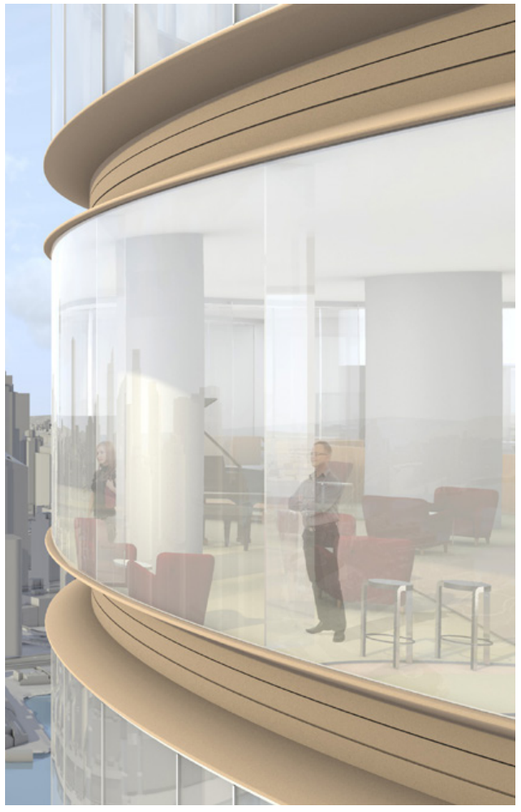
13.13 **Sky Lobby & Club Lounge**

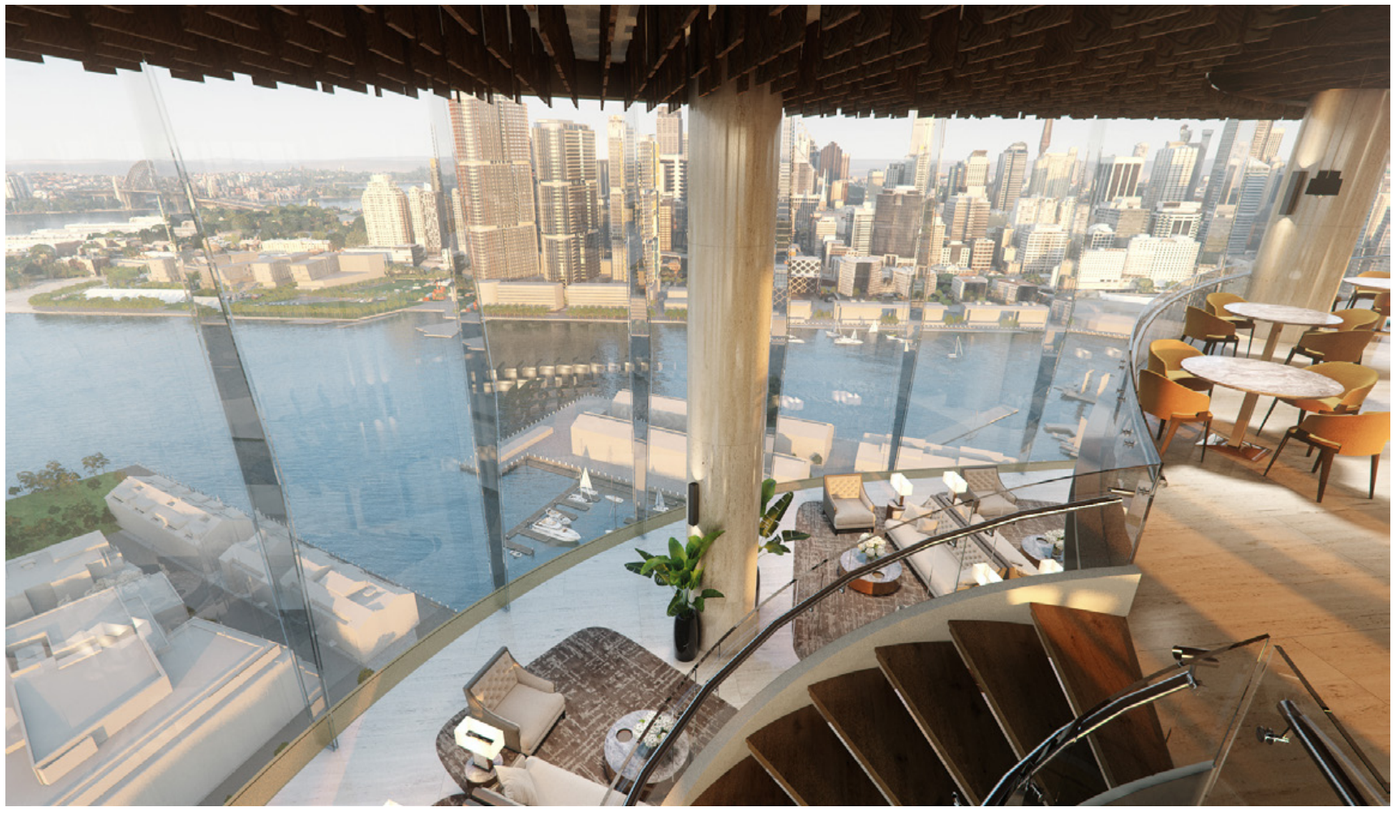
Arriving at the Sky Lobby, guests can experience city wide views immediately as they step from the lifts. A double height space enclosed with frameless glazing. Beyond reception they sky lobby will also house a bar and back of house provision for a server and amenities. The 'sky restaurant' is located on the mezzanine of the double height space, allow guests to relax and enjoy world class dining in an unparalleled setting.

The club lounge offers guests an extension to their rooms formed by a continuous space wrapping along a frameless high performance facade with expansive city views. Beyond on the southern form the open-air 'Club Terrace' is idea for el fresco dining amongst landscaped gardens.

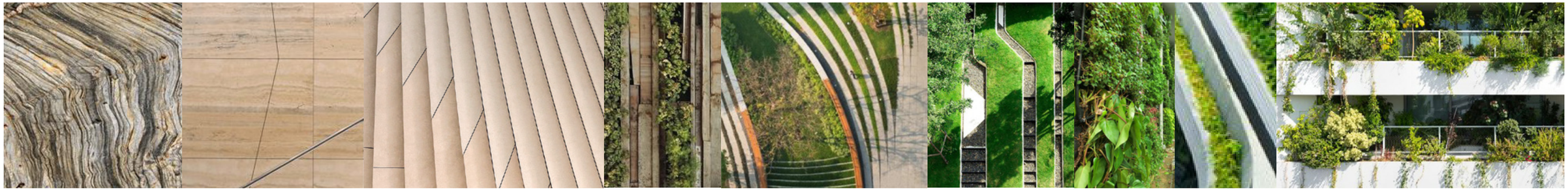
Sky Lobby & Club Lounge

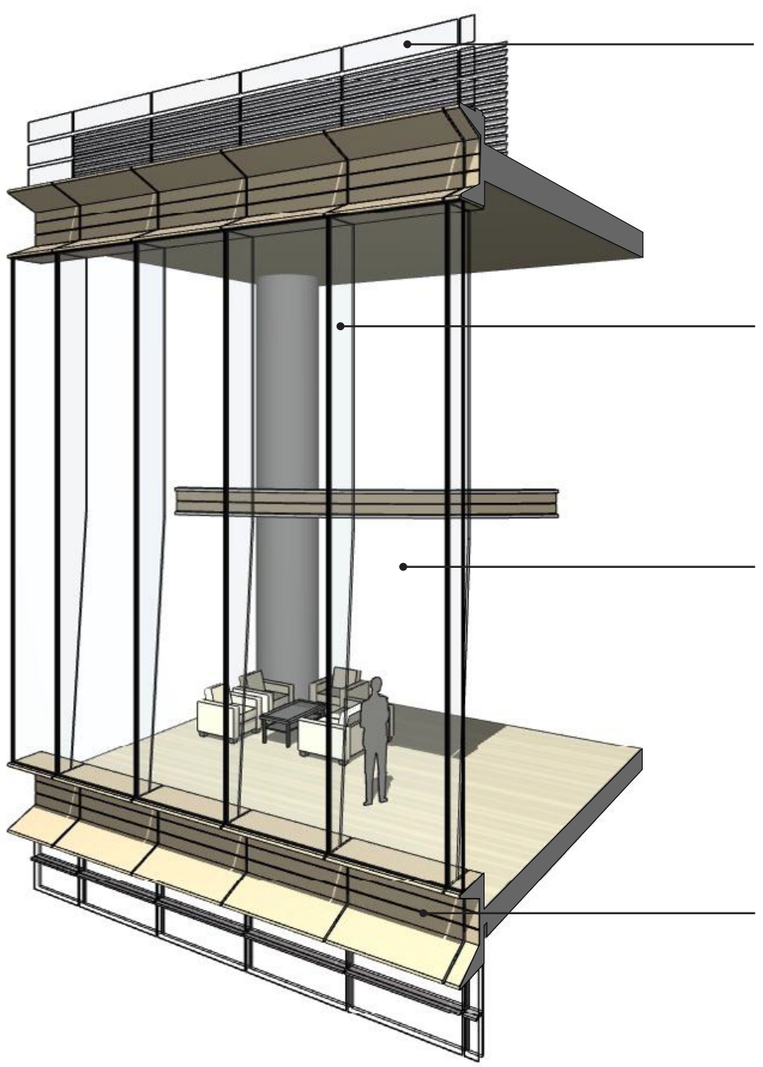


Club Lounge



Internal View of Sky Lobby & Mezzanine restaurant





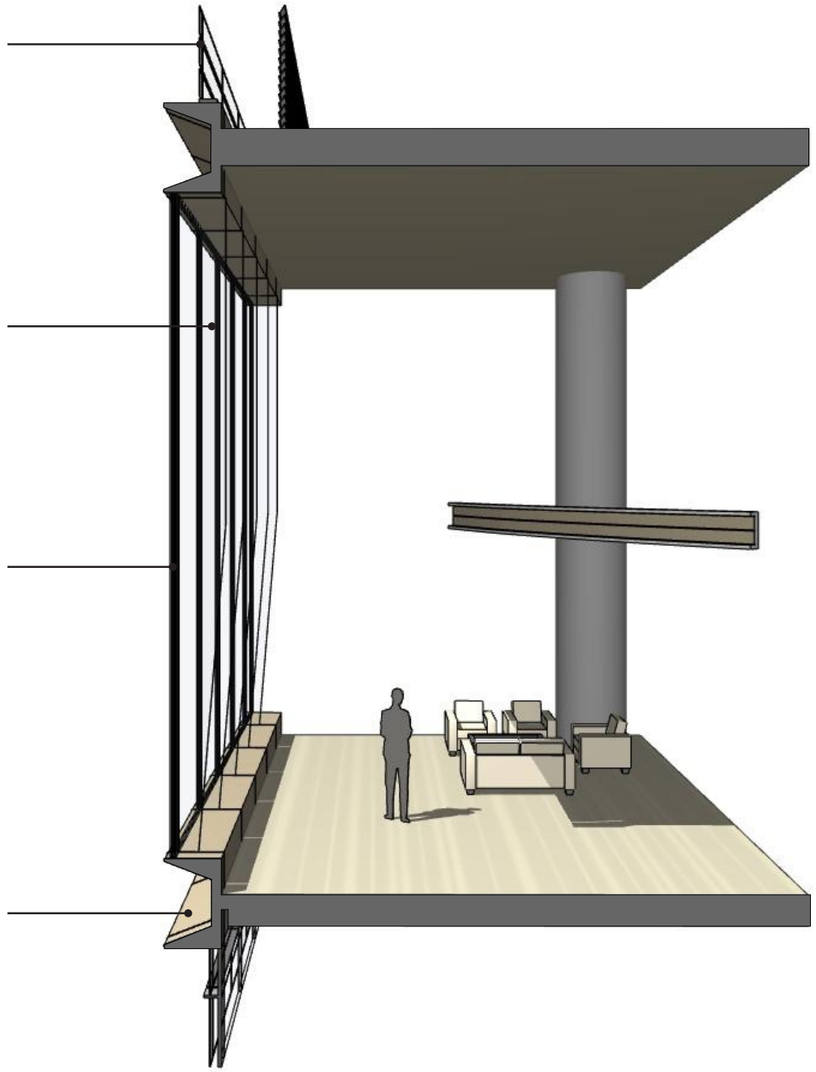
Glass Louvres

Glass louvres around mid tower plant room floor

Glass Mullions

Glass Facade

Spandrel



Sky Lobby facade Elevation

Sky Lobby facade Section

13.14 **Top of Tower**

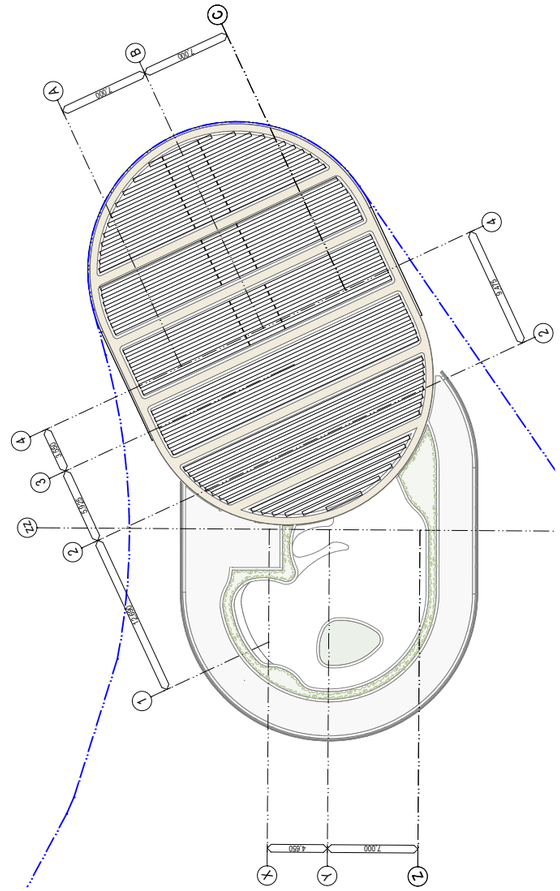
Roof Enclosure

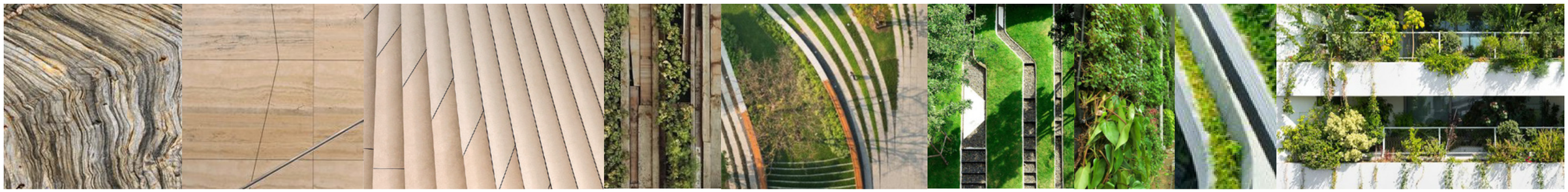
Aluminium Blades

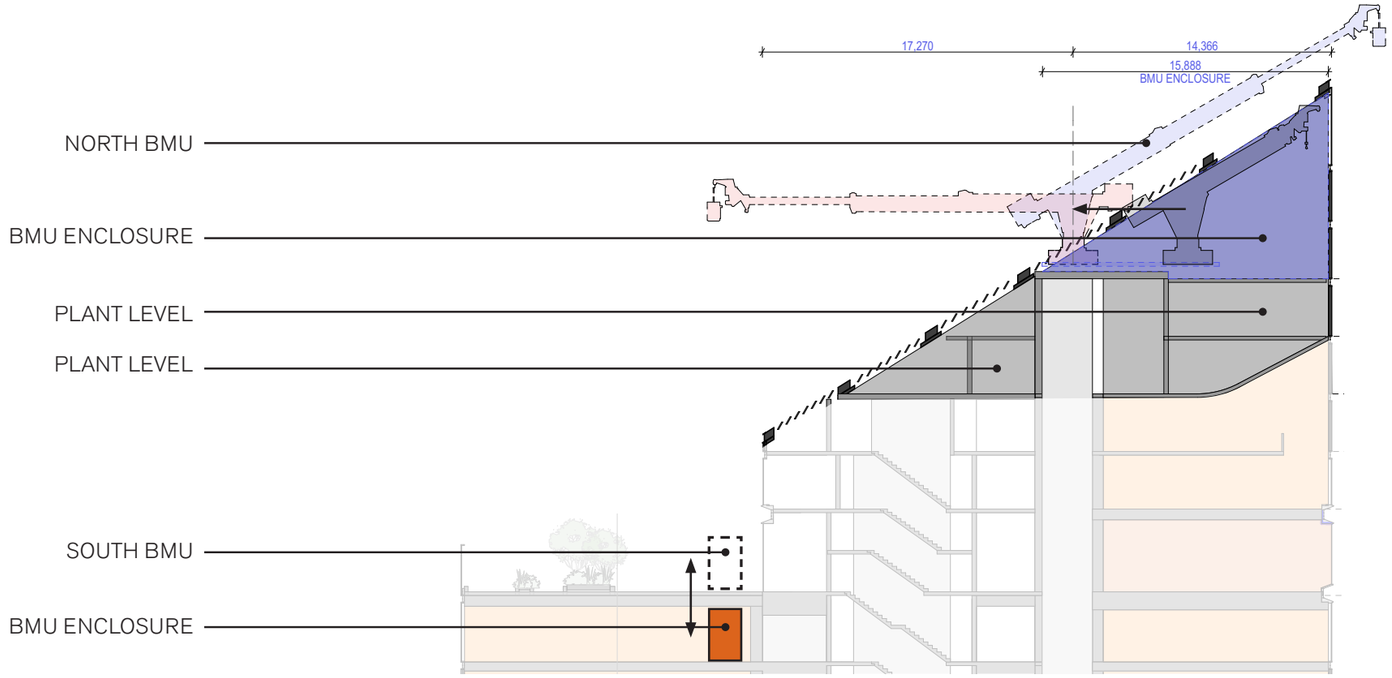
Roof Enclosure Structure

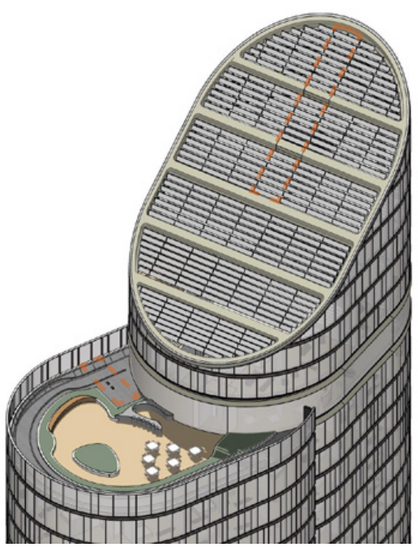
Terrace Balustrade enclosure

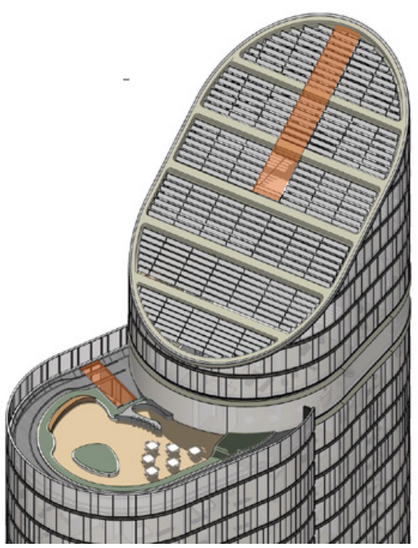
Terrace Landscape

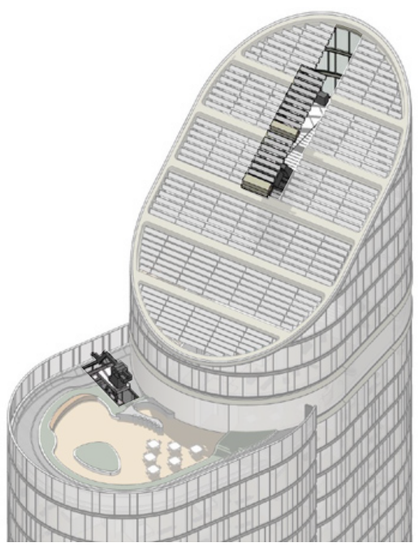


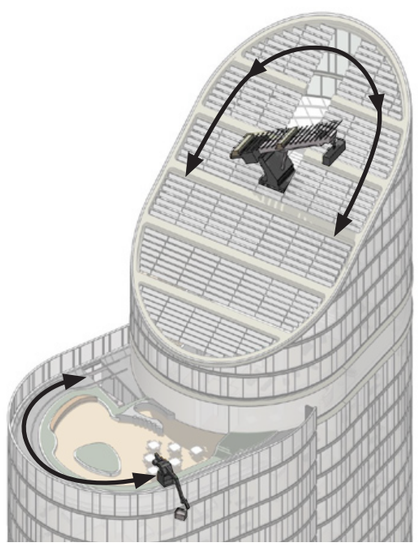



17,270
14,366
15,888
BMU ENCLOSURE
NORTH BMU
BMU ENCLOSURE
PLANT LEVEL
PLANT LEVEL
SOUTH BMU
BMU ENCLOSURE







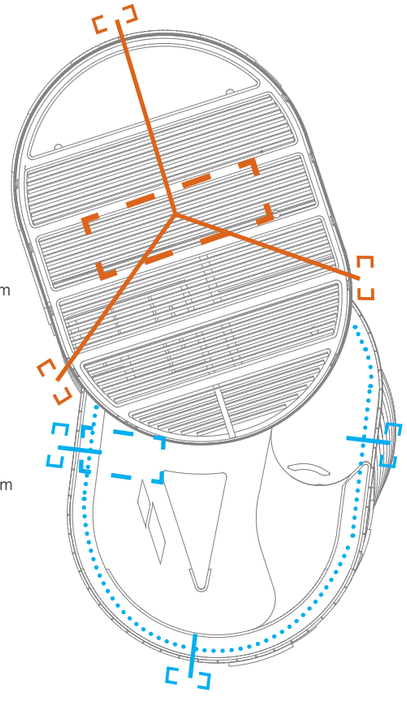


13.15 **Maintenance**

Access

Facade access for cleaning and maintenance will be from a pair of roof BMU's, each located in either tower form.

The taller north form will be serviced by a central BMU with a telescopic arm unit. The south form will be serviced via a smaller, perimeter track based unit. Both BMU's will have discrete garage enclosures disguised within the detail of the building. Whilst there have been initial discussions, further work with a BMU consultant is anticipated to confirm the most effective system.

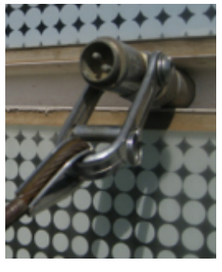


Roof Plan with central BMU garage

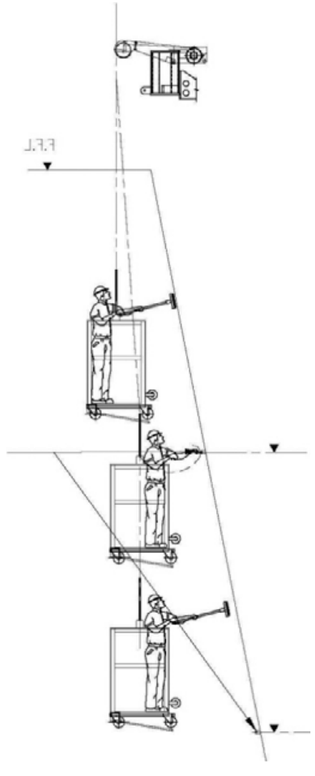
Outward sloping facades

Outward sloping facades use a BMU pull in strategy. Pull in restrain clips are temporally plugged into the mullions. These are used to draw the BMU cradle into the façade. For the larger offsets of 500mm or so these restrain clips will be permanently installed due to the load. The BMU will be fitted with lanyards and rollers to keep the hangers free of the façade

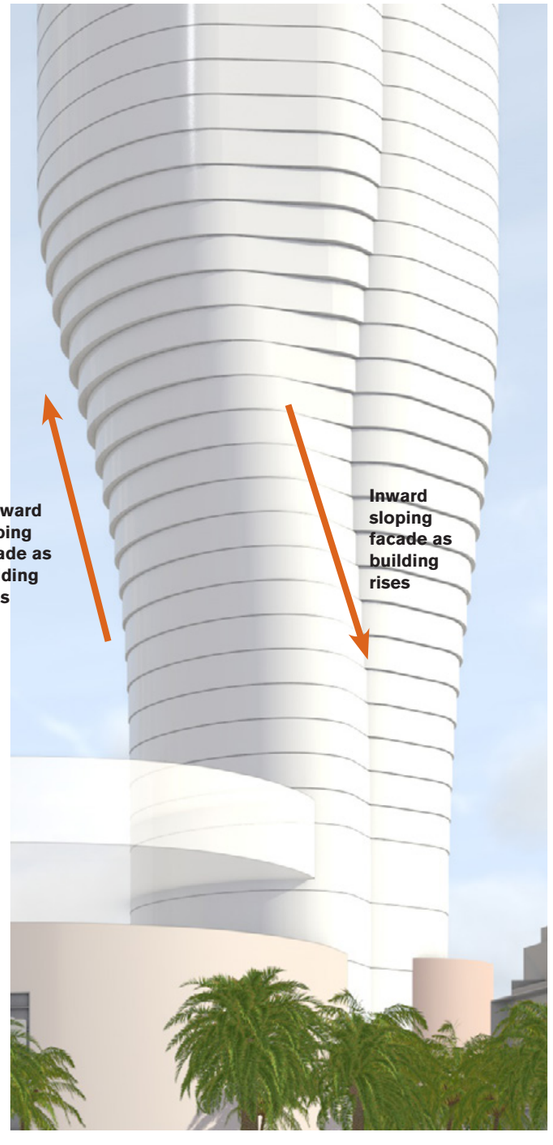
An intermittent 'socket and plug' type restraint. These exist at every 3 to 4 floors on vertical facades and are not practical for overhanging facade.



A continuous 'paddle' restraint system to a 45 storey unitised curtain wall facade system in Perth



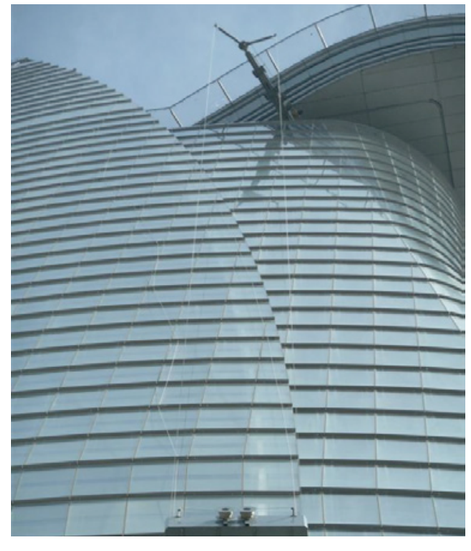
Pull in restraint system to facade



Inward sloping facades

Inwards sloping facades will use a soft rope restraint system with auto spooling that is clipped into temporary restraint plugs. The telescopic arm automatically manoeuvres the cradle in position while the restraint ropes help hold the position..

Rope restraint system



Rope restraint system

14.0 Technical & Environment

Vertical Transportation

Environmental Sustainability

Services Strategy

Structural System

Column Shifting

Car Parking

Bicycle Parking

Loading Dock

Waste

Introduction of Residential Use

Pyrmont Wide shadow impacts

Public Space Solar Analysis

Sun access impacts on adjacent properties

Sun access impacts on adjacent properties currently recieving less than 2 hours sun access

Signage - Tower

Signage - Podium

External Lighting

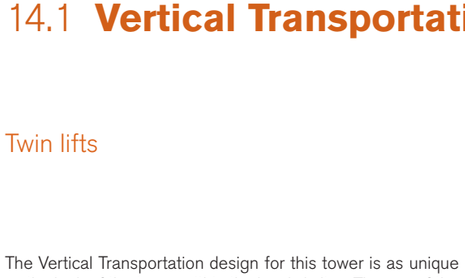
14.1 **Vertical Transportation**

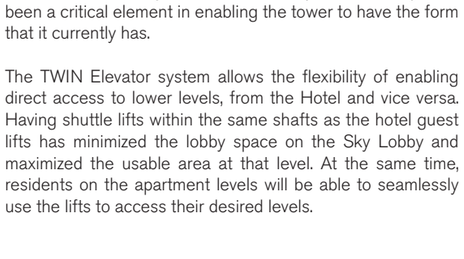
Twin lifts

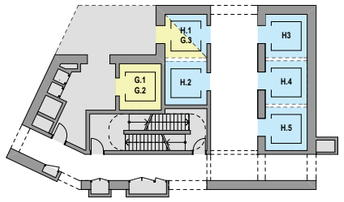
The Vertical Transportation design for this tower is as unique as the look of the tower within the local skyline. The use of the proprietary TWIN Elevator, has allowed the building's core to be minimized, while also adequately serving all the different zones of the building. The Vertical Transportation design has been a critical element in enabling the tower to have the form that it currently has.

The TWIN Elevator system allows the flexibility of enabling direct access to lower levels, from the Hotel and vice versa. Having shuttle lifts within the same shafts as the hotel guest lifts has minimized the lobby space on the Sky Lobby and maximized the usable area at that level. At the same time, residents on the apartment levels will be able to seamlessly use the lifts to access their desired levels.

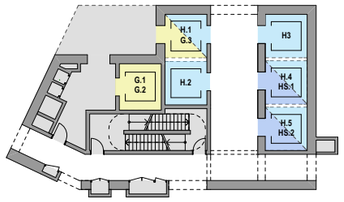
The design aligns with SEGL's goal of achieving the highest standard of built form outcomes for The Star by encouraging innovation and best practice approaches in order to achieve an environmentally sustainable development that positively contributes to the overall architecture of both Pyrmont and the City of Sydney.



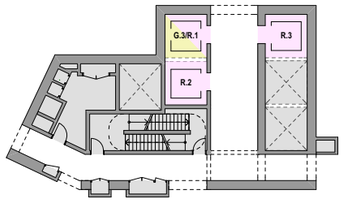




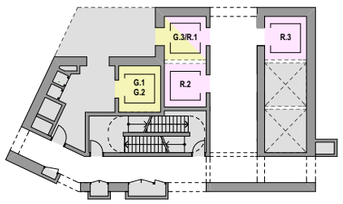
L40 - L59 - Typical Hotel



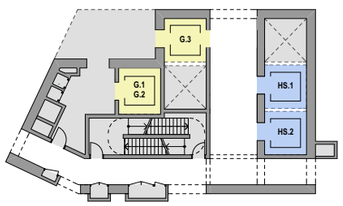
L39 - Hotel Sky Lobby



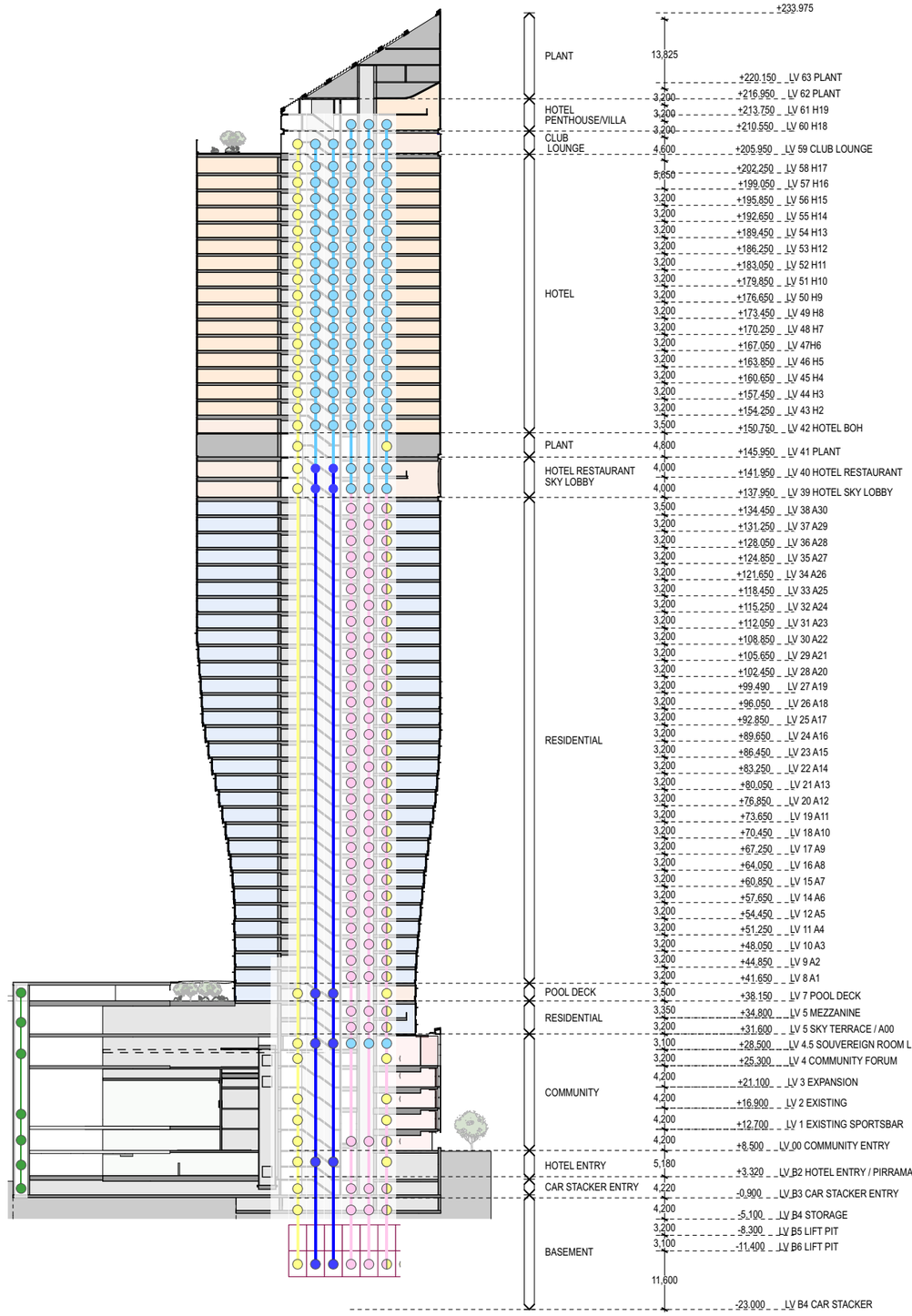
L05 - L06 & L08 - L38 Typical Residential



L00 - Residential Entry



B2 - Hotel Entry, L04m, L07



Lifting diagram

14.2 **Environmental Sustainability**

Plantroom locations and riser strategy

The ambitious NatHERS, BASIX, Section J and Green Star Design and As Built 5 Star Rating targets combined with SEGL's own sector-leading sustainability initiatives reduce the environmental impact of the Proposal and create a building of iconic sustainable performance, being an efficient and highly comfortable user experience-oriented hotel and residential building designed for Sydney's climatic conditions. The design embraces the social and health enhancing role of sustainability by demonstrating the following technology, nature and design initiatives to the larger public;

- Form response underpinned by passive solar design principles
- High performance ventilated facade with biofiltration
- Thermal comfort to reduce heating and cooling loads
- Indoor air quality
- Internal noise levels
- Lighting comfort
- Visual comfort- daylight with glare control
- Minimisation of indoor pollutants
- Rainwater harvesting system
- Potable water reduction
- Efficient energy systems and fittings to reduced energy demands
- Peak electricity demand reduction
- Electrical vehicle charging
- Energy and water sub metering
- Monitored and optimised mechanical system operation
- Harbour heat rejection system
- Variable Speed Drives (VSD) upgrades
- Vertical transport upgrades
- Minimisation of light pollution
- Responsible Building materials and sustainable products
- Cradle to Grave life cycle assessment seeking to greatly reduce whole of life greenhouse gases
- Climate Adaptation plan
- Building information systems
- Construction environmental management
- Minimisation of construction and demolition waste
- Operational waste management plan

All sustainability initiatives are addressed in more detail in the Sustainability Technical report appendix included within the EAR.

14.3 **Services Strategy**

Plantroom locations and riser strategy

Three major areas of plant have been identified:

- L03 - 06: located under the 'ribbon'
- L41: full floor mid level plant
- L62 and up: top of tower

The mechanical services will be designed to best practice principles to ensure that environmental impacts of the development are limited and ecologically sound.

A push/pull corridor pressurisation system has been adopted throughout the tower. This approach combines stair pressurisation with fresh air systems to minimise the amount of on-floor shafts required and improves corridor circulation to fire stairs in the event of a fire. This approach is covered in more detail in the Fire Engineering Assessment.

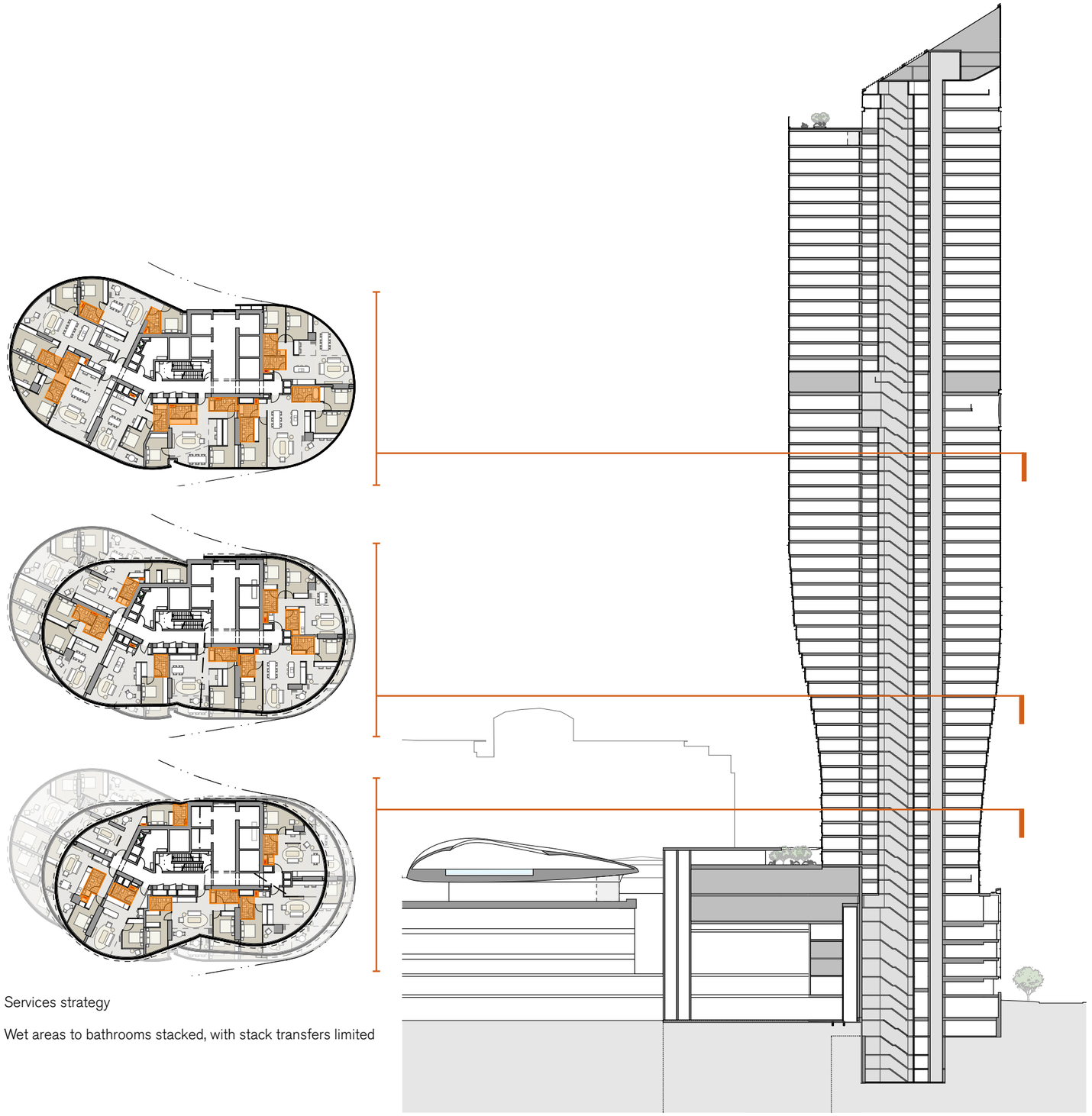
One of the more intricate aspects of coordination has been the reticulation of the Hydraulic stacks. Generally, they are grouped vertically where possible to minimise instances of horizontal transfers.

The northern portion of the floorplate simply contracts inwards on the lower floors. This sees the apartments in this portion of the plan reduce in size from 3B, 2B + S, and 3B, 2B to 1B on the lower levels. The living and bedroom spaces reduces whilst the kitchen and bathroom locations remain relatively fixed adjacent to the core allowing the hydraulic stacks to be vertical.

The greatest variance in apartment planning occurs at the southern end of the floorplate. Where possible hydraulic stacks serving the upper floors are brought down vertically with the stack incorporated into a wall or joinery element adjacent to the facade on the lower levels. Where required, stacks can transfer using a similar strategy as the structure, i.e. along the line of the party walls between apartments.

The HVAC systems will be designed to provide excellent indoor air quality to protect the health and comfort of occupants. Outside air will be provided with high efficiency filtration and delivered at quantities significantly above statutory minimums. CO2 monitoring will also be provided where appropriate to ensure a high quality indoor environment is obtained without compromising energy efficiency. Residential rangehood and wet area mechanical exhausts are reticulated on each floor to a pair of shafts at both ends of the tower which rise and exhaust at the mid-level plant room (Level 41).

The cooling for the development will be provided by the main site central chilled water plant, allowing the Modification 13 development to make use of the energy efficiency improvements planned for the existing site infrastructure, maximizing operational efficiencies and ensuring that extensive new dedicated thermal plant for Modification 13 is not required. Energy consumption for the development will be further minimized through use of a wide range of air-side energy efficiency measures such as high efficiency air handling plant, occupancy-based outside air control and energy recovery.



Services strategy

Wet areas to bathrooms stacked, with stack transfers limited