

BEDDING&BACKFILL NOTES:

1. STONE BEDDING REQUIRED FOR ALL PIPE WITHOUT CONCRETE CRADLE
2. BEDDING AND STONE BACKFILL WILL BE CRUSHED STONE 1/2"X3/4".
3. (4")MIN. BEDDING IN EARTH EXC.
4. (6")MIN. BEDDING IN ROCK EXC.

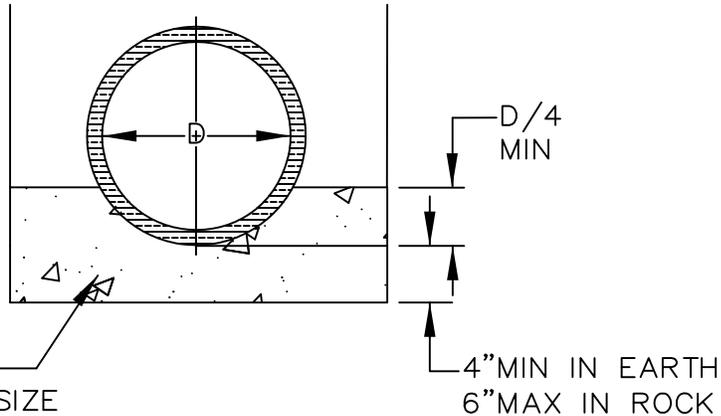
TRENCH BACKFILL;

WITHIN R/W

JOB EXCAVATED MATERIAL COMPACTED TO 95% OF MAX DENSITY

OUTSIDE R/W

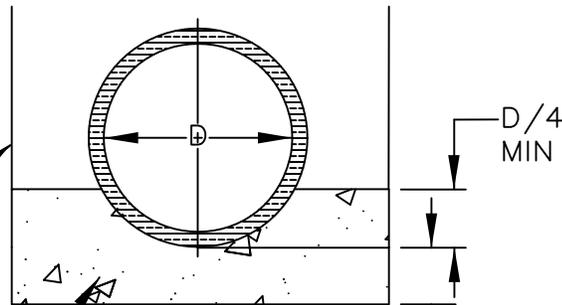
JOB EXCAVATED MATERIAL COMPACTED TO 90% OF MAX DENSITY



CRUSHED CLEAN STONE BEDDING 1/2"X3/4" MAX SIZE

NOT UNDER PAVEMENT

TRENCH BACKFILL FOR PIPE WITH DIA LESS THAN 48" TO BE MHTD TYPE 1 ROCK FROM 4' BACK-OF-CURB TO 4' BACK-OF-CURB



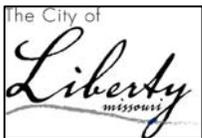
TRENCH WALL (TYPICAL)

CRUSHED CLEAN STONE BEDDING 1/2"-3/4" MAX SIZE

TRENCH BACKFILL FOR PIPE WITH DIA GREATER THAN 48" TO BE JOB EXCAVATED MATERIAL COMPACTED TO 95% OF MAX DENSITY OR MHTD TYPE 1 FROM 4' BACK-OF-CURB TO 4' BACK-OF-CURB

UNDER PAVEMENT

REV 2009

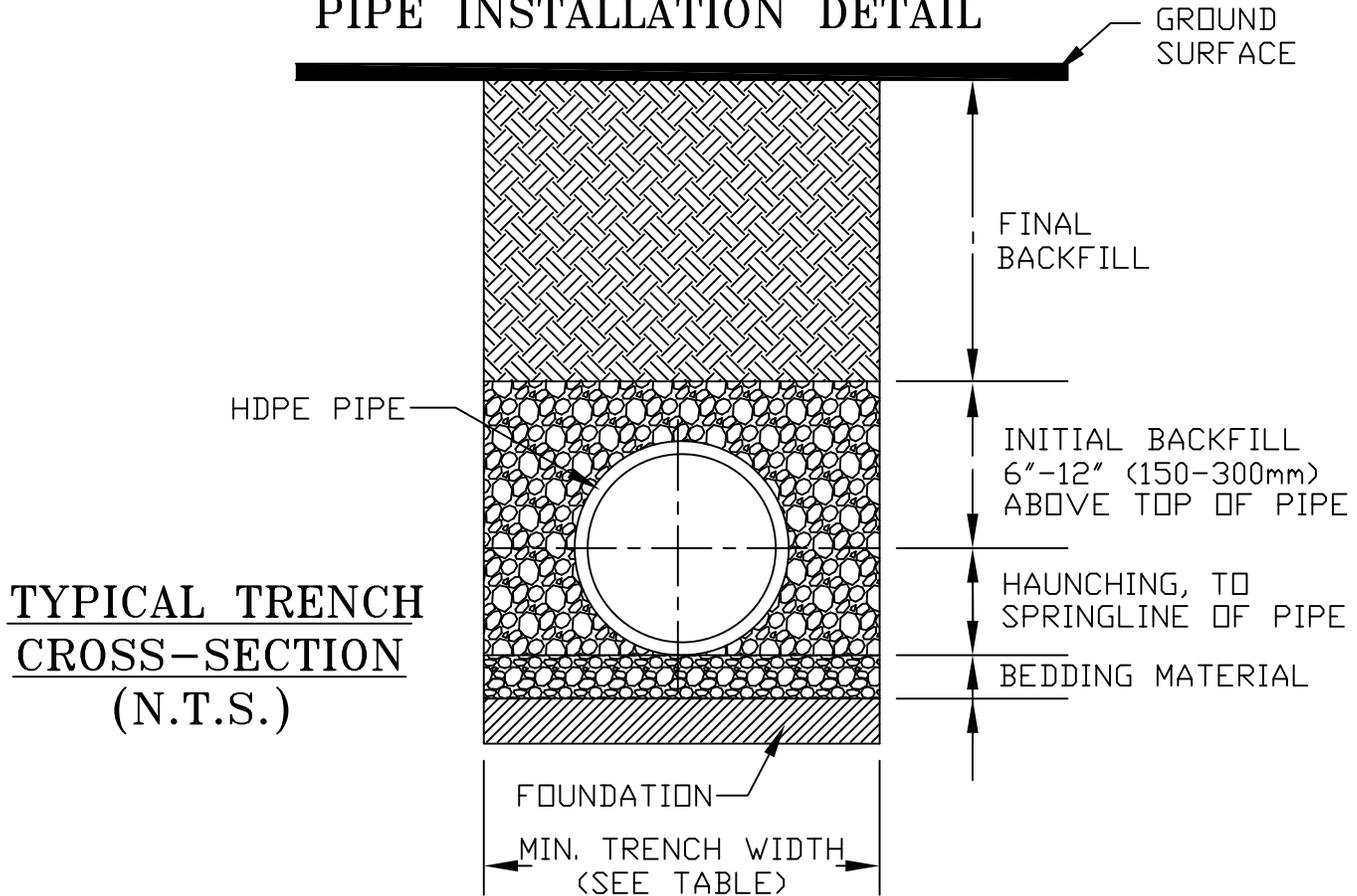


CITY OF LIBERTY, MO  
DEPARTMENT OF  
PUBLIC WORKS

PIPE-BEDDING&CRADLE  
FOR  
STORM-SEWER-PIPE

D40-1A

# HDPE (High-Density Polyethylene) PIPE INSTALLATION DETAIL



1. **FOUNDATION:** WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH A FOUNDATION OF CLASS I OR II MATERIAL AS DEFINED IN ASTM D2321, "STANDARD PRACTICE FOR INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS," LATEST EDITION: AS AN ALTERNATIVE AND AT THE DISCRETION OF THE ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING WOVEN GEOTEXTILE FABRIC.

2. **BEDDING:** SUITABLE MATERIAL SHALL BE CLASS I, II OR III AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.  
  
UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm); FOR 4"-24" (100-600mm) CORRUGATED POLYETHYLENE PIPE (CPEP); 6" (150mm) FOR 30"-60" (750-1500mm) CPEP.

3. **HAUNCHING AND INITIAL BACKFILL:** SUITABLE MATERIAL SHALL BE CLASS I, II OR III AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.

4. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM TRENCH WIDTHS SHALL BE AS FOLLOWS:

NOMINAL in (mm)	MIN. RECOMMENDED TRENCH WIDTH in (mm)
4 (100)	21 (530)
6 (150)	23 (580)
8 (200)	25 (630)
10 (250)	28 (710)
12 (300)	31 (790)
15 (375)	34 (860)
18 (450)	39 (990)
24 (600)	48 (1220)
30 (750)	66 (1680)
36 (900)	78 (1980)
42 (1050)	83 (2110)
48 (1200)	89 (2260)
60 (1500)	102 (2590)

5. **MINIMUM COVER:** MINIMUM RECOMMENDED DEPTHS OF COVER FOR VARIOUS LIVE LOADING CONDITIONS ARE SUMMARIZED IN THE FOLLOWING TABLE. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TAKEN FROM THE TOP OF THE PIPE TO THE GROUND SURFACE.

SURFACE LIVE LOADING CONDITION	MINIMUM RECOMMENDED COVER, in (mm)
H25 (FLEXIBLE PAVEMENT)	12 (300), 24 (600) FOR 60" (1500) PIPE*
H25 (RIGID PAVEMENT)	12 (300), 24 (600) FOR 60" (1500) PIPE
E80 RAILWAY	24 (600)
HEAVY CONSTRUCTION	48 (1200)

\*TOP OF PIPE TO BOTTOM OF BITUMINOUS PAVEMENT SECTION

**NOTE TO THE ENGINEER:** WHEN THIS DETAIL IS TO BE INCORPORATED INTO THE CONTRACT DOCUMENTS, PLEASE REFERENCE SECTION X-2, "RECOMMENDATIONS FOR INCORPORATION INTO CONTRACT DOCUMENTS" OF ASTM SPECIFICATION D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS" SO THAT APPROPRIATE MODIFICATIONS CAN BE MADE TO ACCOMMODATE SITE SPECIFIC NEEDS.

REV 2009



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**HDPE  
PIPE  
INSTALLATION  
DETAIL**

**D40-2A**