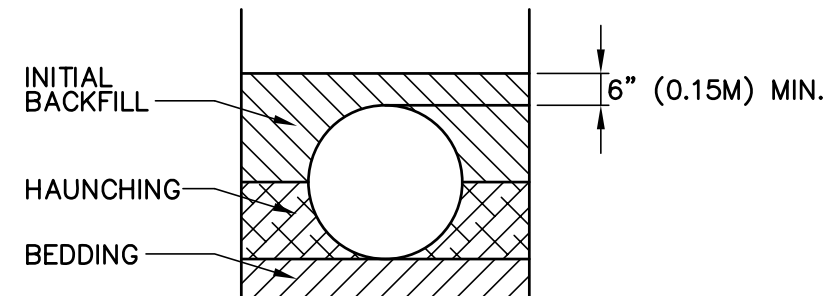


INITIAL BACKFILL:

INITIAL BACKFILL DISTRIBUTES THE LOADS INTO THE HAUNCHING. THIS AREA OF THE BACKFILL ENVELOPE EXTENDS FROM THE PIPE SPRINGLINE TO A MINIMUM OF 6" (0.15M) ABOVE THE PIPE CROWN. IT SHOULD BE PLACED AND COMPACTED IN LAYERS. IF MECHANICAL COMPACTORS WILL BE USED, IT IS IMPORTANT NOT TO USE THE EQUIPMENT DIRECTLY ON THE PIPE ITSELF. FIGURE 4 NOTES THE INITIAL BACKFILL LOCATION.

FIGURE 4: LOCATION OF THE INITIAL BACKFILL AREA OF THE BACKFILL ENVELOPE



SEMI-RIGID AND FLEXIBLE CONDUITS:

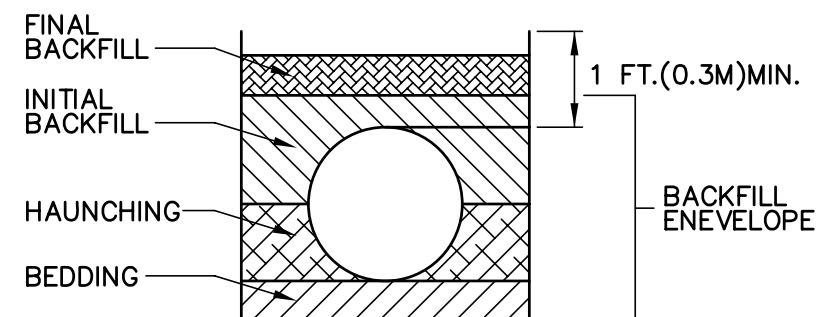
FIRST CLASS PROJECTION BEDDING, IS THAT METHOD OF BEDDING PROJECTING CONDUITS, HAVING A PROJECTION RATIO NOT GREATER THAN 0.70, IN WHICH THE CONDUIT IS CAREFULLY BEDDED ON FINE GRANULAR MATERIALS IN AN EARTH FOUNDATION CAREFULLY SHAPED TO FIT THE LOWER PART OF THE CONDUIT EXTERIOR FOR AT LEAST 10 PERCENT OF IT'S OVER-ALL HEIGHT; AND IN WHICH EARTH FILLING MATERIAL IS THOROUGHLY RAMMED AND TAMPED, IN LAYERS NOT EXCEEDING 6 INCHES IN DEPTH, AROUND THE CONDUIT FOR THE REMAINDER OF THE LOWER 30 PERCENT OF IT'S HEIGHT; ALL UNDER THE DIRECTION OF A COMPETENT ENGINEER, REPRESENTED BY A COMPETENT INSPECTOR CONSTANTLY PRESENT DURING THE OPERATION.

IN CASE OF ROCK FOUNDATIONS, THE PIPE ARE BEDDED IN AN EARTH CUSHION HAVING A DEPTH AS PROVIDED UNDER THE ORDINARY PROJECTION BEDDING.

FINAL BACKFILL:

FINAL BACKFILL EXTENDS FROM THE INITIAL BACKFILL TO THE TOP OF THE TRENCH. IN TRAFFICKED INSTALLATIONS, THE TOTAL HEIGHT OF THE INITIAL BACKFILL AND FINAL BACKFILL MUST BE AT LEAST 1' (0.3M); REFERTO FIGURE 5. SINCE THIS PART OF THE INSTALLATION DOES NOT DIRECTLY SUPPORT THE PIPE, THE TYPE OF MATERIAL AND COMPACTION LEVEL SHOULD BE BASED ON SURFACE LOAD CONDITIONS.

FIGURE 5: LOCATION OF THE FINAL BACKFILL AREA



CONDUIT DESCRIPTION:

DEGREE OF RIGIDITY: CLOSED CONDUITS MAY BE CLASSIFIED AS:

1. RIGID CONDUITS, WHOSE CROSS SECTIONAL SHAPES CANNOT BE DISTORTED SUFFICIENTLY TO CHANGE THEIR VERTICAL OR HORIZONTAL DIMENSIONS MORE THAT 0.1 PERCENT WITHOUT CAUSING MATERIALLY INJURIOUS CRACKS; INCLUDING ALL RECTANGULAR CONDUITS, AND ALL CYLINDRICAL CONDUITS MADE OF PLAIN OR REINFORCED CONCRETE MASONRY OR PIPES OR OF BURNT CLAY PIPES.
2. SEMI-RIGID CONDUITS, WHOSE CROSS SECTIONAL SHAPES CAN BE DISTORTED SUFFICIENTLY TO CHANGE THEIR VERTICAL OR HORIZONTAL DIMENSIONS MORE THAT 0.1 PERCENT, BUT NOT MORE THAN 3.0 PERCENT, WITHOUT CAUSING MATERIALLY INJURIOUS CRACKS; INCLUDING SEGMENTAL BLOCK CONDUITS, AND THOSE MADE OF CAST IRON PIPE, TOGETHER WITH SOME BRICK OR STONE BLOCK MASONRY CYLINDRICAL CONDUITS.
3. FLEXIBLE CONDUITS, WHOSE CROSS SECTIONAL SHAPES CAN BE DISTORTED SUFFICIENTLY TO CHANGE THEIR VERTICAL OR HORIZONTAL DIMENSIONS MORE THAT 3.0 PERCENT BEFORE CAUSING MATERIALLY INJURIOUS CRACKS; INCLUDING THOSE MADE OF CORRUGATED PIPE, THIN STEEL OR WROUGHT IRON PIPE, AND PROBABLY SOME CYLINDRICAL CONDUITS MADE OF BRICK OR STONE BLOCK MASONRY.

NOTE:

ALL PIPE SHALL BE LAID WITH CARE IN ACCORDANCE WITH CONNECTICUT DOT STANDARD SPECIFICATIONS FORM 814-A OR FORM 815 AS AMENDED. WHERE POLYETHYLENE PIPE IS USED, APPROPRIATE BACKFILL SHALL BE APPROVED BY THE CITY ENGINEER OR AS RECOMMENDED BY THE MANUFACTURER FOR SAID APPLICATION.