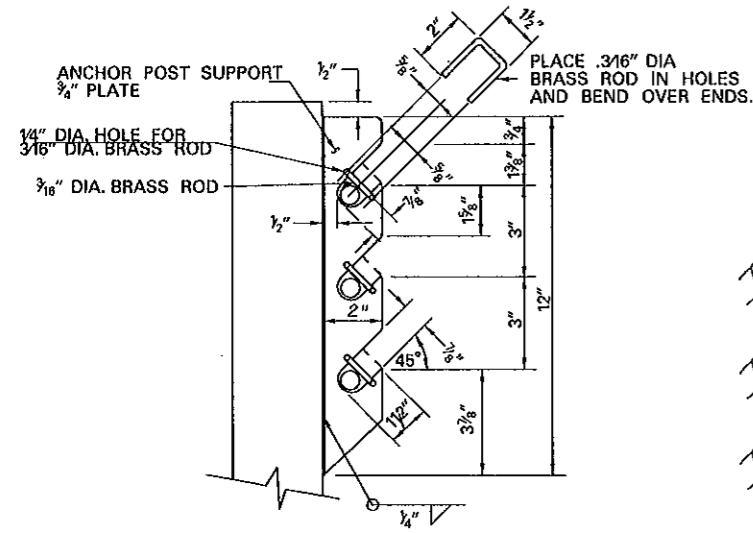
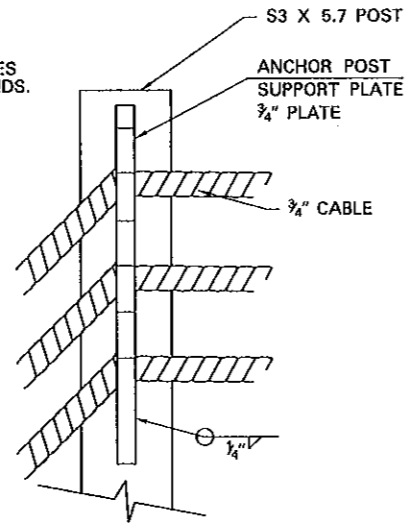


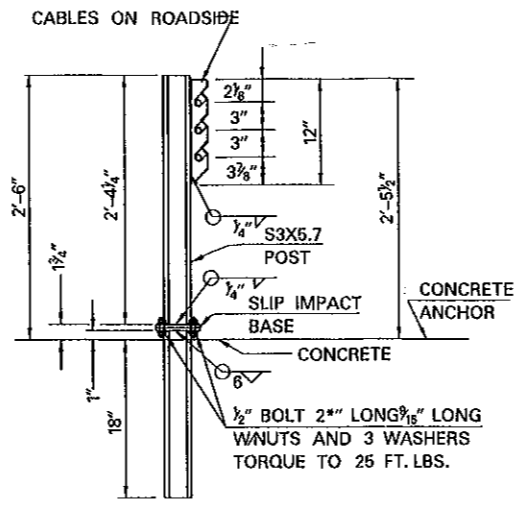
Public Road Dist.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W. V.				200			



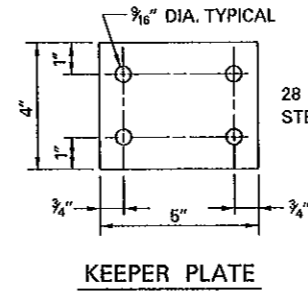
SIDE VIEW OF POST TOP



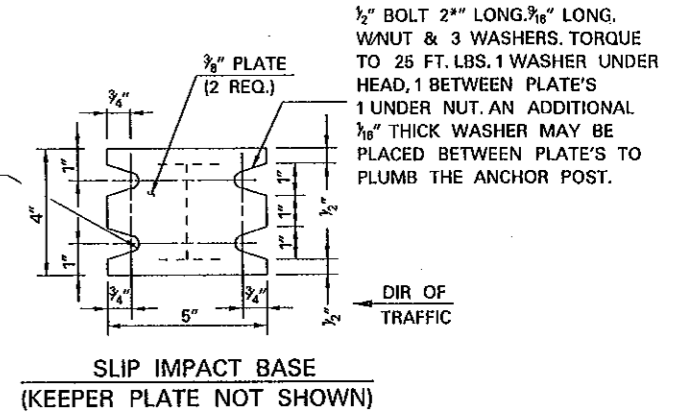
FRONT VIEW OF POST TOP
(ROAD SIDE)



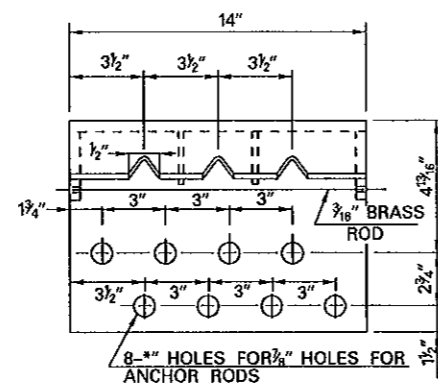
ANCHOR POST DETAIL



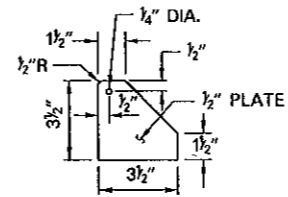
KEEPER PLATE



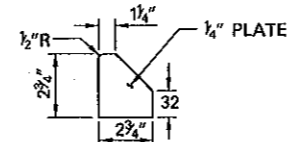
SLIP IMPACT BASE
(KEEPER PLATE NOT SHOWN)



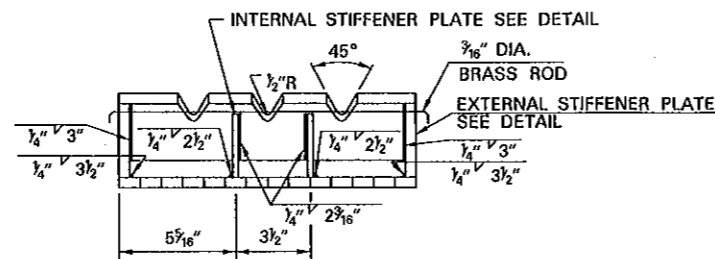
ANCHOR ANGLE DETAILS



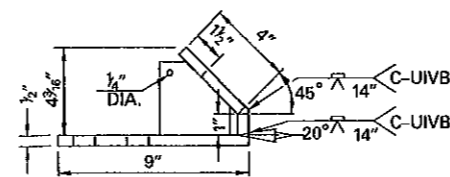
EXTERNAL STIFFENER PLATE



INTERNAL STIFFENER PLATE



BREAKAWAY ANCHOR ANGLE



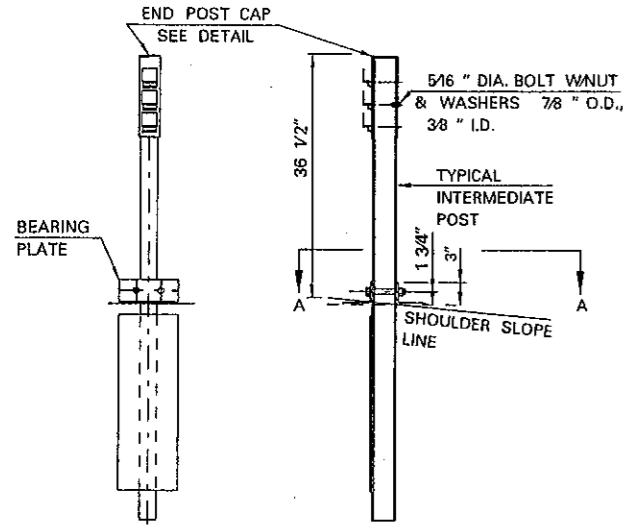
NOTE:
SUBMIT ALTERNATE METHODS OF FABRICATING
ANCHOR ANGLES FOR APPROVAL.

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
SPECIAL DETAIL

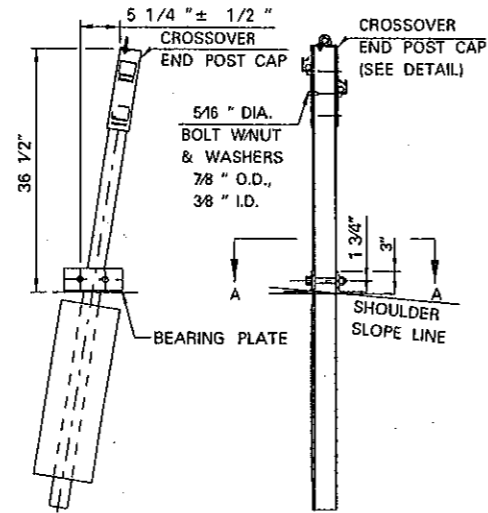
REVISION DATE
6-30-04

**GUARDRAIL ANCHOR
DETAILS**

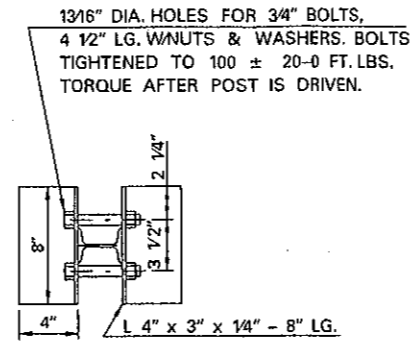
Public Roads Div.	State No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W. V.	03	U318-77-137.90	OCRO-0773 (380)	2005	JACKSON	11	48



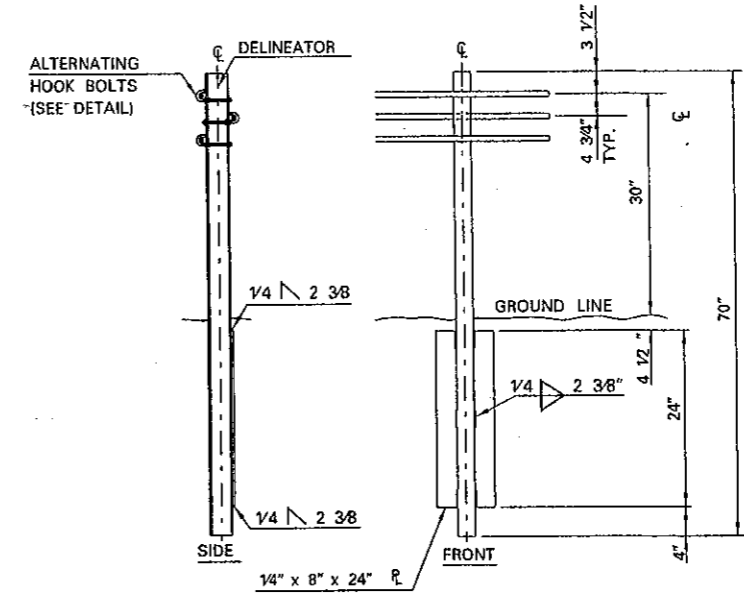
END POST
DOUBLE FACE



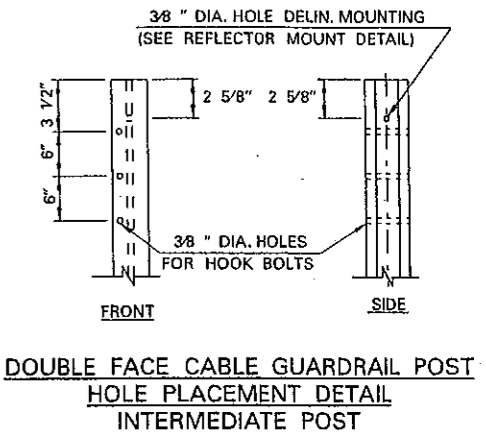
CROSSOVER END POST
DOUBLE FACE



SECTION A-A
BEARING PLATE

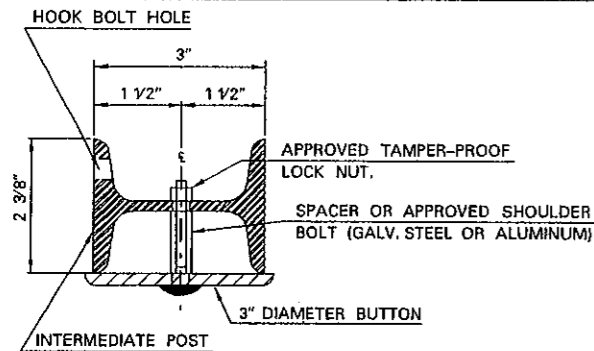


DOUBLE FACE CABLE GUARDRAIL
INTERMEDIATE POST

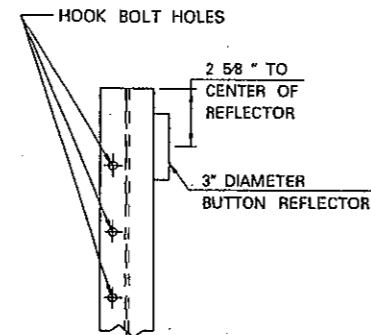


DOUBLE FACE CABLE GUARDRAIL
POST HOLE PLACEMENT DETAIL
INTERMEDIATE POST

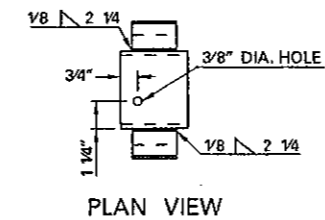
DOUBLE FACE CABLE GUARDRAIL - POST DETAILS



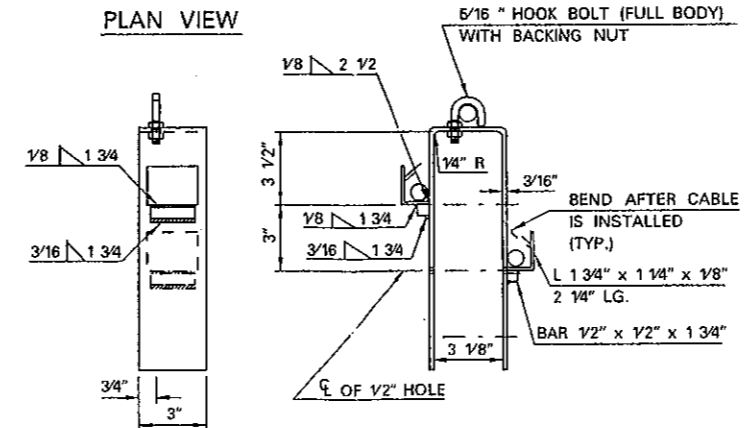
REFLECTOR MOUNT DETAIL
PLAN VIEW



REFLECTOR MOUNT DETAIL
ELEVATION VIEW



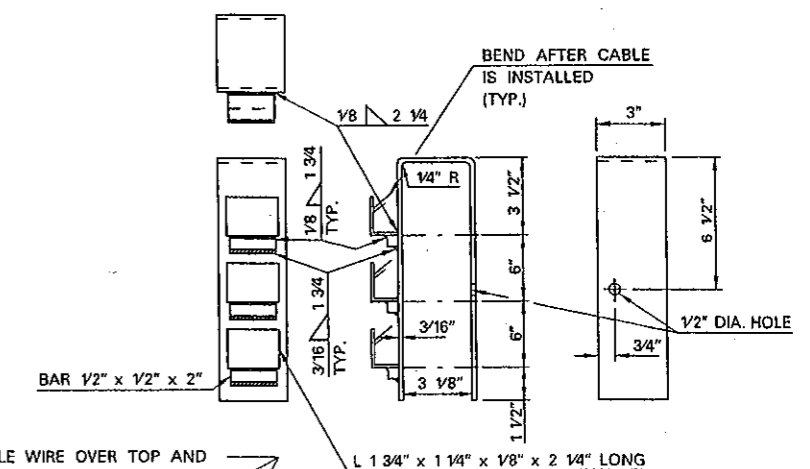
PLAN VIEW



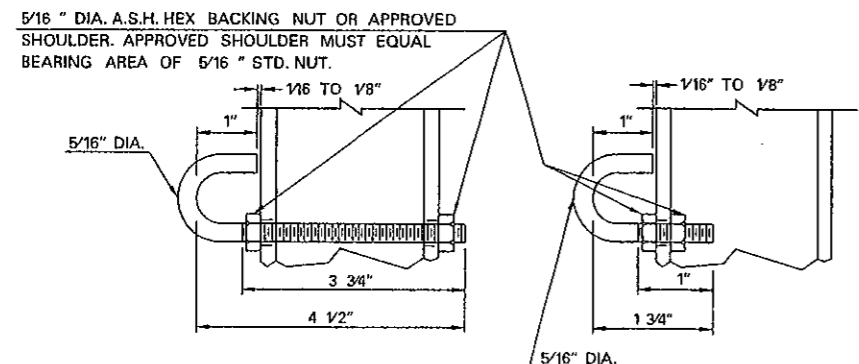
CROSSOVER END POST CAP
ELEVATION VIEW

DOUBLE FACE POST HARDWARE DETAILS

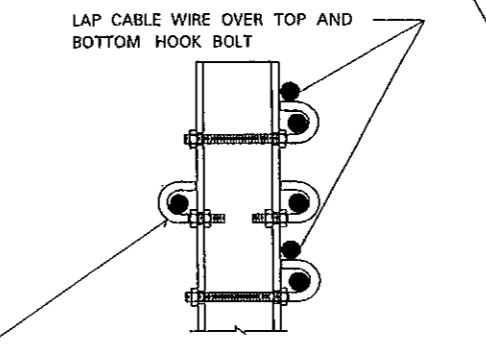
PLAN VIEW



END POST CAP
ELEVATION VIEW



HOOK BOLT (ALTERNATES)



DETAIL "A" CENTER POST
INTERMEDIATE ANCHORAGE SECTION

THE CENTER POST IN THE INTERMEDIATE ANCHORAGE SECTION WILL HAVE CABLE WIRE ON BOTH SIDES OF THE MIDDLE STRAND REQUIRING THE USE OF TWO 1/2" HOOK BOLTS FOR THIS APPLICATION.

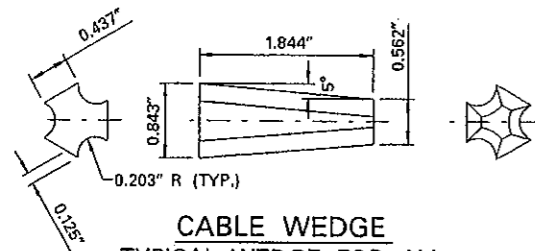
WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
SPECIAL DETAIL

REVISION DATE
6-22-04
10-05-04

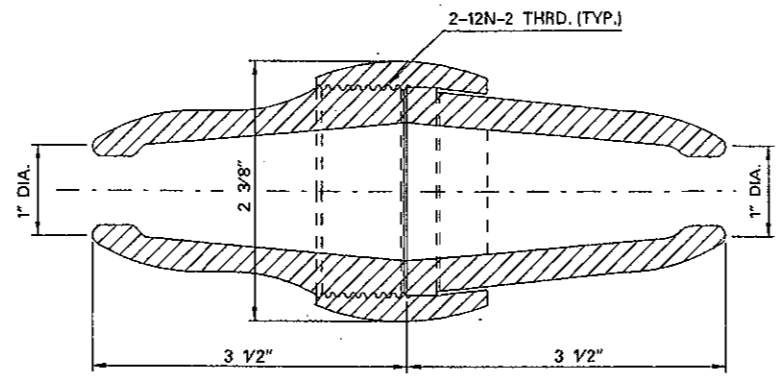
DOUBLE FACE CABLE GUARDRAIL
POST AND HARDWARE DETAILS

SPECIAL DETAIL SHEET CG6

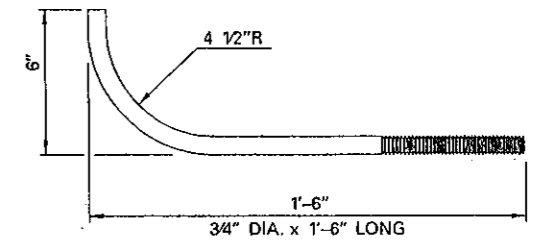
Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W. V.	03	0318-77-137.90	DCRO-0773 (380)	2005	JACKSON	13	48



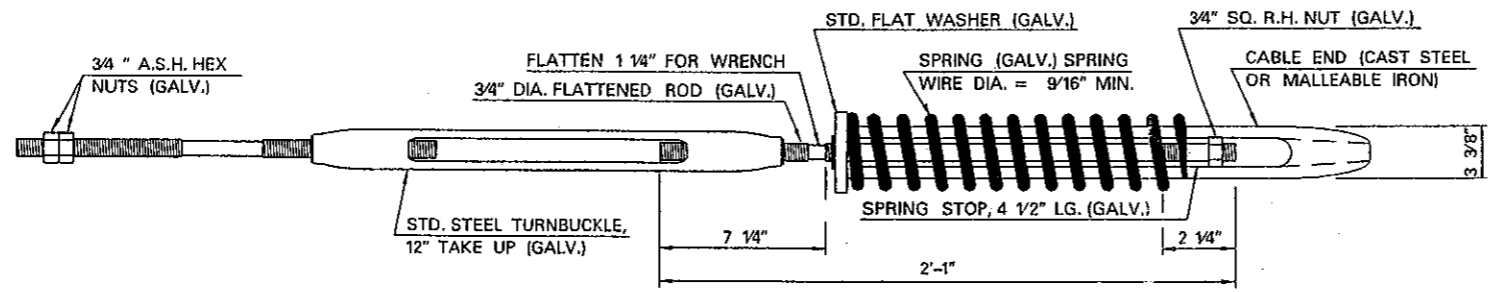
CABLE WEDGE
TYPICAL WEDGE FOR ALL SPLICES AND CABLE FITTINGS



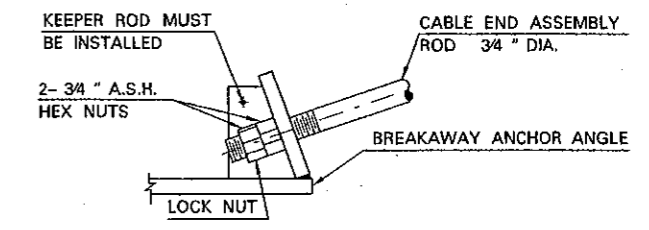
CABLE SPLICE
NOTE: USE WITH WEDGE



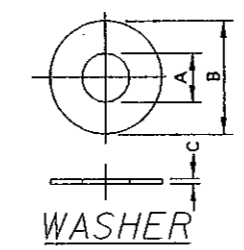
GALVANIZED ANCHOR STUD OPTION



SPRING CABLE END ASSEMBLY COMPENSATING DEVICE

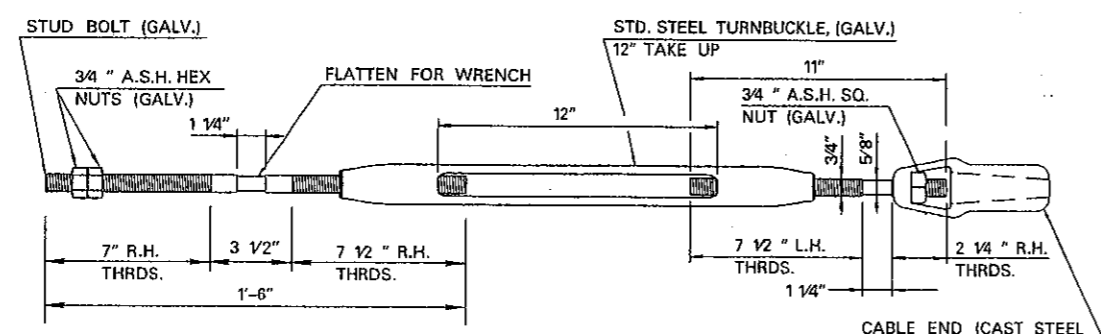


CABLE END ASSEMBLY ROD CABLE TO ANCHOR



WASHER

WASHER	WASHER SERIES	A INSIDE DIA.	B OUTSIDE DIA.	C THICKNESS
3/4"	REGULAR	7/8"	2"	5/32"
	WIDE	7/8"	2 1/16"	3/16"
1/2"	NARROW	17/32"	1"	3/32"



TURNBUCKLE CABLE END ASSEMBLY

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
SPECIAL DETAIL

REVISION DATE
6-30-04

SINGLE AND DOUBLE FACE
CABLE GUARDRAIL
ANCHOR DETAILS

CABLE GUARDRAIL GENERAL NOTES

Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
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- ALL POSTS SHALL BE S3 x 5.7 ROLLED STEEL SECTIONS IN ACCORDANCE WITH ASTM A-6. POSTS, PLATES AND ANCHOR ANGLES SHALL CONFORM TO THE REQUIREMENTS OF SECTION 607 OF THE STANDARD SPECIFICATIONS. WHERE THE RAIL IS PARALLEL TO THE EDGE OF THE TRAVEL LANE, EVERY 6th POST (96') SHALL BE REFLECTORIZED (SEE STANDARD TE11-5 FOR DELINEATORS). DOUBLE FACE CABLE GUIDERAIL SHALL HAVE A DELINEATOR VISABLE, ONE EVERY 6th POST, TO TRAFFIC IN EITHER DIRECTION. DO NOT REFLECTORIZE POSTS IN THE TYPICAL INTERMEDIATE ANCHORAGE SECTION, TYPICAL APPROACH OR TERMINAL SECTIONS.
- ROUND 3/4" DIAMETER ZINC COATED CABLE WIRE SHALL CONSIST OF THREE STRANDS (7 WIRES PER STRAND) HAVING A MINIMUM TENSILE STRENGTH OF 25000 LBS. IN ACCORDANCE WITH AASHTO M-30 TYPE I CABLE, CLASS 'A' COATING.
- MATERIALS INDICATED AS 'CAST STEEL' SHALL CONFORM TO AASHTO M103.
- INSTALLED HOOK BOLTS SHALL DEVELOP AN ULTIMATE PULL OPEN STRENGTH OF 500 LBS. TO 1000 LBS. APPLIED IN A DIRECTION NORMAL TO THE LONGITUDINAL AXIS OF THE POST.
- ALL FITTINGS, INCLUDING SPLICES, SHALL BE DESIGNED TO USE THE CABLE WEDGE AND SHALL DEVELOP THE FULL STRENGTH OF THE 3/4" CABLE. ALL FITTINGS, EXCEPT THE CABLE WEDGE, SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M-30.
- ONE WIRE OF THE WIRE ROPE SHALL BE CRIMPED OVER THE BASE OF THE WEDGE TO HOLD IT FIRMLY IN PLACE AT ALL LOCATIONS WHERE THE CABLE IS CONNECTED TO A CABLE SPLICE CONNECTION.
- DESIGNS FOR A COMBINATION OR SINGLE UNIT COMPENSATING DEVICE AND TURNBUCKLE ASSEMBLY MAY BE SUBMITTED FOR APPROVAL. COMPENSATING DEVICES MUST HAVE A SPRING RATE OF 450 LBS. PER INCH WITH A MINIMUM TOTAL THROW OF 6".
- THE FOLLOWING CRITERIA SHALL APPLY FOR ARRANGEMENT OF SPRING CABLE END ASSEMBLIES (COMPENSATING DEVICES) AND TURNBUCKLE CABLE END ASSEMBLIES:

LENGTH OF CABLE RUNS:

TO 1000' - USE COMPENSATING DEVICE ON ONE END AND TURNBUCKLE ON THE OTHER END OF EACH INDIVIDUAL CABLE.

1000' TO 2000' - USE COMPENSATING DEVICE ON EACH END OF EACH CABLE.

OVER 2000' - START NEW STRETCH BY INTERLACING AT LAST PARALLEL POST (TYPICAL LAYOUT).
- PRIOR TO FINAL ACCEPTANCE BY THE ENGINEER, USE THE FOLLOWING VALUES TO TIGHTEN THE TURNBUCKLES BASED ON THE TEMPERATURE AT THE TIME OF ADJUSTMENT.
- INTERMEDIATE SPLICING OF THE CABLE GUARDRAIL WILL NOT BE PERMITTED.

TEMPERATURE (FAHRENHEIT)	SPRING COMPRESSION FROM UNLOADED POSITION IN EACH SPRING
110° - 120°	1"
100° - 109°	1 1/4"
90° - 99°	1 1/2"
80° - 89°	1 3/4"
70° - 79°	2"
60° - 69°	2 1/4"
50° - 59°	2 1/2"
40° - 49°	2 3/4"
30° - 39°	3"
20° - 29°	3 1/4"
10° - 19°	3 1/2"
0° - 9°	3 3/4"
-10° - -1°	4"
-20° - -11°	4 1/4"

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
SPECIAL DETAIL

REVISION DATE

CABLE GUARDRAIL
GENERAL NOTES

SPECIAL DETAIL SHEET CG10