



1146 Snow Street, Ottawa, ON

Noise Impact Study

Client:

1146 Snow Street Inc.

Attention:

Joe Vaz

Type of Document:

Draft

Project Name:

1146 Snow Street

Project Number:

GTR-24010235-A0

EXP Services Inc.

1595 Clark Boulevard

Brampton, ON, L6T 4V1

t: 905.793.9800

f: 905.793.0641

Date Submitted:

2025-2-27

Table of Contents

1	Introduction	2
2	Site and Surrounding Area.....	3
3	Noise Impact Assessment.....	4
3.1	Noise Impact from Transportation Noise Sources.....	4
3.1.1	Critical Noise Receptors	4
3.1.2	Noise Criteria	4
3.1.3	Transportation Sound Level Prediction	6
3.1.4	Noise Control Recommendations	6
3.2	Noise Impact from On-Site Stationary Noise Sources	8
4	Conclusions	9
5	General Limitations.....	10
6	Closure	11
7	References	12

List of Appendices

Figures

Appendix A – Drawings

Appendix B – STAMSON Calculation Output

1 Introduction

EXP Services Inc. (EXP) was retained by 1146 Snow Street Inc., ("Client") to complete a Noise Impact Study for a proposed residential development at 1146 Snow Street in Ottawa (hereinafter referred to as the 'Site'). The purpose of this study is to assess the impact of noise from nearby environmental sources to the proposed residential development in accordance with Ottawa Environmental Noise Control Guidelines (ENCG). The study is to support a site plan approval application.

2 Site and Surrounding Area

The Site is located on the south side of Snow Street, east of Cummings Avenue. The project consists of one 4-storey apartment building. The patio north of the apartment building and the outdoor amenity area at the southeast corner of the Site are shared designated outdoor amenity areas. A site plan and floor plans are provided in Appendix A.

The Site is surrounded by residential properties. Immediately to the east is Ken Steele Park. The nearest arterial road is Cummings Avenue to the west. Aviation Parkway beyond Ken Steele Park is also an arterial road. An aerial image of the area is shown in Figure 1. There are no significant stationary noise sources in the vicinity.

3 Noise Impact Assessment

3.1 Noise Impact from Transportation Noise Sources

The major transportation noise source that may impact the Site is the road traffic along Cummings Avenue and Aviation Parkway.

3.1.1 Critical Noise Receptors

Critical noise receptors are those receptors likely to be most affected by the identified noise sources. The locations of critical noise receptors are listed in Table 1 and shown in Figure 2. The heights of the critical noise receptors relative to the grading of Cummings Avenue are listed in Table 1. Private balconies and terraces are less than 4 m deep, therefore not considered designated outdoor amenity areas.

Table 1. Critical Noise Receptors for Transportation Noise Sources

Receptor ID	Receptor Location	Height (m)
POR1	Apartment at northeast corner on 3 rd floor	10.8
POR2	Apartment at southwest corner on 4 th floor	14.0
OLA1	Patio near northwest corner of Site	2.5
OLA2	Outdoor amenity area near southeast corner of Site	4.2

3.1.2 Noise Criteria

Guidelines for acceptable sound levels of road traffic on residential developments are given in ENCG which references Part C of MECP publication NPC-300 "Environmental Noise Guidelines, Stationery and Transportation Sources – Approval and Planning" (August 2013). They are summarized in the tables below.

Table 2. MECP Outdoor Sound Level Limits

Time Period	Sound Level Leq (16)
Daytime (07:00-23:00)	55 dBA

Table 3. MECP Noise Control Requirements for Outdoor Receptors

Outdoor Sound Level (Daytime Leq)	Need for Noise Reduction Measures
56 dBA to 60 dBA	Noise control measures may be implemented. If no noise control measures are planned, a Type A warning clause must be included in the unit title or lease agreement.

Outdoor Sound Level (Daytime Leq)	Need for Noise Reduction Measures
Above 60 dBA	Control measures (barriers) required to reduce the Leq to below 60 dBA and as close to 55 dBA as technically, economically and administratively feasible. A warning clause is required if resultant Leq exceeds 55 dBA.

Table 4. MECP Indoor Sound Level Limit

Room	Time Period	Road Sound Level (Leq)
Living/Dining Rooms	Daytime (07:00-23:00)	45 dBA
	Night-time (23:00-07:00)	45 dBA
Bedrooms	Daytime (07:00-23:00)	45 dBA
	Night-time (23:00-07:00)	40 dBA

Table 5. MECP Ventilation and Warning Clause Requirements

Time Period	Assessment Location	Leq	Ventilation Requirements	Warning Clause
Daytime (07:00-23:00)	Plane of a bedroom or living/dining room window	Greater than 55 dBA to less than or equal to 65 dBA	Forced air heating with provision for central air conditioning.	Type C
		Greater than 65 dBA	Central air conditioning	Type D
Night-time (23:00-07:00)	Plane of a bedroom or living/dining room window	Greater than 50 dBA to less than or equal to 60 dBA	Forced air heating with provision for central air conditioning.	Type C
		Greater than 60 dBA	Central air conditioning	Type D

Table 6. MECP Building Component Requirements

Time Period	Assessment Location	Road Sound Level (Leq)	Building Component Requirements
Daytime (07:00-23:00)	Plane of a bedroom or living/dining room window	Less than or equal to 65 dBA	Building compliant with the Ontario Building Code.
		Greater than 65 dBA	Building components must be designed to achieve indoor sound level criteria.
Night-time (23:00-07:00)	Plane of a bedroom or living/dining room window	Less than or equal to 60 dBA	Building compliant with the Ontario Building Code.
		Greater than 60 dBA	Building components must be designed to achieve indoor sound level criteria.

3.1.3 Transportation Sound Level Prediction

The traffic volume data for Cummings Avenue and Aviation Parkway are obtained from ENCG for a 2-lane urban collector and a 4-lane divided urban arterial-divided road respectively. Northbound and southbound of Aviation Parkway are considered two separate segments with the total AADT of 35,000 evenly distributed. The AADT of Cummings Avenue is taken to be 8,000. The medium truck percentage is 7% and the heavy truck percentage is 5%. The day/night split is 92% daytime versus 8% night-time. The speed limit is 50 km/h for Cummings Avenue and 60 km/h for Aviation Parkway. The traffic data are summarized in Table 7.

Table 7. Road Traffic Data Summary

Parameter	Cummings Avenue	Aviation Parkway Southbound	Aviation Parkway Northbound
Traffic Volume AADT	8,000	17,500	17,500
Day/Night Split	92% / 8%	92% / 8%	92% / 8%
Heavy truck percentage	7%	7%	7%
Medium truck percentage	5%	5%	5%
Speed limit	50 km/h	60 km/h	60 km/h

Calculation of traffic sound levels were performed using STAMSON 5.04, the software implementation of the MOE ORNAMENT model for road (and rail) traffic, which was developed and published by the MECP for transportation noise prediction. The calculated sound levels are summarized in Table 8. Figure 3 shows the distances, elevation and angles between the noise sources and critical noise receptors. Calculation printouts are provided in Appendix B.

Table 8. Calculated Outdoor Sound Levels due to Road Traffic

Receptor ID	Calculated Sound Level (dBA)	
	Daytime Leq (16 hrs)	Night-time Leq (8 hrs)
POR1	59	51
POR2	58	50
OLA1	54	-
OLA2	57	-

3.1.4 Noise Control Recommendations

Noise control recommendations for the critical receptors are summarized in Table 9 and discussed in the subsequent sections.

Table 9. Noise Control Measures

Receptor ID	Noise Barrier	Ventilation	Building Components	Warning Clause
POR1	N/A	Forced air heating with provision for central air conditioning	Ontario Building Code	Type C

Receptor ID	Noise Barrier	Ventilation	Building Components	Warning Clause
POR2	N/A	Forced air heating with provision for central air conditioning	Ontario Building Code	Type C
OLA1	No	N/A	N/A	None
OLA2	No	N/A	N/A	Type A

3.1.4.1 Outdoor Amenity Area

The predicted sound level in the north patio is below 55 dBA but the outdoor amenity area at the southeast corner of the Site is between 55 dBA and 60 dBA. Noise control measures are not necessary for the outdoor amenity area. However, a warning clause is required if no noise control measure is implemented.

3.1.4.2 Ventilation

Since the predicted sound levels at POR1 and POR2 are between 55 dBA and 65 dBA during daytime and between 50 dBA to 60 dBA during night-time, forced air heating with provision for central air conditioning is required in the apartments.

3.1.4.3 Building Components

Since the predicted sound levels are below 60 dBA during daytime and 55 dBA during night-time, building components that meet the Ontario Building Code are sufficient to meet the indoor sound level limits.

3.1.4.4 Warning Clause

Since the unmitigated daytime sound level at OLA2 is between 55 dBA and 60 dBA, the following Type A warning clause should be inserted in all development agreements of all dwellings in the apartment building:

“Purchasers/tenants are advised that sound levels due to increasing road traffic may occasionally interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the Municipality and the Ministry of the Environment.”

Since the forced air heating with provision for central air conditioning is required for the apartment building, the following Type C warning clause should be inserted in all development agreements of all dwellings:

“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 in low and medium density developments will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the Municipality and the Ministry of the Environment.”

3.2 Noise Impact from On-Site Stationary Noise Sources

As it is in the early stage of design for the project, the mechanical systems for the proposed apartment building have not been designed. It is also uncertain whether the building will be served by central air conditioning as it is not necessary for noise control purposes. It is anticipated that potential stationary noise sources associated with the Site are rooftop mechanical equipment, if any.

We recommend analysis to be performed when information of the proposed mechanical system is available. Noise control measures shall be implemented to ensure that sound level limits for stationary noise sources in ENCG are met for both on-site and off-site noise sensitive receptors. Typical noise control measures include selecting quieter equipment and noise barrier.

4 Conclusions

Noise impact of transportation noise sources on the proposed residential development will meet the ENCG criteria with the noise control recommendations described in Section 3.1.4. There is no significant stationary noise source in the area. The proposed residential development at 1146 Snow Street in Ottawa should therefore be approved from the noise perspective.

5 General Limitations

The information and conclusions in this report are considered to be privileged and confidential and have been prepared exclusively for 1146 Snow Street Inc. The purpose of this report is to provide 1146 Snow Street Inc. with an assessment of the potential noise impact to the proposed residential development at 1146 Snow Street.

The information presented in this report is based on information provided by others and visual observations as identified herein. Achieving the objectives stated in this report has required us to arrive at conclusions based upon the best information presently known to us. No investigative method can completely eliminate the possibility of obtaining partially imprecise or incomplete information; it can only reduce the possibility to an acceptable level. Professional judgment was exercised in gathering and analyzing the information obtained and in the formulation of the conclusions. Like all professional persons rendering advice, we do not act as absolute insurers of the conclusions we reach, but we commit ourselves to care and competence in reaching those conclusions.

Any use which a third party makes of this report, or any part thereof, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. EXP accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

Noise and vibration levels at various times may differ from those assessed. In addition, any changes to the proposed design or introduction of new processes and/or sources may render the conclusions of this report inaccurate or invalid. In the event of any such changes, EXP should be contacted to re-evaluate the conditions within the assessed areas and make appropriate revisions to the original conclusions of this report.

6 Closure

We trust this report is satisfactory for your purposes. Should you have any questions, please do not hesitate to contact this office.

Yours truly,

EXP Services Inc.

Pearlie Yung, M.Sc., P.Eng.
Senior Acoustic Engineer
Environmental Services



Miles Anderson, M.Sc.
Project Manager
Environmental Services

7 References

- MECP Publication NPC-300. 2013. Environmental Noise Guideline, Stationary and Transportation Sources – Approval and Planning.

Figures

Figure 1 – Aerial Image

Figure 2 – Locations of Critical Noise Receptor

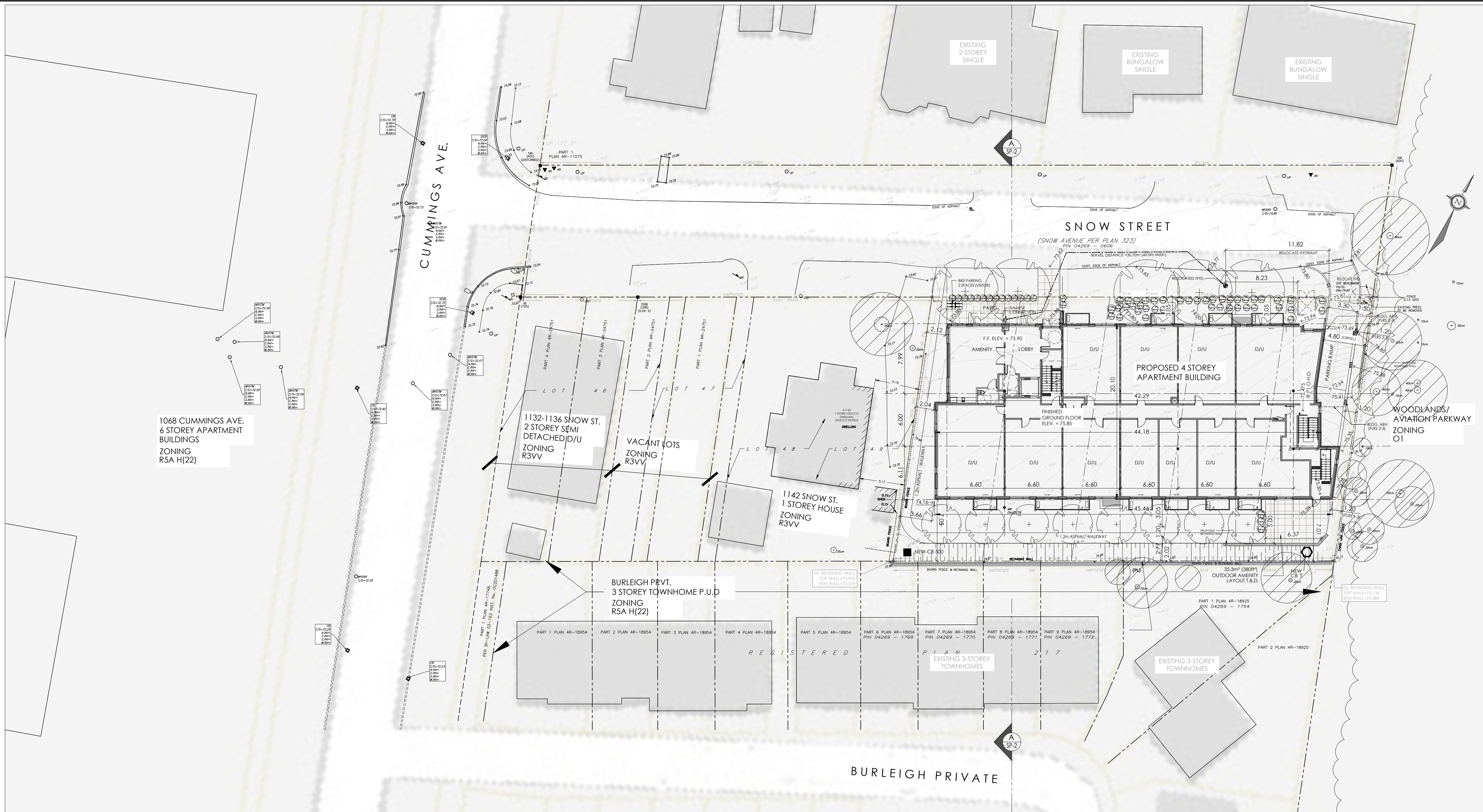
Figure 3 – Dimensions of Separation between Sources and Receptors



Figure 1 Aerial Image



Appendix A – Drawings



SITE PLAN
SCALE= 1:250

PROPOSED RE-ZONING

R4UD ZONING PROVISIONS	LOW-RISE APARTMENT REQUIRED	LOW-RISE APARTMENT PROVIDED
MIN. LOT WIDTH -	15.0 m	50.34m
MIN. LOT AREA -	450m ² (0.045 ha)	1,520.28m ² (0.152 ha)
MAX. BUILDING HEIGHT -	14.5 m	14.02 m (T.O. ROOF DECK)
MIN. FRONT YARD -	4.5 m	** 3.05 m **
MIN. CORNER SIDE YARD -	4.5 m	N/A
MIN. REAR YARD -	7.5m (VARIES SEE NOTE 1)	** 7.01 m **
MIN. INTERIOR SIDE YARD -	1.5 m	** 1.2 m **

NOTES:

1- FOR LOTS LOCATED WITHIN S. 342 AND WHOSE REAR LOT LINE ABUTS AN R1, R2, R3 OR R4 ZONE, SEE PART V, SECTION 144 - ALTERNATIVE YARD SETBACKS FOR LOWRISE DWELLINGS IN THE GREENBELT. IN ALL OTHER CASES THE MINIMUM REAR YARD SETBACK IS 25% OF THE LOT DEPTH WHICH MUST COMPRISE AT LEAST 25% OF THE AREA OF THE LOT. AND NEED NOT EXCEED 7.5 M. EXCEPT ON LOTS WITH DEPTHS OF 15 METRES OR LESS, IN WHICH CASE THE MINIMUM REAR YARD SETBACK IS 4 M. (BY-LAW 2022-103)

LEGEND

	FIRE HYDRANT		EXISTING TREE TO REMAIN
	EXISTING GRADE		EXISTING TREE TO BE REMOVED
	PROPOSED GRADE		PROPOSED NEW TREE
	PROPOSED NEW SHRUBS		
			REFER TO LANDSCAPE PLAN

BUILDING INFORMATION

4 STOREY BUILDING
- TYPICAL CEILING HEIGHT (1 thru 4)= 2770mm

FLOOR AREA CALCULATION
P1 LEVEL = 864.09 m² (9,300.98 ft²)
GROUND FLOOR = 883.38 m² (9,508.62 ft²)
SECOND FLOOR = 915.87 m² (9,858.34 ft²)
THIRD FLOOR = 915.87 m² (9,858.34 ft²)
FOURTH FLOOR = 673.01 m² (7,244.21 ft²)
TOTAL FLOOR AREA= 4,252.22 m² (45,770.49 ft²)
EXCLUDING P1 LEVEL= 3,388.13m² (36,469.51 ft²)

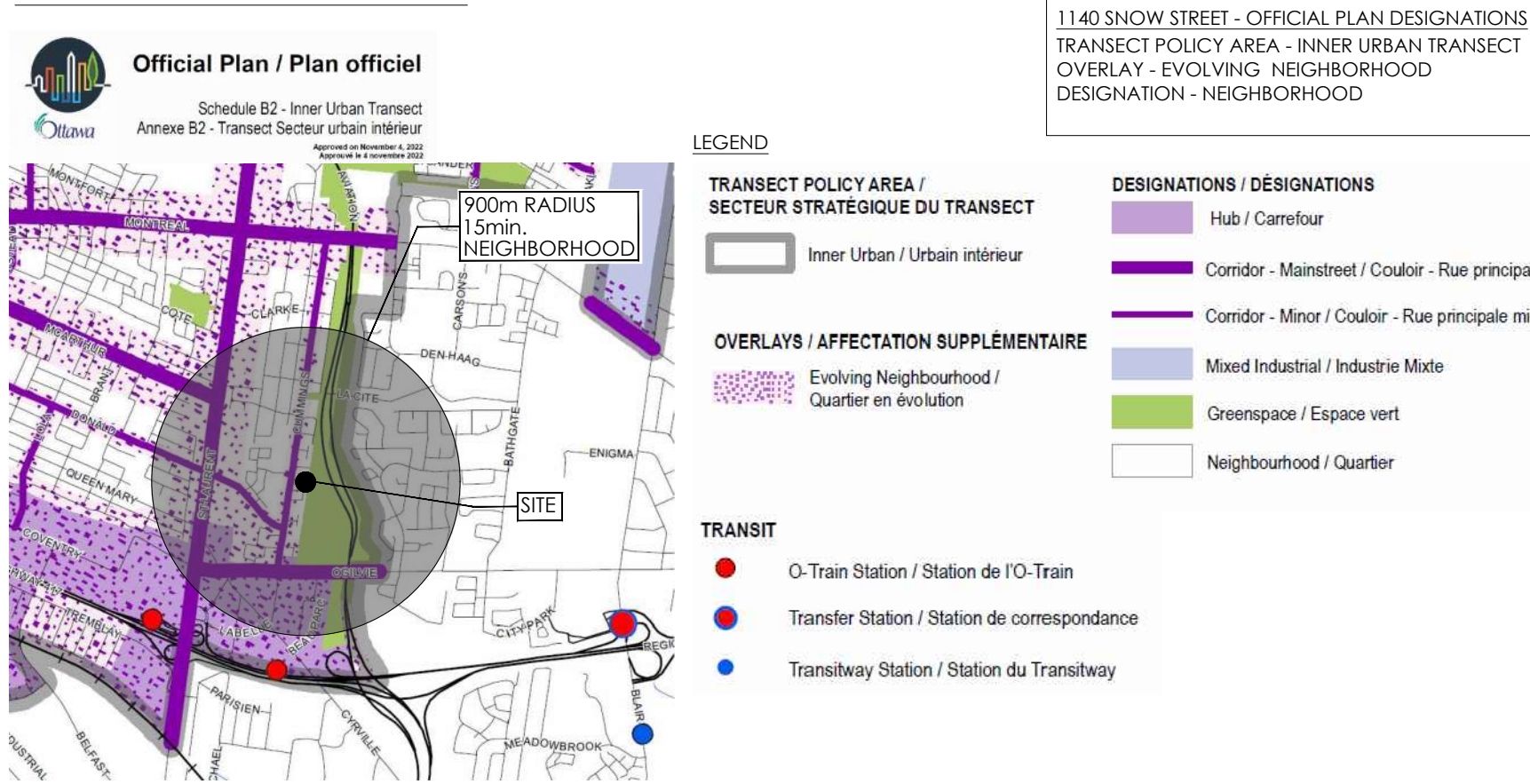
"GROSS FLOOR AREA" CALCULATION
GROUND FLOOR = 11 UNITS = 657.56 m² (7,078 ft²) G.F.A.
2nd FLOOR = 13 UNITS= 818.75 m² (8,813 ft²) G.F.A.
3rd FLOOR = 13 UNITS= 818.75 m² (8,813 ft²) G.F.A.
4th FLOOR = 13 UNITS= 535.58 m² (5,765 ft²) G.F.A.
TOTAL G.F.A. = 2,830.64 m² (30,469 ft²) G.F.A.

UNIT COUNT	STUDIO	1 BR.	2 BR.	B.F. UNIT COUNT	STUDIO	1 BR.	2 BR.
GROUND FLOOR	11	3	6	2	GROUND FLOOR	N/A	1
2nd FLOOR	13	3	6	4	2nd FLOOR	N/A	1
3rd FLOOR	13	3	6	4	3rd FLOOR	N/A	1
4th FLOOR	6	0	2	4	4th FLOOR	N/A	0
TOTAL UNITS=	43	9	20	14	TOTAL=	3 (15% 1BR. UNITS)	4 (28% 2BR. UNITS)

VEHICLE PARKING REQUIRED
43-12= 31 x 0.5 = 15.5= 16 SPACES (RESIDENTS)
43-12= 31 x 0.1 = 3.1 = 3 SPACES (VISITOR)
TOTAL PARKING REQUIRED = 19 SPACES
TOTAL PARKING PROVIDED = 16 SPACES UNDERGROUND

BICYCLE PARKING REQUIRED
SECTION 111-1-TABLE 111A = 0.5 SPACES/d.u.
43 x 0.5= 21.5 = 22 SPACES
TOTAL BICYCLE PARKING PROVIDED = 26 SPACES (24 UNDERGROUND + 2 (VISITOR) OUTDOORS)

CITY OF OTTAWA OFFICIAL PLAN



KEY PLAN: N.T.S.

SITE BOUNDRIES DERIVED FROM
TOPOGRAPHIC SURVEY
LOTS 50, 51, 52, 53 & 54
REGISTERED PLAN 323 CITY OF OTTAWA
PREPARED BY STANTEC GEOMATICS LTD.
DATED: _____

Section 4 – City-Wide Policies

4.2 Housing

4.2.1 Enable greater flexibility and an adequate supply and diversity of housing options throughout the city

2) The City shall support the production of a **missing middle housing** range of mid-density, low-rise multi-unit housing, in order to support the evolution of healthy walkable 15-minute neighbourhoods by:

- Allowing housing forms which are denser, small-scale, of generally three or more units per lot in appropriate locations, with lot configurations that depart from the traditional lot division and put the emphasis on the built form and the public realm, as-of-right within the Zoning By-law;
- Allowing housing forms of eight or more units in appropriate locations as-of-right within the Zoning By-law; and
- In appropriate locations allowing missing middle housing forms while prohibiting lower-density typologies near rapid-transit stations within the Zoning By-law.

Definition

Missing Middle Housing:
In Ottawa's context and for the purposes of this Plan, missing middle housing generally refers to **low-rise, multiple unit residential development of between three and sixteen units, or more, in the case of unusually large lots** and for the lower-density types is typically ground oriented.

Section 5 – Transects

Table 7 – Minimum and Maximum Height Overview Based on Official Plan Policy

Transect	Official Plan Policy Reference	Designation	Height Category and Details
Downtown Core Transect	5.1.3(1)	Hubs	High-rise and High-rise 41+ between 10 stories and 40 stories; and 41 stories plus, through criteria and area-specific policy
	5.1.4(1)	Hubs	Low-rise, Mid-rise and High-rise; minimum 4 stories and maximum 40 stories
	5.1.4(3)	Mainstreet Corridors	Low-rise and Mid-rise; minimum 2 stories and maximum 9 stories
	5.1.4(4)	Minor Corridors	Low-rise and Mid-rise; minimum 2 stories and maximum 4 stories
Inner Urban Transect	5.1.5(1)	Neighbourhoods	Low-rise; minimum 2 stories, generally permit 3 stories, allow a built height of up to 4 stories where appropriate
	5.2.3(1)	Hubs	Low-rise, Mid-rise and High-rise; minimum 3 stories and maximum 40 stories
	5.2.3(2)	Mainstreet Corridors	Low-rise and Mid-rise and High-rise; minimum 2 stories and maximum 40 stories dependent on road width and transit
	5.2.3(3)	Minor Corridors	Low-rise and Mid-rise; minimum 2 stories and maximum 4 stories
	5.2.4(1)	Neighbourhoods	Low-rise; minimum 2 stories, generally permit 3 stories, allow built height of up to 4 stories where appropriate

5.2.4 Provide direction to the Neighbourhoods located within the Inner Urban Transect

1) Neighbourhoods located in the Inner Urban area and within a short walking distance of Hubs and Corridors shall accommodate residential growth to meet the Growth Management Framework as outlined in Subsection 3.2, Table 3b. The Zoning By-law shall implement the density thresholds in a manner which adheres to the built form requirements as described in Subsection 5.6.1, as applicable and that:

- Allows and supports a wide variety of housing types with a focus on missing-middle housing, which may include new housing types that are currently not contemplated in this Plan;
- The application of Zoning By-law development standards to be applied as one lot for zoning purposes to support missing middle housing;
- Provides for a low-rise built form, by requiring in Zoning a minimum built height of 2 stories, generally permitting 3 stories, and where appropriate, will allow a built height of up to 4 stories to permit higher-density low-rise residential development;
- Provides an emphasis on regulating the maximum built form envelope that frames the public right-of-way rather than unit count or lot configuration; and
- In appropriate locations, to support the production of missing middle housing, lower density typologies may be prohibited.

**M. David Blakely
Architect Inc.**
2200 Prince of Wales Dr., Suite 101 Ottawa, Ontario
Phone (613) 226-8811 Fax (613) 226-7942 K2E 6Z9

GENERAL NOTES:
1. THE CONTRACTOR IS RESPONSIBLE FOR CHECKING AND VERIFYING ALL DIMENSIONS. ANY DISCREPANCY MUST BE REPORTED TO M. DAVID BLAKELY ARCHITECT INC.
2. ALL WORK AND MATERIALS TO BE IN COMPLIANCE WITH ALL CODES, REGULATIONS, & BY-LAWS.
3. ADDITIONAL DRAWINGS MAY BE ISSUED FOR CLARIFICATION TO ASSIST THE OWNER'S EXECUTION OF WORK. SUCH DRAWINGS WILL HAVE THE SAME MEANING AND PRESENT AS IF THEY WERE INCLUDED WITH THE PLANS IN CONTRACT DOCUMENTS.
4. DO NOT SCALE DRAWINGS.
5. THIS DRAWING SHALL NOT BE USED OR COPIED WITHOUT THE AUTHORIZATION OF THE ARCHITECT.
6. THIS DRAWING SHALL NOT BE USED FOR PERMIT OR CONSTRUCTION UNLESS THE DRAWING BEARS THE ARCHITECT'S SEAL AND SIGNATURE.

CIVIL ENGINEER
STANTEC CONSULTING LTD.
400-1331 CLYDE AVE.
OTTAWA, ONTARIO, K2C 3G4
LANDSCAPE ARCHITECT
JAMES B. LENNOX & ASSOCIATES INC.
3332 CARLING AVE.
OTTAWA, ONTARIO, K2H 5A8
SURVEYOR
STANTEC GEOMATICS LTD.
400-1331 CLYDE AVE.
OTTAWA, ONTARIO, K2C 3G4

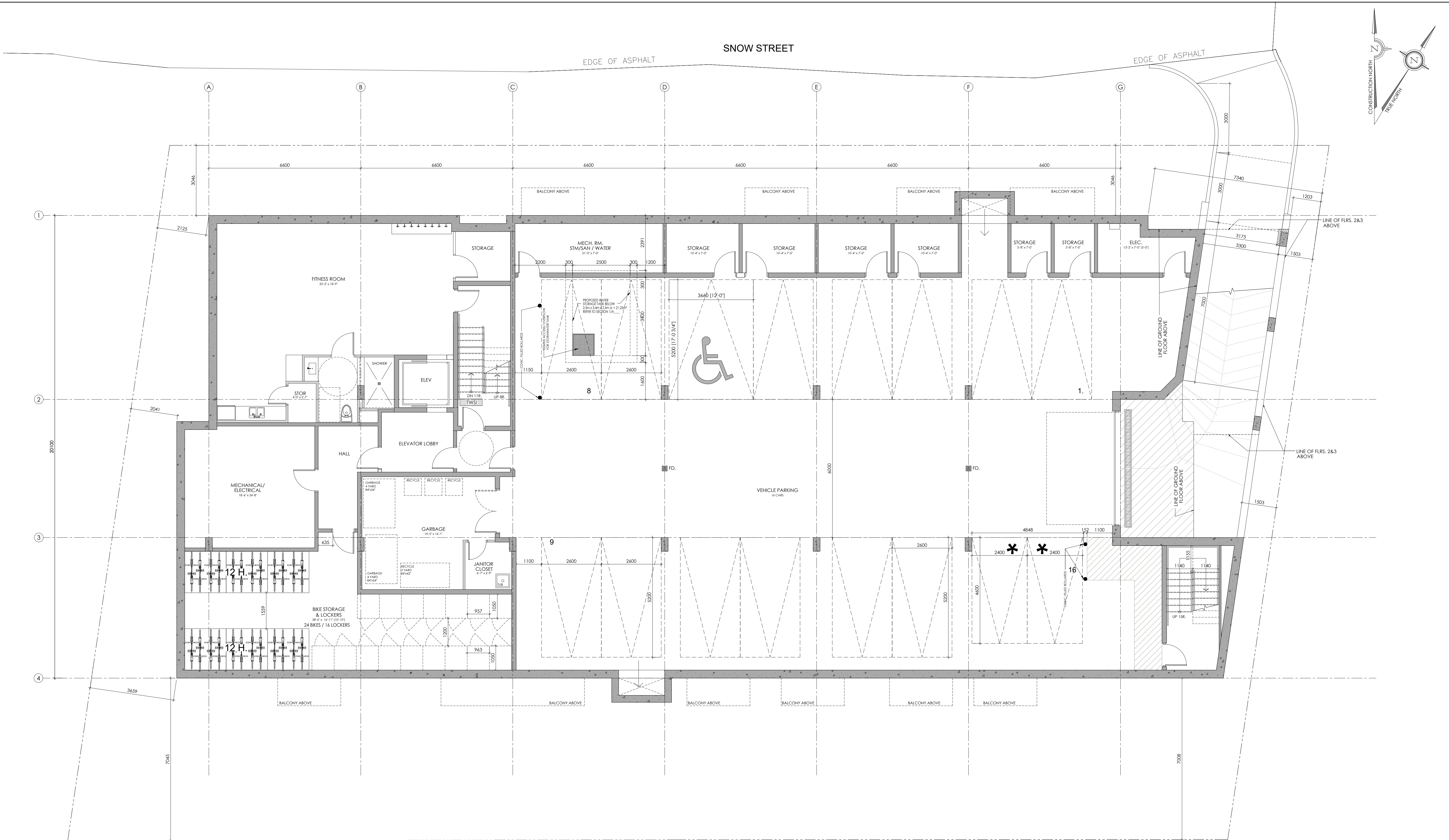
SEAL

NO.	DATE	DESCRIPTION	INIT.	NO.	DATE	DESCRIPTION	INIT.
12.	05/02/25	REVISED BUILDING @ SOUTH EAST CORNER/ COORDINATION	JB	24.			
11.	05/02/25	REVISED PER NEW TOPO SURVEY/ CIVIL COORDINATION	JB	23.			
10.	22/01/25	REVISED BUILDING/ CIVIL COORDINATION	JB	22.			
9.	20/01/25	REVISED BUILDING/ CIVIL COORDINATION	JB	21.			
8.	20/11/24	EXT 'B' EXTERIOR EGRESS/ HYDRANT & TRANSFORMER	JB	20.			
7.	12/11/24	REVISED BUILDING FOR 43 UNITS/ FOR COORDINATION	JB	19.			
6.	07/10/24	HYDRANT RELOCATED & SANISE CONNECTION ADDED	JB	18.			
5.	22/07/24	PRELIM. GRADES & FINISHED FLOOR ELEVATIONS ADDED	JB	17.			
4.	25/06/24	PER TOPOGRAPHIC SURVEY/ FOR COORDINATION	JB	16.			
3.	28/02/24	FOR REVIEW	JB	15.			
2.	05/12/23	FOR REVIEW	JB	14.			
1.	05/12/23	FOR REVIEW	JB	13.			

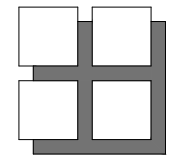
A - DETAIL NUMBER
B - SHEET NUMBER
(DETAIL REQUIRED)
C - SHEET NUMBER
(DETAIL LOCATION)

PROJECT:
4 STOREY - 43 UNIT APARTMENT BUILDING
1146 SNOW STREET
OTTAWA, ONTARIO
CLIENT:
1146 SNOW STREET INC.
5669 POWER ROAD
OTTAWA, ONTARIO, K1G 3N4

DRAWING TITLE:
SITE PLAN
DATE:
DEC. 2023
SCALE:
1 : 250
SHEET NO.:
SP1
DRAWN BY:
JB
CHECKED:
MDB



UNDERGROUND PARKING (P1) LEVEL PLAN
SCALE= 1:75 GROSS FLOOR AREA = 864.09m² (9,300.98 ft²)

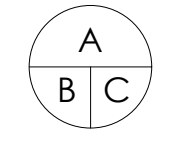


**M. David Blakely
Architect Inc.**
2200 Prince of Wales Dr. Suite 101 Ottawa, Ontario
Phone (613) 226-8811 Fax (613) 226-7942 K2E 6Z9

GENERAL NOTES:
1. THE CONTRACTOR IS RESPONSIBLE FOR CHECKING AND VERIFYING ALL DIMENSIONS. ANY DISCREPANCY MUST BE REPORTED TO M. DAVID BLAKELY ARCHITECT INC.
2. ALL WORK AND MATERIALS TO BE IN COMPLIANCE WITH ALL CODES, REGULATIONS, & BY-LAWS.
3. ADDITIONAL DRAWINGS MAY BE ISSUED FOR CLARIFICATION TO ASSIST THE PROPER EXECUTION OF WORK. SUCH DRAWINGS WILL HAVE THE SAME MEANING AND INTENT AS IF THEY WERE INCLUDED WITH THE PLANS IN CONTRACT DOCUMENTS.
4. DO NOT SCALE DRAWINGS.
5. THIS DRAWING SHALL NOT BE USED OR COPIED WITHOUT THE AUTHORIZATION OF THE ARCHITECT.
6. THIS DRAWING SHALL NOT BE USED FOR PERMIT OR CONSTRUCTION UNLESS THE DRAWING BEARS THE ARCHITECT'S SEAL AND SIGNATURE.

SEAL

12.						24.					
11.						23.					
10.						22.					
9.						21.					
8.						20.					
7.						19.					
6.						18.					
5.						17.					
4.						16.					
3.						15.					
2.						14.					
1.	25/02/25	FOR SUBMISSION				13.					
NO.	DATE	DESCRIPTION				NO.	DATE	DESCRIPTION			INT.
		REVISIONS						REVISIONS			



A - DETAIL NUMBER
B - SHEET NUMBER
(DETAIL REQUIRED)
C - SHEET NUMBER
(DETAIL LOCATION)

PROJECT:
43 UNIT - 4 STOREY APARTMENT BUILDING
1146 SNOW STREET
OTTAWA, ONTARIO

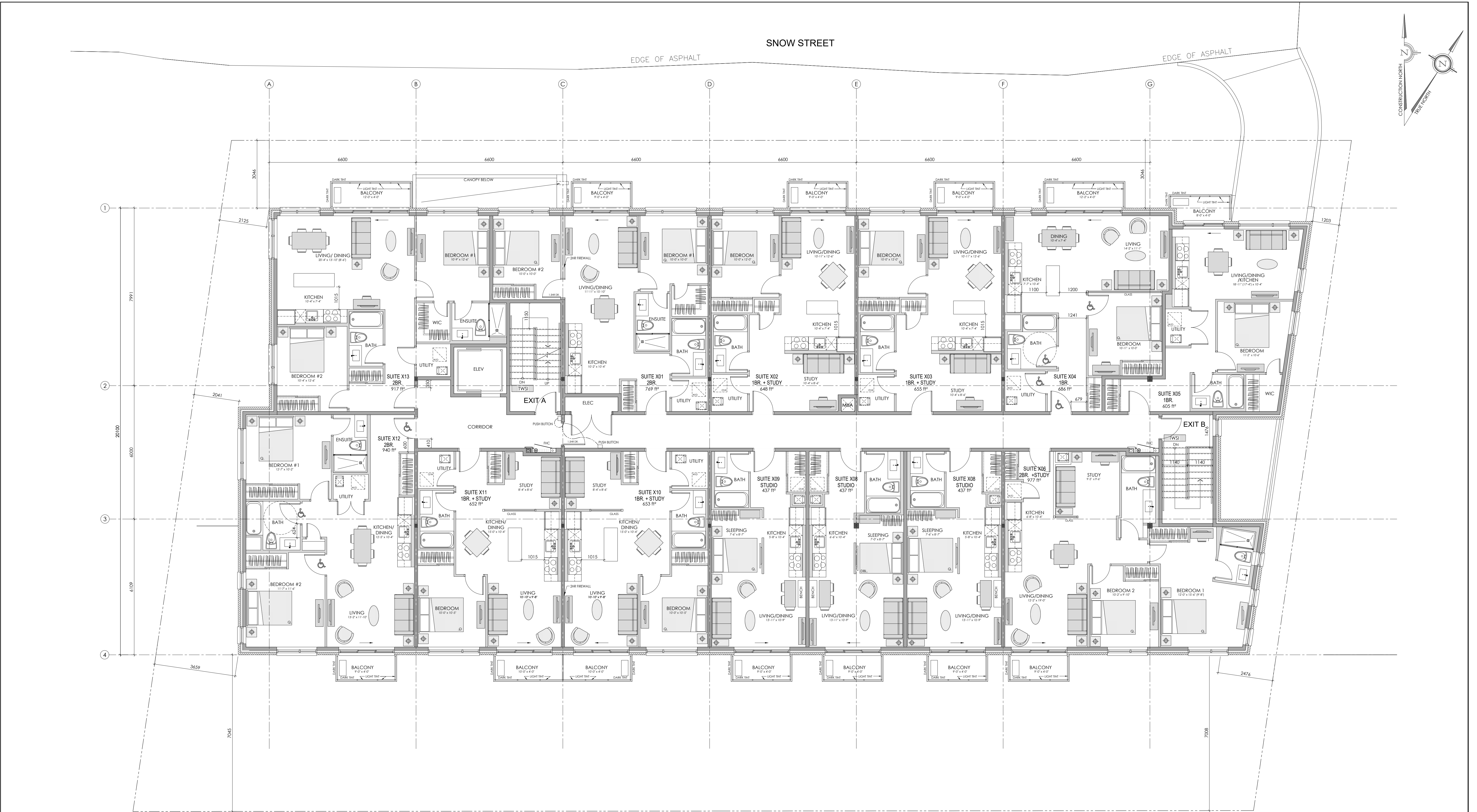
CLIENT:
1146 SNOW STREET INC.
5669 POWER ROAD
OTTAWA, ONTARIO, K1G 3N4

DRAWING TITLE:
**FOUNDATION &
BASEMENT PLAN**

DATE: FEB., 2025
SCALE: 1:75
DRAWN BY: JB
CHECKED: MDB

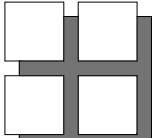
SHEET No.:

A1



TYPICAL FLOOR PLAN (FLOORS 2 & 3)
SCALE= 1:75 GROSS FLOOR AREA = 915.87m² (9,858.34ft²)

13 UNITS
6- 1 BEDROOM
4- 2 BEDROOM
3- STUDIO



**M. David Blakely
Architect Inc.**
2200 Prince of Wales Dr. Suite 101 Ottawa, Ontario
Phone (613) 226-8811 Fax (613) 226-7942 K2E 6Z9

GENERAL NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR CHECKING AND VERIFYING ALL DIMENSIONS. ANY DISCREPANCY MUST BE REPORTED TO M. DAVID BLAKELY ARCHITECT INC.
2. ALL WORK AND MATERIALS TO BE IN COMPLIANCE WITH ALL CODES, REGULATIONS, & BY-LAWS.
3. ADDITIONAL DRAWINGS MAY BE ISSUED FOR CLARIFICATION TO ASSIST THE PROPER EXECUTION OF WORK. SUCH DRAWINGS WILL HAVE THE SAME MEANING AND INTENT AS IF THEY WERE INCLUDED WITH THE PLANS IN CONTRACT DOCUMENTS.
4. DO NOT SCALE DRAWINGS.
5. THIS DRAWING SHALL NOT BE USED OR COPIED WITHOUT THE AUTHORIZATION OF THE ARCHITECT.
6. THIS DRAWING SHALL NOT BE USED FOR PERMIT OR CONSTRUCTION UNLESS THE DRAWING BEARS THE ARCHITECT'S SEAL AND SIGNATURE.

SEAL

12.						24.					
11.						23.					
10.						22.					
9.						21.					
8.						20.					
7.						19.					
6.						18.					
5.						17.					
4.						16.					
3.						15.					
2.						14.					
1.	25/02/25	FOR SUBMISSION				13.					
NO.	DATE	DESCRIPTION				NO.	DATE	DESCRIPTION			
		REVISIONS						REVISIONS			

A

B

C

A - DETAIL NUMBER
B - SHEET NUMBER
(DETAIL REQUIRED)
C - SHEET NUMBER
(DETAIL LOCATION)

PROJECT:
43 UNIT - 4 STOREY APARTMENT BUILDING
1146 SNOW STREET
OTTAWA, ONTARIO

CLIENT:
1146 SNOW STREET INC.
5669 POWER ROAD
OTTAWA, ONTARIO, K1G 3N4

DRAWING TITLE:
TYPICAL FLOOR PLAN
(FLRS. 2 & 3)

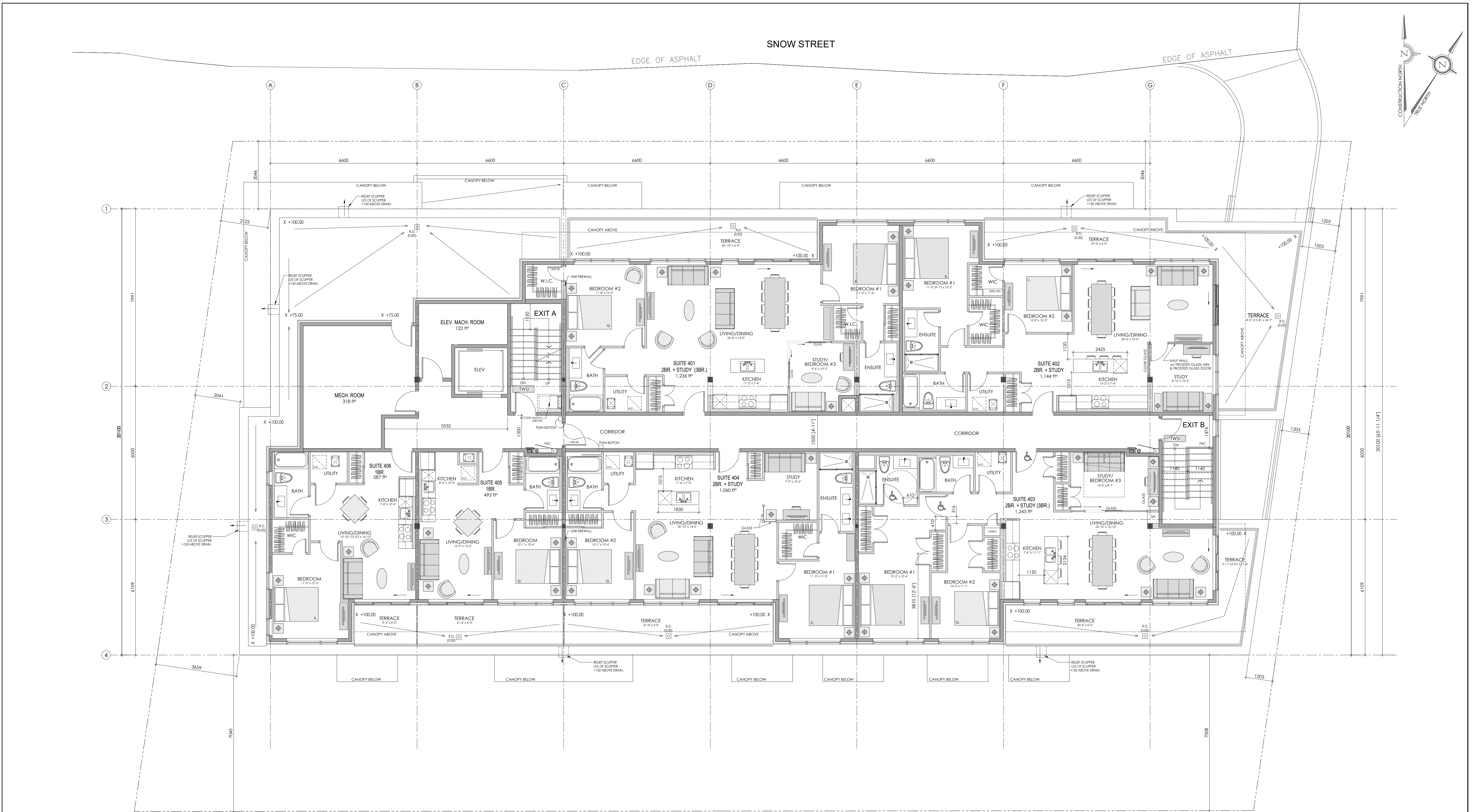
DATE:
FEB., 2025

SCALE:
1:75

SHEET NO.:
A3

DRAWN BY:
JB

CHECKED:
MDB



4TH FLOOR PLAN
SCALE= 1:75
GROSS FLOOR AREA = 673.01m² (7,244.21ft²)
6 UNITS
2- 1 BEDROOM
4- 2 BEDROOM

M. David Blakely Architect Inc.
2200 Prince of Wales Dr. Suite 101 Ottawa, Ontario
Phone (613) 226-8811 Fax (613) 226-7942 K2E 6Z9

GENERAL NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR CHECKING AND VERIFYING ALL DIMENSIONS. ANY DISCREPANCY MUST BE REPORTED TO M. DAVID BLAKELY ARCHITECT INC.
2. ALL WORK AND MATERIALS TO BE IN COMPLIANCE WITH ALL CODES, REGULATIONS, & BY-LAWS.
3. ADDITIONAL DRAWINGS MAY BE ISSUED FOR CLARIFICATION TO ASSIST THE PROPER EXECUTION OF WORK. SUCH DRAWINGS WILL HAVE THE SAME MEANING AND INTENT AS IF THEY WERE INCLUDED WITH THE PLANS IN CONTRACT DOCUMENTS.
4. DO NOT SCALE DRAWINGS.
5. THIS DRAWING SHALL NOT BE USED OR COPIED WITHOUT THE AUTHORIZATION OF THE ARCHITECT.
6. THIS DRAWING SHALL NOT BE USED FOR PERMIT OR CONSTRUCTION UNLESS THE DRAWING BEARS THE ARCHITECT'S SEAL AND SIGNATURE.

SEAL

12.				24.			
11.				23.			
10.				22.			
9.				21.			
8.				20.			
7.				19.			
6.				18.			
5.				17.			
4.				16.			
3.				15.			
2.				14.			
1.	25/02/25	FOR SUBMISSION	JB	13.			
NO.	DATE	DESCRIPTION	INT.	NO.	DATE	DESCRIPTION	INT.
		REVISIONS				REVISIONS	

A

B

C

A - DETAIL NUMBER
B - SHEET NUMBER (DETAIL REQUIRED)
C - SHEET NUMBER (DETAIL LOCATION)

PROJECT:
43 UNIT - 4 STOREY APARTMENT BUILDING
1146 SNOW STREET
OTTAWA, ONTARIO

CLIENT:
1146 SNOW STREET INC.
5669 POWER ROAD
OTTAWA, ONTARIO, K1G 3N4

DRAWING TITLE:
FOURTH (4th) FLOOR PLAN

DATE:
FEB., 2025

SCALE:
1:75

SHEET NO.:
A4

DRAWN BY:
JB

CHECKED:
MDB



FRONT (NORTH) ELEVATION

SCALE= 1:150



REAR (SOUTH) ELEVATION

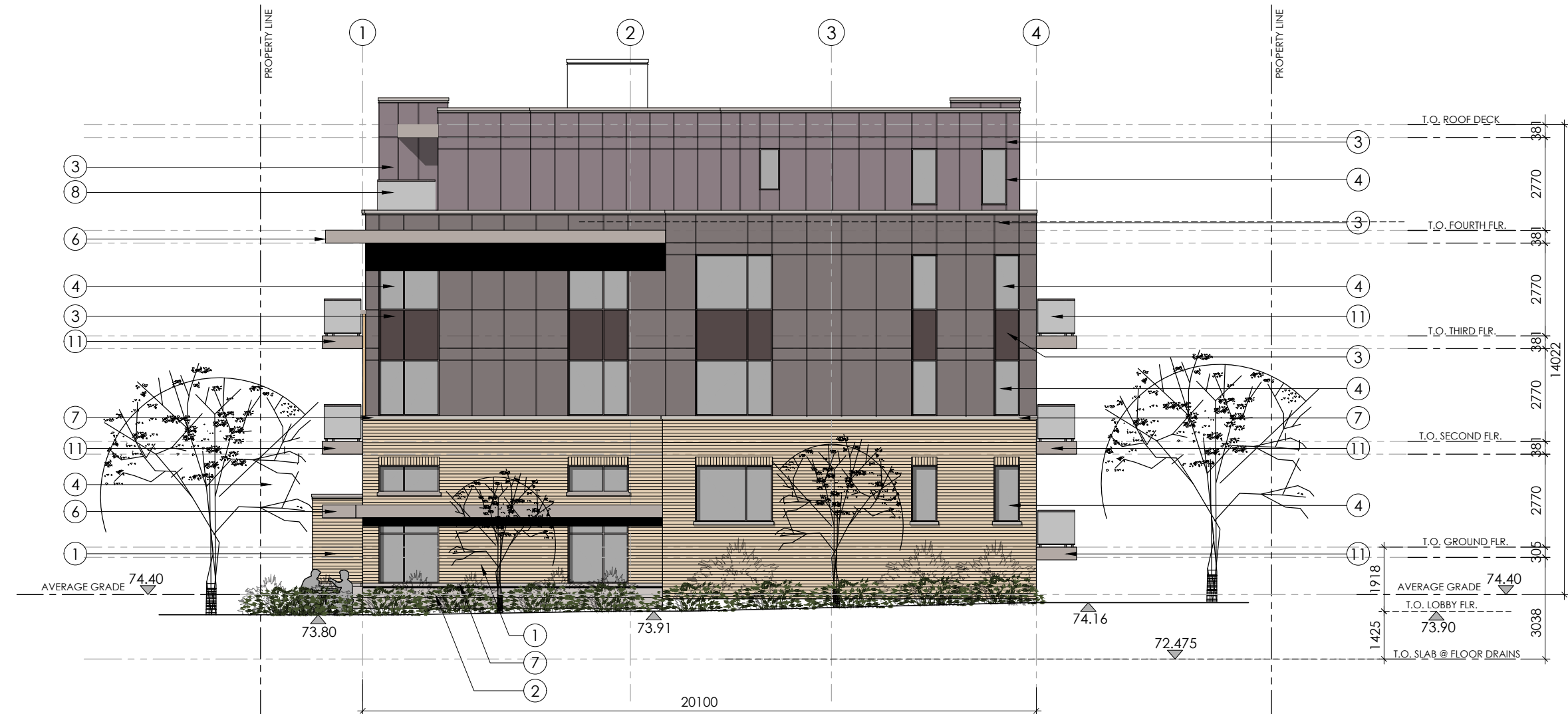
SCALE= 1:150

- LIST OF MATERIALS:
- 1- BRICK VENEER
 - 2- STONE VENEER
 - 3- METAL PANEL
 - 4- WINDOW - FRAME
 - 5- PATIO DOOR
 - 6- CANOPY
 - 7- PRECAST SILL
 - 8- ALUMINUM/ GLASS GUARD & RAILING
 - 9- CONCRETE WALL
 - 10- LIGHT FIXTURE
 - 11- BALCONY w/ ALUMINUM/GLASS GUARD



LEFT (EAST) SIDE ELEVATION

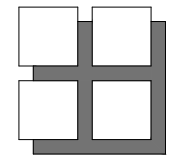
SCALE= 1:150



RIGHT (WEST) SIDE ELEVATION

SCALE= 1:150

AVERAGE GRADE CALCULATION			
ELEVATION	AVERAGE GRADE OF ELEVATION	BUILDING LENGTH	AVG. GRD. x BUILD. LENGTH
NORTH	$73.80 + 73.94 + 73.29 = 221.03/3 =$	73.67 x 48.33=	3561.235
EAST	$75.28 + 75.35 + 75.41 + 75.48 + 74.85 =$	75.27 x 20.10=	1513.00
SOUTH	$74.16 + 74.40 + 74.69 + 74.97 + 75.26 + 75.35 + 75.48 = 599.59/8 =$	74.94 x 48.30=	3619.60
WEST	$73.80 + 73.91 + 74.16 = 221.87/3 =$	73.93 x 20.10=	1486.50
TOTAL		136.83	10180.33
AVERAGE GRADE =		10180.33/ 136.83 =	74.40



M. David Blakely
Architect Inc.

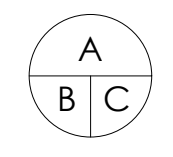
2200 Prince of Wales Dr. Suite 101 Ottawa, Ontario
Phone (613) 226-8811 Fax (613) 226-7942 K2E 6Z9

GENERAL NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR CHECKING AND VERIFYING ALL DIMENSIONS. ANY DISCREPANCY MUST BE REPORTED TO M. DAVID BLAKELY ARCHITECT INC.
2. ALL WORK AND MATERIALS TO BE IN COMPLIANCE WITH ALL CODES, REGULATIONS, & BY-LAWS.
3. ADDITIONAL DRAWINGS MAY BE ISSUED FOR CLARIFICATION TO ASSIST THE PROPER EXECUTION OF WORK. SUCH DRAWINGS WILL HAVE THE SAME MEANING AND INTENT AS IF THEY WERE INCLUDED WITH THE PLANS IN CONTRACT DOCUMENTS.
4. DO NOT SCALE DRAWINGS.
5. THIS DRAWING SHALL NOT BE USED OR COPIED WITHOUT THE AUTHORIZATION OF THE ARCHITECT.
6. THIS DRAWING SHALL NOT BE USED FOR PERMIT OR CONSTRUCTION UNLESS THE DRAWING BEARS THE ARCHITECT'S SEAL AND SIGNATURE.

SEAL

NO.	DATE	FOR SUBMISSION	DESCRIPTION	INIT.	NO.	DATE	FOR SUBMISSION	DESCRIPTION	INIT.
12.					24.				
11.					23.				
10.					22.				
9.					21.				
8.					20.				
7.					19.				
6.					18.				
5.					17.				
4.					16.				
3.					15.				
2.					14.				
1.	25/02/25	FOR SUBMISSION		JB	13.				



A - DETAIL NUMBER
B - SHEET NUMBER
(DETAIL REQUIRED)
C - SHEET NUMBER
(DETAIL LOCATION)

PROJECT:
43 UNIT - 4 STOREY APARTMENT BUILDING
1146 SNOW STREET
OTTAWA, ONTARIO

CLIENT:
1146 SNOW STREET INC.
5669 POWER ROAD
OTTAWA, ONTARIO, K1G 3N4

DRAWING TITLE:
BUILDING ELEVATIONS

DATE: FEB., 2025
SCALE: 1:150
SHEET NO.: A6
DRAWN BY: JB
CHECKED: MDB

Appendix B – STAMSON Calculation Output

STAMSON 5.0 NORMAL REPORT Date: 20-02-2025 13:22:45
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: por1.te Time Period: Day/Night 16/8 hours
Description: Predicted Traffic Sound Level at POR1

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

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Cummings (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 2 / 2
House density : 20 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 104.90 / 104.90 m
Receiver height : 10.81 / 10.81 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Aviation S (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Aviation S (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 : 133.00 / 133.20 m
Receiver height : 10.81 / 10.81 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 3: Aviation N (day/night)

```
-----
Car traffic volume   : 14168/1232   veh/TimePeriod  *
Medium truck volume  : 1127/98      veh/TimePeriod  *
Heavy truck volume   : 805/70       veh/TimePeriod  *
Posted speed limit   : 60 km/h
Road gradient        : 0 %
Road pavement        : 1 (Typical asphalt or concrete)
```

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

```
24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth          : 0.00
Number of Years of Growth            : 0.00
Medium Truck % of Total Volume       : 7.00
Heavy Truck % of Total Volume        : 5.00
Day (16 hrs) % of Total Volume       : 92.00
```

Data for Segment # 3: Aviation N (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 : 191.20 / 191.20 m
Receiver height      : 10.81 / 10.81 m
Topography          : 1             (Flat/gentle slope; no barrier)
Reference angle      : 0.00
```

Results segment # 1: Cummings (day)

Source height = 1.50 m

ROAD (0.00 + 47.73 + 0.00) = 47.73 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.38	65.75	0.00	-11.66	-3.95	0.00	-2.40	0.00	47.73

Segment Leq : 47.73 dBA

Results segment # 2: Aviation S (day)

Source height = 1.50 m

ROAD (0.00 + 56.64 + 0.00) = 56.64 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.38	70.67	0.00	-13.09	-0.94	0.00	0.00	0.00	56.64

Segment Leq : 56.64 dBA

Results segment # 3: Aviation N (day)

Source height = 1.50 m

ROAD (0.00 + 54.46 + 0.00) = 54.46 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.38	70.67	0.00	-15.26	-0.94	0.00	0.00	0.00	54.46

Segment Leq : 54.46 dBA

Total Leq All Segments: 59.03 dBA

Results segment # 1: Cummings (night)

Source height = 1.50 m

ROAD (0.00 + 40.14 + 0.00) = 40.14 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.38	58.16	0.00	-11.66	-3.95	0.00	-2.40	0.00	40.14

Segment Leq : 40.14 dBA

Results segment # 2: Aviation S (night)

Source height = 1.50 m

ROAD (0.00 + 49.03 + 0.00) = 49.03 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.38	63.07	0.00	-13.10	-0.94	0.00	0.00	0.00	49.03

Segment Leq : 49.03 dBA

Results segment # 3: Aviation N (night)

Source height = 1.50 m

ROAD (0.00 + 46.86 + 0.00) = 46.86 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.38	63.07	0.00	-15.26	-0.94	0.00	0.00	0.00	46.86

Segment Leq : 46.86 dBA

Total Leq All Segments: 51.43 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 59.03
(NIGHT): 51.43

STAMSON 5.0 NORMAL REPORT Date: 20-02-2025 13:23:01
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: por2.te Time Period: Day/Night 16/8 hours
Description: Predicted Traffic Sound Level at POR2

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

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Cummings (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 2 / 2
House density : 20 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 60.40 / 60.40 m
Receiver height : 13.96 / 13.96 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Aviation S (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Aviation S (day/night)

Angle1 Angle2 : 17.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 178.00 / 178.00 m
Receiver height : 13.96 / 13.96 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 3: Aviation N (day/night)

```
-----
Car traffic volume   : 14168/1232   veh/TimePeriod  *
Medium truck volume  : 1127/98      veh/TimePeriod  *
Heavy truck volume   : 805/70       veh/TimePeriod  *
Posted speed limit   : 60 km/h
Road gradient        : 0 %
Road pavement        : 1 (Typical asphalt or concrete)
```

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

```
24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth          : 0.00
Number of Years of Growth            : 0.00
Medium Truck % of Total Volume       : 7.00
Heavy Truck % of Total Volume        : 5.00
Day (16 hrs) % of Total Volume       : 92.00
```

Data for Segment # 3: Aviation N (day/night)

```
-----
Angle1  Angle2          : 16.30 deg  90.00 deg
Wood depth                : 0          (No woods.)
No of house rows          : 0 / 0
Surface                   : 1          (Absorptive ground surface)
Receiver source distance  : 236.00 / 236.00 m
Receiver height           : 13.96 / 13.96 m
Topography                : 1          (Flat/gentle slope; no barrier)
Reference angle           : 0.00
```

Results segment # 1: Cummings (day)

Source height = 1.50 m

ROAD (0.00 + 54.83 + 0.00) = 54.83 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.29	65.75	0.00	-7.78	-0.74	0.00	-2.40	0.00	54.83

Segment Leq : 54.83 dBA

Results segment # 2: Aviation S (day)

Source height = 1.50 m

ROAD (0.00 + 52.00 + 0.00) = 52.00 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
17	90	0.29	70.67	0.00	-13.82	-4.85	0.00	0.00	0.00	52.00

Segment Leq : 52.00 dBA

Results segment # 3: Aviation N (day)

Source height = 1.50 m

ROAD (0.00 + 50.48 + 0.00) = 50.48 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
16	90	0.29	70.67	0.00	-15.40	-4.80	0.00	0.00	0.00	50.48

Segment Leq : 50.48 dBA

Total Leq All Segments: 57.59 dBA

Results segment # 1: Cummings (night)

Source height = 1.50 m

ROAD (0.00 + 47.24 + 0.00) = 47.24 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.29	58.16	0.00	-7.78	-0.74	0.00	-2.40	0.00	47.24

Segment Leq : 47.24 dBA

Results segment # 2: Aviation S (night)

Source height = 1.50 m

ROAD (0.00 + 44.40 + 0.00) = 44.40 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
17	90	0.29	63.07	0.00	-13.82	-4.85	0.00	0.00	0.00	44.40

Segment Leq : 44.40 dBA

Results segment # 3: Aviation N (night)

Source height = 1.50 m

ROAD (0.00 + 42.88 + 0.00) = 42.88 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
16	90	0.29	63.07	0.00	-15.40	-4.80	0.00	0.00	0.00	42.88

Segment Leq : 42.88 dBA

Total Leq All Segments: 50.00 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 57.59
(NIGHT): 50.00

STAMSON 5.0 NORMAL REPORT Date: 20-02-2025 13:23:20
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: olal.te Time Period: Day/Night 16/8 hours
Description: Predicted Traffic Sound Level at OLA1

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

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Cummings (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 2 / 2
House density : 20 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 64.80 / 64.80 m
Receiver height : 2.49 / 13.96 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -90.00 deg Angle2 : -22.00 deg
Barrier height : 15.62 m
Barrier receiver distance : 6.35 / 6.35 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

Road data, segment # 2: Aviation S (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Aviation S (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 : 173.60 / 173.60 m
Receiver height : 2.49 / 13.96 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : 19.00 deg Angle2 : 90.00 deg
Barrier height : 15.62 m
Barrier receiver distance : 36.10 / 36.10 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

Road data, segment # 3: Aviation N (day/night)

```
-----
Car traffic volume   : 14168/1232  veh/TimePeriod  *
Medium truck volume  : 1127/98    veh/TimePeriod  *
Heavy truck volume   : 805/70     veh/TimePeriod  *
Posted speed limit   : 60 km/h
Road gradient        : 0 %
Road pavement        : 1 (Typical asphalt or concrete)
```

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

```
24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth          : 0.00
Number of Years of Growth            : 0.00
Medium Truck % of Total Volume       : 7.00
Heavy Truck % of Total Volume        : 5.00
Day (16 hrs) % of Total Volume       : 92.00
```

Data for Segment # 3: Aviation N (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 : 231.60 / 231.60 m
Receiver height     : 2.49 / 13.96 m
Topography          : 2             (Flat/gentle slope; with barrier)
Barrier angle1      : 19.00 deg   Angle2 : 90.00 deg
Barrier height      : 15.62 m
Barrier receiver distance : 36.10 / 36.10 m
Source elevation    : 0.00 m
Receiver elevation   : 0.00 m
Barrier elevation    : 0.00 m
Reference angle     : 0.00
```

Results segment # 1: Cummings (day)

Source height = 1.50 m

Barrier height for grazing incidence

```
-----
Source      ! Receiver    ! Barrier      ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m)
-----+-----+-----+-----
1.50 !      2.49 !      2.39 !      2.39
```

ROAD (0.00 + 36.69 + 49.82) = 50.03 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-22	0.63	65.75	0.00	-10.36	-6.17	0.00	-2.40	0.00	46.81
-90	-22	0.00	65.75	0.00	-6.35	-4.23	0.00	0.00	-18.47	36.69
-22	90	0.63	65.75	0.00	-10.36	-3.17	0.00	-2.40	0.00	49.82

Segment Leq : 50.03 dBA

Results segment # 2: Aviation S (day)

Source height = 1.50 m

Barrier height for grazing incidence

Source Height (m)	! Receiver ! Height (m)	! Barrier ! Height (m)	! Elevation of ! Barrier Top (m)
1.50	!	2.49	!
		2.28	!
			2.28

ROAD (50.01 + 39.66 + 0.00) = 50.39 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	19	0.63	70.67	0.00	-17.34	-3.32	0.00	0.00	0.00	50.01
19	90	0.00	70.67	0.00	-10.63	-4.04	0.00	0.00	-16.33	39.66

Segment Leq : 50.39 dBA

Results segment # 3: Aviation N (day)

Source height = 1.50 m

Barrier height for grazing incidence

Source Height (m)	! Receiver ! Height (m)	! Barrier ! Height (m)	! Elevation of ! Barrier Top (m)
1.50	!	2.49	!
		2.33	!
			2.33

ROAD (47.97 + 38.60 + 0.00) = 48.44 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	19	0.63	70.67	0.00	-19.38	-3.32	0.00	0.00	0.00	47.97
19	90	0.00	70.67	0.00	-11.89	-4.04	0.00	0.00	-16.14	38.60

Segment Leq : 48.44 dBA

Total Leq All Segments: 54.47 dBA

Results segment # 1: Cummings (night)

Source height = 1.50 m

Barrier height for grazing incidence

Source	!	Receiver	!	Barrier	!	Elevation of
Height (m)	!	Height (m)	!	Height (m)	!	Barrier Top (m)
1.50	!	13.96	!	12.74	!	12.74

ROAD (0.00 + 35.85 + 44.93) = 45.44 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-22	0.29	58.16	0.00	-8.17	-5.22	0.00	-2.40	0.00	42.36
-90	-22	0.00	58.16	0.00	-6.35	-4.23	0.00	0.00	-11.72	35.85
-22	90	0.29	58.16	0.00	-8.17	-2.65	0.00	-2.40	0.00	44.93

Segment Leq : 45.44 dBA

Results segment # 2: Aviation S (night)

Source height = 1.50 m

Barrier height for grazing incidence

Source	!	Receiver	!	Barrier	!	Elevation of
Height (m)	!	Height (m)	!	Height (m)	!	Barrier Top (m)
1.50	!	13.96	!	11.37	!	11.37

ROAD (46.61 + 38.84 + 0.00) = 47.28 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	19	0.29	63.07	0.00	-13.68	-2.78	0.00	0.00	0.00	46.61
19	90	0.00	63.07	0.00	-10.63	-4.04	0.00	0.00	-9.56	38.84

Segment Leq : 47.28 dBA

Results segment # 3: Aviation N (night)

Source height = 1.50 m

Barrier height for grazing incidence

Source	!	Receiver	!	Barrier	!	Elevation of
Height (m)	!	Height (m)	!	Height (m)	!	Barrier Top (m)
1.50	!	13.96	!	12.02	!	12.02

ROAD (44.99 + 38.54 + 0.00) = 45.88 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	19	0.29	63.07	0.00	-15.29	-2.78	0.00	0.00	0.00	44.99
19	90	0.00	63.07	0.00	-11.89	-4.04	0.00	0.00	-8.60	38.54

Segment Leq : 45.88 dBA

Total Leq All Segments: 51.04 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 54.47
(NIGHT): 51.04

STAMSON 5.0 NORMAL REPORT Date: 20-02-2025 13:23:42
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: ola2.te Time Period: Day/Night 16/8 hours
Description: Predicted Traffic Sound Level at OLA2

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

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Cummings (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 2 / 2
House density : 20 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 101.70 / 101.70 m
Receiver height : 4.17 / 10.81 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -5.00 deg Angle2 : 90.00 deg
Barrier height : 15.62 m
Barrier receiver distance : 41.47 / 41.47 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

Road data, segment # 2: Aviation S (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Aviation S (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 : 136.70 / 136.70 m
Receiver height : 4.17 / 10.81 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -90.00 deg Angle2 : -77.00 deg
Barrier height : 15.62 m
Barrier receiver distance : 3.43 / 3.43 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

Road data, segment # 3: Aviation N (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 3: Aviation N (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 : 194.70 / 194.70 m
Receiver height : 4.17 / 10.81 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -90.00 deg Angle2 : -77.00 deg
Barrier height : 15.62 m
Barrier receiver distance : 3.43 / 3.43 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

Results segment # 1: Cummings (day)

Source height = 1.50 m

Barrier height for grazing incidence

Source Height (m)	! Receiver Height (m)	! Barrier Height (m)	! Elevation of Barrier Top (m)			
1.50	!	4.17	!	3.08	!	3.08

ROAD (45.55 + 37.58 + 0.00) = 46.19 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-5	0.58	65.75	0.00	-13.13	-4.67	0.00	-2.40	0.00	45.55
-5	90	0.58	65.75	0.00	-13.13	-4.02	0.00	-2.40	0.00	46.20
-5	90	0.00	65.75	0.00	-8.31	-2.78	0.00	0.00	-17.08	37.58

Segment Leq : 46.19 dBA

Results segment # 2: Aviation S (day)

Source height = 1.50 m

Barrier height for grazing incidence

Source Height (m)	! Receiver Height (m)	! Barrier Height (m)	! Elevation of Barrier Top (m)	
1.50	!	4.17	!	4.10

ROAD (0.00 + 34.92 + 54.07) = 54.12 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-77	0.00	70.67	0.00	-9.60	-11.41	0.00	0.00	-14.73	34.92
-77	90	0.58	70.67	0.00	-15.16	-1.44	0.00	0.00	0.00	54.07

Segment Leq : 54.12 dBA

Results segment # 3: Aviation N (day)

Source height = 1.50 m

Barrier height for grazing incidence

Source	!	Receiver	!	Barrier	!	Elevation of
Height (m)	!	Height (m)	!	Height (m)	!	Barrier Top (m)
1.50	!	4.17	!	4.12	!	4.12

ROAD (0.00 + 33.46 + 51.64) = 51.71 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-77	0.00	70.67	0.00	-11.13	-11.41	0.00	0.00	-14.66	33.46
-77	90	0.58	70.67	0.00	-17.59	-1.44	0.00	0.00	0.00	51.64

Segment Leq : 51.71 dBA

Total Leq All Segments: 56.51 dBA

Results segment # 1: Cummings (night)

Source height = 1.50 m

Barrier height for grazing incidence

Source	!	Receiver	!	Barrier	!	Elevation of
Height (m)	!	Height (m)	!	Height (m)	!	Barrier Top (m)
1.50	!	10.81	!	7.01	!	7.01

ROAD (40.02 + 32.04 + 0.00) = 40.66 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-5	0.38	58.16	0.00	-11.48	-4.26	0.00	-2.40	0.00	40.02
-5	90	0.38	58.16	0.00	-11.48	-3.66	0.00	-2.40	0.00	40.62
-5	90	0.00	58.16	0.00	-8.31	-2.78	0.00	0.00	-15.03	32.04

Segment Leq : 40.66 dBA

Results segment # 2: Aviation S (night)

Source height = 1.50 m

Barrier height for grazing incidence

Source	!	Receiver	!	Barrier	!	Elevation of
Height (m)	!	Height (m)	!	Height (m)	!	Barrier Top (m)
1.50	!	10.81	!	10.58	!	10.58

ROAD (0.00 + 30.89 + 48.71) = 48.78 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-77	0.00	63.07	0.00	-9.60	-11.41	0.00	0.00	-11.17	30.89
-77	90	0.38	63.07	0.00	-13.25	-1.11	0.00	0.00	0.00	48.71

Segment Leq : 48.78 dBA

Results segment # 3: Aviation N (night)

Source height = 1.50 m

Barrier height for grazing incidence

Source	!	Receiver	!	Barrier	!	Elevation of
Height (m)	!	Height (m)	!	Height (m)	!	Barrier Top (m)
1.50	!	10.81	!	10.65	!	10.65

ROAD (0.00 + 29.48 + 46.59) = 46.67 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-77	0.00	63.07	0.00	-11.13	-11.41	0.00	0.00	-11.04	29.48
-77	90	0.38	63.07	0.00	-15.37	-1.11	0.00	0.00	0.00	46.59

Segment Leq : 46.67 dBA

Total Leq All Segments: 51.26 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 56.51
(NIGHT): 51.26