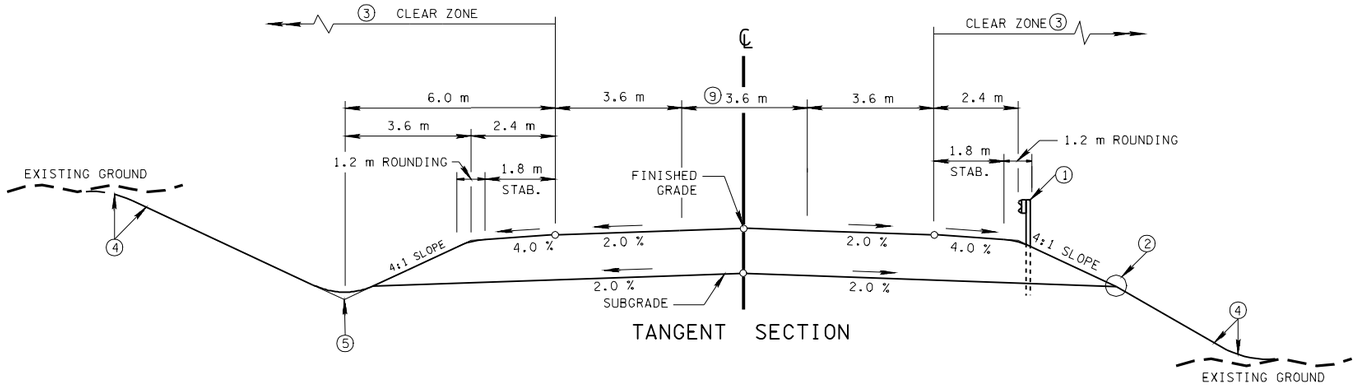
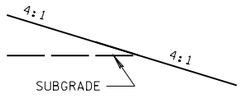
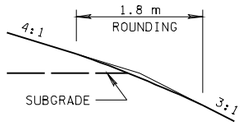
- ☐ REV. 11-1-95: CHANGED TO METRIC.
- ☐ REV. 3-20-02: ADDED SPECIAL NOTE.
- ☐ REV. 3-31-03: CHANGED EFFECTIVE DATE IN SPECIAL NOTE.



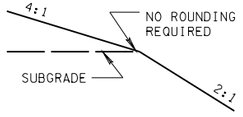
TANGENT SECTION



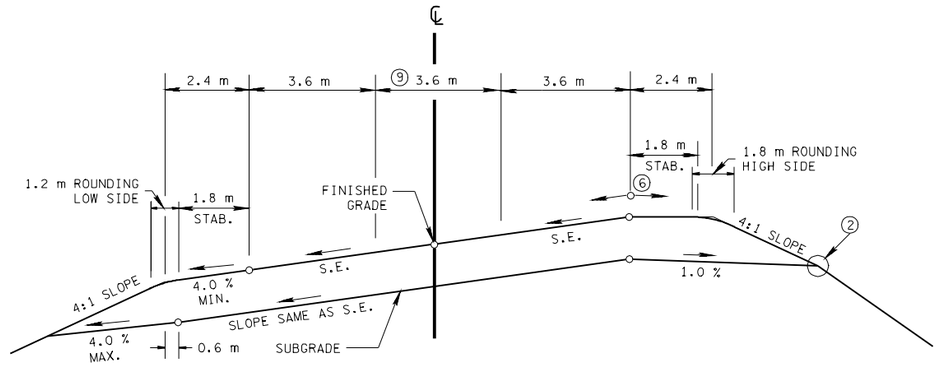
DETAIL A



DETAIL B



DETAIL C



SUPERELEVATED SECTION

SPECIAL NOTE

THIS DRAWING IS NOT TO BE UTILIZED FOR NEW DESIGN PROJECTS BEGUN AFTER OCTOBER 1, 2002.

DESIGN STANDARDS (FOR GIVEN DESIGN SPEED)		DESIGN SPEEDS (km/h)					
		30	40	50	60	70	80
MINIMUM RADIUS (m) 4.0 % MAX. S.E.		35	60	100	150	215	280
MINIMUM RADIUS (m) 6.0 % MAX. S.E.		30		90	135	195	250
MINIMUM RADIUS (m) 8.0 % MAX. S.E.		30	50	80	125	175	230
MINIMUM LENGTH OF CTWLTL (m)		150	150	180	240	300	350
MAXIMUM RURAL GRADES % (PAGE 463,TABLE VI-3)	LEVEL TOPO	7	7	7	7	7	6
	ROLLING TOPO	10	10	9	8	8	7
	MOUNTAINOUS TOPO	12	11	10	10	10	9
MAXIMUM URBAN GRADES % (PAGE 463, TABLE VI-3)	LEVEL TOPO	9	9	9	9	8	7
	ROLLING TOPO	12	12	11	10	9	8
	MOUNTAINOUS TOPO	14	13	12	12	11	10
⑧ MINIMUM STOPPING SIGHT DISTANCE (m)		29.6	44.4	57.4-62.8	74.3-84.6	94.1-110.8	112.8-139.4
⑦ MINIMUM "K" VALUE (PAGE 462, TABLE VI-2A)	CREST VERTICAL CURVE	3	5	9-10	14-18	22-31	32-49
	SAG VERTICAL CURVE	4	8	11-12	15-18	20-25	25-32
SUPERELEVATION		SEE STANDARD DRAWINGS RDM-SE-2 & RDM-SE-3					

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" 1994.

(B) PAGE NUMBERS REFERRED TO ON THIS DRAWING ARE FROM THE ABOVE REFERENCE.

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

(D) MINIMUM RIGHT-OF-WAY IS THAT REQUIRED TO ACCOMMODATE SLOPES AND EROSION CONTROL FEATURES (4.5 m TO 6.0 m OUTSIDE THE SLOPE LINES IS DESIRABLE IN RURAL AREAS).

(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) BRIDGES TO REMAIN IN PLACE SHOULD HAVE ADEQUATE STRENGTH AND AT LEAST THE WIDTH OF THE TRAVELED WAY PLUS 0.6 m CLEARANCE ON EACH SIDE, BUT SHOULD BE CONSIDERED FOR ULTIMATE WIDENING OR REPLACEMENT IF THEY DO NOT PROVIDE AT LEAST 1.0 m CLEARANCE ON EACH SIDE OR ARE NOT CAPABLE OF MS-18 LOADINGS. AS AN INTERIM MEASURE, ALL BRIDGES THAT ARE LESS THAN FULL WIDTH SHOULD BE CONSIDERED FOR SPECIAL NARROW BRIDGE TREATMENTS SUCH AS SIGNING AND PAVEMENT MARKING.

(G) THIS TYPICAL SECTION IS DESIGNED TO ACCOMODATE AN AVERAGE DAILY TRAFFIC OF 5,000 TO 12,500 VEHICLES PER DAY, WHICH IS CONSIDERED TO BE THE TRAFFIC VOLUME NEEDED TO JUSTIFY THE CONTINUOUS TWO-WAY LEFT TURN LANE (CTWLTL) FOR A 2-LANE HIGHWAY. THE TYPICAL SECTION DESIGN FOR VOLUMES LESS THAN 5,000 VEHICLES PER DAY USES THE DESIGN STANDARDS SHOWN ON STANDARD DRAWINGS RDM-TS-1, RDM-TS-2 AND RDM-TS-3.

(H) WHEN ENCOUNTERING INTERSECTIONS ON ARTERIAL HIGHWAYS AND COLLECTOR ROADS AND STREETS, DO NOT EXTEND THE CONTINUOUS TWO-WAY LEFT TURN LANE (CTWLTL) UP TO THE INTERSECTION. TERMINATE THE CTWLTL IN ADVANCE OF THE INTERSECTION TO ALLOW DEVELOPMENT OF AN EXCLUSIVE LEFT-TURN LANE. LOCAL ROADS AND STREETS MAY NOT WARRANT AN EXCLUSIVE LEFT-TURN LANE.

(I) ON WIDENING OF EXISTING TWO-LANE HIGHWAY TO THREE-LANE HIGHWAY THE SHOULDER WIDTH MAY BE REDUCED TO 0.6 m AND THE ROADWAY LANE WIDTH TO 3.3 m UNDER THE FOLLOWING CONDITIONS:

(11) THE DESIGN ADT IS 12,500 VEHICLES PER DAY OR LESS.

(12) THE DESIGN SPEED IS 60 km/h OR LESS.

(13) THERE ARE RESTRICTED AND/OR LIMITED CLEARANCES FOR RIGHT-OF-WAY DUE TO THE EXISTING SOCIAL, ENVIRONMENTAL OR ECONOMIC CONDITIONS.

(14) WHEN SUFFICIENT NUMBERS OF ACCIDENTS AND/OR DELAYS IN TRAFFIC EXIST DUE TO MID-BLOCK LEFT TURNS TO JUSTIFY A CONTINUOUS LEFT TURN LANE ON EXISTING TWO-LANE ROADWAY.

FOOTNOTES

(1) SEE GUARDRAIL STANDARD DRAWINGS FOR TYPICAL GUARDRAIL PLACEMENT.

(2) SEE DETAIL A, B AND C ON THIS SHEET FOR ROUNDING.

(3) MINIMUM CLEAR ZONE WIDTH SHALL BE DETERMINED FROM STANDARD DRAWING RDM-S-11 FOR URBAN DESIGN SEE PAGE 477-478.

(4) SEE STANDARD DRAWING RDM-S-11 CASE II 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 RDM-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) "K" VALUE IS A COEFFICIENT BY WHICH THE ALGEBRAIC DIFFERENCE IN GRADE MAY BE MULTIPLIED TO DETERMINE THE LENGTH IN METERS OF THE VERTICAL CURVE.

(8) ANY LENGTH OF STOPPING SIGHT DISTANCE WITHIN THE RANGE OF VALUES ESTABLISHED ON PAGE 462, TABLE VI-2A IS ACCEPTABLE FOR A SPECIFIC SPEED. HOWEVER, VALUES APPROACHING OR EXCEEDING THE UPPER LIMIT OF THE RANGE SHOULD BE USED AS THE BASIS FOR DESIGN WHEREVER CONDITIONS PERMIT.

(9) THE DESIRABLE LANE WIDTH IN INDUSTRIAL AREAS WITH HEAVY TRUCK TRAFFIC IS 4.2 m.

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 STANDARDS 2-LANE HIGHWAY WITH CONTINUOUS 2-WAY LEFT-TURN LANE

11-1-95 | RDM-TS-7