D-764-17B

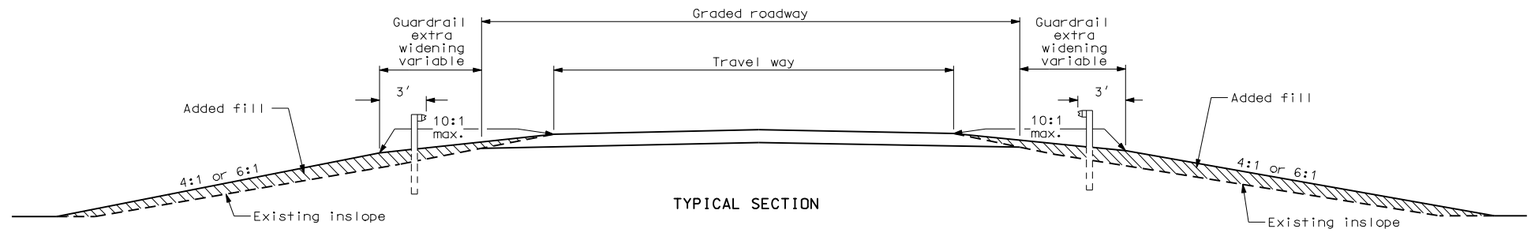
W-BEAM GUARDRAIL DIMENSION TABLE

FOR FLARED GUARDRAIL SECTION

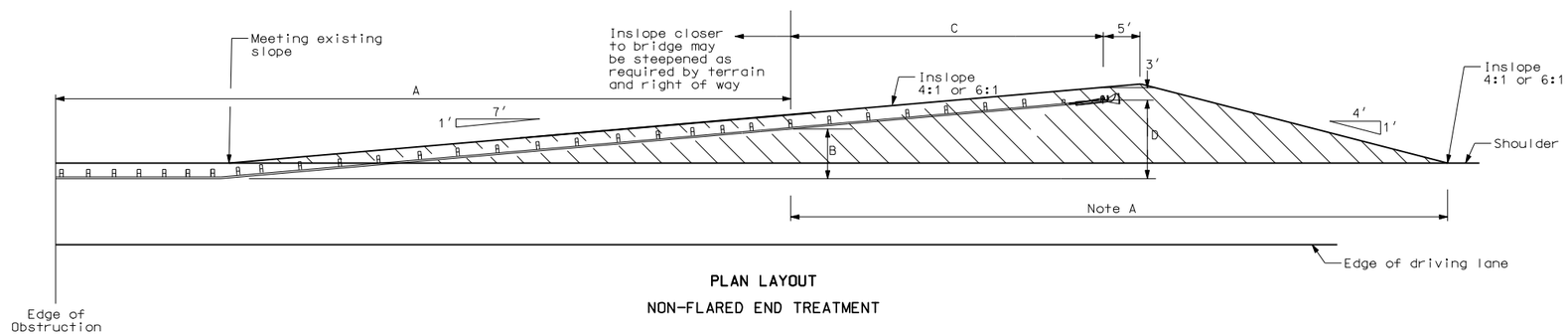
DESIGN TRAFFIC VOLUME	GUARDRAIL OFFSET DISTANCE	APPROACH SIDE: TAPERED GUARDRAIL DIMENSIONS A	B	END TERMINAL DIMENSIONS NON-FLARED C	D	END TERMINAL DIMENSIONS FLARED C1	D1	OPPOSITE SIDE: TAPERED GUARDRAIL DIMENSIONS A	B	END TERMINAL DIMENSIONS NON-FLARED C	D	END TERMINAL DIMENSIONS FLARED C1	D1
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
UNDER 250 ADT	10	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	9	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	8	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	7	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	6	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	5	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	4	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	3	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	2	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	1	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	0	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
250 to 800 ADT	10	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	9	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	8	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	7	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	6	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	5	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	4	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	3	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	2	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	1	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	0	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
800 to 2000 ADT	10	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	9	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	8	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	7	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	6	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	5	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	4	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	3	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	2	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	1	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	0	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
2000 to 6000 ADT	10	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	9	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	8	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	7	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	6	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	5	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	4	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	3	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	2	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	1	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	0	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
OVER 6000 ADT	10	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	9	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	8	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	7	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	6	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	5	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	4	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	3	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	2	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	1	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0
	0	25.0	0.0	50.0	0.0	49.8	4.0	25.0	0.0	50.0	0.0	49.8	4.0

TYPICAL GRADING AT OBSTRUCTION

WITH
FLARED W-BEAM GUARDRAIL
30 MPH DESIGN SPEED

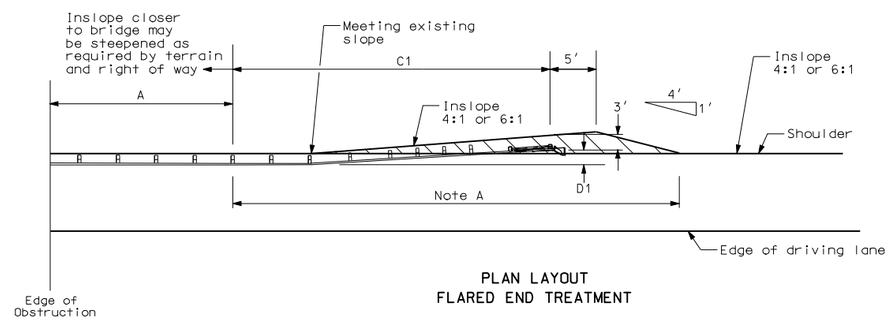


TYPICAL SECTION



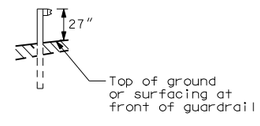
PLAN LAYOUT

NON-FLARED END TREATMENT



PLAN LAYOUT

FLARED END TREATMENT



GUARDRAIL HEIGHT

Note:

The design traffic volumes (ADT) shall be as shown on title sheet under traffic forecast.

Where normal inslope is 4:1, the added fill shall be 4:1.

Where normal inslope is 6:1, the added fill shall be 6:1.

Note A: This area may have to be placed at flatter than 10:1 to provide the proper guardrail height.

NORTH DAKOTA
DEPARTMENT OF TRANSPORTATION

09-01-98

REVISIONS

DATE	CHANGE
10-29-98	Offset dimensions
12-21-00	Revised flared end treatment
08-09-01	Change standard number
12-01-04	PE Stamp added

This document was originally issued and sealed by MARK S GAYDOS, Registration Number PE-4518, on 12/04/04 and the original document is stored at the North Dakota Department of Transportation