

REDUCED BEAM SECTION (DOG BONE) VS. SIDEPLATE®

5-Story hospital in high seismic

DELTA: 220 TONS (3.3PSF)

AREA: 133,000 S.F.

	RBS with deep columns SIZE & WEIGHT	SidePlate® with deep columns SIZE & WEIGHT
Lateral Columns	W33x354	W33x221
	W33x354	W33x241
	W33x387	W33x291
	W33x387	W33x318
	7.93 psf	5.51 psf
Lateral Beams	W30x108	W24x84, W27x94
	W36x232	W33x141
	W36x256	W36x160
	W36x256	W36x182, 194
	7.07 psf	3.83 psf
Gravity Columns	1.00 psf	1.05 psf
Gravity Beams	7.00 psf	7.05 psf
Connection Plates	0.65 psf	2.9 psf
Misc Steel	2.3 psf	2.3 psf
Total Steel Weight	26 psf (1732 tons)	22.7 psf (1512 tons)
Estimated Fabricated & Erected Steel Costs	\$5,716,000 (\$3,300/T)	\$5,140,000 (\$3,400/T)
SidePlate® Services & License Fee	N/A	\$124,000
Owner's Testing Costs:	181 Joints @ 2hrs/joint	0 Joints @ 2hrs/joint
<u>Shop</u> Non-Destructive Testing	\$90/hr for UT Inspection	\$90/hr for UT Inspection
	\$32,580	\$0
Owner's Testing Costs:	268 Conn @ 2hrs/BM End	268 Conn @ 1hrs/BM End
<u>Field</u> Non-Destructive Testing	\$90/hr for UT Inspection	\$90/hr for MT Inspection
	\$48,240	\$24,120
Total Estimated Costs	5,796,820	\$5,288,120

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

- \$508,700 in steel fabrication/erection costs (\$3.40/sf) PLUS
- 2 weeks construction schedule