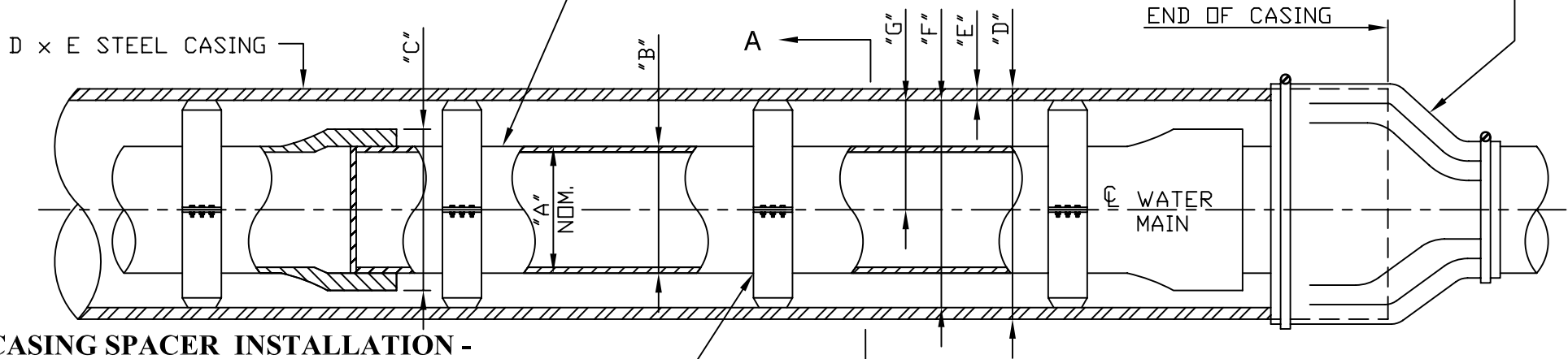


DUCTILE IRON CLASS 52 CEMENT LINED
BOLTLESS RESTRAINED PUSH-ON JOINT PIPE
(TYPE I NEW CONSTRUCTION)
(TYPE II EXISTING CONSTRUCTION).

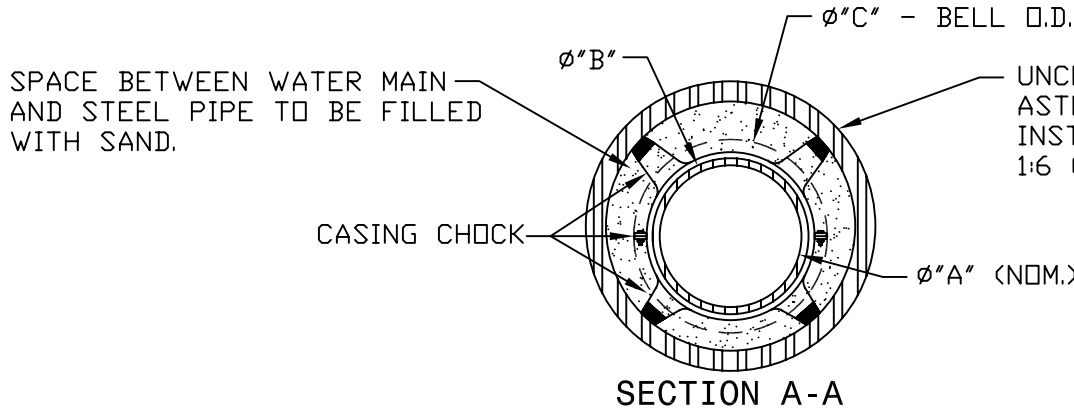
WRAP AROUND RUBBER END SEALS ARE TO BE USED FOR SINGLE
CARRIER PIPES, OR MOLDED END SEALS FOR CLUSTER CARRIER
PIPES. ALL FASTENERS ARE TO BE STAINLESS STEEL. BRICK
BULKHEADS ARE NOT ALLOWED.



- CASING SPACER INSTALLATION -

THREE CASING SPACER PER 18FT. OR 20FT. PIPE JOINTS ARE TO BE USED FOR MAXIMUM CARRIER PIPE SUPPORT; ONE BEHIND THE BELL, ONE AT THE SPIGOT END MAKE-UP LINE, AND ONE CENTERED BETWEEN THE AFOREMENTIONED TWO SPACERS. CASING SPACERS SHOULD CENTER & RESTRAIN THE CARRIER PIPE. WOODEN SKIDS ARE NOT ALLOWED.

A	B	C*	D	E	F	G
8"	9.05"	11.89"	16"	$\frac{3}{8}$ "	15 $\frac{1}{4}$ "	8.00"
12"	13.20"	16.35"	20"	$\frac{3}{8}$ "	19 $\frac{1}{4}$ "	10.00"
16"	17.40"	20.84"	24"	$\frac{1}{2}$ "	23"	12.00"



UNCOATED - UNPROTECTED STEEL CASING
ASTM A-53-89a (AWWA SPEC. C-200-91)
INSTALLED BY JACKING OR BORING METHOD.
1:6 GROUT IF ORDERED AROUND CASING.

- CASING SPACER DETAIL -

CASING SPACERS ARE TO BE STAINLESS STEEL, OR POLYMER COATED CARBON STEEL. STAINLESS STEEL IS NOT ALLOWED IF GROUTING IS REQUIRED. SPACER BAND WIDTHS ARE TO BE 8" CARRIER PIPES THROUGH 24" AND 21" FOR 26" AND LARGER. RUNNERS ARE TO BE GLASS-FILLED POLYMER PLASTIC AND LINER IS TO BE EPDM OR PVC.

NOTES:

1. CONTRACTOR'S FAILURE TO MAINTAIN THE CASING PIPE ON THE LINE AND GRADE AS SHOWN OR DIRECTED, RESULTING IN THE USE OF ADDITIONAL PIPE AND/OR FITTINGS TO MAKE CONNECTIONS TO EXISTING WATER MAIN WILL BE CAUSE FOR REJECTION OF CASING INSTALLATION.

*2. OUTSIDE DIAMETER OF BELL OF BOLTLESS RESTRAINED PIPE MAY VARY WITH MANUFACTURE, THEREFORE, CONTRACTOR SHALL VERIFY O.D. OF BELL AND INCREASE SIZE OF STEEL CASING AS REQUIRED.