SPECIFICATION REFERENCE

TRANSITION CURVES - RURAL
45 MPH DESIGN SPEED

VIRGINIA DEPARTMENT OF TRANSPORTATION

DESIGN FACTORS FOR A DESIGN SPEED OF 45 MPH (RURAL) USING E= 8% MAX.

DESIGN VELOCITY =45		WIDTH=20 FT			WIDTH=22 FT			WIDTH=24 FT			WIDTH=48 FT			WIDTH=72 FT			INTERCHANGE RAMPS WIDTH			
		DESIGN SOFTWARE EQUIVALENTS (NUMBER OF LANES AT LANE WIDTH)															16 FT		18 FT	
		1 @ 10'			1 @ 11'			1 @ 12'			2 @ 12'			3 @ 12'						
RADIUS(FT)	E(%)	Lt	Lr	w	Lt	Lr	w	Lt	Lr	w	Lt	Lr	w	Lt	Lr	w	Lt	Lr	Lt	Lr
6710	NC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5180	2	41	41	2	41	41	0	45	45	0	67	67	0	89	89	0	53	53	56	56
4730	2.1	41	43	2.1	41	43	0	45	47	0	67	70	0	89	94	0	53	56	56	59
4560	2.2	41	46	2.1	41	45	0	45	49	0	67	74	0	89	98	0	53	58	56	61
4350	2.3	42	48	2.2	41	47	0	45	52	0	67	77	0	89	103	0	53	61	56	64
4080	2.4	42	50	2.2	41	49	0	45	54	0	67	80	0	89	107	0	53	63	56	67
3930	2.5	42	52	2.3	41	51	0	45	56	0	67	84	0	89	112	0	53	66	56	70
3780	2.6	42	54	2.3	41	53	0	45	58	0	67	87	0	89	116	0	53	69	56	72
3630	2.7	42	56	2.3	41	55	0	45	60	0	67	90	0	89	120	0	53	71	56	75
3450	2.8	42	59	2.4	41	58	0	45	63	0	67	94	0	89	125	0	53	74	56	78
3270	2.9	42	61	2.4	41	60	0	45	65	0	67	97	0	89	129	0	53	77	56	81
3150	3	42	63	2.5	41	62	0	45	67	0	67	100	0	89	134	0	53	79	56	84
3030	3.1	42	65	2.5	41	64	0	45	69	0	67	104	0	89	138	0	53	82	56	86
2920	3.2	42	67	2.5	41	66	0	45	72	0	67	107	0	89	143	0	53	84	56	89
2840	3.3	42	70	2.6	41	68	0	45	74	0	67	110	0	89	147	0	53	87	56	92
2784	3.4	42	72	2.6	41	70	0	45	76	0	67	114	0	89	152	0	53	90	56	95
2670	3.5	42	74	2.6	41	72	0	45	78	0	67	117	0	89	156	0	53	92	56	97
2606	3.6	43	76	2.7	41	74	0	45	80	0	67	120	0	89	160	0	53	95	56	100
2498	3.7	43	78	2.7	41	76	0	45	83	0	67	124	0	89	165	0	53	98	56	103
2393	3.8	43	81	2.8	41	78	0	45	85	0	67	127	0	89	169	0	53	100	56	106
2355	3.9	43	83	2.8	41	80	0	45	87	0	67	130	0	89	174	0	53	103	56	108
2261	4	43	85	2.9	41	82	0	45	89	0	67	134	0	89	178	0	53	105	56	111
2183	4.1	43	87	2.9	41	84	0	45	92	0	67	137	0	89	183	0	53	108	56	114
2126	4.2	43	90	2.9	41	86	0	45	94	0	67	140	0	89	187	0	53	111	56	117
2069	4.3	43	92	3	45	96	2	45	96	0	67	144	0	89	192	0	53	113	56	120
2012	4.4	43	94	3	45	98	2	45	98	0	67	147	0	89	196	0	53	116	56	122
1955	4.5	43	97	3.1	45	101	2.1	45	100	0	67	150	0	89	200	0	53	119	56	125
1878	4.6	43	99	3.1	45	103	2.1	45	103	0	67	154	0	89	205	0	53	121	56	128
1820	4.7	43	101	3.2	45	106	2.2	45	105	0	67	157	0	89	209	0	53	124	56	131
1788	4.8	43	104	3.2	45	108	2.2	45	107	0	67	160	0	89	214	0	53	126	56	133
1739	4.9	43	106	3.2	45	110	2.2	45	109	0	67	164	0	89	218	0	53	129	56	136
1703	5	44	108	3.3	45	113	2.3	45	112	0	67	167	0	89	223	0	53	132	56	139
1652	5.1	44	111	3.3	45	115	2.3	45	114	0	67	170	0	89	227	0	53	134	56	142
1578	5.2	44	113	3.4	46	118	2.4	45	116	0	67	174	0	89	232	0	53	137	56	144
1535	5.3	44	116	3.5	46	121	2.5	45	118	0	67	177	0	89	236	0	53	140	56	147
1496	5.4	44	118	3.5	46	123	2.5	45	120	0	67	180	0	89	240	0	53	142	56	150
1464	5.5	44	120	3.5	46	125	2.5	45	123	0	67	184	0	89	245	0	53	145	56	153
1419	5.6	44	123	3.6	46	128	2.6	45	125	0	67	187	0	89	249	0	53	147	56	156
1378	5.7	44	126	3.7	46	131	2.7	45	127	0	67	190	0	89	254	0	53	150	56	158
1324	5.8	44	128	3.7	46	133	2.7	45	129	0	67	194	0	89	258	0	53	153	56	161
1306	5.9	45	131	3.8	46	136	2.8	45	132	0	67	197	0	89	263	0	53	155	56	164
1261	6	45	133	3.9	47	139	2.9	45	134	0	67	200	0	89	267	0	53	158	56	167
1240	6.1	45	135	3.9	47	141	2.9	45	136	0	67	204	0	89	272	0	53	160	56	169
1196	6.2	45	138	4	47	144	3	49	150	2	73	224	4	97	299	6	53	163	56	172
1173	6.3	45	140	4	47	146	3	49	152	2	73	228	4	97	304	6	53	166	56	175
1150	6.4	45	143	4.1	47	149	3.1	49	155	2.1	73	232	4.2	97	310	6.3	53	168	56	178
1103	6.5	45	146	4.2	47	152	3.2	49	158	2.2	73	237	4.4	98	316	6.6	53	171	56	180
1079	6.6	45	148	4.2	47	154	3.2	49	161	2.2	73	241	4.4	98	321	6.6	53	174	56	183
1054	6.7	45	151	4.3	47	157	3.3	49	164	2.3	74	245	4.6	98	327	6.9	53	176	56	186
1000	6.8	46	154	4.4	48	160	3.4	49	167	2.4	74	250	4.8	98	333	7.2	53	179	56	189
986	6.9	46	156	4.4	48	163	3.4	49	169	2.4	74	253	4.8	98	338	7.2	53	181	56	192
948	7	46	160	4.6	48	166	3.6	50	173	2.6	74	259	5.2	99	345	7.8	53	184	56	194
933	7.1	46	162	4.6	48	169	3.6	50	175	2.6	74	263	5.2	99	350	7.8	53	187	56	197
896	7.2	46	165	4.7	48	172	3.7	50	178	2.7	75	267	5.4	99	356	8.1	53	189	56	200
858	7.3	47	168	4.8	48	175	3.8	50	182	2.8	75	272	5.6	100	363	8.4	53	192	56	203
846	7.4	47	171	4.9	48	178	3.9	50	185	2.9	75	277	5.8	100	369	8.7	53	195	56	205
807	7.5	47	174	5	49	181	4	50	188	3	75	282	6	100	375	9	53	197	56	208
800	7.6	47	177	5.1	49	184	4.1	51	191	3.1	76	287	6.2	101	382	9.3	53	200	56	211
760	7.7	47	180	5.2	49	187	4.2	51	194	3.2	76	291	6.4	101	388	9.6	53	202	56	214
720	7.8	48	184	5.4	49	191	4.4	51	198	3.4	77	297	6.8	102	396	10.2	53	205	56	216
680	7.9	48	188	5.6	50	195	4.6	52	202	3.6	77	303	7.2	103	404	10.8	53	208	56	219
589	8	49	195	6.2	51	202	5.2	53	209	4.2	79	314	8.4	105	418	12.6	53	210	56	222

NOTE:
Lt, Lr & w VALUES IN FEET. LISTED RADIUS IS THE MINIMUM ALLOWABLE RADIUS FOR THE CORRESPONDING E, Lt, Lr, AND w VALUES. WIDENING SHOWN IS BASED ON A WB-62 DESIGN VEHICLE.

VDOT ROAD AND BRIDGE STANDARDS

REVISION DATE 01/13

SHEET 1 OF 1

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