

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
METHOD OF PIPE INSTALLATION
FLEXIBLE PIPE

SHEET 1 OF 2
300.01

Diagram showing a pipe in a trench with normal earth foundation. The pipe is surrounded by compacted material. Labels include: TOP OF FILL, GROUND LINE, H, I.D. /6 MIN. NOT LESS THAN 6", O.D. + 3', COMPACT AFTER PIPE IS PLACED & PRIOR TO PLACEMENT OF FILL, and NORMAL EARTH FOUNDATION.

Diagram showing a pipe in a trench with a rock foundation. The pipe is surrounded by compacted material, and the trench bottom is rock. Labels include: TOP OF FILL, GROUND LINE, H, I.D. /6 MIN. NOT LESS THAN 6", O.D. + 3', COMPACT AFTER PIPE IS PLACED & PRIOR TO PLACEMENT OF FILL, ROCK, and ROCK FOUNDATION.

Diagram showing a pipe in a trench with an unsuitable material foundation. The pipe is surrounded by compacted material, and the trench bottom is unsuitable material. Labels include: TOP OF FILL, GROUND LINE, H, I.D. /6 MIN. NOT LESS THAN 6", O.D. + 3', COMPACT AFTER PIPE IS PLACED & PRIOR TO PLACEMENT OF FILL, TYPE 4a GEOTEXTILE, 1/2" PER FOOT OF 'H' BUT NOT LESS THAN 12" NOR MORE THAN 24" AS DIRECTED BY ENGR., and UNSUITABLE MATERIAL FOUNDATION.

Diagram showing a pipe above ground with normal earth foundation. The pipe is surrounded by compacted material. Labels include: TOP OF FILL, GROUND LINE, H, MIN. O.D., 1:1, COMPACT AFTER PIPE IS PLACED & PRIOR TO PLACEMENT OF FILL, I.D. /6 MIN. NOT LESS THAN 6", O.D. + 2', and NORMAL EARTH FOUNDATION.

Diagram showing a pipe above ground with a rock foundation. The pipe is surrounded by compacted material, and the ground is rock. Labels include: TOP OF FILL, GROUND LINE, H, MIN. O.D., 1:1, COMPACT AFTER PIPE IS PLACED & PRIOR TO PLACEMENT OF FILL, I.D. /6 MIN. NOT LESS THAN 6", O.D. + 2', and ROCK FOUNDATION.

Diagram showing a pipe above ground with an unsuitable material foundation. The pipe is surrounded by compacted material, and the ground is unsuitable material. Labels include: TOP OF FILL, GROUND LINE, H, MIN. O.D., 1:1, COMPACT AFTER PIPE IS PLACED & PRIOR TO PLACEMENT OF FILL, TYPE 4a GEOTEXTILE, 1/2" PER FOOT OF 'H' BUT NOT LESS THAN 12" NOR MORE THAN 24" AS DIRECTED BY ENGINEER, and UNSUITABLE MATERIAL FOUNDATION.

GENERAL NOTES:

I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.

O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.

H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

APPROVED SUITABLE LOCAL MATERIAL.

TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.

LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.

REFER TO NCDOT PIPE MATERIAL SELECTION GUIDE AND STANDARD SPECIFICATIONS FOR ALLOWABLE PIPE FILL HEIGHTS AND PIPE SPECIFICATIONS.

SPRINGLINE OF PIPE

SELECT BACKFILL MATERIAL CLASS III OR CLASS II, TYPE 1 ABOVE AND BELOW SPRINGLINE.

UNDISTURBED EARTH MATERIAL

SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH TYPE IV GEOTEXTILE AS DIRECTED BY THE ENGINEER.

11/5/2025

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

CONTRACTS STANDARDS
AND DEVELOPMENT UNIT

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