



Chain trencher installing HDPE pip

Significant cost savings were realized on this project by installing high-density polyethylene pipe using a chain trencher and horizontal directional drilling (HDD) methods.

Carlsbad Springs Water Supply System ~ City of Ottawa

This project encompassed a 41.5-km extension of the municipal water distribution system to serve the community of Carlsbad Springs (775 homes) utilizing the steady-flow water distribution system. The system, considered an alternative technology, involved the installation of high-density polyethylene pipe using a chain trencher and directional drilling methods. This methodology provides greatly reduced costs over conventional construction methods. Significant consultation with numerous agencies was required to obtain the approvals from various levels of government.

The steady-flow system design is unique, requiring the installation of a small storage tank and pressure pump in each individual dwelling. This indoor tank provides 'balancing' storage at the home, resulting in a constant flow in the distribution piping and the elimination of high-peak flows. Filing of both a Schedule 'B' Class Environmental Assessment and a Federal Environmental Assessment required extensive public consultation through meetings with residents on a one-on-one basis and liaison with the RMOC, local municipalities and the National Capital Commission (NCC).

The Ainley Group won the 1996 Award of Merit for innovative engineering from the Canadian Consulting Engineering Organization for this project.

Project Facts

Client: City of Ottawa

Scope of Work:

- Federal Environmental Assessment and Class 'B' Class Environmental Assessment (EA)
- Detailed design
- Contract preparation
- Cost estimates
- Public consultation
- Contract administration.

Key Design Criteria:

- 41.5 km HDPE pipe
- Chain trenching and directional drilling
- Steady-flow water distribution system for 775 homes.

Construction Period:

June 1996 to December 1997

Project Cost: \$4,425,000