

GENERAL NOTES:

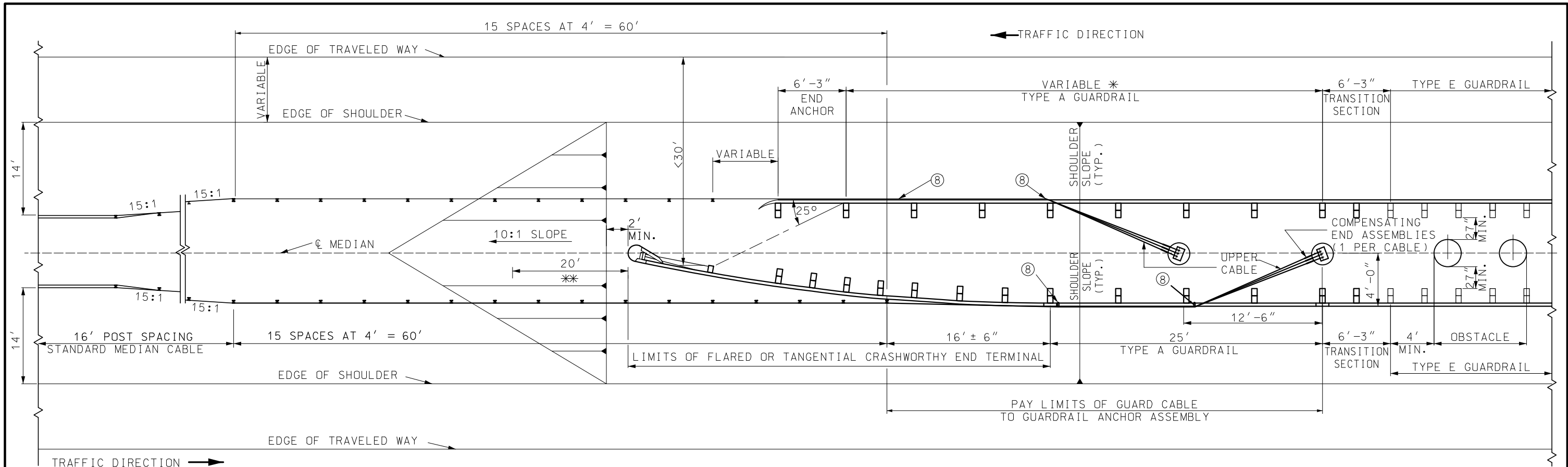
IN THE EVENT THE NORMAL 16' POST SPACING WOULD PLACE A POST ON A DROP INLET, THE SPACING OF THE TWO POSTS IMMEDIATELY PRECEDING THE INLET SHALL BE REDUCED SUCH THAT THE FOLLOWING POST CLEARS THE INLET. EACH SUBSEQUENT POST SHALL BE SPACED AT 16'. IN NO CASE SHALL THE SPACING EXCEED 16'.

IN THE EVENT A LONGITUDINAL MEDIAN PIPE IS ENCOUNTERED THE CABLE SHALL BE PLACED PARALLEL TO THE PIPE AT A MINIMUM OFFSET OF 12". THE OFFSET SHALL BE ACHIEVED BY A MINIMUM 16:1 TAPER ON THE UPSTREAM AND DOWNSTREAM END OF THE PIPE.

FOR SECTION A-A, AND DETAILS A AND B, SEE SHEET 5.

FOR GUARD CABLE DELINEATION DETAILS SEE STD PLAN 903.03.

		MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION 105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	
		REPAIR ONLY: LOW-TENSION GUARD CABLE	
DATE EFFECTIVE:	7/1/2024	606.41N	SHEET NO. 1 OF 7
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GUARD CABLE TO GUARDRAIL TRANSITION AT MEDIAN OBSTACLE

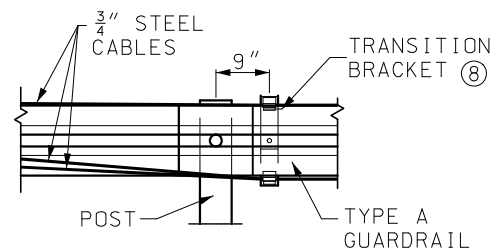
* VARY LENGTH TO ACHIEVE 25° DEFLECTION TO SECOND POST OF FLARED OR TANGENTIAL CRASHWORTHY END TERMINAL.

GENERAL NOTES:

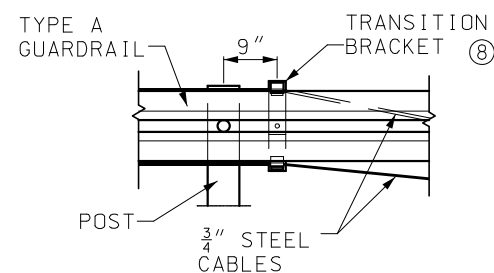
WHEN GUARD CABLE IS LOCATED ALONG THE MEDIAN CENTERLINE NEAR A BRIDGE END OR CONCRETE BARRIER, IT SHALL BE ANCHORED BEHIND THE GUARDRAIL ASSEMBLY WITH THE GUARD CABLE ANCHOR ASSEMBLY. THE GUARD CABLE ANCHOR SHALL BE PROTECTED BY THE GUARDRAIL.

THIS DRAWING DEPICTS THE ATTACHMENT OF GUARD CABLE TO GUARDRAIL. IT DOES NOT INDICATE THAT TWO RUNS OF CABLE ARE REQUIRED.

SUITABLE DRAINAGE MUST BE PROVIDED WHEN MEDIAN GRADING IMPEDES NORMAL FLOW.

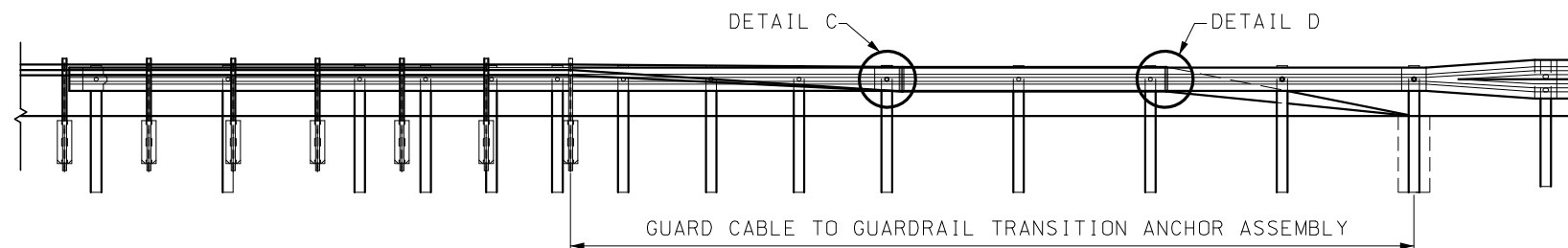


DETAIL C



DETAIL D

FOR DETAIL 8 SEE SHEET 7.



TYPICAL GUARD CABLE TO GUARDRAIL TRANSITION ELEVATION

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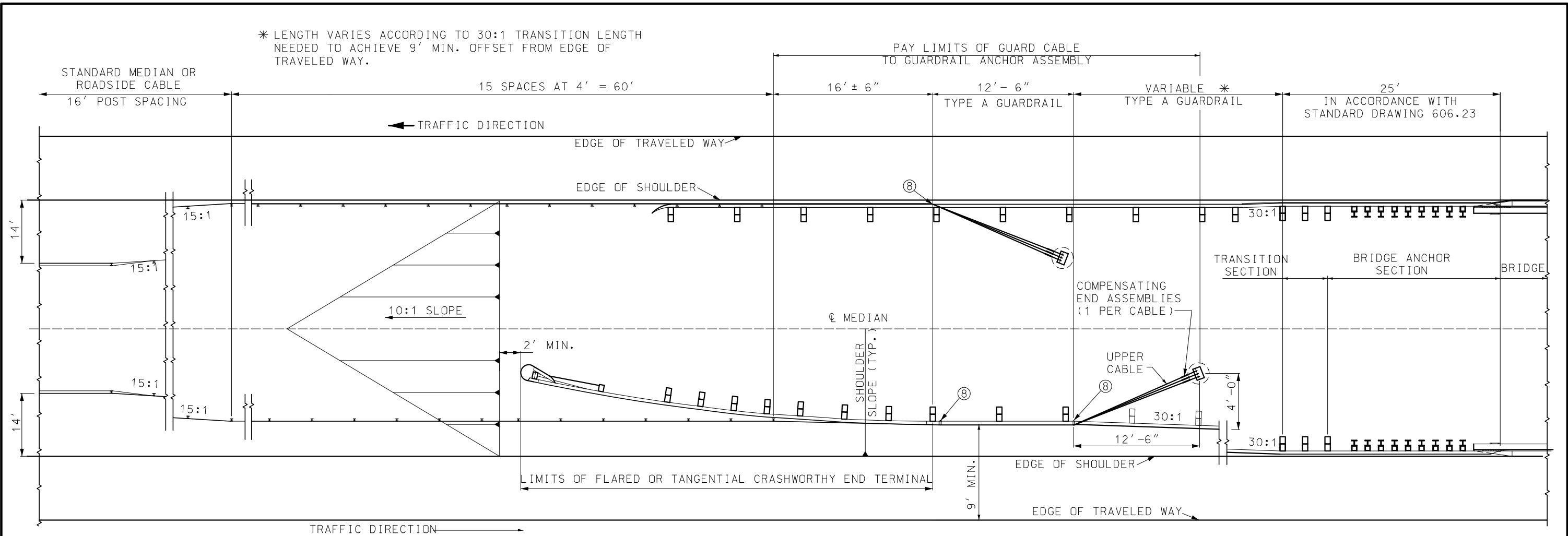
STATE OF MISSOURI
 KENNETH L. VOSS
 NUMBER PE-2002016747
 PROFESSIONAL ENGINEER
 THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

REPAIR ONLY:
 LOW-TENSION
 GUARD CABLE

DATE EFFECTIVE: 7/1/2024
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* LENGTH VARIES ACCORDING TO 30:1 TRANSITION LENGTH NEEDED TO ACHIEVE 9' MIN. OFFSET FROM EDGE OF TRAVELED WAY.

PAY LIMITS OF GUARD CABLE TO GUARDRAIL ANCHOR ASSEMBLY

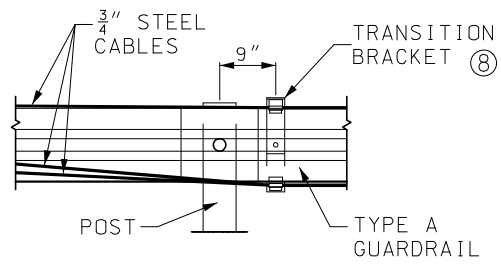
GUARD CABLE TO GUARDRAIL TRANSITION AT MEDIAN BRIDGE END

GENERAL NOTES:

WHEN GUARD CABLE IS LOCATED ALONG THE MEDIAN CENTERLINE NEAR A BRIDGE END OR CONCRETE BARRIER, IT SHALL BE ANCHORED BEHIND THE GUARDRAIL ASSEMBLY WITH THE GUARD CABLE ANCHOR ASSEMBLY. THE GUARD CABLE ANCHOR SHALL BE PROTECTED BY THE GUARDRAIL.

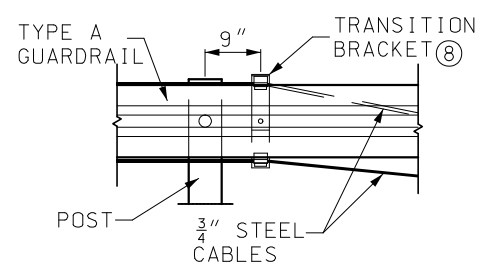
THIS DRAWING DEPICTS THE ATTACHMENT OF GUARD CABLE TO GUARDRAIL. IT DOES NOT INDICATE THAT TWO RUNS OF CABLE ARE REQUIRED.

SUITABLE DRAINAGE MUST BE PROVIDED WHEN MEDIAN GRADING IMPEDES NORMAL FLOW.

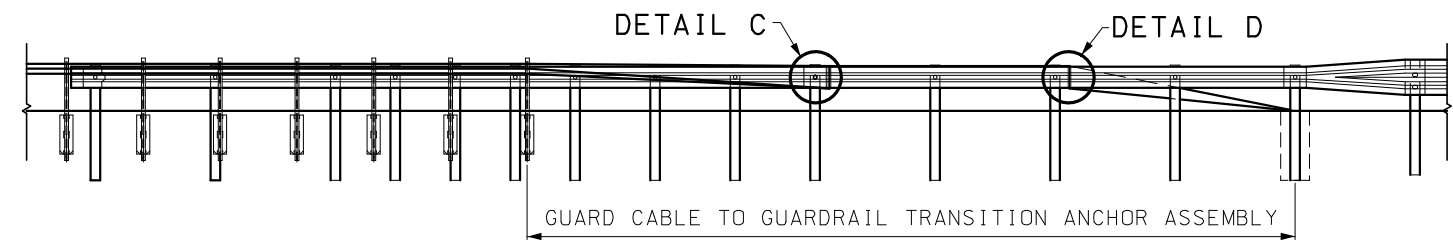


DETAIL C

FOR DETAIL 8 SEE SHEET 7.



DETAIL D



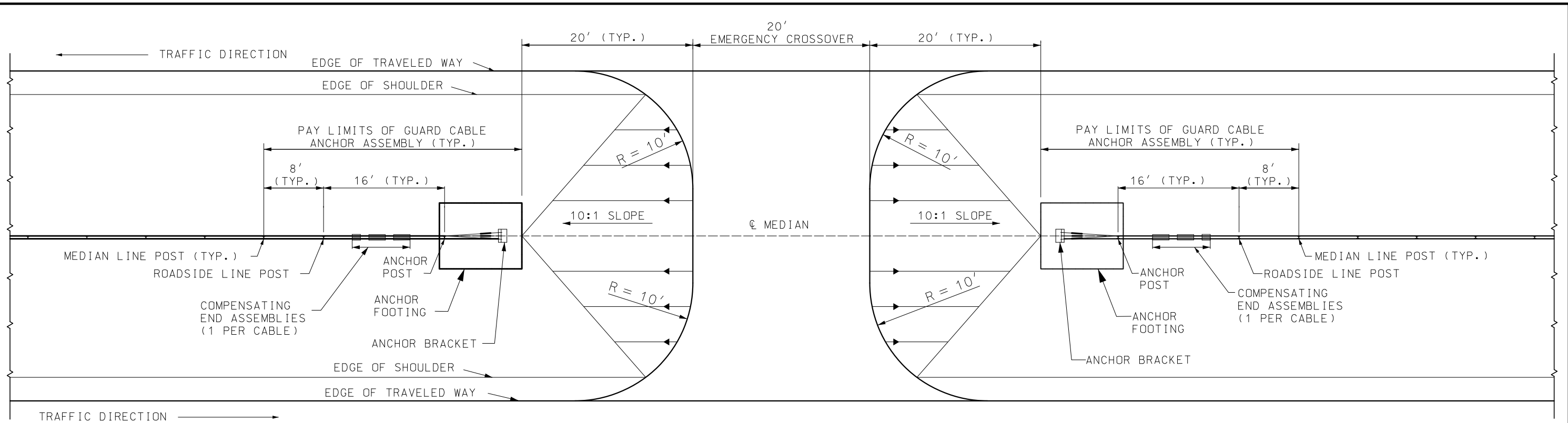
TYPICAL GUARD CABLE TO GUARDRAIL TRANSITION ELEVATION

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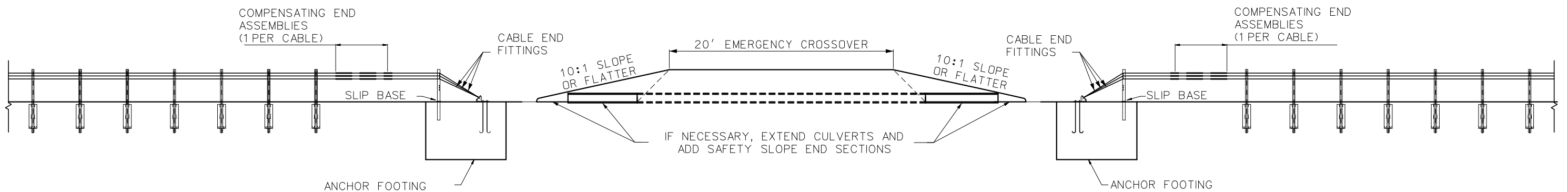
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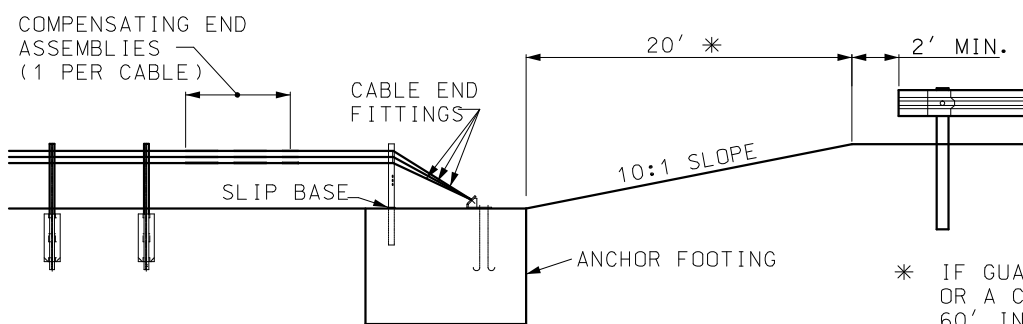
DATE EFFECTIVE: 7/1/2024	606.41N	SHEET NO. 3 OF 7
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PLAN



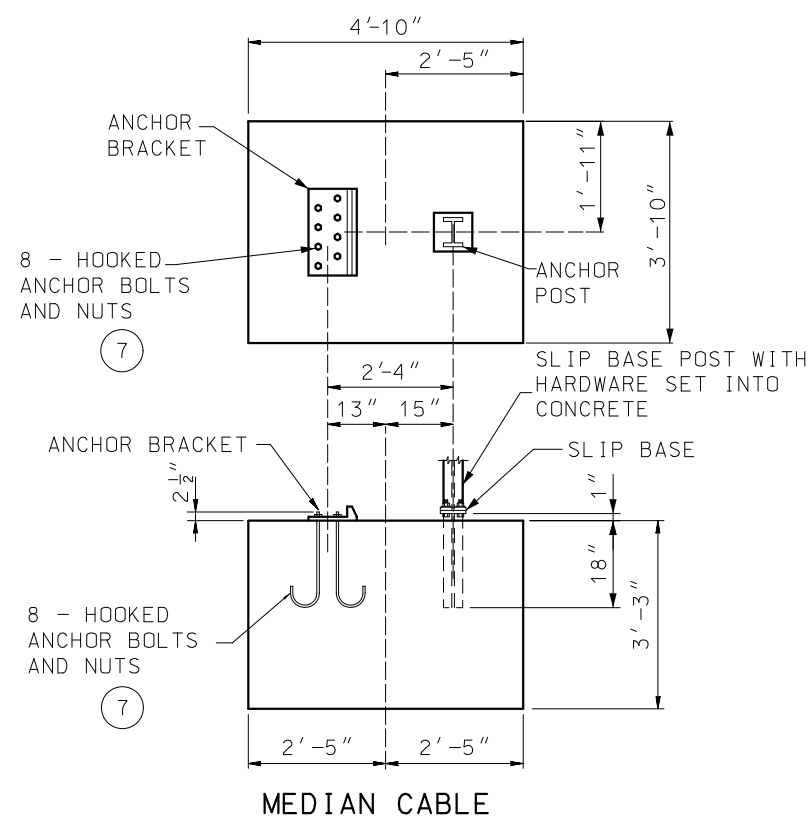
ELEVATION



PROFILE AT MEDIAN OBSTACLE WITH BULLNOSE OR IN A MEDIAN LESS THAN 60'

* IF GUARD CABLE IS USED WITH BULLNOSE GUARDRAIL SYSTEM, OR A CRASHWORTHY END TERMINAL ON A MEDIAN LESS THAN 60' IN WIDTH, THE CABLE ANCHORAGE SHALL BE PLACED ON THE MEDIAN CENTERLINE 20' FROM THE NOSE OF THE CRASHWORTHY END TERMINAL OR BULLNOSE GUARDRAIL SYSTEM.

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		REPAIR ONLY: LOW-TENSION GUARD CABLE TRANSITION AT MEDIAN OPENING
DATE EFFECTIVE: 7/1/2024 DATE PREPARED: 4/10/2024	606.41N	SHEET NO. 4 OF 7



NOTES:
 1. REINFORCEMENT CONSISTS OF NO. 3 BARS PLACED AS SHOWN.
 2. TOP SLOPE TO MATCH ADJACENT CROSS SLOPE.

NOTES:
 1. PLACE ANCHORS SO THE TOPS ARE LEVEL; WARP SLOPE TO FIT.
 2. THE CONCRETE ANCHOR BLOCK DOES NOT REQUIRE REINFORCEMENT.

STANDARDIZED HARDWARE	
①	WIRE ROPE
②	CABLE END FITTING
③	COMPENSATING CABLE END ASSEMBLY
④	ANCHOR BRACKET
⑤	U-BOLT CABLE CLIPS
⑥	CABLE HOOK BOLT AND NUT
⑦	HOOKED ANCHOR BOLT AND NUTS
⑧	CABLE TRANSITION BRACKET

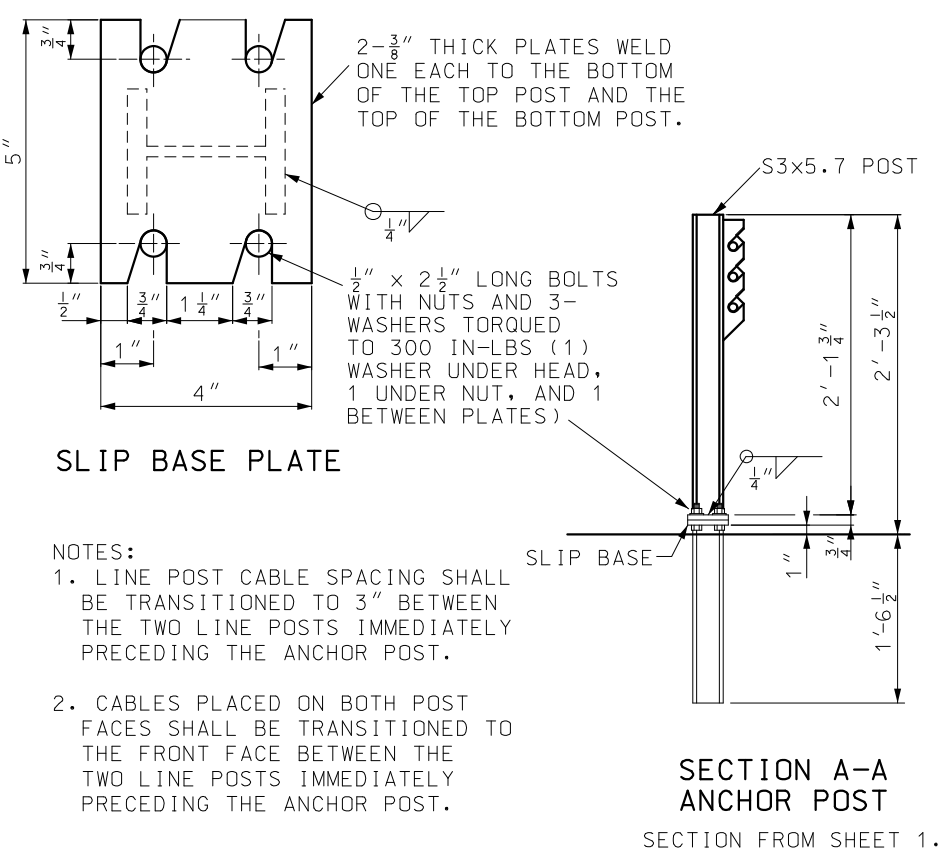
GENERAL NOTES:
 FOR ARRANGEMENT OF SPRING AND COMPENSATING CABLE END ASSEMBLIES AND TURNBUCKLE CABLE END ASSEMBLIES, THE FOLLOWING CRITERIA SHALL APPLY: LENGTH OF CABLE RUNS TO 1000' - USE COMPENSATING CABLE END ASSEMBLY ON ONE END AND THE TURNBUCKLE CABLE END ASSEMBLY ON THE OTHER END OF EACH INDIVIDUAL CABLE. FOR LENGTHS LONGER THAN 1000' AND UP TO AND INCLUDING 2000' - USE COMPENSATING CABLE END ASSEMBLY ON EACH END OF THE INDIVIDUAL CABLE.

PRIOR TO FINAL ACCEPTANCE BY THE ENGINEER, THE FOLLOWING PROCEDURES SHALL BE USED TO TIGHTEN THE TURNBUCKLES. DEPENDING ON THE TEMPERATURE AT THE TIME OF THE ADJUSTMENT IN ACCORDANCE WITH THE FOLLOWING TABLE:

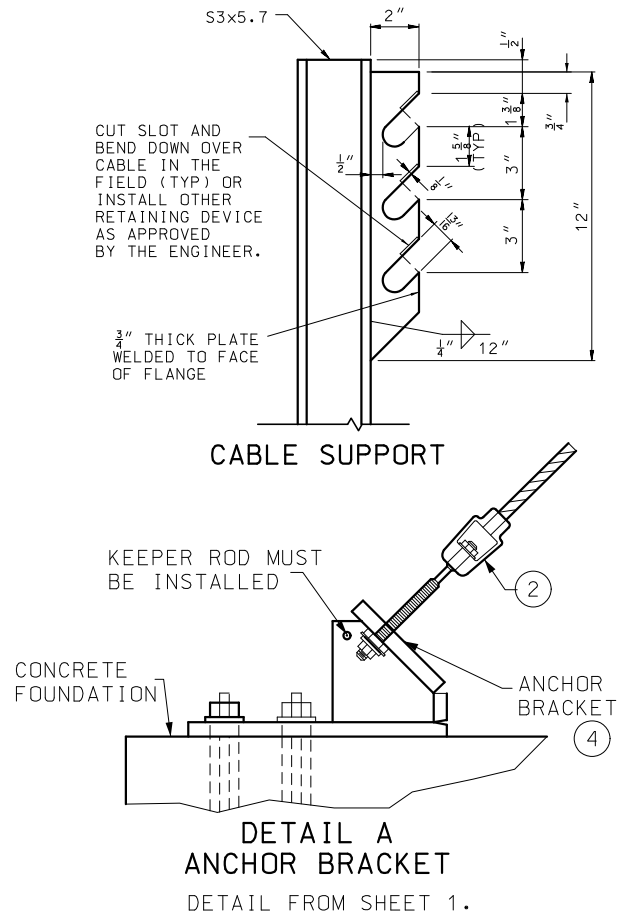
TEMPERATURE (°F)	SPRING COMPRESSION FROM UNLOADED POSITION IN EACH SPRING
120 TO 100	1"
99 TO 80	1 1/2"
79 TO 60	2"
59 TO 40	2 1/2"
39 TO 20	3"
19 TO 0	3 1/2"
-1 TO -20	4"

THE SPECIFICATIONS AND DIMENSIONS OF ALL HARDWARE AND FITTINGS SHALL COMPLY WITH AASHTO-AGC-ARTBA JOINT TASK FORCE 13 REPORT, A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE.

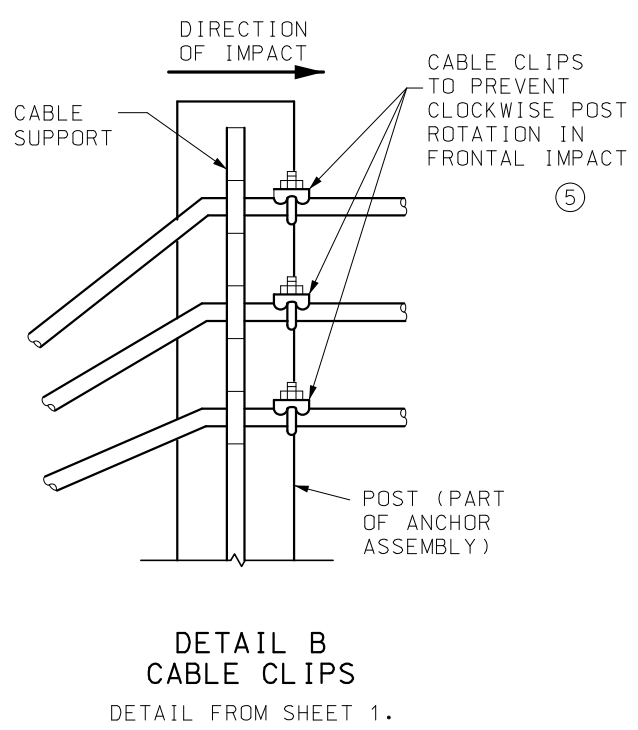
TERMINAL ANCHOR ASSEMBLY



NOTES:
 1. LINE POST CABLE SPACING SHALL BE TRANSITIONED TO 3" BETWEEN THE TWO LINE POSTS IMMEDIATELY PRECEDING THE ANCHOR POST.
 2. CABLES PLACED ON BOTH POST FACES SHALL BE TRANSITIONED TO THE FRONT FACE BETWEEN THE TWO LINE POSTS IMMEDIATELY PRECEDING THE ANCHOR POST.



FOR DETAILS ② AND ④, SEE SHEET 6.
 FOR DETAILS ⑤ AND ⑦, SEE SHEET 7.



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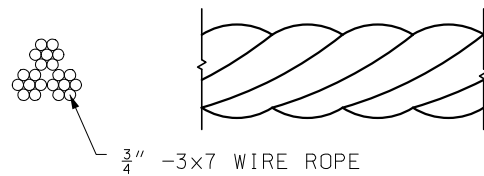
REPAIR ONLY: LOW-TENSION GUARD CABLE

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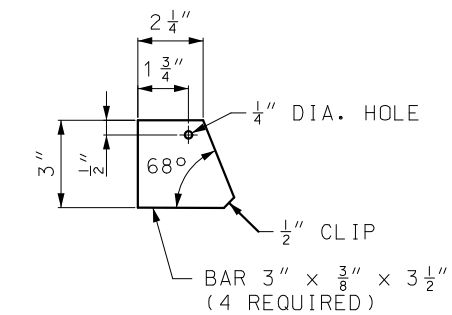
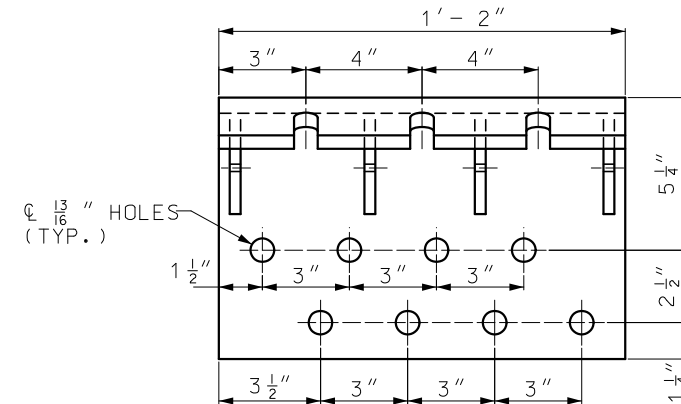
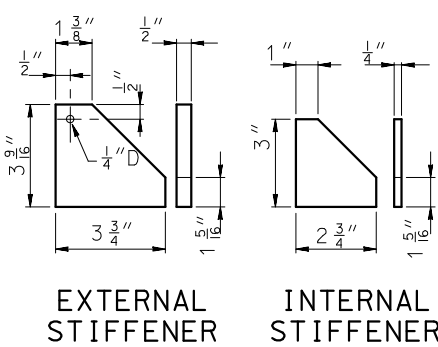
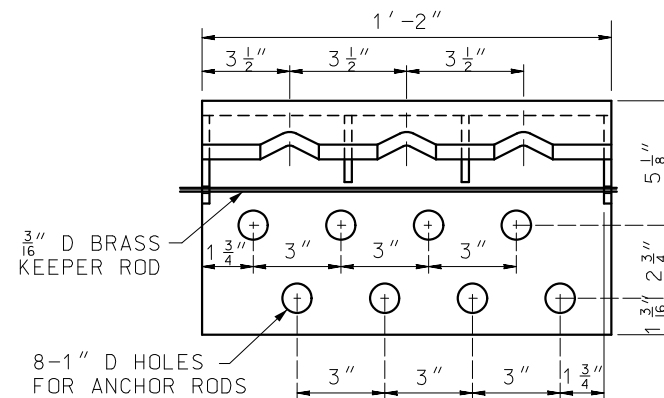
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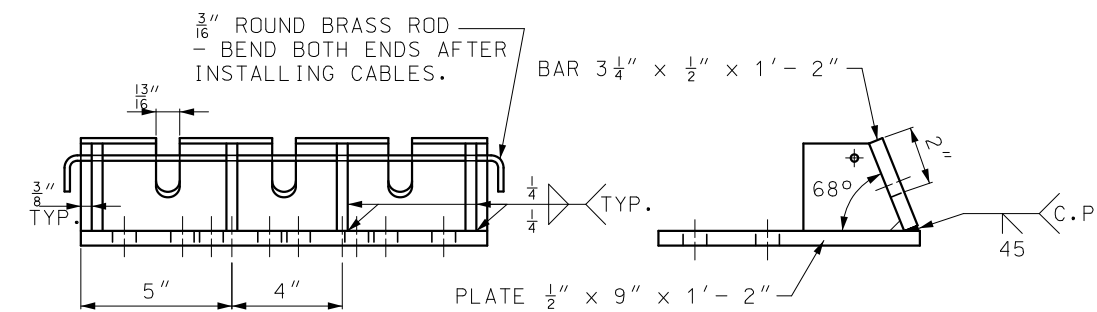
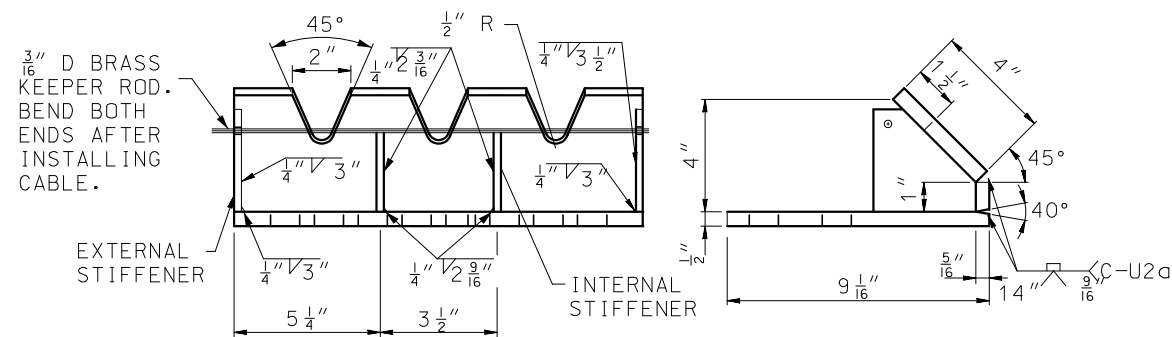
SHEET NO. 5 OF 7



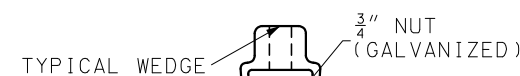
① WIRE ROPE



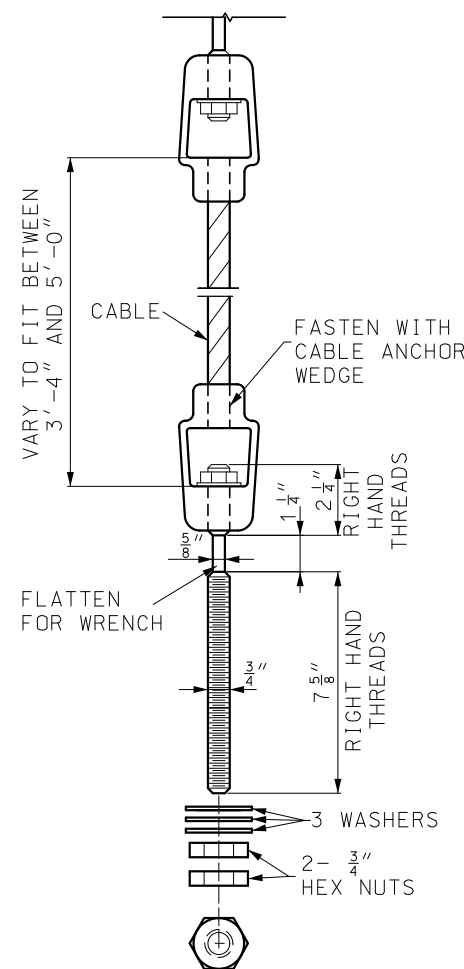
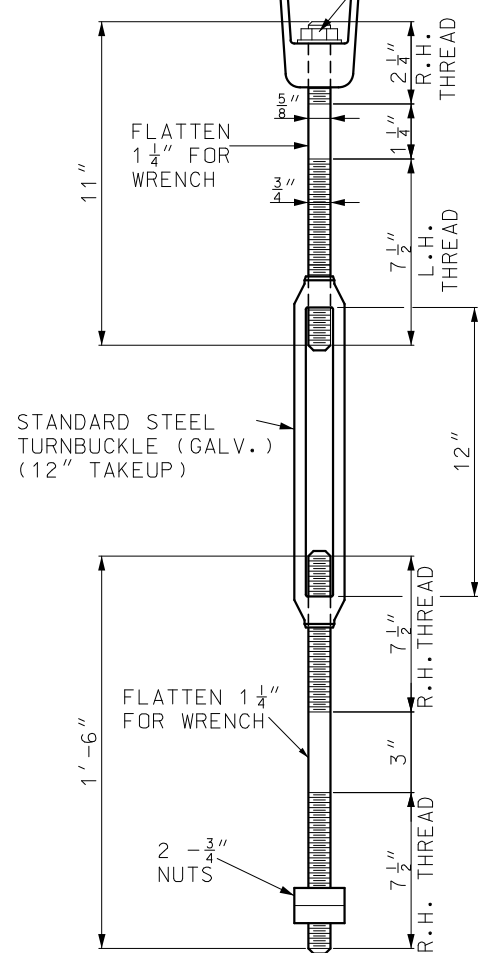
STIFFENER



GUARD CABLE TO GUARDRAIL TRANSITION

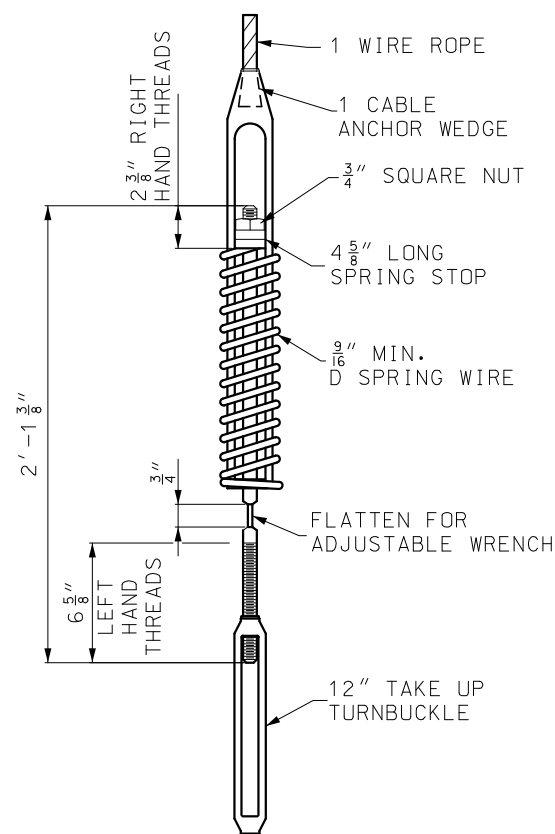


④ ANCHOR BRACKET



TURNBUCKLE CABLE END ASSEMBLY CABLE END FITTING

② CABLE END FITTINGS



③ COMPENSATING CABLE END ASSEMBLY

GENERAL NOTES:

THE SPECIFICATIONS AND DIMENSIONS OF ALL HARDWARE AND FITTINGS SHALL COMPLY WITH AASHTO-AGC-ARTBA JOINT TASK FORCE 13 REPORT, A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE.

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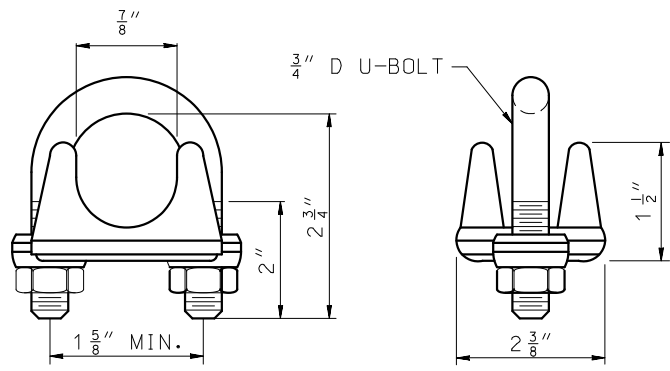
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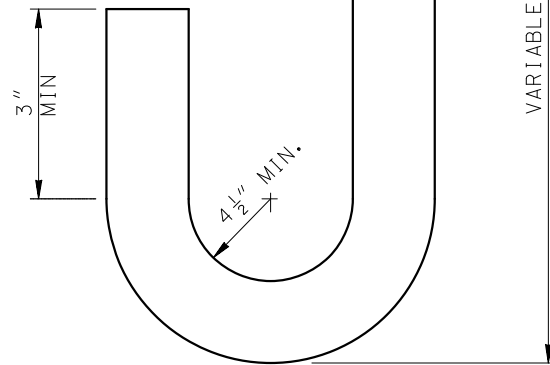
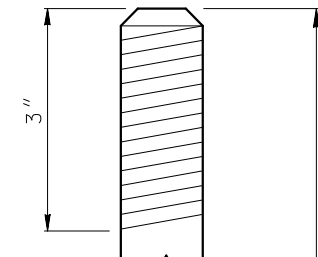
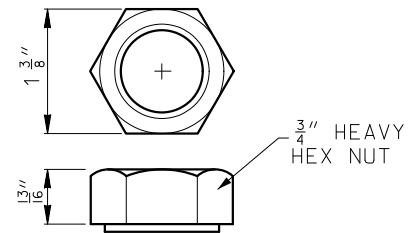
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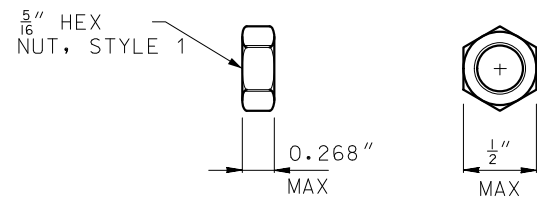
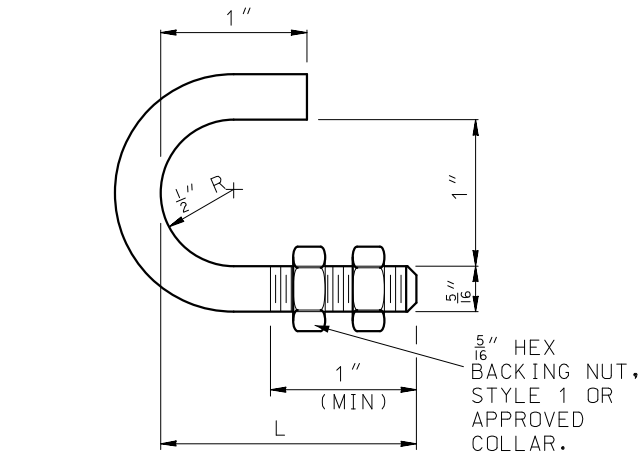
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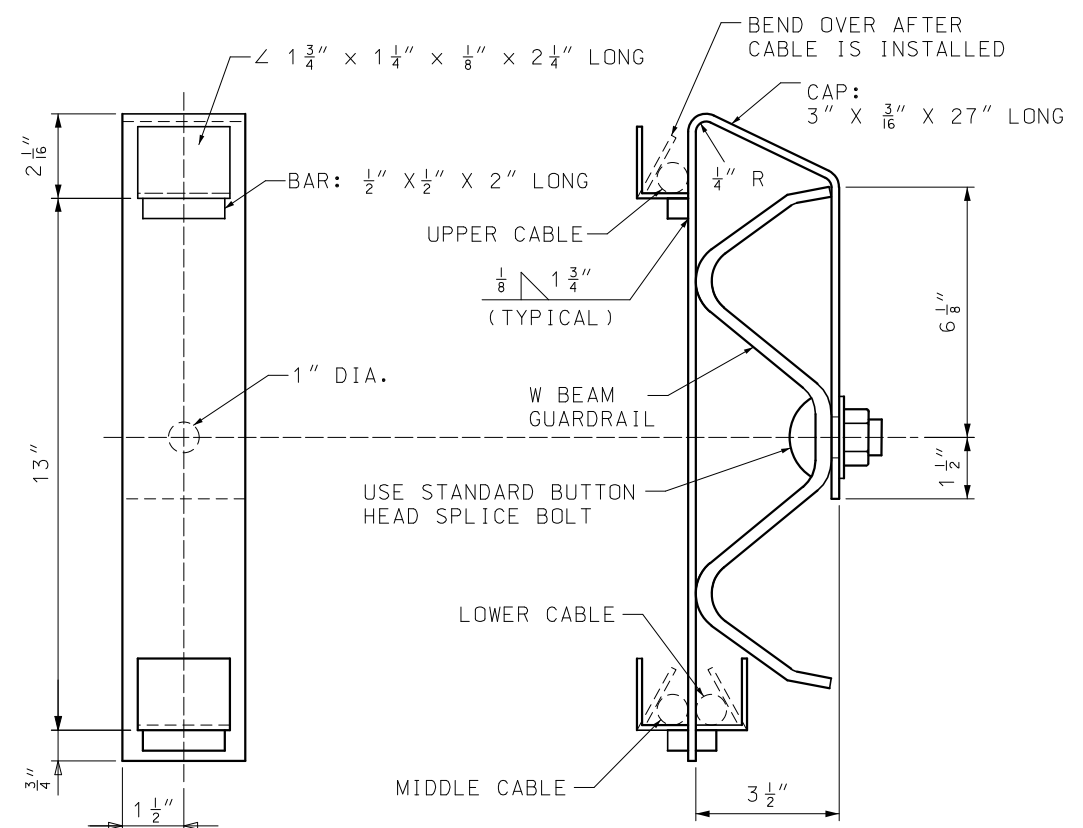
⑤ U-BOLT CABLE CLIPS



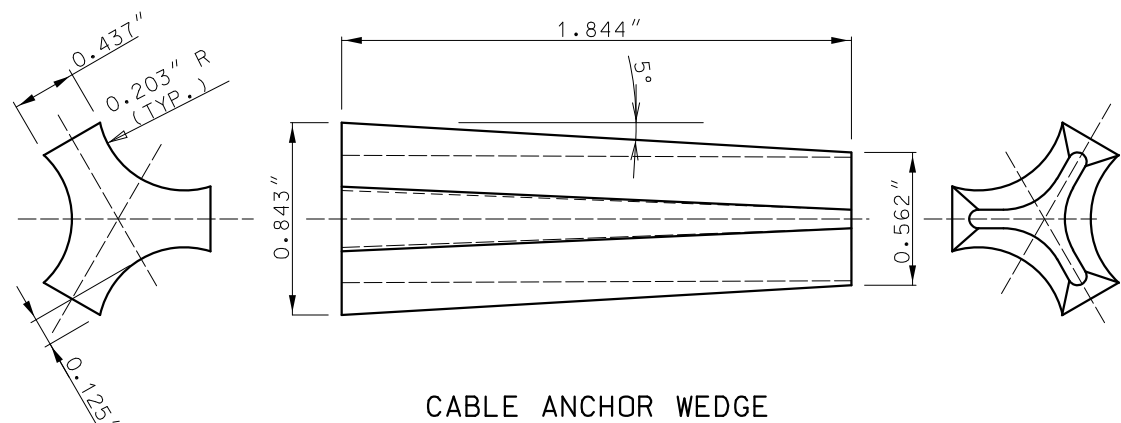
⑦ 25" HOOKED ANCHOR BOLT AND NUT



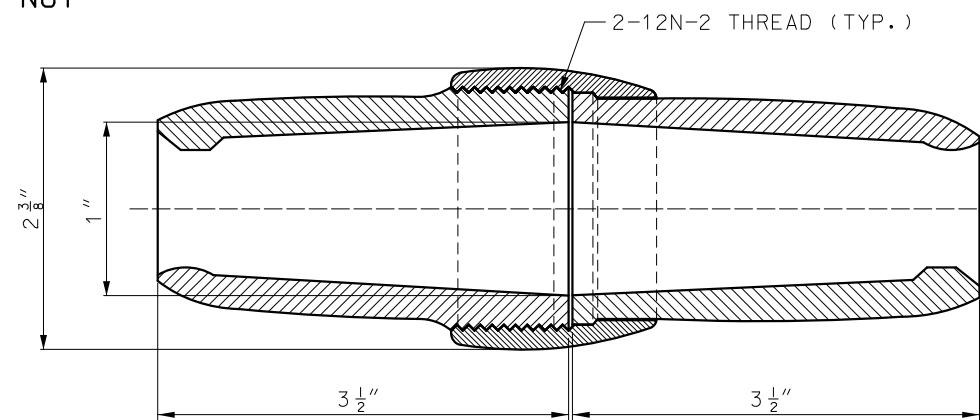
⑥ CABLE HOOK BOLT AND NUT



⑧ CABLE TRANSITION BRACKET



CABLE ANCHOR WEDGE



NOTE:
FITTING SPLICE SHALL DEVELOP THE FULL
STRENGTH OF THE CABLE (25,000 LBS).

CABLE SPLICE

GENERAL NOTES:

REPAIR SPLICES FOR LOW-TENSION SYSTEMS SHALL BE NO CLOSER THAN 400' AND NO MORE THAN FOUR SPLICES PER CABLE WITHIN A 2,000' RUN. WHEN REPAIR TO A LOW-TENSION CABLE REQUIRES SPLICES CLOSER THAN 400' OR MORE THAN FOUR SPLICES PER CABLE WITHIN A 2,000' RUN, THE FULL 2,000' CABLE LENGTH MAY BE REPLACED WITH THE ENGINEER'S APPROVAL.

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