

I am working on a field fix where the existing bolt gage in the column at an end-plate moment connection is greater than the flange width of the beam. The articles and design guides that I have seen all assume that the bolt gage is less than the beam flange width and that the end-plate width does not exceed the beam flange width by more than 1 in. My condition will violate both criteria.

3. A

Specificati

AI C

A

La S.M i, PE

Unusual End-Plate Moment Connection Geometry

I am working on a field fix where the existing bolt gage in the column at an end-plate moment connection is greater than the flange width of the beam. The articles and design guides that I have seen all assume that the bolt gage is less than the beam flange width and that the end-plate width does not exceed the beam flange width by more than 1 in. My condition will violate both criteria.

I want to make sure I understand the basis of these checks and what modifications would be necessary to accurately reflect my condition.

I

P

(5)

AI C

AI C

D G 4: E re ded E d-Plate M ne r C ecti s

Seismic a d Wi d Applicati s 16: Fl sh a d E re ded

M br e-R M ne r E d-Plate C ecti s (

www.aisc.org/dg)

D (1977)

D G 4 16 s

D



B... (1974)

D... (1977)

References:

- ▶ B... (1995), D, E, C, D, G, E, I, B,
- ▶ D... (1977), A, B, H, C, *Engineering Journal*, AI C, 14, 3.
- ▶ ... H. (1974), A, C, D, *Engineering Journal*, AI C, *Engineering Journal*, AI C

AI C *Engineering Journal*

AI C www.aisc.org/ej

B D s ell, PE, PhD

Conflicting Requirements for Seismic Design

We have found conflicting requirements in the 2nd Edition of the AISC *Seismic Design Manual*. Section 4.2 of the *Seismic Design Manual* states: “The only system specific requirements for an OMF (ordinary moment frame) pertain to the beam-to-column moment connections.” However, the commentary to Section E1.2 of the *Seismic Provisions* states: “Thus, the basic design requirement for an OMF is to provide a frame with strong connections. That is, connections should be strong enough so that, as noted above, connection failure is not the first significant inelastic event in the response of the frame to earthquake loading. This applies to all connections in the frame, including beam-to-column connections, column splices, and column base connections.”

There appears to be a conflict between these two statements. The commentary states that that splices and base plates should not govern, while the *Seismic Manual* indicates that “specific requirements for an OMF pertain to the beam-to-column moment connections” only. Please provide clarification.

B... (1974)

F... (1977)

A... *Seismic Provisions*

(... F, ...)

Seismic Provisions

D2.5 D2.6

D2.6 D2.5

A E1.2

I F D2

Seismic Provisions AI C *Seismic Provisions* AI C