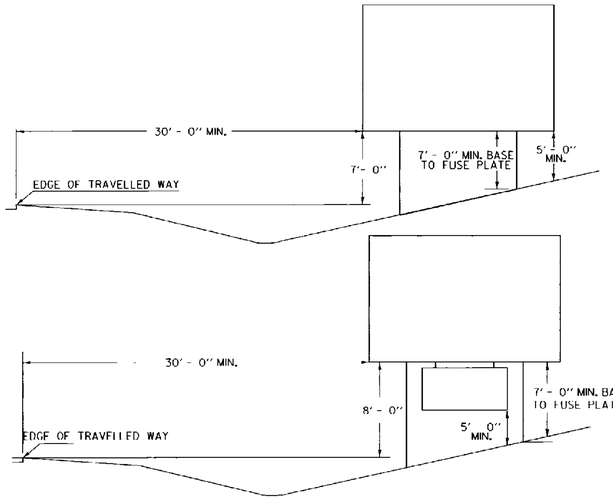
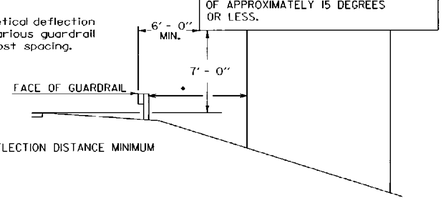


GUARDRAIL DEFLECTION CHART (PER AASHTO - ROADSIDE DESIGN GUIDE 1988)			
TYPE		SPACING	DEFLEC.
Three Cable	w/Steel Posts	16'-0"	12 ft.
	w/Wooden Posts	12'-6"	12 ft.
W-Beam	w/WEAK Posts	12'-6"	7 ft.
	w/Strong Posts	6'-3"	3 ft.
Box Beam		6'-0"	5 ft.
Thrie Beam	w/Weak Posts	12'-6"	4 ft.
	w/Strong Posts	6'-3"	2 ft.

This chart lists the theoretical deflection distance upon impact of various guardrail with different type and post spacing.

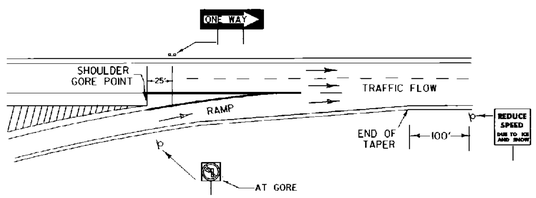
WHEN PLACED BEHIND GUARDRAIL AND BEYOND THE DEFLECTION DISTANCE FOR THAT PARTICULAR RAIL, SIGN POSTS DO NOT HAVE TO BE PLACED ON YIELDING SUPPORTS. SIGN POSTS SHALL BE PLACED ON YIELDING SUPPORTS WHEN THEY CAN BE STRUCK BY AN ERRANT VEHICLE LEAVING THE ROADWAY AT AN ENCROACHMENT ANGLE OF APPROXIMATELY 15 DEGREES OR LESS.



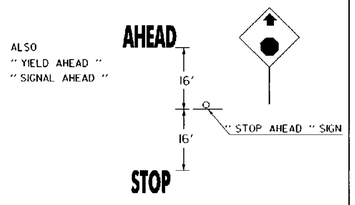
INSTALLATION DETAILS

NORMALLY SIGNS SHOULD BE MOUNTED AT 93° TO THE DIRECTION OF TRAFFIC. ON CURVED ALIGNMENT THE ANGLE OF PLACEMENT SHOULD BE DETERMINED BY THE PATH OF APPROACHING TRAFFIC RATHER THAN BY THE ROADSIDE EDGE AT THE POINT WHERE THE SIGN IS LOCATED. WHEN INSTALLING OVERHEAD SIGNS, CANT THE SIGN FROM THE TOP TOWARD APPROACHING TRAFFIC AT A THREE DEGREE TILT ANGLE.

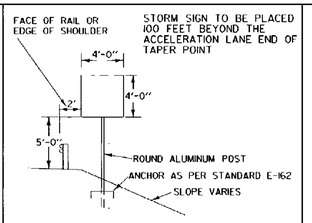
GUIDE SIGNS



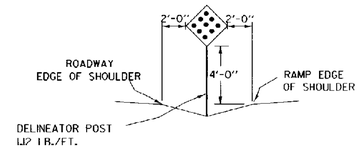
SIGN PLACEMENT AT END OF RAMP



WORD MARKING LAYOUT DETAIL



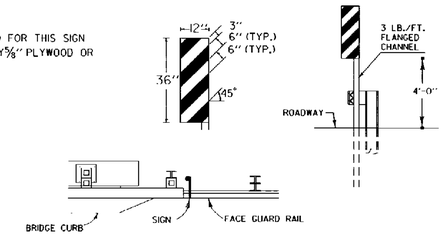
STORM SIGN



HAZARD MARKER

MATERIALS:
THE SIGN BASE MATERIAL USED FOR THIS SIGN MAY BE EITHER HIGH DENSITY 5/8" PLYWOOD OR 0.100" FLAT SHEET ALUMINUM.

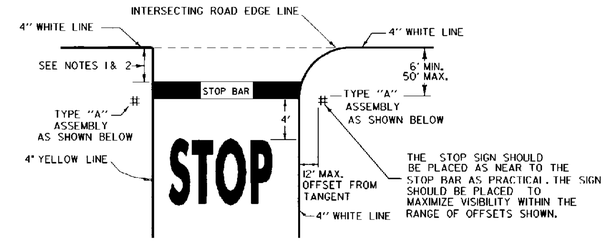
COLORS:
THIS SIGN SHALL HAVE A REFLECTORIZED YELLOW BACKGROUND WITH BLACK PAINTED OR LETTERING FILM STRIPES.



OBJECT MARKER

(TO BE USED WHEN FULL WIDTH SHOULDERS ARE NOT CARRIED ACROSS THE BRIDGE)

MARKERS MOUNTED ON THE LEFT SIDE SHALL HAVE THE DIAGONAL STRIPES SLOPING TOWARD CENTERLINE



EXIT RAMP

SHOWN FOR ILLUSTRATION PURPOSES

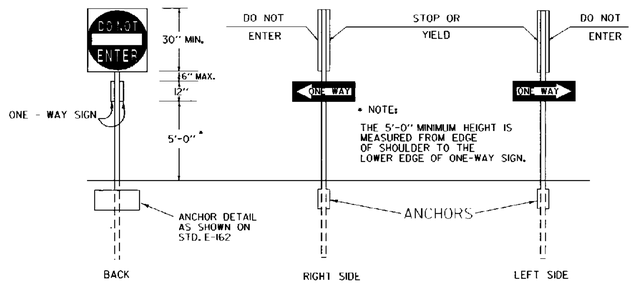
NOTES:

1. THE STOP BAR SHOULD BE PLACED AT THE DESIRED STOPPING POINT, IN NO CASE MORE THAN 30' OR LESS THAN 4' FROM THE NEAREST EDGE OF THE INTERSECTING ROADWAY.
2. AT A SIGNALIZED INTERSECTION, DELETE WORDING " STOP " AND THE STOP SIGN AND PLACE STOP BAR A MINIMUM OF 40' FROM THE NEAREST SIGNAL HEAD FOR THE APPROACH.
3. EXCLUDE THE STOP BAR FOR A YIELD CONDITION.

PAVEMENT MARKING & STOP SIGN LOCATION DETAILS

FOR OFF RAMP

TYPE "A" ASSEMBLY IS WITH "STOP" SIGN
TYPE "B" ASSEMBLY IS WITH "YIELD" SIGN

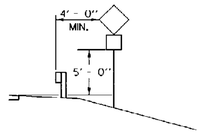


MOUNT ON - 3 LBS/FT FLANGED CHANNEL

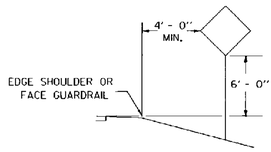
(SEE BRACKET DETAIL AS SHOWN ON STD. E-160)

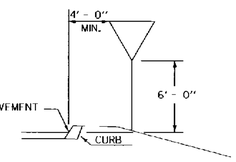
REGULATORY SIGN ASSEMBLY DETAIL

FOR OFF RAMP



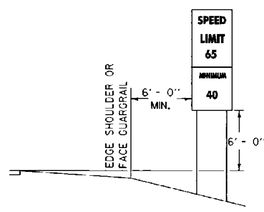
SIGN WITH SUPPLEMENTAL PLAQUE





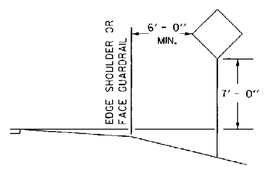
STANDARD SIGN PLACEMENT

RAMP

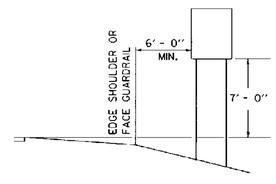


REGULATORY SIGN

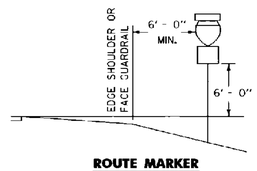
SPEED LIMIT SIGN TO BE PLACED 1600 FEET BEYOND THE END OF THE ACCELERATION LANE TAPER POINT.



WARNING SIGN

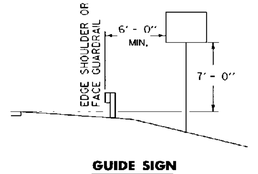


REGULATORY SIGN

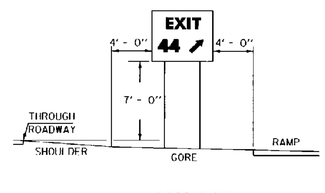


ROUTE MARKER

ROUTE REASSURANCE MARKER TO BE PLACED 600' BEYOND THE END OF THE ACCELERATION LANE TAPER POINT



GUIDE SIGN



GORE SIGN

STANDARD SIGN PLACEMENT

MAINLINE

OTHER STDS. REQUIRED: E-160 E-161 E-162 E-163

REVISIONS AND CORRECTIONS

APR. 01, 1988 - DATE OF ORIGINAL ISSUE

JUNE 21, 1989 - FHWA - CHANGE TO 7' FUSE PLATE CLEARANCE

AUG. 08, 1995 - DELETED TWO RAIL ALUMINUM FROM DEFLECTION CHART AND MINOR NOTE REVISIONS

APPROVED FOR THIS PROJECT AND/OR DESIGN IMPLEMENTATION. FHWA FINAL APPROVAL PENDING.

APPROVED

Gordon D. MacArthur
DIRECTOR OF ENGINEERING

David A. Ross
TRAFFIC AND SAFETY ENGINEER

STANDARD SIGN PLACEMEMT EXPRESSWAY AND FREEWAY

/traf/std/stdel20.dgn : stdel20.i

VERMONT AGENCY OF TRANSPORTATION

STANDARD
E-120