



AMERICAN WOOD COUNCIL

January 2024

ERRATA
to the 2012 Edition of Commentary for the
National Design Specification (NDS) for Wood Construction

(All prior PDF and print versions)

Page **Revision**
243 Revise equation C11.2.2-2 as shown in red below:

$$K_w = 1.2 \left(\frac{14250}{6} \right) \quad (\text{C11.2.2-2})$$



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to the 2018 and Prior Editions of
the National Design Specification® (NDS®) for Wood Construction

Page **Revision**

91 Revise footnote 1 in Table 12.5.1D as follows:

1. The ℓ/D ratio used to determine the minimum ~~edge distance~~ spacing between rows shall be the lesser of:
 - (a) length of fastener in wood main member/ $D = \ell_m/D$
 - (b) total length of fastener in wood side member(s)/ $D = \ell_s /D$



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the National Design Specification® (NDS®) for Wood Construction

Page Revision

166 Clarifies that the following calculations in Example E.7 Sample Solution of Row of Bolts is intended for a single-row bolted connection with a 3-1/2" thick main member and 1-1/2" thick side member:

E.7 Sample Solution of Row of Bolts

Calculate the net section area tension and row tear-out adjusted ASD design capacities for the single-shear single-row bolted connection represented in Figure E2.

Main and Side Members:

#2 grade Hem-Fir ~~2x4~~ lumber. See *NDS Supplement* Table 4A – Visually Graded Dimension Lumber for reference design values. Adjustment factors C_D , C_T , C_M , and C_i are assumed to equal 1.0 in this example for calculation of adjusted design values.

$$F_t' = 525 \text{ psi } (C_F) = 525(1.5) = 788 \text{ psi}$$

$$F_v' = 150 \text{ psi}$$

Connection Details:

Bolt diameter, D : 1/2 in.

Bolt hole diameter, D_h : 0.5625 in.

Adjusted ASD bolt design value, $Z_{||}'$: 550 lbs

(See NDS Table 12A for 3-1/2" main member thickness and 1-1/2" side member thickness. For this trial design, the group action factor, C_g , is taken as 1.0).

Adjusted ASD Connection Capacity, $n Z_{||}'$:

$$nZ_{||}' = (3 \text{ bolts})(550 \text{ lbs}) = 1,650 \text{ lbs}$$

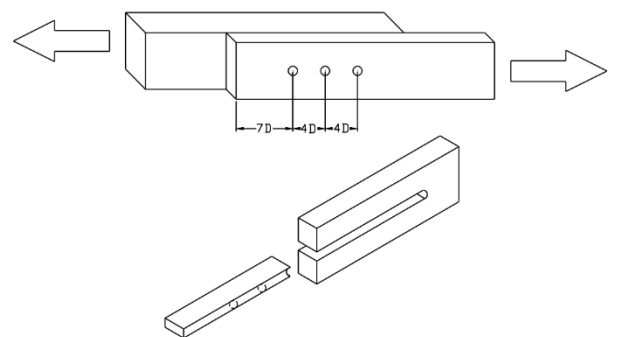
Adjusted For side member, adjusted ASD Net

Section Area Tension Capacity, Z_{NT}' :

$$Z_{NT}' = F_t' t [w - n_{row} D_h]$$

$$Z_{NT}' = (788 \text{ psi})(1.5'')[3.5'' - 1(0.5625'')] = 3,470 \text{ lbs}$$

Figure E2 Single Row of Bolts



Adjusted For side member, adjusted ASD Row Tear-Out Capacity, Z_{RT}' :

$$Z_{RTi}' = n_i F_v' t_{critical}$$

$$Z_{RT1}' = 3(150 \text{ psi})(1.5'')(2'') = 1,350 \text{ lbs}$$

In this sample calculation, the adjusted ASD connection capacity is limited to 1,350 pounds by row tear-out, Z_{RT}' .



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<u>Page</u>	<u>Revision</u>
40	Revise K_{rs} as described in Equation (5.4-3) as follows (replace d_e with d_c):

$$\begin{aligned} K_{rs} &= \text{empirical radial stress factor} \\ &= 0.29(\frac{d_e d_c}{R_m}) + 0.32 \tan^{1.2} \phi_T \end{aligned}$$

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(web versions dated 11-11 and 10-12, printed version 10-12)

Page **Revision**
38 Revise Equations 5.3-4 and 5.3-5 as follows:

~~$$C_i = \frac{1}{\sqrt{1 + (F_b \tan \theta / F_v)^2 + (F_b \tan^2 \theta / F_{c\perp})^2}}$$~~

$$C_I = \frac{1}{\sqrt{1 + \left(\frac{F_b \tan \theta}{F_v C_{vr}}\right)^2 + \left(\frac{F_b \tan^2 \theta}{F_{c\perp}}\right)^2}} \quad (5.3-4)$$

~~$$C_i = \frac{1}{\sqrt{1 + (F_b \tan \theta / F_v)^2 + (F_b \tan^2 \theta / E_c)^2}}$$~~

$$C_I = \frac{1}{\sqrt{1 + \left(\frac{F_b \tan \theta}{F_v C_{vr}}\right)^2 + \left(\frac{F_b \tan^2 \theta}{F_{rt}}\right)^2}} \quad (5.3-5)$$

Page **Revision**
82 Revise the last sentences in Section 11.3.5.2 as follows:

“Where p includes the length of a tapered tip, E, **the dowel bearing length, l_s , or l_m** , shall not exceed p – E/2.

- a) For Lag screws, E, is permitted to be taken from Appendix L, Table L2.
- b) For wood screws, nails, and spikes, E, is permitted to be taken as 2D.



December 2011

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the National Design Specification® (NDS®) for Wood Construction
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<u>Page</u>	<u>Revision</u>	
75	11.2.3.4 <u>11.2.3.5</u>	Nails and spikes shall not be loaded in withdrawal from end grain of wood.