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TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON APRIL 7, 2014
FROM:	JOHN BRAAM, P. ENG. MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES & CITY ENGINEER
SUBJECT:	SOUTHDALE ROAD WEST WIDENING CONTRACT TENDER NO. T13-32 2013 GROWTH MANAGEMENT IMPLEMENTATION STRATEGY (GMIS)

RECOMMENDATION

That on the recommendation of the Managing Director, Environmental & Engineering Services & City Engineer, the following actions **BE TAKEN** with respect to the contract for the Southdale Road West Widening from Wonderland Road to Wharnclyffe Road (TS1486, TS1254-12, ES2467, EW3543):

- (a) the 2013 Southdale Road Widening Contract with Bre-Ex Limited **BE INCREASED** by \$950,000 to \$6,951,132.08 (excluding H.S.T.); and,
- (b) the financing for this project **BE APPROVED** as set out in the Source of Financing Report attached hereto as Appendix 'A';

PREVIOUS REPORTS PERTINENT TO THIS MATTER
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- Civic Works Committee - April 8, 2013 – Contract Award - 2013 Growth Management Implementation Strategy (GMIS), Southdale Road West Widening.

BACKGROUND

Purpose

This report provides Committee and Council with an overview of the status of the Southdale Road West widening construction project and provides recommendations on the adjustment of the contract fees. Through the course of the construction, a number of additional work items were encountered which in turn modified the anticipated work flow. In addition, the early winter season resulted in additional costs as the construction season was impacted. These factors impacted the overall project delivery and the City has incurred additional costs for the Southdale Road West Widening contract, which as a result requires the approval for an increase to the Bre-Ex Limited contract amount by \$950,000 to \$6,951,132.08 (excluding H.S.T.). The increase in contract value is required to complete the contract and to successfully achieve the project objectives.

Context

The Southdale Road Widening project was scheduled and progressed as part of the City's Growth Management Implementation Strategy (GMIS). The Transportation Master Plan (2004) identified this segment of roadway as requiring widening to four through lanes and this project is identified in the Growth Management Implementation Strategy. The project need was confirmed in the Smart Moves 2030 Transportation Master Plan. The additional capacity on Southdale Road completes a missing arterial road link upgrade, reduces traffic delays and mitigates an elevated collision rate. The Environmental Assessment (EA) for these improvements was completed in October of 2009. The Environmental Study Report recommended the construction

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of five lanes, two in each direction plus a center turning lane, with bicycle accommodation and sidewalks. Upgrades to storm, sanitary sewers and watermain are also being coordinated with this project for restoration cost savings and efficiency.

DISCUSSION

Tenders for the Southdale Road Widening project were opened in early March of 2013. Six (6) contractors submitted tender prices and the low bid construction tender was accepted by Council on April 8, 2013 at a value of \$6,001,132.08 (excluding HST). All of the other tender submissions were above \$7,000,000 with the exception of the Bre-Ex submission. The Bre-Ex submission was \$1,002,020 lower than the second lowest bidder (\$7,003,152).

This project was tendered in a very competitive environment and early in the construction season which factored into a favorable price. However, there was a large spread of over \$1 M between the lowest and second lowest bid. The low tender submission was 24% below the pre-tender estimate

Additional Work Items

The contract has required additional work which can be categorized as follows:

- Storm sewer redesign
 - The need to accommodate major overland flow routes in the area resulted in significant unique stormwater improvements to this project.
 - Large storm sewer connection method was not constructable in the field and had to be redesigned.
 - Site conditions at location were constrained with redesign and extra efforts undertaken to provide additional safety to adjacent traffic.
- Sanitary sewer redesign
 - Sanitary sewer had to be moved to a different location due to a conflict with existing infrastructure.
 - Additional structure length was required to accommodate the redesign.
- Poor soil conditions
 - Existing soil underneath portions of Southdale Road needed to be replaced to ensure the integrity of the new road.
 - These locations were localized areas that became evident once the road was excavated.
- Lack of information on existing utilities and infrastructure
 - Existing infrastructure and utilities were not always located as shown on as-built drawings or as indicated during field investigations, and required redesign or relocating.
 - Utility Companies identified additional work that had to be completed and paid through this contract but the City will recoup this money from the Utility Companies.
- Early onset of winter weather
 - Cold weather and early significant amounts of snow impacted the work and resulted in extra costs in order to fully open the road in 2013. Significant amounts of snowfall occurred on November 22, approximately 10 days prior to contract close/substantial completion.

The outstanding 2014 work required under the contract to be completed includes the surface course paving, manhole adjustments and boulevard treatments.

Analysis from a Program Perspective

Staff has considered this contract within the context of the 2013 construction program, within which approximately \$67,000,000 was spent on 37 infrastructure, pollution control, traffic signal and road rehabilitation projects. This entire construction program was completed under budget by \$4,700,000 prior to this request for contract increase. Cost estimating for construction contracts is challenging and is subject to many variables including project complexities, material prices and industry competitiveness. The prediction of future costs is based on past projects with an eye towards industry trends. A goal of zero contract overruns can be sought by including large contingencies. However, this can lead to greater amounts being committed and unspent in contracts. Lower levels of conservatism increase the risk of individual contract overruns but maximize the efficiency of the program funds.

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Continuous Improvement

Civic administration strives to learn lessons from experiences such as this for the improvement of future project management. Construction claims can be caused by a number of factors and understanding what causes construction claims is the first step in avoiding them.

The effects associated with the onset of cold weather and early snowfalls events during construction ultimately increased the time required for completing this project. Poor weather conditions reduced activity, co-ordination of trades becomes increasingly difficult and the contractor is forced to perform certain work in conditions which in and of itself are less productive. It's critical to start larger scale projects such as these as early as in the construction season as possible.

The road widening necessitated numerous utility relocations involving London Hydro, Union Gas, Bell Canada and Rogers Cable. It was possible to complete most relocations prior to the road widening contract and these were undertaken separately and funded by the City as necessary based on standard utility cost-sharing agreements. That said, it is not uncommon for infrastructure and utilities to not be located as shown on old as built drawings triggering redesign or relocating. As such, in some cases the contractor could not have reasonably expected to encounter the conditions and the circumstances that arise. It's become standard practice to perform additional investigations during design to determine conflicts and incorporate adjustments or alternate ways of proceeding before tendering.

CONCLUSION

This project encountered additional work items which were necessary in order to successfully complete the project. Sufficient funds are available in the project account TS1486 to complete the project with these additional items.

Consequently, staff is recommending that the contract for the Southdale Road West Widening project with Bre-Ex Limited be increased by \$950,000.00 to \$6,951,132.08 (excluding H.S.T.) to complete the construction contract. The proposed increase does not elevate the contract value above the second lowest tender submission. This value is an upset limit that includes a contingency for anticipated works in the spring and cost control measure are in place in an effort to not utilize the additional contingency.

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Acknowledgements:

This report was prepared with assistance from David Jackson, P.Eng., Construction Administration Division and Ted Koza, P. Eng., Transportation Planning and Design Division.

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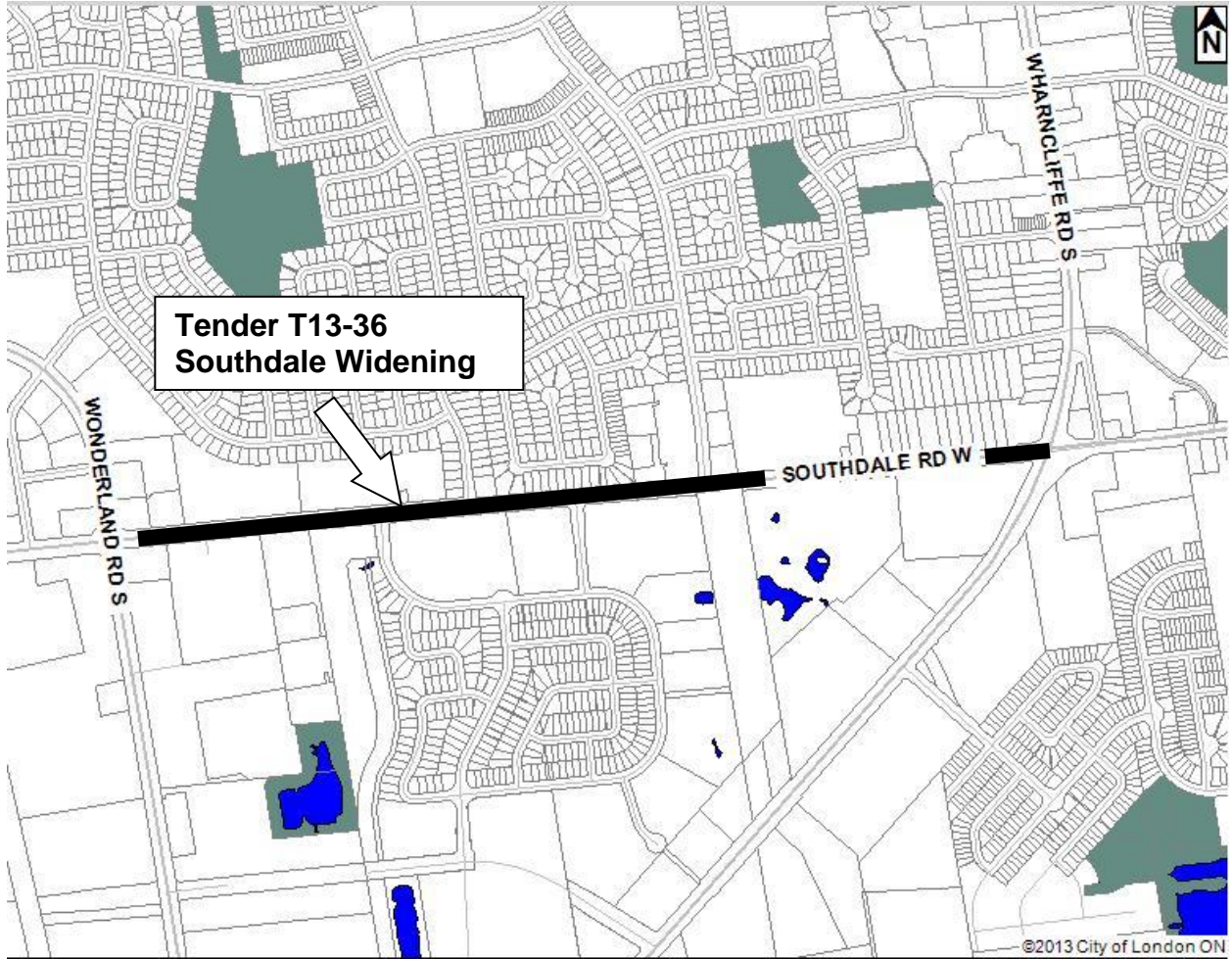
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Attachments: Appendix 'A' – Source of Financing
Appendix 'B' – Project Map

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Appendix 'B' Project Map



————— - Road Widening