

DESIGN FACTORS FOR A DESIGN SPEED OF 30 MPH (RURAL) USING E = 8% MAX.

DESIGN VELOCITY =30	DESIGN SOFTWARE EQUIVALENTS (NUMBER OF LANES AT LANE WIDTH)												INTERCHANGE RAMPS									
	WIDTH=18 FT			WIDTH=20 FT			WIDTH=22 FT			WIDTH=24 FT			WIDTH=48 FT									
	1 @ 9'			1 @ 10'			1 @ 11'			1 @ 12'			2 @ 12'		16 FT		18 FT					
RADIUS(FT)	E(%)	CR	LS	w	CR	LS	w	CR	LS	w	CR	LS	w	CR	LS	w	CR	LS	CR	LS	CR	LS
3500	NC	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0	0	0	0
2402	2.0	28	28	0.0	31	31	0.0	34	34	0.0	37	37	0.0	39	39	0.0	43	43	45	45	45	45
2276	2.1	28	29	0.0	31	32	0.0	34	35	0.0	37	39	0.0	40	41	0.0	43	45	45	48	48	48
2161	2.2	28	30	0.0	31	34	0.0	34	37	0.0	37	40	0.0	40	42	0.0	43	45	45	50	50	50
2056	2.3	28	32	0.0	31	35	0.0	34	39	0.0	37	42	0.0	42	44	0.0	43	45	45	52	52	52
1960	2.4	74	88	2.0	31	37	0.0	34	40	0.0	37	44	0.0	42	44	0.0	43	45	45	54	54	54
1871	2.5	71	88	2.0	31	38	0.0	34	42	0.0	37	46	0.0	43	45	0.0	43	45	45	57	57	57
1789	2.6	68	88	2.0	31	40	0.0	34	44	0.0	37	48	0.0	44	46	0.0	43	45	45	59	59	59
1713	2.7	66	88	2.1	31	41	0.0	34	45	0.0	37	50	0.0	45	47	0.0	43	45	45	61	61	61
1643	2.8	63	88	2.1	31	43	0.0	34	47	0.0	37	51	0.0	46	48	0.0	43	45	45	63	63	63
1577	2.9	61	88	2.1	31	44	0.0	34	49	0.0	37	53	0.0	47	49	0.0	43	45	45	66	66	66
1515	3.0	59	88	2.1	31	46	0.0	34	50	0.0	37	55	0.0	48	50	0.0	43	45	45	68	68	68
1457	3.1	57	88	2.2	31	47	0.0	34	52	0.0	37	57	0.0	49	51	0.0	43	45	45	70	70	70
1403	3.2	55	88	2.2	31	49	0.0	34	54	0.0	37	59	0.0	50	52	0.0	43	45	45	72	72	72
1352	3.3	54	88	2.2	31	50	0.0	34	55	0.0	37	60	0.0	51	53	0.0	43	45	45	75	75	75
1303	3.4	52	88	2.3	31	52	0.0	34	57	0.0	37	62	0.0	52	54	0.0	43	45	45	77	77	77
1258	3.5	51	88	2.3	31	54	0.0	34	59	0.0	37	64	0.0	53	55	0.0	43	45	45	79	79	79
1214	3.6	49	88	2.3	31	55	0.0	34	60	0.0	37	66	0.0	54	56	0.0	43	45	45	81	81	81
1173	3.7	48	88	2.3	31	57	0.0	34	62	0.0	37	68	0.0	55	57	0.0	43	45	45	84	84	84
1134	3.8	47	88	2.4	31	58	0.0	34	64	0.0	37	70	0.0	55	58	0.0	43	45	45	86	86	86
1097	3.9	46	88	2.4	31	60	0.0	34	65	0.0	37	71	0.0	55	59	0.0	43	45	45	88	88	88
1061	4.0	44	88	2.4	31	61	0.0	34	67	0.0	37	73	0.0	55	60	0.0	43	45	45	90	90	90
1028	4.1	43	88	2.5	31	63	0.0	34	69	0.0	37	75	0.0	55	62	0.0	43	45	45	93	93	93
995	4.2	42	88	2.5	31	64	0.0	34	70	0.0	37	77	0.0	55	63	0.0	43	45	45	95	95	95
964	4.3	41	88	2.5	31	66	0.0	34	72	0.0	37	79	0.0	55	64	0.0	43	45	45	97	97	97
934	4.4	40	88	2.6	31	67	0.0	34	74	0.0	37	80	0.0	55	65	0.0	43	45	45	99	99	99
905	4.5	40	88	2.6	31	69	0.0	34	75	0.0	37	82	0.0	55	66	0.0	43	45	45	102	102	102
877	4.6	39	88	2.6	31	70	0.0	34	77	0.0	37	84	0.0	55	67	0.0	43	45	45	104	104	104
851	4.7	38	88	2.7	31	72	0.0	34	79	0.0	37	86	0.0	55	68	0.0	43	45	45	106	106	106
825	4.8	37	88	2.7	31	73	0.0	34	80	0.0	37	88	0.0	55	69	0.0	43	45	45	108	108	108
800	4.9	36	88	2.7	31	75	0.0	34	82	0.0	37	90	0.0	55	70	0.0	43	45	45	111	111	111
775	5.0	36	88	2.8	31	76	0.0	34	84	0.0	37	91	0.0	55	71	0.0	43	45	45	113	113	113
752	5.1	35	88	2.8	31	78	0.0	34	85	0.0	37	93	0.0	55	72	0.0	43	45	45	115	115	115
729	5.2	34	88	2.8	31	79	0.0	34	87	0.0	37	95	0.0	55	73	0.0	43	45	45	117	117	117
706	5.3	34	88	2.9	31	81	0.0	34	89	0.0	37	97	0.0	55	74	0.0	43	45	45	120	120	120
684	5.4	33	88	2.9	31	82	0.0	34	90	0.0	37	99	0.0	55	75	0.0	43	45	45	122	122	122
663	5.5	32	88	3.0	34	92	2.0	34	92	0.0	37	100	0.0	55	76	0.0	43	45	45	124	124	124
641	5.6	33	90	3.0	34	94	2.0	34	94	0.0	37	102	0.0	55	77	0.0	43	45	45	126	126	126
621	5.7	32	91	3.0	34	95	2.0	34	95	0.0	37	104	0.0	55	78	0.0	43	45	45	129	129	129
602	5.8	33	93	3.1	34	98	2.1	34	99	0.0	37	106	0.0	55	79	0.0	43	45	45	131	131	131
583	5.9	33	95	3.1	34	99	2.1	34	99	0.0	37	108	0.0	55	80	0.0	43	45	45	133	133	133
565	6.0	33	97	3.2	34	101	2.2	34	100	0.0	37	110	0.0	55	81	0.0	43	45	45	135	135	135
548	6.1	33	98	3.2	34	103	2.2	34	102	0.0	37	111	0.0	55	82	0.0	43	45	45	138	138	138
531	6.2	33	101	3.3	34	105	2.3	34	104	0.0	37	113	0.0	55	83	0.0	43	45	45	140	140	140
515	6.3	33	102	3.3	34	107	2.3	34	105	0.0	37	115	0.0	55	84	0.0	43	45	45	142	142	142
499	6.4	33	104	3.4	35	109	2.4	34	107	0.0	37	117	0.0	55	85	0.0	43	45	45	144	144	144
484	6.5	33	106	3.4	35	111	2.4	34	109	0.0	37	119	0.0	55	86	0.0	43	45	45	147	147	147
469	6.6	33	108	3.5	35	113	2.5	34	110	0.0	37	120	0.0	55	87	0.0	43	45	45	149	149	149
455	6.7	33	110	3.5	35	115	2.5	34	112	0.0	37	122	0.0	55	88	0.0	43	45	45	151	151	151
441	6.8	33	112	3.6	35	117	2.6	34	114	0.0	37	124	0.0	55	89	0.0	43	45	45	153	153	153
427	6.9	33	113	3.6	35	119	2.6	34	115	0.0	37	126	0.0	55	90	0.0	43	45	45	156	156	156
414	7.0	34	116	3.7	35	121	2.7	34	117	0.0	37	128	0.0	55	91	0.0	43	45	45	158	158	158
400	7.1	34	118	3.8	35	123	2.8	34	119	0.0	37	130	0.0	55	92	0.0	43	45	45	160	160	160
387	7.2	34	119	3.8	35	125	2.8	34	120	0.0	37	131	0.0	55	93	0.0	43	45	45	162	162	162
374	7.3	34	122	3.9	35	127	2.9	34	122	0.0	37	133	0.0	55	94	0.0	43	45	45	165	165	165
361	7.4	34	124	4.0	35	129	3.0	37	135	2.0	37	135	0.0	60	219	2.0	43	158	45	167	167	
348	7.5	34	126	4.1	36	132	3.1	37	137	2.1	37	137	0.0	60	224	2.2	43	160	45	169	169	
334	7.6	34	128	4.2	36	134	3.2	37	140	2.2	37	139	0.0	60	228	2.4	43	163	45	171	171	
320	7.7	35	131	4.3	36	136	3.3	37	142	2.3	37	140	0.0	61	233	2.6	43	165	45	174	174	
305	7.8	35	133	4.4	36	139	3.4	38	145	2.4	37	142	0.0	62	238	2.8	43	167	45	176	176	
287	7.9	35	135	4.5	36	141	3.5	38	147	2.5	37	144	0.0	62	243	3.0	43	169	45	178	178	
251	8.0	35	139	4.9	37	145	3.9	38	151	2.9	37	146	0.0	64	253	3.8	43	171	45	180	180	

NOTE: CR, LS & w VALUES IN FEET. LISTED RADIUS IS THE MINIMUM ALLOWABLE RADIUS FOR THE CORRESPONDING E, CR, LS, AND w VALUES.

SPECIFICATION REFERENCE

TRANSITION CURVES - RURAL  
30 MPH DESIGN SPEED