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SCOTT
SCHELSKE
ENGINEERING

Noise Study for 276 Duke St.

Prepared by: Scott Schelske, P.Eng., F.E.C.

Date: February 17, 2021

1.0 Introduction:

Channel Technical Services Ltd. has been retained by Fusion Capital to prepare certain reports and other document submissions for the purpose of rezoning a property located at 276 Duke Street, Dryden, Ontario. This Nosie Study is being prepared as part of that application for the rezoning. The present zoning for the site is R2 (Residential Two) and the developers are submitting an application to change the zoning to RM (Residential Multiple). It is intended that, once that zoning amendment has been approved, the developers will begin the process to utilize the subject property as the site for the construction of 4 multi unit residential complex buildings. Each building is to house 12 individual apartments and will be 3 stories high.

It is noteworthy that one of the accompanying documents to this report is a full Environmental Impact Statement, which contains much more details on the surrounding area, history of the site, drawings, maps, location of features in the immediate area and photos. This report is intended to be an extension to that report, and it should be reviewed in conjunction with it. (Certain relevant information from sections of that report have been culled and inserted herein).

This document is being prepared to satisfy the Ministry of Environment's "*Requirements for Noise Emissions*", a copy of which is appended to the body of this report. It is noteworthy that the primary "target" of this legislation would appear to be heavy and light industrial developments, commercial and institutional enterprises with round the clock production and process equipment and utilities noise and not at all intended for a relatively small residential development on a single lot, plus there are requirements for noise testing from the constructed developments that are not possible until post construction and in this instance, occupancy of the buildings. The report also requires the listing of the facility's NAICS (North American Industry Classification System) Code. In this instance, the only code that at all matched the code list was "72" which is for "Accommodation and Restaurants", which implies a hotel/motel establishment and not an apartment complex.

2.0 Description of Proposed Project Location:

The proposed development is to take place on a vacant piece of property located on the south side of Duke Street, at the very Eastern end of the subdivided area (See attached plan maps, Google Aerial, and other photos of immediate area). This portion of Duke street is 2 blocks east of the north bound bend for the majority of traffic that directs it to the overpass over the Canadian Pacific Railway (CPR) Main Line and that terminates at the intersection with Highway 17.

The legal description of the lot is: Registered Plan M-318, Parcel 18801 D.K.F., Part 1, Plan KR-1013, Parcel 25313 D.K.F., Part 1, Plan 23p-2337, part of Parcel 28040 D.K.F., Secondly.

The lot measures 125 m (410') x 47.25 m (155') as shown on the attached site plan.

The lot is at the corner of Duke Street and the northern branch of Arthur Street, (which is a gravel road leading to the south) and the northeast corner of the lot is "kitty corner" from the CPR railyard. There is a lockable steel gate located at the approximate mid point of Duke Street in front of the lot at which point the paved street becomes a gravel road.

Immediately to the west of 276 Duke Street are single family houses on both sides of the street, (see aerial photo in the Appendix). However, there is only 1 of the houses directly across the street from the proposed development, (across from the western most proposed building) and that one house is 45 m from the front of that unit and the next-door neighbor immediately to the west of the north corner of that proposed unit is 23 m away.

Since the location of the proposed construction is at the end of a short residential street that is 2 blocks removed from any major transportation route, and the presence of the gate indicates that there would be periodic times when traffic would be prohibited from continuing to Arthur Street, there would be limited traffic going past the property. Therefore, the only real source of noise from off site would be any passing trains, which averaged 21 per day in 2019 according to the CPR website. It is noteworthy that when we were on site on November 17, 2020, the only traffic that passed by the lot were 3 vehicles from CPR, and the gate was open.

3.0 Brief Description of Topography:

The lot itself is a short plateau that is relatively flat running in a south-westerly direction until it reaches a bedrock ridge located past the southern lot boundary that runs diagonally to the property line ranging from approximately 75 m past it at the easter end to 15 m at the western end. The plateau does slope gently to the northeast with an overall drop of approximately 2.5 – 3.5 m. Duke St, running in front of the lot, starts at a level to the lot at the west end then runs downhill to become approximately 6.5 m below the crest of the plateau at the bottom of the ditch at the corner with Arthur Street then there is a further 1.5 m drop along Arthur St. to become 7.5 m at the bottom of the ditch below the top of the very steep slope on the east end to the road.

4.0 Vegetation: *(forest, ground cover, aquatic plants)*

The area of the lot at 276 Duke Street had been stripped for past developments on the property and has sat fallow for several years, which has allowed a host of native grasses to flourish on the property that have reached heights approaching 1 m high. Here the native grass species would be snakeweed, sweet clover, timothy, crab grass and ragweed. Starting at Duke Street and progressing southward there are 30 – 40 m of mixed grasses running to near the back of the property. In addition, there are a couple of dozen white spruce and jack pine that would be approximately 25 – 30 years old (4 – 7 m high) growing in singles, small pairings and intermittently but mainly located in the southwest corner.

At the bush line which roughly approximates the property line (48 m from the front) a predominately coniferous forest of white spruce and jack pine commences, with intermittent poplar, ash, and birch (see photos). At the back of the property itself and extending into the leading edge of the undeveloped forest are "brush species" of tag alder, willow, and dogwood.

5.0 Sensitive Areas: *(residential zones, parkland, hospitals, schools)*

The existing water and sewer lines will service the residences. There are 3 schools available in that are of town plus the Dryden campus of Confederation College: Saint Joseph's Separate School is 9 blocks away; Open Roads Public School is 15 blocks away and Dryden District

High School is 6 blocks way. There is a hospital in town, but not in the immediate area. There are no park, playground nor other sensitive areas immediately in the neighborhood. There are no plans to incorporate a green space area within the sub-division, especially since there is a wooded area immediately to the south of the lot. The CPR work yard will be off limits to residents and may well be locked up in the evenings since there is a gate across Duke Street.

6.0 Special Designations: *(parks, protected areas)*

There are neither parks, protected areas nor special designations within the area to be developed.

7.0 Description of Project:

It is intended that, once that zoning amendment has been approved, the developers will begin the process to utilize the subject property as the site for the construction of 4 multi unit residential complex buildings. Each building is to house 12 individual 3-bedroom apartments and will be 3 stories high, for a total of 48 new housing units.

Plans call for each individual unit to have 3 bedrooms, 2 bathrooms with full laundry services. Construction is to be wood frame and all 4 buildings will be built to the latest standards established by the Ontario Building Code, designed by an architect and project managed and inspected by a registered professional engineer as well as the Dryden Chief Building Official.

8.0 Environmental Impacts:

The construction will place the 4 buildings within the direct line of sight between the residents of Duke Street and the forest behind and will occupy the vacant field that presently exists and remove that as a habitat for wandering deer and small rodents that frequent the field. The total height of the buildings will be 12.5 m (41'-2") which would be below the height of the forest immediately to the south of the property. Therefore, the front would only be visible from Duke Street and the side from the north/south extension of Arthur Street and that would be partially obscured by the 8 m high embankment along the side of the road.

Using an average of 4 persons per 3-bedroom unit, at full occupancy, there could be as many as 192 new residents in the neighborhood, half of which could be children. Using standards

established by the Ministry of Environment for determining effluent quantities for apartment dwellings (as found in Table 8.2.1.3. under Item 1 of Part 8 of the Ontario Building Code), the daily design quantity per person is 275 litres. Therefore, 192 new residents would add 52,800 litres daily to the sanitary sewer system for the neighborhood. Conversely, that would also require an additional 52,800 litres of domestic water to be taken from the City waterline supply. However, it should be noted that the majority of the buildings' residents may not be new residents of Dryden, just relocated from other residential areas.

The noise levels in the neighborhood would increase, particularly in summer months when people are outside during the day on weekends and evenings during the week.

The additional 96 children could pose a strain on playground and recreational facilities in the immediate area.

That small block and a half section of Duke Street which grows from 12 residences to 60 with the 48 new families, would see a significant increase in traffic, but not an unbearable traffic density.

As mentioned previously, present plans call for the use of electric heating in the building, so there will be neither emissions nor noise from heating systems. Furthermore, the use of "Green Stone" building panel construction will be very energy efficient and provide an excellent noise barrier.

Positive impact benefits will be the addition of 48 housing units to the City of Dryden. These 48 units will all become rate payers and add to Dryden's property tax income. In addition, a "ballpark" estimate of the cost of development is $10 million. This is a direct addition to Dryden's economy for materials, skilled trades people, equipment operators and general labour.

9.0 Environmental Impacts Due to Noise:

The Environmental Impact Study summarized and rated an analysis of impacts on several diverse items including noise, which was rated as "Unknown". It stated that with regards to noise, the clearing and landscaping and servicing of the lot using heavy equipment will be accomplished in a matter of a few days. The construction of the buildings themselves would

be a several months long project for each of the 4 units and they themselves may be constructed over a period of a few years depending on the local demand for the spaces and cash flow.

The other noise factor is the eventual addition of 48 families to the neighborhood, with an estimated 192 people, half of whom could be children. This is the unknown factor because the demographics of the present residents of the neighborhood is an unknown and the demographics of the new tenants will be an unknown. For example: If local residents are families with children and the new building does attract families, then the new residents could be welcome additions to the neighborhood. As such it is an Unknown Impact at this juncture. However, that being stated, there are certain items that can be used for analysis and some of these can be mitigated, which will be detailed in a subsequent Section.

The aforementioned, appended "Requirements for Noise Emissions" details various Ontario guidelines and noise levels based on criteria that are site specific, both with respect to the source of any noise emissions and the receptors, defined as "a point of noise reception". The following statements define this:

> *"A point of noise reception is only a point of noise reception if it is a point at which sound discharged into the air from a source of sound at the facility is received and it is located on a property that contains one or more of the following buildings:*
>
> 1. *A building or structure that contains one or more dwellings.*
> 2. *A building used for a commercial purpose that includes one or more habitable rooms used as sleeping facilities, such as a hotel or motel.*
> 3. *A building used for an institutional purpose, including an educational facility, a childcare centre, a hospital, a health care facility, a shelter for emergency housing, a community centre, or a detention centre.*
> 4. *A building used for a place of worship, other than a place of worship located on land that is zoned for commercial or industrial use.*
> 5. *A location on a vacant lot, other than an inaccessible vacant lot, that has been zoned to permit a building mentioned in paragraph 1, 2, 3 or 4.*
> 6. *A portion of a property that is used as a campsite or campground at which overnight accommodation is provided by or on behalf of a public agency or as part of a commercial operation."*

Please note that the only item in the list above that is relevant is No. 1., "A building or structure that contains one or more dwellings" and that would be the very multi unit dwellings that are being proposed for construction, so this Section is Non-Applicable.

"A point located on a property on which a building that contains only one dwelling is located is not a point of noise reception if the building is located on the same property as the source of sound and in a separate building from the source of sound."

"A point of noise reception may be considered not to be an affected point of noise reception if:

1. *The distance from the source of sound to the point of noise reception is greater than or equal to the minimum separation distance determined using the Primary Noise Screening Method.*
2. *The point is one of several points in close proximity and one of the other points is an affected point of noise reception that represents the sound level at the point.*
3. *The background sound level at the point of noise reception is high relative to the sources of sound being assessed.*
4. *Having regard to the class of the area in which the point of noise reception is located, the sound level at the point of noise reception is less than the sound level limits that would apply at the point of noise reception in accordance with sections 6 and 7 of Chapter 3 of the EASR publication.*

If there is a point of noise reception in a cardinal direction, there must be at least one affected point of noise reception in that direction."

The report goes on to allow (request) for calculations on sound levels to be performed if the distance between the source and the receptor is less than 1000 m, which applies in this instance, where the nearest residence to the proposed location of the nearest proposed residential complex would be 23 m (75').

It then states that the noise study shall be a Secondary Noise Screening Report that:

"Contains a statement by the LEP (Licensed Engineering professional) signing the report that one of the following criteria is met:

i. The combined sound level resulting from sound discharged from the facility at each affected point of noise reception, as determined using the Secondary Noise Screening Method, is less than or equal to the applicable sound level limit identified in Chapter 3 of the EASR publication."

As mentioned previously in this report, **it is noteworthy that the requirements of the Secondary noise screening report as listed below, including all, of Sections 4, 5, 6, & 7 are not applicable in that they deal with industrial operations.**

"If the LEP confirms that the criterion in subparagraph 8 iii of subsection 17 (1) is met, the noise report must contain the following:

1. Confirmation that the combined sound levels were determined using the Secondary Noise Screening Method.
2. Confirmation that the affected points of noise reception were determined using the Secondary Noise Screening Method.
3. A copy of all the information used for the Secondary Noise Screening Method and the results it generated.
4. A description of any acoustical barrier used or proposed to be used with respect to each source of sound.
5. A description of the operational parameters that were determined for the purpose of the noise report, including,
i. the facility's maximum rates of production, process limits and performance limits,
ii. parameters relating to equipment and infrastructure at the facility,
iii. the time of day a source of sound is operating or is proposed to be operating,
iv. the duration of time a source of sound is operating or is proposed to be operating, and
v. whether the sound is tonal or non-tonal.
6. A description of the operating and maintenance procedures required to ensure that the facility is operating within the operational parameters referred to in paragraph 5.
7. A statement signed by the person engaging in the prescribed activity confirming that all information the person gave to the licensed engineering practitioner in order to prepare the noise report was complete and accurate."

In order to prepare this report, (the "Secondary Noise Screening") an online search for information on Secondary Noise Screening Method requirements and standards was conducted. One report in particular had an excellent chart of sound levels in Decibels (dB) for a full range of common sources versus human response to that sound. The chart was found in an accepted Ontario Noise Study entitled: "Guasti Plaza Specific Plan Amendment Supplemental EIR".

It is located on the flowing page.

The chart clearly demonstrates the range that common household and street traffic sounds generate, such as: "Normal Conversation at 12': 50 dB", "Dishwasher Rinse at 10' & Air Conditioning Unit: 60 dB", "Vacuum Cleaner, Portable Fan, & Traffic at 100': 70 dB", 'Freeway Traffic at 100', Washing Machine, Alarm Clock, Garbage Disposal, Electric Can Opener: 80 dB" and "Electric Mixer at 85 dB". Considering that most items listed would be utilized during daytime or run for a short duration of a few minutes, (such as an electric

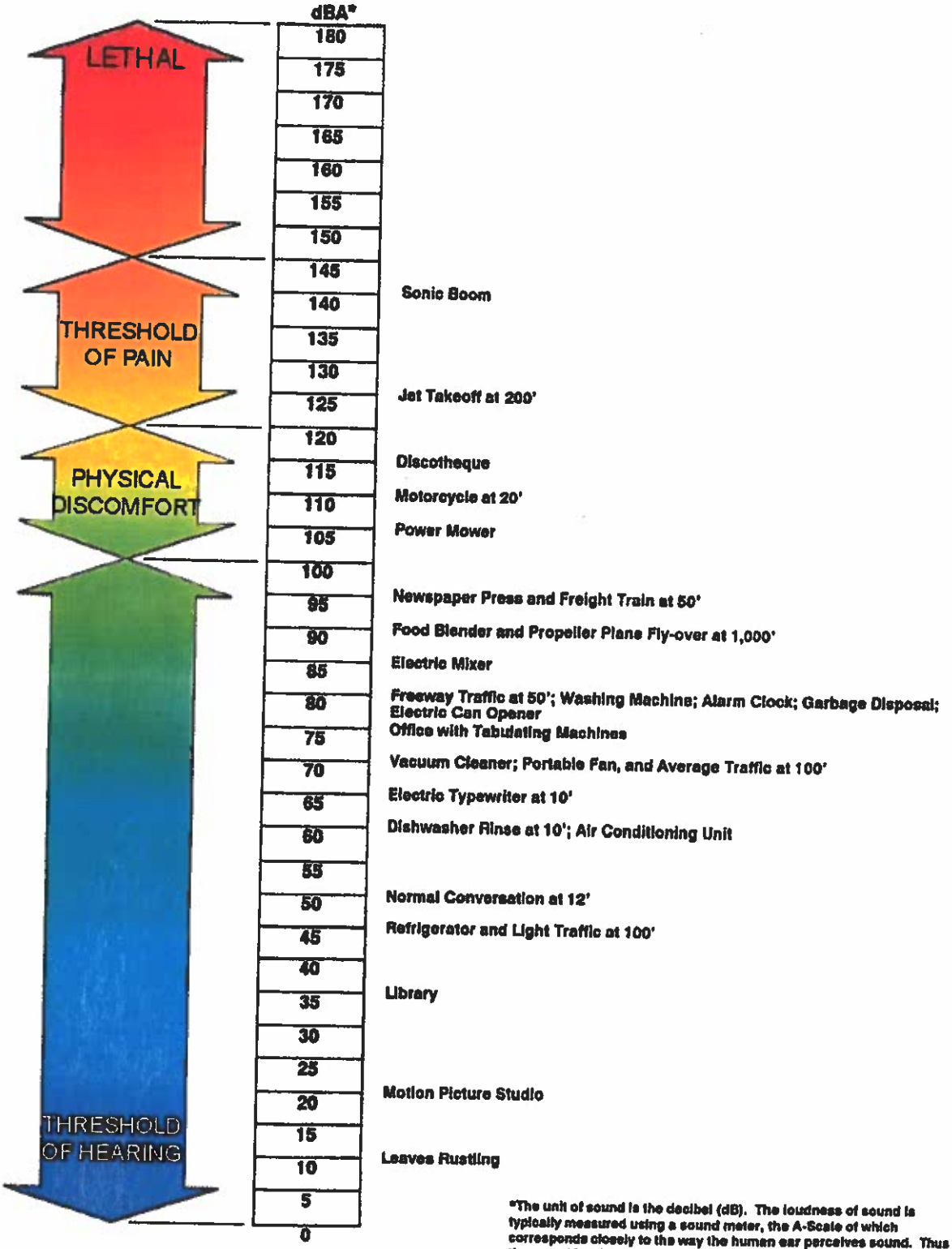
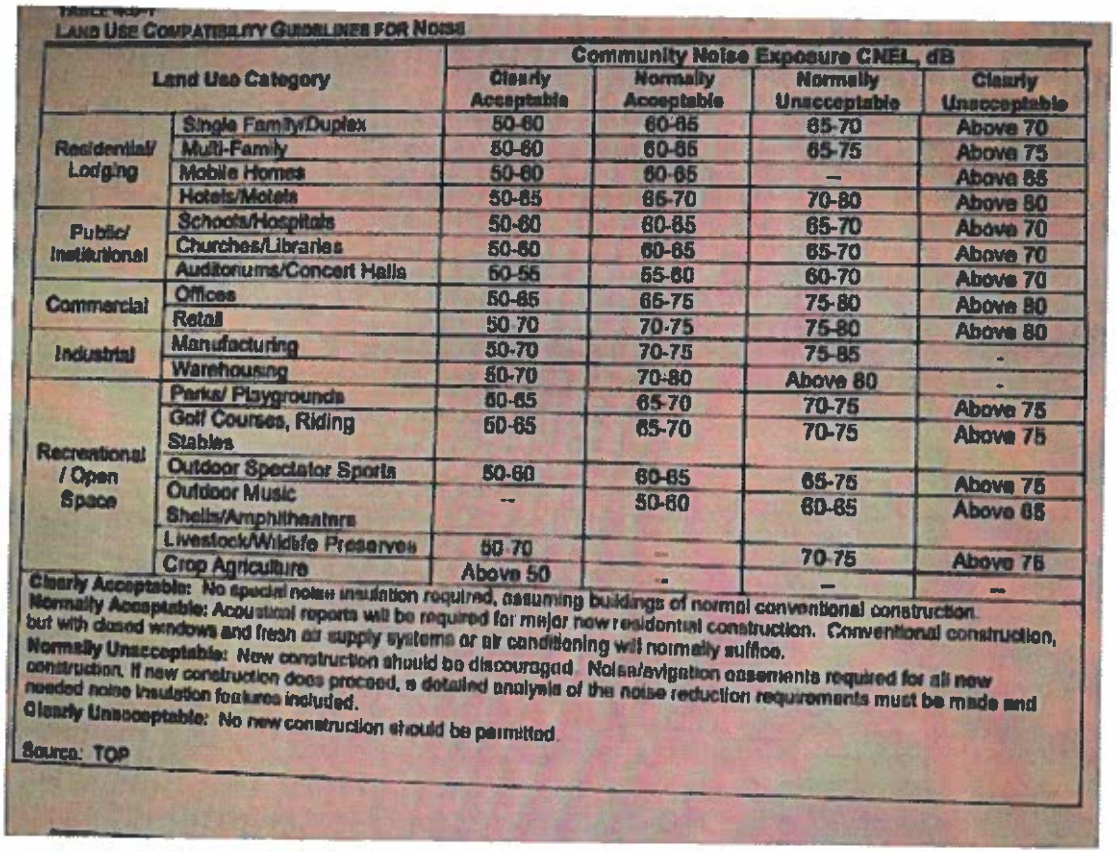


Figure 4.6-1
Acoustical Scale

Guasti Plaza Specific Plan Amendment
Supplemental EIR

mixer) the noise level indicated for washing machine at 80 dB would probably represent the nosier appliance that could be run during nighttime hours. (Other than stereo and other music systems and parties which can be very loud depending on the possible inconsiderate behaviour of a tenant of the unit and those can be subject to noise complaints with law enforcement). Therefore, 80 dB is the sound level generated inside a given unit that was used in this analysis.



LAND USE COMPATIBILITY GUIDELINES FOR NOISE

Land Use Category		Community Noise Exposure CNEL, dB			
		Clearly Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential/ Lodging	Single Family/Duplex	50-60	60-65	65-70	Above 70
	Multi-Family	50-60	60-65	65-75	Above 75
	Mobile Homes	50-60	60-65	--	Above 65
	Hotels/Motels	50-65	65-70	70-80	Above 80
Public/ Institutional	Schools/Hospitals	50-60	60-65	65-70	Above 70
	Churches/Libraries	50-60	60-65	65-70	Above 70
	Auditoriums/Concert Halls	50-55	55-60	60-70	Above 70
Commercial	Offices	50-65	65-75	75-80	Above 80
	Retail	50 70	70-75	75-80	Above 80
Industrial	Manufacturing	50-70	70-75	75-85	-
	Warehousing	50-70	70-80	Above 80	-
Recreational / Open Space	Parks/ Playgrounds	50-65	65-70	70-75	Above 75
	Golf Courses, Riding Stables	50-65	65-70	70-75	Above 75
	Outdoor Spectator Sports	50-60	60-65	65-75	Above 75
	Outdoor Music Shells/Amphitheaters	--	50-60	60-65	Above 65
	Livestock/Wildlife Preserves	50 70	--	70-75	Above 75
	Crop Agriculture	Above 50	-	--	--

Clearly Acceptable: No special noise insulation required, assuming buildings of normal conventional construction.
Normally Acceptable: Acoustical reports will be required for major new residential construction. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
Normally Unacceptable: New construction should be discouraged. Noise/avigation easements required for all new construction. If new construction does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included.
Clearly Unacceptable: No new construction should be permitted.

Source: TOP

Chart Showing Ontario's Acceptable Levels of Sound for Various Spaces

The chart above indicates limits for various land use categories for point of noise reception, for various area zoning. Therefore, using the upper limits listed of: "Normally Acceptable" for daytime and "Clearly Acceptable" for nighttime, in industrial areas, **75 dB** would be for daytime and **70 dB** at night. In commercial areas, it is **75 dB** and **65 dB**, while in residential areas it is **65 dB** and **60 dB** during daytime and night, respectively.

The following chart taken from the US Department of Transportation's Federal Highway Administration's website gives the Exterior Wall Noise Reduction for Various types of

wall construction. The lowest sound reduction for any type of wall construction (and the wall system being proposed is much thicker and will provide a much better sound barrier) is 27 dB for ½' wood siding and ½" to 5/8" drywall. Furthermore, the neighbor's will have a similar reduction provided by their exterior walls. Therefore, the total reduction inside a neighbor's residence due to the exterior walls of housing is 54 dB.

Exterior Wall Noise Rating (EWNR) Values in dB For Standard Exterior Constructions (For Use With Highway Noise)

Note: Approximate Metric thicknesses in centimeters may be obtained by multiplying the nominal English-inch units by 2.54

EXTERIORS		INTERIORS 1 Gypsumboard - 1/2" to 5/8"	2 1/8" to 1/2" Plaster on 3/8" Gypsum Lath	3 1/2" Soundboard on Gypsumboard - 3/8" to 1/2"	4 Plaster - 1/2" to 7/8"	5 Plywood - 1/2"	6* Plywood Paneling - 1/4"	7* Hardboard Paneling - 1/4"	8 Exposed Solid Wall
Alum. Siding on 1/2" Wood	A	28	31	29	32	25	29	31	--
7/8" Stucco	B	36	34	37	30	33	37	38	--
7/8" Stucco on 1/2" Wood	C	37	36	37	32	34	38	39	--
Wood Siding - 1/2" to 3/4"	D	27	29	27	31	24	28	30	--
4-1/2" Brick Veneer	E	44	42	44	39	42	45	46	--
9" Brick	F	47	50	50	45	45	45	45	45
4" Concrete	G	46	47	47	41	40	40	40	40
6" Concrete	H	46	48	48	42	42	42	42	42
6" Hollow Concrete Block	I	38	40	40	34	33	33	33	33
8" Hollow Concrete Block	J	40	42	42	36	35	35	35	35
6" Block w/1/2" Stucco	K	39	41	41	35	34	34	34	34
8" Block w/1/2" Stucco	L	41	43	43	37	36	36	36	36

*Both 1/4" Paneling Interiors (columns 6 and 7) are mounted on 1/2" Gypsumboard only for Exteriors A through E.

Using the upper limit of sound at night generated by a washing machine at 80 dB and subtracting the lowest value for the sound dampening effect of exterior wall of 54dB, the net sound level being transmitted and received is only 26 dB, which is 9 dB quitter than

the limit for a library! Plus, that doesn't even account for the reduction in sound due to the distance of 23 m (75') to the nearest receptor.

10.0 Mitigation and Construction Scheduling to Reduce Noise:

It was mentioned previously that heavy equipment work for land clearing and site preparation and servicing of the lot would only last for a few days. Building construction could take a few months for each unit and construction of the 4 units could conceivably be stretched out for a few years depending on the rate of occupancy of the units. The noise guidelines for construction activities require that outdoor activities be restricted to the hours of 7:00 AM – 7:00 PM during weekdays and 9:00 AM – 7:00 PM on weekends.

The parking lot for the dwellings will be located at the front of the buildings. This would push their location to the back of the lot, thus increasing the distance from any future residential construction on the north side of Duke Street. It also would provide the impetus to locate playground equipment in the back yards, thus the buildings would provide a natural sound barrier from noise generated during the day by children.

Trees and other vegetation can also provide noise attenuation. However, approximately 100 feet of dense foliage (see photos) is required to achieve a 5-dB attenuation of noise. Thus, the use of vegetation as a noise barrier on the west side of the building would not be considered a practical method of noise control for the site. However, there is presently approximately 700 m (2300') of forest directly behind the loot to the south. This would provide an excellent sound barrier to residents living along the east-west section of Arthur Street.

At the present time there are no specific plans nor necessity to construct a fence along the western property line. However, if such an item is constructed in the future, that would provide additional sound attenuation.

12.0 Summary and Conclusions:

In summary it is perhaps noteworthy that the zoning by law change request at 276 Duke Street is for a single, large 125 m x 47.25 (410'x 155') lot to be rezoned from R2 to RM and not a large subdivision development. Furthermore, the lot in question is at the end of a short. 1 ½ block extension to one of Dryden's major thoroughfares and is gated by the CPR at approximately the ½ way point so as to restrict passing traffic.

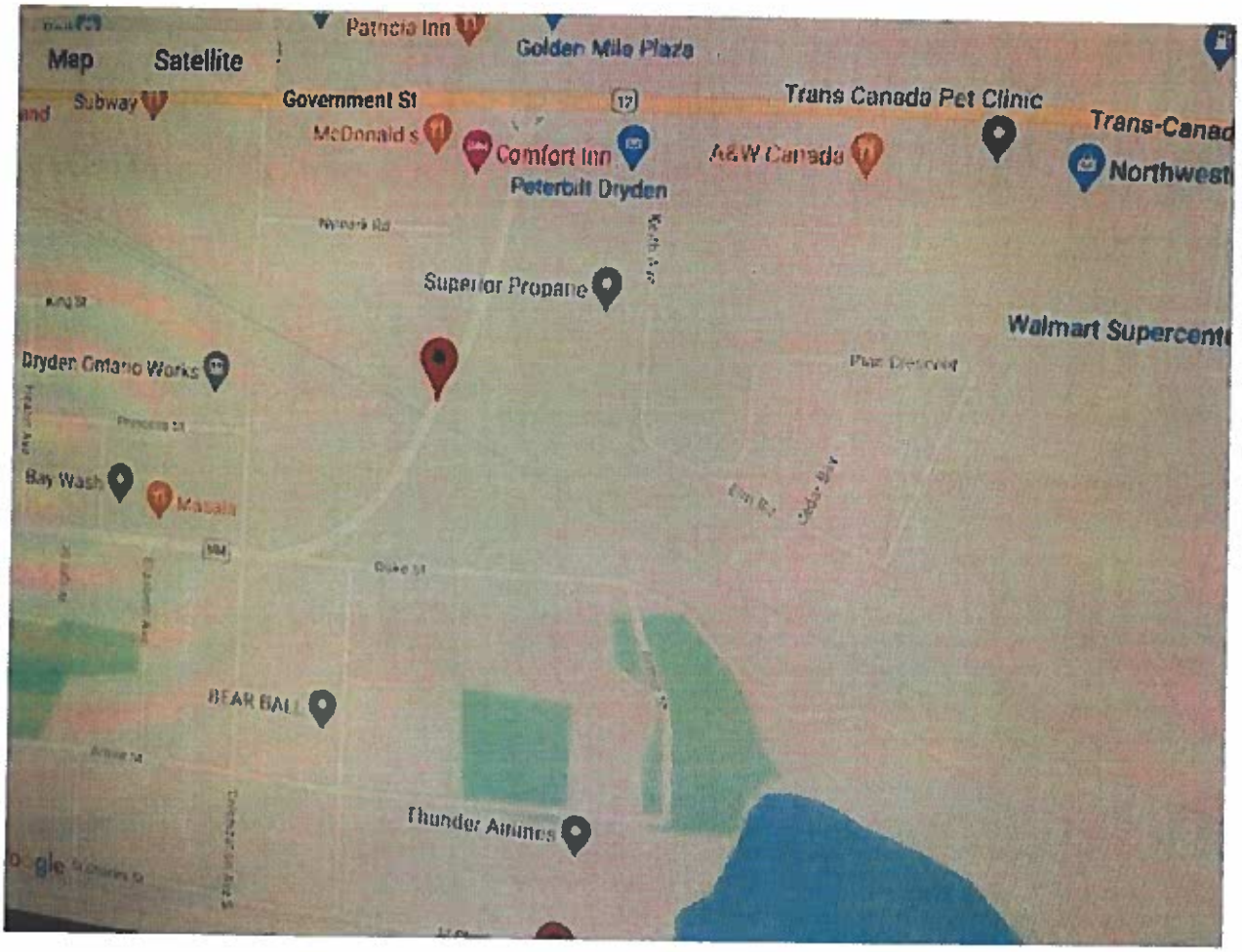
Since the CPR Mainline passes immediately to the north of neighbors along the north side of Duke Street the accompanying noise from the passing average of 21 trains per day would generate far more sound than any that will be produced by this development.

In conclusion it is, therefore, my professional opinion that the proposed development of 4 multi unit dwelling at 276 Duke Street will not generate an unacceptable level of noise unless there eventually is a tenant(s) of the complex whose inconsiderate behavior with respect to the use of audio-visual equipment and gatherings of large groups of people, which would be subject to investigation by law enforcement.

Respectively submitted:

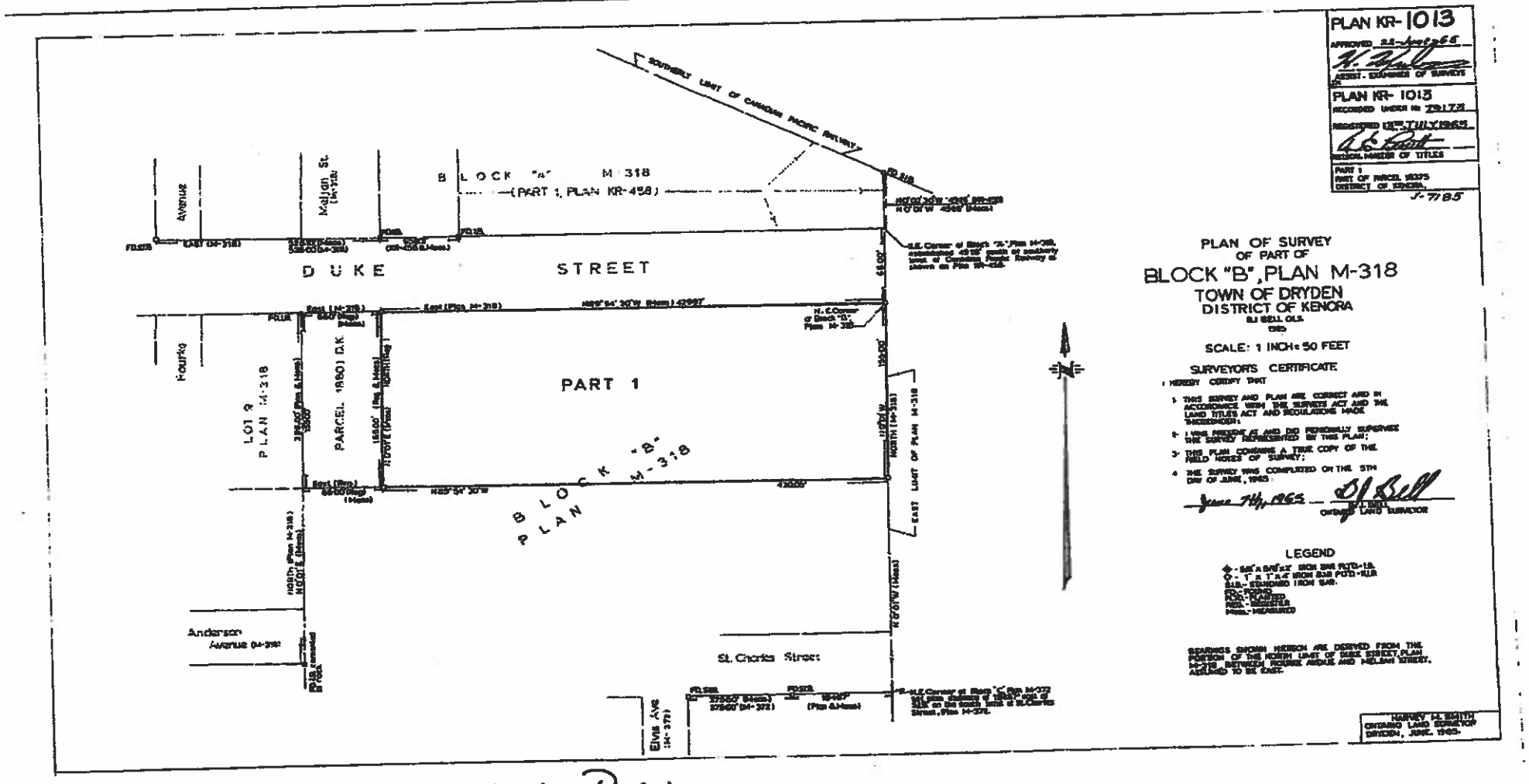
Scott Schelske, P.Eng., F.E.C.
License Number 409350177

Appendix:

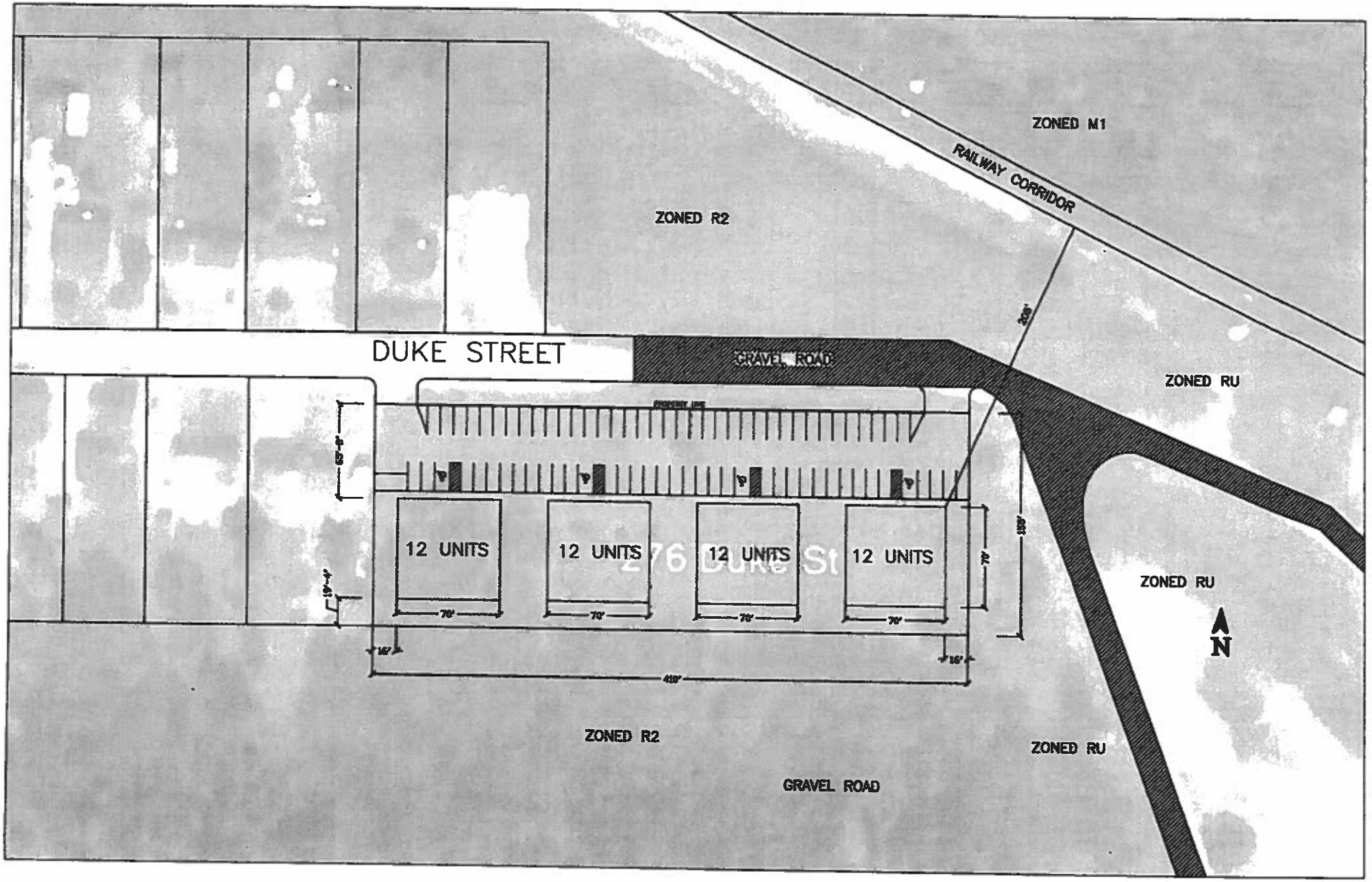


Enlarged Area Map

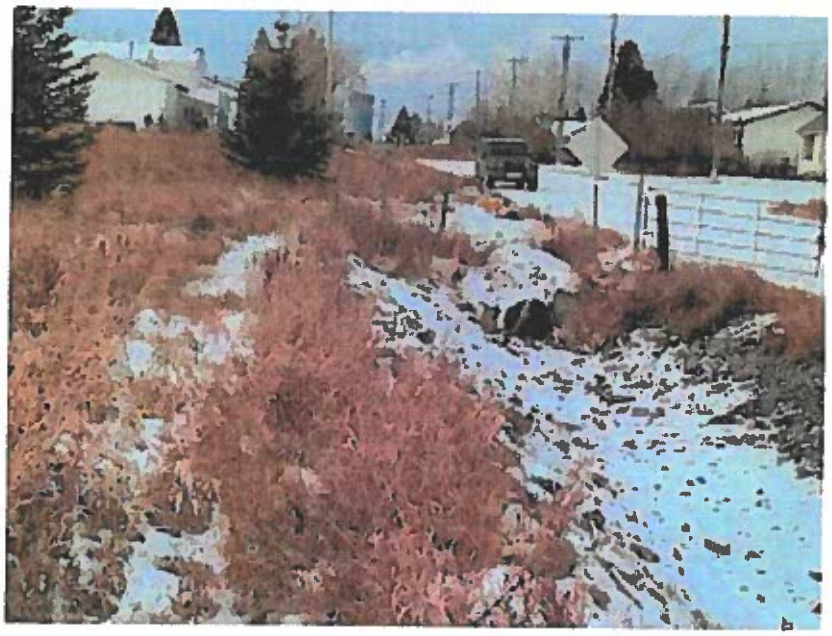
Google Aerial Photo



ORIGINAL PLAN

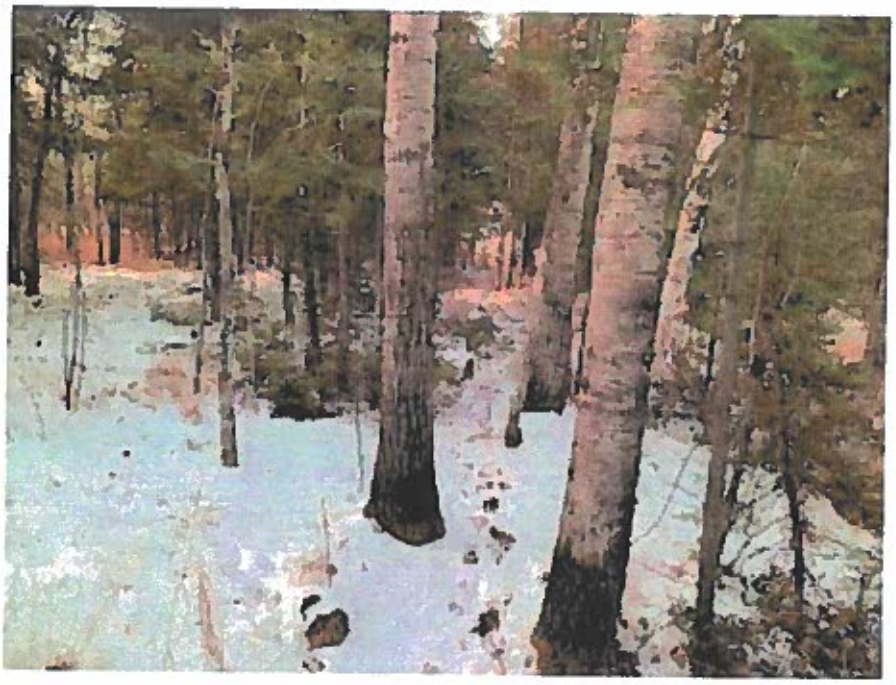

ZONED M1
RAILWAY CORRIDOR
ZONED R2
DUKE STREET
GRAVEL ROAD
ZONED RU
12 UNITS
12 UNITS
12 UNITS
12 UNITS
276 Duke St
ZONED RU
N
ZONED R2
ZONED RU
GRAVEL ROAD

Property Line at 274 Duke St Looking North



Looking West:
Neighborhood, Lockable Steel Gate &
Ditch & Culvert

Treed Bedrock Ridge South of Property



Mature Mixed Forest Just South of Property Line

Ontario

Ministry of the Environment, Conservation and Parks

Primary Noise Screening Method

Fields marked with an asterisk (*) are mandatory.

General Information and Instructions

General:

The *Environmental Protection Act* (EPA) defines "contaminant" to mean any solid, liquid, gas, odour, heat, sound, vibration, radiation or combination of any of them resulting directly or indirectly from human activities that causes or may cause an adverse effect. The intended audience for this form are persons who discharge sound to air in Ontario. The form is not meant to be used in respect of any other jurisdiction. While every effort has been made to ensure the accuracy of the information contained in this form, it should not be construed as legal advice. In the event of a conflict with requirements of the EPA or O. Reg. 1/17, the legislative requirements shall determine the appropriate approach.

Information provided in this form and in any supporting information is collected and maintained by the Client Services and Permissions Branch of the Ministry of the Environment, Conservation and Parks ("MECP") under the authority of the *Environmental Protection Act*, R.S.O. 1990, c. E.19, as amended ("EPA"), and will be used to evaluate compliance with MECP noise guidelines for an application for Environmental Compliance Approval (Air & Noise) made under section 20.2 of Part II.1 of the EPA for approval to engage in an activity mentioned in subsection 9(1) of the EPA. This Primary Noise Screening Method may also be used in order to prepare a noise report under O. Reg. 1/17 Registrations under Part II.2 of the *Act - Activities Requiring Assessment of Air Emissions*. Supporting information may be claimed as confidential; however, the collection, use and dissemination of this information are governed by the *Freedom of Information and Protection of Privacy Act*, R.S.O. 1990, c. F.31, as amended. Questions about this collection should be directed to the Customer Services and Outreach Unit Supervisor, Client Services and Permissions Branch, 135 St. Clair Ave. W, 1st Floor, Toronto ON M4V 1P5. Telephone outside Toronto 1-800-461-6290 or in Toronto 416-314-8001.

Instructions:

Refer to the Primary Noise Screening Method Guide for information and instructions on how to complete this form.

Facility Information

Company Name *
Fusion Capital

Site Name
276 Duke Street, Multi Unit Appartment

Site Address - Street information (applies to an address that has civic numbering and street information - includes street number, name, type and direction)

Unit Number	Street Number	Street Name	PO Box
	276	Duke Street	

Survey Address (used for a rural location specified for a subdivided township, an unsubdivided township or unsurveyed territory)

Non Address Information (includes any additional information to clarify clients' physical location)

Municipality/Unorganized Township	County/District	
City/Town * Dryden	Province * Ontario	Postal Code *

Step 1: Confirm Facility Eligibility *

1. Do any of the following cases apply to the facility?

a) Facility has a Point of Reception in a Class 4 Area	☐ Yes	☑ No
b) Facility is closer to a Point of Reception than 50 metres	☑ Yes	☐ No
c) Application for Renewable Energy Approval	☐ Yes	☑ No

2. What is the facility's NAICS Code?

   72

NOISE EMISSIONS REQUIREMENTS FROM MOE REGULATIONS

Noise emissions

16. For the purposes of clause 20.21 (1) (c) of the Act, a person who engages in an activity prescribed by section 2 of this Regulation shall ensure that the following requirements are complied with in respect of the facility at which the person engages in the activity:

1. At all times when engaging in the activity, a noise report that meets the requirements in sections 17 to 22 must be available at the facility.
2. A new noise report that meets the requirements in sections 17 to 22 must be prepared at least once every 10 years.
3. If a noise abatement action plan is prepared under subparagraph 8 v of subsection 17 (1), it must be implemented in accordance with its contents.
4. At all times when engaging in the activity, the person engaging in the activity must ensure that the facility is operating within the operational parameters, if any, set out in the noise report. However, this requirement does not apply if a noise abatement action plan is being implemented at the facility.
5. At all times when engaging in the activity, the person shall ensure that the combined sound level resulting from the sound discharged from the facility does not exceed the applicable sound level limit set out in Chapter 3 of the EASR publication at each affected point of noise reception. However, this requirement does not apply if a noise abatement action plan is being implemented at the facility.
6. At all times when engaging in the activity, the person engaging in the activity must ensure that the facility is implementing the noise control measures and procedures, if any, set out in the noise report.
7. Each record described in Chapter 3 of the EASR publication in respect of a source of sound must be prepared and retained at the facility for the period set out in that Chapter, or if no retention period is set out in that Chapter, for 20 years after its creation.

Noise report

17. (1) The following are the requirements for a noise report:

1. It must be dated, signed, and sealed by a licensed engineering practitioner and set out the practitioner's name and licence number.
2. The information in the report must be accurate as of the date it is signed and sealed.

3. It must set out the primary NAICS code and any other applicable NAICS codes for the facility.

4. It must contain a statement by the licensed engineering practitioner mentioned in paragraph 1 confirming that, based on the information provided to the practitioner, the information in the report is accurate as of the date it is signed and sealed.

5. It must set out the legal name of each owner of the facility and the name under which each owner carries on business if it is not the owner's legal name.

6. If the person who operates the facility is not an owner, the noise report must set out the legal name of each person who operates the facility and the name under which each operator carries on business, if it is not the operator's legal name.

7. It must set out the site address of the facility.

8. It must contain a statement by the licensed engineering practitioner mentioned in paragraph 1 confirming that one of the following criteria is met:

i. The distance between the facility and the property boundary of the closest point of noise reception is equal to or greater than 1000 metres.

ii. The actual separation distance from the facility to the closest point of noise reception is equal to or greater than the minimum separation distance, as determined by using the Primary Noise Screening Method.

iii. The combined sound level resulting from sound discharged from the facility at each affected point of noise reception, as determined using the Secondary Noise Screening Method, is less than or equal to the applicable sound level limit set out in Chapter 3 of the EASR publication.

iv. The combined sound level resulting from sound discharged from the facility at each affected point of noise reception, as determined using an acoustic assessment, is less than or equal to the applicable sound level limit set out in Chapter 3 of the EASR publication.

v. A noise abatement action plan is included in the noise report. This criterion applies only in respect of a facility that commenced operation before the day this Regulation came into force and at which, as of the day the first registration in respect of the facility is filed in the Registry, the combined sound level resulting from sound discharged from the facility at an affected point of noise reception, as determined using an acoustic assessment, is greater than the applicable sound level limit set out in Chapter 3 of the EASR publication.

(2) For the purpose of subparagraph 8 i of subsection (1), the distance between a facility and the property boundary of a point of noise reception shall be measured from Point A to Point B in accordance with the following:

1. Point A is,

i. the point that is located on the exterior wall of a building at the facility and that is closest to the property boundary of the point of noise reception, or

ii. if there is an outdoor source of sound at the facility that is located closer to the property boundary of the point of noise reception than the point mentioned in subparagraph i, the point that is located on the edge of the outdoor source of sound and that is closest to the property boundary of the point of noise reception.

2. Point B is the point that is located on the property boundary of the point of noise reception and that is closest to Point A.

Noise setback, subparagraph 8 i of s. 17 (1)

18. If the licensed engineering practitioner confirms that the criterion in subparagraph 8 i of subsection 17 (1) is met, the noise report must contain a drawing, made to scale, that shows Points A and B described in subsection 17 (2).

Primary noise screening, subparagraph 8 ii of s. 17 (1)

19. If the licensed engineering practitioner confirms that the criterion in subparagraph 8 ii of subsection 17 (1) is met, the noise report must contain the following:

1. Confirmation that the comparison of the actual separation distance and the minimum separation distance was performed in accordance with the Primary Noise Screening Method.
2. A copy of all the information used for the Primary Noise Screening Method and the results it generated.

Secondary noise screening, subparagraph 8 iii of s. 17 (1)

20. If the licensed engineering practitioner confirms that the criterion in subparagraph 8 iii of subsection 17 (1) is met, the noise report must contain the following:

1. Confirmation that the combined sound levels were determined using the Secondary Noise Screening Method.
2. Confirmation that the affected points of noise reception were determined using the Secondary Noise Screening Method.
3. A copy of all the information used for the Secondary Noise Screening Method and the results it generated.
4. A description of any acoustical barrier used or proposed to be used with respect to each source of sound.

5. A description of the operational parameters that were determined for the purpose of the noise report, including,

   i. the facility's maximum rates of production, process limits and performance limits,

   ii. parameters relating to equipment and infrastructure at the facility,

   iii. the time of day a source of sound is operating or is proposed to be operating,

   iv. the duration of time a source of sound is operating or is proposed to be operating, and

   v. whether the sound is tonal or non-tonal.

6. A description of the operating and maintenance procedures required to ensure that the facility is operating within the operational parameters referred to in paragraph 5.
7. A statement signed by the person engaging in the prescribed activity confirming that all information the person gave to the licensed engineering practitioner in order to prepare the noise report was complete and accurate.

Acoustic assessment, subparagraph 8 iv of s. 17 (1)

21. If the licensed engineering practitioner confirms that the criterion in subparagraph 8 iv of subsection 17 (1) is met, the noise report must contain the following:

1. The information and confirmations described in paragraphs 5 to 7 of section 20.
2. A description of each noise control measure or procedure used with respect to a source of sound in order to ensure that the sound level at each affected point of noise reception does not exceed the applicable sound level limits set out in Chapter 3 of the EASR publication.
3. Confirmation that the affected points of noise reception were determined in accordance with Chapter 3 of the EASR publication.
4. A description of the methods and procedures that were employed in preparing the report to ensure minimization of error and omissions.
5. The information required under Chapter 3 of the EASR publication, including the Acoustic Assessment Summary Table required under that Chapter.

Noise abatement action plan, subparagraph 8 v of s. 17 (1)

22. If the licensed engineering practitioner confirms that the criterion in subparagraph 8 v of subsection 17 (1) is met, the noise report must contain the following:

1. The information and confirmations described in paragraphs 5 and 7 of section 20.
2. A description of each noise control measure or procedure used with respect to a source of sound.
3. Confirmation that the affected points of noise reception were determined in accordance with Chapter 3 of the EASR publication.
4. A description of the methods and procedures that were employed in preparing the report to ensure minimization of error and omissions.
5. The information required under Chapter 3 of the EASR publication, including the Acoustic Assessment Summary Table required under that Chapter.
6. A noise abatement action plan that describes the measures and procedures required to be implemented to prevent or minimize the sound discharged from the facility in order to ensure that the sound level at each affected point of noise reception does not exceed the applicable sound level limits set out in Chapter 3 of the EASR publication.
7. A schedule for implementing the noise control measures and procedures described in paragraph 6, including specific dates by which they will be implemented.

Notice to prepare acoustic audit report:

23. (1) The Director may give written notice to a person who engages in an activity prescribed by section 2 requiring the person to submit to the Director an acoustic audit report that meets the requirements in subsection (3) if the person discharges or causes or permits the discharge of sound into the air from a source of sound at the facility at which the person engages in the activity, and

(a) the Director has reasonable grounds to believe that,

(i) the discharge may cause an adverse effect, or

(ii) the sound level resulting from the discharge at an affected point of noise reception is greater than the applicable sound level limit set out in Chapter 3 of the EASR publication; or

(b) the most recent noise report in respect of the facility confirms that the criterion in subparagraph 8 iv or v of subsection 17 (1) is met.

(2) Before the Director gives a person a notice under this section, the Director shall give the person a draft of the notice, with reasons, and an opportunity to make written submissions to the Director during the period that ends 30 days after the draft is given.

(3) The following are the requirements for an acoustic audit report:

1. It must be dated, signed, and sealed by a licensed engineering practitioner and set out the practitioner's name and licence number.
2. It must set out the primary NAICS code and any other applicable NAICS codes for the facility.
3. It must summarize the results of an acoustic audit conducted in accordance with the Director's notice.
4. The licensed engineering practitioner who signs and seals the report must not be the same licensed engineering practitioner who signed and sealed the most recent noise report prepared for the purposes of paragraph 1 of section 16.

(4) A person to whom the Director has given a notice under this section shall ensure that the acoustic audit report is prepared in accordance with the Director's notice and submitted not later than the date specified in the notice.

(5) For the purpose of this section, an acoustic audit must,

(a) verify the sound level at one or more affected points of noise reception by,

(i) measuring the sound level at the affected point of noise reception, or

(ii) if it is not possible to measure the sound level at the affected point of noise reception, measuring the sound level at a point near to the affected point of noise reception and predicting the sound level at the affected point of noise reception;

(b) confirm that the noise control measures and procedures set out in the noise report are being implemented; and

(c) verify the sound level limits and affected points of noise reception set out in the noise report.