$$t_{fc} > \sqrt{\frac{\dfrac{M_f}{2\,(d_b - t_{fb})}}{0.8\,F_{yc}Y_c}} \tag{3-25}$$

where:

$$Y_c = \left(\frac{c}{2} + s\right)\left(\frac{1}{C_2} + \frac{2}{C_1}\right) + \left(C_2 + C_1\right)\left(\frac{4}{c} + \frac{2}{s}\right) \tag{3-26}$$

$$C_1 = \frac{g}{2} - k_1 \tag{3-27}$$

$$C_2 = \frac{b_{fc} - g}{2} \tag{3-28}$$

$$s = \sqrt{\frac{C_1C_2}{C_2 + 2C_1}\left(2b_{fc} - 4k_1\right)} \tag{3-29}$$

If t_{fc} is less than the calculated value, a column with a thicker flange must be selected.

Step 8: Check column flange thickness for adequacy for beam flange compression according to the following:

$$t_{fc} > \frac{M_f}{\left(d_b - t_{fb}\right)\left(6k + 2t_{pl} + t_{bf}\right)F_{yc}} \tag{3-30}$$

where k is the k-distance of the column from the *AISC Manual*.

If t_{fc} is less than given by Equation 3-30, than beam flange continuity plates are required in accordance with Section 3.3.3.1.

Step 9: Check the panel zone shear capacity in accordance with Section 3.3.3.2. For purposes of this calculation, d_b may be taken as the distance from one edge of the end plate to the center of the beam flange at the opposite flange.

Step 10: Detail the connection as shown in Figure 3-13.