Curb and gutter

1.		HORIZONTAL AND VERTICAL CONTROLS MAXIMUM 2:1 CUT OR FILL SLOPE					CURB AND GUTTER ROADWAYS (SEE SPECIAL WIDTH REDUCTION CRITERIA)	
PROJECTED TRAFFIC VOLUME (ADT)	MINIMUM DESIGN SPEED (MPH)	CURVE DATA		SUGGESTED MAXIMUM % GRADE	MINIMUM SIGHT DISTANCE		MINIMUM WIDTH (CURB TO CURB) (3) (PARKING ASSUMED) LENGTH NOT A FACTOR	CLEAR ZONE WITHOUT PARKING (MEASURED FROM FACE OF CURB) (6) NEW
		MINIMUM CENTERLINE RADIUS	SUPER-ELEV.		STOPPING	INTERSECTIONS		
UP TO 400	20	120' (5)	NONE	10 (1) 7-16 BASED ON TERRAIN	125'	200'	28' (2) 28-30'	3
401 - 1500	25	165' 180'	NONE	10 (1) 7-16 BASED ON TERRAIN	155' 150'	280' 250'	36'	3
1501 - 2000	30	275' 300'	NONE	10 (1) 7-16 BASED ON TERRAIN	200'	335' 300'	36'	6
2001 - 4000	30	275' 300'	NONE	10 (1) 7-16 BASED ON TERRAIN	200'	335' 300'	40' 38' (3)	6

NOTES:

For streets with volumes over 4000 or serving heavy commercial or Industrial traffic; use the appropriate geometric design standard. (see VDOT's road design manual)

The roadway with the highest volume will govern the sight distance.

1. For mountainous terrain, maximum percent of grade may be 16% for ADT up to 400 and 14% for 400-4000 ADT.
2. 26'allowed for streets< 400 vpd with concurrence of local officials.
3. 36' allowed for streets that are internal to the sub-division, with concurrence of local officials.
4. Pavement widths may be reduced if parking is not allowed. See page 14 for roadway width exceptions criteria.
5. 95' minimum radius allowed in mountainous terrain
6. For curb and gutter streets with parking lanes, the clear zone is accommodated within the parking lane. However, VDOT has established a 3' minimum setback requirement behind the curb.

		HORIZONTAL AND VERTICAL CONTROLS Maximum 2:1 Cut or Fill Slope					SHOULDER AND DITCH ROADWAYS Minimum ditch width should be 4 feet or greater, based on slopes of 3:1 or flatter (Gentler slopes promote homeowner maintenance of ditches)			
PROJECTED TRAFFIC VOLUME (ADT)	MINIMUM DESIGN SPEED (MPH)	CURVE DATA		SUGGESTED MAXIMUM % GRADE	MINIMUM SIGHT DISTANCE		MINIMUM PAVEMENT WIDTH	MINIMUM GRADED SHOULDER WIDTH		CLEAR ZONE (measured from edge of roadway pavement) new
		MINIMUM CENTERLINE RADIUS	SUPER-ELEV.		STOPPING	INTERSECTIONS		FILL W/ G.R.	CUT OR FILL	
UP TO 400	20	120’ (6)	NONE	10 (2) 7-16 BASED ON TERRAIN	125’	200’	18’ (18-20)	5’ (7)	4’ (1)	6’ (3)
401 - 1500	25	165’ 180	NONE	10 (2) 7-16 BASED ON TERRAIN	155’ 150’	280’ 250’	20’ 20-22 based on terrain(4)	8’ (7)	5’ (5)(4)	7’
1501 - 2000	30	275’ 300’	NONE	10 (2) 7-14 BASED ON TERRAIN	200’	335’ 300’	22’20-22 based on terrain	9’	6’	10’
2001 - 4000	30	275’ 300’	NONE	10 (2) 7-14 BASED ON TERRAIN	200’	335’ 300’	24’ 22’	11’ (9)	8’ (6)	12’

NOTES:

For streets with volumes over 4000 or serving heavy commercial or industrial traffic; use the appropriate geometric design standard. (see VDOT’s Road Design Manual)

The roadway with the highest volume will govern the sight distance.

1. When pedestrian facilities are provided behind ditches, the shoulder width may be reduced to a minimum of 2 feet.
2. For mountainous terrain, maximum percent of grade may be 16% for ADT up to 400 and 14% for 400-4000 ADT.
3. Clear zone widths may be reduced with the concurrence of the resident engineer where terrain or social/environmental impact considerations are appropriate.
4. 18’ minimum with < 600 ADT in mountainous terrain.
5. 2’ minimum in mountainous terrain with < 600 ADT.
6. 95’ radius minimum allowed in mountainous terrain.

One way street design guidance – not available in 1996

TRAFFIC	PROJECTED RAFFIC VOLUME (ADT)	DESIGN SPEED (MPH)	HORIZONTAL AND VERTICAL CONTROLS Maximum 2:1 cut or fill slope				ROADWAY SECTION CRITERIA					
			MIN. CURVE RADIUS W/O SUPER-ELEV.	MAX. % GRADE SUG.	MINIMUM SIGHT DISTANCE		SHOULDER AND DITCH ROADWAYS Minimum ditch width should be 4 feet or greater, based on slopes of 3:1 (Gentler slopes promote homeowner maintenance of ditches)				CURB AND GUTTER ROADWAYS	
					STOPPING	INTER-SECTION	MINIMUM PAVEMENT WIDTH	FILL W. G.R.	CUT OR FILL W/O G.R.	CLEAR ZONE (FROM EDGE OF TRAVELWAY)	CURB TO CURB WIDTH, WITH OR WITHIOUT PARKING ON ONE SIDE	CLEAR ZONE (FROM FACE OF CURB)
ONE-WAY (1- LANE)	≤ 400 (5)	20	120’	10% (2)	125’	200’ (4)	16’	5’	4’ (1)	6’ (3)	22’	3’

GENERAL NOTES:

These design standards may also be used for one-way divided pairs, such as subdivision entrances with wide medians.

For streets anticipated to serve mixed residential-commercial, commercial, or industrial traffic, use the appropriate urban standard in the road design manual. In such settings, where

- On-street parking is anticipated; a parking lane width not less than 7 feet should be used.
- Normal minimum shoulder widths and construction practices make parking along rural typical roadway sections inappropriate if not illegal.

FOOTNOTES:

1. When pedestrian facilities are provided behind ditches, the shoulder width may be reduced to a minimum of 2 feet.
2. The maximum percent grade suggested may be adjusted to 16% in mountainous terrain.
3. Clear zone widths may be reduced with the concurrence of the resident engineer where terrain or social/environmental impact considerations are appropriate
4. The roadway with the highest volume will govern the sight distance
5. For traffic volumes > 400 vpd, pavement widths will be established by the resident engineer