Construction Advantages of Environment One LPS Schemes

The use of the Environment One low-pressure sewer system will positively impact the project delivery in many ways, positively affecting the both the Water Authority and the property owners:

Design Period

- Reduced need for surveying
- Simplified (alignment only) drawings

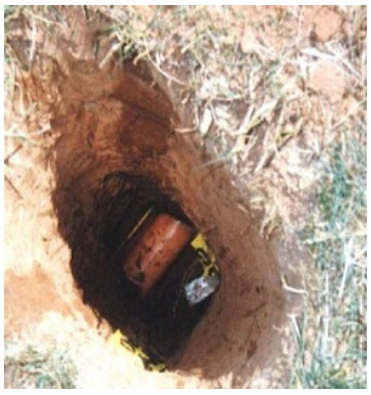
Construction

- Shallow narrow trenches are faster to excavate
- Less environmental disruption
- Less restoration time and costs
- Suitability for alternative construction methods

Environment One is a time-tested and proven reticulation technology, which enables the use of alternative construction technologies, significantly improving productivity while reducing environmental disruption. These technologies include:

- Vacuum excavation for existing utility identification
- Narrow shallow trenched reticulation system
- Directional boring techniques where appropriate
- Auger installation of the grinder pump stations

Vacuum Excavation



Pot holing, by means of vacuum excavation, provides a safe, fast method of exposing existing utilities and providing access to the reticulation line for connection. Using a combination of compressed air and vacuum, small holes of more than 200 mm diameter and up to several meters deep can be excavated with no damage to existing cables, pipelines and other installed utilities. Restoration is minimized as well.

Narrow Shallow Trenching

From small, easily maneuvered machines to large machines capable of trenching through rock, trenchers can be used to quickly prepare for the installation of the pressure reticulation main. Backfill and restoration are minimized.

Productivity is enhanced with the use of long contiguous lengths of reel mounted polyethylene piping materials.

Directional Boring

A variety of directional boring techniques can be used to install piping under roadways and other areas where environmental, traffic, or restoration concerns dictate. Polyethylene pipe, mounted on reels are simply pulled back through the bores as the bore heads are retrieved. Installation is accomplished quickly with minimum disturbance to traffic and virtually no restoration.

Grinder Pump Installation

In suitable soils, large diameter augers will be used to excavate for the grinder pump stations.

Mounted on small backhoes, these augers can quickly excavate the 1 meter diameter by 1.5 meter deep hole as required. With a minimum of soil and sod displacement, installation productivity is increased and restoration minimized.

Finished Onsite Installations

These pictures depict actual onsite installations using the techniques discussed above.

Simple clean installations have resulted in minimal restoration needs and no call backs.