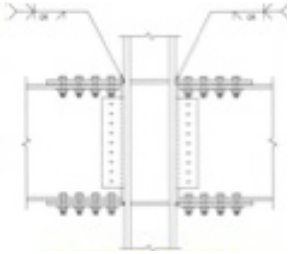
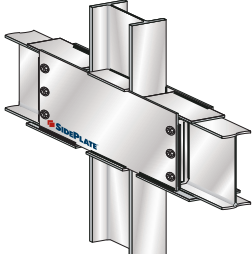


BOLTED FLANGE PLATE (BFP) VS. SIDEPLATE®

8-Story Federal Courthouse in low seismic

AREA: 347,031 S.F. WITH PLAN IRREGULARITIES,
20' OR LESS STANDOFF & CURVED STEEL MOMENT FRAMES

Progressive Collapse Design Cost Comparison

Steel Elements (no misc. steel included)	Bolted Flange Plate ¹ Skewed biaxial 3 & 4 sided connections	SidePlate® system ² Orthogonal uniaxial 1 & 2 sided connections
	SIZE & WEIGHT	SIZE & WEIGHT
Lateral Columns	W14x	W18x and W21x
	5.91 psf	2.05 psf
Lateral Beams	W24x, W27x and W30x	W24x and W30x
	6.68 psf	3.62 psf
		
	All shop CJP welded	All shop fillet welded
Connection Plates	1.14 psf (avg. 3/8"x30" cover plate for 2,028 connections+ additional continuity plates)	1.50 psf (avg. cover plate and side plates for 1,117 connections)
Gravity	3.73 psf (25% of total wt.)	5.04 psf (36% of total wt.)
Total	15.2 psf (2639 tons)	14.0 psf (2429 tons)

- (1) BFP connection full-scale testing and prequalifications per FEMA 350 *Acceptance Criteria* is **not applicable** to curved moment frame and biaxial applications; skewed connections have **not been tested**.
- (2) SidePlate® connection full-scale testing and prequalification per per FEMA 350 *Acceptance Criteria* is **applicable** to curved moment frame applications; connections remain orthogonal **as tested**.

BOLTED FLANGE PLATE (BFP) VS. SIDEPLATE® (CONT.)

Progressive Collapse Design Cost Comparison - Federal Courthouse

WEST COAST FABRICATOR EXPERIENCE:

	Bolted Flange Plate¹ Skewed biaxial 3 & 4 sided connections	SidePlate® system² Orthogonal uniaxial 1 & 2 sided connections	Estimated Savings w/ SidePlate® technology
Material & Shop Fabrication	[(2,639 tons x \$600/ton-Material)+(15.6 man-hours/ton x 2,639 tons x \$42/hr-Labor)] x 1.5 =	[(2,429 tons x \$600/ton-Material)+(12.5 man-hours/ton x 2,429 tons x \$42/hr-Labor)] x 1.5 =	
	\$4,968,709 (\$1,883/ton)	\$4,098,938 (\$1,687/ton)	
Field Erection	\$1,293,110 (\$490/ton)	\$900,000 (\$370/ton)	
Total	\$6,261,819 (\$2,373/ton)	\$4,998,938 (\$2,057/ton)	\$1,262,881

EAST COAST (MID ATLANTIC) FABRICATOR:

Estimated Minimum Savings using SidePlate® Connection System	
Shop Labor Savings	\$323,215
Field Labor Savings	\$135,563
210 Tons of Raw Material at \$540/Ton	\$124,740
Total	\$613,518

"...there is no question that the GSA is going to save money using the SidePlate Connection on this project."

DEWAYNE MINNICK

V.P. Sales and Marketing
Banker Steel Company, Inc. Lynchburg, VA