

Mezcon Construction Ltd.

35-41 Janefield Avenue City of Guelph Environmental Noise Report

December 20, 2023

35-41 Janefield Avenue
City of Guelph
Environmental Noise Report

35-41 Janefield Avenue

City of Guelph

Environmental Noise Report

December 20, 2023

Prepared By:

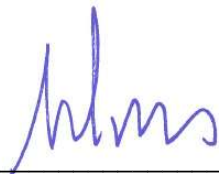
Arcadis Professional Services (Canada) Inc.
410 Albert Street, Suite 101
Waterloo, Ontario N2L 3V3
Canada
Phone: 519 585 2255

Prepared For:

Mezcon Construction Ltd.
70 Preston Street
Guelph, ON N1H 3C4

Our Ref:

144507



Andy Kroess, M.Eng., P.Eng

This document is intended only for the use of the individual or entity for which it was prepared and may contain information that is privileged, confidential and exempt from disclosure under applicable law. Any dissemination, distribution or copying of this document is strictly prohibited.

Version Control

Issue	Revision No.	Date Issued	Page No.	Description	Reviewed By
Final		December 20, 2023			

Contents

1	Introduction	1
2	Background and Noise Criteria	1
2.1	Traffic Noise Criteria	2
3	Noise Sources & Modelling Methods	4
3.1	Road Noise	4
4	Free Field Analysis	5
4.1	Road Noise	5
5	Receiver Locations	6
5.1	On-Site Receivers	7
6	Results	7
6.1	Road Noise	7
7	Conclusions and Recommendations	9

Tables

Table 2-1	MECP Road & Rail Traffic Noise Level Criteria	2
Table 2-2	MECP Road & Rail Traffic Noise Control Measures and Associated Requirements	3
Table 3-1	Road Traffic Data	4
Table 4-1	Traffic Noise Free Field Analysis Results	5
Table 5-1	On-Site Traffic Noise Receiver Locations and Data (Hanlon Parkway Exposure)	7
Table 5-2	On-Site Traffic Noise Receiver Locations and Data (Janefield Avenue Exposure)	7
Table 6-1	Un-Attenuated Road Traffic Noise Levels (dBA)	8

Appendices

Noise Information Plan	A
Traffic Information	B
STAMSON Output	C

1 Introduction

Arcadis (formerly IBI Group) was retained to undertake an environmental noise study to examine the impacts of road traffic noise for the proposed lot severance located at 35-41 Janefield Avenue in Guelph, Ontario.

The subject lands consist of 41 Janefield Avenue and a portion of 35 Janefield Avenue with an approximate total area of 0.1868 hectares. The 41 Janefield Avenue property consists of a single-detached dwelling, a detached garage, and other accessory structures in the rear yard. These buildings and accessory structures will be demolished to develop the proposed semi-detached dwellings and detached accessory residential dwelling units. The 35 Janefield Avenue property also consists of a single-detached dwelling, attached garage, and accessory sheds in the rear yard. This building, along with the accessory structures, will be demolished to facilitate the lot addition to 41 Janefield Avenue. The properties are bounded by residential development to the north, south, and west, and Janefield Avenue to the east.

The lands are to be developed with a total of 12 dwelling units comprised of four semi-detached units on their own lots, each with a basement ARDU and a detached ARDU. To facilitate the proposed development, 41 Janefield Avenue is proposed to be severed into three lots.

Refer to the Site Plan and the Noise Information Plan (Figure 1) in **Appendix A** for a plan of the site and adjacent areas.

This report documents the noise analysis and findings to review the feasibility of the site from a noise perspective.

2 Background and Noise Criteria

The City of Guelph document “Guelph Noise Control Guidelines, City of Guelph Engineering and Transportation Services, Version 1.0, November 2018 - In effect as of January 1, 2019” was used to determine the noise criteria for this project. These noise guidelines are used in conjunction with The Ministry of Environment, Conservation and Parks (MECP, formerly MOE and MOECC) environmental noise guideline NPC-300 “Stationary and Transportation Sources – Approval and Planning” document.

The primary noise sources that may impact the proposed residential sensitive receivers on the subject development are:

1. Traffic Noise:

- Hanlon Parkway (Highway 6);
- College Avenue West; and
- Janefield Avenue.

2. Stationary Noise

- Off-Site: There is a high school located approximately 200m to the north of the property. Given this distance it is not expected that the High School site would be a significant source of stationary noise that would impact the subject property. No other potential stationary noise sources in the vicinity of the property were identified. Therefore, off-site stationary noise will not be reviewed further in this study.

- **On-Site:** The development will include new residential lots that are will not include any stationary noise sources (i.e., rooftop HVAC, truck loading docks, etc.). Therefore, on-site stationary noise will not be reviewed further in this study.

As the proposed development is outside the zone of influence of railways and airports, rail traffic and air traffic noise are assumed not to be an issue and will not be reviewed further in this study.

2.1 Traffic Noise Criteria

For traffic noise, Section C3 and C7 of MECP’s NPC-300 were referenced to determine the noise criteria for the development.

The criteria are shown in Table 2-1 and noise control measures and associated requirements are summarized in Table 2-2.

Table 2-1 MECP Road & Rail Traffic Noise Level Criteria

Location	Assessment Location	Noise Level Criteria (dBA)	
		Road	Rail
Outdoor Living Areas (OLA) ^{1,2} : Daytime (0700 to 2300)	Outdoor	55	55
Living area ^{3,4} : Anytime	Indoor	45	40
Bedrooms ⁴ : Daytime (0700 to 2300)	Indoor	45	40
	Nighttime (2300 to 0700)	40	35

Notes:

- 1) Train whistle noise is excluded for OLA noise assessments and included for Living / Dining Room and Sleeping Quarter assessments, where applicable.
- 2) Road and Rail noise impacts are combined for assessment of receiver impacts.
- 3) Residence area Dens, Hospitals, Nursing Homes, Schools, Daycares are included. During the nighttime period, Schools and Daycares are excluded.
- 4) An assessment of indoor noise levels is required only if the criteria in Table 2-1 are exceeded.

Table 2-2 MECP Road & Rail Traffic Noise Control Measures and Associated Requirements

Location	Noise Levels (dBA)		Noise Control Measures and Associated Requirements
	Road	Rail ¹	
Outdoor Living Areas (Daytime- 0700 to 2300)	Less than 55		i) No control required
	55 to 60		i) Type A warning clause required OR ii) Physical control required
	Greater than 60		i) Type B warning clause required AND ii) Physical control required (reduce noise to 55dBA)
Outside Living Room Window (Daytime- 0700 to 2300)	Less than 55		i) No control required
	55 to 65		i) Type C warning clause required AND ii) Forced air heating with provision of central air conditioning required to allow windows to remain closed ³
	Greater than 65		i) Type D warning clause required AND ii) Special building components potentially required to reduce indoor noise levels to required levels ² AND iii) Central air conditioning required to allow windows to remain closed ³
Outside Bedroom Window (Nighttime- 2300 to 0700)	Less than 50		i) No control required
	50 to 60		i) Type C warning clause required AND ii) Forced air heating with provision of central air conditioning required to allow windows to remain closed ³
	Greater than 60		i) Type D warning clause required AND ii) Special building components potentially required to reduce indoor noise levels to required levels ² AND iii) Central air conditioning required to allow windows to remain closed ³

Notes:

- 1) Train whistle noise is excluded except for building component analysis where it is included;
- 2) Road and Rail noise is combined except for building component analysis where it is assessed separately;
- 3) Outdoor air conditioning device to comply with sound level limits of MECP Publication NPC-216.

3 Noise Sources & Modelling Methods

The following sections describe the identified noise sources pertinent to the subject development.

3.1 Road Noise

The traffic volumes and truck count data for Hanlon Parkway, College Street West, and Janefield Avenue were obtained from the MTO and the City of Guelph, respectively. The AADT values and truck counts for Hanlon Parkway are provided on the MTO website (<https://icorridor-mto-on-ca.hub.arcgis.com>). The AADT values for College Avenue West and Janefield Avenue were provided via e-mail by City of Guelph Transportation Engineering, Engineering and Transportation Services staff. The truck counts for College Avenue West and Janefield Avenue were calculated based on total count diagrams provided by City of Guelph Transportation Engineering, Engineering and Transportation Services staff. Refer to **Appendix B** for the data and calculations.

The traffic volumes along with other relevant traffic data are summarized in Table 3-1. The predicted noise levels are to be determined based on a period ten years from the date of construction. The ‘Years of Growth’ in Table 3-1 assume a construction date of 2024.

Table 3-1 Road Traffic Data

Item	Hanlon Parkway (2019)	College Avenue West (2018)	Janefield Avenue (2022)
AADT	38,100 vpd	10,360 vpd	3,500 vpd
Years of Growth	15	16	12
% Growth	2.5	2.0	2.0
AADT (Calculated Future)	55,181 vpd	14,223 vpd	4,440 vpd
% Medium Trucks	3.5	1.1	2.4
% Heavy Trucks	3.5	1.1	2.4
Road Grade	2%	2%	2%
Speed Limit	70 kph	50 kph	50 kph
Day/Night Split	66.7/33.3	90/10	90/10

The noise levels produced by road traffic along Hanlon Parkway, College Avenue West, and Janefield Avenue were modelled/predicted utilizing MECP’s computer modelling software “STAMSON 5.04”. The intermediate surface was modelled as absorptive.

4 Free Field Analysis

A “Free Field Analysis” is an analysis of noise without any structures or features to provide noise mitigation. From this analysis, the limits at which noise impact may be of issue can be determined, and from this the need for warning clauses, noise barriers, and/or special building components can be further reviewed, and the need established.

4.1 Road Noise

A free field analysis was completed for the road traffic noise on Hanlon Parkway, College Avenue West, and Janefield Avenue. The results of this analysis are shown in Table 4-1 and graphically on Figure 1 in **Appendix A**.

Table 4-1 Traffic Noise Free Field Analysis Results

Free Field Limit	Distance from Hanlon Parkway	Distance from College Avenue West	Distance from Janefield Avenue
65 dBA (Day)	47.44m	<15m	<15m
60 dBA (Day)	94.93m	21.78m	<15m
55 dBA (Day)	190.01m	43.60m	28.59m
60 dBA (Night)	107.36m	<15m	<15m
50 dBA (Night)	463.06m	37.68m	24.47m

In reference to Table 4-1 and the **Appendix A** Noise Information Plan, the following observations are made:

Hanlon Parkway

- The daytime acoustical impact on sensitive areas located within 190.01 metres of the centreline of Hanlon Parkway will have noise levels in excess of 55 dBA which exceeds the minimum daytime noise level criteria. Portions of the development are within this offset distance.
- The nighttime acoustical impact on sensitive areas located within 463.06 metres of the centreline of Hanlon Parkway will have noise levels in excess of 50 dBA which exceeds the minimum nighttime noise level criteria. Portions of the development are within this offset distance.

College Avenue West

- The daytime acoustical impact on sensitive areas located within 43.60 metres of the centreline of College Avenue West will have noise levels in excess of 55 dBA which exceeds the minimum daytime noise level criteria. Since the development is located beyond this offset distance, and daytime road noise from College Avenue West will not be considered further.
- The nighttime acoustical impact on sensitive areas located within 37.68 metres of the centreline of College Avenue West will have noise levels in excess of 50 dBA which exceeds the minimum nighttime

noise level criteria. Since the development is located beyond this offset distance, and nighttime road noise from College Avenue West will not be considered further.

Janefield Avenue

- The daytime acoustical impact on sensitive areas located within 28.59m metres of the centreline of Janefield Avenue will have noise levels in excess of 55 dBA which exceeds the minimum daytime noise level criteria. Portions of the development fronting onto Janefield Avenue are within this offset distance.
- The nighttime acoustical impact on sensitive areas located within 24.47 metres of the centreline of Janefield Avenue will have noise levels in excess of 50 dBA which exceeds the minimum nighttime noise level criteria. Portions of the development fronting onto Janefield Avenue are within this offset distance.

5 Receiver Locations

To facilitate the analysis, various sensitive receiver locations were identified. All receivers were located at worst case locations (most exposed) for both daytime and nighttime periods for noise received from traffic sources. For daytime noise, the receiver is located at the building façade at a height of 1.5 metres off the ground. For nighttime noise, the receiver is located at the building façade at a height of 4.5 metres off the ground. For outdoor daytime noise, the outdoor living area (OLA) receiver is located 1.5 meters off the ground at a distance of 3.0 meters from the rear dwelling façade.

5.1 On-Site Receivers

Sensitive receiver locations were established on the proposed development. These on-site receiver locations are shown on the Noise Information Plan in **Appendix A** and parameters for Hanlon Parkway and Janefield Avenue exposure are summarized in Table 5-1 and Table 5.2, respectively.

Table 5-1 On-Site Traffic Noise Receiver Locations and Data (Hanlon Parkway Exposure)

Receiver	Location	Distance From Hanlon Parkway (m)	Exposure	No. of Rows of Houses	Density Of First Row (%)
Receiver A	West Façade West Units (Floors 1 and 2)	87.22	-90 to 90	1	80
Receiver B	Rear Yard OLA East Units	118.84	-90 to 90	1	80
Receiver C	West Façade East Units (Floor 1 & 2)	121.84	-90 to 90	1	80

Table 5-2 On-Site Traffic Noise Receiver Locations and Data (Janefield Avenue Exposure)

Receiver	Location	Distance From Janefield Avenue (m)	Exposure	No. of Rows of Houses	Density Of First Row (%)
Receiver D	East Façade (Floors 1 and 2)	17.91	-90 to 90	0	-

6 Results

The following sections review the modelled/predicted on-site noise impacts.

6.1 Road Noise

Results of the STAMSON noise modelling for the road noise are included in **Appendix C** and summarized in Table 6-1. Note, the intermediate surface between the noise sources and the receivers were modelled as having an absorptive surface, and the intermediate rows of houses were taken into consideration for Hanlon Parkway.

Table 6-1 Un-Attenuated Road Traffic Noise Levels (dBA)

Receiver	Daytime	Nighttime	Criteria Day/Night
A	54.9	54.9	55/ 50
B	52.8	-	55/ -
C	53.5	53.5	55/ 50
D	58.3	52.1	55/ 50

As shown in Table 6-1, noise levels at the receivers do not exceed 65 dBA and 60 dBA during the daytime and nighttime, respectively, but do exceed the 55 dBA daytime and 50 dBA nighttime criteria. Accordingly, physical mitigation will not be required, however warning clauses will be required.

For STAMSON modelling results, refer to **Appendix C**.

7 Conclusions and Recommendations

The following specific recommendation is provided:

Recommendation #1 (All Units)

Due to the exceedance of the City of Guelph and MECP noise criteria for daytime and nighttime acoustical levels from road traffic from Hanlon Parkway and Janefield Avenue, all units are to be fitted with forced air heating with provision for air conditioning. Further, these residential units shall include the following Warning Clauses:

“The Transferee covenants with the Transferor that the below clause, verbatim, will be included in all subsequent Agreements of Purchase of sale or lease and Sale and Deeds conveying the lands described herein, which covenant shall run with the said lands and is for the benefit of the subsequent owners and renters of the said lands and the owner of the adjacent road.”

and

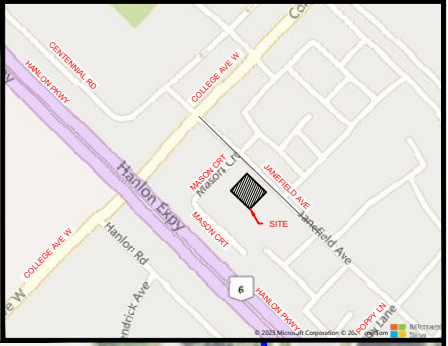
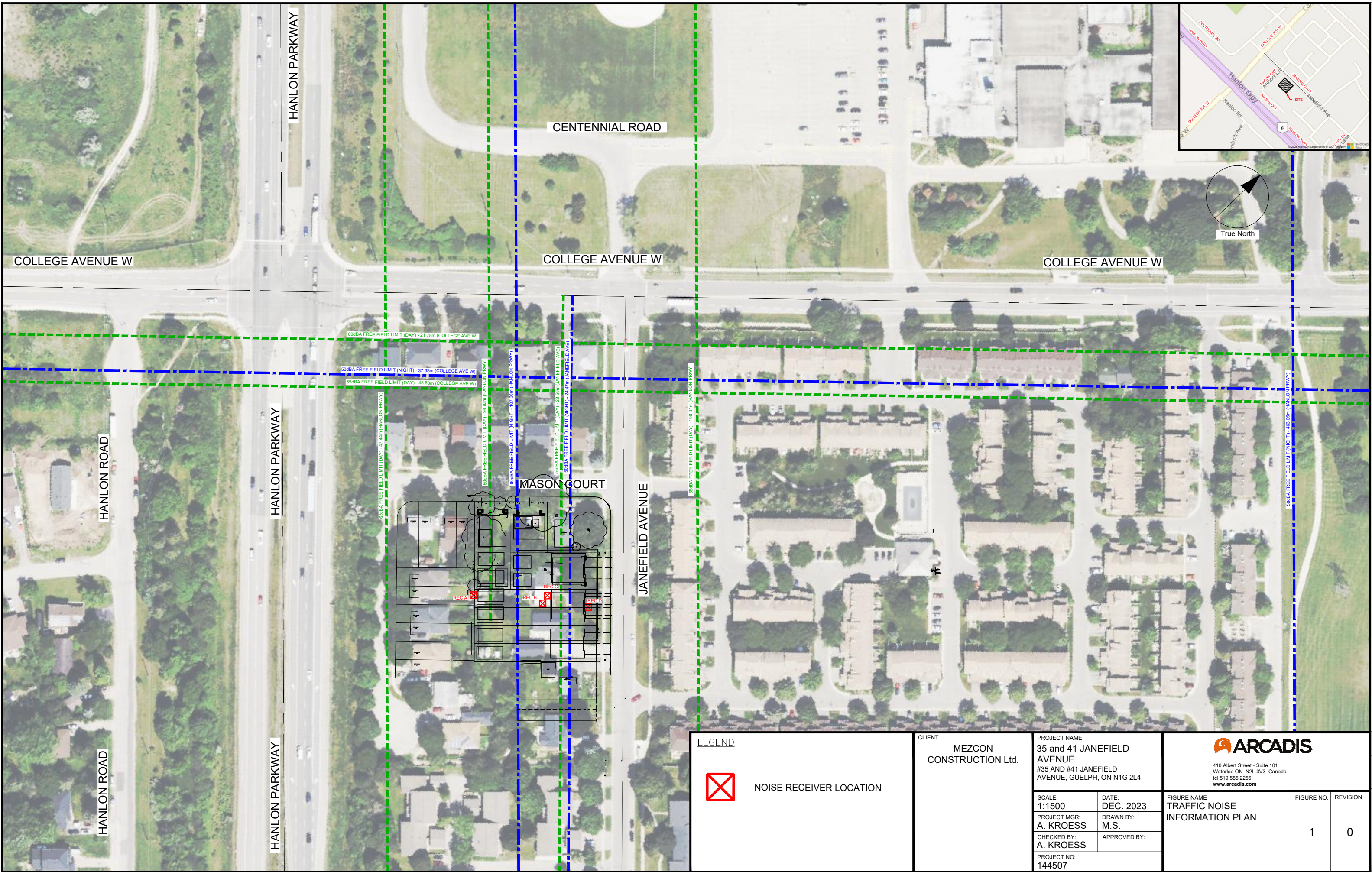
“This dwelling unit has been designed with the provision for adding central air conditioning at the occupant’s discretion. Installation of central air conditioning by the occupant will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the municipal and provincial sound level limits.”

“The building components of this dwelling unit (walls, windows and exterior doors) have been designed to provide acoustic insulation so that, when windows and exterior doors are closed, the indoor sound levels are within the municipal and provincial sound level limits. The details of this building component design are available by contacting the builder of this unit.”

Based on the preceding we conclude that the subject development can be designed appropriately to address noise impacts and meet the requirements of the City of Guelph Noise Control Guidelines and NPC-300.

Appendix A

Noise Information Plan



LEGEND	
	NOISE RECEIVER LOCATION

CLIENT
**MEZCON
CONSTRUCTION Ltd.**

PROJECT NAME
**35 and 41 JANEFIELD
AVENUE**
#35 AND #41 JANEFIELD
AVENUE, GUELPH, ON N1G 2L4

SCALE:
1:1500

PROJECT MGR:
A. KROESS

CHECKED BY:
A. KROESS

PROJECT NO:
144507

410 Albert Street - Suite 101 Waterloo ON N2L 3V3 Canada tel 519 585 2255 www.arcadis.com	
FIGURE NAME TRAFFIC NOISE INFORMATION PLAN	REVISION 0
FIGURE NO. 1	

Appendix B

Traffic Information

Andy Kroess

From: Gwen Zhang <Gwen.Zhang@guelph.ca>
Sent: Tuesday, February 14, 2023 4:59 PM
To: Andy Kroess
Cc: Munshif Muccaram; Shophan Daniel
Subject: RE: 27 Janefield Ave, Traffic Data

*** Exercise caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Hi Andy,

We only have traffic data from 2016 ATRs and 2018 TMCs for College Avenue between Highway 6 and Janefield Avenue. In general, these pre-COVID traffic volumes are higher than those post-COVID. Based on these two sets of data, the AADT was estimated at approximately 10,360 vpd.

We suggest using a 2% annual growth rate that is in line with City's population growth.

The posted speed limit on College Avenue will remain at 50 km/h until mid-2024.

If you have more recent traffic data from MTO, we suggest you obtain the percentages for medium and heavy trucks on College Avenue. Alternatively you can purchase the 2016 ATRs from the city by email traffic@guelph.ca.

If you have any questions, please contact us.

Regards,

Gwen Zhang, M.Sc., P.Eng (she/her), Transportation Planning Engineer
Engineering and Transportation Services
T 519-822-1260 x 2638
E gwen.zhang@guelph.ca

From: Andy Kroess <Andy.Kroess@IBIGroup.com>
Sent: February 10, 2023 2:02 PM
To: Shophan Daniel <Shophan.Daniel@guelph.ca>
Subject: 27 Janefield Ave, Traffic Data

[EXTERNAL EMAIL] Do not click links or attachments unless you recognize the sender and know the content is safe.

Hello Shophan,

I will be preparing an environmental noise report for the property located at 27 Janefield Ave as per the attached meeting notes.

Are you able to provide traffic data for College Ave. W.?

- AADT
- % medium trucks
- % heavy trucks

- Annual growth rate
- Posted speed limit

I will need to include this road along with the Hanlon for the assessment.

I have obtained Hanlon data from the MTO.

Thank you.

Andy Kroess M ENG P ENG

Senior Water Resources Engineer

410 Albert Street, Suite 101
Waterloo ON N2L 3V3 Canada
tel +1 519 585 2255 ext 63203

Kroess, Andy

From: Gwen Zhang <Gwen.Zhang@guelph.ca>
Sent: Thursday, November 30, 2023 7:00 PM
To: Kroess, Andy
Cc: Munshif Muccaram
Subject: RE: 27 Janefield Ave, Traffic Data

Hi Andy,

Based on the 2018 ATR counts and 2022 TMC counts at the Janefield/Scottsdale intersection, the AADT on Janefield Ave is 3,500 vehicle/day.

If you need these counts, please contact traffic@guelph.ca.

Let me know if you have any questions.

Regards,

Gwen

From: Kroess, Andy <andy.kroess@arcadis.com>
Sent: Thursday, November 30, 2023 8:48 AM
To: Gwen Zhang <Gwen.Zhang@guelph.ca>
Cc: Munshif Muccaram <Munshif.Muccaram@guelph.ca>; Shophan Daniel <Shophan.Daniel@guelph.ca>
Subject: RE: 27 Janefield Ave, Traffic Data

[EXTERNAL EMAIL] This email originates outside the City of Guelph. Do not click links or attachments unless you recognize the sender and know the content is safe.

Hi Gwen,

We have received comments back on our noise report, which require assessment of Janefield Avenue.

Do you have the AADT and associated data for Janefield available?

Thanks.

Andy Kroess M ENG P ENG
Senior Water Resources Engineer
410 Albert Street, Suite 101 | Waterloo | ON | N2L 3V3 | Canada
T: +1 519 585 2255 ext 63203
www.arcadis.com



College Ave W @ Janefield Ave

Total Count Diagram

Municipality: Guelph
Site #: 000000001
Intersection: College Ave W & Janefield Ave
TFR File #: 1
Count date: 13-Jun-2018

Weather conditions:
 Sunny
Person(s) who counted:
 Mark

**** Signalized Intersection ****

Major Road: College Ave W runs W/E

North Leg Total: 1324
 North Entering: 849
 North Peds: 21
 Peds Cross: \times

Cyclists	0	1	0	1
Trucks	16	0	1	17
Cars	250	64	517	831
Totals	266	65	518	

Cyclists	2
Trucks	16
Cars	457
Totals	475

East Leg Total: 6093
 East Entering: 2790
 East Peds: 41
 Peds Cross: \times

Cyclists	Trucks	Cars	Totals
5	70	2862	2937

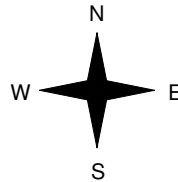


Centennial Rd

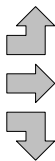
Cars	Trucks	Cyclists	Totals
115	1	0	116
2373	36	4	2413
233	28	0	261
2721	65	4	



College Ave W



Cyclists	Trucks	Cars	Totals
1	8	122	131
8	49	2376	2433
0	7	598	605
9	64	3096	



Janefield Ave

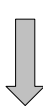
College Ave W



Cars	Trucks	Cyclists	Totals
3230	65	8	3303

Peds Cross: \times
 West Peds: 37
 West Entering: 3169
 West Leg Total: 6106

Cars	895	Cars	239	220	337	796
Trucks	35	Trucks	18	7	15	40
Cyclists	1	Cyclists	1	1	0	2
Totals	931	Totals	258	228	352	



Peds Cross: \times
 South Peds: 18
 South Entering: 838
 South Leg Total: 1769

Comments

Determination of Truck %

Total Traffic = 2937 + 3303 = 6240
 Total Trucks = 70 + 65 = 135
 Trucks = 2.2%
 Assume 1.1% Medium, 1.1% Heavy

Accu-Traffic Inc.

Total Count Diagram

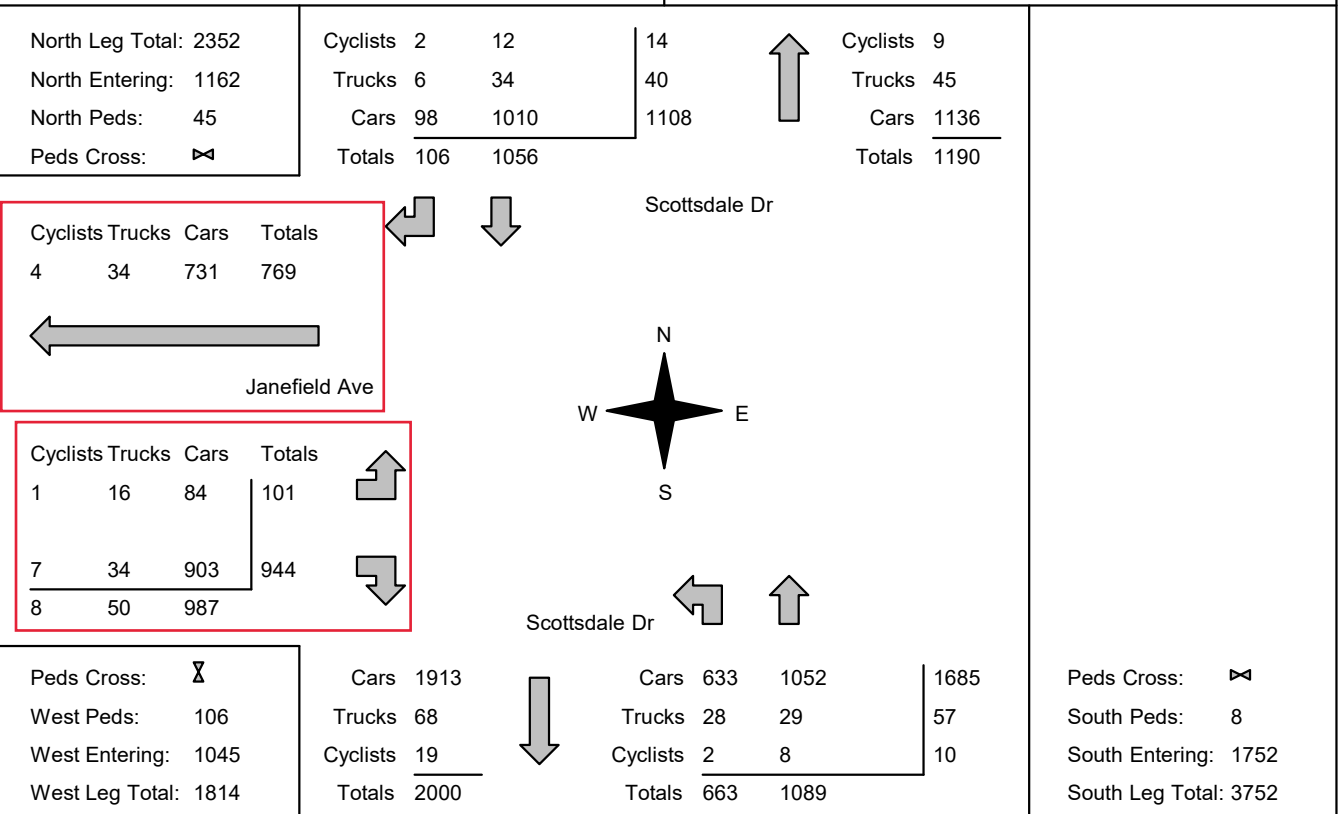
Municipality: Guelph
Site #: 2205500013
Intersection: Scottsdale Dr & Janefield Ave
TFR File #: 1
Count date: 19-May-22

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Scottsdale Dr runs N/S



Determination of Truck %

Comments

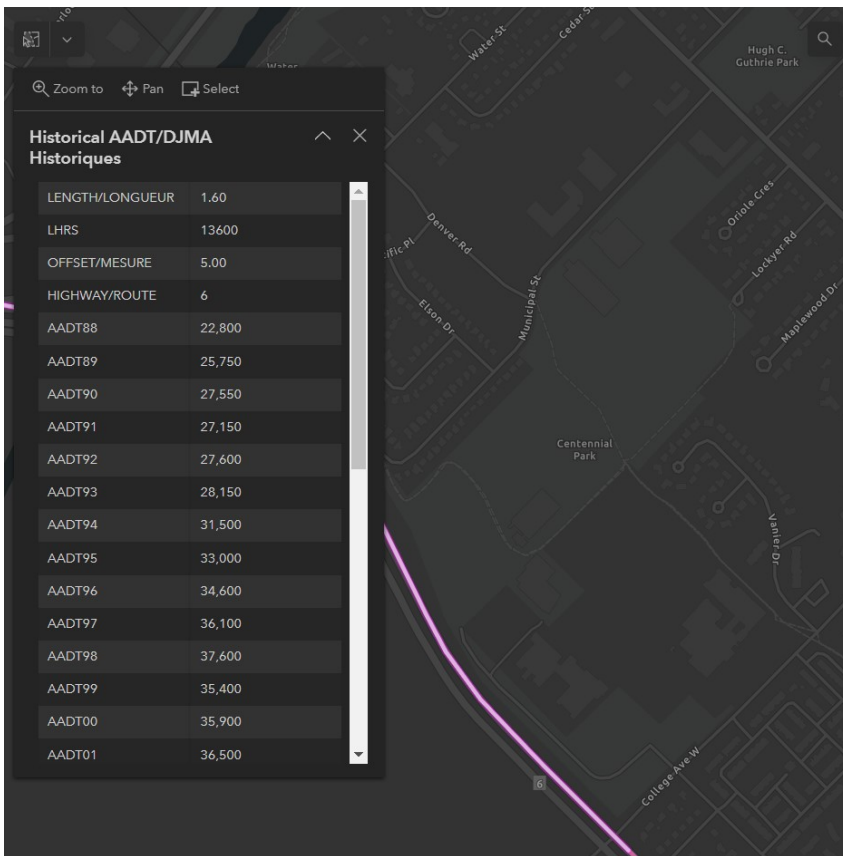
Total Traffic = 769 + 987 = 1756
 Total Trucks = 34 + 50 = 84
 Trucks = 4.8%
 Assume 2.4% Medium, 2.4% Heavy

Andy Kroess

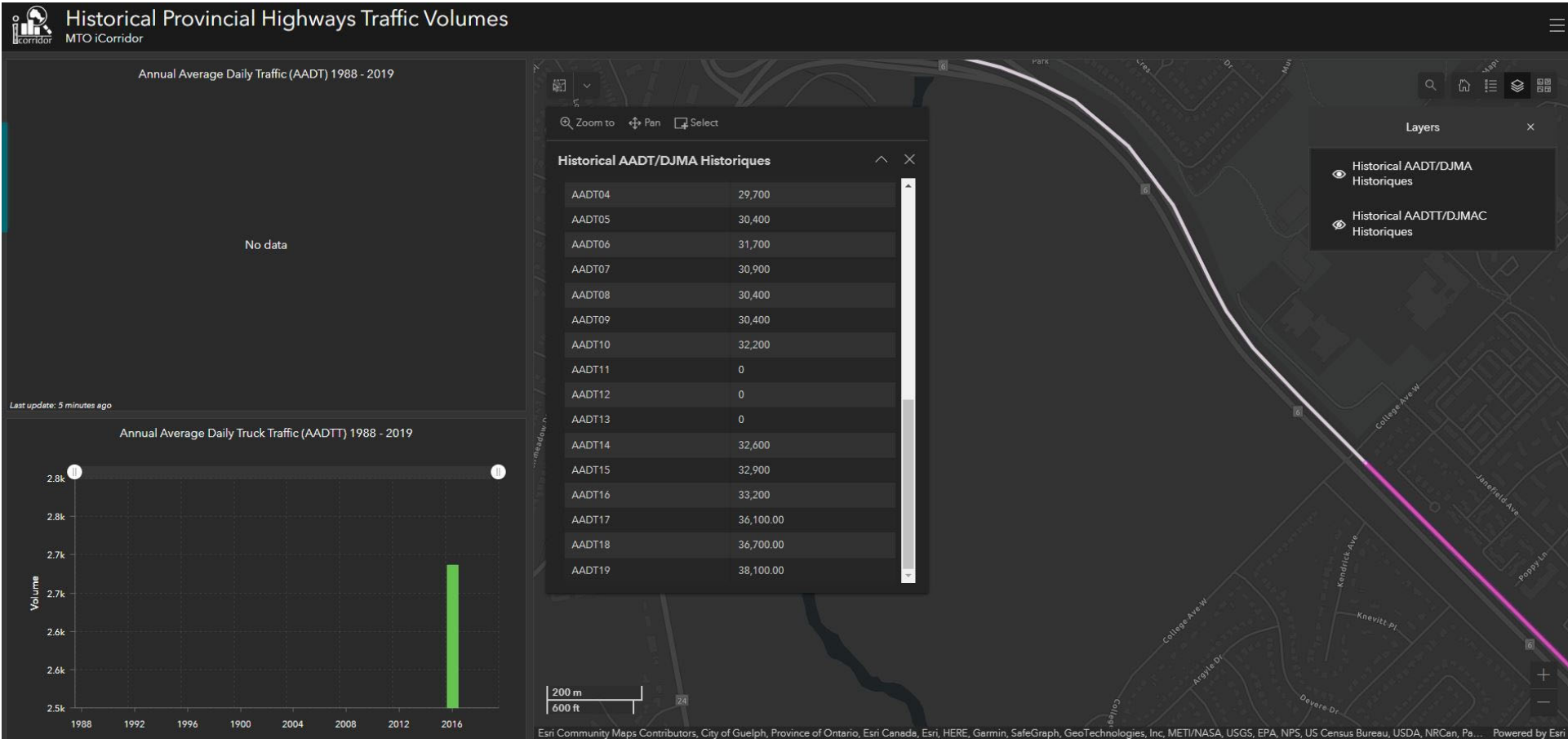
From: iCorridor (MTO) <iCorridor@ontario.ca>
Sent: Friday, February 10, 2023 9:03 AM
To: Andy Kroess
Subject: Re: AADT Data Request - Highway 6

***** Exercise caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. *****

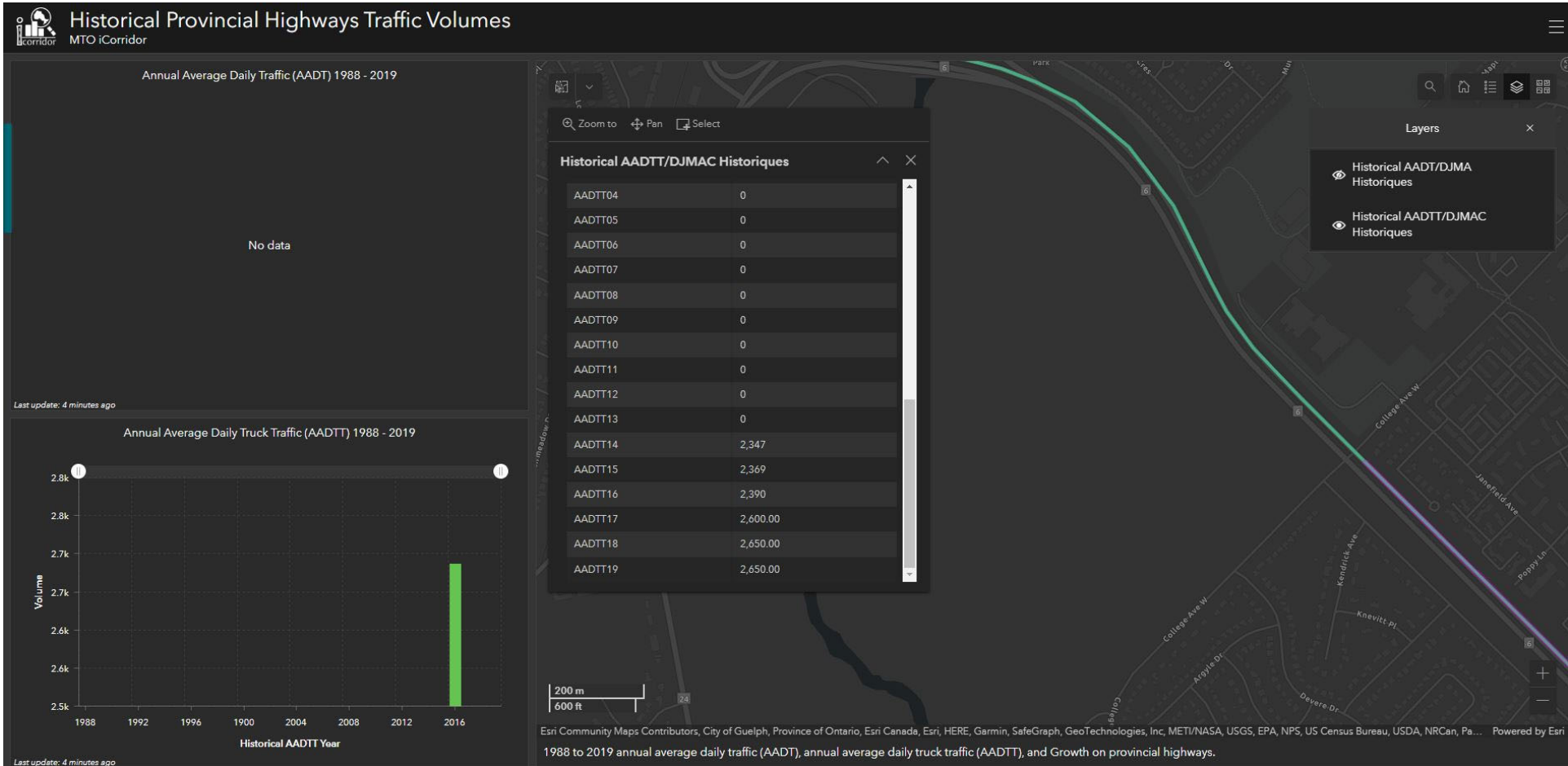
You can get some of what you are looking for on the public facing map tool here, by zooming to your location and clicking on the selected features. We have AADT and AADTT (trucks) but no medium vs. heavy. Speed limit you can get lots of publicly available sources.



[Historical Provincial Highways Traffic Volumes | MTO iCorridor \(arcgis.com\)](#)



2019 AADT = 38,100



2019 AADT = 38,100
2019 AADTT = 2,650

% Trucks = $2,650/38,100 = 7.0\%$
Assume 3.5% Medium, 3.5% Heavy

Appendix C

STAMSON Output

FREE-FIELDS

STAMSON 5.0 NORMAL REPORT
Date: 07-03-2023 10:19:49
MINISTRY OF ENVIRONMENT AND ENERGY /
NOISE ASSESSMENT

Filename: HANFF.te Time Period:
Day/Night 16/8 hours
Description: Hanlon Parkway - Free Fields
Daytime/Nighttime

Road data, segment # 1: Hanlon Pkwy
(day/night)

Car traffic volume : 34213/17104
veh/TimePeriod *
Medium truck volume : 1288/644
veh/TimePeriod *
Heavy truck volume : 1288/644
veh/TimePeriod *
Posted speed limit : 70 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or
concrete)

* Refers to calculated road volumes based on
the following input:

24 hr Traffic Volume (AADT or SADT): 38100
Percentage of Annual Growth : 2.50
Number of Years of Growth : 15.00
Medium Truck % of Total Volume : 3.50
Heavy Truck % of Total Volume : 3.50
Day (16 hrs) % of Total Volume : 66.67

Data for Segment # 1: Hanlon Pkwy (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground
surface)
Receiver source distance : 47.44 / 107.36 m
Receiver height : 1.50 / 4.50 m
Topography : 1 (Flat/gentle
slope; no barrier)
Reference angle : 0.00

Results segment # 1: Hanlon Pkwy (day)

Source height = 1.37 m

ROAD (0.00 + 65.00 + 0.00) = 65.00 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj
F.Adj W.Adj H.Adj B.Adj SubLeq

-90 90 0.66 74.76 0.00 -8.30 -1.46
0.00 0.00 0.00 65.00

Segment Leq : 65.00 dBA

Total Leq All Segments: 65.00 dBA

Results segment # 1: Hanlon Pkwy (night)

Source height = 1.37 m

ROAD (0.00 + 60.00 + 0.00) = 60.00 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj
F.Adj W.Adj H.Adj B.Adj SubLeq

-90 90 0.57 74.76 0.00 -13.45 -1.31
0.00 0.00 0.00 60.00

Segment Leq : 60.00 dBA

Total Leq All Segments: 60.00 dBA

TOTAL Leq FROM ALL SOURCES (DAY):
65.00
(NIGHT): 60.00

STAMSON 5.0 NORMAL REPORT
Date: 07-03-2023 10:20:08
MINISTRY OF ENVIRONMENT AND ENERGY /
NOISE ASSESSMENT

Filename: COLLFF.te Time Period:
Day/Night 16/8 hours
Description: College Ave. W. - Free Fields
Daytime/Nighttime

Road data, segment # 1: College Ave (day/night)

Car traffic volume : 12518/1391
veh/TimePeriod *
Medium truck volume : 141/16
veh/TimePeriod *
Heavy truck volume : 141/16 veh/TimePeriod
*
Posted speed limit : 50 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or
concrete)

* Refers to calculated road volumes based on
the following input:

24 hr Traffic Volume (AADT or SADT): 10360
Percentage of Annual Growth : 2.00
Number of Years of Growth : 16.00
Medium Truck % of Total Volume : 1.10
Heavy Truck % of Total Volume : 1.10
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 1: College Ave (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground
surface)
Receiver source distance : 21.78 / 37.68 m
Receiver height : 1.50 / 4.50 m
Topography : 1 (Flat/gentle
slope; no barrier)
Reference angle : 0.00

Results segment # 1: College Ave (day)

Source height = 1.02 m

ROAD (0.00 + 60.00 + 0.00) = 60.00 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj
F.Adj W.Adj H.Adj B.Adj SubLeq

-90 90 0.66 64.15 0.00 -2.69 -1.46
0.00 0.00 0.00 60.00

Segment Leq : 60.00 dBA

Total Leq All Segments: 60.00 dBA

Results segment # 1: College Ave (night)

Source height = 1.03 m

ROAD (0.00 + 50.00 + 0.00) = 50.00 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj
F.Adj W.Adj H.Adj B.Adj SubLeq

-90 90 0.58 57.66 0.00 -6.34 -1.33
0.00 0.00 0.00 50.00

Segment Leq : 50.00 dBA

Total Leq All Segments: 50.00 dBA

TOTAL Leq FROM ALL SOURCES (DAY):
60.00
(NIGHT): 50.00

RECEIVERS

STAMSON 5.0 NORMAL REPORT
Date: 19-10-2023 11:08:08
MINISTRY OF ENVIRONMENT AND ENERGY /
NOISE ASSESSMENT

Filename: reca.te **Time Period:**
Day/Night 16/8 hours
**Description: Receiver A - Daytime &
Nighttime Noise**

Road data, segment # 1: Hanlon Pkwy
(day/night)

Car traffic volume : 34213/17104
veh/TimePeriod *
Medium truck volume : 1288/644
veh/TimePeriod *
Heavy truck volume : 1288/644
veh/TimePeriod *
Posted speed limit : 70 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or
concrete)

* Refers to calculated road volumes based on
the following input:

24 hr Traffic Volume (AADT or SADT): 38100
Percentage of Annual Growth : 2.50
Number of Years of Growth : 15.00
Medium Truck % of Total Volume : 3.50
Heavy Truck % of Total Volume : 3.50
Day (16 hrs) % of Total Volume : 66.67

Data for Segment # 1: Hanlon Pkwy (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 1 / 1
House density : 80 %
Surface : 1 (Absorptive ground
surface)
Receiver source distance : 87.22 / 87.22 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle
slope; no barrier)
Reference angle : 0.00

Results segment # 1: Hanlon Pkwy (day)

Source height = 1.37 m

ROAD (0.00 + 54.85 + 0.00) = 54.85 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj
F.Adj W.Adj H.Adj B.Adj SubLeq

-90 90 0.66 74.76 0.00 -12.69 -1.46
0.00 -5.76 0.00 54.85

Segment Leq : 54.85 dBA

Total Leq All Segments: 54.85 dBA

Results segment # 1: Hanlon Pkwy (night)

Source height = 1.37 m

ROAD (0.00 + 54.85 + 0.00) = 54.85 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj
F.Adj W.Adj H.Adj B.Adj SubLeq

-90 90 0.66 74.76 0.00 -12.69 -1.46
0.00 -5.76 0.00 54.85

Segment Leq : 54.85 dBA

Total Leq All Segments: 54.85 dBA

TOTAL Leq FROM ALL SOURCES (DAY):
54.85
(NIGHT): 54.85

STAMSON 5.0 NORMAL REPORT
Date: 19-10-2023 11:08:15
MINISTRY OF ENVIRONMENT AND ENERGY /
NOISE ASSESSMENT

Filename: recb.te Time Period:
Day/Night 16/8 hours
Description: Receiver B - Daytime Noise

Road data, segment # 1: Hanlon Pkwy
(day/night)

Car traffic volume : 34213/17104
veh/TimePeriod *
Medium truck volume : 1288/644
veh/TimePeriod *
Heavy truck volume : 1288/644
veh/TimePeriod *
Posted speed limit : 70 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or
concrete)

* Refers to calculated road volumes based on
the following input:

24 hr Traffic Volume (AADT or SADT): 38100
Percentage of Annual Growth : 2.50
Number of Years of Growth : 15.00
Medium Truck % of Total Volume : 3.50
Heavy Truck % of Total Volume : 3.50
Day (16 hrs) % of Total Volume : 66.67

Data for Segment # 1: Hanlon Pkwy (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 1 / 1
House density : 80 %
Surface : 1 (Absorptive ground
surface)
Receiver source distance : 118.84 / 118.84 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle
slope; no barrier)
Reference angle : 0.00

Results segment # 1: Hanlon Pkwy (day)

Source height = 1.37 m

ROAD (0.00 + 52.77 + 0.00) = 52.77 dBA

Angle1 Angle2 Alpha RefLeq P.Adj D.Adj
F.Adj W.Adj H.Adj B.Adj SubLeq

-90 90 0.66 74.76 0.00 -14.92 -1.46
0.00 -5.61 0.00 52.77

Segment Leq : 52.77 dBA

Total Leq All Segments: 52.77 dBA

Results segment # 1: Hanlon Pkwy (night)

Source height = 1.37 m

ROAD (0.00 + 52.77 + 0.00) = 52.77 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj
F.Adj W.Adj H.Adj B.Adj SubLeq

-90 90 0.66 74.76 0.00 -14.92 -1.46
0.00 -5.61 0.00 52.77

Segment Leq : 52.77 dBA

Total Leq All Segments: 52.77 dBA

TOTAL Leq FROM ALL SOURCES (DAY):
52.77

(NIGHT): 52.77

STAMSON 5.0 NORMAL REPORT
Date: 19-10-2023 11:08:24
MINISTRY OF ENVIRONMENT AND ENERGY /
NOISE ASSESSMENT

Filename: recc.te Time Period:
Day/Night 16/8 hours
**Description: Receiver C - Daytime &
Nighttime Noise**

Road data, segment # 1: Hanlon Pkwy
(day/night)

Car traffic volume : 34213/17104
veh/TimePeriod *
Medium truck volume : 1288/644
veh/TimePeriod *
Heavy truck volume : 1288/644
veh/TimePeriod *
Posted speed limit : 70 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or
concrete)

* Refers to calculated road volumes based on
the following input:

24 hr Traffic Volume (AADT or SADT): 38100
Percentage of Annual Growth : 2.50
Number of Years of Growth : 15.00
Medium Truck % of Total Volume : 3.50
Heavy Truck % of Total Volume : 3.50
Day (16 hrs) % of Total Volume : 66.67

Data for Segment # 1: Hanlon Pkwy (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 1 / 1
House density : 80 %
Surface : 1 (Absorptive ground
surface)
Receiver source distance : 121.84 / 121.84 m
Receiver height : 4.50 / 4.50 m
Topography : 1 (Flat/gentle
slope; no barrier)
Reference angle : 0.00

Results segment # 1: Hanlon Pkwy (day)

Source height = 1.37 m

ROAD (0.00 + 53.54 + 0.00) = 53.54 dBA

Angle1 Angle2 Alpha RefLeq P.Adj D.Adj
F.Adj W.Adj H.Adj B.Adj SubLeq

-90 90 0.57 74.76 0.00 -14.32 -1.31
0.00 -5.60 0.00 53.54

Segment Leq : 53.54 dBA

Total Leq All Segments: 53.54 dBA

Results segment # 1: Hanlon Pkwy (night)

Source height = 1.37 m

ROAD (0.00 + 53.53 + 0.00) = 53.53 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj
F.Adj W.Adj H.Adj B.Adj SubLeq

-90 90 0.57 74.76 0.00 -14.32 -1.31
0.00 -5.60 0.00 53.53

Segment Leq : 53.53 dBA

Total Leq All Segments: 53.53 dBA

TOTAL Leq FROM ALL SOURCES (DAY):
53.54

(NIGHT): 53.53

STAMSON 5.0 NORMAL REPORT
Date: 20-12-2023 12:35:05
MINISTRY OF ENVIRONMENT AND ENERGY /
NOISE ASSESSMENT

Filename: recd.te Time Period:
Day/Night 16/8 hours
**Description: Receiver D - Daytime &
Nighttime Noise**

Road data, segment # 1: (day/night)

Car traffic volume : 3803/423 veh/TimePeriod
*
Medium truck volume : 96/11
veh/TimePeriod *
Heavy truck volume : 96/11 veh/TimePeriod
*
Posted speed limit : 50 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or
concrete)

* Refers to calculated road volumes based on
the following input:

24 hr Traffic Volume (AADT or SADT): 3500
Percentage of Annual Growth : 2.00
Number of Years of Growth : 12.00
Medium Truck % of Total Volume : 2.40
Heavy Truck % of Total Volume : 2.40
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 1: (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground
surface)
Receiver source distance : 17.91 / 17.91 m
Receiver height : 1.50 / 4.50 m
Topography : 1 (Flat/gentle
slope; no barrier)
Reference angle : 0.00

Results segment # 1: (day)

Source height = 1.25 m

ROAD (0.00 + 58.37 + 0.00) = 58.37 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj
F.Adj W.Adj H.Adj B.Adj SubLeq

-90 90 0.66 61.11 0.00 -1.28 -1.46
0.00 0.00 0.00 58.37

Segment Leq : 58.37 dBA

Total Leq All Segments: 58.37 dBA

Results segment # 1: (night)

Source height = 1.25 m

ROAD (0.00 + 52.14 + 0.00) = 52.14 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj
F.Adj W.Adj H.Adj B.Adj SubLeq

-90 90 0.58 54.67 0.00 -1.21 -1.32
0.00 0.00 0.00 52.14

Segment Leq : 52.14 dBA

Total Leq All Segments: 52.14 dBA

TOTAL Leq FROM ALL SOURCES (DAY):
58.37
(NIGHT): 52.14

Arcadis Professional Services (Canada) Inc.
410 Albert Street, Suite 101
Waterloo, Ontario N2L 3V3
Canada
Phone: 519 585 2255
Fax:
www.arcadis.com