

DESIGN FACTORS FOR A DESIGN SPEED OF 20 MPH (RURAL) USING E = 8% MAX.

DESIGN VELOCITY =20	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		16 FT		18 FT			
	1 @ 9'		1 @ 10'		1 @ 11'		1 @ 12'		1 @ 12'		2 @ 12'		w		CR	LS	CR	LS		
RADIUS(FT) E(%)	CR	LS	w	CR	LS	w	CR	LS	w	CR	LS	w	CR	LS	CR	LS	CR	LS		
1800	NC	0	0.0	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0	0		
1213	59	2.0	28	28	2.0	30	30	0.0	33	33	0.0	49	49	0.0	39	39	41	41		
1148	59	2.1	28	29	0.0	30	32	0.0	33	35	0.0	49	52	0.0	39	40	41	43		
1090	54	2.2	28	30	0.0	30	33	0.0	33	36	0.0	49	54	0.0	39	42	41	45		
1036	52	2.3	28	32	0.0	30	35	0.0	33	38	0.0	49	56	0.0	39	44	41	47		
987	50	2.4	28	33	0.0	30	36	0.0	33	39	0.0	49	59	0.0	39	46	41	49		
941	48	2.5	28	34	0.0	30	38	0.0	33	41	0.0	49	61	0.0	39	48	41	51		
899	46	2.6	28	36	0.0	30	39	0.0	33	43	0.0	49	64	0.0	39	50	41	53		
860	44	2.7	28	37	0.0	30	41	0.0	33	44	0.0	49	66	0.0	39	52	41	55		
824	43	2.8	28	38	0.0	30	42	0.0	33	46	0.0	49	69	0.0	39	54	41	57		
790	41	2.9	28	40	0.0	30	44	0.0	33	48	0.0	49	71	0.0	39	56	41	59		
759	40	3.0	28	41	0.0	30	45	0.0	33	49	0.0	49	73	0.0	39	58	41	61		
729	39	3.1	28	42	0.0	30	47	0.0	33	51	0.0	49	76	0.0	39	60	41	63		
701	37	3.2	28	44	0.0	30	48	0.0	33	52	0.0	49	78	0.0	39	61	41	65		
674	36	3.3	28	45	0.0	30	50	0.0	33	54	0.0	49	81	0.0	39	63	41	67		
650	35	3.4	28	46	0.0	30	51	0.0	33	56	0.0	49	83	0.0	39	65	41	69		
626	34	3.5	28	48	0.0	30	53	0.0	33	57	0.0	49	86	0.0	39	67	41	71		
604	33	3.6	28	49	0.0	30	54	0.0	33	59	0.0	49	88	0.0	39	69	41	73		
582	32	3.7	28	50	0.0	30	55	0.0	33	60	0.0	49	90	0.0	39	71	41	75		
562	32	3.8	28	52	0.0	30	57	0.0	33	62	0.0	49	93	0.0	39	73	41	77		
543	31	3.9	28	53	0.0	30	58	0.0	33	64	0.0	49	95	0.0	39	75	41	79		
524	30	4.0	28	55	0.0	30	60	0.0	33	66	0.0	49	98	0.0	39	77	41	81		
506	29	4.1	28	56	0.0	30	61	0.0	33	67	0.0	49	100	0.0	39	79	41	83		
489	29	4.2	29	60	3.0	30	63	0.0	33	69	0.0	49	103	0.0	39	80	41	85		
473	29	4.3	29	62	3.0	30	64	0.0	33	70	0.0	49	105	0.0	39	82	41	87		
457	29	4.4	29	63	3.0	30	66	0.0	33	72	0.0	49	108	0.0	39	84	41	89		
442	29	4.5	29	65	3.1	31	68	2.1	30	73	0.0	49	110	0.0	39	86	41	92		
427	29	4.6	29	66	3.2	30	69	2.2	30	75	0.0	49	112	0.0	39	88	41	94		
413	29	4.7	29	68	3.2	31	71	2.2	30	77	0.0	49	115	0.0	39	90	41	96		
399	4.8	30	70	3.3	31	73	2.3	30	72	0.0	33	78	0.0	49	92	41	98			
385	4.9	29	71	3.3	31	74	2.3	30	73	0.0	33	80	0.0	49	94	41	100			
372	5.0	30	73	3.4	31	76	2.4	30	75	0.0	33	82	0.0	49	96	41	102			
358	5.1	30	75	3.5	31	78	2.5	30	76	0.0	33	83	0.0	49	98	41	104			
345	5.2	30	76	3.5	31	80	2.5	30	78	0.0	33	85	0.0	49	100	41	106			
332	5.3	30	78	3.6	31	81	2.6	30	79	0.0	33	86	0.0	49	101	41	108			
320	5.4	30	80	3.7	31	83	2.7	30	81	0.0	33	88	0.0	49	103	41	110			
308	5.5	30	82	3.8	31	85	2.8	30	82	0.0	33	90	0.0	49	105	41	112			
297	5.6	30	83	3.9	32	87	2.9	30	84	0.0	33	91	0.0	49	107	41	114			
286	5.7	30	85	3.9	32	89	2.9	30	85	0.0	33	93	0.0	49	109	41	116			
276	5.8	30	87	4.0	32	91	3.0	33	95	2.0	33	95	0.0	53	153	2.0	39	111	41	118
266	5.9	31	89	4.1	32	93	3.1	33	97	2.1	33	96	0.0	54	157	2.2	39	113	41	120
258	6.0	30	90	4.2	32	95	3.2	33	99	2.2	33	98	0.0	54	161	2.4	39	115	41	122
248	6.1	31	92	4.3	32	97	3.3	34	101	2.3	33	99	0.0	55	165	2.6	39	117	41	124
240	6.2	31	94	4.4	32	99	3.4	34	103	2.4	33	101	0.0	55	169	2.8	39	119	41	126
232	6.3	31	96	4.5	33	101	3.5	34	105	2.5	33	103	0.0	55	173	3.0	39	120	41	128
225	6.4	31	98	4.6	33	103	3.6	34	107	2.6	33	104	0.0	56	177	3.2	39	122	41	130
217	6.5	31	100	4.7	33	105	3.7	34	109	2.7	33	106	0.0	56	181	3.4	39	124	41	132
209	6.6	31	102	4.8	33	107	3.8	34	111	2.8	33	108	0.0	57	185	3.6	39	126	41	134
202	6.7	32	104	4.9	33	109	3.9	34	113	2.9	33	109	0.0	57	189	3.8	39	128	41	136
196	6.8	32	106	5.0	33	111	4.0	34	115	3.0	36	120	0.0	57	193	4.0	39	130	41	138
189	6.9	32	108	5.1	33	113	4.1	35	118	3.1	36	122	2.1	58	198	4.2	39	132	41	140
183	7.0	32	110	5.2	33	115	4.2	35	120	3.2	36	124	2.2	58	202	4.4	39	134	41	142
176	7.1	32	112	5.3	33	117	4.3	35	122	3.3	36	127	2.3	59	206	4.6	39	136	41	144
170	7.2	32	115	5.4	34	120	4.4	35	125	3.5	36	129	2.5	59	212	5.0	39	138	41	146
164	7.3	33	117	5.6	34	122	4.6	35	127	3.6	37	132	2.6	60	217	5.2	39	140	41	148
158	7.4	33	119	5.8	34	124	4.8	35	129	3.8	37	134	2.8	60	222	5.6	39	141	41	150
152	7.5	33	122	5.9	34	127	4.9	36	132	3.9	37	137	2.9	61	227	5.8	39	143	41	152
146	7.6	33	124	6.1	34	129	5.1	36	135	4.1	37	140	3.1	62	233	6.2	39	145	41	154
139	7.7	33	127	6.3	35	132	5.3	36	137	4.3	38	143	3.3	63	239	6.6	39	147	41	156
132	7.8	34	130	6.5	35	135	5.5	36	140	4.5	38	145	3.5	64	246	7.0	39	149	41	158
124	7.9	34	133	6.8	35	138	5.8	37	144	4.8	38	149	3.8	65	254	7.6	39	151	41	160
108	8.0	35	139	7.6	36	144	6.6	38	150	5.6	39	155	4.6	68	270	9.2	39	153	41	162

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

TRANSITION CURVES - RURAL
20 MPH DESIGN SPEED

SPECIFICATION
REFERENCE