



MAXFLO HDPE PIPE INSTALLATION

BACKFILL PLACEMENT & MINIMUM COVER

Before placing any backfill, the floor of the trench must be made suitable for proper installation. Pipe should have a firm bedding no less than 4 inches deep, up to 6 inches in cases where rock or other coarse material is present. Uniform placement and compaction of bedding allows for equal load distribution of pipe and protruding features of pipe connections. Class I, II and III material should be used in the bedding zone.

Haunching is the next and most important layer of backfill that is put into place. The haunching should be worked in and compacted around the curvature of the bottom half of the pipe before the rest of backfill is placed.

The springline height is half of the outside diameter of the pipe. Class I, II and III material should be used in the haunching zone that is the same, or very similar to, material used in the bedding zone. This helps to maintain side support of the envelope.

The initial backfill begins at the springline and extends to a minimum of 6 inches above the top of the pipe. Class I, II and III materials can be used in the initial backfill zone. If different classes of material are used within the envelope, a geotextile is required between layers. It is very important not to use compaction equipment directly over pipe while placing initial backfill.

The final backfill is not quite as crucial as the envelope around the pipe, but it is still important to keep a good level of compaction to prevent rutting at the top of trench. The final backfill extends from the initial backfill to the surface and should be a minimum of 6 inches deep. Recommended minimum height of cover for 4 – 48 inch diameter pipe is 12 inches in a typical trench installation. Height of cover in flexible pavement applications (asphalt) is measured from top of pipe to the bottom of flexible pavement. In a rigid pavement application (concrete), height of cover is measured from top of pipe to the top of the rigid pavement application. When hydrohammer type compactors

are approved for use, a minimum of 48 inches of cover is recommended. If excessive construction loads are passing over pipe system, minimum cover may be increased. The excavated material from digging the trench may be used for the final backfill stage, unless otherwise required.

POST-CONSTRUCTION INSPECTION

Deflection testing may be required by the engineer to ensure deflection limits are not exceeded. At least 30 days should be given to allow the system and soil to stabilize before deflection testing is performed.

COMPACTION & COMPACTION EQUIPMENT

There are different methods of compaction used to achieve desired density. There is very little compaction required for crushed stone. For Class II and III backfill material, hand-held or walk behind compaction equipment is recommended. This equipment eliminates any damage to the pipe and will ensure proper compaction density.

OTHER CONSIDERATIONS

Parallel Pipe Installation –

Special considerations and construction techniques are used when installing parallel pipe. Side support of the pipe must be maintained by allowing the proper amount of backfill to be compacted between parallel pipes. One foot of space should be used between pipe up to 24 inches in diameter. For pipe more than 24 inches, half of the diameter is recommended for proper spacing.

Connecting Different Pipe Types –

When installing a new system, there may be a need to connect different types of pipe together. In these cases, a specific adaptor may be available to complete the connection. Another option is the use of a concrete collar. When using this method, a geotextile wrap is put around the joining ends to keep out foreign materials. Then, concrete is poured around the connection.

Vertical Installation –

When installing access risers, meter pits, and catch basins, pipe is installed vertically. In any load situation, the frame and cover should be secured to a concrete collar around the vertical pipe. These concrete collars transfer load into the soil to keep stress off of the pipe.

Joints – The assembly and lubrication of joints should comply with Timewell's recommendations.