

**DESIGN FACTORS FOR A DESIGN SPEED OF 25 MPH (RURAL) USING E- 8% MAX.**

DESIGN VELOCITY -25 RADIUS(FT)	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				WIDTH			
	1 e 9'			1 e 10'			1 e 11'			1 e 12'			2 e 12'			16 FT		18 FT						
	Lt	Lr	w	Lt	Lr	w	Lt	Lr	w	Lt	Lr	w	Lt	Lr	w	Lt	Lr	Lt	Lr					
1756	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
1766	2.0	26	0.0	29	29	0.0	32	32	0.0	35	35	0.0	38	38	0.0	40	40	0	43					
1664	2.1	71	7.4	2.0	29	30	0.0	32	33	0.0	35	36	0.0	38	39	0.0	40	42	45					
1579	2.2	68	7.4	2.0	29	32	0.0	32	35	0.0	35	38	0.0	40	44	0.0	40	44	48					
1502	2.3	65	7.4	2.0	29	33	0.0	33	37	0.0	35	40	0.0	40	46	0.0	40	46	50					
1431	2.4	62	7.4	2.1	29	35	0.0	32	38	0.0	35	42	0.0	40	48	0.0	40	48	52					
1366	2.5	60	7.4	2.1	29	36	0.0	32	40	0.0	35	43	0.0	40	50	0.0	40	50	54					
1306	2.6	57	7.4	2.1	29	38	0.0	32	41	0.0	35	45	0.0	40	52	0.0	40	52	56					
1250	2.7	55	7.4	2.1	29	39	0.0	32	43	0.0	35	47	0.0	40	54	0.0	40	54	58					
1198	2.8	53	7.4	2.2	29	40	0.0	32	44	0.0	35	48	0.0	40	56	0.0	40	56	60					
1149	2.9	52	7.4	2.2	29	42	0.0	32	46	0.0	35	50	0.0	40	58	0.0	40	58	63					
1104	3.0	50	7.4	2.2	29	43	0.0	32	48	0.0	35	52	0.0	40	60	0.0	40	60	65					
1061	3.1	48	7.4	2.3	29	45	0.0	32	49	0.0	35	54	0.0	40	62	0.0	40	62	67					
1021	3.2	47	7.4	2.3	29	46	0.0	32	51	0.0	35	55	0.0	40	64	0.0	40	64	69					
983	3.3	45	7.4	2.3	29	48	0.0	32	52	0.0	35	57	0.0	40	66	0.0	40	66	71					
948	3.4	44	7.4	2.4	29	49	0.0	32	54	0.0	35	59	0.0	40	68	0.0	40	68	73					
914	3.5	43	7.4	2.4	29	50	0.0	32	55	0.0	35	60	0.0	40	70	0.0	40	70	75					
882	3.6	42	7.4	2.4	29	52	0.0	32	57	0.0	35	62	0.0	40	72	0.0	40	72	78					
852	3.7	40	7.4	2.5	29	53	0.0	32	59	0.0	35	64	0.0	40	74	0.0	40	74	80					
823	3.8	39	7.4	2.5	29	55	0.0	32	60	0.0	35	66	0.0	40	76	0.0	40	76	82					
795	3.9	38	7.4	2.6	29	56	0.0	32	62	0.0	35	67	0.0	40	78	0.0	40	78	84					
769	4.0	37	7.4	2.6	29	58	0.0	32	63	0.0	35	69	0.0	40	80	0.0	40	80	86					
744	4.1	37	7.4	2.6	29	59	0.0	32	65	0.0	35	71	0.0	40	82	0.0	40	82	88					
720	4.2	36	7.4	2.7	29	60	0.0	32	66	0.0	35	72	0.0	40	84	0.0	40	84	90					
696	4.3	35	7.4	2.7	29	62	0.0	32	68	0.0	35	74	0.0	40	86	0.0	40	86	93					
674	4.4	34	7.4	2.7	29	63	0.0	32	70	0.0	35	76	0.0	40	88	0.0	40	88	95					
652	4.5	33	7.4	2.8	29	65	0.0	32	71	0.0	35	78	0.0	40	90	0.0	40	90	97					
632	4.6	33	7.4	2.8	29	66	0.0	32	73	0.0	35	79	0.0	40	92	0.0	40	92	99					
612	4.7	32	7.4	2.9	29	68	0.0	32	74	0.0	35	81	0.0	40	94	0.0	40	94	101					
592	4.8	31	7.4	2.9	29	69	0.0	32	76	0.0	35	83	0.0	40	96	0.0	40	96	103					
573	4.9	31	7.5	2.9	29	70	0.0	32	77	0.0	35	84	0.0	40	98	0.0	40	98	105					
555	5.0	30	7.5	3.0	32	79	2.0	32	79	0.0	35	86	0.0	40	100	0.0	40	100	108					
537	5.1	31	7.7	3.0	32	81	2.0	32	81	0.0	35	88	0.0	40	102	0.0	40	102	110					
519	5.2	31	7.9	3.1	32	83	2.1	32	82	0.0	35	90	0.0	40	104	0.0	40	104	112					
502	5.3	31	8.0	3.1	32	84	2.1	32	84	0.0	35	91	0.0	40	106	0.0	40	106	114					
485	5.4	31	8.2	3.2	32	86	2.2	32	85	0.0	35	93	0.0	40	108	0.0	40	108	116					
468	5.5	31	8.4	3.2	32	88	2.2	32	87	0.0	35	95	0.0	40	110	0.0	40	110	118					
452	5.6	31	8.6	3.3	33	90	2.3	32	88	0.0	35	96	0.0	40	112	0.0	40	112	120					
437	5.7	31	8.8	3.4	33	92	2.4	32	90	0.0	35	98	0.0	40	114	0.0	40	114	123					
423	5.8	31	8.9	3.4	33	93	2.4	32	92	0.0	35	100	0.0	40	116	0.0	40	116	125					
409	5.9	31	9.1	3.5	33	95	2.5	32	93	0.0	35	102	0.0	40	118	0.0	40	118	127					
396	6.0	31	9.3	3.5	33	97	2.5	32	95	0.0	35	103	0.0	40	120	0.0	40	120	129					
383	6.1	32	9.5	3.6	33	99	2.6	32	96	0.0	35	105	0.0	40	122	0.0	40	122	131					
371	6.2	32	9.7	3.7	33	101	2.7	32	98	0.0	35	107	0.0	40	124	0.0	40	124	133					
359	6.3	32	9.8	3.7	33	103	2.7	32	99	0.0	35	108	0.0	40	126	0.0	40	126	135					
347	6.4	32	10.0	3.8	33	105	2.8	32	101	0.0	35	110	0.0	40	128	0.0	40	128	138					
336	6.5	32	10.2	3.9	33	103	2.9	32	103	0.0	35	112	0.0	40	130	0.0	40	130	140					
326	6.6	32	10.4	3.9	33	108	2.9	32	104	0.0	35	114	0.0	40	132	0.0	40	132	142					
315	6.7	32	10.6	4.0	34	111	3.0	35	115	2.0	35	115	0.0	40	134	0.0	40	134	144					
305	6.8	32	10.8	4.1	34	113	3.1	35	118	2.1	35	117	0.0	40	136	0.0	40	136	146					
295	6.9	32	11.0	4.2	34	115	3.2	35	120	2.2	35	119	0.0	40	138	0.0	40	138	148					
286	7.0	32	11.1	4.2	34	116	3.2	35	121	2.2	35	120	0.0	40	140	0.0	40	140	150					
276	7.1	33	11.4	4.3	34	119	3.3	35	124	2.3	35	122	0.0	40	142	0.0	40	142	153					
267	7.2	33	11.6	4.4	34	121	3.4	35	126	2.4	35	124	0.0	40	144	0.0	40	144	155					
258	7.3	33	11.8	4.5	34	123	3.5	36	128	2.5	35	126	0.0	40	146	0.0	40	146	157					
248	7.4	33	12.0	4.6	34	125	3.6	36	131	2.6	35	127	0.0	40	148	0.0	40	148	159					
239	7.5	33	12.2	4.7	34	127	3.7	36	133	2.7	35	129	0.0	40	150	0.0	40	150	161					
229	7.6	33	12.4	4.8	35	130	3.8	36	135	2.8	35	131	0.0	40	152	0.0	40	152	163					
219	7.7	33	12.7	5.0	35	132	4.0	36	138	3.0	38	143	2.0	40	154	0.0	40	154	165					
209	7.8	34	12.9	5.1	35	135	4.1	36	140	3.1	38	146	2.1	40	156	0.0	40	156	168					
196	7.9	34	13.2	5.3	35	138	4.3	37	143	3.3	38	149	2.3	40	158	0.0	40	158	170					
171	8.0	34	13.6	5.8	36	142	4.8	37	148	3.8	39	154	2.8	40	160	0.0	40	160	172					

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

SPECIFICATION REFERENCE

**TRANSITION CURVES - RURAL  
25 MPH DESIGN SPEED**

VIRGINIA DEPARTMENT OF TRANSPORTATION



ROAD AND BRIDGE STANDARDS

REVISION DATE SHEET 1 OF 1

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