

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

TRAFFIC VOLUME	TERRAIN	DESIGN SPEED (MPH)	MIN. RADIUS	(8)	(2)	(3)		(4)		(5)	(6)	(7)
				STOPPING SIGHT DISTANCE		MIN. WIDTH OF TOTAL SHOULDER (GRADED & PAVED)	PAVED SHOULDER WIDTH	MINIMUM WIDTH OF DITCH FRONT SLOPE	SLOPE			
				Min.		FILL W/GR	CUT & FILL	RT	LT			
(1) ADT OVER 2000	LEVEL	70	1821'	730'	12'	13'	10'	8'	4'	10'	CS-4, CS-4A OR CS-4C	10' PLUS PAVEMENT WIDTH PLUS 10'
		60	1204'	570'								
	ROLLING	60	1204'	570'								
		50	760'	425'								
	MOUNTAINOUS	50	760'	425'								
		40	465'	305'								
(1) ADT 1500 TO 2000	LEVEL	70	1821'	730'	12'	11'	8'	6'	4'	6'	CS-4, CS-4A OR CS-4C	8' PLUS PAVEMENT WIDTH PLUS 8'
		60	1204'	570'								
	ROLLING	60	1204'	570'								
		50	760'	425'								
	MOUNTAINOUS	50	760'	425'								
		40	465'	305'								
(1) ADT 400 TO 1500	LEVEL	70	1821'	730'	12'	11'	8'	6'	4'	6'	CS-4, CS-4A OR CS-4C	8' PLUS PAVEMENT WIDTH PLUS 8'
		60	1204'	570'								
	ROLLING	60	1204'	570'								
		50	760'	425'								
	MOUNTAINOUS	50	760'	425'								
		40	465'	305'								
CURRENT ADT UNDER 400	LEVEL	70	1821'	730'	12'	9'	6'	4'	4'	6'	CS-4, CS-4A OR CS-4C	6' PLUS PAVEMENT WIDTH PLUS 6'
		60	1204'	570'								
	ROLLING	60	1204'	570'								
		50	760'	425'								
	MOUNTAINOUS	50	760'	425'								
		40	465'	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-5.01R (2001 AASHTO Green Book) superelevation based on 8% maximum is to be used for Rural Minor Arterials.

If medians are included, see [Section 2E 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 Current AASHTO Green Book.

For maximum grades relative to terrain and design speed, see [AASHTO Green Book, Chapter 7, Exhibit 7-2](#).

### 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) If graded median is used, the width of median shoulder is to be 8'.
- (4) The Paved widths shown are the widths to be used if the Materials Division recommends the shoulders be paved. When the mainline is 4 lanes (both directions) a minimum 8' wide paved shoulder will be provided on the right of traffic and a minimum 4' wide paved shoulder on the median side. Where the mainline is 6 or more lanes, both right and median paved shoulders will be 8' in width. If paved shoulders are not recommended by the Materials Division the mainline pavement structure will be extended 1' at the same slope into the shoulder to eliminate raveling of the pavement edge. For additional guidance on shoulder widths, see the AASHTO Green Book, Chapter 7.
- (5) Ditch slopes to be 6:1 - 10' width, 4:1 - 6' width. A hydraulic analysis is necessary to determine actual depth requirement.
- (6) Additional or modified slope criteria to be applied where shown on typical sections.
- (7) Vertical clearance at roadway underpasses for new and reconstructed bridges is to be 16'-6" (1' additional clearance required for non-vehicular overpasses).
- (8) For additional information on sight distance requirements on grades of 3 percent or greater, see Exhibit 3-2 of the 2004 AASHTO Green Book.

**FIGURE A-1-2\***