



Environmental Noise and Vibration Study

118 Cross Avenue, Oakville, Ontario

Batory Planning + Management

Prepared by:

SLR Consulting (Canada) Ltd.

100 Stone Road West, Suite 201, Guelph, ON N1G 5L3

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Revision	Date	Prepared By	Checked By	Authorized By
0	August 21, 2026	Rachel Gerke	Dylan Diebolt	Aaron K. Haniff



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Executive Summary

SLR Consulting (Canada) Ltd. (SLR), was retained by Batory Planning + Management, to conduct an Environmental Noise and Vibration Study in support of a combined Official Plan Amendment (OPA) and Zoning By-law Amendment (ZBA) applications for the proposed development. The development site is located at 118 Cross Avenue in Oakville, Ontario (“the Project site”).

This assessment has considered:

- Industrial noise and vibration sources; and
- Transportation-related noise and vibration sources.

The assessment has included a review of noise and vibration sources from industrial facilities in the area, as applicable.

The Project site is anticipated to be compatible with the surrounding land uses from a noise and vibration perspective. It is recommended that a Warning Clause be used and where possible, incorporate receptor based physical mitigation measures in the architectural design of the Project site structures.

Further, the Project site will not affect the ability for industrial facilities to obtain or maintain compliance with applicable Provincial environmental policies, regulations, approvals, authorizations, and guidelines. The requirements of MECP Guideline D-6, and Publication NPC-300, are met. As the applicable policies and guidelines are met, the Project site is:

- Unlikely to result in increased risk of complaint and nuisance claims;
- Unlikely to result in operational constraints for the major facilities; and
- Unlikely to result in constraints on major facilities to reasonably expand, intensify or introduce changes to their operations.



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Acronyms and Abbreviations

Acronym	Definition
AADT	Annual Average Daily Traffic
CN	Canadian National
dB	Decibels (Unweighted)
dBA	Decibels (A-weighted)
dBAI	Decibels (A-weighted), Impulsive
FCM	Federation of Canadian Municipalities
HVAC	Heating Ventilation and Air Conditioning
ISO	International Organization for Standardization
L _{eq}	Energy Equivalent Sound Exposure Level
L _{LM}	Logarithmic Mean Impulse Sound Level
L _{max}	Maximum Sound Level
MECP	Ministry of the Environment, Conservation and Parks
MOE	Ministry of the Environment
MTO	Ministry of Transportation Ontario
NAG	Noise Abatement Guidelines
NPC-300	MECP Publication Noise Pollution Control (NPC) - 300
OBC	Ontario Building Code
OLA	Outdoor Living Area
OPA	Official Plan Amendment
ORNAMENT	Ontario Road Noise Analysis Method for Environment and Transportation
PWL	Sound Power Level
QEW	Queen Elizabeth Way
RAC	Railway Association of Canada
STC	Sound Transmission Class
ZBA	Zoning By-Law Amendment



1.0 Introduction

SLR Consulting (Canada) Ltd. (SLR) was retained by Batory Planning + Management to conduct an Environmental Noise and Vibration Assessment for the proposed 118 Cross Avenue Development in Oakville, Ontario (Project site). This assessment has been completed in support of the Official Plan Amendment (OPA)/ Zoning By-law amendment (ZBA) applications for the development.

1.1 Focus of Report

In assessing potential impacts of the environment on the proposed development, the focus of this report is to assess the potential for:

- Transportation noise impacts from the nearby roadways; and
- Railway noise impacts from nearby rail lines; and
- Stationary noise impacts from surrounding commercial and industrial properties.

1.2 Nature of the Subject Lands

The site is located near the intersection of Cross Avenue and Lyons Lane. It is located on the south side of Cross Avenue. The Project site is currently occupied by a row of single residential homes and will be re-developed into a high-rise mixed-use development featuring one residential tower located on a podium.

The site plan of the proposed development is provided in Appendix A.

The proposed mixed-use development will include a 5-storey podium and a 38-storey tower (plus penthouse). The proposed development will also include bicycle storage space and building services on the ground floor and mezzanine. Floor 1 is for non-residential use (minus the lobby) and do not include noise-sensitive space. Floors 2 to 38 are for residential use, with indoor and outdoor amenity space included on Floors 2 and 6. There will be 3 levels of underground parking.

1.3 Nature of the Surroundings

To the north of the proposed development, across Cross Avenue, there are several commercial complexes including businesses such as Tim Hortons, Home Depot, Value Village, along with a variety of smaller retailers. Directly east of the proposed development is an office building, and further northeast is a rail station and GO bus terminal. Running along the south of the proposed development, parallel to Cross Avenue, is the Canadian National (CN) Oakville Subdivision rail line (Oakville Sub). The area surrounding the Project site has been under potential re-development for years, though none have been approved.

The site and surrounding area are shown in Figure 1.

2.0 Transportation Noise Impacts

Noise impacts from transportation sources were investigated in detail. Transportation noise sources considered in the assessment are indicated in Figure 1. Transportation noise sources of interest with the potential to produce noise at the proposed development are:

- Cross Avenue;



- Queen Elizabeth Way (QEW); and
- Rail traffic along the Oakville Subdivision rail line.

Sound exposure levels at the development due to these sources have been predicted, and this information has been used to identify façade, ventilation, and warning clause requirements.

2.1 Surface Transportation Noise Criteria

This section includes an overview of the relevant noise criteria for surface transportation.

2.1.1 Ministry of the Environment Publication NPC-300

2.1.1.1 Noise Sensitive Developments

Ministry of the Environment, Conservation and Parks (MECP) Publication NPC-300 provides sound level criteria for noise sensitive developments. The applicable portions of NPC-300 are Part C – Land Use Planning and the associated definitions outlined in Part A – Background. Tables 1 to 5 below summarize the applicable surface transportation (road and rail) criteria limits.

2.1.1.2 Location Specific Criteria

Table 1 summarizes criteria in terms of energy equivalent sound exposure (L_{eq}) levels for specific noise-sensitive locations. Both outdoor and indoor locations are identified, with the focus of outdoor areas being amenity spaces. Indoor criteria vary with sensitivity of the space. As a result, sleep areas have more stringent criteria than Living / Dining room space.

Table 1: MECP Publication NPC-300 Sound Level Criteria for Road and Rail Noise

Type of Space	Time Period	Equivalent Sound Exposure Level - L_{eq} (dBA)		Assessment Location
		Road	Rail ^[1]	
Outdoor Living Area (OLA)	Daytime (0700-2300h)	55	55	Outdoors ^[2]
Living / Dining Room ^[3]	Daytime (0700-2300h)	45	40	Indoors ^[4]
	Night-time (2300-0700h)	45	40	Indoors ^[4]
Sleeping Quarters	Daytime (0700-2300h)	45	40	Indoors ^[4]
	Night-time (2300-0700h)	40	35	Indoors ^[4]
Notes: [1] Whistle noise is excluded for OLA noise assessments and included for Living / Dining Room and Sleeping Quarter assessments. [2] Road and Rail noise impacts are to be combined for assessment of OLA impacts. [3] Residence area Dens, Hospitals, Nursing Homes, Schools, Daycares are also included. During the night-time period, Schools and Daycares are excluded. [4] An assessment of indoor noise levels is required only if the criteria in Table 4 are exceeded.				



2.1.1.3 Outdoor Amenity Areas

Table 2 summarizes the noise mitigation requirements for outdoor amenity areas (“Outdoor Living Areas” or “OLAs”). This would include the ground level patios/backyards and raised terraces.

Table 2: MECP Publication NPC-300 Outdoor Living Area Mitigation Requirements

Time Period	Equivalent Sound Level in Outdoor Living Area (dBA)	Mitigation Requirements
Daytime (0700-2300h)	< 55	None
	55 to 60 incl.	Noise barrier and Warning Clause B OR Warning Clause A
	> 60	Noise barrier to reduce noise to 55 dBA OR Noise barrier to reduce noise to 60 dBA and Warning Clause B

For the assessment of outdoor sound levels, the surface transportation noise impact is determined by combining road and rail traffic sound levels. Whistle noise due to railway trains is not included in the determination of levels, however warning bells for the GO train were included.

2.1.1.4 Ventilation and Warning Clauses

Table 3 summarizes requirements for ventilation where windows potentially would have to remain closed as a means of noise control. Despite implementation of ventilation measures where required, if sound exposure levels exceed the guideline limits in Table 1, warning clauses advising future occupants of the potential excesses are required.

Warning clauses also apply to the OLA, where an excess of up to 5 dBA over the 55 dBA OLA limit is often acceptable to many, particularly in the context of an urban environment.

Table 3: MECP Publication NPC-300 Ventilation & Warning Clause Requirements

Assessment Location	Time Period	Energy Equivalent Sound Exposure Level - L_{eq} (dBA), Road and Rail ^[1]	Ventilation and Warning Clause Requirements ^[2]
Outdoor Living Area	Daytime (0700-2300h)	56 to 60 incl.	Type A Warning Clause
		56 to 60 incl. with noise barrier	Type B Warning Clause
Plane of Window	Daytime (0700-2300h)	≤ 55	None
		56 to 65 incl.	Forced Air Heating with provision to add air conditioning + Type C Warning Clause
		> 65	Central Air Conditioning + Type D Warning Clause
	Night-time (2300-0700h)	51 to 60 incl.	Forced Air Heating with provision to add air conditioning + Type C Warning Clause



Assessment Location	Time Period	Energy Equivalent Sound Exposure Level - L_{eq} (dBA), Road and Rail ^[1]	Ventilation and Warning Clause Requirements ^[2]
		> 60	Central Air Conditioning + Type D Warning Clause
Notes: [1] Rail whistle noise is excluded. [2] Road and Rail noise is combined for determining Ventilation and Warning Clause requirements.			

2.1.1.5 Building Shell Requirements

Table 4 provides sound level thresholds which if exceeded, require the building shell and components (i.e., wall, windows) to be designed and selected accordingly to ensure that the Table 3 and Table 4 indoor sound criteria are met.

Table 4: MECP Publication NPC-300 Building Component Requirements

Assessment Location	Time Period	Energy Equivalent Sound Exposure Level - L _{eq} (dBA))		Component Requirements
		Road	Rail ^[1]	
Plane of Window	Daytime (0700-2300h)	> 65	> 60	Designed/ Selected to Meet Indoor Requirements ^[2]
	Night-time (2300-0700h)	> 60	> 55	
Notes:				
[1] Including whistle noise.				
[2] Building component requirements are assessed separately for Road and Railway noise. The resultant sound isolation parameter is required to be combined to determine an overall acoustic parameter.				

In addition to the building component criteria outlined in Table 4, NPC-300 also includes a façade construction requirement for rail noise only, outlined in Table 5. The façade construction requirements are necessary only if the development is located in the first row of dwellings.

Table 5: MECP Publication NPC-300 Rail Noise Façade Requirements

Assessment Location	Distance to Railway	$L_{eq} - 24hr$ ^{[1] [2]} (dBA)	Noise Control Requirement
Plane of Bedroom Window	Less than 100 m	< 60	No additional requirement
		> 60	Brick Veneer or Acoustic Equivalent Required
	Greater than 100 m	< 60	No additional requirement
		> 60	No additional requirement

Notes:

[1] Assessed for developments located within the first row of dwellings.

[2] Including whistle noise.



2.1.2 Halton Region

The Halton Region guidelines include the Noise Abatement Guidelines – Regional Official Plan Guidelines and the Land Use Compatibility Guidelines – Regional Official Plan Guidelines, both dated June 18, 2014. In general, the Halton Region guidelines are consistent with the MECP NPC-300 guidelines, with the exception of the barrier assessment.

2.2 Traffic Data and Future Projections

2.2.1 Roadway Traffic Data

For Cross Avenue, the annual average daily traffic (AADT) volume counts were obtained from the City of Oakville Traffic Volumes Map document from the year 2019. The AADT volume for Cornwall Road was taken from the same source, but counts were taken in the year 2018. The data was grown to 2039 using the City of Oakville's suggested 2% growth rate per annum. Day/Night split data was obtained from a previous report SLR completed around Kerr Street and Speers Road, an intersection situation within one kilometer of the proposed development. Vehicle breakdowns were determined from historic data at SLR for urban areas.

Traffic data for Queen Elizabeth Way (QEW) was obtained from the Ministry of Transportation Provincial Highway Traffic Volumes document for the year 2019 with the assumption that 75% of the trucks were heavy, and 25% were medium. The data was grown to 2039 at a 1% growth rate per annum. Day/night split data was obtained from historic data at SLR for urban areas and freeways.

Copies of traffic data used can be found in Appendix B. Table 6 summarizes the road traffic volumes used within the analysis.

Table 6: Summary of Road Traffic Data Used in the Transportation Noise Analysis

Roadway Link	Ultimate Traffic Volumes (AADT)	Day/Night Volume Split		Commercial Traffic Breakdown		Vehicle Speed (km/h)
		%Daytime	%Night-time	%Medium Trucks	%Heavy Trucks	
QEW	259,046	85	15	2.2	6.7	100
Cross Avenue	18,574	92	8	8.1	1.1	50
Cornwall Road	30,920	92	8	8.1	1.1	60

2.2.2 Railway Traffic Data

A request has been made to CN for updated rail volumes, but data was not received in time for this report. Freight and passenger traffic volumes for the CN Oakville Sub were obtained directly from CN (2018 study referenced above) and were assessed based on an annual growth rate of 2.5% to the year 2039. Future railway traffic data for the GO commuter trains were obtained directly from Metrolinx. Both electric and diesel volumes were provided on November 20, 2025. However, Metrolinx has requested that for acoustic assessments, all trains should employ diesel parameters. Based on the info received from Metrolinx, there is an anti-whistling by-law in this area and noise from train horns and whistles have not been assessed in this study. However, the GO train safety bells were included in the assessment. Copies of the rail traffic data are provided in Appendix B. The rail traffic data used in the assessment is summarized in Table 7:



Table 7: Summary of 2039 Rail Traffic Data Used in the Transportation Noise Analysis

Rail	Train Type	Number of Trains		Typical No. of Locomotives	Typical No. of Cars	Maximum Speed (km/h)
		Daytime (7am to 11pm)	Night-time (11pm to 7am)			
CN Freight	Diesel Locomotive	12	0	4	25	97
VIA Passenger	Diesel Locomotive	24	0	2	10	153
GO Metrolinx Commuter	Diesel Locomotive	354	54	1	10	129

2.3 Projected Sound Levels

Future road and rail traffic sound levels at the proposed development were predicted using Cadna/A, a software implementation of the internationally recognized ISO-9613-2 (1996) environmental noise propagation algorithms. Cadna/A/ISO-9613 is the preferred acoustic model of the MECP. The ISO-9613 equations account for:

- Source to receiver geometry;
- Distance attenuation;
- Atmospheric absorption;
- Reflections off of the ground and ground absorption;
- Reflections off of vertical walls; and
- Screening effects of buildings, terrain, and purpose-built noise barriers (noise walls, berms, etc.).

Roadways were modelled as line sources of sound, with sound emission rates calculated using ORNAMENT algorithms, the road traffic noise model of the MECP. These predictions are equivalent to those made using the MECP's ORNAMENT or STAMSON v5.04 road traffic noise models. A STAMSON validation file is included in Appendix B.

Future CN, VIA Rail, and GO Metrolinx rail sound levels at the proposed development were also predicted using the FTA/FRA modelling algorithms included in Cadna/A. FTA reference sound levels were used for diesel locomotives, and rail cars.

Noise from warning bells were modelled starting at a distance of 300 m from the station platform, which is a conservative distance based on historical observations made by SLR personnel. As the FTA/FRA reference sound levels are for warning horns, and not the typical bells associated with the GO trains, an adjustment was applied. An adjustment of -14 dB was used, based on the historical SLR sound data for a GO Train bell (approx. L_{max} of 96 dBA at 15m).



2.3.1 Façade Sound Levels

Sound levels were predicted along the façades of the proposed development using the “building evaluation” feature of Cadna/A. This feature allows for noise levels to be predicted across the entire façade of the structure.

Predicted worst-case façade sound levels are shown in Figure 2 and presented below in Table 8. Only the worst-case sound levels on each façade are presented.

Table 8: Summary of Transportation Façade Sound Levels

Location	Façade Direction	Roadway Sound Levels (dBA)		Railway Sound Levels (dBA)		Combined Road and Rail (dBA)	
		L _{eq} Day	L _{eq} Night	L _{eq} Day	L _{eq} Night	L _{eq} Day	L _{eq} Night
Podium	North	70	65	55	48	70	65
	East	69	64	68	62	70	64
	South	58	52	70	64	70	64
	West	67	62	67	60	70	64
Tower	North	70	65	55	48	70	65
	East	68	62	68	61	70	65
	South	57	51	70	64	70	64
	West	68	63	66	60	70	65

Notes: Sound levels shown are the maximum for the entire building façade.

2.3.2 Outdoor Living Area Sound Levels

Two common outdoor living areas (OLAs) are currently planned for the proposed development as shown in Appendix A, one on Level 7 (podium rooftop) and one on Level 2 (Level 1 rooftop). For the purposes of assessing the impacts of the common OLAs four points of reception have been modeled to determine sound levels.

As the development includes a common amenity space for all occupants, the private terraces are not considered to be the only outdoor amenity space available. Therefore, an assessment of private terraces was excluded based on the definitions outlined in NPC-300. Landscaped areas at grade are publicly accessible and have not been included as an Outdoor Living Area based on the definitions outlined in NPC-300.

The predicted road and rail noise impacts on the OLAs are shown Figure 3 and are summarized in Table 9:



Table 9: Summary of Predicted Outdoor Living Area Sound Levels

ID	Location	Transportation Impacts L_{eq} Day (dBA)	Applicable Guideline Limit L_{eq} Day (dBA)	Meets Criteria? (Yes/No)
OLA 1	On Top of Podium	71	55 ^[1]	No
OLA 2	On Top Level 1 Roof	70	55 ^[1]	No
OLA 3	On Top Level 1 Roof	70	55 ^[1]	No
OLA 4	On Top Level 1 Roof	70	55 ^[1]	No
Notes: [1] NPC 300 and its predecessors require 55 dBA as the outdoor amenity limit. In cases where mitigation may not be technically, economically, and administratively feasible, a tolerance of up to 5 dB may be permitted with a warning clause.				

Sound levels are predicted to be above 55 dBA for the outdoor amenity spaces; therefore, an assessment of noise control measures is required.

2.4 Façade Assessment

2.4.1 Façade Recommendations

An assessment of indoor noise levels is required providing the façade sound levels due to:

- road traffic exceeding 65 dBA during the daytime or 60 dBA during the night-time periods, or
- rail traffic exceeding 60 dBA during the daytime or 55 dBA during the night-time periods.

Based on the noise levels shown in Table 8 the façade sound levels are predicted to be above the criteria at multiple façades of the development.

Indoor sound levels and required facade Sound Transmission Classes (STCs) were estimated at the façades identified above using the procedures outlined in National Research Council Building Practice Note 56 (BPN-56).

Detailed floor plans and elevation drawings were not available at the time of the assessment. The preliminary façade requirements analysis is therefore based on the following assumptions, to provide an indication of require building components for the proposed development.

- Non-glazing portions of the exterior walls are assumed to have a rating and STC 43 (spandrel panel) for mixed-use buildings.
- For mixed-use buildings, 70% of the exterior facade is vision glass/patio doors for living/dining rooms, and 50% for bedrooms. Living/dining rooms are assumed to have intermediate absorption, while bedrooms are assumed to be very absorptive.
- The façade-to-floor area ratio is assumed to be 50% for living/dining rooms, and 100% for bedrooms.

The worst-case building façade requirements based on the road traffic sound levels and assumptions listed above are outlined in Table 10.



Table 10: Summary of Façade STC Requirements

Building	Façade Direction	Living Room (STC)	Bedroom (STC)
Podium	North	OBC (28)	OBC (28)
	East	32	32
	South	32	32
	West	30	30
Tower	North	OBC (28)	OBC (28)
	East	31	31
	South	32	32
	West	30	30

The combined glazing and frame assembly must be designed to ensure the overall sound isolation performance for the entire window unit meets the sound isolation requirements. It is recommended window manufacturers test data be reviewed to confirm acoustical performance is met.

As the proposed development is further away than 100m to the closest rail track, no additional special façade wall upgrade requirements as listed in Table 5 are required.

The glazing requirements stated are approximated, based on the generic room, façade and glazing dimensions. Once detailed floor plans and façade plans become available, the glazing requirements should be re-assessed and reviewed by an Acoustical Consultant.

2.4.2 Ventilation and Warning Clause Requirements

The requirements regarding warning clauses are summarized in Table 3. Based on the predicted sound levels, warning clauses are recommended to be included in agreements registered on Title for the residential units and included in all agreements of purchase and sale or lease, and all rental agreements.

Central Air Conditioning and a Type D Warning Clause is recommended for all residential units for the proposed development as sound levels are predicted to be above 65 during the daytime hours and/or 60 dBA during night-time hours.

In addition, CN and Metrolinx Warning Clauses are required for all blocks of the development. Warning clause text can be found in Appendix C.



2.5 Outdoor Living Areas Requirements

2.5.1 Acoustic Barriers

An evaluation of acoustic barriers was completed for OLAs. Barriers along the perimeter of each outdoor amenity space were considered. Table 11 summarizes the predicted OLA sound levels with acoustic barriers at different heights.

Table 11: Summary of OLA Acoustic Barrier Modelling

Building Section	Location	ID	Barrier Height (m)	Transportation Noise Levels Leq Day (dBA)	Applicable Guideline Limit Leq Day (dBA) ^[1]
Podium Rooftop	Level 7	OLA 1	No barrier	71	55
			1	70	55
			2	64	55
			3	61	55
			4	59	55
Level 1 Rooftop	Level 2	worst case of: OLA 2 OLA 3 OLA 4	No barrier	70	55
			1	70	55
			2	65	55
			3	58	55
			4	56	55

Notes: [1] NPC 300 and its predecessors require 55 dBA as the outdoor amenity limit. In cases where mitigation may not be technically, economically, and administratively feasible, a tolerance of up to 5 dB may be permitted, subject to feasibility.

A barrier height limit of 4 m may be considered feasible. Heights beyond this are understood to be infeasible from a structural and architectural perspective.

As shown in Table 11, 4 m tall barriers are required to reduce sound levels to below 60 dBA for each OLA. Achieving the 55 dBA limit is not feasible, however, the allowable 5 dBA tolerance, resulting in a 60 dBA target, is met.

A maximum height of 4 m was applied to the perimeter barriers for the Level 2 and 7 OLAs as discussed above. The results, based on 4 m high perimeter barriers are shown in Figure 4 and summarized in Table 12 below.

Table 12: Summary of Recommended Acoustic Barriers

Building Section	Location	ID	Barrier Height (m)	Transportation Noise Level Leq Day (dBA)	Applicable Guideline Limit Leq Day (dBA)	Notes
Podium Rooftop	Level 7	OLA 1	4	59	55 ^[1]	• Outside perimeter barrier • Height = 4 m • Approx. length of 45 m
Level 1 Rooftop	Level 2	OLA 2	4	56	55 ^[1]	• Outside perimeter barrier • Height = 4 m • Approx. length of 55 m
		OLA 3	4	56	55 ^[1]	
		OLA 4	4	56	55 ^[1]	
Notes: [1] NPC 300 and its predecessors require 55 dBA as the outdoor amenity limit. In cases where mitigation may not be technically, economically, and administratively feasible, a tolerance of up to 5 dB may be permitted, subject to feasibility.						



The parapet acoustic barriers could be composed of solid walls or glass/ plexiglass panels. The panels should be selected so that they have sufficient mass to adequately attenuate the noise (generally a minimum of 20 kg/m² face density). The panels and frames should be free of gaps and cracks on the sides and bottom. The system should also be designed to withstand any wind loading.

2.5.2 Warning Clause Requirements

As physical mitigation will be required for the common outdoor amenity areas, a Type B warning clause is required. Warning clause text can be found in Appendix C.

3.0 Transportation Vibration Impacts

The vibration criteria for this project and those for both CN and Metrolinx.

For rail activity along the Oakville Sub line, the applicable vibration limits for CN trains are found in the RAC/FCM, 2013 Report *Guidelines for New Development in Proximity to Rail Lines*. In addition, Metrolinx also has their own 2010 *Principal Main Line Requirements for New Development* document.

The recommended minimum vibration influence area to be considered is 75 metres from a railway corridor or rail yard. The proposed development is 130 metres away from the Oakville Subdivision rail line, therefore a vibration study is not required for this project.

4.0 Stationary Source Noise Impacts

4.1 Guidelines Considered in This Assessment

The MECP Noise Guideline Publication *NPC-300 – Environmental Noise Guideline, Stationary and Transportation Sources* was considered in this assessment.

4.1.1 MECP NPC-300 Guidelines for Stationary Noise Sources

The applicable noise guidelines for new industrial land uses and new residential development are provided in the NPC-300, which sets out noise limits for two main types of noise sources:

- Non-impulsive, “continuous” noise sources such as ventilation fans, mechanical equipment, and vehicles while moving within the property boundary of an industry. Continuous noise is measured using 1-hour average sound exposures (L_{eq} (1-hr) values), in dBA; and
- Impulsive noise, which is a “banging” type noise characterized by rapid rise time and decay. Impulsive noise is measured using a logarithmic mean (average) level (L_{LM}) of the impulses in a one-hour period, in dBA.

No impulsive noise sources were observed to be present during the site visit by SLR personnel or would be anticipated based on the types of surrounding land uses. Impulsive noise impacts are not assessed further.



Furthermore, the guideline requires an assessment at, and provides separate guideline limits for both:

- Outdoor points of reception (e.g., back yards, communal outdoor amenity areas); and
- Plane of windows on the outdoor facade which connect onto noise sensitive spaces, such as living rooms, dens, eat-in kitchens, dining rooms and bedrooms.

The applicable noise limits at a point of reception are the higher of:

- The existing ambient sound level due to road traffic, or
- The exclusion limits set out in the guideline.

The ambient noise in the surrounding area was consistent of an urban environment and generally dominated by road traffic noise.

4.1.2 Proposed Area Classification

Based on the nature of the area, the Class 1 area urban sound level limits apply. The area is urban in nature and dominated by man-made sounds, including road traffic noise, rail traffic noise and local commercial operations.

4.1.3 MECP Stationary Noise Criteria

The NPC-300 stationary source noise requirements are summarized in Table 13 below for steady sound sources for outdoor and plane-of-window receptor locations in Class 1 areas.

Table 13: NPC-300 Exclusion Limits ($L_{eq}(1\text{-hr})$, dBA)

Time of Day	Class 1 Area	
	Planes of Windows of Noise Sensitive Spaces	Outdoor Points of Reception
Daytime Period 7 am to 7 pm	50	50
Evening Period 7 pm to 11 pm	50	50
Nighttime Period 11 pm to 7 am	45	n/a

Before applying the NPC-300 exclusionary limits to this study, an analysis of the ambient sound levels is conducted.

4.1.4 Ambient Sound Levels and Guideline Limits

It was noted that the acoustic environment surrounding the proposed development site is dominated by the roadway noise from Cross Avenue and Queen Elizabeth Way (QEW). As NPC-300 allows for the higher of the existing ambient sound level or the exclusion limits, an assessment of roadway noise ambient levels was completed.

The same AADT vehicle break-down percentages data described in Section 2.2.1 was used for the ambient sound level analysis. Cross Avenue and QEW used data from the year 2019, and Cornwall Road used data from 2018. The hourly volume breakdowns and vehicle breakdowns were determined from historic data at SLR for urban areas and freeways. Copies of all traffic



data used and calculations can be found in Appendix B. Table 14 summarizes the road traffic volumes used in the analysis.

Table 14: Summary of Ambient Road Traffic Data

Roadway	Existing Traffic Volume (AADT)	Minimum Hourly Percentages			% Commercial Traffic Breakdown		Vehicle Speed (km/h)
		Daytime 7am – 7pm	Evening 7pm-11pm	Nighttime 11pm-7am	Medium Trucks	Heavy Trucks	
QEW	212,300	5.1%	3.8%	0.7%	2.2	6.7	100
Cross Avenue	12,500	4.3%	3.1%	0.4%	8.1	1.1	50
Cornwall Road	20,400	4.3%	3.1%	0.4%	8.1	1.1	60

Existing road traffic was modelled using Cadna/A. Roadways were modelled as line sources of sound, with sound emission rates calculated using the ORNAMENT algorithms, the road traffic noise model of the MECP. These predictions were validated and are equivalent to those made using the MECP's ORNAMENT or STAMSON v5.04 road traffic noise models. The STAMSON v5.04 results are included in Appendix B.

The calculated ambient (background) sound levels, shown in Figure 5, are summarized in Table 15. The Figure conservatively shows evening levels and night time levels only as the daytime levels are higher than both.

Table 15: Calculated Background Sound Levels During Minimum Traffic Hours ($L_{eq}(1\text{-hr})$, dBA)

Location	Background Sound Levels		
	L_{eq} Day	L_{eq} Evening	L_{eq} Night
Facades			
Podium North	67-68	66-67	56-59
Podium East	64-66	63-65	55-57
Podium South	52-56	50-54	42-46
Podium West	65-66	64-65	56-57
Tower North	67-69	66-67	59-60
Tower East	61-65	63-65	56-57
Tower South	53-55	51-53	43-45
Tower West	65-66	64-66	57-58
Outdoor Points of Reception			
OPOR 1	68	67	N/A
OPOR 2	57	56	N/A
OPOR 3	54	53	N/A



Location	Background Sound Levels		
	Leq Day	Leq Evening	Leq Night
OPOR 4	53	52	N/A
Notes: Level represents impacts on entire façade. N/A – Not applicable, OPORs are only assessed during daytime/evening hours.			

The higher value of the applicable exclusion limit or the predicted background sound level for Class 1 is taken for each building façade and outdoor point of reception and summarized in Table 16.

Table 16: Class 1 Limits for Each Point of Reception ($L_{eq}(1\text{-hr})$, dBA)

Location	Greater of Class 1 Guideline Limit or Background Level		
	Day	Evening	Night
Facades			
Podium North	67-68	66-67	56-59
Podium East	64-66	63-65	55-57
Podium South	52-56	50-54	45-46
Podium West	65-66	64-65	56-57
Tower North	67-69	66-67	59-60
Tower East	61-65	63-65	56-57
Tower South	53-55	51-53	45
Tower West	65-66	64-66	57-58
Outdoor Points of Reception			
OPOR 1	67	66	N/A
OPOR 2	56	54	N/A
OPOR 3	53	52	N/A
OPOR 4	52	50	N/A
Notes: N/A – Not applicable, OPORs are only assessed during daytime/evening hours.			

4.2 Modelled Stationary Sources

A review has been conducted for the potential impacts on the development from “stationary” noise. Significant noise sources which have the potential to operate were identified from site visits conducted on November 18, 2025, and a review of aerial photography. These sources include the HVAC units on the rooftops of the various businesses to the north, and the office building east. Additional stationary sources in the review included idling cars in the Tim Hortons drive-through and idling trucks/forklifts within the Home Depot loading bay area. Surrounding local sources considered in this assessment are shown in Figure 6.

A screening level acoustic model to evaluate predictable worst-case sound levels was prepared for each of the facilities identified in Section 4.0 above, considering the information contained in Table 17.



Table 17: Modelled Noise Sources

Facility	Modelled Noise Sources
Professional Building 136 Cross Ave	• Sources: HVAC unit • Operating hours: 5 am – 11 pm, 7 days a week.
Master Auto Lube & Tires 142 Cross Ave	• Sources: HVAC units, air compressor, impact wrench • Operating hours: Varies, 8 am – 6 pm, 7 days a week.
Transformer Station 539 Lyons Lane	• Sources: Transformer • Operating hours: 24 hours, 7 days a week.
Tim Hortons 111 Cross Ave	• Sources: HVAC units and idling vehicles. • Operating hours: 5 am – 11 pm, 7 days a week.
The Home Depot 99 Cross Ave	• Sources: HVAC units and trucks idling at loading bay. • Operating hours: Varies, 6 am – 9 pm, 7 days a week.
Various Retail Stores & Restaurant 105 Cross Ave, 117 Cross Ave, & 125 Cross Ave	• Sources: HVAC units and exhaust fan. • Operating hours: Varies, 8 am – 12 am, 7 days a week.

Sound level data was taken from SLRs' database of similar equipment. A summary of the sound power levels used in the assessment is included in Appendix D.

4.3 Stationary Noise Modelling and Results

Sound levels from stationary sources were modelled using Cadna/A.

The following additional parameters were used in the modelling, which are consistent with providing a conservative (predictable worst-case assessment of sound levels):

- Source to receiver geometry;
- Distance attenuation;
- Atmospheric absorption;
- Reflections from the ground;
- Reflections from vertical walls; and
- Screening effects of buildings, terrain, and noise barriers.

The following additional parameters were used in the modelling, which are consistent with providing a conservative (worst-case) assessment of noise levels:

- Temperature: 10°C;
- Relative Humidity: 70%;
- Ground Absorption G: G=0.2 as default global parameter;
- Reflection: An order of reflection of 1 was used (accounts for noise reflecting from walls);
- Wall Absorption Coefficients: Set to 0.21 (21 % of energy is absorbed, 79% reflected); and



- Terrain: ground height contours were modelled to account for variances in grade in the surrounding area.

The building evaluation feature of Cadna/A was used to assess facade sound levels on the conceptual development building. Outdoor Points of Reception (OPOR) sound levels were assessed at a height of 1.5 m relative to the roof. The OPORs assessed are the outdoor amenity areas on Level 2 and Level 7 of the proposed development

A summary of the sound levels used in the analysis and equipment operating conditions are included for reference in Appendix D. All surrounding stationary sources were assessed cumulatively.

The predicted façade and OPOR sound levels from stationary noise sources are presented in Figure 7 and summarized in Table 18.

Table 18: Predicted Sound Levels – Cumulative Stationary Sources (L_{eq} (1-hr), dBA)

Location	Predicted Sound Level			Meets Class 1 Applicable Limit?
	Day	Evening	Night	
Facades				
Podium North	54	54	51	Yes
Podium East	53	53	50	Yes
Podium South	47	47	44	Yes
Podium West	52	52	49	Yes
Tower North	54	54	51	Yes
Tower East	53	53	49	Yes
Tower South	46	46	43	Yes
Tower West	52	52	50	Yes
Outdoor Points of Reception				
OPOR 1	53	53	N/A	Yes
OPOR 2	36	36	N/A	Yes
OPOR 3	33	33	N/A	Yes
OPOR 4	31	31	N/A	Yes
Notes: N/A – Not applicable, OPORs are only assessed during daytime/evening hours.				

The proposed development has no exceedances of the sound level limit from stationary sources.

4.3.1 Recommended Mitigation Measures for the Proposed Development

The following preliminary mitigation measures are recommended for the proposed development with respect to stationary noise.

- An MECP Type E warning clauses is recommended for all residential units, to inform occupants of the proximity of the proposed development to surrounding commercial and industrial facilities.



See Appendix C for recommended warning clause details. The warning clause should be included in documents registered on Title and included in all agreements of purchase and sale or lease and all rental agreements.

5.0 Noise Impacts Proposed Development Stationary Sources

Impacts of the proposed development on itself are anticipated to be negligible. At the time of this assessment, the proposed development's mechanical systems have not been sufficiently designed.

If common mechanical systems will be implemented as part of the proposed development, the impacts from all equipment should comply with the MECP Publication NPC-300 guideline limits. For the mechanical equipment that is to be included with proposed development, the potential impacts should be assessed as part of the final building design. The criteria can be met at all surrounding and on-site receptors by the appropriate selection of mechanical equipment, by locating equipment with sufficient setback from noise sensitive locations, and by incorporating control measures (e.g., silencers) into the design. This can be confirmed at either the site plan approval or building permit approval stages.

If individual air conditioning systems are to be implemented for each residential unit for the proposed site, the sound levels from each unit should meet MECP Publication NPC-216.

6.0 Proposed Development Mechanical Equipment

The building mechanical systems have not been designed at this time. Impacts of the proposed development on the surrounding area are still anticipated to be negligible. If the proposed development has to meet at its own noise sensitive uses, it will meet at the surrounding receptors.

If common mechanical systems will be implemented as part of the proposed development, such equipment has the potential to result in noise impacts on residential spaces within the development. This equipment is required to meet MECP Publication NPC 300 requirements at the facades of the noise sensitive spaces within the development. Therefore, the potential impacts should be assessed as part of the final building design. The criteria are expected to be met at all on-site receptors with the appropriate selection of mechanical equipment, by locating equipment to minimize noise impacts within the development, and by incorporating control measures (e.g., silencers) into the design.

If individual air conditioning systems are to be implemented for each residential unit for the proposed site, there will be very little chance of offsite impacts as compliance is required to be met onsite.

It is recommended the mechanical systems be reviewed by an acoustical professional prior to final selection of equipment.



7.0 Conclusions and Recommendations

The potential for noise impacts on and from the proposed development have been assessed. Impacts of the environment on the development, the development on itself, and the development on the surrounding area have been considered. Based on the results of our studies, the following conclusions have been reached:

7.1 Transportation Noise

- An assessment of transportation noise impacts has been completed for the surrounding roadways.
- The combined glazing and frame assembly must be designed to ensure the overall sound isolation performance for the entire window unit meets the sound isolation requirements outline in Table 10.
- The common outdoor amenity areas require physical mitigation and a Type B warning clause.
- Requirement for central air-conditioning and a Type D warning clause are required for building façades in every direction.

7.2 Transportation Vibration

- Since the development is well over 75 metres away from the rail corridor, vibration levels from the trains on the Oakville Sub are expected to meet the 0.14 mm/s RMS criterion at the nearest development façade and therefore, a detailed assessment was not completed.

7.3 Stationary Noise

- Stationary noise impacts were assessed against the MECP NPC-300 Class 1 Area criteria, as outlined in Section 4.0 of this report.
- A Type E noise warning clause is recommended, as outlined in Section 4.3.1, due to the general noise from the surrounding industries and commercial properties. Warning clauses are included in Appendix C.

7.4 Overall Assessment

- Impacts of the environment on the proposed development can be adequately controlled through the feasible mitigation measures, façade designs, and warning clauses detailed in Sections 2.0, 3.0, and 4.0 of this report.
- Impacts of the proposed development on itself are anticipated to be negligible and can be adequately controlled by following the design guidance outlined in Section 5.0 of this report.
- Impacts of the proposed development on the surrounding area are anticipated to be negligible and can be adequately controlled by following the design guidance outlined in Section 6.0 of this report.



- Glazing requirements above are approximated, based on the generic room, façade and glazing dimensions. Once detailed floor plans and façade plans become available, the glazing requirements should be re-assessed and reviewed by an Acoustical Consultant.
- Given the early stage of design and the conservative analysis that has been completed, the acoustical requirements above should be refined by an Acoustical Consultant as part of the future site plan approval application.

8.0 Closure

Should you have any questions on the above study, feel free to contact the undersigned.

Sincerely,

Regards,

SLR Consulting (Canada) Ltd.



Dylan Diebolt, B.Sc.
Acoustics Consultant



Aaron K. Haniff, P.Eng.
Principal, Acoustics Engineer



9.0 References

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- Ontario Ministry of the Environment, Conservation & Parks (MECP, 1996), STAMSON v5.04: Road, Rail and Rapid Transit Noise Prediction Model.
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Figures

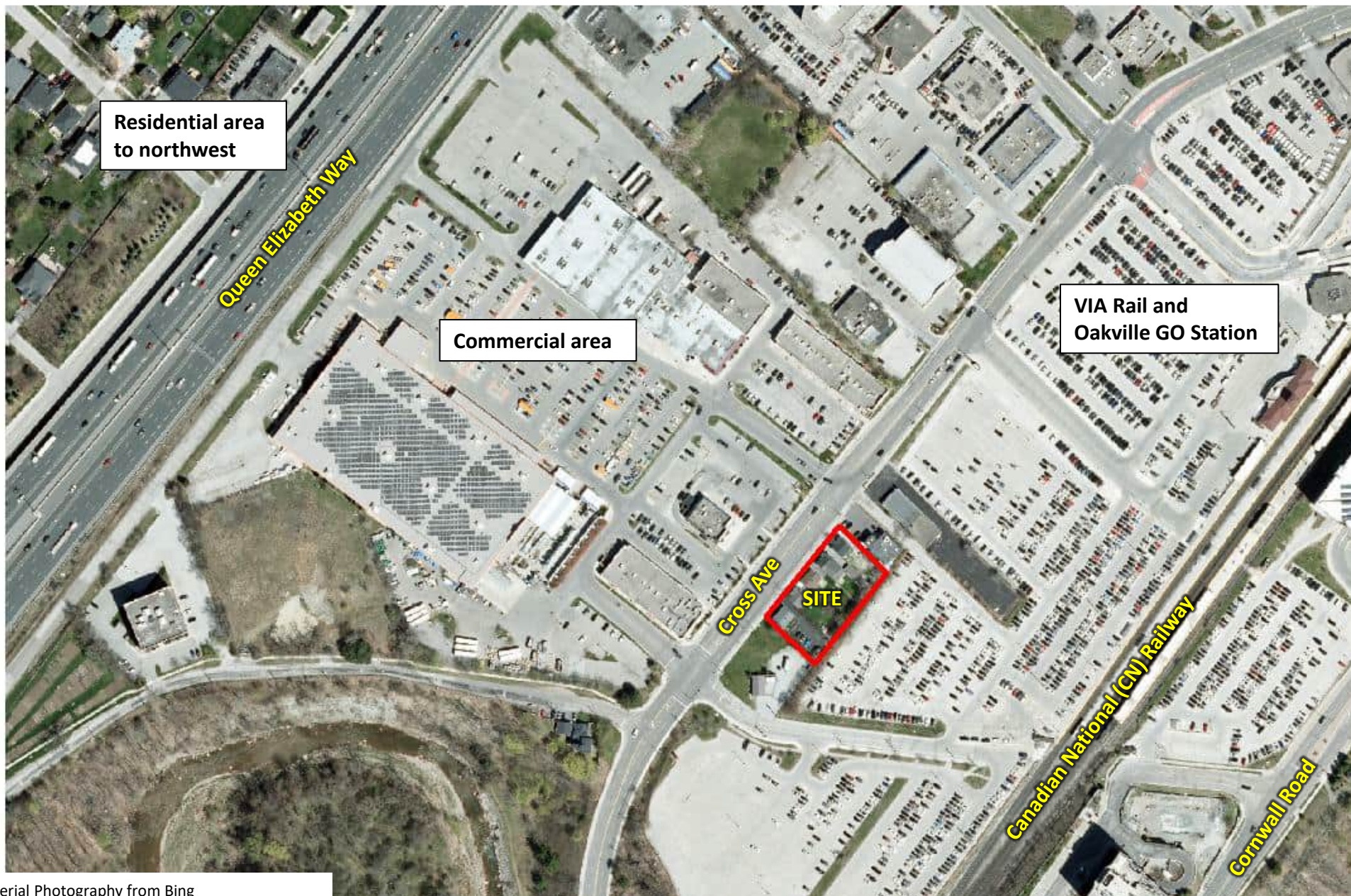
Environmental Noise and Vibration Study

118 Cross Avenue, Oakville, Ontario

Batory Planning + Management

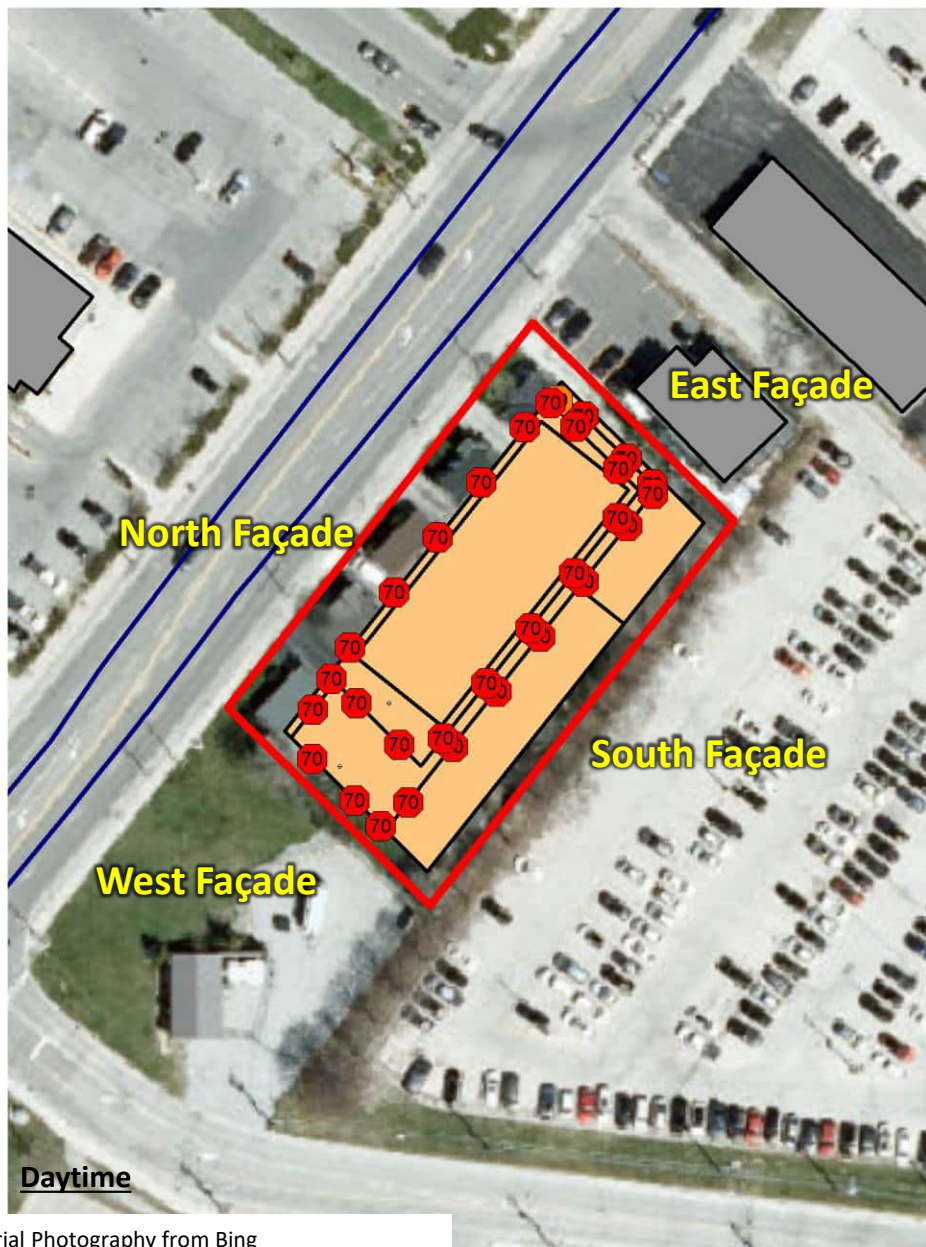
SLR Project No.: 241.031814.00001

August 21, 2026



Aerial Photography from Bing

BATORY PLANNING + MANAGEMENT		True North 	Scale: 1:3,000		METRES	
118 CROSS AVENUE – OAKVILLE, ONTARIO			Date: August 2026	Rev 0.0	Figure No.	
SITE AND CONTEXT PLAN			Project No. 241.031814.00001		1	



Aerial Photography from Bing



BATORY PLANNING + MANAGEMENT

118 CROSS AVENUE – OAKVILLE, ONTARIO

PREDICTED TRANSPORTATION NOISE SOUND LEVELS – OVERALL

True North



Scale: 1:1,000

Date: August 2026

Rev 0.0

Project No. 241.031814.00001

METRES

Figure No.

2





Aerial Photography from Bing

BATORY PLANNING + MANAGEMENT

118 CROSS AVENUE – OAKVILLE, ONTARIO

PREDICTED TRANSPORTATION NOISE SOUND LEVELS AT OLAS – OVERALL – UNMITIGATED

True North



Scale: 1:1,000

Date: August 2026 Rev 0.0

Project No. 241.031814.00001

METRES

Figure No.

3





Aerial Photography from Bing

BATORY PLANNING + MANAGEMENT

118 CROSS AVENUE – OAKVILLE, ONTARIO

PREDICTED TRANSPORTATION NOISE SOUND LEVELS AT OLAS – OVERALL – MITIGATED

True North



Scale: 1:1,000

Date: August 2026

Rev 0.0

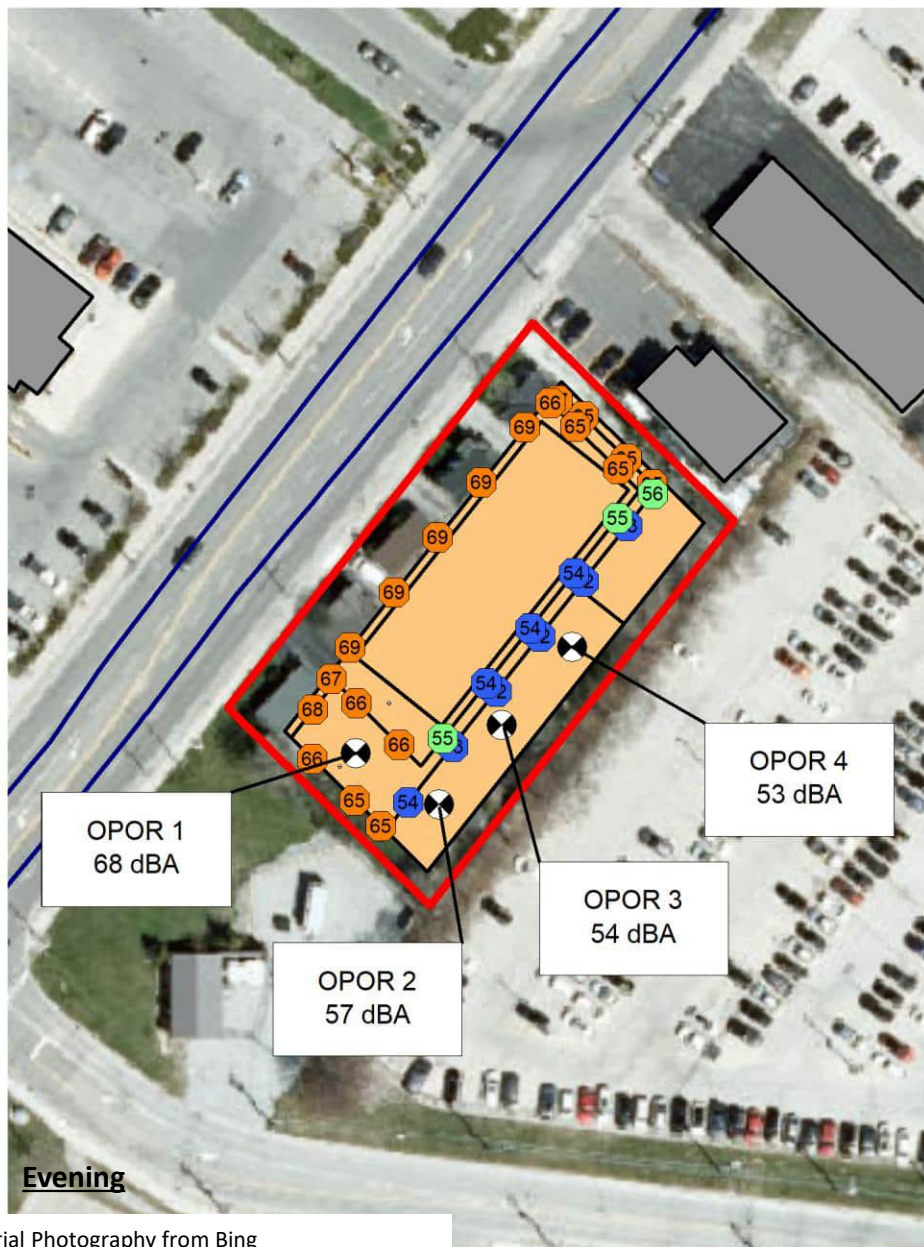
Project No. 241.031814.00001

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Figure No.

4





Aerial Photography from Bing



BATORY PLANNING + MANAGEMENT

118 CROSS AVENUE – OAKVILLE, ONTARIO

PREDICTED AMBIENT SOUND LEVELS

True North



Scale: 1:1,000

Date: August 2026

Rev 0.0

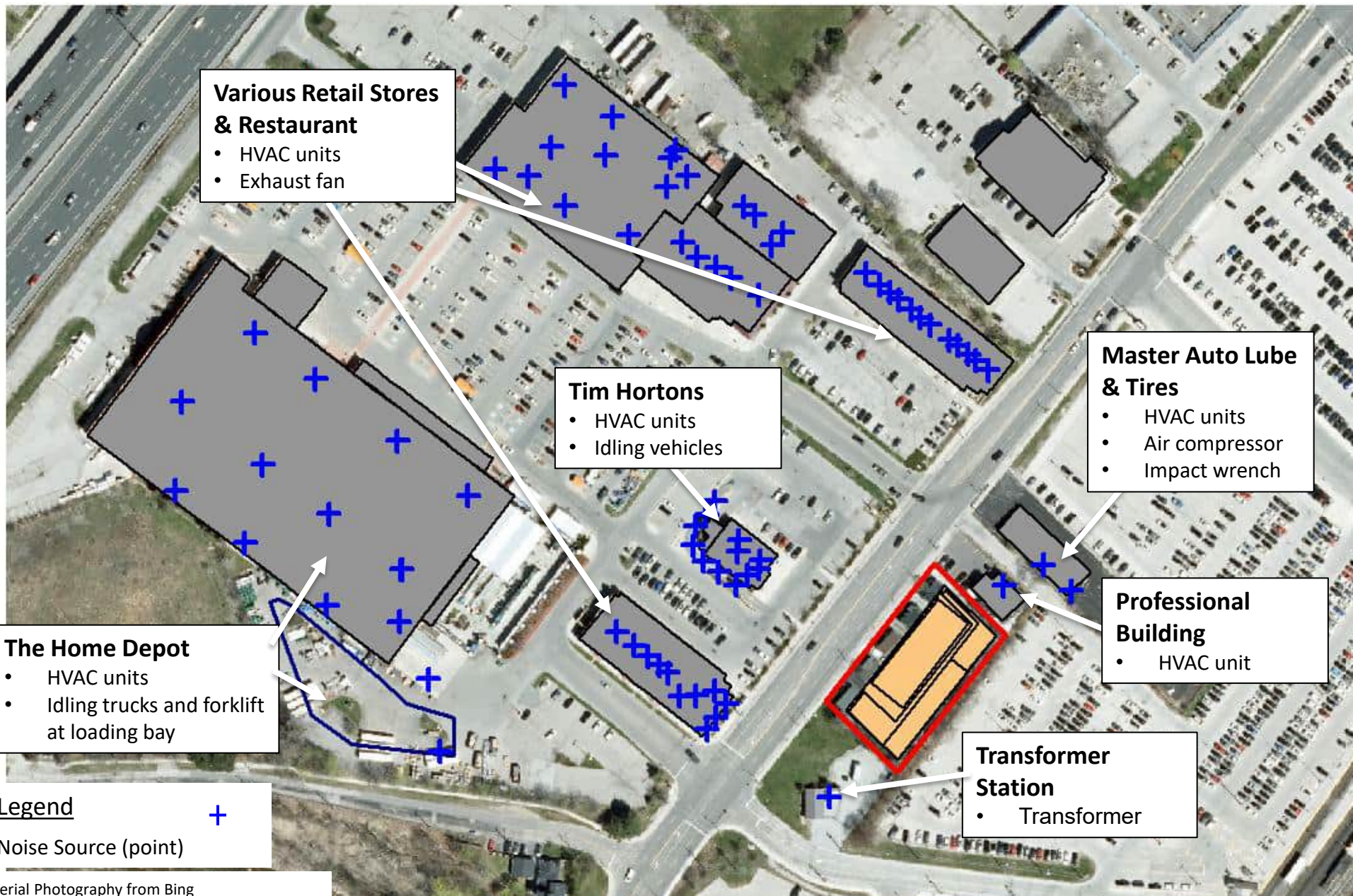
Project No. 241.031814.00001

METRES

Figure No.

5





BATORY PLANNING + MANAGEMENT

118 CROSS AVENUE – OAKVILLE, ONTARIO

MODELLED STATIONARY NOISE SOURCE LOCATIONS

True North



Scale:

1:2,000

METRES

Date: August 2026

Rev 0.0

Figure No.

6

Project No. 241.031814.00001





Aerial Photography from Bing



BATTERY PLANNING + MANAGEMENT

118 CROSS AVENUE – OAKVILLE, ONTARIO

PREDICTED STATIONARY NOISE SOUND LEVELS

True North



Scale: 1:1,000

Date: August 2026

Rev 0.0

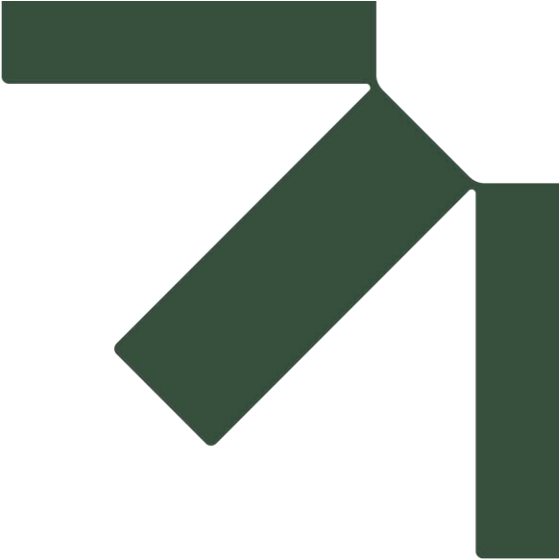
Project No. 241.031814.00001

METRES

Figure No.

7





Appendix A Development Drawings

Environmental Noise and Vibration Study

118 Cross Avenue, Oakville, Ontario

Batory Planning + Management

SLR Project No.: 241.031814.00001

August 21, 2026



BDP. Quadrangle

Quadrangle Architects Limited
The Well, 8 Spadina Avenue, Suite 2100, Toronto, ON M5V 0S8
t 416 598 1240 www.bdpquadrangle.com

118-132 Cross Avenue

Oakville, ON

for
Batory Planning and Management

Project No. 23031
Date 27 JULY 2026
Issued for Official Plan and Zoning Bylaw Amendment Application

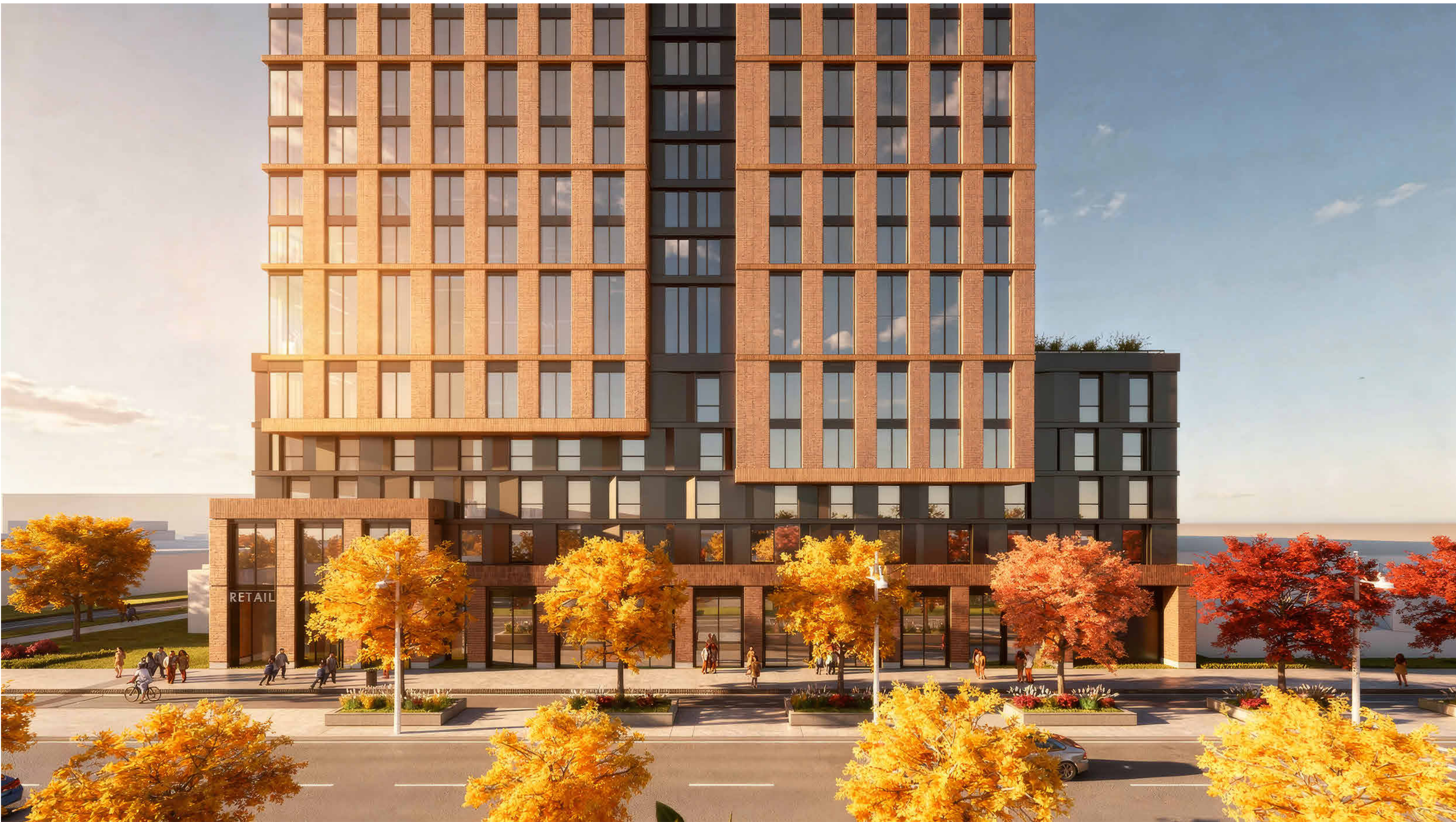
ARCHITECTURAL DRAWINGS

A000.S	Cover Page
A001.S	Visualization Images
A100.S	Statistics
A101.S	Site Plan
A151.S	P3 and P3 Lower Parking Plans
A152.S	P1 and P2 Parking Plans
A201.S	Ground Floor Plan
A202.S	Floors 2 and 3 Plans
A203.S	Floors 4 and 5 Plans
A204.S	Floor 6 and Typical Tower Floors (L7-L38)
A205.S	MPH and Roof Plans
A401.S	Building Elevations - North and East
A402.S	Building Elevations - South and West
A451.S	Building Sections





VIEW 1: LOOKING SOUTH ALONG CROSS AVENUE



VIEW 2: LOOKING SOUTHEAST FROM CROSS AVENUE

Date	No.	Description
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REVISION RECORD

27-07-2026		Official Plan and Zoning Bylaw Amendment Application
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ISSUE RECORD

BDP.
Quadrangle

Quadrangle Architects Limited
901 King Street West, Suite 701 Toronto, ON M5V 3H5
t 416 598 1240 www.bdpquadrangle.com

118-132 Cross Avenue

Oakville, ON
for
Batory Planning and
Management

23031	ER	SK
PROJECT SCALE	DRAWN	REVIEWED

Visualization Images

A001.S

Note: This drawing is the property of the Architect and may not be reproduced or used without the expressed consent of the Architect. The Contractor is responsible for checking and verifying all levels and dimensions and shall report all discrepancies to the Architect and obtain clarification prior to commencing work.

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BUILDING AREA

Gross Floor Area Summary by Use	
Use	GFA
NON-RESIDENTIAL	580.5 m²
RESIDENTIAL	31,389.5 m²
TOTAL GROSS FLOOR AREA	31,980.1 m²

Gross Floor Area Breakdown				
Typical Levels	Floor Count	Use	Area per Floor	GFA
FLOORS 7-38	32	RESIDENTIAL	794 m²	25,417.8 m²
FLOOR 7			794 m²	25,417.8 m²
FLOOR 6	1	RESIDENTIAL	794 m²	794.3 m²
FLOOR 6			794 m²	794.3 m²
FLOOR 5	1	RESIDENTIAL	1,077 m²	1,076.9 m²
FLOOR 5			1,077 m²	1,076.9 m²
FLOOR 4	1	RESIDENTIAL	1,049 m²	1,049.1 m²
FLOOR 4			1,049 m²	1,049.1 m²
FLOOR 3	1	RESIDENTIAL	1,027 m²	1,027.3 m²
FLOOR 3			1,027 m²	1,027.3 m²
FLOOR 2	1	NON-RESIDENTIAL	274 m²	274.1 m²
FLOOR 2	1	RESIDENTIAL	814 m²	814.3 m²
FLOOR 2			1,088 m²	1,088.4 m²
GROUND FLOOR	1	NON-RESIDENTIAL	306 m²	306.4 m²
GROUND FLOOR	1	RESIDENTIAL	1,220 m²	1,219.7 m²
GROUND			1,526 m²	1,526.2 m²
TOTAL GROSS FLOOR AREA			7,357 m²	31,980.1 m²

Gross Building Area- Summary*

Name	Floor Count	GBA
GROSS BUILDING AREA	42	37,915.6 m²

* Includes above and below grade levels, with no area exclusions (excludes open to below areas).

Gross Building Area- Above Grade*

Level	Floor Count	Area per Floor	GBA
MECHANICAL PENTHOUSE	1	497.5 m²	497.5 m²
FLOORS 7-38	32	794.3 m²	25,417.8 m²
FLOOR 6	1	794.3 m²	794.3 m²
FLOOR 5	1	1,076.9 m²	1,076.9 m²
FLOOR 4	1	1,049.1 m²	1,049.1 m²
FLOOR 3	1	1,027.3 m²	1,027.3 m²
FLOOR 2	1	1,088.4 m²	1,088.4 m²
GROUND FLOOR	1	1,526.2 m²	1,526.2 m²
TOTAL ABOVE-GRADE GROSS BUILDING AREA	39		32,477.6 m²

* Excludes open to below areas.

Gross Building Area - Below Grade

Level	Floor Count	Area per Floor	GBA
P1	1	1,813 m²	1,812.7 m²
P2	1	1,813 m²	1,812.7 m²
P3	1	1,813 m²	1,812.7 m²
TOTAL BELOW-GRADE GROSS BUILDING AREA	3		5,438.0 m²

Statistics Notes

Floor Area: means the aggregate area of a building contained within the exterior walls, but does not include attic or basement space	
GFA:	GFA means the total area of all of the floors in a building measured from the exterior faces of the exterior walls, but shall not include an attic, basement or mechanical penthouse (By-Law 2023-065). GFA is used for calculating FSI
NOTE:	All open to below areas are <u>excluded</u> in GBA and GFA, unless indicated otherwise.

UNIT COUNT

Unit Mix						
Unit Type	Unit Count	Distribution	Saleable Area	Saleable Area (sqft)	Average Unit Size	Average Unit Size (sqft)
1B	176	41.0%	8,376 m²	90,154 ft²	47.6 m²	512 ft²
1B+D	74	17.2%	4,231 m²	45,537 ft²	57.2 m²	615 ft²
2B	109	25.4%	7,304 m²	78,619 ft²	67.0 m²	721 ft²
3B	38	8.9%	3,234 m²	34,813 ft²	85.1 m²	916 ft²
STUDIO	32	7.5%	1,227 m²	13,213 ft²	38.4 m²	413 ft²
TOTAL UNITS	429	100.0%	24,372 m²	262,335 ft²		

Unit Mix Per Floor									
Typical Levels	Unit Type	Units Per Floor	Total Units	Distribution	Saleable Area	Saleable Area (sqft)	Average Unit Size	Average Unit Size (sqft)	
FLOOR 2	1B	1	1	0.2%	46 m²	493 ft²	45.8 m²	493 ft²	
FLOOR 2	1B+D	1	1	0.2%	56 m²	599 ft²	55.7 m²	599 ft²	
FLOOR 2	2B	1	1	0.2%	65 m²	696 ft²	64.6 m²	696 ft²	
FLOOR 2: 3			3	0.7%	166 m²	1,788 ft²	166.1 m²	1788 ft²	
FLOOR 3	1B	5	5	1.2%	239 m²	2,571 ft²	47.8 m²	514 ft²	
FLOOR 3	1B+D	3	3	0.7%	169 m²	1,817 ft²	56.3 m²	606 ft²	
FLOOR 3	2B	4	4	0.9%	296 m²	3,189 ft²	74.1 m²	797 ft²	
FLOOR 3	3B	2	2	0.5%	183 m²	1,971 ft²	91.5 m²	985 ft²	
FLOOR 3: 14			14	3.3%	887 m²	9,549 ft²	269.7 m²	2903 ft²	
FLOOR 4	1B	5	5	1.2%	252 m²	2,716 ft²	50.5 m²	543 ft²	
FLOOR 4	1B+D	3	3	0.7%	169 m²	1,816 ft²	56.3 m²	605 ft²	
FLOOR 4	2B	4	4	0.9%	305 m²	3,279 ft²	76.1 m²	820 ft²	
FLOOR 4	3B	2	2	0.5%	182 m²	1,963 ft²	91.2 m²	981 ft²	
FLOOR 4: 14			14	3.3%	908 m²	9,774 ft²	274.0 m²	2950 ft²	
FLOOR 5	1B	5	5	1.2%	260 m²	2,800 ft²	52.0 m²	560 ft²	
FLOOR 5	1B+D	3	3	0.7%	177 m²	1,906 ft²	59.0 m²	635 ft²	
FLOOR 5	2B	4	4	0.9%	305 m²	3,279 ft²	76.1 m²	820 ft²	
FLOOR 5	3B	2	2	0.5%	194 m²	2,089 ft²	97.0 m²	1044 ft²	
FLOOR 5: 14			14	3.3%	936 m²	10,073 ft²	284.2 m²	3059 ft²	
FLOORS 7-38	1B	5	160	37.3%	7,578 m²	81,573 ft²	47.4 m²	510 ft²	
FLOORS 7-38	1B+D	2	64	14.9%	3,660 m²	39,398 ft²	57.2 m²	616 ft²	
FLOORS 7-38	2B	3	96	22.4%	6,334 m²	68,177 ft²	66.0 m²	710 ft²	
FLOORS 7-38	3B	1	32	7.5%	2,675 m²	28,790 ft²	83.6 m²	900 ft²	
FLOORS 7-38	STUDIO	1	32	7.5%	1,227 m²	13,213 ft²	38.4 m²	413 ft²	
FLOORS 7-38: 12			384	89.5%	21,475 m²	231,151 ft²	292.5 m²	3148 ft²	
TOTAL UNITS			429	100.0%	24,372 m²	262,335 ft²			

PARKING / LOADING / WASTE

Provided Car Parking			
Level	Type	Count	Designation
P3 - LOWER	2700x5700 Standard	10	Resident
P3	2700x5700 Standard	29	Resident
P3	3650x5700 Barrier Free Type A	1	Resident
P2	2700x5700 Standard	21	Resident
P2	3650x5700 Barrier Free Type B	2	Resident
Resident: 63		63	
P2	2700x5700 Standard	7	Visitor
P1	2700x5700 Standard	13	Visitor
P1	3650x5700 Barrier Free Type A	1	Visitor
Visitor: 21		21	
TOTAL PARKING SPACES: 84		84	

Provided Bicycle Parking				
Level	Usage	Type	Energized Parking	Count
GROUND	Commercial	Vertical	No	2
Commercial:				2
GROUND	Residential	Stacked	No	12
GROUND	Residential	Vertical	No	18
Residential:				30
TOTAL BICYCLE SPACES				32

Loading Statistics

RESIDENTIAL	429 UNITS
REQUIRED: 1	PROVIDED: 1

Provided Waste Statistics

Name	Level	Area
WASTE STAGING	GROUND	72 m²
WASTE ROOM	GROUND	119 m²

AMENITY / NOTES

Provided Amenity Areas		
Level	Name	Area
INDOOR AMENITY		
GROUND	INDOOR AMENITY	18 m²
FLOOR 2	INDOOR AMENITY	422 m²
FLOOR 6	INDOOR AMENITY	568 m²
		1,008 m²
OUTDOOR AMENITY		
FLOOR 2	OUTDOOR AMENITY	304 m²
FLOOR 6	OUTDOOR AMENITY	231 m²
		535 m²
Total Amenity Provided		1,543 m²

SUMMARY

Project Statistics Summary	
Municipal Address: 118-132 Cross Avenue	
Zoning Bylaw: By-law 2023-065	
Gross Site Area: 2,466.3 sm	
Road Widening 521.4 sm	
Net Site Area: 1,944.9 sm	
Building Height (Storeys): (excl. Mechanical Penthouse) 38 ST	
Building Height above Average Grade: 124.5 m	
GFA - Residential Uses 31,400.1 sm	
GFA - Non-Residential Uses 580.5 sm	
Total Combined Gross Floor Area 31,980.6 sm	
Floor Space Index (FSI) (Gross Floor Area/Gross Site Area) 12.97	
Number of Residential Units 429	
Residential Indoor Amenity Space Provided 1,008 sm	
Residential Outdoor Amenity Space Provided 535 sm	
Vehicular Parking Total Provided 84	
Bicycle Parking Total Provided 32	
Total Loading Spaces Provided 1	

Date	No.	Description
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27-07-2026	Official Plan and Zoning Bylaw Amendment Application
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23031 1 : 1 SR SK
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Statistics

A100.S

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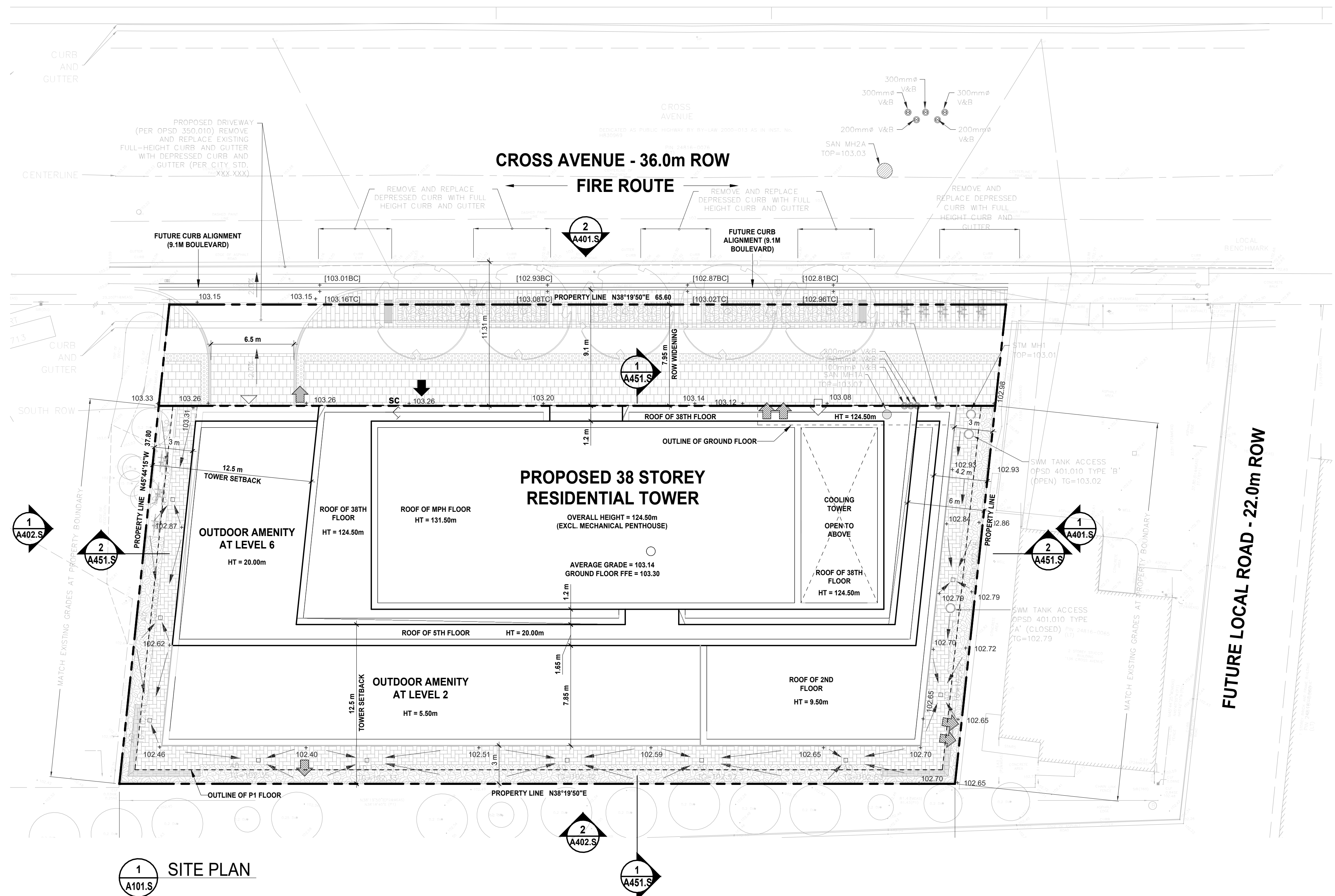
2026-07-28 11:16:39 AM

PROPERTY LINE	
	LINE OF UNDER GROUND GARAGE BELOW
	MAIN BUILDING ENTRANCE
	RETAIL ENTRANCE
	EXIT
	VEHICLE / LOADING ENTRANCE / EXIT
	FIRE HYDRANT
	SIAMESE CONNECTION
	MANHOLE COVER
	AREA DRAIN
	CATCH BASIN
	FLOOR DRAIN (PARKING SLAB)
	FLOOR DRAIN (INTERIOR)
	EXISTING LIGHT
	TYPICAL PARKING SPACE
	TYPICAL B.F. PARKING SPACE
	FINISH FLOOR ELEVATION
	EXISTING ELEVATION
	PROPOSED ELEVATION
	TOP OF ROOF
	BUILDING ENVELOPE
	FIRE ACCESS ROUTE HEAVY DUTY PAVING. ASSEMBLY TO BE DESIGNED TO MEET THE LOADS IMPOSED BY FIRE FIGHTING EQUIPMENT
	GREEN ROOF
	TERRACE PAVERS

BF	DENOTES BOARD FENCE
CB	DENOTES CATCHBASIN
CLF	DENOTES CHAIN LINK FENCE
FG	DENOTES FENCE GATE
+ 3 METER	DENOTES GAS METER
+ SM	DENOTES GAS VALVE
HP	DENOTES HYDRO POLE
HW	DENOTES HANDWELL
LS	DENOTES LIGHT STANDARD
MB	DENOTES MAIL BOX
MH	DENOTES MANHOLE
NW	DENOTES MONITORING WELL
BW	DENOTES BENCHMARK
SP	DENOTES STAND PIPE
(S) TWIL	DENOTES TELEPHONE MANHOLE
WELL	DENOTES WELL
WK	DENOTES WATER KEY
WMH	DENOTES WATER MANHOLE
WV	DENOTES WATER VALVE
—OC—	DENOTES OVERHEAD CABLE
—E—	DENOTES OVERHEAD TELEPHONE CABLE
—T—	DENOTES OVERHEAD HYDROPHONE CABLE
~	DENOTES SLEEPING TREE
⊙	DENOTES SHRUB
	DENOTES DECIDUOUS TREE
	DIA=DIAMETER OF TRUNK IN METRES
	DENOTES CONIFEROUS TREE
	DIA=DIAMETER OF TRUNK IN METRES

■	DENOTES	SURVEY MONUMENT FOUND
■	DENOTES	SURVEY MONUMENT SET
S/B	DENOTES	STANDARD IRON BAR
SS/B	DENOTES	IRON 'STANDARD' IRON BAR
R	DENOTES	ROUND IRON BAR
C/C	DENOTES	CUT CROSS
NI	DENOTES	NOT IDENTIFIABLE
MEAS	DENOTES	MEASURED
CLF	DENOTES	CHAIN LINK FENCE
91	DENOTES	SRRP BY J.H. GELBORN SURVEYING LTD.
P2	DENOTES	-DATED AUGUST 27, 2019
	DENOTES	SRRP BY J.H. GELBORN SURVEYING LTD.
	DENOTES	-DATED SEPTEMBER 27, 2015
01	DENOTES	INSTRUMENT NUMBER 725105
91	DENOTES	ORIGIN UNKNOWN
760	DENOTES	K. F. McNEILL O.L.S.
1806	DENOTES	J. H. GELBORN SURVEYING LTD., O.L.S.
	DENOTES	MINISTRY OF TRANSPORTATION

N=North/S=South/E=East/W=West

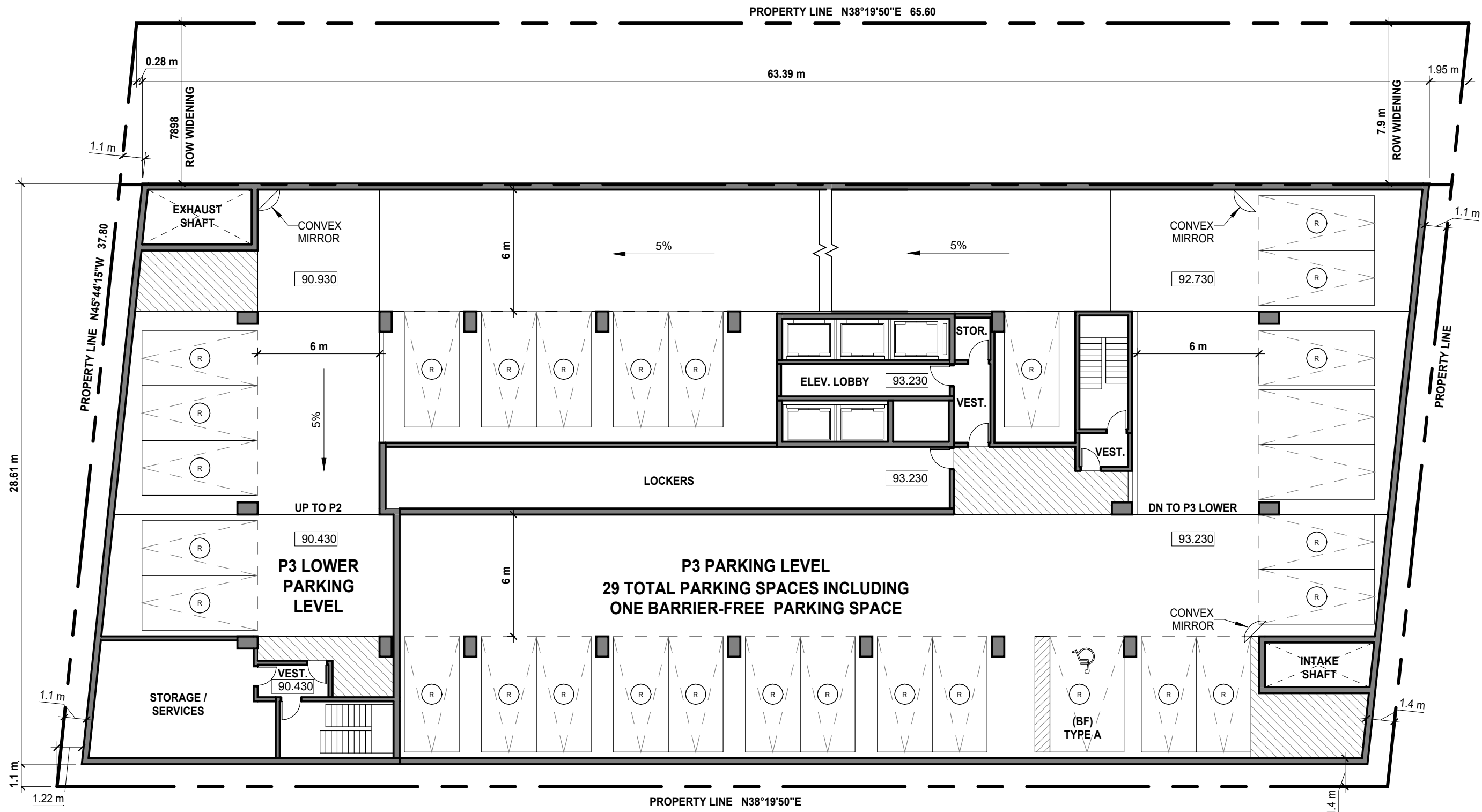


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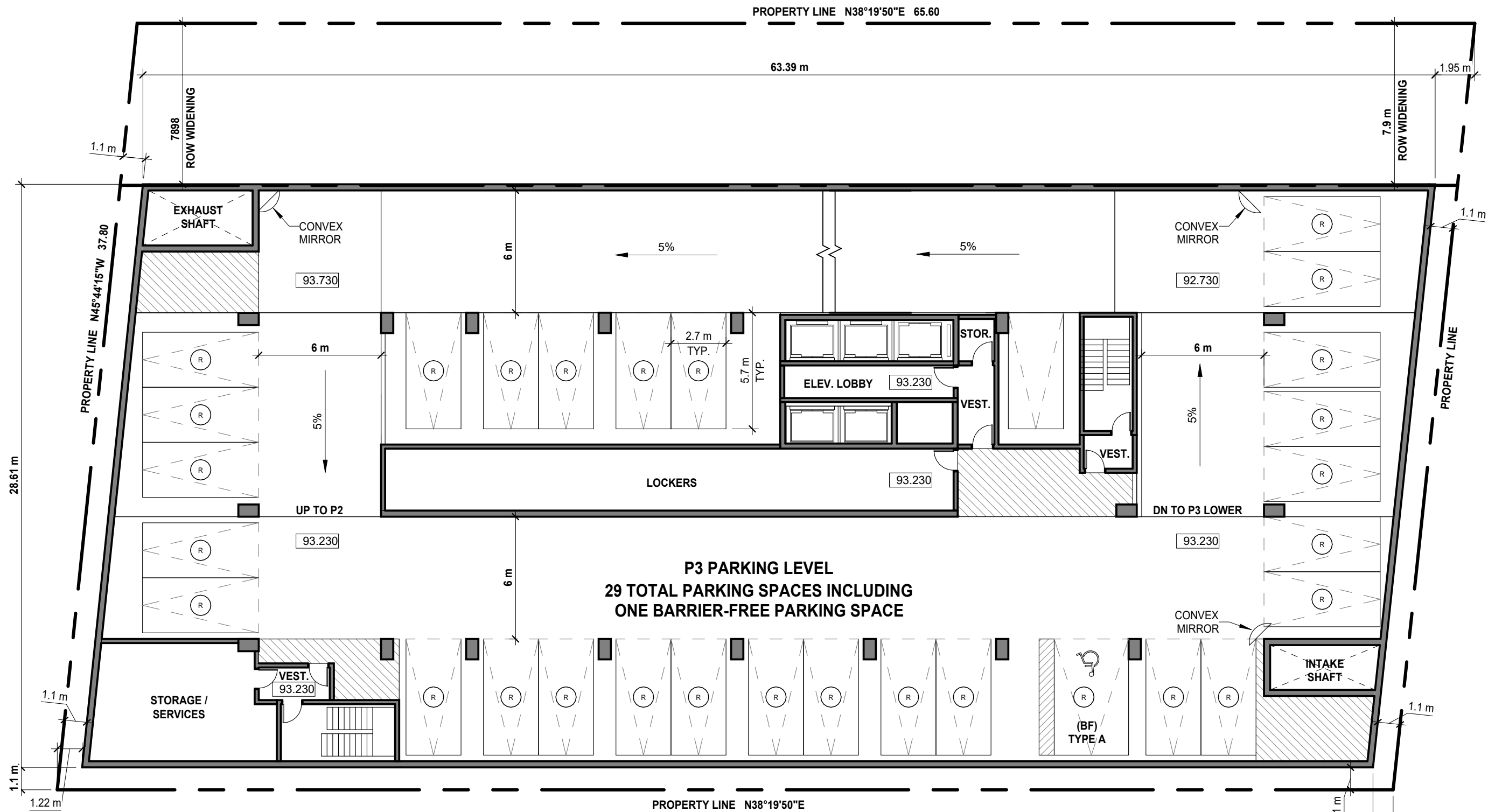
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2 P3 LOWER PARKING PLAN



1 P3 PARKING PLAN

- PARKING NOTES:**
- MINIMUM PARKING SPACE SIZES (UNLESS OTHERWISE NOTED):
 - 2700mm WIDE X 5700mm LONG (NO SIDES OBSTRUCTED)
 - 3000mm WIDE X 5700mm LONG (ONE SIDE OBSTRUCTED)
 - 3300mm WIDE X 5700mm LONG (TWO SIDES OBSTRUCTED)
 - MAINTAIN MINIMUM DRIVE AISLE WIDTH OF 6000mm UNLESS OTHERWISE NOTED.
 - MAINTAIN MINIMUM HEADROOM CLEARANCE OF 2100mm THROUGHOUT.

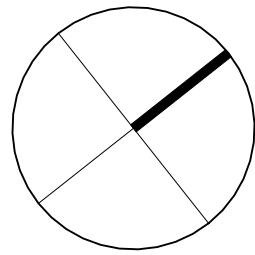
- PARKING LEGEND:**
- COMMERCIAL PARKING SPACE
 - RESIDENTIAL PARKING SPACE
 - VISITOR PARKING SPACE
 - EXISTING PARKING SPACE
 - BIKE LOCKER
 - BIKE PARKING (STACKED)
 - BIKE PARKING (VERTICAL)
 - CONVEX MIRROR
 - ELECTRIC VEHICLE
 - LIGHT STANDARD
 - PAINTED LINES
 - FIRE-RATED BULKHEAD
 - TYPICAL
 - ONE SIDE OBSTRUCTED
 - PARALLEL PARKING
 - ACCESSIBLE
 - ACCESSIBLE VISITOR - TYPE A
 - ACCESSIBLE VISITOR - TYPE B

Provided Car Parking			
Level	Type	Count	Designation
P3 - LOWER	2700x5700 Standard	10	Resident
P3	2700x5700 Standard	29	Resident
P3	3650x5700 Barrier Free Type A	1	Resident
P2	2700x5700 Standard	21	Resident
P2	3650x5700 Barrier Free Type B	2	Resident
Resident: 63		63	
P2	2700x5700 Standard	7	Visitor
P1	2700x5700 Standard	13	Visitor
P1	3650x5700 Barrier Free Type A	1	Visitor
Visitor: 21		21	
TOTAL PARKING SPACES: 84		84	

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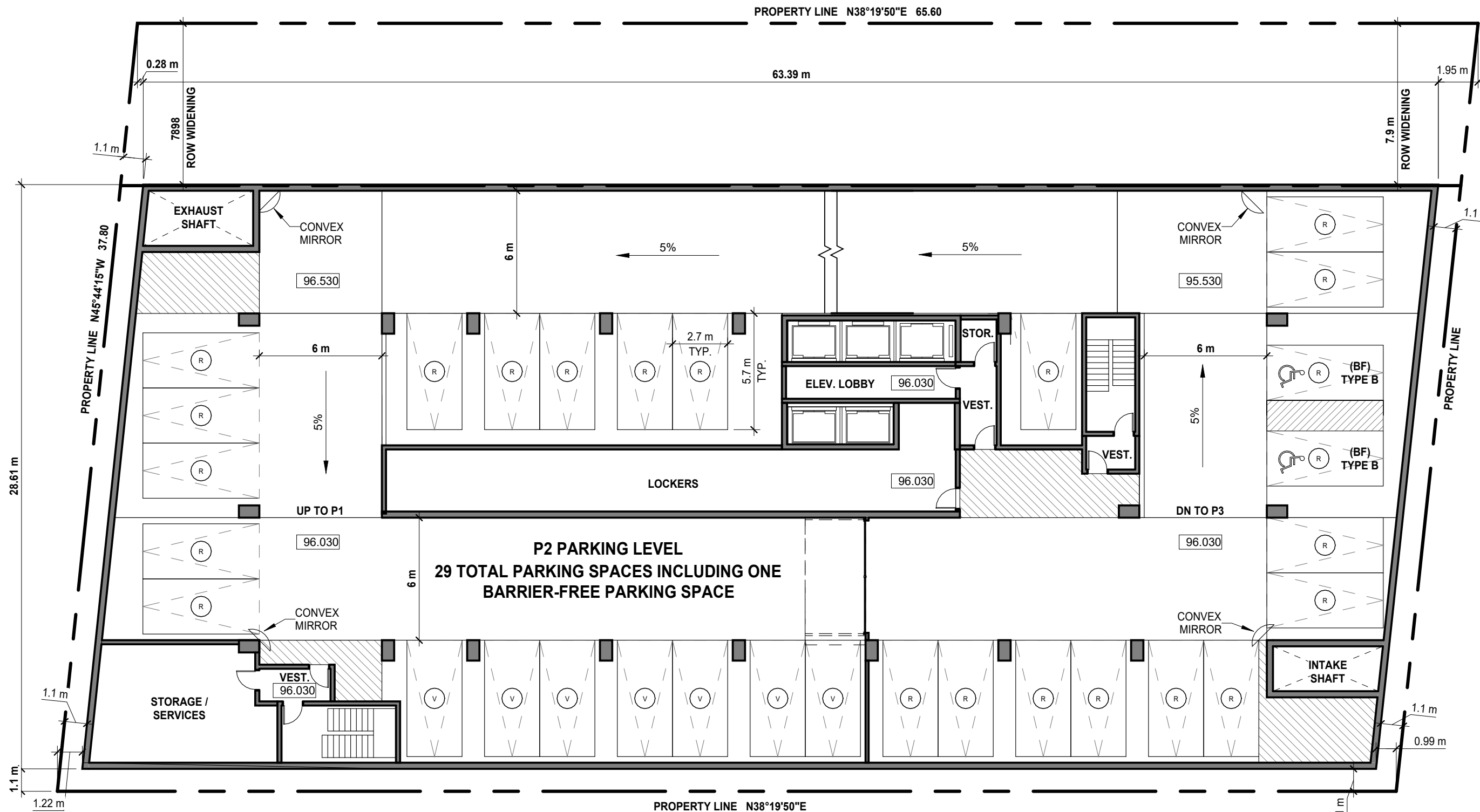
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23031 1 : 200 WM SK
PROJECT SCALE DRAWN REVIEWED

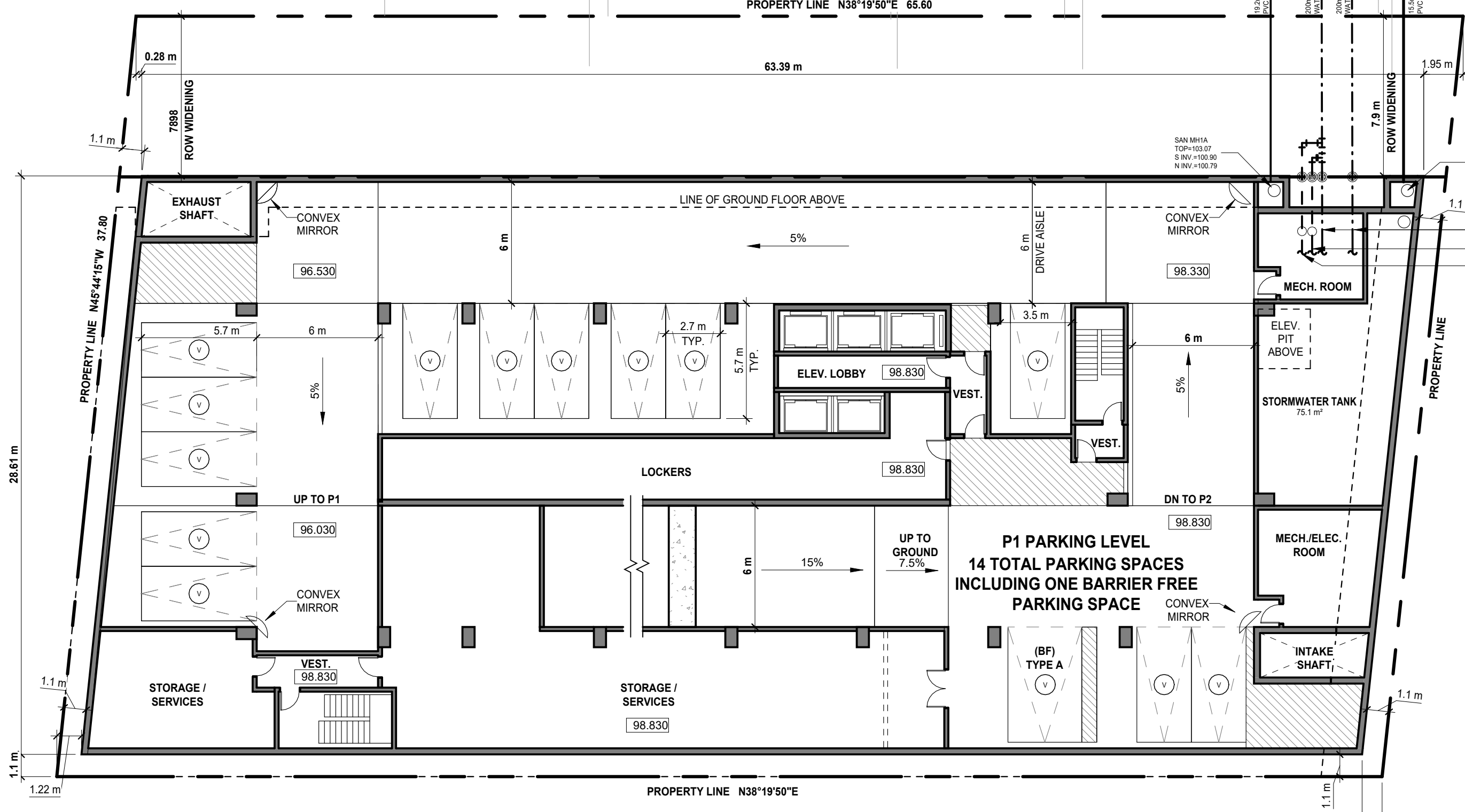
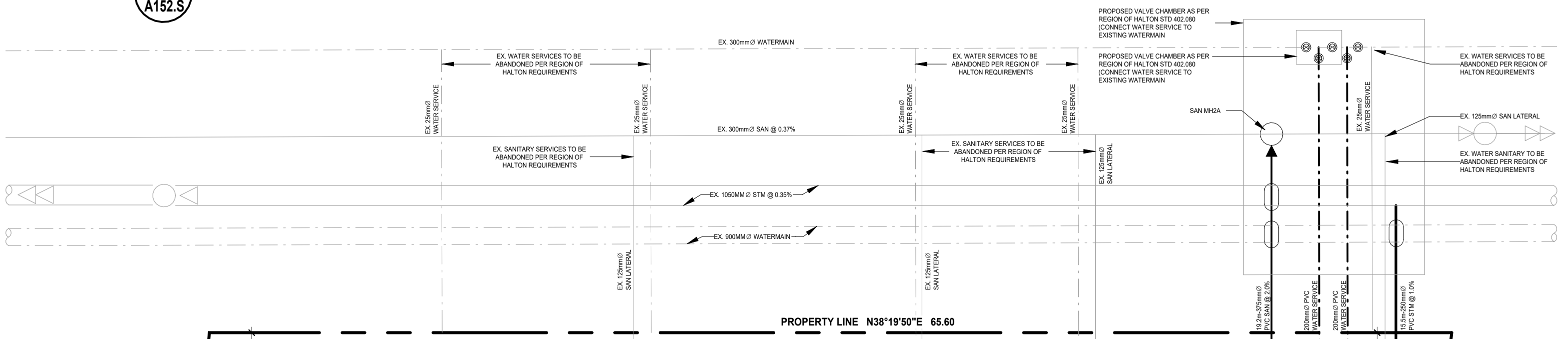
P3 and P3 Lower Parking Plans

A151.S

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1 A152.S P2 PARKING PLAN



2 A152.S P1 PARKING PLAN

- PARKING NOTES:**
1. MINIMUM PARKING SPACE SIZES (UNLESS OTHERWISE NOTED):
 - 2700mm WIDE X 5700mm LONG (NO SIDES OBSTRUCTED)
 - 3000mm WIDE X 5700mm LONG (ONE SIDE OBSTRUCTED)
 - 3300mm WIDE X 5700mm LONG (TWO SIDES OBSTRUCTED)
 2. MAINTAIN MINIMUM DRIVE AISLE WIDTH OF 6000mm UNLESS OTHERWISE NOTED.
 3. MAINTAIN MINIMUM HEADROOM CLEARANCE OF 2100mm THROUGHOUT.

PARKING LEGEND:

- (C) COMMERCIAL PARKING SPACE
- (R) RESIDENTIAL PARKING SPACE
- (V) VISITOR PARKING SPACE
- (E) EXISTING PARKING SPACE
- [Symbol] BIKE LOCKER
- [Symbol] BIKE PARKING (STACKED)
- [Symbol] BIKE PARKING (VERTICAL)
- [Symbol] CONVEX MIRROR
- [Symbol] ELECTRIC VEHICLE
- [Symbol] LIGHT STANDARD
- [Symbol] PAINTED LINES
- [Symbol] FIRE-RATED BULKHEAD

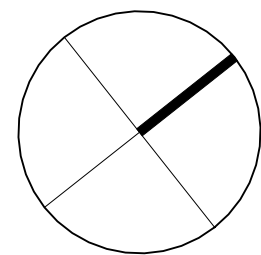
Typical dimensions for parking spaces: 2700x5700 (Typical), 3000x5700 (One Side Obstructed), 2700x7000 (Parallel Parking). Accessible dimensions: 3650x6200 (Accessible), 3650x5700 (Accessible Visitor - Type A), 2400x5500 (Accessible Visitor - Type B).

Provided Car Parking			
Level	Type	Count	Designation
P3 - LOWER	2700x5700 Standard	10	Resident
	2700x5700 Standard	29	Resident
	3650x5700 Barrier Free Type A	1	Resident
	2700x5700 Standard	21	Resident
	3650x5700 Barrier Free Type B	2	Resident
Resident: 63		63	
P2	2700x5700 Standard	7	Visitor
P1	2700x5700 Standard	13	Visitor
P1	3650x5700 Barrier Free Type A	1	Visitor
Visitor: 21		21	
TOTAL PARKING SPACES: 84		84	

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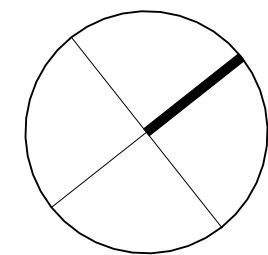
P1 and P2 Parking Plans

A152.S

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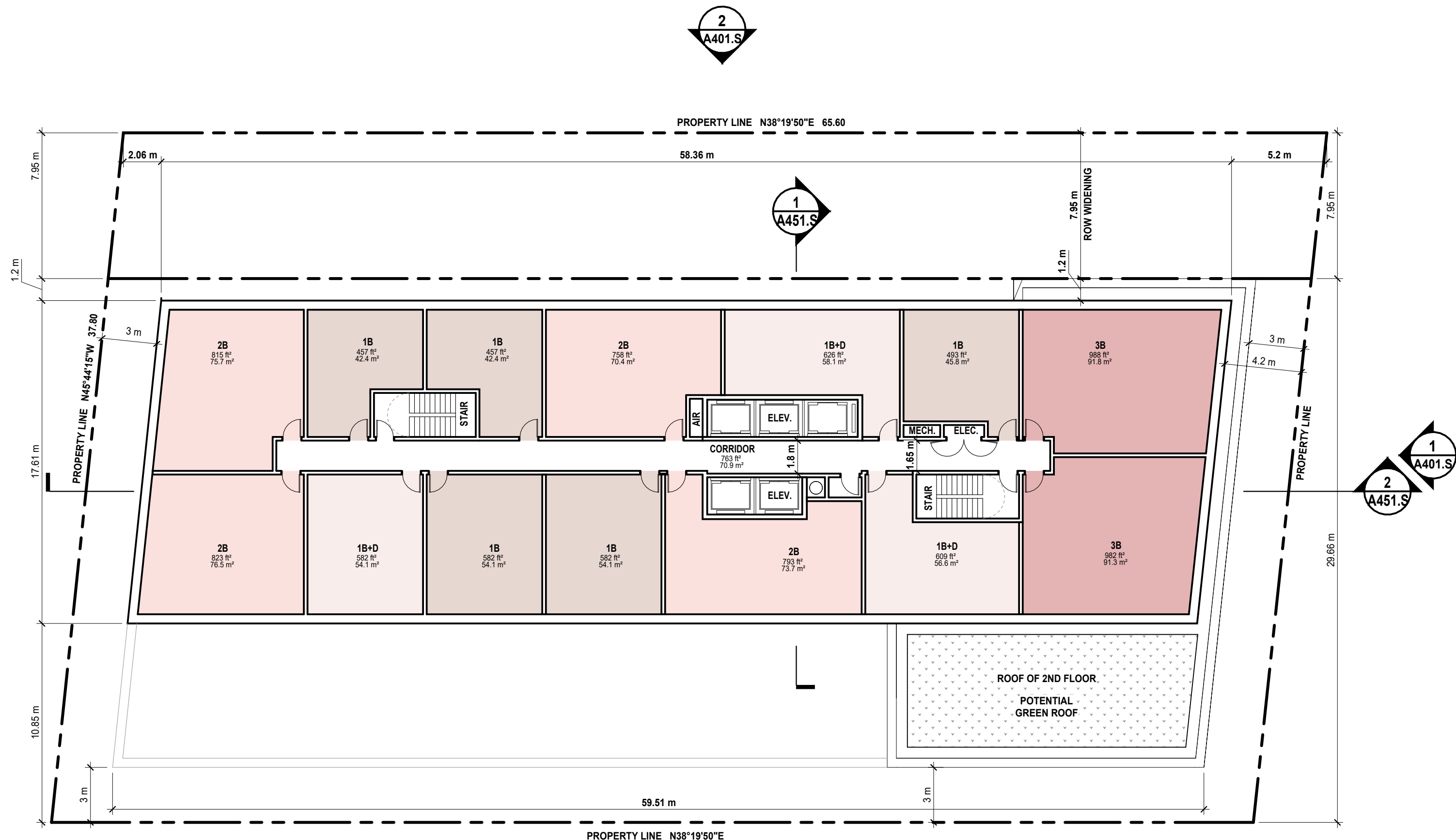
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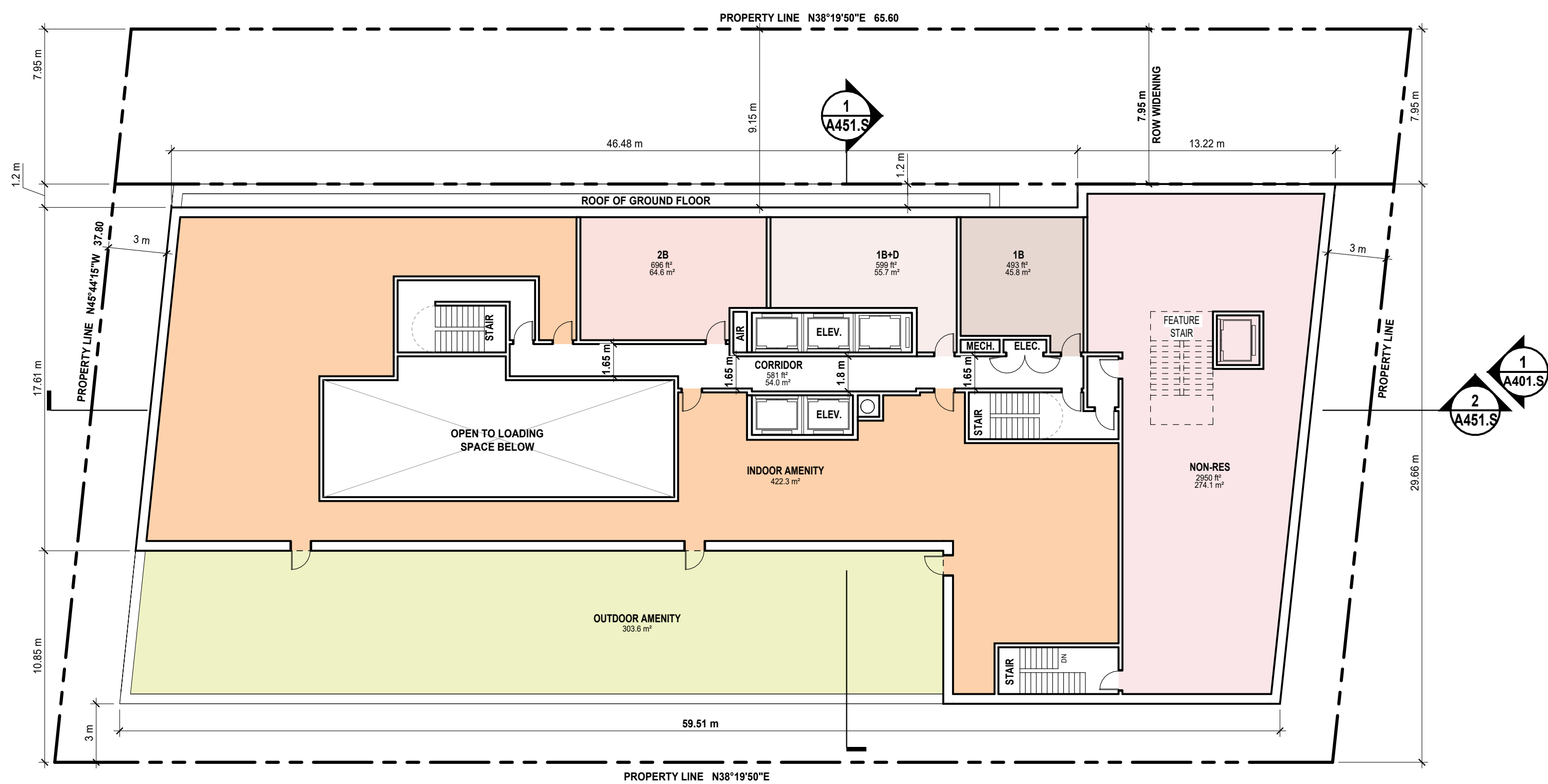
Ground Floor Plan

A201.S

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2 FLOOR 3

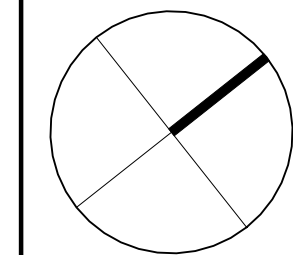


1 FLOOR 2

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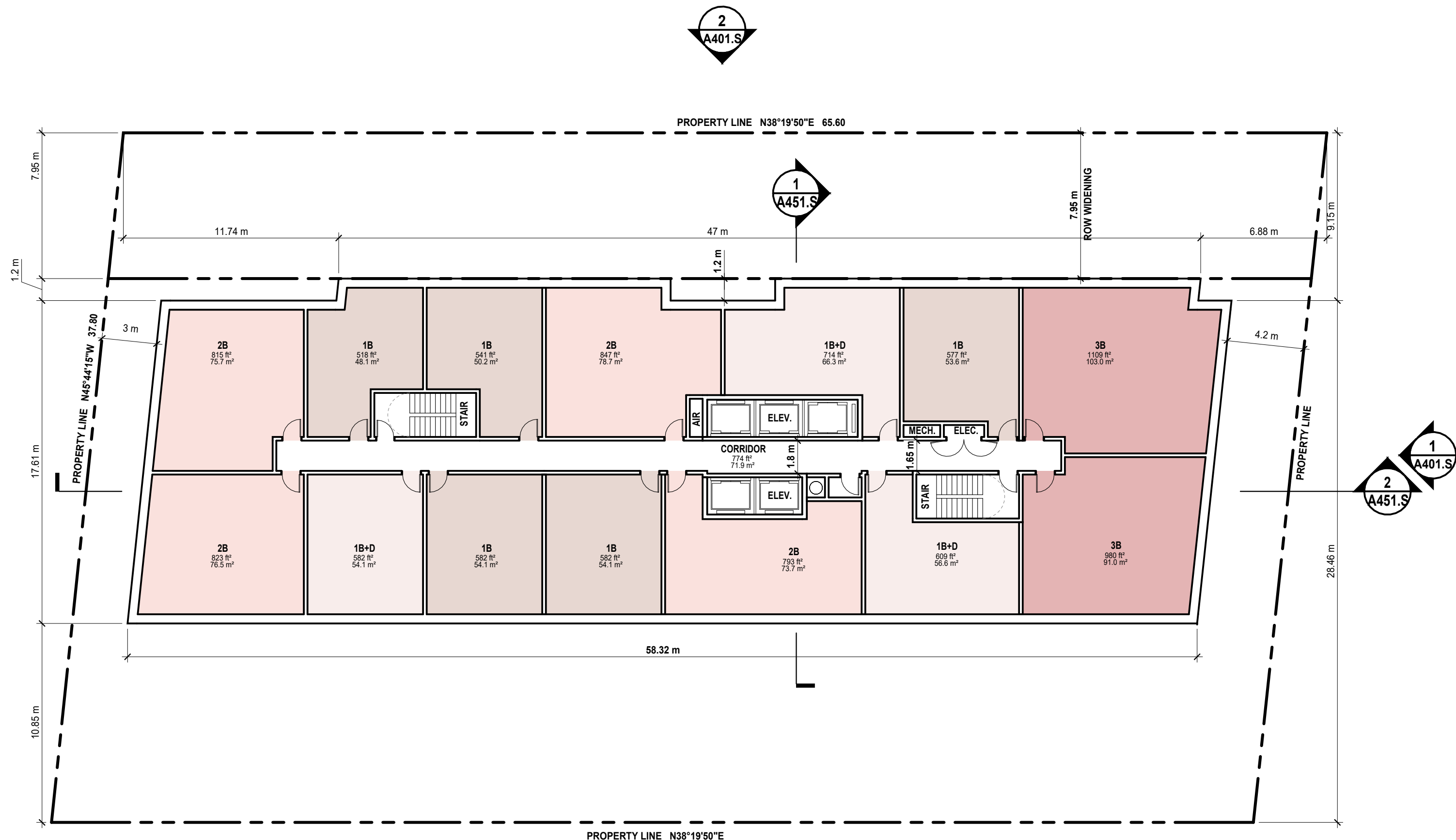
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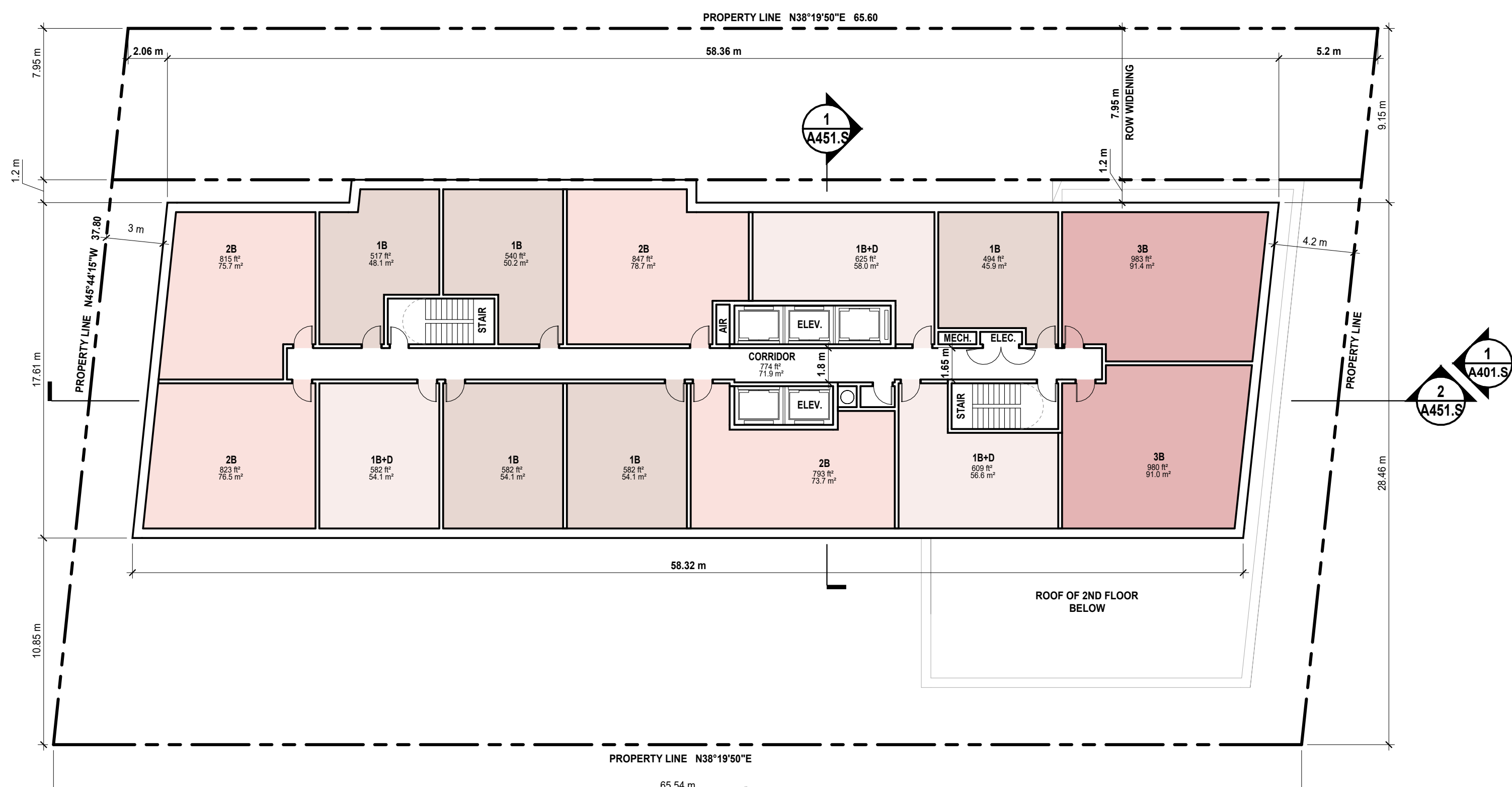
Floors 2 and 3 Plans

A202.S

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3 FLOOR 5

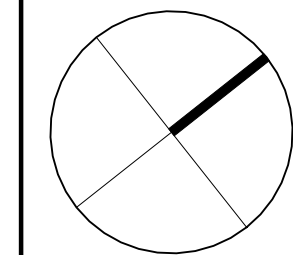


1 FLOOR 4

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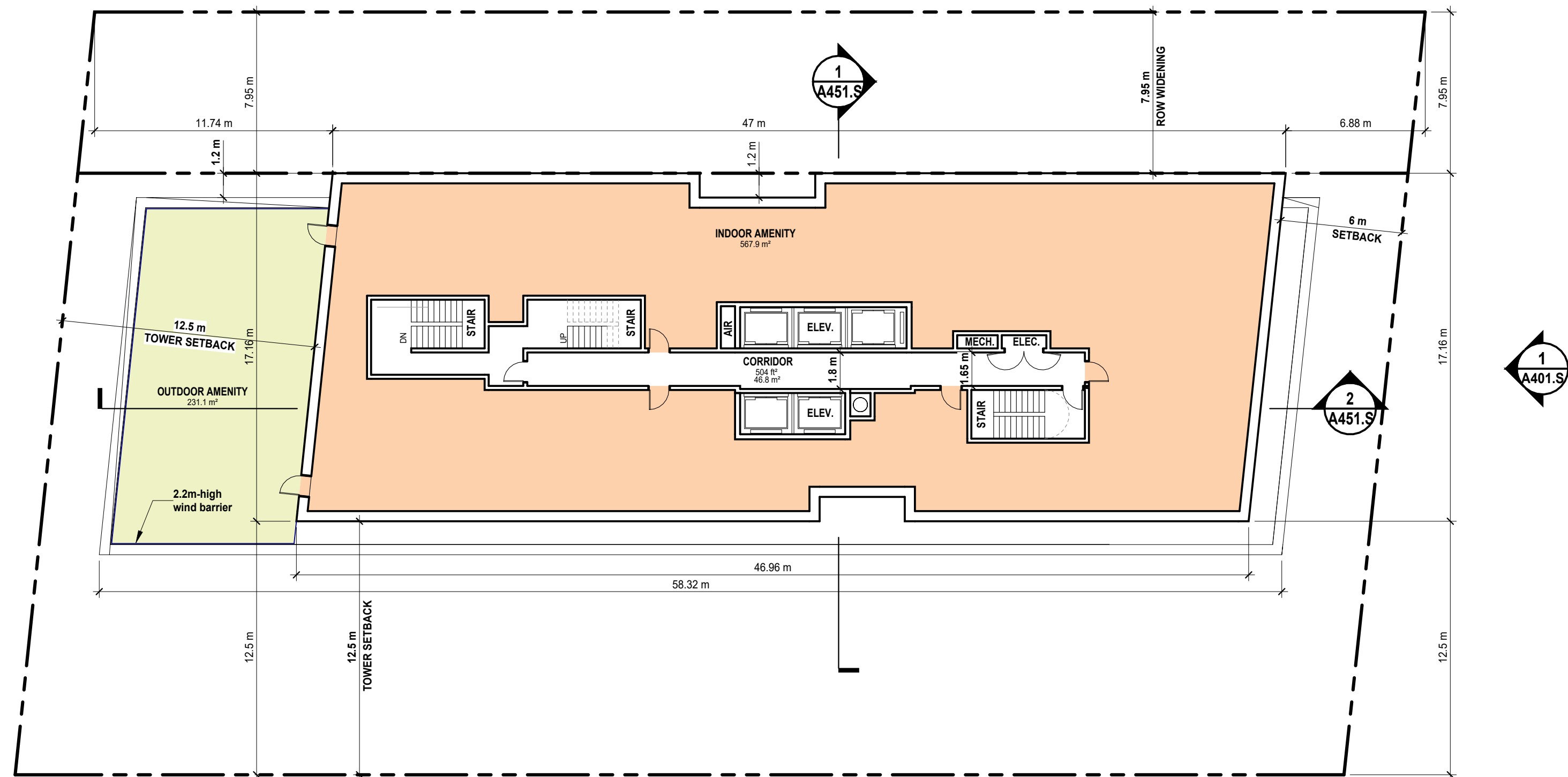
Floors 4 and 5 Plans

A203.S

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2 TYPICAL TOWER PLAN (LEVELS 7-50)

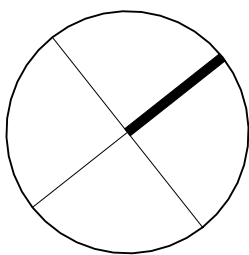


1 FLOOR 6 - AMENITY

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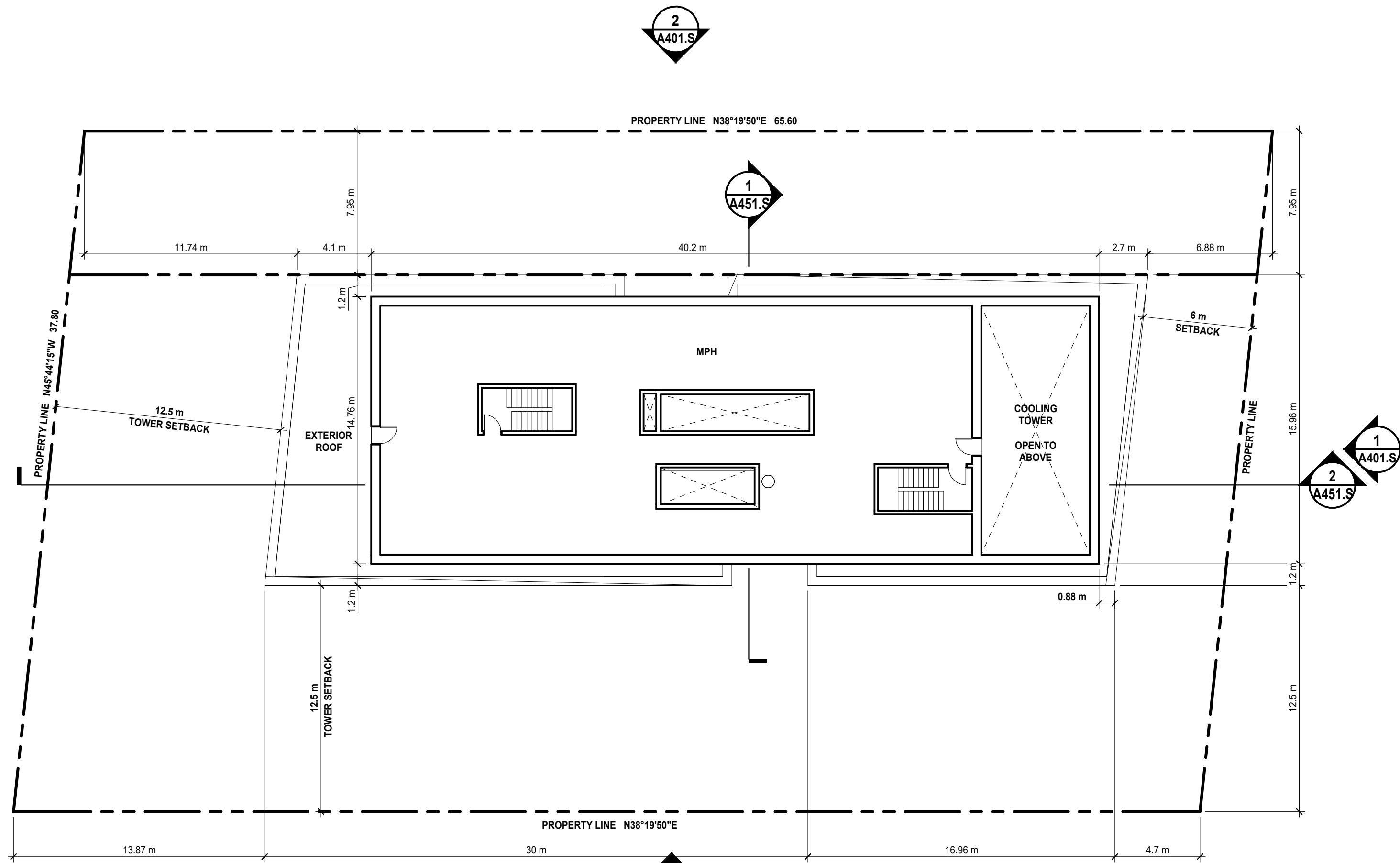
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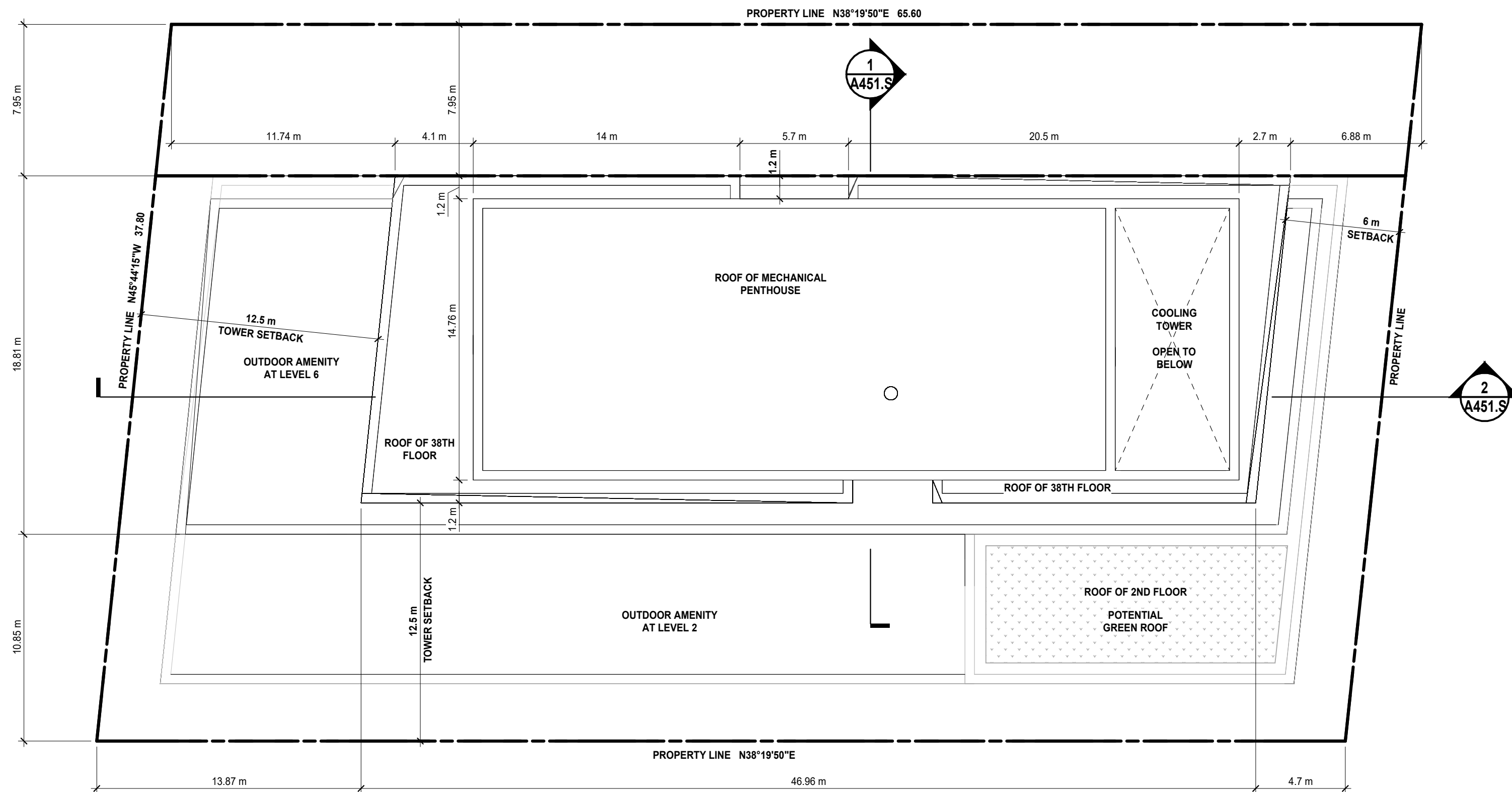
Floor 6 and Typical Tower Floors
(L7-L38)

A204.S

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1 MPH PLAN
A205.S

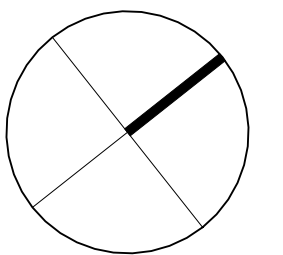


2 ROOF PLAN
A205.S

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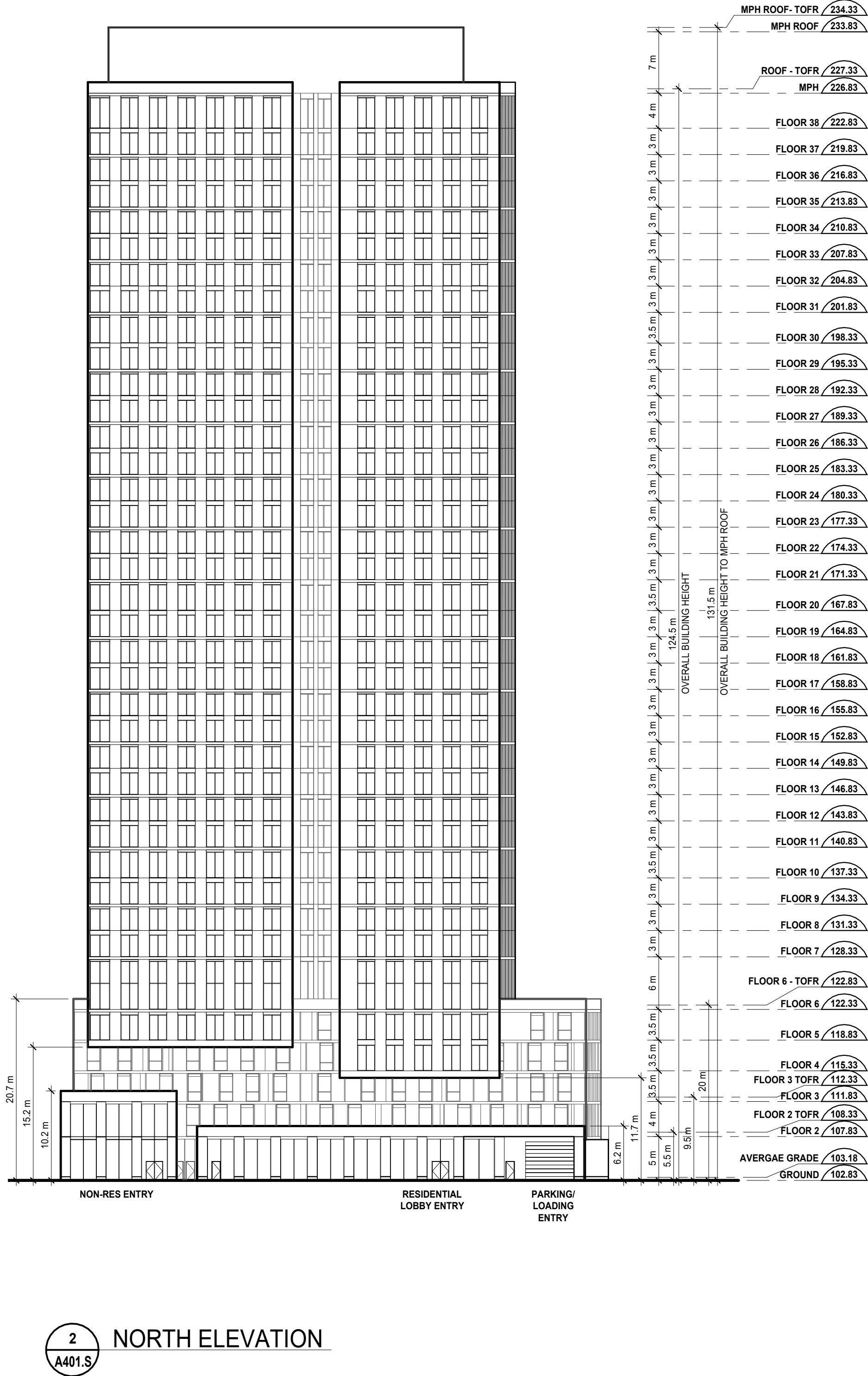
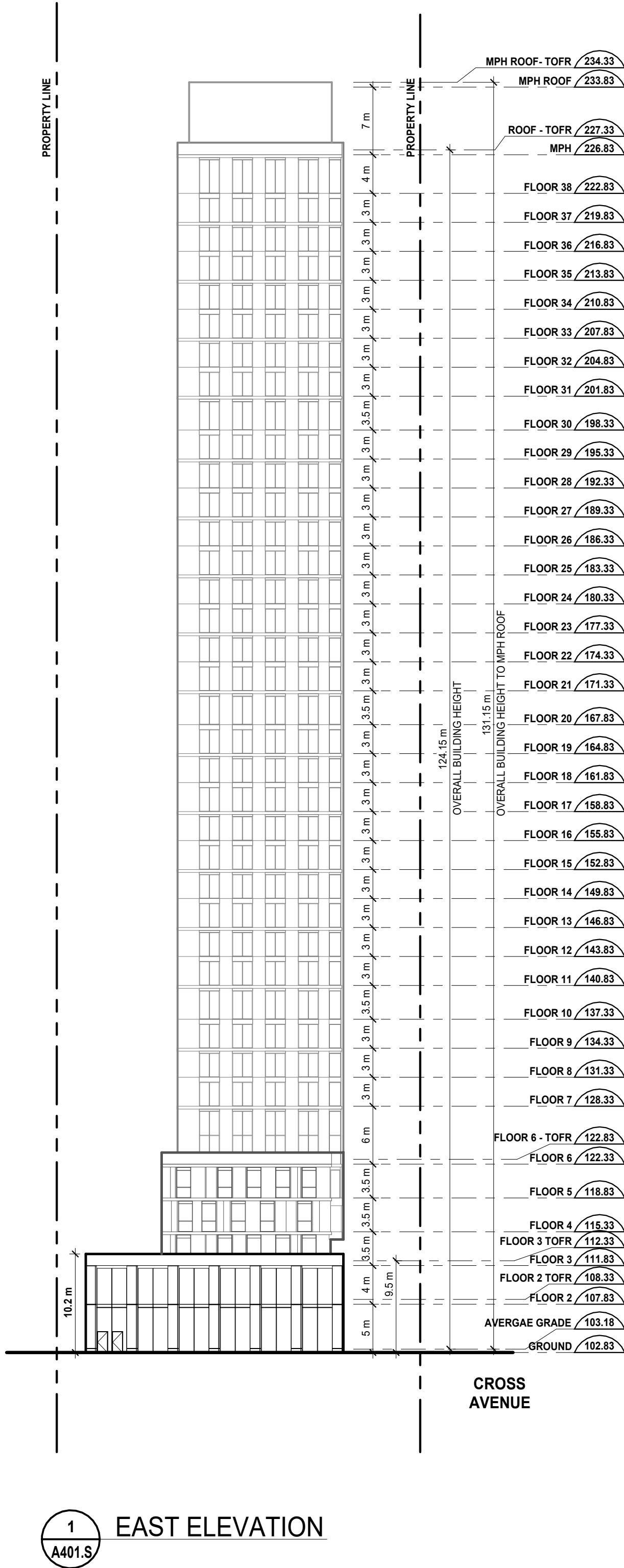
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MPH and Roof Plans

A205.S

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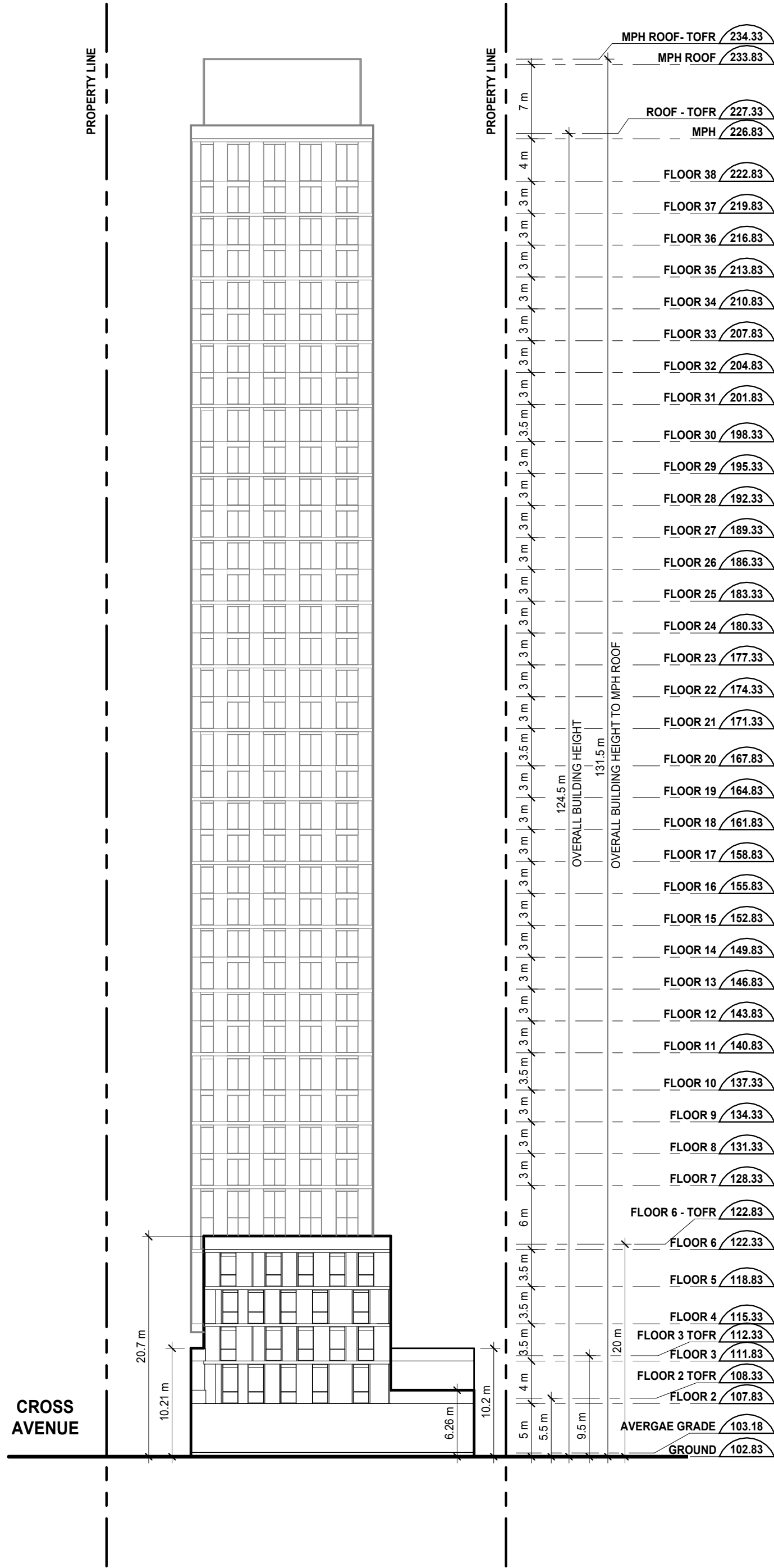
Building Elevations - North and
East

A401.S

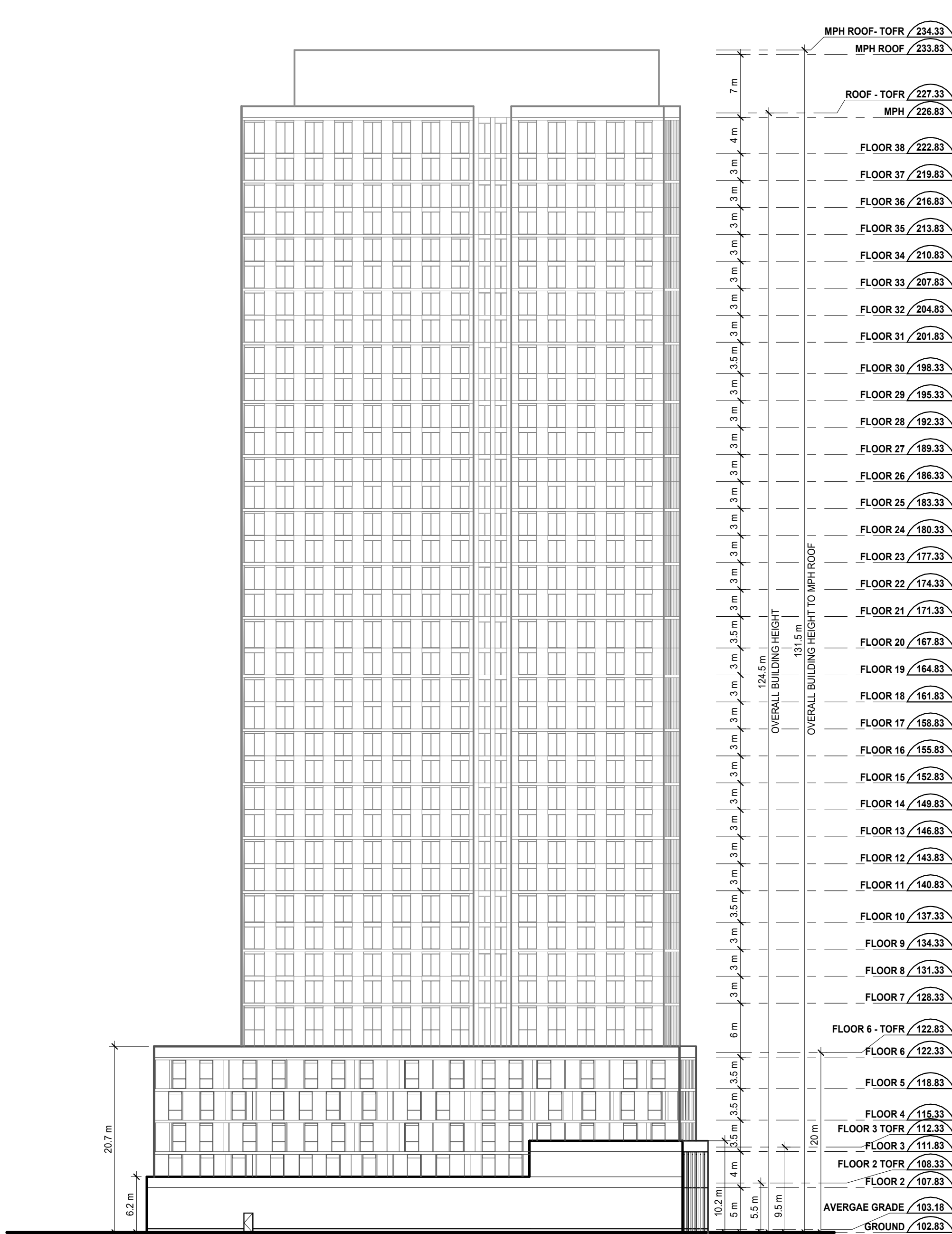
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1 WEST ELEVATION
A402.S



2 SOUTH ELEVATION
A402.S

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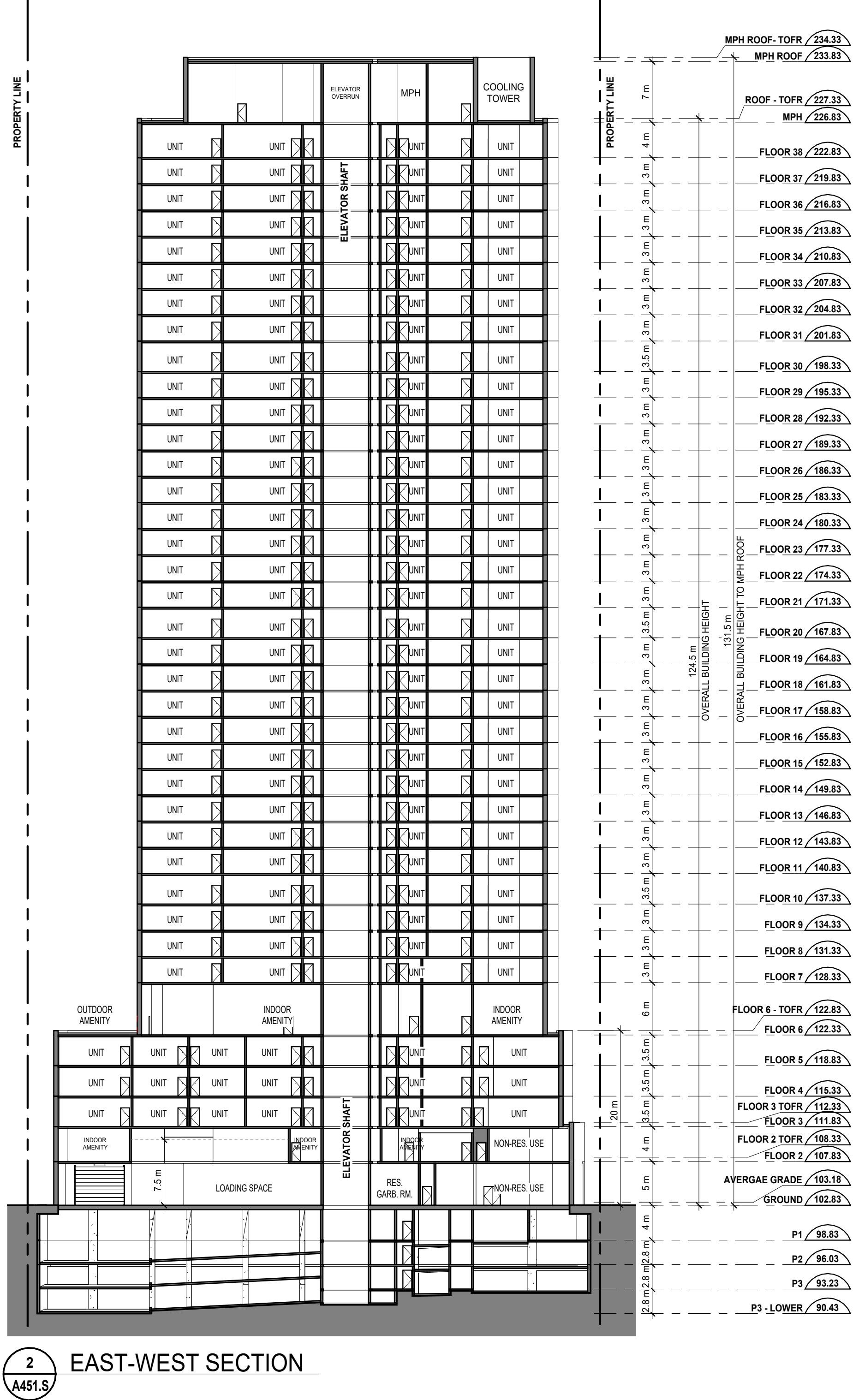
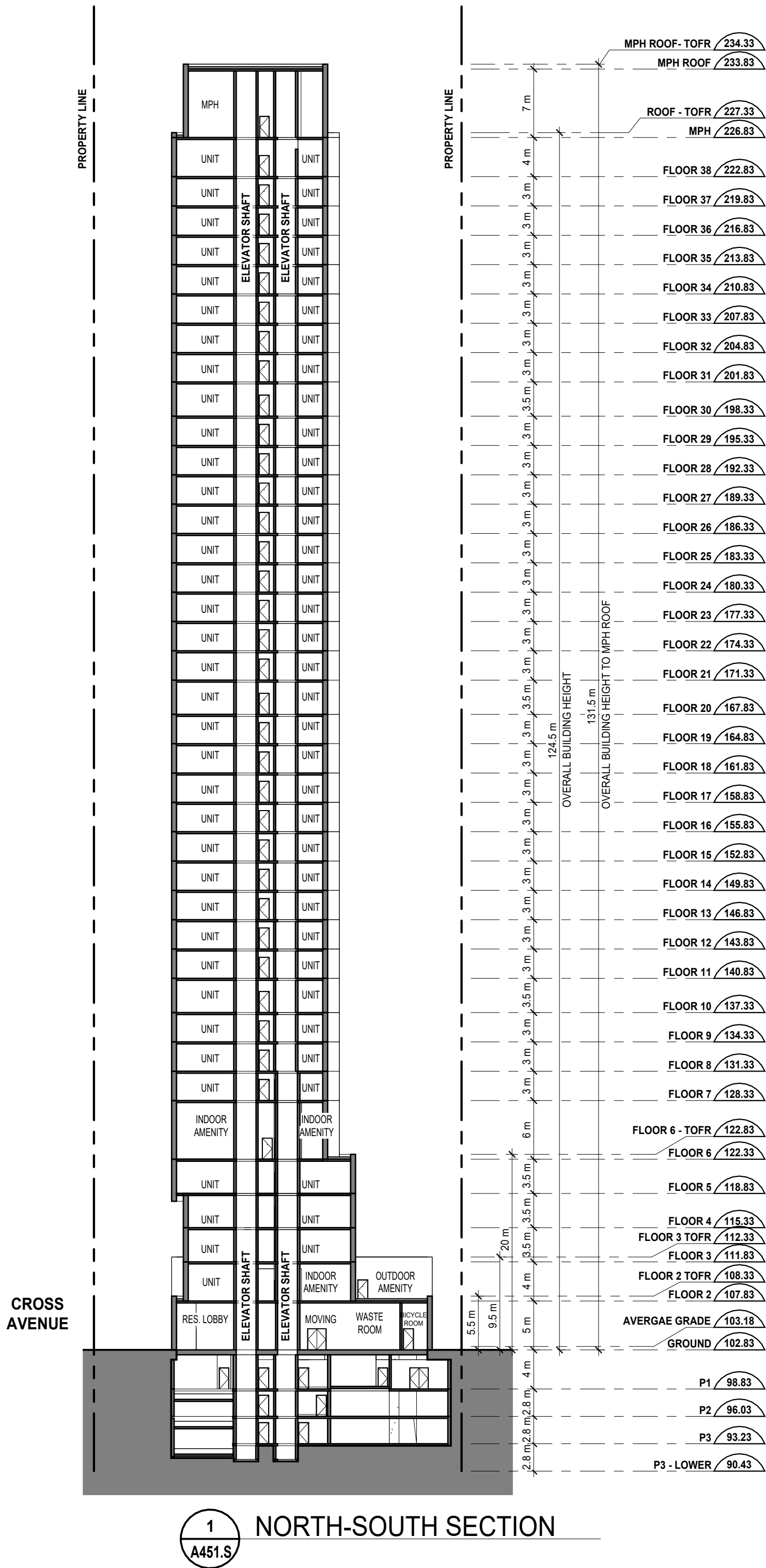
Building Elevations - South and
West

A402.S

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responsible for checking and verifying all levels and dimensions and shall report
all discrepancies to the Architect and obtain clarification prior to commencing
work.

2026-07-28 11:16:56 AM

C:\Users\HIM4547\Documents\BDPQ_AR_23031_Cross Ave Oakville_R025_HM4547.rvt



Date No. Description

REVISION RECORD

27-07-2026 Official Plan and Zoning Bylaw
Amendment Application

ISSUE RECORD

BDP.
Quadrangle

Quadrangle Architects Limited
901 King Street West, Suite 701 Toronto, ON M5V 3H5
t 416 598 1240 www.bdpquadrangle.com

118-132 Cross Avenue

Oakville, ON
for
Batory Planning and
Management

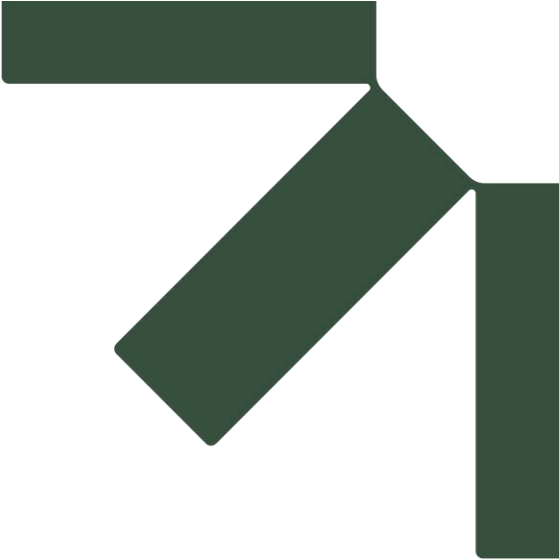
23031 1 : 400 WM SK
PROJECT SCALE DRAWN REVIEWED

Building Sections

A451.S

Note: This drawing is the property of the Architect and may not be reproduced or
used without the expressed consent of the Architect. The Contractor is
responsible for checking and verifying all levels and dimensions and shall report
all discrepancies to the Architect and obtain clarification prior to commencing
work.

2026-07-28 11:19:59 AM



Appendix B Traffic Data

Environmental Noise and Vibration Study

118 Cross Avenue, Oakville, Ontario

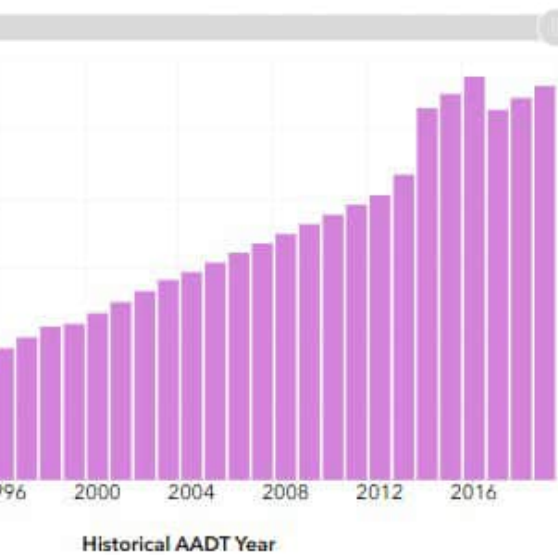
Batory Planning + Management

SLR Project No.: 241.031814.00001

August 21, 2026

Provincial Highways Traffic Volumes

Annual Average Daily Traffic (AADT) 1988 - 2019



Annual Average Daily Truck Traffic (AADTT) 1988 - 2019

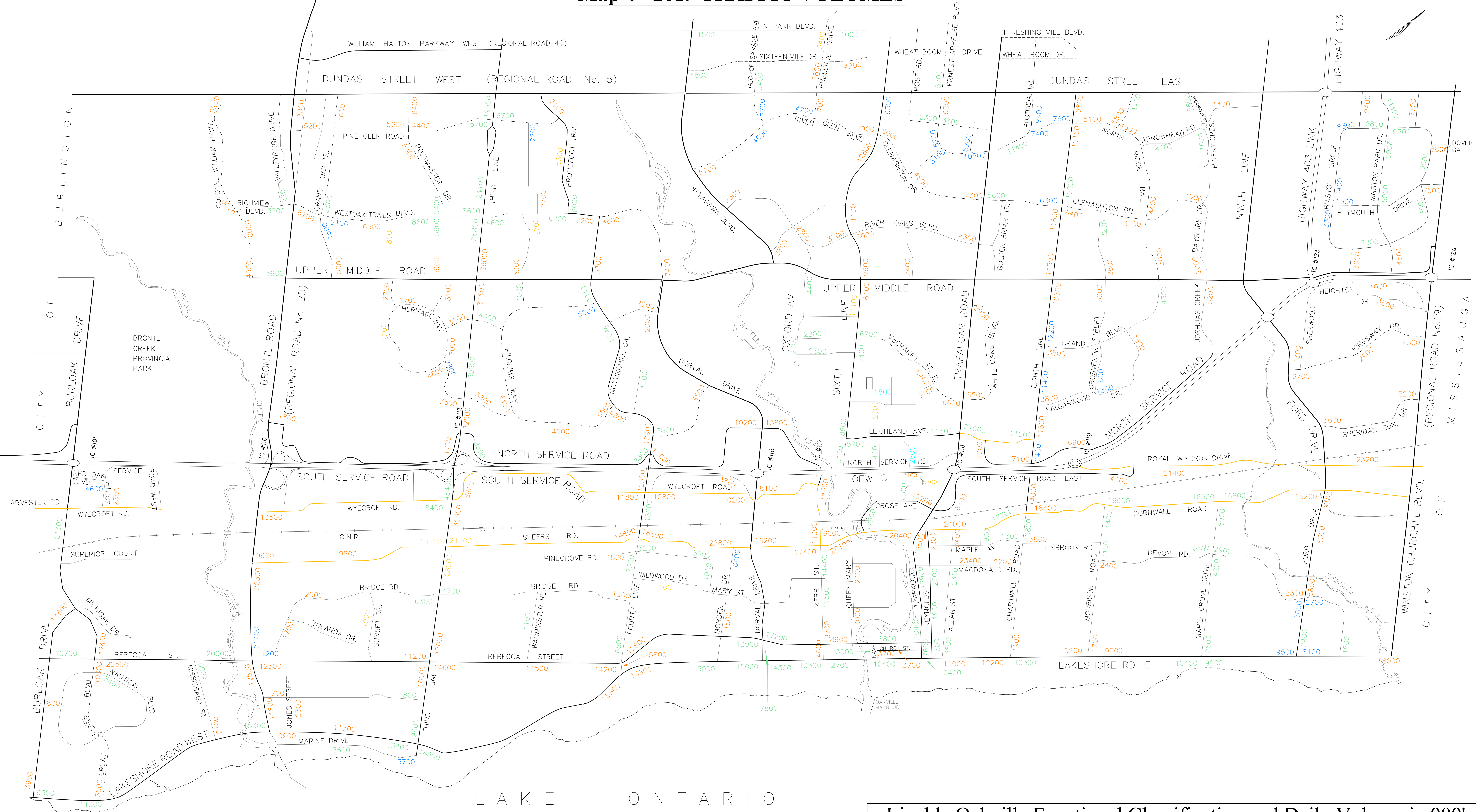


Historical AADT/DJMA Historiques

AADT06	164,700
AADT07	167,400
AADT08	170,100
AADT09	172,900
AADT10	175,600
AADT11	178,400
AADT12	181,100
AADT13	187,000
AADT14	206,000
AADT15	210,000
AADT16	215,000
AADT17	205,500.00
AADT18	208,900.00
AADT19	212,300.00

200 m
500 ft

Map 4 - 2019 TRAFFIC VOLUMES



LEGEND					
2019 Volumes	2018 Volumes	2017 Volumes	2016 Volumes	2015 Volumes	Beyond 2015 Volumes
Please Note: All Volumes Are Rounded to the Nearest 100.					

Livable Oakville Functional Classification and Daily Volume in 000's					
Road Class	Typical Maximum		Road Class	Typical Maximum	
Major Arterials	40-60	—————	Industrial Arterials	15	-----
Multi-purpose Arterials	20-40	—————	Major Collectors	10	-----
Minor Arterials	20-40	—————	Collectors	5	-----

RE: Rail Traffic Data Request - 118 Cross Avenue, Oakville - Metrolinx

From Rail Data Requests <RailDataRequests@metrolinx.com>

Date Thu 11/20/2025 10:54 AM

To Dylan Diebolt <ddiebolt@slrconsulting.com>

Cc Aaron Haniff <ahaniff@slrconsulting.com>; Rachel Gerke <rachel.gerke@slrconsulting.com>

Good afternoon,

Further to your request dated November 17, 2025, the subject lands (118 Cross Avenue, Oakville) are located within 300 metres of the Metrolinx Oakville Subdivision (which carries Lakeshore West GO rail service).

It's anticipated that GO rail service on this Subdivision will be comprised of diesel and electric trains. The GO rail fleet combination on this Subdivision will consist of up to 1 locomotive and 10 passenger cars. The typical GO rail weekday train volume forecast near the subject lands, including both revenue and equipment trips is in the order of 408 trains. The planned detailed trip breakdown is listed below:

	1 Diesel Locomotive	1 Electric Locomotive		1 Diesel Locomotive	1 Electric Locomotive
Day (0700-2300)	132	222	Night (2300-0700)	20	34

The current track design speed near the subject lands is 80 mph (129 km/h).

There are *anti-whistling by-laws* in affect near the subject lands at Chartwell Road and Kerr Street at railway crossing.

With respect to future electrified rail service, Metrolinx is committed to finding the most sustainable solution for electrifying the GO rail network and we are currently working towards the next phase.

However, we can advise that train noise is dominated by the powertrain at lower speeds and by the wheel- track interaction at higher speeds. Hence, the noise level and spectrum of electric trains is expected to be very similar at higher speeds, if not identical, to those of equivalent diesel trains.

Given the above considerations, it would be prudent at this time, for the purposes of acoustical analyses for development in proximity to Metrolinx corridors, to assume that the acoustical characteristics of electrified and diesel trains are equivalent. In light of the aforementioned information, acoustical models should employ diesel train parameters as the basis for analyses.

We anticipate that additional information regarding specific operational parameters for electrified trains will become available in the future once the proponent team is selected.

Operational information is subject to change and may be influenced by, among other factors, service planning priorities, operational considerations, funding availability and passenger demand.

It should be noted that this information only pertains to Metrolinx rail service. It would be prudent to contact other rail operators in the area directly for rail traffic information pertaining to non-Metrolinx rail service.

I trust this information is useful. Should you have any questions or concerns, please do not hesitate to contact me.

Best Regards,

Jenna Auger (She/Her)

Project Analyst, Adjacent Construction Review (ACR)

Development & Real Estate Management

T: (416)-881-0579

20 Bay Street | Toronto | Ontario | M5J 2W3



From: Dylan Diebolt <ddiebolt@slrconsulting.com>

Sent: November 17, 2025 4:41 PM

To: Rail Data Requests <RailDataRequests@metrolinx.com>

Cc: Aaron Haniff <ahaniff@slrconsulting.com>; Rachel Gerke <rachel.gerke@slrconsulting.com>

Subject: Rail Traffic Data Request - 118 Cross Avenue, Oakville - Metrolinx

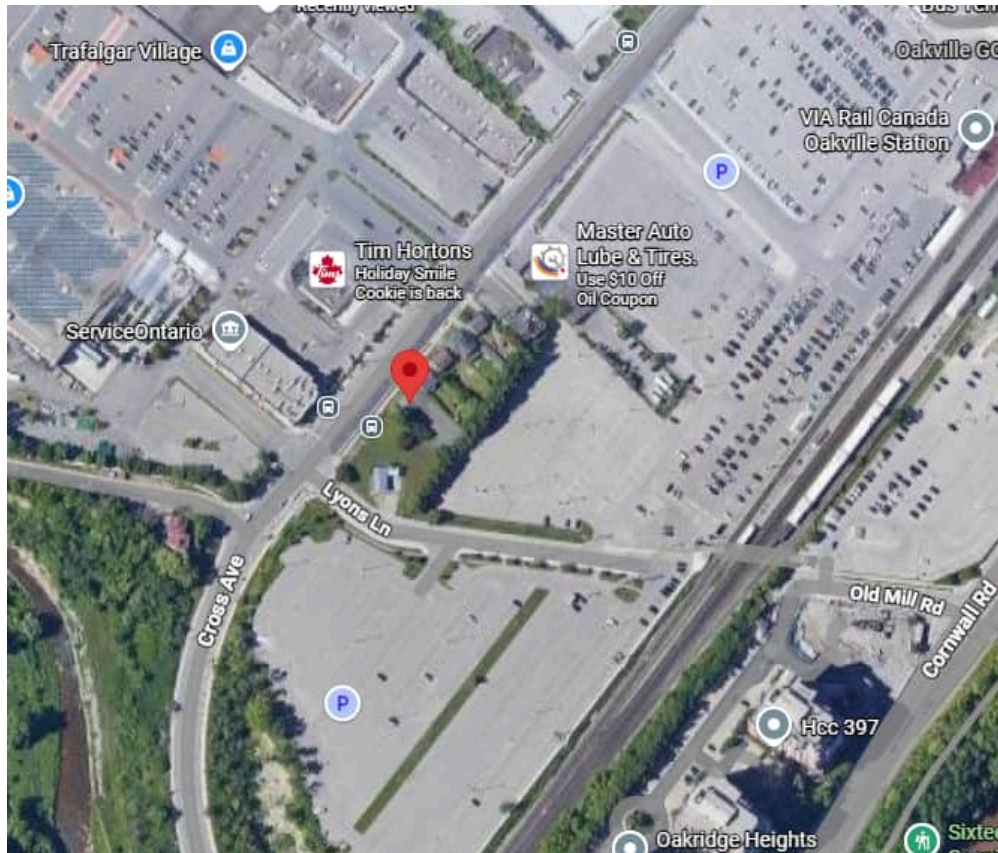
EXTERNAL SENDER: Do not click any links or open any attachments unless you trust the sender and know the content is safe.

EXPÉDITEUR EXTERNE: Ne cliquez sur aucun lien et n'ouvrez aucune pièce jointe à moins qu'ils ne proviennent d'un expéditeur fiable, ou que vous ayez l'assurance que

Hello,

We are working on an environmental noise study for a new proposed development located near the intersection of Cross Ave and Lyons Lane in Oakville, Ontario. please see the map below for reference.

Could you please provide Metrolinx rail traffic data forecasts for this segment of the Oakville Subdivision for use in our noise study? I will request CN traffic data separately.



Please let me know if you have any questions or require any further information regarding this request.

Thank you in advance,

Dylan

Dylan Diebolt

Acoustics Consultant

O [+1 226 706 8080](tel:+12267068080)

M [+1 226 203 8694](tel:+12262038694)

E ddiebolt@slrconsulting.com

SLR Consulting (Canada) Ltd.

100 Stone Road West, Suite 201, Guelph, ON, Canada N1G 5L3



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Train Count Data

TRANSMITTAL

To: Novus Environmental Project : OAK-22.02-550 Kerr St, Oakville, ON
Destinataire : 150 Research Lane
Suite 105
Guelph, ON N1G 4T2

Att'n: R.L. Scott Penton Routing: scottp@novusenv.com
From: Michael Vallins Date: 09/05/2018
Expéditeur :

Cc: Adjacent Development
CN via e-mail

☐ Urgent ☐ For Your Use ☐ For Review ☒ For Your Information ☐ Confidential

Re: Train Traffic Data – CN Oakville Subdivision near 550 Kerr St in Oakville, ON

Please find attached the requested Train Traffic Data; this data does not reflect GO Metrolinx Traffic. The application fee in the amount of **\$500.00** +HST will be invoiced.

Should you have any questions, please do not hesitate to contact the undersigned at 905-669-3264.

Sincerely,
CN Design & Construction

Michael Vallins P.Eng
Manager of Public Works
public_works_gld@cn.ca

Date: 2018/09/05

Project Number: OAK-22.02-550 Kerr St, Oakville, ON

Dear Scott:

Re: Train Traffic Data – CN Oakville Subdivision near 550 Kerr St in Oakville, ON

The following is provided in response to Scott's 2018/04/17 request for information regarding rail traffic in the vicinity of 550 Kerr Street in Oakville at approximately Mile 22.02 on CN's Oakville Subdivision.

Typical daily traffic volumes are recorded below. However, traffic volumes may fluctuate due to overall economic conditions, varying traffic demands, weather conditions, track maintenance programs, statutory holidays and traffic detours that when required may be heavy although temporary. For the purpose of noise and vibration reports, train volumes must be escalated by 2.5% per annum for a 10-year period.

Typical daily traffic volumes at this site location are as follows:

***Maximum train speed is given in Miles per Hour**

	0700-2300			
Type of Train	Volumes	Max.Consist	Max. Speed	Max. Power
Freight	0	140	60	4
Way Freight	7	25	60	4
Passenger	14	10	95	2

	2300-0700			
Type of Train	Volumes	Max.Consist	Max. Speed	Max. Power
Freight	0	140	60	4
Way Freight	0	25	60	4
Passenger	0	10	95	2

The volumes recorded reflect westbound and eastbound freight and passenger operations on CN's Oakville Subdivision.

Except where anti-whistling bylaws are in effect, engine-warning whistles and bells are normally sounded at all at-grade crossings. There is one (1) at-grade crossing in the immediate vicinity of the study area at Mile 21.94. Anti-whistling bylaws are not in effect at this crossing. Please note that engine warning whistles may be sounded in cases of emergency, as a safety and or warning precaution at station locations and pedestrian crossings and occasionally for operating requirements.

With respect to equipment restrictions, the gross weight of the heaviest permissible car is 286,000 lbs.

The (Quadruple) mainline track is considered to be continuously welded rail throughout the study area. The presence of four (4) switches located at Mile

21.92,22.04,22.05 and 22.13 may exacerbate the noise and vibration caused by train movements.

The Canadian National Railway continues to be strongly opposed to locating developments near railway facilities and rights-of-way due to potential safety and environmental conflicts. Development adjacent to the Railway Right-of-Way is not appropriate without sound impact mitigation measures to reduce the incompatibility. For confirmation of the applicable rail noise, vibration and safety standards, Adjacent Development, Canadian National Railway Properties at Proximity@cn.ca should be contacted directly.

I trust the above information will satisfy your current request.

Sincerely,

A handwritten signature in black ink, appearing to read 'Michael Vallins', with a horizontal line extending to the right.

Michael Vallins P.Eng
Manager of Public Works
public_works_gld@cn.ca

ORNAMENT - Sound Power Emissions & Source Heights

Ontario Road Noise Analysis Method for Environment and Transportation

Road Segment ID	Roadway Name	Link Description	Speed (kph)	Period (h)	2039 AADT Traffic Volumes	Auto %	Med %	Hvy %	Auto	Med	Heavy
Cross_Ave_D	Cross Avenue	Daytime Impacts	50	16	17088	90.9%	8.1%	1.1%	15526	1377	186
Cross_Ave_N	Cross Avenue	Nighttime Impacts	50	8	1486	90.9%	8.1%	1.1%	1350	120	16
QEW_D	QEW	Daytime Impacts	100	16	220189	91.0%	2.2%	6.7%	200380	4952	14857
QEW_N	QEW	Nighttime Impacts	100	8	38857	91.0%	2.2%	6.7%	35361	874	2622
Cornwall_D	Cornwall	Daytime Impacts	60	16	28446	90.9%	8.1%	1.1%	25845	2292	309
Cornwall_N	Cornwall	Nighttime Impacts	60	8	2474	90.9%	8.1%	1.1%	2247	199	27
Cross_Ave_D_min	Cross Avenue minimum	Daytime Impacts	50	1	538	90.9%	8.1%	1.1%	489	43	6
Cross_Ave_E_min	Cross Avenue minimum	Evening Impacts	50	1	384	90.9%	8.1%	1.1%	349	31	4
Cross_Ave_N_min	Cross Avenue minimum	Nighttime Impacts	50	1	45	90.9%	8.1%	1.1%	41	4	0
QEW_D_min	QEW minimum	Nighttime Impacts	100	1	10838	91.0%	2.2%	6.7%	9863	244	731
QEW_E_min	QEW minimum	Evening Impacts	100	1	8124	91.0%	2.2%	6.7%	7393	183	548
QEW_N_min	QEW minimum	Nighttime Impacts	100	1	1512	91.0%	2.2%	6.7%	1376	34	102
Cornwall_D_min	Cornwall minimum	Daytime Impacts	60	1	878	90.9%	8.1%	1.1%	798	71	10
Cornwall_E_min	Cornwall minimum	Evening Impacts	60	1	627	90.9%	8.1%	1.1%	570	51	7
Cornwall_N_min	Cornwall minimum	Nighttime Impacts	60	1	74	90.9%	8.1%	1.1%	67	6	1

Filename: crossave.te Time Period: 16 hours
Description:

Road data, segment # 1: QEW E

Car traffic volume : 100190 veh/TimePeriod
Medium truck volume : 2476 veh/TimePeriod
Heavy truck volume : 7429 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: QEW E

Angle1 Angle2 : -80.00 deg 80.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 340.00 m
Receiver height : 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: QEW W

Car traffic volume : 100190 veh/TimePeriod
Medium truck volume : 2476 veh/TimePeriod
Heavy truck volume : 7429 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: QEW W

Angle1 Angle2 : -80.00 deg 80.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 370.00 m
Receiver height : 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 3: Cross Ave E

```

-----
Car traffic volume : 7763 veh/TimePeriod
Medium truck volume : 688 veh/TimePeriod
Heavy truck volume : 93 veh/TimePeriod
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

```

Data for Segment # 3: Cross Ave E

```

-----
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 : 15.00 m
Receiver height : 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

```

↑

Road data, segment # 4: Cross Ave W

```

-----
Car traffic volume : 7763 veh/TimePeriod
Medium truck volume : 688 veh/TimePeriod
Heavy truck volume : 93 veh/TimePeriod
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

```

Data for Segment # 4: Cross Ave W

```

-----
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 : 20.00 m
Receiver height : 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

```

↑

Results segment # 1: QEW E

Source height = 1.61 m

ROAD (0.00 + 69.36 + 0.00) = 69.36 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-80	80	0.00	83.43	0.00	-13.55	-0.51	0.00	0.00	0.00	69.36

Segment Leq : 69.36 dBA

↑
Results segment # 2: QEW W

Source height = 1.61 m

ROAD (0.00 + 69.00 + 0.00) = 69.00 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-80	80	0.00	83.43	0.00	-13.92	-0.51	0.00	0.00	0.00	69.00

Segment Leq : 69.00 dBA

↑
Results segment # 3: Cross Ave E

Source height = 1.02 m

ROAD (0.00 + 63.80 + 0.00) = 63.80 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	63.80	0.00	0.00	0.00	0.00	0.00	0.00	63.80

Segment Leq : 63.80 dBA

↑
Results segment # 4: Cross Ave W

Source height = 1.02 m

ROAD (0.00 + 62.55 + 0.00) = 62.55 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	63.80	0.00	-1.25	0.00	0.00	0.00	0.00	62.55

Segment Leq : 62.55 dBA

Total Leq All Segments: 73.17 dBA

↑



Aerial Photography from Bing

BATORY PLANNING + MANAGEMENT

118 CROSS AVENUE – OAKVILLE, ONTARIO

ST5 VS. CADNA/A VALIDATION

True North



Scale: 1:1,000

Date: August 2026 Rev 0.0

Project No 241.031814.00001

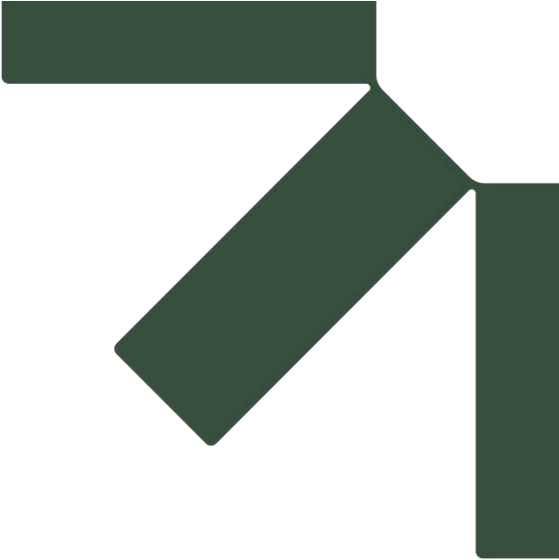
METRES

Figure No.
B.1



TOTAL Leq FROM ALL SOURCES: 73.17





Appendix C Required Warning Clauses

Environmental Noise and Vibration Study

118 Cross Avenue, Oakville, Ontario

Batory Planning + Management

SLR Project No.: 241.031814.00001

August 21, 2026

SUMMARY OF MITIGATION MEASURES AND WARNING CLAUSES

Warning Clauses

Warning Clauses may be used individually or in combination. The following Warning Clauses should be included in agreements registered on Title for the residential units, and included in all agreements of purchase and sale or lease, and all rental agreements:

Transportation Sources (Road and Rail)

MECP Type B Warning Clause

“Purchasers/tenants are advised that despite the inclusion of noise control features in the development and within the building units, sound levels due to increasing road and rail traffic may on occasions 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.”

MECP Type D Warning Clause

“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 sound level limits of the Municipality and the Ministry of the Environment.”

Metrolinx

“Metrolinx and its assigns and successors in interest operate commuter transit service within 300 metres from the land which is the subject hereof. In addition to the current use of these lands, there may be alterations to or expansions of the rail and other facilities on such lands in the future including the possibility that Metrolinx or any railway entering into an agreement with Metrolinx or any railway assigns or successors as aforesaid may expand their operations, which expansion may affect the living environment of the residents in the vicinity, notwithstanding the inclusion of any noise and vibration attenuating measures in the design of the development and individual dwellings. Metrolinx will not be responsible for any complaints or claims arising from use of such facilities and/or operations on, over or under these lands.”

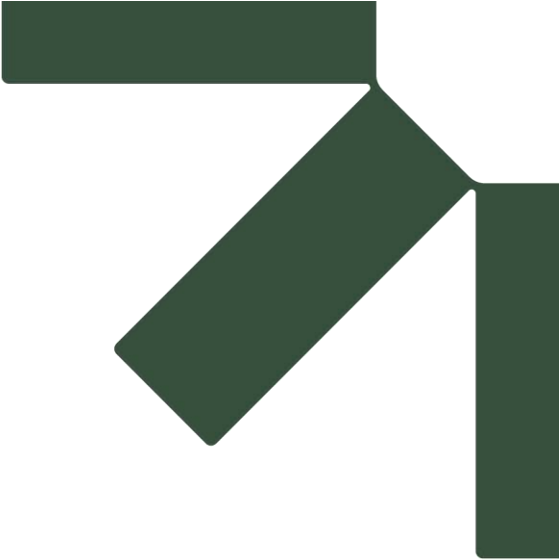
CN

“Purchasers are advised that Canadian National Railway Company or its assigns or successors in interest has or have a right of way within 300 metres from the land the subject thereof. There may be alterations to or expansions of the rail facilities on such right of way in the future, including the possibility that the railway or its assigns or successors as aforesaid may expand its operations, which expansion may affect the living environment of the residents in the vicinity, notwithstanding the inclusion of any noise and vibration attenuating measures in the design of the development and individual dwelling(s). CNR will not be responsible for any complaints or claims arising from use of such facilities and/or operations on, over or under the aforesaid right-of-way”.

Stationary Sources

MECP Type E Warning Clause

“Purchasers/tenants are advised that due to the proximity of adjacent industries, noise from these facilities may at times be audible.”



Appendix D Stationary Source Data

Environmental Noise and Vibration Study

118 Cross Avenue, Oakville, Ontario

Batory Planning + Management

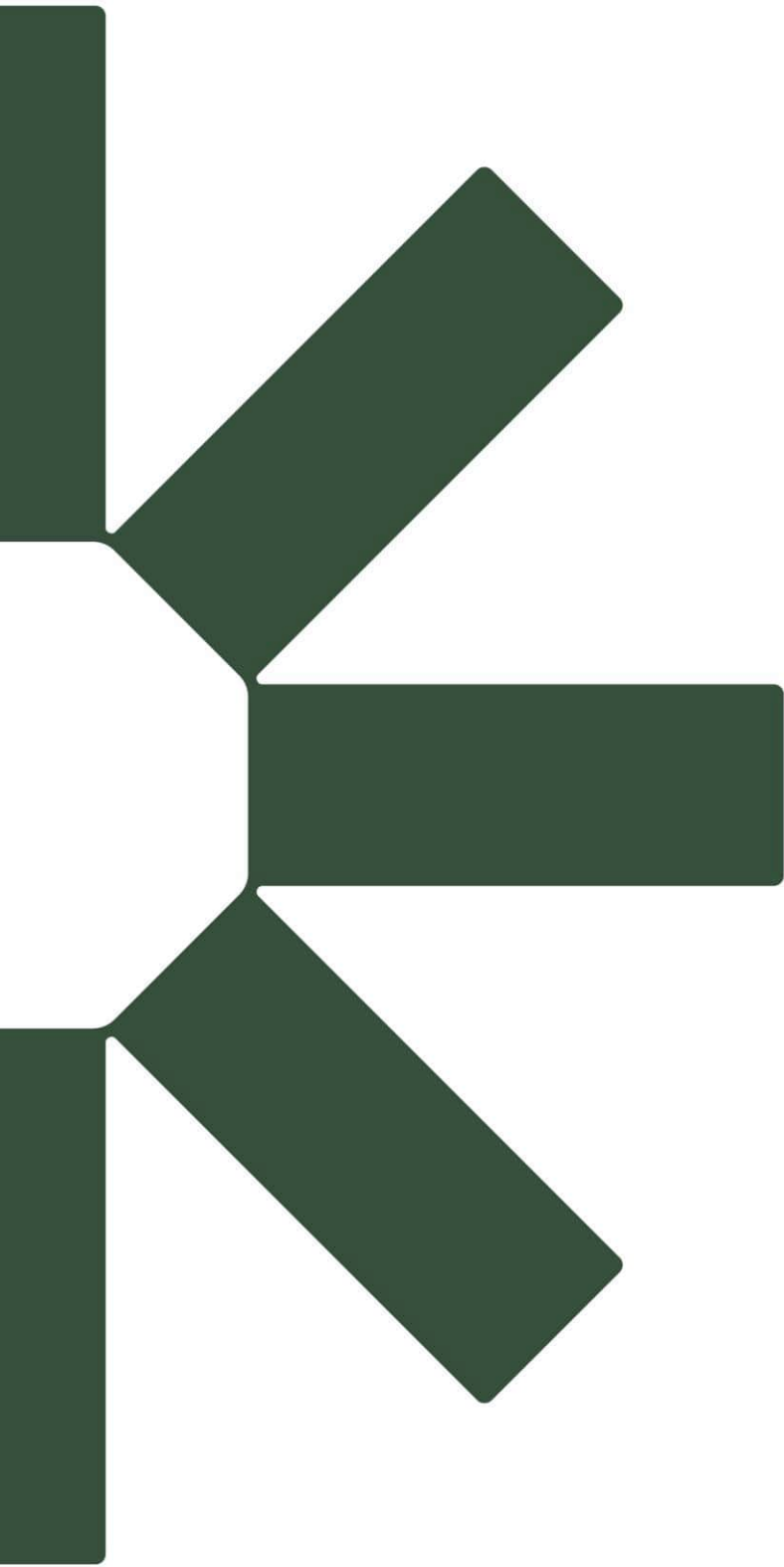
SLR Project No.: 241.031814.00001

August 21, 2026

Table D.1: Summary of Noise Source Sound Power Levels

Source Description	ID	Maximum Sound Power Levels (1/1 Octave Band Levels)									Total PWL (dBA)	Notes
		32 (dB)	63 (dB)	125 (dB)	250 (dB)	500 (dB)	1000 (dB)	2000 (dB)	4000 (dB)	8000 (dB)		
Rooftop HVAC (5-ton)	HVAC_5ton	77	80	81	81	80	78	74	70	64	83	- based on SLR historical data - Assumed to operate 60 minutes per hour during all times of day and 30 minutes per hour during all nighttime hours
Rooftop HVAC (10-ton)	HVAC_10ton	80	84	84	84	83	81	77	73	67	86	- based on SLR historical data - Assumed to operate 60 minutes per hour during all times of day and 30 minutes per hour during all nighttime hours
HVAC Unit (15 ton)	HVAC_15ton	87	90	91	91	90	88	84	80	74	93	- based on SLR historical data - Assumed to operate 60 minutes per hour during all times of day and 30 minutes per hour during all nighttime hours
HVAC Unit (20 ton)	HVAC_20ton	89	92	93	93	92	90	86	82	76	95	- based on SLR historical data - Assumed to operate 60 minutes per hour during all times of day and 30 minutes per hour during all nighttime hours
Generic Exhaust Fan- Small	EF_Kitchen	--	83	93	88	82	77	75	69	66	85	- based on SLR historical data - Assumed to operate 60 minutes per hour during all times of day and 30 minutes per hour during all nighttime hours
Heavy Truck Idling	vcIHvyTrkl	19	93	88	83	90	87	88	82	71	93	- based on SLR historical data - Assumed to operate 20 min/hour during daytime and evening hours
Idling Car	Car_Idle	--	85	80	75	72	70	69	65	55	76	- based on SLR historical data - Assumed 7 cars idling for 60 minutes during daytime and nighttime hours.
Rooftop ACC (20-ton)	ACC_20ton	--	96	102	96	92	88	83	77	68	94	- based on SLR historical data - Assumed to operate 60 minutes per hour during all times of day and 30 minutes per hour during all nighttime hours
Impact Wrench	Impact	83	78	82	76	79	78	86	85	85	91	- based on SLR historical data - Assumed to operate 5 minutes per hour during day and evening periods only - Spectrum does not include penalty (+10 dB).
Air Compressor	Air_Comp	101	101	96	89	86	86	84	85	81	92	- based on SLR historical data - Assumed to operate 5 minutes per hour during day and evening periods only - Spectrum does not include penalty (+5 dB)
Transformer	Transformer	72	74	69	69	63	58	53	46	--	65	- based on SLR historical data - Assumed to operate 60 minutes per hour during all times of day and 30 minutes per hour during all nighttime hours - Spectrum includes penalty (+5 dB)





Making Sustainability Happen