MEMORANDUM

Ainley Graham & Associates Limited
139 Front Street Unit 100, Belleville, ON K8N 2Y6
Tel: (613) 966-4243 P Fax: (613) 966-1168

To: Cheryl Tolles **Copies to:**

From: Caitlin Sheahan & Lilly Chen

Date: January 13, 2021

Ref: MTO Comments on Traffic Impact Study **File: 20525-1**

Comments:
Ainley Group received comments on the Traffic Impact Study (Blessington Road Development) from MTO dated October 28, 2020. The following is a response to the MTO comments.

MTO Comment #1: *The entrance on Blessington Road is stated in the report as approximately 100 metres from the Highway 37/Blessington Road intersection. MTO requires a minimum of 85 m for a single residential home, and greater distances for commercial businesses as per MTO access management requirements. The bare minimum for commercial use would be 185 metres provided that the lower traffic volumes support this in the report. For large traffic generators, MTO is looking for a minimum of 400 metre spacing. Please address.*

Ainley Response #1: As per the MTO *Highway Access Management Guideline* dated September 2013 Figure 5, the section of Highway 37 is classified as a 2B arterial. The Guideline's Figure 12, the desirable corner clearance distance on a public road (Blessington Road) between a 2B arterial (Highway 37) and a low volume commercial access (main site access) is 85 m (the minimum is 45 m). Thus the main site access meets this requirement (100 m > 85 m or 45 m). The 185 m requirement is for an access on Highway 37 and not for an access on Blessington Road. In addition, our analysis indicates that the space on Blessington Road between Highway 37 and the main site access (approximately 120 m) is sufficient to accommodate the 2035 westbound queue length (30 m) 95% of the time.

MTO Comment #2: *Review of the geometrics of the Highway 37/Blessington Road Intersection including Auto Turn software analysis for WB-20 design to ensure the trucks for this development can manoeuvre through the intersection without encroaching on other lanes, shoulder or curbing. From a review by MTO, it does not appear that this intersection was designed with WB 20's, as Blessington Road is not an industrial or commercial area receiving trucks. Auto Turn tracking for the WB-20 vehicle for both the southbound and northbound movement onto Blessington Road will need to be included. Is any mitigation required to ensure the intersection geometrics work at this intersection? Are any signals/poles impacted? If so, what improvements are proposed?*

Ainley Response #2: As per the MTO Design Supplement for TAC Geometric Design Guide for Canadian Road – June 2017, a rural arterial links the major regions of a province and should be able to serves all types of vehicles and up to 20% of traffic is heavy trucks. Given that the City has no truck restrictions on Blessington Road, trucks on Highway 37 are allowed to turn to/from Highway 37. In the TAC Geometric Design Guide for Canadian Road Table 2.4.4 for a WB-20 vehicle, the minimum turning radius for a turn of 90 degrees is 10.7 m for outside front wheel (9.6 m for centre of axle). The current northeast quadrant curb radius is 18 m and southeast quadrant curb radius is 24 m (both >10.7 m). Therefore, a WB-20 truck to/from the site can maneuver through the intersection without encroaching on other lanes, shoulder or curbing. The attached figure illustrates the same.

The TIS has included the intersection of Blessington Road/Hwy 37 and found that no improvements (i.e. left turn lane or right turn lane or additional through lane) are required as a result of the increased site traffic (see Executive Summary Key Findings). The report has analyzed the intersection from existing conditions to future background conditions and future total conditions.

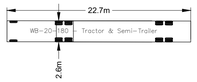
MTO Comment #3: *The entrance width for the commercial entrance is proposed at 15 metres. This appears to provide access to larger trucks so they can maneuver into the site. Please confirm in the report what type of trucks are entering the site.*

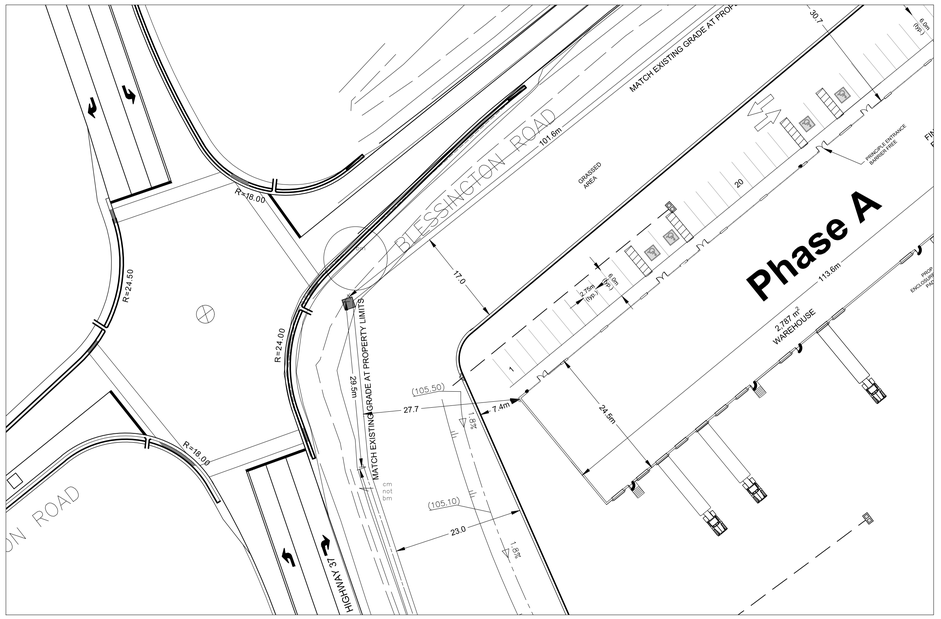
Ainley Response #3: The design vehicle for the site is WB-20. The land use site plan also shows the vehicle types and volumes anticipated for the site.

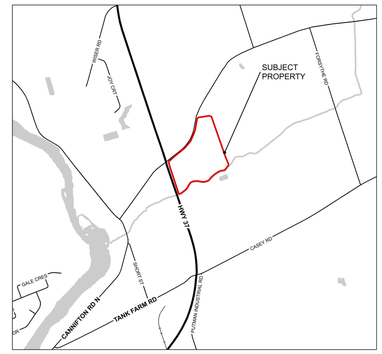
MTO Comment #4: *Additionally, what entrance design has been shown? This does not match any MTO commercial entrance design. It does not appear to be a City of Belleville commercial entrance design but please confirm. Also, is the City prepared to accept this exceptionally wide entrance?*

Ainley Response #4: Given that the entrance is on Blessington Road, the design should be in accordance with the City's standard. The entrance provides adequate space for WB-20 truck turning movements into and out of the site. Ainley Group will work with City staff during the Site Plan Application process to ensure the entrance meets their design requirements.

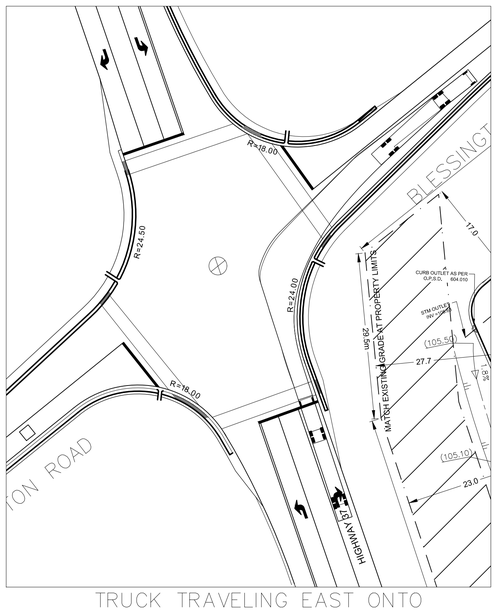
AUTODESK VEHICLE TRACKING
SAMPLE VEHICLE
TRACTOR SEMI-TRAILER (WB-20)
TAC 1999



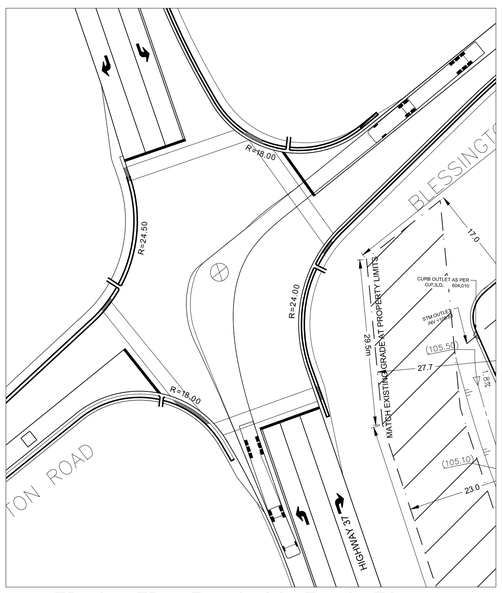




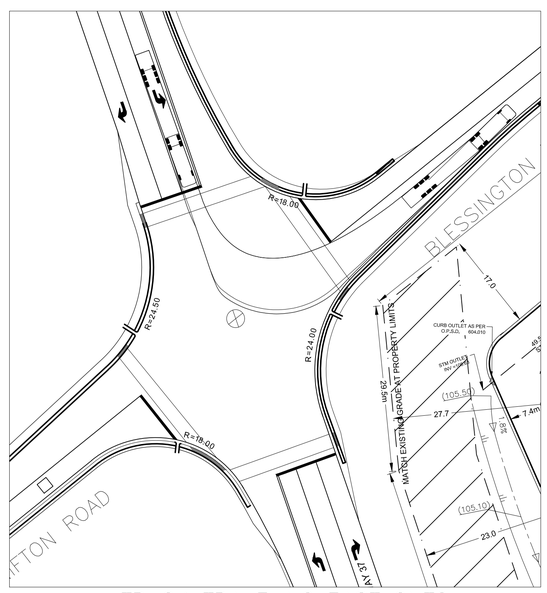
KEY MAP
N.T.S.



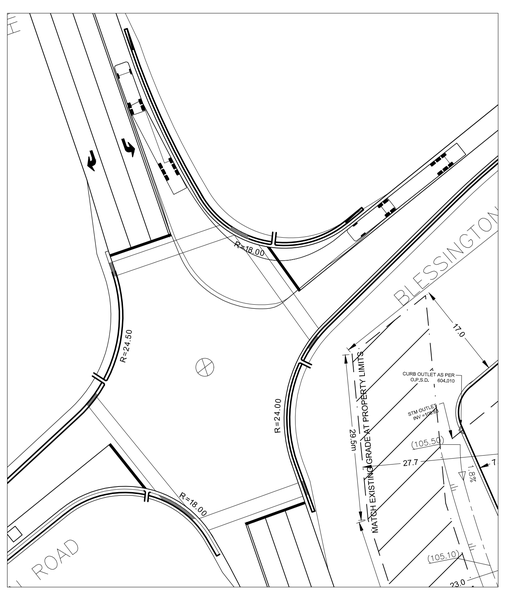
TRUCK TRAVELING EAST ONTO
BLESSINGTON ROAD (FROM SOUTH)



TRUCK TRAVELING SOUTH ONTO HWY
37 FROM BLESSINGTON EAST



TRUCK TRAVELING EAST ONTO
BLESSINGTON ROAD (FROM NORTH)



TRUCK TRAVELING NORTH ONTO
HWY 37 FROM BLESSINGTON EAST

LEGEND

- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING WATER MAIN
- EXISTING OVERHEAD HYDRO
- EXISTING HYDRO POLE
- EXISTING UNDERGROUND BELL
- EXISTING UNDERGROUND GAS
- EXISTING SANITARY MANHOLE
- EXISTING STORM MANHOLE
- EXISTING CATCHBASIN
- EXISTING DOUBLE CATCHBASIN
- EXISTING VALVE
- EXISTING FIRE HYDRANT
- EXISTING TEE
- EXISTING TEE
- EXISTING STREET LIGHT
- PROPOSED SANITARY SEWER
- PROPOSED STORM SEWER
- PROPOSED WATER MAIN
- PROPOSED SANITARY MANHOLE
- PROPOSED STORM MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED DOUBLE CATCH BASIN
- PROPOSED HYDRANT
- PROPOSED VALVE
- PROPOSED TEE
- PROPOSED BEND
- PROPOSED SWALE
- PROPOSED LIGHT
- PROPOSED CHAINLINK FENCE
- TACTILE SURFACE INDICATOR (O.P.S.D 310.039)
- 1.7% PROPOSED GRADE
- 100.00 PROPOSED ELEVATION
- 100.00 EXISTING ELEVATION
- PROP. 6m WIDE FIRE ROUTE CENTRELINE

REV.#	REVISIONS	DATE	INITIAL
1	PRELIMINARY DESIGN	13/01/21	V.B.C.

Not Valid Unless Signed And Dated

SCALE: 1:750
DESIGN: V.B.C.
DRAWN: V.B.C.
CHECKED: CRS
DATE: JAN 2021

COUNTY TRANSPORT
HIGHWAY 37 & BLESSINGTON ROAD
CITY OF BELLEVILLE

INTERSECTION
VEHICLE TRACKING

Ainley GROUP
CONSULTING ENGINEERS PLANNERS

CONTRACT No. 20525-1 DWG 20525-VT

V:\20525-1 Blessington Rd\Drawings\Parent\Blessington Road Site Plan- Intersection.dwg 2020-01-13 10:31 AM Victoria Chapman