

TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON FEBRUARY 6, 2018
FROM:	KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER
SUBJECT:	HAMILTON ROAD INFRASTRUCTURE LIFECYCLE RENEWAL CHESLEY AVENUE TO EGERTON STREET HYDRO & TELECOMMUNICATION UTILITY LOCATIONS

RECOMMENDATION

That, on the recommendation of the Managing Director, Environmental and Engineering Services and City Engineer, the following actions **BE TAKEN** with respect to the Hamilton Road Infrastructure Lifecycle Renewal Project from Chesley Avenue to the west side of Egerton Street:

- (a) the following report outlining the cost and schedule implications related to converting utilities from overhead to underground on Hamilton Road **BE RECEIVED** for information; and,
- (b) the Civic Administration **BE DIRECTED** to tender the project for implementation in 2018 as currently designed maintaining the aerial hydro and telecommunications utility arrangements.

COUNCIL'S 2015-2019 STRATEGIC PLAN

The following report supports the Strategic Plan through the strategic focus area of Building a Sustainable City by creating beautiful places and spaces, while addressing infrastructure needs.

BACKGROUND

Context

On December 12th 2017, Council resolved that the following:

“the Civic Administration **BE DIRECTED** to report back with a revised cost estimate for the 2018 Hamilton Road and Sackville Street Infrastructure Project, including engineering costs to provide for the relocation of utilities and telecommunications infrastructure to be placed underground, and a source of financing to accommodate the additional work; it being noted that the source of financing is to include information regarding potential impacts to 2019 Projects that may need to be cancelled or postponed to accommodate the increase budget.”

This report responds to the Council resolution by outlining the project impacts associated with the relocation of hydro and telecommunications infrastructure to underground locations on Hamilton Road between Chesley Avenue and Egerton Street.

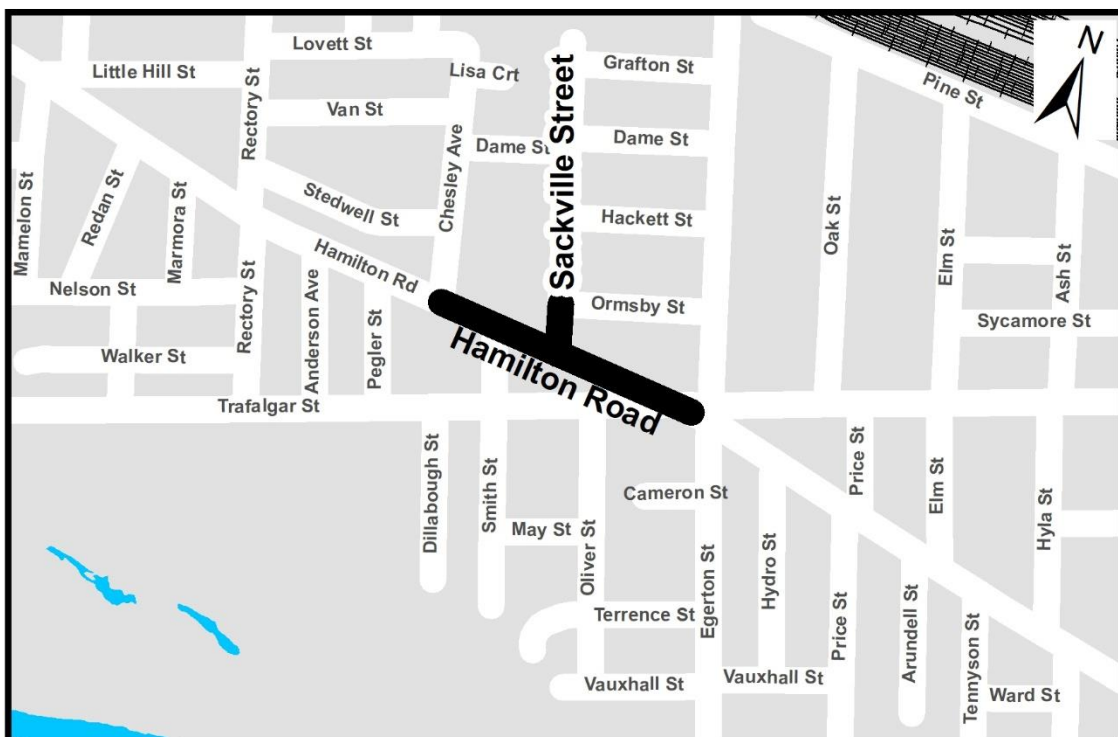
Background

Hamilton Road is an arterial road in the City of London that provides a direct connection from Highway 401 and Highbury Avenue South to the downtown and accommodates 21,000 vehicles/day. It is a busy 20 m wide corridor conveying four lanes of traffic with parking permitted in the curb lanes during off-peak hours.

The Hamilton Road corridor also accommodates major utility infrastructure. Utility poles on the north side of Hamilton Road accommodate significant hydro conductors belonging to London Hydro and telecommunications lines belonging to Bell Canada and Rogers Cable. The existing poles also support the streetlighting along this portion of Hamilton Road. A 200 mm diameter gas main exists beneath the road within the project limits. City utility services beneath Hamilton Road include storm & sanitary sewers and watermain.

An Infrastructure Lifecycle Renewal Project (ILRP) for Hamilton Road from Chesley Avenue to the west side of Egerton Street and Sackville Street from Hamilton Road to the north limit, was initiated in 2016 for construction in 2018. The two year design assignment was provided to allow sufficient time to create a Hamilton Road Streetscape Master Plan (SMP) from Horton Street to Highbury Avenue South recognizing the London Plan. The SMP is intended to provide direction for the restoration of the roadway within the current and future projects.

Figure 1 – Location Map



The London Plan identifies Hamilton Road from Horton Street to Adelaide Street and Rectory Street to Egerton Street as Main Street place types. The current project limits lie within these Main Street areas. The sections from Adelaide Street to Rectory Street and Egerton Street to Highbury Avenue are identified as Civic Boulevards. The SMP

has developed conceptual cross sections and design parameters for the Main Street and Civic Boulevard sections that are to be used to guide road design as various sections of Hamilton Road are reconstructed over the coming years. The Hamilton Road SMP was the subject of a recent public meeting and is nearing completion.

The Hamilton Road SMP includes recommendations to reclaiming portions of the corridor in order to re-purpose some of the public spaces in line with the vision of the London Plan. Within the existing project, this includes the creation of a “shared street” in the entrance of Sackville Street and a parkette at Trafalgar Street. The improvements for the shared street on Sackville Street will provide the addition of street trees where possible and a premium surface treatments from Hamilton Road to the south side of Ormsby Street (beside the Crouch Library) making it a unique space and more pedestrian friendly. The parkette concept reclaims space on the eastbound one-way portion of Trafalgar south of Hamilton Road.

During development of the SMP, consideration was given to converting the overhead hydro and telecommunications cabling to an underground installation within the Main Street sections in recognition of the London Plan urban design priority for Main Streets. Discussions with London Hydro identified significant cost and complications associated with implementation of the concept. Additionally, the removal of the utility poles would necessitate replacement with streetlighting poles. After some consideration in the context of the opportunities and constraints in the corridor, relocating underground the 400 m of hydro within the current project limits from Chesley Avenue to Egerton Street was not recommended.

The detailed design for the Hamilton Road ILRP is predominantly complete and was previously planned for tendering in the first week of February 2018 to enable a construction start in mid-May. Enhancements guided by the SMP and planned for implementation in the ILRP include:

- Implementation of the “shared street” concept in the southerly block of Sackville Street. This involves the addition of street trees where possible and a premium surface treatments making it a unique gathering place by the Crouch Library.
- Trafalgar Street, west of Egerton Street and south of Hamilton Road will become a parkette. The eastbound one way portion of Trafalgar Street will be closed and combined with the triangular public space for a parkette with additional trees and pedestrian space;
- Additional tree plantings where possible along Hamilton Road;
- Specialized surface textures; and,
- Street furniture in the public spaces near the library to provide a resting point.

The planned work on Egerton Street in 2019 will include sewer improvements from the south side of Hamilton Road and northerly past the north side of Trafalgar Street. Detailed design of the intersection has not yet been initiated to define the easterly limit of the improvements as sewer needs are being explored. A westbound left turn lane on Hamilton Road is proposed that will necessitate widening and likely utility relocations. Consequently, the conversion of the aerial utilities to underground locations within the Hamilton Road / Egerton Street intersection is under consideration in the 2019 project given the additional surface space constraints at that location combined with the aesthetic benefits.

The detail design for all of Sackville Street is also mostly complete. The infrastrucre renewal on Sackville Street from Ormsby Street to the north limit has been deferred to a

future construction year due to budgetary pressures and considering infrastructure condition.

DISCUSSION

Project Schedule

Changing the utility designs for the project will delay the project implementation from 2018 to the 2020 construction season.

The affected utility companies, London Hydro, Bell Canada and Rogers Cable each require five to six months to complete the design to place their infrastructure in conduits beneath the road. Not all work could proceed simultaneously so relocating overhead utilities would add a year to the project schedule. Additional time may be necessary to access every business and complete an assessment of the existing services in order to convert private services to underground feed. This co-ordination with customers may cause project delays outside of London Hydro's control and creates schedule uncertainty.

The Hamilton Road project is also coordinated with other projects in the area. It was planned to precede the Egerton Street Phase 2 project from Margaret Street to south of Hamilton Road that is scheduled for 2019. If Hamilton-Sackville was delayed, Egerton Phase 2 would remain scheduled in 2019 because it is a higher priority for sewer upgrades and it is one component of several related and phased projects. Therefore the Hamilton Road project would be postponed until 2020 to allow for area traffic management during construction. The delay would also allow sufficient time for London Hydro, Rogers and Bell to complete their necessary design work required for the underground conversion.

Costs

The affected utility companies provided cost estimates to complete the transition to underground where not previously planned in the current project. The additional services from the project engineering consultant to incorporate the additional work, revise the traffic staging, electrical, streetlight designs and additional construction administration are also reflected. Given the lack of design detail available for this concept, the confidence level for these estimates is low so a contingency has been added. The estimates are summarized as follows:

Component	Estimated Cost
London Hydro	\$1,580,000
Bell Canada	\$500,000
Rogers Communications	\$300,000
New Streetlight Poles	\$250,000
Additional Contract Engineering Design	\$150,000
Additional Contract Administration	\$120,000
Scope Contingency	\$400,000
Total	\$3,300,000

The additional \$3.3 M represents approximately a doubling of the project cost.

Construction Staging

The project, as currently designed, is planned to keep one vehicle lane of travel open in each direction on Hamilton Road while the work is being completed. There may be some short-term closures to one lane of travel with flagged traffic for localized work and potentially some detouring of eastbound traffic depending on subsurface excavation conditions.

Overhead to underground conversion of utilities would likely require closure of Hamilton Road to all traffic between Chesley Avenue and Egerton Street in order to complete all of this work in one construction season. While design for the utility alignments has yet to be determined, the existing aerial hydro and telecommunications service poles and lines would have to remain in place until the installation of the new underground service ducts is completed and all users are transitioned over to the new services. Only then could the existing service poles and lines be decommissioned and removed.

Co-ordinating construction so that each utility has time and space to complete their work inside the City's contract will be necessary, and it will add complications and costs to the project. With planning and staging (yet to be determined), every effort would be made to keep the road closure to a minimum, but it could be for as long as six months. North/south Egerton Street movements through the intersection would be maintained. With the road closed to vehicle traffic, detours would have to be established for the 21,000 vehicles/day that use this roadway, including transit.

Impact to Future Work Programs

Funds currently allocated in the 2018 Sewer, Water and Transportation capital accounts for the Hamilton Road project would be saved to be used on this project in 2020. An additional \$3.3 M would need to be allocated from the Transportation budget to fund the conversion program. Future 2020 projects representing this value would need to be deferred in order to reallocate the funds needed to reallocate the \$3.3 M required for this work. Projects that are currently under consideration for near-term implementation are identified below with preliminary cost estimates. Two of these projects would need to be deferred to provide the additional funds for the overhead to underground conversion of utilities on Hamilton Road in 2020.

- Exeter Road – Wellington Road to Meg Drive (\$1.1 M)
- Brydges Street – Egerton Street to Highbury Avenue (\$2.0 M)
- Fanshawe Park Road East – Highbury Ave N to Clarke Road (\$2.2 M)

CONCLUSION

Hamilton Road is a major corridor for both mobility needs and utility services. The Hamilton Road SMP considered the conversion of the above-ground utilities to below-ground considering the London Plan Main Street designation. The SMP did not recommend burial due to the considerable associated costs, and impacts on traffic flow, private services and related projects.

The additional scope of work and complexity associated with coordinating the conversion of the hydro and telecommunications infrastructure from overhead to underground on Hamilton Road between Chesley Avenue and Egerton Street would require:

- A project delay of two years;
- A cost increase of \$3.3 M; and,
- A construction road closure of Hamilton Road within the identified work zone in the order of 6 months.

The project includes enhancements that will contribute to the aesthetics of the corridor including a parkette, a shared street, new trees, premium surface treatments and street furniture. Staff recommend continuing with the tender and construction of the 2018 ILRP Hamilton-Sackville project as currently designed and maintaining the existing pole-mounted aerial utilities.

The resolution of this issue has delayed the tendering schedule for the project. This project was planned to be tendered in early February, with construction scheduled to start in mid-May. With approval of the report recommendation to proceed with the project as currently designed, tendering of the project can be initiated in March with construction commencing in June.

Acknowledgements

This report was prepared with assistance from Jane Fullick, C.E.T., Senior Technologist and Karl Grabowski, P. Eng. Transportation Design Engineer of the Transportation Planning and Design Division.

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cc: Councillor van Holst
 London Hydro
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