



All Units

	O.A.S.P.1	Pier	SPRING SPAC
Is (in <sup>4</sup> )	4930	5200	4930
IC (in <sup>4</sup> )	13700	—	13700
Ss (in <sup>3</sup> )	329	539	529
Sc (in <sup>3</sup> )	494	—	494
I <sub>x</sub> (K/I)	.887	.887	.887
M <sub>x</sub> (K)	196	487	199
S <sub>x</sub> (K/I)	.345	.345	.345
M <sub>s</sub> (K)	90	145	119
M <sub>t</sub> (K)	444	326	502
M <sub>IMP</sub> (K)	120	84	124
M <sub>2M<sub>x</sub>+I</sub> (K)	940	683	1043
M <sub>0</sub> (K)	1594	1700	1770
M <sub>U</sub> (K)	2791	—	2791
λ (non-comp)	7.1	14.1	7.2
λ <sub>s</sub> (comp) ksi	2.2	—	2.9
λ <sub>s</sub> (total) ksi	22.8	15.2	25.3
λ <sub>s</sub> (overload) ksi	32.1	29.3	33.4
λ <sub>s</sub> (total) ksi	41.8	38.1	46.1
λ <sub>r</sub> (K)	55	56.9	46

\* M<sub>U</sub> = Full Plastic Moment Capacity for Compact, Braced Section.  
M<sub>0</sub>(Applied Moment) = 1.5(M<sub>x</sub> + M<sub>s</sub>) + 1/3(M<sub>t</sub> + I)

All Units

	ABUT.	PIER
R <sub>x</sub> (K)	26.5	95.6
R <sub>y</sub> (K)	43.6	55.1
IMP (K)	11.8	13.8
R <sub>TOTAL</sub> (K)	81.9	164.5

**TOP OF BEAM ELEVATION**

Beam	⓪	Ⓛ	Ⓚ	Ⓛ	Ⓜ	Ⓝ	Ⓞ	Ⓟ
Beam #1	481.45	481.54	481.58	481.61	481.72	481.73	481.75	481.87
Beam #2	481.61	481.67	481.71	481.74	481.85	481.86	481.88	482.00
Beam #3	481.72	481.78	481.82	481.85	481.96	481.97	481.99	482.11
Beam #4	481.61	481.67	481.71	481.74	481.85	481.86	481.88	482.00
Beam #5	481.78	481.54	481.58	481.61	481.72	481.73	481.75	481.87

**FRAMING PLAN - UNITS B & C**  
**SANGAMON RIVER OVERFLOW BRIDGE**  
**F.A. ROUTE 34 (ILLINOIS ROUTE 97)**  
**SECTION 2BR-1**  
**MENARD COUNTY**  
**STATION 756+00**