

STANDARD INSTALLATION DETAIL

TABLE 1:

BEDDING AND BACKFILL REQUIREMENTS FOR NON-RIGID PIPE IN CROSS-DRAIN AND STORM-DRAIN APPLICATIONS
A. Bedding shall be Class B in accordance with Subsection 603.03.2 of the Mississippi Standard Specifications for Road and Bridge Construction, latest edition.
B. Backfill material shall be one of the following:
1. Flowable Fill in accordance with Section 631 of the Mississippi Standard Specifications for Road and Bridge Construction, latest edition.
2. Crushed Stone Aggregate Backfill in accordance with Subsection 703.04.03 of the Mississippi Standard Specifications for Road and Bridge Construction, latest edition.
If Backfill material 1 is utilized, care shall be taken to prevent "floating" of pipe.
The cost of furnishing and placing the required bedding and backfill material indicated in A & B shall be included in the unit cost of the non-rigid pipe alternate, i.e., there will be no separate pay item for non-rigid pipe bedding and backfill material.

BEDDING AND BACKFILL REQUIREMENTS FOR NON-RIGID PIPE IN SIDEDRAIN APPLICATIONS
A. Bedding shall be Class C in accordance with Subsection 603.03.2 of the Mississippi Standard Specifications for Road and Bridge Construction, latest edition.
B. Backfill material shall be in accordance with Subsection 203.03.8.6 of the Mississippi Standard Specifications for Road and Bridge Construction, latest edition. Pipes that serve as a side-drain on Departmental ROW, but travel under a county or local road shall adhere to the bedding and backfill requirements for a cross-drain contained above.
The cost of furnishing and placing the required bedding and backfill material indicated in A & B shall be included in the unit cost of the non-rigid pipe alternate, i.e., there will be no separate pay item for non-rigid pipe bedding and backfill material.

TABLE 2:
HIGH DENSITY CORRUGATED POLYETHYLENE PIPE
HEIGHT OF COVER
H-20 AND E-80 LIVE LOADS

NOMINAL DIAMETER IN. (MM)	MINIMUM COVER IN. & (MM)		MAXIMUM COVER FT. & (M)
	H-20	E-80	
12 (300)	12 (300)	24 (600)	50 (15.24)
15 (375)	12 (300)	24 (600)	50 (15.24)
18 (450)	12 (300)	24 (600)	45 (13.72)
24 (600)	12 (300)	24 (600)	40 (12.19)
30 (750)	12 (300)	24 (600)	40 (12.19)
36 (900)	12 (300)	24 (600)	35 (10.67)
42 (1050)	12 (300)	24 (600)	35 (10.67)
48 (1200)	12 (300)	24 (600)	30 (9.14)

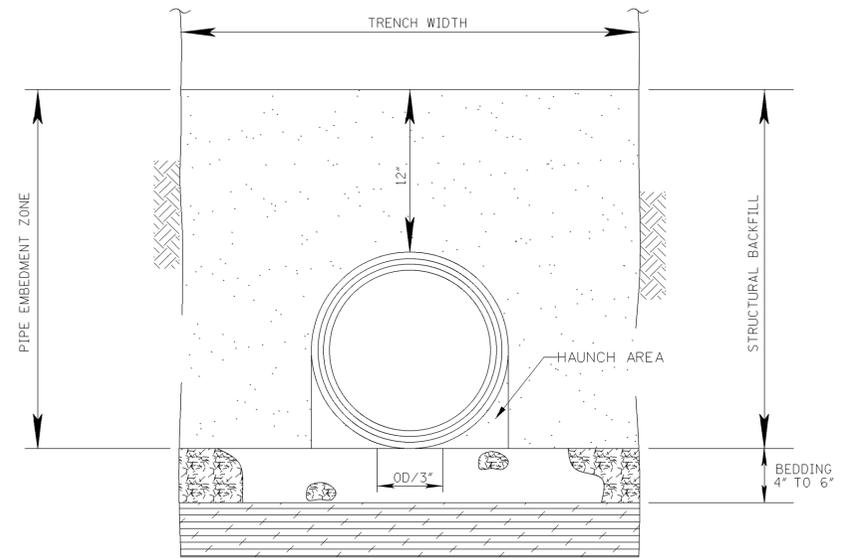
TABLE 3: RECOMMENDED TRENCH WIDTH

DIAMETER	O.D.	TRENCH WIDTH
12"	14.45"	34"
15"	17.57"	38"
18"	21.20"	44"
24"	27.80"	54"
30"	35.10"	65"
36"	41.70"	75"
42"	47.70"	84"
48"	53.60"	92"

The trench width must be wide enough to accommodate compaction equipment.

TABLE 4: MULTIPLE INSTALLATION OF
POLYETHYLENE PIPES

DIAMETER OF PIPE IN. (MM)	CLEAR DISTANCES BETWEEN PIPES FT. (M)
18 (450)	1' 2" (0.36)
24 (600)	1' 5" (0.44)
30 (750)	1' 8" (0.52)
36 (900)	1' 11" (0.60)
42 (1050)	2' 2" (0.68)
48 (1200)	2' 5" (0.76)



TRENCH CROSS SECTION SHOWING TERMINOLOGY

NOTES:

1. MATERIALS

THERMOPLASTIC PIPE

POLYETHYLENE PIPE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 294, LATEST EDITION.
DESIGNATION OF TYPE: TYPE S: THIS PIPE WILL HAVE A FULL CIRCULAR CROSS SECTION, WITH AN OUTER CORRUGATED PIPE WALL AND A SMOOTH INNER LINER.

BEDDING MATERIAL AND STRUCTURAL BACKFILL

BEDDING AND STRUCTURAL BACKFILL SHALL MEET THE REQUIREMENTS OF TABLE 1.

2. JOINTS

JOINTS FOR THERMOPLASTIC PIPE SHALL MEET THE PERFORMANCE REQUIREMENTS OF SOILTIGHTNESS UNLESS WATERTIGHTNESS IS SPECIFIED.

SUITABLE JOINTS CAN BE OBTAINED WITH THE FOLLOWING TYPES OF CONNECTIONS:

- A) CORRUGATED BANDS (WITH OR WITHOUT GASKETS)
- B) BELL AND SPIGOT PIPE ENDS (WITH OR WITHOUT GASKETS)
- C) DOUBLE BELL COUPLINGS (WITH OR WITHOUT GASKETS)

3. INSTALLATION

MINIMUM TRENCH WIDTHS SHALL MEET THE REQUIREMENTS OF TABLE 3.

THE MIDDLE THIRD OF THE BEDDING MATERIAL UNDER THE PIPE SHOULD BE LOOSELY PLACED, WHILE THE

REMAINDER SHALL BE COMPACTED TO A MINIMUM 90% OF MAXIMUM DENSITY PER AASHTO T 99.

A MINIMUM OF 4 INCHES OF BEDDING SHALL BE PROVIDED PRIOR TO PLACEMENT OF THE PIPE.

STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING AN 8 INCH LOOSE LIFT

THICKNESS AND BROUGHT UP EVENLY ON BOTH SIDES OF THE PIPE TO AN ELEVATION NOT LESS THAN 12 INCHES

ABOVE THE TOP OF THE PIPE. A MINIMUM COMPACTION LEVEL OF 90% STANDARD DENSITY PER AASHTO T

99 SHALL BE ACHIEVED.

MINIMUM COVER REQUIREMENTS SHALL MEET THE REQUIREMENTS OF TABLE 2.

FOR MULTIPLE INSTALLATION OF POLYETHYLENE PIPES, A CLEAR DISTANCE BETWEEN PIPES SHALL MEET THE

REQUIREMENTS OF TABLE 4.

4. CALCULATIONS FOR FILL DEPTHS ARE BASED ON PROPERTIES DEFINED IN

AASHTO M294 AND CALCULATIONS IN AASHTO SEC. 18.

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MISSISSIPPI DEPARTMENT OF TRANSPORTATION			
FLEXIBLE PIPE STANDARD			
DATE	DESIGN TEAM	CHECKED	DATE
REVISION	BY	WORKING NUMBER HDPE-1	
FILENAME:			SHEET NUMBER