

**DESIGN FACTORS FOR A DESIGN SPEED OF 20 MPH  
(URBAN) USING E= 4% MAX.**

RADIUS (FEET)	E (%)	PAVEMENT WIDTH											
		24 FT		36 FT		48 FT		60 FT		66 FT		72 FT	
		DESIGN SOFTWARE EQUIVALENTS (NUMBER OF LANES AT LANE WIDTH)											
		1 @ 12'		1.5 @ 12'		2 @ 12'		3 @ 10'		3 @ 11'		3 @ 12'	
Lt	Lr	Lt	Lr	Lt	Lr	Lt	Lr	Lt	Lr	Lt	Lr		
1400	NC	0	0	0	0	0	0	0	0	0	0	0	
961	2.0	33	33	41	41	49	49	55	55	60	60	65	65
884	2.1	33	35	41	43	49	52	55	57	60	63	65	69
810	2.2	33	36	41	45	49	54	55	60	60	66	65	72
735	2.3	33	38	41	47	49	56	55	63	60	69	65	75
653	2.4	33	39	41	49	49	59	55	65	60	72	65	78
578	2.5	33	41	41	51	49	61	55	68	60	75	65	82
516	2.6	33	43	41	53	49	64	55	71	60	78	65	85
464	2.7	33	44	41	55	49	66	55	73	60	81	65	88
421	2.8	33	46	41	57	49	69	55	76	60	84	65	91
383	2.9	33	48	41	59	49	71	55	79	60	87	65	95
351	3.0	33	49	41	61	49	73	55	82	60	90	65	98
322	3.1	33	51	41	63	49	76	55	84	60	93	65	101
296	3.2	33	52	41	65	49	78	55	87	60	96	65	104
273	3.3	33	54	41	67	49	81	55	90	60	99	65	108
252	3.4	33	56	41	69	49	83	55	92	60	102	65	111
232	3.5	33	57	41	71	49	86	55	95	60	105	65	114
214	3.6	33	59	41	73	49	88	55	98	60	108	65	117
196	3.7	33	60	41	75	49	90	55	100	60	110	65	120
179	3.8	33	62	41	77	49	93	55	103	60	113	65	124
160	3.9	33	64	41	79	49	95	55	106	60	116	65	127
127	4.0	33	65	41	81	49	98	55	109	60	119	65	130

**NOTE:**

Lt AND Lr VALUES IN FEET.

FOR PAVEMENT WIDTHS GREATER THAN 72 FEET USE Lr VALUES DEVELOPED BY THE DESIGN SOFTWARE.

LISTED RADIUS IS THE MINIMUM ALLOWABLE RADIUS FOR THE CORRESPONDING E, Lt, AND Lr VALUES.

SPECIFICATION REFERENCE

**TRANSITION CURVES - URBAN  
20 MPH DESIGN SPEED**

VIRGINIA DEPARTMENT OF TRANSPORTATION