

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR STRUCTURE ANCHOR UNITS GUARDRAIL ANCHOR UNIT, TYPE III

SHEET 5 OF 6 862D03

THRRIE-BEAM GUARDRAIL
 SECTION OF THRRIE BEAM POSTS 1 THRU 6
 SECTION OF WTR BEAM POST 8
 SECTION OF WTR BEAM POST 9
 SECTION OF THRRIE BEAM POST 7
 SECTION OF 'W' BEAM POST 9
 THRRIE-BEAM SECTION
 WTR SECTION
 END SHOE
 THRRIE BEAM OFFSET BLOCK
 THRRIE BEAM LINE POST

NOTE: THE MID POST AND OFFSET BLOCK OF SPECIAL BOLT HOLE DRILLING IN THE THRRIE BEAM OFFSET BLOCK AND LINE POST.

3/4" x 2 1/2" SLOT (OPT.)
 7/8" x 1 1/8" SLOT (TYP.) FOR UNION TO RAIL SECTIONS

1" DIA. HOLES (TYP.) FOR ANCHOR BOLTS

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ENGLISH DETAIL DRAWING FOR ANCHORAGE FOR GUARDRAIL POST ON BOX CULVERT

SHEET 6 OF 6 862D03

ELEVATION VIEW
PLAN VIEW

NEW STRUCTURES:
 -ATTACH POST TO INSERT ASSEMBLY UNITS (USING ANCHOR BOLTS SUPPLIED WITH INSERTS) WHICH HAVE BEEN CAST INTO THE STRUCTURE DURING CONSTRUCTION.
 EXISTING STRUCTURES:
 -USE CONCRETE ANCHORS CONSISTING OF A STUD BOLT WITH NUT AND WASHER. USE STUDS THREADED ON ONE END AND HAVING AN EXPANDED WEDGE ASSEMBLY POSITIONED AROUND A TAPERED AREA AT THE OTHER END. USE ANCHORS WHICH PROVIDE A MINIMUM SAFE HOLDING POWER OF 2875 LBS. FOR A 3/4" OR 1" DIAMETER BOLT. CALCULATE HOLDING POWER BASED ON 1/4 THE ACTUAL HOLDING POWER OF THE ANCHOR IN 3500 PSI CONCRETE AS DETERMINED BY AN APPROVED COMMERCIAL TESTING LABORATORY.
 -USE ANCHORS GALVANIZED IN ACCORDANCE WITH A.S.T.M. A-153. SIZE HOLES FOR THE CONCRETE ANCHORS IN ACCORDANCE WITH THE ANCHOR MANUFACTURER'S RECOMMENDATIONS. DRILL HOLES WITH A CARBIDE OR DIAMOND TIPPED MASONRY BIT POWERED BY A ROTARY OR ROTARY IMPACT DRILL. NO OTHER IMPACT TOOLS WILL BE PERMITTED. DRILL HOLES VERTICALLY. FURNISH DOCUMENTATION OF HOLE SIZE RECOMMENDED FOR THE SPECIFIED ANCHOR TO THE ENGINEER BEFORE DRILLING HOLES. THOROUGHLY CLEAN HOLES FOR ANCHORS OF ALL CONCRETE CHIPS, DUST, GREASE, OIL, ETC. BEFORE ANCHORS ARE INSTALLED. REPAIR ALL DAMAGE CAUSED BY THIS WORK TO THE SATISFACTION OF THE ENGINEER.

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PROJECT SERVICES UNIT
 STANDARDS AND SPECIAL DESIGN
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SEE PLATE FOR TITLE

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