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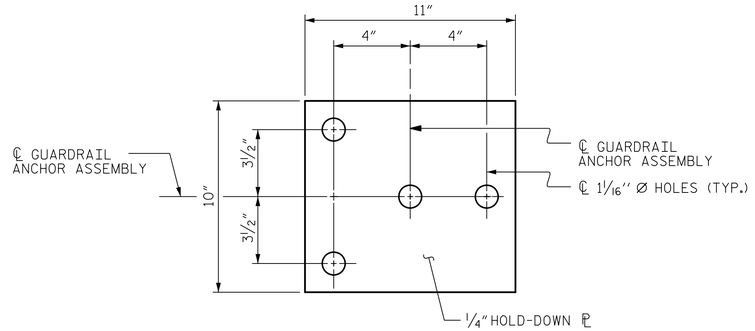
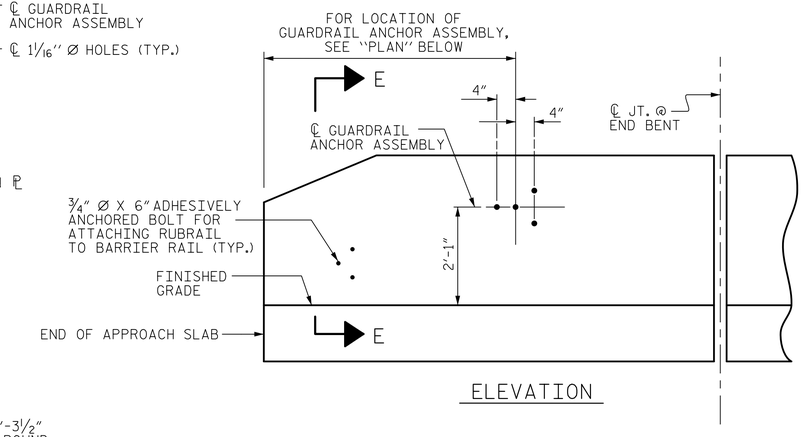
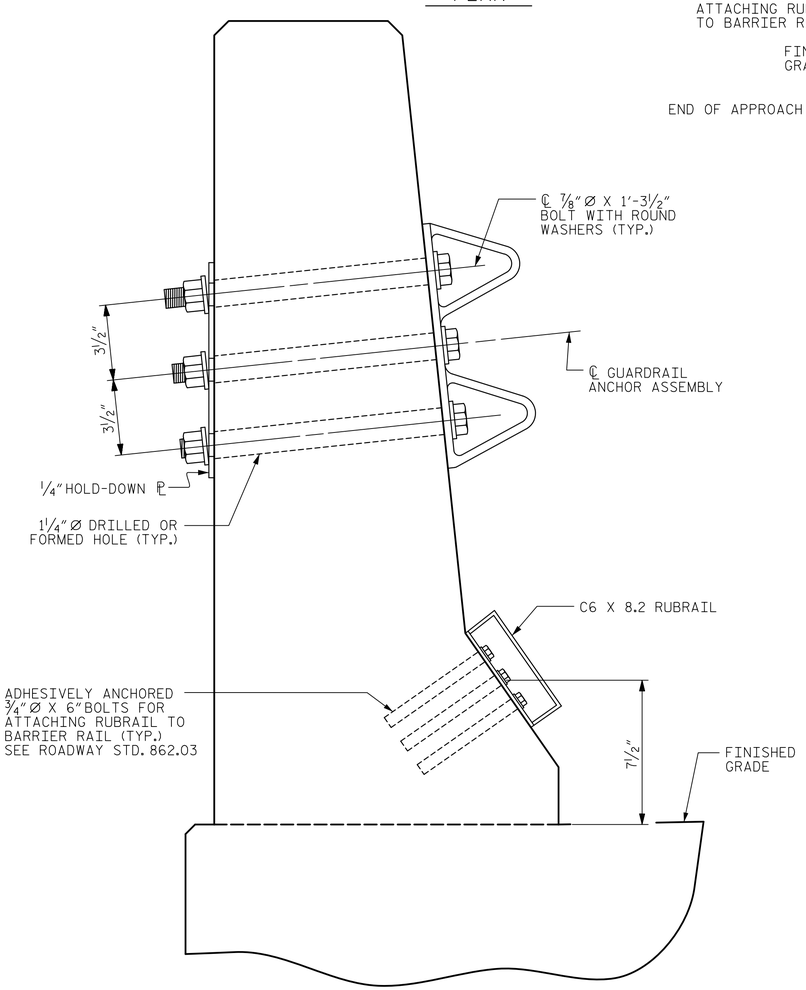


PLAN

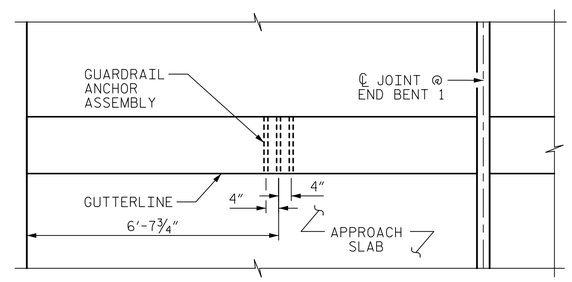


ELEVATION



SECTION E-E

GUARDRAIL ANCHOR ASSEMBLY DETAILS



PLAN

LOCATION OF ANCHORS FOR GUARDRAIL

END BENT 1 SHOWN, END BENT 2 SIMILAR.

NOTES

THE GUARDRAIL ANCHOR ASSEMBLY SHALL CONSIST OF A ¼" HOLD-DOWN PLATE AND 4 - ⅞" Ø BOLTS WITH NUTS AND WASHERS, RUBRAIL, AND ADHESIVELY ANCHORED BOLTS.

THE HOLD-DOWN PLATE SHALL CONFORM TO AASHTO M270 GRADE 36. AFTER FABRICATION, THE HOLD-DOWN PLATE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M111.

BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307 AND NUTS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M291. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. (AT THE CONTRACTOR'S OPTION, STAINLESS STEEL BOLTS, NUTS AND WASHERS MAY BE USED AS AN ALTERNATE FOR THE ⅞" Ø GALVANIZED BOLTS, NUTS AND WASHERS. THEY SHALL CONFORM TO OR EXCEED THE MECHANICAL REQUIREMENTS OF ASTM A307. THE USE OF THIS ALTERNATE SHALL BE APPROVED BY THE ENGINEER.)

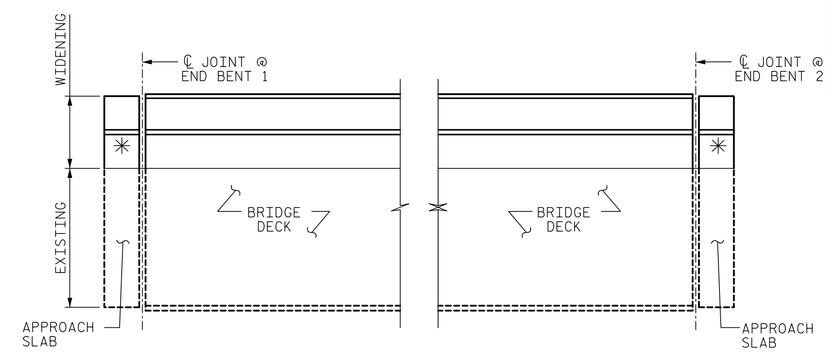
THE GUARDRAIL ANCHOR ASSEMBLY IS REQUIRED AT ALL POINTS WHERE APPROACH GUARDRAIL IS TO BE ATTACHED TO THE END OF BARRIER RAIL. FOR POINTS OF ATTACHMENT, SEE SKETCH.

AFTER INSTALLATION, THE EXPOSED THREAD OF THE BOLT SHALL BE BURRED WITH A SHARP POINTED TOOL.

THE COST OF THE GUARDRAIL ANCHOR ASSEMBLY SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR CONCRETE BARRIER RAIL.

THE 1 ¼" Ø HOLES SHALL BE FORMED OR DRILLED WITH A CORE BIT. IMPACT TOOLS WILL NOT BE PERMITTED. ANY CONCRETE DAMAGED BY THIS WORK SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.

THE C6 X 8.2 RUBRAIL IS TO BE ADHESIVELY ANCHORED TO THE RAIL USING THREE ¾" Ø X 6" BOLTS WITH WASHERS. LEVEL ONE FIELD TESTING IS REQUIRED, AND THE YIELD LOAD OF THE ¾" Ø BOLT IS 12 KIPS. FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE STANDARD SPECIFICATIONS. SEE ROADWAY STANDARD 862.03 FOR DETAILS AND LOCATION OF THE RUBRAIL.



SKETCH SHOWING POINTS OF ATTACHMENTS

✳ DENOTES GUARDRAIL ANCHOR ASSEMBLY

PROJECT NO. U-5748

WAKE COUNTY

STATION: 24+88.00 -L-

AECOM

AECOM TECHNICAL SERVICES OF NC, INC.
5438 WADE PARK BOULEVARD, SUITE 200
RALEIGH, NC 27607
(919) 854-6200 www.aecom.com
AECOM License No. F-0342

NORTH CAROLINA PROFESSIONAL SEAL 030474 ENGINEER JOHN C. MORRISON

DocuSigned by: John C. Morrison 2/10/2023
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DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD

GUARDRAIL ANCHORAGE FOR BARRIER RAIL

(SOUTHBOUND LANES)

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-33
1			3			TOTAL SHEETS
2			4			119

STD. NO. GRA2

ASSEMBLED BY : D.R. DRUM		DATE : 6/2021	
CHECKED BY : J.C. MORRISON		DATE : 6/2021	
DRAWN BY : TLA 6/05	REV. 5/1/06	RRR	KMM/GM
CHECKED BY : VC 6/05	REV. 10/1/11		MAA/GM
	REV. 12/17		MAA/THC

USER: carterm
DGN: pw:\\aecom-na-pw.bentley.com:AECOM_DS2\NA_2020\Documents\60609754\U-5748 Ligon Mill\60-CAD GIS\90_CADD\70_NCDOT_TIP\Structures\04 Drawings\402_067_U-5748_SMU_GR_S2-33.90\31
DATE: 2/9/2023
TIME: 10:55:11 PM