



**To:** Development Permit Panel

**Date:** November 20, 2019

**From:** Wayne Craig  
Director, Development

**File:** DP 18-818671

**Re:** **Application by Christopher Bozyk Architects Ltd. for a Development Permit at 4693, 4720, 4740 Vanguard Road and Road Parcel Richmond Key 20909**

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### Staff Recommendation

That a Development Permit be issued which would:

1. Permit the construction of two industrial buildings on the consolidated parcel including 4693, 4720, 4740 Vanguard Road and Road Parcel Richmond Key 20909 on a site zoned “Industrial Retail (IR1)”; and
2. Vary the provisions of Richmond Zoning Bylaw 8500 to:
  - a) Increase the maximum height for buildings from 12.0 m to 16.15 m; and
  - b) Reduce the minimum vehicle manoeuvring aisle width from 7.5 m to 6.7 m.

A handwritten signature in black ink, appearing to read 'Wayne Craig', written over a circular stamp or seal.

Wayne Craig  
Director, Development  
(604-247-4625)

WC:jr  
Att. 5

## Staff Report

### Origin

Christopher Bozyk Architects Ltd. has applied to the City of Richmond for permission to develop two industrial buildings on a consolidated parcel including 4693, 4720, 4740 Vanguard Road and Road Parcel Richmond Key 20909. The development site is currently zoned “Industrial Retail (IR1)” and contains several large industrial buildings. A location map is provided in Attachment 1.

There is no associated rezoning, but two variances are requested.

### Background

The subject site is located in the East Cambie planning area. Development surrounding the subject site is as follows:

- To the north, two large 5,818 m<sup>2</sup> and 3,562 m<sup>2</sup> (62,624 ft<sup>2</sup> / 38,341 ft<sup>2</sup>) lots containing industrial warehouses. Both lots are zoned “Industrial Retail (IR1)”.
- To the east, an 8,106 m<sup>2</sup> (87,252 ft<sup>2</sup>) vacant treed lot owned by the BC Transportation Financing Authority and zoned “School & Institutional Use (SI)”.
- To the south, Highway 91, beyond which is the Richmond Nature Park on a property zoned “School & Institutional Use (SI).” This property is also identified as part of the Agricultural Land Reserve (ALR).
- To the west, a rail right-of-way (ROW) corridor and Shell Road. The rail corridor is owned by CN Rail, and the portion of the corridor adjacent to the subject site is zoned “Industrial Retail (IR1).”

### Related Policies and Studies

#### Aircraft Noise Sensitive Development Policy

The subject site is located within Aircraft Noise Area 1A, which restricts all new noise sensitive uses. The proposed industrial use is not restricted, and noise mitigation is not required. Prior to issuance of the Development Permit, the applicant is required to register an aircraft noise covenant on Title to address public awareness of the potential impact of aircraft noise on the site.

#### Floodplain Management Implementation Strategy

The proposed redevelopment must meet the requirements of Richmond Flood Plain Designation and Protection Bylaw 8204. Registration of a flood indemnity covenant on Title is required prior to issuance of the Development Permit.

### Development Information

Please refer to the attached Development Application Data Sheet (Attachment 3) for a comparison of the proposed development data with the relevant Bylaw requirements.

The applicant proposes to construct two buildings on the consolidated site (referred to as Building A and Building B in the plans), which would have a combined net built area of 19,018 m<sup>2</sup> (204,714 ft<sup>2</sup>). The proposal is for stacked warehouse units, each with a main floor and a mezzanine, arranged on a central corridor forming a spine. The developer intends to stratify these units. Each building is described as having three storeys and one mezzanine, giving the appearance of a four-storey building.

Ground floor units are accessed directly from the drive aisle via insulated steel overhead rolling doors or via the internal central corridor. At upper levels, units are accessed from the central corridor within the building or perimeter corridors that run around the third floor. Stair cases are located at either end of the central corridor and at each of the four corners of each building. Each building has three elevators, including two freight elevators, located at the north end of the central corridor.

The exterior of the buildings consist of painted concrete, metal panels, spandrel panels, and extensive areas of clear glazing. Landscaping is proposed at the corners of each building and around the perimeter of the site, as well as on a portion of the third storey roofs. Unobstructed pedestrian pathways are provided around each building, and marked crosswalks are provided in key locations.

The applicant provided an ornithologist's report on the proposed development, which included recommendations for strategies to mitigate bird strikes. Recommendations incorporated into the proposal include reduced glazing on the upper storeys of the buildings, introduction of ceramic frit treatment on the south façade of Building A and the south and east facades of Building B, and use of full cut-off lighting on the building exteriors and parking area. These design measures are included in the DP plan set and secured accordingly.

### **Rezoning and Public Hearing Results**

As the site does not require a rezoning, the proposed development was not required to go through a Public Hearing.

### **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 "Industrial Retail (IR1)" except for the zoning variances noted below.

### **Zoning Compliance/Variiances** (staff comments in *bold italics*)

The subject site's current "Industrial Retail (IR1)" zoning provides for a range of general industrial uses, stand-alone offices and a limited range of general retail uses. Retail uses currently permitted in the "Industrial Retail (IR1)" zone are generally limited to retail goods that require large floor areas like furniture, carpet, home appliances and building materials. Zoning compliance would be enforced through the Business Licensing and Building Permit application processes for each strata owner and/or building tenant. A legal agreement will be registered on Title notifying prospective buyers about the property zoning.

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

- a) Increase the maximum height for buildings in the “Industrial Retail (IR1)” zone from 12.0 m to 16.15 m.

*Staff supports the proposed variance as the additional height allows the proposed units to be stacked, a new approach to warehouse buildings in Richmond that allows for more intensive use of the site while enhancing the open areas around each building.*

*The requested height variance includes 15.85 m to the top of the roof, plus an additional 0.30 m to accommodate solar panels, for a total building height of 16.15 m.*

- b) Reduce the minimum vehicle manoeuvring aisle width from 7.5 m to 6.7 m.

*The requested variance would apply to the drive aisles located on the west, south, and east portions of the site only. The reduced drive aisle width maintains two-way vehicle traffic throughout the site and adequate manoeuvring space at drive aisle intersections for vehicle turning movements. The centre and north drive aisles have a proposed minimum width of 7.87 m, which exceeds the Zoning Bylaw requirement.*

*Staff supports the proposed variance as the reduced drive aisles allow for separated pedestrian circulation around each building and will not impact the designated medium and large loading spaces. Transportation staff have reviewed the proposal and support the requested variance.*

### Advisory Design Panel Comments

At their meeting of December 6, 2018, the Advisory Design Panel (ADP) provided their support for the application subject to consideration of the Panel’s comments. The applicant has incorporated a number of design changes in response to the Panel’s comments, including:

- Design solutions to mitigate potential bird strikes;
- Enclosure and screening of rooftop mechanical systems;
- Improved landscaping throughout the site;
- Improved pedestrian circulation around buildings and from parking areas;
- Addition of permeable pavers to mark the entrance to the site;
- Addition of green roofs on each of the buildings; and
- Addition of solar panels on each of the buildings.

An excerpt from the Advisory Design Panel Minutes from December 6, 2018 is attached for reference (Attachment 4). The design response from the applicant has been included immediately following the specific Design Panel comments and is identified in ***bold italics***.

### Analysis

#### *Conditions of Adjacency*

- The buildings have been designed to have a strong visible presence on Highway 91 and Shell Road, and include extensive clear glazing.

- The buildings are taller than the one and two storey buildings in the immediate area. However the height is comparable to recently approved industrial buildings north of Highway 99, continuing the revitalization of the area.
- The subject site is located across Highway 91 from the Richmond Nature Park. The applicant provided a report from an ornithologist which identified a moderate risk of bird strikes on the south elevation of Building A and the south and east elevations of Building B. Design solutions in the proposed development include ceramic frit on the sensitive building elevations, reduced area of glazed surfaces throughout, and use of full cut-off lighting in outdoor areas. Together, these measures reduce the potential for bird strikes.

### ***Urban Design and Site Planning***

- The proposal involves consolidation of the properties into a single lot, which will have a single vehicle access from Vanguard Road.
- The two buildings separated by a centre drive aisle and truck court, which contains loading and parking spaces. Additional parking spaces surround each building.
- Two garbage enclosures are proposed in the northwest and northeast corners of the site. The proposed enclosures are concrete with steel swing doors finished to match the metal cladding on each building. Landscaping is proposed to screen the concrete structure, with minimum 2.0 m tall “Emerald Cedar” hedges planted along the interface with Shell Road, consistent with the screening requirements contained in the Zoning Bylaw.

### ***Parking and Access***

- Access to the site is via a single driveway at the terminus of Vanguard Road. A small cul-de-sac will be constructed in the road allowance to accommodate turning movements of passenger vehicles without entering the site. Design and construction will be through the Servicing Agreement.
- Larger vehicles will be able to turn around on-site, and an SRW for public rights-of-passage will be secured for this purpose.
- On-site vehicle parking is in excess of the 75 spaces required in the Zoning Bylaw. A total of 208 spaces are provided, including 4 handicapped accessible spaces and 107 small car spaces. The handicapped spaces are located nearest the main entry points of each building.
- Three large loading spaces are located parallel to the drive aisle on the north side of the site, and twelve medium loading spaces are located in the central truck court, which exceeds the Zoning Bylaw loading requirements.
- Forty-eight (48) Class 1 bicycle spaces are provided within the building in individual units. There is no common secure bike facility proposed. An additional 48 Class 2 bicycle spaces are provided via several bicycle racks grouped in six locations near the building entrances.

### ***Architectural Form and Character***

- Two industrial buildings are proposed, each having the appearance of a four-storey building.
- The buildings are largely the same in design and appearance, except Building A is wider and each building is accented with a different primary colour.
- The buildings have a modern appearance, with extensive clear glazing on all four elevations and roofs that slope upwards gently.
- Full-height vertical elements break up the horizontal massing on the north and south elevations of each building.

- Corrugated metal screening will be provided for rooftop mechanical equipment, and will be located on either side of the spine of each building. The screens are set back from the edge of the roof and will not project above the 15.85 m height of the taller spine, minimizing their appearance from the ground.

### ***Landscape Design and Open Space Design***

- A total of 61 new trees are proposed to be planted on the development site, and include a mix of coniferous and deciduous species. Trees within the parking area are primarily deciduous to allow for clear sight lines, while conifers are primarily located in the larger landscaped areas where they can be clustered with other plantings.
- There are statutory rights-of-way for third party utilities along the north, west, and east property lines, which reduce opportunities for tree planting in these locations. As a result, the perimeter of the site is landscaped primarily with evergreen shrubs, flowering perennials, and ornamental grasses. The plantings are layered to provide seasonal variation and texture.
- Consistent with the OCP, a 3.0 m wide landscape buffer is provided along the south property line to screen and buffer the site from the Agricultural Land Reserve (ALR) across Highway 91. Continued maintenance of this buffer area will be secured through a legal agreement on Title.
- An enlarged landscaped area is provided at the terminus of the centre drive aisle.
- Parking spaces are broken up by landscaped bump-outs, which include shrubs and trees. Additional landscaping is provided at the corners of each building.
- Irrigation is provided for all soft landscape areas, including the landscaped bump-outs.
- Each building contains two green roof areas on the third storey, with a total planted area of 412 m<sup>2</sup> (4,436 ft<sup>2</sup>). The proposed green roof system will be planted with sedum mats.
- Defined pedestrian pathways lead from the Vanguard Road access to the main entry of each building. Additional pedestrian pathways are provided around the perimeter of the buildings.
- Permeable pavers are proposed at the entrance of the site, which will mark the transition from Vanguard Road into the site.
- No new fencing is proposed. There is an existing chain link fence separating the site from the railway to the west and Highway 91 to the south, which will be retained.
- The applicant is required to submit an acceptable security for landscaping in the amount of \$349,082, inclusive of a 10% contingency cost, prior to issuance of the Development Permit.

### ***Tree Removal and Replacement***

- One bylaw-sized tree on the subject site will be removed as it is located within the proposed building envelope. The OCP would require replacement at a 2:1 ratio.
- The landscape plans include 61 new on-site trees to be planted within the parking area, at the corners of each building, and along the southern perimeter of the site.
- Three bylaw-sized trees in the Highway 91 road right-of-way and one bylaw-sized tree in the rail right-of-way will not be impacted by the proposed development, and will be retained and protected.

***Sustainability***

- The buildings are designed to achieve ASHRAE 90.1-2010 energy standards, and the indoor and outdoor lighting will be 50% and 40% better than ASHRAE 90.1-2010, respectively.
- Solar panels will be installed on the flat roof forming the spine of each building, and will have an estimated power output of 40,000 kWh/year, which would meet the lighting and receptacle power demands of the buildings according to preliminary modelling by their consultant (Attachment 5). The system will be designed to qualify for the BC Hydro Net-Metering program, allowing excess electricity to be sold to BC Hydro for distribution on the larger electrical grid. Installation and maintenance of the agreed upon renewable energy system will be secured through a legal agreement on Title.
- Permeable pavers are proposed at the site entrance, along the west side of the site, and in various locations around the perimeter of both buildings in order to improve site drainage. Including the green roofs, permeable surfaces constitute approximately 21% of the site area.
- The applicant has agreed to provide Level 2 EV charging for 10% of the required vehicle parking spaces, i.e. 7 stalls. The provision and maintenance of the agreed upon vehicle charging infrastructure will be secured through a legal agreement on Title.

***Crime Prevention Through Environmental Design***

- The site has a single access point for vehicles and pedestrians. Marked pedestrian crossings are located away from the intersection to ensure clear sightlines.
- On-site lighting will be downward directed with full cut-off to avoid casting glare to the adjacent properties, Highway 91, and Shell Road. Lighting is predominantly building mounted, except for two pole mounted lights at the site entrance.
- There is an existing chain link fence located off-site, separating the site from the railway to the west and Highway 91 to the south. Landscaping around the perimeter of the site consists of taller shrubs in order to provide an additional barrier and screen headlight glare.
- Parking medians are landscaped with high-branching deciduous trees in order to preserve sightlines to and from parked vehicles.

***Public Art***

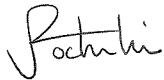
- The applicant has decided to provide a voluntary contribution to the City's Public Art Reserve in the amount of \$49,272 based on \$0.24 per buildable square foot. This contribution is consistent with the recommended Public Art contribution for applications received in 2018.

***Site Servicing***

- The applicant is required to enter into a Servicing Agreement for the design and construction of the required site servicing and off-site works described in Attachment 6, which include, but may not be limited to:
  - Watermain upgrades.
  - Cul-de-sac turning facility at the south end of Vanguard Road.

**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.



Jordan Rockerbie  
Planning Technician – Design  
(604-276-4092)

JR:blg

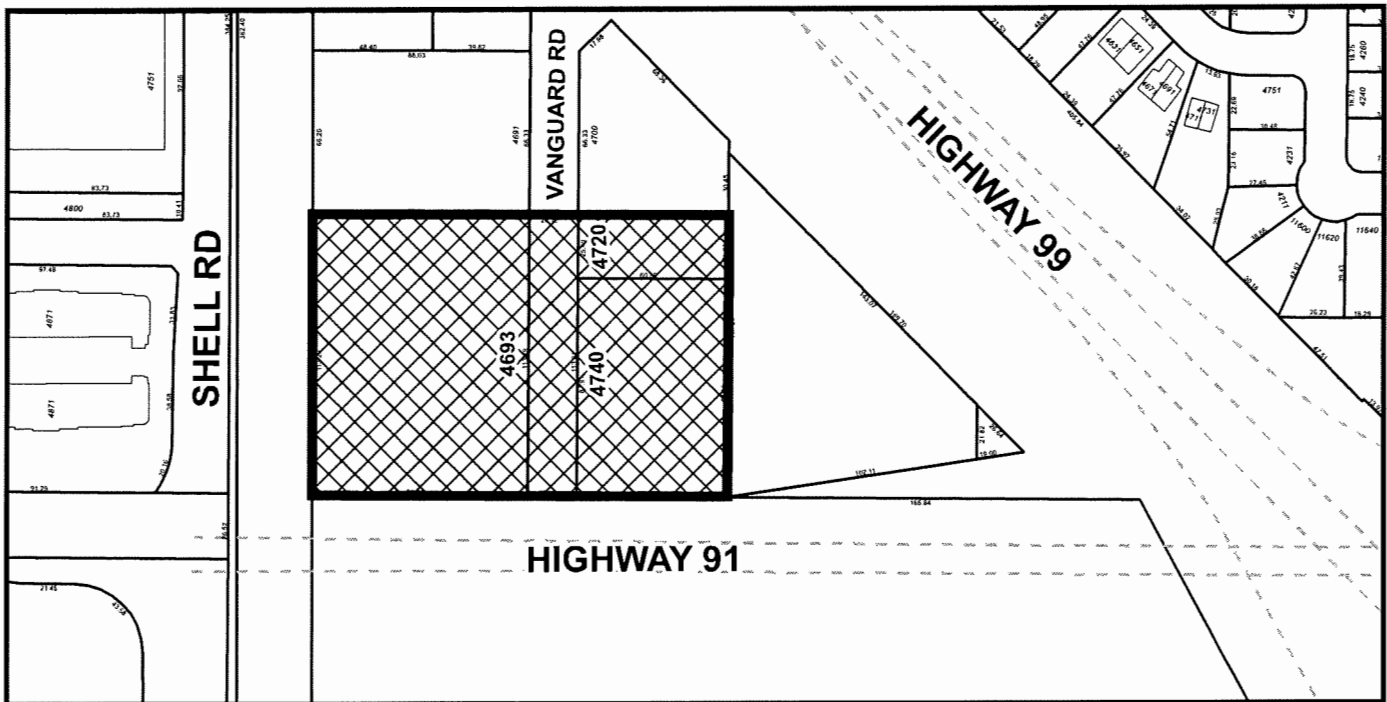
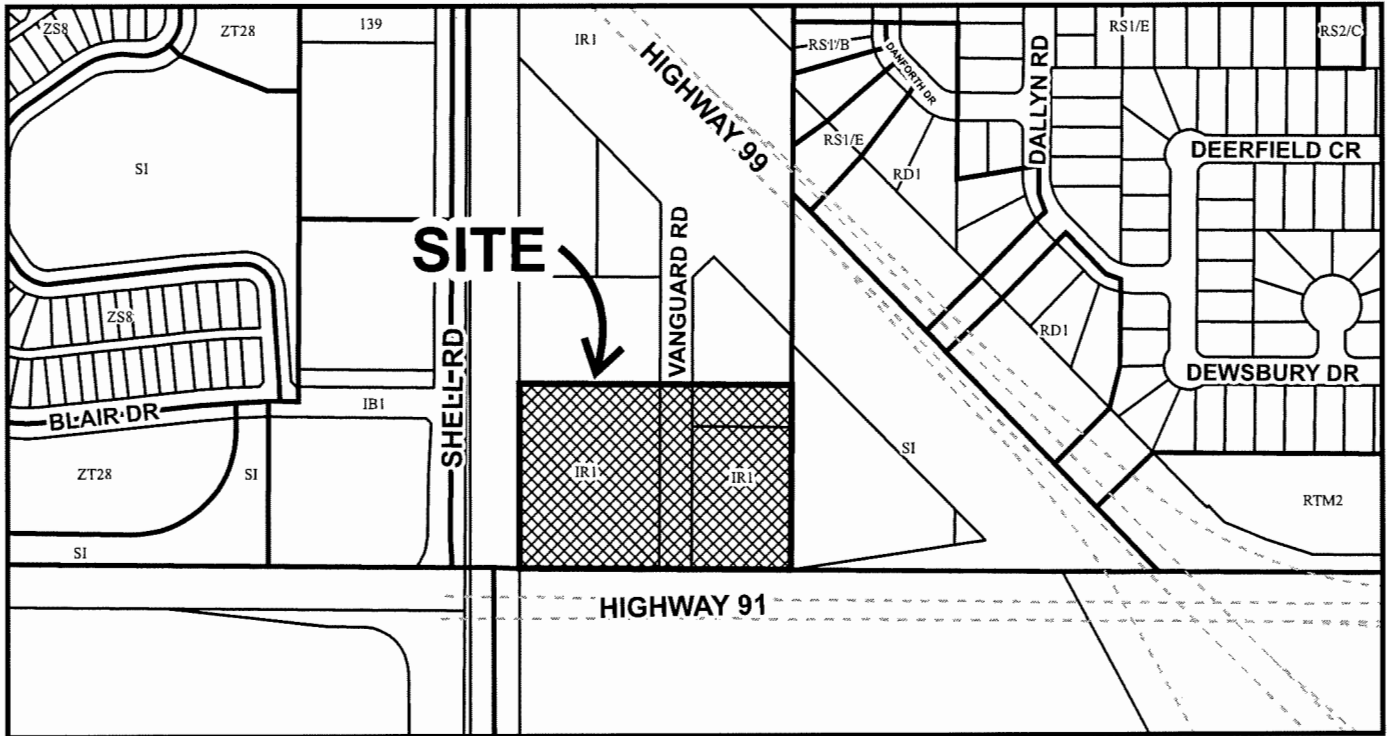
Attachments:

- Attachment 1: Location Map
- Attachment 2: Development Application Data Sheet
- Attachment 3: Excerpt from the Advisory Design Panel Minutes
- Attachment 4: Solar energy response letter
- Attachment 5: Development Permit Considerations





# City of Richmond



DP 18-818671

Original Date: 04/27/18

Revision Date: 08/20/19

Note: Dimensions are in METRES



**DP 18-818671**

**Attachment 2**

Address: 4693, 4720, 4740 Vanguard Road and Road Parcel Richmond Key 20909

Applicant: Christopher Bozyk Architects Ltd. Owner: 4693 Vanguard Road Holdings Ltd., Inc. No. BC 1045695

Planning Area(s): East Cambie

Floor Area Gross: 28,275.01 m<sup>2</sup> Floor Area Net: 19,018.00 m<sup>2</sup>

	Existing	Proposed
<b>Site Area:</b>	19,073 m <sup>2</sup>	No change
<b>Land Uses:</b>	Three industrial buildings	Two industrial buildings
<b>OCP Designation:</b>	Mixed Employment (MEMP)	No change
<b>Zoning:</b>	Industrial Retail (IR1)	No change

	Bylaw Requirement	Proposed	Variance
Floor Area Ratio:	1.0	1.0	None permitted
Lot Coverage:	Max. 60%	37%	None
Setback – North Front Yard:	Min. 3.0 m	24.3 m	None
Setback – West Side Yard:	Min. 3.0 m	19.8 m	None
Setback – East Side Yard:	Min. 0 m	19.5 m	None
Setback – South Rear Yard:	Min. 0 m	19.2 m	None
Height (m):	Max. 12 m	16.15 m	<b>Vary by 4.15 m</b>
Lot Size:	No Minimum	19,073 m <sup>2</sup>	None
Total Off-street Spaces:	73	208 (107 small car spaces)	None
Off-street Parking Spaces – Accessible:	2	4	None
Loading Spaces:	Medium: 4 Large: 3	Medium: 12 Large: 3	None
Bicycle Spaces:	Class 1: 47 Class 2: 48	Class 1: 48 Class 2: 48	None

**Excerpt from the Minutes from  
The Design Panel Meeting**

**Wednesday, December 5, 2018 – 4:00 p.m.  
Rm. M.1.003  
Richmond City Hall**

**1. DP 18-818671 – APPARENT FOUR-STOREY INDUSTRIAL RETAIL DEVELOPMENT**

ARCHITECT: Christopher Bozyk Architects

LANDSCAPE ARCHITECT: KD Planning and Design

PROPERTY LOCATION: 4693, 4720 and 4740 Vanguard Road

**Applicant's Presentation**

Chantal Bobyn, Christopher Bozyk Architects, Ltd., and Shan Tennyson, Krahn-KD Planning and Design, presented the project, and together with Gordon Yeh and Michael Chiang, Alliance Partners, answered queries from the project on behalf of the applicant.

**Panel Discussion**

*Comments from Panel members were as follows:*

- potential uses of the development could be flexible; however, the architectural design does not reflect this intent; some details in the design are missing for uses other than storage such as for commercial and office spaces, e.g. roof enclosures for mechanical units and continuous band of louvers for ventilation; incorporating these details will impact the shape and form of the development;

Primary and major use to be light industrial (light storage) with minor showroom/retail use on ground floor. No major commercial/office use.

An enclosure has been provided for the rooftop mechanical equipment.

- applicant is advised to confirm if vestibules are required for proposed storage use as per BC Building Code considering that provision of vestibules is required for office and retail uses;

Primary and major use to be light industrial (light storage) with minor showroom/retail use on ground floor. No major commercial/office use.

No requirement for vestibule.

- agree with the preceding comments from the Panel; proposed number of parking spaces would pose a challenge for other uses of the two buildings other than storage, e.g. office and commercial uses;

Primary and major use to be light industrial (light storage) with minor showroom/retail use on ground floor. No major commercial/office use.

- investigate opportunities for integrating louvers, opaque surfaces, or mesh screening on the building façade to reduce the potential for bird strikes into the proposed buildings;

We have reduced the amount of glazing by 38% by introducing concrete tilt wall panels. We believe this will help mitigate potential bird strikes.

- consider a strategy for screening of mechanical systems at this stage of the project if the proposed development will be utilized for uses other than a storage facility;

An enclosure has been provided for the rooftop mechanical equipment.

- consider designating planting areas on the corners of the buildings adjacent to the internal drive aisles that will not conflict with the drive aisles or alignment issues to provide a layering effect;

Addressing – Revised Site plan and Landscape plan to follow. See updated Site Plan & Landscape Plan Resubmitted.

- investigate opportunities for incorporating an outdoor amenity area within the site to take advantage of the forested area on the east side and the Shell Road Trail on the west side of the site; the outdoor amenity area could be located on the edge of the west side of the site and designed to work with the Shell Road Trail to the west;

Pedestrian connection to the park is not feasible due to an active rail line.

- consider eliminating the parking stalls immediately at the southern end of Vanguard Road and incorporate a planting area with mature planting to provide a buffer/screening to the south side of the site;

Addressing – Revised Site plan and Landscape plan to follow. See updated Site Plan & Landscape Plan Resubmitted.

- consider installing electric vehicle charging in the parking area;

Addressing – Revised Site plan and Landscape plan to follow. See updated Site Plan & Landscape Plan Resubmitted.

- consider installing a built louvers screening system for the large “unit sub” facility located immediately to the west of the driveway entrance;

After further considerations, Unit Sub is now eliminated (replace by PMTs)

- consider installing permeable pavers on the vehicle entrance to the north of the two buildings to identify the main entrances to the site;

Addressing – Revised Site plan and Landscape plan to follow. See updated Site Plan & Landscape Plan Resubmitted.

- consider a lighting strategy for outside of the buildings and for the parking area to address potential CPTED issues;

Yes, lighting will be provided to address

- appreciate the model and the applicant's presentation of the project;
- on-site landscaping appears thin; however, the site benefits from the existing greenery on all sides of the site;

See revised Landscape Plan.

- consider taking away a portion of the loading areas and parking stalls at the front of the two buildings to enhance the landscaping at the pedestrian entries to the site/building; landscaping should be given the same attention as the building architecture;

We believe the loading is best where located as it is close to entry and not requiring to circulate through the site. The unit sub is now eliminated so there will be some greenery gained.

- grasses on existing groundcovers are a step in the right direction as they require little maintenance; however, consider adding low groundcovers; ornamental grasses can grow taller and provide seasonal variation;

Addressing – Revised Site plan and Landscape plan to follow. See updated Site Plan & Landscape Plan Resubmitted.

- consider enhancing the landscaping around the “sub-unit” facility to provide more adequate screening;

After further considerations, Unit Sub is now eliminated (replace by PMTs)

- an outdoor amenity area within the site may not be necessary if there is strong connection to the existing greenery surrounding the site; a pedestrian connection could cut through the Shell Road Trail and across Blair Drive;

Pedestrian connection to the park is not feasible due to an active rail line.

- proposed form and character of the two buildings could function well as a storage facility; massing has been broken down and provides a nice variety; exterior corridors work well;
- exterior glazed massing could be broken up to reduce the potential for bird strikes into the buildings;

We believe bird strike won't be an issue with the proposed buildings. We have reduced the amount of glazing by 38% by introducing concrete tilt wall panels. We believe this will help mitigate potential bird strikes.

- there is a significant amount of hardscape in the project which could give rise to heat island effect and pose potential challenges to stormwater management; investigate opportunities for stormwater capture on the building roofs for irrigation and other uses; the applicant is also encouraged to provide more green spaces on-site which may require removing some parking stalls;

Addressing – Revised Site plan and Landscape plan to follow. See updated Site Plan & Landscape Plan Resubmitted.

- consider removing some of the parking stalls immediately adjacent to the building and incorporating an outdoor amenity area on the south side of the site;

Addressing – Revised Site plan and Landscape plan to follow. See updated Site Plan & Landscape Plan Resubmitted.

- pedestrian entry points off Vanguard Road would appear underwhelming if the proposed buildings will also be used for office spaces; note the limited amount of landscaping and weather protection and lack of identity of entry points; proposed building design and landscaping are appropriate for a storage facility and not for office spaces;

Primary and major use to be light industrial (light storage) with minor showroom/retail use on ground floor. No major commercial/office use.

After further considerations, Unit Sub is now eliminated (replace by PMTs)

- appreciate the daylight exterior stairs on the corners of the two buildings; applicant is encouraged to bring down the natural light all the way down to the ground floor;
- proposed materials for building exterior work well together; internal lay-out of the building is appropriate for industrial warehouse use and would pose some challenges for other uses;

Primary and major use to be light industrial (light storage) with minor showroom/retail use on ground floor. No major commercial/office use.

Retail accessible from exterior at ground floor only.

- staff is advised that an accurate aerial map would be helpful to the Panel to better understand the project site and its context;
- “sub-unit” facility could be relocated either to the northeast or northwest corner of the site; however, if relocation is not possible, consider screening with a hard structure which complements with the design of the building;

After further considerations, Unit Sub is now eliminated (replace by PMTs)

- pedestrian pathway goes right through the “sub-unit” facility;

After further considerations, Unit Sub is now eliminated (replace by PMTs)

- applicant needs to give careful thought regarding the screening of rooftop mechanical equipment if the two buildings will be used for a complex mix of uses in addition to storage given the prominent location and high visibility of the buildings;

Primary and major use to be light industrial (light storage) with minor showroom/retail use on ground floor. No major commercial/office use.

An enclosure has been provided for the rooftop mechanical equipment.

- support the Panel comment to incorporate an outdoor amenity area on-site in view of the potential for a mix of building uses; applicant could use some of the parking spaces; pedestrian connection to the park is not feasible due to an active rail line;

Addressing – Revised Site plan and Landscape plan to follow. See updated Site Plan & Landscape Plan Resubmitted.

- consider introducing an outdoor amenity area on the building rooftop; would have great views to the north and would receive adequate sun exposure;

See Solar Report provided and updated Roof Plan.

- lots of horizontal lines breaking up the two buildings may reduce the potential for bird strikes; consider getting advice from an ornithologist;

We believe bird strike won't be an issue with these buildings. We have reduced the amount of glazing by 38% by introducing concrete tilt wall panels. We believe this will help mitigate potential bird strikes.

- consider more lighting for the site in view of the potential mix of uses for the buildings;

See Lighting specs provided.

- support the Panel comment that the applicant could take advantage of, or provide interface with, the existing greenery around the site for landscaping of the site; and
- the applicant is advised that other potential uses for the proposed development, e.g. daycare, may not be feasible due to lack of accessibility features.

Primary and major use to be light industrial (light storage) with minor showroom/retail use on ground floor. No major commercial/office use.

### **Panel Decision**

It was moved and seconded

*That DP 18-818671 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**

Opposed: Tom Parker and Jubin Jalili



969G Laval Crescent  
Kamloops, BC, V2C 5P4

Nov 7, 2019

Mr. Gordon Yeh  
Alliance Partners  
#100 – 88 W 8th Ave,  
Vancouver, BC, V5Y 1M7

Dear Gordon,

At MAKE Projects request, we have reviewed the implications of a 40kWp grid connected solar PV system for each of Building A and B for your project at 4720 and 4740 Vanguard Road in Richmond, BC.

Key considerations for successfully integrating 40 kWp solar systems into your project include:

1. **Expected Energy Production:**

Properly designed and installed these solar PV systems will produce about 40,000 kWh per year for each building. This would offset 100% of the Building Basic House Loads (lighting and receptacles) consumption of 39,420 kWh per year estimated by your design team.

2. **Electrical Considerations:**

- Electrical House panels A6HDP and B6HDP (600/347V-3P) are suitably sized to be the points-of-connection to the grid for each PV system and require only dedicated circuit breakers and suitably sized transformers for this purpose.
- Alternately, 208/120V-3P panels A2H2 and B2H2 could be used if their bus and associated transformer capacities were increased.
- Lockable disconnection means is required for each system; preferably nearby the point-of-connection to the grid.
- Suitably sized, electrical conduits or cables between electrical room points-of-connection to the grid and rooftop array locations should be specified and installed during construction in advance of solar PV installation.
- Rooftop cable penetrations, array cabling raceway requirements, and routing should be planned well in advance of the solar PV installation.

3. **Structural Considerations:**

- We recommend ballasted solar PV racking systems to avoid racking attachment penetrations of the roof membrane.
- Solar PV installation proponents will provide a stamped engineered ballasting plan assuring racking designs meet site wind and seismic design loads. Subsequently, the project structural engineer of record must assure the building can manage the additional loading. Ballasted PV system array dead loads in the order of 6-11 PSF are not uncommon depending on site design conditions.





4. **Mechanical Considerations:**

- 40 kWp arrays will require approximately 3800-4000 ft<sup>2</sup> carefully designated in advance for this purpose on each building rooftop.
- Placing vents, exhaust stacks, fall arrest anchors, rooftop units, or other equipment which could impede the placement of solar racking and modules must be avoided in these designated array areas

We are available to advise your design team in detail to ensure the building designs are ready for seamless incorporation of 40 kWp PV systems under the BC Hydro Net-Metering program.

We hope you will find this guidance helpful and look forward to answering any questions you might have.

Sincerely;

A handwritten signature in black ink, appearing to read "Ben Giudici".

Ben Giudici, P.Eng  
Director – Riverside Energy Systems



# City of Richmond

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

**Address:** 4693, 4720, and 4740 Vanguard Road

**File No.:** DP 18-818671

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

1. Consolidation of the properties into a single lot (which will require the demolition of the existing buildings).
2. Installation of appropriate tree protection fencing around all trees to be retained as part of the development prior to any construction activities, including building demolition, occurring on-site.
3. Submission of a cash security or Letter-of-Credit for landscaping in the amount of \$349,082 inclusive of a 10% contingency cost (as per the landscape cost estimate provided by KD Planning & Design Ltd. on November 7, 2019).
4. City acceptance of the developer's offer to voluntarily contribute \$0.24 per buildable square foot (i.e. \$49,272) to the City's public art fund.
5. Registration of an Aircraft Noise covenant on Title (Area 1A).
6. Registration of a Flood Indemnity covenant on Title (2.9 m GSC - Area A).
7. Registration of an Agricultural Land Reserve (ALR) Buffer Area covenant on Title to identify the 3.0 m wide landscaped buffer area along the south property line and to ensure that landscaping planted within the buffer is maintained and will not be abandoned or removed. The legal agreement is also to indicate that the property is potentially subject to impacts of noise, dust, and odour resulting from agricultural operations.
8. Registration of an Electric Vehicle (EV) Charging Infrastructure covenant on Title, securing the owner's commitment to voluntarily provide, install, and maintain EV charging equipment for the use of the commercial tenants and others as determined to the satisfaction of the City through an approved Development Permit. More specifically, a minimum of 10% of the required parking spaces must be provided with Level 2 EV charging (ex. 7 spaces for the proposed development).
9. Registration of an agreement on Title ensuring that the proposed solar panels will be installed to the satisfaction of the Director of Building Approvals, maintained for the life of the building and will not be removed without City approval. The agreement will include provisions for alternative renewable technologies to replace the solar panel installations provided that equal or better performance is achievable to the satisfaction of the Director of Development and the Director of Building Approvals.
10. Registration of a legal agreement on Title identifying that the property is located in an industrial area and that use of the property must be consistent with the Zoning Bylaw, and requiring that the owner provide an acknowledgement of the same in all purchase and sale agreements.

11. Granting of a Statutory Right-of-Way for Public Rights-of-Passage across the driveway from Vanguard Road and a portion of the drive aisle, in order to accommodate vehicle maneuvering on site.
12. Enter into a Servicing Agreement\* for the design and construction of site servicing and off-site works. A Letter of Credit or cash security for the value of the Service Agreement works, as determined by the City, will be required as part of entering into the Servicing Agreement. Works include, but may not be limited to:

**Water Works:**

- a) Using the OCP Model, there is 146 L/s of water available at a 20 psi residual at the Vanguard Road frontage. Based on your proposed development, your site requires a minimum fire flow of 250 L/s.
- b) Prior to the DP staff report being written, the Developer is required to coordinate with Richmond Fire Rescue to confirm whether fire hydrants are required along the proposed development's lane frontage. If required by RFR, the necessary water main and hydrant installations shall be reviewed by Engineering and added to the servicing agreement scope.
- c) At Developer's cost, the Developer is required to:
  - i) Submit Fire Underwriter Survey (FUS) or International Organization for Standardization (ISO) fire flow calculations to confirm 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.
  - ii) Review hydrant spacing on all road frontages and install new fire hydrants as required to meet City spacing requirements for the proposed land use.
  - iii) Provide right-of-ways for the water meters. Minimum right-of-way dimensions to be the size of the meter box (from the City of Richmond supplementary specifications) + any appurtenances Exact right-of-way dimensions to be finalized via the servicing agreement process.
  - iv) To address the issue of insufficient fire flow according to the OCP model, the developer has two options:
    - (1) Upgrade approximately 400m of the existing 200mm AC water main to 300mm PVC water main, within Vanguard road, from the north property line to Highway 99.-OR-
    - (2) Loop the water system to Blair Drive, by installing approximately 150m of new 200mm PVC water main. Installing the new water main will require the registration of a 6m wide SRW within the development site extending approximately 90m west of Vanguard Road. In addition to the 6m wide SRW required onsite, the water main will have to pass through the railway right of way and the developer is required to acquire written permission from the Canadian National Railway to complete these works. In addition to the installation of the new water main, the developer must replace any sections of the water main within Vanguard Road which may be impacted by the lane works at the developer's costs.
  - v) Depending on which option the developer choses to proceed with, at the developer's cost, the City will either:
    - (1) Cut and cap the existing water service connections at main;  
Remove the existing blow-off then cut and cap the existing main at the property line;  
Provide a 200mm line valve just north of the property line; and

Remove the cap then connect the on-site water system to the main at the property line  
-OR-

- (2) Cut and cap the existing water service connections at main;  
Remove the existing blow-off then cut and cap the existing main at the property line; and  
Provide new water service connections off of the new water mains within the 6m right of way.

**Storm Sewer Works:**

- d) At Developer's cost, the Developer is required to:
  - i) Provide an erosion and sediment control plan for all on-site and off-site works, to be reviewed as part of the servicing agreement design.
  - ii) Extend the existing 450mm diameter storm sewer complete with a manhole and stub with cap at the property line.

**Sanitary Sewer Works:** Existing sanitary sewer connection to be retained.

**Frontage Improvements:**

- e) At Developer's cost, the Developer is required to:
  - i) Coordinate with BC Hydro, Telus and other private communication service providers:
    - (1) To pre-duct for future hydro, telephone and cable utilities along all road frontages.
  - ii) Review street lighting levels along all road and lane frontages, and upgrade as required, should lighting be required along Vanguard Road, an LPT may be required.
  - iii) 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 development's 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 architectural plans/functional plan, the servicing agreement drawings, and registered prior to SA design approval:
    - 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 x 1.0 m
    - Telus FDH cabinet – 1.1 x 1.0 m
  - iv) Complete other frontage improvements as per Transportation requirements:
    - (1) Provide a vehicle turn-around facility at the south end of Vanguard Road to allow the public to turn around without entering the subject site. The facility should:
      - (a) Be designed to accommodate the U-turning of a regular-size passenger vehicle in a continuous movement;
      - (b) Have a minimum design radius of 7.3 m;
      - (c) Include barrier curb along the edge; and
      - (d) Include any additional requirements identified by RFR or Environmental Services.

**General Items:**

- f) At Developer's cost, the Developer is required to:
- i) As per GeoPacific's recommendations the developer is to conduct monitoring of settlements, using survey points spaced every 20 meters along their west property line, as this relates to impact to the railway.
  - ii) 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 construction water, the Developer will be required to enter into a de-watering agreement with the City to discharge treated construction water to the storm sewer system.
  - iii) Not encroach into City rights-of-ways with any proposed trees, retaining walls, or other non-removable structures. Retaining walls proposed to encroach into rights-of-ways must be reviewed by the City's Engineering Department.
  - iv) 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, 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.

**Prior to Building Permit\* issuance, the developer is required to complete the following:**

1. The applicant is required to obtain a Building Permit for any construction hoarding associated with the proposed development. If construction hoarding is required to temporarily occupy a street, or any part thereof, or occupy the air space above a street or any part thereof, additional City approvals and associated fees may be required as part of the Building Permit. *For further information on the Building Permit, please contact Building Approvals Department at 604-276-4285.*
2. 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.

**Note:**

- 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.

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Signed

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Date



No. DP 18-818671

To the Holder: CHRISTOPHER BOZYK ARCHITECTS LTD.

Property Address: 4693, 4720, 4740 VANGUARD ROAD AND  
ROAD PARCEL RICHMOND KEY 20909

Address: C/O SUITE 414 – 611 ALEXANDER STREET  
VANCOUVER, BC V6A 1E1

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:
  - a. Increase the maximum height for buildings from 12.0 m to 16.15 m; and
  - b. Reduce the minimum vehicle manoeuvring aisle width from 7.5 m to 6.7 m.
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 DP 18-818671-1 through DP 18-818671-17 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 \$349,082 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 18-818671**

To the Holder: CHRISTOPHER BOZYK ARCHITECTS LTD.

Property Address: 4693, 4720, 4740 VANGUARD ROAD AND  
ROAD PARCEL RICHMOND KEY 20909

Address: C/O SUITE 414 – 611 ALEXANDER STREET  
VANCOUVER, BC V6A 1E1

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8. The land described herein shall be developed generally in accordance with the terms and conditions and provisions of this Permit and any plans and specifications attached to this Permit which shall form a part hereof.

This Permit is not a Building Permit.

AUTHORIZING RESOLUTION NO.  
DAY OF , .

ISSUED BY THE COUNCIL THE

DELIVERED THIS DAY OF , .

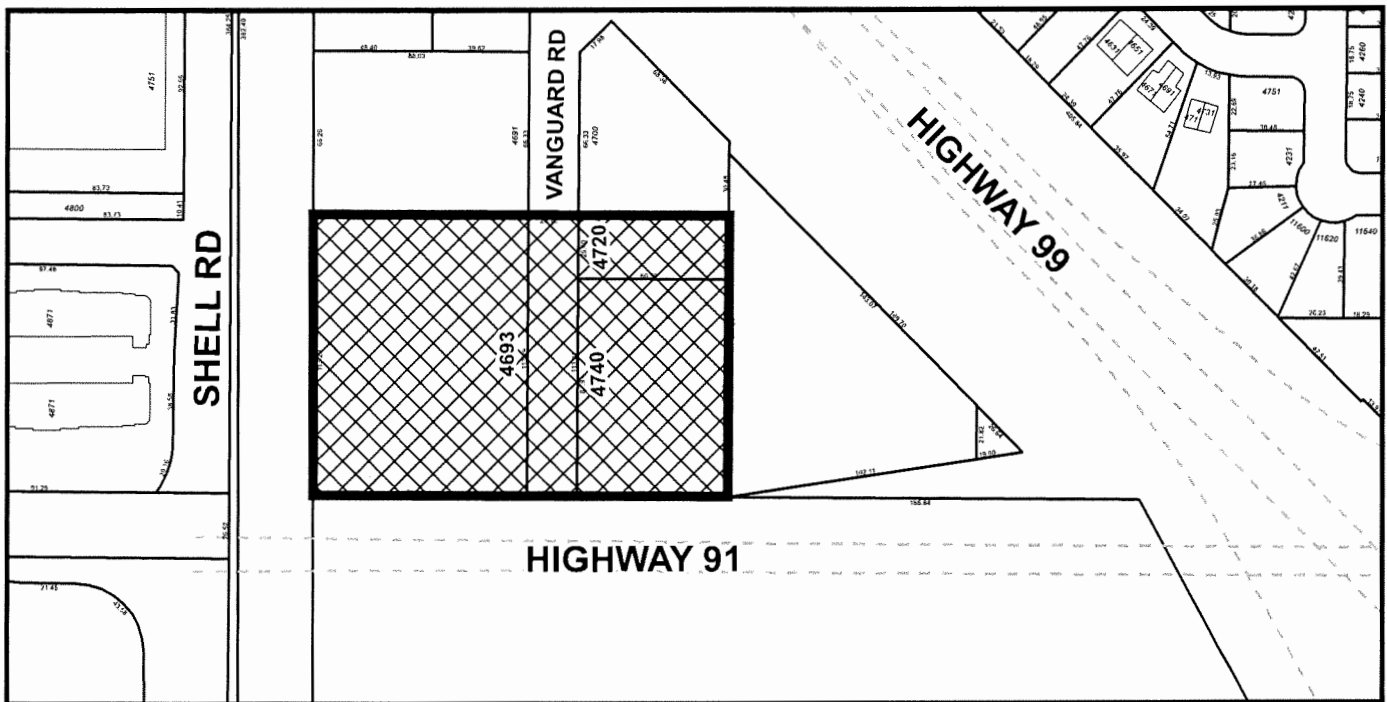
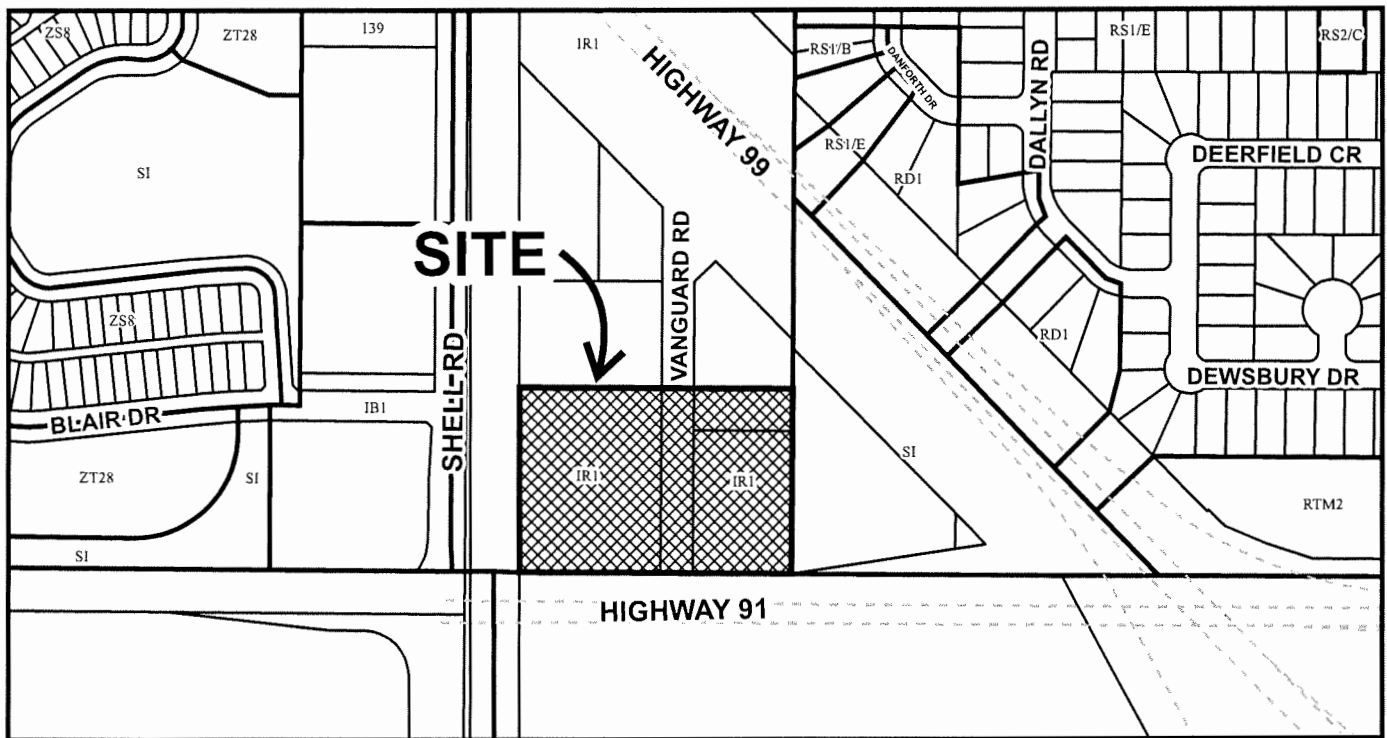
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MAYOR





City of  
Richmond



DP 18-818671  
SCHEDULE "A"

Original Date: 04/27/18

Revision Date: 08/20/19

Note: Dimensions are in METRES



# 4720 + 4740 VANGUARD ROAD, RICHMOND BC

## TEAM LIST

**OWNER**  
 Alliance Properties  
 120-1111 Westmoreland Way,  
 Richmond, BC, V6X 3A9  
 Contact: Gordon Yeo, gyeo@allianceproperties.ca  
 T: 778-855-8818

**ARCHITECT**  
 Christopher Bozyk Architects Ltd.  
 414-111 Alexander Street  
 Vancouver, BC, V6A 1E1  
 Contact: Chantal Bozyk, chantal@bozyk.com  
 T: 604-251-3440

**ENV**  
 Kram Engineering Ltd.  
 #210-1311 Keesley Street  
 Vancouver, BC, V6A 4T9  
 Contact: Stuart Macgregor, stuart@kram.com  
 T: 604-683-8811 (ext. 103)

**STRUCTURAL**  
 Kram Engineering Ltd.  
 #210-1311 Keesley Street  
 Vancouver, BC, V6A 4T9  
 Contact: Stuart Macgregor, stuart@kram.com  
 T: 604-683-8811 (ext. 103)

**Mechanical**  
 Kram Engineering Ltd.  
 #210-1311 Keesley Street  
 Vancouver, BC, V6A 4T9  
 Contact: Stuart Macgregor, stuart@kram.com  
 T: 604-683-8811 (ext. 103)

**Electrical**  
 Kram Engineering Ltd.  
 #210-1311 Keesley Street  
 Vancouver, BC, V6A 4T9  
 Contact: Stuart Macgregor, stuart@kram.com  
 T: 604-683-8811 (ext. 103)

**LANDSCAPE**  
 Kram Engineering Ltd.  
 #210-1311 Keesley Street  
 Vancouver, BC, V6A 4T9  
 Contact: Stuart Macgregor, stuart@kram.com  
 T: 604-683-8811 (ext. 103)

## PROJECT STATISTICS

KEY INFORMATION	AREA SUMMARY	STATISTICS
<b>CIVIC ADDRESS:</b> 4881, 4720, 4740 VANGUARD ROAD <b>LEGAL DESCRIPTION:</b> LOTS 244, 246 AND 247, ALL OF SECTION 26, BLOCK 10701, RANGE 6 WEST, AND PLAN 36629 <b>ZONE:</b> R1-10 (RESIDENTIAL) <b>BUILDING BY LAW:</b> RICHMOND <b>CONTRACT AWARD CODE:</b> R100000000 <b>DATE OF AWARD:</b> 2019 <b>DATE OF CONTRACT:</b> 2019	<b>BUILDING A</b> FLOOR ONE: 41,847 SF / 1,888 SM LEVEL TWO: 22,791 SF / 1,051 SM LEVEL THREE: 12,111 SF / 553 SM <b>TOTAL BUILDING A:</b> 76,749 SF / 3,492 SM <b>BUILDING B</b> FLOOR ONE: 31,468 SF / 1,451 SM LEVEL TWO: 18,794 SF / 862 SM LEVEL THREE: 29,891 SF / 1,380 SM <b>TOTAL BUILDING B:</b> 79,153 SF / 3,693 SM <b>TOTAL BUILDING A+B:</b> 155,902 SF / 7,185 SM <b>SITE AREA:</b> 295,303 SF / 13,673 SM <b>BUILDING FOOTPRINT:</b> 114,940 SF / 5,303 SM (37%) <b>FAR ALLOWABLE:</b> 111 <b>FAR PROVIDED:</b> 111	<b>SITE COVERAGE:</b> TOTAL GROSS FLOOR AREA: 155,902 SF HEIGHT: VARIANCE REQUIRED <b>SETBACKS</b> front: 80'-6" / 24.38m exterior side yard: 65'-1" / 19.81m rear: 65'-0" / 19.80m interior side yard: 64'-0" / 19.50m <b>PARKING</b> Showroom: 34 stalls Warehouse/storage: 63 stalls Small cars: 107 stalls HC stalls: 4 stalls <b>TOTAL:</b> 208 <b>LOADING</b> medium: 12 stalls large: 3 stalls <b>BICYCLE CLASS 1</b> Showroom: 48 stalls class 1 Warehouse Storage: (10,000 sf / 929sm) leasable <b>CLASS 2</b> Warehouse Storage: (176,232 sf / 16,372sm) leasable Showroom: 48 stalls class 2 Warehouse Storage: (10,000 sf / 929sm) leasable Warehouse Storage: (176,232 sf / 16,372sm) leasable

**DP 18-818671-1**

## DRAWING LIST

REVISION	DATE	DESCRIPTION
14	08.11.2019	RE-ISSUED FOR DP - RESPONSE TO COMMENTS
13	04.08.2019	PERMEABLE AREA AND PAVING REQUIREMENTS
12	28.07.2019	RE-ISSUED FOR DP - RESPONSE TO COMMENTS
11	24.07.2019	ISSUED FOR COORDINATION
10	20.06.2019	RE-ISSUED FOR DP - RESPONSE TO COMMENTS
09	20.06.2019	RE-ISSUED FOR DP - RESPONSE TO COMMENTS
08	01.06.2019	ISSUED FOR COORDINATION
07	09.05.2019	ISSUED FOR RFP RESPONSE TO COMMENTS
06	12.05.2018	ISSUED FOR BP
05	11.04.2018	RE-ISSUED FOR DP - ISSUED FOR RFP
04	10.03.2018	RE-ISSUED FOR DP
03	08.02.2018	RE-ISSUED FOR DP
02	08.02.2018	RE-ISSUED FOR DP
01	04.07.2018	ISSUED FOR DP

**COVER + PROJECT STATISTICS**  
 SITE PLAN + FIRE ACCESS PLAN  
 LEVEL ONE  
 LEVEL TWO  
 LEVEL THREE  
 LEVEL THREE MEZZANINE  
 ROOF PLAN  
 ROOF PLAN - LOCATION FOR SOLAR PANELS  
 BUILDING SECTIONS  
 BUILDING SECTION A  
 ELEVATIONS BLDG A  
 ELEVATIONS BLDG B  
 LEVEL ONE FAR  
 LEVEL TWO AREAS  
 LEVEL THREE AREAS  
 LEVEL THREE MEZZ AREAS  
 FLOOR AREA RATIO CALCULATIONS  
 USE OVERLAYS  
 WASTE MANAGEMENT PLAN  
 SHADOW ANALYSIS  
 UNITS AREA  
 UNITS AREA

REVISION	DATE	DESCRIPTION
14	08.11.2019	RE-ISSUED FOR DP - RESPONSE TO COMMENTS
13	04.08.2019	PERMEABLE AREA AND PAVING REQUIREMENTS
12	28.07.2019	RE-ISSUED FOR DP - RESPONSE TO COMMENTS
11	24.07.2019	ISSUED FOR COORDINATION
10	20.06.2019	RE-ISSUED FOR DP - RESPONSE TO COMMENTS
09	20.06.2019	RE-ISSUED FOR DP - RESPONSE TO COMMENTS
08	01.06.2019	ISSUED FOR COORDINATION
07	09.05.2019	ISSUED FOR RFP RESPONSE TO COMMENTS
06	12.05.2018	ISSUED FOR BP
05	11.04.2018	RE-ISSUED FOR DP - ISSUED FOR RFP
04	10.03.2018	RE-ISSUED FOR DP
03	08.02.2018	RE-ISSUED FOR DP
02	08.02.2018	RE-ISSUED FOR DP
01	04.07.2018	ISSUED FOR DP

**4720 + 4740 VANGUARD RD**  
**RICHMOND, BC**

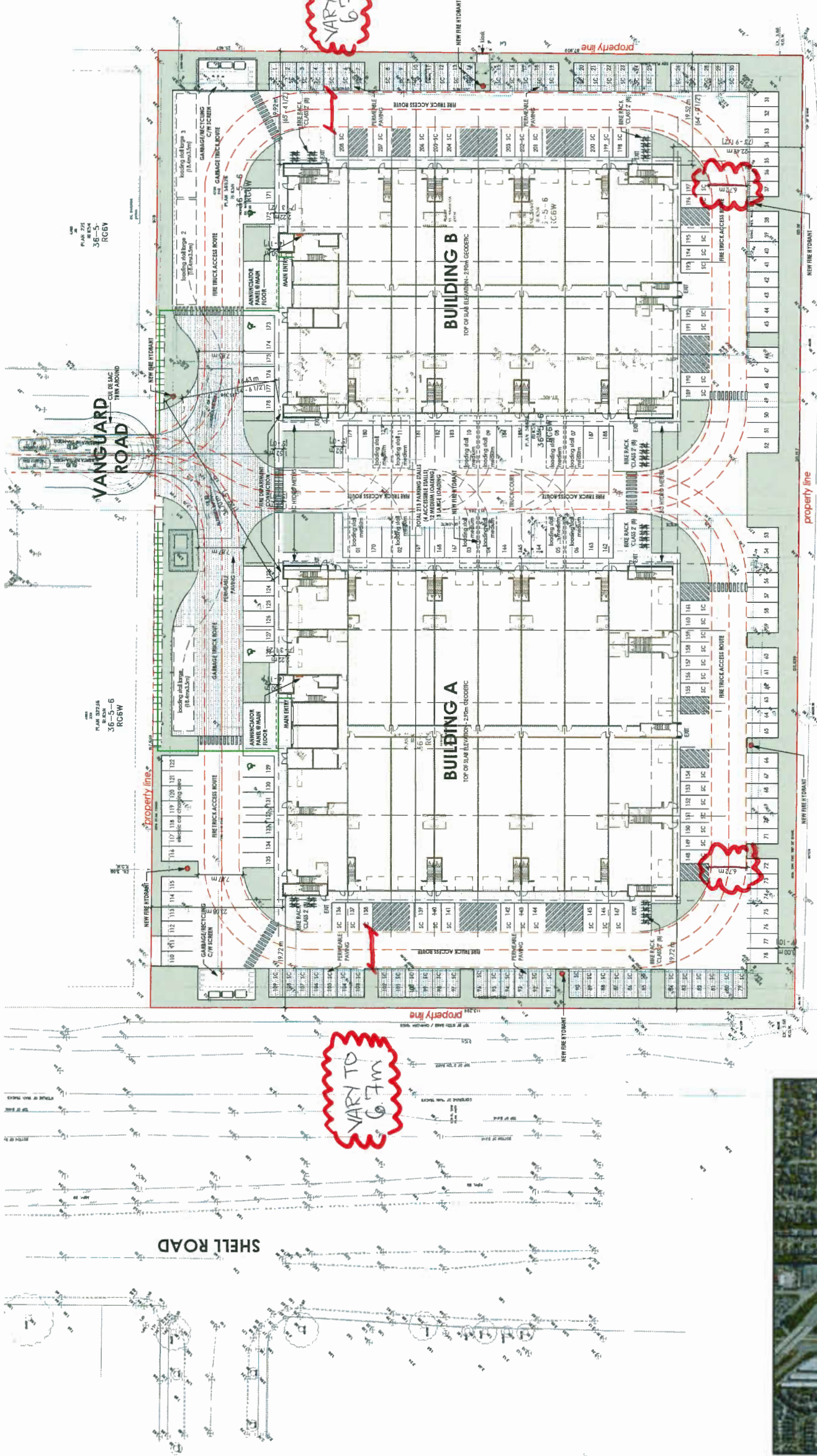
**COVER + PROJECT STATISTICS**

SCALE	As indicated	DATE: DEC 5, 2018	DRAWN/DATE
PROJECT NUMBER			218717

**A000**

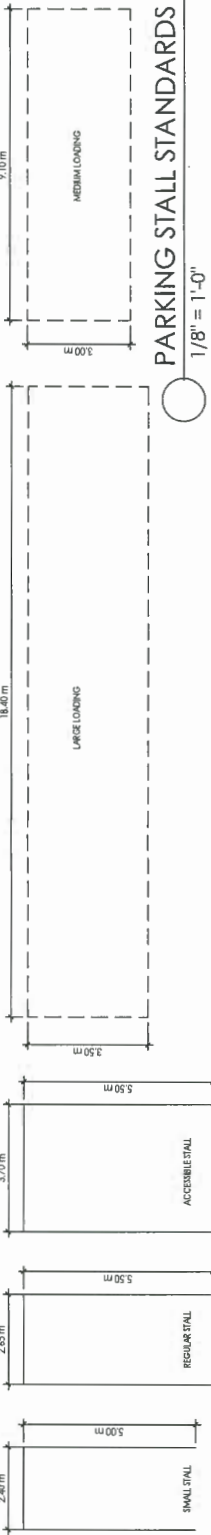
PERMEABLE AREA CALCULATION	
LANDSCAPE AREA	2.4156P
PERMEABLE PAVING AREA	3.7125P
TOTAL AREA	6.1281P

**NOTE:**  
 ALL EXTERIOR LIGHTS TO BE FULL CUT-OFF WITH MAXIMUM 3 FOOT CIRCLES AT THE PROPERTY LINE AS PER ELECTRICAL ENGINEERING LETTER DATED JUL 25, 2018.



① DP SITE PLAN  
 1" = 30'-0"

**EAST WEST CONNECTOR**



REVISION	DATE	DESCRIPTION
14	04.11.2019	REISSUED FOR DP-RESPONSE TO COMMENTS
13	04.09.2019	PERMEABLE AREA AND PAVING REQUIREMENTS
12	25.07.2019	REISSUED FOR DP-RESPONSE TO COMMENTS
11	24.07.2019	ISSUED FOR COORDINATION
10	20.06.2019	REISSUED FOR DP-RESPONSE TO COMMENTS
09	23.06.2019	REISSUED FOR DP-RESPONSE TO COMMENTS
08	01.06.2019	ISSUED FOR COORDINATION
07	09.05.2019	ISSUED FOR DP-RESPONSE TO COMMENTS
06	12/05/2018	ISSUED FOR BP
05	10/14/2018	RE-ISSUED FOR DP - ISSUED FOR ADP
04	10/22/2018	RE-ISSUED FOR DP
03	08/19/2018	RE-ISSUED FOR DP
02	09/06/2018	RE-ISSUED FOR DP
01	04/12/2018	ISSUED FOR DP

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Written dimensions shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions on the job. Client requests for changes to the drawings shall be in writing and approved by the Contractor. Failure to obtain such clarification renders the Contractor responsible for any resulting improper work and the cost of rectification.

**4720 + 4740 VANGUARD RD  
 RICHMOND, BC**

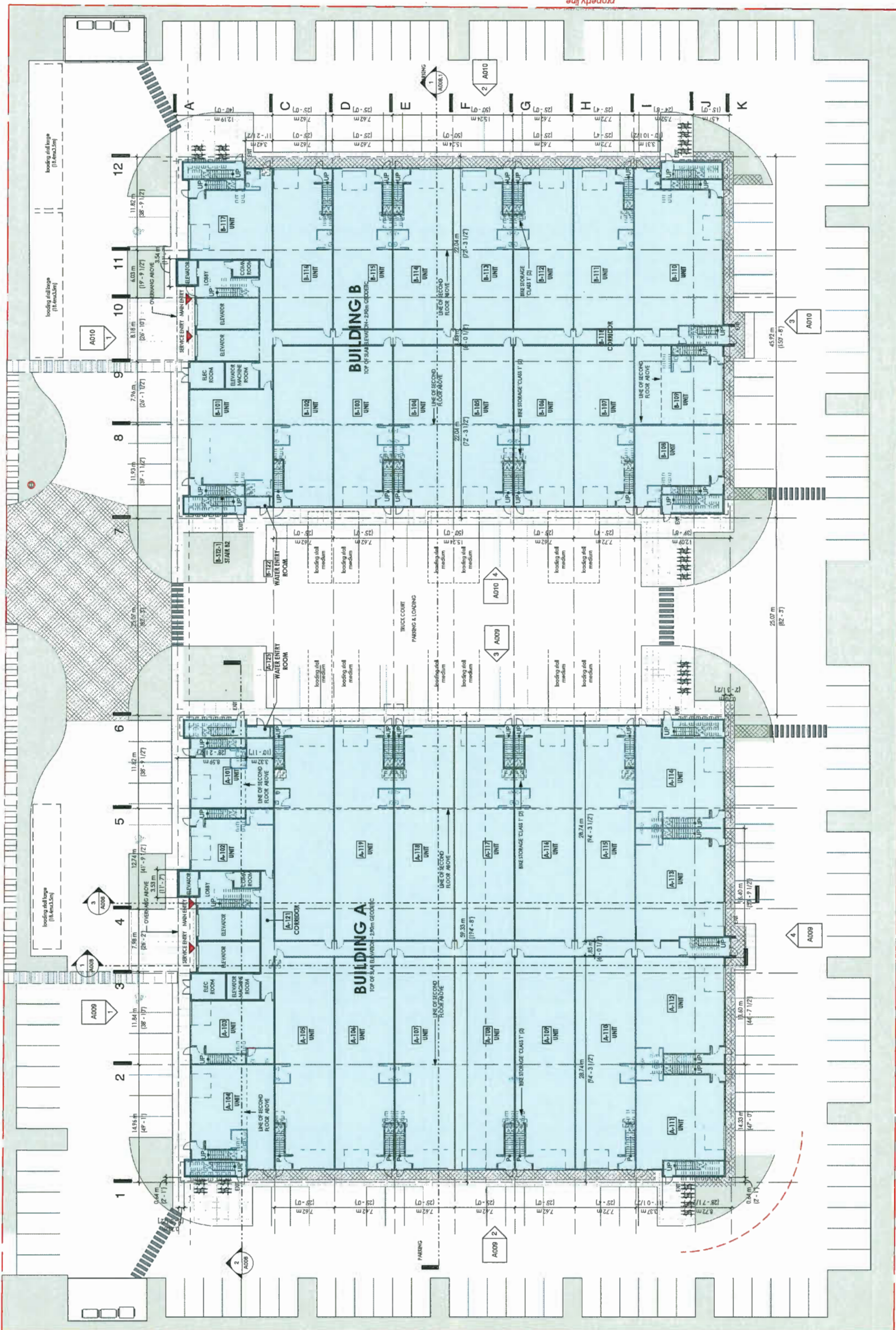
**SITE PLAN + FIRE ACCESS  
 PLAN**

SCALE	As Indicated	DATE	DEC 1, 2018	DRAWING NO.	271017
PROJECT NUMBER					

**A001**

**DP 18-8128-18-071-2**





VANGUARD ROAD



① DP LEVEL ONE  
 1" = 20'-0"

property line

DP 40-010071-3

REVISION	DATE	DESCRIPTION
01	14/07/2018	ISSUED FOR DP
02	04/04/2018	RE-ISSUED FOR DP
03	01/19/2018	RE-ISSUED FOR DP
04	18/22/2018	RE-ISSUED FOR DP
05	11/14/2018	RE-ISSUED FOR DP - ISSUED FOR RFP
06	12/05/2018	ISSUED FOR BP
07	01/18/2019	ISSUED FOR RFP RESPONSE TO COMMENTS
08	01/06/2019	ISSUED FOR COORDINATION
09	21/02/2019	REISSUED FOR DP - RESPONSE TO COMMENTS
10	28/04/2019	REISSUED FOR DP - RESPONSE TO COMMENTS
11	24/07/2019	ISSUED FOR COORDINATION
12	28/07/2019	REISSUED FOR DP - RESPONSE TO COMMENTS
13	04/08/2019	PERMISSIBLE AREA AND PAVING REQUIREMENTS
14	08/11/2019	REISSUED FOR DP - RESPONSE TO COMMENTS

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Written dimensions shall have precedence over scaled dimensions. Contractors shall verify all dimensions and quantities on site. The Contractor shall be responsible for obtaining all necessary permits and approvals from the appropriate authorities. Failure to obtain such information rendered in contract drawings and documents. Failure to obtain such information renders the Contractor responsible for any resulting improper work and the cost of rectification.

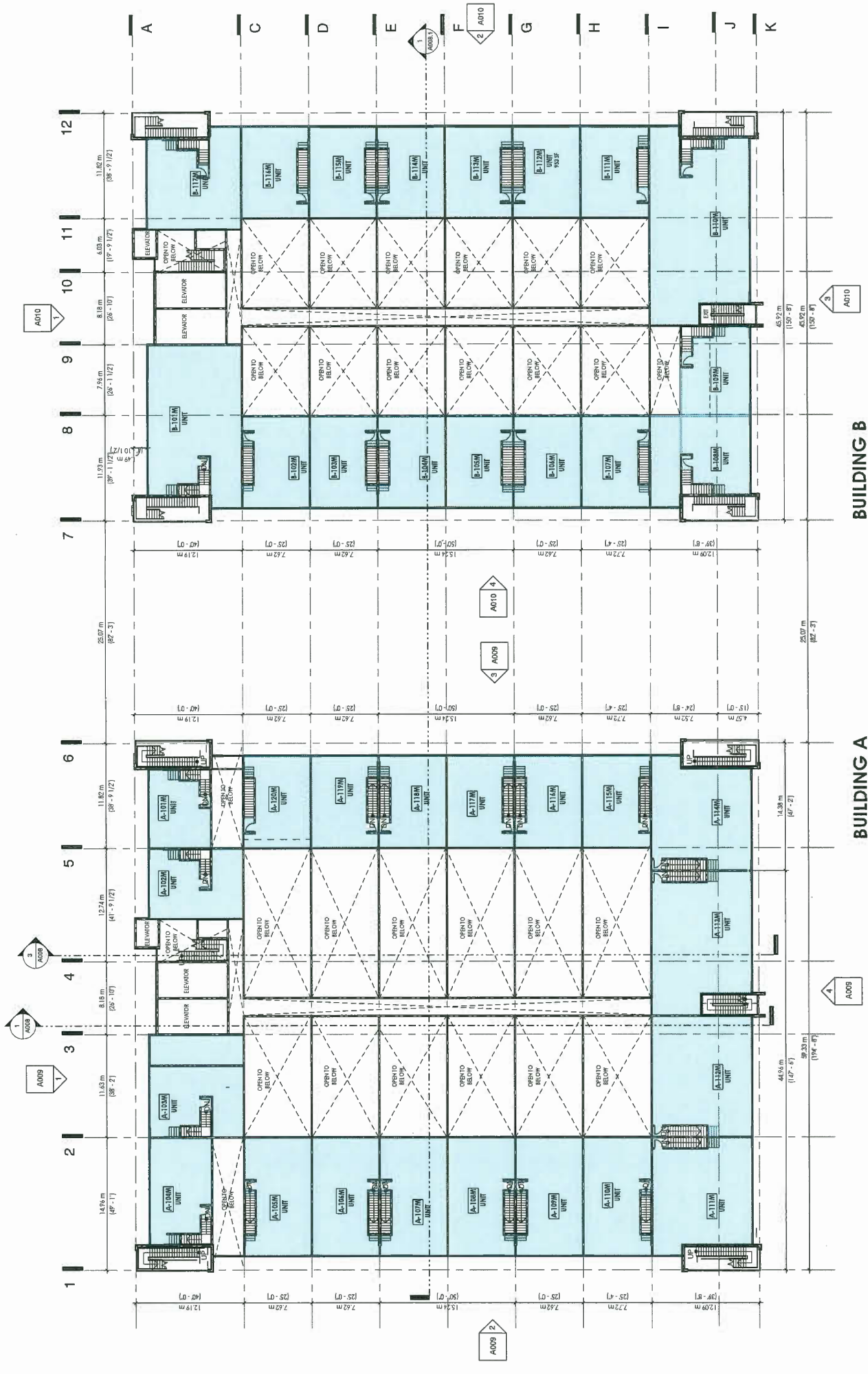
**4720 + 4740 VANGUARD RD  
 RICHMOND, BC**

**LEVEL ONE**

SCALE 1" = 20'-0"  
 DATE: DEC 5, 2018  
 DRAWING NO: 211017  
 PROJECT NUMBER

**A003**

property line



Property line

DP 18-818671-4

1 DP LEVEL TWO  
1" = 20'-0"



REVISION	DATE	DESCRIPTION
01	04/12/2018	ISSUED FOR DP
02	04/09/2018	RE-ISSUED FOR DP
03	04/19/2018	RE-ISSUED FOR DP
04	10/22/2018	RE-ISSUED FOR DP
05	11/14/2018	RE-ISSUED FOR DP - ISSUED FOR ADP
06	12/05/2018	ISSUED FOR BP
07	02/19/2019	ISSUED FOR ADP RESPONSE TO COMMENTS
08	01/05/2019	ISSUED FOR COORDINATION
09	21/06/2019	REISSUED FOR DP - RESPONSE TO COMMENTS
10	20/06/2019	REISSUED FOR DP - RESPONSE TO COMMENTS
11	24/07/2019	ISSUED FOR COORDINATION
12	28/07/2019	REISSUED FOR DP - RESPONSE TO COMMENTS
13	04/06/2019	PERMISSIBLE AREA AND PAVING REQUIREMENTS
14	08/11/2019	REISSUED FOR DP - RESPONSE TO COMMENTS

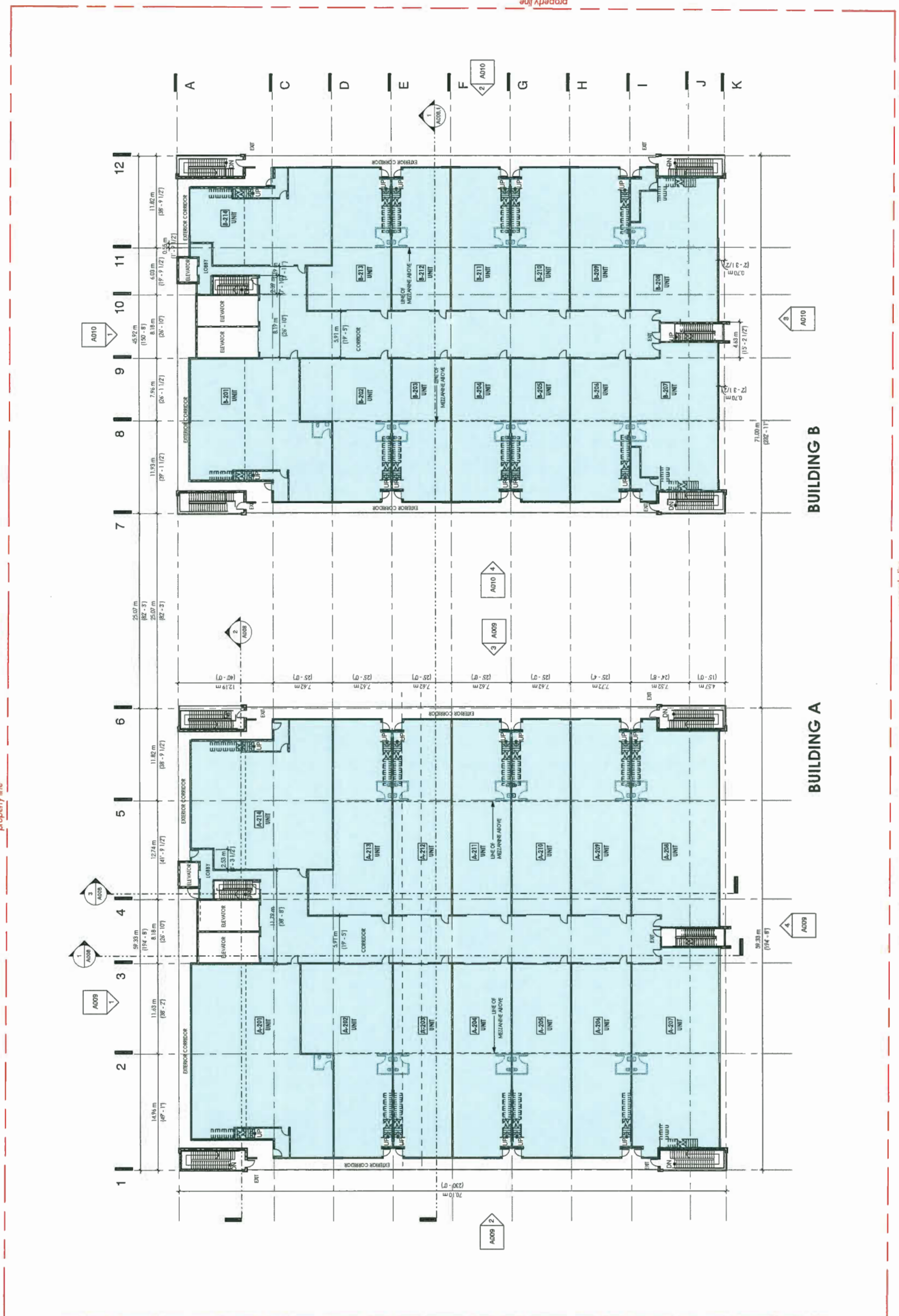
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Within dimensions shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions on the job, and shall request clarification from the architect as soon as possible. Failure to obtain such clarification renders the Contractor responsible for any resulting improper work and the cost of rectification.

**4720 + 4740 VANGUARD RD  
RICHMOND, BC**

**LEVEL TWO**

SCALE 1" = 20'-0"  
DATE DEC 5, 2018  
PROJECT NUMBER 21797

**A004**



REVISION	DATE	DESCRIPTION
14	08.11.2019	REISSUED FOR DP-RESPONSE TO COMMENTS
13	04.08.2019	PERMEABLE AREA AND PAVING REQUIREMENTS
12	28.07.2019	REISSUED FOR DP-RESPONSE TO COMMENTS
11	24.07.2019	ISSUED FOR COORDINATION
10	20.06.2019	REISSUED FOR DP-RESPONSE TO COMMENTS
09	20.06.2019	REISSUED FOR DP-RESPONSE TO COMMENTS
08	01.05.2019	ISSUED FOR COORDINATION
07	09.11.2019	ISSUED FOR ADP-RESPONSE TO COMMENTS
06	12.05.2018	ISSUED FOR BP
05	11.14.2018	RE-ISSUED FOR DP - ISSUED FOR ADP
03	09.10.2018	RE-ISSUED FOR DP
02	09.08.2018	RE-ISSUED FOR DP
01	04.12.2018	ISSUED FOR DP

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**4720 + 4740 VANGUARD RD  
 RICHMOND, BC**

**LEVEL THREE**

SCALE 1" = 20'-0"  
 DATE: DEC 5, 2018  
 PROJECT NUMBER: 211017  
 DRAWING DATE: 18/12/18

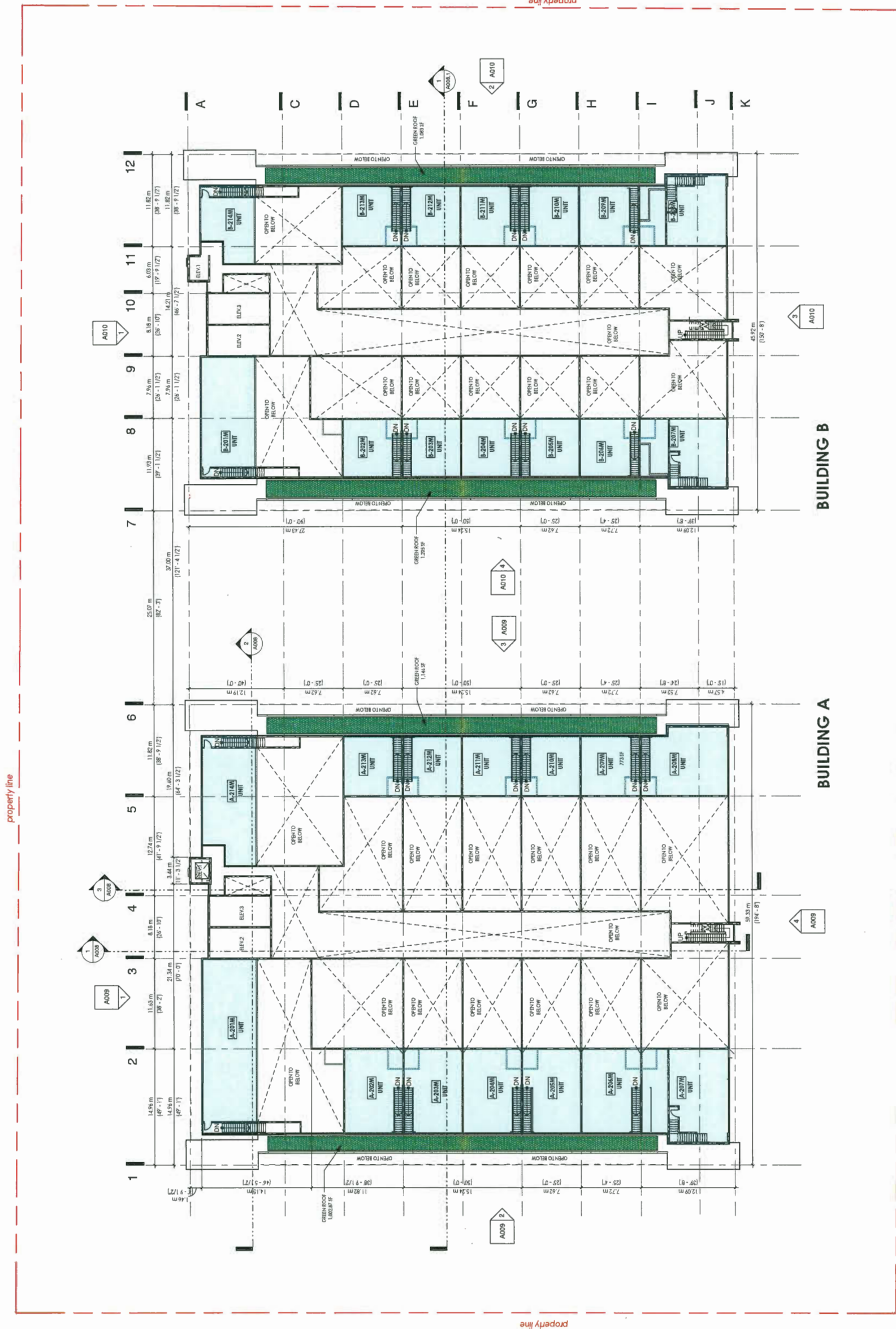


1 DP LEVEL THREE  
 1" = 20'-0"

property line

DP 18-818671-5

**A005**



REVISION	DATE	DESCRIPTION
01	04/12/2018	ISSUED FOR DP
02	08/06/2018	RE-ISSUED FOR DP
03	09/19/2018	RE-ISSUED FOR DP
04	10/22/2018	RE-ISSUED FOR DP
05	11/14/2018	RE-ISSUED FOR DP - ISSUED FOR ADP
06	12/05/2018	ISSUED FOR BP
07	03/19/2019	ISSUED FOR ADP RESPONSE TO COMMENTS
08	01/05/2019	ISSUED FOR COORDINATION
09	20/08/2019	RE-ISSUED FOR DP - RESPONSE TO COMMENTS
10	20/08/2019	RE-ISSUED FOR DP - RESPONSE TO COMMENTS
11	24/07/2019	ISSUED FOR COORDINATION
12	29/07/2019	RE-ISSUED FOR DP - RESPONSE TO COMMENTS
13	04/09/2019	PERMISSIBLE AREA AND PAVING REQUIREMENTS
14	06/11/2019	RE-ISSUED FOR DP - RESPONSE TO COMMENTS

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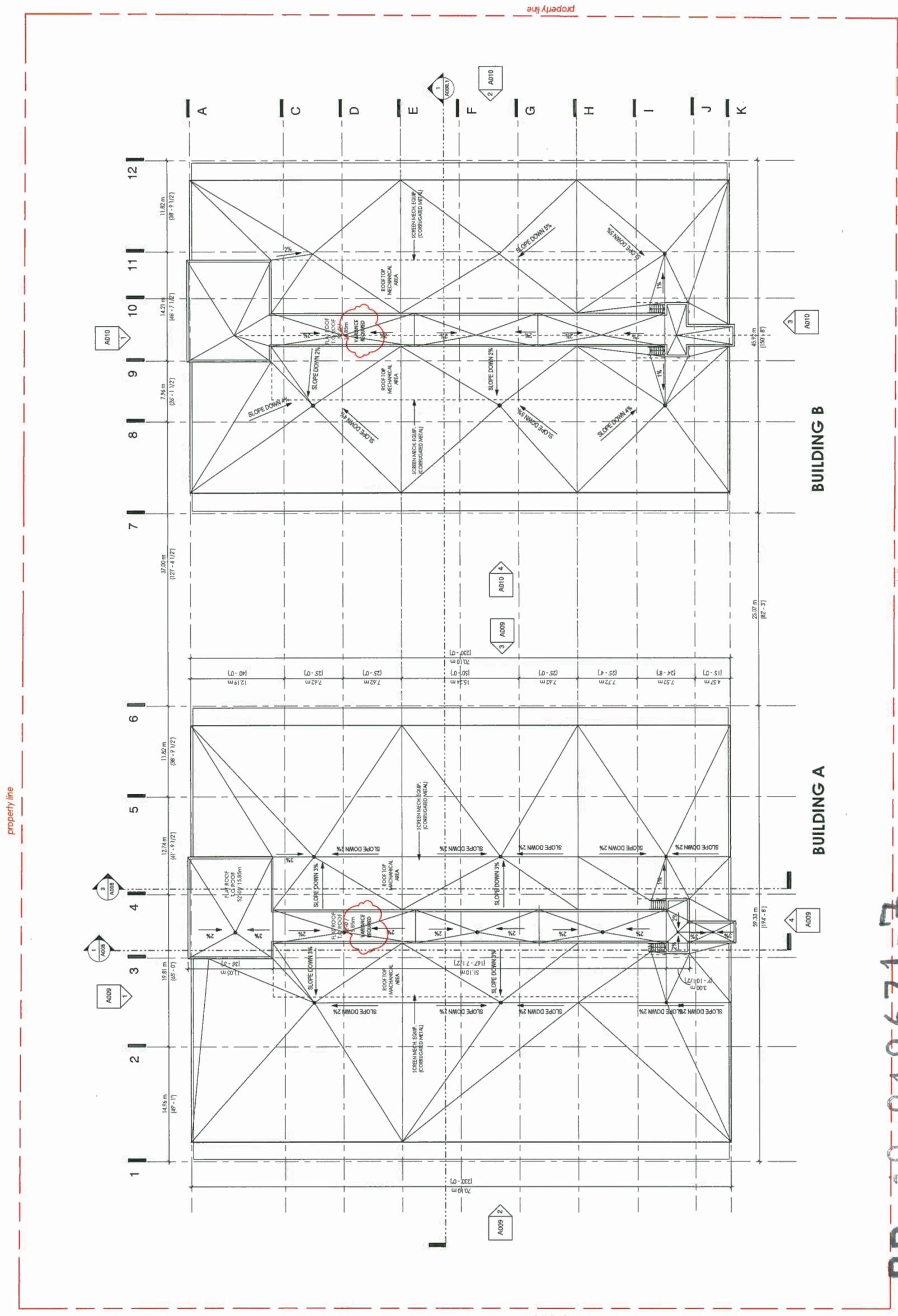
**4720 + 4740 VANGUARD RD  
 RICHMOND, BC**

**LEVEL THREE MEZZANINE**

SCALE: 1" = 20'-0"  
 DATE: DEC 5, 2018  
 DRAWING NO: 211917  
 PROJECT NUMBER

**DP 18-818671-6**  
 DP LEVEL THREE MEZZANINE  
 1" = 20'-0"

**A006**



**DP 18-818671-7**

**1 ROOF LEVEL**  
 1" = 20'-0"

SCALE 1" = 20'-0"  
 DATE DEC 5, 2018  
 PROJECT NUMBER 210107

REVISION	DATE	DESCRIPTION
01	04/12/2018	ISSUED FOR DP
02	09/04/2018	RE-ISSUED FOR DP
03	09/19/2018	RE-ISSUED FOR DP
04	10/22/2018	RE-ISSUED FOR DP
05	11/14/2018	RE-ISSUED FOR DP - ISSUED FOR AIP
06	12/05/2018	ISSUED FOR BP
07	03/19/2019	ISSUED FOR AIP RESPONSE TO COMMENTS
08	01/06/2019	ISSUED FOR COORDINATION
09	20/06/2019	REISSUED FOR DP - RESPONSE TO COMMENTS
10	20/06/2019	REISSUED FOR DP - RESPONSE TO COMMENTS
11	24/07/2019	ISSUED FOR COORDINATION
12	23/07/2019	REISSUED FOR DP - RESPONSE TO COMMENTS
13	04/08/2019	PERMEABLE AREA AND PAVING REQUIREMENTS
14	08/11/2019	REISSUED FOR DP - RESPONSE TO COMMENTS

**4720 + 4740 VANGUARD RD  
 RICHMOND, BC**

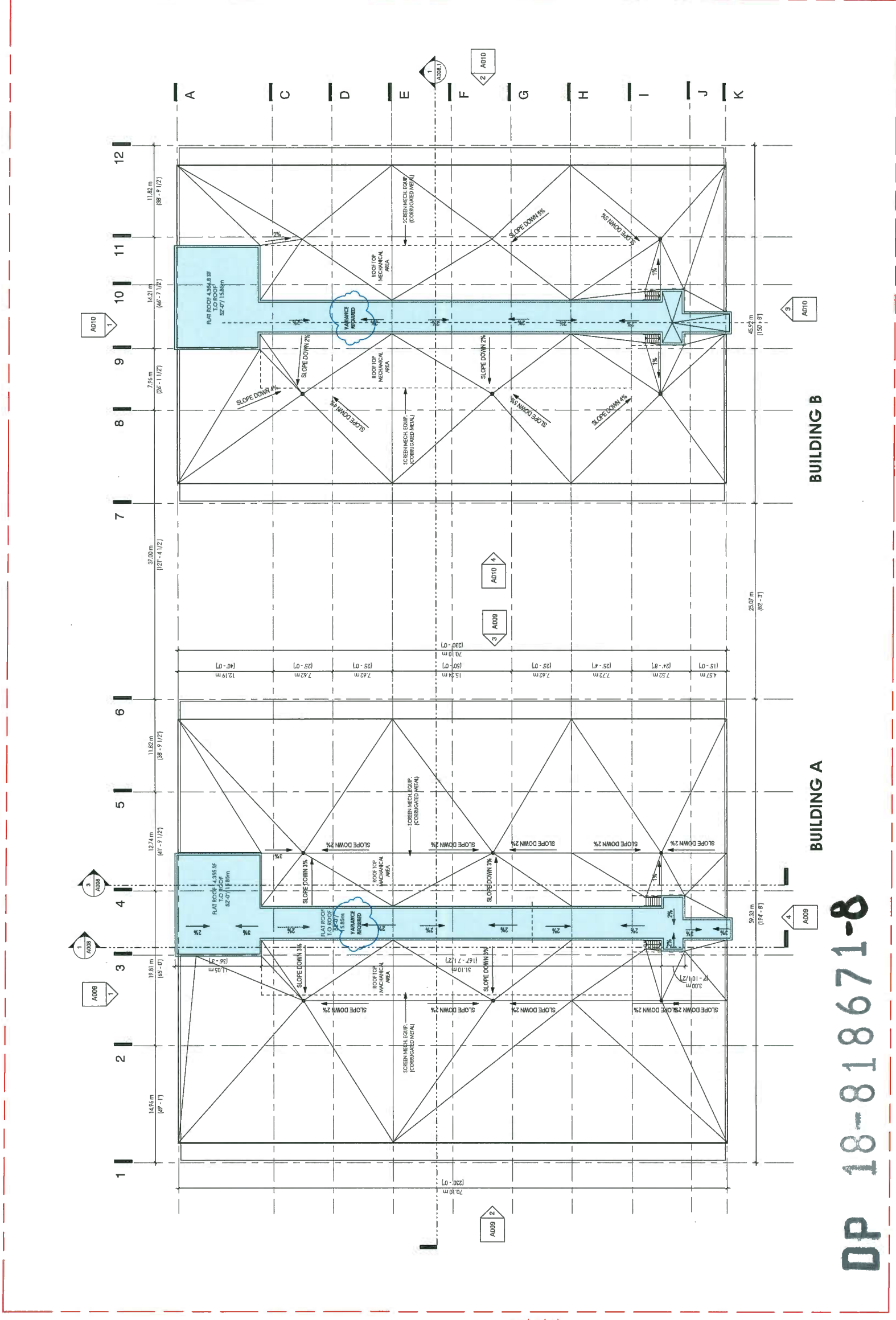
**ROOF PLAN**

**4720 + 4740 VANGUARD RD  
 RICHMOND, BC**

**A007**



property line



**DP 18-818671-8**

1 ROOF LEVEL - LOCATION FOR SOLAR PANELS  
 1" = 20'-0"

REVISION	DATE	DESCRIPTION
01	04/22/2018	ISSUED FOR DP
02	08/06/2018	RE-ISSUED FOR DP
03	08/16/2018	RE-ISSUED FOR DP
04	10/22/2018	RE-ISSUED FOR DP
05	11/14/2018	RE-ISSUED FOR DP - ISSUED FOR AP
06	12/05/2018	ISSUED FOR BP
07	03/15/2019	ISSUED FOR AP RESPONSE TO COMMENTS
08	01/05/2019	ISSUED FOR COORDINATION
09	20/06/2019	RE-ISSUED FOR DP - RESPONSE TO COMMENTS
10	20/06/2019	RE-ISSUED FOR DP - RESPONSE TO COMMENTS
11	24/07/2019	ISSUED FOR COORDINATION
12	28/07/2019	RE-ISSUED FOR DP - RESPONSE TO COMMENTS
13	04/09/2019	PERMEABLE AREA AND PAVING REQUIREMENTS
14	04/11/2019	RE-ISSUED FOR DP - RESPONSE TO COMMENTS

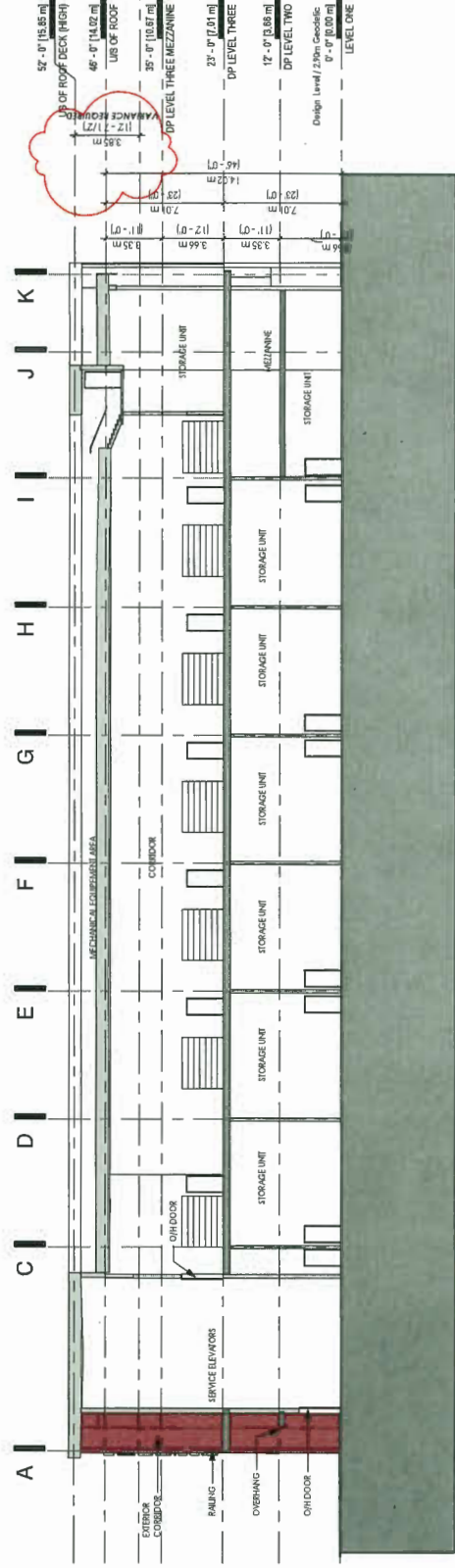
**4720 + 4740 VANGUARD RD**  
**RICHMOND, BC**

**ROOF PLAN - LOCATION FOR SOLAR PANELS**

SCALE 1" = 20'-0" DATE DEC 5, 2018 DRAWN/CHKD PROJECT NUMBER 217017

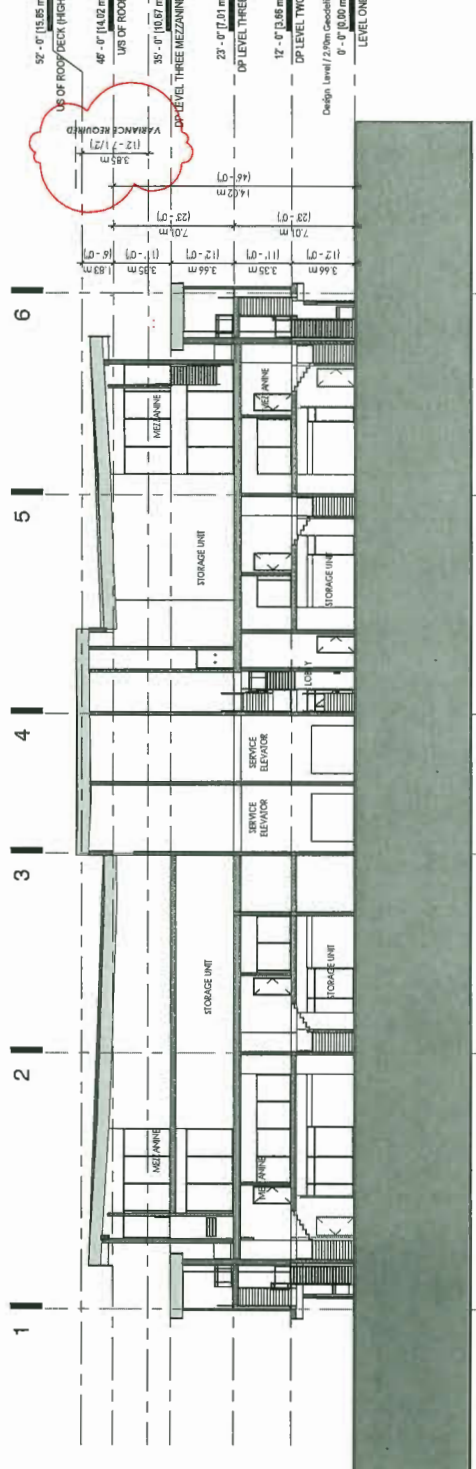
**DP 18-818671-8**

VARY TO 16.15 m  
 39'-4 1/2" (12.00 m)  
 MAX ALLOWABLE HEIGHT



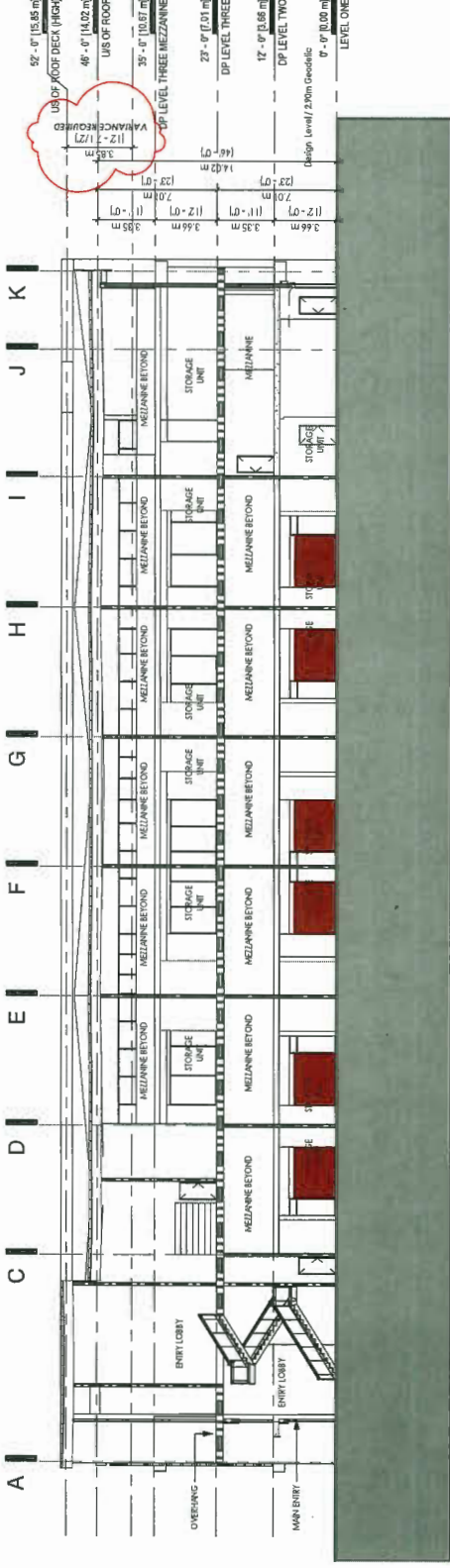
① DP SECTION A-A  
 1/16" = 1'-0"

VARY TO 16.15 m  
 39'-4 1/2" (12.00 m)  
 MAX ALLOWABLE HEIGHT



② DP SECTION B-B  
 1/16" = 1'-0"

VARY TO 16.15 m  
 39'-4 1/2" (12.00 m)  
 MAX ALLOWABLE HEIGHT



③ DP SECTION C-C  
 1/16" = 1'-0"

REVISION	DATE	DESCRIPTION
01	04/22/2018	ISSUED FOR DP
02	06/06/2018	RE-ISSUED FOR DP
03	08/19/2018	RE-ISSUED FOR DP
04	10/22/2018	RE-ISSUED FOR DP
05	11/14/2018	RE-ISSUED FOR DP - ISSUED FOR ADP
06	12/05/2018	ISSUED FOR BP
07	01/18/2019	ISSUED FOR ADP RESPONSE TO COMMENTS
08	01/18/2019	ISSUED FOR COORDINATION
09	23/05/2019	RE-ISSUED FOR DP - RESPONSE TO COMMENTS
10	26/08/2019	RE-ISSUED FOR DP - RESPONSE TO COMMENTS
11	24/07/2019	ISSUED FOR COORDINATION
12	23/07/2019	RE-ISSUED FOR DP - RESPONSE TO COMMENTS
13	04/08/2019	PERMISSIBLE AREA AND PARKING REQUIREMENTS
14	04/11/2019	RE-ISSUED FOR DP - RESPONSE TO COMMENTS

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**4720 + 4740 VANGUARD RD  
 RICHMOND, BC**  
**BUILDING SECTIONS**

SCALE 1/16" = 1'-0" DATE DEC 1, 2018 DRAWING NO. 217017 PROJECT NUMBER

**A008**

DP 18-818671-9

**MATERIALS LEGEND**

METAL PANEL	
M1	METAL CORRUGATED CLADDING PANEL RED
M2	COLOUR TO MATCH M1 CABRIE A-200
M3	METAL CORRUGATED CLADDING PANEL BLUE
M4	COLOUR TO MATCH M3 CABRIE A-200
M5	METAL CORRUGATED CLADDING PANEL - GALVANNEED A-200
M6	METAL CORRUGATED CLADDING PANEL GRAY
M7	COLOUR TO MATCH M6 CABRIE A-200
M8	FRESHENED WIRE ARCH PANEL BY ALUCOBOND
M9	ARCH PANEL BY ALUCOBOND
M10	COLOUR TO MATCH M9 CABRIE A-200
CONCRETE	
C1	BLINDFORMED FRESH CONCRETE - COLOUR TO MATCH
C2	PAINT TO MATCH C1
C3	PAINT TO MATCH C1
C4	PAINT TO MATCH C1
C5	PAINT TO MATCH C1
C6	PAINT TO MATCH C1
C7	PAINT TO MATCH C1
C8	PAINT TO MATCH C1
C9	PAINT TO MATCH C1
C10	PAINT TO MATCH C1
C11	PAINT TO MATCH C1
C12	PAINT TO MATCH C1
C13	PAINT TO MATCH C1
C14	PAINT TO MATCH C1
C15	PAINT TO MATCH C1
C16	PAINT TO MATCH C1
C17	PAINT TO MATCH C1
C18	PAINT TO MATCH C1
C19	PAINT TO MATCH C1
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C99	PAINT TO MATCH C1
C100	PAINT TO MATCH C1

GLASS	
G1	GLAZED PANEL - CLEAR
G2	GLAZED PANEL - CERAMIC TINT OR BRID SHELLOW E
G3	GLAZED PANEL - CERAMIC TINT OR BRID SHELLOW E
G4	GLAZED PANEL - CERAMIC TINT OR BRID SHELLOW E
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G99	GLAZED PANEL - CERAMIC TINT OR BRID SHELLOW E
G100	GLAZED PANEL - CERAMIC TINT OR BRID SHELLOW E

REVISION	DATE	DESCRIPTION
01	04/12/2018	ISSUED FOR DP
02	04/12/2018	ISSUED FOR DP
03	08/19/2018	RE-ISSUED FOR DP
04	10/22/2018	RE-ISSUED FOR DP
05	11/14/2018	RE-ISSUED FOR DP
06	12/05/2018	ISSUED FOR BP
07	03/13/2019	ISSUED FOR ACP RESPONSE TO COMMENTS
08	01/05/2019	ISSUED FOR COORDINATION
09	21/05/2019	REISSUED FOR DP - RESPONSE TO COMMENTS
10	26/02/2019	REISSUED FOR DP - RESPONSE TO COMMENTS
11	24/07/2019	ISSUED FOR COORDINATION
12	25/07/2019	REISSUED FOR DP - RESPONSE TO COMMENTS
13	04/09/2019	PERMEABLE AREA AND PAVING REQUIREMENTS
14	04/11/2019	REISSUED FOR DP - RESPONSE TO COMMENTS

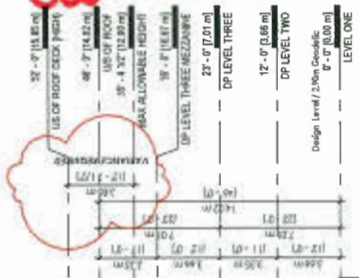
**4720 + 4740 VANGUARD RD  
 RICHMOND, BC**

**ELEVATIONS BLDG A**

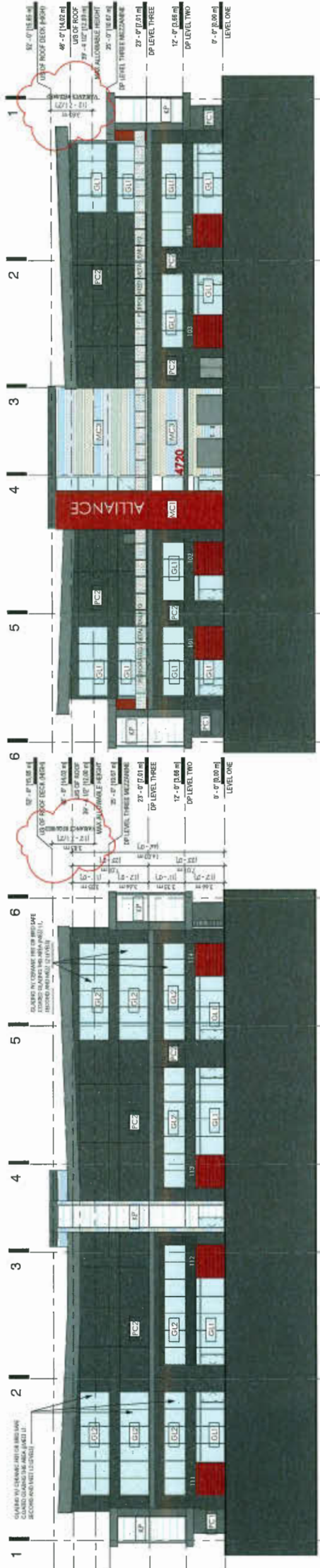
SCALE: As Indicated DATE: DEC 3, 2018 DRAWN: DR  
 PROJECT NUMBER: 217917

**A009**

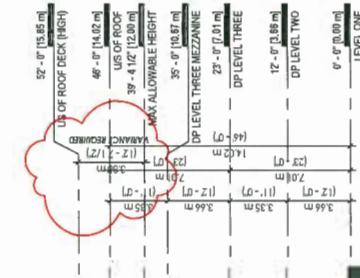
VARY TO  
 16.15M



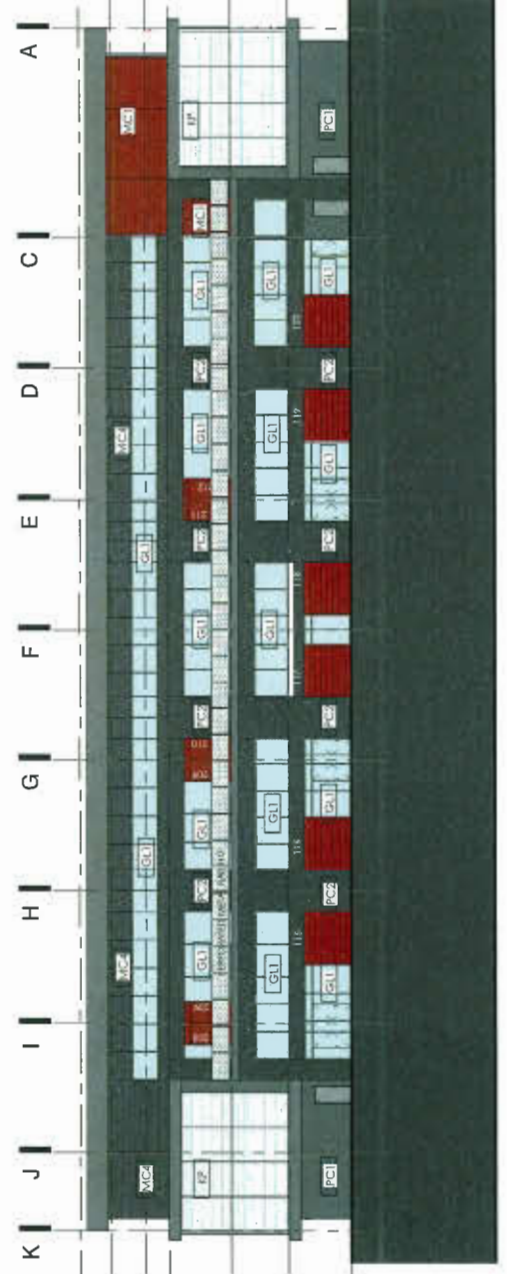
1 DP WEST ELEVATION\_BLDG A  
 1/16" = 1'-0"



2 DP NORTH ELEVATION\_BLDG A  
 1/16" = 1'-0"



3 DP SOUTH ELEVATION\_BLDG A  
 1/16" = 1'-0"



4 DP EAST ELEVATION\_BLDG A  
 1/16" = 1'-0"

DP 18-818671-10

**MATERIALS LEGEND**

MATERIAL	DESCRIPTION
M1	METAL COMBIBOND CLADDING PANEL RED, COLOUR TO MATCH BLM CONCRETE FINISH
M2	ALUMINUM CLADDING PANEL, COLOUR TO MATCH BLM CONCRETE FINISH
M3	ALUMINUM CLADDING PANEL, COLOUR TO MATCH BLM CONCRETE FINISH
M4	METAL COMBIBOND CLADDING PANEL GRAY, COLOUR TO MATCH BLM CONCRETE FINISH
M5	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M6	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M7	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M8	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M9	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M10	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M11	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M12	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M13	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M14	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M15	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M16	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M17	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M18	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M19	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M20	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M21	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M22	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M23	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M24	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M25	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M26	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M27	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M28	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M29	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M30	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M31	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M32	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M33	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M34	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M35	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M36	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M37	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M38	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M39	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M40	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M41	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M42	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M43	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M44	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M45	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M46	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M47	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M48	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M49	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH
M50	PRE-FINISHED WIRE MESH PANEL, FINISH TO MATCH BLM CONCRETE FINISH

GL1	GLASS PANEL - CLEAR
GL2	GLASS PANEL - CLEAR WITH IRIDIUM LOW E COATING TO MATCH BLM CONCRETE FINISH
FP	POLYCARBONATE INSULATED WIRE PANEL
SP1	SPANDREL PANEL - WIRE
DOOR	
OH1	INSULATED STEEL OVERHUNG DOOR COLOUR RED, COLOUR TO MATCH BLM CONCRETE FINISH
OH2	INSULATED STEEL OVERHUNG DOOR COLOUR BLUE, COLOUR TO MATCH BLM CONCRETE FINISH
OH3	INSULATED STEEL OVERHUNG DOOR COLOUR GRAY, COLOUR TO MATCH BLM CONCRETE FINISH
B	ELEVATOR DOOR
SD	INSULATED STEEL DOOR

NOTE: DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND MATERIALS AGAINST THE SPECIFICATIONS AND DRAWINGS. FAILURE TO OBTAIN SUCH VERIFICATION BEFORE PROCEEDING WITH CONSTRUCTION SHALL BE AT THE CONTRACTOR'S RISK AND WITHOUT LIABILITY TO ARCHITECTS. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REVISIONS TO THE DRAWINGS AND FOR THE COST OF REVISIONS.

**4720 + 4740 VANGUARD RD RICHMOND, BC**

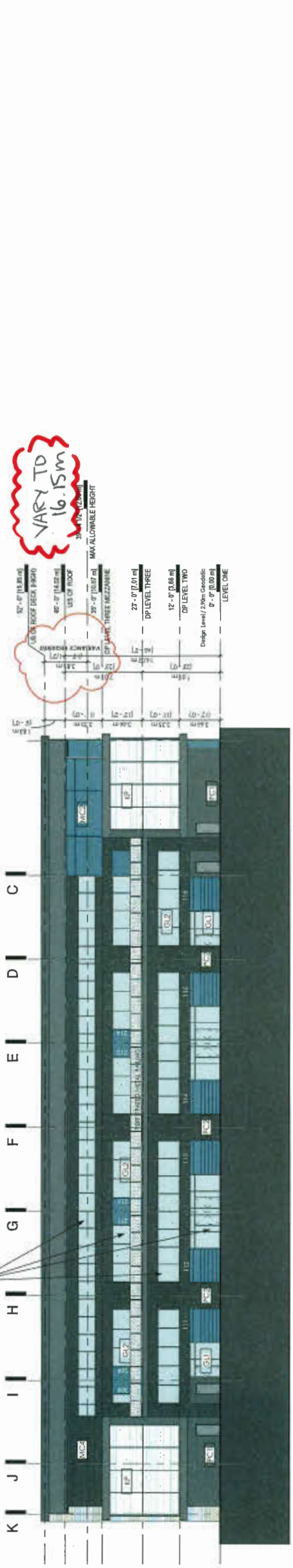
**ELEVATIONS BLDG B**

SCALE: AS SHOWN DATE: DEC 1, 2018 DRAWING NO: 210117 PROJECT NUMBER

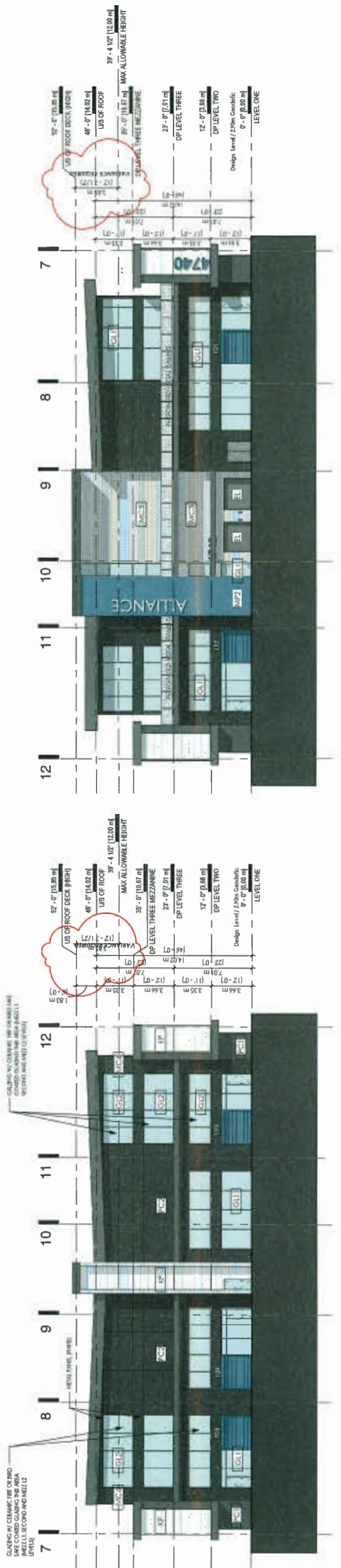
**DP NORTH ELEVATION\_BLDG B**  
 1/16" = 1'-0"

**DP SOUTH ELEVATION\_BLDG B**  
 1/16" = 1'-0"

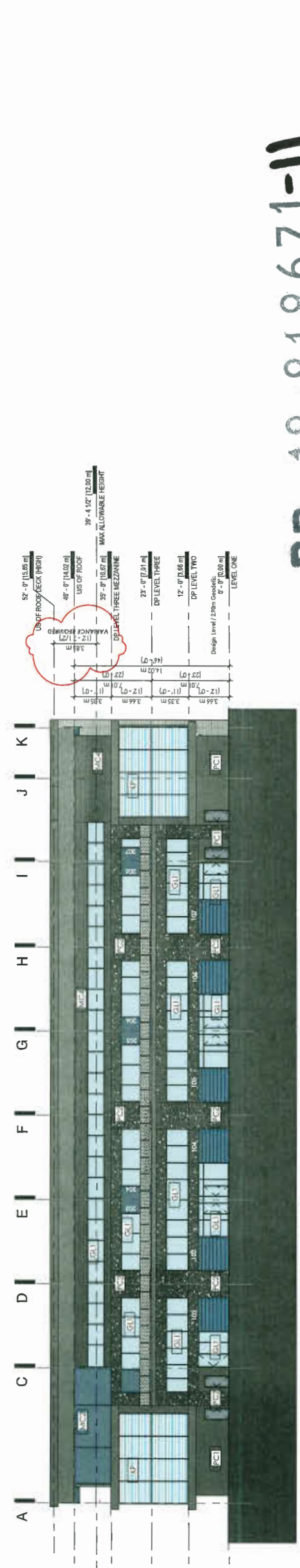
**DP WEST ELEVATION\_BLDG B**  
 1/16" = 1'-0"



2 DP EAST ELEVATION\_BLDG B  
 1/16" = 1'-0"



3 DP SOUTH ELEVATION\_BLDG B  
 1/16" = 1'-0"



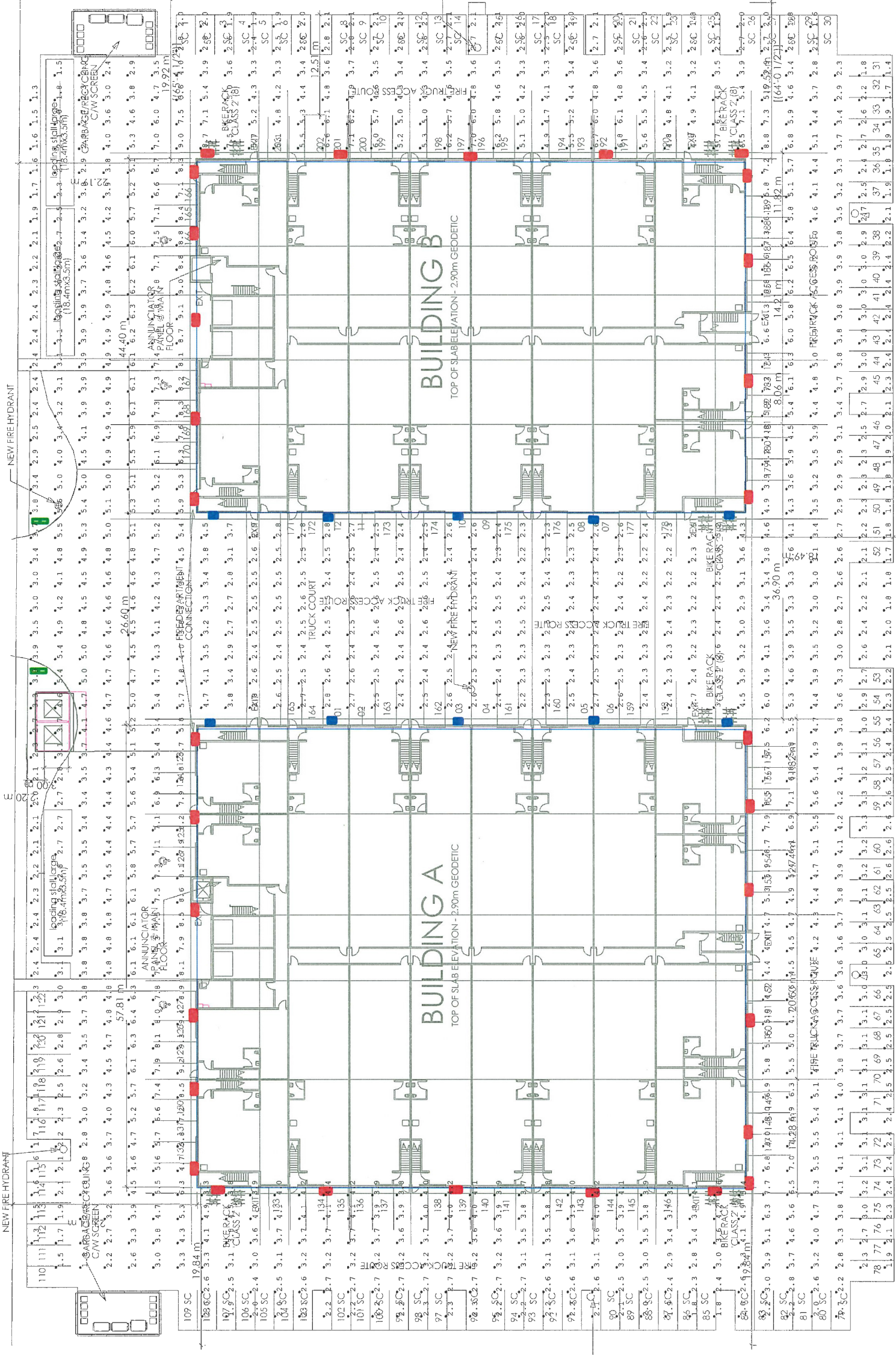
4 DP WEST ELEVATION\_BLDG B  
 1/16" = 1'-0"

**DP 18-818671-11**

**A010**

Calculation Summary

Label	CalcPts 1
CalcType	Illuminance
Units	Fc
Avg	3.84
Min	1.3
Avg/Min	2.95
Max/Min	7.23



Luminaire Schedule	Symbol	Qty	Label
		2	P26-48L-500-NW-G2-3
		31	PWS-64L-900-NW-G2-4
		10	PWS-48L-400-NW-G2-3
Total Lamp Lumens			
		N.A.	N.A.
Arrangement			
			SINGLE
			SINGLE
			SINGLE

**VANGUARD**

Drawn By: \_\_\_\_\_  
Checked By: \_\_\_\_\_  
Date: 2019-07-31

Scale: \_\_\_\_\_

Revisions	#	Date	Comments



**LEGEND**

- TURF GRASS
- CONCRETE WALKWAY
- PERMEABLE PAVERS
- IRRIGATION CONDUIT
- EXISTING TREE TO BE REMOVED
- EXISTING TREE TO BE RETAINED

**ISSUED PER COMMENTS**

- 06/11/19
- 06/06/19
- 26/07/19
- 21/02/19
- 07/02/19
- 31/01/19
- 30/11/18
- 14/11/18
- 27/09/18
- 27/08/18
- 19/05/18
- 09/05/18
- 31/07/18
- 10/04/18
- 07/12/17

ISSUED FOR TENDER  
ISSUED FOR DP  
ISSUED FOR ADDRESS ZCP  
ISSUED FOR BP  
ISSUED FOR COORDINATION  
ISSUED FOR DP  
ISSUED FOR DP  
ISSUED FOR DP  
ISSUED FOR REVIEW  
ISSUED FOR REVIEW  
ISSUED FOR REVIEW

B.C.S.L.A. #565



ALLIANCE VANGUARD

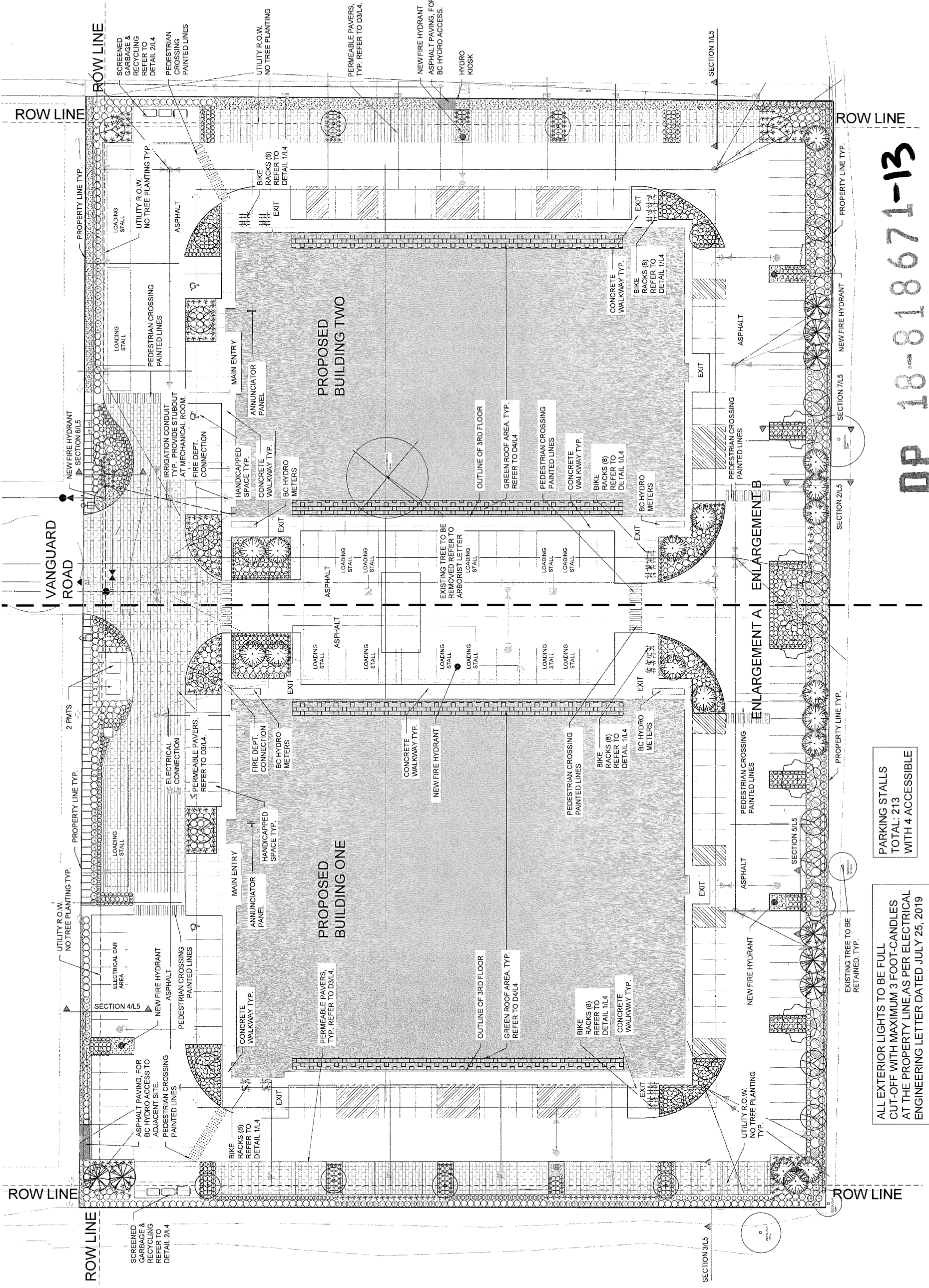
PROJECT ADDRESS  
4683, 4720 & 4740 VANGUARD RD  
RICHMOND, BC

DATE: 2019  
DRAWN BY: ST  
PROJECT NO: 170266  
DRAWING NO: L1

OVERALL LANDSCAPE PLAN

SCALE: 1:300  
DATE: 2019  
PROJECT NO: 170266  
DRAWING NO: L1

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PARKING STALLS  
TOTAL: 213  
WITH 4 ACCESSIBLE

ALL EXTERIOR LIGHTS TO BE FULL  
CUT-OFF WITH MAXIMUM 3 FOOT-CANDLES  
AT THE PROPERTY LINE AS PER ELECTRICAL  
ENGINEERING LETTER DATED JULY 25, 2019

DP 18-818671-13

**LEGEND**

	TURF GRASS
	CONCRETE WALKWAY
	PERMEABLE PAVERS
	IRRIGATION CONDUIT
	EXISTING TREE TO BE REMOVED
	EXISTING TREE TO BE RETAINED

**REVISIONS**

1	06/11/09	RESUBMITTED COMMENTS
2	06/08/09	RESUBMITTED COMMENTS
3	2/07/09	RESUBMITTED FOR DP
4	2/05/09	ISSUED FOR TENDER
5	07/02/09	RESUBMITTED FOR DP
6	3/16/09	ISSUED TO ADDRESS ACP COMMENTS
7	3/01/09	ISSUED FOR DP
8	14/11/08	ISSUED FOR COORDINATION
9	27/09/08	RESUBMITTED FOR DP
10	27/09/08	RESUBMITTED FOR DP
11	10/09/08	RESUBMITTED FOR DP
12	09/09/08	RESUBMITTED FOR DP
13	09/09/08	RESUBMITTED FOR REVIEW
14	11/04/08	ISSUED FOR DP
15	07/22/07	ISSUED FOR REVIEW

NOT TO SCALE UNLESS SPECIFIED  
 UNLESS OTHERWISE NOTED

B.C.S.L.A. #565



PROJECT TITLE  
**ALLIANCE VANGUARD**

PROJECT ADDRESS  
 4893, 4720 & 4740 VANGUARD RD  
 RICHMOND, BC

DRAWING TITLE  
**ENLARGEMENT A**

SCALE  
 1:200

DRAWN BY  
 BM

CHECKED BY  
 ST

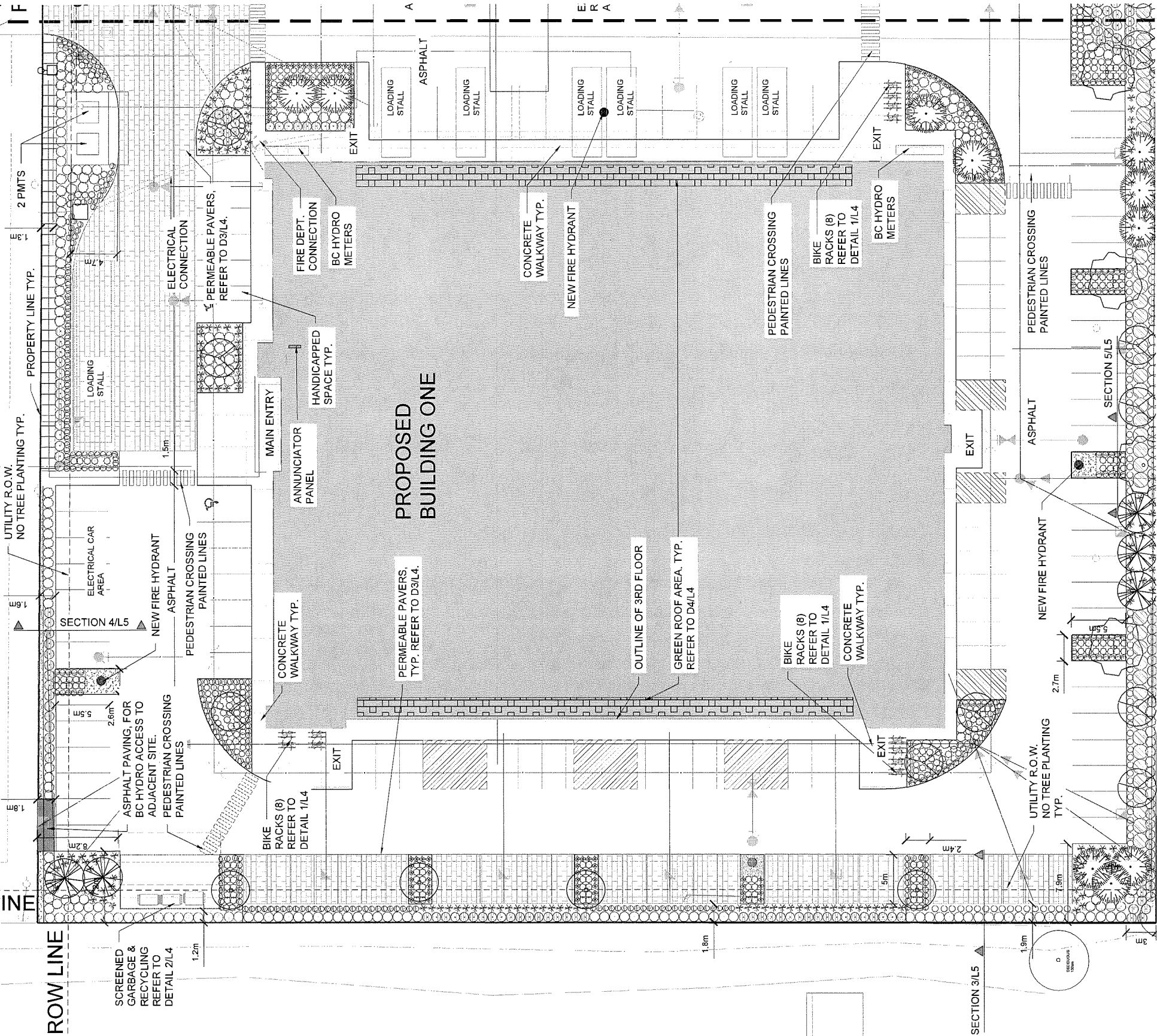
PANEL NO.  
 170508

DRAWING NO.  
 12

DATE  
 11/11/08

PROJECT NO.  
 170508

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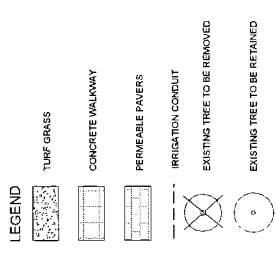
**PLANT LIST - FOR ENTIRE SITE**

SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	CONDITION
	6	Magnolia wilsonii	Star Magnolia	6 cm cal.	as per plan	WB.
	21	Cornus florida	Kousa Dogwood	6 cm cal.	as per plan	WB.
	6	Liquidambar styraciflua 'Winged'*	Winged Liquidambar	6 cm cal.	as per plan	WB.
	8	Chamaecyparis nootkatensis 'Pendula'	Weeping Noctule False Cypress	2.5m H.	as per plan	WB.
	18	Picea canadensis	White Spruce	2.5m H.	as per plan	WB.
	228	Lonicera alida	Lancea Beauty	60 cm H.	80 cm	#1 Pot
	229	Rhododendron 'White Light'	White Light Rhododendron	90 cm H.	100 cm	#1 Pot
	71	Picea japonica 'Villy Fir'	Layer of the-vally Spruce	1.2m H.	1.5m	#1 Pot
	134	Taxus media 'Dorcademe'	Dense Yew	60 cm H.	60 cm	#1 Pot
	171	Wickstroemia 'Spiral'	Spiral Wattle	2m H.	4m	#1 Pot
	41	David's Star	David's Star	60 cm H.	60 cm	#1 Pot
	331	Geranium 'Bicolor'	Bicolor Geranium	45 cm	45 cm	#1 Pot
	332	Geranium 'Bicolor'	Bicolor Geranium	60 cm	60 cm	#1 Pot
	333	Geranium 'Bicolor'	Bicolor Geranium	80 cm	80 cm	#1 Pot
	334	Geranium 'Bicolor'	Bicolor Geranium	80 cm	80 cm	#1 Pot
	335	Penstemon 'alpinus'	Alpine Penstemon	60 cm	60 cm	#1 Pot
	348	Rubus 'Ligula'	Rubus Ligula	60 cm	60 cm	#1 Pot

DP 18-818671-14



**Krahn**  
GROUP OF COMPANIES  
1000 WEST 10TH AVENUE, SUITE 1400, VANCOUVER, BC V6H 3G5  
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VANCOUVER OFFICE: 1000 WEST 10TH AVENUE, SUITE 1400, VANCOUVER, BC V6H 3G5  
TEL: 604.683.8941 FAX: 604.683.8932  
OTTAWA OFFICE: 1000 WEST 10TH AVENUE, SUITE 1400, VANCOUVER, BC V6H 3G5  
TEL: 604.683.8941 FAX: 604.683.8932



NO.	DATE (Y/M/D)	DESCRIPTION
1	08/11/19	ISSUED FOR COORDINATION
2	09/02/19	ISSUED FOR COMMENTS
3	09/02/19	ISSUED FOR COMMENTS
4	09/02/19	ISSUED FOR COMMENTS
5	09/02/19	ISSUED FOR COMMENTS
6	09/02/19	ISSUED FOR COMMENTS
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47	09/02/19	ISSUED FOR COMMENTS
48	09/02/19	ISSUED FOR COMMENTS
49	09/02/19	ISSUED FOR COMMENTS
50	09/02/19	ISSUED FOR COMMENTS

B.C.S.L.A. #565



**PROJECT NAME:**  
ALLIANCE VANGUARD

**PROJECT ADDRESS:**  
4668, 4730 & 4740 VANGUARD RD  
RICHMOND, BC

**SCALE:**  
1:300

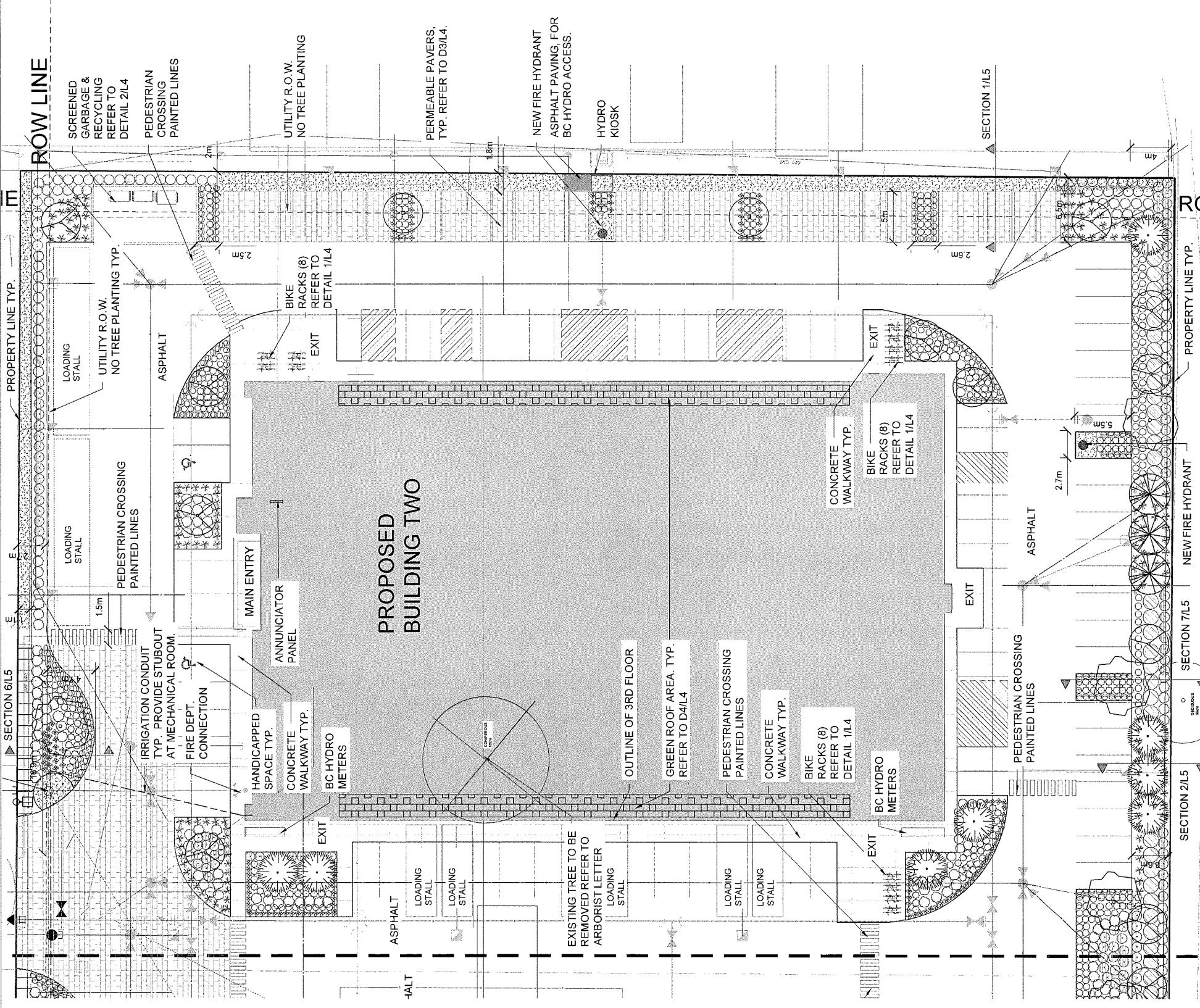
**DATE:**  
ENLARGEMENT B

**PROJECT NO.:**  
102095

**DATE:**  
ENLARGEMENT B

**PROJECT NO.:**  
102095

**DATE:**  
ENLARGEMENT B

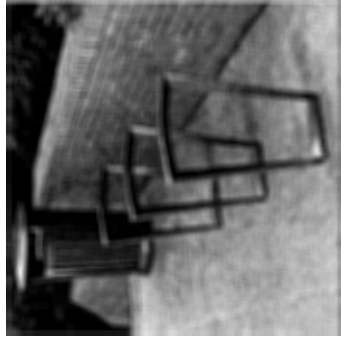


**PLANT LIST - FOR ENTIRE SITE**

SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	CONDITION
<b>DECIDUOUS TREES</b>						
○	6	Magnolia nitida	Star Magnolia	6 cm cal.	as per plan	W.B.
○	21	Cornus florida	Kousa Dogwood	6 cm cal.	as per plan	W.B.
○	8	Liquidambar styraciflua 'Weylandter'	Weylandter Sweetgum	6 cm cal.	as per plan	W.B.
<b>CONIFEROUS TREES</b>						
○	8	Chamaecyparis nootkanensis 'Pendula'	Weeping Nootka False Cypress	2.5m Ht.	as per plan	W.B.
○	18	Phoebe ornata	Serbian Spruce	2.5m Ht.	as per plan	W.B.
<b>SHRUBS</b>						
○	238	Lonicera caerulea 'Lemon Beauty'	Lemon Beauty Bush	60 cm Ht.	80 cm	#2 Pot
○	229	Rhododendron 'White Light'	White Light Rhododendron	100 cm Ht.	100 cm	#3 Pot
○	71	Penstemon 'Jupiter Valley Pink'	Jupiter Valley Penstemon	12cm Ht.	100cm	#2 Pot
○	71	Thalictrum 'Carmelita'	Carmelita Thalictrum	30cm Ht.	100cm	#2 Pot
○	414	Yucca filamentosa 'Soleil d'Or'	Soleil d'Or Yucca	60 cm Ht.	60 cm	#2 Pot
<b>PERENNIALS, GRASSES AND GRASSES</b>						
○	531	Geranium 'Bicolor'	Bicolor Geranium	45 cm	45 cm	#1 Pot
○	246	Hebe 'Blueberry Blush'	Blueberry Blush Hebe	90cm	90cm	#1 Pot
○	355	Penstemon 'Appalachian Haze'	Appalachian Haze Penstemon	80 cm	80 cm	#1 Pot
○	348	Rubus 'Black-Eyed Susan'	Black-Eyed Susan	60cm	60cm	#1 Pot

DP 18-818671-15

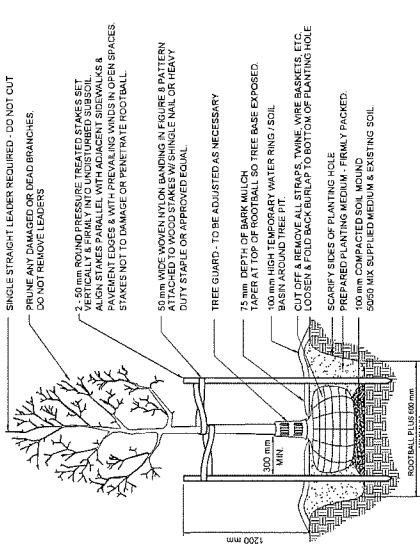




**BIKE RACK TO BE:**  
**MODEL: EMERSON**  
**MANUFACTURER: LANDSCAPE FORMS**  
**COLOR: BLACK**

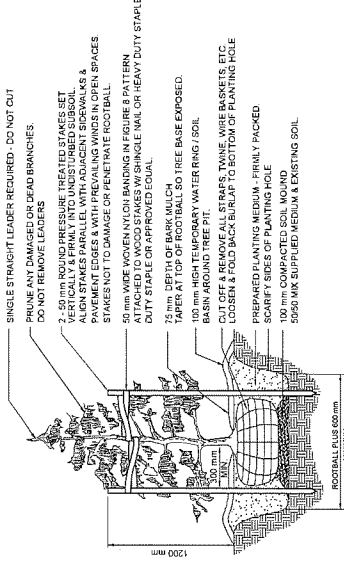
**QUANTITY: 48**  
**OR APPROVED EQUAL**

### D1 BIKE RACK



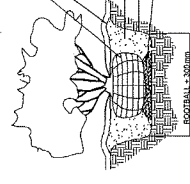
### DECIDUOUS TREE

N.T.S.



### CONIFEROUS TREE

N.T.S.

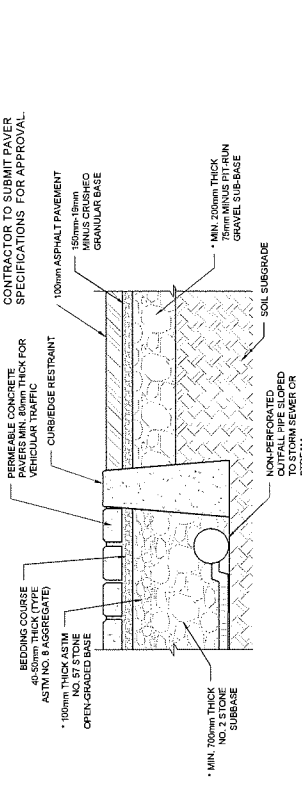


### SHRUB AND PERENNIAL PLANTING DETAIL

N.T.S.

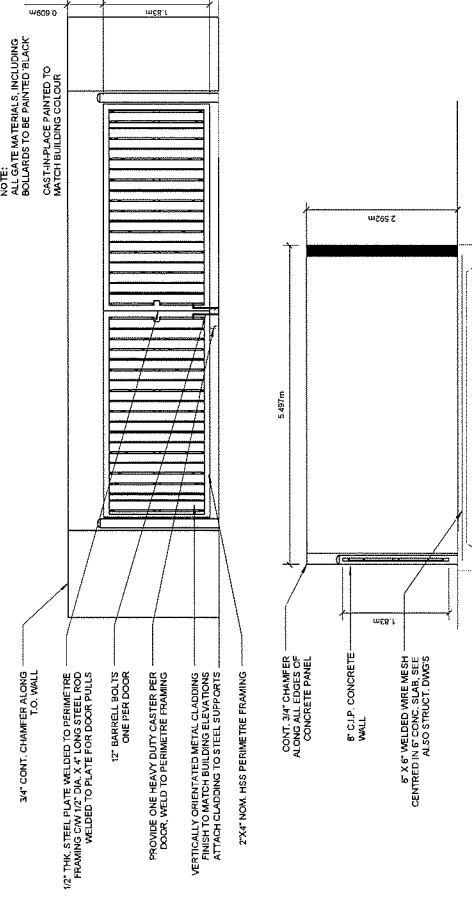
### NOTES:

PAVERS TO BE SQUARE. LAYING PATTERN TO BE SQUARE. LAYING CONTRACTOR TO SUBMIT PAVEMENT SPECIFICATIONS FOR APPROVAL.



### D3 PERMEABLE PAVERS

N.T.S.

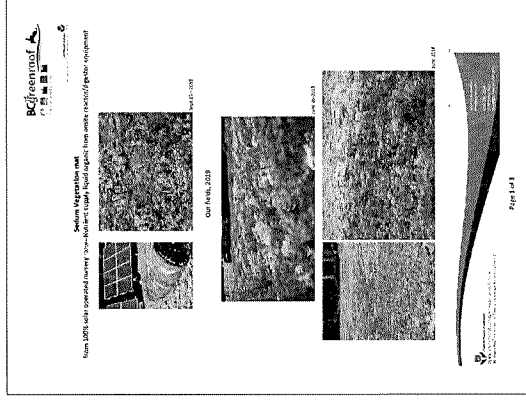


### D3 PERMEABLE PAVERS

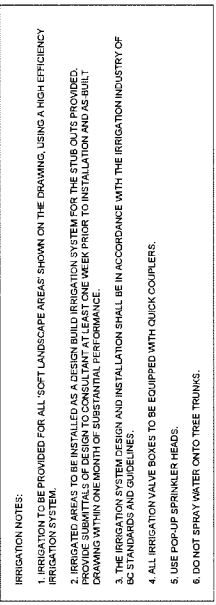
N.T.S.

### D4 GREEN ROOF - SEDUM MATS

N.T.S.



**NOTES:**  
 ALL GREEN ROOF AREAS TO BE SEDUM MATS BY BC GREEN ROOF, OR APPROVED EQUAL.



**IRRIGATION NOTES:**

- IRRIGATION TO BE PROVIDED FOR ALL SOFT LANDSCAPE AREAS SHOWN ON THE DRAWING, USING A HIGH EFFICIENCY IRRIGATION SYSTEM.
- IRRIGATED AREAS TO BE INSTALLED AS A DESIGN BUILD IRRIGATION SYSTEM FOR THE STUB CUTS PROVIDED. PROVIDE SUBMITTALS OF DESIGN TO CONSULTANT AT LEAST ONE WEEK PRIOR TO INSTALLATION AND AS BUILT DRAWING WITHIN ONE MONTH OF SUBSTANTIAL TENDERS.
- THE IRRIGATION SYSTEM DESIGN AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE IRRIGATION INDUSTRY OF BC STANDARDS AND GUIDELINES.
- ALL IRRIGATION VALVE BOXES TO BE EQUIPPED WITH QUICK COUPLERS.
- USE POP-UP SPRINKLER HEADS.
- DO NOT SPRAY WATER ONTO TREE TRUNKS.

**SODDING NOTES:**

- SODDED AREAS AS SHOWN ON THE DRAWING ARE TO BE CERTIFIED CANADA NO. 1 CULTIVATED TURF SOIL, WITH STRONG FIBROUS ROOT SYSTEM, THICK AND HEAVY GROWTH CONFORMING TO REQUIREMENTS OF THE CANADIAN LANDSCAPE STANDARD FOR SODS AND TENDERS, AND TO BE STORED UNDER COVER UNTIL USED. THE SOIL SHOULD BE AT LEAST 48 HOURS BEFORE USED. SOIL SHOULD BE TESTED FOR CHLORIDE AND PH. SOIL SHOULD BE TESTED FOR CHLORIDE AND PH. SOIL SHOULD BE TESTED FOR CHLORIDE AND PH. SOIL SHOULD BE TESTED FOR CHLORIDE AND PH.
- SOIL TO BE SODDED SHALL HAVE A MINIMUM 150MM TOPSOIL BASE.
- LOOSEN SOIL SURFACE PRIOR TO SODDING. ELIMINATE BUMPS AND HOLLOWES. ROLL LIGHTLY WHENEVER TOPSOIL IS EXCESSIVELY LOOSE.
- PRIOR TO SODDING, OBTAIN APPROVAL THAT FINISHED GRADE AND DEPTH OF TOPSOIL ARE SATISFACTORY.
- DELIVER SOD TO SITE WITHIN 24 HOURS OF BEING LIFTED AND LAY WITHIN 24 HOURS OF BEING LIFTED. DURING DRY WEATHER PROTECT SOD FROM DRYING, AND WATER SOD AS NECESSARY TO ENSURE ITS VITALITY AND PREVENT THE LOSS OF SOIL IN HANDLING. DRY SOD WILL BE REJECTED.
- LAY SOD DURING GROWING SEASON. LAY SOD IN ROWS, PERPENDICULAR TO SLOPE, AND WITH JOINTS STAGGERED. THIN SECTIONS WITH SHARP IMPLANTS.
- WATER SOD IMMEDIATELY AFTER LAYING TO OBTAIN THE BEST PENETRATION AND TOP 15MM OF TOPSOIL. MAINTAIN SODDED AREAS FROM START OF INSTALLATION UNTIL FINAL ACCEPTANCE.

**PLANTING NOTES**

- PLANTS SHALL BE INSTALLED AS DIRECTED BY THE DRAWING, NOTES AND DETAILS.
- PLANT MATERIAL SUBSTITUTIONS WILL NOT BE ACCEPTED WITHOUT PRIOR WRITTEN APPROVAL.
- ALL PLANT MATERIAL SHALL BE THOROUGHLY WATERED AND SOAKED AT THE TIME OF PLANTING.
- TREE PROTECTION: PER THE MUNICIPAL DETAIL IF REQUIRED.
- ALL LANDSCAPE MATERIAL IS TO COMPLY WITH THE CANADIAN LANDSCAPE STANDARD.
- SOIL ANALYSIS FOR PROPOSED GROWING MEDIUM IS TO BE PROVIDED TO LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
- PLANT MATERIALS SPECIFIED FOR THIS PROJECT WILL CONFORM TO THE CANADIAN LANDSCAPE STANDARD AND MUNICIPAL LANDSCAPE STANDARD FOR SIZE, VARIETY AND CONDITION AS INDICATED ON THE PLANT LIST SHOWN ON THIS DRAWING. ANY PLANT DISPLAYING FOOT GROWTH, HABITS, INJURY OR DISEASE WILL BE REJECTED. ANY PLANT THAT IS REJECTED WILL BE REMOVED FROM THE SITE AND REPLACED WITH A PLANT OF ACCEPTABLE QUALITY AT NO ADDITIONAL COST TO THE OWNER.
- REMOVE DEAD OR DAMAGED BRANCHES. ALL PRUNING SHALL BE PERFORMED IN ACCORDANCE WITH STANDARD HORTICULTURAL PRACTICES AND INTERNATIONAL SOCIETY ARBORISTS (I.S.A.) SPECIFICATIONS WITH APPROPRIATE TIMING FOR EACH SPECIES.
- PROVIDE A ONE YEAR WARRANTY FOR THE PLANT MATERIAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MAINTENANCE REQUIRED TO KEEP THE PLANTS IN A HEALTHY CONDITION DURING THE WARRANTY PERIOD UNLESS OTHERWISE AGREED UPON, AND FOR REPLACEMENT OF PLANT MATERIALS THAT ARE DEAD OR IN POOR CONDITION DURING THE WARRANTY PERIOD AT THE CONTRACTORS OWN EXPENSE. MAINTENANCE INCLUDES BUT IS NOT LIMITED TO:
  - Watering
  - Mulching
  - Pruning
  - Fertilizing
  - Staking
  - Support
  - Protective wrapping
  - Replacement of dead or damaged plants
  - Removal of weeds
  - Removal of debris
  - Removal of animal damage
  - Removal of insect damage
  - Removal of disease
  - Removal of other damage
  - Removal of other damage
- Regular selection of existing plants is required and/or as directed by the Project Manager during construction and the warranty period. Plants shall be watered within 48 hours of within 48 hours of installation. The contractor shall provide all materials and labor required for the maintenance of the plants. The cost of the work shall be included in the Bid. Contact Price on backsheet and otherwise recovered from the Contractor.
- Maintenance and additional installation of mesh.
- Weed removal
- Disease control

# OP 18-818671-16

### D2 GARBAGE SCREENING

### ALLIANCE VANGUARD

PROJECT DATE: 07/02/2017  
 PROJECT ADDRESS: 4693, 4720 & 4740 VANGUARD RD RICHMOND, BC  
 DRAWING TITLE: DETAILS & NOTES  
 SCALE: AS NOTED  
 DATE: 08/20/2017  
 DRAWN BY: BT  
 CHECKED BY: BT  
 PROJECT NO: 170566  
 DRAWING NO: 170566

### L4

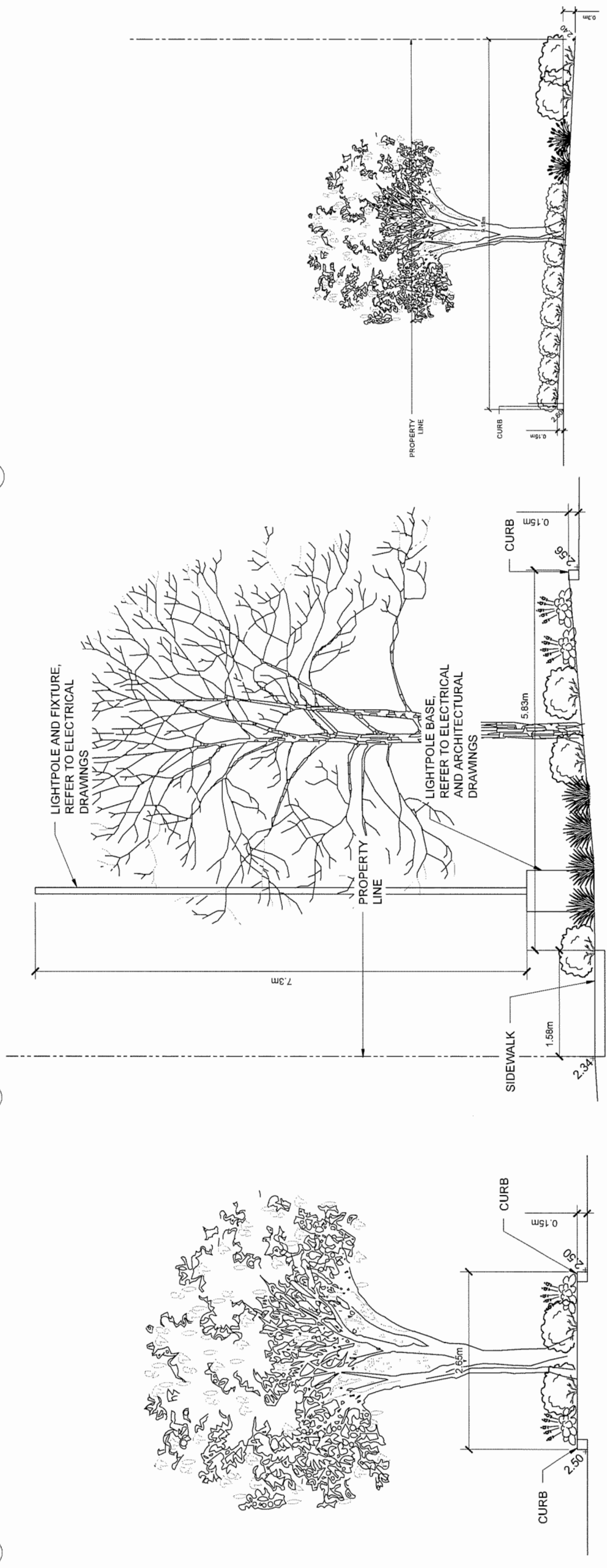
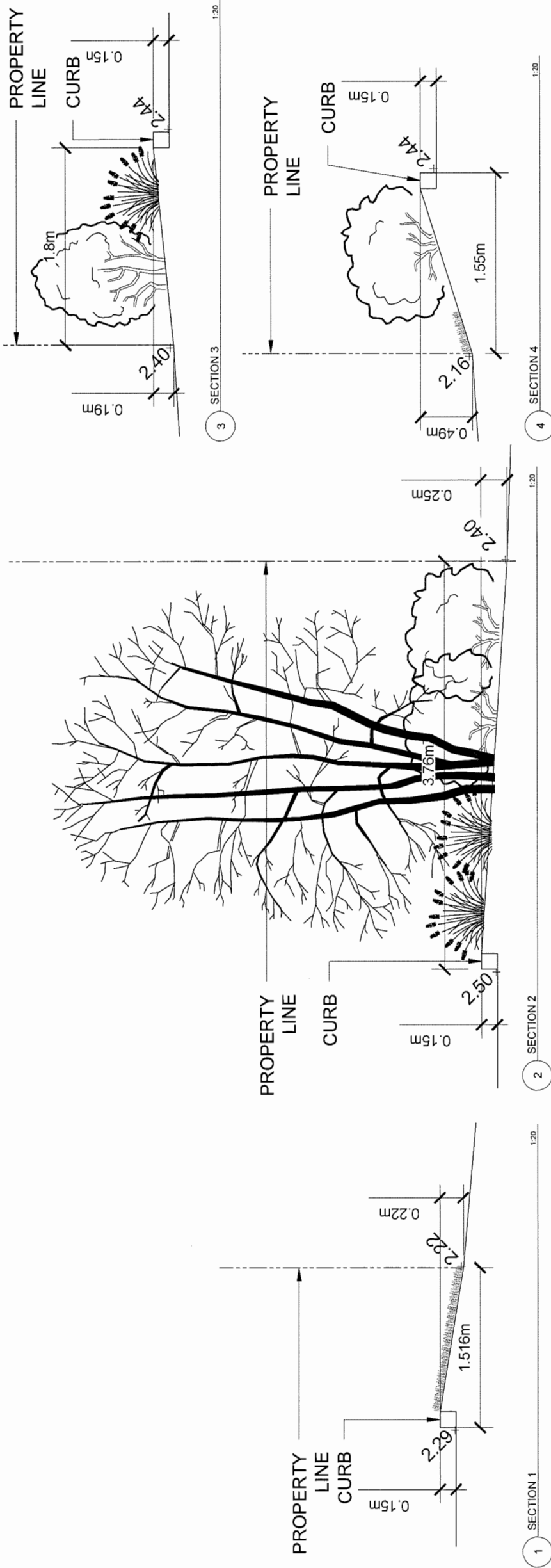


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NO.	DATE	REVISION / COMMENTS
1	05/02/19	RESSESSED PER COMMENTS
2	26/07/19	RESSESSED FOR CP
3	21/08/19	ISSUED FOR TENDER
4	07/03/19	RESSESSED FOR DP
5	21/05/19	RESSESSED TO ADDRESS ADP
6	30/11/18	ISSUED FOR BP
7	14/11/18	ISSUED FOR COORDINATION
8	27/05/18	RESSESSED FOR DP
9	18/02/18	RESSESSED FOR CP
10	06/04/18	RESSESSED FOR DP
11	31/07/18	ISSUED FOR REVIEW
12	11/04/18	ISSUED FOR BP
13	07/03/17	ISSUED FOR REVIEW

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NO.	DATE	DESCRIPTION
1	09/11/19	ISSUED FOR COMMENTS
2	09/26/19	REISSUED FOR COMMENTS
3	20/07/19	ISSUED FOR DP
4	21/08/19	ISSUED FOR TENDER
5	07/03/19	ISSUED FOR DP
6	31/01/19	ISSUED TO ADDRESS AUP COMMENTS
7	30/11/18	ISSUED FOR BP
8	14/11/18	ISSUED FOR COORDINATION
9	22/10/18	ISSUED FOR DP
10	21/09/18	ISSUED FOR DP
11	18/09/18	ISSUED FOR DP
12	08/08/18	ISSUED FOR DP
13	31/07/18	ISSUED FOR REVIEW
14	11/04/18	ISSUED FOR DP
15	07/02/17	ISSUED FOR REVIEW

PROJECT NAME  
**ALLIANCE VANGUARD**

PROJECT ADDRESS  
4693, 4720 & 4740 VANGUARD RD  
RICHMOND, BC

DRAWING NO.  
170256

SCALE  
AS NOTED

DATE  
11/2019

PROJECT NO.  
170256

DRAWING NO.  
170256