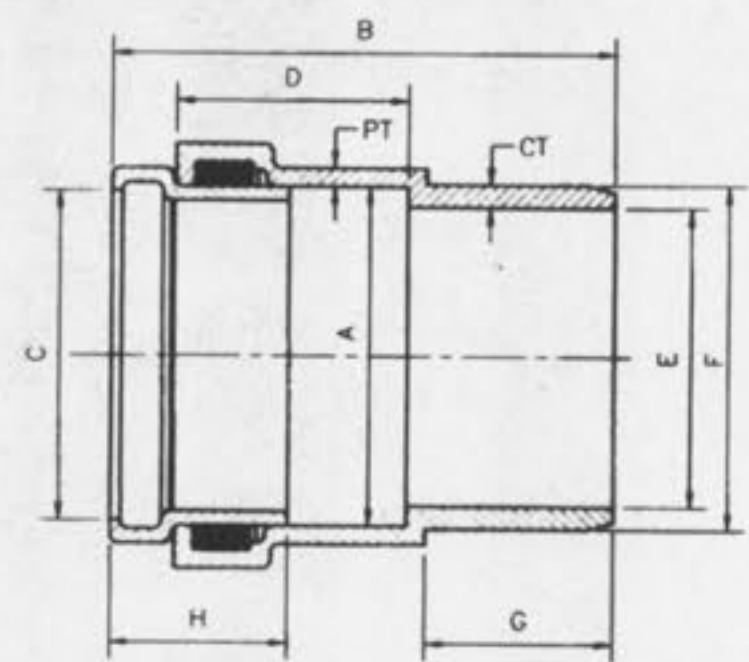


SDR-35 x C900  
BELL x SPIGOT ADAPTERS

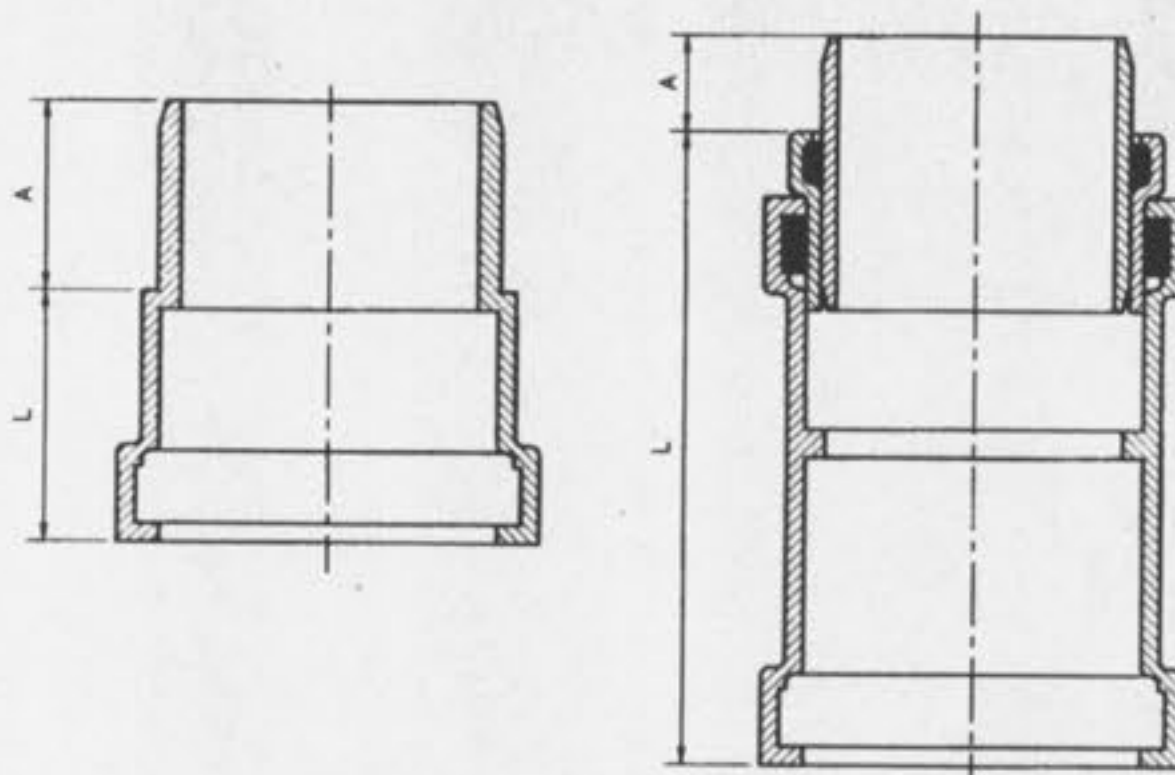


SIZE	CATALOG NO.	A	B	C	D	E	F	G	H	CT	PT
4"	334-040	4.56	8.23	4.25	4.10	3.94	4.80	2.72	2.7	.32	.25
6"	334-060	6.68	9.93	6.31	4.57	5.88	6.90	3.72	3.5	.45	.36

Duckett Creek Sanitary District

SDR-35 x C900  
BELL AND SPIGOT  
ADAPTERS  
 Des. By: BSM App. By: KLA Detail No. 19A  
 Chk. By: MDOB Date: 1-3-01

SDR-35 x C900  
BELL x SPIGOT ADAPTERS



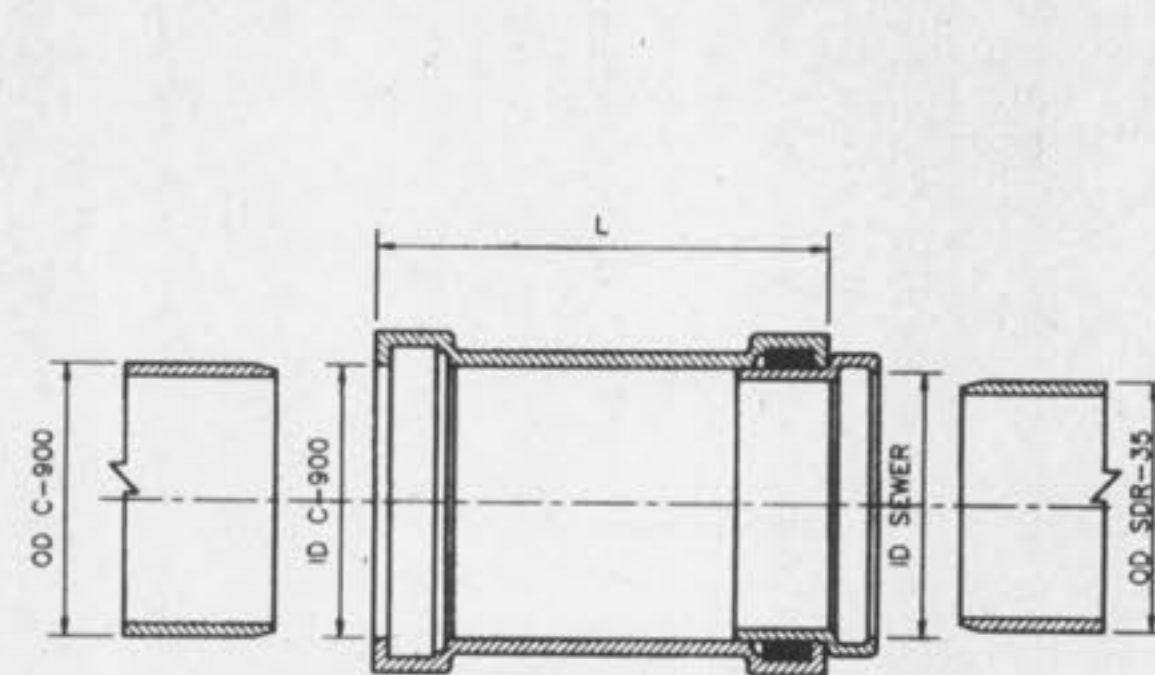
HARCO STYLE FABRICATED STYLE

SIZE	CATALOG NO.	A	L	STYLE
4"	335-040	3.2	10.0	FABRICATED
6"	335-060	2.9	3.5	HARCO
8"	335-080	4.0	12.5	FABRICATED

Duckett Creek Sanitary District

SDR-35 x C900  
BELL AND SPIGOT  
SPECIAL 4" 6" & 8" ADAPTERS  
 Des. By: BSM App. By: KLA Detail No. 19B  
 Chk. By: MDOB Date: 1-3-01

SDR-35 x C900  
BELL x BELL ADAPTERS

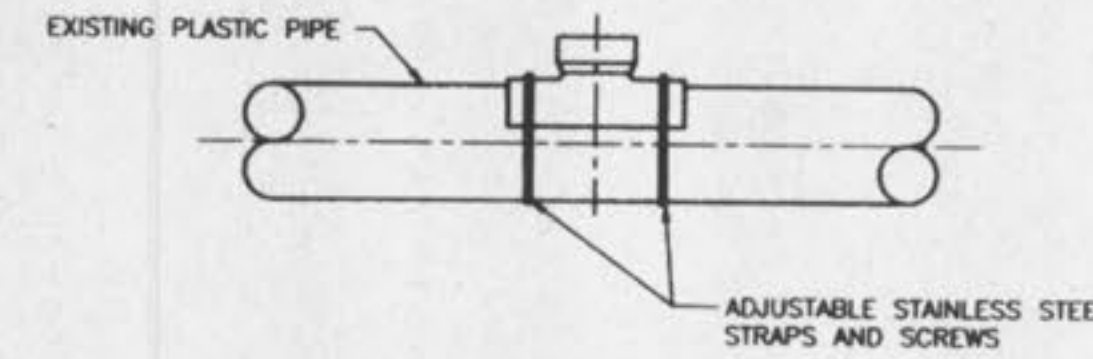


SIZE	CATALOG NO.	OD C900 SEWER	OD ID C900 SEWER	ID ID SEWER	L	CTN QTY	CTN WT
4x4	337-040	4.80	4.215	4.86	4.25	10.0	1 4
6x6	337-060	6.90	6.275	6.96	6.32	11.13	1 8
8x8	337-080	9.05	8.400	9.13	8.45	12.50	1 15

Duckett Creek Sanitary District

SDR-35 x C900  
BELL AND BELL  
4" 6" & 8" ADAPTERS  
 Des. By: BSM App. By: KLA Detail No. 19C  
 Chk. By: MDOB Date: 1-3-01

PLASTIC SADDLE TEE OR WYE FITTING  
(SOLVENT WELD)



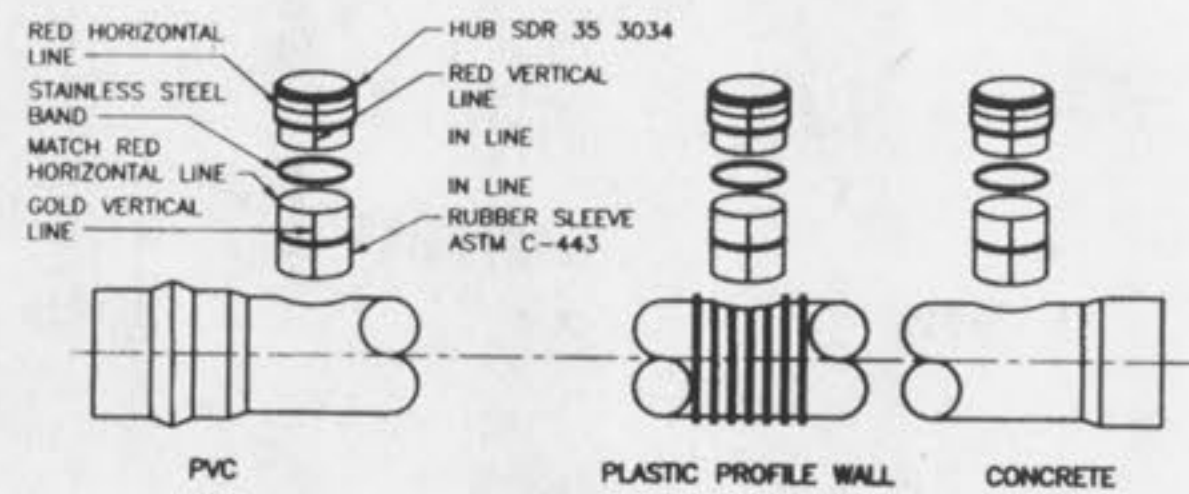
WHEN CONNECTION TO A PLASTIC PIPE IS ALLOWED AND A CONNECTION IS LARGER THAN 6" IN DIAMETER, A SOLVENT WELD WYE OR TEE FITTING OF A SIMILAR MATERIAL MUST BE USED. (EXAMPLE: 10" x 8") THIS IS ACCOMPLISHED BY CAREFULLY CUTTING A HOLE WITH A SAW IN THE MAIN AT THE REQUIRED LOCATION AFTER CUTTING AND SHAPING THE HOLE TO THE SIZE OF THE FITTING. THE FOLLOWING STEPS SHOULD BE TAKEN:

- CLEAN AND DRY BOTH INSIDE THE SADDLE WYE SURFACE AND PIPE SURFACE TO BE SOLVENT CEMENTED.
- IMPORTANT: APPLY A LIBERAL, HEAVY COAT OF ONE-STEP SOLVENT CEMENT TO THE INSIDE SURFACE OF THE SADDLE WYE AND TO THE EXTERIOR WELDING SURFACE TO THE PIPE.
- WITHOUT DELAY, MATE THE SURFACES AND STRAP DOWN TIGHTLY. A BEAD OF SOLVENT SHOULD APPEAR AFTER THE SADDLE HAS BEEN STRAPPED DOWN TIGHTLY.
- USING A RAG OR PAPER TOWEL, WIPE BEAD AND ANY EXCESS SOLVENT CEMENT OFF PIPE AND SADDLE.
- ALLOW 30-60 MINUTES FOR SET-UP TIME BEFORE BACKFILLING. CURE TIME DEPENDS ON SIZE FIT OF MATERIALS BEING INSTALLED AND VARIOUS COLD DAMP CONDITIONS.
- DISCARD OLD SOLVENT IF IT BECOMES JELLED OR LUMPY.
- A CLEAN, DRY BEDDING MATERIAL IS REQUIRED UNDER THE COMPLETED CONNECTION BEFORE BACKFILLING. THE BEDDING MATERIAL SHOULD BE ONE OF THE FOLLOWING:
  - A. 1 TO 3 CEMENT TO SAND MIX
  - B. "PRE-MIX" CONCRETE
  - C. DCSO APPROVED BEDDING FOR SANITARY SEWERS.

Duckett Creek Sanitary District

8" & LARGER  
CONNECTION TO  
PLASTIC MAIN  
 Des. By: BSM App. By: KLA Detail No. 20A  
 Chk. By: MDOB Date: 1-4-01

INSERTA TEE  
THE USE OF AN INSERTA TEE  
REQUIRES DISTRICT APPROVAL

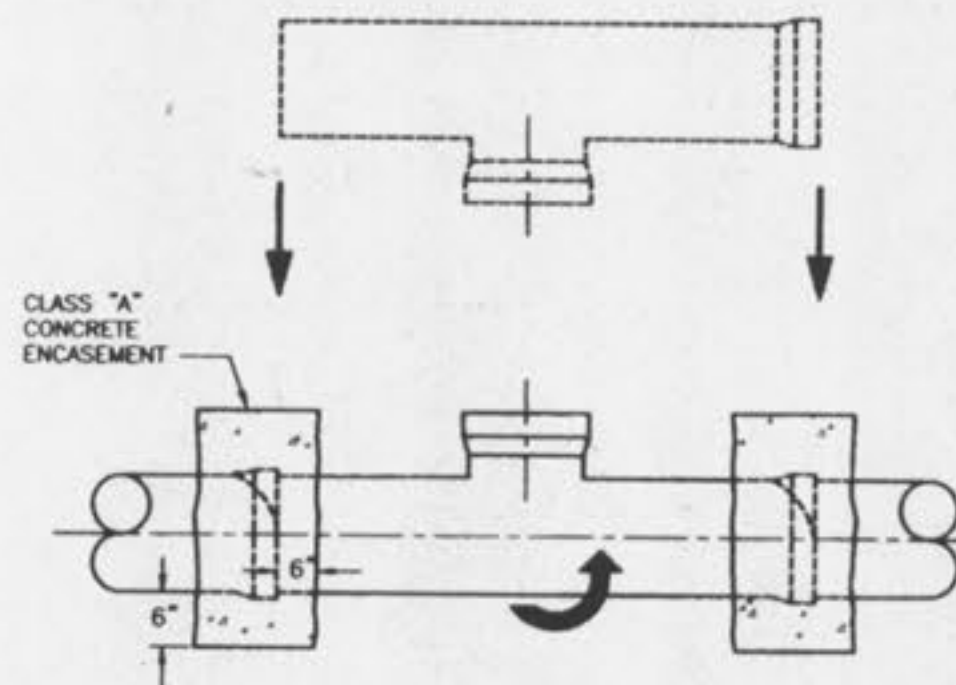


INSTALLATION PROCEDURE:

- CORE THE PROPER SIZE HOLE. TEE SIZE: 4" 6" 8" 10" 12" 15"  
BIT SIZE: 4 1/2" 6 1/2" 8 1/2" 10 1/2" 12 1/2" 15 1/2"
- INSERT THE RUBBER SLEEVE (1) IN THE CORED HOLE WITH THE GOLD VERTICAL LINE ON THE RUBBER SLEEVE (2) FACING TO THE SIDE OF THE MAIN LINE. THE UPPER SEGMENT SHOULD BE ON TOP OF THE WALL OR RIB AND THE LOWER SEGMENT (PVC, PROFILE WALL, AND POLYETHYLENE PIPE ONLY) SHOULD BE ON THE INSIDE OF THE PIPE.
- APPLY THE INSERTA TEE SOLUTION SUPPLIED TO THE INSIDE OF THE RUBBER SLEEVE AND TO THE OUTSIDE OF THE PVC HUB ADAPTER. CAUTION - DO NOT USE OIL OR BASED LUBRICANT.
- PLACE THE PVC HUB ADAPTER (3) INTO THE RUBBER SLEEVE. MAKE SURE THAT THE RED VERTICAL LINE (4) ON THE PVC HUB ADAPTER IS IN LINE WITH THE GOLD VERTICAL LINE (2) ON THE RUBBER SLEEVE.
- PLACE THE 2x4 BOARD ONTO THE TOP OF THE PVC HUB ADAPTER.
- THE RED HORIZONTAL LINE (5) AT THE TOP OF THE HUB ADAPTER IS A DEPTH MARK. THIS TELLS THE INSTALLER HOW FAR TO DRIVE THE ADAPTER INTO THE RUBBER SLEEVE. DRIVE THE PVC HUB ADAPTER INTO THE RUBBER SLEEVE TO WHERE THE HORIZONTAL RED LINE (5) ON THE PVC HUB ADAPTER (3) MEETS THE TOP OF THE RUBBER SLEEVE (2).
- PLACE THE STAINLESS STEEL BAND (7) AROUND THE TOP OF THE RUBBER SLEEVE AND TIGHTEN DOWN.
- INSTALL PIPE IN NORMAL MANNER.

Duckett Creek Sanitary District

INSERTA TEE  
DETAILS AND  
SPECIFICATIONS  
 Des. By: BSM App. By: KLA Detail No. 20B  
 Chk. By: MDOB Date: 1-4-01

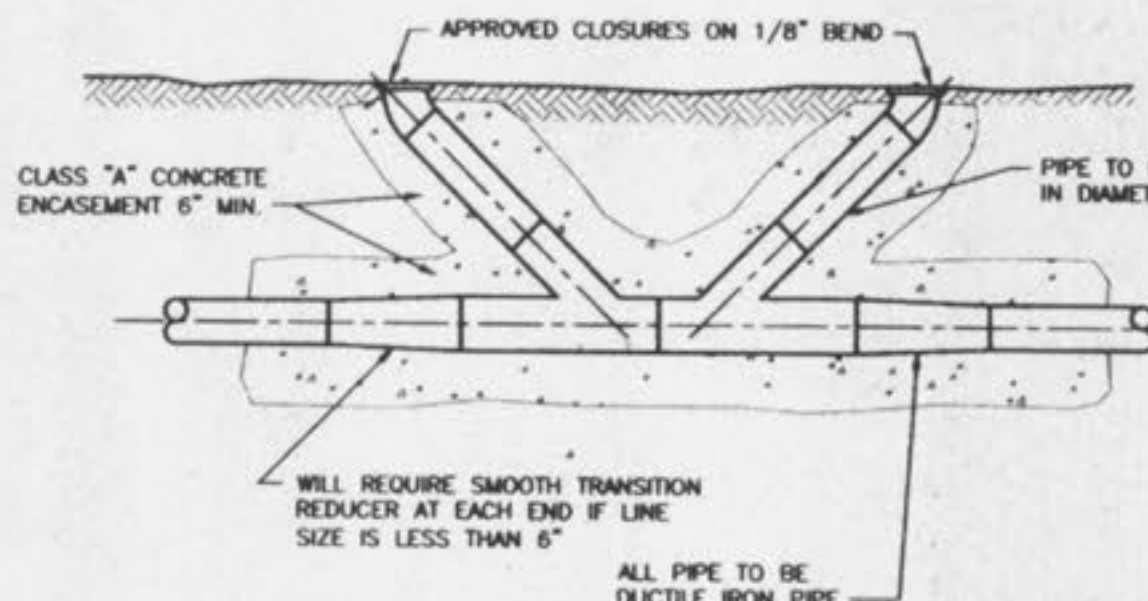


NOTES:

- WHEN A CONNECTION IS ALLOWED LARGER THAN 6" DIAMETER A SADDLE MAY BE USED IF THE I.D. OF THE CONNECTION PIPE IS NOT GREATER THAN ONE HALF (1/2) OF THE I.D. OF THE MAIN SEWER. (EXAMPLE: 24" x 10")
- IF THE I.D. OF THE CONNECTION PIPE IS GREATER THAN ONE HALF (1/2) THE I.D. OF THE MAIN SEWER THE WYE OR TEE MUST BE "ROLL-IN". (EXAMPLE: 15" x 8")
- THIS IS ACCOMPLISHED BY BREAKING AWAY AND REMOVING ONE SECTION OF PIPE. THE TOP HALF OF THE BELL ON THE PIPE LYING ADJACENT TO THE GAP IS CAREFULLY BROKEN OFF. THE TOP HALF OF THE BELL ON THE MAIN REPLACEMENT SECTION (WITH A TEE) WYE) FITTING IS ALSO BROKEN OFF. THE REPLACEMENT PIPE IS THEN PLACED IN THE LINE GAP WITH THE STUB POINTED IN THE WRONG DIRECTION. THE BROKEN BELLS ON THE REPLACEMENT AND ADJOINING PIPE MAKE IT POSSIBLE FOR THE REPLACEMENT SECTION TO FIT INTO THE SEWER LINE WITHOUT DISTURBING THE ADJOINING PIPE SECTIONS. THE REPLACEMENT SECTION IS THEN ROTATED TO THE DESIRED POSITION AND THE BROKEN BELLS ARE ENCASED WITH A 6" CLASS "A" CONCRETE ENCASEMENT.
- I.D. OF MAIN SEWER SHALL NOT BE DECREASED BY A ROLL-IN CONNECTION.

Duckett Creek Sanitary District

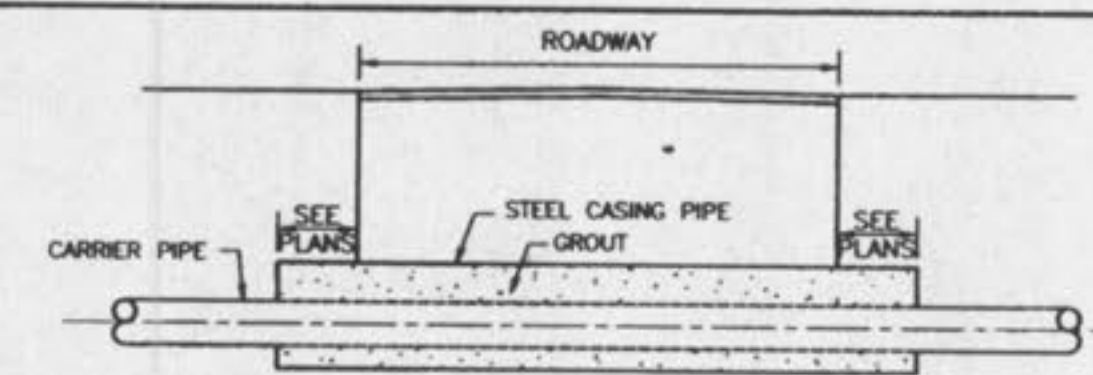
"ROLL-IN"  
(FOR EXISTING  
CLAY OR CONCRETE PIPE)  
 Des. By: BSM App. By: KLA Detail No. 21  
 Chk. By: MDOB Date: 1-5-01



1800' MAXIMUM SPACING

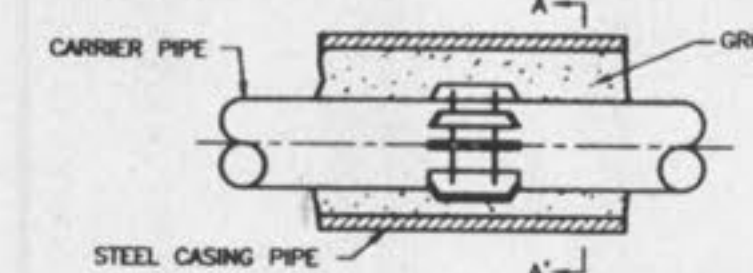
Duckett Creek Sanitary District

FORCE MAIN  
CLEANOUT  
(6" DIA. & SMALLER)  
 Des. By: BSM App. By: KLA Detail No. 22  
 Chk. By: MDOB Date: 1-5-01

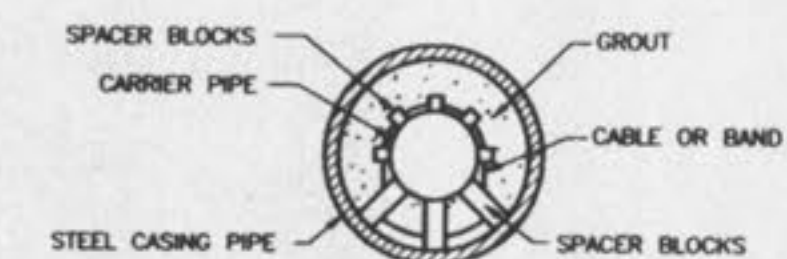


BORING DETAIL

- NOTES:
- INSIDE DIAMETER OF CASING PIPE TO BE MINIMUM OF 4" GREATER THAN COUPLING DIAMETERS OF CARRIER PIPE.
  - ENCASEMENTS TO BE INSTALLED UNDER THE ROAD BY MEANS OF JACKING IT THROUGH, OR BY DRY BORING A HOLE THAT WILL RECEIVE THE CASING WITH A SNUG FIT.
  - THE OUTSIDE DIAMETER OF THE CASING SHALL NOT BE LESS THAN, NOR MORE THAN ONE INCH GREATER THAN THE BORED HOLE.
  - THE ANNULAR SPACE BETWEEN THE CASING PIPE AND THE BORED HOLE SHALL BE FILLED WITH GROUT.



SUPPORT OF CARRIER PIPE OR FORCE MAIN IN CASING



SECTION A-A'

Duckett Creek Sanitary District

ROADWAY  
BORING  
DETAIL  
 Des. By: BSM App. By: KLA Detail No. 23  
 Chk. By: MDOB Date: 1-5-01

THE UNDERGROUND UTILITIES SHOWN HEREON WERE PLOTTED FROM AVAILABLE INFORMATION AND DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NONEXISTENCE, SIZE, TYPE, NUMBER OR LOCATION OF THESE OR OTHER UTILITIES. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UNDERGROUND UTILITIES, SHOWN OR NOT SHOWN, AND SAID UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY GRADING, EXCAVATION OR CONSTRUCTION OF IMPROVEMENTS. THESE PROVISIONS SHALL IN NO WAY ABSOLVE ANY PARTY FROM COMPLYING WITH THE UNDERGROUND FACILITY SAFETY AND DAMAGE PREVENTION ACT, CHAPTER 319, RSMo.

BASE MAP

ISSUE REMARKS/DATE  
10/19/01 FIRST SUBMITTAL

PREPARED FOR:  
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(314) 432-3088

STERLING CO. ENGINEERS & SURVEYORS  
5055 NEW BAUMGARTNER ROAD  
ST. LOUIS, MISSOURI 63129  
(314)-487-0440 FAX 487-8644  
E-Mail: Sterling@sterling-eng-sur.com

DESIGNED: [Signature]  
CHECKED: [Signature]

PROJECT: KENSINGTON PLACE ADDITION  
SHEET TITLE: DCSO DETAILS

No. 01 01 012  
M.S.D. SHEET  
P# CD7  
DATE: 10/19/01