

8

YORK-PEEL WATER SUPPLY PROJECT UPDATE PROJECT 77300

The Transportation and Works Committee recommends:

- 1. The presentation by Bala Araniyasundaran, Manager, Engineering Water and Wastewater, Infrastructure Design and Construction, be received; and**
- 2. The recommendations contained in the following report, April 30, 2004, from the Commissioner of Transportation and Works be adopted:**

1. RECOMMENDATIONS

It is recommended that:

1. The following report be received for information by Committee and Regional Council.
2. The Regional Clerk forward copies of 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 over the next few months on the York-Peel Water Partnership (YPWP) project.

3. BACKGROUND

3.1 York-Peel Water Partnership Projects

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 km 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 Regional Municipality of York has assumed primary management responsibility for the above-noted works, while The Regional Municipality of Peel has retained primary management responsibility for project components within its Regional boundaries.

All projects included in the YPWP, both those being administered by York Region and the Region of Peel, are currently forecast to be completed by the end of November 2004, which will enable both Regions to achieve the agreed in-service date of December 31, 2004.

3.2 York and Peel Contracts

A single design-build contract, valued at about \$72 million, encompasses all works to be constructed as part of the YPWP within the boundaries of York Region. The primary component of the project is an 1800 mm diameter feedermain that will begin at the east side of Highway 50 (the Peel-York Boundary), extend eastward along Rutherford Road to connect with the previously constructed feedermain segment, and then continue 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 will be extended eastward across Highway 400 along Teston Road and will ultimately connect to the existing Maple Reservoir in the City of Vaughan. On June 26, 2003, Regional Council authorized the award of design-build Contract No. 03-04 in the amount of \$72,310,643.87 including GST for feedermain installation and road reconstruction to Dufferin.

The Peel portion of the work, which has been sub-divided into several design-build and conventional contracts, includes a 2100 mm diameter feedermain that will begin at the existing Beckett-Sproule Reservoir, Brampton, and will run northward and eastward to the intersection of West Drive and Queen Street, extend eastward along Queen Street to Airport Road, and then continue 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. An outgoing 1800 mm. feedermain will be installed along the future Humber West Parkway and will continue eastward along Castlemore Road, connecting with the York feedermain at the York-Peel Regional boundary, plus connections to the new Airport Road Reservoir and Pumping Station.

4. ANALYSIS AND OPTIONS

4.1 Progress Summary

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

- Completing nearly all of the necessary property acquisition within both York and Peel.
- Liaising with utilities and regulatory agencies to ensure timely issuance of permits and approvals. Finalizing all water crossing permits.
- Monitoring material procurement status.

- Conducting regular design review, construction, and project scheduling meetings with the design-builder.
- Reviewing design and other submittals from the design-builder. The design phase is now complete.
- Administering construction of the following:
 - Road reconstruction works on Rutherford Road, Weston Road and Teston Road, including electrical and intersection improvements.
 - Foundations and substructure for the new Elder Mills Bridge.
 - On-going preparatory work (removal and vegetation, utility relocation, etc.).
 - Tunnels under Highway 400.
 - There has been limited construction in Peel with respect to the design-build portion of the feedermain.
 - Construction of the Airport Road Reservoir and Pumping Station in Peel is currently on schedule. This facility will feed water into the York Water System.

4.2 Property Acquisition Status

The Region is currently negotiating for all outstanding property; property acquisition status for different sections of the feedermain and road reconstruction is as follows:

- Rutherford Road and Weston Road: all property has been acquired for feedermain installation and road reconstruction.
- Block 33: Property agreements have been executed with the developers.
- Teston Road: There are no outstanding properties required for feedermain installation.
- Most property within Peel Region required for the feedermain has been acquired with the exception of a few properties along Castlemore Road. These outstanding agreements are however imminent.
- Teston Road: Property requirements for the road reconstruction are as follows:
 - Property on the south side of Teston Road is owned either by York Region or the City of Vaughan. Although the necessary permissions are in place for feedermain and road construction to proceed, the Region must still execute formal agreements with the City of Vaughan to provide easements or transfer property to the Region.
 - Property acquisition on the north side of Teston Road involves negotiations with individual landowners. Property agreements are in place for about 80% of the required properties, but a few remain to be obtained via expropriation, which will allow the Region to take possession no earlier than August 30, 2004.
 - Arrangements are also being finalized to acquire the property from the Teston United Church to permit the construction of the jog elimination at Jane Street and Teston Road.

4.3 Material Procurement and Source Quality Control

The design-build Request for Proposal (RFP) incorporated a performance based specification for the concrete pressure pipe (CPP) that set out specific Quality Assurance/Quality Control (QA/QC) requirements, including compliance with American Water Works Association (AWWA) Standard C301.

The design-builder (Dufferin) has in turn contracted with Munro Concrete Products (Munro), an existing concrete pipe manufacturer in Barrie, Ontario, to supply CPP to the entire York-Peel Feedermain project. This includes approximately 2.7 km of 2100 mm diameter pipe and approximately 7.5 km of 1800 mm diameter pipe within Peel Region. York's portion of the pipe delivery from Munro consists of approximately 13 km of 1800 mm diameter pipe.

Munro is currently developing a new production facility built around European sourced automated process equipment that has been employed worldwide in CPP manufacturing facilities. Construction of this manufacturer's new facilities to house CPP production was completed in early 2004. Completion of a mandatory certification process was an essential prerequisite to the shipment of any CPP produced at the Munro plant to either York or Peel Region's site. Initial testing has now been successfully completed and certification of the plant was achieved as of April 27, 2004. CPP deliveries are expected to commence the week of May 3, 2004.

Dufferin's formal QA/QC plan provides that, subsequent to the initial plant certification, on-going assurance of product compliance with AWWA Standard C301 will be provided by an independent inspection company. Company representatives are present on site and have provided interim reports to both Dufferin and the Region.

Dufferin had earlier provided assurances to the Region that it would purchase CPP from alternate certified suppliers, should Munro be unable to produce sufficient quantities of pipe to support the required installation schedule. Dufferin's assurances were tied to a series of milestone dates on which progress with construction and commissioning of the new plant would be assessed by the project management team. Beginning in mid-January, Regional staff participated in weekly meetings with Munro and Dufferin to review production status and issues in detail, and made regular visits to Munro's premises to observe progress first hand.

Construction of the new facilities to house the CPP production was completed on schedule and equipment installation was accomplished in early 2004 with only minor delays. The new CPP production line is currently in operations; however Munro encountered difficulties in its attempts to obtain final certification of its process, therefore it was not able to ramp up production to full capacity in sufficient time to support Dufferin's originally planned installation schedule.

Staff at both Regions have recently reviewed the latest construction schedule presented by Dufferin on April 30, 2004. The schedule indicates that the Peel contracts will be completed by the required October 31, 2004 date and that most of the feedermain construction in York will be completed by the same date as per their original schedule. The remainder of the feedermain construction along Teston Road show a completion date of mid December 2004. This slippage in the schedule is due to the pipe delivery issues experienced by Munro. Dufferin has indicated that they will try and bring that portion of the project back on schedule by mobilizing additional resources (labour and equipment) to accelerate feedermain installation and to compress the overall time frame required for

these activities. However, this cannot be confirmed until Munro can ramp up production as proposed.

The Design-Build team is well aware that completing the feedermain installation within the original time frame is essential to both Regions. The team is working with the design-builder to ensure that established contingency plans are adjusted and refined and monitoring efforts are stepped up as necessary to reflect the latest scheduling issues.

4.4 Construction Schedule Overview

Table 1 provides milestone dates for future 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 pipe delivery/installation in York and Peel	May 2004
Complete overall water supply system commissioning – Including Airport Road Reservoir and Pumping Station	November 2004
Construction (inclusive of road works) substantially performed	September 2005
Total Performance of the work	November 2005
Final Acceptance (end of warranty period)	November 2007

4.5 Forecast Activities for the Next Quarter

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

- Start feedermain installation on Rutherford Road, west of the CPR crossing to Highway 50, and on Weston Road.
- Start feedermain installation in Block 33 and on Teston Road from Block 33 to Jane Street.
- Continue roadwork on Rutherford Road (between the CPR crossing and Napa Valley Avenue), Weston Road (between Rutherford Road and Major Mackenzie Drive), and Teston Road (between Block 33 and Jane Street).
- Construct the deck of the new Elder Mills Bridge.

- Start the Robinson Creek Bridge widening and concrete culvert replacement, both on Rutherford Road.
- Start feedermain construction in Peel along Airport Road and Castlemore Road.
- Continue works on the Airport Road Reservoir and Pumping Station

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, have been tendered and awarded. 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 and to provide a modest reserve for any unforeseen circumstances that may still crop up.

Where Regional Council has approved advancing road improvement expenditures, the relevant line items in the 10 year Roads Capital Plan have been adjusted in the 2004 Business Plan and Budget.

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.

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 being undertaken in York Region is progressing. The feedermain portion of the work is scheduled for commissioning by the end of 2004.

The Senior Management Group has reviewed this report.

(A copy of the attachment referred to in the foregoing is included with this report and is also on file in the Office of the Regional Clerk.)