



BURNSIDE

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April 7, 2014

Via: Email (kwingrove@get.on.ca)

Ms. Kim Wingrove
Chief Administrative Officer
Township of Guelph/Eramosa
P.O. Box 700
Rockwood ON N0B 2K0

Dear Kim:

**Re: ZBA Hidden Quarry, Township of Guelph/Eramosa
Review of Traffic Impact Study
File No.: 300032475.0000**

Burnside received the documentation listed below directly from Leigh Mugford, Project Manager of James Dick Construction Ltd. relative to the transportation issues related to this site. We understand that James Dick Construction Ltd. has been working with the Ministry of Transportation to address Ministry comments.

- Revised Traffic Impact Study, Eramosa Quarry, James Dick Construction Limited; prepared by Cole Engineering Group Ltd; dated November 2013.
- Email comments from Diana Beaulne, Ministry of Transportation; dated September 30, 2013.

Our review comments are set out in the following. As the documentation came directly from the applicant and not through their consultant in this regard, we have addressed the comments to the Municipality and copied the applicant. It is noted that the review was carried out by Mr. Henry Centen, P.Eng., a Transportation Engineer with Burnside.

The applicant's revised Traffic Impact Study (TIS) provides the following main conclusions and recommendations (paraphrased):

- The gravel pit is forecast to generate 26 truck trips (total, two-way) in the peak hour.
- The gravel pit is anticipated to have no significant impact on the surrounding road network.
- It is recommended that the crest be lowered on the 6th Line to improve sight distance and to reduce the approach grade to the Highway 7 / 6th Line intersection.
- It is recommended that a westbound deceleration lane be provided on Highway 7 at the 6th Line intersection (80 m parallel lane and 80 m taper).

- It is recommended that oversize truck entrance signs be placed on Highway 7 and standard truck entrance signs be placed on 6th Line.;
- At the intersection of Highway 7 / 6th Line, a left turn lane is warranted due to background conditions (25 m storage, 70 m parallel lane, 160 m taper).

Based on our review of the revised TIS, we provide the following comments:

1. Upgrading of the 6th Line will be required to accommodate the gravel pit, including:
 - Removal of the crest along 6th Line to provide a stopping sight distance at the intersection of 6th Line / Highway 7, to meet Ministry of Transportation (MTO) standards.
 - Upgrade of road base and surface on the 6th Line, confirmed through a geotechnical report, entrance permits and a road improvement agreement.
2. A ten year horizon period has been considered for analysis. We note that the estimated life of the quarry is anticipated to be 20 years. We do not believe further analysis relative to the estimated life expectancy of the operation is warranted as such analysis is not anticipated to change the recommendations for improvements.
3. While it is forecast that there is sufficient capacity available for turning movements from 6th Line onto Highway 7, there will be significant delays during peak periods (Level of Service F, volume/capacity = 0.29). While no practical mitigation measures are available to reduce the delays, it does highlight the importance of completing other improvements to maximize overall operational efficiency/safety at this intersection (i.e. eastbound left turn lane, westbound right turn lane, improvements to the road structure and sight lines on 6th Line).
4. MTO has confirmed the need for an eastbound left turn lane at the intersection of Highway 7 / 6th Line. The TIS assumes that very little traffic for the quarry will be to/from the west and that the need for this left turn lane is to address background traffic. While we appreciate that the major market for the aggregate will be to/from the east, there remains the potential for increased traffic to/from the west, beyond the volume forecast in the TIS. In addition the deceleration and turning movement requirements for the larger trucks increases the need for a separate left turn lane, especially considering the very high opposing traffic volumes forecast. The responsibility of implementing the warranted left turn lane should be confirmed. We note that the runnout lane for the westbound left turn lane should be 190 metres. Therefore this runnout lane will extend beyond the intersection of Highway 7 / 5th Line, since the spacing between the intersections is only about 75 metres. The TIS does not provide an analysis of the warrant for a westbound left turn lane at the intersection of Highway 7 / 5th Line. Since we expect that this warrant may also be met, it is likely that the left turn road widening will be required for the full length between the two intersections.
5. We concur with the TIS recommendations to provide a westbound right turn lane at the intersection of Highway 7 / 6th Line and the placement of truck entrance signs on Highway 7 and on 6th Line.

If you have any questions in regard to the above, please contact our office.

Yours truly,

R.J. Burnside & Associates Limited

A handwritten signature in black ink, appearing to read "Don McNalty". The signature is written in a cursive style and is positioned above a horizontal line that extends to the right.

Don McNalty, P.Eng.
Vice President, Public Sector

cc: Saidur Rahman, Director of Public Works, Email (srahman@get.on.ca)
Henry Centen, P.Eng., Burnside, Email (henry.centen@rjburnside.com)
Leigh Mugford, James Dick Construction Ltd., Email (lmugford@jamesdick.com)

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