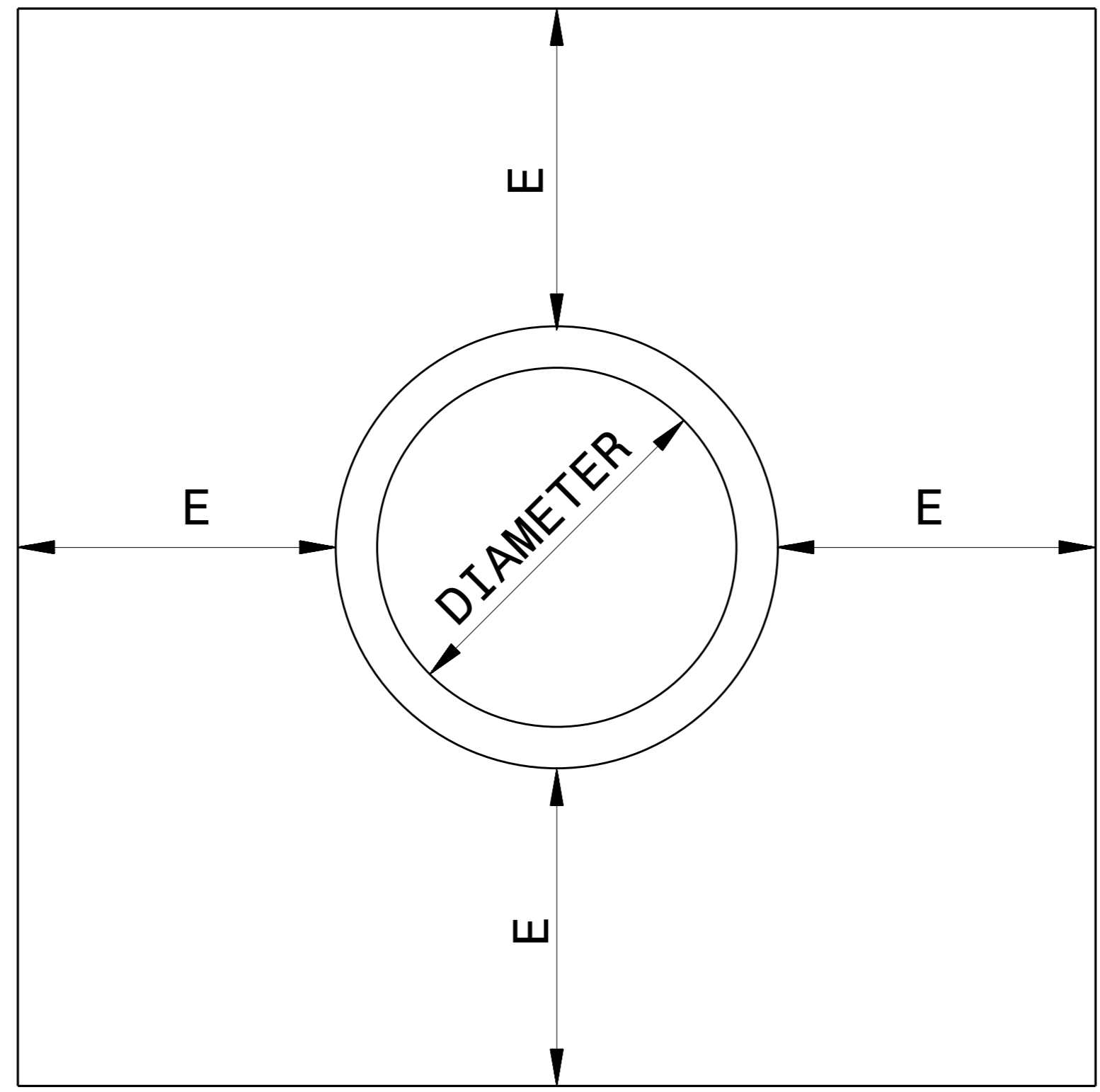


STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
PIPE COLLAR

SHEET 1 OF 1
840D72



ELEVATION

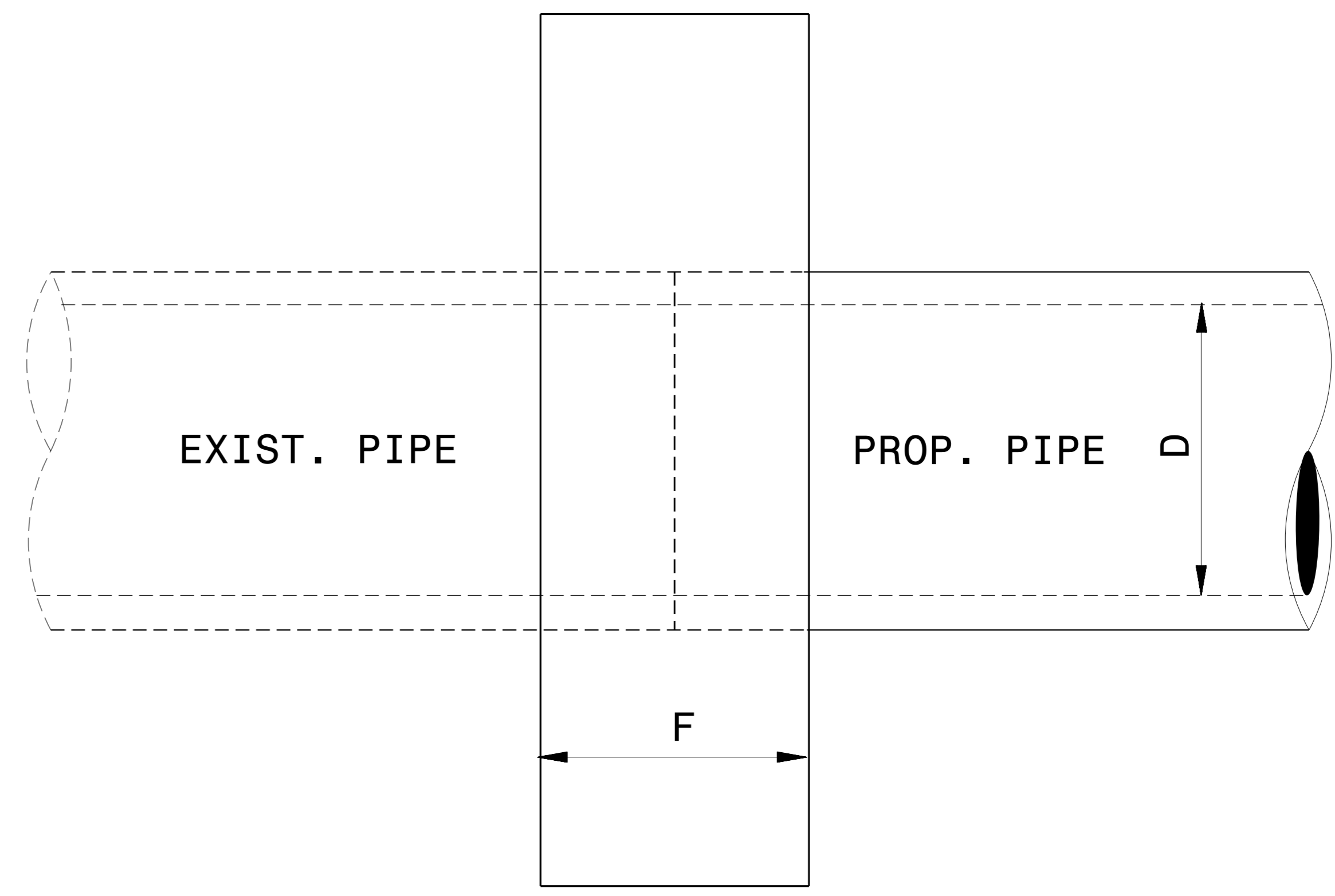
GENERAL NOTES:

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.

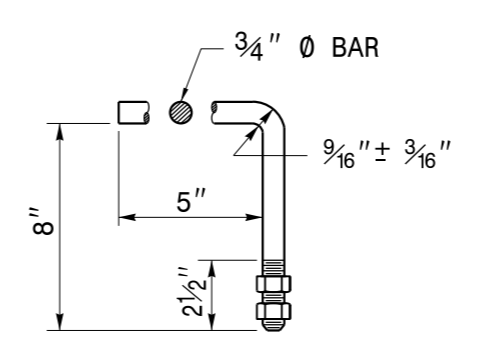
CONSTRUCT THE PIPE COLLAR WITH CLASS "B" OR BETTER CONCRETE.

OBSERVE ALL REQUIREMENTS OF SECTION 840 OF THE STANDARD SPECIFICATIONS.

USE HOOK BOLTS TO ANCHOR CSP TO THE CONCRETE COLLAR.



SIDE ELEVATION



HOOK BOLT

HOOB 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.
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
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12/10/2014
Seal of a Professional Engineer, State of North Carolina, No. 022966, Joel S. Howerton.
DocuSigned by: Joel Howerton
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CONTRACT STANDARDS & DEVELOPMENT UNIT
STANDARDS AND SPECIAL DESIGN
Office 919-707-6950 FAX 919-250-4119

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