APPENDIX I

Existing Noise Report

April 30, 2020

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Subject: Southwest Agincourt Transportation Connections Environmental Assessment – Noise Assessment – Existing Conditions Evaluation Memo

As part of the Environmental Assessment, this memo evaluates the existing acoustic environment of the area where a new north-south public street and other improvements are being studied. The intent of a new north-south street would be to connect the existing terminus of Village Green Square (south of the Canadian Pacific (CP) Rail Corridor) to Sheppard Avenue East. The preferred design and alignment of a north-south connection and other alternatives have yet been determined at the time of preparing this memo. The study area is shown in **Figure 1**.

The objective of this noise memo is to conduct acoustical evaluation to determine the existing sound levels at noise sensitive areas (NSAs) within the study area. The existing sound levels established from this assessment will be used later to assess noise impacts resulting from the introduction of new street(s) and other improvements (the Project). Sources of sound assumed in the existing conditions evaluation include transportation (i.e. road traffic) noise.

NOISE GUIDELINES

When examining the noise impacts of transportation improvements on existing residential areas, the Ministry of the Environment, Conservation and Parks' (MECP) approach for the assessment of noise impacts is documented in "A Protocol for Dealing with Noise Concerns during Preparation, Review and Evaluation of Provincial Highway Environmental Assessments", February 1986, prepared by the Ontario Ministry of Transportation (MTO) and the MECP (hereafter referred to as the Protocol).

The Protocol stipulates "The objective for outdoor sound levels is the higher of the L_{eq} 55 dBA or the existing ambient. The significance of a noise impact will be quantified by using this objective in addition to the change in noise level above the ambient."

STUDY AREA

For the purpose of this evaluation, the study area extends 600 metres on both sides of a potential north-south connection (i.e. existing terminus of Village Green Square to Sheppard Avenue). In practical terms, the area of investigation extends only as far as the first row of residential housing with outdoor living areas (OLAs) since it is understood that the greatest noise impacts will occur at the first row. The noise assessment was undertaken based on a selection of residential homes adjacent to the new connection within the study area to represent the locations where the potential worst-case noise impacts are expected.

NOISE SOURCES

Vehicular traffic on Kennedy Road, Sheppard Avenue East and Highway 401 were identified as the existing predominant sources of transportation noise in the vicinity of the study area. It should be noted that highly intrusive short duration noise such as traffic noise is typically excluded from the determination of the ambient. Accordingly, noise train pass-bys on CP Rail Corridor was not included in the noise assessment.

Current Average Annual Daily Traffic (AADT) volumes for Kennedy Road and Sheppard Avenue East were determined based on the peak hour existing traffic volumes provided by the WSP transportation team. Commercial vehicle percentage splits were calculated using the Turning Movement Counts (TMC) for intersections along Kennedy Road and Sheppard Avenue East, which were also provided by the WSP transportation team.

AADT volumes for Highway 401 were determined using the historical traffic data obtained from the MTO website. Average growth rate was calculated using the historical data to project the current AADT volumes. An overall commercial vehicle percentage was obtained from the MTO; medium and heavy truck percentages were determined using typical commercial medium to heavy truck split ratios of 5 to 15 for freeways. Furthermore, directional split for Highway 401 was also provided by the MTO and was applied to the AADT volumes.

Traffic data used in the noise assessment are summarized in **Table 1**.

Table 1 – Traffic Data

Roadway	AADT (Year 2020)	Posted Speed Limit (km/h)	Medium / Heavy Truck Percentage (%)
Highway 401 interchange @ Kennedy Road	358,500	100	2.0 / 6.0
Sheppard Avenue East – East of Gordon Avenue	21,500	60	3.4 / 5.4
Kennedy Road – South of Jade Street	33,000	60	0.9 / 1.4
Kennedy Road – Village Green Square	36,500	60	0.5 / 0.8

ASSESSMENT METHODOLOGY

Sound levels were calculated using the method outlined in the MECP document “ORNAMENT”, October 1989 and the MECP “STAMSON”, Computer Program for Road and Rail Traffic Noise Assessment (Version 5.04 issued in 2000).

SETBACKS, ELEVATIONS AND RECEPTOR HEIGHTS

An OLA is an outdoor space easily accessible from a building and is designed for quiet enjoyment of the outdoor environment. Review of the study area identified OLAs that would potentially have the greatest exposure to the project undertaking (i.e. first row of residential housing). These OLA receptors were placed at 3.0 metres from the façade and at a height of 1.5 metres above the existing grade. One exception is R1, which represents daycare playground area located on the ground level at west side of the condominium building. This receptor was placed in the centre of the playground area at a height of 1.5 metres above grade. **Table 2** summarizes the locations of the receptor. The receptor locations are shown in **Figure 2**.

Table 2 – Receptor Locations

Receptor	Address	Type of Residential Unit
R1	275 Village Green Square	Condominium
R2	27 Collingwood Street	Detached House
R3	11 Collingwood Street	Detached House
R4	28 Collingwood Street	Detached House
R5	1 Gordon Avenue	Detached House
R6	2 Collingwood Street	Detached House

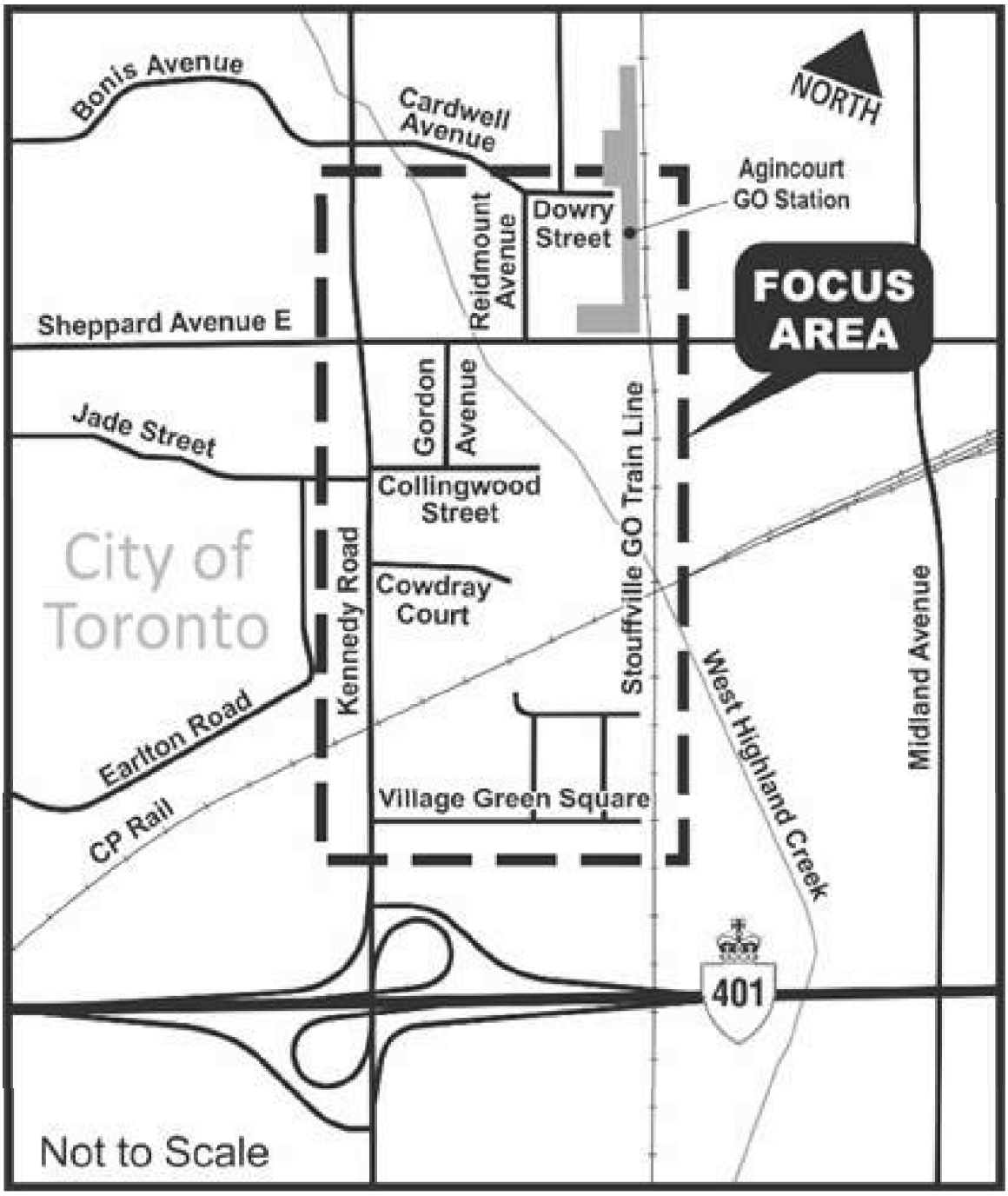
EXISTING SOUND LEVELS

Sixteen-hour sound levels (L_{eq} (16-hr)) were determined using STAMSON. **Table 3** summarizes the existing sound levels due to the existing traffic on Kennedy Road, Sheppard Avenue East and Highway 401. It should be noted that screening provided by any existing structures and terrain features were included in the noise assessment.

Table 3 – Existing Transportation Sound Levels

Receptor	Existing Sound Level – L_{eq} (16-hr) (dBA)
R1	52
R2	41
R3	48
R4	49
R5	47
R6	58

As shown in **Table 3**, the existing sound levels are below 55 dBA at all receptor locations except at R6. Since the objective sound level is the higher of 55 dBA or the existing ambient, the existing sound level of 60 dBA will be used as the ambient at R6 in determining noise impacts due to the undertaking of the project at a later stage of noise assessment. On the other hand, the objective sound level of 55 dBA will be used for R1 to R5.



wsp	PROJECT: SOUTHWEST AGINCOURT TRANSPORTATION CONNECTIONS TORONTO, ONTARIO	SCALE: NTS	
		DRAWN BY: TP	CHECKED BY: -
	TITLE: STUDY AREA	PROJECT NO: 19M-01888-00	
		DATE: APRIL 2020	
	CLIENT: CITY OF TORONTO	FIGURE NO: 1	REV.: -

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LEGEND

RECEPTOR LOCATION

60 30 0 60 Metres

N W E S

CLIENT:

CITY OF TORONTO

PROJECT:

SOUTHWEST AGINCOURT
TRANSPORTATION CONNECTIONS
TORONTO, ONTARIO

PROJECT NO:	DATE:
19M-01888-00	APRIL 2020

DESIGNED BY: -

DRAWN BY: TP

CHECKED BY: -

FIGURE NO:	SCALE:
2	1:6,000

TITLE:

EXISTING CONDITIONS -
RECEPTOR LOCATIONS R1 TO R6

DISCIPLINE:

ENVIRONMENT

ISSUE:	REV.:
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