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TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON MAY 5, 2015
FROM:	JOHN BRAAM, P.ENG. MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER
SUBJECT:	SOUTH STREET AND GREY STREET TWO WAY CONVERSION

RECOMMENDATION

That on the recommendation of the Managing Director, Environmental & Engineering Services and City Engineer, the Civic Administration **BE DIRECTED** to host a public meeting with respect to converting South Street between Wellington Street and Adelaide Street N and Grey Street between Richmond Street and Adelaide Street to two way traffic operations, as recommended in the South Street Campus Lands Development Transportation Impact Assessment and referenced in the South of Horton Community Improvement Plan and the Old Victoria Hospital Lands Secondary Plan.

PREVIOUS REPORTS PERTINENT TO THIS MATTER
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- Built and Natural Environment Committee (BNEC) - June 13, 2011 - SoHo Community Improvement Plan
- Planning and Environment Committee – June 17, 2014 - Old Victoria Hospital Lands Secondary Plan and Associated Official Plan Amendments

BACKGROUND

Purpose

This report seeks Municipal Council input on the proposed one way to two way traffic operations conversion and direction to host a public meeting with the community with respect to the conversion of South Street and Grey Street as recommended in the South Street Campus Lands Development Transportation Impact Assessment Study.

Context

In June 2011, the South of Horton (SoHo) Community Improvement Plan was adopted by the Council to establish a vision for the future development and intensification of this neighbourhood. The SoHo Plan identified the need to study the potential conversion of South Street and Grey Street from one-way to two-way streets.

A Transportation Impact Assessment study was completed in 2013 to assess the impact of the South Street Campus Lands development on the surrounding road network system. As part of the study, the conversion of South Street and Grey Street to two-way

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streets was evaluated to assess the impact of the conversion on adjacent streets and intersections and the required road improvements. The transportation study determined that the conversion of South Street and Grey Street from one-way to two-way operation will have a minimal effect on the surrounding intersection operations and will improve traffic flow within the SoHo community. However, it does require the removal of approximately half of the existing street parking.

The recommendation for two-way operations on South Street and Grey Streets was further reiterated in the Old Victoria Hospital Lands Secondary Plan.

South Street from Colborne Street to Wellington Street is scheduled for reconstruction in 2016 as part of the annual Infrastructure Renewal Program. As such, there is an opportunity to coordinate the recommended infrastructure and operating changes when South Street from Colborne Street to Wellington Street is reconstructed in 2016.

DISCUSSION

South Street and Grey Street are one-way streets and considered to be main access roads for the SoHo community. A Transportation Impact Assessment was completed in 2013 to assess the impact of the South Street Campus Lands development on the surrounding road network system. As part of the TIA study, the conversion of South Street and Grey Street to two-way streets was evaluated to assess the impact of the conversion on adjacent streets and intersections and the required road improvements.

On major arterial corridors, one-way operation can provide many benefits including improved traffic signal coordination and overall improvement to the flow of traffic. In a neighbourhood context such as that of SoHo, the existing one-way operation of South Street and Grey Street provides simplified routes for travel into and out of the area. The drawback to this method of operation within a local setting is that it can become confusing to those unfamiliar with the setup and causes residents along these streets to backtrack when travelling in the neighbourhood.

Additionally, intersections where the one-way streets meet the arterial network can become congested as this setup funnels inbound and outbound traffic onto specific routes with reduced options available. With two-way operation on South Street and Grey Street, motorists would be given greater choice in the routes used to access the development, minimizing the 'funnel' effect described above, which in turn could improve the overall flow of traffic in the vicinity. Additionally, the congested southbound left turn at the intersection of South Street and Wellington Street would potentially be alleviated as some vehicles would use the intersection at Grey Street to turn.

In the vicinity of the subject site, the rapid transit network may be located to the west of the site along Wellington Street. The final rapid transit corridors are being evaluated in the current **Shift** initiative. The implementation of a rapid transit network will have a significant impact on the cross-section of Wellington Street in the vicinity of the subject streets. Depending on the outcome of the rapid transit environmental assessment, the transit lanes could be placed in the middle of the road, or within the curb lanes of the roadway. These potential designs will impact the final configuration of the intersection of Wellington Street with South Street and Grey Street.

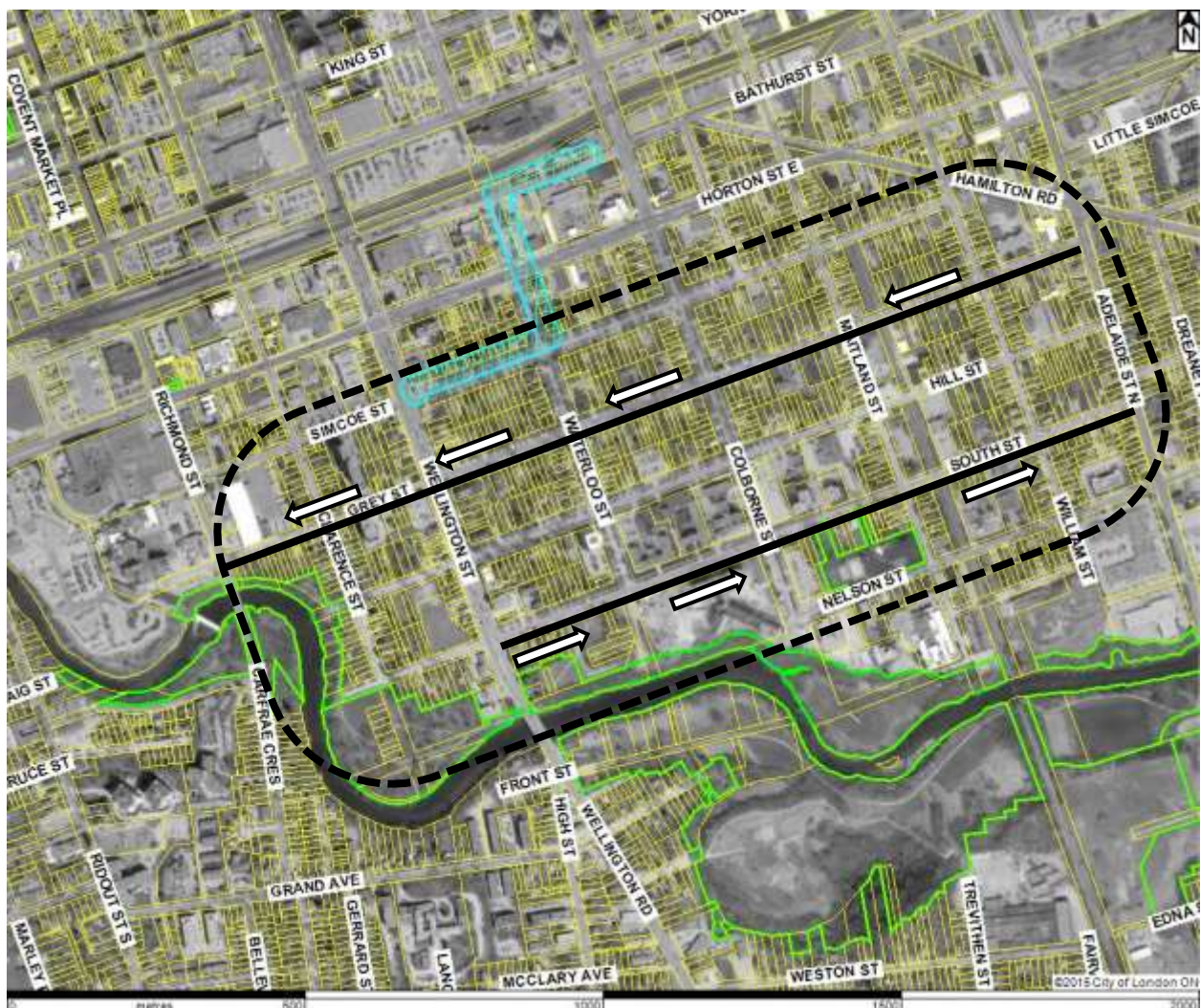
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Existing Conditions

South Street is a one-way eastbound Secondary Collector carrying an average of 2000 vehicles per day with a posted speed limit of 50 km/h. It is a primary access road for the SoHo community between Wellington Street and Adelaide Street. Metered on-street parking currently exists on both sides of South Street between Wellington Street and Maitland Street. Unmetered on-street parking is allowed on South Street between Maitland Street and Adelaide Street. All intersections are stop-controlled.

Grey Street is a one-way westbound Secondary Collector with a posted speed limit of 50 km/h and traffic volume of 3000 vehicles per day. It services the SoHo community from Adelaide Street to Richmond Street. Grey Street is currently traffic signal controlled at the intersections of Wellington Street and Colborne Street. The traffic signal is being removed and the intersection is being converted to an all way stop as part of the Colborne Street reconstruction as it is no longer required. On-street parking is currently permitted on both sides of the roadway and on the south side only west of Wellington Street. Figure 1 below illustrates the study area and the subject one way streets.

Figure 1



London Transit Commission currently operates numerous routes within the subject area as many routes terminate or travel through the downtown core. Route 1, operates in a general north-south orientation from Adelaide Street and Kipps Lane in the north to Commissioners Road and Deveron Crescent in the south. In the vicinity of the subject site, Route 1 completes a loop via Wellington Street, South Street, Colborne Street &

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Grey Street and services many stop locations within this loop with 15 minute intervals during the morning and afternoon peak hour periods.

Potential Conversion to Two-Way Operations

To determine the traffic volume reassignment (diversion of traffic) for two-way operation on South Street and Grey Street, it was assumed that 50% of through and turning traffic from each roadway would shift to the other street.

A traffic operational analysis was undertaken to determine the revised total future (year 2027) traffic operations with two-way streets in place on South Street and Grey Street. Overall, operations at the study area intersections remain largely the same with the implementation of two-way traffic on South Street and Grey Street.

In the morning peak hour, the delay on the southbound left movement at the intersection of South Street and Wellington Street showed improvements but continued to operate at a poor level of service. During the afternoon peak hour the greatest change to operations occurs at the intersection of Grey Street and Wellington Street. The westbound left, westbound through, and southbound through movements at this intersection all become critical with the conversion to two-way traffic on Grey Street. This is largely due to the addition of eastbound through and turning movements, which increase delay to the increased westbound movements. As none of these movements are operating over capacity, it is likely that a signal timing adjustment would improve operations at this location.

Based on the traffic analysis, the TIA study recommended that South Street and Grey Street be converted from one-way operation to two-way operation. The two-way conversion is expected to improve flow within the SoHo neighbourhood and provide more access options from the arterial network. The infrastructure and operating requirements for converting South Street and Grey Street from one-way to two-way operations are briefly summarized below:

South Street

- Remove all existing "one-way" and "do not enter" signage;
- **South Street at Wellington Street:** install a westbound stop sign, and a left-through prohibition;
- **South Street at Colborne Street:** install a westbound stop sign;
- Prohibit and Remove existing on-street parking on the south side of the road between Colborne Street and Maitland Street (one block);
- Prohibit on-street parking between Maitland Street and Adelaide Street; and
- Install westbound railway crossing protection (by CNR) including appropriate pavement markings and signage.

The total estimated cost of conversions on South Street is approximately \$150,000.

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It is recommended that eastbound and westbound left turn movements at the intersection of Wellington Street and South Street be prohibited due to the restricted sightlines along this section of Wellington Street. Prohibiting these movements would have a minimal impact on traffic operations as very few motorists make these movements today and few are expected to do so in the future. Alternative options for these movements are available including Wellington Street at Grey Street, which has been taken into consideration for the traffic analysis.

Grey Street

- Remove all existing "one-way" and "do not enter" signage;
- **Grey Street at Wellington Street:** modify island on north leg to accommodate a southbound left turn lane with 20 metres of storage and a 45 metre taper, relocate existing traffic signal pole, install new eastbound primary and secondary traffic signal heads, widen the west leg of the intersection by 2 metres and 100 metres long on the south side to accommodate a new eastbound left turn lane, and remove existing curb bump out on southwest corner to accommodate eastbound traffic;
- **Grey Street at Colborne Street:** install new stop sign and pavement markings for eastbound traffic (existing traffic signals will be removed this year as part of the Colborne Street reconstruction);
- **Grey Street at Maitland Street:** install new stop sign and pavement markings for eastbound traffic;
- **Grey Street at William Street:** install new stop sign and pavement markings for eastbound traffic;
- Prohibit on-street parking on south side of Grey Street between Richmond Street and Adelaide Street;
- Prohibit on-street parking on north side of Grey Street from Colborne Street to Adelaide Street;
- Install eastbound railway crossing protection (by CNR) including appropriate pavement markings and signage; and
- Install school crossing signage for eastbound traffic.

The total estimated cost of conversions on South Street is approximately \$400,000.

Public Consultation

Conversion of one-way streets to two-way is a Schedule A+ activity under the Municipal Class Environmental Assessment Process. Schedule A+ activities are pre-approved; however, the public is to be advised prior to implementation.

Given the proposed change is in an established residential neighbourhood, subject to Council direction, staff will host a community public meeting to inform and receive comments regarding the proposed two-way conversion of South and Grey Streets.

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CONCLUSION

A Transportation Impact Assessment study was completed in 2013 to assess the impact of the South Street Campus Lands development on the surrounding road network system. As part of the study, the conversion of South Street and Grey Street to two-way streets was evaluated to assess the impact of the conversion on adjacent streets and intersections and the required road improvements.

The transportation study determined that the conversion of South Street and Grey Street from one-way to two-way operation will have a minimal effect on the surrounding intersection operations and will improve traffic flow within the SoHo community. However, the two-way conversion will require a reduction of approximately half of the existing on-street parking.

The estimated cost of the associated infrastructure changes is \$550,000. Costs would predominantly be addressed by the Transportation Services annual Localized Roadworks account.

There is an opportunity to coordinate the recommended infrastructure and operating changes when South Street from Colborne Street to Wellington Street is reconstructed in 2016.

Next Steps:

Subject to Council direction, staff will host a public meeting with property owners adjacent to South and Grey Streets to inform the residents of the two-way conversion and receive comments. Staff would report back on the results of this engagement.

Subject to the results of the engagement and council approval of the conversion, administration would subsequently arrange for the appropriate amendment to the Traffic and Parking By-law and implement the necessary changes. This includes coordination with the 2016 South Street project and liaison with CN. If approved, implementation timing is likely 2016 but is dependent on CN scheduling of the required rail signals.

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Acknowledgements

This report was prepared with the assistance of Maged Elmadhoon, M.Eng., P.Eng., Manager Transportation Planning of the Transportation Planning & Design Division.

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