NOISE & VIBRATION STUDY

"NEW SENIOR APARTMENT BUILDING"
1022 GALLAGHER ROAD
BURLINGTON, ON

Prepared for:

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1.0 INTRODUCTION

dBA Acoustical Consultants Inc. has been retained to provide a noise & vibration study for the "New Senior Apartment Building" located at 1022 Gallagher Road, Burlington.

The purpose of the study is to determine the vehicular noise impact from Plains Road East, and area stationary source noises that may have an impact on the proposed site.

This study will detail noise impact relative to the site plan and recommend noise control measures necessary (if applicable) to meet Ministry of Environment, Conservation and Parks (MECP) Publication NPC-300 entitled "Stationary & Transportation Sources-Approval & Planning guidelines while satisfying the planning requirements of the City of Burlington.

Rail vibration was not considered in this report as the rail lines are more than 450m from the proposed development. There is no heavy industry in the immediate area. Aircraft noise was not considered in this report as the development is located outside the NEF 25 contour.

2.0 SITE DESCRIPTION

Proposed is an 8-storey senior apartment building with 134 residential units. There is 1 level of underground parking as well as an enclosed rooftop mechanical penthouse. Proposed is a ground level outdoor amenity area at the west portion of the building. The proposed underground parking has ground level intake and exhaust shafts these will not have an acoustical impact as the traffic noise is greater than the noise levels of the intake and exhaust. The mechanical equipment for the shafts is located underground.

To the north of the proposed development is a 2-storey school (Holy Rosary). The school has several rooftop HVAC units that are shielded by parapet walls and will not have an acoustical impact on the proposed development. To the east, south and west there are a mix of 1-2 storey single family homes and townhouses. Northwest of the proposed building is Aldershot Greenhouses Limited, which has two large greenhouses at the end of Gallagher Road. CN Rail Aldershot yard is located over 450m west of the proposed building and is separated by several residential streets. Due to the distance separation and extensive shielding from existing residential and commercial buildings, the CN Rail Aldershot Yard will not have an impact on the proposed development.

Plains Road East is a 4-lane roadway with center turning lane running north and south with a speed limit of 50 km/hr. A site visit has confirmed that there are no immediate area stationary noise sources that have any acoustical impact on the proposed development.

3.0 NOISE IMPACT ASSESSMENT

3.1 NOISE CRITERIA

The MECP specifies limits for road noise relative to new residential developments. The MECP Publication 300, Stationary & Transportation Sources-Approval & Planning, specifies the criteria, summarized as follows:

TABLE 1 - Road Traffic Sound Levels Limits	
Time Period	L_{eq} (dBA)
07:00 – 23:00 (16 hr.)	55 Outdoor Living Area (OLA)
23:00 – 07:00 (8 hr.)	50 Plane of Bedroom Window (POW)

Where noise levels estimated in the (OLA) and at the windows, (POW) are equal to or less than the values listed in Table 1, no noise control measures are required. Where noise levels exceed Table 1 values, the following action is required:

TABLE 2 – Noise Control Requirements		
Time Period	Noise Level Leq (dBA)	Action Required
07:00 - 23:00 Daytime (OLA)	56 to 60	Warning Clause Type "A"
	> 60	Barrier & Warning Clause Type "B"
07:00 – 23:00 Daytime (POW)	> 55	Provision for A/C, Warning Clause "C"
	> 65	Central A/C, Warning Clause "D"
	> 65	Building Component Specification
23:00 to 07:00 Nighttime (POW)	> 50	Provision for A/C and Warning Clause Type "C"
	> 60	Building Component Specification
	> 60	Central Air and Warning Clause Type "D"

Where nighttime noise levels exceed 60 dBA, building components must be designed to meet Table 3 indoor sound level limits.

TABLE 3 - Indoor Road Sound Levels Limits	
Indoor Location	Leq (dBA)
	Road
Living/Dining 7:00 – 23:00	45
Bedroom 23:00 - 07:00	40

3.2 ROAD NOISE

Predicted road traffic noise levels were calculated for Plains Road East, the major road noise source in the site area. Road traffic volumes were sourced from the City of Burlington's Open Data page. MECP computer program STAMSON version 5.04 was used to carry out prediction calculations (See Appendix "A"). Traffic data is summarized in Table 4.

The daytime/nighttime volume ratio relative for Plains Road East is calculated using a 90/10 split and a 16/8-hour assessment as required by the MECP. The maximum posted speed for all vehicles is 50 km/hr on Plains Road East with a School Zone speed limit of 40 km/hr. School Zone speed limit is enforced during specific time of the school day. For the report we have used the speed limit of 50km/hr. The percentage of annual growth was figured at 2% over 14 years. The AADT (Annual Average Daily Traffic) 2022 volumes were used for Plains Road East, reflective of the worst-case scenario. Truck volumes were factored at 2% medium and 2% heavy of the total vehicle volumes for Plains Road East.

TABLE 4 – Future Road Traffic Volumes			
Plains Road East	AADT 38940 Vehicles		
	Cars	Medium Trucks	Heavy Trucks
Day	33645	701	701
Night	1558	32	32

Table 5 summarizes the "free field" traffic noise prediction results, modeled at 7 receptor locations. The west façade was not calculated as there are no direct angles to Plains Road East traffic.

TABLE 5 – Predicted Future Traffic Noise (dBA)		
Location	07:00 – 23:00	23:00 – 07:00
R1 – North Façade 2nd Floor (6m)	63 dBA	57 dBA
R2 – North Facade 8th Floor (24m)	63 dBA	57 dBA
R3 – East Façade 2nd Floor (6m)	68 dBA	61 dBA
R4 – East Façade 8th Floor (24m)	67 dBA	60 dBA
R5 – East Façade 3rd Floor Terrace (9m)	67 dBA	N/A
R5A – East Façade 3rd Floor Terrace Mitigated 1.22m	54dBA	N/A
R6 – South Facade 2nd Floor (6m)	63 dBA	57 dBA
R7 – South Façade 8th Floor (24m)	63 dBA	57 dBA

3.3 VIBRATION

The City of Burlington Construction and Mobility Management Plan (CMMP) require pre-condition surveys of area buildings within the area of influence, noise and vibration protocol, shoring approval and vibration monitoring during shoring and all heavy construction activities prior to mobilizing construction equipment. Further information will be provided prior to the issuance of a building permit or as The City of Burlington staff require the documents for approval.

4.0 RECOMMENDATIONS - NOISE CONTROL

4.1 OUTDOOR LIVING AREAS

Standard balconies are proposed and are less than 4m in depth and therefore not considered as Outdoor Living Areas (OLA's). There is a 3rd floor terrace on the east façade where calculated road noise levels exceed the 55 dBA daytime criteria in Table 1. A minimum 1.22m safety Guard Railing or Equivalent is required. There is also a ground level outdoor amenity area located on the west portion of the property that is shielded from the traffic on Plains Road East and noise mitigation measures are not required.

4.2 INDOOR NOISE LEVELS

Calculated road noise levels at the Plane of Window (POW) exceed the 50 dBA criteria outlined in Table 1 for indoor space for all units. Specific building components (walls, windows, doors etc.) are required and confirmed using the STC (Sound Transmission Class) methods based on using three building components. Building design specifications were not made available at report time and STC are summarized in Table 6.

As a cost-efficient consideration for the builder, all windows for all floors and facades of the proposed building require the same window STC value configurations. Prior to the issuance of a Building Permit, a letter from the appropriate window company must be issued to the Acoustical Consultant confirming the acoustically tested windows STC values have been achieved.

TABLE 6 – Recommended Door and Window Construction

LOCATION	Acoustically Tested Windows STC Rating	Patio Door Construction STC	Exterior Walls STC
All Units	Example	Example	Example
Bedroom	STC-34	STC-34	STC-36
Living room	STC-34	STC-34	STC-36

5.0 VENTILATION / WARNING CLAUSES

Ventilation and Warning Clause requirements for all residential apartment units are presented in Table 7 following. It is recommended that the appropriate Warning Clauses be inserted into all Offers and Agreements of Purchase and Sale or Lease.

TABLE 7 - Ventilation and Warning Clause Requirements

LOCATION	VENTILATION	WARNING CLAUSE
All Units	Central Air Conditioning	Type "B" & "D"

The following warning clauses should be used in combination:

TYPE B: (All Units)
"Purchasers/tenants are advised that despite the inclusion of noise control features in the development and within the buildings units, sound levels due to increasing road traffic may on occasions interfere with some activities of the dwelling occupants as the sound levels exceed the Municipality's and the MECP's noise criteria."

TYPE D: (All Units)
"This dwelling unit has been supplied with a central air conditioning system which will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the Municipality's and the MECP's noise criteria."

6.0 NOISE CONTROL REQUIREMENTS CONFIRMATION

The following Table 8 summarizes the highest roadway noise levels (Table 5) for the daytime/nighttime hours and recommends air conditioning, warning clauses, and indoor noise level limits criteria. Table 8 shows that with the Warning Clauses and STC requirements listed below the redevelopment will meet the MECP minimum required indoor noise level limits.

TABLE 8 - Noise Control Requirements Confirmation

Time Period	Predicted Impact, Leq (dBA)	A/C Req.	Warning Clause	Indoor Limits, Leq (dBA)		Window / Floor Area Ratio (%)	Wall / Floor Area Ratio (%)	STC Requirements			
				Living, Dining, and Den Areas	Sleeping Quarters			Living, Dining, and Den Areas		Sleeping Quarters	
	Road			Road	Road			Window	Wall	Window	Wall
Day	68	YES	B & D	45	45	80%	100%	34	36	34	36
Night	61	YES	B & D	45	40	80%	100%	26	28	32	34

7.0 STATIONARY SOURCES (EXHAUST & INTAKE UNITS)

7.1 REGULATORY CONTEXT (RESIDENTIAL)

The MECP Publication NPC-300, Stationary & Transportation Sources-Approval & Planning guidelines defines a point of reception/receptor as *"any point on the premises of a person where the sound or vibration originating from other than those premises are received."*

The point of reception may be located on any of the following, or zoned for future use, premises including but not limited to the following: residential homes, hospitals, nursing/retirement homes, etc.

The areas surrounding the proposed commercial development are indicative of a "Class 1 Area" as defined in MECP Publication NPC-300, Stationary & Transportation Sources-Approval & Planning guidelines. The applicable sound limits are the higher of:

- The existing ambient sound level; or
- The minimum values of Table 9.

No restrictions apply to stationary sources if the one-hour equivalent sound exposure (Leq) is lower than the levels in the following Table 9.

The parking exhaust shaft is located on the northeast portion of the proposed development, and the air intake shaft is located on the southeast portion at ground level. These units generate little noise from the source and operate only when required to intake air and exhaust fumes to/from the underground parking areas. The sound emanates upwards and quickly dissipates. Both main mechanical operating systems are located in the parking structure and generally equipped with acoustical wrapping.

The traffic background noise results in higher noise levels than the following Table 9 therefore it is anticipated that the parking intake and exhaust units will follow MECP Publication NPC-300, Stationary & Transportation Sources-Approval & Planning guidelines.

TABLE 9 Minimum Sound Levels Limits (Class 1Area)	
Time Period	L_{eq} (dBA)
07:00 - 19:00	50
19:00 - 23:00	50
23:00 – 07:00	45

8.0 SUMMARY OF RECOMMENDATIONS

The following noise control measures are required to satisfy the indoor and outdoor noise level criterion:

- Window, Door, and Wall construction as recommended in Table 6.
- Type “B” & “D” Warning Clauses for all residential units as recommended in Table 7
- A minimum 1.22m Safety Guard Railing or Equivalent for the 3rd Floor Terrace.
- A letter from the window company be issued to confirm STC values for all proposed windows to be installed and an Acoustical Certificate to be sent to the City of Hamilton confirming that STC values have been achieved.
- It is recommended that a qualified acoustical consultant certify that the required noise control measures have been incorporated into the builder’s plans prior to issuance of a building permit.
- It is recommended that a qualified acoustical consultant certify that the required control measures have been properly installed prior to an occupancy permit.

9.0 CONCLUSIONS

dBA Acoustical Consultants Inc. has provided a noise & vibration study for the "New Seniors Apartment Building" located at 1022 Gallagher Road, Burlington.

The study determined the vehicular noise impact from Plains Road East that has an impact on the proposed site.

This study detailed noise impact relative to the site plan and recommended noise control measures necessary to meet MECP Publication NPC-300 entitled "Stationary & Transportation Sources-Approval & Planning guidelines while satisfying the planning requirements of the City of Burlington.

FIGURE 1
SITE CONTEXT PLAN

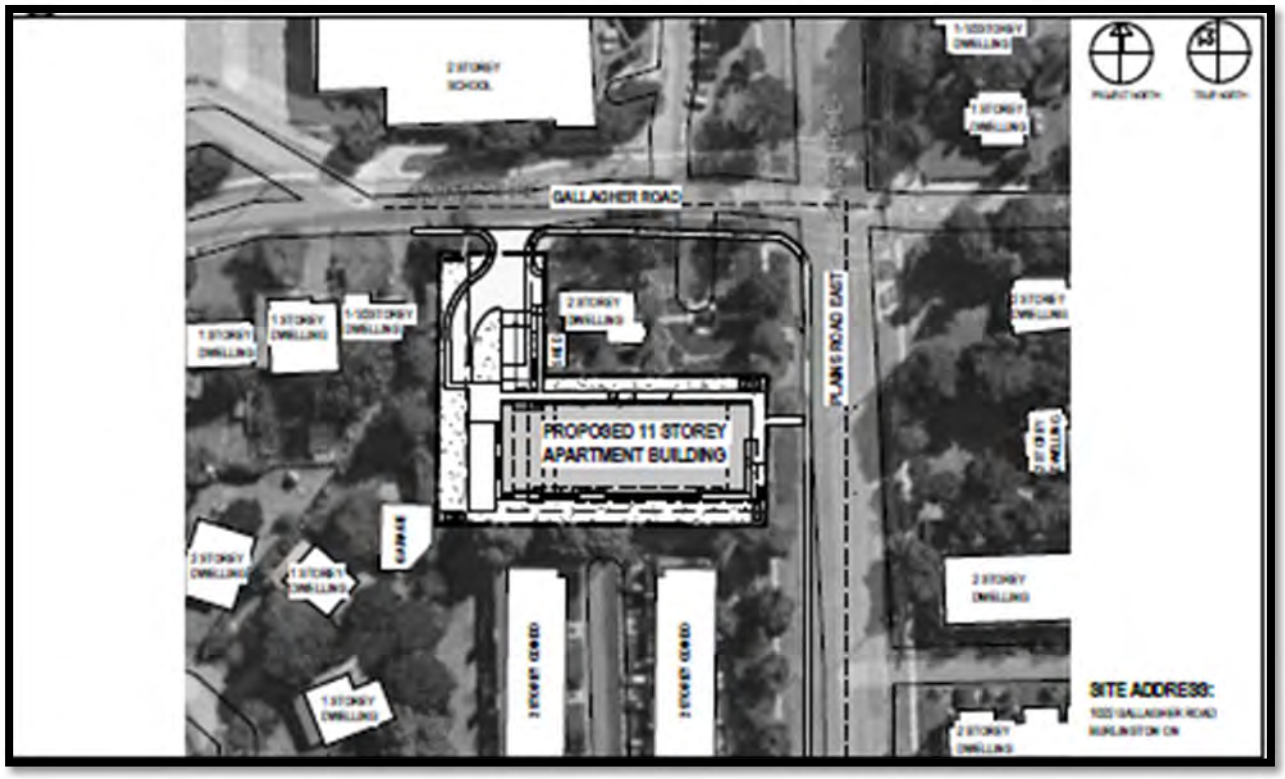


FIGURE 2
SITE PLAN

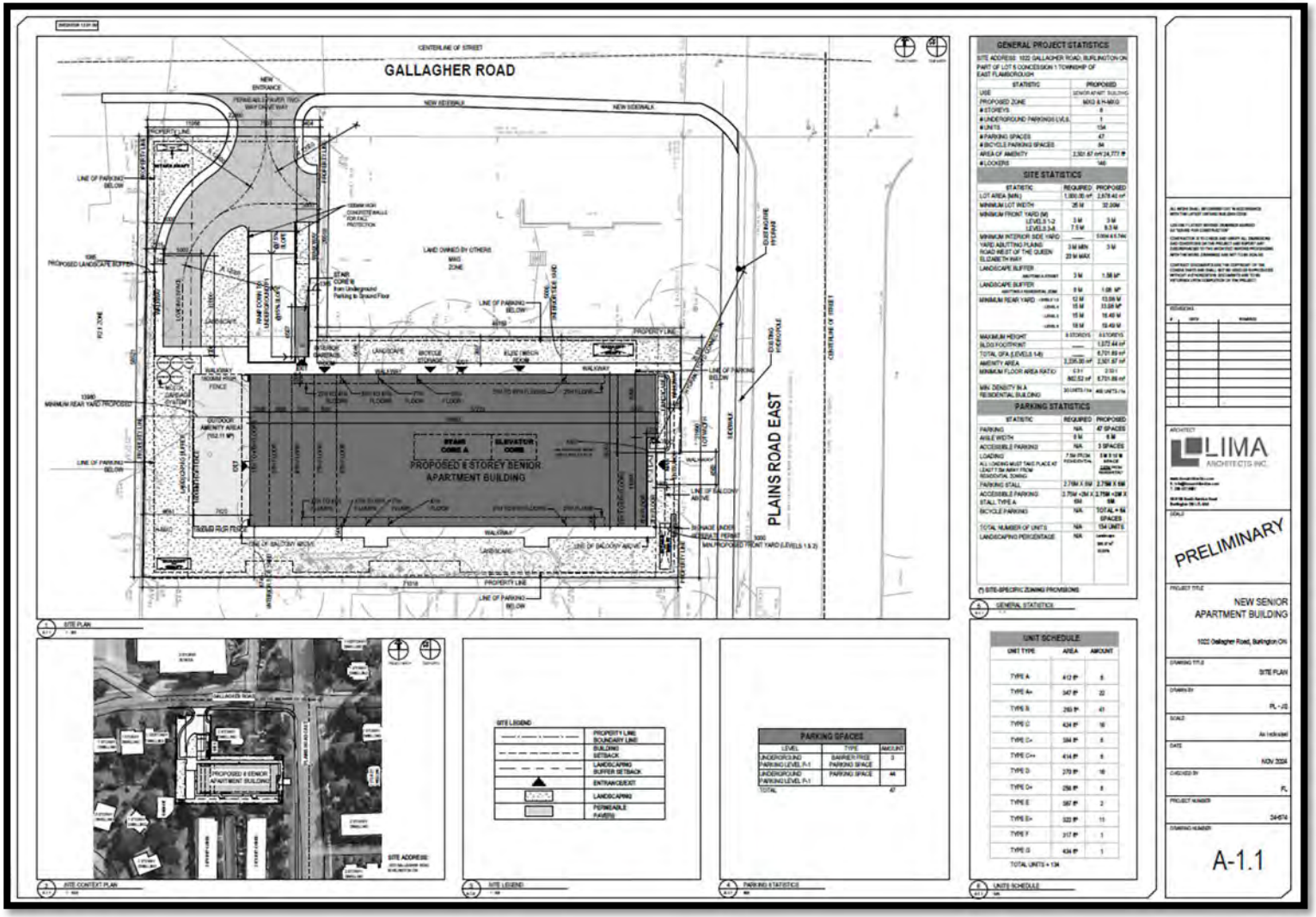


FIGURE 3
RECEPTOR LOCATIONS

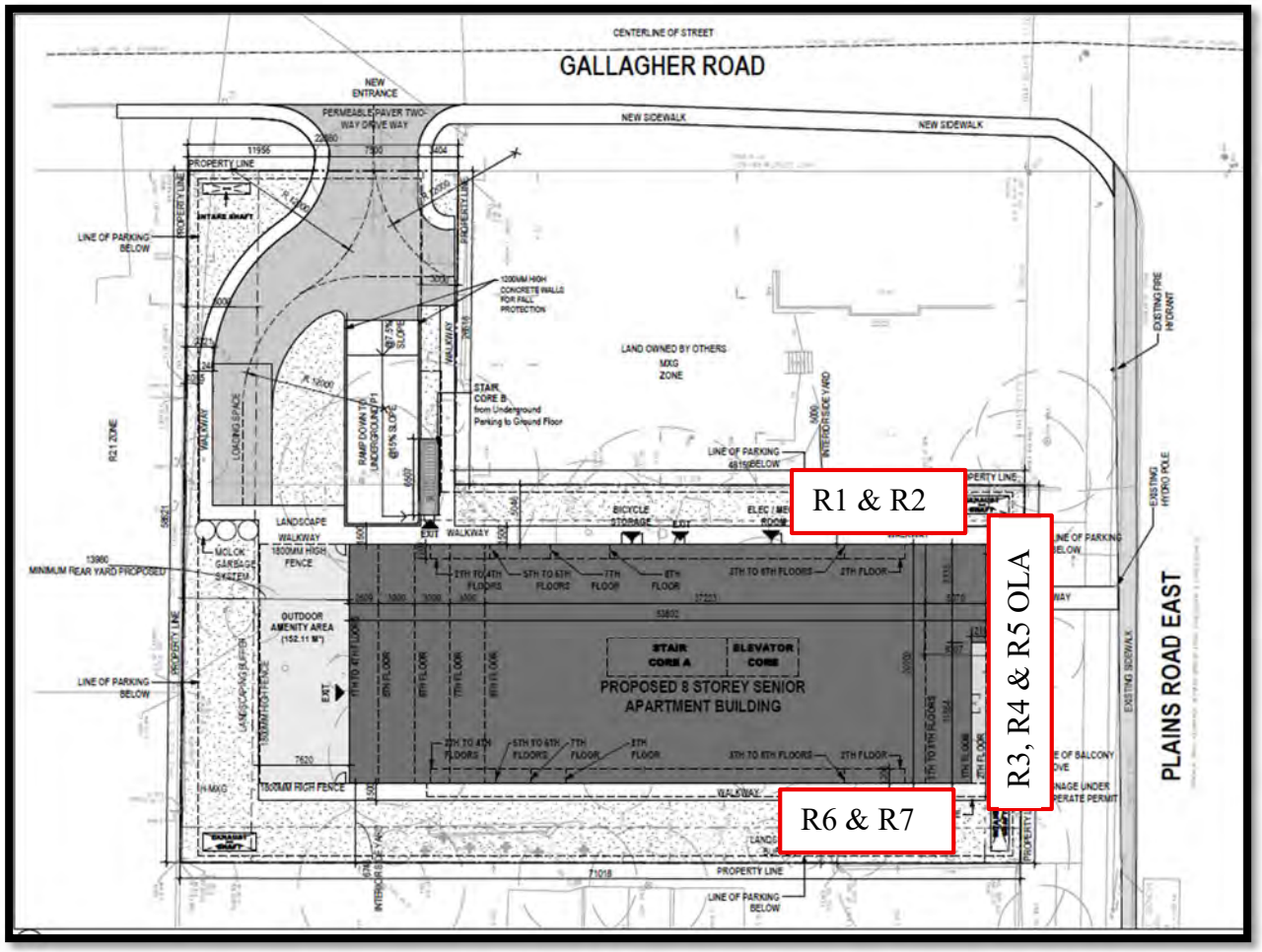
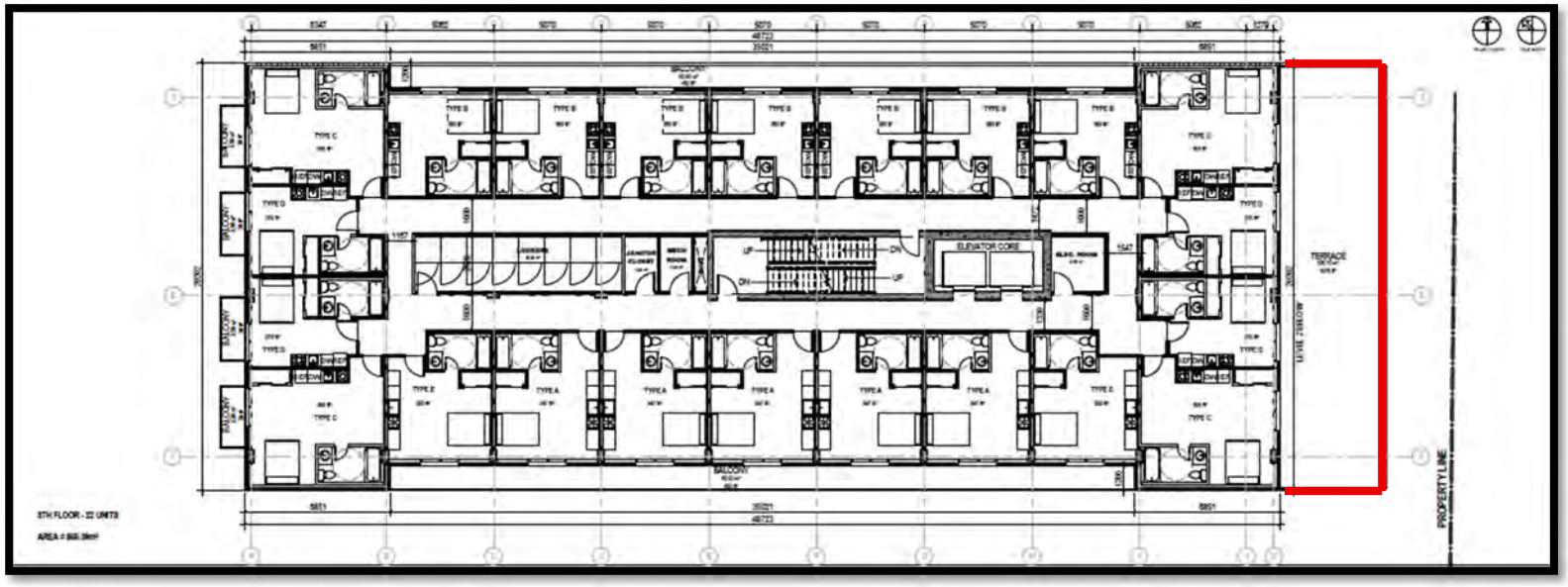
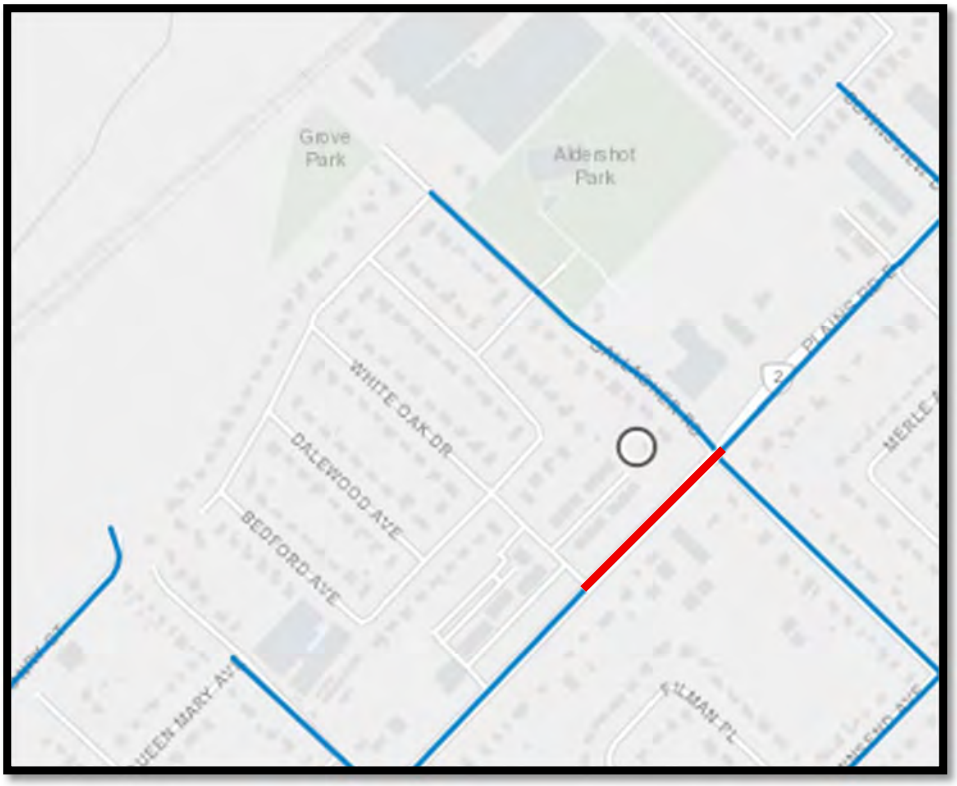


FIGURE 4
1.22m SAFETY GUARD RAILING LOCATIONS



APPENDIX "A"

CITY OF BURLINGTON AADT
2022 TRAFFIC DATA
PLAINS ROAD EAST



AADT Counts 2022

Zoom to

FID	119
STREET_NAM	PLAINS RD. E
TES_ID	219,590
Volume	29,512
AADT_Year	2,022
Shape__Length	178.285

CITY OF BURLINGTON AADT
2022 TRAFFIC DATA
GALLAGHER ROAD



AADT Counts 2022

Zoom to

FID	598
STREET_NAM	GALLAGHER RD.
TES_ID	208,480
Volume	1,224
AADT_Year	2,022
Shape__Length	238.469

STAMSON CALCULATIONS

```
STAMSON 5.04        SUMMARY REPORT        Date: 23-01-2026 10:51:47
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: R1plain.te           Time Period: Day/Night 16/8 hours
Description: R1 North Facade 2nd Floor
                  TOTAL Leq FROM ALL SOURCES                (DAY): 63.47
                                                            (NIGHT): 56.95

Road data, segment # 1: Plains rd (day/night)
-----------------------------------------------
Car traffic volume  : 33645/3738  veh/TimePeriod  *
Medium truck volume :   701/78    veh/TimePeriod  *
Heavy truck volume  :   701/78    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):  29512
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Plains rd (day/night)
-------------------------------------------
Angle1   Angle2           : -90.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  30.00 / 30.00  m
Receiver height           :   6.00 / 6.00   m
Topography                :      1       (Flat/gentle slope; no barrier)

Result summary (day)
--------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains rd        !     1.19 !    63.47 !    63.47
--------------------+---------+---------+---------
                      Total                  63.47 dBA

Result summary (night)
----------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains rd        !     1.19 !    56.95 !    56.95
--------------------+---------+---------+---------
                      Total                  56.95 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 23-01-2026 10:53:30
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: R2plain.te           Time Period: Day/Night 16/8 hours
Description: R2 North Facade 8th Floor
                  TOTAL Leq FROM ALL SOURCES                  (DAY): 63.47
                                                              (NIGHT): 56.95
Road data, segment # 1: Plains rd (day/night)
-----------------------------------------------
Car traffic volume  : 33645/3738  veh/TimePeriod  *
Medium truck volume :   701/78    veh/TimePeriod  *
Heavy truck volume  :   701/78    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):  29512
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Plains rd (day/night)
-------------------------------------------
Angle1   Angle2           : -90.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  30.00 / 30.00  m
Receiver height           :  24.00 / 24.00  m
Topography                :      1       (Flat/gentle slope; no barrier)

Result summary (day)
--------------------
                     !  source  !   Road   !  Total
                     !  height  !   Leq    !   Leq
                     !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains rd         !     1.19 !    63.47 !    63.47
--------------------+---------+---------+---------
                       Total                  63.47 dBA

Result summary (night)
----------------------
                     !  source  !   Road   !  Total
                     !  height  !   Leq    !   Leq
                     !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains rd         !     1.19 !    56.95 !    56.95
--------------------+---------+---------+---------
                       Total                  56.95 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 23-01-2026 10:57:14
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r3plain.te           Time Period: Day/Night 16/8 hours
Description: R3 East Facade 2nd Floor
                  TOTAL Leq FROM ALL SOURCES                (DAY): 67.64
                                                            (NIGHT): 61.11

Road data, segment # 1: Plains rd (day/night)
-----------------------------------------------
Car traffic volume  : 33645/3738  veh/TimePeriod  *
Medium truck volume :   701/78    veh/TimePeriod  *
Heavy truck volume  :   701/78    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):  29512
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Plains rd (day/night)
-------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  23.00 / 23.00  m
Receiver height           :   6.00 / 6.00   m
Topography                :      1       (Flat/gentle slope; no barrier)

Result summary (day)
--------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains rd        !     1.19 !    67.64 !    67.64
--------------------+---------+---------+---------
                      Total                  67.64 dBA

Result summary (night)
----------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains rd        !     1.19 !    61.11 !    61.11
--------------------+---------+---------+---------
                      Total                  61.11 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 23-01-2026 11:01:01
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r4plain.te           Time Period: Day/Night 16/8 hours
Description: R4 East Facade 8th Floor
                  TOTAL Leq FROM ALL SOURCES                (DAY): 66.94
                                                            (NIGHT): 60.41

Road data, segment # 1: Plains rd (day/night)
-----------------------------------------------
Car traffic volume  : 33645/3738  veh/TimePeriod  *
Medium truck volume :   701/78    veh/TimePeriod  *
Heavy truck volume  :   701/78    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):  29512
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Plains rd (day/night)
-------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  27.00 / 27.00  m
Receiver height           :  24.00 / 24.00  m
Topography                :      1       (Flat/gentle slope; no barrier)

Result summary (day)
--------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains rd        !     1.19 !    66.94 !    66.94
--------------------+---------+---------+---------
                      Total                  66.94 dBA

Result summary (night)
----------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains rd        !     1.19 !    60.41 !    60.41
--------------------+---------+---------+---------
                      Total                  60.41 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 23-01-2026 11:20:50
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r5plain.te           Time Period: 16 hours
Description: R5 East Facade 3rd Floor OLA
                  TOTAL Leq FROM ALL SOURCES:                    67.28

Road data, segment # 1: Plains rd
---------------------------------
Car traffic volume  : 33645 veh/TimePeriod  *
Medium truck volume :   701 veh/TimePeriod  *
Heavy truck volume  :   701 veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 1: Plains rd
-------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  25.00 m
Receiver height           :   9.00 m
Topography                :      1       (Flat/gentle slope; no barrier)

Result summary
--------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains rd        !     1.19 !    67.28 !    67.28
--------------------+---------+---------+---------
                      Total                  67.28 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 23-01-2026 11:18:19
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r5aplain.te          Time Period: 16 hours
Description: R5a East Facade 3rd Floor OLA Mitigated
                  TOTAL Leq FROM ALL SOURCES:                    54.31

Road data, segment # 1: Plains rd
---------------------------------
Car traffic volume  : 33645 veh/TimePeriod  *
Medium truck volume :   701 veh/TimePeriod  *
Heavy truck volume  :   701 veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 1: Plains rd
-------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  25.00 m
Receiver height           :   9.00 m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -90.00 deg   Angle2 : 90.00 deg
Barrier height            :   1.22 m
Barrier receiver distance :   3.00 m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :   9.00 m

Result summary
--------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains rd        !     1.19 !    54.31 !    54.31
--------------------+---------+---------+---------
                      Total                  54.31 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 23-01-2026 11:10:24
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r6plain.te           Time Period: Day/Night 16/8 hours
Description: R6 South Facade 2nd Floor
                  TOTAL Leq FROM ALL SOURCES                (DAY): 63.47
                                                            (NIGHT): 56.95

Road data, segment # 1: Plains rd (day/night)
-----------------------------------------------
Car traffic volume  : 33645/3738  veh/TimePeriod  *
Medium truck volume :   701/78    veh/TimePeriod  *
Heavy truck volume  :   701/78    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):  29512
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Plains rd (day/night)
-------------------------------------------
Angle1   Angle2           : -90.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  30.00 / 30.00  m
Receiver height           :   6.00 / 6.00   m
Topography                :      1       (Flat/gentle slope; no barrier)

Result summary (day)
--------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains rd        !     1.19 !    63.47 !    63.47
--------------------+---------+---------+---------
                      Total                  63.47 dBA

Result summary (night)
----------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains rd        !     1.19 !    56.95 !    56.95
--------------------+---------+---------+---------
                      Total                  56.95 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 23-01-2026 11:12:41
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r7plain.te           Time Period: Day/Night 16/8 hours
Description: R7 South Facade 8th Floor
                  TOTAL Leq FROM ALL SOURCES                (DAY): 63.47
                                                            (NIGHT): 56.95

Road data, segment # 1: Plains rd (day/night)
-----------------------------------------------
Car traffic volume  : 33645/3738  veh/TimePeriod  *
Medium truck volume :   701/78    veh/TimePeriod  *
Heavy truck volume  :   701/78    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):  29512
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

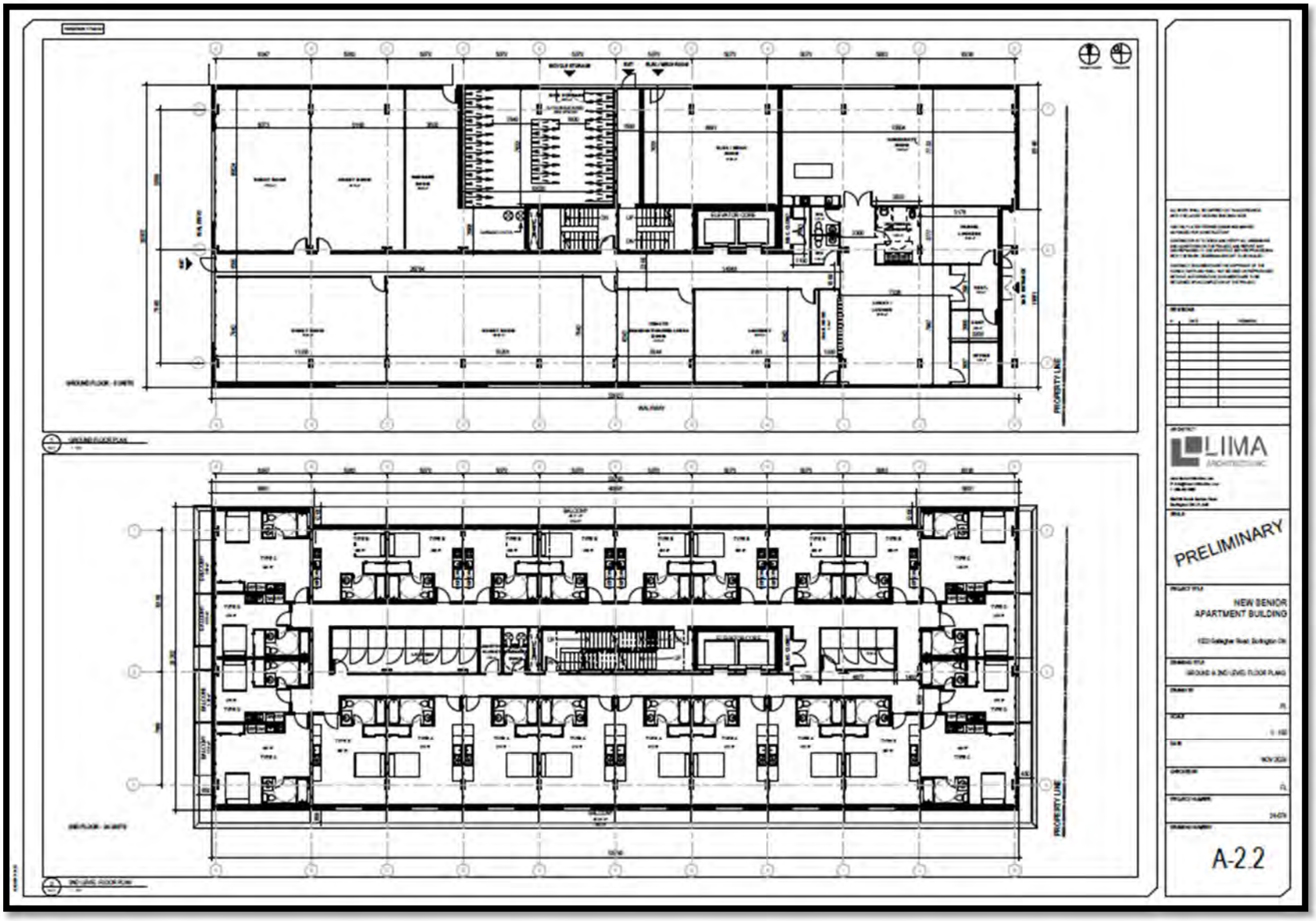
Data for Segment # 1: Plains rd (day/night)
-------------------------------------------
Angle1   Angle2           : -90.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  30.00 / 30.00  m
Receiver height           :  24.00 / 24.00  m
Topography                :      1       (Flat/gentle slope; no barrier)

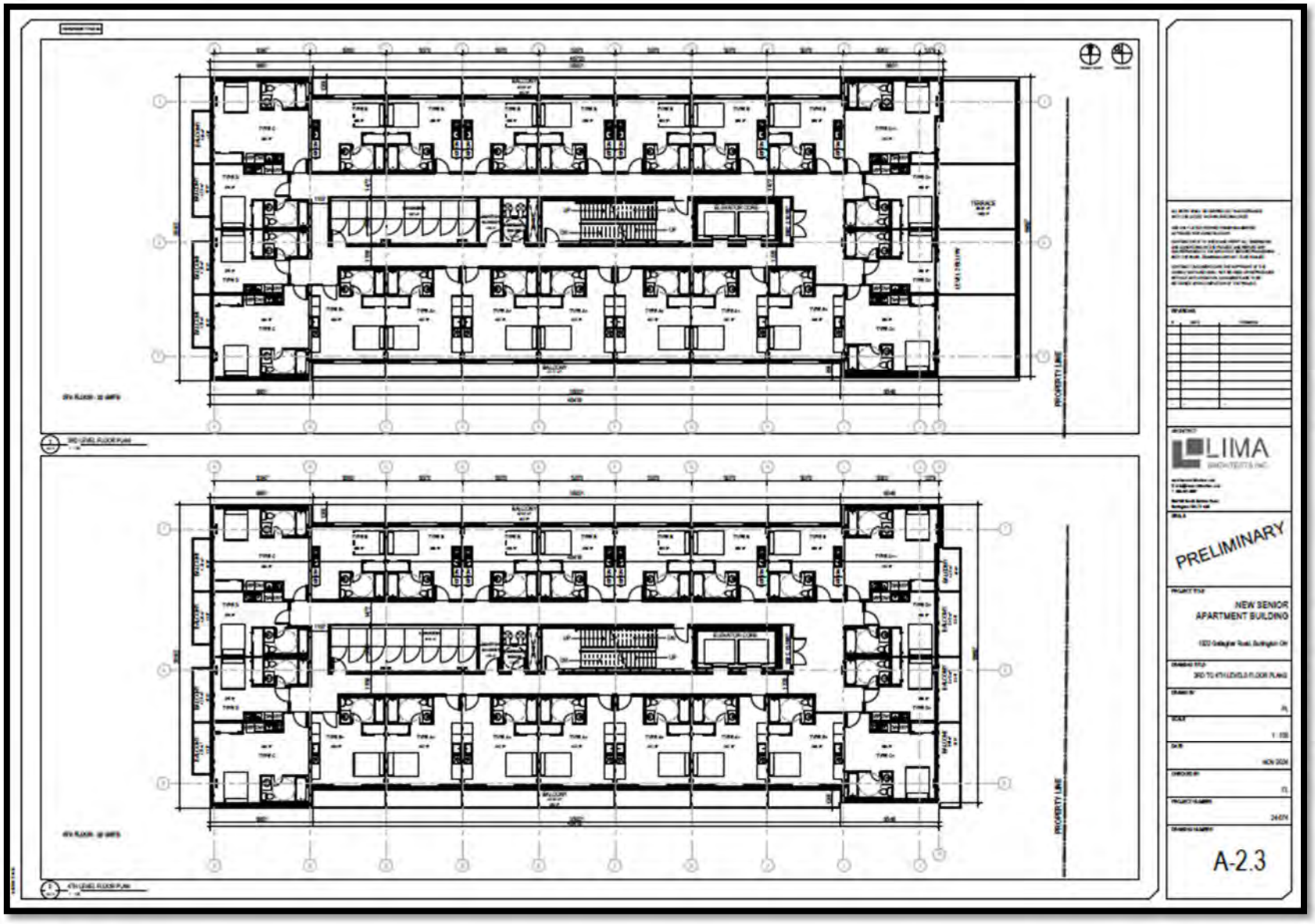
Result summary (day)
--------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains rd        !     1.19 !    63.47 !    63.47
--------------------+---------+---------+---------
                      Total                  63.47 dBA

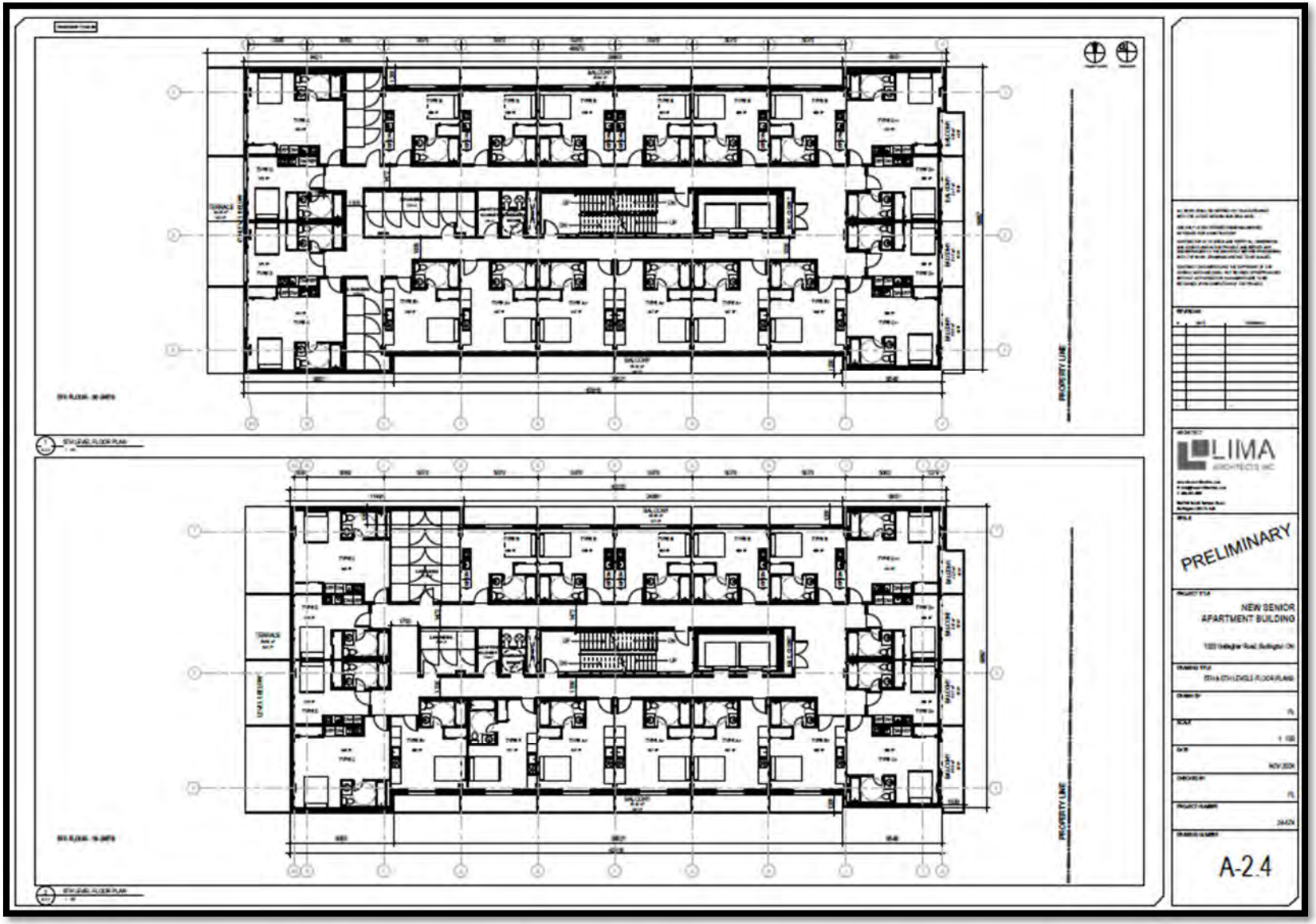
Result summary (night)
----------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains rd        !     1.19 !    56.95 !    56.95
--------------------+---------+---------+---------
                      Total                  56.95 dBA
```

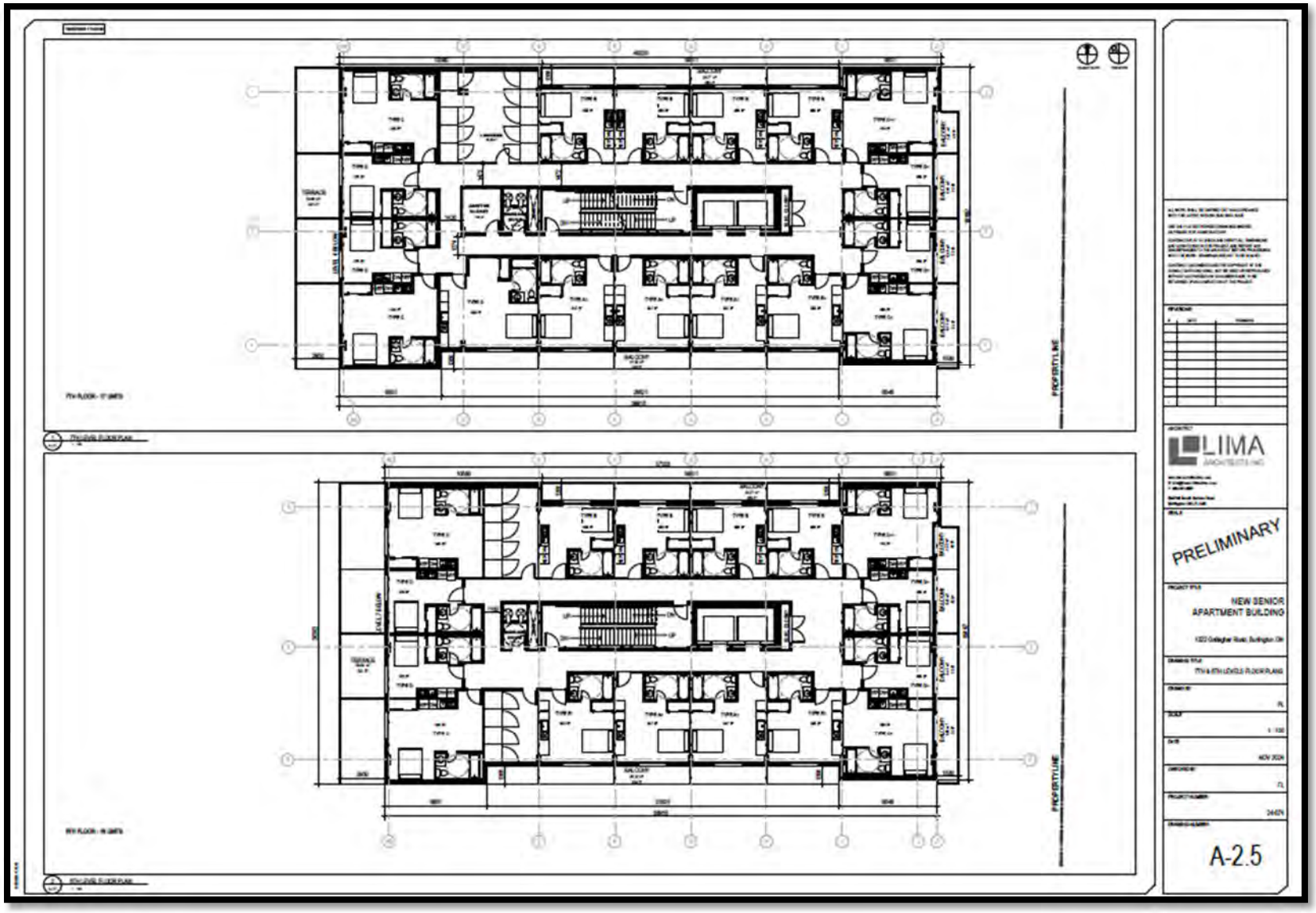
FLOOR PLANS


7TH FLOOR - 17 UNITS
7TH LEVEL FLOOR PLAN
8TH FLOOR - 16 UNITS
8TH LEVEL FLOOR PLAN
PROPERTY LINE
LEVEL BELOW
TERRACE
BALCONY
LIMA
ARCHITECTS INC.
PRELIMINARY
NEW SENIOR
APARTMENT BUILDING
1022 Gallagher Road, Burlington ON
7TH & 8TH LEVELS FLOOR PLANS
NOV 2024
A-2.5

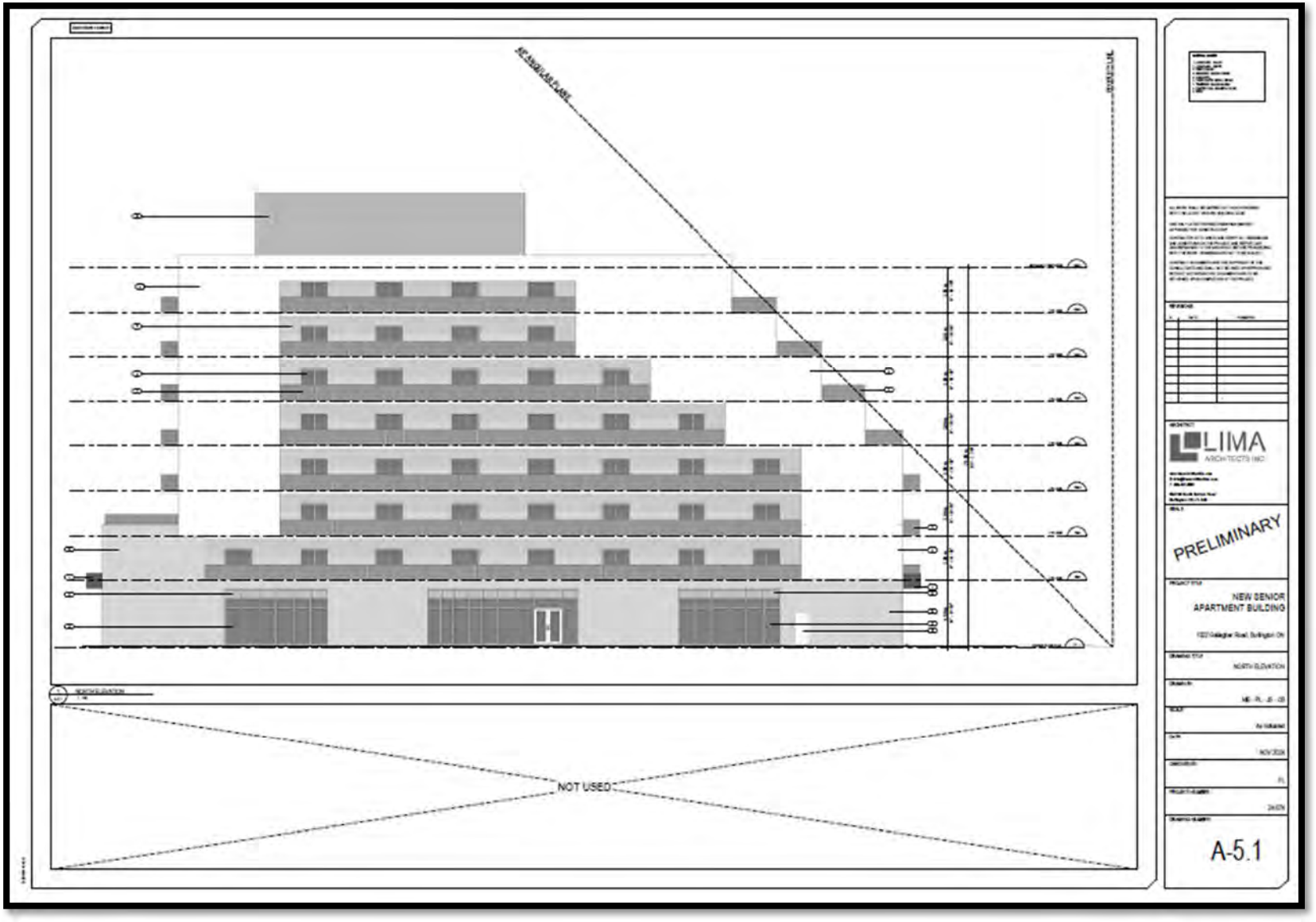

LIIMA
PRELIMINARY
NEW SENIOR APARTMENT BUILDING
A-2.2

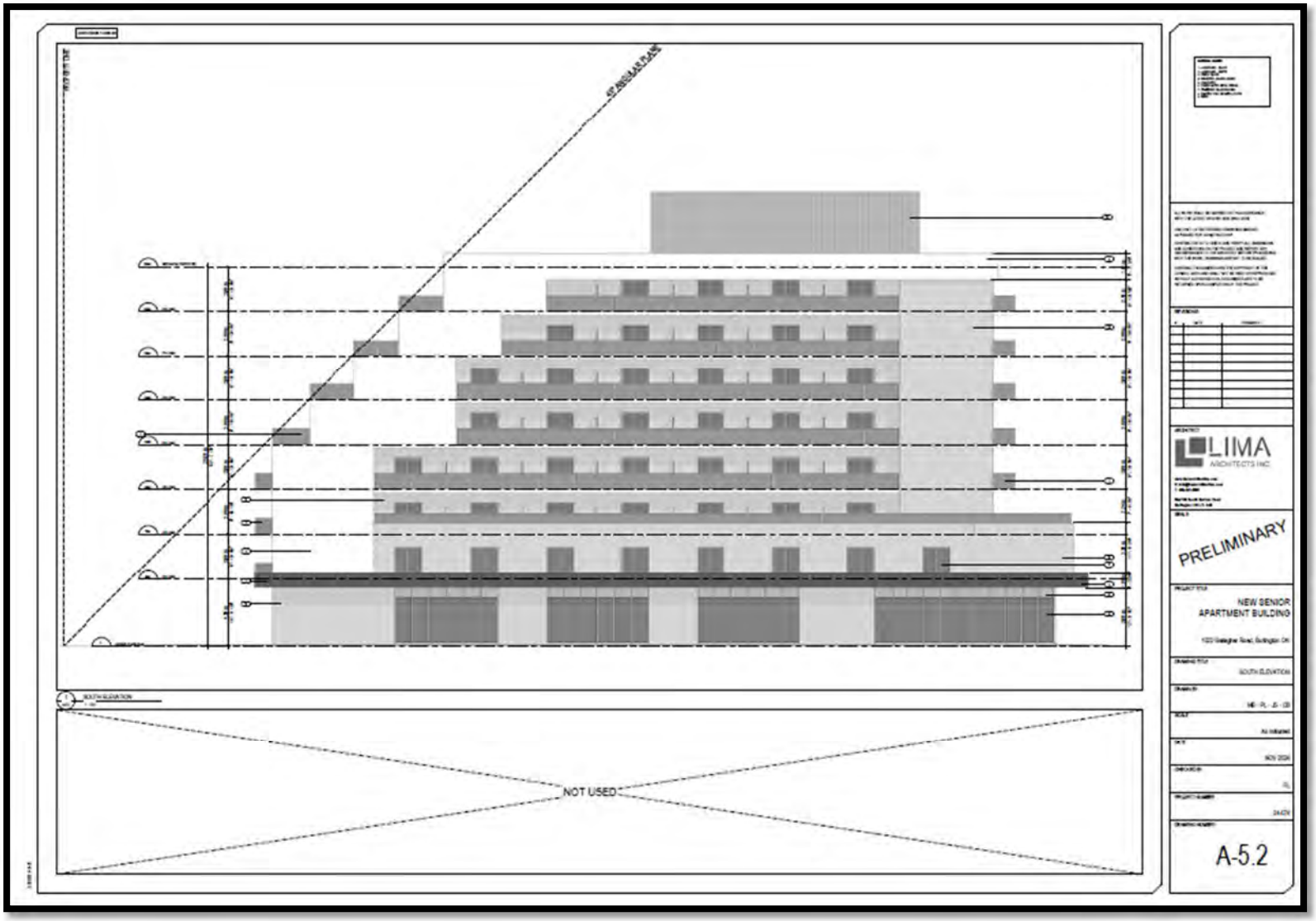

LIMA
PRELIMINARY
NEW SENIOR
APARTMENT BUILDING
A-2.3

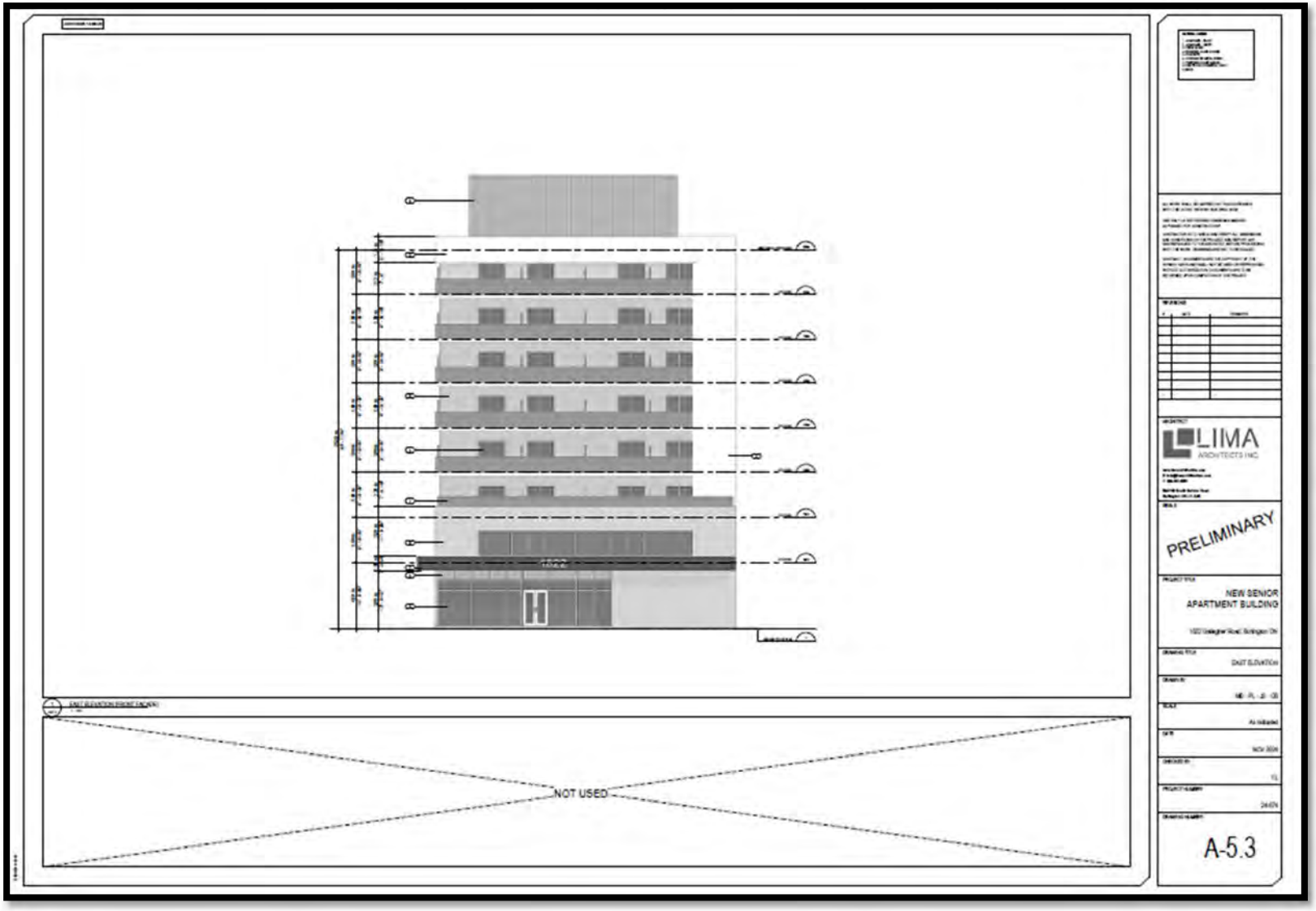

LIMA
PRELIMINARY
NEW SENIOR
APARTMENT BUILDING
A-2.4

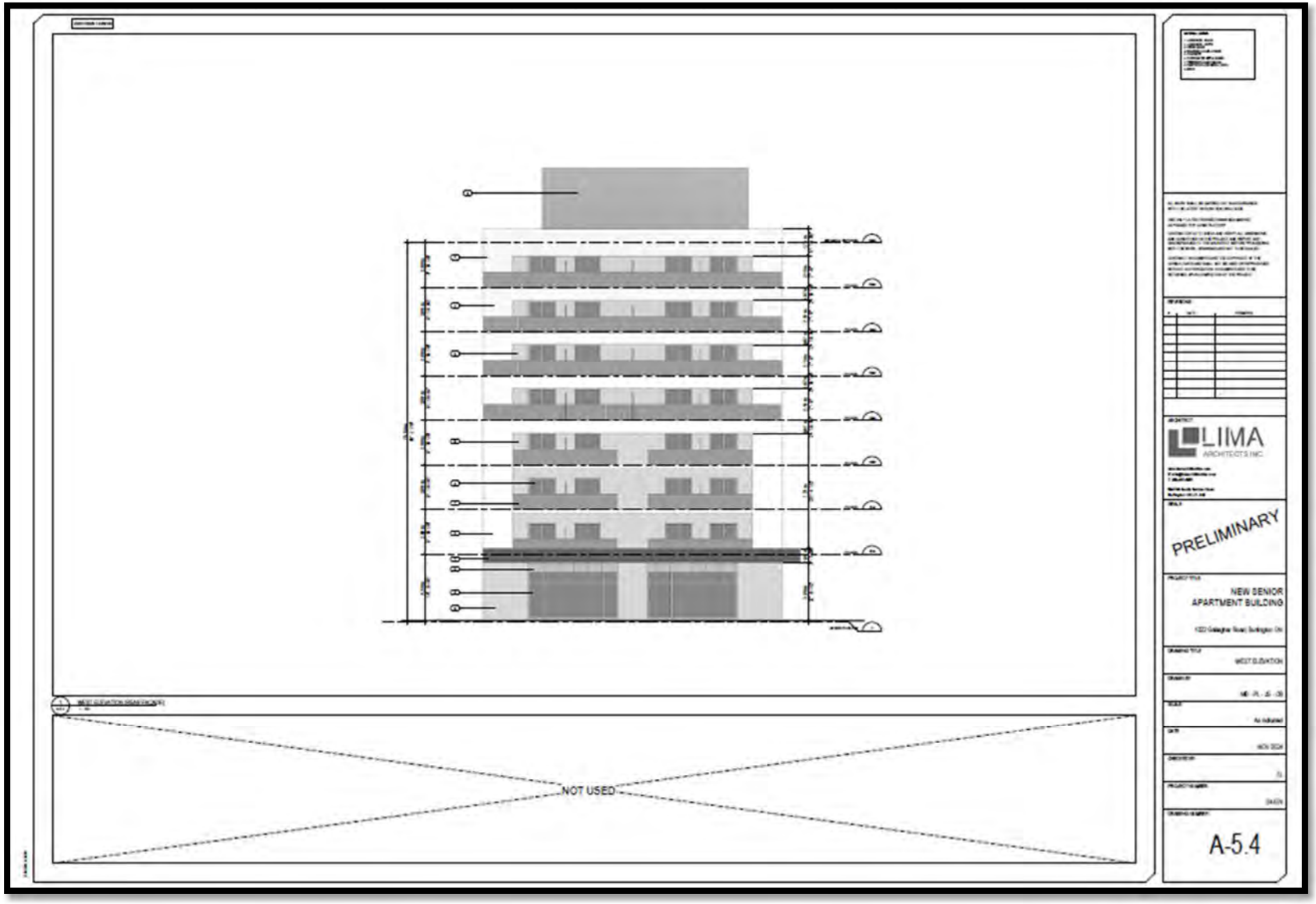

PROPERTY LINE
PROPERTY LINE
LIMA
PRELIMINARY
NEW SENIOR
APARTMENT BUILDING
A-2.5

ELEVATIONS


NOT USED
LIMA
ARCHITECTS INC.
PRELIMINARY
NEW SENIOR
APARTMENT BUILDING
NORTH ELEVATION
A-5.1


45° ANGULAR PLANE
SOUTH ELEVATION
NOT USED
LIMA
ARCHITECTS INC.
PRELIMINARY
NEW SENIOR
APARTMENT BUILDING
SOUTH ELEVATION
A-5.2


LIMA
ARCHITECTS INC.
PRELIMINARY
NEW SENIOR
APARTMENT BUILDING
EAST ELEVATION
NOT USED
A-5.3


NOT USED
LIIMA
ARCHITECTS INC.
PRELIMINARY
NEW SENIOR
APARTMENT BUILDING
WEST ELEVATION
A-5.4

SITE STATISTICS

GENERAL PROJECT STATISTICS

SITE ADDRESS: 1022 GALLAGHER ROAD, BURLINGTON ON

PART OF LOT 5 CONCESSION 1 TOWNSHIP OF EAST FLAMBOROUGH

STATISTIC	PROPOSED
USE	SENIOR APART. BUILDING
PROPOSED ZONE	MXG & H-MXG
# STOREYS	8
# UNDERGROUND PARKINGS LVLS.	1
# UNITS	134
# PARKING SPACES	47
# BICYCLE PARKING SPACES	64
AREA OF AMENITY	2,301.87 m² 24,777 ft²
# LOCKERS	146

SITE STATISTICS

STATISTIC	REQUIRED	PROPOSED
LOT AREA (MIN.)	1,000.00 m²	2,878.40 m²
MINIMUM LOT WIDTH	25 M	32.00M
MINIMUM FRONT YARD (M) LEVELS 1-2 LEVELS 3-8	 3 M 7.5 M	 3 M 8.3 M
MINIMUM INTERIOR SIDE YARD	——	5.00M & 6.74M
YARD ABUTTING PLAINS ROAD WEST OF THE QUEEN ELIZABETH WAY	3 M MIN 23 M MAX	3 M
LANDSCAPE BUFFER ABUTTING A STREET	3 M	1.58 M*
LANDSCAPE BUFFER ABUTTING A RESIDENTIAL ZONE	6 M	1.08 M*
MINIMUM REAR YARD - LEVELS 1-3 - LEVEL 4 - LEVEL 5 - LEVEL 6	12 M 15 M 15 M 18 M	13.98 M 13.98 M* 16.49 M 19.49 M
MAXIMUM HEIGHT	8 STOREYS	8 STOREYS
BLDG FOOTPRINT	——	1,072.44 m²
TOTAL GFA (LEVELS 1-8)	——	6,701.89 m²
AMENITY AREA	2,235.00 m²	2,301.87 m²
MINIMUM FLOOR AREA RATIO	0.3:1 862.52 m²	2.33:1 6,701.89 m²
MIN. DENSITY IN A RESIDENTIAL BUILDING	30 UNITS / ha	466 UNITS / ha

PARKING STATISTICS

STATISTIC	REQUIRED	PROPOSED
PARKING	N/A	47 SPACES
AISLE WIDTH	6 M	6 M
ACCESSIBLE PARKING	N/A	3 SPACES
LOADING ALL LOADING MUST TAKE PLACE AT LEAST 7.5M AWAY FROM RESIDENTIAL ZONING	7.5M FROM RESIDENTIAL	6 M X 12 M SPACE 2.32M FROM RESIDENTIAL*
PARKING STALL	2.75M X 6M	2.75M X 6M
ACCESSIBLE PARKING STALL TYPE A	2.75M +2M X 6M	2.75M +2M X 6M
BICYCLE PARKING	N/A	TOTAL = 64 SPACES
TOTAL NUMBER OF UNITS	N/A	134 UNITS
LANDSCAPING PERCENTAGE	N/A	Landscape 636.31 M² 22.02%

(*) SITE-SPECIFIC ZONING PROVISIONS

EXTERIOR WALL STC RATINGS

EXTERIOR WALL STC RATINGS

Wall Configuration	EW1	EW2	EW3	EW4	EW1R	EW2R	EW3R	EW5	EW4R	EW6	EW7 EW5R	EW8
STC Rating	38	40	43	46	47	48	49	54	55	57	58	62

Source: National Research Council, Division of Building Research

NOTES:

1 The common structure of walls EW1 to EW5 is composed of 12.7mm gypsum board, vapour barrier and 38x89 mm studs with 50 mm (or thicker) mineral wool or glass fibre batts in inter-stud cavities.

- EW1 denotes the common structure, plus sheathing, plus wood siding or metal siding and fibre backer board
- EW2 denotes the common structure, plus rigid insulation (25 to 30 mm), and wood siding or metal siding and fibre backer board.
- EW3 denotes simulated mansard with the common structure, plus sheathing, 28 X89 mm framing, sheathing and asphalt roofing material
- EW4 denotes the common structure, plus sheathing and 20 mm stucco.
- EW5 denotes the common structure, plus sheathing, 25 mm air space, 100mm brick veneer.
- EW6 denotes exterior wall composed of 12.7 mm gypsum board, rigid insulation (25 to 50 mm), 100 mm back-up block 100 mm face brick.
- EW7 denotes exterior wall composed of 12.7 mm gypsum board, rigid insulation (25 to 50 mm), 140mm back-up block, 100 mm face brick.
- EW8 denotes exterior wall composed of 12.7 mm gypsum board, rigid insulation (25 to 50 mm), 200 mm concrete.

2 R signifies the mounting of the interior gypsum board on resilient clips.

3 An exterior wall conforming to rainscreen design principles and composed of 12.7 mm gypsum board, 100 mm concrete block, rigid insulation (25 to 50 mm), 25 mm air space, and 100 mm brick veneer has the same STC as EW6.

4 An exterior wall described in EW1 with the addition of rigid insulation (25 to 50 mm) between the sheathing and the external finish has the same STC as EW2.