

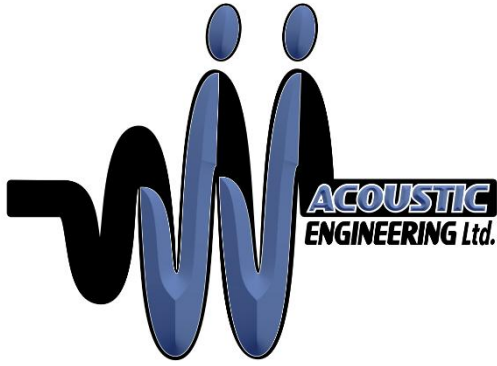


Stationary Noise Impact Study

Part of Lot 36 and 37, Arthur, Ontario

JJ-00722-NIS1





April 15, 2025,

Reference No. JJ-00722-NIS1

Anna Marie Vanleeuwen
Administrator
Dakota's Truck Services Ltd.
7831 Sixth Line
Elora, Ontario N0B 1S0
519-843-3636
admin@dakotastruckservices.com

Dear Anna Marie:

**Re: Stationary Noise Impact Study
Part of Lot 36 and 37 Concession 1, Arthur, Ontario**

1. Introduction

JJ Acoustic Engineering Ltd. (JJAE) was retained to complete a Stationary Noise Impact Study (Study) for the commercial development located at Part of Lot 36 and 37 Concession 1 in Arthur, Ontario (Site). The Site will be developed into a commercial building. JJAE has provided a copy of the most up-to-date Site Plan in Attachment A.

The Study was prepared consistent with Ontario Ministry of the Environment, Conservation and Parks (MOECP) NPC 300, "Environmental Noise Guideline, Stationary and Transportation Sources— Approval and Planning" dated August 2013.

This Study has determined that the potential environmental noise impact from stationary noise is not significant. JJAE has determined that the proposed development will not require noise mitigation.

The following attachments were included with this Study:

- Attachment A – Site Plan
- Attachment B – Stationary Noise Impact Figures
- Attachment C – Stationary Noise Impact Source Table

JJ Acoustic Engineering Ltd.
joey@jjae.ca
226-346-6473

2. Stationary Noise Impact Analysis

2.1 Stationary Noise Impact Sound Level Criteria

The general criteria for stationary noise sources are defined by NPC 300. The criteria defined in Table C-5 and C-6, "Exclusion Limit Values of One-Hour Equivalent Sound Level (Leq, dBA) Outdoor Points of Reception" and "Exclusion Limit Values of One-Hour Equivalent Sound Level (Leq, dBA) Plane of Window of Noise Sensitive Spaces" are used to evaluate the noise impact at the proposed development.

The criteria for Class 3 area have been summarized below:

Receiver Category	Time Period	Stationary Noise Criteria
Outdoor Living Area (OLA)	Day = 7:00 to 23:00	Leq = 45 dBA
Plane of Window (POW)	Day = 7:00 to 19:00	Leq = 45 dBA
	Evening = 19:00 to 23:00	Leq = 40 dBA
	Night = 23:00 to 7:00	Leq = 40 dBA

2.2 Modelling Methodology

The stationary noise impact was evaluated using the CADNA A acoustic modelling software that is based on the ISO 9613-2 standard. The data for all potential stationary noise sources was summarized in Attachment D.

JJAE used the following assumptions in our Cadna A model:

- **Ground Absorption:** Default ground absorption coefficient of 0.7 was used.
- **Temperature:** 10°C
- **Humidity:** 70%
- **Building Reflection Coefficient:** Absorption Coefficient Alpha of 0.37 (Reflection Loss of 2dB, Structured Façade) was used.
- **Time-Weighted Adjustment:** where sources operate non-continuously JJAE has provided operating times and as shown in Sections 4 and 5.
- **Tonality:** A 5 dbA tonal penalty was applied to all tonal sources, where applicable. JJAE has provided a (T) for sources identified as tonal in Sections 4 and 5.
- **Reflection Order:** A maximum reflection order of 1 was used to evaluate indirect noise impact.

3. Noise Impact Summary – From Site to Environment

JJAE was provided by the client with typical operating conditions and equipment that would be used onsite during the operating hours of 8:00am to 5:30pm. Garage activities onsite include impact tools, hammering, compressors. JJAE has identified the following:

- Heavy Trucks T1, T2, T3 (10 heavy trucks per hour during the daytime, Speed of 20 km/hr)
- Garage Activities (60 minutes during the daytime)¹

JJAE has modelled the noise sources and summarized them in the table below and illustrated on Figure 1:

Points of Reception	Worst Case Daytime Sound Level (dBA)	Daytime Noise Limit (dBA)	Limits met
POR #1	45	45	Yes
POR #2	38	45	Yes
POR #3	40	45	Yes
POR #4	38	45	Yes
Outdoor POR #1	45	45	Yes

From the table above it can be seen that all points of reception meet or are below noise limits

¹ JJAE confirmed that the garage doors remain closed during the use of any equipment. JJAE has used transmission loss values that closely matches 18-gauge steel garage doors in our model.

4. Recommendations

The stationary noise impacts from the Site to the neighboring buildings were evaluated and the sound level predictions were determined to be below the noise limits for all points of reception. In order to reduce potential off site nuisance, JJAЕ recommends that idling time of the heavy trucks in the parking lot areas be minimized.

5. Conclusions

The results of this Study indicate that the potential environmental impact from stationary noise sources is not significant. No further mitigation will be required.

Should you have any questions on the above, please do not hesitate to contact us.

Yours truly,

Written by:

Reviewed by:

April 15, 2025



Emmanuel Ghiorghis,
Acoustic Technician

Joey Jraige, P.Eng., B.A.Sc.
President

ATTACHMENT A

LEGEND:

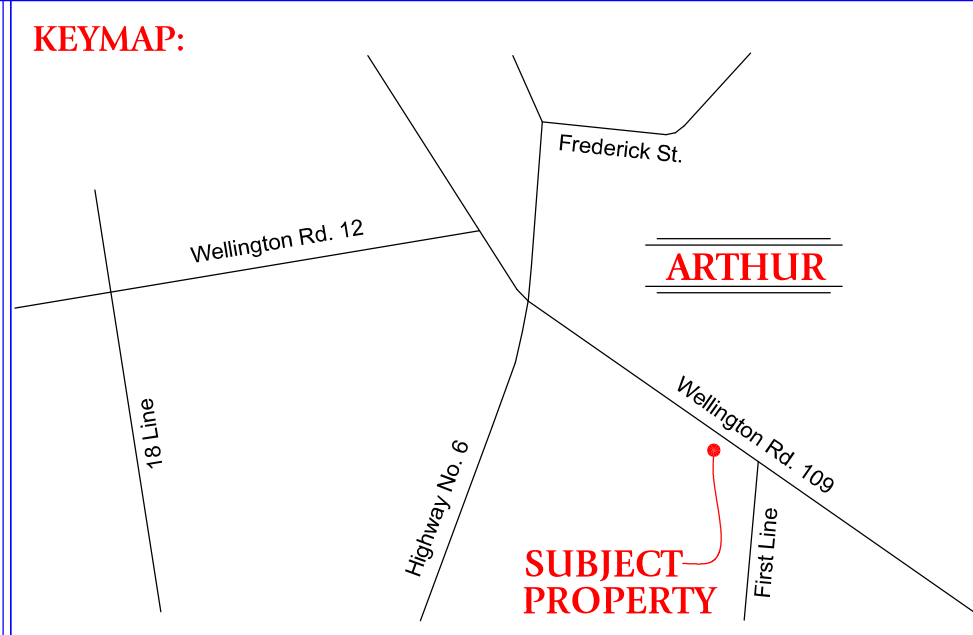
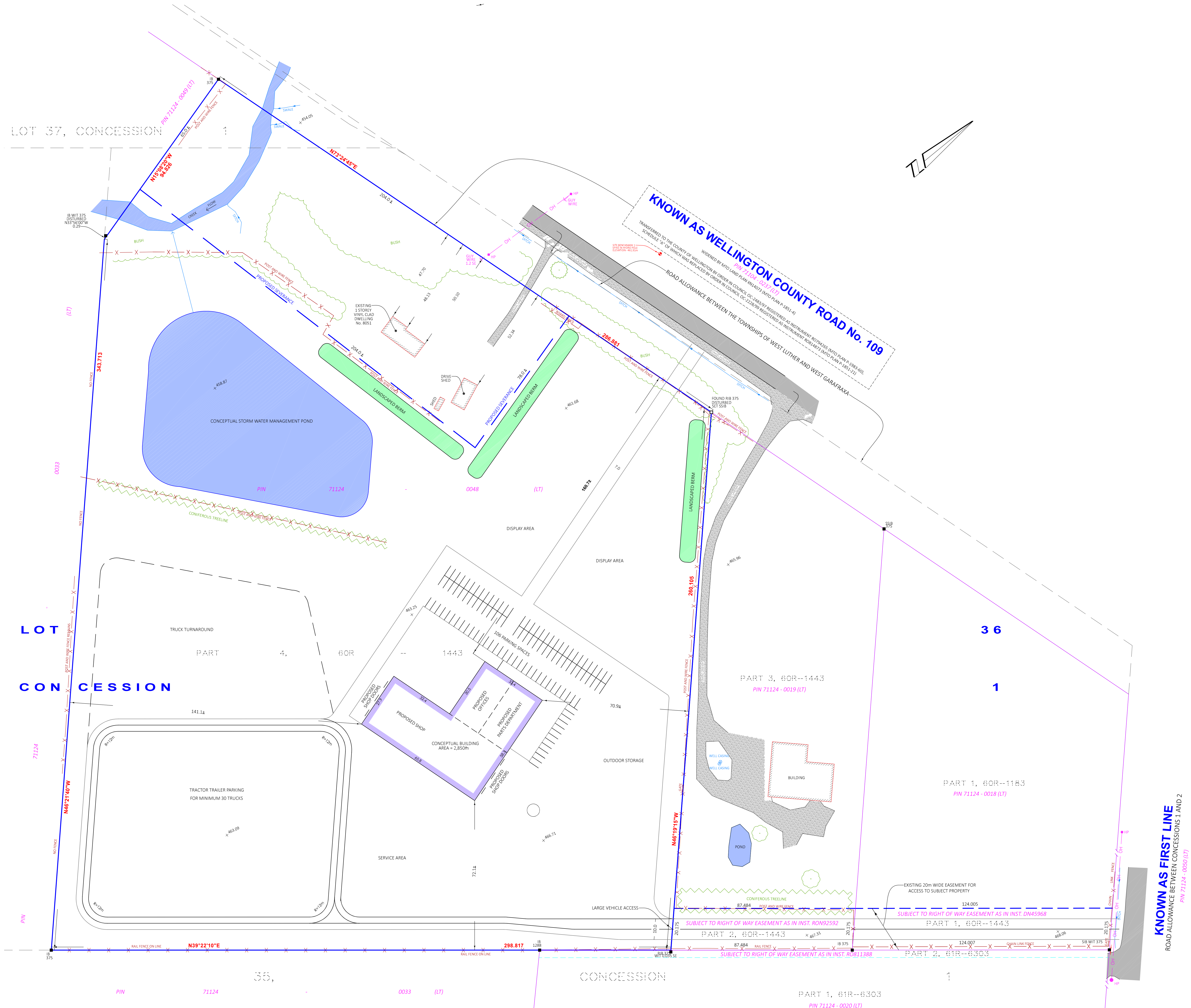
—□—	SURVEY MONUMENT FOUND	—X—	(206.55)	ASPHALT
—■—	SURVEY MONUMENT SET	—X—	(206.55)	GRAVEL
SB	025 X 025 X 1.03 STANDARD IRON BAR	FF	206.33	CONCRETE
IB	025 X 025 X 0.60 IRON BAR	FF	206.33	WATER
RB	ROUND IRON BAR	FF	206.33	LANDSCAPED AREA
CB	CONCRETE CURB	FF	206.33	NATURAL ENVIRONMENT ZONE
WH	WAN HARTEN SURVEYING INC., O.L.S.	FF	206.33	
MTO	MINISTRY OF TRANSPORTATION OF ONTARIO	FF	206.33	
375	BLACK, SHOEMAKER, ROBINSON & DONALDSON LTD.	FF	206.33	
1288	DEREK G. GRAHAM O.L.S.	FF	206.33	

EXISTING ELEVATION	X (206.55)	ASPHALT
PROPOSED ELEVATION	X (206.55)	GRAVEL
TOP OF FOUNDATION	FF=206.33	CONCRETE
FINISHED FLOOR ELEVATION	FF=206.33	WATER
UTILITY POLE	OP	LANDSCAPED AREA
HYDRO POLE	HP	NATURAL ENVIRONMENT ZONE
HP WITH LIGHT	HP/L	
LIGHT STANDARD	LS	
HYDRO METER	HM	
GUY WIRE	GUY	
FIRE HYDRANT	PH	
WATER VALVE	WV	
GATE	GA	

DIRECTION OF FLOW	→	PROPOSED GRASS
DITCH/SWALE	OH	LANDSCAPED AREA
OVERHEAD HYDRO	OH	NATURAL ENVIRONMENT ZONE
OVERHEAD BELL	YEL	
UNDERGROUND BELL	UTEL	
UNDERGROUND FIBRE	FIBRE	
GAS LINE	GAS	
WATER LINE	W	
SANITARY SENSER	SM	
STORM SENSER	ST	
FENCE LINE	X	
TOP OF BANK	—	
SILT FENCE	—	
TREE PROTECTION FENCE	—	
EDGE OF BUSH	—	

BEARING AND COORDINATE NOTE:

- BEARINGS ARE GRID BEARINGS AND ARE DERIVED FROM GNSS OBSERVATIONS AND ARE REFERRED TO THE UTM PROJECTION, ZONE 17, IN THE NAD 83 (CGRS-2011) DATUM.
- DISTANCES SHOWN ON THIS PLAN ARE ADJUSTED GROUND DISTANCES AND CAN BE CONVERTED TO GRID DISTANCES BY MULTIPLYING BY AN AVERAGED COMBINED SCALE FACTOR OF 0.999590.
- COORDINATES ON THIS PLAN ARE UTM, ZONE 17, IN THE NAD83 (CGRS-2011) DATUM AND BASED ON GNSS OBSERVATIONS FROM A NETWORK OF PERMANENT GNSS REFERENCE STATIONS.



PROPERTY DESCRIPTION:

- PART OF PIN 71124-0048 (LT)
- PART OF LOTS 36 AND 37, CONCESSION 1; BEING PART 4, 60R-1443
- GEOGRAPHIC TOWNSHIP OF WEST GARAFRAXA
- COUNTY OF WELLINGTON

PROPOSED ZONING DESIGNATION: RURAL INDUSTRIAL (RIN)

ITEM	REQUIRED	PROPOSED	COMMERCIAL
MINIMUM Lot Area - 14.21	0.4 ha		45.2 ha
MINIMUM Lot Frontage - 14.2.2	30.0m		453.3m
MINIMUM Front Yard - 14.2.3	7.6m		150.7m
MINIMUM Interior Side Yard - 14.2.5	3.0m & 8.9.2m where a RIN Zone abuts any residential zone.		470.9m/141.1m
MINIMUM Rear Yard - 14.2.4	7.6m		272.1m
MAXIMUM Lot Coverage - 14.2.7	30%		3.00%

Residential Setbacks: No industrial activity including outdoor storage will be permitted within 60m of a residence on an abutting lot. Complies

ZONING: GENERAL PROVISIONS

REGULATION	REQUIRED	PROPOSED	COMPLIES

PARKING:

EMPLOYEE: XX
CUSTOMER: XX
ACCESSIBLE: X
CUSTOMER REPAIR: XX

SURVEY INFORMATION:

BENCHMARK REFERENCE:
ELEVATIONS ARE BASED ON GNSS OBSERVATIONS FROM PERMANENT REFERENCE STATIONS IN THE NAD83 (CGRS-2011) COORDINATE SYSTEM, WITH HEIGHTS CONVERTED TO ORTHOMETRIC ELEVATIONS ON THE CGVD28 DATUM (1978 ADJUSTMENT) WITH GEOID MODEL HTv2.0, AS SUPPLIED BY NATURAL RESOURCES CANADA.

SITE BENCHMARK:
1. SPIKE IN HYDRO POLE ACROSS WELLINGTON ROAD No. 109, OPPOSITE SUBJECT DRIVEWAY, HAVING AN ELEVATION OF 461.91m.

TOPOGRAPHIC SURVEY DATE:
THIS TOPOGRAPHIC SURVEY WAS COMPLETED ON THE 10th DAY OF JANUARY, 2025.

CAUTION: - THIS IS NOT A PLAN OF SURVEY AND SHALL NOT BE USED FOR TRANSACTION OR MORTGAGE PURPOSES.
- THIS SKETCH IS PROTECTED BY COPYRIGHT, © 2025

METRIC: DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

CONCEPT PLAN:
PART OF LOTS 36 AND 37,
CONCESSION 1
GEOGRAPHIC TOWNSHIP OF WEST GARAFRAXA
TOWNSHIP OF WELLINGTON NORTH
COUNTY OF WELLINGTON

DRAWING REVISION SCHEDULE

NO.	REVISION	DATE

PREPARED FOR: 2494113 ONTARIO LTD.
PROJECT No. 33999-24
DRAWING SCALE 1 : 750

THE INTENDED PLOT SIZE OF THIS PLAN IS 1321mm IN WIDTH BY 610mm IN HEIGHT. THE ORIGINAL VERSION OF THIS PLAN WAS CREATED IN COLOUR.



Ritchener/Waterloo
Ph: 519-742-8371

Guelph
Ph: 519-821-2763

Orangeville
Ph: 519-940-4110

www.vanharten.com info@vanharten.com

DRAWN BY: D.R.D. DESIGNED BY: C.C. CHECKED BY: P.C./J.E.B.
Feb. 25.2025 11:45am
G:\WEST GARAFRAXA\com\lucad\CONCEPT PLAN PT LT 36 (D\KOTA-33999-24) UTM 2010.dwg

CALL BEFORE YOU DIG

THE LOCATION OF SERVICES ON THIS DRAWING ARE ONLY APPROXIMATE AND BASED ON SURFACE FEATURES LOCATED AT THE TIME OF THE TOPOGRAPHIC SURVEY. PRIOR TO ANY CONSTRUCTION IT IS THE RESPONSIBILITY OF THE CONTRACTOR/BUILDER TO ENSURE THE EXACT LOCATION OF ALL UTILITIES.

ATTACHMENT B



STATIONARY NOISE IMPACT
PART OF LOT 36 AND 37, CONCESSION 1, ARTHUR, ONTARIO

FIGURE 1
NOISE IMPACT FROM SITE TO NEIGHBORING BUILDINGS



- ... < 45.0
- 45.0 <= ... < 50.0
- 50.0 <= ... < 55.0
- 55.0 <= ... < 60.0
- 60.0 <= ... < 65.0
- 65.0 <= ... < 70.0
- 70.0 <= ... < 75.0
- 75.0 <= ...



- Line Source
- vert. Area Source
- Building
- X Receiver
- ⊕ Building Evaluation

ATTACHMENT C

Stationary Noise Impact Source Data

Noise Source Description	Cadna ID	Total SWL (dBA)	Data Source or Representative Data	Height Absolute (m)	Above Roof (m)	Coordinates	
						x	y
T1	Heavy_truck_10kph	103.5	Heavy_truck_10kph	2.3	2.3	17538645	4852817
T2	Heavy_truck_10kph	93.9	Heavy_truck_10kph	2.3	2.3	17538708	4852860
T3	Heavy_truck_10kph	96.9	Heavy_truck_10kph	2.3	2.3	17538638	4852829
Interior Garage Activity with Doors Closed	Door_Closed Interior_Garage_Activity	93.2	Interior_Garage_Activity	3.5	3.5	17538607	4852882
Interior Garage Activity with Doors Closed	Door_Closed Interior_Garage_Activity	93.2	Interior_Garage_Activity	3.5	3.5	17538676	4852865