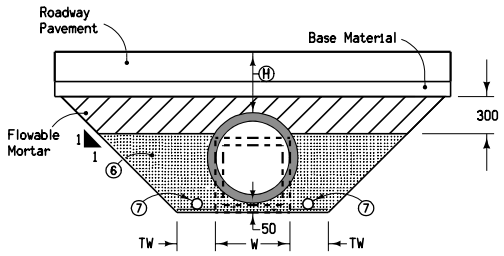
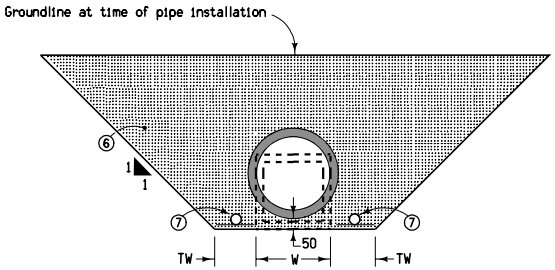
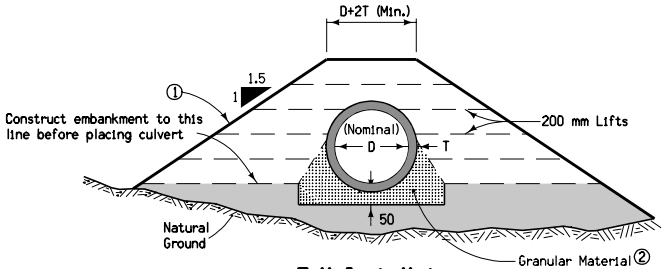


Trench Installation
Ⓗ ≤ 1.2 m

Type	TW
Box Culvert	300
Pipe Culvert	500

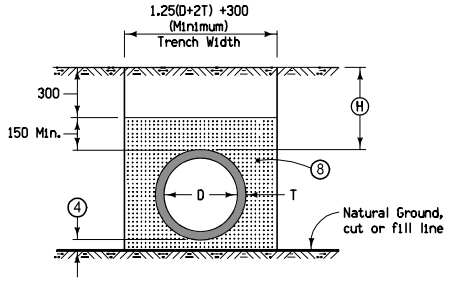


Trench Installation
Ⓗ >1.2 m



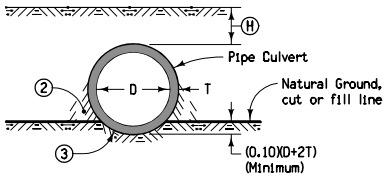
Fill Installation

CLASS 'B' BEDDING & BACKFILL ⑤

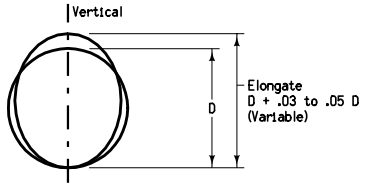


CLASS 'A' BEDDING & BACKFILL ⑤

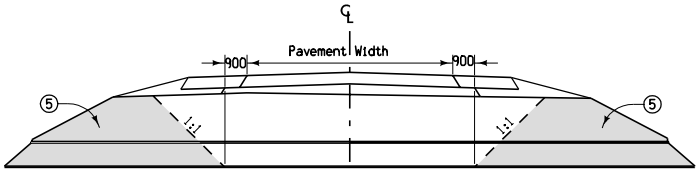
(Trench Installation)



CLASS 'C' BEDDING & BACKFILL



ELONGATED PIPE



Typical Section - Soil Plug

Where a corrugated metal pipe culvert requiring elongation is to be installed, such elongation shall be accomplished by means approved by the Engineer. Elongation may be developed either as part of shop fabrication or field installation.

Minimum and maximum allowable cover Ⓗ for pipe culverts shall be as shown on the appropriate Standard Road Plans for the particular kind of culvert, as follows:

RF-31 Depth of Cover Tables for Concrete Pipe
RF-32 Depth of Cover Tables for Corrugated Round Pipe
RF-33 Depth of Cover Tables for Corrugated Arch Pipe

Minimum and maximum allowable cover for polyethylene pipe culverts shall be 0.6 meters and 4.5 meters, respectively.

① The backfill adjacent to and above the pipe culvert may be placed in conjunction with normal embankment construction. The embankment within the limits shown shall be thoroughly tamped.

② Extra care shall be taken to ensure complete and satisfactory tamping of backfill material in the area immediately adjacent to the lower portion of pipe.

③ The excavation below groundline shall be carefully made with a template or shaped by other means and checked with a template conforming to the actual dimension and shape of the pipe.

④ 50 mm minimum for metal pipes.
100 mm minimum for polyethylene pipes.

⑤ For pipes backfilled with Granular Material, place a cohesive soil plug at the inlet and outlet, around the culvert to prevent seepage and erosion.

⑥ Flooded Granular Backfill with less than 4% passing the #200 sieve.

⑦ 100 mm subdrain. Place at flowline elevation of culvert or below. Extend across the flooded granular backfill and cap. For pipe culverts, only one subdrain is necessary.

⑧ Uncompacted sand meeting the requirements of Gradation No. 1 or No. 32 of the Aggregate Gradation Table.

Contract Items:

Flowable Mortar
Granular Backfill
Excavation, Class 20

Tabulation: 104-3

All dimensions given in millimeters unless noted.

M
METRIC VERSION

Iowa Department of Transportation

REVISION
9 | 10-16-07

STANDARD ROAD PLAN

RF-30A
SHEET 1 of 1

REVISIONS: Modified to show the box culvert and TW dimensions correctly.

Deanna Maifield
APPROVED BY DESIGN METHODS ENGINEER

CULVERT (BEDDING AND BACKFILL)