



1. The superelevation shown is for flat terrain. Superelevation may be increased to a maximum of 6% for sloped terrain.
2. Show pavement elevations on plan.
3. Deflection angle Δ may vary from 60° to 100°.
4. For an industrial knuckle use W=22'.

$$A = P \tan \frac{\Delta}{2}$$

$$B = \frac{R_6}{\tan 10^\circ} - \frac{P+W}{\sin 10^\circ} - R_1 \tan 5^\circ$$

$$C = \frac{R_6}{\sin 10^\circ} - \frac{P+W}{\tan 10^\circ} + R_1 \tan 5^\circ$$

		100° > Δ > 75°			75° > Δ > 65°			65° > Δ > 60°								
P	W	R ₁	R ₂	R ₃	R ₄	R ₅	R ₃	R ₄	R ₅	R ₃	R ₄	R ₅	R ₆	R ₇	B	C
30	18	100	88	15	27	45	23	35	53	33	45	63	61	73	60.78	87.81
	20	100	90	17	27	47	25	35	55	35	45	65	61	71	49.26	76.47
	22	111	103	27	35	57	32	40	62	42	50	72	65	73	59.47	89.11
33	18	100	85	12	27	45	20	35	53	30	45	63	61	76	43.50	70.80
	20	100	87	14	27	47	22	35	55	32	45	65	61	74	31.98	59.46
	22	111	100	24	35	57	32	40	62	39	50	72	65	76	42.19	72.11

APPROVED BY *[Signature]*
 CITY ENGINEER
 DATE 5/18/11

CITY OF RIVERSIDE
 PUBLIC WORKS DEPARTMENT

STANDARD KNUCKLE

STANDARD DRAWING NO. 104
 Sheet 1 of 1

MARK	REVISIONS	APPR.	DATE