URBAN DESIGN BRIEF
924 to 944 King Street West

City of Kitchener
Official Plan Amendment and Zoning By-law Amendment

November 2024

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Prepared for:
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1. BACKGROUND

1.1 Proposal

GSP Group Inc. has been retained by 1000100206 Ontario Inc. (924-938 & 944 King Street West) 1000187534 Ontario Inc. (940 King Street West) to provide an Urban Design Report in support of an application for a Zoning By-law Amendment required to permit mixed-use, residential development for the property located at 924-944 King Street West, City of Kitchener, Region of Waterloo ("Site").

The proposed development consists of a 28-storey mixed-use building, comprising ground floor commercial retail units along King Street and residential use above (341 dwelling units). The development concept proposes a Floor Space Ratio of 11.5 and incorporates a 5-storey podium and tower stepbacks adjacent to both King Street West and Dodd's Lane. The concept proposes a total of 182 parking spaces within one level of underground parking and five levels of structured, podium parking.

1.2 Purpose

An Official Plan Amendment ("OPA") and Zoning By-law Amendment ("ZBA") are required to facilitate the proposed development on the Site. An Urban Design Brief was identified as a required component of a complete application package as per the pre-submission consultation record dated November 23, 2023. The Kitchener Official Plan defines an Urban Design Brief as an "urban design document that may be required of an owner/applicant to demonstrate how a development application implements the City's Urban Design Manual," which "does not require Council approval."

Based on the matters for consideration and evaluation identified in the pre-submission consultation record, this Urban Design Brief contains:

- A description of the existing physical conditions on the Site (Section 2);
- A description and characterization of the Site's surrounding area and neighbourhood context (Section 3);
- A description of the design components of the proposed development (Section 4);
- An assessment of the proposed design concept with respect to relevant design policies and guidelines (Section 5); and,
- A summary of the report findings (Section 6).

1.3 Supporting Studies and Materials

The Urban Design Brief has considered the following plans and reports prepared in support of the subject application:

- Site Plan prepared by ABA Architects Inc.;
- Floor Plans prepared by ABA Architects Inc.;
- Elevations and Renderings prepared by ABA Architects Inc.;
- Shadow Study Graphics prepared by ABA Architects Inc.; and
- Windy Study Analysis prepared by SLR Consulting (Ltd).

2. EXISTING SITE CONDITIONS AND CONTEXT

2.1 Location and Description

The Site is generally located on the north side of King Street, east of Union Street and across from the Grand River Hospital, in the City of Kitchener (Figure 1). The Site is municipally known as 920, 924 to 938, 940 and 944 King Street West. The Site has approximately 83.2 metres of frontage on King Street with an overall site area of 0.3 hectares.

2.2 Existing Conditions

The Site is a consolidation of three existing commercial and residential properties, including a pharmacy, dental office and a cluster of street facing 3-storey commercial at grade with residential above properties and rear parking areas. The properties combined currently include 18 market-rental dwelling units, most of which are occupied. The existing three buildings are situated close to King Street West, with surface parking provided at the rear.

The construction date of the existing dwellings are unknown and they do not have any heritage status, being neither listed as a non-designated property of cultural heritage value or interest on the Municipal Heritage Register, designated under the Ontario Heritage Act, or identified on the Kitchener Inventory for Historic Buildings.

Dodds Lane runs along the rear of the existing buildings and serves as the secondary access point for the Site. Each property also has a separate driveway access to King Street through the rear parking lot. There is little to no vegetation on the Site.

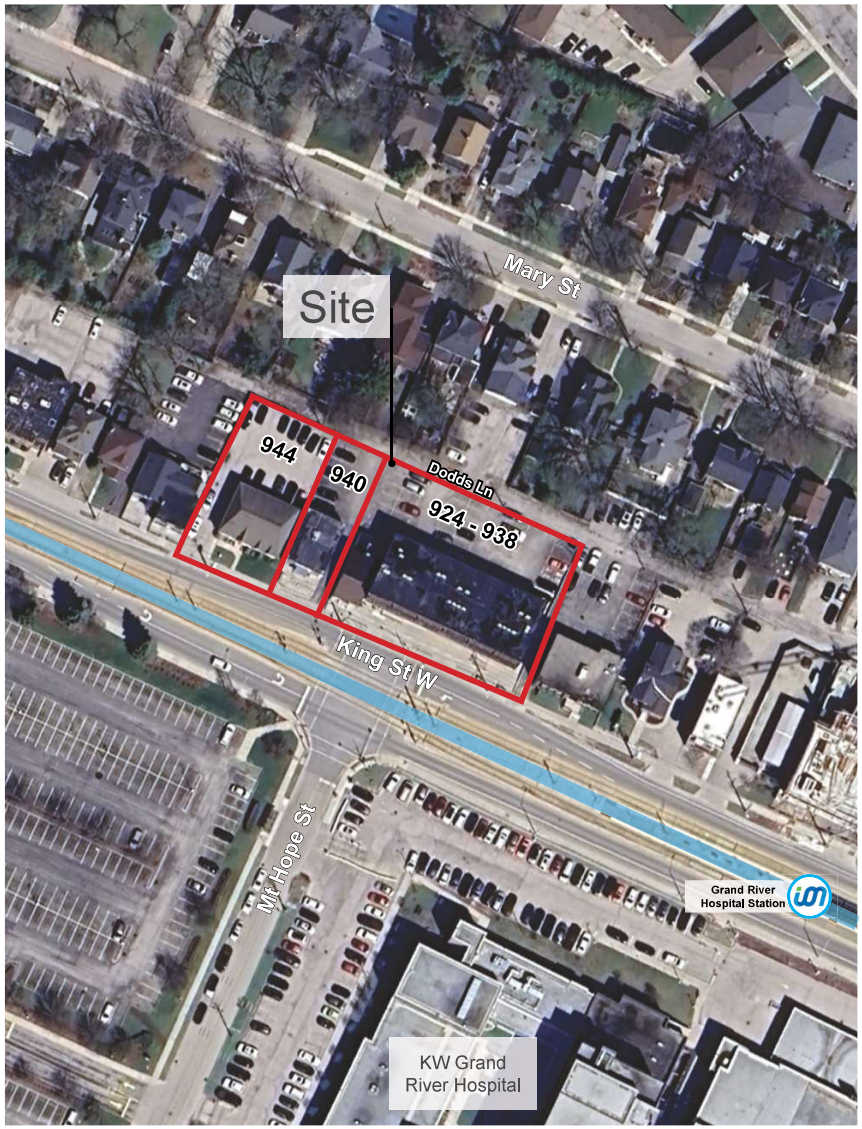


Fig.1: Site Location

3. SURROUNDING CONTEXT ANALYSIS

3.1 Street and Block Pattern

The Site is located within a rapidly urbanizing area of Kitchener, positioned between the Urban Growth Centres of both the City of Kitchener and the City of Waterloo. It is surrounded by a mix of commercial, residential, and institutional uses, with the immediate area featuring various mid- to high-rise developments that contribute to the ongoing intensification of this strategic growth area.

The Site is located approximately 250 west of the existing Grand River Hospital iON Station and within a Projected Major Transit Station Area. The Site is also proximate to existing Grand River Transit ("GRT") services on King Street West, Union Street and Glasgow Street. The Iron Horse Trail—which stretches for approximately 5 km between Kitchener and Waterloo—is less than a 10-minute walk from the Site, offering a scenic route for commuting or recreation.

The Site is within walking distance of several key community amenities, including places of worship and the Kitchener Waterloo Collegiate and Vocational School. It is also conveniently close to the Mount Hope Cemetery, which features walking pathways, as well as recreational facilities such as the YMCA, Walter St. Park, and Cherry Park, providing residents with a variety of options for outdoor activities and fitness.

As identified on Figure 2, the immediately surrounding land uses are as follows:

North: Existing low-density residential dwellings along Mary Street, including single detached residential dwellings as well as duplexes and low rise apartment buildings; existing commercial and office buildings on the west side of Pine Street.

- **East:** An existing high-rise residential building on at the northeast corner of Pine Street and King Street West; mix of low-rise residential and commercial uses on the east side of Pine Street; existing commercial, office health office and multiple dwelling uses further east along King Street.
- **South:** Existing Grand River Hospital with a number of associated surface parking facilities; Sunlife Financial to the southwest, on the west side of Union Street
- **West:** A mix of low-rise residential and commercial uses on the west side of Union Street (between King Street West and Herbert Street).

The Site has access to high levels of public transit services which include:

Light Rail Transit (ION): A transit stop located in front of the subject lands currently offers service up and down the King Street Corridor to Conestoga Mall and Fairview Park Mall (Route 301). The LRT connects to the ION/ixpress buses.

Grand River Transit: Route 4 – Glasgow – Margaret Route. This bus route provides connection from East – West across the City of Kitchener with connections to the Frederick Bus Station to the Boardwalk. Route 7 – King Route. Provides bus transit from Fairview Park Mall to Conestoga Station.

King Street has barrier free sidewalks up and down the corridor. Cycling routes (Spur Line Trail and the Iron Horse Trail are just over 500 metres away from the Site providing North-South access through the City.

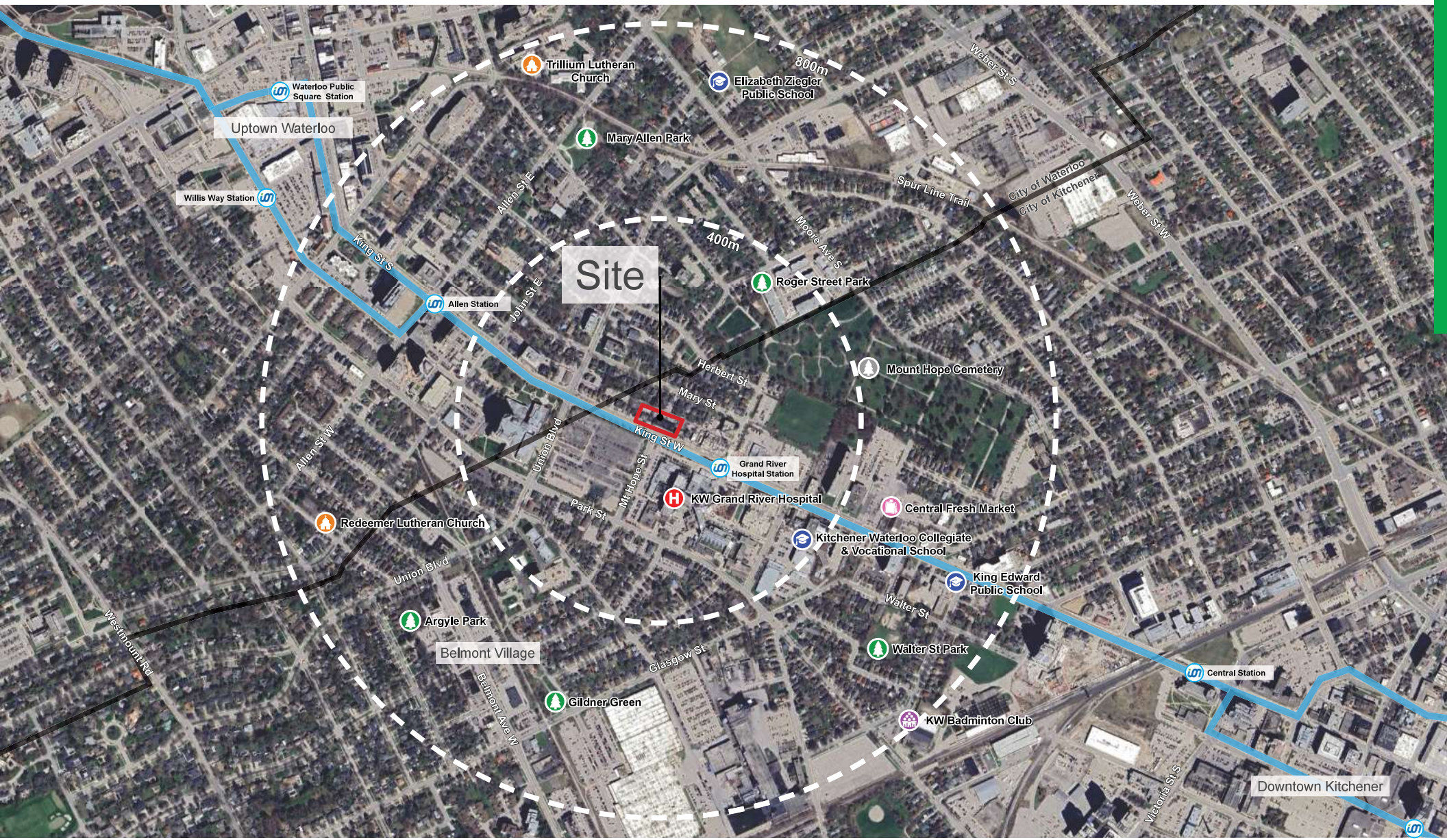


Fig.2: Surrounding site context

3.2 Abutting Properties

North: Existing low-density residential dwellings along Mary Street

East: Low-rise commercial uses along King Street and high-rise residential building is located at the northeast corner of Pine Street and King Street

South: Existing Grand River Hospital with a number of associated surface parking facilities

West: Low-rise commercial uses along King Street

Rear View of Site and Dodds Lane

4. DESIGN POLICY AND GUIDELINE FRAMEWORK

4.1 City of Kitchener Official Plan

Growing Together

The Site is located within a Protected Major Transit Station Area in OPA49, which are areas intended to support transit through accommodating future growth and development through a mix of residential, office, institutional and commercial uses that provide for connectivity to various modes of transportation and have streetscapes and built forms that are pedestrian and transit friendly.

The Site is designated as "Strategic Growth B" in OPA 49, which permits all forms of residential development as well as a range of non-residential uses that will support complete communities. Development within Strategic Growth Area A will have a maximum building height of 28 storeys, a minimum FSR of 1.0 and no maximum FSR.

The Proposed Development conforms with the applicable designations and policies of OPA 49.

4.2 General Urban Design Policies

Section 11 of the Official Plan contains general urban design policies that are used to evaluate movement patterns, the relationship between built form and open spaces, integration of natural and cultural resources and development impacts. They include:

- General urban design policies that speak to the city's skyline, CPTED principles, fire prevention, barrier-free accessibility, and shade.
- Site Design policies speak to street relationships and landscaping to improve abutting streetscapes; developments to improve aesthetic quality and be safe, comfortable, functional and provide circulation for all transportation modes; and site servicing and utilities to be screened from public view.
- Building Design, Massing and Scale design policies speak to human-scale proportions to support a comfortable and attractive public realm, including attractive building forms, façades, and roof designs; complementary design of new buildings; and architectural innovation and expression.

Section 17.E.10.5 identifies that urban design briefs/ reports together with other design-related are meant to be used to

- demonstrate that a proposed development or redevelopment is compatible;
- address the relationship to and the privacy of adjacent residential development; and,
- ensure compatibility with the existing built form and the physical character of the established area and/or neighbourhood.

4.3 Urban Design Manual

PART A – Design Guidelines
Part A contains design guidelines on various land uses, built types, geographic areas, and urban structure elements. The below are relevant to the Subject Site and the proposed development:

The City-Wide design guidelines seek the design of Kitchener as an inclusive, safe, accessible, comfortable, and appealing place to live, work and play. The Site Design guidelines in the City-Wide address built form, open space and site functionality.

The Major Transit Station Areas guidelines apply generally for areas surrounding ION Stations; the Subject Site is within the Station Area of the Central Station. The guidelines indicate they do not apply to Downtown sites, but they do inform design.

The Tall Buildings guidelines provide form and site guidance to buildings greater than 8 storeys in height and are meant to be applied on a case-by-case basis.

PART C – Design Standards
Part C contains design standards with specifications on technical details. Several standards are applicable to the proposed development, including those for access to roads, surface parking, outdoor lighting, accessibility, pedestrian-supportive development, transit-supportive development, rooftop mechanical equipment screening, emergency services, multiple residential, landscaping and natural features, and landscape design. These technical aspects of the detailed design will be evaluated at a later stage of the review process through Site Plan Approval.

5. PROPOSED DEVELOPMENT

5.1 Site Design

The Proposed Development is a 28-storey mixed-use building that includes both residential units and commercial spaces, along with private amenity areas. The design features a 5-storey podium that forms the base of the structure. The Proposed Development will occupy the majority of its Site with a building footprint of approximately 1,858 square metres, which covers 62% of the total site area after the planned road widening. The total gross floor area of the development is 34,390 square metres, resulting in a floor space ratio of 11.5

The residential portion of the development consists of 341 units, offering a mix of unit types, including one-bedroom, one-bedroom plus den, two-bedroom, and three-bedroom units. At the ground level, approximately 659 square metres is allocated for commercial uses, which will help activate the street frontage along King Street West. These commercial spaces are designed to encourage pedestrian traffic and integrate the development into the surrounding urban fabric.

The Site features a through driveway that plays an important role in the overall site circulation. This driveway runs from King Street West to Dodds Lane, allowing vehicles to move efficiently between the two streets without requiring significant turns or causing traffic congestion along the main frontage. The primary access to the Site will be from King Street West, designed as a left-in, left-out configuration. Dodds Lane, which runs along the rear of the building, serves as the secondary access point for the Site.

To preserve the aesthetic integrity of the streetscape, parking for the development will be provided in a combination of one underground parking level and five levels of structured podium parking (Levels 1-5). The total number of parking spaces is 182, which will serve both the residential and commercial users of the building. Additionally, the development includes dedicated bicycle storage on the ground floor and underground consisting of a total of 342 bicycle stalls (Class A) and 8 bike racks (Class B), promoting sustainable transportation options for residents and visitors.

Beyond the immediate site boundaries, the surrounding area is set for further urban intensification. Major developments in the vicinity include the Station Park project, which is a multi-phase condominium development with towers ranging from 18 to 44 storeys, as well as The Bright building at 741 King Street West, standing at 18 storeys. Additionally, there are 25 storey mixed development proposed at 900 King Street West (adjacent to the Site) and a proposed 44-storey residential building at 864-872 King Street West. These projects, along

with the Proposed Development, align seamlessly with the evolving character of the neighbourhood, demonstrating a cohesive approach to urban growth. This foresight informs the development's compatibility with the surrounding urban fabric, positioning it optimally for future growth and integration within the community. The Growing Together Kitchener initiative further supports this intensification by encouraging higher-density, mixed-use developments in key areas like this. As part of a Strategic Growth Area, this development is well-positioned to contribute to the City's vision of sustainable, transit-oriented growth, ensuring compatibility with the surrounding urban fabric and optimizing its role in the community's future development.

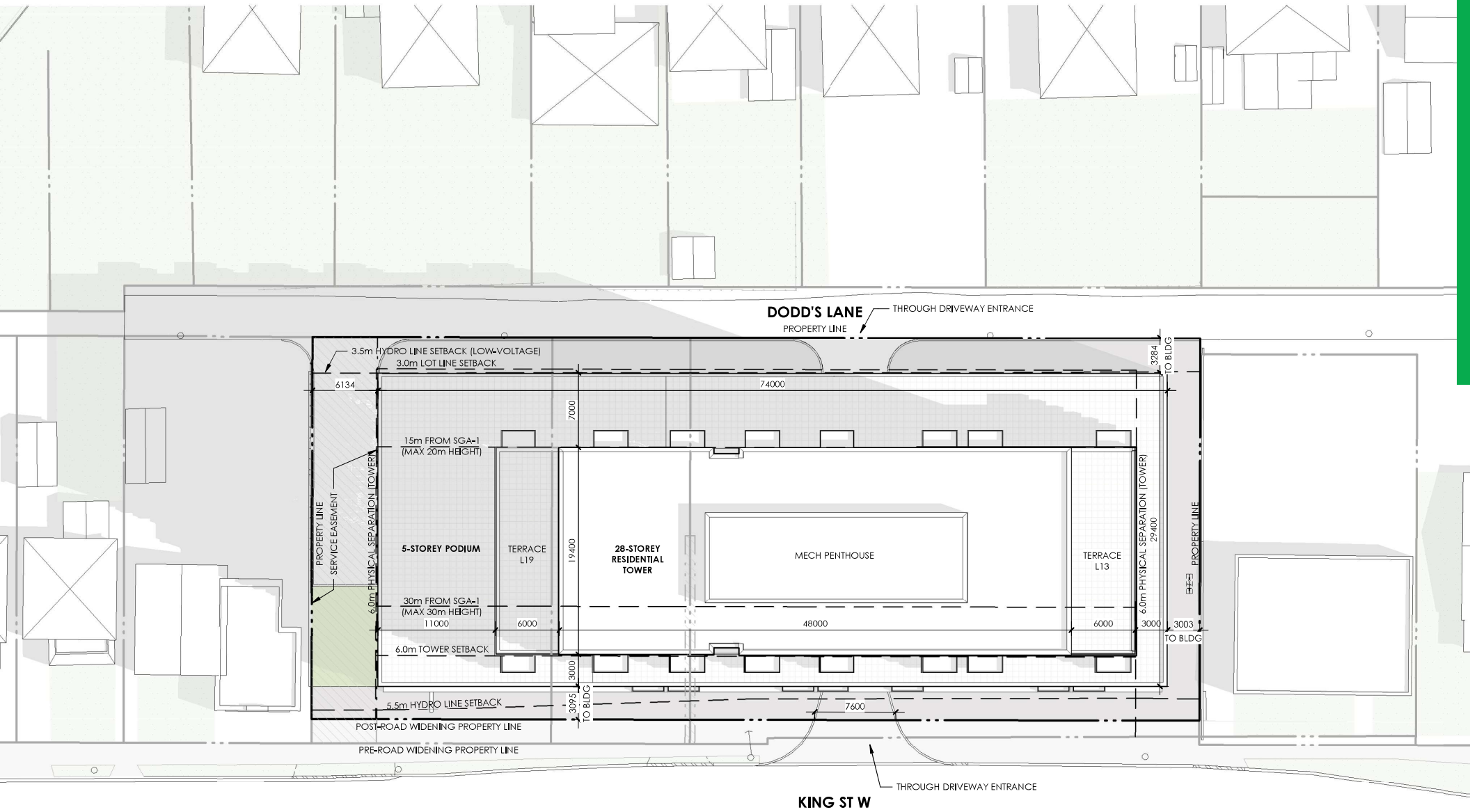


Fig.3: Aerial Site Plan prepared by ABA Architects Inc.

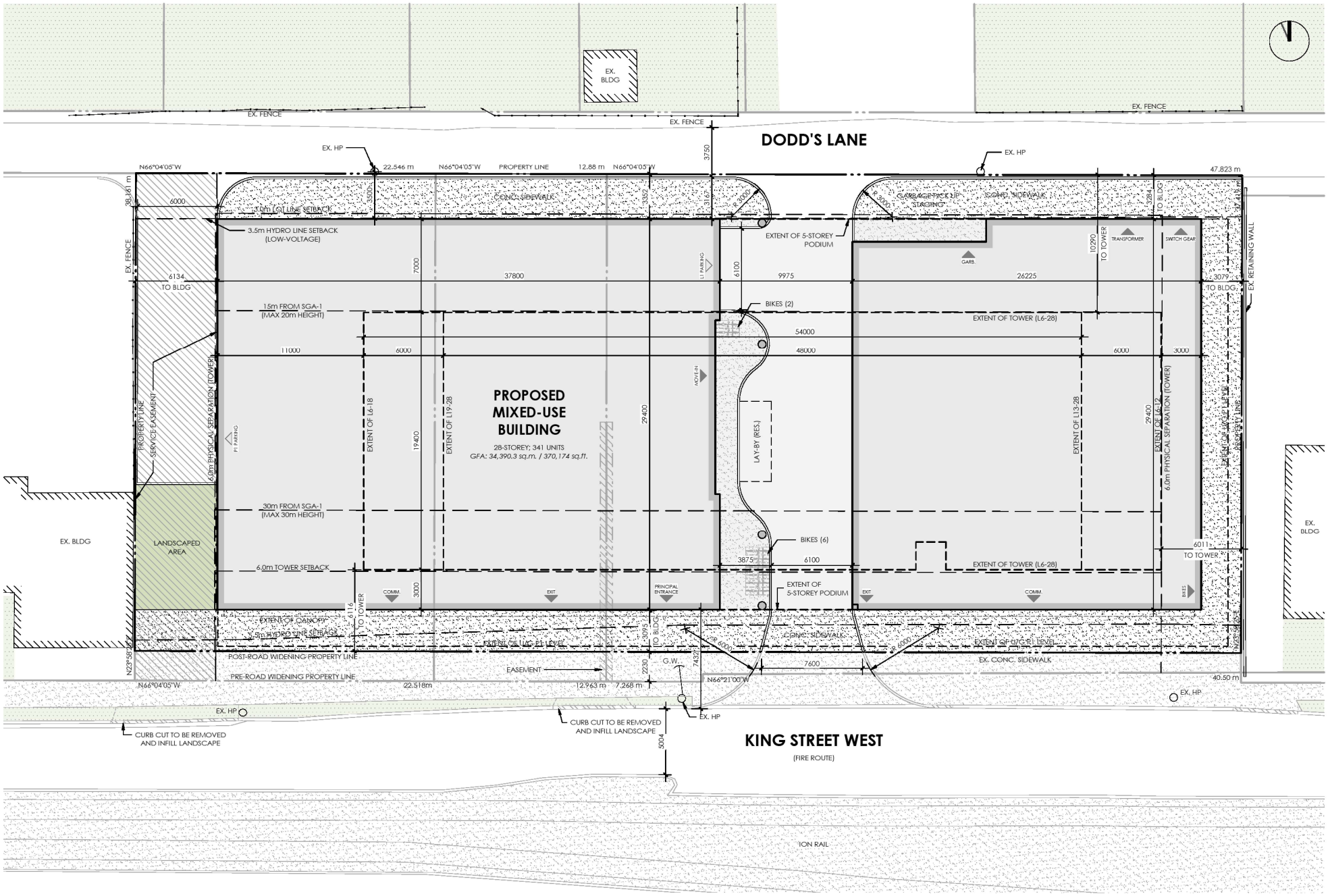
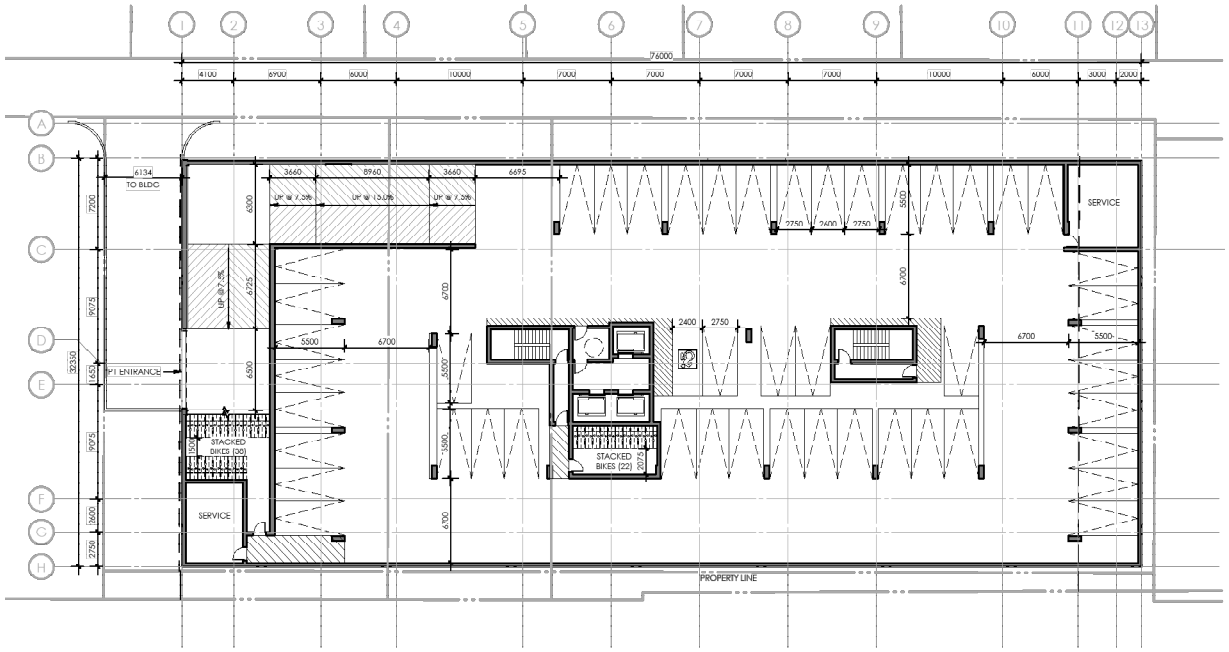
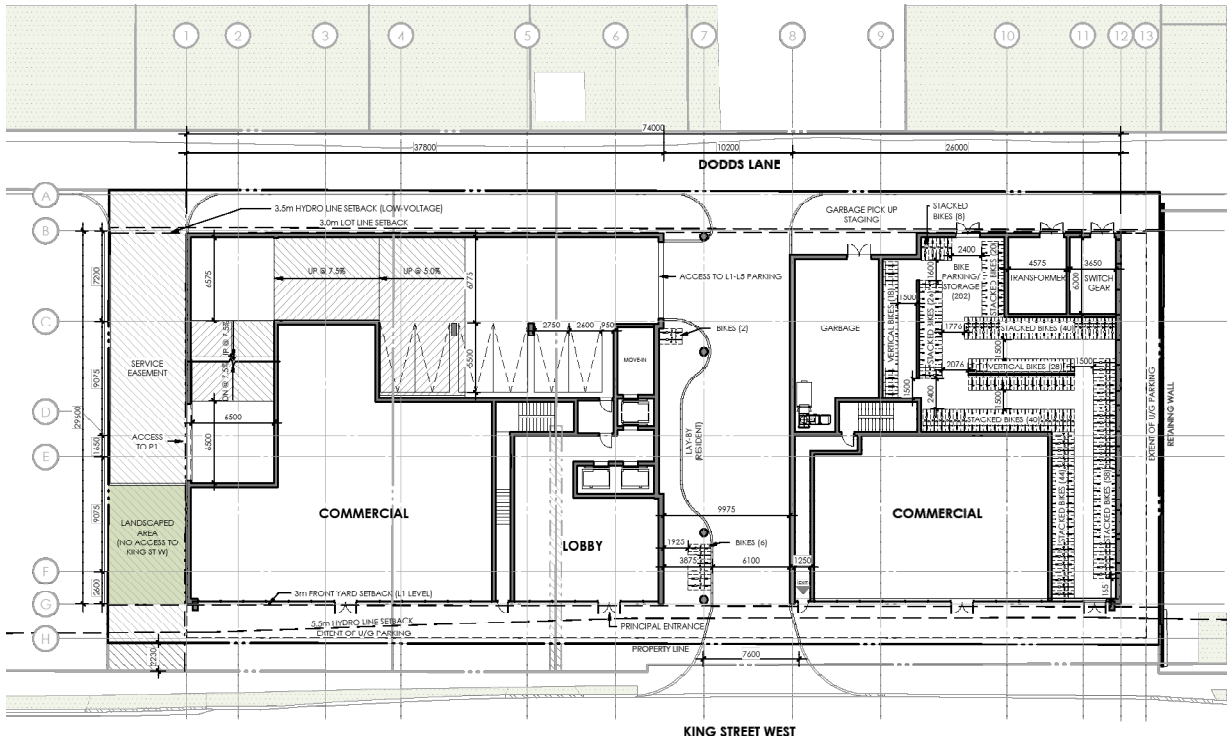


Fig.4: Site Plan prepared by ABA Architects Inc.

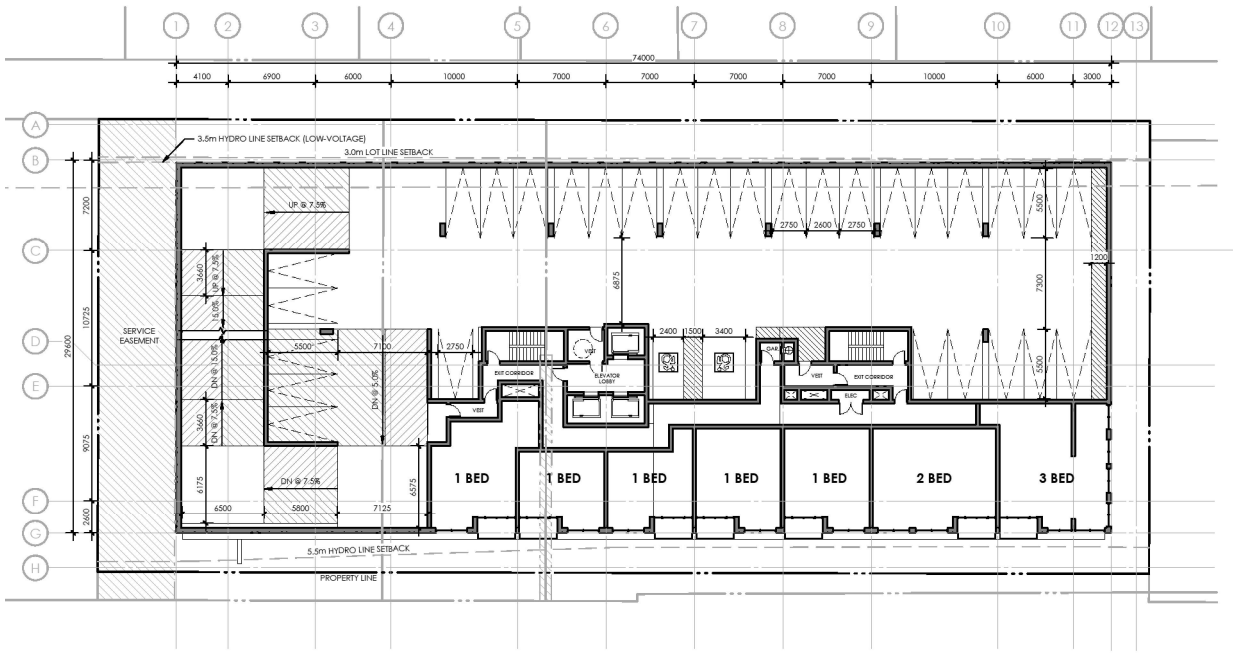


Level P1

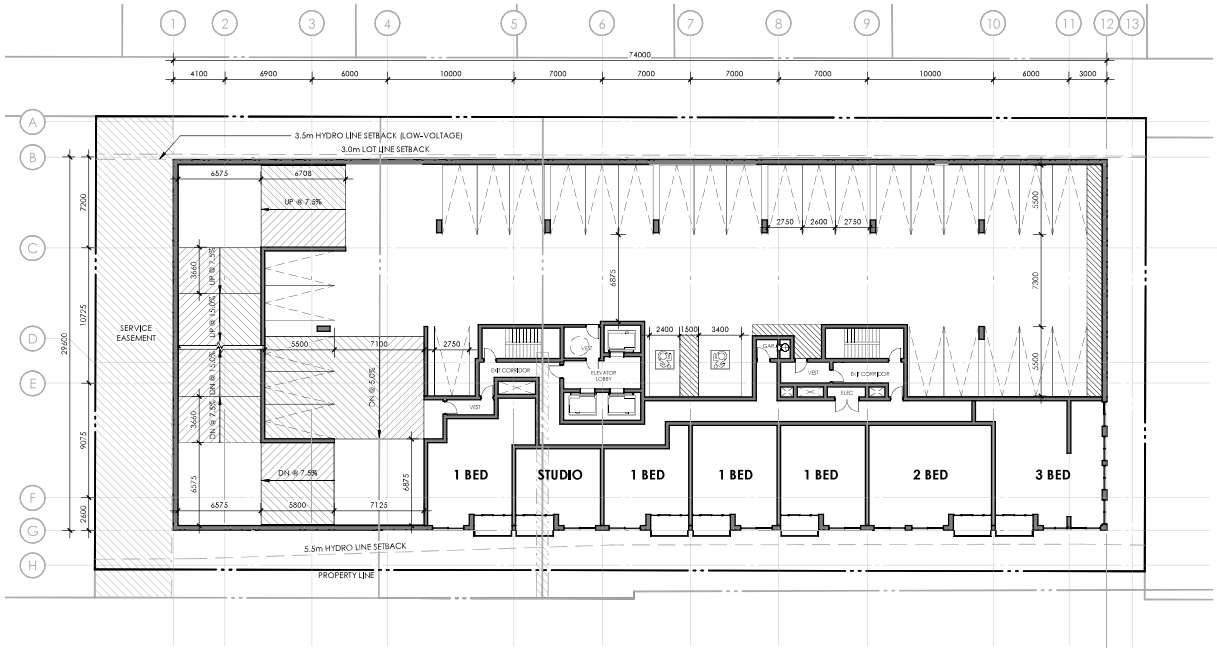


Ground Floor

Fig.5: Floor Plans prepared by ABA Architects Inc.

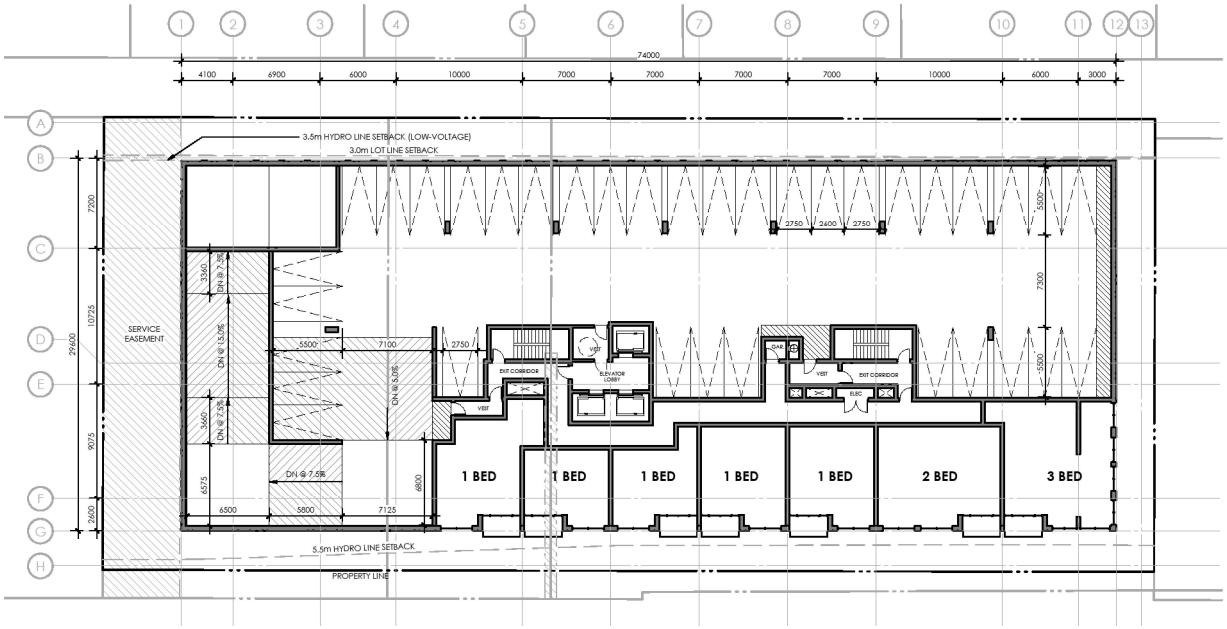


Levels 2

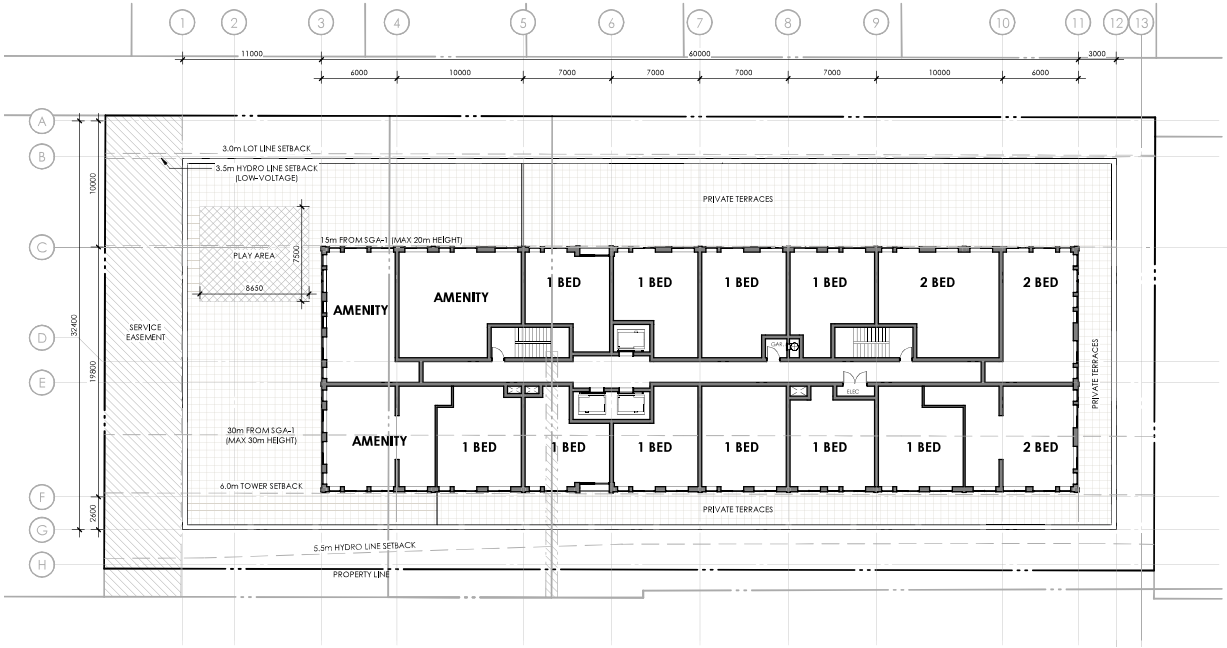


Levels 3-4

Fig.6: Floor Plan prepared by ABA Architects Inc.

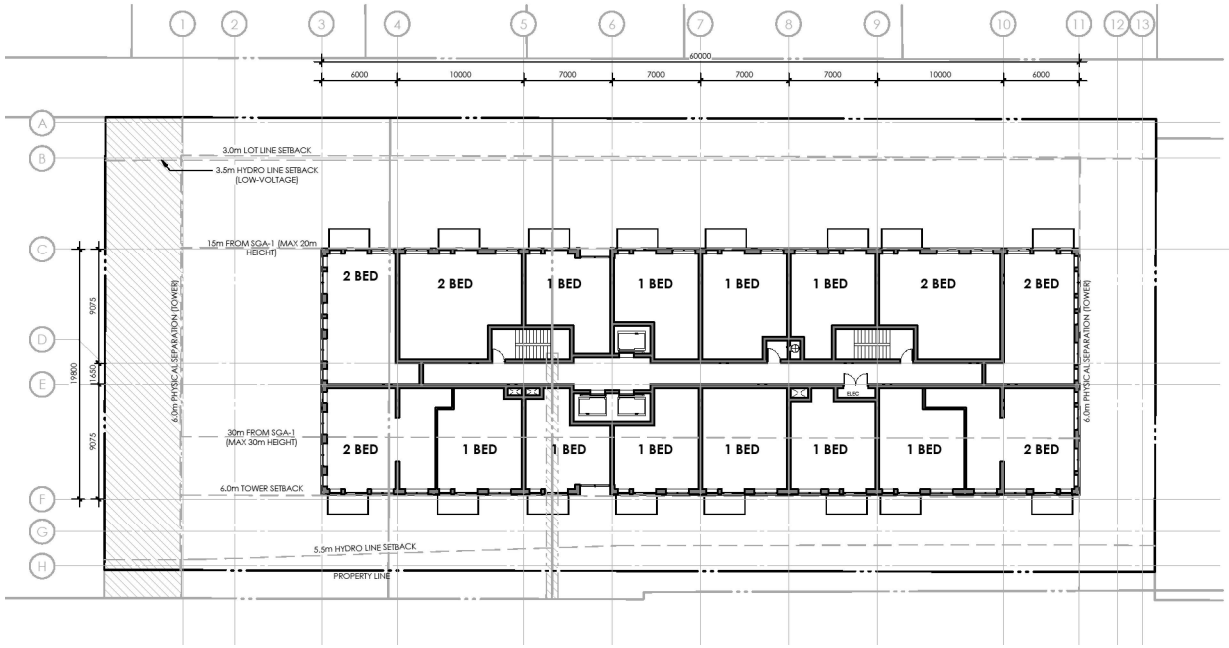


Levels 5

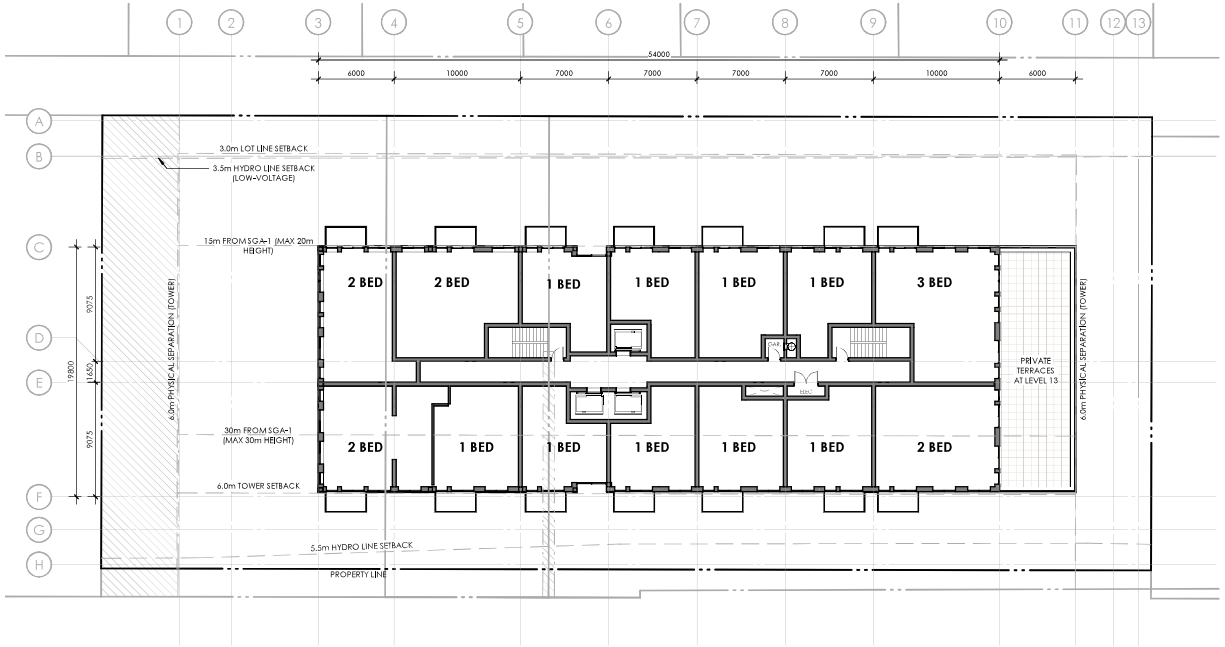


Level 6 (Rooftop Terrace)

Fig.7: Floor Plan prepared by ABA Architects Inc.



Levels 7-12



Levels 13-18

Fig.8: Floor Plan prepared by ABA Architects Inc.

5.2 Building Design

Podium Design

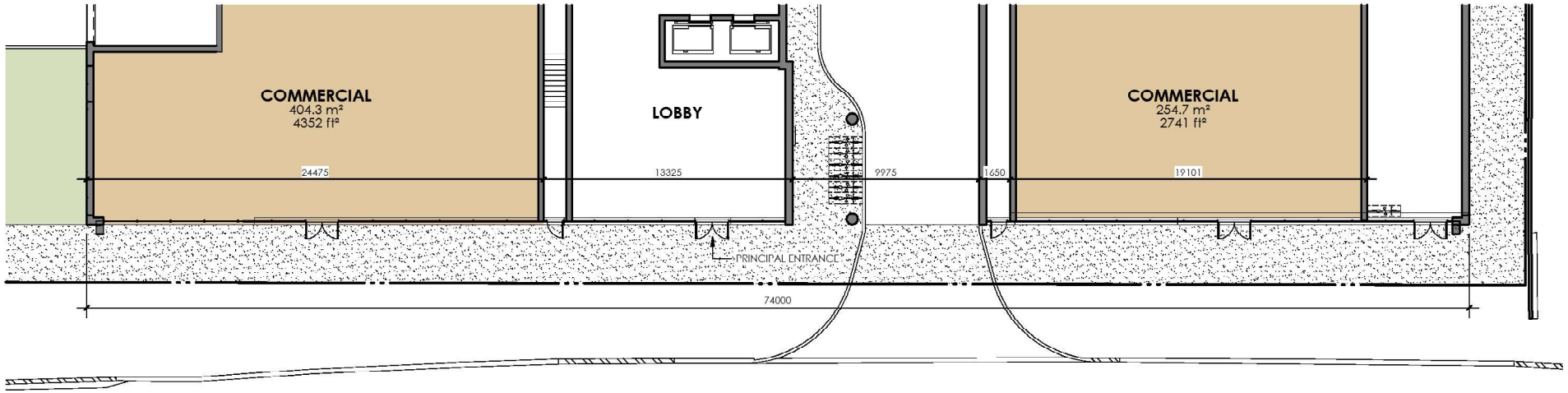
The podium portion of the Proposed Development aligns with the Growing Together initiative, which identifies this section of King Street as a Priority Street, allowing the building to be positioned closer to the street to support a vibrant, active streetscape. The podium maintains a front yard setback of 5.32 metres from King Street West pre-road widening and 3 metres post-road widening, in line with the surrounding building front yards. Side yard setbacks of 3 metres and 6 metres are proposed from the eastern and western property lines respectively. The ground floor has a taller floor-to-ceiling height of a minimum of 4.5 metres allowing for versatile commercial uses and residential entrance, providing an active streetscape and contributing to the vibrancy of the area. The ground floor design continuously lines King Street frontage with a significant amount of transparency, except for a break associated with driveway, resulting in approximately 75% of the ground floor facade openings. This includes the two commercial spaces and the residential lobby that front King Street West. The total facade area measures 262.4 square metres, with 196.6 square metres dedicated to facade openings. A total of 43.6 metres of commercial use frontage is provided along the 74-metre street line, resulting in 59% of the ground floor being occupied by commercial uses.

Large glass storefronts ensure visibility from the street, drawing attention to the businesses and creating an inviting atmosphere for passersby. The commercial units have direct access from King Street West, promoting ease of entry and encouraging foot traffic. The residential lobby provides access to elevators, a mailroom, and a move-in room. Additionally, the ground floor level consists of a bicycle storage room, as well as garbage and recycling areas with collection access via Dodds Lane. The through driveway connecting King Street West to Dodds Lane doubles as a drop-off and pick-up area for residents. Service areas, including the building transformer, are located at the rear of the building and screened from view from King Street West.

The podium is designed as a mid-rise structure, standing 5 storeys, measuring 19.3 metres tall from King Street West. The 5-storey podium seamlessly integrates into the existing and planned streetwall, offering a human-scale frontage that aligns with the buildings along King Street West. The development removes emphasis on the automobile by incorporating parking completely within the limits of the building. Parking is provided within one level of underground parking and within five levels of the podium (Levels 1-5). To maintain an inviting streetscape, residential units are positioned along King Street West, concealing the parking areas and ensuring a lively, pedestrian-friendly frontage.

STREETLINE GROUND FLOOR FACADE OPENINGS

OVERALL FACADE AREA: 262.4m²
FACADE OPENINGS AREA: 196.9m²
PERCENT OPENINGS: 75%



STREETLINE COMMUNITY/COMMERCIAL USE

STREET FACADE LENGTH: 74.0m
COMMERCIAL USE LENGTH: 43.6m
PERCENT: 59%

KING STREET WEST

Fig.9: Priority Streetscape prepared by ABA Architects Inc.

Tower Design

The tower portion of the proposed development consists of large slab floorplates with footprints ranging from 1160 square metres to 930 square metres (between Levels 6 to 28), sitting atop the mid-rise podium structure, reaching 28 storeys in height and an overall building height of 94.1 metres.

The tower is stepped back from all sides of the podium and includes upper storey stepbacks on the east and west portions of the tower. The tower is set back approximately 6 metres from the King Street property line (post-road widening) to the tower's edge at Level 6, 6 metres from the eastern side of the tower at Level 13, and 6 metres from the western side of the tower at Level 19. The tower is set back 10.3 metres at the rear at Level 6, adjacent to Dodd's Lane.

It is important to note that the rear yards of residential properties backing onto Dodds Lane are deeper, with an average depth of 14-16 metres. Some of these rear yards directly abutting the site are used as surface parking lots, while others feature landscaped areas with mature trees, adding a buffer between the development and neighbouring residences.

Separation

The proposed tower arrangement follows the SGA-3 Zoning regulations for physical separation. From Levels 6-12, a 6-metre physical separation distance is maintained between the tower and the eastern property line. From Levels 13-28, a 12-metre separation is maintained from the eastern property line. Similarly, on the western side, a separation distance of 17 metres is maintained from Levels 6-18, and 23 metres from Levels 19-28. The tower maintains a physical separation distance of 10.29 metres to the rear yard lot line.

A 3.75-metre-wide lane (Dodds Lane) abuts the rear of the building, providing an additional buffer and resulting in a total separation distance of approximately 14 metres from the adjacent low-rise residential properties. These deeper residential rear yards, averaging 14-16 metres, further reduce direct impacts on neighbouring residences, helping to minimize potential privacy and shadowing effects on these properties.

Top Design

The top of the tower features an enclosed mechanical penthouse, with the uppermost storey set back from the public realm to minimize its visual impact and enhance the overall skyline appearance.

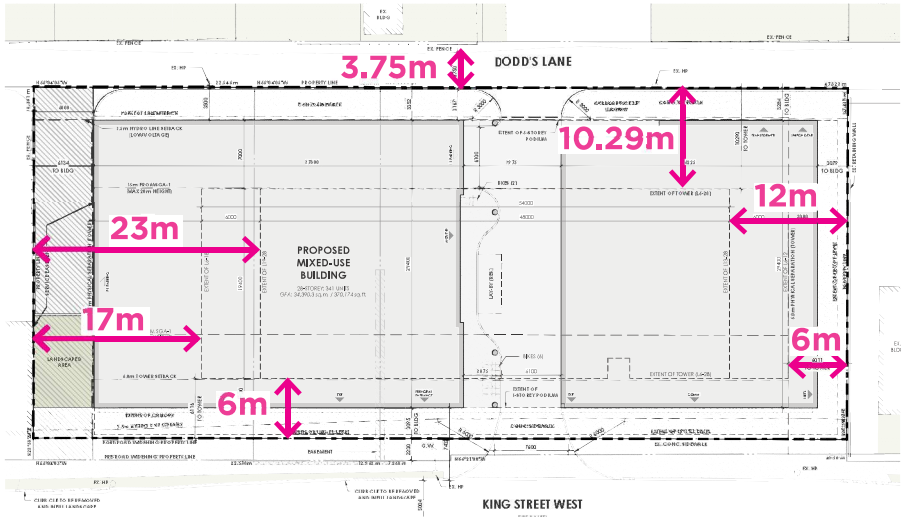
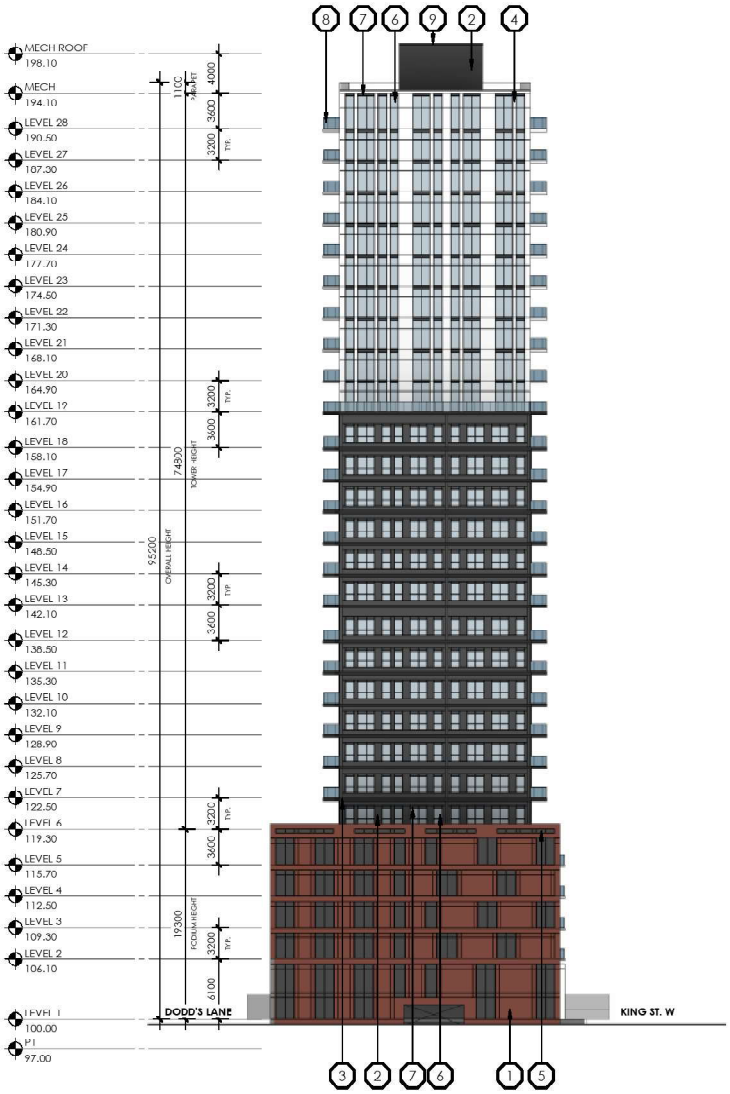


Fig.10: Building Setback and Separation Distance Diagram

Fig.11: View of the 3D rendering of the Proposed Development from King Street West

MATERIAL LEGEND

1. BRICK COLOUR: RED
2. METAL PANEL COLOUR: DARK GREY
3. METAL PANEL COLOUR: BLACK
4. METAL PANEL COLOUR: WHITE
5. BRICK COLOUR: DARK GREY
6. VISION GLAZING FRAME COLOUR: BLACK
7. SPANDREL GLAZING COLOUR: DARK GREY
8. GLAZED BALCONY GUARD RAILING COLOUR: BLACK
9. METAL CAP FLASHING COLOUR: GREY
10. GLAZED BALCONY SLIDING DOOR VISION GLAZING FRAME: BLACK



WEST ELEVATION

SOUTH ELEVATION - KING ST. WEST

Fig.12: Elevations

MATERIAL LEGEND

1 BRICK
COLOUR: RED

3 METAL PANEL
COLOUR: BLACK

5 BRICK
COLOUR: DARK GREY

7 SPANDREL GLAZING
COLOUR: DARK GREY

9 METAL CAP FLASHING
COLOUR: GREY

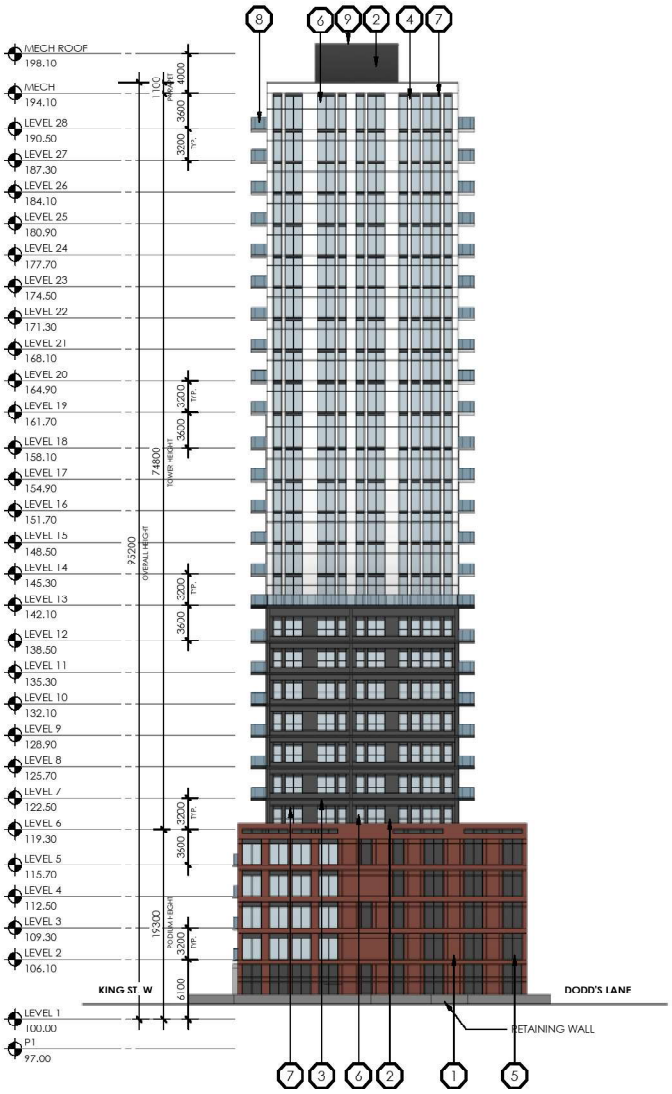
2 METAL PANEL
COLOUR: DARK GREY

4 METAL PANEL
COLOUR: WHITE

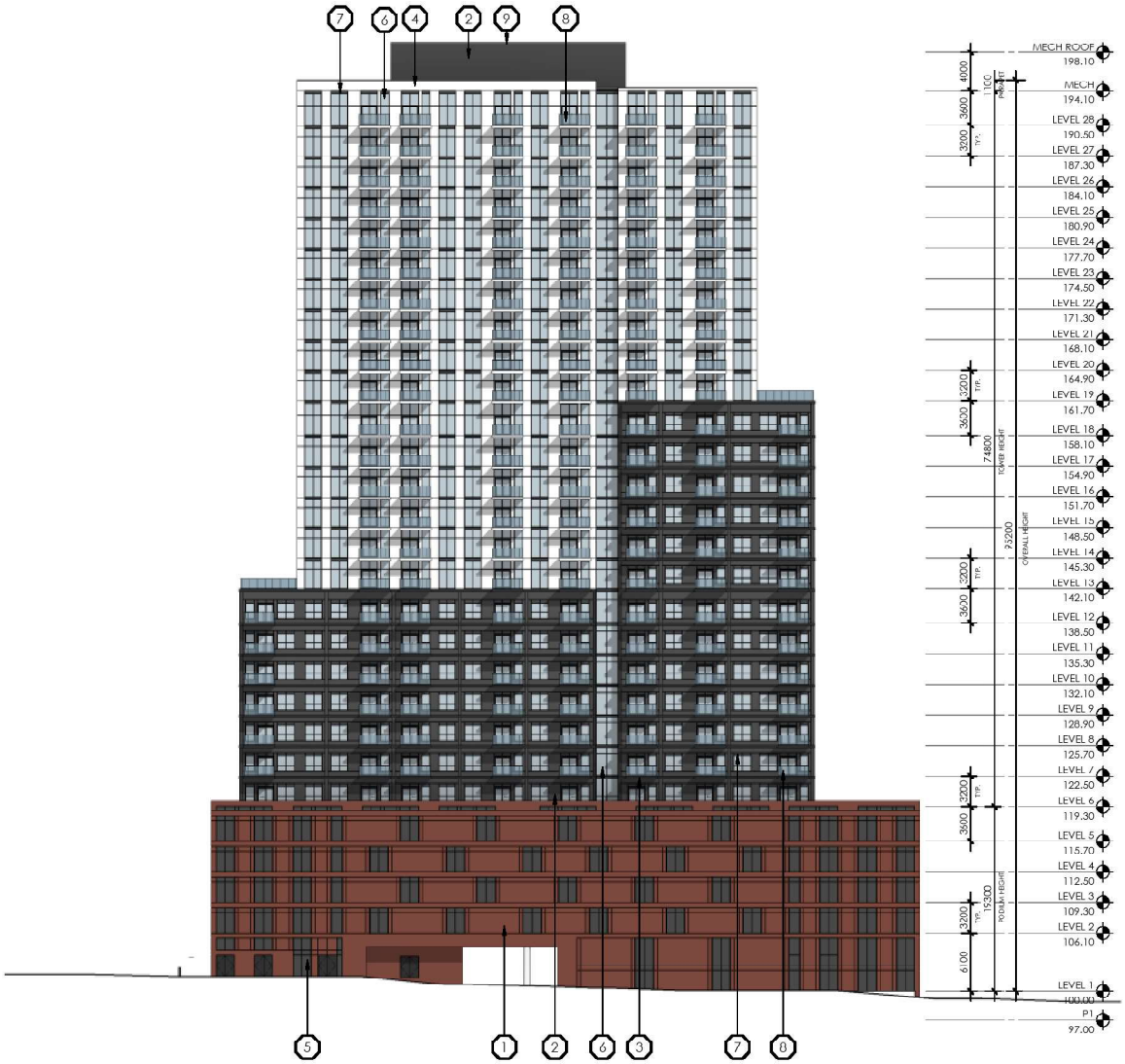
6 VISION GLAZING
FRAME COLOUR: BLACK

8 GLAZED BALCONY GUARD
RAILING COLOUR: BLACK

10 GLAZED BALCONY SLIDING DOOR
VISION GLAZING
FRAME: BLACK

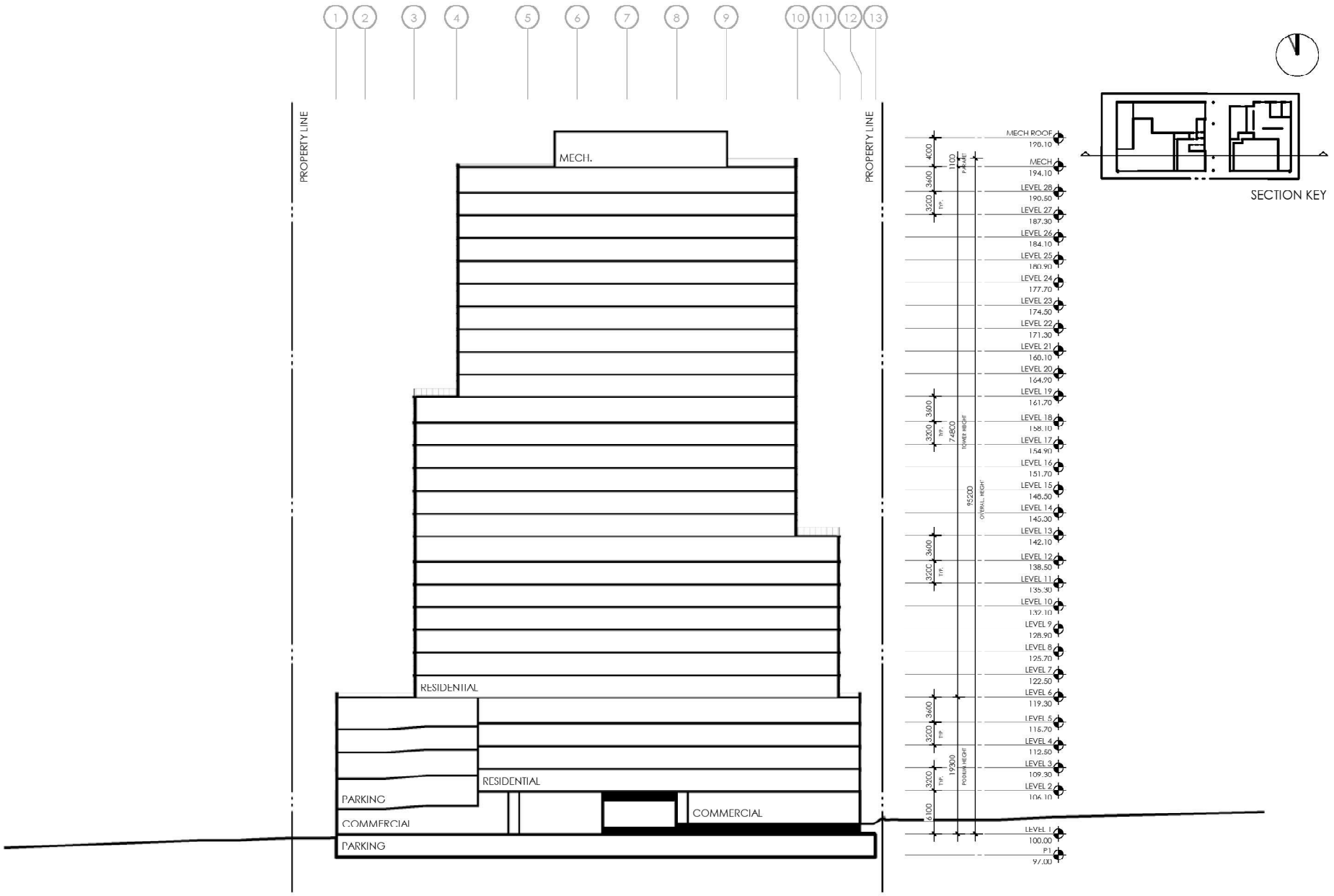


EAST ELEVATION



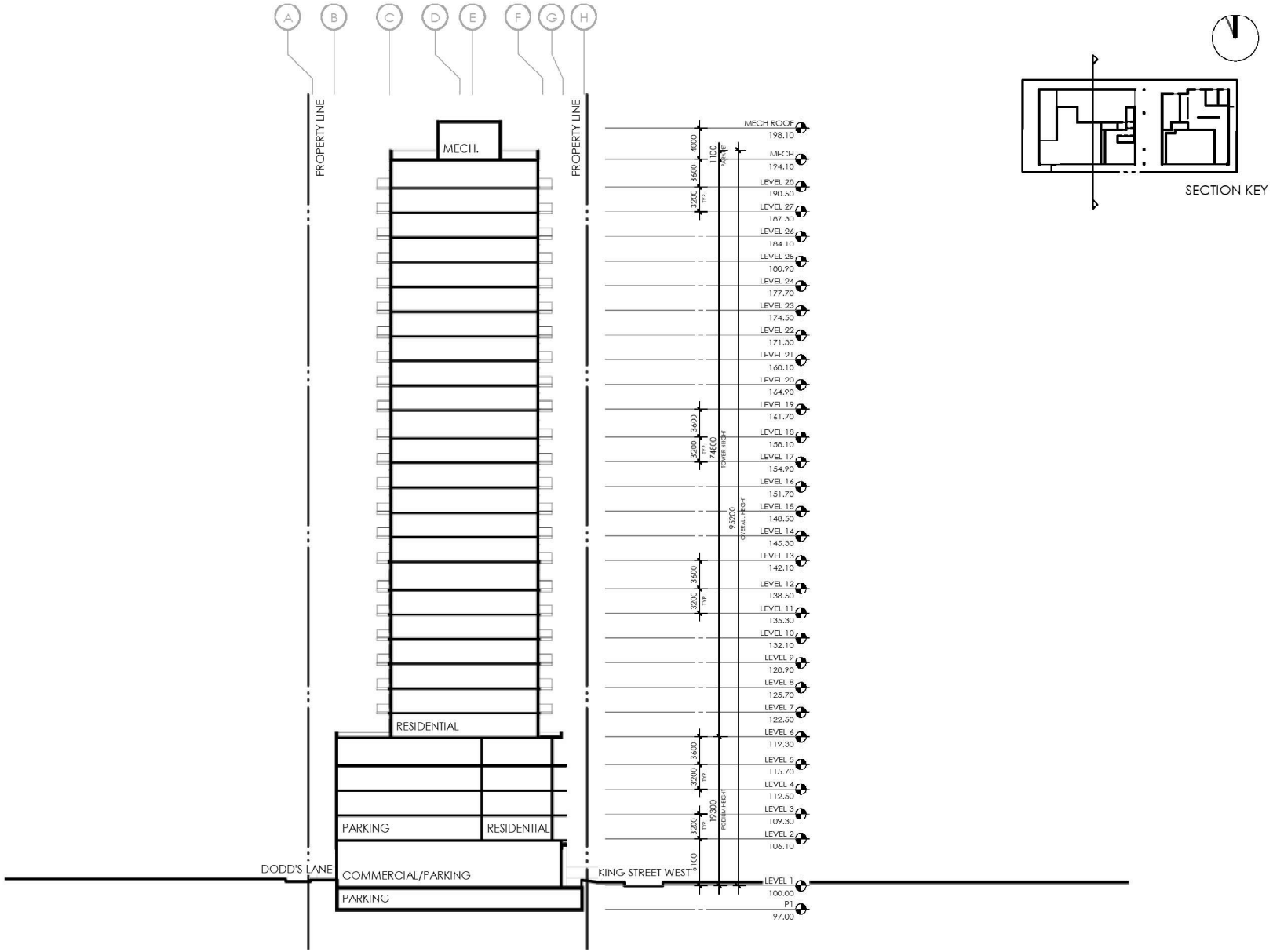
NORTH ELEVATION - DODD'S LANE

Fig.13: Elevations



EAST-WEST CROSS SECTION

Fig.14: Cross Section



NORTH-SOUTH CROSS SECTION

Fig.15: Cross Section

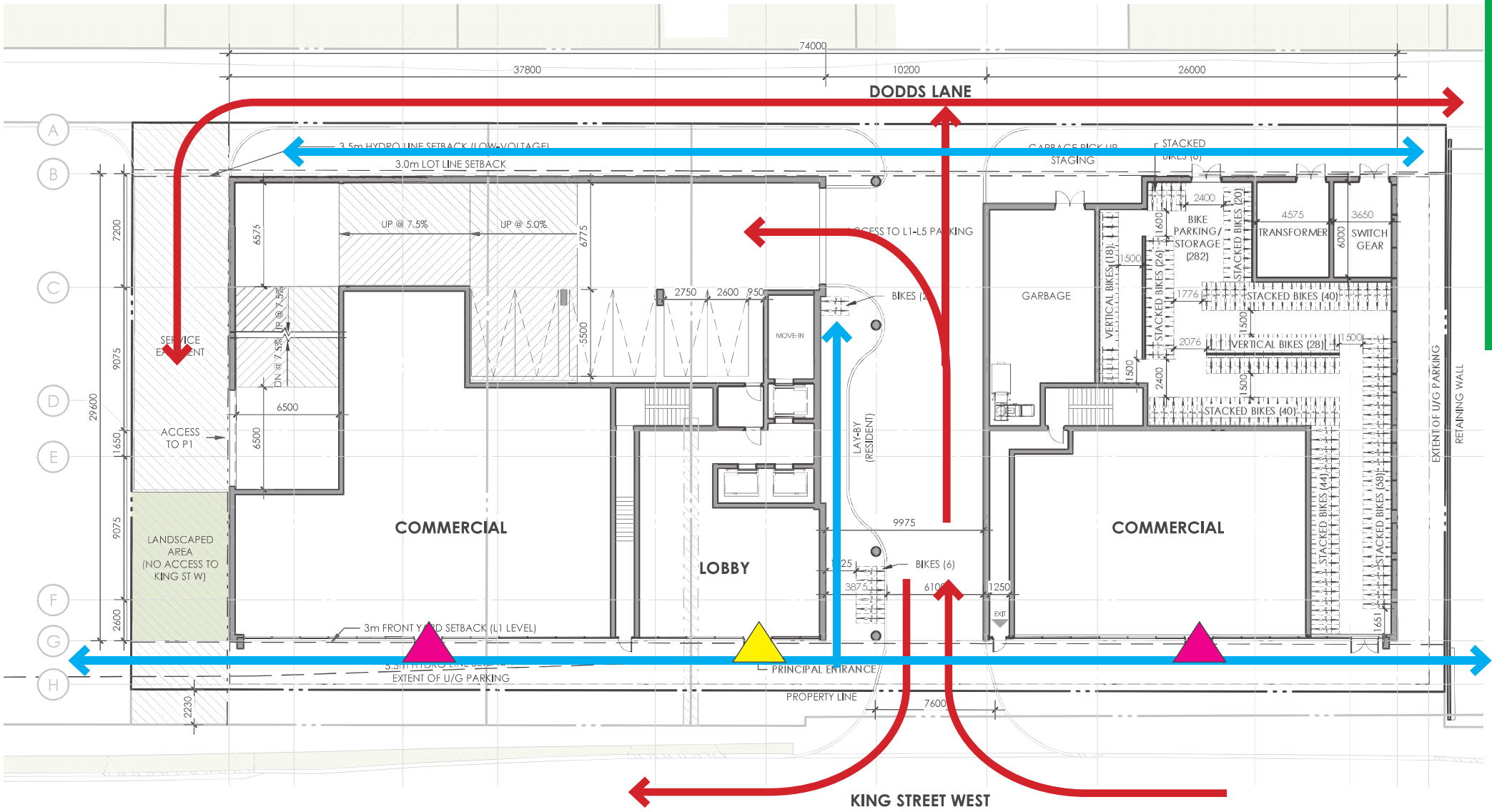
5.3 Access and Circulation

The primary access point to the Site is from King Street West, where the driveway has been intentionally aligned with the Mount Hope Street intersection to improve traffic flow and accessibility. This alignment enhances connectivity and facilitates safe entry and exit for vehicles. The driveway provides access to both the underground parking levels and the podium parking garage, and it continues through to Dodds Lane at the rear of the building, enabling smooth circulation and access to service areas. The driveway also accommodates pickup and drop-off functions, ensuring convenient access for residents and visitors.

Dodds Lane, which runs parallel to the Site on the south side, serves as an additional access point, particularly for service vehicles. It provides entry to the service areas located at the rear of the building, including garbage collection and loading zones.

This lane also helps separate service traffic from the primary pedestrian and vehicle access along King Street West, reducing congestion.

Pedestrian circulation is focused along King Street West, where active frontages such as the commercial units and residential lobby are located. Pedestrians have direct access to the building from the sidewalk, encouraging interaction with the street and supporting a pedestrian-friendly environment. The circulation pattern effectively balances vehicle access, service areas, and pedestrian activity, promoting both functionality and safety across the Site.



Pedestrian Circulation

Vehicular Circulation

Commercial Entrance

Residential Entrance

Fig.16: Circulation Diagram

5.4 Parking

A total of 182 parking spaces are proposed, with access provided through a driveway off King Street West, which connects to both the underground and podium parking levels. The parking areas are designed to ensure ease of access and circulation, with clear separation from the pedestrian areas to maintain safety and reduce conflicts.

In addition to vehicle parking, the development includes dedicated bicycle storage on the ground floor and underground consisting of a total of 342 bicycle stalls (Class A) and 8 bike racks (Class B), promoting sustainable transportation options for residents and visitors.

5.5 Service and Loading Areas

The loading and service areas for the Proposed Development are strategically located at the rear of the building, also accessible via Dodds Lane. The garbage and recycling collection areas are conveniently positioned near the loading zone, allowing for efficient waste management without impacting the building's front-facing areas. By locating these service functions at the rear, the design minimizes their visibility from the street, maintaining a clean and active frontage along King Street West, while also ensuring that service traffic remains separate from pedestrian and resident activity.

5.6 Building Articulation

The podium stands at 5 storeys, featuring a red brick facade that aligns with the existing character of the street. The brickwork adds texture and depth to the base of the building, providing a human-scale frontage that enhances pedestrian interaction along King Street West. The ground-level commercial spaces are highly transparent, with large storefront windows that activate the street and promote engagement with the public realm. The composition of the podium, with its clear horizontal and vertical divisions, is articulated through the thoughtful placement of windows and the strategic use of materials, creating a well-proportioned and visually engaging base for the tower above.

Above the podium, the tower rises with stepbacks, especially on the uppermost storeys, which help reduce the perceived mass of the building when viewed from the street. The tower's facade features a combination of dark grey and white metal panels, spandrel glazing, and vision glazing. The balconies, which are equipped with black glazed railings, are uniformly distributed across the tower's façade. These continuous bands of balconies not only offer private outdoor spaces for residents but also contribute to the articulation of the tower by creating shadow lines and a sense of depth. The mechanical penthouse at the top is enclosed and integrates seamlessly into the overall design, contributing to the tower's clean and cohesive appearance.

5.7 Street and Landscape Design

King Street Streetscape
A 3.0-metre front yard setback is maintained along King Street, providing space for the public realm and ensuring adequate room for pedestrian movement. This setback may also allow for additional landscaping or outdoor seating, enhancing the activation of the street frontage and promoting interaction between the building and the public.

To the west of the Site, there is a small, landscaped area that, while not directly accessible from King Street West, offers a visual buffer. This area helps to soften the transition between the building and the street, contributing to an inviting and well-integrated streetscape design.

Amenity Spaces
The Proposed Development includes both indoor and outdoor amenity areas on Level 6, designed as multi-use common spaces with a rooftop terrace that can be programmed for a variety of events and functions. Additionally, private terraces are proposed on Levels 13 and 19. A total amenity area of 3,014.9 square metres are proposed.

The rooftop terrace is not yet fully designed, but the intent is for it to serve as a durable, low-maintenance space, primarily featuring hard surfaces. The vision includes incorporating soft landscape elements, such as raised planting beds with small canopy trees and shrubs, along with a children's play area. Various seating options, moveable furnishings, shade structures, and fireplace features are planned to accommodate different group sizes and provide flexibility for a range of activities.

5.8 Sustainable Design

At a broader city-level of sustainable development, the proposed development at 924-944 King Street West represents a compact and efficient mixed-use project, contributing to the intensification goals of Downtown Kitchener. The development includes a mix of residential units and commercial spaces, which supports the broader mixed-use community in this urban area. The redevelopment is well-integrated into existing community, servicing, transit, and road infrastructure. The unit mix, ranging from one-bedroom to three-bedroom suites, will provide diverse living options for downtown residents. The development form and density align with intensification and redevelopment objectives for a highly transit-supported location.

The Site and building design prioritize sustainable transportation options. The development supports car-free living due to its prime location within close proximity to public transit. Located within the Projected Major Transit Station Area (PMTSA), the site offers easy access to the iON Light Rail service (Grand River Hospital Station), Grand River Transit services, and cycling routes such as the Iron Horse Trail, reducing the need for automobile dependence. The site design also facilitates pedestrian-friendly connections, ensuring safe and direct access from King Street West to Dodds Lane, promoting walkability and alternative modes of transport.

While LEED certification is not being pursued, the design includes several sustainable measures that align with energy conservation and environmental goals:

- **Energy Conservation:** The building design features a window-to-wall ratio conducive to energy efficiency. High-performance glazing and exterior cladding will contribute to insulation and reduce energy consumption.
- **Energy Generation:** At this time, alternative or renewable energy systems have not been explored but could be considered in future design stages.
- Water Conservation: Water conservation measures, including alternative water supply and demand management systems, have not yet been explored.
- **Parking:** Parking is fully integrated into the building, with one level of underground parking and five podium levels, reducing heat island effects by eliminating surface parking.
- **Bicycle Parking:** The development includes 350 bicycle parking spaces, supporting sustainable transportation. Long-term parking is provided in dedicated bike rooms, with additional short-term parking outside the building to encourage cycling as a primary mode of transport.
- **Stormwater Management:** Stormwater will be managed through existing sewer connections on adjacent streets, following the approved engineering plans. Due to the form of the development, additional stormwater quantity or quality controls are not required.
- **Rooftops:** The podium rooftops may incorporate white roofing materials and soft landscaping elements, such as raised planting beds, to minimize heat island effects and promote urban biodiversity.
- **Waste Management:** The building includes internal garbage collection and sorting areas to promote waste reduction and recycling. Convenient access to waste management facilities ensures efficient handling of waste.
- **Bird Collision:** The material choices and façade detailing will address bird collision avoidance guidelines, which can be further explored in the detailed design phase to enhance the building's environmental performance.

The overall design of the development at 924-944 King Street West reflects a commitment to sustainability, supporting both city-wide environmental objectives and the creation of a vibrant, transit-oriented urban community.

5.9 Microclimate Impact Analysis

Shadow Analysis

The tower in the Proposed Development has been strategically situated off-center, positioned slightly towards the east rather than centered on the site, to help limit shadow impacts on nearby properties. This intentional placement minimizes prolonged shadowing on surrounding areas, aligning with municipal standards and the Tall Building Guidelines for sunlight access.

Shadow impacts are reasonable where they maintain a certain threshold of sunlight on different spaces and areas. For private properties, generally the common municipal criterion is 4 hours of sunlight on private amenity areas. For the public realm, the Tall Building Guidelines specifically identify that shadow analysis should demonstrate how a proposed building maintains "daily access to at least 5 hours of cumulative direct sunlight under equinox conditions" on nearby open spaces and sidewalks."

The Shadow Analysis modelling in Appendix A shows the potential shadowing from the proposed development. It models hourly times for the period generally 1.5 hours after sunrise and 1.5 hours before sunset for each of June 21, September 21, and December 21,

The shadow study analysis for the proposed development at 924-944 King Street West in Kitchener examines the impact of shadows cast by the building throughout different times of the year, focusing on the solstices and equinoxes to understand seasonal variations. The key findings of the shadow study are summarized as follows:

Spring/Fall Equinoxes (March 21st and September 21st):

During the spring and fall, shadows in the morning (8:00 AM) are cast towards the west and move gradually to the north as the day progresses. By 2:00 PM, the shadow stretches over the nearby residential properties located behind the Proposed Development. However, by 4:00 PM, the shadows shift towards the east, impacting a few properties but primarily falling over the roads and public areas. In the late afternoon (4:00 PM), the shadows become longer and move further towards the north, covering more residential properties, and open spaces.

Summer Solstice (June 21st):

In June, shadows are much shorter due to the higher position of the sun. At 8:00 AM, shadows are cast towards the west, but they quickly dissipate by mid-morning. By noon, shadows are minimal and are cast over parts of the road but quickly move off-site. In the afternoon, shadows lengthen slightly, casting over the adjacent properties briefly at 2:00 PM, but they rapidly move eastward. By 4:00 PM, shadows begin to stretch towards the north and west, affecting nearby areas slightly, but remain short compared to other times of the year. At 6:00 PM, the shadows are longer but confined to public spaces, with no significant impact on surrounding buildings or residential areas.

Winter Solstice (December 21st):

During the winter, shadows are longest, as expected. At 8:00 AM, long shadows are cast over the west and northwest, impacting some of the nearby properties. By noon, shadows move towards the north, covering parts of the adjacent streets and some residential properties.

At 2:00 PM, shadows are at their longest, casting over both the north and west portions of the Site, including some nearby buildings. By 4:00 PM and 6:00 PM, the shadows extend significantly, covering larger areas due to the low angle of the sun, but this is typical for buildings of this height and location during winter.

The shadow analysis indicates that the shadows cast by the proposed development are generally aligned with the city's best practices and standards. While shadows are longer in the winter, they primarily impact public realm areas and streets, with minimal effect on surrounding residential properties. In the spring, fall, and summer, the shadows are shorter and quickly move across the area, with no extended periods of overshadowing. The development has been designed to mitigate prolonged shadow impact, ensuring compliance with Kitchener's urban design and shadow impact guidelines.

Pedestrian Wind Impact Analysis

According to the wind study prepared by SLR Consulting Ltd. for the proposed development at 924-944 King Street West in Kitchener, the pedestrian wind conditions were assessed using wind tunnel modeling. The study concludes that:

- The development meets wind safety criteria throughout the year in all areas on-site and in the surrounding neighbourhood, both under existing and proposed configurations.
- Current wind conditions around the Site, including nearby transit stops, are generally appropriate for year-round use.
- With the addition of the proposed building, on-site wind conditions remain suitable for the intended uses, including at the main entrance, secondary entrances, building exits, and commercial entrances. A minor design adjustment is suggested to improve wind conditions at one commercial entrance.
- The Level 6 outdoor amenity terrace is expected to have comfortable wind conditions in summer, making it suitable for seasonal use.
- Sidewalks around the development and nearby transit stops continue to maintain appropriate wind conditions for pedestrian comfort year-round.

6. RESPONSE TO POLICY AND GUIDELINE FRAMEWORK

6.1 Response to Official Plan Policy

At 28-storeys, the scale of the proposed development conforms to the High Rise Residential designation of the Official Plan and the urban design objectives because:

- The integration of ground-floor commercial spaces and diverse residential units ensures a vibrant, mixed-use environment where residents can live, work, and interact. By offering access to amenities, surrounding open spaces, and excellent transit connectivity, the design promotes a thriving and inclusive urban setting.
- The red brick podium respects the area's architectural character, while the modern tower enhances the skyline, giving the development a clear identity. The careful integration of stepbacks, balconies, and material choices create focal points, reinforcing a strong sense of place. Although the Site has no direct cultural or natural heritage features, the design aligns with the existing streetscape and community character, contributing positively to the area's visual identity.
- The building's design establishes a cohesive relationship with the surrounding urban fabric. The ground-level commercial units create active frontages, encouraging pedestrian movement and interaction along King Street West. The stepbacks in the tower ensure the building harmonizes with adjacent properties, reducing its visual impact and allowing for adequate light and privacy. The design integrates well with existing and planned developments in the area, contributing to the ongoing urban intensification and the broader network of streets, transit, and community amenities.
- The development minimizes potential adverse impacts through careful design choices. Stepbacks and separation distances between the tower and neighbouring properties mitigate concerns about shadowing and privacy.
- The parking is fully integrated into the structure to limit surface parking and heat island effects. Traffic and service areas are well-managed with a through driveway and rear access via Dodds Lane, minimizing congestion and disruptions along the street frontage.
- The Site is within walking distance to the iON Light Rail Station at Grand River Hospital, offering excellent access to public transit. Proximity to the Iron Horse Trail and local bus routes further promotes pedestrian movement and car-free living.
- The development reflects a commitment to architectural excellence and innovative urban design. The tower's sleek, modern aesthetic, combined with the human-scale brick podium,

balances boldness and sensitivity to the surrounding area. The mix of materials, large transparent storefronts, and varied setbacks offer a dynamic visual experience while maintaining coherence with neighbouring structures.

The proposed development is designed in keeping with the general urban design policies in Section 11 of the Official Plan as it:

- Coordinates site, building, and landscape design with the surrounding streetscape, enhancing King Street's character with active frontages, transparent commercial spaces, and pedestrian-friendly sidewalks.
- Considers the city's skyline by integrating upper-storey stepbacks and a slender tower form, ensuring that the development contributes positively to the skyline without overwhelming the streetscape.
- Incorporates CPTED principles, such as clear sightlines, well-lit public areas, and secure entrances. The site design also facilitates access for emergency services, ensuring fire prevention and timely emergency response.
- Promotes barrier-free access throughout the Site, ensuring compliance with the Ontario Building Code and accessibility regulations, providing universal accessibility for all citizens.
- Enhances pedestrian and cycling usability with a 5-storey podium at human scale, transparent facades, and active uses that engage with the street, creating a vibrant, accessible, and safe urban environment.
- Provides high quality building materials and architectural detailing on all elevations that complement surrounding buildings in the neighbourhood.

6.2 Response to Urban Design Manual

BUILT FORM
CITY-WIDE
TALL BUILDING DESIGN
MAJOR TRANSIT STATION AREAS

Ground Floor and Base Design
The base of the building includes a 5-storey podium, designed to interact directly with the streetscape, providing transparency and active frontage. The ground floor features large glass storefronts that enhance pedestrian connectivity and create an inviting streetscape along King Street West.

The podium design prioritizes pedestrian comfort by incorporating high levels of transparency, and active uses such as commercial spaces and residential entrances.

The base is well-articulated with massing and materials that create a visually engaging, human-scaled environment.

The podium length abutting King Street is 74 metres, designed with high-quality materials, articulation, and enhanced streetscaping to maintain visual interest and break up the façade. The ground floor is divided into two portions by a through driveway, with the eastern portion measuring 26.2 metres and the western portion 37.8 metres. The podium features large windows and balconies, which add depth and create shadow, enhancing the facade's visual texture and contributing to a dynamic streetscape.

Street-facing balconies provide outdoor spaces for residents, and structured parking is screened behind active uses, maintaining an engaging streetscape along King Street.

Service functions are placed at the rear of the building along Dodds Lane, screened from public view to preserve the street's visual appeal.

The 4.5-metre ground floor height supports retail flexibility and integrates with the streetscape, using high-quality materials to ensure an attractive and pedestrian-friendly environment.

Tower Design
The proposed tower design aligns with Kitchener's guidelines as well as the Zoning By-law for Tower Design, addressing both Size & Proportion and Separation & Placement as follows:

- The tower floorplates range from 930 to 1160 square metres, categorizing it as a Large Slab. Tower design include stepbacks at different levels (6 metres from the eastern and western sides at higher floors) and the use of balconies and material changes to add articulation and visual interest. This reduces the visual bulk and integrates the tower into the surrounding urban fabric. The tower's overall height is 94.1 metres, including the mechanical penthouse.
- The tower maintains the separation distances set by the SGA-3 Zoning regulations. It maintains a 6-metre separation from the eastern property line from Levels 6 to 12, increasing to 12 metres from Levels 13 to 28. On the western side, it maintains a

17-metre separation up to Level 18 and 23 metres from Levels 19 to 28. Additionally, a 14-metre total separation from the rear properties along Dodds Lane ensures minimal impact on neighbouring low-rise residences. These residential rear yards are deep, averaging 14-16 metres, further reduce direct impacts on neighbouring residences, helping to minimize potential privacy and shadowing effects on these properties.

- To reduce the visual impact of the tower's mass, the design employs horizontal and vertical articulation, such as stepbacks, balconies, and changes in materials. These elements break up the building's bulk and enhance the skyline.

The top floors include additional stepbacks and material transitions, providing further articulation and reducing the perceived mass of the building from the street level. These design elements contribute to a well-proportioned and visually appealing tower top, which enhances the building's skyline presence and ensures that the upper levels complement the architectural character of the proposed development as a whole.

INCLUSIVE DESIGN
CITY-WIDE
MAJOR TRANSIT STATION AREAS

The design ensures clear, unobstructed sightlines along all publicly accessible routes, including sidewalks, entryways, and surrounding open spaces. Active ground-floor uses and transparent facades enhance visibility, allowing pedestrians to detect and avoid potentially unsafe situations.

The design avoids the creation of dead-ends or entrapment areas by providing multiple pedestrian routes and clear access points throughout the site. Service areas, including loading zones, will be well-lit and accessible with multiple escape routes to ensure safety.

There is a mix of different sizes of one-bedroom, one-bedroom plus den, two-bedroom, and three-bedroom units to provide flexibility of housing choice.

SHARED SPACES
CITY-WIDE
MAJOR TRANSIT STATION AREAS

Building design addresses pedestrian weather protection through recessed vestibules from public sidewalk and covered landing spaces.

Varied colours between the different building elevations and diverse planting plans provide visual interest throughout the seasons.

STREETS AND OPEN SPACES
CITY-WIDE
TALL BUILDING DESIGN

High percentages of glazing and active uses at the ground level provide natural surveillance along King Street West. Windows and balconies on the base storeys overlook the public realm, enhancing security and engagement.

The design avoids physical or visual barriers, ensuring a continuous and connected pedestrian environment without dead-ends or hidden areas.

Service areas will be well-lit and located at the rear of the building along Dodds Lane, ensuring they do not interfere with pedestrian flow.

The proposed development includes a mixture of private balconies, shared terraces, and landscaped rooftop area, providing various spaces for leisure, and interaction.

Views & Skyline
The building's placement and massing take into account the broader urban context to preserve sightlines and avoid obstructing key vistas.

The tower's design includes architectural articulation and stepbacks that create visual interest, particularly at street intersections and terminating views. These features enhance the building's prominence in the skyline while providing an engaging visual experience from multiple vantage points in the city.

COMPATIBILITY
CITY-WIDE
TALL BUILDING DESIGN
MAJOR TRANSIT STATION AREAS

The tower's height, scale, and massing are compatible with the emerging context of King Street, which includes other high-rise and mid-rise developments. The use of materials, architectural articulation, and stepbacks complement the surrounding urban environment.
The building employs stepbacks at various levels, particularly on the upper storeys, to provide a sensitive transition between the high-rise tower and the lower-scale residential areas along Dodds Lane. This ensures a smooth and thoughtful integration into both the existing context and the planned future vision for the area.

The design incorporates contemporary architectural elements and materials that draw inspiration from the surrounding urban context without replicating historical styles. The rhythm of the façade, transparency at the base, and articulation in the podium reflect the modern, urban character of the neighbourhood.

Setbacks and stepbacks are implemented from property lines and from the tower's base, reducing the perceived mass at street level and maintaining a human-scaled relationship with the public realm.

The tower adopts a modern architectural style that aligns with the city's forward-looking vision, while still ensuring that it enhances the skyline without imposing on the existing or planned neighbourhood character.

The 5-storey podium establishes a human-scaled interaction with the streetscape, promoting an inviting and active pedestrian environment. The setbacks and massing ensure the building fits comfortably within the public realm.

The tower placement and physical separation follows the zoning regulations, reducing impacts on privacy, shadowing, and overlook for adjacent properties. The use of stepbacks and floor plates further contributes to a design that balances height with compatibility.

DESIGN FOR SUSTAINABILITY
CITY-WIDE
MAJOR TRANSIT STATION AREAS

The building includes a diverse range of unit types and sizes, allowing for future adaptability and changes in use. High-quality materials and construction practices are used to ensure building longevity and resilience to climate change.

Stormwater on the site will be controlled through onsite measures to reduce peak flows to existing conditions levels, limiting pressures on the existing sewers.

The landscaping design will incorporate native planting materials and will employ low-impact development practices.

Enhanced building envelopes with above average standards for insulation, windows and air tightness will be explored.

Dark sky-compliant lighting and high-efficiency LED fixtures will be used to minimize light pollution, enhancing nighttime comfort and reducing the impact on the surrounding environment in common areas

LED light fixtures will be installed in the new units along with motion detectors in common areas.

The building's glass and lighting design will incorporate bird-friendly strategies. Visual markers on glass and the avoidance of untreated reflective surfaces within the first 12 metres of height will minimize bird collisions. Nighttime lighting will be managed to reduce reflections that could disorient migratory birds.

DESIGN FOR OUTDOOR COMFORT
CITY-WIDE
MAJOR TRANSIT STATION AREAS

Shadow Study Analysis demonstrates acceptable sun exposure conditions for affected sidewalks, public spaces and adjacent properties.

Wind Study Analysis confirms that the proposed development meets year-round safety and comfort standards for pedestrian wind conditions on-site and in surrounding areas.

STREET DESIGN
CITY-WIDE
MAJOR TRANSIT STATION AREAS

The development prioritizes walkability by providing direct, safe pedestrian routes to the nearby Grand River Hospital ION Light Rail Station and GRT bus stops. It is designed to integrate with the broader sidewalk and trail network, including easy access to the Iron Horse Trail, further enhancing pedestrian and cycling connectivity.

The primary access from King Street West aligns with the Mount Hope Street intersection, creating a through driveway to Dodds Lane. This ensures better integration with the surrounding street network and improves access for pedestrians and cyclists.

The streetscape design emphasizes a continuous and attractive pedestrian experience. The ground-level commercial spaces, wide sidewalks, and transparent facades create an active, safe, and engaging environment, minimizing conflict between pedestrians and vehicles.

The development includes secure bike parking to encourage cycling as a primary mode of transport, with long-term bicycle storage within the building and short-term parking outside, supporting sustainable transportation choices.

Streets and pedestrian routes around the development are designed to be barrier-free, ensuring accessibility for children, older adults, and those with mobility needs.

7. CONCLUSION

The proposed development at 924-944 King Street West consists of a 28-storey mixed-use building that supports the intensification of King Street and aligns with the emerging urban context in the area. The building features a mix of residential units and ground-floor commercial spaces, contributing to a vibrant streetscape and improving the character of the site. The design provides a thoughtful transition between the high-rise building and the surrounding residential and commercial uses, enhancing the pedestrian experience along King Street.

Parking and site functions, including loading and service areas, are efficiently located in the interior of the site and accessed via Dodds Lane, reducing the visual impact on King Street West. The building's design incorporates stepbacks and articulation that contribute to a human-scaled streetscape, ensuring a balanced relationship between the building and its surroundings.

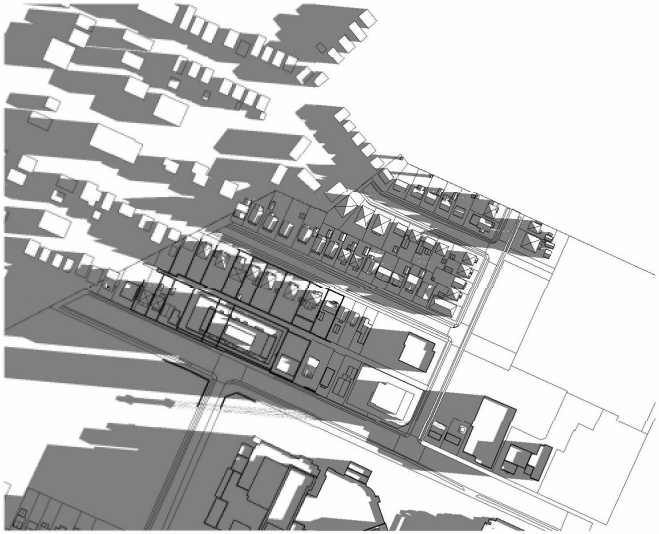
The project benefits from excellent proximity to public transit, including the nearby iON Light Rail and bus routes, supporting a transit-oriented lifestyle. Bicycle parking and pedestrian-friendly design features further enhance accessibility and sustainability.

This development aligns with the Growing Together Kitchener initiative, contributing to the city's vision of higher-density, transit-oriented growth in key areas. It reflects the principles of intensification and smart urban development promoted by the City, helping to create a more sustainable and connected urban community.

Overall, the proposed development conforms to the Urban Design policies of the City of Kitchener's Official Plan and the Urban Design Manual. The design reflects principles of good urban design, providing an appropriate and high-quality contribution to the downtown Kitchener context.

APPENDIX A

Shadow Study



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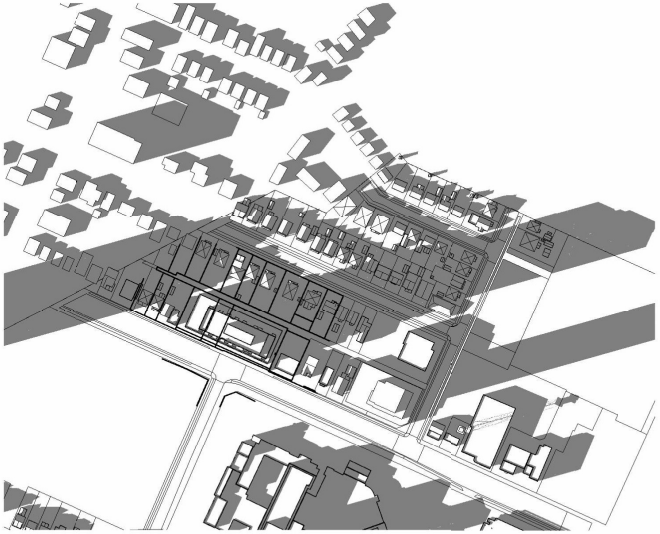

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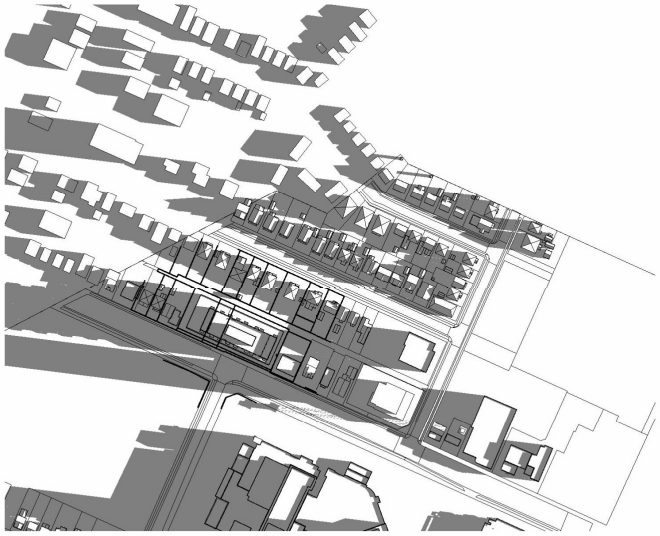

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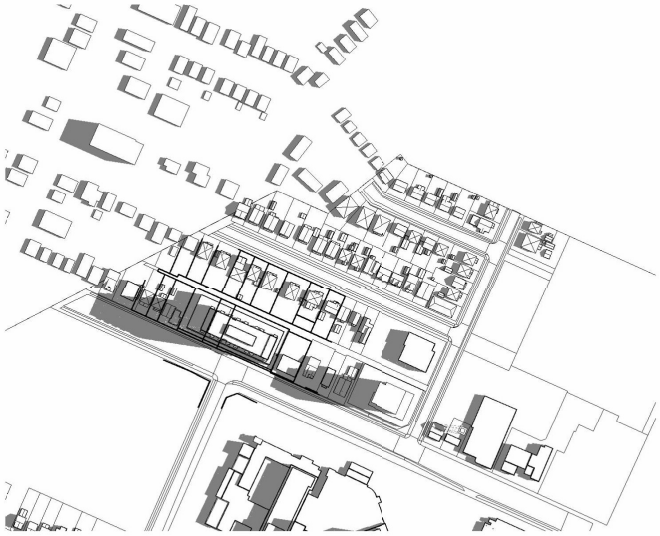

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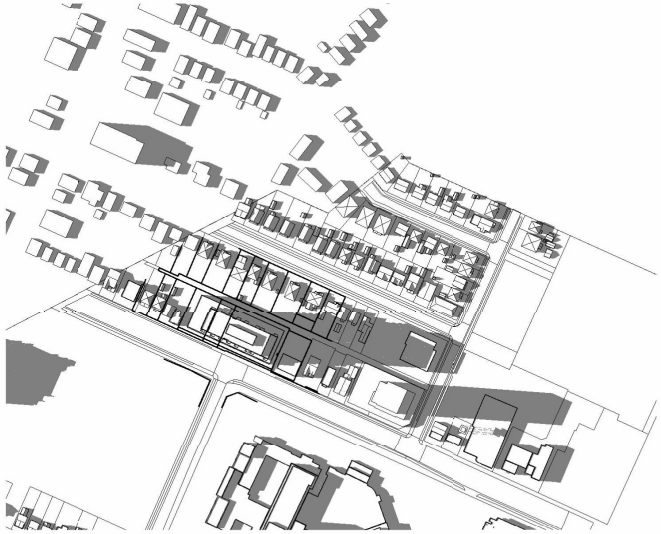

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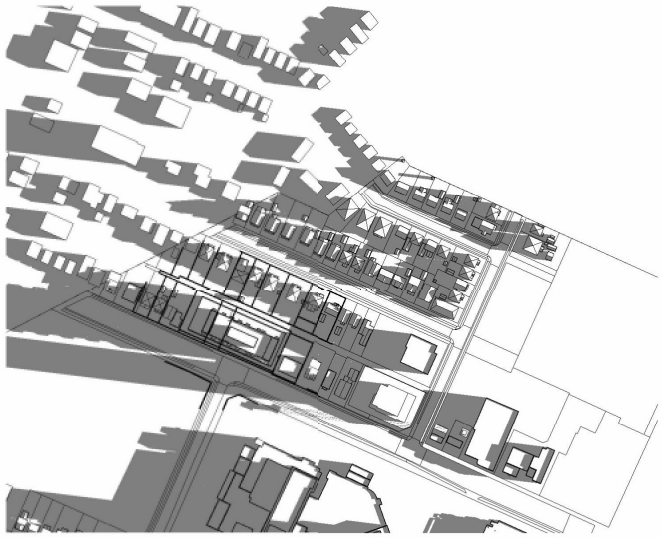

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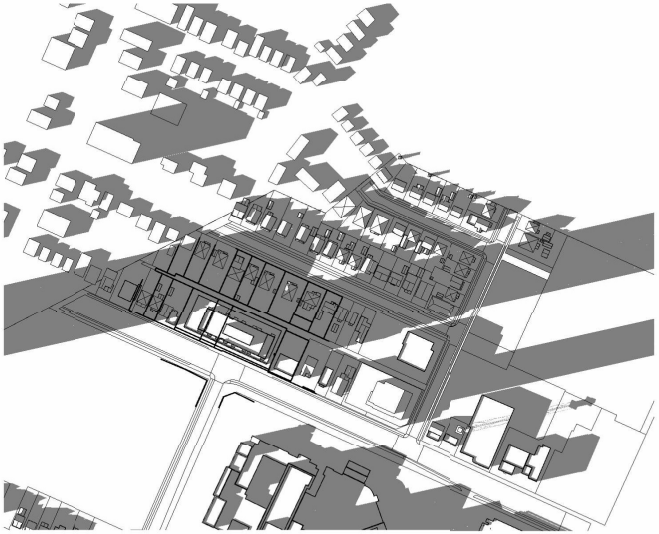

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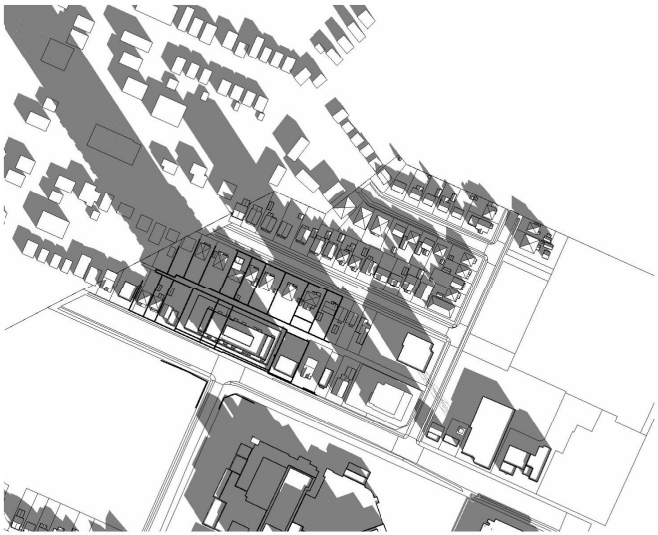

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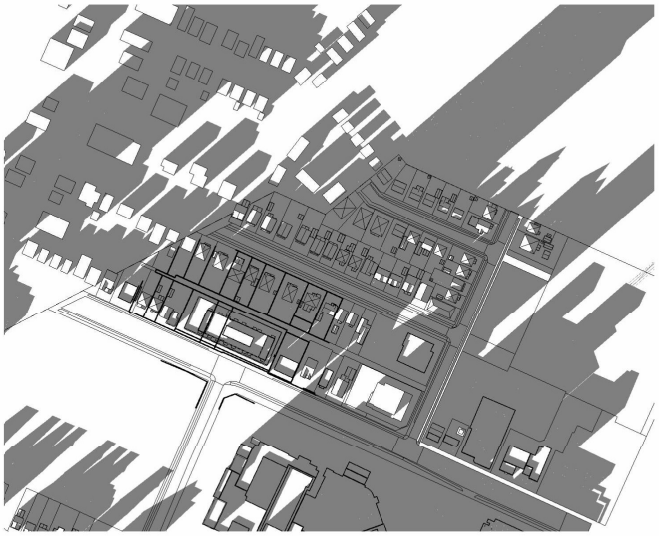

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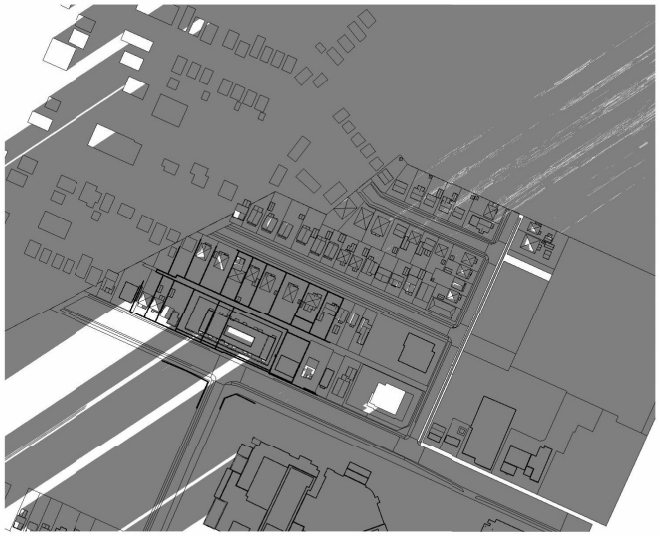

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