

SYDNEY





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ONE SYDNEY HARBOUR

BARANGAROO

R4A SUPPLEMENTARY DESIGN STATEMENT

June 2019

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1.0 Introduction

This Design Statement has been prepared by Renzo Piano Building Workshop (RPBW) to illustrate and explain design amendments proposed by a S4.55 Modification to development consent SSD6964 for Building R4A located at Barangaroo South. The changes are addressed under the following sections:

1. Tower
2. Podium

The amendments proposed by the S4.55 represent the culmination of an iterative design process that has sought to refine the spatial planning of the tower as well as to craft a striking architectural form that responds to its urban and environmental context.

The proposed changes include a re-alignment of the upper floor levels to match the heights of the associated levels of the neighbouring R4B tower. Changes to the upper floor levels also includes the upper plant room level which will now be aligned with the level 47 plant room on R4B. The subtle difference in the plant room level facades on both towers will form a shared high-rise datum that will allow the relative height difference of each tower to be read more clearly.

Finally, several adjustments are proposed for the podium design including changes to the bridge connection with R4B, some minor facade improvements, and an enhancement of the spatial connection between the tower and the external terrace. These changes are designed to increase the architectural merit of the tower as well as to enhance the amenity for residents.



1.0 Site Context

The One Sydney Harbour site lies at the northern end of the Barangaroo South precinct. The extent of the site is defined by Hickson Road towards the east, Watermans Quay to the south, Barangaroo Avenue to the west and Hickson Park to the north.

The development constitutes three residential towers named R4A, R4B and R5. These towers share the precinct with the Crown Resort which is located to the west and the International Towers which are located to the south.

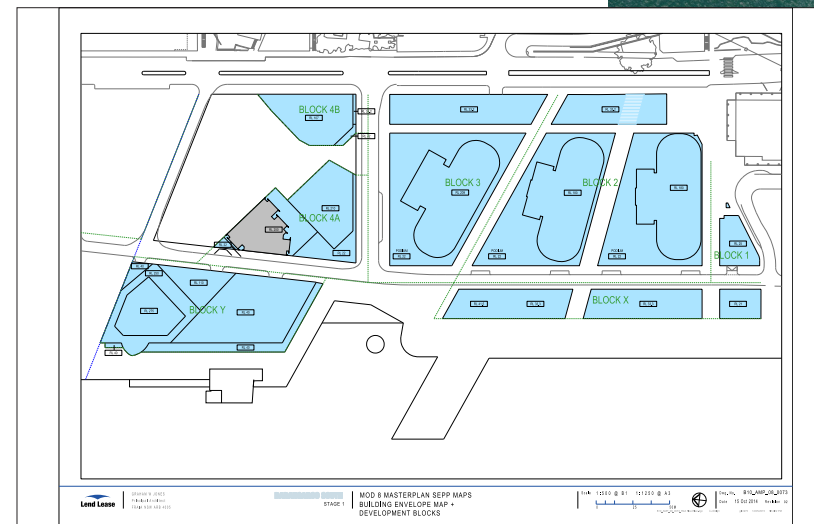
Under the Mod 8 Barangaroo Concept Plan, the site layout allows for the grouping of the residential building forms towards the south and the creation of a park to the north. This park separates the site from Barangaroo Central.

The tower forms feature podiums of a moderate height that extend to the aforementioned streets to define the character and scale of the public domain. All three towers and podiums fit within the Barangaroo South Building Envelope Plan.

The three residential buildings sit above a four level common basement containing car parking, storage, and services / infrastructure.

RPBW has developed a proposal that reiterates and strengthens the design objectives of the proposed Mod 8 Concept Plan produced by Rogers, Stirk, Harbour + Partners.

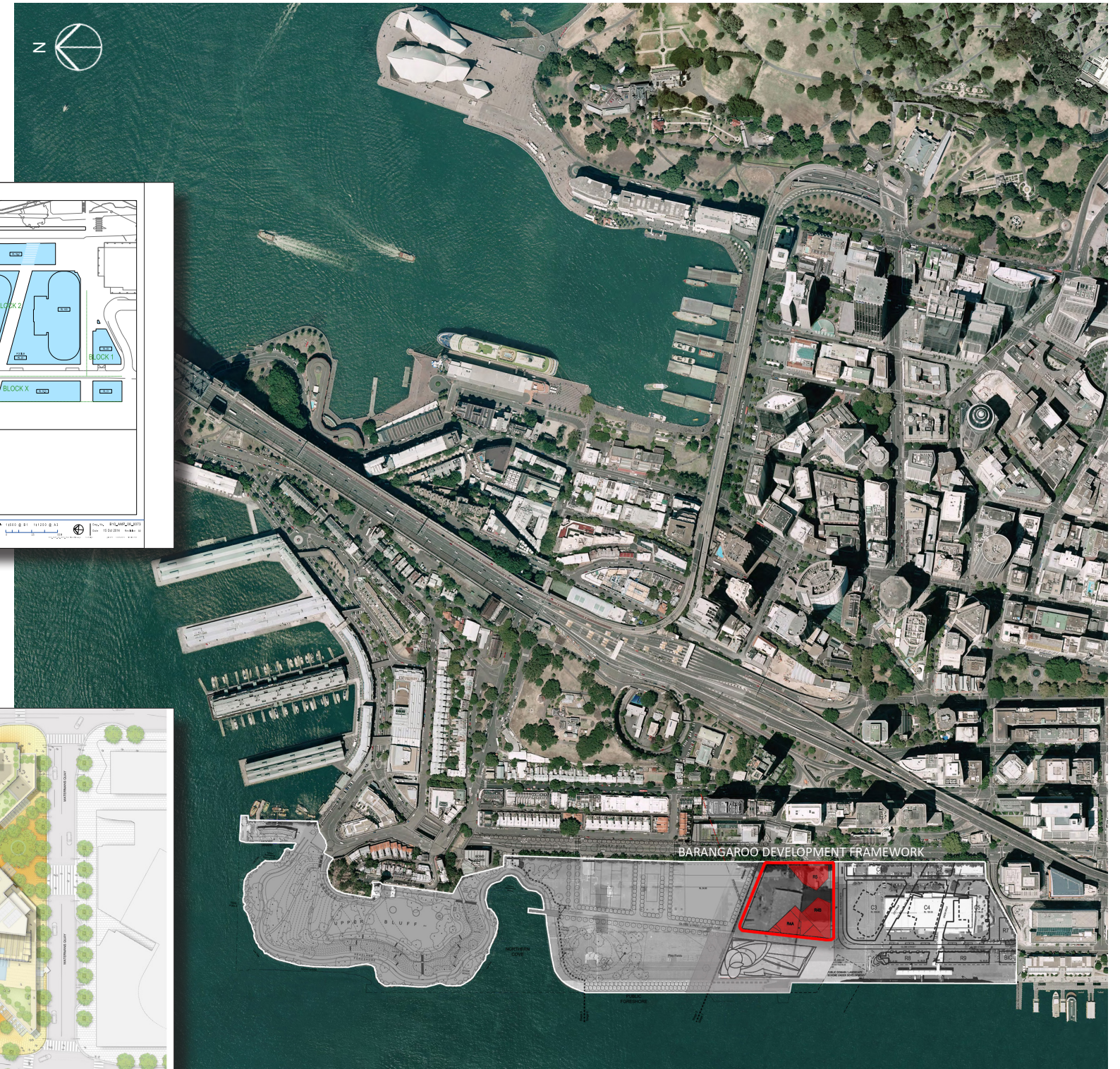
The modifications proposed in this report allow for all three buildings to comply with the performance criteria outlined in the Barangaroo South Built Form and Urban Design Controls.



Mod 8 Concept Plan

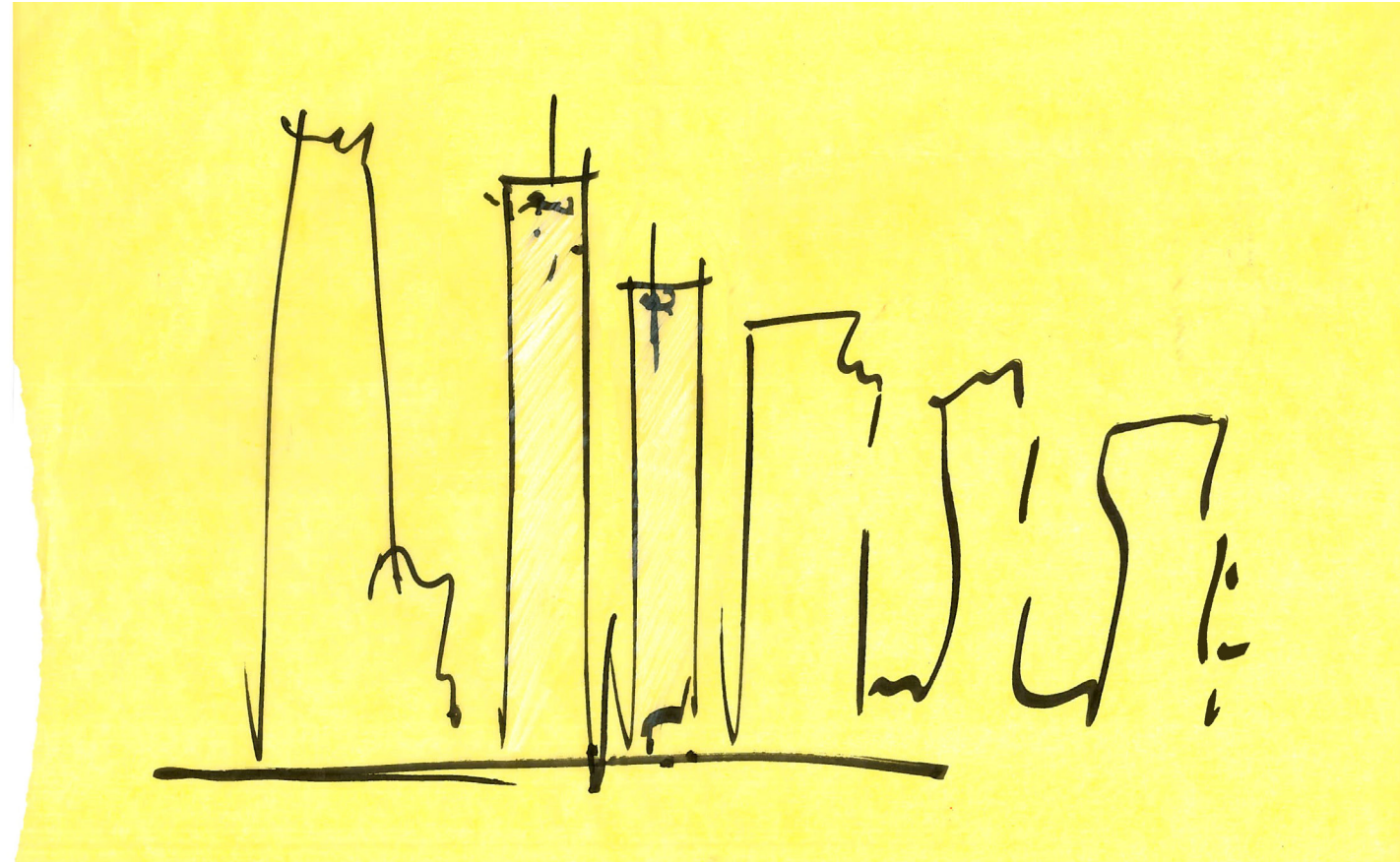


Site Plan

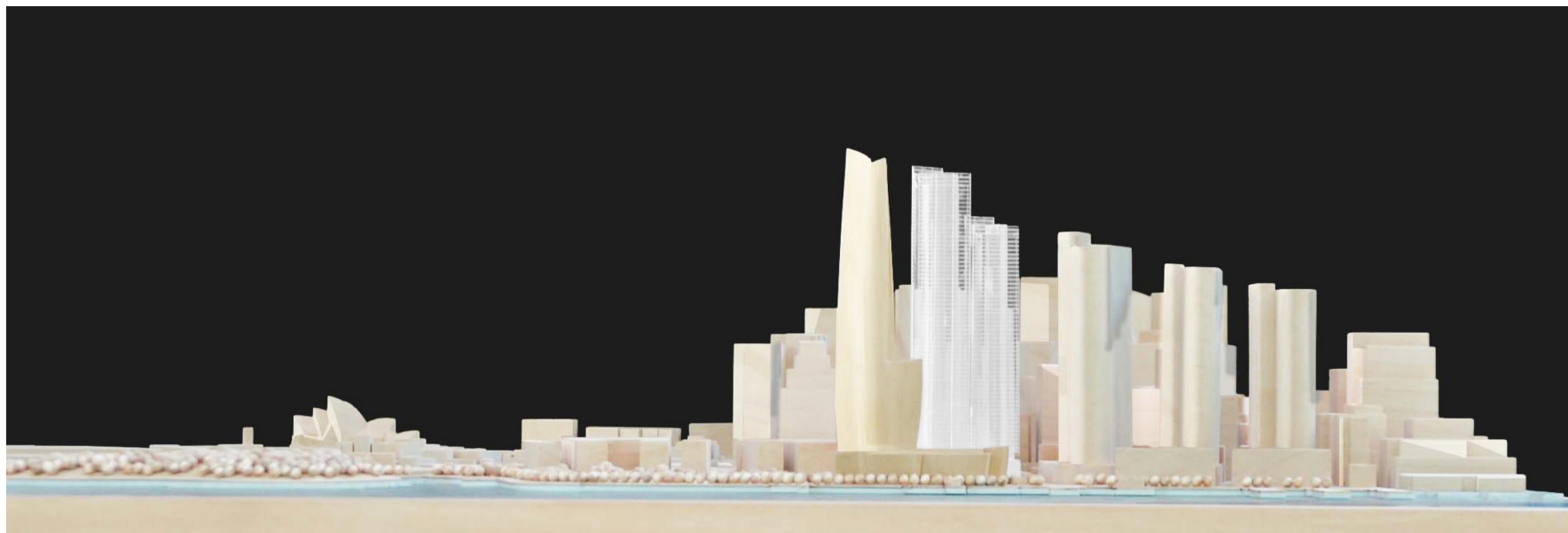


One Sydney Harbour Development Set in Barangaroo Aerial View Highlighted in Red

1.2 Architectural Process



Conceptual Sketch



Podium Massing Evolution Model



The three residential towers have been conceived as 'crystals'. These crystalline forms will be elegantly skinned with a highly transparent glass facade. The form and juxtaposition of the associated detailing of these facades will create a unique architectural language that reflects the site's setting between the Harbour and the CBD.

The selected triangular form is not only intended to maximise the view aspect and the orientation to the north-east and west, but this geometry also aims to enhance access to natural light and ventilation.

The façades of each of the three key elevations associated with the triangulated geometry are intended to be consciously expressed, feathering at the edges and delineated with incised rebates at each corner. The design approach is about clarity to the form and surfaces associated with the crystal structures.

The crystal volumes are articulated with a number of different glass facade treatments that form a kinetic skin. The operable wintergardens panels communicate movement and animation to the tower. The main curtain wall elements of the facade extend the crystal form against the sky and down to the podium.

In planning the ground plane a great deal of attention went into maximising the creation of active spaces within the adjacent public realm. Lobbies, amenity facilities and retail spaces are designed and located in a way that will draw life into the precinct.

2.0 Proposed Tower Modifications

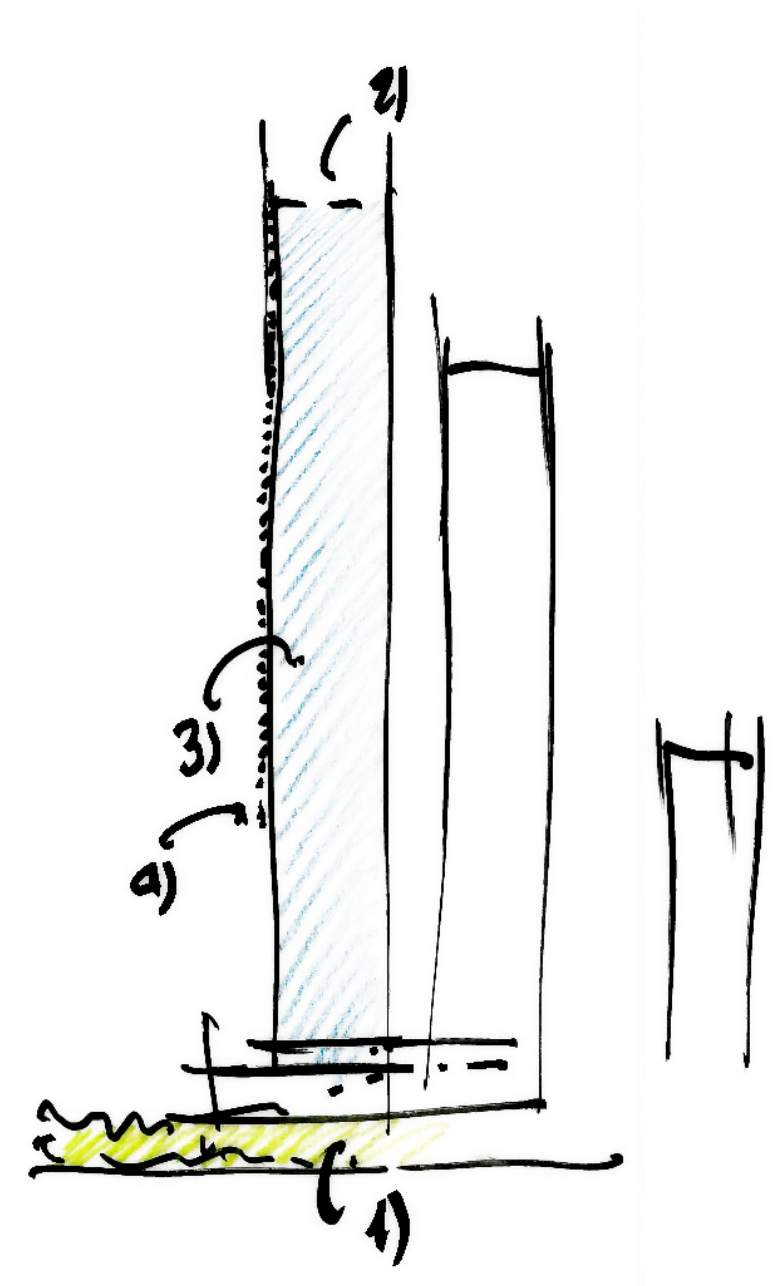
Building R4A was approved by the NSW Planning Assessment Commission in September 2017. Since that approval, the architectural design of the building has been further reviewed, studied, and modelled by the RPBW team with subsequent design refinements undertaken. These refinements are summarised within the following sections:

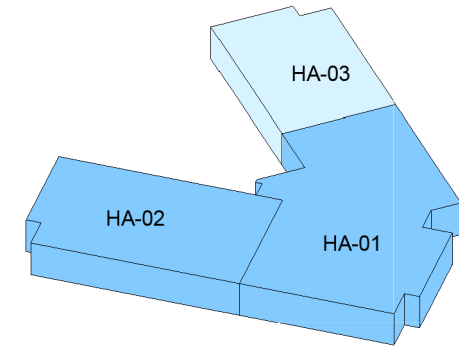
Section 2.1 R4A Floor Plate Level Adjustments

Section 2.2 R4A Internal Apartment Refinements

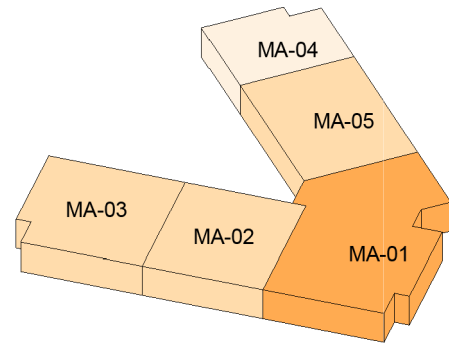
Section 2.3 Tower Facade Updates

- 2.3.1 Primary Open Cavity Facade (OCF)
- 2.3.2 Change to Wintergarden
- 2.3.3 Skirt Reduction on West Facade
- 2.3.4 Amenities Park Facade
- 2.3.5 New facade Typology - Mini OCF
- 2.3.6 Plantroom Facade
- 2.3.7 Penthouse Facade

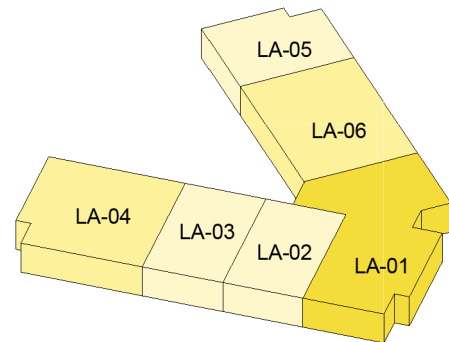




Upper Plate	
Previous:	15
Proposed:	20
Increase:	+5

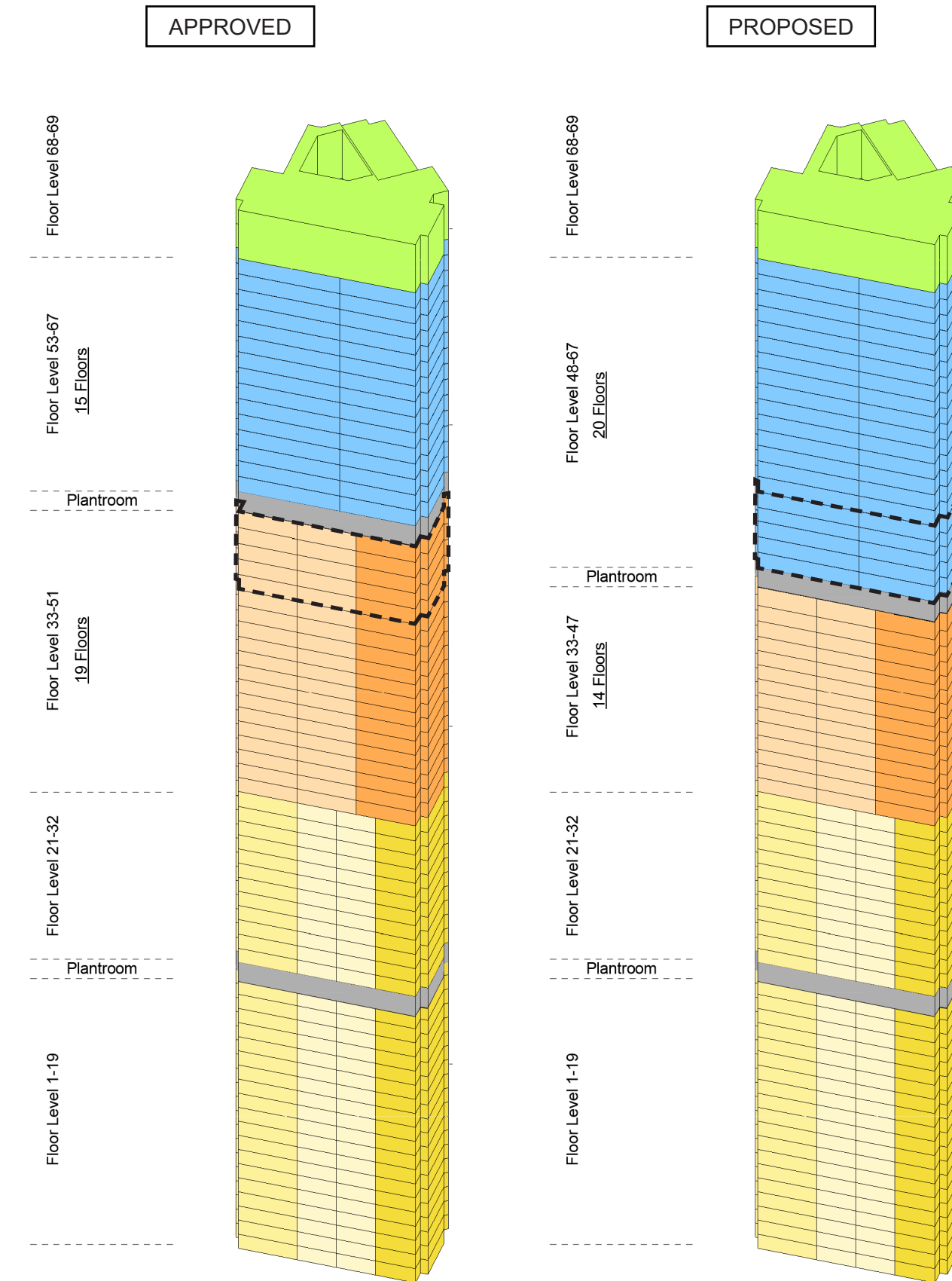


Mid Plate	
Previous:	19
Proposed:	14
Reduction:	-5



Lower Plate	
Previous:	31
Proposed:	31
No Change:	=

R4A Apartment plates variation.



R4A Plate Changes Diagram

2.1 R4A Floor Plate Level Adjustments

The upper levels of the tower (47-52) have been re-aligned to match the heights of the associated levels of the neighbouring R4B tower. In doing so, the alignment of the finish floor levels and curtainwall modules on both building has been achieved.

The upper level plantroom of R4A has been lowered from level 52 to level 47 in order to allow for an increase in the number of upper floor plate apartments. This increases the number of larger family-orientated apartments in accordance with market demand.

Please note that this adjustment is to happen simultaneously with proposed amendments in the R4B tower which would see the two buildings share an aligned upper level plantroom. The proposed change can be appreciated in the diagrams below.



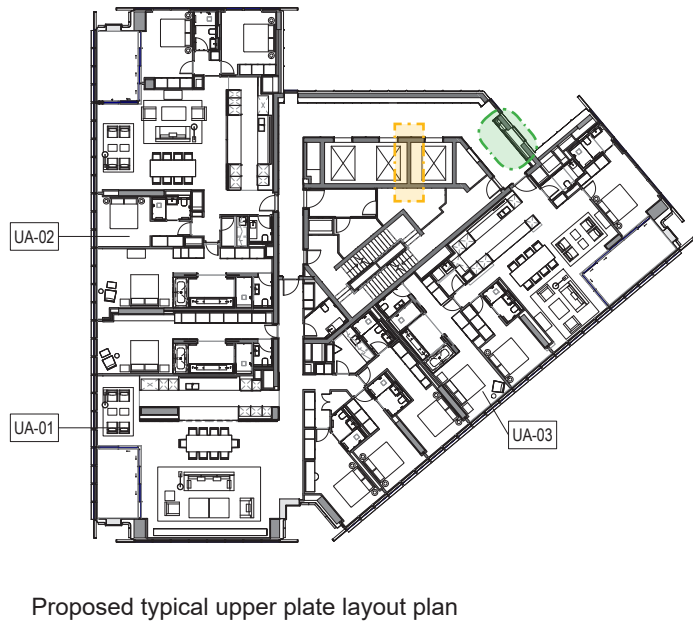
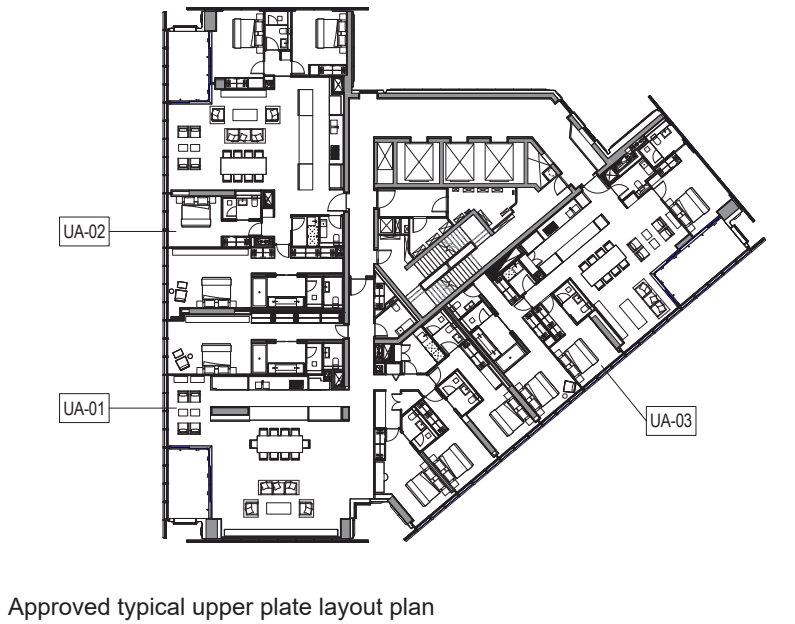
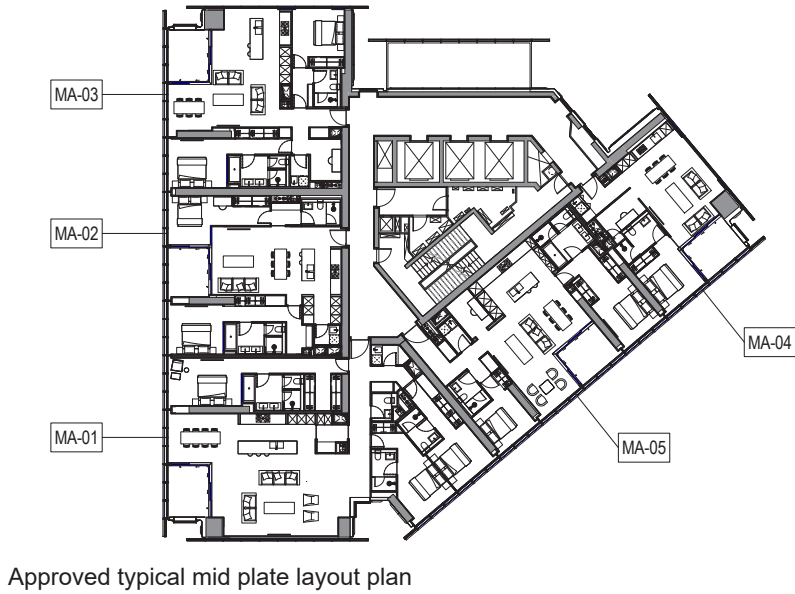
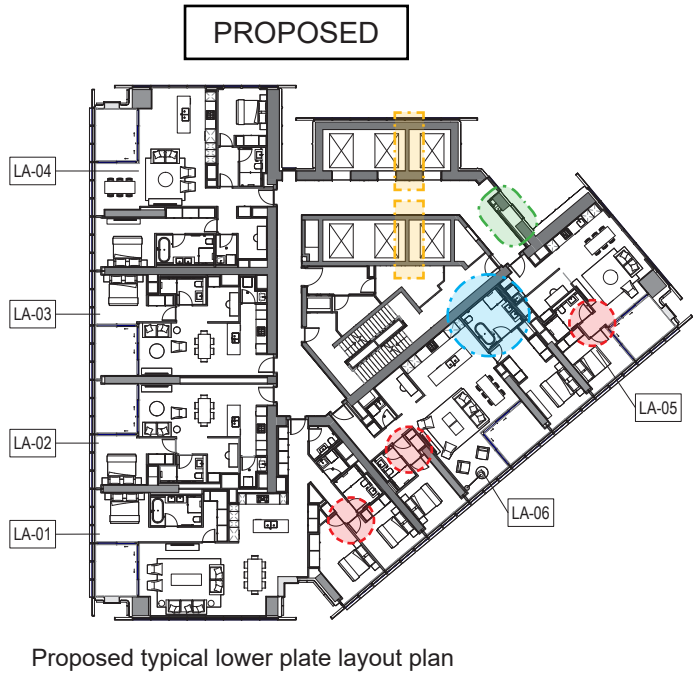
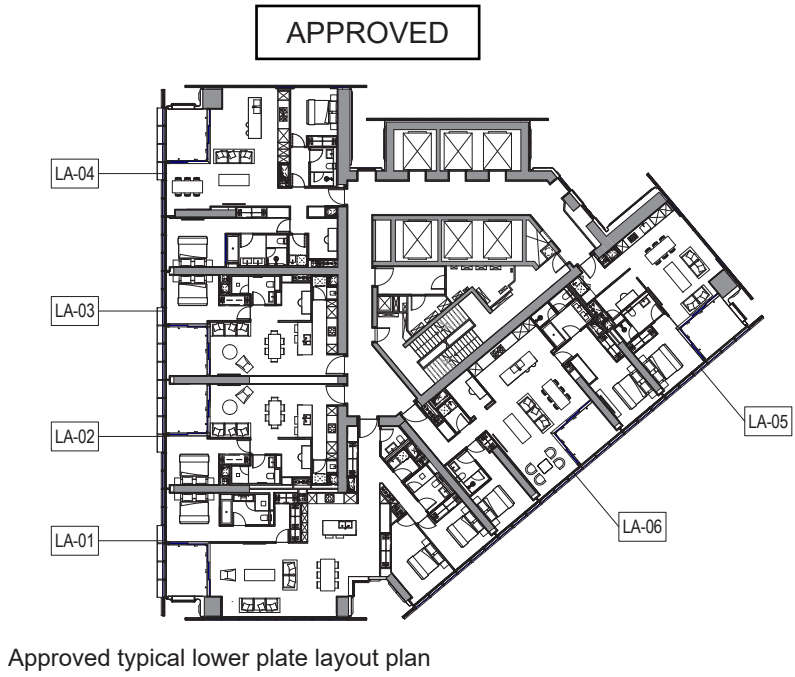
R4A and R4B Alignments Diagram

2.2 R4A Internal Apartment Refinements

The internal layout of the tower has been slightly tuned to suit the demands of the current residential market and to accommodate further efficiencies in the mechanical services design.

The proposed changes are identified by the colour coded categories below:

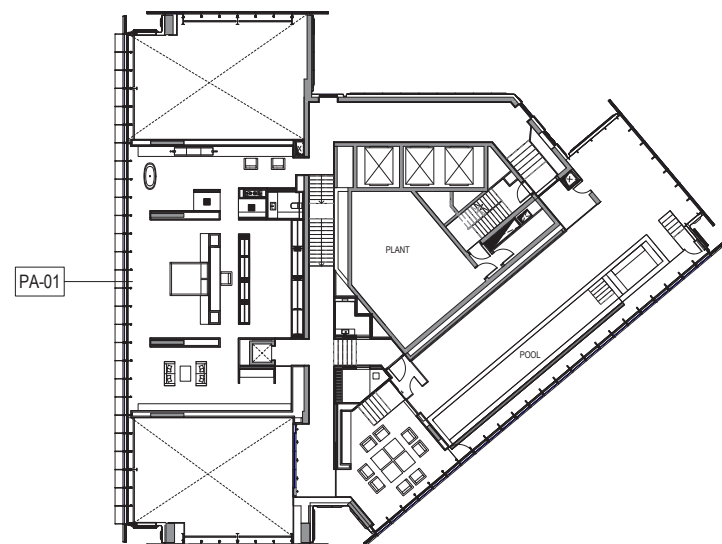
-  Doors
-  Bathrooms
-  Riser and Plenums
-  Lifts



APPROVED

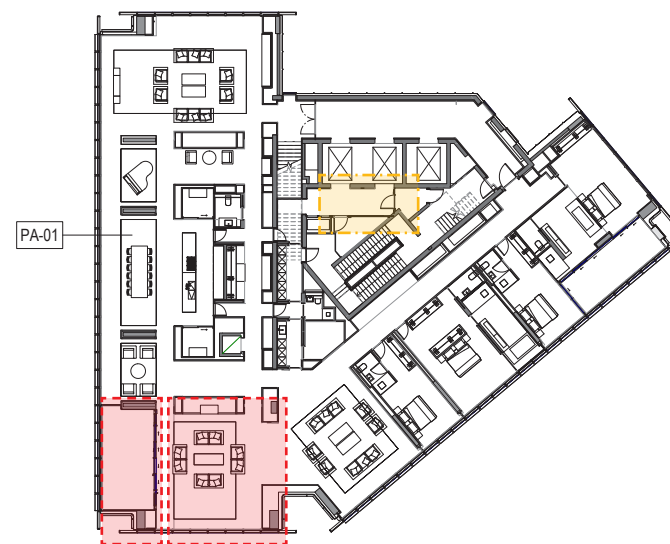


Approved lower penthouse layout plan - Level 68

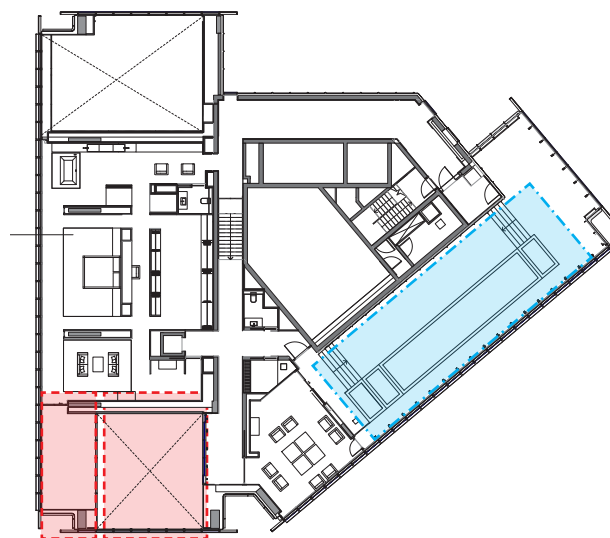


Approved upper penthouse layout plan - Level 69

PROPOSED



Proposed lower penthouse layout plan - Level 68



Proposed upper penthouse layout plan - Level 69

The internal layout of the Penthouse is still under development and the drawings that follow should be seen as such.

Highlighted below are some note-worthy amendmends regarding the Penthouse:

- Reduction of the double height Wintergarden in the North-West corner and an increase in internal area (double height maintained).
- Reduction of the raised pool deck area. In the updated proposed layout, the deck is set back from the South facade and constrained to the areas around the Pool.
- Changes in the Penthouse private lift lobby, with the addition of a dedicated, secondary lift.

2.3 Tower Facade Updates

As part of the iterative design development process, the tower facades have been fine-tuned to ensure that the aspirations of the project are met.

The facade has been conceived as an active system with an appearance that changes as the occupant responds to variable climatic conditions. All the elements of the facade including the roller blinds, the moveable sash window systems and the Open Cavity Facade (OCF) system form part of a breathable skin which portrays a sense of permeability and activation. The following pages highlight the most significant of these changes as well as the motivation behind these changes. The location of these changes are illustrated in the following simplified massing diagrams.

They include:

2.3.1 - Primary Open Cavity Facade (OCF)
(Highlighted in light red)

2.3.2 - Change to Wintergarden
(Highlighted in light blue)

2.3.4 - Amenities Park Facade
(Highlighted in Orange)

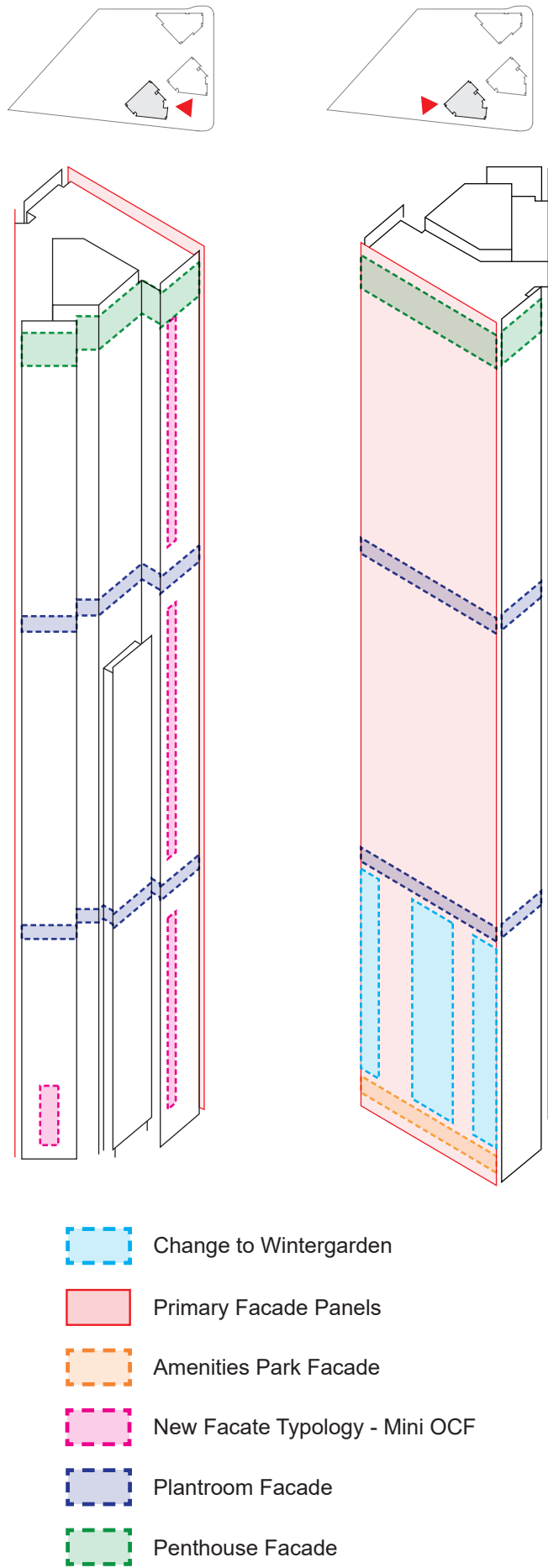
2.3.5 - New Facade Typology - Mini OCF
(Highlighted in pink)

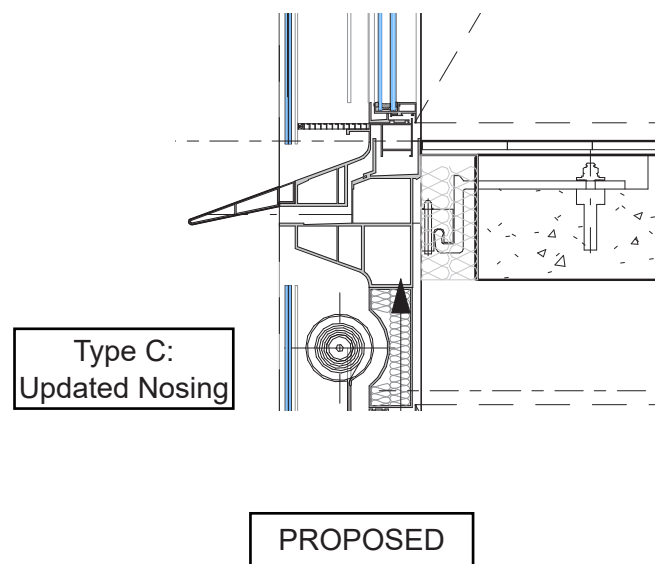
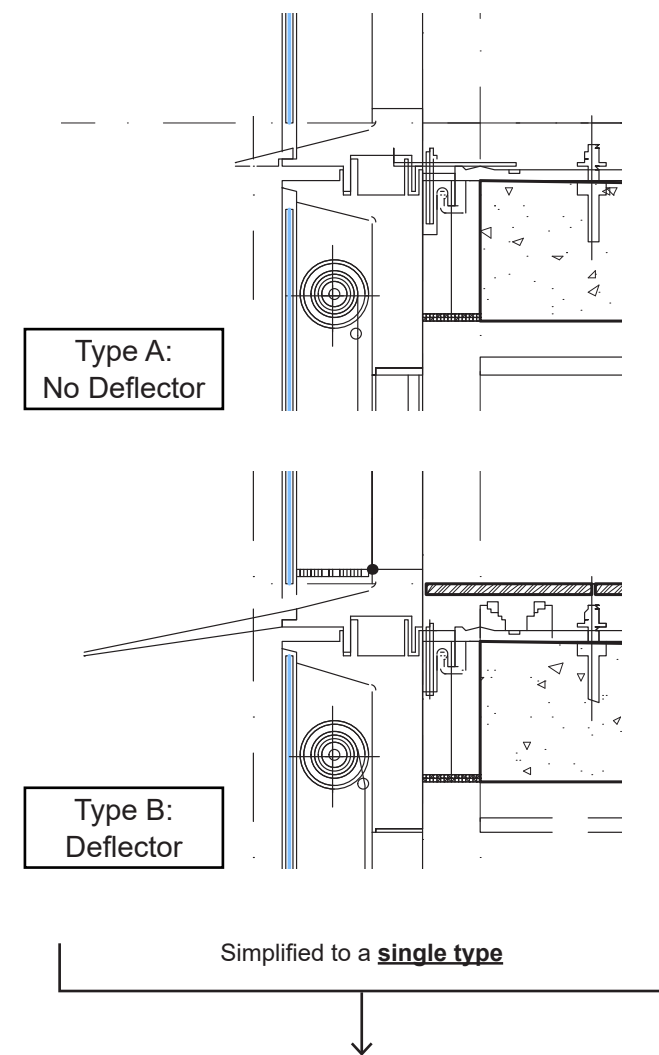
2.3.6 - Plantroom Facade
(Highlighted in Dark blue)

2.3.7 - Penthouse Facade
(Highlighted in Green)



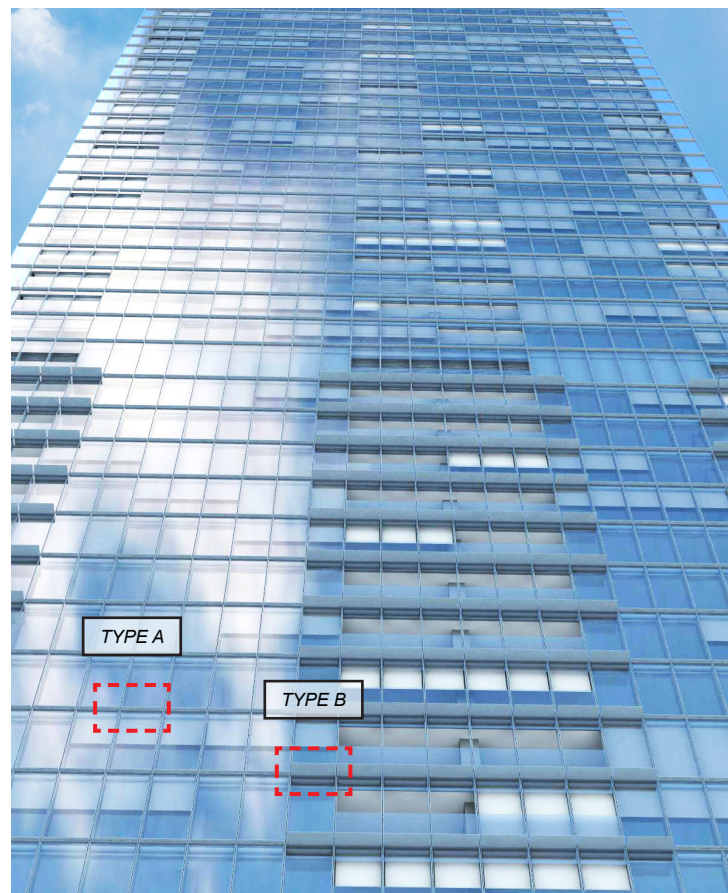
One Sydney Harbour - R4A on right



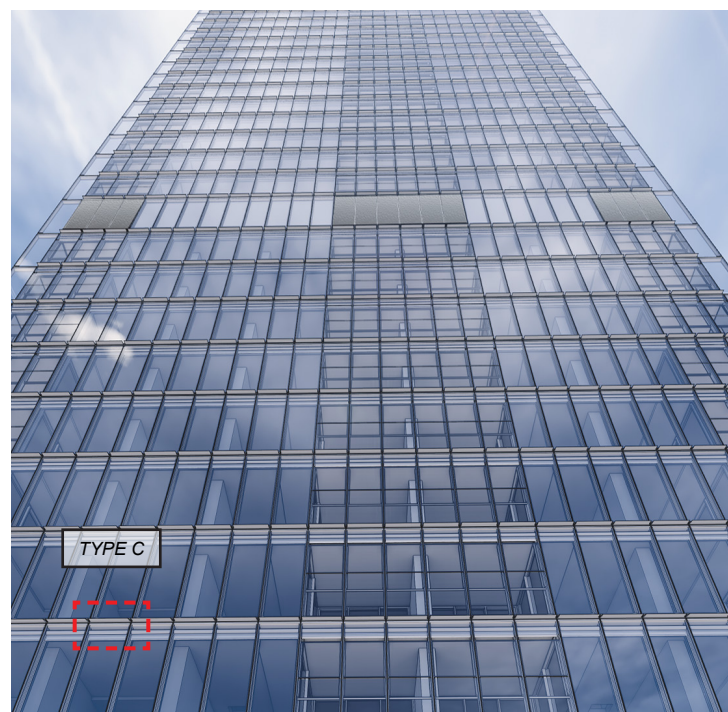


Proposed stack joint type unification on main facade

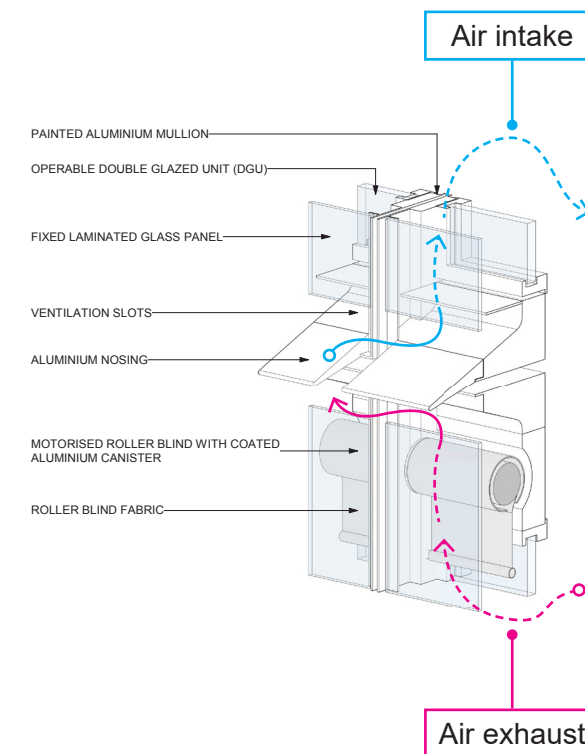
APROVED



PROPOSED



Proposed view on main facade



Proposed stack joint on main facade - 3D Views

2.3.1 Primary Open Cavity Facade (OCF)

The stack-joint of the open cavity facade has been subtly re-designed as a result of specialist advice from wind consultants. The approved wind deflectors, which are present in only some of the lower floor plate facade panels, are proposed to be removed via this modification and replaced with a single extrusion that achieves favourable performance results across the entire primary facade.

This refinement creates a unified solution for this facade system and in doing so achieves the homogeneous appearance that was originally envisaged for this facade type.

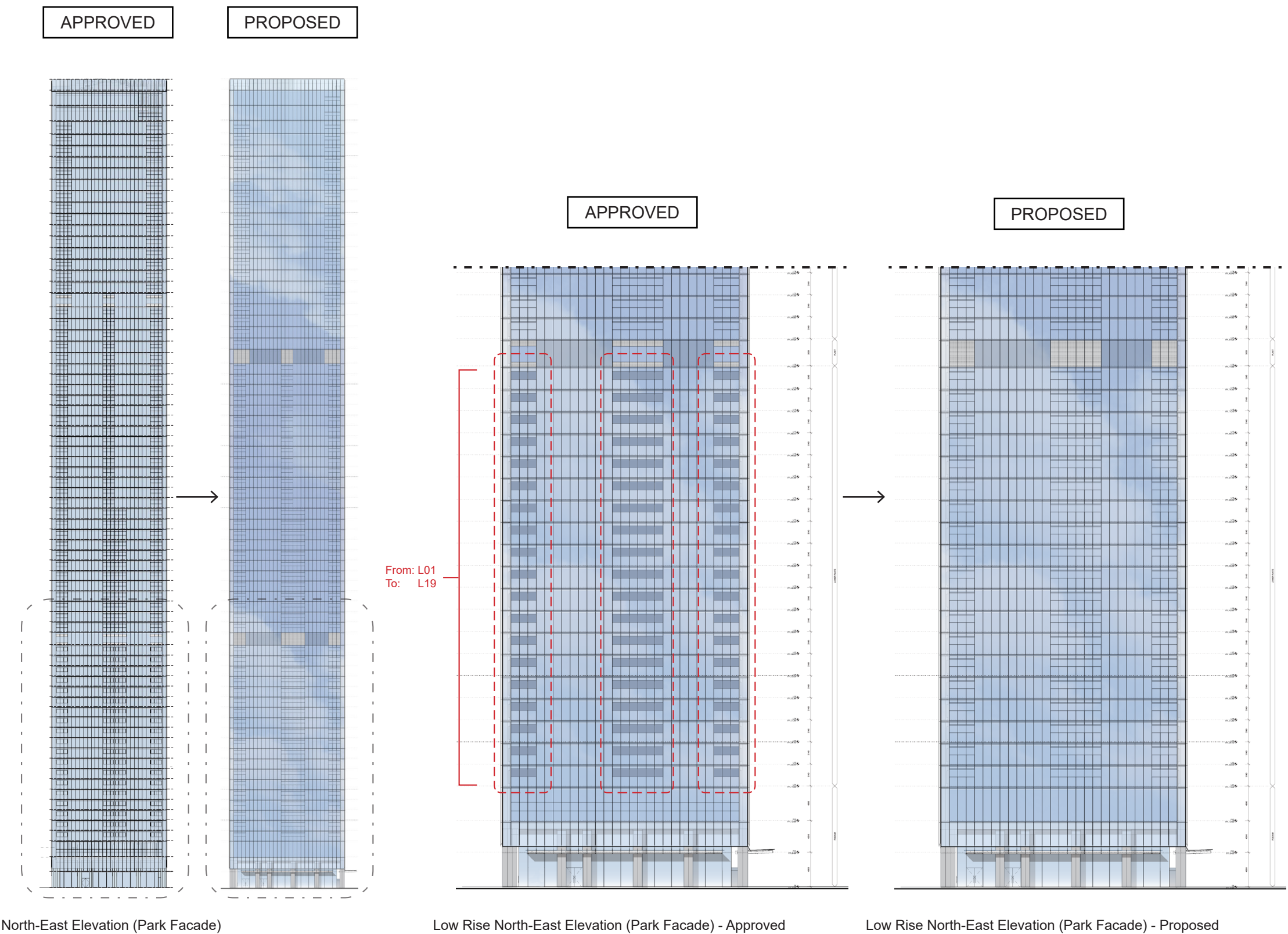
Refer to the adjacent diagrams which explain this proposed change.

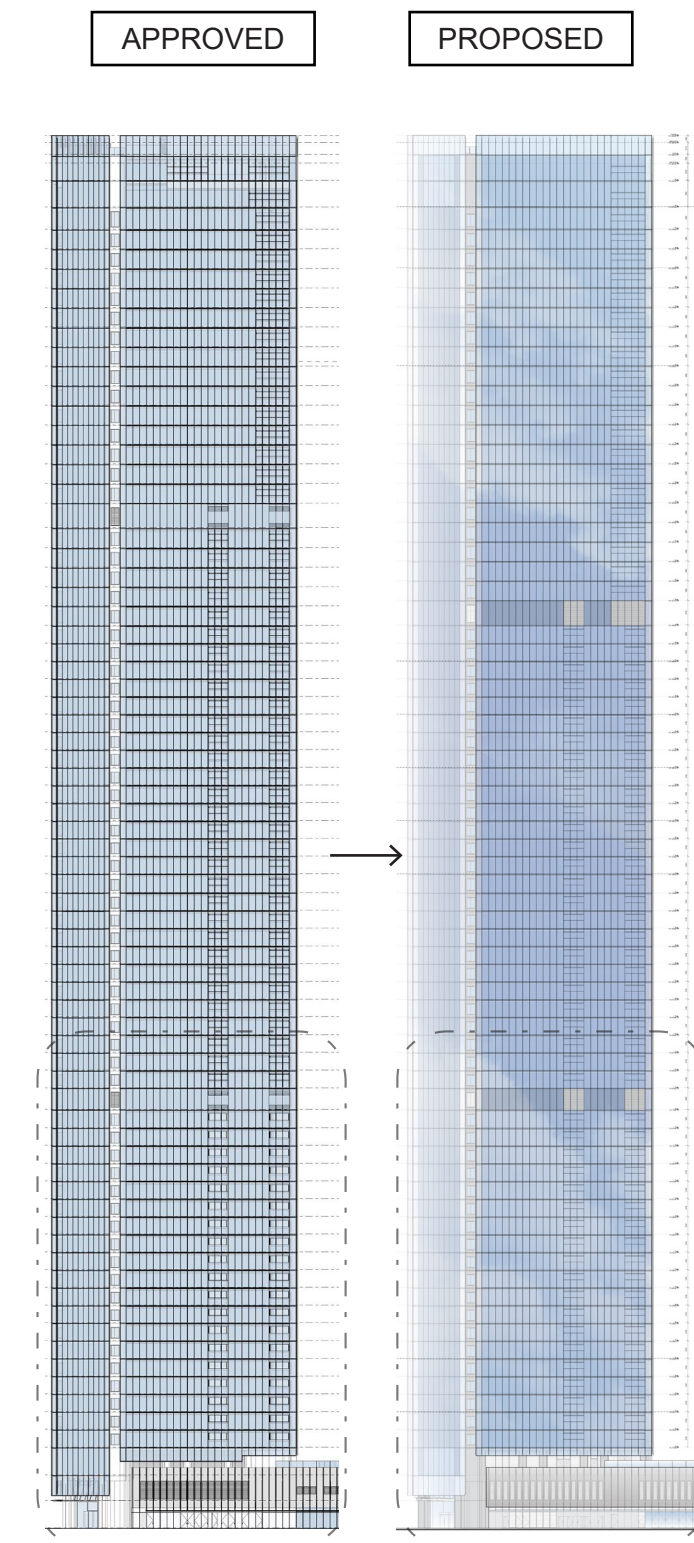
2.3.2 Change to Wintergarden

In the approved design, the apartments in the lower plates of the tower (from Level 1 to Level 19) differ from those above when it comes to the balcony facade typology. These lower level balconies have a permanently open facade with a fixed glass balustrade. The apartments above, however, are to be fitted with an operable glass sash window system which can be partially closed to create a wintergarden space. This allows for a greater degree of protection against rain and wind and thus will provide greater amenity for the residents.

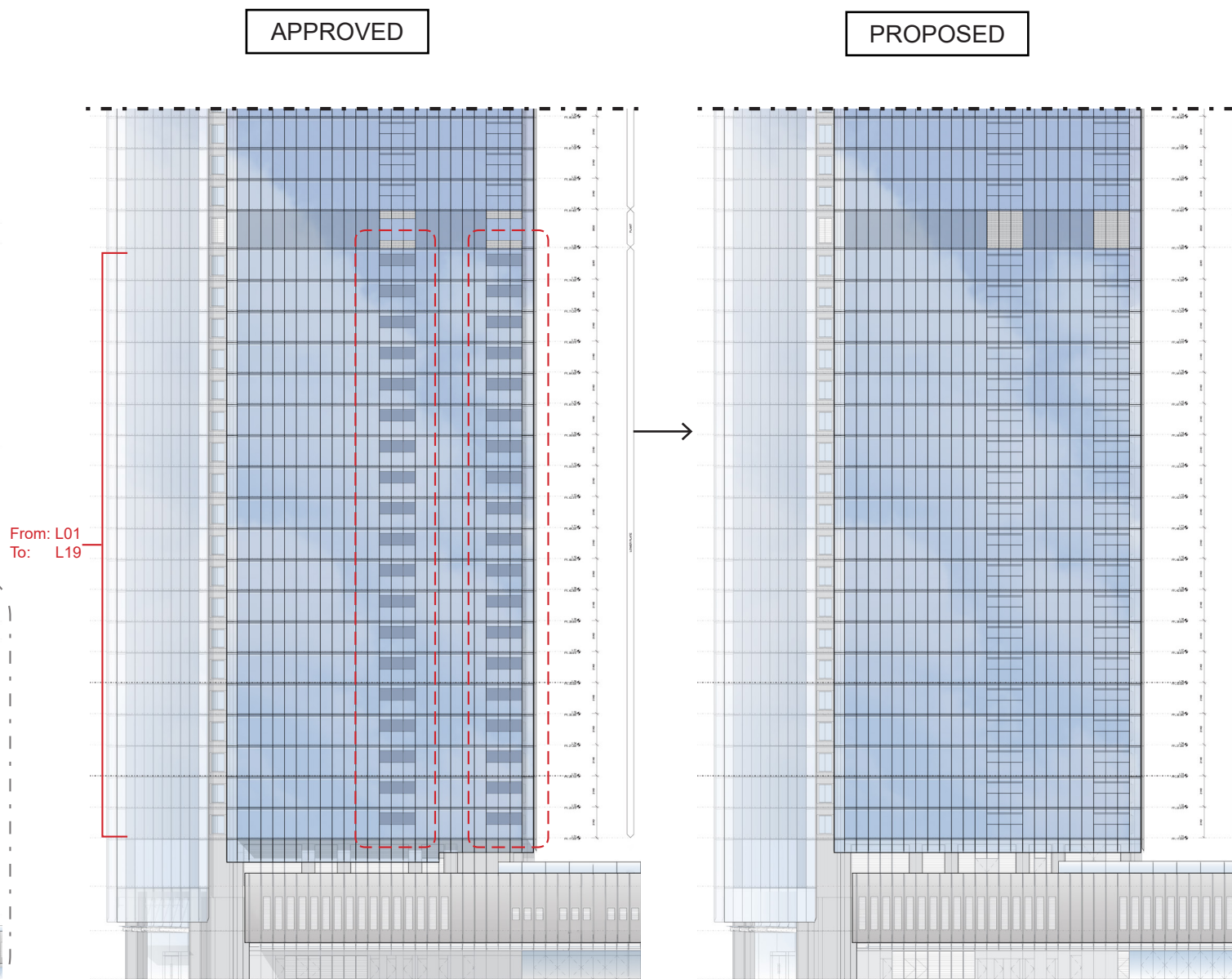
Following further wind analysis, and in an effort to create a higher degree of homogeneity in the facade design, it is proposed that this wintergarden sash system is extended across all balconies of the tower, regardless of the floorplate typology. This will ensure that all residents will have the ability to moderate the environmental conditions of their apartment's exterior spaces.

 Updated Facades

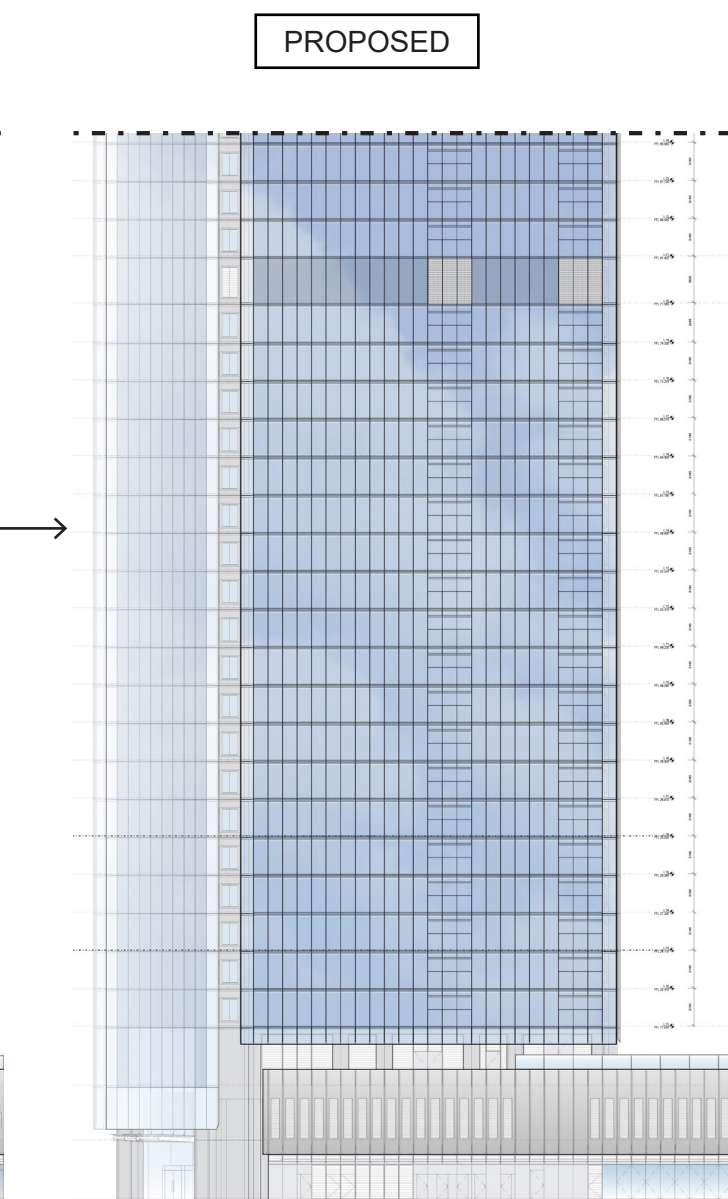




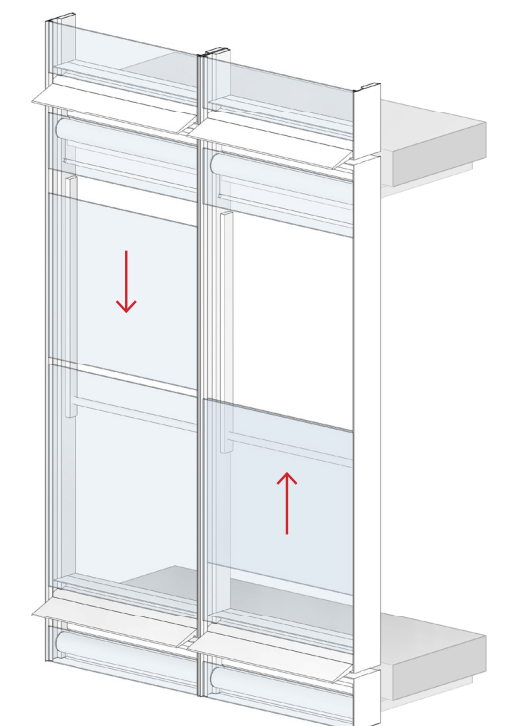
West Elevation



Low Rise West Elevation - Approved



Low Rise West Elevation - Proposed



Wintergarden operation - 3D Diagram

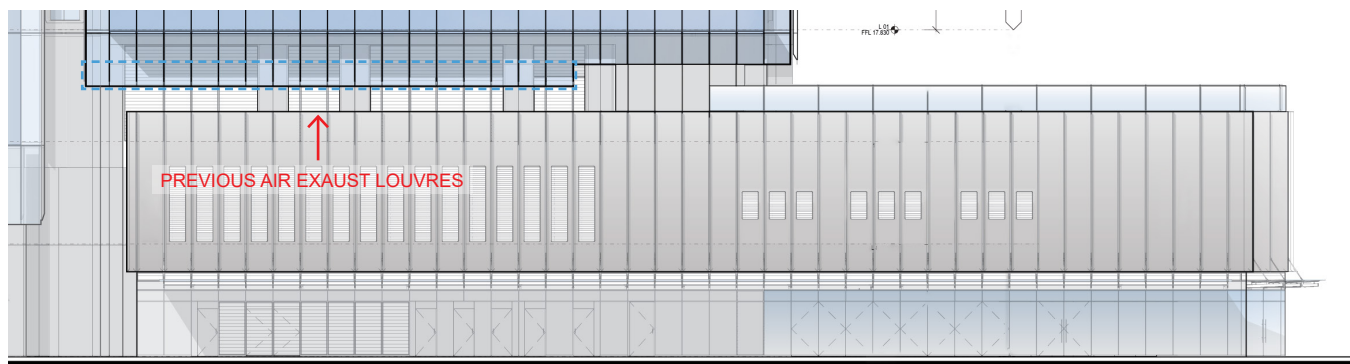
2.3.3 Skirt Height Reduction on West Facade

The skirt in the west façade of the building underwent an important fine-tuning. In the approved design, the northern skirt panels were different in height from its southern counterparts, creating a step in the bottom edge of this façade.

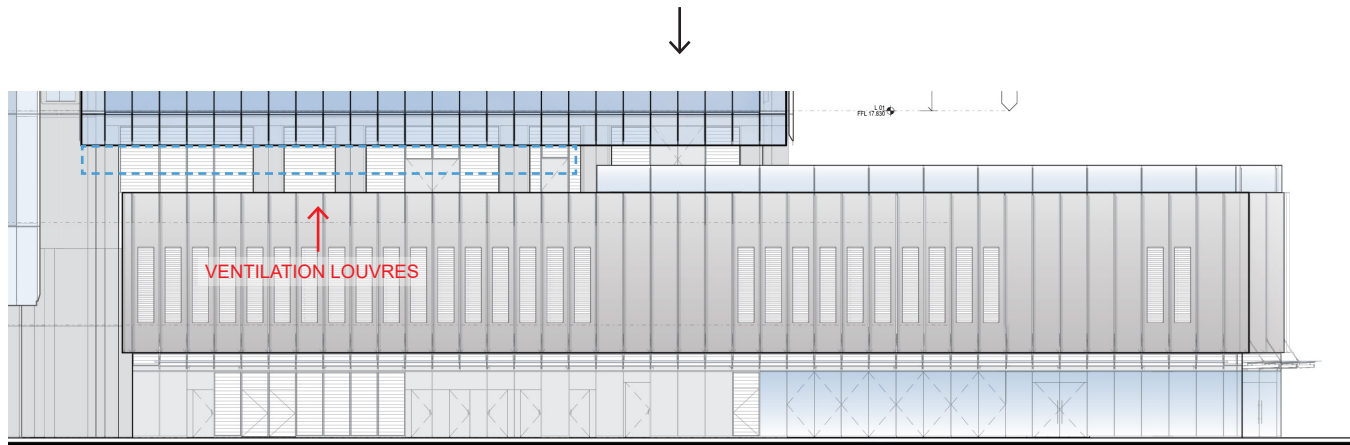
The step had to do with the previous ventilation strategy. In the approved scheme, Louvre panels at P2 were exhaust louvres (indicated with the red arrow), therefore, it should maintain a 6m distance from the apartments OCF above. That clearance was obtained by lowering the skirt. After relocation of mechanical services and revisions the louvres on P2 became regular ventilation louvres, eliminating the need to maintain such separation from the apartment’s openings.

Without this constrain came the opportunity to propose the realignment of those skirt panels matching not only its southern counterparts. The skirts are therefore simplified into 2 heights. A longer one, above the lobby, and a shorter, above the podium volume as shown respectively in orange and magenta in the following diagrams.

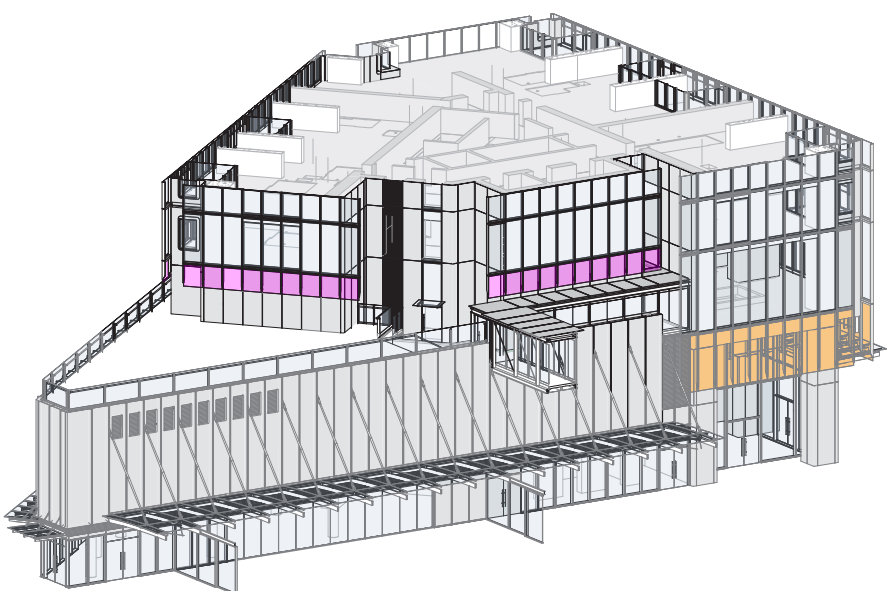
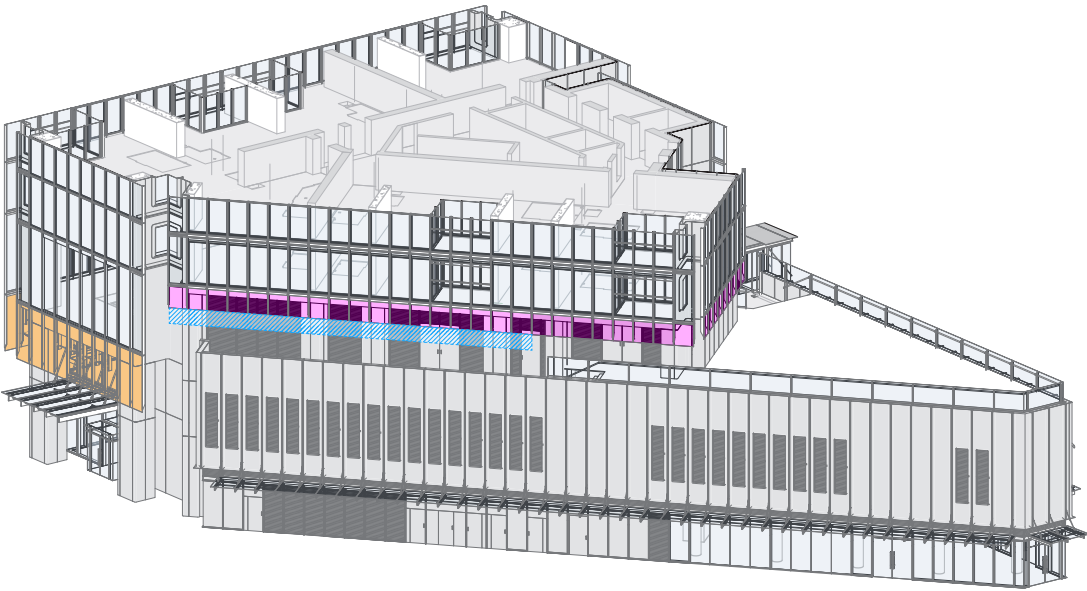
- Skirt Panels Height Reduction
- Short Skirt Facade above Podium
- Long Skirt Facade above Lobby



Aproved West Facade Skirt

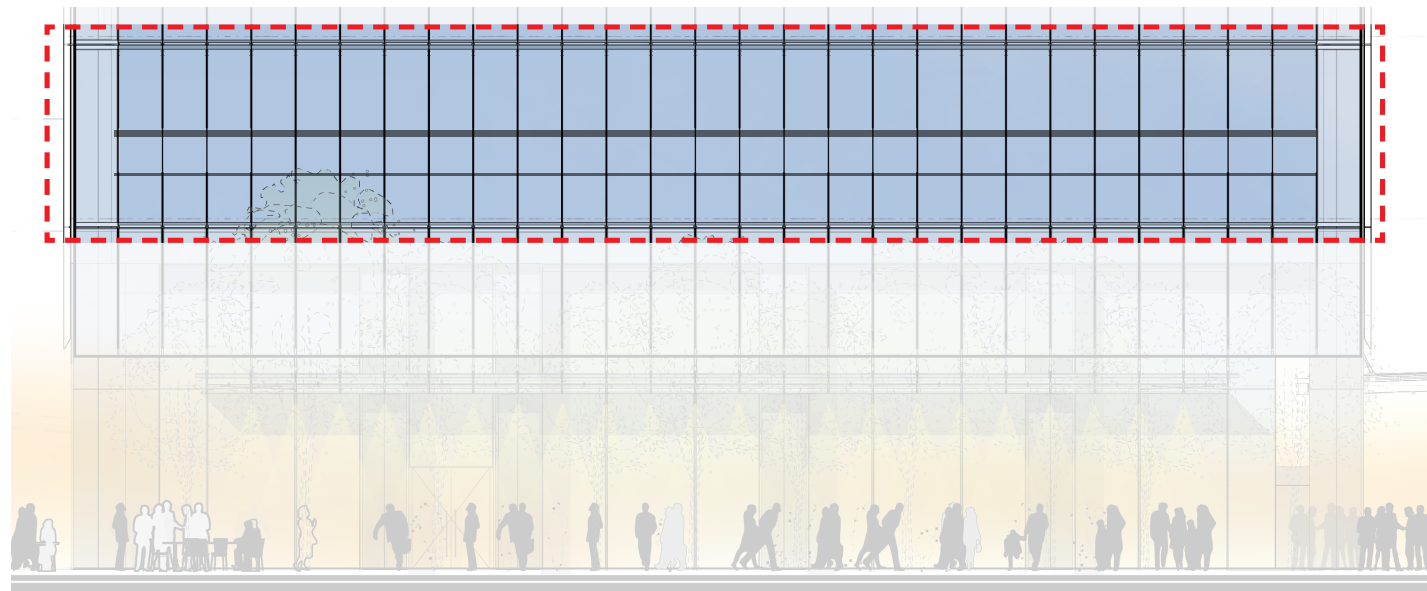


Proposed West Facade Skirt



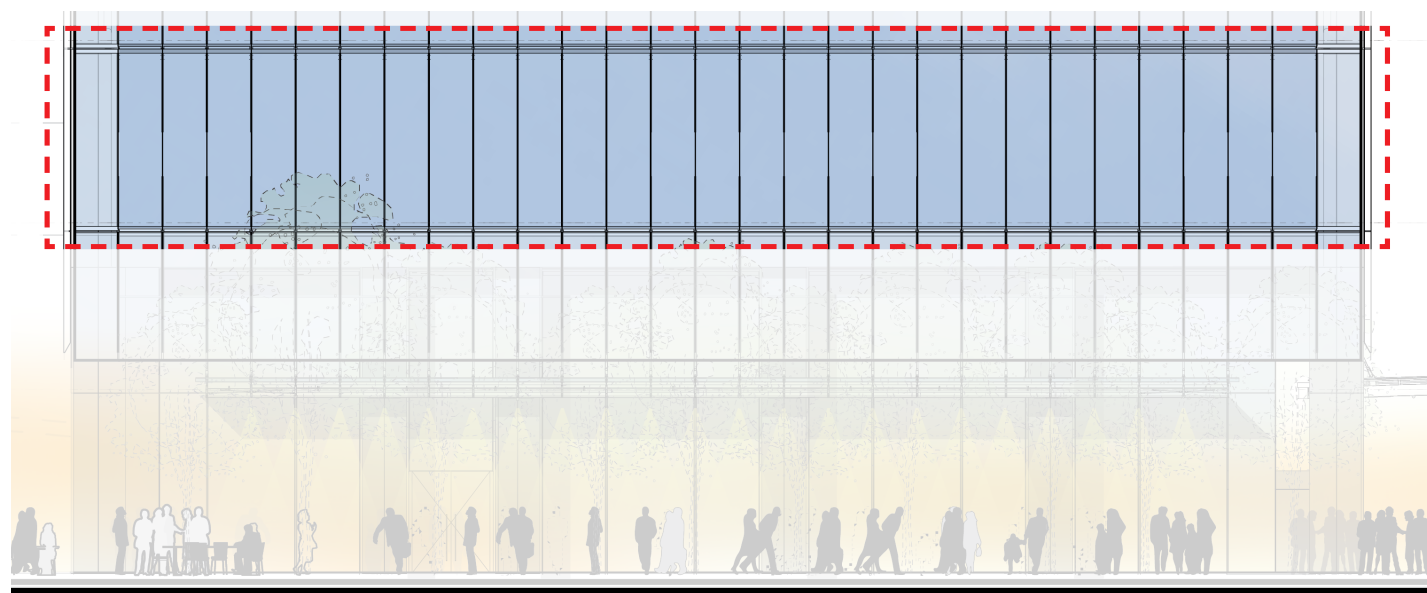
Proposed Podium and Skirts Diagrams

APPROVED

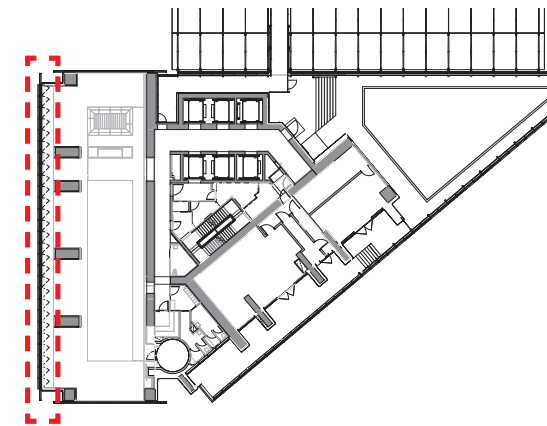


Previous P02 North East Facade

PROPOSED



Proposed P02 North East Facade

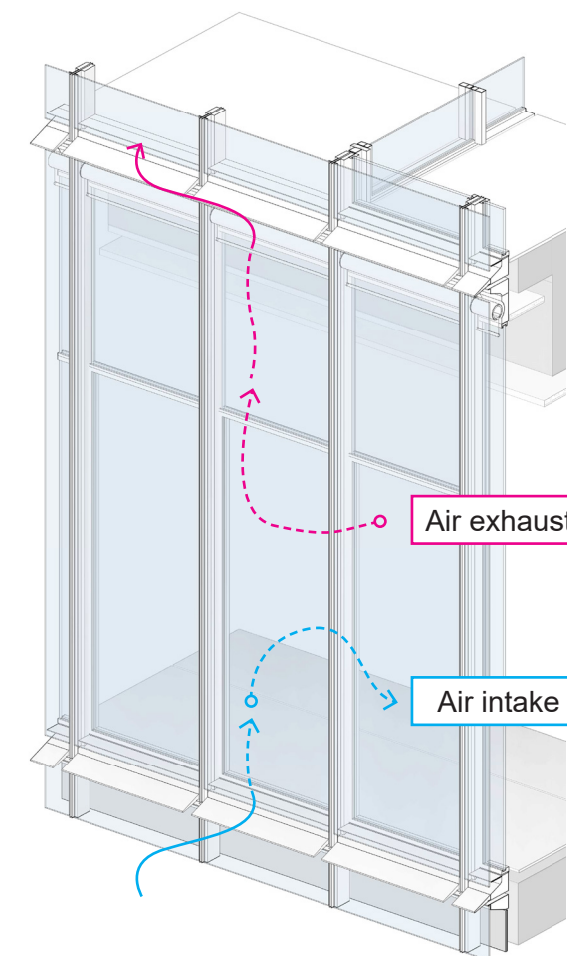


2.3.4 Amenities Park Facade

The lowermost facade level facing Hickson Park has been reconfigured from the approved design in order to provide a better user experience. Currently as approved, this space would have an external feel created by the usage of wintergarden sash window panels. Subsequent thermal studies have led to the realisation that the permanently opened gaps within the wintergarden facade system, and the airflow that these gaps allow, is likely to compromise the mechanical thermal control systems of this space leading to discomfort during days of high temperature.

As a response to these consequences, the wintergarden panels are proposed to be removed under this modification and replaced with Open Cavity Facade (OCF) modules instead. This is expected to create a more stable temperature for the users of the space and allow this room to better complement the external amenities area in R4B by offering residents greater choice between facilities throughout the year.

Importantly, this Open Cavity Facade (OCF) is still a fully operable facade that allows fresh air and breezes into this space during benign climatic conditions.



Proposed P02 North East Facade - 3D Diagram

2.3.5 New facade Typology - Mini OCF

Currently, the South East facade facing bedroom (above level 7) is a fixed double glazed unit which means that a mechanical ventilation solution is required.

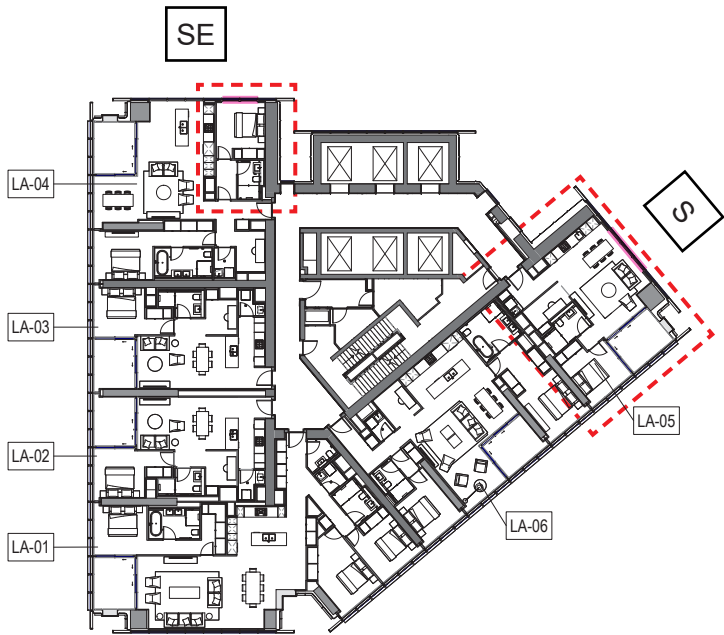
In order to increase the amenity of these bedrooms, a new facade typology has been introduced via this modification which provides natural ventilation to all levels aside from those within 6 metres of the two plant room levels. The introduction of this system also enhances the degree to which these apartments are cross-ventilated.

In the South facing apartment, wind reports demonstrated the need for a second opening in order to properly cross-ventilate that apartment in lower levels. For compliance with the Apartment Design Guide Objective 4B-3, The mini - OCF facade type has been introduced on the south elevation to provide cross ventilation to the south east apartment up to level 6. Above this level, with higher wind pressure differences, the apartments are expected to be well ventilated with the openings provided for in the west facing primary façade.

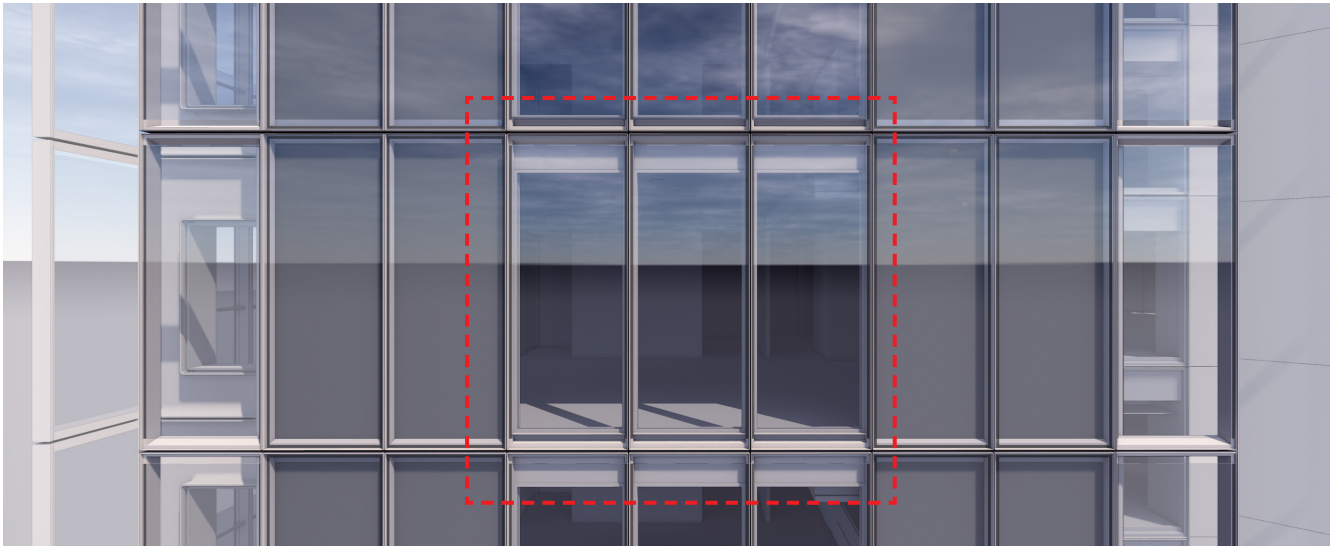
This facade typology is related in concept with the primary Open Cavity Facade (OCF) system but is reduced in depth from 250mm to 185mm as there is no requirement for an external fabric blind as there is with the primary facade typology. For this reason, this system is referred to as the 'mini-OCF system'.

In every other respect, including glass type and means of operation, the mini-OCF system is identical with the primary OCF system.

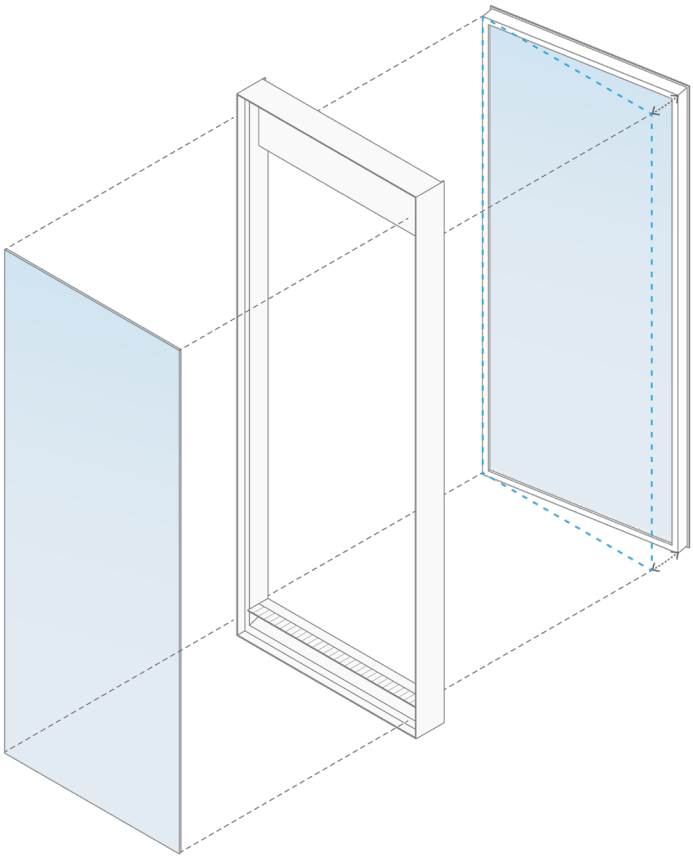
Refer to the adjacent diagrams that explain this proposal.



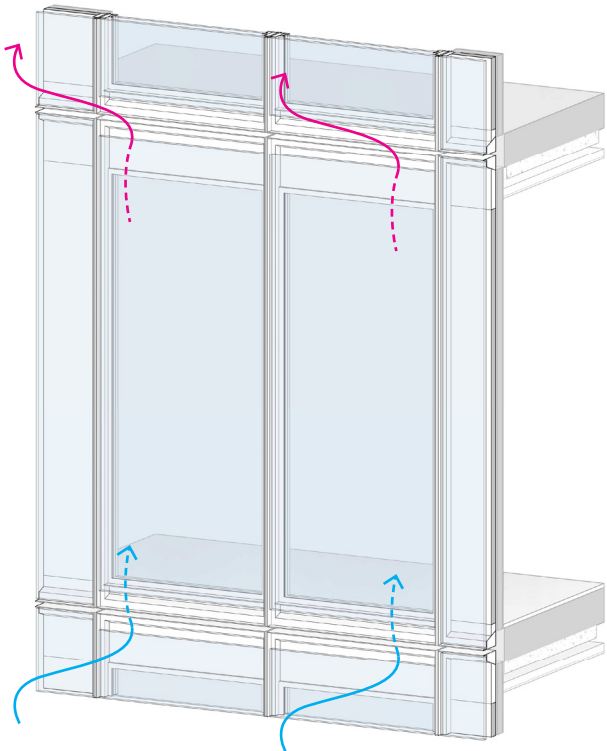
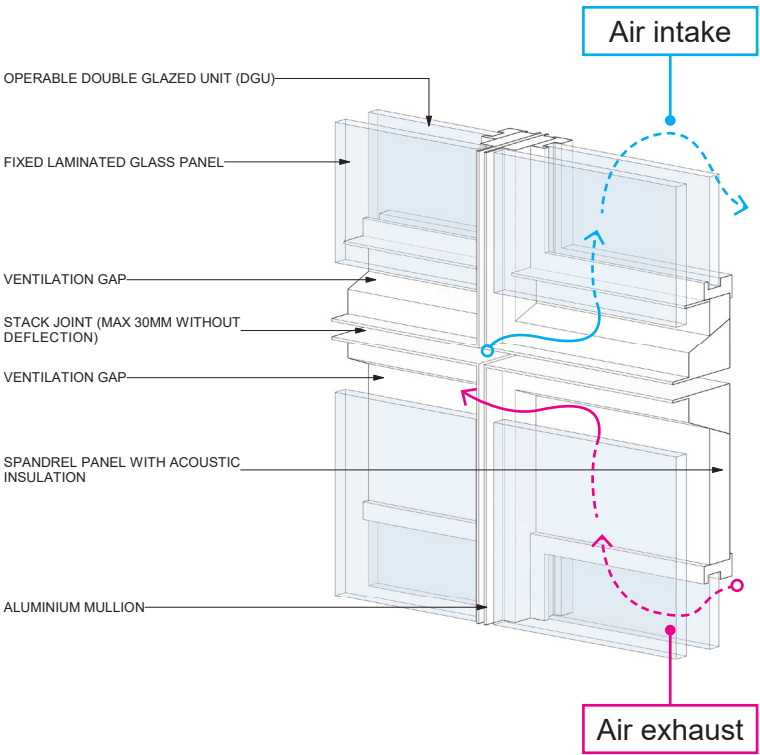
Approved typical low rise layout plan

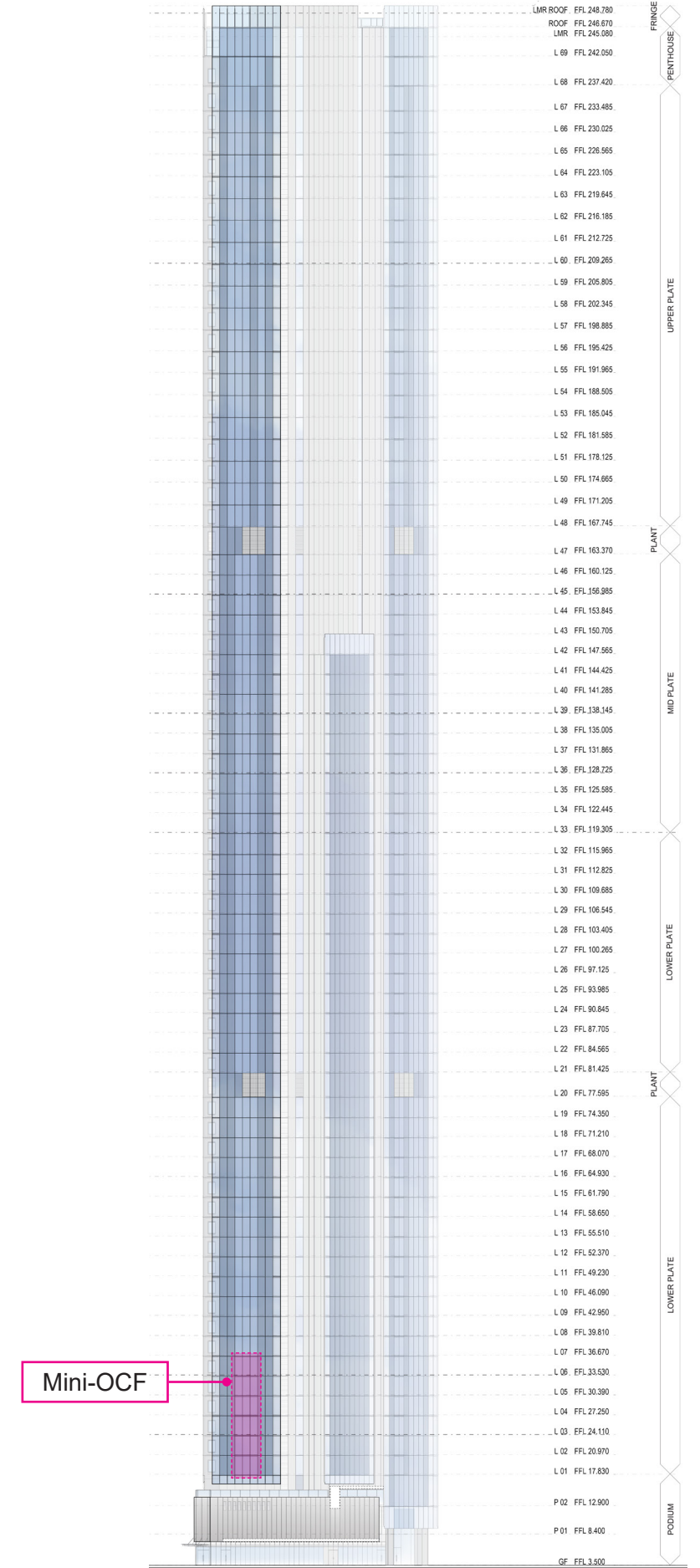
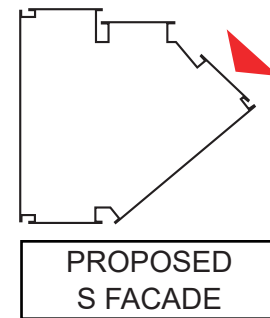
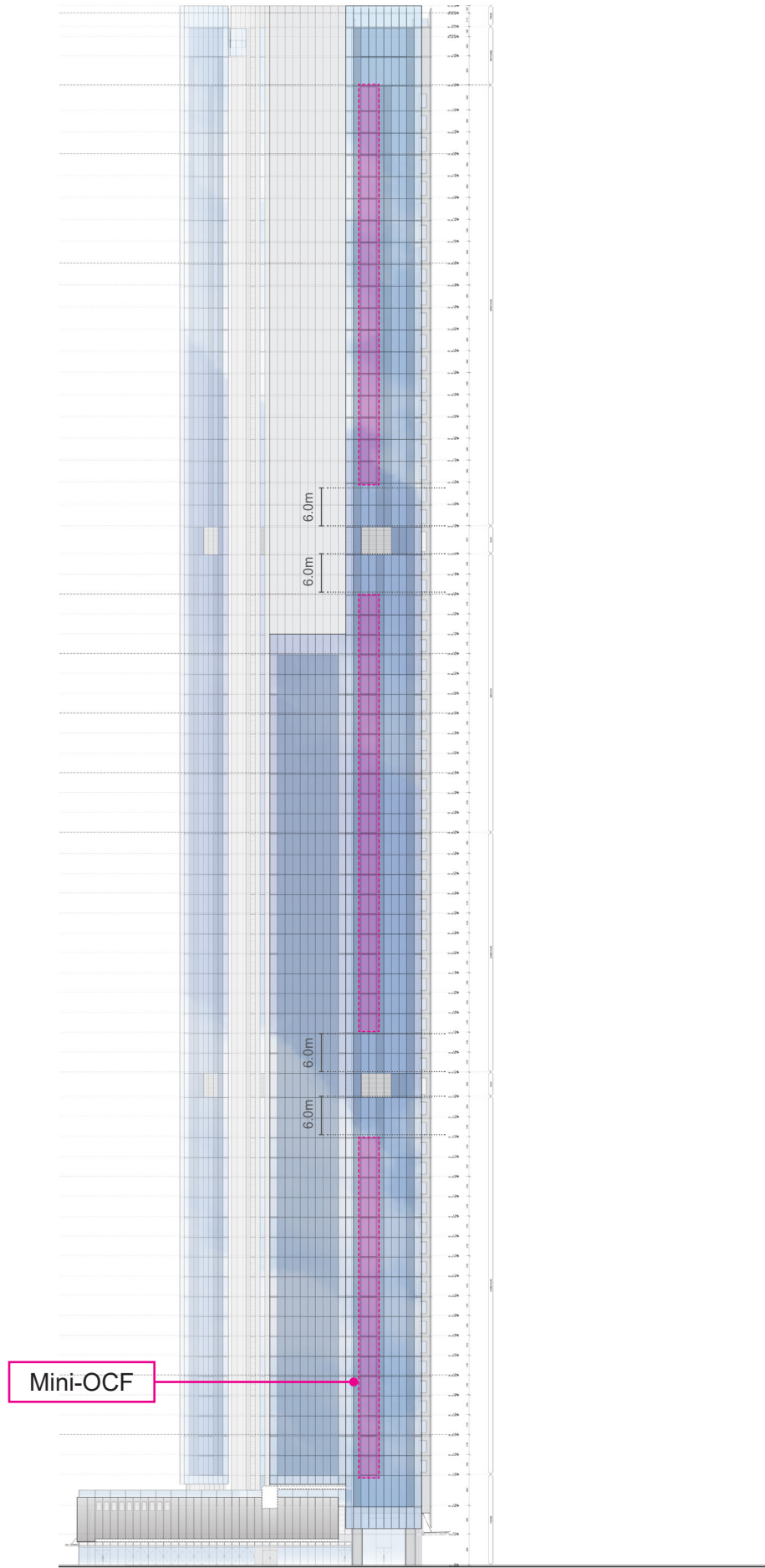
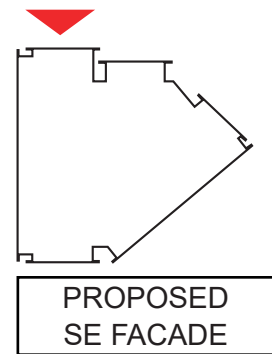


3D Visual representation of Mini OCF from outside



Diagrammatic schemes for "Mini OCF's" composition and operability





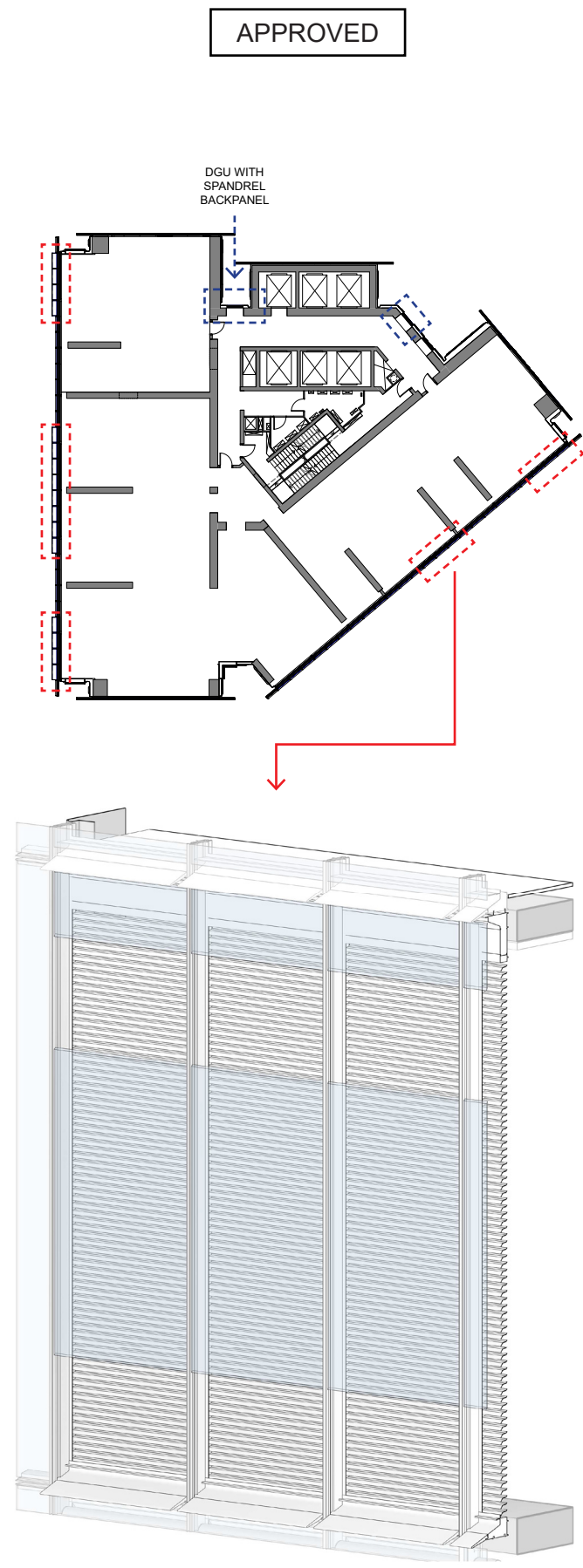
2.3.6 Plantroom Facade

Following design developments in the mechanical services system, it was established that there is a requirement for additional ventilation within the plantrooms. To achieve this, the glass panels that sit in front of the louvred facade panels in the approved design are proposed to be removed as part of this modification. This will allow for additional free open area per louvred facade panel and thus enable the design to meet the increased mechanical demands.

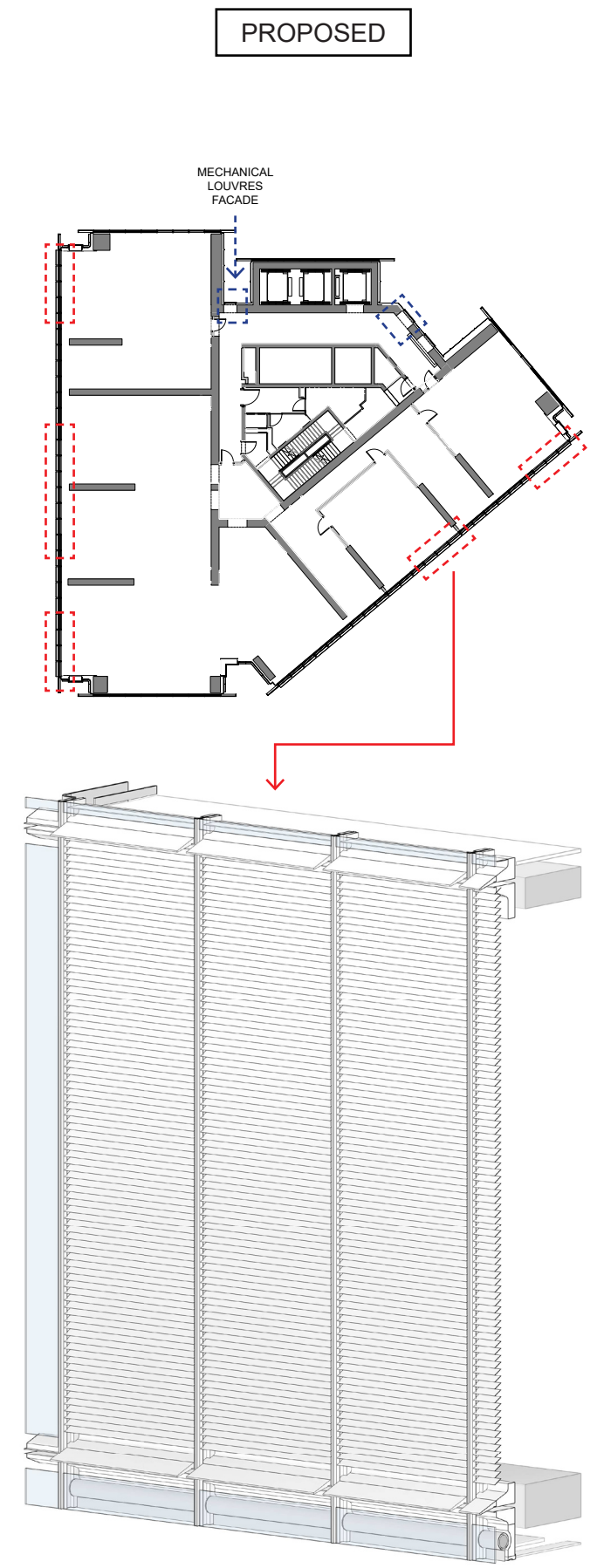
Refer to the adjacent 3D views and red highlighted areas in plan.

A second proposed change is the addition of two extra panels of ventilated louvres along the southern and southeastern façades. These modules substitute the previous spandrel panels that are approved in these locations (highlighted by the blue dashed lines in the adjacent plans). This second amendment is also driven by the need for extra ventilation.

- Louvred Facade with removed Glass
- DGU CCF converted to Louvred Facade



Plantroom Facade - 3D Diagram and Plan - Approved



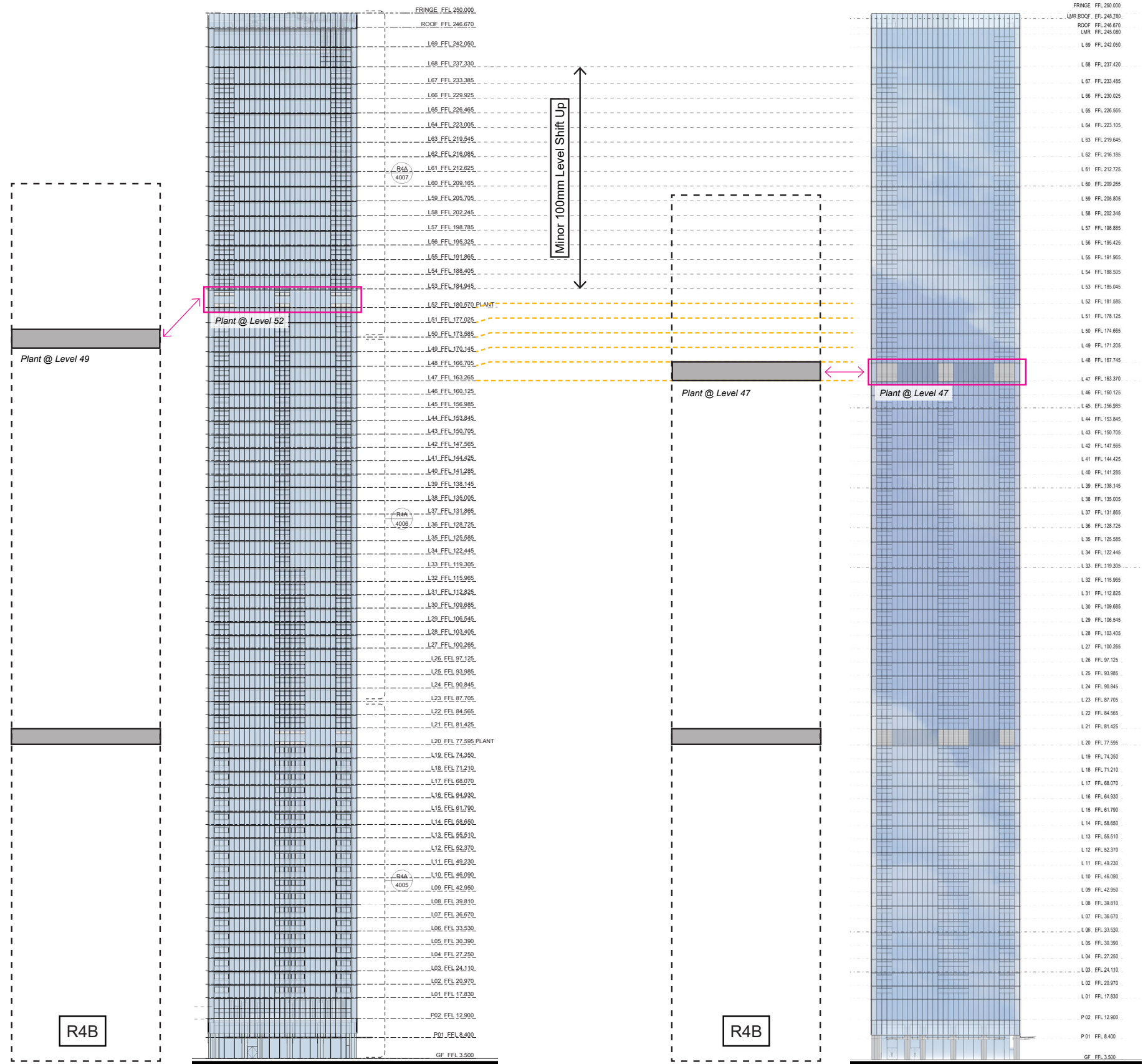
Plantroom Facade - 3D Diagram and Plan - Proposed

APPROVED R4B

APPROVED R4A

PROPOSED R4B

PROPOSED R4A



Approved - NE-Elevation

Proposed - NE-Elevation

As previously mentioned in Section 2.1, the plantrooms of both R4A and R4B are proposed to be shifted in level to match each other.

The elevations to the left show this alignment and also how they relate to the adjoining floor levels. The dashed yellow lines in the adjacent elevations represent the most substantial changes. These are a consequence of the aforementioned change from a mid-plate layout to an upper-plate layout on these particular levels.

The dashed grey lines indicate minor revisions (a consistent 100mm shift upwards), which is again a consequence of this proposed revision.

----- Substantial Level Shift

□ Shifted R4A Plantroom

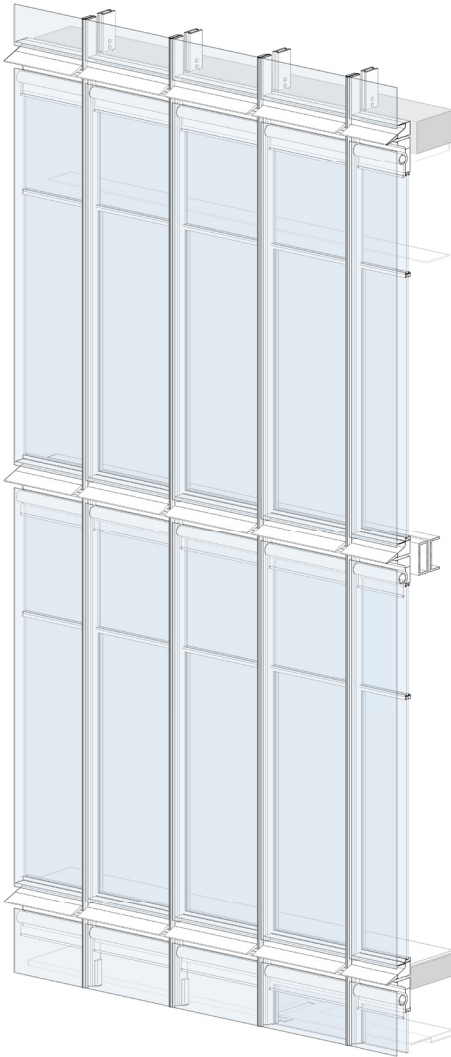
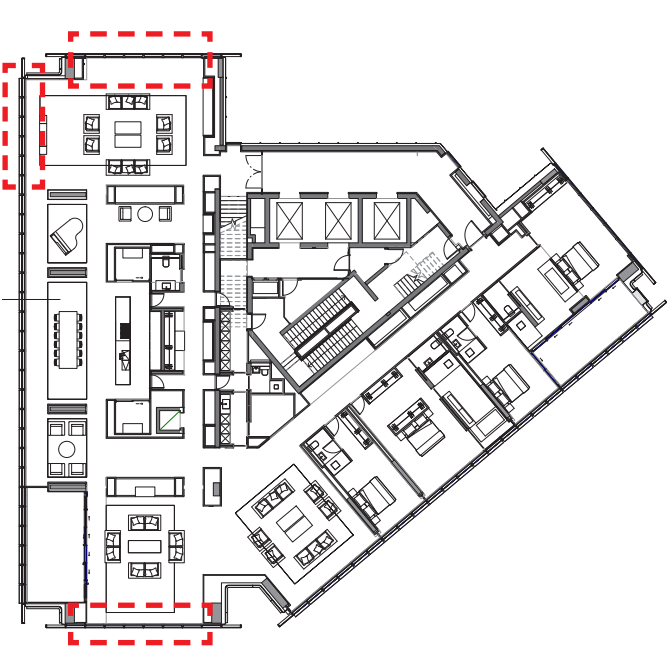
2.3.7 Penthouse Facade

The penthouse apartment features double-height spaces at both its northeastern and northwestern corners. Following a design development process, two amendments are proposed for the facade system that is featured in these spaces.

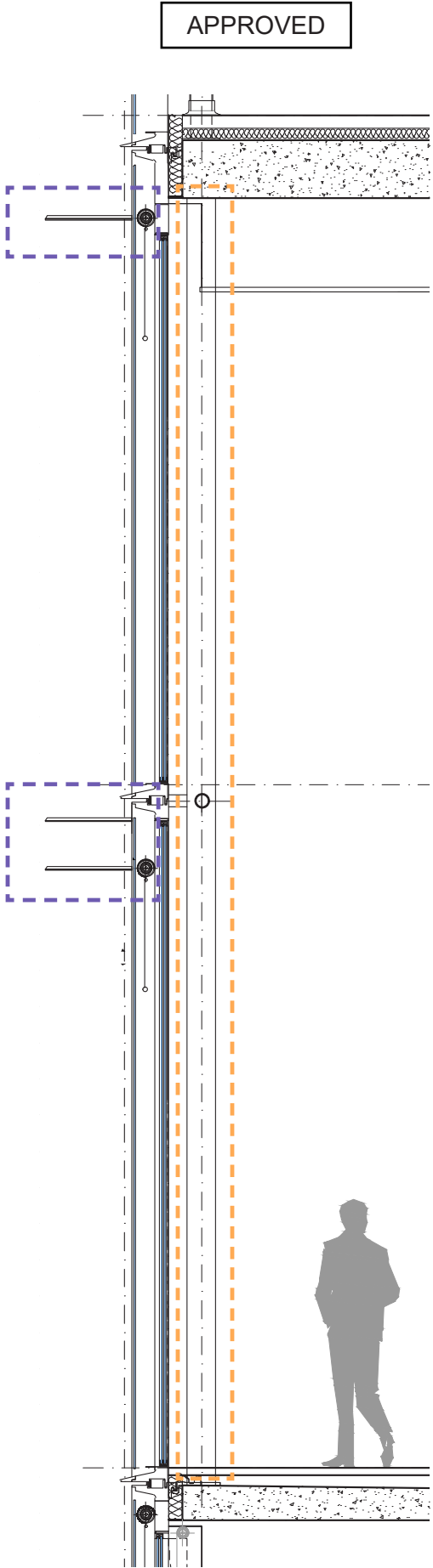
The first amendment relates to the approved sun shades which are shown highlighted in purple in the adjacent section. Following a lengthy review of the performance of the facade, these sunshades were deemed to be unnecessary and so it is proposed that they be removed. Noting that this is the only location on the project where these sunshades have been specified, the result of this change is a facade system that is more in keeping with the rest of the tower.

The second amendment refers to the design of the steel supporting frame which the double-height facade relies upon for its structural rigidity. In the approved design, a steel column is positioned behind every facade mullion. It is proposed to replace this vertical structural array with a single horizontal beam behind the stack joint (refer to the areas highlighted with dashed orange lines in the adjacent sections). This proposed change will increase views from within the apartment and allow for easier operation of the Open Cavity Facade (OCF) window system.

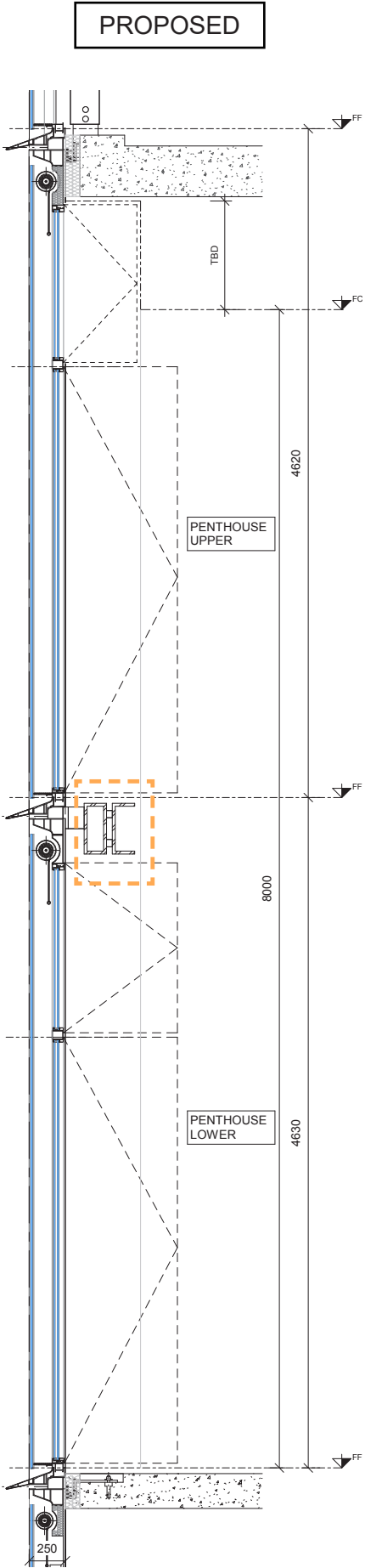
-  Double Height Facades
-  Removed Sun Shades
-  Updated Backstructure



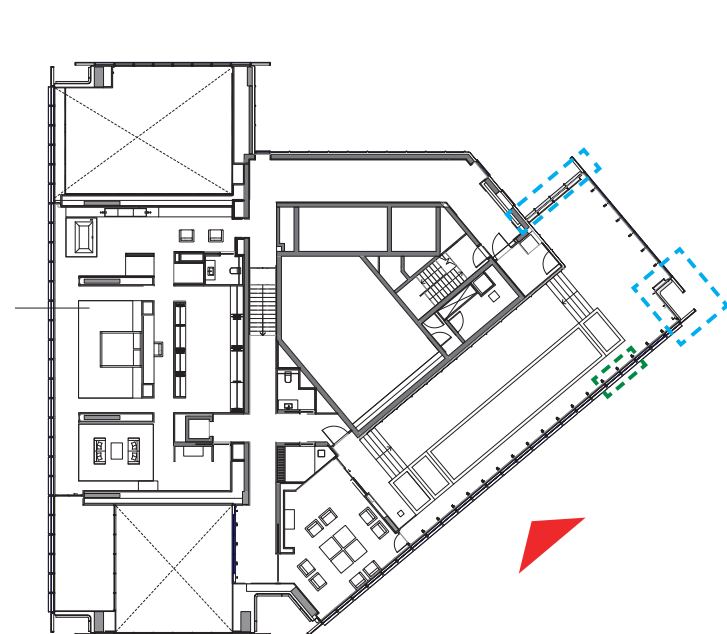
Proposed Double Height Facade - 3D Schematic



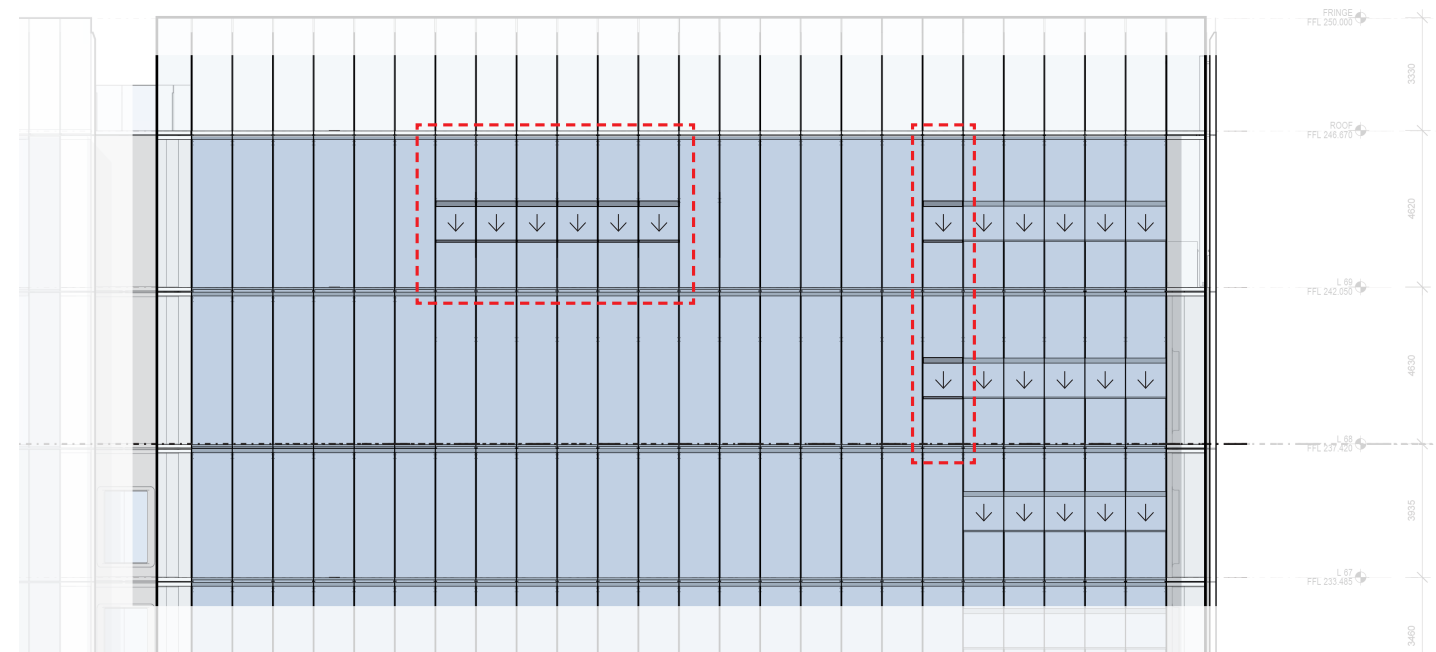
Approved Double Height Facade - Section



Proposed Double Height Facade - Section



APPROVED



Approved Penthouse West Facade

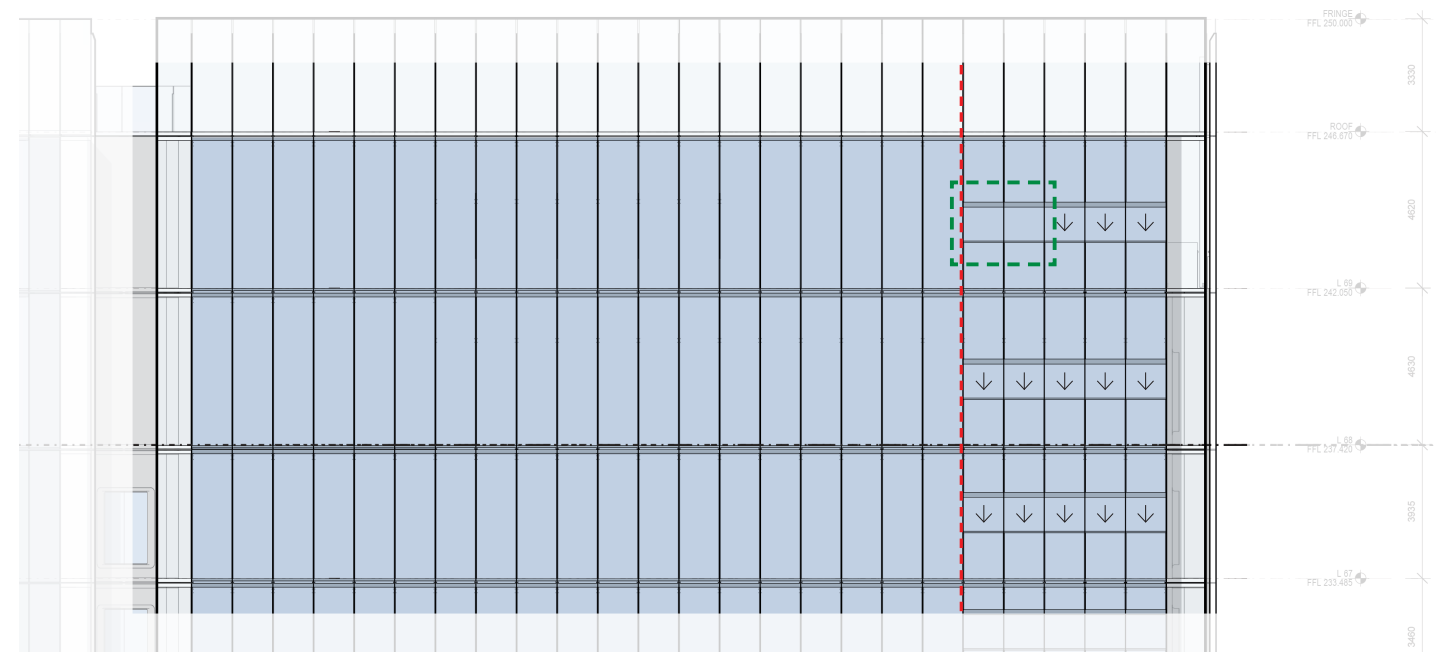
The top level of the western façade, which faces the Harbour and protects the external terrace, has several proposed amendments that are a result of the design development process as well as subsequent wind analysis.

Firstly, eight modules of the wintergarden facades (one on each level), are proposed to be changed to fixed glass panels in order to better align with the wintergardens in the typical levels below (highlighted in red in the adjacent elevations).

The two corners of the penthouse external terrace, the windscreens are proposed to be updated to allow for the inclusion of operable panels. By doing so, the previously continuous glass parapet was divided in such a way as to match the openings in the adjacent wintergarden sash windows (highlighted in blue in the diagram to the left).

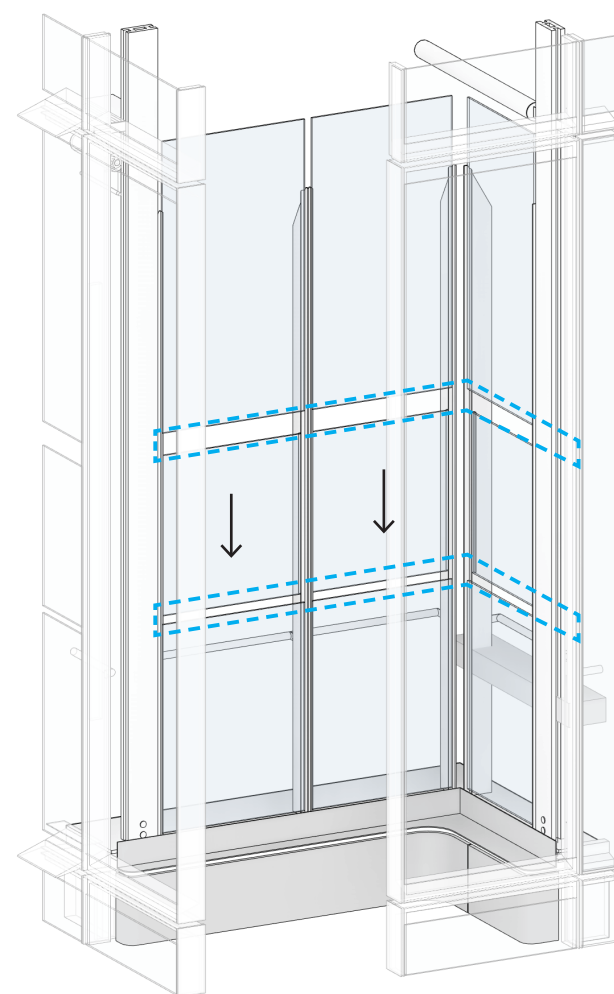
Finally, on the upper level, highlighted in green, two 'wintergarden' panels are proposed to be changed to a new typology that is visually similar to the closed wintergarden system (including the size of the openings) yet will be non-operable. That is to prevent eventual falling risks given the proximity of such panels to the raised pool deck

PROPOSED



Proposed Penthouse West Facade

- ⬜ Removed Wintergarden Panels
- ⬜ Updated Windscreen with Gaps
- ⬜ Fixed Panel with Gaps



Proposed Windscreen - 3D Schematic

3.0 Proposed Podium Modifications

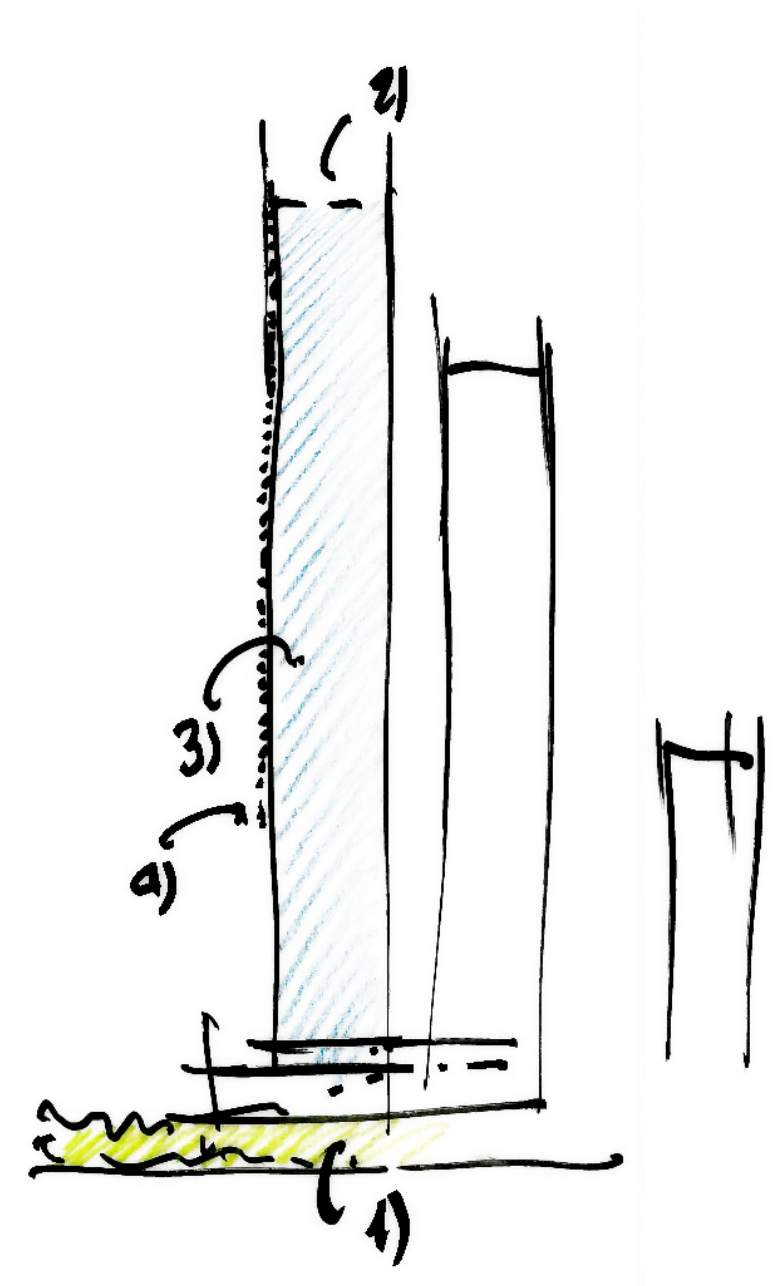
The proposed modifications to the R4A Building Podium are as follows:

3.1 Podium Facade Updates

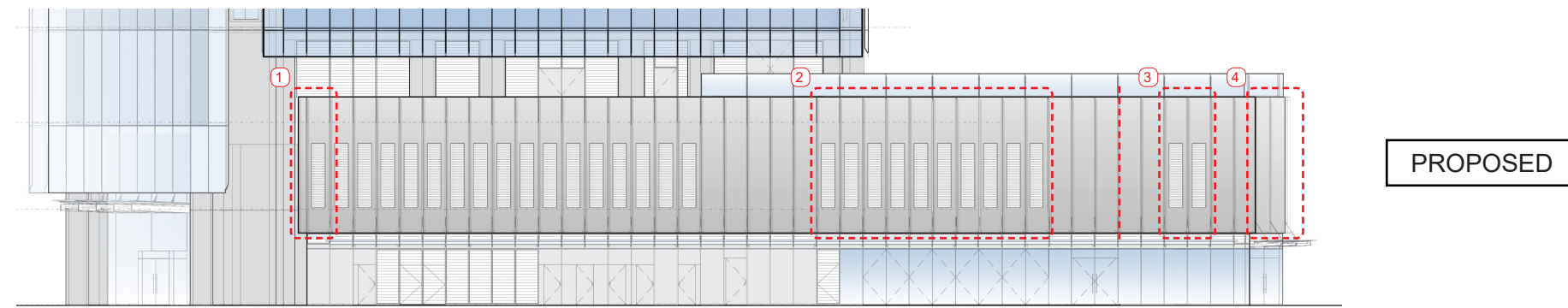
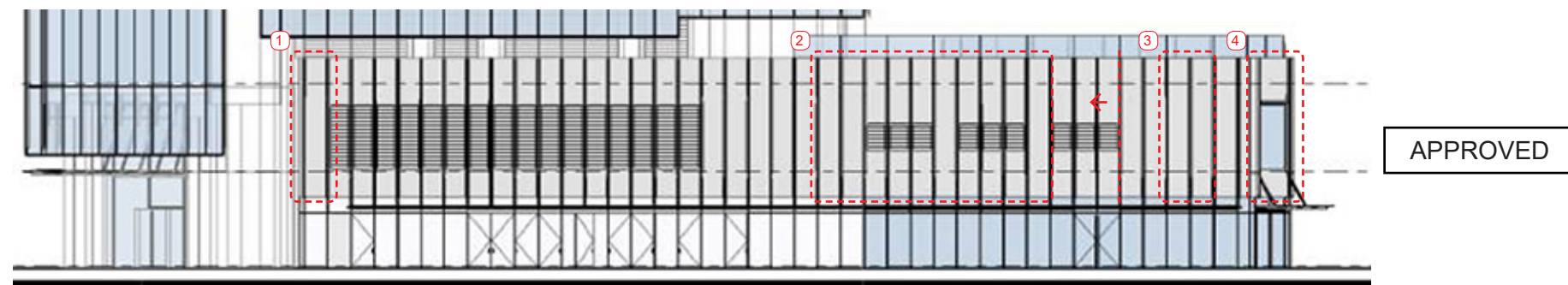
3.1.1 Opaque Panels Development

3.1.2 Podium Recessed Façade

3.2 Bridge Connection Amendments



3.1 Podium Facade Updates



Podium West Facade (Above: previous; Below: propopsed)

The modification proposes to refine the opaque podium facade modules. These refinements will improve the visual appearance of the facade and better meet the ventilation requirements of the substation and plantrooms. The proposed refinements are described as follows:

West Facade:

1. Addition of an extra louvre panel.
2. Relocation of the substation louvre panels, enlargement of those to match the adjoining ones, and addition of an extra louvre panel
3. Addition of two extra louvre panel.
4. Division of the approved large window panel on the podium tip into two regular opaque panels to match the rest of the podium facade.

South East Facade:

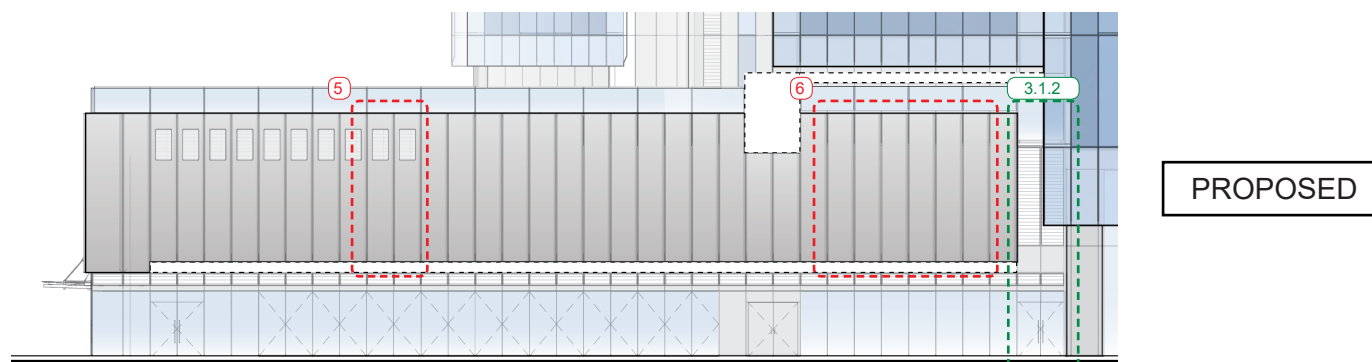
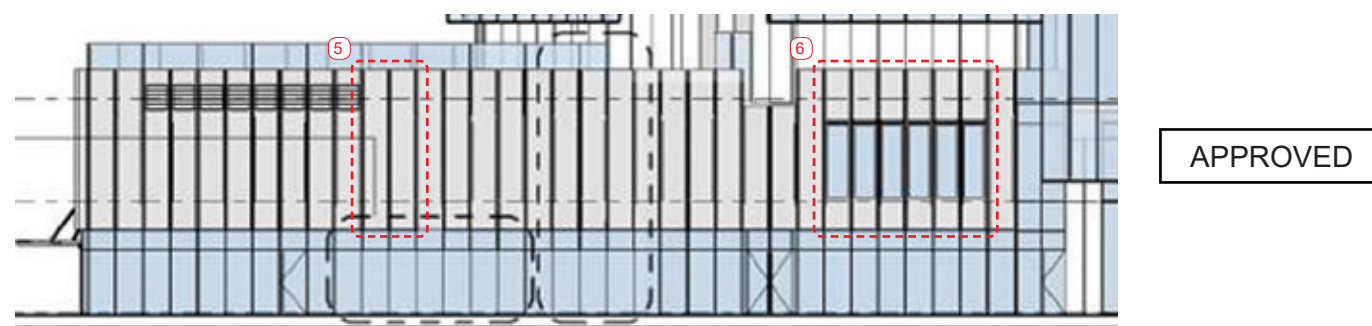
5. Addition of two extra louvre panels for the substation.
6. Replacement of 6 window panels with typical opaque panels so as to conceal the back-of-house space behind these panels.

The comparison between the previous and proposed elevations are shown with the corresponding numbers

Furthermore, other changes in the podium facade will be discussed in the following sections:

3.1.1 Opaque Panels Development
(Comprehensive update, affecting every panel)

3.1.2 - Podium Recessed Façade



Podium South East Facade (Above: previous; Below: propopsed)

3.1.1 Opaque Panels Development

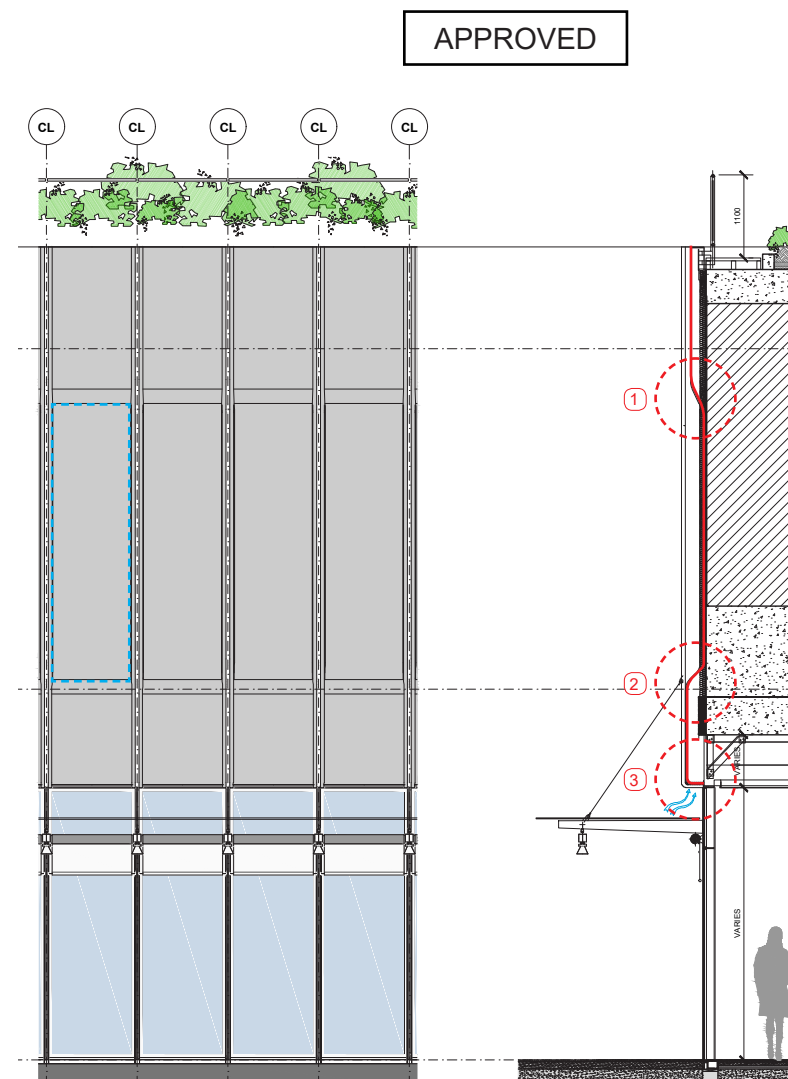
A key design change in the podium is the redesign of the vertical opaque cladding panels. During the post-approval design development phase, the curvature of the panel geometry was simplified in an effort to achieve a cleaner architectural form that better expresses the project's aesthetic principles of verticality, simplicity and lightness.

The proposed changes are highlighted in red in the adjacent sections.

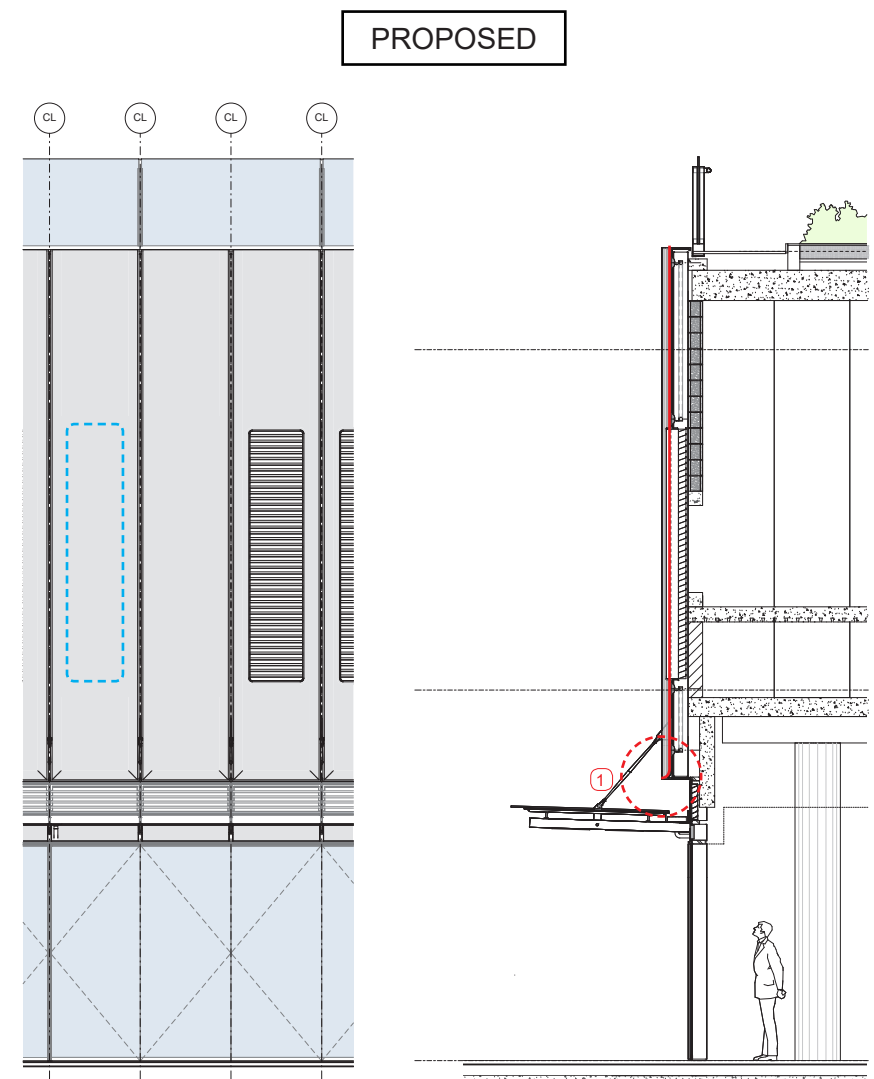
The panel geometry continues to allow for the required openings where needed, but in the updated panel design, the form of these openings are no longer reflected as physical impressions in the opaque panels (highlighted in blue in the adjacent elevations).

The layout grid was not altered.

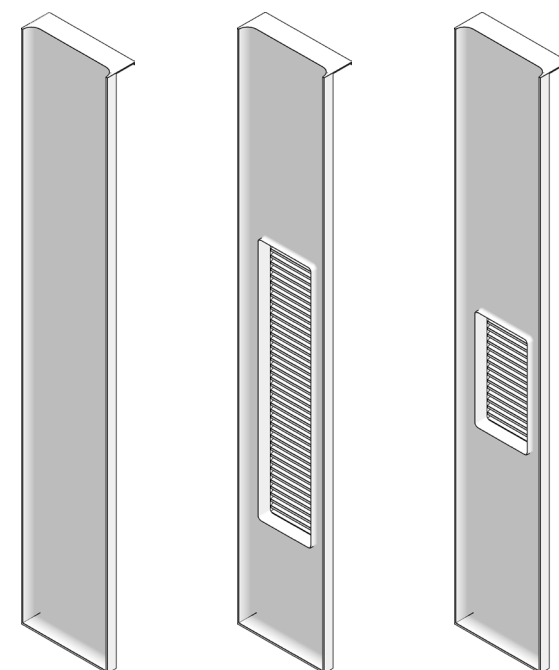
-  Panel Curve
-  Potential Panel Opening Area



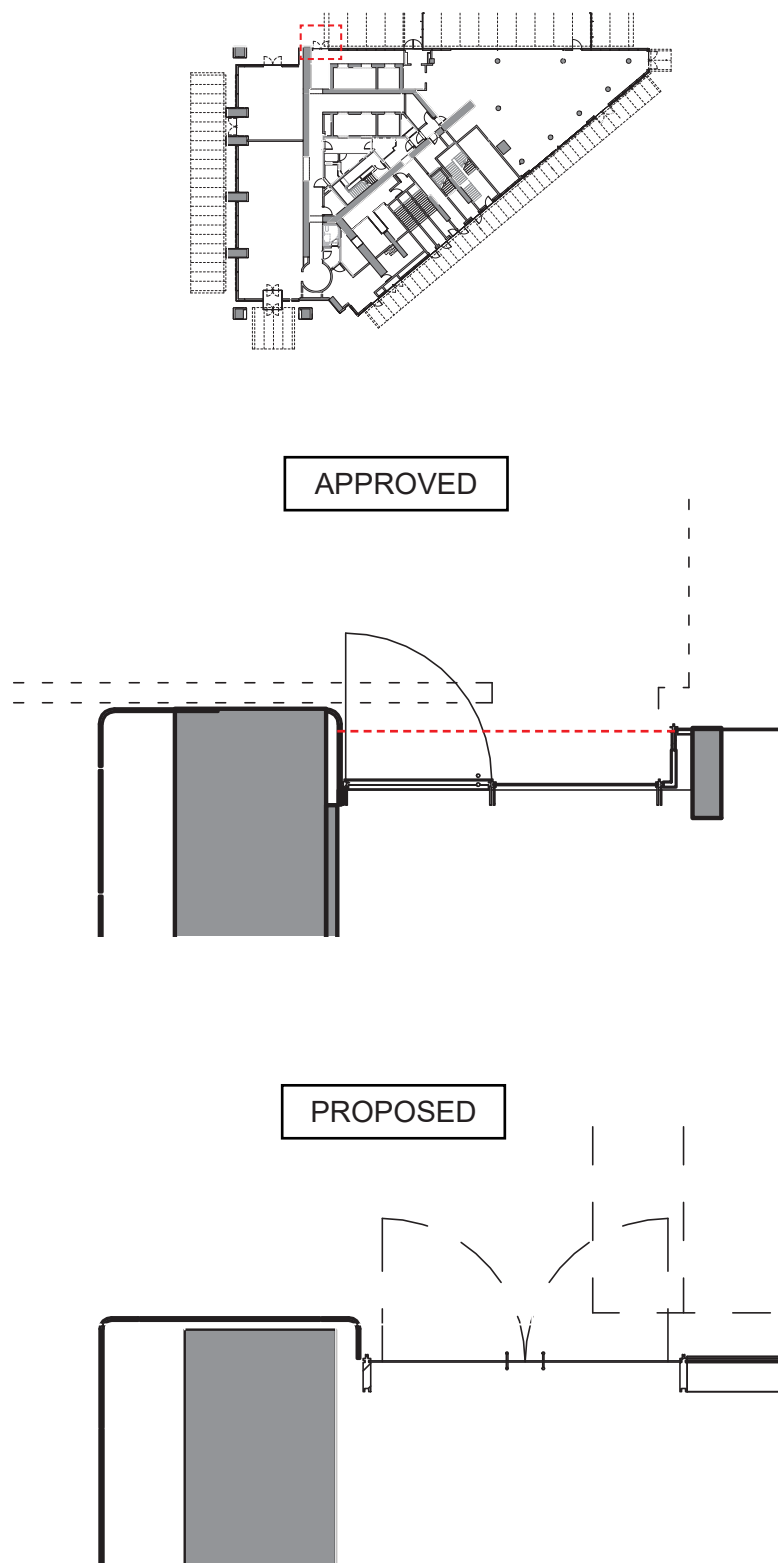
Approved Opaque Podium Panel



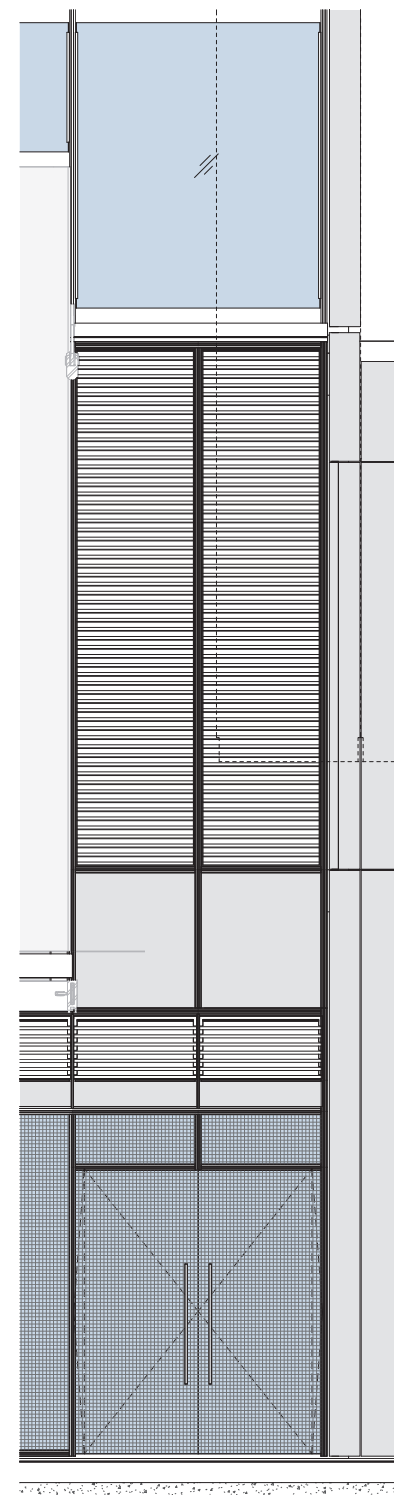
Proposed Opaque Podium Panel



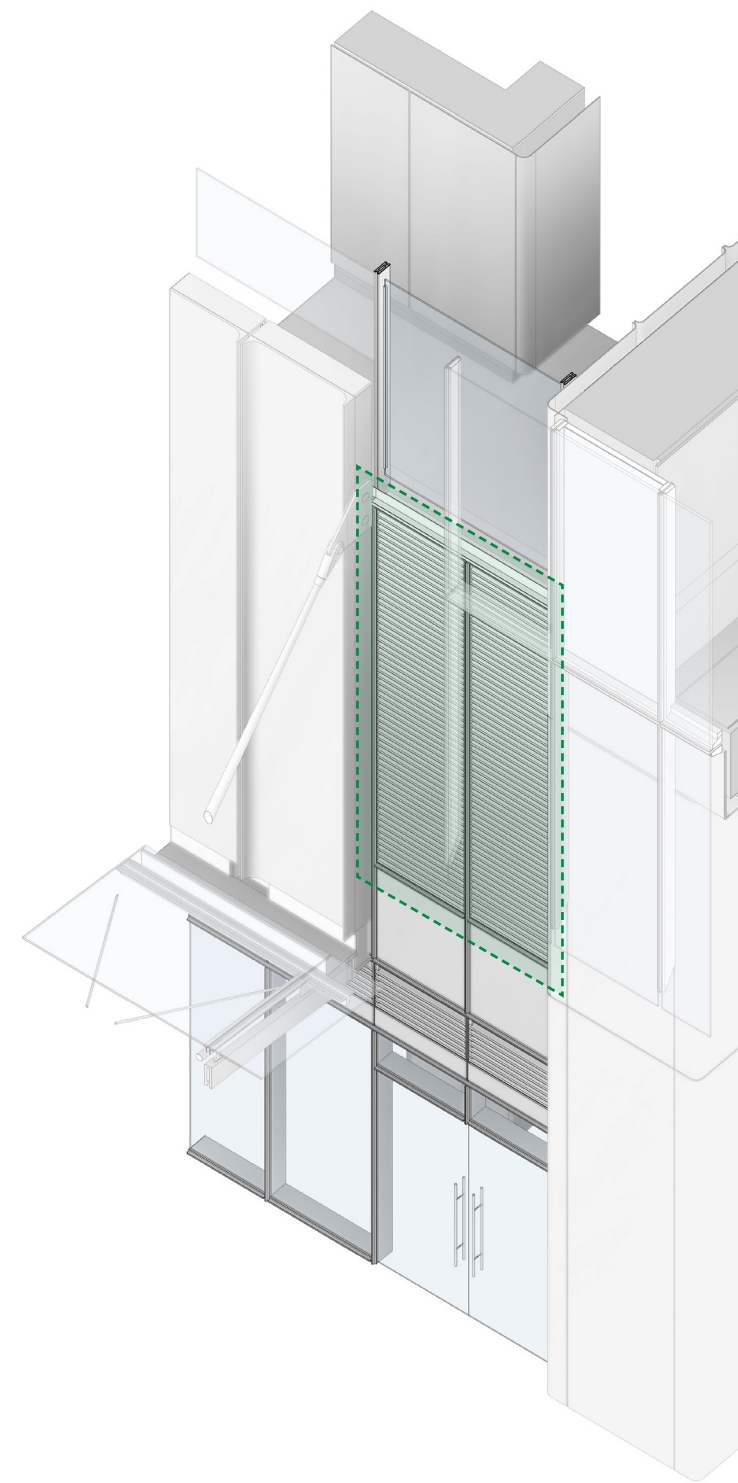
Proposed Opaque Podium Panel Variants



Lift Egress Facade - Plan



Proposed Lift Egress Facade - Elevation



Proposed Lift Egress Facade - 3D Schematic View

3.1.2 Podium Recessed Façade

A series of minor amendments are proposed for the lift lobby facade egress doors. These include:

1. Alignment of the egress doors to the plane of the adjoining glass facade. This reduces the facade steps in that area and creates a visually cleaner interface with the column cladding that is adjacent to it.
2. Addition of a second door to the currently approved single door.
3. Addition of a louvre panel in the area highlighted in green in the adjacent 3D view. By contrast, the current approved design is an opaque glass spandrel panel.

The result of all three proposed changes is a visually cleaner design and one that allows for simpler and better construction details.

 Added Louvred Panel

3.2 Bridge Connection Amendments

In an effort to develop a clearer connection between the R4A and R4B towers, the pedestrian bridge and its connections to R4A have been reviewed as part of the post-approval design development process. A new design has been developed that is more sympathetic to the geometry of the R4A external building form and the interior floor plan layout.

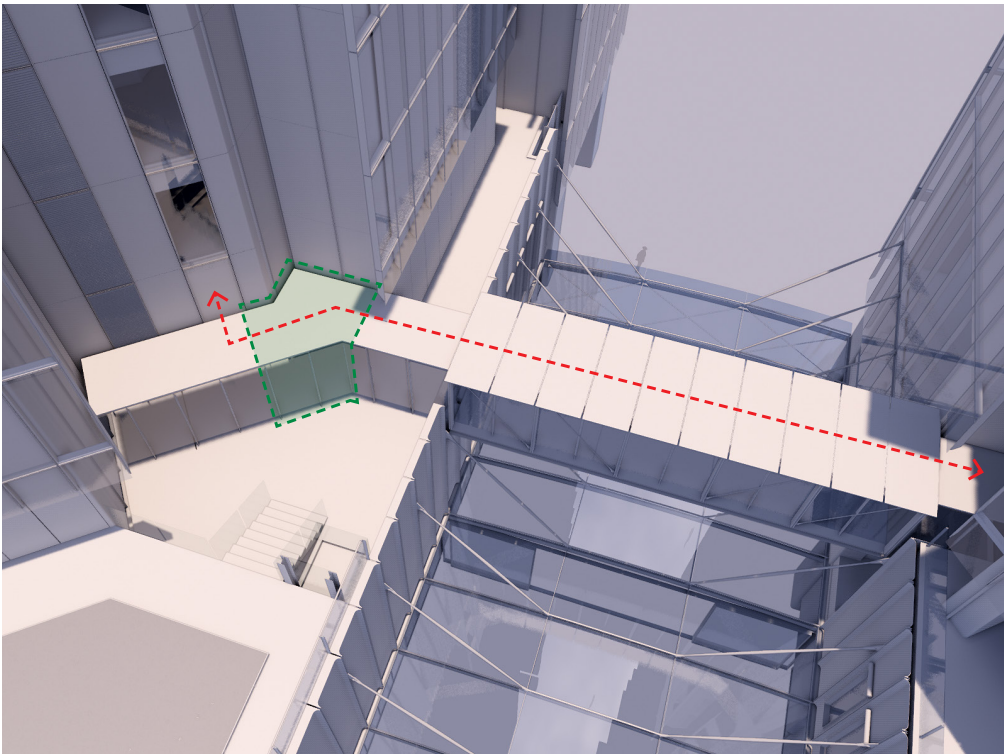
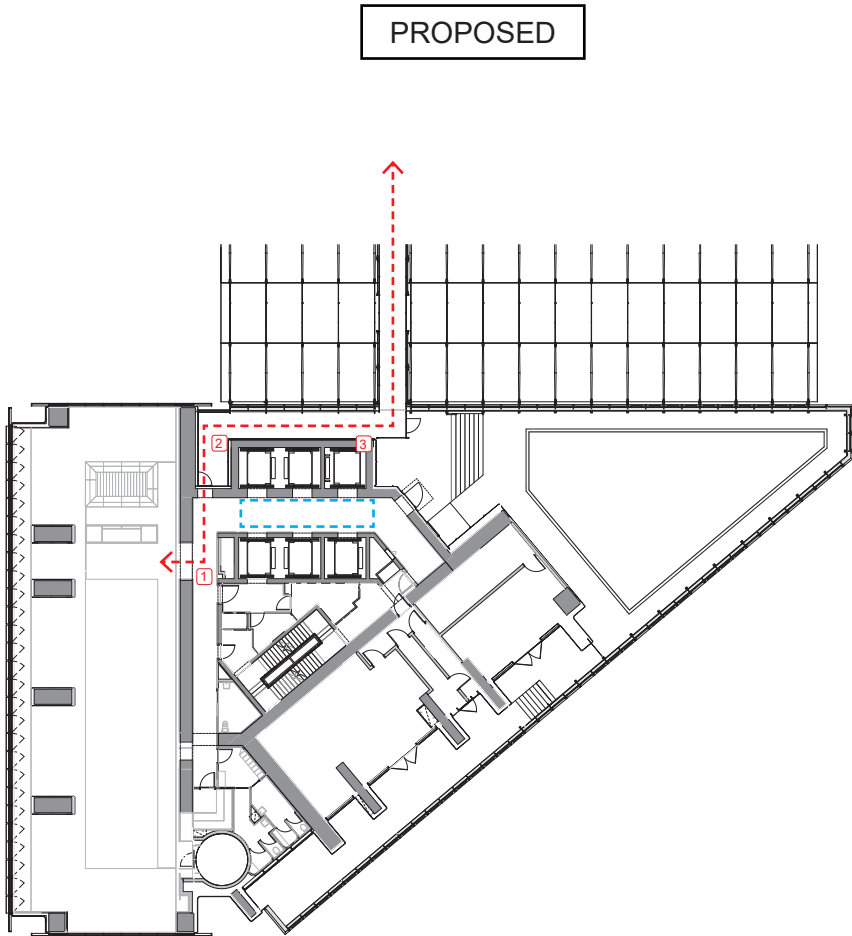
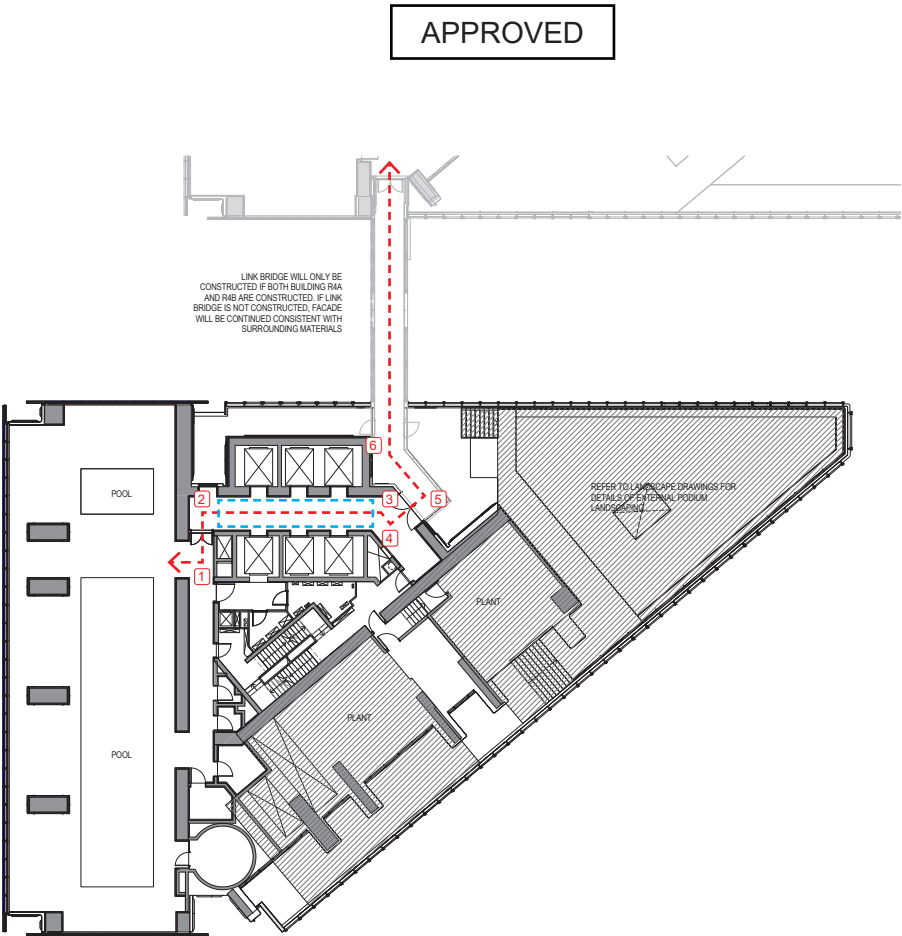
The proposed solution works better in two key aspects:

Firstly, it provides a simpler, more rational connection for its users. This is achieved by separating the path of travel of people crossing from one tower to another (highlighted by the dashed red lines) from those who are waiting in the lift lobby (highlighted by the blue rectangle).

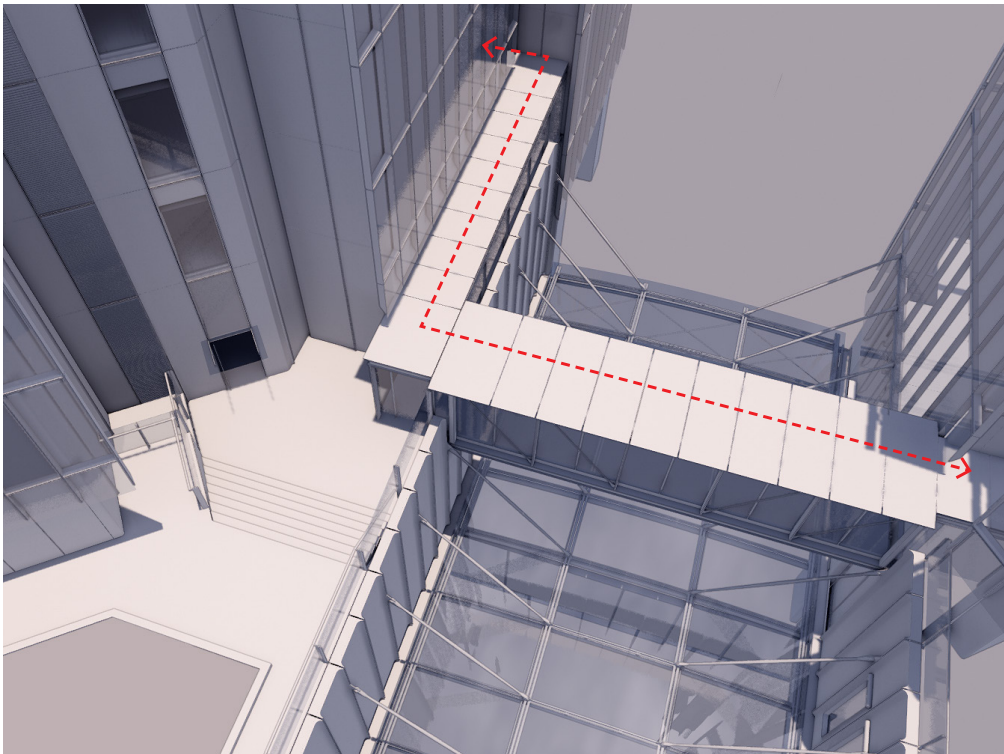
Secondly, the proposed connection route avoids excessive turns, offering a more straightforward and user-friendly path from R4A to R4B. In doing so, the proposed path of travel avoids the angular connection that exists in the approved design (highlighted in green in the 3D images).

Under the proposed scheme, people will exit and enter both buildings from a similar point relative to the side facades of each tower which brings a conceptual clarity to the connection between the two buildings.

-  Lift Lobby Arrival Area
-  R4A / R4B Flux
-  Previous Angled Connection

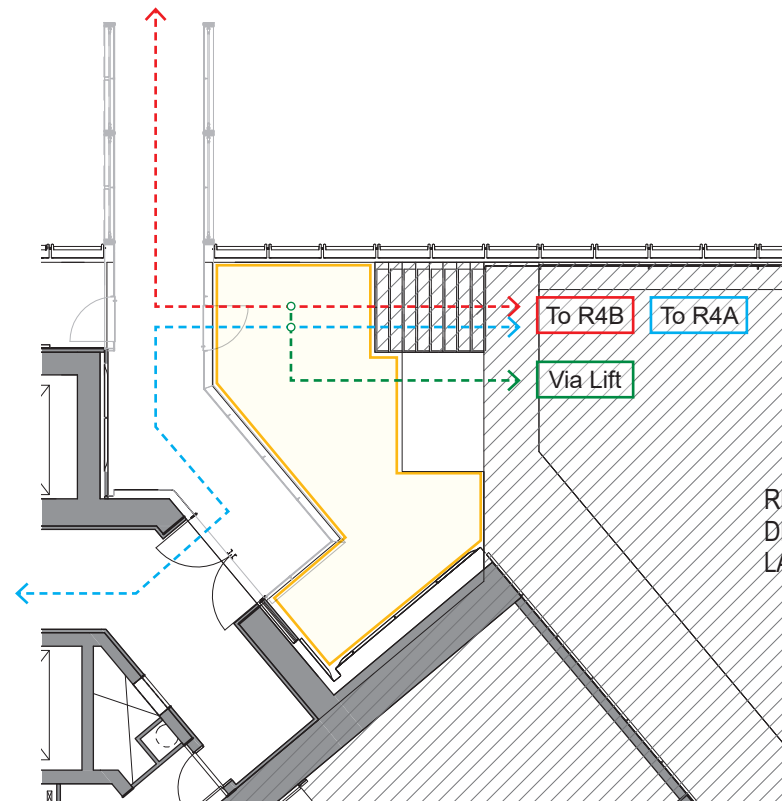


Previous Scheme for R4A-R4B Bridge



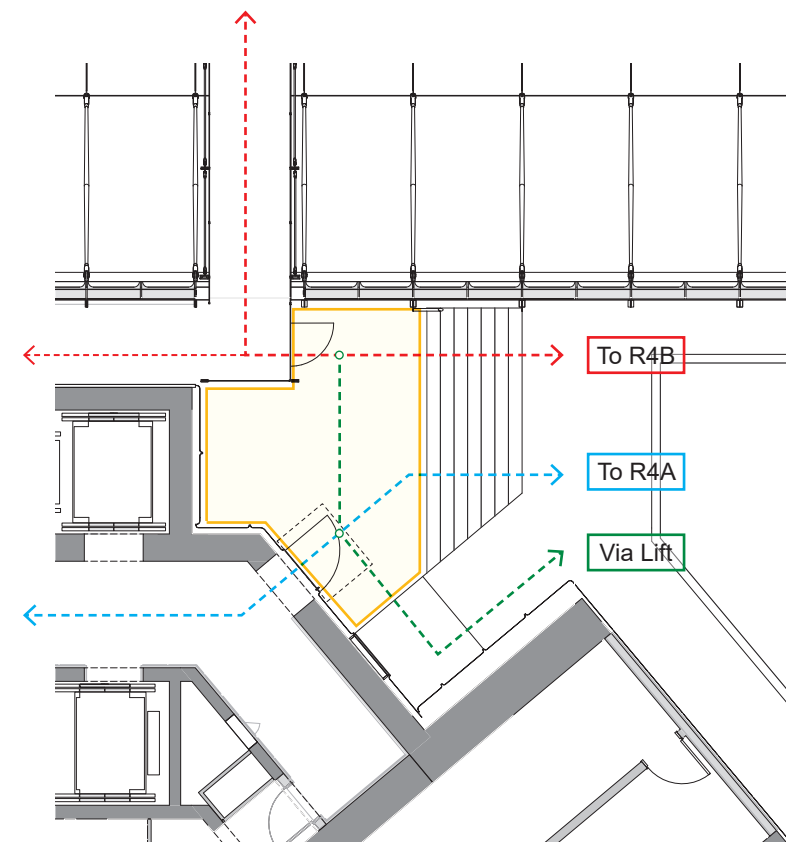
Proposed Scheme for R4A-R4B Bridge

APPROVED



Approved Scheme for R4A Terrace Access - Plan

PROPOSED



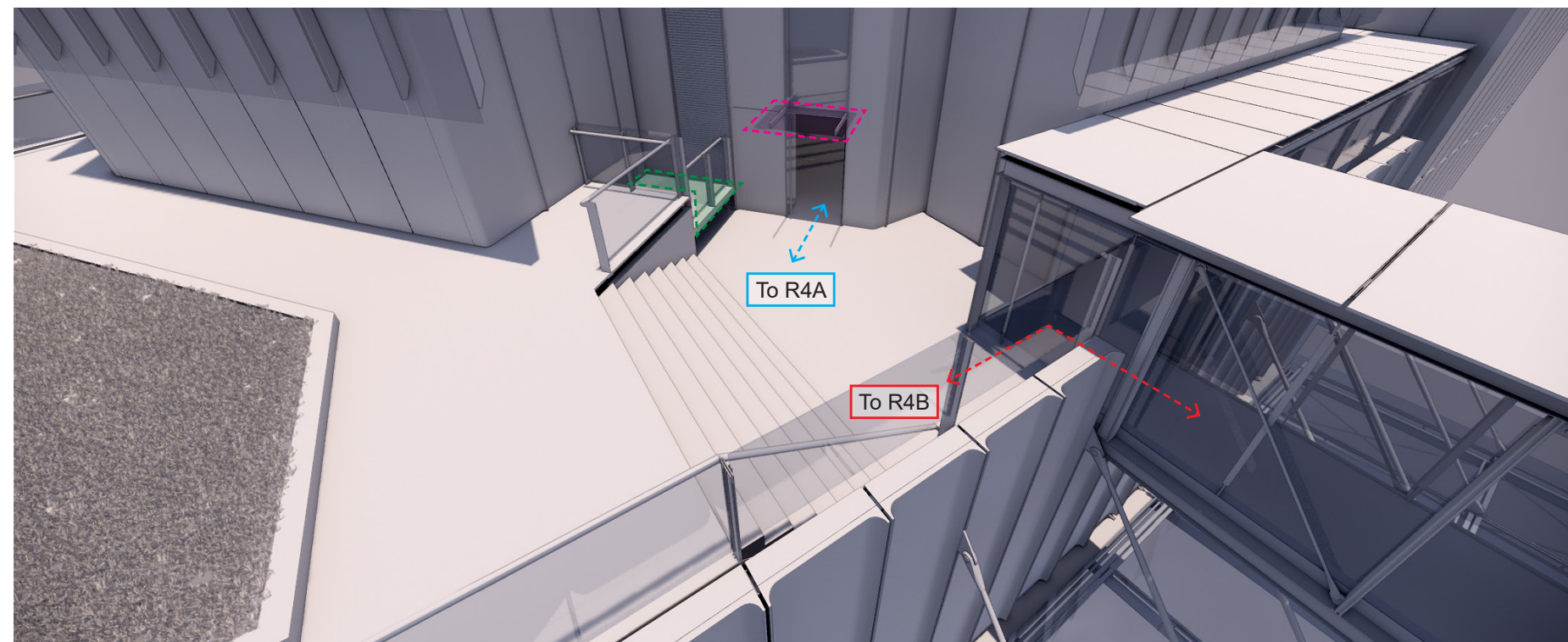
Proposed Scheme for R4A Terrace Access - Plan

Along with the proposed changes to the connection corridor, the access to the R4A external terrace is also proposed to be amended.

Under the proposed modifications, both door locations leading to the external terrace are retained with one door opening directly to the bridge for users coming from R4B and one opening directly to the R4A amenities corridor. The stairs are repositioned and enlarged as per the adjacent floor plan. This enables the reconfiguration of the residual external space to create an inviting small 'piazza' (highlighted in yellow) that distributes and clarifies the various pedestrian paths.

Since the doorway to the R4A lift lobby would no longer be protected from downdrafts by the bridge connection roof structure, it is deemed necessary to provide a new glazed canopy above this entrance (highlighted in pink in the adjacent 3D view) to act as a windshield. This will ensure the door's proper operability and provide additional amenity for users of this space.

All these minor changes come together to create a coordinated and logical connection between R4A and R4B as well as between the internal and external amenities of R4A. The net effect is to strengthen the broader development principle of providing a unified resident amenities facility that services both buildings equally in a seamless and elegant manner.



Proposed Scheme for R4A Terrace Access - 3D visual representation

 New Windshield Awning

 Small *Piazza*

 R4A Flux

 R4B Flux

 Access via Platform Lift

4.0 Design Quality and Amenity

The changes that are presented by the S4.55 modification do not compromise in any way the high level of design quality and amenity which the building provides for its residents and visitors.

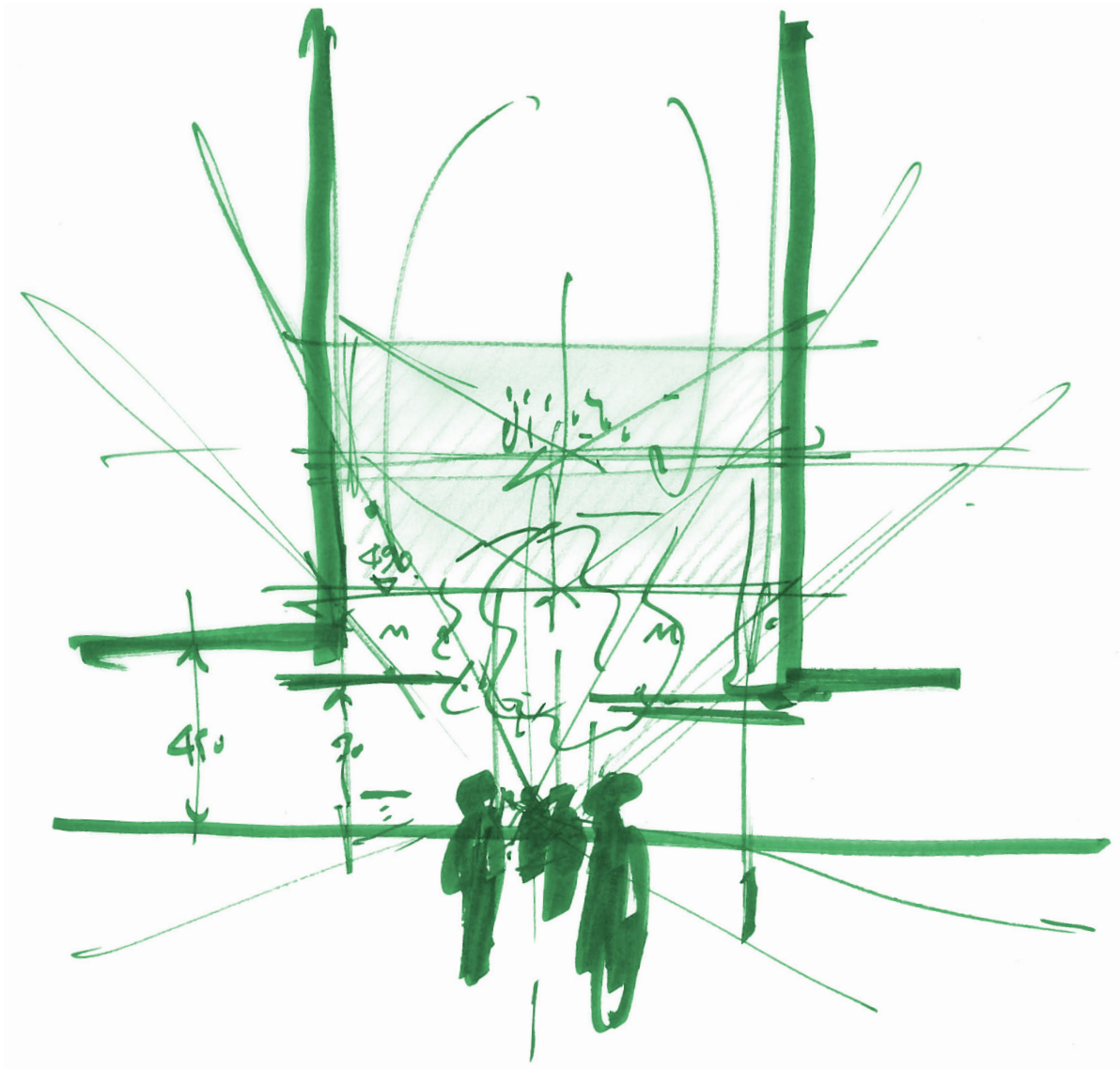
The various changes that are presented in this report including the changes to the upper level floor plates, the alignment of the upper plantrooms and floor levels of the two towers, the refinement of the podium panels and other ‘fine-tunings’—however minor—are expected to contribute significantly to the perceived quality and architectural merit of the One Sydney Harbour development.

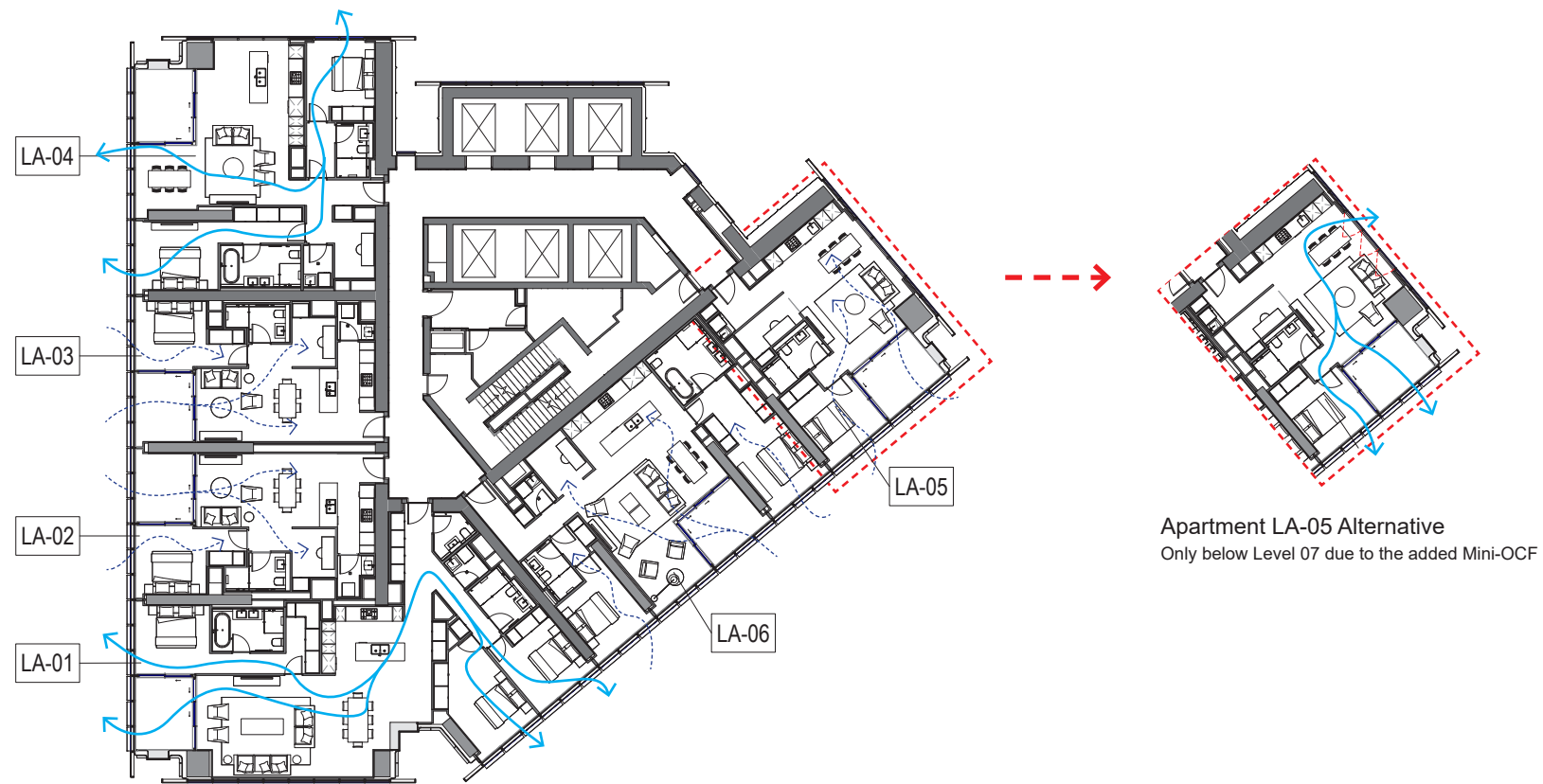
Moreover, there is a clear emphasis on providing a refined connection between the various amenities and ensuring that these spaces achieve the highest standard of usability. This approach reaffirms the importance of the resident amenities to the R4A development.

Finally, this section considers other relevant amenity assessment criteria including:

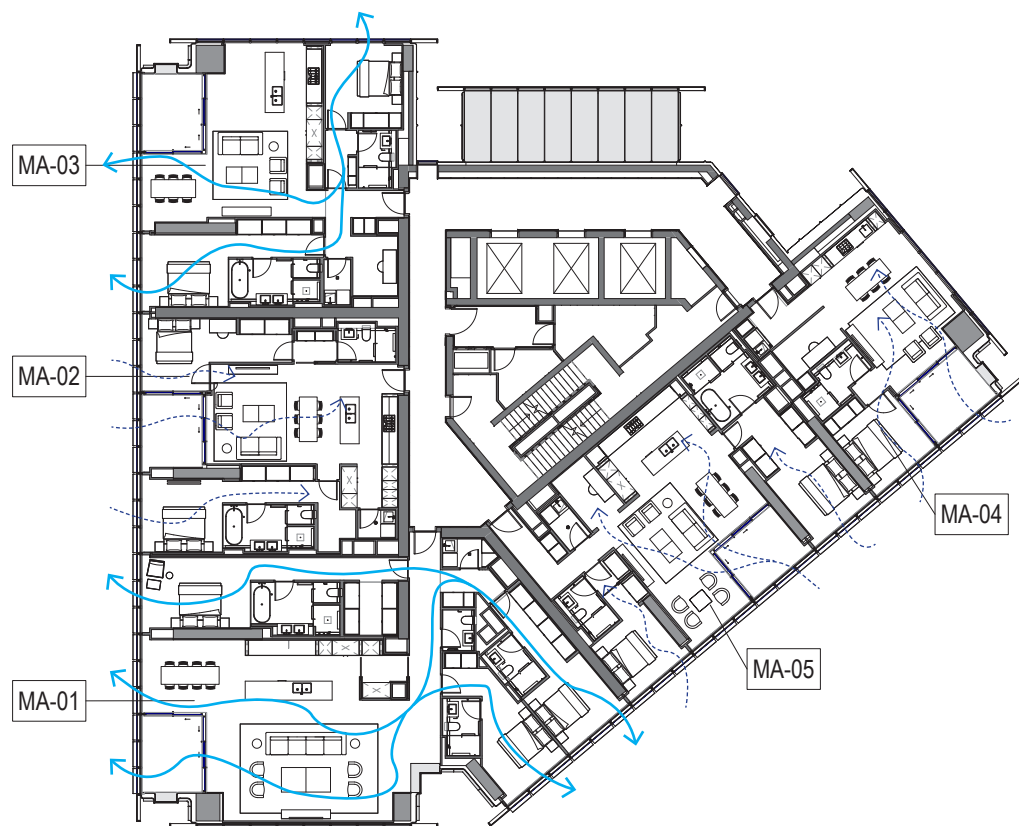
4.1 - Cross Flow Ventilation; and

4.2 - SEPP65 ADG Compliance

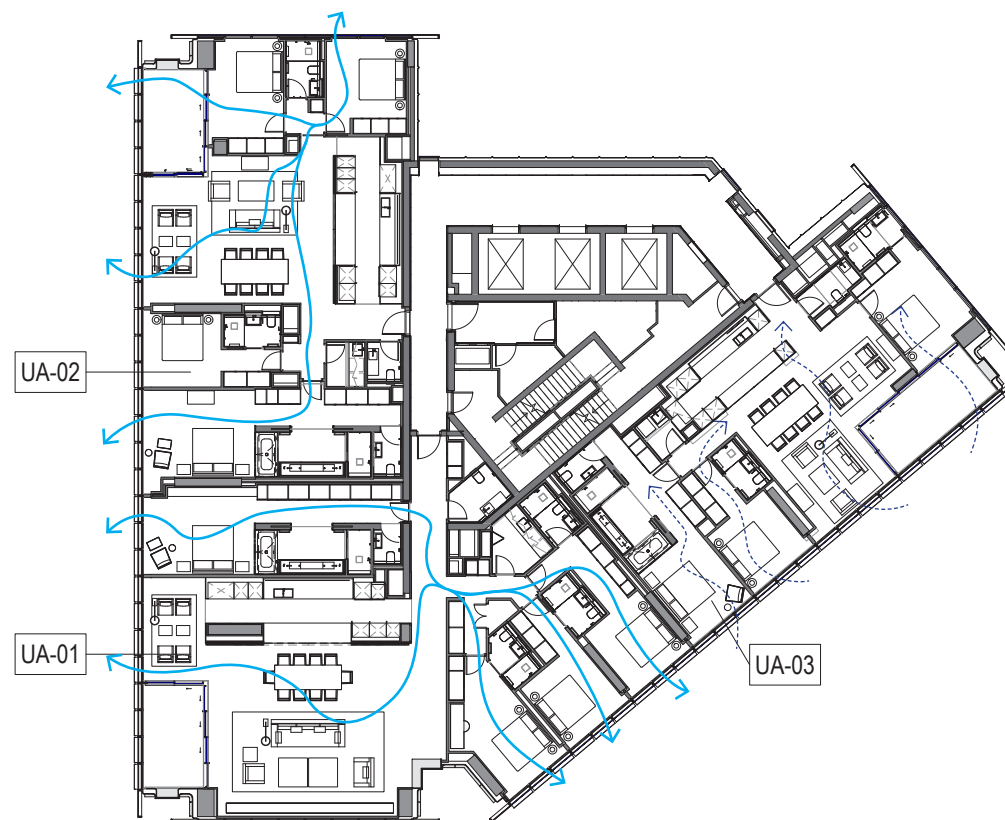




Ventilation Diagrams - Lower plate



Ventilation Diagrams - Mid plate



Ventilation Diagrams - Upper plate

4.1 Cross Flow Ventilation

The apartments have been designed to support natural ventilation with full-height operable glazed facade systems as well as large sliding doors to balconies and wintergardens that are designed to take advantage of the prevailing breezes.

Natural ventilation is a driving force behind the design and therefore the requirement that all habitable rooms in the tower could be naturally ventilated.

An important addition to achieve this is introduction of the 'mini-OCF' facade typology, as discussed in Section 2.3.2 of this report. The introduction of this new facade type provides a considerable increase in amenity and access to direct natural ventilation for the apartments in which it is proposed to be introduced.

Whilst the SEPP65 Apartment Design Guidelines considers any apartment that is ten storeys or greater to be cross ventilated, there is no doubt that the introduction of the mini-OCF into the LA-04 apartment above this height threshold significantly improves the degree to which this apartment is cross-ventilated.

- Cross Flow Ventilation with 2 opposing openings
- > Natural Ventilation

4.2 SEPP65 ADG Compliance



Level	Unit	No. of Bedrooms	No. of Bathrooms	GFA (m2)	Balcony / Wintergarden Area (m2)	Balcony / Wintergarden Depth (m)	Wintergarden Area As % Of Unit GFA + Area Over (m2)	Master Bed Area (m2)	Additional Bed Area(s) (m2)	Minimum Bed Dimensions (m)	Habitable Room Depth (m)	Living Room Width (m)	Cross Ventilation	Storage Internal (m3)	Storage External (m3)	2 Hours Solar 9am-3pm (Hours)	2 Hours Solar 9am-5pm (Hours)	Any Solar 9am-3pm (Hours)	Any Solar 9am-5pm (Hours)
68/69	PENT	5	7	1071.4	254.2	2.7 - 7.0	23.7% (93.2m2)	116.2	29.3 - 24.2	3.23	7.8	10.9	DEEMED	MIN. 10	5	06:00	06:00	06:00	08:00
67	UA01	4	4.5	282.9	13.9	2.7	4.9%	25.6	17.1 - 14.1 - 16.8	3.05	4.6	7.7	DEEMED	27.3	5	05:45	05:45	05:45	07:00
67	UA02	4	3.5	211.2	13.9	2.7	6.6%	27.1	14.1 - 14.5 - 13.4	3.05	5.6	6.6	DEEMED	12.5	5	05:45	05:45	05:45	05:45
67	UA03	3	3.5	164.0	17.5	2.7	10.7%	20.1	13.6 - 15.9	3.29	4.3	7.9	DEEMED	8.2	5	00:00	03:00	01:30	03:15
66	UA01	4	4.5	282.9	13.9	2.7	4.9%	25.6	17.1 - 14.1 - 16.8	3.05	4.6	7.7	DEEMED	27.3	5	05:45	05:45	05:45	07:00
66	UA02	4	3.5	211.2	13.9	2.7	6.6%	27.1	14.1 - 14.5 - 13.4	3.05	5.6	6.6	DEEMED	12.5	5	05:45	05:45	05:45	05:45
66	UA03	3	3.5	164.0	17.5	2.7	10.7%	20.1	13.6 - 15.9	3.29	4.3	7.9	DEEMED	8.2	5	00:00	03:00	01:30	03:15
65	UA01	4	4.5	282.9	13.9	2.7	4.9%	25.6	17.1 - 14.1 - 16.8	3.05	4.6	7.7	DEEMED	27.3	5	05:45	05:45	05:45	07:00
65	UA02	4	3.5	211.2	13.9	2.7	6.6%	27.1	14.1 - 14.5 - 13.4	3.05	5.6	6.6	DEEMED	12.5	5	05:45	05:45	05:45	05:45
65	UA03	3	3.5	164.0	17.5	2.7	10.7%	20.1	13.6 - 15.9	3.29	4.3	7.9	DEEMED	8.2	5	00:00	03:00	01:30	03:15
64	UA01	4	4.5	282.9	13.9	2.7	4.9%	25.6	17.1 - 14.1 - 16.8	3.05	4.6	7.7	DEEMED	27.3	5	05:45	05:45	05:45	07:00
64	UA02	4	3.5	211.2	13.9	2.7	6.6%	27.1	14.1 - 14.5 - 13.4	3.05	5.6	6.6	DEEMED	12.5	5	05:45	05:45	05:45	05:45
64	UA03	3	3.5	164.0	17.5	2.7	10.7%	20.1	13.6 - 15.9	3.29	4.3	7.9	DEEMED	8.2	5	00:00	03:00	01:30	03:15
63	UA01	4	4.5	282.9	13.9	2.7	4.9%	25.6	17.1 - 14.1 - 16.8	3.05	4.6	7.7	DEEMED	27.3	5	05:45	05:45	05:45	07:00
63	UA02	4	3.5	211.2	13.9	2.7	6.6%	27.1	14.1 - 14.5 - 13.4	3.05	5.6	6.6	DEEMED	12.5	5	05:45	05:45	05:45	05:45
63	UA03	3	3.5	164.0	17.5	2.7	10.7%	20.1	13.6 - 15.9	3.29	4.3	7.9	DEEMED	8.2	5	00:00	03:00	01:30	03:15
62	UA01	4	4.5	282.9	13.9	2.7	4.9%	25.6	17.1 - 14.1 - 16.8	3.05	4.6	7.7	DEEMED	27.3	5	05:45	05:45	05:45	07:00
62	UA02	4	3.5	211.2	13.9	2.7	6.6%	27.1	14.1 - 14.5 - 13.4	3.05	5.6	6.6	DEEMED	12.5	5	05:45	05:45	05:45	05:45
62	UA03	3	3.5	164.0	17.5	2.7	10.7%	20.1	13.6 - 15.9	3.29	4.3	7.9	DEEMED	8.2	5	00:00	03:00	01:30	03:15
61	UA01	4	4.5	282.9	13.9	2.7	4.9%	25.6	17.1 - 14.1 - 16.8	3.05	4.6	7.7	DEEMED	27.3	5	05:45	05:45	05:45	07:00
61	UA02	4	3.5	211.2	13.9	2.7	6.6%	27.1	14.1 - 14.5 - 13.4	3.05	5.6	6.6	DEEMED	12.5	5	05:45	05:45	05:45	05:45
61	UA03	3	3.5	164.0	17.5	2.7	10.7%	20.1	13.6 - 15.9	3.29	4.3	7.9	DEEMED	8.2	5	00:00	03:00	01:30	03:15
60	UA01	4	4.5	282.9	13.9	2.7	4.9%	25.6	17.1 - 14.1 - 16.8	3.05	4.6	7.7	DEEMED	27.3	5	05:45	05:45	05:45	07:00
60	UA02	4	3.5	211.2	13.9	2.7	6.6%	27.1	14.1 - 14.5 - 13.4	3.05	5.6	6.6	DEEMED	12.5	5	05:45	05:45	05:45	05:45
60	UA03	3	3.5	164.0	17.5	2.7	10.7%	20.1	13.6 - 15.9	3.29	4.3	7.9	DEEMED	8.2	5	00:00	03:00	01:30	03:15
59	UA01	4	4.5	282.9	13.9	2.7	4.9%	25.6	17.1 - 14.1 - 16.8	3.05	4.6	7.7	DEEMED	27.3	5	05:45	05:45	05:45	07:00
59	UA02	4	3.5	211.2	13.9	2.7	6.6%	27.1	14.1 - 14.5 - 13.4	3.05	5.6	6.6	DEEMED	17.8	5	05:45	05:45	05:45	05:45
59	UA03	3	3.5	164.0	17.5	2.7	10.7%	20.1	13.6 - 15.9	3.29	4.3	7.9	DEEMED	8.2	5	00:00	03:00	01:30	03:15
58	UA01	4	4.5	282.9	13.9	2.7	4.9%	25.6	17.1 - 14.1 - 16.8	3.05	4.6	7.7	DEEMED	27.3	5	05:45	05:45	05:45	07:00
58	UA02	4	3.5	211.2	13.9	2.7	6.6%	27.1	14.1 - 14.5 - 13.4	3.05	5.6	6.6	DEEMED	17.8	5	05:45	05:45	05:45	05:45
58	UA03	3	3.5	164.0	17.5	2.7	10.7%	20.1	13.6 - 15.9	3.29	4.3	7.9	DEEMED	8.2	5	00:00	03:00	01:30	03:15
57	UA01	4	4.5	282.9	13.9	2.7	4.9%	25.6	17.1 - 14.1 - 16.8	3.05	4.6	7.7	DEEMED	27.3	5	05:45	05:45	05:45	07:00
57	UA02	4	3.5	211.2	13.9	2.7	6.6%	27.1	14.1 - 14.5 - 13.4	3.05	5.6	6.6	DEEMED	12.5	5	05:45	05:45	05:45	05:45
57	UA03	3	3.5	164.0	17.5	2.7	10.7%	20.1	13.6 - 15.9	3.29	4.3	7.9	DEEMED	8.2	5	00:00	03:00	01:30	03:15
56	UA01	4	4.5	282.9	13.9	2.7	4.9%	25.6	17.1 - 14.1 - 16.8	3.05	4.6	7.7	DEEMED	27.3	5	05:45	05:45	05:45	07:00
56	UA02	4	3.5	211.2	13.9	2.7	6.6%	27.1	14.1 - 14.5 - 13.4	3.05	5.6	6.6	DEEMED	12.5	5	05:45	05:45	05:45	05:45
56	UA03	3	3.5	164.0	17.5	2.7	10.7%	20.1	13.6 - 15.9	3.29	4.3	7.9	DEEMED	8.2	5	00:00	03:00	01:30	03:15
55	UA01	4	4.5	282.9	13.9	2.7	4.9%	25.6	17.1 - 14.1 - 16.8	3.05	4.6	7.7	DEEMED	27.3	5	05:45	05:45	05:45	07:00
55	UA02	4	3.5	211.2	13.9	2.7	6.6%	27.1	14.1 - 14.5 - 13.4	3.05	5.6	6.6	DEEMED	12.5	5	05:45	05:45	05:45	05:45
55	UA03	3	3.5	164.0	17.5	2.7	10.7%	20.1	13.6 - 15.9	3.29	4.3	7.9	DEEMED	8.2	5	00:00	03:00	01:30	03:15
54	UA01	4	4.5	282.9	13.9	2.7	4.9%	25.6	17.1 - 14.1 - 16.8	3.05	4.6	7.7	DEEMED	27.3	5	05:45	05:45	05:45	07:00
54	UA02	4	3.5	211.2	13.9	2.7	6.6%	27.1	14.1 - 14.5 - 13.4	3.05	5.6	6.6	DEEMED	17.8	5	05:45	05:45	05:45	05:45
54	UA03	3	3.5	164.0	17.5	2.7	10.7%	20.1	13.6 - 15.9	3.29	4.3	7.9	DEEMED	8.2	5	00:00	03:00	01:30	03:15
53	UA01	4	4.5	282.9	13.9	2.7	4.9%	25.6	17.1 - 14.1 - 16.8	3.05	4.6	7.7	DEEMED	27.3	5	05:45	05:45	05:45	07:00
53	UA02	4	3.5	211.2	13.9	2.7	6.6%	27.1	14.1 - 14.5 - 13.4	3.05	5.6	6.6	DEEMED	12.5	5	05:45	05:45	05:45	05:45
53	UA03	3	3.5	164.0	17.5	2.7	10.7%	20.1	13.6 - 15.9	3.29	4.3	7.9	DEEMED	8.2	5	00:00	03:00	01:30	03:15
52	UA01	4	4.5	282.9	13.9	2.7	4.9%	25.6	17.1 - 14.1 - 16.8	3.05	4.6	7.7	DEEMED	27.3	5	05:45	05:45	05:45	07:00
52	UA02	4	3.5	211.4	13.9	2.7	6.6%	27.1	14.1 - 14.5 - 13.4	3.05	5.6	6.6	DEEMED	12.5	5	05:45	05:45	05:45	05:45
52	UA03	3	3.5	164.0	17.5	2.7	10.7%	20.1	13.6 - 15.9	3.29	4.3	7.9	DEEMED	8.2	5	00:00	03:00	01:30	03:15
51	UA01	4	4.5	282.9	13.9	2.7	4.9%	25.6	17.1 - 14.1 - 16.8	3.05	4.6	7.7	DEEMED	27.3	5	05:45	05:45	05:45	07:00
51	UA02	4	3.5	211.4	13.9	2.7	6.6%	27.1	14.1 - 14.5 - 13.4	3.05	5.6	6.6	DEEMED	12.5	5	05:45	05:45	05:45	05:45
51	UA03	3	3.5	164.0	17.5	2.7	10.7%	20.1	13.6 - 15.9	3.29	4.3	7.9	DEEMED	8.2	5	00:00	03:00	01:30	03:15
50	UA01	4	4.5	282.9	13.9	2.7	4.9%	25.6	17.1 - 14.1 - 16.8	3.05	4.6	7.7	DEEMED	27.3	5	05:45	05:45	05:45	07:00
50	UA02	4	3.5	211.4	13.9	2.7	6.6%	27.1	14.1 - 14.5 - 13.4	3.05	5.6	6.6	DEEMED	12.5	5	05:45	05:45	05:45	05:45
50	UA03	3	3.5	164.0	17.5	2.7	10.7%	20.1	13.6 - 15.9	3.29	4.3	7.9	DEEMED	8.2	5	00:00	03:00	01:30	03:15
49	UA01	4	4.5	282.9	13.9	2.7	4.9%	25.6	17.1 - 14.1 - 16.8	3.05	4.6	7.7	DEEMED	27.3	5	05:45	05:45	05:45	07:00
49	UA02	4	3.5	211.4	13.9	2.7	6.6%	27.1	14.1 - 14.5 - 13.4	3.05	5.6	6.6	DEEMED	12.5	5	05:45	05:45	05:45	05:45
49	UA03	3	3.5	164.0	17.5	2.7	10.7%	20.1	13.6 - 15.9	3.29	4.3	7.9	DEEMED	8.2	5	00:00	03:00	01:30	03:15
48	UA01	4	4.5	282.9	13.9	2.7	4.9%	25.6	17.1 - 14.1 - 16.8	3.05	4.6	7.7	DEEMED	27.3	5	05:45	05:45	05:45	07:00
48	UA02	4	3.5	211.4	13.9	2.7	6.6%	27.1	14.1 - 14.5 - 13.4	3.05	5.6	6.6	DEEMED	12.5	5	05:45	05:45	05:45	05:45
48	UA03	3	3.5	164.0	17.5	2.7	10.7%	20.1	13.6 - 15.9	3.29	4.3	7.9	DEEMED	8.2	5	00:00	03:00	01:30	03:15
46	MA01	3	3.5	197.9	10.4	2.7	5.3%	25.1	14.6 - 15.1	3.18	4.6	5.4	DEEMED	12.1	5	05:30	05:30	05:30	06:45
46	MA02	2	2	113.5	9.8	2.7	8.6%	20	15.6	3.01	6.0	4.4	DEEMED	5.6	4	02:30	02:30	05:30	05:30
46	MA03	2	2	121.8	10.4	2.7	8.5%	17	11.3	3.02	4.5	4.6	DEEMED	7.1	4	05:45	05:45	05:45	05:45
46	MA04	1	1	66.7	10.4	2.7	15.6% (0.4m2)	10.9	N/A	3.28	5.1	4.8	DEEMED	1.8	5	00:00	02:00	01:30	03:15
46	MA05	2	2	125.6	9.7	2.7	7.7%	16.9	10.9	3.01	3.9	6.							

Level	Unit	No. of Bedrooms	No. of Bathrooms	GFA (m2)	Balcony / Wintergarden Area (m2)	Balcony / Wintergarden Depth (m)	Wintergarden Area As % Of Unit GFA + Area Over (m2)	Master Bed Area (m2)	Additional Bed Area(s) (m2)	Minimum Bed Dimensions (m)	Habitable Room Depth (m)	Living Room Width (m)	Cross Ventilation	Storage Internal (m3)	Storage External (m3)	2 Hours Solar 9am-3pm (Hours)	2 Hours Solar 9am-5pm (Hours)	Any Solar 9am-3pm (Hours)	Any Solar 9am-5pm (Hours)
42	MA04	1	1	66.7	10.4	2.7	15.6% (0.4m2)	10.9	N/A	3.28	5.1	4.8	DEEMED	1.8	5	00:00	02:00	01:30	03:15
42	MA05	2	2	126.6	9.7	2.7	7.7%	16.9	10.9	3.01	3.9	6.6	DEEMED	6.4	4	00:00	02:45	01:30	03:15
41	MA01	3	3.5	197.6	10.4	2.7	5.3%	24.9	14.6 - 14.6	3.14	4.6	5.4	DEEMED	12.1	5	05:30	05:30	05:30	06:45
41	MA02	2	2	113.4	9.7	2.7	8.6%	19.9	19.9	3.01	6.0	4.4	DEEMED	5.6	4	02:30	02:30	05:30	05:30
41	MA03	2	2	121.4	10.4	2.7	8.6%	16.8	11.3	3.02	4.5	4.6	DEEMED	7.1	4	05:45	05:45	05:45	05:45
41	MA04	1	1	66.1	10.4	2.7	15.7% (0.4m2)	10.8	N/A	3.25	5.1	4.8	DEEMED	1.8	5	00:00	02:00	01:30	03:15
41	MA05	2	2	125.5	9.7	2.7	7.7%	16.7	10.8	3.01	3.9	6.6	DEEMED	6.4	4	00:00	02:45	01:30	03:15
40	MA01	3	3.5	197.6	10.4	2.7	5.3%	25.1	14.6 - 15.1	3.18	4.6	5.4	DEEMED	12.1	5	05:30	05:30	05:30	06:45
40	MA02	2	2	113.4	9.8	2.7	8.6%	20	15.6	3.01	6.0	4.4	DEEMED	5.6	4	02:30	02:30	05:30	05:30
40	MA03	2	2	121.4	10.4	2.7	8.6%	17	11.3	3.02	4.5	4.6	DEEMED	7.1	4	05:45	05:45	05:45	05:45
40	MA04	1	1	66.1	10.4	2.7	15.6% (0.4m2)	10.9	N/A	3.28	5.1	4.8	DEEMED	1.8	5	00:00	02:00	01:30	03:15
40	MA05	2	2	126.5	9.7	2.7	7.7%	16.9	10.9	3.01	3.9	6.6	DEEMED	6.4	4	00:00	02:45	01:30	03:15
39	MA01	3	3.5	197.6	10.4	2.7	5.3%	24.9	14.6 - 14.6	3.14	4.6	5.4	DEEMED	12.1	5	05:30	05:30	05:30	06:45
39	MA02	2	2	113.4	9.7	2.7	8.6%	19.9	19.9	3.01	6.0	4.4	DEEMED	5.6	4	02:30	02:30	05:30	05:30
39	MA03	2	2	121.4	10.4	2.7	8.6%	16.8	11.3	3.02	4.5	4.6	DEEMED	7.1	4	05:45	05:45	05:45	05:45
39	MA04	1	1	66.1	10.4	2.7	15.7% (0.4m2)	10.8	N/A	3.25	5.1	4.8	DEEMED	1.8	5	00:00	02:00	01:30	03:15
39	MA05	2	2	125.5	9.7	2.7	7.7%	16.7	10.8	3.01	3.9	6.6	DEEMED	6.4	4	00:00	02:45	01:30	03:15
38	MA01	3	3.5	197.6	10.4	2.7	5.3%	24.9	14.6 - 14.6	3.14	4.6	5.4	DEEMED	12.1	5	05:30	05:30	05:30	06:45
38	MA02	2	2	113.4	9.7	2.7	8.6%	19.9	19.9	3.01	6.0	4.4	DEEMED	5.6	4	02:30	02:30	05:30	05:30
38	MA03	2	2	121.4	10.4	2.7	8.6%	16.8	11.3	3.02	4.5	4.6	DEEMED	7.1	4	05:45	05:45	05:45	05:45
38	MA04	1	1	66.1	10.4	2.7	15.7% (0.4m2)	10.8	N/A	3.25	5.1	4.8	DEEMED	1.8	5	00:00	02:00	01:30	03:15
38	MA05	2	2	125.5	9.7	2.7	7.7%	16.7	10.8	3.01	3.9	6.6	DEEMED	6.4	4	00:00	02:45	01:30	03:15
37	MA01	3	3.5	197.6	10.4	2.7	5.3%	24.9	14.6 - 14.6	3.14	4.6	5.4	DEEMED	12.1	5	05:30	05:30	05:30	06:45
37	MA02	2	2	113.4	9.7	2.7	8.6%	19.9	19.9	3.01	6.0	4.4	DEEMED	5.6	4	02:30	02:30	05:30	05:30
37	MA03	2	2	121.4	10.4	2.7	8.6%	16.8	11.3	3.02	4.5	4.6	DEEMED	7.1	4	05:45	05:45	05:45	05:45
37	MA04	1	1	66.1	10.4	2.7	15.7% (0.4m2)	10.8	N/A	3.25	5.1	4.8	DEEMED	1.8	5	00:00	02:00	01:30	03:15
37	MA05	2	2	125.5	9.7	2.7	7.7%	16.7	10.8	3.01	3.9	6.6	DEEMED	6.4	4	00:00	02:45	01:30	03:15
36	MA01	3	3.5	197.6	10.4	2.7	5.3%	24.9	14.6 - 14.6	3.14	4.6	5.4	DEEMED	12.1	5	05:30	05:30	05:30	06:45
36	MA02	2	2	113.4	9.7	2.7	8.6%	19.9	19.9	3.01	6.0	4.4	DEEMED	5.6	4	02:30	02:30	05:30	05:30
36	MA03	2	2	121.4	10.4	2.7	8.6%	16.8	11.3	3.02	4.5	4.6	DEEMED	7.1	4	05:45	05:45	05:45	05:45
36	MA04	1	1	66.1	10.4	2.7	15.7% (0.4m2)	10.8	N/A	3.25	5.1	4.8	DEEMED	1.8	5	00:00	02:00	01:30	03:15
36	MA05	2	2	125.5	9.7	2.7	7.7%	16.7	10.8	3.01	3.9	6.6	DEEMED	6.4	4	00:00	02:45	01:30	03:15
35	MA01	3	3.5	197.6	10.4	2.7	5.3%	24.9	14.6 - 14.6	3.14	4.6	5.4	DEEMED	12.1	5	05:30	05:30	05:30	06:45
35	MA02	2	2	113.4	9.7	2.7	8.6%	19.9	19.9	3.01	6.0	4.4	DEEMED	5.6	4	02:30	02:30	05:30	05:30
35	MA03	2	2	121.4	10.4	2.7	8.6%	16.8	11.3	3.02	4.5	4.6	DEEMED	7.1	4	05:45	05:45	05:45	05:45
35	MA04	1	1	66.1	10.4	2.7	15.7% (0.4m2)	10.8	N/A	3.25	5.1	4.8	DEEMED	1.8	5	00:00	02:00	01:30	03:15
35	MA05	2	2	125.5	9.7	2.7	7.7%	16.7	10.8	3.01	3.9	6.6	DEEMED	6.4	4	00:00	02:45	01:30	03:15
34	MA01	3	3.5	197.6	10.4	2.7	5.3%	24.9	14.6 - 14.6	3.14	4.6	5.4	DEEMED	12.1	5	05:30	05:30	05:30	06:45
34	MA02	2	2	113.4	9.7	2.7	8.6%	19.9	19.9	3.01	6.0	4.4	DEEMED	5.6	4	02:30	02:30	05:30	05:30
34	MA03	2	2	121.4	10.4	2.7	8.6%	16.8	11.3	3.02	4.5	4.6	DEEMED	7.1	4	05:45	05:45	05:45	05:45
34	MA04	1	1	66.1	10.4	2.7	15.7% (0.4m2)	10.8	N/A	3.25	5.1	4.8	DEEMED	1.8	5	00:00	02:00	01:30	03:15
34	MA05	2	2	125.5	9.7	2.7	7.7%	16.7	10.8	3.01	3.9	6.6	DEEMED	6.4	4	00:00	02:45	01:30	03:15
33	MA01	3	3.5	197.6	10.4	2.7	5.3%	24.9	14.6 - 14.6	3.14	4.6	5.4	DEEMED	12.1	5	05:30	05:30	05:30	06:45
33	MA02	2	2	113.4	9.7	2.7	8.6%	19.9	19.9	3.01	6.0	4.4	DEEMED	5.6	4	02:30	02:30	05:30	05:30
33	MA03	2	2	121.4	10.4	2.7	8.6%	16.8	11.3	3.02	4.5	4.6	DEEMED	7.1	4	05:45	05:45	05:45	05:45
33	MA04	1	1	66.1	10.4	2.7	15.7% (0.4m2)	10.8	N/A	3.25	5.1	4.8	DEEMED	1.8	5	00:00	02:00	01:30	03:15
33	MA05	2	2	125.5	9.7	2.7	7.7%	16.7	10.8	3.01	3.9	6.6	DEEMED	6.4	4	00:00	02:45	01:30	03:15
32	LA01	3	2.5	158.1	10.5	2.7	6.6%	17.3	14.1 - 11.2	3.2	6.6	4.8	DEEMED	15.4	5	03:30	03:30	05:15	05:15
32	LA02	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.07	5.8	3.4	DEEMED	1.3	5	02:45	02:45	05:30	05:30
32	LA03	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.12	5.8	3.4	DEEMED	1.6	5	02:45	02:45	05:30	05:30
32	LA04	2	2	120.0	10.5	2.7	8.8%	16.7	10.7	3.02	4.4	4.8	DEEMED	4.8	4	05:30	05:30	05:30	05:30
32	LA05	1	1	65.0	10.4	2.7	16% (0.6m2)	10.7	N/A	3.01	4.9	4.8	DEEMED	1.9	5	00:00	02:00	01:00	02:45
32	LA06	2	2	123.9	9.7	2.7	7.8%	17	11.4	3.06	4.3	6.6	DEEMED	4.3	4	00:00	02:30	01:00	02:45
31	LA01	3	2.5	158.1	10.5	2.7	6.6%	17.3	14.1 - 11.2	3.2	6.6	4.8	DEEMED	15.4	5	03:30	03:30	05:15	05:15
31	LA02	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.07	5.8	3.4	DEEMED	1.3	5	02:45	02:45	05:30	05:30
31	LA03	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.12	5.8	3.4	DEEMED	1.6	5	02:45	02:45	05:30	05:30
31	LA04	2	2	120.0	10.5	2.7	8.8%	16.7	10.7	3.02	4.4	4.8	DEEMED	4.8	4	05:30	05:30	05:30	05:30
31	LA05	1	1	65.0	10.4	2.7	16% (0.6m2)	10.7	N/A	3.01	4.9	4.8	DEEMED	1.9	5	00:00	02:00	01:00	02:45
31	LA06	2	2	123.9	9.7	2.7	7.8%	17	11.4	3.06	4.3	6.6	DEEMED	4.3	4	00:00	02:30	01:00	02:45
30	LA01	3	2.5	158.1	10.5	2.7	6.6%	17.3	14.1 - 11.2	3.2	6.6	4.8	DEEMED	15.4	5	03:30	03:30	05:15	05:15
30	LA02	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.07	5.8	3.4	DEEMED	1.3	5	02:45	02:45	05:30	05:30
30	LA03	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.12	5.8	3.4	DEEMED	1.6	5	02:45	02:45	05:30	05:30
30	LA04	2	2	120.0	10.5	2.7	8.8%	16.7	10.7	3.02	4.4	4.8	DEEMED	4.8	4	05:30	05:30	05:30	05:30
30	LA05	1	1	65.0	10.4	2.7	16% (0.6m2)	10.7	N/A	3.01	4.9	4.8	DEEMED	1.9	5	00:00	02:00	01:00	02:45
30	LA06	2	2	123.9	9.7	2.7	7.8%	17	11.4	3.06	4.3	6.6	DEEMED	4.3	4	00:00	02:30	01:00	02:45
29	LA01	3	2.5	158.1	10.5	2.7	6.6%	17.3	14.1 - 11.2	3.2	6.6	4.8	DEEMED	15.4	5	03:30	03:30	05:15	05:15
29	LA02	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.07	5.8	3.4	DEEMED	1.3	5	02:45	02:45	05:30	05:30
29	LA03	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.12	5.8	3.4	DEEMED	1.6	5	02:45	02:45	05:30	05:30
29	LA04	2	2	120.0	10.5	2.7	8.8%	16.7	10.7	3.02	4.4	4.8	DEEMED	4.8	4	05:30	05:30	05:30	05:30
29	LA05	1	1	65.0	10.4	2.7	16% (0.6m2)	10.7	N/A	3.01	4.9	4.8	DEEMED	1.9	5	00:00	02:00</		

Level	Unit	No. of Bedrooms	No. of Bathrooms	GFA (m2)	Balcony / Wintergarden Area (m2)	Balcony / Wintergarden Depth (m)	Wintergarden Area As % Of Unit GFA + Area Over (m2)	Master Bed Area (m2)	Additional Bed Area(s) (m2)	Minimum Bed Dimensions (m)	Habitable Room Depth (m)	Living Room Width (m)	Cross Ventilation	Storage Internal (m3)	Storage External (m3)	2 Hours Solar 9am-3pm (Hours)	2 Hours Solar 9am-5pm (Hours)	Any Solar 9am-3pm (Hours)	Any Solar 9am-5pm (Hours)
26	LA02	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.07	5.8	3.4	DEEMED	1.3	5	02:45	02:45	05:30	05:30
26	LA03	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.12	5.8	3.4	DEEMED	1.6	5	02:45	02:45	05:30	05:30
26	LA04	2	2	120.0	10.5	2.7	8.8%	16.7	10.7	3.02	4.4	4.8	DEEMED	4.8	4	05:30	05:30	05:30	05:30
26	LA05	1	1	65.0	10.4	2.7	16%(0.6m2)	10.7	N/A	3.01	4.9	4.8	DEEMED	1.9	5	00:00	02:00	01:00	02:45
26	LA06	2	2	123.9	9.7	2.7	7.8%	17	11.4	3.06	4.3	6.6	DEEMED	4.3	4	00:00	02:30	01:00	02:45
25	LA01	3	2.5	158.1	10.5	2.7	6.6%	17.3	14.1 - 11.2	3.2	6.6	4.8	DEEMED	15.4	5	03:30	03:30	05:15	05:15
25	LA02	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.07	5.8	3.4	DEEMED	1.3	5	02:45	02:45	05:30	05:30
25	LA03	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.12	5.8	3.4	DEEMED	1.6	5	02:45	02:45	05:30	05:30
25	LA04	2	2	120.0	10.5	2.7	8.8%	16.7	10.7	3.02	4.4	4.8	DEEMED	4.8	4	05:30	05:30	05:30	05:30
25	LA05	1	1	65.0	10.4	2.7	16%(0.6m2)	10.7	N/A	3.01	4.9	4.8	DEEMED	1.9	5	00:00	02:00	01:00	02:45
25	LA06	2	2	123.9	9.7	2.7	7.8%	17	11.4	3.06	4.3	6.6	DEEMED	4.3	4	00:00	02:30	01:00	02:45
24	LA01	3	2.5	158.1	10.5	2.7	6.6%	17.3	14.1 - 11.2	3.2	6.6	4.8	DEEMED	15.4	5	03:30	03:30	05:15	05:15
24	LA02	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.07	5.8	3.4	DEEMED	1.3	5	02:45	02:45	05:30	05:30
24	LA03	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.12	5.8	3.4	DEEMED	1.6	5	02:45	02:45	05:30	05:30
24	LA04	2	2	120.0	10.5	2.7	8.8%	16.7	10.7	3.02	4.4	4.8	DEEMED	4.8	4	05:30	05:30	05:30	05:30
24	LA05	1	1	65.0	10.4	2.7	16%(0.6m2)	10.7	N/A	3.01	4.9	4.8	DEEMED	1.9	5	00:00	02:00	01:00	02:45
24	LA06	2	2	123.9	9.7	2.7	7.8%	17	11.4	3.06	4.3	6.6	DEEMED	4.3	4	00:00	02:30	01:00	02:45
23	LA01	3	2.5	158.1	10.5	2.7	6.6%	17.3	14.1 - 11.2	3.2	6.6	4.8	DEEMED	15.4	5	03:30	03:30	05:15	05:15
23	LA02	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.07	5.8	3.4	DEEMED	1.3	5	02:45	02:45	05:30	05:30
23	LA03	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.12	5.8	3.4	DEEMED	1.6	5	02:45	02:45	05:30	05:30
23	LA04	2	2	120.0	10.5	2.7	8.8%	16.7	10.7	3.02	4.4	4.8	DEEMED	4.8	4	05:30	05:30	05:30	05:30
23	LA05	1	1	65.0	10.4	2.7	16%(0.6m2)	10.7	N/A	3.01	4.9	4.8	DEEMED	1.9	5	00:00	02:00	01:00	02:45
23	LA06	2	2	123.9	9.7	2.7	7.8%	17	11.4	3.06	4.3	6.6	DEEMED	4.3	4	00:00	02:30	01:00	02:45
22	LA01	3	2.5	158.1	10.5	2.7	6.6%	17.3	14.1 - 11.2	3.2	6.6	4.8	DEEMED	15.4	5	03:30	03:30	05:15	05:15
22	LA02	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.07	5.8	3.4	DEEMED	1.3	5	02:45	02:45	05:30	05:30
22	LA03	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.12	5.8	3.4	DEEMED	1.6	5	02:45	02:45	05:30	05:30
22	LA04	2	2	120.0	10.5	2.7	8.8%	16.7	10.7	3.02	4.4	4.8	DEEMED	4.8	4	05:30	05:30	05:30	05:30
22	LA05	1	1	65.0	10.4	2.7	16%(0.6m2)	10.7	N/A	3.01	4.9	4.8	DEEMED	1.9	5	00:00	02:00	01:00	02:45
22	LA06	2	2	123.9	9.7	2.7	7.8%	17	11.4	3.06	4.3	6.6	DEEMED	4.3	4	00:00	02:30	01:00	02:45
21	LA01	3	2.5	158.1	10.5	2.7	6.6%	17.3	14.1 - 11.2	3.2	6.6	4.8	DEEMED	15.4	5	03:30	03:30	05:15	05:15
21	LA02	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.07	5.8	3.4	DEEMED	1.3	5	02:45	02:45	05:30	05:30
21	LA03	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.12	5.8	3.4	DEEMED	1.6	5	02:45	02:45	05:30	05:30
21	LA04	2	2	120.0	10.5	2.7	8.8%	16.7	10.7	3.02	4.4	4.8	DEEMED	4.8	4	05:30	05:30	05:30	05:30
21	LA05	1	1	65.0	10.4	2.7	16%(0.6m2)	10.7	N/A	3.01	4.9	4.8	DEEMED	1.9	5	00:00	02:00	01:00	02:45
21	LA06	2	2	123.9	9.7	2.7	7.8%	17	11.4	3.06	4.3	6.6	DEEMED	4.3	4	00:00	02:30	01:00	02:45
19	LA01	3	2.5	158.2	10.4	2.7	6.6%	17.3	14.1 - 11.2	3.2	6.6	4.8	DEEMED	15.4	5	03:30	03:30	05:15	05:15
19	LA02	1	1	70.4	9.6	2.7	13.6%	12.9	N/A	3.07	5.8	3.5	DEEMED	1.3	5	02:45	02:45	05:30	05:30
19	LA03	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.08	5.8	3.5	DEEMED	1.6	5	02:45	02:45	05:30	05:30
19	LA04	2	2	119.8	10.4	2.7	8.7%	16.7	10.7	3.02	4.4	4.8	DEEMED	4.8	4	05:30	05:30	05:30	05:30
19	LA05	1	1	65.0	10.4	2.7	16%(0.6m2)	10.7	N/A	3.01	4.9	4.8	DEEMED	1.9	5	00:00	02:00	01:00	02:45
19	LA06	2	2	123.8	9.7	2.7	7.8%	17	11.4	3.06	4.3	6.6	DEEMED	4.3	4	00:00	02:30	01:00	02:45
18	LA01	3	2.5	158.2	10.4	2.7	6.6%	17.3	14.1 - 11.2	3.2	6.6	4.8	DEEMED	15.4	5	03:30	03:30	05:15	05:15
18	LA02	1	1	70.4	9.6	2.7	13.6%	12.9	N/A	3.07	5.8	3.5	DEEMED	1.3	5	02:45	02:45	05:30	05:30
18	LA03	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.08	5.8	3.5	DEEMED	1.6	5	02:45	02:45	05:30	05:30
18	LA04	2	2	119.8	10.4	2.7	8.7%	16.7	10.7	3.02	4.4	4.8	DEEMED	4.8	4	05:30	05:30	05:30	05:30
18	LA05	1	1	65.0	10.4	2.7	16%(0.6m2)	10.7	N/A	3.01	4.9	4.8	DEEMED	1.9	5	00:00	02:00	01:00	02:45
18	LA06	2	2	123.8	9.7	2.7	7.8%	17	11.4	3.06	4.3	6.6	DEEMED	4.3	4	00:00	02:30	01:00	02:45
17	LA01	3	2.5	158.2	10.4	2.7	6.6%	17.3	14.1 - 11.2	3.2	6.6	4.8	DEEMED	15.4	5	03:30	03:30	05:15	05:15
17	LA02	1	1	70.4	9.6	2.7	13.6%	12.9	N/A	3.07	5.8	3.5	DEEMED	1.3	5	02:45	02:45	05:30	05:30
17	LA03	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.08	5.8	3.5	DEEMED	1.6	5	02:45	02:45	05:30	05:30
17	LA04	2	2	119.8	10.4	2.7	8.7%	16.7	10.7	3.02	4.4	4.8	DEEMED	4.8	4	05:30	05:30	05:30	05:30
17	LA05	1	1	65.0	10.4	2.7	16%(0.6m2)	10.7	N/A	3.01	4.9	4.8	DEEMED	1.9	5	00:00	02:00	01:00	02:45
17	LA06	2	2	123.8	9.7	2.7	7.8%	17	11.4	3.06	4.3	6.6	DEEMED	4.3	4	00:00	02:30	01:00	02:45
16	LA01	3	2.5	158.2	10.4	2.7	6.6%	17.3	14.1 - 11.2	3.2	6.6	4.8	DEEMED	15.4	5	03:30	03:30	05:15	05:15
16	LA02	1	1	70.4	9.6	2.7	13.6%	12.9	N/A	3.07	5.8	3.5	DEEMED	1.3	5	02:45	02:45	05:30	05:30
16	LA03	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.08	5.8	3.5	DEEMED	1.6	5	02:45	02:45	05:30	05:30
16	LA04	2	2	119.8	10.4	2.7	8.7%	16.7	10.7	3.02	4.4	4.8	DEEMED	4.8	4	05:30	05:30	05:30	05:30
16	LA05	1	1	65.0	10.4	2.7	16.0%	10.7	N/A	3.01	4.9	4.8	DEEMED	1.9	5	00:00	02:00	01:00	02:45
16	LA06	2	2	123.8	9.7	2.7	7.8%	17	11.4	3.06	4.3	6.6	DEEMED	4.3	4	00:00	02:30	01:00	02:45
15	LA01	3	2.5	158.2	10.4	2.7	6.6%	17.3	14.1 - 11.2	3.2	6.6	4.8	DEEMED	15.4	5	03:30	03:30	05:15	05:15
15	LA02	1	1	70.4	9.6	2.7	13.6%	12.9	N/A	3.07	5.8	3.5	DEEMED	1.3	5	02:45	02:45	05:30	05:30
15	LA03	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.08	5.8	3.5	DEEMED	1.6	5	02:45	02:45	05:30	05:30
15	LA04	2	2	119.8	10.4	2.7	8.7%	16.7	10.7	3.02	4.4	4.8	DEEMED	4.8	4	05:30	05:30	05:30	05:30
15	LA05	1	1	65.0	10.4	2.7	16%(0.6m2)	10.7	N/A	3.01	4.9	4.8	DEEMED	1.9	5	00:00	02:00	01:00	02:45
15	LA06	2	2	123.8	9.7	2.7	7.8%	17	11.4	3.06	4.3	6.6	DEEMED	4.3	4	00:00	02:30	01:00	02:45
14	LA01	3	2.5	158.2	10.4	2.7	6.6%	17.3	14.1 - 11.2	3.2	6.6	4.8	DEEMED	15.4	5	03:30	03:30	05:15	05:15
14	LA02	1	1	70.4	9.6	2.7	13.6%	12.9	N/A	3.07	5.8	3.5	DEEMED	1.3	5	02:45	02:45	05:30	05:30
14	LA03	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.08	5.8	3.5	DEEMED	1.6	5	02:45	02:45	05:30	05:30
14	LA04	2	2	119.8	10.4	2.7	8.7%	16.7	10.7	3.02	4.4	4.8	DEEMED	4.8	4	05:30	05:30	05:30	05:30
14	LA05	1	1	65.0	10.4	2.7	16%(0.6m2)	10.7	N/A	3.01	4.9	4.8	DEEMED	1.9	5	00:00	02:00	01:00	02:45
14	LA06	2	2	123.8	9.7	2.7	7.8%	17	11.4	3.06	4.3	6.6	DEEMED	4.3	4	00:00	02:30	01:00	02:45
13	LA01	3	2.5	158.2															

Level	Unit	No. of Bedrooms	No. of Bathrooms	GFA (m2)	Balcony / Wintergarden Area (m2)	Balcony / Wintergarden Depth (m)	Wintergarden Area As % Of Unit GFA + Area Over (m2)	Master Bed Area (m2)	Additional Bed Area(s) (m2)	Minimum Bed Dimensions (m)	Habitable Room Depth (m)	Living Room Width (m)	Cross Ventilation	Storage Internal (m3)	Storage External (m3)	2 Hours Solar 9am-3pm (Hours)	2 Hours Solar 9am-5pm (Hours)	Any Solar 9am-3pm (Hours)	Any Solar 9am-5pm (Hours)
11	LA02	1	1	70.4	9.6	2.7	13.6%	12.9	N/A	3.07	5.8	3.5	DEEMED	1.3	5	02:45	02:45	05:30	05:30
11	LA03	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.08	5.8	3.5	DEEMED	1.6	5	02:45	02:45	05:30	05:30
11	LA04	2	2	119.8	10.4	2.7	8.7%	16.7	10.7	3.02	4.4	4.8	DEEMED	4.8	4	05:30	05:30	05:30	05:30
11	LA05	1	1	65.0	10.4	2.7	16% (0.6m2)	10.7	N/A	3.01	4.9	4.8	DEEMED	1.9	5	00:00	02:00	01:00	02:45
11	LA06	2	2	123.8	9.7	2.7	7.8%	17	11.4	3.06	4.3	6.6	DEEMED	4.3	4	00:00	02:30	01:00	02:45
10	LA01	3	2.5	158.2	10.4	2.7	6.6%	17.3	14.1 - 11.2	3.2	6.6	4.8	DEEMED	15.4	5	03:30	03:30	05:15	05:15
10	LA02	1	1	70.4	9.6	2.7	13.6%	12.9	N/A	3.07	5.8	3.5	DEEMED	1.3	5	02:45	02:45	05:30	05:30
10	LA03	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.08	5.8	3.5	DEEMED	1.6	5	02:45	02:45	05:30	05:30
10	LA04	2	2	119.8	10.4	2.7	8.7%	16.7	10.7	3.02	4.4	4.8	DEEMED	4.8	4	05:30	05:30	05:30	05:30
10	LA05	1	1	65.0	10.4	2.7	16% (0.6m2)	10.7	N/A	3.01	4.9	4.8	DEEMED	1.9	5	00:00	02:00	01:00	02:45
10	LA06	2	2	123.8	9.7	2.7	7.8%	17	11.4	3.06	4.3	6.6	DEEMED	4.3	4	00:00	02:30	01:00	02:45
09	LA01	3	2.5	158.2	10.4	2.7	6.6%	17.3	14.1 - 11.2	3.2	6.6	4.8	DEEMED	15.4	5	03:30	03:30	05:15	05:15
09	LA02	1	1	70.4	9.6	2.7	13.6%	12.9	N/A	3.07	5.8	3.5	DEEMED	1.3	5	02:45	02:45	05:30	05:30
09	LA03	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.08	5.8	3.5	DEEMED	1.6	5	02:45	02:45	05:30	05:30
09	LA04	2	2	119.8	10.4	2.7	8.7%	16.7	10.7	3.02	4.4	4.8	DEEMED	4.8	4	05:30	05:30	05:30	05:30
09	LA05	1	1	65.0	10.4	2.7	16% (0.6m2)	10.7	N/A	3.01	4.9	4.8	DEEMED	1.9	5	00:00	02:00	01:00	02:45
09	LA06	2	2	123.8	9.7	2.7	7.8%	17	11.4	3.06	4.3	6.6	DEEMED	4.3	4	00:00	02:30	01:00	02:45
08	LA01	3	2.5	158.2	10.4	2.7	6.6%	17.3	14.1 - 11.2	3.2	6.6	4.8	DEEMED	15.4	5	03:30	03:30	05:15	05:15
08	LA02	1	1	70.4	9.6	2.7	13.6%	12.9	N/A	3.07	5.8	3.5	DEEMED	1.3	5	02:45	02:45	05:30	05:30
08	LA03	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.08	5.8	3.5	DEEMED	1.6	5	02:45	02:45	05:30	05:30
08	LA04	2	2	119.8	10.4	2.7	8.7%	16.7	10.7	3.02	4.4	4.8	DEEMED	4.8	4	05:30	05:30	05:30	05:30
08	LA05	1	1	65.0	10.4	2.7	16% (0.6m2)	10.7	N/A	3.01	4.9	4.8	DEEMED	1.9	5	00:00	02:00	01:00	02:45
08	LA06	2	2	123.8	9.7	2.7	7.8%	17	11.4	3.06	4.3	6.6	DEEMED	4.3	4	00:00	02:30	01:00	02:45
07	LA01	3	2.5	158.2	10.4	2.7	6.6%	17.3	14.1 - 11.2	3.2	6.6	4.8	DEEMED	15.4	5	03:30	03:30	05:15	05:15
07	LA02	1	1	70.4	9.6	2.7	13.6%	12.9	N/A	3.07	5.8	3.5	DEEMED	1.3	5	02:45	02:45	05:30	05:30
07	LA03	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.08	5.8	3.5	DEEMED	1.6	5	02:45	02:45	05:30	05:30
07	LA04	2	2	119.8	10.4	2.7	8.7%	16.7	10.7	3.02	4.4	4.8	DEEMED	4.8	4	05:30	05:30	05:30	05:30
07	LA05	1	1	65.0	10.4	2.7	16% (0.6m2)	10.7	N/A	3.01	4.9	4.8	DEEMED	1.9	5	00:00	00:00	01:00	02:30
07	LA06	2	2	123.8	9.7	2.7	7.8%	17	11.4	3.06	4.3	6.6	DEEMED	4.3	4	00:00	02:15	01:00	02:30
06	LA01	3	2.5	158.2	10.4	2.7	6.6%	17.3	14.1 - 11.2	3.2	6.6	4.8	YES	15.4	5	03:30	03:30	05:15	05:15
06	LA02	1	1	70.4	9.6	2.7	13.6%	12.9	N/A	3.07	5.8	3.5	NO	1.3	5	02:45	02:45	05:30	05:30
06	LA03	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.08	5.8	3.5	NO	1.6	5	02:45	02:45	05:30	05:30
06	LA04	2	2	119.8	10.4	2.7	8.7%	16.7	10.7	3.02	4.4	4.8	YES	4.8	4	05:30	05:30	05:30	05:30
06	LA05	1	1	64.6	10.4	2.7	16% (0.6m2)	10.7	N/A	3.01	4.9	4.8	YES	1.9	5	00:00	00:00	00:30	00:30
06	LA06	2	2	123.8	9.7	2.7	7.8%	17	11.4	3.06	4.3	6.6	YES	4.3	4	00:00	00:00	00:45	00:45
05	LA01	3	2.5	158.2	10.4	2.7	6.6%	17.3	14.1 - 11.2	3.2	6.6	4.8	YES	15.4	5	03:30	03:30	05:15	05:15
05	LA02	1	1	70.4	9.6	2.7	13.6%	12.9	N/A	3.07	5.8	3.5	NO	1.3	5	02:45	02:45	05:30	05:30
05	LA03	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.08	5.8	3.5	NO	1.6	5	02:45	02:45	05:30	05:30
05	LA04	2	2	119.8	10.4	2.7	8.7%	16.7	10.7	3.02	4.4	4.8	YES	4.8	4	05:30	05:30	05:30	05:30
05	LA05	1	1	64.6	10.4	2.7	16% (0.6m2)	10.7	N/A	3.01	4.9	4.8	YES	1.9	5	00:00	00:00	00:30	00:30
05	LA06	2	2	123.8	9.7	2.7	7.8%	17	11.4	3.06	4.3	6.6	YES	4.3	4	00:00	00:00	00:45	00:45
04	LA01	3	2.5	158.2	10.4	2.7	6.6%	17.3	14.1 - 11.2	3.2	6.6	4.8	YES	15.4	5	03:30	03:30	05:15	05:15
04	LA02	1	1	70.4	9.6	2.7	13.6%	12.9	N/A	3.07	5.8	3.5	NO	1.3	5	02:45	02:45	05:30	05:30
04	LA03	1	1	70.5	9.6	2.7	13.6%	12.9	N/A	3.08	5.8	3.5	NO	1.6	5	02:45	02:45	05:30	05:30
04	LA04	2	2	119.8	10.4	2.7	8.7%	16.7	10.7	3.02	4.4	4.8	YES	4.8	4	05:30	05:30	05:30	05:30
04	LA05	1	1	64.6	10.4	2.7	16% (0.6m2)	10.7	N/A	3.01	4.9	4.8	YES	1.9	5	00:00	00:00	00:30	00:30
04	LA06	2	2	123.8	9.7	2.7	7.8%	17	11.4	3.06	4.3	6.6	YES	4.3	4	00:00	00:00	00:45	00:45
03	LA01	3	2.5	158.4	10.4	2.7	6.6%	17.3	14.1 - 11.2	3.2	6.6	4.8	YES	15.6	5	03:30	03:30	05:15	05:15
03	LA02	1	1	70.2	9.6	2.7	13.7%	12.9	N/A	3.07	5.8	3.5	NO	2.5	5	02:45	02:45	05:30	05:30
03	LA03	1	1	70.4	9.6	2.7	13.6%	12.9	N/A	3.08	5.8	3.5	NO	2.5	5	02:45	02:45	05:30	05:30
03	LA04	2	2	120.2	10.4	2.7	8.7%	16.7	10.7	3.02	4.4	4.8	YES	4.3	4	05:30	05:30	05:30	05:30
03	LA05	1	1	64.6	10.4	2.7	16% (0.6m2)	10.7	N/A	3.01	4.9	4.8	YES	1.2	5	00:00	00:00	00:30	00:30
03	LA06	2	2	124.1	9.7	2.7	7.8%	17	11.4	3.06	4.3	6.6	YES	4.3	4	00:00	00:00	00:45	00:45
02	LA01	3	2.5	158.4	10.4	2.7	6.6%	17.1	14.1 - 11.2	3.15	6.6	4.8	YES	15.6	5	03:30	03:30	05:15	05:15
02	LA02	1	1	70.2	9.5	2.7	13.5%	12.7	N/A	3.01	5.8	3.4	NO	2.5	5	02:45	02:45	05:30	05:30
02	LA03	1	1	70.4	9.5	2.7	13.5%	12.7	N/A	3.06	5.8	3.4	NO	2.5	5	02:45	02:45	05:30	05:30
02	LA04	2	2	120.2	10.4	2.7	8.7%	16.5	10.7	3.02	4.4	4.8	YES	4.3	4	05:30	05:30	05:30	05:30
02	LA05	1	1	64.6	10.4	2.7	16.2% (0.8m2)	13.1	N/A	3.25	4.6	4.8	YES	1.2	5	00:00	00:00	00:30	00:30
02	LA06	2	2	124.1	9.7	2.7	7.8%	17	11.4	3.06	4.3	6.6	YES	4.3	4	00:00	00:00	00:45	00:45
01	LA01	3	2.5	158.3	10.4	2.7	6.6%	17.3	14.1 - 11.2	3.2	6.6	4.8	YES	15.6	5	03:30	03:30	05:15	05:15
01	LA02	1	1	70.1	9.6	2.7	13.7%	12.9	N/A	3.07	5.8	3.5	NO	2.5	5	02:45	02:45	05:30	05:30
01	LA03	1	1	70.7	9.6	2.7	13.6%	12.9	N/A	3.08	5.8	3.5	NO	2.5	5	02:45	02:45	05:30	05:30
01	LA04	2	2	120.2	10.4	2.7	8.7%	16.7	10.7	3.02	4.4	4.8	YES	4.3	4	05:30	05:30	05:30	05:30
01	LA05	1	1	64.2	10.4	2.7	16% (0.6m2)	10.7	N/A	3.01	4.9	4.8	YES	1.2	5	00:00	00:00	00:30	00:30
01	LA06	2	2	124.9	9.7	2.7	7.8%	17	11.4	3.06	4.3	6.6	YES	4.3	4	00:00	00:00	00:45	00:45



Renzo Piano



Emanuela Baglietto