## Proposed Burlington Quarry Expansion

## JART COMMENT SUMMARY TABLE - Transportation

 provided once a response has been prepared to the comments raised below and additional information provided.

|  | JART Comments (February 2021) | Reference | Source of Comment | Applicant Response (June 2021) | JART Response (December 2021) | Applicant Response (June 2022) | JART Response (June 2023) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Report/Date: Transportation / Haul Route Study, February 2020 |  |  |  | Author: Paradigm Transportation Solutions Limited |  |  |  |
| 1. | In addition to the provided comments, the <br> Transportation Planning Department provided the following background studies, with corresponding links, for the TIS to consider in its growth rate assumptions and overall background traffic characterization: <br> Dundas Corridor Study - Brant St to Bronte <br> Rd - MCEA Study: (2015) <br> https://www.halton.ca/For- <br> Residents/Roads-Construction/Municipal- <br> Class-Environmental-Assessment- <br> Studies/Dundas-Corridor-Study-Brant-Stto- <br> Bronte-Rd-(1) <br> Hamilton - Waterdown/Aldershot <br> Transportation Master Plan - East-West <br> Corridor Study - (2012) <br> https://www.hamilton.ca/cityplanning/ <br> master-plans-classeas/ <br> waterdownaldershot-transportationmaster- | General | Halton Region | The growth rates used in the Dundas Corridor Study and the Hamilton - <br> Waterdown/Aldershot Transportation Master Plan <br> are consistent with the growth rate used in the February 2020 traffic report prepared for the proposed Burlington Quarry <br> Extension. <br> The generalized background traffic growth assumes an annual growth rate of $2 \%$ per annum. This growth rate is <br> considered conservative (i.e., high) for the study area. In general terms, peak hour traffic growth is driven by urban <br> development trends and in this area, the new urban development for the next few years is the Waterdown urban <br> expansion, urban Burlington intensification and north Oakville urban expansion. These urban development trends would <br> indicate that traffic growth is most likely to increase in the eastbound and westbound directions along Dundas Street with <br> limited growth along the north/south arterial roadways of Guelph Line and Cedar Springs <br> Road, south of Dundas Street. | $2 \%$ per annum is considered conservative and is acceptable | Addressed. No Action |  |
| 2. | Perform safety analysis for the future crossing of No. 2 Side Road. This is where the access to the proposed southern expansion will align with the existing access and large trucks will be crossing city road. | General | $\begin{gathered} \text { City of } \\ \text { Burlington } \end{gathered}$ | True North Safety (TNS) has prepared a safety analysis for the crossing of No. 2 Sideroad. This report has been provided to JART under separate cover. | The study is related to No. 2 Sideroad and there are no additional comments as the safety issues have been addressed as part of the safety review. | Addressed. No Action |  |
| 3. | Provide information that the applicant's traffic consultant used to come up with the traffic generated by the quarry. It is needed to confirm the number of vehicles, where these vehicles are coming from and travelling to. | General | $\begin{gathered} \text { City of } \\ \text { Burlington } \end{gathered}$ | Appendix A in the February 2020 Traffic Study contains confidential data provided by Nelson Aggregate Co. This data was provided to the JART peer reviewer (CIMA Canada Inc.) in November 2020 subject to a Non Disclosure Agreement (NDA) with Nelson Aggregate Co . We understand the City of Burlington is relying upon the peer reviewer to conduct the review on behalf of the City of Burlington. | Confirmed that the numbers provided correspond with the information in the report. | Addressed. No Action |  |
| 4. | With regard to deemed right of way widths and widening requirements, under the current official plan, the following information is provided, please be advised however that through the application process, through review of the traffic studies, etc., by vested departments/agencies, it may be necessary for additional lands to be dedicated for additional lanes, turning lanes, daylight and visibility triangles etc., Site Engineering defers to the expertise of the City's Transportation department and the Region's Transportation department to confirm requirements. | General | $\begin{gathered} \text { City of } \\ \text { Burlington } \end{gathered}$ | See MHBC cover letter for response to Comments \#4-\#14 | The deemed rights-of-way should be shown on the site plan with the right of ways clear of quarry operations and facilities. | The existing and future rights-of-way are clear of quarry operations and facilities. The ARA Site Plans, attached as Tab 1, identify the existing right of ways. The Region and City have no authority to take land for the future right-of-ways as part of the proposed application to permit the proposed Burlington Quarry Extension since Site Plan Approval or Plan of Subdivision approval from the City and Region is not required. |  |
| 5. | No. 2 side Road is a City of Burlington owned road, the deemed right of way is 30.0 metres, the actual width varies from $+/-20.0$ metres to 25.0 metres. In order to meet the deemed width a variable widening of up to $+/-5.0$ metres would be required. The widening would be dedicated (free of charge and all legal and survey costs would be the responsibility of the applicant) through the planning application process. Only an Ontario Land Surveyor (OLS) would be able to accurately determine the actual dimensions and prepare a drawing which accurately shows the deemed right of way/widening. | General | $\begin{gathered} \text { City of } \\ \text { Burlington } \end{gathered}$ | Refer to Comment Response \#4. | Refer to JART Comment Response \#4. | Refer to Comment Response \#4. | Not resolved. |
| 6. | Colling Road is a City of Burlington owned road, the deemed right of way is 20.0 metres, the actual width meets deemed, no widening required. | General | $\begin{gathered} \text { City of } \\ \text { Burlington } \end{gathered}$ | Refer to Comment Response \#4. | Refer to JART Comment Response \#4 | Refer to Comment Response \#4. | Not resolved. |
| 7. | Cedar Springs Road is a City of Burlington owned road, the deemed right of way is 30.0 metres, the actual width varies from $+/-20.0$ metres to 30.0 metres. In order to meet the deemed width a variable widening of up to $+/-5.0$ metres would be required. The widening would be dedicated (free of charge and all legal and survey costs would be the responsibility of the applicant) through the | General | City of Burlington | Refer to Comment Response \#4. | Refer to JART Comment Response \#4 | Refer to Comment Response \#4. | Not resolved. |


|  | Land Surveyor (OLS) would be able to accurately determine the actual dimensions and prepare a drawing which accurately shows the deemed right of way/widening. |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8. | Guelph Line is a Region of Halton owned road, please contact the Region for deemed width and any widening and daylight triangle requirements. | General | City of Burlington | Refer to Comment Response \#4. | Refer to JART Comment Response \#4 | Refer to Comment Response \#4. | Not resolved. |
| 9. | Official Plan/Transportation Master Plan Rightof Way Requirements: <br> Any lands within 17.5 metres ( 57.4 feet) of the center line of the original right-of-way of Guelph Line (Regional Road 1) that are part of the subject property shall be dedicated to the Regional Municipality of Halton for the purpose of road right- of-way widening and future road improvements. | General | Halton Region | Refer to Comment Response \#4. | Refer to JART Comment Response \#4. | Refer to Comment Response \#4. | The previous JART response to Comment \#4 still stands. <br> The deemed rights-of-way should be shown on the site plan with the right of ways clear of quarry operations and facilities. |
| 10 | Municipal Class Environmental Assessment Study/Environmental Study Report (Transportation Planning) Right-of-Way Requirements Guelph Line (Regional Road 1): Any additional lands that are part of the subject property and have been identified as required for the future widening of Guelph Line (Regional Road 1), as identified in a future Municipal Class Environmental Assessment Study/Environmental Study Report, shall be dedicated to the Regional Municipality of Halton for the purpose of road right- of-way widening and future road improvements. <br> Currently, a Municipal Class Environmental Assessment has not been completed. | General | Halton Region | Refer to Comment Response \#4. | Refer to JART Comment Response \#4. | Refer to Comment Response \#4. | Refer to JART Comment Response \#9. |
| 11 | Detail Design Project (Engineering \& Construction) Right-of-Way Requirements Guelph Line (Regional Road 1): <br> Any additional lands that are part of the subject property and have been identified as required for the future widening of Guelph Line (Regional Road 1), as identified in a future Detailed Design Project, shall be dedicated to the Regional Municipality of Halton for the purpose of road right- of-way widening and future road improvements. Currently, a Detail Design has not been completed. | General | Halton Region | Refer to Comment Response \#4. | Refer to JART Comment Response \#4. | Refer to Comment Response \#4. | Refer to JART Comment Response \#9. |
| 12 | A daylight triangle measuring 15.0 metres along Guelph Line (Regional Road 1) and 15.0 metres along Colling Road shall be dedicated to the Regional Municipality of Halton for the purpose of road right-of-way widening and future road improvements. | General | Halton Region | Refer to Comment Response \#4. | Refer to JART Comment Response \#4. | Refer to Comment Response \#4. | The previous JART response to Comment \#4 still stands. <br> The deemed rights-of-way including the daylight triangles should be shown on the site plan with the right of ways and daylight triangles clear of quarry operations and facilities. |
| 13 | All lands to be dedicated to Halton Region shall be dedicated with clear title (free and clear of encumbrances) and a Certificate of title shall be provided, in a form satisfactory to the Director of Legal Services or his/her designate. | General | Halton Region | Refer to Comment Response \#4. | Refer to JART Comment Response \#4. | Refer to Comment Response \#4. | Refer to JART Comment Response \#9. |
| 14 | Please provide a draft reference plan detailing all of the proposed widening (and daylight triangle) dedications. The quarry lands (both the expansion and existing quarry) north of No. 2 Side Road, are, or will be one property, therefore the widening dedications would be taken on both the expansion and existing quarry lands, as well as for the frontage of the south expansion lands. | General | $\begin{aligned} & \text { City of } \\ & \text { Burlington } \end{aligned}$ | Refer to Comment Response \#4. | Refer to JART Comment Response \#4. | Refer to Comment Response \#4. | Not resolved. |
| 15 | Mitigation Measures -Future Operational Analysis Various movements at intersections within the study area were identified as operating at or above capacity during Total Traffic Conditions. There port does not specifically | General | CIMA Canada Inc. | The following critical movements, per the Halton Region TIS guidelines, are forecast to occur under Total Traffic conditions. <br> Dundas Street and Guelph Line <br> - Eastbound left-turn (capacity issue) <br> - Eastbound through (capacity issue) | Partially Addressed <br> The effects of the site traffic on the identified future total critical movements are minimal. However, as per the Halton Region | As noted the effects of site traffic to critical movements are minimal and are a result of existing and planned traffic levels. <br> Although these mitigation measures are not a | Acknowledged. We are assuming that the requested information will be included in the addendum letter. |

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## - Westbound through (capacaity issue)

Northbound left-turn (capacity \& que
Northbound through (capacity issue) Dundas Street \& Cedar Springs Road/Brant Stre

- Eastbound through (capacity issue)
-Westbound left-turn (capacity \& queueing issue)
Northbound left-turn (capacity \& queueing issue) Guelph Line and 2 Side Road
- Eastbound Left-Turn Lane (capacity issu)

Site generated traffic is not creating any new critical movements at the above noted intersections. Site generated traffic is expected to contribute volumes to only the following
critical movements:

Dundas Street and Guelph Line

- Eastbound left-turn -AM peak hour $=4$ PCE, $\mathrm{PM}=$ zero

Northbound through - AM peak hour = 7 PCE, PM = zero Dundas Street \& Cedar
Springs Road/Brant Stree

- Eastbound through - AM peak hour $=4$ PCE, PM $=$ zero Guelph Line and 2 Side Road
- Eastbound Left-Turn Lane - AM peak hour $=21$ PCE $\mathrm{PM}=$

Of the four critical movements identified as being a concern under the total traffic horizon where site traffic contributes volumes, the following movements are also considered critica

Dundas Street and Guelph Line

- Eastbound left-turn - (capacity issue)

Northbound through - (capacity issue) Dundas Street \& Cedar Springs Road/Bran
Eastbound through - (capacity issue) Guelph Line and 2 Side Road

- Eastbound Left-Turn Lane (capacity issue)

Site traffic related to a 2.0 million tonnes per annum extraction limit has negligible impact on traffic operations. Of the four critical movements identified to occur under total traffic operations, site traffic is expected to have very little impact on intersection operations
beyond the 2 Side Road intersection with Guelph Line. Table 1 below summaries the beyond in ser vehicle, v/c ratio and queue length between total summaries the and background traffic operations.
The generalized increase in background traffic growth ( $2 \%$ per annum) is expected to have a greater impact on intersection operations than site traffic generated by the site.

TABLE 1: OPERATION SUMMARY - CRITICAL MOVEMENTS IMPACTED BY SITE

| Intrectiont Mosement | Horizon Vear Year | $\begin{aligned} & \text { AM Poak Hour } \\ & \text { Los Delay vic } \end{aligned}$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
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|  | Bratal |  |  |  |  |  |

The following queue lengths are forecast to exceed the available existing storage at the

- Westbound left-turn
- Northbound left-tur

Site generated traffic is not expected to contribute volumes to these two movements. Both tare expected to remain critical with or without the approval of the quarry extension

It is anticipated that the storage requirements for the westbound lett-urn movement fio Dundas Street to Guelph Line will be addressed by the Dundas Street road widening ength for this movement is approximately 115 m . The forecast queue length is approximately 400 m . The forecast volume for this movement is approximately 715 PCE during the PM peak hour. The forecast volume suggests the need for dual westbound left-turn lanes.

The existing storage lane length for the northbound left-turn lane is 50 m . Guelph Line between Dundas Street and Driftwood Drive/Coventry Way is currently designed as a 5 ane cross-section with a painted centre median measuring approximately 5 m in widih connection with left-turns restricted by a raised centre median. There are no privated driveways or intersections along Guelph Line between Dundas Street and Driftwood Drive/Coventry Way. This would allow the road authority to repaint the existing center median to provide additional storage for the northbound left-turn movement. The analysis 190 m is needed for this movement. The additional storage can be accommodated by repainting the existing center median to provide the additional storage.
Table 2 below summarizes the operational conditions for the Dundas Street and Guelph Line intersection under total traffic conditions with the implementation of a dual

The report should identify all movements direct result of the proposed development. A section is required in the revised Transportation Impact Study which provides summary of the recommendations in accordance with Halton Region Guidelines.
equested Paradigm will provide an ddend atter outlining potential remedia easures that could be considered by the

## Addressed

The following mitigation measures are provided at Guelph Line \& Dundas Street to address the forecasted queuing issues

- Dual westbound left-turn lanes; and - Extending the northbound left-turn lane storage lane capacity to 190 metres
Table 2 outlines the 2024 total traftic operations with the proposed mitigation measures



Haul Route Stud
anges to the proposed h hat there are no mpacts to the road network are anticicapted, the Haul Route Study. It should be noted that the Region's report $\angle P S 08$-20 - Proposed Expansion to the Burlington Quary (Nelson),
yirements identified by the Region's Agregate Resources Reference Manual for the reparation of a Transportation/Haul Route

Figure 2.1 shows that the highest traffic volumes during the PM peak occurs between 12:00 PM and
3:0 PM. This is confirmed by the statement in Section 2.2 .3 that says: "Shipping actively begins
to taper off around 3PM". However, the TMCs provided in Appendix B for the driveway site show
nat the highest PM peak hour occurs between :30 and $5: 30 \mathrm{PM}$. Please confirm and update the

Please update Sections 2.2.1 and 2.2.3 to a
It the PM peak hour at the site is the same as he Guelph Line peak hour, no changes in the .00 PM, it is ree site occurs betwend dditional $P M$ peak operational analysis.

Section 2.2.3 the report provides details ary vehicle generation in recent years a Quarry does not own or operate any trucks for of origin to the quarry or to an end use entractors that trans customer and their port examines the customers' truck fleet, or typical truck sizes, tra tgoing trip. However to netermin per stimated truck trips generated by the consultant conducted a review of detailed mport indicates that records to 2018. The view are contidential and only availabla
he details provided in Section 2.2 .3 of the report hipping records would be beneficial to provide s such it is pat of the Quarry's operations.
ensing Quar has been producing aggregate since 1953. The proposed qua existing location. The haul route used to ship material to market will remain unchanged Line (Regional Road 1). The Regional Road network will support the movement of on lin

All trucks hauling material to market are expected to follow and adhere to the existing, and future, truck route network. Local deliveries may require a deviation from identified

To the west of the subject site there is an existing truck prohibition which limits truck prohibition was established by Council Resolution CC-83-05. The existing truck route options are available to the subject site. The site driveway for heavy vehicles is oute provides the shortest most direct route to the Regional road network while limiting The rock trucks shipping material across No 2 sideroad from the South Extension lands approximately 485 m west of Guelph Line. Rock trucks will not travel along No 2 Sideroad. Alth tucks will only cross No 2 Sideroad until the South Extension is exhausled.

At Guelph Line \& No 2 Side Road the entering volume during the PM peak hour is 1.156 vehicles. During the $3: 00$
at 800 vehicles per hour.

Table 3 below summarizes the two-way traffic volumes on Guelph Line at No 2 Side Road and the two-way volumes using the site driveway for the AM and PM count periods.
Highlighted cells indicate the peak hour for Guelph Line and the site driveway. The twoway volumes using both Guelph Line and the site driveway peak at the same time during
the AM count period. During the PM count period, two-way volumes using the site driveway peak prior to Guelph Line. The peak hour for the network is the adjacent street Off peak analysis is not expected to result in the identification of any new capacity issues
vs. the findings of the February 2020 Traffic Report.

TABLE 3: TWO-WAY VOLUME SUMMARY

Appendx A in the February 2020 Traffic Study contains confidential data provided by Inc.) in November 2020 subject to a Non-Disclosure Agreement (NDA) with Nel canad Aggregate CO . We understand the Region of Halton is relying upon the peer reviewer to

Addressed. No action
. Trip Distribution
Future quarry activity estimates are based on
the turning movement count done in October 2019 and factored to the maximum quarry production of 2.0 million tonnes per annum. The TMC data indicates 84 AM peak hour trips with 28 (98 passenger car equivalents (PCE)) two way additional heavy vehicle trips and 15 peak hour trips with 1 ( 4 PCE) two-way
additional heavy vehicle trip. No justification provided for the number of estimated additiona two-way trips.

Additionally, the trip distributions shown in Figures 4.2A and 4.2B require further explanation or adjustments. For example, Figures 4.2A indicates 28 additional inbound trips are making southbound right-turns from
Guelph Line but there are only 21 outbound trips making an eastbound left-turn onto Guelph Line.

Please provide further justification for the umber of additional trips estimated in Table 4.1.

Additionally, update Figure 4.2A and 4.2B to reflect outbound trips returning on the same path as the inbound trips or provide justification
for the different origin/destination points. Any changes to the future operations should be reflected in the future improvement scenario

## 22. Paradigm Methodology

Paradigm reviewed the detailed shipping records, provided in Appen aix A, that contain
shipping details from 2014 to 2018. Based on the shipping details, they estimated trucking levels for a 2.0 tonnes per annum scenario. This scenario includes three distinct types of truck trips entering and exiting the quarry. The first
distinct type, which accounts for all the outbound trips, is aggregate material that is mined and processed in the quarry. The second and third
distinct types, which are incoming trips to the quarry, are clean fill and recycling materials. quarry, are clean fill and recycling materials. the incoming trucks with clean fill and recycling material between 2014 and 2017 also left with a incoming trucks leaving with aggregate increased by about $23.0 \%$. The estimates were used to calculate the annual inbound and

Additionally, estimates of the future increase to truck volumes were calculated based on the details shipping records. The estimates were developed by adding the truck volumes from the
October 2019 site driveway turning movement count to the volumes estimated from the average daily trucks served in 2018. Th volumes from the provided in Appendix A, CIMA verified that the
estimated $50.0 \%$ of the clean fill and recycling trips that left with aggregate, was used to calculate annual inbound and outbound truck trips from 2014 to 2017, while $77.0 \%$ was used or 2018

Based on the review of the detailed 2018 data provide in Appendix $A$, the estimated total future truck levels shown in Table 4.1 of the subject 1 S are appropiate estimates for the
future peak hour truck volumes

From Table 4.1, the future estimated truck volume is 29 , which is added to the existing olumes CIMA examined the 2018 mo month total (aggregate, clean fills and recycling trips) average daily trucks served in averaged for the year was 31 trucks (rounded up). The value is fairly close to the 29 total

TABLE 4: ESTIMATED TRIP DISTRIBUTION

| Origin/Destination | AM Peak Hour |  | PM Peak Hour |  |
| :---: | :---: | :---: | :---: | :---: |
|  | In | Out | In | Out |
| North via Guelph Line | 60\% | 40\% | 60\% | 75\% |
| South via Guelph Line | 15\% | 30\% | 20\% | 15\% |
| South via Brant Street | 0\% | 5\% | 0\% | 0\% |
| East via Dundas Street | 20\% | 15\% | 20\% | 10\% |
| West via Dundas Street | 5\% | 10\% | 0\% | 0\% |
| Total | $100$ | 100\% | 100\% | $100$ |

trafic
or the site trip generation for a 2.0 million tonne license limit is recommended at this tim
The haul route used to ship material to market will remain unchanged from existing. All
material shipped to market, except local deliveries, will travel east tofrom Guelph Line material shipped to market, except local deliveries, will travel east to/from Guelph Line
(Regional Road 1). The Regional Road network will support the movement of goods to market including the resources produced at the Burlington Quarry. All Regional roads are classified and designed to accommodate truck traffic ${ }^{2}$. Acknowledged.

## Addressed

Based on the review of the data provided in Appendix A, the estimated total future truck evels shown in Table 4.1 of the subject TIS hour truck volumes.

The comments section provides justificatio for the trip distributions (shown in Figures he report) in Table 4: Estimated Trip Distribution.

## Rere

Partially Addressed
Appendix B provides a detailed breakdown
Appendix B provides a detailed breakdown of
vehicle types for the AM peak hour. However,
vehicle types for the AM peak hour. Howeve vehicles for the PM peak hour
Additionally, attachment 3 provides a breakdown of vehicle class for all study ar intersections except for at Gravel Pit \&

Addressed. Consultant has provided full breakdown of vehicle types for Gravel

|  | trucks estimated by Paradigm. <br> However, CIMA was unable to verify the distribution of the estimated 29 total trucks between the AM and PM peak hours. The subject TIS distributes 28 trucks (evenly distributed between inbound and outbound) to the AM peak hour and 1 outbound truck to the shown in Table 4.1, 15.0\% of the estimated 29 added trucks, or 4 trucks, should be allocated to the PM peak hour. <br> The TMC provided in Appendix B, does not include a detailed breakdown of the vehicles in the PM peak hour. A detailed breakdown of the vehicle types entering and exiting the site, such as the one for the AM peak hour, is needed to verify the added truck volumes in PM peak hour of the subject TIS. <br> In summary, the process used to estimate the added future truck volumes for both peak hours was verified; however, the distribution of the added truck volumes could not be <br> It is recommended that a detailed breakdown of PM peak hour TMC data be provided, similar to the data provided for the AM peak hour. |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 24. | Future Traftic Operations Tables 4.2 and 4.3 show future traffic operations at all study area intersections. Signalized and unsignalized intersections are together in the same table. Signalized and unsignalized intersections should not be in the same table as the level of service for a stopcontrolled intersection differs from a signalized intersection. <br> Please provide separate tables for signalized and unsignalized intersections for all traffic operational analyses. | $\begin{aligned} & \text { Tables } 4.2 \\ & \text { and } 4.3 \end{aligned}$ | $\begin{aligned} & \text { CIMA } \\ & \text { Canada } \\ & \text { Inc. } \end{aligned}$ | Acknowledged. Separate tables are not required to summarize operational conditions. The tables contained in the February 2020 TIS reflects the different LOS thresholds tor unsignalized and signalized intersections. <br> Attachment 1 contains the requested separate operational tables for ease of review. | Addressed <br> Attachment 1 provides the separate tables for signalized and unsignalized intersections | Addressed. No action |  |
| 25. | Mitigation Measures. - Traftic Signal Warrant for the intersection of Guelph Line \& No. 2 Sideroad. The report mentions that the traffic signal was not warranted. However, the not match those in Figures $4.3 \mathrm{~A} / \mathrm{B}$ (Total Traftic not match those in Figures 4.3AB (Total Traffic Conditions). <br> It is recommended to review the volumes used for the traficic signal warrant and update the analysis as necessary. as necessary | $\begin{aligned} & \text { Figures } \\ & 4.3 \text { a and } \end{aligned}$ 4.3B | $\begin{aligned} & \text { CIMA } \\ & \text { Canada } \end{aligned}$ Inc. | OTM warrants utilize total count volume forecast for the intersection with no PCE factor applied. <br> Attachment 2 contains supplementary OTM Warrant analysis with a PCE factor applied. <br> Traffic control signals at the intersection of Guelph Line \& No. 2 Sideroad are not warranted using OTM Book 12 Justification 7. | Addressed signal warrant analysis. The results indicate that signalization is not warranted. | Addressed. No action |  |
|  | Access Road <br> In Section 5.2.1 the second bullet point for site operational assumptions indicates the expected number of working days per year will be 208. <br> However, in Table 5.1 the number of operating days used for calculating average tonnage per year is 250 . | Section 5.2 .1 and Table 5. | $\begin{aligned} & \text { CIMA } \\ & \text { Canada } \\ & \text { Inc. } \end{aligned}$ | The difference between Section 5.2.1 and Table 5.1 accounts for the theoretical maximum tonnage of 2.0 tonnes per annum. The table assumes the 2.0 million tonne per annum limiti is comprised of only new material extracted from the South Extension. <br> The traffic impact assessment has been completed based on the proposed limit of 2.0 million tonnes per annum and considers asphall production, aggregate recycling and clean fill imported for rehabilitation. <br> With the existing 208 working days per year the tonnage would be approximately 1.75 M tonnes where 250 working days per year equates to approximately 2.1 M tonnes. | Partially Addressed <br> Table 5 in the comments provides an updated table with 208 working days per year. change in two- way truck tratific crossin the Number 2 Side Road from 85 PCE vehicles to 90 PCE venicles during the AM during thePM) from the AM peak hour to the PM peak hour. <br> Finally, reference is made for the Number 2 Side Road access ot the Halton Region Number 2 Side Road access is over 400 metres trom Gueph Line. The Halton Region Access Management Guidelines tor a full movement access indicates a spacing between 300 t 400 mer between 300 o 10400 metres. | The 90 PCE is a typographical- error. The PCE calculation for two-way truck trips is 84 ( $24 \times 3.5$ ) Actual truck trips may vary depending on operations and service rates for vehicles hauling material over the roadway. Vehicles may not return to the southern pit extension within the same hour. Additionally, the hauling operation over the roadway may taper off during the afternoon <br> Number 2 Side Road is under the City of Burlington's Jurisdiction. Halton Region Access Management Guidelines apply to Regional Roads. <br> Nevertheless, the space between the driveway and Guelph Line is noted to be over 400 metres and satisfies the Halton Region Access Management Guidelines. | Addressed. Consultant has provided the required detail for PCE calculation and access spacing. This detail should be provided in the report. |
|  | Additionally, Table 5.1 shows the number of two- way truck tips However, the number of PCE vehicles per hour Howevere tor 85 PCEE sin hh AM peak to 90 increas PCES ithe PM peak without any turther PCEs in the PM peak without any further background. <br> Finally, Section 5.2.1 mentions that the South Extension Access Road will be designed to (CAT 77570 -tonne rock truck) and will be stop- controlled, however no reference to the requirements of Halton Region's "Access Management Guidelines" is presented as part |  |  | Although this adjustment was made, the number of working days per year has no effect on the truck trip generation as the generation based on the number of trucks, trips per hour and hours of operation. Table 5 below provides an updated table with 208 working days. <br> TABLE 5: ESTIMATED SOUTH QUARRY EXTENSION CROSSING TRAFFIC |  | No further JART comment. This is assumed to be addressed. |  |



|  | The roadway geometry and road bed structure will be designed to accommodate the rock trucks that the licensee plans to operate <br> Comment: <br> Information contained in the Site Plan should include the recommendation presented in Section 2.4.4. of the TNS report. | $\begin{aligned} & \text { CIMA } \\ & \text { Canada } \\ & \text { Inc. } \end{aligned}$ | Section 2.4.4 of the TNS report addresses "Approach Site Distance". The following note will be added to the proposed Burington Quarry Extension ARA Site Plan (March 2022) and the proposed existing Burington Quarry Site Plans: <br> "The haul truck crossing approaches on No. 2 Sideroad shall be designed and constructed to provide an approach sight distance (i.e., visibility triangle) extending, at a minimum of 25 m on each crossing approach to a point 50 m east and west on No 2 Side Road." The TNS is included as Tab 3. | Addressed. Consultant has agreed to add excerpt from TNS report to the Site Plan as requested. |
| :---: | :---: | :---: | :---: | :---: |
| 32. | Prior to extraction commencing in the South Extension, the licensee will be responsible to upgrade the crossing on Side Road No. 2 to municipal standards. During operations in the South Extension, the licensee will be responsible for maintaining this crossing. The licensee is responsible for all costs associated with the crossing, including signage at the crossing. (Financial Report). <br> Comment: <br> No comments. Side Road No. 2 is under | $\begin{aligned} & \text { CIIMA } \\ & \text { Canada } \\ & \text { Inc. } \end{aligned}$ | Addressed. No action. |  |
| 33. | Various notes on the proposed site plan should reflect the integrated nature of the operation desired by the proponent. This includes, but not limited to, capping the maximum number of and proposed) <br> The maximum number of vehicle trips shall be cumulative across all licensed areas (current and proposed). | Halton Region | The ARA Site Plans for the Extension and Existing Quarry reflect the integrated nature of the operation and includes the maximum number of vehicle trips. <br> Regarding the maximum number of on-site trucks between the two site please see proposed Existing Quary Site Plans (February 2022) page 2 - "On-site Operations" Notes 7 and 8 and the proposed Burlington Quarry Extension Site Plans (March 2022) - page 2 "Noise" 3 E . See Tab 4 for the Existing Quarry Site Plans (February 2022). | Drawing 2 of 4 of the Redlined version of the Draft Operational Plan, Revised September 21,2022 shows the requested information. It should be noted that the Burlington Quarry Extension Site Plan, Revised September 2022 does include any notes about the maximum number of vehicle trips and should be updated with this information |


[^0]:    capacity attributable to the proposed evelopment can be improved. For example, during the AM peak hour at Guelph Line and Dundas Street, are expected to operate above apacity. The eastbound through movement is expected to be addressed by the Dundas Stree oad widening outlined in the Region's
    ransportation Master Plan (TMP).
    However, no specific improvements are Guelph Line by the report or the Region's TMP.
    Further information is required regarding proposed improvements for alleviating ements that are expected to operate at or above capacity attributable to the traffic enerated by the pro

