

September 14, 2023

Huntingwood Trails (Collingwood) Ltd.
152 Dalemount Avenue
Toronto, Ontario
M6B 3C9

Attention: Edward Weisz

VIA E-MAIL
eddyweisz@gmail.com



Re: Environmental Noise Report
Proposed Residential Development
Highway 26 and Silver Creek Drive
Town of Collingwood
Our File: 22-092

Jade Acoustics Inc. was retained to prepare an Environmental Noise Report to investigate the potential impact of noise on the proposed residential development to the satisfaction of the Town of Collingwood. The environmental noise guidelines of the Ministry of the Environment, Conservation and Parks (MOE) set out sound level limits for both the indoor and outdoor space.

The proposed residential development is located between Silver Creek Drive and Silver Creek Boulevard, south of Highway 26 in the Town of Collingwood, County of Simcoe. The proposed development consists of single detached, semi-detached and street townhouse dwellings, environmental protection area, walkway and road widening blocks. Surrounding land uses include existing residential developments to the east, future residential development to the west, a former waste disposal site to the south, open space and future residential to the north and beyond. Road traffic noise from Highway 26, Silver Creek Drive and Silver Glen Boulevard was considered in the analysis.

A site visit was conducted on June 13, 2022. The site is not subject to noise from aircraft, rail activities or industrial activities.

The proposed site is identified as:

Part of Lots 47, 48 and 49, Concession 12
Town of Collingwood
County of Simcoe



The analysis was based on the following:

- Draft Plan of Subdivision prepared by KLM Planning Partners Inc. dated January 10, 2023, received August 16, 2023;
- Transportation Impact Study prepared by C.F. Crozier & Associates Inc., dated September 2023;
- Functional Servicing and Stormwater Management Report prepared by C.F. Crozier & Associates Inc. dated September 2023; and
- Site visit completed by Jade Acoustics Inc. on June 13, 2022.

A Key Plan is attached as Figure 1. Figure 2 shows the proposed residential development.

Transportation Sources

The major noise source of potentially adverse impact is the road traffic on Highway 26, Street “1”, Silver Creek Drive, Silver Glen Boulevard and Forest Drive.

The road traffic volumes for all roadways were calculated based on the traffic data provided in the Transportation Impact Study noted above.

Due to the setback distance, it was determined through analysis that Highway 26 is acoustically insignificant at the subject site.

The traffic volumes on Street “1”, Silver Creek Drive and Silver Glen Boulevard were expected and determined to be low through analysis and are considered to be acoustically insignificant; therefore, no exceedance above the MOE guidelines are expected. Road traffic information is summarized in Table 1. Appendix C includes sample calculations.

Forest Drive was considered to be acoustically insignificant due to anticipated low traffic volumes and setback distances. Therefore, Forest Drive was not included in the assessment.

Stationary Sources

As can be seen on Figure 1, there are existing and future residential developments to the north, east and west. There is a former waste disposal site located south of the proposed development. Based on observations at the time of the site visit by Jade Acoustics staff, the waste disposal site was not active. Additionally, based on

available information on the website of Ministry of the Environment, the former waste disposal site is not active and is currently subject to long-term environmental monitoring. Therefore, any noise sources were considered to be acoustically insignificant with respect to the proposed development and were not investigated further.


Based on the above, no upgraded construction, no central air conditioning and no sound barriers will be required for the residential lots and blocks (units) within this development to meet the MOE noise guidelines.


If there are any questions, please do not hesitate to call.

Yours truly,

JADE ACOUSTICS INC.



Per: 
Wai Lung (Jake) Chong, B.Eng., E.I.T

Per: 
Chris B Kellar, P.Eng.



Att.

TABLE 1
PROPOSED RESIDENTIAL DEVELOPMENT
HIGHWAY 26 AND SILVER CREEK DRIVE
TOWN OF COLLINGWOOD

SUMMARY OF TRAFFIC DATA

A. ROAD TRAFFIC



ROAD	HIGHWAY 26	SILVER GLEN BOULEVARD	SILVER CREEK DRIVE	STREET "1"
AADT* (2037)	23,040	1,020	1,580	1,430
No. of Lanes	2	2	2	2
Speed (km/h)	70	50	50	50
Medium truck (%)	1.5**	2**	2**	2**
Heavy truck (%)	0.2**	0**	0**	0**
Gradient (%)	1	1**	1**	1**
Day/Night Split (%)	90/10**	90/10**	90/10**	90/10**

* AADT: Annual Average Daily Traffic.

** Assumed

TABLE 2

**PROPOSED RESIDENTIAL DEVELOPMENT
HIGHWAY 26 AND SILVER CREEK DRIVE
TOWN OF COLLINGWOOD**

**SAMPLE OF PREDICTED UNMITIGATED SOUND LEVELS OUTDOORS
DUE TO TRANSPORTATION SOURCES**



Block	Location*	Source	Distance (m)	Leq (dBA)	
				Day	Night
Block 19	Rear Façade	Highway 26	500	47	41
	Rear Yard	Highway 26	500	47	--

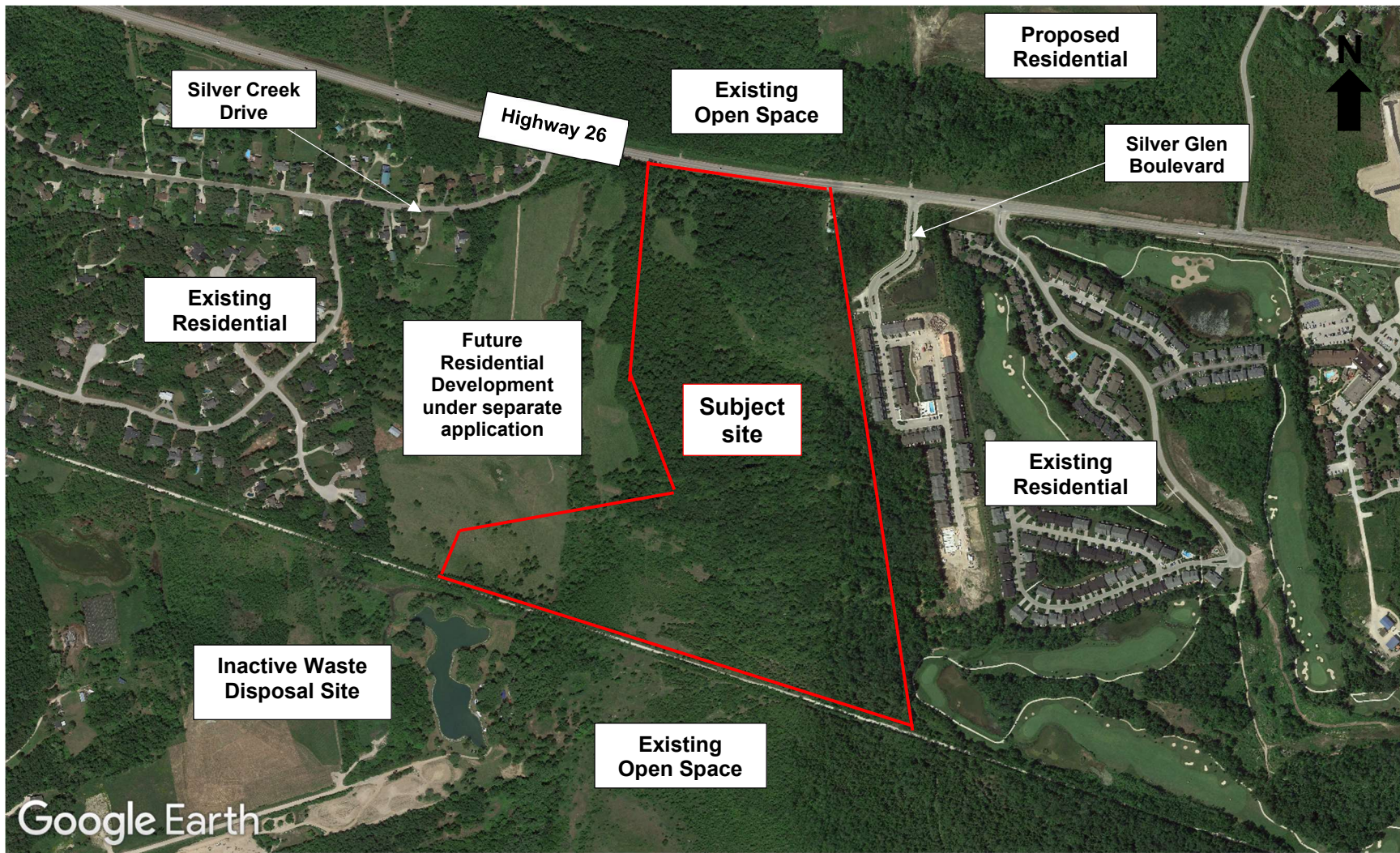
* See Figure 2.

TABLE 3

**PROPOSED RESIDENTIAL DEVELOPMENT
HIGHWAY 26 AND SILVER CREEK DRIVE
TOWN OF COLLINGWOOD**

SUMMARY OF MINIMUM NOISE ABATEMENT MEASURES

Location	Air Conditioning	Exterior Wall	Window	Sound Barrier	Warning Clause
All lots/blocks (units)	No Requirements				



N.T.S.

**Proposed Residential Development
Highway 26 and Silver Creek Drive
Town of Collingwood**

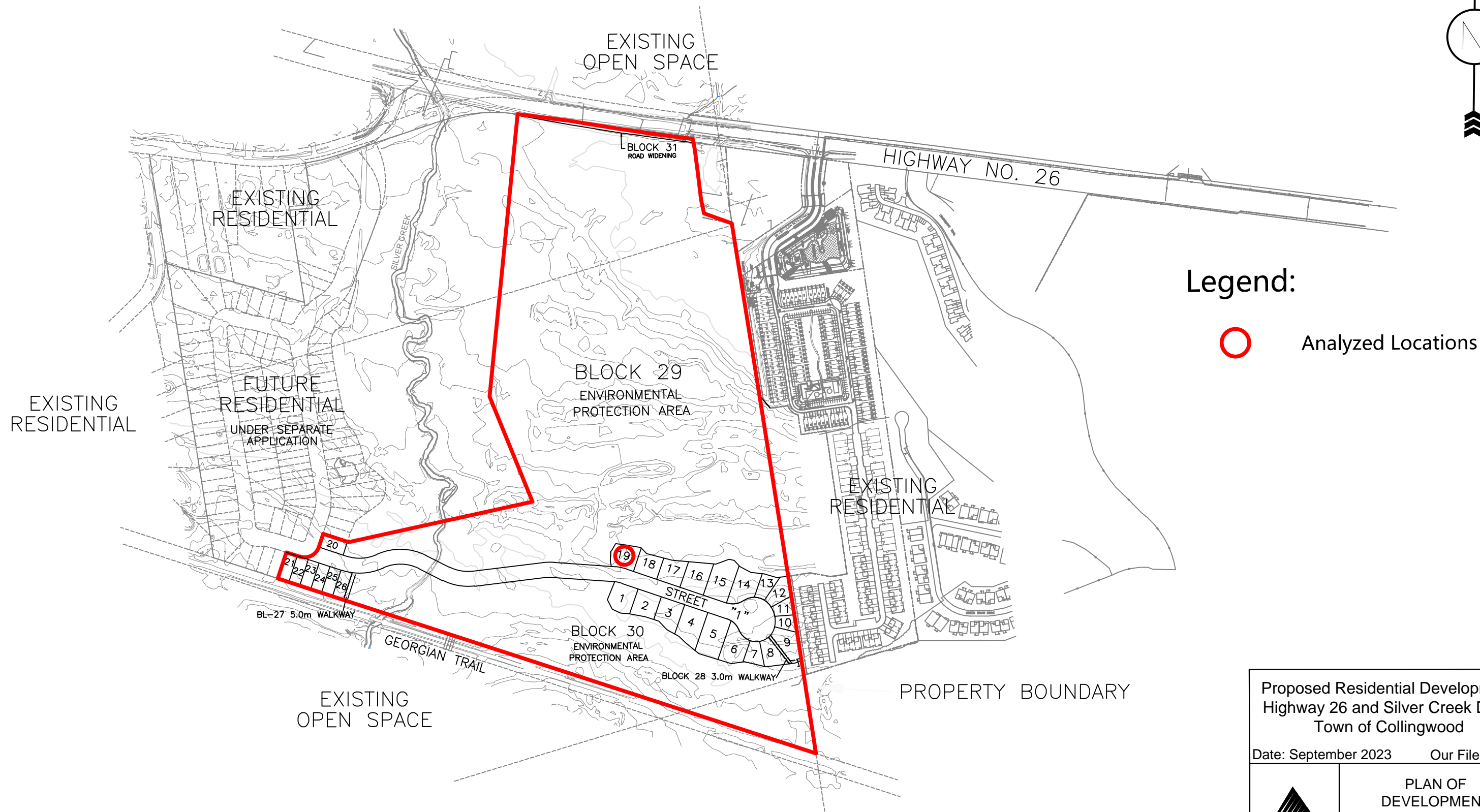
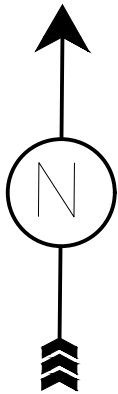
Date: September 2023

File: 22-092

KEY PLAN

FIGURE 1





Legend:

 Analyzed Locations

N.T.S.

Proposed Residential Development
Highway 26 and Silver Creek Drive
Town of Collingwood

Date: September 2023 Our File: 22-092



PLAN OF
DEVELOPMENT
SHOWING NOISE
ABATEMENT
MEASURES

FIGURE 2



APPENDIX A

CORRESPONDENCE REGARDING ROAD TRAFFIC

TRANSPORTATION IMPACT STUDY

**HUNTINGWOOD TRAILS (EAST)
RESIDENTIAL DEVELOPMENT
TOWN OF COLLINGWOOD**

**PREPARED FOR:
HUNTINGWOOD TRAILS (COLLINGWOOD) LTD.**

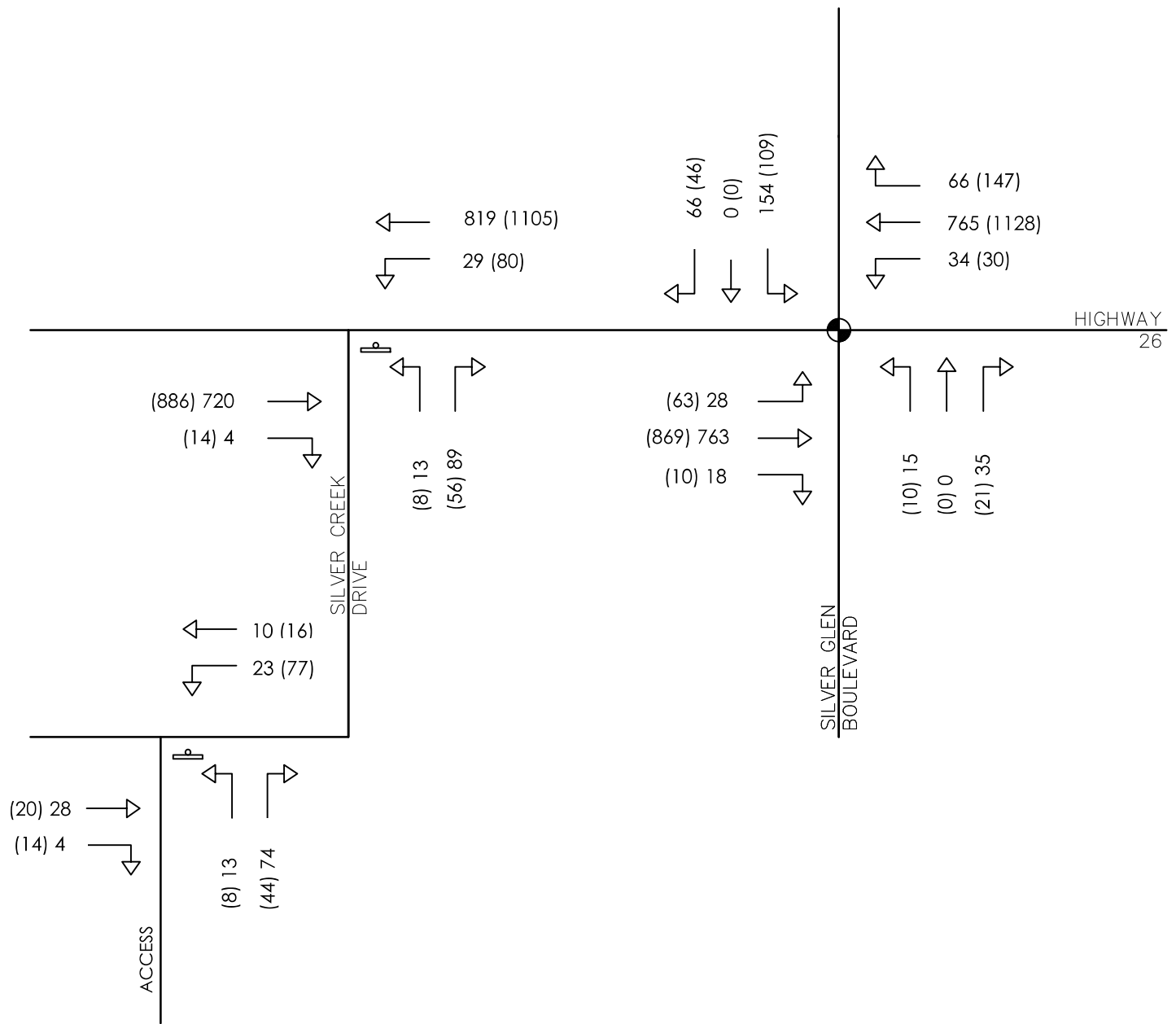
**PREPARED BY:
C.F. CROZIER & ASSOCIATES INC.
1 FIRST STREET, SUITE 200
COLLINGWOOD, ON L9Y 1A1**

SEPTEMBER 2023

CFCA FILE NO. 281-2769

The material in this report reflects best judgment in light of the information available at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions made based on it, are the responsibilities of such third parties. C.F. Crozier & Associates Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.





NOTE: THIS FIGURE IS FOR SCHEMATIC PURPOSES ONLY & IS NOT TO BE SCALED.



APPENDIX B

ENVIRONMENTAL NOISE CRITERIA

ONTARIO MINISTRY OF THE ENVIRONMENT, CONSERVATION AND PARKS (MOE)

Reference: “Environmental Noise Guidelines Stationary and Transportation Sources – Approval and Planning”, Publication NPC-300, August, 2013, released October 21, 2013 (updated final version # 22).

SOUND LEVEL CRITERIA FOR ROAD AND RAIL NOISE

TABLE C-1

Sound Level Limit for Outdoor Living Areas

Road and Rail

Time Period	Leq (16) (dBA)
16 hr, 07:00 - 23:00	55

TABLE C-2

Indoor Sound Level Limits

Road and Rail

Type of Space	Time Period	Leq (dBA)	
		Road	Rail
Living/dining, den areas of residences, hospitals, nursing homes, schools, daycare centres, etc.	07:00 – 23:00	45	40
Living/dining, den areas of residences, hospitals, nursing homes, etc. (except schools or daycare centres)	23:00 – 07:00	45	40
Sleeping quarters	07:00 – 23:00	45	40
	23:00 – 07:00	40	35





APPENDIX C

SAMPLE CALCULATION OF PREDICTED UMITIGATED SOUND LEVELS DUE TO ROAD TRAFFIC

APPENDIX C-1
SAMPLE CALCULATION OF PREDICTED SOUND LEVELS

FILE: 22-092
NAME: Highway 26 and Silver Creek Drive
REFERENCE DRAWINGS: Preliminary Grading Plan
LOCATION: Block 19, 3-storey, rear facade

Noise Source:	Highway 26
Time Period:	16 hr. (day)
Segment Angle:	-90 to 90
Distance (m):	500

CALCULATION OF PREDICTED SOUND LEVELS*

Reference Leq (dBA)*:	68.31
Height and/or Distance Correction (dBA):	-20.25
Finite Element Correction (dBA):	-0.83
Allowance for Future Growth (dBA):	incl.

LeqDay (dBA):	47.22
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* Leq determined using the computerized model of the Ministry of the Environment, Conservation and Parks Noise Assessment Guidelines, STAMSON Version 5.04 (ORNAMENT). See attached printouts.



**APPENDIX C-2
SAMPLE CALCULATION OF PREDICTED SOUND LEVELS**

FILE: 22-092
NAME: Highway 26 and Silver Creek Drive
REFERENCE DRAWINGS: Preliminary Grading Plan
LOCATION: Block 19, 3-storey, rear facade

Noise Source:	Highway 26
Time Period:	8 hr. (night)
Segment Angle:	-90 to 90
Distance (m):	500

CALCULATION OF PREDICTED SOUND LEVELS*

Reference Leq (dBA)*:	61.82
Height and/or Distance Correction (dBA):	-20.25
Finite Element Correction (dBA):	-0.83
Allowance for Future Growth (dBA):	incl.

LeqNight (dBA):	40.73
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* Leq determined using the computerized model of the Ministry of the Environment, Conservation and Parks Noise Assessment Guidelines, STAMSON Version 5.04 (ORNAMENT). See attached printouts.



Filename: blk19br.te Time Period: Day/Night 16/8 hours
Description: Block 19 - building requirement

Road data, segment # 1: Hwy 26 (day/night)

```
-----
Car traffic volume : 20383/2265 veh/TimePeriod *
Medium truck volume : 311/35 veh/TimePeriod *
Heavy truck volume : 41/5 veh/TimePeriod *
Posted speed limit : 70 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)
```

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

```
24 hr Traffic Volume (AADT or SADT): 23040
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 1.50
Heavy Truck % of Total Volume : 0.20
Day (16 hrs) % of Total Volume : 90.00
```

Data for Segment # 1: Hwy 26 (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 : 500.00 / 500.00 m
Receiver height : 7.50 / 7.50 m
Topography : 0 (Define your own alpha.)
Barrier angle1 : -90.00 deg Angle2 : 90.00 deg
Barrier height : 0.01 m
Barrier receiver distance : 6.30 / 6.30 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Alpha : 0.33
Reference angle : 0.00
```

Results segment # 1: Hwy 26 (day)

Source height = 0.67 m

Barrier height for grazing incidence

```
-----
Source ! Receiver ! Barrier ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m)
-----+-----+-----+-----
0.67 ! 7.50 ! 7.41 ! 7.41
```

```
ROAD (0.00 + 47.22 + 0.00) = 47.22 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----
-90 90 0.33 68.31 0.00 -20.25 -0.83 0.00 0.00 0.00 0.00 47.22
```

Segment Leq : 47.22 dBA

Total Leq All Segments: 47.22 dBA



Results segment # 1: Hwy 26 (night)

Source height = 0.68 m

Barrier height for grazing incidence

Source ! Receiver ! Barrier ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m)
-----+-----+-----+-----
0.68 ! 7.50 ! 7.41 ! 7.41

ROAD (0.00 + 40.73 + 0.00) = 40.73 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----
-90 90 0.33 61.82 0.00 -20.25 -0.83 0.00 0.00 0.00 40.73
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----

Segment Leq : 40.73 dBA

Total Leq All Segments: 40.73 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 47.22
(NIGHT): 40.73



**APPENDIX C-3
SAMPLE CALCULATION OF PREDICTED SOUND LEVELS**

FILE: 22-092
NAME: Highway 26 and Silver Creek Drive
REFERENCE DRAWINGS: Preliminary Grading Plan
LOCATION: Block 19, rear yard

Noise Source:	Highway 26
Time Period:	16 hr. (day)
Segment Angle:	-90 to 90
Distance (m):	500

CALCULATION OF PREDICTED SOUND LEVELS*

Reference Leq (dBA)*:	68.31
Height and/or Distance Correction (dBA):	-20.25
Finite Element Correction (dBA):	-0.83
Allowance for Future Growth (dBA):	incl.

LeqDay (dBA):	47.22
---------------	-------

* Leq determined using the computerized model of the Ministry of the Environment, Conservation and Parks Noise Assessment Guidelines, STAMSON Version 5.04 (ORNAMENT). See attached printouts.



Filename: blk19ry.te Time Period: Day 16 hours
Description: Block 19 - rear yard

Road data, segment # 1: Hwy 26 (day)

```
-----
Car traffic volume : 20383 veh/TimePeriod *
Medium truck volume : 311 veh/TimePeriod *
Heavy truck volume : 41 veh/TimePeriod *
Posted speed limit : 70 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)
```

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

```
24 hr Traffic Volume (AADT or SADT): 23040
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 1.50
Heavy Truck % of Total Volume : 0.20
Day (16 hrs) % of Total Volume : 90.00
```

Data for Segment # 1: Hwy 26 (day)

```
-----
Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 500.00 m
Receiver height : 1.50 m
Topography : 0 (Define your own alpha.)
Barrier angle1 : -90.00 deg Angle2 : 90.00 deg
Barrier height : 0.01 m
Barrier receiver distance : 6.30 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Alpha : 0.33
Reference angle : 0.00
```

Results segment # 1: Hwy 26 (day)

Source height = 0.67 m

Barrier height for grazing incidence

```
-----
Source ! Receiver ! Barrier ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m)
-----+-----+-----+-----
0.67 ! 1.50 ! 1.49 ! 1.49
```

```
ROAD (0.00 + 47.22 + 0.00) = 47.22 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----
-90 90 0.33 68.31 0.00 -20.25 -0.83 0.00 0.00 0.00 47.22
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----
```

Segment Leq : 47.22 dBA

Total Leq All Segments: 47.22 dBA

