## ELEVATION FOR LOCATION OF RUBRAIL, SEE ROADWAY STD. 862.03

NOTES

THE GUARDRAIL ANCHOR ASSEMBLY SHALL CONSIST OF A  $1/4^{\prime\prime}$  HOLD DOWN PLATE AND 7 -  $1/8^{\prime\prime}$  Ø BOLTS WITH NUTS AND WASHERS.

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 1/8" 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.)

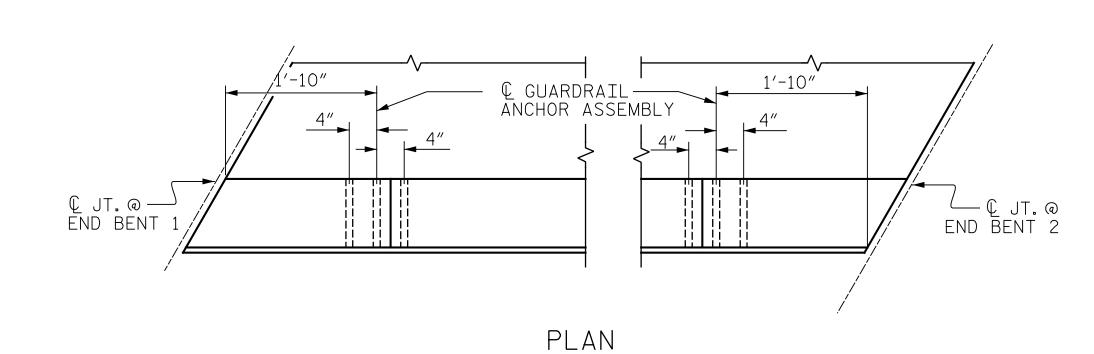
THE GUARDRAIL ANCHOR ASSEMBLY IS REQUIRED AT ALL POINTS WHERE APPROACH GUARDRAIL IS TO BE ATTACHED TO THE END OF BARRIER RAIL. FOR POINTS OF ATTACHMENT, SEE SKETCH.

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 VERTICAL CONCRETE BARRIER RAIL.

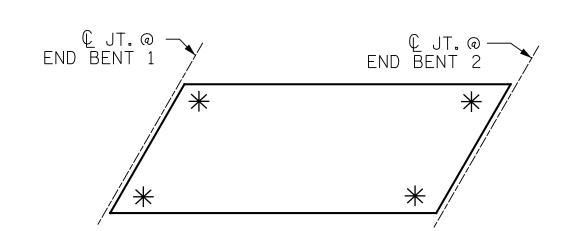
THE VERTICAL REINFORCING BARS MAY BE SHIFTED SLIGHTLY IN THE VERTICAL CONCRETE BARRIER RAIL TO CLEAR ASSEMBLY BOLTS.

THE 1  $\frac{1}{4}$ "  $\varnothing$  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.



LOCATION OF ANCHORS FOR GUARDRAIL

(TYP.EA.SIDE)



SKETCH SHOWING POINTS OF ATTACHMENT

\* DENOTES GUARDRAIL ANCHOR ASSEMBLY

DEPARTMENT OF TRANSPORTATION
RALEIGH STANDARD SEAL 7 037180 NGINES

DocuSigned by:

Ochen T Ventra

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11/7/2017

GUARDRAIL ANCHORAGE FOR BARRIER RAIL

PROJECT NO. 41665.7A

CUMBERLAND COUNTY

STATION: 106+59.74 -L1-14+51.19 -Y-

STATE OF NORTH CAROLINA

REVISIONS SHEET NO S02-14 NO. BY: DATE: TOTAL SHEETS

Gannett Fleming
Raleigh NC 27607-3
(919) 420-7660 OCUMENT NOT CONSIDEREI FINAL UNLESS ALL SIGNATURES COMPLETED Excellence Delivered As Promised NC Lic. No. F-0270

STD. NO. GRA3 STR.NO.2

ASSEMBLED BY : B.A. WHITE CHECKED BY : T.M. FORD DATE: 09/12/17 DATE: 10/15/17 MAA/GM MAA/GM DRAWN BY: TLA 5/06 CHECKED BY: GM 5/06

1/4" HOLD----DOWN P

PLAN

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SECTION E-E

GUARDRAIL ANCHOR ASSEMBLY DETAILS

 $\frac{1}{2} \frac{7}{8}$ " Ø X 1'-2" BOLT

WITH ROUND WASHERS (TYP.)

— € GUARDRAIL

ASSEMBLY

ANCHOR