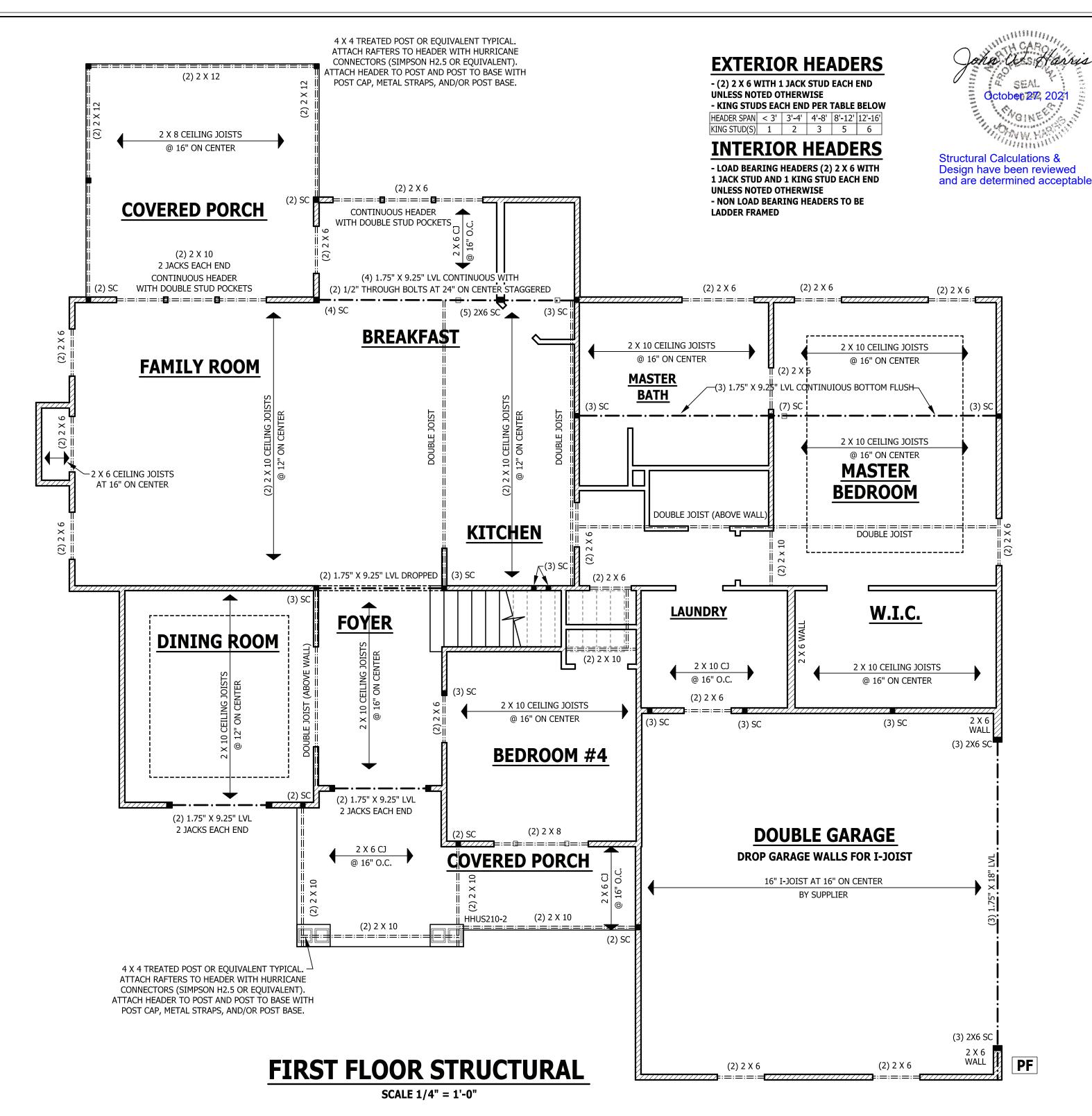
CS-WSP: Shall be minimum 3/8" OSB or CDX nailed at 6" on center at edges and 12" on center at intermediate supports with 6d common nails or 8d(2 1/2" long x 0.113" diameter). **CS-SFB:** Shall be minimum 1/2" structural fiber board nailed at 3" on center at edges and 3" on center at intermediate supports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



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STRUCTURAL

Olive Mount FLOOR **FIRST** 



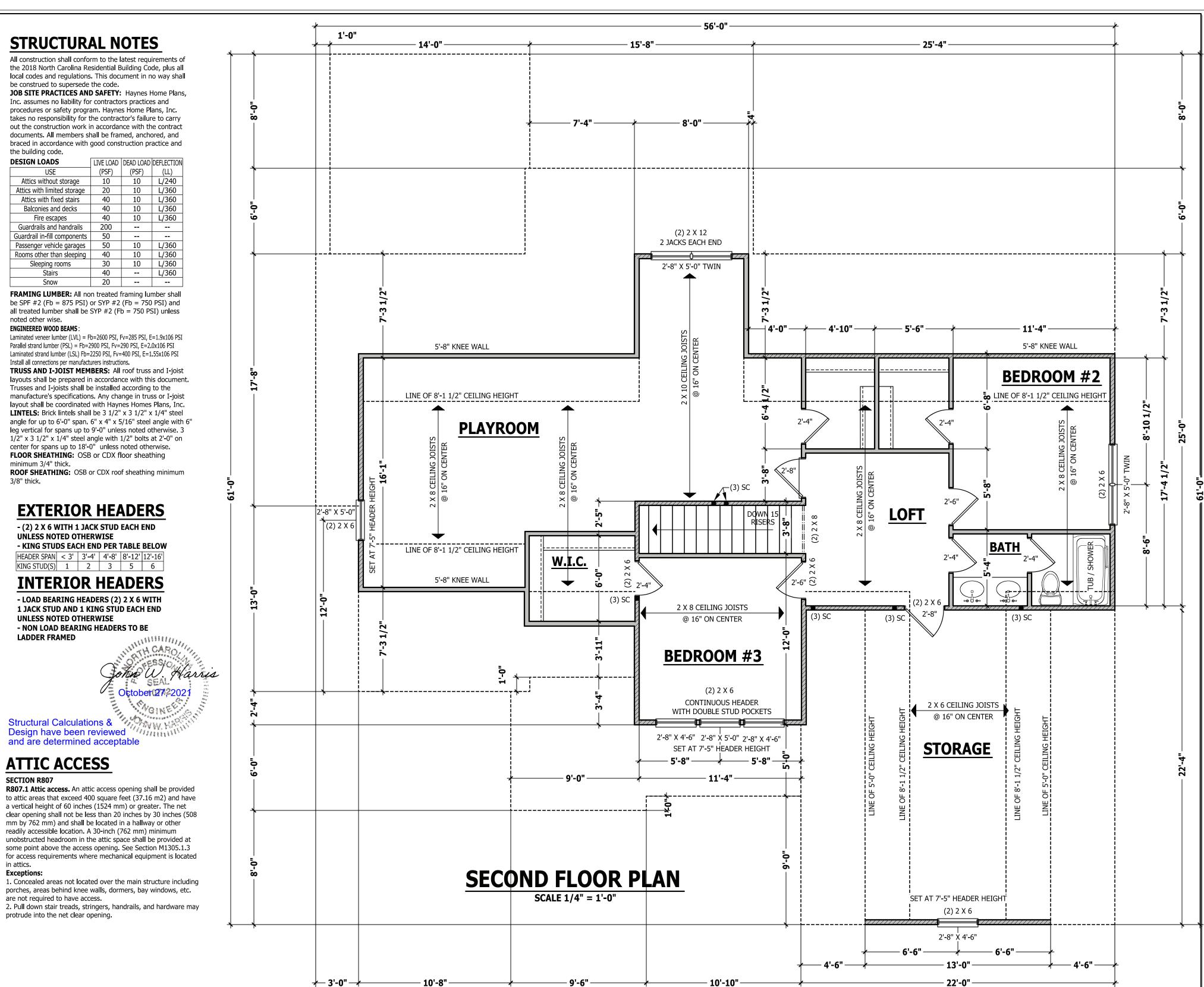
SQUARE FOOTAGE HEATED FIRST FLOOR SECOND FLOOR PLAYROOM UNHEATED

GARAGE FRONT PORCH REAR PORCH STORAGE TOTAL

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56'-0" -

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PLAN FLOOR ECOND

Olive

Mount

SQUARE FOOTAGE HEATED FIRST FLOOR SECOND FLOOR PLAYROOM

TOTAL UNHEATED

GARAGE FRONT PORCH REAR PORCH STORAGE

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and are determined acceptable

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**Mount Olive ROOF PLAN** 

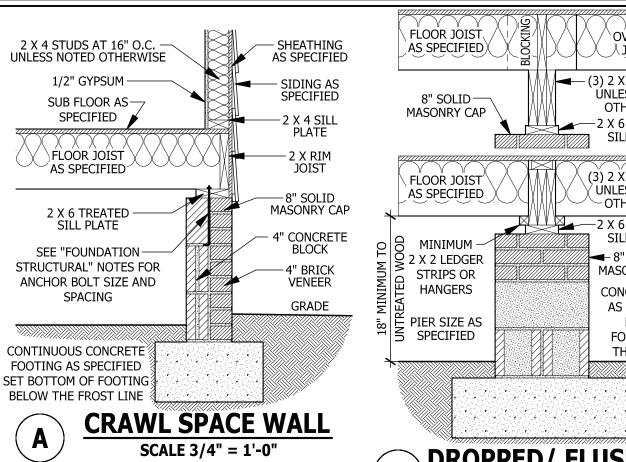
SQUARE FOOTAGE
HEATED
FIRST FLOOR 1672 SQ.FT.
SECOND FLOOR 552 SQ.FT.
PLAYROOM 493 SQ.FT.
TOTAL 2717 SQ. FT.

TOTAL UNHEATED GARAGE FRONT PORCH REAR PORCH STORAGE TOTAL

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#### 2 X 4 STUDS AT 16" O.C. 1/2" GYPSUM UNLESS NOTED OTHERWISE SEE "FOUNDATION -SHEATHING AS SPECIFIED STRUCTURAL" NOTES FOR ANCHOR BOLT SIZE AND SIDING AS **SPACING** 3 1/2" CONCRETE SLAB 2 X 6 TREATED FIBER REINFORCED OR 6 X 6 SILL PLATE 10/10 WELDED WIRE MESH 8" SOLID REINFORCED WITH CHAIRS MASONRY CAP **EXPANSION JOINT** 4" BRICK 6 MIL VAPOR BARRIER VENEER GRADE ్డ్ 4" APPROVED BASE శ్రీ క్లో TAMPED OR UNDISTURBED CONTINUOUS CONCRETE **≬EARTH**∅ FOOTING AS SPECIFIED SET BOTTOM OF FOOTING BELOW THE FROST LINE

**GARAGE STEM WALL** 

SCALE 3/4" = 1'-0"

# **DECK STAIR NOTES**

**SECTION AM110** 

D

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 provide lateral stability.

AM109.1.1. When the deck floor height is less than 4'-0" above finished grade per Figure AM109 and the deck is attached to the structure in accordance with Section AM104, lateral bracing is not required.

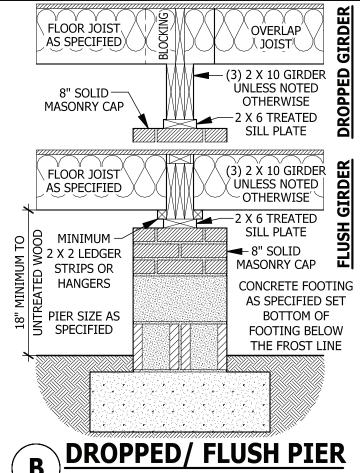
**AM109.1.2.** 4 x 4 wood knee braces may be provided on each column in both directions. The knee braces shall attach to each post at a point not less than 1/3 of the post length from the top of the post, and the braces shall be angled between 45 degrees and 60 degrees from the horizontal. Knee braces shall be bolted to the post and the girder/double band with one 5/8 inch hot dipped galvanized bolt with nut and washer at both ends of the brace per Figure AM109.1

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

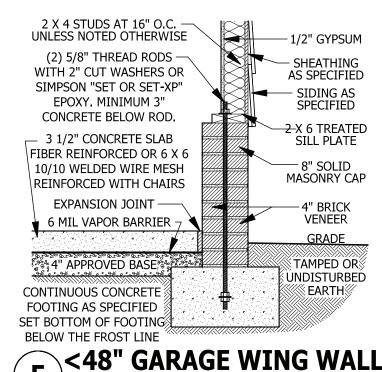
and the following:						
POST SIZE			EMBEDMENT DEPTH	CONCRETE DIAMETER		
4 X 4	48 SF	4'-0"	2'-6"	1'-0"		
6 X 6	120 SF	6'-0"	3'-6"	1'-8"		

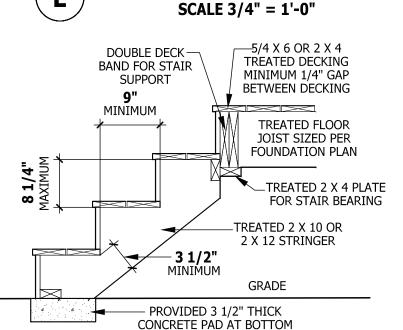
**AM109.1.4.** 2 x 6 diagonal vertical cross bracing may be provided in two perpendicular directions for freestanding decks or parallel to the structure at the exterior column line for attached decks. The 2 x 6's shall be attached to the posts with one 5/8 inch hot dipped galvanized bolt with nut and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

AM109.1.5. For embedment of piles in Coastal Regions, see Chapter 45.



# SCALE 3/4" = 1'-0"





E

SHEATHING +

AS SPECIFIED

LATH-

SEE FOUNDATION

FOR FOUNDATION

**DETAILS** 

**WEEP SCREED** 

**SCALE 3/4" = 1'-0"** 

# FIGURE AM110 TYPICAL DECK STAIR DETAIL

SCALE 3/4" = 1'-0"

AS SPECIFIED

VAPOR BARRIER

-WEEP SCREED

MINIMUM 4" TO

GROUND OR 2"

-TO PAVEMENT

GRADE

OF STEPS FOR BEARING

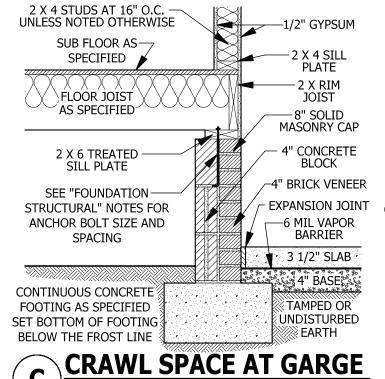
**WEEP SCREEDS** All weep screeds and stone veneer to be installed per manufactures instructions and STONE VEENER

> Building code. **R703.6.2.1 -** A minimum 0.019-inch (0.5 mm) (No. 26 galvanized sheet gage), corrosion-resistant weep screed or plastic weep screed, with a minimum vertical attachment flange of 31/2 inches (89 mm) shall be provided at or below the foundation plate line on exterior stud walls in accordance with ASTM C 926. The weep screed shall be placed a minimum of 4

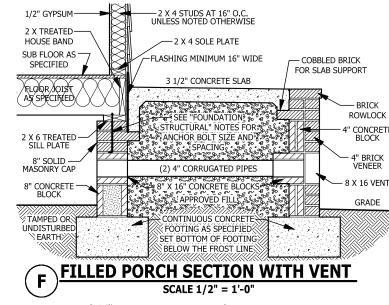
per the 2012 North Carolina Residential

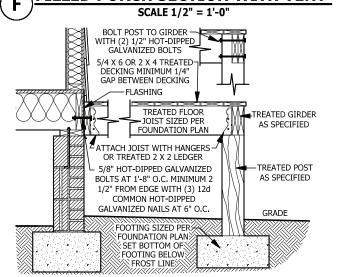
inches (51 mm) above paved areas and shall be of a type that will allow trapped water to drain to the exterior of the shall cover and terminate on the attachment flange of the weep screed.

inches (102 mm) above the earth or 2



**SCALE 3/4" = 1'-0"** 





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

# **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 NFPA 72. **R314.2 Smoke detection systems.** Household fire alarm systems installed in accordance with NFPA 72 that include smoke alarms, or a combination of smoke detector and audible notification device installed as required by this section for smoke alarms, shall be permitted. The household fire alarm system shall provide the same level of smoke detection and alarm as required by this section for smoke alarms. Where a household fire warning system is installed using a combination of smoke detector and audible notification device(s), it shall become a permanent fixture of the occupancy and owned by the homeowner. The system shall be monitored by an approved supervising station and be maintained in accordance with

NFPA 72. **Exception:** Where smoke alarms are provided meeting the requirements of Section R314.4.

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

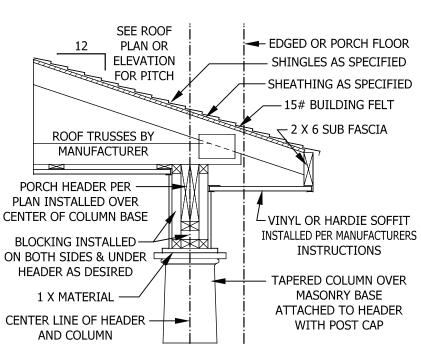
1. In each sleeping room.

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

3. On each additional story of the dwelling, including basements and habitable attics (finished) but not including crawl spaces, uninhabitable (unfinished) attics and uninhabitable (unfinished) attic-stories. In *dwellings* or *dwelling units* with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.

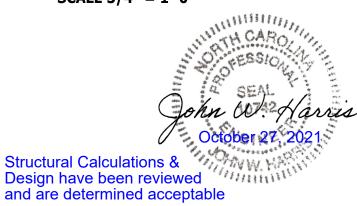
When more than one smoke alarm is required to be installed within in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit.

**R314.4 Power source.** Smoke alarms shall receive their primary power from the building wiring when such wiring is served from a building. The weather-resistant barrier shall commercial source, and when primary power is interrupted, shall lap the attachment flange. The exterior lath receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection. Smoke alarms shall be interconnected.



# **PORCH HEADER WITH TAPERED COLUMN**

SCALE 3/4" = 1'-0"



# **CARBON MONOXIDE ALARMS**

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 than 9/16 inch (14 mm). A nosing not less than 3/4 inch (19 mm) but not more than 1 1/4 inches (32 mm) shall be provided on stairways with solid

**R311.7.7 Handrails.** Handrails shall be provided on at least one side of each continuous run of treads or flight with four or more risers.

R311.7.7.1 Height. Handrail height, measured vertically from the sloped plane adjoining the tread nosing, or finish surface of ramp slope, shall be not less than 34 inches (864 mm)and not more than 38 inches (965 mm). **Exceptions:** 

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

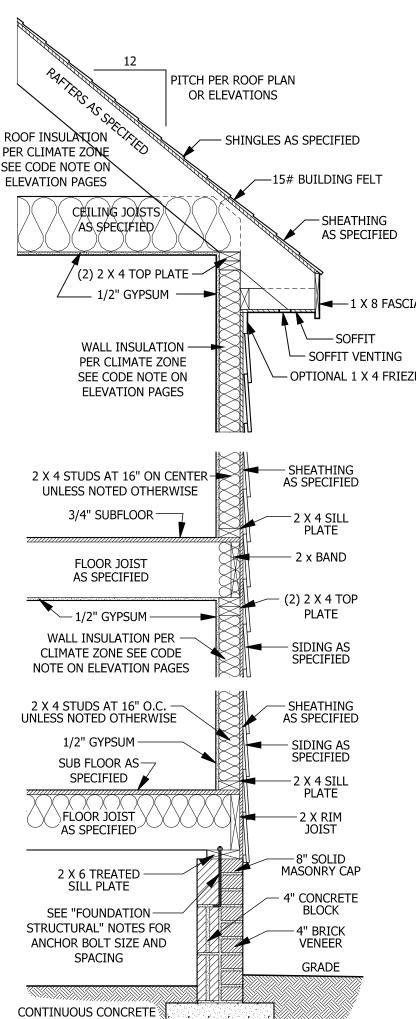
2. When handrail fittings or bendings are used to provide continuous transition between flights, the transition from handrail to guardrail, or used at the start of a flight, the handrail height at the fittings or bendings shall be permitted to exceed the maximum height.

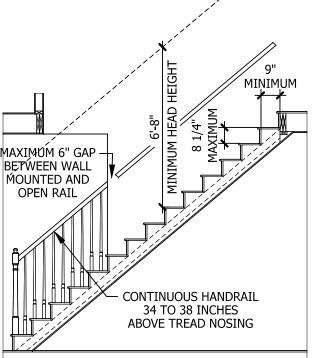
**R311.7.7.2 Continuity.** Handrails for stairways shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals.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

#### 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.





SCALE 3/4" = 1'-0"

FOOTING AS SPECIFIED

SET BOTTOM OF FOOTING

TYPICAL STAIR DETAIL

SQUARE FOOTAGE HEATED 1672 SQ.F 552 SQ.F 493 SQ.F 2717 SQ.F SECOND FLOOR PLAYROOM UNHEATED GARAGE FRONT PORCH REAR PORCH STORAGE

PURCHASER MUST VERIFY ALL

EFORE CONSTRUCTION BEGINS

HAYNES HOME PLANS, INC.

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<u>Olive</u>

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DET,

**TYPICAL** 

IGINEER SHOULD BE CONSULTED

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# TYPICAL WALL DETAIL

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