



Development Permit Panel

**Council Chambers, City Hall
6911 No. 3 Road**

**Wednesday, November 14, 2018
3:30 p.m.**

MINUTES

Motion to adopt the minutes of the Development Permit Panel meeting held on October 24, 2018.

- 1. DEVELOPMENT PERMIT 17-785944**
(REDMS No. 5720223)

APPLICANT: Zhao XD Architect Ltd.

PROPERTY LOCATION: 9880 Granville Avenue and 7031 No. 4 Road

Director's Recommendations

That a Development Permit be issued which would permit the construction of seven three-storey townhouse units at 9880 Granville Avenue and 7031 No. 4 Road on a site zoned "Medium Density Townhouses (RTM2)".

- 2. DEVELOPMENT PERMIT 18-815966**
(REDMS No. 5977699)

APPLICANT: I-Fly Vancouver

PROPERTY LOCATION: 9151 Van Horne Way

ITEM

Director's Recommendations

That a Development Permit be issued which would permit the construction of an indoor recreational skydiving facility at 9151 Van Horne Way with a maximum building height of 24.0 m (78.8 ft.) on a site zoned “Light Industrial (IL)”.



3. DEVELOPMENT PERMIT 18-820582

(REDMS No. 5973337)

APPLICANT: Greater Vancouver Sewerage and Drainage District

PROPERTY LOCATION: 1000 Ferguson Road

Director's Recommendations

That a Development Permit be issued at 1000 Ferguson Road in order to allow construction of temporary dewatering facilities on a site designated an Environmentally Sensitive Area.



4. New Business

5. Date of Next Meeting: November 28, 2018

ADJOURNMENT



City of Richmond

Minutes

Development Permit Panel Wednesday, October 24, 2018

Time: 3:30 p.m.

Place: Council Chambers
Richmond City Hall

Present: John Irving, Acting Chair
Victor Wei, Director, Transportation
Peter Russel, Senior Manager, Sustainability and District Energy

The meeting was called to order at 3:30 p.m.

Minutes

It was moved and seconded

That the minutes of the meeting of the Development Permit Panel held on September 26, 2018 be adopted.

CARRIED

1. DEVELOPMENT PERMIT 16-740262 (REDMS No. 5974941 v. 2)

APPLICANT: 0989705 B.C. Ltd.

PROPERTY LOCATION: 7960 Alderbridge Way and 5333 & 5411 No. 3 Road

INTENT OF PERMIT:

To permit the construction of a high-density, mixed-use development consisting of approximately 18,720 sq.m. (201,500 sq.ft.) of office and commercial floor area and approximately 822 residential units at 7960 Alderbridge Way and 5333 & 5411 No. 3 Road on a site zoned “City Centre High Density Mixed Use (ZMU34) – Lansdowne Village”.

Applicant's Comments

Achim Charisius, GBL Architects, with the aid of a video presentation (copy on file, City Clerk's Office), provided background information on the project's site context and layout, design rationale, architectural form and character, vehicular access into the site, pedestrian entries and circulation within the site, and various uses of building and outdoor spaces within the site.

1.

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Mr. Charisius highlighted the following significant features of the project, among others:

- the proposed podium, mid-rise and tower form of development is intended for commercial, office and residential uses including affordable market rental, market rental and market strata units;
- the two open air mid-block pedestrian mews from No. 3 Road and one from the new north-south road lead to the internal courtyard plaza and provide an east-west pedestrian connection through the site;
- corner undercuts along No. 3 Road provide small plaza spaces for anchor tenants and weather protection;
- outdoor amenity areas are provided on various levels of the building; and
- tower balconies along the west facade have generous and varied balcony depths.

In addition, Mr. Charisius provided details on the project's indoor and outdoor amenity areas, sustainability features, proposed building materials, signage and wayfinding strategy, transportation management demand (TDM) measures, and proposed public art.

Chris Philips, PFS Studio., with the aid of a video presentation (copy on file, City Clerk's Office) briefed the Panel on the main landscaping features of the project, noting that (i) wide sidewalks are proposed along the street frontages, (ii) the courtyard plaza incorporates seating and landscaping and is surrounded by retail spaces at the edges to animate the space, (iii) public art is intended to be integrated into the plaza, (iv) lighting is incorporated into the pedestrian mews and the plaza, (v) a large outdoor amenity area is proposed on Level 3 podium rooftop for office workers and residents and common outdoor spaces are provided on the upper levels, and (vi) the potential public art plaza location is intended to be visible from the plaza and the west and east sides of the development, particularly from the Canada Line Skytrain.

Staff Comments

Wayne Craig, Director, Development noted that (i) there is a significant Servicing Agreement associated with the subject development for road improvements along No. 3 Road, the new east-west road and the new north-south road, (ii) there are 38 low-end market rental units and 115 market rental units with housing agreements adopted by Council, (iii) the proposed Transportation Demand Management (TDM) package includes four car share vehicles, bicycle end-of-trip facilities for commercial and office users as well as for residents, and a transit pass program for 100% of the low-end market rental units and 50 % of the market rental units, and (iv) 192 residential units are designed to meet the City's Basic Universal Housing (BUH) guidelines.

In addition, Mr. Craig noted that the project has paid particular attention to mitigate aircraft noise as well as noise generated by the Canada Line Skytrain.

In closing, Mr. Craig clarified that project's proposed public art will be approved through a separate process and the development permit approval does not approve any particular public art piece.

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Panel Discussion

In reply to a query from the Panel, Mr. Charisius acknowledged that electric vehicle charging is provided on three levels of parking.

In reply to a related query from the Panel, Mr. Craig confirmed that the City's current Zoning Bylaw requires that all residential parking stalls be provided with electric vehicle charging outlets; however, there is a grandfather provision for in-stream development permit applications depending on when a Building Permit is obtained.

In reply to further queries from the Panel, Mr. Charisius noted that (i) the proposed public art piece is intended to be visible not only from the courtyard plaza but also from the Canada Line Skytrain, (ii) retail components around the pedestrian plaza include small-scale convenience retail and food and beverage establishments to animate the space and draw people into the plaza, (iii) residents and office workers will have access to the second level overlooking the plaza, (iv) there are no retail components on the second level, (v) the east-west pedestrian connection is publicly accessible and open 24 hours a day, seven times a week, although there will be changes in lighting conditions after business hours, (vi) the larger component of the indoor amenity space will be for shared use of market strata and low-end market rental housing units; however, a smaller component of the proposed indoor amenity space is allocated for exclusive use of tenants of market rental units, and (vii) the green roofs on top of the towers are not accessible.

In reply to a further query from the Panel, Mr. Charisius noted that the massing of the west façade is visually broken down through introducing gently curving podium "ribbon" balconies and different colour/material themes for the towers, among others.

Gallery Comments

None.

Correspondence

None.

Panel Discussion

The Panel expressed support for the project, noting that (i) the applicant was able to come up with a high-density mixed use development despite the building height restrictions and amount of road dedication on the subject site, (ii) the project design is well thought out, and (iii) the project is pedestrian-friendly and transit-oriented.

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Panel Decision

It was moved and seconded

That a Development Permit be issued which would permit the construction of a high-density, mixed-use development consisting of approximately 18,720 m² (201,500 ft²) of office and commercial floor area and approximately 822 residential units at 7960 Alderbridge Way and 5333 & 5411 No. 3 Road on a site zoned "City Centre High Density Mixed Use (ZMU34) – Lansdowne Village".

CARRIED

2. DEVELOPMENT PERMIT 17-794280

(REDMS No. 5987886 v. 3)

APPLICANT: Ciccozzi Architecture Inc.

PROPERTY LOCATION: 4008 Stolberg Street

INTENT OF PERMIT:

To permit the construction of a 196-unit apartment complex at 4008 Stolberg Street on a site zoned "Low Rise Apartment (ZLR22) – Alexandra Neighbourhood (West Cambie)".

Applicant's Comments

Robert Ciccozzi, Ciccozzi Architecture Inc., provided background information on the proposed development, noting that (i) two 4-storey wood frame buildings comprising of 196 units over below-grade parkade are proposed, (ii) 20 units will have Basic Universal Housing (BUH) features, (iii) all parking spaces are provided with Level 2 electric vehicle charging outlets, (iv) the East Coast contemporary design of the buildings fits into the neighbourhood, (v) brick is proposed as primary base material for the buildings, and (vi) the building massing is broken down through the use of materials, colours and recesses on the building façade.

In addition, Mr. Ciccozzi noted that (i) a maximum of 1.2 meters in height difference between sidewalk and patios is proposed along the street frontages, (ii) height of building roofs are raised at the entrances and corners to accentuate them, and (iii) each building is provided with an indoor amenity area.

Mr. Ciccozzi also advised that the applicant has addressed the comments of the Advisory Design Panel including, among others, (i) increasing the size of the entry plaza between buildings facing Stolberg Street, and (ii) introducing architectural and landscaping treatments to the parkade ramp and garbage and recycling loading area to provide visual interest and create a plaza-like feel to the space.

Daryl Tyacke, ETA Landscape Architecture, briefed the Panel on the main landscaping features of the project and highlighted the following:

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- the public realm is animated through the brick and concrete retaining walls along the street frontages punctuated by stairways leading from the street to the residential units;
- the large central courtyard on top of the parking podium provides a series of zones consisting of active and passive spaces;
- the amenity room in each building spills out into the outdoor amenity area;
- a series of staggered walkways are proposed along the rear of the site; and
- dense planting is proposed along the west and east sides of the development to provide screening to the street and adjacent developments.

Staff Comments

Mr. Craig noted that (i) the project will connect to the Alexandra District Energy Utility (DEU) facility, (ii) the development will meet the requirements for the City's Aircraft Noise Policy, (iii) the majority of road frontages were improved through the Servicing Agreements associated with the rezoning of the subject site, and (iv) there will be work orders for minor frontage adjustments to accommodate the project.

Panel Discussion

In reply to queries from the Panel, Mr. Ciccozzi acknowledged that (i) the retaining wall along the Stolberg Street frontage and the other three sides of the development will be clad in brick, (ii) a fence along the east property line and berm landscaping provide an appropriate interface with the development to the east, (iii) garbage and recycling rooms are located in the parkade and the garbage and recycling bins will be brought up to the loading area for pick-up, and (iv) the proposed surface paving treatment of the loading area help create a plaza-like feel for the space.

Gallery Comments

None.

Correspondence

None.

Panel Discussion

The Panel expressed support for the project, noting that the proposed central courtyard is well designed and the project fits well with its site context.

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Panel Decision

It was moved and seconded

That a Development Permit be issued which would permit the construction of a 196-unit apartment complex at 4008 Stolberg Street on a site zoned "Low Rise Apartment (ZLR22) – Alexandra Neighbourhood (West Cambie)".

CARRIED

- 3. Date of Next Meeting: November 18, 2018**

- 4. Adjournment**

It was moved and seconded

That the meeting be adjourned at 4:25 p.m.

CARRIED

Certified a true and correct copy of the Minutes of the meeting of the Development Permit Panel of the Council of the City of Richmond held on Wednesday, October 24, 2018.

John Irving
Acting Chair

Rustico Agawin
Committee Clerk



**City of
Richmond**

Report to Development Permit Panel

To: Development Permit Panel

Date: October 23, 2018

From: Wayne Craig
Director, Development

File: DP 17-785944

Re: Application by Zhao XD Architect Ltd. for a Development Permit at
9880 Granville Avenue and 7031 No. 4 Road

Staff Recommendation

That a Development Permit be issued which would permit the construction of seven three-storey townhouse units at 9880 Granville Avenue and 7031 No. 4 Road on a site zoned “Medium Density Townhouses (RTM2)”.

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

WC:el
Att. 2

Staff Report

Origin

Zhao XD Architect Ltd. has applied to the City of Richmond for permission to develop seven three-storey townhouse units at 9880 Granville Avenue and 7031 No. 4 Road. The site is being rezoned from “Single Detached (RS1/F)” zone to “Medium Density Townhouses (RTM2)” under Bylaw 9686 (RZ 15-708960), which received third reading following the Public Hearing on April 18, 2017. The site currently contains two single-family dwellings, which will be demolished. A Servicing Agreement for road widening, frontage beautification, storm upgrades, and service connections is required prior to issuance of a Building Permit for the site.

Development Information

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

Background

Development surrounding the subject site is as follows:

- To the north, across Granville Avenue, a seven-unit townhouse development on a site zoned “Town Housing (ZT60) – North McLennan (City Centre)” and a duplex on a site zoned “Two-Unit Dwellings (RD1)”.
- To the east, across No. 4 Road, a single-family home on a lot zoned “Agriculture (AG1)” located within the Agriculture Land Reserve (ALR).
- To the south, a 22-unit townhouse development on a site zoned “Low Density Townhouses (RTL1)”.
- To the west, an 18-unit townhouse development, under construction, on a site zoned “Medium Density Townhouses (RTM2)”.

Rezoning and Public Hearing Results

The Public Hearing for the rezoning of this site was held on April 18, 2017. No concerns regarding the rezoning application were expressed at the 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 in compliance with the “Medium Density Townhouses (RTM2)” zone.

Advisory Design Panel Comments

The subject application was not presented to the Advisory Design Panel on the basis that this relatively small project generally meets all the applicable Development Permit Guidelines, and the overall design and site plan have adequately addressed staff comments.

Analysis

Conditions of Adjacency

- An agricultural landscape buffer is required within the subject site, along the eastern edge of the No. 4 Road frontage. The buffer is intended to mitigate land use conflicts between the residential uses on the subject site and any agricultural land uses east of No. 4 Road. The Agricultural Advisory Committee (AAC) has reviewed and supported the proposed agricultural landscape buffer design on January 19, 2017.
- Both the form and massing of the proposed development are consistent with the adjacent townhouse development to the west, which is comprised of three-storey townhouses.
- The proposed townhouse development is also compatible to the existing two-storey townhouse development to the south. Varied roof line, additional setback on the upper floors, reduced window sizes and restricted window orientations are included in the architectural design of the south building (Building 2) to provide an appropriate interface with the adjacent two-storey townhouse development to the south.
- Second floor living room windows are set back approximately 3.5 m to 4.3 m to the rear (south) property line; and there is only one south facing bedroom window on the third floor (set back approximately 5.3 m from the south property line) overlooking the neighbouring yards to the south.
- Three trees, hedges, and a 1.8 m tall wood fence are proposed along the rear property line for screening between the subject and the neighbouring property to the south.
- Perimeter drainage will be required as part of the Building Permit to ensure storm water is managed and addressed through the development and will not impact the neighbouring properties.

Urban Design and Site Planning

- The subject townhouse development will have vehicle access and garbage, recycling and organic waste collection facilities provided by the adjacent townhouse development to the west at 9800 Granville Avenue, which is under construction. A Statuary Right of Way (SRW) has been registered on Title of 9800 Granville Avenue to provide vehicle access to the subject site from Granville Avenue. A cross-access easement agreement has been registered on Title of 9800 Granville Avenue to allow for the shared used of the garbage, recycling and organic waste collection facilities located on 9800 Granville Avenue. These arrangements (including cost sharing for maintenance purposes) were agreed upon between the developers of 9800 Granville Avenue and the owners of the subject site at the time 9800 Granville Avenue was rezoned for townhouse uses.
- The proposal consists of seven units provided in two clusters. Five units will have direct pedestrian access from the street and two units will have access from the internal drive aisle.
- The proposal provides for a pedestrian-oriented streetscape fronting both Granville Avenue and No. 4 Road with a landscaped edge treatment, low metal fencing, and metal gates to the street-fronting units. A separate pedestrian entrance from No. 4 Road to the development site is proposed to provide a direct access to the internal drive aisle from No. 4 Road.

- Ten residential parking spaces are required for this seven unit townhouse development. The developer is providing four additional residential parking spaces in tandem arrangement; bringing the total number of residential parking spaces to be provided on site to 14 spaces. This parking arrangement has been presented at Rezoning stage and no concerns have been raised. A Restrictive Covenant, prohibiting the conversion of tandem parking area into habitable area has been secured at rezoning.
- Two visitor parking spaces are proposed, which meets the minimum bylaw requirement. No accessible visitor parking space is required for this seven-unit townhouse development.
- Both residential and visitor bicycle parking are provided in compliance with the Zoning Bylaw requirements.
- The provision of private outdoor spaces complies with the Development Permit Guidelines (minimum of 30 m² per unit) of the OCP. All units have private outdoor spaces consisting of front or rear yard and balconies on the second floors.
- Outdoor amenity space is proposed at the northwest corner of the site. The size and location of the outdoor amenity space are appropriate in providing open landscape and amenity space convenient to all units.
- A covered mailbox kiosk and short-term bicycle parking spaces are provided at the entrance of the outdoor amenity space.
- Additional outdoor amenity space (10% of the site area) as per the City Centre Amenity Space Provisions in the City Centre Area Plan is provided as a walkway and landscaped areas throughout the site.

Architectural Form and Character

- The architect advised that the proposed architectural design is based on traditional housing style with pitched roof and wood siding/cladding of similar character. It is however improved with a few modern forms and elements (such as metal siding and exterior partition walls between balconies on Building 1) to give a more contemporary look.
- The overall appearance of the proposal generally conforms to the design guidelines of the South McLennan area and is compatible with the character of the surrounding area.
- A pedestrian scale is generally achieved along the public streets and internal drive aisle through the inclusion of variation in building projections, recesses, entry porches, varying material/colour combinations, landscape features, and the use of individual unit entrances.
- The proposed building materials (asphalt roof shingles, hardie siding/panel, galvanized metal siding, and wood trim/bracket/column & post) are generally consistent with the Official Community Plan (OCP) Guidelines and compatible with the existing character of the neighbourhood.
- Strong contrasting colours are used on the accent walls to provide visual interest.

Landscape Design and Open Space Design

- Tree preservation was reviewed at the rezoning stage; all seven trees on site are identified for removal.
- Based on the 2:1 tree replacement ratio goal stated in the Official Community Plan (OCP), 14 replacement trees are required. The applicant is proposing to plant 14 replacement trees on-site, including one conifer and 13 deciduous trees.
- Parks Operations staff agreed to the removal of a Birch tree located at the northwest corner of the site. Compensation of \$1,300 for the street tree removal has been secured as a condition of rezoning approval.
- A pedestrian-oriented streetscape along Granville Avenue and No. 4 Road is proposed; with a landscaped edge treatment, low metal fencing with masonry columns, and gates and walkways to individual townhouse unit front doors.
- Each unit will have a private yard with landscaping, a shade tree, a lawn area and a patio. Various hedges, shrubs and ground covers, as well as perennials and grasses have been selected to ensure the landscape treatment remains interesting throughout the year.
- A children's play area is proposed for the outdoor amenity area; natural play elements and play equipment have been chosen to fit into outdoor amenity space and to provide different play opportunities (i.e., climbing, social, imagination, balance, motor skills) that can be used by different age groups and for multiple purposes. A bench is also provided for caregivers.
- The surface parking stalls and a portion of the internal drive aisle will be treated with permeable pavers for better water infiltration and variety in paving surfaces. Feature paving will be used to identify the visitor parking stalls and to enhance the pedestrian route from No. 4 Road to the unit entries along the internal drive aisle. Paver colours and patterns are designed to match the design of the internal drive aisle of the neighbouring townhouse development to the west.
- In order to ensure that the proposed landscaping works are completed, the applicant is required to provide a landscape security of \$52,878.11 in association with the Development Permit.
- Indoor amenity space is not proposed on-site. A \$7,000 cash-in-lieu contribution (\$1,000 per unit) has been secured as a condition of rezoning approval, consistent with the Official Community Plan (OCP).

Crime Prevention Through Environmental Design

- Site lighting and clear site lines provide unobstructed views of surrounding area; plantings near residential entries are low to maximize views and casual surveillance opportunities.
- Exterior lights will be provided along drive aisle, as well as in visitor parking, outdoor amenity, and private yard areas; wall mount illuminated lights will be installed on building faces.
- All entrances are visible and overlooked by pedestrians or by neighbour's windows.

Sustainability

- The applicant has committed to achieving an EnerGuide rating of 82 for the proposed townhouses and to pre-ducting all units for solar hot water heating.
- A Certified Energy Advisor has confirmed that the proposed townhouse units will be designed to achieve an EnerGuide rating of 82. The report prepared by the Energy Advisor is on file and will be utilized through the Building Permit review process to ensure these measures are incorporated in the Permit drawings.
- The architect advised that the following design/features will be incorporated into the development:
 - Double glazed vinyl framed windows with low-E glass.
 - Energy star appliances and low flow fixtures.
 - Low emitting sealants, paints, adhesives, carpet and composite wood.

Accessible Housing

- The proposed development includes two convertible units that are designed with the potential to be easily renovated to accommodate a future resident in a wheelchair. The potential conversion of these units will require installation of a vertical lift in the stacked storage space (which has been dimensioned to allow for this in Units F & G) in the future, if desired.
- All of the proposed units incorporate aging in place features to accommodate mobility constraints associated with aging. These features include:
 - Stairwell hand rails.
 - Lever-type handles for plumbing fixtures and door handles.
 - Solid blocking in washroom walls to facilitate future grab bar installation beside toilets, bathtubs and showers.

Conclusions

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



Edwin Lee
Planner 1
(602-276-4121)

EL:blg

Attachment 1: Development Application Data Sheet
Attachment 2: Development Permit Considerations



City of Richmond

Development Application Data Sheet

Development Applications Department

DP 17-785944

Attachment 1

Address: 9880 Granville Avenue and 7031 No. 4 Road

Applicant: Zhao XD Architect Ltd. Owner: Shih Lu & Reng Fang Chang

Planning Area(s): South McLennan Sub-Area (City Centre)

Floor Area Gross: 1,260.65 m² Floor Area Net: 812.22 m²

	Existing	Proposed
Site Area:	1,332.8 m ²	1,250.0 m ²
Land Uses:	Single-Family Residential	Multiple-Family Residential
OCP Designation:	OCP: Neighbourhood Residential CCAP: General Urban T4 South McLennan Sub-Area Plan: Residential, 2½ storey typical (3-storeys maximum) with 0.55 base FAR	No Change
Zoning:	Single Detached (RS1/F)	Medium Density Townhouses (RTM2)
Number of Units:	2	7

	Bylaw Requirement	Proposed	Variance
Floor Area Ratio:	Max. 0.65	0.65	none permitted
Lot Coverage – Building:	Max. 40%	39.2%	none
Lot Coverage – Non-porous Surfaces:	Max. 65%	60.0%	none
Lot Coverage – Landscaping:	Min. 25%	31.1 %	none
Setback – Front Yard (m):	Min. 6.0 m	6.10 m	none
Setback – East Flanking Side Yard (m):	Min. 6.0 m	6.08 m	none
Setback – West Side Yard (m):	Min. 3.0 m	3.38 m	none
Setback – Rear Yard (m):	Min. 3.0 m	3.25 m	none
Height (m):	Max. 12.0 m (3 storeys)	11.9 m (3 storeys)	none
Lot Width (m):	Min. 30.0 m	30.1 m	none
Lot Depth (m):	Min. 35 m	41.8 m	none
Off-street Parking Spaces – Regular (R) / Visitor (V):	1.4 (R) and 0.2 (V) per unit	2 (R) and 0.28 (V) per unit	none

Off-street Parking Spaces – Total:	10 (R) and 2 (V)	14 (R) and 2 (V)	none
Tandem Parking Spaces:	Max. 50% of required residential spaces in enclosed garages (10 x Max. 50% = 5 spaces)	40% of required residential spaces (i.e., 4 spaces) + 4 surplus spaces = total 8 spaces	none
Small Car Parking Spaces	None when fewer than 31 spaces are provided on site	0	none
Handicap Parking Spaces:	None when fewer than 3 visitor parking spaces are required	0	none
Bicycle Parking Spaces – Class 1 / Class 2:	1.25 (Class 1) and 0.2 (Class 2) per unit	2 (Class 1) and 0.28 (Class 2) per unit	none
Off-street Bicycle Parking Spaces – Total:	9 (Class 1) and 2 (Class 2)	14 (Class 1) and 2 (Class 2)	none
Amenity Space – Indoor:	Min. 70 m ² or Cash-in-lieu	Cash-in-lieu	none
Amenity Space – Outdoor:	Min. 6 m ² x 7 units = 42 m ²	51.5 m ²	none



**City of
Richmond**

ATTACHMENT 2

Development Permit Considerations

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

Address: 9880 Granville Ave & 7031 No 4 Road

File No.: DP 17-785944

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

1. Final adoption of the Zoning Amendment Bylaw 9686.
2. Receipt of a Letter-of-Credit for landscaping security in the amount of \$52,878.11.

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

1. 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.
2. Incorporation of accessibility, CPTED and sustainability measures in Building Permit (BP) plans as determined via the Rezoning and/or Development Permit processes.
3. Enter into a Servicing Agreement* for the design and construction of engineering infrastructure improvements. Works include, but may not be limited to,

Water Works

- a. Using the OCP Model, 555 L/s of water available at 20 psi residual at the hydrant in front of 9860 Granville Avenue. Based on your proposed development, your site requires a minimum fire flow of 220 L/s.
- b. The Developer is required to:
 - Submit Fire Underwriter Survey (FUS) or International Organization for Standardization (ISO) fire flow calculations to confirm the development has adequate fire flow for on-site fire protection. Calculations must be signed and sealed by a Professional Engineer and be based on Building Permit Stage and Building designs.
 - Install a fire hydrant at No. 4 Road frontage to service the proposed townhouse development.
- c. At the Developer's cost, the City will:
 - Cut and cap at main the existing water service connections at Granville Avenue and No. 4 Road frontages.
 - Install new water connection to service the proposed development off of the existing watermain along Granville Avenue.

Storm Sewer Works

- a. The Developer is required to:
 - Upgrade approximately 35 m of the existing 600 mm diameter storm sewer along Granville Avenue frontage to 750 mm diameter pipe from the site's west property line to the box culvert along No. 4 Road. Tie-in to existing system shall be via new manholes. Details of the upgrade will be finalized in the Servicing Agreement designs.
 - Install new storm sewer connection to service the proposed site off of the proposed storm sewer along Granville Avenue.
- b. At the Developer's cost, the City will cut and cap at main the existing storm sewer service connections at Granville Avenue and No. 4 Road frontages.

Initial: _____

Sanitary Sewer Works

- a. The developer is required to remove the existing sanitary lead that services 9880 Granville Avenue and 7031 No. 4 Road and discharge the existing sanitary right of way along the west property lines of 9880 Granville Avenue and 7031 No 4 Road. The extent of the existing sanitary right-of-way to be discharged shall be finalized via the servicing agreement design.
- b. At the Developer's cost, the City will:
 - Provide sanitary service connection to the proposed site off of the east side of the existing sanitary manhole located near the southwest corner of the proposed site.
 - Plug at the north side of the manhole the existing sanitary lead that services 9880 Granville Avenue and 7031 No 4 Road.

Frontage Improvements

- a. The Developer is required to:
 - Locate all above ground utility cabinets and kiosks required to service the proposed development within the developments site (see list below for examples). A functional plan showing conceptual locations for such infrastructure shall be submitted prior to the rezoning staff report progressing to Planning Committee and shall be included in the development process design review. Please coordinate with the respective private utility companies and the project's lighting and traffic signal consultants to confirm the right-of-ways 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 SRWs that shall be shown in the functional plan and registered prior to Servicing Agreement design approval:
 - i. BC Hydro PMT – 4 m W X 5 m (deep)
 - ii. BC Hydro LPT – 3.5 m W X 3.5 m (deep)
 - iii. Street light kiosk – 1.5 m W X 1.5 m (deep)
 - iv. Traffic signal kiosk – 1 m W X 1 m (deep)
 - v. Traffic signal UPS – 2 m W X 1.5 m (deep)
 - vi. Shaw cable kiosk – 1 m W X 1 m (deep) – show possible location in functional plan
 - vii. Telus FDH cabinet - 1.1 m W X 1 m (deep) – show possible location in functional plan
 - Coordinate with BC Hydro regarding the removal of the existing BC Hydro pole lines along No. 4 Road and possible pole relocations along Granville Avenue frontage.
 - Provide frontage improvements on Granville Avenue; works include, but are not limited to the following:
 - i. Design and construct new curb and gutter along the development frontage to meet the curb and gutter west of the site. (Refer to the frontage improvements for 9800/9820/9840/9860 Granville Avenue – RZ 14-658085). The curb and gutter works may require minor widening of Granville Avenue and modification to the southwest corner of the No. 4 Road/Granville Avenue intersection (as determined by the completion of a functional road plan).
 - ii. Measuring from the new curb of Granville Avenue (south side) towards the property line of the subject development, design and construct a minimum 1.5 m wide grass boulevard (exclusive of the 0.15 m wide top of curb) and a 1.75 m wide concrete sidewalk. As the width between the curb and the property line varies along the frontage, the frontage works are to transition to meet the sidewalk and boulevard treatments west of the subject site. (Refer to the frontage improvements for 9800/9820/9840/9860 Granville Avenue - RZ 14-658085).

- iii. The existing driveway along the Granville Avenue development frontage is to be closed. The applicant/developer is responsible for the removal of the existing driveway letdown and the replacement with barrier curb and gutter, grass/treed boulevard and sidewalk per standards described above).
- iv. Consult Parks on the requirement for tree preservation/placement including tree species and spacing as part of the frontage works.
- v. Consult Engineering on lighting and other utility requirements as part of the frontage works.
- Provide frontage improvements on No. 4 Road; works include, but are not limited to the following:
 - i. Remove the existing sidewalk and construct a new 1.5 m wide concrete sidewalk next to the new property line (with the 2.0 m wide road dedication on No. 4 Road). Construct a new boulevard over the remaining width between the new sidewalk and the west curb of No. 4 Road. The 2.0 m wide road dedication is to be treated as a grass boulevard without any tree planting. The new sidewalk and boulevard are to transition to meet the existing frontage treatments south of the subject site.
 - ii. The existing driveway along the No. 4 Road development frontage is to be closed. The applicant is responsible for the removal of the existing driveway letdown and the replacement with barrier curb and gutter, grass/treed boulevard and sidewalk per standards described above.
 - iii. Construct a 3 m x 9 m concrete bus pad at the existing southbound bus stop on No. 4 Road south of Granville Avenue. The bus pad works is to include conduit pre-ducting for electrical connections. This bus pad is to be constructed in accordance with Tran slink's 'Universal Accessible Bus Stop Design Guidelines'.
 - iv. Consult Parks on the requirement for tree preservation/placement including tree species and spacing as part of the frontage works.
 - v. Consult Engineering on lighting and other utility requirements as part of the frontage works.
- Provide street lighting along Granville Avenue and No. 4 Road frontages.

General Items:

- a. The Developer is required to:
 - Provide if pre-load is required, prior to pre-load installation, a geotechnical assessment of preload and soil preparation impacts on the existing utilities fronting or within the development site (e.g., existing sanitary mains), proposed utility installations, the existing houses along the south and west property lines, and provide mitigation recommendations. The mitigation recommendations shall be incorporated into the first Servicing Agreement design submission or if necessary to be implemented prior to pre-load.
 - 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.
- 4. If applicable, payment of latecomer agreement charges associated with eligible latecomer works.
- 5. Obtain a Building Permit (BP) for any construction hoarding. If construction hoarding is required to temporarily occupy a public street, the air space above a public street, or any part thereof, additional City approvals and associated fees may be required as part of the Building Permit. For additional information, contact the Building Approvals Department at 604-276-4285.

Note:

- * This requires a separate application.
- Where the Director of Development deems appropriate, the preceding agreements are to be drawn not only as personal covenants of the property owner but also as covenants pursuant to Section 219 of the Land Title Act.

All agreements to be registered in the Land Title Office shall have priority over all such liens, charges and encumbrances as is considered advisable by the Director of Development. All agreements to be registered in the Land Title Office shall, unless the Director of Development determines otherwise, be fully registered in the Land Title Office prior to enactment of the appropriate bylaw.

The preceding agreements shall provide security to the City including indemnities, warranties, equitable/rent charges, letters of credit and withholding permits, as deemed necessary or advisable by the Director of Development. All agreements shall be in a form and content satisfactory to the Director of Development.

- Additional legal agreements, as determined via the subject development's Servicing Agreement(s) and/or Development Permit(s), and/or Building Permit(s) to the satisfaction of the Director of Engineering may be required including, but not limited to, site investigation, testing, monitoring, site preparation, de-watering, drilling, underpinning, anchoring, shoring, piling, pre-loading, ground densification or other activities that may result in settlement, displacement, subsidence, damage or nuisance to City and private utility infrastructure.
- Applicants for all City Permits are required to comply at all times with the conditions of the Provincial *Wildlife Act* and Federal *Migratory Birds Convention Act*, which contains prohibitions on the removal or disturbance of both birds and their nests. Issuance of Municipal permits does not give an individual authority to contravene these legislations. The City of Richmond recommends that where significant trees or vegetation exists on site, the services of a Qualified Environmental Professional (QEP) be secured to perform a survey and ensure that development activities are in compliance with all relevant legislation.

Signed

Date



City of Richmond

Development Permit

No. DP 17-785944

To the Holder: ZHAO XD ARCHITECT LTD.

Property Address: 9880 GRANVILLE AVENUE AND 7031 NO. 4 ROAD

Address: C/O ZUEDONG ZHAO
#255 – 11181 VOYAGEUR WAY
RICHMOND, BC V6X 3N9

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. Subject to Section 692 of the Local Government Act, R.S.B.C.: buildings and structures; off-street parking and loading facilities; roads and parking areas; and landscaping and screening shall be constructed generally in accordance with Plans #1 to #4 attached hereto.
4. Sanitary sewers, water, drainage, highways, street lighting, underground wiring, and sidewalks, shall be provided as required.
5. As a condition of the issuance of this Permit, the City is holding the security in the amount of \$52,878.11 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.
6. 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 17-785944

To the Holder: ZHAO XD ARCHITECT LTD.

Property Address: 9880 GRANVILLE AVENUE AND 7031 NO. 4 ROAD

Address: C/O ZUEDONG ZHAO
#255 – 11181 VOYAGEUR WAY
RICHMOND, BC V6X 3N9

7. 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 ,

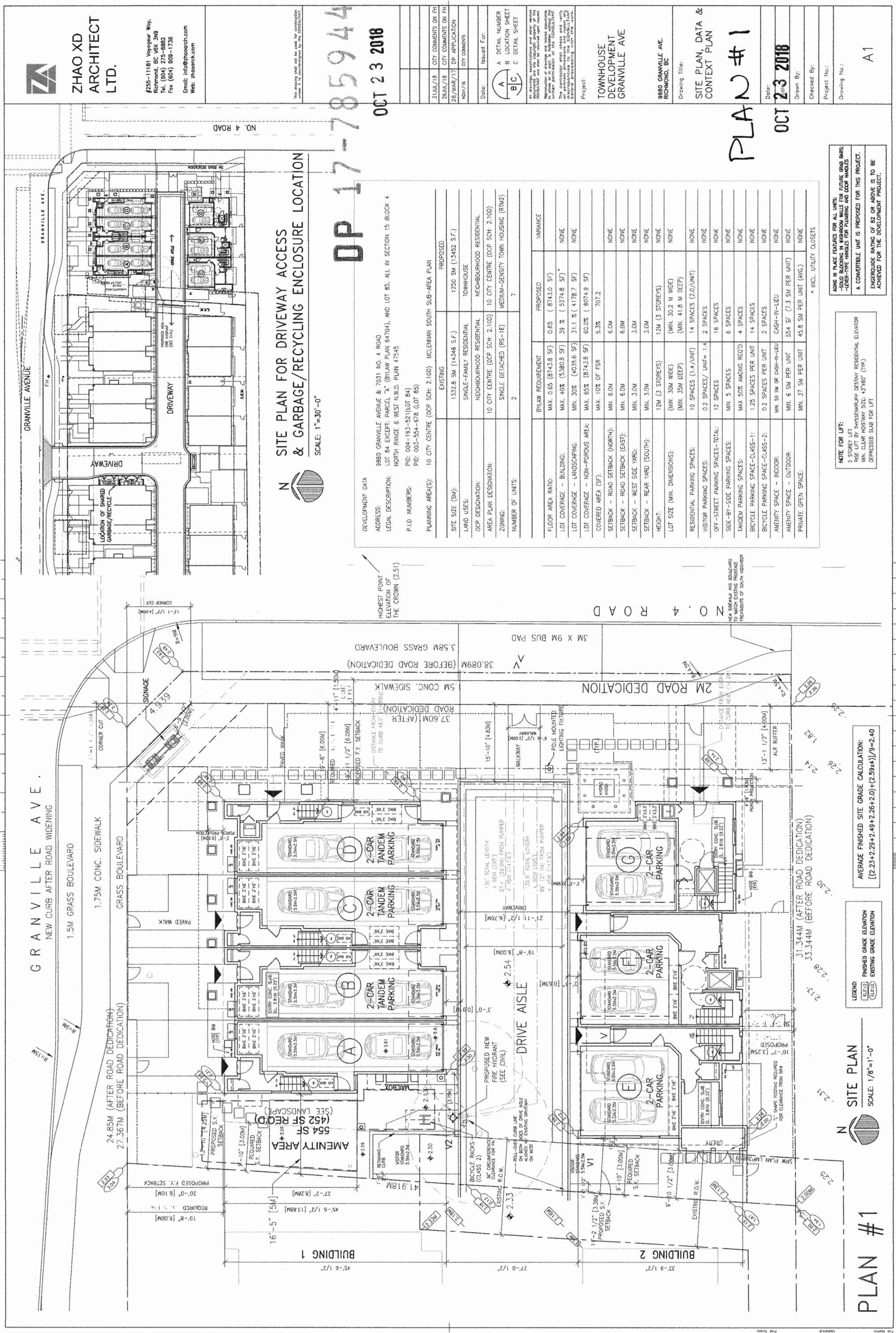
MAYOR

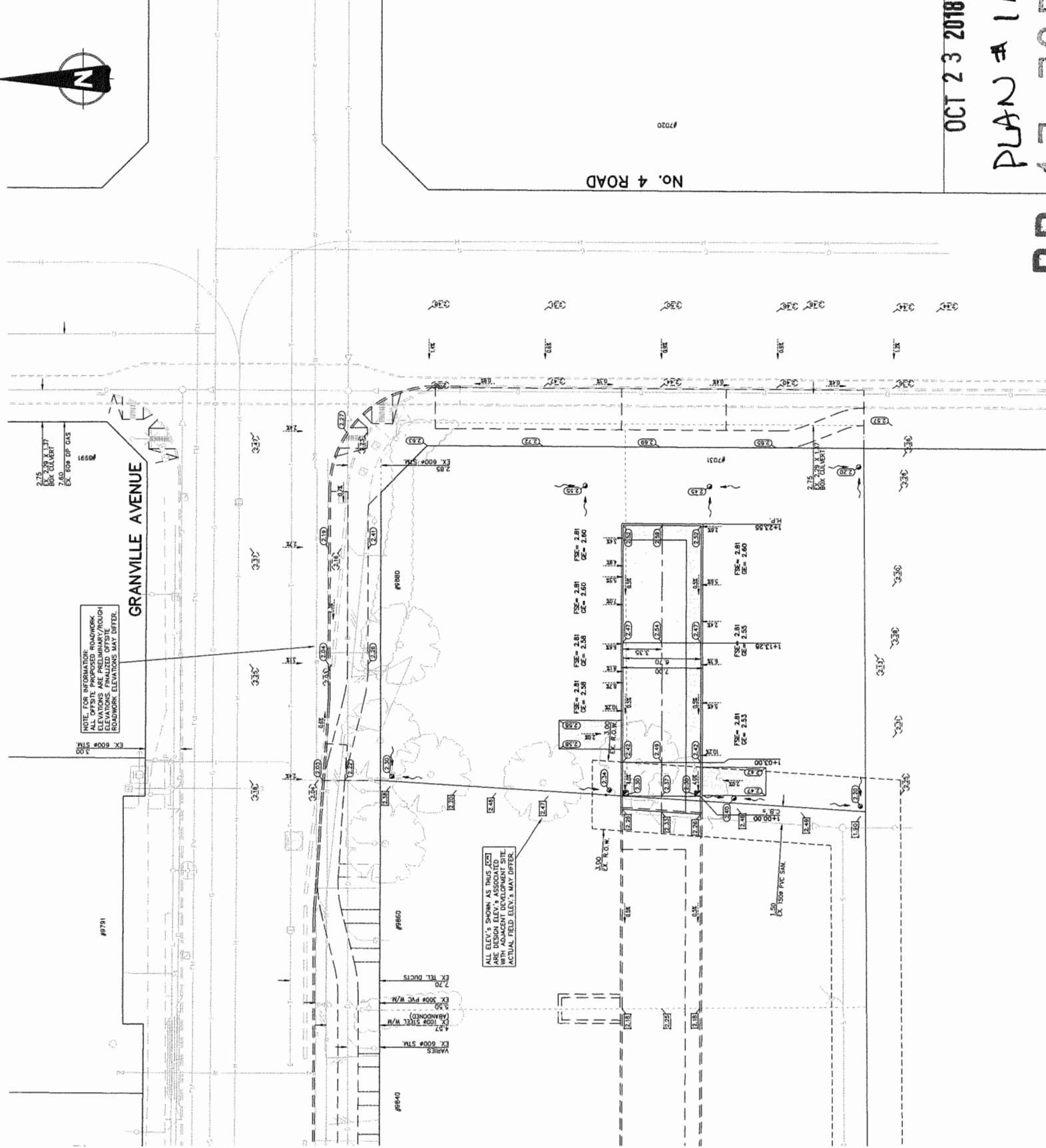


City of Richmond



	DP 17-785944 SCHEDULE "A"	Original Date: 09/29/17 Revision Date: Note: Dimensions are in METRES
--	--	---





DP 17-785944
PLAN #1A
OCT 23 2018

SITE GRADING INFORMATION
7 FEB 2018

SURFACE WORKS			
#19880 GRANVILLE AVE. & #7031 No. 4 ROAD	DRAWING NO.: R15936-B		
DESIGN: TN	DRAWN: TN	SHEET NO.: 3 OF 6	
	CHECKED: JWC	SCALE: 1:200	
ALL DIMENSIONS AND ELEVATIONS ARE IN METRIC UNITS.			
REV/N	DATE	BY	CH.
DESCRIPTION			
MPT ENGINEERING CO. LTD.			
#320-11120 HORSESHOE WAY, RICHMOND, BC V7A 5H7 TEL: 604-270-6331 FAX: 604-270-1371			
ZHAO XD ARCHITECT LTD.			

ZHAO XD
ARCHITECT
LTD.

#255-11181 Viergeur Way,
Richmond, BC V6K 3N8
Tel: (604) 275-8882
Fax: (604) 938-1736
Email: info@zhaearch.com
Web: zhaearch.com

This drawing is not to be used for construction purposes. It is the responsibility of the contractor to obtain the latest version of the zoning bylaw and relevant regulations.

28/MAR/17	D/P APPLICATION
NOV/16	CITY COMMENTS
31/AUG/16	ISSUED FOR:
Date:	

TOWNHOUSE
DEVELOPMENT
GRANVILLE AVE

9880 GRANVILLE AVE.
RICHMOND, BC

Drawing Title:

FLOOR PLANS

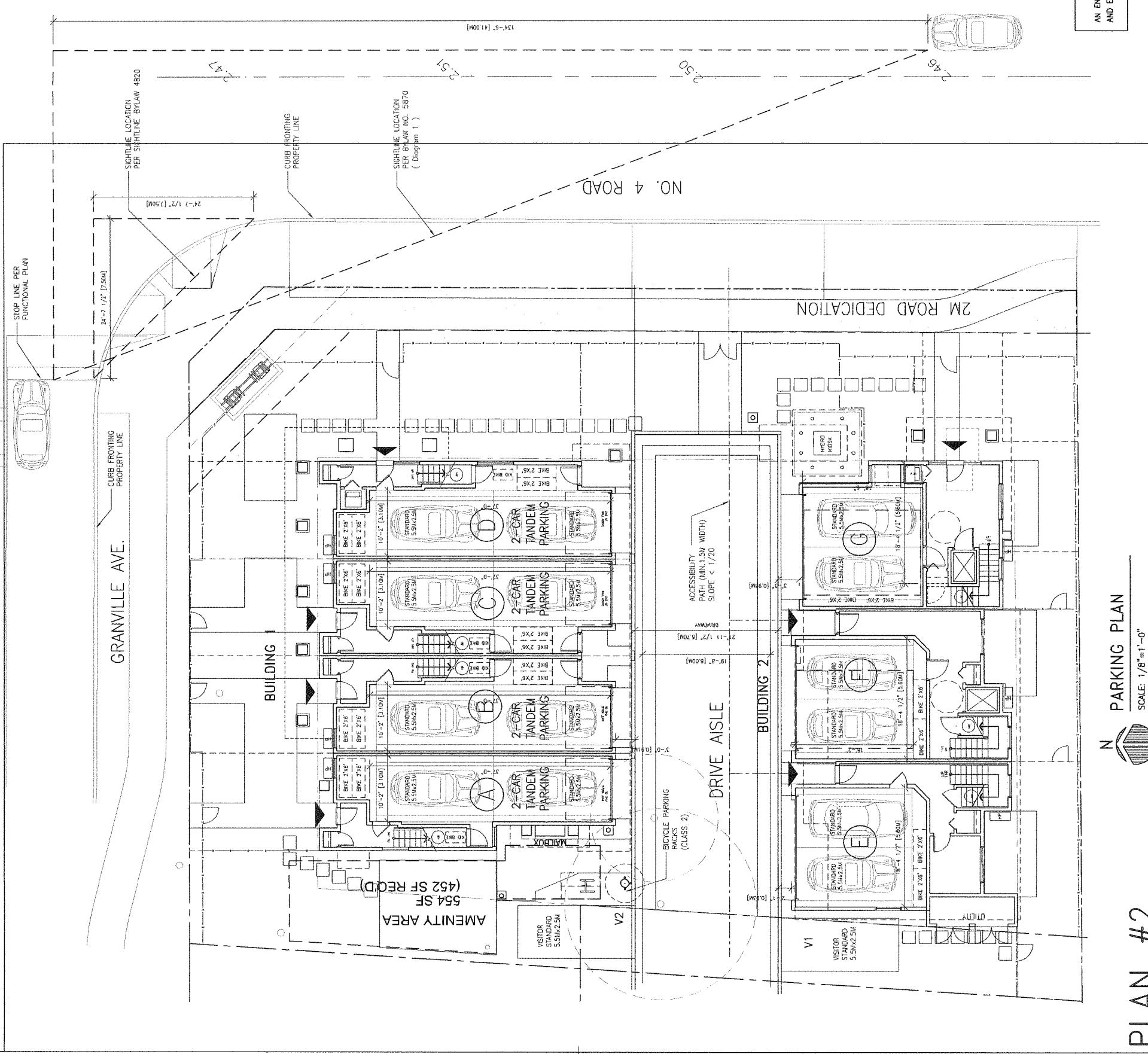
A	B	C
DETAIL NUMBER	LOCATION SHEET	
	DETAIL SHEET	

OCT 23
2016

Project No.:
Drawing No.:
2

PLAN #2
17-785944

8 inches
200 millimetres





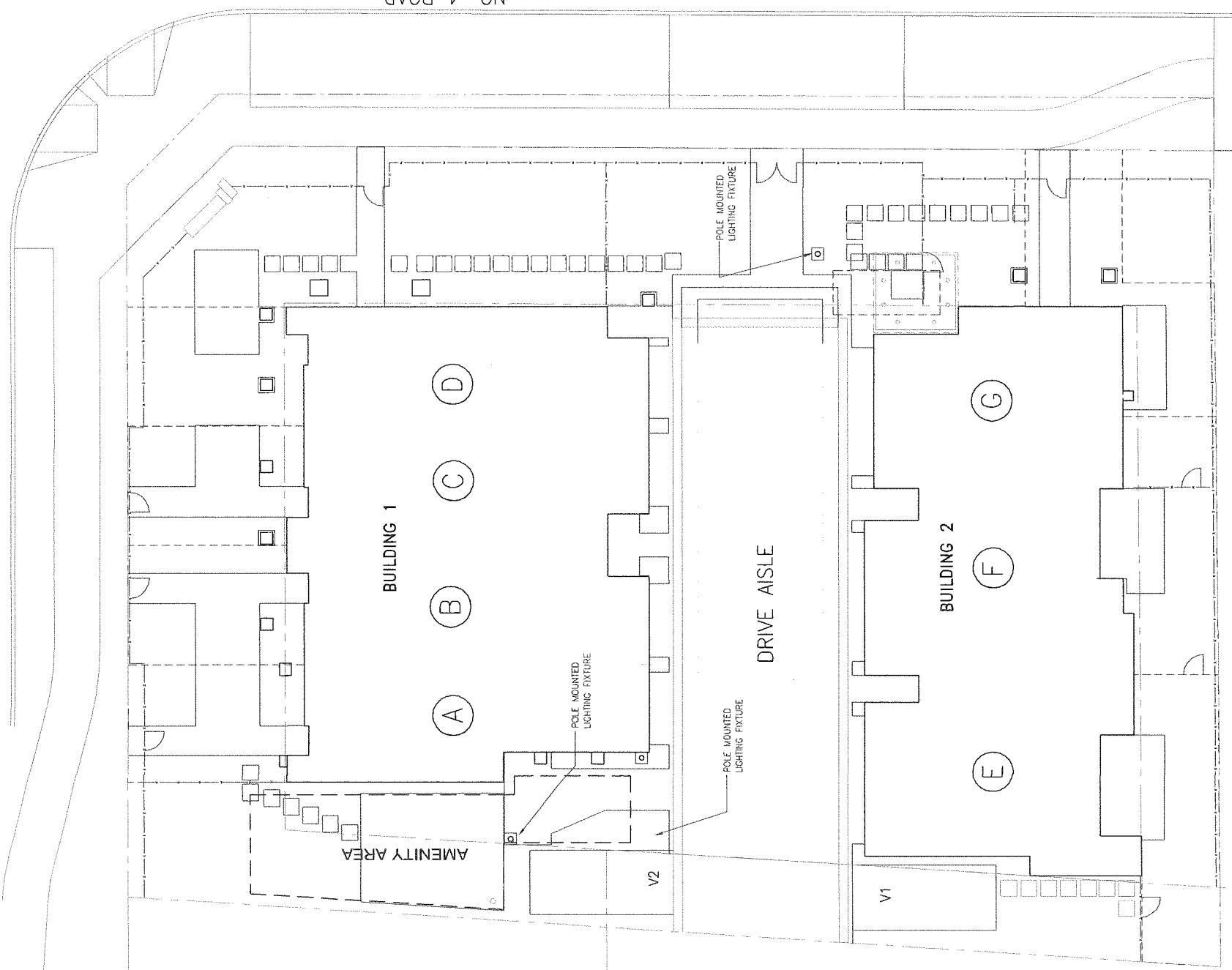
ZHAO XD
ARCHITECT
LTD.

#255-11181 Voyageur Way,
Richmond, BC V6V 1N9
Tel: (604) 275-8882
Fax: (604) 909-1736
Email: info@zhaodarch.com
Web: zhaodarch.com

This drawing sheet is not to scale. Use Figure dimensions only.

NO. 4 ROAD

GRANVILLE AVE.



28/MAR/17	DP APPLICATION
NOV/16	CITY COMMENTS
31/AUG/16	
Date:	Issued For:

A DETAIL NUMBER
B LOCATION SHEET
C DETAIL SHEET

TOWNHOUSE

DEVELOPMENT

GRANVILLE AVE

8880 GRANVILLE AVE.

RICHMOND, BC

Drawing Title:

ROOF PLAN &
LIGHTING PLAN

Date:
Scale:
Drawn By:
Checked By:

Project No.:
Drawing No.:
Drawing Date:

OCT 23 2010
A2.1

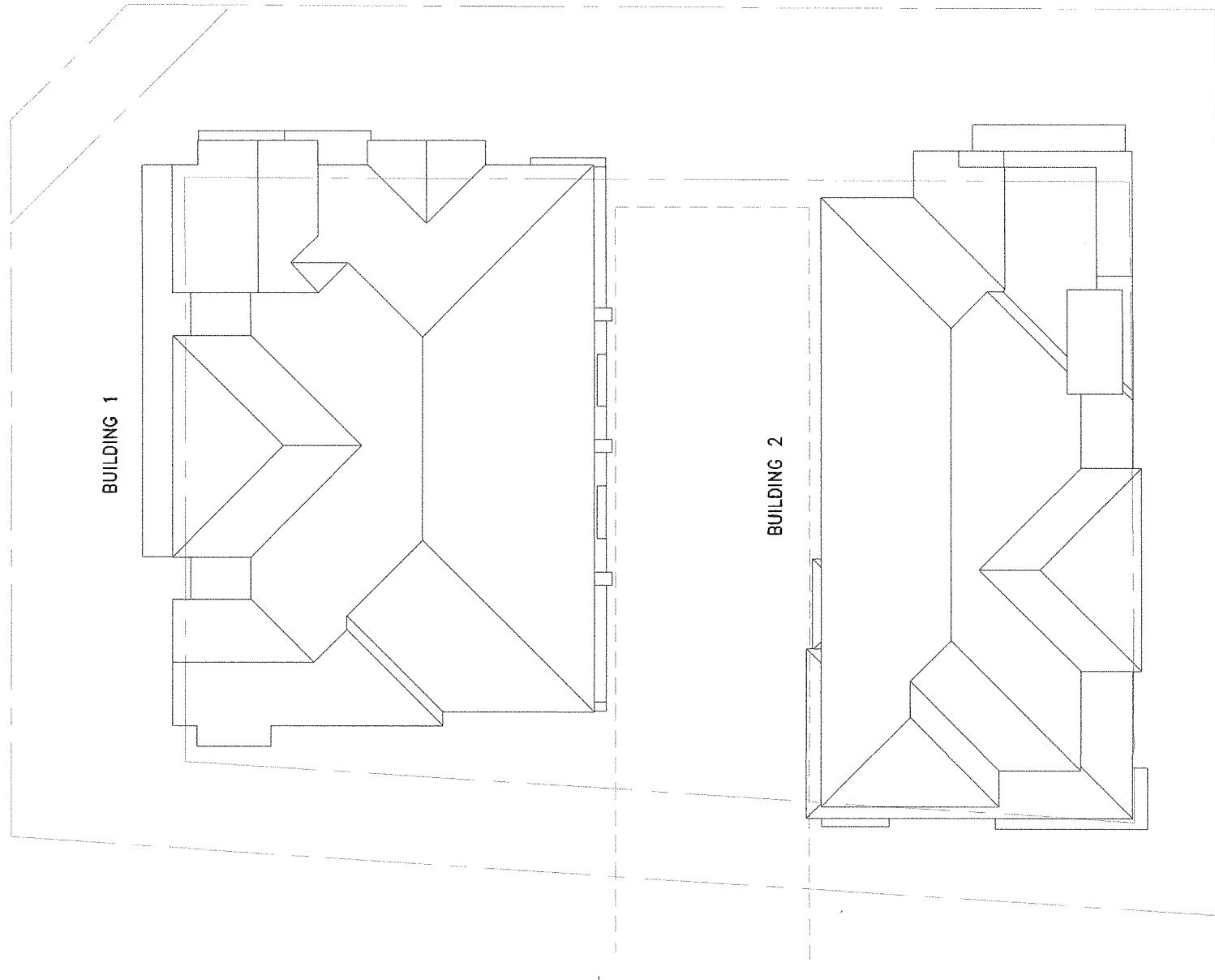
LIGHTING PLAN

SCALE: 1/8"=1'-0"

DP 17-785944
OCT 23 2010
A2.1

ROOF PLAN

SCALE: 1/8"=1'-0"



This drawing is NOT to be scaled. Use Figure dimensions only.

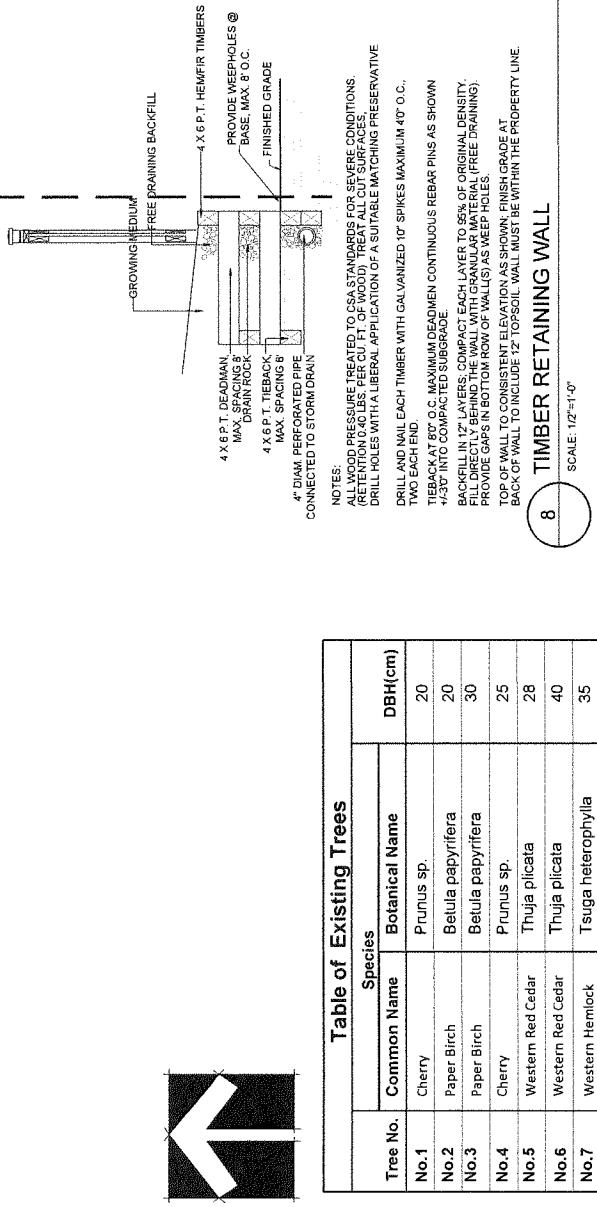


LANDSCAPE
ARCHITECTS
Suite C100 - 4185 Sill Creek Drive
Burnaby, British Columbia, V5C 6S9
P: 604 234-0011 | F: 604 234-0022

SEAL:



TREE TO REMOVE



8 TIMBER RETAINING WALL

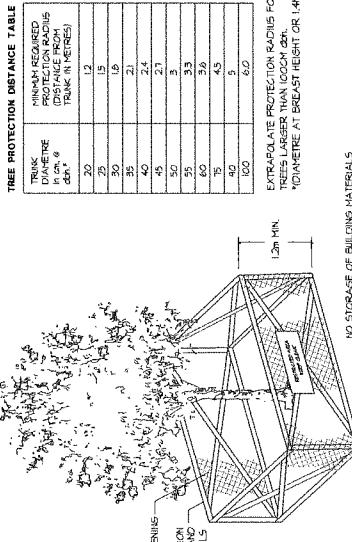
Table of Existing Trees

Tree No.	Common Name	Botanical Name	DBH(cm)
No.1	Cherry	Prunus sp.	20
No.2	Paper Birch	Betula papyrifera	20
No.3	Paper Birch	Betula papyrifera	30
No.4	Cherry	Prunus sp.	25
No.5	Western Red Cedar	Thuja plicata	28
No.6	Western Red Cedar	Thuja plicata	40
No.7	Western Hemlock	Tsuga heterophylla	35
No.8	Douglas Fir	Pseudotsuga menziesii	30

Table of proposed Trees

QTY	Common Name	Botanical Name	SIZE
5	CRATAEGUS DOUGLASSII	BLACK HAWTHORN	6CM CAL; B&B
1	POPULUS TREMULOIDES	TREMBLING ASPEN	9CM CAL; 2M STD; B&B
1	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	4M HT; B&B
3	STEWARTIA PSEUDOCAMELLIA	JAPANESE STEWARTIA	6CM CAL 2M STD; B&B
4	STYRAX JAPONICUS	JAPANESE SNOWBELL	8CM CAL; B&B

NOTE: ALL TREES REGARDLESS OF SIZE ARE PROTECTED
IN HIGH ENVIRONMENTALLY SENSITIVE AREAS



PROJECT:
7 UNIT TONHOUSE
DEVELOPMENT

9880 GRANVILLE AVENUE
AND 7031 NO. 4 ROAD
RICHMOND

CLIENT:

NO. DATE

REVISION DESCRIPTION DR.

CUSTOMER:

TREE MANAGEMENT
PLAN

DRAWING TITLE:

DATE: August 21/2016

SCALE: 1/8" = 1'-0"

DRAWN: DD

DESIGN: DD

CHKD: PCM

PNG PROJECT NUMBER:

15135-9.ZIP

PLAN 3 OCT 23 2018

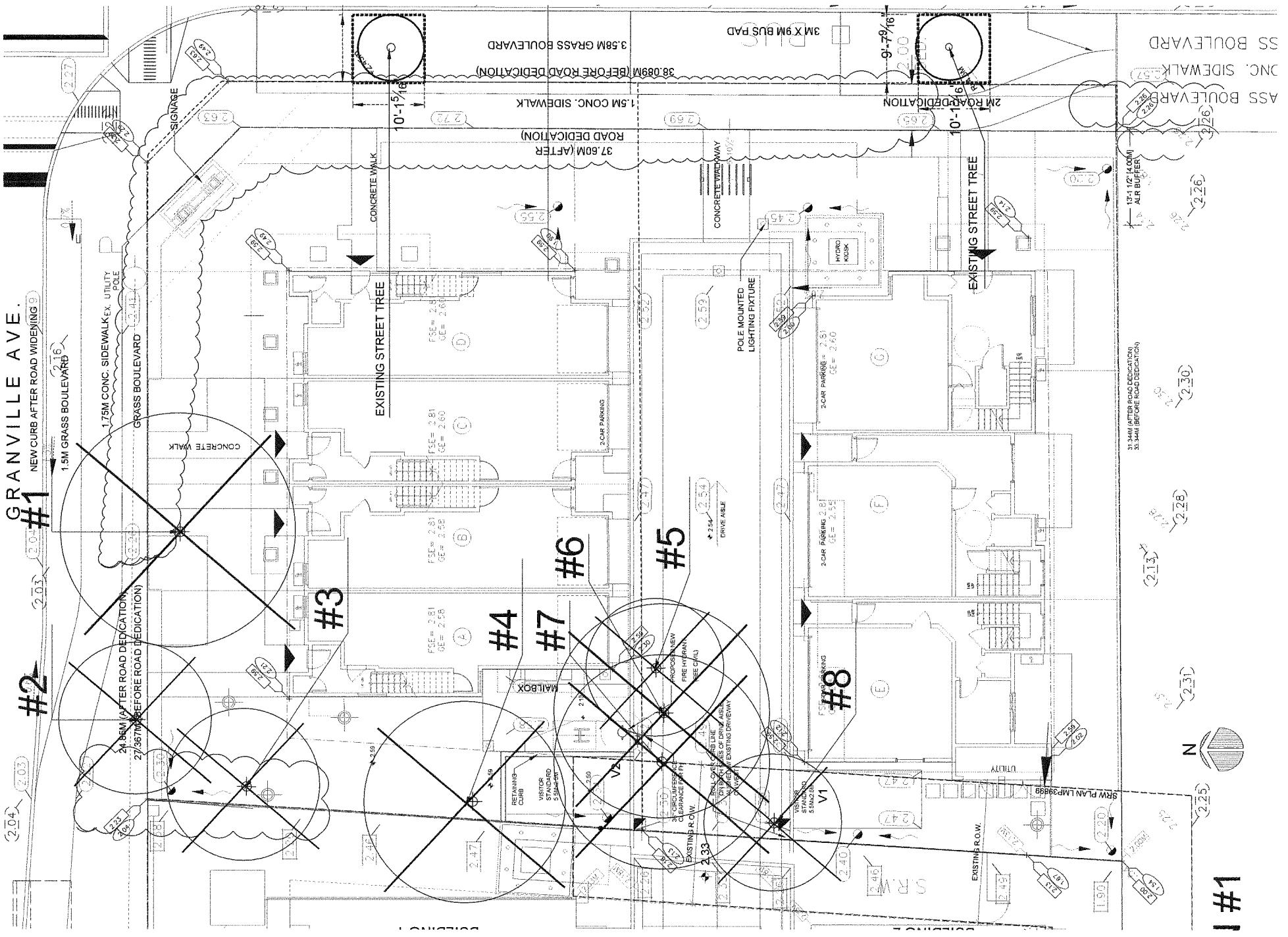


DRAWING NUMBER:

L3

OF 4

1 #1

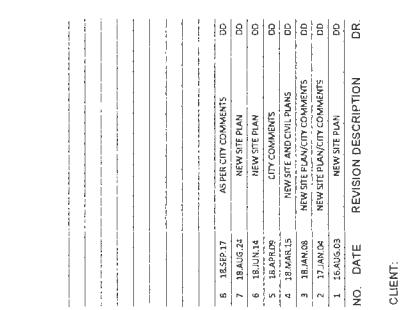
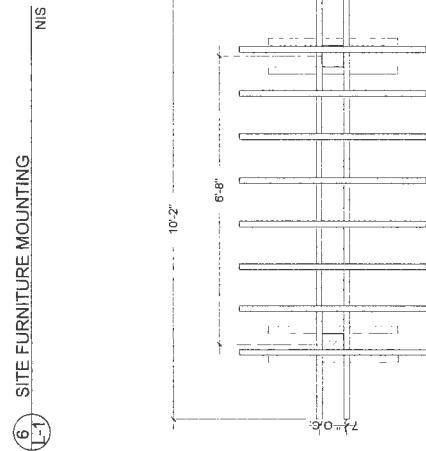
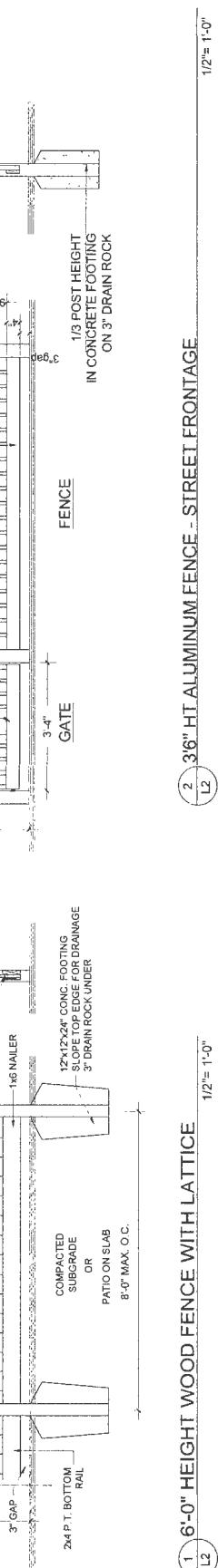
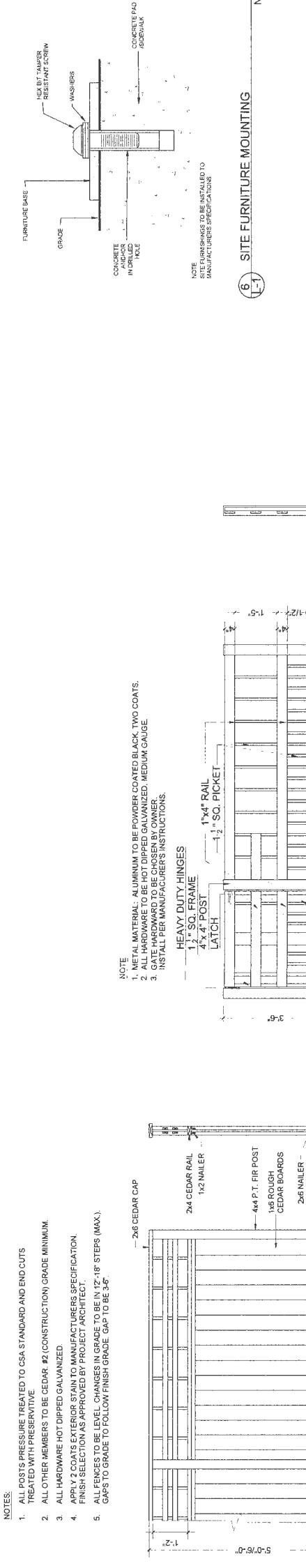




Landscape
Architects

Suite C100 - 4185 Ball Creek Drive
Burnaby, British Columbia V5C 6G9
P. 604 294-0011 : F. 604 294-0022

SEAL:



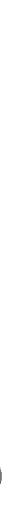
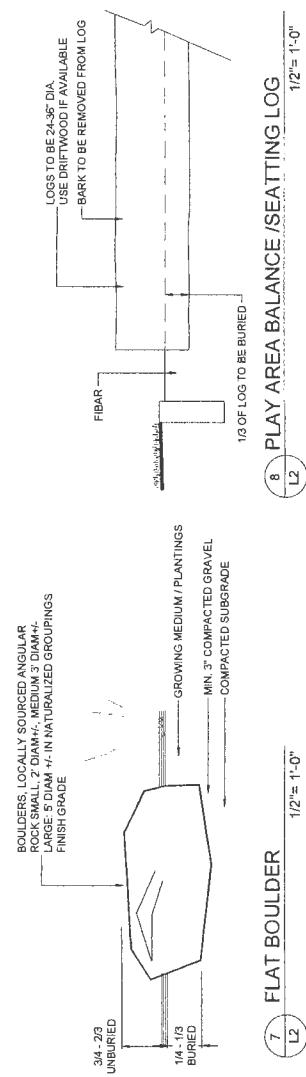
4 SIGN WALL

L2



3 PICKET FENCE & GATE

L2



6 VERTICAL LOG

L2

1/2" = 1'-0"

1/2" = 1'-0"

5 PLAYGROUND SAFETY SURFACE

L2

1/2" = 1'-0"

OP 17-785944

PLAN 38 OCT 23 2018



PLAN 4 OCT 23 2018

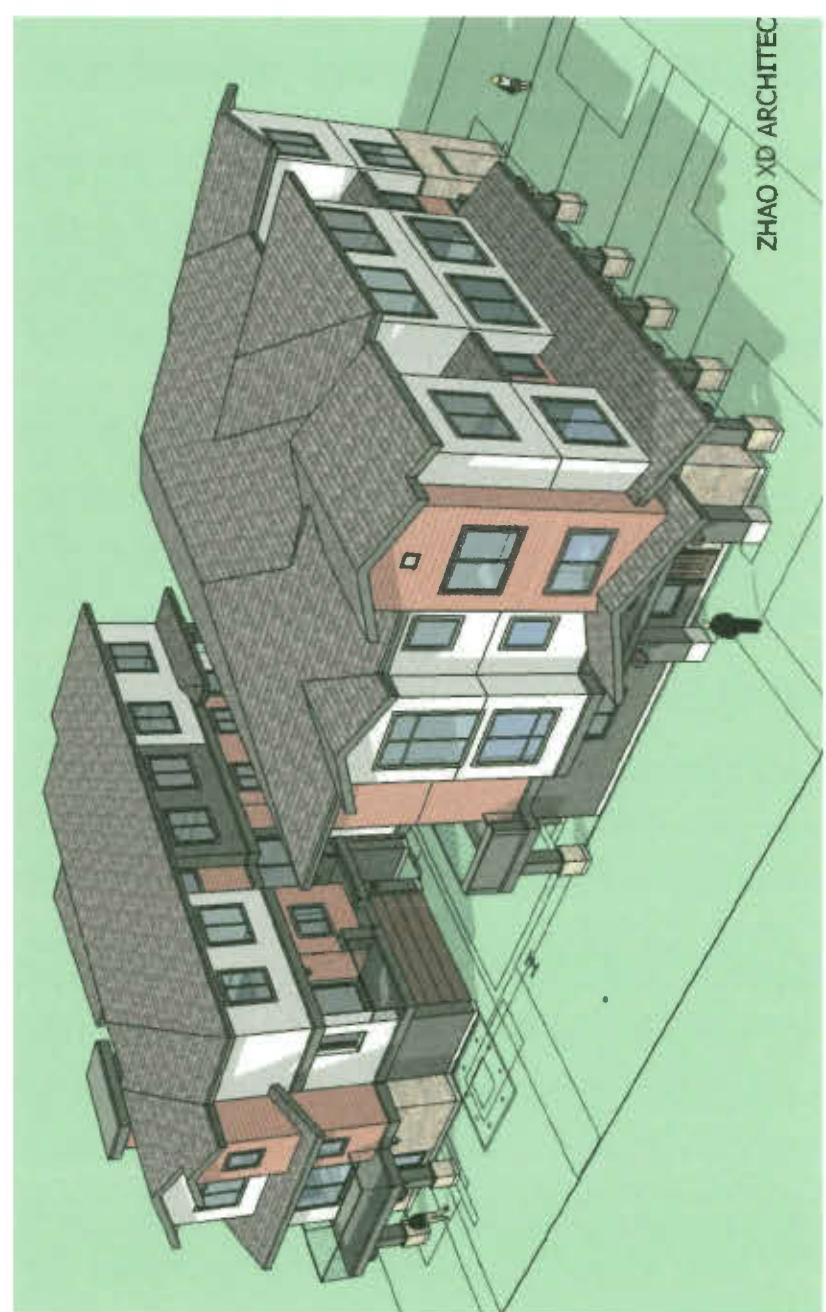
ZHAO XD ARCHITECT LTD.
www.zhaearch.com Tel: 604 275-8882



DP 17-785944



7-UNIT TOWNHOUSE DEVELOPMENT
9880 GRANVILLE AVENUE & 7031 NO. 4 ROAD
RICHMOND, BC

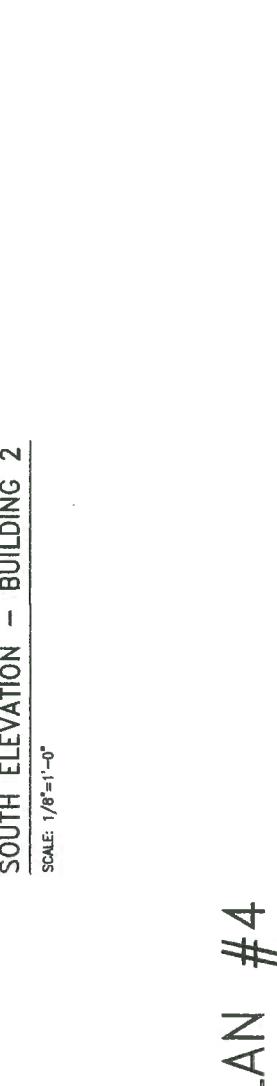
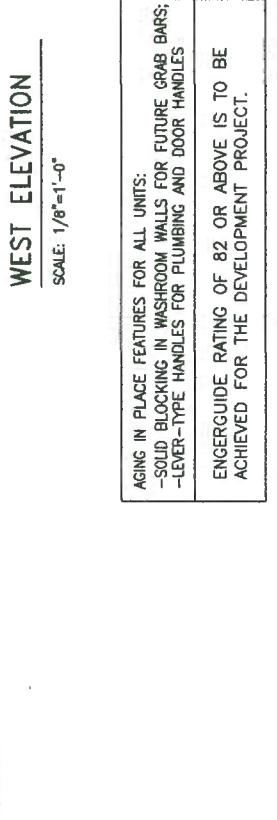
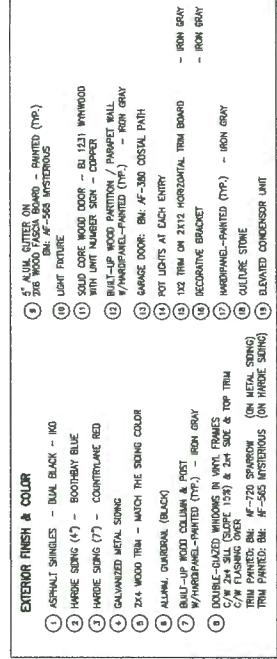
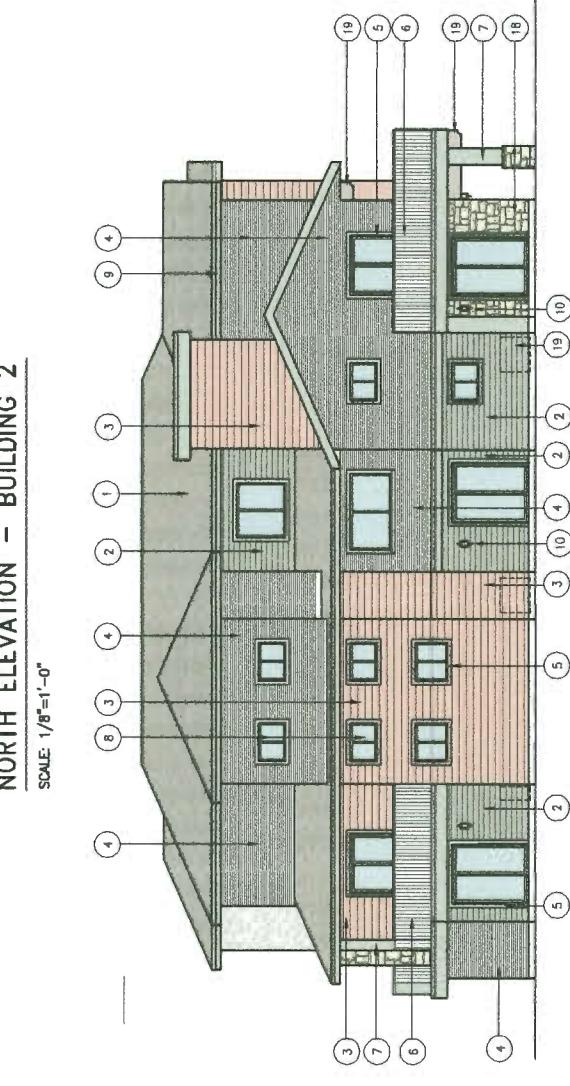
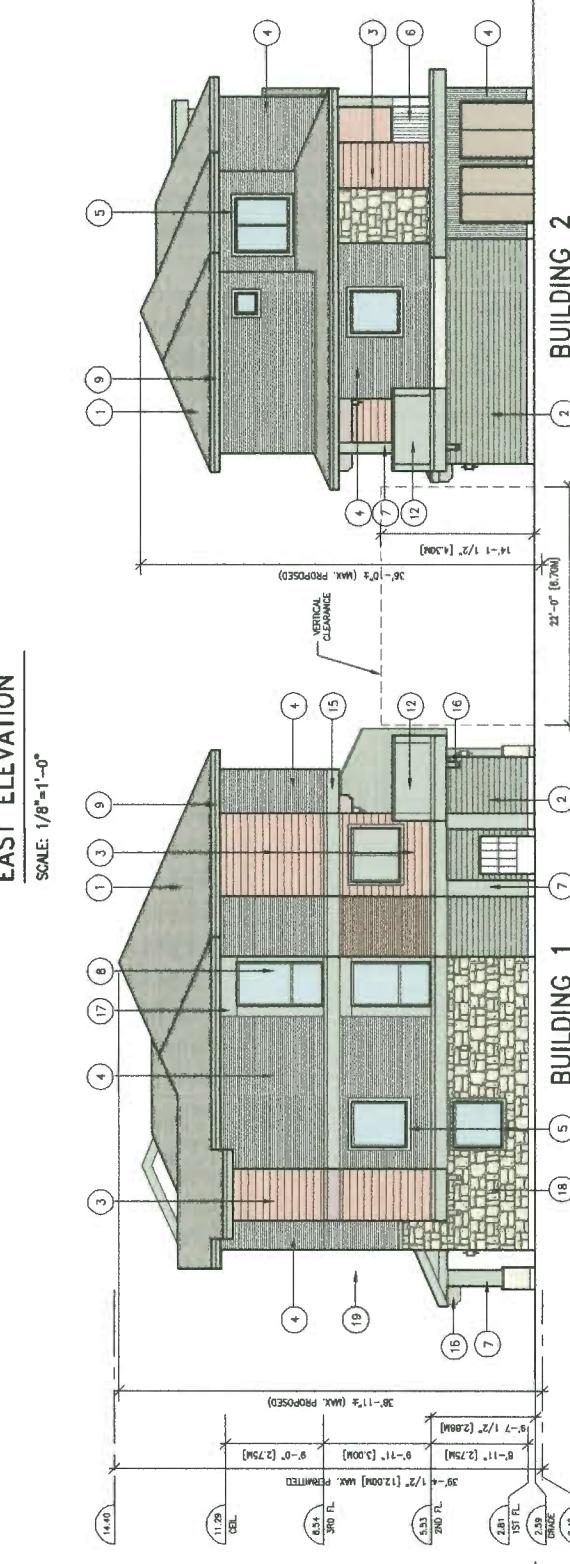
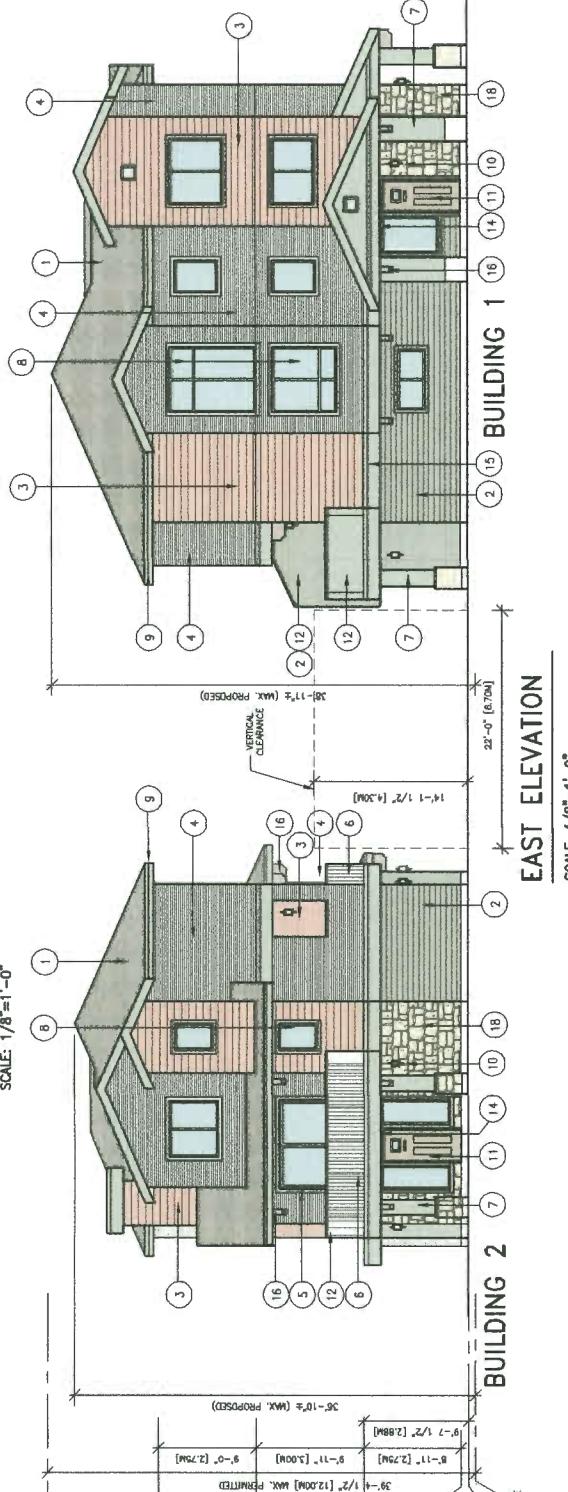
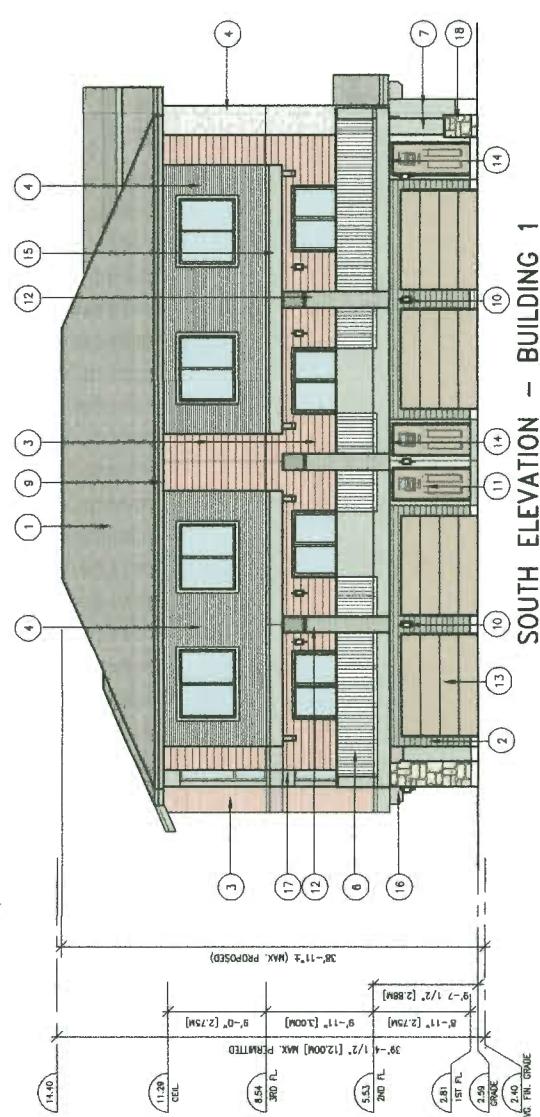
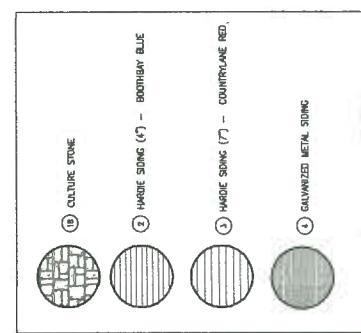


ZHAO XD ARCHITECT

ZHAO XD
ARCHITECT
LTD.

#255-11181 Vougeot Way,
Burnaby, BC V5A 3N9
Tel: (604) 275-8882
Fax: (604) 909-1736
Email: info@zhaoarch.com
Web: zhaoarch.com

DP 17-785944
OCT 23 2008



PLAN #4

PLAN #4

A8

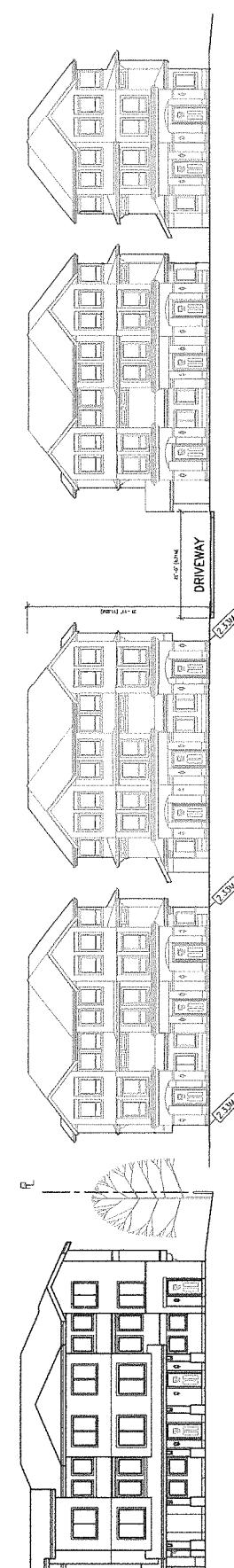
A8



ZHAO XD
ARCHITECT
LTD.

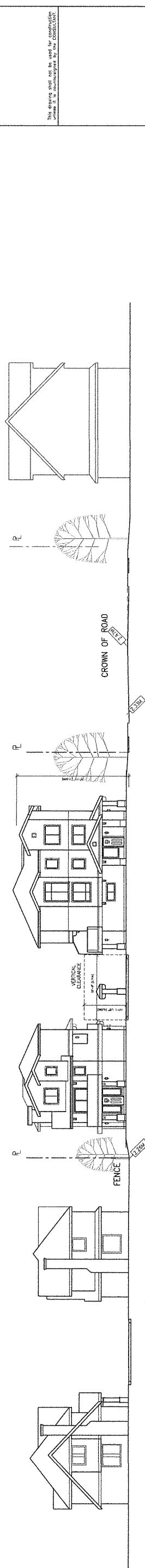
#255-1181 Voyageur Way,
Richmond, BC V6X 3N9
Tel: (604) 275-0882
Fax: (604) 909-1736
Email: info@zhaodarch.com
Web: zhaodarch.com

This drawing shall not be used for construction unless accompanied by detailed working drawings.



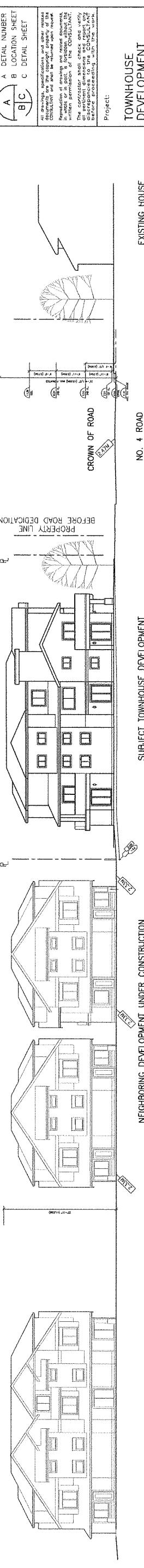
NORTH SITE ELEVATION - (GRANVILLE AVE.)

SCALE: 1/16"=1'-0"



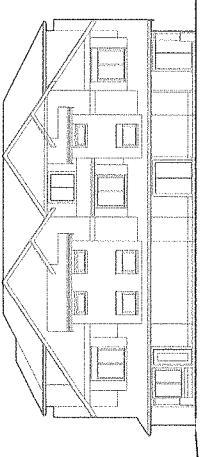
EAST SITE ELEVATION - (NO. 4 ROAD)

SCALE: 1/16"=1'-0"



SOUTH SITE ELEVATION

SCALE: 1/16"=1'-0"



TOWNHOUSE
DEVELOPMENT
GRANVILLE AVE

9880 GRANVILLE AVE.
RICHMOND, BC

STREET ELEVATIONS

Drawing Title:

Date: _____
Scale: _____
Drawn By: _____
Checked By: _____
Project No.: _____
Drawing No.: _____

OCT 23 2018

PLAN 4B

DP 17-785944

A9

This drawing is NOT to be scaled. True figures dimensions only.

**ZHAO XD
ARCHITECT
LTD.**

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Richmond, BC V6X 3N9
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Email: info@zhaearch.com
Web: zhaearch.com

OCT 23 2008

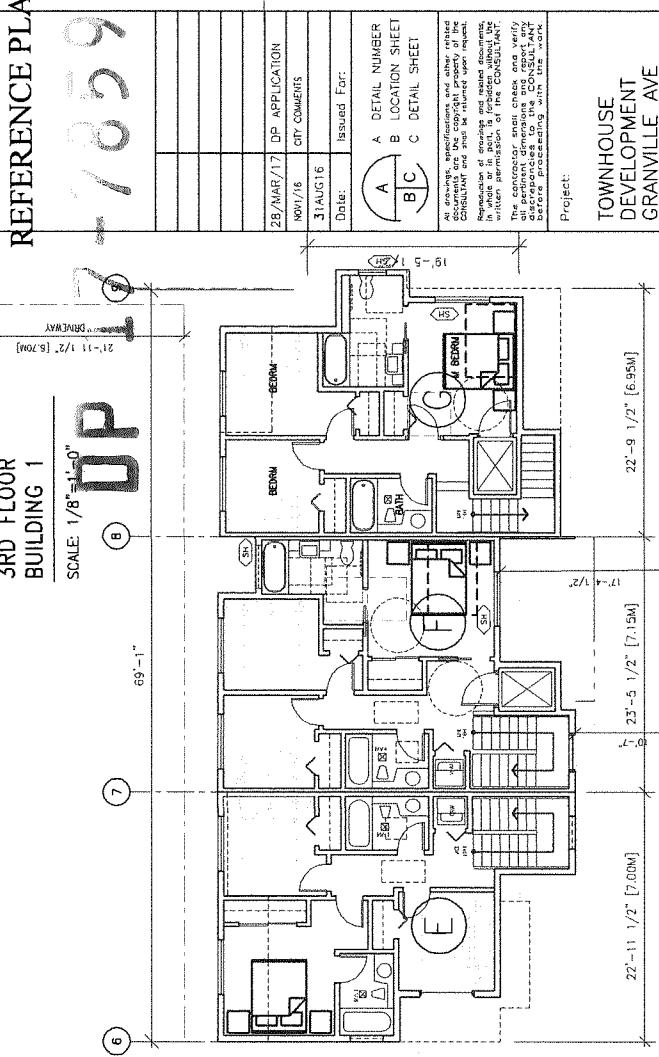
REFERENCE PLAN

44
44
44
44
44

3RD FLOOR
BUILDING 1

UP
7
6
5
4
3
2
1

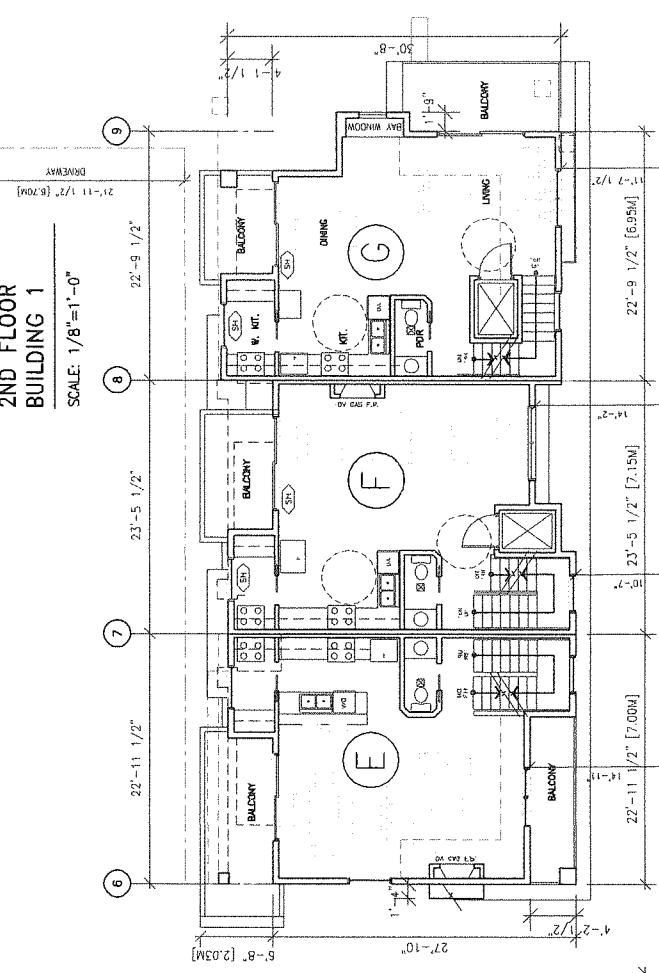
SCALE: 1/8"=1'-0"



2ND FLOOR
BUILDING 1

9
8
7
6
5
4
3
2
1

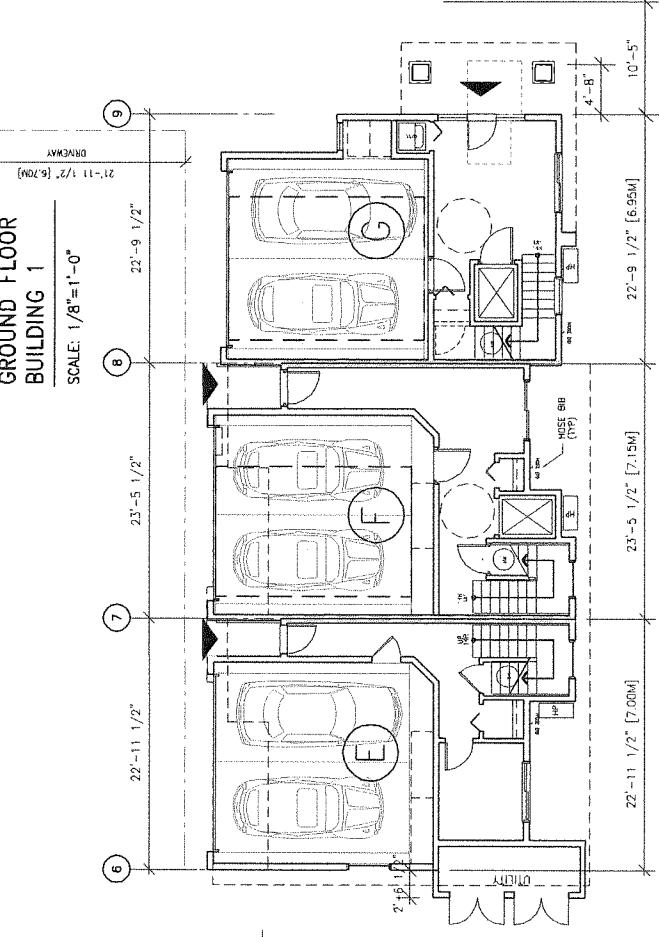
SCALE: 1/8"=1'-0"



GROUND FLOOR
BUILDING 1

9
8
7
6
5
4
3
2
1

SCALE: 1/8"=1'-0"



TOWNHOUSE
DEVELOPMENT
GRANVILLE AVE

9880 GRAMMIE AVE.
RICHMOND, BC

Drawing Title:

FLOOR PLAN
& UNITS DATA

F.A.R. CALCULATION: LOT AREA: 13452 SQ.FT.		
FAR = 8747.2 SQ.FT.		
UNIT PERMITTED:	0.65	FAR = 8747.2 SQ.FT.
GROSS	EXEMPTED AREA	NET
UNIT A	1757.0 SQ.FT.	631.9 SQ.FT.
UNIT B	1883.3 SQ.FT.	720.5 SQ.FT.
UNIT C	1905.5 SQ.FT.	742.7 SQ.FT.
UNIT D	1995.3 SQ.FT.	828.2 SQ.FT.
UNIT E	1967.9 SQ.FT.	661.9 SQ.FT.
UNIT F	2062.5 SQ.FT.	806.8 SQ.FT.
UNIT G	1931.2 SQ.FT.	643.3 SQ.FT.
UTILITY CLOSET	67.3 SQ.FT.	67.3 SQ.FT.
TOTAL PROPOSED:	13570.0 SQ.FT.	4759.7 SQ.FT.
	8745.0	8745.0
	5274.8	5274.8
	740.4	740.4

A3

This drawing is NOT to be scaled. Use Figured dimensions only.

GROUND FLOOR
BUILDING 2

SCALE: 1/8"=1'-0"

AREA CALCULATIONS (PER UNIT)

TOWNHOUSE
DEVELOPMENT
GRANVILLE AVE

9880 GRAMMIE AVE.
RICHMOND, BC

Drawing Title:

FLOOR PLAN
& UNITS DATA

AREA CALCULATIONS (PER UNIT)			
	OUTDOOR SPACE (SF):	GROSS FLOOR AREA (SF):	NET FLOOR AREA (SF):
BUILDING 1			
UNIT A	427.4	1757.0	631.9
UNIT B	433.4	1883.3	720.5
UNIT C	433.4	1905.5	742.7
UNIT D	454.4	1995.3	828.2
UNIT E	533.3	1967.9	661.9
UNIT F	534.6	2062.5	806.8
UNIT G	528.2	1931.2	643.3
UTILITY CL.	67.3	67.3	67.3
MALBOX			
TOTAL:	3344.7	13570.0	4759.7
		8745.0	8745.0
		5274.8	5274.8
		740.4	740.4

PLAN #3

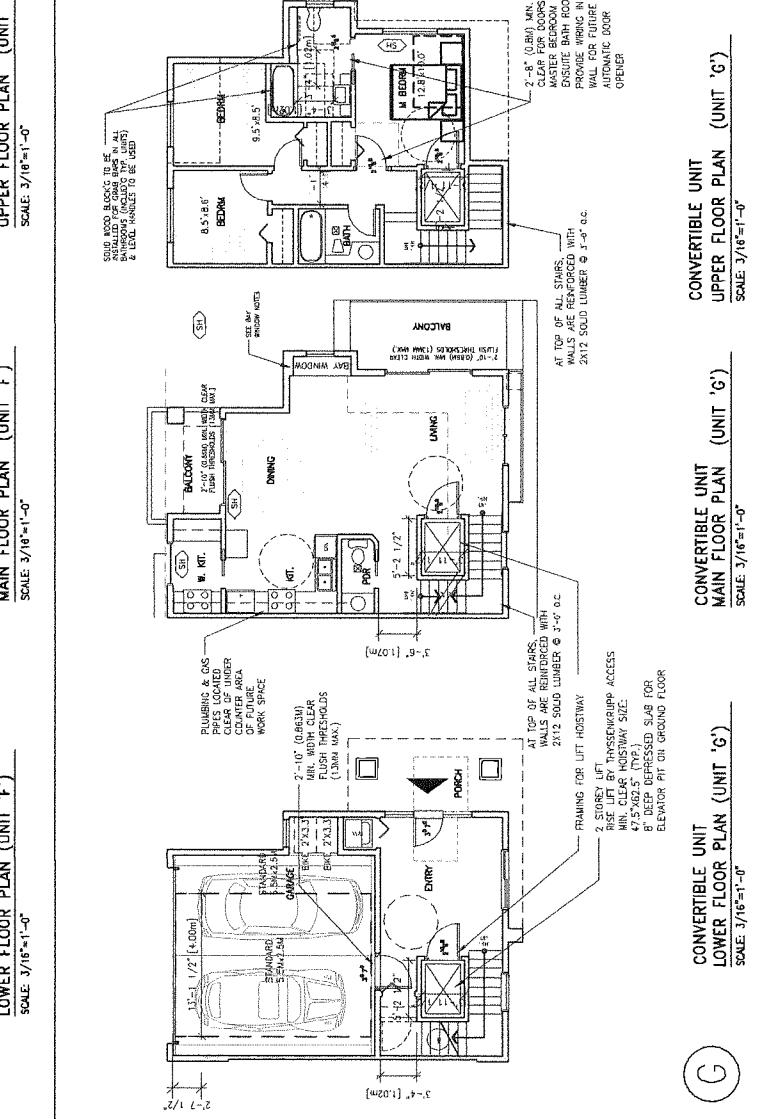
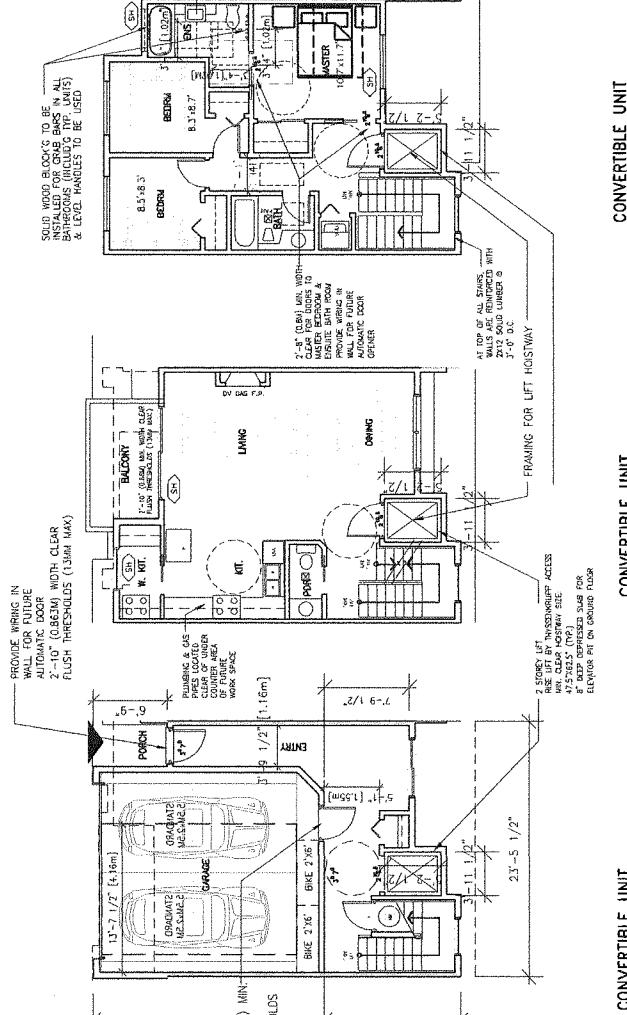


ZHAO XD
ARCHITECT
LTD.

#255-11181 Voyageur Way,
Richmond, BC V6V 3N9
Tel: (604) 275-8882
Fax: (604) 908-1736
Email: info@zhaearch.com
Web: zhaearch.com

This drawing shall not be used for construction without the approval of the architect.

GROUND FLOOR SECOND FLOOR THIRD FLOOR



8980 GRANVILLE AVE.
RICHMOND, BC

Drawing Title:
28/MAR/17 DP APPLICATION
NOV/16 CITY COMMENTS
31/AUG/16 Issued For:
A DETAIL NUMBER
B LOCATION SHEET
C DETAIL SHEET

UNIT FLOOR PLANS
& OVERLAYS
(convertible unit)

Date:
Scale:
Drawn By:
Checked By:

Project No.:
Drawing No.:
A7

mm

inches

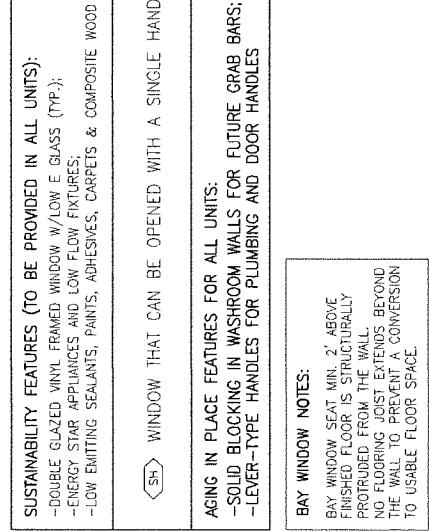
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This drawing is NOT to be scaled. Use standard dimensions only.

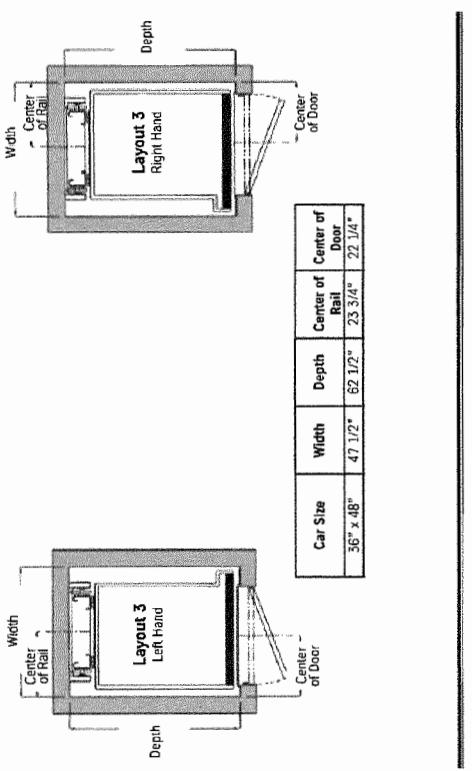


CHECKLIST - CONVERTIBLE UNIT FEATURES	
DOORS & DOORWAYS:	TOLERANCES NEEDED UNDER FUTURE WORK SPACE PLUMBING AND GAS PIPES
ENTRY DOOR MIN. 863 MM BUT IDEALLY 814MM AND HAVE CLEAR ACCESS.	WALL BLOCKING FOR FUTURE COUNTER AREA OF FUTURE WORK SPACE (INC-WALL AND INC-FLOOR) LOCATED CLEAR OF UNDER COUNTER AREA. ALL PIPES ARE BROUGHT IN NO HIGHER THAN 30MM TO 35MM TO THE CENTRE OF THE PIPE FROM FLOOR LEVEL.
PLUMBING & GAS LOCATED ON OUTSIDE OF DOOR TO ENSURE NO RISER TO THE INSIDE.	LEVER-TYPE HANDLES FOR PLUMBING FIXTURES.
PIPS LOCATED UNDER COUNTER AREA OF FUTURE WORK SPACE	CABINETS UNDERNEATH SINK ARE EASILY REMOVED.
WORK SPACE	CABINETS TO 355MM TO THE CENTRE OF THE PIPE FROM FLOOR LEVEL.
INTERIOR DOORS TO MAIN LIVING AREAS, 1 BATHROOM AND 1 BEDROOM, MIN. 800 MM CLEAR OPENING WITH FLUSH THRESHOLDS MAX. 13 MM HEIGHT	DEMONSTRATE BATH AND SHOWER CONTROLS ARE EASILY REMOVED.
OPENING WITH FLUSH THRESHOLDS MAX. 13 MM HEIGHT	DOORS ARE EASILY REMOVED.
OPENING BETWEEN THE HALLWAY AND ROOMS AND WIDEN HALLWAY AND/OR DOOR(S) IF NECESSARY TO SECURE ACCESS.	DOORS ARE EASILY REMOVED.
PATIO/BALCONY MIN. 860MM CLEAR OPENING, NOTE HOW ACCESSED.	ALL INTERIOR THRESHOLDS WITHIN UNITS COMPLY BC BUILDING CODE.
ALL INTERIOR THRESHOLDS FOR ALL DOORS.	LEVER-TYPE HANDLES FOR ALL DOORS.
VERTICAL CIRCULATION:	VERTICAL LIFT, DEPRESSED SLAB AREA, AND LANDINGS, AS NOTED ON FLOOR PLANS IN CONFLUENCE WITH MANUFACTURER SPECIFICATIONS, FRAMING TO ACCOMMODATE SHAFT CONSTRUCTION WITHOUT IMPACT TO SURROUNDING STRUCTURE.
MIN. 900 MM WIDTH	AT THE TOP OF ALL STAIRWAYS, WALLS ARE REINFORCED WITH 2x12 SOLID LUMBER @ 3'-0" OC.
GARAGE	AT THE TOP OF ALL STAIRWAYS, WALLS ARE REINFORCED WITH 2x12 SOLID LUMBER @ 3'-0" OC.
MIN. 1 ACCESSIBLE PARKING SPACE WITH MIN. 4' GARAGE WIDTH	1500 MM TURNING DIAMETER OR TURNING PATH DIAGRAM WITH FLUSH THRESHOLDS MAX. 13 MM HEIGHT
ACCESS FROM GARAGE TO LIVING AREA WITH MIN. 800 MM CLEAR DOOR OPENING (2'-8" SLIDING OR 2'-10" SWINGING DOOR SPEC.)	UPGRADE TO FOLD-FLEX OUTLETS IN MASTER BEDROOM, HOME OFFICE, GARAGE, AND REFRIGERATOR ROOM.

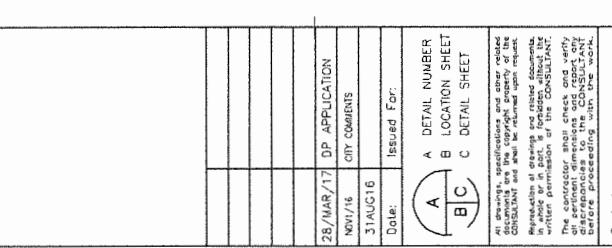
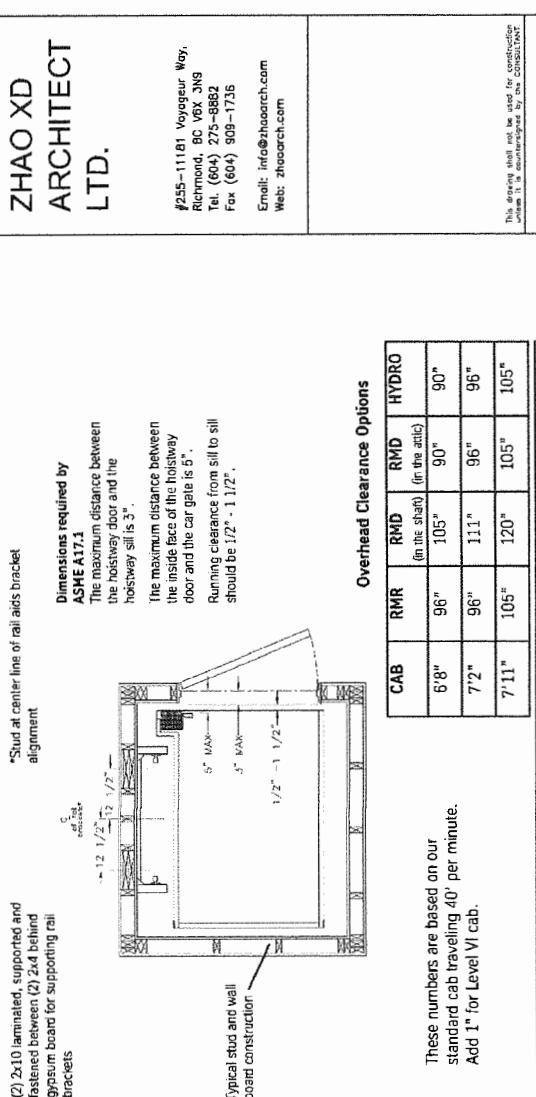
Equipment

General:	<ul style="list-style-type: none"> Travel: Up to 50' Load Capacity: Ropet Hydraulic Drive - 950 lbs up to 44' (750 lbs up to 50') Winding Drum Drive - 950 lbs or 750 lbs Speed: 40 rpm optional 30 or 35 rpm Overhead: 96" minimum; RMD 105° min. (for Overhead Clearance Options, see page 6) Pit depth: 6" minimum (8" recommended) Roped Hydraulic Drive 1. 1:2 roped hydraulic. 2. Remote machine room can be located up to 40' from the unit. 3. 3HP submersed motor with 2-speed valve assembly. Winding Drum Drive <ul style="list-style-type: none"> 1. 3HP inverter controlled winding drum unit. 2. RMD (Rail Mount Drum), RMR (Reduced Machine Room), plus other varieties of drum layout configurations. 										
Standard Features:	<ul style="list-style-type: none"> Car size: Up to 15 sq ft. 7' interior ceiling height No.4 (brushed) stainless steel or No.4 (brushed) brass hall call and car operating panel Wood handrail Birch, oak, or maple veneer interior walls Two recessed halogen lights White melamine, oak veneer, birch veneer, or maple veneer ceiling Unfinished plywood floor Sill set for 3/4" finished floor Telephone jack - surface mount Digital floor position indicator "Car Here" and call acknowledgement lights Automatic on/off car lighting Emergency stop switch and alarm button Emergency lighting Self Diagnostic System 										
Optional Features:	<ul style="list-style-type: none"> Pit switch Manual lowering device Pre-wired car Two stops Auto-homing Single opening Three year limited parts warranty Custom car size: <ul style="list-style-type: none"> 74" & 77 10" car heights No.8 (polished) stainless steel, or No.4 oil rubbed brass hall call, car operation panel and phone box Melamine, laminate or custom wood veneer interiors Wood veneer or clear panel accordion gate Raised or recessed panel car - birch, red oak, cherry, maple or hickory Single or deluxe frame ceiling in matching hardwood Auto gate operator (accordion gate only) with battery backup Finished flooring - light oak or dark oak Three to six stops Handrail <ul style="list-style-type: none"> 1. No.4 (brushed) brass 2. No.8 (polished) brass 3. No.4 (brushed) stainless steel 4. No.8 (polished) stainless steel 5. No.4 oil rubbed brass Accordion gate Two recessed halogen lights White melamine, oak veneer, birch veneer, or maple veneer ceiling Unfinished plywood floor Sill set for 3/4" finished floor Telephone jack - surface mount Digital floor position indicator "Car Here" and call acknowledgement lights Automatic on/off car lighting Emergency stop switch and alarm button Emergency lighting Self Diagnostic System 										
Dimensions:	<p>Car size: 36" x 48"</p> <table border="1"> <thead> <tr> <th>Car Size</th> <th>Width</th> <th>Depth</th> <th>Center of Rail</th> <th>Center of Door</th> </tr> </thead> <tbody> <tr> <td>36" x 48"</td> <td>47 1/2"</td> <td>62 1/2"</td> <td>23 3/4"</td> <td>22 1/4"</td> </tr> </tbody> </table>	Car Size	Width	Depth	Center of Rail	Center of Door	36" x 48"	47 1/2"	62 1/2"	23 3/4"	22 1/4"
Car Size	Width	Depth	Center of Rail	Center of Door							
36" x 48"	47 1/2"	62 1/2"	23 3/4"	22 1/4"							

Typical Hoistway Layouts



Recommended Hoistway Construction



TOWNHOUSE
DEVELOPMENT
GRANVILLE AVE

9880 GRANVILLE AVE.
RICHMOND, BC

Drawing Title:

REFERENCE PLAN

OCT 23 2018

DP 17-7852944

DP

Date:
Scale:
Drawn By:
Checked By:
Project No.:
Drawing No.:
A7.1

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 millimetres

This drawing is not to be scaled. Use 1/8" dimensions only.

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NET ID: 08-24-11 DH-204

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NET ID: 08-24-11 DH-204

08-24-11 DH-204



City of Richmond

Report to Development Permit Panel

To: Development Permit Panel

Date: October 22, 2018

From: Wayne Craig
Director, Development

File: DP 18-815966

Re: Application by I-Fly Vancouver for a Development Permit at 9151 Van Horne Way

Staff Recommendation

That a Development Permit be issued which would permit the construction of an indoor recreational skydiving facility at 9151 Van Horne Way with a maximum building height of 24.0 m (78.8 ft.) on a site zoned "Light Industrial (IL)".

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

WC:mm
Att. 4

Staff Report

Origin

I-Fly Vancouver has applied to the City of Richmond for permission to develop an indoor recreational skydiving facility at 9151 Van Horne Way with a maximum building height of 24.0 m (78.8 ft.) on a site zoned “Light Industrial (IL)”. The proposed 1,081 m² (11,636 ft²) skydiving facility is being built on the site in addition to an existing 1,859 m² (20,010 ft²) indoor badminton centre and associated surface parking lot.

The main purpose of this Development Permit is to address the form and character of the proposed I-Fly building to be located on the eastern portion of the site. The owner has also agreed to include improvements to the existing badminton centre building and associated parking lot on the western portion of the site.

Servicing works will be required for this project under a Servicing Agreement prior to Building Permit issuance. These works include a 4.0 m (13.1 ft.) wide multi-use asphalt pathway and a boulevard consisting of grass and street trees along the site’s entire Van Horne Way frontage. There will also be installation of 170 m (558 ft.) storm main, new fire hydrants, water and sanitary connections, and associated repaving of Van Horne Way (see Attachment 4).

Development Information

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

Background

Development surrounding the subject site is as follows:

- To the north, there is un-used CPR spur rail line within a statutory-right-of-way (SRW) on the subject site and the Canada Line rail yard on the adjacent property zoned “Light Industrial (IL)”.
- To the east, there is the Oak Street Bridge and a vacant site zoned “Light Industrial (IL)”.
- To the south, there is a large light industrial building on a site zoned “Light Industrial (IL)”.
- To the west, there is a vacant City-owned parcel with the former Bridgeport Trail zoned “Light Industrial (IL)”.

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), City Centre Area Plan (CCAP) and is in compliance with the “Light Industrial (IL)” zone which permits a maximum building height of 25.0 m (82.0 ft.) though issuance of a Development Permit.

Advisory Design Panel Comments

The Advisory Design Panel was in favour of the proposed project. A copy of the relevant excerpt from the Advisory Design Panel Minutes from the September 6, 2018 meeting is attached for reference (Attachment 2). 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

- To the south, Van Horne Way fronts the entire property while remaining at its current elevation of approximately 1.0 m (geodetic) elevation adjacent to the project's surface parking lots at the same level; the building podium is located at the City's 2.9 m geodetic flood construction level. The proposed 3.0 m (9.8 ft.) wide landscape strip running along the front of the site provides a buffer to the parking lots and a gradual grade transition up to the I-Fly building podium.
- To the east, the proposed I-Fly building rises above the adjacent elevated Oak Street Bridge deck. The building is located approximately 50 m (164.0 ft.) from the bridge deck, which is more than the minimum 30 m (98.0 ft.) setback from the bridge deck required for this building under the "Light Industrial (IL)" zone.
- There is a vacant City property to the west which the City is holding for a future use to be determined.
- To the north, the statutory-right-of-way (SRW) for the un-used CPR rail spur running along the northern edge of the parcel prevents development of this area located behind the two buildings. This SRW provides a spatial buffer to the Canada Line rail yard on the property to the north.

Access and Parking

- The main pedestrian pathway to the site is provided near the middle of the block of the Van Horne Way Street frontage that lead to separate on-site pathway routes providing pedestrian access to both of the buildings.
- The existing badminton centre surface parking lot will be re-built with new pavement and landscaped islands; a new parking lot will be constructed for the I-Fly building on the east side of the site.
- The parking lots will be accessed by two driveways leading from Van Horne Way near the western and eastern edges of the site.
- The project includes the required 92 parking spaces with 74 spaces provided for the existing badminton centre and 18 spaces provided for the proposed I-Fly building.
- Each building will be provided with one medium (SU9) loading space.
- Two parking spaces are provided with 240 volt electrical (Level 2) charging stations as a sustainability measure.
- There will be a total of five Class 1 (Occupant) bicycle parking spaces within the badminton building and two bike parking spaces within the I-Fly building. Bike racks will be provided

to accommodate the required Class 2 (Visitor) bicycle parking spaces; with 14 spaces for the badminton building and 12 spaces for the I-Fly building.

Urban Design and Site Planning

- The site is fronted by Van Horne Way with the two parking lots located near the front of the site with 3.0 m (9.8 ft.) landscape strip and 2.0 m (6.6 ft.) concrete sidewalk that provides on-site pedestrian circulation.
- The proposed public multi-use pathway to be built off-site on Van Horne Way will provide pedestrian access for those taking transit and for those bicycling to the site.
- The proposed I-Fly building is setback 6.8 m (22.3 ft.) from the property line along Van Horne Way. Locating the building close to the street is consistent with creating a more pedestrian-oriented, urban street presence.
- The existing badminton centre building is located 44.0 m (144.5 ft.) back from Van Horne Way with the surface parking lot located in front of the building. In the future, the property owner plans to construct a larger, new building close to the Van Horne Way frontage on top of this existing parking lot (see Plan A-17 Development Permit Reference Plans).
- The western driveway entrance provides access to a separate parking lot for use by the existing badminton centre.
- The eastern driveway entrance onto Van Horne Way provides access to a parking lot located between the proposed I-Fly building and the Oak Street Bridge.
- The I-Fly building loading area, recycling/garbage area and mechanical yard are located to the rear of the building adjacent to the un-used CPR spur line.

Architectural Form and Character

- The proposed I-Fly building has a unique design built around wind-generating machinery and the tall interior chases and chambers necessary for an indoor skydiving facility.
- The centre of the building is composed of a tall concrete core which gently slopes inward on the west and east elevations towards the top of the building at 22.0 m (72.2 ft.) above the podium and 24.0 m (78.8 ft.) above finished grade. This core is painted dark and light grey, and dominates the east and west side elevations of building.
- There are sections of the building extending proud of the concrete core on its north and south elevations that rise up to near the top of the building. These sections include metal-like EIFS panels, aluminum panels, windows and louvered vents with wood grain, dark red and grey colours.
- The building includes street-level glazing and several windows located mid-way up the southern building elevation facing Van Horne Way. Aside from a relatively small section of windows facing east towards the Oak Street Bridge, there are no other windows on the building.
- The building is topped by an asymmetrical butterfly roof that generally resembles a large wing.

- Wall-mounted signage is proposed to be located near the top of the north, south and east elevations of the building (See Development Permit Reference Plans). The proposed signage has been preliminarily reviewed by staff for consistency with the City's Sign Bylaw 9700. The signage installed on the building will require a separate Sign Permit in accordance with the Sign Bylaw prior to installation.
- The building's roof-top mechanical equipment, located on the small flat roofs on the building's north and south elevations, will be screened by high parapet walls.
- The existing badminton centre will be repainted in grey tones and the existing loading doors will be replaced with the wood grain aluminum panels to improve its appearance and to complement the design of the proposed I-Fly building.

Landscape Design and Open Space Design

- There is a 3.0 m (9.8 ft.) wide on-site landscape strip with 11 Sweet Gum trees and a carpet of Bearberry and Spirea shrubs along entire site frontage adjacent to Van Horne Way.
- The landscaping slopes up from the above-noted buffer strip to the building podium, thereby reducing its apparent height when viewed from Van Horne Way.
- The building's raised building podium includes railings around the sides and rear of the building adjacent to the parking and loading areas with planters along the edge of the podium facing Van Horne Way.
- The raised concrete podium decks on the front and west sides of the building have outdoor seating areas to activate the space.
- The large existing badminton centre parking lot will be re-built to include seven landscape islands with shrubs and Sentinel Maple trees.
- There are landscape buffers located along the east and west sides, and the rear of the site. The landscape buffers along the rear and west side sides of the site include Western Red Cedar trees to screen the site from the Canada Line rail yard to the north and vacant City lot to the west.
- The applicant will be required to provide a landscape security of \$93,127.00 prior to Development Permit issuance.

Crime Prevention Through Environmental Design

- The Development Permit plans include a lighting plan for the parking lot; the building will be illuminated with large, downward lights located with the roof overhangs.
- The raised landscaping to the front of the building removes the need for a railing along most of the front of the podium facing Van Horne Way.

Accessibility

- A wheelchair ramp has been located at the southeast corner of the building adjacent to the parking lot and front pedestrian entrance off of Van Horne Way.
- There will also be room provide for storage of wheelchairs within the I-Fly building.

Energy and Sustainability

The proposed building is not required to meet the City Centre Area Plan's LEED Silver Equivalency Policy due to having a floor area of less than 2,000 m² (the maximum building size exempted from the LEED Policy). Nevertheless, the applicant will be including several energy conservation strategies as described in the attached letters from Recollective Consulting Inc. (Attachment 3) which include:

- Two Level 2 charging stations for vehicles.
- Building envelope exceeding the requirements of ASHRAE 90.1 for insulation, glazing, thermal bridging and air tightness.
- Reducing GHG emission by using only electricity for all building systems.

OCP Aircraft Noise Policy

An Airport Noise Covenant was registered on the title of the property in 2009. As the proposed indoor recreation use is a non-sensitive use, an acoustic report will not be required.

Flood Construction Level

A Flood Construction Covenant was registered on the title of the property in 2009, specifying the current applicable 2.9 m geodetic flood construction level, which has been incorporated into the development's design.

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.



Mark McMullen
Senior Coordinator - Major Projects
(604-276-4173)

MM:blg

Attachments:

- Attachment 1 Development Application Data Sheet
- Attachment 2 Advisory Design Panel Minutes With Applicant Response
- Attachment 3 Letters from Sustainability Consultant
- Attachment 4 Development Permit Conditions of Approval



City of Richmond

Development Application Data Sheet

Development Applications Department

DP 18-815966

Attachment 1

Address: 9151 Van Horne Way

Applicant: I-Fly Vancouver Owner: MBA Asset Management Inc.

Planning Area(s): City Centre

Floor Area Gross: 1,903 m² (New I-Fly Building) Floor Area Net: 1,081 m² (New I-Fly Building)

	Existing	Proposed
Site Area:	11,499 m ²	11,499 m ²
Land Uses:	Indoor Recreation	Indoor Recreation
OCP Designation:	Industrial	Industrial
Zoning:	Light Industrial (IL)	Light Industrial (IL)
Number of Units:	N/A	N/A

	Bylaw Requirement	Proposed	Variance
Floor Area Ratio (Both Buildings):	1.2	0.26	none permitted
Lot Coverage (Both Buildings):	Max. 80 %	19.8 %	none
Setback – Front Yard:	Min. 3.0 m	20.8 m	none
Setback – East Side Yard: (Oak St. Bridge Deck Setback)	3.0 m (Min. 30.0 m)	> 50 m	none
Setback – West Side Yard:	Min. 0.0 m	> 0.0 m	none
Setback – Rear Yard:	Min. 0.0 m	> 0.0 m	none
Height (m) (in City Centre):	Max. 25.0 m	24.0 m	none
Lot Size:	none	11,499 m ²	none
Off-street Parking Spaces – Commercial (Both Buildings):	92	92	none
Off-street Parking Spaces – Accessible:	2	2	none

Attachment 2

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

**Thursday, September 6, 2018 – 4:00 p.m.
Rm. M.1.003
Richmond City Hall**

1. DP 18-815966 – I-FLY INDOOR RECREATION DEVELOPMENT

ARCHITECT: Jensen Fey Architects

PROPERTY LOCATION: 9151 Van Horne Way

Applicant's Presentation

Bill Adams, Adams 1st Consultants, David Fey, Jensen Fey Architects, and Oren Mizrahi, Connect Landscape Architecture, presented the project and together with Ethan Mabe, Parkway Construction, and Justine Markowski, Jensen Fey Architects, answered queries from the Panel on behalf of the applicant.

Panel Discussion

Comments from Panel members present were as follows:

Panel Discussion

Comments from Panel members present were as follows:

- appreciate the project; - **Thank you**
- facing towards Oak Street Bridge to complement the proposed public art/mural;
We previously had similar thoughts- the roof was previously extended out 2 additional feet on the oak street bridge side. Further extension would require larger structural members to support the cantilevered portion. In our opinion this would cause the roof to look too “heavy” and would like to keep it as is.

- investigate opportunities for creating an expression at the southwest corner of the I-Fly building to help identify the main entry to the building for people coming from the western portion of the site through the surface parking lot fronting the existing badminton centre building; proposed gathering/seating area at the southwest corner of the I-Fly building appears blunt; consider extending the canopy at the main entrance to wrap around the southwest corner of the building or installing a trellis feature to help direct people to the main entrance of the building;- *We have added a stair on the west portion of the plinth to connect the west side of the building to the west parking and future development. We also pushed the seating and reduced the railing in that area to create a larger entrance and enhance circulation.*
- consider tilting up the edge of the entry canopy facing Oak Street Bridge to reflect/complement the bigger image and character of the building; - *We appreciate this comment but feel that a horizontal canopy relates better to the front façade design and doesn't compete with the main a-symmetrical roof.*
- exterior lighting should light up the four sides of the building, but highlight and emphasize the entrance side;- *Agreed. We have incorporated this into our design.*
- appreciate the applicant's presentation and the model; like the proposed building;- *Thank you.*
- a more detailed planting plan, e.g., including identification of plant species proposed to be installed , would have been useful in understanding the proposed landscaping for the project; landscaping could do a lot to help in wayfinding; applicant needs to provide more details regarding the project's landscape strategy;- *Agreed. We have provided a more detailed landscape plan as part of the DP submission.*
- agree with the importance of planting along the edges of the site to have more habitat value; support the applicant's approach to the pedestrian realm reflecting the urban character of the building and the strong architectural forms; also support the applicant's intention to have more planting along the front edge of the site;- *We agree and we have incorporated this into our new approach.*
- consider introducing a continuous sidewalk and planting a row of trees along its edge on the west side of the I-Fly building to provide a pedestrian connection to the main entry of the building from the rest of the subject site; applicant could reconfigure the lay-out and/or reduce the number of parking stalls on the surface parking lot on the western portion of the site to accommodate this proposed scheme; would complement the proposal to install a canopy or trellis around the southwest corner of the I-Fly building;- *We aren't able to reduce the number of parking stalls. The design currently has a sidewalk along the west end. We do agree we can add some planter boxes to improve the appearance and access from that side of the building. We also added some pedestrian walk ways from the sidewalk over to the badminton center that also connect to the iFly building.*

- ed areas on the site; - *Although we are committed to sustainability, a green roof is not feasible in this project due to the need to replace equipment by periodically by removing roof pieces. We would like to pursue a lighter roof color to reduce radiant heat.*
- appreciate the applicant's presentation; - ***Thank you.***
- I-Fly building and the significant amount of hard surface on the site; *Although we appreciate this comment, we have worked diligently to come up with a thoughtful design color palette. Our concept is responding to the industrial nature of the site with the concrete "greys." At the same time, we are acknowledging the larger contextual vernacular architecture by incorporating warm "woods" of a Pacific Northwest style. We also need to maintain the iFly branding with the red. We feel that these colors and materials provide a rich contrast; warm woods, cool greys & deep red. As we began to look at lighter color options the richness of these contrasting elements really started to fade. We would like to leave the color palette as is.*
- consider bringing the public art/mural down to the ground level to cover the whole east façade of the building to mitigate the lack of glazing and fenestration on the building and reduce the heat island effect; - ***The mural is not be included at this time.***
- support the Panel members' proposed architectural and landscaping treatments for the building's west façade to soften its appearance; - ***We have added landscape to accommodate this comment.***
- - ***We have designated a portion of the first floor storage space for this purpose.***
- appreciate the applicant's intention to integrate public art into the project which will help activate the building façade facing Oak Street Bridge; - ***We are no longer considering the mural for the building at this time.***
- the canopy helps emphasize the main entrance to the building; however, consider introducing different materials and pedestrian scale texture around the base of the building, particularly on the north [east] side of the building to enhance pedestrian experience towards the main entry to the building; - ***We originally had more textured plinth, however this increased the heaviness to the plinth. We believe that the smooth finish works better and will soften and enhance the pedestrian experience with landscaping where available.***
- consider introducing different colours, patterns, and/or textures on concrete along the edges of the building to help activate the proposed night lighting and reduce the apparent mass at the corners of the building to enhance on-site pedestrian experience, - ***We originally had more textured plinth, however this increased the heaviness to the plinth. We believe that the smooth finish works better and will soften and enhance the pedestrian experience with landscaping where available.***

- *- We want the main canopy to be the main focal point. After looking at multiple canopy options we believe one focal canopy keeps a clean look and works better with the composition with the façade.*
- look at the relationship of the proposed landscaping for the project with the Bridgeport Trail and its proposed terminus at the new Van Horne Way multi-use pathway running along the front of the site; - *We have looked at the relationship and we like it as is.*
- consider incorporating pedestrian pathways around the surface parking lot using different surface paving materials and colours to enhance pedestrian circulation and safety throughout the site; will also help break down the large surface parking area on the site; - *With the added landscape and enhanced walkway. We also added some pedestrian walk ways from the sidewalk over to the badminton center that also connect to the iFly building. We believe we have captured the intent of this comment without drastic change.*
- appreciate the clear presentation of the design team; - *Thank you.*
- the project has the potential to become a catalyst for development in and around the area; - *We agree.*
- support the proposal to reduce the amount of surface parking on the site; proposed parking lay-out for the I-Fly building could be mirrored in the parking lot fronting the badminton centre building; with reduced parking, users of badminton and I-Fly facilities could use public transit considering the proximity of Bridgeport Canada Line Skytrain Station to the subject site; - *We are currently meeting the minimum requirement for the parking based on the occupancy calculations.*
- proposed building form and roof profile are interesting; will not have adverse shadowing and view impacts on adjacent developments; the proposed 24-meter high building will provide an interesting view from Canada Line Skytrain and Oak Street Bridge; - *Thank you.*
- appreciate the proposed building articulation and façade expression which is reflective of the building's proposed use and its surrounding neighbourhood; however, the proposed mural on a square space on the upper portion of the building appears superficial; support comment from the Panel that the applicant consider bringing the mural down to the whole east façade of the building to enhance the pedestrian arrival experience on the site; - *We agree and have made this adjustment, however we are still working on the final design of the mural.*

- support the Panel comment that the applicant consider incorporating lighter colours into the building to lighten and brighten up the subject building which is located in an industrial area; - *Although we appreciate this comment, we have worked diligently to come up with a thoughtful design color palette. Our concept is responding to the industrial nature of the site with the concrete "greys." At the same time, we are acknowledging the larger contextual vernacular architecture by incorporating warm "woods" of a Pacific Northwest style. We also need to maintain the iFly branding with the red. We feel that these colors and materials provide a rich contrast; warm woods, cool greys & deep red. As we began to look at lighter color options the richness of these contrasting elements really started to fade. We would like to leave the color palette as is.*
- support the use of red colour for the “metal-like” exterior insulation and finish system (EIFS) material on the building; proposed colour is appropriate for long-term maintenance; and – **Thanks.**
- appreciate the use of woodgrain panel materials as these will help soften the building façade; however, consider replacing the wood fence for the mechanical yard with steel fence to match the glass and metal fence that wraps around the building’s main entry area; the wood fence currently appears residential and needs to be have a more utilitarian expression.- *We have modified the material of the fence to have a more metal look.*

(The following written questions and comments were submitted by Jubin Jalili and were read in the meeting by Sara Badyal)

- How will the operation of fly chamber pressurization system affect the building envelop assemblies with respect to positive pressures and what mitigating design features will be provided to accommodate that?- *The mechanical systems of the building manage the different air pressures with dampers and outside air ducting so that you can operate the wind tunnel with the doors open or closed. The pressure differential is negligible.*
- What will happen if there is a failure in the pressurized capsule/chamber? Are there any safety devices to prevent explosion of the building envelop assemblies?- *The chamber itself is not pressurized so there is no risk of failure or explosion.*
- City staff to confirm that there is no requirement for this building to be connectable to future District Energy Utility (DEU) systems as the design is proposing to use all electric/stand-alone systems.- *There is no need for this.*

(Note: City Staff has confirmed that there is no requirement for the proposed building to be connected to a DEU system)

- ,000 square feet, vestibules are mandatory for BC Building Code compliance;- *The front door opens into a conditioned space of less than 3,000 sf (much of the floor area in this building is unconditioned mechanical space) therefore a vestibule is not needed.*

- with the sloped roof design feature, where will the ventilation systems be located? no mechanical rooms are shown on the plans; it seems that the design team is using electric (potentially VRF or split) AC system with outdoor units to be installed within the mechanical enclosure adjacent to the building; however, no space provision for ventilation system is shown;- ***There are mechanical rooms and condenser units on the second roof system.***
- given its low glass-to-wall ratio, the proposed building will satisfy Code compliance through prescriptive measures; ***Thanks for confirming.***
- given the use of electric AC systems (use of VRF technology is highly recommended) and no natural gas, the project will have reduced GHG emissions and is on the right track from the sustainability point of view; and
- use of heat recovery for ventilation is highly recommended. – ***Thank you.***

Panel Decision

It was moved and seconded

That 18-815966 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



2018-06-29

Sustainability measures for Richmond iFly Skydiving Centre

Hello,

This is an updated letter outlining sustainability strategies for the Richmond iFly project including a response to DP application review comments from the city. This letter further clarifies the strategies outlined in the initial sustainability letter dated February 22, 2018. Please see the original letter for notes on indoor environmental quality, construction waste management, and sustainable site measures.

Infrastructure in Support of Electric Vehicles

Two 240V J1772 Level 2 charging stations will be provided for use of patrons, staff, and users of the adjacent building.

Energy Conservation

In addition to the hot water and lighting energy reductions previously mentioned, the team is focusing on reducing thermal energy demand intensity through a focus on the envelope, exceeding the prescriptive envelope requirements of ASHRAE 90.1-2010 for insulation, glazing, thermal bridging and air tightness.

Green House Gas Emissions

The project will minimize GHG emissions by going all electric for heating, cooling and hot water. There will be no gas connection to the building.

Regards,

A handwritten signature in black ink, appearing to read "JASON PACKER".

Jason Packer, B.Admin, Dip.Tech, LEED AP BD+C, CPHC
Principal, Senior Green Building Strategist

RECOLLECTIVE CONSULTING INC
 210 - 128 W Hastings St, Vancouver, BC V6B 1G8
 T 604.669.4940 x203
 D 604.674.1752
www.recollective.ca jason@recollective.ca

210 - 128 West Hastings Street
 Vancouver BC Canada
 V6B 1G8



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www.recollective.ca
 @recollectiveca



2018-02-22

Sustainability measures for Richmond iFly Skydiving Centre

Hello,

The iFly project is based on a number of similar facilities built in various cities throughout North America. In recognition of the City of Richmond's focus on sustainability, this particular iFly Centre will implement a number of green building strategies. The following sustainability measures are included in the design or are being envisioned through design development.

Site and Transportation Strategies

This project is well served by transit with close proximity to the Canada Line Skytrain and numerous bus lines. It will contribute to the options for entertainment and recreation within a growing region of the city. The parking provided meets but does not exceed the minimum required by city bylaws, reflecting the reduced need for vehicle trips due to the location. Furthermore, Level 2 electric vehicle charging will be provided in the parking area.

To encourage cycling, the facility will include secured, indoor bike parking and a shower for staff. Consideration for bikes will include push button door openers for ease of access.

Light coloured roofing materials will be specified to mitigate urban heat island effects. Landscaping on the site will employ native and adaptive species for irrigation savings and reduced maintenance requirements.

Energy and Water Conservation

In addition to reduced irrigation demand, water use will be reduced through the use of low flow fixtures and dual-flush toilets.

Energy savings will result from the use of LED lighting, efficient HVAC systems including variable speed fans and pumps along with envelope upgrades including higher insulation levels and higher performing glazing.

Indoor Air Quality

Entry way systems will be installed at entrances to reduce tracking in of dirt. Low emitting materials will be specified including the following:

- low VOC paints
- low VOC adhesives and sealants
- formaldehyde free insulation
- formaldehyde free composite wood products
- FloorScore certified flooring

210 – 128 West Hastings Street
Vancouver BC Canada
V6B 1G8

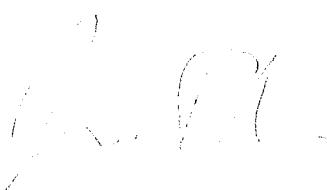


604.669.4940
www.recollective.ca
@recollectiveca

Construction Waste Management

The contractor will engage a waste hauler who can provide tracking and diversion from landfill for construction waste. Separate bins will be located on site during construction to facilitate achievement of waste diversion.

Regards,


Jason Packer, B.Admin, Dip.Tech, LEED AP BD+C, CPHC
Principal, Senior Green Building Strategist

RECOLLECTIVE CONSULTING INC
210 - 128 W Hastings St, Vancouver, BC V6B 1G8
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**City of
Richmond**

Development Permit Conditions of Approval

Development Applications Department

IFLY Vancouver - 9151 Van Horne Way
DP 18-815966

The following are to be met prior to forwarding this Development Permit application to Council for approval:

- Receipt of a Letter-of-Credit for landscaping in the amount of \$93,127.00.

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

- Enter into a Servicing Agreement (SA) with the City of Richmond for the design and construction of all Engineering and Transportation works and provide a security for the value of all works to the satisfaction of the City as outlined in Appendices 1 and 2 below.
- Include specifications for two outdoors Level 2 charging stations for vehicles within the Building Permit plans.
- 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.*
- Submission of a construction traffic and parking management plan to the satisfaction of the City's Transportation Department (<http://www.richmond.ca/services/ttp/special.htm>).

William Adams

Name of Developer/Applicant

Signature

24OCT18

Date



**City of
Richmond**

Development Permit Conditions of Approval
Development Applications Department

IFLY Vancouver - 9151 Van Horne Way
DP 18-815966

Appendix 1: Engineering & Servicing Works

A servicing agreement is required to design and construct the following works.

1. Water Works:

- a. Using the OCP Model, there is 598.0 L/s of water available at a 20 psi residual at the Van Horne Way frontage. Based on your proposed development, your site requires a minimum fire flow of 200 L/s.
- b. 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. Confirm the existing southwestern water connection has adequate capacity to serve the proposed development. If it does, it may be retained. If not, it shall be replaced by City crews at the developer's cost.
 - iii. Provide fire hydrants per City spacing requirements for commercial land use.
- c. At Developer's cost, the City is to:
 - i. Cut, cap, and remove the existing northeastern water connection.

2. Storm Sewer Works:

- a. At Developer's cost, the Developer is required to:
 - i. Perform a capacity analysis to size the proposed storm sewer in Van Horne Way. The analysis shall consider both the existing condition and the 2041 OCP condition. Storm sewers shall be interconnected where possible. Minimum pipe size shall be 600 mm.
 - ii. Install approximately 170 m of new storm sewer in Van Horne Road, sized via the required capacity analysis, from the west property line of the development site to existing manhole STMH6290 near the Highway 99 overpass. The new storm sewer shall be located in the roadway at or near the centerline.
 - iii. Remove the existing 300 mm storm sewer along the development's south property line.
 - iv. Install one new storm service connection, complete with inspection chamber, to serve the development site. Inspection chamber to be located in a right-of-way onsite.
 - v. Provide an erosion and sediment control plan for all on-site and off-site works, to be reviewed as part of the servicing agreement.
- b. At Developer's cost, the City is to:
 - i. Cut and cap all existing storm service connections to the development site and remove inspection chambers.
 - ii. Reconnect all existing storm connections, catch basins, and lawn basins to the proposed storm sewer.
 - iii. Complete all tie-ins for the proposed works to existing City infrastructure.

3. Sanitary Sewer Works

- a. At Developer's cost, the City is to:
 - i. Install one new sanitary service connection, complete with inspection chamber.
 - ii. Cut and cap the existing service connection to the development site, and remove inspection chamber.



**IFLY Vancouver - 9151 Van Horne Way
DP 18-815966**

4. Frontage Improvements:

- a. The Developer is required to:
 - i. Coordinate with BC Hydro, Telus and other private communication service providers:
 - a) To pre-duct for future hydro, telephone and cable utilities along all road frontages.
 - b) To locate all proposed underground structures (e.g. junction boxes, pull boxes, service boxes, etc.) outside of bike paths and sidewalks.
 - c) To locate/relocate all above ground utility cabinets and kiosks required to service the proposed development, and all above ground utility cabinets and kiosks located along the development's frontages, within the developments site (see list below for examples). A functional plan showing conceptual locations for such infrastructure shall be included in the development process design review. 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 functional plan 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 – 1.0 x 1.0 m
 - Traffic signal UPS – 2.0 x 1.5 m
 - Shaw cable kiosk – 1.0 x 1.0 m
 - Telus FDH cabinet – 1.1 x 1.0 m
 - ii. Other requirements as per Transportation comments.

5. General Items:

- a. The Developer is required to:
 - i. Coordinate with TransLink regarding any potential impact or settlement to the adjacent Canada Line guideway due to site preparation works including preload, excavation, piling, etc.
 - ii. Coordinate with Canadian Pacific Railway regarding any potential impact or settlement to the adjacent railway tracks due to site preparation works including preload, excavation, piling, etc.
 - iii. 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.



**City of
Richmond**

Development Permit Conditions of Approval
Development Applications Department

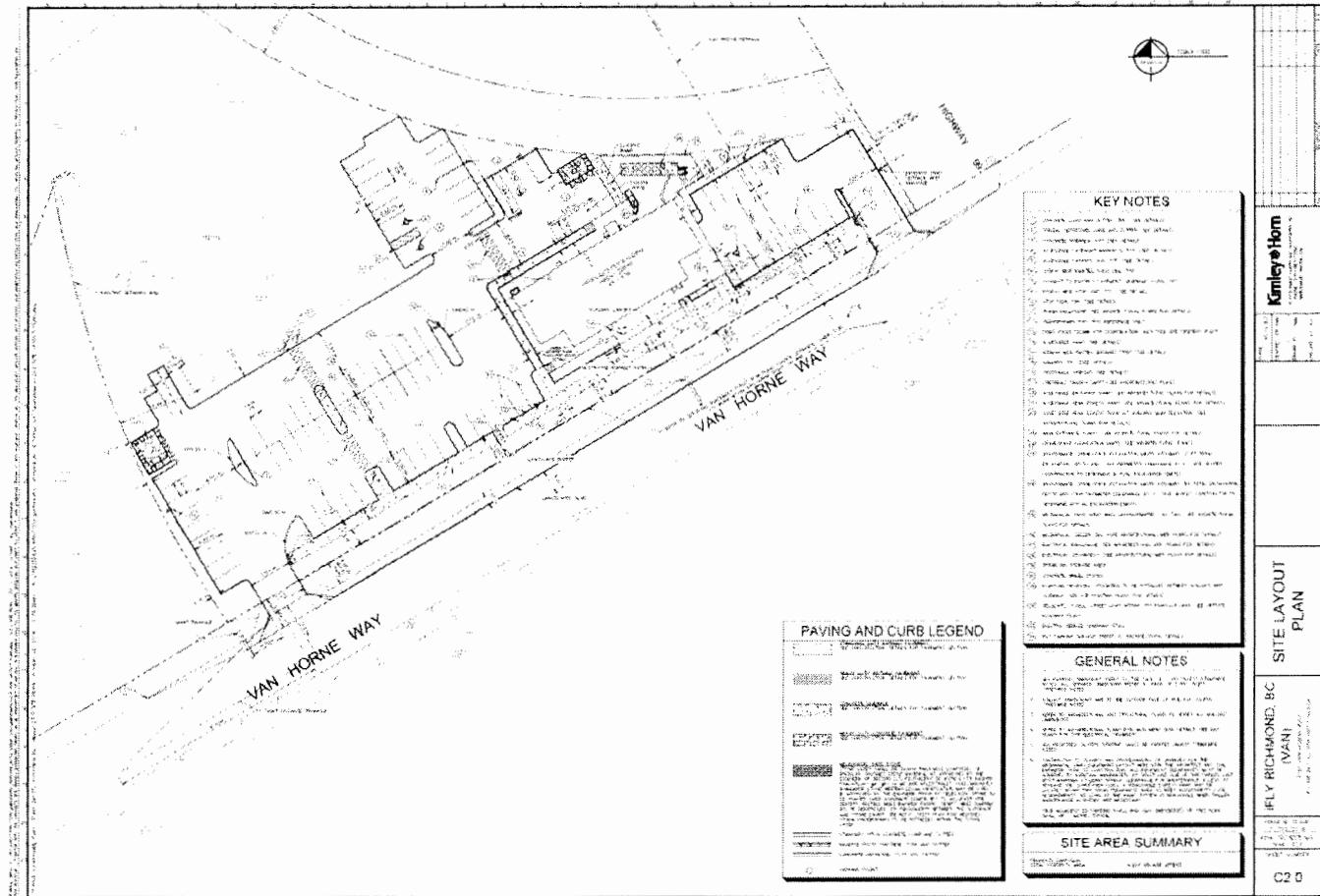
IFLY Vancouver - 9151 Van Horne Way
DP 18-815966

Appendix 2: Transportation Works

The developer will undertake the design and construction of the following frontage improvements under the Servicing Agreement as follows and as generally shown on the plan below.

Along the entire Van Horne Way frontage: Road construction to achieve the following road cross-section: (from south to north):

- Maintain existing yellow centre line;
- Allocate 4.3m as the width of driving surface
- New 0.15m wide barrier curb;
- New 1.5m wide landscaped boulevard with grass and street trees; and
- New 4.0m wide asphalt multi-use pathway (between the boulevard and existing property line)





City of Richmond

Development Permit

No. DP 18-815966

To the Holder: I-FLY VANCOUVER
C/O BILL ADAMS

Property Address: 9151 VAN HORNE WAY

Address: PO BOX 6051
SILVERDALE, WA 98315
USA

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 Development Permit authorizes a maximum building height of 24.0 m (78.8 ft.) pursuant to the "Light Industrial (IL)" zone.
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 #DP18-815966-1 to #DP 18-815966-24 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 \$93,127.00 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 18-815966

To the Holder: I-FLY VANCOUVER
C/O BILL ADAMS

Property Address: 9151 VAN HORNE WAY

Address: PO BOX 6051
SILVERDALE, WA 98315
USA

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 ,

MAYOR

PROJECT STATISTICS:

LOT AREA: 11,499 m²
 PROVIDED LOT COVERAGE: 19.8% (INCLUDING EXISTING
 BADMINTON BUILDING)
 PROVIDE FRONT & EXTERIOR YARD SETBACK: 3m ON VAN HORNE
 WAY & 2m ON HIGHWAY 99
 PROVIDED BUILDING HEIGHT: 23.7m

FLOOR AREA:
 BADMINTON = 1,859 m²
 I-FLY = 1,903 m²

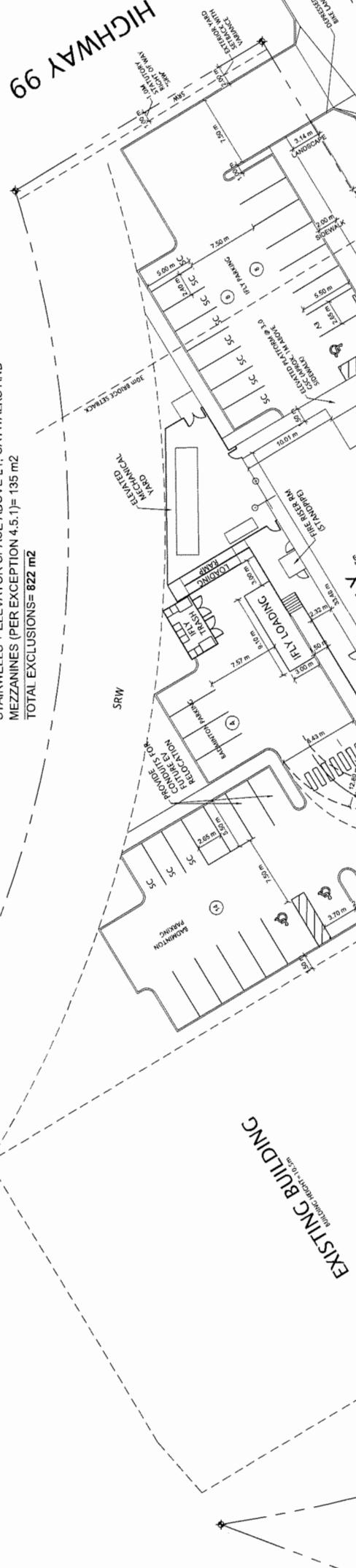
GROSS LEASABLE FLOOR AREA: (SAME AS FLOOR AREA AS
 ONLY 1 TENANT IN EACH BUILDING) I-FLY = 1,903 m²

BADMINTON = 1,859 m²

F.A.R. (BADMINTON & I-FLY):
 (1,859 m²+ 1,081 m²) / 11,499 m² (SITE AREA) = 0.28

ADDRESS: 9151 VAN HORNE WAY
 PLANNING AREA: CITY CENTER, BRIDGEPORT VILLAGE
 ZONING: IL (LIGHT INDUSTRIAL)
 ALLOWABLE LOT COVERAGE: 80% (WITHIN CITY CENTER)
 FRONT & EXTERIOR YARD SETBACK: 3m
 INTERIOR & REAR YARD SETBACK: NONE
 ALLOWABLE BUILDING HEIGHT: 15m OR 25m WITH VARIANCE

DP REF: 18-8159-66-1



F.A.R. EXCLUSIONS:

VERTICAL AND HORIZONTAL AIR SHAFTS= 687 m²
 STARWELLS + ELEVATOR SPACE ABOVE L1, CATWALKS AND
 MEZZANINES (PER EXCEPTION 4.5.1)= 135 m²
 TOTAL EXCLUSIONS= 822 m²

NAME	DATA	DESCRIPTION
MAIN	5217	

DRAWN BY:	JM
CHECKED:	DF
NOTES:	CHECK PLOT
PLotted DATE:	10/01/2018
Job No.:	5217

ARCHITECTURAL SITE PLAN
I-FLY VANCOUVER
9151 VAN HORNE WAY
RICHMOND, BC V6X 1W2

SHEET:

A1.0

1 OF

1 SHEETS

TOTAL ON SITE 92

TOTAL 18 TOTAL

TOTAL 74 TOTAL

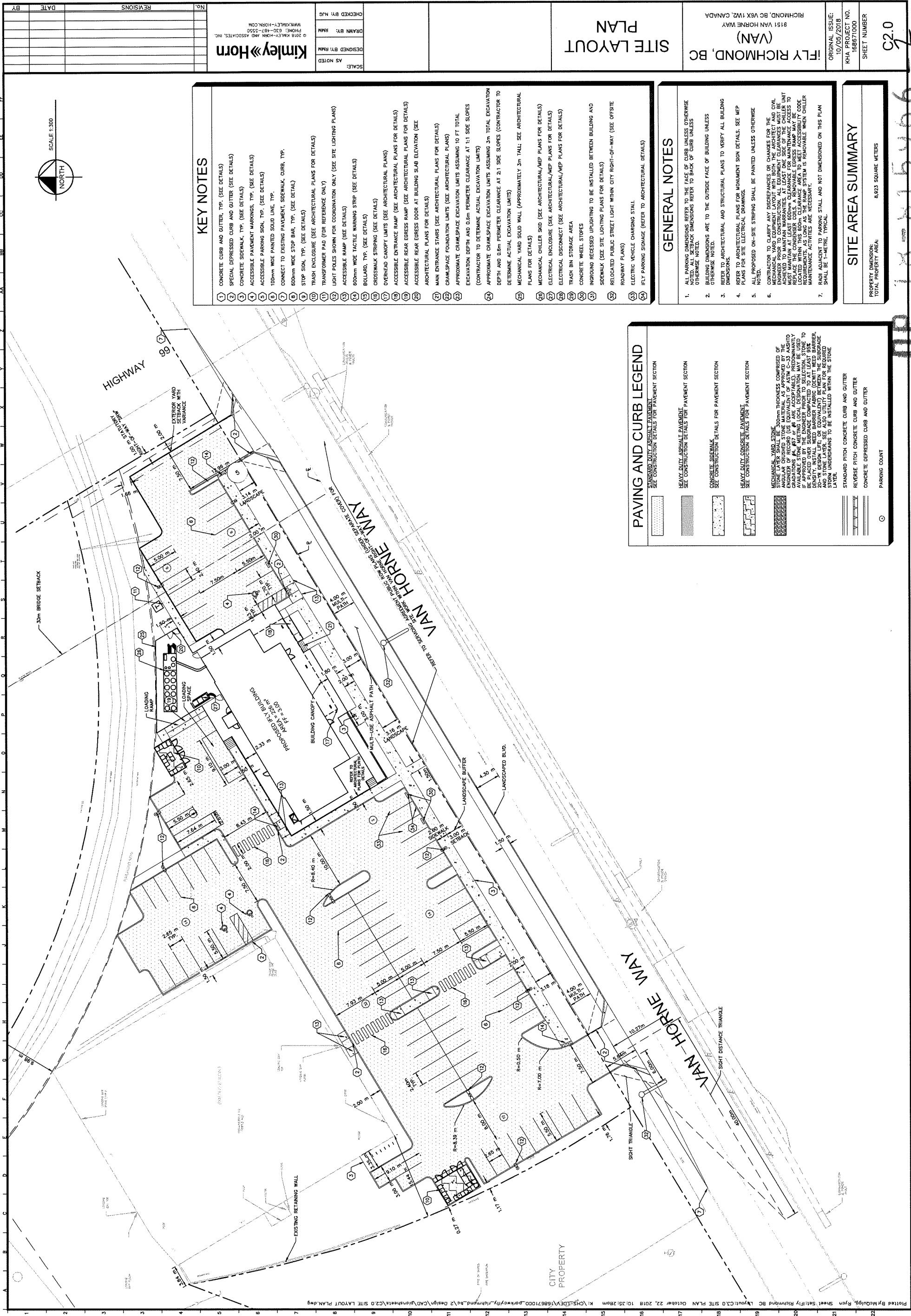
BADMINTON
 PARKING PROVIDED:
 STANDARD (MIN) 37
 SC- COMPACT (MAX) 35
 ACCESSIBLE 2

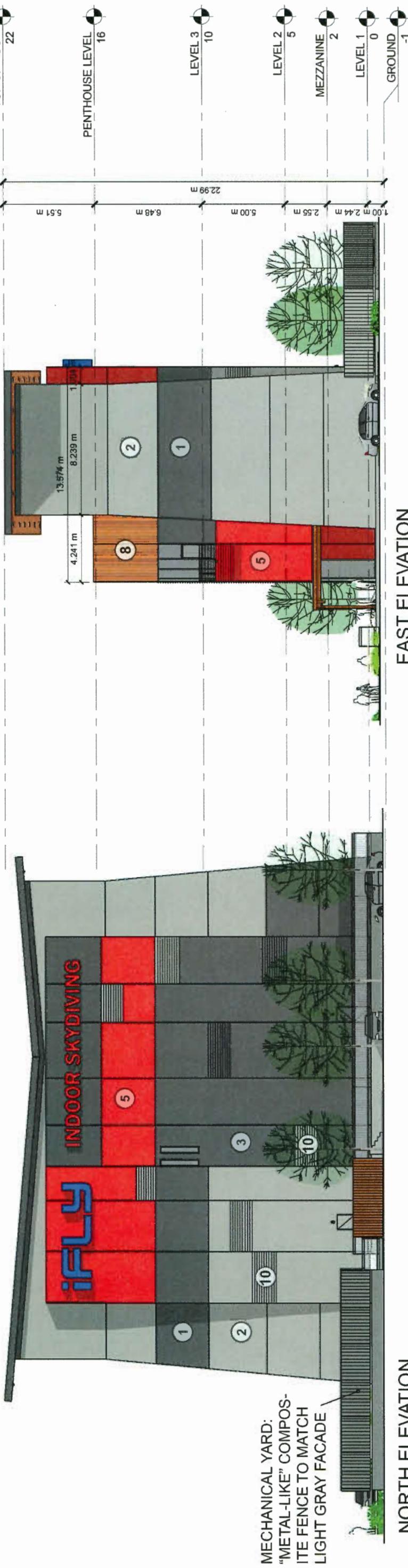
I-FLY
 PARKING PROVIDED:
 STANDARD (MIN) 9
 SC- COMPACT (MAX) 8
 ACCESSIBLE 1

① SITE PLAN
1:500



DP 16 - 8159-32

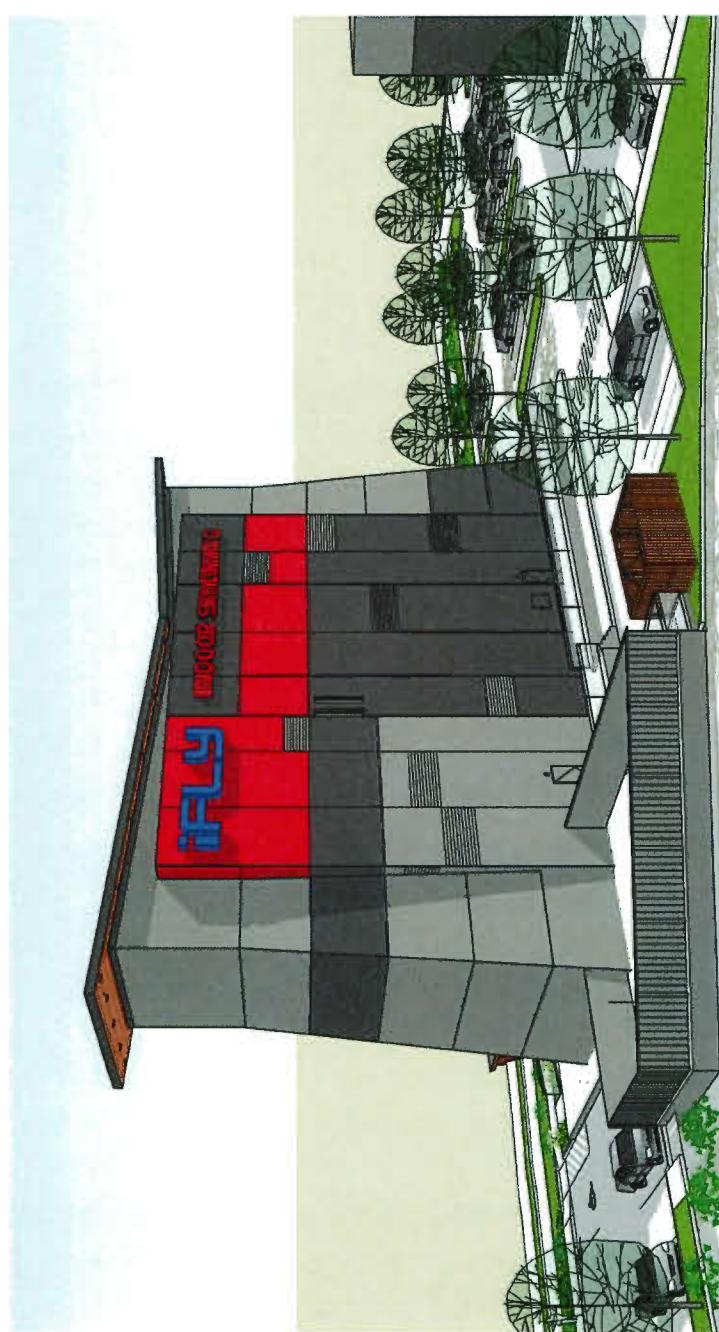
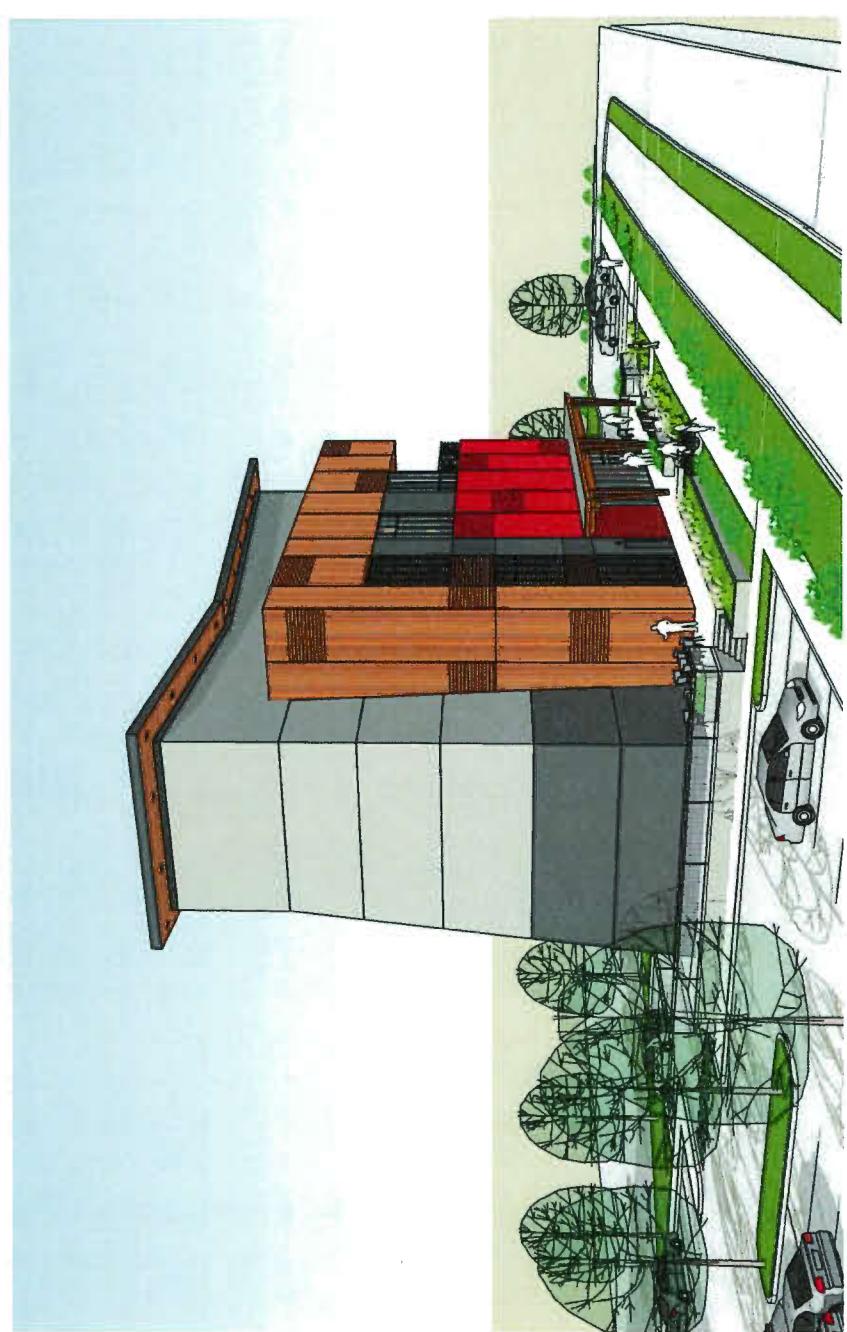




1. CONCRETE- DARK GRAY
2. CONCRETE- LIGHT GRAY
3. "METAL-LIKE" EIFS (STOLIT MILANO FINISH)- DARK GRAY
4. "METAL-LIKE" EIFS (STOLIT MILANO FINISH)- LIGHT GRAY
5. "METAL-LIKE" EIFS (STOLIT MILANO FINISH)- RED
6. ALUMINUM WOODGRAIN PANEL HORIZONTAL APPLICATION
7. ALUMINUM "WOOD-LIKE" LOUVERS OVER WINDOW
8. ALUMINUM WOODGRAIN PANEL VERTICAL APPLICATION
9. "METAL-LIKE" EIFS WITH HORIZONTAL REVEALS- DARK GRAY
10. "METAL-LIKE" EIFS WITH HORIZONTAL REVEALS- LIGHT GRAY

A-10 -9

DP 18-815966



PERSPECTIVES

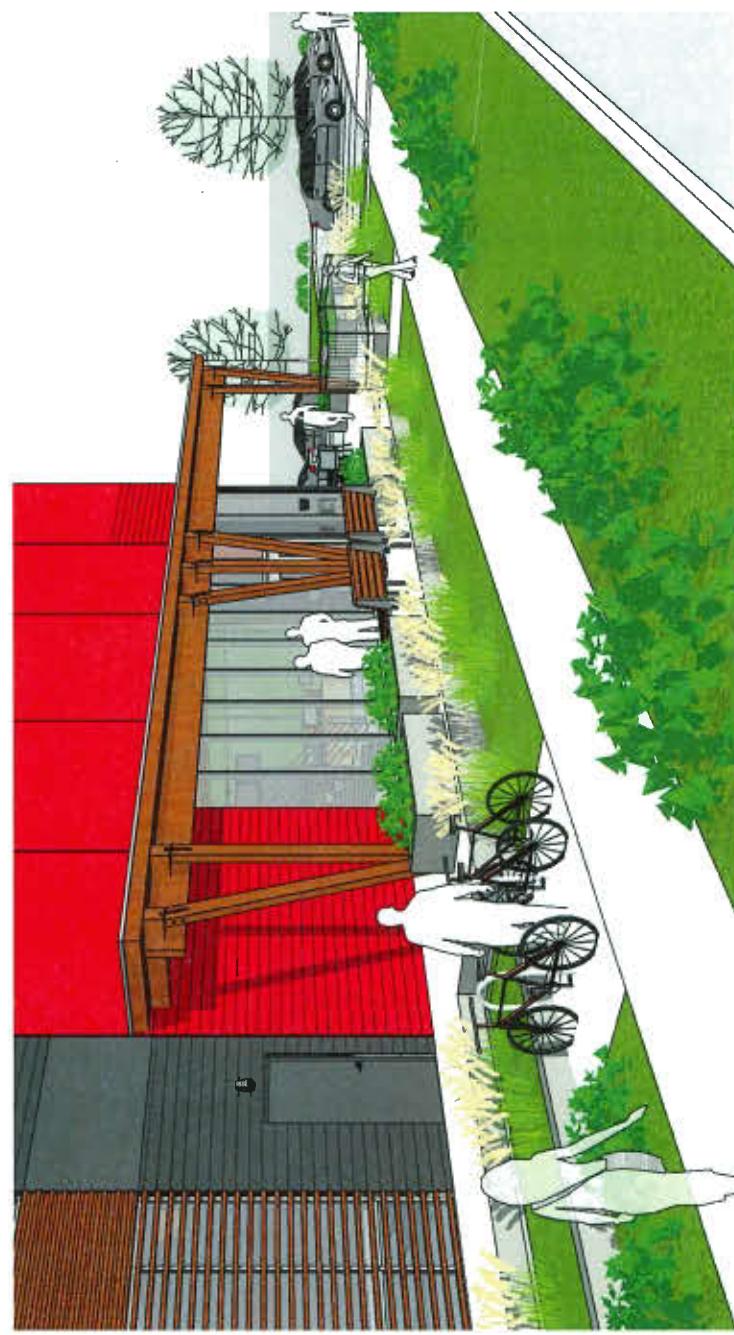
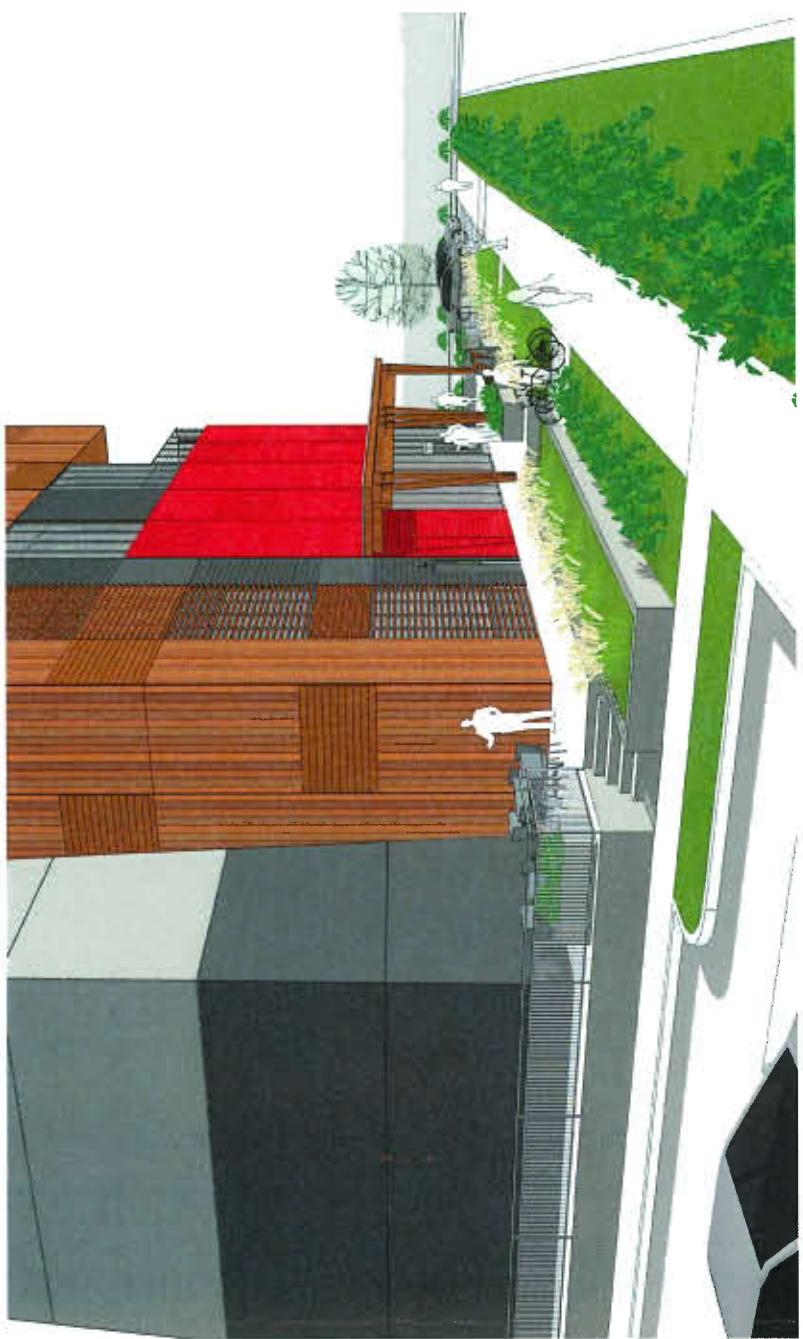
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DP 18-815966-5

A-11

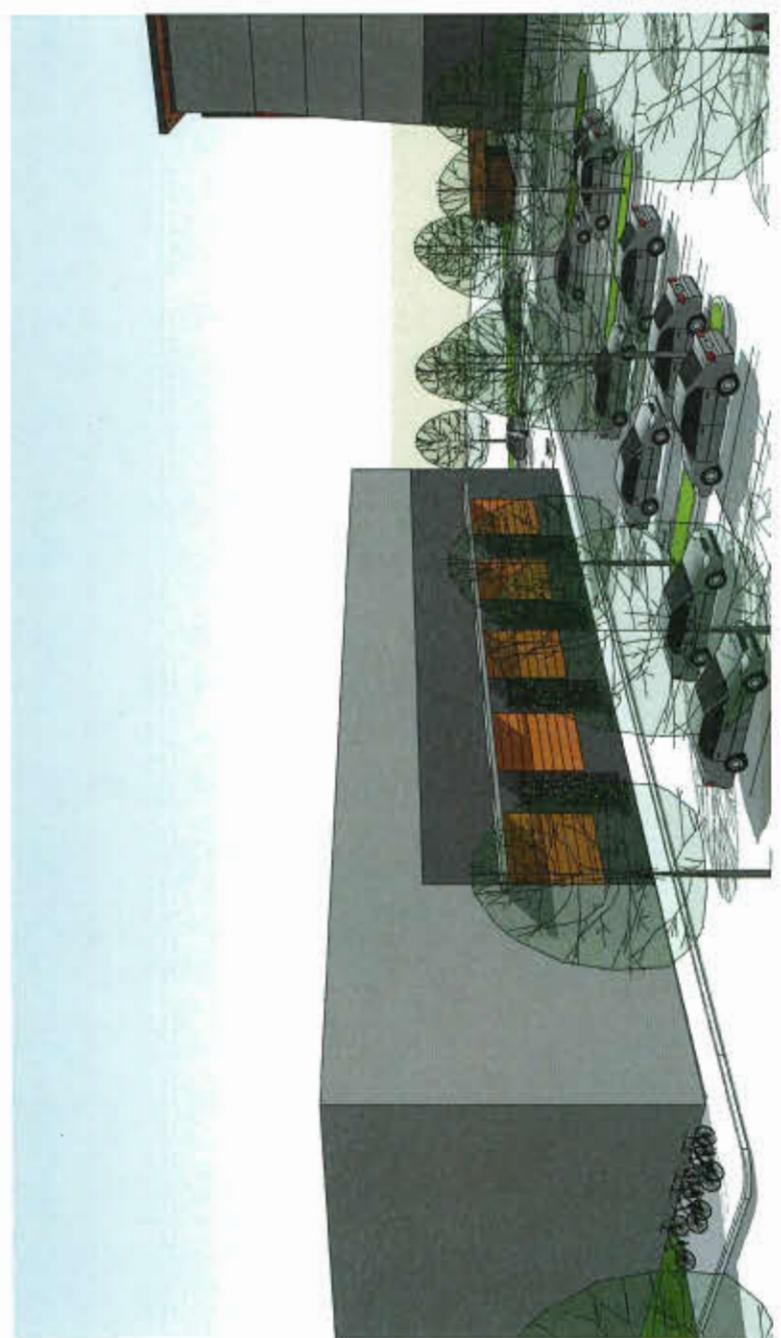
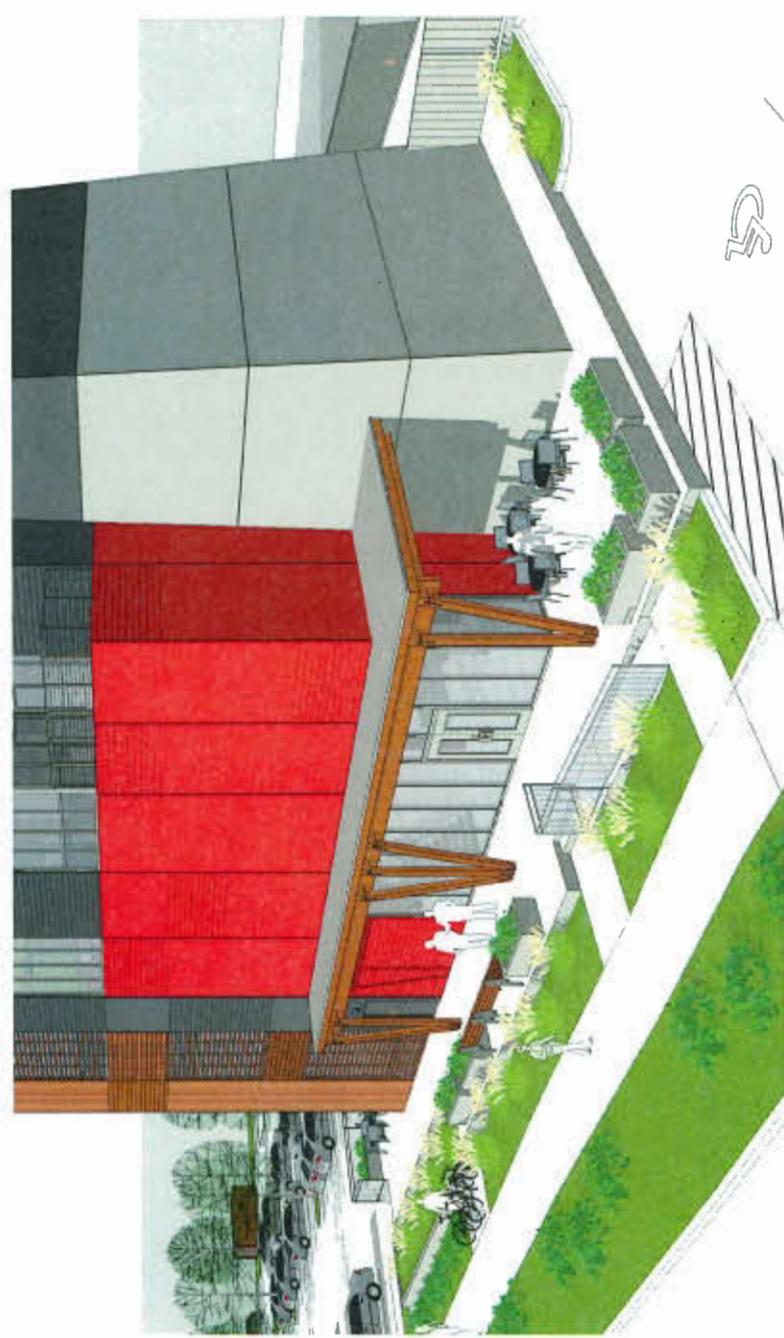
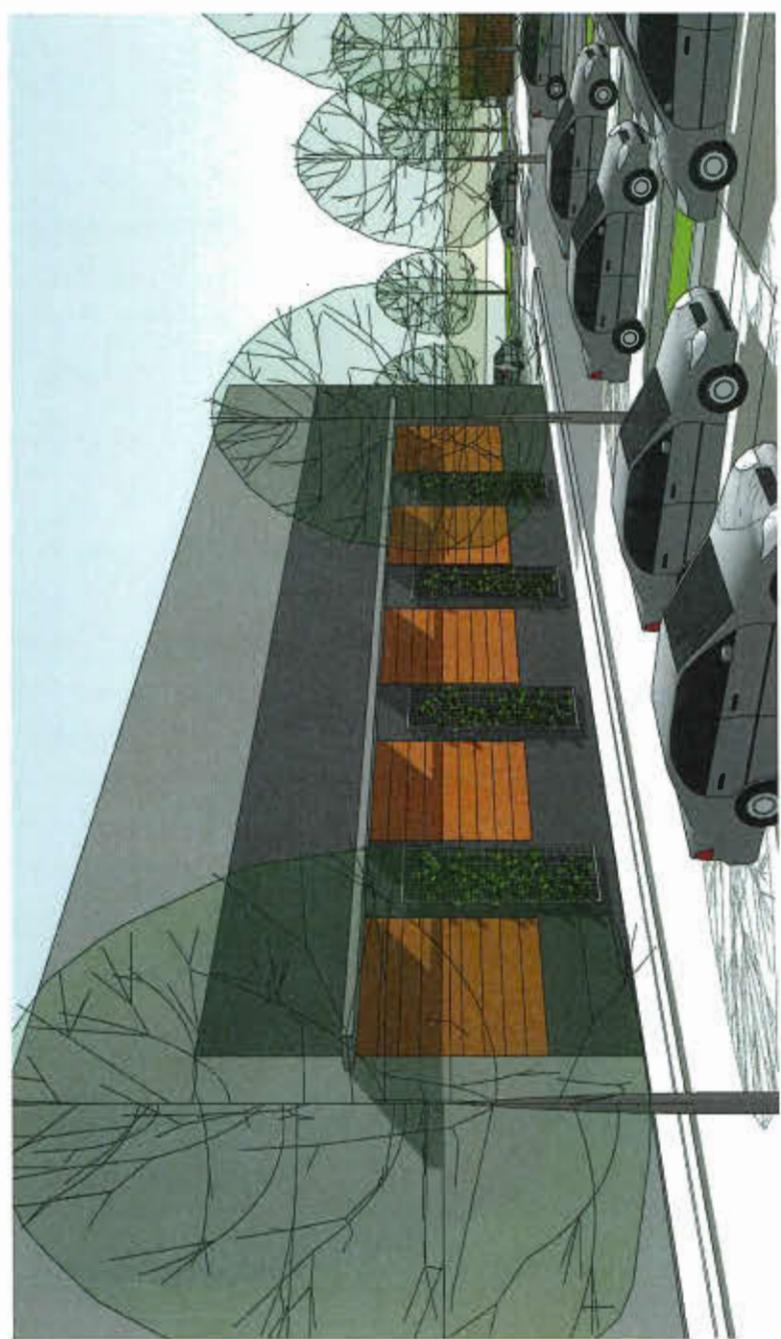
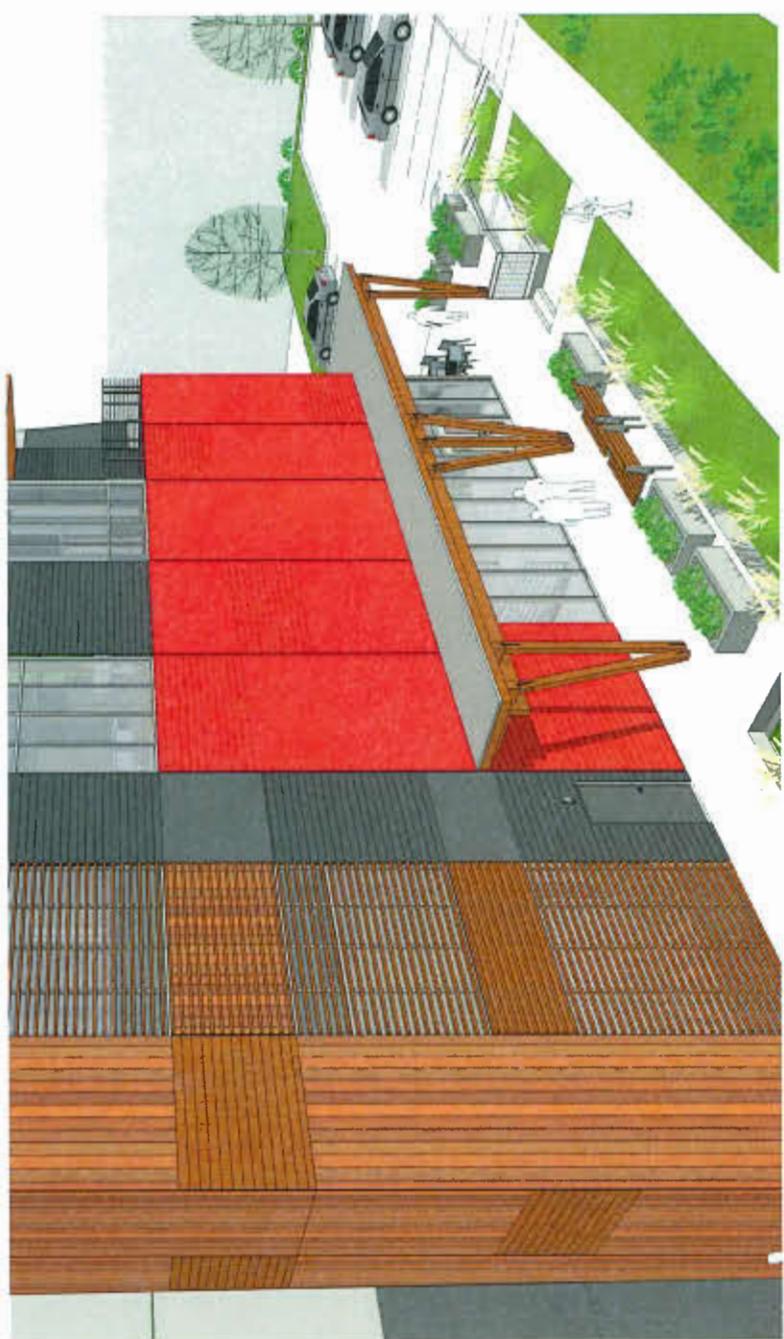
PERSPECTIVES

9.24.2018



A-12

DP 18-815966-6



PERSPECTIVES

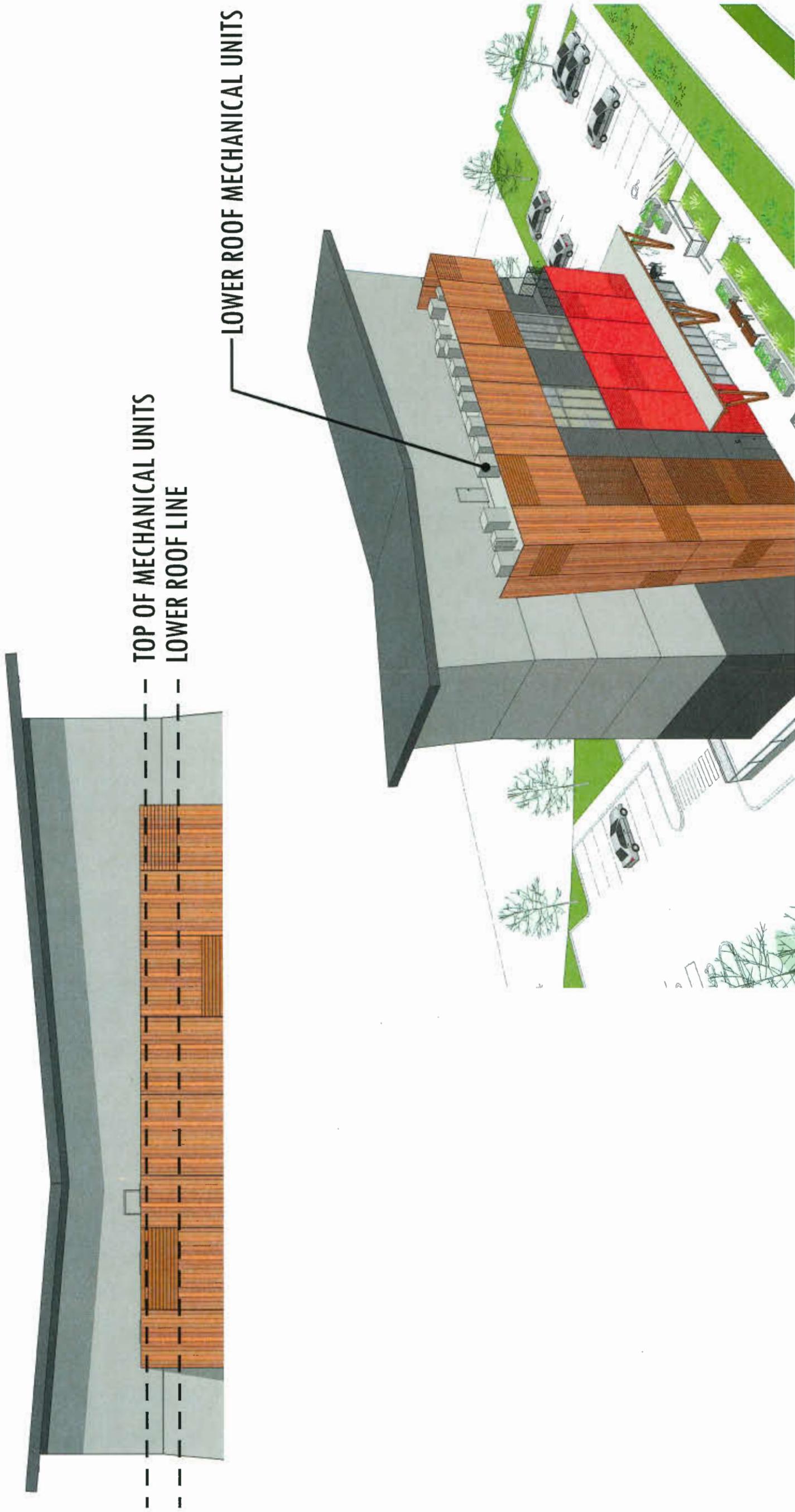
09/11/2018

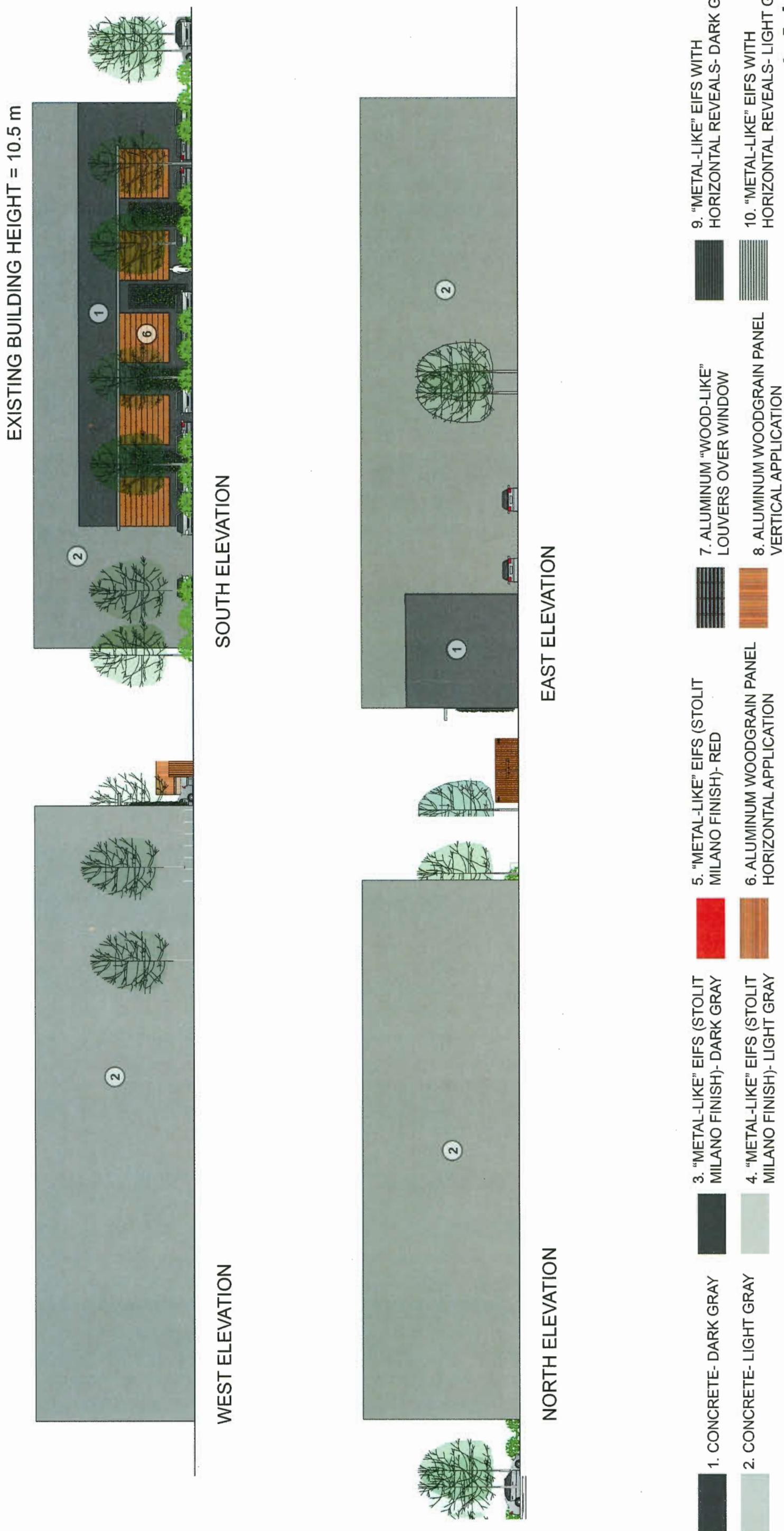
MECHANICAL SCREENING

07.07.18

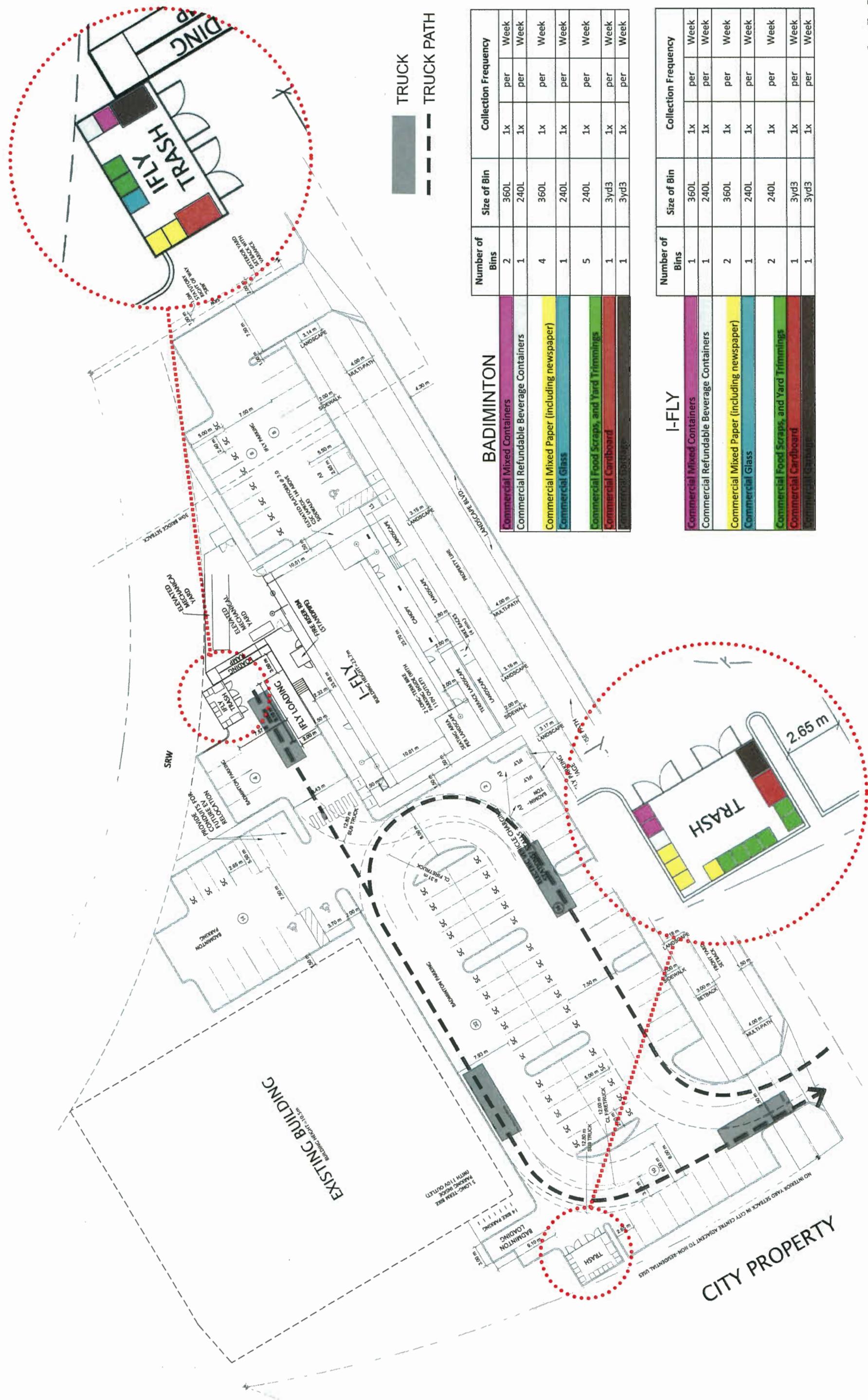
A-19

DP 18-815966-7



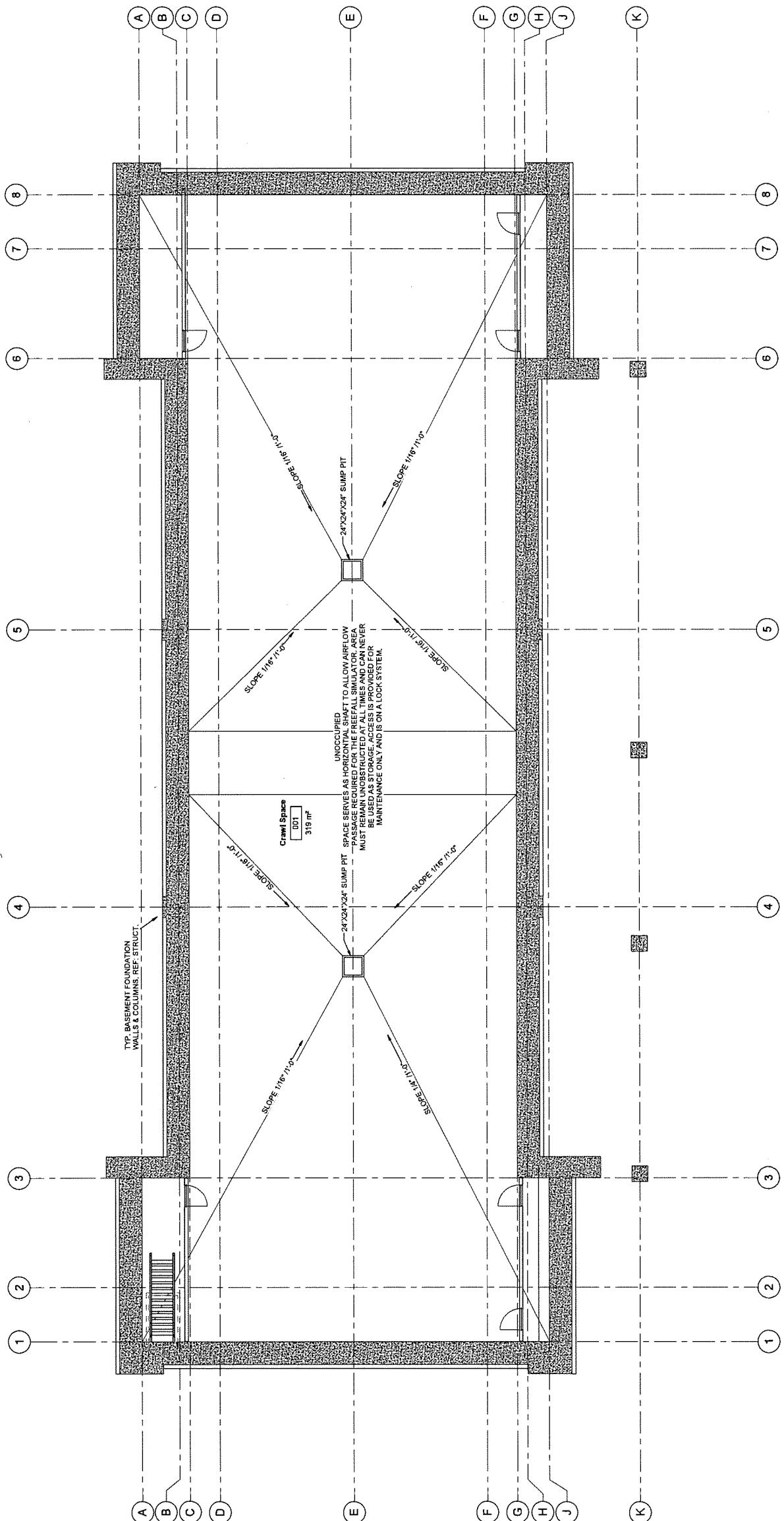


CITY PROPERTY



Floor Plan - Crawl Space

1-FLY VANCOUVER WAY
9151 VAN HORNE WAY
RICMOND, BC V6X 1W2



① Crawl Space
1:1.50

A2.0

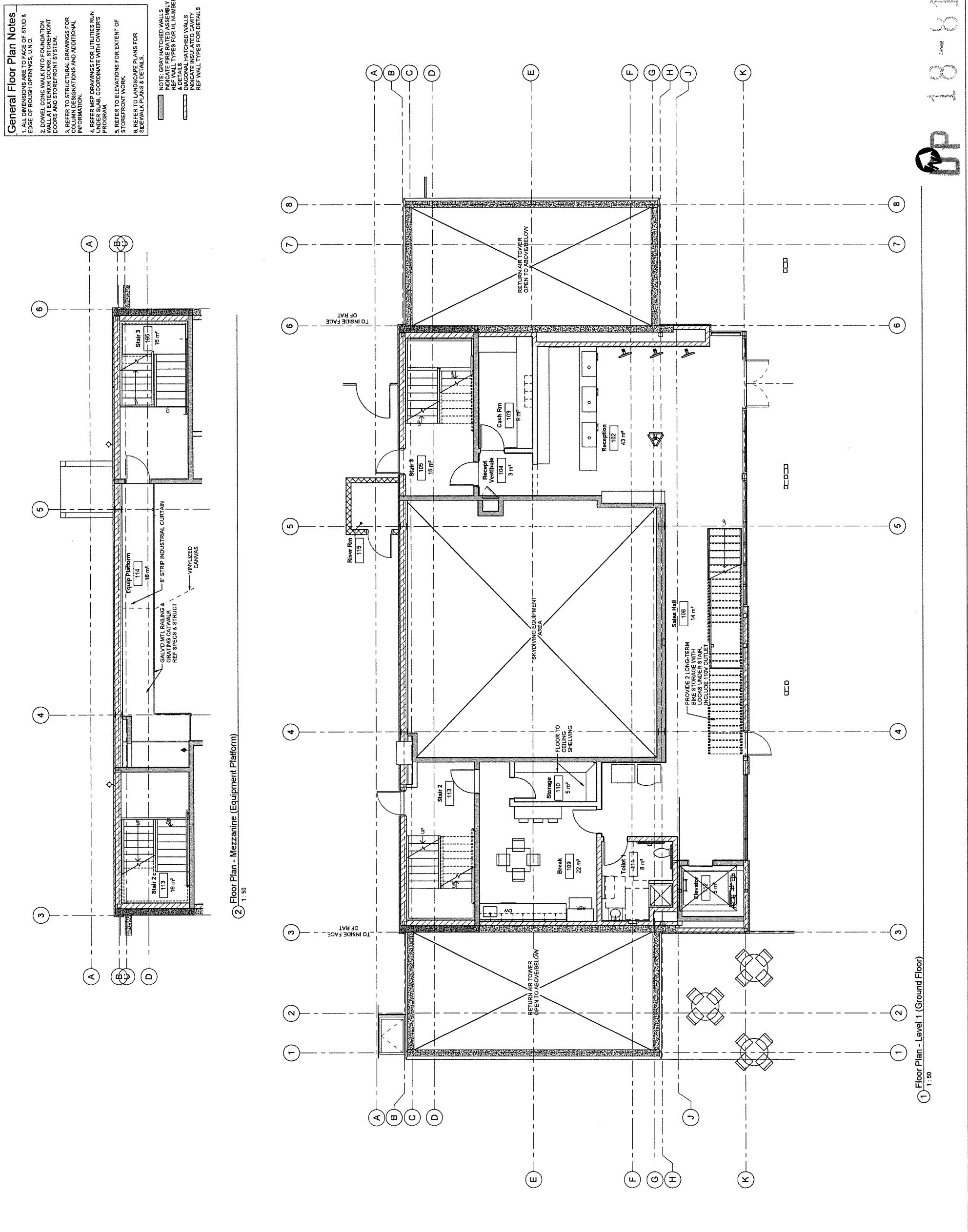
D.P. 18

W

6 6 - 10

SHEET:

1 OF 1



6 - 12

A2.2
 DP 100-86
 OF: 2 SHEETS

Floor Plan - Level 2
 1:50

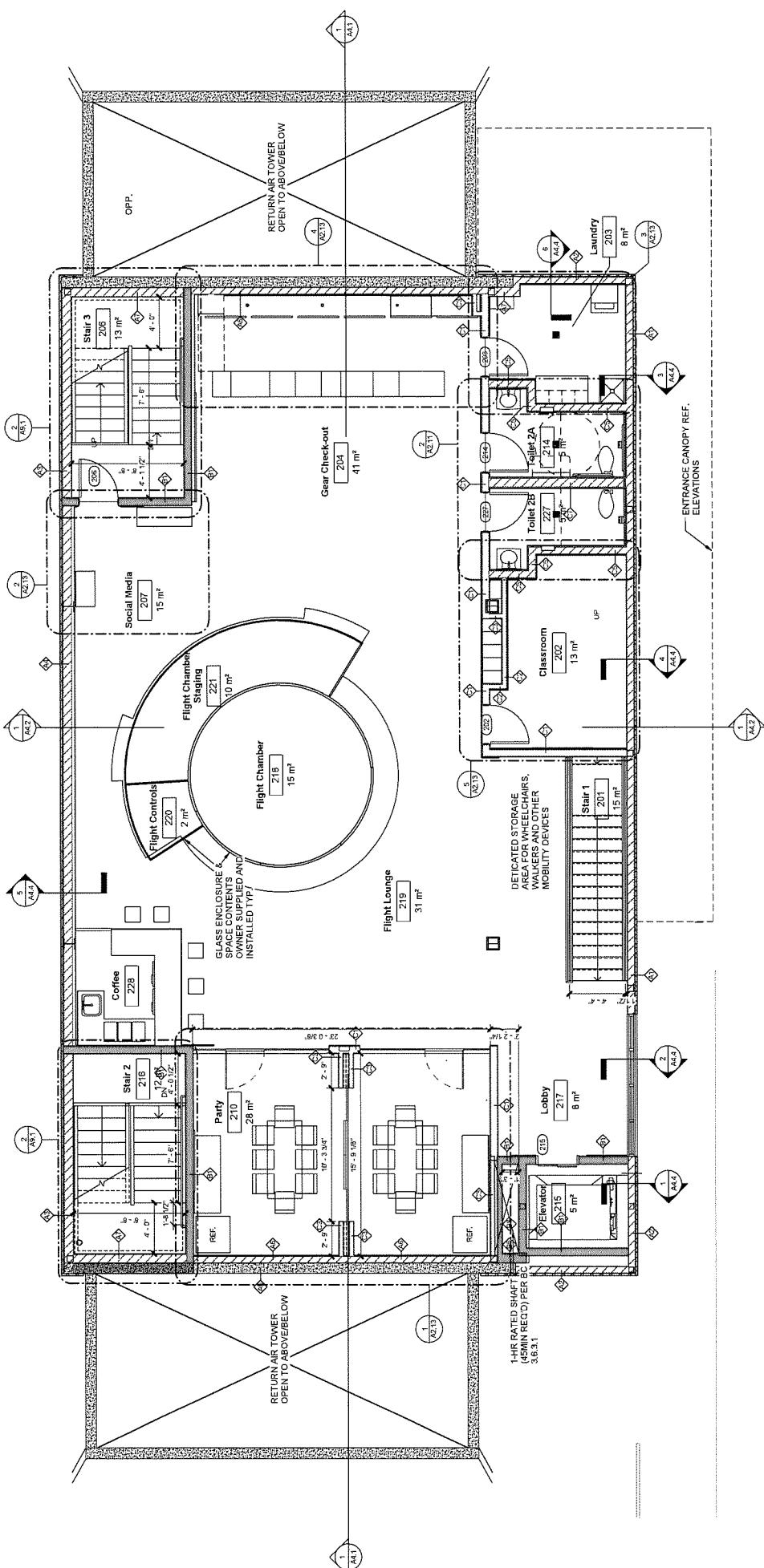
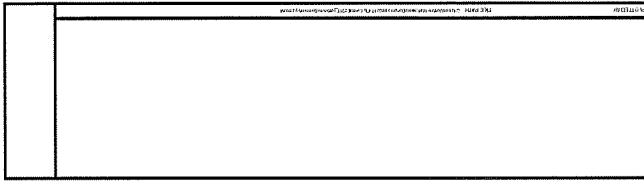
Floor Plan - Level 2
 I-FLY VANCOUVER LTD.
 9151 VAN HORNE WAY
 RICHMOND, BC V6X 1W2

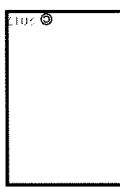
General Floor Plan Notes

1. ALL DIMENSIONS ARE TO PLACE OF STUD & EDGE OF ROUGH OPENINGS IF UNO.
2. DOWEL CONCRETE WALK INTO FOUNDATION WALL AT EXTERIOR DOORS, STOREFRONT DOORS AND STOREFRONT SYSTEM.
3. REFER TO STRUCTURAL DRAWINGS FOR COLUMN RESISTANCES AND ADDITIONAL INFORMATION.
4. REFER TO MEP DRAWINGS FOR UTILITIES RUN UNDER SLAB COORDINATE WITH OWNER'S PROGRAM.
5. REFER TO ELEVATIONS FOR EXTENT OF STOREFRONT WORK.
6. REFER TO LANDSCAPE PLANS FOR SIDEWALK PLANS & DETAILS.

NOTE: GRAY HATCHED WALLS
 INDICATE FIRE RATED ASSEMBLY
 REF. WALL TYPES FOR U.L. NUMBERS
 & DETAILS.
 DASHED OR HATCHED WALLS
 INDICATE INSULATED CAVITY
 REF. WALL TYPES FOR DETAILS.

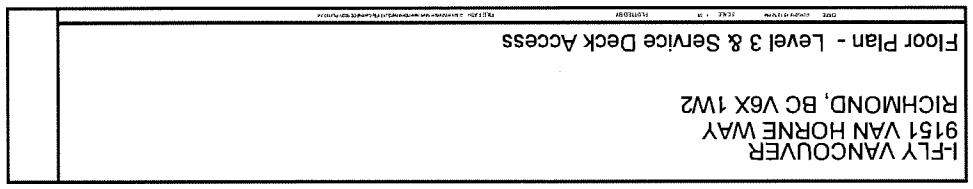
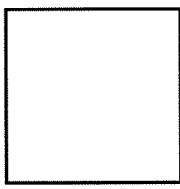
MARK	DATE	DESCRIPTION





REVISIIONS			
MARK	DATE	DESCRIPTION	

DRAWN:	IR
CHECKED:	DF
JOB NO:	5217



Floor Plan - Level 3 & Service Deck Access

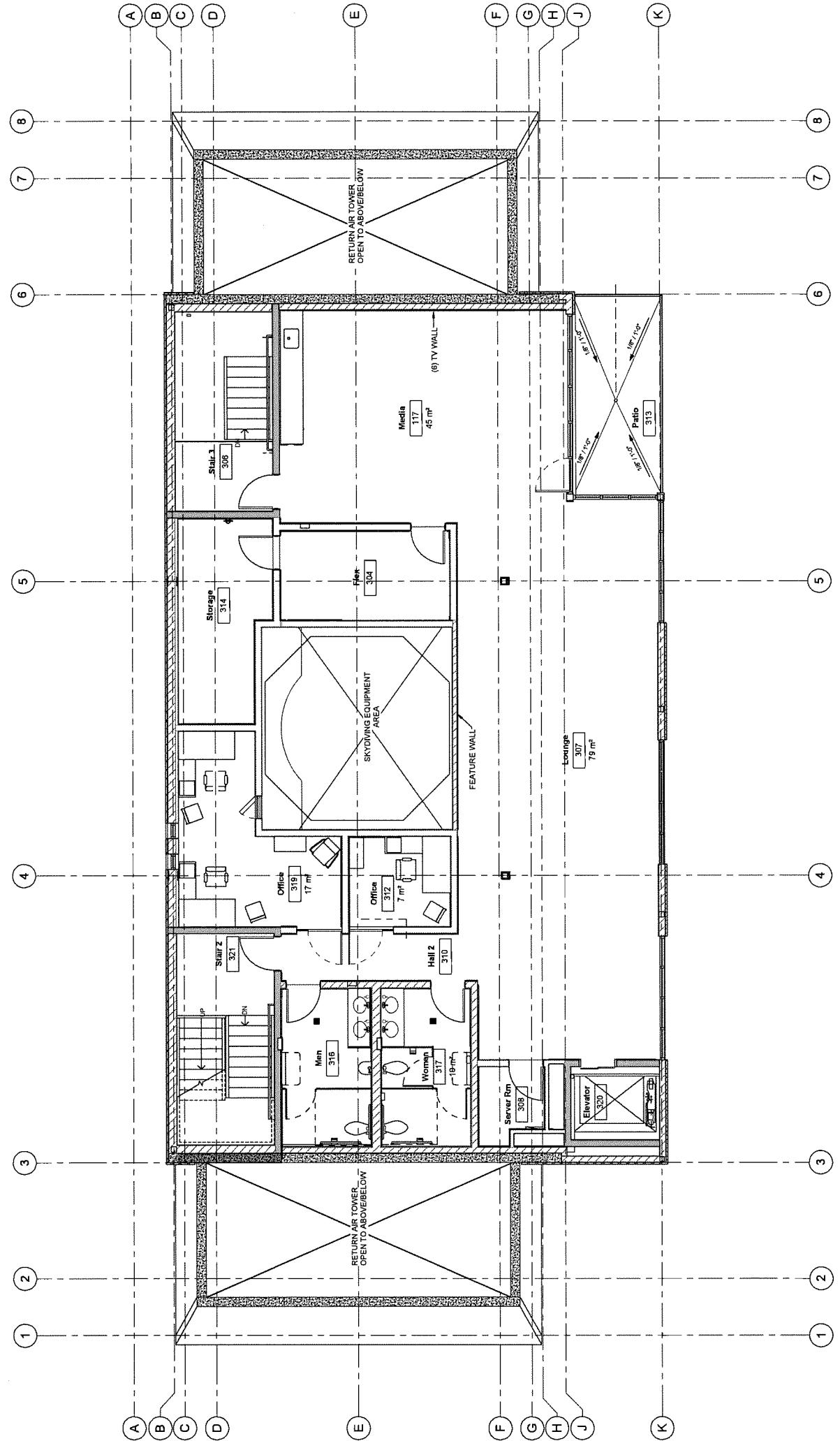
9151 VAN HORNE WAY
RICHMOND, BC V6X 1W2

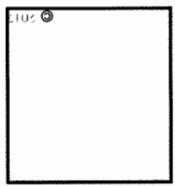
A2.3

SHEET:

596

6-8





REVISIONS		
MARK	DATE	DESCRIPTION

DRAWN: IR
CHECKED: DF
JOB NO: 5217

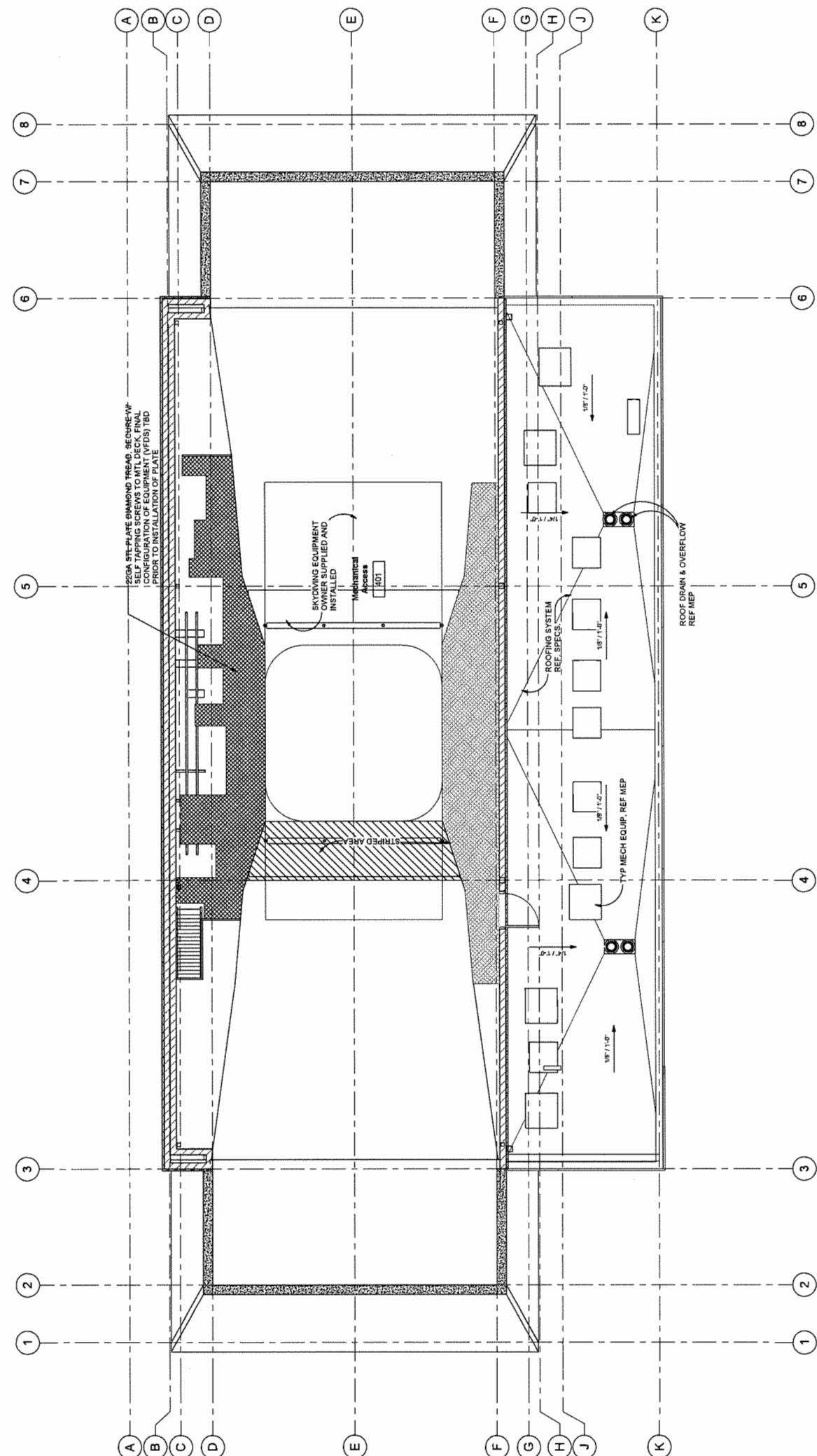
Floor Plan - Penthouse Level
9151 VAN HORNE WAY
RICHMOND, BC V6X 1W2
LFLY VANCOUVER

SHEET:

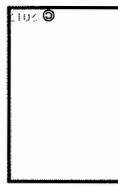
A2.4

14
SHEET:
A2.6
OF 6 SHEETS

DP 18-815



① Floor Plan - Penthouse Level
1:50



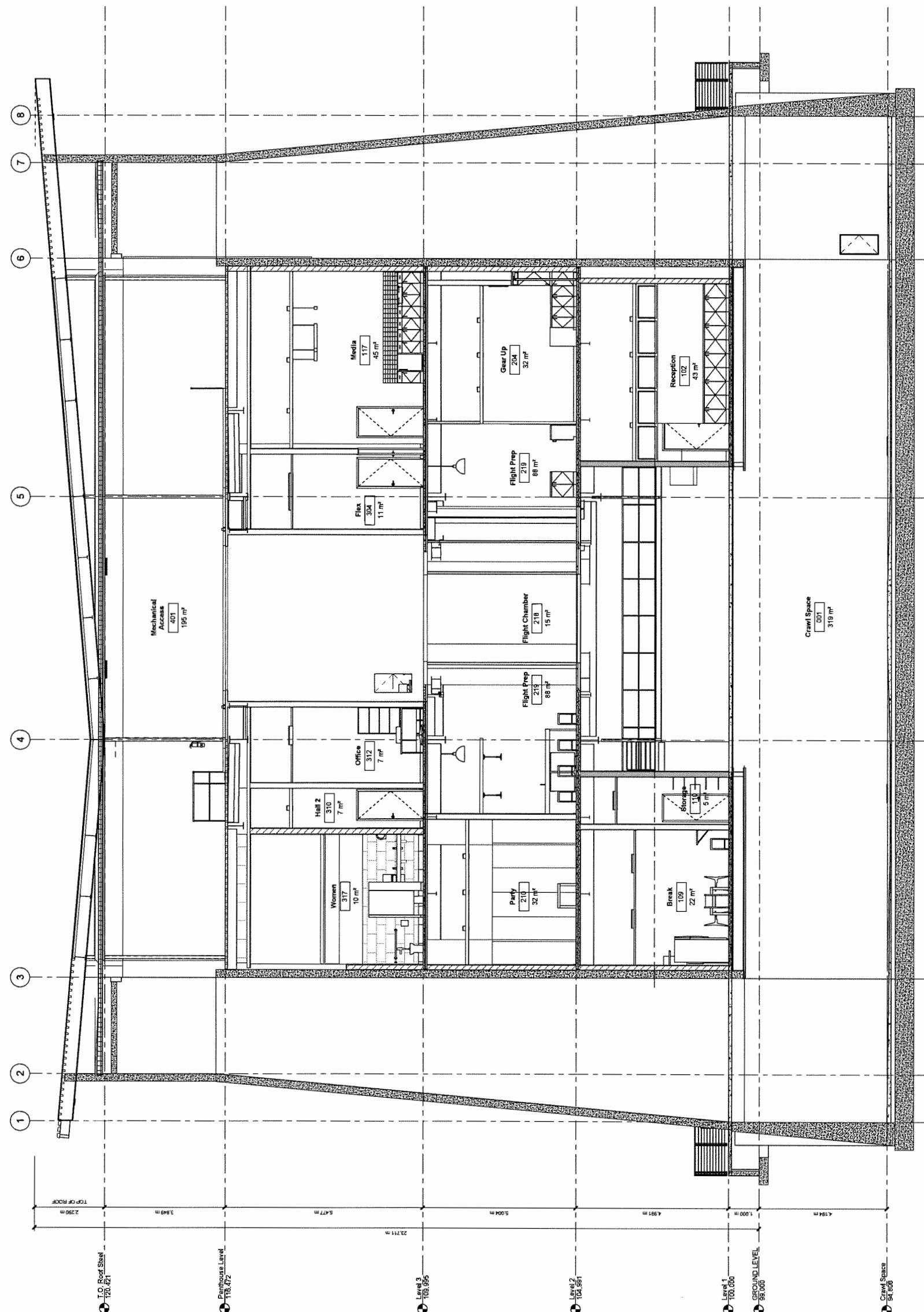
REVISIONS			
MARK	DATE	DESCRIPTION	

DRAWN: IR
CHECKED: DF
JOB NO: 5217



Building Sections
9151 VAN HORNE WAY
RICHMOND, BC V6X 1W2
LFLY VANCOUVER LTD

SHEET: 15 OF 15
A4.1



(1) LONGITUDINAL SECTION
1:50

UP 43-015966-15

DP 18-81

A4.3

5966

SHEET:

OF

Building Sections

9151 VAN HORNE WAY

RICHMOND, BC V6X 1W2

MARK	DATE	DESCRIPTION
REVISED		

DRAWN:

IR

DF

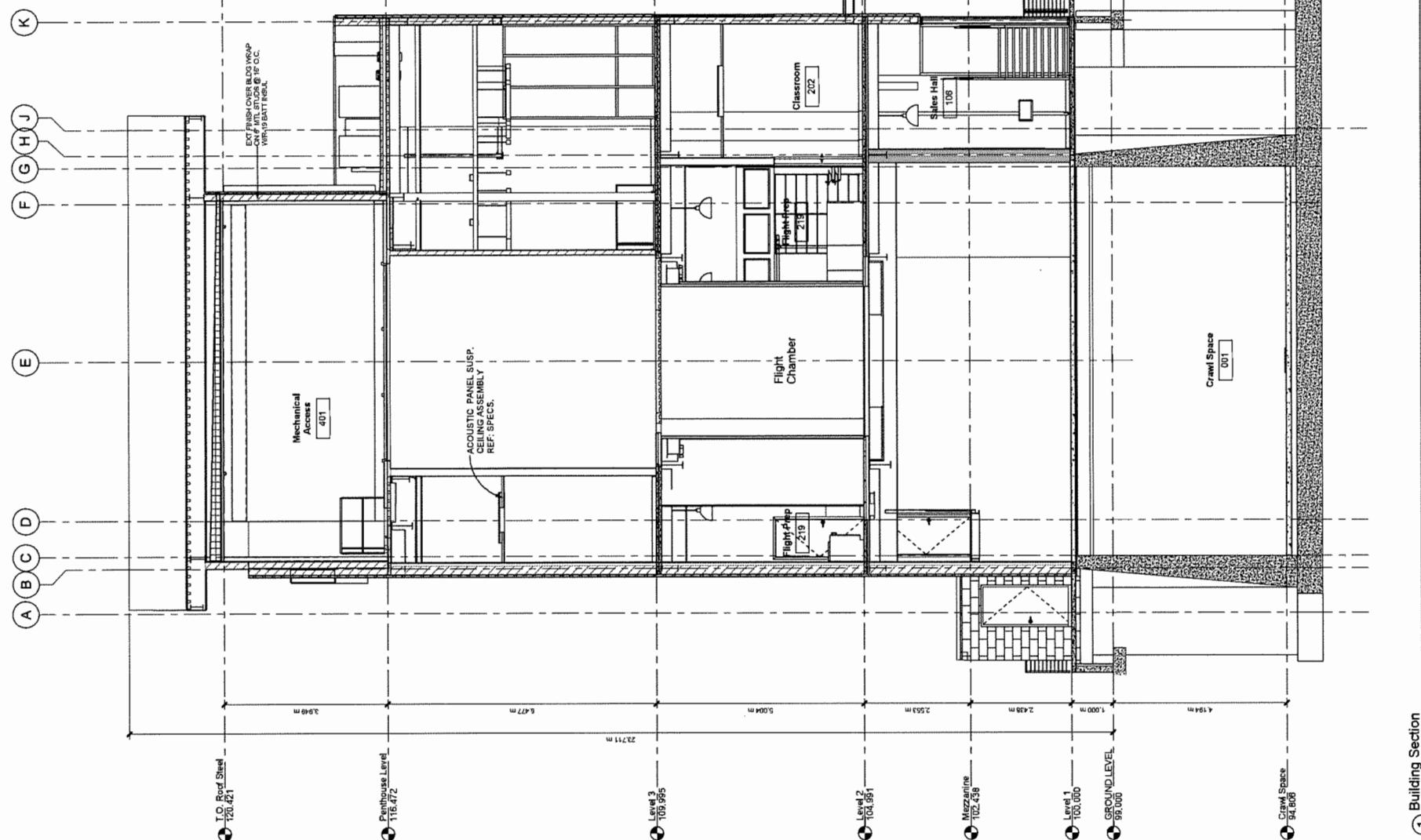
CHECKED:

DF

5217

JOB NO:

2017



(1) Building Section

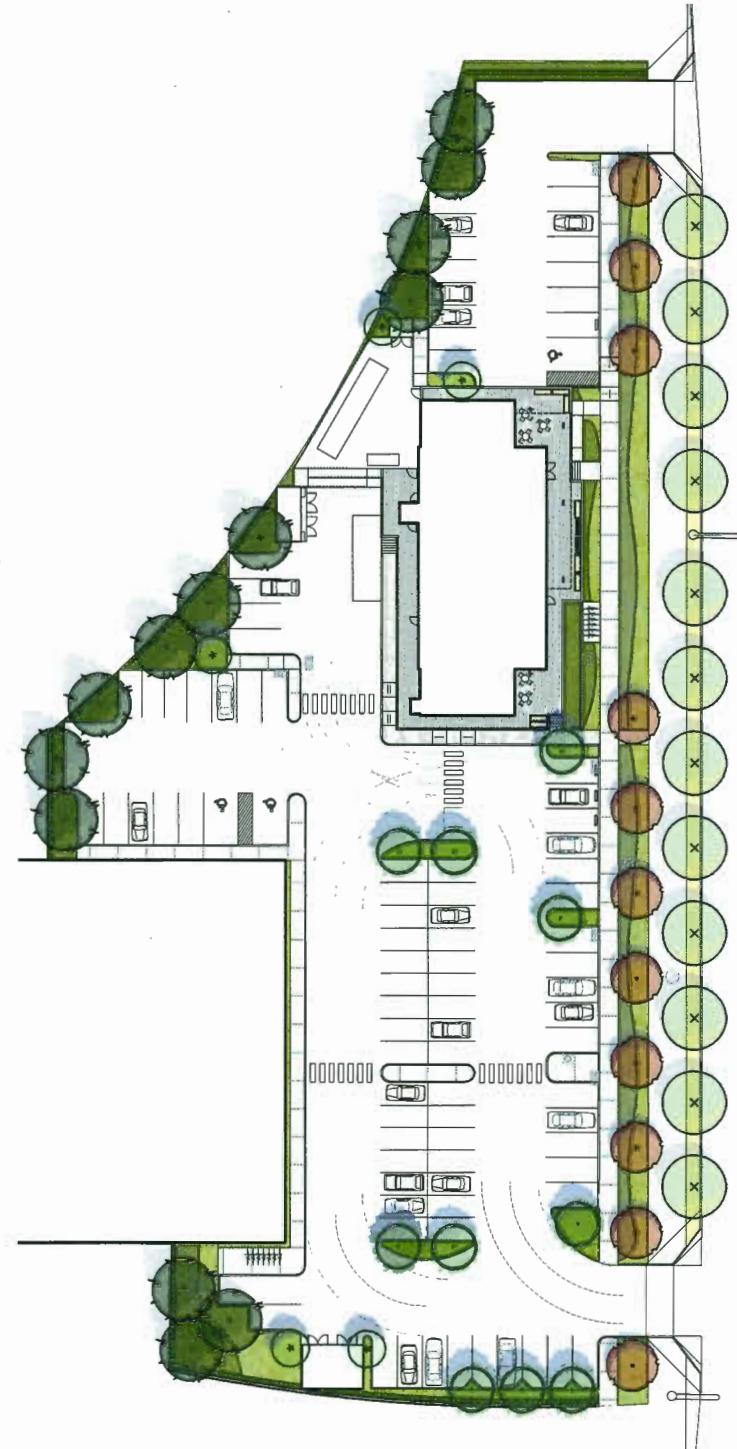
1:50

THE CONTRACTOR IS RESPONSIBLE FOR
DETERMINING THE EXISTENCE, LOCATION, AND
ELEVATION OF ALL UTILITIES AND / OR
CONCEALED STRUCTURES, AND IS
RESPONSIBLE FOR NOTIFYING THE
APPROPRIATE COMPANY, DEPARTMENT OR
PERSON(S) OF ITS INTENTION TO CARRY OUT ITS
OPERATIONS.

I FLY

RICHMOND, BRITISH COLUMBIA

RE-ISSUED FOR DEVELOPMENT PERMIT APPLICATION



LANDSCAPE DRAWING INDEX

DRAWING INDEX	
SHEET No.	SHEET NAME
L.0.0	COVER SHEET & DRAWING LIST
L.1.0	OVERALL SITE PLAN
L.2.0	LANDSCAPE MATERIALS & FURNISHINGS
L.2.1	PLANTING PLAN - WEST
L.2.2	PLANTING PLAN - EAST
L.3.0	LANDSCAPE DETAILS - SOFTSCAPE
L.3.1	LANDSCAPE DETAILS - SECTIONS

GENERAL NOTES

ALL LANDSCAPE ARCHITECTURAL DRAWINGS IN THIS PACKAGE SHALL BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS, DETAILS, SPECIFICATIONS, AND/OR OTHER CORRESPONDANCE THAT MAY BE ISSUED DURING THE COURSE OF THE CONTRACT.

IF A DISCREPANCY OCCURS BETWEEN THE DRAWINGS AND THE SPECIFICATIONS OR ANY OTHER DOCUMENT ASSOCIATED WITH THE PROJECT, THE CONFLICT SHALL BE REPORTED IN WRITING TO THE OWNER OR OWNERS REPRESENTATIVE TO OBTAIN CLARIFICATION AND APPROVAL BEFORE PROCEEDING WITH WORKS.

ALL EXISTING INFORMATION IS BASED ON AVAILABLE RECORDS AND SHALL NOT BE CONSTRUED TO BE COMPLETE OR ACCURATE. THE CONTRACTOR SHALL VISIT THE SITE TO VERIFY THE TRUE EXISTING CONDITIONS. ANY UNCLEAR ISSUES SHALL BE CLARIFIED WITH THE OWNER OR OWNERS REPRESENTATIVE. NO CLAIM SHALL BE ALLOWED FOR EXTRAS WHICH MAY ARISE THROUGH NEGLECT OF THIS ADVICE.

THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXISTENCE, LOCATION, AND ELEVATION OF ALL UTILITIES AND CONCEALED STRUCTURES, AND IS RESPONSIBLE FOR NOTIFYING THE APPROPRIATE COMPANY, DEPARTMENT OR PERSON(S) OF ITS INTENTION TO CARRY OUT ITS OPERATIONS.

LAYOUT OF HARDCAPE, SITE FURNITURE, GROWING MEDIA, TREES, PLANTING, AND ALL OTHER MATERIALS IS TO BE STAKED OUT AND APPROVED BY OWNER OR OWNERS REPRESENTATIVE.
ALL PLANTING SHALL BE IN ACCORDANCE WITH THE CANADIAN LANDSCAPE STANDARD, LATEST EDITION.

REVISIONS

5	RE-ISSUED FOR DP APPLICATION	18-10-19
4	RE-ISSUED FOR DP APPLICATION	18-10-15
3	RE-ISSUED FOR DP APPLICATION	18-09-24
2	RE-ISSUED FOR DP APPLICATION	18-08-10
1	ISSUED FOR DEVELOPMENT	18-02-27
	PERMIT APPLICATION	

Scale: _____ N/A
Drawn: _____ PMIDS
Reviewed: _____ DS
Project No. _____ 06-006

COVER SHEET
AND DRAWING LIST

DP 10-01906-17
100.0

CONNECT LANDSCAPE ARCHITECTURE INC.
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LOCATION, AND ELEVATION OF UTILITIES AND / OR
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OPERATIONS.



IFLY RICHMOND

Richmond, British Columbia
Scale: 1:200
Drawn: PM
Reviewed: DS
Project No. 06-606

AYOUT PLAN

DP 18-8 15966-18
L1.0

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OPERATIONS.

PLANT LIST

TREES QTY.	BOTANICAL NAME	COMMON NAME	SIZE
14	Acer rubrum 'Scarlet Sentinel'	Scarlet Sentinel Maple	6cm cal., B&B 6 ft standard minimum
5	Stewartia pseudocamellia	Japanese Stewartia	6cm cal., B&B
11	Liquidambar styraciflua 'Worplesdon'	Worplesdon Sweetgum	7cm cal., B&B
12	Street Tree	Street tree species and size as per city of Richmond	



SHRUBS QTY.	BOTANICAL NAME	COMMON NAME	SIZE
298	Buxus microphylla 'Winter Beauty'	Boxwood	#Boxwood
366	Polystichum munitum	Western Sword Fern	#2 pot
71	Rhododendron 'Hotie'	Yellow Rhododendron	#5 pot
612	Spiraea x bumalda 'Goldflame'	Goldflame Spirea	#2 pot
331	Sisyrinchium	Mexican Feather Grass	#2 pot

GROUND COVERS AND VINES QTY. (m²)	BOTANICAL NAME	COMMON NAME	SIZE
161	Arctostaphylos uva-ursi	Bearberry	4'(10cm) pot
78	Mahonia repens	Creeping Oregon Grape	4'(10cm) pot
56	Rubus calycinoides	Emerald Carpet	4'(10cm) pot

5	RE-ISSUED FOR DP APPLICATION	18-10-19
4	RE-ISSUED FOR DP APPLICATION	18-10-15
3	RE-ISSUED FOR DP APPLICATION	18-9-24
2	RE-ISSUED FOR DP APPLICATION	18-8-10
1	ISSUED FOR DEVELOPMENT PERMIT APPLICATION REVISIONS	18-02-27

PLANT MATERIALS



SHRUBS



GROUND COVERS, FERNS, AND VINES



PERENNIALS, BULBS AND ANNUALS



BENCH RACK MODEL
MODEL: SCR 100Z, SURFACE MOUNT
SUPPLIER: MAGLIN (1.855.944.0330)
FINISH: POWDERCOAT SILVER FINTEX

UNIT PAVING

Richmond, British Columbia
Scale: As Shown
Drawn: PM
Reviewed: DS
Project No. 06-606

PLANTING MATERIALS

IFLY RICHMOND

Richmond, British Columbia
Scale: As Shown
Drawn: PM
Reviewed: DS
Project No. 06-606

DP 18-815966-19
L2.0

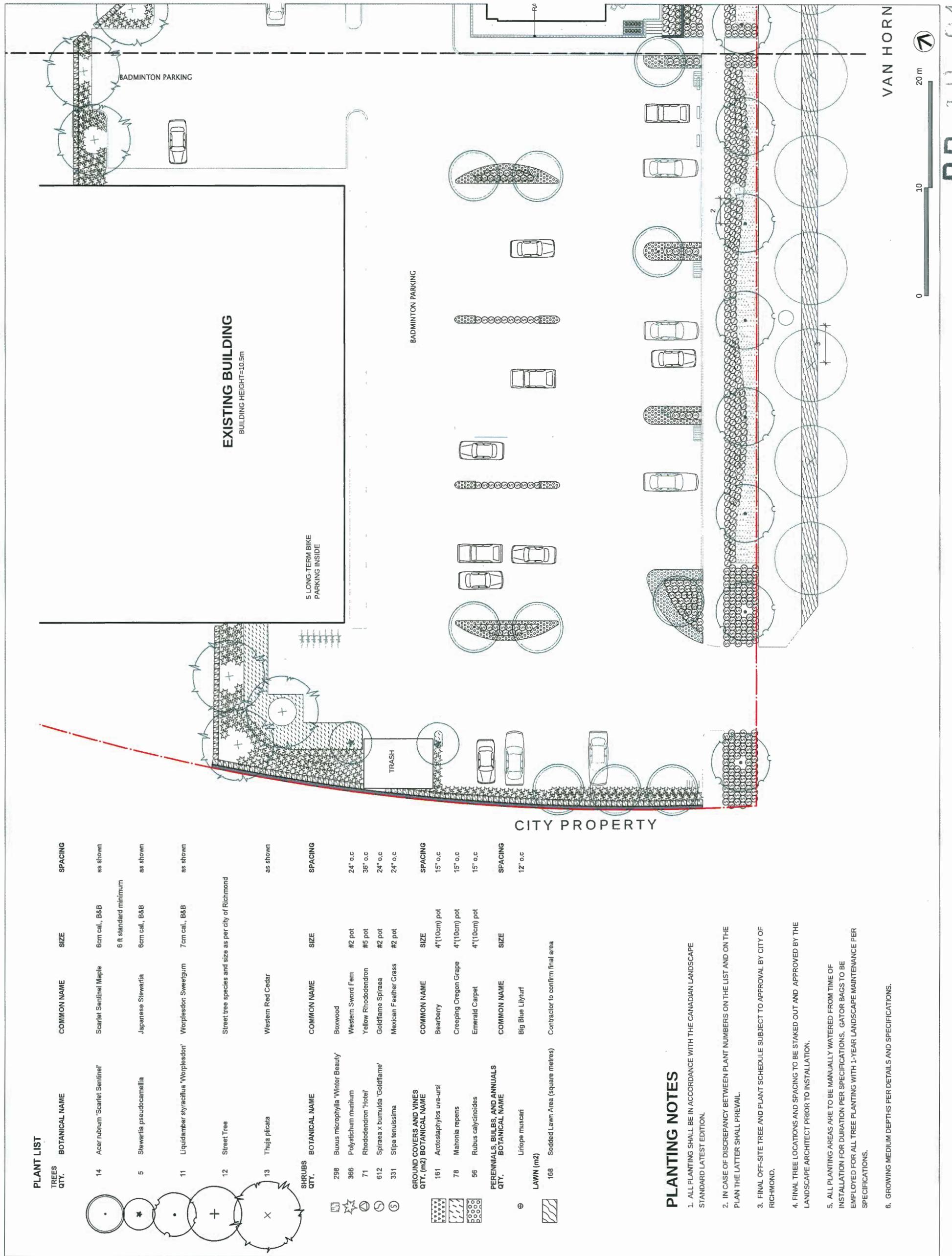
Richmond, British Columbia
Scale: As Shown
Drawn: PM
Reviewed: DS
Project No. 06-606

BIKE RACK MODEL
MODEL: SCR 100Z, SURFACE MOUNT
SUPPLIER: MAGLIN (1.855.944.0330)
FINISH: POWDERCOAT SILVER FINTEX

UNIT PAVING

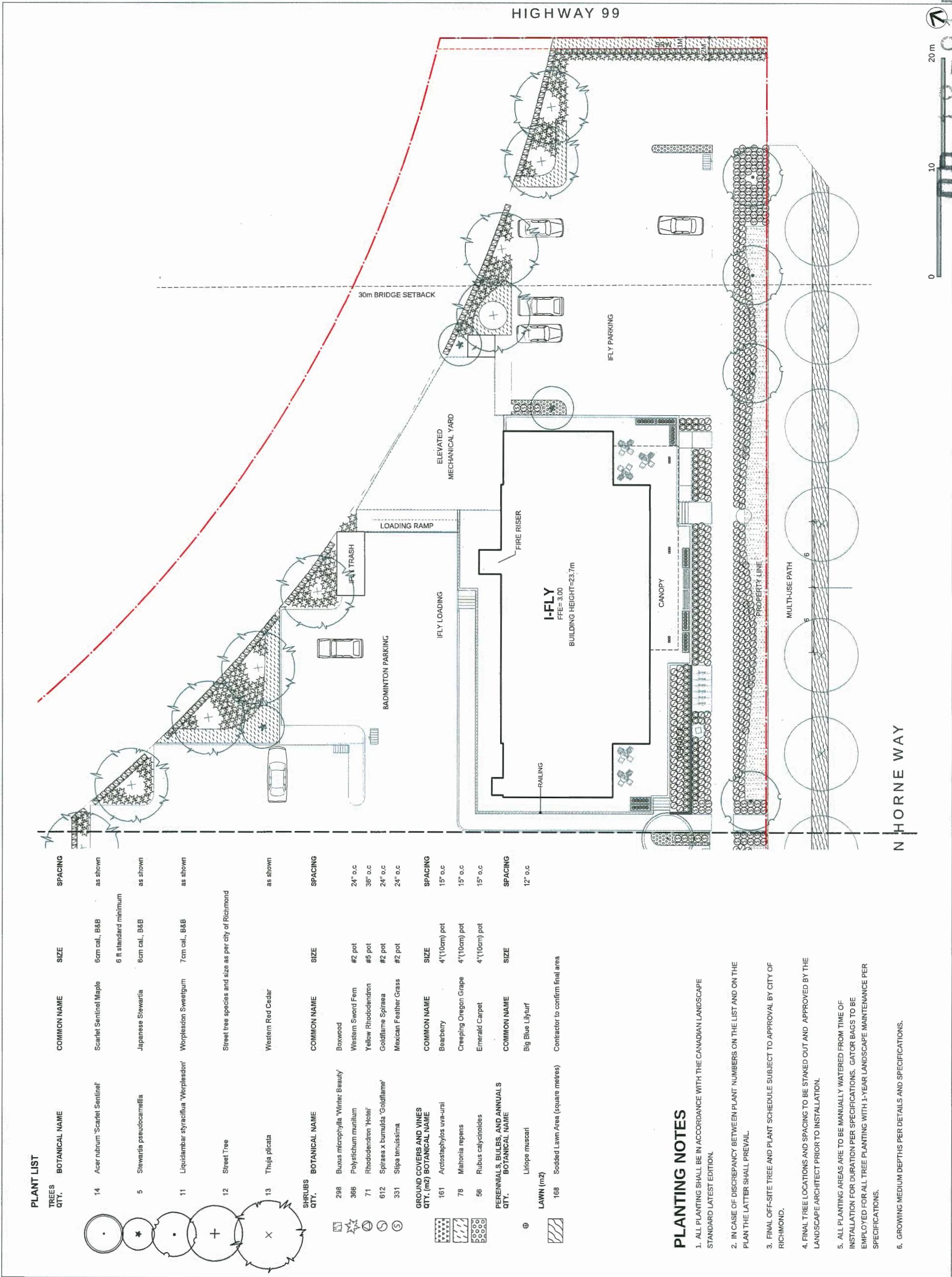
CONNECT LANDSCAPE ARCHITECTURE INC.
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LOCATION, AND ELEVATION OF UTILITIES AND /
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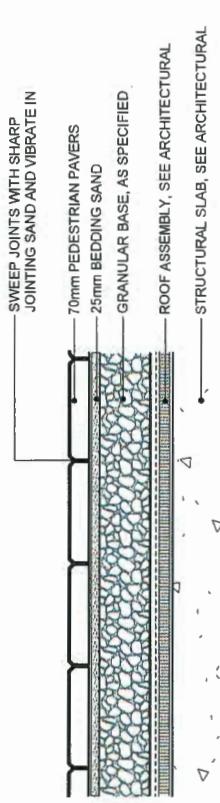
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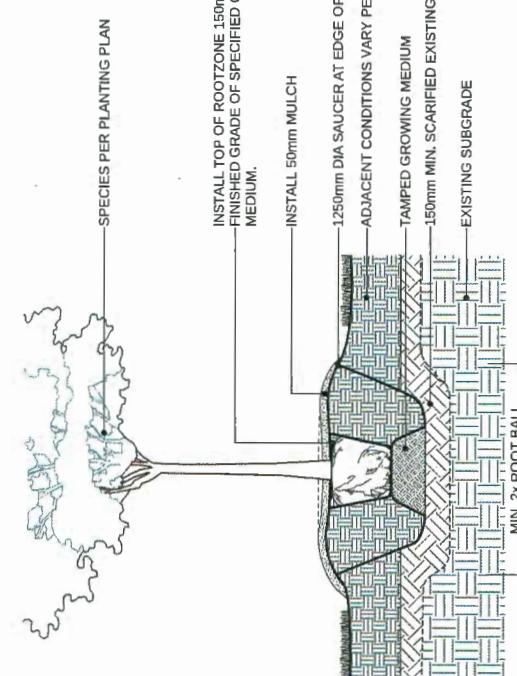
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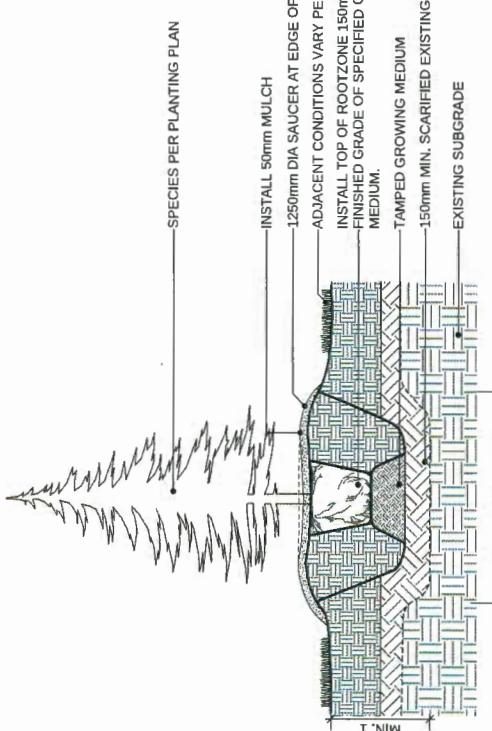


NOTE:
USE CONCRETE HIDDEN EDGE RESTRAINT WHEN PAVERS ARE NOT ADJACENT TO A SOLID EDGE CONDITION.

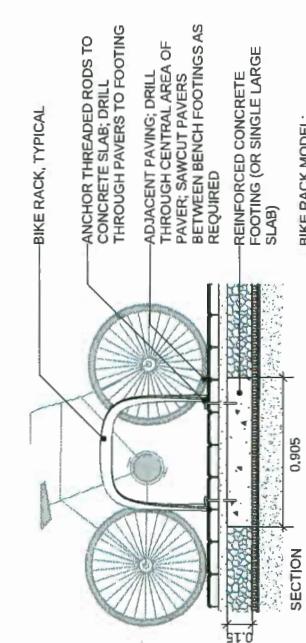
1 PEDESTRIAN UNIT PAVERS ON SLAB (TYPICAL)
Scale: 1:10



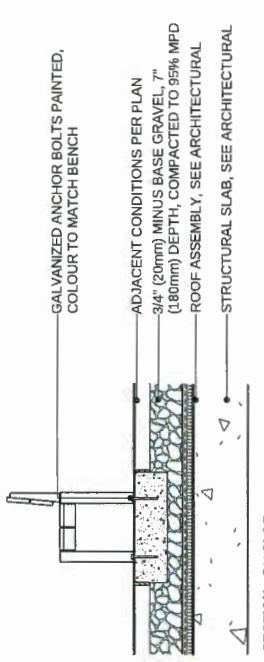
2 DECIDUOUS TREE PLANTING ON GRADE (TYPICAL)
Scale: 1:20



3 CONIFEROUS TREE PLANTING ON GRADE (TYPICAL)
Scale: 1:20



4 BIKE RACK (TYPICAL)
Scale: 1:20



5 BENCH (TYPICAL)
Scale: 1:20

REVISIONS
4 RE-ISSUED FOR DP APPLICATION 18-10-15
3 RE-ISSUED FOR DP APPLICATION 18-09-24
2 RE-ISSUED FOR DP APPLICATION 18-08-10
1 ISSUED FOR DEVELOPMENT 18-02-27
PERMIT APPLICATION
REVISIONS

IFLY RICHMOND

Richmond, British Columbia
Scale: As Shown
Drawn: PM
Reviewed: DS
Project No. 06-606

DETAILS

DP 18-815966-22

CONNECT LANDSCAPE ARCHITECTURE INC.
DOES NOT GUARANTEE THE EXISTENCE,
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OR CONCEALED STRUCTURES AT THE PROJECT
SITE.

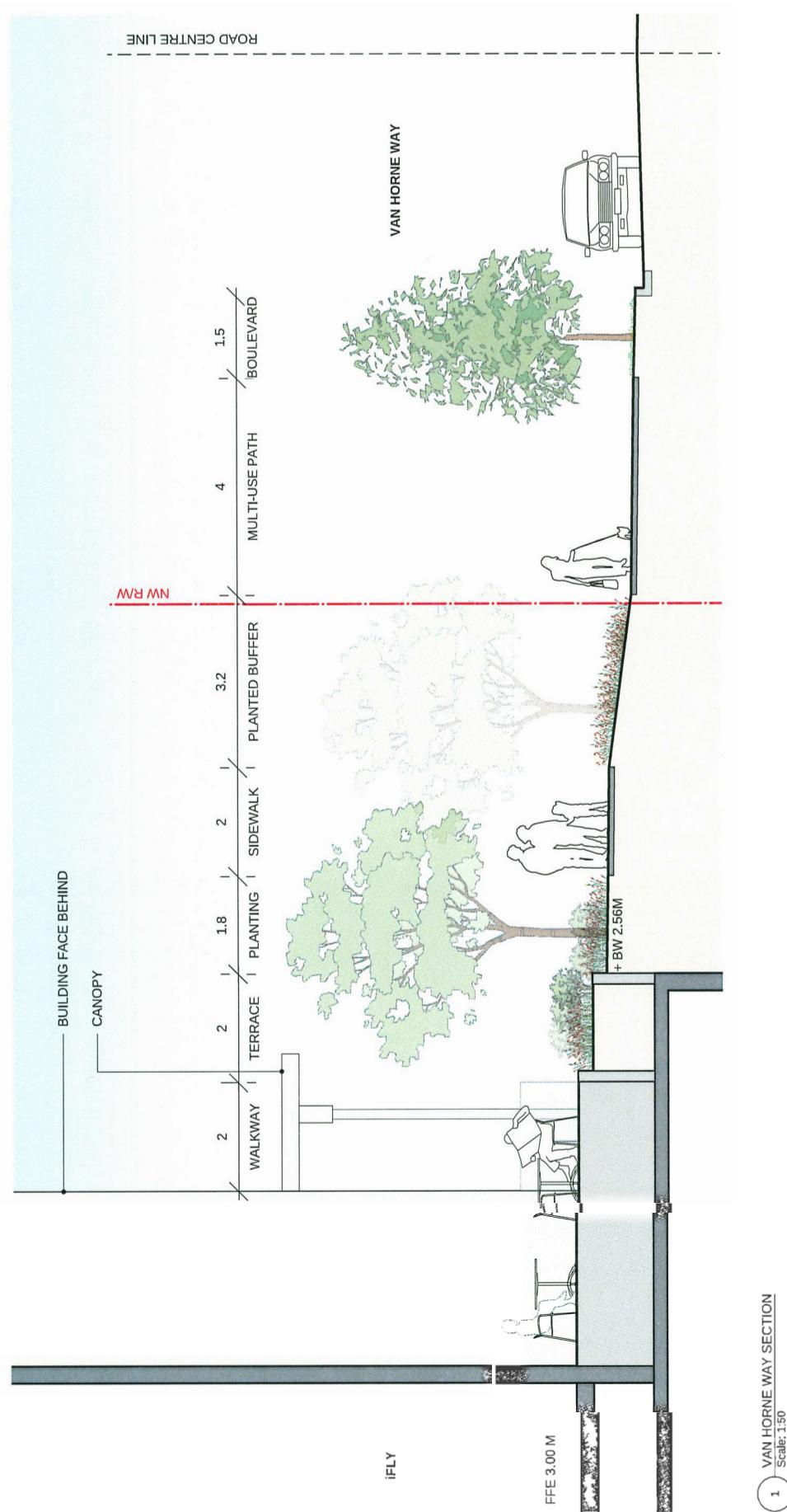
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ELEVATION OF ALL UTILITIES AND / OR
CONCEALED STRUCTURES, AND IS
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PERSON(S) OF ITS INTENTION TO CARRY OUT ITS
OPERATIONS.

- 4 RE-ISSUED FOR DP APPLICATION 18-10-15
3 RE-ISSUED FOR DP APPLICATION 18-9-24
2 RE-ISSUED FOR DP APPLICATION 18-8-10
1 ISSUED FOR DEVELOPMENT PERMIT APPLICATION 18-02-27
REVISIONS

IFLY RICHMOND

Richmond, British Columbia
Scale: As Shown
Drawn: PM
Reviewed: DS
Project No. 06-606

SECTION



D P L3.1
966 - 215

Parvin-Clauss

SIGN COMPANY

Design • Fabrication • Installation • Maintenance
1651ubway Drive • Carol Stream, Illinois 60188
Tel / 630-510-2020 • Fax / 630-510-2074
e-mail / signs@parvinclauss.com
www.parvinclauss.com

PROJECT:



CONSTRUCTION • ARCHITECTURE



iFly
9151 Van Horne Way
Richmond, BC V6X 1W2
Canada

CUSTOMER APPROVAL:

DATE

AUTHORIZED SIGNATURE

REPRESENTATIVE

DRAWN BY

DATE

SCALE

SHEET NO.

WORK ORDER

FILE NAME

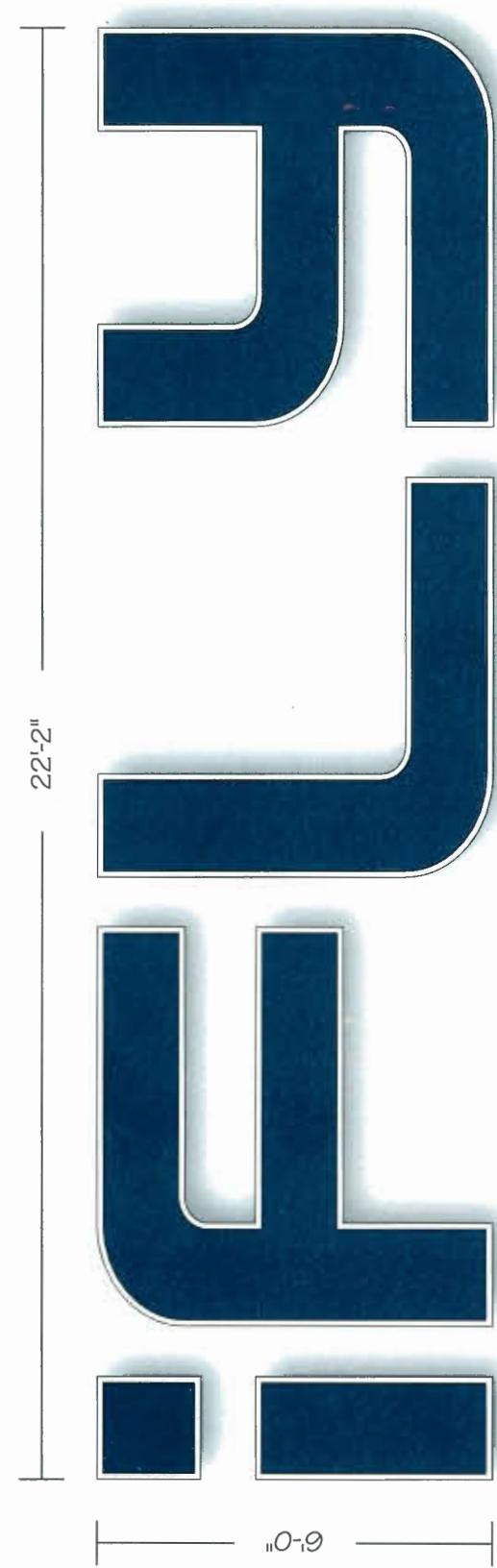
REVISIONS:

1	7.26.18 - 5 size
2	8.10.18
3	
4	
5	
6	
7	
8	

This sign is intended to be installed in accordance with the requirements of Article 600 of the National Electrical Code and/or other applicable local codes. This includes proper grounding and bonding of the sign.

DP 18-815966-Reference

IFLY / iFLY 6' CHANNEL LETTERS / REAR ELEVATION

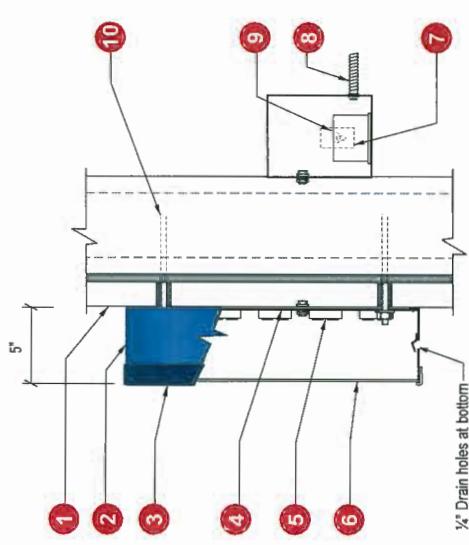
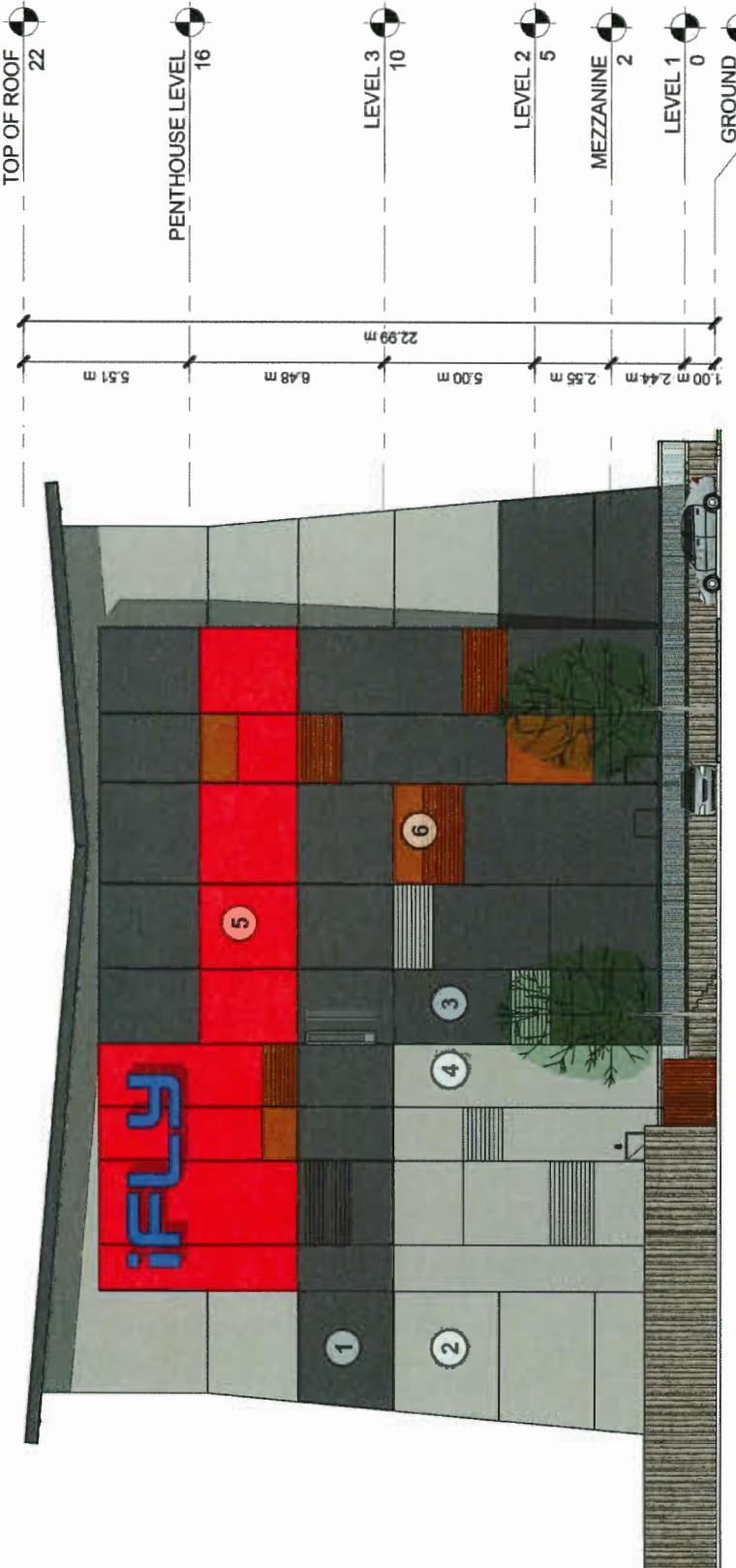


Power Requirements:

- 1 Dedicated 20 amp circuit
- 120 Volt
- Timer installed next to breaker box
- J-Box installed within 6' of sign location
- Power installed above roofline

Specifications:

1. Existing Facade: Varies Per Location
2. .040 Aluminum letter returns painted to match iFLY Color Specifications
3. .125" x 1" trim cap to match iFLY Color Specifications
4. .063 Aluminum backs
- (Interior of sign can painted white for maximum illumination)
5. White LEDs
6. 3/16" White Acrylic Faces with 1st surface applied vinyl
7. Waterproof disconnect switch per UL Specifications
8. Primary electrical feed
9. Power Supply
10. Mounting hardware to suit building construction



Section LED Individual Channel Letters
Front-Lit (Remote)
Scale: N.T.S.

This sign is built to UL Standards
for operation in North America.

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Tel / 630-510-2020 • Fax / 630-510-2074
e-mail / signs@parvinclauss.com
www.parcnclausss.com

PROJECT:

CONSTRUCTION • ARCHITECTURE

iFly

9151 Van Horne Way
Richmond, BC V6X 1W2
Canada

CUSTOMER APPROVAL:

DATE

AUTHORIZED SIGNATURE

REPRESENTATIVE

Lisa Staszak / LS

DRAWN BY

Bill Marlow

DATE

7/12/18

SCALE

3/16" = 1'

SHEET NO.

2 of 5

WORK ORDER

800087

FILE NAME

PWCBOO87

REVISIONS:

1 7/26/18 - size

2 8/10/18

3

4

5

6

7

8

INDOOR SKYDIVING

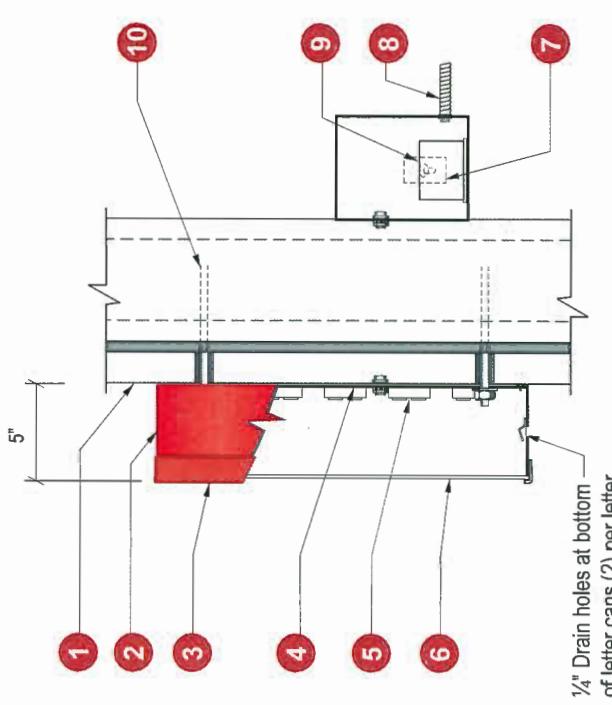
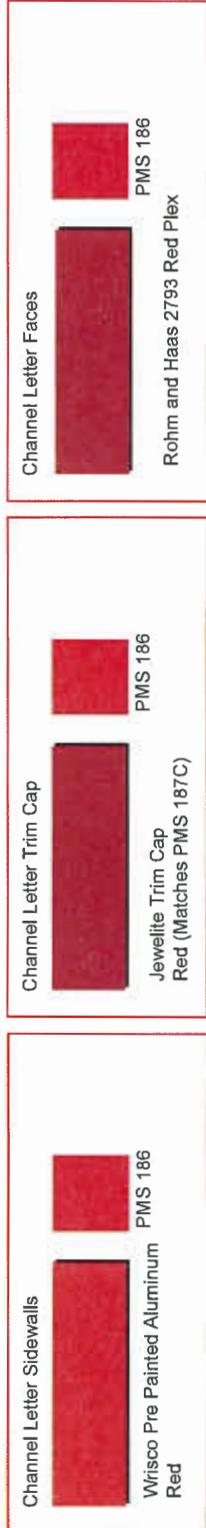
43'-1"

iFLY / INDOOR SKYDIVING 3'-6" REAR ELEVATION**Power Requirements:**

- 1 Dedicated 20 amp circuit
- 120 Volt
- Timer installed next to breaker box
- J-Box installed within 6' of sign location
- Power installed above roofline

Specifications:

1. Existing Facade: Varies Per Location
2. .040 Aluminum letter returns painted to match iFly Color Specifications
3. .125" x 1" trim cap to match iFly Color Specifications
4. 063 Aluminum backs
(interior of sign can painted white for maximum illumination)
5. White LEDs
6. 3/16" White Acrylic Faces with 1st surface applied vinyl
7. Waterproof disconnect switch per UL Specifications
8. Primary electrical feed
9. Power Supply
10. Mounting hardware to suit building construction



Section LED Individual Channel Letters
Front-Lit (Remote)
Scale: N.T.S.

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This sign is intended to be installed in accordance with the requirements of Article 600 of the National Electrical Code and/or other applicable local codes. This includes proper grounding and bonding of the sign.

DP 10-81596-Reference Plan



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Tel / 630-510-2070 • Fax / 630-510-2074
e-mail / signs@parvinclauss.com
www.parvinclauss.com

PROJECT:



CONSTRUCTION • ARCHITECTURE

PARKWAY

iFly
9151 Van Horne Way
Richmond, BC V6X 1W2
Canada

CUSTOMER APPROVAL:

DATE

AUTHORIZED SIGNATURE

REPRESENTATIVE

Lisa Staszak / LS

DRAWN BY

Bill Marlow

DATE

7/12/18

SCALE

3/8" = 1'

WORK ORDER

800087

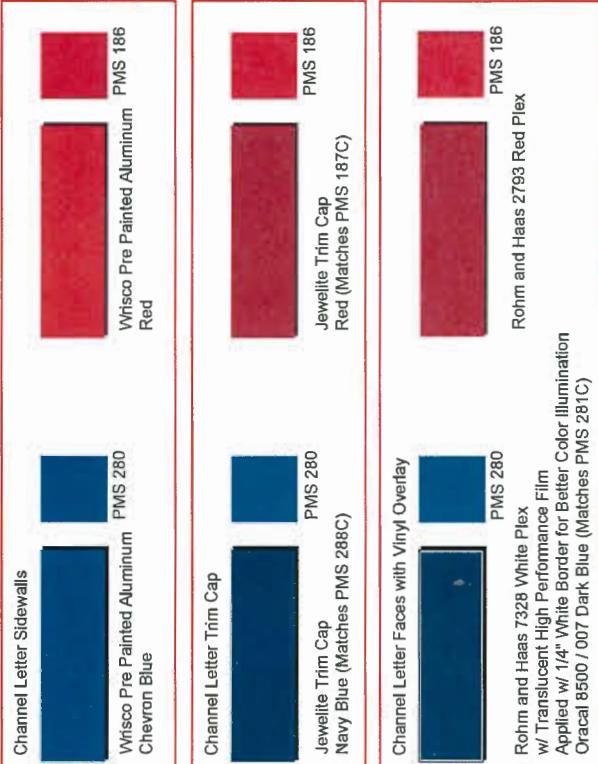
FILE NAME

PWCBOOB7

REVISIONS:

- 1 7.26.18 - add to s.o.w.
- 2 8.10.18
- 3
- 4
- 5
- 6
- 7
- 8

This sign is intended to be installed in accordance with the requirements of Article 600 of the National Electrical Code and/or other applicable local codes. This includes proper grounding and bonding of the sign.



iFLY / iFLY 5' STANDARD / SIDE ELEVATION

23'-6"



Total Square Feet: 1175

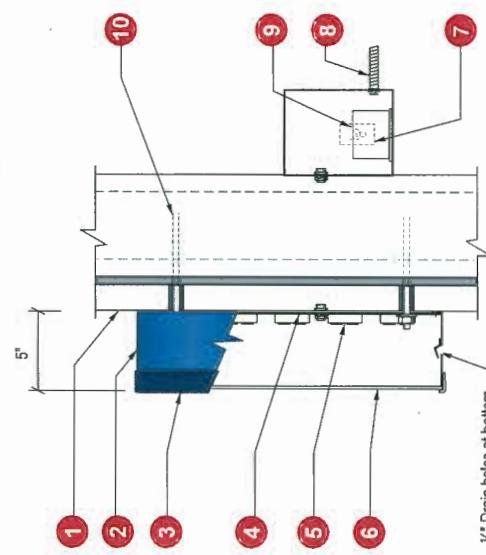
Note: Depending on access signs maybe installed on 2" square tube frames with power supplies installed above roofline.
Frames will be painted to match building facade.

Power Requirements:

- 1 Dedicated 20 amp circuit
- 120 Volt
- Timer installed next to breaker box
- J-Box installed within 6' of sign location
- Power installed above roofline

Specifications:

1. Existing Facade: Varies Per Location
- .040 Aluminum letter returns painted to match iFly Color Specifications
- .125" x 1" trim cap to match iFly Color Specifications
- .063 Aluminum backs
- (interior of sign can painted white for maximum illumination)
5. White LEDs
6. 3/16" White Acrylic Faces with 1st surface applied vinyl
7. Waterproof disconnect switch per UL Specifications
8. Primary electrical feed
9. Power Supply
10. Mounting hardware to suit building construction



Section LED Individual Channel Letters
Front-Lit (Remote)

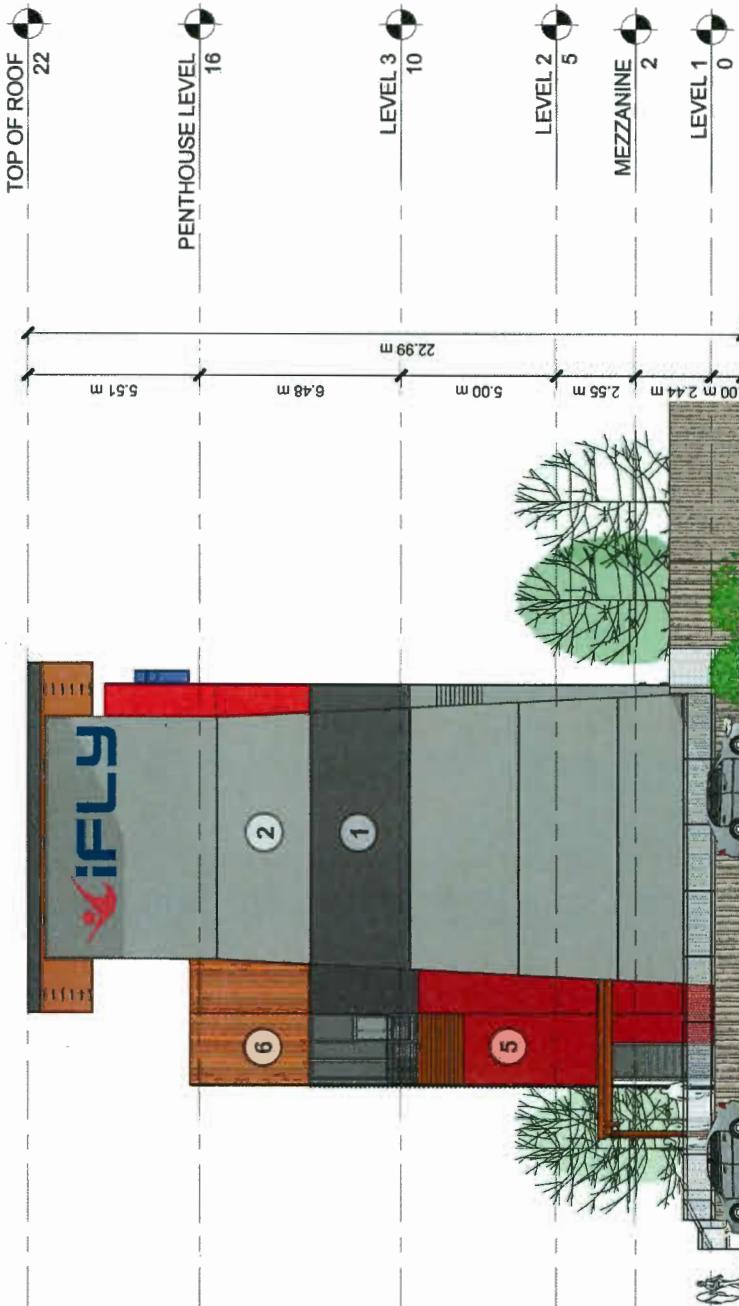
Scale: N.T.S.

This sign is built to UL Standards
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DP 18-815966 - Reference Plan



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PROJECT:



INDOOR SKYDIVING

IFLY / INDOOR SKYDIVING 4' STANDARD FRONT ELEVATION

65'-0"

E



Note: Depending on access signs maybe installed on 2" square tube frames with power supplies installed above roofline.
Frames will be painted to match building facade.

IMPORTANT: If installed on typical rear elevation it is required that the building gutters be 70' apart from inside to inside of gutters.

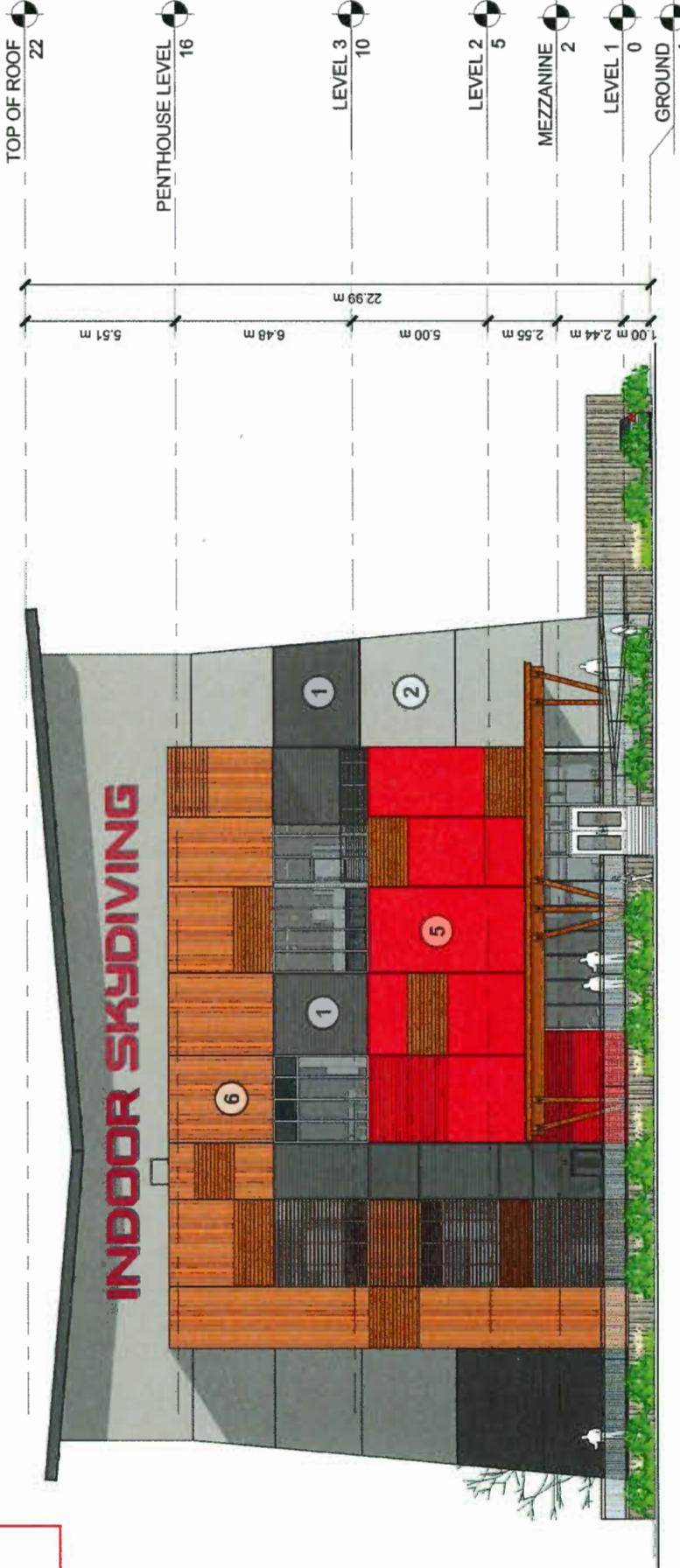
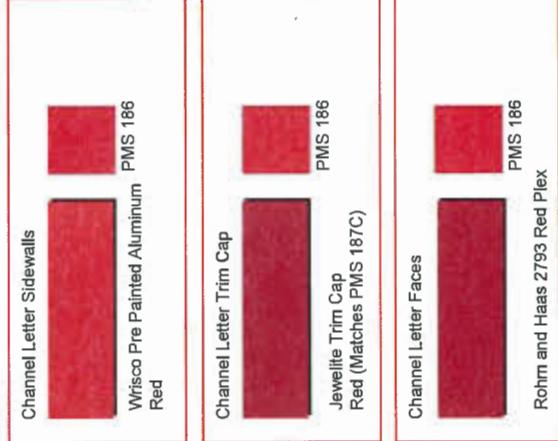
Power Requirements:

- 1 Dedicated 20 amp circuit
- 120 Volt
- Timer installed next to breaker box
- J-Box installed within 6' of sign location
- Power installed above roofline

Specifications:

1. Existing Facade: Varies Per Location
2. .040 Aluminum letter returns painted to match iFly Color Specifications
3. 1.125" x 1" trim cap to match iFly Color Specifications
4. .063 Aluminum backs
- (Interior of sign can painted white for maximum illumination)
5. White LEDs
6. 3/16" White Acrylic Faces with 1st surface applied vinyl
7. Waterproof disconnect switch per UL Specifications
8. Primary electrical feed
9. Power Supply
10. Mounting hardware to suit building construction

Total Square Feet: 260



CUSTOMER APPROVAL:	
DATE	
AUTHORIZED SIGNATURE	Lisa Staszak / LS
REPRESENTATIVE	
DRAWN BY	Bill Marlow
DATE	7.12.18
SCALE	3/16" = 1'
SHEET NO.	4 of 5
WORK ORDER	800087
FILE NAME	PWC80087

REVISIONS:

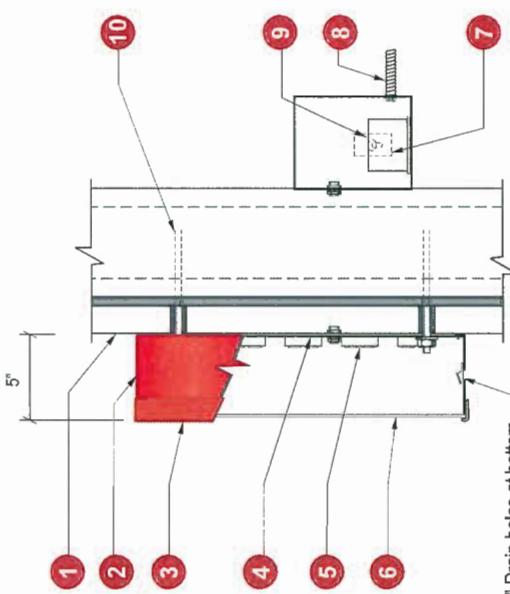
- 1 7.26.18 - add to s.o.w.
- 2 8.10.18 - adjust size
- 3
- 4
- 5
- 6
- 7
- 8

This sign is intended to be installed in accordance with the requirements of Article 600 of the National Electrical Code and/or other applicable local codes. This includes proper grounding and bonding of the sign.

Section LED Individual Channel Letters Front-Lit (Remote)
Scale: N.T.S.

This sign is built to UL Standards for operation in North America.

1/4" Drain holes at bottom
of letter cans (2) per letter



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Reference Plan



Parvin-Clauss

SIGN COMPANY

Design • Fabrication • Installation • Maintenance

165 Tubeway Drive • Carol Stream, Illinois 60168
Tel / 630-510-2020 • Fax / 630-510-2074
e-mail / signs@parvinclauss.com
www.parciauss.com

PROJECT:



iFly
9151 Van Horne Way
Richmond, BC V6X 1W2
Canada

CUSTOMER APPROVAL:

DATE

AUTHORIZED SIGNATURE

REPRESENTATIVE

DRAWN BY

DATE

SCALE

SHEET NO.

WORK ORDER

FILE NAME

REVISIONS:

1 7.26.18 - add to s.o.w.

2 8.10.18 - adjust size

3

4

5

6

7

8

This sign is intended to be installed in accordance with the requirements of Article 600 of the National Electrical Code and/or other applicable local codes. This includes proper grounding and bonding of the sign.



Night View

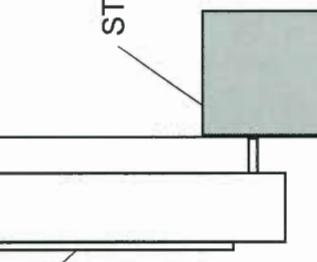


iFLY / ENTRY SIGN STANDARD / ENTRY CANOPY SIGN

3" DEEP RETURN W/ WHITE LED ILLUMINATION
& PUSH THRU FACE

- RED LED REVERSE ILLUMINATION

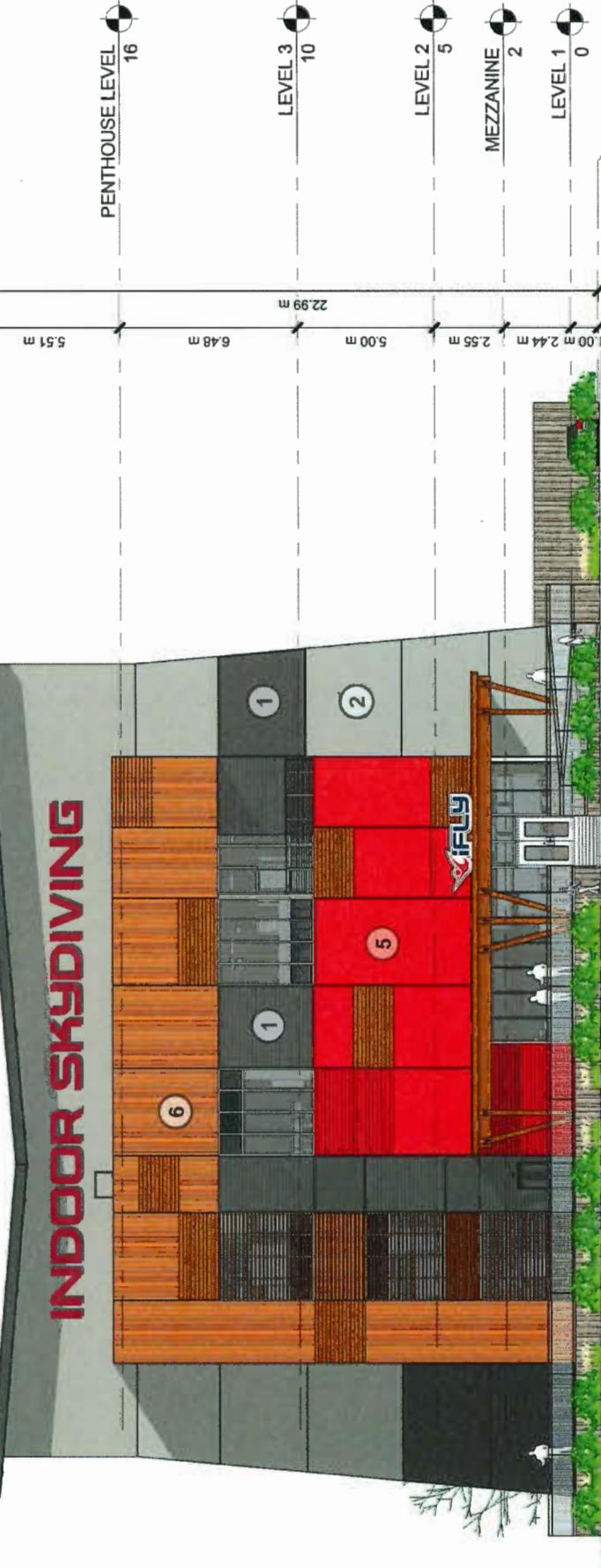
STD. 7" x 7" RACEWAY



SIDE VIEW, N.T.S.

3/4" PUSH THRU
FACE

INDOOR SKYDIVING



Power Requirements:

- 1 Dedicated 20 amp circuit
- 120 Volt
- Timer installed next to breaker box
- J-Box installed within 6' of sign location

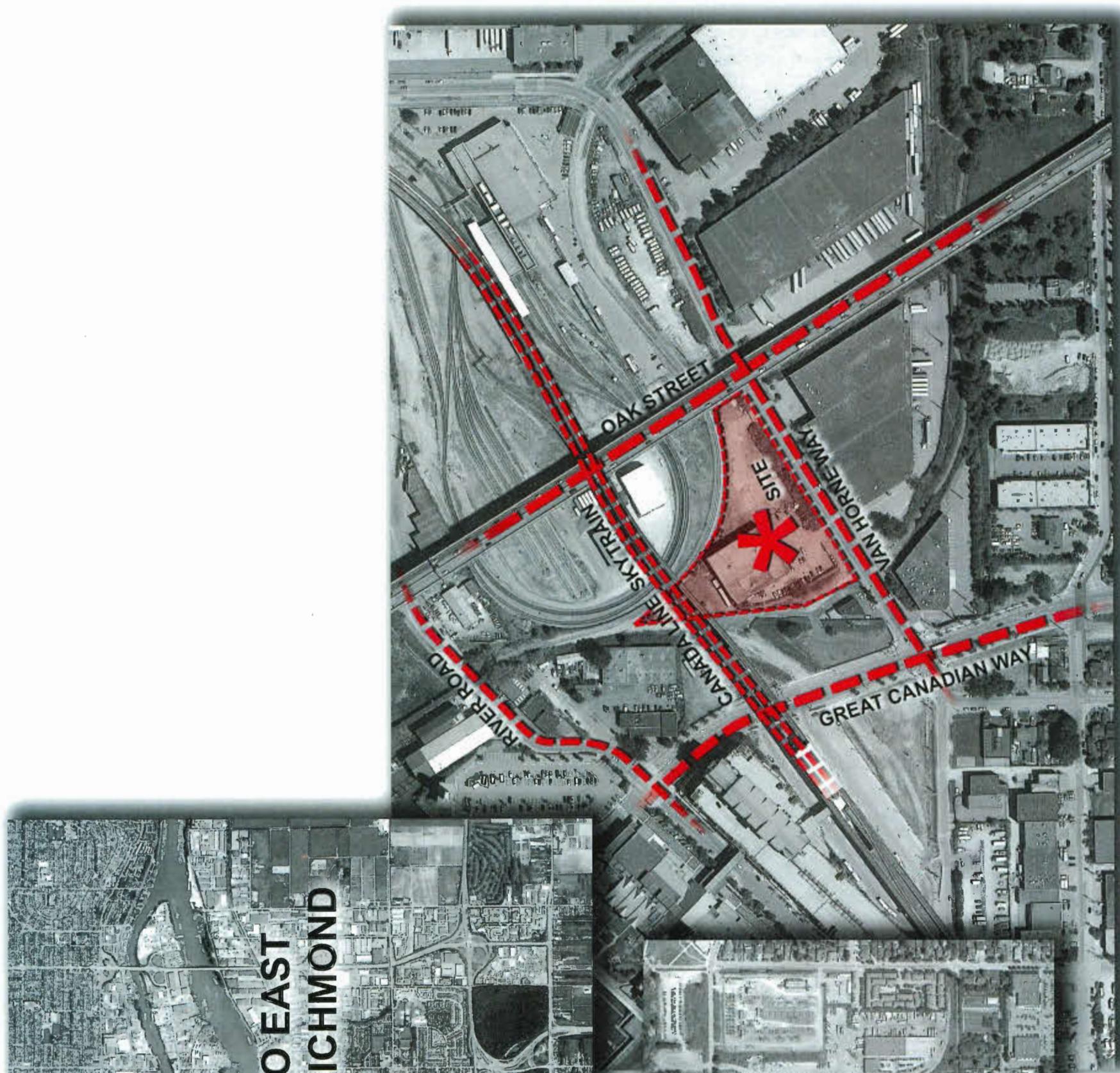
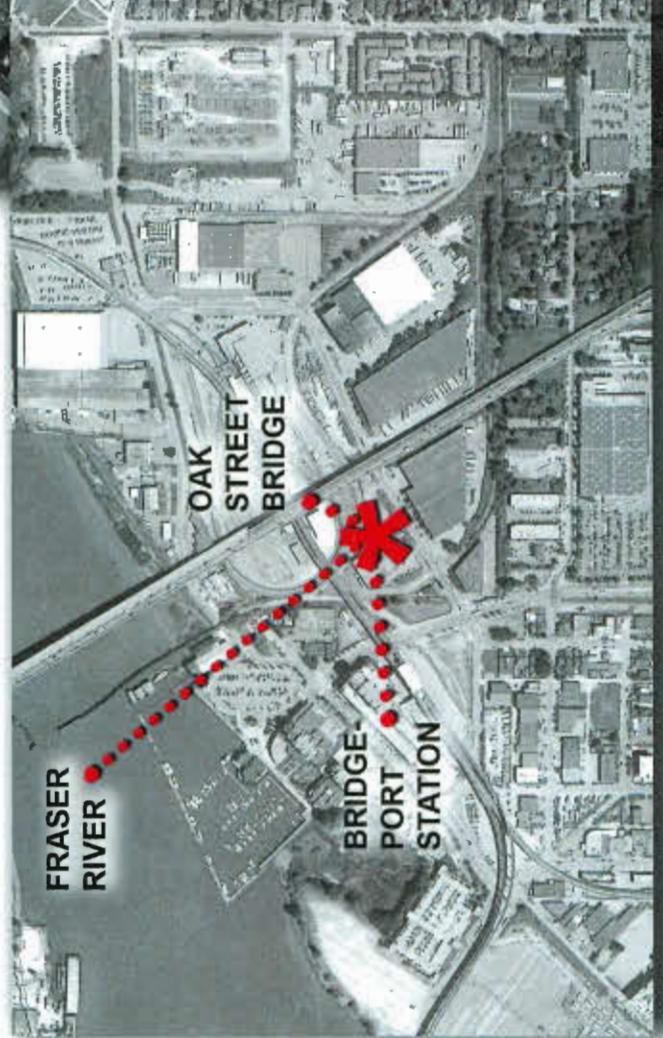
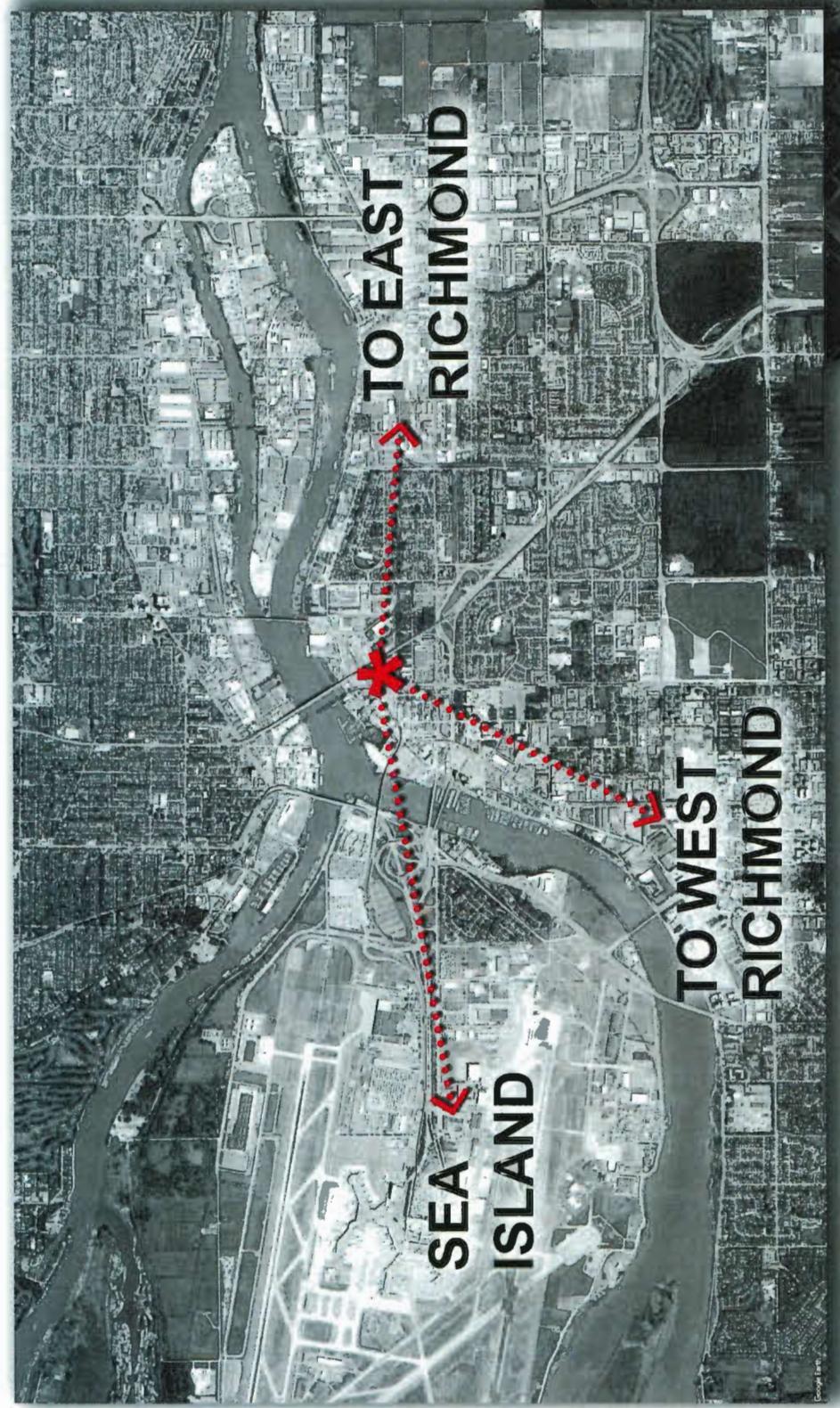
This sign is built to UL Standards
for operation in North America.



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DP 10-815966 - Reference Plan

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A-01

EXISTING BADMINTON BUILDING ON PROJECT SITE



PROJECT SIDE OF STREET ADJACENT TO SITE

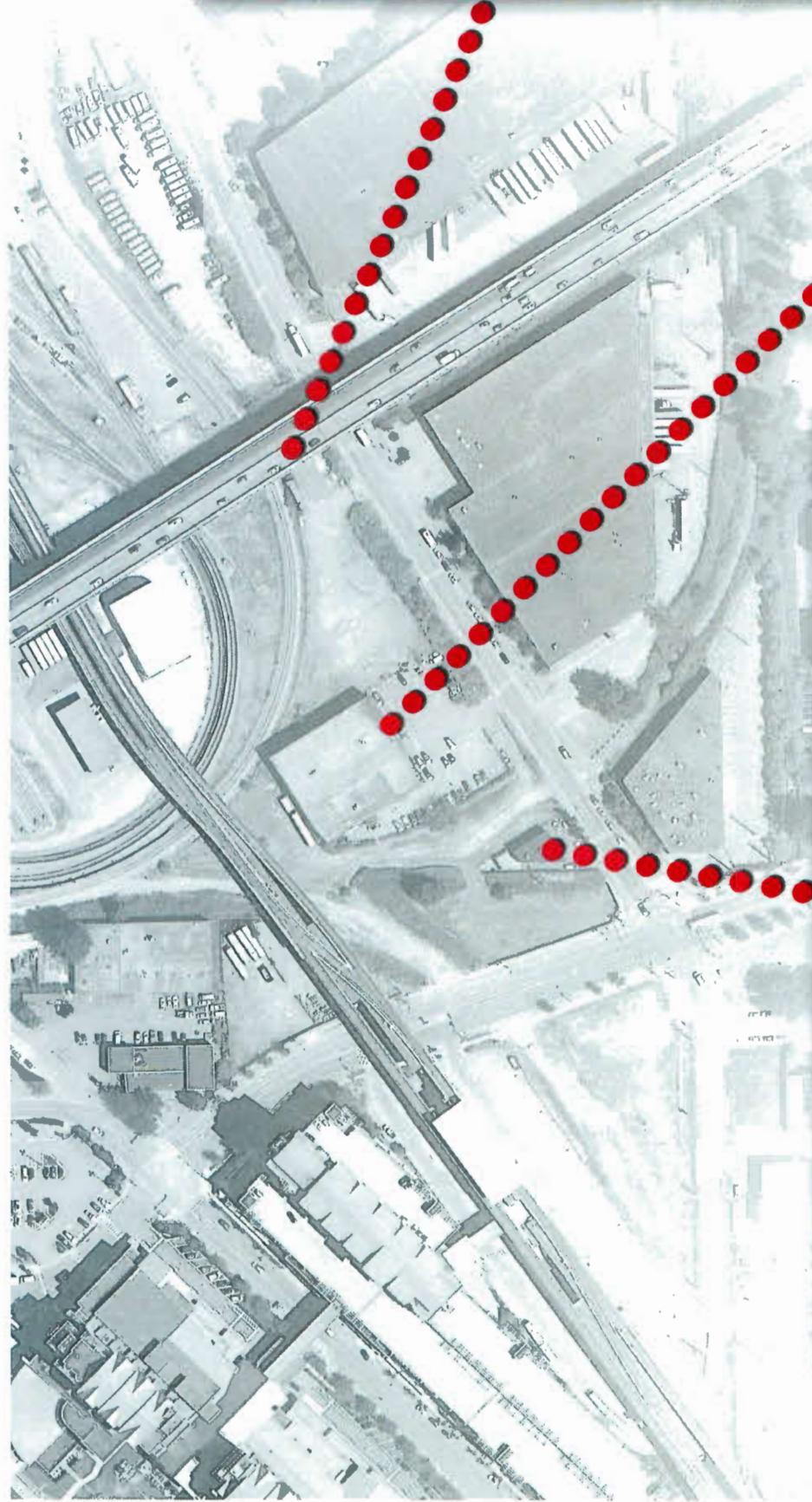


CONTEXT PHOTOS

02.27.2018



OAK STREET BRIDGE ADJACENT TO SITE



BUILDING OPPOSITE SIDE OF STREET AT ENTRY



BUILDING FAÇADE OPPOSITE SIDE OF STREET ALONG
VAN HORNE WAY



BUILDING OPPOSITE SIDE OF STREET PARKING

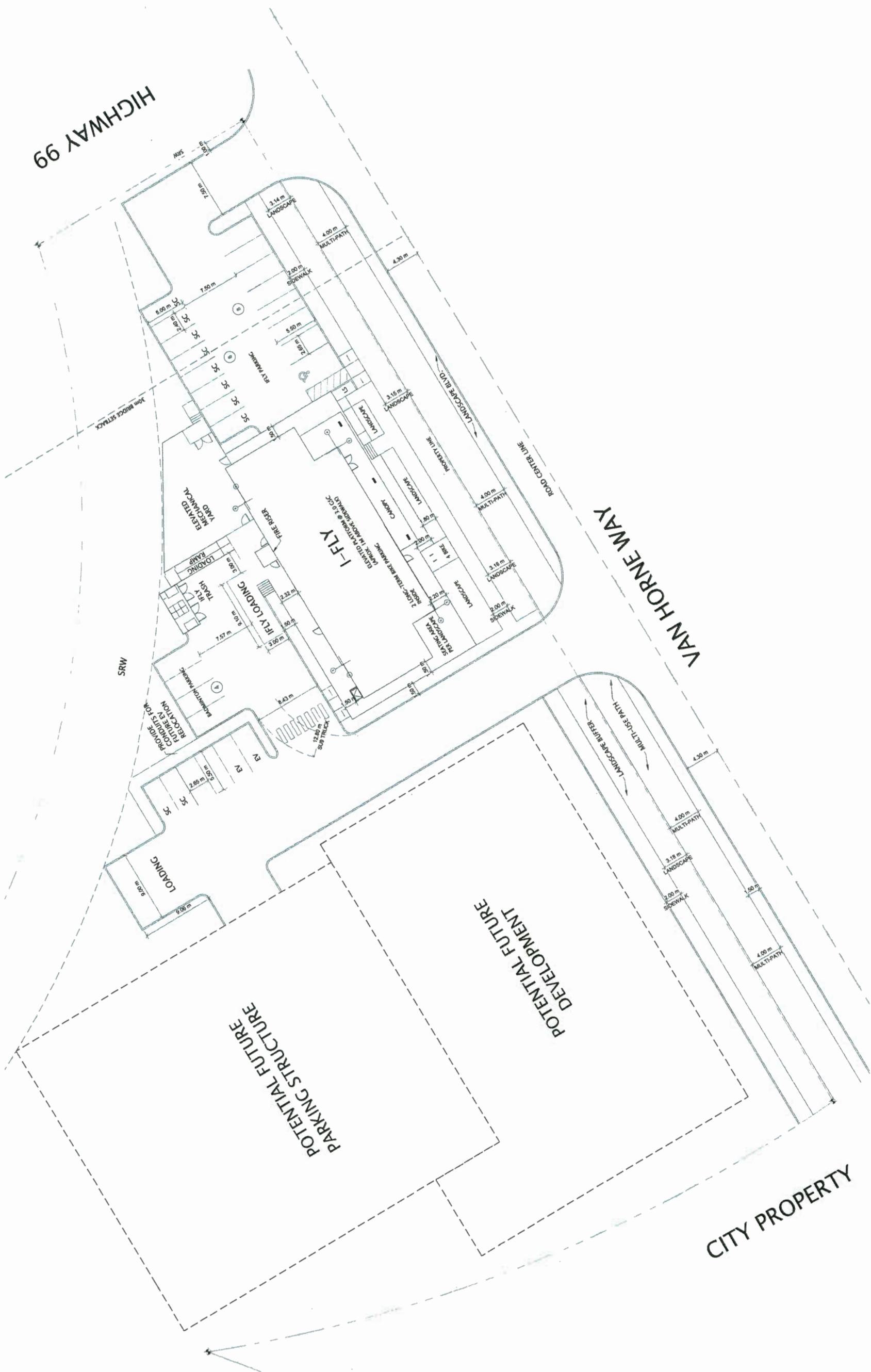


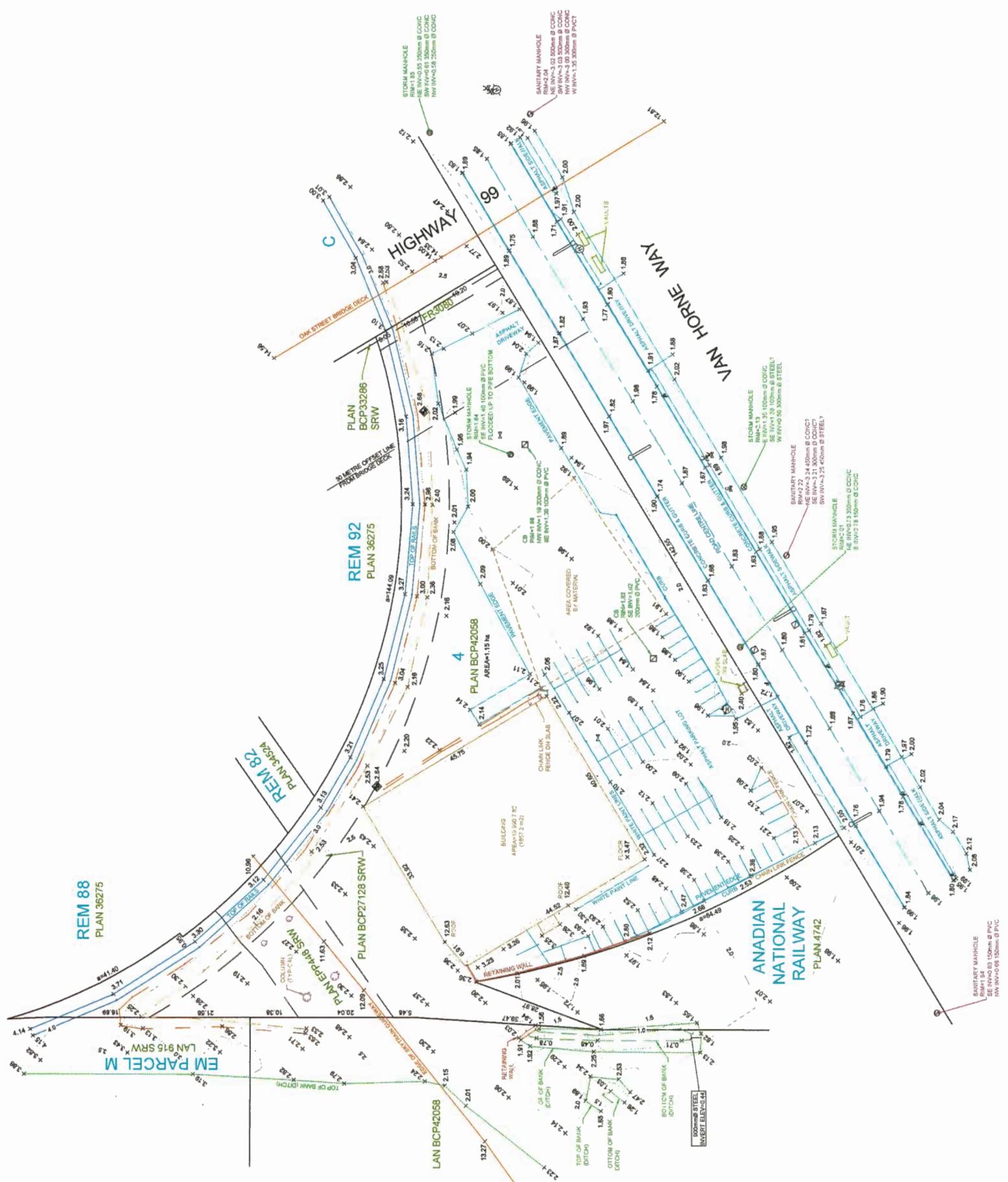
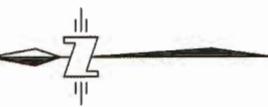
CONTEXT PHOTOS

07/25/14

A-02

DP 18-815966 - Reference plan





NOTES

THE SURVEY IS ON LOCAL GROUND COORDINATE SYSTEM.
BEING A 1:50000 GRID, DERIVED FROM OBSERVATIONS ON GCM
TM8465 AND TM8463 AND TM8462.

- TO CONVERT TO UTM ZONE 10 (NAD83(CS)) A 0.08 BC 1.0 GRID,
MULTIPLY BY THE COMBINED FACTOR OF 0.9996339 ABOUT GCM
TM8465.
- ELEVATIONS ARE IN METRES AND ARE REFERRED TO GEODETIC
DATUM CY2003/2005 USING MONUMENT C5477H40 AT THE
INTERSECTION OF BROWN ROAD AND BROWN GATE, ELEVATION
1.733 METRES.
- CONTOUR INTERVAL IS 0.5 METRES.
- PARCEL DIMENSIONS REPRESENTED ON THIS PLAN ARE DERIVED
FROM FIELD MEASUREMENTS.
- UNINCERTIFIED INTERESTS HAVE NOT BEEN INCLUDED OR
CONSIDERED.
- THE SURVEY REPRESENTED BY THIS PLAN WAS COMPLETED ON THE
8TH OF JANUARY, 2018.

THIS PROPERTY MAY BE SUBJECT TO THE FOLLOWING:
NOTICE OF INTEREST, BUILDERS LIEN ACT (S.22); SEE BV16279 FILED
2003-01-16; COLLABORATION AND PLAN UNDER THE AERONAUTICS ACT;
CANADA FEDERAL GOVERNMENT UNDER NO. T17054; PLAN NO. B1216;
STATUTORY RIGHT OF WAY
F72000 - BC HYDRO & POWER AUTHORITY
BC15845, RD17578 - TOWNSHIP OF RICHMOND
BC15276, RD17578 - CANADIAN NATIONAL RAILWAY
BENTON CITY, BC - RICHMONDVANCOUVER AIRPORT AUTHORITY
COVENANT BB10367, BB106299
ASSIGNMENT OF RIGHTS C5405133

THIS TOPOGRAPHIC PLAN HAS BEEN PREPARED IN
ACCORDANCE WITH THE PROFESSIONAL PRACTICE MANUAL
AND IS CERTIFIED CORRECT THIS 2011 DAY OF JANUARY, 2016.

ARMED NAME, BLD. CLB
THIS DOCUMENT IS NOT VALID UNLESS ORIGINALLY SIGNED
AND SEALED.

ALL RIGHTS RESERVED. NO PERSON MAY COPY, REPRODUCE,
REUBLISH, TRANSMIT OR ALTER THIS DOCUMENT IN WHOLE
OR IN PART, WITHOUT THE EXPRESS WRITTEN CONSENT OF
MCELHANNY ASSOCIATES LAND SURVEYING LTD.

PARKWAY CONSTRUCTION
1000 CIVIC CIRCLE, LEMARSH, TEXAS, USA 75687
TOPOGRAPHIC SURVEY PLAN OF
LOT 4 SECTION 22 BLOCK 5 NORTH RANGE 6 WEST
NEW WESTMINSTER DISTRICT PLAN BCP42058
9151 VAN HORNE WAY, RICHMOND, BC
PID: 028-018-141

Drawing No.
08858-01

Project Number
2112-08858-0

Rev. 0

McElhanney
McElhanney Associates Land Surveying Ltd.

Sub 2300
Sumpt BC
Canada V3T 5Z3
Tel 604 596 0391

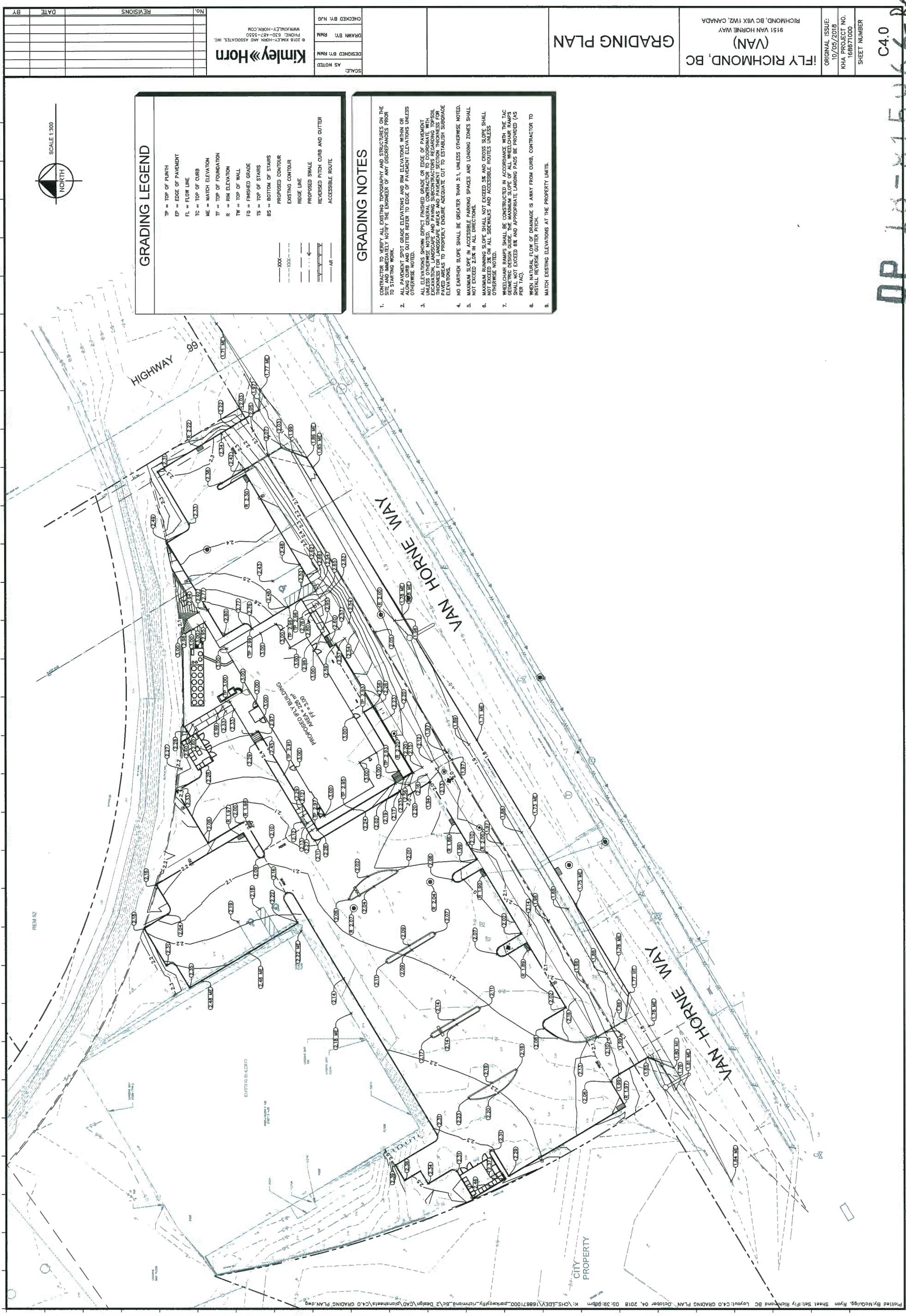
Approved Sealed

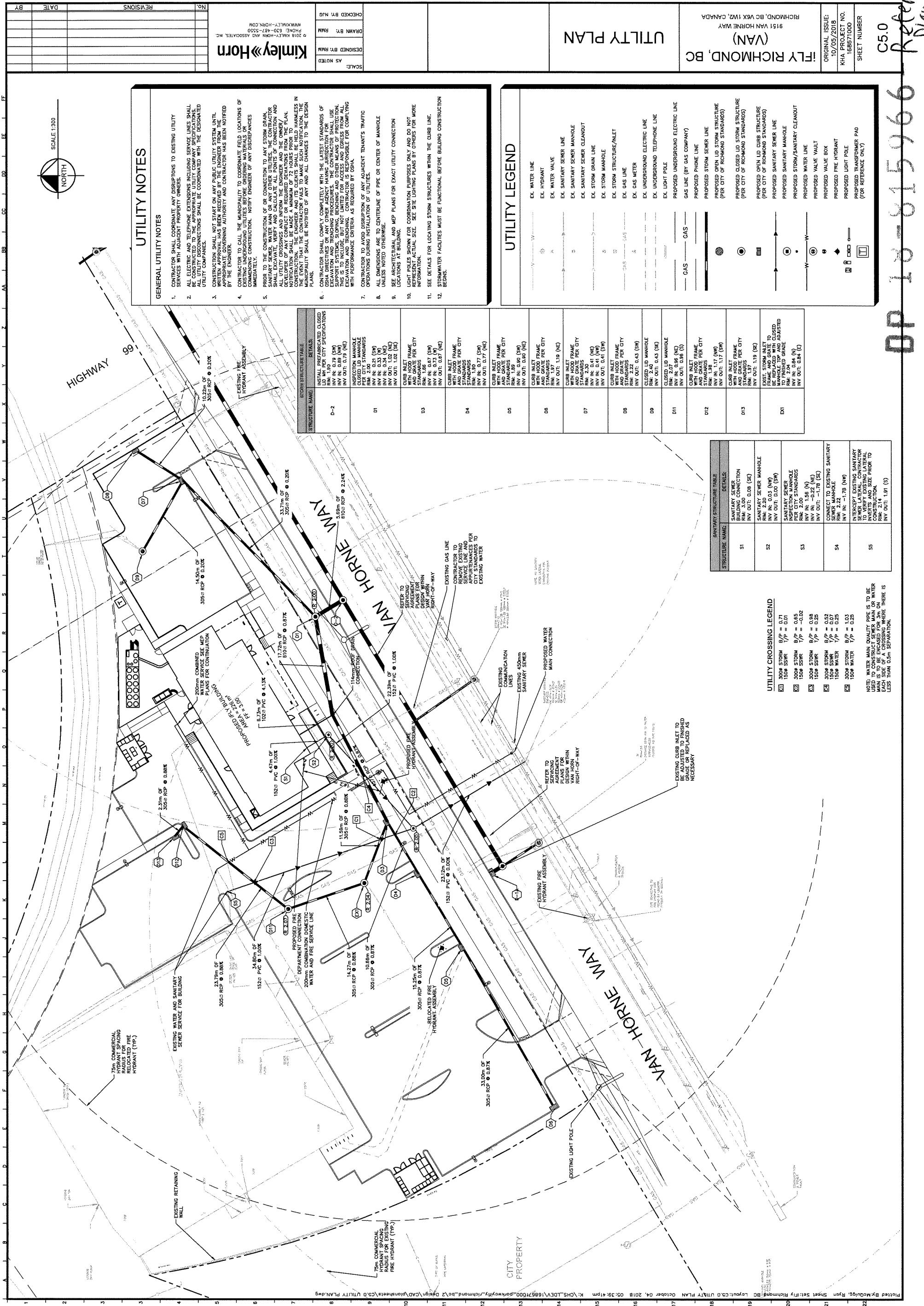
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DATE: 2016-01-16 10:00:00 PLG: 1-DATA0660-06699-QP9-Van - 9151 Van Horne Way/LDG.Dwg#1010101.CBL1.D06695-61 topo.dwg	McElhanney Associates Land Surveying Ltd.	08858-01
1000 CIVIC CIRCLE, LEMARSH, TEXAS, USA 75687		
TOPOGRAPHIC SURVEY PLAN OF		
LOT 4 SECTION 22 BLOCK 5 NORTH RANGE 6 WEST		
NEW WESTMINSTER DISTRICT PLAN BCP42058		
9151 VAN HORNE WAY, RICHMOND, BC		
PID: 028-018-141		
0 2016-01-09 TOPO Date Description	Survey Drawn	Approved
Rev. 0		

DP 18-815966-Reference Plan

C4.0





DP 10-615966 Reference plan

Sheet 1 of 1

Original Issue
10/05/2018
KHA 165671000

Sheet Number

5.0



City of Richmond

Report to Development Permit Panel

To: Development Permit Panel

Date: October 24, 2018

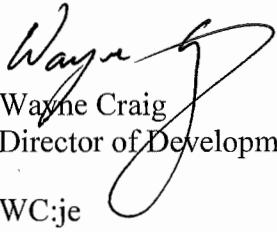
From: Wayne Craig
Director of Development

File: DP 18-820582

Re: **Application by Greater Vancouver Sewerage and Drainage District for a
Development Permit at 1000 Ferguson Road**

Staff Recommendation

That a Development Permit be issued at 1000 Ferguson Road in order to allow construction of temporary dewatering facilities on a site designated an Environmentally Sensitive Area.


Wayne Craig
Director of Development

WC:je
Att. 8

Staff Report

Origin

Greater Vancouver Sewerage and Drainage District (GVS&DD) has applied to the City of Richmond for an Environmentally Sensitive Area (ESA) Development Permit (DP) to allow construction of temporary mechanical dewatering facilities at 1000 Ferguson Road (Attachments 1 and 2). As the site is currently designated as an ESA, a Development Permit is required prior to Building Permit approval.

The 48.36 ha (119.45 acre) subject site currently contains the Iona Island Wastewater Treatment Plant (IIWWTP) that provides primary sewage and stormwater treatment for the City of Vancouver and the University Endowment Lands, and portions of the Cities of Richmond and Burnaby.

The Province has mandated that the IIWWTP be upgraded to secondary treatment by 2030. In preparation for the upgrades, the site's existing sludge lagoons and stockpiles, which currently serve as the dewatering facilities, must be decommissioned to create space for the expansion. As a result, temporary dewatering facilities are proposed as an interim measure to replace the lagoons and stockpiles until all of the secondary treatment upgrades have been completed.

The proposed project footprint for the temporary facilities is 13,666 m², and would include a dewatering building, storage tanks, a truck loading building for removing the biosolids to off-site locations, and an odour control facility. Once the upgrades to secondary treatment are complete, the temporary dewatering facilities would be decommissioned by no later than 2031. The applicant has committed to undertaking a new ESA DP in advance of decommissioning the facility to guide rehabilitation of the project footprint. A master plan for the upgrades to secondary treatment is planned for 2019; once details are known, staff will work with GVS&DD to determine the necessary permits and approvals.

In compensation for disturbing ESA to develop the temporary facilities, GVS&DD has committed to undertaking invasive species removal and enhancement of an equal amount (13,666 m²) of low-value natural area within the adjacent regional park (at a ratio of 1:1 to the project footprint). Additionally, the applicant will provide a total of 1,245 m² of landscape restoration within and immediately adjacent to the project footprint.

An ESA DP was adopted in 2015 to allow the GVS&DD to expand the IIWWTP with a 550 m² screening and degrit building, a 20 m diameter thickener, a 25 m² thickener pump station and four 36 m² digester mixing pump buildings within the ESA at 1000 Ferguson Road (DP14-676361). The project committed to 3,300 m² of landscape restoration (a ratio of 0.5:1 to the project footprint). The as-built information submitted by GVS&DD shows that 3,791 m² has been restored as a result of the project.

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.

Background

The area surrounding the site consists of:

- To the north, the North Arm of the Fraser River;
- To the east, is the Iona Beach Regional Park (Canfor Point), managed by Metro Vancouver;
- To the south, the Iona Island causeway; and,
- To the west, Iona Beach, Iona Jetty and the North Arm Jetty. The North Arm Jetty is under Port of Vancouver jurisdiction.

With the exception of the Iona and North Arm Jetties, Iona Island is entirely designated as “Conservation” in Richmond’s Official Community Plan, and zoned “School & Institutional Use (SI)” under Zoning Bylaw 8500.

Staff Comments

The proposed scheme attached to this report has satisfactorily addressed the significant Environmentally Sensitive Area (ESA) 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 and is generally in compliance with the School and Institutional (SI) zone. No variances are being sought through this ESA Development Permit application.

Advisory Design Panel

As the scope of this Development Permit does not involve any building design components, the application has not been reviewed by the Advisory Design Panel.

Analysis

Site Planning

GVS&DD advises that the project is for a temporary mechanical dewatering facility adjacent to the existing IIWWTP. The IIWWTP currently provides primary sewage treatment, which involves the removal of primary sludge and anaerobic digestion prior to storage in sludge lagoons. The treated effluent is discharged to the Strait of Georgia, while the treated biosolids are stockpiled onsite following lagoon stabilization. GVS&DD is working towards upgrading the facility to provide secondary waste treatment by 2030.

To create space for the upcoming IIWWTP upgrades, the biosolids stockpiles and storage lagoons must be decommissioned. Temporary dewatering facilities are required in lieu of the sludge piles and lagoons until the longer term IIWWTP upgrades are complete. Once the secondary treatment is in place, the temporary dewatering facilities would no longer be required and would be decommissioned. Decommissioning would occur within a year of completing the secondary treatment facility and the area would be rehabilitated under a future ESA DP.

The project footprint is proposed to be 13,666 m² (Attachment 4) and includes various temporary structures and paved areas for vehicle circulation. The facility will include a dewatering building, storage tanks, a truck loading building for removing the biosolids to off-site locations, and an odour control facility. After site clearing and grubbing, three areas within the project footprint and immediately adjacent the project footprint (totalling 1,275 m²) would be re-landscaped with native vegetation selected to attract pollinator species. Final design of the temporary dewatering facility, vehicle circulation and landscaping will be determined through a design-build process that will include applications for a Building Permit, which is to be completed following adoption of the Development Permit.

To accommodate the proposed temporary dewatering facility, the entire project footprint will be cleared of existing vegetation, and developed or re-landscaped with native vegetation. While the entire project footprint is within the ESA, the area was selected by GVS&DD because of its proximity to the existing IIWWTP and because it has been previously disturbed. A detailed Environmental Assessment completed by AECOM notes that, of the 13,666 m² ESA required for the project footprint, only 5,097 m² is vegetated. Of that total, 4,078 m² is vegetated with exotic or invasive species and 1,019 m² is vegetated with native species. The remaining 8,569 m² consists of previously disturbed gravel piles and un-vegetated biosolids stockpiles.

ESA Environmental Inventory

The area proposed for the temporary dewatering facility is designated as “Freshwater Wetland” ESA, and is contiguous with “Shoreline” ESA, “Intertidal” ESA and non-ESA natural areas within the Iona Island Regional Park. The total contiguous ESA measures approximately 182.4 ha (450.5 acre) and is designated as a hub in the Ecological Network Management Plan.

The biophysical inventory submitted by AECOM (completed in January and August 2018), found no wet areas, rare plants or species at risk. AECOM describes the project area as an anthropogenic ecosystem that is generally flat, dominated by grasses, partially forested with pioneer young tree and shrub species, and several exotic and invasive plant species. Soils were found to be sandy with no standing water. The area offers habitat for foraging, nesting and rearing. During the inventory, three species of song bird (song sparrow, spotted towhee, and golden-crowed sparrow) were observed and two raptor species (peregrine falcon and bald eagle) were noted flying over the site or perching on the cellular towers.

Within the vicinity of the project area, a provincially blue-listed wetland exists to the west and is home to a Provincially red-listed population of western painted turtle. The project area is situated in an area mapped as estuarine marsh by the Metro Vancouver Sensitive Ecosystem Inventory, and is contiguous with estuarine marsh, wetland swamp and freshwater pond.

Tree Inventory

There were no bylaw sized trees found on-site during the inventory, but 100 undersized poplar trees were counted. All trees are proposed to be removed as part of the project works.

Mitigation

The project was intentionally sited in an area with limited sensitive habitat value, between the existing IIWWTP and wastewater sludge piles.

Increased impermeable surfaces from construction and paving is not expected to impact runoff or infiltration as existing soils are sandy and support only vertical infiltration, not horizontal movement of groundwater. Surface run-off will be directed to the site's stormwater system, which is processed through the IIWWTP.

Proposed Compensation and Landscape Restoration

To compensate for impacts to 13,666 m² of ESA within the project footprint, GVS&DD proposes to restore to natural condition an equal area within Iona Island Park on Canfor Point (a compensation ratio of 1:1). Proposed compensation would include invasive species removal and enhancement of 13,666 m² of existing ESA within the park, resulting in an overall net gain in ESA function (Attachment 5).

The proposed compensation area is divided into two distinct but contiguous planting areas, A and B, which are detailed below. Both compensation areas have well-drained, sandy soils, and are dominated by invasive plant species, including three species identified as priority species in the City's Invasive Species Action Plan (scotch broom, Himalayan blackberry and reed canarygrass). Restoration of each area will include removal invasive plant species and enhancement with native plant species.

Specific enhancement plans for each area are differentiated according to existing topography, location, and hydrology:

- Area A (670 m²): Enhancement is proposed to create a small tree and shrub ecosystem free of invasive species that helps to provide ecosystem connectivity within the regional park. Plant species include a mix of 260 native trees and shrubs, including:
 - black cottonwood (60 trees),
 - chokecherry (40 trees),
 - red elderberry (60 small trees/shrubs),
 - crabapple (40 trees), and
 - willow (60 small trees).

The selected plant species provide fruits and berries as food sources for wildlife, as well as structural diversity for roosting, nesting and denning.

- Area B (12,996 m²): located on the south side of the compensation area, Area B is slightly below Area A in elevation. The intent is to create an open shrub/dune grass ecosystem that provides wildlife habitat, including food sources, nesting, borrowing, foraging and dispersal habitat, and helps to provide connectivity to habitats within the regional park. Species were selected for these objectives and to provide structural diversity include:
 - red elderberry (203 small trees/shrubs),
 - tall Oregon grape (203 plants),
 - coastal strawberry (2000 plants), and
 - dune grass (11,000 plants).

The proposed compensation plan includes 200 trees at a 4:1 replacement ratio to trees removed for the temporary dewatering facilities, to a total of 13,666 native plants. Plant density would be 1 plant/m².

While the compensation area is not designated as ESA, the ecosystem services resulting from the proposed compensation plan will be protected through Metro Vancouver's long term objectives for Iona Beach Regional Park.

In addition to the compensation area proposed within Canfor Point, the applicant commits to restoring and re-vegetating a minimum landscape area of 1,245 m² with native plant species, within and immediately adjacent the project footprint. Landscaping restoration is proposed in three distinct areas: Areas I (360 m²), Area II (210 m²) and Area III (675 m²) (Attachment 6). Landscape restoration in each area would include:

- removal of invasive species while preserving existing native plant species, if possible;
- restoring soils with growing medium and topsoil;
- re-planting with native trees, shrubs and other plant species selected to attract pollinators and wildlife; and,
- providing wood mulch around the planting areas to maintain soil moisture and control re-growth of invasive species.

Planting within each of the three planting areas includes an evenly-distributed mix of small trees, shrubs and plants:

- vine maple (6 trees),
- tall Oregon grape (35 shrubs),
- red-flowering currant (55 shrubs),
- red elderberry (55 small trees/shrubs),
- baldhip rose (145 shrubs),
- common snowberry (130 shrubs),
- red huckleberry (165 shrubs),
- salal (265 plants),
- dwarf Oregon grape (155 plants), and
- sword fern (240 plants).

If approved, the project would result in:

- the development of 13,666 m² of low value ESA on-site;
- landscaping using native plant species for 1,245 m² on-site; and
- the restoration of 13,666 m² of low value habitat area off-site.

The result would be a total of 14,911 m² of enhanced natural area and ESA within Iona Island, which represents a net gain in habitat function and ecosystem services by improving:

- the density and diversity of native plant species;
- the quality of wildlife habitat through focusing on berry and fruit producing vegetation;
- tree canopy cover through planting 200 trees (a ratio of 2:1 for non-bylaw sized trees); and,
- connectivity with the contiguous ESA, the Ecological Network and Metro Vancouver's regional park as a result of removing invasive species and enhancing the function of contiguous natural areas.

For details on the proposed compensation and landscape restoration, refer to Development Permit Plans #1 – 5.

Monitoring and Maintenance

To ensure that the proposed enhancements have the best chance of survival and that invasive species are controlled, monitoring and annual reporting by a Qualified Environmental Professional (QEP) will occur for five years following completion of the landscape restoration plan. Reports will be provided to the City.

The applicant has submitted a letter committing to implementing the works described above by 2021, and to complete monitoring and maintenance of the compensation area following completion (Attachment 6). Receipt of the commitment letter is included as a Development Permit Considerations (Attachment 7).

Engineering Comments

A Servicing Agreement will not be required for this development. Utility connections and frontage improvements will be addressed at the time of Building Permit.

Financial Impacts

The application results in an insignificant Operational Budget Impact (OBI) for off-site City infrastructure (such as road works, waterworks, storm sewers, sanitary sewers, street lights, street trees and traffic signals).

Conclusions

The applicant proposes to develop a total of 13,666 m² within an area designated as Environmentally Sensitive Area (ESA) as part of upgrades to the IIWWTP. Compensation is proposed through a combination of invasive species removal, off-site restoration of 13,666 m² within the adjacent Metro Vancouver regional park, and landscaping with native species for at least 1,245 m² within the project footprint adjacent to the IIWWTP. As the proposed, compensation plan would result in a net gain in ESA function; staff recommend that the Development Permit be endorsed, and issuance by Council be recommended.



Jeanette Elmore
Planner 2

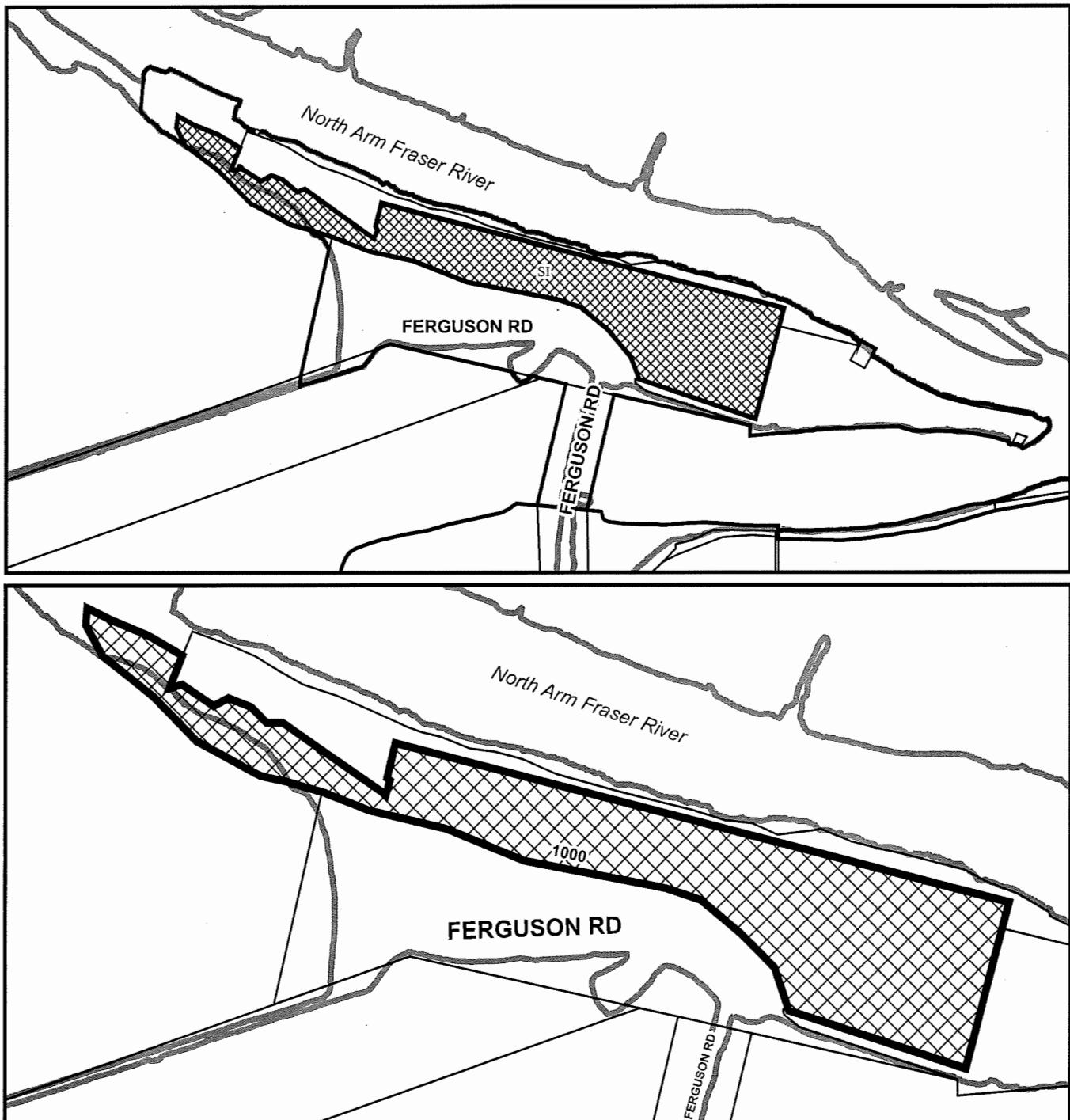
JE:cas

Attachments:

- Attachment 1: Location Map
- Attachment 2: Context Map
- Attachment 3: Data Sheet
- Attachment 4: Site Landscape Plan
- Attachment 5: Off-site Compensation Plan
- Attachment 6: Landscape Restoration Detail
- Attachment 7: Commitment Letter from Metro Vancouver
- Attachment 8: Development Permit Considerations



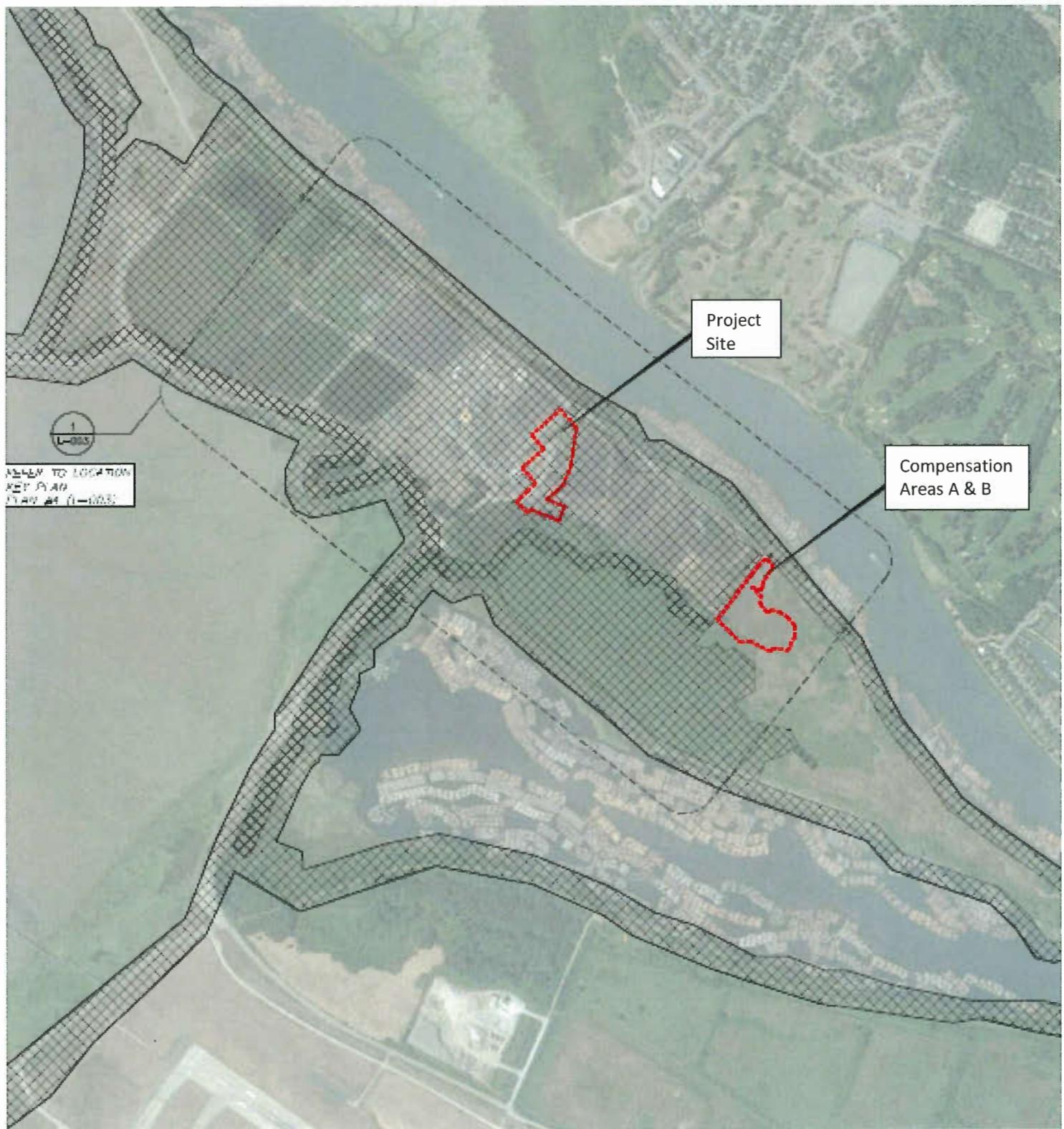
City of Richmond



	DP 18-820582	Original Date: 04/26/18
		Revision Date:
		Note: Dimensions are in METRES

ATTACHMENT 2

Context Plan



Environmentally
Sensitive Areas
(ESA)



City of Richmond

Development Application Data Sheet

Development Applications Department

DP 18-820582

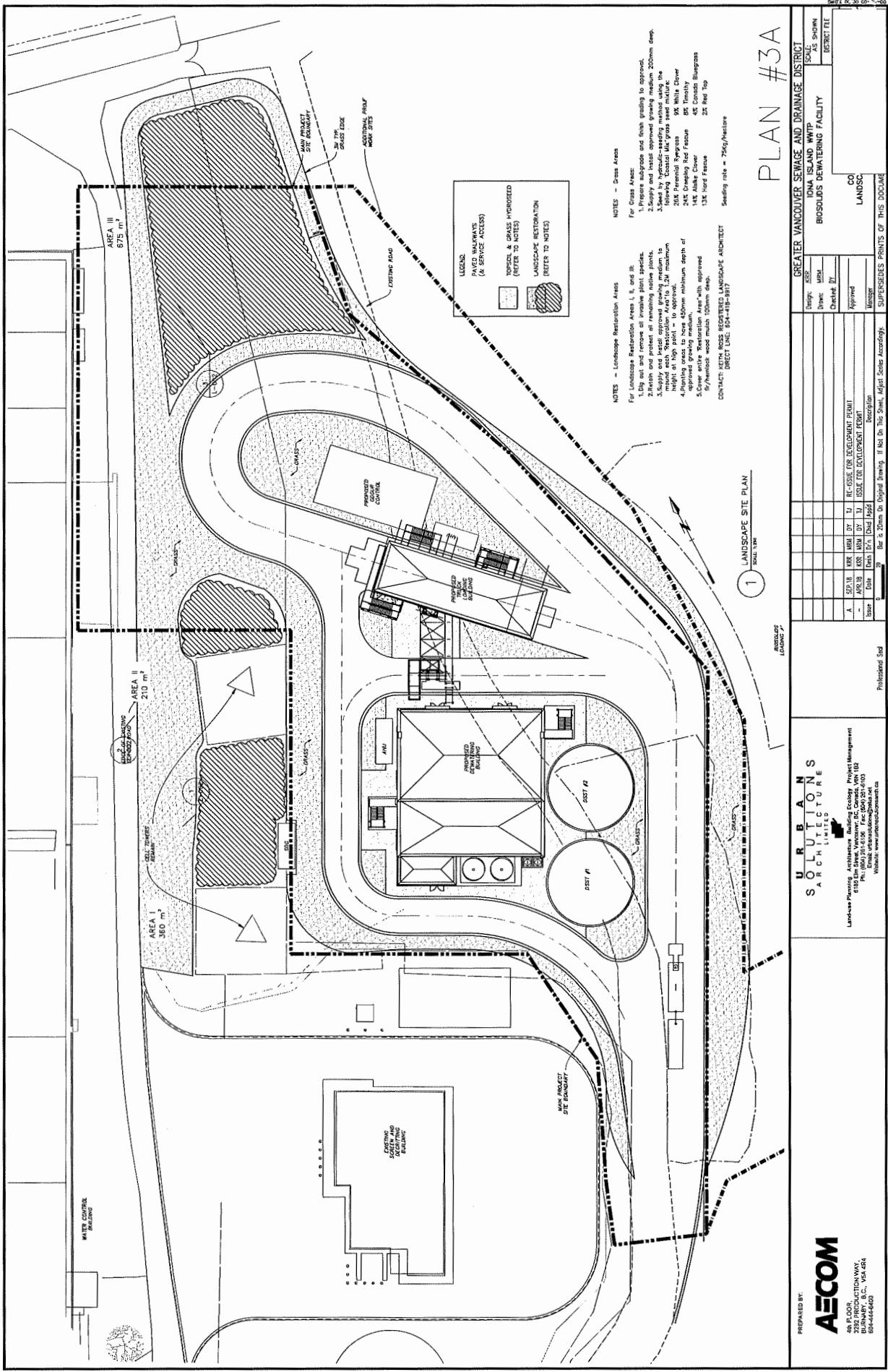
Attachment 3

Address: 1000 Ferguson Road
Applicant: Greater Vancouver Sewerage and Drainage District
Owner: Greater Vancouver Sewerage and Drainage District
Planning Area(s): Sea Island
Floor Area Gross: N/A Floor Area Net: N/A

	Existing	Proposed
Site Area:	48.36 Ha	No change
Land Uses:	Waste water treatment facility	No change
OCP Designation:	Conservation	No change
Zoning:	School and Institutional Use (SI)	No change
Number of Units:	0	No change

	Bylaw Requirement	Proposed	Variance
Floor Area Ratio:	No maximum	Consistent with zone	none permitted
Lot Coverage:	No maximum	Consistent with zone	none
Setback – Front Yard:	Min. 6.0 m	Consistent with zone	none
Setback – Side Yard (one side):	Min. 3.0 m	Consistent with zone	none
Setback – Rear Yard:	Min. 3.0 m	Consistent with zone	none
Height (m):	Max. 12 m within 10 m of a residential zone, otherwise no minimum	Consistent with zone	none
Lot Size:	No minimum	Consistent with zone	none
Total off-street Spaces:	None	79 existing	none

ATTACHMENT 4



Off-Site Compensation Area



(2) COMPENSATION AREAS
SCALE 1:1

NATIVE SPECIES PLANTING – SITE A:

RAISED, NORTH SITE AREA = 670 SQ. METERS

NATIVE PLANT SPECIES (*with fruits / berries)	COMMON NAME	SIZE	QTY	PLANTING RATIOS (in Site A)
<i>Malus fusca</i> *	Pacific Crab Apple	2 gal	40	15%
<i>Populus balsamifera</i> spp. <i>trichocarpa</i>	Balsam Poplar	5 gal	60	23%
<i>Prunus virginiana</i> *	Choke Cherry	2 gal	40	15%
<i>Salix hookeriana</i>	Hoover's Willow	2 gal	60	23%
<i>Sambucus racemosa</i> var. <i>arborescens</i> *	Red Elderberry	2 gal	60	23%

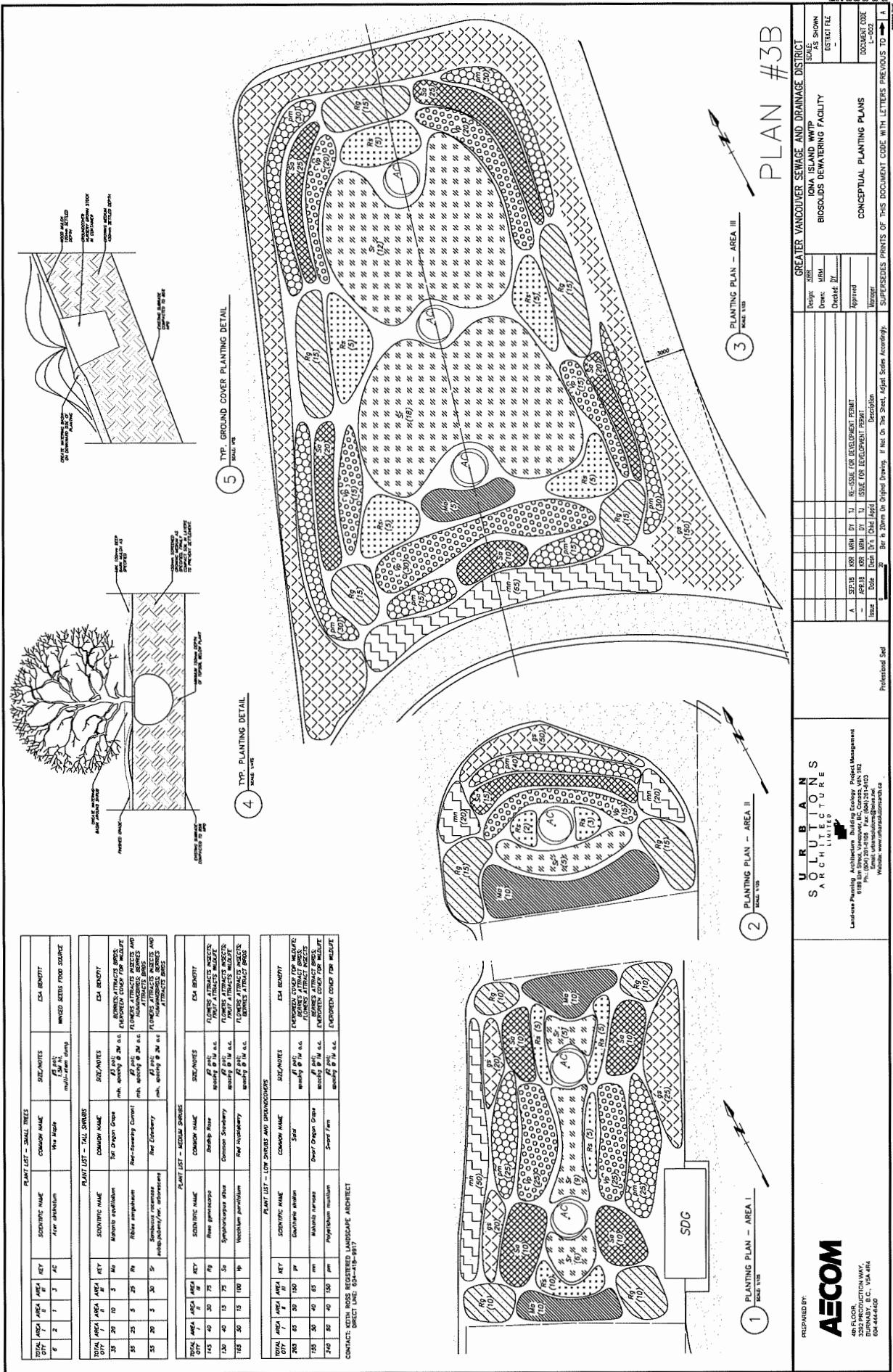
TOTAL = 260 PLANTS

NATIVE SPECIES PLANTING – SITE B:

FLAT, SOUTH SITE AREA = 12,936 SQ. METERS

NATIVE PLANT SPECIES (*with fruits / berries)	COMMON NAME	SIZE	QTY	PLANTING RATIOS (in Site B)
<i>Fragaria chiloensis</i> *	Coastal Strawberry	1.5*	2000	15%
<i>Lepturus mollis</i>	Dune Grass	Plugs	11,000	82%
<i>Motacilla aguimpullum</i> *	Tall Oregon Grap	2 gal	203	1.5%
<i>Sambucus racemosa</i> var. <i>arborescens</i> *	Red Elderberry	2 gal	203	1.5%

TOTAL = 13,406 PLANTS



*Liquid Waste Services
Project Delivery Division
Tel: 604 451 6011 Fax: 604 436 6714*

August 28, 2018

File: SE-02-01-16006/50

Mr. Wayne Craig, Director of Development
The City of Richmond
Development Applications Division
6911 No. 3 Road
Richmond, BC V6Y 2C1

Dear Mr. Craig:

RE: DP 18-820582 – Letter of Commitment, Iona Island Wastewater Treatment Plant Biosolids Dewatering Facility - Environmental Considerations

The Greater Vancouver Sewerage & Drainage District (GVS&DD) is proposing to construct a new Biosolids Dewatering Facility at its existing Iona Island Wastewater Treatment Plant at 1000 Ferguson Road. To support this work, the GVS&DD has made an application to the City of Richmond for a Development Permit. The Development Permit is for an area of approximately of 13,666 m² on the east side of the wastewater treatment plant, and will include a Dewatering Building, a Truck Loading area, an area for odour control equipment, and a temporary haul road.

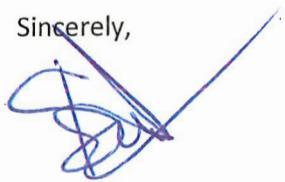
The location of the proposed works is zoned by the City of Richmond as an Environmentally Sensitive Area. An Environmental Assessment has been conducted for the project area and a Compensation Plan has been developed which describes compensation measures used to offset project effects that cannot be mitigated through other means.

Based on the above, and to support the Development Permit process, the GVS&DD is committing to the following actions:

- Implement the site restoration, invasive species management and compensation measures outlined in the final Environmental Assessment Report by December 2021 (within 1 year of completion of the Dewatering Facility);
- Undertake and maintain the landscape installations outlined in the final Landscape Compensation Plan by December 2021; and
- Submit to the City of Richmond for information only, annual monitoring and maintenance reports for 5 years following installation of compensation plantings.

Should you have any questions with respect to this letter, please do not hesitate to contact me.

Sincerely,



Daniel Wee, P. Eng.
Lead Senior Engineer

DW/KKH/jS

cc: Kate Ho, MV, LWS Project Delivery
 Rick Bitcon, AECOM
 Donald Yen, Urban Solutions Architecture Ltd.



City of Richmond

ATTACHMENT 8

Development Permit Considerations

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

Address: 1000 Ferguson Road

File No.: DP 18-820582

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

1. Ministry of Environment (MOE) Certificate of Compliance or alternative approval to proceed granted from MOE regarding potential site contamination issues. This approval is required prior to dedication of land or road to the City if applicable.
2. Receipt of a Letter of Commitment from the Greater Vancouver Sewerage and Drainage District to undertake the landscape restoration works as described in the Iona Island Wastewater Treatment Plant Biosolids Dewatering Facility Expansion Environmental Assessment, dated August 2018.

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

1. 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.
2. If applicable, payment of latecomer agreement charges associated with eligible latecomer works.
3. Obtain a Building Permit (BP) for any construction hoarding. If construction hoarding is required to temporarily occupy a public street, the air space above a public street, or any part thereof, additional City approvals and associated fees may be required as part of the Building Permit. For additional information, contact the Building Approvals Department at 604-276-4285.

Note:

- * This requires a separate application.
- Where the Director of Development deems appropriate, the preceding agreements are to be drawn not only as personal covenants of the property owner but also as covenants pursuant to Section 219 of the Land Title Act.

All agreements to be registered in the Land Title Office shall have priority over all such liens, charges and encumbrances as is considered advisable by the Director of Development. All agreements to be registered in the Land Title Office shall, unless the Director of Development determines otherwise, be fully registered in the Land Title Office prior to enactment of the appropriate bylaw.

The preceding agreements shall provide security to the City including indemnities, warranties, equitable/rent charges, letters of credit and withholding permits, as deemed necessary or advisable by the Director of Development. All agreements shall be in a form and content satisfactory to the Director of Development.

- Additional legal agreements, as determined via the subject development's Servicing Agreement(s) and/or Development Permit(s), and/or Building Permit(s) to the satisfaction of the Director of Engineering may be required including, but not limited to, site investigation, testing, monitoring, site preparation, de-watering, drilling, underpinning, anchoring, shoring, piling, pre-loading, ground densification or other activities that may result in settlement, displacement, subsidence, damage or nuisance to City and private utility infrastructure.
- Applicants for all City Permits are required to comply at all times with the conditions of the Provincial *Wildlife Act* and Federal *Migratory Birds Convention Act*, which contains prohibitions on the removal or disturbance of both birds and their nests. Issuance of Municipal permits does not give an individual authority to contravene these legislations. The City of Richmond recommends that where significant trees or vegetation exists on site, the services of a Qualified Environmental Professional (QEP) be secured to perform a survey and ensure that development activities are in compliance with all relevant legislation.

Signed

Date



City of Richmond

Development Permit

No. DP 18-820582

To the Holder: Great Vancouver Sewerage and Drainage District

Property Address: 1000 Ferguson Road

Address: c/o Donald Yen
Urban Solutions Architecture Ltd.
6189 Elm Street, Vancouver, BC V6N 1B2

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 in cross hatch on the attached Schedule "A" and any and all buildings, structures and other development thereon.
3. Subject to Section 692 of the Local Government Act, R.S.B.C.: buildings and structures; off-street parking and loading facilities; roads and parking areas; and landscaping and screening shall be constructed generally in accordance with Plans #1 to #5 attached hereto.
4. Sanitary sewers, water, drainage, highways, street lighting, underground wiring, and sidewalks, shall be provided as required.
5. As a condition of the issuance of this Permit, the applicant will install the works shown on the Landscape Compensation Plan before 2021, and once in place, the applicant will provide landscape monitoring and maintenance for the compensation for 5 years following completion.
6. If the Holder does not commence the construction permitted by this Permit within 36 months of the date of this Permit, this Permit shall lapse and the security shall be returned in full.
7. 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. OF , .

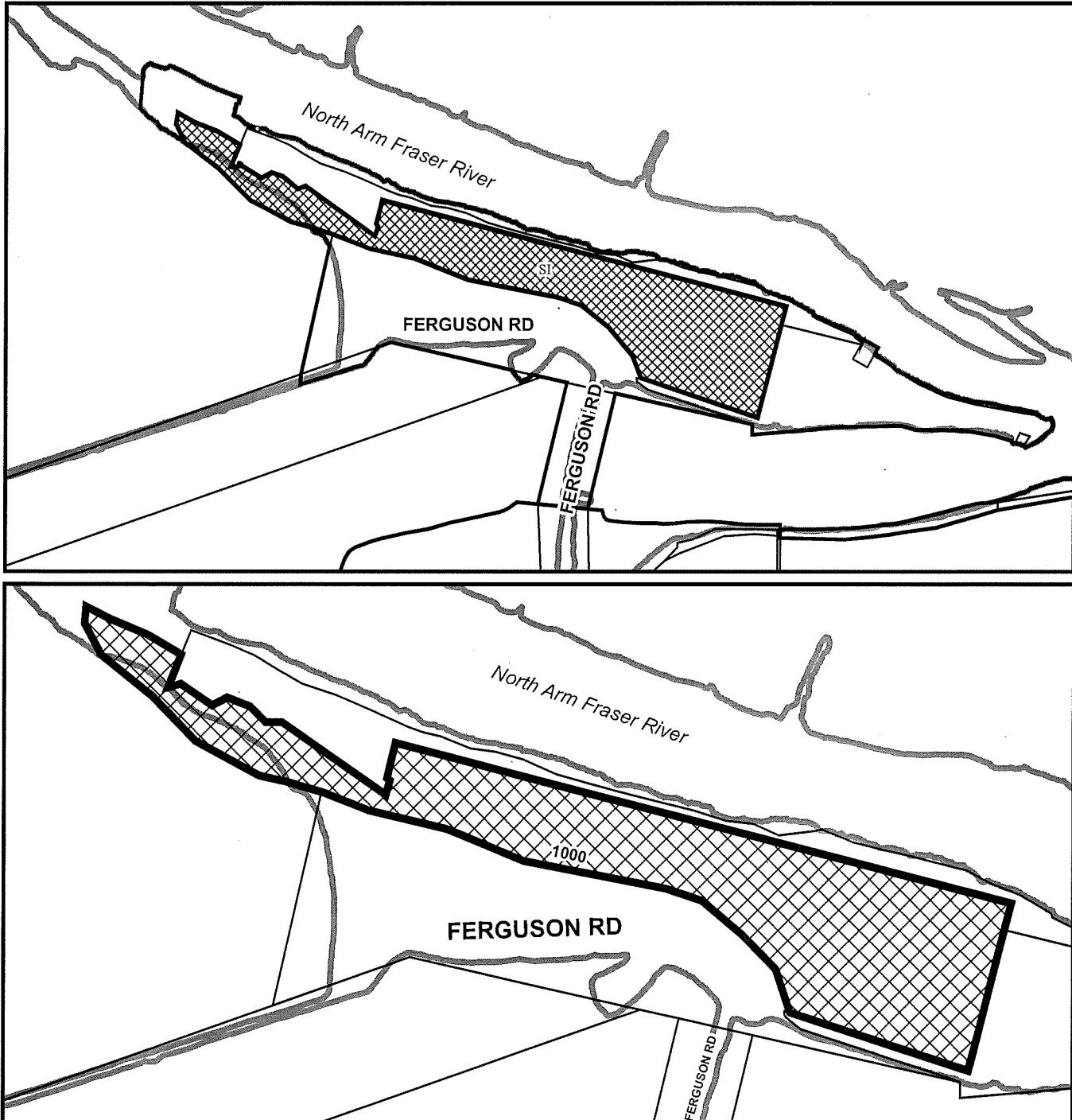
ISSUED BY THE COUNCIL THE DAY

DELIVERED THIS DAY OF , .

MAYOR

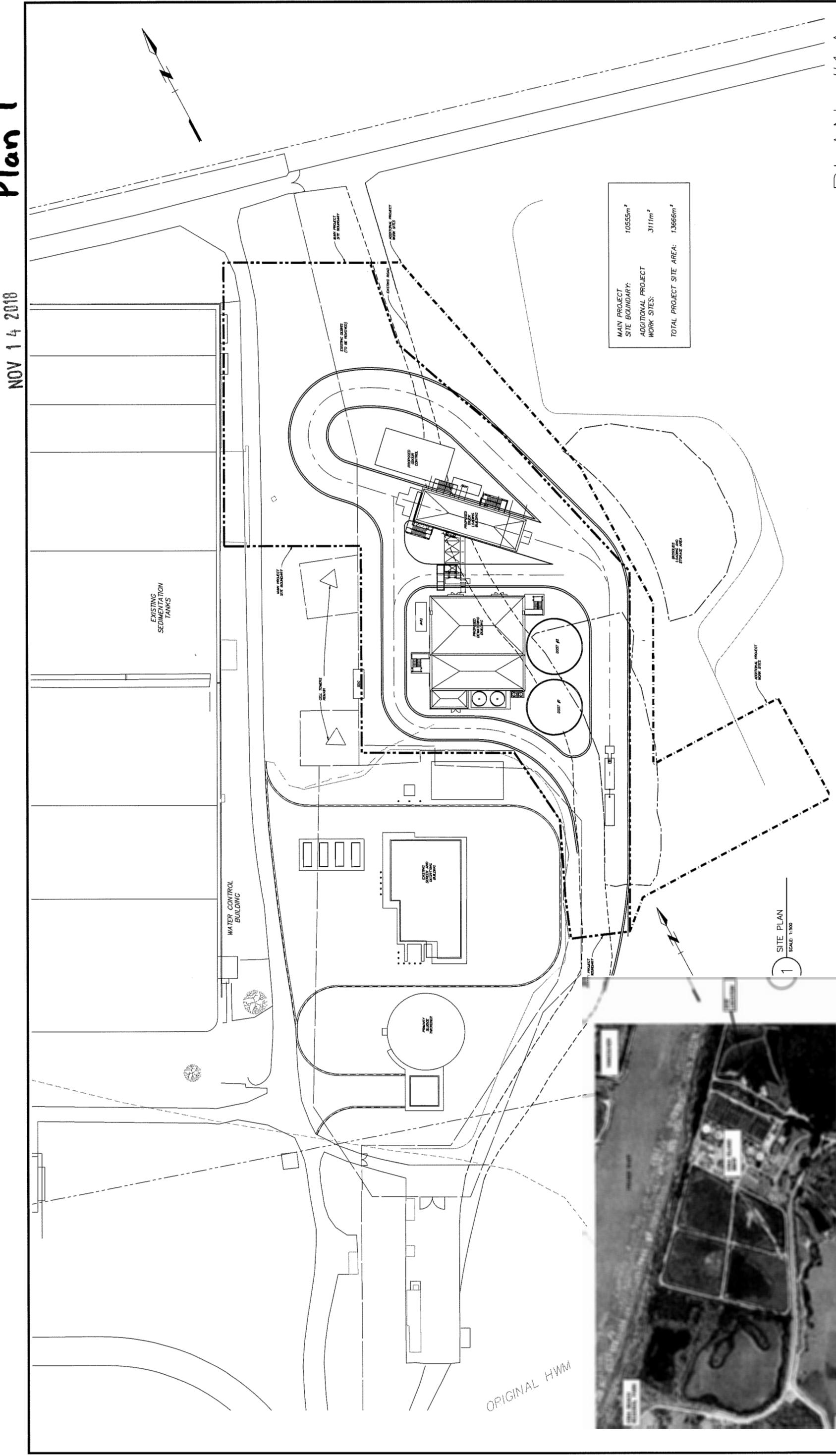


City of Richmond



N	DP 18-820582 SCHEDULE "A"	Original Date: 04/26/18 Revision Date: Note: Dimensions are in METRES
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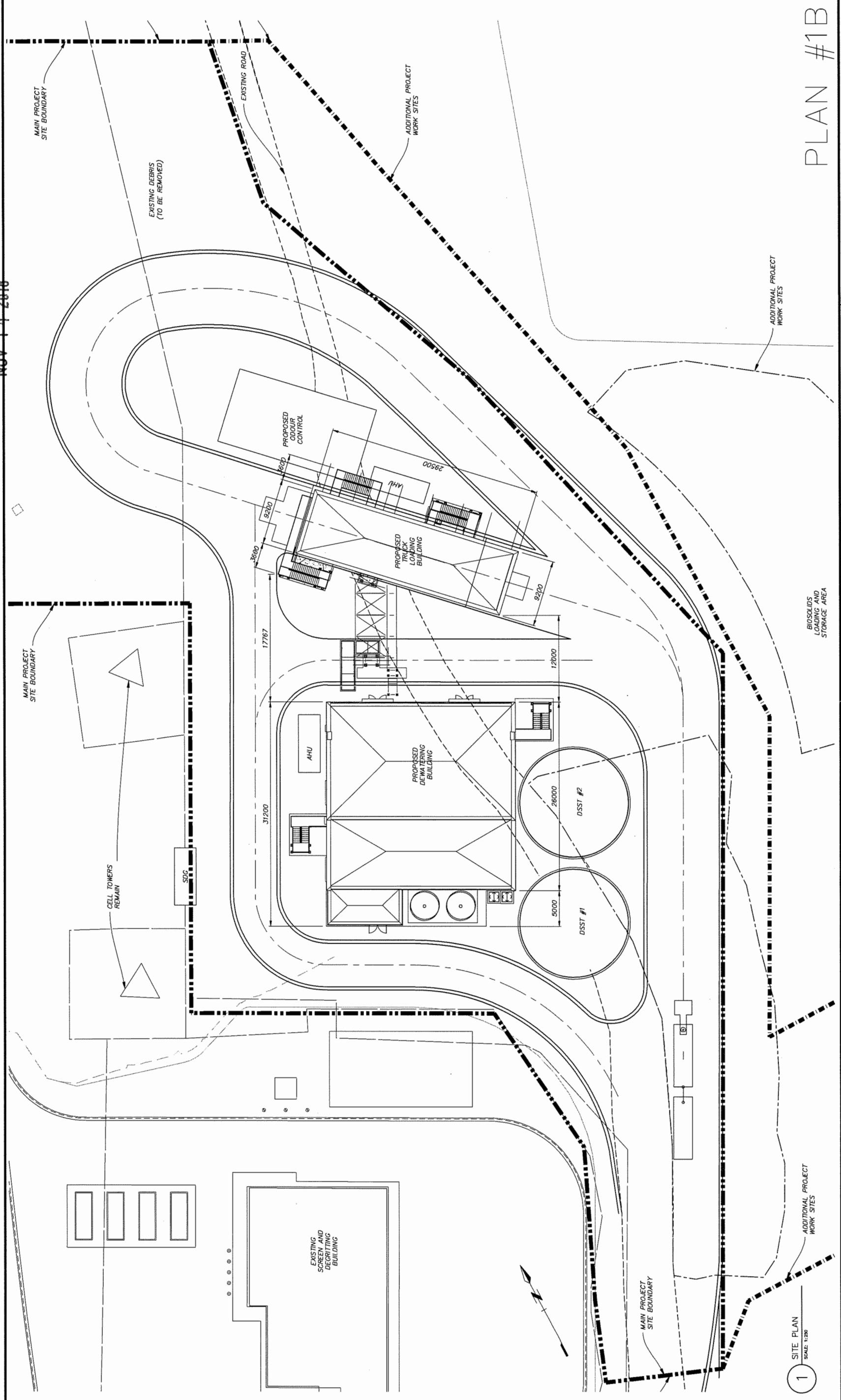
Plan 1



PREPARED BY:		URBAN SOLUTI	
N.T.S.		ONS	
		ARCHITECTURE	
		LIMITED	
		Land-use Planning Architecture Building Ecology Project Management	
		6189 Elm Street, Vancouver, BC, V6N 1B2	
		Phone: (604) 261-6106 Fax: (604) 261-6103	
		Email: urbansolutions@telus.net	
		Website: www.urbansolutionsarch.ca	
LOCATION PLAN		A-ECON	
		4th FLOOR, 3292 PRODUCTION WAY, BURRARD, B.C., V6A 4R4	
		604-444-6100	
PRINTS OF THIS DOCUMENT CODE WITH LETTERS PREVIOUS TO → A		SUPERSEDES → A	
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5M07 00-000		5M07 00-000	
DOCUMENT CODE A-011		DOCUMENT CODE A-011	
SITES PLAN		SITES PLAN	
APPROVED		APPROVED	
MANAGER		MANAGER	
ISSUE DATE APR 18		ISSUE DATE APR 18	
DRAFT MRM		DRAFT MRM	
RE-ISSUE FOR DEVELOPMENT PERMIT		RE-ISSUE FOR DEVELOPMENT PERMIT	
TUE APR 18		TUE APR 18	
PROJECT NAME		PROJECT NAME	
IONA ISLAND WWTP		IONA ISLAND WWTP	
BIOSOLIDS Dewatering Facility		BIOSOLIDS Dewatering Facility	
Design: DY Draw: MRM		Design: DY Draw: MRM	
Checked: DY		Checked: DY	
Scale: AS SHOWN		Scale: AS SHOWN	
DISTRICT FILE -		DISTRICT FILE -	
5M07 00-000		5M07 00-000	

Plan 2

NOV 14 2010



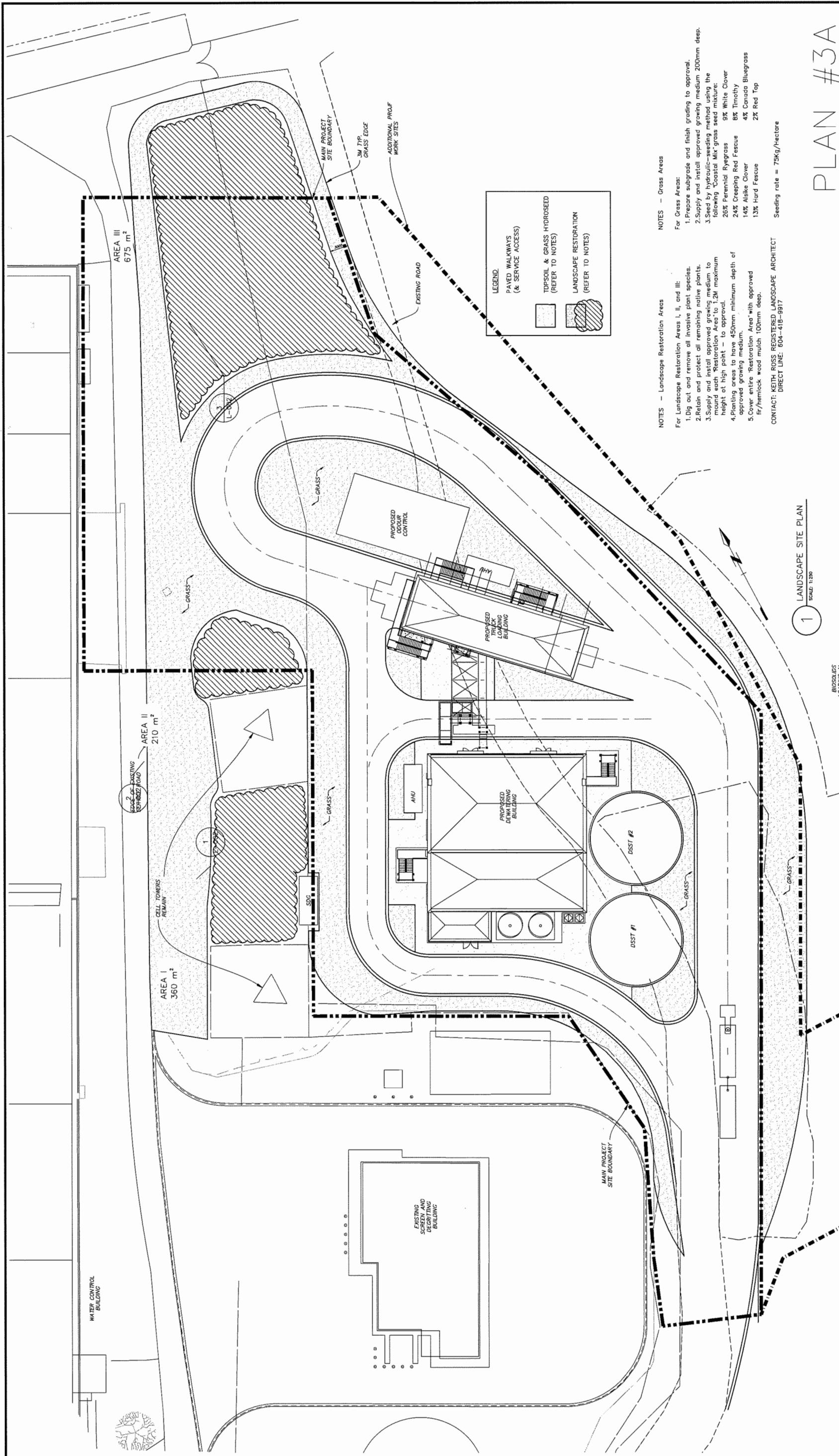
PLAN #1B

GREATER VANCOUVER SEWAGE AND DRAINAGE DISTRICT			
Design: DY		IONA ISLAND WWTP	
Drawn: MRM		BIOSOLIDS Dewatering FACILITY	
Checked: DY			
Approved:			
Manager:			
SUPERSEDES PRINTS OF THIS DOCUMENT CODE WITH LETTERS PREVIOUS TO A			
00-00-00 00-00 7M07.DWG			
DOCUMENT CODE A-002			
Site Plan			
Land-use Planning Architecture Building Ecology Project Management 6189 Elm Street, Vancouver, BC, Canada, V6N 1B2 Ph.: (604) 261-6106 Fax: (604) 261-6103 Email: urbansolutions@telus.net Website: www.urbansolutions.ca			
PREPARED BY: AECOM 4th FLOOR, 3292 PRODUCTION WAY, BURNABY, B.C., V5A 4R4 604-444-6400			
1			

18-820582

Plan 3

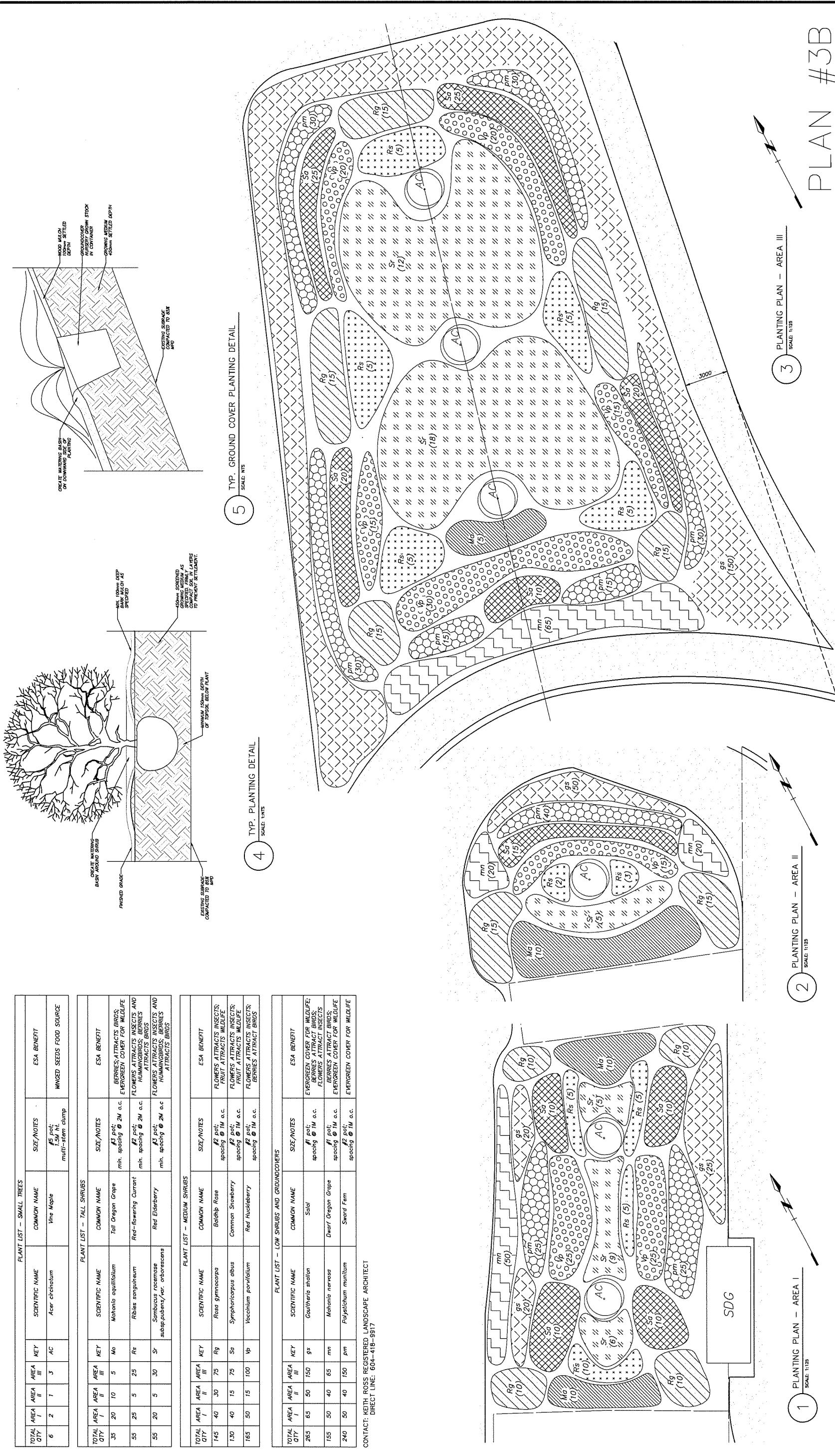
NOV 14 2018



PREPARED BY:		AECOM	
		4th FLOOR, 3252 PRODUCTION WAY, BURNABY, B.C., V5A 4R4 604-444-6400	
		Land-use Planning Architecture Building Ecology Project Management 6189 Elm Street, Vancouver, BC, Canada, V6N 1B2 Ph.: (604) 261-6106 Fax: (604) 261-6103 Email: urbansolutions@telus.net Website: www.urbansolutions.ca	
		NOTES — Grass Areas	
		For Grass Areas:	
		1. Prepare subgrade and finish grading to approval.	
		2. Supply and install approved growing medium 200mm deep.	
		3. Seed by hydraulic-seeding method using the following Coastal Mix grass seed mixture:	
		9% White Clover	
		26% Perennial Ryegrass	
		24% Creeping Red Fescue	
		24% Timothy	
		14% Alsike Clover	
		2% Hard Red Fescue	
		2% Red Top	
		Seeding rate = 75kg/Hectare	
		5M 6 00 00 00-00-00	
		PPFTTJG	
		PLAN #3A	
		Scale: 1:250	
		Design: KBR Drawn: MRM Checked: DY Approved: Manager: SUPERSEDES PRINTS OF THIS DOCUMENT	
		GREATER VANCOUVER SEWAGE AND DRAINAGE DISTRICT IONA ISLAND WWTP BIOSOLIDS DEWATERING FACILITY	
		Scale: AS SHOWN District File:	

Plan 4

NOV 14 2018



GREATER VANCOUVER SEWAGE AND DRAINAGE DISTRICT		
Design:	KRR	IONA ISLAND WWTP BIOSSOLIDS DEWATERING FACILITY
Drawn:	MM	Checkd: DY
SCALE AS SHOWN		
DISTRICT FILE -		
APPROVAL		
RE-ISSUE FOR DEVELOPMENT PERMIT		
ISSUE FOR DEVELOPMENT PERMIT		
Issue Date:	Desn Drn Crkd Appl	Description
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CONCEPTUAL PLANTING PLANS		
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**1 PREPARED BY:
AECOM**

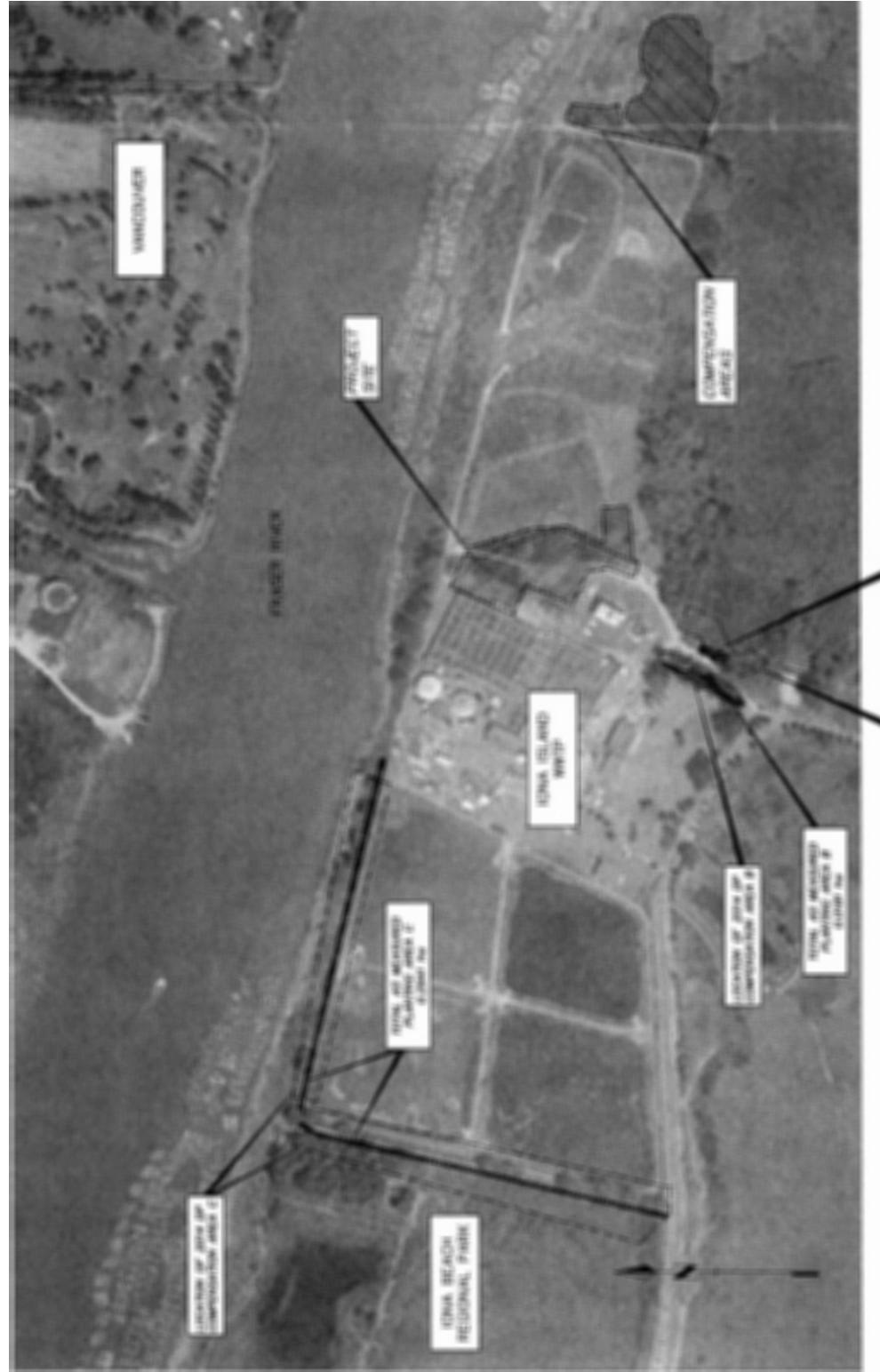
4TH FLOOR,
3212 PRODUCTION WAY,
BURNABY, B.C., V5A 4R4
604-444-6400

**2 URBAN SOUTHERN
ARCHITECTURE
LIMITED**

Land-Use Planning, Architecture, Building Ecology, Project Management
6138 Elm Street, Vancouver, BC, Canada, V6J 1B2
Ph.: (604) 261-6105 Fax: (604) 261-5103
Email: urbansouthern@telus.net
Website: www.urbansouthernarch.com

Plan 5

NOV 14 2018



ESA COMPENSATION SUMMARY

(Refer to Environmental Assessment Report – AECOM 2018)

Project Site Area in ESA	= 13,666 sq. meters (1.37 ha)
Compensation Ratio @ 1 : 1	= 13,666 sq. meters (1.37 ha) Compensation Area required
Existing Trees to be removed on Project site	= 100 trees (young Eastern Cottonwoods – less than 20cm dbh)
Replacement trees @ 2 : 1 ratio	= 200 Replacement Trees required
Proposed Compensation Sites for habitat restoration / native species planting at Confer Point park site in Metro Vancouver Iona Beach Regional Park.	
Total number of Shrubs, Grosses, and Groundcovers	= 13,466 plants @ 1 plant per sq. meter

CONTACT: KEITH ROSS REGISTERED LANDSCAPE ARCHITECT
DIRECT LINE: 604-418-9917



LANDSCAPE PRESCRIPTION

INVASIVE SPECIES REMOVAL:

- Remove all invasive plants and their rootballs by machine excavator
- Remove top 30cm of seed-laden soil by machine excavator
- Include binning and trucking of removed materials off site to green waste facility
- Use of best practices containment and disposal techniques for removed materials

SITE PREPARATION:

- Exposed sand on north Site A to be regraded to maintain a mound shape.
- South Site B to remain as flat topography.
- Shape and finish grading on both sites to approval as coastal sand dune zone.

NATIVE SPECIES PLANTING:

- All trees, shrubs, grasses, and groundcovers to be native species.
- Diversity of native plantings include fruiting and berries bearing plants.

MONITORING AND MAINTENANCE

- 5 YEAR MONITORING AND MAINTENANCE PROGRAM (DEP)
 - SITE VISITS BY CEP AT YEAR 1, 2, 3 AND 5 WITH ANNUAL REPORT TO MV PARKS AND CITY OF RICHMOND
 - 80% SURVIVAL RATE
 - ANNUAL WEEDING OF INVASIVE SPECIES
 - ANNUAL REPLACEMENT OF DEAD PLANTS

Professional Seal

PREPARED BY:

AECOM
4th FLOOR,
329 PRODUCTION WAY,
BURNABY, B.C., V5A 4R4
604-444-5400

Land-use Planning Architecture Building Ecology Project Management
6189 Elm Street, Vancouver, BC, Canada, V6N 1B2
Ph.: (604) 261-5106 Fax: (604) 281-6103
Email: urbansolutions@elus.net
Website: www.urbansolutions.ca

GREATER VANCOUVER SEWAGE AND DRAINAGE DISTRICT			
Design: KRR	IONA ISLAND WWTP	Scale: AS SHOWN	5MOT-00-00-00
Drawn: MRM	BIOLOGICAL DEWATERING FACILITY	District File: -	5MOT-00-00-00-00
Approved		LANDSCAPE COMPENSATION PLAN	
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PLAN #4

DP 18-820582