

REV. 9-10-90: REDREW SHEET, REORGANIZED SHEET AND UPDATED TO 1990 POLICY.

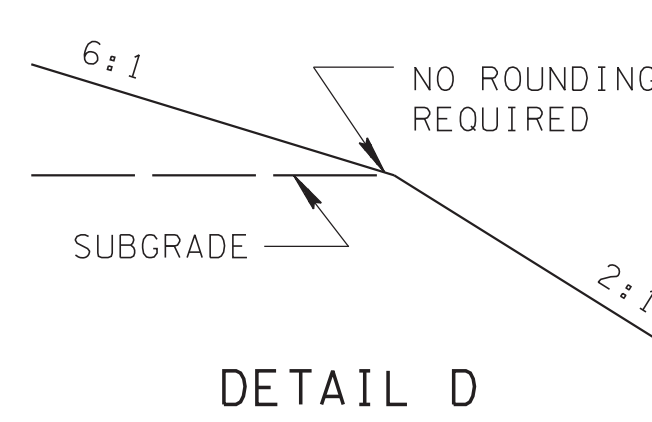
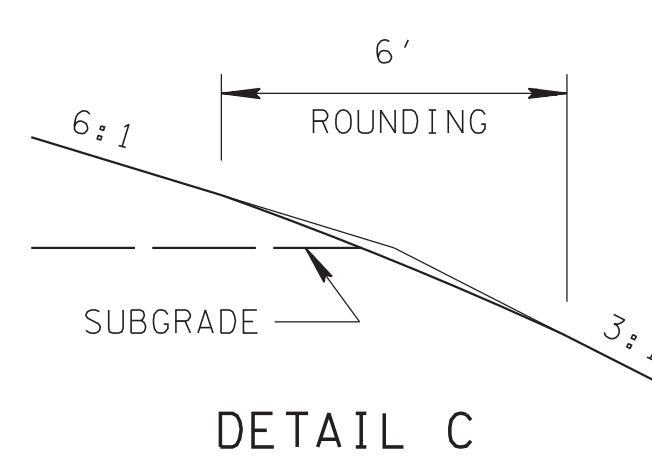
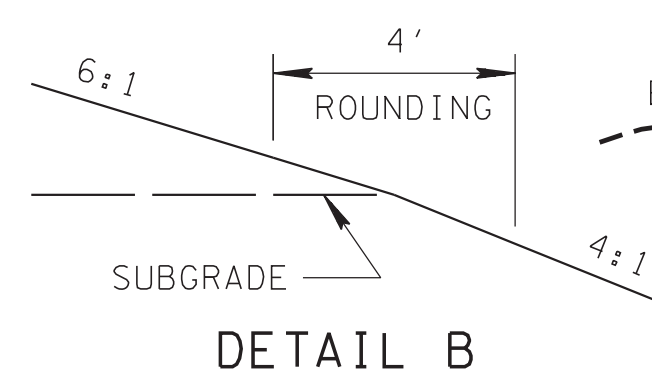
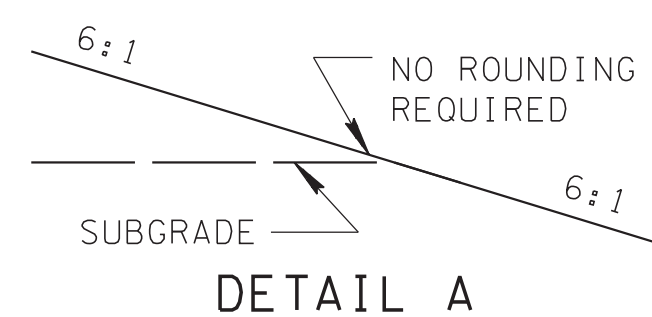
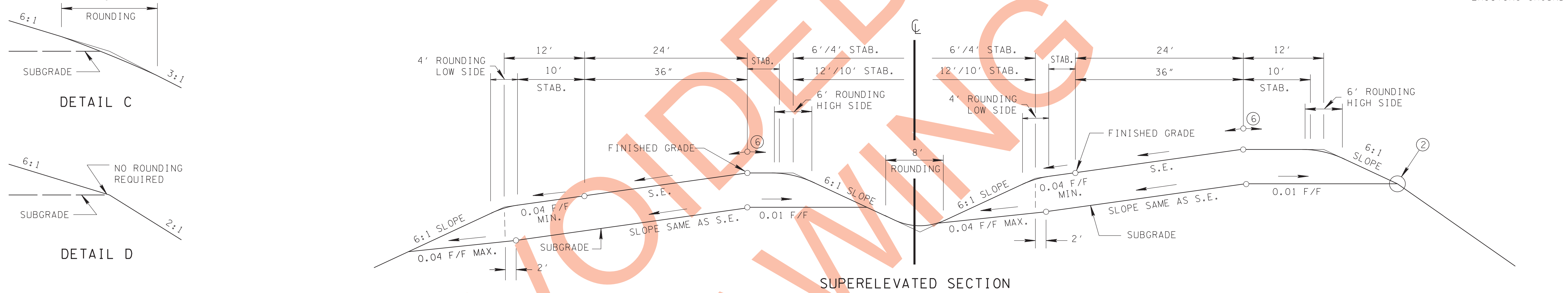
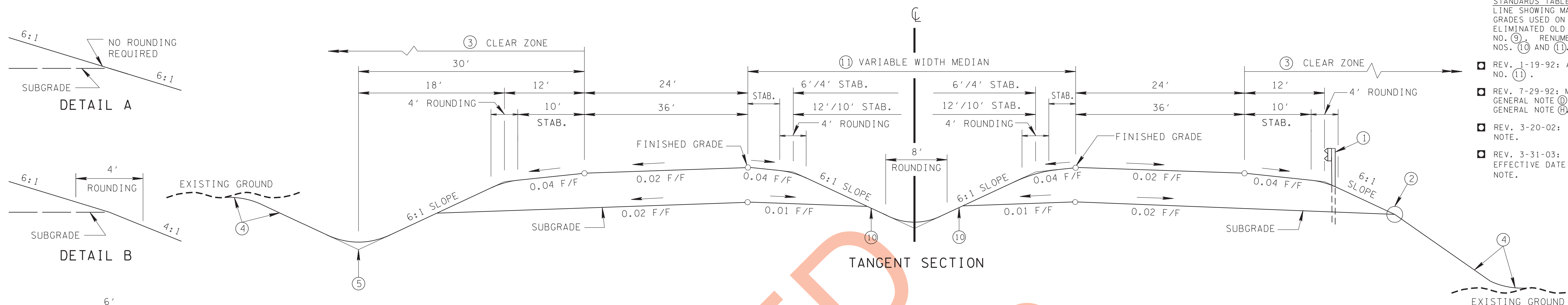
REV. 10-26-91: IN DESIGN STANDARDS TABLE ELIMINATED LINE SHOWING MAXIMUM PERCENT GRADES USED ON INTERSTATE. ELIMINATED OLD FOOTNOTE NOS. (9), (10), (11), (12) AND (13). RENUMBERED FOOTNOTE NOS. (1) AND (2).

REV. 1-19-92: ADDED FOOTNOTE NO. (11).

REV. 7-29-92: MODIFIED GENERAL NOTE (10) AND DELETED GENERAL NOTE (8).

REV. 3-20-02: ADDED SPECIAL NOTE.

REV. 3-31-03: CHANGED EFFECTIVE DATE IN SPECIAL NOTE.



⑨ DESIGN SPEED (MPH)	
LEVEL TOPO	70
ROLLING TOPO	60
MOUNTAINOUS TOPO	50

DESIGN STANDARDS (FOR GIVEN DESIGN SPEED)		DESIGN SPEEDS (MPH)		
		50	60	70
MAXIMUM CURVATURE (DEGREES) 0.04 MAX. S.E.		6° 00'	3° 45'	—
MAXIMUM CURVATURE (DEGREES) 0.06 MAX. S.E.		6° 45'	4° 15'	2° 45'
MAXIMUM CURVATURE (DEGREES) 0.08 MAX. S.E.		7° 30'	4° 45'	3° 00'
MAXIMUM CURVATURE (DEGREES) 0.10 MAX. S.E.		8° 15'	5° 15'	3° 30'
⑧ MINIMUM STOPPING SIGHT DISTANCE (FEET)		400-475	525-650	625-850
⑦ MINIMUM "K" VALUE	CREST VERTICAL CURVE	110-160	190-310	290-540
	SAG VERTICAL CURVE	90-110	120-160	150-220
SUPERELEVATION		SEE STAND. DWG. RD-SE-2 & 3		
⑩ MAXIMUM GRADES (%) (PAGE 585; TABLE VIII-1)	LEVEL TOPO	4	3	3
	ROLLING TOPO	5	4	4
	MOUNTAINOUS TOPO	6	6	5

- FOOTNOTES**
- SEE GUARDRAIL STANDARD DRAWINGS FOR TYPICAL GUARDRAIL PLACEMENT.
 - SEE DETAIL A, B, C, OR D ON THIS SHEET FOR ROUNDDING.
 - CLEAR ZONE WIDTHS SHALL BE DETERMINED FROM STANDARD DRAWING RD-S-11.
 - SEE STANDARD DRAWING RD-S-11 FOR FILL AND CUT SLOPE TABLES, ROUNDDING ON TOP OF CUT SLOPES AND TOE OF FILL SLOPES, AND SPECIAL ROCK CUT TREATMENT.
 - SEE STANDARD DRAWING RD-S-11A FOR ROUNDDING OF ROADSIDE DITCH SLOPES.
 - THE SLOPES OF THE SHOULDER AND ROADWAY PAVEMENT SHALL NOT EXCEED AN ALGEBRAIC DIFFERENCE OF 0.07 FOOT PER FOOT.
 - "K" VALUE IS A COEFFICIENT BY WHICH THE ALGEBRAIC DIFFERENCE IN GRADE MAY BE MULTIPLIED TO DETERMINE THE LENGTH IN FEET OF THE VERTICAL CURVE.
 - ANY LENGTH OF STOPPING SIGHT DISTANCE WITHIN THE RANGE OF VALUES ESTABLISHED ON PAGE 500, TABLE VII-3 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.
 - IN URBAN AREAS, THE DESIGN SPEED SHALL BE AT LEAST 50 MILES PER HOUR.
 - GRADES ONE PER CENT STEEPER THAN THE VALUE SHOWN MAY BE USED FOR EXTREME CASES IN URBAN AREAS WHERE DEVELOPMENT PRECLUDES THE USE OF FLATTER GRADES AND FOR ONE-WAY DOWNGRADES EXCEPT IN MOUNTAINOUS TERRAIN.
 - MINIMUM MEDIAN WIDTH IS TO BE 48 FEET WHEN USING 6 FEET WIDE INSIDE SHOULDERS. MINIMUM MEDIAN WIDTH IS TO BE 64 FEET WHEN USING 12 FOOT WIDE INSIDE SHOULDERS.

- GENERAL NOTES**
- FOR SPECIFIC CONDITIONS NOT COVERED ON THIS SHEET, REFERENCE SHOULD BE MADE TO "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS" 1990.
 - PAGE NUMBERS REFERRED TO ON THIS DRAWING ARE FROM THE ABOVE REFERENCE.
 - REFERENCE SHOULD ALSO BE MADE TO THE AASHTO "ROADSIDE DESIGN GUIDE".
 - MINIMUM RIGHT-OF-WAY IS THAT REQUIRED TO ACCOMMODATE SLOPES. (15 TO 20 FEET OUTSIDE THE SLOPE LINES IS DESIRABLE IN RURAL AREAS).
 - 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.
 - BRIDGES TO REMAIN IN PLACE SHOULD HAVE ADEQUATE STRENGTH AND AT LEAST THE WIDTH OF THE TRAVELED WAY PLUS 2 FEET CLEARANCE ON EACH SIDE, BUT SHOULD BE CONSIDERED FOR ULTIMATE WIDENING OR REPLACEMENT IF THEY DO NOT PROVIDE AT LEAST 3 FEET CLEARANCE ON EACH SIDE OR ARE NOT CAPABLE OF HS-20 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.
 - FOR INTERSTATES, SEE AASHTO'S "A POLICY ON DESIGN STANDARDS-INTERSTATE SYSTEM" JULY 1991.

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

MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DESIGN STANDARDS
FREEWAYS WITH
DEPRESSED MEDIANS

RD-TS-5