

1

YORK-PEEL WATER SUPPLY PROJECT UPDATE PROJECT 77300

The Transportation and Works Committee recommends the adoption of the recommendation contained in the following report, September 14, 2005, from the Commissioner of Transportation and Works:

1. RECOMMENDATION

It is recommended that:

1. The Regional Clerk forward this report to the Clerks of the City of Vaughan and the Towns of Markham, Richmond Hill, Aurora and Newmarket.

2. PURPOSE

The purpose of this report is to update Committee and Regional Council on the progress achieved to date as well as forecast activities to the completion of the York-Peel Water Partnership (YPWP) project.

3. BACKGROUND

3.1 York-Peel Water Partnership (YPWP) Project

The primary objective of the YPWP project is to design, construct and put into service a major east-west supply system to convey up to 388 ML/d (85 MIGD) of treated water from The Regional Municipality of Peel to York Region's Maple Reservoir. The project consists of 30 kilometres of large-diameter feeder mains through the Cities of Brampton and Vaughan, as well as a new reservoir and pumping station facility located in Brampton. The project is a major component of the Region's preferred strategy for long-term water supply and is being implemented in co-operation with The Regional Municipality of Peel.

The various contract packages constituting the YPWP project are shown in the key plan provided (*see Attachment 1*).

The project was initiated in March 2002 with the Class Environmental Assessment for the York-Peel Feeder main. In June 2002, the process consultant to oversee the design-build contract was selected. In June 2003, a single contract encompassing the design and construction of feeder mains on the York side of the boundary, as well as related roadworks was awarded following a competitive proposal process. Based on the current completion schedule, the entire project will span about three-and-one-half years.

3.2 York and Peel Contracts

The central component of the project is an 1800 millimetre diameter feedermain that begins at the east side of Highway 50 (the Peel-York Boundary), extends eastward along Rutherford Road to connect with the previously constructed feedermain segment and then continues northward from Rutherford Road along Weston Road to the proposed Block 33 residential subdivision north of Major Mackenzie Drive. After traversing the subdivision lands, the feedermain extends eastward across Highway 400 along Teston Road, ultimately connecting to the existing Maple Reservoir in the City of Vaughan.

York Region has assumed primary management responsibility for the above-noted works, while the Region of Peel has retained primary management responsibility for project components within its' geographical boundaries.

On June 26, 2003, York Region Council authorized the award of design-build Contract No. 03-04 in the amount of \$67,662,541.00 excluding GST for feedermain installation and road reconstruction to Dufferin Construction. The value of the Contract has since increased to \$72,511,749.68 to cover various additions to the scope of work. Some of the increased scope has been funded by developers of adjacent properties.

The Peel portion of the work, which has been sub-divided into several design-build and conventional contracts, includes a 2100 millimetre diameter feedermain that begins at the existing Beckett-Sproule Reservoir, Brampton and runs northward and eastward to the intersection of West Drive and Queen Street, extends eastward along Queen Street to Airport Road and then continues northward to enter an easement along the Canadian National Railway (CNR), below Castlemore Road, terminating at a new 35 ML reservoir and associated pumping station (the "Airport Road Reservoir and Pumping Station" – ARRPS). An outgoing 1800 millimetre feedermain has been installed along the future Humber West Parkway, then eastward along Castlemore Road, to connect the ARRPS with the York feedermain at the York-Peel Regional boundary.

On July 10, 2003, Peel Regional Council authorized the award of design-build Contract #2004-109P for the Airport Road/Castlemore Road feedermain to Dufferin Construction.

4. ANALYSIS AND OPTIONS

4.1 Progress Summary

Since the last report to Council, the project team has focused on the following activities:

- Organizing for the end-to-end commissioning of the York-Peel Water System.
- Conducting regular construction meetings with the design-builder.
- Administering construction of the following:
 - Completion of feedermain ancillary installations and pressure testing on Rutherford and Teston Roads.

- Additions and modifications to the communications system at the Maple Reservoir to facilitate monitoring and control of flow in the feedermain.
- Roadworks on Rutherford and Teston Roads.
- Construction of Elder Mills Bridge superstructure plus concrete culverts on Rutherford Road and Teston Road.

Construction of the ARRPS is complete. The Peel side of the pumping station has been commissioned, together with the 2100 millimetre diameter pipeline between the Beckett-Sproule Pumping Station and the ARRPS, while the York side is ready for commissioning as part of the end-to-end commissioning program. The end-to-end commissioning program was developed in early 2005 through a cooperative effort between the Regions and the design-builders for the feeder mains and the ARRPS. By agreeing to temporarily devote a cell at the Maple Reservoir to commissioning use outside of high water demand periods, the Region was able to assist the design-builder to simplify and streamline the proposed feeder main disinfection and commissioning process.

4.2 Construction Schedule Overview

Table 1 provides milestone dates for key activities.

Table 1
Key Project Milestones

Task	Schedule Date
Construction start on Rutherford Road – CPR to Napa Valley Avenue	September 2003
Start of Elder Mills and Robinson Creek Bridge Reconstruction	December 2003
Construction start on Weston Road – Rutherford Road to Major Mackenzie Drive	September 2003
Construction start on Teston Road – Keele Street to Jane Street.	September 2003
Commence highway and water crossings	February 2004
Commence concrete pressure pipe (CPP) delivery in York and Peel	May 2004
Commence CPP installation along Weston Road	May 2004
Commence CPP installation through Block 33	August 2004
Complete pressure testing of Weston Road/Block 33 feeder mains	April 2005
Commence CPP installation along Rutherford Road	November 2004
Complete pressure testing of Rutherford Road feeder mains	July 2005
Commence CPP installation along Teston Road/Keele Street	December 2004
Complete pressure testing of Teston Road/Keele Street feeder mains	July 2005

Complete essential ancillary facilities (e.g., metering chamber equipment) to undertake commissioning	September 2005
Complete Airport Road Reservoir and Pumping Station (exclusive of final commissioning for York pumps and controls)	April 2005
Complete Feedermain Work in Peel Region	April 2005
Commence overall water supply system commissioning	September 2005
Complete overall water supply system commissioning	October 2005
Construction (inclusive of road works) substantially performed	November 2005

4.3 Forecast Activities from September 1, 2005 through October 31, 2005

The following are key events scheduled over the next two months:

- Complete additions at Maple Reservoir.
- Complete end-to-end system commissioning, inclusive of pressure testing and disinfecting all feeder mains and commissioning the remainder of the Airport Road Reservoir and Pumping Station.
- Continue ongoing road works.
- Construct four concrete box culverts on Rutherford and Teston Roads recently approved by Toronto and Region Conservation Authority.

Feedermain installation and commissioning within York Region was originally scheduled for completion by the end of October 2004. The required in-service date for the feeder main was subsequently extended by agreement to May 2, 2005 on account of changes to the contract scope and the conditions under which some of the work had to be performed.

On August 10, 2005, excavation work being carried out for the road improvements uncovered a burial feature containing a large quantity of disarticulated human bones within the Teston Road Regional ROW, under the existing pavement. Following an investigation by York Regional Police and the Coroner's Office the matter was determined to be a Cemeteries Branch responsibility. Upon an order of the Registrar of Cemeteries, York Region with Archaeological Services Inc. (ASI) initiated an investigation into the nature and origin of the bone deposit. The investigation was completed on September 9, 2005, and the final report was submitted to the Registrar of Cemeteries and York Region on September 12, 2005. The investigation determined this collection of bone is an aboriginal ossuary most probably associated with the mid to late fifteenth century (approximately 500 years old) Teston site, located a short distance to the north-east. The report recommends the Registrar of Cemeteries and York Region consult with all appropriate First Nation representatives in order to reach a consensus as to the next steps.

York Region is presently awaiting the Registrar of Cemeteries to make a declaration under the Cemeteries Act naming the aboriginal groups whose ancestors are interred in

the ossuary. Following the declaration, York Region can proceed to negotiate a Site Disposition Agreement with the named aboriginal groups. This issue will impact the timely completion of the roadwork on Teston Road. The project management team is currently working with the Design/Builder to assess options and impacts of realigning Teston Road in the event it is determined the ossuary should remain in its current location. Final design and construction activities for this section of Teston Road cannot be started until after the Site Disposition Agreement is finalized. However, the Design/Builder has been instructed to prepare a temporary road layout that can be implemented if this issues results in a lengthy delay to the completion of the road construction. York Region staff are consulting with the adjacent residents to keep them informed of our work and the status of the ossuary. This includes working with them to facilitate safe access to Teston Road and interim solutions for maintaining services such as solid waste collection. At this time sufficient information to assess the cost and schedule impacts of this discovery is not available and additional work is required to support any decision regarding possible further extensions to the schedule for completion of road reconstruction.

The latest schedule shows that the in-service date for the feedermain is estimated to be October 31, 2005, while the road component of the contract is scheduled to be completed by November 30, 2005.

Completion of the Peel Feedermain will result in increased water supply to York Region in accordance with the agreement. The maximum daily flow rates are 33.6 ML/d in 2006 with incremental increases to 388 ML/d in 2031.

5. FINANCIAL IMPLICATIONS

All major contracts relating to this project, including those being managed on the Region's behalf by The Regional Municipality of Peel, are now complete or very near completion. York Region's 10-year Capital Plan includes sufficient funds to cover committed engineering, construction, project management, land acquisition and miscellaneous costs associated with the feedermain and road works.

The current financial status of Contract P-03-04 is summarized in Table 2. All tabulated figures are exclusive of GST.

Table 2
Contract P-03-04 Financial Status as of July 31, 2005

	Amount
Original Value of Contract P-03-04	\$ 67,662,541.00
Value of Change Orders Issued or Agreed To	\$ 4,849,208.68
Approximate Total Committed Cost	\$ 72,511,749.68

Major items of additional or changed work giving rise to the Change Orders include:

- Additional turning lanes in various locations.
- Upgraded sidewalks and pavements.
- Significantly increased culvert sizes (to meet current TRCA requirements).
- Additional utility relocation fees.
- Poor soil conditions.
- Teston Road closure/non-closure.

Financial responsibility for the pipeline works in Peel Region is subject to the terms of the York-Peel Water Supply Agreement. Each municipality is arranging its own funding for ancillary road and other infrastructure work. Some of the additional work has been requested by developers of adjacent properties and will therefore be developer financed.

6. LOCAL MUNICIPAL IMPACT

The York-Peel Feedermain project is required to accommodate future growth within York Region including the City of Vaughan and to supplement the existing water supply from the City of Toronto.

There is no reason to expect adverse impacts on local municipalities other than impacts normally associated with large projects of this nature.

7. CONCLUSION

The York-Peel Feedermain installation and road reconstruction project (Contract P-03-04) is nearing completion. The watermain is expected to be in service this month and the majority of roadworks are expected to be completed on schedule by the end of November 2005, subject to any modifications in road design and construction as a result of the ossuary issue referred to in section 4.3 above.

Report No. 8 of the Transportation and Works Committee
Regional Council Meeting of October 27, 2005

The Senior Management Group has reviewed this report.

(The attachment referred to in this clause was included in the agenda for the October 12, 2005 Committee meeting.)