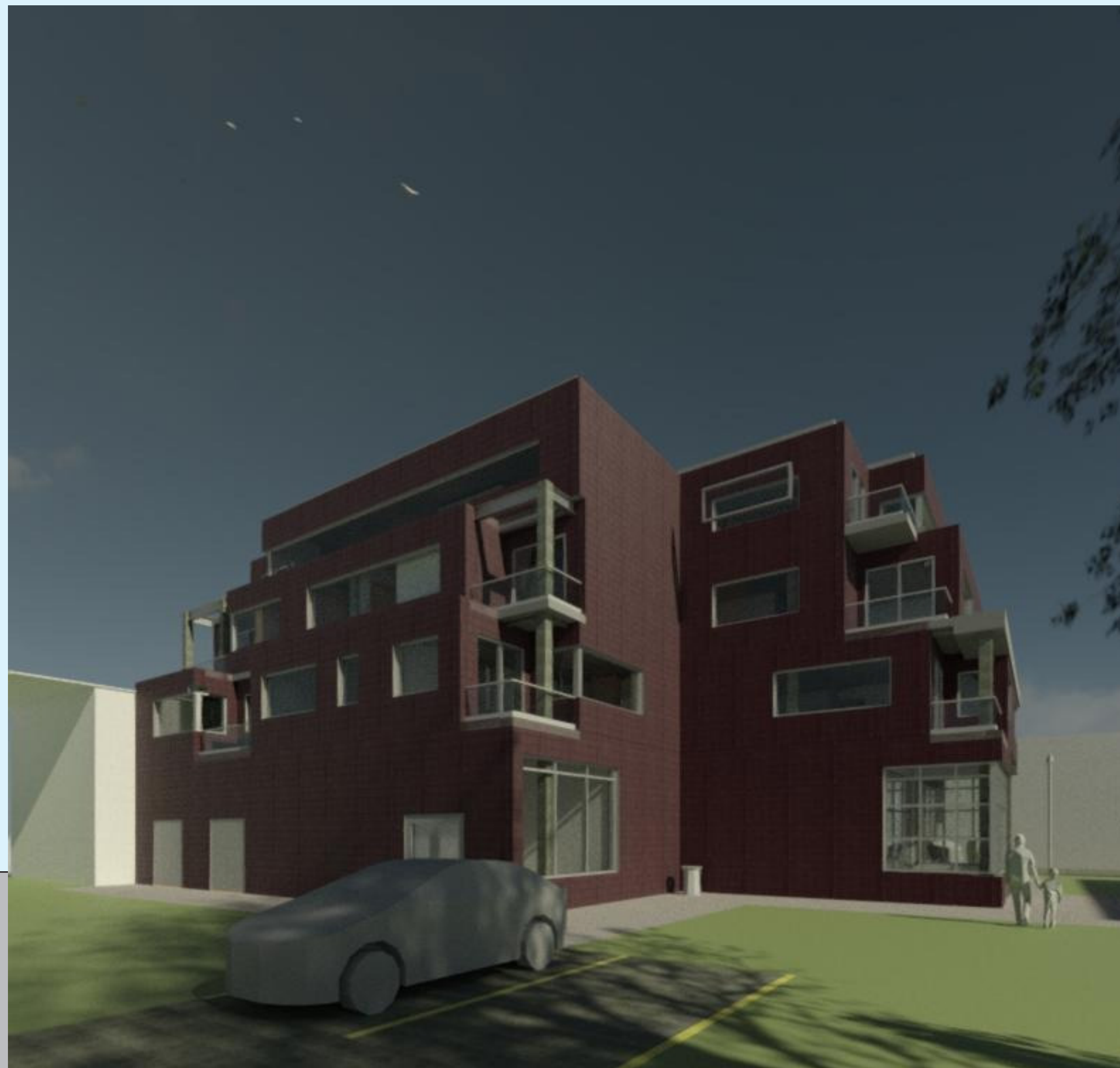


FINAL PROJECT MULTI-STOREY BUILDING

STUDIO 5 - ARCH31452

FALL 2021 - DECEMBER 13TH, 2021

MARY ABUELFARAG, MAIYA SAMUEL, RICHELLE ARAYA



STUDIO 5 - FINAL PROJECT

DESIGN CONCEPT

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A00 - GROUND FLOOR PLAN

A01 - TYPICAL RESIDENTIAL FLOOR PLAN

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RENDERINGS

TORONTO GREEN STANDARDS

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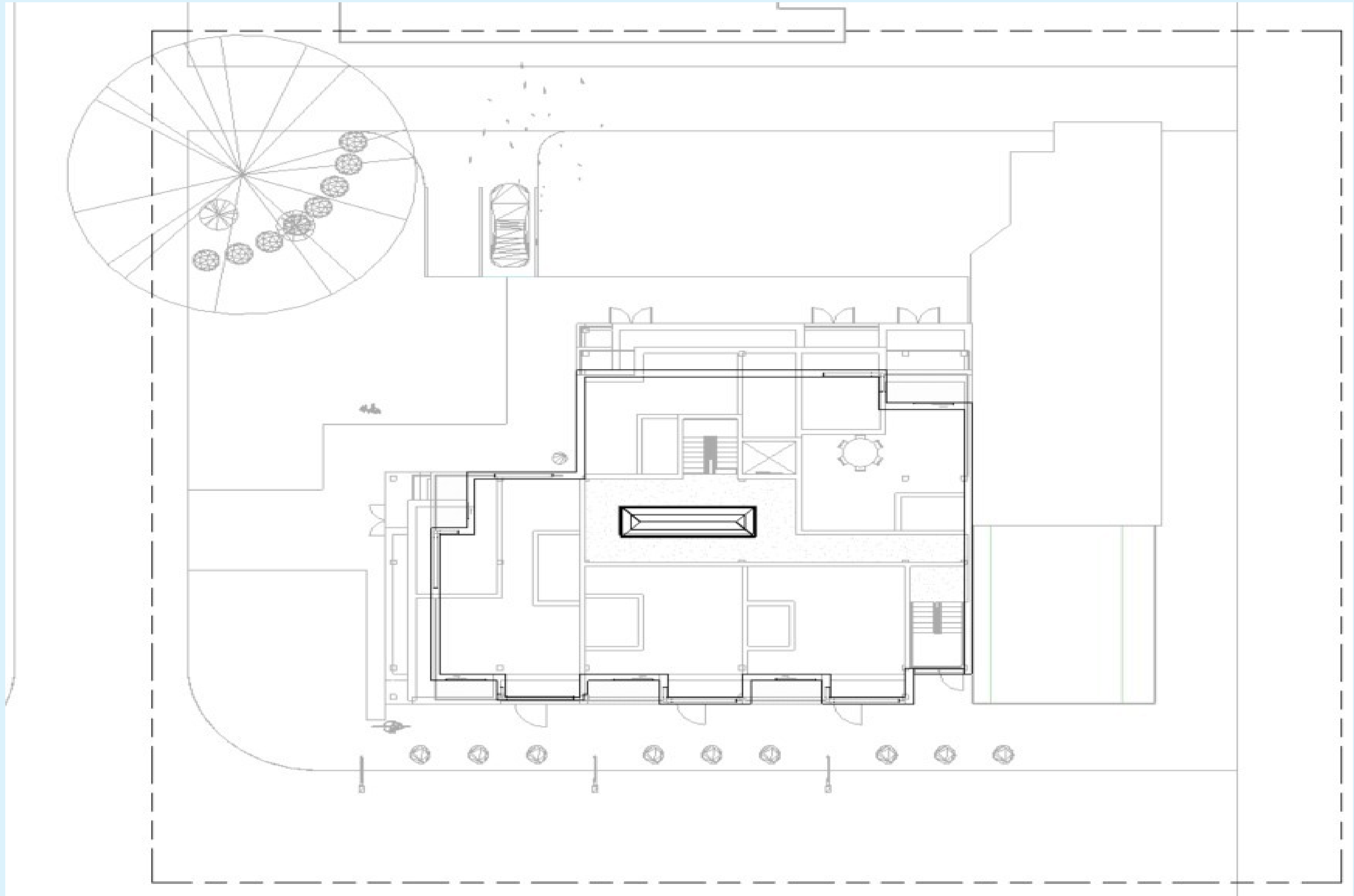
STUDIO 5 - FINAL PROJECT

This project's design was developed upon two important characteristics, the solar path, and the neighborhood context. As a result of these factors, we started our first development phase. When analyzing the start of the design of our project our intention was to make the building design feel welcomed in the district but also modern, as a result we took inspiration of the shape and design from the neighboring buildings. The first debate we faced was whether to make the retail spaces faced towards Queen Street to attract more public, or to demonstrate the residential space. In the future development of this new construction, we aim to utilize the sun exposure but incorporate ways to eliminate harsh sun rays. This obstacle can be prevented with angled curtain walls, that way the sun is still being utilized without being overused.



DESIGN CONCEPT

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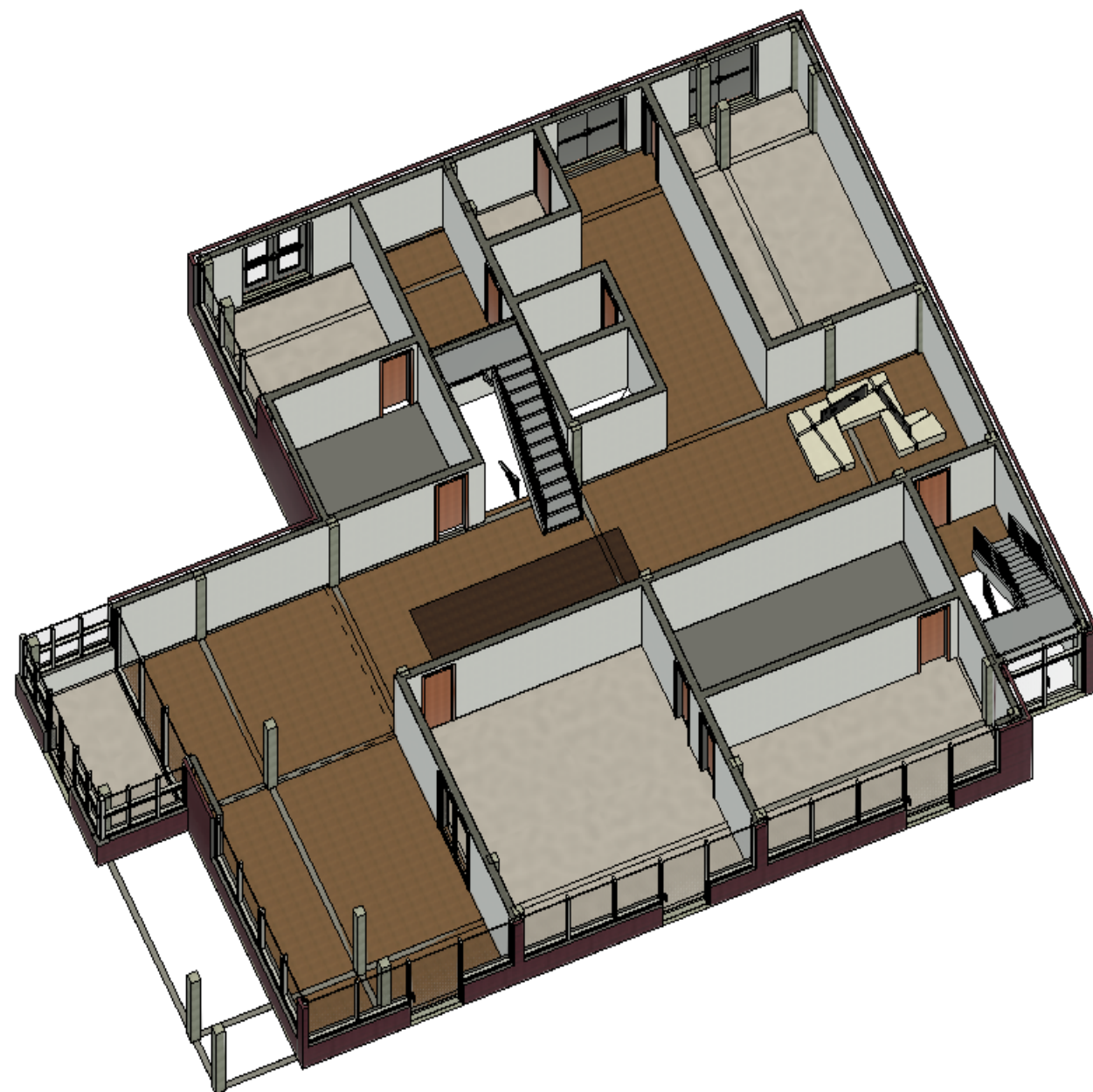


AOSP - SITE PLAN

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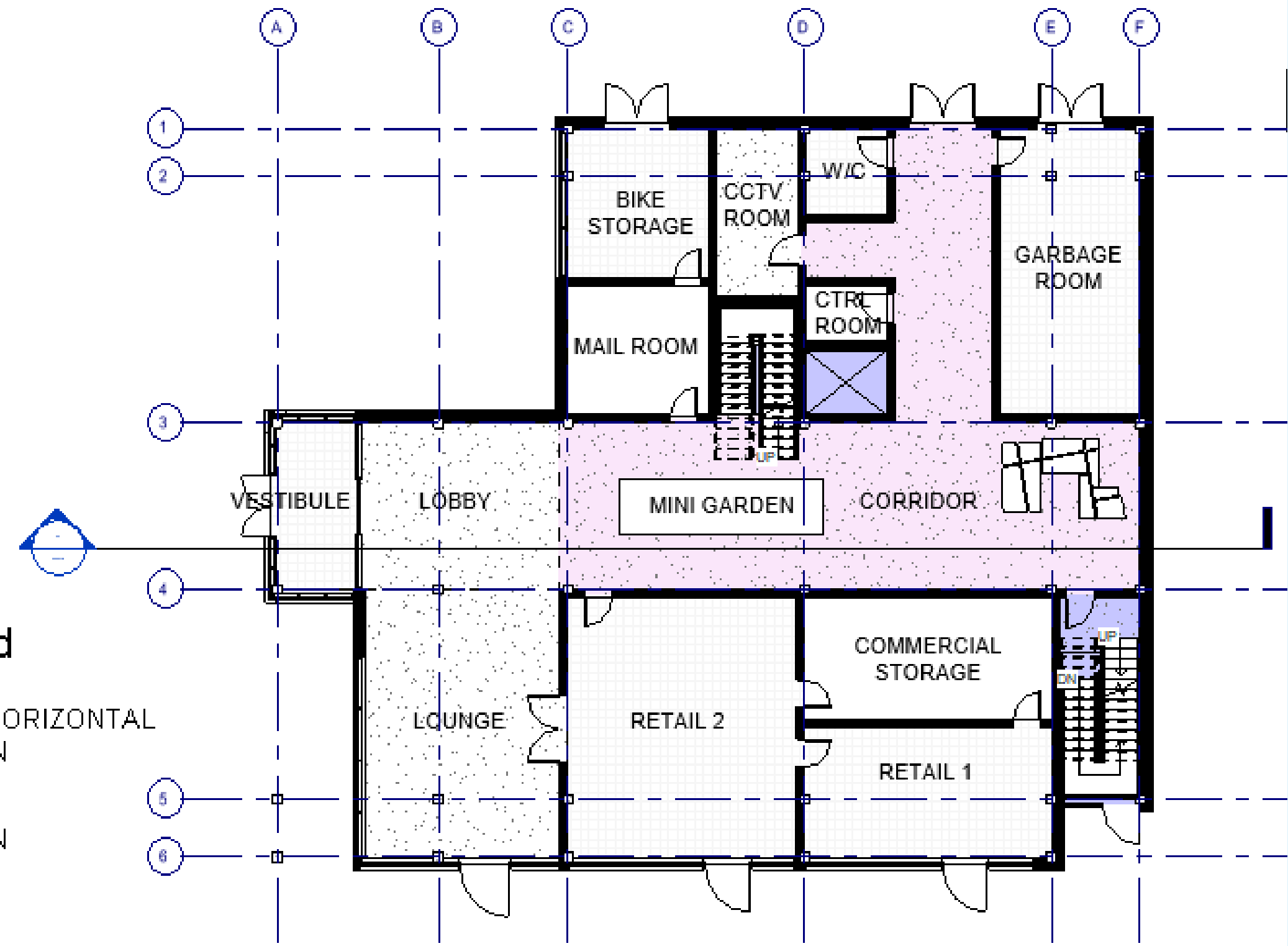
GROUND FLOOR UNIT SIZES

ROOM	SUITE AREA
VESTIBULE	10 m ²
LOBBY	25 m ²
MINI GARDEN	9 m ²
CORRIDOR	98 m ²
LOUNGE	40 m ²
RETAIL 1	25 m ²
RETAIL 2	46 m ²
COMMERCIAL STORAGE	23 m ²
BIKE STORAGE	16 m ²
MAIL ROOM	14 m ²
CCTV ROOM	10 m ²
W/C	5 m ²
CONTROL ROOM	3 m ²
GARBAGE ROOM	31 m ²



Room Legend

- CORRIDOR/HORIZONTAL CIRCULATION
- VERTICAL CIRCULATION



A00 - GROUND FLOOR PLAN

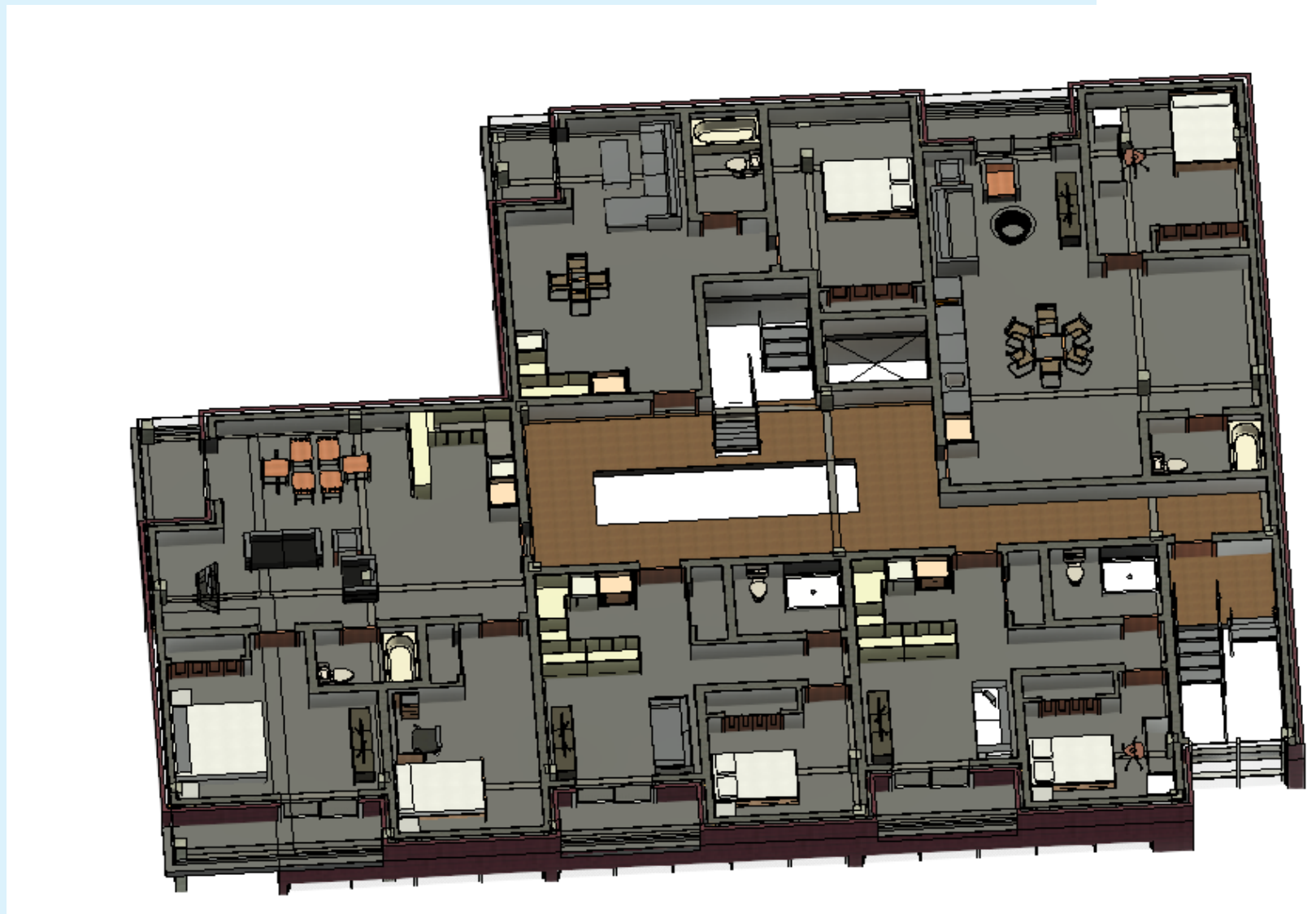
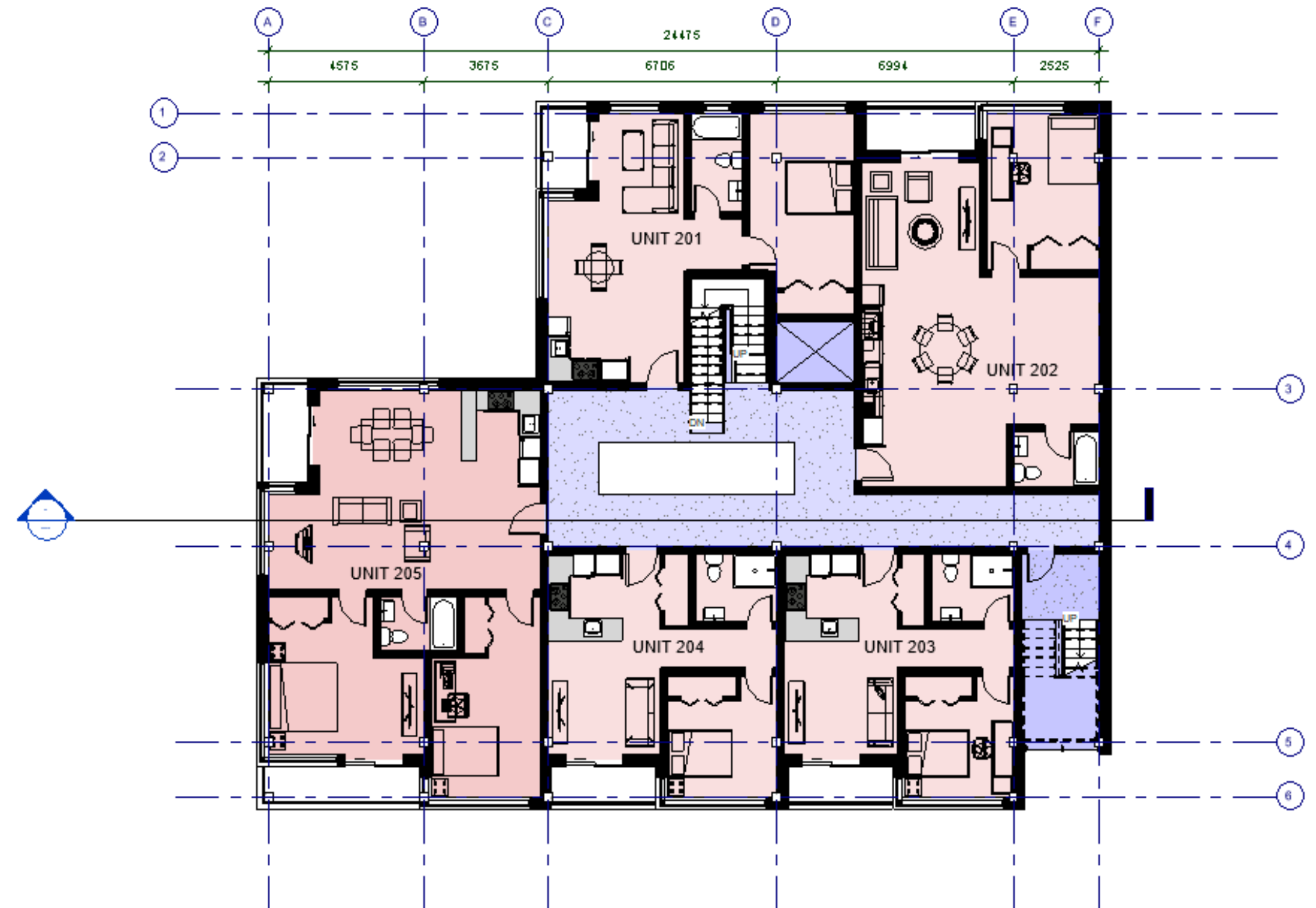
STUDIO 5 - FINAL PROJECT

TYPICAL FLOOR UNIT SIZES

ROOM	SUITE AREA
UNIT 201	53 m ²
UNIT 202	69 m ²
UNIT 203	42 m ²
UNIT 204	42 m ²
UNIT 205	83 m ²
HORIZONTAL CIRCULATION	43 m ²
VERTICAL CIRCULATION	23 m ²

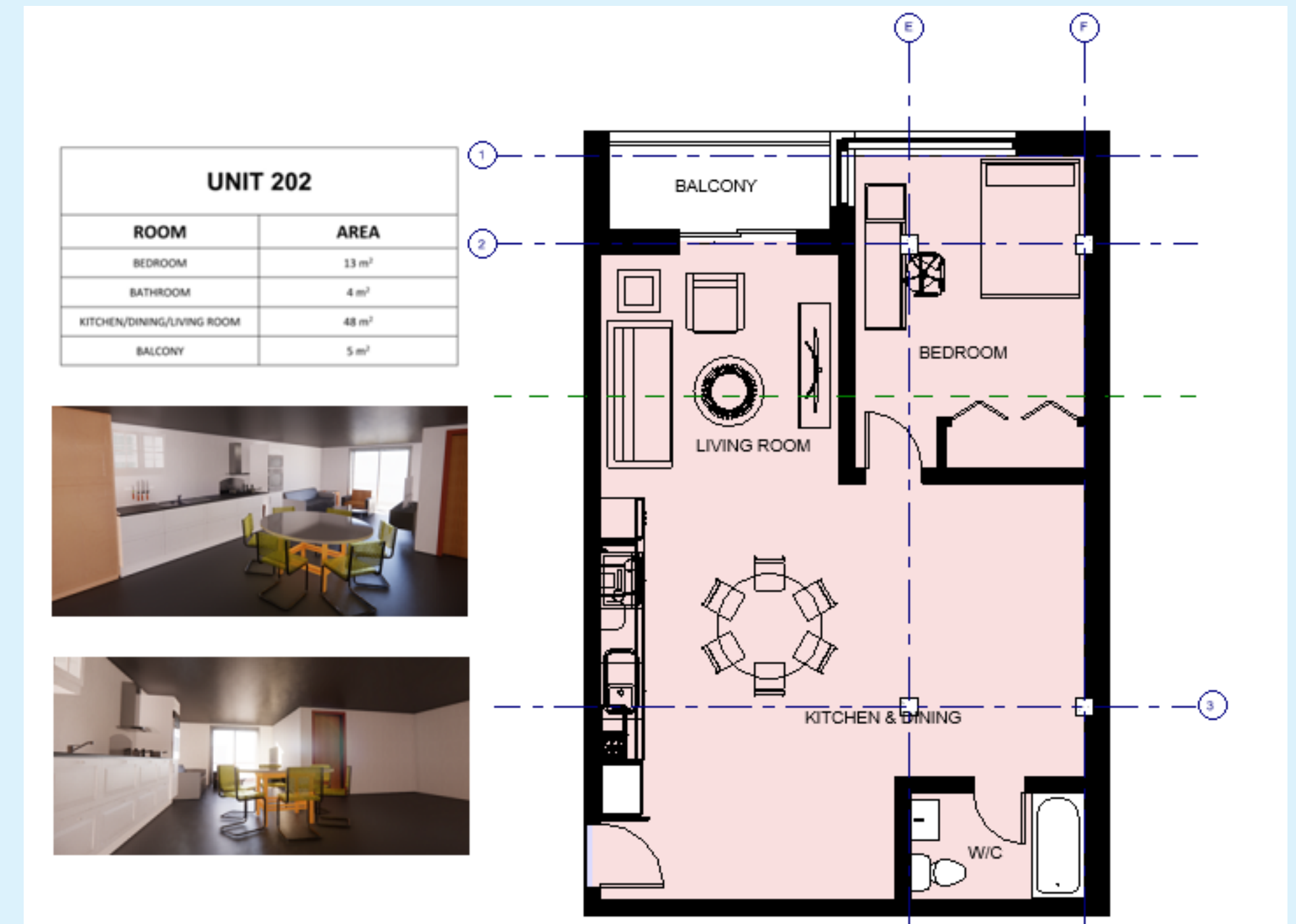
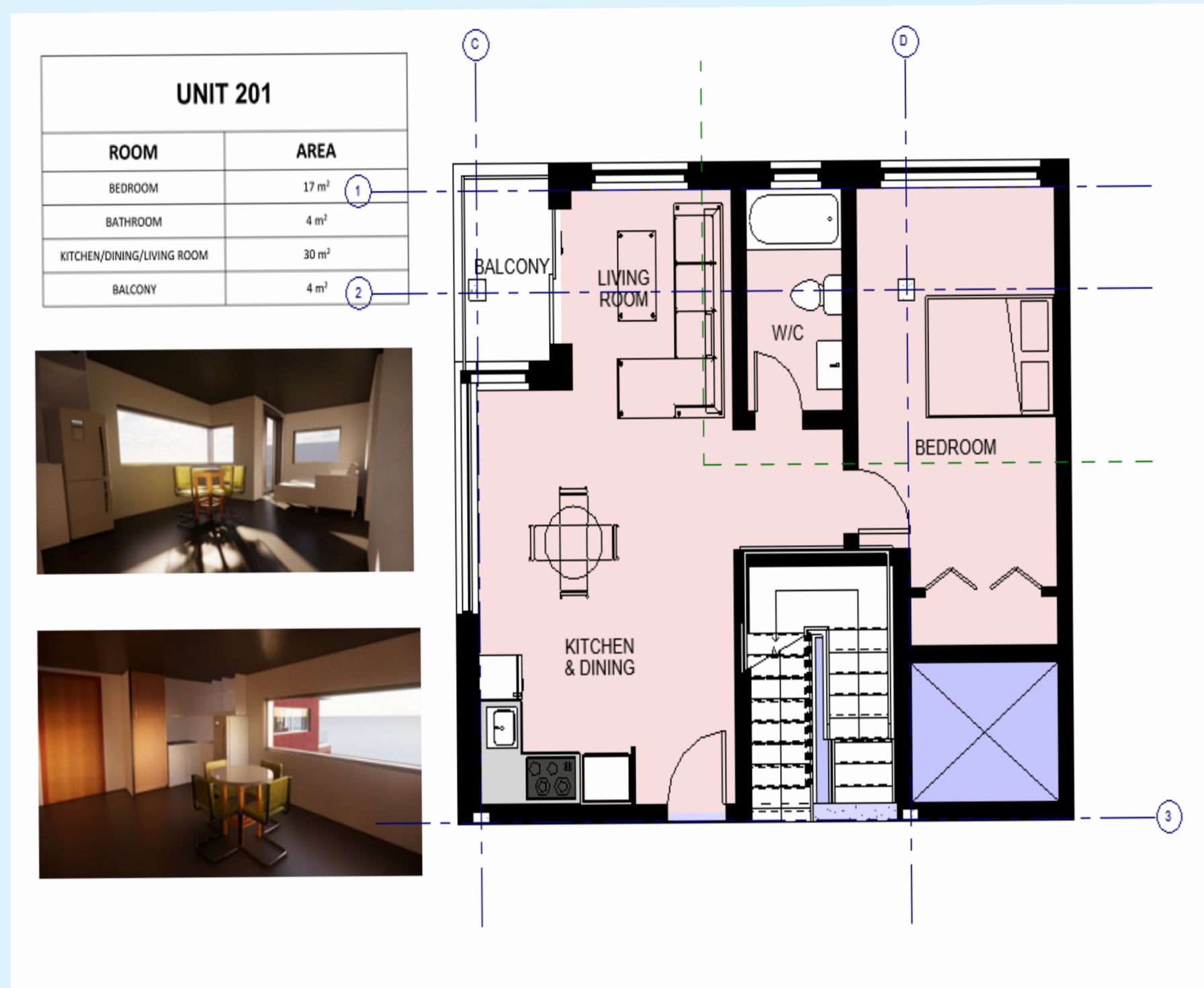
Room Legend

- 1 BEDROOM
- 2 BEDROOMS
- HORIZONTAL CIRCULATION
- VERTICAL CIRCULATION



A01 - TYPICAL RESIDENTIAL FLOOR

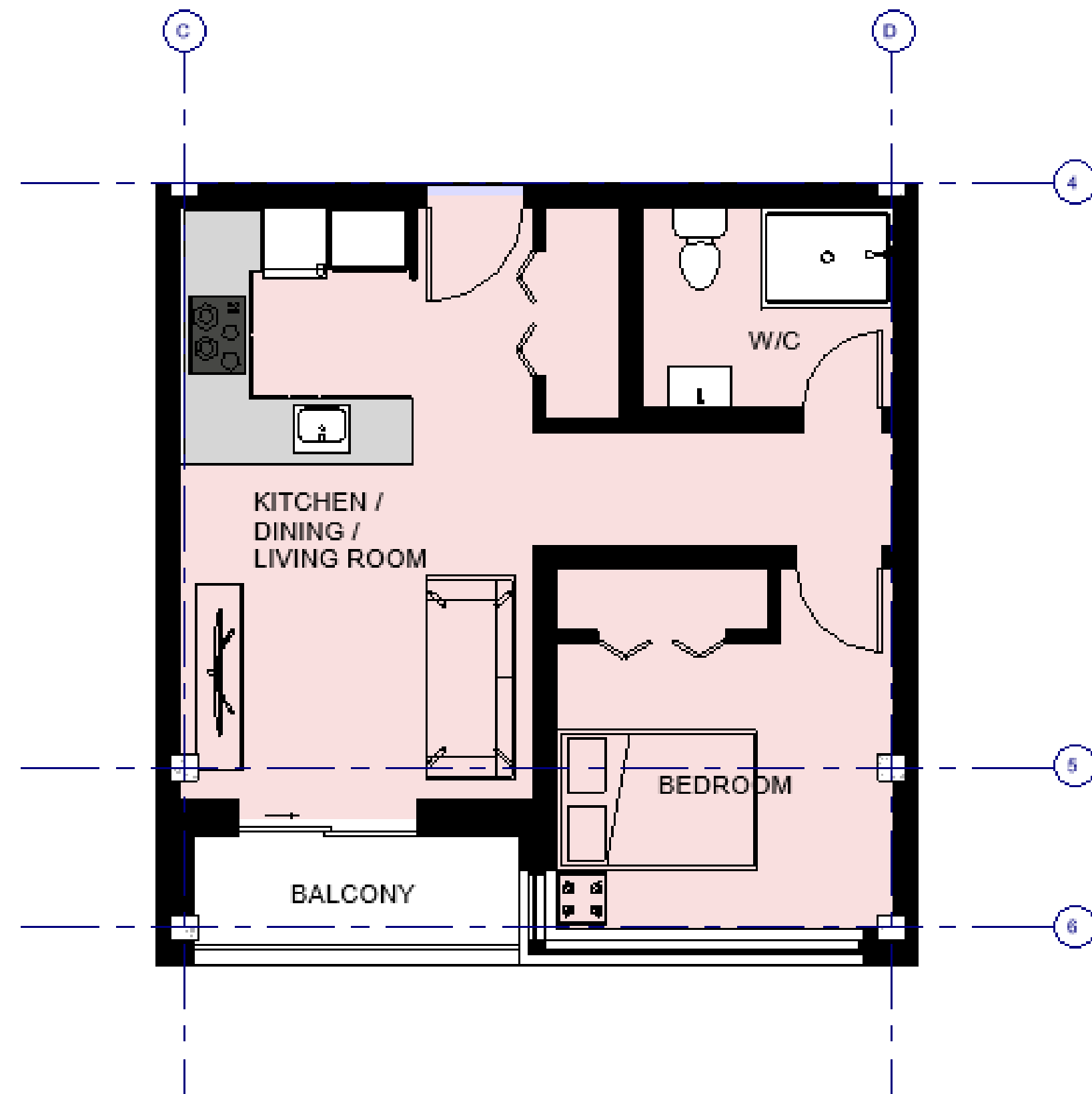
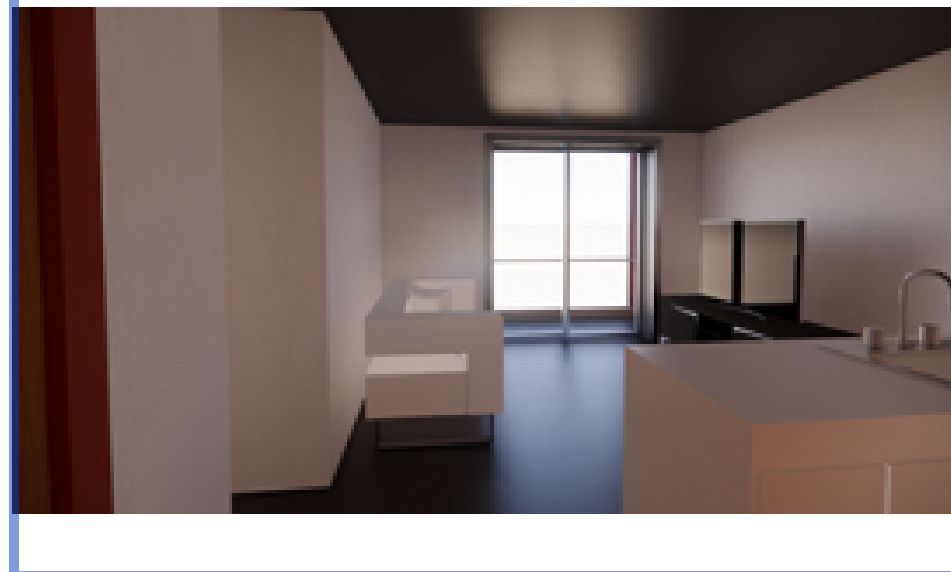
STUDIO 5 - FINAL PROJECT



A01 A - UNIT 201 & 202

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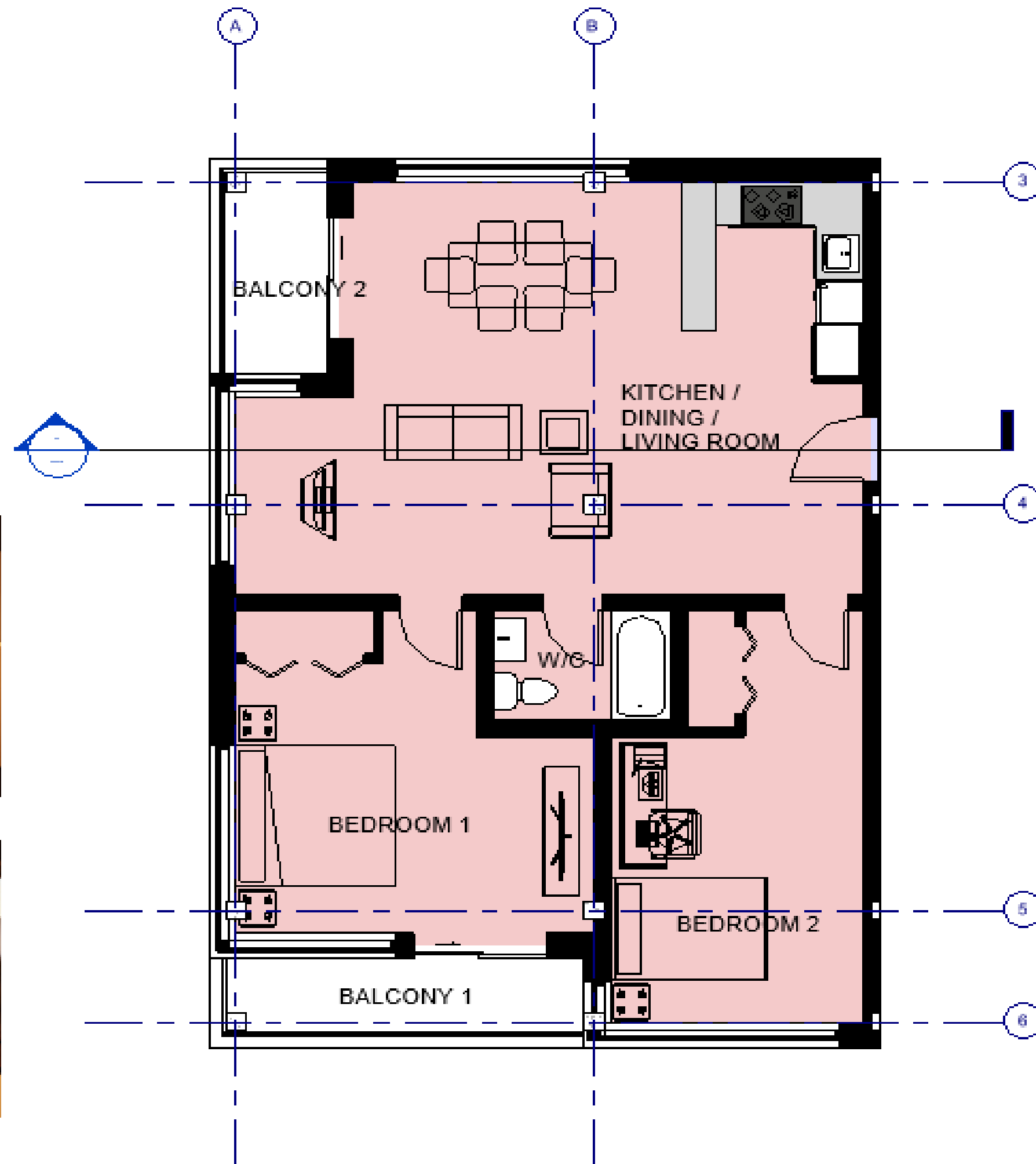
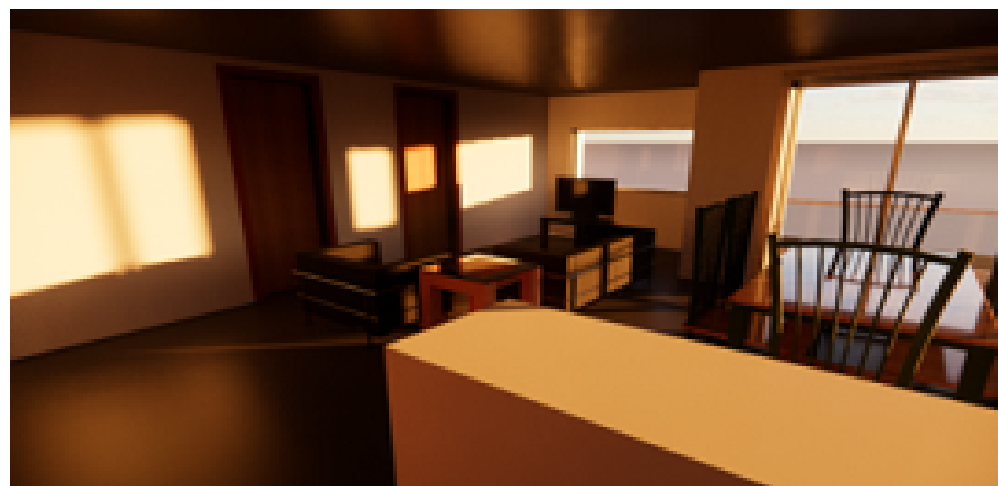
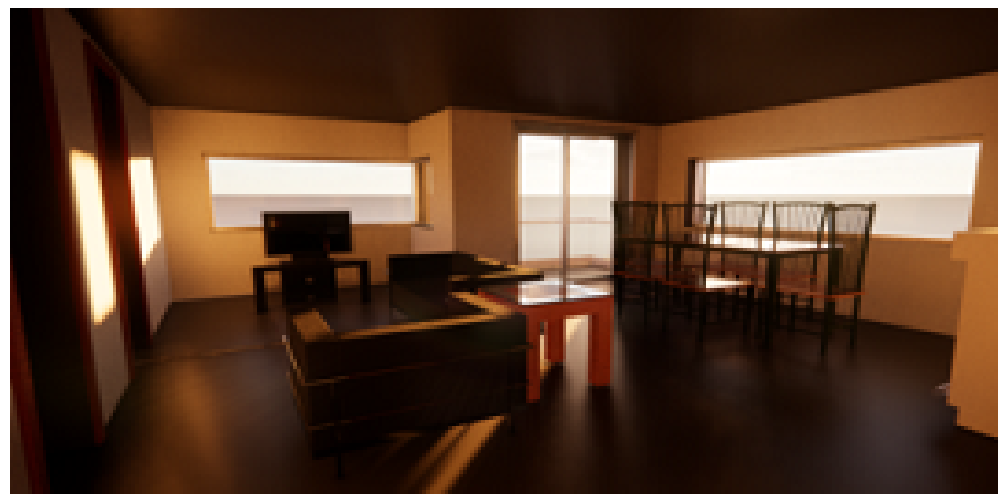
UNIT 203 & 204	
ROOM	AREA
BEDROOM	10 m ²
BATHROOM	5 m ²
KITCHEN/DINING/LIVING ROOM	25 m ²
BALCONY	4 m ²



A01 B - UNIT 203 & 204

STUDIO 5 - FINAL PROJECT

UNIT 205	
ROOM	AREA
BEDROOM 1	18 m ²
BEDROOM 2	17 m ²
BATHROOM	3 m ²
KITCHEN/DINING/LIVING ROOM	41 m ²
BALCONY 1	6 m ²
BALCONY 2	5 m ²



A01 C - UNIT 205

STUDIO 5 - FINAL PROJECT

Sustainability- Energy
Maiya, Mary, and Richelle

Solar Panels
- Still able to generate energy in low light situations, solar panels are a good option to harnessing renewable energy. Solar panels are becoming more affordable than ever, they can have a long lifespan, and they benefit the whole electricity grid.

Green Roof & Local Vegetation
- Green roofs help to reduce heat island effects. They can remove heat from the air and be less reflective and absorb heat compare to asphalt. Depending on the type of vegetation a green roof can also increase local biodiversity by being a place for bugs and birds to rest.

Low-E Windows & Insulation
-Low-e coating on windows reflects long-wave infrared energy so when heat tries to escape in the winter the low-e reflects heat back inside and the reverse in summer.
-Increasing insulation will allow heat to be retained in a passive way so less consumption of energy during the winter.

Semi-permeable Pavement
- This pavement allow water to soak back into the ground so that water is not pooling on top of asphalt or concrete. Benefits are that the pavement does not produce a "heat island" effect, it can be made of recycled material, in freezing temperature there is less chance that ice will build up on the surface due to porous material and warm ground temperature, and the pavement stays cool in the summers.

Fennings Street

Queen Street West

A02 - SUSTAINABILITY DESIGN

STUDIO 5 - FINAL PROJECT

Sustainability- Water
Maiya, Mary, and Richelle

Rainwater Harvesting

-By collecting rain water instead of having it run off we can use the water to flush toilets instead of using potable water. The rain that is absorbed by the green roof vegetation is caught by the roof drain and directed to the storage cistern in the basement of the building.

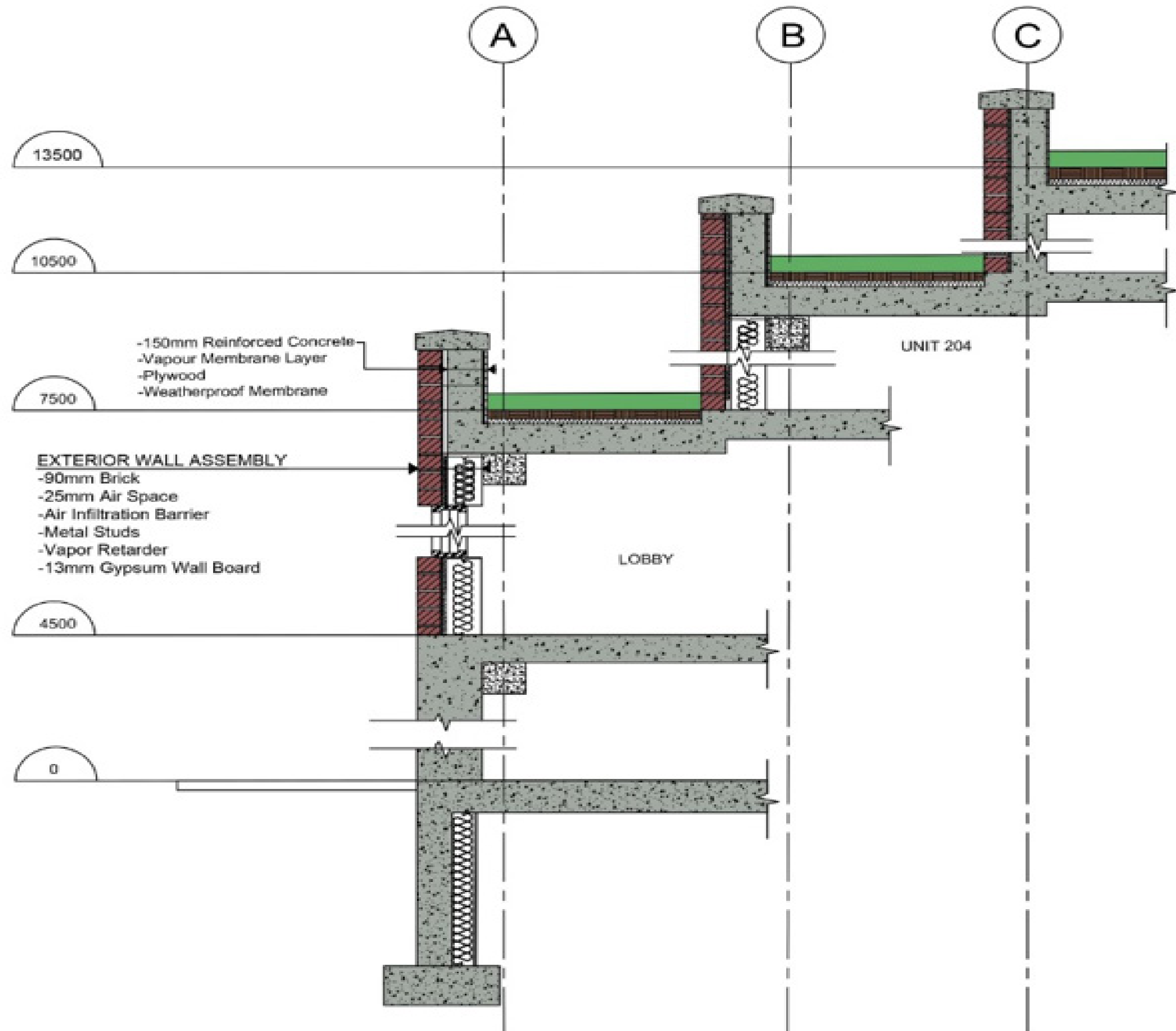
Permeable Pavement

-Pavement with porous holes allow water to seep through and continue to penetrate the soil beneath. It keeps the pavement warm so that ice does not build up on the surface.



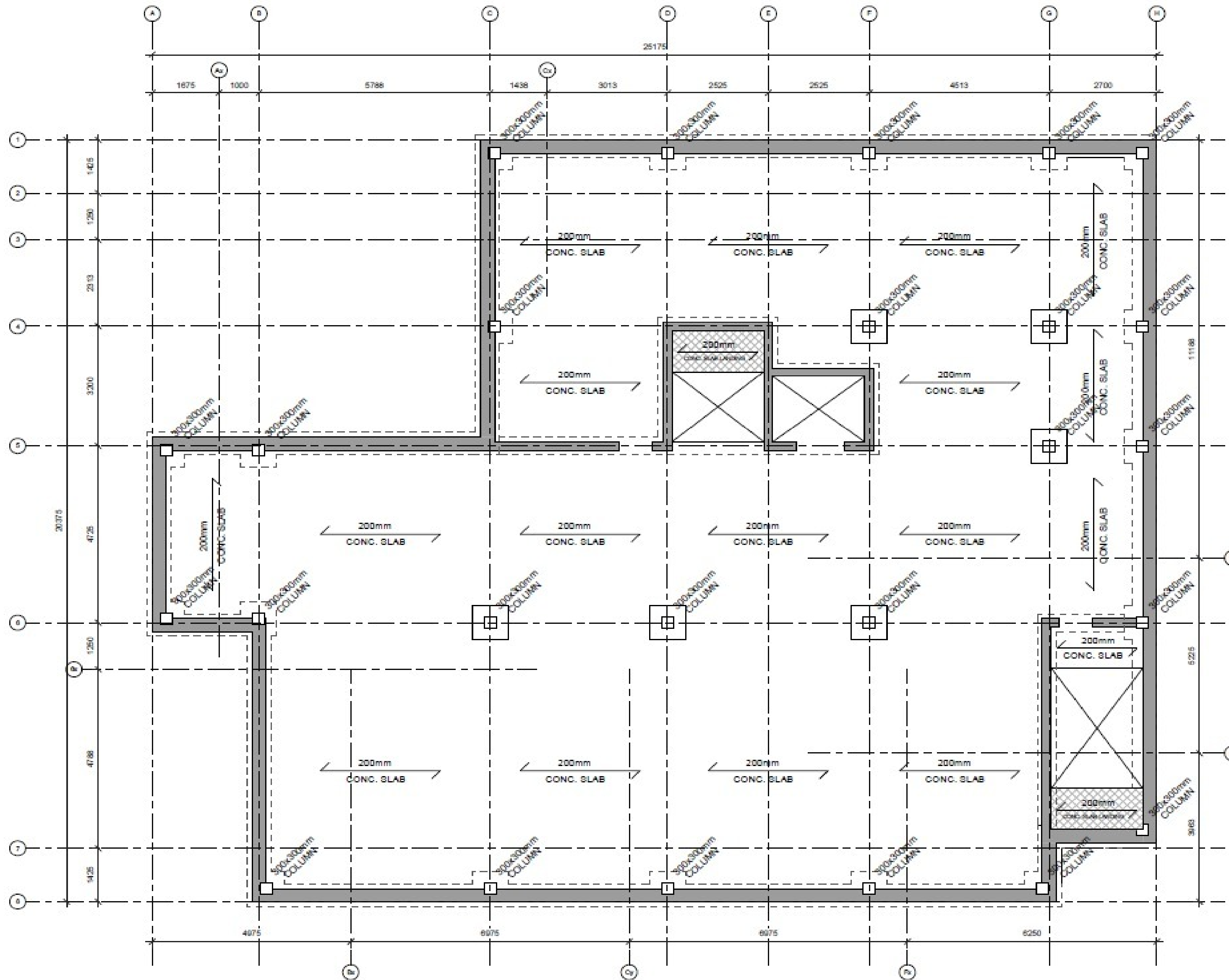
A02 - SUSTAINABILITY DESIGN

STUDIO 5 - FINAL PROJECT



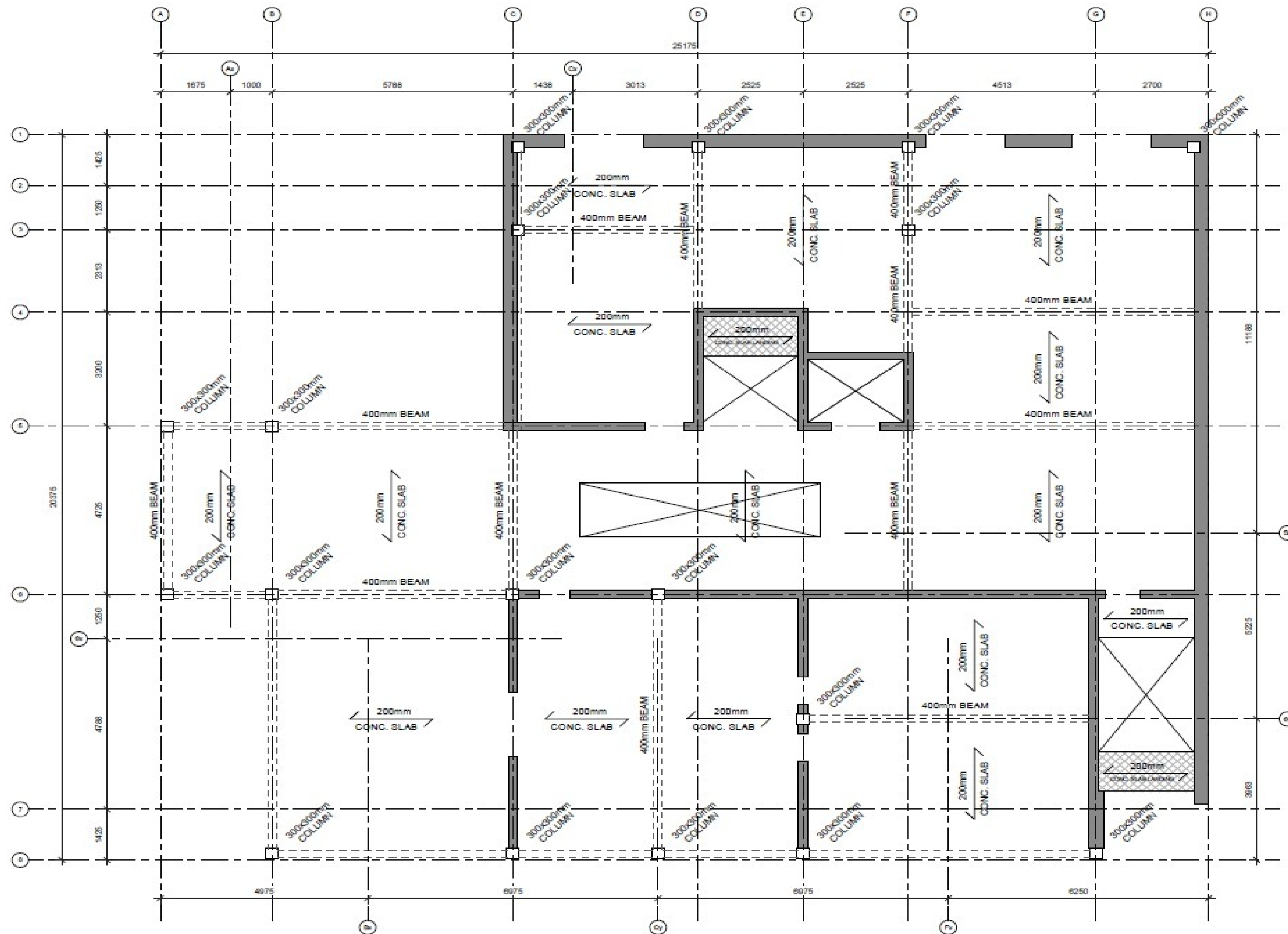
A03 - WALL SECTION

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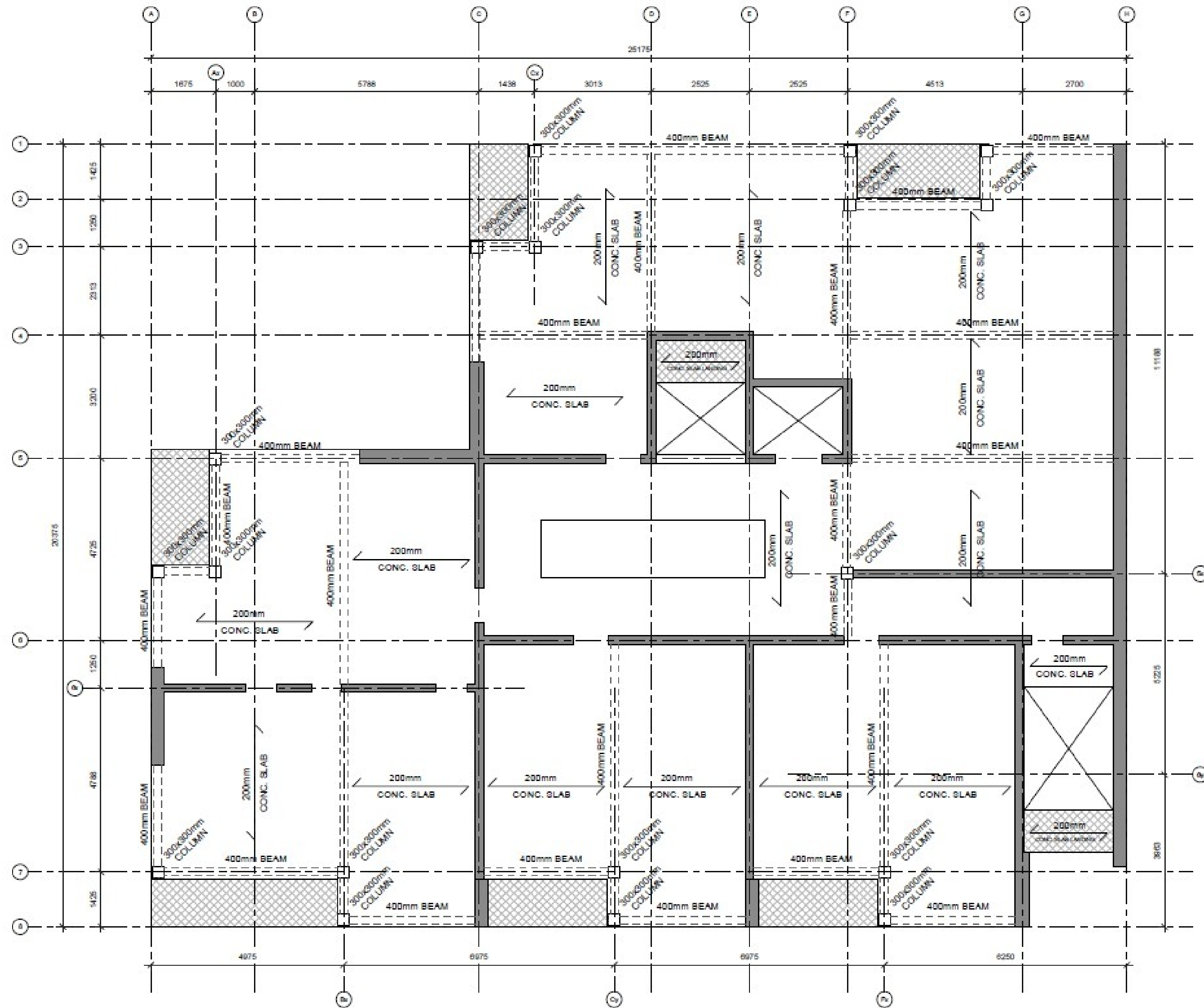
S100 - STRUCTURAL BASEMENT PLAN

STUDIO 5 - FINAL PROJECT



S101 - STRUCTURAL GROUND PLAN

STUDIO 5 - FINAL PROJECT



S102 -STRUCTURAL SECOND FLOOR PLAN







STUDIO 5 - FINAL PROJECT

Statistics Template - Toronto Green Standard Version 3.0
**Mid to High Rise Residential and all
 New Non-Residential Development**

The Toronto Green Standard Version 3.0 Statistics Template is submitted with Site Plan Control Applications and stand alone Zoning Bylaw Amendment applications. Complete the table and copy it directly onto the Site Plan submitted as part of the application.

For Zoning Bylaw Amendment applications: complete General Project Description and Section 1.

For Site Plan Control applications: complete General Project Description, Section 1 and Section 2.

For further information, please visit www.toronto.ca/greendevlopment

General Project Description	Proposed
Total Gross Floor Area	2000sqm
Breakdown of project components (m ²)	
Residential	1908sqm
Retail	45sqm
Commercial	47sqm
Industrial	0
Institutional/Other	0
Total number of residential units	13

**Section 1: For Stand Alone Zoning Bylaw Amendment Applications and
 Site Plan Control Applications**

Automobile Infrastructure	Required	Proposed	Proposed %
Number of Parking Spaces	2	2	
Number of parking spaces dedicated for priority LEV parking	N/A	0	
Number of parking spaces with EVSE	2	2	

Cycling Infrastructure	Required	Proposed	Proposed %
Number of long-term bicycle parking spaces (residential)	9	18	
Number of long-term bicycle parking spaces (all other uses)	0	0	
Number of long-term bicycle parking (all uses) located on:	9	18	
a) first storey of building		8	
b) second storey of building		0	
c) first level below-ground		10	
d) second level below-ground		0	
e) other levels below-ground		0	



STUDIO 5 - FINAL PROJECT

Statistics Template - Toronto Green Standard Version 3.0
**Mid to High Rise Residential and all
 New Non-Residential Development**

Cycling Infrastructure	Required	Proposed	Proposed %
Number of short-term bicycle parking spaces (residential)	5	10	
Number of short-term bicycle parking spaces (all other uses)	0	0	
Number of male shower and change facilities (non-residential)	0	0	
Number of female shower and change facilities (non-residential)	0	0	

Tree Planting & Soil Volume	Required	Proposed	Proposed %
Total Soil Volume (40% of the site area + 66 m ² x 30 m ³).	154	163	

Section 2: For Site Plan Control Applications

Cycling Infrastructure	Required	Proposed	Proposed %
Number of short-term bicycle parking spaces (all uses) at-grade or on first level below grade	5	8	

UHI Non-roof Hardscape	Required	Proposed	Proposed %
Total non-roof hardscape area (m ²)	N/A	70sqm	
Total non-roof hardscape area treated for Urban Heat Island (minimum 50%) (m ²)	200sqm	215sqm	70%
Area of non-roof hardscape treated with: (indicate m ²)			
a) high-albedo surface material			
b) open-grid pavement			
c) shade from tree canopy			
d) shade from high-albedo structures			
e) shade from energy generation structures			
Percentage of required car parking spaces under cover (minimum 75%)(non-residential only)		90%	

Green & Cool Roofs	Required	Proposed	Proposed %
Available Roof Space (m ²)		375sqm	
Available Roof Space provided as Green Roof (m ²)		354sqm	90%
Available Roof Space provided as Cool Roof (m ²)			
Available Roof Space provided as Solar Panels (m ²)	N/A	180sqm	50%

STUDIO 5 - FINAL PROJECT

Statistics Template - Toronto Green Standard Version 3.0
**Mid to High Rise Residential and all
 New Non-Residential Development**

Water Efficiency	Required	Proposed	Proposed %
Total landscaped site area (m ²)		400sqm	
Landscaped site area planted with drought-tolerant plants (minimum 50%) (m ² and %) (if applicable)	200	200	

Tree Planting Areas & Soil Volume	Required	Proposed	Proposed %
Total site area (m ²)		847	
Total Soil Volume (40% of the site area + 66 m ² x 30 m ²)	154	215	
Total number of planting areas (minimum of 30m ² soil)		50	
Total number of trees planted		3	
Number of surface parking spaces (if applicable)		2	
Number of shade trees located in surface parking area interior (minimum 1 tree for 5 parking spaces)		1	

Native and Pollinator Supportive Species	Required	Proposed	Proposed %
Total number of plants		20	
Total number of native plants and % of total plants (min.50%)		70%	

Bird Friendly Glazing	Required	Proposed	Proposed %
Total area of glazing of all elevations within 12m above grade (including glass balcony railings)		350	
Total area of treated glazing (minimum 85% of total area of glazing within 12m above grade) (m ²)	296	306	90%
Percentage of glazing within 12m above grade treated with:			
a) Low reflectance opaque materials		30%	
b) Visual markers		85%	
c) Shading		20%	