

Report to Development Permit Panel

To:

Development Permit Panel

Date:

July 7, 2020

From:

Wayne Craig

File:

DP 18-837117

Re:

Director, Development

Application by W. T. Leung Architects Inc. for a Development Permit at 6333 Mah Bing Street

Staff Recommendation

That a Development Permit be issued which would:

- 1. Permit the construction of a multiple-family residential development with two 15-storey high-rise buildings and a nine-storey mid-rise building, consisting of approximately 232 dwelling units and 364 parking spaces at 6333 Mah Bing Street on a site zoned "High Rise Apartment (ZHR4) – Brighouse Village (City Centre)"; and
- 2. Vary the provisions of Richmond Zoning Bylaw 8500 to reduce the minimum lot area from 13,000 m² (139,930 ft²) to 8,227 m² (88,554 ft²).

Wayne Craig

Director, Development

(604-247-4625)

WC:el Att. 4

Staff Report

Origin

W. T. Leung Architects Inc. has applied to the City of Richmond for permission to develop a multiple-family residential development with two 15-storey high-rise buildings and a nine-storey mid-rise building, consisting of approximately 232 dwelling units and 358 parking spaces at 6333 Mah Bing Street on a site zoned "High Rise Apartment (ZHR4) – Brighouse Village (City Centre)". Key components of the proposal include:

- Second phase of the "Park Residences" development, including three buildings (Towers C, D & E) and a greenway connection between Mah Bing Street and Minoru Park, on a site adjacent to the previously approved phase east of the subject site.
- One 15-storey building (Tower C) with five levels of parking, three of which are located within a podium above grade with townhouse and apartment units which interface with the public realm on three sides of the building.
- One 15-storey and one 9-storey building (Towers D & E) with four levels of parking, three of which are located within a podium above grade with townhouse and apartment units which interface with the public realm on all sides with the exception of the south elevation of the podium.
- A maximum floor area ratio (FAR) of 3.4 for residential uses and a maximum floor area ratio of (FAR) 0.1 for indoor amenity uses are allowed for the entire "Park Residences" development. Phase 2 utilizes the balance of the floor area allowed (approximately 27,995 m² or 91,847 ft²) to create approximately 232 dwelling units.
- Maximum height allowed is at 47.0 m geodetic.
- Step Code 2 and connection to the district energy utility (DEU) system.
- Provision of statutory rights-of-way (SRW) for a pedestrian greenway connection through the middle of site between Mah Bing Street and Minoru Park in alignment with Murdoch Avenue.

An associated Servicing Agreement (SA 08-413951) was secured through the Rezoning (RZ 04-286496, approved in 2008) for works required to service Phase 2 of the "Park Residences" development. Modification to the original Servicing Agreement (approved in February, 2012) is required to match existing conditions and reduce impacts on Minoru Park. The required modifications to Servicing Agreement (SA 08-413951) will be facilitated through a post approval revision. Modifications include rerouting of underground services to preserve trees in Minoru Park and revisions to the extent of the road and sidewalk.

Development Information

Please refer to attached Development Application Data Sheet (Attachment 1) for a comparison of the proposed development data with the relevant Bylaw requirements.

Background

- The site currently contains two three-storey rental apartment buildings.
- The site was initially rezoned in 2008 (RZ 04-286496), prior to adoption of the City Centre Area Plan (CCAP), for the proposed "Park Residences" development.
- The Development Permit for Phase 1 of the "Park Residences" development (DP 07-362006) was issued in 2013, which includes two high-rise buildings over a common parking structure consisting of 92 market housing units, 110 residential market rental units, and 22 affordable senior housing units.
- When the Phase 1 of the development was completed, the existing rental tenants were provided with first opportunity to relocate into the rental units in the Phase 1 development.
- The subject Development Permit application is for Phase 2 (Towers C, D, and E) of the "Park Residences" development.

Development surrounding the subject site is as follows:

To the north: Two 15-storey residential buildings linked by a mid-rise podium on a site zoned

"High Rise Apartment (ZHR11) – Brighouse Village (City Centre)".

To the east: Across Mah Bing Street, on the north side of Murdoch Avenue, two 15-storey

residential buildings on a site zoned "High Rise Apartment (ZHR4) – Brighouse

Village (City Centre)", which is Phase 1 (Towers A and B) of the "Park Residences" development; on the south side of Murdoch Avenue, two

three-storey apartment buildings fronting Minoru Boulevard, on properties zoned

"Medium Density Low Rise Apartments (RAM1)".

To the south: Three high-rise residential buildings on a site zoned under "Land Use Contract

(LUC 001)" with underlying zoning "High Rise Apartment (ZHR14) – Brighouse

Village (City Centre)".

To the west: Minoru Park zoned "School and Intuitional (SI).

Rezoning and Public Hearing Results

The Public Hearing for the rezoning of this site (Zoning Amendment Bylaw 8103) was held on September 6, 2006. At the Public Hearing, the following concerns about rezoning the property were expressed:

- Concerns regarding increased traffic in the area, especially trucks, during construction of the new building.
- Concerns regarding impact of construction of the new building on the adjacent buildings and the residents in the immediate vicinity of the development site.
- Concerns regarding preservation of the rental housing stock in the City Centre area.
- Issue of loss of views/property values was also raised by some residents.

Staff worked with the applicant to address these issues in the following ways:

- Development of the "Park Residences" project has been divided into two phases. A new road (Murdoch Avenue) was constructed prior to construction of Phase 1 to minimize traffic impacts to the area residents. A separate Traffic Management Plan for construction vehicles and construction workers will be required as part of the Building Permit submission for the subject development (i.e., Phase 2 of the "Park Residences" project).
- Adequate geotechnical analysis of the site has been undertaken and appropriate
 procedures will be put in place to minimize impact on neighbouring properties, and to
 address any possible damage to adjacent buildings which might occur as a result of
 construction of the new development.
- Provision of replacement rental units is included in Phase 1 of the Park Residences" project (Tower A). Details are included the "Housing-Rental Replacement and Affordable Housing" section in this report.
- Refinements of the massing and location of Towers C, D and E on the subject site have been exercised to maximize view corridors. It should be noted that some obstruction of existing views is to be expected from the redevelopment of this site in this higher density City Centre location.

Staff Comments

The proposed scheme attached to this report has satisfactorily addressed the significant urban design issues and other staff comments identified as part of the review of the subject Development Permit application. In addition, it complies with the intent of the applicable sections of the Official Community Plan (OCP) and is generally in compliance with the "High Rise Apartment (ZHR4) – Brighouse Village (City Centre)" except for the zoning variances noted below.

Zoning Compliance/Variance (staff comments in bold)

The applicant requests to vary the provisions of Richmond Zoning Bylaw 8500 to:

1) Reduce the minimum lot area from 13,000 m² (139,930 ft²) to 8,227 m² (88,554 ft²).

(Staff supports the proposed variance as the subject development is the second and last phase of a larger development known as "Park Residences". The minimum lot area under the "High Rise Apartment (ZHR4) — Brighouse Village (City Centre)" was based on the total site area of the entire development. Upon development of Phase 1 of the "Park Residences" development, the original development site was subdivided into two lots and two new roads (Murdoch Avenue and Mah Bing Street) were created. The lot located at the northeast corner of Murdoch Avenue and Mah Bing Street contains Phase 1 of the development; and the lot located west of Mah Bing Street is created for Phase 2 of the development. This variance is required due to the phasing of the development).

Through the applicant's Development Permit processes, the developer has satisfied the following development requirements.

Road Dedications

A Statutory Right-of-Way (SRW) (CA3023335, EPP28003) over Mah Bing Street located on the subject site has been secured as part of the rezoning application in 2008. This SRW area is required for the construction of Mah Bing Street; dedication of this area has been deferred due to the fact that this area is being used for surface parking, serving the existing rental buildings. An Option to Purchase the SRW is included in the SRW agreement, and this area will be transferred to the City once the existing rental buildings on site are demolished.

A 3.5 m wide SRW (CA3023366, EPP21004) has also been secured as part of the rezoning application in 2008 for future sidewalk and boulevard along the west side of Mah Bing Street. Based on the functional design provided by the applicant, the SRW is required to expand to 5.0 m wide to accommodate the proposed sidewalk and boulevard, and a 4 m x 4 m corner cut at

5.0 m wide to accommodate the proposed sidewalk and boulevard, and a 4 m x 4 m corner cut at the southeast corner of the site is required. It is recommended that the existing SRW (CA3023366, EPP21004) be discharged and a new SRW over the proposed sidewalk and boulevard on the west side of Mah Bing Street and the 4 m x 4 m corner cut, with an option to purchase, be provided by the applicant prior to Development Permit issuance. This SRW area will be transferred to the City once the Building Permit for the subject development is issued.

On Site Public Walkways

The western property boundary of the subject site abuts Minoru Park. A 3.0 m wide lit pedestrian walkway with a 0.28 m wide landscape strip on the development side is proposed to run the length of the western property line providing access to the adjacent townhouses and a walking path for all park users. Prior to Development Permit issuance, provision of a 3.28 m wide SRW for public access along the west property line of the site is required.

A 1.2 m wide SRW for public access along the south property line of the site is also required to provide adequate width for two-way traffic on the lane of the neighbouring site. This SRW may also be used as a pathway, and will be connected to the proposed pathway along the west property line, adjacent to Minoru Park.

Greenway

The development will create a major greenway connection between Mah Bing Street and Minoru Park in alignment with Murdoch Avenue; an SRW has been secured at Rezoning. The greenway configuration was originally defined by the tower footprints envisioned at Rezoning. In order to better align Tower C's façade with Towers A and B built in Phase 1 of the "Park Residences" development, and to allow for a wider view corridor between Towers C and D, the tower footprints have been modified. As a result, the SRW for the greenway is required to be revised. Staff support the proposed revision as the width and the size of the modified greenway are similar to the original configuration; except that the greenway is to be shifted approximately 3.5 m to the north.

Existing Legal Encumbrances

There is an existing Statutory Right of Way (SRW) in favour of BC Hydro along the north property line of site (CA2817671, Plan EPP24203). The developer is required to discharge this SRW or confirm an alternative form of approval from BC Hydro prior to Building Permit issuance. The developer is responsible to coordinate with BC Hydro.

Housing-Rental Replacement and Affordable Housing

When the rezoning application (RZ 04-286496) for the parent parcel of the "Park Residences" (including both Phase 1 and Phase 2) was submitted in 2004, the City did not have a formalized rental housing replacement policy for redevelopment of sites with existing rental units. The applicant has worked cooperatively with the City to create housing options to minimize the impact on the residents. The following table summaries the existing and proposed rental housing availability on-site.

	Existing	Proposed
	(6391 and 6491 Minoru Blvd.)	(7399 Murdoch Ave.)
Senior's Affordable Housing	None designated	22
Market Rental	128	110
Total units	128	132

Tower A in Phase 1 of the "Park Residences" development at 7399 Murdoch Avenue was secured for residential rental by a Housing Agreement. It contains 22 units of senior's affordable housing for residents 65 years or older, and 110 market rental units. The existing rental buildings on-site (known as 6391 and 6491 Minoru Boulevard) were requested by the City to remain on-site during the construction of the first phase of the "Park Residences" development. At the time of redevelopment of Phase 1, the developer gave the residents at 6391 and 6491 Minoru Boulevard first option for refusal on the new rental units in Tower A when the new rental units were ready for occupancy, which provided the opportunity for those tenants that would be displaced by construction of Phase 2 to rent units in Tower A. All the new rental units in Tower A are currently occupied.

Tenant Relocation Plan

As per the City's current OCP requirements, a Tenant Relocation Plan (Attachment 2) for the existing residents at 6391 and 6491 Minoru Boulevard has been provided by the applicant. The proposed Tenant Relocation Plan complies with the Market Rental Housing Policy in the OCP. The applicant has agreed to register a legal document on title, prior to Development Permit issuance, to ensure that the proposed tenant relocation plan will be implemented prior to any demolition construction activity occurs on-site.

View Blockage and Other Development Impacts

The subject development's towers generally satisfy Development Permit Guidelines with respect to tower separation. Prior to Development Permit issuance, a covenant will be registered on title to the site to notify potential purchasers that future adjacent development may block views and/or have other impacts.

Aircraft Noise

The site is designated as "Area 4 - Aircraft Noise Notification Area" where "all aircraft noise sensitive land use types may be considered." A City's standard residential aircraft noise covenant has been secured at Rezoning stage. An acoustic report and a mechanical report, prepared by a certified professional and satisfactory to the City, are required prior to Building Permit issuance.

Floodplain Requirements

In accordance with the City's Flood Management Strategy, the applicant is required to register a legal document on title referencing the minimum habitable elevation for the area, which is 2.9 m (geodetic). A Flood Indemnity Covenant has been secured at Rezoning stage.

Advisory Design Panel Comments

On November 2, 2019, the Advisory Design Panel (ADP) reviewed and supported the subject Development Permit application moving forward to the Development Permit Panel, subject to the applicant giving consideration to the ADP's comments. A copy of the relevant excerpt from the Advisory Design Panel Minutes is attached for reference (Attachment 3), together with the applicant's design response in 'bold italics'.

Analysis

Conditions of Adjacency

- The applicant proposes three buildings as follows:
 - Tower C (North of the Greenway): A 15-storey building with five levels of parking, three of which are located within a podium above grade and with townhouse and apartment units facing the public realm in most areas.
 - O Towers D and E (South of the Greenway): 15-storey and nine-storey buildings with four levels of parking, three of which are located within a podium above grade with townhouse and apartment units facing on the public realm in most areas with the exception of the south elevation of the podium.
- The north side of the Tower C podium includes a three-storey concrete wall on the north property line that will abut a similar podium wall on the development to the north. The proposed height of the podium wall (at 10.67 m or 35.0 ft.) matches the height of the podium wall to the north. The indoor pool building on level 4 sets back approximately 1.5 m (5.0 ft.) from the north property line and the tower above level 4 sets back approximately 14.0 m (46 ft.) from the north property line.
- Tower C is designed to terrace down from west to east in order to maximize the tower spacing between the proposed Tower C and existing adjacent "Carrerra" towers to the north; the proposed minimum tower separation is 38.1 m (125 ft.) to the closest adjacent tower to the north.
- The terracing design of Tower C also maximize the tower spacing between the proposed Tower C and existing adjacent Tower B of "Park Residences" (Phase 1) to the east; the proposed minimum tower separation is 38.2 m (125.3 ft.).

- The massing and orientations of the Towers C, D and E (with narrow, elongated floor plates) are designed to minimize impacts on existing buildings to the east and provide view corridors towards the park.
- Tower E is designed to be nine storey high and set back from Minoru Park in order to minimize impacts on existing adjacent buildings to the south.
- The south wall of the Tower D/E podium includes a three-storey concrete wall, clad in brick and vine planting systems, set back 1.44 m (4.7 ft.) from the south property line, and faces the side of the existing tower to the south.

Architectural Form and Character

- The proposed form of development, which combines articulated streetwall building elements and towers, generally complement with the adjacent residential and mixed-use projects developed under the City Centre Area Plan (CCAP).
- The proposed development is a continuation of the high-density residential tower project generally envisioned under the site specific zone adopted in 2008. While the density and building heights are higher than that provided under the current CCAP designation (adopted in 2009), the project has a similar density and the building height found throughout much of Brighouse Village.
- Proposed massing, height and architectural expression of the towers, and overall character
 of the proposed development are generally in compliance with the applicable Design
 Guidelines.
- The massing of the towers is reduced by reinforcing their verticality with large glass surfaces contained by a well proportioned, full-height solid grid frame at the northern potion of Tower C and northeast corners of Tower D respectively. The other sides of the towers reduce the perception of mass with a combination of a solid grid frame and glass surfaces.
- Massing is refined further by a series of three-storey elements, grounding the tower at the Greenway and Mah Bing Street. The lighter glazed tower is recessed and appears to float above.
- Major balconies (especially south and west facing) wrap around and provide sun shade for the corner units. Window walls will be used especially higher up, to give the appearance of a light structure above, reducing the appearance of mass.
- Significant corner elements will be cladded in cementitious panels. Elements closer to the
 ground will be cladded in brick, whereas other solid elements will be painted concrete frames
 with punched windows.
- The scale and architectural detailing, including materials and colours of the proposed ground-oriented units, the entrance to the residential towers, and other architectural features in the lower levels help to reinforce a pedestrian scale.

Urban Design and Site Planning

- The proposed buildings have been carefully sited to minimize potential impacts to views and shadows on existing and future neighbouring developments. The towers are oriented eastwest and step inwards, to take advantage of the westward park views. The east-west origination leans itself towards a narrow, elongated floor plates. This orientation provides view corridors towards the park for future developments to the east of the subject site.
- While Tower C is designed to terrace down from west to east, Tower D is designed to descend from east to west in order to maximize tower spacing between Tower C and Tower D and to increase view exposure and balcony opportunities westward towards Minoru Park. Tower E, at nine storeys, is massed similarly to Tower D, but at a lower ultimate height.
- The edge conditions along Minoru Park, the proposed greenway and Mah Bing Street achieve the proper pedestrian scale and provide a gentle transition between sidewalk/public walkway and building. The relationship between public, semi-private, and private realms is well resolved and provides a high quality streetscape.
- Townhouse units line the Minoru Park frontage with a raised patios. Additional townhouse units and main entrances for Towers C and D are proposed along the greenway to provide "eyes on the street".
- The façades of the podiums along Mah Bing Street are designed to minimize the visual impact of the parkade entrances. Street-fronting indoor amenity areas are designed to animate Mah Bing Street. Extent of glass window wall at units above grade is maximized.
- Extent of solid façade on the east elevation of the Tower C podium is minimized and is softened with brick treatment and vertical landscaping.
- Loading and waste collection will be provided within laybys off of Mah Bing Street adjacent to each of the parkade entrances
- There is a total of 358 parking spaces provided in the two podiums (311 residential and 47 visitor parking spaces; including nine accessible parking stalls). The proposed number of parking spaces is consistent with the parking requirements under the ZHR4 zone subject to the provision of Transportation Demand Measures (TDM) to the satisfaction of the City. The TDM includes:
 - o a greenway to Minoru Park through the subject site, which provides a direct and functional connection from Minoru Boulevard to Minoru Park through a combination of road (Murdoch Avenue) and private property right-of-way (ROW) on-site; and
 - o an additional 50 Class 1 and 25 Class 2 bicycle parking space beyond the minimum bylaw requirements to promote alternate mode of transportation.
- Energized electric vehicle (EV) charging outlets for 100% of resident vehicle parking spaces (208V 240V) will be provided.
- The proposal will feature 62 parking spaces in a tandem arrangement. Registration of a
 restrictive covenant to prohibit the conversion of the tandem garage area into habitable space,
 and to ensure that both parking spaces be assigned to the same dwelling unit where two
 parking spaces are provided in a tandem arrangement, is required prior to Development
 Permit issuance.

- Registration of a restrictive covenant to the number of visitor parking stalls per zoning bylaw requirements will be maintained in perpetuity is required prior to Development Permit issuance.
- There is a total of 412 bicycle parking spaces provided throughout the site (340 Class 1 and 72 Class 2 spaces).
- All residential bicycle parking spaces/lockers will be provided within bike storage room
 within the parking structure. Prior to Development Permit issuance, a restrictive covenant is
 required to be registered on title to ensure that:
 - o Conversion of the proposed bike storage room/lockers in this development into habitable space or general storage area is prohibited.
 - The bike storage room must remain available for shared common use and for the sole purpose of bicycle storage.
- 32 visitor bicycle parking spaces will be provided in the open area by each of the main entry of Towers C, D, and E. As there is insufficient room to provide additional bicycle racks on the exterior without impacting the proposed public greenway, the balance of the visitor bicycle parking spaces are to be provided within the parking structures: 10 spaces will be provided adjacent to the vestibule serving visitor parking for Tower C; and 30 spaces will be provided near the south end of visitor parking in Towers D and E. Prior to Development Permit issuance, a restrictive covenant is required to be registered on title to ensure that:
 - The number of visitor bicycle parking spaces per Zoning Bylaw requirements will be maintained in perpetuity.
 - o Conversion of the proposed visitor bicycle parking areas in this development into habitable space or general storage area is prohibited.
- It is noted that garbage and recycling collection vehicles currently access the Minoru Towers property (adjacent residential development at 6611 Minoru Boulevard) by driving across the southeast corner of the subject site though there is no access easement registered on title. The applicant had contacted the strata of 6611 Minoru Boulevard and proposed two options to provide truck access to the garbage and recycling collection facilities at 6611 Minoru Boulevard. One of the options involves physical changes to the Minoru Towers property and the other does not. Since there is no agreement with the adjacent strata corporation regarding modifications to their property, the applicant offers to provide a hammerhead at the southwest corner of the subject property to allow garbage and recycling collection vehicles servicing 6611 Minoru Boulevard to turn-around. No physical changes to the Minoru Towers property is required. The proposed hammerhead is designed by the applicant's traffic engineers (Attachment 4) and the proposal is acceptable to Transportation and Environment Services staff. Prior to Development Permit issuance, an SRW over the entire hammerhead area for public rights-of-passage (PROP) will be required.
- The applicant has also worked with the owners of 6551 Minoru Boulevard to relocate the
 existing garbage and recycling bins for that residential development to a new location that
 would not impede traffic flow and truck movement to the Minoru Towers property south of
 the subject site. Correspondence related to this matter between the applicant and the property
 management company of 6551 Minoru Boulevard are on file.

Tree Management

- The applicant has submitted a Certified Arborist's Report; which identifies on-site and off-site tree species, assesses tree structure and condition, and provides recommendations on tree retention and removal relative to the proposed development. The Report identifies eight bylaw-sized trees on the subject development site, all in good to fair condition, and recommends that all of them be removed since they are falling within the proposed building footprints or area of heavy construction (i.e., underground services as coordinated in Servicing Agreement or required pedestrian pathway along Minoru Park).
- Based on the 2:1 tree replacement ratio goal stated in the Official Community Plan (OCP),
 16 replacement trees are required. The applicant is proposing to plant 120 replacement trees on-site, including 70 conifer and 50 deciduous trees.
- The proposed buildings and underground parking structures have been set back sufficiently to enable retention of trees located along the adjacent Minoru Park frontage. Landscape installation within the Critical Root Zone will be coordinated with the consulting arborist.
- Prior to Development Permit issuance, the applicant is required to submit to the City of a contract with a Certified Arborist for the supervision of all works conducted within or in close proximity to the tree protection zones for trees located within Minoru Park. The contract must include the scope of work required, the number of proposed monitoring inspections at specified stages of construction, any special measures required to ensure tree protection, and a provision for the Arborist to submit a post-construction impact assessment to the City for review.
- Prior to demolition of the existing buildings on the subject development site, installation of
 tree protection fencing around adjacent trees within Minoru Park is required. Tree protection
 fencing must be installed to City standard in accordance with the City's Tree Protection
 Information Bulletin Tree-03 prior to any works being conducted on-site, and remain in place
 until construction and landscaping on-site is completed.
- Tree preservation strategy for off-site servicing works will be reviewed as part of the Post Approval Revision to Servicing Agreement (SA 08-413951).

Landscape Design and Open Space Design

- The proposed greenway located between Towers C and D will provide a generous public open space between the two buildings, creating a new connection between Minoru Park and Mah Bing Street.
- The greenway features a plaza with Public Art, benches, planting beds with trees, and open flexible lawn areas for picnics or active play. A gateway trellis is proposed at the west end of the greenway to announce the arrival to Minoru Park.
- At the Minoru Park interface, a 3.0 m wide walkway is provided and will connect to the existing walkway established on the adjacent development to the north.
- The overall landscape concept satisfactorily enhances and softens the interface between building(s) and the public realm.
- Building lobbies and private patios with individual gates are proposed along the greenway and along the walkway adjacent to Minoru Park to animate the public realm.

- Along Mah Bing Street, the public realm is primarily defined by a tree lined boulevard.
- The podium roofs on Level 4 are designed to be a "landscaped roof" with significant landscaping and planting areas that will help to reduce storm water flow and provide a pleasant outdoor amenity for the residents.
- Tower C has an outdoor amenity space featuring a children's play area with a kid table and sitting poles, a play house, a spring toy and a play tower with climbing net, wood post and plastic slide. In addition, there is a patio area, a sodded lawn, an urban agriculture space, and a south-facing amenity deck which can be considered as an outdoor extension of the indoor pool area.
- Towers D and E share an outdoor space which feature a larger children's play areas; in addition to the kid table, play house, spring toy, and play tower featured in Tower C, a single balance beam and timber steps are included in the play area. In addition, similar to the Tower C rooftop, an amenity deck adjacent to the indoor pool area is proposed.
- With the open space provided in the greenway, the proposed size of the outdoor amenity space exceeds the minimum identified under the Development Permit Guidelines.
- Proposed children's play area (composed of the open lawn areas in the proposed greenway
 and the children's play spaces on Level 4 in both towers) meets the minimum identified
 under the Development Permit Guidelines.
- The CCAP requires that multi-family development comprising 200 units or more provide indoor amenity space at a standard of 2 m² (21.5 ft²) per dwelling unit. The subject development exceeds the CCAP minimum and provides for 854 m² (9,201 ft²) of indoor amenity space located over three floors in the podium. Tower C features a fitness room on ground floor, an amenity room on the second floor, and a pool area on level 4. Towers D & E feature an amenity rooms on the ground floor and a pool area on level 4.
- An irrigation system is proposed to ensure continued maintenance of live landscaping on site.
- In order to ensure that the proposed landscaping works are completed, the applicant is required to provide a landscape security of \$1,066,863.05 in association with the Development Permit.

Public Art

The applicant is participating in the public art program. Contribution was secured through
the Rezoning. The art piece will be approved through the standard public art approval
process and is intended to be installed in the greenway connecting Mah Bing Street to
Minoru Park. Registration of a public art covenant is required prior to Development Permit
issuance.

Crime Prevention Through Environmental Design

- Crime Prevention Through Environmental Design (CPTED) principles have been considered throughout the proposed development.
- Ground-oriented units are proposed along the greenway and Minoru Park to create animation and facilitate casual surveillance for added pedestrian's safety. Units in Levels 2 and 3 of the podium, along Mah Bing Street, also achieve this general objective.
- Pedestrian accesses to the ground-oriented units will be raised above grade clearly denoting them as private space.

- Vehicular accesses for visitors are gated; entry for non-residents will be controlled by residents via cell phone technology.
- Parking is on designated half levels; each half level is open visually at all ends.
- Openings are provided at all intermediate ramps to increase visual access between levels.
- Elevator lobbies are fully glazed; vestibule doors to access residential areas feature glazed opening with wired Georgian glass.

Energy and Sustainability

- The subject site will be required to connect to the City's District Energy Utility (DEU) via connection to energy transfer stations to be located in DEU mechanical rooms within the buildings. Registration of a legal agreement on title is required, securing the owner's commitment to connect to a DEU that provides that no Building Permit will be issued unless the building is designed with the capability to connect to and be serviced by a DEU. Prior to Building Permit Issuance, DEU mechanical room size and location, service connection routing, and building mechanical system compatibility are subject to approval of the City and the DEU provider LIEC. The owner will also be required to provide mechanical drawings and detailed energy modeling, which shall be reviewed by the City and LIEC for compliance with DEU requirements prior to Building Permit issuance.
- The project is subject to the Step 2 of the Energy Step Code.

Accessible Housing

- The proposed development includes 12 basic universal housing units that are designed to be easily renovated to accommodate a future resident in a wheelchair. These single-storey units are required to incorporate all of the accessibility provisions listed in the Basic Universal Housing Features section of the City's Zoning Bylaw, and are permitted a density exclusion of 1.86 m² (20 ft²) per unit.
- All of the proposed units incorporate aging in place features to accommodate mobility constraints associated with aging. These features include:
 - Stairwell hand rails.
 - Lever-type handles for plumbing fixtures and door handles.
 - O Solid blocking in washroom walls to facilitate future grab bar installation beside toilets, bathtubs and showers.

Servicing Requirements

Through Rezoning (RZ 04-286496), the developer had entered into two Servicing Agreements (e.g., SA 07-382691 and SA 08-413951) to service the two phases of the "Park Residences" development. Both Servicing Agreement designs are approved, SA07-382691 covered the recently constructed Servicing Agreement works needed to service Phase 1 (i.e., 7333 and 7399 Murdoch Avenue), while Servicing Agreement (SA 08-413951) will cover the remaining works required to service Phase 2, which is the subject of this Development Permit application.

In order to service the subject site, infrastructure works will be required within Minoru Park due to the existing gravity system. The approved servicing design for Phase 2 (i.e., SA 08-413951) was approved in February, 2012 (bonding is in place). It had been developed to minimize impact

on trees within Minoru Park but it is impossible to complete the infrastructure improvements without some impact on trees within the park. In order to minimize the impact on the trees and address additional servicing modifications, the approved Servicing Agreement for Phase 2 requires modification to match existing conditions. The required modifications will be facilitated through a post approval revision, in consultation with the parks department. This will be a condition to Development Permit issuance. Site servicing works are being coordinated with Parks and Engineering staff; detailed design review is ongoing. Any tree removal and replacement associated with the SA works will be determined by the Parks Services Department.

Conclusions

As the proposed development would meet applicable policies and Development Permit Guidelines, staff recommend that the Development Permit be endorsed, and issuance by Council be recommended.

Edwin Lee Planner 2

(604-276-4121)

EL:blg

Attachment 1: Development Application Data Sheet

Attachment 2: Tenant Relocation Plan

Attachment 3: Excerpt from Advisory Design Panel Meeting Minutes (November 2, 2019) Attachment 4: Turning Paths at 6611 Minoru Boulevard - Garbage Tuck and Recycling Truck

Attachment 5: Development Permit Considerations



Development Application Data Sheet

Development Applications Department

DP 18837117 Attachment 1

Address: 6333 Mah Bing Street

Applicant: WT Leung Architects Inc. Owner: 410730 BC Ltd.

Planning Area(s): City Centre

Floor Area Gross: 30,525.55 m² (328,574 ft²) Floor Area Net: 27,948.47 m² (408,474 ft²)

	Existing	Proposed
Site Area:	9,810 m ² (105,594 ft ²)	Post road dedication as secured at Rezoning = 8,720 m ² (93,861 ft ²)
Land Uses:	Multi-family Residential	Multi-family Residential
OCP Designation:	Mixed Use	No Change
Area Plan Designation	City Centre Area Plan: General Urban T5 (25 m) Sub-Area B.3: Mixed Use – High-Rise Residential, Commercial & Mixed Use	No Change
Zoning:	ZHR4	No Change
Number of Units:	124	232

	Bylaw Requirement	Proposed	Variance
Floor Area Ratio (Residential):	3.40	3.21	none permitted
Floor Area Ratio (Amenity Space):	0.10	0.10	none permitted
Lot Coverage - Building:	Max. 90 %	67%	none
Setback - Front Yard:	Min. 6.0 m	6.0 m	none
Setback - Side Yard (north):	n/a	0.0 m	none
Setback - Side Yard (south):	n/a	1.44 m	none
Setback - Rear Yard (west):	Min. 6.0 m	6.0 m	none
Height (m):	Max. 47.0 m geodetic	47.0 m geodetic	none
Lot Size:	13,000 m² (139,930 ft²)	8,720 m² (93,861 ft²)	Variance Requested
Off-street Parking Spaces – Residential:	327 or 295 with TDM	311 with TDM	none
Off-street Parking Spaces – Visitor:	47	47	none
Off-street Parking Spaces - Total:	374 or 342 with TDM	358 with TDM	none

Accessible Parking Spaces: Min. 2% when 11 or more spaces are required (358 x 2% = 8 spaces)		9	none
Tandem Parking Spaces:	Max. 100%	62	none
Small Car Parking Spaces:	Max. 50% when 31 or more spaces are provided on-site (358 x Max. 50% = 179)	149	none
Bicycle Parking Spaces – Class 1 / Class 2:	1.25 (Class 1) and 0.20 (Class 2) per unit	1.46 (Class 1) and 0.31 (Class 2) per unit	none
Bicycle Parking Spaces - Total:	290 (Class 1) and 47 (Class 2)	340 (Class 1) and 72 (Class 2)	none
Amenity Space – Indoor:	Min. 2 m ² x 232 units = 464 m ² (4,994 ft ²)	835 m² (8,987 ft²)	none
Amenity Space – Outdoor:	Min. 6 m ² x 232 units + 10% of net site area = 2,219 m ² (23,885 ft ²)	3,054 m² (32,873 ft²)	none

(A) Current Site Information

Site Address:	6391 Minoru Blvd / 6491 Minoru Blvd (new site address 6333 Mah Bing Street)	
Legal Description:	Lot B, Section 8, Block 4 North Range 6 West, NWD Plan EPP21002	
Owner Name:	410730 BC Ltd (Park Residences Phase II Limited Partnership)	
Applicant Name:	Rachel Hutton, Stikeman Elliott LLP	
Phone:	604-631-1342	
E-mail:	rhutton@stikeman.com	
Current Zoning:	Richmond Bylaw 8300 Amendment Bylaw No. 8103 (per RZ004-286496 adopted Sept 08, 2008)	
Current Rental Type: (select all that apply)	x Market ☐ Non-market ☐ Cooperative ☐ Other (please specify):	

(B) Current Total Rental Units

Unit Nur		nber of Current Units		Average	Average
Туре	Total	Occupied	Ground- Oriented*	Monthly Rent	Size (m²)
Studio	06	05	0	\$ 0 884.00	52.0
1 BR	67	62	0	\$ 1 054.68	72.2
2 BR	46	45	0	\$ 1 262.67	102.8
3 BR	05	05	0	\$1 433.00	124.9
3+ BR					
Total	124	117	0	n/a	n/a

(C) New Rental Units (*CONSTRUCTION COMPLETED - OCCUPANCY Nov 2016)

		New		
Unit Type	Number of Units	Ground-Oriented*	Initial Average Monthly Rent at occupancy	Average Size (m²)
Studio	28	0	\$ 0 927.78 senior ** \$ 1 115.00 market ***	46.1
1 BR	74	. 0	\$ 1 000.00 senior ** \$ 1 347.88 market ***	50.0
2 BR	30	0	\$ 1 882.67 market ***	70.3
3 BR				
3+ BR				
Total	132	n/a	n/a	n/a

- Ground-oriented unit means a unit that is directly accessible from the road
- 22 units seniors' housing was provided with rents capped at \$1 000/ month per housing agreement 110 units market housing was provided

(D) Tenant Relocation Plan

Tenant Relocation Plan Components	Tenant Relocation Plan	Comply with the policy?
Notification: • A minimum 4 months' notice to end tenancy, and otherwise as set out in the provincial Residential Tenancy Act	The Residential Tenancy Act will be followed as it pertains to notification and compensation	x Yes □ No
Right of First Refusal: • Offer to return to the building, with rent rates set at low-end market rental (LEMR) rates (without having to meet income thresholds)	132 Replacement Rental Units were constructed, completed and occupancy granted December 06, 2016 (110 market + 22 non-market seniors' affordable) Existing Tenants were offered first refusal Yes, 19 accepted the offer *NOTE: Rezoning adopted Sept. 08, 2008; initial rents were as per rates outlined in housing agreement — rates were established at max \$1 000 / month for seniors non market as outlined in the housing agreement	x Yes □ No
Relocation Assistance: (Only required for tenants with tenancy of 1+ years) Accommodation must meet the tenant's needs Accommodation should be located in Richmond or in another location at the tenant's discretion	The developer will provide relocation assistance Yes, a Tenant Relocation Coordinator will be retained to provide relocation assistance July 07, 2020 – updated	x Yes □ No
 Rents at the new location should not exceed CMHC average area rents for Richmond 	The relocation coordinator will be Betty Thien, Property Manager (Rhome) Betty.Thien@Rhomepm.com - 604-501-4413	

	3 months free rent or lump sum equivalent will be provided	
	July 07, 2020 – updated	
Compensation:	For those who qualify for compensation, the option will be provided for 3 months' free rent or lump sum equivalent	
(Only required for tenants with tenancy of 1+ years) • 3 months' free rent or lump	Those who have resided in the building for five years or more will receive one additional month free rent or lump sum equivalent	x Yes □ No
sum equivalent	Those who have resided in the building for ten years or more will receive two additional months free rent or lump sum equivalent	
	Ms. Betty Thien (Rhome Management) will handle all monetary issues	
	All damage deposits will be returned to the tenants upon vacating, as the buildings will be demolished	
	Property management has been in communication with tenants during the development application process	
	July 07, 2020 - updated	
Communication with Tenants:	The on-site manager in regular communication with tenants is Mr. Ivan Petrov, 604-270-6779	X Yes
	The DP Sign was erected in front of the buildings, at the intersection of Murdoch and Mah Bing November 13, 2018.	□ No
	After Development Permit Approval and issuance and Demolition Permit Issuance, the applicant will conduct an Open House meeting with tenants (Covid-19 conditions permitting) and will also advise tenants in writing of relocation assistance options and compensation available	

Prepared by:	Doug Millar architect aibc_	
Date:	July 07, 2020	

Excerpt from the Minutes from The Design Panel Meeting

Wednesday, November 2, 2019 – 4:00 p.m. Rm. M.1.003 Richmond City Hall

1. DP 18-837117 – THREE-TOWER RESIDENTIAL DEVELOPMENT

ARCHITECT:

W.T. Leung Architects Inc.

LANDSCAPE

Durante Kreuk Landscape Architects

ARCHITECT:

PROPERTY

6333 Mah Bing Street

LOCATION:

Applicant's Presentation

Wing Ting Leung, Arnold Wong, and Doug Millar, W.T. Leung Architects, Inc., Richard O' Connor and Jane Durante, Durante Kreuk Landscape Architects, Daniel Roberts, Kane Consulting, and Willie Perez, MCW Consultants, presented the project and answered queries from the Panel on behalf of the applicant.

Panel Discussion

(Applicant Responses in Bold Italics)

Comments from Panel members were as follows:

• consider installing a pocket door for the ensuite washroom in the master bedroom and an outward swinging door for the second washroom (in lieu of an inward swinging door) in convertible units to enhance accessibility of residents in wheelchairs and strollers:

WTLA: pocket doors are not typically included on our projects. There are a number of drawbacks to pocket doors in our view. These include difficulty cleaning the inside pocket space and binding that occurs after building settlement, which renders the pocket door inoperable. We will review swing doors and adjust according to the comments

- consider installing an automatic door from the parkade to the elevator to assist people with disabilities;
 - WTLA: The Building Code requires automatic door openers when the proscribed clearances on the push/pull sides of the door are not being met. We will meet the proscribed clearances OR provide automatic openers on every level of the parkade accessed by people with disabilities
- consider incorporating aging-in-place features for some townhouse units;
 - WTLA: Typical aging-in-place features (lever handles, blocking, clearances at door entries) are provided throughout this project. With respect to multi-storey townhouses, there are 10 (ten) three-storey units fronting the park. Each of these units contains its own elevator to assist with aging-in-place
- proposed public art feature in a highly visible location benefits the project and the public realm, improves wayfinding and enhances the public character of the plaza;

WTLA: noted

- consider further breaking down the massing of the podium wall above the parkade entrances facing Mah Bing Street considering their visible and prominent location and the possibility that the proposed vine planting on the podium wall may take time to grow; consider further articulating the podium wall and introducing architectural elements to provide a pedestrian scale treatment to the Mah Bing Street elevation and improve the appearance of the parkade entrances;
 - WTLA: The East Elevation has been revised to increase the amount of Gold Glazing at the feature above the parkade entry, and to add Terra Cotta Paneling over the parkade entrance to Towers D/E. Canopies have also been enhanced at Tower Entries.
- appreciate the current approach to break down the massing of the south façade of Tower E; however, consider further breaking down the mass on the pedestrian level at grade through further articulation, e.g. introducing patterns or another colour for the brick material to provide visual interest to pedestrians; also ensure adequate lighting on the south edge to address potential CPTED concerns;
 - WTLA: Brick material provided at south elevation between Terra Cotta at Mah Bing and Glass Panel at park. Separate Lighting Plan has been developed and lighting specs included on landscape drawing L1.9
- appreciate the project design with open view corridors and the openness to the park; the project is well conceived and well landscaped;

WTLA: noted

review the proposed lighting strategy for the greenway and consider a lighting strategy which balances addressing potential CPTED issues and avoiding light disturbance to neighbouring residences and light pollution; consider installing a greater number of low level lighting to ensure a more even distribution of lighting in the greenway;

WTLA: Separate Lighting Plan has been developed and lighting specs included on landscape drawing L1.9

 appreciate the applicant's comprehensive presentation and package submission which includes energy modeling results and LEED scorecard;

WTLA: noted

- a 50 percent glass-to-wall ratio is not apparent in the model presented by the applicant; applicant is advised to review assumptions regarding the energy and sustainability aspects of the project to ensure compliance with BC Step Code requirements;
 - WTLA: The preliminary model was based on design elevations with less than 50% glass to wall ratio. The building uses a lot of spandrel glass with insulated panel behind, for ease of construction. Spandrel panels are included as wall in the wall-to-window ratios. The elevations are deceptive due to the appearance of more glazing. The spandrel glass inserted as part of the window-wall system for ease of fabrication / ease of construction. BC Step Code compliance will be demonstrated in more detail with the Building Permit submission.
- review the proposed strategy to mitigate noise from the generator room to ensure that potential noise impacts to the adjacent tower to the south are addressed;

WTLA: Specific mitigation measures being incorporated:

- Emergency Generator will provide a muffler to reduce sound power at point of discharge;
- Parkade Exhaust Ventilation operates "on demand" w/ variable speeds;
- Rooftop Units all rooftop equipment is screened visually and acoustically i.e.
 - 6333 Mah Bing (Tower 'c') all equipment is behind a parapet;
 - 6355 -6399 Mah Bing all equipment is behind a rooftop screen;

The acoustic noise mitigation properties of all above measures will be incorporated at the Building Permit stage when equipment selections and design details are complete.

- review the design and energy requirements of the lobby vestibules as these may meet BC Step Code requirements but not provide thermal comfort;
 - WTLA: There is no requirement in the BC Building Code 2018 edition for vestibules. Should the refined energy model based on developed Building permit drawings show that the project is not meeting Step 2 requirements then we will need a vestibule. Short of that there is no specific requirement mandating the application of vestibules for this project. We will revisit this issue when the detailed energy model is closer to completion, and act accordingly should vestibules not be required to meet Step Code.
- appreciate the applicant voluntarily designing the project to achieve LEED
 Silver Equivalency; however, consider targeting LEED Silver Certification;
 - WTLA: The project exceeds LEED Silver Equivalency. The LEED Certification process adds project costs without changing this benefit. These costs are borne ultimately by the purchaser. This is not a value-add to the project and only increases the cost of housing in general.
- appreciate the model as it helped the Panel better understand the project;

WTLA: noted

- consider a consistent approach for the articulation colour and materiality of the soffits on the townhouse versus the tower levels;
 - WTLA: Colour details for treatment of various soffits will be developed for construction documents, and will reflect the design approach evident on phse 1, now complete
 - WTLA JUNE 29 soffits to match colour of concrete (BM-OV 14 natural cream)
- consider introducing a different treatment for the main pedestrian entrances of the buildings along the greenway, e.g. through introducing accent colours, banding or coloured canopies over the recesses, to make them more prominent;
 - WTLA: Canopies have been accentuated in the drawings see elevations for revisions
- appreciate the proposed overall landscaping for the project; and

WTLA: noted

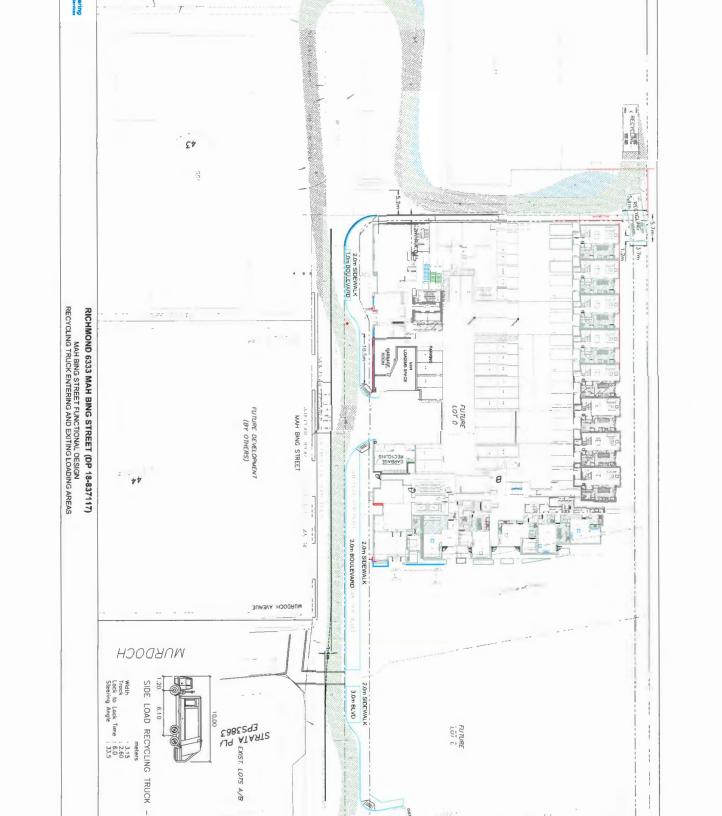
- consider introducing more landscape treatment for the three-meter wide sidewalk along the edge of the park to make it more visually interesting.
 - WTLA: Changes of paving added to the landscape plans; the front entrances to the buildings changed to special paving. Refer to landscape plans

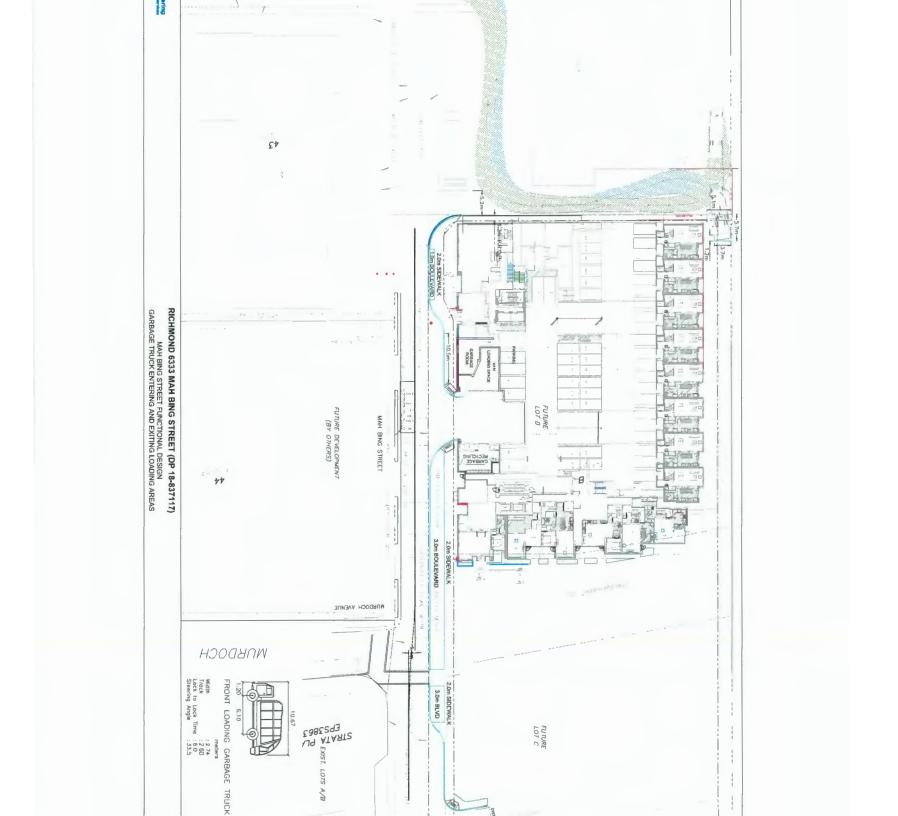
Panel Decision

It was moved and seconded

That DP 18-837117 be supported to move forward to the Development Permit Panel subject to the applicant giving consideration to the comments of the Advisory Design Panel.

CARRIED







Development Permit Considerations

Development Applications Department 6911 No. 3 Road, Richmond, BC V6Y 2C1

Address: 6333 Mah Bing Street File No.: DP 18-837117

Prior to approval of the Development Permit, the developer is required to complete the following:

- 1. Discharge of Statutory Right of Way CA3023366 (Plan EPP21004) for "Utilities and Sidewalk Lot B".
- 2. Registration of a statutory right-of-way, and/or other legal agreements or measures, as determined to the satisfaction of the Director of Development, over the proposed sidewalk and boulevard areas along Mah Bing Street and the proposed 4.0 m x 4.0 m corner cut at the southeast corner of the site for utilities and sidewalk. Any works essential for public access within the required statutory right-of-way (SRW) are to be included in the Servicing Agreement (SA). The design must be prepared in accordance with City specifications & standards and the construction of the works will be inspected by the City concurrently with all other SA related works. Languages should be included in the document that the entire SRW area shall be transferred to the City after the Building Permit for the development (DP 18-837117) has been issued, and prior to Final Inspection of the Building Permit (i.e., occupancy) is granted.
- 3. Granting of a 3.28 m wide statutory right-of-way along the entire west property line of the site for the purposes of a public walkway. Any works essential for public access within the required statutory right-of-way (SRW) are to be included in the Servicing Agreement (SA). The design must be prepared in accordance with City specifications & standards and the construction of the works will be inspected by the City concurrently with all other SA related works. The property owner/strata are responsible for all maintenance of improvements, including but not limited to the public walkways/sidewalks, street furniture, lighting and landscaping within the SRW, and are responsible for all liability of SRW area.
- 4. Granting of a 1.2 m wide statutory right-of-way along the entire south property line of the site to provide adequate width for two way traffic on neighbour's lane. Any works essential for public access within the required statutory right-of-way (SRW) are to be included in the Servicing Agreement (SA). The design must be prepared in accordance with City specifications & standards and the construction of the works will be inspected by the City concurrently with all other SA related works. The property owner/strata are responsible for all maintenance of improvements, including but not limited to the public walkways/sidewalks, street furniture, lighting and landscaping within the SRW, and are responsible for all liability of SRW area.
- 5. Replace Plan EPP21005 attached to Statutory Right of Way CA3023344 to reflect the new alignment of the public greenway.
- 6. Registration of a legal agreement(s) regarding the developer's commitment to the proposed Tenant Relocation Plan. Languages should be included in the document to confirm adherence to the Tenant Relocation Plan prior to any demolition construction activity on site.
- 7. Registration of a legal agreement on title stipulating that the development is subject to potential impacts due to other development that may be approved within the City Centre including without limitation, loss of views in any direction, increased shading, increased overlook and reduced privacy, increased ambient noise and increased levels of night-time ambient light, and requiring that the owner provide written notification of this through the disclosure statement to all initial purchasers, and erect signage in the initial sales centre advising purchasers of the potential for these impacts.
- 8. Registration of a statutory right-of-way, and/or other legal agreements or measures, as determined to the satisfaction of the Director of Development, over the proposed hammerhead area at the southwest corner of the site to facilitate truck turnaround capability between the subject site and the property to the south at 6611 Minoru Boulevard. Any works essential for truck turnaround within the required statutory right-of-way (SRW) are to be included in the Servicing Agreement (SA). The design must be prepared in accordance with City specifications & standards and the construction of the works will be inspected by the City concurrently with all other SA related works.

Initial:	

- 9. Registration of a legal agreement on title ensuring that:
 - a) where two parking spaces are provided in a tandem arrangement both parking spaces must be assigned to the same dwelling unit; and
 - b) conversion of tandem parking area into habitable space is prohibited.
- 10. Registration of a legal agreement on title ensuring that:
 - a) the number of visitor parking stalls per zoning bylaw requirements will be maintained in perpetuity;
 - b) selling, leasing, assigning, or designating any of the visitor parking spaces to individual unit owners/renters/occupants or any other persons by the developers/applicants/owners and future strata councils is prohibited; and
 - c) the required visitor parking stalls are available for the common use of visitors to this development and are accessible to visitors at all times.
- 11. Registration of a legal agreement on title ensuring that:
 - a) conversion of any of the bicycle parking areas within the parking structure into habitable space or general storage area is prohibited; and
 - b) all of the bicycle parking areas are available for shared common use and for the sole purpose of bicycle storage.
- 12. Registration of a legal agreement on title ensuring that:
 - a) the number of visitor bicycle parking (Class 2) stalls per zoning bylaw requirements will be maintained in perpetuity;
 - b) selling, leasing, assigning, or designating any of the visitor bicycle parking (Class 2) stalls to individual unit owners/renters/occupants or any other persons by the developers/applicants/owners and future strata councils is prohibited; and
 - c) the required visitor bicycle parking (Class 2) stalls are available for the common use of visitors to this development and are accessible to visitors at all times.
- 13. Registration of a restrictive covenant and/or alternative legal agreement(s), to the satisfaction of the City, securing the owner's commitment to connect to District Energy Utility (DEU), which covenant and/or legal agreement(s) will include, at minimum, the following terms and conditions:
 - a) No building permit will be issued for a building on the subject site unless the building is designed with the capability to connect to and be serviced by a DEU and the owner has provided an energy modelling report satisfactory to the Director of Engineering;
 - b) If a DEU is available for connection, no final building inspection permitting occupancy of a building will be granted until the building is connected to the DEU and the owner enters into a Service Provider Agreement on terms and conditions satisfactory to the City and grants or acquires the Statutory Right-of-Way(s) and/or easements necessary for supplying the DEU services to the building;
 - c) If a DEU is not available for connection, then the following is required prior to the earlier of subdivision (stratification) or final building inspection permitting occupancy of a building:
 - i) the City receives a professional engineer's certificate stating that the building has the capability to connect to and be serviced by a DEU;
 - ii) the owner enters into a covenant and/or other legal agreement to require that the building connect to a DEU when a DEU is in operation;
 - iii) the owner grants or acquires the Statutory Right-of-Way(s) and/or easements necessary for supplying DEU services to the building;
 - iv) if required by the Director of Engineering, the owner provides to the City a letter of credit, in an amount satisfactory to the City, for costs associated with acquiring any further Statutory Right of Way(s) and/or easement(s) and preparing and registering legal agreements and other documents required to facilitate the building connecting to a DEU when it is in operation.
- 14. Registration of a Public Art Covenant on title for the implementation of the City approved Public Art Plan.
- 15. Receipt of a Letter of Credit for landscaping in the amount of \$1,066,863.05 (based on the costs estimate provided by a CSLA registered landscape Architect including 10% contingency).

Initial:	

- 16. Submission of a Contract entered into between the applicant and a Certified Arborist for supervision of any on-site works conducted within or in close proximity to the tree protection zones for trees located within Minoru Park. The Contract should include the scope of work to be undertaken, including: the proposed number of site monitoring inspections, and a provision for the Arborist to submit a post-construction assessment report to the City for review.
- 17. Approval of a Post Approval Revision to SA 08-413951. An updated Letter of Credit or cash security for the value of the revised Service Agreement works, as determined by the City, will be required as part of the Post Approval Revision to SA 08-413951. Works include, but may not be limited to:

Water Works:

- Using the OCP Model, there is 344 L/s of water available at a 20 psi residual at the Mah Bing street frontage. Based on your proposed development, your site requires a minimum fire flow of 220 L/s.
- Submit Fire Underwriter Survey (FUS) or International Organization for Standardization (ISO) fire flow calculations to confirm the development has adequate fire flow for onsite fire protection. Calculations must be signed and sealed by a Professional Engineer and be based on Building Permit Stage building designs.
- At the developer's cost, the Developer is required to:
 - Update the water works design as per approved SA08-413951 to reflect the actual invert elevations at the tie-in points.
 - o Install the proposed 200mm diameter watermain at the frontage of Tower D & E (i.e., southern portion of Mah Bing Street) as per SA08-413951.
 - o Provide new hydrants to meet the 75m standard spacing required as per City standard.
 - o Install new water service connection off of the proposed 300 mm PVC water main along the Mah Bing frontage. Meter to be located onsite (i.e. in a mechanical room).

Storm Sewer Works:

- At the Developer's cost, the Developer is required to:
 - Update the storm sewer design as per approved SA08-413951 to reflect the actual invert elevations at the tie-in points.
 - o Install the proposed 600mm diameter storm sewer at the frontage of Tower D & E (i.e., southern portion of Mah Bing Street) as per SA08-413951.
 - Revise the alignment of the proposed box culvert (as per SA08-413951) in the proposed greenway to match the latest greenway concept and revise the proposed box culvert alignment in the park to minimize required tree removal. Parks and Engineering staff will provide directions on this prior to revising SA08-413951.

Sanitary Sewer Works:

- At the Developer's cost the Developer is required to:
 - O Update the sanitary sewer design (as per approved SA08-413951) to reflect the actual invert elevations at the tie-in points.
 - o Install the proposed 250mm diameter sanitary sewer at the frontage of Tower D & E (i.e., southern portion of Mah Bing Street) as per SA08-413951.
 - o Revise the alignments of the proposed sanitary main and forcemain in the proposed greenway (as per approved SA08-413951) to match the latest greenway concept.
 - o Provide an updated tree survey within the affected portion of Minoru Park and determine an alignment for the proposed box culvert, forcemain and sanitary main that will require the least tree removal. Parks and Engineering staff will provide input on this prior to revising SA08-413951.
 - o Revise the alignment of the proposed sanitary main (as per approved SA08-413951) from the west property line to an alignment through the Minoru Park.
 - Confirm whether the existing sanitary main (coming from the property to the north that is 7368 Gollner Avenue) is live. If it is live, the developer is required to relocate that existing sanitary main prior to any site preparation works.
- At Developer's cost, the City is to:
 - Cut and cap, at main, all existing service connections to the development site and remove inspection chambers.
 - o Perform all tie-ins to existing City infrastructure.

Initial:	

Frontage Improvements:

- The Developer is required to:
 - Provide other frontage improvements as per Transportation's requirements, provided separately. Changes to the road width, sidewalks, boulevards, etc) Improvements shall be built to the ultimate condition wherever possible.
 - Coordinate with BC Hydro, Telus and other private communication service providers to pre-duct for future hydro, telephone and cable utilities along the Mah Bing Street frontages.
 - O Coordinate with BC Hydro, the removal or relocation within the proposed development of the existing PMT that fronts the proposed Tower C (i.e., proposed building north of the proposed greenway) at the east side of Mah Bing Street.
 - Coordinate with BC Hydro, Telus and other private communication service providers to determine if above ground structures are required and coordinate their locations (e.g. Vista, PMT, LPT, Shaw cabinets, Telus Kiosks, etc). These should be located onsite, as described below.
 - O Locate/relocate all above ground utility cabinets and kiosks required to service the proposed development, and all above ground utility cabinets and kiosks located along the development's frontages, within the developments site (see list below for examples). A functional plan showing conceptual locations for such infrastructure shall be included in the development design review process. Please coordinate with the respective private utility companies and the project's lighting and traffic signal consultants to confirm the requirements (e.g., statutory right-of-way dimensions) and the locations for the aboveground structures. If a private utility company does not require an aboveground structure, that company shall confirm this via a letter to be submitted to the City. The following are examples of statutory right-of-ways that shall be shown on the DP architectural plans/functional plan, the servicing agreement drawings, and registered prior to SA design approval:
 - Vista Approximately 8.8 x 6.5 m, confirm SRW dimensions with BC Hydro
 - BC Hydro PMT 4.0 x 5.0 m
 - BC Hydro LPT 3.5 x 3.5 m
 - Street light kiosk 1.5 x 1.5 m
 - Traffic signal kiosk 2.0 x 1.5 m
 - Traffic signal UPS 1.0 x 1.0 m
 - Shaw cable kiosk $-1.0 \times 1.0 \text{ m}$
 - Telus FDH cabinet 1.1 x 1.0 m
 - o Revise the street lighting design as per SA08-413951 to update to current City Center standards.

General Items:

- The Developer is required to:
 - o Provide an updated tree survey, arborist report and QEP report to confirm whether the existing trees and RMA in Minoru Park will be affected by the developer's proposed sanitary line construction.
 - O Provide, within the post approval revision to the servicing agreement or prior to start of site preparation works (whichever comes first), a geotechnical assessment of preload, de-watering, and soil preparation impacts on the existing utilities fronting the development site and provide mitigation recommendations.
 - Monitor the settlement at the adjacent utilities and structures during pre-loading, dewatering, and soil preparation works per the geotechnical engineer's recommendations, and report the settlement amounts to the City for approval.
 - Submit a proposed strategy at the building permit stage for managing excavation de-watering. Note that the City's preference is to manage construction water onsite or by removing and disposing at an appropriate facility. If this is not feasible due to volume of de-watering, the Developer will be required to apply to Metro Vancouver for a permit to discharge into the sanitary sewer system. If the sanitary sewer does not have adequate capacity to receive the volume of groundwater, the Developer will be required to enter into a de-watering agreement with the City wherein the developer will be required to treat the groundwater before discharging it to the City's storm sewer system.
 - O Enter into, if required, additional legal agreements, as determined via the subject development's Servicing Agreement(s) and/or Development Permit(s), and/or Building Permit(s) to the satisfaction of the Director of Engineering, including, but not limited to, site investigation, testing, monitoring, site preparation, dewatering, drilling, underpinning, anchoring, shoring, piling, pre-loading, ground densification or other

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- activities that may result in settlement, displacement, subsidence, damage or nuisance to City and private utility infrastructure.
- Oconduct pre- and post-preload elevation surveys of all surrounding roads, utilities, and structures. Any damage, nuisance, or other impact to be repaired at the developer's cost. The post-preload elevation survey shall be incorporated within the servicing agreement design.
- O Conduct pre and post construction video inspections of adjacent sewer mains to check for possible construction damage. At their cost, the developer is responsible for rectifying construction damage.

Notes:

- For City review, the developer shall submit the cost estimate from the winning contractor for the works covered under the approved post approval revision to SA08-413951, which will be the basis of the updated security bond. If the winning contractor's estimate is not available, a signed and sealed Engineer's estimate would be acceptable subject to a 150% bonding percentage.
- Prior to start of any site preparations works (e.g., preload, soil densifications, etc.), the developer is required to:
 - Complete the post approval revision to SA08-413951 and extend first the proposed sanitary main, forcemain and box culvert through the proposed greenway and tie-in to the existing sanitary main, forcemain and canal inside Minoru Park.
 - O Confirm whether the existing sanitary main at the north end of Mah Bing Street (coming from the property to the north that is 7368 Gollner Avenue) is live. If it is live, the developer is required to relocate that existing sanitary main prior to any site preparation works.
 - Remove or relocate the existing PMT at the west side of Mah Bing Street fronting the proposed tower C (i.e., proposed building north of the proposed greenway).

Prior to Demolition Permit Issuance, the developer must complete the following requirements:

- 1. Provide written confirmation and supporting documents to demonstrate that the proposed Tenant Relocation Plan has been implemented.
- 2. Installation of appropriate tree protection fencing adjacent trees within Minoru Park prior to any construction activities, including building demolition, occurring on-site.

Prior to Building Permit Issuance, the developer must complete the following requirements:

- 1. Dedicate the SRW area (Plan EPP28003, CA3023335) on the subject site (i.e., Mah Bing Street secured as part of the rezoning application RZ 04-286496) to the City once the existing rental buildings on site are demolished.
- 2. Discharge of existing Statutory Right of Way (SRW) (CA2817671, Plan EPP24203) or confirm an alternative form of approval from BC Hydro to facilitate the proposed development.
- 3. Submission of a Construction Parking and Traffic Management Plan to the Transportation Department. Management Plan shall include location for parking for services, deliveries, workers, loading, application for any lane closures, and proper construction traffic controls as per Traffic Control Manual for works on Roadways (by Ministry of Transportation) and MMCD Traffic Regulation Section 01570.
- 4. Incorporation of accessibility measures in Building Permit (BP) plans as determined via the Rezoning and/or Development Permit processes.
- 5. If applicable, payment of latecomer agreement charges associated with eligible latecomer works.
- 6. Obtain a Building Permit (BP) for any construction hoarding. If construction hoarding is required to temporarily occupy a public street, the air space above a public street, or any part thereof, additional City approvals and associated fees may be required as part of the Building Permit. For additional information, contact the Building Approvals Department at 604-276-4285.

Prior to Final Inspection of Building Permit (i.e., Occupancy), the developer must complete the following requirements:

1. Transfer of the SRW area over the proposed sidewalk and boulevard areas along Mah Bing Street and the proposed 4.0 m x 4.0 m corner cut at the southeast corner of the site, secured as part of the Development Permit application DP 18-837117 to the City.

Initial:	

Note:

- * This requires a separate application.
- Where the Director of Development deems appropriate, the preceding agreements are to be drawn not only as personal covenants of the property owner but also as covenants pursuant to Section 219 of the Land Title Act.
 - All agreements to be registered in the Land Title Office shall have priority over all such liens, charges and encumbrances as is considered advisable by the Director of Development. All agreements to be registered in the Land Title Office shall, unless the Director of Development determines otherwise, be fully registered in the Land Title Office prior to enactment of the appropriate bylaw.
 - The preceding agreements shall provide security to the City including indemnities, warranties, equitable/rent charges, letters of credit and withholding permits, as deemed necessary or advisable by the Director of Development. All agreements shall be in a form and content satisfactory to the Director of Development.
- Additional legal agreements, as determined via the subject development's Servicing Agreement(s) and/or Development Permit(s), and/or Building Permit(s) to the satisfaction of the Director of Engineering may be required including, but not limited to, site investigation, testing, monitoring, site preparation, de-watering, drilling, underpinning, anchoring, shoring, piling, pre-loading, ground densification or other activities that may result in settlement, displacement, subsidence, damage or nuisance to City and private utility infrastructure.
- Applicants for all City Permits are required to comply at all times with the conditions of the Provincial Wildlife Act and Federal Migratory Birds Convention Act, which contains prohibitions on the removal or disturbance of both birds and their nests. Issuance of Municipal permits does not give an individual authority to contravene these legislations. The City of Richmond recommends that where significant trees or vegetation exists on site, the services of a Qualified Environmental Professional (QEP) be secured to perform a survey and ensure that development activities are in compliance with all relevant legislation.

Signed	Date
Signed	Date



Development Permit

No. DP 18-837117

To the Holder:

W. T. LEUNG ARCHITECTS

Property Address:

6333 MAH BING STREET

Address:

C/O 973 W. BROADWAY STREET, UNIT 300

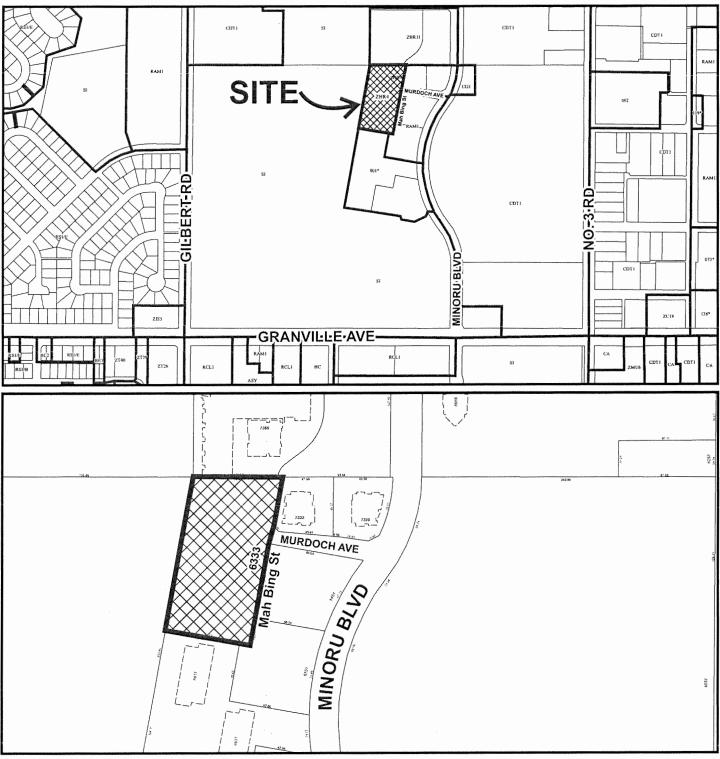
VANCOUVER, BC V5Z 1K3

- 1. This Development Permit is issued subject to compliance with all of the Bylaws of the City applicable thereto, except as specifically varied or supplemented by this Permit.
- 2. This Development Permit applies to and only to those lands shown cross-hatched on the attached Schedule "A" and any and all buildings, structures and other development thereon.
- 3. The "Richmond Zoning Bylaw 8500" is hereby varied to reduce the minimum lot area from 13,000 m² (139,930 ft²) to 8,227 m² (88,554 ft²).
- 4. Subject to Section 692 of the Local Government Act, R.S.B.C.: buildings and structures; off-street parking and loading facilities; roads and parking areas; and landscaping and screening shall be constructed generally in accordance with Plans #1 to #74 attached hereto.
- 5. Sanitary sewers, water, drainage, highways, street lighting, underground wiring, and sidewalks, shall be provided as required.
- 6. As a condition of the issuance of this Permit, the City is holding the security in the amount of \$1,066,863.05 to ensure that development is carried out in accordance with the terms and conditions of this Permit. Should any interest be earned upon the security, it shall accrue to the Holder if the security is returned. The condition of the posting of the security is that should the Holder fail to carry out the development hereby authorized, according to the terms and conditions of this Permit within the time provided, the City may use the security to carry out the work by its servants, agents or contractors, and any surplus shall be paid over to the Holder. Should the Holder carry out the development permitted by this permit within the time set out herein, the security shall be returned to the Holder. The City may retain the security for up to one year after inspection of the completed landscaping in order to ensure that plant material has survived.
- 7. If the Holder does not commence the construction permitted by this Permit within 24 months of the date of this Permit, this Permit shall lapse and the security shall be returned in full.

Development Permit No. DP 18-837117

To the Holder:	W. T. LEUNG ARCHITECTS
Property Address:	6333 MAH BING STREET
Address:	C/O 973 W. BROADWAY STREET, UNIT 300 VANCOUVER, BC V5Z 1K3
	•
AUTHORIZING RESOLUTEDAY OF ,	ION NO. ISSUED BY THE COUNCIL THE
DELIVERED THIS D	AY OF , .
MAYOR	







DP 18-837117 SCHEDULE "A"

Original Date: 09/27/18

Revision Date:

Note: Dimensions are in METRES

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DRAWING NO.:

DATE August 23, 2018

лов но 02-03 DRAWN DM/VK SCALE 1/16" = 1'-0"

CHECKED WTL



6333, 6355, 6399 Mah Bing Road, Richmond, BČ Lot B, Section B, Block 4 North, Range 6 Weat, New Westmirster District Plan EPP21002

PROJECT DATA
Civic Address
Legal Description

Suite 300, 973 West Brondway, Vancouver, British Columbia • Canada V5Z 1K3 Telephone 604 736-9711, Eucsimile 604 736-7991

NORTH

Hesidential 167,175				
+0.10 Amenity Bonus +0.10 Amenity Bonus mum	167,175.00 SF 142,106.00 SF	(15,50.56 SM) (13,201.65 SM)	Per Survey by J.C. Tam & Associates Per Survey by Butler Sundvick	n & Associates undvick
Exclusions (SF) Exclusi	Exclusions (SF) BUH	Exclusions (SF) Mech / DEU Exclusions	DEU Exclusions	Net Area (SF)
	0.00 SF		839.28 SF	119.951.82 SF

Density (Floor Area Ratlo)

Lot Size

	Gross Area (SF)	Exclusions (SF) Amenity	Exclusions (SF) BUH 20.00sf / unit	Exclusions (SF) Mech / Stairs	SF) 10.76 SF / Unit	Net Area (SF)
Tower C Residential	130,426.50 SF	3,656.30 SF	0.00 SF	5,979.10 SF	839.28 SF	119,951.82 SF
Tower D Residential	144,331.60 SF	4,107.20 SF	240.00 SF	6,823.30 SF	1,162.08 SF	131,999.02 SF
Tower E Residential	52,401.10 SF	1,230,50 SF	0.00 SF	2,488.10 SF	494.96 SF	48,187.54 SF
Total Building Area	327,159.20 SF	8,994.00 SF	240,00 SF	15,290.50 SF	2,496.32 SF	300,138.38 SF
•	[30,393.09 SM]	[835.54 SM]	[22:30 SM]	[1,420.49 SM]	[231.91 SM]	[27,882.86 SM]
Total Residential Area	195.712.00 SF	5.237.00 SF	0.00 SF	7,770.00 SF	0.00 SF	182,705.00 SF
PH 1 (TWR A + TWR B)	[18,181.64 SM]	[486.52 SM]	[0.00 SM]	[721.83 SM]	[0.00 SM]	[16,973.29 SM]
Total Residential Area	522.871.20 SF	14.231.00 SF	240.00 SF	23.060.50 SF	2.496.32 SF	482,843,38 SF
PH 1 + PH 2	[48,574.73 SM]	[1,322.06 SM]	[22.30 SM]	[2,142.32 SM]	[231.91 SM]	[44,856.15 SM]
TOTAL FAR	3.68 Gross	0.10 Gross				3.40 Net
RESIDENTIAL UNIT SUMMARY	MMARY					
Unit Type		TH/4BDR	SBDR	ZBDR	1BDR	TOTAL PER TOWER
Tower C		9	36	35	+	78
Tower D		13	80	99	21	108
Tower E		0	9	16	24	46
Total Units		49	20	117	46	232
The state of the s		(8 19%)	12155%1	150.43%)	1 19 83%	1 100 00% 1

PARKING ANALYSIS				
		Required/Allowed	w/ TDM (-10%)	Proposed
Car Parking Residential	AAAAAA MAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA			
Section 7.9.3.1 Zone 2	(232) Units@1.2 per Dwelling Unit	278		311
Section 7.9.3.1 Zone 2	0.2 Visitor per Dwelling Unit * - rounded up	47		47
HC Stalls per Section 7.5.14		7 (min.)	,	on
Small Car Stalls (max. 50%)		179 (max.)		149
Tandem Stalls (max. 50%)	(0) Sets	156 (max.)		62
Total Stalls (Residential)		325		358
			i	
Bicycle Parking Residential		The same is the first of the same is the same of the same is the s		
Section 7.14.10 Class 1	1.25 per Dwelling Unit	290	,	340
Section 7.14.10 Class 2	0.2 per Dwelling Unit	47	,	72
Section 7.14.5	33% Max. Req'd @ Vertical Spaces	112		134
Loading Space Residential				
907		trous AIT con		1 handing

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Dicycle Parking neededings	A OF section 1 last	000		940
Section 7.14.10 Class I	L.C.3 per Lywelling Unit.	062		240
Section 7.14.10 Class 2	0.2 per Dwelling Unit	47	,	72
Section 7.14.5	33% Max. Req'd @ Vertical Spaces	112	•	134
Loading Space Residential				
Section 7.13.6		see TIA report		1 Medium
AREA BREAKDOWN*	("Net Floor Area, including all exemptions)			
		TOWERC	TOWER D	TOWER E
		Residential	Residential	Residential
3round Floor / P1		9,467.80 SF	13,621.90 SF	3,666.80 SF
2nd Floor / P2		7,240.30 SF	14,128.00 SF	3,477.20 SF
3rd Floor / P3		9,232.50 SF	12,105.50 SF	3,933.90 SF
tth Floor		13,024.10 SF	12,686.60 SF	7,530.10 SF
5th Floor		11,399.20 SF	9,617.10 SF	7,283.50 SF
3th Floor		11,399.20 SF	9,617.10 SF	7,283.50 SF
7th Floor		10,003.60 SF	9,459.60 SF	6,408.70 SF
3th Floor		10,003.60 SF	9,212.80 SF	6,408.70 SF
Ith Floor		10,003.60 SF	9,212.80 SF	6,408.70 SF
Oth Floor		6,507.80 SF	9,053.60 SF	0.00 SF
1th Floor		6,507.80 SF	8,668.10 SF	0.00 SF
2th Floor		6,507.80 SF	7,142,50 SF	0.00 SF
13th Floor		6,507.80 SF	7,142.50 SF	0.00 SF
14th Floor		6,507.80 SF	6,255.80 SF	0.00 SF
5th Floor		5,879.10 SF	6,256.50 SF	0.00 SF
16th Floor		234.50	151.40	0.00
3ross Floor Area		130,426.50 SF	144,331.60 SF	52,401.10 SF
		[12,117.03 SM]	[13,408.86 SM]	[4,868.23 SM]

[30,393.09 SM] 327,159.20 SF Gross Residential Area

ARCHITECTURAL DRAWING LIST

Project Data, Site Plan Streetscapes, Park Elevation

LANDSCAPE DRAWING LIST

Park Residences PH2 Resid'I Development

Tower C+D+E

6333 - 6399 Mah Bing Street Richmond, BC

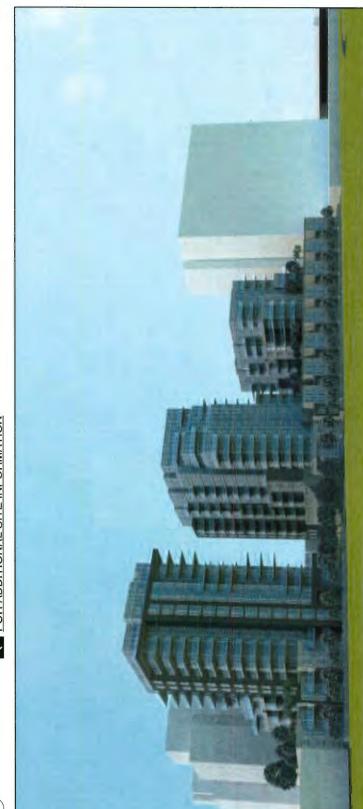
DATA + COVER

TWR C+D+E

rativity P-z it Plan
Ground, Farking P-I Filpan
Ground, Farking P-I Filpan
2nd / Parking P-I Filpan
3nd / Floor Plan
4nd Floor

16 storeys 03 storeys KIOZK KIOZI MINORU MURDOCH AVENUE 13

SEE ALSO SHEET A2.16 ROOF PLANS FOR ADDITIONAL SITE INFORMATION \downarrow SITE / CONTEXT PLAN



JUL 0 7 2020 PLAN#

18-837117 JUL 0 7 2020

STREETSCAPE - MAH BING ROAD

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DATE August 23, 2018 SCALE 1/16" DRAWN DM/ VK JOB NO. 02-03

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Park Residences PH 2 Resid'I Development STREETSCAPE Park Elevation 6333 - 6399 Mah Bing Road Richmond, BC Tower C+D+E

SUBJECT SITE

STREETSCAPE - MURDOCH AVENUE

SUBJECT SITE

MAH BING ROAD

MINORU PARK

W. T. LEUNG
ARCHITECTS
INC.

Suite 300, 973 West Broadway,
Vancouver, British Columbin

Canada V5Z 1K3
Telephone 604 736-9711, Facsimile 604 736-7991

MARCH 21 / SEPTEMBER 21 @ 4PM

PLAN # S

MARCH 21 / SEPTEMBER 21 @ 2PM

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Resid'I Development Park Residences PH2 6333 - 6399 Mah Bing Street Richmond, BC Tower C+D+E

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SHADOW ANALYSIS TWR C+D+E

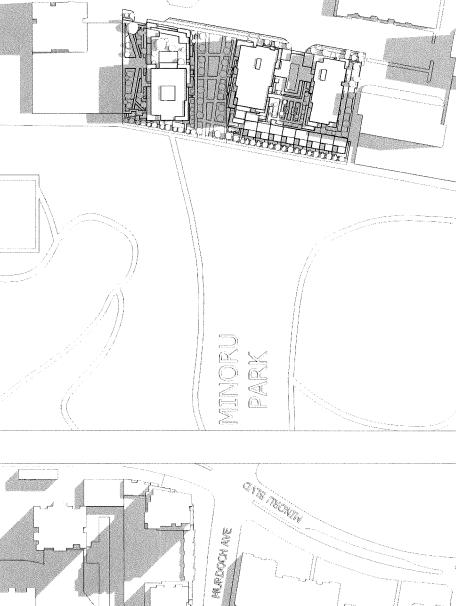
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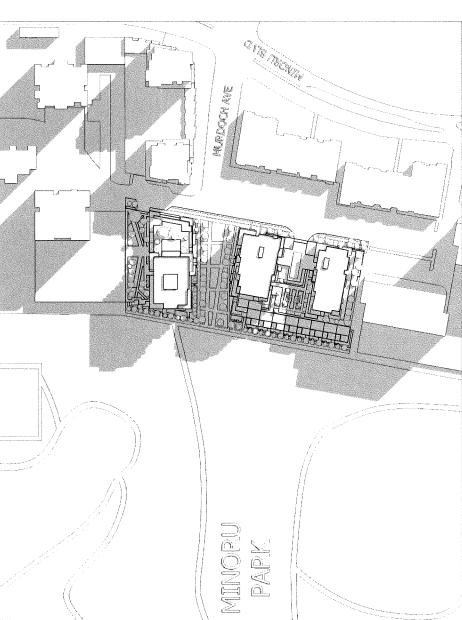
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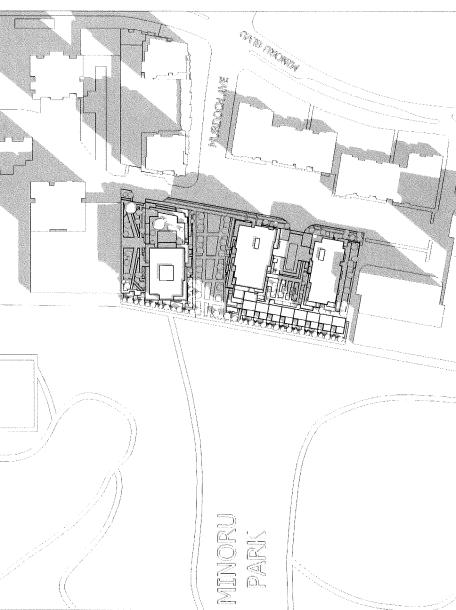




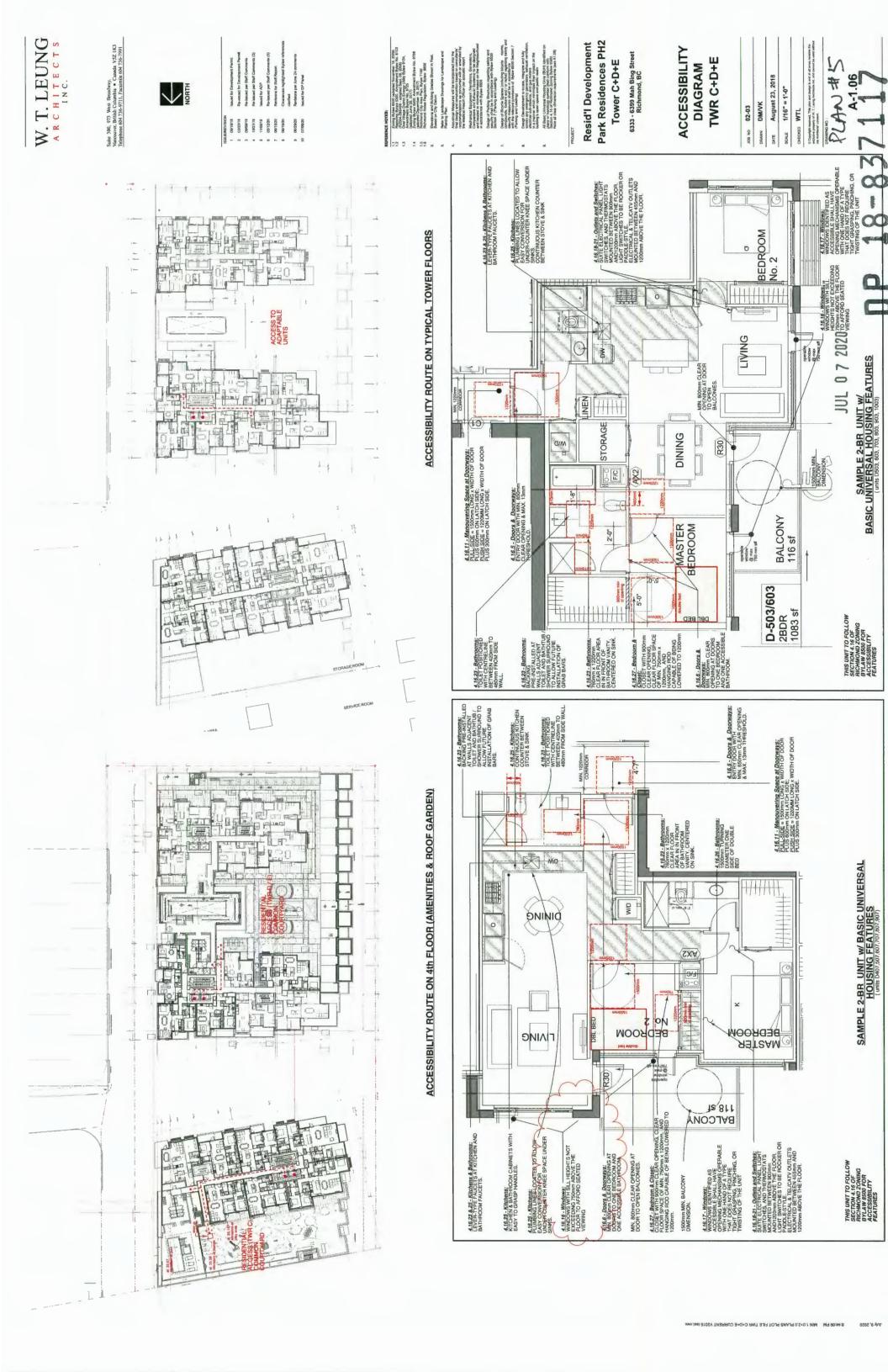


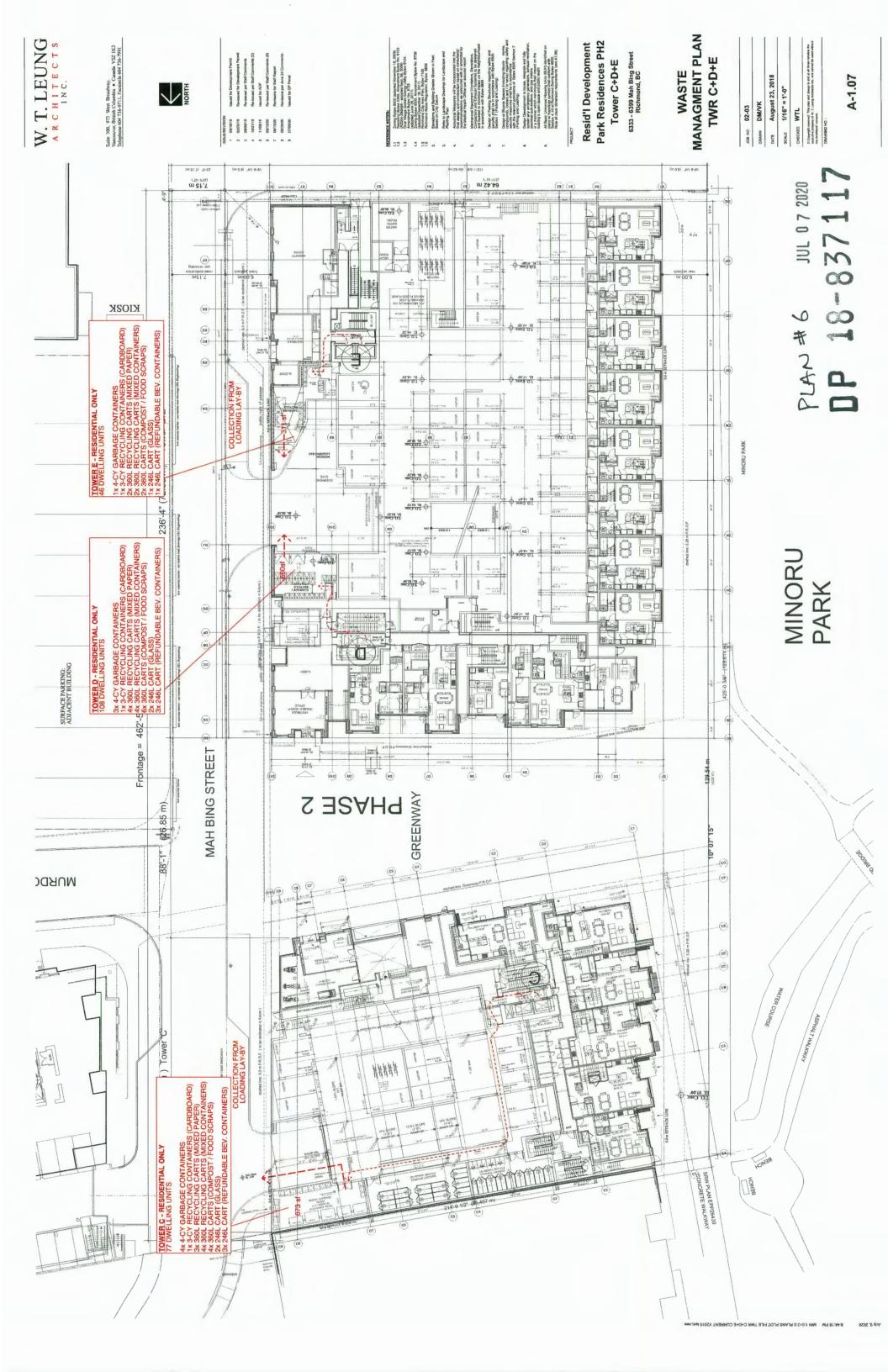












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Suite 300, 973 West Breathway.
Vancouver, British Columbia • Canada VSZ 1K3
Telephone 604 736-9711, Facsimile 604 736-7991

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Resid'I Development Park Residences PH2 6333 - 6399 Mah Bing Street Richmond, BC Tower C+D+E

Floor Plan PL-1

JOB NO. 02-03

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DRAWING NO.: омте August 23, 2018 some 1/16" = 1'-0" смесмер WTL

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PLAN #7

8-837

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W. T. LEUNG
ARCHITECTS
INC. Suite 300, 973 West Brendway, Vancouver, British Columbia • Canada VSZ 1K3 Telephone 604 736-9711, Facsimile 604 736-7991 6333 - 6399 Mah Bing Street Richmond, BC NORTH

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Park Residences PH2 Resid'l Development Tower C+D+E

Floor Plan PL 0

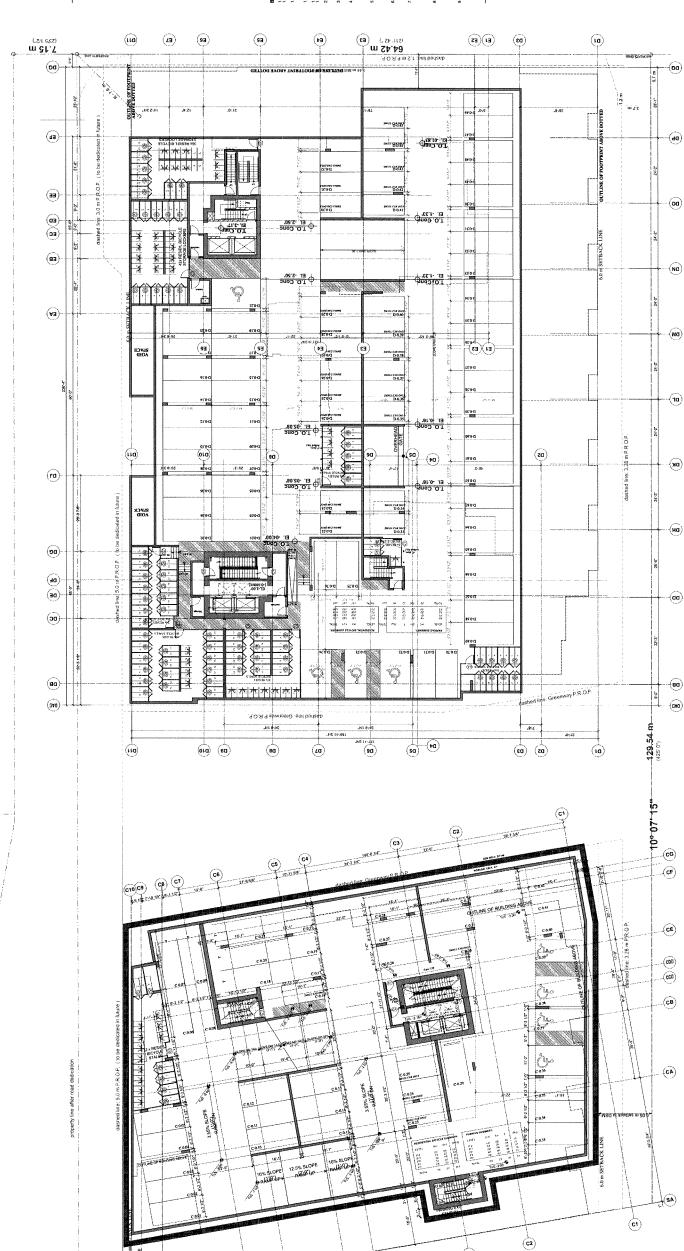
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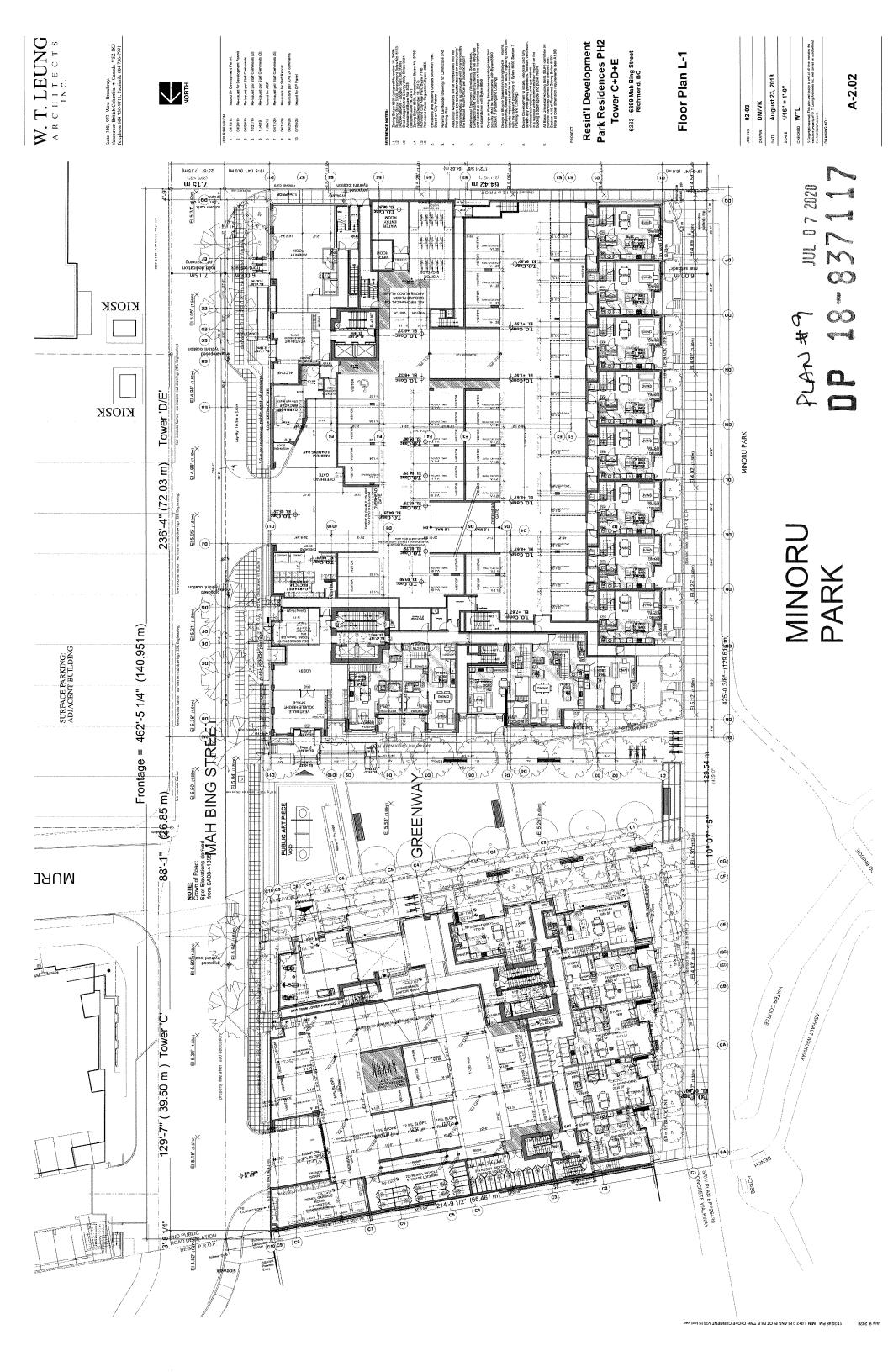
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Design of Parking Structures regarding safety and security shall be in accordance with Sylew 8500 Section 7 (Parking and Loading)

chanical Equipment (Vertilaturs, Generators, ropactors and Exhaust Systems) to be designed located to midmige impact on the Neighbourthood coordance with Bylaw 8856

ayn of Bitsych Spazas (including bisyste - resms, younds, lookers and or restes) respecting stally and eity measures shall be in accordance to interest provisions of Bylaw 5500 Section 7 long and Leading)

Accusing Measures will be incorporated into the final design and construction based on consultants recommendations as concurred with or amended by the Medical Hoalth Officer per accusing report

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Park Residences PH2 Resid'I Development 91 2·0 42000 1000

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-11/4 EMERGENCY DISTRIBUTION ROOM 440 sf T.O. Cone

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6333 - 6399 Mah Bing Street Richmond, BC Tower C+D+E

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Floor Plan L-2

DATE	DRAWN	JOB NO.	
August 23, 2018	DM/VK	02-03	

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JUL 07 2020

Suite 300, 973 West Broadway.
Vancouver, British Columbia • Canada VSZ 1K3
Telephone 604 736-9711, Facsimile 604 736-7991

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August 23, 2018 1/16" = 1'-0"

DRAWN DM/VK

Floor Plan L-3 Courtyard

Park Residences PH2 6333 - 6399 Mah Bing Street Richmond, BC Tower C+D+E (D3) (10)

Resid'l Development

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W. T. LEUNG
ARCHITECTS
INC.

Suite 300, 973 West Broadway, Vancouver, British Columbia • Canada V5Z 1K3 Telephone 604 736-9711, Facsimile 604 736-7991

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W. T. LEUNG
ARCHITECTS
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Suite 300, 973 West Broatway.
Vancouver, British Columbia • Canada VSZ 1K3
Telephone 604 736-9711, Facsimile 604 736-7991

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Suite 300, 973 West Broadway, Vancouver, British Columbia • Canada V5Z 1K3 Telephone 604 736-9711. Facsimile 604 736-7991

NORTH

JOB NO.	02-03
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Resid'I Development Park Residences PH2 Tower C+D+E Floor Plan L-5 6333 - 6399 Mah Bing Street Richmond, BC



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W. T. LEUNG
ARCHITECTS
INC.

NORTH

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Demonstration of the CRD All Education of the

Resid'I Development Park Residences PH2 Tower C+D+E

6333 - 6399 Mah Bing Street Richmond, BC

Floor Plan L-6

02-03	DM/VK	August 23, 2018	1/16" = 1'-0"	iTW
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Suite 300, 973 West Broadway.

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Resid'l Development Park Residences PH2 Tower C+D+E PROJECT

6333 - 6399 Mah Bing Street Richmond, BC

Floor Plan L-7

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DRAWN DATE AUGUST 23, 2018

SCALE 1/16" = 1'-0"

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Resid'l Development Park Residences PH2 6333 - 6399 Mah Bing Street Richmond, BC Tower C+D+E

Floor Plan L-8

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PLAN#16 18-8371

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NORTH

JOB NO 02-03

PLAN#17

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Resid'l Development Park Residences PH2 Floor Plan L-9 6333 - 6399 Mah Bing Street Richmond, BC Tower C+D+E

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Resid'l Development Park Residences PH2

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6333 - 6399 Mah Bing Street Richmond, BC

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Floor Plan L-10

DATE August 23, 2018 SCALE 1/16" = 1'-0" JOB NO 02-03 DRAWN DM/VK

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NORTH

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6333 - 6399 Mah Bing Street Richmond, BC

Floor Plan L-11

August 23, 2018

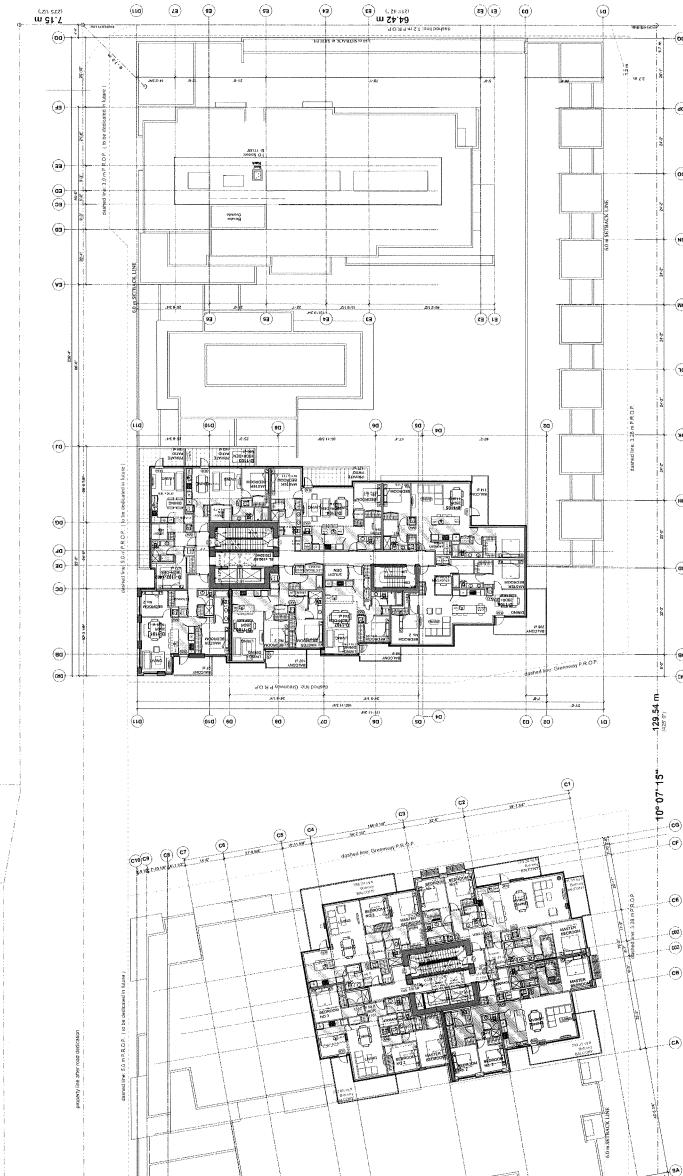
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Resid'l Development Park Residences PH2 Tower C+D+E

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Suite 300, 973 West Broatlway. Vancouver, British Columbia • Cannala VSZ 1K3 Telephone 604 736-9711, Facsimile 604 736-7991

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6333 - 6399 Mah Bing Street Richmond, BC

Floor Plan L-12

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W. T. LEUNG
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Resid'I Development Park Residences PH2 Tower C+D+E

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6333 - 6399 Mah Bing Street Richmond, BC

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Floor Plan L-13

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Tower C+D+E

6333 - 6399 Mah Bing Street Richmond, BC

Floor Plan L-14

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W. T. LEUNG
ARCHITECTS
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Resid'l Development Park Residences PH2

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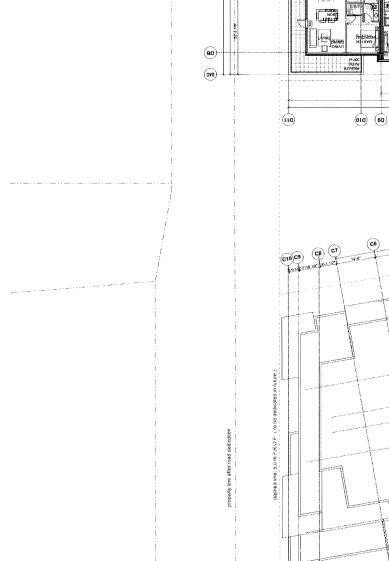
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Resid'I Development Park Residences PH2 Floor Plan L-15

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6333 - 6399 Mah Bing Street Richmond, BC Tower C+D+E

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PLAN #23

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NORTH

6.0 m SETBACK LINE

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6333 - 6399 Mah Bing Street Richmond, BC

Floor Plan 1 -16

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PLAN #24 JUL 0

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Resid'l Development Park Residences PH2 Tower C+D+E

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DM/VK	August 23, 2018	1/16" = 1'-0"	WTL	
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Suite 300, 973 West Broatway, Vancouver, British Columbia • Carada VSZ 1K3 Telephone 604 736-9711, Facsimile 604 736-7991

CONCRETE & ELASTOMERIC PAINT FINISH (BM OC-14 Natural Cream) DOUBLE GLAZED WINDOW IN PREFINISHED ALUMINUM FRAME (window

BACKPAINTED GLAZED PANEL - ACCENT COLOUR BM 2155-20 Gold Mine

SPANDREL PANEL various colours (location TBD)
8a BM 2125-70 Wedding Veil
8b BM 12125-70 Wedding Veil
8c BM HC-139 Philipsburg Blue
8m HC-12 Chondu flowry
8e BM 2013-60 Sandblast
8f BM CC-840 Blue Heroen

BRICK MASONRY - Imperial Gray ©

EL 154.199'

MECHANICAL NOTES

FLUID COOLERS AND AIR HANDLING UNITS concease balling parage; accusate noise militarion measures to be incorporated at BP stage when equipment details and specifications complete

FLUID COOLERS AND AIR HANDLING UNITS conceigle behind metal screen who accustic properties accusic noise mitigation measures to be incoprorated at BP stage when equipment details and specifications complete. (B)

EMERGENCY GENERATOR ROOM generator equipped with engine muffer to reduce at point of discharge 0

PARKADE EXHAUST VENTILATION parkade fans w Variable Frequency Drives ventilation system operates on demand fan speeds match gas concentrations witn parkade <u>_</u>

PASSIVE VENTILATION passive ventilation at service rooms (m)

1 09/18/18 2 09/20/19 3 09/09/19 4 10/21/19 5 11/04/19 6 11/08/19

Park Residences PH 2 Resid'I Development Tower C+D+E

Elevation West

Park Elevation DATE August 23, 2018 SCALE 1/16" DRAWN DM/ VK лов ио. 02-03

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10th FLELSI 167 27.79 m PATAPETE 1300
PA 14th FLEL 128 SO TOP OF SUB 11th FLE 100 SO TOP OF SLAB 9th FLEL 81 533 7th FLet 63 167 8th FL EL 72 501 6th FLEI 53 833 5th FL EL H SOT 12th FLEL 108 8XX 4th FLEL 35 167 TOP OF SLAB 15th FLet 137 830' 13th FLEL 119 167

6333 - 6399 Mah Bing Road Richmond, BC 1st FL EL 7.167 2.18 m TOP OF SLAB 2nd FL EL 1650 3rd FLet 25 839* P-0 EL-2 SO TOP OF SOIR \Diamond GREENWAY

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GEODETIC

Suite 300, 973 West Broadwuy, Vancouver, British Columbia • Canada V5Z 1K3 Telephone 604 736-9711, Facsimile 604 736-7991

MATERIAL LIST

TERRA COTTA PANEL Moeding Quarzgrey (regular layout pattern)

CONCRETE c/w ELASTOMERIC PAINT FINISH (BM OC-14 Natural Cream) TERRA COTTA PANEL Moeding Quarzgrey (accent layout pattern)

DOUBLE GLAZED WINDOW IN PREFINISHED ALUMINUM FRAME (window wall)

BACKPAINTED GLAZED PANEL - ACCENT COLOUR BM 2155-20 Gold Mine

VERTICAL LANDSCAPING (see landscape drawings) GLASS GUARDRAIL

PERFORATED METAL SCREEN (mechanical rooftop units)

BRICK MASONRY - Imperial Gray (n)

EL 154.199'

MECHANICAL NOTES

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FLUID COOLERS AND AIR HANDLING UNITS conceased behind meats access who should properties accusite noise miligation measures to be incorporated at BP stage when equipment details and specifications complete

(B)

EMERGENCY GENERATOR ROOM generator equipped with engine muffler to reduce sound at point of discharge 0

PARKADE EXHAUST VENTILATION parkade fans w'Variable Frequency Drivas ventilation system operates 'on demand' fan speeds match gas concentrations win parkade <u>o</u>

PASSIVE VENTILATION passive ventilation at service rooms

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AARAPETEL 154.00
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TOP OF SLAB 14th FLEL 128 SO TOP OF SLAB

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Park Residences PH 2 Resid'l Development 6333 - 6399 Mah Bing Road Richmond, BC Tower C+D+E

Mah Bing Road **Elevation East**

August 23, 2018 DRAWN DM/ VK JOB NO. 02-03 SCALE 1/16" снескер МТL

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2nd FL £L 18.50 TOP OF SLAB 10th FLELS1 167 13th FLEL 119.167 11th FLet 100 50 9th FLEL 81 833 8th FL EL 72.50 TOP OF SLAB 6th FLet 53 833 TOP OF SLAB 5th FL EL 44.50 3rd FLEL 25 833 12th FL= 109 833 TOP OF SUAB 7th FLELES 167 4th FLEL35.187 1st FL EL 7.167 P-OEL-2.50 TOP OF SLAB **•** • 0 0 (\$) (m) canopy GREENWAY (n) (2) **(-)** (m) (B) GEODETIC

DLAN #26 JUL 0 7 2020

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W. T. LEUNG
ARCHITECTS
INC.

FLUID COOLERS AND AIR HANDLING UNITS conceade behind paper accussing eighting apaging massures to be incorporated at BP s when equipment details and specifications complete. \bigcirc CONCRETE c/w ELASTOMERIC PAINT FINISH (BM OC-14 Natural Cream)

TERRA COTTA PANEL Moeding Quarzgrey (regular layout pattern) TERRA COTTA PANEL Moeding Quarzgrey (accent layout pattern)

MATERIAL LIST

MECHANICAL NOTES

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BACKPAINTED GLAZED PANEL - ACCENT COLOUR BM 2155-20 Gold Mine

GLASS GUARDRAIL

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PERFORATED METAL SCREEN (mechanical rooftop units) VERTICAL LANDSCAPING (see landscape drawings)

SPANDREL PANEL various colours (location TBD)
8a BM 2125-70 Wedding Veil
8b BM HC-1248 Wedgewood Gray
8c BM HC-126 Penigrisgung Blue
8d MH C-126 Penigrisgung Blue
8d MM 2013-50 Sanoblasat
8f BM CO-340 Blue Heroen

BRICK MASONRY - Imperial Gray

(a)

EMERGENCY GENERATOR ROOM generator equipped with engine mulfler to reduce sound 0

PARKADE EXHAUST VENTILATION parkade fans w/ Variable Frequency Drives ventilation system operates 'on demand' fan speeds match ges concentrations win perk <u>_</u>

PASSIVE VENTILATION passive ventilation at service rooms

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Greenway Elevations Park Residences PH 2 Resid'I Development © Copyrdy manwed. This pay and datign is and all different meditor the success property of W. T. Laung Additions linc and cannot be used without prevent Andrested content.

DRAWING NO. :: SOUTH TWR C NORTH TWR D 6333 - 6399 Mah Bing Road Richmond, BC Tower C+D+E DATE August 23, 2018 SCALE 1/16" DRAWN DM/ VK 108 NO. 02-03 CHECKED WTL PARAPETELISM
TOP OF PARAMETERS IN THE PARAMETERS 15th FLEL 137.833" TOP OF SUAB 14th FLEL 128 SO TOP OF SLAB 12th FL-1, 109,833* TOP OF SLAB 10th FLE 91.167 8th FL EL72 50 TOP OF SLAB 5th FL EL H 50) TOP OF SLAB 13th FLet 119.167 11th FLEL 100.50" 4th FLEL38.167 3rd FLEL 25 833 2nd FL EL16.50 TOP OF SLAB 9th FLELBI.833 7th FLEL 63.167 TOP OF SLAB P-0 EL -2.50 TOP OF SLAB 1ST FL EL 7.167 8 JE. 2 (a) \Diamond نم تد 0 (m) (2) EL 154,199'

GREENWAY NORTH ELEVATION TOWER D

GREENWAY SOUTH ELEVATION TOWER C PLAN # 27 DP 18-83711

9:04:02 PM MIN 3.0+4.0 ELEVATIONS+SECTIONS PLOT FILE TWR C+D+E CURRENT V2015.

18-8371

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ARCHITECTS
INC.

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1 09/18/18 2 09/20/19 2 09/20/19 3 09/09/19 4 10/21/19 5 11/04/19 6 11/08/19

TERRA COTTA PANEL Moeding Quarzgrey (accent layout pattern) (18) TERRA COTTA PANEL Moeding Quarzgrey (regular layout pattern)
(18) TERRA COTTA PANEL Moeding Quarzgrey (accent layout pattern) PERFORATED METAL SCREEN (mechanical rooftop units) VERTICAL LANDSCAPING (see landscape drawings) GLASS GUARDRAIL

BACKPAINTED GLAZED PANEL - ACCENT COLOUR BM 2155-20 Gold Mine CONCRETE c/w ELASTOMERIC PAINT FINISH (BM OC-14 Natural Cream) DOUBLE GLAZED WINDOW IN PREFINISHED ALUMINUM FRAME (window SPANDREL PANEL various colours (location TBD)
sa BM 212-570 Wedding Vell
BM HC-146 Wedgewood Gray
be BM HC-146 Wedgewood Gray
BM HC-159 Philipaturg Blue
gd BM HC-12 Concold Nory
BM HC-12 Concold Nory
BM C-240 Blue Heroen

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BRICK MASONRY - Imperial Gray

(G)

EL 154.199'

FLUID COOLERS AND AIR HANDLING UNITS conceiled behind metal screen wit accusic properties accusion order mitigation measures to be incorporated at BP stage when equipment details and specifications complete. accusate noise mitigation measures to be incorporated at BP s when equipment details and specifications complete FLUID COOLERS AND AIR HANDLING UNITS concealed behind parapet PARKADE EXHAUST VENTILATION parkade fans w/ Variable Frequency Drives ventilation system operates on demand fan speeds match gas concentrations win parkade EMERGENCY GENERATOR ROOM generator equipped with engine muffler to red at point of discharge PASSIVE VENTILATION passive ventilation at service rooms (n) 0 0 Ш

MECHANICAL NOTES

MATERIAL LIST



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Suite 300, 973 West Broadway, Vancouver, British Columbia Carada V5Z 1K3 Telephone 604 736-9711. Facsimile 604 736-7991

SPANDREL PANEL various colours (location TBD)

8a BM 2125-70 Wedding Veil

8b BM HC-148 Wedgewood Gray

8c BM HC-148 Wedgewood Gray

8c BM HC-159 Philipsburg Blue

8d MC-12 Concord Nory

8e BM 2013-60 Sanoblast

8f BM CC-840 Blue Heroen (1) (u) (d) (d) (b) (d)

PERFORATED METAL SCREEN (mechanical rooftop units) VERTICAL LANDSCAPING (see landscape drawings)

GLASS GUARDRAIL

BRICK MASONRY - Imperial Gray

EL 154 199'

(a)

DOUBLE GLAZED WINDOW IN PREFINISHED ALUMINUM FRAME (window wall) BACKPAINTED GLAZED PANEL - ACCENT COLOUR BM 2155-20 Gold Mine

A FLUID COOLERS AND AIR HANDLING UNITS conceaded behind paraget acoustic noise miligation measures to be incorporated at 8P stage when equipment details and specifications complete

MECHANICAL NOTES

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CONCRETE a/w ELASTOMERIC PAINT FINISH (BM OC-14 Natural Cream)

TERRA COTTA PANEL Moeding Quarzgrey (regular layout pattern) TERRA COTTA PANEL Moeding Quarzgrey (accent layout pattern)

MATERIAL LIST

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EMERGENCY GENERATOR ROOM generator equipped with engine muffler to reduce sount at point of discharge PARKADE EXHAUST VENTILATION parkade fans w/ Variable Frequency Drives ventilation system operates 'on demand' fan speeds match gas concentrations witn parkade (-)

PASSIVE VENTILATION passive ventilation at service rooms Ш

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Resid'l Development Park Residences PH 2 10th FLEL91.167 27.79 m TOP OF SLAB 14th FLet 128 Sor TOP OF SLAB 13th FLa. 119.187 TOP OF SLAB 12th FLE 109,853 11th FLEL 100 50" 9th FLELALASS 15th FLet 137 833 TOP OF SLAB (m) 0 **(**-) (0)

Courtyard Elev. TWR E NORTH TWR C

6333 - 6399 Mah Bing Road Richmond, BC Tower C+D+E

> 8th FL E.72501 7th FLE 63.16

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5th FL EL 450 TOP OF SLAB 4th FLEL 35.167 TOP OF SLAB 3rd FLet 25 800'

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COURTYARD NORTH ELEVATION TOWER E

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PLAN #29 JUL 0 7 2020

LANE SOUTH ELEVATION TOWER E

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18-8371

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MATERIAL LIST

TERRA COTTA PANEL Moeding Quarzgrey (regular layout pattern)

TERRA COTTA PANEL Moeding Quarzgrey (regular layout pattern)

CONCRETE ow ELASTOMERIC PAINT FINISH (BM OC-14 Natural Cre.)

CONCRETE ow ELASTOMERIC PAINT FINISH (BM OC-14 Natural Cre.)

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CONCRETE & LASTOMERIC PAINT FINISH (BM OC-14 Natural Cream)

DOUBLE GLAZED WINDOW IN PREFINISHED ALUMINUM FRAME (window wall)

BACKPAINTED GLAZED PANEL - ACCENT COLOUR BM 2155-20 Gold Mine

SPANDREL PANEL various colours (location TBD)

8a BM 2125-70 Weeding Veil
8b BM HC-148 Weedengood Glay
8c BM HC-136 Philipsburg Blas
8d BM 16-12 Concord lavoy
8e BM 2013-90 Sandbast
81 BM CC-840 Blue Heroen

Park Residences PH 2 Resid'l Development Tower C+D+E

6333 - 6399 Mah Bing Road Richmond, BC

MATERIAL BOARD **EQUITONE TE60** PHASE 2

лов ис. 02-03 режим DM, VK рате AUGUST 31, 2018

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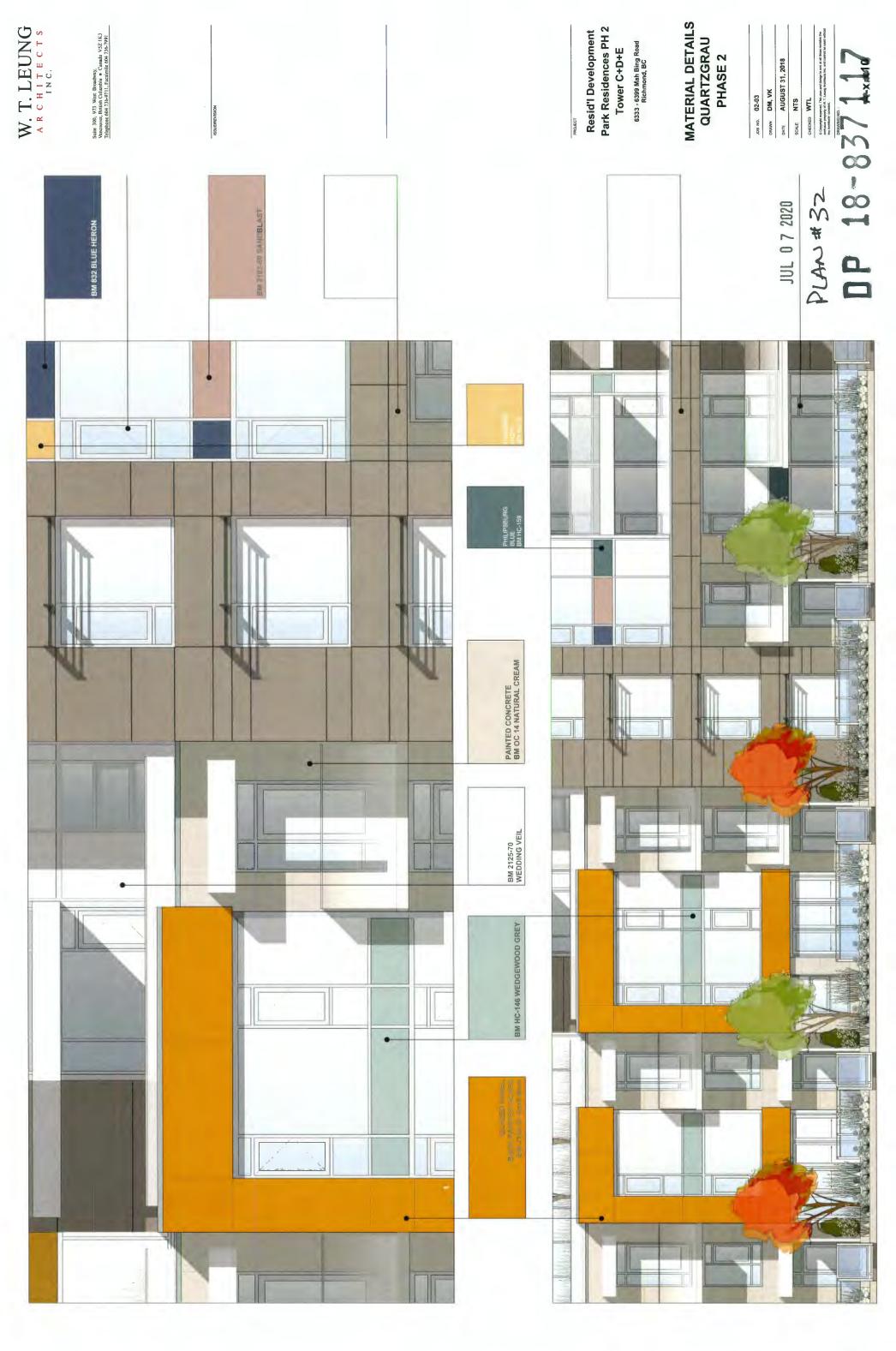
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PAINTED CONCRETE PAINTED CONCRETE BUILDING BM OC 14 NATURAL CREAM GLASS SPANDREL PANEL BM 2125-70 WEDDING VEIL GLASS TOWER PORTION

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4 10/21/19
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Resid'l Development

Park Residences PH 2 6333 - 6399 Mah Bing Road Richmond, BC Tower C+D+E

Sections TWR C+D+E

DRAWN DIM, VK JOB NO 02-03

DATE AUGUST 31, 2018
SCALE WTL

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PLAN #33

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The Anticide of Chicago and C Resid'l Development Park Residences PH 2 Compare (2 Packs) Extensive specified and ordered agreements of the Packs (2 Packs) Extensive specified and personnel specified (2 Packs) Extensive Specifie Annual II and a 2001 feature of the special of the Sections TWR C+D+E 6333 - 6399 Mah Bing Road Richmond, BC Tower C+D+E SCALE WTL DRAWN DM, VK JOB NO 02-03 PARAPET ELISCON
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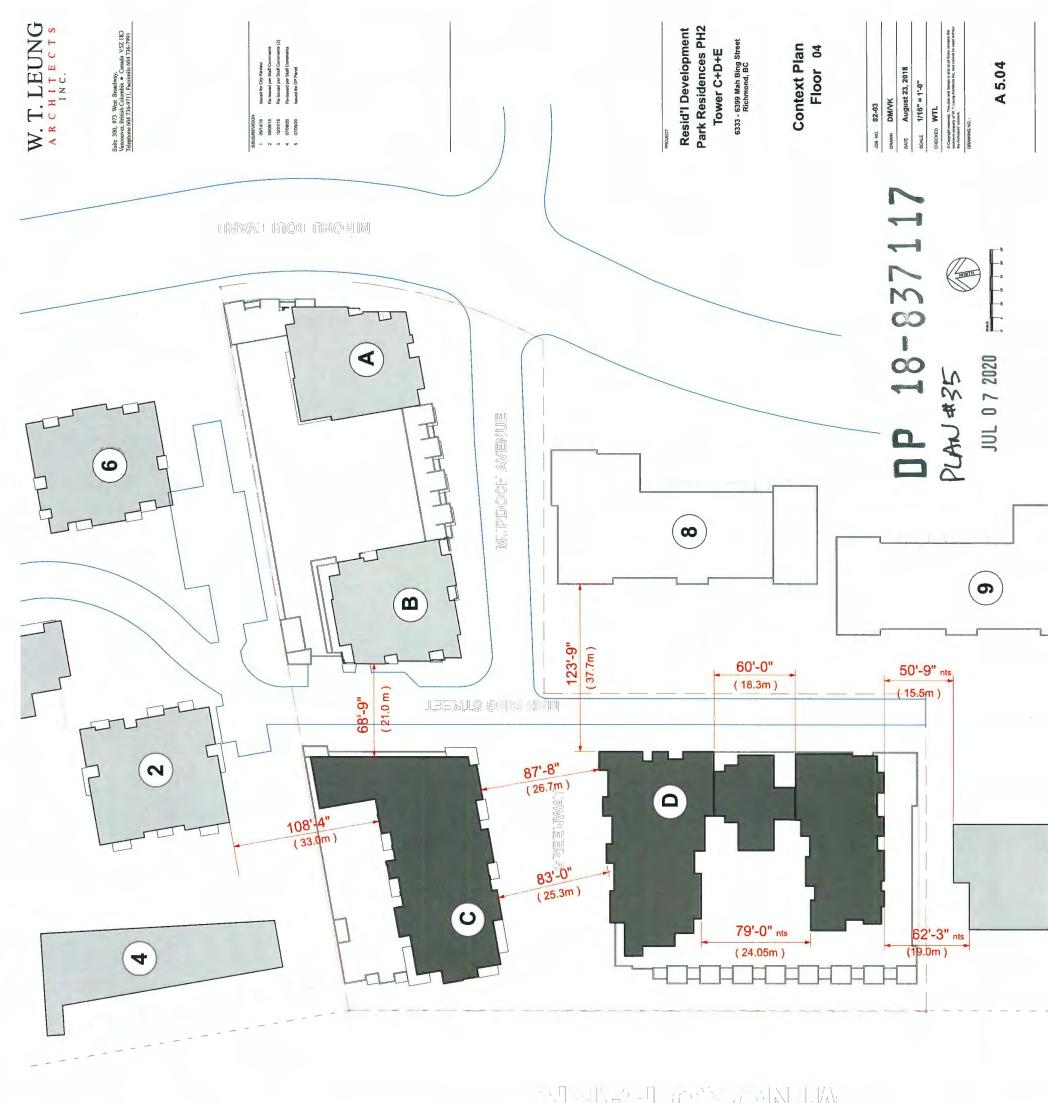
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Carrera Mid-Rise Carrera Amenity

8 519 sf

Carrera Tower Carrera Tower

FL PLATE

NAME

#

adjacent floorplate sizes approx 6 œ *** ВОТИВСЕИ РКОРЕКТІЕS**

12 610 sf

Minoru Gardens

0 000 sf

Low Rise Low Rise

0 000 sf

7 800 sf

7 800 sf

Kiwanis Tower Kiwanis Tower

4 360 sf

SUBJECT SITE

12 623 sf

7 577 sf

13 219 sf

> 8 Floor Level

T.O. Slab - El

FL PLATE NAME #

12 610 sf 16 395 sf 0 000 sf 0 000 sf 7 800 sf 7 800 sf 8 519 sf Carrera Mid-Rise Carrera Amenity Minoru Gardens Kiwanis Tower Carrera Tower Kiwanis Tower Carrera Tower Low Rise e 7 10 *** PDJACEN PROPERTIES**

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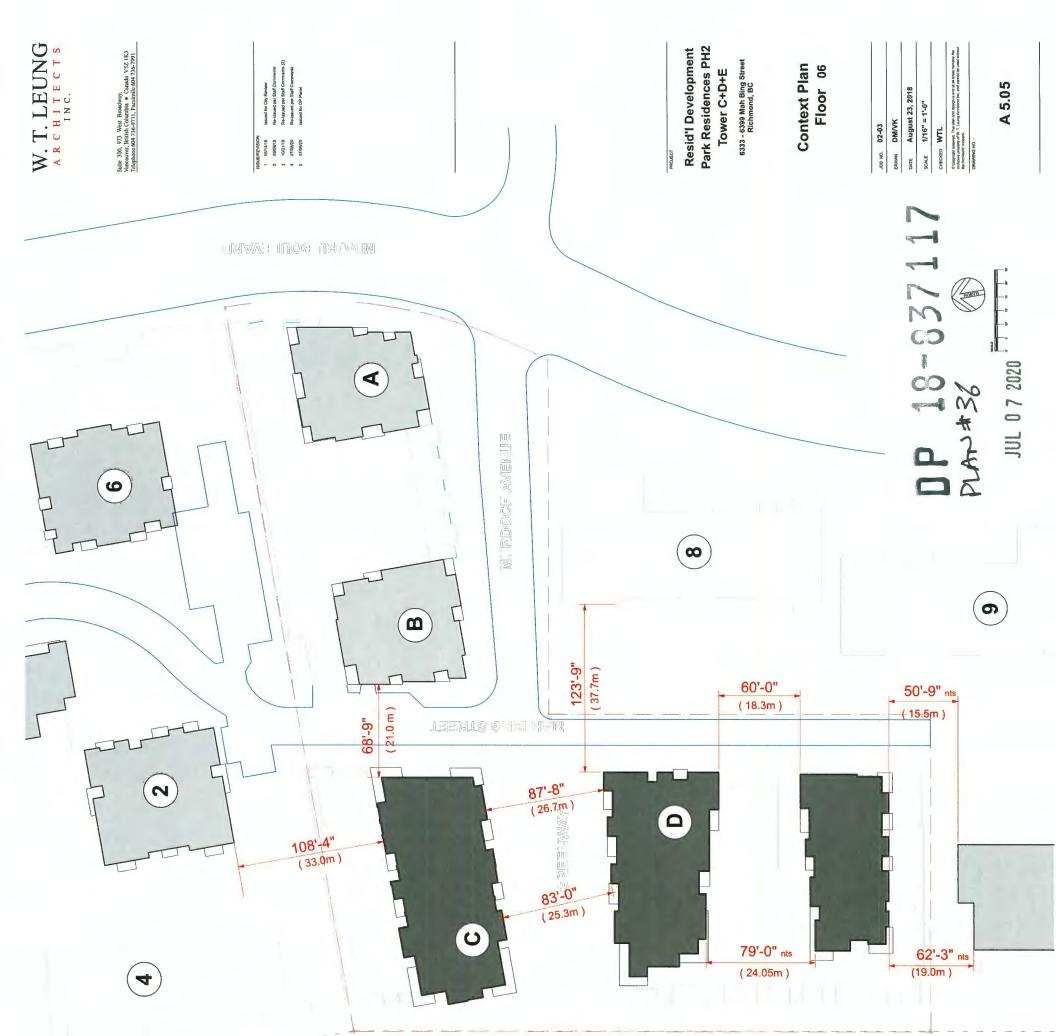
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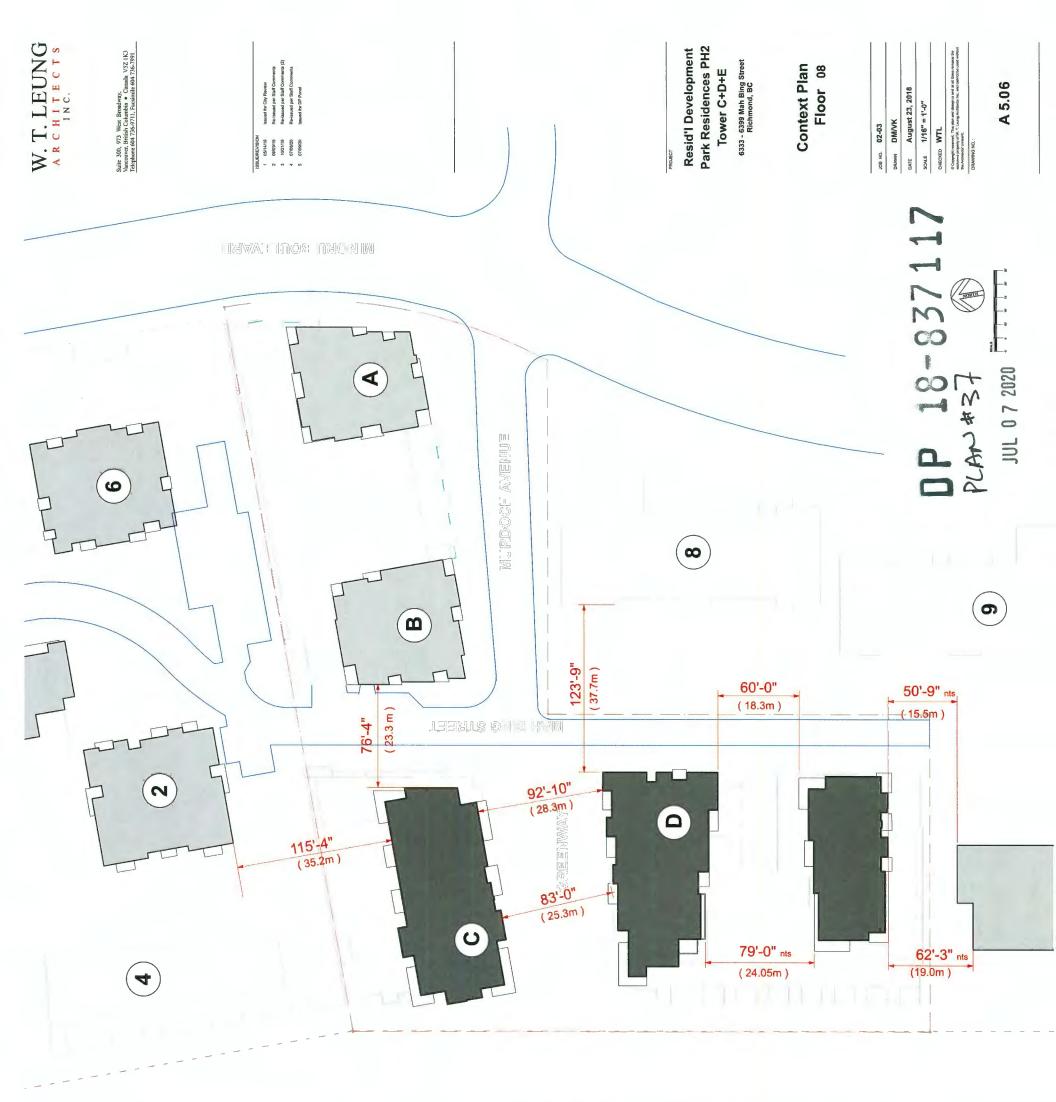
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Floor Level





FL PLATE

NAME

#

12 610 sf

Minoru Gardens

Kiwanis Tower

0 000 sf

Low Rise Low Rise

00 6

0 000 sf

Kiwanis Tower

*** POJACEN PROPERTIES**

0 000 sf

Carrera Amenity

16 395 sf

Carrera Mid-Rise

8 519 sf

Carrera Tower

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Carrera Tower

10 157 sf

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SUBJECT SITE

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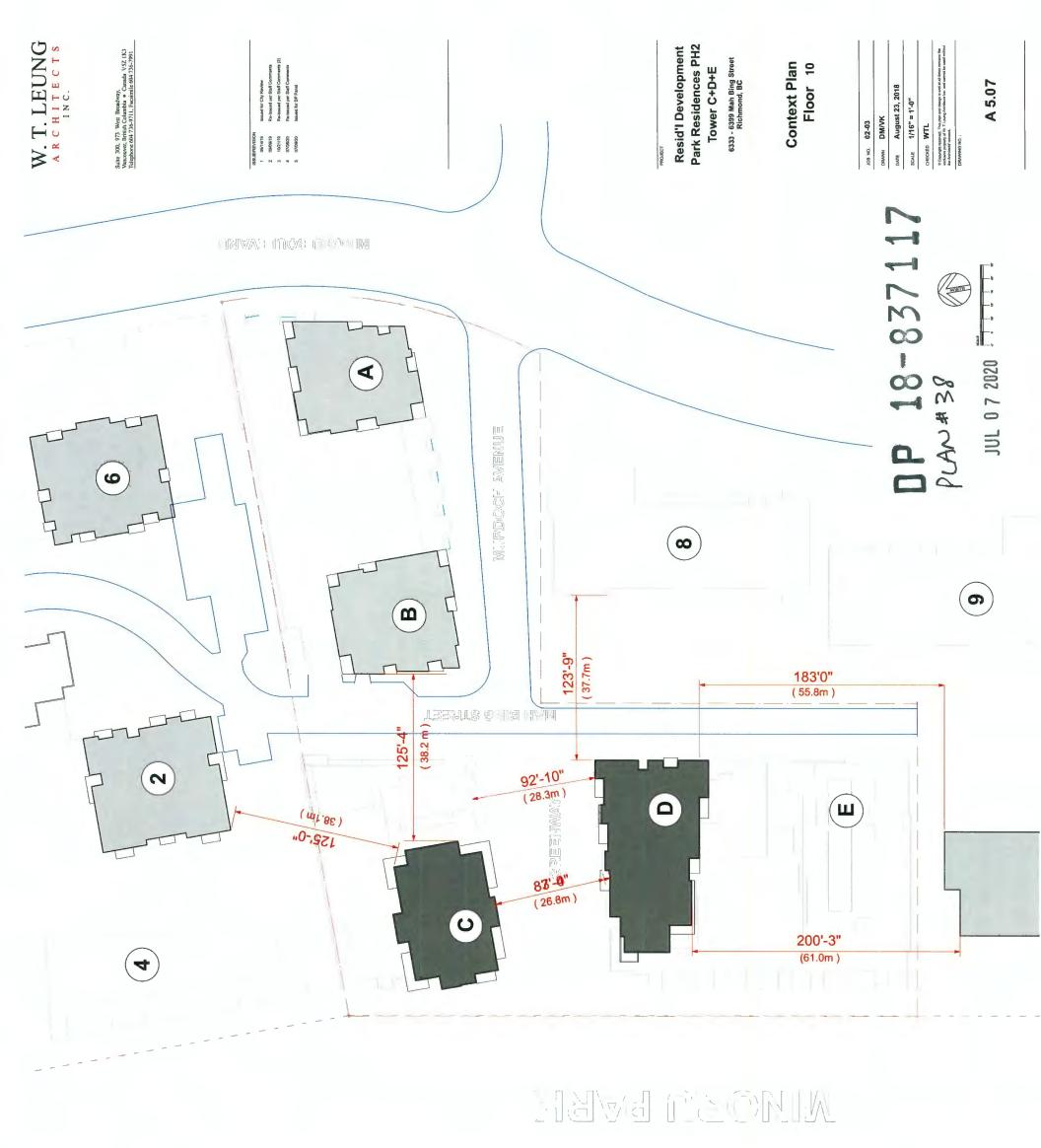
6 280 sf

6399 Mah Bing 6355 Mah Bing

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08 Floor Level

72.50 T.O. Slab - EI



FL PLATE

NAME

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Carrera Tower

7 m 4

Carrera Tower

Minoru Gardens

Low Rise

00 6

0 000 sf

Low Rise

adjacent floorplate sizes ap

7399 Murdoch

4 B

7333 Murdoch

6399 Mah Bing 6355 Mah Bing

6 668 sf

6333 Mah Bing

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SUBJECT SITE

7 800 sf

7 800 sf

Kiwanis Tower Kiwanis Tower

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*** POJACEN PROPERTIES**

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0 000 sf

Carrera Amenity

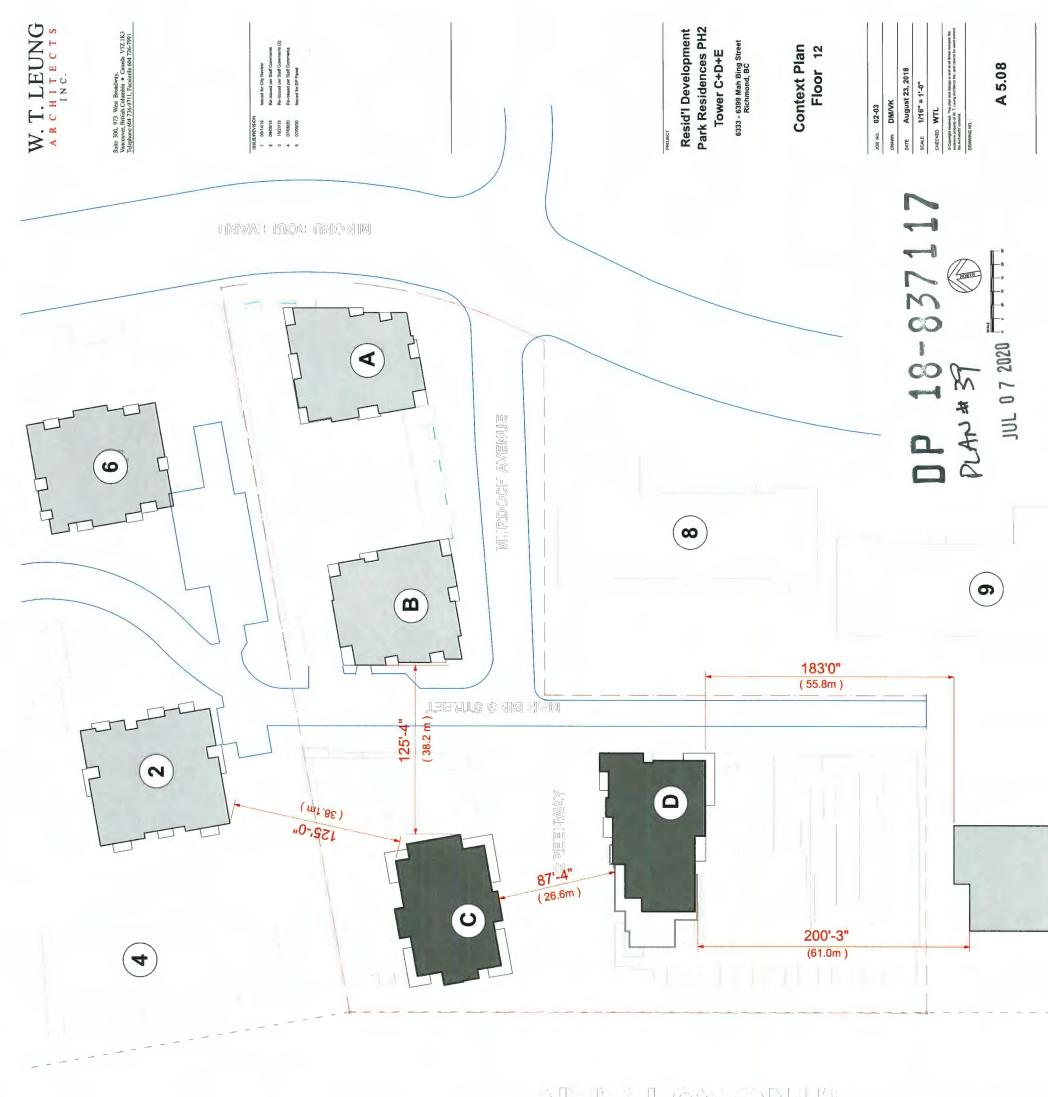
Carrera Mid-Rise

10 Floor Level

T.O. Slab - EI

(25.65m above ground plain

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FL PLATE 12 610 sf 8 519 sf 7 800 sf 0 000 sf 6 865 sf 7 176 sf 0 000 sf 0 000 sf 0 000 sf 7 800 sf 6 660 sf 6 668 sf Carrera Mid-Rise Minoru Gardens Carrera Amenity Kiwanis Tower 6355 Mah Bing **Kiwanis Tower** 6333 Mah Bing Carrera Tower 7399 Murdoch 7333 Murdoch Carrera Tower Low Rise Low Rise NAME ∢ 8 # O ٥ 7 က 4 ro 9 6

*** ADJACEN PROPERTIES**

SUBJECT SITE

0 000 sf

6399 Mah Bing

Floor Level

12

T.O. Slab - El

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W. T. LEUNG
ARCHITECTS
INC. Resid'I Development Park Residences PH2 Suite 300, 973 West Broadway, Vancouver, British Columbia • Canada V5Z 1K3 Telephone 604 736-9711, Facsimile 604 736-7991 © Copyright reserved. Then plan and detection is such as all when annually the includes properly of Ver. T. Laway Anchitects Inc., and carried be vamed within the Anchostic Contest.

DRAWARMS NO.: Context Plan Floor 14 6333 - 6399 Mah Bing Street Richmond, BC Tower C+D+E A 5.09 DATE August 23, 2018 SCALE 1/16" = 1'-0" JOB NO. 02-03 DRAWN DM/VK CHECKED WTL DP 18-837117 CIAAVE IUQE URONIM 4 JUL 0 7 2020 PLAN #46 MIRDOCK AVENUE ဖ œ B 183'0" (55.8m) THE STREET (38.8 m) 127'-4 133,-0" SEENWARY 87'-4" (26.6m) O 200'-3" 4

FL PLATE

NAME

#

Minoru Gardens

Kiwanis Tower

Kiwanis Tower

*** ADJACEN PROPERTIES** *

0 000 sf

Low Rise Low Rise

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0 000 sf

adjacent floorplate sizes approximate

6355 Mah Bing

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6333 Mah Bing

SUBJECT SITE

6399 Mah Bing

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5 540 sf

7333 Murdoch

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7 600 sf

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Carrera Amenity

8 275 sf

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Carrera Mid-Rise

8 275 sf

Carrera Tower

Floor Level

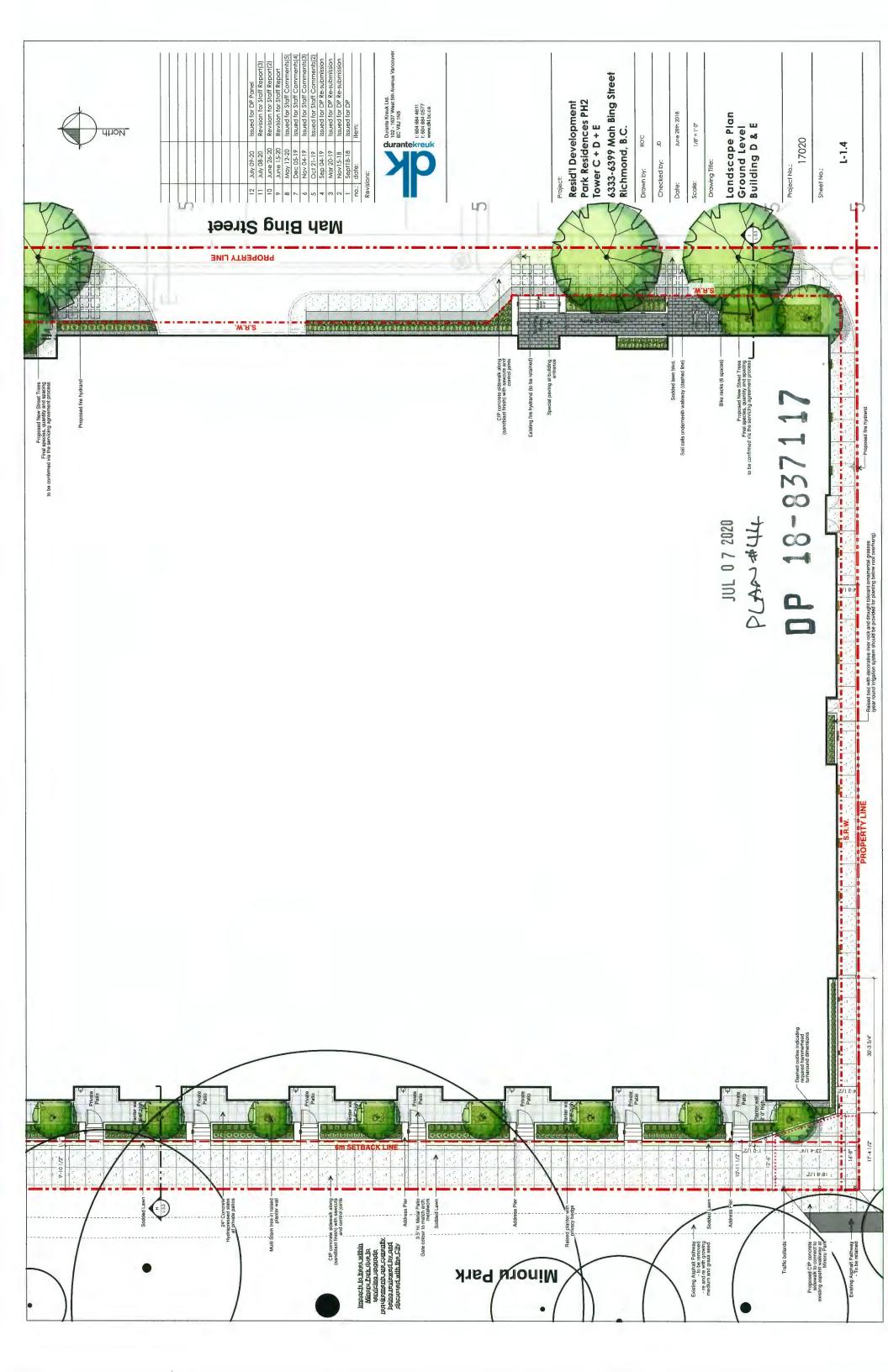
T.O. Slab - El 128.50

(37.05m above ground plail



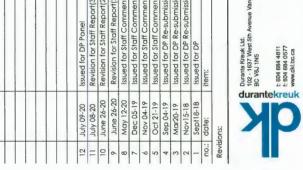












	Resid'i Development	Park Residences PH2	+ D + E	6333-6399 Mah Bing Street	d, B.C.	RO'C	Qr
:000:	Resid'I De	Park Resi	Tower C + D + E	6333-639	Richmond, B.C.	Drawn by:	Checked by:

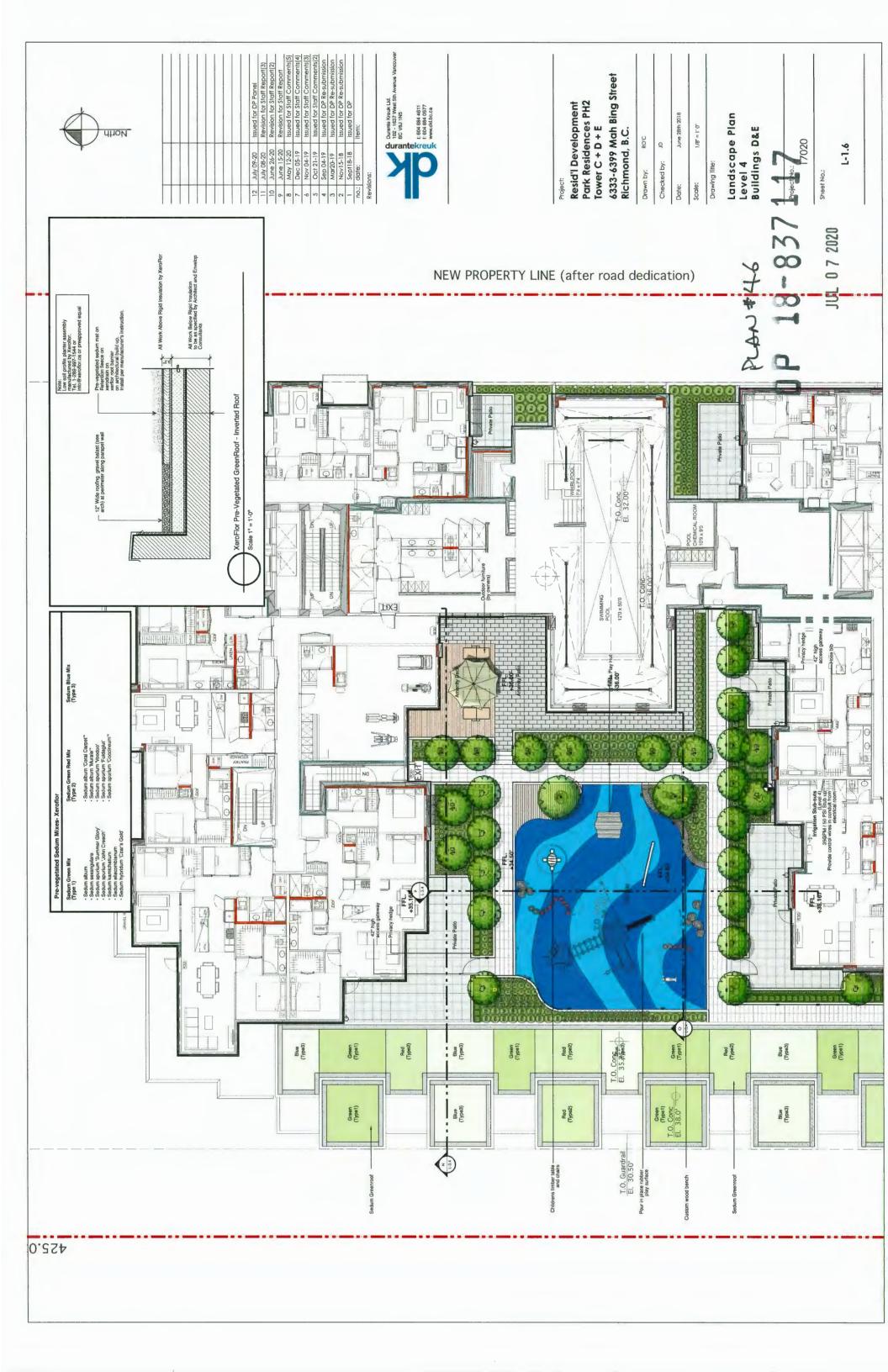
Landscape Plan Level 4 Building C

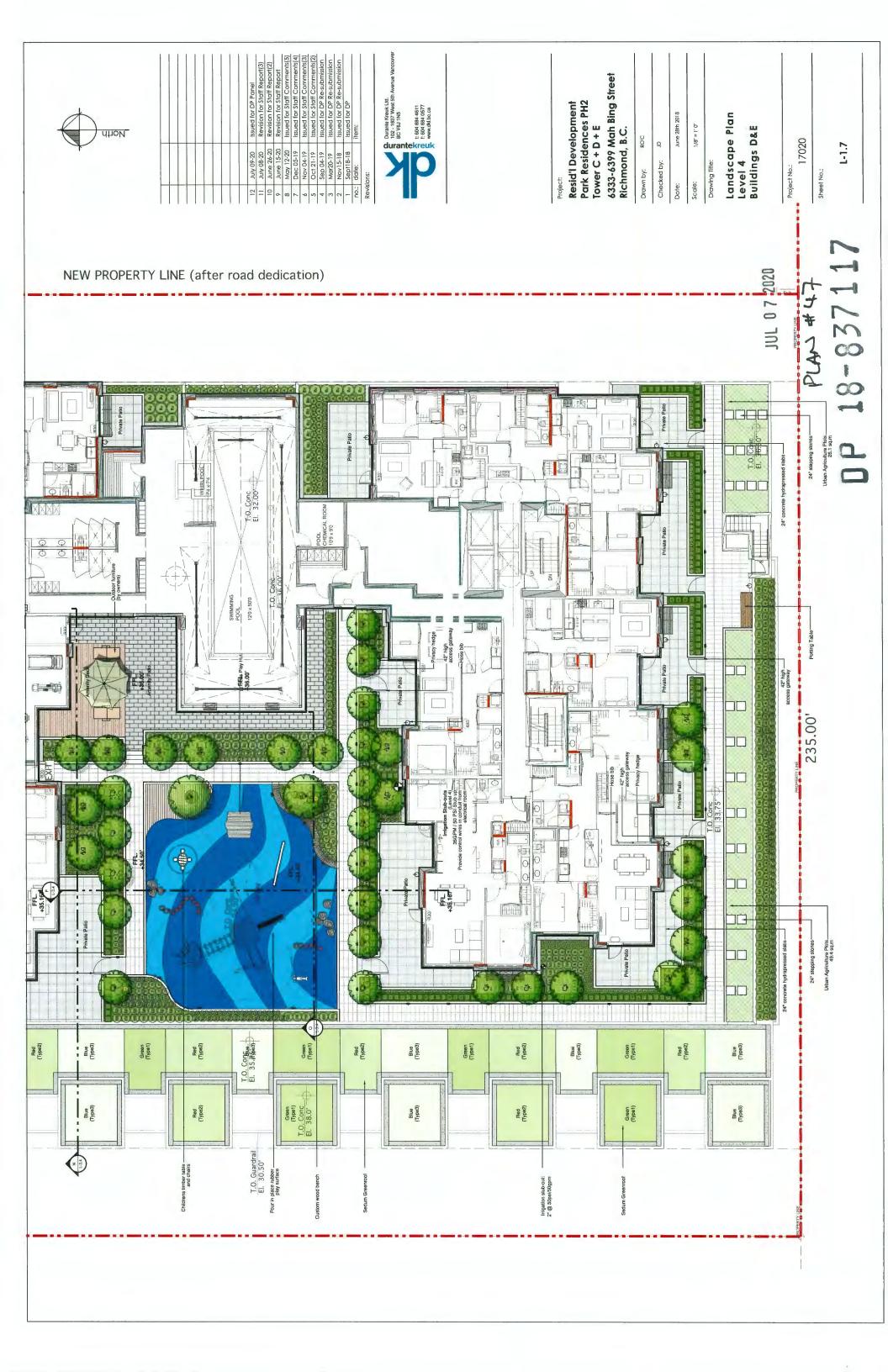
June 28th 2018 1/8"=1"0"

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Project No.	
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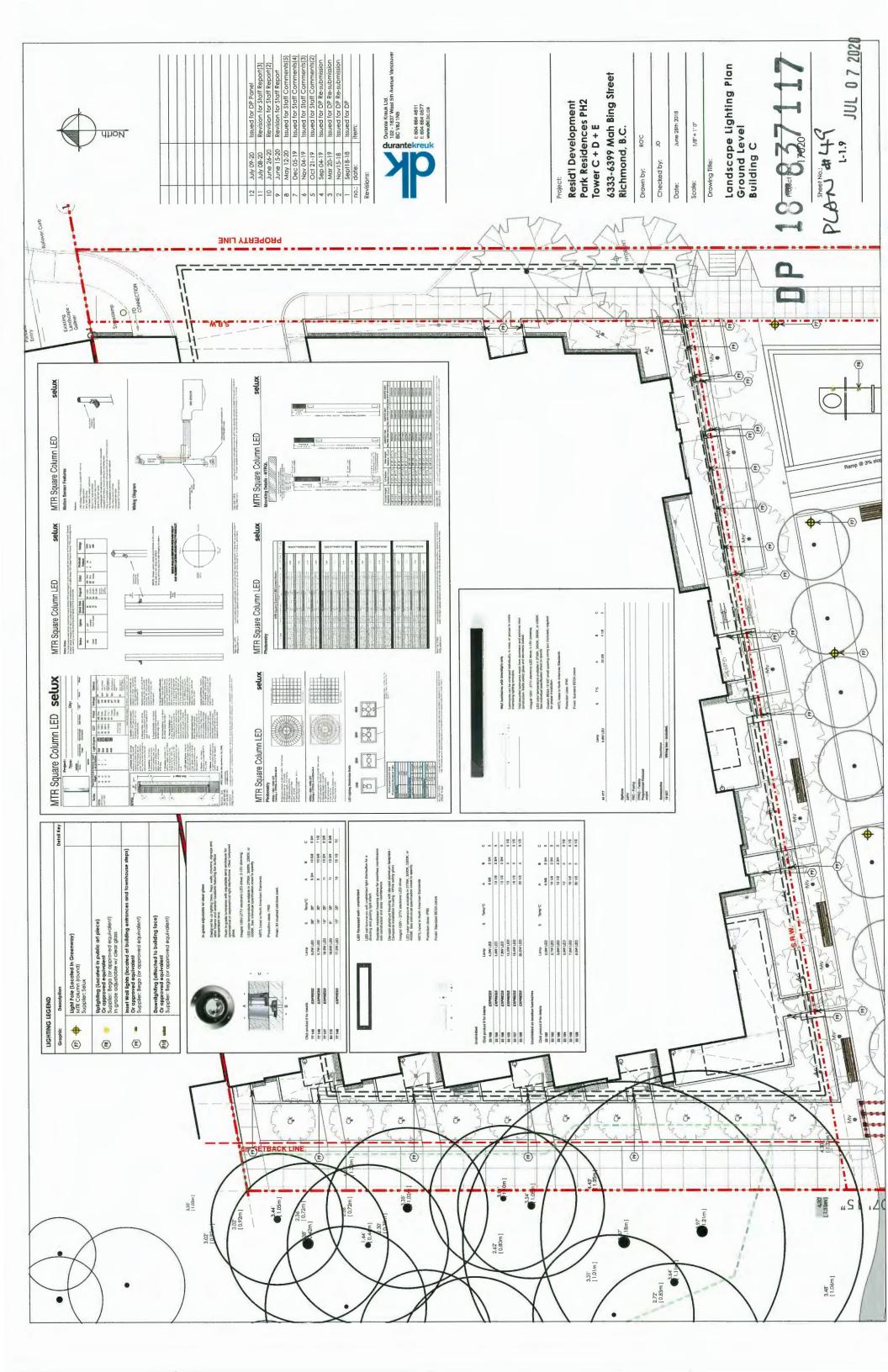
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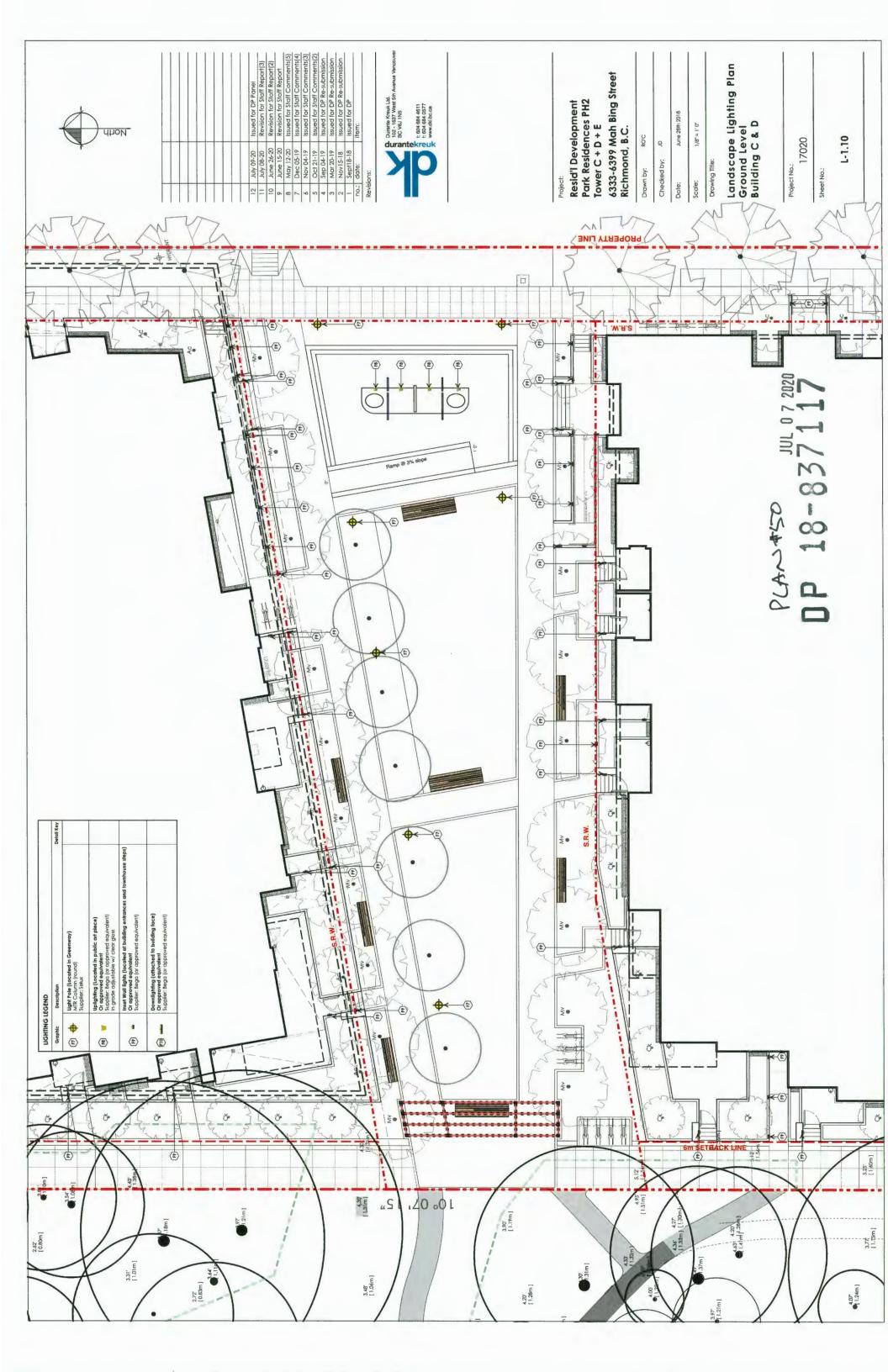
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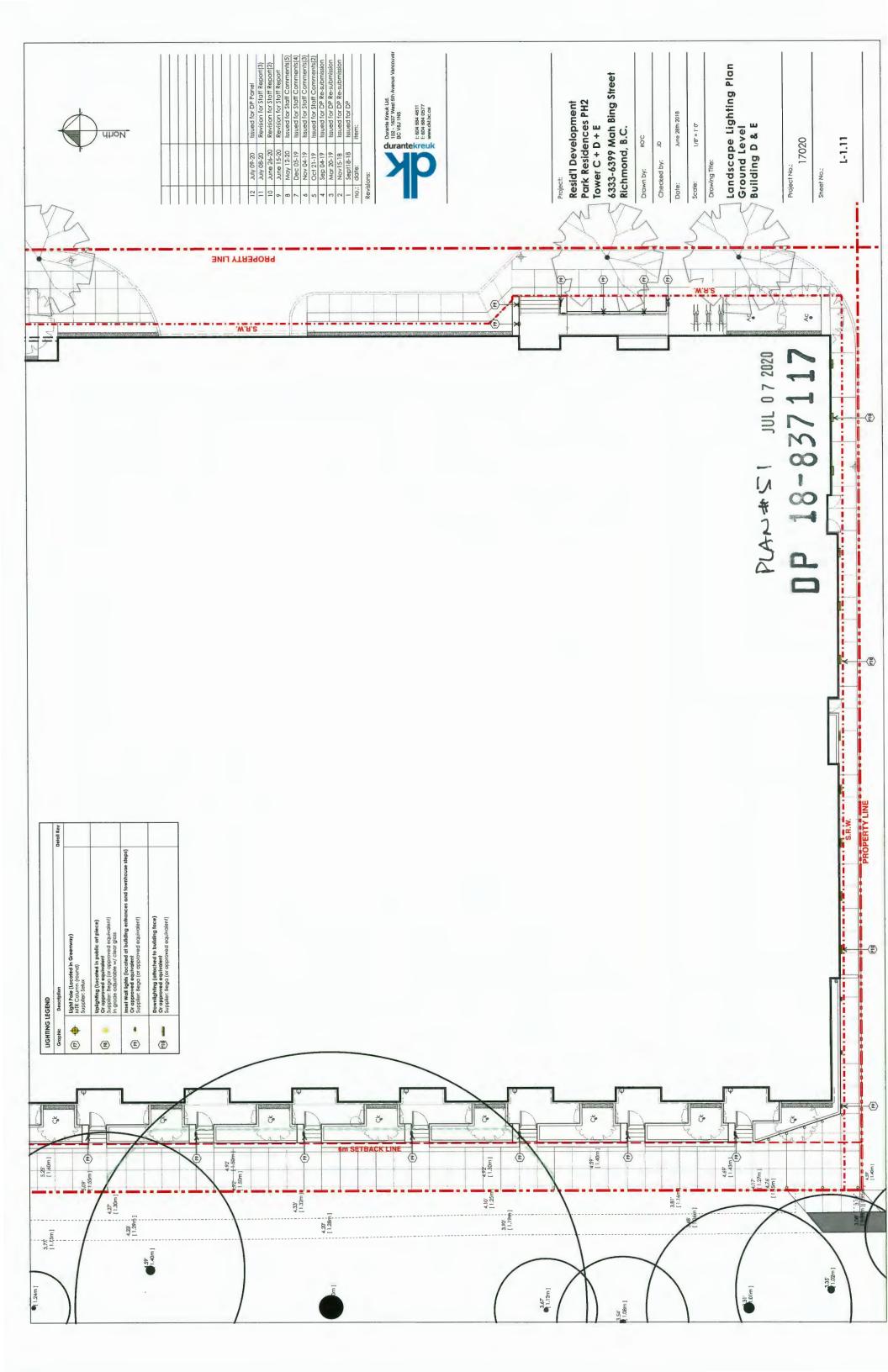






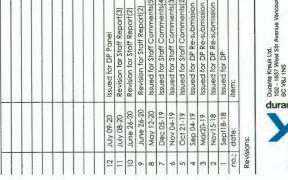








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North

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MAMMA

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S w
6333-6399 Mah Bing Stree Richmond, B.C.

RO'C

Drawn by:

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	June 28th 2018	1/8" = 1 0"		Landscape Lighting Plan Level 4
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Lighting
Landscape Level 4 Building C
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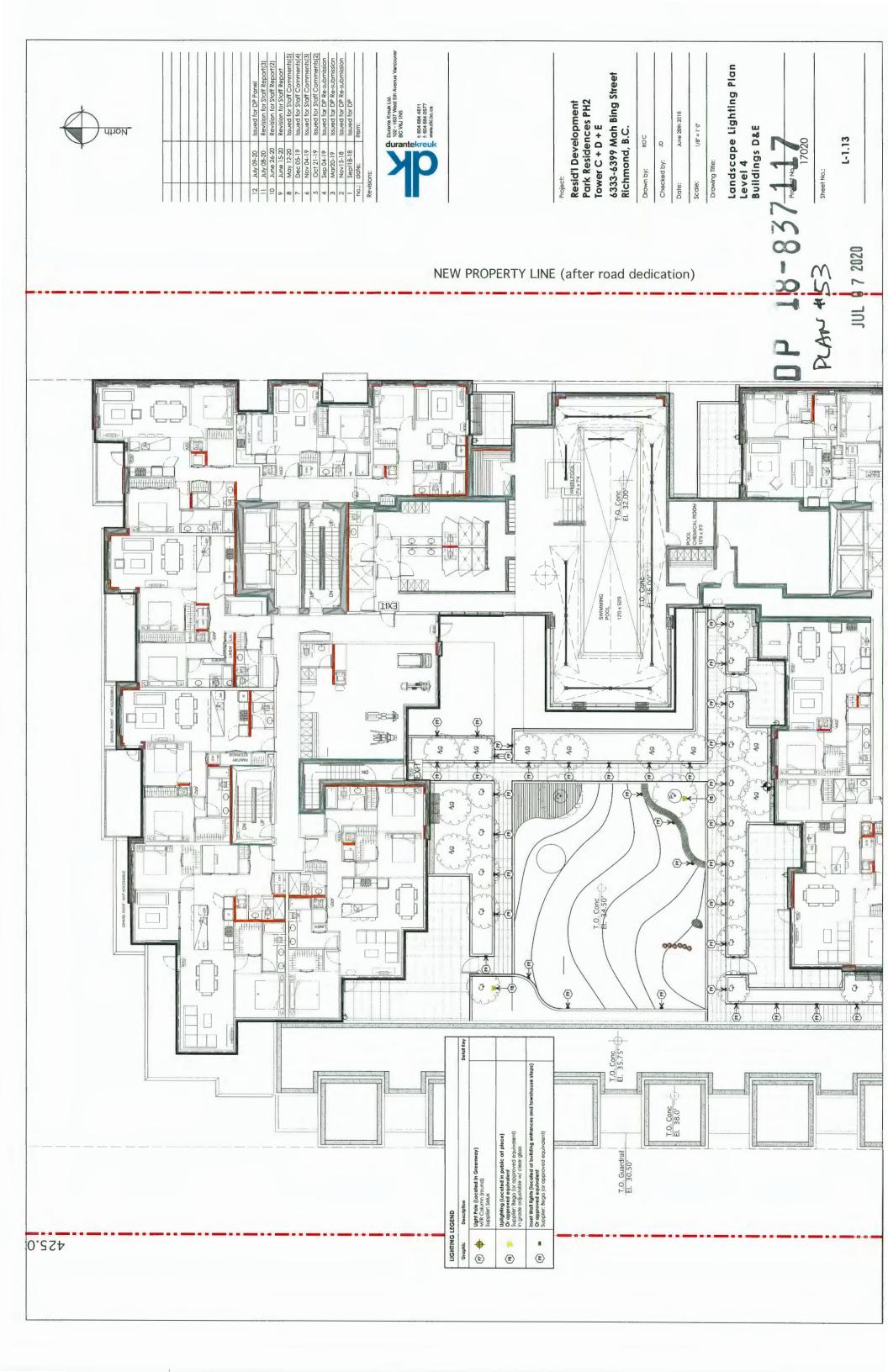
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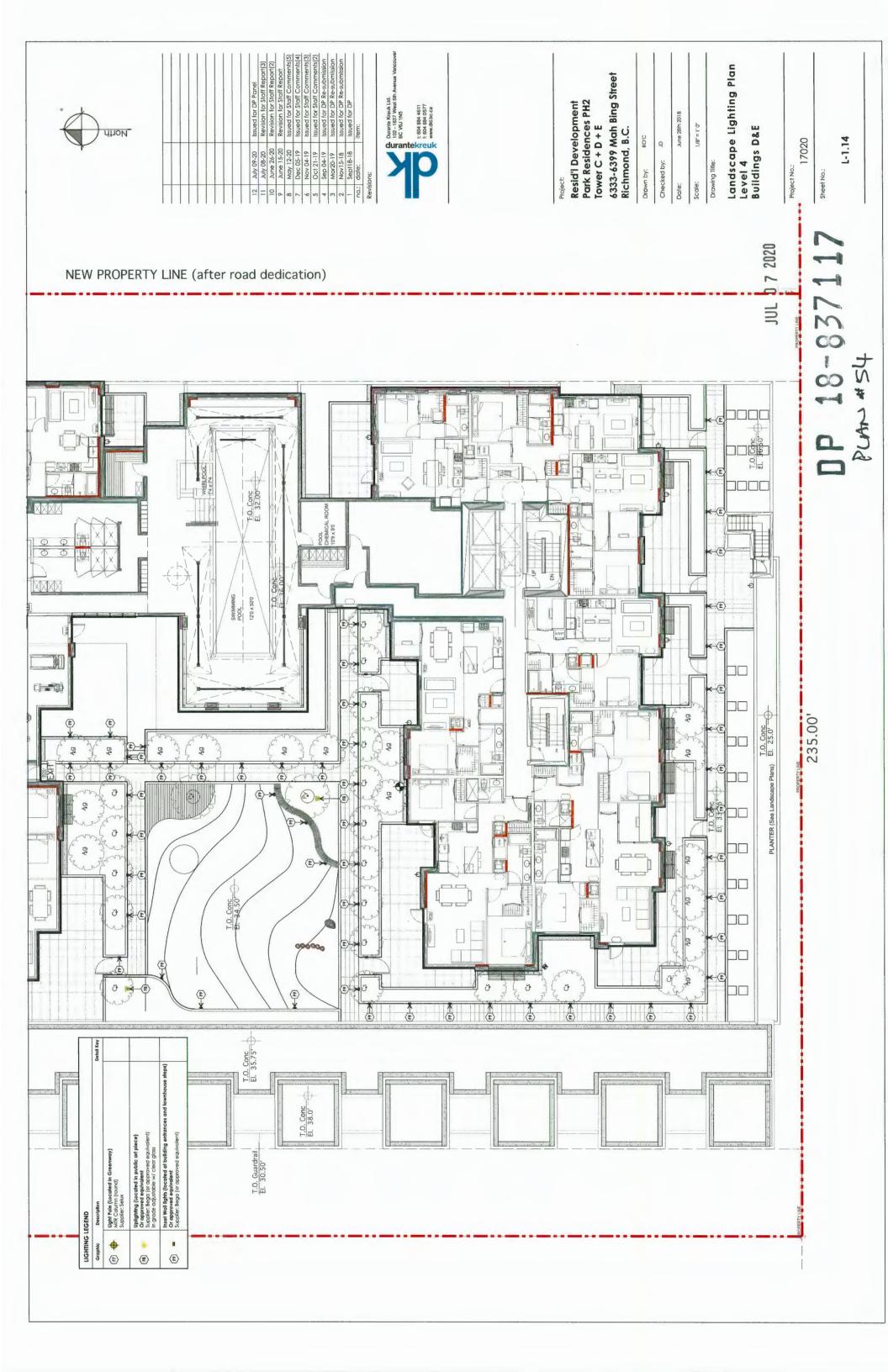
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22	1
170	
	Z to
	9

DP 18-857

L-1.12









2269.8 m² SUMMARY OF OUTDOOR SPACE REQUIREMENTS 1,398m2 871.8m2 MINIMUM OCP OPEN SPACE REQUIREMENT (6m2/ per unit)
MINIMUM CCAP OPEN SPACE REQUIREMENT (10% of net site Area) # OF UNIT IN PROPOSED DEVELOPMENT TOTAL OUTDOOR OPEN SPACE REQUIRED

PIPE

10101

Issued for Staff Comments[2]
Issued for DP Re-Submission
Issued for DP Re-Submission
Issued for DP Re-Submission
Issued for DP 229 (Tower C 72, Tower D+E 157) 2053.4 m2

1001.3 m2 Private Outdoor Space Provided (L4) Public Outdoor Space Provided (L1)

3,054.3 m² Total Outdoor Space Provided

6m SETBACK LINE

425.03'

.SI .ZO .OI

COMMON CHILDREN'S PLAY SPACE AREAS

'Public' Ground Level 'Private' North Tower(C) Level 4 'Private' South Towers(D&E) Level 4

229 # of Unit in Poposed Development (Tower C, D & E)

TOTAL CHILDREN'S PLAY SPACE PROVIDED

Total Inaccessible Green Roof Area

388.3 m2 154.6 m2 **542.9 m2** South Towers(D&E) Level 4 North Tower(C) Level 9 **Total**

LEGEND

Common Outdoor Open Space

Description

Graphic

Children's Play Space

Inaccessible Green Roof

Resid'l Development Park Residences PH2 Tower C + D + E 6333-6399 Mah Bing Street

Richmond, B.C.

ROC

Drawn by:

Z Z Checked by:

Landscape CCAP Amenity Calculations Level 4 Drawing Title:

L-1.17

Durane Kouk Lú.
102 - 1637 West Gn A
102 - 1637 West Gn A
www.dki.bc.ca.
www.dki.bc.ca.

379.9 m2 100.2 m2 217.4 m 2 **697.5 m2** 687 m² 697.5 m² MINIMUM CHILDREN'S PLAY SPACE REQUIRED 3 sq. ft. per Unit (1/3 of OCP Requirement)

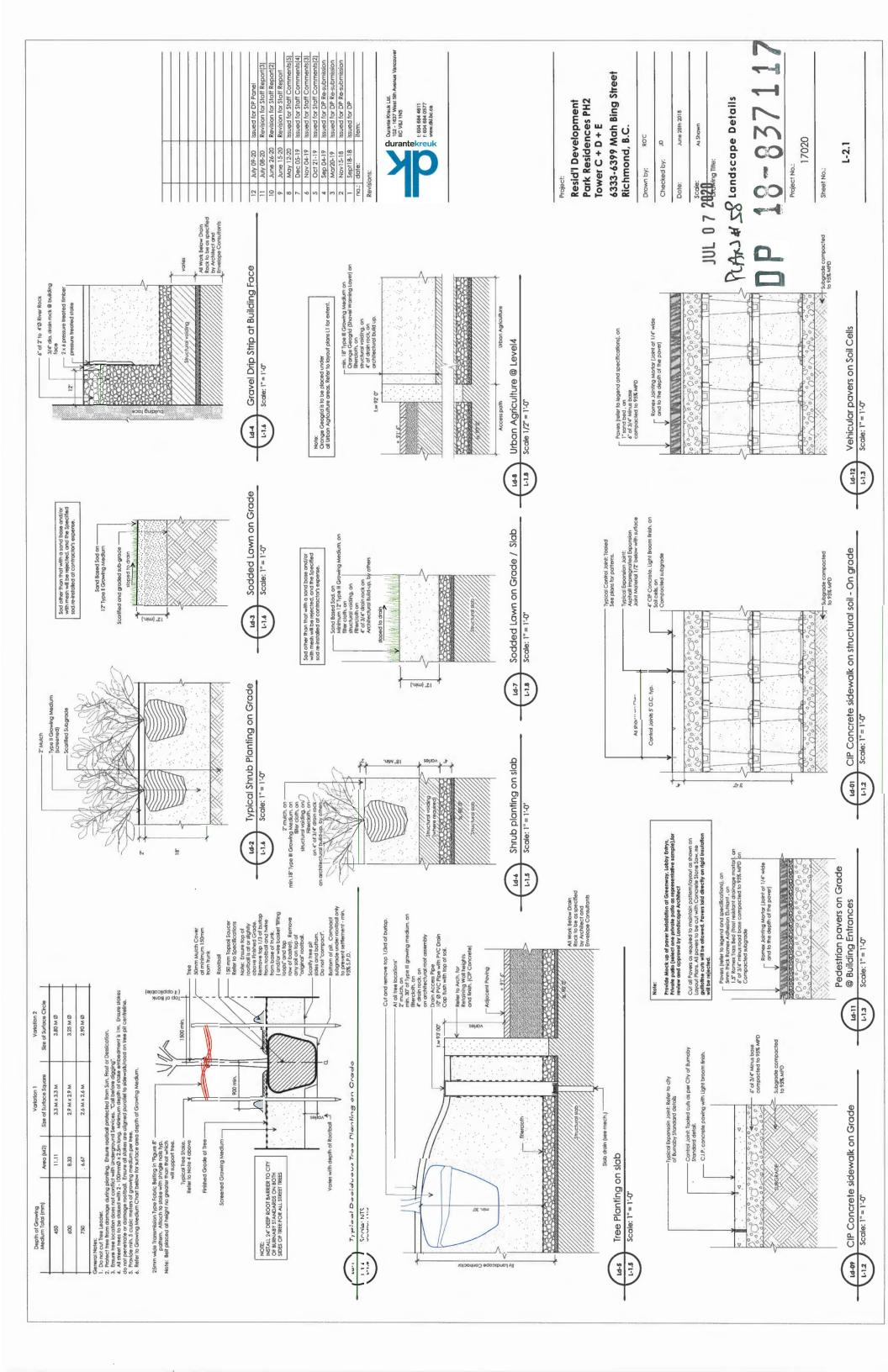
NEW PROPERTY LINE (after road dedication)

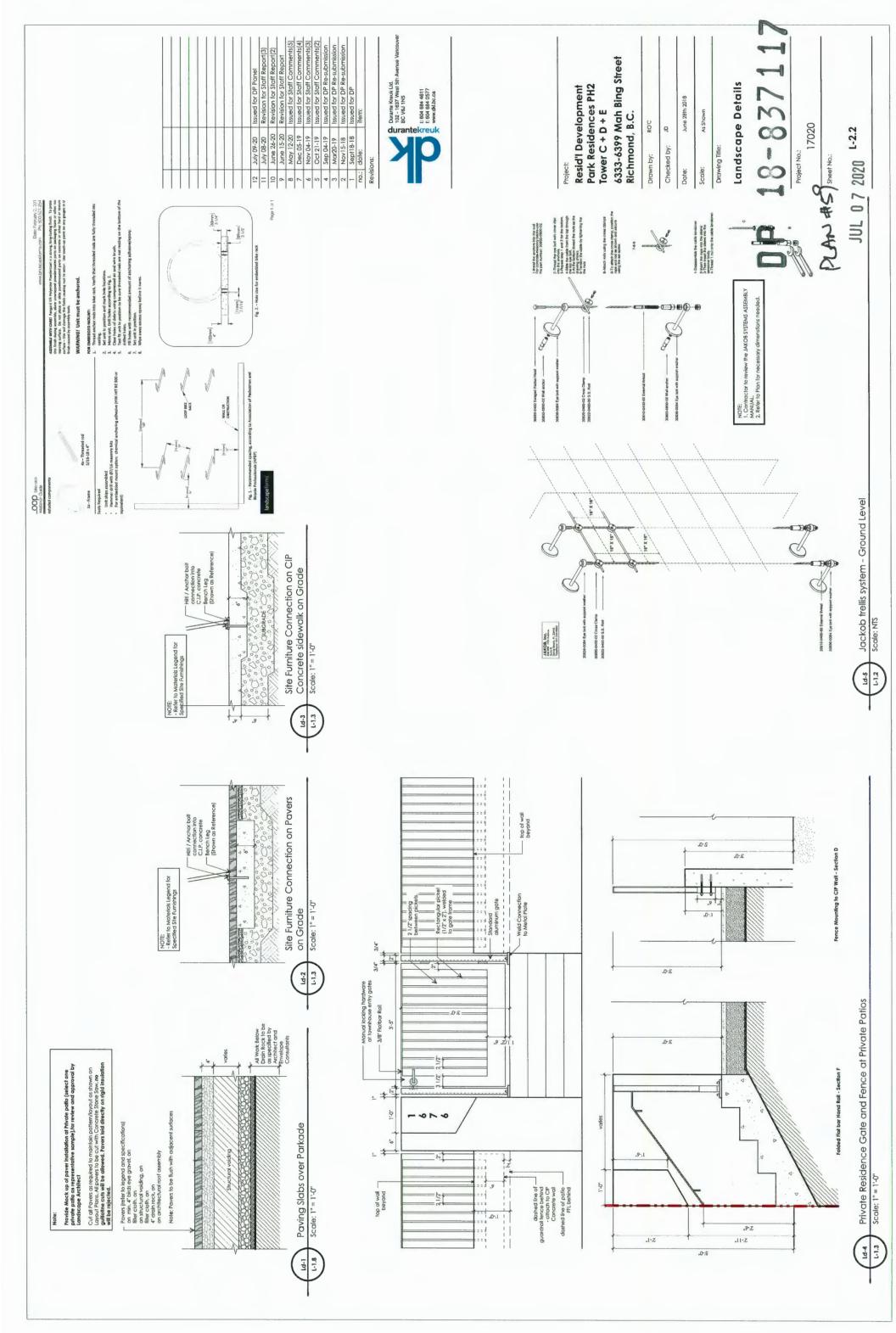
TOTAL INACCESSIBLE GREEN ROOF AREA PROVIDED 542.9 m2

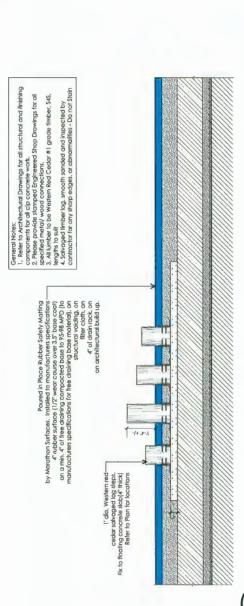
Private Outdoor Open Space

Property Line

235.00







(u-or) Timber steps and Play Table and seat - Level 4 Courtyard Scale: 1/2' = 1'-0'

General Notes:

1. Provide stamped Engineered Shop Drawings for all specified metal/wood connections prior to manufacturing, for review by Landscape Architect.

Childrens Play Equipment and Structural General Notes:

1. Provides clamped fingleneered Shop Durwings for al specified metal wood connections prior to manufacturing.

2. All natural non hace de wood finish such as Brade RRO-IRE/10R, color natural file, to be used anty.

3. All nortware is to be hat dispeed gativitized.

4. All work is to condraw with the CAS Audieline for Children's Playapoces and Equipment.

5. Provide Shop Drawings for review by Landscape Architect.

6. Provide Shop Drawings for review by Landscape Architect.

8. All tumber to be Western Red Cacter #1 gades firmber, 54,8 lengths to site.

9. Carpentry/ Specialized Scope does not include the fabrication/supply of specified metal camponents

Play Structures
1. Climber to be linished smooth with no sharp edges.
2. Pray stonger equipment including latches to be constructed with no pirching hazard or any pose o hazard to users.



KOMPAN

NRO212 Kids Table with 4 sitting poles

KOMPAN

Total height (CM) 47
Safety Zone 17.3 m2

Elevated Accessible Accessible Accessible Ground Ground Activities: Elevated Level Level Page Activities Types

THE FATE

Product is available as FSC® Cr rebinis wood on request.

ASTM SP GROU.

Total height (CM) 50 Safety Zone 13.9 m

R GROU.

:45

:45 A Land

3C | 2

Play tower with climbing net, wood post KOMPAN!
& plastic slide



CE CECO.

KOMPAN NR0111 Dolphin Springer

KOMPAN

NRO605 Dress-up Cottage



Time

The product is available as FSC's Certified CD04450) robinus wood on request.

SUR ASTM Second Second gC 1 -.4

16

--76-

COMMITTEE COMMITTEE

Z.

10 June 26-20 R 9 June 15-20 R 8 May 12-20 Is 6 Nov 04-19 Is 5 Oct 21-19 Is 4 Sep 04-19 Is 3 Mar 20-19 Is 1 Septil 8-18 Is 1 Septil 8-18 Is 1 Septil 8-18 Is 1 Septil 8-18 Is

Lu-as Spring Seat - Level 4 Courtyard

Playhut - Level 4 Courtyard Scale: NTS

[1-1.9]

Durante Kreuk Ltd.
102-1637 West 5th Avenue Va
Tuz-1637 West 5th Avenue Va
Tuz-1641 NS
Tuz-1641 NS
Tuz-1641 NS
Newworld Ltd.
Newworld Ltd.

6333-6399 Mah Bing Street Resid'I Development Park Residences PH2 Tower C + D + E

Richmond, B.C. RO'C q Checked by: Drawn by:

June 28th 2018 As Shawn Date: Scale:

Landscape Details

Drawing Title:

DP 18-8371 Project No.: DUAN#60

17020

Sheet No.:

L-2.3

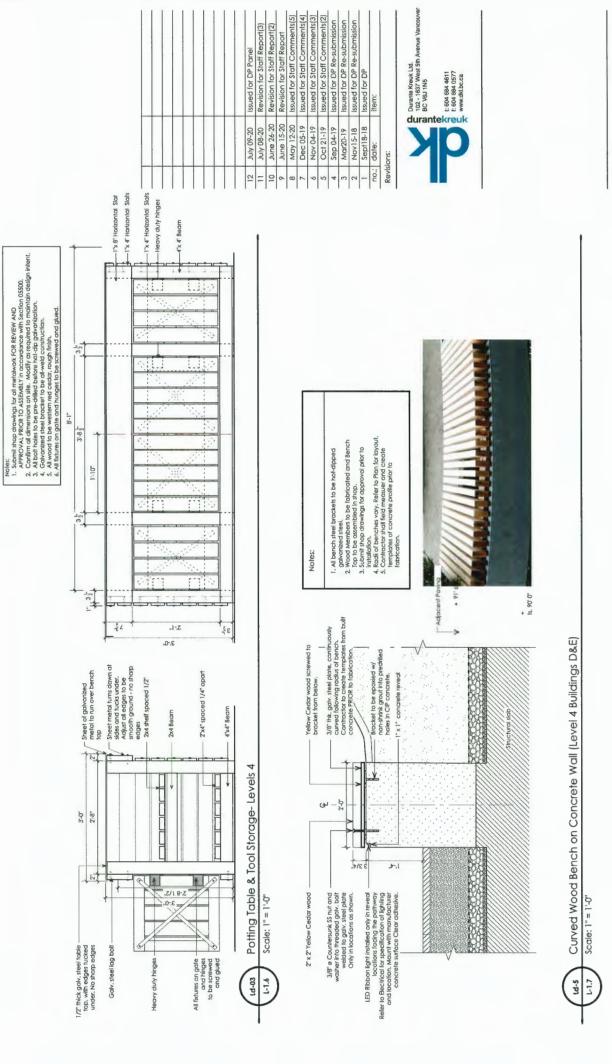
1-1.3

Kids Table and Chairs - Level 4 Courtyard Scale: NTS

Ld-03 Natural balance beam - Level 4 Courtyard

Ld-03

Play Structure - Level 4 Courtyard Scale: NTS



Project:

Resid"I Development
Park Residences PH2
Tower C + D + E
6333-6399 Mah Bing Street
Richmond, B.C.

Richmond, B.C.

Drawn by: RO'C

Checked by: JD

Date: June 28th 2018

Scale: As Shown

Landscape Details

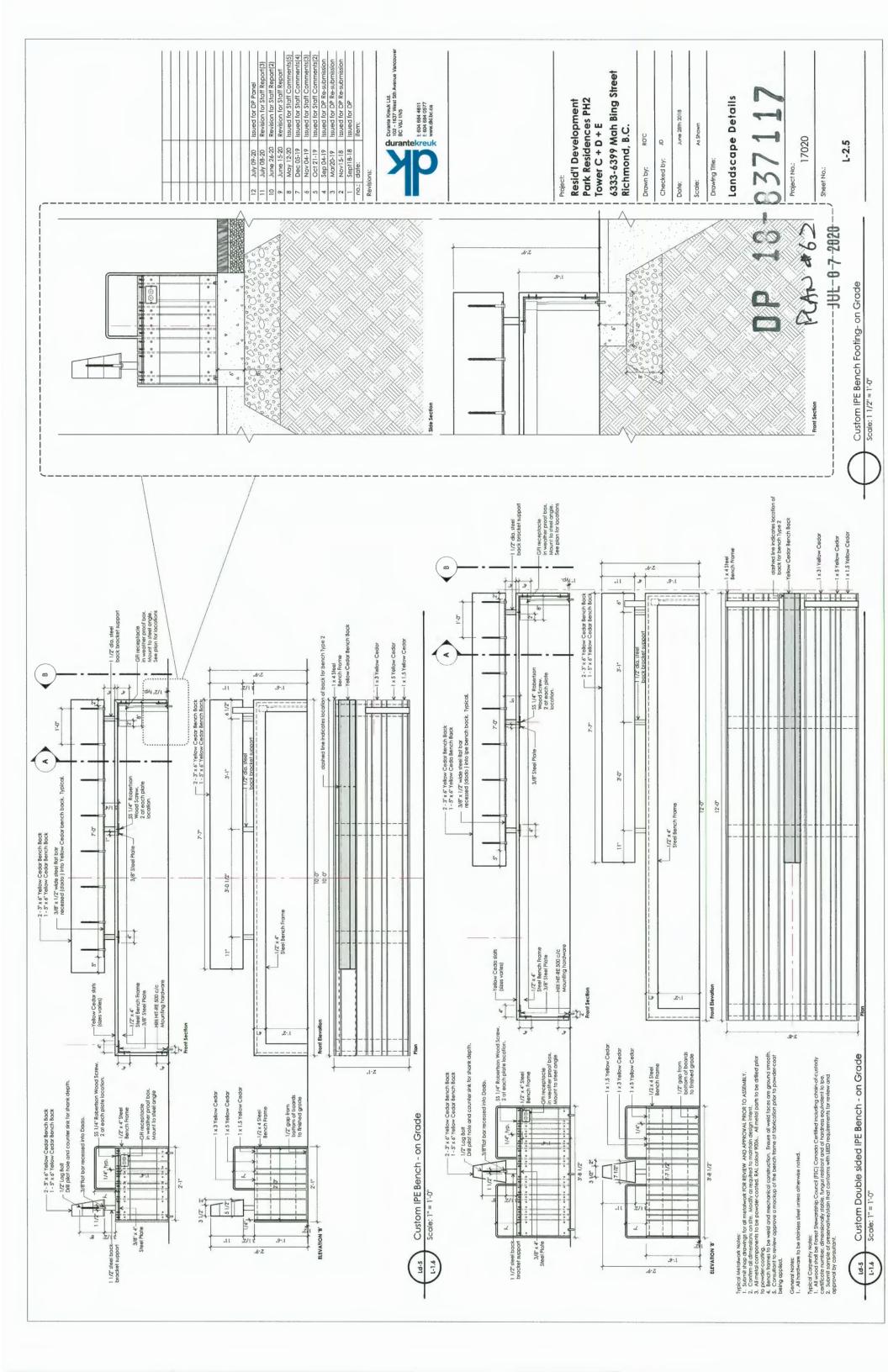
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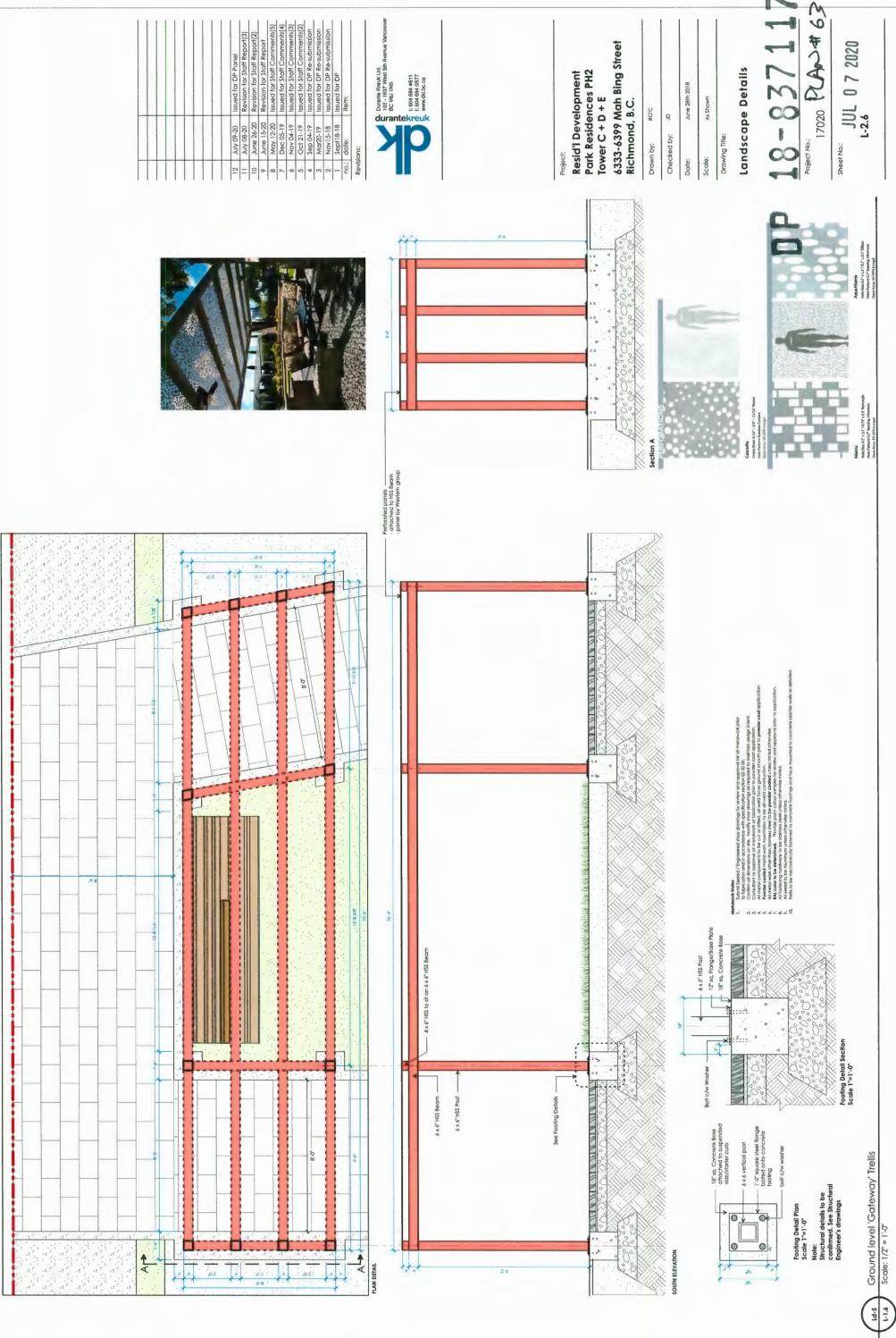
DP 18-83711

L-2.4

17020

Project No.:





NOTE. All signage toolings to be located in softscape areas. squares to the adjacent plantway, Locate debtam back from edge of pathways to allow for adequate space for planting, ginage to be supplied and installed by City of Richmond, gastes. See the supplied and installed by City of Richmond.

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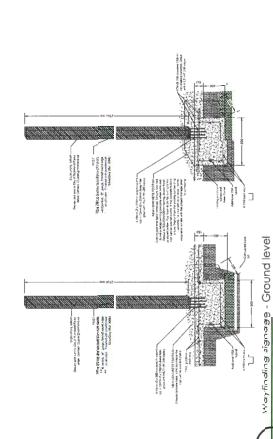
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Resid'I Development Park Residences PH2 Tower C + D + E

6333-6399 Mah Bing Street Richmond, B.C.

June 28th 2018 RO'C 9 Checked by: Drawn by: Dofe:

As Shown

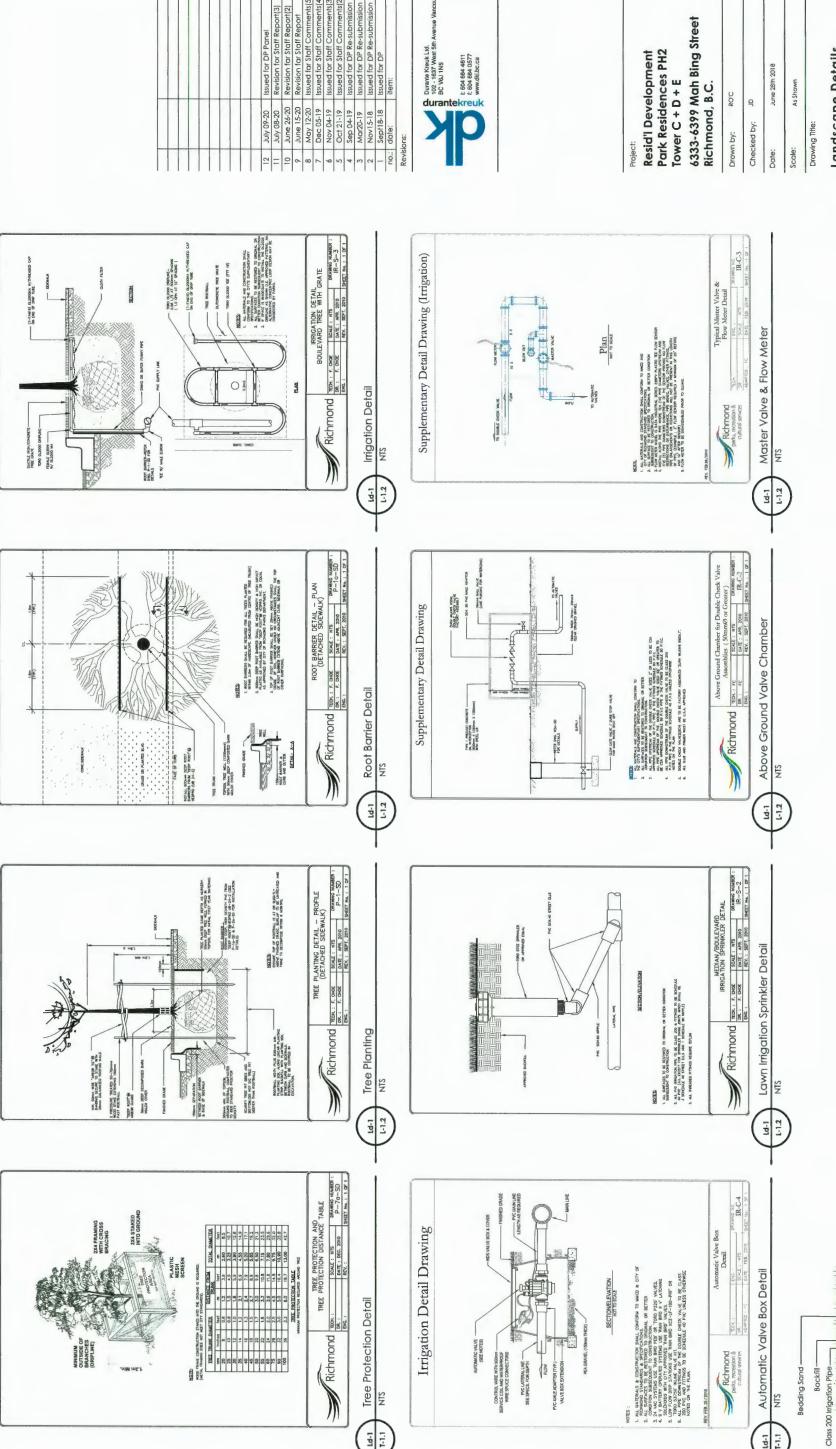
Scale:

Landscape Details

Drowing Title:

DP 18-83711 PAN # 64 17020

L-2.7



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12 July 09-20 Issued for DP Panel
11 July 08-20 Revision for Staff Report[3]
10 June 26-20 Revision for Staff Report[3]
9 June 15-20 Revision for Staff Report[6]
7 Dec 05-19 Issued for Staff Comments[5]
6 Nov 04-19 Issued for Staff Comments[5]
5 Oct 21-19 Issued for Staff Comments[5]
6 Nov 04-19 Issued for DR Re-submission
7 Mar20-19 Issued for DP Re-submission
8 Mar20-19 Issued for DP Re-submission
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6333-6399 Mah Bing Street Resid'I Development Park Residences PH2 Tower C + D + E

June 28th 2018

Landscape Details

18-8371

17020

Sheet No.:

L-2.8

Automatic Valve Box Detail

1-1-1

1-1-1

City of Richmond Engineering Department

SUPPLEMENTARY SPECIFICATIONS AND DETAIL DRAWINGS

istruction Documents (MMCD) - Platinum Edition)

SCHEDULE G

SUPPLEMENTARY SPECIFICATIONS AND DETAIL DRAWINGS FOR TREE PLANTING ON SIDEWALKS AND BOULEVARDS

The Supplementary Specification between shall apply p all the planting work in the City of fichmout 7 They replace the specification in Section 313 90.1 Planting of Trees, Shouls and dround Govern's in the Master Municipal Construction Document ((MMCD) - Planting Construction except in particular items where specific reference are mode to items under the MMCD.

TABLE OF CONTENTS

SECTION 3 - SUPPLEMENTARY DETAIL DRAWINGS

SECTION 1 - MATERIALS

3131507

Definition

- - 1.1 Tree Species
- .1 The salection of tree species shall approved by the City. Should the specified tree not be available, the City shall be notified so that an alternate choice can be made. The developer/contrador shall not make substitutions without approval of the City.

- All plant material shall be nursery grown stock.
- .2 All plant material shall comply with the B.C.S.L.A./C.S.N.T./B.C.N.T.A. Landscape Standard for container grown plants.

1.3 Tree Dimensions

Each tree shall have a calliper of 7 m or not be less than 3m in oneerall alongful unkso otherwise approved by the City. Each tree shall have a sharp, shapight furth. Lowest branch height on all releast hall be at land a this so therwise approved by the City. Each tree shall have a well-hadanced chandring head with the Planches growing out from the stem this measurable symmetry. All uses shall be in we basete unites otherwise approved by the City. (Refer to I plate 5-1 and 5-2).

Root System

the case shall be in whe baseds unkness otherwise approved by the City Container grown that A the pass and the case of the cost system shall be sincip. Brooks: free of diseases insents deficiely delicated and the cost system shall be sincip. Brooks: free of diseases insents deficiely developed to guarantee successful formity and shall be sufficiently developed to guarantee successful formity and shall be sufficiently developed to guarantee successful.

MAJSET

H	Height (cm)	Minimum Rootball Diameters (cm)	Diameters (cm)
	Dwarf and Medium	Tall and Columnar	Tall and Broad
30 cm	20	,	
40 cm	25		,
50 cm	30	25	25
60 cm	30	30	30
80 cm	35	30	35
1.0 M	45	35	40
1.25 M	20	35	45
1.50 M	09	40	20
1.75 M	70	45	55
2.0 M	,	50	09
2.5 M		55	70
NO.		20	52

Ensure top of rootball is at or slightly above finished grade. Remove top the Call Burgat from rootball and wine from base of trunk (and/or wire basker 'fifting loops' and top row of basted). Remove any soil on top of original rootball.

be backfilled with topsoil to bring the plant material to the depth they werk originally growing in the nursary. All trees shall be planted so that after settlement they will be at the original growing medium depth.

Once the trees are in place, the hotes are to be backflidd with topocal manner with a high properties are to be a noted flight and to the according to the manufacturer's recommendations. The hotes shall be backflind, lamped was watered in layers to help secure the tree and eliminate large an poolets.

Once planted, the trees are to be securely staked using two (2) 8ft., 50mm to 75mm diameter pressure freated stakes and tied with Arborite® or approved equal banding attached to each stake with a shingle nail.

install Aborguard® to protect the tree trunk

Planting Procedures

2.5

CIDUOUS TREES	Minimum Rootball Diameters (cm)	Zone 6 & Above		20	55	09	70	80	06	100	110	120	130	140	For every 2.5 cm of caliber over 20 cm. roothall diameter shall increase by 10 cm.
MINIMUM ROOTBALL DIAMETERS FOR DECIDUOUS TREES	Minimum Rooth	Zone 5 & Below	20	55	09	20	75	80	95	105	125	150	170	200	over 20 cm. roothall diame
MINIMUM ROOT	Caliper		4	4.5	s,	9	7	60	o	10	12.5	15	17.5	20	or every 2.5 cm of caliner

Condition

- All plant material shall be of good health and vigour with no visible signs of disease, insect pests, damage or other objectionable disfigurements.
 - The contractor is responsible for contacting the City for inspection and approval of the trees on site and before planting.

de descripationator le trapposible for all messaren maniferance et line pail in pagint material for the duration of the Maniferance Period. This shall be paint material for the duration of the Maniferance Period. This shall provide only projective any procedure messareny no material paint unifficity weeding, proming providion such as weating, plant unifficity weeding, proming and material for disease and press. All patering the described in levels in removed all east once per month during the growing season by hand, public or handles. The material period is described as often as required to ensure public and materials.

Upon completion of boulevard planting, the soil shalt be raked to remove any details brought to the surface by the planting operations. After raking the planting area should be mulcipled with 75mm of bark mulcip placed in an even layer over the soil surface.

Plants shall be planted so that after settlement they will be at the origina growing medium depth. Allow for settling of the growing medium after planting so that the total depth of the roolball remains in the topsoil. All plants for planting areas shall be delivered to the site and protected from sun and drying winds. Plants that cannot be planted immediately delivery shall be kept well watered.

Plants shall be set plumb in the planting beds or planting pils. except where the plant's character requires variation from this.

Once planting and mulching is completed, the site shall be cleaned of all excess soll, rock and debris.

181597

SECTION 2 - INSTALLATION 2.1 Subgrade and Topsoil

- Prior to placing topsoil in boulevard planting areas, the subgrade shall be established at 300mm below finished grade for all ground cover areas, and 450mm below finished grade for all strub areas.
 - Grade transitions shall be smooth and even, and shall be such that ponding cannot occur on the subgrade surface.
- Debris, rools, branches, stones, building material, contaminated subsoil visible weeds and autimatise that may interfere with the proper growt and development of the planted boulevard, shall be removed from the subgrade prior to installing the topsoil.
 - Screened topsoil shall be installed at the following minimum depths price to shrub plantling in the boulevard: ground cover areas 300mm, shrub areas 450mm.

2.2 Time of Planting

- Planting work is to be completed during normal planting seasons as dictated by prevailing weather conditions. Planting in frozen ground or with frozen rootballs is not acceptable.
- Planting will not be permitted during extremely hot, dry weather, or during heavy rain.
 - All necessary precautions are to be taken to protect the plant materia from prevailing weather conditions during transportation, storage and planting.

- Treas are to be planted no more than 9.0m apout, unitiess otherwise proproced by the CDA, Actual teru enumbles, spacing and locations will vary according to site conditions and amenities. Locations will be staked out by the developersormateria coording to the plants and verified on site by the CDA prior to planting. If underground coastuctions are uncovered these are to be reported to the CDA for resolution.

Location of Planting 2.3

- Planting Procedures Trees
- All trees shall be planted as per Supplementary Detail Drawings G-1-SD and G-2-SD.
- All wess shall be planted, set plumb, in holes large enough to accommodate the entire nootball plus topsoil. Therefore, holes should be excavated the diameter of the rootball plus 600 mm. The holes shall then

12 July 09-20 Issued for DP Panel
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9 June 16-20 Revision for Staff Report(2)
8 May 12-20 Issued for Staff Report(3)
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3 Mar20-19 Issued for DR Re-submission
2 Nov 15-18 Issued for DR Re-submission
2 Nov 15-18 Issued for DR Re-submission
1 Sept18-18 Issued for DP Re-submission



Park Residences PH2 Tower C + D + E Resid'I Development

RO'C Drawn by:

June 28th 2018 As Shown 9 Checked by: Scale: Date:

Landscape Details

Drawing Title:

17020

Sheet No.:

L-2.9

Delete			
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		1.3.1	2.10.8
		2.2.1.3	2.10.10
		2.3	2.10.11
		2.6	2.10.12
		2.8	2.10.17
		2.9	Table 2
		7able 1 2.10.4	3.4 Table 3
		2.10.5	3.5
Addt	Add the following		
1.3	.1 (ss) mem	Soil Quality Control	Growing medium preparation to be done by a company with a minimum of five (5) years experience in the process of measuring and finking of consiltaent components that make up a prepared medium mix.
	.2 (ss) new		The prepared growing medium shall match the standard established by the approved tested sample after all recommended amendments have been added.
ri.	.2 (ss) new	Inspection and Testing	Submit to the Contract Administrator a copy of a growing Administration. The analysis shall be of tests close to Contract Administration. The analysis shall be of tests close on the source-widely included the shall be of tests close to the source-widely included the shall be of the supply source-widely included the shall be source with source-widely included and the supply source-widely included and the supply source-widely included and the supply source with a postfictured in a supply ensure compilation with spoofficturion shall be brome by the contract of Results of these was a table presented to the Contract Administration for weiver at least seven 17 days.
	.3 (ss) new		BEFORE any growing medium delivery to site. The analysis shall include break down of the following components; particle size class and properties, total integen by weight, carbon to infrogen ratio, available levels of phosphorus, potassium, catcium, magnesium in partis per million, electrical conductive, asolube saft content, organic
	.4 (ss) new		motater to widegin, and no Viraliae. The analysis shall outline the testing laboratory's recommendations for amendment and sold other required modifications to make the proposed official the sold medium meet the requirements of this specification. The soil test results from the testing ideacratery faith be legible (i.e. pyto-written not knaw written) allowed signed by a qualified soil.

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90	S (99)	At the discretion of the Contract Administrator sub
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.5 (ss)	.6 (ss)	.7 (ss) new	.1 (65)	1.1 (88)	2 (98)	.1 (ss)	.2 (ss)	.3 (ss)	.4 (88)	.1 (ss) new		
			Samples			Product Handling				Send		
At the discretion of two additional samp Administrator of gro delivered to site. Status ample for testing. to the Contract Administrated Admin	Growing medium faconsidered by the C to be adjusted will b the project.	In the event of a dis medium, the Contra testing and the Con binding.	Submit to the Contri materials:	Dotomite Limestone:	Growing Medium Si Shall be composite of proposed source, at and taken from a std	Do no move or word are excessively wet white will adversely Growing medium will hendling under thes replaced by the Cor	Administrator. Protect growing mer wetting by rain or ot weeds and insects.	Deliver fertifizer and other original containers. Protectincoporated into the work.	All growing medium the approved suppli same supplier throu	Hard, sharp, granule of contaminants, ch by weight:	SIEVE SIZE	No. 4 (4.76 mm)
the discontained the Contract Administrators authoring to be we additional samples at interests cultimed by Contract Administrator of growing medium taken from miserial and administrator of growing shall be administrated. Interest the contract of the contract of the contract of the little endown locations and mixed to create as single uniform the result of the season is of the season of the presented to the Contract Administrator for review.	Grawing medium falling to satisfy specifications or being considered by the Contract Administrator to be uneconomical to be adjusted will be rejected and not permitted for use in the project.	In the event of a dispute on the quality of the growing medium, the Contract Administrator will perform independent testing and the Contract Administrator's results will be binding.	Submit to the Contract Administrator samples of the following materials:	5 kg (1.1 lbs.)	Organic westernian St. 84 (1.11 faz.). Growing Medium Sample: One composite sample. Samples Stabil the composite of stability of stabil	Do no move or work growing medium of additives when they accessively we acknowled not additive when they will will will add the accessively we acknowled not be acknowled not acknowled medium acticuture. Which will advantately alled growing medium whose shredure has been compounted by medium whose shredure has been compounted by medium whose acknowled has been compounted by medium who be confined to medium or rejected and shall be promitted by the Comment.	Administrator. Protect growing medium end additives against extreme weeting by rain or other agents, and against contamination by weets and insects.	Deliver fertilizer and other chemicals in menufacturer's original containers. Protect against end moisture until incorporated into the work.	All growing medium will be delivered to site premixed from the approved supplier. The Contractor shall maintain the same supplier throughout the life of the project.	Hard, sharp, granular, river pump sand, well washed and free of contaminants, chemical and organic metter. Particle sizas by weight:	CLASSIFICATION	Fine gravel
rator submit up to ad by Contract or material from a minimum of free a single uniform is shall be presented	ations or being to be uneconomical mitted for use in	the growing erform independent esults will be	ples of the following		s sample. Samples lings from the e (1) litre in volume work of this project.	additives when they additives when they menner m structure. en compromised by jected and shall be the Contract.	ainst extreme ist contamination by	enufacturer's noisture until	te premixed from rell maintain the oject.	rell washed and free otter. Particle sizas	% RETAINED	%0

	No. 4 (4.76 mm) No. 10 (2.0 mm)	E E
20.00,000	62	

No. 28 (0.50 mm) Contrains earned 15 – 20%				No. 18 (1.0 mm)	Very coarse sand	1-10%
				No. 35 (0.50 mm)	Coarse sand	15-20%
				No. 60 (0.25 mm)	Medium sand	50-75%
				No. 140 (0.105 mm)	Fine sand	5-15%
(1 (ss) (Nood new Assistant ne				No. 270	Very fine sand	0-2%
(a) (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c				Passing No. 270	Silt, clay	9,0
. 1 (sa) Ferfitzer 2. (ss) 3. (ss) 4. (ss) 4. (ss) 5. (ss) 6. (ss) 1. (ss) 1. 1 (ss) 1	2.8	.1 (ss) new	Wood	Wood residuals in the	ie form of saw dust, v I in the make up of th	wood chips, etc.
2 (ss) 3 (ss) 4 (ss) 6 (ss) 6 (ss) 6 (ss) 7 (ss) 7 (ss) 7 (ss) 7 (ss) 7 (ss) 7 (ss) 8 (ss) 7 (ss) 7 (ss) 8 (ss) 9 (ss) 7 (ss) 9 (ss) 9 (ss) 9 (ss) 1 (ss) 1 (ss) 1 (ss) 1 (ss)	2.9	.1 (ss)	Fertilizer	Complete commercii meeting the requiren packed in water proc name of the manufat	al synthetic slow rele nents of the Canada of containers, clearly cture, weight and any	ease fertilizer Fertilizer Act, marked with the alysis.
3 (88) 4 (88) 5 (89) 6 (89) 6 (89) 7 (89) 7 (89) 7 (89) 7 (1 (89)		.2 (ss)		Formulation ratio: as	per soil test recomn	nendations.
. 5 (es)		.3 (95)		To be the fertilizers or or approved by the C	recommended in the Contract Administrate	soils analysis re
. 5 (es) 4 (es) 6 (es) 7 (es) 8 (es) 9 (es) 1.10 (es) 1.12 (es) 1.14 (es) 1.15 (es) 1.16 (es) 1.16 (es) 1.16 (es) 1.17 (es) 1.18 (es) 1.18 (es) 1.18 (es) 1.19 (es) 1.19 (es) 1.19 (es) 1.19 (es) 1.19 (es) 1.19 (es)		.4 (ss)		Contractor to provide fertilizers and liming	e proof of purchase a	and epplication of of receipts.
A (se) A (cowing mean B (se) A (se)		.5 (ss)		Substitutions for ferti approval of the Cont	ilizers will not be pen ract Administrator.	mitted without the
	2.10	.4 (63)	Growing	Available Calcium to	be 500 to 2500 ppm	t by dry weight.
		.5 (ss) mew		For growing media h ecceptable after lead thorough drainage pi	igh in % sand, a soil ching with fresh wate rior to plenting	may become r followed by
		(88) 8.		Total Nitrogen to be	0.2 to 0.5 % by dry v	weight
		(88) 6'		Available Phosphoru	is to be 25 to 250 pp	om by dry weight
		.10 (ss)		Available Potessium	to be 50 to 1,000 pi	pm by dry weight
		.11 (ss)		Available Magnesiur	n to be 50 to 500 pp	um by dry weight
		.12 (88)		Carbon to Nitrogen r	atio (C/N) to be not r	more than 20:1.
		.14 (ss) new		Texture: particle size to be within ranges see Where "Gravel" in Te	es and proportions o shown in Table 2 for i able 2 is indicated, th	f each size partic intended applical its should be real

Lawns Other Pi	Area	75 - 65% 70 - 809	2-5% 5-10%	2-5% 2-5%	-10% 10 - 159	0-2% 0-2%		6.0 - 6.5 5.0 - 6.0	30 – 50 meq. 30 – 50 r	Maximum Maximun 40:1		0.4 - 0.8% 0.4 - 0.8 by weight weight	70 80 ppm 70 80 p	150 - 250 150 - 25 ppm ppm	50 - 500 50 - 500 ppm	500-2500 500-25 ppm ppm	on extract conductivity.	imum saturated hydra our in place.	, ground dolomite lim
(Measured in % Dry We	Particle Size Class and Properties	Sand (Larger than 0.05 mm and smaller than 0.02 mm)	u 90	Clay (Smaller than 0.002 mm)	Organic Material 5	d Gravel (2	(Particle size in Per cent (%) of Dry Weight)	oH):	Cation exchange 30 capacity:	Carbon to nitrogen Maxi ratio: 40:1	5. Ferblity:	Total nitrogen: 0.4	Available phosphorus 70	Available potassium 150 -	Available magnesium 50 – 9	Available calcium 500 -	 Salinity: Maximum saturation extract conductivity: millihos/cm at 25 degrees C. 	 Hydraulic Conductivity: Minimum saturated hydra conductivity 5.0 – 7.0 cm/hour in place. 	Coarse (unless noted otherwise), ground dolomite lime
Standard for	Prepared Growing	Emploam																	Lime
Ψ.																			۲.
2.11	(SS)																		2.12

2.13	.1 (ss) new	Organic Materials	Submit sample prior to shipping to site.
	.2 (ss) new		Organic Material shall be, black/brown in colour made up of fully composted organics (i.e. no sawdust or wood chips)
	.3 (ss) new		Growing medium deficient of organic matter and fertility will be achieved using fully composed organic matter either peat or animal manure.
	.4 (ss) new		A surface horizon of increased organic matter and fertility will be achieved by top dressing the required depth of organic matter following by thorough tillage into the top 15 cm of soil.
	.5 (ss) new		Peat is recommended for soils requiring an immediate acidification (lower pH). Proposed peats will be tocally harvested offering a pH between 3.0 and 5.0.
3.2	.6 (ss) new	Preparation of Subgrade	Scarify and / or break up and loosen existing sub grade and compacted gravel areas to a minimum depth of 200 mm (8") to allow for propar drainage in all planting areas and tree pits.
	.7 (ss) .7		Ensure proper drainage in all tree pits, shrub beds, planters and miscellaneous planting areas.
3.3	.4 (ss)	Processing Growing Medium	Screen growing medium with medianical screening integration with approximation and proving medium with process to produce recommended editives during screening process to produce recommended editives during screening process to produce working medium extractions with the properties as specified in 2.02. No high during will be properties as specified in 2.02. No high during will be defined to 2.02. When the contract demands specifically approved by the Contract
	.5 (ss) new		Screening and mixing of growing medium on site will be not be allowed. All growing medium is to errive pre-mixed.
3.4	.1 (ss) new	Placement of Growing Medium	Do not place growing medium until Confract Administrator has reviewed subgrade.
	.2 (ss) new		Ensure that impation lines, tree root barriers, subgrade drainage, etc. to be installed have been reviewed by the Contract Administrator prior to the placing of growing medium.
	.3 (ss)		Break up and loosen subgrade and compected gravel areas to allow for proper drainage in planting ereas and planted islands.
	.4 (ss)		Place prepared growing medium in compacted layers of 100 mm to 150 mm (4° to 6°) in planting areas on grade. Lightly roll each layer of placed topsoif firm against deep foot printing, with a fine loose texture.

3.10 1.1 (sa) Peest and All methods of peest and weed control to be in compliance new in the city's "Pestidide use control bylaw".

.6 (ss) new .7 (ss)		Place ormain madium to the required finished grades with
7 (38) WHIII		riace growing insulant to the required interior grades what adequate moisture, in uniform layers, during dry weather, over approved, dry, uniforate subgrade where planting is indicated to the following minimum depths:
7. (ss) Wen		Tree pits: To depth of rootball
,7 (ss) Wen		
,7 (ss) mew		Ground cover areas: 300 mm (1'-0")
.7 (38) new		Lawn area: 200 mm (8")
		Apply lime, or other growing medium amendraent at rate determined by testing laboratory's recommendations.
.8 (3S) new		Mix amendments well into full depth of growing medium by cultivating or roto tilling prior to application of fertilizer.
.1 (ss) A	Application of Fertilizer	Apply fertilizer at least two weeks affer lime application and at least 6 days before planting.
.2 (ss) new		Spraad ferdilzar with mechanical spraaders over entire area of growing medium at rate recommended by the leading leboratory. Mk ferdilzer thoroughly into upper 100 mm (4*) of growing medium.
.3 (ss) new		Incorporate lime into the top 15 cm depth of growing medium.
.4 (ss) new		Slow release fertilizers will be surface applied to avoid contact with applied lime.
.5 (ss) new		Spread fertilizer eventy over growing medium with a suitable mechanical spreader. Applications of fertilizer or lime by hand is not acceptable.
.3 (ss) F	Finish Grading	Fine grade (manually) growing medium to contours and elevations shown on drawings or se directed by Contract Administrator. Eliminals rough spots and low areas to ensure positive drainage.
.4 (ss) new		Leave surface smooth, uniform, firm against deep foot printing, with a fine loose texture.
.2 (ss) A	Acceptance	Eliminate all weeds and weed roots from growing medium.
.3 (ss) new		Contract Administrator to review all methods of weed removal other than by mechanical or hand pulling prior to start of operation.

12	July 09-20	Issued for DP Panel
=	July 08-20	Revision for Staff Report(3)
10	June 26-20	Revision for Stoff Report(2)
٥	June 15-20	Revision for Staff Report
00	May 12-20	Issued for Staff Camments(5)
7	Dec 05-19	Issued for Staff Comments(4)
9	Nov 04-19	Issued for Staff Comments(3)
5	Oct 21-19	Issued for Staff Comments(2)
4	Sep 04-19	Issued for DP Re-submission
6	Mar20-19	Issued for DP Re-submission
2	Nov15-18	Issued for DP Re-submission
-	Sept18-18	Issued for DP
	date:	item:

	Soci to be approved by Contract Administrator and to be furnished and the social and the furnished social and the furnished social approved by Contract Administrations, Social to be qualify callined bit grass grown from season approved by Contract Department of Administration (from season approved by Contract Department of Administration and debits, Social International Contractions, Social and debits, Social and debits and debits, Social and the social and debits, Social and the social and debits, Social and the social and debits and debits, Social and the social and debits and debits, Social and the social and debits and debits, Social and debits and debits, Social and debits and debits, Social and debits
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Durans Kreuk Ltd.
102 - 1637 West Sin Avenue Van
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10wer C + D + E 6333-6399 Mah Bing Street Richmond, B.C.	Drawn by: RO'C	Checked by: JD	Date: June 28th 2018	Scale: As Shown	
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Landscape Details

Landscape Details

PLAN#67 Project No.:

1-2.10

SECTION 32 91 13 23 STRUCTURAL SOIL PAGE 1 OF 7

2. Screened Growing Modulum shall consist of on site or imported soil screened with additives and followes services the Tolking Screened with additives and Screened with additives the Screened with additives and the Screened Sc .5 Sand shall have a saturated hydraulic conductivity between 100 mm. and 300 mm. per hour. Test conditions shall be for saturated sand . 15 blows compaction. Sand: Approved river pump sand, well-washed and tree of contaminants, chemical and romanic matter. Gradation of particle sizes shall fall within the ranges shown in the follow! 2.6 GROWING MEDIUM COMPONENT: TYPE II GROWING MEDIUM 0.50 0.25 0.105 0.053 .10 Peritle: Granular, expanded volcanic sterile, pH 6.5 - 7.5. 2.5 FILTER FABRIC 2.4 FERTILIZERS SECTION 32 91 13 23 STRUCTURAL SOIL PAGE 2 OF 7 Carry out growing medium preparation and placement such that the final product matches the standard set by the samples submitted, within a range of variation that may be expected with good quality control. 1. DO NOT MOVE OR WORK GROWING MEDIAM OR ADDITIVES WHEN THEY ARE EACESSNEET VEHE TAREY ARE EACESSNEET OR IN ANY MANNEE WHICH WILL ADVERSELY AFFECT GROWING MEDIAM STRUCTINE, cowing mediam whose simplements between the strend reading of hamford wide friese conditions will be rejected.

2. Protect growing medium and delibres against extreme wetting by rain or other agents, and against contential by yeared and frieses. Notify the Consultant when the sile is prepared for growing medium placement. Do not place growing medium units subgrades have been reviewed,
 Provide at least two days (48 hours) notice in advence of each required review. 4. The landscape sub-contractor shalf quarantee that the soil submitted for laboratory testing is representative sample taken from the soil that will be delivered to the site. Submit with the above analysis, the testing laboratory's recommendations for amendments, tertilizers and other medications to make the proposed growing medium meet the equipments of his specification. Submit to the Consultant one composite sample each of "ENGINEERED SOIL" MIX and of
components Each surface shall be a composite of it least three samplings from the proposicource and shall be at least one if it lite in volume. Provide and install TYPE IV "ENGINEERED" SOIL MIX as specified herein, to the extents
shown, at all plashing pils for fees in head landscape (pawed) areas, and at all other areas
where Structural Soil Mix ("ENGINEERED SOIL" MIX) is shown. In this Specification, a range of neasonable physical and chemical properties are set out il acceptable in a givenity enterind. Compliance with this Specification is to be determined to select in the set properties. When improved or to raite soil a used, of stall by the setted and mindlined as necessary by the admittant of other components to thing its properties within specified in rights. Submit to the Consultant a copy of an analysis by an approved independent soil testing laboratory. The analysis shall be of tests done on the proposed growing medlum and addi proposed for the work, within three weeks immediately prior to growing medlum piacomer. Test, or have the soil supplier lest, the proposed soil and growing medium and include the
required modifications in the price for the work. Re-less growing medium and re-submit or
results as required by the Consultant to verify that the growing medium installed on sale in
the apperitization requirements. Deliver and store lentitzers and other chemical ingredients in the manufacturer's original containers. Protect against damage and moisture until incorporated into the work. .1 This section of the specification forms part of the Contract Documents and is to be read, interpreted and coordinated with other parts. Failure to test and provide appropriate documentation of test results may be considered grounds for rejection of a proposed growing medium and may result in removal of reject material at the contractor's expense. The Owner may appoint an independent testing laboratory to ascertain compliance with specification and to recommend modifications to make the growing medium meet the requirements of this specification. Submittals shall be made at least seven (?) days before delivery and placement of grow medium to allow for evaluation of samples and analyses. Submit additional samples and test results, including samples of proposed add growing modern, as testing the State of proposed add growing modern is the state of scholar state of scholar state of scholar state of scholar samples and test results of growing medium and samples taken on site during installation. 3 British Columbia Landscape Standard, current edition .1 Canadian National Master Construction Specification .2 USDA-NHCS Soil Texture Classification Triangle 1.5 TYPES AND LOCATIONS OF GROWING MEDIUM Work included: Supply all labour, services and install growing medium as specified herein. 1.3 RELATED STANDARDS AND LEGISLATION .2 Related Work in Other Sections .1 32 93 00 Plants and Planting 1.9 PRODUCT HANDLING 1.10 APPROVED EQUALS dk - DURANTE KREUK LTD. 1.8 QUALITY CONTROL

Wood Residuals: Sawdust or wood waste is not an acceptable component of growing medium. Well orther word residuals but to be a component of compost, are main moure or maintone manure or maintone manure are acceptable provided that the total Cautoon to lost infringent rate in this growing medium is a maximum of 4011. Cedus or resknood sawdust shall mob the present in growing medium:

, 2				
chart ("Percent" to be reported as the mass of the particles whose size is less than the designated sleve opening):	CLASS	Fine gravel	Very coarse sand	Coarse sand
nass of the partici nan the next design	PERCENT	0-3	0 - 20	0-5
reported as the n	SIEVE SIZE (mm)	4.76	2:00	1.00
chart ("Percent" to be designated sleve ope	USBS SIEVE NUMBER	4	10	91

Available copper, zinc and manganese following acid digest test in 0.1N HC1 and shakei 1/2 hour shall be less than 25 PPM when analyzed by atomic absorption spectroscopy.

Peaimose. Horticulural grada, partially decomposed librous or celular stems and leave Spagagore Mosses with Mosses with Mosses with source variety provide to spagagore the state as substantially increageneous with a pir value for froil less sin an 3.5 and not gratefy deather metalin to Corpsia prededes suitable for neticularial purposes, to the requirements of the C. Landscape Standard.

Dotomite Lime: Approved commercial brands for horticultural purposes, coarsely ground containing not less than 20% calcium by weight.

.11 Soil Stabifzer: Organic compound specifically designed for binding soil particles. Soil Stabifzer as supplied by Sport Turf Inc., 4091 Seldon Road. Abbotsford, B.C. Ph. (604) 850 7857.

Approved suphur-coated controlled release ferritoess, standard commercial trands, meeting the requirements in the Canada Fertilizer Act, packed in standard waterproof containors, clearly marked with the name of the manufacturer, weight and analysis. Fertilizers shall have guaranteed NP-K analysis.

SECTION 32 91 13 23 STRUCTURAL SOIL PAGE 5 OF 7

Types, formulations and rates of application of lenticers and liming agents shall be as reconnended by the abonatory soil specialists on the basis of lest results, and as approved by the Consultant. Substitutions or vanisticms in lenticers and methods shall be made only upon pre-approval by the Consultant.

Hoceipts and empty lentitzer bags shall be retained until reviewed by the Consultant as vertication that the required fertilizer has been applied.

Non-woven gootestile fabric designed for filtration, minimum average roll values; elongation 59%, Cell purpor el 151%, Cell purpor el 151%, Cell purpor el 151%, ACS o 2000n, Lidis Save 50), permittini (grah) min. AON (40%), Lidis Regional i seriogen 1738 (40%), ACS o 2000n (10. Save 50), permittini (40%) de sec. I (lieu min 1970 una 1700 proper til non National III o Approved liter flabrics: Nilex 4545, Terrativ 1720, Proper Cheese.

Spec, note: THESE ARE heavier duty filter fabrics, SUITABLE FOH THE STRESSES OF ROAD ENVIRONMENTS, SCREENED GROWING MEDIUM (TYPE II)

.2 Gravel content (all particles larger than 2mm), proportion by dry mass relative to the total

Particle size gradation and organic content, proportion by dry mass relative excluding all particles larger lhan 2mm: FOR GROWING MEDIUM COMPONENT OF STRUCTURAL SCIL. MIX STRUCTOR CONTROL CONTROL

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SECTION 32 91 13 23 STRUCTURAL SOIL PAGE 6 OF 7

"Engineered" soil shall be a homogenous mix of the follo proportions by volume: COMPONENT AMOUNT BY WEIGHT
Sorm to 80mm rock as specified

Sorm to 80mm rock as specified

Soil stabilizer to be applied by hand

Cubic meters of Rock & Growing Medium Mix

2.7 "ENGINEERED" SOIL (TYPE IV)

See EXECUTION for mixing prov

MIXING AND SCREENING NORMAL SCREENED GROWING MEDIUM (TYPE II)

Screen sof with mechanized screening equipment incorporating additives in the required propordiors while screening. Do not hand mix. The resulting product shall be a homogene mixture having the required properties firzoughout.

Screening may be done on sile only if specifically permitted by the contract documents and only in areas of the site approved for screening and stockpling of growing medium. Distoss as I waste from screening operations by removing all waste from the site in an approved manner.

Moleture content of peat most as the time of mixing shall be not less than 60% to 73%, Peat must shall form that a blat when opposed and neith its upon release of pressure, insufficient moisters wall road in the peat mosts not horting regarble, while accessive mosture is evident when the ball formed is plabbe with a clear water sheer on the surface.

3.2 MIXING AND SCREENING "ENGINEERED" SOIL (TYPE IV)

| 12 | July 09-20 | Issued for DP Pone| | 1 | July 08-20 | Revision for Staff Report[2] | 9 | June 15-20 | Revision for Staff Report[2] | 9 | June 15-20 | Revision for Staff Report[2] | 7 | Dec 05-19 | Issued for Staff Comments[4] | 6 | Nov 04-19 | Issued for Staff Comments[3] | 5 | Oct 21-19 | Issued for DP Re-submission | 2 | Nov 15-18 | Issued for DP Re-submission | 2 | Nov 15-18 | Issued for DP Re-submission | 1 | Sept18-18 | Issued for DP Re-submission | 1 | Sept18-18 | Issued for DP Re-submission | 1 | Sept18-18 | Issued for DP Re-submission | 1 | Sept18-18 | Issued for DP Re-submission | 1 | Sept18-18 | Issued for DP Re-submission | 1 | Sept18-18 | Issued for DP Re-submission | 1 | Sept18-18 | Issued for DP Re-submission | 1 | Sept18-18 | Issued for DP Re-submission | 1 | Sept18-18 | Issued for DP Re-submission | 1 | Sept18-18 | Issued for DP Re-submission | 1 | Sept18-18 | Issued for DP Re-submission | 1 | Sept18-18 | Issued for DP Re-submission | 1 | Sept18-18 | Issued for DP Re-submission | 1 | Sept18-18 | Issued for DP Re-submission | 1 | Sept18-18 | Issued for DP Re-submission | 1 | Sept18-18 | Issued for DP Re-submission | 1 | Sept18-18 | Issued for DP Re-submission | 1 | Sept18-18 | Issued for DP Re-submission | 1 | Sept18-18 | Issued for DP Re-submission | 1 | Sept18-18 | Issued for DP Re-submission | 1 | Sept18-18 | Issued for DP Re-submission | 1 | Sept18-18 | Issued for DP Re-submission | 1 | Sept18-18 | Issued for DP Re-submission | 1 | Sept18-18 | Issued for DP Re-submission | 1 | Sept18-18 | Issued for DP Re-submission | 1 | Sept18-18 | Issued for DP Re-submission | 1 | Sept18-18 | Issued for DP Re-submission | 1 | Issued f

5 Oct 21-19
4 Sep 04-19
3 Mar20-19
2 Nov15-18
1 Sepf18-18
no.: date:

Revisions:

Layout specified aggregate in a lift (approx. 300mm depth) on a llat, paved surface

Marinin procedure. Mix an a search was call stated by Laydon for their details of the buckelostes of rock at a time and spread safetic selection begins of \$50 mm. Once each bun buckelostes of rock, agreed an entered and on a special content at the recommended rate and mix together by selection passes of the buckel. Repeat lour of the intensity to proceed. Repeat the procedure of the procedure of the intensity to proceed. The procedure of the procedure of the intensity of the mean volume into storage for a procedure or selection of the intensity of the procedure of the procedure of the intensity of the procedure of the procedure of the analysis of the procedure of the procedure of the analysis of the procedure of the analysis of the procedure of the procedure of the analysis of the procedure of the analysis of analysis of

SUBGRADE PREPARATION FOR STRUCTURAL SOIL PITS

Before installing structural soil, verify that the sub base is compacted as required and at the correct elevations. Verify that drains are installed as detailed and specified. Do not place growing medium until Consultant has reviewed and approved subgrade.

Recompact subgrade as necessary in areas to support hard surfaces and features, such as concrete, asphalt, or unit pavers.

D Durante Kreuk Ltd.

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103 - 1504 Btd 4511

1 - 1504 Btd 4577

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SECTION 32 91 13 23 STRUCTURAL SOIL PAGE 7 OF 7

3.4 PREPARATION FOR GROWING MEDIUM ON SLAB Ensure protection board is in place and verify approved before starting work of this Section.

Piace stab drainage and voiding to depths shown and required, with all pieces tightly jointed and well atigned and filted.

install filter fabric to form continuous layer over stab drainage. Lap filler fabric 6" at all joints and place filter fabric at least 6" up all walls.

4 Ensure that filter tabric, stab drainage protection board, etc. are not damaged or displaced during installation of growing medium.

3.5 PLACING "ENGINEERED" SOIL (TYPE IV)

Before inspaling "Engineere" sait, verify that the sub base is compacted as required and at the correct developer. We reflect that contains are installed as dealled and specified. Do not place influenced soil until Consultan has reviewed and approved subgarde.

Place Engineered soil over sub base to 800mm depth or as otherwise detailed, comparated where it was community to where it was community to whose the whole the best Engineered. The control is the control of the seast Engineered Tabonomes, Compart as required in meet engineering sequencements for subsequential to the control of the con

Plant tree as detailed and add growing medium if required.

Ferbizers shall be added and thoroughly mixed into the growing medium to bring fertiliny with the specified ranges.

Park Residences PH2 Tower C + D + E Resid'l Development

6333-6399 Mah Bing Street Richmond, B.C.

June 28th 2018 RO'C 9 Checked by: Drawn by: Date:

As Shown

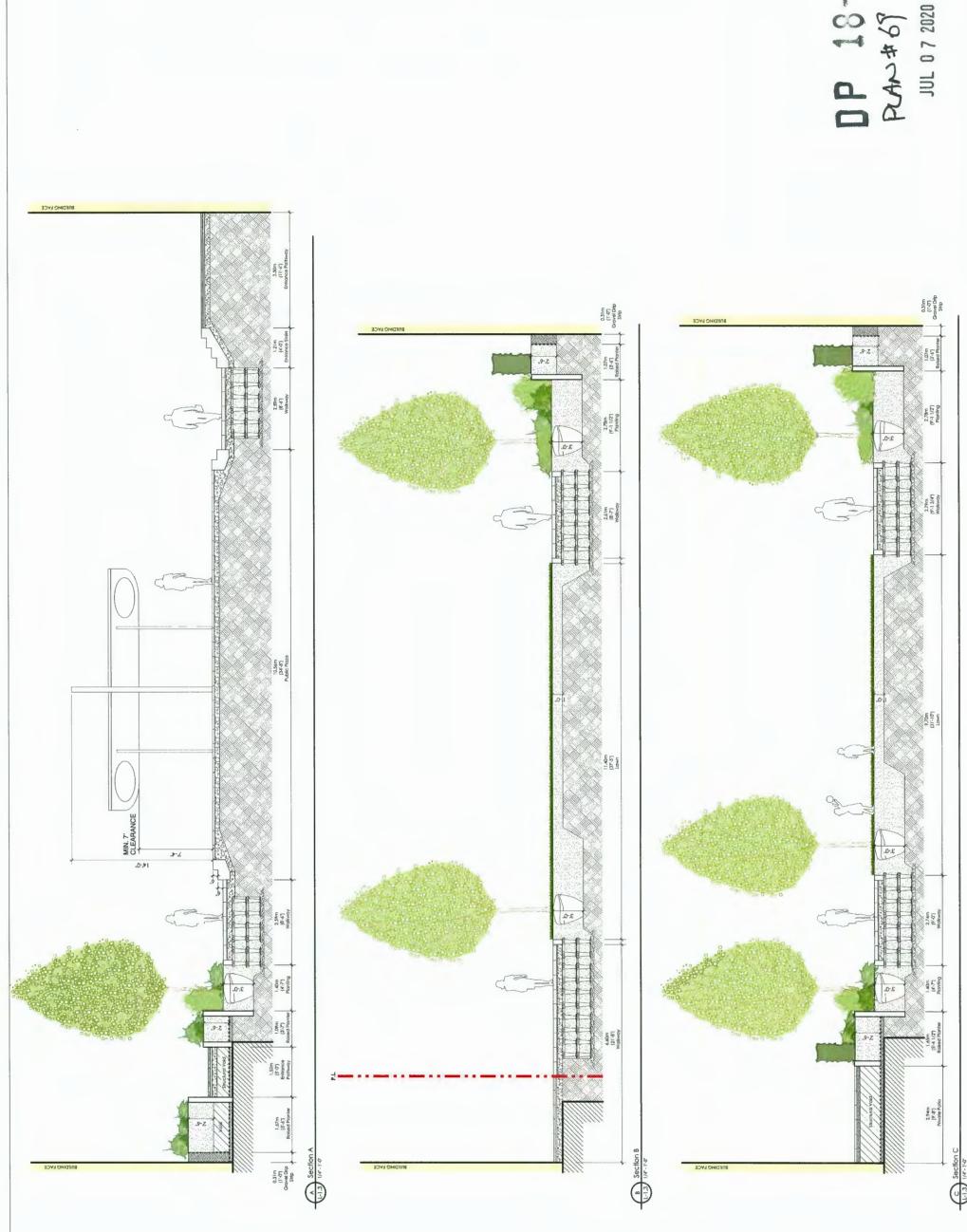
Scale:

Landscape Details

Drawing Title:

DP 18-83 Project No.:

17020 Sheet No.: **L-2.11**



12 July 09-20 Issued for DP Panel
11 July 08-20 Revision for Staff Report (3)
10 June 26-20 Revision for Staff Report (2)
9 June 15-20 Revision for Staff Report (2)
9 June 15-20 Revision for Staff Comment
7 Dec 05-19 Issued for Staff Comment
6 Nov 04-19 Issued for Staff Comment
5 Cot 21-19 Issued for DP Re-submission
1 Septilib-18 Issued for DP Re-submission
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Project:
Resid'I Development
Park Residences PH2
Tower C + D + E
6333-6399 Mah Bing Street
Richmond, B.C.

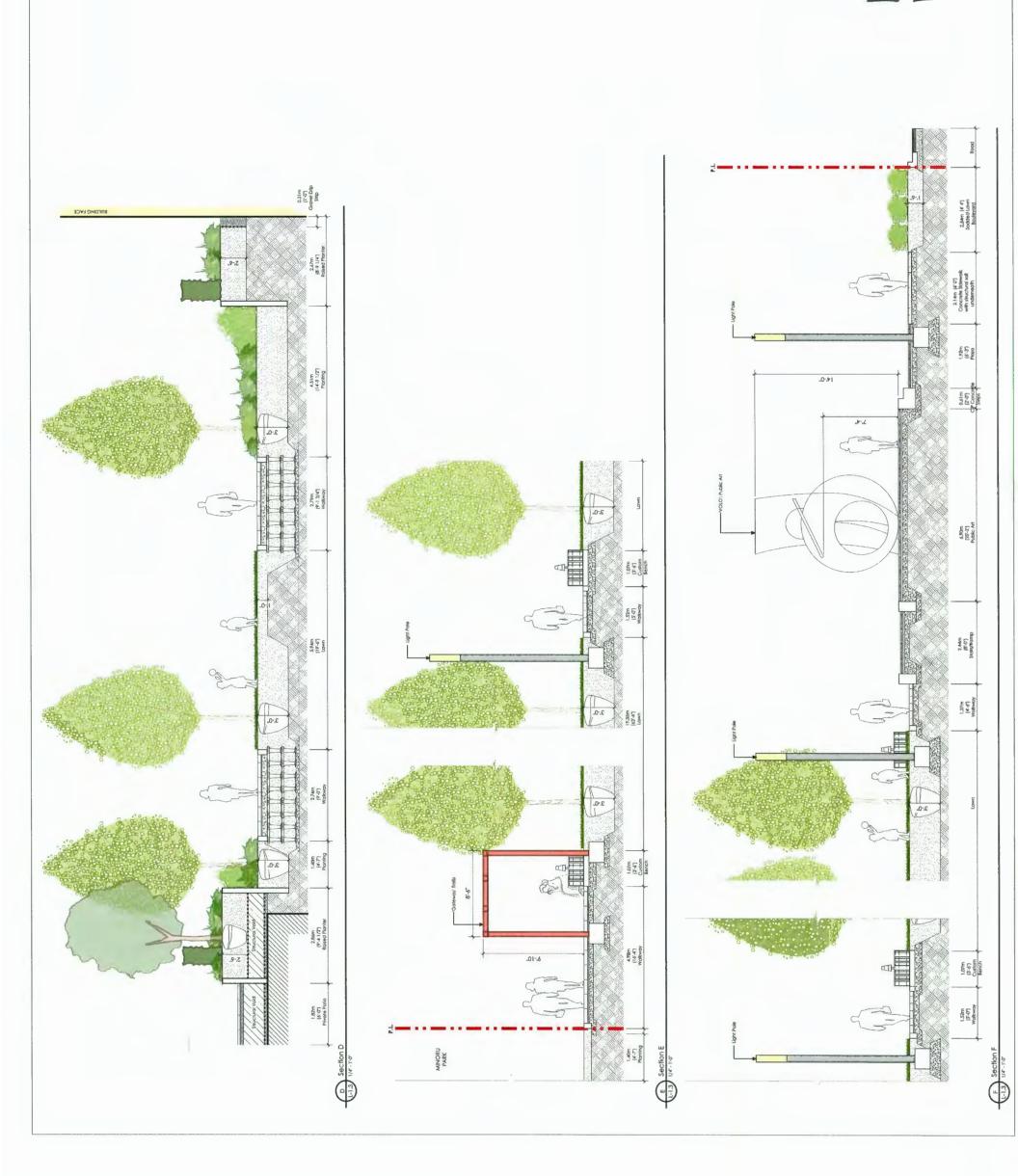
Drawn by: RO'C
Checked by: JD
Date: June 28th 2018
Scale: 1/8"= 1"0"

Landscape Sections

Drawing Title:

DP 18-837117 PAN#69 Sheet No.: 17020

L-3.1



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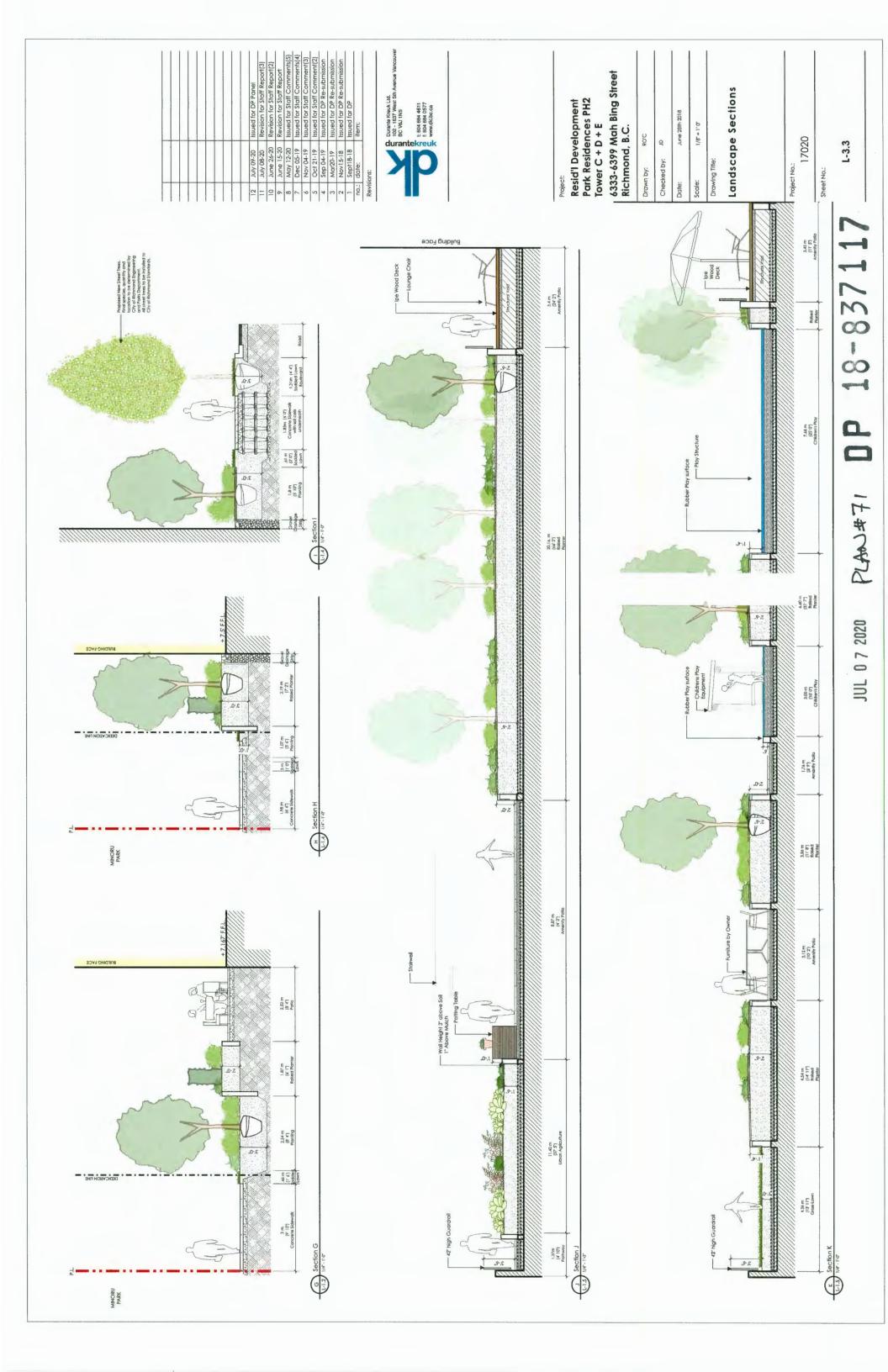
6333-6399 Mah Bing Street Resid'l Development Park Residences PH2 Tower C + D + E

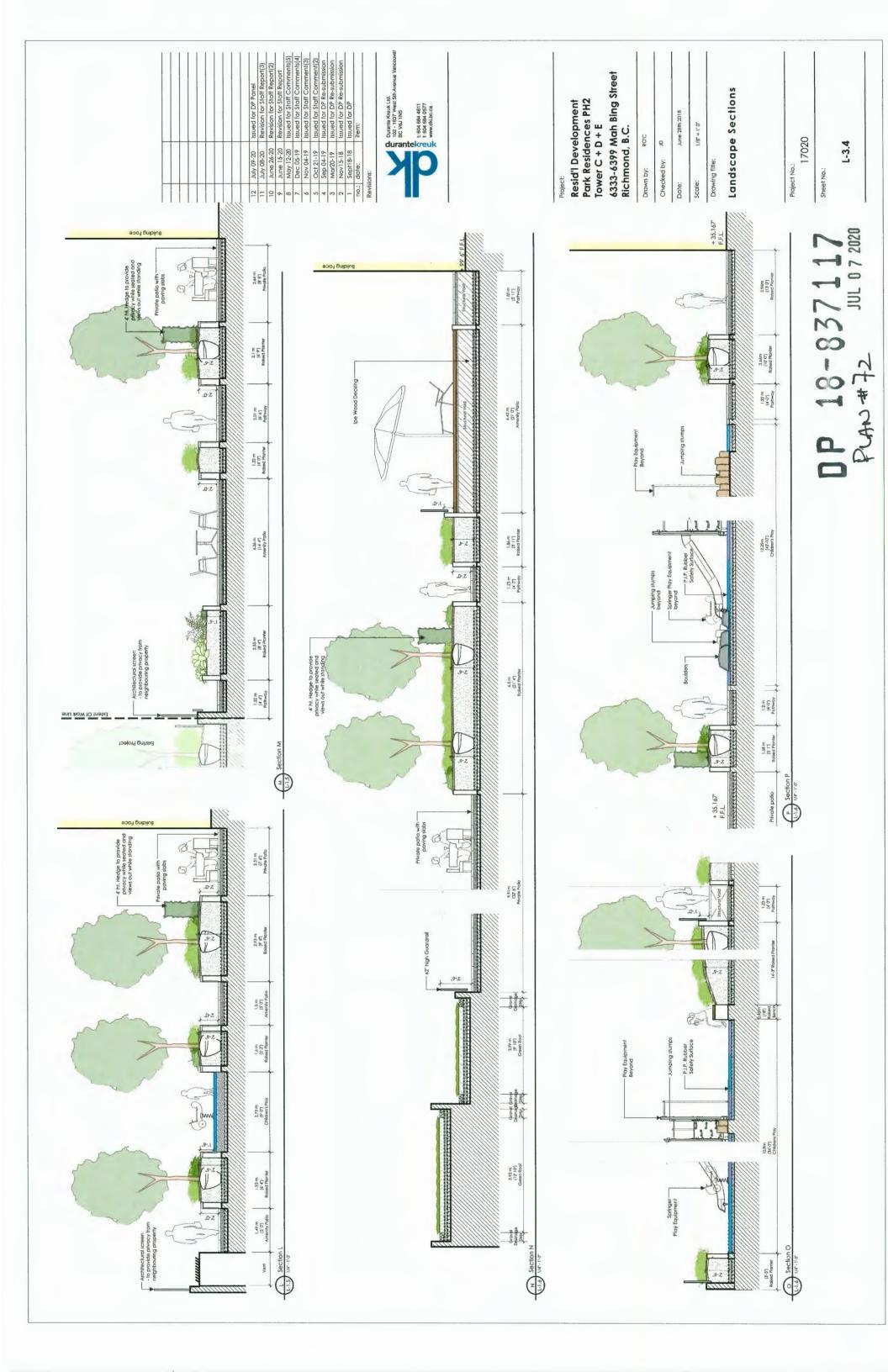
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Drown by:	RO'C
Checked by:	qr
Date:	June 28th 2018
Scale:	1/8" = 1' 0"

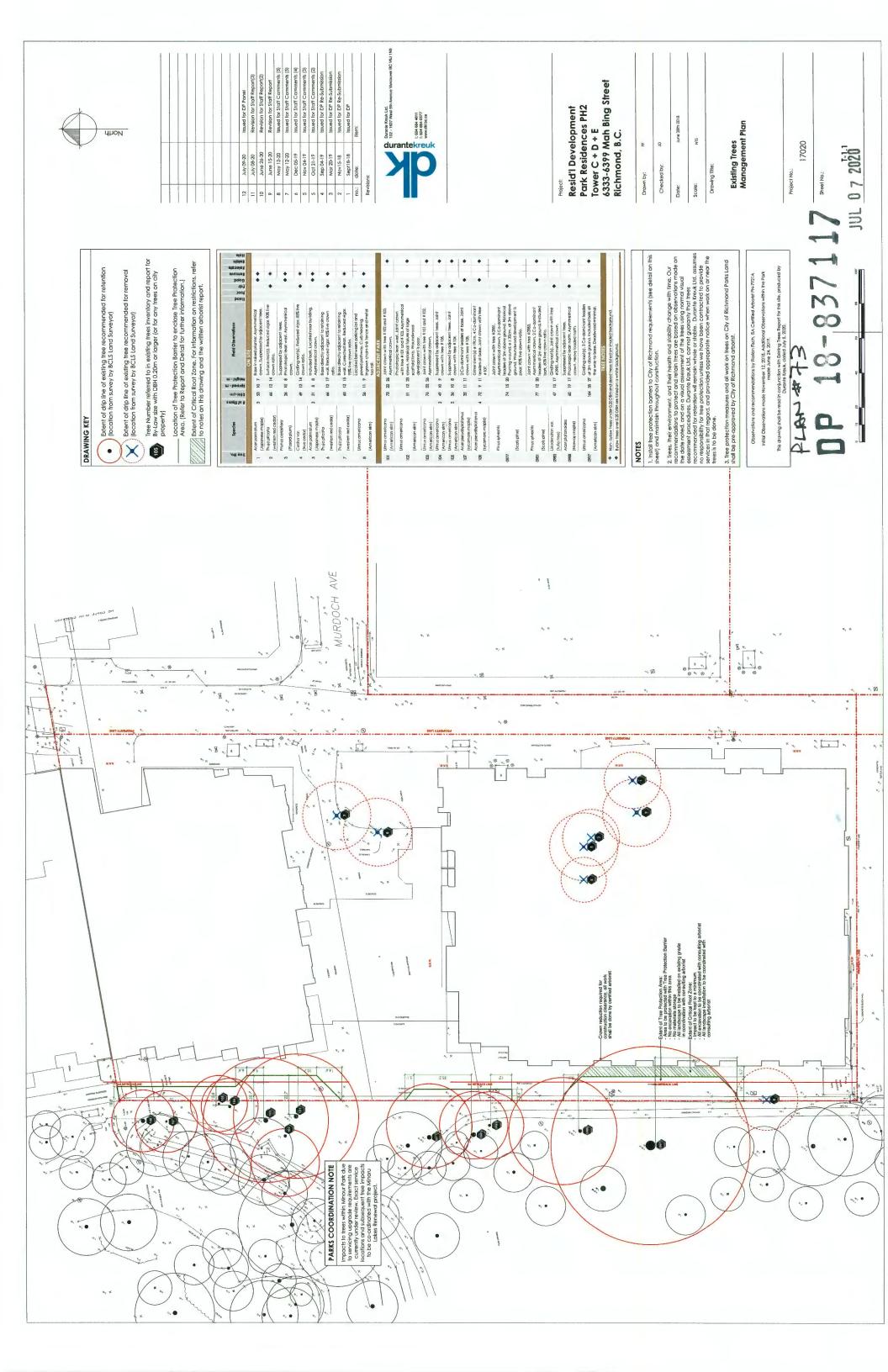
Landscape Sections Drawing Title:

DP 18-83711 PLAN#70 17020

L-3.2







17020_Tree Report

Note																	
CONTRACTOR OF THE PARTY OF																	
Retain											•	•	•	•	•	•	•
Renove	1						-										
Good			•		•	*	•										•
Fair			•		•	•	•	•	•		•	•	•	•	•	•	•
1009																	
Dead	B																
	ON SITE	Base in raised planter. Asymmetrical crown. Suppressed by adjacent trees.	Surface roof(s). Reduced vigor. 90% live crown ratio.	Suppressed by adjacent trees. Phototropic lean west. Asymmetrical		Included bark. Located near building. Asymmetrical crown.	Base directly adjacent to retaining wall. Reduced vigor. 95% live crown ratio.	Base directly adjacent to retaining wall. Corrected lean. Reduced vigor. 95% live crown ratio.	Located between parking lot and paved pathway. Cuth heaving. Ingrown chain-link fence and metal top rail.	ADJACENT PARK	Joint crown with tree # 102 and # 103. Asymmetrical crown.	Photofropic lean west. Joint crown with tree # 101 and # 103. Asymmetrical crown. Historical failure of large scaffold limb, woundwood seaflod limb, boox.	Joint crown with tree #101 and #102. Asymmetrical crown.	Suppressed by adjacent trees, Joint crown with tree # 105.	Suppressed by adjacent trees. Joint crown with tree #104.	2 Co-dominant leaders at base, Joint arown with tree # 108.	Other stem (s) @ 19cm. 4 Co-dominant 11 leaders at base. Joint crown with tree #107.
m - tdglaH		_	4	00	4	00	17	15	0		28	8	26	٥	œ	=	=
2bread - m		2	12	5	12	00	12	12	=		8	12	23	9	10	=	6
DBH-cm		B	38	8	4	9	38	8	92		23	52	76	49	36	35	72
amət? to #		က				2								2	2		4
Species		Acer palmatum (Japanese maple)	Thuja plicata (westem red cedar)	Prunus cerasifera (Pissard plum)	Ceahus var. (true cedar)	Acer palmatum (Japanese maple)	Thuja plicata (western red cedar)	Thuja plicata (westem red cedar)	Ulmus americana (American elm)		Ulmus americana (American elm)	Ulmus americana (American elm)	Ulmus americana (American elm)	Ulmus americana (American elm)	Ulmus americana (American elm)	Acer pseudopiatanus (sycamore maple)	Acer pseudoplatanus (sycamore maple)
Tree No.		_	2	6	4	2	9	_	00		101	102	103	20	305	107	108
200										100		_		_			_

Retain Kelocate Веточе bood Poor Fair Dead Joint crown with tree #0981.

Asymmetrical crown, 3 Co-dominant leaders at 2m above ground. Historical Pruning wound, ø±35cm, at 3m above ground. Woundwood development is poor, 90% live crown ratio. Girdling root(s), 3 Co-dominant leaders 164 35 27 at 2m above ground. Included bark all the woy to base, Deadwood minimal. Joint crown with tree #0983.

Asymmetrical crown. 2 Co-dominant

77 12 20 leaders at 2m above ground. Included bank. 60% live crown ratio. Suppressed by adjacent frees.

60 19 17 Phototrapic lean north. Asymmetrical crown. Heavy loaded north. Girdling root(s). Joint crown with tree #0981. Asymmetrical crown. Field Observations m - tdgiəH 47 12 17 zbread - m 74 рвн-сш # of Stems Ulmus americana Acer platanoides Species Linodendron var. (Noway maple) (American elm) Pinus sylvestris Pinus sylvestris (Scots pine) (Scots pine) (tulip tree) Tree No. 0983 8860 2660 1260 1860

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TREE NOTES
 Non-bylaw trees under 0.20 DBH and dead trees listed on shaded background.
 ◆ Bylaw trees over 0.20 DBH are listed on a white background.

OP 18-837117 4C# 1474

17020_Tree Report