



SCHEDULE A

DP 19-047

GATEWAY RESIDENCES

APPLICATION FOR OCP, ZONING AND
DEVELOPMENT PERMIT AMENDMENT

707+723 MAIN STREET (752 MARINE DRIVE),
WEST VANCOUVER

MARCH 16, 2020

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1.0 EXECUTIVE SUMMARY

This document describes the proposal to amend the Development Permit for the Gateway Residences, in order to add 95 secured rental residential units to the approved development and associated Re-Zoning and OCP Amendments. The number of residential units would increase from 203 to 298, with no increase in parking. To accomplish this, the East Building would go from 14 to 19 floors and the West Building, from 11 to 16 floors. The overall high quality expression of the buildings, podiums and public realm will not change from the approved development.

There are several community opportunities and benefits with this proposal. They include:

- Implementation to best practices in Smart Growth development which is a material response to the District of West Vancouver Council declaration of a climate emergency;
- Adherence to the goals and objectives of the OCP, with the exception of the modifications to the Local Area Plan;
- The near term and certain increase in the number of rental residential units available in West Vancouver with no increase in infrastructure or the use of additional lands;
- Increase in residential capacity within a mixed-use neighbourhood with amenities and services within walking distance and strong public transportation connections;
- A 23 unit increase in the number of adaptable units within the development and a higher level of barrier-free measures.
- CACs attributed to the additional rental units used at Council's discretion to address immediate community needs.

The following package describes in more detail the above points and the comparison of the current approved development and this proposal.

1.1 PROJECT DATA

CURRENT OCP, ZONING + DP

East Block	# of Units	Residential (ft²)	Commercial (ft²)	Service (WCs)	Supportive Housing (ft²)	Childcare (ft²)	Residential Amenity (ft²)	Sub-total
Level 1	0	1,683	6,584					
Level 2	6	6,385					1,208	
Level 3 thru 12 (per floor)	9	8,894						
Level 13	6	7,616						
Level 14	2	4,067						
Total	104	108,692	6,584	0	0	0	1,208	116,588 Ft²

West Block	# of Units	Residential (ft²)	Commercial (ft²)	Service (WCs)	Supportive Housing (ft²)	Childcare (ft²)	Residential Amenity (ft²)	Sub-total
Level 1	0	1,730	13,323	717				
Level 2 (incl. Childcare)	11	0			9,700	3,918		
Level 3	16	13,608						
Level 4	13	10,434						
Level 5 thru 9 (per floor)	10	7,793						
Level 10	7	6,611						
Level 11	2	3,804						
Total	99	75,153	13,323	717	9,700	3,918	0	102,812 Ft²

South Block (Squamish Nation)	# of Units	Residential (ft²)	Commercial (ft²)	Service (WCs)	Supportive Housing (ft²)	Childcare (ft²)	Residential Amenity (ft²)	Sub-total
Levels 1 & 2	0	0	9,681	0	0	0	0	9,681 Ft²

Subtotals	# of Units	Residential (ft²)	Commercial (ft²)	Service (WCs)	Supportive Housing (ft²)	Childcare (ft²)	Residential Amenity (ft²)	Sub-total
	203	183,845	29,589	717	9,700	3,918	1,208	228,977 Ft²

FAR Calculation	Combined Sites	Fee Simple Only
Total GFA	228,977 Ft²	219,400 Ft²
Total Site Area	101,613 Ft²	60,461 Ft²
FAR	2.25	3.63
Site Coverage	34.50%	45.50%

Building Height	Storeys	Above Ground	Geodetic
East Tower	14 + Mech	49.35 m	57.20 m
West Tower	11 + Mech	42.50 m	50.35 m

Unit Mix	East Tower	West Tower	Total No. Units
1 BDRM	21	55	76
2 BDRM	56	22	78
3 BDRM	27	10	37
Studio		1	1
Supportive		11	11
Sub-total	104	99	203

Housing Type	
Social Housing (DWV Owned)	11
Rental in Perpetuity	49
Rent for 20 Years	51
Unsecured Rental	92
Total	203

	Vehicle Parking	Secure Bike Parking
Commercial	33	30
Social Housing (Supportive)	5	14 (1.25 per unit)
Rental in Perpetuity (Secured)	44	61 (1.25 per unit)
Rent for 20 Years + Market Rental	127	179 (1.25 per unit)
Childcare	3	0
Visitor Carshare	9	0
Visitor Unreserved	11	0
Total	232	284

Loading	
Class A	2
Class B	3
Total	5

PROPOSED OCP, ZONING + DP

East Block	# of Units	Residential (ft²)	Commercial (ft²)	Service (WCs)	Supportive Housing (ft²)	Childcare (ft²)	Residential Amenity (ft²)	Sub-total
Level 1	0	1,683	6,584					
Level 2	6	6,385					1,208	
Level 3 thru 17 (per floor)	9	8,894						
Level 18	6	7,616						
Level 19	2	4,067						
Total	149	153,162	6,584	0	0	0	1,208	160,955 Ft²

West Block	# of Units	Residential (ft²)	Commercial (ft²)	Service (WCs)	Supportive Housing (ft²)	Childcare (ft²)	Residential Amenity (ft²)	Sub-total
Level 1	0	1,730	13,323	717				
Level 2 (incl. Childcare)	11	0			9,700	3,918		
Level 3	16	13,608						
Level 4	13	10,434						
Level 5 thru 14 (per floor)	10	7,793						
Level 15	7	6,611						
Level 16	2	3,804						
Total	149	114,118	13,323	717	9,700	3,918	0	141,777 Ft²

South Block (Squamish Nation)	# of Units	Residential (ft²)	Commercial (ft²)	Service (WCs)	Supportive Housing (ft²)	Childcare (ft²)	Residential Amenity (ft²)	Sub-total
Levels 1 & 2	0	0	9,681	0	0	0	0	9,681 Ft²

Subtotals	# of Units	Residential (ft²)	Commercial (ft²)	Service (WCs)	Supportive Housing (ft²)	Childcare (ft²)	Residential Amenity (ft²)	Sub-total
	298	267,281	29,589	717	9,700	3,918	1,208	312,413 Ft²

FAR Calculation	Combined Sites	Fee Simple Only
Total GFA	312,413 Ft²	302,732 Ft²
Total Site Area	101,613 Ft²	60,461 Ft²
FAR	3.07	5.01
Site Coverage	34.50%	45.50%

Building Height	Storeys	Above Ground	Geodetic
East Tower	19 + Mech	64.10 m	71.95 m
West Tower	16 + Mech	57.25 m	65.10 m

Unit Mix	East Tower	West Tower	Total No. Units
1 BDRM	31	83	114
2 BDRM	81	38	119
3 BDRM	37	15	52
Studio		2	2
Supportive		11	11
Sub-total	149	149	298

Housing Type	
Social Housing (DWV Owned)	11
Rental in Perpetuity	138
Rent for 20 Years	57
Unsecured Rental	92
Total	298

	Vehicle Parking	Secure Bike Parking
Commercial	33	30
Social Housing (Supportive)	5	14 (1.25 per unit)
Rental in Perpetuity (Secured)	86	180 (1.25 per unit)
Rent for 20 Years + Market Rental	85	179 (1.25 per unit)
Childcare	3	0
Visitor Carshare	9	0
Visitor Unreserved	11	0
Total	232	403

Loading	
Class A	2
Class B	3
Total	5

2.0 APPLICATION OPPORTUNITIES + BENEFITS



2.1 SMART GROWTH NEIGHBOURHOOD

In June 2019, the District of West Vancouver Council passed a motion declaring a climate emergency in response to climate change. District staff was directed to report back regarding:

- Actions the District is presently taking to reduce GHG emissions (corporate and community) and to meet the District's climate targets
- Actions the District is presently taking to adapt to climate change (corporate and community) and their costs;
- Actions that comparable municipalities are taking to reduce their GHG emissions and
- Additional actions that the District could take in the short, medium and long term (corporate and community) to further reduce GHG emissions.

In response to the same concern, the Province of British Columbia has published the BC Climate Action Toolkit (<http://www.toolkit.bc.ca>) that describes smart growth land use strategies that may assist in addressing climate change. Quoting from the government website, "Smart Neighbourhoods exhibit all or some of the following characteristics including:

1. Compact and complete, characterized by higher densities and a mix of uses;
2. Central location, with clustering of employment, retail, residential, and other activities and uses;
3. Accessible, multimodal transportation, allowing people to get around easily on foot, bicycle and transit;
4. Green networks, integrating landscaping, green roofs, street boulevards, parks, and environmentally sensitive areas;
5. Green buildings;
6. Reduced energy and resource use, based on district energy and efficient infrastructure;
7. Diverse housing options, accommodating people of all ages and walks of life and
8. Economic viability, ensuring the long-term resilience of developer, town, and residents"

The Gateway Residence currently approved development and this proposal to add 95 rental residential units, aligns with these Smart Growth Characteristics and has significantly less impact on the environment compared to accommodating the same number of rental residential units elsewhere in the Lower Mainland.

1. Compact and complete, characterized by higher densities and a mix of uses: No additional land is required to accommodate the increase in residential units within this mix-use development.

2. Central location, with clustering of employment, retail, residential, and other activities and uses: The development is located adjacent to a major retail and employment centre as well as close to recreation and entertainment activities. Park Royal is willing to work with the District of West Vancouver to accommodate activities such as arts & culture, adult care and youth programming within new facilities for the near, mid or long term.

3. Accessible, multimodal transportation, allowing people to get around easily on foot, bicycle and transit: The Gateway Residences is a key part of Park Royal's evolution as a mixed use walkable community, ultimately lessening the dependence on or the need for single occupant cars. Public transit, car share, bicycle and pedestrian connections will be very well developed in this area. The Marine Drive RapidBus service allows for quick and easy movement across the North Shore and compliments already robust public transportation to Vancouver's downtown core. No additional vehicular parking will be provided, however additional bicycle storage will be provided for the 95 rental residential units.

4. Green networks, integrating landscaping, green roofs, street boulevards, parks, and environmentally sensitive areas: The development will undertake extensive greening of the site with new landscaping, public plazas, vegetated roofs and a strengthened public access from Park Royal to the Capilano River natural area. The additional units will have no impact on storm water run-off.

5. Green buildings: The development will exceed the current District's Sustainable Buildings Policy.

6. Reduced energy and resource use, based on district energy and efficient infrastructure: The increase in residential rental units will require significantly less energy demand and infrastructure compared to accommodating the same number of units on a separate site. This is due to the opportunity to share common spaces and the core mechanical, electrical, elevator and structural systems within the approved building. Less embodied energy will be expended and far less building material and equipment will be required compared to a separate development. A Life cycle assessment (LCA) was undertaken to assess the proposal's savings in CO2 emissions compared to a stand along project providing the same number of residential units. Please see Section 2.2 Life Cycle Assessment.

7. Diverse housing options, accommodating people of all ages and walks of life: The addition of 95 secured rental units will create a larger stock of much needed rental accommodation in the District of West Vancouver. To be clear, the additional 95 units will be rental for the life of the building.

8. Economic viability, ensuring the long-term resilience of developer, town, and residents: Park Royal has a long and rich history of serving the community. Employment and business opportunities are abundant and with the broadest amenity offering on the North Shore, it is a meeting place for all generations. The vision for Park Royal is to be a thriving neighbourhood, a community within a community, where people can live, shop, work and be entertained.

2.2 LIFE CYCLE ASSESSMENT



DATE: October 15, 2019
TO: Rick Amantea (Park Royal)
FROM: Integral Group
RE: 752 Marine Drive – Densification Impact Analysis

To whom it may concern,

The 752 Marine Drive development has proposed a novel method to provide more housing while mitigating the environmental impact associated. The development team would like to provide increased housing for the Park Royal area of West Vancouver without the environmental impact of an additional parkade structure. The increased density would occur across both towers in the form of 95 secured rental units. The current parking structure would be sufficient to support this increase.

Currently 232 parking stalls are being provided for the entire site which includes a mix of 203 residential units and ~30,000 square feet of commercial. If 95 extra secured rental units are planned offsite, an additional 71 parking stalls would be required assuming the new building would be entirely secured rental with a parking rate of 0.75 stalls per unit. To confirm the significance of the increased density on the 752 Marine Drive site, the design team has pursued a Life Cycle Assessment (LCA) to provide the magnitude of emissions savings as a result of not constructing a new parkade.

A whole building LCA allows a project team to understand the “Cradle-to-Grave” environmental impact of the design, material selection, construction and demolition of the proposed building. The LCA has the ability to evaluate several impact categories and evaluates each impact category through the initial stages of the raw material supply to the demolition of the building after its expected life span. The LCA has been applied to the 752 Marine Drive development to evaluate the parking structure’s Global Warming Potential (also referred to as Embodied Carbon or Greenhouse Gas Emissions).

Methods

In communication with the design team it was agreed that, if the proposed additional 95 units were to be constructed on a stand-alone site, materiality of the above-grade structure would likely be similar to that of the 752 Marine Drive development. However, as currently proposed, the 95 units would be added to the 752 Marine Drive development without additional parkade space, which would otherwise be required to support the 95 units if they were built on a stand-alone site. For this reason, the environmental benefit of the increased density is being defined according to the emissions saved through the addition of the residential units without the construction of an additional parkade.

Global Warming Potential calculations for all major building materials contained within the parkade have been conducted based on the “Issued for Construction to Grade” structural drawings and “Issued for Construction (Foundation)” architectural drawings. The software used in this analysis was the Athena Impact Estimator. All information used in the calculation was extracted from the above drawing sets for input into the analysis software. Where and if assumptions were required, they were based on the LCA practitioners previous experience and industry best practice.

All three levels of parkade were analyzed including the foundation. The major inputs into the analysis are detailed in the table below.

Design Assumptions	Below Grade
Building Footprint	4,432 m2
Columns & Beams	Type: Concrete Height (m): 2.8
Foundations	Concrete Footings Concrete Raft Slab Concrete Slab on Grade

Design Assumptions	Below Grade
Interior Walls	1,291 m total wall length Non-Structural Walls: Concrete Block Shear walls: Cast in Place Concrete 35 MPa to 65 MPa 100 mm to 700 mm Structural Walls: Cast in Place Concrete 35 MPa
Exterior Walls	902 m total wall length Cast in Place Concrete 35 MPa, Drainage Mat, SBS Waterproof Membrane
Floors	7,484 m2 total floor area Concrete Suspended Slab 35 MPa
Roof	4,432 m2 total parkade roof area Concrete Suspended Slab 35 MPa

Results

The Athena Impact Estimator for Buildings software was utilized, which is in compliance with EN 15978. A 60-year building life expectancy was modeled in this analysis. The following outputs in the table below represent the overall Global Warming Potential associated with the measured structural and enclosure components of the parkade as currently designed. Based on this intensity, we can extrapolate the potential embodied emissions intensity of a similar parking structure would be for the stand-alone 95-unit residential building.

Parkade Environmental Impact Results		
	Unit	Total
Global Warming Potential	tonnes CO2eq	4,370
Number of Parking Stalls	#	232
Global Warming Potential Intensity	tonnes CO2eq/s:all	18.8
Global Warming Potential Annualized Intensity (60-year building life expectancy)	tonnes CO2eq/stall/year	~0.3

It has been determined based on the current design of the parkade for 752 Marine Drive, the total lifecycle Global Warming Potential **per parking stall** is ~19 tonnes of CO2eq per stall and annualized intensity is ~0.3 tonnes of CO2eq per stall per year, considering a 60-year structure life.

If 95 extra secured rental units are added to the 752 Marine Drive development, a parking structure providing 71 parking stalls would not be constructed. As previously discussed, 71 stalls would need to be provided to meet the needs of a 95 unit secure rental building. Therefore, providing the extra density would mean a **total emissions savings of ~1,330 tonnes of CO2eq**. This can also be seen over the predicted project life time of 60 years as the savings would be ~22 tonnes of CO2eq per year.

Summary

The above noted life cycle analysis results provide further insight to the densification of the 752 Marine Drive development. Understanding the life cycle analysis of the parkade portion of the project will allow further knowledge into the resulting environmental impact. The significant environmental impact savings has been calculated due to the proposed densification of the 752 Marine drive development.

Should you have any concerns, please contact the undersigned.

Yours truly,

Kevin Welsh, CPHC, LEED® AP O+M, BD+C, HOMES
Senior Sustainability Advisor

Tyler Davis, B.A.Sc., Ph.D.
Sustainability Advisor

2.3 WEST VANCOUVER OFFICIAL COMMUNITY PLAN + THE MARINE DRIVE LOCAL AREA PLAN

West Vancouver OCP

This proposal is an opportunity to further the objectives of the DWV's Official Community Plan. As stated in the OCP:

- Provide additional housing for families with school-aged children, downsizers, working-class professionals
- Increase the number of missing middle and infill housing types
- Increase the number of purpose-built rental units and expand the range of rental options

The majority of the 95 additional rental units will be two bedroom and two baths and a will be built to high standards; similar to condominium standards. They will appeal to new families, young professionals and downsizers who wish to live in West Vancouver.

Marine Drive Local Area Plan

With the exception of the increase in building height, the density related to the added rental units and a reduced parking ratio, the proposed development is in compliance with the Marine Drive Local Area Plan. The following is a short summary of the relevant concepts and guidelines that applies to the Gateway Residence development

Planning Objectives and Land Use Concept

As with the approved development, the proposal to add additional purpose-built rental units adheres to the key planning and land use objectives identified in the Local Area Plan. These include:

- Reinforcing the existing urban centre;
- Facilitating pedestrian movement across the neighbourhood;
- Engaging the natural environment by linkages to the Capilano River;
- Supporting the legibility of the town centre;
- Responding to the surrounding context;
- Reinforcing connections with the Park Royal Mall;
- Providing community amenities and
- Minimizing traffic and trip generation.

Built Form Design Guidelines

The Local Area Plan under Section 3.2.2, outlines specific built form guidelines for this project. These guidelines and how this proposal relates to them are listed below:

- "Mark the south side of the Marine Drive and Taylor Way intersection with a primary mid-rise building (of 12-14 storeys) that responds to the corner, and a secondary mid-rise form with lower massing that responds to Marine Drive, and creates a varied skyline." While this proposal seeks to increase the height of the East Tower (from 14 storeys to 19 storeys) and the West Tower (from 11 storeys to 16 storeys), the height difference and building expression continues to create a varied skyline.
- "Building massing and expression to help shape public space including connections to and from Marine Drive, and between the corner and open space that relates to - and benefits from -southern exposure." This proposal adheres to this guideline with attractive and inviting visual and pedestrian connections through the site.
- "Encourage forms distinct from, but complementary to, existing buildings with the West Royal Towers having the greatest visual presence." This proposal adheres to this guideline with a well-articulated and varied architectural expression.
- Orient principal flatiron building along Taylor Way with secondary mid-rise building providing a strong presence on Marine Drive." This proposal adheres to this guideline with a well-articulated and varied architectural expression by creating a defined streetwall along Marine Drive
- "Complete a view and shadowing impact analyses as part of development review." An updated view and shadowing analysis has been provide in this submission.
- "Reinforce Marine Drive axis and respond to the Burrard Inlet viewshed with particular consideration given to the view of the Lions Gate Bridge from the intersection of Taylor Way and Keith Road" Consistent with the current approved development, the north-east corner of the East Tower of this proposal frames the view of the Lions Gate Bridge.

Public Realm Guidelines

As there are no proposed changes to either the buildings' podium or landscape, this proposal retains adherence to the Public Realm Guidelines outlined in Section 3.3.3 of the Local Area Plan, including:

- A public plaza of significant size, located on the interior of the site and oriented to take advantage of southern sun exposure, with active uses at its edge.
- Public connection that visually and physically connects the northeast corner of the site to the plaza, and to public spaces further across the intersection, to recognize the prominence the corner has on the public realm.
- Generous sidewalks that reflect the urban character of Marine Drive and provide space for street trees and other public realm amenities to make a comfortable environment for pedestrians and transit users.
- Public art in locations that reflects its importance and contributes to the sense of place.

Transportation

The local area plan outlines that the parking required in this area shall be approximately 1.25 stalls per residential unit and approximately 0.75 stalls per secure rental unit. In keeping with Council's direction on the approved development, the parking provided is limited, with the parking stalls decoupled from the residential units. With the additional rental units, the proposed parking ratio for both the secured and unsecured rental unit is 0.60 per unit.

2.4 TRANSPORTATION

2.4.1 TRANSPORTATION OPTIONS

As outlined above, the number of vehicular trips generated by Gateway Residences will be less given the availability retail, entertainment and recreational options within walking distance. In addition, the project is located adjacent to the RapidBus service and transit service into central Vancouver will offer transportation alternatives.

No parking stalls will be added to the project, lowering the ratio of cars to units to 0.60 for the secured and unsecured rental residential units. This is the lowest residential parking ratio in West Vancouver and one of the lowest in Metro Vancouver. As part of the currently approved development, 9 car share stalls will be provided.

Storage for an additional 119 bicycles will be provided.

1. INTRODUCTION

A development permit for the Gateway Residences at 752 Marine Drive in West Vancouver, BC was approved in 2018 and the building is currently under construction. The approved development included 203 residential units, 29,589 sq ft of street-oriented commercial space and a 3,918 sq ft childcare facility. Bunt & Associates (Bunt) prepared a comprehensive Transportation Impact Assessment (TIA) to accompany the application which was accepted by the District of West Vancouver and the Ministry of Transportation and Infrastructure.

The applicant has since requested to include an additional 95 market rental units. The revised proposal includes additional bicycle parking but no additional vehicle parking spaces. The development has also committed to purchasing up to nine MODO shared vehicles which anyone with a MODO membership will be able to use. The following addendum highlights the anticipated transportation-related impacts of the proposed design change and possible design measures to modify the Taylor Way & Main Street intersection which is a key area of concern to the public.

2. PREVIOUS STUDY

Key items from Bunt's previous TIA report, dated April 4, 2018, were as follows:

- The traffic congestion that regularly develops at the Taylor Way & Marine Drive intersection and at times extends through adjacent intersections is a function of traffic operations on the nearby Lions Gate Bridge. Vehicles travelling eastbound on Marine Drive (towards Lions Gate Bridge) are sometimes unable to enter the intersection since the receiving lanes were fully occupied. This indicates that more vehicles could have moved through the intersection if there was less congestion downstream, particularly at the bridge access.
- Traffic data was collected on a Thursday and Saturday which would have included multiple ferry arrivals/departures.
- The vehicle forecasts included other known or likely developments including the remaining parcels of 'Evelyn' and the contemplated development at 660 Clyde and 657 & 675 Marine Drive. The vehicle forecasts also included an additional 1% annual growth to account for other factors.
- The proposed Gateway Residences were anticipated to have a negligible impact on the surrounding street network. This is not a surprising result due to the site's excellent walk/bicycle/transit access.
- The former White Spot restaurant on the 752 Marine Drive site used to generate approximately 84 vehicle trips during the weekday afternoon peak hour. The approved development was anticipated to generate a net additional 63 vehicles per hour on the area road system over and above what was being generated with the White Spot restaurant operating from this site, or on average about one additional vehicle per minute during the weekday afternoon peak hour traffic period. For comparison, fully building out the site's previous C-1 Zoning would generate approximately 300 vehicle trips during the weekday afternoon peak hour.

2.4.2 VEHICULAR IMPACTS + MITIGATION

- The frequency of vehicles blocking the Taylor Way & Main Street intersection could be minimized through additional pavement markings, signage and enforcement. The approved development included restricting access to the west leg of the intersection to right-turns only, i.e., right turn only entry from southbound Taylor Way and right-turn-only exits onto southbound Taylor Way, with the objective of reducing vehicle blockages of the intersection at this location.

3. ADDITIONAL 95 DWELLING UNITS

3.1 Change in Vehicle Trips

The additional 95 market rental units will result in some additional vehicle trips though at a reduced rate as no additional parking is being provided for these added units. Other high-rise residential developments in the area have been observed by Bunt to generate up to 0.31 vehicle trips during the busiest hour of the day. This rate would equate to the 95 homes generating an additional 29 vehicle trips (20 in, 9 out) per afternoon peak hour. Approximately two-thirds of vehicles will exit onto Marine Drive and one third will exit onto Taylor Way.

This estimate is likely a conservative result since the development will be providing a moderate parking supply of 0.60 parking spaces. This may result in the development having a lower vehicle trip rate, closer to 0.25 vehicle trips per afternoon peak hour. This would result in the entire 298 residences generating 75 vehicle trips, or about an additional 10 additional vehicle trips per peak hour compared to the approved development.

3.2 Vehicle Operations

In Bunt's April 4, 2018, TIA, we determined that Taylor Way & Marine Drive was the only intersection that operated above the study's performance thresholds. In our report, we recommended that the order of the northbound and southbound signal phases at the Marine Drive and Taylor Way intersection be reversed from the existing operation to reduce the occurrence of intersection blockage so that the westbound to southbound left-turn movement can operate more efficiently.

Table 1 compares the vehicle operations for the 2030 horizon year Saturday afternoon peak hour. The minor differences between the vehicle operations for the approved development and the proposed development are highlighted in grey. As indicated, an additional 10 vehicle trips per peak hour will have a negligible impact on the intersection's operations compared to the approved development. The additional 95 units are anticipated to add 0.2 seconds to the average vehicle delay at the intersection during the Saturday peak hour.

Table 1: 2030 Vehicle Operations – Saturday PM Peak Hour

MOVEMENT	APPROVED DEVELOPMENT			PROPOSED DEVELOPMENT		
	LOS	v/c	95th Q (m)	LOS	v/c	95th Q (m)
OVERALL	E	1.02		E	1.02	
EBL	E	0.90	115	E	0.90	115
EBT	E	0.93	130	E	0.93	130
EBR	D	0.05	0	D	0.05	0
WBL	F	1.00	190	F	1.00	190
WBT	D	0.57	105	D	0.58	105
WBR	D	0.66	105	D	0.66	110
NBL/T	F	0.87	75	F	0.87	75
NBR	E	0.10	10	E	0.10	10
SBL	E	0.91	185	E	0.93	190
SBT/R	E	0.91	160	E	0.91	160

4. VEHICLE PARKING SUPPLY

The proposed development includes a total of 298 units of which 287 are market rental and 11 are non-market rental units to be owned by the District. The units will be supported by 201 residential parking spaces for an average supply rate of 0.6 spaces/unit. There is a general trend of developments right-sizing their parking supply since many residential buildings provide too much parking. The following sections review the suitability of the proposed parking supply.

4.1 Metro Vancouver Regional Parking Study

4.1.1 Key Findings

Metro Vancouver’s 2018 Regional Parking Study (MVRPS) corroborated many of the 2012 Regional Parking Study findings, with three of the key findings particularly relevant to the Gateway Residences:

Key Finding #1: Apartment parking supply exceeds use across the region.

Relevance: Most developments include too much parking.

Key Finding #2: Apartment parking supply and use are lower for buildings closer to frequent transit.

Relevance: The Gateway Residences will be adjacent to a RapidBus stop which will lower its parking use.

Key Finding #3: Transit use is generally higher where apartment parking use is lower, especially for rental buildings.

Relevance: Residents of rental buildings (such as the Gateway Residences) are particularly open to owning fewer vehicles and using transit more.

4.1.2 Transit Proximity

The MVRPS found that the average vehicle ownership at market rental buildings within 400 metres of frequent bus service was 0.72 vehicles/unit which is 17% less than buildings away from the Frequent Transit Network.

Another related finding is that the only building category that exceeded one vehicle/unit were strata units more than 800 metres from rapid transit and more than 400 metres from frequent bus service. All rental buildings, as well as strata buildings with good transit access, had vehicle ownership rates less than one vehicle/unit. This indicates that not having a personal vehicle is a reality for many residents across the region.

4.1.3 Non-market Units

The development includes 11 non-market rental units which will be owned by the District. The MVRPS found that non-market rental units own half as many vehicles as market rental units.

4.1.4 Willingness to Forgo a Parking Stall

As part of the MVRPS, Metro Vancouver asked residents if they were willing to forego a parking stall if it resulted in a lower home purchase price or rent. Rental residents were substantially more willing to forego a parking stall than strata residents. 79% of zero vehicle households were willing or interested in forgoing a parking stall and 31% of households with a vehicle were willing or interested in forgoing a parking stall.

Therefore, it is anticipated that a substantial number of residents will be open or interested in forgoing a parking stall at the Gateway Residences.

4.2 Assessment

The proposed residential parking supply of 0.6 spaces/unit is generally aligned with the MVRPS with the demand for vehicle parking around 0.7 spaces/unit for market rental units with significantly lower demand from non-market unit residents.

Due to the proposed parking supply, the development is likely to attract a significant number of residents who do not own a vehicle. This is made feasible by a large number of amenities within walking distance, excellent transit access and proximity to car-share vehicles. This will minimize the site’s vehicle trip generation and effect on nearby intersection operations.

There are minimal opportunities for residents to park their vehicles long-term at off-site locations. Park Royal enforces the 4-hour parking limit on its property and there is minimal on-street parking nearby. Therefore, if a potential resident owns a vehicle and there are no remaining parking spaces to rent at the Gateway Residences, it is unlikely that they will rent an apartment and park their vehicle elsewhere.

5. TAYLOR WAY & MAIN STREET INTERSECTION

The driveway for West Royal Towers is located on the east leg of the Taylor Way and Main Street intersection. An issue raised by some of the existing area residents during consultation for the approved development at 752 Marine Drive was the difficulty in entering and exiting from their driveway connection to Taylor Way due to vehicles blocking the intersection as they queue northbound for clearance through the nearby Marine Drive traffic signal. The following section reviews opportunities to improve this intersection and facilitate more efficient exiting from West Royal Towers.

5.1 Right-in, Right-out Traffic Diverter

In Bunt's April 4, 2018, TIA, we recommended that the west leg of the subject intersection could be limited to right turns only. This would redistribute vehicles wanting to make an eastbound left turn from Main Street onto northbound Taylor Way to other exit locations on the Park Royal site. This would reduce the northbound vehicle queue on Taylor Way, providing more opportunities for vehicles to enter and exit West Royal Towers. The analysis presented in Bunt's April 4, 2018, TIA indicates that this improvement would reduce northbound queues on Taylor Way by approximately 30% which would reduce the frequency of vehicles blocking the subject intersection.

Exhibit 4.6 in the April 2018 Final TIA illustrates the approximate vehicle re-distribution as a result of the approved right-in/right-out intersection configuration. The two primary impacts are: (1) vehicles turning northbound left from Taylor Way towards the site will turn left before Main Street, and (2) there will be a reduction of vehicles leaving site northbound on Taylor Way and an increase of eastbound vehicles on Marine Drive approaching Taylor Way. Section 4.2.1 of the TIA did not identify any unintended consequences.

This improvement was included in the 2018 development permit for this project.

5.2 New Traffic Signal

Installing a traffic signal (including a pedestrian signal) at the intersection of Main Street and Taylor Way is not feasible due to its close proximity to existing traffic signals to the north and south. The subject intersection is 70 and 50 metres from these two traffic signals which are well below typical traffic signal spacing guidelines. In addition, the Ministry of Transportation and Infrastructure operates the Taylor Way & Marine Drive intersection and has previously rejected the possibility of a traffic signal in this location on account of this limited spacing condition.

5.3 Potential for Relocating West Royal Towers Driveway

Bunt reviewed the possibility of relocating the West Royal Towers Driveway to the existing traffic signal located 50 metres to the south of the current driveway. The amount of available public and private land does not provide sufficient space to realign the driveway to this location. There is insufficient land available adjacent to the Maple Leaf Self Storage building located to the south of West Royal Towers to realign the driveway.

5.4 Pavement Markings and Signage Improvements

In an effort to reduce vehicles blocking the intersection, cross-hatching using 10 cm yellow paint lines and a "DO NOT BLOCK INTERSECTION" sign on the east side of the road have already been installed. However, there are still occurrences of northbound drivers not complying with the regulations and blocking the intersection. The following improvements could be implemented to improve reduce the occurrence of vehicle blockages (see **Exhibit 1**):

- Replace the existing cross-hatching with thicker (15-20 cm) white lines;
- Install a Stop Bar which will notify northbound drivers where they should stop if they will not be able to pass through the intersection; and,
- Replace the "DO NOT BLOCK INTERSECTION" sign with a larger version.
- Trim vegetation surrounding the "DO NOT BLOCK INTERSECTION" sign on a regular basis to maximize its visibility.

5.5 Transportation Network Changes

In addition to the potential changes to the intersection itself, two nearby transportation network changes could reduce the critical northbound vehicle queue on Taylor Way at Marine Drive.

Park Royal is currently constructing a new northbound right-turn lane from Taylor Way onto the Welch Street Bridge. This improvement will reduce the travel times for this vehicle movement and may encourage more drivers to use this route to reach North Vancouver rather than staying on Taylor Way northbound for a right turn onto Marine Drive. A shift in vehicle routing would reduce the northbound vehicle queue on Taylor Way at Marine Drive, increasing possibilities for West Royal Towers residents to exit their driveway.

TransLink is currently implementing RapidBus service on Marine Drive, connecting Park Royal through North Vancouver to Phibbs Exchange. The increased bus service in addition to street improvements to increase bus speeds will allow people to travel faster across the North Shore and incentivize people to switch from driving to transit. This overall trend away from vehicle travel may reduce vehicle travel around Park Royal and the critical northbound vehicle queue on Taylor Way at Marine Drive. Transitioning travellers from driving to transit (and walking and cycling) is a necessary long term solution to the region's transportation needs.

6. SUMMARY

The additional 95 market rental homes proposed for the Gateway Residences are anticipated to have minimal impact on the vehicle volumes on adjacent streets. No additional parking is being provided for these added 95 dwelling units and residents will be required to travel by alternative modes to the private automobile including walking, cycling, transit, car share and ride-hailing services. The incremental vehicle traffic anticipated with this zero parking addition of 95 dwelling units is anticipated to be approximately 10 vehicles per hour during the weekday afternoon peak period or an average one vehicle every 6 minutes.

The approved development application included a right-in, right-out traffic diverter on the west leg of the Taylor Way and Main Street intersection. This is anticipated to reduce northbound vehicle queues on Taylor Way at Marine Drive which would increase the number of opportunities for drivers to exit West Royal Towers. In addition, the pavement markings at the intersection should be improved and vegetation surrounding the "DO NOT BLOCK INTERSECTION" sign should be maintained to increase driver compliance. The West Vancouver Police Department could also increase the frequency of enforcing the traffic regulations, particularly immediately after the pavement marking improvements.

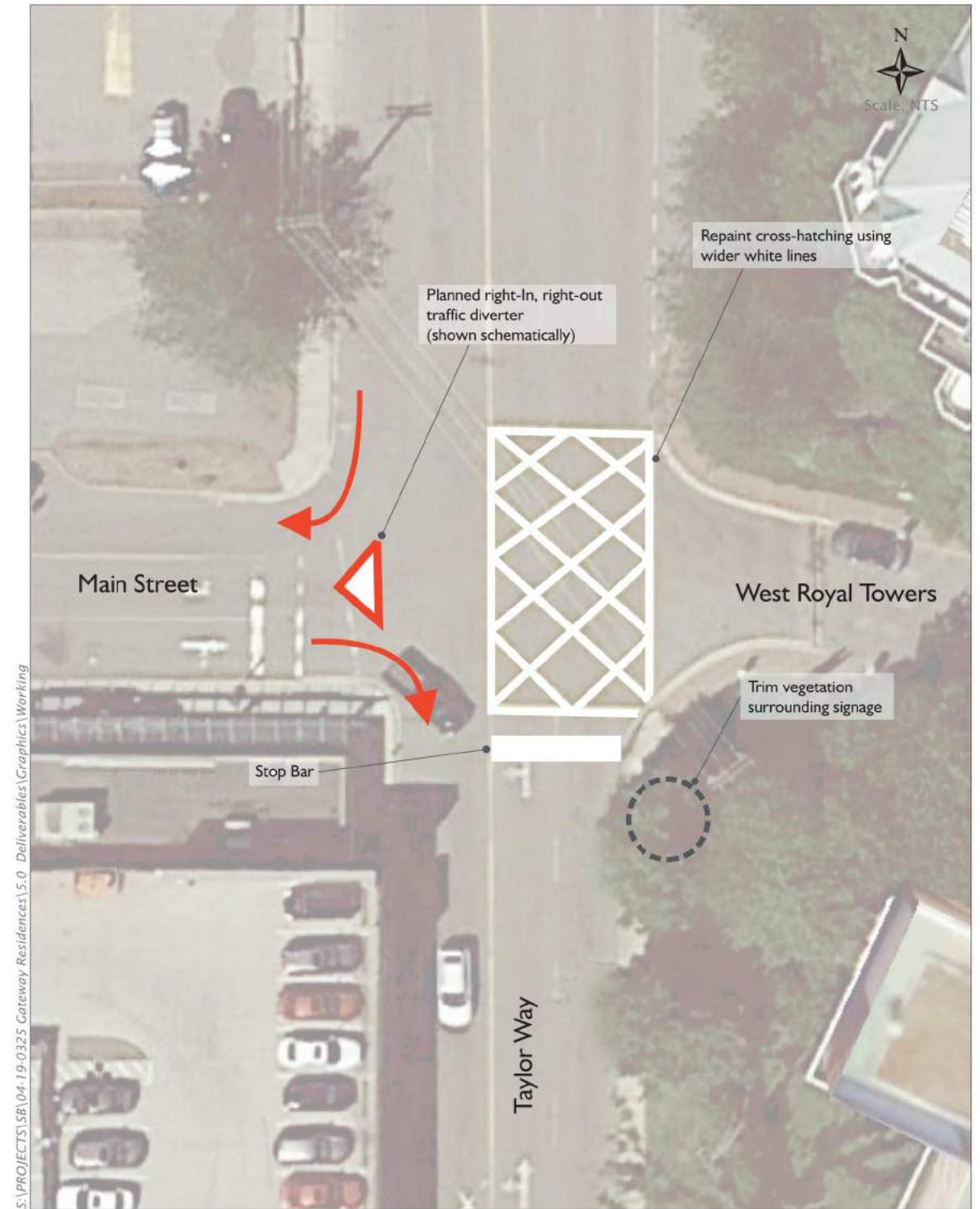


Exhibit 1
Pavement Marking and Signage Improvements

Gateway Residences (752 Marine Drive)
04-19-0325 September 2019



2.5 ADAPTABLE RESIDENTIAL UNITS + BARRIER FREE MEASURES

In the original zoning and development permit application, all 11 supportive housing units were to be designed to the City of North Vancouver Level 3 adaptability standards. In addition a series of barrier free measures were to be integrated into the development. They were:

- Clear identification on staircases in emergency stairwells e.g. yellow tactile bull nosing on the stairs.
- Intercom system at the front of the buildings with possible combination of video and interface.
- Elevators with audible interface e.g. announce the floors as you go up and when the doors open.
- Mailboxes positioned for easy access for individuals with mobility challenges such as wheel chairs.
- Pushbutton automatic doors to the lobbies and leading to the designated HC parking stalls are to be provided.
- Pushbutton automatic doors leading to the storage areas, garbage room are to be provided in the West Building where the adaptable units are located.
- Barrier free access to balconies from adaptable-designed units.
- All crossings to have City of Vancouver streetscape standard let downs with score markings indicating direction of travel.
- No grade on site will exceed 5% in slope.
- Accessible ramp down to water play area, within the Village Square.
- Wide walkways throughout the development.

With this application, we propose to provide an additional 23 Adaptable Level 2 units; 7 more in the West Building and 16 within the East Building. In total 34 residential units will conform to the City of North Vancouver Adaptable standards; 23 will be Level 2 and 11 will be Level 3.

In addition we propose to improve the barrier-free measures within the development with the following:

- Convert four existing parking spaces into Accessible Parking Stalls;
- Provide pushbutton automatic doors leading to the storage areas, garbage room in the East Building;
- Provide pushbutton automatic doors leading into the Amenity Area and
- All stairway: in addition to yellow tactile nosings, provide yellow handrails and tactile warning areas at the top and bottom of the stairs.
- Concierge service in the main lobby of both buildings - the ability to have food delivered and stored in refrigerated units.

2.6 CAC + DCC OPPORTUNITIES FOR COMMUNITY BENEFITS

The benefits to West Vancouver of an additional 95 purpose-built rental residential unit will be substantial and far reaching. District of West Vancouver Council has discretion in determining the form of amenity to be provided, be it cash or in-kind.

CACs attributed to the additional rental units are at Council's discretion and used to address community needs. Park Royal is uniquely positioned to offer a range of benefits in the form of transitional or permanent space for a youth centre, arts & culture or adult day care as an in-kind CAC proposition or if the Council elects, a cash payment.

As part of the project DCCs, Park Royal is prepared to discuss transportation alternatives, in partnership with Squamish Nation and West Vancouver, to address immediate and longer range improvements on the property it occupies immediately east of Pound Road. Such improvements address immediate needs by providing safer and easier vehicular access to/from the playing fields between Park Royal and 13th Street and anticipate future INSTPP initiatives and planning for a Lower Level Road connection.

2.7 COMPARISON TO CURRENT REZONING AND DEVELOPMENT PERMIT

The following is a set of drawings and photos illustrating the accommodation of 95 more rental units in five additional floors on to each building.



2.7.1 HEIGHT COMPARISON

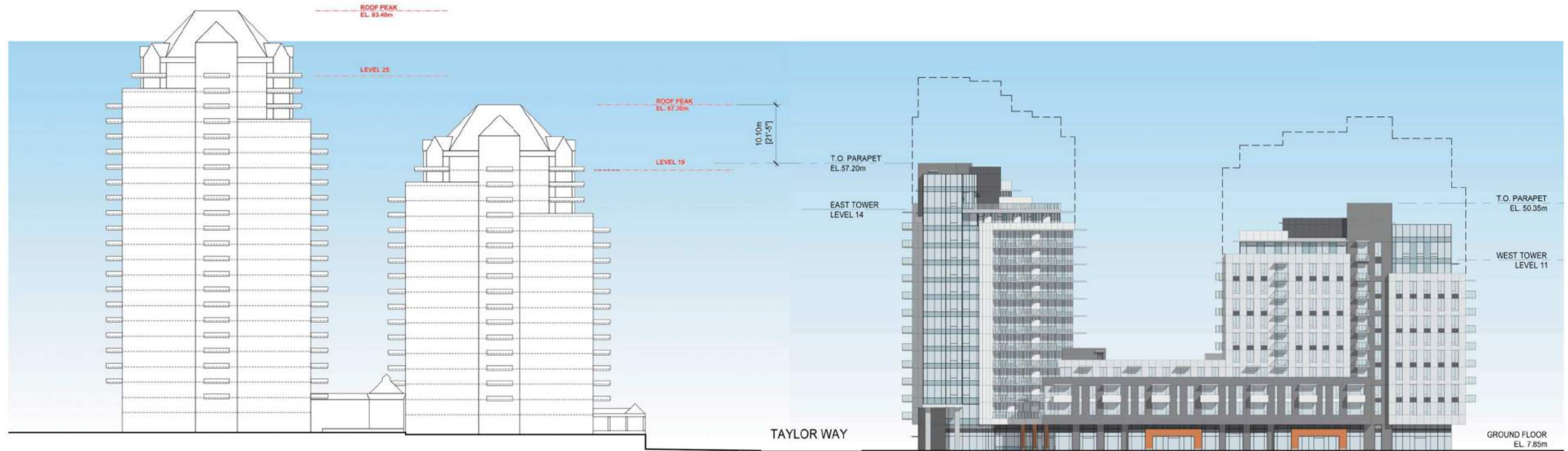
CURRENT OCP, ZONING + DP



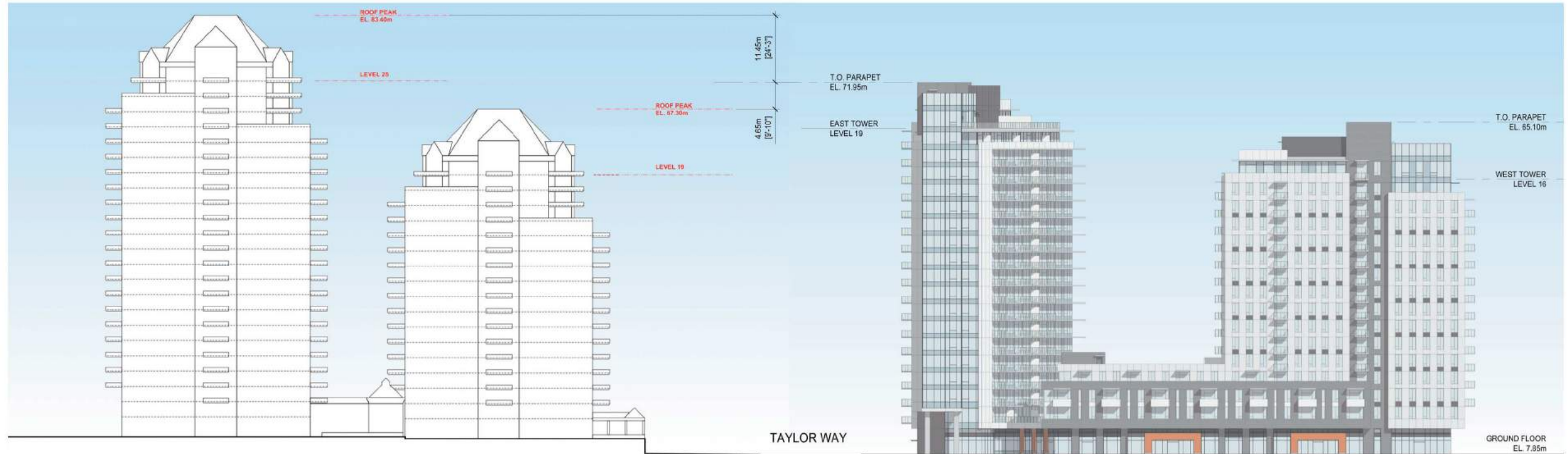
PROPOSED OCP, ZONING + DP



CURRENT OCP, ZONING + DP



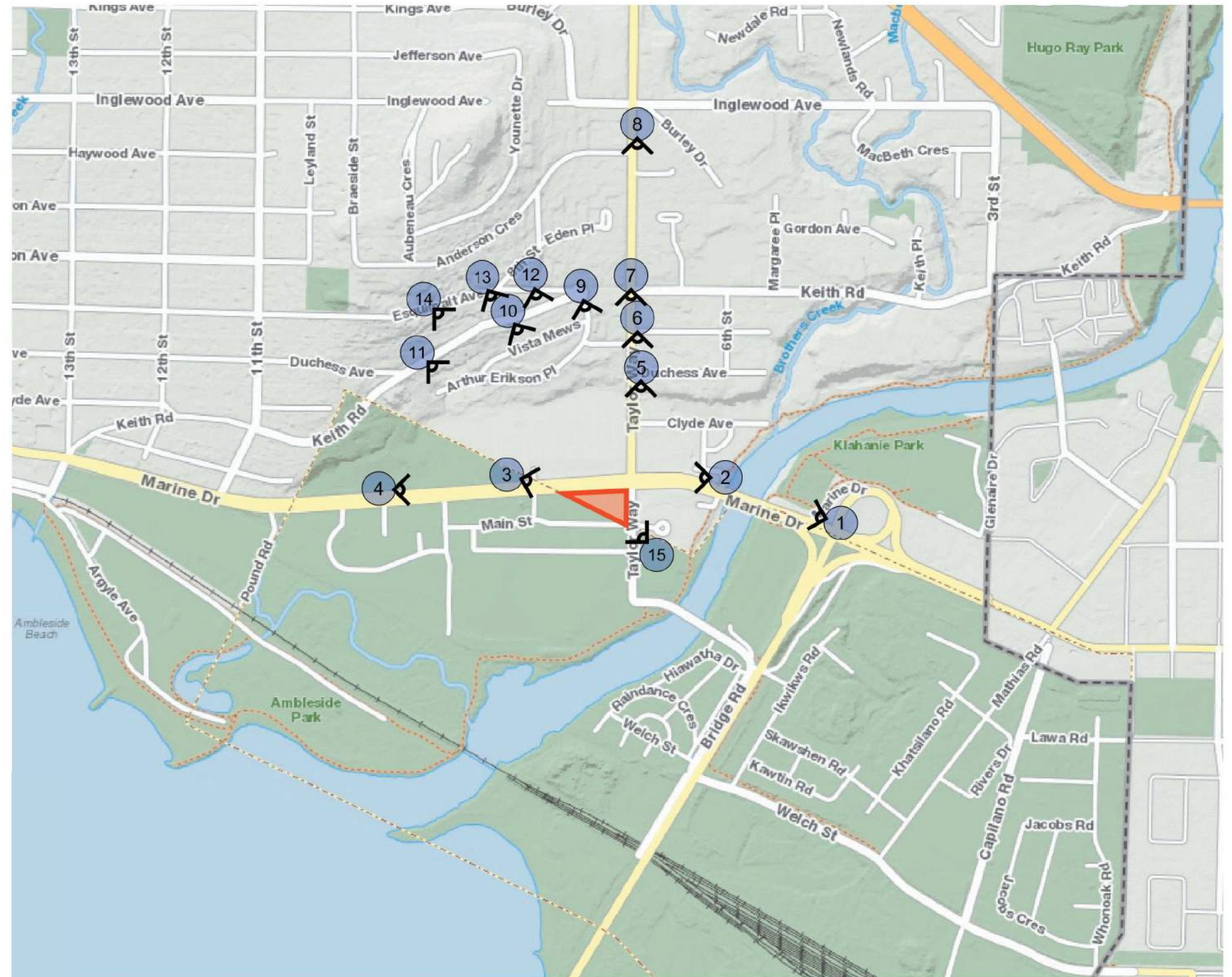
PROPOSED OCP, ZONING + DP



2.7.2 VIEW STUDIES

View Studies have been completed for the project to assess the impact of the project with five additional floors in its context.

1. Marine Drive @ Lions Gate Bridge
2. Marine Drive @ Capilano River
3. Marine Drive @ Park Royal North
4. Marine Drive @ 900 Block
5. Taylor Way @ Duchess Avenue
6. Taylor Way @ Esquimalt Avenue
7. Taylor Way @ Keith Road
8. Taylor Way @ Anderson Crescent
9. Keith Road @ Arthur Erickson Place
10. Keith Road @ 800 Block
11. Keith Road @ Duchess Avenue
12. Esquimalt Avenue @ 800 Block
13. Esquimalt Avenue @ 8th Street
14. Esquimalt Avenue @ 900 Block
15. Taylor Way @ Main Street, Adjacent to Site



1. Marine Drive @ Lions Gate Bridge



Current OCP, Zoning + DP



Proposed OCP, Zoning + DP

2. Marine Drive @ Capilano River



Current OCP, Zoning + DP



Proposed OCP, Zoning + DP

3. Marine Drive @ Park Royal North



Current OCP, Zoning + DP



Proposed OCP, Zoning + DP

4. Marine Drive @ 900 Block



Current OCP, Zoning + DP



Proposed OCP, Zoning + DP

5. Taylor Way @ Duchess Avenue



Current OCP, Zoning + DP



Proposed OCP, Zoning + DP

6. Taylor Way @ Esquimalt Avenue



Current OCP, Zoning + DP



Proposed OCP, Zoning + DP

7. Taylor Way @ Keith Road



Current OCP, Zoning + DP



Proposed OCP, Zoning + DP

8. Taylor Way @ Anderson Crescent



Current OCP, Zoning + DP



Proposed OCP, Zoning + DP

9. Keith Road @ Arthur Erickson Place



Current OCP, Zoning + DP



Proposed OCP, Zoning + DP

10. Keith Road @ 800 Block



Current OCP, Zoning + DP



Proposed OCP, Zoning + DP

11. Keith Road @ Duchess Avenue



Current OCP, Zoning + DP



Proposed OCP, Zoning + DP

12. Esquimalt Avenue @ 800 Block



Current OCP, Zoning + DP



Proposed OCP, Zoning + DP

13. Esquimalt Avenue @ 8th Street



Current OCP, Zoning + DP



Proposed OCP, Zoning + DP

14. Esquimalt Avenue @ 900 Block



Current OCP, Zoning + DP



Proposed OCP, Zoning + DP

15. Taylor Way @ Main Street, Adjacent to Site



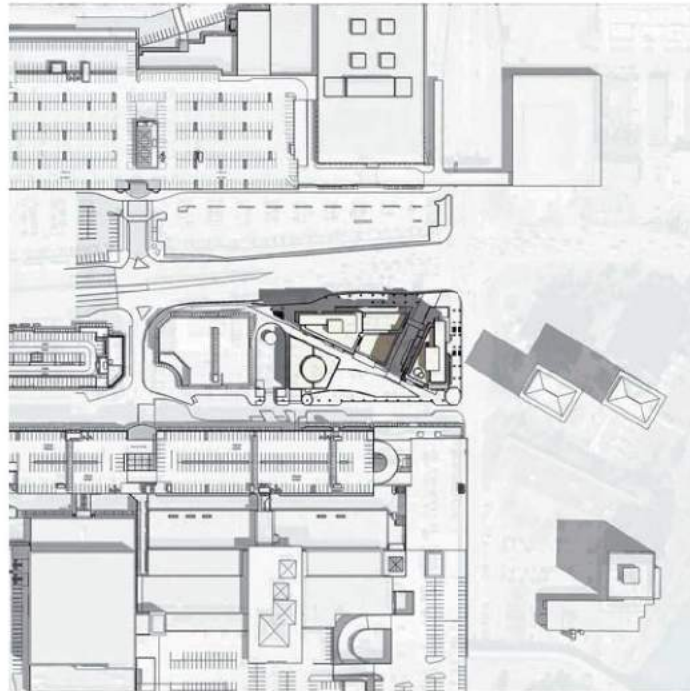
Current OCP, Zoning + DP



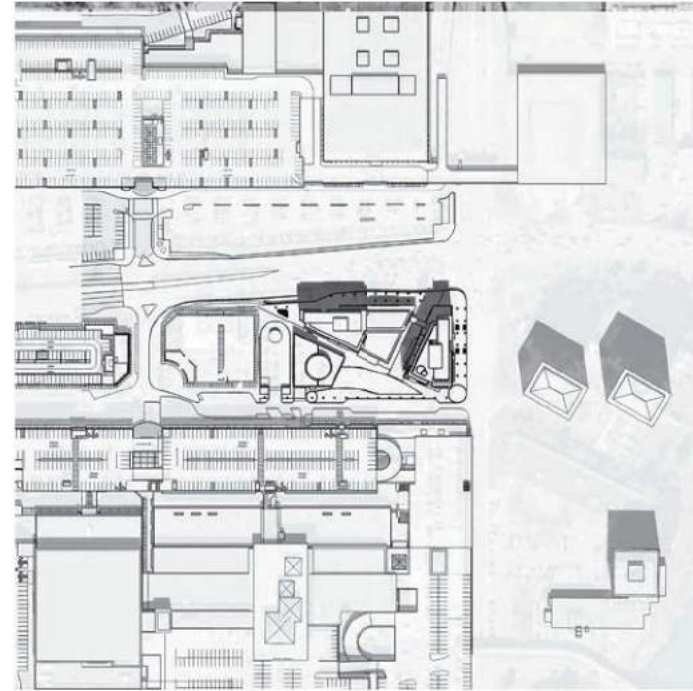
Proposed OCP, Zoning + DP

2.7.3 SHADOW STUDIES

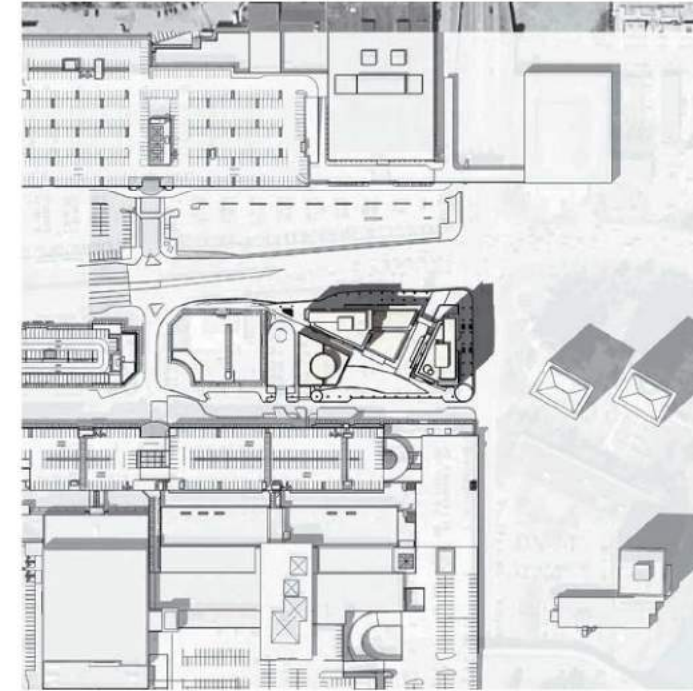
CURRENT OCP, ZONING + DP



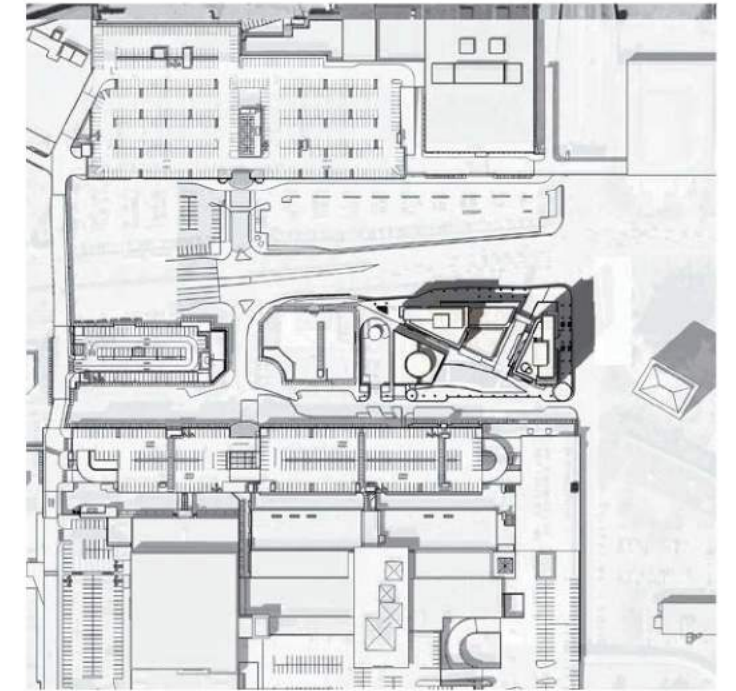
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June 21st - 12 noon

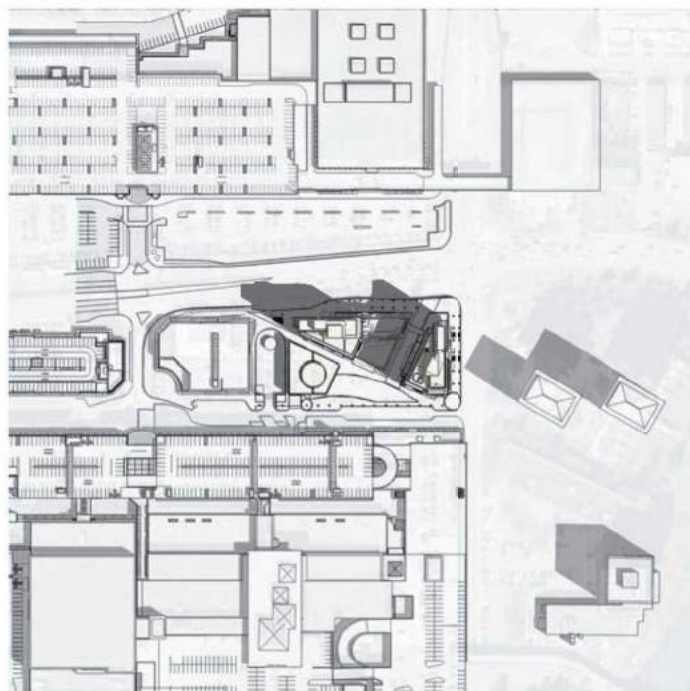


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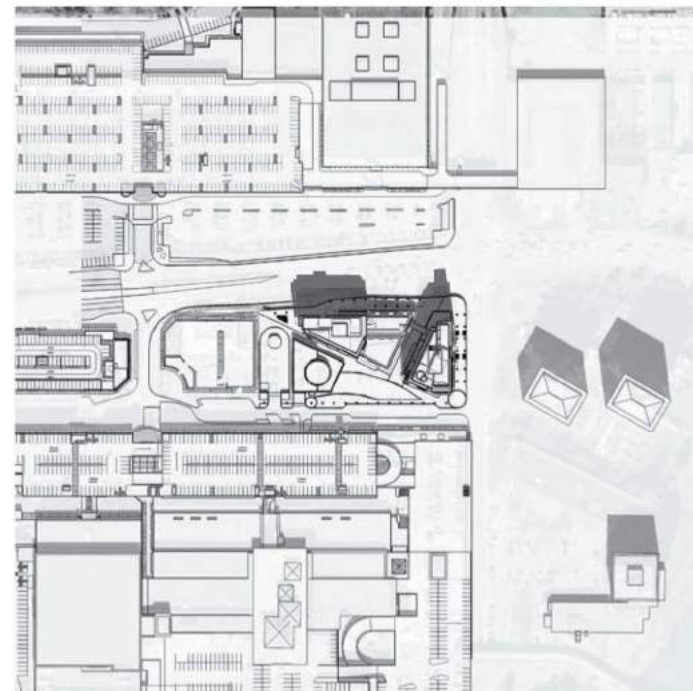


June 21st - 4 pm

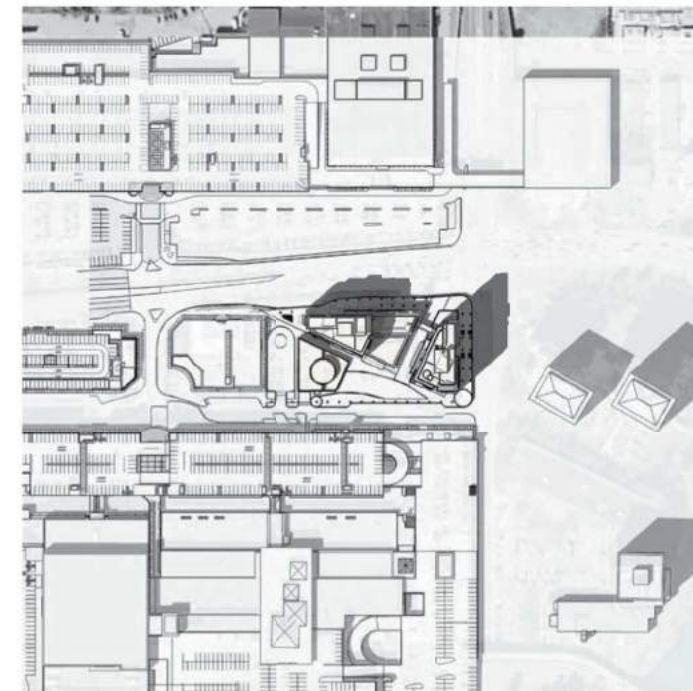
PROPOSED OCP, ZONING + DP



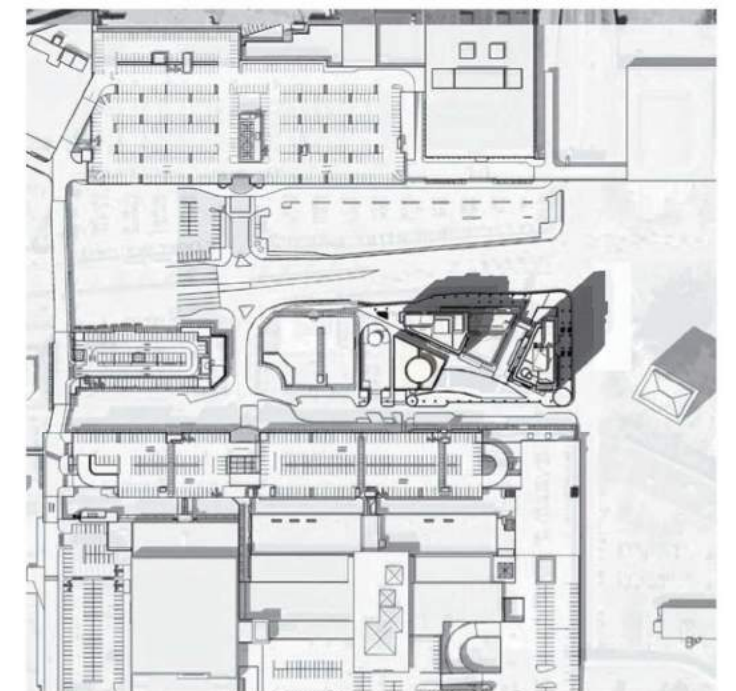
June 21st - 10 am



June 21st - 12 noon



June 21st - 2 pm

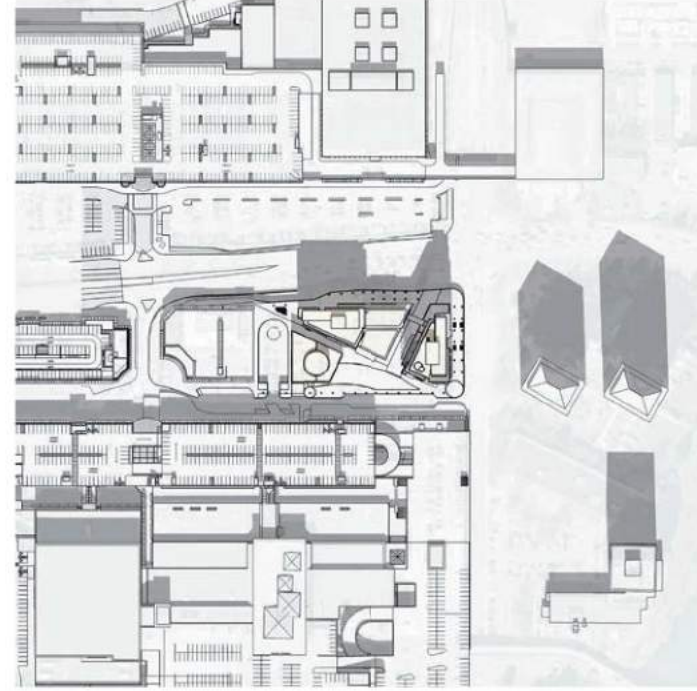


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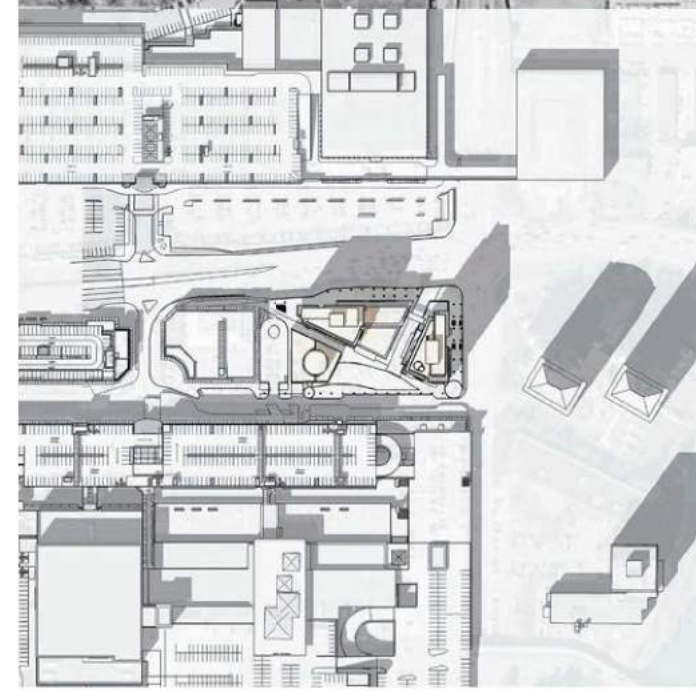
CURRENT OCP, ZONING + DP



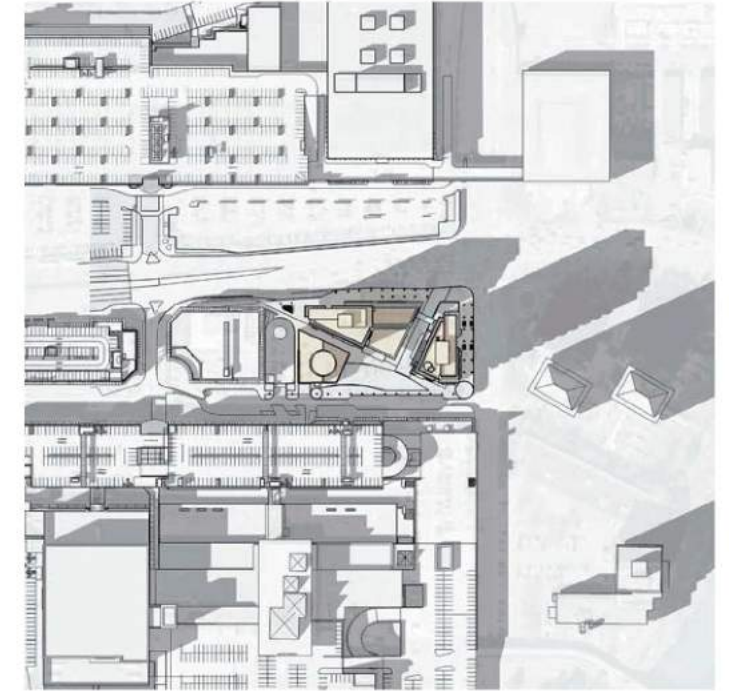
Sept 21st - 10 am



Sept 21st - 12 noon

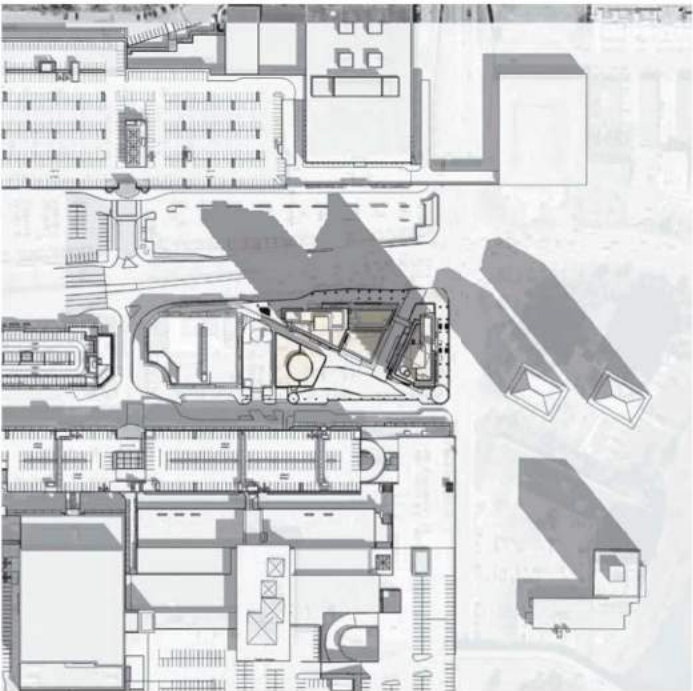


Sept 21st - 2 pm

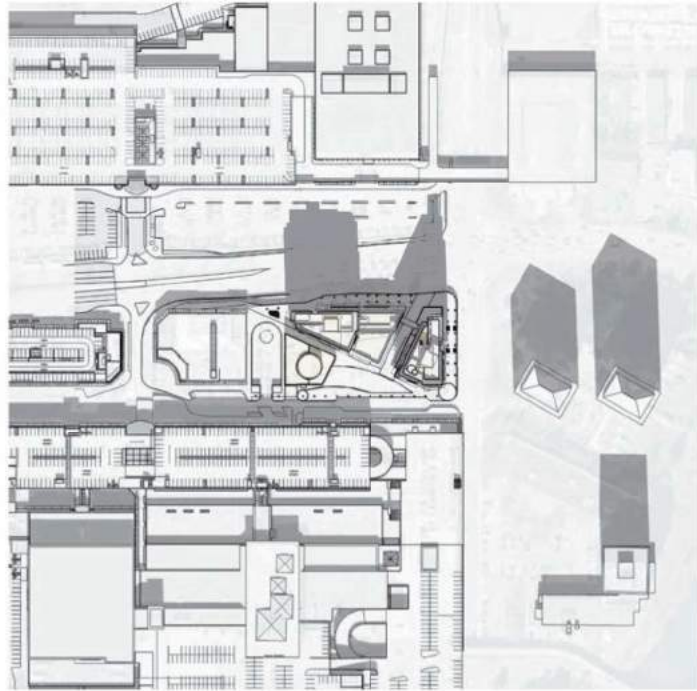


Sept 21st - 4 pm

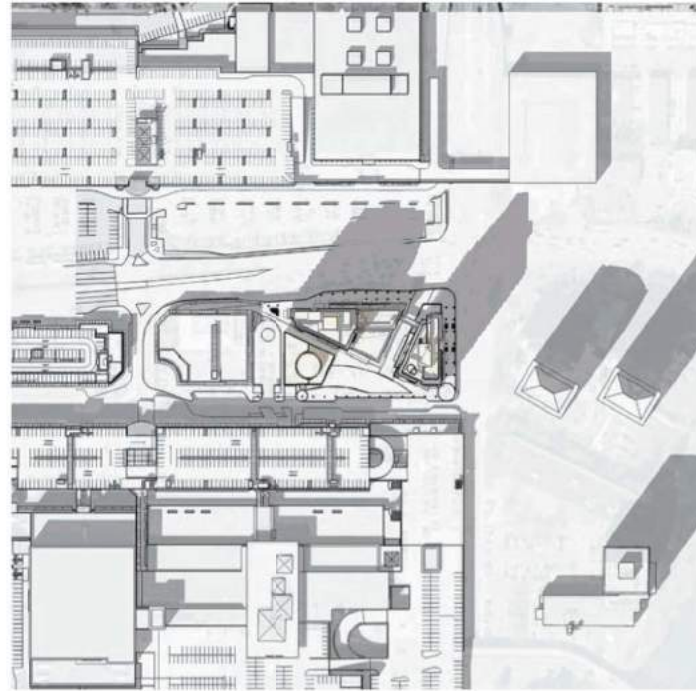
PROPOSED OCP, ZONING + DP



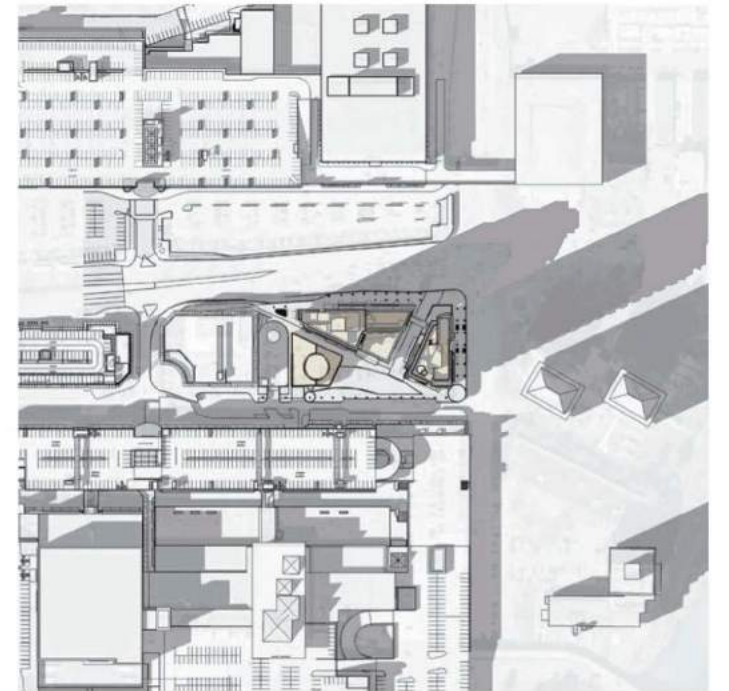
Sept 21st - 10 am



Sept 21st - 12 noon



Sept 21st - 2 pm

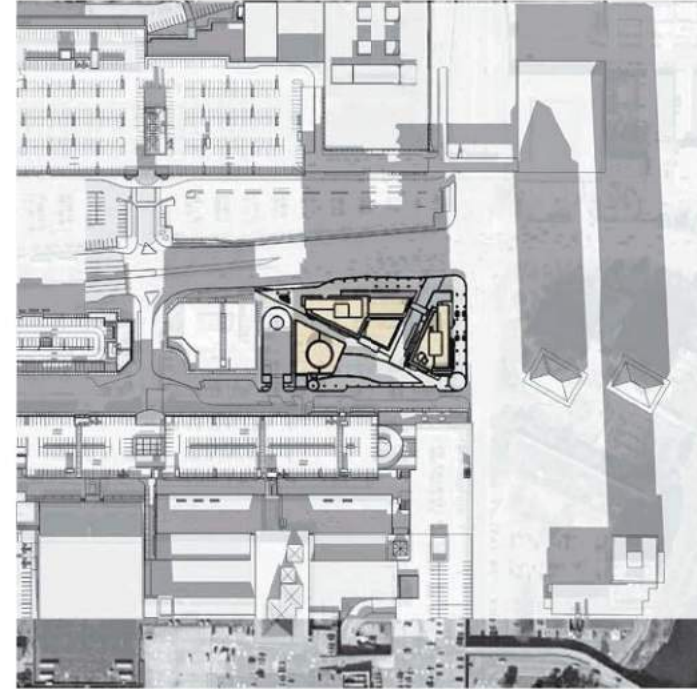


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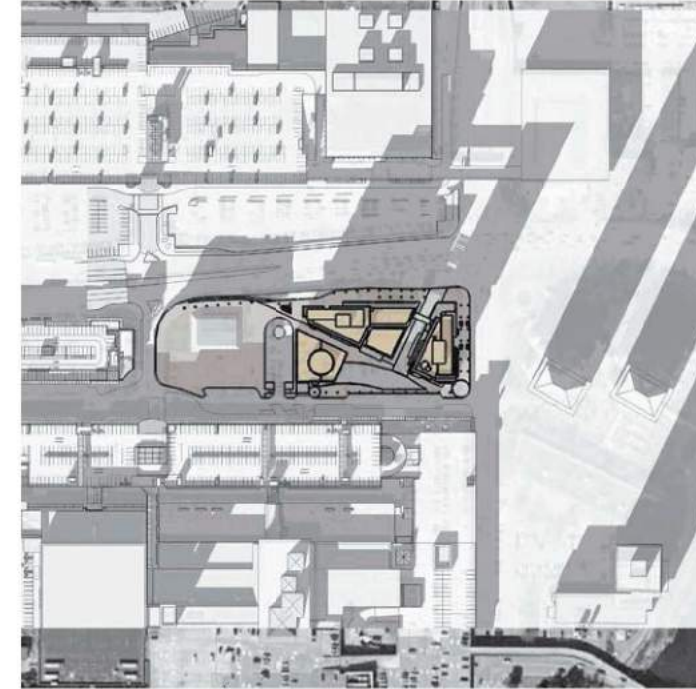
CURRENT OCP, ZONING + DP



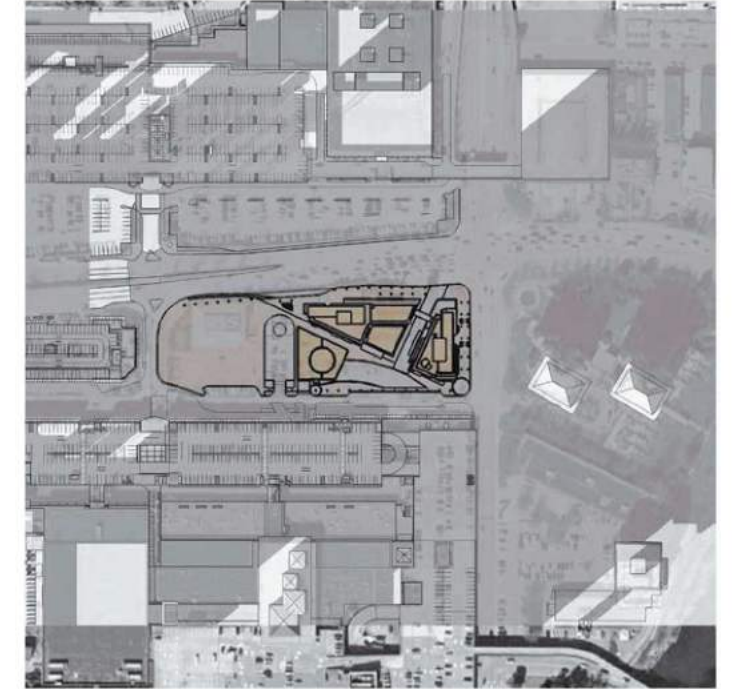
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Dec 21st - 12 noon

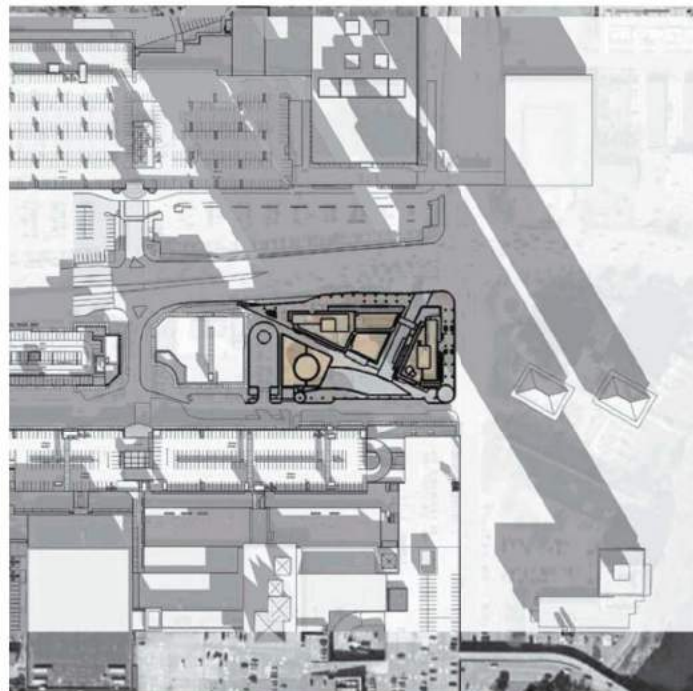


Dec 21st - 2 pm

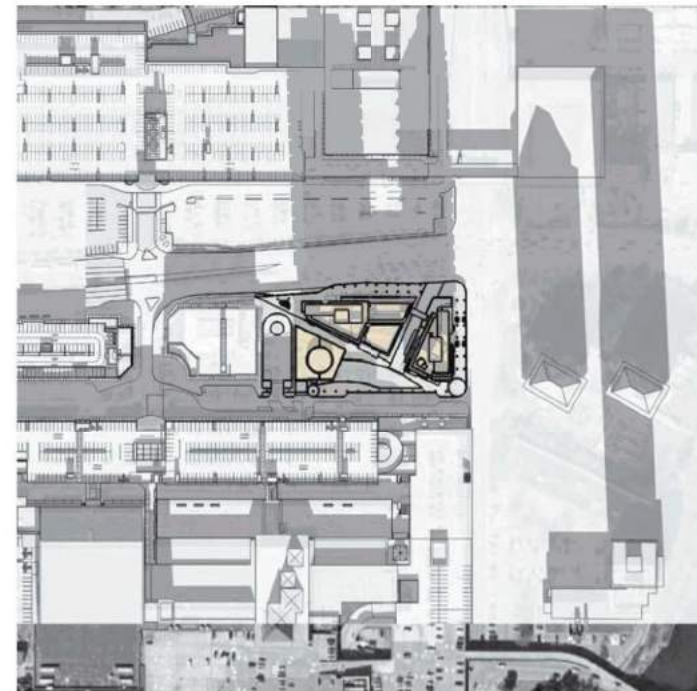


Dec 21st - 4 pm

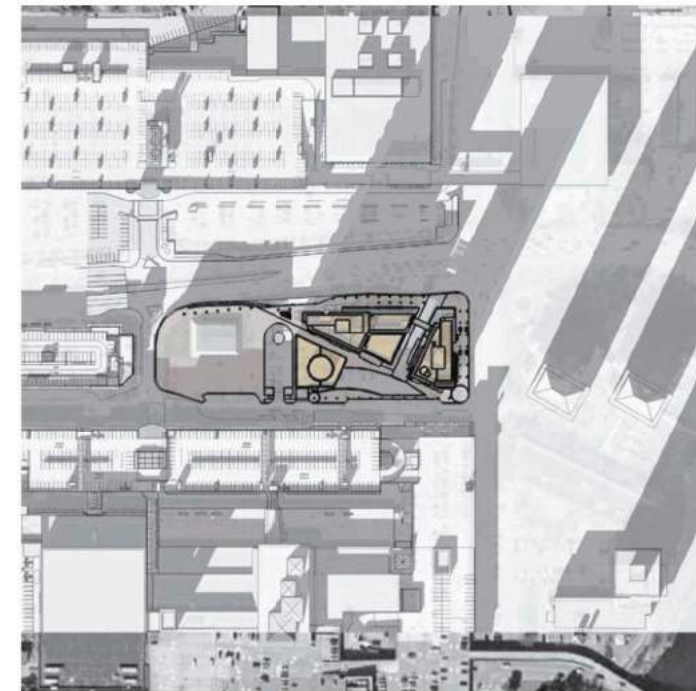
PROPOSED OCP, ZONING + DP



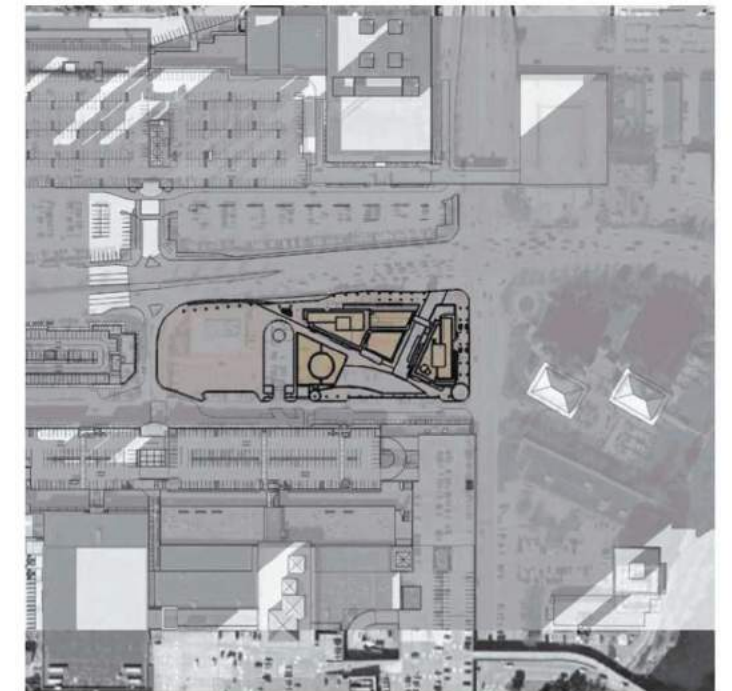
Dec 21st - 10 am



Dec 21st - 12 noon



Dec 21st - 2 pm



Dec 21st - 4 pm



2.8 DRC RESPONSE MEMO



December 3, 2019

Lisa Berg MCIP RPP
Senior Community Planner
District of West Vancouver
#750- 17th Street
West Vancouver, BC V7V 3T3

Re: Gateway Residences, 707 & 723 Main Street (752 Marine Drive), West Vancouver

Dear Lisa

Thank you for the text of the DRC Draft Motion of Support with the request for the design team to review number of design items with DWV staff. These items are listed below along with our response.

1. a review of potential expansion of the car sharing opportunities;

Gateway Residences currently has 9 dedicated car share stalls within the underground parkade and Park Royal is actively expanding this number in other areas of Park Royal. In October 2019 Park Royal entered into an agreement with car2go Canada Ltd for six (6) care share stalls at Park Royal South as shown on the attached context plan. The additional car share stalls are immediately south of Gateway Residences. The car share program for Park Royal is expandable as demand warrants.

2. a review of the potential for active uses of the level 4 and 5 rooftop areas;

The two areas in question are passive green roof areas on the West Building that contributes to our stormwater management strategy and provides visual relief from the overlooking residential units above. The current proposal also provides a substantial roof terrace at the top of the West Building that is accessible to all the residents in the building. Access to either of the green roof areas would only supplement this outdoor amenity.

Access to the Level 5 green roof area is not possible since the public corridor does not extend to this roof area, but access to the Level 4 roof area would be possible. However if this is publicly accessible, the green roof would have to change to a paved terrace, due to the fragility of the green roof material. This terrace will also overlook onto the Childcare outdoor play area, which may be undesirable to the operation of the Childcare. Therefore given that the current proposal does provide communal outdoor access at the top of the building, we believe that the best design response is to retain both the Level 4 and 5 roof area as a publicly non-accessible green roof.

3. consideration of the robustness of the Prodema material around the high traffic entrance areas;

We have accepted the DRC advice and propose substitute Trespa Meteon as the cladding material these areas. This material is comprised of wood fibres and resin, and has a wood grain finish. However it is more durable than Prodema.

4. a review by the District and the proponent to maximize community amenity contributions to use in a way that supports increased density;

We look forward to working with the DWV on this point.

5. consideration of the child care spaces and potential opportunities for expansion;

The childcare space is owned by the District of West Vancouver along with the Supportive Housing on level 2 of the west building. There is no opportunity to expand the building floorplate and the only option to increase the size of the childcare is for the District to reduce the supportive housing component. In June 2019 West Vancouver Council approved an amendment to the development permit for Park Royal North to allow for alterations to an area next to the Bay to accommodate a child care facility. The new childcare facility has approximately 100 spaces and is a short walk to the Gateway Residences. The combination of the Gateway Residences and Park Royal North facilities will provide approximately 125 new childcare spaces to the community. The zoning for Park Royal North and the land use for the property leased from the Squamish First Nation both provide for childcare. If/when demand indicates the need for additional childcare facilities at Park Royal entitlements are in place for such consideration.

cc:
p:\1727-600 752 marine drive - dp amendment\4.0 city corres\03 development permit\drc response\gateway drc response letter- 2019-12-03.docx

>> 200 - 1014 Homer Street, Vancouver, British Columbia, Canada V6B 2W9 T 604 685 6312 F 604 685 0988

Mark Ehman Architect AIBC, Partner James Kao Architect AIBC, Partner Randy Krill Architect AIBC, Consulting Partner

www.da-architects.ca

www.da-architects.ca

6. consideration of providing opportunities for childrens' play on the ground floor public realm.

We are proposing to enrich the triangular green space immediately to the east of the water play area to provide additional childrens' play opportunities. Please see the attached plan and precedent images.

We trust that we have responded appropriately to the DRC comments and look forward with Staff support of the measures proposed.

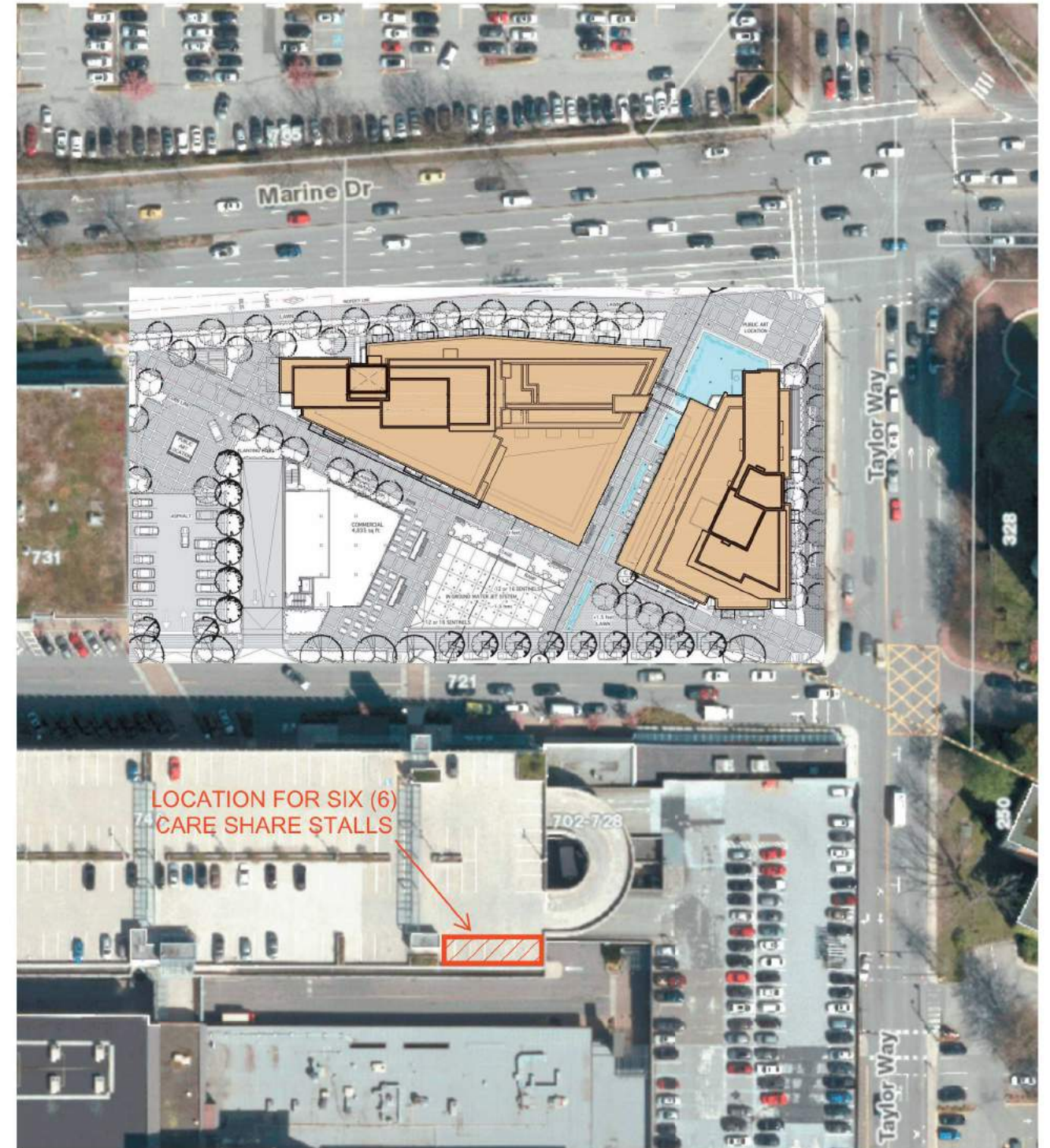
Please let me know if you have any questions

Yours truly,



Mark Ehman, Architect AIBC, Partner.
DA Architects + Planners

www.da-architects.ca



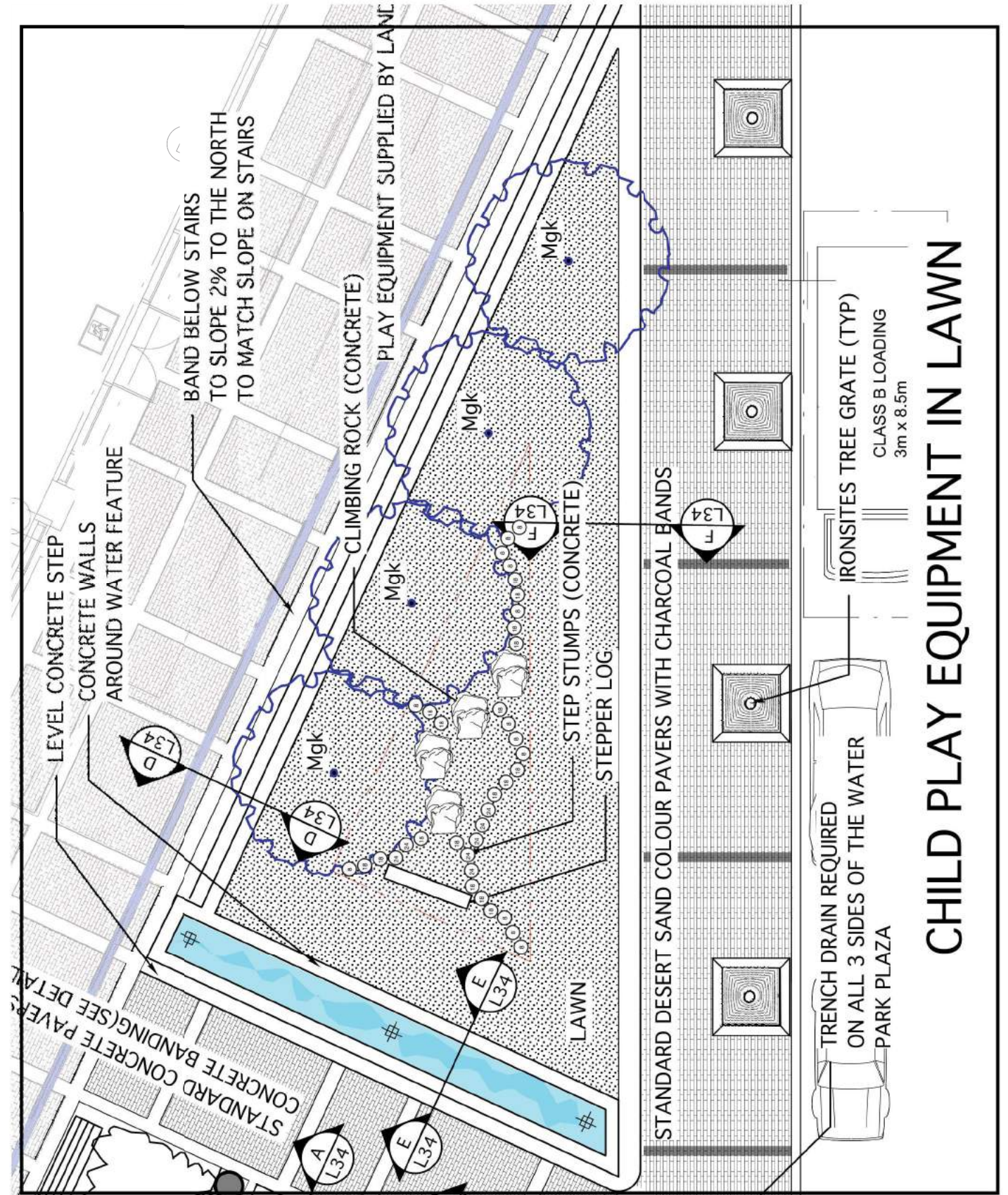
CONTEXT PLAN

Addition of Child Play

With the addition of multi-use steppers and climbers in the lawn area we are extending the play opportunities for children while at the same time making interesting seating locations and encouraging passive opportunities. The red line shows the 6' clear safety zone around the concrete walls, and this will stay lawn and relaxation, while the middle area will offer opportunities for activity and play, even during wetter or colder periods.



Colour palette above for rocks. Variations on grey will be chosen for the rocks



3.0 ARCHITECTURAL DRAWINGS

3.1 PLANS

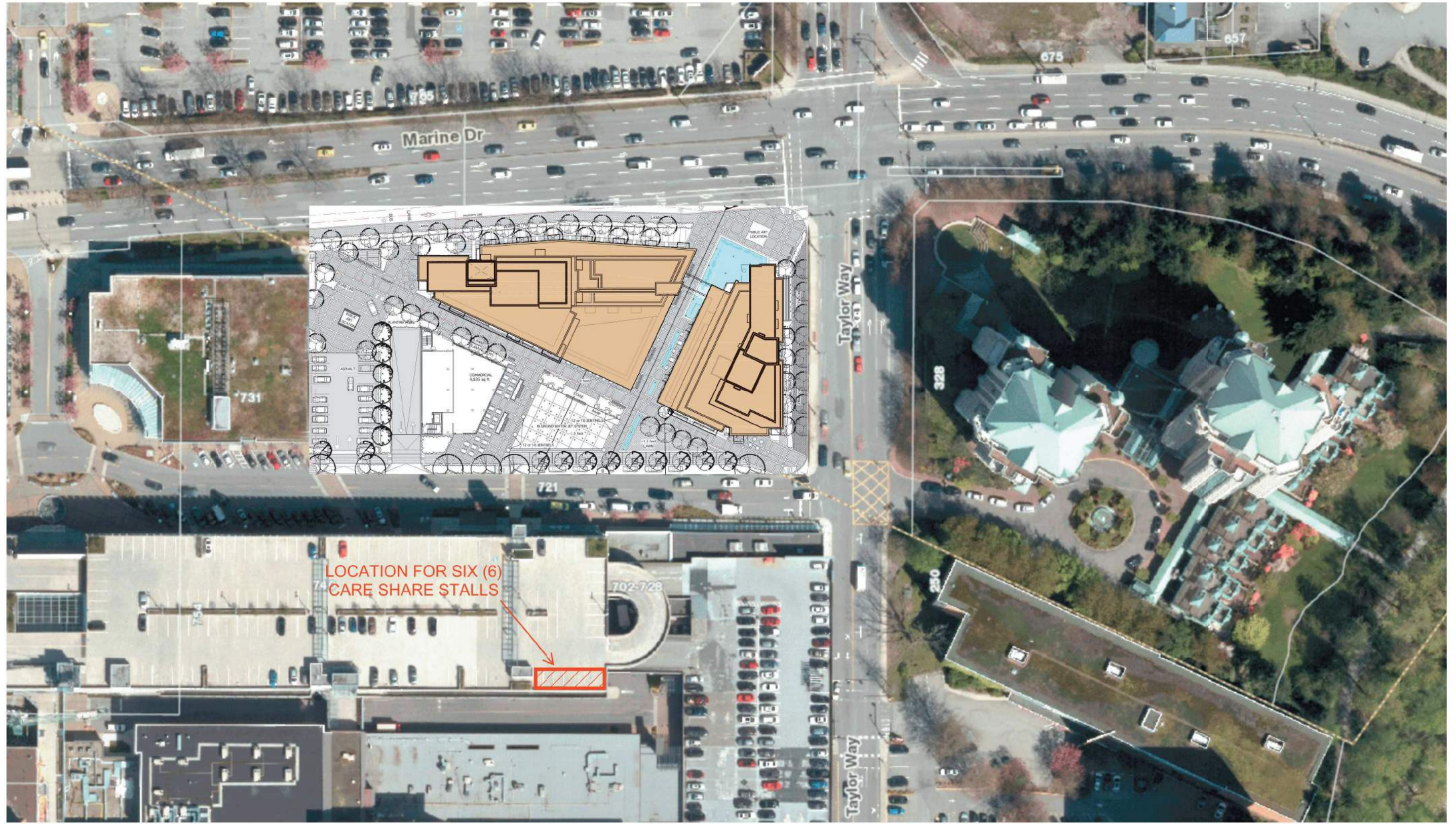
- CONTEXT PLAN
- SURVEY PLAN
- SITE PLAN
- LEVEL P3 PLAN
- LEVEL P2 PLAN
- LEVEL P1 PLAN
- LEVEL 1 PLAN
- LEVEL 2 PLAN
- LEVEL 3 PLAN
- LEVEL 4 PLAN
- LEVEL 5 PLAN
- LEVEL 6 PLAN
- LEVEL 7-10 PLAN
- LEVEL 11 PLAN
- LEVEL 12 PLAN
- LEVEL 13-14 PLAN
- LEVEL 15 PLAN
- LEVEL 16 PLAN
- LEVEL 17 PLAN
- LEVEL 18 PLAN
- LEVEL 19 PLAN
- LEVEL 20 PLAN
- ROOF PLAN

3.2 ELEVATIONS

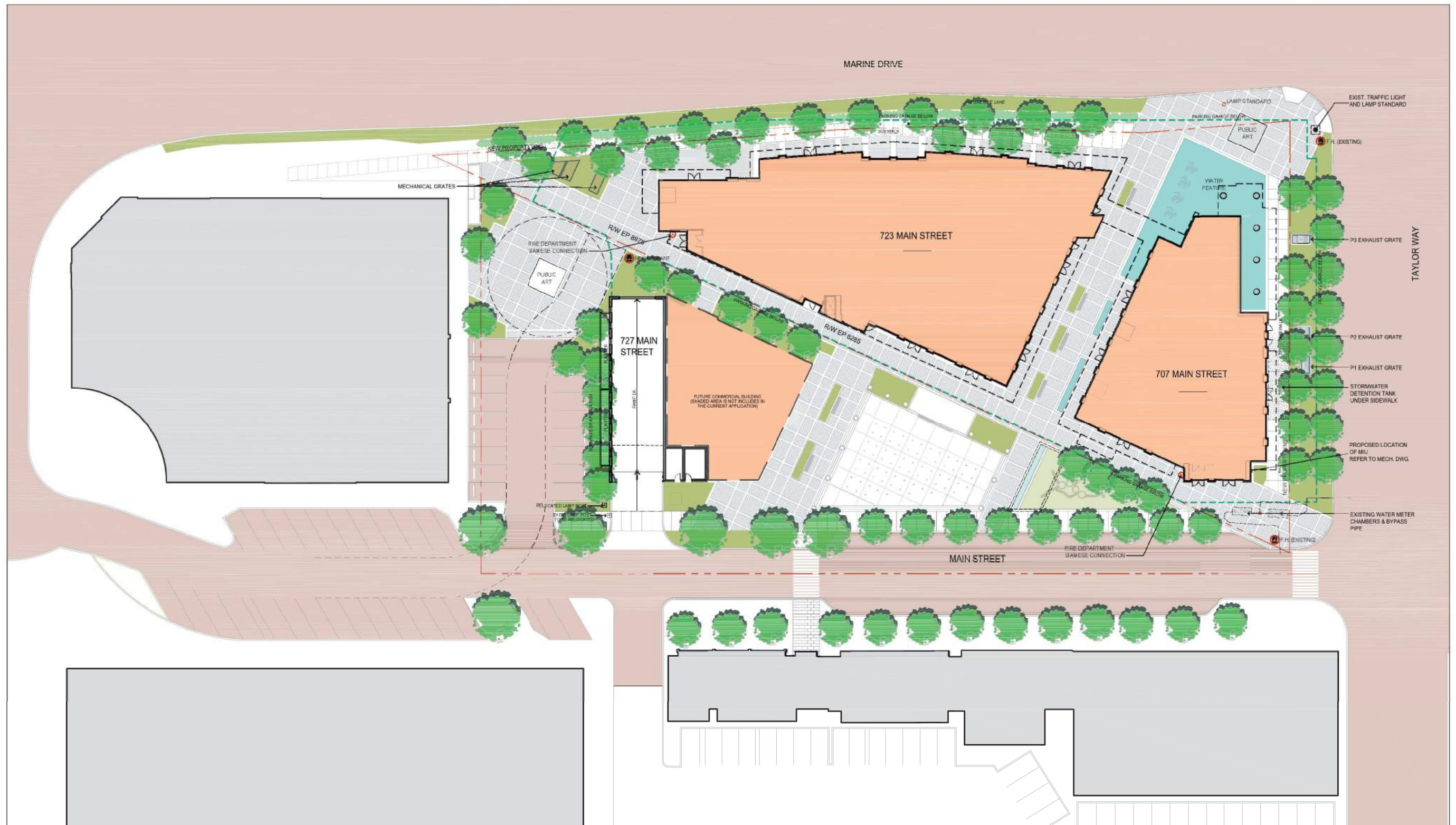
- EAST ELEVATION (EAST TOWER)
- NORHT ELEVATION
- WEST ELEVATION / SOUTHEAST ELEVATION (WEST TOWER)
- SOUTHWEST ELEVATION
- NORTHWEST ELEVATION / SOUTH ELEVATION (EAST TOWER)

3.3 SECTIONS

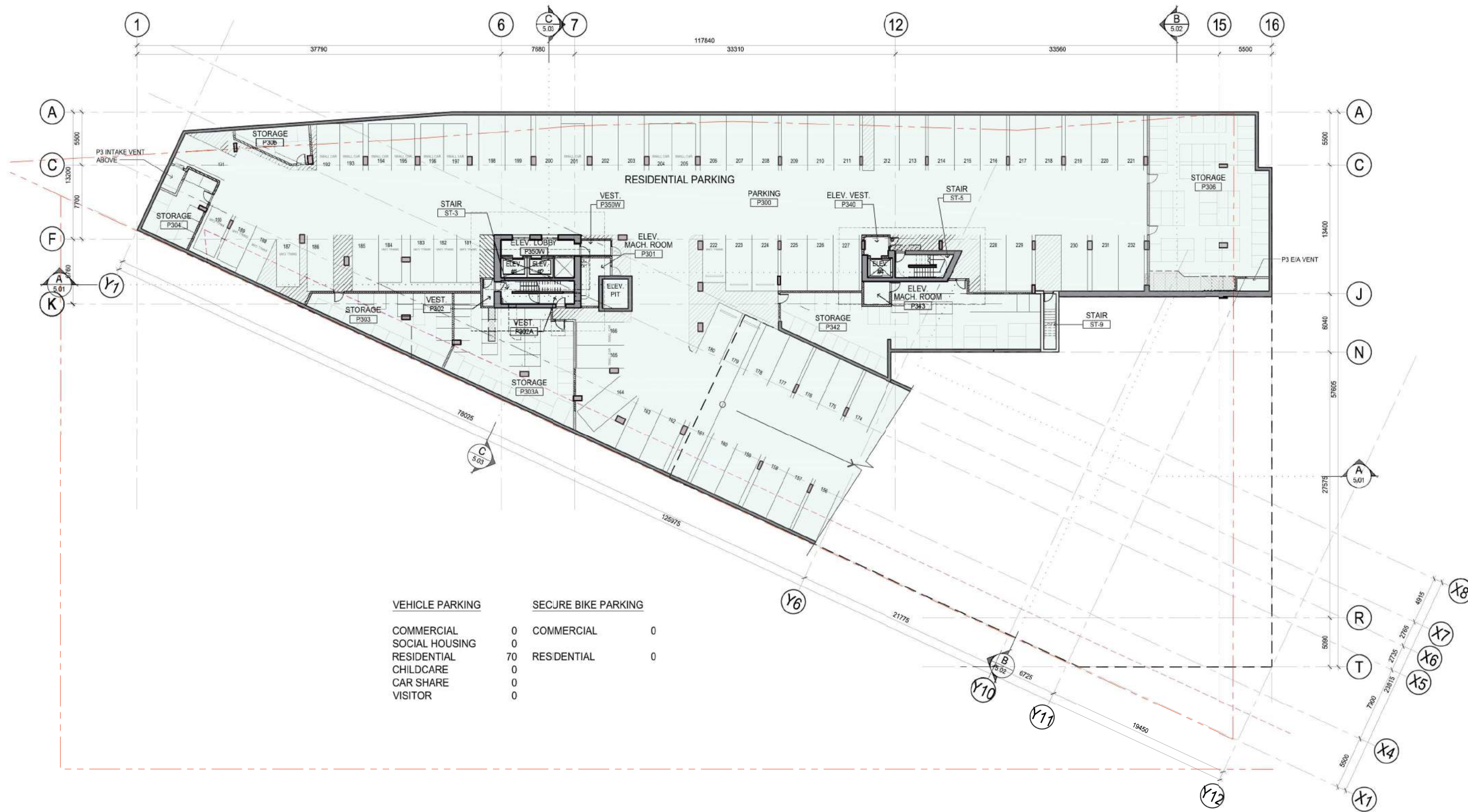
- OVERALL BUILDING SECTION
- EAST TOWER SECTION
- WEST TOWER SECTION



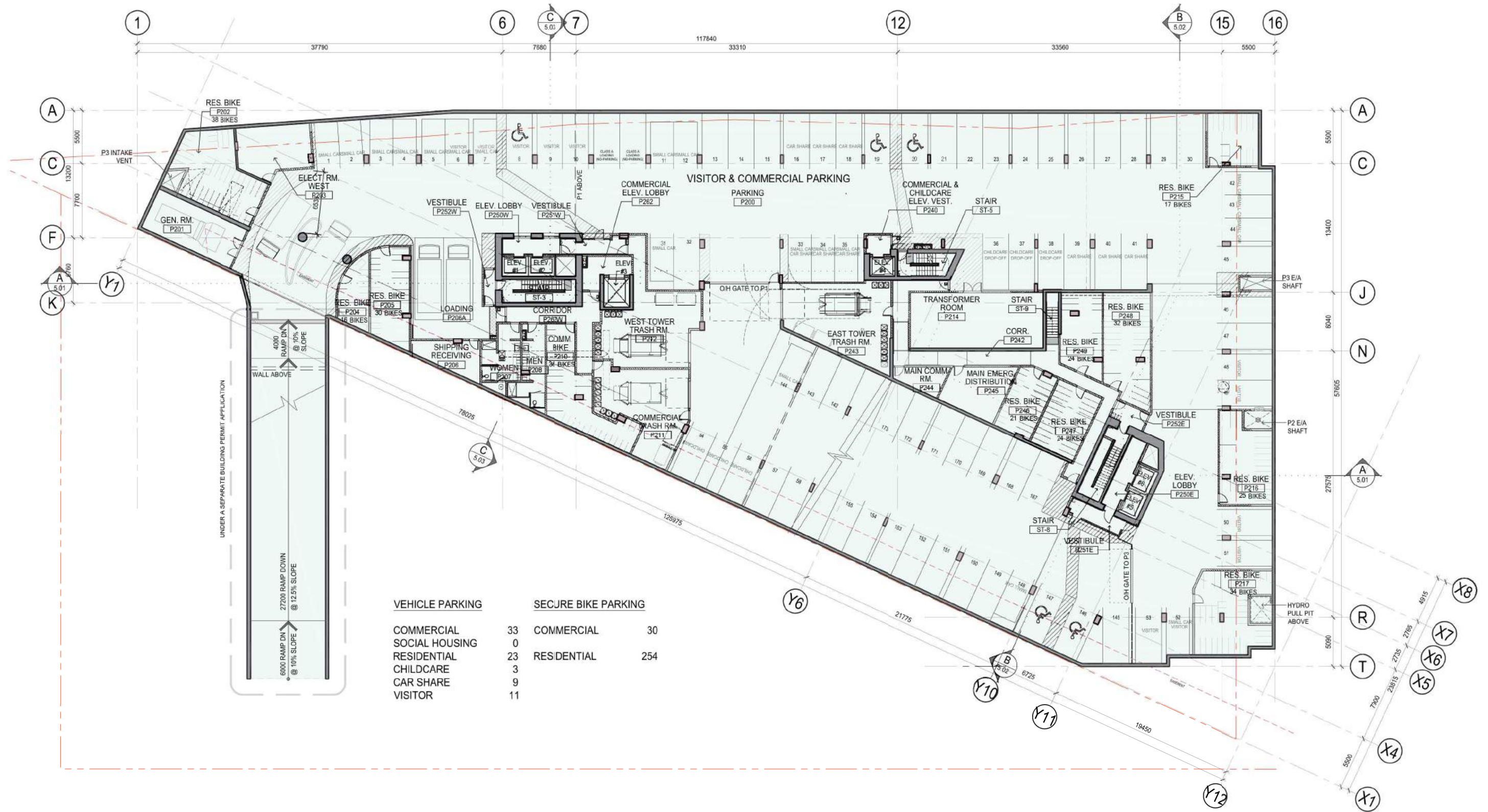
CONTEXT PLAN



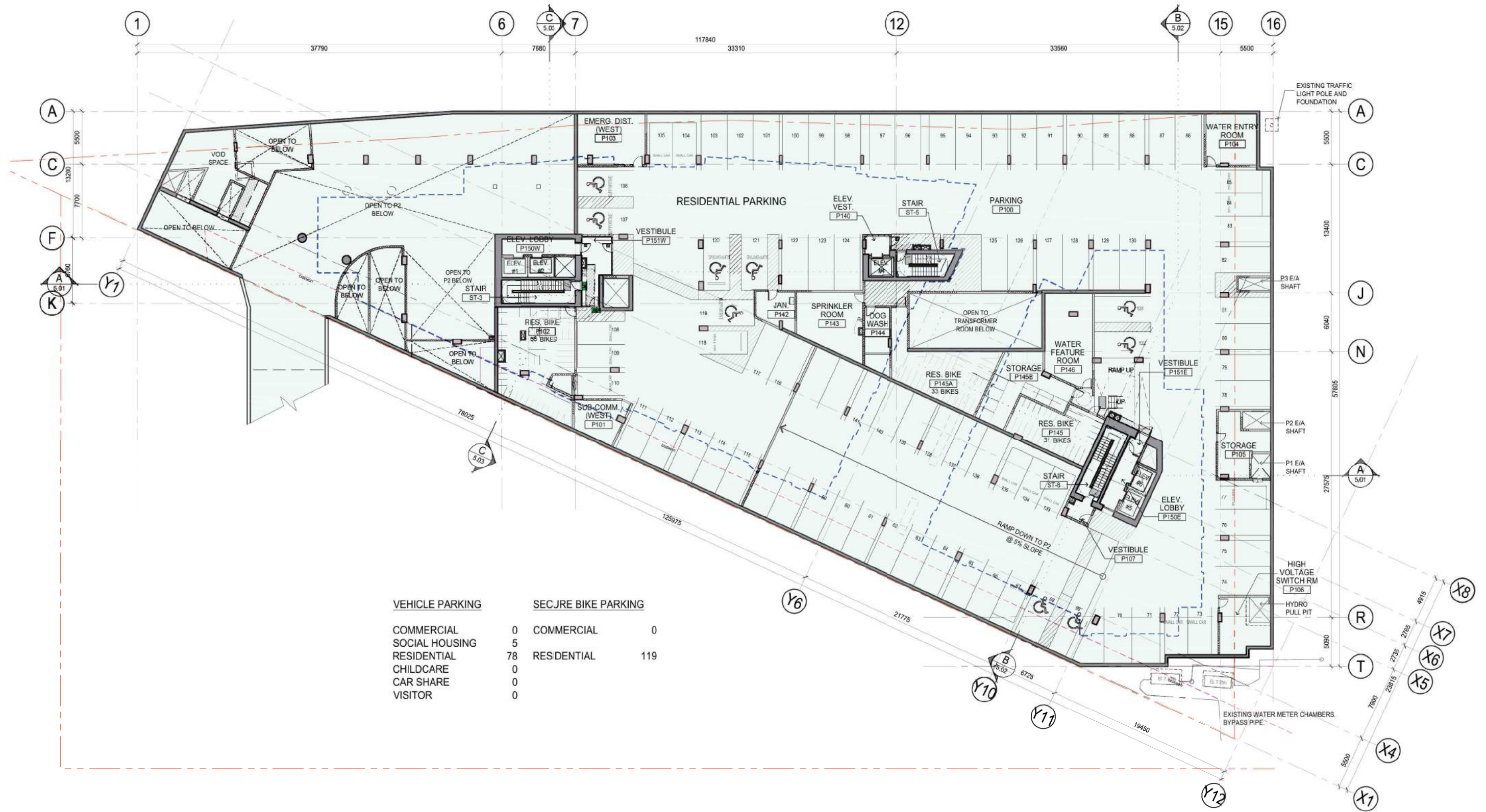
SITE PLAN



LEVEL P3 PLAN



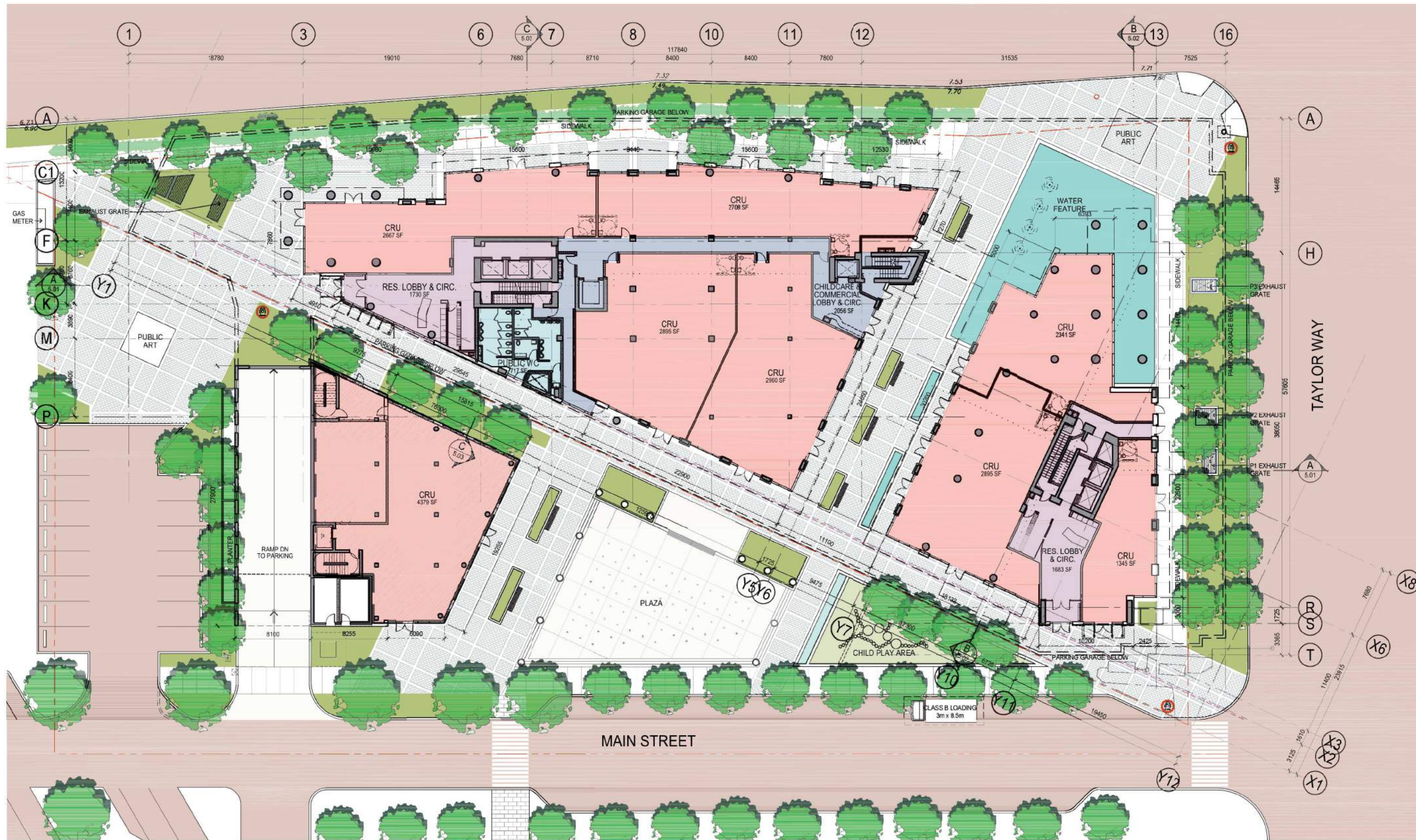
LEVEL P2 PLAN



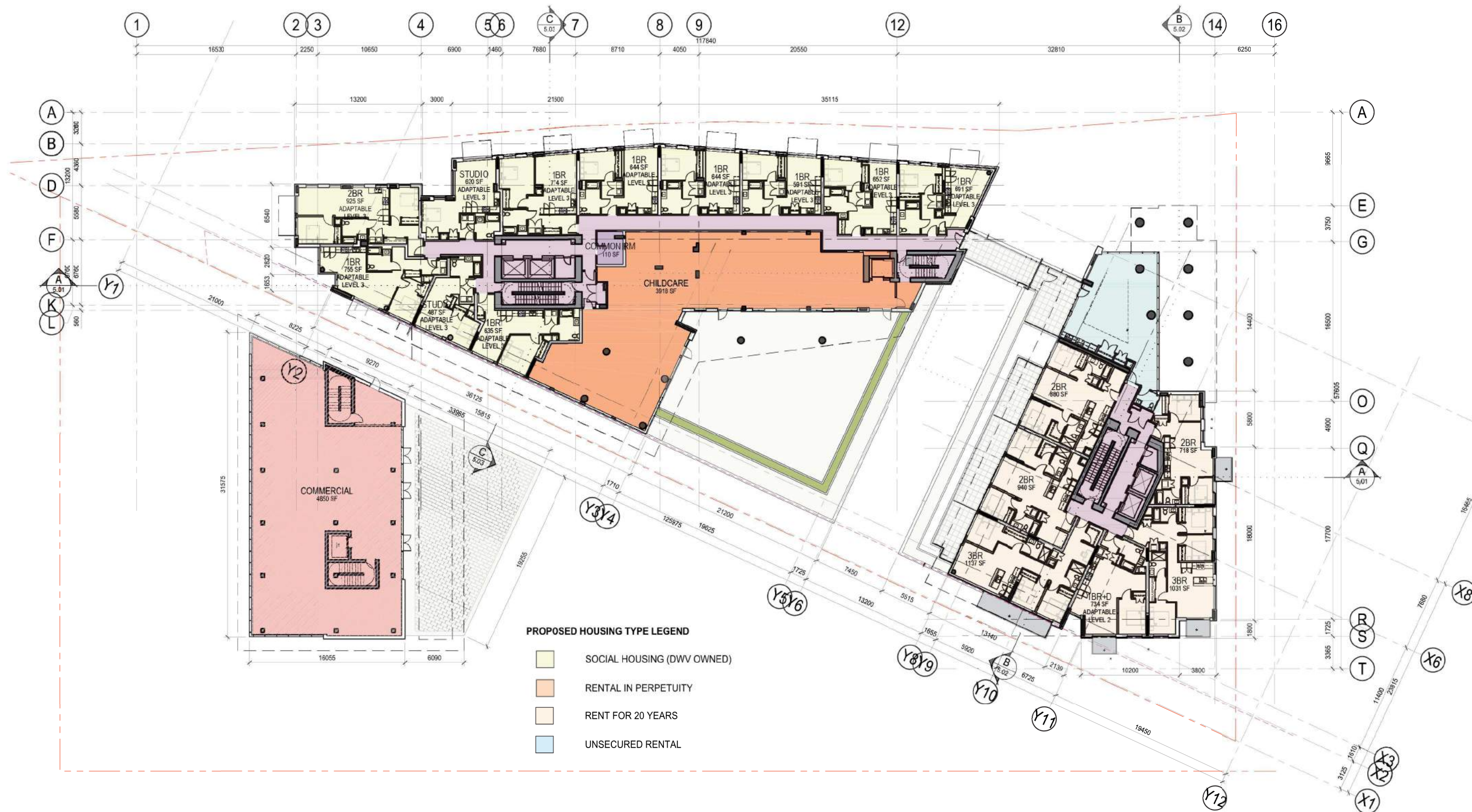
VEHICLE PARKING		SECURE BIKE PARKING	
COMMERCIAL	0	COMMERCIAL	0
SOCIAL HOUSING	5	RESIDENTIAL	119
RESIDENTIAL	78		
CHILDCARE	0		
CAR SHARE	0		
VISITOR	0		

LEVEL P1 PLAN

DA ARCHITECTS + PLANNERS



LEVEL 1 PLAN



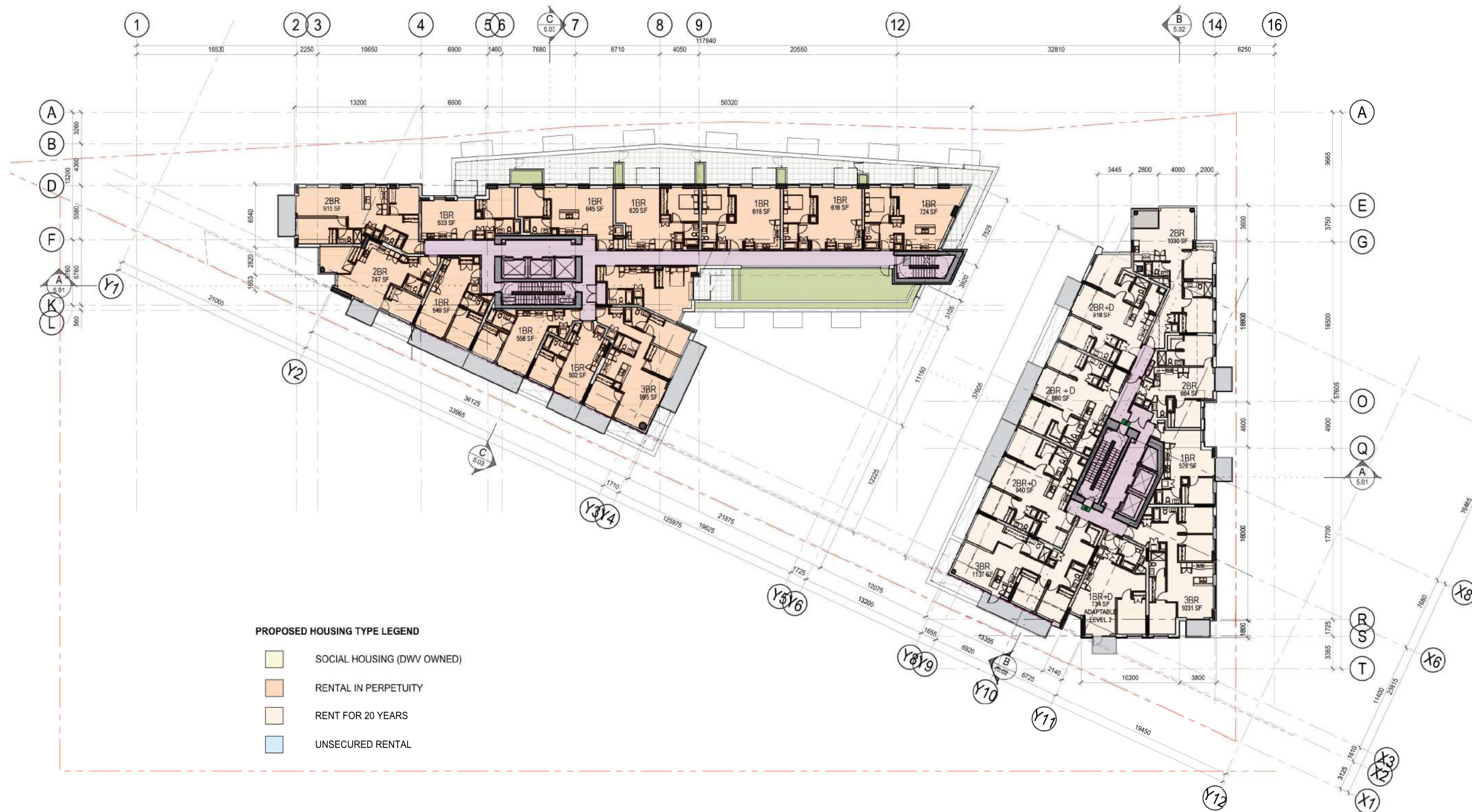
LEVEL 2 PLAN

DA ARCHITECTS + PLANNERS



LEVEL 3 PLAN

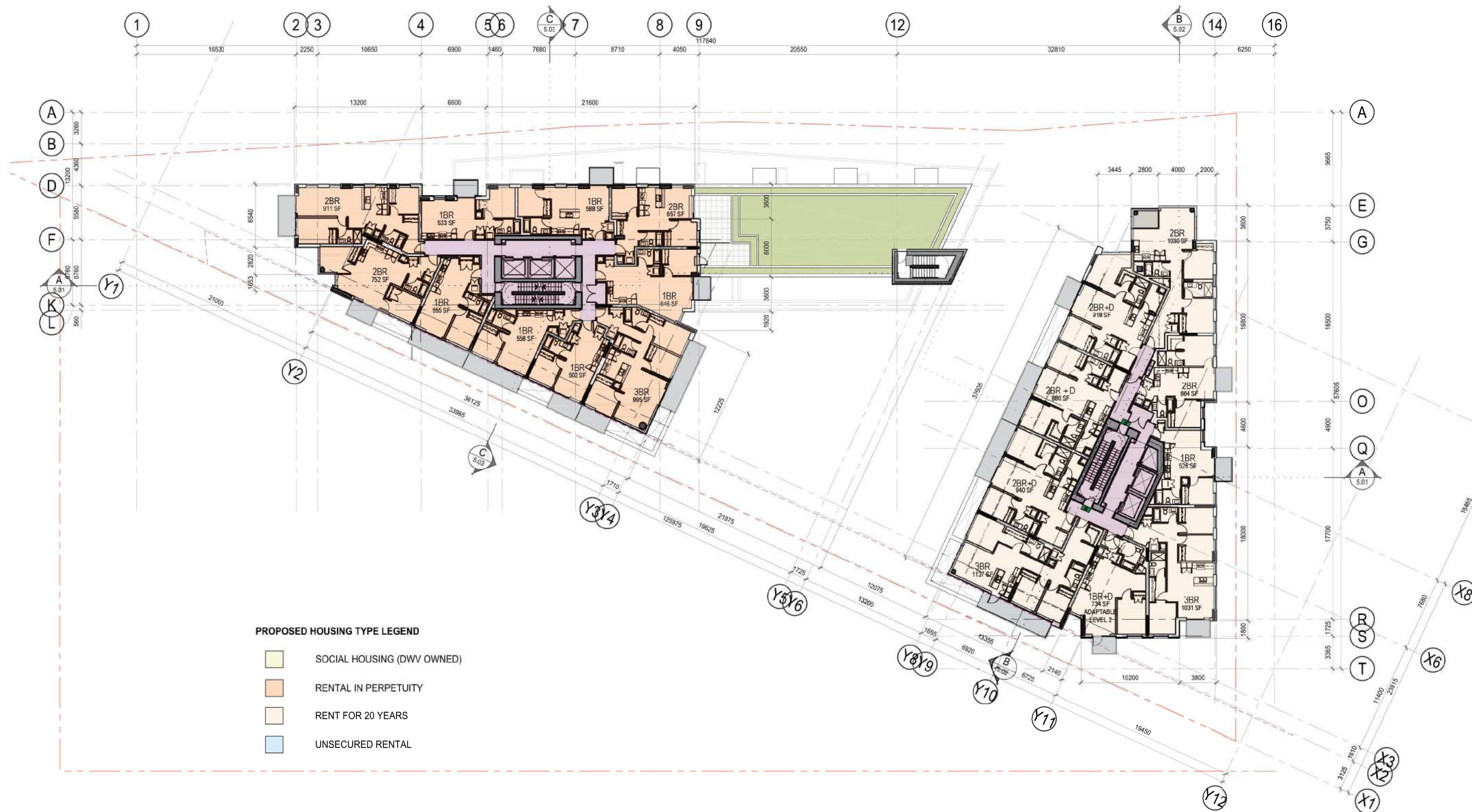
DA ARCHITECTS + PLANNERS



PROPOSED HOUSING TYPE LEGEND

	SOCIAL HOUSING (DWV OWNED)
	RENTAL IN PERPETUITY
	RENT FOR 20 YEARS
	UNSECURED RENTAL

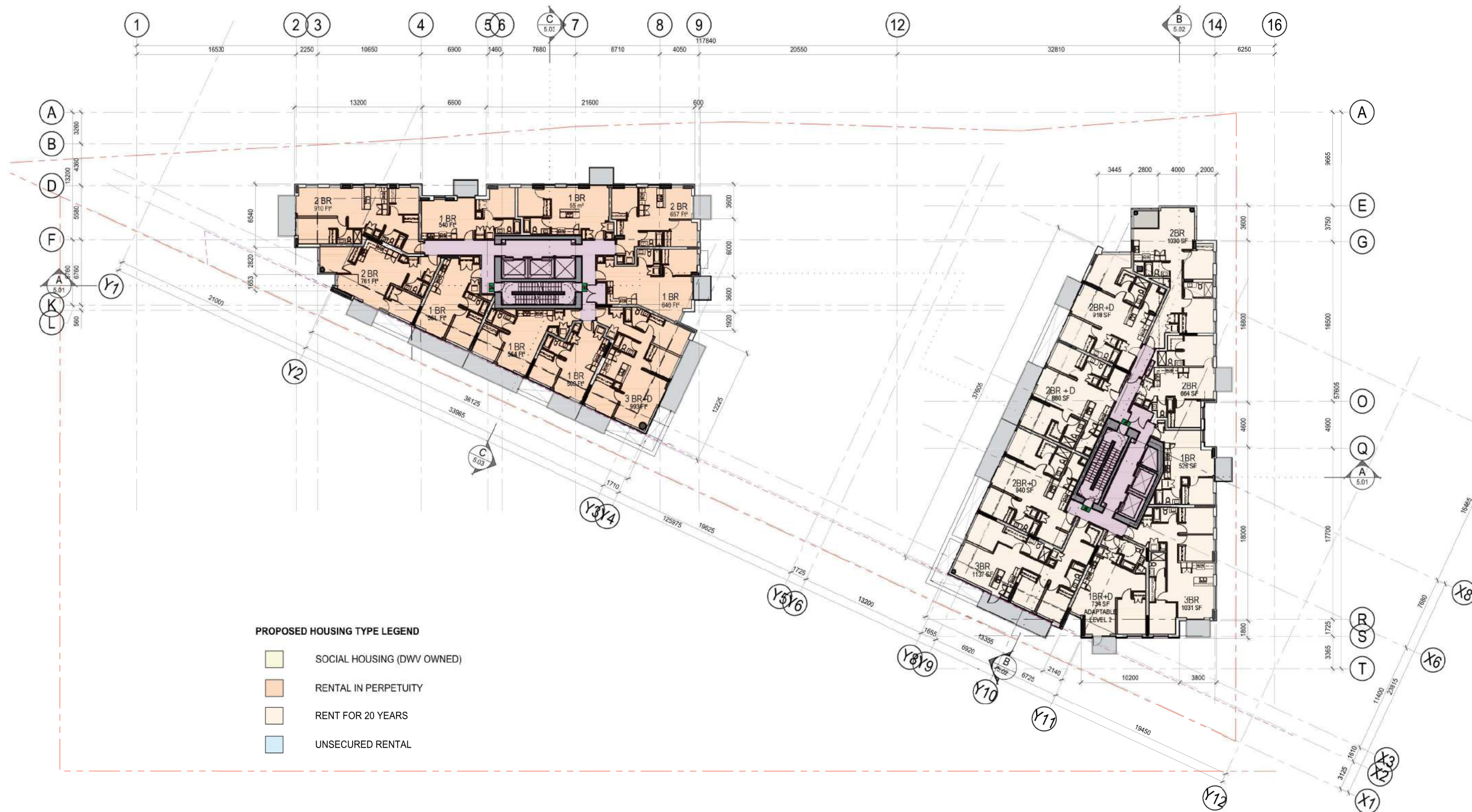
LEVEL 4 PLAN



PROPOSED HOUSING TYPE LEGEND

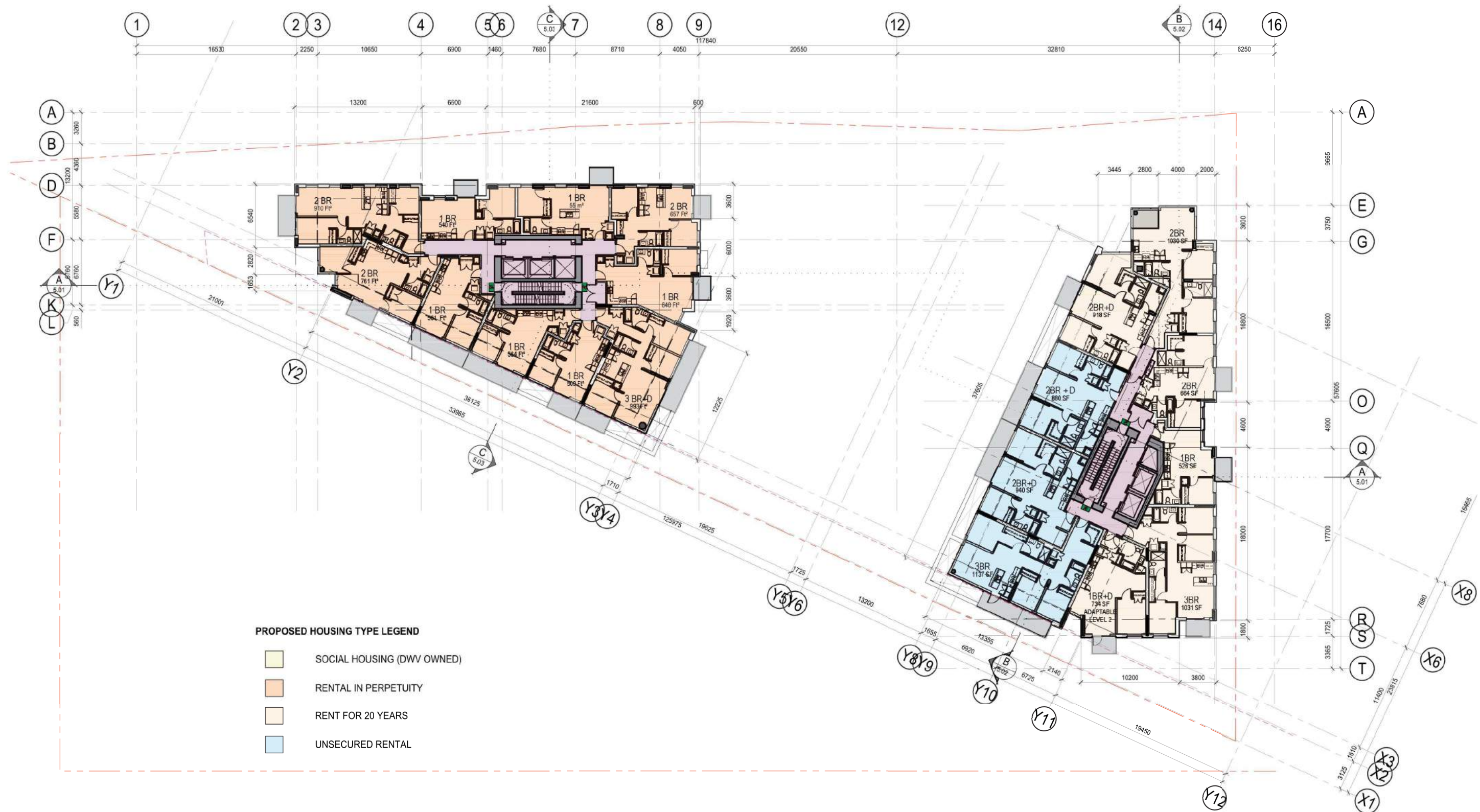
- SOCIAL HOUSING (DWV OWNED)
- RENTAL IN PERPETUITY
- RENT FOR 20 YEARS
- UNSECURED RENTAL

LEVEL 5 PLAN



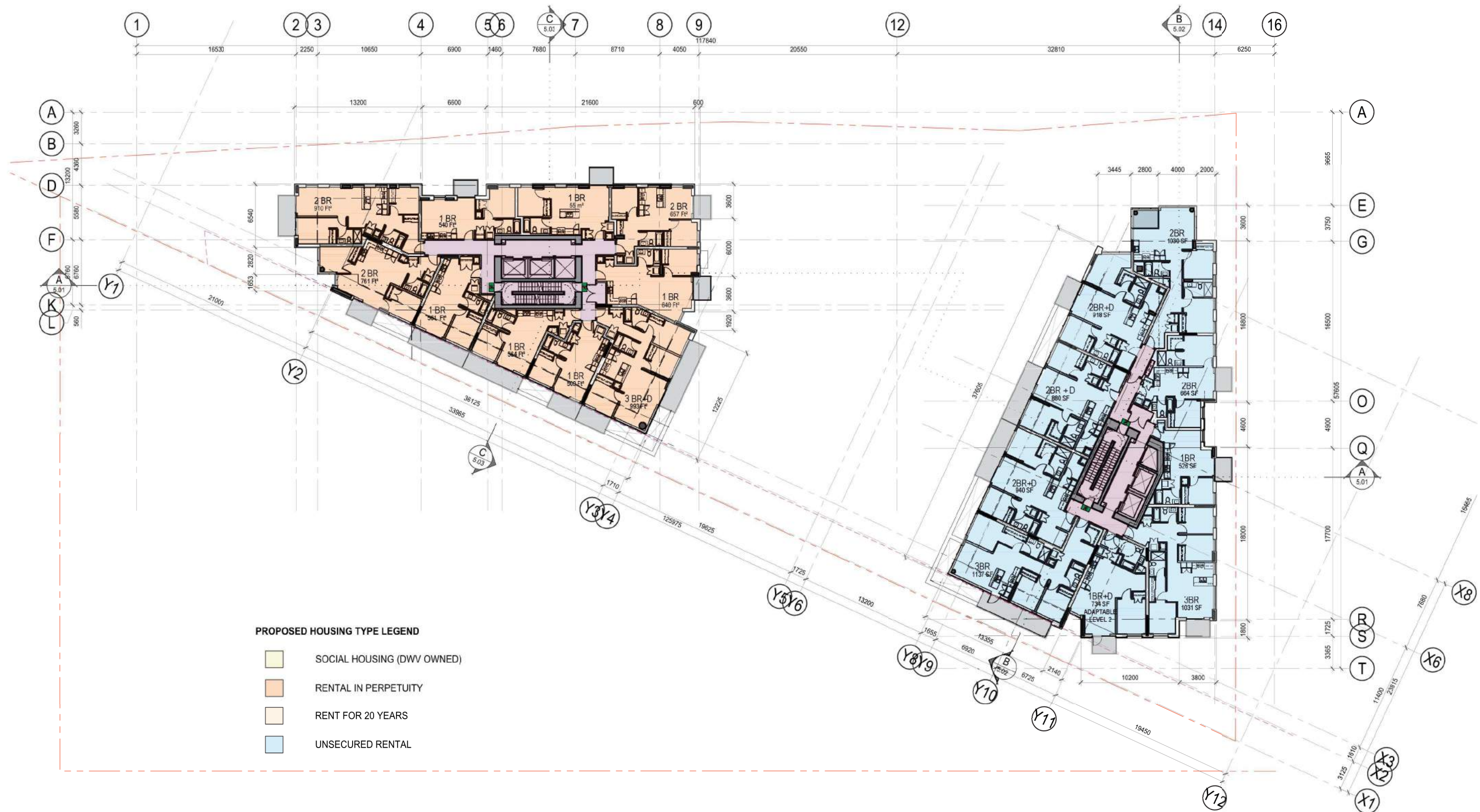
LEVEL 6-7 PLAN

DA ARCHITECTS + PLANNERS

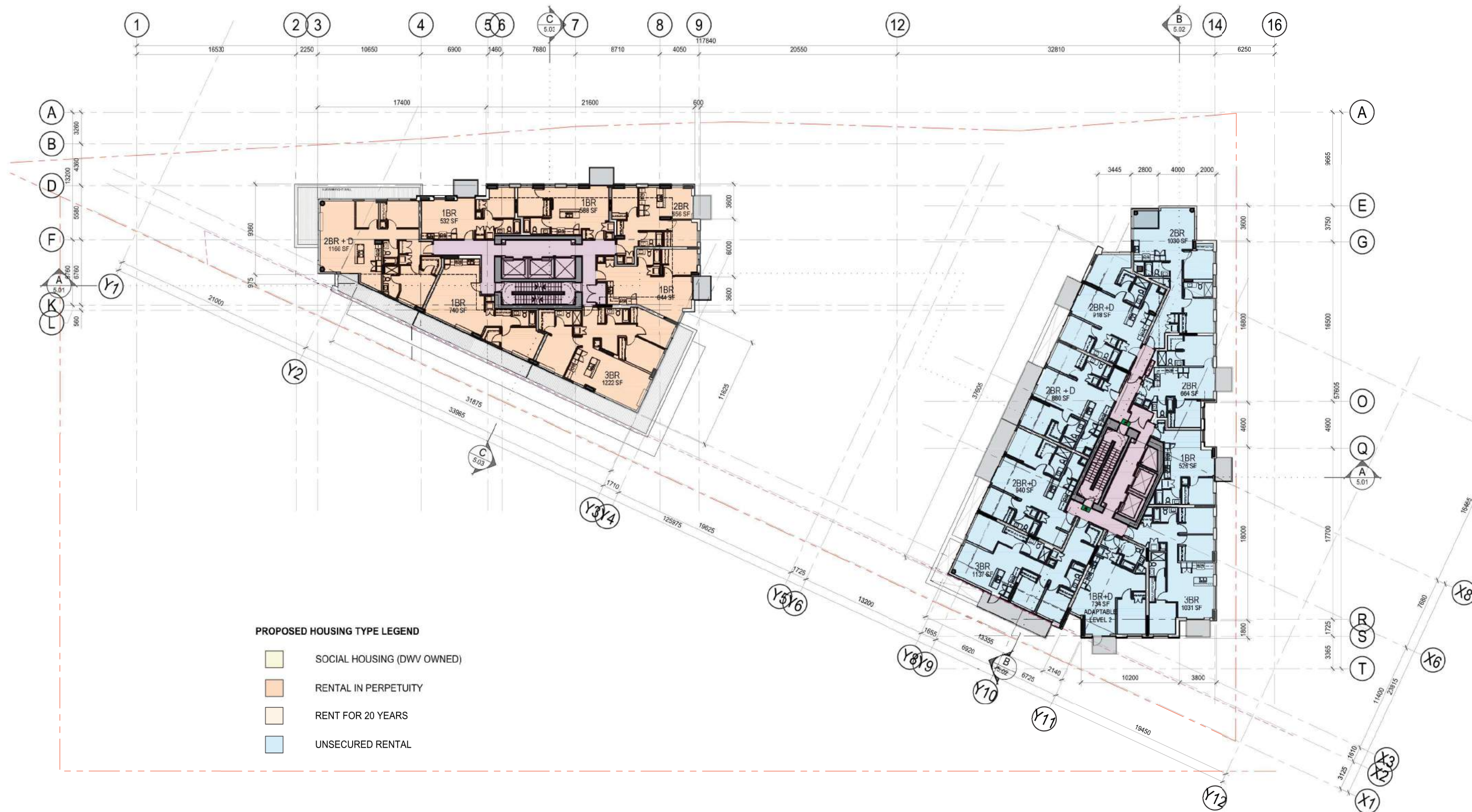


LEVEL 8 PLAN

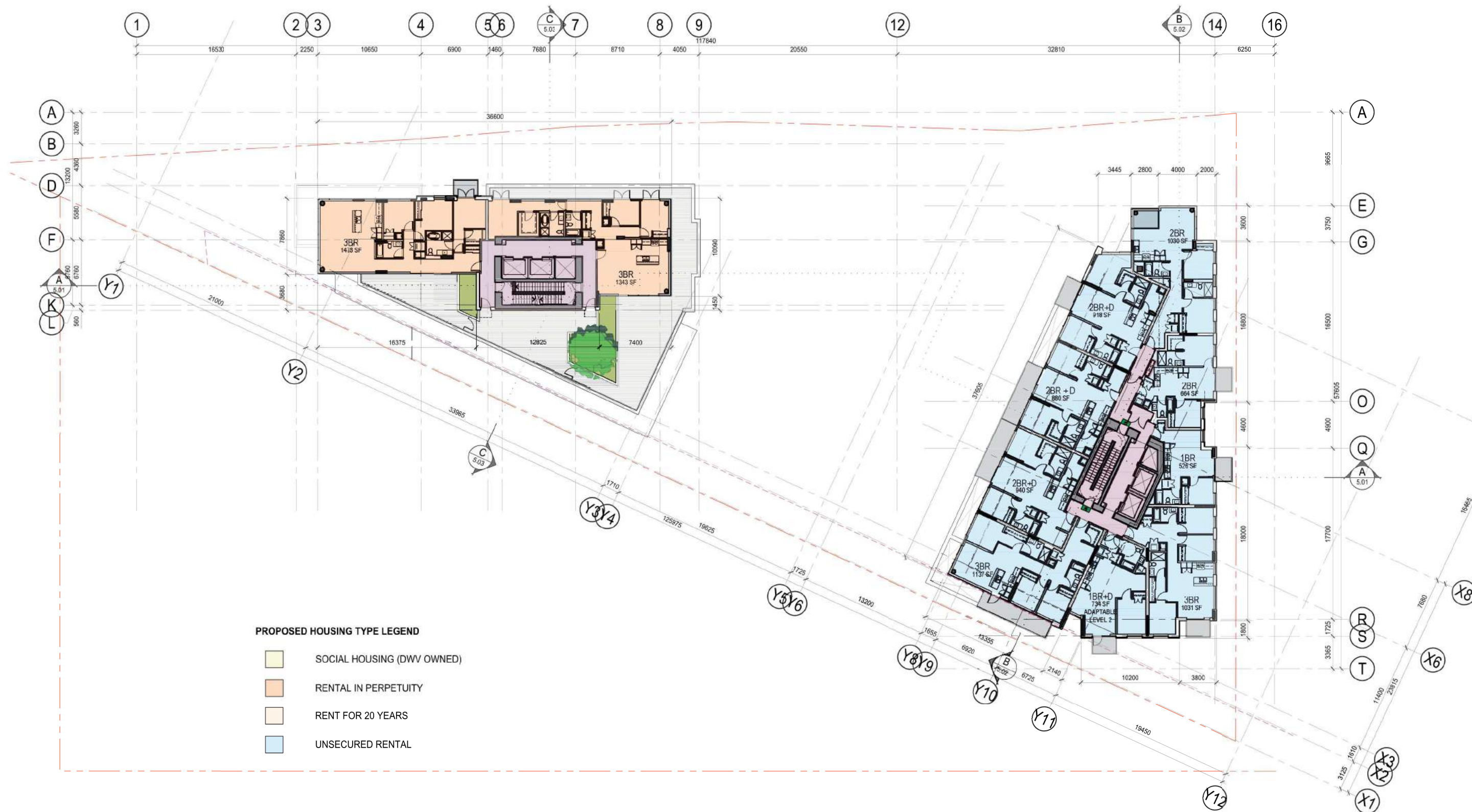
DA ARCHITECTS + PLANNERS



LEVEL 9-14 PLAN



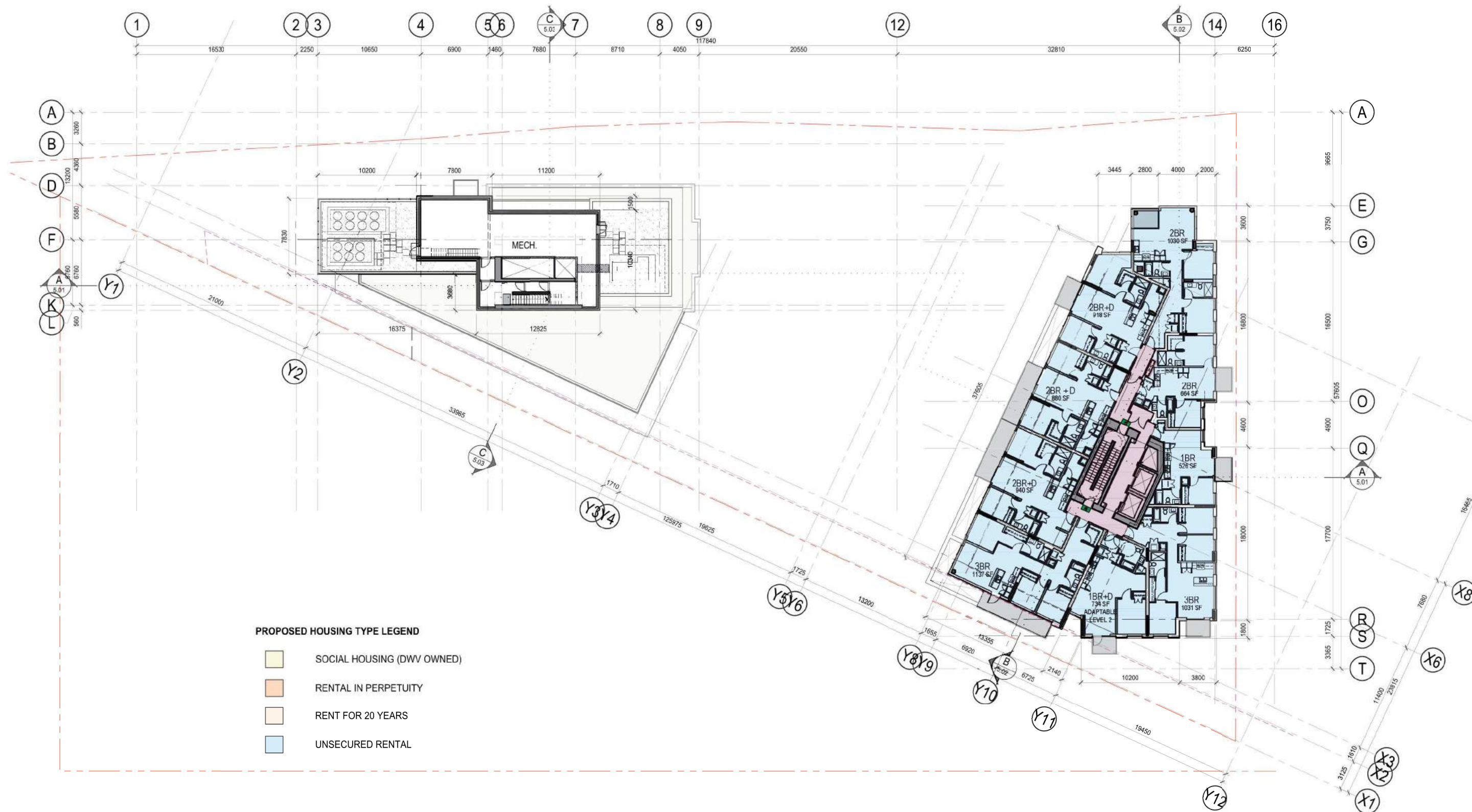
LEVEL 15 PLAN



PROPOSED HOUSING TYPE LEGEND

 SOCIAL HOUSING (DWV OWNED)
 RENTAL IN PERPETUITY
 RENT FOR 20 YEARS
 UNSECURED RENTAL

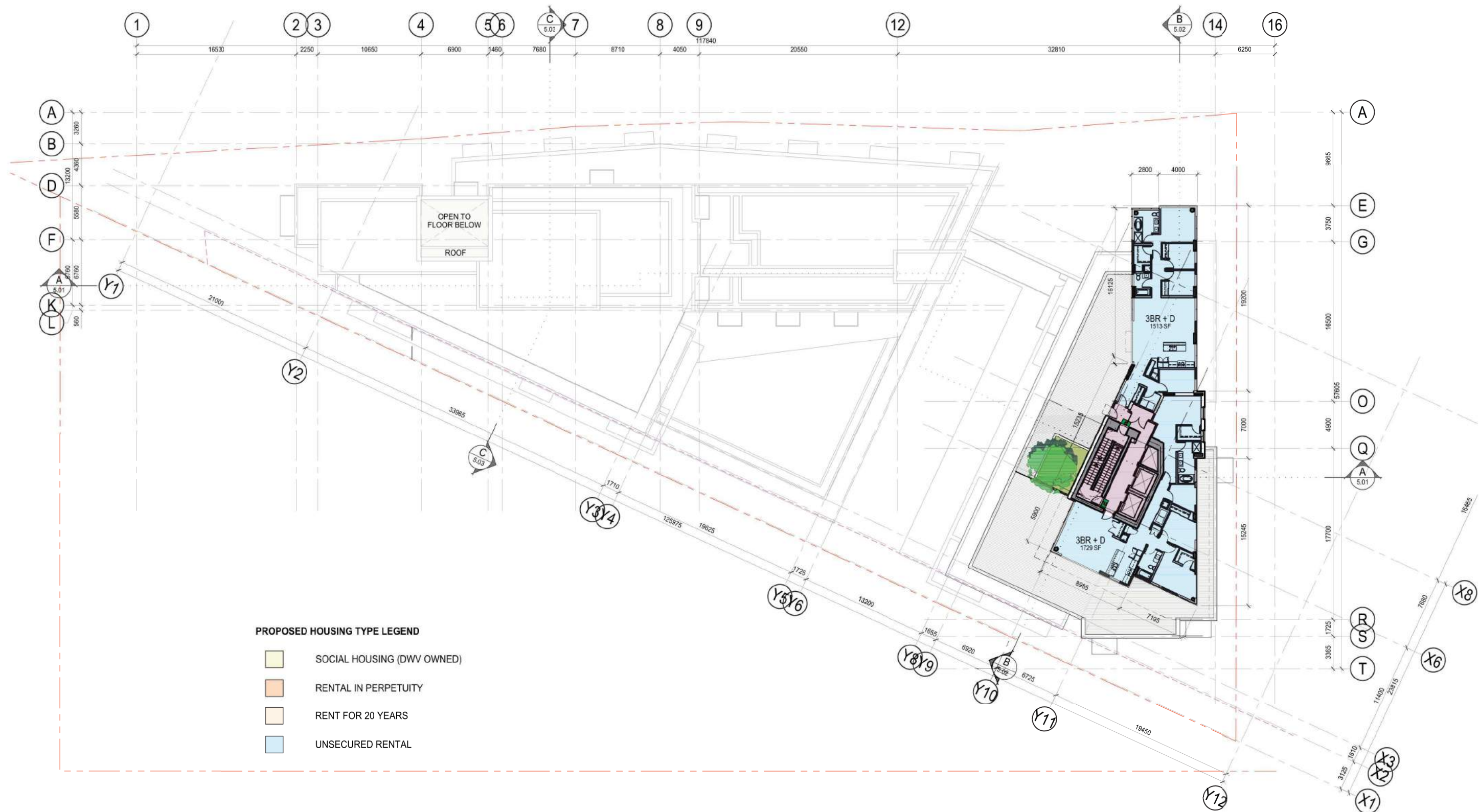
LEVEL 16 PLAN



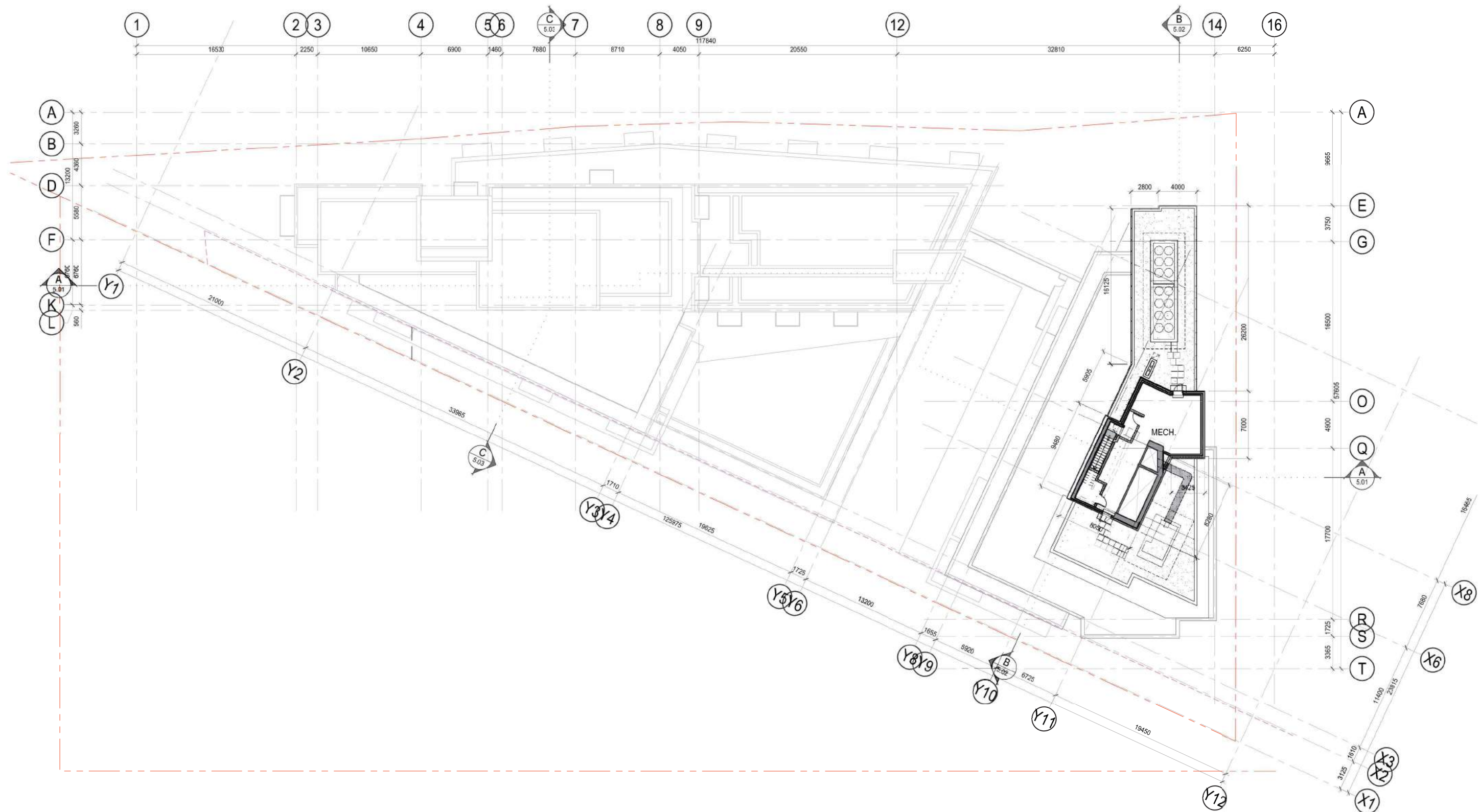
PROPOSED HOUSING TYPE LEGEND

 SOCIAL HOUSING (DWV OWNED)
 RENTAL IN PERPETUITY
 RENT FOR 20 YEARS
 UNSECURED RENTAL

LEVEL 17 PLAN

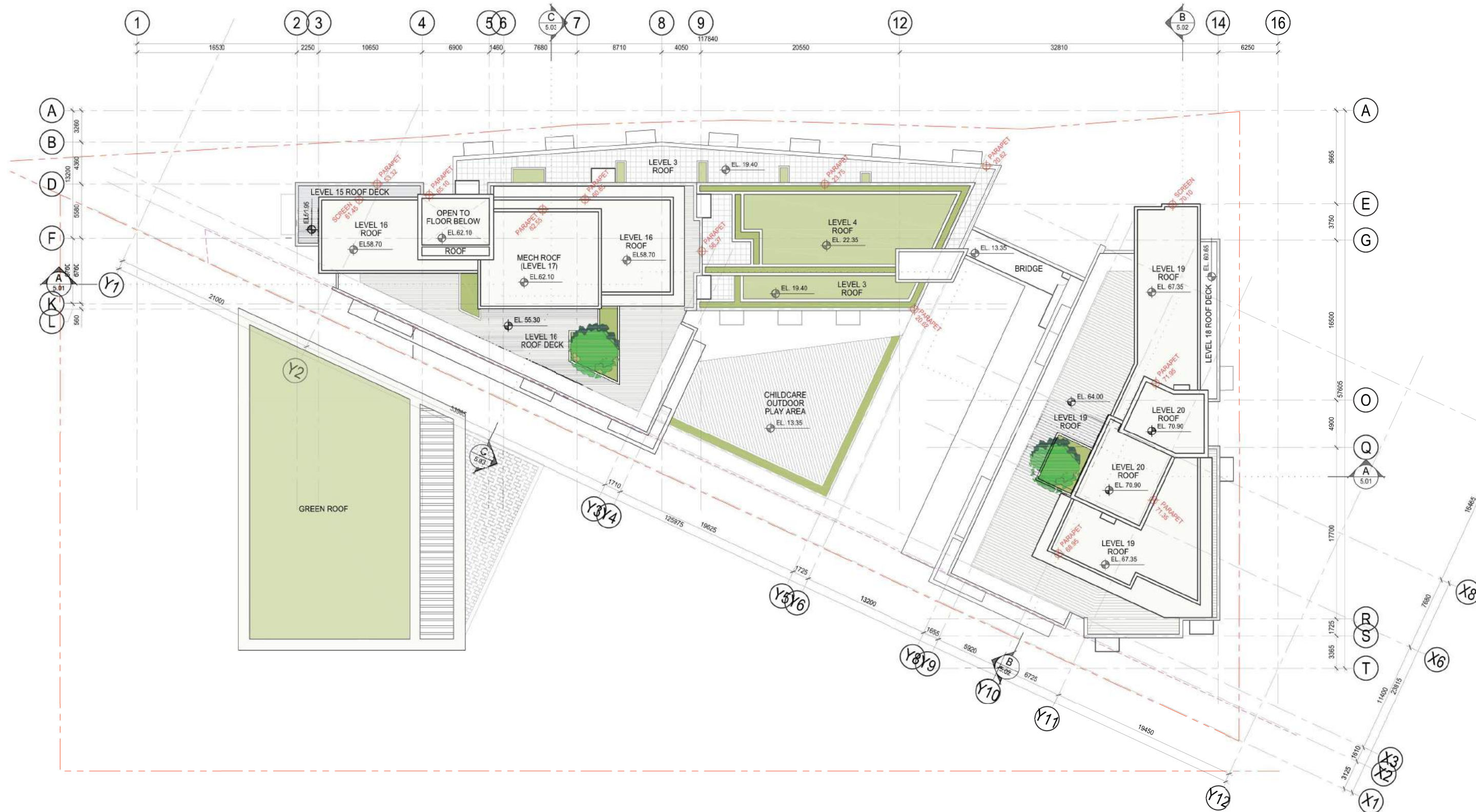


LEVEL 19 PLAN



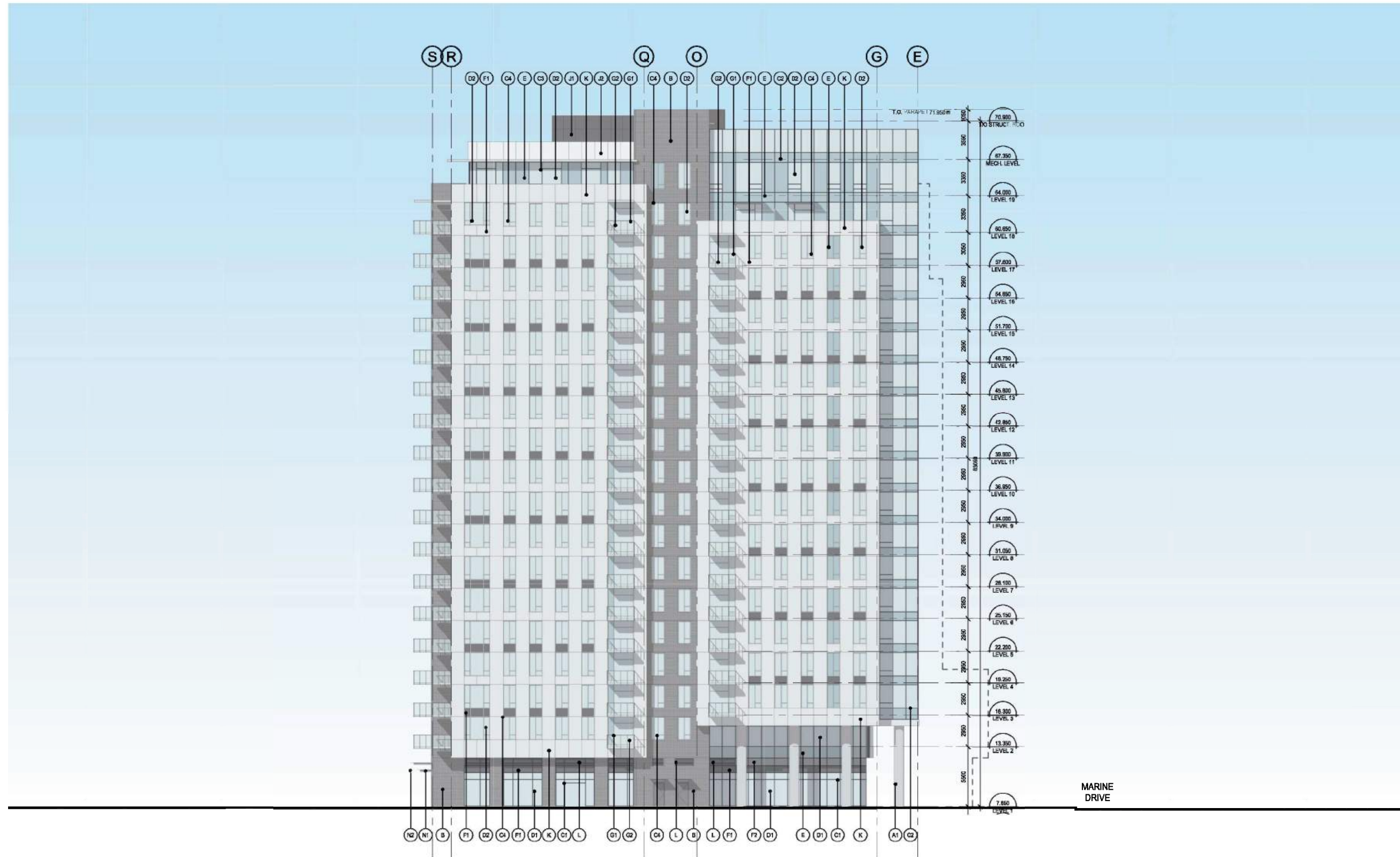
LEVEL 20 PLAN

DA ARCHITECTS + PLANNERS



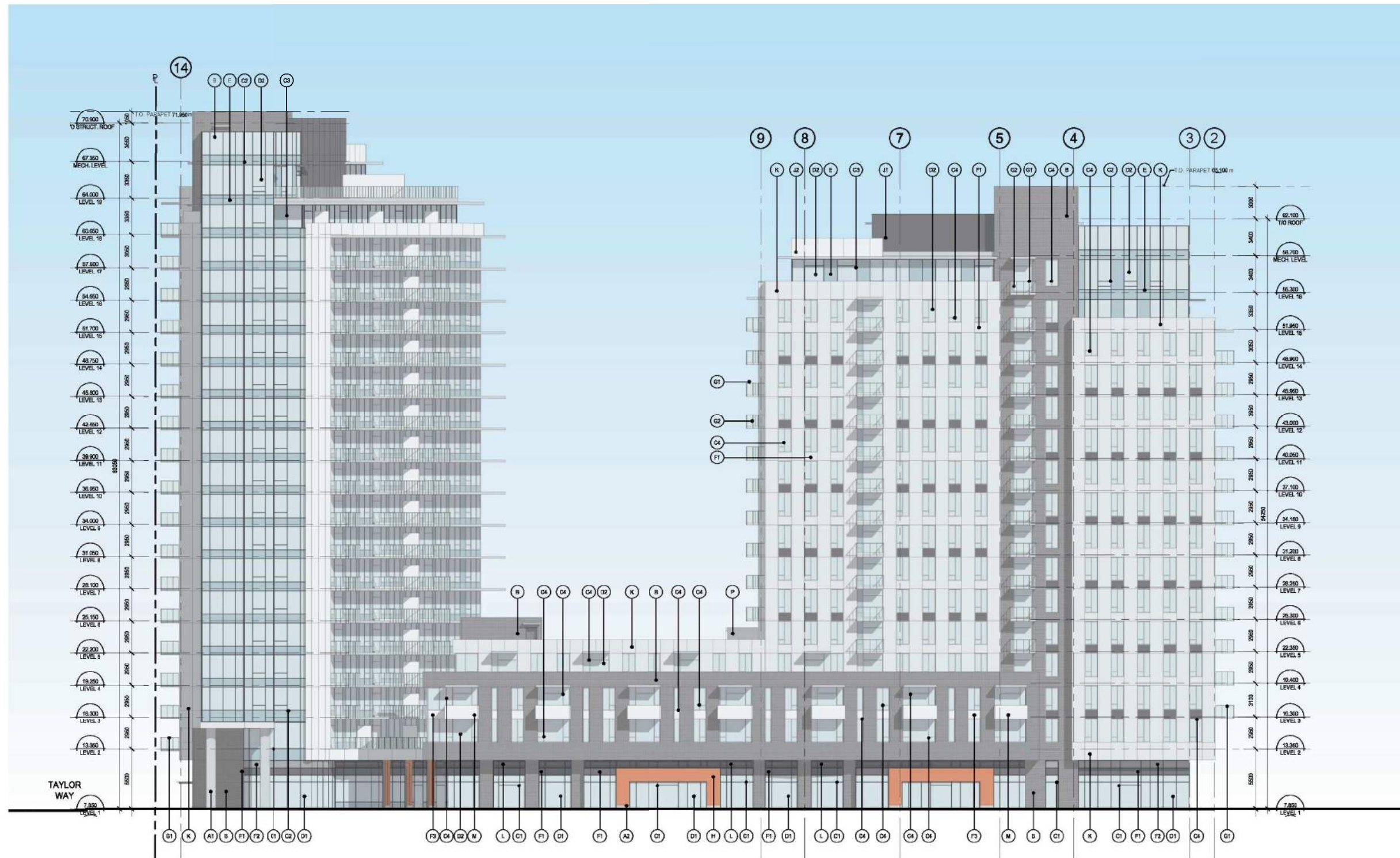
ROOF PLAN

3.2 ELEVATIONS



MATERIAL LEGEND	
A1	ARCHITECTURAL CAST IN PLACE CONCRETE
A2	ARCHITECTURAL PRECAST CONCRETE
B	BRICK - GREY
C1	ALUMINUM CURTAIN WALL FRAME - CHARCOAL
C2	ALUMINUM HYBRID WINDOW WALL FRAME - CHARCOAL
C3	ALUMINUM WINDOW WALL FRAME - CHARCOAL
C4	ALUMINUM WINDOW WALL FRAME - WHITE
D1	CURTAIN WALL GLAZING
D2	WINDOW WALL GLAZING
E	SPANDREL GLASS
F1	INSULATED METAL PANEL INFILL - DARK GREY
F2	INSULATED METAL PANEL INFILL - LIGHT GREY
F3	INSULATED METAL PANEL INFILL - WHITE
G1	GLAZED ALUMINUM GUARD RAIL - METAL
G2	GLAZED ALUMINUM GUARD RAIL - GLASS
H	HIGH PRESSURE LAMINATE WOOD GRAIN PANEL (TRESPA)
J1	COMPOSITE METAL PANEL - DARK GREY
J2	COMPOSITE METAL PANEL - WHITE
K	COMPOSITE TEXTURED METAL PANEL - WHITE
L	MECHANICAL LOUVER - LIGHT GREY
M	METAL GUARD RAIL - WHITE
N1	GLAZED METAL CANOPY - METAL
N2	GLAZED METAL CANOPY - GLASS
P	PRIVACY SCREEN
Q	GREEN WALL

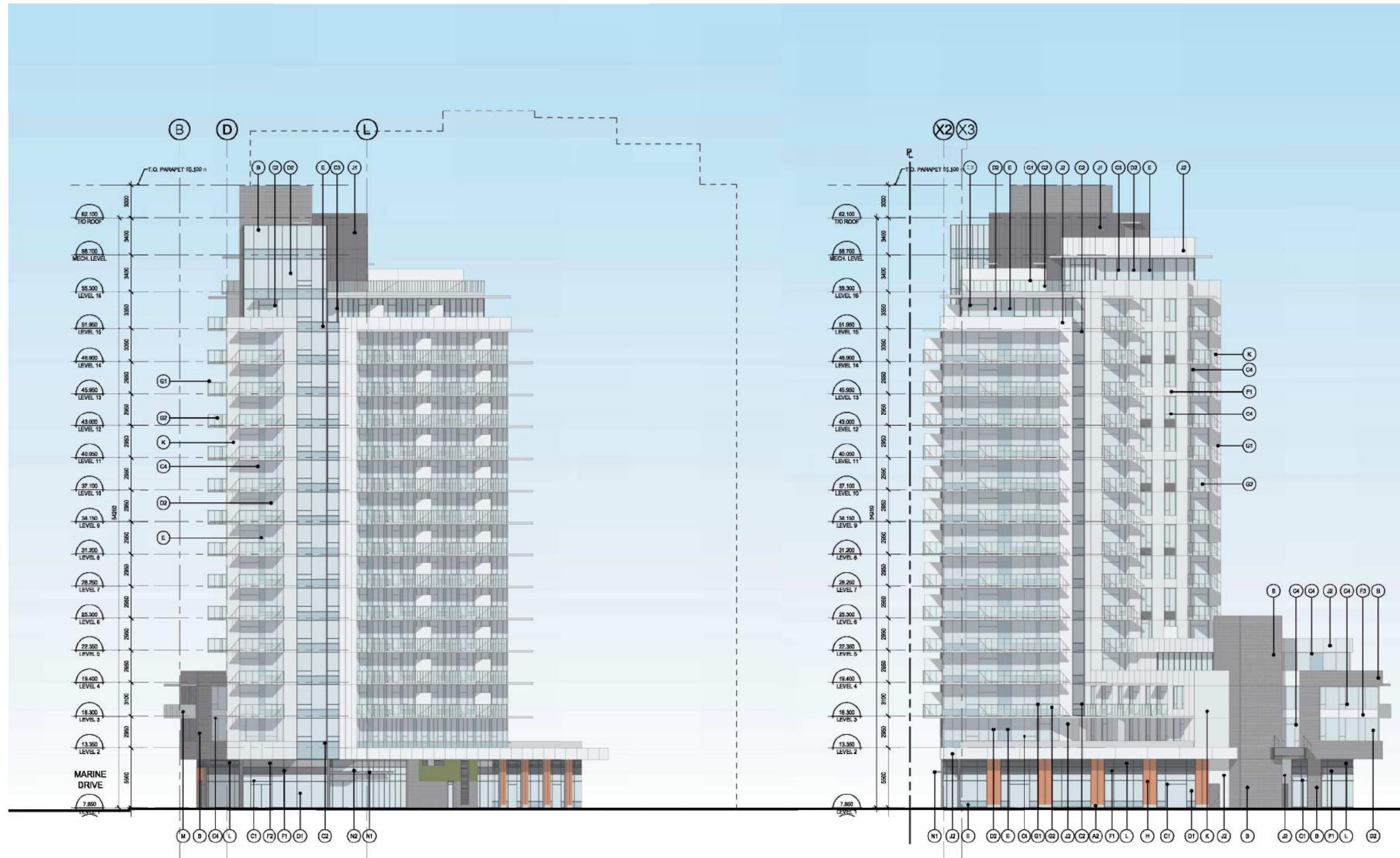
EAST ELEVATION (EAST TOWER)



MATERIAL LEGEND	
(A1)	ARCHITECTURAL CAST IN PLACE CONCRETE
(A2)	ARCHITECTURAL PRECAST CONCRETE
(B)	BRICK - GREY
(C1)	ALUMINUM CURTAIN WALL FRAME - CHARCOAL
(C2)	ALUMINUM HYBRID WINDOW WALL FRAME - CHARCOAL
(C3)	ALUMINUM WINDOW WALL FRAME - CHARCOAL
(C4)	ALUMINUM WINDOW WALL FRAME - WHITE
(D1)	CURTAIN WALL GLAZING
(D2)	WINDOW WALL GLAZING
(E)	SPANDREL GLASS
(F1)	INSULATED METAL PANEL INFILL - DARK GREY
(F2)	INSULATED METAL PANEL INFILL - LIGHT GREY
(F3)	INSULATED METAL PANEL INFILL - WHITE
(G1)	GLAZED ALUMINUM GUARD RAIL - METAL
(G2)	GLAZED ALUMINUM GUARD RAIL - GLASS
(H)	HIGH PRESSURE LAMINATE WOOD GRAIN PANEL (TRESPA)
(J1)	COMPOSITE METAL PANEL - DARK GREY
(J2)	COMPOSITE METAL PANEL - WHITE
(K)	COMPOSITE TEXTURED METAL PANEL - WHITE
(L)	MECHANICAL LOUVER - LIGHT GREY
(M)	METAL GUARD RAIL - WHITE
(N1)	GLAZED METAL CANOPY - METAL
(N2)	GLAZED METAL CANOPY - GLASS
(P)	PRIVACY SCREEN
(Q)	GREEN WALL

NORTH ELEVATION

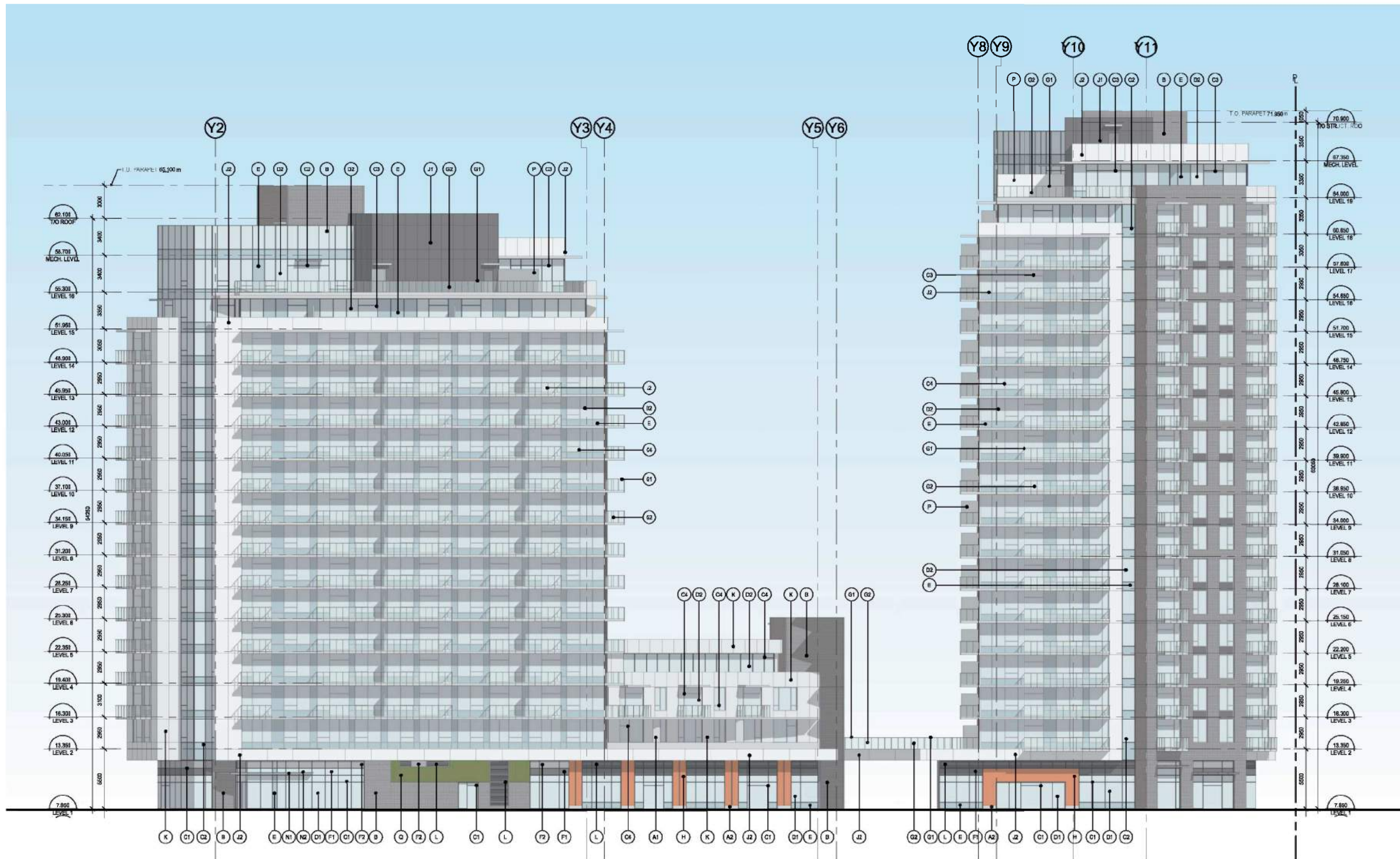
DA ARCHITECTS + PLANNERS



MATERIAL LEGEND	
(A1)	ARCHITECTURAL CAST IN PLACE CONCRETE
(A2)	ARCHITECTURAL PRECAST CONCRETE
(B)	BRICK - GREY
(C1)	ALUMINUM CURTAIN WALL FRAME - CHARCOAL
(C2)	ALUMINUM HYBRID WINDOW WALL FRAME - CHARCOAL
(C3)	ALUMINUM WINDOW WALL FRAME - CHARCOAL
(C4)	ALUMINUM WINDOW WALL FRAME - WHITE
(D1)	CURTAIN WALL GLAZING
(D2)	WINDOW WALL GLAZING
(E)	SPANDREL GLASS
(F1)	INSULATED METAL PANEL INFILL - DARK GREY
(F2)	INSULATED METAL PANEL INFILL - LIGHT GREY
(F3)	INSULATED METAL PANEL INFILL - WHITE
(G1)	GLAZED ALUMINUM GUARD RAIL - METAL
(G2)	GLAZED ALUMINUM GUARD RAIL - GLASS
(H)	HIGH PRESSURE LAMINATE WOOD GRAIN PANEL (TRESPA)
(J1)	COMPOSITE METAL PANEL - DARK GREY
(J2)	COMPOSITE METAL PANEL - WHITE
(K)	COMPOSITE TEXTURED METAL PANEL - WHITE
(L)	MECHANICAL LOUVER - LIGHT GREY
(M)	METAL GUARD RAIL - WHITE
(N1)	GLAZED METAL CANOPY - METAL
(N2)	GLAZED METAL CANOPY - GLASS
(P)	PRIVACY SCREEN
(Q)	GREEN WALL

WEST ELEVATION (WEST TOWER)

SOUTHEAST ELEVATION (WEST TOWER)



MATERIAL LEGEND	
(A1)	ARCHITECTURAL CAST IN PLACE CONCRETE
(A2)	ARCHITECTURAL PRECAST CONCRETE
(B)	BRICK - GREY
(C1)	ALUMINUM CURTAIN WALL FRAME - CHARCOAL
(C2)	ALUMINUM HYBRID WINDOW WALL FRAME - CHARCOAL
(C3)	ALUMINUM WINDOW WALL FRAME - CHARCOAL
(C4)	ALUMINUM WINDOW WALL FRAME - WHITE
(D1)	CURTAIN WALL GLAZING
(D2)	WINDOW WALL GLAZING
(E)	SPANDREL GLASS
(F1)	INSULATED METAL PANEL INFILL - DARK GREY
(F2)	INSULATED METAL PANEL INFILL - LIGHT GREY
(F3)	INSULATED METAL PANEL INFILL - WHITE
(G1)	GLAZED ALUMINUM GUARD RAIL - METAL
(G2)	GLAZED ALUMINUM GUARD RAIL - GLASS
(H)	HIGH PRESSURE LAMINATE WOOD GRAIN PANEL (TRESPA)
(J1)	COMPOSITE METAL PANEL - DARK GREY
(J2)	COMPOSITE METAL PANEL - WHITE
(K)	COMPOSITE TEXTURED METAL PANEL - WHITE
(L)	MECHANICAL LOUVER - LIGHT GREY
(M)	METAL GUARD RAIL - WHITE
(N1)	GLAZED METAL CANOPY - METAL
(N2)	GLAZED METAL CANOPY - GLASS
(P)	PRIVACY SCREEN
(Q)	GREEN WALL

SOUTHWEST ELEVATION

DA ARCHITECTS + PLANNERS

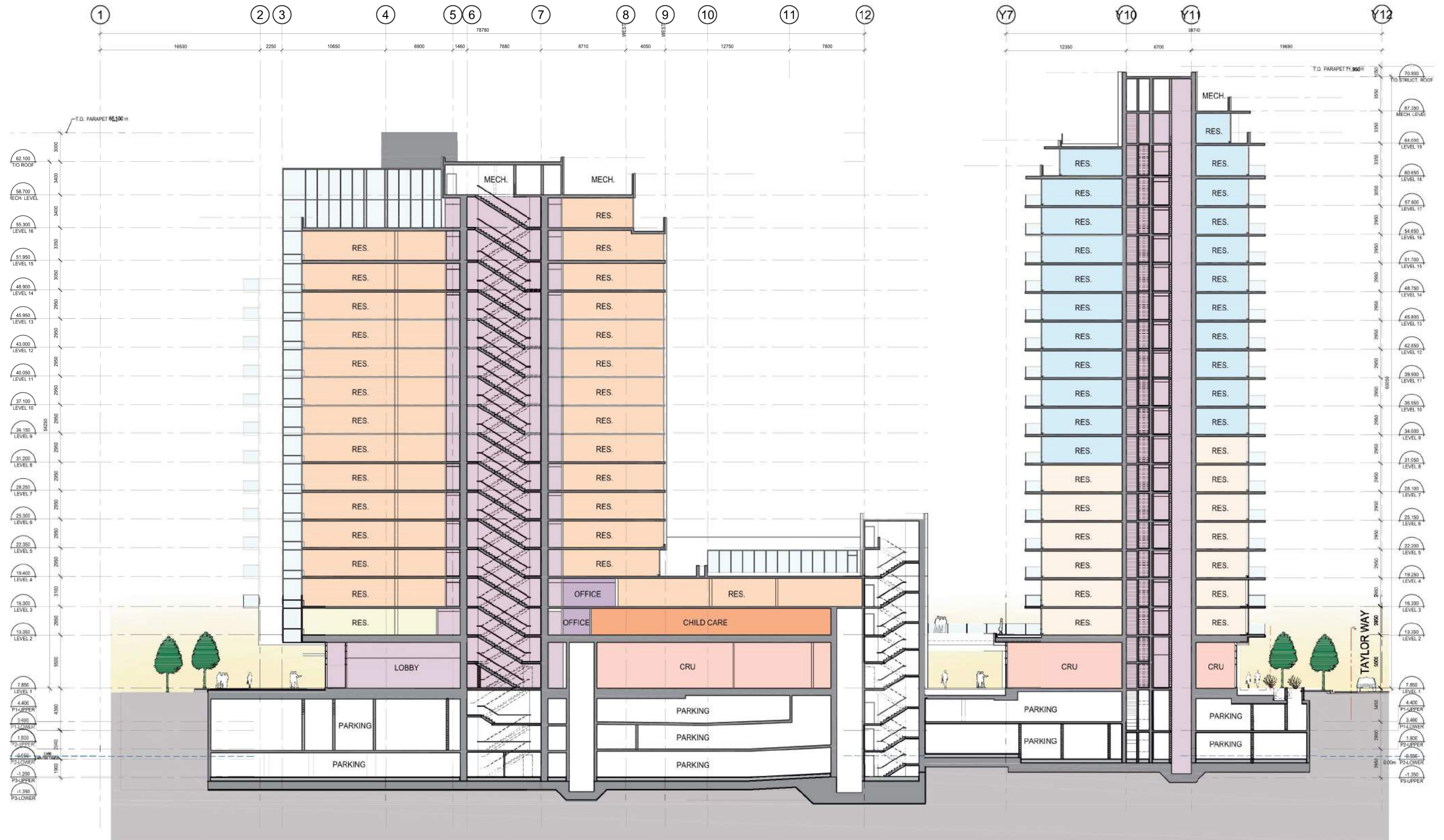


MATERIAL LEGEND	
A1	ARCHITECTURAL CAST IN PLACE CONCRETE
A2	ARCHITECTURAL PRECAST CONCRETE
B	BRICK - GREY
C1	ALUMINUM CURTAIN WALL FRAME - CHARCOAL
C2	ALUMINUM HYBRID WINDOW WALL FRAME - CHARCOAL
C3	ALUMINUM WINDOW WALL FRAME - CHARCOAL
C4	ALUMINUM WINDOW WALL FRAME - WHITE
D1	CURTAIN WALL GLAZING
D2	WINDOW WALL GLAZING
E	SPANDREL GLASS
F1	INSULATED METAL PANEL INFILL - DARK GREY
F2	INSULATED METAL PANEL INFILL - LIGHT GREY
F3	INSULATED METAL PANEL INFILL - WHITE
G1	GLAZED ALUMINUM GUARD RAIL - METAL
G2	GLAZED ALUMINUM GUARD RAIL - GLASS
H	HIGH PRESSURE LAMINATE WOOD GRAIN PANEL (TRESPA)
J1	COMPOSITE METAL PANEL - DARK GREY
J2	COMPOSITE METAL PANEL - WHITE
K	COMPOSITE TEXTURED METAL PANEL - WHITE
L	MECHANICAL LOUVER - LIGHT GREY
M	METAL GUARD RAIL - WHITE
N1	GLAZED METAL CANOPY - METAL
N2	GLAZED METAL CANOPY - GLASS
P	PRIVACY SCREEN
Q	GREEN WALL

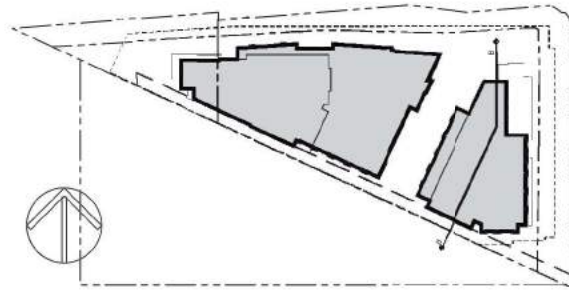
NORTHWEST ELEVATION (EAST TOWER)

SOUTH ELEVATION (EAST TOWER)

3.3 SECTIONS

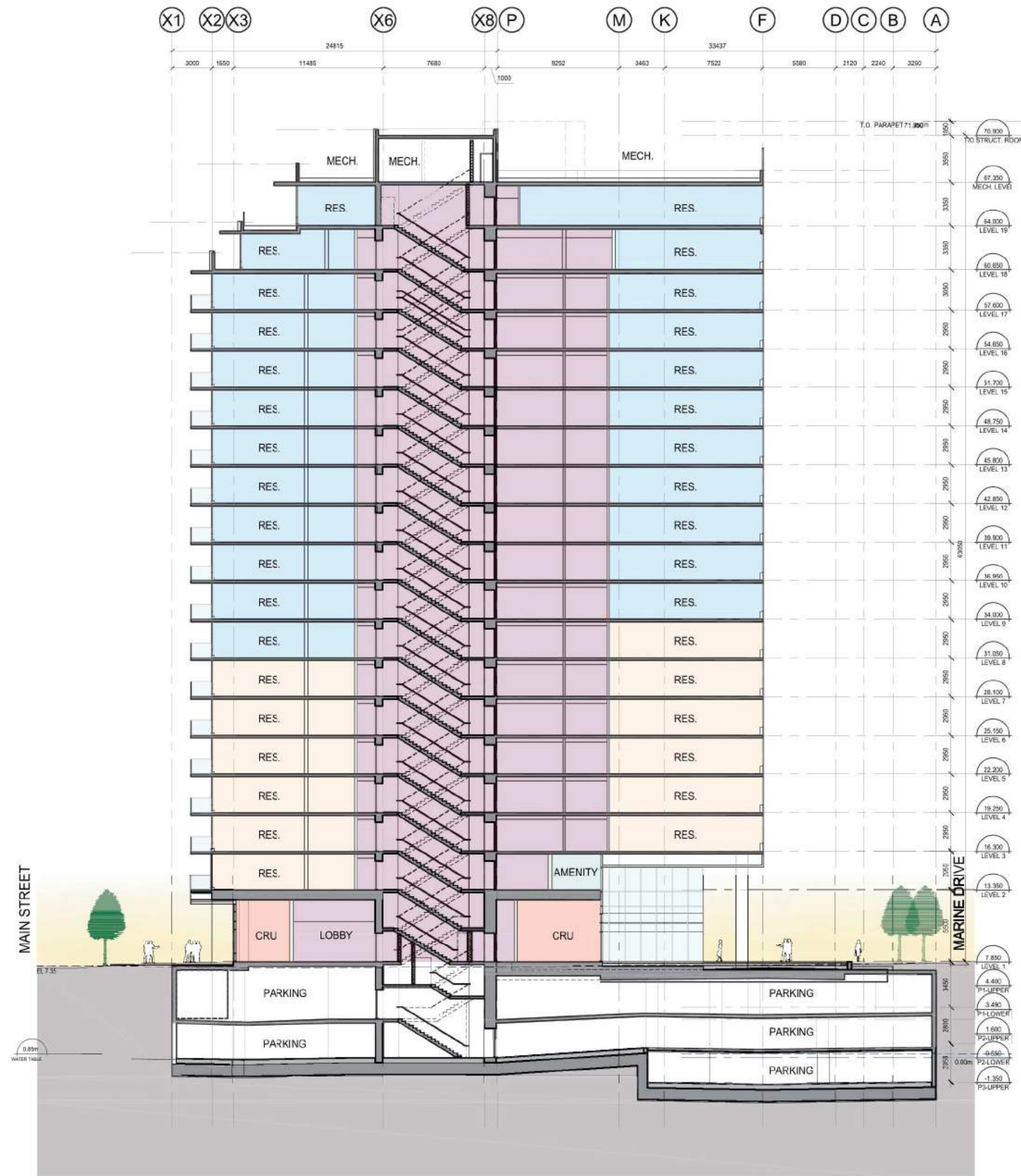


OVERALL BUILDING SECTION



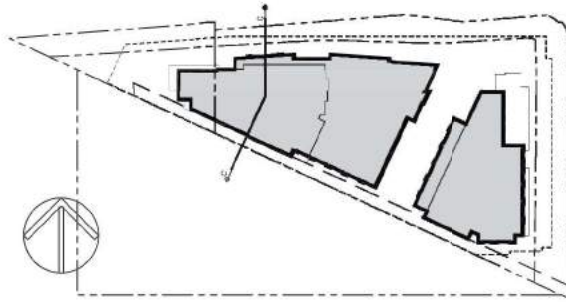
PROPOSED HOUSING TYPE LEGEND

- SOCIAL HOUSING (DWV OWNED)
- RENTAL IN PERPETUITY
- RENT FOR 20 YEARS
- UNSECURED RENTAL



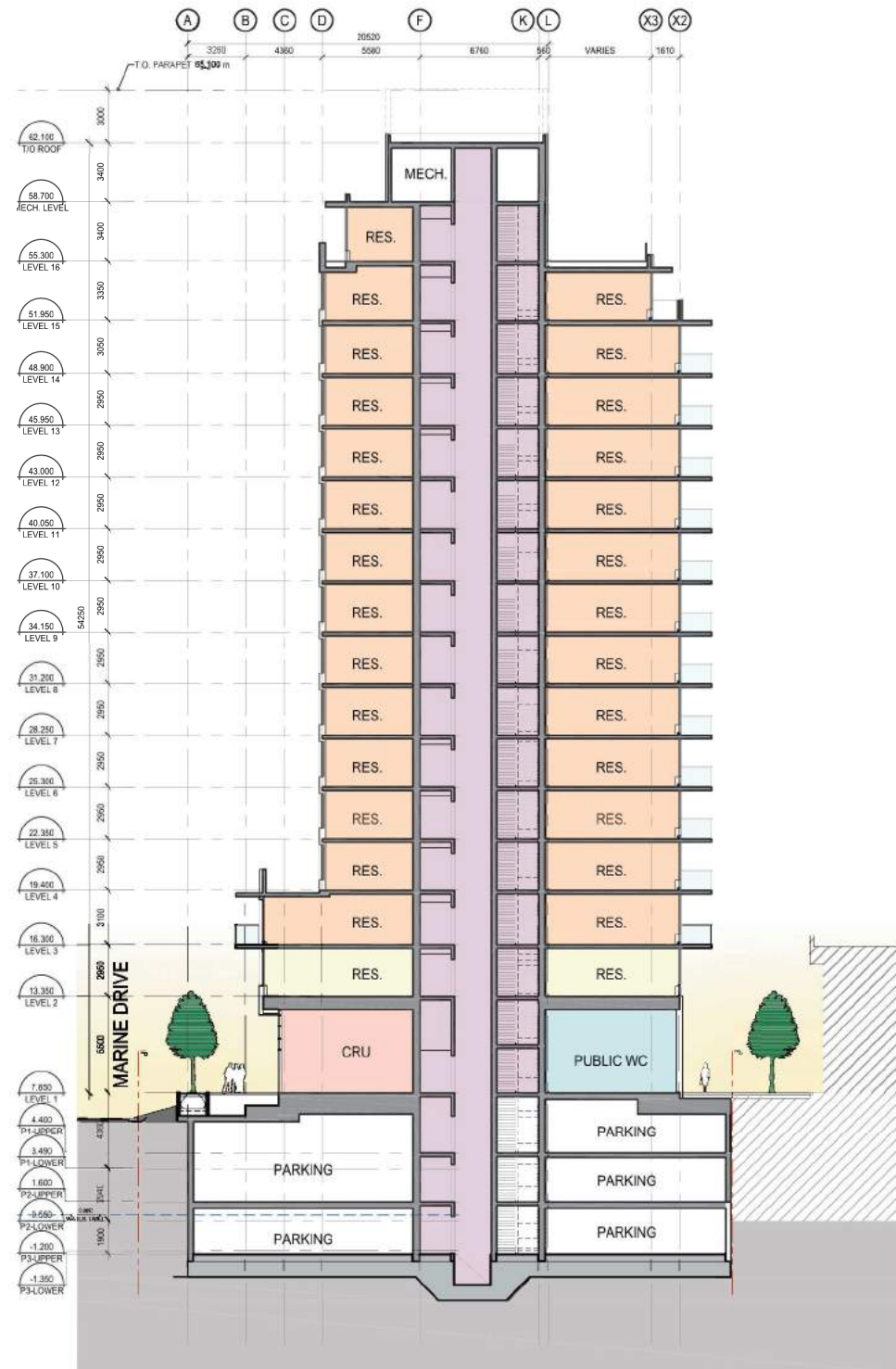
EAST TOWER SECTION

DA ARCHITECTS + PLANNERS



PROPOSED HOUSING TYPE LEGEND

- SOCIAL HOUSING (DWW OWNED)
- RENTAL IN PERPETUITY
- RENT FOR 20 YEARS
- UNSECURED RENTAL



WEST TOWER SECTION

DA ARCHITECTS + PLANNERS