NOISE & VIBRATION STUDY

"284 – 292 PLAINS ROAD EAST DEVELOPMENT"
PART OF LOT 4
BROKEN FRONT CONCESSION
(FORMERLY IN THE TOWNSHIP
OF EAST FLAMBOROUGH)
CITY OF BURLINGTON, ON
REGIONAL MUNICIPALITY OF HALTON

Prepared for:

284 Plains Road Development Inc.
1065 Clarke Road
London ON
N5V 3B3

Prepared By:



Melissa MacLean
Vice President

Reviewed By:



Frank Westaway
President/Owner

REVISED October 2022
Sept 2021
New File No: 22-2213
Original File No: 20-2080

dBA ACOUSTICAL CONSULTANTS INC.
P.O Box 32059
1447 Upper Ottawa
Hamilton, ON
L8W 3K0

TABLE OF CONTENTS

1.0 INTRODUCTION..... Page 3

2.0 SITE DESCRIPTION..... Page 3

3.0 NOISE IMPACT ASSESSMENT……. Page 4
3.1 Noise Criteria……. Page 4
3.2 Road Noise……. Page 4
3.3 Vibration…… Page 5

4.0 RECOMMENDATIONS NOISE CONTROL……. Page 6
4.1 Outdoor Living Areas……. Page 6
4.2 Indoor Noise Levels…… Page 6

5.0 VENTILATION/WARNING CLAUSES……. Page 6

6.0 STATIONARY SOURCES (EXHAUST & INTAKE UNITS).. Page 7
6.1 Regulatory Context (Residential)……. Page 7

7.0 SUMMARY OF RECOMMENDATIONS……..... Page 8

8.0 CONCLUSIONS…… Page 8

FIGURE 1 – Site Location
FIGURE 2 – Site Plan
FIGURE 3 – Receptor Locations
FIGURE 4 – Noise Barrier or Safety Railing Locations

Appendix "A"
City of Burlington AADT 2019 Traffic Data
Stamson Calculation Sheets
Building Layout
Elevations
Site Area Overview
Site Statistics
Exterior Wall STC Ratings

1.0 INTRODUCTION

dBA Acoustical Consultants Inc. has been retained to provide a noise & vibration study for 284 Plains Road Development Inc., for the proposed "284-292 Plains Road East Development, Part of Lot 4, Broken Front Concession, City of Burlington, Regional Municipality of Halton. See Figure 1 Site Location.

The purpose of the study is to determine the noise impact from Plains Road East, Burlington, ON and area stationary source noises that may be deemed to have an impact on the proposed site and are addressed in this report. Proposed for the development is a 6-storey residential apartment building with a rooftop amenity area, a rear yard ground level outdoor amenity area and standard balconies. See Figure 2 Site Plan.

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. Vibration was not considered in this report as there are no CN/CP Rail lines or heavy industry in the immediate area. Aircraft noise was not considered in this report as the development is located outside the 25 NEF 2010 contour

2.0 SITE DESCRIPTION

The proposed 6-storey (24m) residential apartment building, totaling 107 units, is in a commercial/residential zoned RM1. The proposed residential building has an enclosed rooftop mechanical penthouse room (which includes the cooling tower/chiller, boiler units and water softeners), a proposed rooftop enclosed indoor amenity area, rooftop outdoor amenity area, rear yard ground floor outdoor amenity area, 2 floors underground parking, and proposed parking intake and exhaust units at grade. The proposed parking intake and exhaust units will not have an acoustical impact as the traffic noise is greater than the noise levels of the intake and exhaust.

To the south of the proposed development site are 1 & 1.5 storey residential homes, to the east and west are commercial properties, to the north approximately 20m to the is Plains Road East. To the north approximately 530m is the CN/GO rail lines. Separating the development site and the CN and GO rail line is a school, church and two large commercial buildings on Gallagher Road. This large building abuts the rail tracks and provides ample shielding from rail noise. Plains Road East is a 4-lane roadway with center turning lane and a posted 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.

Also separating the CN & GO rail line are several residential streets with 1.5 & 2 storey homes. Due to the distance separation and extensive shielding from existing residential and commercial buildings the CN & GO rail lines with not have an impact on the proposed development. Stamson rail calculations do not support noise calculations in exceedance of 500m. This development is well beyond 500m and road noise from Plains Road East is the predominant noise source. An example of a Stamson calculation for CN GO rail is attached at 500m free field at the top floor of R2 confirming train traffic has no acoustical noise impact at 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 first-floor window, (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)	55 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 Florin Patrau, Traffic Technologist, Transportation Services with the City of Burlington and were given verbally over the phone. 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 roadway 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 during the day and nighttime hours. The percentage of annual growth was figured at 2% over 13. The AADT (Annual Average Daily Traffic) 2019 volumes were used for Plains Road East, reflective of the worst-case scenario.

Truck volumes were factored at 3% medium and 3% heavy of the total vehicle volumes for Plains Road East. Table 5 summarizes the "free field" traffic noise prediction results, modeled at specific locations of the proposed building. (See Figure 3 Receptor Location).

TABLE 4 – Future Road Traffic Volumes			
Plains Road East	AADT 37305 Vehicles		
	Cars	Medium Trucks	Heavy Trucks
Day	31560	1007	1007
Night	3507	112	112

Table 5 summarizes the "free field" traffic noise prediction results, modeled at 9 receptor locations representative of all building facades and outdoor amenity areas for the site development (See Figure 3 Receptor Locations).

TABLE 5 – Predicted Future Traffic Noise (dBA)		
Location	07:00 – 23:00	23:00 – 07:00
R1 - North Façade - 1st Floor (2m)	67	60
R2 - North Façade - 6th Floor (19m)	69	62
R3 - East & West Facades - 1st Floor (2m)	61	55
R4 - East & West Façades - 6th Floor (19m)	64	57
R5 - Southeast & Southwest Facades – 1st Floor (2m)	56	50
R6 - Southeast & Southwest Facades – 6th Floor (19m)	60	54
R7 – South Façade 1st Floor (2m) & Ground Floor Outdoor Amenity Area	51	44
R8 – South Rooftop Amenity Area – 1.22m Glass Safety Railing (23m)	38	N/A
R9 – North Rooftop Amenity Area – 1.22m Safety Glass Railing (23m)	53	N/A

3.3 VIBRATION

The City of Burlington Construction and Mobility Management Plan (CMMP) requires pre-condition surveys of area buildings within the area of influence (to be established), noise and vibration protocol, shoring approval and vibration monitoring during shoring and all heavy construction activities prior to mobilizing of 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

Calculated road noise levels for R1, R2, R3, R4, R5, & R6 exceed the 55 dBA daytime criteria outlined in Table 1. The small ground floor amenity area (R7) south of the proposed development is completely shielded by the proposed building structure and other existing commercial buildings, therefore mitigation measures for the rear yard amenity space is not required. The draft plan for the proposed development includes a 6th floor rooftop outdoor amenity area. Mitigation to reduce outdoor noise levels is required. A 1.22m (4 ft) noise barrier or safety glass railing or equivalent, will suffice. Proposed are standard balconies that are less than 4m in depth and therefore not considered an amenity space as defined by the MECP noise guidelines and do not require mitigation measures, however the Ontario Fire Code and Ontario Building Code (OBC) require safety railings.

In compliance with MECP guidelines, a noise barrier/ safety railing or equivalent must have a minimum surface density of 20kg/m^2 and be designed and constructed without cracks or gaps. Any gaps under the noise barrier that are necessary for drainage purposes must be minimized (2") and localized and must not deteriorate acoustical performance. (See Figure 4, Noise Barrier Locations)

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.

Building design specifications were not made available at report time and STC (Sound Transmission Class) are summarized in Table 6 following with minimum window door and wall construction specified for specific receptor locations.

The STC was calculated for each room type, based on typical window to floor ratios of 20% for bedrooms and 30% for living room areas. Wall to floor ratio was factored at 80%. A maximum of two components were factored per room.

TABLE 6 – Recommended Door and Window Construction

LOCATION	STC Rating	Patio Door Construction	Exterior Walls
All Units	Example	Example	Example
Bedroom	34	34	EW3
Living room	34	34	EW3

5.0 VENTILATION / WARNING CLAUSES

Ventilation and warning clause requirements for the development is required. In addition to any recommended physical controls, specifically worded warning clauses are mandatory. It is recommended that a Type "B" & "D" Warning Clauses will suffice for all apartment units.

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."

TABLE 7 - Ventilation and Warning Clause Requirements		
LOCATION	VENTILATION	WARNING CLAUSE
All Units	Central Air Conditioning	Type "B" and Type "D"

6.0 STATIONARY SOURCES (EXHAUST & INTAKE UNITS)

6.1 REGULATORY CONTEXT (RESIDENTIAL)

The MECP Publication-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 6.1.

No restrictions apply to stationary sources if the one-hour equivalent sound exposure (Leq) is lower than the levels in the following Table 6.1.

The parking exhaust is located on the northeast portion of the proposed development and the air intake shaft is located on the southwest portion of the proposed development. These units generate approximately 62 dBA at 2m from the source and operates only when required to intake air and exhaust fumes to/from the underground parking areas. The sound emanates upwards and quickly dissipates. The two units themselves must be acoustically equipped and the sound is typically from the air exhaust and not the unit noise themselves.

The traffic background noise results in higher noise levels than the following Table 6.1 Therefore it is anticipated that the parking intake and exhaust units will be in compliance with MECP Publication-300, Stationary & Transportation Sources-Approval & Planning guidelines. Calculating the noise levels from either the intake or exhaust units to the nearest residential property is 25m. Calculation is as 2 ÷ 20 = (Log x 20) = - 22dba (62dba-22dba) = 40 dBA. Noise data was obtained and referenced from dBA library.

TABLE 6.1 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

7.0 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's "B" & "D" Warning Clause for all units are required and Registered on Title.
- Prior to final Site Plan Approval pre-condition surveys and noise and vibration monitoring as per the City of Burlington Construction and Mobility Management Plan
- Rooftop amenity area and standard balconies require 1.22m (4 ft) noise barrier, Safety Glass Railing or equivalent.
- 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.

8.0 CONCLUSIONS

dBA Acoustical Consultants Inc. has provided a noise & vibration study for 284 Plains Road Development Inc., for the proposed "284-292 Plains Road East Development, Part of Lot 4, Broken Front Concession, City of Burlington, Regional Municipality of Halton.

The study determined that the noise impact from Plains Road East, Burlington, ON have an impact on the proposed site and noise mitigation measures are required.

FIGURE 1
SITE LOCATION



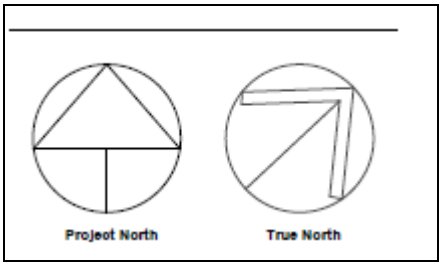


FIGURE 2
SITE PLAN

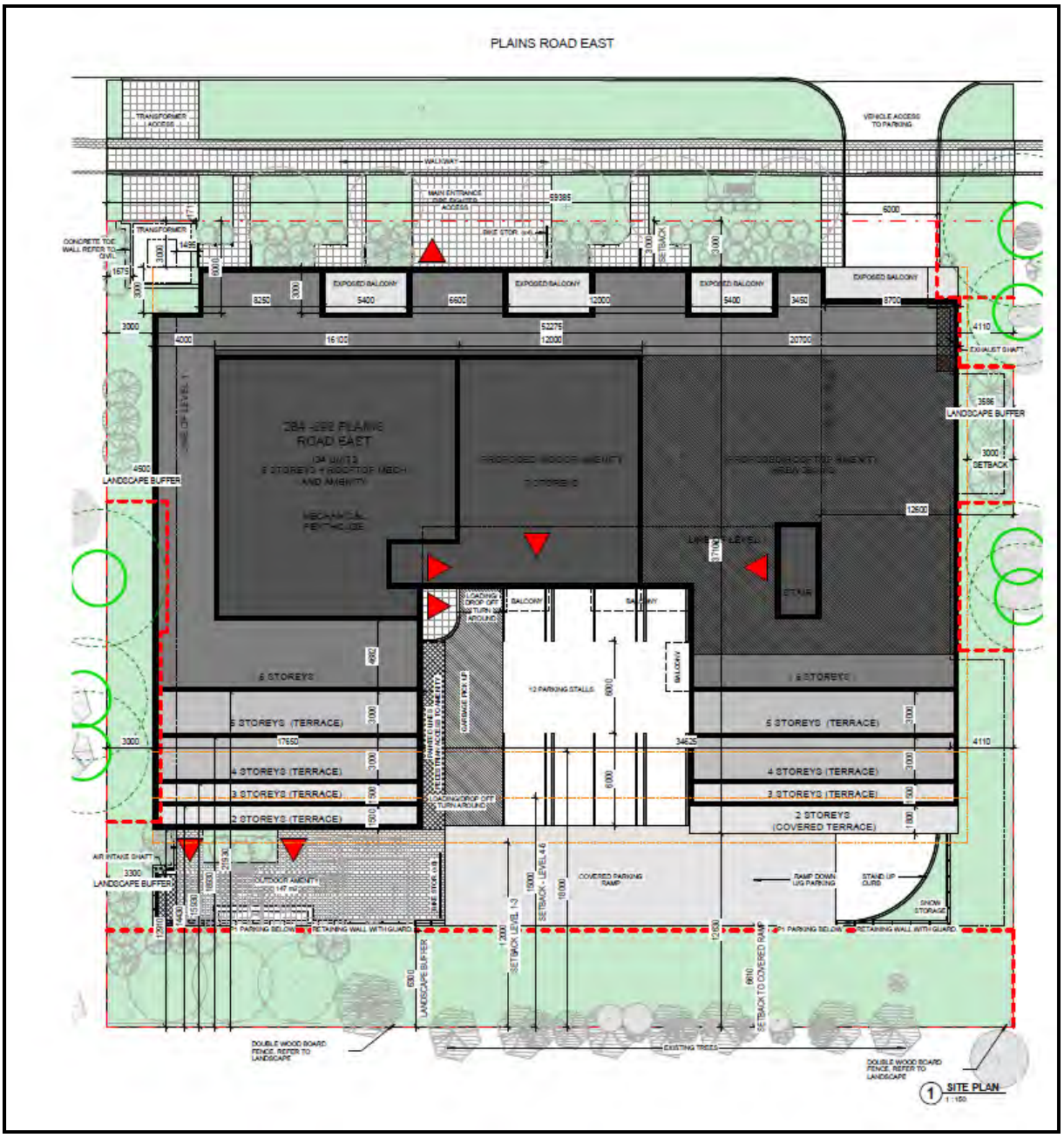


FIGURE 3
RECEPTOR LOCATIONS

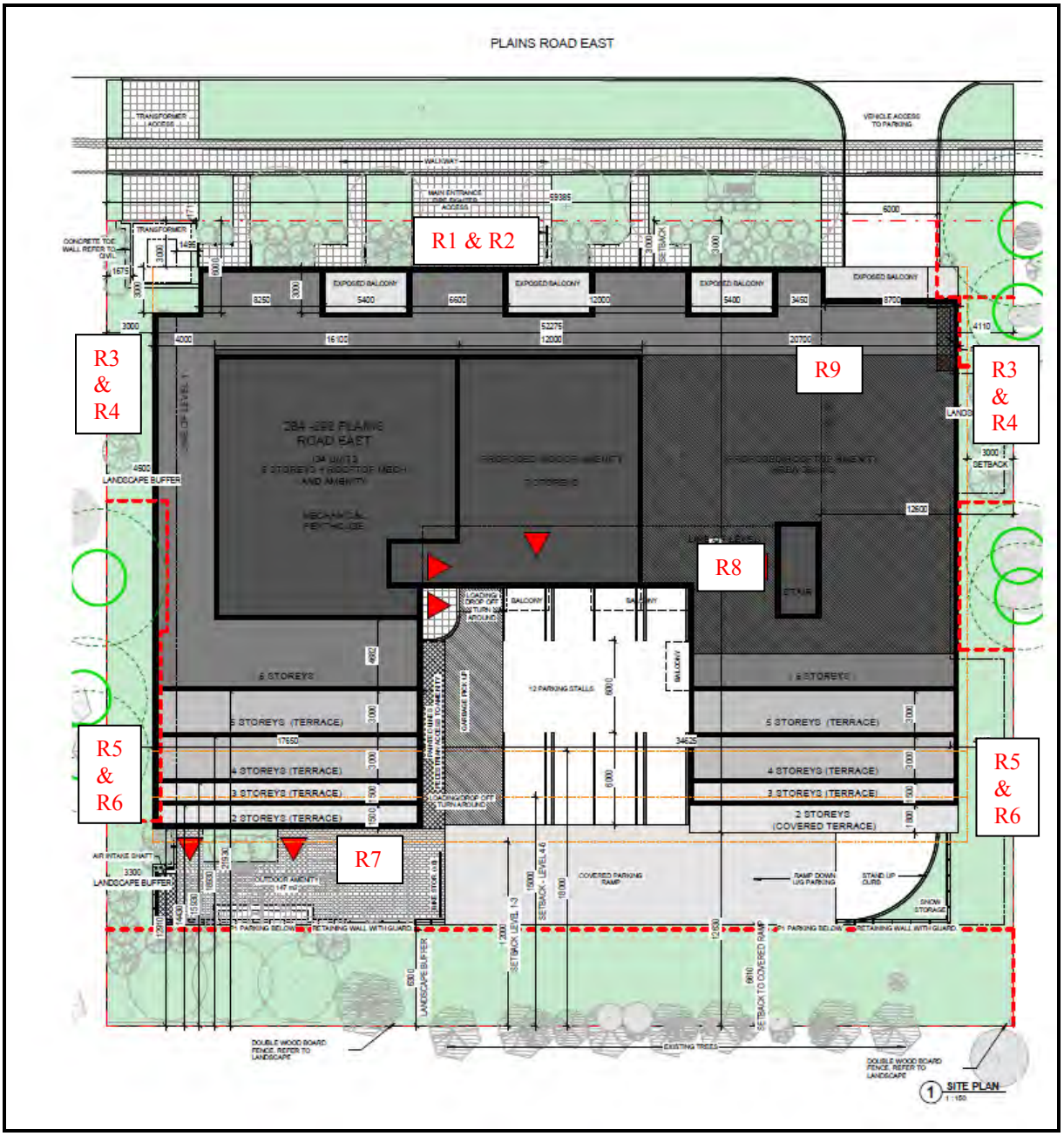
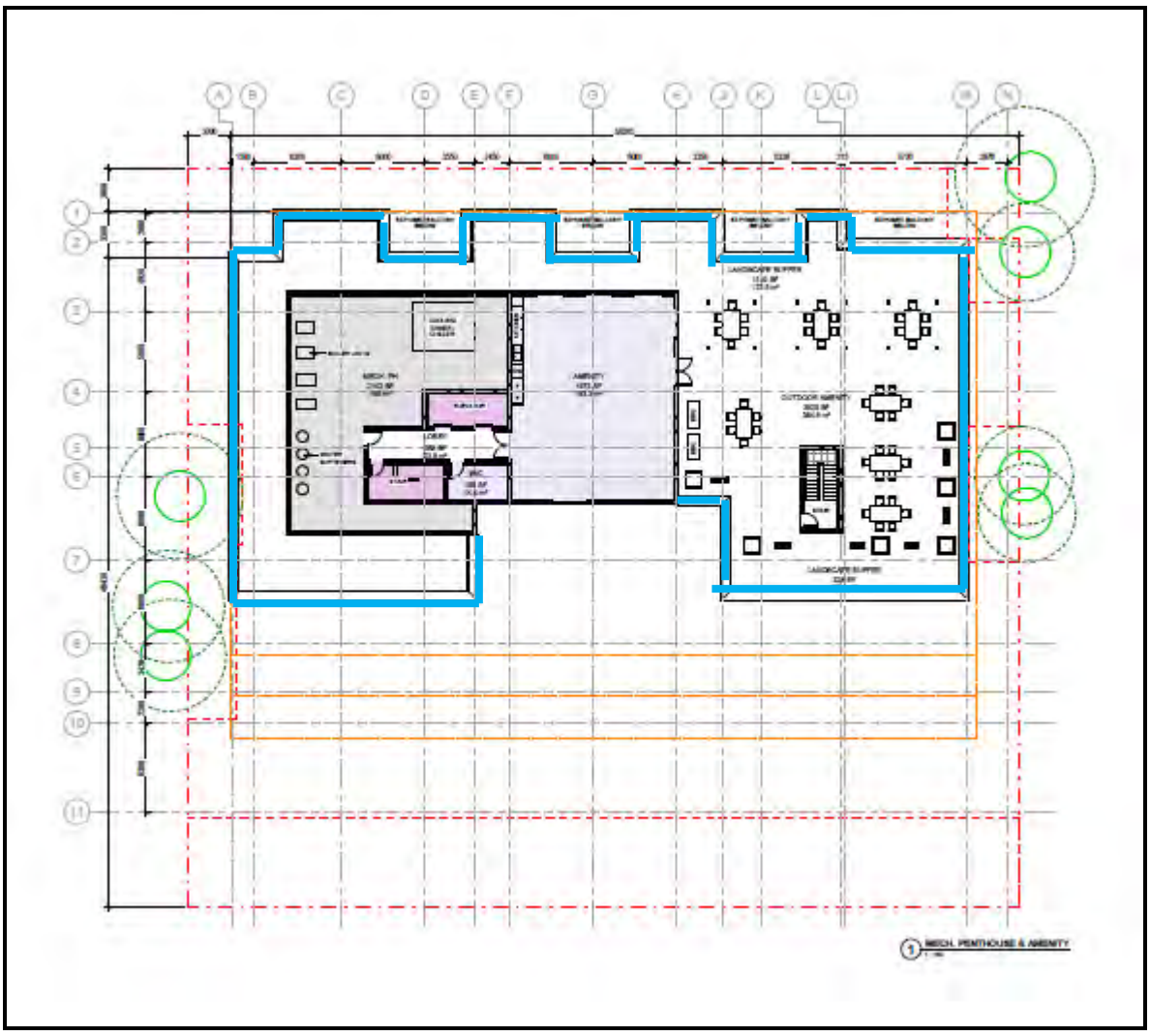


FIGURE 4
NOISE BARRIER OR SAFETY RAILING LOCATIONS

Rooftop Amenity Area Requires a 1.22m (4 ft) Safety Glass Railing or Equivalent. If the OBC requires higher Safety Glass Railing or equivalent, then OBC requirements supersede the MECP noise requirements. The safety glass railings or the parapet exterior wall extension exceed the MECP density of a noise barrier 20kg².



APPENDIX "A"

CITY OF BURLINGTON AADT 2019 TRAFFIC DATA

Road traffic volumes were sourced from Florin Patrau, Traffic Technologist, Transportation Services with the City of Burlington and were given verbally over the phone. Mr. Patrau informed dBA staff that the traffic AADT website is no longer being updated and information will now be available through the City of Burlington's Open Data platform which is currently being updated.





STAMSON CALCULATIONS

```
STAMSON 5.04        SUMMARY REPORT        Date: 01-09-2022 14:27:57
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r1plains.te          Time Period: Day/Night 16/8 hours
Description: R1-Plains Rd First Floor Residential North Facade
                     TOTAL Leq FROM ALL SOURCES                    (DAY): 66.95
                                                                   (NIGHT): 60.42

Road data, segment # 1: Plains Rd E (day/night)
-----------------------------------------------
Car traffic volume  : 31560/3507  veh/TimePeriod  *
Medium truck volume :  1007/112   veh/TimePeriod  *
Heavy truck volume  :  1007/112   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):  28838
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  13.00
    Medium Truck % of Total Volume     :   3.00
    Heavy Truck  % of Total Volume     :   3.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Plains Rd E (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  :  20.00 / 20.00  m
Receiver height           :   2.00 / 2.00   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Result summary (day)
--------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E      !     1.32 !    66.95 !    66.95
--------------------+---------+---------+---------
                      Total                  66.95 dBA

Result summary (night)
----------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E      !     1.32 !    60.42 !    60.42
--------------------+---------+---------+---------
                      Total                  60.42 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 01-09-2022 14:31:16
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r2plains.te          Time Period: Day/Night 16/8 hours
Description: R2-Plains Rd 6th Floor Residential North Facade
                     TOTAL Leq FROM ALL SOURCES                  (DAY): 68.64
                                                                (NIGHT): 62.11

Road data, segment # 1: Plains Rd E (day/night)
-----------------------------------------------
Car traffic volume  : 31560/3507  veh/TimePeriod  *
Medium truck volume :  1007/112   veh/TimePeriod  *
Heavy truck volume  :  1007/112   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):  28838
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  13.00
    Medium Truck % of Total Volume     :   3.00
    Heavy Truck  % of Total Volume     :   3.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Plains Rd E (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  :  20.00 / 20.00  m
Receiver height           :  19.00 / 19.00  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Result summary (day)
--------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E      !     1.32 !    68.64 !    68.64
--------------------+---------+---------+---------
                      Total                  68.64 dBA

Result summary (night)
----------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E      !     1.32 !    62.11 !    62.11
--------------------+---------+---------+---------
                      Total                  62.11 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 01-09-2022 14:42:55
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r3plains.te          Time Period: Day/Night 16/8 hours
Description: R3-Plains Rd 1st Floor Residential East & West
                     TOTAL Leq FROM ALL SOURCES                  (DAY): 61.03
                                                                 (NIGHT): 54.50

Road data, segment # 1: Plains Rd E (day/night)
-----------------------------------------------
Car traffic volume  : 31560/3507  veh/TimePeriod  *
Medium truck volume :  1007/112   veh/TimePeriod  *
Heavy truck volume  :  1007/112   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):  28838
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  13.00
    Medium Truck % of Total Volume     :   3.00
    Heavy Truck  % of Total Volume     :   3.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Plains Rd E (day/night)
---------------------------------------------
Angle1   Angle2           :  -0.00 deg   90.00 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           :   2.00 / 2.00   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Result summary (day)
--------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E      !     1.32 !    61.03 !    61.03
--------------------+---------+---------+---------
                      Total                  61.03 dBA

Result summary (night)
----------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E      !     1.32 !    54.50 !    54.50
--------------------+---------+---------+---------
                       Total                  54.50 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 01-09-2022 14:44:00
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r4plains.te          Time Period: Day/Night 16/8 hours
Description: R4-Plains Rd 6th Floor Residential East & West
                      TOTAL Leq FROM ALL SOURCES                  (DAY): 63.62
                                                                  (NIGHT): 57.09

Road data, segment # 1: Plains Rd E (day/night)
-----------------------------------------------
Car traffic volume  : 31560/3507  veh/TimePeriod  *
Medium truck volume :  1007/112   veh/TimePeriod  *
Heavy truck volume  :  1007/112   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):  28838
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  13.00
    Medium Truck % of Total Volume     :   3.00
    Heavy Truck  % of Total Volume     :   3.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Plains Rd E (day/night)
---------------------------------------------
Angle1   Angle2           :  -0.00 deg   90.00 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           :  19.00 / 19.00  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Result summary (day)
--------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E      !     1.32 !    63.62 !    63.62
--------------------+---------+---------+---------
                      Total                  63.62 dBA

Result summary (night)
----------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E      !     1.32 !    57.09 !    57.09
--------------------+---------+---------+---------
                      Total                  57.09 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 01-09-2022 14:47:16
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r5plains.te          Time Period: Day/Night 16/8 hours
Description: R5-Plains Rd 1st Floor Residential East & West
                     TOTAL Leq FROM ALL SOURCES                  (DAY): 56.06
                                                                 (NIGHT): 49.53

Road data, segment # 1: Plains Rd E (day/night)
-----------------------------------------------
Car traffic volume  : 31560/3507  veh/TimePeriod  *
Medium truck volume :  1007/112   veh/TimePeriod  *
Heavy truck volume  :  1007/112   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):  28838
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  13.00
    Medium Truck % of Total Volume     :   3.00
    Heavy Truck  % of Total Volume     :   3.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Plains Rd E (day/night)
---------------------------------------------
Angle1   Angle2           :  -0.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  60.00 / 60.00  m
Receiver height           :   2.00 / 2.00   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Result summary (day)
--------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E      !     1.32 !    56.06 !    56.06
--------------------+---------+---------+---------
                      Total                  56.06 dBA

Result summary (night)
----------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E      !     1.32 !    49.53 !    49.53
--------------------+---------+---------+---------
                      Total                  49.53 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 01-09-2022 14:54:35
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r6plains.te          Time Period: Day/Night 16/8 hours
Description: R6-Plains Rd 1st Floor Residential East & West
                     TOTAL Leq FROM ALL SOURCES                  (DAY): 60.18
                                                                 (NIGHT): 53.65

Road data, segment # 1: Plains Rd E (day/night)
-----------------------------------------------
Car traffic volume  : 31560/3507  veh/TimePeriod  *
Medium truck volume :  1007/112   veh/TimePeriod  *
Heavy truck volume  :  1007/112   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):  28838
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  13.00
    Medium Truck % of Total Volume     :   3.00
    Heavy Truck  % of Total Volume     :   3.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Plains Rd E (day/night)
---------------------------------------------
Angle1   Angle2           :   0.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  60.00 / 60.00  m
Receiver height           :  19.00 / 19.00  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Result summary (day)
--------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E      !     1.32 !    60.18 !    60.18
--------------------+---------+---------+---------
                      Total                  60.18 dBA

Result summary (night)
----------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E      !     1.32 !    53.65 !    53.65
--------------------+---------+---------+---------
                      Total                  53.65 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 01-09-2022 15:02:04
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r7plains.te          Time Period: Day/Night 16/8 hours
Description: R7-Plains Rd Rear South Facade
                     TOTAL Leq FROM ALL SOURCES                  (DAY): 50.95
                                                                 (NIGHT): 44.43

Road data, segment # 1: Plains Rd E (day/night)
-----------------------------------------------
Car traffic volume  : 31560/3507  veh/TimePeriod  *
Medium truck volume :  1007/112   veh/TimePeriod  *
Heavy truck volume  :  1007/112   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):  28838
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  13.00
    Medium Truck % of Total Volume     :   3.00
    Heavy Truck  % of Total Volume     :   3.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Plains Rd E (day/night)
---------------------------------------------
Angle1   Angle2           : -10.00 deg   10.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  60.00 / 60.00  m
Receiver height           :   2.00 / 2.00   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Result summary (day)
--------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E      !     1.32 !    50.95 !    50.95
--------------------+---------+---------+---------
                      Total                  50.95 dBA

Result summary (night)
----------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E      !     1.32 !    44.43 !    44.43
--------------------+---------+---------+---------
                      Total                  44.43 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 01-09-2022 15:06:15
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r8plains.te          Time Period: Day/Night 16/8 hours
Description: R8-Plains Rd Rear South Rooftop Amenity Area
                     TOTAL Leq FROM ALL SOURCES                  (DAY): 37.88

Road data, segment # 1: Plains Rd E (day/night)
-----------------------------------------------
Car traffic volume  : 31560/3507  veh/TimePeriod  *
Medium truck volume :  1007/112   veh/TimePeriod  *
Heavy truck volume  :  1007/112   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):  28838
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  13.00
    Medium Truck % of Total Volume     :   3.00
    Heavy Truck  % of Total Volume     :   3.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Plains Rd E (day/night)
-----------------------------------------------
Angle1   Angle2           : -10.00 deg   10.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  60.00 / 60.00  m
Receiver height           :  23.00 / 23.00  m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -10.00 deg   Angle2 : 10.00 deg
Barrier height            :   1.22 m
Barrier receiver distance :   3.00 / 3.00   m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :  23.00 m
Reference angle           :   0.00

Result summary (day)
--------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E      !     1.32 !    37.88 !    37.88
--------------------+---------+---------+---------
                      Total                 37.88 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 01-09-2022 15:08:42
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r9plains.te          Time Period: Day/Night 16/8 hours
Description: R9- North Rooftop Amenity Area
                     TOTAL Leq FROM ALL SOURCES                    (DAY): 53.04

Road data, segment # 1: Plains Rd E (day/night)
-----------------------------------------------
Car traffic volume  : 31560/3507  veh/TimePeriod  *
Medium truck volume :  1007/112   veh/TimePeriod  *
Heavy truck volume  :  1007/112   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):  28838
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  13.00
    Medium Truck % of Total Volume     :   3.00
    Heavy Truck  % of Total Volume     :   3.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Plains Rd E (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  :  20.00 / 20.00  m
Receiver height           :  23.00 / 2.00   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 / 10.00  m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :  23.00 m
Reference angle           :   0.00

Result summary (day)
--------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E      !     1.32 !    53.04 !    53.04
--------------------+---------+---------+---------
                      Total                 53.04 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 01-09-2022 15:10:22
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: Plains Rd CN/GO.te        Time Period: Day/Night 16/8 hours
Description: R2- Top Floor CN - GO Train Traffic 500m Example
                    TOTAL Leq FROM ALL SOURCES              (DAY): 54.39
                                                            (NIGHT): 54.38
Rail data, segment # 1: Way Freight (day/night)
-----------------------------------------------
Train            ! Trains      ! Speed !# loc !# Cars! Eng  !Cont
Type             !             !(km/h) !/Train!/Train! type !weld
-----------------+-------------+------+-----+-----+-----+---
  1. Way Freight !   5.1/2.5   ! 129.0 !  4.0 ! 25.0 !Diesel! Yes
Data for Segment # 1: Way Freight (day/night)
-----------------------------------------------
Angle1   Angle2           : -40.00 deg   25.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 500.00 / 500.00 m
Receiver height           :   24.00 / 24.00 m
Topography                :      1       (Flat/gentle slope; no barrier)
No Whistle
Reference angle           :   0.00
Rail data, segment # 2: Passenger (day/night)
-----------------------------------------------
Train            ! Trains      ! Speed !# loc !# Cars! Eng  !Cont
Type             !             !(km/h) !/Train!/Train! type !weld
-----------------+-------------+------+-----+-----+-----+---
  1. Passenger   !  11.9/5.9   ! 129.0 !  2.0 ! 10.0 !Diesel! Yes

Data for Segment # 2: Passenger (day/night)
-------------------------------------------
Angle1   Angle2           : -40.00 deg   25.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 500.00 / 500.00 m
Receiver height           :   24.00 /24.00  m
Topography                :      1       (Flat/gentle slope; no barrier)
No Whistle
Reference angle           :   0.00
Rail data, segment # 3: Go Trains (day/night)
-----------------------------------------------
Train            ! Trains      ! Speed !# loc !# Cars! Eng  !Cont
Type             !             !(km/h) !/Train!/Train! type !weld
-----------------+-------------+------+-----+-----+-----+---
  1. Go Trains   !  86.1/43.0  ! 150.0 !  2.0 ! 10.0 !Diesel! Yes

Data for Segment # 3: Go Trains (day/night)
-------------------------------------------
Angle1   Angle2           : -40.00 deg   25.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 500.00 / 500.00 m
Receiver height           :   24.00 /24.00  m
Topography                :      1       (Flat/gentle slope; no barrier)
No Whistle
Reference angle           :   0.00
```

Result summary (day)

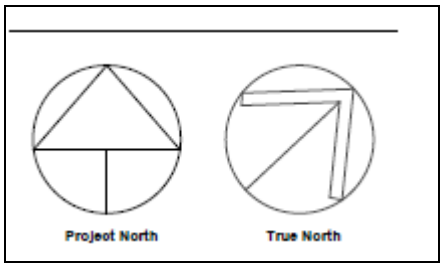
	Loc Leq (dBA)	Wheel Leq (dBA)	Whistle Left Leq (dBA)	Whistle Right Leq (dBA)	Total Leq (dBA)	
1.Way Freight	43.25	32.83	--	--	43.63	*
2.Passenger	43.73	32.68	--	--	44.06	*
3.Go Trains	53.21	42.30	--	--	53.55	*
Total					54.39	dBA

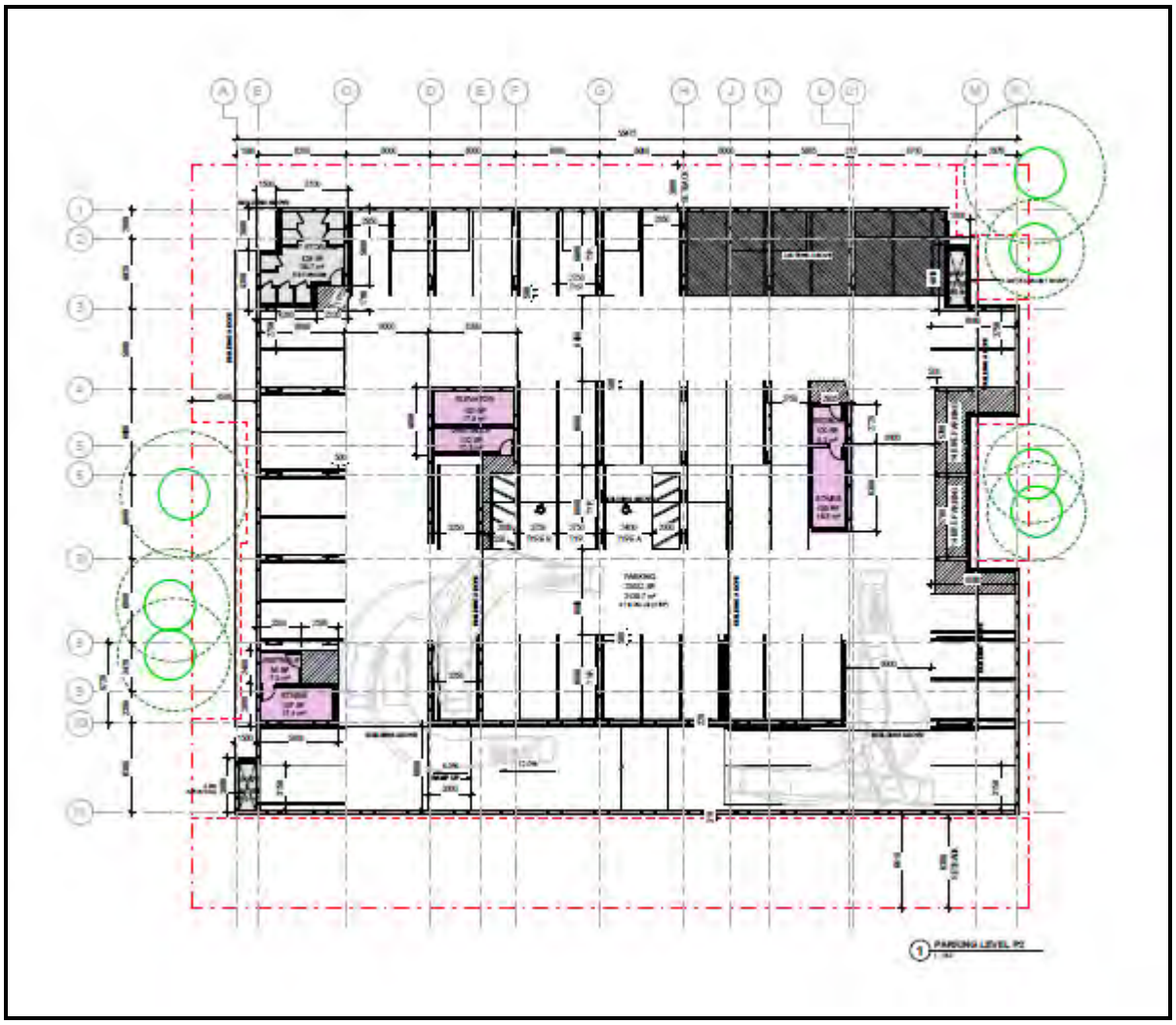
Result summary (night)

	Loc Leq (dBA)	Wheel Leq (dBA)	Whistle Left Leq (dBA)	Whistle Right Leq (dBA)	Total Leq (dBA)	
1.Way Freight	43.17	32.75	--	--	43.55	*
2.Passenger	43.70	32.64	--	--	44.03	*
3.Go Trains	53.21	42.30	--	--	53.55	*
Total					54.38	dBA

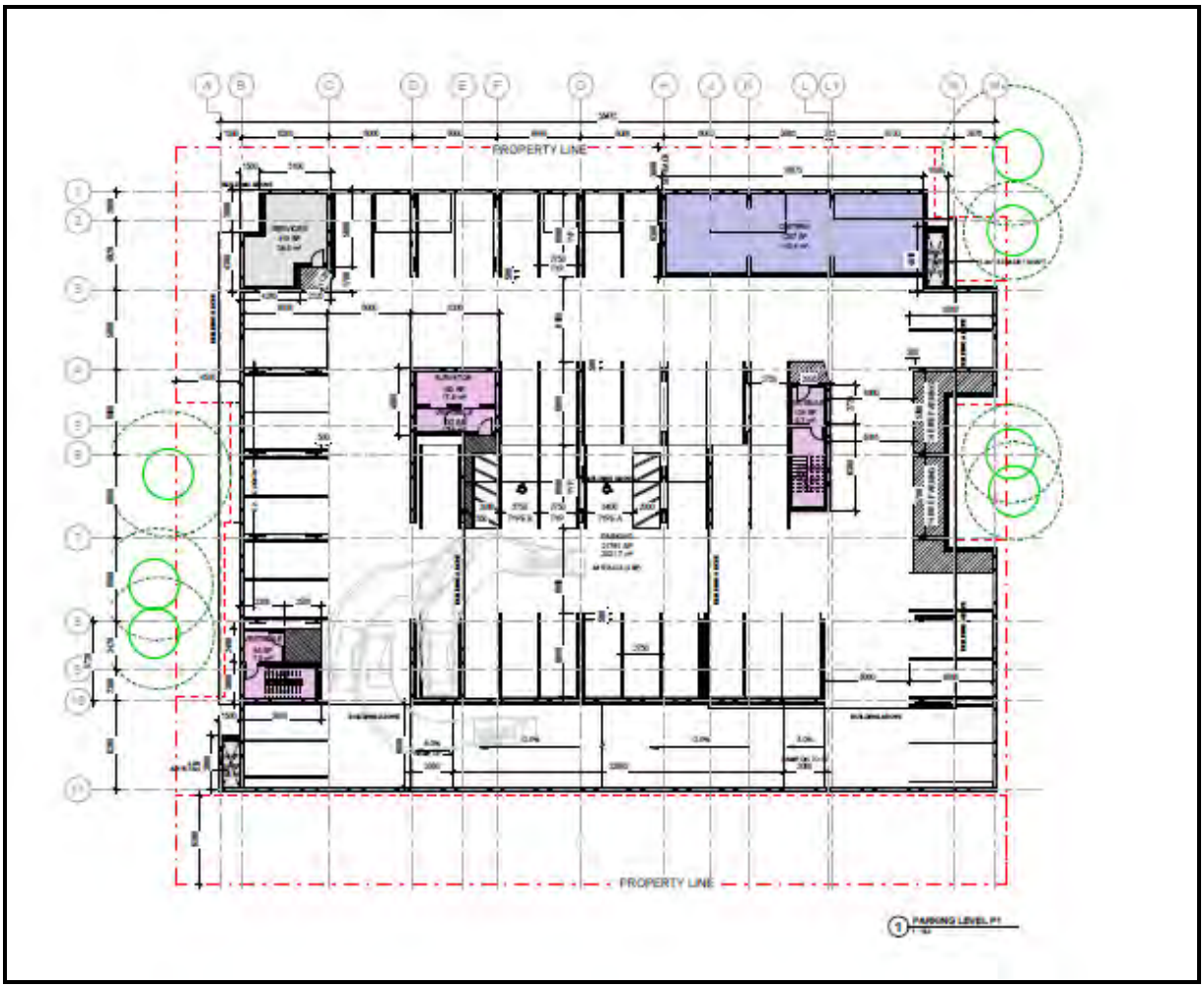
BUILDING LAYOUT

PARKING LEVEL P2

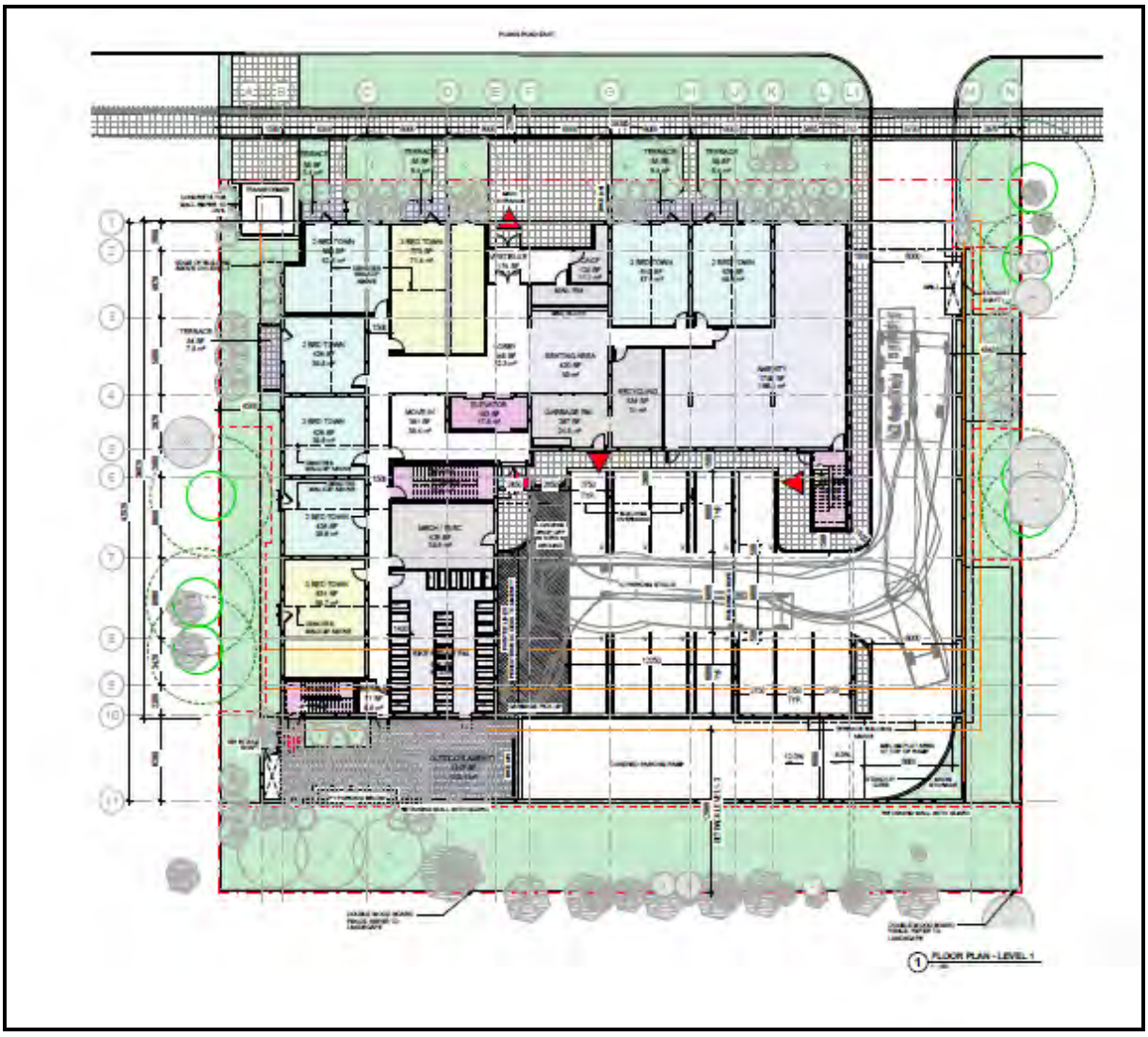




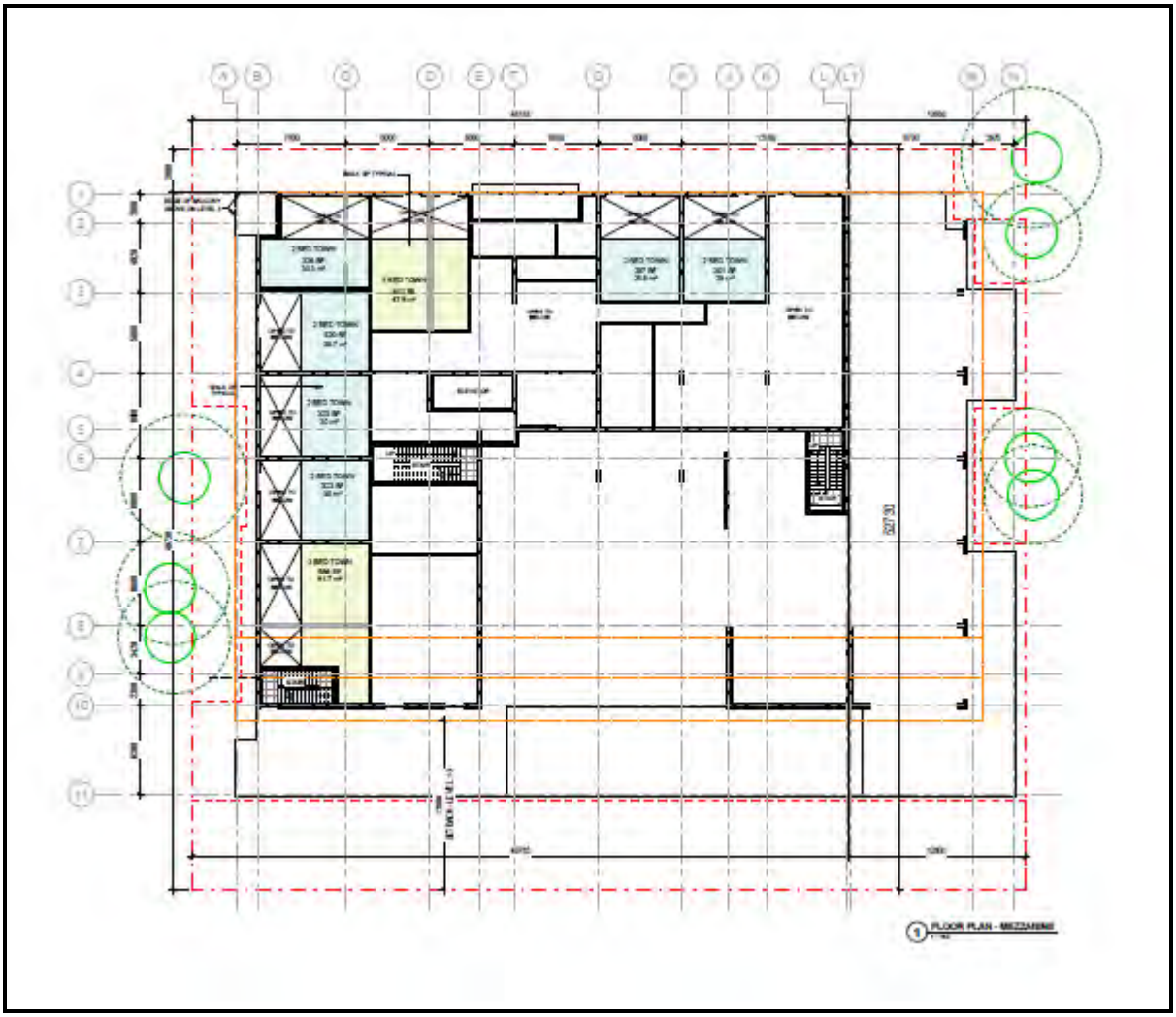
PARKING LEVEL P1



LEVEL 1



MEZZANINE



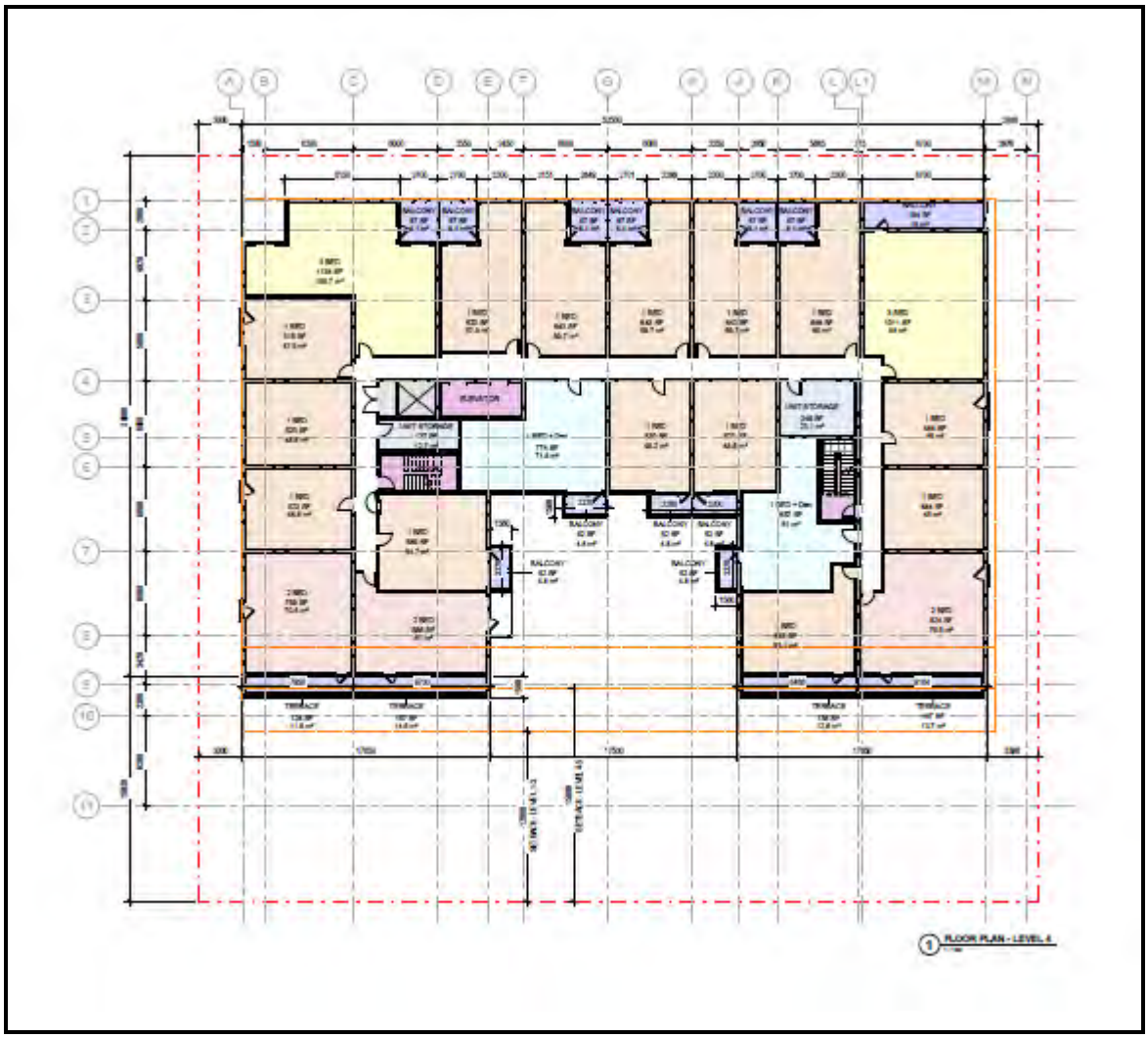
LEVEL 2



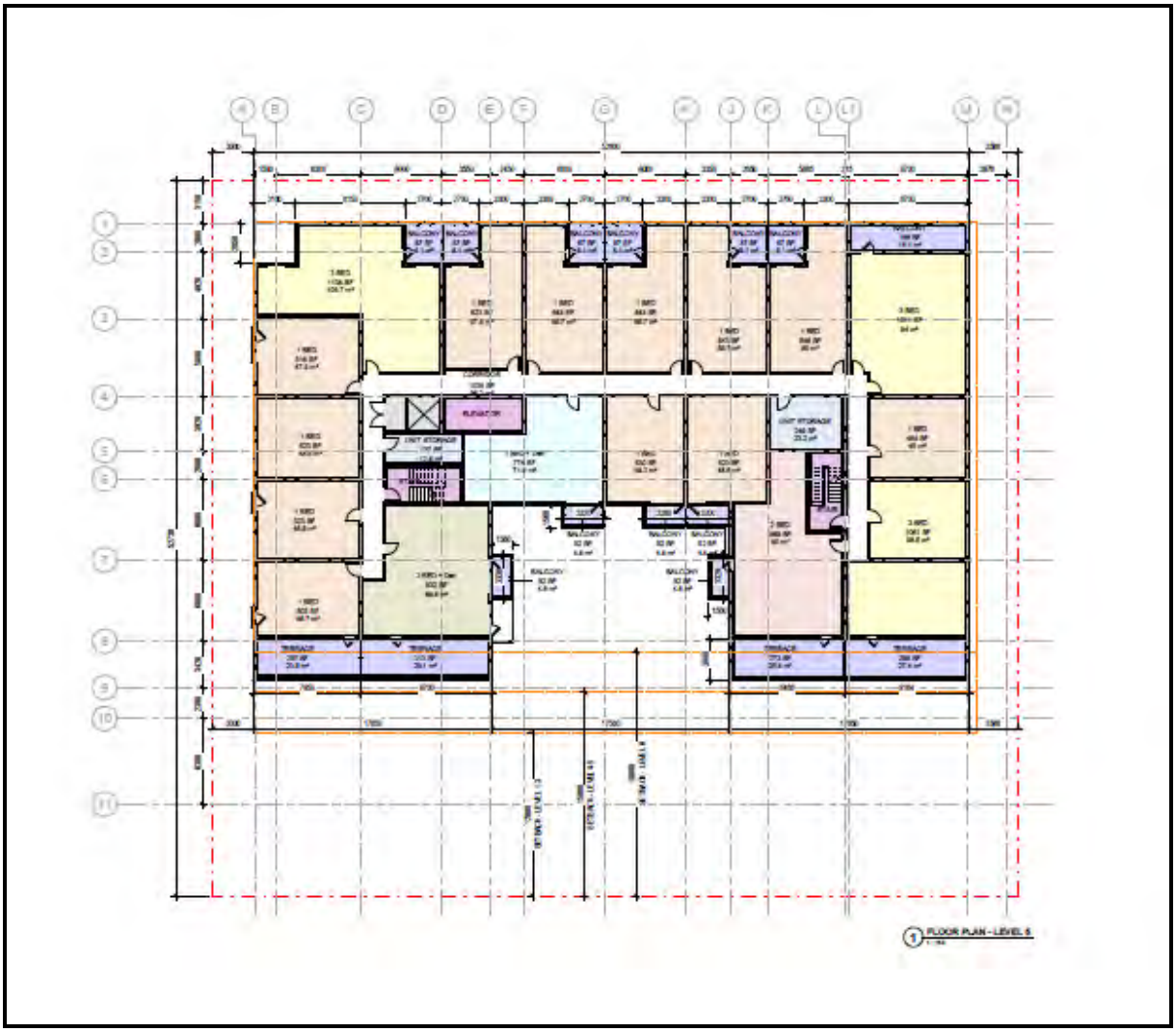
LEVEL 3



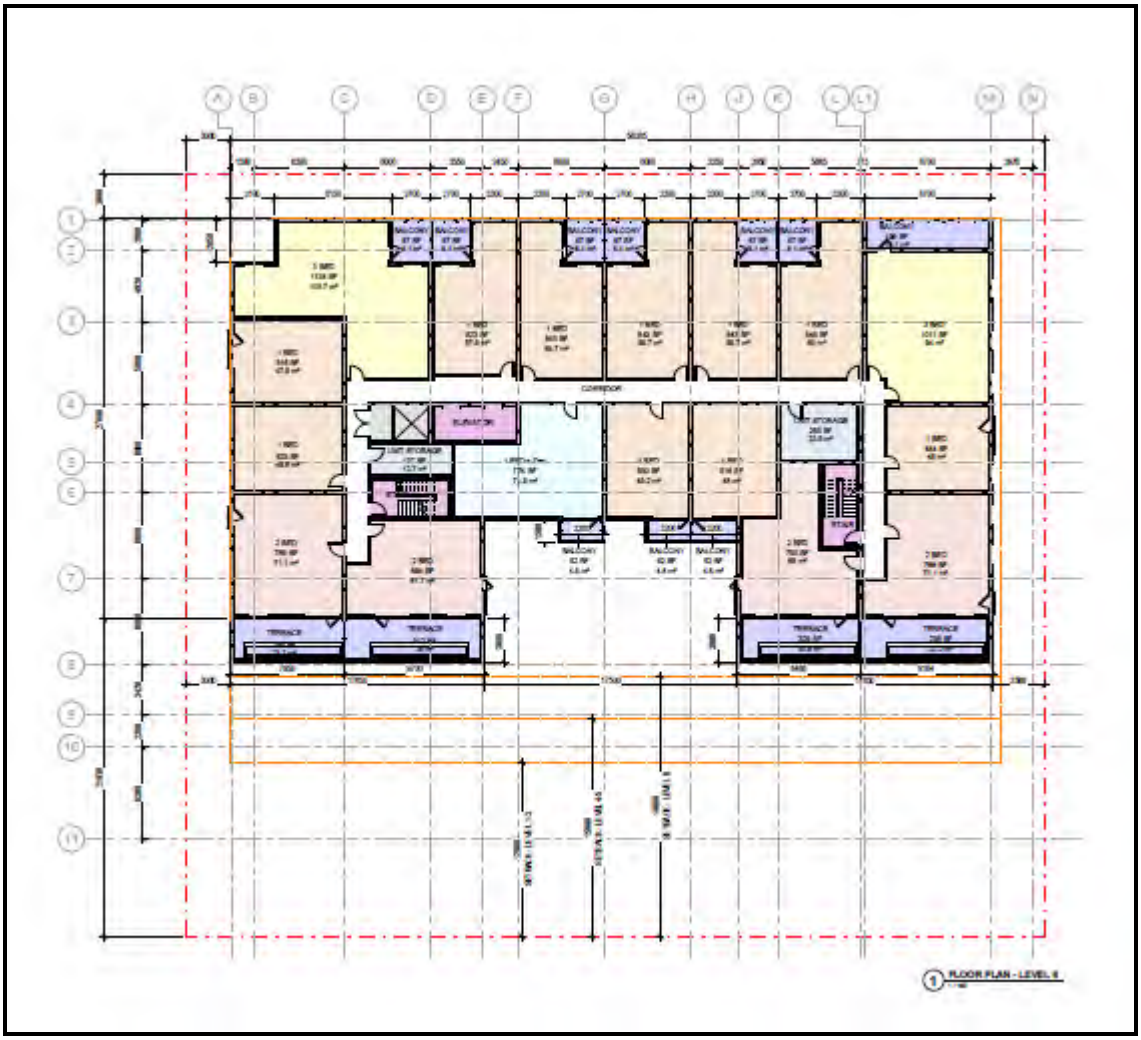
LEVEL 4


A
B
C
D
E
F
G
H
J
K
L
L1
M
N
1
2
3
4
5
6
7
8
9
10
11
ELEVATOR
UNIT STORAGE
BALCONY
TERRACE
1 FLOOR PLAN - LEVEL 4

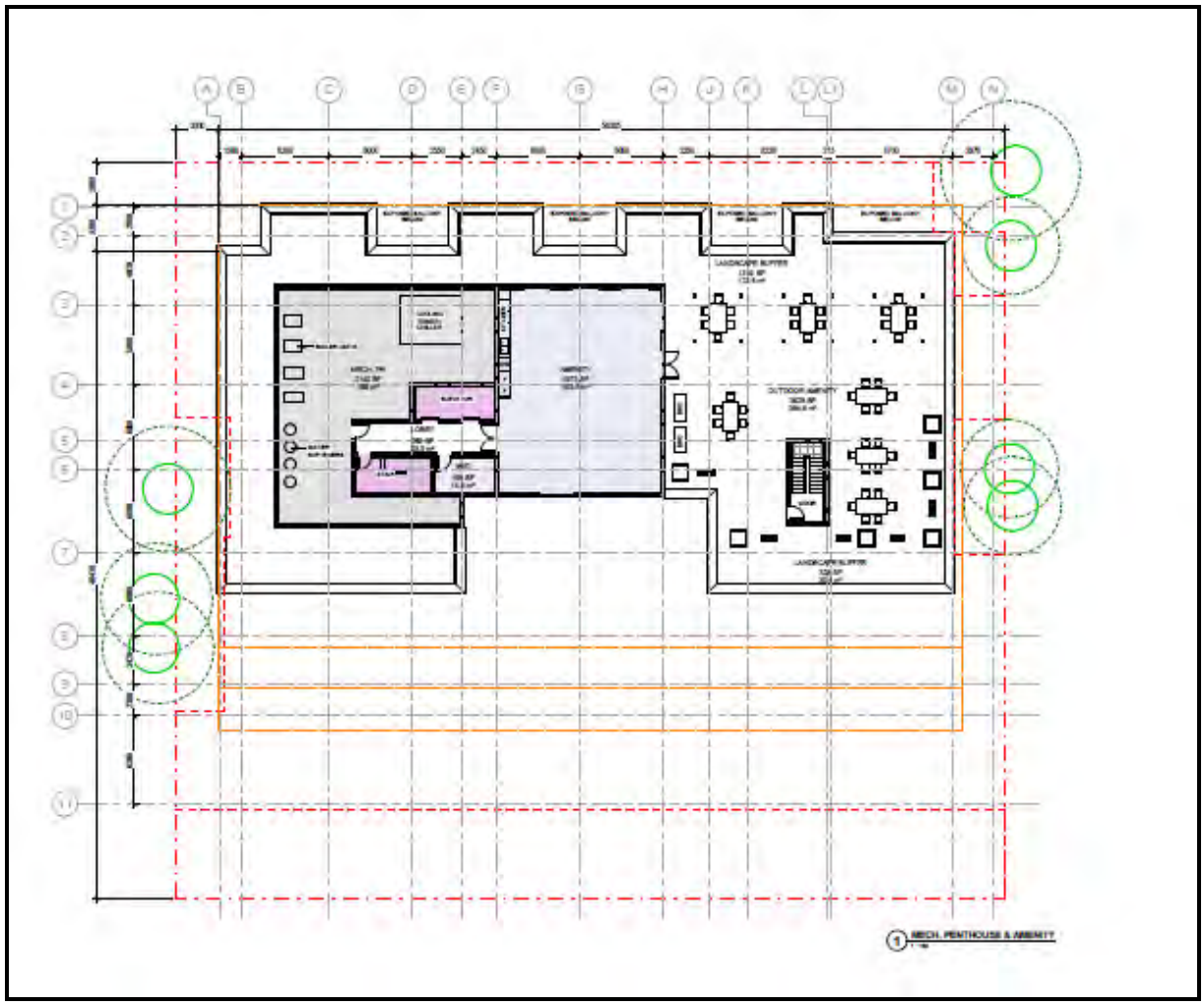
LEVEL 5



LEVEL 6


A
B
C
D
E
F
G
H
J
K
L
L1
M
N
1
2
3
4
5
6
7
8
9
10
11
CORRIDOR
ELEVATOR
STAIR
TERRACE
BALCONY
1 FLOOR PLAN - LEVEL 6

MECHANICAL PENTHOUSE & ROOFTOP AMENITY

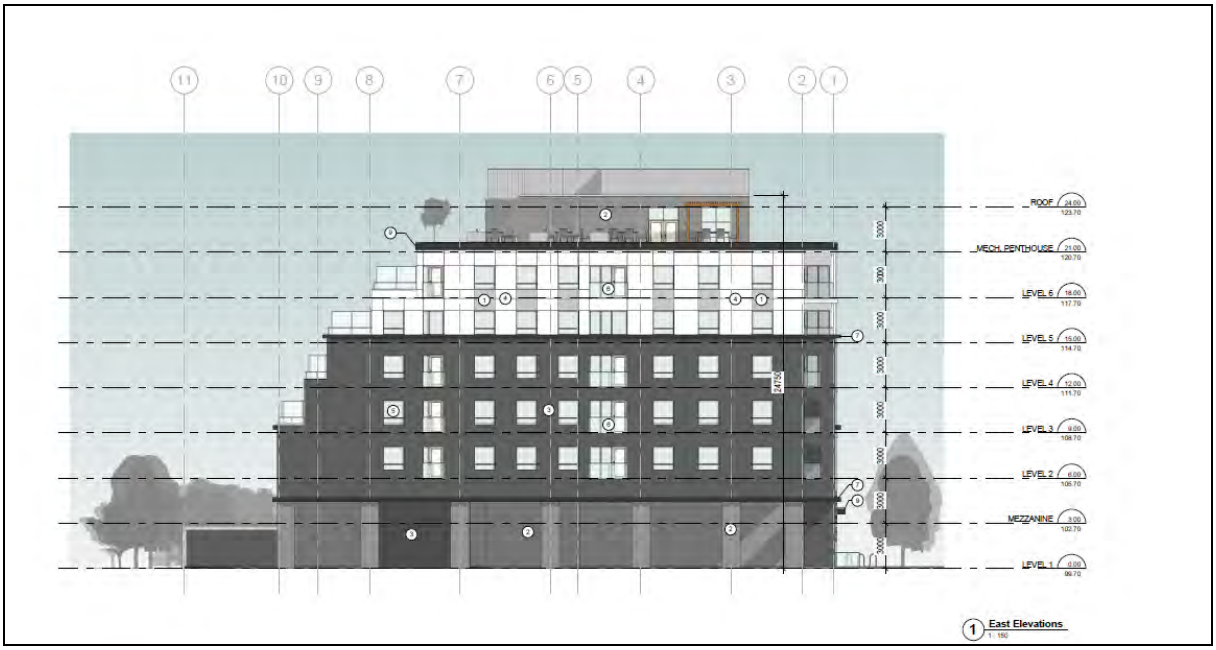


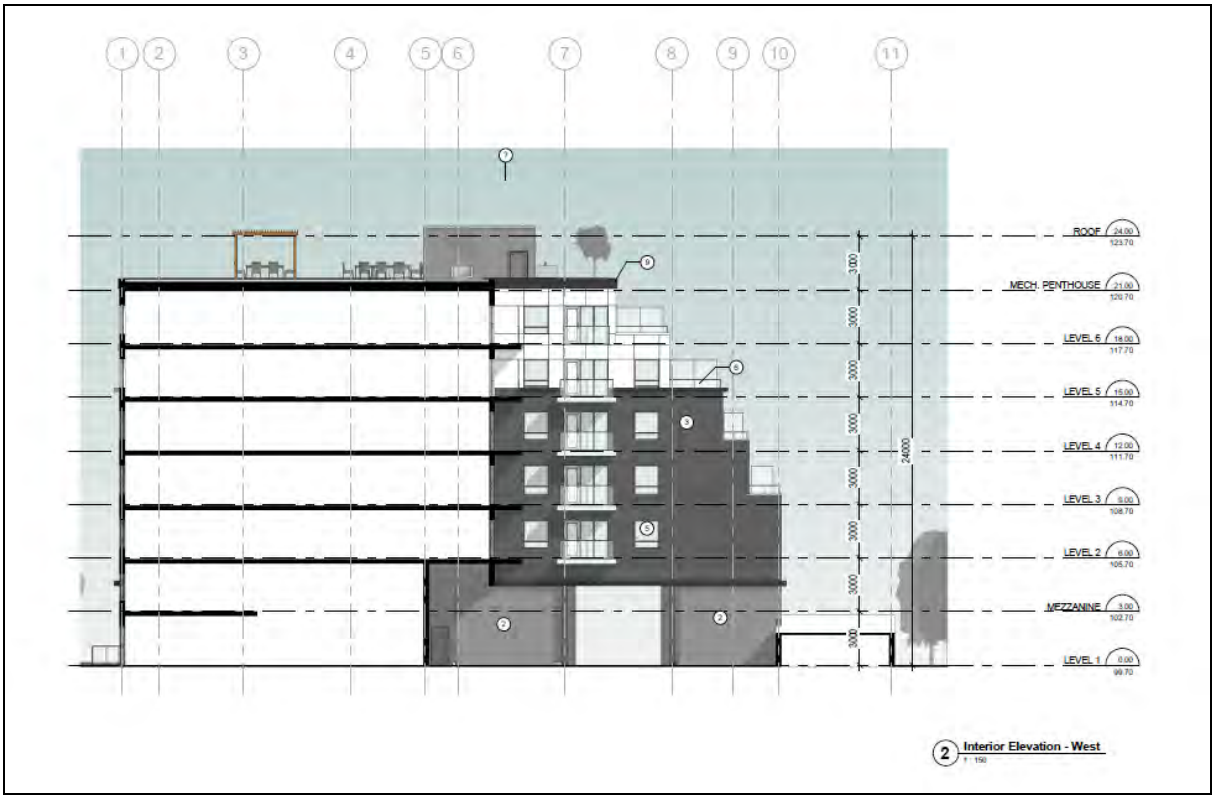
ELEVATIONS


A
B
C
D
E
F
G
H
J
K
L
L1
M
N
ROOF
MECH. PENTHOUSE
LEVEL 6
LEVEL 5
LEVEL 4
LEVEL 3
LEVEL 2
MEZZANINE
LEVEL 1
2 South Elevation


N
M
L1
L
K
J
H
G
F
E
D
C
B
A
ROOF
MECH. PENTHOUSE
LEVEL 6
LEVEL 5
LEVEL 4
LEVEL 3
LEVEL 2
MEZZANINE
LEVEL 1
1 North Elevation

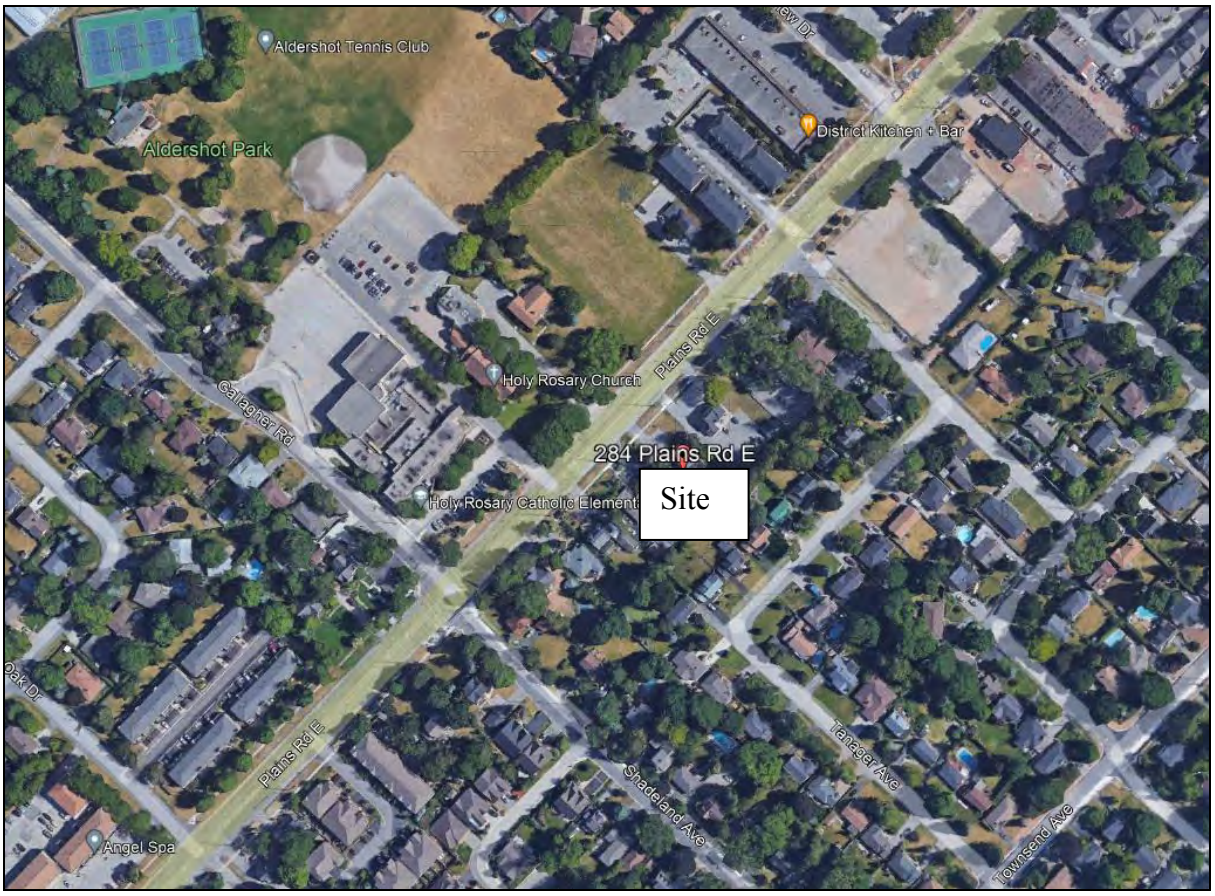

1
2
3
4
5
6
7
8
9
10
11
ROOF
MECH. PENTHOUSE
LEVEL 6
LEVEL 5
LEVEL 4
LEVEL 3
LEVEL 2
MEZZANINE
LEVEL 1
2 West Elevation


11
10
9
8
7
6
5
4
3
2
1
ROOF
MECH. PENTHOUSE
LEVEL 6
LEVEL 5
LEVEL 4
LEVEL 3
LEVEL 2
MEZZANINE
LEVEL 1
1 East Elevations


1
2
3
4
5
6
7
8
9
10
11
ROOF
MECH. PENTHOUSE
LEVEL 6
LEVEL 5
LEVEL 4
LEVEL 3
LEVEL 2
MEZZANINE
LEVEL 1
3000
24000
2 Interior Elevation - West


11
10
9
8
7
6
5
4
3
2
1
ROOF
MECH. PENTHOUSE
LEVEL 6
LEVEL 5
LEVEL 4
LEVEL 3
LEVEL 2
MEZZANINE
LEVEL 1
1750
3150
3000
21600
1 Interior Elevation - East

SITE AREA OVERVIEW



SITE STATISTICS

SITE DATA

284-292 Plains Rd. E, Burlington, Ontario

DATA		REQUIRED	PROVIDED
ZONING		ZONING - MXG	
PROPERTY ZONE		RM1-346	
LOT AREA (m²)		--	3,131.4 m²
PROPOSED FLOOR AREA RATIO (FAR)		--	3.00
SETBACKS	FRONT YARD (m)	3 m	3 m
	INTERIOR SIDE YARD (m) East	3 m	3 m
	AT GRADE (EDGE OF PARKING)		4.5 m
	INTERIOR SIDE YARD (m) West	3 m	3.6 m
	AT GRADE		4.8 m
	REAR YARD (m)	FLOORS 1-3 = 12 m	12.6 m
	REAR YARD (m)	FLOORS 4-5 = 15 m	15.9 m
	REAR YARD (m)	FLOORS 6 = 18 m	21.9 m

BUILDING DATA

DATA	REQUIRED	PROVIDED
TOTAL DENSITY (# of units) 1 BEDROOM 1 BEDROOM+DEN 2 BEDROOM 2 BEDROOM+DEN 2 BED TOWNHOUSES 3 BED 3 BED TOWNHOUSES	--	107 units 64 units 8 units 13 units 1 units 6 units 12 units 3 units
BUILDING AREA (m²) + COVERED RAMP (m²)	--	1,040m² (11,194sf) 167m² (1,798sf)
GROSS FLOOR AREA (m²) U/G common areas incl.	--	9,416m² (101,353sf)
GROSS CONSTRUCTION AREA (m²) -incl. parking	--	13,578m² (146,152sf)
NET LEASABLE AREA (m²)	--	6,862m² (73,862 sf)
NUMBER OF STOREYS	6 MAX.	7 STOREYS
BUILDING HEIGHT (m)	--	24.75 m OVERALL + Penthouse Height
AMENITY AREA (m²) (15m² for 1B unit <60m², 20m² for 1B >60m², 35m² for 2B+)	1B < 60m² = 59 (15m²) = 885 m² 1B > 60m² = 5 (20m²) = 100 m² 2B+ = 37 (35m²) = 1,295 m² TOTAL = 2,280 m²	EXTERIOR = 1,310 m² INTERIOR = 490 m² TOTAL =1,800 m² = 17.31 m² / unit

LANDSCAPING DATA

DATA	REQUIRED	PROVIDED
LANDSCAPE AREA (area)	--	904 m²
LANDSCAPE AREA (percentage)	--	29%
LANDSCAPE BUFFER (m)	3m (Front) 6m (Rear and sides abutting res)	-- --
HARDSCAPE AREA (area)	--	317 m²
HARDSCAPE AREA (percentage)	--	10%
TOTAL LANDSCAPE+HARDSCAPE	--	1,221 m² (39%)
ASPHALT AREA (area)	--	702 m²
ASPHALT AREA (percentage)	--	22%

VEHICLE PARKING DATA

DATA	REQUIRED (BY-LAW 2020)	REQUIRED (PARKING STRD REVIEW)	PROVIDED
RESIDENTIAL PARKING	1.25x (72) 1 BED = 90 1.5 x (20) 2 BED = 30 1.75 x (15) 3 BED =27 0.35 x 107 = 38 VISITOR 2 MAINTENANCE	1x (72) 1 BED = 72 1 x (35) 2+ BED = 35 0.08 x 107 = 8.56 VISITOR	LEVEL P2: 56 Stalls LEVEL P1: 48 Stalls LEVEL 1: 12 Surface
B.F. PARKING		3% OF STALLS = 4	4 (includ. in above)
TOTAL	185	115.56	116

BICYCLE PARKING DATA

DATA	REQUIRED	PROVIDED
RESIDENTIAL BICYCLE PARKING		
SHORT TERM	0.05 x (107) = 5.35	12 (ST)
LONG TERM	0.5 x (107) = 53.5	91 (LT)
	TOTAL	107

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.