

**Peer Review of the November 2017 Traffic Impact Study by
LEA Consulting Ltd. for the Hotel and Residential
Subdivision 144 & 176 John Street East and 200 John Street
East & 588 Charlotte Street**

Town of Niagara-on-the-Lake



REPORT NO. 18M-01769-00-T01





December 19, 2018

Patrick Little, Partner
Heelis, Little, Almas and Murray LLP
P.O. Box 1056,
St. Catharines, ON
L2R 7A3

Dear Mr. Little:

**SUBJECT: Peer Review of the November 2017 Traffic Impact Study by LEA Consulting Ltd.
for the Hotel and Residential Subdivision 144 & 176 John Street East and 200 John
Street East & 588 Charlotte Street, Town of Niagara-on-the-Lake**

WSP is pleased to provide our peer review findings for the above-noted Traffic Impact Study prepared by Lea Consulting Ltd for the proposed development at 144 & 176 John Street East and 200 John Street East & 588 Charlotte Street in Niagara-on-the-Lake.

We thank you for the opportunity to undertake this assignment. Please do not hesitate to contact us if you have any questions or comments.

Yours sincerely,

WSP Canada Group Limited

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WSP ref.: 18M-01769-00-T01



1.0 PROJECT BACKGROUND

WSP has been retained by Heelis, Little, Almas and Murray LLP to assist Save Our Randwood Estate (SORE) in reviewing the above-noted development application. As part of a team of experts, our role was to review the Traffic Impact Study (TIS) dated November 2017 prepared by LEA Consulting Ltd. for Solmar Development Corp. and provide comments on its accuracy and completeness.

The TIS indicates that it covers a proposed hotel development and a separate future application for a residential subdivision. The TIS includes a portion of a site plan with an unknown date.

The Town of Niagara-on-the-Lake received a revised submission on July 10, 2018 which included an updated site plan dated July 8, 2018. LEA Consulting provided a letter dated June 7, 2018 stating that an updated TIS was not required because the number of proposed units in the hotel had not changed. The cover letter for the revised submission refers to an “Amended Hotel & Convention Plan” which is significantly different than the proposed development discussed in the TIS.

WSP has reviewed the TIS plus the more recent resubmission, and conducted a site visit on November 21, 2018.

2.0 TIS PEER REVIEW

Traffic

Study Area

The report indicates that Town staff were consulted on the definition of the affected study area. In our opinion, the study area is appropriate.

Existing Road Network

Transit:

The WEGO transit service operated by the City of Niagara Falls and the Niagara Parks Commission that operates along the Niagara Parkway to and from Niagara Falls is shown on the map in Figure 5, but its frequency is not shown in Table 1.

Data Collection:

Turning movement counts were collected at seven intersections on a selection of Tuesdays and Saturdays in August and September of 2017. The text on page 7 states that the traffic volumes collected in August and September are within 7% and, since they are similar, no seasonal adjustments are needed to use September data.

The report states that two survey dates for the intersection of John Street East and Queens Parade/Niagara Parkway (Tuesday August 22 and Tuesday September 19) were compared and found to be within 7%. Generally, the August volumes were higher than the September volumes. It is noteworthy that these two survey dates produced a different peak hour; one commencing at 4:00 pm and the other at 4:15 pm. A closer look revealed that the eastbound and westbound total approach volumes in the Saturday peak hour differed by 34% and 7% respectively. Because the eastbound and westbound movements at this intersection are stop controlled and experience the lowest level of service of any intersection movement in the study area, it is reasonable to conclude that analyzing this intersection with data from a September Saturday will result in better operating conditions than if August data were used. Using Saturday data from August would have likely produced less favourable operating conditions.

The data collection on Saturdays was carried out between 11:00 am and 1:00 pm and between 4:00 pm and 6:00 pm. The busiest hour from 11:00 to 1:00 was noon to 1:00 pm which was the last hour counted. The busiest hour from 4:00 to 6:00 pm was 4:00 to 5:00 pm, and this was the first hour counted. It is noteworthy that this PM peak hour was higher than the noon to 1:00 period. The data shows that traffic volumes continued to increase from 11:00 am until 1:00 pm, and were even higher from 4:00 to 5:00 pm and then started to decline. Without additional data showing the volume patterns throughout a typical summer Saturday, we are not confident that 4:00 to 5:00 pm is the relevant Saturday peak hour for this

assessment. This could be critical because the Saturday traffic conditions are busier than the am and pm weekday periods.

Existing Traffic Conditions

The peak hour factor of 0.92 as suggested by the Niagara Region guidelines is appropriate.

Tables 3, 4 and 5 show the unsignalized capacity analysis for the am, pm and Saturday peak hours using Synchro version 9.0 using HCM 2000 methodology. All study area intersections are operating under capacity during the weekday am and pm peak, with the exception of John Street at Queens Parade and Niagara Parkway which has problems shown by the Saturday analysis. The EB and WB approaches are operating at level of service D and F respectively, and are experiencing average delays of 33 and 233 seconds (s) respectively.

The results in Table 5 for the critical intersection of John Street and Queens Parade/Niagara Pkwy do not match the Synchro results in Appendix C for the Saturday peak hour. The Synchro output shows better operating conditions than what is shown in Table 5.

Future Background Traffic

Page 14 of the report outlines the future background traffic, and lists three developments provided by the Town that should be included. The largest of the three, the Pillar and Post Inn Expansion, is listed as having 114 hotel rooms and a 9,048 ft² conference centre. However, the traffic impact study for this development, which is appended to the LEA report as Appendix D, refers to a Pillar and Post Redevelopment Proposal that involves only event space.

Comparing Figure 8 with Figure 11, it is not possible to confirm whether the correct volumes have been added to the existing traffic volumes. This is, in part, due to the fact that the most critical intersection of this TIS is not within the study area of the reference study from which the future background traffic is drawn.

Additional developments such as the Royal Albion Place (683 King Street) which includes 29 single detached homes and 26 townhomes could have been considered significant enough and proximate enough to be included.

The results in Table 9 show the only traffic concern under the Future Background Traffic scenario is the intersection of John Street East and Queens Parade/ Niagara Pkwy on a Saturday which will have EB and WB movements operating at level of service E and F respectively, with average delays of 35 and 433s respectively.

The report discusses the potential installation of a roundabout at the intersection of John Street East and Queens Parade /Niagara Pkwy to address the conditions forecasted under the Future Background Traffic scenario. The only alternative presented is the roundabout, but no other options are discussed.

The roundabout analysis shows future operations would be improved under roundabout control. However, there are several additional impacts related to constructing a roundabout including property requirements, the possible removal of two or three mature trees for which the Niagara Parks Commission of the Town may not grant approval, as well as the relocation of utility poles.

Trip Generation

The forecasted trips for the three different land uses are shown in Table 11 on page 22. The rates used and the resulting trips are accurate. However, there is a Function Hall shown on the site plan in Figure 2, but this use is not discussed in Table 11 and no trips are generated for this use. In order to add these trips, more information will be required about the size and function of this space. It is important to note that the covering letter that accompanied the revised submission to the Town of Niagara-on-the-Lake in

July of 2018 refers to an “amended Hotel and Convention Centre Site Plan” but the TIS only discusses the traffic impact of the hotel use.

Trip Distribution

The distribution of the site generated trips is discussed on page 2 and presented on Figures 12, 13 and 14. The trip assignment appears reasonable.

In summary, the traffic analysis presented in the LEA report identifies operational concerns only at the intersection of John Street East and Queen’s Parade/ Niagara Parkway. However, as noted previously in this peer review, there are questions regarding the existing traffic data, the additional traffic generated by other proposed developments, plus the new traffic generated by the convention centre that was not included in the analysis.

Parking

The development’s parking requirements are outlined on page 30. The report lists the proposed uses as follows:

Hotel: 145 units

Residential Subdivision: 25 townhouse units

Residential Subdivision: 144 units of singles/semis

The parking requirements are correctly shown based on the indicated uses. However, the proposed site plan on page 2 of the TIS shows a new six-storey hotel block and a proposed one storey function hall. The applicant’s reports refer to the proposed development of a hotel and convention centre. The GFA for the function hall is not included in the TIS and this use was not accounted for in the assessment of the parking requirement for the proposed development. Although the TIS indicates that the proposed parking supply for the hotel exceeds the parking requirements according to the Town’s zoning by-law, this cannot be determined until the details of the convention centre are confirmed and added to the analysis.

The parking requirement for the residential subdivision has been correctly shown in the TIS. However, the proposed parking supply for this subdivision cannot be confirmed without more detailed drawings for what is being proposed.

Access Configuration

The site plan in Figure 2 on page 2 shows four proposed access points for the development. Three of the driveways are on John Street East. The report indicates that the westerly driveway will be an access and egress for the hotel only. The middle access on John will be an inbound only access for the hotel. The easterly driveway on John Street East is an access and egress for the hotel and the residential development, including emergency vehicle access. The concept plan shown in Figure 3 shows the easterly access to John Street East as if it is an extension of a new public road from the adjacent residential subdivision. There are several inter-connecting driveways on the hotel site, but the report does not indicate any measures planned to restrict movement between these accesses. Based on the site plan shown in Figure 2, it is not clear why the middle access on John Street East is required. Its proximity to the easterly driveway, and the driveway to the neighbouring property to the east (not shown), will create a series of three closely spaced driveways, some of which will be used by unfamiliar users such as hotel guests. This close spacing can result in significant vehicular conflicts.

The fourth access to the site is projected to be the primary access for the residential subdivision and is located on Charlotte Street. Charlotte is designated a local road in the Town’s Official Plan, and a new road serving as the primary access for the 169 residential units would more appropriately be connected to a collector road. This new access will be immediately south of the residential properties on the south

side of Weatherstone Court. This location currently contains a private driveway and a former rail corridor which is now part of the Upper Canada Heritage Trail, both of which intersect with Charlotte. The site plan in Figure 3 and the discussion on page 31 propose that the new public road exits the applicant's property and intersects with Charlotte at the current location of the Heritage Trail. It also proposes that the Heritage Trail will cross the new public road approximately 30 m from Charlotte, and approach Charlotte on what is currently the applicant's land. These changes will require removal of sections of the stone wall that surrounds the Randwood Estate. The Heritage Trail lands are not included in the lands listed in the development application. Consequently, the connection to Charlotte Street, as proposed, cannot be constructed without the trail owner's agreement.

Currently, the three-legged interaction of Charlotte and Paffard Streets is approximately 22 metres from the three-legged intersection of Charlotte and Weatherstone Court. Sightlines at this latter intersection are restricted by the stone wall along Charlotte. The addition of a new intersection on Charlotte to serve this development approximately 15 m south of Paffard is less than ideal. Possible conflicts at this location include:

- NB lefts to Paffard and SB lefts to Street B creating queues that interlock;
- The above-noted conflict also occurring with the trail crossing between the two side-street legs; and
- The trail crossing of Street B in proximity to Charlotte Street.

A detailed assessment of all movements along this section of Charlotte Street and a functional design of the proposed changes are necessary to properly assess the safety of this proposal.

3.0 PEER REVIEW FINDINGS:

1. The September Saturday data at John Street East and Queens Parade/ Niagara Pkwy needs to be adjusted because the critical side street movements are likely higher on August Saturdays.
2. More data is required to confirm the true peak hour for traffic analysis of this area on a Saturday.
3. The Pillar and Post Inn expansion specifications need to be correctly included in the LEA TIS.
4. The convention centre use must be included correctly in the analysis.
5. Other alternative improvements need to be evaluated to address the forecasted traffic conditions at the intersection of John Street East and Queens Parade/Niagara Pkwy. Only the roundabout is discussed.
6. The property requirements, mature tree and utility impacts as well as the estimated cost of the proposed roundabout need to be included in the report.
7. The parking demand for the convention centre use must be included in the TIS, and more detailed plans for the residential component are required to confirm the parking arrangements.
8. The proposed site access on Charlotte Street needs further review based on a functional design.

4.0 CONCLUSIONS:

The Official Plan of the Town of Niagara-on-the-Lake includes General Development Policies which include policy 6.23 Planning Impact Analysis. This section outlines the requirements for an applicant to



demonstrate the impact of their development. The Planning Impact Analysis is evaluated by the Town based on matters including Section 6.23 h) which reads:

“the adequacy of the existing roadway system to accommodate the proposed use and the location of vehicular access points and the likely impact of traffic generated by the proposal on streets, pedestrian and vehicular safety, and on surrounding properties.”

Also, the portion of the subject site intended to contain the hotel and convention centre is designated “General Commercial” as per the Site Specific Official Plan Amendment #51. Section 10.2 of the Town of Niagara-on-the-Lake Official Plan contains Goals and Objectives for Commercial land uses. Objective #7 states:

“to minimize the impact of commercial developments on the traffic carrying capacity of adjacent roads.”

In our opinion, the issues raised in this peer review could result in significant additional traffic impacts, which may or may not be able to be mitigated, and which the TIS has not adequately addressed. Therefore, the submitted TIS has not demonstrated compliance with Sections 6.23(h) and 10.2 of the Town’s Official Plan.