

# CLR Reinforcing Member Substitution

This detail is to be used when a Continuous Lateral Restraint (CLR) is specified on a truss design but an alternative web reinforcement method is desired.

## Notes:

This detail is only applicable for changing the specified CLR shown on single ply sealed designs to T-reinforcement or L-reinforcement or scab reinforcement.

Alternative reinforcement specified in chart below may be conservative. For minimum alternative reinforcement, re-run design with appropriate reinforcement type.

Use scabs instead of L- or T- reinforcement on webs with intersecting truss joints, such as K-web joints, that may interfere with proper application along the narrow face of the web.

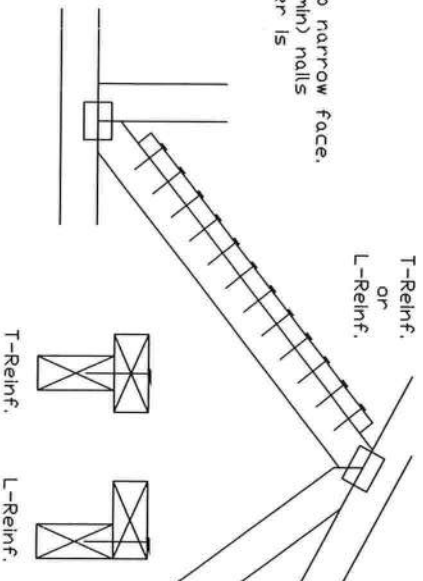
Web Member Size	Specified CLR Restraint	Alternative Reinforcement T- or L- Reinf. Scab Reinf.
2x3 or 2x4	1 row	2x4 1-2x4
2x3 or 2x4	2 rows	2x6 2-2x4
2x6	1 row	2x4 1-2x6
2x6	2 rows	2x6 2-2x4(*)
2x8	1 row	2x6 1-2x8
2x8	2 rows	2x6 2-2x6(*)

T-reinforcement, L-reinforcement, or scab reinforcement to be same species and grade or better than web member unless specified otherwise on Engineer's sealed design.

(\*) Center scab on wide face of web. Apply (1) scab to each face of web.

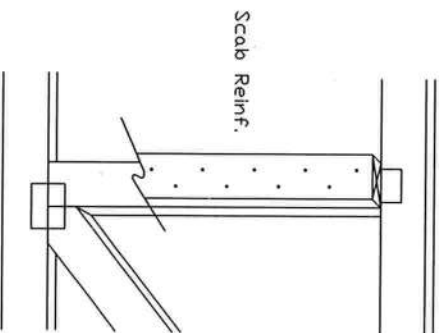
## T-Reinforcement or L-Reinforcement:

Apply to either side of web narrow face. Attach with 10d (0.128"x3.0" min) nails at 6" o.c. Reinforcing member is a minimum 80% of web member length.



## Scab Reinforcement:

Apply scabs to wide face of web. No more than (1) scab per face. Attach with 10d (0.128"x3.0" min) nails at 6" o.c. Reinforcing member is a minimum 80% of web member length.



## WARNING: READ AND FOLLOW ALL NOTES ON THIS DRAWING

Trusses require extreme care in fabricating, handling, shipping, installing and bracing. Refer to end of this drawing for details of Erection and Bracing. Component Safety Information by IPI and SBCA for safety practices prior to erection. Top chord shall have properly attached structural lateral restraint. Webs shall have a properly attached rigid ceiling. Locations shown for permanent lateral restraint of webs. Refer to drawings 1004's shown above and on the Joint Details, unless noted otherwise.

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No. 70861	TC LL	PSF	REF	CLR Subst.
STATE OF FLORIDA	BC DL	PSF	DATE	01/02/19
PROFESSIONAL ENGINEER	BC LL	PSF	DRWG	BRCB SUB0119
11/13/2020	TOT. LD.	PSF		
	DUR. FAC.			
	SPACING			

# NAIL SPACING DETAIL

MINIMUM SPACING FOR SINGLE BLOCK IS SHOWN. DOUBLE NAIL SPACINGS AND STAGGER NAILING FOR TWO BLOCKS. GREATER SPACING MAY BE REQUIRED TO AVOID SPLITTING.

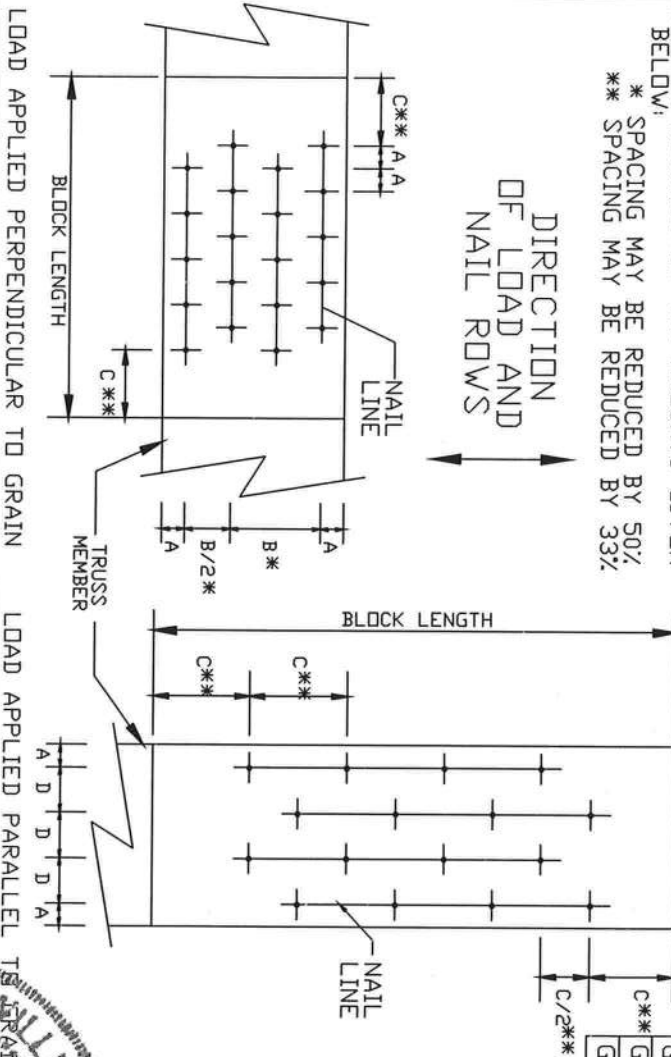
BLOCK LOCATION, SIZE, LENGTH, GRADE AND TOTAL NUMBER AND TYPE OF NAILS ARE TO BE SPECIFIED ON SEALED DESIGN REFERENCE THIS DETAIL.

- LOAD PERPENDICULAR TO GRAIN
  - A - EDGE DISTANCE AND SPACING BETWEEN STAGGERED ROWS OF NAILS (6 NAIL DIAMETERS)
  - B - SPACING OF NAILS IN A ROW (12 NAIL DIAMETERS)
  - C - END DISTANCE (15 NAIL DIAMETERS)
- LOAD PARALLEL TO GRAIN
  - A - EDGE DISTANCE (6 NAIL DIAMETERS)
  - C - SPACING OF NAILS IN A ROW AND END DISTANCE (15 NAIL DIAMETERS)
  - D - SPACING BETWEEN STAGGERED ROWS OF NAILS (7 1/2 NAIL DIAMETERS)

IF NAIL HOLES ARE PREBORED, SOME SPACING MAY BE REDUCED BY THE AMOUNTS GIVEN BELOW:

- \* SPACING MAY BE REDUCED BY 50%
- \*\* SPACING MAY BE REDUCED BY 33%

DIRECTION  
OF LOAD AND  
NAIL ROWS

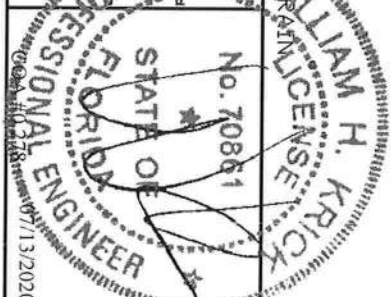


NAIL TYPE	DISTANCES			
	A	B*	C**	D
8d BOX (0.113" X 2.5", MIN)	3/4"	1 3/8"	1 3/4"	7/8"
10d BOX (0.128" X 3", MIN)	7/8"	1 5/8"	2"	1"
12d BOX (0.128" X 3.25", MIN)	7/8"	1 5/8"	2"	1"
16d BOX (0.135" X 3.5", MIN)	7/8"	1 5/8"	2 1/8"	1 1/8"
20d BOX (0.148" X 4", MIN)	1"	1 7/8"	2 1/4"	1 1/8"
8d COMMON (0.131" X 2.5", MIN)	7/8"	1 5/8"	2"	1"
10d COMMON (0.148" X 3", MIN)	1"	1 7/8"	2 1/4"	1 1/8"
12d COMMON (0.148" X 3.25", MIN)	1"	1 7/8"	2 1/4"	1 1/8"
16d COMMON (0.162" X 3.5", MIN)	1"	2"	2 1/2"	1 1/4"
GUN (0.120" X 2.5", MIN)	3/4"	1 1/2"	1 7/8"	1"
GUN (0.131" X 2.5", MIN)	7/8"	1 5/8"	2"	1"
GUN (0.120" X 3", MIN)	3/4"	1 1/2"	1 7/8"	1"
GUN (0.131" X 3", MIN)	7/8"	1 5/8"	2"	1"



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TRUSSES require extreme care in fabricating, handling, shipping, installing and bracing. Refer to and follow the latest edition of BCI Building Code. Installers shall provide temporary bracing and blocking unless noted otherwise. Top chord shall have properly attached structural sheathing and bottom chord shall have a properly attached rigid ceiling. Locations shown for permanent lateral restraint of webs of truss and positioned per BCI sections B3, B7 or B10, as applicable. Apply plates to each face of truss and position per BCI section B10.2 for standard plate positions. Refer to drawings 160A-2 for standard plate positions. Alpine, a division of ITV Building Components Group Inc. shall not be responsible for any design, installation, or bracing of trusses. Seal on this drawing or cover page listing this drawing, indicates acceptance of professional engineer and seal of the State of Florida. The suitability and use of this drawing for any structure is the responsibility of the user. For more information see the web site: [www.alpineinc.com](http://www.alpineinc.com) TPI: [www.tpiinc.com](http://www.tpiinc.com) SDC: [www.sdcinc.com](http://www.sdcinc.com) ICD: [www.icdinc.com](http://www.icdinc.com)



REF	NAIL SPACE
DATE	10/01/14
DRWG	CNNAILSP1014