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**Re: Lot 1990 Fry Road, Prince Edward County
c/o RFA Planning**

Subject: Commercial Entrance / Traffic Brief

Project Number: 2138445

Having visited the subject property and reviewed the available documents, the following is provided in support of the development application process.

Existing Conditions

The subject property is located at #1990 Road in Prince Edward County. An aerial and street level image of the property and existing buildings being converted are provided below.



There is an existing house and 2 farm buildings, including barn (with silos) and quonset hut.

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Fry Road is a rural, 2 lane municipal road. While the traditional default legal speed limit is 80 km/h, Fry Road has a reduced posted speed limit of 70 km/h.

The property entrance is located on a curve posted with curve warning and 40 km/h advisory speed signage.

There is also a curve immediately north of the entrance also with curve warning and similar 40 km/h advisory speed signage.

Traffic activity is a mixture of local, agricultural and tourist traffic.

The road width was measured to be roughly 5.5m and as narrow as 5.0m at a nearby culvert crossing.

The property currently has 3 gravel entrances, a split gravel entrance to the home and a gravel entrance to the farm buildings.

Proposed Development

A preliminary development plan image (appended) was provided which notes the following development elements:

- 4 acre wild flower meadow and honey collection.
- 8 acres of planned fruit and botanical orchards.
- Public botanical garden.
- 20 acres of working farm (corn, wheat, oats, cereals).
- 3 bedroom boutique bed and breakfast (converted existing home).
- 1500 ft² quanset hut licensed for alcohol manufacturing.
- Licensed barn tap room and retail bottle shop.

A proposed site plan has been prepared by RFA Planners an excerpt of that plan is below.



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The proposed plan includes a single shared entrance located on the radius of the curve to provide optimal sight distance to the west and north. 21 parking spaces are provided shared between a bed and breakfast and distillery. All entrance and parking areas are planned to remain gravel.

(Note: It is reasonable to anticipate some minor changes in the site plan as the approval process runs its course. Only changes that are felt to be significant and directly relevant to entrance traffic may warrant a revision to this document.)

Trip Generation

It is difficult to estimate peak hour traffic activity for a small boutique style business such as this but even if full parking lot turnover is assumed during the peak hour a modest 21 trips would enter and exit the site.

Traffic Volumes / Entrance Level of Service

Due to the time of year this document was drafted, collection of detailed existing traffic counts was not possible. Based on the available County traffic counts and site observations, existing background traffic volumes are sufficiently low that detailed counts are not felt to be necessary.

County traffic counts are provided below:

ROAD	DESCRIPTION	TRAFFIC VOLUME (24h)	POSTED SPEED	Date of Counts
FRY ROAD	173 metres from County Rd 4	390	70	20-Jun-12
		267	70	21-Jun-17
FRY ROAD	165 metres North of County Rd 5	335	70	22-Jun-12

The counts near County Road 4 are roughly 9.5 km away from the site but unexpectedly show traffic activity on Fry Road dropping between 2012 and 2017 at an average rate of 7% year over year.

The count near County Road 5 is roughly 4 km away from the site and suggest that traffic activity may lessen as you travel north.

Traffic activity across the County has been increasing – largely due to increasing tourist activity for developments such as the one proposed. Based on this more general trend we will apply a common industry practice of increasing traffic at a rate of 2% year over year to provide a conservative estimate of current traffic activity.

Based on a 2% *increase* in traffic from 2012 to today, a daily traffic volume of 466 vehicles is estimated.

If a current AADT of roughly 466 vehicles is presumed; approximately 30% (140 vehicles) of that daily volume can be assumed to occur during the 4 hours between 2-6 pm; leaving approximately 35-40 vehicles for the peak pm hour.

RFA's concept plan shows 21 parking spaces.

Allowing for a total of 40 vehicles on Fry Road; split 50/50 directionally; full turnover of the proposed parking spaces; and some additional cushion for conservative estimates we believe these volumes would fall well short of a

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concern from typical volumetric measurables and warrants. To confirm, a rough model was done confirming a level of service of A and negligible volume / capacity ratio resulted.

Entrance Safety

We are not aware of any existing concerns or history of accidents associated with this subject entrance. However, with the addition of the proposed commercial use providing an appropriate line of sight should be confirmed.

1. *Ministry of Transportation Highway Access Management Guideline*

The MTO Highway Access Management Guideline has been used as a line of sight standard in other instances in the County and is assumed to be the applicable standard in this case.

Stopping sight distance is from the point of view of a motorist travelling on the road. It is the distance that a motorist should be able to see to stop safely. This is the minimum standard that should be met.

Stopping Sight Distance (Table 9)

- Posted speed of 70 km/h.
- Design speed allowance of an additional 20 km/h.
- Roughly flat approach grade.
- Distance Required = 160m

- Curve warning speed of 40 km/h, however, MTO reference table's lowest stopping sight distance value is for 50 km/h so this has been used.
- Design speed allowance of an additional 20 km/h.
- Roughly flat approach grade.
- Distance Required = 105m.

The entering sight distance is from the point of view of a motorist waiting to enter or cross the highway. It is the distance a motorist should be able to see to safely enter the road and accelerate to the posted speed without being overtaken by an approaching vehicle.

Entering Sight Distance for 2 Lane Highways (Table 7)

- Posted speed of 70 km/h.
- Commercial access.
- Design speed allowance of an additional 20 km/h.
- Roughly flat approach grade.
- Distance Required = 290m

- Curve warning speed of 40 km/h, however, MTO reference table's lowest entering sight distance value is for 50 km/h.
- Commercial access.
- Design speed allowance of an additional 20 km/h.
- Roughly flat approach grade.
- Distance Required = 225m

2. *Transportation Association of Canada Geometric Design Guide (TAC)*

It's noted that similar line of sight requirements are stated in the TAC and are provided below for additional reference.

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Stopping Sight Distance (Table 2.5.2)

- Posted speed of 70 km/h (design speed of 90 km/h).
- Level roadway.
- Design speed allowance of an additional 20 km/h.
- Distance Required = 160m (similar to MTO)

Intersection Sight Distance: Right Turn (Table 9.9.6)

- Distance Required = 165m

Intersection Sight Distance: Left Turn (Table 9.9.4)

- Distance Required = 190m

Site Observations

A site visit was conducted on Sunday May 16th, 2021.

During the site visit, previous descriptions of existing conditions were confirmed.

While on site a total of 4 vehicles were observed over a period of 30 minutes. (It is acknowledged these observed traffic conditions represent lower than typical traffic volumes due to the COVID restrictions in place.)

Field Measurements

Site distance measurements taken on site involved parking a vehicle in the southernmost entrance, walking either direction on the municipal road checking visibility from each lane back to the parked car.

Distance measurements were taken with a measuring wheel.

Travelling west, Fry Road is straight for roughly 100m then curves gently to the south. The road is flat. The following measurements were taken:

- 140m to curve warning sign.
- 200m to field entrance on north side.
- 215m visibility becomes challenging due to roadside vegetation.
- 230m visibility exceeded.
- MTO / TAC 70 km/h stopping sight distance is satisfied.

Travelling north, Fry Road continues straight to a sharp 90 degree curve. The road is flat. The following measurements were taken:

- 80m to curve warning sign.
- 150m to the sharp curve.
- 175m maximum visibility due to roadside vegetation.
- MTO / TAC 70 km/h stopping sight distance is satisfied.

This is an existing entrance that to the best of our knowledge has been operating in a safe manner to date. While meeting the entrance sight distance standard is desirable, we do not feel it is a requirement for an existing entrance on a low volume road such as this. Maximizing the available line of sight to minimize the impact on through traffic while existing traffic accelerates is recommended and we believe the proposed entrance location does this.

(Note: Field measurements are approximate, to some degree judgment based and affected by conditions such as roadside vegetation that can vary over time.

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Accordingly, some variation can be expected in these measurements from person to person or from time to time during the year.)

See attached images showing existing sightlines.

Regular maintenance of roadside vegetation and avoiding visual obstructions at the entrance is recommended.

Fire / Emergency Access

Based on Ontario Building Code requirements, an access must be provided for fire department (and emergency vehicle access) that shall:

- Have a clear width not less than 6m.
- Have a centreline radius not less than 12m.
- Have an overhead clearance not less than 5m.
- Have a change of gradient not more than 1 in 12.5 (8%).
- Be designed to support the expected loads imposed by firefighting equipment and be surfaced with concrete, asphalt or other material designed to permit accessibility under all climatic conditions.
- Have turnaround facilities for any dead-end portion of the access route more than 90m long.
- Be connected to a public thoroughfare.

The proposed parking facilities will satisfy these requirements including the following elements of note:

- Parking isle width will be equal to or greater than 6m.
- No centreline radius is required for the proposed access and parking layout.
- There will be no overhead obstructions.
- The surface will be more or less 'flat' with a minimal grade to shed surface water.
- A compacted gravel surface constructed in a manner that will provide year round access if such access is required.
- The access route will be less than 90m long and therefore no turnaround is required.
- Will be connected to Fry Road.

Entrance Geometry

Where possible, consistent with Ontario Ministry of Transportation access management standards, we recommend the entrance reflect MTOD 305.140 Commercial Entrance to Small Businesses including a width of 8m and radii of 15m (where posted speed is 70 km/h or greater).

Conclusion

Based on site observations; applicable standards; a lack of previous safety concerns; and our understanding that the proposed development expansion will not significantly affect existing traffic activity (as it relates to level of service and other traffic study measurables), we believe the proposed entrance will be acceptable for the proposed development.

If there are any questions or comments, please contact the undersigned.

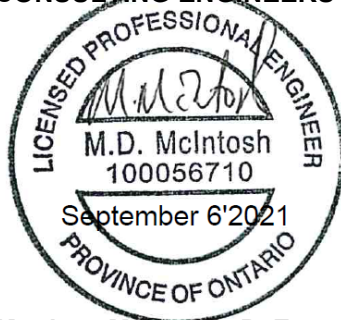
September 6th, 2021



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Sincerely,

**THE GREER GALLOWAY GROUP INC.
CONSULTING ENGINEERS**



Matthew McIntosh, P. Eng.
Senior Engineer / Project Manager

Attachments:

1. Site Visit Photos
2. Preliminary Site Plan Image

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Photo 1: Existing Southern Entrance Looking West



Photo 2: Existing Southern Entrance Looking North



Photo 3: Existing Southern Entrance



Photo 4: Existing Buildings



Preliminary Development Plan Image

