

# BOLTED END PLATE (BEP) VS. SIDEPLATE®

5-Story Office Building in high seismic

LATERAL SYSTEM: STEEL MOMENT FRAMES

AREA: 106,600 S.F.

	Bolted End Plate WEIGHT	SidePlate® system WEIGHT
Lateral Columns	W14x211	W21x93
	W14x233	W21x122
	W14x455	W21x132
		W21x166
		W21x182
	<b>5.91 psf</b>	<b>2.05 psf</b>
Lateral Beams	W21x50	W16x31
	W24x76	W21x50
	W24x103	W24x55
		W24x62
		W24x94
		W24x103
	<b>2.43 psf</b>	<b>1.41 psf</b>
Gravity Columns	0.08 psf	0.45 psf
Gravity Beams	4.34 psf	4.79 psf
Connection Plates	0.09 psf	0.81 psf
Misc Steel	1.65 psf	1.65 psf
<b>Total Steel Weight</b>	<b>14.5 psf (1732 tons)<sup>1</sup></b>	<b>11.2 psf (1512 tons)<sup>1</sup></b>
Estimated Fabricated & Erected Steel Costs	\$2,675,000 (\$3,460/T)	\$2,118,000 (\$3,560/T)
SidePlate® Services & License Fee <sup>2</sup>	N/A	\$42,000
<b>Total Estimated Costs</b>	<b>\$2,675,000</b>	<b>\$2,160,000</b>
<b>Estimated Savings w/ SidePlate® Moment Frames</b>	<b>\$2,675,000</b>	<b>\$2,160,000</b>

(1) Based on data obtained from ETABS Model and SidePlate Systems, Inc. for connection weight

(2) See Attached List for Services Included with selection of SidePlate® Connection Technology

## Recommendation:

Use SidePlate® connection technology and *save the owner*:

- \$515,000 in steel fabrication & erection costs (\$4.83/sf) PLUS
- 24% (50) fewer moment connections to install in the field resulting in faster construction schedule