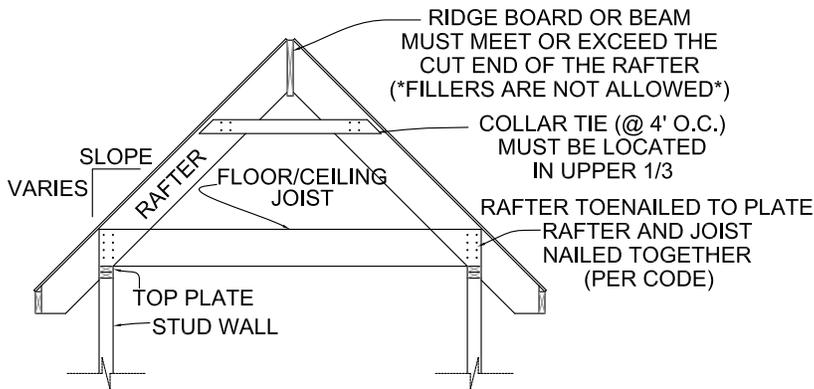


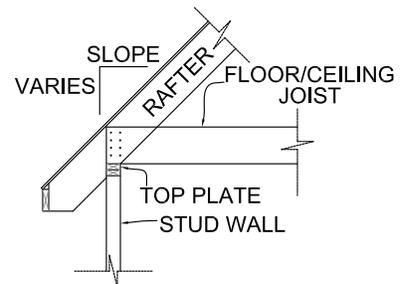
Town of Farragut - Building Code Enforcement & Inspections

Roof Framing

PRESCRIPTIVE METHOD FOR RIDGE BOARD / BEAM & RAFTER CONNECTION PER IRC 2012 - SECTION R802.3 (RAFTERS AND CEILING/FLOOR JOIST PARALLEL)



PRESCRIPTIVE METHOD FOR RAFTER/CEILING JOIST CONNECTION PER IRC 2012 - SECTION R802.3.1 (RAFTERS AND CEILING/FLOOR JOIST PARALLEL)



IRC Section R802.3 - FRAMING DETAILS:

RAFTERS SHALL BE FRAMED TO THE RIDGE BOARD OR TO EACH OTHER WITH A GUSSET PLATE AS A TIE. RIDGE BOARD SHALL BE AT LEAST 1-INCH NOMINAL THICKNESS AND NOT LESS IN DEPTH THAN THE CUT END OF THE RAFTER. AT ALL VALLEYS AND HIPS THERE SHALL BE A VALLEY OR HIP RAFTER NOT LESS THAN 2-INCH NOMINAL THICKNESS AND NOT LESS IN DEPTH THAN THE CUT END OF THE RAFTER. HIPS AND VALLEY RAFTERS SHALL BE SUPPORTED AT THE RIDGE BY A BRACE TO A BEARING PARTITION OR BE DESIGNED TO CARRY AND DISTRIBUTE THE SPECIFIC LOAD AT THAT POINT. WHERE THE ROOF PITCH IS LESS THAN THREE UNITS VERTICAL IN 12 UNITS HORIZONTAL, STRUCTURAL MEMBERS THAT SUPPORT RAFTERS AND CEILING JOISTS, SUCH AS RIDGE BEAMS, HIPS AND VALLEYS, SHALL BE DESIGNED AS BEAMS.

IRC Section R802.3.1 - CEILING JOIST AND RAFTER CONNECTIONS:

CEILING JOIST AND RAFTERS SHALL BE NAILED TO EACH OTHER IN ACCORDANCE WITH TABLE R802.5.1(9), AND THE RAFTER SHALL BE NAILED TO THE TOP WALL PLATE IN ACCORDANCE WITH TABLE R602.3(1). CEILING JOISTS SHALL BE CONTINUOUS OR SECURELY JOINED IN ACCORDANCE WITH TABLE R802.5.1(9) WHERE THEY MEET OVER INTERIOR PARTITIONS AND ARE NAILED TO ADJACENT RAFTERS TO PROVIDE A CONTINUOUS TIE ACROSS THE BUILDING WHEN SUCH JOIST ARE PARALLEL TO THE RAFTERS.

WHERE CEILING JOIST ARE NOT CONNECTED TO THE RAFTERS AT THE TOP WALL PLATE, JOISTS CONNECTED HIGHER IN THE ATTIC SHELL BE INSTALLED AS RAFTER TIES, OR RAFTER TIES SHALL BE INSTALLED TO PROVIDE A CONTINUOUS TIE. WHERE CEILING JOISTS ARE NOT PARALLEL TO RAFTERS, RAFTER TIES SHALL BE A MINIMUM OF 2 INCHES BY 4 INCHES NOMINAL, INSTALLED IN ACCORDANCE WITH THE CONNECTION REQUIREMENTS IN TABLE R802.5.1(9), OR CONNECTIONS OF EQUIVALENT CAPACITIES SHALL BE PROVIDED. WHERE CEILING JOIST OR RAFTER TIES ARE NOT PROVIDED, THE RIDGE FORMED BY THESE RAFTERS SHALL BE SUPPORTED BY A WALL OR GIRDER DESIGNED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE. COLLAR TIES OR RIDGE STRAPS TO RESIST WIND UPLIFT SHALL BE CONNECTED IN THE UPPER THIRD OF THE ATTIC SPACE IN ACCORDANCE WITH TABLE R602.3(1).

SEE THE 2012 IRC BOOK FOR MORE INFORMATION AND/OR EXCEPTIONS

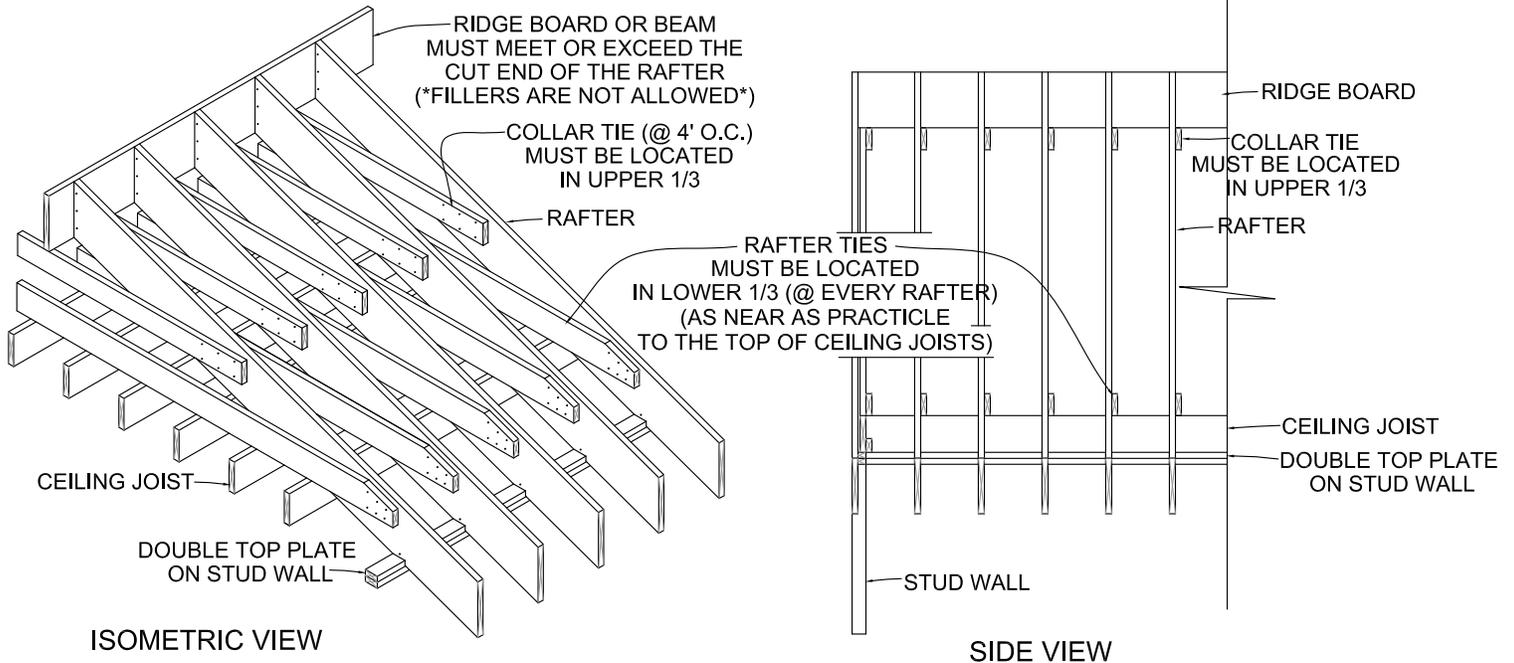
NOTE: ALTERNATIVE PRE-ENGINEERED WOOD TRUSSES ARE APPROVED FOR USE IN ACCORDANCE WITH:
IRC SECTION R802.10 - WOOD TRUSSES

Town of Farragut - Building Code Enforcement & Inspections

Roof Framing (Continued)

PRESCRIPTIVE METHOD FOR ROOF FRAMING PER IRC 2012 - SECTION R802.3

(RAFTERS AND CEILING JOIST PERPENDICULAR)



IRC Section R802.3 - FRAMING DETAILS:

RAFTERS SHALL BE FRAMED TO THE RIDGE BOARD OR TO EACH OTHER WITH A GUSSET PLATE AS A TIE. RIDGE BOARD SHALL BE AT LEAST 1-INCH NOMINAL THICKNESS AND NOT LESS IN DEPTH THAN THE CUT END OF THE RAFTER. AT ALL VALLEYS AND HIPS THERE SHALL BE A VALLEY OR HIP RAFTER NOT LESS THAN 2-INCH NOMINAL THICKNESS AND NOT LESS IN DEPTH THAN THE CUT END OF THE RAFTER. HIPS AND VALLEY RAFTERS SHALL BE SUPPORTED AT THE RIDGE BY A BRACE TO A BEARING PARTITION OR BE DESIGNED TO CARRY AND DISTRIBUTE THE SPECIFIC LOAD AT THAT POINT. WHERE THE ROOF PITCH IS LESS THAN THREE UNITS VERTICAL IN 12 UNITS HORIZONTAL, STRUCTURAL MEMBERS THAT SUPPORT RAFTERS AND CEILING JOISTS, SUCH AS RIDGE BEAMS, HIPS AND VALLEYS, SHALL BE DESIGNED AS BEAMS.

IRC Section R802.3.1 - CEILING JOIST AND RAFTER CONNECTIONS:

CEILING JOIST AND RAFTERS SHALL BE NAILED TO EACH OTHER IN ACCORDANCE WITH TABLE R802.5.1(9), AND THE RAFTER SHALL BE NAILED TO THE TOP WALL PLATE IN ACCORDANCE WITH TABLE R602.3(1). CEILING JOISTS SHALL BE CONTINUOUS OR SECURELY JOINED IN ACCORDANCE WITH TABLE R802.5.1(9) WHERE THEY MEET OVER INTERIOR PARTITIONS AND ARE NAILED TO ADJACENT RAFTERS TO PROVIDE A CONTINUOUS TIE ACROSS THE BUILDING WHEN SUCH JOIST ARE PARALLEL TO THE RAFTERS.

WHERE CEILING JOIST ARE NOT CONNECTED TO THE RAFTERS AT THE TOP WALL PLATE, JOISTS CONNECTED HIGHER IN THE ATTIC SHELL BE INSTALLED AS RAFTER TIES, OR RAFTER TIES SHALL BE INSTALLED TO PROVIDE A CONTINUOUS TIE. WHERE CEILING JOISTS ARE NOT PARALLEL TO RAFTERS, RAFTER TIES SHALL BE A MINIMUM OF 2 INCHES BY 4 INCHES NOMINAL, INSTALLED IN ACCORDANCE WITH THE CONNECTION REQUIREMENTS IN TABLE R802.5.1(9), OR CONNECTIONS OF EQUIVALENT CAPACITIES SHALL BE PROVIDED. WHERE CEILING JOIST OR RAFTER TIES ARE NOT PROVIDED, THE RIDGE FORMED BY THESE RAFTERS SHALL BE SUPPORTED BY A WALL OR GIRDER DESIGNED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE. COLLAR TIES OR RIDGE STRAPS TO RESIST WIND UPLIFT SHALL BE CONNECTED IN THE UPPER THIRD OF THE ATTIC SPACE IN ACCORDANCE WITH TABLE R602.3(1).

SEE THE 2012 IRC BOOK FOR MORE INFORMATION AND/OR EXCEPTIONS

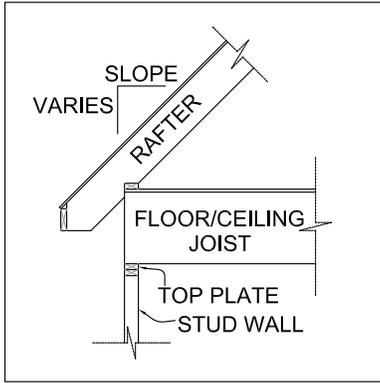
NOTE: ALTERNATIVE PRE-ENGINEERED WOOD TRUSSES ARE APPROVED FOR USE IN ACCORDANCE WITH:
IRC SECTION R802.10 - WOOD TRUSSES

Town of Farragut - Building Code Enforcement & Inspections

Roof Framing (Continued)

NON-PRESCRIPTIVE METHOD FOR ROOF FRAMING PER IRC 2012 - SECTION R802.3

(RAFTERS AND CEILING/FLOOR JOIST DO NOT TIE TOGETHER PER PRESCRIPTIVE METHOD OF FRAMING)



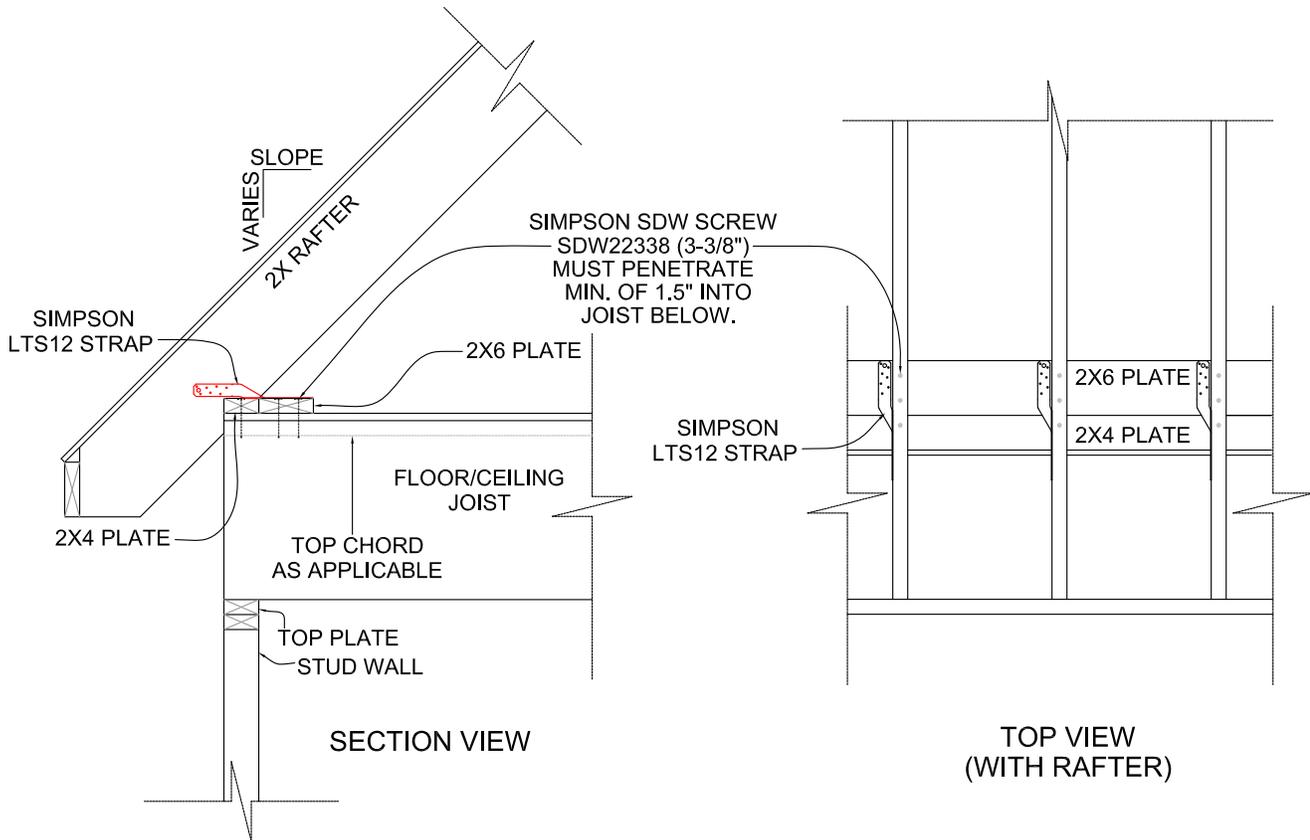
PLACING THE RAFTERS ON TOP OF THE CEILING/FLOOR JOIST, NAILED TO A CONTINUOUS 2X PLATE IS NOT A PRESCRIPTIVE METHOD OF ROOF FRAMING PER THE IRC 2012, CHAPTER 8, SECTION 802. IN SITUATIONS SIMILAR TO THE ILLUSTRATION (NON-PRESCRIPTIVE METHOD OF ROOF FRAMING). AN APPROVED ENGINEERED CONNECTION MUST BE USED AND CONTRACTORS MUST SUBMIT AN APPROVED, ENGINEERED DESIGN IN SUCH APPLICATIONS OR THE FOLLOWING CODE APPROVED ALTERNATIVE MAY BE USED:

← BASIC ILLUSTRATION
OF NON-PRESCRIPTIVE
METHOD OF ROOF FRAMING

CODE APPROVED ALTERNATIVE METHOD OF ROOF FRAMING

FOR RAFTERS SITTING ON TOP OF A 2X PLATE ON TOP OF THE CEILING/FLOOR JOIST

NOTE: THIS ALTERNATIVE METHOD IS NOT ALL-INCLUSIVE AND DOES NOT COMPLY IN ALL SITUATIONS
PLEASE CONSULT WITH BUILDING OFFICIAL FOR ADDITIONAL METHODS APPROVED FOR CONSTRUCTION
THE BUILDING OFFICIAL RESERVES THE RIGHT TO REQUIRE AN ENGINEERED FRAMING LETTER AS DEEMED NECESSARY



Town of Farragut - Building Code Enforcement & Inspections

Roof Framing (Continued)

