



Freymond Aggregates Quarry

Bay Lake Rd., Twp. of Faraday

Traffic Brief

South Site Entrance

Prepared by:

Tranplan Associates

PO Box 455
Lakefield, ON
K0L 2H0

www.tranplan.com

Prepared for:

EcoVue Consulting Services

July 2012

July 17, 2012

Heather Sadler, B.A., M.A., MCIP, RPP
Principal and Senior Planner
EcoVue Consulting Services Inc.
25 Reid Street
Lakefield, ON K0L 2H0

Dear Ms. Sadler:

**RE: Traffic Assessment - Revised Site Entrance for Proposed Freymond Quarry
Bay Lake Road, Township of Faraday, County of Hastings**

1.0 BACKGROUND

In May, 2012 Tranplan Associates completed a full traffic impact study¹ for the proposed Freymond Quarry that will be located on Bay Lake Road in the Township of Faraday on the the south side of the Town of Bancroft, Ontario. The May, 2012 report assumed that quarry access to Bay Lake Road would be an existing north entrance to the study site (see *Exhibit 1 - Site Access* following report text and *Sections 2.3.5 and 4.5* of the May, 2012 Report). Since the original report was published, the proponent has revised his access strategy. Planned access to the quarry will now be through a south site entrance which now serves as the main access to *Freymond Lumber Ltd.* mill located at 2287 Bay Lake Road. The main reason for this change is to take advantage of an existing weigh scale location that is presently located in close proximity to the south entrance.

2.0 THE PROPOSED SITE ENTRANCE

The present *South Site Entrance* is located about 180 m south of the original planned entrance to the quarry (see *Exhibit 1*). A site visit was carried out on Friday June 22, 2012 to assess traffic operations at the south entrance. For the purposes of discussion in this brief it has been assumed that Bay Lake Road runs in a north/south direction and the *South Site Entrance* approach runs in an easterly direction to access Bay Lake Road in a "T" intersection. This entrance serves as the main site entrance to the present lumber mill. A mix of traffic was observed accessing/departing the mill during the site visit. This mix included large tractor trailers, smaller trucks and pickup trucks assumed to be on business/service calls or making retail purchases. There are two parking areas in the immediate vicinity of the entrance. One is on the west side of Bay Lake Road just north of the entrance the other opposite the entrance on the east side of Bay Lake Road. Both lots were about 75% full with what is assumed to be employee vehicles parked for the day.

A field assessment of vehicle operating speeds was carried out along Bay Lake Road in the immediate vicinity of the *South Site Entrance*. Southbound traffic was observed to be traveling at about 45 - 50 kph. These lower speeds are influenced by a crest vertical curve about 75 m south of the entrance followed by a sharp right angle turn to the west in the Bay Lake Road alignment (see *Exhibit 1*). Northbound traffic was observed to be traveling about 50-55 kph.

¹ Freymond Aggregates Quarry, Bay Lake Road, Traffic Impact Study, Prepared for EcoVue Consulting Services Inc., by Tranplan Associates, pub., May 2012

The northbound speed was a little higher because this traffic has crested the vertical curve south of the site entrance and has clear visibility and a straight alignment for about 200 m to the north.

3.0 SITE ENTRANCE ASSESSMENT

3.1 Sight Lines

Sight lines at the *South Site Entrance* were measured as part of the June 22, 2012 field assessment. There is about 90 m of sight distance to the south of the proposed entrance. This sight line is restricted by a crest vertical curve in Bay Lake Road. To the north the sight distance exceeds 210 m. These sight lines were reviewed against standards contained in the MTO's *Geometric Design Standards for Ontario Highways* (GDSOH) manual. Sight distance to the south was assessed against the observed 50-55 kph operating speed of the northbound traffic approaching from the south. The available sight distance is about 90 m. The MTO recommended *Stopping Sight Distance* (SSD) for 55 kph is 75 m. The available 90 m sight distance exceeds the minimum SSD. The MTO preferred sight distance for a commercial entrances² for 55 kph is about 130 m. Based on Township Road Needs Study data (see attachment following *Exhibit 1*), the planned/posted speed for this section of Bay Lake Road is 60 kph. The SSD for 60 kph is 85 m. The available SSD of 90 m to the south of the entrance exceeds this minimum requirement.

The southbound traffic stream on Bay Lake Road is operating at about 45-55 kph. This lower operating speed is likely a result of the fact that most of the drivers on Bay Lake Road are familiar with the restricted sight lines caused by the crest vertical curve followed by the right angle turn to the west. The 210 m sight line to the north is exceeds the MTO recommended sight distance for commercial entrances for speeds up to 90 kph.

3.2 Traffic Operations

Traffic operations of the *South Site Entrance* were assessed using forecast traffic volumes prepared for the May, 2012 report. As a worst case scenario the assessment was based on 2022 total traffic conditions illustrated in *Exhibit 7* of the May, 2012 report. Site traffic was re-assigned to the south entrance. Approach volumes at the Bay Lake Road/South Site Entrance intersection are all forecast to be less than 100 vehicles per hour (vph). Based on these approach volumes, all traffic movements at the site entrance will operate at acceptable levels of driver delay consistent with current *Highway Capacity Manual* (HCM) standards. Since all forecast approach volumes are less than 100 vph, there will be no requirement for auxiliary turning lanes on Bay Lake Road to support forecast volumes accessing the study site.

3.3 Entrance Requirements

The recommended lane configuration at the intersection of the South Site Entrance and Bay Lake Road is as follows:

²

See Table 1, Commercial Site Access Policy and Standard Designs, MTO pub. 1994.

- Northbound Bay Lake Road, a shared through/left turn lane
- Southbound Bay Lake Road, a shared through/right turn lane
- Eastbound Site Entrance, one shared left turn/right turn lane and one inbound lane.

The present *South Site Entrance* is slightly skewed to the north. This entrance should be aligned to 90 degrees to Bay Lake Road. This would improve sight visibility to the south with its lesser sight distance. A guide to finalizing the site entrance requirements a suggested design CSAS-23 *Truck Access* can be taken from the current MTO *Commercial Site Access* manual.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The conclusions and recommendations contained in *Section 5* of the May, 2012 report remain valid with the exception of the original site entrance comments. *Section 5.1*, Bullet No. 5 and the final bullet of the May, 2012 report are superceded by the findings of this traffic brief. Access to the proposed site will now be via the existing South Site Entrance to the *Freymond Lumber Ltd.* mill. There is a reduced sight line distance to the south of the proposed site entrance. This sight line exceeds MTO recommended SSD requirements. All other sight lines meet or exceed MTO sight line requirements as defined in *Table 1* of the MTO *Commercial Site Access* manual.

In *Section 5.2 - Recommendations*, Bullet No 3 of the May 2012 report is superceded by the findings of this Traffic Assessment. The recommended *Truck Entrance Sign* (Wc-8L) should be installed on the east side of Bay Lake Road at an appropriate location south of the South Site Entrance. The remaining recommendations of the May 2012 report remain valid.

With the implementation of the recommendations of this traffic assessment, the existing South Site Entrance to Freymond Lumber mill will provide adequate access to the proposed quarry development. An additional consideration not included in the May, 2012 report is the internal circulation of on-site traffic. The original study analyses assumed a north entrance that would provide almost direct access from the quarry operation to Bay Lake Road. With the planned utilization of the existing South Site Entrance there will be a mix of quarry and mill traffic. It is recommended that in preparing the overall site plan for the development, that consideration be given to providing appropriate safe on-site routing for the two separate sources of site traffic.

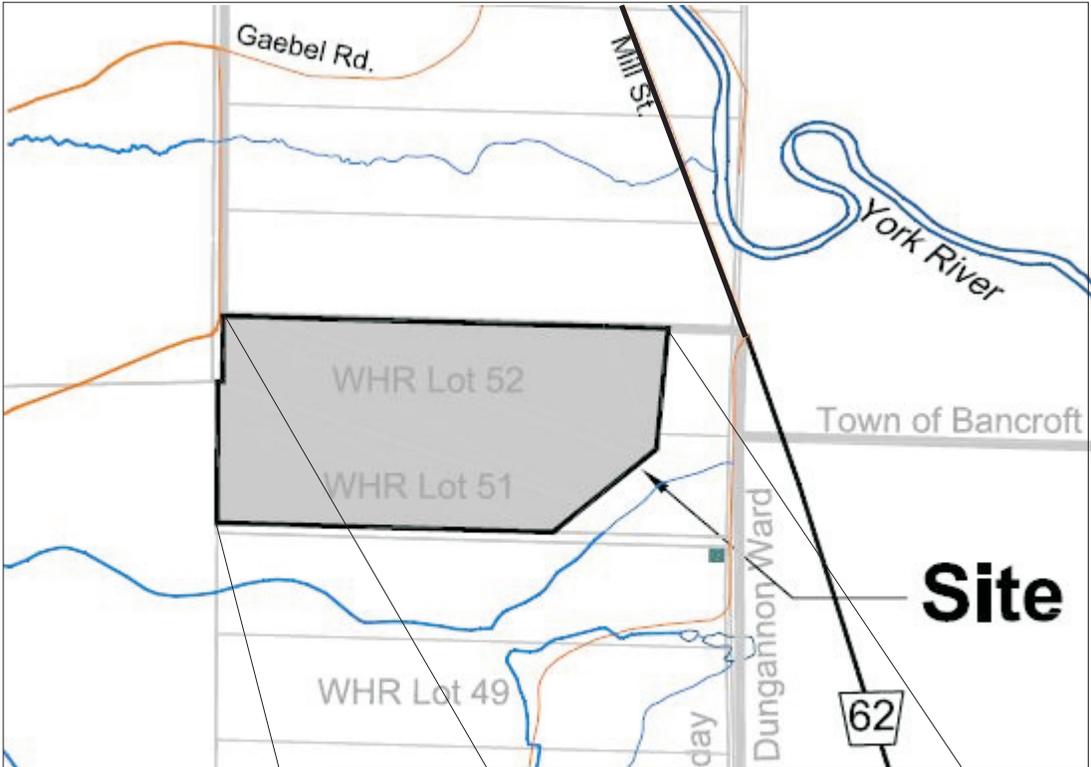
Additional background information on the traffic analysis is available in study working papers. I would be pleased to provide such further information as you may require.

Yours truly,



William Copeland, P.Eng.
Principal

Exhibit 1 Site Access



Road Appraisal Sheet

| | | | | | |
|-----------------------|-----------------|------------------------|-------------|----------------------|-----|
| Section No | 1210 | Length | 3.4 | Old Sect No | 121 |
| Road Name | Bay Lake Road A | | | | |
| From | Hwy 62 | Km | 0.5 | Direction | S |
| To | Barton Lane | Km | 0 | Direction | |
| Surf Type | LCB | Platform Width | 7 | Surface Width | 6 |
| | | Road Allowance: | Forced Road | | |
| Road Environ | R | Drainage | ND | Speed | 60 |
| Boundary Road | N | Classification | 5 | Old Class | M5 |
| Road Condition | 6 | | | | |
| Construction: | \$650,063 | | | | |
| Ditching: | \$0 | | | | |
| Remarks | | | | | |