

DESIGN FACTORS FOR A DESIGN SPEED OF 40 MPH (RURAL) USING E- 8% MAX.

DESIGN VELOCITY -40 RADIUS(FT) E(%)	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-72 FT		16 FT		18 FT		
	1 @ 9'		1 @ 10'		1 @ 11'		1 @ 12'		2 @ 12'		3 @ 12'		Lr		Lr		
	Lt	w	Lt	w	Lt	w	Lt	w	Lt	w	Lt	w	Lt	w	Lt	w	
6000	NC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4000	2.0	32	32	0	35	38	38	0	0	0	63	63	0	83	83	0	
3792	2.1	32	33	0	35	37	40	0	0	0	63	66	0	83	87	0	
3603	2.2	32	35	0	35	38	42	0	0	0	63	69	0	83	92	0	
3430	2.3	32	36	0	35	40	44	0	0	0	63	72	0	83	96	0	
3271	2.4	32	38	0	35	42	46	0	0	0	63	75	0	83	100	0	
3125	2.5	32	39	0	35	44	48	0	0	0	63	78	0	83	104	0	
2990	2.6	32	41	0	35	45	50	0	0	0	63	81	0	83	108	0	
2866	2.7	32	42	0	35	47	52	0	0	0	63	84	0	83	112	0	
2865	2.7	87	117	2.0	35	47	56	0	0	0	63	84	0	83	112	0	
2748	2.8	84	117	2.0	35	49	54	0	0	0	63	87	0	83	116	0	
2640	2.9	81	117	2.0	35	50	55	0	0	0	63	90	0	83	120	0	
2538	3.0	78	117	2.0	35	52	57	0	0	0	63	94	0	83	125	0	
2443	3.1	76	117	2.1	35	54	59	0	0	0	63	97	0	83	129	0	
2354	3.2	74	117	2.1	35	56	61	0	0	0	63	100	0	83	133	0	
2289	3.3	71	117	2.1	35	57	63	0	0	0	63	103	0	83	137	0	
2190	3.4	69	117	2.1	35	59	65	0	0	0	63	106	0	83	141	0	
2115	3.5	67	117	2.2	35	61	67	0	0	0	63	109	0	83	145	0	
2044	3.6	65	117	2.2	35	63	69	0	0	0	63	112	0	83	149	0	
1977	3.7	64	117	2.2	35	64	71	0	0	0	63	115	0	83	154	0	
1913	3.8	62	117	2.2	35	66	73	0	0	0	63	118	0	83	158	0	
1852	3.9	60	117	2.2	35	68	74	0	0	0	63	122	0	83	162	0	
1794	4.0	59	117	2.3	35	69	76	0	0	0	63	125	0	83	166	0	
1739	4.1	58	117	2.3	35	71	78	0	0	0	63	128	0	83	170	0	
1686	4.2	56	117	2.3	35	73	80	0	0	0	63	131	0	83	174	0	
1635	4.3	55	117	2.3	35	75	82	0	0	0	63	134	0	83	178	0	
1587	4.4	54	117	2.4	35	76	84	0	0	0	63	137	0	83	183	0	
1540	4.5	52	117	2.4	35	78	86	0	0	0	63	140	0	83	187	0	
1495	4.6	51	117	2.4	35	80	88	0	0	0	63	143	0	83	191	0	
1452	4.7	50	117	2.4	35	82	90	0	0	0	63	146	0	83	195	0	
1411	4.8	49	117	2.5	35	83	92	0	0	0	63	149	0	83	199	0	
1370	4.9	48	117	2.5	35	85	93	0	0	0	63	153	0	83	203	0	
1332	5.0	47	117	2.5	35	87	95	0	0	0	63	156	0	83	207	0	
1294	5.1	46	117	2.5	35	88	97	0	0	0	63	159	0	83	212	0	
1258	5.2	45	117	2.6	35	90	99	0	0	0	63	162	0	83	216	0	
1222	5.3	45	117	2.6	35	92	101	0	0	0	63	165	0	83	220	0	
1188	5.4	44	117	2.6	35	94	103	0	0	0	63	168	0	83	224	0	
1154	5.5	43	117	2.7	35	95	105	0	0	0	63	171	0	83	228	0	
1122	5.6	42	117	2.7	35	97	107	0	0	0	63	174	0	83	232	0	
1090	5.7	42	117	2.7	35	99	109	0	0	0	63	177	0	83	236	0	
1058	5.8	41	117	2.7	35	100	110	0	0	0	63	180	0	83	240	0	
1028	5.9	40	117	2.8	35	102	112	0	0	0	63	184	0	83	245	0	
999	6.0	39	117	2.8	35	104	114	0	0	0	63	187	0	83	249	0	
971	6.1	39	117	2.8	35	106	116	0	0	0	63	190	0	83	253	0	
944	6.2	38	117	2.9	35	107	118	0	0	0	63	193	0	83	257	0	
917	6.3	38	117	2.9	35	109	120	0	0	0	63	196	0	83	261	0	
891	6.4	37	117	2.9	35	111	122	0	0	0	63	199	0	83	265	0	
866	6.5	37	118	3.0	39	124	124	0	0	0	63	202	0	83	269	0	
842	6.6	37	120	3.0	39	126	126	0	0	0	63	205	0	83	274	0	
818	6.7	37	122	3.0	39	128	128	0	0	0	63	208	0	83	278	0	
794	6.8	37	124	3.1	39	130	129	0	0	0	63	212	0	83	282	0	
771	6.9	37	126	3.1	39	132	131	0	0	0	63	215	0	83	286	0	
748	7.0	37	128	3.2	39	134	133	0	0	0	63	218	0	83	290	0	
726	7.1	37	130	3.2	39	136	135	0	0	0	63	221	0	83	294	0	
703	7.2	37	133	3.3	39	139	137	0	0	0	63	224	0	83	298	0	
681	7.3	37	135	3.3	39	141	139	0	0	0	63	227	0	83	303	0	
658	7.4	38	137	3.4	39	143	141	0	0	0	63	230	0	83	307	0	
635	7.5	38	139	3.4	39	145	143	0	0	0	63	233	0	83	311	0	
612	7.6	38	141	3.5	39	148	145	0	0	0	63	236	0	83	315	0	
587	7.7	38	143	3.5	39	150	147	0	0	0	63	239	0	83	319	0	
560	7.8	38	146	3.6	39	152	148	0	0	0	63	243	0	83	323	0	
529	7.9	38	148	3.7	40	155	150	0	0	0	63	246	0	88	346	2.1	
465	8.0	38	152	4.0	40	159	166	2.0	42	166	0	63	269	0	90	359	3.0

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



ROAD AND BRIDGE STANDARDS

SHEET 1 OF 1

REVISION DATE

802.36

TRANSITION CURVES - RURAL
40 MPH DESIGN SPEED

VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION
REFERENCE