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WIDENING OF WARDEN AVENUE TOWN OF MARKHAM PROJECTS 98990 AND 96780

The Transportation and Works Committee recommends the adoption of the recommendations contained in the following report, April 1, 2005, from the Commissioner of Transportation and Works:

1. RECOMMENDATIONS

It is recommended that:

1. The Chief Administrative Officer be authorized to award the Phase 1 contract for the reconstruction and widening of Warden Avenue (Y.R. 65) from Highway 407 northerly to Apple Creek Boulevard, in the Town of Markham.
2. The Commissioner of Transportation and Works be authorized to issue a subsequent separate tender for Phase 2, the completion of the balance of the Warden Avenue (Y.R. 65) road reconstruction project from Highway 407 southerly to McPherson Street, in the Town of Markham.
3. The Regional Clerk forward a copy of this report to the Clerk of the Town of Markham.

2. PURPOSE

The purpose of this report is to advise Regional Council of the action taken by the Commissioner of Transportation and Works in tendering Phase 1 of the contract for the reconstruction and widening of Warden Avenue between Highway 407 and Apple Creek Boulevard and subject to Regional Council's approval authorize the Chief Administrative Officer to award the Phase 1 tender. It is also to obtain authorization for the Commissioner of Transportation and Works to issue a second separate tender for Phase 2, the completion of the Warden Avenue road reconstruction project from Highway 407 southerly to McPherson Street (*See Attachment 1*).

3. BACKGROUND

3.1 Environmental Study Report

A Class Environmental Assessment (Class EA) for Warden Avenue between Steeles Avenue and Major Mackenzie Drive project was carried out and the Environmental Study Report (ESR) was approved in March 2002. This report identified that due to existing and

projected traffic volumes, additional traffic lanes are required to provide increased north-south capacity within the Warden Avenue corridor in order to improve traffic operations and reduce traffic congestion and delays. The recommendations approved in the ESR include the widening of Warden Avenue between Steeles Avenue and Apple Creek Boulevard to a basic seven-lane road. The section of Warden Avenue between Apple Creek Boulevard and 16th Avenue will remain at a five-lane cross section, while the section between 16th Avenue and Major Mackenzie Drive is recommended for widening to five lanes in 2007.

Following completion of the ESR the Town of Markham subsequently requested that the Warden Avenue widening from 14th Avenue northerly be advanced and the portion between 14th Avenue and Steeles Avenue be deferred. The morning and evening peak hours traffic volumes on Warden Avenue between 14th Avenue and Highway 7 is 4,100 vehicles and this is the area where the current highest level of congestion on Warden Avenue exists.

The need for improvements to Warden Avenue have been identified as an important infrastructure improvement to address transportation demands created by existing and future development in Markham. Major recent job growth in Markham has been focussed within the Warden Avenue corridor and at Highway 7, with major new developments such as IBM, Motorola and future Markham Town Centre requiring improvements to transportation system capacity.

3.2 Property

The acquisition of required property to construct the road improvements between Steeles Avenue and Apple Creek Boulevard has been completed and all agreements with the property owners are in place.

3.3 Project Schedule

The widening and reconstruction of Warden Avenue between the Steeles Avenue and Apple Creek Boulevard is included in the current 10-year Capital Plan approved by Council for construction start in 2005.

3.4 Detailed Design Progress

The detailed design for the roadwork is complete. Structural designs have been completed for the widening of the Canadian National (CN) railway overpass south of Highway 407 and for the bridge structure over the Rouge River, south of Highway 7.

3.5 Utility Plans

Utility relocation plans have been prepared by the various utility companies for the relocation of services and elimination of conflicts with the proposed road construction. All major utilities will be relocated by the end of May 2005.

3.6 Approvals

3.6.1 Permits/Approvals

The following permits/approvals/clearances have been secured:

- Toronto Region Conservation Authority.
- Transport Canada (Marine) for the widening of the bridge over the Rouge River.
- Ministry of Natural Resources (in water work window at Rouge River Bridge July 1-September 15, 2005).
- Ministry of Transportation (MTO) for works through the Highway 407 interchange expected April 6, 2005.

3.6.2 CN Rail Crossing

The Transportation and Works Department has been planning for the widening of the existing bridge over the CN tracks with the railway authority since 2002. Through discussions with CN, York staff have reached an understanding that the bridge widening and proposed design is acceptable to both parties.

In order to proceed with the reconstruction of the rail crossing and, regardless of who the senior authority is, an agreement needs to be executed between the rail and road authorities, which include the apportionment of costs between the parties.

On January 16, 2004, the railway authority issued a formal agreement to the Region for execution. The submitted agreement did not address any cost apportionment between the railway and the road authorities for the reconstruction of the grade separation. Under the agreement all costs were expected to be borne by the Region.

According to the Canadian Transportation Agency (CTA) guidelines for cost apportionment of grade separated crossings such as this one, the cost for reconstruction of the rail crossing is a sharable expense where the proponent of the project is responsible for eighty-five percent and the other party is responsible for fifteen percent of the costs. As the reconstruction and widening is required to accommodate roadway improvements, York Region is the proponent and is responsible for eighty-five percent of the cost, despite the fact that York Region is the senior member at the crossing location.

By letter dated March 10, 2004, the Region advised CN that the agreement must be amended to reflect CN's fifteen percent share of the costs for the reconstruction and in the absence of any amendment to the agreement, York Region further advised CN that an application will be made to the CTA for a resolution of the matter. Given that the design has been accepted by both parties, the railway's shareable expense, according to CTA guidelines, has been estimated at \$450,000.

In the spirit of cooperation and in the interest of maintaining the Warden Avenue project on schedule, the Region requested that the railway enter into an agreement with York Region under Section 101(1) of the Canada Transportation Act wherein both parties

agree to allow construction of the project to proceed if initially funded entirely by York Region and set a condition that both parties further agree to refer the matter of cost apportionment to the CTA for a ruling under Section 101(4) of the Act. In response, the railway authority indicated that they are not prepared to accept the Region's proposal and that their position is to have a full agreement in place before construction is allowed to proceed.

During summer and fall of 2004, York Region and CN staff continued to negotiate to resolve CN's pending appeal to the federal Court of CTA's decision in favour of York Region at the Elgin Mills level crossing east of Yonge Street. The Warden Avenue CN Bridge widening was included as part of these negotiations which ultimately failed. On December 7, 2004, the Federal Court of Appeal dismissed CN's appeal regarding the Elgin Mills crossing cost sharing with costs to York Region. As a result of this action, progress toward an agreement with CN for the Warden Avenue crossing has not progressed sufficiently to allow tendering the work south of Highway 407 or to eliminate the need to seek a CTA ruling.

Given the railway authority's position, York Region submitted on January 31, 2005 an application to the CTA for a decision on cost apportionment and authority to reconstruct the subject crossing after having been unable to reach an agreement with CN.

According to CTA protocol, the Federal agency is obligated to issue a ruling on an application within 120 days of submission. The railway authority was granted a two-week extension to respond to the CTA. CN provided their response on March 18, 2005, which maintains their previous position that CN is not responsible for making financial contributions toward widening of the bridge. A decision from the CTA is not expected until the end of June 2005.

3.7 Implementation

Collectively, preconstruction activities (design, property acquisition, utility relocation and permits) have sufficiently progressed, with the exception of a CN agreement, to allow for the Warden Avenue project to proceed to full tender in May 2005.

4. ANALYSIS AND OPTIONS

Recognizing current congestion and traffic problems on Warden Avenue and the Town of Markham's request to widen the section between 14th Avenue and Apple Creek Boulevard in response to the traffic issue, the Region is committed to commencing improvements in 2005 to address the situation without delay.

However, given the circumstances with CN and the widening of the bridge over the railway tracks south of Highway 407, several tendering options have been examined with the objective of initiating roadway improvements as early as possible in 2005 while

evaluating the potential impacts and risks associated with the outstanding CTA ruling and railway agreement for the widening of the CN crossing.

In order to ensure that impacts to traffic and to the YRTP's "Viva" transit service are minimized, York Region staff has worked with the YRTP and have included specifications in the contract documents that require the contractor to stage the work and maintain the through traffic lanes in each direction plus additional turning lanes at major intersections throughout the construction.

The tendering options presented below have been evaluated taking into account:

- The current application to the CTA and their expected ruling late in June.
- The Ministry of Natural Resources' requirement that the widening of the bridge over the Rouge River be carried out between July 1 and September 15, 2005.
- Potential risk related to contractual claims and liability.
- The Region's commitment to expedite roadway improvements as early as possible in 2005.

4.1 Option 1 – Tender Contract After CTA Ruling

This tendering option carries the least risk and minimizes exposure to delay claims from the contractor. Following a ruling of the CTA in late June, and provided that the railway does not appeal, the agreement with the railway will need to be completed which incorporates the facts of the CTA decision. In the event that an agreement is not issued by CN in due time following the CTA ruling, a second application may be required to the CTA to seek a Order for CN to allow the Region to proceed with construction under the apportionment of costs decided already decided upon.

At best, this option may yield a summer tender and late season construction start, which will defer the work at the Rouge River bridge until summer 2006. Traffic congestion will continue until all improvements are completed in late summer 2006.

In the event that CN appeals the CTA ruling, a tender under this format could not be issued until all matters are resolved, which would mean that construction would certainly not start in 2005. Upon the receipt of a ruling from the CTA, the railway has thirty days to appeal the CTA decision to the Federal Court, where a trial may not be heard for up to one year. This option is not recommended because it does not address concerns to increase road capacity on Warden Avenue as quickly as possible.

4.2 Option 2 – Accept the Railway Company Terms of Agreement

Again, this option minimizes exposure to claims and construction is commenced in 2005. The railway cost for their share of the work would be entirely absorbed by the Region and the action may set a precedent which could affect discussions for other railway crossing agreements.

This option is not recommended because unfavourable precedence may result, and, furthermore, signing an agreement waives our right to go to the CTA in the future for this crossing work.

4.3 Option 3 – Tender Full Project Before CTA Ruling.

Under this option, a full tender for the reconstruction and widening of Warden Avenue between McPherson Street and Apple Creek Boulevard would be issued with an operational constraint that work at the railway crossing is deferred until the CN Agreement is in place.

A construction contract under this scenario carries a high level of risk with exposure to delay claims due to the uncertain duration of the delay. Timing uncertainties associated with a final CN agreement create the potential for a longer construction duration and prolonged public inconvenience by bridge work not being commenced. In this time, contractual delay claims may amount over an unknown period. As a result, this option is not recommended.

4.4 Option 4 – Tender Phase 1 Contract for Construction North of 407

Under this arrangement, a tender for the roadwork north of Highway 407 would be awarded as early as possible (May 2005).

Following a CTA ruling and CN agreement, a second separate contract to complete the work south of Highway 407 would be tendered.

With this option, construction is commenced in 2005 and in-stream works at the Rouge River bridge would be completed this year. Furthermore, construction north of Highway 407 allows coordination with Town of Markham Clegg Road extension project and efficiencies realized where the two planned works overlap.

Contractual claims and risks are minimized since the two issued tenders are separated by time and distance through operational constraints included in the contracts.

Provided that the release of the second tender is not further hampered by a CN agreement, the overall project construction period and public inconvenience may be slightly longer, but the marginal difference would be outweighed by the significantly reduced exposure to liability and delay claims through this tendering strategy.

In addition, this tendering approach demonstrates that the Region is committed to improving its road infrastructure and will look at ways at continuing with the works scheduled under the Capital Program, even when delays arise by other parties. For these reasons, this is the preferred option.

4.5 Option 5 – Tender Full Contract which Excludes Grade Separation

Essentially, the strategy contained under this tender option is identical to Option 4, with the difference being that the Phase 1 tender will include all work, including south of

Highway 407, with the exception of the railway crossing. This tender will also contain an operational constraint that the works south of Highway 407 be completed by a prescribed date.

The second tender would be issued solely for the widening of the CN grade separation, only once the CN agreement is in place and when the works south of Highway 407 have been completed under the initial tender.

Although the bulk of the road improvements are initiated in 2005, the issuance of the second tender is entirely dependent on two major prerequisites; completion south of Highway 407 and CN agreement.

The amount of work required through the Highway 407 interchange is minimal when compared to the extent and complexity of the work required south of Highway 407, where heavier construction is required. Therefore, there are constructability and timing concerns associated with this option that introduce risk and exposure to the evaluation.

Again, because of timing uncertainties associated with a final CN agreement, there is a continued potential for a longer construction duration and prolonged public inconvenience under this option. As a result, this option is not favourable.

4.6 Summary

Based on the evaluation of tendering alternatives, staff recommend to proceed with Tender Option 4 for the following reasons:

- Roadway improvements are initiated as early as possible and will be substantially completed in the section north of Highway 407 in 2005.
- The timing window for in-stream works at the Rouge River bridge is met in 2005.
- This option facilitates coordination with the Clegg Road Extension to continue as planned.
- The work is not influenced by the CTA ruling or CN agreement.
- Contractually, this often provides low risk and exposure to claims and liability.
- This option provides a manageable means to mitigate public inconvenience.

Accordingly, the Commissioner of Transportation and Works has undertaken to proceed the tendering of Phase 1 contract for the reconstruction and widening of Warden Avenue between Highway 407 and Apple Creek Boulevard, with the condition that award of the contract is subject to approval by Regional Council.

This measure has been taken to obtain contract pricing through the Region's tendering process and in the interest of maintaining the Warden Avenue project schedule.

Subject to Regional Council's approval of the action taken and authorization to proceed with the award of the Phase 1 tender in accordance with the requirements of the Region's Purchasing By-law, a second separate tender (Phase 2) for completion of the Warden

Avenue road reconstruction project from Highway 407 southerly to McPherson Street would be issued after the Phase 1 work in the vicinity of the Highway 407 interchange is complete and after the CTA ruling agreement with CN is established.

5. FINANCIAL IMPLICATIONS

Overall project funding is allocated within the approved 2005 Road Capital Budget for Warden Avenue – McPherson Street to Highway 407 (Project No. 96780) and for Warden Avenue – Highway 407 to Apple Creek Boulevard (Project 98990). The total estimated cost of the combined projects is \$9.5 million.

Minor additional costs have been incurred for the splitting of the project into separate phases and preparation of the second contract. These costs are in the order of \$15,000 and can be covered within the approved expenditure for consultant fees.

6. LOCAL MUNICIPAL IMPACT

The widening of Warden Avenue between 14th Avenue and Apple Creek Boulevard will reduce congestion and improve traffic operations for the travelling public when the improvements to Warden Avenue are completed.

The Town of Markham is concerned with the current level of traffic congestion along Warden Avenue. York Region is appreciative of this concern and is committed to implementing the needed improvements under the 2005 Roads Capital Program.

Regional staff have worked closely with the Town staff to incorporate Markham's requirements for sidewalks, illumination and other features throughout the design process.

7. CONCLUSION

Several tendering options have been reviewed to ensure that improvements to Warden Avenue are initiated in 2005 and under a scenario that minimizes the Region's liability and exposure to contract claims and risk. In addition, tendering options were reviewed against public inconvenience, construction schedule and duration and overall project constructability.

In light of the dispute with CN over cost apportionment and expected CTA ruling, it is recommended that the reconstruction and widening of Warden Avenue between 14th Avenue and Apple Creek Boulevard be carried out in two phases with work north of Highway 407 commencing initially under a May 2005 tender.

The Senior Management Group has reviewed this report.

(The attachment referred to in this clause was included in the agenda for the April 6, 2005 Committee meeting.)