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CONSULTANT SELECTION FOR ENGINEERING SERVICES HIGHWAY 400 AND HIGHWAY 7 IMPROVEMENTS TO SUPPORT THE VAUGHAN CORPORATE CENTRE DEVELOPMENT CITY OF VAUGHAN, PROJECT 82690

The Transportation and Works Committee recommends the adoption of the recommendations contained in the following report, March 28, 2006, from the Commissioner of Transportation and Works:

1. RECOMMENDATIONS

It is recommended that:

1. The consulting engineering firm of Delcan Corporation be engaged to undertake the engineering services for the Class Environmental Assessment and preliminary design for Highway 400 and Highway 7 (Y.R. 7) Improvements to Support the Vaughan Corporate Centre Development at a total upset limit fee of $822,812.57, excluding GST.

2. The Regional Chair and Regional Clerk be authorized to sign the necessary agreement, subject to review by Legal Services.

2. PURPOSE

This report recommends the retention of consulting engineers to complete the Class Environmental Assessment (Class EA) and preliminary design for Highway 400 and Highway 7 Improvements to Support the Vaughan Corporate Centre Development. A location plan is appended to this report *(see Attachment 1).*

3. BACKGROUND

3.1 Project Description

York Region's Official Plan calls for the creation of compact, well designed communities. A key part of this strategy is the creation of a system of Regional centres linked by rapid transit in Regional corridors. The Regional centres are linked by Regional corridors of Yonge Street and Highway 7. The Vaughan Corporate Centre, located in the north-east quadrant of the Highway 400/Highway 7 interchange, is one of four Regional centres that have been designated.

The Government of Ontario has prepared a plan documenting its long term vision and strategy to guide future growth in the greater Golden Horseshoe area over the next 30 years. The Proposed Growth Plan, has been prepared under the *Places to Grow Act, 2005* and is about to be approved by the Province. In this plan, the Vaughan Corporate Centre is identified as an "Urban Growth Centre" and a "Major Transit Station and Intensification Corridor".

The Vaughan Corporate Centre was established in Official Plan Amendment (OPA) 400 and adopted by Council in 1994. Subsequently, the Vaughan Corporate Centre Secondary Plan was approved, with modifications at the Municipal Board on March 5, 1998, as OPA No. 500. OPA 500 established the policies to guide the City of Vaughan in its consideration of development applications within the Vaughan Corporate Centre Secondary Plan Area.

The Vaughan Corporate Centre Node is within the secondary plan area and includes the lands east of Highway 400 either side of Highway 7 easterly to east of Jane Street (Maplecrete Road). It is intended that the Vaughan Corporate Centre Node become a higher order transit hub and eventually become the "downtown" of the City of Vaughan. A ring road system is proposed around the node with a 100 metre city block street system within the ring road *(see Attachment 2).*

By 2021, the Vaughan Corporate Centre is expected to provide over 30,000 employment opportunities and places of residence for 5,000 people. The impacts on the existing road network will be very significant with over 10,000 trips in the morning peak hour and 20,000 in the afternoon peak hour. The increase in traffic cannot be accommodated on the existing road network, when a number of key intersections in the Vaughan Corporate Centre secondary area plan are already experiencing poor levels of service. Given the current state of the road network, full development of the Vaughan Corporate Centre by 2021 will not be accommodated without numerous improvements and modifications.

However, the Vaughan Corporate Centre, while strategically located at the Highway 400 and Highway 7 interchange and in close proximity to Highway 407, is considerably restricted in terms of opportunities to expand the network. OPA No. 500 was supported by a transportation study (City of Vaughan Corporate Centre Secondary Plan, Traffic and Transportation Analysis, January 1998) prepared by the consulting firm McCormick Rankin Corporation. The study recognized that the arterial road network for the area was largely in place and that opportunities to expand the system are limited. A number of key intersections in the Vaughan Corporate Centre secondary plan area are already experiencing poor levels of service. There is little opportunity to add additional links to network due to the constraints presented by the existing freeway and arterial road infrastructure.

The City of Vaughan conducted the "Vaughan Corporate Centre Node – Transportation/ Transit Planning and Functional Design Study" to address the issues related to road capacity and congestion. The study was undertaken by Cansult Limited to provide a detailed level of functional design for the road and transit network serving the Corporate Centre and its environs. The Region, in consultation with the City and Ministry of Transportation (MTO), had retained Marshall Macklin Monaghan Limited to undertake a peer review in order to examine the methodology used by Cansult and the network operations and proposed infrastructure requirements.

Subsequently, OPA No. 500 was amended, through the approval of OPA No. 528, which identified and incorporated road network improvements into OPA No. 500 with supporting policies related to the road network and road network improvements. Further, the City of Vaughan through OPA 529 identified and secured a higher order rapid transit right-of-way from York University to the Vaughan Corporate Centre.

Links 4 and 5 were included among several road improvements proposed under OPA No. 528 *(see Attachment 3)*. Link 4 consists of one-way northbound link road running north from the existing Highway 400 northbound off-ramp at Highway 7 to the extension of the proposed ring road around the Vaughan Corporate Centre. Link 5 consists of a new northbound Highway 400 on-ramp connecting to a two-way collector road extension to the northerly east-west section of the ring road system. Links 4 and 5 traverse lands owned by First Vaughan Investment Limited.

The Region has assumed proponency for this Class EA study since Links 4 and 5 provide an arterial road function connecting the Provincial highway system and Regional road system. The roadway solutions to be implemented by the Region as a result of this study will be limited to the connections with/to Highway 400 and Highway 7. The Region's proposed work will not include the implementation of the Ring Road, connector roads or the proposed Highway 7 transitway.

In summary, the purpose of this assignment is to conduct a Class Environmental Assessment Study (Schedule "C") to confirm the need and justification and determine specific improvements to Highway 400 and its interchanges and Highway 7 that are required to support the Vaughan Corporate Centre development.

3.2 Scope of Assignment

The scope of work for this assignment includes:

- Undertaking the study of Highway 400 and Highway 7 Improvements to Support the Vaughan Corporate Centre Development, in accordance with all requirements of the Municipal Class EA document for municipal projects, prepared by the Municipal Engineers Association dated June 2000. The study shall be classified as a Schedule 'C' undertaking and be completed through to the end of Phase 4 as outlined in the Class EA document.
- Completing the study to meet the requirements of Canadian Environmental Assessment Act (CEAA) as required and coordinate it with the Municipal Class EA, under the concept of "one project – one assessment".
- Completing the preliminary design of the project requirements, including all field investigations, reviews, relevant tests, inspections and studies, with due regard for environmental, traffic accommodation and safety concerns, capital cost and

operating efficiency all in accordance with MTO and York Region standards, specifications and practices.

3.3 Project Phasing

The Region's proposed 2006 10-Year Road Construction Program has identified the timing for the improvement works in the vicinity of the Vaughan Corporate Centre for construction in 2009. Depending on the recommendations of the Class EA study, Regional priorities and available funding, the scope of works currently included in the Region's 10-Year Capital Forecast may be revised.

The anticipated schedule for the project is as follows:

- Schedule 'C' Class Environmental Assessment (EA) – 2006 to 2008.
- Detailed Design – 2008 to 2009.
- Construction – 2009/2010.

4. ANALYSIS AND OPTIONS

4.1 Outcome of Evaluation of Proposals

In accordance with the Regional Purchasing By-law, Expressions of Interest (EOI) were received for this work in response to an appropriate advertisement in a publication of general circulation. All EOIs were reviewed and based on the results of the evaluation; three firms were invited to submit a response to our Request for Proposal (RFP) document.

The three firms invited to submit written proposals for this assignment were as follows:

1. Delcan Corporation.
2. Marshall Macklin Monaghan Limited.
3. Morrison Hershfield Limited.

The Region used the "two envelope" evaluation process for this RFP, in which technical/ management proposals were opened and evaluated prior to the opening and evaluation of the corresponding financial proposals. The total weighting of the technical/management proposal is 80% and the total weighting of the financial proposal is 20%. This allocation of technical/management and financial will ensure that the assignment is awarded to a consultant that is technically competent as well as cost competitive.

The technical proposals were evaluated based on the following technical criteria:

- Project team experience.
- Project management.
- Project implementation.

In accordance with the terms of the RFP, the financial proposals were opened only after Region staff agreed to the overall technical scores. After compliance of the financial proposals had been established, the overall proposal was evaluated based on a weighting of 80% for the technical/management proposal and 20% for the financial proposal. The best proposal was deemed the one with the highest total score.

The consultant proposal evaluation summary is presented in Table 1 and includes the technical score, the upset limit fee and corresponding financial score and the total score for each proponent.

Table 1
Consultant Proposal Evaluation Summary

Firm	Technical Score (Out of 80)	Upset Limit Fee Excluding GST	Financial Score (Out of 20)	Total Score (Out of 100)
Delcan Corporation	56.8	$822,812	11.3	68.1
Morrison Hershfield Limited	44.0	$463,500	20.0	64.0
Marshall Macklin Monaghan Limited	45.5	$700,795	13.2	58.7

The best overall (combination of technical and financial) proposal was received from Delcan as their proposal had the highest total score and represents the best value for the Region on this assignment.

The technical proposal submitted by Delcan consistently scored higher over all categories of the evaluation criteria declared in the RFP and thus received the highest technical score by a considerable margin. Delcan's proposal was considerably better than the other two proposals and in particular because of the following:

1. Delcan's workplan recognized the need to build consensus among various stakeholders with competing interests including MTO, City of Vaughan and private landowners. Any solution will impact Highway 400 mainline, collectors or ramps and will have to be approved by MTO. Delcan's proposal features an enhanced public/stakeholder consultation plan which will be a key component to the success of this study. To this end, they have proposed a collaborative process in developing solutions that consists of a series of meetings and technical workshops to proactively manage regulatory agency and public/stakeholder expectations. They have thought through the methodology and have acknowledged the need to resolve issues/concerns in progression and seek MTO and other regulatory agency acceptance at key milestones throughout the study. They have also identified the need and proposed an additional public consultation centre.

2. The Delcan proposal clearly articulates the methodology of the process that will be undertaken in order to identify the needs and justification, propose alternative solutions and obtain consensus and acceptance for the recommended design. For example, they have committed to develop a detailed traffic simulation model to provide a detailed operational analysis of the existing transportation network as well as design alternatives. While it is realized that probably no solution will completely satisfy all stakeholders, and that some compromises will have to be accepted, a sound technical analysis will enable the team to demonstrate transparency and fairness in their approach.

3. Their detailed discussion on project issues demonstrates their understanding of the unique project requirements and constraints. For example, they have studied the alternative solutions made available in the RFP and have been in touch with MTO. They have gone beyond what is normally expected during a proposal call in developing a schematic design and presented a graphic image in the proposal of an alternative solution that may address a key MTO concern.

4. Delcan's proposal touched on all potential permits and approvals that may be applicable to this undertaking including the potential impacts to fish habitat at crossing(s) of Black Creek within the study area. This is indicative of their proactive strategy to obtain approvals in a timely manner.

5. Delcan's proposal featured a good complement of senior project management and technical staff from within the organization and through association with reputable sub-consultants. The time-task matrix submitted with their technical proposal indicates a good balance of staff hours to tasks.

6. The proposals by other consultants were generally lacking in comparison to Delcan's proposal. For example, one consultant's proposal while concentrating on roadway design and traffic analysis, did not adequately address the public consultation process, communications plan, environmental issues such as natural environment, noise, archaeology and had an incomplete work plan and methodology.

Although the financial proposals from Marshall Macklin Monaghan Limited and Morrison Hershfield Limited are notably lower, Delcan's fee is well supported with a greater commitment of resources and higher level of effort. While Delcan's proposal indicates a total time commitment of 7,350 person hours (including for provisional items), Morrison Hershfield's and Marshall Macklin's proposals indicate 2,800 and 4,500 hours, respectively, excluding provisional items. The Region has recent experience with prolonged approval processes and corresponding schedule delays on projects where MTO has been a major stakeholder and where their approval was required for implementing the undertaking. Considering this past experience, staff considers the level of effort indicated in Delcan's proposal to be appropriate for this study.

This section of Highway 7 is one of the busiest transportation corridors in the Region with an average annual daily traffic of 77,500 vehicles on a weekday. It supports a high proportion (12%) of truck traffic related to the flow of goods and services within a highly industrialized area of Vaughan.

The Supplies and Services Branch has reviewed the evaluation summary and has issued their internal report confirming that Delcan be recommended as the successful overall proponent for this assignment

5. FINANCIAL IMPLICATIONS

The upset limit fee for the work is $822,812.57, excluding GST.

There are sufficient funds in the Region's proposed 2006 Roads Capital Budget to undertake the study in 2006. Funding for the study in 2007, will be adjusted accordingly in the upcoming 2007 Capital Budget Process. Proposed expenditures and sources of funding for this project are given in the following table:

Table 2
Proposed Budgeted Expenditures and Sources of Funding
(Cash Flow in 000s)

Proposed Budgeted Expenditures	2006	2007	2008	2009	Total
Highway 400 and Highway 7 Improvements to Support the Vaughan Centre Development	$290	$290	$2,124	$2,061	$4,765
Total	**$290**	**$290**	**$2,124**	**$2,061**	**$4,765**
Funding Sources					
DCs	222	222	1,625	1,577	3,645
Tax Levy	68	68	499	484	1,120
Total	**$290**	**$290**	**$2,124**	**$2,061**	**$4,765**

The upset limit fee includes provisional items for consulting engineering activities such as stage two archaeological assessments or additional public meetings, if required. A provisional item in the amount of $100,000 is also included for geotechnical investigation and survey. The consultant will only be paid for the provisional item(s) if specifically directed by the Region to undertake the work covered under the provisional item(s).

6. LOCAL MUNICIPAL IMPACT

The Highway 400 and Highway 7 road improvements will be constructed in the City of Vaughan. It is anticipated that the existing road network will not be able to accommodate the traffic generated by the proposed Vaughan Corporate Centre development. The project objective is to address the need to improve traffic capacity and lessen congestion for the travelling public. The study will confirm the need for road network improvements and identify specific road improvements that are required to support the Vaughan Corporate Centre development; an initiative that is supported at the Provincial, Regional and local municipal level.

Throughout the Class EA, Regional staff will work closely with staff from MTO and the City of Vaughan, to accommodate their requirements in the Class EA and preliminary design.

7. CONCLUSION

Consultants' proposals for this project were evaluated in accordance with Regional policy, by-laws and practices. The proposal submitted by Delcan addressed all of the requirements for this assignment, including qualified and knowledgeable personnel, and proposed a sound methodology to complete this assignment. The proposal represents the best overall value to York Region

The Senior Management Group has reviewed this report.

(The attachments referred to in this clause were included in the agenda for the April 5, 2006 Committee meeting.)