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| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| R-3622B | 2C-3 |

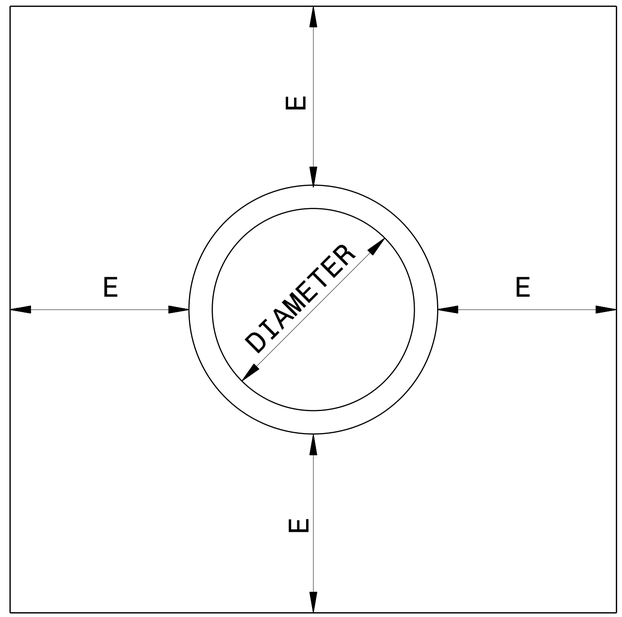
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR

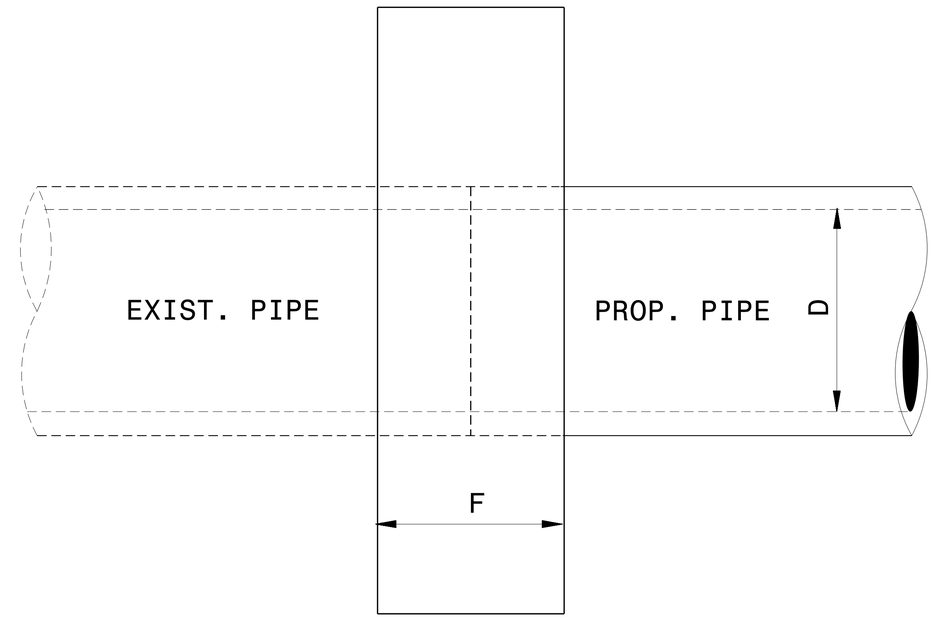
# PIPE COLLAR

SHEET 1 OF 1

**840D72**




## ELEVATION




## SIDE ELEVATION

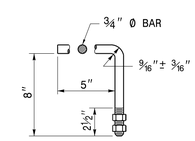
GENERAL NOTES:

USE PIPE COLLAR FOR EXTENDING EXISTING CONCRETE PIPE CULVERTS AT LOCATIONS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER. THIS INCLUDES EXTENDING EXISTING PIPES WITH PIPES OF DIFFERENT MATERIALS.

CONSTRUCT THE PIPE COLLAR WITH CLASS "B" OR BETTER CONCRETE.

OBSERVE ALL REQUIREMENTS OF SECTION 840 OF THE STANDARD SPECIFICATIONS.

USE HOOK BOLTS TO ANCHOR CSP TO THE CONCRETE COLLAR.




## HOOK BOLT

HOOK BOLTS (INSTALL ANCHORS AT 2'-0" CTS. ALONG THE CIRCUMFERENCE OF THE CSP). EMBED THE HOOK BOLTS IN THE CONCRETE COLLAR 8" IN DEPTH. THE GALVANIZED 3/4" DIA. HOOK BOLTS MUST MEET ASTM A-307 OR ASTM A-836. BOTH BOLTS AND NUTS MUST BE IN ACCORDANCE WITH ASTM A-153 FOR GALVANIZING.

| DIA. | E | F | CU. YD. |
|---|---|---|---|
| 8" | 12" | 12" | 0.2634 |
| 12" | 12" | 12" | 0.3528 |
| 15" | 12" | 12" | 0.3990 |
| 18" | 12" | 12" | 0.4465 |
| 24" | 12" | 12" | 0.5526 |
| 30" | 12" | 12" | 0.6560 |
| 36" | 12" | 12" | 0.7640 |
| 42" | 12" | 12" | 0.8856 |
| 48" | 12" | 12" | 1.0126 |
| 54" | 18" | 18" | 2.5793 |
| 60" | 18" | 18" | 2.8506 |
| 66" | 18" | 18" | 3.1307 |
| 72" | 18" | 18" | 3.4176 |
| 84" | 18" | 18" | 3.9914 |
| 96" | 18" | 18" | 4.5652 |

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ENGLISH DETAIL DRAWING FOR

# PIPE COLLAR

SHEET 1 OF 1

**840D72**

NORTH CAROLINA PROFESSIONAL SEAL 022966 ENGINEER
Jeffrey L. Hoverson
873F3D17DCDC45F...
4/7/2015

**CONTRACT STANDARDS & DEVELOPMENT UNIT**
**STANDARDS AND SPECIAL DESIGN**
Office 919-707-6950 FAX 919-250-4119

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