

**DESIGN FACTORS FOR A DESIGN SPEED OF 70 km/h  
(URBAN) USING E= 4% MAX.**

RADIUS (METERS)	E (%)	PAVEMENT WIDTH											
		7.2 m		10.8 m		14.4 m		18.0 m		19.8 m		21.6 m	
		DESIGN SOFTWARE EQUIVALENTS (NUMBER OF LANES AT LANE WIDTH)											
		1 @ 3.6 m		1.5 @ 3.6 m		2 @ 3.6 m		3 @ 3.0 m		3 @ 3.3 m		3 @ 3.6 m	
		Lt	Lr	Lt	Lr	Lt	Lr	Lt	Lr	Lt	Lr	Lt	Lr
2000	NC	0	0	0	0	0	0	0	0	0	0	0	0
1191	2.0	14	14	17	17	20	20	22	22	24	24	27	27
1108	2.1	14	14	17	18	20	21	22	23	24	26	27	28
1030	2.2	14	15	17	18	20	22	22	24	24	27	27	29
957	2.3	14	16	17	19	20	23	22	26	24	28	27	31
886	2.4	14	16	17	20	20	24	22	27	24	29	27	32
817	2.5	14	17	17	21	20	25	22	28	24	30	27	33
747	2.6	14	18	17	22	20	26	22	29	24	32	27	35
685	2.7	14	18	17	23	20	27	22	30	24	33	27	36
631	2.8	14	19	17	23	20	28	22	31	24	34	27	37
583	2.9	14	19	17	24	20	29	22	32	24	35	27	38
540	3.0	14	20	17	25	20	30	22	33	24	36	27	40
501	3.1	14	21	17	26	20	31	22	34	24	38	27	41
466	3.2	14	21	17	27	20	32	22	35	24	39	27	42
433	3.3	14	22	17	27	20	33	22	36	24	40	27	44
403	3.4	14	23	17	28	20	34	22	38	24	41	27	45
374	3.5	14	23	17	29	20	35	22	39	24	42	27	46
347	3.6	14	24	17	30	20	36	22	40	24	44	27	48
323	3.7	14	25	17	31	20	37	22	41	24	45	27	49
294	3.8	14	25	17	31	20	38	22	42	24	46	27	50
265	3.9	14	26	17	32	20	39	22	43	24	47	27	52
215	4.0	14	28	17	34	20	40	22	44	24	48	27	54

NOTE:

Lt AND Lr VALUES IN METERS.

FOR PAVEMENT WIDTHS GREATER THAN 21.6 METERS USE Lr VALUES DEVELOPED BY DESIGN SOFTWARE.

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

**TRANSITION CURVES - URBAN  
70 km/h DESIGN SPEED**

VIRGINIA DEPARTMENT OF TRANSPORTATION