

A107 Toe-Nailed Jack Connections

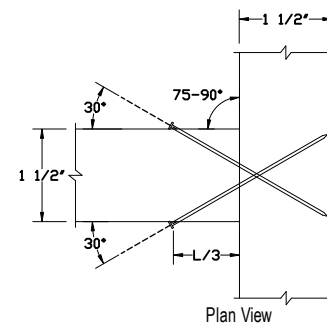
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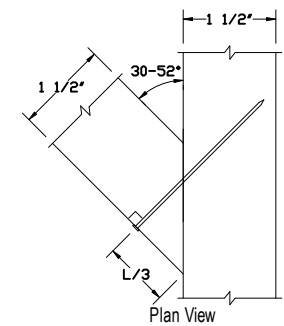
| Nail Type | Min. Nail Spacing (In.) | | | | No. of Nails | Minimum Chord Sizes | | Lateral Nail Resistance (lbs) | | | |
|----------------------------|-------------------------|-----|---------|-----|--------------|---------------------|---------|-------------------------------|---------|-----|---------|
| | SPF | | D.Fir-L | | | Detail A | | Detail B | | | |
| | c | d | c | d | | SPF | D.Fir-L | SPF | D.Fir-L | SPF | D.Fir-L |
| 0.120"Øx3.25" Pneumatic | 1 | 1/2 | 1-1/4 | 5/8 | 2 | 2x4 | 2x4 | 188 | 209 | 152 | 173 |
| | | | | | 3 | 2x4 | 2x6 | 282 | 313 | 229 | 259 |
| | | | | | 4 | 2x6 | 2x6 | 376 | 418 | 305 | 346 |
| 0.131"Øx3.25" Pneumatic | 1-1/8 | 5/8 | 1-3/8 | 3/4 | 2 | 2x4 | 2x4 | 221 | 246 | 174 | 197 |
| | | | | | 3 | 2x4 | 2x6 | 332 | 369 | 262 | 296 |
| | | | | | 4 | 2x6 | 2x6 | 442 | 492 | 349 | 395 |
| 0.122"Øx3.0" Common Spiral | 1 | 1/2 | 1-1/4 | 5/8 | 2 | 2x4 | 2x4 | 192 | 215 | 152 | 172 |
| | | | | | 3 | 2x4 | 2x6 | 288 | 323 | 228 | 258 |
| | | | | | 4 | 2x6 | 2x6 | 385 | 431 | 304 | 344 |
| 0.152"Øx3.5" Common Spiral | 1-1/4 | 5/8 | 1-5/8 | 7/8 | 2 | 2x4 | 2x4 | 283 | 322 | 225 | 254 |
| | | | | | 3 | 2x6 | 2x6 | 425 | 483 | 337 | 381 |
| | | | | | 4 | 2x6 | - | 566 | - | 450 | - |
| 0.144"Øx3.0" Common Wire | 1-1/8 | 5/8 | 1-1/2 | 3/4 | 2 | 2x4 | 2x4 | 244 | 277 | 196 | 222 |
| | | | | | 3 | 2x4 | 2x6 | 366 | 416 | 294 | 333 |
| | | | | | 4 | 2x6 | - | 488 | - | 393 | - |
| 0.160"Øx3.5" Common Wire | 1-3/8 | 3/4 | 1-5/8 | 7/8 | 2 | 2x4 | 2x4 | 304 | 346 | 243 | 275 |
| | | | | | 3 | 2x6 | 2x6 | 456 | 519 | 365 | 412 |
| | | | | | 4 | 2x6 | - | 609 | - | 486 | - |

- Note:** Lateral nail resistances above are the maximum factored vertical (downwards or upwards for uplift) end reaction capacities based on the following:
1. Capacities per CSA 086-09 (NBCC 2010) and CSA 086-14 (NBCC 2015).
 2. All minimum No.1/No.2 grade, dry and untreated lumber, used in dry service conditions and normal term load duration factor.
 4. All capacities are limited to toe-nailed jack members.
 5. Capacities are limited to the size, length & number of nails shown, the connection geometry shown in Details A & B, the minimum nail spacing requirements shown in Details 1 & 2, the lumber species combination and the minimum lumber chord sizes shown.
 6. Ensure minimum nail spacing as the number of nails shown may not be possible.
 7. 50% of the above lateral nail resistances shall be used for all square cut jack ends that are not flush cut to the supporting girder member. Square cut jacks are limited to a maximum 0.131" nail diameter.
 8. Hangers may be required for connections exceeding these capacities and limitations.

Detail A, End Jack to Hip Girder Truss

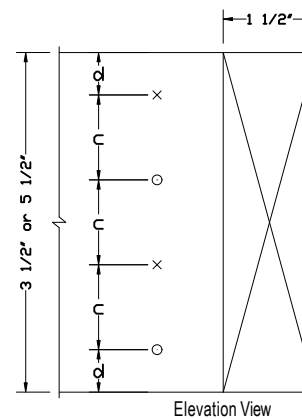


Detail B, Corner Jack to Corner Girder Truss



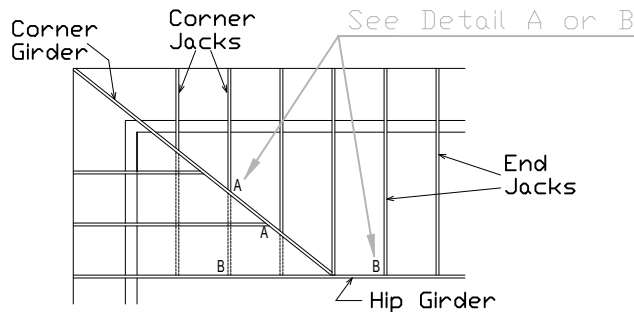
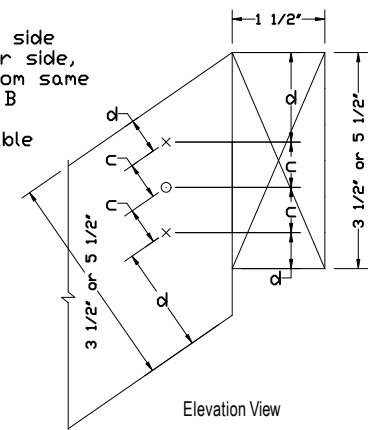
L = nail length

Detail 1, Minimum Nail Spacing Requirements



Detail 2, Minimum Nail Spacing Requirements

o = nail on far side
x = nail on near side, except nails from same side for Detail B
c & d = see table



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CCMC #12182-L, 12802-L, 13124-L

*****WARNING***** TRUSSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCSI-BIC (HANDLING, INSTALLING, RESTRAINING AND BRACING), JOINTLY PRODUCED BY TPIC, TPI AND SBCA, AND AVAILABLE AT WWW.BCSIINDUSTRY.COM/BCSI-CANADA FOR BEST PRACTICES PRIOR TO PERFORMING THESE FUNCTIONS. UNLESS OTHERWISE INDICATED, TOP CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE A PROPERLY ATTACHED RIGID CEILING. *****IMPORTANT***** FURNISH A COPY OF THIS DESIGN TO THE INSTALLATION CONTRACTOR. ALPINE SYSTEMS CORPORATION SHALL NOT BE RESPONSIBLE FOR ANY DEVIATION FROM THIS DESIGN; ANY FAILURE TO BUILD THE TRUSSES IN CONFORMANCE WITH TPIC OR FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING OF TRUSSES DESIGN CONFORMS WITH APPLICABLE PROVISIONS OF CSA 086 (CANADIAN STANDARDS ASSOCIATION), NBCC, AND TPIC. ALPINE CONNECTORS ARE MADE OF 2024 AL7N AL635 GRA4 GALV. STEEL EXCEPT AS NOTED. APPLY CONNECTORS TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED IN THIS DESIGN, POSITION CONNECTORS PER DRAWINGS 160 A-2. THE SEAL ON THIS DRAWING INDICATES ACCEPTANCE OF PROFESSIONAL ENGINEERING RESPONSIBILITY SOLELY FOR THE TRUSS COMPONENT DESIGN SHOWN. THE SUITABILITY AND USE OF THIS COMPONENT FOR ANY SPECIFIC BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER, PER APPLICABLE TPIC DESIGN STANDARD.