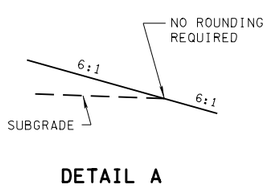
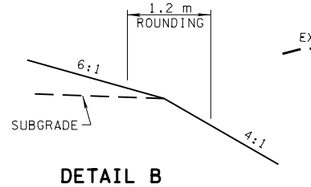
REV. 10-15-02: NEW SHEET.
REPLACES RDM-TS-3.



DETAIL A



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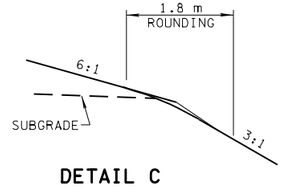

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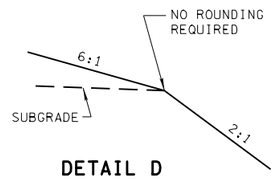
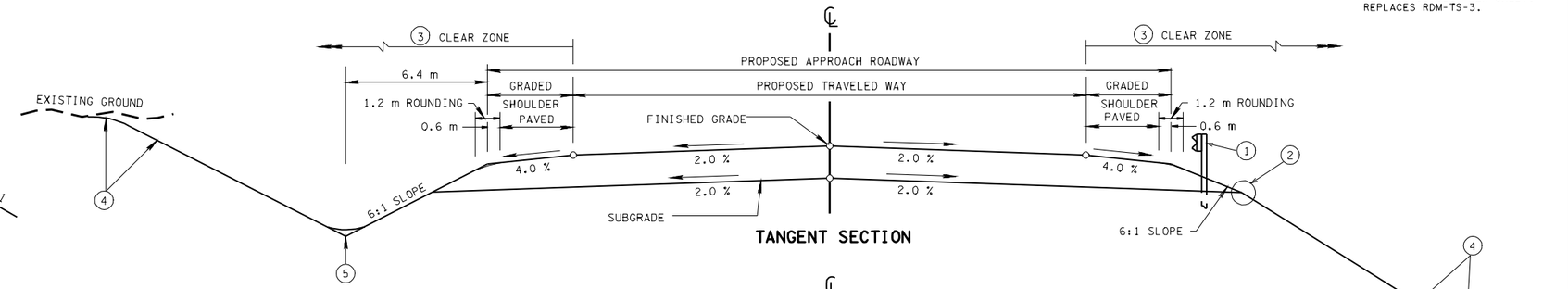
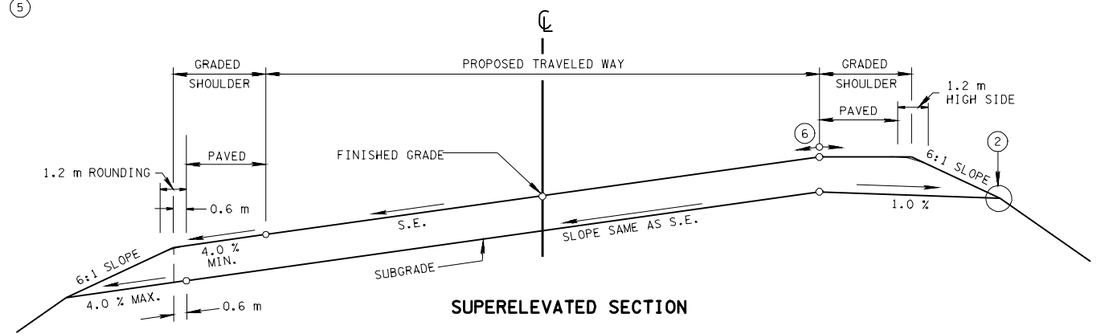


DETAIL D



TANGENT SECTION



SUPERELEVATED SECTION

TABLE I. RECOMMENDED RURAL DESIGN SPEEDS (SEE PAGE 448) (9)

TYPE OF TERRAIN	DESIGN SPEED (km/h)
LEVEL	110
ROLLING	100
MOUNTAINOUS	80

TABLE II. MINIMUM WIDTH OF TRAVELED WAY AND GRADED SHOULDER FOR RURAL ARTERIALS (SEE PAGE 452)

DESIGN SPEEDS (km/h)	MINIMUM WIDTH OF TRAVELED WAY (m) FOR SPECIFIED DESIGN ADT (VEH/DAY)			
	UNDER 400	400 TO 1,500	1,500 TO 2,000	OVER 2,000
60	6.6	6.6	6.6	7.2
70	6.6	6.6	6.6	7.2
80	6.6	6.6	7.2	7.2
90	6.6	6.6	7.2	7.2
100	7.2	7.2	7.2	7.2
110	7.2	7.2	7.2	7.2
ALL SPEEDS	(7) WIDTH OF GRADED SHOULDER (m)			
	1.8	2.4	2.4	3.0

TABLE III. 2-LANE ARTERIAL-DESIGN STANDARDS (8)

DESIGN STANDARDS (FOR GIVEN DESIGN SPEED)		DESIGN SPEEDS (km/h) 50	60	70	80	90	100	110	
MINIMUM RADIUS (m) 0.04 MAX. S.E.		100	150	215	280	375	490		SEE PAGE 145
MINIMUM RADIUS (m) 0.06 MAX. S.E.		90	135	195	250	335	435		
MINIMUM RADIUS (m) 0.08 MAX. S.E.		80	125	175	230	305	395	500	
MAXIMUM RURAL GRADES (%)	LEVEL TERRAIN		5	5	4	4	3	3	SEE PAGE 450
	ROLLING TERRAIN		6	6	5	5	4	4	
	MOUNTAINOUS TERRAIN		8	7	7	6	6	5	
MAXIMUM URBAN GRADES (%)	LEVEL TERRAIN	8	7	6	6	5	5		SEE PAGE 476
	ROLLING TERRAIN	9	8	7	7	6	6		
	MOUNTAINOUS TERRAIN	11	10	9	9	8	8		
MINIMUM STOPPING SIGHT DISTANCE (m)		65	85	105	130	160	185	220	SEE PAGE 449
MINIMUM "K" VALUE	CREST VERTICAL CURVE	7	11	17	26	39	52	74	SEE PAGE 274
	SAG VERTICAL CURVE	13	18	23	30	38	45	55	SEE PAGE 280
MINIMUM PASSING SIGHT DISTANCE (m)		345	410	485	540	615	670	730	SEE PAGE 449
MINIMUM "K" VALUE FOR CREST VERTICAL CURVE		138	195	272	338	438	520	617	SEE PAGE 276
SUPERELEVATION		SEE STANDARD DRAWINGS RDM01-SE-2 AND RDM01-SE-3.							

FOOTNOTES

1. SEE GUARDRAIL STANDARD DRAWINGS FOR TYPICAL GUARDRAIL PLACEMENT.
2. SEE DETAILS A, B, C, OR D FOR ROUNDING.
3. CLEAR ZONE WIDTH SHALL BE DETERMINED FROM STANDARD DRAWING RDM01-S-12. SEE THE "ROADSIDE DESIGN GUIDE," AASHTO, 2002, FOR FURTHER INFORMATION ON CLEAR ZONES.
4. SEE STANDARD DRAWINGS RDM01-S-11 AND RDM01-S-11B FOR FILL AND CUT SLOPE TABLES, ROUNDING ON TOP OF CUT SLOPES AND TOE OF FILL SLOPES, AND SPECIAL ROCK CUT TREATMENT.
5. SEE STANDARD DRAWING RDM01-S-11A FOR ROUNDING OF ROADSIDE DITCH SLOPES.
6. THE SLOPES OF THE SHOULDER AND ROADWAY PAVEMENT SHALL NOT EXCEED AN ALGEBRAIC DIFFERENCE OF 7.0 %.
7. USABLE SHOULDERS ON ARTERIALS SHOULD BE PAVED.
8. 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).
9. URBAN DESIGN SPEEDS ARE GENERALLY IN THE RANGE OF 50 TO 100 KILOMETERS PER HOUR (SEE PAGE 474).
10. PROPOSED ROADWAY WIDTH WILL NOT BE LESS THAN EXISTING WIDTH.

GENERAL NOTES

(A) FOR SPECIFIC CONDITIONS NOT COVERED ON THIS SHEET, REFERENCE SHOULD BE MADE TO "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS," AASHTO, 2001.

(B) PAGE NUMBERS REFERRED TO ON THIS DRAWING ARE FROM "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS," AASHTO, 2001, UNLESS OTHERWISE NOTED.

(C) REFERENCE SHOULD ALSO BE MADE TO THE "ROADSIDE DESIGN GUIDE," AASHTO, 2002.

(D) DESIRABLE RIGHT-OF-WAY IS SLOPE LINES PLUS 4.6 METERS TO 6.1 METERS.

(E) ALL NEW AND REHABILITATED BRIDGES SHALL BE DESIGNED FOR MS-18 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.

(F) 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 0.6 METER CLEARANCE ON EACH SIDE. BRIDGES SHOULD BE CONSIDERED FOR ULTIMATE WIDENING OR REPLACEMENT IF THEY DO NOT PROVIDE AT LEAST MS-18 LOADINGS. AS AN INTERIM MEASURE, NARROW BRIDGES SHOULD BE CONSIDERED FOR SPECIAL NARROW BRIDGE TREATMENTS SUCH AS SIGNING AND PAVEMENT MARKING.

(G) FOR ADDITIONAL URBAN DESIGN GUIDANCE AND CRITERIA, SEE PAGES 473-506.

TENNESSEE METRIC D.O.T.

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

☐ MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DESIGN STANDARD FOR 2-LANE ARTERIAL HIGHWAYS

10-15-02 RDM01-TS-3

06-JUN-2003 08:56 $FILE$ $TIME$ $DATE$
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