

5500 DUNDAS STREET WEST

TORONTO, ONTARIO

AIR QUALITY ASSESSMENT

RWDI #2600994

December 10, 2025

SUBMITTED TO

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1 INTRODUCTION

This Air Quality Assessment has been prepared on behalf of the client, FCHT Holdings (Ontario) Corporation, in support of advancing a Zoning By-Law application for the proposed redevelopment at 5500 Dundas Street West in Toronto, Ontario.

The proposed development is bounded by Dundas Street West to the south, Billingham Road to the west, Paulart Drive to the east and Silverhill Drive to the north, and to the east of the Highway 427. It is also near an Employment Area (mainly to the south) that contains of a variety of industries.

The proposed development consists of two (2) mixed-use residential low-rise towers, namely Building A (the eastern portion of the Site) and Building B (the western portion of the Site). Both buildings are designed with outdoor amenity areas on level five. **Appendix A** provides the site plan for the proposed development.

Based on a preliminary screening of the surrounding facilities, Pure Foods Meat Solution Inc. ("Pure Foods") and The New Zealand and Australian Lamb Company Limited ("The Lamb Company") were identified as the primary concerns for potential odour impacts to the proposed development. The proposed development will introduce new elevated points of reception at a greater height compared to what was assessed when Pure Foods and The Lamb Company were registered under the Ontario Ministry of the Environment, Conservation and Parks (MECP) Environmental Activity and Sector Registry (EASR). It is of interest to examine whether the facilities operations would have any odour impacts on the elevated receptors of the proposed development and whether the proposed development would impair these facilities' ability to operate in compliance with their permits and provincial regulations. Therefore, RWDI completed a screening-level odour modelling assessment to evaluate the potential odour impacts from Pure Foods and The Lamb Company on the proposed development.

Given that the proposed development is located in proximity of Dundas Street West, Highway 427, and a Go Train rail line, the air quality impact from the transportation corridors was also evaluated in this assessment.

2 METHODOLOGY

As discussed in Section 1, Pure Foods and The Lamb Company were identified for a high-level screening odour assessment with dispersion modelling. Odour was considered the primary concern of interest. Odour impacts from these two facilities on the proposed development were compared with that on the existing residences to evaluate the feasibility of proposed development.

In addition to dispersion modelling, the MECP Niagara District office was contacted to request for complaint history. The MECP district officer indicated that the details of any complaint, if any, should be requested via the Ministry's Freedom of Information (FOI) office. A FOI request has been placed to understand the history of complaints in the area. However, RWDI's previous experience has shown that such requests may not produce valuable information within appropriate timelines. Meanwhile, an internet search for complaints in the local area was undertaken but no information related to odour or dust complaints were found.

2.1.1 Dispersion Modelling

The dispersion model used in this study was the US EPA's AERMOD version 22112. This is a widely used dispersion model and is an approved model for regulatory purposes in Ontario.

2.1.2 Meteorological Data

The facility is located in Etobicoke; therefore, the Central Region meteorological data set is recommended by the MECP for use at this site. This includes surface data from Pearson International Airport in Toronto and upper air data from Buffalo, New York. Within each region, the MECP provides alternative data sets with the choice of data set depending on the character of the terrain at the study site. The area surrounding the facility is primarily residential and industrial; therefore, the default data set for "suburban" was used.

2.1.3 Terrain Data

Terrain information for the area surrounding the facility was obtained from the MECP Regional Meteorological and Terrain Data for Air Dispersion Modelling website. The terrain data is based on the Canadian Digital Elevation Model (CDEM) horizontal reference datum. These data were run through the AERMAP terrain pre-processor to estimate base elevations for sources and receptors to help the model account for changes in elevation in the surrounding terrain.

2.1.4 Odour Emission Rates and Discharge Parameters

As this analysis was conducted as a high-level screening assessment to compare the air quality impact on the proposed development with that on the existing residences nearby, a unit emission rate was applied for simplicity. No attempts were made to estimate actual odour emission rates or compare against acceptable odour benchmarks. The exercise is intended to be a relative comparison of potential maximum impacts between existing sensitive receptors in the vicinity and the proposed development ground level and elevated receptors. Detailed information of the exhaust designs at the two concerned facilities was not available at the time of the assessment. In addition, it is observed that no tall stacks are present on site. Instead, the exhaust is likely discharged through an exhaust system on the roof of the buildings. Therefore, a pseudo volume source per each facility at the rooftops was assumed.

2.1.5 Receptors

The dispersion modelling considered discrete receptors at some existing residences and gridded elevated receptors at the proposed development. Receptors were placed at every floor level, starting from 1.5 m above grade for the first floor. The locations of receptors are shown in **Figure 1**.



Figure 1: Locations of Receptors

2.2 Results

Table 1 summarizes the modelling results for existing residences and the two proposed buildings. The modelled odour concentrations were based on a unit emission rate to serve as a comparison between the existing residences and the proposed development. Comparison against the odour detection threshold commonly used is not applicable in this study.

Table 1: Comparison of Modelled Maximum Odour Concentrations at Existing Residences and the Proposed Development

Category	Maximum Odour Concentration (OU/m ³) [1]	Comparison with the MPOI at Existing Residences (%)
Existing Residences	0.00071	-
Proposed Building A (the eastern portion)	0.00062	87%
Proposed Building B (the western portion)	0.00047	66%

Note:

[1] The odour concentrations were derived based on a unit emission rate for a comparison between the existing residences and the proposed development. Comparison against the odour detection threshold commonly used is not applicable.

The modelling results show that the maximum odour concentration modelled is at one of the existing residences along Kebral Avenue, at 0.00071 OU/m³, while the maximum odour concentration modelled at the proposed development is 0.00062 OU/m³ (i.e. about 87% compared with the existing residences) at the proposed Building A. The maximum odour concentrations were found at the first level, i.e. 1.5 m above ground.

In addition, wind data in the meteorological data was reviewed. A summary of the directional distribution of winds for Central Region over the model period (1996-2000) is shown in **Figure 2**. The most frequent winds originate from the west-southwest to north, with winds from the east and southeast are relatively less frequent, facilitating the dispersion of contaminants away from the proposed development for most of the time.

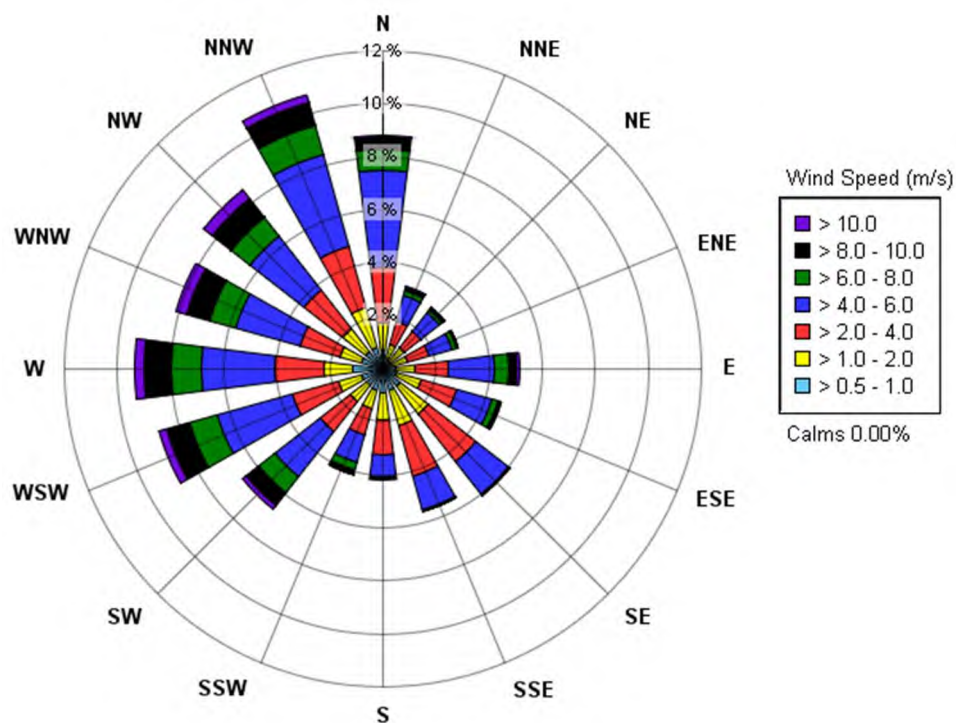


Figure 2: Wind Speed and Direction Frequencies for Central Region (1996-2000)

In view of these, it is concluded that Pure Foods and The Lamb Company would not result in an odour impact on the proposed development worse than that on the existing residences. Provided that there is no history of odour complaints from the industries in that area, no adverse odour impacts from these two facilities are anticipated on the proposed development.

3 TRANSPORTATION CORRIDORS

Based on experience with roadway modelling assessments and publicly available studies, such as The City of Toronto produced report: “Avoiding the TRAP: Traffic-Related Air Pollution in Toronto and Options for Reducing Exposure” (City of Toronto, October 2017), the most widely reported mitigation strategy is separation distances or buffer zones. Some environmental agencies (California and British Columbia) recommend a setback of 500 ft (approx. 150 m) from major highways with an average annual daily traffic (AADT) of 100,000 vehicles or more per day and 100 m from roads with an AADT of 15,000 vehicles or more per day. The study also lays out the level of Traffic-Related Air Pollution (TRAP) that a sensitive receptor is exposed to when being located near different types of roads:

- Sites with the greatest TRAP exposure: located near multiple major highways with an AADT volume of 100,000 vehicles or more, within 500 metres;
- High exposure sites: located near one major highway with an AADT volume of 100,000 vehicles or more, within 500 metres;
- Medium-high exposure sites: located near one highway with an AADT volume of 50,000 vehicles or more, within 150 metres;
- Medium exposure sites: located near one arterial road with an AADT volume of 15,000 vehicles or more, within 100 metres; and
- Sites outside TRAP zones: located farther away from highways and high-volume arterial roads.

The proposed development lies along Dundas Street West and is located approximately 650 m to the east of Highway 427. Highway 427 is one of the major highways in Toronto with an AADT over 400,000 vehicles per day, while Dundas Street West has an AADT of over 50,000 vehicles per day, which suggests a minimum separation distance of 500 m and 150 m from Highway 427 and Dundas Street West. Given the large distance from Highway 427 (approximately 650 m), the TRAP impact on the proposed development would not be significant. On the other side, the proposed buildings are only about 10 m from Dundas Street West. Dundas Street West might be a potential concern of TRAP to the proposed development considering its comparable traffic volume and limited setback distance. In light of this, RWDI recommends a TRAP study be completed prior to the site plan approval stage to inform the needs of any mitigation requirements.

In addition to the major roads, emissions from diesel fuelled locomotives can have an impact on sensitive receptors located in close proximity to frequently travelled corridors. There is a Go Train Railway line approximately 250 m to the southeast of the proposed development, greater than the setback distance of 30 m recommended in “Guideline for New Development in Proximity to Railway Operations” (The Railway Association of Canada and Federation of Canadian Municipalities, May 2013). The GO Rail Network Electrification Environmental Project Report Addendum – Lakeshore East Study (Metrolinx 2021) was also reviewed to get a sense of air quality effects around rail corridors (a very conservative comparison in terms of railcar movement and number of locomotives). The Lakeshore East Study indicated that air quality impacts decrease sharply with distance and are generally low (within 20% of background) beyond 50 m. Therefore, the proposed development is considered compatible with the rail corridor.

4 CONCLUSIONS

Air quality impacts arising from the existing employment area on the proposed development, particularly the potential odour impacts from Pure Foods Meat Solutions Inc. and The New Zealand and Australian Lamb Company Limited in the vicinity, were assessed. Results of dispersion modelling suggests that these facilities have a lower odour impact on the proposed development than that on the existing residences. Provided that there is no history of odour complaints from the industries in that area, no adverse odour impacts from these two facilities are anticipated on the proposed development.

Transportation corridors in the surroundings, including Dundas Street West, Highway 427 and the Go Train Railway, were also evaluated. No potential compatibility issues from an air quality perspective were identified with respect to Highway 427 and the railway corridor. Nonetheless, due to traffic volumes for Dundas Street West, RWDI recommends a TRAP study be completed prior to the Site Plan Approval stage.

5 STATEMENT OF LIMITATIONS

This report entitled 5500 Dundas Street West (Air Quality Assessment) was prepared by Rowan Williams Davies & Irwin Inc. ("RWDI") for FCHT Holdings (Ontario) Corporation ("Client"). The findings and conclusions presented in this report have been prepared for the Client and are specific to the project described herein ("Project"). The conclusions and recommendations contained in this report are based on the information available to RWDI when this report was prepared. Because the contents of this report may not reflect the final design of the Project or subsequent changes made after the date of this report, RWDI recommends that it be retained by Client during the final stages of the project to verify that the results and recommendations provided in this report have been correctly interpreted in the final design of the Project.

The conclusions and recommendations contained in this report have also been made for the specific purpose(s) set out herein. Should the Client or any other third party utilize the report and/or implement the conclusions and recommendations contained therein for any other purpose or project without the involvement of RWDI, the Client or such third party assumes any and all risk of any and all consequences arising from such use and RWDI accepts no responsibility for any liability, loss, or damage of any kind suffered by Client or any other third party arising therefrom.

Finally, it is imperative that the Client and/or any party relying on the conclusions and recommendations in this report carefully review the stated assumptions contained herein and to understand the different factors which may impact the conclusions and recommendations provided.



APPENDIX A

FLOOR PLATE AREA - The total area of a floor of a building, measured from the exterior of the main wall of the floor level, including voids at the level of the floor such as an atrium, mezzanine, stairwell, escalator, elevator, ventilation duct or utility shaft.

GROSS FLOOR AREA - The total area of each floor level of a building, above and below average grade, measured from the exterior of the main wall of each floor level, including voids at the level of each floor, such as an atrium, mezzanine, stairwell, escalator, elevator, ventilation duct or utility shaft, but excluding areas used for the purpose of parking or loading.

THE METHOD OF INSTALLATION FOR THE PROPOSED SERVICE CONNECTIONS WILL BE AT THE DISCRETION OF TORONTO WATER.

2. EXISTING CONNECTIONS NO LONGER IN USE SHALL BE DISCONNECTED BY TORONTO WATER AT THE OWNER'S COST.

3. THE PROPOSED SERVICE CONNECTIONS SHALL BE TO THE MAIN WATER MAINS SHALL BE TO THE MAIN WATER MAINS.

4. THE OWNER IS REQUIRED TO INSTALL AND MAINTAIN A PERMITS ISOLATION DEVICE FOR ALL APPLICABLE WATER SERVICES IN ACCORDANCE WITH THE TORONTO MUNICIPAL CODE, CHAPTER S51 WATER SUPPLY, THE BUILDING CODE AND CSA B46 SERIES STANDARDS.

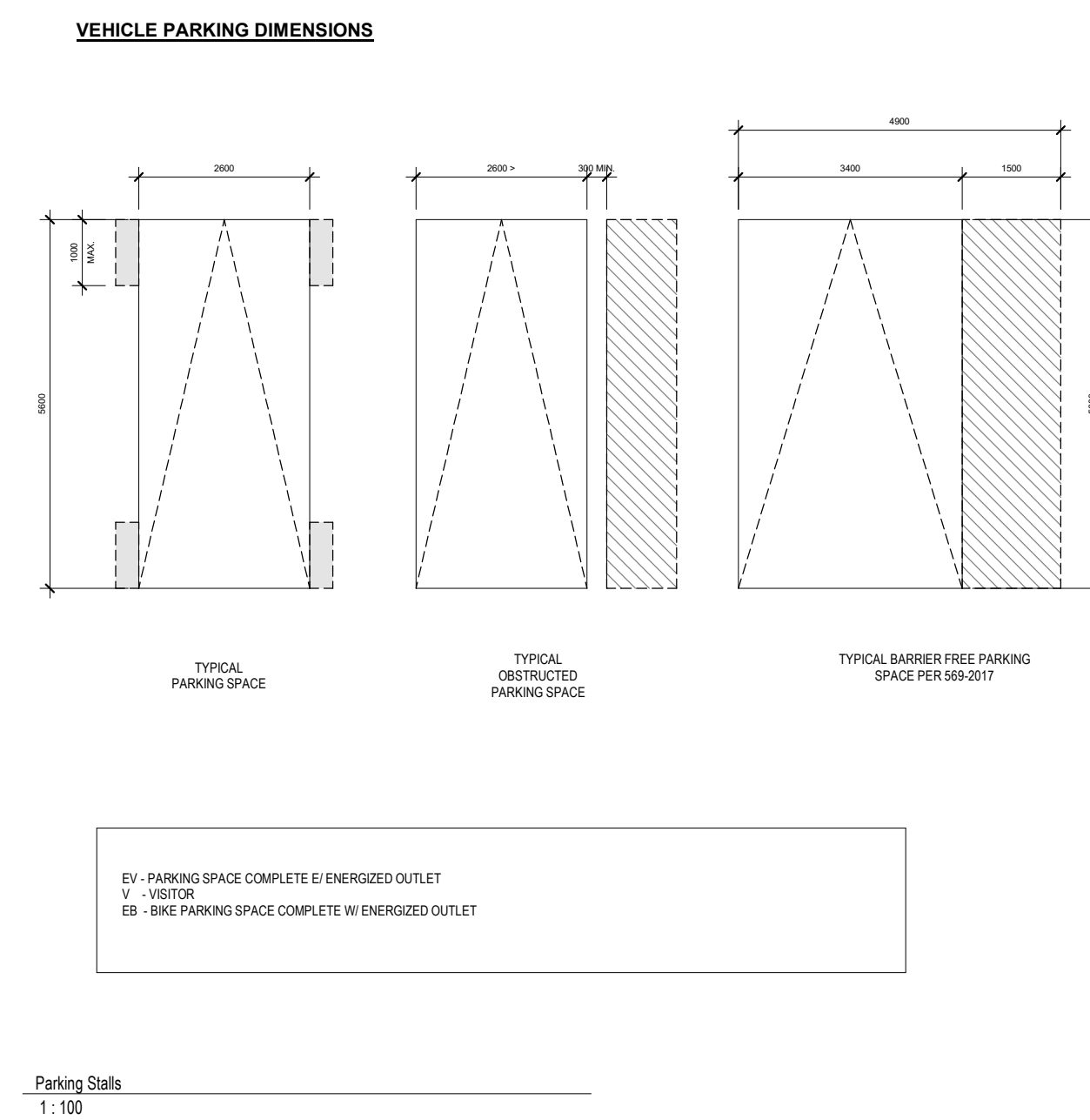
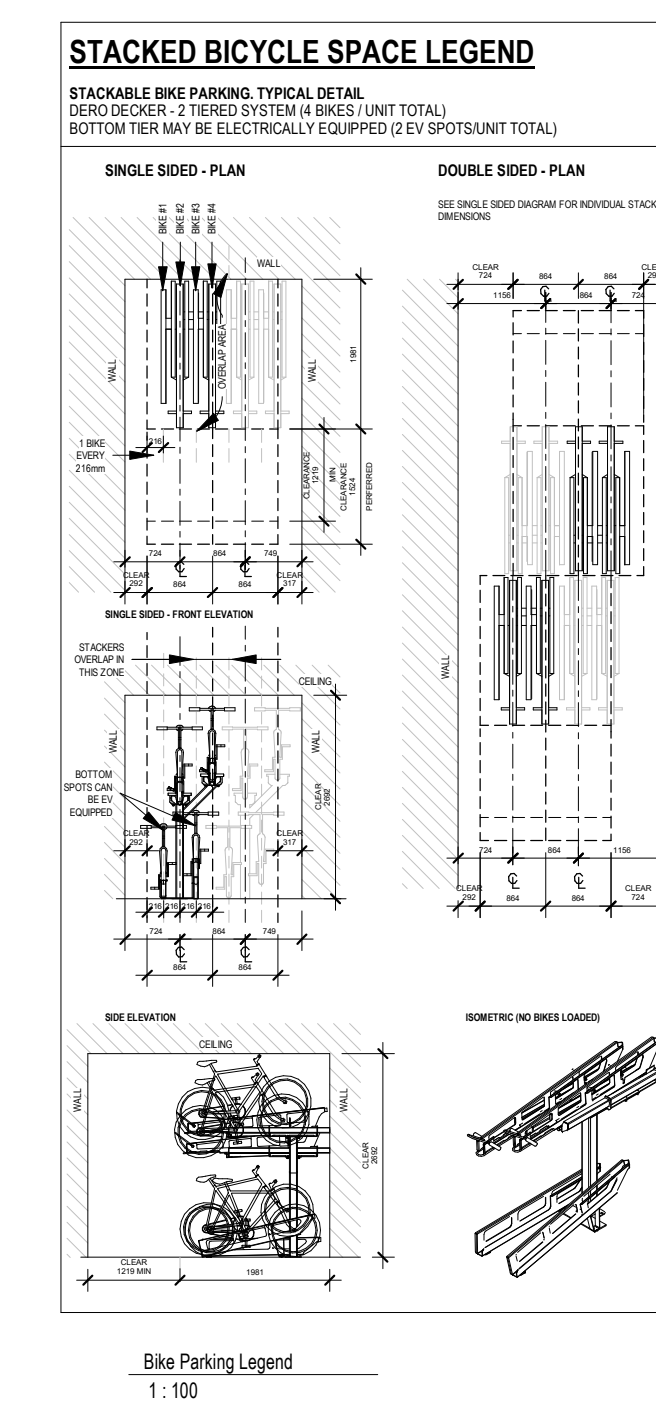
5. THE BUILDING'S STORM AND SANITARY SYSTEMS MUST BE DESIGNED TO BE ABLE TO OPERATE UNDER MUNICIPAL SURCHARGE CONDITIONS.

IT IS ADVISED THAT SHOULD ANY PARTY, INCLUDING THE APPLICANT OR ANY SUBSEQUENT OWNER, APPLY FOR MORE THAN ONE CONDOMINIUM CORPORATION ENCOMPASSING ANY OR ALL OF THIS DEVELOPMENT OR MAKE AN APPLICATION THAT RESULTS IN A LAND DIVISION, PARTY MAY REQUIRE LEGAL ASSURANCES, INCLUDING BUT NOT LIMITED TO EASEMENTS, WITH RESPECT TO THE APPROVED DEVELOPMENT.



A 50

159 PARKING STALLS
6 BARRIER FREE PARKING STALLS
165 TOTAL



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No.	Date	Issue/Revision
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5500 DUNDAS ST W

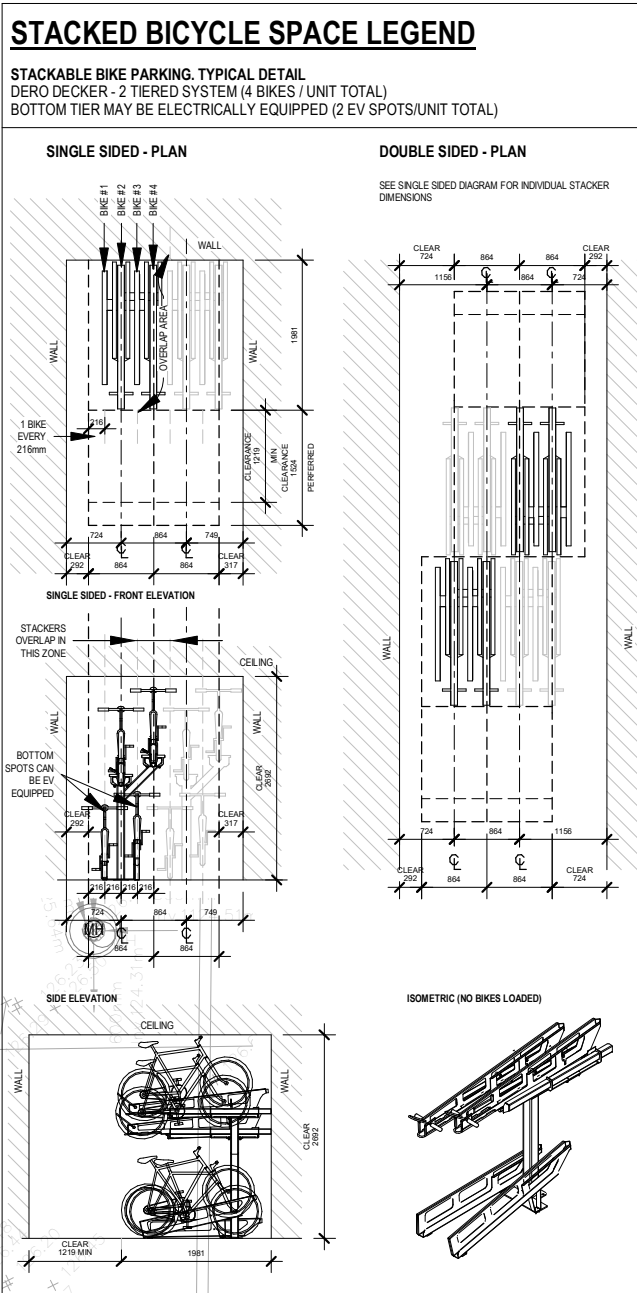
5500 Dundas St W, Etobicoke, ON M9B 1B

Title: **Parking Level 2**

Project No. 2413	Scale	As indicated
Drawing No.		

A 100

GROSS SITE AREA:9751.46M²
LESS: 32.46M²
NET SITE AREA: 9719 M²



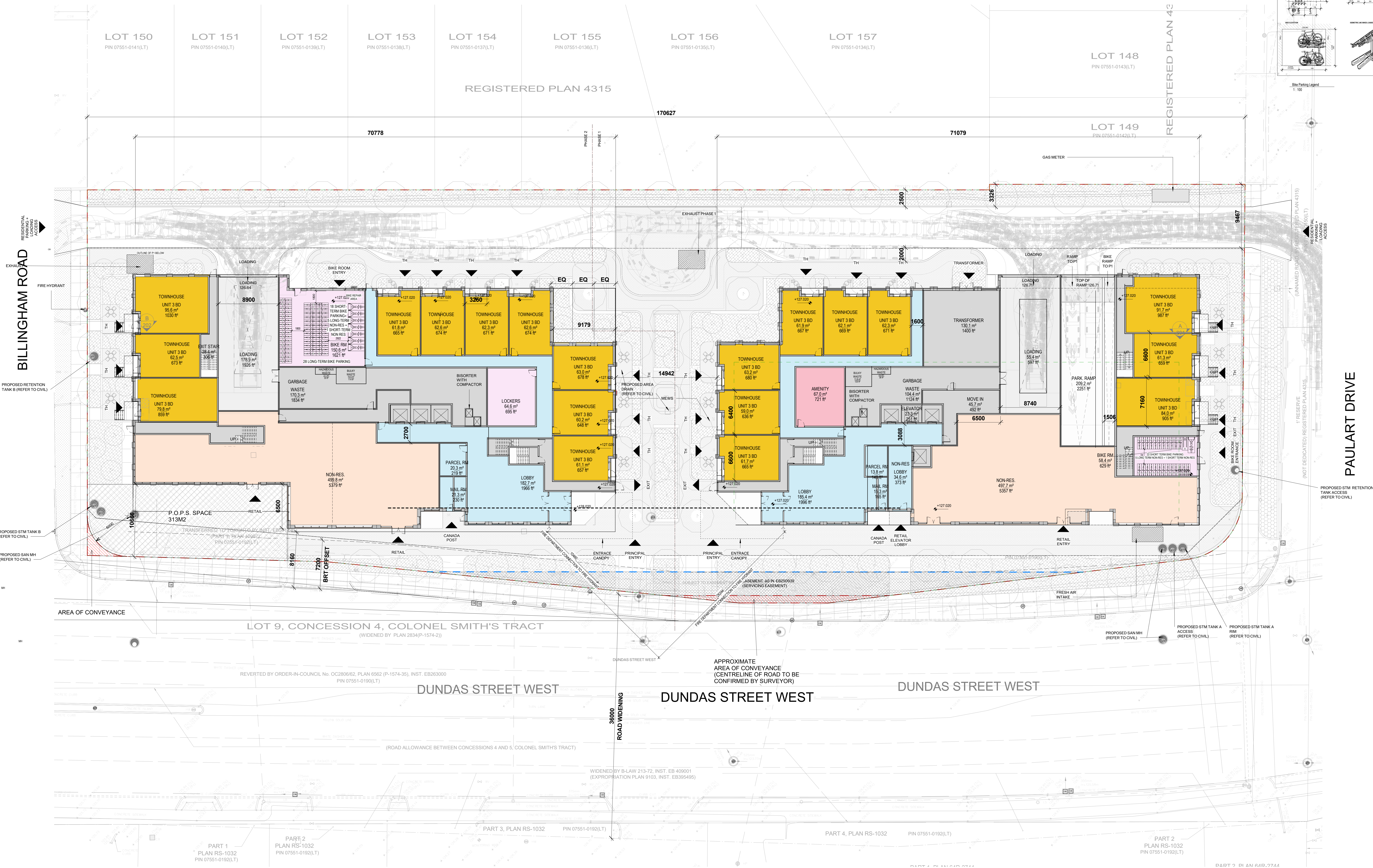
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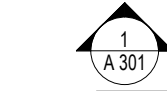
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5500 Dundas St W, Etobicoke, ON M9B 1B7		
Title: Floor Plan - Ground Floor		
Project No. 2413	Scale	As indicated
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5500 Dundas St W, Etobicoke, ON M9B 1B7

Project No. 2413	Scale 1 : 200
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Drawing No.

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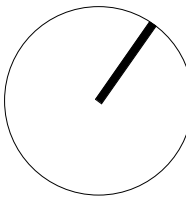


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5500 Dundas St W, Etobicoke, ON M9B 1B7		
Title: Floor Plan - Level 03-04		
Project No. 2413	Scale	1 : 200
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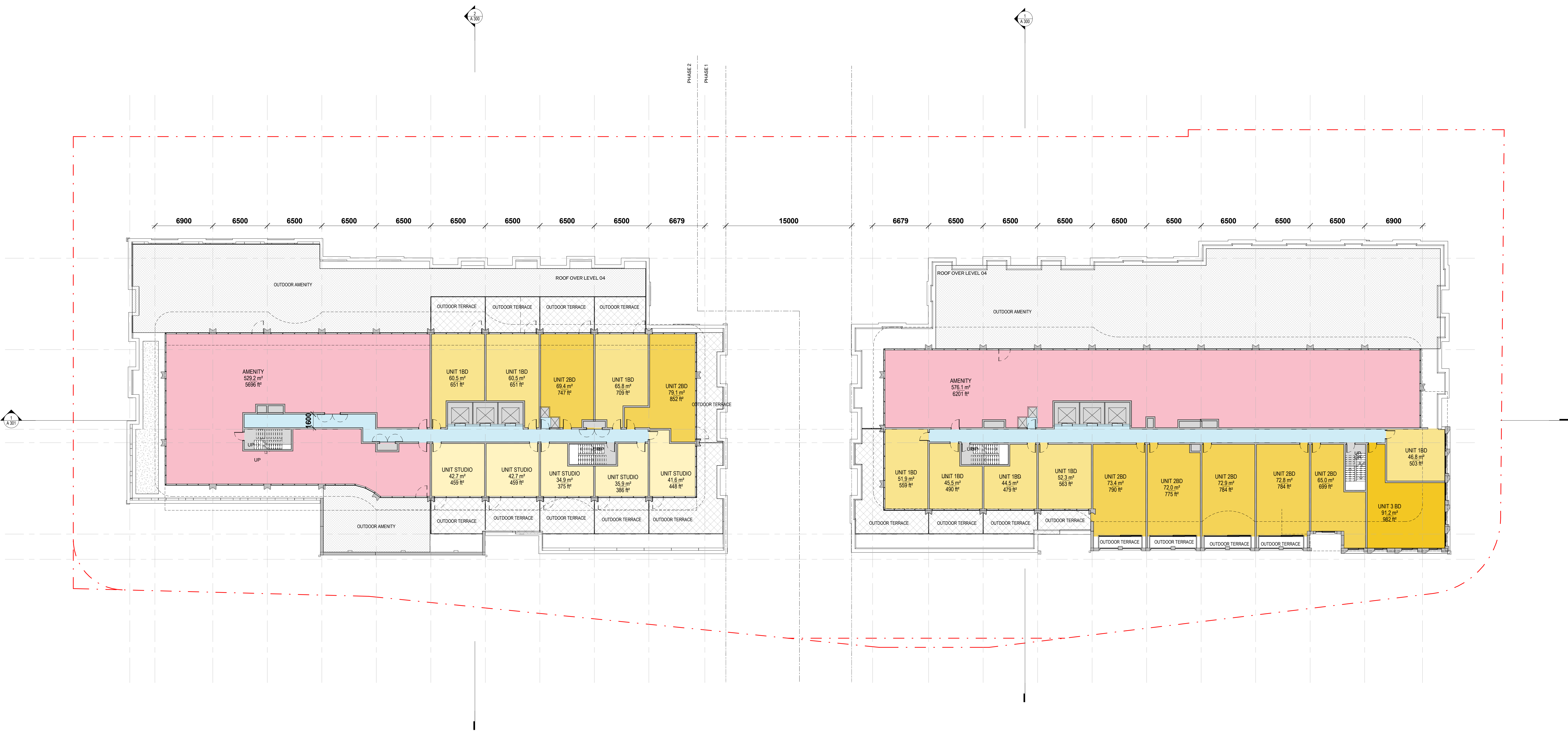
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Floor Plan - Level
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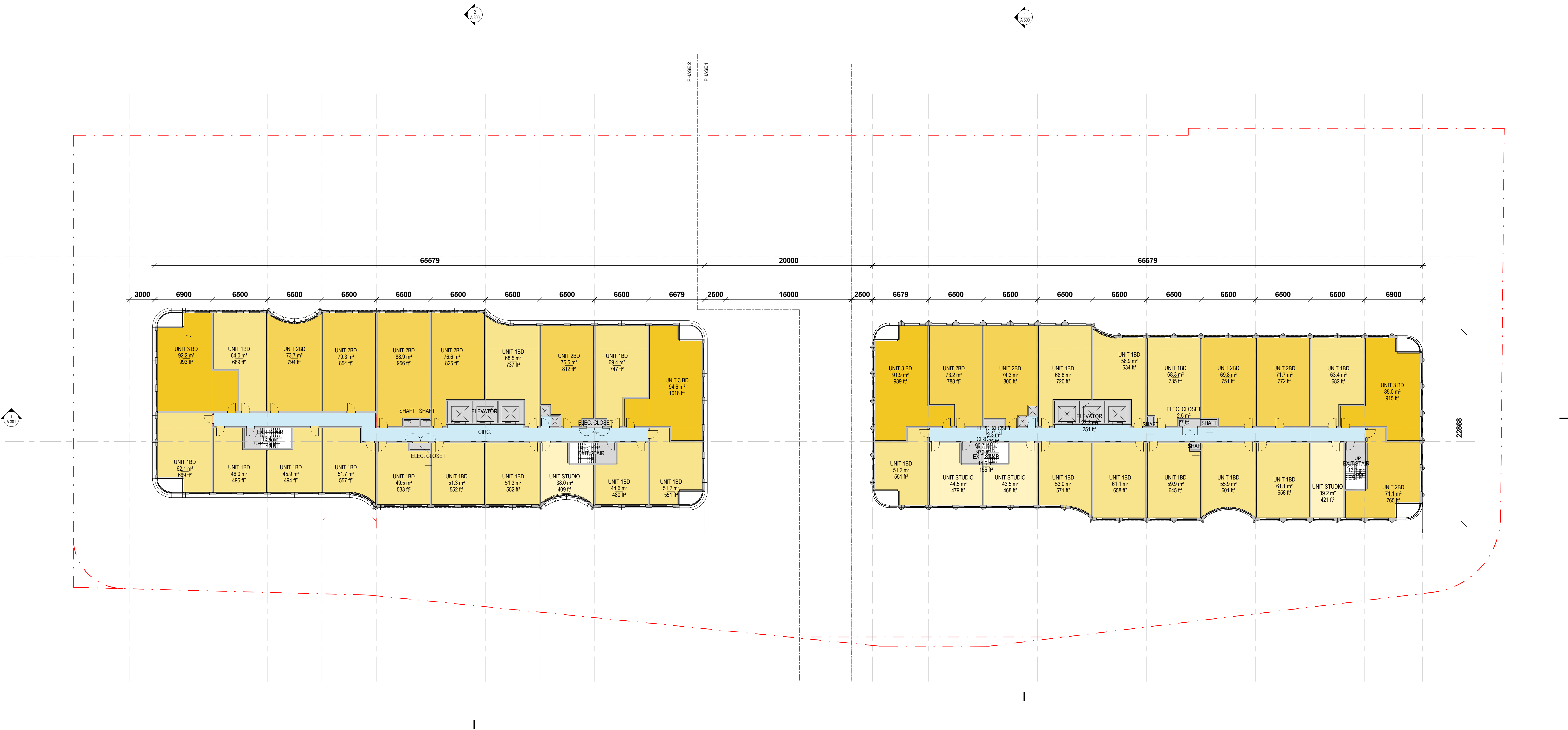
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Drawing No.

A 105



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North Elevation
1 : 200



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Drawing No.		

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