GEOMETRIC DESIGN STANDARDS FOR RURAL MINOR ARTERIAL SYSTEM (GS-2)

TRAFFIC VOLUME	TERRAIN	DESIGN SPEED (MPH)	MIN. RADIUS	(7) MINIMUM STOPPING SIGHT DISTANCE	(2) MINIMUM WIDTH OF LANE	MINIMUM WIDTH OF TOTAL SHOULDERS (GRADED + PAVED) CUT & FILL (8)		(3) MINIMUM PAVED SHOULDER WIDTH		(4) MINIMUM WIDTH OF DITCH FRONT SLOPE	(5) SLOPE	NEW AND RECONSTRUCTED MINIMUM BRIDGE WIDTHS AND VERTICAL CLEARANCES
						With GR	Without GR	LT.	RT.			
(1) ADT OVER 2000	LEVEL	70	1821’	730’	12’	14’	10’	4’	8’	10’ @ 6:1	CS-4, CS-4A OR CS-4C	See Footnote (6)
		60	1204’	570’								
	ROLLING	60	1204’	570’								
		50	760’	425’						6’ @ 4:1		
	MOUNTAINOUS	50	760’	425’							CS-3/ CS-3B	
		45	589’	360’								
		40	446’	305’								
(1) ADT 1500 TO 2000	LEVEL	70	1821’	730’	12’	12’	8’	4’	6’	6’ @ 4:1	CS-4, CS-4A OR CS-4C	
		60	1204’	570’								
	ROLLING	60	1204’	570’								
		50	760’	425’								
	MOUNTAINOUS	50	760’	425’							CS-3/ CS-3B	
		45	589’	360’	11’							
		40	446’	305’								
(1) ADT 400 TO 1500	LEVEL	70	1821’	730’	12’	12’	8’	4’	6’	6’ @ 4:1	CS-4, CS-4A OR CS-4C	
		60	1204’	570’								
	ROLLING	60	1204’	570’								
		50	760’	425’	11’							
	MOUNTAINOUS	50	760’	425’							CS-3/ CS-3B	
		45	589’	360’								
		40	446’	305’								
CURRENT ADT UNDER 400	LEVEL	70	1821’	730’	12’	10’	6’	4’	4’	6’ @ 4:1	CS-4, CS-4A OR CS-4C	
		60	1204’	570’								
	ROLLING	60	1204’	570’								
		50	760’	425’	11’							
	MOUNTAINOUS	50	760’	425’							CS-3/ CS-3B	
		45	589’	360’								
		40	446’	305’								

GENERAL NOTES

Rural Minor Arterials are designed with design speeds of 50 to 70 MPH, dependent on terrain features and traffic volumes, and occasionally may be as low as 40 MPH in mountainous terrain.

In incorporated towns or other built-up areas, Urban Standard GS-6 may be used for design. “Built-up” is where there is sufficient development along the roadway that justifies a need to channelize traffic into and out of properties utilizing curb and gutter.

Standard TC-5.11R superelevation based on 8% maximum is to be used for Rural Minor Arterials.

If medians are included, see Section 2E-3 of Chapter 2E of the *Road Design Manual*.

Clear Zone and Recoverable Area information can be found in Appendix A, Section A-2 of the *Road Design Manual*.

For Passing Sight Distance Criteria, see AASHTO Green Book, Section 3.2.4, page 3-8.

For maximum grades relative to terrain and design speed, see AASHTO Green Book, Chapter 7, Section 7.3.2, page 7-29, Table 7-4.

FOOTNOTES

(1) Use Design Year ADT for new construction and reconstruction projects (not applicable to R.R.R. projects or roads with ADT < 400) in accordance with *Road Design Manual*, Chapter 2A, “REQUEST FOR TRAFFIC DATA” and Form LD-104.

(2) Lane width to be 12' at all interchange locations. For projects not on the National Highway System, width of traveled way may remain at 22' on reconstructed highways where alignment and safety records are satisfactory.

(3) Where the mainline is 6 or more lanes, both right and median paved shoulders shall be 8' in width. For additional guidance on shoulder widths/reductions, see AASHTO Green Book, Chapter 7, Section 7.2.11, page 7-13.

(4) A hydraulic analysis is necessary to determine actual depth requirement.

(5) Additional or modified slope criteria to be applied where shown on typical sections.

(6) See *Manual of the Structure and Bridge Division* – Volume V – Part 2 Design Aids – Chapter 6 Geometrics.

(7) For additional information on sight distance requirements on grades of 3 percent or greater, see AASHTO Green Book, Chapter 3, Section 3.2.2, page 3-5, Table 3-2.

(8) Total shoulder widths include the paved portion and are applicable to the left and right shoulder.

FIGURE A-1-2*

* Rev. 1/19