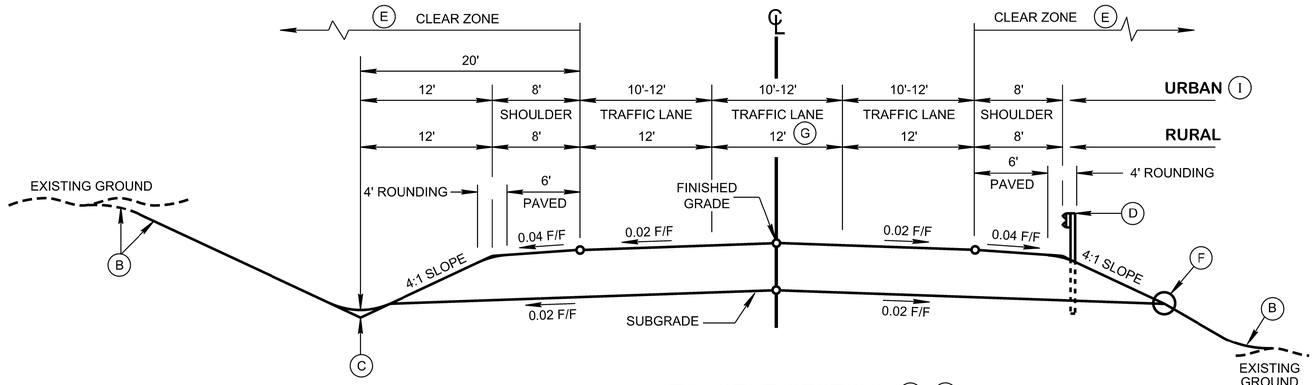
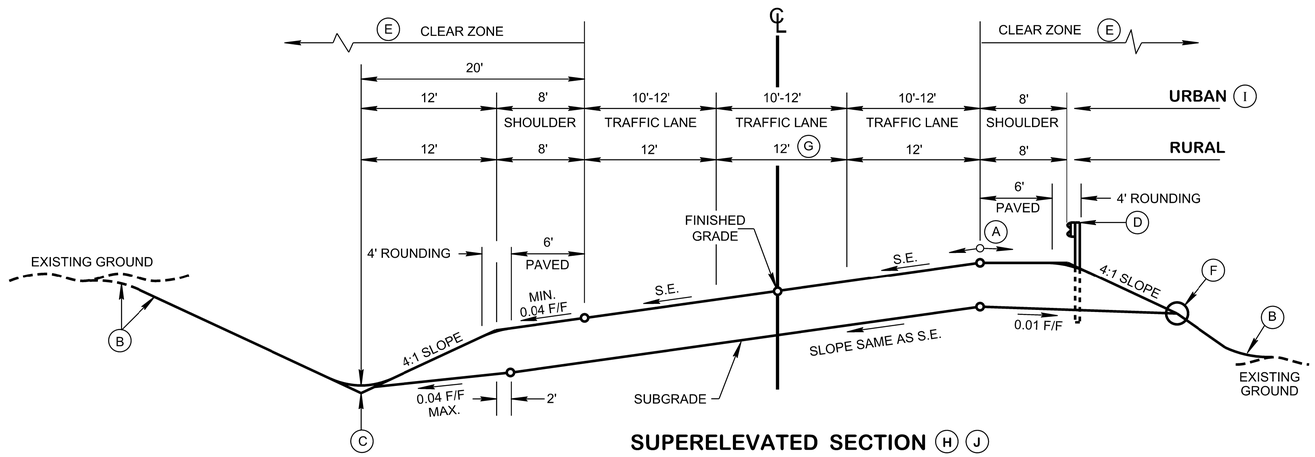
REV. 07-17-2020: REVISED DESIGN NOTE (H) AND GENERAL NOTE (9).



TANGENT SECTION (H) (J)



SUPERELEVATED SECTION (H) (J)

DESIGN NOTES

(A) THE SLOPE OF THE SHOULDER AND THE ROADWAY PAVEMENT SHOULD NOT EXCEED AN ALGEBRAIC DIFFERENCE OF 7%.

(B) SEE STANDARD DRAWING RD11-S-11 FOR FILL AND CUT SLOPE TABLES. ROUNDIN ON TOP OF CUT SLOPES AND TOE ROUNDING ON TOP OF CUT SLOPES AND TOE OF FILL SLOPE SPECIAL ROCK TREATMENT AND SUBGRADE ROUNDING IF APPLICABLE.

(C) SEE STANDARD DRAWING RD11-S-11A FOR ROUNDING OF ROADSIDE DITCH SLOPES.

(D) SEE STANDARD DRAWING S-PL-6 AND S-PL-6A FOR TYPICAL GUARDRAIL PLACEMENT.

(E) SEE STANDARD DRAWING S-CZ-1 FOR CLEAR ZONE CRITERIA. SEE THE "ROADSIDE DESIGN GUIDE", AASHTO, 2011, FOR FURTHER INFORMATION REGARDING CLEAR ZONE.

(F) SEE STANDARD DRAWING RD11-S-11 FOR ROUNDING DETAILS.

(G) THE DESIRABLE LANE WIDTH IN INDUSTRIAL AREAS WITH HEAVY TRUCK TRAFFIC IS 14 FEET.

(H) THESE TYPICAL SECTIONS WERE DEVELOPED FOR COLLECTORS AND ARTERIALS ROADS WITH DESIGN SPEEDS 55 MILES PER HOUR AND LOWER. IF A CONTINUOUS TWO WAY WITH LEFT TURN LANE (CTWLTL) IS NEEDED ABOVE 55 MILES PER HOUR OR, THE DESIGNER WILL REFER TO THE PROPER RD11-TS-SERIES SHEET FOR TYPICAL SECTION REQUIREMENTS.

(I) **URBAN ROADWAYS CROSS SECTIONAL ELEMENTS:**

REFER TO PAGES 5-13 THROUGH 5-16 FOR INFORMATION REGARDING WIDTH OF TRAVELED WAY, PARKING LANES, MEDIANS, CURBS, AND OTHER CROSS-SECTIONAL ELEMENTS FOR LOCAL ROADS. REFER TO PAGES 6-13 THROUGH 6-16 FOR INFORMATION REGARDING WIDTH OF TRAVELED WAY, SHOULDERS, PARKING LANES, MEDIANS, CURBS, AND OTHER CROSS-SECTIONAL ELEMENTS FOR COLLECTOR ROADS.

(J) **URBAN ROADWAYS GENERAL DESIGN CONSIDERATIONS:**

REFER TO PAGES 5-11 THROUGH 5-13 FOR INFORMATION REGARDING DESIGN SPEED, ALIGNMENT, GRADES, SUPERELEVATION, SIGHT DISTANCE, AND OTHER DESIGN CONSIDERATIONS FOR LOCAL ROADS. REFER TO PAGES 6-11 THROUGH 6-13 FOR INFORMATION REGARDING DESIGN SPEED, ALIGNMENT, GRADES, SUPERELEVATION, SIGHT DISTANCE, AND OTHER DESIGN CONSIDERATIONS FOR COLLECTOR ROADS.

(K) **RURAL ROADWAYS CROSS SECTIONAL ELEMENTS:**

THE RIGHT-OF-WAY WILL LIKELY NOT BE CONSTRAINED, THE ROADWAY MAY BE DESIGNED WITH FLATTER FILL SLOPES. WIDER SHOULDERS SHOULD BE CONSIDERED FOR HIGH SPEED FACILITIES.

GENERAL NOTES

1. FOR SPECIFIC CONDITIONS NOT COVERED ON THIS SHEET, REFERENCE SHOULD BE MADE TO "A POLICY OF GEOMETRIC DESIGN OF HIGHWAYS AND STREETS" AASHTO, 2011 (GREEN BOOK).
2. PAGE NUMBERS REFERRED TO ON THIS DRAWING ARE FROM "A POLICY OF GEOMETRIC DESIGN OF HIGHWAYS AND STREETS" AASHTO, 2011 (GREEN BOOK), UNLESS OTHERWISE NOTED.
3. REFERENCE SHOULD ALSO BE MADE TO THE AASHTO "ROADSIDE DESIGN GUIDE," AASHTO, 2011.
4. MINIMUM RIGHT-OF-WAY IS THAT REQUIRED TO ACCOMMODATE SLOPES AND EROSION CONTROL FEATURES (15 TO 20 FEET OUTSIDE THE SLOPE LINES IS DESIRABLE IN RURAL AREAS).
5. THE DESIGN OF BRIDGES, CULVERTS, WALLS, TUNNELS AND OTHER STRUCTURES SHOULD BE IN ACCORDANCE WITH PRINCIPALS OF AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE DESIGN LOADING SHOULD BE THE HL-93 CALIBRATED LIVE LOAD DESIGNATION. 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.
6. FOR EXISTING BRIDGES TO REMAIN IN PLACE, THEY SHOULD HAVE ADEQUATE 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 3-FEET CLEARANCE ON EACH SIDE OR BE HL-93 CALIBRATED LIVE LOAD CAPACITY. 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.
7. THIS TYPICAL SECTION IS DESIGNED TO ACCOMMODATE 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 RD11-TS-1, RD11-TS-2 AND RD11-TS-3.
8. WHEN ENCOUNTERING MAJOR INTERSECTIONS, 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. MINOR INTERSECTIONS MAY NOT WARRANT AN EXCLUSIVE LEFT-TURN LANE. SEE STRIPING DETAILS SHOWN ON T-M-1 OR CURRENT EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
9. AT LOCATIONS WHERE RIGHT-OF-WAY IS LIMITED, REPURPOSING EXISTING TWO-LANE HIGHWAY TO THREE-LANE HIGHWAY THE EXISTING SHOULDER WIDTH MAY BE REDUCED AND THE ROADWAY LANE WIDTH TO ELEVEN (11) FEET UNDER THE FOLLOWING CONDITIONS:
   - (9a) THE DESIGN ADT IS 12,500 VEHICLES PER DAY OR LESS.
   - (9b) THE DESIGN SPEED IS 55 MILES PER HOUR OR LESS.
   - (9c) THERE ARE RESTRICTED AND/OR LIMITED CLEARANCES FOR RIGHT-OF-WAY DUE TO THE EXISTING SOCIAL, ENVIRONMENTAL OR ECONOMIC CONDITIONS.
   - (9d) 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.

NOT TO SCALE

STATE OF TENNESSEE
STANDARD DRAWING
DEPARTMENT OF TRANSPORTATION

DESIGN STANDARDS 2-LANE HIGHWAYS WITH CONTINUOUS 2-WAY LEFT-TURN LANE

01-01-2019 | RD11-TS-7B