



TABLE I. RECOMMENDED RURAL DESIGN SPEEDS (SEE PAGE 448) ⑦

TYPE OF TERRAIN	DESIGN SPEED (MPH)
LEVEL	70
ROLLING	60
MOUNTAINOUS	50

TABLE II. 4 AND 6 LANE ARTERIAL - DESIGN STANDARDS ⑩

DESIGN STANDARDS (FOR GIVEN DESIGN SPEED)	DESIGN SPEEDS (MPH)										
	30	35	40	45	50	55	60	65	70		
MINIMUM RADIUS (FT.) 0.04 MAX. S.E.	300	420	565	730	930	1190	1505			SEE PAGE 145	
MINIMUM RADIUS (FT.) 0.06 MAX. S.E.	275	380	510	660	835	1065	1340				
MINIMUM RADIUS (FT.) 0.08 MAX. S.E.	250	350	465	600	760	965	1205	1485	1820		
MAXIMUM RURAL GRADES %	LEVEL TERRAIN			5	5	4	4	3	3	3	SEE PAGE 450
	ROLLING TERRAIN			6	6	5	5	4	4	4	
	MOUNTAINOUS TERRAIN			8	7	7	6	6	5	5	
MAXIMUM URBAN GRADES %	LEVEL TERRAIN	8	7	7	6	6	5	5		SEE PAGE 476	
	ROLLING TERRAIN	9	8	8	7	7	6	6			
	MOUNTAINOUS TERRAIN	11	10	10	9	9	8	8			
MINIMUM STOPPING SIGHT DISTANCE (FT.)	200	250	305	360	425	495	570	645	730	SEE PAGE 449	
MINIMUM "K" VALUE	CREST VERTICAL CURVE	19	29	44	61	84	114	151	193	247	SEE PAGE 274
	SAG VERTICAL CURVE	37	49	64	79	96	115	136	157	181	SEE PAGE 280
MINIMUM PASSING SIGHT DISTANCE (FT.)	1090	1280	1470	1625	1835	1985	2135	2285	2480	SEE PAGE 449	
MINIMUM "K" VALUE FOR CREST VERTICAL CURVE	424	585	772	943	1203	1407	1628	1865	2197	SEE PAGE 276	
SUPERELEVATION	SEE STANDARD DRAWINGS RD01-SE-2 AND RD01-SE-3.										

- FOOTNOTES**
- SEE DETAIL E FOR GUARDRAIL PLACEMENT AND GUARDRAIL STANDARD DRAWINGS (S-GR-SERIES).
 - SEE DETAILS A, B, C, OR D FOR ROUNDING.
 - CLEAR ZONE WIDTH SHALL BE DETERMINED FROM STANDARD DRAWING RD01-S-12. SEE THE "ROADSIDE DESIGN GUIDE," AASHTO, 2002, FOR FURTHER INFORMATION ON CLEAR ZONES.
 - SEE STANDARD DRAWINGS RD01-S-11 AND RD01-S-11B FOR FILL AND CUT SLOPE TABLES, ROUNDING ON TOP OF CUT SLOPES AND TOE OF FILL SLOPES, AND SPECIAL ROCK CUT TREATMENT.
 - SEE STANDARD DRAWING RD01-S-11A FOR ROUNDING OF ROADSIDE DITCH SLOPES.
 - THE SLOPES OF THE SHOULDER AND ROADWAY PAVEMENT SHALL NOT EXCEED AN ALGEBRAIC DIFFERENCE OF 0.07 FOOT PER FOOT.
 - URBAN DESIGN SPEEDS ARE GENERALLY IN THE RANGE OF 30 TO 60 MILES PER HOUR (SEE PAGE 474).
 - 6:1 SLOPES ARE DESIRABLE. SLOPES RANGING BETWEEN 6:1 AND 4:1 MAY BE USED UNDER SPECIFIC ADVERSE CONDITIONS SUCH AS TO FACILITATE DRAINAGE OR TO ESTABLISH A LEFT TURN LANE.
 - 48 FEET MINIMUM. 64 FEET MINIMUM FOR A SIX LANE SECTION.
 - ALTHOUGH THE SELECTED DESIGN SPEED ESTABLISHES THE LIMITING VALUES OF CURVE RADIUS AND MINIMUM SIGHT DISTANCE THAT SHOULD BE USED IN DESIGN, THERE SHOULD BE NO RESTRICTION ON THE USE OF FLATTER HORIZONTAL CURVES OR GREATER SIGHT DISTANCES WHERE SUCH IMPROVEMENTS CAN BE PROVIDED AS A PART OF AN ECONOMICAL DESIGN (SEE PAGE 69).

- GENERAL NOTES**
- SEE GUARDRAIL STANDARD DRAWINGS FOR TYPICAL GUARDRAIL PLACEMENT.
 - PAGE NUMBERS REFERRED TO ON THIS DRAWING ARE FROM "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS," AASHTO, 2001, UNLESS OTHERWISE NOTED.
 - REFERENCE SHOULD ALSO BE MADE TO THE "ROADSIDE DESIGN GUIDE," AASHTO, 2002.
 - DESIRABLE RIGHT-OF-WAY IS SLOPE LINES PLUS FIFTEEN FEET TO TWENTY FEET.
 - ALL NEW AND REHABILITATED BRIDGES SHALL BE DESIGNED FOR HS-20 LOADING. THE MINIMUM CLEAR WIDTH FOR NEW AND REHABILITATED BRIDGES SHALL BE EQUAL TO THE FULL WIDTH OF THE APPROACH ROADWAY, CURB-TO-CURB OR FULL SHOULDER WIDTH AS APPLICABLE.
 - FOR EXISTING BRIDGES TO REMAIN IN PLACE, THEY SHOULD HAVE ADEQUATE STRUCTURAL STRENGTH AND A WIDTH AT LEAST EQUAL TO THE WIDTH OF THE TRAVELED WAY PLUS 2 FEET CLEARANCE ON EACH SIDE. BRIDGES SHOULD BE CONSIDERED FOR ULTIMATE WIDENING OR REPLACEMENT IF THEY DO NOT PROVIDE AT LEAST HS-20 LOADINGS. AS AN INTERIM MEASURE, NARROW BRIDGES SHOULD BE CONSIDERED FOR SPECIAL NARROW BRIDGE TREATMENTS SUCH AS SIGNING AND PAVEMENT MARKING.
 - FOR ADDITIONAL URBAN DESIGN GUIDANCE AND CRITERIA, SEE PAGES 473-506.

MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.