

**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		
1410	NC	0	0	0	0	0	0	0	0	0	0	0	
960	2	33	33	41	41	49	49	55	55	60	60	65	65
868	2.1	33	35	41	43	49	52	55	57	60	63	65	69
756	2.2	33	36	41	45	49	54	55	60	60	66	65	72
684	2.3	33	38	41	47	49	56	55	63	60	69	65	75
565	2.4	33	39	41	49	49	59	55	65	60	72	65	78
504	2.5	33	41	41	51	49	61	55	68	60	75	65	82
408	2.6	33	43	41	53	49	64	55	71	60	78	65	85
376	2.7	33	44	41	55	49	66	55	73	60	81	65	88
348	2.8	33	46	41	57	49	69	55	76	60	84	65	91
300	2.9	33	48	41	59	49	71	55	79	60	87	65	95
264	3	33	49	41	61	49	73	55	82	60	90	65	98
254	3.1	33	51	41	63	49	76	55	84	60	93	65	101
229	3.2	33	52	41	65	49	78	55	87	60	96	65	104
197	3.3	33	54	41	67	49	81	55	90	60	99	65	108
188	3.4	33	56	41	69	49	83	55	92	60	102	65	111
167	3.5	33	57	41	71	49	86	55	95	60	105	65	114
156	3.6	33	59	41	73	49	88	55	98	60	108	65	117
147	3.7	33	60	41	75	49	90	55	100	60	110	65	120
124	3.8	33	62	41	77	49	93	55	103	60	113	65	124
116	3.9	33	64	41	79	49	95	55	106	60	116	65	127
87	4	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.



ROAD AND BRIDGE STANDARDS

SHEET 1 OF 1

REVISION DATE

803.24

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

VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION  
REFERENCE