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CONSTRUCTION ADMINISTRATION SERVICES WESTON ROAD, TESTON ROAD AND HIGHWAY 400 INTERCHANGE PURCHASE ORDER REVISION - PROJECTS 8182 AND 98610 CITY OF VAUGHAN

The Transportation and Works Committee recommends the adoption of the recommendation contained in the following report dated March 31, 2009, from the Commissioner of Transportation Services.

1. RECOMMENDATIONS

It is recommended that:

1. Regional Council authorize modifications of the agreement between The Regional Municipality of York and URS Canada Inc. for contract administration, inspection services and material testing in connection with the road improvements for Weston Road (Y.R. 56) from north of Major Mackenzie Drive (Y.R. 25) to Teston Road (Y.R. 49), Teston Road (Y.R. 49) from Weston Road (Y.R. 56) to Jane Street (Y.R. 55) and new Highway 400 interchange at Teston Road (Y.R. 49) to:
 - a) Increase the scope of work to include additional contract administration and speciality inspection services related to enhanced environmental management and controls and an extension to the duration of the contract administration and inspection requirements outside of the original scope of work and which could not have been anticipated at the time of the Request for Proposals.
 - b) Increase the Blanket Purchase Order number B00009892 issued to URS Canada Inc., by \$676,178.95, from \$2,439,319.05 to \$3,115,498, excluding GST.

2. PURPOSE

This report seeks Regional Council authorization to amend the agreement between York Region and URS Canada Inc. to modify the scope of work and to increase the purchase order issued to URS Canada Inc. (URS), for the contract administration, inspection services and material testing in connection with the road improvements for:

- Weston Road from north of Major Mackenzie Drive to Teston Road.
- Teston Road from Weston Road to Jane Street.
- Highway 400 interchange at Teston Road.

The Purchasing By-law requires Regional Council authorization to increase the value of a purchase order (PO) in excess of 15% for contingencies and 20% for additional scope activities. As both of these limits have already been reached, Regional Council authorization is required for this PO increase.

3. BACKGROUND

In April 2006, URS was retained to complete the contract administration, inspection services and material testing for Projects 9861 and 8182. This work was to be completed in accordance with the Region's Request for Proposal (RFP) P-05-52 dated June 24, 2005 and URS's proposal dated August 15, 2005. The award of this assignment to URS was authorized by Clause 13 of Report No. 3 of the Transportation and Works Committee adopted by Council on March 23, 2006.

A Blanket Purchase Order (BPO) was prepared and issued to URS at an upset limit fee of \$1,806,903.

Work under this BPO included all contract administration, inspection services and material testing activities for the delivery of Contract 05-103, including the following key items:

- Widening of Weston Road from Retreat Boulevard to Teston Road.
- Widening of Teston Road from Weston Road to west of Jane Street.
- Culvert removal and new bridge over Cold Creek, west of Highway 400.
- Removal of existing bridge at Teston Road/Highway 400 and construction of a new interchange.
- Construction of storm sewers and City of Vaughan watermain along Teston Road.

As part of the Region's RFP and URS' response, a detailed scope of work was outlined. This included, a comprehensive list of activities and timing, including:

- Provision of all staff, equipment and materials, office space, etc. to complete the contract administration and inspection services.
- Engineering materials laboratory and field testing services.
- Contractor quality control plan administration services.
- Contractor critical path schedule administration services.
- Preparation of all contract administration record documents.
- Quality control of contract administration and inspection services.
- Liaison and coordination with all stakeholders, including government agencies, utility companies, property owners, developers, etc.
- Representing York Region on matters related to the contract administration and inspection of the work.

URS prepared their proposal to undertake all of the above activities; however, the duration of the work was limited to 385 working days, which was the Working Time included in Contract 05-103.

As construction proceeded, additional project activities were required to administer the contract and minimize future risk to the Region

Additional services outlined below necessitated the activations of the allowances provided for in the Region's Purchasing By-law. Accordingly, B00009892 issued to URS for this assignment is currently at its maximum allowable limit of \$2,439,319.05.

- Contract Administration (CA)/Inspection during winter shutdown periods.
- Pre-load settlement monitoring.
- Pre-construction detailed home inspections.
- Seismic monitoring during pile driving and grading/paving operations.
- Pre-cast concrete components plant/shop inspection.
- Additional environmental monitoring, assessment and reporting due to field conditions and incremental Toronto and Region Conservation Authority/Department of Fishers and Oceans (TRCA/DFO) requirements.
- Brook Trout spawning survey requested by TRCA.
- Culvert 13 clean-up planning.
- CA/Inspection services during January - March 2008 due to environmental issues involving TRCA/DFO.
- Testing and categorization of chloride impacted material to determine suitability of for re-use and disposal requirements.

These activities were not included in the original scope of work URS was required to complete, nor could they have been reasonably anticipated at the time the RFP was issued. These items of work related to changes in field conditions, design refinements that could not have been anticipated prior to construction and changed requirements from regulators, including TRCA. Further, issues arose during construction, such as vibration concerns from adjacent residents (which required house inspections and seismic monitoring), restoration and removal of sediments from Cold Creek and construction activities during traditional winter shut-down periods.

Project status and timing for completion

Construction on the project is currently underway with some significant earth grading and electrical activities having progressed through the winter period. The construction contractor is presently working to complete the new bridge over Highway 400 and complete the interchange ramps.

Based on the current schedule, construction of the project including the interchange should be completed in the summer of 2009.

Once construction is completed later this year and negotiation on the contractor's claims for construction costs are completed, staff will come forward with a further report on any additional construction costs.

4. ANALYSIS AND OPTIONS

Additional contract administration and inspection services

The original scope for this assignment was based on a construction duration of 385 working days. As a result of environmental issues and weather conditions that affected progress of the work, work has proceeded during traditional winter shut down periods. Furthermore, an extension to the contract time is being negotiated with the construction contractor. In the event that an extension is agreed to, this would necessitate a corresponding extension to the contract administration and inspection services.

Further, the construction contractor has requested an extension to the contract time for the prolonged duration of the construction of the new bridge on Teston Road between Weston Road and Highway 400. Staff are reviewing this request and negotiating with the construction contractor. In addition, during construction the Ministry of Transportation (MTO) changed their requirements for construction of the underground drainage appurtenances along Highway 400. This resulted in a delay to the construction contractor and staff are presently negotiating an extension to the working time because of this change.

Throughout construction URS and York Region have been working to not only minimize the overall delay to the completion of the construction, but also to minimize the incremental costs associated with delivering the contract administration and inspection services. Due to the changing requirements of the project, additional contract inspection and administration was required during two winter shut down periods and when combined with associated construction delays, it is anticipated that the total number of working days for contract administration and site inspections will have increased by approximately 50%.

The fee associated with providing incremental contract administration and inspection services beyond the original scope of work and increases to BPO B00009892 already authorized under the scope and contingency provisions of the Purchasing By-law is \$559,536.74.

Additional environmental monitoring, geotechnical engineering and materials testing services

Similar to the incremental contract administration and inspection services, the prolonged period of construction has resulted in incremental work for environmental monitoring, geotechnical engineering, and materials testing services.

On these items, URS and their subconsultants have worked to minimize the increases in the work effort and attempted to optimize the delivery of the services. However, the prolonged period of construction has resulted in an increase in the total effort required to deliver these services. The increased effort is largely due to the number of visits and the amount time technical staff have spent on site.

Material testing costs have two basic components. First, the time required to monitor the contractor and collect the samples. Second, the time and equipment necessary to test the samples and report on conformance with contract specifications. As a result of the slower than anticipated construction, there has been a significant increase in the amount of time spent by URS and their subconsultants to collect the material samples in the field.

The fee associated with providing incremental engineering materials laboratory and field testing services beyond the original scope of work is \$116,642.21.

5. FINANCIAL IMPLICATIONS

The total cost for the above additional contract administration, inspection services, environmental monitoring, geotechnical engineering, and materials testing on this assignment, which are in excess of the contingency and additional scope allowances of the Purchasing By-law, equals \$676,178.95.

There are sufficient funds in the 2009 Capital Budget to cover these additional expenditures in 2009.

The original value for the construction contract is \$28.3M plus G.S.T. The total value of additional work on the construction work identified in Section 3.0 is now estimated at \$3.0M for an approximate total contract value of \$31.3M. Regional staff have also compared the adjusted value of the contract administration, inspection services and material testing in relation to the approximate total construction contract value, for comparison in relation to other public sector projects. The adjusted value of the contract administration, inspection services and material testing, is approximately 10% of the approximate total construction contract value. While this may seem high, it is within the typical range of 7% to 10%.

Regional staff have reviewed this request and do feel that these fees are reasonable and fair. They account for the significant complexity and magnitude of the work, ongoing challenges encountered during the construction and the heightened environmental sensitivities in this area. It should also be noted that Regional staff, with the assistance of the Contract Administration consultants, are also actively negotiating and defending the Region's position in response to requests from the construction contractor for additional compensation

Once construction is completed later this year and negotiation on the contractor's claims for construction costs are completed, staff will come forward with a further report on any additional construction costs.

All outstanding expenditures on this project will be funded 88% from Development Charges and 12% from Tax Levy. Further, a portion of the expenditures on this project are recoverable from MTO through an executed legal agreement and from the City of Vaughan for work which the Region is undertaking on their behalf.

Since 2003, 685 purchase orders with a total value of \$352,973,939 have been issued to secure engineering, consulting and construction services on Roads projects. Of these, 35 or 5% of the purchase orders have required increases beyond the increases allowed in the Regional Purchasing Bylaw. The total value of such increases is \$4,537,246 or 1% of the total original value of the purchase orders.

6. LOCAL MUNICIPAL IMPACT

The City of Vaughan will benefit significantly from the works presently under construction in the Weston Road, Teston Road and Highway 400 area of the City. The road improvements will provide additional capacity within the Regional corridors and the new interchange at Highway 400 and Teston Road will enhance connectivity between the arterial road system and the Provincial freeway network. Construction of all work including the Highway 400/Teston Road Interchange is scheduled to be completed in the summer of 2009.

7. CONCLUSION

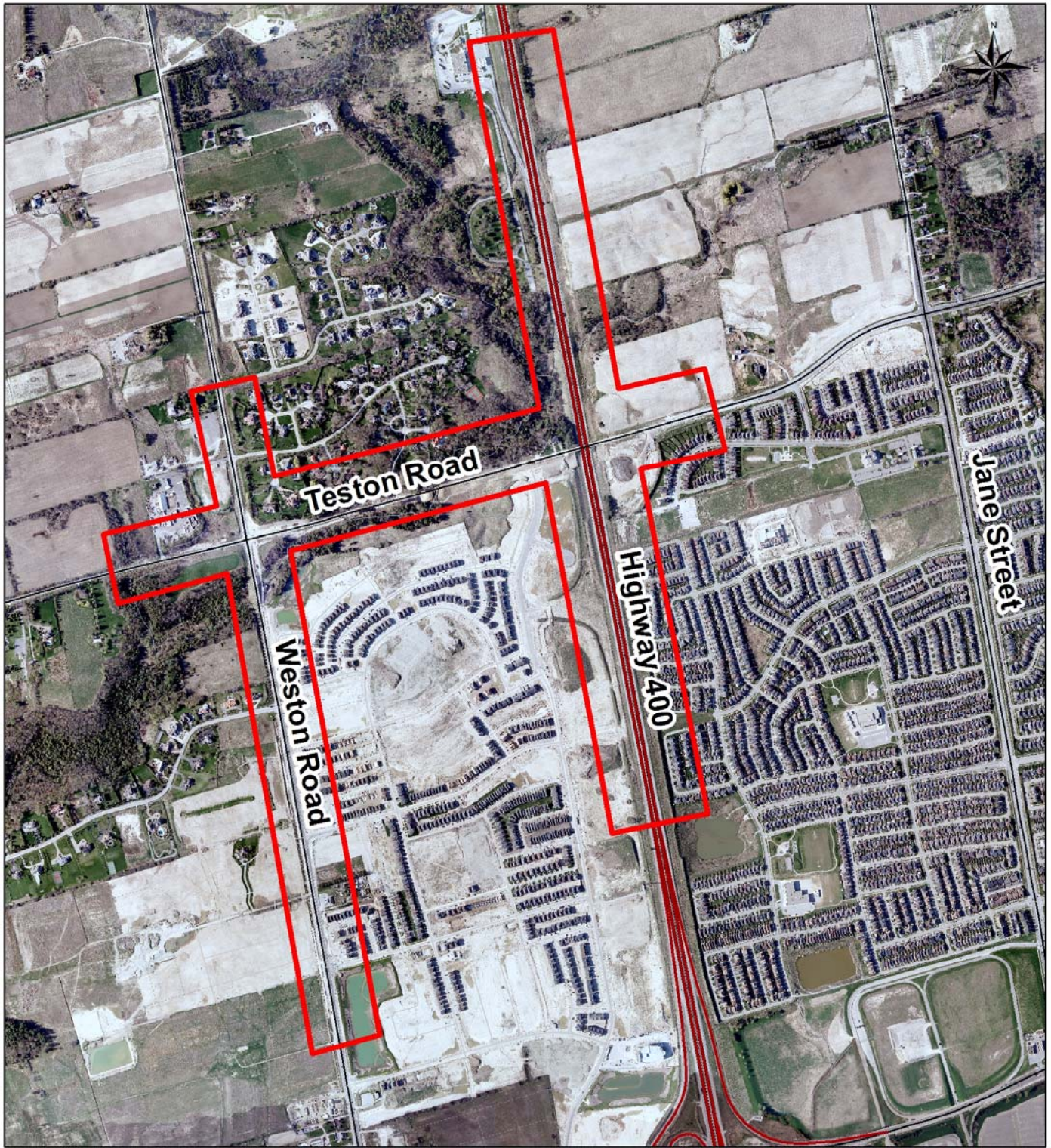
URS is required to assist Regional staff in completing the contract administration, inspection services and material testing tasks on this complex project. In order to accomplish this, additional services beyond the original scope of their assignment, which could not have been anticipated at the time of the Request for Proposals, are required. Fees for these services are in excess of the contingency and additional scope allowances provided for in the Region's Purchasing By-law. Accordingly, it is recommended that the Purchase Order for this assignment be increased to \$3,115,498, excluding GST, to fund these necessary additional services.

For more information on this report, contact Paul Jankowski, General Manager, Roads at extension 5901 in the Transportation Services Department.

The Senior Management Group has reviewed this report.

(The attachment referred to in this clause was included in the agenda for the April 8, 2009 meeting.)

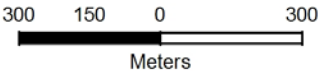
FILENAME: H:\CD\LIBR\Location Maps\YR49\05-103\05-103 - Aerial Map Attachment 1.mxd



LOCATION PLAN

Contract No. 05-103, Project Nos. 9861 & 8182
Weston Road, Teston Road, Highway 400 Interchange
City of Vaughan

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