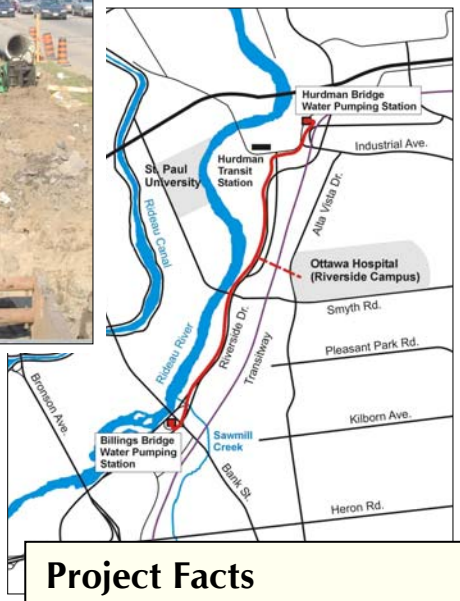
Ainley GROUP
CONSULTING ENGINEERS & PLANNERS

Project Case Study

The majority of the 3.9 kms of watermain was installed using traditional trenching methods.

By installing the new trunk watermain off the travelled portions of the four-lane divided roadway (Riverside Drive), traffic disruption was kept to a minimum.



Billings-Hurdman Interconnection Watermain

City of Ottawa

In the spring of 2004, the City of Ottawa retained the Ainley Group to provide resident and non-resident construction services for the $7M Billings-Hurdman Interconnection Watermain project. As shown on the map on the right, the assignment involved the installation of approximately 3.9 kms of new 900-mm diameter pre-stressed concrete-cylinder watermain. The new watermain, running adjacent to the Rideau River and Riverside Drive, links the Billings Bridge Water Pumping Station to the Hurdman Bridge Water Pumping Station in the City of Ottawa.

The watermain improves water supply reliability by providing a secondary source to two large developed areas through an interconnection of existing water Pressure Zones (2C and 1E). A secondary supply link to the Ottawa Hospital's Riverside Campus, considered a critical-needs supply point, was made through a small interconnect feeder to the existing supply system.

Of the total 3.9-km length of watermain, approximately 0.5 km was installed by trenchless methods (tunnelling or boring and jacking). In particular, the crossing of Bank Street and the Riverside Drive South Bound Lanes intersection were accomplished by trenchless methods to avoid disruption of traffic patterns and any impact on major buried utilities such as natural gas, hydro and cable TV. It was also necessary to tunnel under nearby Sawmill Creek, as the creek contains significant fish habitat and is bordered by trees and vegetation. The Federal Screening Document, previously prepared by the Ainley Group, recommended a trenchless crossing of Sawmill Creek.

Construction took place from mid July to December 2004, with site cleanup and landscaping in Spring/Summer 2005.

Project Facts

Client: City of Ottawa

Scope of Work:

- Preliminary and detailed design
- Federal and Provincial Environmental Assessments (EA)
- Investigate alternate routes
- Compare and report on alternate watermain materials
- Construction Administration.

Key Design Criteria:

- Route through area with contaminated soils
- Minimize traffic disruption
- Trenchless technology methods
- Fish habitat protection
- Link to Riverside Hospital Campus.

Project Cost: $7,000,000 (2004)