



VIOLET HILL PIT

ENTRANCE / EXIT

AND

HAUL ROUTE

(OPTION 2)

LOCATION PLAN

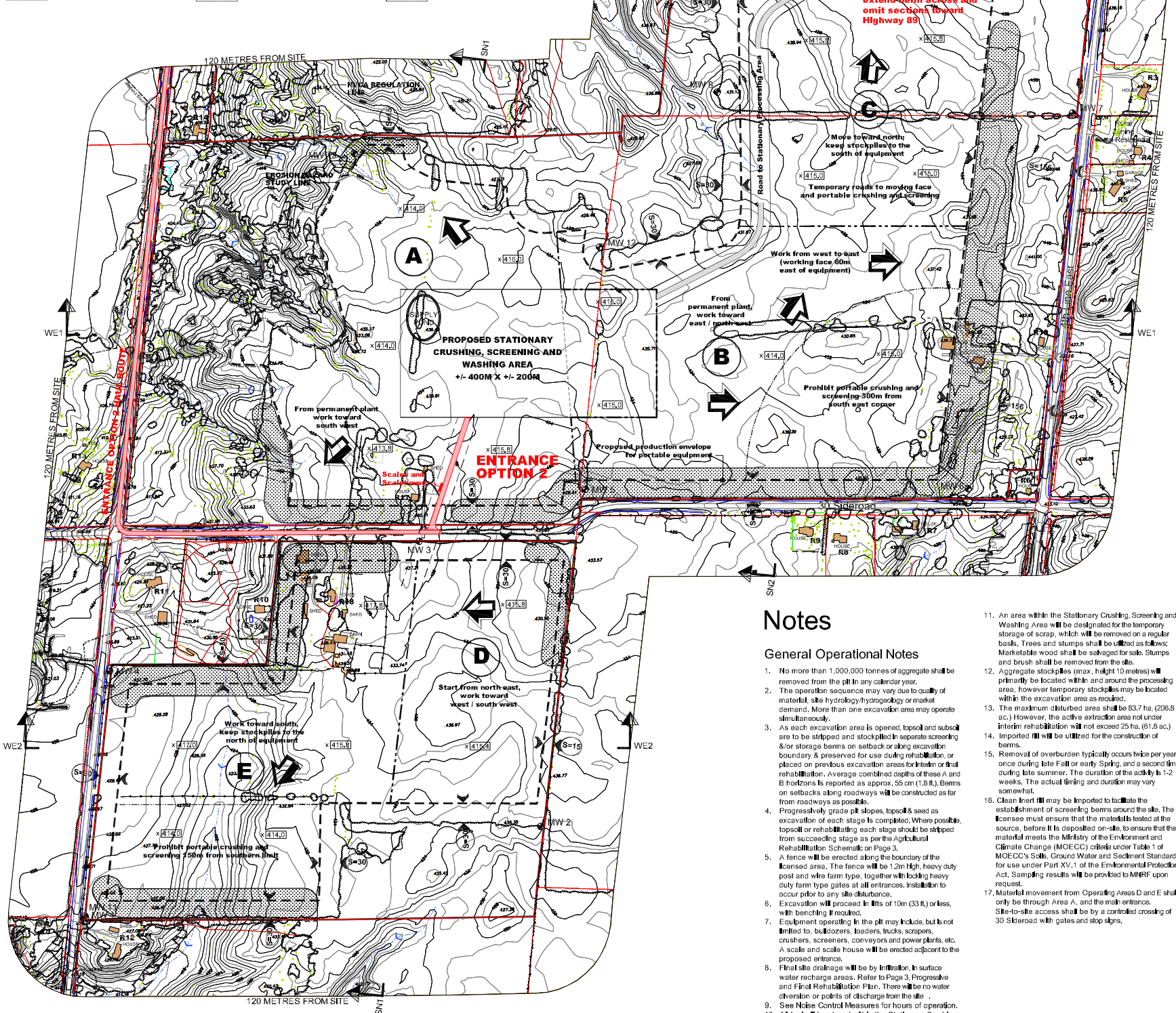
TRAFFIC REPORT (TIS)

AIR QUALITY AND NOISE EVALUATION

March 2, 2017

Legend

	Boundary of Area to be Licensed		Existing Tree Cover		Direction of Excavation
	Area to be Excavated		Existing Fences		Operating Areas A - E
	Elevation, 1M Contour		Building/Structure See Drawing 5 of 5 - Berm Phasing		Berm
	Elevation, Spot		Cross Sections Location and Identifier		Monitoring Well MW1-MW13 Location and Number
	Parcel Fabric		Existing Entrance/Exit		Proposed Pit Floor Elevation M.A.S.L.
	Setbacks, Metres				



Notes

General Operational Notes

- No more than 1,000,000 tonnes of aggregate shall be removed from the pit in any calendar year.
- The operation sequence may vary due to quality of material, site hydrology/hydrogeology or market demand. More than one excavation area may operate simultaneously.
- As each excavation area is opened, topsoil and subsoil are to be stripped and stockpiled in separate screening &/or storage berms on setback or along the excavation boundary & preserved for use during rehabilitation, or placed on previous excavation areas for final or final rehabilitation. Average combined depths of these A and B horizons is reported as approx. 55 cm (1.8 ft). Berms on setbacks along roadways will be constructed as far from roadways as possible.
- Progressively grade pit slopes, topsoil & seed as excavation of each stage is completed. Where possible, topsoil or rehabilitating each stage should be stripped from succeeding stage as per the Agricultural Rehabilitation Schematic on Page 3.
- A fence will be erected along the boundary of the licensed area. The fence will be 1.2m high, heavy duty post and wire farm type, together with locking heavy duty farm type gates at all entrances. Installation to occur prior to any site disturbance.
- Excavation will proceed in lifts of 10m (33 ft) or less, with benching if required.
- Equipment operating in the pit may include, but is not limited to, bulldozers, loaders, trucks, scrapers, crushers, screeners, conveyors and power plants, etc. A scale and scale house will be erected adjacent to the proposed entrance.
- Final site drainage will be by infiltration, in surface water recharge areas. Refer to Page 3, Progressive and Final Rehabilitation Plan. There will be no water diversion or points of discharge from the site.
- See Noise Control Measures for hours of operation.
- All fuel will be stored within the Stationary Crushing, Screening & Washing Area.

- An area within the Stationary Crushing, Screening and Washing Area will be designated for the temporary storage of scrap, which will be removed on a regular basis. Trees and stumps shall be utilized as follows: Marketable wood shall be salvaged for sale. Stumps and brush shall be removed from the site.
- Aggregate stockpiles (max. height 10 metres) will primarily be located within and around the processing area, however temporary stockpiles may be located within the excavation area as required.
- The maximum disturbed area shall be 33.7 ha (206.8 ac.) However, the active extraction area not under interim rehabilitation will not exceed 25 ha (61.8 ac.). Imported fill will be utilized for the construction of berms.
- Removal of overburden typically occurs twice per year, once during late Fall or early Spring, and a second time during late summer. The duration of the activity is 1-2 weeks. The actual timing and duration may vary somewhat.
- Clean inert fill may be imported to facilitate the establishment of screening berms around the site. The licensee must ensure that the materials tested at the source, before it is deposited on-site, to ensure that the material meets the Ministry of the Environment and Climate Change (M.O.E.C.C.) criteria under Table 1 of the M.O.E.C.C.'s Soil, Ground Water and Sediment Standards for use under Part XV.1 of the Environmental Protection Act. Sampling results will be provided to MNRF upon request.
- Material movement from Operating Areas D and E shall only be through Area A, and the main entrance.
- Site-to-site access shall be by a controlled crossing of 30 Skerroad with gates and stop signs.

Natural Heritage Mitigation

The following actions are recommended and are included on the site plans to mitigate and protect natural features on and within 120m of the Greenwood Violet Hill Pit site:

Provincially Significant Wetlands

- The extraction limit will be set back a minimum of 150 m from the wetland boundary.

Endangered and Threatened Species

General

- The Species at Risk List for Ontario will be reviewed annually to determine if newly listed species are present or have the potential to be found within the extraction limit.
- Prior to stripping the area to be cleared will be surveyed during appropriate survey time periods by a qualified professional for the presence of endangered and threatened species.
- A report of the above described surveys will be kept on file at the pit site and will be provided to OMNRF if an endangered or threatened species is found.
- If required, approvals/authorizations will be obtained under the Endangered Species Act and/or amendments made to the site plan as necessary.

Butternut

- Each of the 30 known Butternut will be clearly marked and numbered to assist with future identification and the establishment of appropriate setbacks.
- A minimum 25 m setback between the extraction limit and the drip line of the north woodland where 28 Butternut were found will be established and clearly marked.
- Prior to any operation occurring within the licensed area, the operator will demonstrate to the satisfaction of OMNRF, that the Endangered Species Act and all requirements related to protecting Butternut and their habitats have been met.
- This will be accomplished by:
 - A search for new and previously identified Butternut, both within and within 25 m of the proposed extraction limit by a qualified professional using OMNRF search protocols.
 - Numbering and clearly marking all Butternut found.
 - Completing a health assessment by a qualified Butternut health assessor on all Butternut found.
 - Submitting the results of the Butternut health assessments to OMNRF within 30 days of completing the assessments.
 - Seeking appropriate authorization under the Endangered Species Act prior to removing any Butternut.

Barn Swallow

- Greenwood Aggregates Limited has registered with the OMNRF a Notice of Activity, to "Alter a Structure" that is Barn Swallow habitat, under Endangered Species Act exemption guidelines O. Reg. 24/208 23.3, certificate # X-102-0000000340.
- Prior to any land clearing within the licensed area and prior to removing the barn, all the exemption guidelines to protect Barn Swallow habitat outlined in the Endangered Species Act O. Reg. 24/208 Section 23.5 will be adhered to.

Bobolink and Eastern Meadowlark

- Exclude the natural vegetation communities including the cultural meadows along the north-west and west boundaries of the licensed area from the extraction limit.

Bat Species

- Exclude the on site north and south woodlands and potential bat maternity habitats from the extraction limit.
- Ensure a minimum 30 m setback between the extraction limit and the drip lines of any woodland community or adjacent to the site.

Significant Woodlands

- Exclude the north and south woodlands from the extraction limit.
- Ensure a minimum 30 m setback from the drip lines of all woodlands on the site and their adjacent components.
- Implement dust control measures as required to protect vegetation and wildlife within woodlands.

Significant Wildlife Habitat

- Shrub/Early Successional Bird Breeding Habitat
 - Exclude the natural vegetation communities including the cultural thickets along the west boundary of the licensed area from the extraction limit.

Eastern Wood Pewee

- Exclude the north and south woodlands from the extraction limit.
- Ensure a minimum 30 m setback from the drip lines of all woodlands on the site and their adjacent components.
- Implement dust control measures as required to protect vegetation and wildlife within woodlands.

Fish Habitat

- Store fuel and maintain equipment in a fuel and maintenance area in accordance with Provincial legislation.
- Prepare a Spills Response Plan that will be implemented and enforced to protect water quality.
- Monitor groundwater as described in the "Proposed Violet Hill Pit Combined Level 1 Level 2 Hydrogeological Assessment" by Whitewater Hydrogeology Ltd., 2015.

Recycling

- Recycling of asphalt and concrete will be permitted on this site.
- Recyclable asphalt materials will not be stockpiled within:
 - 30m of any water body or man-made pond or
 - 2m of the surface water or the established water table.
- Any other and other structural material must be removed from the recycled material during processing and placed in a designated scrap pile on site which will be removed on an on-going basis.
- Removal of recycled aggregate is to be ongoing.
- Once the aggregate on site has been depleted there will be no further importation of recyclable materials permitted.
- Once final rehabilitation has been completed and approved in accordance with the site plan, all recycling operations must cease.

Hydrogeology

Gravel pit extraction will remain 5 metres above the established water table. As a result, there is no risk of an interference with any existing private water wells.

Pit Floor Elevation

The water table elevation across the site ranges between 406.1 m a.s.l. in the south to 413.5 m a.s.l. in the north. Due to the geological conditions, the pit floor will range at elevations between 411 m a.s.l. in the south and 420 m a.s.l. in the north.

Aggregate Washing
Site operations will include an on-site washing facility consisting of a fixed closed loop system, which will recycle water in ponds perched above the water table. Appropriate approvals under the Ontario Water Resources Act will be obtained to allow for the use of water in day-to-day operations.

Compliance Monitoring Program

- Manual water levels shall be completed monthly at all on-site groundwater monitoring wells between March and November of each operating year.
- Continuous water levels and temperatures shall be collected at groundwater monitoring wells MW2, MW5, MW11, and MW13 between March and November of each operating year.
 - A selection of representative domestic water wells located within 500 m of the extraction area should be included in the groundwater monitoring program if they meet the selection criteria, which includes: wells are in compliance with Ontario Regulation 903 (as amended), are accessible, and constructed in the overburden aquifer. Prior to operations, water samples shall be collected from the participating domestic water wells and analyzed for general chemistry, major anions, oil and grease, and bacteria. Subsequent samples should be collected and analyzed on an annual basis at the end of the operational season (late fall). Continuous water levels should be collected from each domestic well and the data retrieved on a semi-annual basis.
- An annual report summarizing the findings of the groundwater monitoring program for the operational season shall be prepared and submitted to the MNRF by June 1st of the following year.

Dust Control Measures

- Travel speeds for trucks, scrapers, loaders, and any other equipment at the site will remain below 35 km/hr on paved roads and 20 km/hr on unpaved roads.
- All truck loads will be tarped/covered before leaving the site.
- The site entrance and exit will be swept as necessary to minimize tracking of dust off-site.
- In the event of dust complaints, the complaint will be directed to the Site Supervisor, who will follow the protocols outlined in the Greenwood Complaints Procedures document which is kept on-site.
- A water truck will be employed to moisten ground surfaces to minimize dust. Additional watering will occur when significant dust plumes are observed trailing from trucks or otherwise migrating off-site.
- Other commercial dust suppressants may be employed at the discretion of the Site Supervisor should dust issues persist.
- Extraction shall be suspended at the discretion of the Site Supervisor if the condition of the pit is dry and dusty and the wind is sufficient to cause wide-spread visible erosion of the open face with plumes directed off-site.
- The site will maintain all water truck and water spray equipment in good working order to ensure reliability of operation.
- Weather reports will be checked daily to plan for next-day operations and watering needs.
- The dust control measures listed here serve as a standard operating procedure and should be kept on site in a conspicuous location and used for staff training and guidance.

Spill Contingency Plan

(Applies uniformly to all Greenwood operations)

- In case of accidental spill of petroleum products, the following contingency plan will be activated:
 - A) The Ministry of Environment and Climate Change and surrounding landowners will be notified.
 - B) For a leakage, immediate action will be taken to stop it. At the same time, measures will be taken to prevent the spread of the leak (i.e., construction of a berm, digging of a ditch). If it is a spill, similar measures as mentioned for preventing the spread of a leak will be taken.
 - C) Greenwood Aggregates Limited will commence recovery procedure by pumping the spilled liquid into containers. The spilled liquid may have to be recovered from an open water body or land or from both. For a spill contained in an open water body, recovery may require pumping or skimming or both.
 - D) The soil in the area affected by the spill or leak will be removed.
 - E) The contaminated soil, the recovered soil and water will be disposed of by Greenwood Aggregates Limited at locations prescribed by the Ministry of Environment and Climate Change.
- The following will be available at the site:
 - I) A skimming device (where open water exists)
 - II) A diesel pump
 - III) Portable containers
- All liquid petroleum products will be stored on-site in accordance with applicable regulations.
- Fuel storage will be inspected for leaks on a weekly basis.
- During the fuelling of equipment, the area in question will be inspected for leaks and spills.
- If a spill volume of 5 litres or more, the Spill Action Centre established by the M.O.E.C.C., 1-800-268-6080 will be contacted immediately.
- The licensee shall take reasonable measures to stop or control the spill.
- A qualified person shall inspect the spill site and complete a general assessment of the area affected.
- The licensee shall implement remedial measures recommended by the qualified person and/or the M.O.E.C.C.
- A written report of the incident will be prepared and submitted to the M.O.E.C.C., Town and MNRF.



Greenwood
AGGREGATES LIMITED
205467 County Rd. 109, Amaranth ON L9W 0V1

VIOLET HILL PIT

Part Lots 30, 31 & 32, Conc. 4 E.H.S.
Town of Mono
Dufferin County

ENTRANCE OPTIONS

Noise Control Measures

- Hours of operation are 7:00 to 19:00 Monday to Friday.
- Loading and shipping only is allowed beginning at 6:00 am Monday to Friday and 6:00 to 12:00 on Saturdays.
- Receptor 17 must be vacated prior to commencing any extraction activities on the site.
- Receptor 18 must be vacated prior to commencing extraction activities in the south portion of the site.
- The sound emission level for all pieces of equipment used for construction activities including site preparation and rehabilitation must comply with the limits outlined in MOECC Publication NPG-115, "Construction Equipment".
- Construction and rehabilitation activities can only occur during the daytime period (i.e. 07:00 to 19:00 hours), Monday to Friday. There is to be no construction on weekends or on Statutory holidays.
- Berms must be constructed as shown on the Operations Plan. The berms can be constructed and removed according to the findings shown on the berm sequencing details. The berms required for any area must be constructed prior to extraction commencing within that area. For example, if extraction is to commence in Area A, then the berms required for Area A must be constructed prior to this extraction. If extraction were to move to Area B prior to extracting all of Area A, then the berms for both Areas A and B are required prior to extraction commencing in Area B.
- Portable crushing and screening activities cannot occur within 300 m of the southeast corner of Area B and within 150 m of the southern limit of Area C. See Operations Plan.
- Permanent processing plant is to only operate within the area shown on the Operations Plan. The permanent processing plant is to be installed at a ground elevation of 422 m a.s.l. to take advantage of the acoustical screening provided by having the plant below existing grade.
- The direction of extraction is to be as shown on the Operations Plan.
- The amount of equipment and the corresponding maximum sound emission levels are not to exceed the values indicated in the table below.

- If additional or other equipment is to be used on the site for non-construction or non-rehabilitation activities, the noise impact assessment needs to be updated and any mitigation recommendations implemented prior to this equipment operating on the site.
- One off-site noise audit measurement is to be completed at the commencement of the operation and after reaching a depth of elevation 422 m a.s.l. when processing is being done on the site to confirm the MOECC noise guideline limits are met. The audit measurements must be done by a qualified acoustical engineer.

Archaeology

- Should deeply buried archaeological heritage remains be found on the property during site preparation and/or extraction activities, the Ministry of Tourism and Culture should be notified immediately. In the event that human remains are encountered during site preparation and/or extraction, activities associated with the proposed development of the license area, the project proponent, Greenwood Aggregates Limited, should immediately contact the police, the Ministry of Tourism and Culture, and the Registrar or Deputy Registrar of the Cemeteries Regulation Unit of the Ministry of Consumer and Commercial Relations at 416-328-4392.

Variations from the Operational Standards

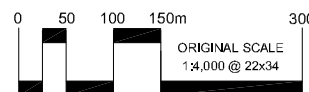
The following conditions illustrated on this plan vary from the requirements of the provincial standards that apply to licensed pits in Ontario:

Standard	Variation
5.1 Fences	Fence will be located along edge of tree line in forested areas, and adjacent to access road at entrance to create truck waiting area

Type	Number	Maximum Sound Emission Level at 15m Reference Distance (dBA)
Front End Loader at Extraction Face	1	75
Portable Crushing Plant at Extraction Face	1	84
Portable Screening Plant at Extraction Face	1	86
Dedicated On-Site Haul Trucks	4	82
Permanent Processing Plant which includes crushers, screens and a wash plant	1	90
Front End Loaders at the Permanent Processing Plant	2	75

DRAWN: J.A.R.	I ACKNOWLEDGE AND SHALL CARRY ON MY OPERATION IN ACCORDANCE WITH THE SITE PLAN UPON WHICH MY LICENSE IS BASED.	THIS SITE PLAN IS PREPARED UNDER THE AGGREGATE RESOURCES ACT FOR A CLASS A LICENCE, CATEGORY 3
APPROVED: S.G.	GREENWOOD AGGREGATES LIMITED	
FILED: January 2018 Site Plans	PER: _____ DATE: _____	
PLOTTED: 28 Feb. 2017	SITE PLANS APPROVED BY: _____	
AMENDMENT NO. 0	MINISTRY OF NATURAL RESOURCES	JEFFREY A. ROLLINGS
	DATE: _____	DATE: _____

No.	DATE	DESCRIPTION	APP'D
Amendments			



ROLLINGS HYLAND CONSULTING
Orangeville, Ontario 519.942.1961

CERTIFIED TO PREPARE SITE PLANS UNDER SECTION 8(4) OF THE AGGREGATE RESOURCES ACT

28 February, 2017



C.C. Tatham & Associates Ltd.

Consulting Engineers

Collingwood Bracebridge Orillia Barrie Ottawa

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Collingwood, Ontario L9Y 5A6
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Email: info@cctatham.com
Web: www.cctatham.com

March 3, 2017

via email: Zsolt.Katzirz@ontario.ca
CCTA File 114239

Zsolt Katzirz

Corridor Management Planner
MTO - West Region, London
659 Exeter Road
London, ON N6E 1L3

Re: Violet Hill Gravel Pit, Town of Mono
3rd Line Access to Highway 89

Dear Zsolt:

Further to our letter of December 22, 2016 and your response of February 8, 2017, we are writing to further explore access to Highway 89 via the 3rd Line to support the proposed Violet Hill gravel pit. While we had previously identified a number of challenges that exist with respect to the use of the 3rd Line (eg. site topography, possible NEC concerns and possible public concerns given the proximity to the hamlet of Violet Hill), such appears to be the only viable option in consideration of MTO access management requirements and associated highway improvements. The intent of this letter is to address the sight lines available at the 3rd Line and the requirements for highway improvements.

Sight Line Assessment

Sight Line Requirements

For a posted speed of 80 km/h, the MTO *Highway Access Management Guideline* requires a stopping sight distance of 185 metres and an entering sight distance of 320 metres for a public road or commercial access to a 2-lane road.

Sight Lines to/from West

To/from the west, existing sight lines are in excess of 320 metres, as evident in the photos of Figure 1. As such, there are no improvements necessary in this regard.

Sight Lines to/from East

The available sight lines to/from the east are illustrated in the photos of Figure 2. As evident, the minimum stopping sight distance of 185 metres is provided, thus ensuring motorists can turn to/from



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Consulting
Engineers of
Ontario

the 3rd Line in a safe manner (in that they would have sufficient time to see a stopped vehicle, or other hazard, in the road and bring their vehicle to a stop as required).

With respect to the entering sight distance of 320 metres, there are limitations resulting from the horizontal alignment of Highway 89; the vertical alignment does not restrict sight lines as illustrated in Figure 3 (which reflects the vertical profile of Highway 89). Plan 2 attached illustrates the 320 metre required lines of sight for a vehicle stopped on 3rd Line, with the driver situated 3 metres and 5 metres in advance of the through edge of pavement on Highway 89. As noted, the line of sight extends beyond the edge of Highway 89 in the order of 8 to 9 metres (all of which is contained within the Highway 89 right-of-way). However, as evident in the photos of Figure 4, the lands adjacent to the highway do not necessarily obstruct the line of sight. In other words, despite the line of sight extending beyond the edge of the highway, visibility of oncoming vehicles is maintained. It must also be acknowledged that the driver eye height for a truck stopped at 3rd Line is higher than that of a passenger car, and that they would be looking towards the roof lines of oncoming vehicles.

It is further noted that the majority of site related traffic will be destined to/from the east via Highway 89. In this regard, the critical sight lines for trucks exiting the site will be to the west. For trucks entering the site, the critical sight distance corresponds to stopping sight distance for vehicles approaching from behind, which is otherwise satisfied.

In consideration of the above, the existing sight lines to/from the east are also considered appropriate. Relocation of the "Mono Township Line 3 E.H.S." roadway identification sign located approximately 95 metres east of 3rd Line is recommended to improve visibility.

Traffic Operations

A traffic brief was prepared on June 15, 2015 to address the potential impacts of the proposed gravel pit on Highway 89, including consideration for direct access to the highway. The traffic brief concluded that excellent levels of service would be provided at the site access (Level of Service B with delays of 13 seconds or less) through to the 2025 horizon year. While the current proposal is to utilize 3rd Line for access to Highway 89, similar operations are expected given the limited volumes that 3rd Line currently serves. In this respect, the conclusions and recommendations of the traffic brief remain valid.

Highway Improvements

Notwithstanding the good operating conditions anticipated at the site access, the traffic brief also reviewed the need for left and right turn lanes to serve the site. The following were recommended:

- a 60 metre EB right turn taper (to be paved within the existing gravel shoulder area); and
- a WB left turn lane consisting of a 15 metre storage length, 70 metre parallel lane and 160 metre taper (as per MTO standards for a 100 km/h design speed).

The traffic brief further noted that the improvements are based on the site operating at its extraction limit of 1,000,000 tonnes per year and the resulting truck volumes that will be generated. Consideration should be given to a staged approach for the road improvements that reflects the actual amount of material to be extracted and shipped, recognizing that the actual amounts will likely be less, particularly during the opening few years.

A functional plan illustrating the above noted improvements is provided in Plan 1 attached. With respect to the left turn lane, MTO had previously commented on the need to extend the storage length in consideration of the anticipated truck use. While the number of trucks will be limited, even with full capacity operations, a storage length of 30 metres has nonetheless been adopted in accordance with MTO standards. Further to the design standards noted above, the following have been employed:

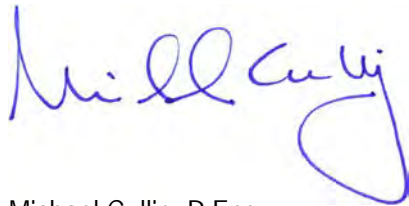
- a 3.5 metre left turn lane with an alignment as per Figure B9-3 of the *MTO Geometric Design Standards for Ontario Highways*, including a widening of the highway on the north side and a runout lane consisting of a 30 metre parallel lane measured from the centre of the intersection and a 160 metre taper);
- a 3.5 metre WB through lane where the highway is to be widened;
- a 3.5 metre right turn taper; and
- 3.0 metre gravel shoulders.

Given the existing highway right-of-way, it is expected that the improvements can be accommodated without impact to private properties. It is also noted, that the provision of the WB left turn lane will result in a road widening on the north side which will further improve visibility to/from the east.

Closing

We trust the above has demonstrated the availability of appropriate sight lines at 3rd Line and the intended improvements to support the proposed gravel pit. Should you have any questions or comments on the above, please do not hesitate to contact us.

Yours truly,
C.C. Tatham & Associates Ltd.



Michael Cullip, P.Eng
Director, Manager – Municipal & Transportation Engineering
MJC:mjc

copy: Sam Greenwood, Greenwood Construction (sam@greenwoodconst.ca)

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looking west on Highway 89 from 3rd Line



looking east to 3rd Line from 320 metres to the west



looking east on Highway 89 from 3rd Line



looking west to 3rd Line from 185 metres to the east



looking west to 3rd Line from 320 metres to the east

date of photo: February 22, 2017

photo taken from edge of shoulder on Hwy 89



date of photo: February 22, 2017

photo taken from edge of shoulder on Hwy 89

vehicles approaching 3rd Line from
GREATER than 320 metres away

truck is approximately 320
metres east of 3rd Line

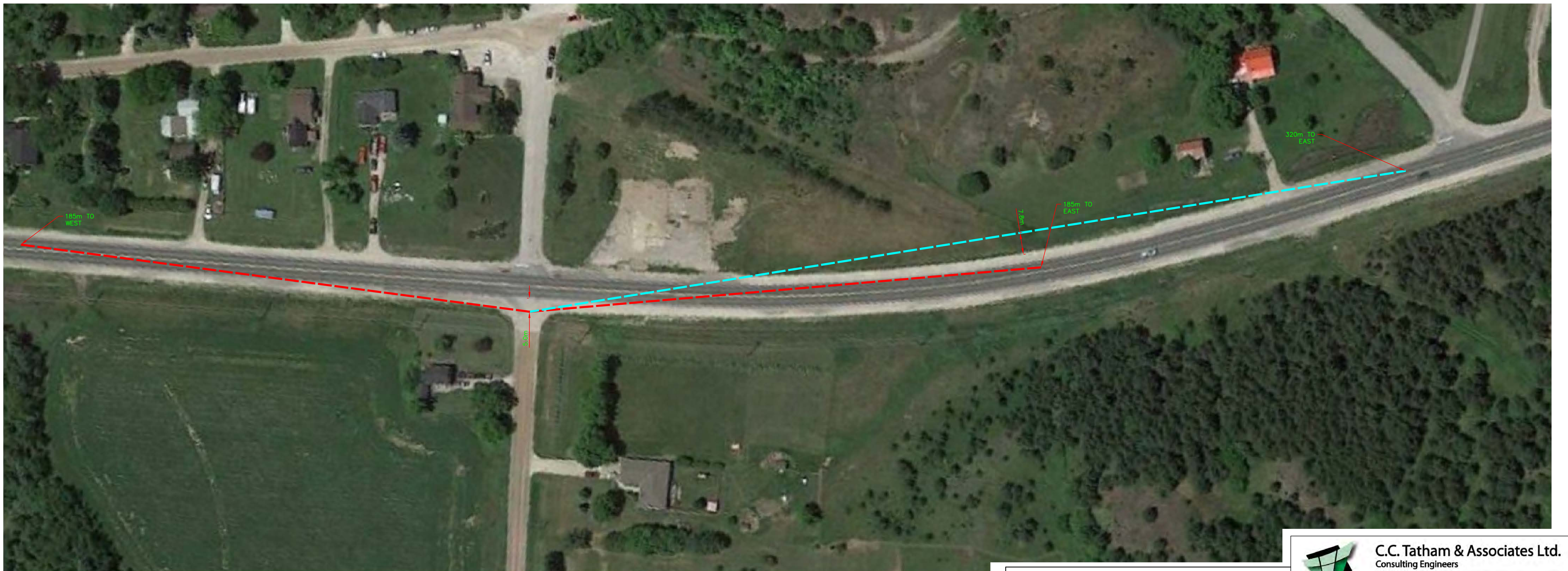


date of photo: February 22, 2017

photo taken approximately 10 metres in advance of edge of shoulder on Hwy 89



van is turning from 3rd Line
north leg, approximately 335
metres east of 3rd Line



3RD LINE AND HIGHWAY 89
SIGHTLINES



C.C. Tatham & Associates Ltd.
Consulting Engineers

Collingwood Bracebridge Orillia Barrie Ottawa

SCALE: 1:750	JOB NO. 114239
DRAWN: SDH	DATE: MAR/17
DWG. PLAN-2	



885 Don Mills Road | Suite 106 | Toronto, ON M3C 1V9 | P (416) 391-2527 | F (416) 391-1931

trinityconsultants.com



March 1, 2017

Sam Greenwood

Greenwood Construction Company Limited
205467 County Rd. 109
Amaranth, ON
L9W 0V1

***RE: Greenwood Construction Company Limited
Option 2 Entrance/Exit (Third Line)***

Dear Mr. Greenwood:

Trinity Consultants Ontario Inc. (Trinity) has prepared this letter to comment on the newly proposed Greenwood Construction Company Limited (Greenwood) haul route for the Violet Hill Pit (Pit) that is located on Part Lots 30, 31 and 32, Concession 4 in the Township of Mono, County of Dufferin, Ontario.

Greenwood has proposed to construct an alternate entrance/exit to the Pit; referred to as "Option 2" in the attached site plan. Option 2 is a shorter onsite haul route that decreases the travelling distance of trucks by approximately 75% from the original route (Option 1). Greenwood has identified that the internal haul route extending from the public road to the entrance will be paved, and recycled asphalt would be laid for the remainder of the route. Since travel distance plays a key role in the generation of road dust, total dust from truck traffic is expected to be significantly lower when compared to the Option 1 entrance originally assessed in the air modelling report. As such, Trinity does not have any concerns with this relocation from an air quality perspective.

Should there be any questions, please do not hesitate to contact me at (416) 391-2527 extension 30 or at cscullion@trinityconsultants.com.

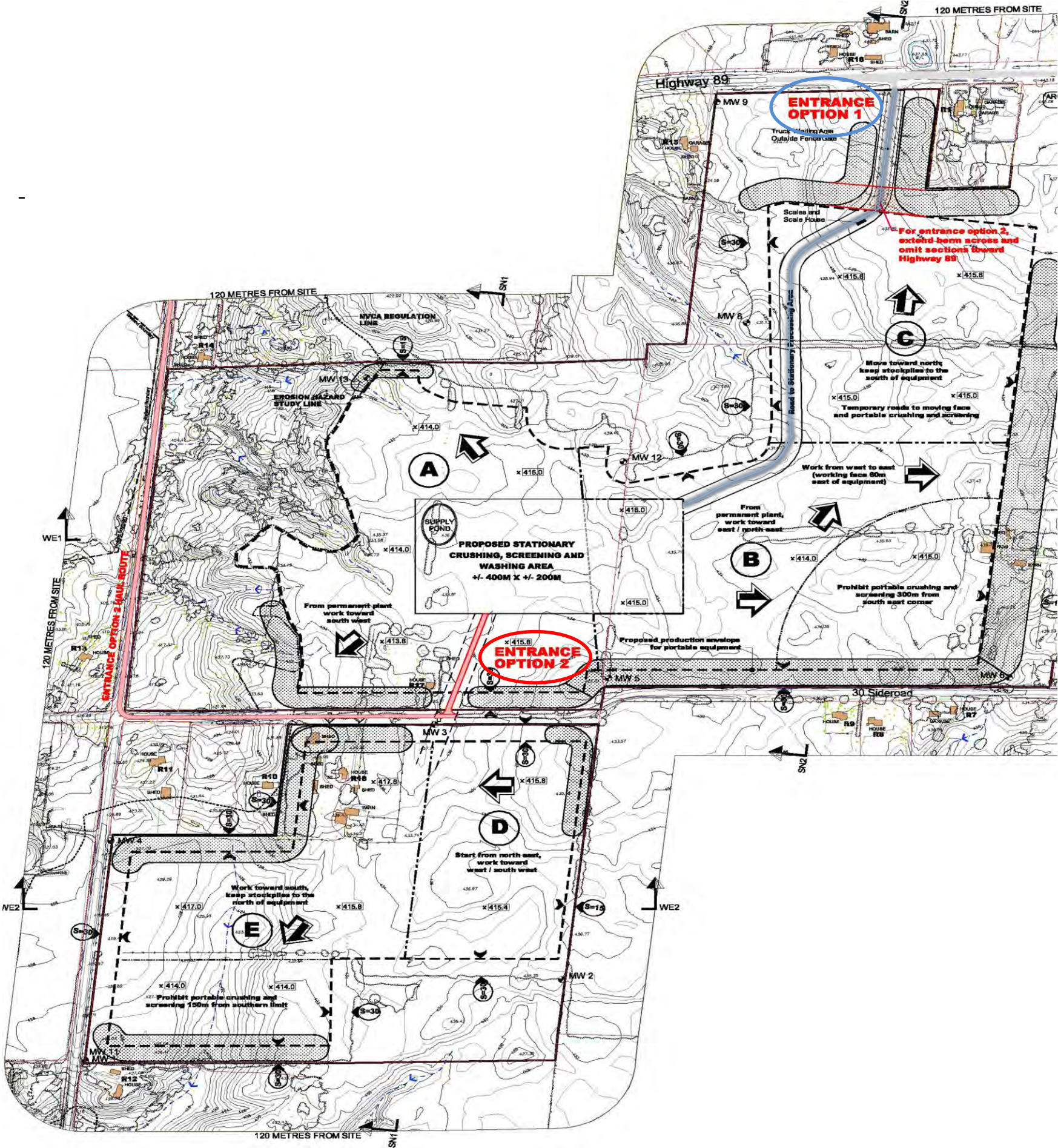
Yours truly,

Trinity Consultants Ontario Inc.

Christopher Scullion
Managing Consultant

Attached

1. Site Plan Image



MEMORANDUM

TO: Sam Greenwood, Greenwood Aggregates Limited **VIA E-MAIL**

FROM: John Emeljanow

DATE: March 2, 2017

RE: Sound Impact Analysis
Violet Hill Pit

FILE: 114-310

Our understanding is that the Ministry of Transportation is not permitting direct access from the proposed pit to Highway 89, as was shown on the Site Plans at the time our noise impact study was prepared. As a result, an alternate entrance option (Option 2) is being considered. We have assessed the impact the alternate entrance has on the on-site noise mitigation requirements. Our findings are summarized below.

The alternate site entrance location (Option 2) is to the south of the permanent processing plant where internal haul trucks were to cross 30 Sideroad to bring aggregate from the southern portion of the site to the processing plant.

Our assessment indicates that moving the site entrance to the Option 2 location has no impact on the noise mitigation requirements in Areas A, B, D and E. For Area C, the northern berm that had returns along the site entrance (Option 1) could be simplified by joining the two berms and eliminating the returns. In addition, the height of these berms can be reduced by 0.5 m. See Figure 1 attached. All other mitigation recommendations (i.e. direction of extraction, etc.) for Area C remain unchanged from our original report.

If there are any questions or if additional information is needed, please do not hesitate to call.

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