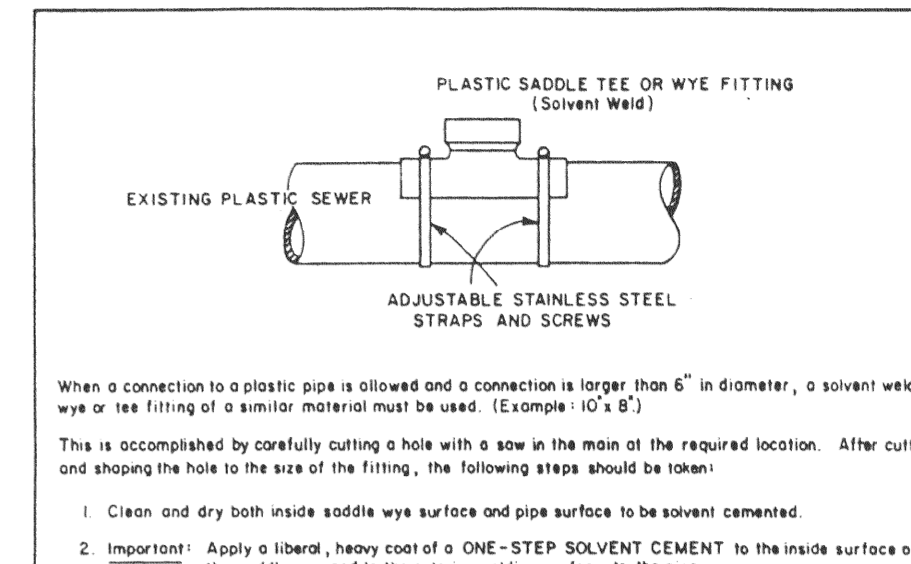


Note: The opening shall be cut by the contractor to a sufficient size to permit inserting a tee saddle or short length of pipe of the required elevation and depth to allow at least two (2) inches space around the pipe. The space will be sealed with a 1:3 cement-sand mortar and the new pipe neatly trimmed and pointed up flush with the inside of the main sewer.

If there are reinforcing bars in the sewer wall, only those preventing insertion of the pipe may be cut. All others shall be bent into a Class "A" concrete collar at the junction of the connection pipe and the main sewer.

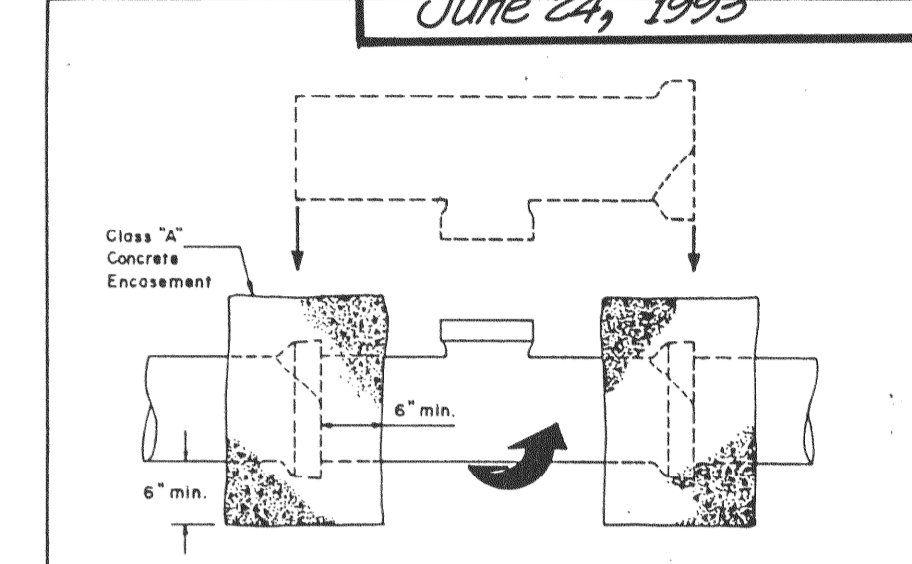
HOUSE CONNECTIONS ALLOWED BY TEE SADDLE	METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction Dr. A.E.S. Ch. J.C.K.	April 1978	Sheet 52
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When a connection to a plastic pipe is allowed and a connection is larger than 6" in diameter, a solvent-weld tee or wye fitting of a similar material must be used. (Example: 10" x 6")

- Clean and dry both inside 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 surface of the pipe.
- Without delay, mate the surfaces and strap down tightly. A bead of solvent should appear after 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 and fill of materials being installed and various cold-weather conditions.
- Discard old solvent if it becomes gelled or lumpy.
- A clean, dry bedding material is required around the completed connection before backfilling. The bedding material should be one of the following:
 - M.S.D. Bedding
 - 1 to 3 Cement to Sand Mix
 - Pre-Mix Concrete

6" (8" LARGER) CONNECTION TO PLASTIC MAIN	METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction Dr. A.E.S. Ch. J.C.K.	JUNE, 1985	SHEET 53
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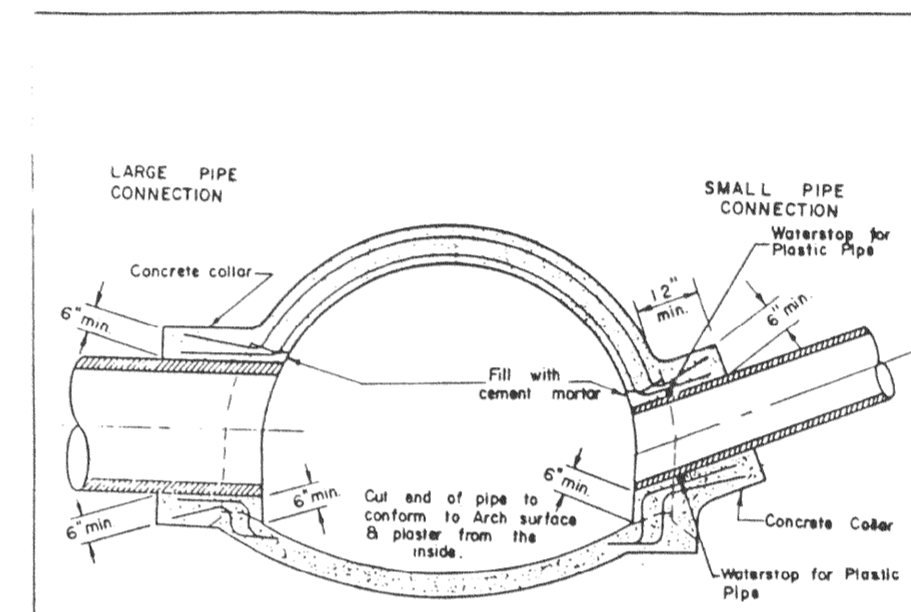


When a connection is allowed larger than 6" diameter a saddle may be used if the I.D. of the connection pipe is 1/2" greater than one-half (1/2) the I.D. of the main sewer. (Example: 24" x 6")

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 "rolled-in". (Example: 15" x 6")

This is accomplished by breaking away and removing one section of pipe. The top half of the section on the pipe lying adjacent to the gap is carefully broken off. The top half of the section on the main replacement section (with a tee or wye fitting) is also broken off. The replacement pipe is then placed in the line gap with the end pointed in the wrong direction. The broken ends on the replacement and the adjoining pipe make a pair for the replacement section to fit into the sewer line without disturbing the adjoining pipe sections. The replacement section is then removed to the desired position and the broken ends are enclosed with a 6" Class "A" concrete enclosure.

"ROLL-IN" (FOR EXISTING CLAY OR CONCRETE PIPE)	METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction Dr. A.E.S. Ch. J.C.K.	April 1985	Sheet 54
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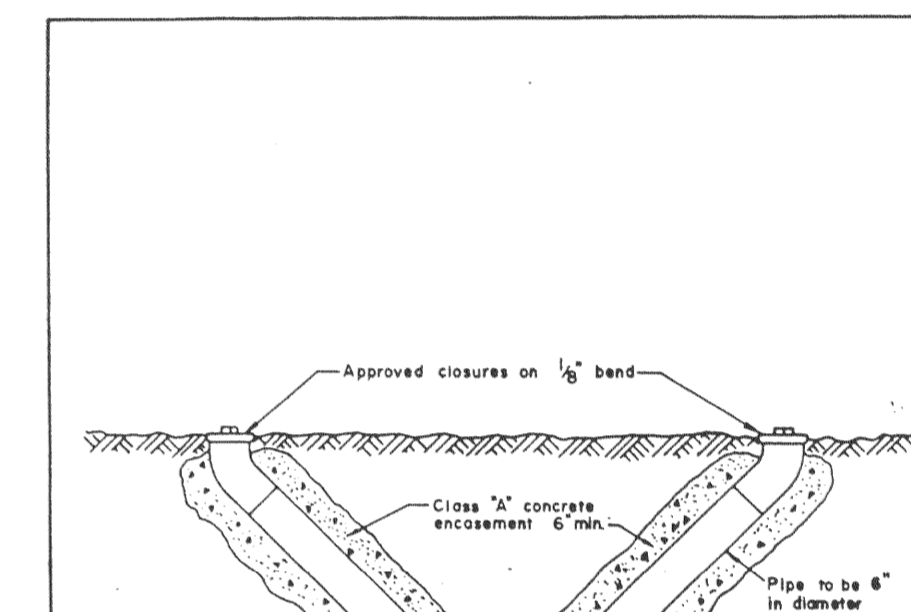
Notes: Opening into existing sewer to be cut carefully to avoid damage to adjacent masonry.

Note: To be cut to proper grade and elevation and to be of such size as to permit a two-inch space all around the outside of the pipe.

This space shall be carefully filled with one part cement and three parts sand mortar, compacted in place after the pipe has been inserted and properly supported to line and grade.

Existing reinforcing bars are to be bent back into the concrete collar around the pipe to provide reinforcement equally on all sides.

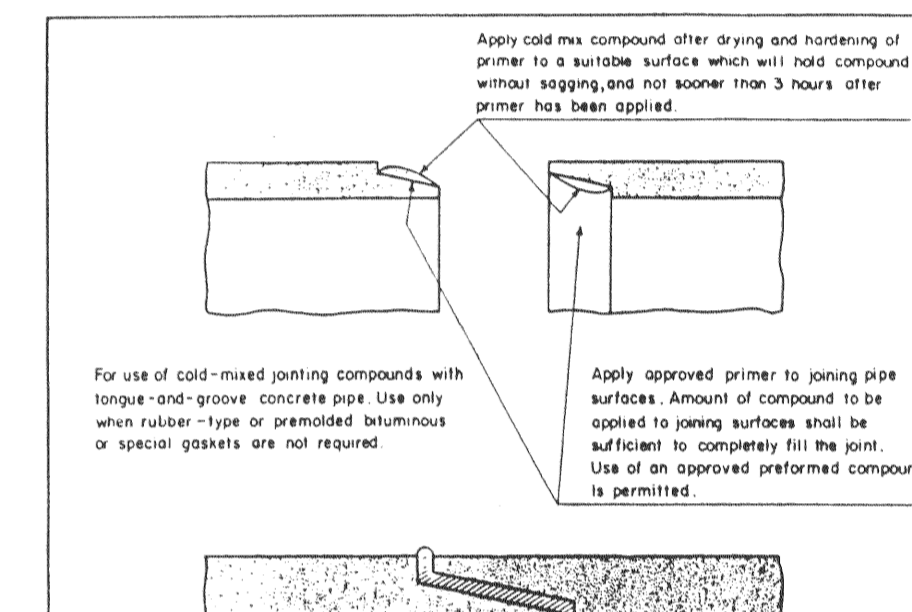
CONNECTIONS TO LARGE SEWERS	METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction Dr. AMF Ch. J.C.K.	April 1985	Sheet 55
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Will require smooth transition reducer at each end if line size is less than 6" dia.

All pipe to be cast iron or ductile iron pipe.

FORCE MAIN CLEANOUT (6" DIA. & SMALLER)	METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction Dr. R.H. Ch. J.C.K.	JAN. 1987	Sheet 56
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For use of cold-mixed jointing compounds with tongue-and-groove concrete pipe. Use only when rubber-type or preformed bituminous or special grouts are not required.

Apply approved primer to jointing pipe surfaces. Amount of compound to be applied to jointing surfaces shall be sufficient to completely fill the joint. Use of an approved preformed compound is permitted.

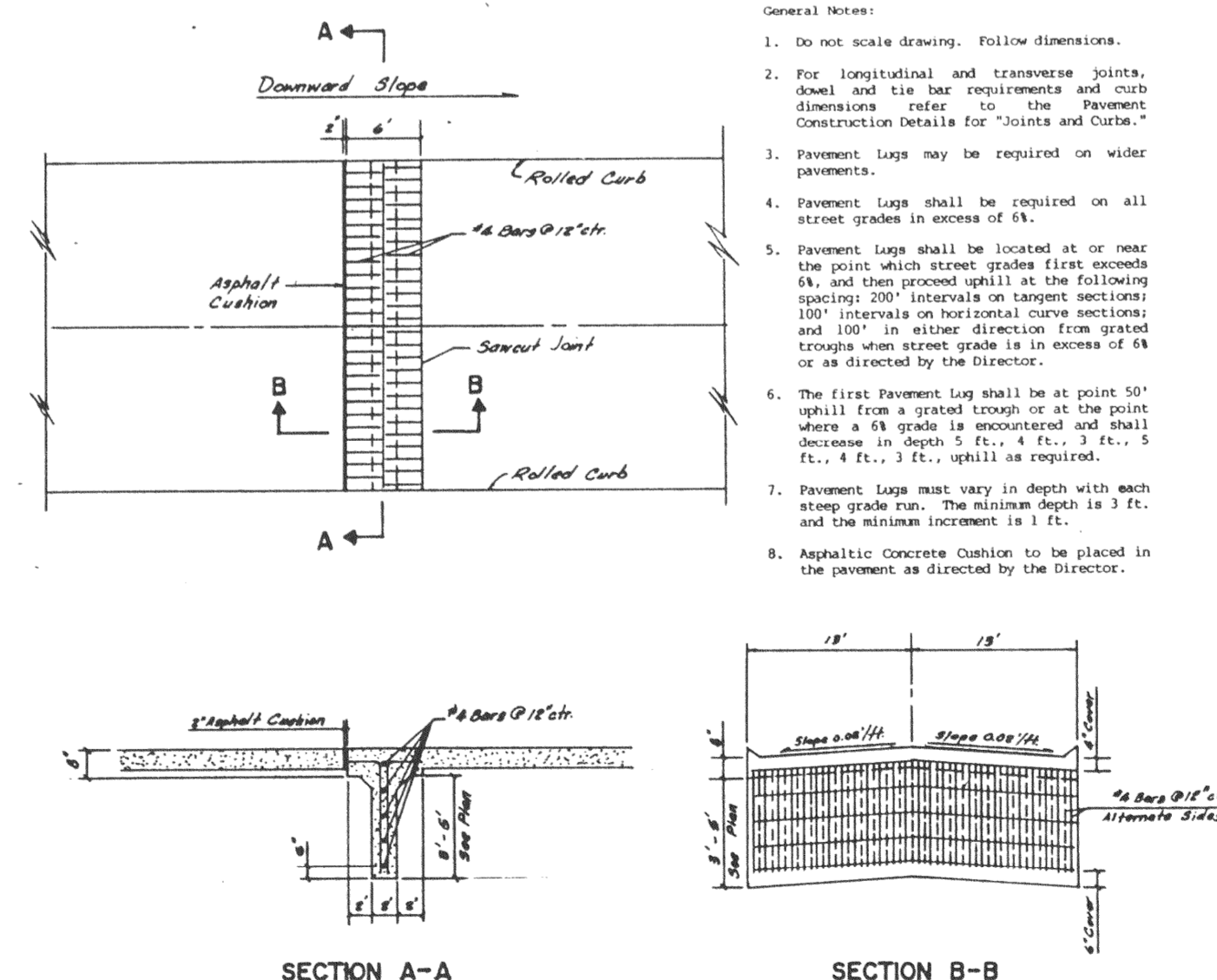
Strike of excess flush with interior.

Inside width of joint:

- 1 1/4" max. — FOR STRAIGHT ALIGNMENT ONLY
- 1" max. — For inside Dia. 48" and larger
- 3/4" max. — For inside Dia. 24" to 48" inclusive
- 1/2" max. — For inside Dia. 12" to 24" inclusive

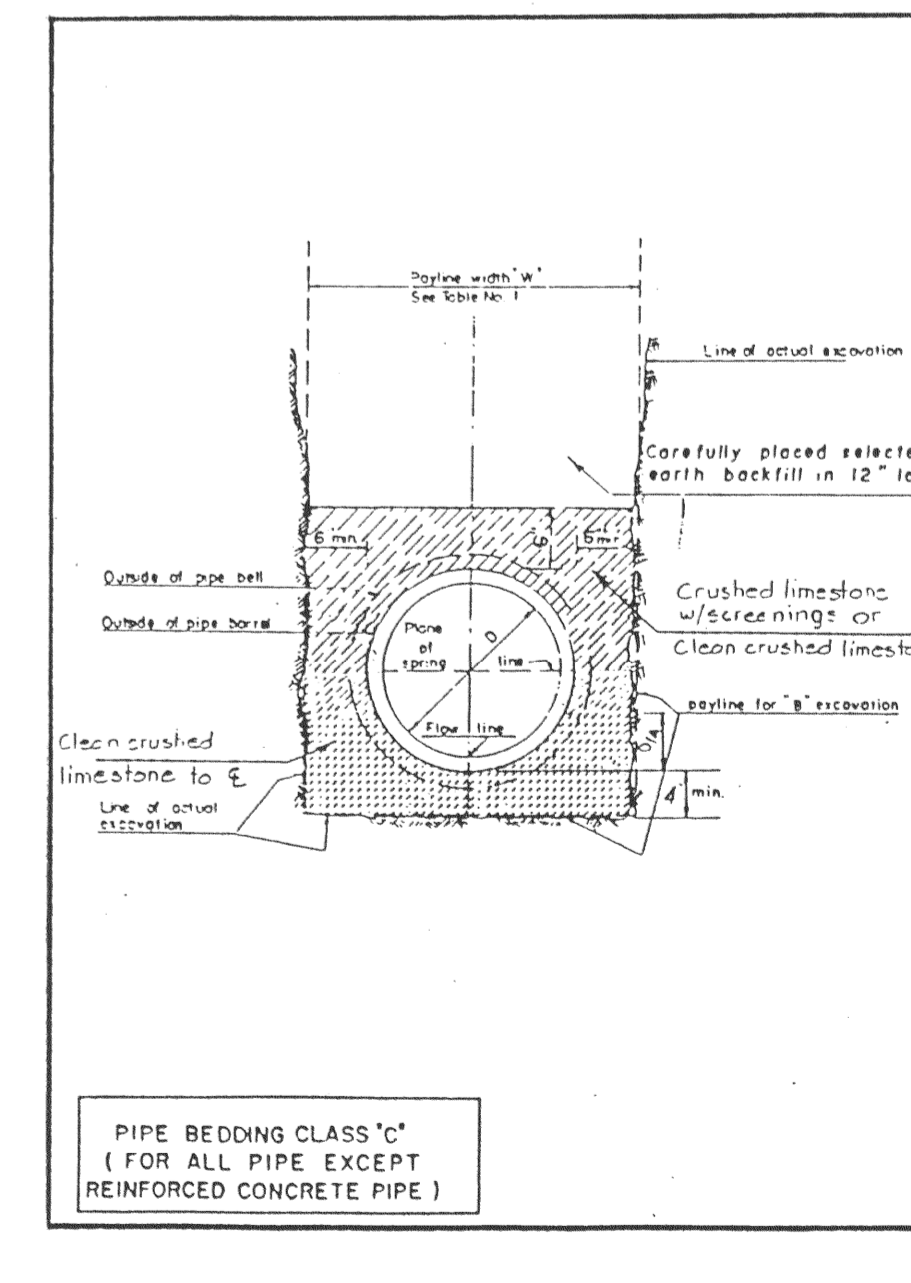
50% Maximum increase permitted on curved alignments

TONGUE AND GROOVE CONCRETE PIPE JOINTS	METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction Dr. AOS Ch. JHS	November 1966	Sheet 57
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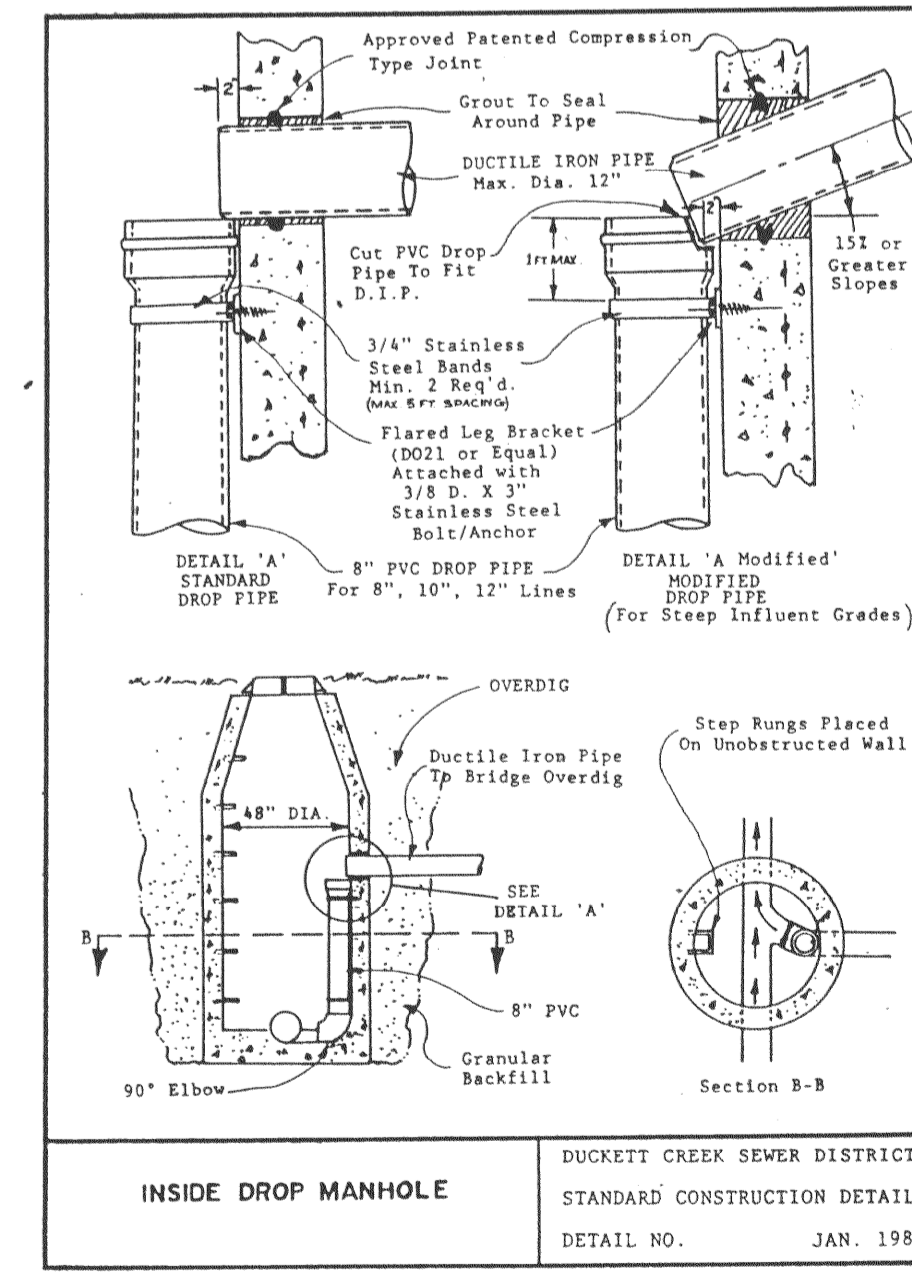


- General Notes:
- Do not scale drawing. Follow dimensions.
 - For longitudinal and transverse joints, swell and tie bar requirements and curb dimensions refer to the Pavement Construction Details for "Joints and Curbs."
 - Pavement Lugs may be required on wider pavements.
 - Pavement Lugs shall be required on all street grades in excess of 6%.
 - Pavement Lugs shall be located at or near the point which street grade first exceeds 6%, and then proceed uphill at the following spacing: 200' intervals on adjacent sections; 100' intervals on horizontal curve sections; and 100' intervals in the direction from graded troughs when street grade is in excess of 6% or as directed by the Director.
 - The first pavement lug shall be at least 50' uphill from a graded trough or at the point where a 6% grade is encountered and shall decrease in depth 5 ft., 4 ft., 3 ft., 1 ft. for 4 ft., 3 ft., 2 ft., uphill as required.
 - Pavement Lugs must vary in depth with each street grade run. The minimum depth is 3 ft. and the minimum increment is 1 ft.
 - Asphaltic Concrete Curb to be placed in the pavement as directed by the Director.

SECTION A-A SECTION B-B
PAVEMENT LUG



PIPE BEDDING CLASS 'C' (FOR ALL PIPE EXCEPT REINFORCED CONCRETE PIPE)



INSIDE DROP MANHOLE
BUCKET CREEK SEWER DISTRICT
STANDARD CONSTRUCTION DETAIL
DETAIL NO. JAN. 1989