

## Revisions and Errata List

### AISC Steel Design Guide 29, 1<sup>st</sup> printing (Printed Edition) and March 2015 Revision (Digital Edition)

August 20, 2020

The following list represents corrections made to the first printing (dated 2013) and the March 2015 revision (digital edition) of the first edition of AISC Design Guide 29, *Vertical Bracing Connections—Analysis and Design*.

#### Page(s)

#### Item

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Under the heading “Tension rupture component,” revise the text as follows:

$$\begin{aligned}
 U_{bs} &= 1 \text{ from AISC Specification Section J4.3 because the bolts are uniformly loaded} \\
 A_{nt} &= (0.435 \text{ in.}) [7.96 \text{ in.} - 5.00 \text{ in.} - 1(1\frac{1}{16} + \frac{1}{16} \text{ in.})] \\
 &= 0.80 \text{ in.}^2 \\
 U_{bs} F_u A_{nt} &= 1(65 \text{ ksi})(0.80 \text{ in.}^2) \\
 &= 52.0 \text{ kips}
 \end{aligned}$$

The available strength for the limit state of block shear rupture is:

$$\begin{aligned}
 0.60 F_u A_{nv} + U_{bs} F_u A_{nt} &= 285 \text{ kips} + 52.0 \text{ kips} \\
 &= 337 \text{ kips} \\
 0.60 F_y A_{gv} + U_{bs} F_u A_{nt} &= 351 \text{ kips} + 52.0 \text{ kips} \\
 &= 403 \text{ kips}
 \end{aligned}$$

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Replace the first line of text and calculation box with the following:

Therefore,  $R_n = 337$  kips.

LRFD	ASD
$  \begin{aligned}  \phi R_n &= 0.75(2)(337 \text{ kips}) \\  &= 506 \text{ kips} > 270 \text{ kips} \quad \mathbf{o.k.}  \end{aligned}  $	$  \begin{aligned}  \frac{R_n}{\Omega} &= 2 \left( \frac{337 \text{ kips}}{2} \right) \\  &= 337 \text{ kips} > 180 \text{ kips} \quad \mathbf{o.k.}  \end{aligned}  $

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The calculation for  $\beta$  should be replaced with the following:

$$\begin{aligned}
 \beta &= \frac{\alpha - e_b \tan \theta + e_c}{\tan \theta} && \text{(from Manual Eq. 13-1)} \\
 &= \frac{16.3 - (8.85 \text{ in.})(1.33) + 0}{1.33} \\
 &= 3.41 \text{ in.}
 \end{aligned}$$