

SPECIAL CONCENTRIC BRACE FRAME (SCBF) VS. SIDEPLATE® MOMENT FRAME

5- Story medical office building in high seismic

AREA: 140,000 S.F.

	Braced Frames w/ 16'x8' deep concrete grade beams & spread footings	SidePlate® Moment Frames w/ 3'x4' deep concrete grade beams & spread footings
	SIZE & WEIGHT	SIZE & WEIGHT
Lateral Columns	W12x	W27x
	7.93 psf	5.51 psf
Lateral Beams	W21x50	W24x
	W24x68	W27x
	0.91 psf	2.20 psf
Lateral Braces	HSS 1.02 psf	N/A
Gravity Columns	1.11 psf	1.00 psf
Gravity Beams	5.18 psf	5.00 psf
Connection Plates	0.2 psf	1.4 psf
Additional Misc Steel	1.9 psf	1.9 psf
Total Steel Weight	11.0 psf (770 tons)	13.5 psf (945 tons)
Estimated Fabricated & Erected Steel Costs using \$2,500/T	\$1,925,000	\$2,362,000
Foundation System for Lateral at \$350/CY ¹	2780 CY = \$973,000	937 CY = \$328,000
SidePlate® Services & License Fee	N/A	\$94,000
Total Estimated Costs	\$2,898,000	\$2,784,000
Architectural Furring of Braces at \$750/brace	\$90,000	N/A
Total Estimated Costs	\$2,988,000	\$2,784,000
Estimated Savings with SidePlate® Moment Frames		\$204,000

(1) Does *not* include savings in construction schedule and reduced excavation costs

Recommendation:

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

- \$204,000 in steel fabrication/erection and foundation costs (\$1.46/sf) PLUS
- Faster construction schedule