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4001 Knight Street

REZONING APPLICATION
16 February, 2024

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SUBMISSION LETTER

CONNEST DEVELOPMENTS

City of Vancouver
515 W 10th Ave.
Vancouver, BC
Canada V5Y 1V4
Attention: Matt Shillito, Acting Director of Planning

January 18, 2024

Dear Mr. Shillito,

Re: Rezoning Application for 4001 Knight St. and 1348 East 24th Ave., Vancouver, BC

We are pleased to submit the subject rezoning application located at the southern gateway entrance to the Cedar Cottage Commercial Centre. The proposal is responding to the critical shortage in housing and childcare in Vancouver and will deliver 37 childcare spaces, 233 ownership housing units and ground level service commercial space. The project will complement the Southern Gateway at the Northwest corner of King Edward and Knight St. The site also offers a unique urban design opportunity with a third quieter fronting street on East 24th Ave. The application proposes a zoning change from C-2 and RM-1N to CD-1 (Comprehensive Development).

The proposed form of development includes a single tower over a four-storey podium including a roof top amenity space, fifth floor childcare and ground floor commercial. The tower form at this location complements the recently approved 13 storey supportive housing project and the 6 – 17 storey multi storey project approved in 2003 located east and southeast of the subject site. The ground level commercial space will complement the existing neighbourhood commercial and complete the street fronting retail opportunities along Knight Street. The proposed commercial area will also provide an opportunity for an animated, south facing public realm experience. The project will also provide off-street underground parking and bicycle storage.

The site is occupied by an antiquated single level strip mall and a neighboring single-family dwelling and represents a significant opportunity for additional net new housing, childcare and improved commercial space. This Cedar Cottage location enjoys easy access to shopping, transit, downtown, schools, parks, library, and Trout Lake Community Centre. While the area is well served, it has had limited new home ownership opportunities that provide area residents the ability to move up the housing continuum and remain in the Cedar Cottage area. The development will be appealing for young families and downsizing seniors wanting to stay in the area.

Enclosed please find all the materials required for a full rezoning application for your review and consideration. We look forward to working together with you and staff on this Council Priority Project that provides much needed housing supply and a Community Amenity Contribution consisting of an in-kind, City owned, 37 space childcare airspace parcel. Please let me know if you have any questions and I will look forward to advancing this application to public consultation and City Council.

Best,



Joe Carreira
VP Development, Conwest

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FRANCL
ARCHITECTURE

CONNEST

PROPOSAL

The 4001 Knight Street and 1348 East 24th Avenue site is the prime candidate for a significant net new housing project serving as the southern gateway entrance to the Kensington Cedar Cottage neighbourhood. Conwest (4001 Knight) Limited Partnership is submitting this Rezoning Application for a 24-storey mixed-use development which will deliver a 37-space daycare program, ground floor retail, and 233 market ownership units. Located on the northwest corner of two arterial streets, Knight Street and King Edward Avenue, the proposal seeks to serve as a gateway project to the Kensington Cedar Cottage neighbourhood. The Prioritization Framework, approved by Council in May 2023, prioritizes the delivery of the greatest amount of net new housing across the entire housing continuum, for all types and tenures, and prioritizes projects with the co-location of childcare, amenity, or social space. The proposal will deliver important home ownership housing supply designed and developed for local buyers and include much-needed daycare space, situated close to shopping, parks, schools and a library.

The project proposes to rezone the two properties to CD-1 to permit a high-density mixed-use development. The proposed development meets the needs of the City of Vancouver's Housing Strategy by delivering 233 market ownership units. The proposal to deliver a new supply of condominium units, designed for local buyers, addresses the City of Vancouver's unprecedented housing crisis. The 233 market ownership units are located on floors 2 – 4 in the base podium, and floors 6 – 23 above the podium.

The proposal also responds to Vancouver's Childcare Strategy by delivering new childcare space. The floor at the podium level serves as the ideal space for the 37-space daycare, with the outdoor play area ideally situated as the exposed roof of the podium providing southern solar exposure to the play area.

To complement the existing services in the area, 4,187 sq. ft. of retail space is located at grade fronting onto Knight Street with exposure to King Edward as well. A rooftop indoor and outdoor amenity space is proposed to serve the residents. All underground parking stalls are located within the parkade levels below grade, accessed from East 24th Avenue.

Key proposal details:

- 24 - storey mixed use tower
- 233 market ownership units
- 37 - space daycare
- 4,187 sq. ft. of retail at grade
- 212,000 sq. ft. total proposed net area



VIEW OF SITE LOOKING NORTH

COMMUNITY AMENITY PROPOSAL

DAYCARE

The proposal for the subject site includes a Community Amenity Contribution consisting of the delivery of an in-kind, City owned, 37-space daycare. The proposal responds to Vancouver's Childcare Strategy and addresses the supply gap on the east side of Vancouver. The daycare space is proposed at the podium level, with good southern solar exposure to the play area. The proposed daycare will provide much needed services to young families living in Kensington Cedar Cottage and surrounding neighbourhoods.

Conwest has had early conversations with Sr. Staff at the YMCA BC, the largest non-for-profit provider of childcare in Canada. YMCA BC is supportive of the proposal and considers daycare space in this location to be both necessary and desired, as per the letter included in this submission.



May 18, 2023

City of Vancouver
453 W 12th Avenue, Vancouver, BC
V5Y 1V4

To City of Vancouver Mayor and Council,

Re: Conwest Proposed Knight St. and King Edward Ave. Residential Project with Daycare Space

I met with the Conwest Development Team to discuss the need for childcare space and Conwest's opportunity to include childcare space within their City of Vancouver residential project. The YMCA recognizes the need for new childcare space and supports projects that strive to meet these needs.

YMCA BC is the largest non-for-profit provider of childcare in Canada with nearly 40 years of experience. YMCA offers high-quality childcare programs for infants, toddlers, preschool and school aged children. Based on our experience, there is a desperate need for new childcare spaces and programs within the City of Vancouver, as many young families are unable to find adequate childcare. In fact, we currently have over 9,000 children on the waitlist for early years care in Vancouver specifically.

YMCA BC is supportive of Conwest's project proposal on Knight St. and King Edward Avenue. The proposal for this project includes a much needed 37-space daycare. Daycare in the Kensington Cedar Cottage neighborhood, and King Edward Village area specifically, is both necessary and desired.

YMCA BC supports Conwest's proposal for Knight St. and King Edward Ave. and looks forward to seeing this project move forward.

Sincerely,

Kate Roy
Manager, Development and Reporting
YMCA BC

Cc: Joe Carreira, VP Development, Conwest Developments
Theresa O'Donnell, Director of Planning and General Manager of Planning, Urban Design, and Sustainability, City of Vancouver

BUILDING AMENITY & LIVABILITY

ROOFTOP RESIDENTIAL AMENITY

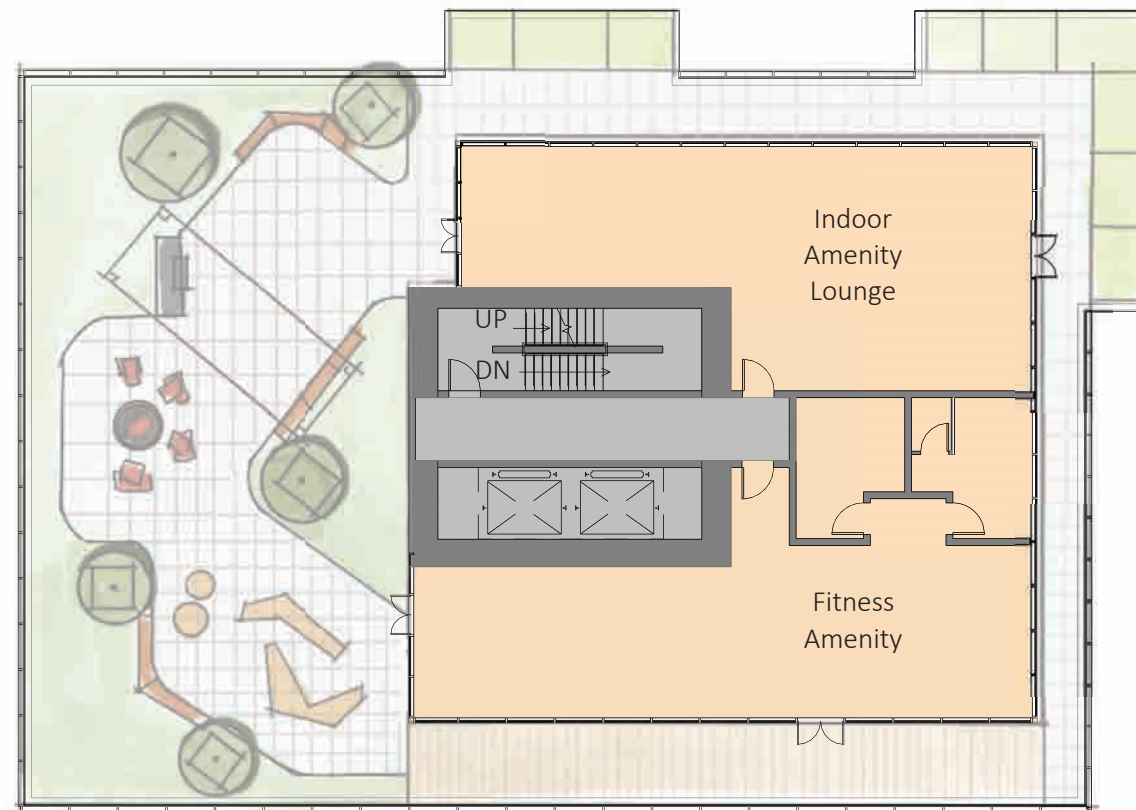
The proposal is pleased to provide a host of high-quality indoor and outdoor amenity spaces that enhance the residential user experience of the building.

Rooftop Amenities include:

- Children's play area and seating.
- Fitness zones with stretching deck and changing facilities.
- Social lounge and kitchen area.
- Covered BBQ area.
- Urban agriculture plots.

These rooftop amenity spaces compliment the indoor amenity bike wash and repair area at grade with oversized bike parking for use of use of parents with bike trailers.

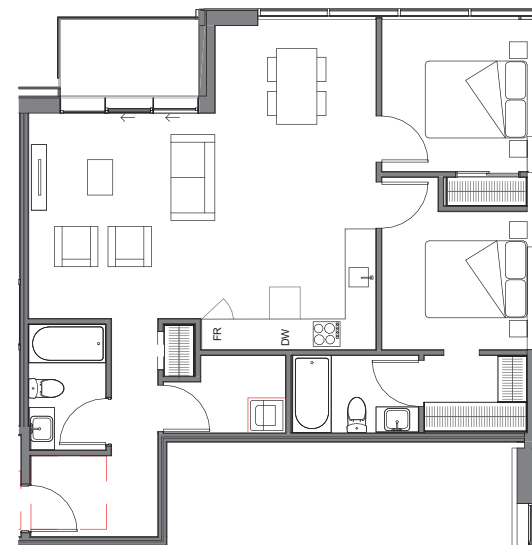
The allocation of the roof to building amenity shows the commitment from the client to providing their building's residential community with excellent amenity experiences. The north-facing areas boast 180-degree views of the northshore mountains, downtown and the water. The south-facing areas enjoy full solar exposure and equally stunning views. The client anticipates a level of amenity experiences that foster a sense of community within the building in hopes of encouraging a sense of belonging and long-term tenancy.



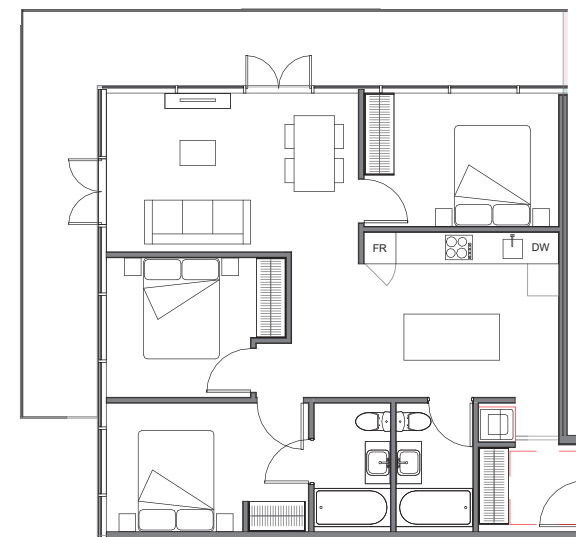
Rooftop Amenity - NTS

FAMILY UNITS

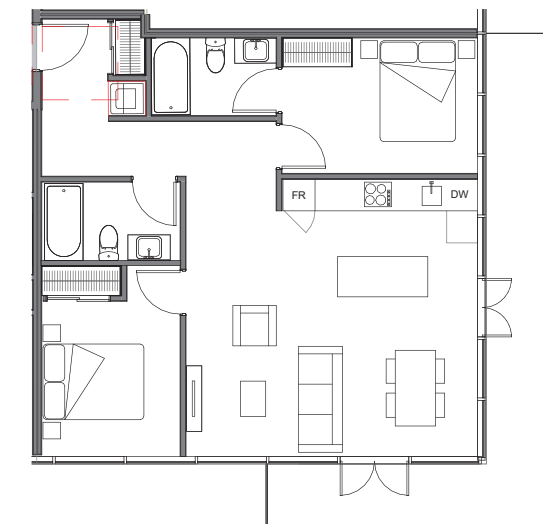
The unit mix incorporates the requirements of the 25% two bed and 10% three bedroom units as per the City's Family Housing guidelines. Careful consideration has been given to the design of dining, living, and bedroom spaces to accommodate diverse family activities. The unit layouts facilitate a separation of conflicting uses, with specific attention to washable and waterproof surfaces in dining areas and larger-than-minimum-sized bathrooms to accommodate parent-child use.



2 Bedroom NE Podium - NTS



2 Bedroom NW Tower - NTS



2 Bedroom SE Tower - NTS

CONTEXT

URBAN CONTEXT

The proposal is located in the Kensington Cedar Cottage neighbourhood, a neighbourhood located in proximity to downtown, local schools, transit, parks, commercial facilities and served by amenities including the Vancouver Public Library and Trout Lake Community Centre. The proposal provides a significant net new housing project, which includes a daycare program and ground floor retail. The proposed development will reinforce and enhance the area and serve as the southern gateway entrance to the Kensington Cedar Cottage neighbourhood.

The Kensington Cedar Cottage neighbourhood was one of two pilot neighbourhoods included in the “City Plan: Directions for Vancouver,” a previous planning process adopted by Council in 1995. As part of the City Plan planning process, the Kensington Cedar Cottage Community Vision was approved, which provided a design process for the Kensington Cedar Cottage neighbourhood to accommodate densification. The Kensington Cedar Cottage Community Vision identified Kingsway and Knight Street as a shopping area, in which the area was identified as a high priority for a wide range of improvements.

Kingsway and Knight Street has become a commercial node, as planned in the vision, and the subject site serves as the ideal location for the gateway to the neighbourhood. Not only does the site lend itself well to higher density, but the proposal works to enhance the Kingsway and Knight Street commercial centre. The proposed project serves as an addition to the commercial centre by creating a more vibrant local shopping street and a more socially connected neighbourhood.

NEIGHBOURHOOD CONTEXT

Surrounding properties to the north and along Kingsway are zoned C-2 (Commercial) District and are generally developed as one to three-storey mixed-use buildings. The property to the east is zoned CD-1 (Comprehensive Development) District, and is developed with 6 – 17 storey, mixed-use buildings in a complex known as King Edward Village. An anchor grocery store, Save-on Foods, the Kensington Branch of the Vancouver Public Library, and additional shops and services are located in this development.

The property to the southeast has been recently zoned CD-1 (Comprehensive Development) District and will be developed with a 13-storey residential building containing social housing units. The properties to the south and west are zoned RM-1N (Residential) District and are developed with single-detached houses with the potential for increased height and massing.

NEIGHBOURHOOD AMENITIES

The following neighbourhood amenities are within walking distance of the site:

- Parks: Kingcrest Park is less than 100 m southeast. Glen Park is 500 m east. Brewers Park is 800 m east. Sunnyside Park is 950 m north.
- Transit: The #22 Knight, #25 King Edward, and #19 Kingsway, and #19 bus stops are located within one block of the site.
- Bicycle Routes: The Dumfries north-south bikeway is to the east and the E 37th Ave. east-west bikeway is to the south.
- Cultural/Community Space: Vancouver Public Library, Kensington Branch is less than 100m east. Croatian Cultural Centre is 1.3 km northeast. Cedar Cottage Neighbourhood House is 1.1 km east. Trout Lake Community Centre is 1.6 km northeast. Polish Community Centre is 1.1 km west.
- Childcare Facilities: Wonder of Learning Organization is 230 m north. Community Montessori Children’s Centre is 700 m northeast

LOCAL SCHOOL CAPACITY

The site is located in the catchment area of Charles Dickens Elementary School, a 14-minute walk to the northwest, Lord Selkirk, a 11-minute walk to the northeast, Selkirk Annex, a 9-minute walk to the southeast, Charles Dickens Annex, a 7-minute walk to the east, Gladstone Secondary School, a 23-minute walk to the east, and Sir Charles Tupper Secondary School, a 22-minute walk to the west.

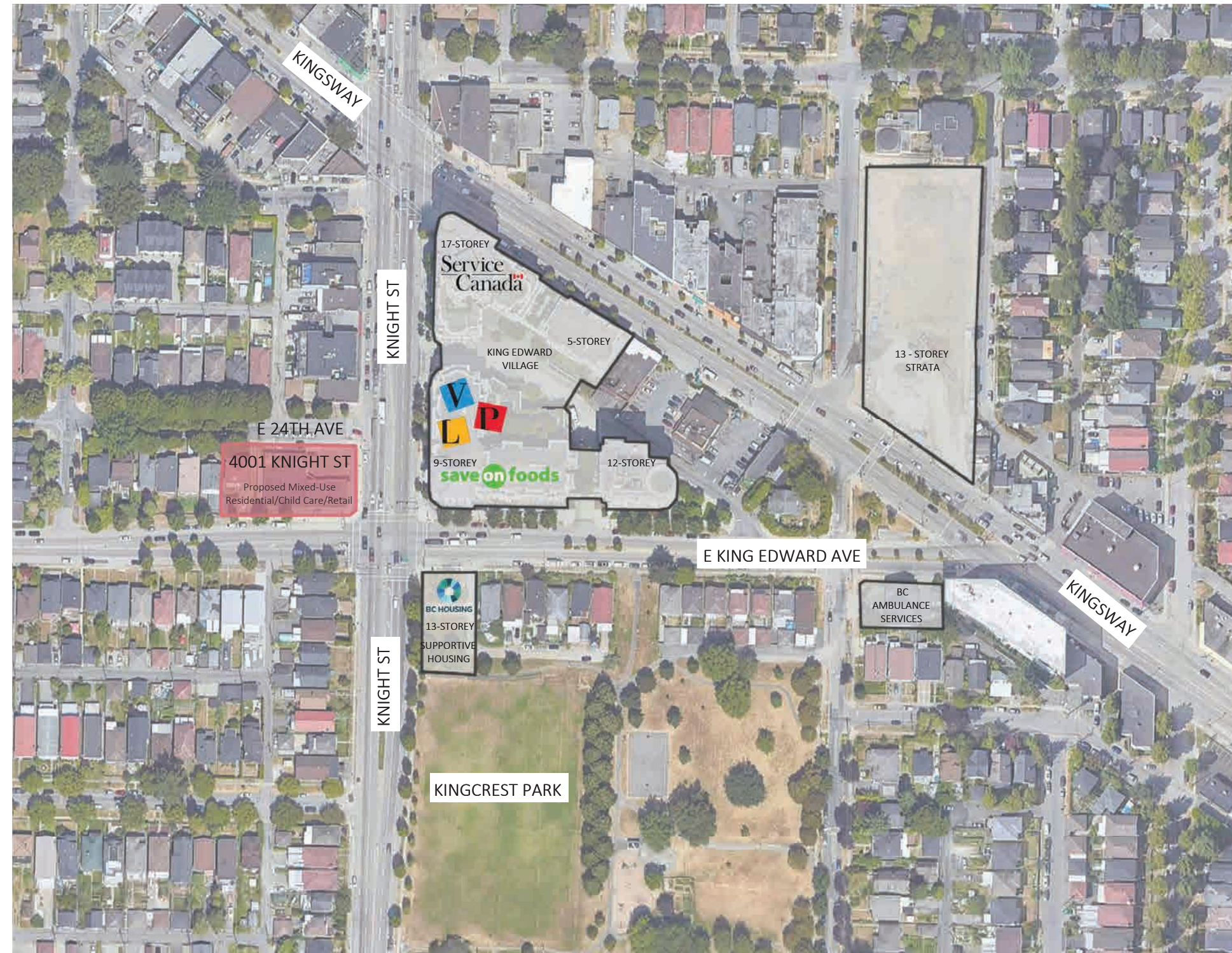


CONTEXT MAP

SITE CONTEXT

The 17,805 sq. ft. subject site is comprised of two lots located at the northwest corner of Knight Street and King Edward Avenue in the Kensington Cedar-Cottage neighbourhood. The site consists of two adjacent properties, 4001 Knight Street and 1348 East 24th Avenue, with a total frontage of 180 feet along King Edward Ave and a depth of 100 feet along Knight Street.

The 4001 Knight is zoned C-2 (Commercial) District, currently occupied with a single storey commercial development including surface parking, and the 1348 East 24th Avenue is zoned RM-1 (Residential) District, occupied with a single-family dwelling.



- SITE - 4001 KNIGHT ST
- CONTEXT DEVELOPMENT







VIEW LOOKING NORTHWEST

SITE PHOTOS



KING EDWARD VILLAGE EAST OF SITE



VIEW OF SITE FROM KNIGHT STREET



VIEW OF SITE FROM 24TH AVE



KNIGHT STREET NORTH OF SITE



VIEW OF SITE FROM E KING EDWARD AVE

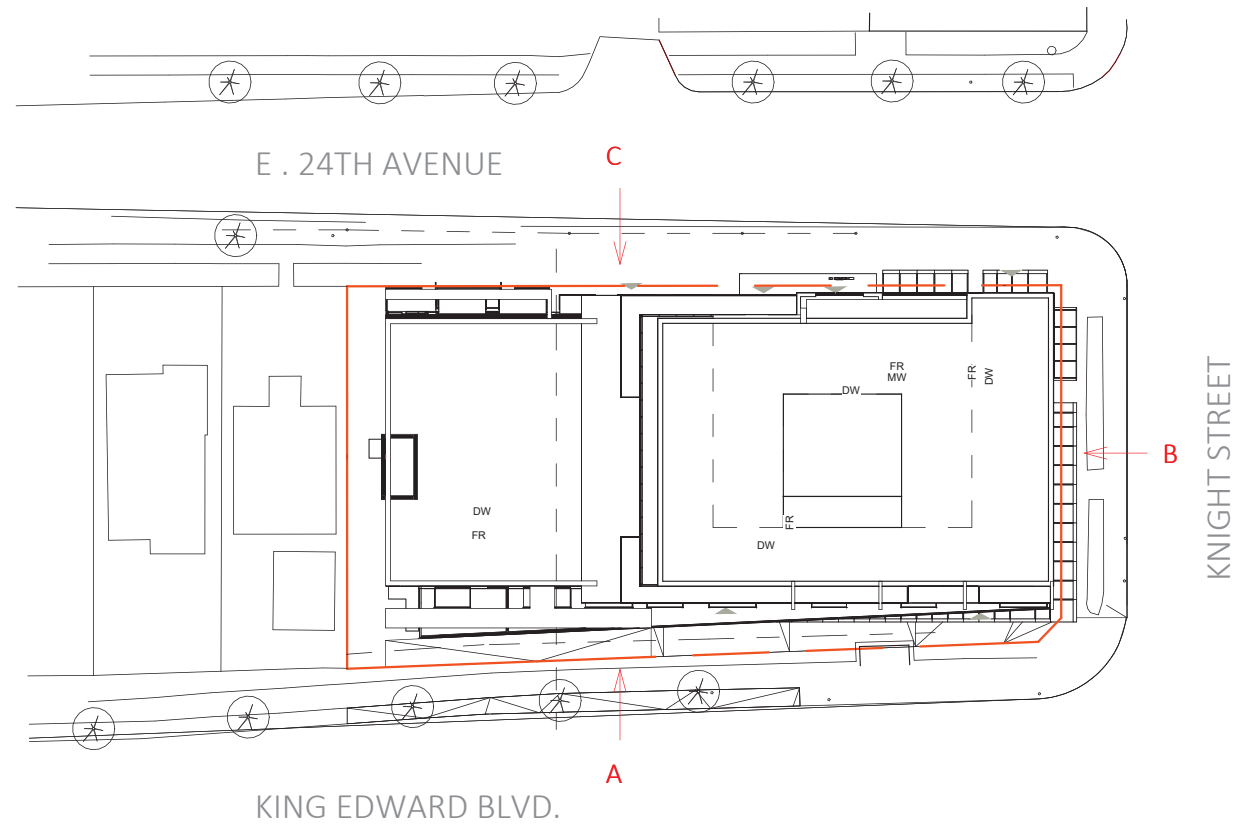


LOCATION OF PROPOSED
13 STOREY BC HOUSING

VIEW SOUTH FROM E KING EDWARD AVE



STREETSCAPE



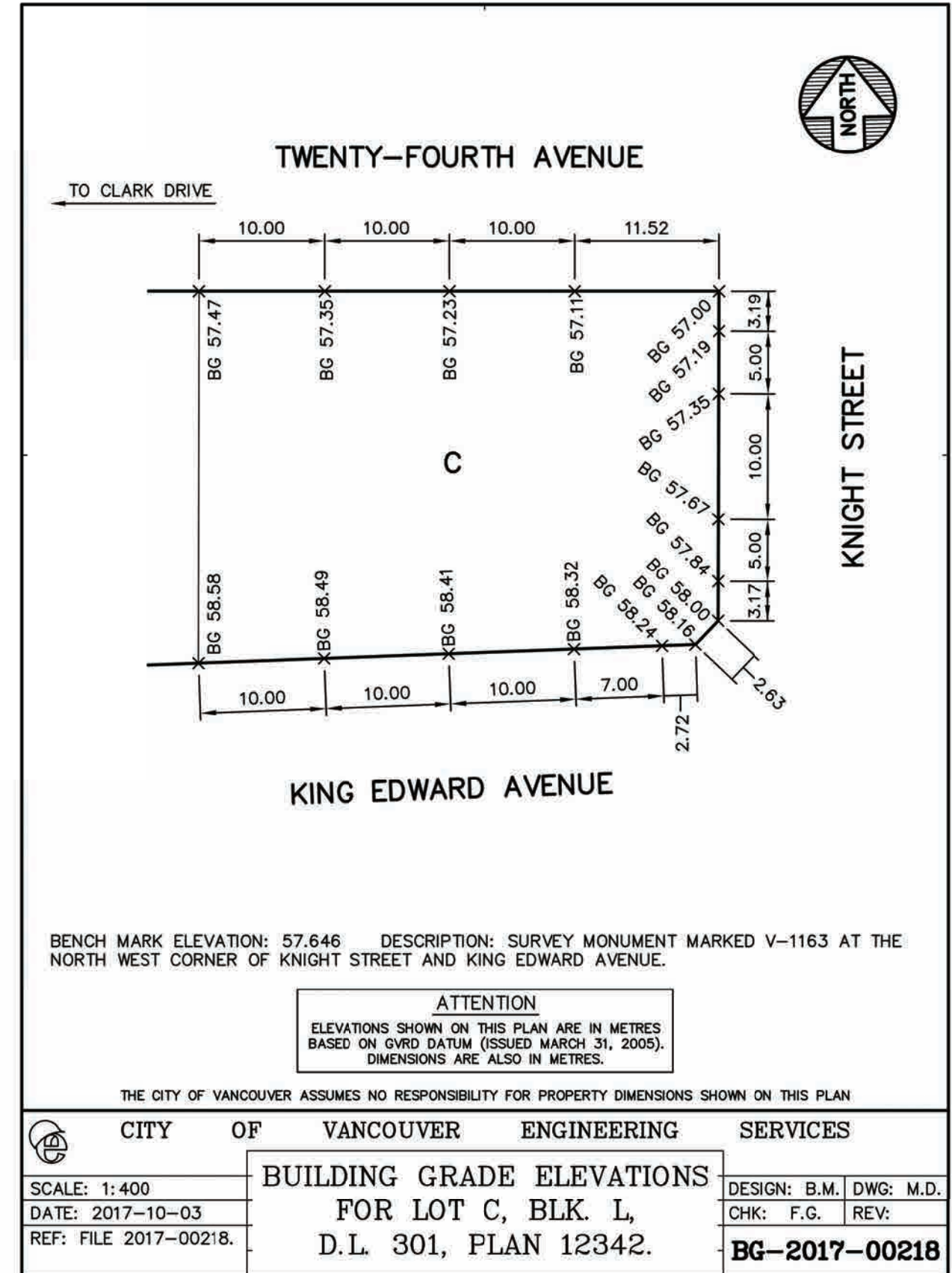
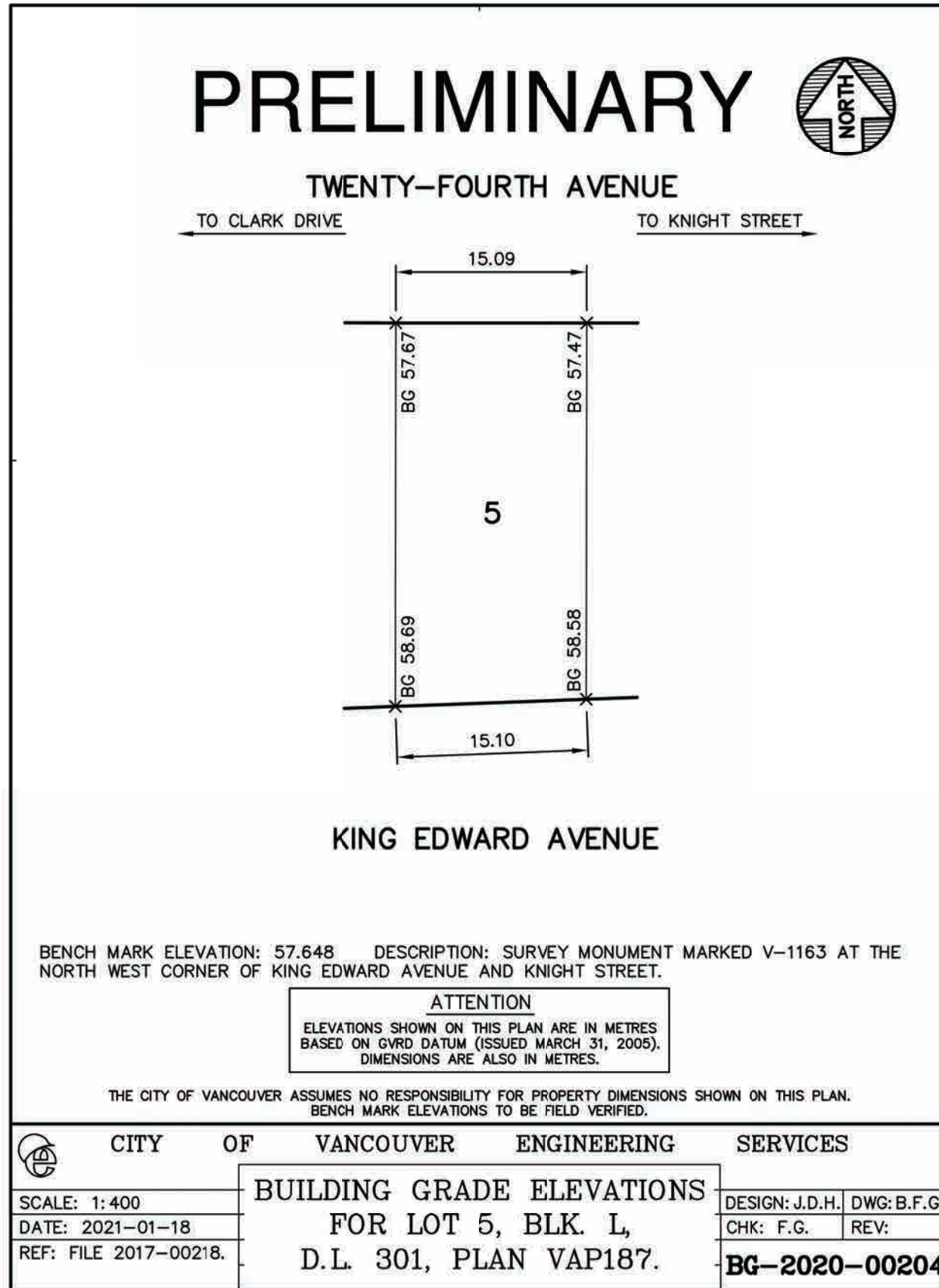
A.



B.



C.



**TOPOGRAPHIC SURVEY OF
LOT C BLOCK L DISTRICT LOT 301 GROUP 1 PLAN 12342 AND
LOT 5 EXCEPT PART IN REFERENCE PLAN 8408 BLOCK L DISTRICT LOT 301 PLAN 187**



SCALE 1:250
DISTANCES ARE IN METRES

PID: 008-906-441
ADDRESS: 4001 KNIGHT STREET,
VANCOUVER BC

PID: 015-640-515
ADDRESS: 1348 E 24th AVENUE,
VANCOUVER BC



CONTEXT

APPLICABLE POLICIES AND GUIDELINES

BOLD STRATEGIES

Mayor Sim Seven “Bold Strategies” (2023) – On October 11, 2023, Mayor Sim announced a multi-faceted strategy that he defines as the approach to making meaningful change in the housing affordability and supply crisis. This approach outlines seven strategies, focused on catalyzing new housing supply. The proposed development responds and adheres to the strategies as follows:

- 1. Implementing 26 new Village Areas**
Implementing Village Areas, as outlined in the Vancouver Plan, helps to create more interconnected communities. **The project will facilitate the transformation of the Kingsway and Knight Neighborhood Centre, creating a more interconnected community, where retail and market and non-market residential uses blend together to create a more livable neighbourhood**
- 2. Explore steps and measures to harmonize and align the Vancouver Building Code with the BC Building Code**
The City of Vancouver’s separate building code is to align with the BC Building Code. **This project will adhere to both the BC Building Code and the City of Vancouver building code during construction and demolition.**
- 3. Review the City’s building height restrictions due to building shadowing impacts**
The City of Vancouver has various shadowing and view cone policies. **As part of this project, a thorough review was conducted to ensure the proposal does not impede or impact direct sunlight on nearby parks, streets, plazas, intersections, and other public spaces.**
- 4. Increasing the maximum floor plate size for residential towers**
Increasing the maximum floor plates will enable more homes on a lot through added density and greater flexibility. **The design of this project accommodates a “right” size floor plate to enable added density and increased flexibility**
- 5. Explore opportunities to expand and improve the City’s Certified Professional (CP) Program**
To help accelerate more housing, the City of Vancouver Certified Professional program will be expanded or improved to increase the number of trained and certified professionals in the private sector. **The proponents of this project are supportive of expanding or improving the City’s CP program.**
- 6. Explore opportunities for more high-density, transit-oriented developments next to Vancouver’s underdeveloped SkyTrain stations**
This strategy focuses on the rezoning of lands in close proximity to underdeveloped Skytrain stations. **The proposal is for a development with a superior location to major bus routes and short travel time to downtown. The Kensington Cedar Cottage neighbourhood is also the 8th most walkable neighbourhood in Vancouver according to WalkScore.**
- 7. Support the provincial government’s upcoming short-term rental enforcement policies**
This strategy supports short-term rental enforcement policy. **While the subject project does not include short-term rentals, the proponents are supportive of the City of Vancouver foregoing measures to regulate short-term rentals.**

APPLICABLE POLICIES AND GUIDELINES

PRIORITIZATION FRAMEWORK FOR PLANNING POLICY AND PROCESSING APPLICATIONS

The Prioritization Framework for Planning Policy and Processing Applications was approved by Council on May 9, 2023. This framework informs the processing of rezoning applications over the short term. This framework prioritizes, amongst other uses, the delivery of the greatest amount of net new housing across the entire housing continuum, for all housing types and tenures and prioritizes projects with co-location of childcare, amenity, or social space. **This project is considered a priority based on the proposal to deliver net new housing and the co-location of childcare within the development.**



VANCOUVER PLAN

The Vancouver Plan was approved by Council on July 22, 2022, and is a land use strategy to guide long-term growth of the City over the next 30 years. The approved Vancouver Plan will serve as a framework with further implementation planning work to follow over the next two to four years. The Vancouver Plan identifies Neighbourhood Centers as successful, mixed-use neighbourhoods with vibrant, local shopping areas, green residential streets, a wide range of housing options, and supportive amenities. **The site of this project falls within a Neighbourhood Center and will deliver a much-needed mixed-use development to the neighbourhood. Given the neighbourhood context, the subject site provides a unique opportunity for a higher density project, in order to deliver much needed housing to the neighbourhood.**



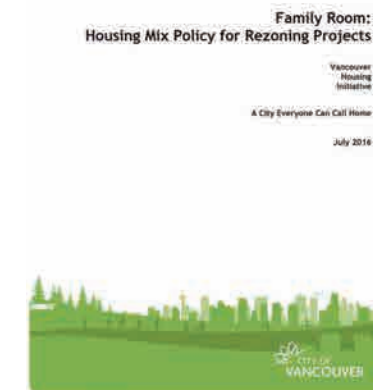
HOUSING VANCOUVER STRATEGY

In November 2017, Council approved the Housing Vancouver Strategy (2018 – 2027). Housing Vancouver focuses on the right supply of new homes to meet a continuum of housing types. Overall, 72,000 new homes are targeted for the 10-year period from 2018 to 2027, including ownership housing. The target for condominium apartments is 30,000 units. This strategy sets a family housing target for 35% of condo units ownership options provided being two- and three-bedroom units. **This project will contribute towards the targets for ownership housing and family units as set out in the Housing Vancouver Strategy by delivering 233 market ownership units and 84 family-friendly units (two- and three- bedroom units).**



FAMILY ROOM: HOUSING MIX POLICY FOR REZONING PROJECTS

The Family Room Policy, approved by Council in 2016, requires that new residential developments that are rezoned include a certain percentage of family-sized units such as two- and three-bedroom units. Rezoning applications that include any residential strata housing are required to include a minimum of 35% family units (units having two or more bedrooms), with a minimum of 10% three-bedroom units and a minimum of 25% two-bedroom units. **This proposed project will adhere to this policy by exceeding the family unit requirement by providing 84 family-friendly units, 60 two-bedroom units and 24 three-bedroom units.**



MAKING STRIDES: VANCOUVER'S CHILDREN STRATEGY

In June 2022, Council approved Making Strides, Vancouver's 10-year Childcare Strategy, to support access to a new universal system of early care and learning led by Provincial and Federal governments. This strategy identifies the need for new childcare space in Vancouver. Specifically, this strategy identifies supply gaps are widest on the east side of Vancouver. **This project will contribute towards the addition of new childcare space, specifically addressing the supply gap on the east side.**



URBAN FORESTRY STRATEGY

The Urban Forestry Strategy, approved by Council in 2014, provides direction for the retention and regeneration of Vancouver's urban forest. This strategy suggests that any street trees will have to be fully protected and maintained during construction. **This project will adhere to this strategy by including an arborist report as part of the rezoning application. No mature trees exist onsite.**



APPLICABLE POLICIES AND GUIDELINES

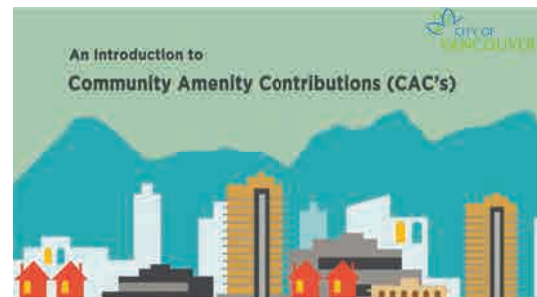
GREEN BUILDINGS POLICY FOR REZONINGS

The Green Building Policy for Rezonings was adopted in 2010 and amended in 2023. The goals of the action plan are zero carbon, zero waste, and healthy ecosystems. **The subject project will follow the requirements of the Green Buildings policy for reducing greenhouse gas intensity (GHGI) and thermal energy demand intensity (TEDI) limits.**



COMMUNITY AMENITY CONTRIBUTIONS - THROUGH REZONINGS

The Community Amenity Contributions Policy for Rezonings was adopted by Council in 1999 and amended in 2023. Community Amenity Contributions (CACs) are in-kind or cash contributions that may be provided through rezonings, to help address costs associated with growth increases as a result of rezonings. The Community Amenity Contributions Policy for Rezonings sets out the policies for how Community Amenity Contributions (CACs) are determined. **A Real Estate Proforma Analysis and Community Amenity (CAC) Offer Form have been included as part of the rezoning submission. The project includes the delivery of a full turnkey 37-space daycare facility transferred to the City of Vancouver as an air space parcel at zero cost.**



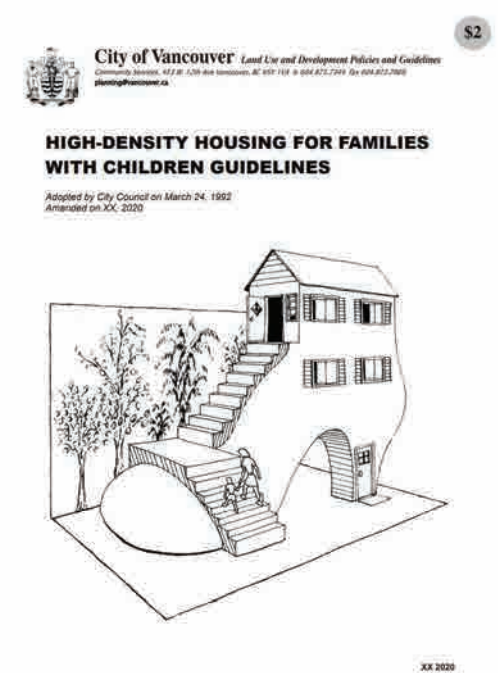
TRANSPORTATION 2040

Transportation 2040 is aligned with the Greenest City 2020 Action Plan. This plan sets guiding principles to help meet the City's transportation goals. The primary goals include making two thirds of all trips on foot, bike, or transit by 2040, eliminating the dependence on fossil fuels and breathing the cleanest air of any major city on the world. **The proposal provides a development with a superior location to major bus routes both north/south and east/west, providing convenient access to UBC, downtown and rapid transit. The proposal also includes enhanced bicycle storage and a bike repair station.**



HIGH-DENSITY HOUSING FOR FAMILIES WITH CHILDREN GUIDELINES

The High-Density Housing for Families with Children Guidelines was adopted by Council in 1992, and most recently amended in 2022. The intent of these guidelines is to address the key issues of site, building and unit design, which relate to residential livability for families with children. The guidelines suggest that high density developments require the provision of adequate access to essential services, including schools, daycares, transportation, and shopping areas. **The proposal adheres to the High-Density Housing for Families with Children Guidelines as the subject site is well situated in close proximity to numerous parks, daycares, Vancouver Public Library, and cultural/ community spaces. The subject site is also within walking distance to elementary schools and secondary schools. The project is designed in accordance with the High-Density Housing for Families with Children Guidelines by providing childcare space within the development, in-building amenity spaces catering to the needs of children, and ground-level retail services.**



PUBLIC ART POLICY

The Public Art Policy applies to rezoning developments of 100,000 sq. ft. or greater. **The proponent will work with the City to ensure the project meets this requirement.**



DESIGN PROPOSAL

The proposal is for a 24-storey mixed-use development including childcare space at Level 5. The childcare space will have direct access to an outdoor play area on the podium rooftop. This break in occupancy also provides a break in massing, reducing the scale of the tower and emphasising the residential scale of the podium.

To complement the existing services in the area, retail space is located at grade with primary exposure onto Knight Street and King Edward Avenue. A setback along King Edward Avenue provides space for a plaza to facilitate any future commercial use. Along East 24th, ground floor residential lofts have been placed at the western side of the site to improve the transition towards the single-family neighbourhood. The residential entrance lobby, to the podium and tower units, is clearly defined on East 24th to differentiate from the commercial use. Overall, the development will strengthen the neighbourhood centre by providing opportunities for Vancouverites to work, live, and be creative.

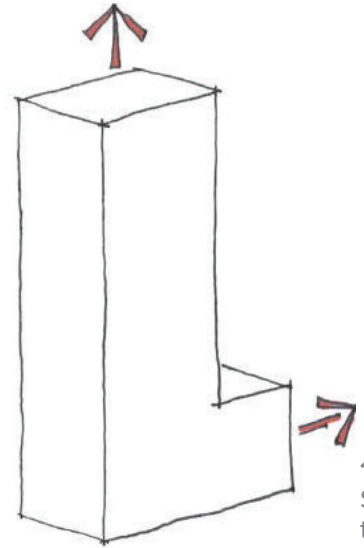
Above grade, floors 2–4 are a podium of market residential strata units. The podium was designed to complement the current condition of the adjacent King Edward Village, which provides a strong street wall along Knight Street and King Edward Avenue. It also reflects the possibility of a future 4-6 storey building should the adjacent site to the west or north develop under the City’s “Secured Rental Policy Incentives for New Housing”. Floors 7–24 rise out of the podium as a tower form articulated on the 24th floor with a set back partial floor. Level 24 will provide excellent amenity for the residents with gym outdoor recreation area and function space.

Parking and Loading are accessed from East 24th Avenue. The unit mix incorporates the requirements of the 25% two-bed and 10% three-bedroom units as per the City’s Family Housing guidelines.

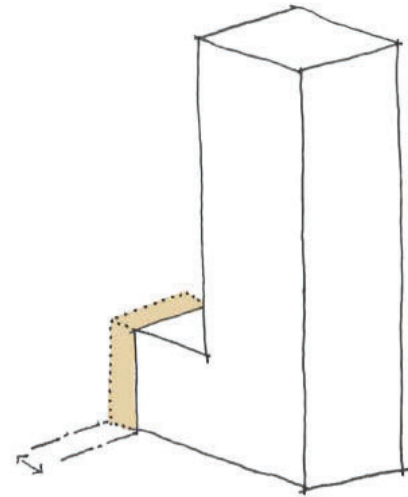


VIEW FROM THE CORNER OF 25TH AND KNIGHT STREET

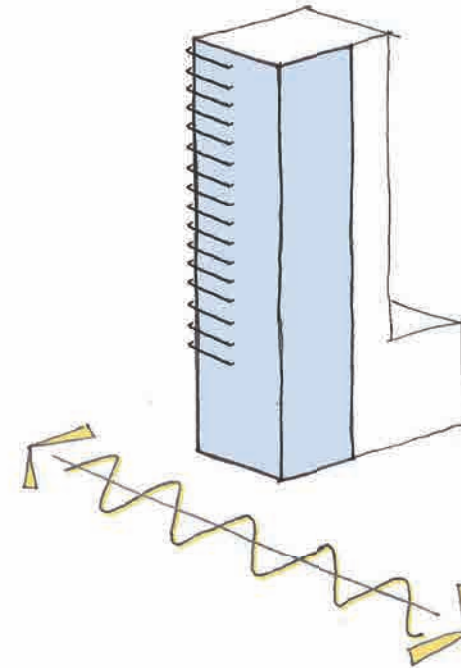
DESIGN CONCEPT



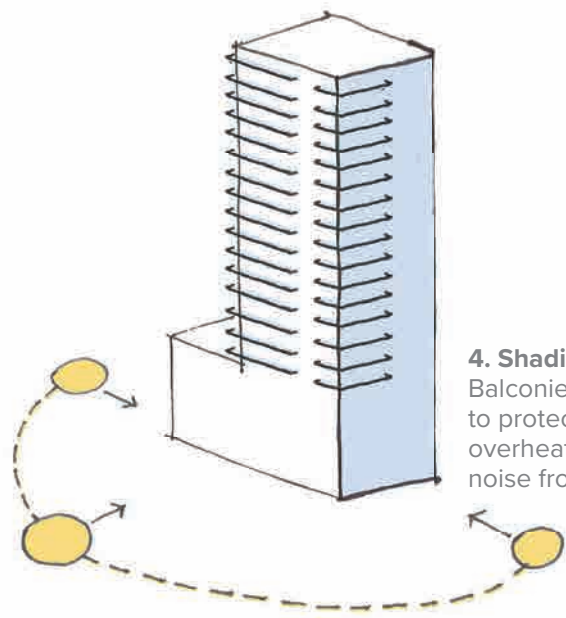
1. Building Form
Surrounding residential informed tower and podium massing.



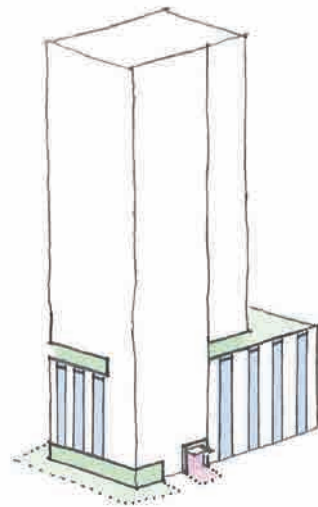
2. Setback
Creation of setback for access and response to surrounding residential scale.



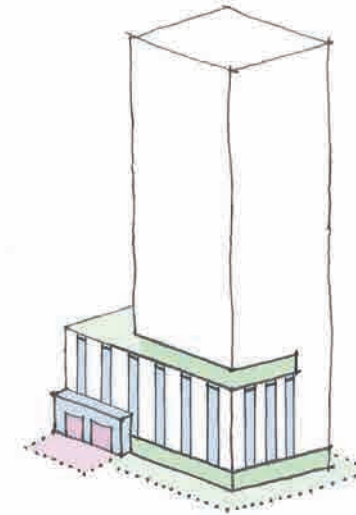
3. Focal Point
Architectural focal point from Kingsway with highly insulated wall to protect from noise along Knight St. - a major arterial route.



4. Shading
Balconies act as horizontal shading to protect from overheating on South facade and noise from Knight St.



5. Podium Detail
Scale at podium is informed by neighbouring residential street. Tower massing is split at the podium. Clarity between residential and commercial entrances.



6. Activation
Programming of daycare, community bicycle room and commercial units inform active street frontage.



March/September 21st 10.00 am



March/September 21st 12.00 pm



March/September 21st 2.00 pm



March/September 21st 4.00 pm





June 21st 10.00 am



June 21st 12.00 pm



June 21st 2.00 pm



June 21st 4.00 pm





VIEW FROM THE CORNER OF 24TH AND KNIGHT STREET



VIEW FROM THE CORNER OF 25TH AND KNIGHT STREET



VIEW FROM THE CORNER OF 25TH AND KNIGHT STREET



VIEW LOOKING SOUTHWEST

PROJECT STATISTICS

SITE INFORMATION to be coordinated with survey				
Civic Address:	4001 Knight St, Vancouver, BC V5N 3L9			
Legal Description:	LOT C BLOCK XL DISTRICT LOT 301 GROUP 1 PLAN 12342			
Property ID:	008-906-441			
Gross Site Area	m ²	ft ²	ha	ac
	1,200.9	12,926.8	0.12	0.30
Civic Address:	1348 E 24th Ave, Vancouver, BC V5V 2B7			
Legal Description:	LOT 5 EXCEPT PART IN REFERENCE PLAN 8492 BLOCK L DISTRICT LOT 301 PLAN 117			
Property ID:	015-640-515			
Gross Site Area	m ²	ft ²	ha	ac
	453.2	4,878.6	0.05	0.11
TOTAL GROSS SITE AREA	m ²	ft ²	ha	ac
	1,654.2	17,805.4	0.17	0.41

ZONING DATA		
Zoning classification	Existing	Proposed
FSR Permissible	C2 and RM-1N	CD-1
Building Height (Storeys)	N/A	24 storeys 260' 10"

SETBACKS (RESIDENTIAL) ABOVE GRADE			
	Existing	Proposed	
	ft/m	m	ft/m
24th Avenue	2'-0"	0.6	2'-0"
Knight Street	0'-0"	0.6	2'-0"
King Edward	0'-0"	2.2	7'-1"
Line to West	0'-0"	2.7	8'-11"

AMENITY AREAS AT LEVEL 24		
TOTAL PROPOSED (TBD)	m ²	ft ²
Outdoor	363	3907
Indoor	223	2400

Vehicle Parking			
		Bylaw Required (Physical Stalls)	Provided (Physical Stalls)
Residential	Resident	187	207
	Visitor	12	12
	Accessible	9	9
Commercial	General Retail	5	5
	Accessible	0	0
Childcare	General	6	6
	Accessible	1	1
TOTAL		220	240

Class B Loading	
Required	2
Provided	2

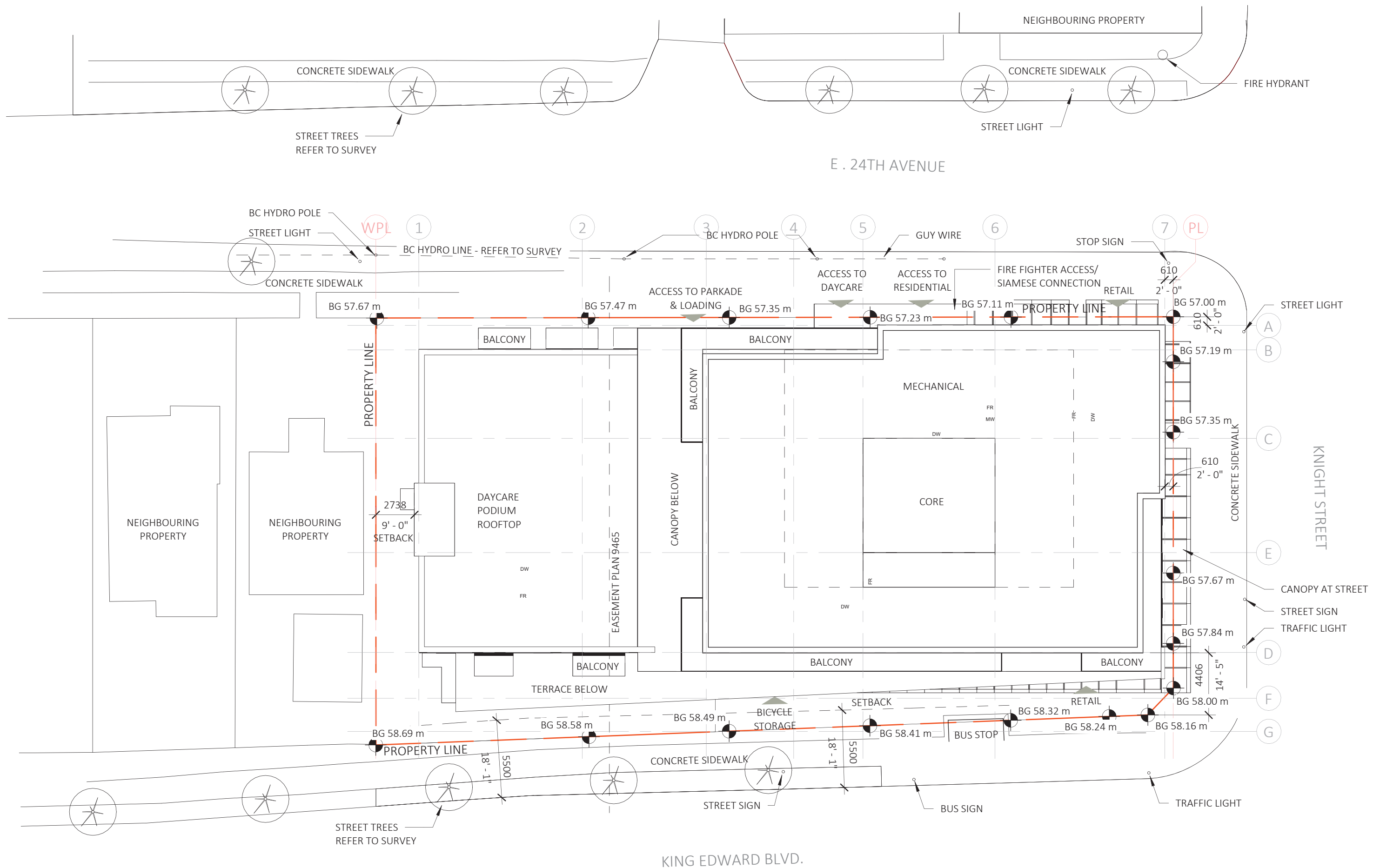
Bicycle Parking			
	Class A Requirement	Class A Oversized	Class B Requirement
Residential	434	22	13
Commercial	1	0	0
Childcare	0	0	0
Required	435	22	13
Provided	435	22	13

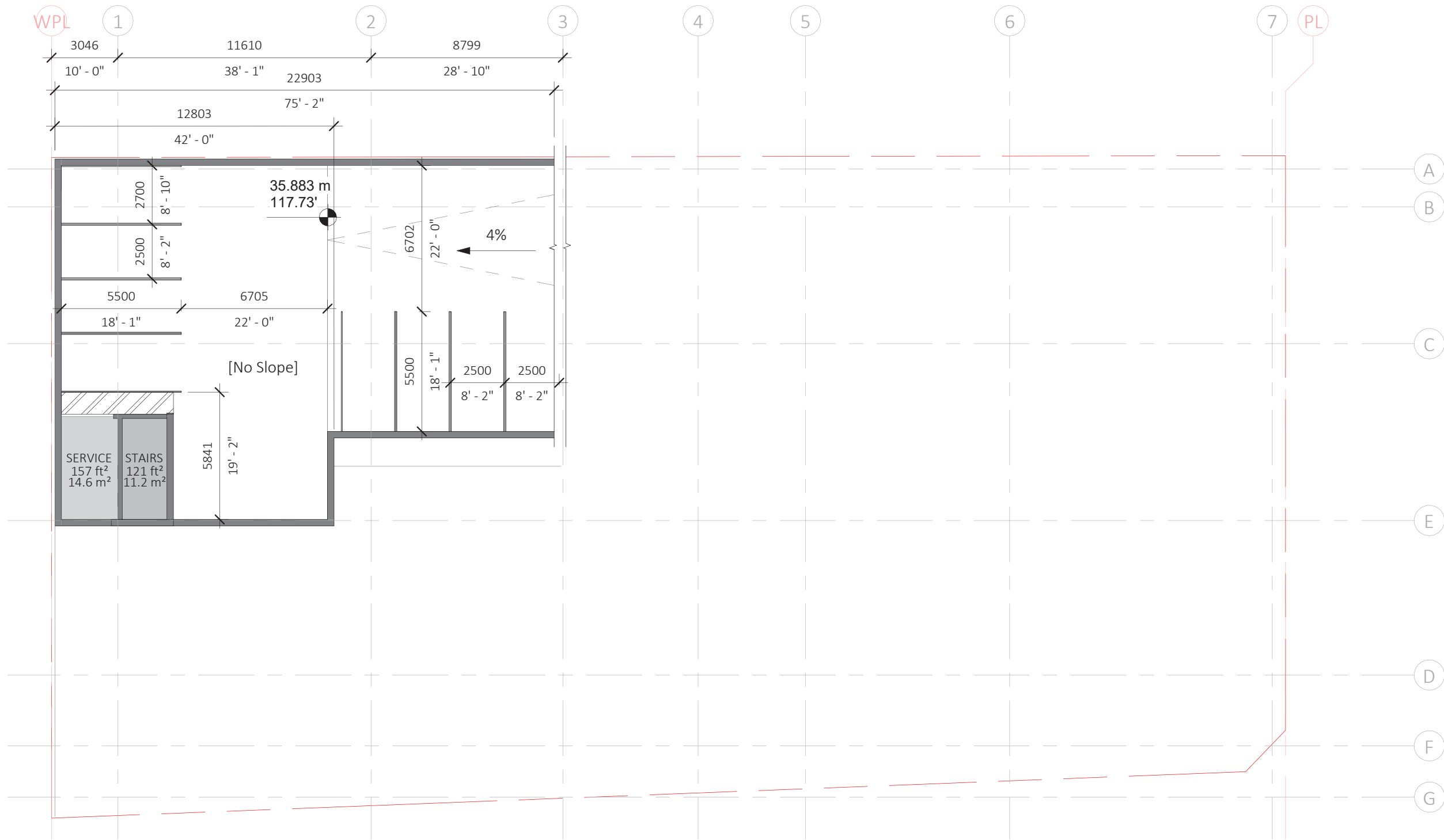
* refer to detailed parking sheet for additional data

GENERAL FSR (EXCLUSION TBD)																
Storeys	Gross Floor Area	Retail		Daycare		Amenity		Storage Exclusions		Wall, Mech, Bicycle Exclusions		Floor Space Area		Residential Floor Area (Saleable)	FSR	
		m ²	ft ²	m ²	ft ²	m ²	ft ²	m ²	ft ²	m ²	ft ²	m ²	ft ²			m ²
Mechanical	856	79.5										856	79.5			
AMENITY LEVEL 24	3,256	302.5				2,400	223.0					856	79.5			
RESIDENTIAL LEVEL 23	7,618	707.7						237	22.0			7,381	685.7	6,304	585.7	
RESIDENTIAL LEVEL 22	7,618	707.7						237	22.0			7,381	685.7	6,304	585.7	
RESIDENTIAL LEVEL 21	7,618	707.7						237	22.0			7,381	685.7	6,304	585.7	
RESIDENTIAL LEVEL 20	7,618	707.7						237	22.0			7,381	685.7	6,304	585.7	
RESIDENTIAL LEVEL 19	7,618	707.7						237	22.0			7,381	685.7	6,304	585.7	
RESIDENTIAL LEVEL 18	7,618	707.7						237	22.0			7,381	685.7	6,304	585.7	
RESIDENTIAL LEVEL 17	7,618	707.7						237	22.0			7,381	685.7	6,304	585.7	
RESIDENTIAL LEVEL 16	7,618	707.7						237	22.0			7,381	685.7	6,304	585.7	
RESIDENTIAL LEVEL 15	7,618	707.7						237	22.0			7,381	685.7	6,304	585.7	
RESIDENTIAL LEVEL 14	7,618	707.7						237	22.0			7,381	685.7	6,304	585.7	
RESIDENTIAL LEVEL 13	7,618	707.7						237	22.0			7,381	685.7	6,304	585.7	
RESIDENTIAL LEVEL 12	7,618	707.7						237	22.0			7,381	685.7	6,304	585.7	
RESIDENTIAL LEVEL 11	7,618	707.7						237	22.0			7,381	685.7	6,304	585.7	
RESIDENTIAL LEVEL 10	7,618	707.7						237	22.0			7,381	685.7	6,304	585.7	
RESIDENTIAL LEVEL 9	7,618	707.7						237	22.0			7,381	685.7	6,304	585.7	
RESIDENTIAL LEVEL 8	7,618	707.7						237	22.0			7,381	685.7	6,304	585.7	
RESIDENTIAL LEVEL 7	7,618	707.7						237	22.0			7,381	685.7	6,304	585.7	
RESIDENTIAL LEVEL 6	7,618	707.7						237	22.0			7,381	685.7	6,304	585.7	
CHILD CARE LEVEL 5	6,299	585.2			4,881	453.5						6,299	585.2			
RESIDENTIAL LEVEL 4	12,526	1,163.7						250	23.2			12,276	1,140.5	10,402	966.4	
RESIDENTIAL LEVEL 3	12,526	1,163.7						250	23.2			12,276	1,140.5	10,402	966.4	
RESIDENTIAL LEVEL 2	12,526	1,163.7						250	23.2			12,276	1,140.5	10,402	966.4	
LEVEL 1 - Mezzanine	5,357	497.3								4,833	449.0	524	48.7			
LEVEL 1 - Commercial	11,851	1,101.0	4,323	401.6	358	33.3				3,536	328.5	8,275	768.8	1,194	110.9	
PARKING LEVEL 1																
PARKING LEVEL 2																
PARKING LEVEL 3																
PARKING LEVEL 4																
PARKING LEVEL 5																
PARKING LEVEL 6																
PARKING LEVEL 7																
TOTAL	202,314	18,795.6	4,323	401.6	5,240	486.8	2,400	223.0	5,052	469.3	8,369	777.5	186,493	17,325.8	145,880	13,552.7

RESIDENTIAL UNIT COUNT & TYPE BY LEVELS PROPOSED						
OPTION 1.3						
Type	STUDIO	1 BED	2 BED	3 BED	TOTAL UNITS	TYP. FLOOR PLAN TYPE
Mechanical	0	0	0	0	0	
LEVEL 24 - Amenity	0	0	0	0	0	
RESIDENTIAL LEVEL 23	0	6	3	1	10	
RESIDENTIAL LEVEL 22	0	6	3	1	10	
RESIDENTIAL LEVEL 21	0	6	3	1	10	
RESIDENTIAL LEVEL 20	0	6	3	1	10	
RESIDENTIAL LEVEL 19	0	6	3	1	10	
RESIDENTIAL LEVEL 18	0	6	3	1	10	
RESIDENTIAL LEVEL 17	0	6	3	1	10	
RESIDENTIAL LEVEL 16	0	6	3	1	10	
RESIDENTIAL LEVEL 15	0	6	3	1	10	
RESIDENTIAL LEVEL 14	0	6	3	1	10	
RESIDENTIAL LEVEL 13	0	6	3	1	10	
RESIDENTIAL LEVEL 12	0	6	3	1	10	
RESIDENTIAL LEVEL 11	0	6	3	1	10	
RESIDENTIAL LEVEL 10	0	6	3	1	10	
RESIDENTIAL LEVEL 9	0	6	3	1	10	
RESIDENTIAL LEVEL 8	0	6	3	1	10	
RESIDENTIAL LEVEL 7	0	6	3	1	10	
RESIDENTIAL LEVEL 6	0	6	3	1	10	
CHILD CARE LEVEL 5	0	0	0	0	0	
RESIDENTIAL LEVEL 4	7	6	2	2	17	
RESIDENTIAL LEVEL 3	7	6	2	2	17	
RESIDENTIAL LEVEL 2	7	6	2	2	17	
LEVEL 1 - Mezzanine	0	0	0	0	0	
LEVEL 1	0	2	0	0	2	
TOTAL (by unit type)	21	128	60	24	233	
TOTAL %	9.0%	54.9%	25.8%	10.3%	100%	

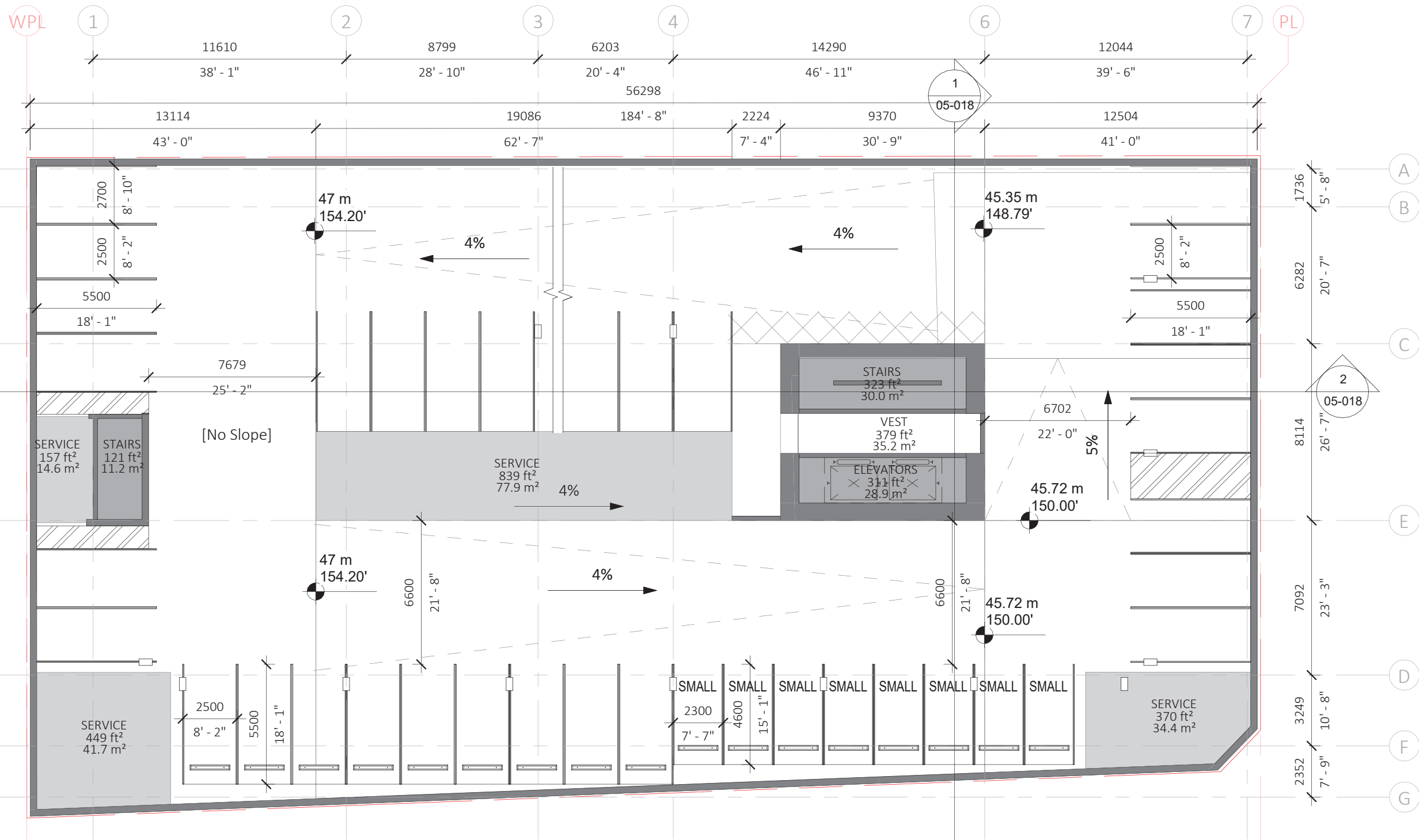






Parking Schedule P8			
Level	Type Comments	Count	Comments
Level P8	STANDARD	9	RESIDENTIAL
Grand total:		9	

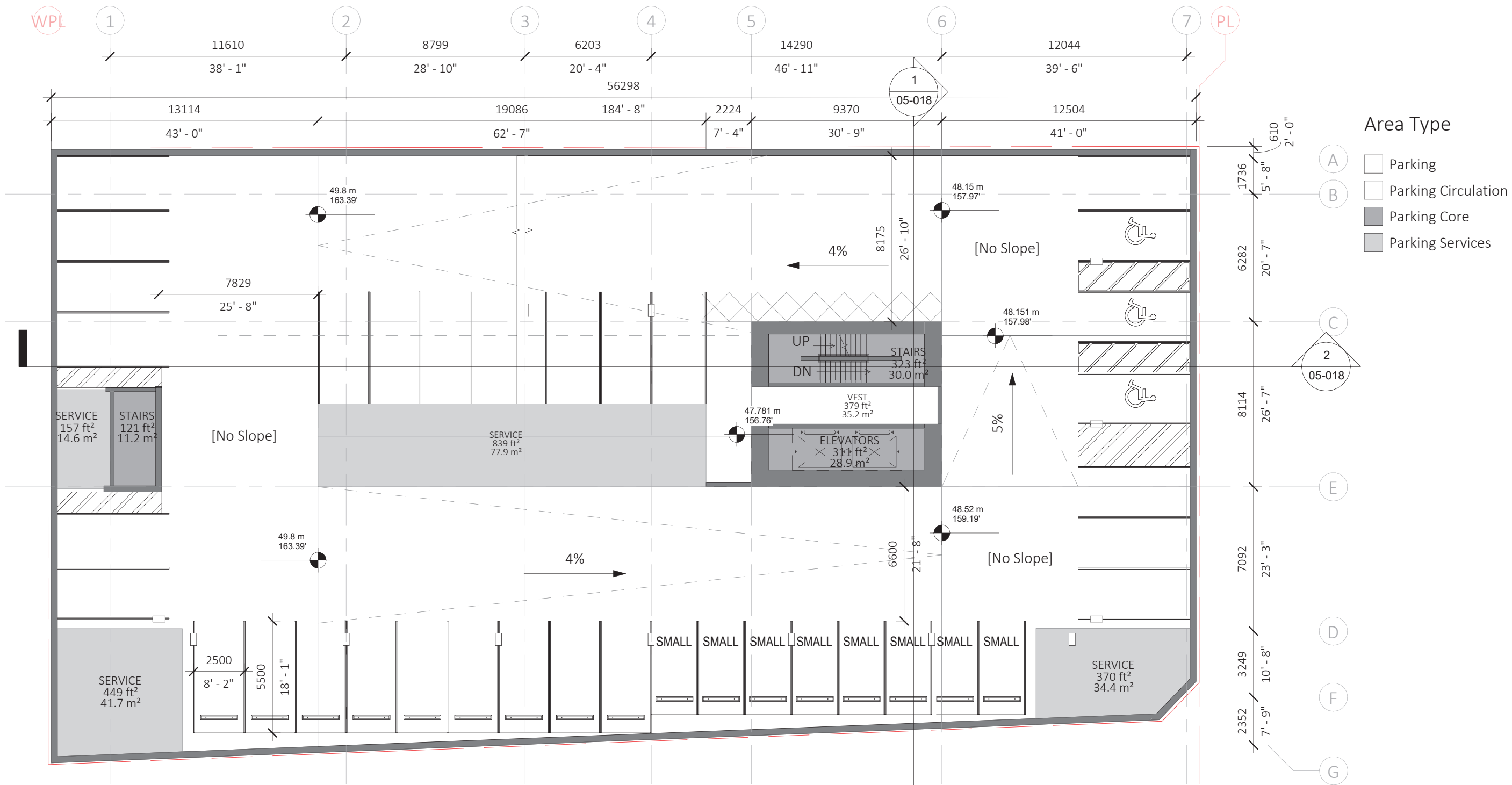




- Area Type**
- Parking
 - Parking Circulation
 - Parking Core
 - Parking Services
 - Tower Services

Parking Schedule P4-P7			
Level	Type Comments	Count	Comments
Level P4	SMALL	8	RESIDENTIAL
Level P4	STANDARD	30	RESIDENTIAL
Grand total:		38	





- Area Type
- Parking
 - Parking Circulation
 - Parking Core
 - Parking Services

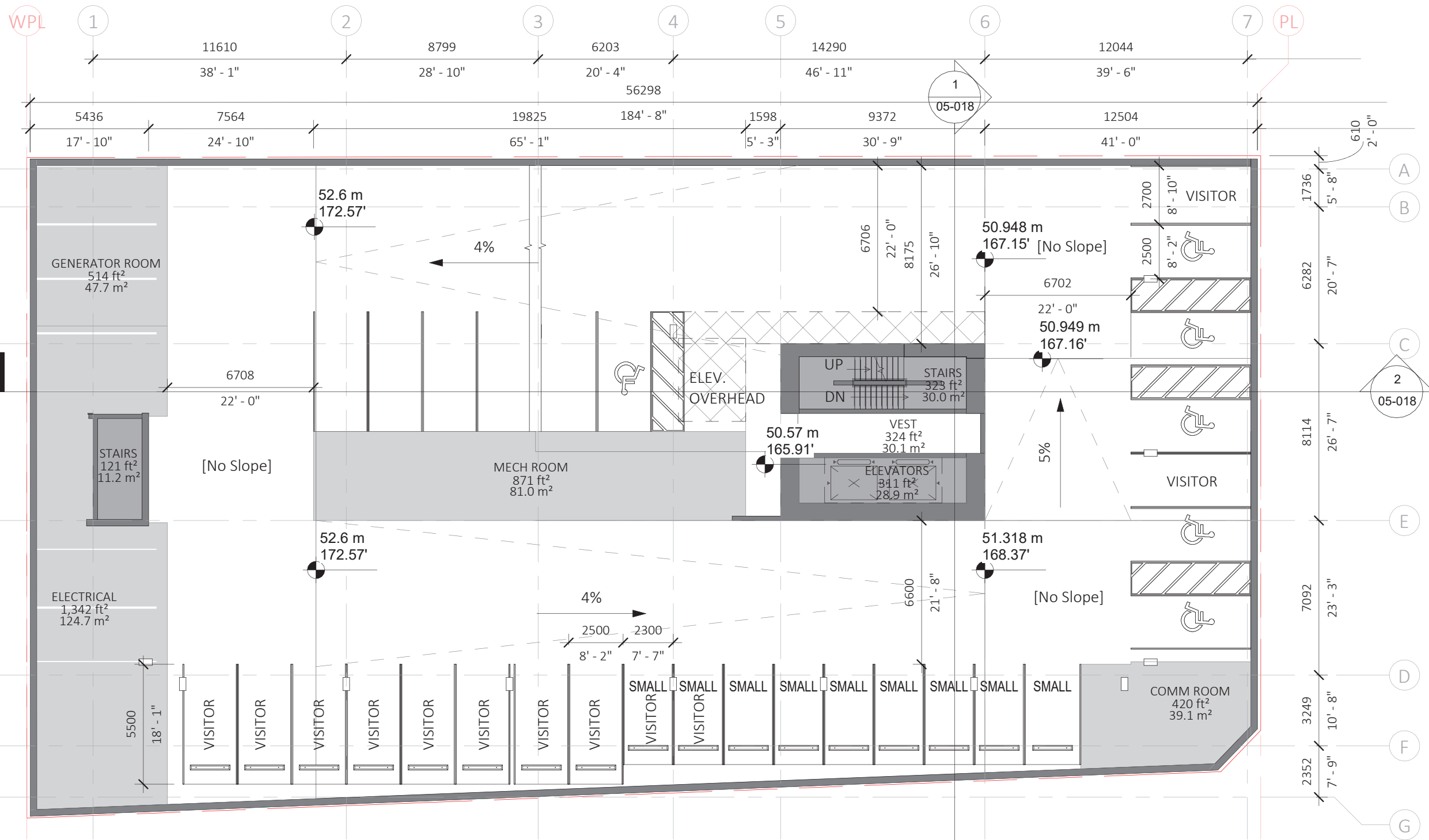
Parking Schedule P3			
Level	Type Comments	Count	Comments

Level P3	ACCESSIBLE	3	RESIDENTIAL
Level P3	SMALL	8	RESIDENTIAL
Level P3	STANDARD	26	RESIDENTIAL

Grand total: 37

37



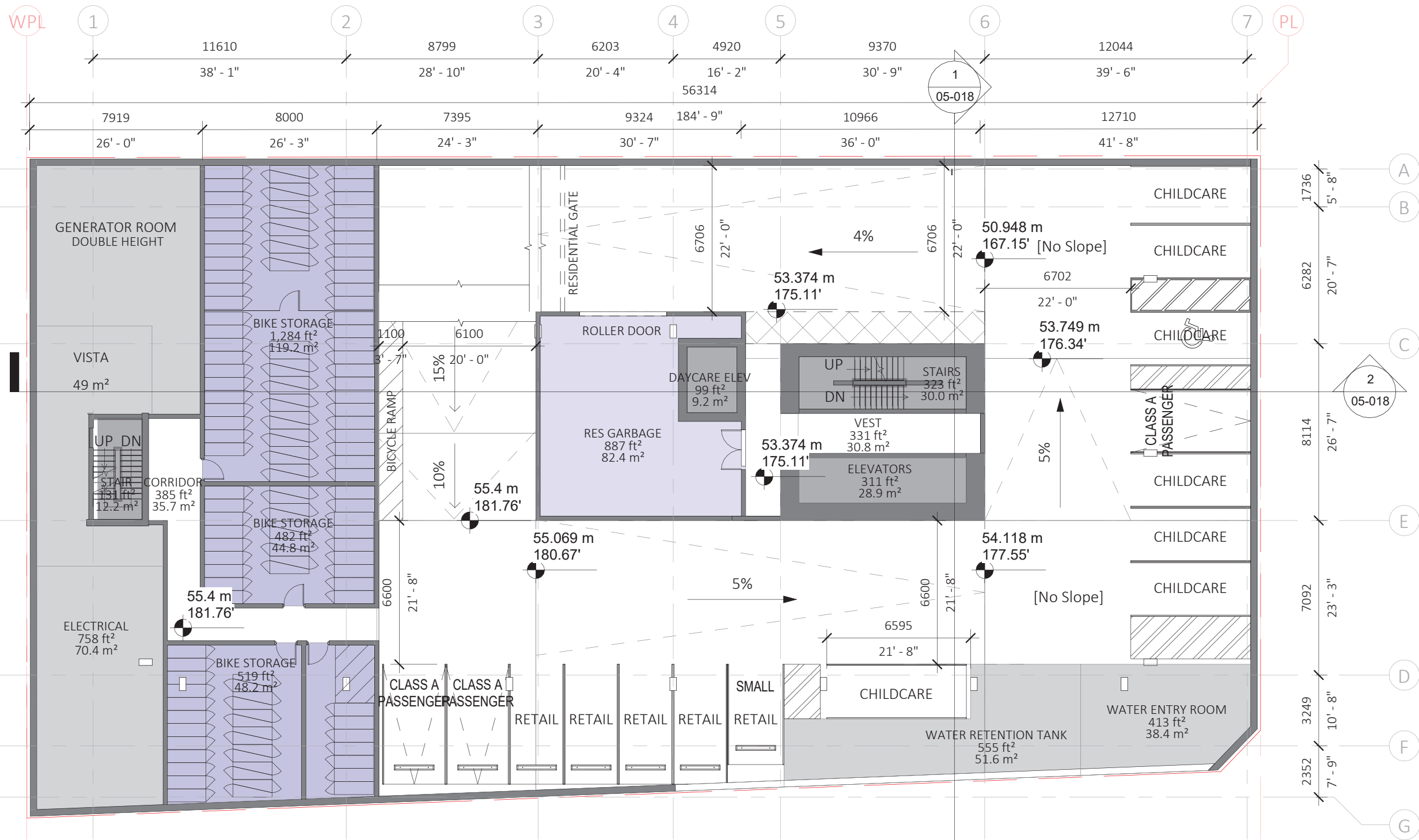


Area Type

- Parking
- Parking Circulation
- Parking Core
- Parking Services

Parking Schedule P2			
Level	Type Comments	Count	Comments
Level P2	ACCESSIBLE	6	RESIDENTIAL
Level P2	SMALL	9	RESIDENTIAL
Level P2	STANDARD	15	RESIDENTIAL
Grand total: 30		30	

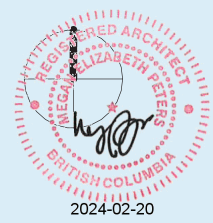


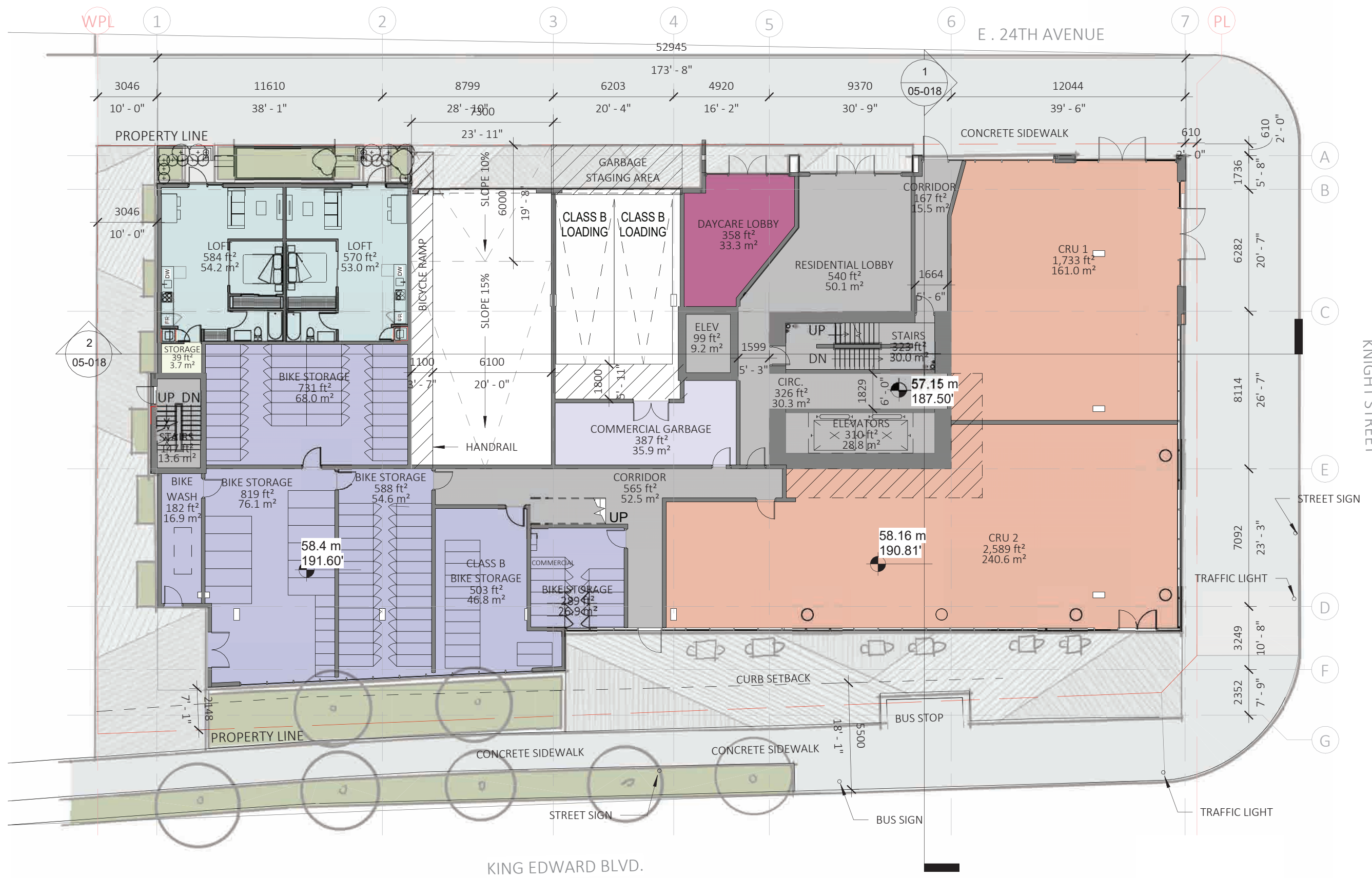


Area Type

- Bike Storage
- Garbage
- Parking
- Parking Circulation
- Parking Core
- Parking Services

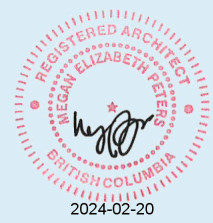
Parking Schedule P1			
Level	Type Comments	Count	Comments
Level P1	ACCESSIBLE	1	CHILDCARE
Level P1	CLASS A PASS.	3	COMMERCIAL
Level P1	PARALLEL	1	CHILDCARE
Level P1	SMALL	1	RETAIL
Level P1	STANDARD	8	<varies>
Level P1	STANDARD	1	CHILDCARE
Grand total: 15		15	

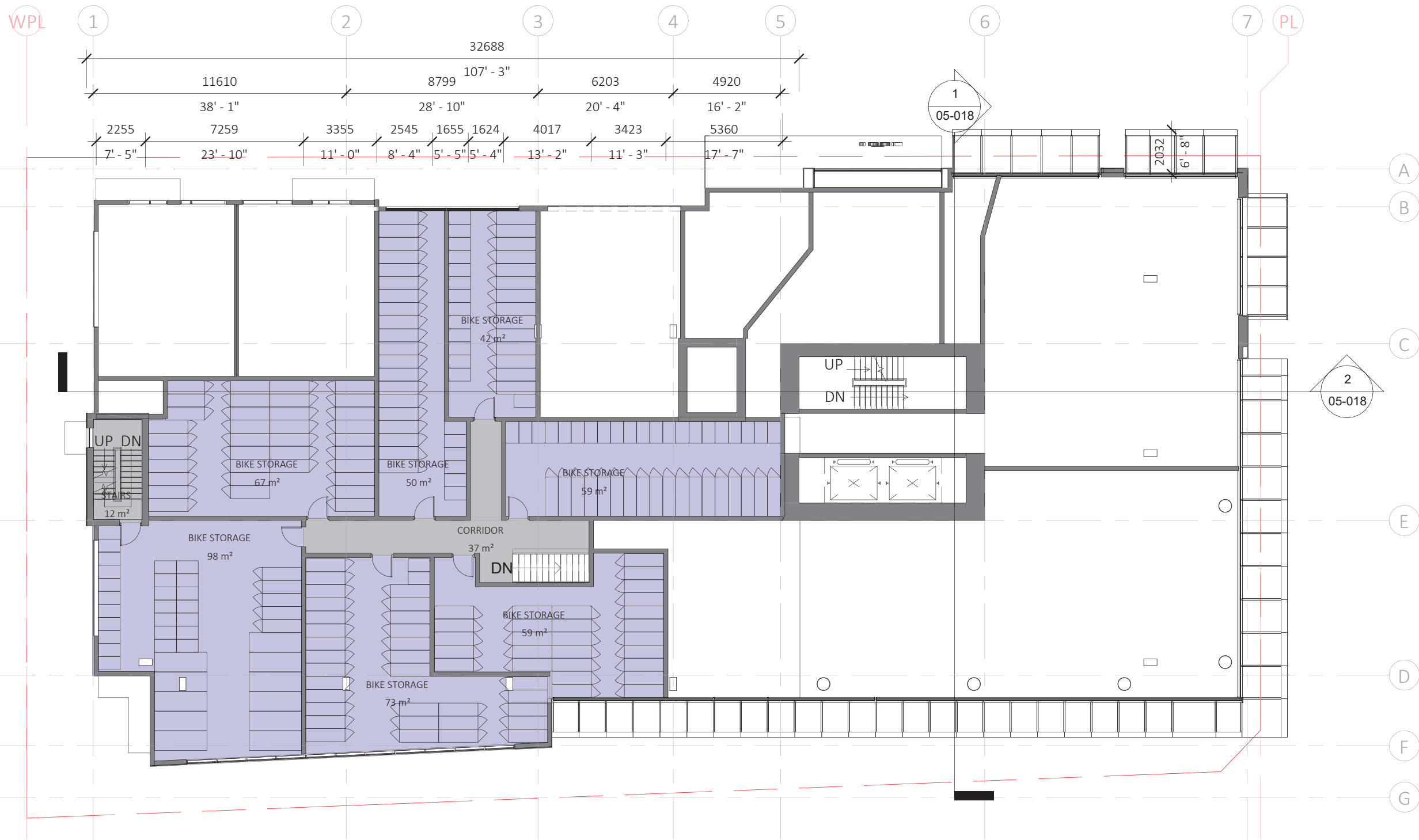




- Area Type**
- Bike Storage
 - Circulation
 - Daycare
 - Exclusion - In Suite Storage
 - Garbage
 - Residential
 - Retail

ARCHITECTURAL DRAWINGS





Area Type
 Bike Storage
 Circulation



WPL

1

2

3

4

5

1
05-018

6

7

PL

52986

173' - 10"

8513

27' - 11"

4688

15' - 5"

4688

15' - 5"

4688

15' - 5"

6807

22' - 4"

6639

21' - 9"

6478

21' - 3"

10463

34' - 4"

A

B

C

E

D

F

G

Area Type

- Balcony
- Circulation
- Exclusion - In Suite Storage
- Residential

1736

5' - 8"

6282

20' - 7"

8114

26' - 7"

7092

23' - 3"

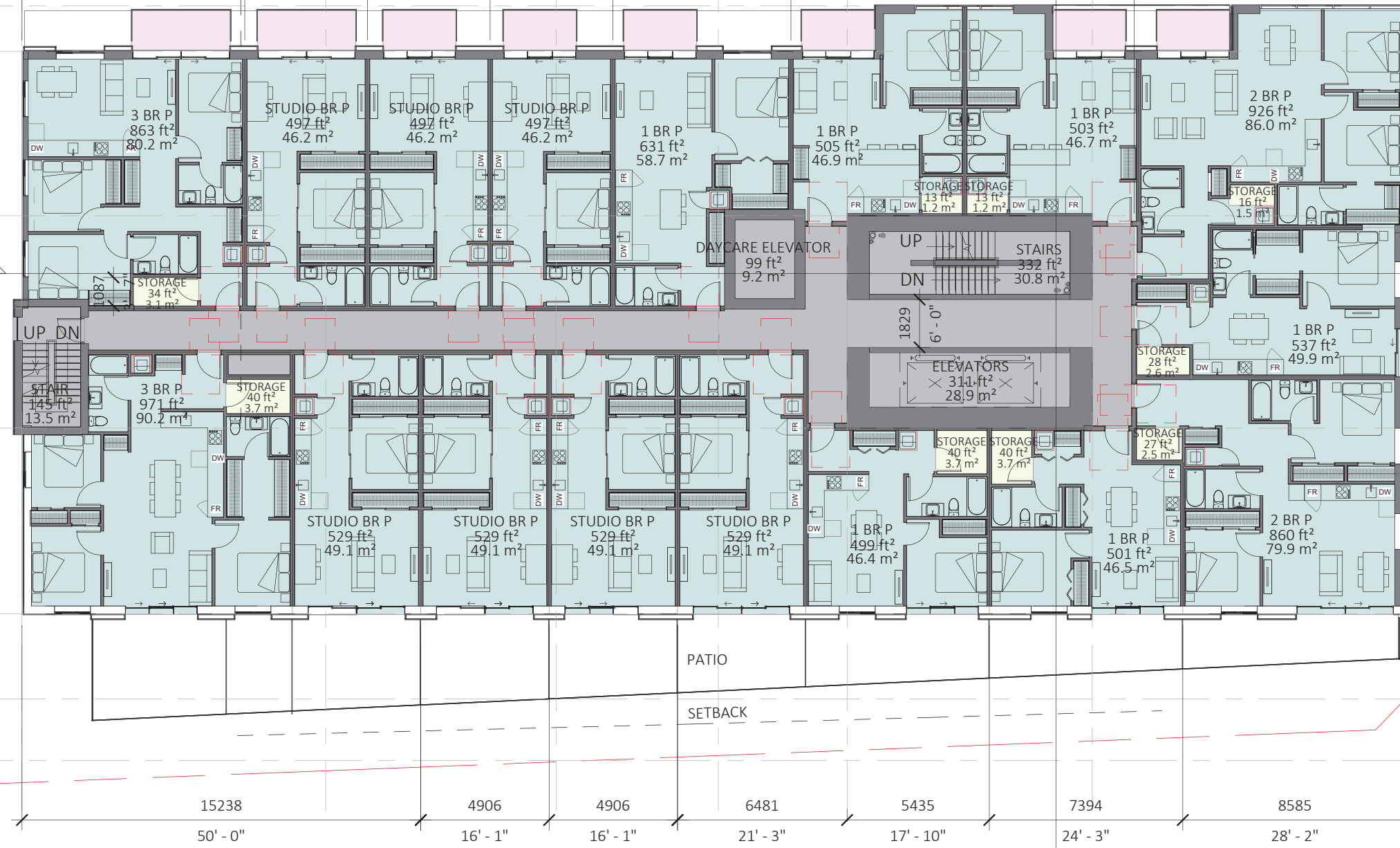
3249

10' - 8"

2352

7' - 9"

2
05-018



15238

50' - 0"

4906

16' - 1"

4906

16' - 1"

6481

21' - 3"

5435

17' - 10"

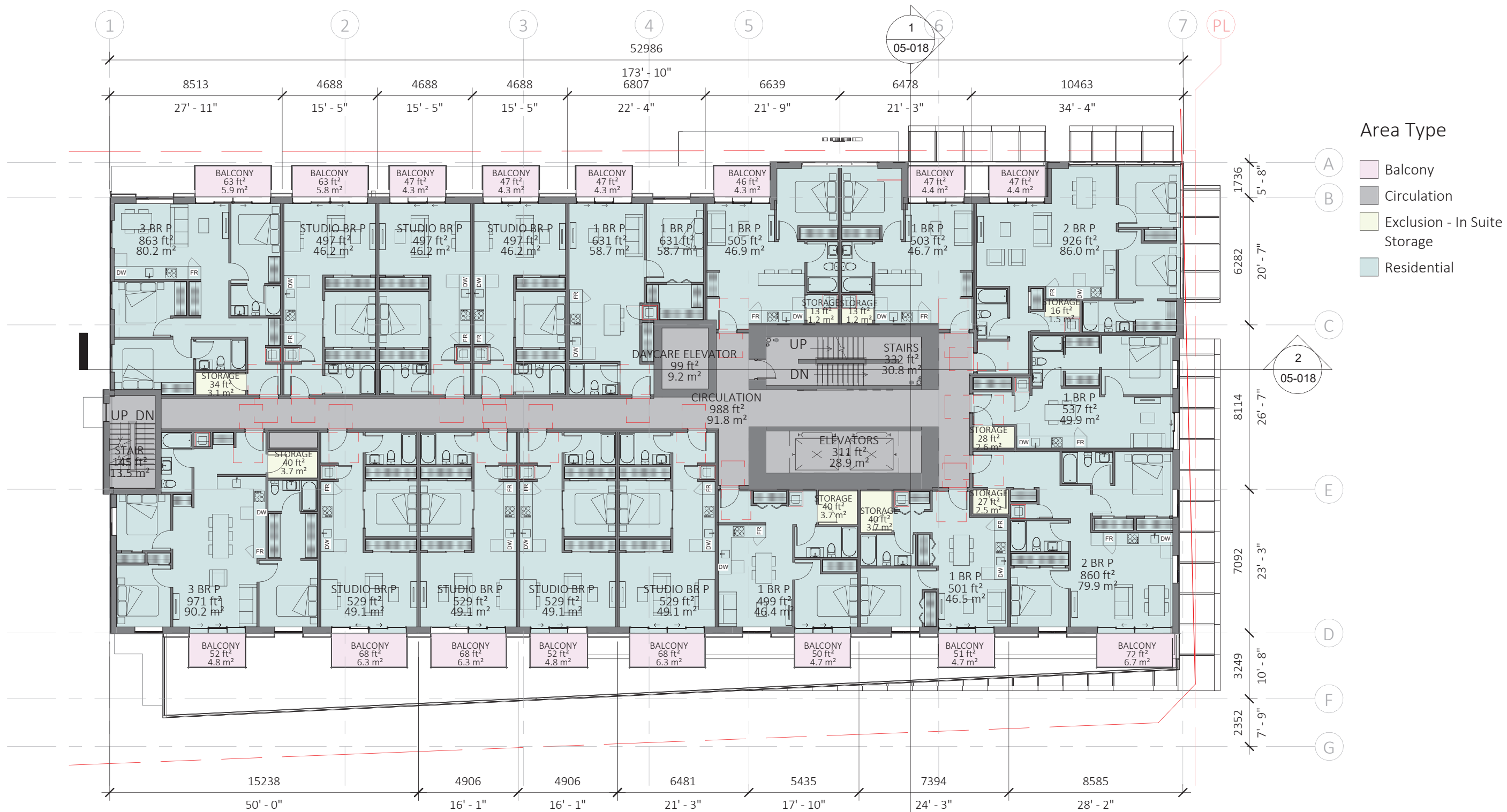
7394

24' - 3"

8585

28' - 2"



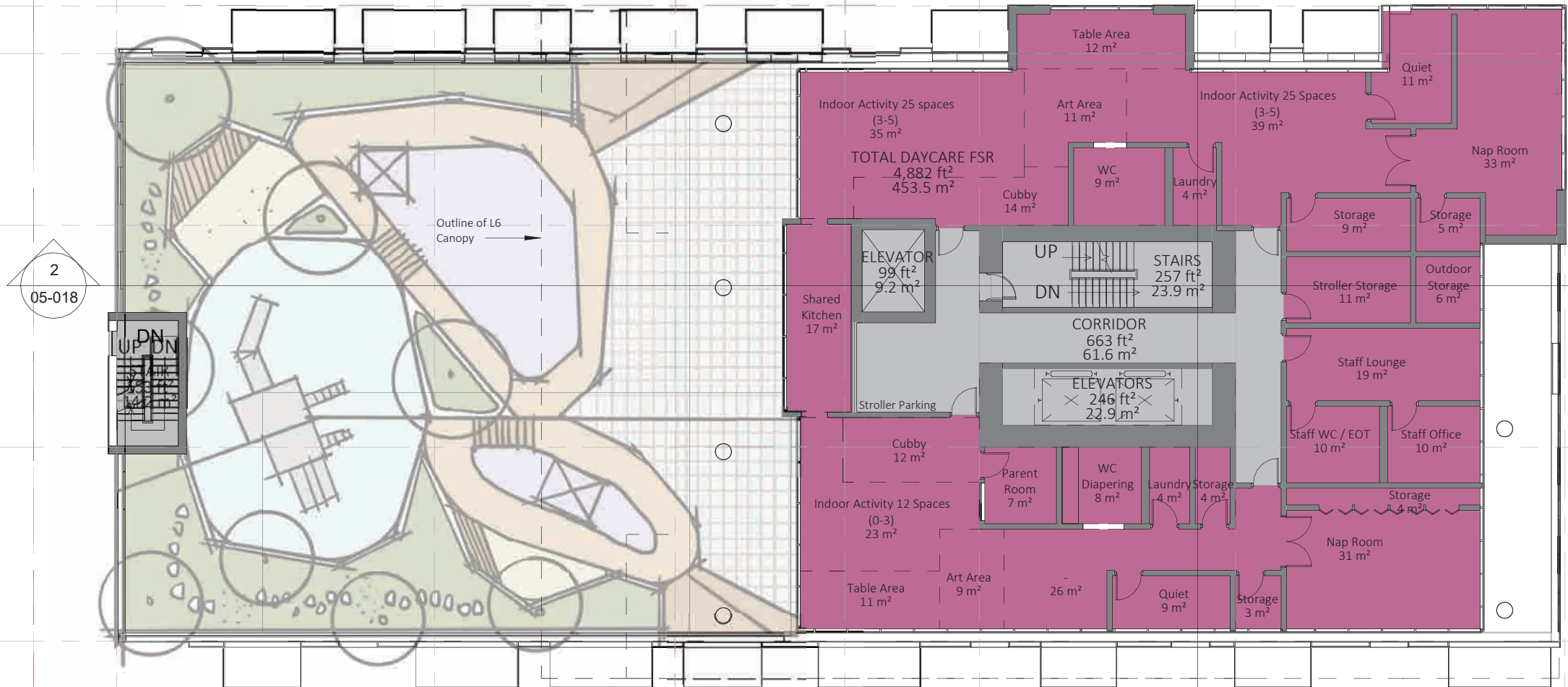


WPL 1 2 3 4 5 6 7 PL

11610 38'-1" 8799 28'-10" 6203 20'-4" 4920 16'-2" 9370 30'-9" 1 05-018 12044 39'-6" 610 2'-0"

Area Type

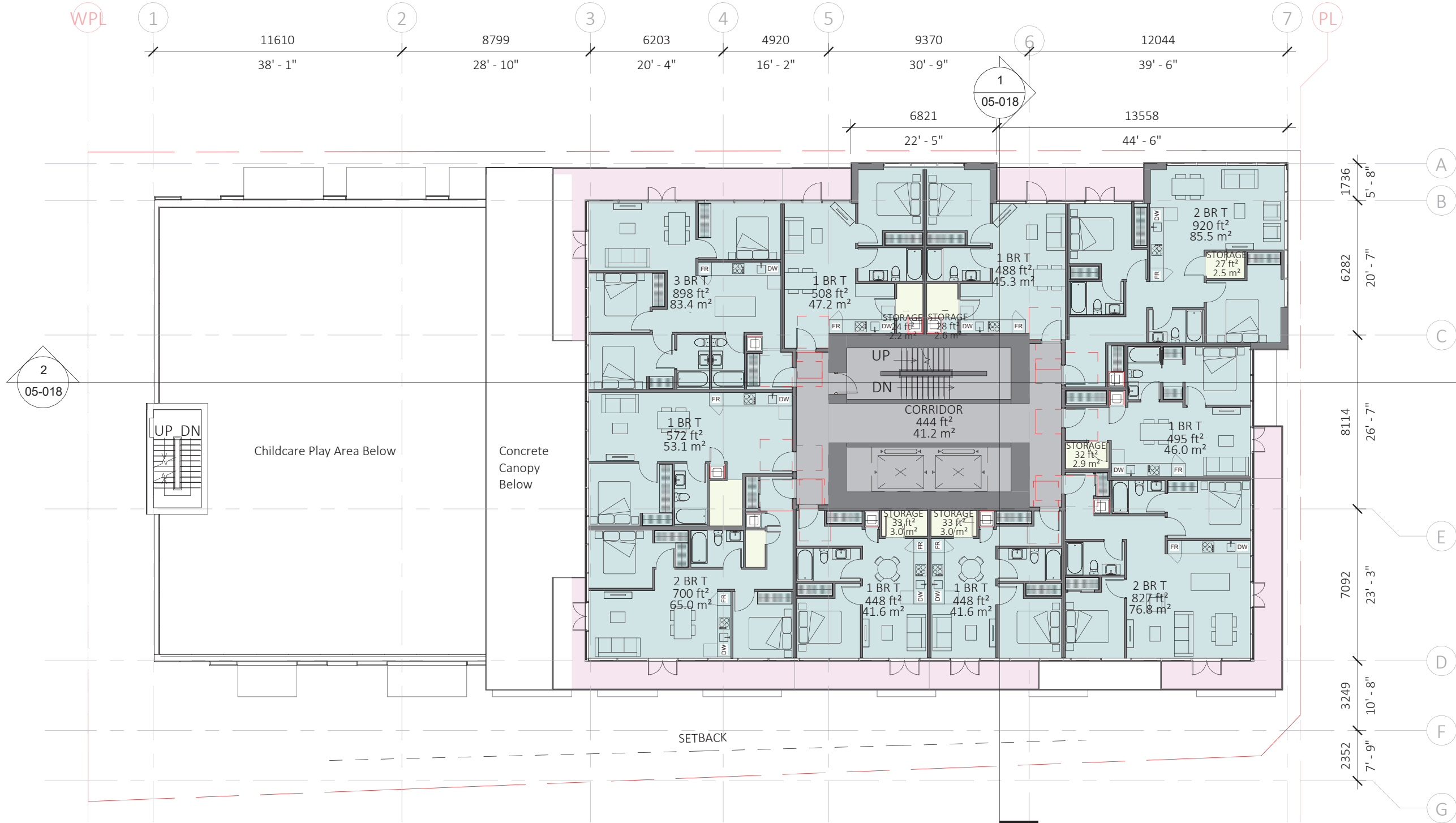
- Circulation
- Daycare



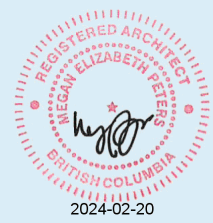
1736 5'-8" A
6282 20'-7" B
8114 26'-7" C
7092 23'-3" D
3249 10'-8" E
2352 7'-9" F
G

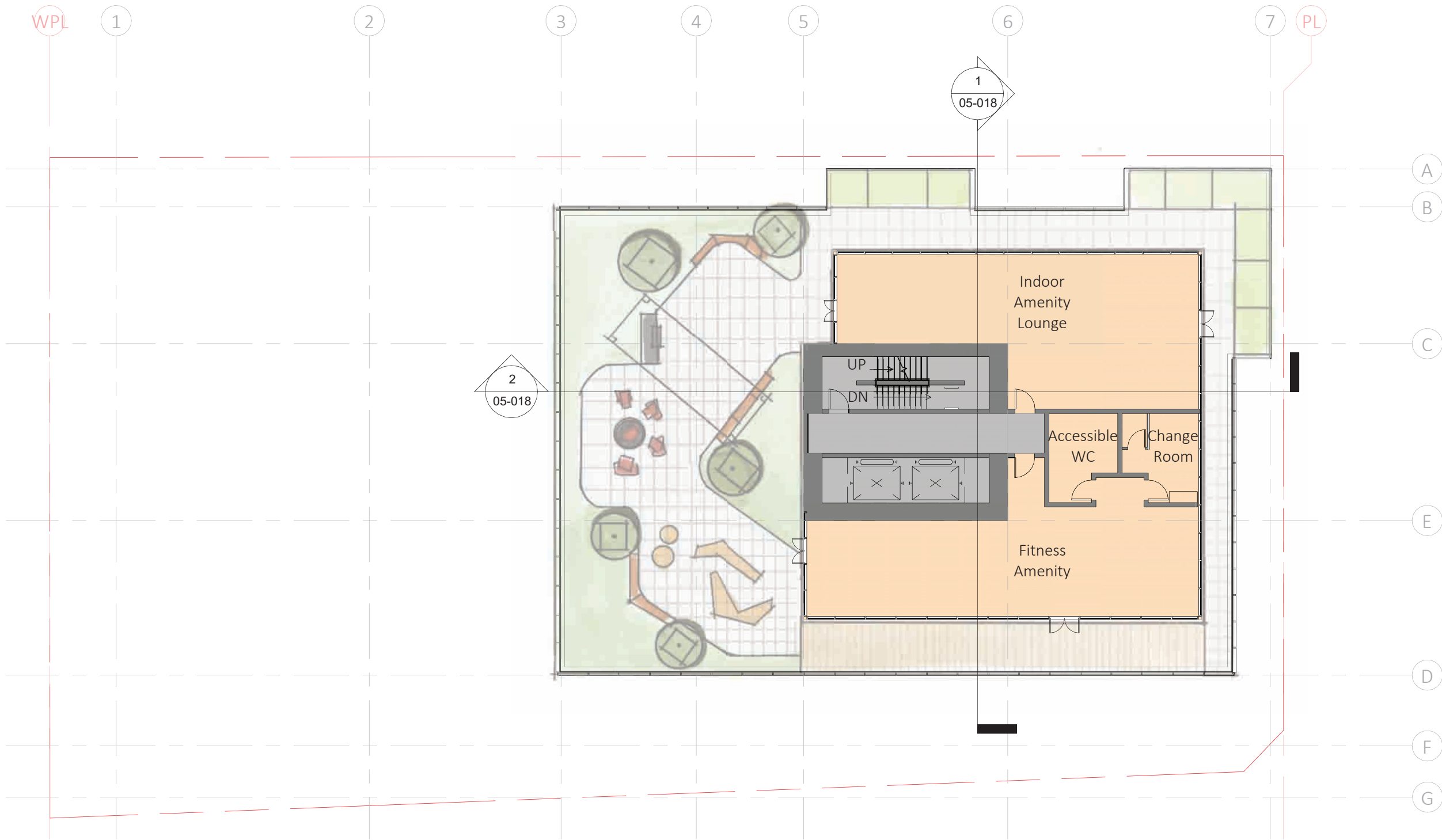
2 05-018





- Area Type
- Balcony
 - Circulation
 - Exclusion - In Suite Storage
 - Residential

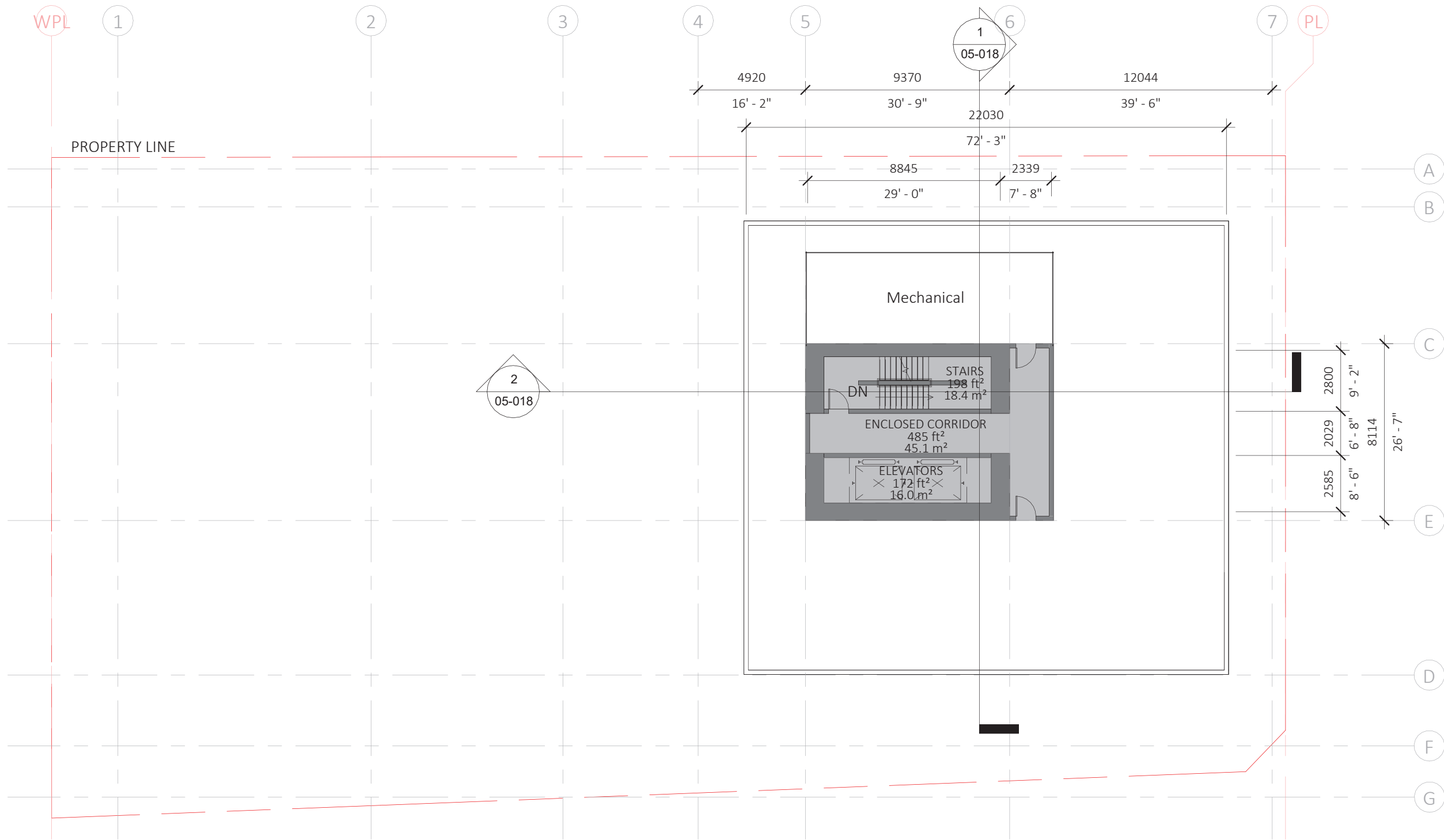




Area Type

- Amenity
- Circulation
- Exclusion





Area Type
 Circulation



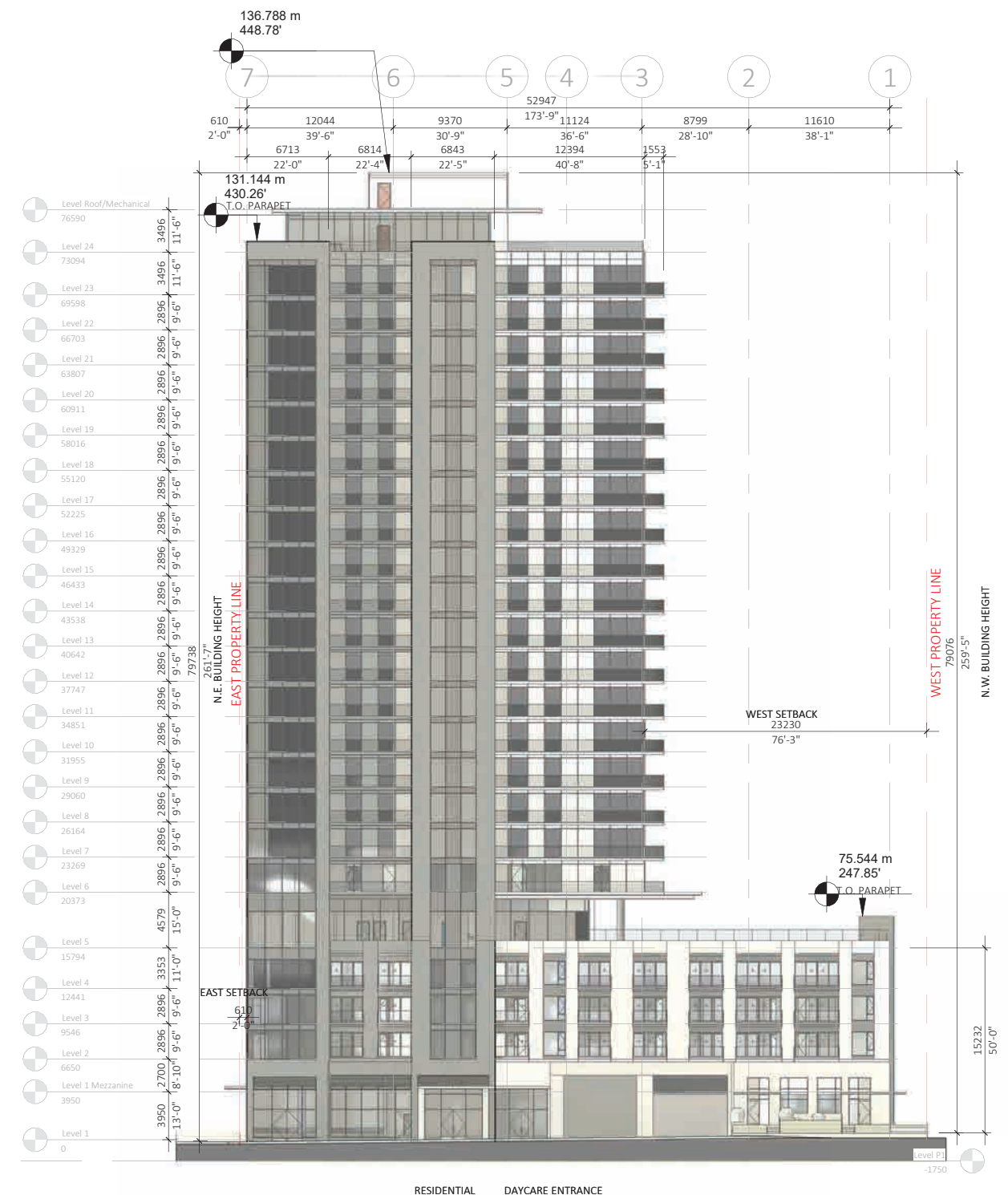


2024-02-20

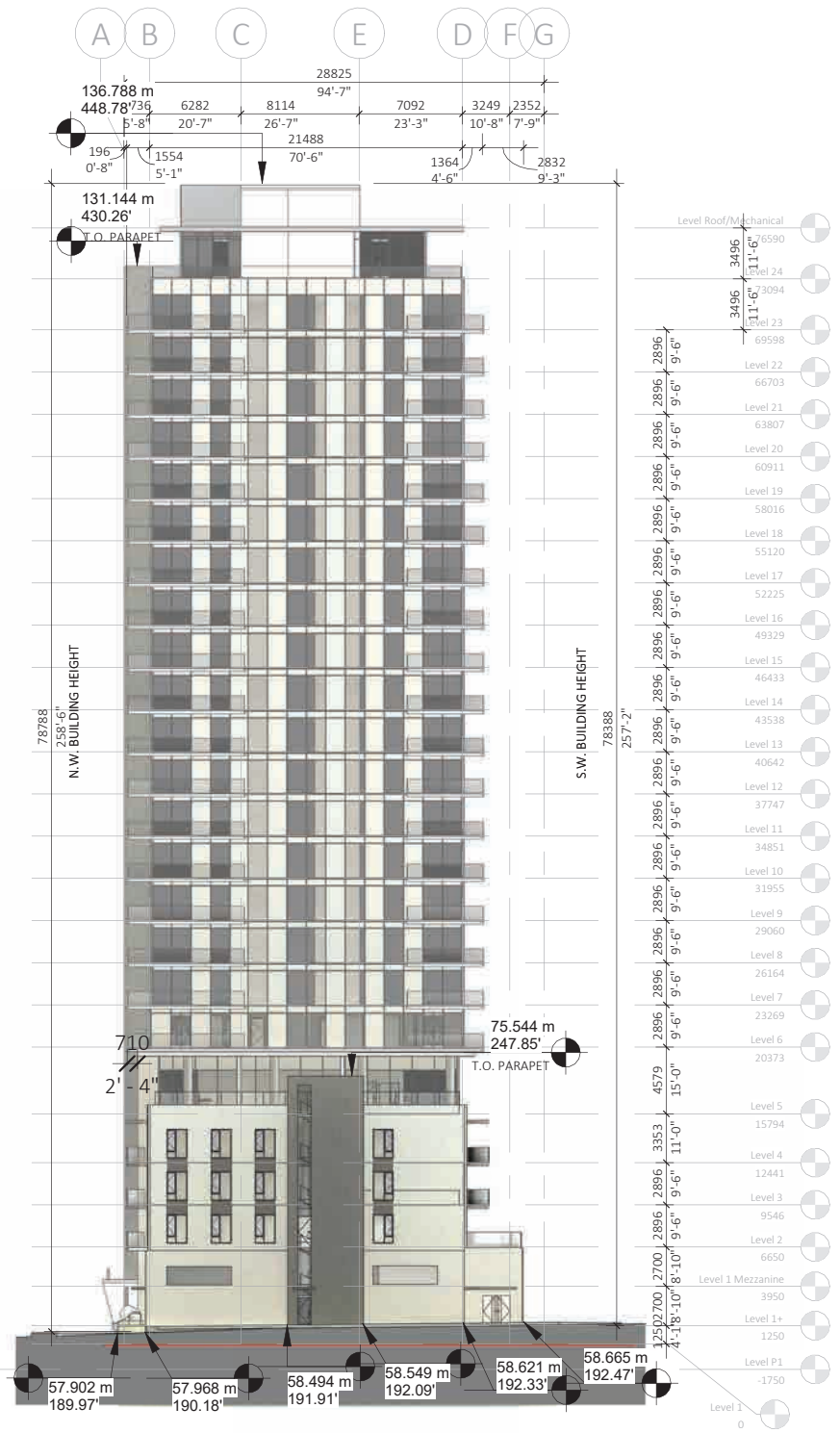
05-016



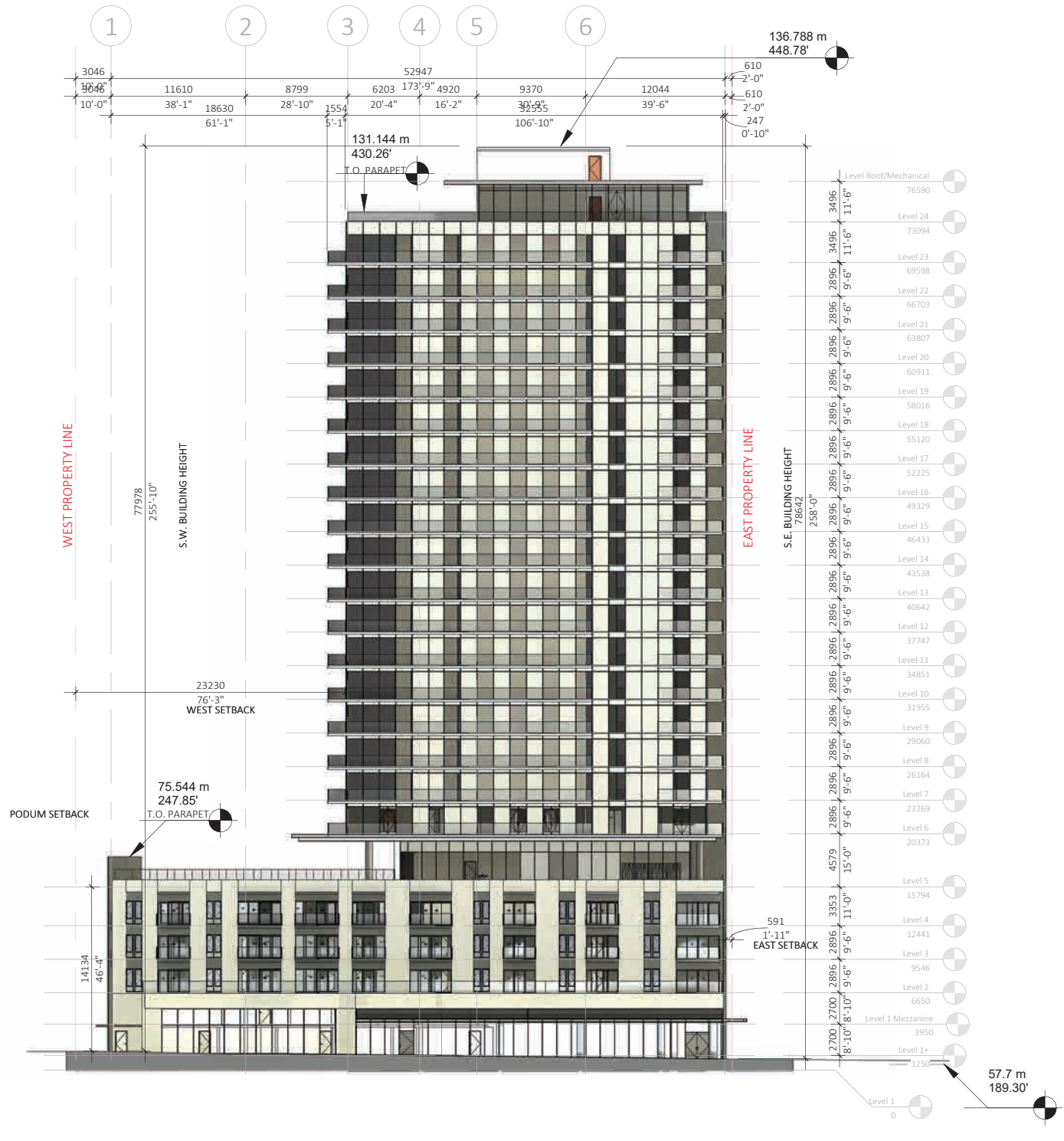
East Elevation



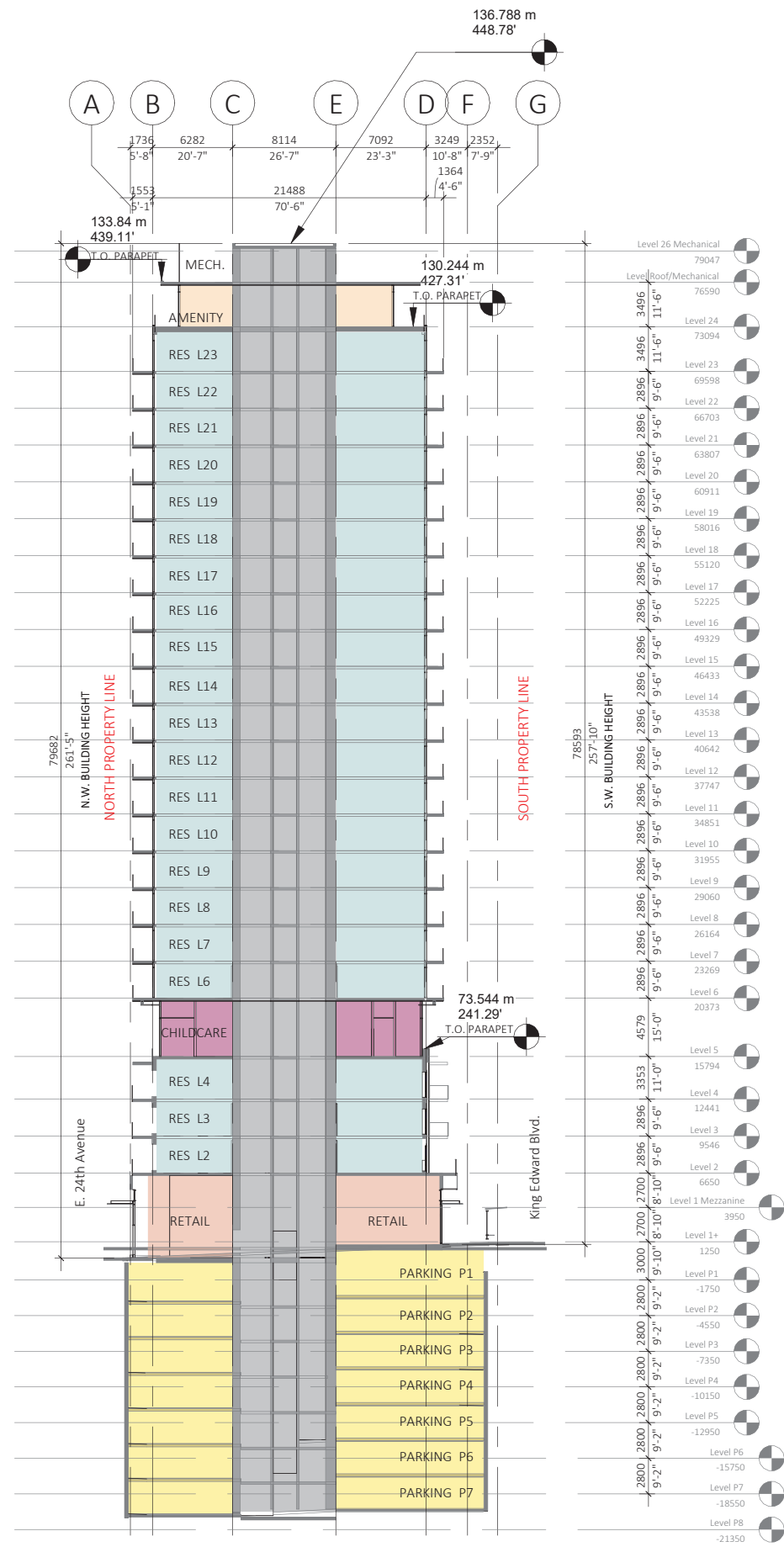
North Elevation



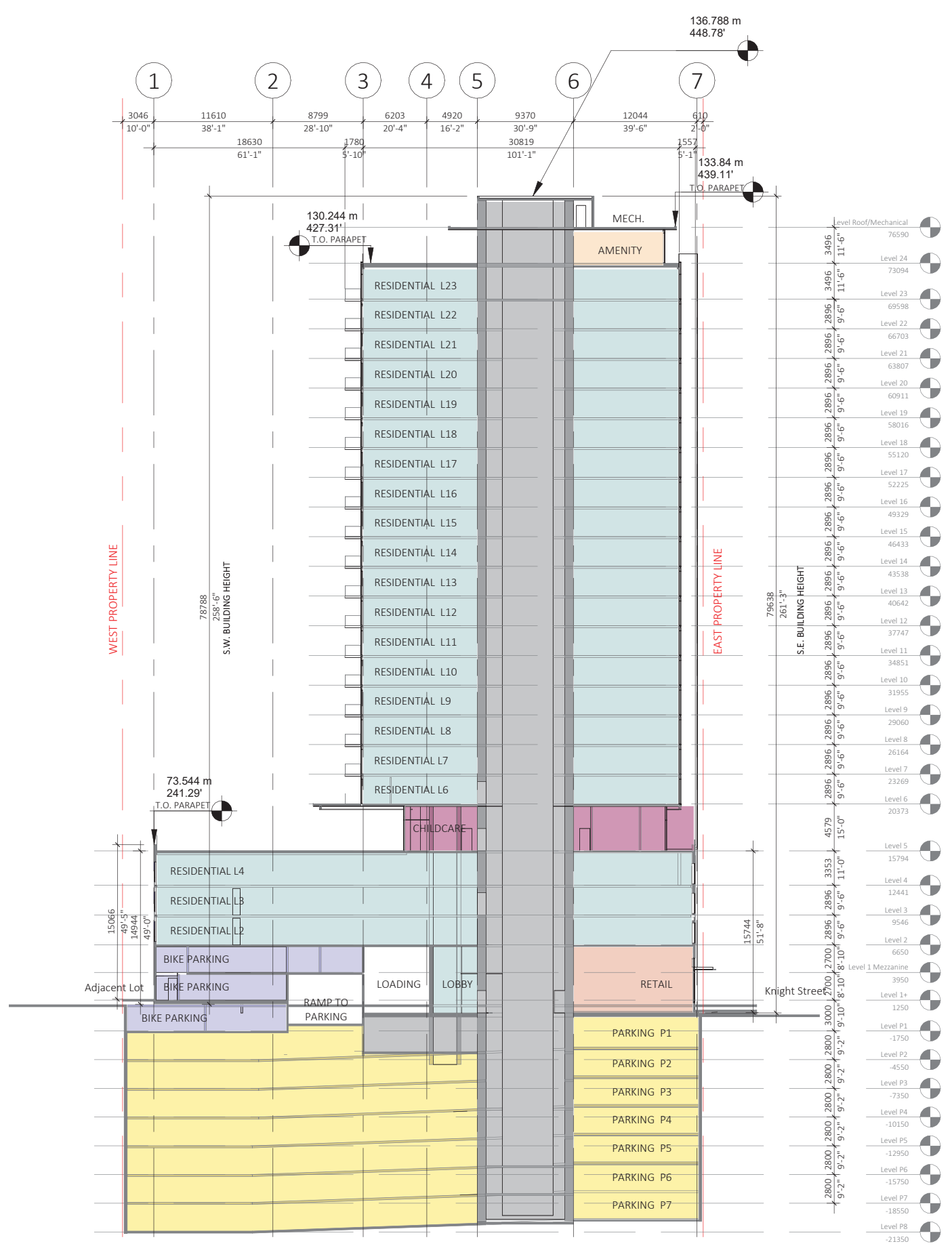
West Elevation



South Elevation



Transversal Section



Longitudinal Section

Scale 1 : 500

Cross Sections

4001 Knight Street

DRAWING LIST

SHEET	DRAWING TITLE	SCALE
L1.1	Ground Level Landscape Concept	1:200
L1.2	Daycare Level Landscape Concept	1:200
L1.3	Roof Level Landscape Concept	1:200

LANDSCAPE NOTES

- All work shall meet or exceed the requirements as outlined in the current Edition of the Canadian Landscape Standard.
- Plant sizes and related container classes are specified according to the Canadian Landscape Standard current Edition. For container classes #3 and smaller, plant sizes shall be as shown in the plant list and the Standard; for all other plants, both plant size and container class shall be as shown in the plant list. Specifically, when the plant list call for #5 class containers, these shall be as defined in the CNLA (ANSI) Standard.
- Area of search for specified plant material shall include the Lower Mainland of British Columbia, Vancouver Island, Washington and Oregon States.
- All plant material used on this project shall be hardy in this climate. Plant types have been selected with this as a primary criteria. This Contractor shall guarantee that plant material supplied has equal provenance, i.e. it is developed from cuttings or seeds collected in an area of similar climatic characteristics.
- Substitutions in plant material will not be considered unless written proof is submitted thirty (30) days prior to scheduled installation stating a specified plant cannot be obtained within the specified area of search.
- All trees to be staked in accordance with CNLA Standards.
- For all existing on site services and survey symbols refer to survey drawings.
- All landscaping and treatment of the open portions of the site shall be completed in accordance with the approved drawings within six (6) months of the date of issuance of any required occupancy permit, or any use or occupancy of the proposed development not requiring an occupancy permit, and thereafter permanently maintained in good conditions.

OFF-SITE PLANTING NOTES

- Street tree final spacing and quantity to the approval of CoV Engineering, (contact Eileen Curran of Engineering Services, Street Tree Division at 604.871.6131).
- Street tree final species to the approval of CoV Park Board.
- Approved root barrier to be installed per CoV standard, 8' (2.4m) long and 18" (450mm) deep.
- Call Park Board for inspection after tree planting.

ADDITIONAL NOTES

- All sidewalks between curb and property line are to be reconstructed fully at the applicant's expense.
- This plan is NOT FOR CONSTRUCTION and is to be submitted for review to Engineering Services a minimum of 8 weeks prior to the start of any construction proposed for public property. No work on public property may begin until such plans receive "For Construction" approval and related permits are issued. Please contact Engineering, Development Services and/ or your Engineering Building Site Inspector for details.
- Final spacing, quantity and tree species to the satisfaction of the General Manager of Engineering Services. New trees must be of good standard, installed with approved root barriers and appropriate soil. Root barriers shall be of rigid construction, 8 feet long and 18 inches in depth. Planting depth of root ball must be below sidewalk grade. Call Park Board (604-257-8587) for inspection after tree planting completion.

IRRIGATION NOTES

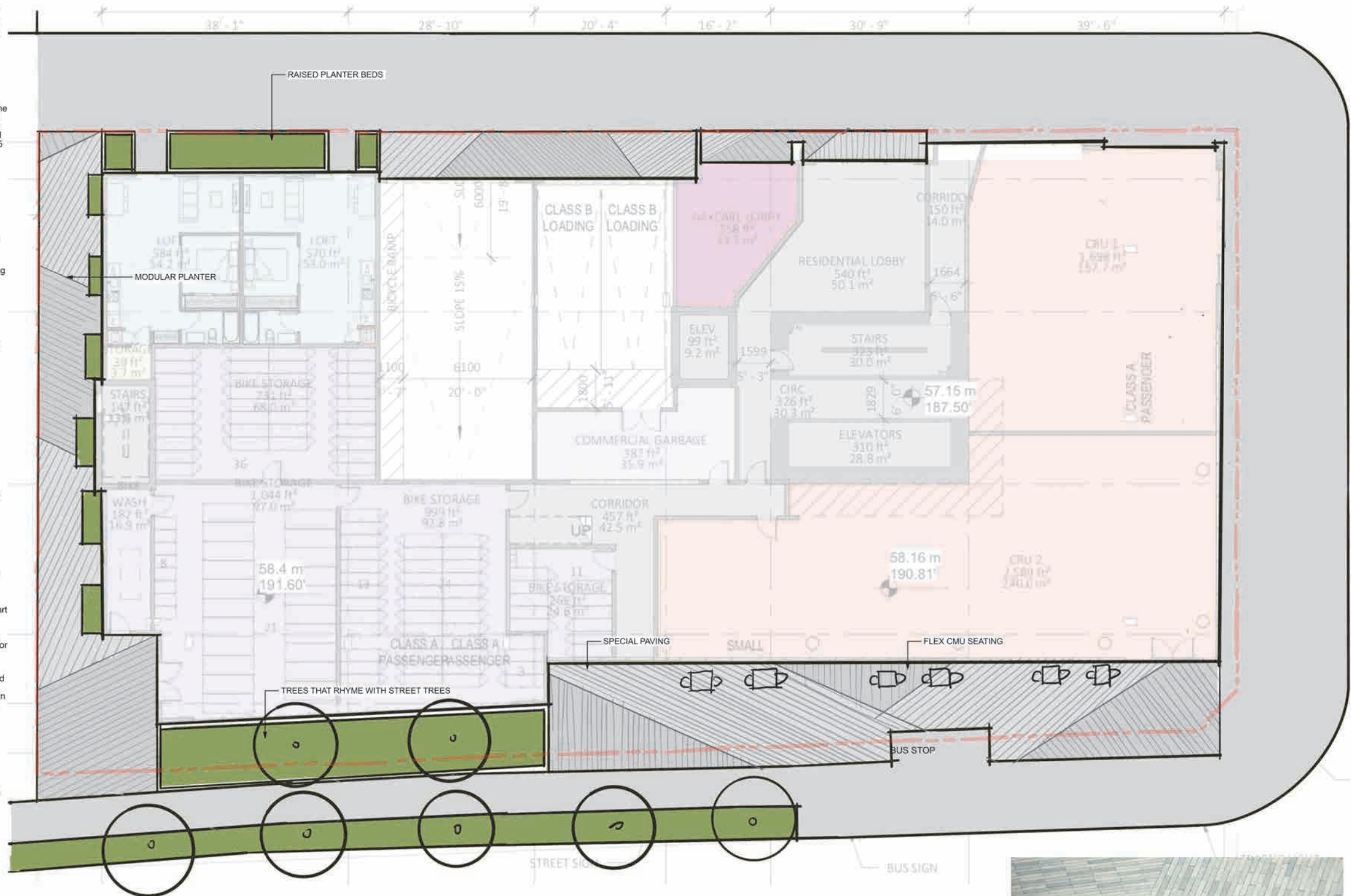
- All on-site 'Soft Landscape Areas' are to be irrigated with high-efficiency automatic irrigation systems, including rain sensors, to IAABC Standards.
- Irrigation stub-outs and hose bib locations will be provided to mechanical and electrical consultants for coordination.
- Irrigation system is a design-build. Landscape contractor to provide irrigation design/layout for review by Landscape Consultant for approval.
- No visible irrigation lines will be accepted.
- All irrigation boxes to be equipped with quick couplers.
- Irrigation controller to be located in mechanical room.

BIRD FRIENDLY STRATEGY

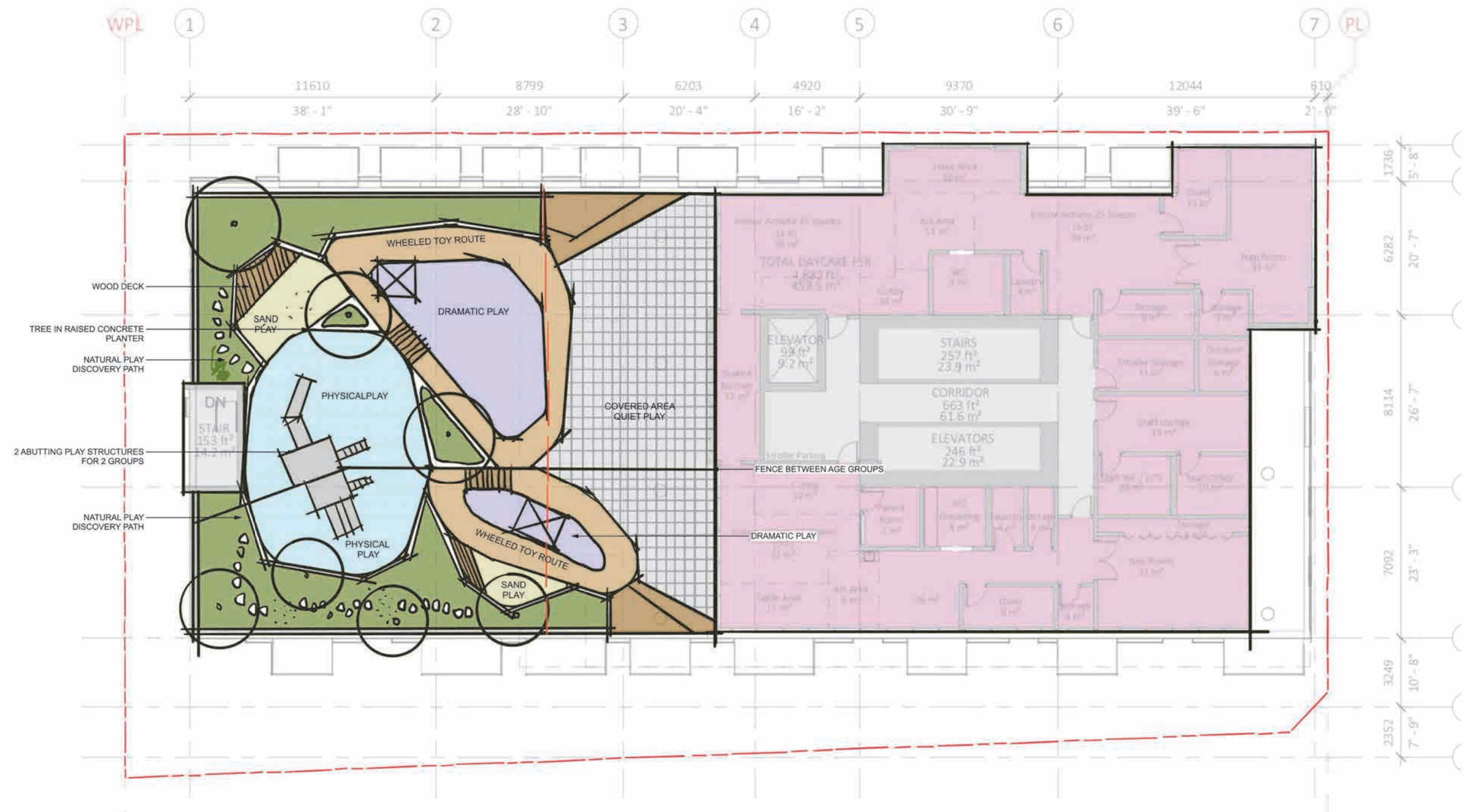
Elements of the landscape design and planting selection have been thoughtfully considered to support the City of Vancouver's 'Bird Friendly Strategy Design Guidelines.' The use of native tiered planting materials will provide a variety of textures and heights that will support bird habitat. The plantings should provide opportunities for nesting, food sources, pollination support, shelters as well as protection.

A landscape consideration that will make this proposed development more bird friendly will be the expansion of the urban tree canopy. The development proposes to add street trees along King Edward Blvd. These trees will grow up to provide shade, perching and nesting opportunities.

The proposed landscape planting incorporates canopy and habit stratification with tree(s), shrub(s) and groundcover planting, utilizing plants that attract birds, insects and includes native and non-native/non-invasive plants.



STRIP PAVING TO MATCH BUILDING MATERIAL CONCEPT





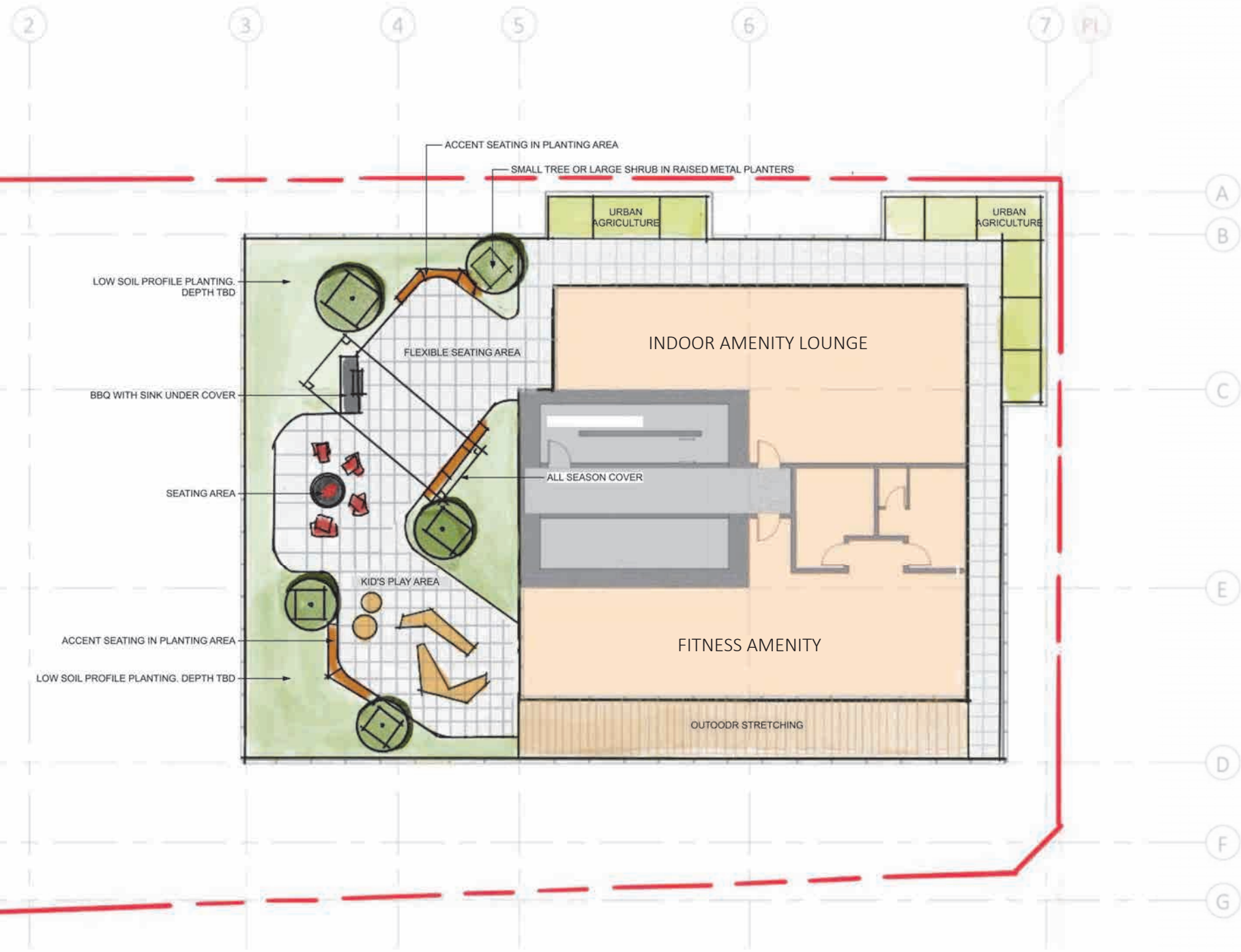
ACCENT SEATING



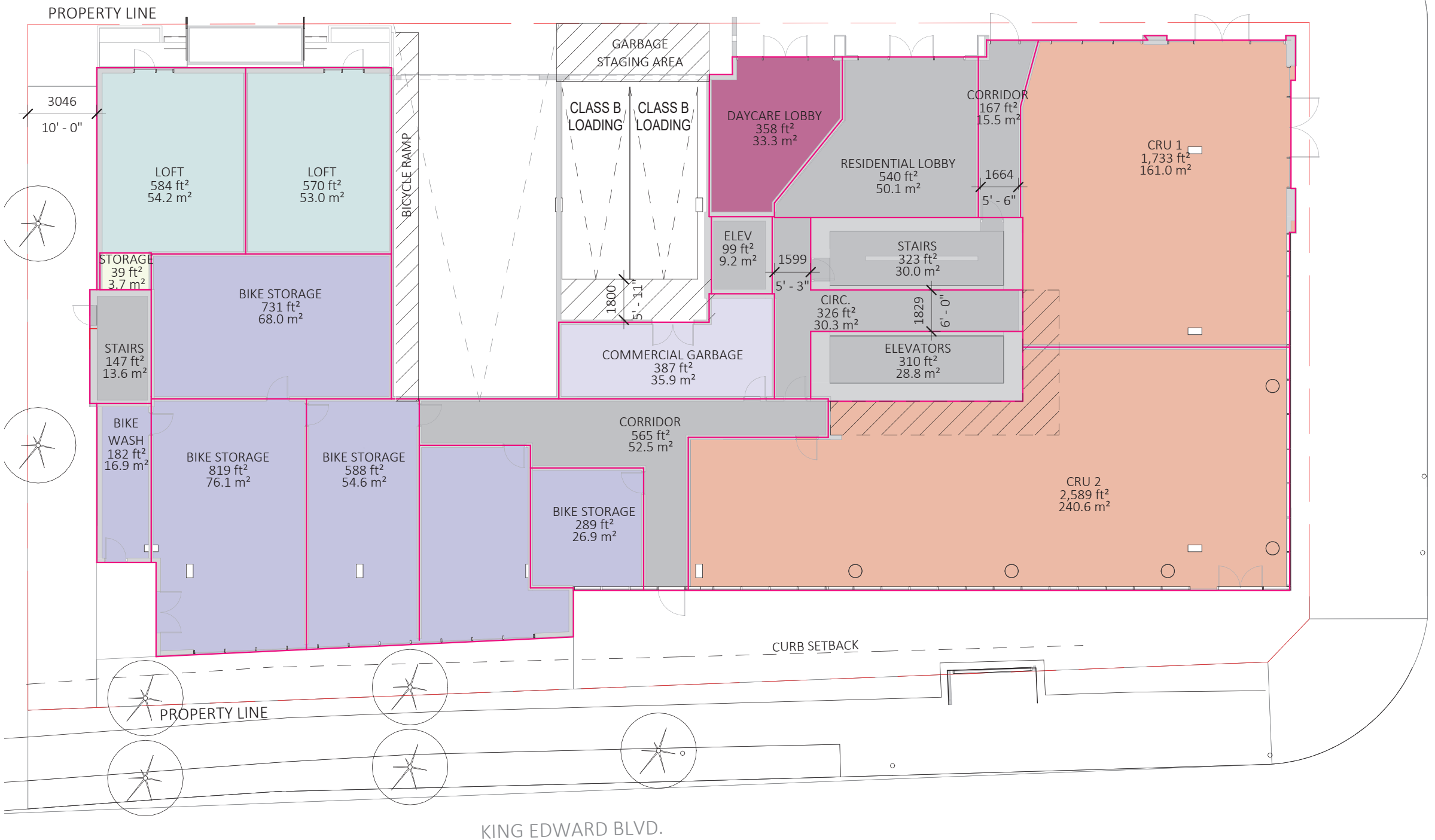
LOW-PROFILE PLANTING



LOW-PROFILE PLANTING WITH RAISED METAL PLANTERS



E . 24TH AVENUE

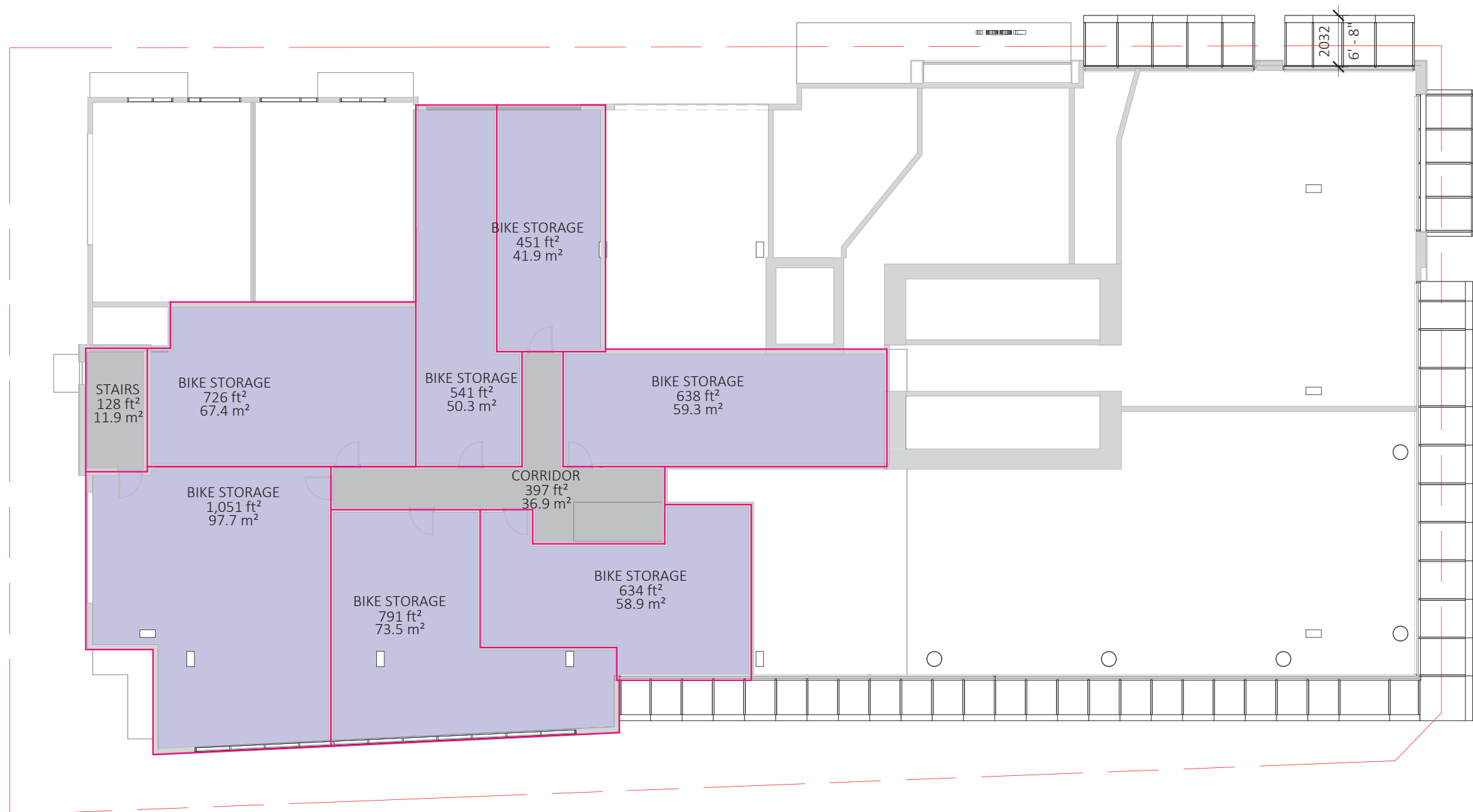


- Area Type
- Bike Storage
 - Circulation
 - Daycare
 - Exclusion - In Suite Storage
 - Garbage
 - Residential
 - Retail

FSR AREA LEVEL 1

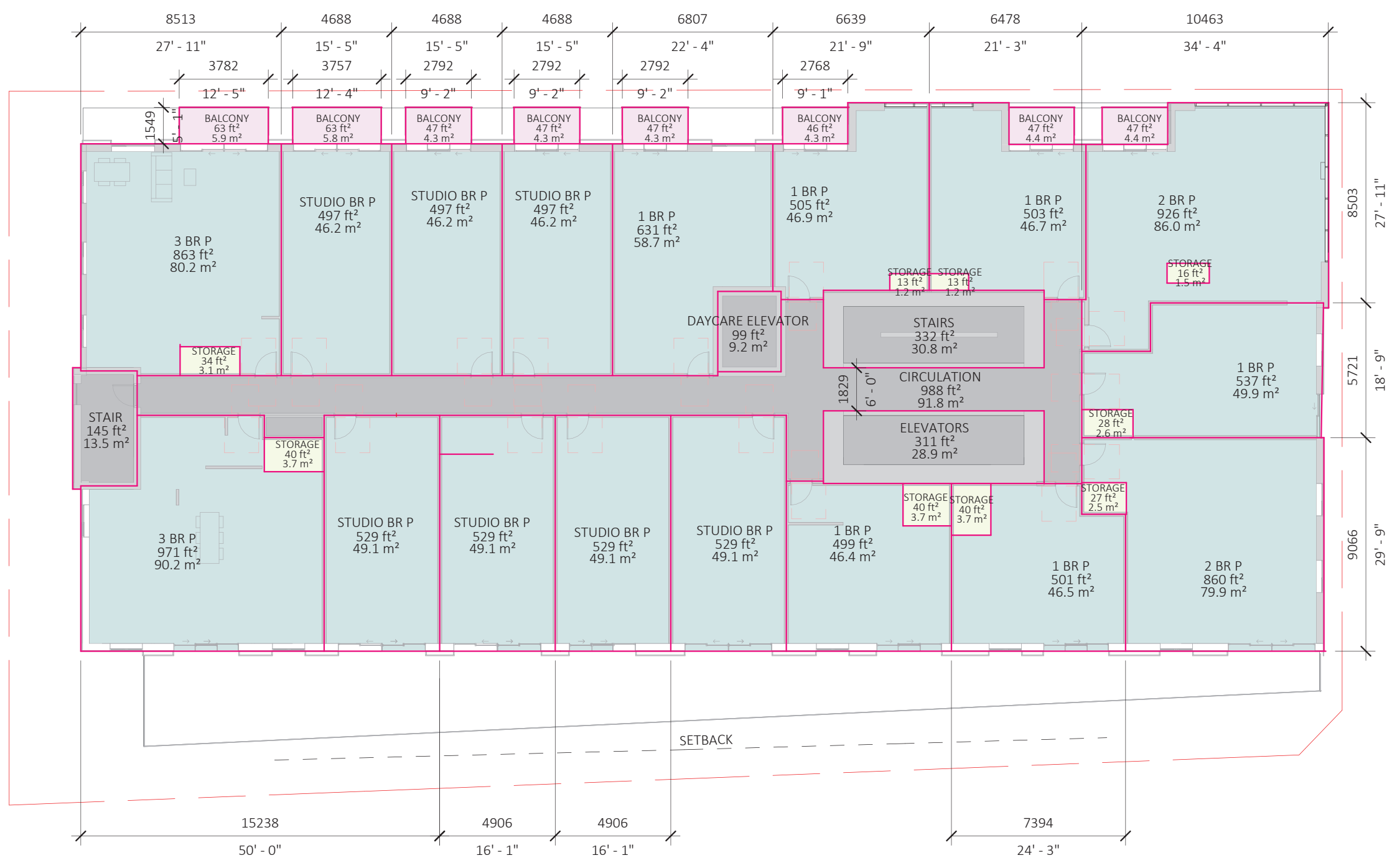
RESIDENTIAL AREA (m2)	CIRCULATION AREA (m2)	RETAIL AREA (m2)	DAYCARE AREA (m2)	NET FLOOR AREA (m2)	EXCLUDED STORAGE AREA (m2)	EXCLUDED SERVICES AREA (m2)	EXCLUDED AMENITY AREA (m2)	GFA EXCLUSIONS (m2)	GROSS FLOOR AREA (m2)
107.2	226.7	401.6	33.3	768.8	3.7	328.5	0.0	332.2	1101.0
107.2	226.7	401.6	33.3	768.8	3.7	328.5	0.0	332.2	1101.0





FSR AREA LEVEL 1 MEZZANINE									
RESIDENTIAL AREA (m2)	CIRCULATION AREA (m2)	RETAIL AREA (m2)	DAYCARE AREA (m2)	NET FLOOR AREA (m2)	EXCLUDED STORAGE AREA (m2)	EXCLUDED SERVICES AREA (m2)	EXCLUDED AMENITY AREA (m2)	GFA EXCLUSIONS (m2)	GROSS FLOOR AREA (m2)
0.0	48.7	0.0	0.0	48.7	0.0	449.0	0.0	449.0	497.7





- Area Type
- Balcony
 - Circulation
 - Exclusion - In Suite Storage
 - Residential

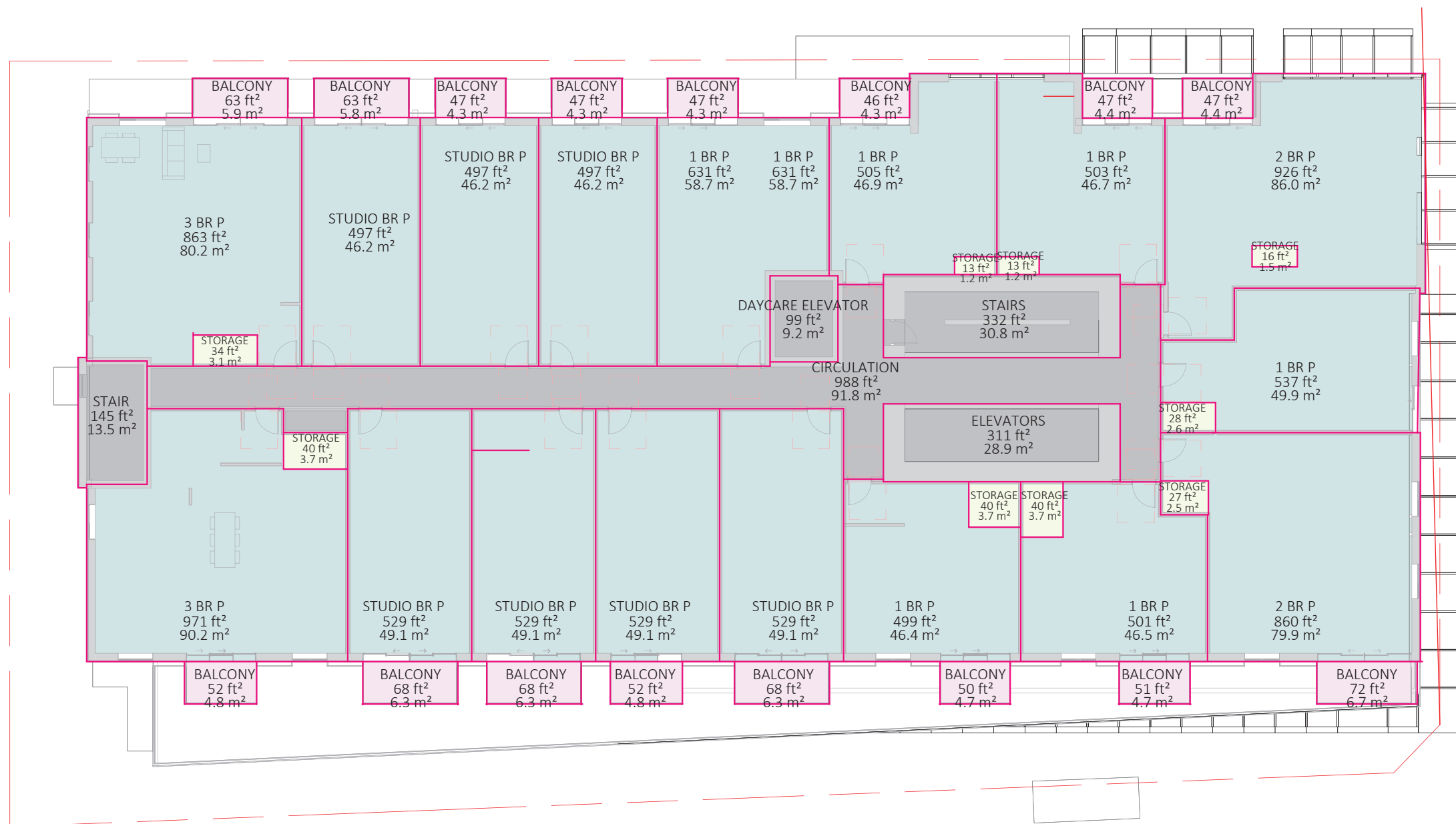
BALCONY AREA LEVEL 2
BALCONY AREAS (m ²)
37.7

FSR AREA LEVEL 2									
RESIDENTIAL AREA (m ²)	CIRCULATION AREA (m ²)	RETAIL AREA (m ²)	DAYCARE AREA (m ²)	NET FLOOR AREA (m ²)	EXCLUDED STORAGE AREA (m ²)	EXCLUDED SERVICES AREA (m ²)	EXCLUDED AMENITY AREA (m ²)	GFA EXCLUSIONS (m ²)	GROSS FLOOR AREA (m ²)
966.4	174.1	0.0	0.0	1140.5	23.2	0.0	0.0	23.2	1163.7



Area Type

- Balcony
- Circulation
- Exclusion - In Suite Storage
- Residential



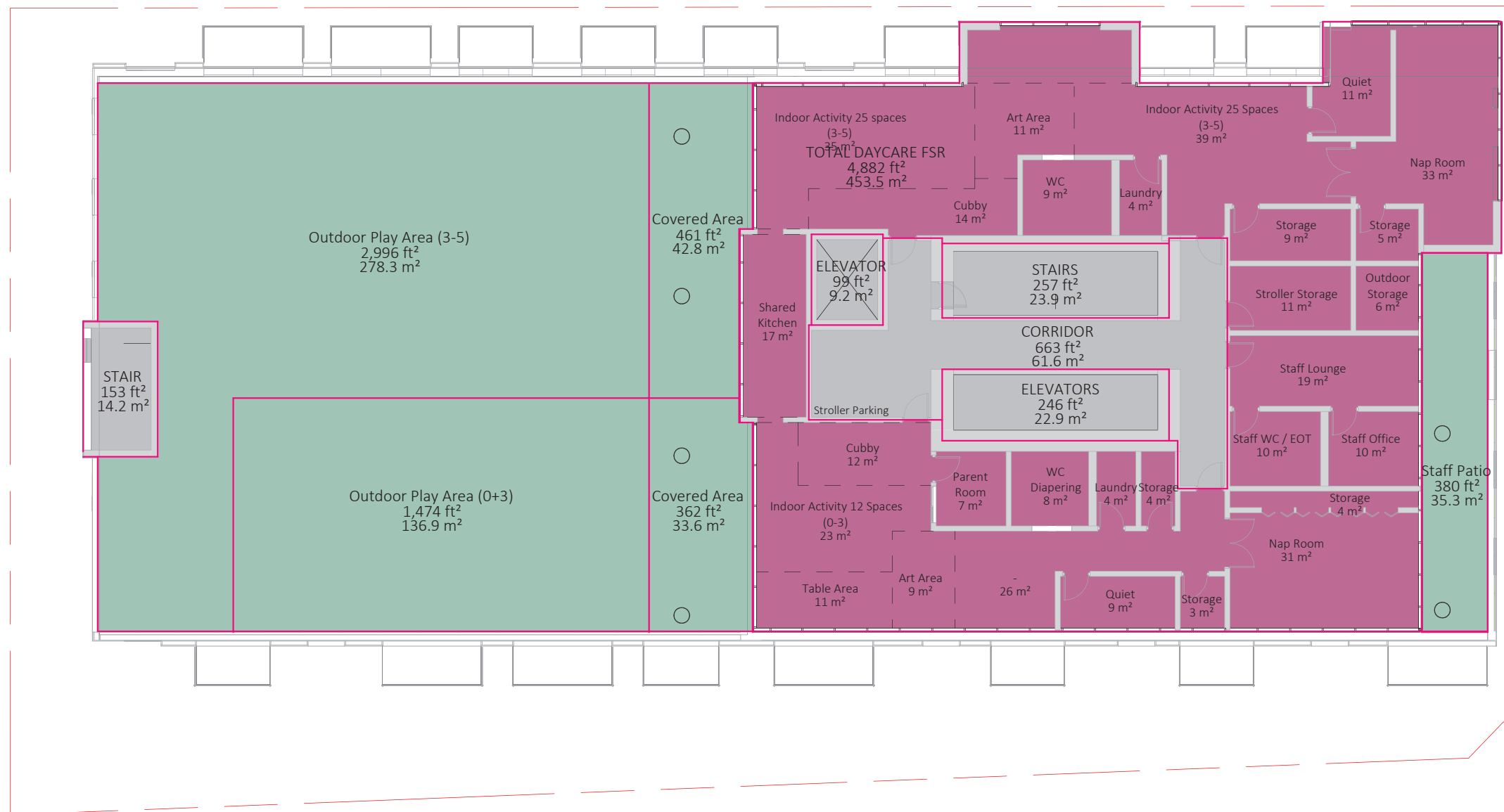
BALCONY AREA LEVEL 3 - LEVEL 4
BALCONY AREAS (m ²)
82.3
82.3

FSR AREA LEVEL 3 - LEVEL 4									
RESIDENTIAL AREA (m ²)	CIRCULATION AREA (m ²)	RETAIL AREA (m ²)	DAYCARE AREA (m ²)	NET FLOOR AREA (m ²)	EXCLUDED STORAGE AREA (m ²)	EXCLUDED SERVICES AREA (m ²)	EXCLUDED AMENITY AREA (m ²)	GFA EXCLUSIONS (m ²)	GROSS FLOOR AREA (m ²)
966.4	174.1	0.0	0.0	1140.5	23.2	0.0	0.0	23.2	1163.7



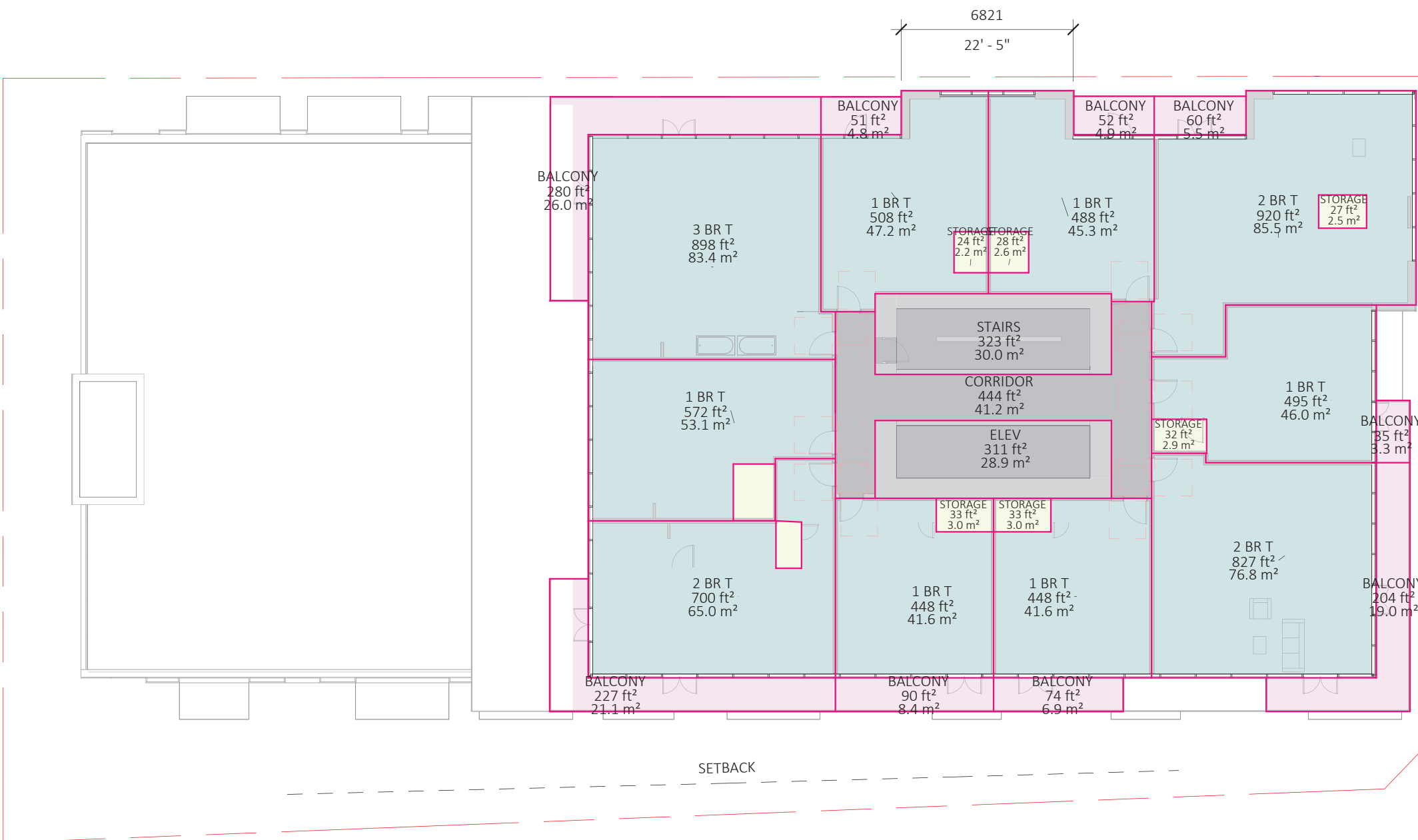
Area Type

- Circulation
- Daycare
- Daycare Outdoor



FSR AREA LEVEL 5									
RESIDENTIAL AREA (m2)	CIRCULATION AREA (m2)	RETAIL AREA (m2)	DAYCARE AREA (m2)	NET FLOOR AREA (m2)	EXCLUDED STORAGE AREA (m2)	EXCLUDED SERVICES AREA (m2)	EXCLUDED AMENITY AREA (m2)	GFA EXCLUSIONS (m2)	GROSS FLOOR AREA (m2)
0.0	131.7	0.0	453.5	585.2	0.0	526.9	0.0	526.9	1112.1





Area Type

- Balcony
- Circulation
- Exclusion - In Suite Storage
- Residential

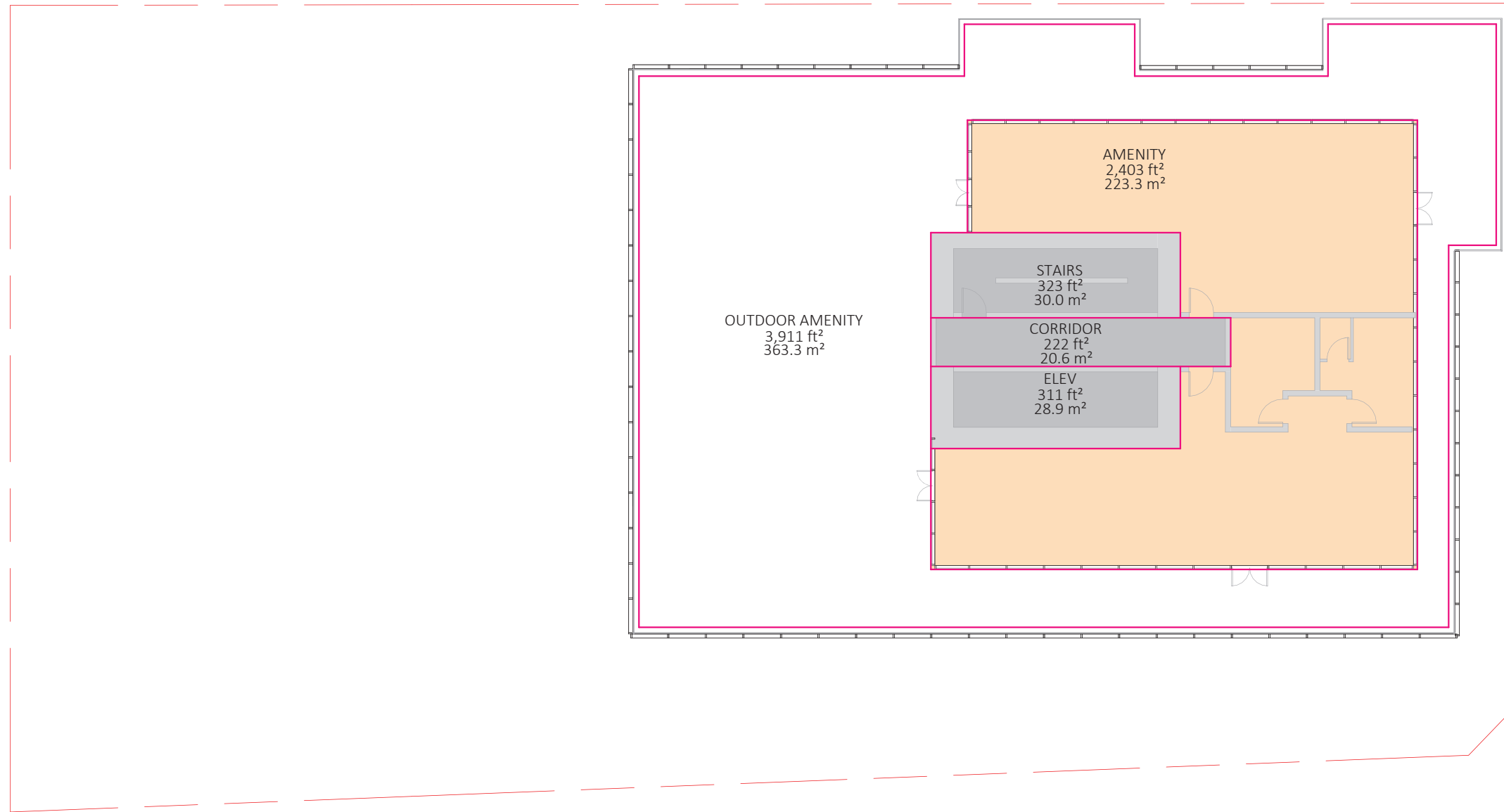
BALCONY AREA LEVEL 6 - LEVEL 23
BALCONY AREAS (m ²)

FSR AREA LEVEL 6 - LEVEL 23									
RESIDENTIAL AREA (m ²)	CIRCULATION AREA (m ²)	RETAIL AREA (m ²)	DAYCARE AREA (m ²)	NET FLOOR AREA (m ²)	EXCLUDED STORAGE AREA (m ²)	EXCLUDED SERVICES AREA (m ²)	EXCLUDED AMENITY AREA (m ²)	GFA EXCLUSIONS (m ²)	GROSS FLOOR AREA (m ²)
585.7	100.1	0.0	0.0	685.8	22.0	0.0	0.0	22.0	707.7



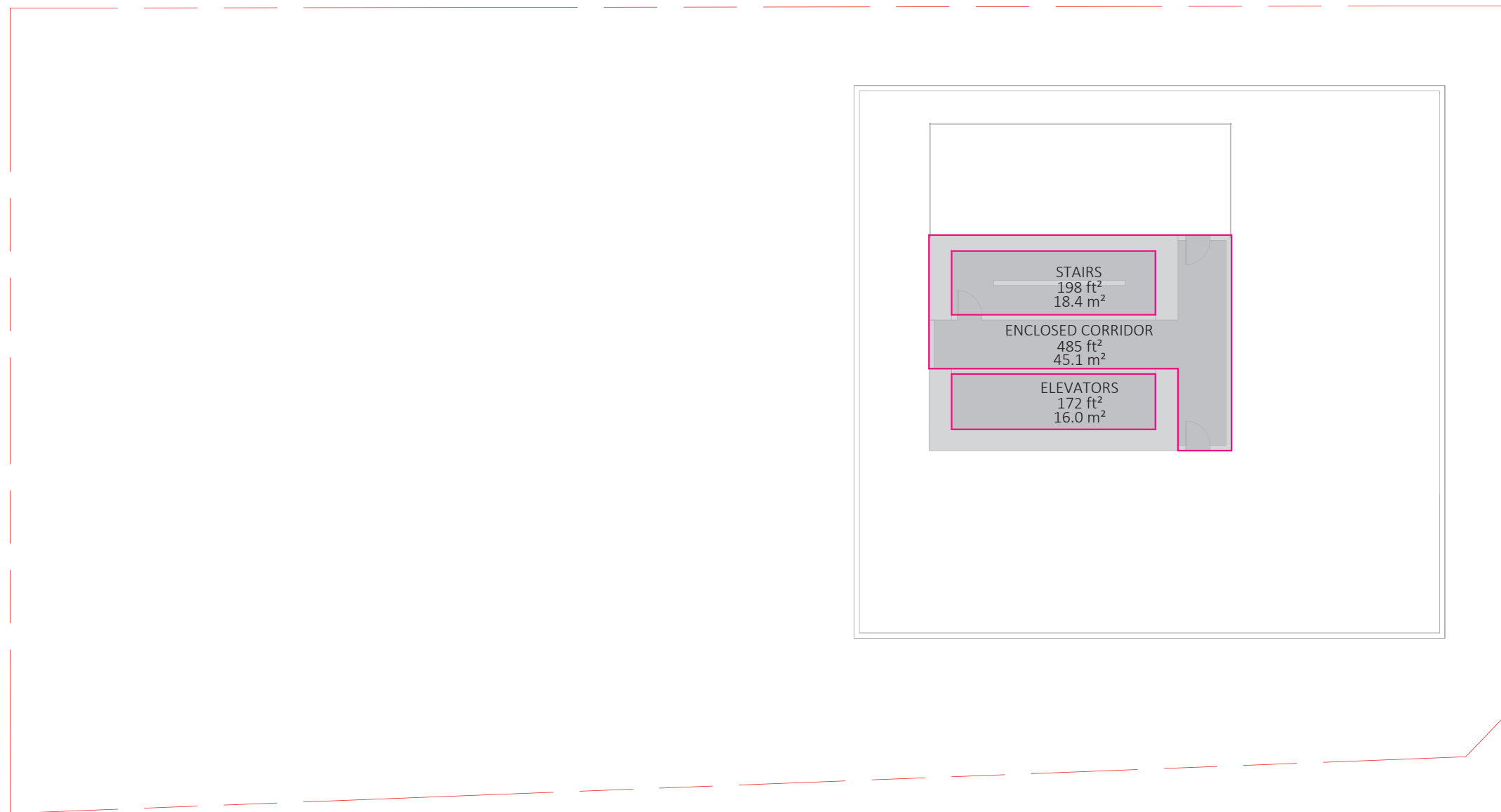
Area Type

- Amenity
- Circulation
- Exclusion



FSR AREA LEVEL 24									
RESIDENTIAL AREA (m ²)	CIRCULATION AREA (m ²)	RETAIL AREA (m ²)	DAYCARE AREA (m ²)	NET FLOOR AREA (m ²)	EXCLUDED STORAGE AREA (m ²)	EXCLUDED SERVICES AREA (m ²)	EXCLUDED AMENITY AREA (m ²)	GFA EXCLUSIONS (m ²)	GROSS FLOOR AREA (m ²)
0.0	79.5	0.0	0.0	79.5	0.0	363.3	223.3	586.6	666.1





Area Type

■ Circulation

FSR AREA ROOF									
RESIDENTIAL AREA (m2)	CIRCULATION AREA (m2)	RETAIL AREA (m2)	DAYCARE AREA (m2)	NET FLOOR AREA (m2)	EXCLUDED STORAGE AREA (m2)	EXCLUDED SERVICES AREA (m2)	EXCLUDED AMENITY AREA (m2)	GFA EXCLUSIONS (m2)	GROSS FLOOR AREA (m2)
0.0	18.4	0.0	0.0	18.4	0.0	0.0	0.0	0.0	18.4
0.0	79.5	0.0	0.0	79.5	0.0	0.0	0.0	0.0	79.5
0.0	79.5	0.0	0.0	79.5	0.0	0.0	0.0	0.0	79.5



The following table summarizes the preliminary requirements of the building envelope, heating, cooling, ventilation, domestic hot water, and lighting systems of the building to comply with the applicable performance limits.

Date: December 13, 2023
To: Conwest – Kim Maust
Cc: Francl Architecture Inc. – Ronnie Murray / Megan Peters / Sandra Alvarez
Project: Conwest – 4001 Knight St.
4001 Knight Street, Vancouver, BC
Subject: **ENERGY & EMISSIONS PERFORMANCE – PRELIMINARY**

**ENERGY REPORT
ER01**

BC Building Science Ltd. (BCBS) has been retained as the Building Science Consultant for this project. The project has been modeled for compliance with the energy targets outlined in the Vancouver Green Buildings Policy for Rezonings (GBPR) and the Vancouver Building Bylaw 2019 (VB3L), Part 10, Article 10.2.2.5. Building Energy and Emissions Performance.

As this project is at a preliminary design stage and the detailed designs of building envelope, mechanical, and electrical systems are not available yet, the basis of design of such systems is established to comply with the applicable energy performance targets. At this stage, it is assumed that the project will be equipped with a Low Carbon Energy System (LCES) in accordance with Vancouver LCES Policy (Type 3: User-owned, On-site LCES). Some of the assumptions in this energy submittal may change at later stages of the project as the detailed design of the contributing systems are developed.

The energy modeling has been executed in accordance with the *City of Vancouver Energy Modeling Guideline Version 2.0 (CoV-EMG)*. Thermal bridging calculations have been performed based on the *Building Envelope Thermal Bridging Guide Version 1.6 (BETBG)*. The project has been modeled using IES-VE 2022 and the results follow:

Energy Simulation – Results			BCBS
Metric	Proposed Design	Requirement	Result
Thermal Energy Demand Intensity (TEDI) [kWh/m ² /y]	35.5	≤ 39.6	✓ Complies
Total Energy Use Intensity (TEUI) [kWh/m ² /y]	88.5	≤ 131.5	✓ Complies
Greenhouse Gas Intensity (GHGI Including GHGI-R) [kgCO ₂ /m ² /y]	2.3	≤ 3.0	✓ Complies
Notes: 1. Please refer to the enclosed energy and emissions design report for metric calculation details.			

Energy Simulation – Inputs		BCBS
1. Project Data		
Drawing Submittal	Architectural set of drawings provided by Francl Architecture Inc., dated November 30, 2023.	
Address	4001 Knight Street, Vancouver, BC	
Description	Type of Building: ▪ Mixed-use Residential & Commercial Type of Construction: ▪ Non-combustible, Concrete Levels of Building: ▪ 24 Storeys	
2. Building and Location		
Location	Vancouver, BC	
Weather File	Vancouver 2016 CWEC	
Modeling Software	IES-VE 2022	
Floor Area	Modeled Floor Area: ▪ Residential: 19,897 [m ²] ▪ Commercial: 776 [m ²] Architectural Gross Floor Area: ▪ 19,719 [m ²] (MFA is within 5% of Architectural GFA.)	
Vertical Surface Area to Floor Area Ratio (VFAR)		
Window to Wall Ratio	44% (as per Architectural design)	
3. Building Envelope		
Roofs	Roofs / Decks: ▪ 4"/R20 Rigid Insulation Continuous Above Overall Roof Effective (BETBG, including all thermal bridges): R19.9	

Exterior Walls	<p>Concrete / Steel-framed Walls:</p> <ul style="list-style-type: none"> Split Insulated: R22 Batt Insulation in 6" Steel Studs + 2"/R8.4 Semi-rigid Insulation Exterior with Thermal Attachments Interior Insulated Concrete (limited area at ground floor adjacent to unheated): R14 Batt Insulation in 3 5/8" Steel Studs + 2"/R8.4 Semi-rigid Insulation Continuous Interior (or equivalent) <p>Window Wall Spandrel:</p> <ul style="list-style-type: none"> Thermally Enhanced with Minimum 4"/R16.8 Semi-rigid Insulation in Backpan, R12+ Effective Slab Bypass: Minimum 2"/R8.4 Semi-rigid Insulation over Slab Edge <p>Other:</p> <ul style="list-style-type: none"> Curtain Wall Spandrel: 4"/R16.8 Semi-rigid Insulation in Backpan Below-grade Concrete Core Walls (elevator, stair): Uninsulated Balconies / Parapets: Uninsulated / Not Thermally Broken <p>Overall Wall Effective (BETBG, including all thermal bridges): R5.3</p>
Exposed Floors	<p>Over Parkade:</p> <ul style="list-style-type: none"> 5"/R20 Spray Fibreglass Insulation Continuous Below <p>Soffits:</p> <ul style="list-style-type: none"> 6"/R25.2 Semi-rigid Insulation Below <p>Overall Floor Effective (BETBG, including all thermal bridges): R15.4</p>
Glazing	<p>Residential Windows and Glazed Doors:</p> <ul style="list-style-type: none"> High Efficiency Double-glazed Aluminum $U_{OVERALL} \leq 0.35$, $SHGC_{OVERALL} 0.32 \pm 0.02$ <p>Commercial / Storefront Windows and Glazed Doors (limited area at ground floor):</p> <ul style="list-style-type: none"> Standard Double-glazed Aluminum $U_{OVERALL} \leq 0.38$, $SHGC_{OVERALL} 0.32 \pm 0.02$
Doors	<p>Opaque Doors:</p> <ul style="list-style-type: none"> $U \leq 0.30$
Infiltration Rate	Standard: 0.2 [L/s/m ² facade]
4. Mechanical Systems	
Heating / Cooling	<p>Suite:</p> <ul style="list-style-type: none"> Packaged Terminal Air Source Heat Pump (or equivalent) Heat Pump Efficiency: COP_H 2.5+ & EER 10+ <p>Amenity / Commercial (TI):</p> <ul style="list-style-type: none"> Split Air Source Heat Pump (or equivalent) Heat Pump Efficiency: COP_H 2.5+ & EER 10+ <p>Corridor / Lobby:</p> <ul style="list-style-type: none"> Pre-heated Ventilation from Makeup Air Unit Equipped with Air Source Heat Pump Heat Pump Efficiency: COP_H 2.5+ & EER 10+ Supply Heating LAT $\leq 18^{\circ}\text{C}$ <p>Stair / Storage / Mechanical / Other:</p> <ul style="list-style-type: none"> Electric Baseboard Heater (where applicable for freeze protection)

Ventilation	<p>Suite:</p> <ul style="list-style-type: none"> Direct Ventilation by HRV / ERV Sensible Recovery Efficiency (32°F): 78%+ Continuous Ventilation Rate: ASHRAE 62 / VBBL 9.32, Not Overventilated <p>Amenity / Commercial (TI):</p> <ul style="list-style-type: none"> Direct Ventilation by HRV / ERV Sensible Recovery Efficiency (32°F): 78%+ Occupied Hours: ASHRAE 62 Ventilation Rate, Not Overventilated Unoccupied Hours: OFF (timeclock) <p>Corridor / Lobby:</p> <ul style="list-style-type: none"> Pressurized by Makeup Air Unit Residential Corridor: Maximum 15 cfm per Suite Door Lobby / Other Corridor: ASHRAE 62 Ventilation Rate, Not Overventilated <p>Parking / Other:</p> <ul style="list-style-type: none"> Supply / Exhaust / Transfer Fans Exhaust Ventilation Rate: 0.75 [cfm/ft²]
Service Hot Water	<p>Hot Water Demand and Schedule:</p> <ul style="list-style-type: none"> Suite: 0.0016 L/s/person Other / Schedule: NECB A-8.4.3.2.(1)/(2) <p>Service Water Heating System:</p> <ul style="list-style-type: none"> Central Electric Water Heater and Storage Tank Thermal Efficiency: 100%
5. Lighting Systems	
Interior Lighting	<p>Interior Lighting Power Density [W/m²], Schedule:</p> <ul style="list-style-type: none"> Suite: 5.0, NECB Schedule G Amenity: 5.0, NECB Schedule C Commercial (TI): 13.1, NECB Schedule C Corridor / Lobby / Stairway: 4.0, 24/7 Elec / Mech: 4.0, Appendix B of BC Hydro's Energy Modeling Guidelines Storage: 4.0, NECB Schedule E Parking: 1.4, 24/7
Exterior Lighting	≤ 2 kW, Astronomical Clock
6. Other	
Indoor Design Temperature	<p>Suite, NECB Schedule G:</p> <ul style="list-style-type: none"> Heating: 18-22°C Cooling: 24°C <p>Other:</p> <ul style="list-style-type: none"> NECB A-8.4.3.2.(1)/(2)
Occupancy	<p>Suite:</p> <ul style="list-style-type: none"> Studio / 1-BR: 2 People 2-BR+: 1 Additional Person per Bedroom Schedule: NECB Schedule G <p>Other:</p> <ul style="list-style-type: none"> NECB A-8.4.3.2.(1)/(2)

Plug Load / Receptacle	Suite:
	<ul style="list-style-type: none"> 5.0 [W/m²], NECB Schedule G (electric cooking)
	Elevator:
	<ul style="list-style-type: none"> 3 x 3 kW, NECB Schedule G 1 x 3 kW, NECB Schedule C
	Other:
	<ul style="list-style-type: none"> NECB A-8.4.3.2.(1)/(2)

The table above has provided the requirements for compliance with the applicable energy targets at this preliminary design stage. Further energy modeling is required to ensure compliance with the performance limits at the building permit stage of the project when the detailed designs of architectural, mechanical, and electrical systems are available. If any of the assumptions in this table require alterations, other assumptions will be affected. It is crucial that any required changes on these assumptions be confirmed with the energy modeling team to ensure the preservation of the energy compliance throughout the design and construction phases.

The following graph demonstrates the energy use components of the building based on the energy modeling results with the above inputs:

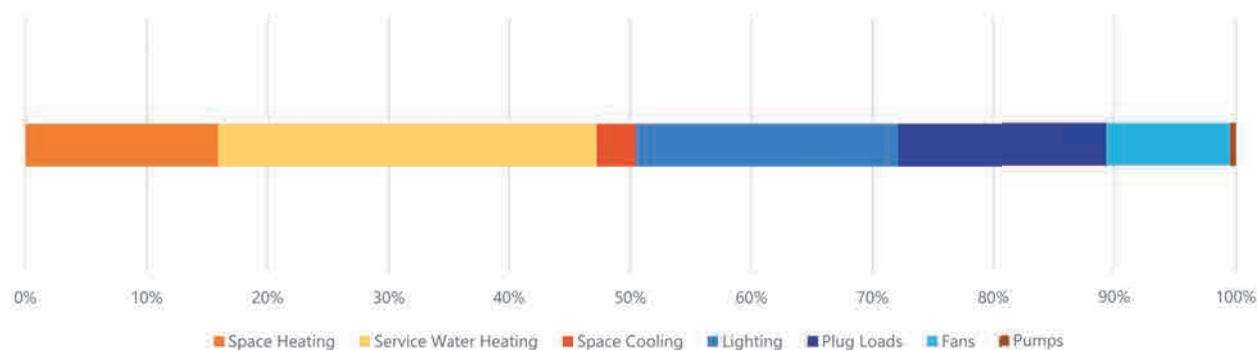


Figure 1: Energy Use Breakdown of the Building

It should be noted that the results of this energy simulation are for the purpose of energy compliance with the applicable performance limits and are not representatives of the actual energy consumption of the proposed buildings. The actual energy consumption of the building may differ from these results, as the assumptions are based on the typical operating conditions applicable from the standards and guidelines which may or may not represent the real occupant behavior and usage of the building.

We look forward to the successful completion of this project. If there are any questions, please contact our office.

Respectfully Submitted,
BC Building Science

Prepared by:

Ramin Hortamani
M.Sc.

Reviewed by:



Farshid Bagheri
P.Eng., Ph.D., EA, CBCP

Enclosed: Energy and Emissions Design Report (+3 pages)