July 29, 2021 Ref: 2021-069

Oland Holdings Inc.
c/o TACC Developments
600 Applewood Crescent
Vaughan, ON L4K 4B4

Re: 102 Prouse Road Uxbridge Soil-Mixing and Concrete Recycling Site – Traffic Brief

Oland Holdings Inc. is proposing a Zoning By-Law Amendment (ZBA) at 102 Prouse Road. This letter has been prepared to address the transportation requirements of the proposed land uses and will examine the changes in site operations and traffic volumes generated by 102 Prouse Road.

Site Context

The subject property is approximately 141,400 square metres and has two zoning designations. Currently the site is occupied by industrial uses and upon the redevelopment the site will include concrete mixing and soil recycling facilities. The site access is located at a One-Way Stop Controlled intersection of York Durham Line and Prouse Road, approximately 1.1 kilometres north of Highway 47. Figure 1 illustrates the site context and Attachment 1 includes the proposed site plan.

Figure 1: Site Context

Existing Road Network

Prouse Road

Prouse Road is a Township of Uxbridge local road with a two-lane rural cross-section. The segment of Prouse Road in the vicinity of the subject site runs for approximately 300 metres between York Durham Line and an access to an industrial property to the east, with no other connections to the east or to the west. The right of way of this roadway was measured to be 20 metres using the Durham Region interactive maps. This road has not been assumed by the Township of Uxbridge and currently functions as a site driveway for the subject site as well as the adjacent lands to the east.

York Durham Line

York Durham Line is a Durham Region Type B arterial road with a two-lane rural cross-section in the vicinity of the subject site. The right of way of this road was measured to be 36 metres using the Durham Region interactive maps. Between Prouse Road and Highway 47 / Bloomington Road, as well as between Wagg Road and Aurora Road, York Durham Line is a designated truck route with no weight restriction according to the 2021 Durham Region Works Department Regional Weight Restrictions Map. An 80 km/h posted speed limit applies.

Highway 47 / Bloomington Road

East of York Durham Line, Highway 47 is a Durham Region Type A arterial road with a two-lane rural cross-section and auxiliary turn lanes at major intersections. The right of way of this roadway was measured to be 40 metres using the Durham Region interactive maps. Highway 47 is exempt from weight restrictions according to the 2021 Durham Region Works Department Regional Weight Restrictions Map. An 80 km/h posted speed limit applies. West of Durham York Line, Highway 47 becomes Bloomington Road and is a York Region arterial road with a two-lane rural cross-section, a 36-metre right of way, and no road weight restrictions. A 70 km/h posted speed limit applies.

Aurora Road

Aurora Road is a York Region road with a two-lane rural cross-section and auxiliary turn lanes at major intersections. The right of way of this road is 36 metres according to the York Region Street Network Map and no vehicle weight restrictions apply. The unposted speed limit is assumed to be 80 km/h.

Existing Peak Hour Travel Demand

To understand the existing AM and PM peak hour traffic volumes including the heavy vehicle percentage, 2019 TMC data at York Durham Line and Regional Highway 47 has been acquired from Durham Region. The volumes coming from and towards north have been conservatively carried through to the subject site frontage along York Durham Line to establish the baseline for analysis herein. The 2019 AM and PM peak hour turning movement volumes are illustrated in Figure 2, and the heavy vehicle percentages are shown in Figure 3. The TMC data is included in Attachment 2.

Figure 2: Existing Traffic Volumes

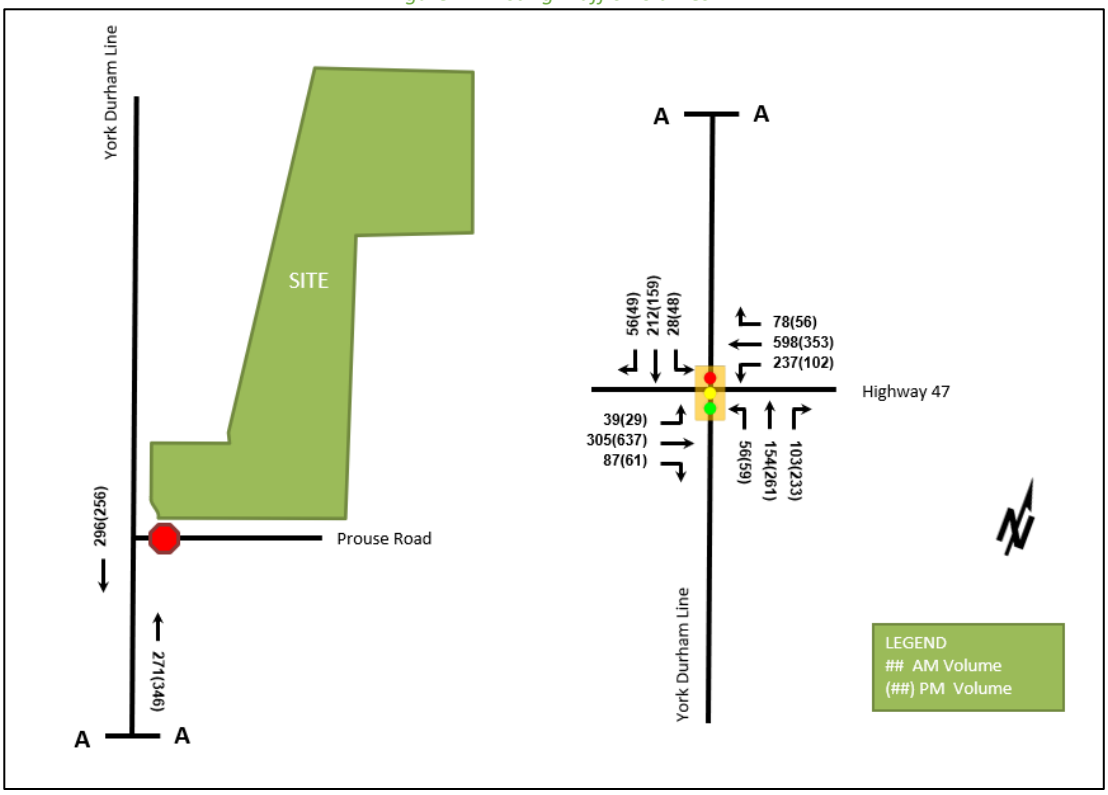
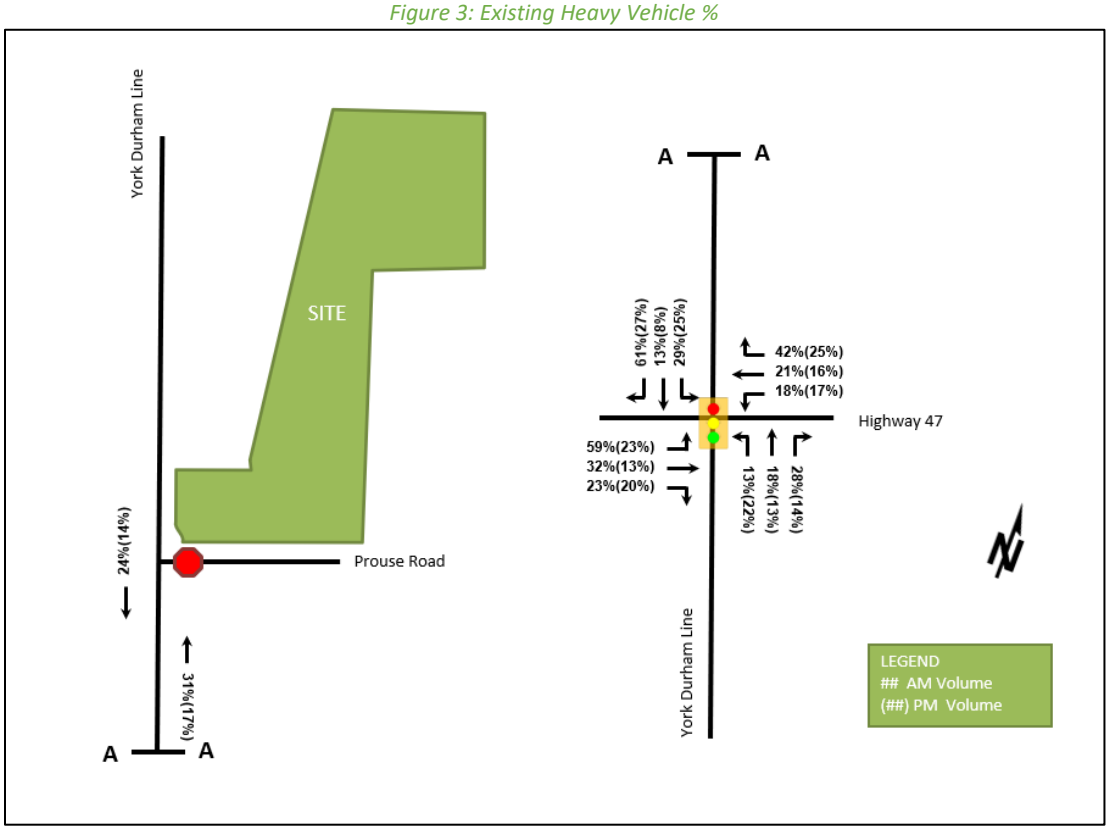


Figure 3: Existing Heavy Vehicle %



Existing and Proposed Site Operations and Trip Generation

Currently the site is occupied by industrial uses and upon redevelopment the site will include concrete mixing and soil recycling facilities. The land uses currently provided on site are not functional, however, to determine the net impact of the proposed redevelopment on the road network, trip generation will be undertaken for both the existing and the proposed land uses. The existing industrial land use operations involved 10 Triaxle truck loads per day and 80 employees. The proposed land uses will include a maximum of 228 Triaxle truck loads per day and 45 employees will be present on site. The operating hours of 7 AM to 5 PM remain the same between the existing and proposed land uses.

The trip generation of the existing and proposed land uses was estimated using the first principles to determine the net impact of the proposed redevelopment on the study area road network. The subject site peak hours were determined by assuming that staff arrive and leave within 30 minutes of the shift start and end times and that the first and last truck loads happen at 7:00 AM and 5:00 PM, respectively. This resulted in peak hours of 6:30 - 7:30 AM and 4:30 - 5:30 PM. The existing and proposed land use peak hour trip generation is summarized in Table 1.

Table 1: Trip Generation and Directional Split

Land Uses	AM Peak Hour			PM Peak Hour		
	In (6:30 – 7:00)	Out (7:00 – 7:30)	Total (6:30 – 7:30)	In (4:30 – 5:00)	Out (5:00 – 5:30)	Total (4:30 – 5:30)
Existing	80 auto trips	1 truck load	81	1 truck load	80 auto trips	81
Proposed	45 auto trips	12 truck loads	57	12 truck loads	45 auto trips	57
Net Difference	-35 auto trips	11 truck loads	-24	11 truck loads	-35 auto trips	-24

As can be seen from the Table 1 above, the existing land uses generated 80 inbound auto trips and 1 outbound truck trip during the AM peak hour and the mirror opposite during the PM peak hour, for a total of 81 peak hour trips. The proposed land uses generate 45 auto trips during the peak hours, and 12 truck loads come in or out of the site in the first and last half an hour of the operations. This adds up to a total of 57 peak hour trips. The net reduction in peak hour trips is 24, which is made up of 35 fewer auto trips and an additional 11 truck loads during the site peak hours.

Trip Assignment and Total Traffic Volumes

The AM and PM peak hour trip generation of the subject site was overlayed with the peak hour volume of the side street. In the AM peak period, this results in a conservative analysis as the adjacent street peak hour happens one hour beyond the subject site peak of 6:30 - 7:30 AM. In the PM, the site peak hour, and the adjacent street peak hour overlap.

As the subject site was functional in 2019, the trips in and out of the subject site were subtracted from the trough movements along York Durham Line and assigned to turning movements into and out of Prouse Road. Total existing land use vehicular volumes and truck percentages in the study area can be seen in Figure 4 and Figure 5, respectively. The trip generation and heavy vehicle percentage under the proposed conditions, assigned to the study area road network, can be seen in Figure 6 and Figure 7, respectively.

Figure 4: Total Area Traffic Volumes – Existing Land Uses

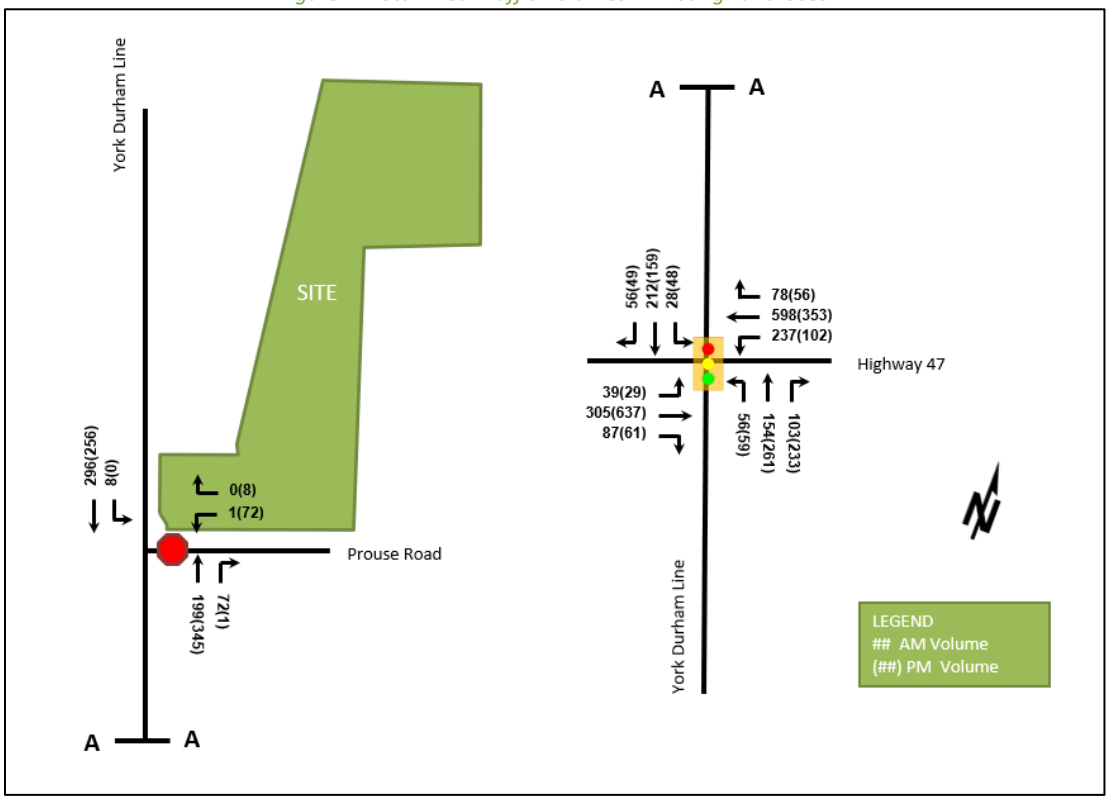


Figure 5: Total Area HV % - Existing Land Uses

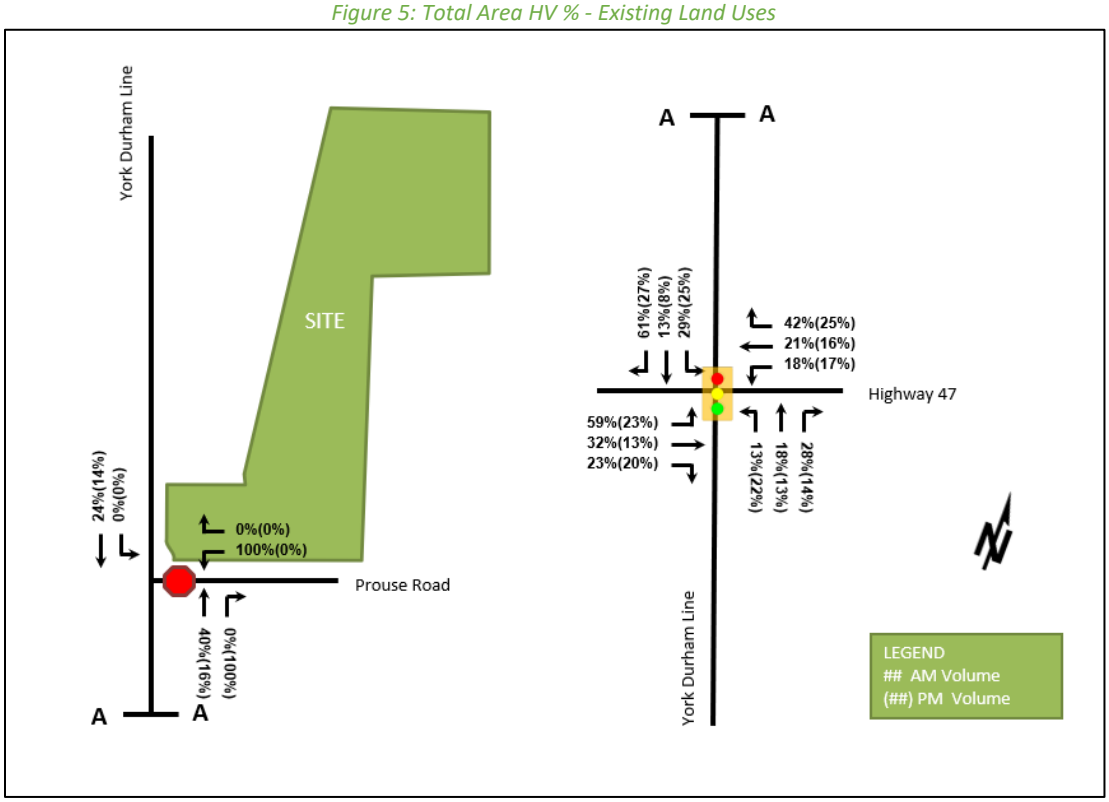


Figure 6: Total Area Traffic Volumes – Proposed Land Uses

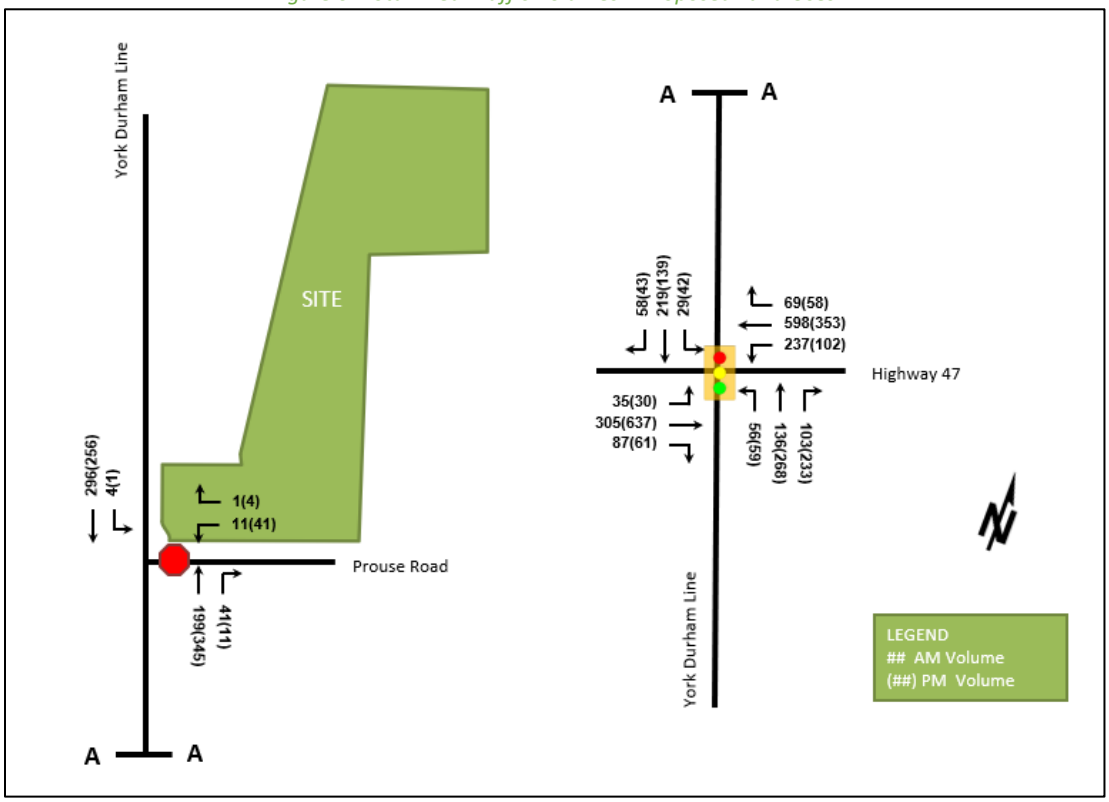
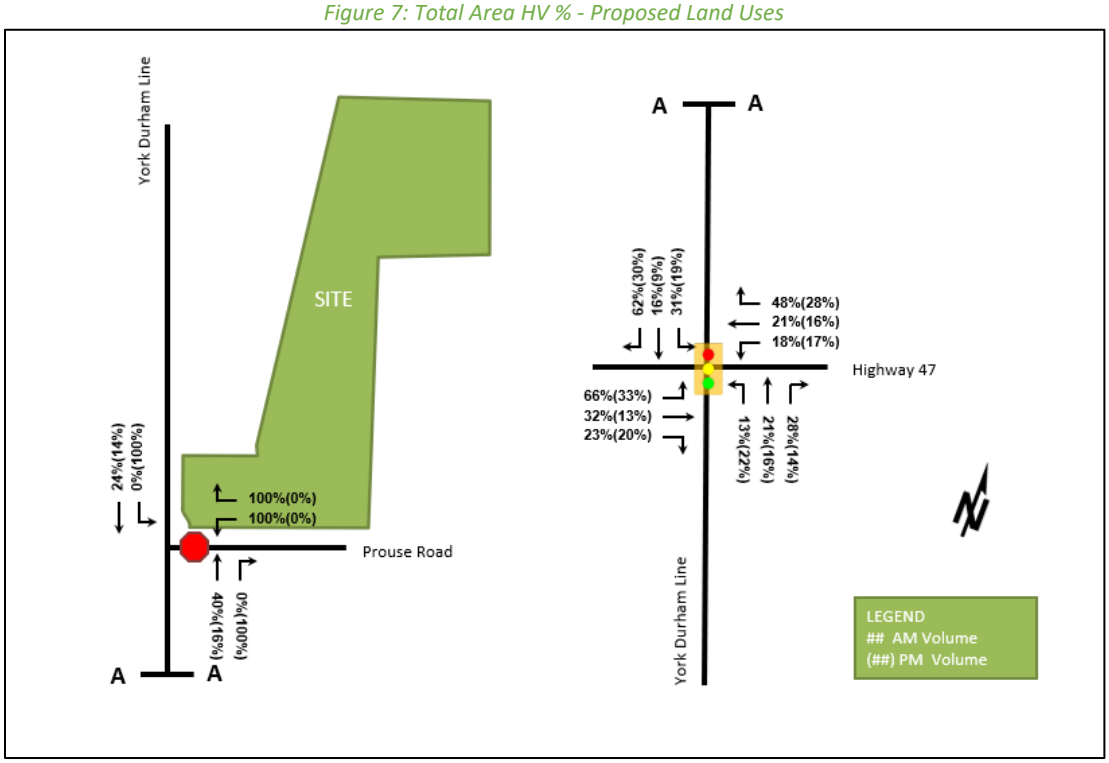


Figure 7: Total Area HV % - Proposed Land Uses



As previously discussed, the proposed land uses result in a net reduction of peak hour trips to 102 Prouse Road. When considered in isolation the proposed land uses generate 57 trips during both AM and PM peak hours. The Heavy Vehicle percent along individual movements of York Durham Line and Highway 47 after the redevelopment of 102 Prouse Road are within 10% of the heavy vehicle % surveyed in 2019. Therefore, the proposed land uses will have a minimal impact on the adjacent Regional road network.

Access Requirements

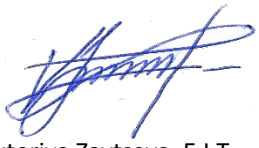
The largest vehicle accessing 102 Prouse Road (Triaxle truck), and the site access configuration, remains constant between the existing and proposed land uses. Therefore, a turning movement review of the site access is not required as the existing access configuration has already been designed to accommodate a Triaxle truck.

Conclusions

Based on the key requirements of the agreed to scope, the following conclusions are made for this site:

- The first principles trip generation analysis demonstrates that the proposed development results in a net reduction of peak hour trips when compared to the existing land uses
- When considered in isolation, the trip generation of the proposed land uses does not trigger a need for a TIS
- With the proposed redevelopment, the heavy vehicle percent along individual movements of York Durham Line and Highway 47 are expected to be within 10% of the heavy vehicle % surveyed in 2019
- The turning movement review of the site access is not required as the existing access configuration has already been designed to accommodate Triaxle trucks accessing 102 Prouse Road

Based on this Traffic Brief, the proposed development should be approved, from a transportation perspective.



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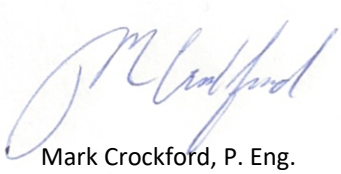


Mark Crockford, P. Eng.
905-251-4070
mark.crockford@cghtransportation.com

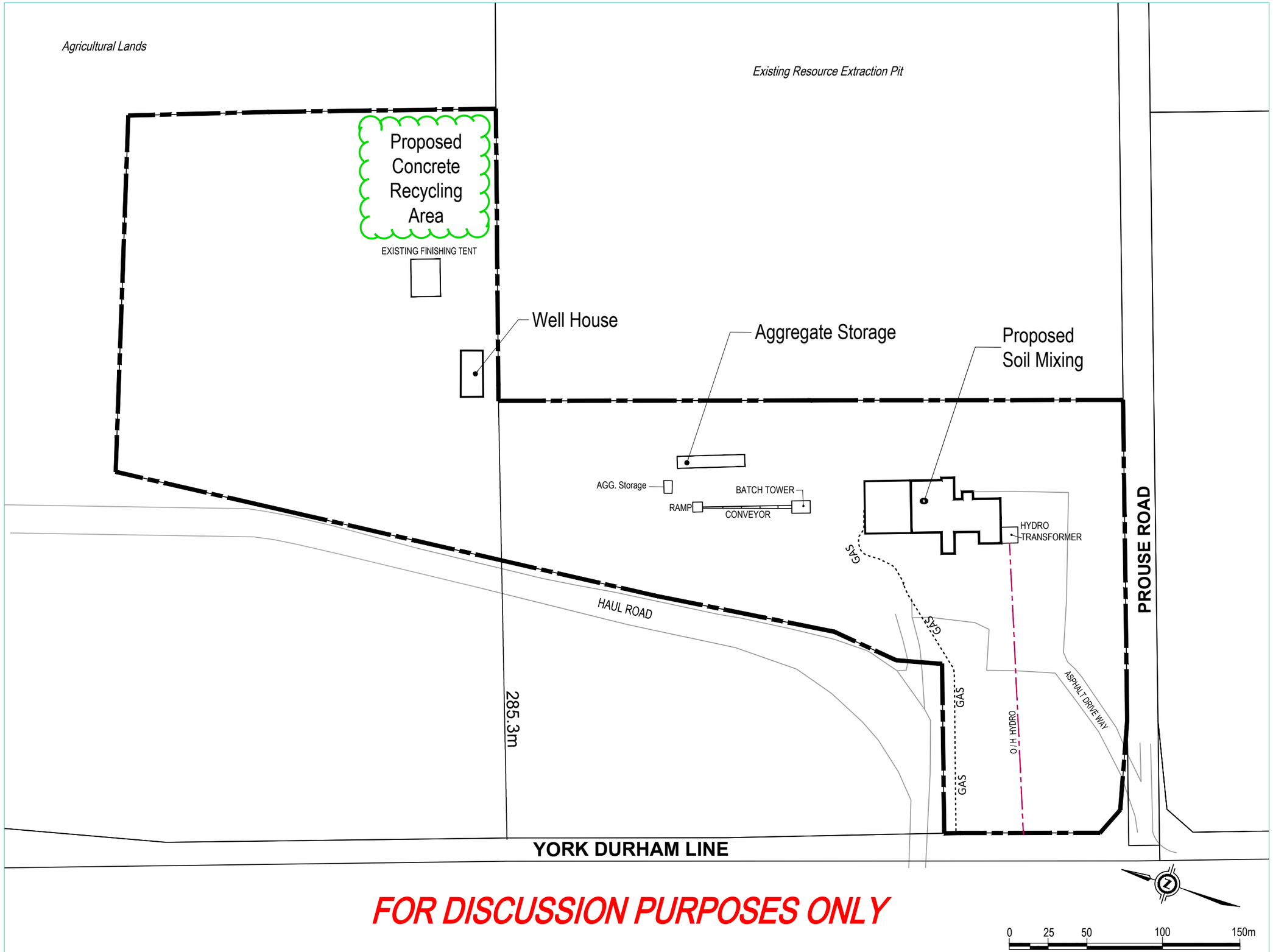
Attachments:
Attachment 1 – Proposed Site Plan
Attachment 2 – TMC Data

Attachment 1

Proposed Site Plan

PRELIMINARY CONCEPT PLAN

102 Prouse Road, Uxbridge, ON



Legend

- Subject Lands - 13.79 ha
- Existing Structures*
- Gas line
- Hydro line

*All existing buildings are shown. No new structures are proposed.

FOR DISCUSSION PURPOSES ONLY

MGP File: 21-3015
Date: June 3, 2021

Malone Given Parsons.
140 Renfrew Drive, Suite 201 | Markham, ON
L3R 6B3 | 905 513 0170 | mgp.ca

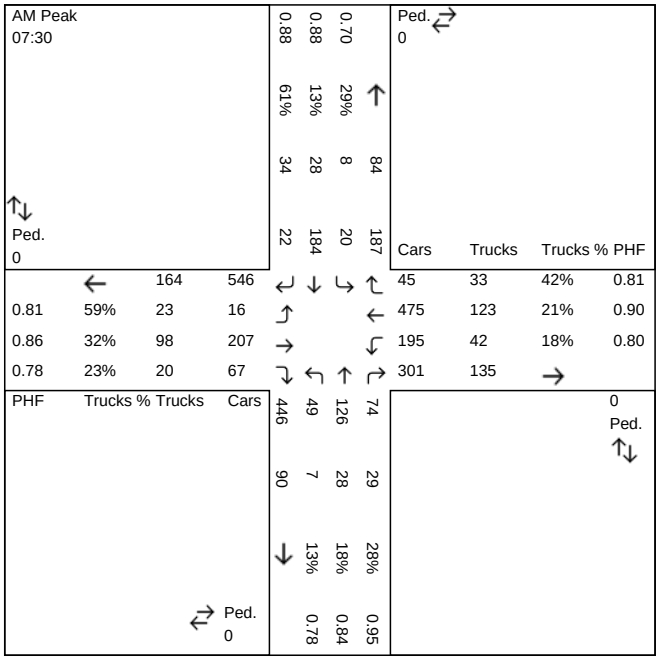
Attachment 2

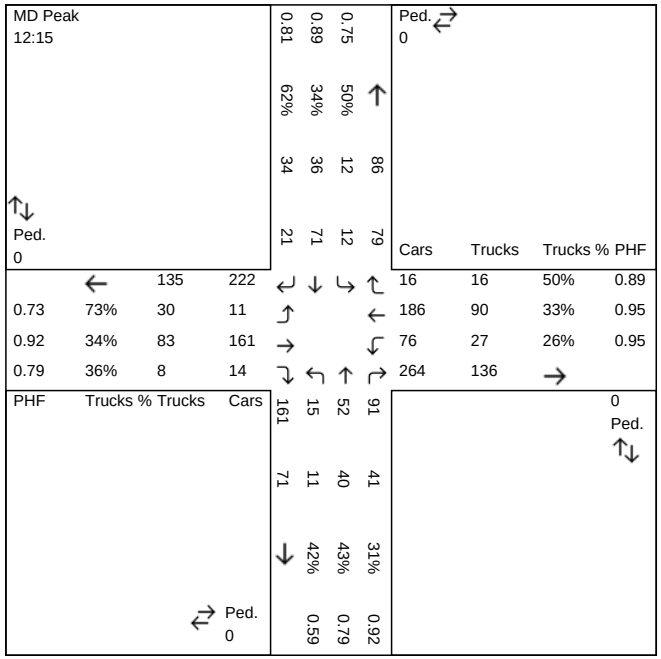
TMC Data

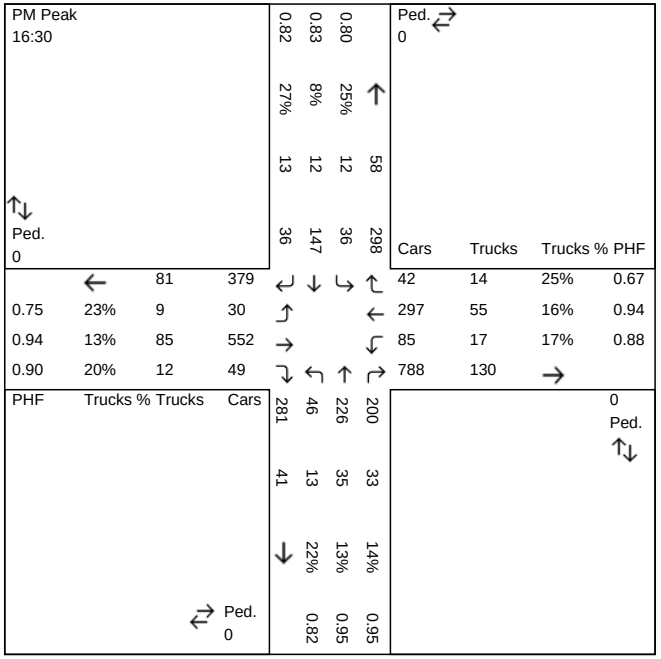
TMC Tabular Report

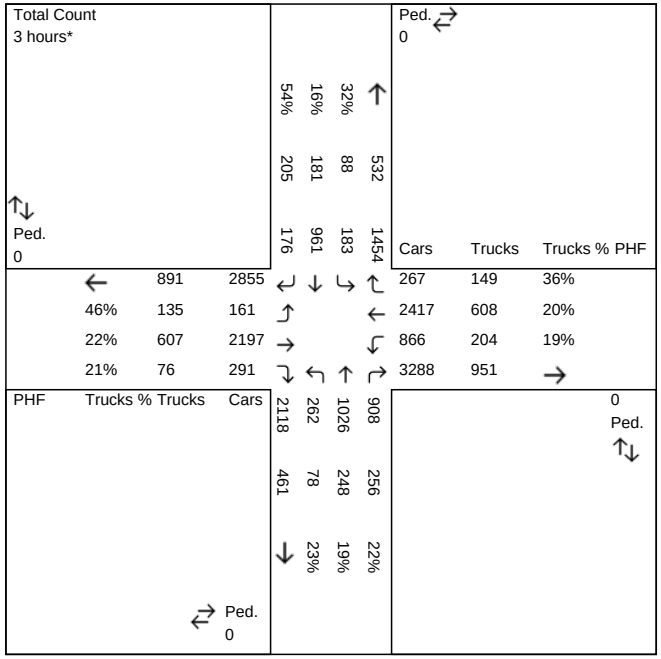
York Durham Line (R.R. 30) @ Regional Highway 47

TMC No: 0300400000 **Intersection ID:** 2320 **Count ID:** 35702018103 **Count Date:** 10/03/2019, Thu









TMC 15 Min Report

York Durham Line (R.R. 30) @ Regional Highway 47

TMC No: 0300400000 **Intersection ID:** 2320 **Count ID:** 35702018103 **Count Date:** 10/03/2019, Thu

Time	NORTH APPROACH										EAST APPROACH										SOUTH APPROACH										WEST APPROACH										Total
	Left	Cars Thru	Right	Left	Trucks Thru	Right	Left	Heavies Thru	Right	Ped	Left	Cars Thru	Right	Left	Trucks Thru	Right	Left	Heavies Thru	Right	Ped	Left	Cars Thru	Right	Left	Trucks Thru	Right	Left	Heavies Thru	Right	Ped	Left	Cars Thru	Right	Left	Trucks Thru	Right	Left	Heavies Thru	Right	Ped	
Period 1																																								
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16:30	**6**	**19**	**6**	**2**	**5**	**6**	**0**	**0**	**0**	**0**	**22**	**63**	**15**	**7**	**21**	**6**	**0**	**0**	**0**	**0**	**9**	**56**	**44**	**8**	**13**	**17**	**0**	**0**	**0**	**0**	**7**	**116**	**8**	**4**	**30**	**6**	**0**	**0**	**0**	**0**	**496**
16:45	**8**	**38**	**10**	**5**	**2**	**5**	**0**	**0**	**0**	**0**	**21**	**81**	**8**	**5**	**13**	**4**	**0**	**0**	**0**	**0**	**16**	**55**	**55**	**2**	**12**	**6**	**0**	**0**	**0**	**0**	**5**	**146**	**14**	**3**	**16**	**3**	**0**	**0**	**0**	**0**	**533**
17:00	**10**	**44**	**13**	**2**	**4**	**2**	**0**	**0**	**0**	**0**	**19**	**77**	**13**	**2**	**12**	**1**	**0**	**0**	**0**	**0**	**13**	**52**	**52**	**2**	**8**	**8**	**0**	**0**	**0**	**0**	**7**	**138**	**12**	**0**	**22**	**2**	**0**	**0**	**0**	**0**	**515**
17:15	**12**	**46**	**7**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**23**	**76**	**6**	**3**	**9**	**3**	**0**	**0**	**0**	**0**	**8**	**63**	**49**	**1**	**2**	**2**	**0**	**0**	**0**	**0**	**11**	**152**	**15**	**2**	**17**	**1**	**0**	**0**	**0**	**0**	**512**
17:30	6	39	12	1	3	1	0	0	0	0	21	74	7	1	10	2	0	0	0	0	9	57	44	1	1	4	0	0	0	0	6	134	9	2	12	1	0	0	0	0	457
17:45	13	26	8	2	1	0	0	0	0	0	16	55	6	2	8	0	0	0	0	0	12	54	63	0	2	0	0	0	0	0	10	116	13	1	8	2	0	0	0	0	418
18:00	10	25	8	2	2	0	0	0	0	0	12	52	8	2	7	2	0	0	0	0	8	55	41	1	0	1	0	0	0	0	8	109	12	0	9	0	0	0	0	0	374
18:15	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*
18:30	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*