



City of
Richmond

Report to Development Permit Panel

To: Development Permit Panel

Date: February 19, 2019

From: Wayne Craig
Director, Development

File: DP 16-741329

Re: **Application by 0908206 BC Ltd. for a Development Permit at 9560, 9580 and 9584 Granville Avenue**

Staff Recommendation

That a Development Permit be issued which would:

1. Permit the construction of 16 two-storey townhouse units at 9560, 9580, and 9584 Granville Avenue on a site zoned "Medium Density Townhouses (RTM2)"; and
2. Vary the provisions of Richmond Zoning Bylaw 8500 to increase the maximum lot coverage for buildings from 40% to 45%.

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

WC:el
Att. 3

Staff Report

Origin

0908206 BC Ltd. has applied to the City of Richmond for permission to develop 16 two-storey townhouse units at 9560, 9580 and 9584 Granville Avenue. The site is being rezoned from “Single Detached (RS1/F)” zone to “Medium Density Townhouses (RTM2)” under Bylaw 9573 (RZ 14-677733), which received Third Reading following the Public Hearing on July 18, 2016. The site is currently vacant. A Servicing Agreement for the design and construction of required frontage beautification works 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, existing three-storey townhouse developments on lots zoned “Medium Density Townhouses (RTM1)” and “Town Housing (ZT56) – North McLennan (City Centre)”, and a single-family home on a large lot zoned “Single Detached (RS1/F)”.
- To the east, four single-family homes on small lots zoned “Single Detached (RS1/A)” fronting Granville Avenue with rear lane access, and a single-family home on a large lot zoned “Single Detached (RS1/F)” fronting Bridge Street.
- To the south, existing two-storey townhouse developments on lots zoned “Town Housing (ZT16) – South McLennan and St. Albans Sub-Area (City Centre)”.
- To the west, existing two-storey townhouse development on a lot zoned “Medium Density Townhouses (RTM2)” with vehicle access from Ash Street.

Rezoning and Public Hearing Results

The Public Hearing for the rezoning of this site was held on July 18, 2016. No concerns regarding the rezoning application was expressed at the Public Hearing.

Staff Comments

The proposed scheme attached to this report has satisfactorily addressed the urban design issues and other staff comments identified as part of the review of the subject Development Permit application. In addition, it complies with the intent of the applicable sections of the Official Community Plan (OCP) and is generally in compliance with the “Medium Density Townhouses (RTM2)” except for the zoning variances noted below.

Zoning Compliance/Variances (staff comments in *bold*)

The applicant requests to vary the provisions of Richmond Zoning Bylaw 8500 to increase the maximum lot coverage for buildings from 40% to 45%.

(This variance was identified at rezoning stage, and no concerns were identified at that time. The proposed development features all two-storey townhouse units, each with a side-by-side double car garages. This typology typically requires a higher lot coverage for buildings when compares to three-storey townhouse units with tandem parking spaces (which is also permitted on this site). To mitigate the potential implication of the higher lot coverage for buildings the developer is proposing to:

- i. achieve a greater lot coverage for porous surfaces on site (i.e., 49%) by using permeable pavers on the drive aisle and surface parking stalls; which exceeds the minimum requirement of 35% under the RTM zone; and*
- ii. achieve a greater lot coverage for landscaping with live plant materials (i.e., 27%); which exceeds the minimum requirement of 25% under the RTM zone.*

Staff supports this variance since the proposed two-storey building massing helps address potential adjacency concerns, and that the proposed increases in lot coverage for porous surfaces and landscaping with live plant materials are a reasonable response to the increased site coverage).

Advisory Design Panel Comments

The Advisory Design Panel (ADP) has reviewed and supported the project. A copy of the relevant excerpt from the Advisory Design Panel Minutes from Wednesday, October 4, 2017 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***

- Both the form and massing of the proposed development are consistent with the existing surrounding two-storey townhouse developments to the west and south.
- Along the side yard interface with adjacent single-family developments to the east, the windows on the second floor of the proposed townhouse units will be specified with frosted glass to address potential privacy and overlook concerns.
- A six foot tall fence and hedging materials will be installed along the east and west property lines to provide a buffer between the subject and adjacent developments.
- The proposed 3.9 m rear yard (south) setback exceeds the minimum rear yard setback requirement under the "Medium Density Townhouses (RTM2)" zone. One Whitebarked Himalayan Birch tree or Austrian Black Pine tree will be planted in each of the rear yards of the townhouse units along the south property line to provide a nature screen between the subject and adjacent townhouse developments.

- The site is surrounded by existing retaining walls to the east, west and south. Site grade will be raised to meet the existing site grades on the adjacent properties.
- 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 proposal provides for a pedestrian-oriented streetscape fronting Granville Avenue with a landscaped edge treatment, low metal fencing, and metal gates to the street fronting units. A pedestrian walkway from Granville Avenue to the development site is proposed along the east side of the entry driveway.
- The proposal consists of 16 units provided in four townhouse clusters. Half of the units will have direct pedestrian access from the street and half of the units will have access from the internal drive aisle.
- The internal road layout is a T-shape with future cross-access connection to the neighbouring properties to the east, secured by SRW. No connection to the adjacent property to the west is required since it has already been redeveloped into a townhouse complex with vehicle access off Ash Street.
- The number of residential parking spaces proposed for this townhouse development exceeds the minimum parking requirement within the City Centre area, and all units will have two vehicle parking spaces in a side-by-side parking arrangement within a garage.
- A total of four visitor parking spaces, including an accessible visitor parking space, are proposed, which meets the minimum bylaw requirement. 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 (30 m² per unit) of the Official Community Plan (OCP). All units will have private outdoor spaces consisting of a front or rear yard; the street fronting units will also have a balcony on the second floor facing the internal drive aisle.
- Outdoor amenity space is proposed opposite to the site entry for maximum casual surveillance opportunity and sun exposure. The size and location of the outdoor amenity space is appropriate in providing open landscape and amenity space convenient to all units.
- Additional outdoor amenity space (10% of the site area), as per the City Centre Amenity Space Provisions in the City Centre Area Plan, is proposed and includes the entry walkway and various landscaped areas throughout the site.
- A covered mailbox kiosk and short-term bicycle parking spaces will be provided along the entry walkway.
- The required garbage, recycling and organic waste storage enclosures have been incorporated into the design of the street fronting buildings to minimize the visual impact of these enclosures.

Architectural Form and Character

- The architect advised that the architectural language adopted in the design is inspired from the conventional single-family homes in the area.
- The massing and architectural rhythm of the proposed townhouse clusters is consistent to the neighbouring developments.
- Individuality of dwelling units is expressed by their separate entry porches and different entry door colours.
- The overall appearance of the proposal generally conforms to the design guidelines of the North McLennan area and should fit in well 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 impact of blank garage doors has been mitigated with panel patterned doors, transom windows, unit entrances, and planting islands along the drive aisle.
- The proposed building materials (asphalt roof shingles, hardie siding/panels and wood trim/brackets) are generally consistent with the Official Community Plan (OCP) Guidelines and are compatible with the existing single-family character of the neighbourhood.
- Heritage colours have been used for all siding materials to fit with the context of the neighbourhood. Strong contrasting colours are used on the accent walls/trims to provide visual interest.

Landscape Design and Open Space Design

- Tree preservation was reviewed at rezoning stage. Two City trees along the frontage of the site and four trees on site are identified for removal. Based on the 2:1 tree replacement ratio goal stated in the Official Community Plan (OCP), eight replacement trees are required. The applicant is proposing to plant 33 replacement trees on-site, including seven conifers and 26 deciduous trees.
- An English Oak tree (tag#930 – 43+22cm calliper) located at the northeast corner of the development site is identified for retention. Tree protection fencing is required to be installed as per the Arborist Report recommendations prior to any construction activities (including demolition) occurring on-site. A Tree Survival Security has been secured at the rezoning stage.
- A pedestrian-oriented streetscape along Granville Avenue 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 and lawn area. 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.
- An on-site irrigation system is proposed to ensure continued maintenance of live landscaping.

- The location of outdoor amenity space provides the easy access and visual transparency and surveillance for the townhouse residents. The proposed trellis at the terminus point of the entry driveway/entrance to the outdoor amenity space provides visual screening and spatial definition.
- A tower slide and a single springer are proposed within the outdoor amenity area. These play structures/elements are chosen to fit into the provided space and to allow multiple children to play at the same time. The equipment provides different play opportunities for the development of social, imagination, balance, and motor skills. A bench is also provided for caregivers.
- The drive aisle and surface parking stalls will be treated with permeable pavers for better water infiltration and variety in paving surfaces. Feature paving will be used to identify and enhance the pedestrian route along the internal drive aisle.
- In order to ensure that the proposed landscaping works are completed, the applicant is required to provide a landscape security of \$160,929.00 in association with the Development Permit.
- Indoor amenity space is not proposed on-site. A \$16,000 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 exterior lights will be equipped with a diffuser to reduce glare.
- All entrances are visible and overlooked by pedestrians or by neighbour's windows.

Sustainability

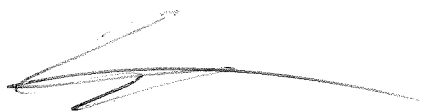
- The applicant has committed to achieving an EnerGuide rating of 82 for the proposed townhouses and to pre-ducting all units for solar hot water heating.
- A Certified Energy Advisor has confirmed that the proposed townhouse units will be designed to achieve an EnerGuide rating of 82. The report prepared 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 following design/features will be incorporated into the development:
 - Energy Star rated windows.
 - Use of LED lights, low-flow toilets, Energy Star appliances.

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 2 & 3) 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 would meet applicable policies and Development Permit Guidelines, staff recommend that the Development Permit be endorsed, and issuance by Council be recommended.



Edwin Lee
Planner I
(604-276-4121)

EL:blg

Attachment 1: Development Application Data Sheet

Attachment 2: Excerpt from Advisory Design Panel Meeting Minutes (August 22, 2018)

Attachment 3: Development Permit Considerations



DP 16-741329

Attachment 1

Address: 9560, 9580 and 9584 Granville Avenue

Applicant: 0908206 BC Ltd.

Owner: 0908206 BC Ltd.

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

Floor Area Gross: 2,510.6 m²

Floor Area Net: 1,908.2 m²

	Existing	Proposed
Site Area:	2,936 m ²	No Change
Land Uses:	Single-Family Residential	Multiple-Family Residential
OCP Designation:	Neighbourhood Residential	No Change
Area Plan Designation:	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:	3	16

	Bylaw Requirement	Proposed	Variance
Floor Area Ratio:	Max. 0.65	0.65	none permitted
Lot Coverage – Building:	Max. 40%	45%	Variance Requested
Lot Coverage – Non-porous Surfaces:	Max. 65%	51%	none
Lot Coverage – Landscaping:	Min. 25%	27%	none
Setback – Front Yard (m):	Min. 6.0 m	6.0 m	none
Setback – East Side Yard (m):	Min. 3.0 m	3.52 m	none
Setback – West Side Yard (m):	Min. 3.0 m	3.0 m	none
Setback – Rear Yard (m):	Min. 3.0 m	3.9 m	none
Height (m):	Max. 12.0 m (3 storeys)	9.52 m (2 storeys)	none
Lot Width (m):	Min. 30.0 m	67.2 m	none
Lot Depth (m):	Min. 35 m	43.4 m	none
Off-street Parking Spaces – Regular (R) / Visitor (V):	1.4 (R) and 0.2 (V) per unit	2 (R) and 0.25 (V) per unit	none

Off-street Parking Spaces – Total:	23 (R) and 4 (V)	32 (R) and 4 (V)	none
Tandem Parking Spaces:	Max. 50% of required residential spaces in enclosed garages (23 x Max. 50% = 11 spaces)	0	none
Small Car Parking Spaces	Max. 50% when 31 or more spaces are provided on site (36 x Max. 50% = 18)	16	none
Handicap Parking Spaces:	Min. 2% when 11 or more spaces are required (27 x 2% = 1 space)	1	none
Bicycle Parking Spaces – Class 1 / Class 2:	1.25 (Class 1) and 0.2 (Class 2) per unit	1.25 (Class 1) and 0.25 (Class 2) per unit	none
Off-street Bicycle Parking Spaces – Total:	20 (Class 1) and 4 (Class 2)	20 (Class 1) and 4 (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 16 units = 96 m ²	98.8 m ²	none

Excerpt from the Minutes from
The Design Panel Meeting

Wednesday, October 4, 2017 – 4:00 p.m.
Rm. M.1.003
Richmond City Hall

1. **DP 16-741329 - 16-UNIT TWO-STOREY TOWNHOUSE DEVELOPMENT**

ARCHITECT: Eric Law Architect

PROPERTY LOCATION: 9560, 9580 and 9584 Granville Avenue

Applicant's Presentation

Eric Law, Eric Law Architect, Inc., and Jenny Liu, JHL Design Group Inc., presented the project and answered queries from the Panel.

Panel Discussion

Comments from the Panel were as follows:

- appreciate the applicant contributing to the City's Public Art Fund; however, the applicant is also encouraged to investigate opportunities for integrating public art into the project as it will add value to the project and will help the project's integration with the community;

Owner prefers to pay contribution to the public art fund.

- consider introducing canopies over the doors of the unit entries to the rear units to create a stronger visual prominence along the internal drive aisle and help provide separation of the rear buildings from the drive aisle;

A decorative gable roof feature added to the rear units to highlight a stronger visual prominence.

- appreciate the proposed two-storey massing for the townhouse development; also appreciate the detailing of the two convertible units; however, consider (i) integrating the bump out for the future elevator with the usable ground floor space of the convertible unit to provide additional space for the dining area, and (ii) relocating the front door entrance on the ground floor to increase the size of the powder room and the width of the sliding door to enhance accessibility;

The dining area is bumped out to provide additional space. The powder room is enlarged slightly and closet removed to provide easy access to the powder room.

- ensure the visibility the bicycle racks and other low structures adjacent to the garbage and recycling area during truck pick-ups to avoid potential damage;

A bright color bicycle racks will be provided to ensure visibility.

- appreciate the breaking up of the roofline along Granville Avenue; consider a similar approach for the rear buildings to provide a more neighbourly interface with the existing two-storey townhouse development to the south;

Rear roof lines are adjusted to be broken up similar to the front building.

- appreciate the proposed lay-out for the kitchen which provides a workable work triangle and a three-foot clearance underneath the counter;

Noted.

- limited landscaping opportunities along the internal drive aisle is noted; applicant is advised to provide more detail and commitment, for review by City staff, regarding retention of soil volume for proposed planting of trees along the internal drive aisle to ensure their survival, e.g. use of soil cell or structural soil;

Limited spaces for the proposed trees along the internal drive, so the landscape architect is proposing structural soil to have trees in these areas.

- consider relocating the proposed tree and plantings at the back of the outdoor amenity area to the edges to open up the lawn area and provide more play space for children;

Landscape on the outdoor amenity area has been updated.

- reconsider the placement of windows of townhouse units looking out into the play area to provide privacy to users of the play area;

Windows have been provided for surveillance and safety purpose. Please also see non-concern comments on the same item below.

- consider eliminating the long and narrow gaps between the duplexes along Granville Avenue to (i) provide more landscaping opportunities at the east and west edges of the site, (ii) provide more separation from the adjacent townhouse developments along Granville Avenue, (iii) provide more opportunities for planting along the sides of the entry driveway, and (iv) increase the size of the front yards of units along Granville Avenue;

The long and narrow gaps have been reduced. Unit 13 to Unit 16 are shifted to provide a wider access entrance along Granville Revised. The landscape plans are adjusted to provide more landscape opportunities wherever we can.

- relocate the electrical rooms between the duplexes along Granville Avenue to the side yards and introduce plantings to provide screening around the electrical rooms;

The electrical room has been relocated to the east side yard area with landscape planting.

- consider opening up the side yards along Granville Avenue to provide more usable outdoor yard spaces for residents; consider installing a gate adjacent to the visitor parking space to provide access to the side yard;

The side yards are counted towards the additional 10% public open space as required. Fences are provided between the open spaces and the adjoining dwelling units.

- support the landscaping scheme to provide seasonal all year round interest;

Noted.

- support the densification of the area which is in close proximity to parks and schools; appreciate the size of the townhouse units and the applicant's attention to the livability of the units; however, outdoor spaces have been marginalized; ***noted.***

- support the comment to eliminate the long and narrow spaces between the duplexes along Granville Avenue as they not usable and have compromised the side yard spaces and the main entry point to the site; make the side yards usable for residents and clarify their ownership;

The long and narrow gaps have been reduced to provide a wider access entrance along Granville Avenue as commented above. The side yards are for the additional 10% public open space as required by City. Gates are provided between the open spaces and the adjoining dwelling units for the south units.

- appreciate the proximity of garbage, recycling, and other amenities to Granville Avenue; however, consider (i) reconfiguring the arrangement of these amenities to locate them on one side, and (ii) increasing the width of the entry driveway and install a pedestrian sidewalk along the driveway adjacent to these amenities to provide pedestrian access into and out of the site;

The entrance driveway width has been enlarged to have a sidewalk along the driveway. The recycle and garbage rooms are to be kept small and separated so that they are not visually prominence as one piece.

- consider installing small gables above the unit entries to the rear units to provide a stronger visual prominence along the internal drive aisle and facilitate way finding;

Small gables are provided above the rear unit entrance.

- support the proposal to break up the roofs in the rear buildings; may not enhance sunlight penetration into the central drive aisle but will help make the general massing of the rear buildings more neighbourly to the adjacent townhouse development to the south;

The rear building roofs are broken up similar to the front building.

- support the comment to maximize the usable space on the side yards adjacent to the corner units;

The corner open space are required as part of the 10% additional public space. These spaces are not counted as private side yard. Gates are provided between the public spaces and yard spaces.

- consider less prescriptive but more interesting and intuitive play opportunities for children at the outdoor amenity area;

Please see revised landscape plan.

- not concerned with side windows of units looking out into the outdoor amenity area;

Noted, and please also see comments above.

- appreciate the large area for living spaces on the ground floor of townhouse units; however, they are located deep into the units and natural light penetration may be limited; investigate opportunities for introducing more openings, e.g. clerestory windows to allow more natural light into the living spaces;

The effective depth of the rear units' living space is only approximately 20'. The units are provided with patio doors which will have lot of light penetration from the south.

- appreciate the project providing more density to the area; however, Granville Avenue could support three-storey townhouse units as the neighbourhood grows and changes in the future; the proposed two-storey massing is challenging in terms of providing a sense of opening to the site, e.g. width of drive aisle entry needs to be increased;

The 2 storey building approach is consistent to 2 storey townhouse context. The drive aisle entry width is now increased.

- support the comment to eliminate the narrow space between the duplexes along Granville Avenue as they are a potential CPTED concern; however, maintain the proposed roofline;

The narrow gaps are reduced and the roof profile is maintained.

- in general, supportive of the proposed 45 percent variance in maximum coverage for buildings;

Noted.

- unit entries to the rear units feel secondary compared to unit entries along Granville Avenue; consider introducing a gabled canopy over the entry doors of the rear units slightly ahead of the garage doors and slightly recessing the entry doors to make them more visually significant;

A decorative gable roof feature added to the rear units to highlight a stronger visual prominence.

- not opposed to the comment to break up the roofs of the rear buildings; the move may not enhance sunlight penetration to the central drive aisle but will enhance the buildings' form and character; roofs of the rear buildings could hip and follow the direction of the dormers and install a roof cricket with a different pitch lower in height to the dormers;

The rear building roofs are broken up with different roof pitch similar to the front building.

- support the comment to eliminate the space between the duplexes along Granville Avenue to provide more space for the side yards and the front entry;

The gap between duplex are reduced to provide a wider entrance and sidewalk from Granville Avenue.

- consider flipping one of two townhouse units with adjacent unit entries along the internal drive aisle to provide more articulation and separation to the unit entries to the rear units;

Townhouse unit 7 is flipped to provide more identifiable entry to the unit.

- a three-storey scheme for the proposed development is preferable; however, the applicant has done a good job in the proposed two-storey scheme;

The 2 storey building approach is considered to be consistent to 2 storey surrounding townhouse context.

- understand the rationale for the proposed two-storey scheme; however, the proposed development need not conform to the site context in terms of the design of neighbouring developments but could still be consistent with the City's vision for the neighbourhood; and

Noted.

- agree with the comment that proposed developments need not be contextually sensitive and similar all the time; City staff could encourage applicants to introduce some variety and diversity in massing and articulation in the neighbourhood.

Noted.

- *(The Chair read into the minutes the following comments submitted by Panel member Jubin Jalili regarding the mechanical and sustainability aspect of the project)*

- the project seems to be on the right track with respect to sustainability with the following proposed features by the design team: Energuide rating of 82, use of Energy Star-rated vinyl windows and appliances, and use of LED interior and exterior lighting;

Noted.

- proposed mechanical system for the project is not clear; recommend the use of Heat Recovery Units in the townhouse units;
Heat recovery ventilation units are provided in the townhouse as noted on A1.
- not clear on the landscape drawings where the gas meters will be installed; and
Gas meter located on the east side yard as noted on A2.
- overall, a good package; support the project.

Panel Decision

It was moved and seconded

That DP 16-741329 be supported to move forward to the Development Permit Panel subject to the applicant giving consideration to the comments of the Advisory Design Panel.

CARRIED



Development Permit Considerations

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

Address: 9560, 9580 and 9584 Granville Avenue

File No.: DP 16-741329

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

1. Final adoption of the Zoning Amendment Bylaw 9573.
2. Receipt of a Letter of Credit for landscaping in the amount of \$160,929.00.

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

1. Installation of appropriate tree protection fencing around all hedges to be retained as part of the development prior to any construction activities, including building demolition, occurring on-site.
2. Enter into a Servicing Agreement* for the design and construction of frontage improvement works. A Letter of Credit or cash security for the value of the Service Agreement works, as determined by the City, will be required as part of entering into the Servicing Agreement. Works include, but may not be limited to:

Granville Avenue Frontage Improvements

- a) Match curb alignment on the south side of Granville Avenue as set out by the redevelopments to the east and west of the site (i.e., road widening to 11.2 m curb to curb, curb & gutter, creation of about a 3.3 m wide grass & treed boulevard, concrete sidewalk at north property line). Extend frontage upgrades established by 7028 Ash Street development to the west as per SA 12-603914.
- b) Employ a Geotechnical Engineer to confirm the adequacy of the existing soil conditions along Granville Avenue frontage. All peat and organic materials shall be removed and replaced with compacted structural fill to subgrade elevations from property line to Granville Avenue centerline.
- c) Extend the existing street lighting system built via SA12-603914 across the Granville Avenue frontage of the proposed site.
- d) Coordinate with BC Hydro, Telus and other private communication service providers:
 - (1) Underground proposed private utility service lines (e.g., BC Hydro, Telus, etc.).
 - (2) Remove the existing poles and underground the existing overhead lines along Granville Avenue frontage.
 - (3) To determine if above ground structures are required and coordinate their on-site locations (e.g. Vista, PMT, LPT, Shaw cabinets, Telus Kiosks, etc.).

Water Works:

- e) Submit Fire Underwriter Survey (FUS) or International Organization for Standardization (ISO) fire flow calculations to confirm the development has adequate fire flow for onsite fire protection. Calculations must be signed and sealed by a Professional Engineer and be based on Building Permit Stage Building designs.
- f) Install a new 100 mm water service connections complete with meter and meter box along Granville Avenue frontage.
- g) Cut and cap at main three (3) existing water service connections along the proposed site's Granville Avenue frontage.

Storm Sewer Works:

- h) Provide additional right of way to accommodate new IC's within the property, details to be finalized in the Servicing Agreement process.
- i) Cut and cap nine (9) existing storm service connections and remove nine (9) existing IC located along the proposed site's Granville Avenue frontage.

Initial: _____

- j) Install a new storm service connection complete with IC and tie-in to the existing 600 mm storm sewer along Granville Avenue.

Sanitary Sewer Works:

- k) Remove and dispose offsite the existing sanitary main along the rear yard of the proposed site from the west property line of 9560 Granville Avenue to the west property line of 9584 Granville Avenue. Removal works shall include the existing service connections, inspection chamber and manhole that are connected to the pipe to be removed.
- l) Discharge the existing utility right-of-way along the rear yard of the proposed site. Prior to discharge of the right-of-way, a signed and sealed letter by a Professional Engineer must be submitted to the City, stating the sanitary main, as depicted within the Servicing Agreement design, has been properly and legally removed and disposed of off-site.
- m) Provide a new utility right of way to accommodate new sanitary manhole at the southwest corner of 9560 Granville Avenue. The right-of-way details are to be finalized in the Servicing Agreement process.
- n) Cut and cap near the west property line of 9560 Granville Avenue the existing sanitary main along the proposed site's rear yard.
- o) Install a new manhole, complete with a service connection stub, to the proposed site and tie-in the new manhole to the capped end of the existing rear yard sanitary main. The tie-in and service connection details shall be finalized via the Servicing Agreement design process.

General Items:

- p) 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.
- 3. Submission of a Construction Parking and Traffic Management Plan to the Transportation Department. Management Plan shall include location for parking for services, deliveries, workers, loading, application for any lane closures, and proper construction traffic controls as per Traffic Control Manual for works on Roadways (by Ministry of Transportation) and MMCD Traffic Regulation Section 01570.
- 4. Incorporation of energy efficiency, CPTED, sustainability, and accessibility measures in Building Permit (BP) plans as determined via the Rezoning and/or Development Permit processes.
- 5. Payment of DCC's (City & GVS&DD), School Site Acquisition Charges, Address Assignment Fee, and all required servicing costs.
- 6. Obtain a Building Permit (BP) for any construction hoarding. If construction hoarding is required to temporarily occupy a public street, the air space above a public street, or any part thereof, additional City approvals and associated fees may be required as part of the Building Permit. For additional information, contact the Building Approvals Department at 604-276-4285.

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.

Initial: _____

- 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



No. DP 16-741329

To the Holder: 0908206 BC LTD.
Property Address: 9560, 9580 AND 9584 GRANVILLE AVENUE
Address: C/O ERIC LAW
ERIC LAW ARCHITECT INC.
#216 – 288 WEST 8TH AVENUE
VANCOUVER, BC V5Y 1N5

1. This Development Permit is issued subject to compliance with all of the Bylaws of the City applicable thereto, except as specifically varied or supplemented by this Permit.
2. This Development Permit applies to and only to those lands shown cross-hatched on the attached Schedule "A" and any and all buildings, structures and other development thereon.
3. The "Richmond Zoning Bylaw 8500" is hereby varied to increase the maximum lot coverage for buildings from 40% to 45%.
4. Subject to Section 692 of the Local Government Act, R.S.B.C.: buildings and structures; off-street parking and loading facilities; roads and parking areas; and landscaping and screening shall be constructed generally in accordance with Plans #1 to #4 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 \$160,929.00 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 16-741329

To the Holder: 0908206 BC LTD.
Property Address: 9560, 9580 AND 9584 GRANVILLE AVENUE
Address: C/O ERIC LAW
ERIC LAW ARCHITECT INC.
#216 – 288 WEST 8TH AVENUE
VANCOUVER, BC V5Y 1N5

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.

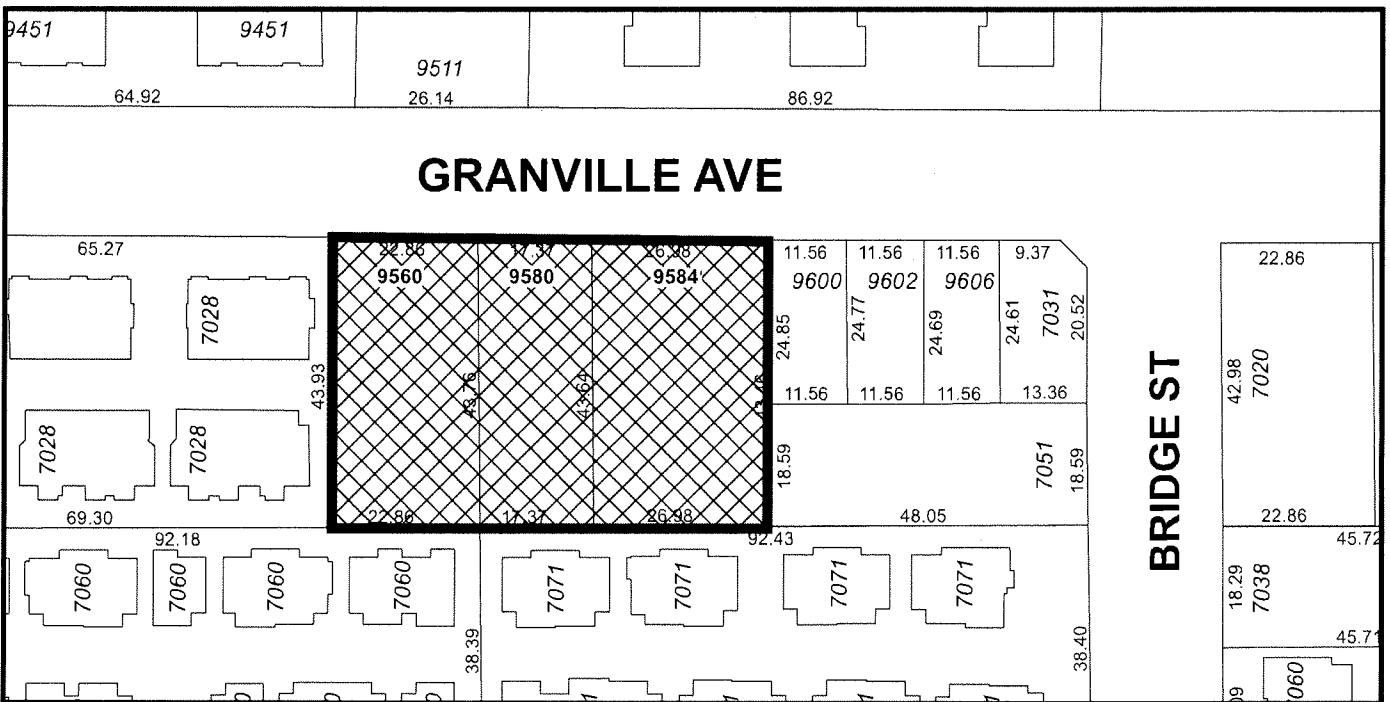
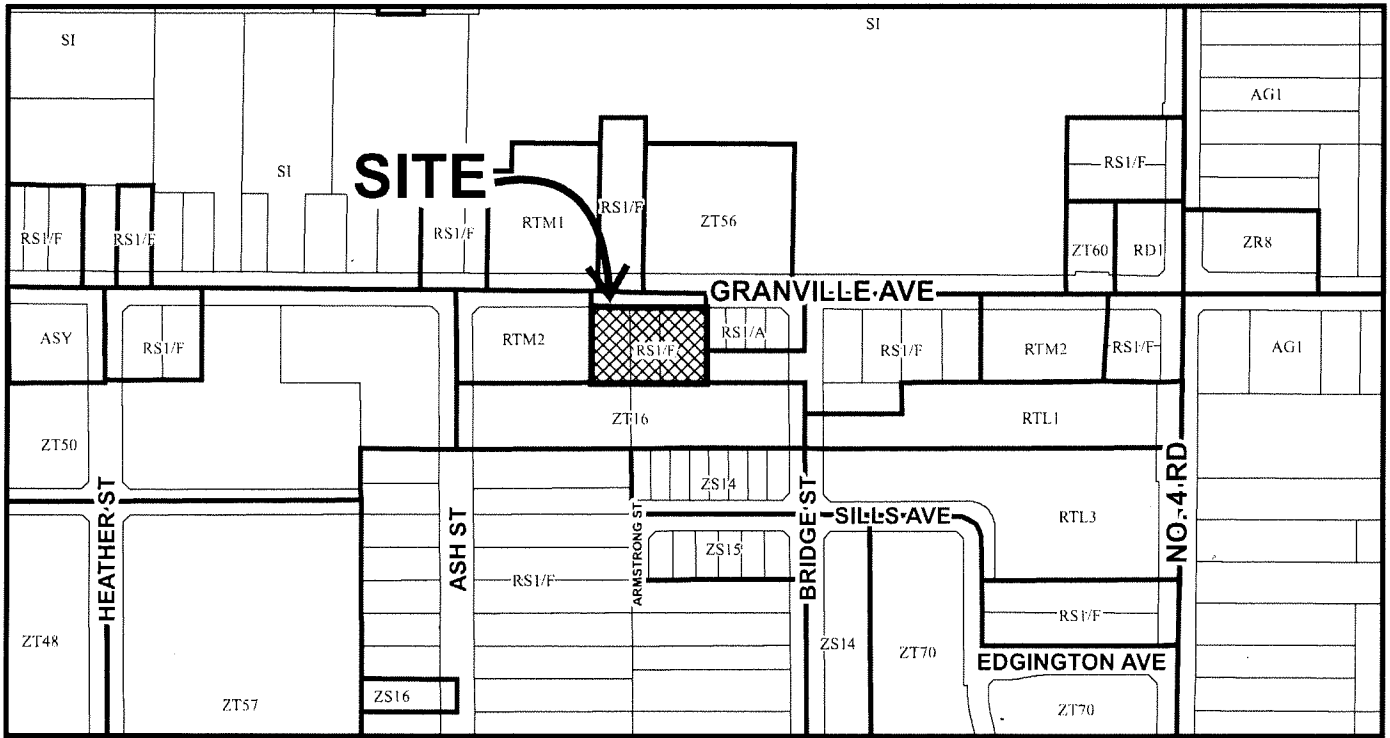
AUTHORIZING RESOLUTION NO. ISSUED BY THE COUNCIL THE
DAY OF , .

DELIVERED THIS DAY OF , .

MAYOR



City of Richmond



DP 16-741329 SCHEDULE "A"

Original Date: 09/14/16

Revision Date:

Note: Dimensions are in METRES

PROPOSED TOWNHOUSE DEVELOPMENT AT 9560-9584 GRANVILLE AVENUE, RICHMOND, BC

DEVELOPMENT DATA

- (A) CIVIC ADDRESS: 9560, 9580, 9584 GRANVILLE AVENUE, RICHMOND, BC
- (B) LEGAL DESCRIPTION: LOT 4 PLAN 14703; LOT 88 AND 89 PLAN 48591
ALL OF SECTION 15 BLOCK 4 NORTH RANGE 6 WEST NEW WESTMINSTER DISTRICT
- (C) LOT AREA: 2,936 SM (31,602 SF)
- (D) ZONING USE: CURRENT: RS1/F, PROPOSED: RTM2

CURRENT ZONING (UNDER RS1/F ZONING)

PROPOSED REZONING (RTM2)

(E) FLOOR AREA RATIO: 0.55 TO 454.5 SM
0.3 TO REST OF SITE AREA

PROPOSED DEVELOPMENT: 0.65
1907.75M (20,537 SF) FLOOR AREA

(F) NUMBER OF UNIT: 1 PER LOT
(G) BUILDING COVERAGE: MAX - 45%

16 UNITS
MAX - 40% (1174.4 SM)

44.9% (14197 SQ. FT.) (VARIANCE REQUIRED)

TOTAL NON POROUS AREA % = 51% (SEE LANDSCAPE DWG)
TOTAL LIVE PLANT AREA % = 27% (SEE LANDSCAPE DWG)

(H) BUILDING HEIGHT: MAX MAIN BUILDING HEIGHT - 12M
FRONTYARD FACING GRANVILLE - 6M
SIDEYARD - 3M
REARYARD - 3M

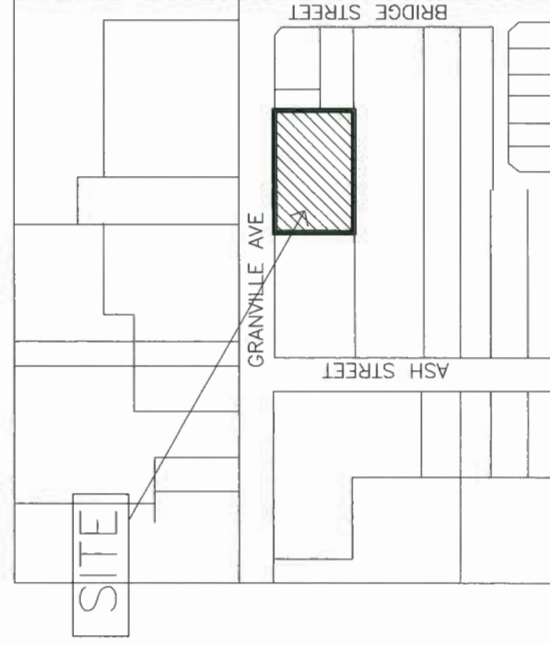
BUILDING HEIGHT - 9.52M (31'3")
FRONTYARD FACING GRANVILLE - 6.06M (19'-11")
EAST SIDEYARD - 3.52M (11'6")
WEST SIDEYARD - 3.01M (9'11")
REAR YARD - 3.90M (12'10")

(I) PARKING: 2 PER DWELLING UNIT

1.4 PER DWELLING UNITS X16 = 23
0.2 VISITOR PARKING / UNIT X16 = 4
TOTAL = 36 REQUIRED
(50% PARKING CAN BE SMALL PARKING)

RESIDENTIAL PARKING: 16 REGULAR
16 SMALL

VISITOR PARKING: 1 DISABLED
3 REGULAR



2 LOCATION MAP
NTS

VISITOR BICYCLE: 0.2 PER DWELLING UNIT X16= 4
RESIDENTIAL BICYCLE STORAGE: 1.25 PER DWELLING UNIT X16=20
TOTAL: 20

VISITOR BIKE RACK: 4
TOTAL: 20

OPEN AMENITY SPACE = 6 SM PER UNIT
X16= 96 SM (1033 SF)

OUTDOOR AMENITY AND: 98.8 SM
CHILDREN PLAYGROUND: 1064 SQ. FT.)

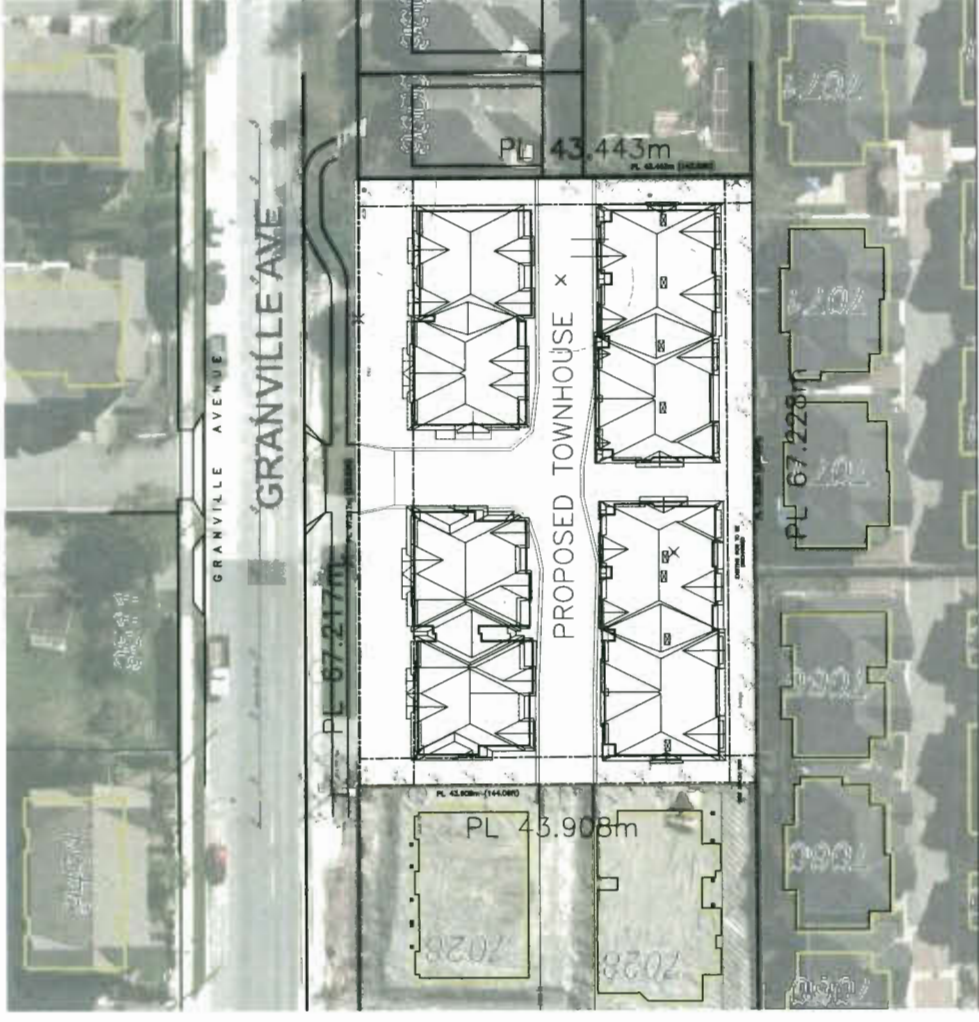
ALL THE UNITS IN THIS PROJECT SHALL INCORPORATE THE FOLLOWING FEATURES IN THE UNITS

- (1) PROVIDE PRE-DUCTING TO ACCOMMODATE FUTURE SOLAR HOT WATER HEATING
- (2) AGING IN PLACE FEATURES SHALL BE PROVIDED TO ALL UNITS:
- (3) STAIRWELL HANDRAILS
- (4) LEVER TYPE HANDLES FOR PLUMBING FIXTURE AND DOOR HANDLES
- (5) SOLID BLOCKING IN WASHROOM WALLS TO FACILITATE FUTURE GRAB BAR INSTALLATION BESIDE TOILETS, BATHTUBS AND SHOWERS

TOWNHOUSE SHALL MEET CITY'S ENERGIUE 82 REQUIREMENTS, AND ALL UNIT ARE TO BE PRE-DUCT FOR FUTURE HOT WATER HEATING

HEAT RECOVERY VENTILATION SYSTEM TO BE PROVIDED IN THE TOWNHOUSE UNITS

TWO CONVERTIBLE UNITS ARE PROVIDED IN THIS DEVELOPMENT
AND THE PROJECT WILL MEET ENERGIUE 82 REQUIREMENTS



1 LOCATION PLAN
1/32" TO 1'-0"

Policy Compliance Case:
The policy compliance case models the upgrades which shall improve the energy performance of all homes in the proposed development to an EnerGuide rating of 82 or better.

Table of upgrades and commitments:
All units: The following list of upgrades will be installed in all units

Component	Upgrade	Commitment
Solar Hot Water Ready requirement	At least 2 conduit runs must be provided that extend from the area directly adjacent to the buildings primary service water heater to the roof area, or an accessible attic space adjacent to the roof area, designated for installation of solar collectors.	The location of the conduit runs must be specified on the building plans. A 9.3m ² area (with no dimension less than 2.7 metres) suitable for a solar collector shall be identified on a flat roof, or on a south, east or west-facing roof, such that at least part of the collector area is situated directly above the unit it is intended for.
Space Heating:	Gas Boiler AFUE 94%	Siting and specifications for the Gas boiler, including the minimum AFUE value required to achieve the modeled performance gain, will be noted on the building plans.
Domestic Hot Water (DHW):	Combination unit with boiler system EE-79	Siting and specifications for the upgraded DHW unit, including the minimum Energy Factor (EF) or thermal efficiency required to achieve the modeled performance gain, will be noted on the building plans.

ARCHITECTURAL DRAWING LIST

- A1- DEVELOPMENT SUMMARY
- A2- SITE PLAN G/F
- A2A- ENVELOPE-PROJECTION
- A3- PARKING PLAN
- A4- SITE PLAN 2/F
- A5- SITE PLAN ROOF PLAN
- A6- ELEVATIONS
- A7- SECTIONS
- A8- UNIT PLANS
- A9- UNIT PLANS
- A10- UNIT PLANS
- A11-ELEVATION COLOUR
- A12-ELEVATION COLOUR
- A13-OPEN SPACE DIAGRAM
- A14-SITE COVERAGE DIAGRAM
- FAR-FAR DIAGRAM

PROPOSED TOWNHOUSE AT
9580 GRANVILLE AVE
RICHMOND BC

DEVELOPMENT SUMMARY

PROJECT NUMBER: 14-30
ISSUED: 1/25/2019
DRAWN BY: EL
CHECKED BY: EL
FILENAME: 14-30_NGJ_190125-DP-DWG

ERIC LAW ARCHITECT

ericlaw.architect@gmail.com
210 W 88 WEST AVE VANCOUVER BC
V6P 1K2
(604) 555-2029
FAX: (604) 509-2897

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ISSUED

1. 2016.06.10 FOR DEVELOPMENT PERMIT APPLICATION
2. 2016.07.31 FOR CITY REVIEW
3. 2017.06.19 FOR CITY ADP REVIEW
4. 2018.01.23 FOR CITY REVIEW
5. 2018.07.10 FOR CITY REVIEW
6. 2018.12.07 FOR CITY REVIEW
7. 2019.01.25 FOR CITY REVIEW

DP 16-741329 A1

DP 16-741329
PLAN # 1

FEB 19 2019

PROVIDE SPRAY AERATOR ON KITCHEN FACUETS

ADDITION TO ABOVE, ALL EXTERIOR AND INTERIOR LIGHTS IN THIS PROJECT SHALL BE LED LIGHT,

ALL VINYL WINDOWS TO BE ENERGY STAR RATED

ALL HOME APPLIANCES TO BE ENERGIUE STAR PRODUCT

ALL TOILETS SHALL BE LOW FLOW TYPE FIXTURE

DEVELOPMENT PERMIT

216 204 W. AGRIE VANCOUVER BC
 TEL: (604) 505-2889
 FAX: (604) 505-2887
 eric@ericlaw.com
 www.ericlaw.com

FINISH GRADE CALCULATION:
 NW LOT CORNER: 2.38
 NE LOT CORNER: 2.17
 SW LOT CORNER: 2.02
 SE LOT CORNER: 2.10
 AVERAGE = 2.29

BLDG A: 2.60+2.27+2.43+2.43 / 4 = 2.43
 BLDG B: 2.40+2.45+2.60+2.60 / 4 = 2.51
 BLDG C: 2.30+2.35+2.40+2.40 / 4 = 2.36
 BLDG D: 2.20+2.25+2.30+2.30 / 4 = 2.26
 BLDG E: 2.20+2.25+2.30+2.30 / 4 = 2.26
 AVERAGE = 2.33

AVERAGE GRADE: 2.18+2.43 / 2 = 2.31 M (7.61')
 MAX CROWN OF THE ROAD: 2.3M
 BUILDING HEIGHT: 11.83M - 2.31M = 9.52M

- ISSUED
- 2016.08.10 FOR DEVELOPMENT PERMIT APPLICATION
 - 2016.07.31 FOR CITY REVIEW
 - 2017.09.19 FOR ADP REVIEW
 - 2018.01.23 FOR CITY REVIEW
 - 2018.07.10 FOR CITY REVIEW
 - 2018.12.07 FOR CITY REVIEW
 - 2019.01.25 FOR CITY REVIEW
 - 2019.02.19 FOR CITY REVIEW

LANDSCAPE STONE TREE WELL SEE CIVIL ENGINEER GRADING PLAN FOR SECTION DETAIL

CONCRETE SIDEWALK

NEW BOULEVARD

NEW SIDEWALK

HYDRO MESH SHIELD

EXISTING FIRE HYDRANT

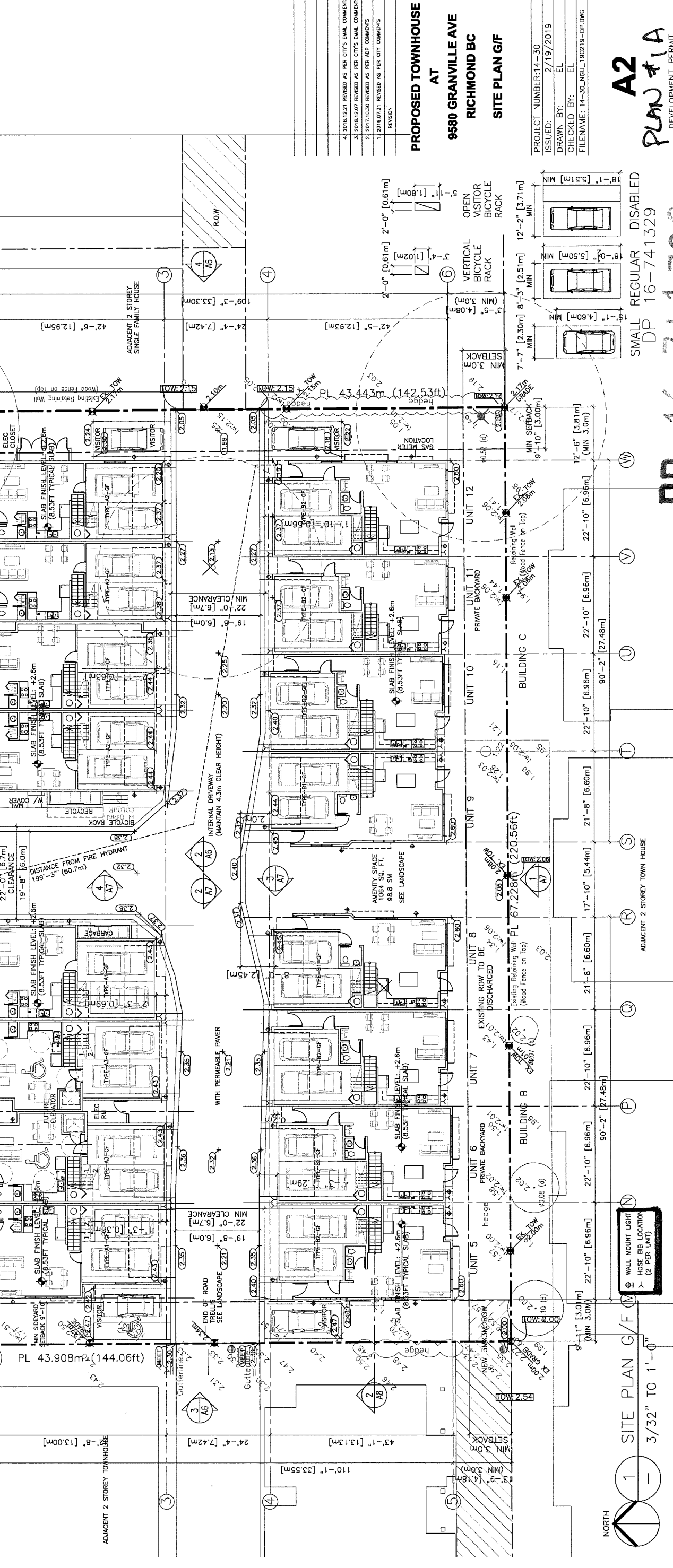
INTERNAL DRIVEWAY (MAINTAIN 4.3m CLEAR HEIGHT)

WITH PERMEABLE PAVEMENT

ADJACENT 2 STOREY TOWNHOUSE

ADJACENT 2 STOREY SINGLE FAMILY HOUSE

ADJACENT 2 STOREY TOWN HOUSE



PROPOSED TOWNHOUSE AT 9580 GRANVILLE AVE RICHMOND BC SITE PLAN G/F

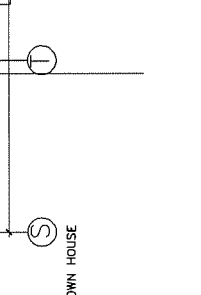
PROJECT NUMBER: 14-30
 ISSUED: 2/19/2019
 DRAWN BY: EL
 CHECKED BY: EL
 FILENAME: 14-30_NGU_190219-DP.DWG

4. 2018.12.21 REVISED AS PER CITY'S EMAIL COMMENTS
 3. 2018.12.07 REVISED AS PER ADP COMMENTS
 2. 2017.10.30 REVISED AS PER ADP COMMENTS
 1. 2016.07.31 REVISED AS PER CITY COMMENTS
- REASON

A2 PLAN #1A
 DEVELOPMENT PERMIT
FEB 19 2019

DP 16-741329
 SMALL REGULAR DISABLED DP 16-741329

1 SITE PLAN G/F
 3/32" TO 1'-0"



WALL MOUNT LIGHT
 HOSE BIB LOCATION
 (2 PER UNIT)

GRANVILLE AVENUE

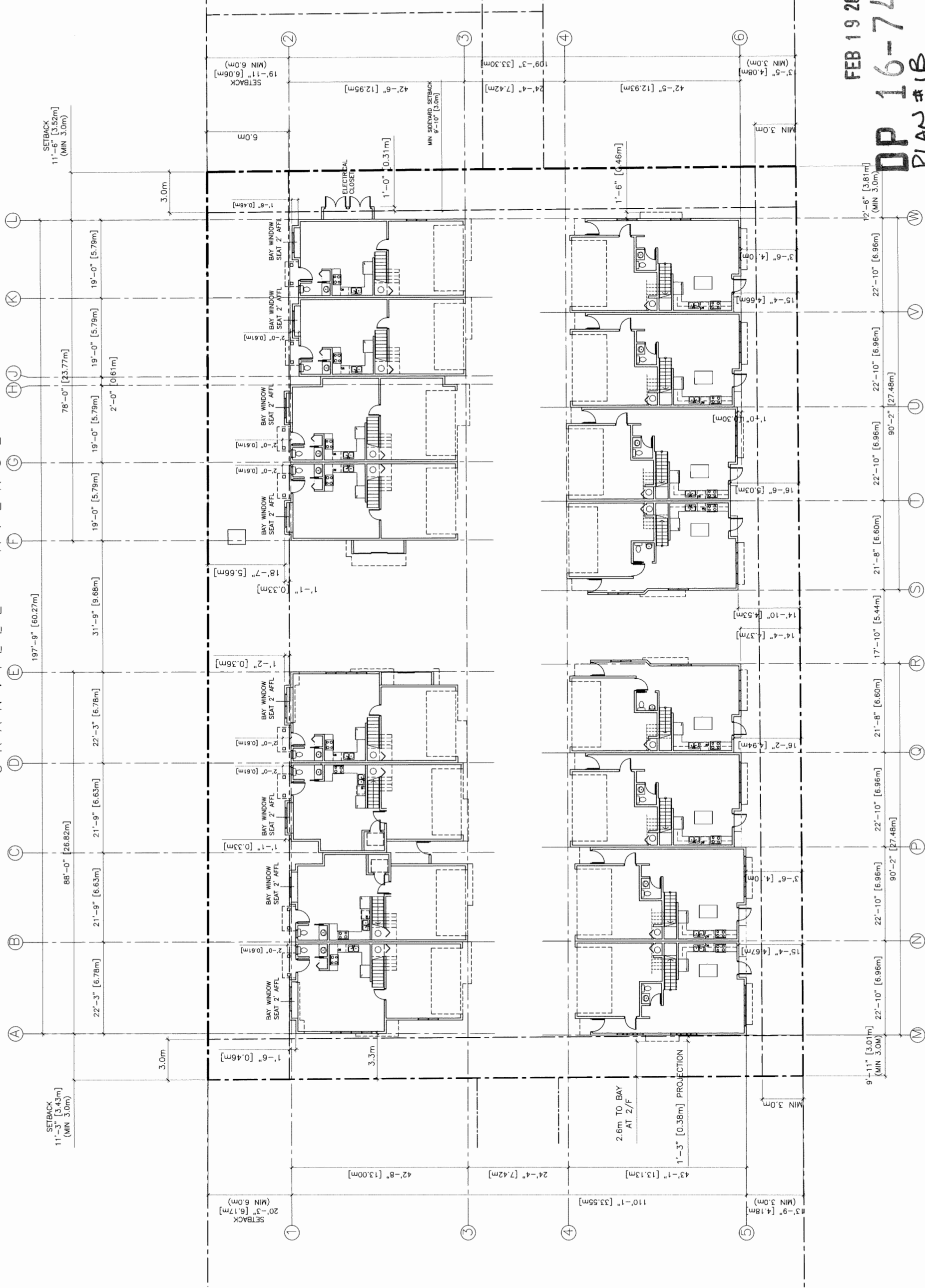
ERIC LAW ARCHITECT

ericlawarchitect@gmail.com
 207 N. WEBB WITH AVENUE VANCOUVER BC
 TEL: (604) 686-5698
 FAX: (604) 906-2897

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ISSUED

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2	2016.07.31 FOR CITY REVIEW
3	2017.05.19 FOR CITY ADP REVIEW
4	2018.01.23 FOR CITY REVIEW
5	2018.07.10 FOR CITY REVIEW
6	2018.12.07 FOR CITY REVIEW
7	2019.01.25 FOR CITY REVIEW



4	2018.12.21 REVISED AS PER CITY'S EMAIL COMMENTS
3	2018.12.07 REVISED AS PER CITY'S EMAIL COMMENTS
2	2017.10.20 REVISED AS PER ADP COMMENTS
1	2016.07.31 REVISED AS PER CITY COMMENTS
	REVISION

PROPOSED TOWNHOUSE
AT
9580 GRANVILLE AVE
RICHMOND BC
ENVELOPE PROJECTIONS

PROJECT NUMBER: 14-30
 ISSUED: 1/25/2019
 DRAWN BY: EL
 CHECKED BY: EL
 FILENAME: 14-30_NGU_190125-DP.DWG

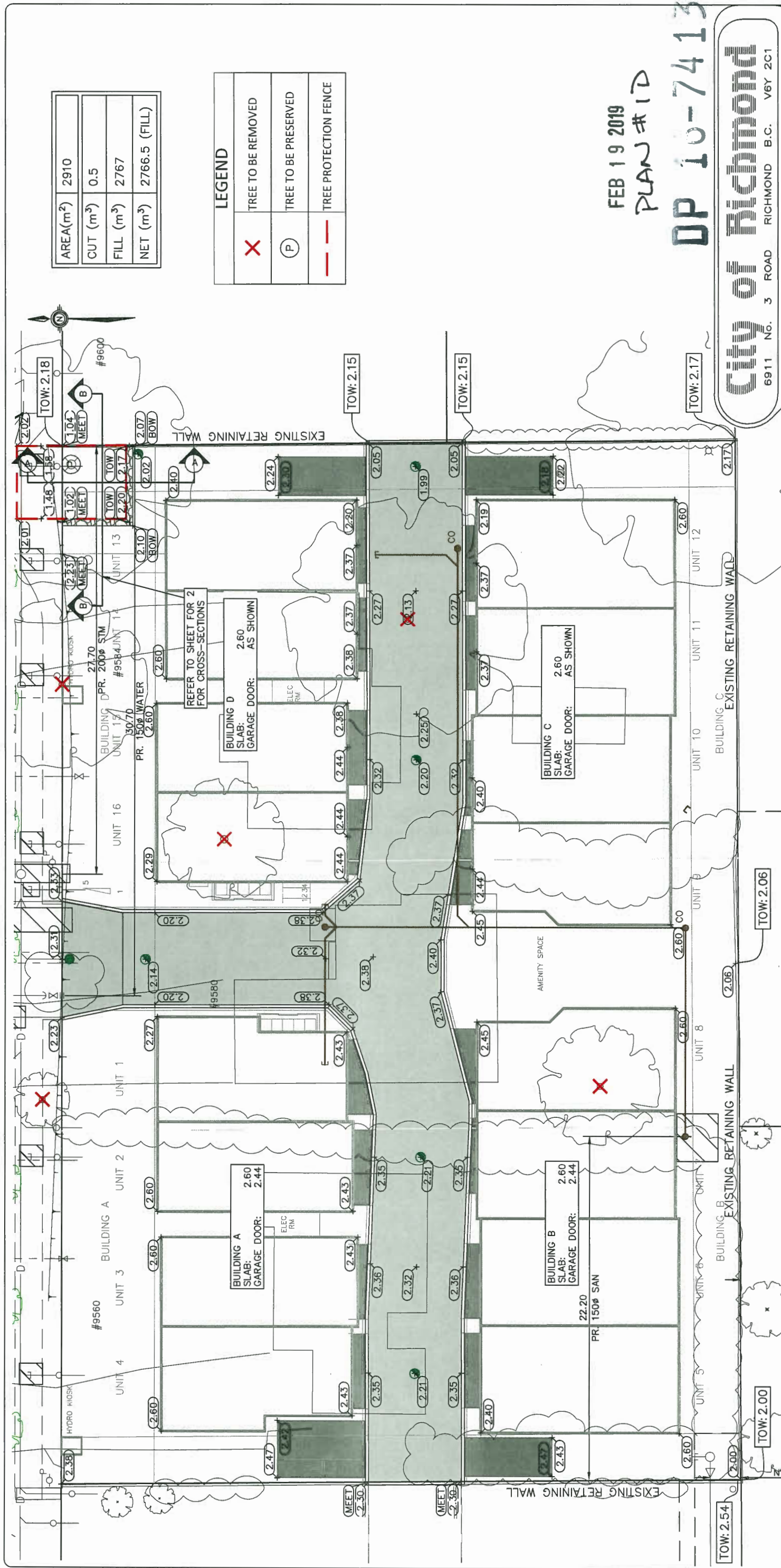
FEB 19 2019

DP 16-741329
PLAN #1B

DP 16-741329

A2A

DEVELOPMENT PERMIT



AREA(m ²)	2910
CUT (m ³)	0.5
FILL (m ³)	2767
NET (m ³)	2766.5 (FILL)

LEGEND	
X	TREE TO BE REMOVED
P	TREE TO BE PRESERVED
---	TREE PROTECTION FENCE

FEB 19 2019
PLAN #10
DP 10-741329

City of Richmond
6911 No. 3 ROAD RICHMOND B.C. V6Y 2C1

TITLE: LOT GRADING	
9560, 9580 AND 9584 GRANVILLE AVE	
CITY FILE: ----	
DESIGN: BTR	DWG. No.: .
DRAWN: HH	CHECKED: BD
ENGINEER: RF	DATE: AUG 2014
SEC. No.: 15-4-6	SHT No.: 1 OF 2

26 JUN 2018	
-------------	--

REV'N	DATE	BY	CH.	DESCRIPTION
2.	26 JUN 2018	AR	BTR	FOR CITY REVIEW
1.	16 APR 2018	LL	BTR	FOR DISCUSSION PURPOSES
0.	08 DEC 2016	BTR	RF	FOR DISCUSSION PURPOSES

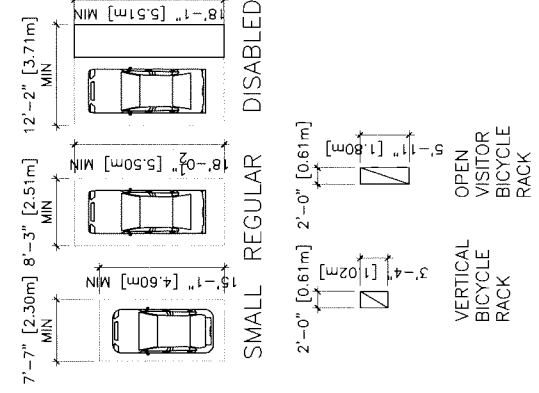
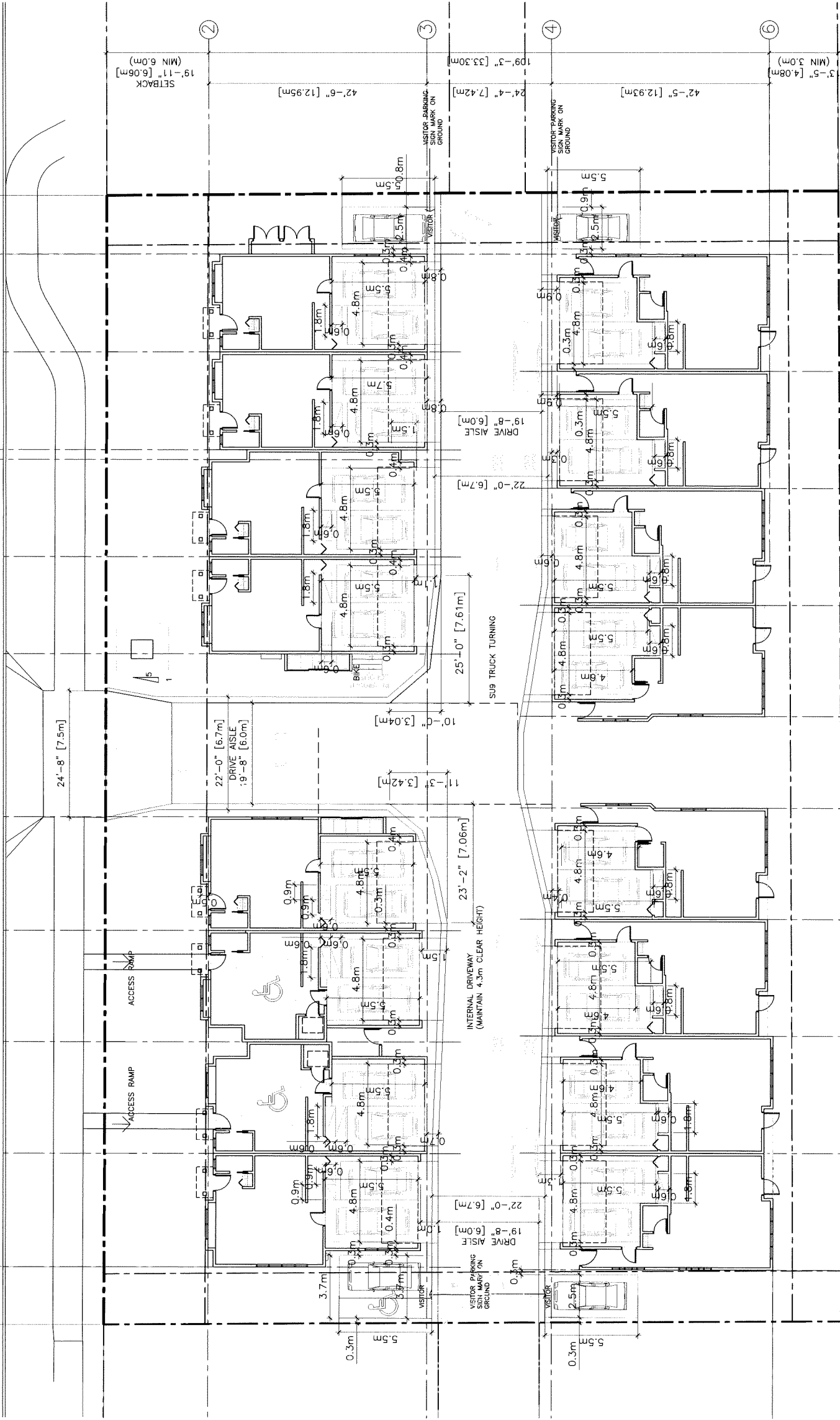
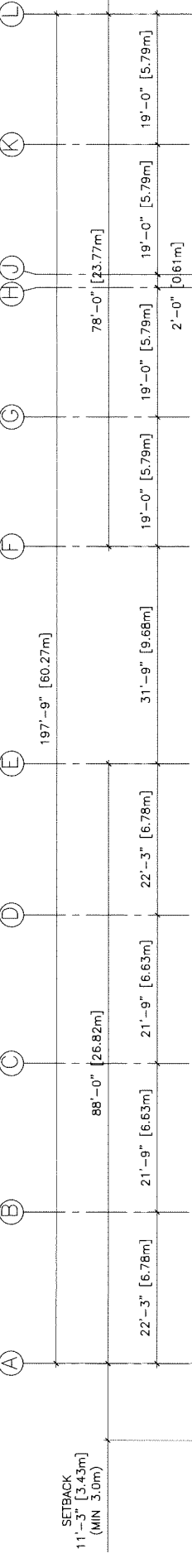
tel : 604.249.5040
 fax : 604.249.5041
 #220-2639 Viking Way, Richmond, BC, V6V 3B7
 www.coreconceptconsulting.com

KHALID HASAN

Core Concept Consulting Project No. 14078
DWG. 1 OF 1

GRANVILLE AVENUE

PROPOSED REZONING (RTM2)	PROPOSED DEVELOPMENT
1.4 PER DWELLING UNITS X16 = 23 0.2 VISITOR PARKING / UNIT X16 = 4 TOTAL = 36 REQUIRED (50% PARKING CAN BE SMALL PARKING)	RESIDENTIAL PARKING: 16 REGULAR 16 SMALL VISITOR PARKING: 1 DISABLED 3 REGULAR
SETBACK 11'-6" [3.52m] (MIN 3.0m)	BICYCLE VISITOR BIKE RACK 4 TOTAL: 20
VISITOR BIKE RACK 0.2 PER DWELLING UNIT X16 = 4 RESIDENTIAL BICYCLE STORAGE 1.25 PER DWELLING UNIT X16 = 20	



ISSUED

- 2016.08.10 FOR DEVELOPMENT PERMIT APPLICATION
- 2016.07.31 FOR CITY REVIEW
- 2017.06.19 FOR CITY ADP REVIEW
- 2018.01.23 FOR CITY REVIEW
- 2018.07.10 FOR CITY REVIEW
- 2018.12.07 FOR CITY REVIEW
- 2019.01.25 FOR CITY REVIEW

ERIC LAW ARCHITECT
 2375 W 8TH AVENUE VANCOUVER BC
 TEL: (604) 556-0688
 FAX: (604) 509-2897

ERIC LAW ARCHITECT

**PROPOSED TOWNHOUSE AT
 9580 GRANVILLE AVE
 RICHMOND BC
 PARKING PLAN**

FEB 19 2019

PROJECT NUMBER: 14-30
 ISSUED: 1/25/2019
 DRAWN BY: EL
 CHECKED BY: EL
 FILENAME: 14-30_NGL_190125-dp.dwg

PLAN #2

DP 16-741329 A3

PARKING PLAN
 3/32" TO 1'-0"

ALL PARKING (EXCEPT VISITOR) SHALL HAVE LEVEL 2 EV CHARGING OUTLETS LEVEL 2 EV CHARGING (208V TO 240V AC AND CURRENT OF 16A TO 80A)

DATE	ISSUED FOR	REV
2018-12-06	DP SUBMISSION	0
2019-01-16	DP RE-SUBMISSION	A

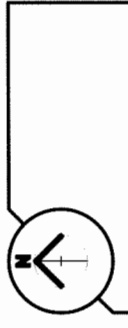
The drawing has been prepared solely for the use of the CLIENT and there are no representations of any kind made by Donald V. S. Duncan to any party with whom Donald V. S. Duncan has not entered into a contract.

The original design was prepared by JH Design Group Inc. who retain copyright of the concept. Detailing provided by Donald V. S. Duncan.

This drawing shall not be used for construction purposes until the seal appearing hereon is signed and dated by the Landscape Architect.

Consultants

Civil: _____
 Ecology: _____
 Structural: Eric Law Architect
 Mechanical: _____
 Electrical: _____



A Project Leader
 D. Duncan
 Drawn by
 D. Duncan
 Revision

PROPOSED TOWNHOUSE
 9560 9580 9584 Granville Avenue
 Richmond, British Columbia
 Canada

TREE MANAGEMENT

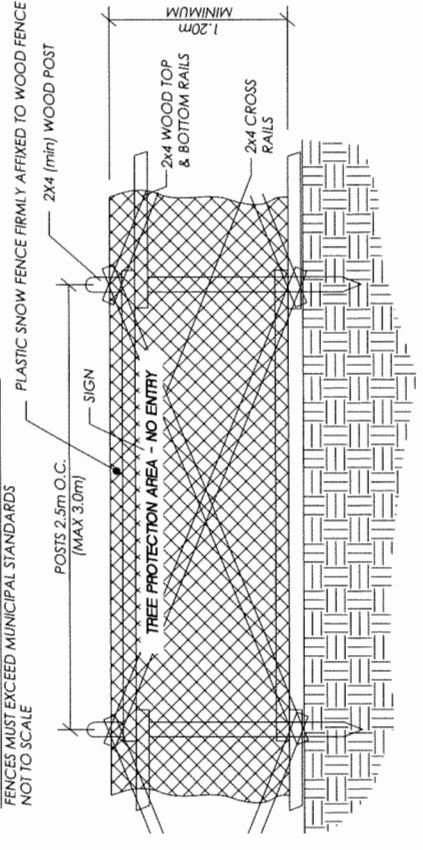
Check Scale (may be photo reduced)
 0 10mm
 0 1 inch

Project No. 18-00339
 Drawing No. L1-2

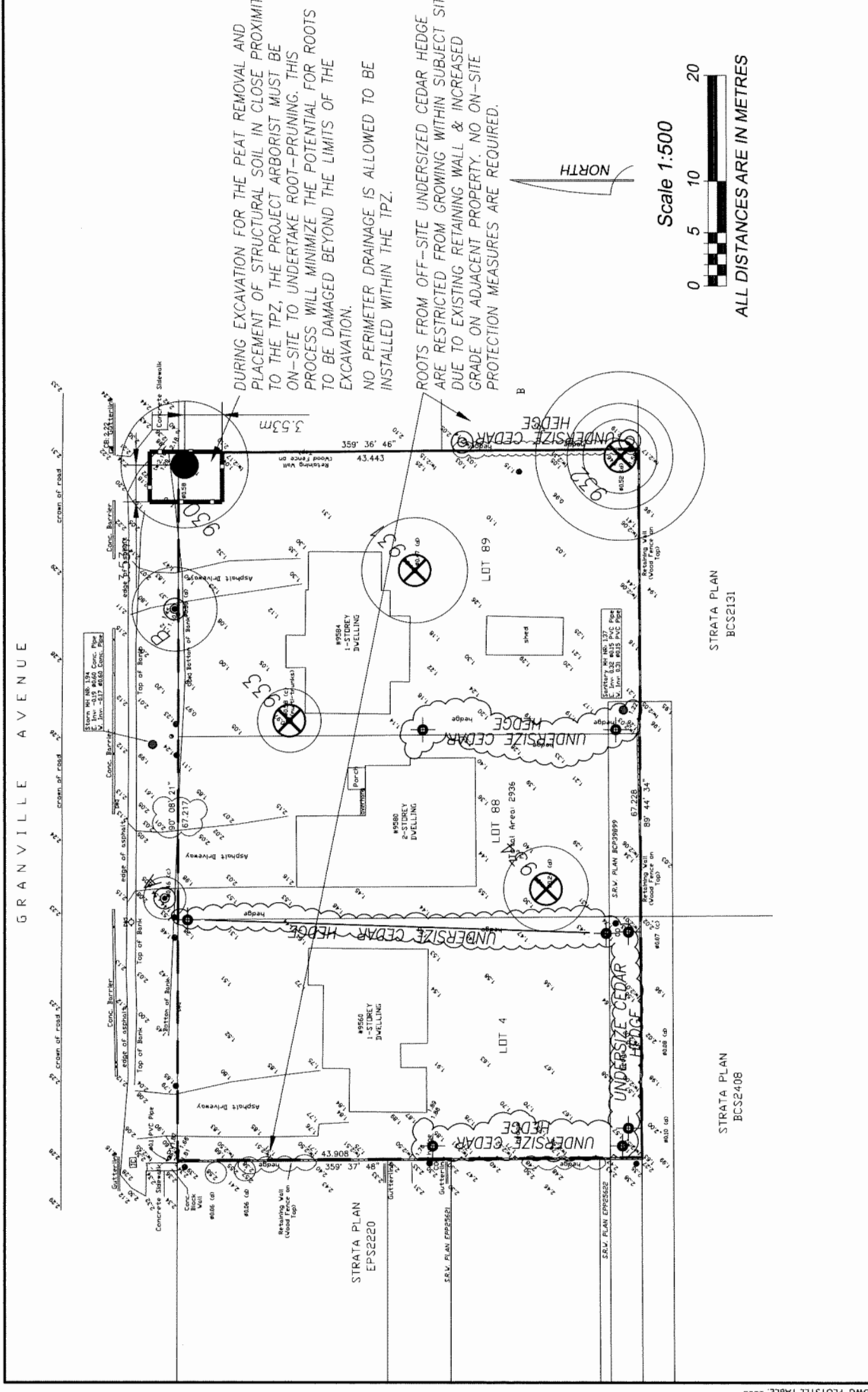
TREE PROTECTION GUIDELINES:

- THE PROTECTION ZONE SETBACKS:**
 The Tree Protection Zone (TPZ) is established or directed by this office to provide a suitable setback to ensure adequate root protection for the tree and its stability. These setbacks are based on the tree's canopy as determined by the guidelines and the species or other tree protection setbacks provided by other municipal, provincial or federal tree protection guidelines, and may be conditional to certain mitigation measures being undertaken (i.e. root pruning, compensatory treatment to remaining root zones). The tree protection setbacks also apply to the overhead portions of the tree (limbs, branches and foliage) over all those tree parts extending outside of the TPZ setback.
- THE PROTECTION FENCES (BARRIERS):**
 Barriers must be erected at the specified alignments and setbacks, maintained in good condition until the project reaches substantial completion, and the restrictions and guidelines implemented as detailed herein through to the completion of the landscaping phase. The materials and installation of the fence must meet or exceed the municipal standard. Signs stating "TREE PROTECTION ZONE - NO ENTRY" must be placed on the fence at a suitable frequency at the direction of the project architect. Barriers will not be installed in cases that we are retained to provide field services for compliance during construction. The owner, contractor, sub-contractor and trades should be made aware of the restrictions, then, and consult with the office for any access. If required, tree protection fencing must be inspected and approved by the municipality and/or the project architect and to commence on any day after the date of preparation or construction work.
- SETBACKS TO THE PROTECTION FENCE:**
 The tree protection fence are to be placed with or within close proximity to a restrictive covenant, a property line, or a line environmentally sensitive or protected area. The contractor must undertake a survey of the location of those property lines such that the tree protection fence can be installed and inspected accurately.
- THE PROTECTION AND LAND CLEARING OPERATIONS:**
 If large scale land clearing areas contain a TPZ and/or there is winnowing treatments required in new forest edge interfaces along the perimeter of the land clearing area, and/or when certain trees within a TPZ are specified for removal, it is strongly recommended that the land clearing contractor should coordinate with the project architect in advance to review their work plan and to identify retained trees and the protection measures for them, as well as during the clearing process to improve compliance and to assist new forest edges and provide tree failure risk mitigation prescriptions. For retaining purposes, the arrangement should be required to provide unit costs for the following treatments (including disposal of waste in the forest interface zone):
 - Removal of obstructive trees (size categories of small (dbh up to 20 cm dbh), medium (dbh 21 cm to 45 cm), large (dbh 46 to 75 cm) and very large (76 cm dbh and greater)) and
 - Limbs and/or top removal of trees (dbh up to 20 cm dbh), medium (dbh 21 cm to 45 cm), large (dbh 46 to 75 cm) and very large (76 cm dbh and greater) and
 - Limbs and/or top removal of trees (dbh up to 20 cm dbh), medium (dbh 21 cm to 45 cm), large (dbh 46 to 75 cm) and very large (76 cm dbh and greater) and
 - Limbs and/or top removal of trees (dbh up to 20 cm dbh), medium (dbh 21 cm to 45 cm), large (dbh 46 to 75 cm) and very large (76 cm dbh and greater) and
- THE PROTECTION GUIDELINES:**
 Initiating a tree protection zone (TPZ) such as survey stakes, painting lines on the ground, and/or placing tape and flagging. Any construction work or activities within or directly adjacent to a TPZ requires advance approval and the on-site direction of the project architect. The trunk, branches, foliage and roots of retained trees, as well as the soil within the tree protection zone, must not be damaged by construction activities, except as approved and directed by the project architect. Activities within and adjacent to the TPZ are restricted during the site preparation, construction and landscape installation phases of the project as follows:
 - Retained trees must be protected from damage by construction equipment, vehicles, materials, and/or other construction activities.
 - Excavation for building foundations, fill placement or trenching for irrigation or conduit installation.
 - No storage or transport of soil, rock, construction materials, waste materials, etc.
 - No waste or washing of concrete, masonry, or other material that may adversely impact the soil or roots.
 - No placement or operation of vehicles or equipment.
 - No cutting, lighting, signs, cables or any other device to retained trees.
 - No unauthorized pruning or cutting of retained trees. Any pruning or other treatment of a retained tree must be completed by a qualified arborist or tree service firm employing ISA Certified Arborists and in compliance with ANSI A300 Standards, and/or under the direction of the Project Architect from the office, and
 - Any excavation adjacent to the TPZ will require the attendance of the project architect and soil piling to be undertaken as necessary.
 - The use of geotextile, sheet piling or other overhead equipment is restricted in proximity to retained trees and should be planned with the project architect.
 - If a tree is damaged by construction activities, the contractor must provide a written report to the project architect detailing the damage, the tree's tag number, and the proposed remedial actions. The project architect will determine if the tree can be retained or if it should be removed. The project architect will also determine if the tree should be replaced and if so, the species, size, and location of the replacement tree. The project architect will also determine if the tree should be protected and if so, the type of protection to be provided.

TREE PROTECTION FENCE DETAIL - SAMPLE:
 FENCES MUST EXCEED MUNICIPAL STANDARDS
 NOT TO SCALE



PLANS # 3 FEB 19 2019
 DP 16-741329



- LEGEND:**
- ### denotes tree TAG NUMBER or ID REFERENCE.
 - ⊗ denotes DRIFLINE (spread of the branches and foliage) of the tree.
 - ⊕ denotes the trunk location of tree proposed to be **REMOVED** and protected.
 - ⊖ denotes the trunk location of tree proposed to be **REMOVED**.
 - ⊙ denotes trunk location of **HIGH RISK** tree for owner to obtain permit and REMOVE as soon as possible.
 - ⊛ denotes trunk location of **OFF-SITE** tree to be protected (unless owner/municipal approvals for removal are obtained).
 - ⊚ denotes **NON-BYLAW** under-size tree (measured by project arborist).
 - ⊚ denotes **SITE LIMITS**.
 - denotes **TREE PROTECTION ZONE** setback alignment.

TREE INVENTORY AND ASSESSMENT LIST:

This list provides a summary of the tree inventory and assessment data for the project. The list includes the following information:

- Tree Tag Number
- Tree Species
- Tree Size (DBH, Height, Spread)
- Tree Condition
- Tree Location
- Tree Protection Status
- Tree Management Recommendations

Tag #	Sp	DBH (cm)	Height (m)	Spread (m)	Condition	Location	Protection Status	Management Recommendations
931	B	3	3	3	M	Lot 88	Retained	Remove
932	B	6	5	5	M	Lot 88	Retained	Remove
933	B	3	3	3	M	Lot 88	Retained	Remove
934	A	4	24	24	U	Lot 88	Retained	Remove
4	S	7	18-14-12-10	18-14-12-10	U	Lot 88	Retained	Remove
6	S	4	20	20	U	Lot 88	Retained	Remove

SUGGESTED PLANT LIST - REPLACEMENT TREES

Please use botanical name when ordering.

Current arboreal best management practices and BCSLA/BCMA standards apply to quality, root ball, health, form, handling, planting, watering/staking and establishment care.

BROADLEAF - SMALL TO MEDIUM SCALE	COMMON NAME
AG	Acer griseum
AG	Acer rubrum
DI	Dawsonia
FSD	Fagus sylvatica 'Dawyck'
SP	Stewartia pseudocamellia
CC	Cercis canadensis
MGR	Magnolia grandiflora
SI	Syrax japonicus
APC	Abies procera 'Glauca'
PO	Picea omorika

NOTE: THE TREE MANAGEMENT PLAN, PREPARED BY ARBOURTECH CONSULTING, IS PROVIDED HERE FOR CONVENIENCE ONLY - THE CONTRACTOR SHALL CONSULT DIRECTLY WITH THE ARBORIST BEFORE BEGINNING WORK.

DATE	ISSUED FOR	REV
2018-12-06	DP SUBMISSION	0
2019-01-16	DP RE-SUBMISSION	A

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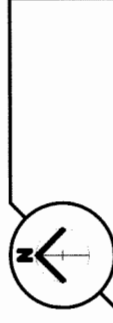
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Consultants

Civil: [Blank]
 Ecological: [Blank]
 Structural: [Blank]
 Mechanical: [Blank]
 Electrical: [Blank]

Eric Law Architect



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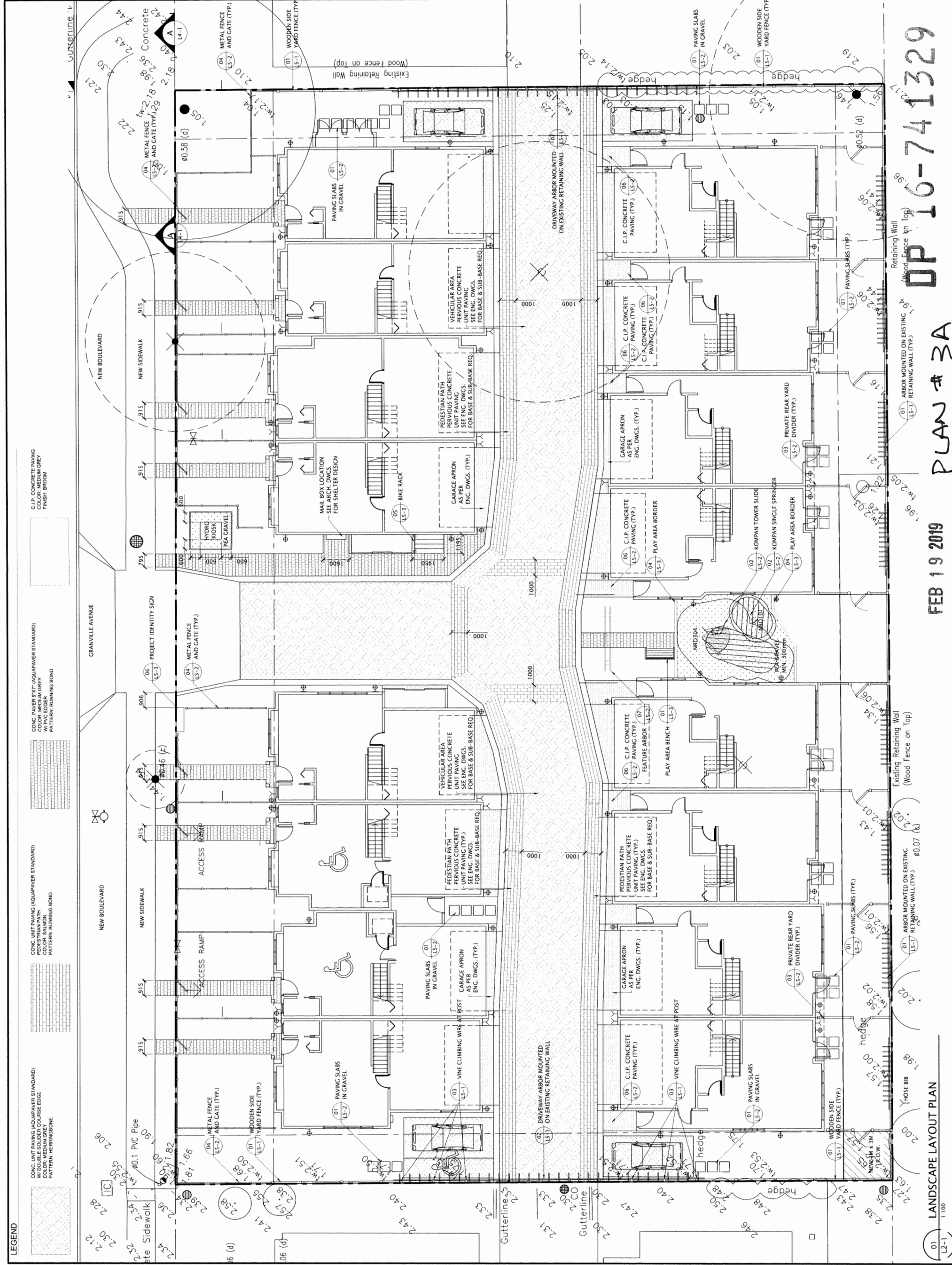
Project Leader: D.Duncan
 Drawn by: D.Duncan
 Revision: D.Duncan

PROPOSED TOWNHOUSE
 9560 9580 9584 Granville Avenue
 Richmond, British Columbia
 Canada

Drawing Title:
HARD LANDSCAPE

Check Scale (may be photo reduced)
 1 inch = 0 10mm

Project No. 18-0039
 Drawing No. L2-1



LEGEND

	CONC. UNIT PAVING (AQUAPAVER STANDARD) COLOR: MEDIUM GREY FINISH: BROOM
	CONC. PAVER PAVING (AQUAPAVER STANDARD) COLOR: MEDIUM GREY FINISH: BROOM
	CONC. UNIT PAVING (AQUAPAVER STANDARD) COLOR: MEDIUM GREY FINISH: BROOM W/ PVC EDGER PATTERN: RUNNING BOND
	CONC. PAVER PAVING (AQUAPAVER STANDARD) COLOR: MEDIUM GREY FINISH: BROOM W/ PVC EDGER PATTERN: RUNNING BOND

FEB 19 2019
 PLAN # 3A
 OP 16-741329
 LANDSCAPE LAYOUT PLAN
 L2-1
 1:100

DATE	ISSUED FOR	REV
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- Consultants**
- Civil: _____
 - Ecology: _____
 - Architectural: Eric Law Architect
 - Structural: _____
 - Mechanical: _____
 - Electrical: _____



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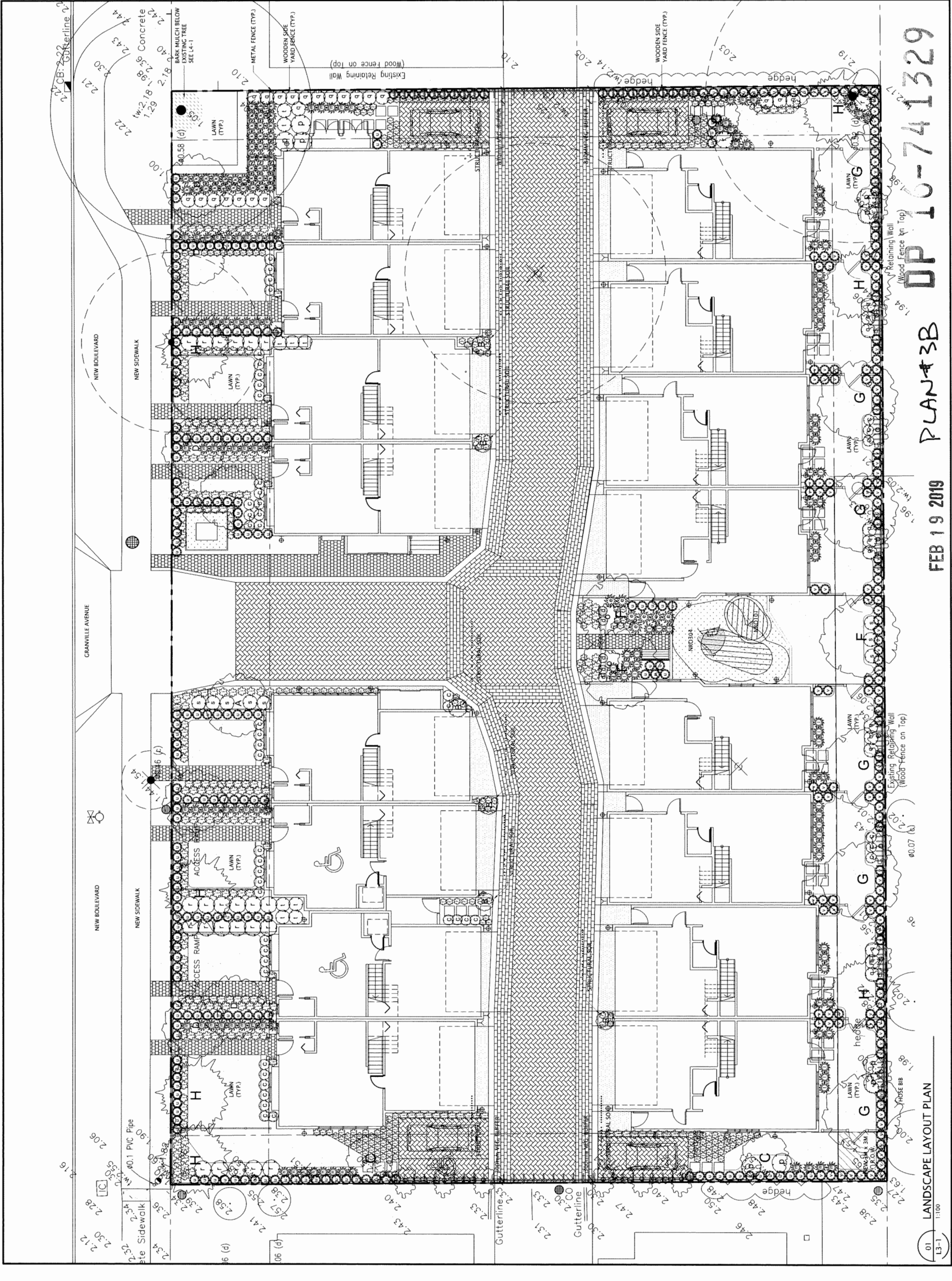
Project Leader	D.Duncan
Drawn by	D.Duncan
Revision	D.Duncan

PROPOSED TOWNHOUSE
 9560 9580 9584 Granville Avenue
 Richmond, British Columbia
 Canada

Drawing Title
SOFT LANDSCAPE

Check Scale (may be photo reduced):
 1" = 10'-0"
 1:100

Project No. 18-0039
 Drawing No. L3-1



PLAN 3B
 FEB 19 2019
DP 16-741329
 L3-1

DATE	ISSUED FOR	REV
2018-12-06	DP SUBMISSION	0
2019-01-16	DP RE-SUBMISSION	A

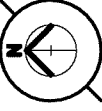
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Consultants

Civil: _____
 Ecology: _____
 Architectural: Eric Law Architect
 Structural: _____
 Mechanical: _____
 Electrical: _____



DV Donald V. S. Duncan
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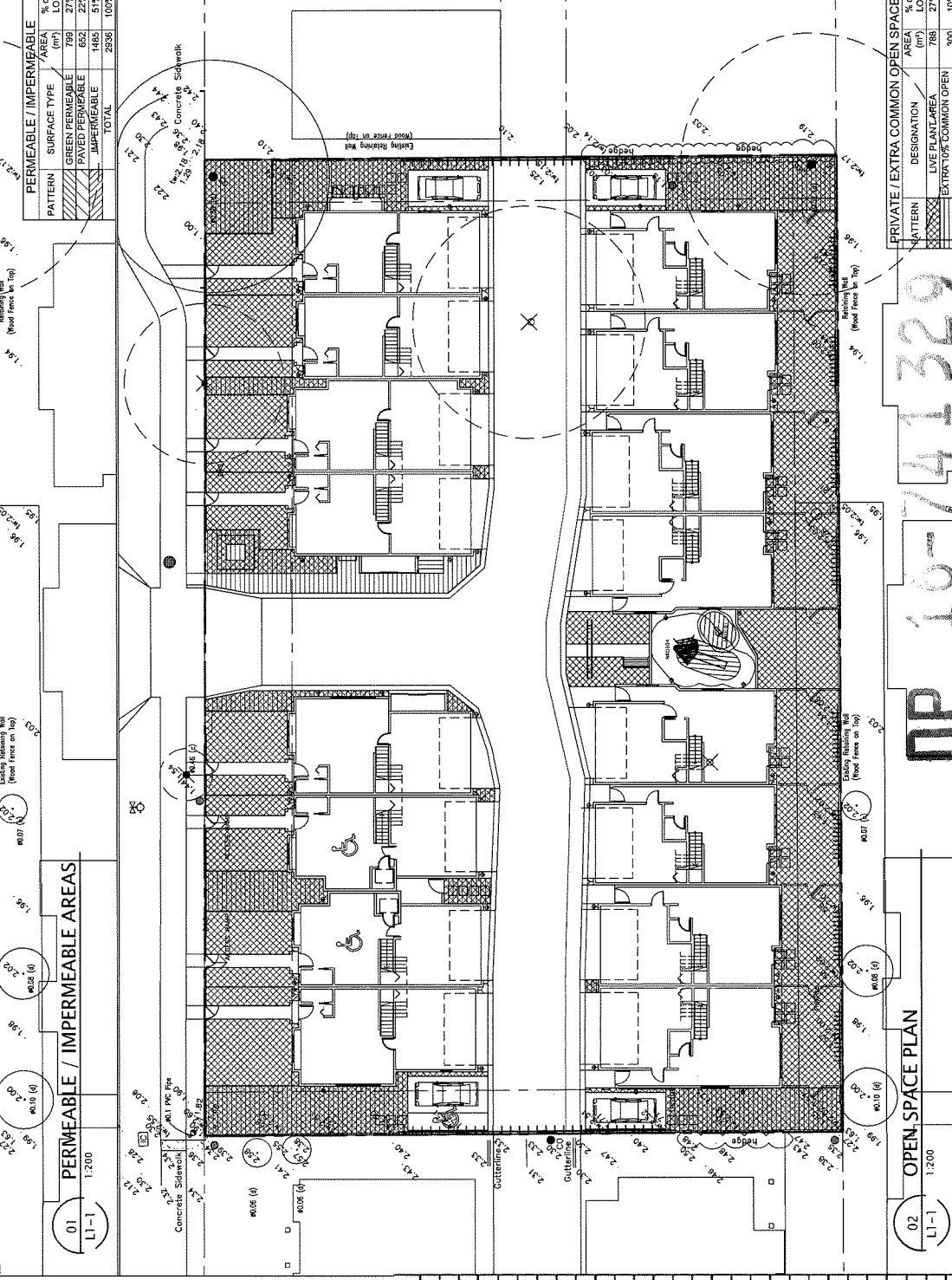
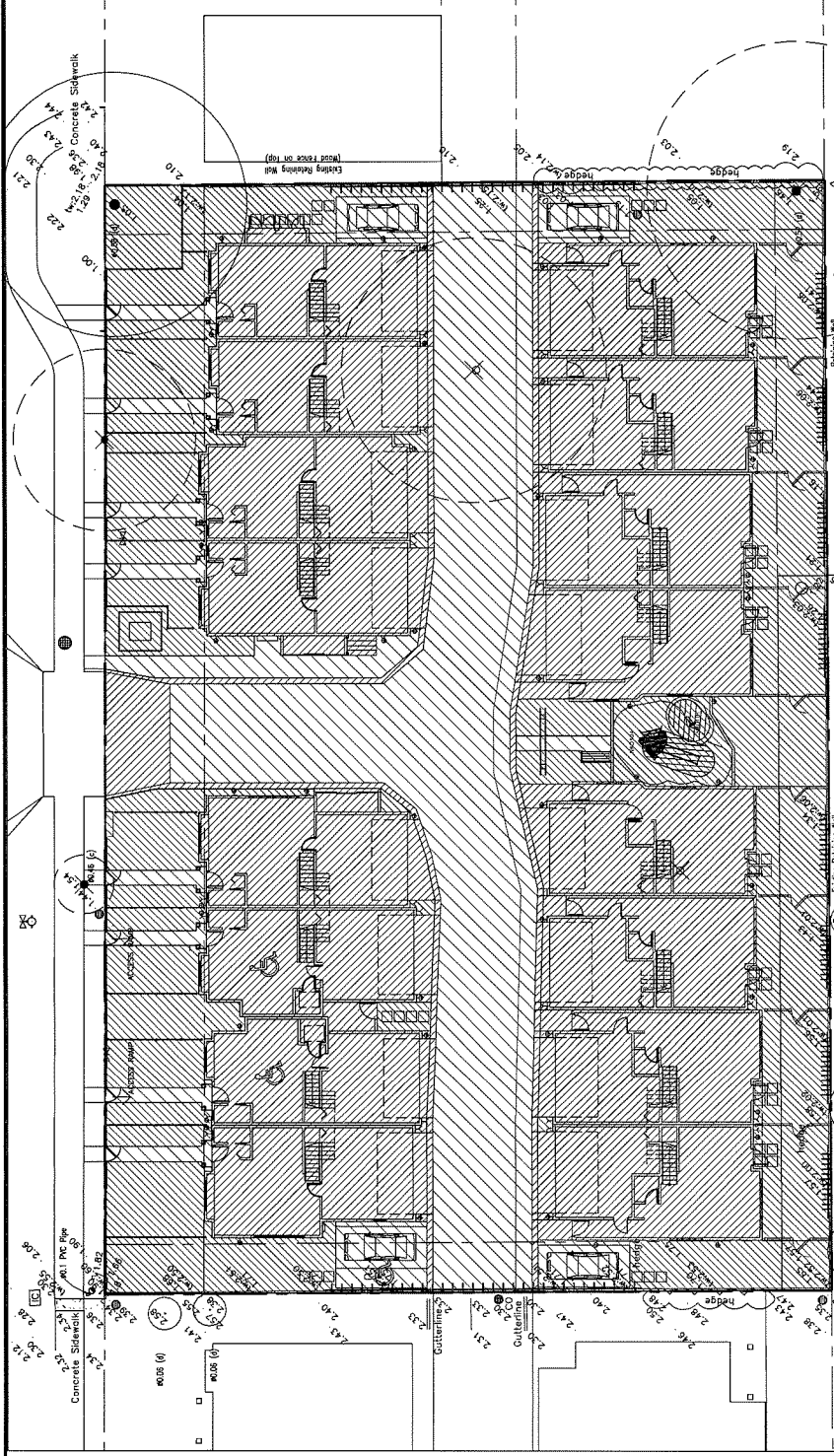
A Project Leader
 D.Duncan
 Drawn by
 D.Duncan
 Revision

PROPOSED TOWNHOUSE
 9560 9580 9584 Cranville Avenue
 Richmond, British Columbia
 Canada

Drawing Title
INFORMATION

Check Scale (may be photo reduced)
 0 10mm
 1 inch

Project No. 18-0039
 Drawing No. L1-1



1. COMPLIANCE GOVERNMENT - ALL WORK SHALL BE COMPLETED TO THE SATISFACTION OF THE CITY OF RICHMOND AND SHALL COMPLY WITH ALL STANDARDS AND REGULATIONS OF THE SAME. CONTRACTORS SHALL ENSURE COMPLIANCE OF ALL WORK PRIOR TO INSTALLATION.

2. COMPLIANCE, BCNTABCSLA - ALL MATERIAL, SHIPPING PROCEDURES, AND INSTALLATION OF LANDSCAPE ELEMENTS SHALL CONFORM TO LATEST EDITION OF BCNTABCSLA LANDSCAPE STANDARD AVAILABLE AT COMMENCEMENT OF WORK.

3. COMPLIANCE, MMCD - ALL WORKS SHALL CONFORM TO THE LATEST MMCD DETAILS AND SPECIFICATIONS AVAILABLE AT COMMENCEMENT OF WORK WHERE NO SPECIFIC DETAIL, NOTE OR SPECIFICATION IS PROVIDED IN THE DRAWING SET OR ATTACHED MATERIALS.

4. CONCRETE, FORMS - THE CONTRACTOR SHALL COMPARE DIMENSIONS PROVIDED WITH SITE CONDITIONS AND IMMEDIATELY REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT AND THE ENGINEER. ONCE COMPLETED THE CONTRACTOR SHALL CALL FOR INSPECTION OF THE FORMS PRIOR TO PLACING STEEL REINFORCEMENT. CONTACT LANDSCAPE ARCHITECT A MINIMUM OF 48 HOURS PRIOR TO DESIRED INSPECTION TIME.

5. CONCRETE REINFORCEMENT - ALL CONCRETE REINFORCEMENT SHALL BE INSPECTED AND APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO POURING OF CONCRETE. CONTACT STRUCTURAL ENGINEER A MINIMUM OF 48 HOURS PRIOR TO DESIRED INSPECTION TIME.

6. GRADING, GENERAL - THE CONTRACTOR SHALL ESTABLISH GRADES SUCH THAT THERE IS, IN ALL AREAS, POSITIVE DRAINAGE TO AN ADJACENT DRAIN. MINIMUM SLOPES SHALL BE AS FOLLOWS:

- PEDESTRIAN PAVED AREAS 1%
- VEHICULAR PAVED AREAS 2%
- LAWN AREAS 2%
- PLANTED BEDS 5%

7. GRADING, ALLOWANCES AND TOPSOIL PLACEMENT - DEPTH OF PLANTING MEDIUM AFTER SETTLEMENT SHALL BE:

- ON GRADE
- GRASS AREAS - 150 mm
- SHRUB BEDS - 450 mm
- GROUND COVER AREAS - 450 mm
- TREES - 300 mm ALL AROUND ROOTBALL

N.B. ALL SOIL SHALL BE TESTED NOT MORE THAN 14 DAYS PRIOR TO INSTALLATION ON SITE. TESTING SHALL BE SPECIFIC TO THIS WORK. CONTRACTOR SHALL AMEND THE SOIL ACCORDING TO THE RECOMMENDATIONS OF THE SOILS TESTING LAB.

8. PLANT MATERIAL, QUANTITIES - CONTRACTOR SHALL CONFIRM ALL PLANT MATERIAL QUANTITIES. ANY DISCREPANCIES BETWEEN THE PLANT LIST AND THE DRAWING SHALL BE REPORTED TO THE CONSULTANT. IN CASE OF DISCREPANCY CONTRACTOR SHALL INSTALL PLANT MATERIAL AS PER DRAWING. IN CIRCUMSTANCES WHERE THERE IS A DISCREPANCY BETWEEN GROUND COVER QUANTITY AND SPACING REQUIREMENT WILL PREVAIL.

9. PLANT MATERIAL, SUBSTITUTIONS - NO SUBSTITUTIONS TO PLANT LIST SHALL BE MADE BY CONTRACTOR WITHOUT PRIOR WRITTEN AUTHORIZATION FROM CONSULTANT.

10. PLANT MATERIAL - ALL PLANT MATERIAL SHALL MEET MINIMUM SIZE REQUIREMENTS AS INDICATED IN THE PLANT LIST.

11. TREE LOCATIONS - TREES SHALL NOT BE PLANTED WITHIN 9 METRES OF BUILDING FOUNDATIONS, RETAINING WALLS OR FENCES EXCEPT AS SPECIFICALLY NOTED ON THE PLANTING PLAN. TREES IN LAWN AREAS SHALL BE LOCATED WITHIN A MINIMUM 1 METRE DIAMETER MULCHED RING.

12. SODDING, BOULEVARD - CONTRACTOR SHALL INSTALL TOP SOIL AND TURF WITHIN ALL STREET BOULEVARDS. SODDING SHALL CONTINUE ALONG SUCH BOULEVARDS TO THE EDGE OF DISTURBANCE OR TO THE BOUNDARY OF THE WORK AS DEFINED ON SITE BY THE LANDSCAPE ARCHITECT.

13. MULCH - PLANTING AREAS SHALL BE MULCHED WITH 50 MM OF HEMPIR BARK MULCH. THE USE OF CEDAR MULCH OR ANY MIX CONTAINING CEDAR IS NOT PERMITTED.

14. IRRIGATION - AN IRRIGATION SYSTEM SHALL BE INSTALLED AS A DESIGN-BUILD BY AN ACCREDITED IRRIGATION CONTRACTOR. THE SYSTEM SHALL PROVIDE FULL COVERAGE. THE GENERAL CONTRACTOR SHALL PROVIDE SLEEVES AND COIRING AS NECESSARY. A PLAN OF THE PROPOSED SYSTEM SHALL BE PROVIDED TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION.

PLANT LIST	Quantity/Symbols	Botanical Name	Common Name	Size	Spacing
Trees					
2	A	Cornus florida 'Cherokee Chief'	Red Flowering Dogwood	16cm cal B&B	as shown
6	B	Prunus serotina 'Amanogawa'	Amanogawa Cherry	8cm cal B&B	as shown
3	C	Cornus mas	Cornelian Cherry Dogwood	8cm cal B&B	as shown
3	D	Styrax japonica	Japanese Snowbell	8cm cal B&B	as shown
3	F	Prunus yedoensis 'Akebono'	Akebono Cherry	8cm cal B&B	as shown
6	G	Betula jacquemontii	Whitebarked Himalayan Birch	8cm cal B&B	as shown
7	H	Pinus nigra	Austrian Black Pine	3m High, B&B	as shown
Shrubs, Perennials & Grasses					
49	c	Azalea japonica 'Ward's Ruby'	Evergreen Azalea	# 2 pot	as shown
5	d	Azalea japonica 'Diamant Lachs'	Evergreen Azalea	# 2 pot	as shown
7	e	Calamagrostis x acutiflora 'Karl Foerster'	Foerster's Reed Grass	# 3 pot	as shown
250	f	Festuca idahoensis	Idaho Blue Fescue	# 1 pot	as shown
273	i	Carex morrowii 'Aureo-variegata'	Variegated Sedge	# 1 pot	as shown
4*	k	Polysichum munim	Western Sword Fern	# 1 pot	as shown
53	l	Helictotrichon sempervirens	Siberian Iris	# 2 pot	as shown
66	m	Iris sibirica 'Ficht of Butterflies'	Siberian Iris	# 1 pot	as shown
8	n	Hemerocallis 'Black-eyed Stella'	Daylily	# 1 pot	as shown
16	o	Clematis armandi	Evergreen Clematis	# 3 pot	as shown
9	p	Cornus sericea	Redtwig Dogwood	# 3 pot	as shown
34	q	Rhododendron 'Elizabeth'	Rhododendron	# 2 pot	as shown
25	r	Rhododendron 'Mary Fleming'	Rhododendron	# 3 pot	as shown
8	s	Rose meidiland 'La Sevillana'	Rose	# 2 pot	as shown
9	t	Skimmia japonica 'Reevesiana'	Skimmia Fortunei	# 2 pot	as shown
223	u	Taxus x media 'Hicksii'	Hick's Yew	4' high	as shown
150	v	Thuja occidentalis 'Smaragd'	Emerald Green Cedar	6' High, B & B, trim top flat	as shown

DP 10-741329

OPEN SPACE PLAN

L1-1 1:200

PLAN #3C

FEB 19 2019

DATE	ISSUED FOR	REV
2018-12-06	DP SUBMISSION	0
2019-01-16	DP RE-SUBMISSION	A

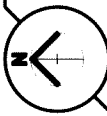
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Consultants

Civil:
Ecology:
Architectural: Eric Law Architect
Structural:
Mechanical:
Electrical:

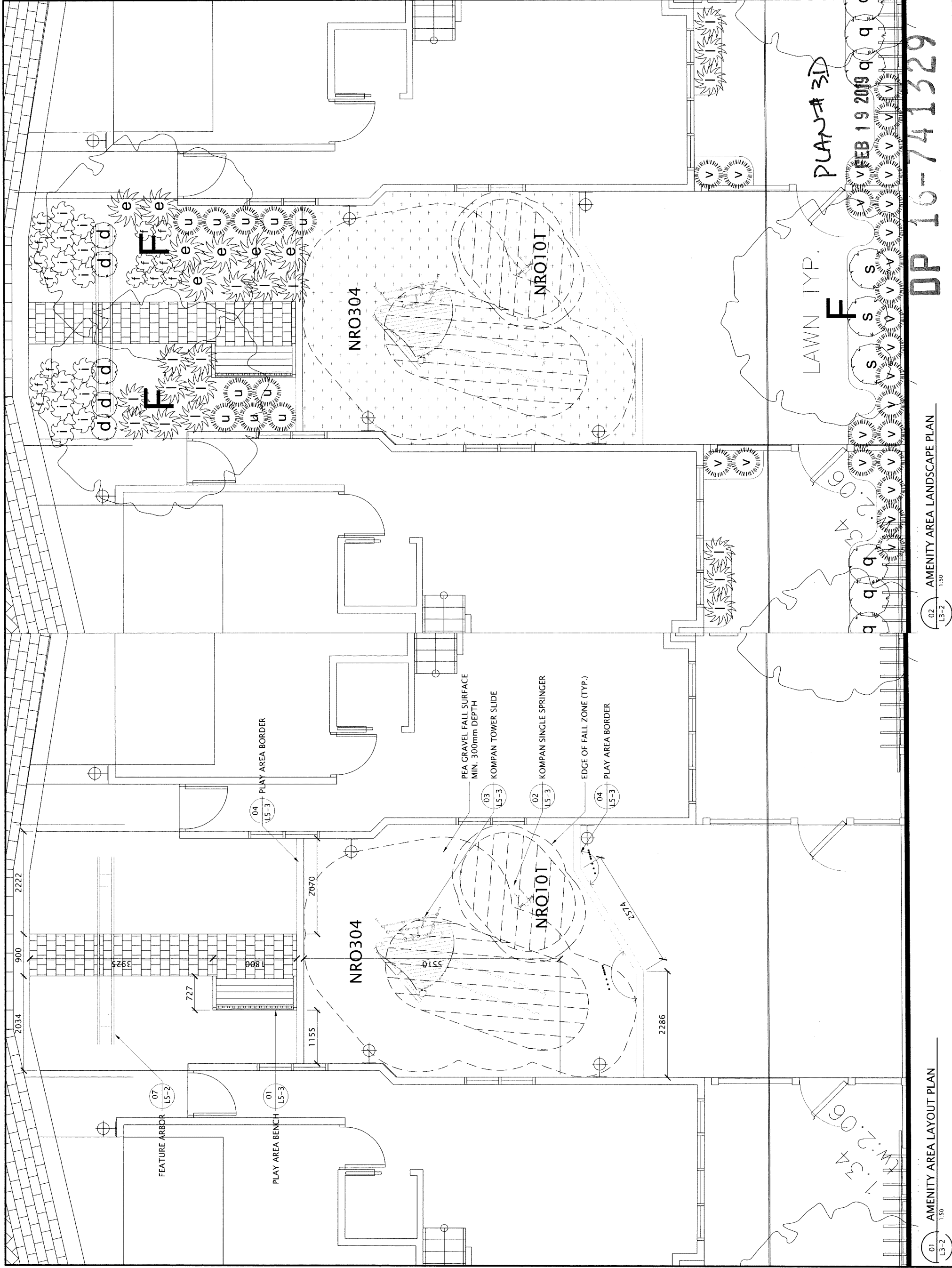




Donald V. S. Duncan
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Project Leader: D. Duncan	PROPOSED TOWNHOUSE 9560 9580 9584 Granville Avenue Richmond, British Columbia Canada
Drawn By: D. Duncan	
Revision:	Drawing Title: AMENITY AREA
Check Scale (may be photo reduced): 0 10mm 1 1inch	
Project No. 18-0039 Drawing No. L3-2	



01 AMENITY AREA LAYOUT PLAN
L3-2 1:50

02 AMENITY AREA LANDSCAPE PLAN
L3-2 1:50

DP 16-741329

DATE	ISSUED FOR	REV
2018-12-06	DP SUBMISSION	0
2019-01-16	DP RE-SUBMISSION	A
2019-02-07	DP RE-SUBMISSION	B

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Consultants

Civil: [Blank]
 Ecology: [Blank]
 Horticulture: [Blank]
 Structural: [Blank]
 Mechanical: [Blank]
 Electrical: [Blank]

Eric Law Architect

Donald V. S. Duncan
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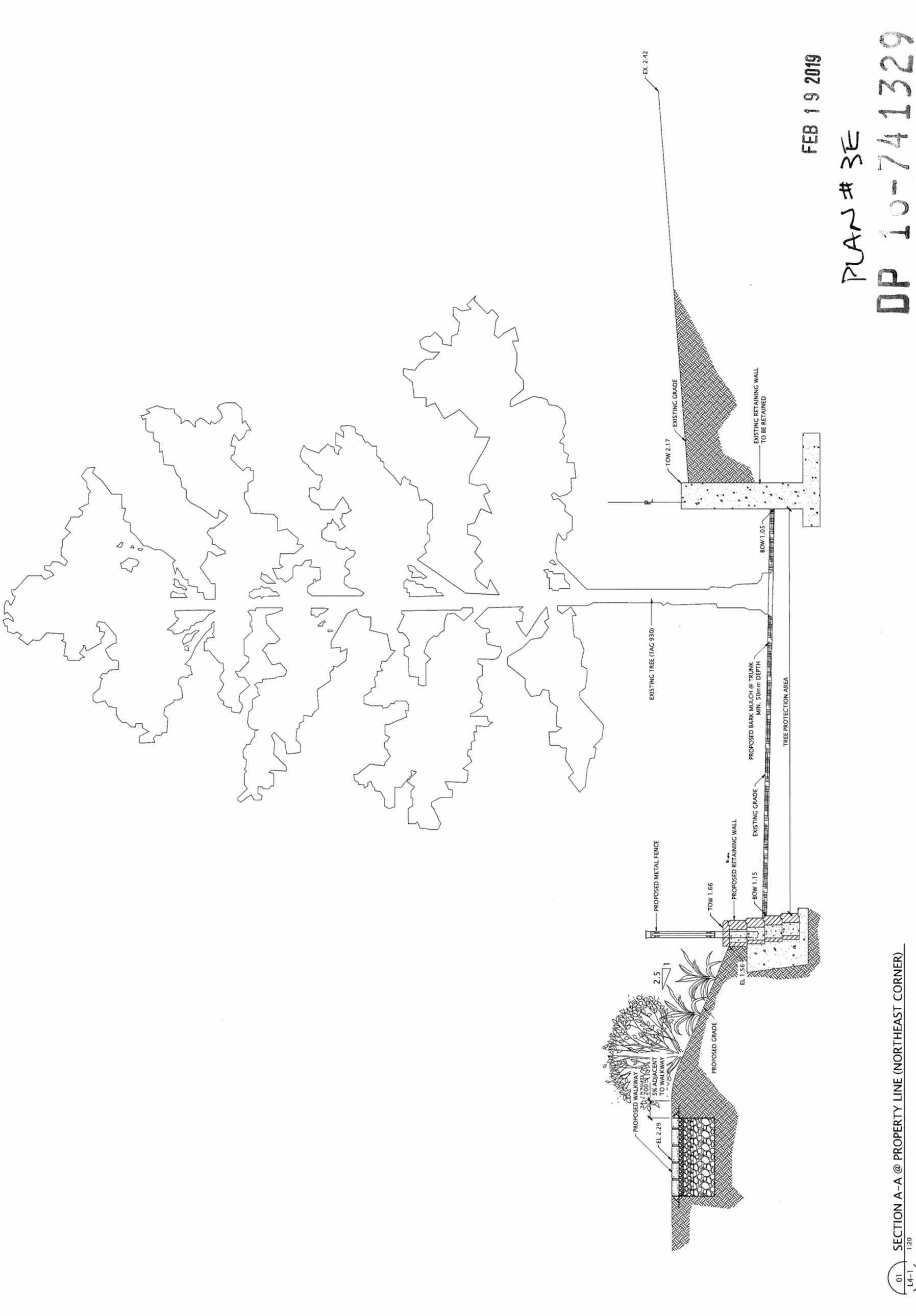


Project Leader
 Drawn By: [Blank]
 Checked By: [Blank]
 Revision: [Blank] | D.Duncan

PROPOSED TOWNHOUSE
 9560 9580 9584 Granville Avenue
 Richmond, British Columbia
 Canada

Drawing Title
TREE 930 SECTION

Check Scale (may be photo reduced) 0.10mm
 Project No. 18-0039
 Drawing No. L4-1



DATE	ISSUED FOR	REV
2018-12-06	DP SUBMISSION	0
2019-01-16	DP RE-SUBMISSION	A

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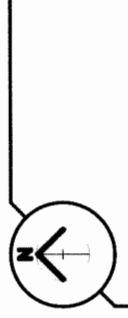
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Consultants

Civil:
Ecology:
Structural:
Mechanical:
Electrical:

Eric Law Architect



DV SD Donald V. S. Duncan
DEVELOPMENT CONSULTANT
LANDSCAPE ARCHITECT

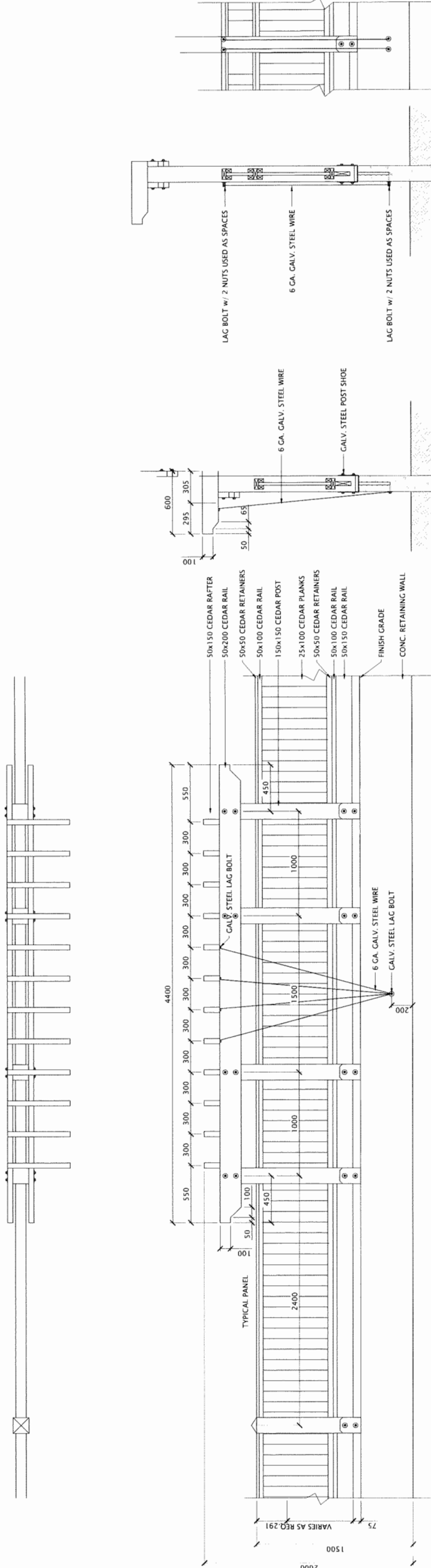
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A Project Leader
D. Duncan
Drawn by
Revision D. Duncan

PROPOSED TOWNHOUSE
9560 9580 9584 Granville Avenue
Richmond, British Columbia
Canada

Drawing Title
HARD LANDSCAPE

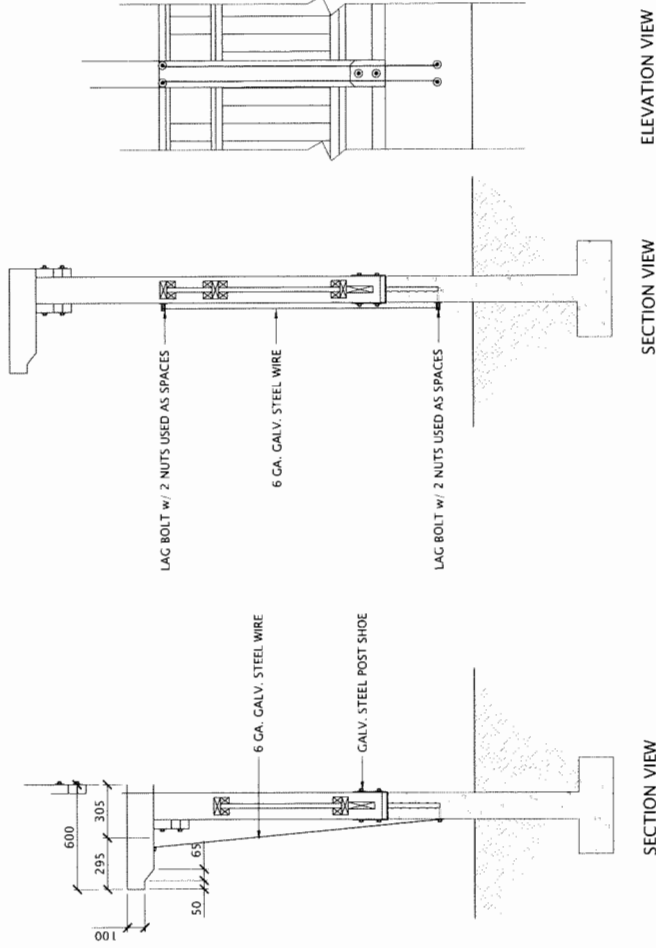
Check's Scale (may be photo reduced)
0 10mm
Project No. 18-0039
Drawing No. LS-1



ELEVATION VIEW (SIDE YARD BEHIND FRONT YARD SETBACK & REAR YARD)

01
LS-1
1:20

REAR & SIDERYARD FENCE

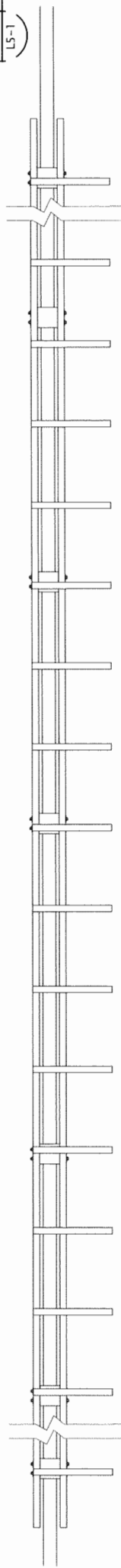


SECTION VIEW

ELEVATION VIEW

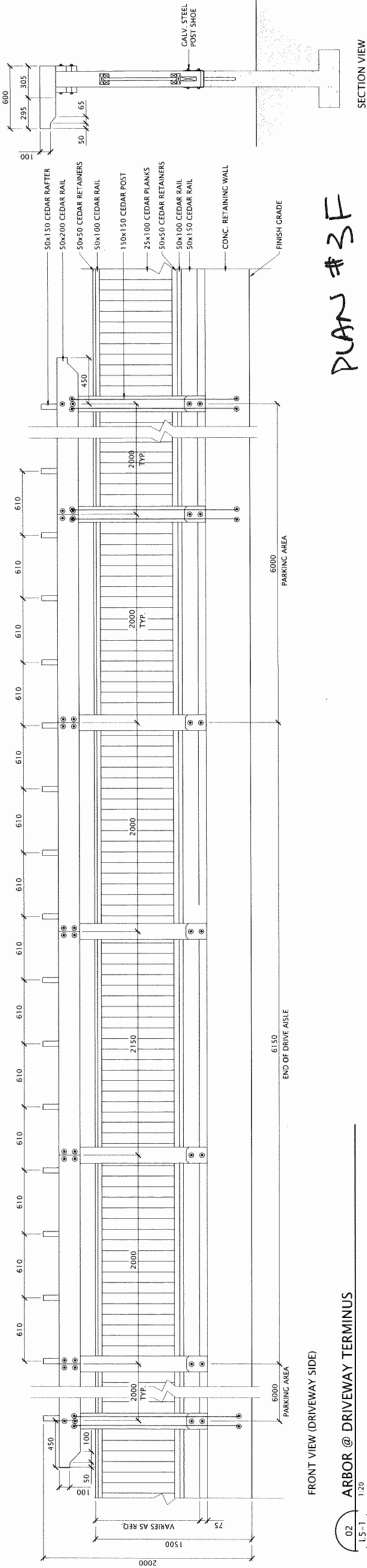
03
LS-1
1:20

VINE CLIMBING WIRE AT POST



02
LS-1
1:20

ARBOR @ DRIVEWAY TERMINUS



SECTION VIEW

SECTION VIEW

PLAN #3F

DP 16-741329

FEB 19 2019

FRONT VIEW (DRIVEWAY SIDE)

DATE	ISSUED FOR	REV
2018-12-06	DP SUBMISSION	0
2019-01-16	DP RE-SUBMISSION	A

<p>PROPOSED TOWNHOUSE 9560 9580 9584 Granville Avenue Richmond, British Columbia Canada</p> <p>Drawing Title HARD LANDSCAPE</p> <p>Check Scale (may be photo reduced) 0 10mm 0 1inch</p> <p>Project No. 18-0039 Drawing No. L5-3</p>	
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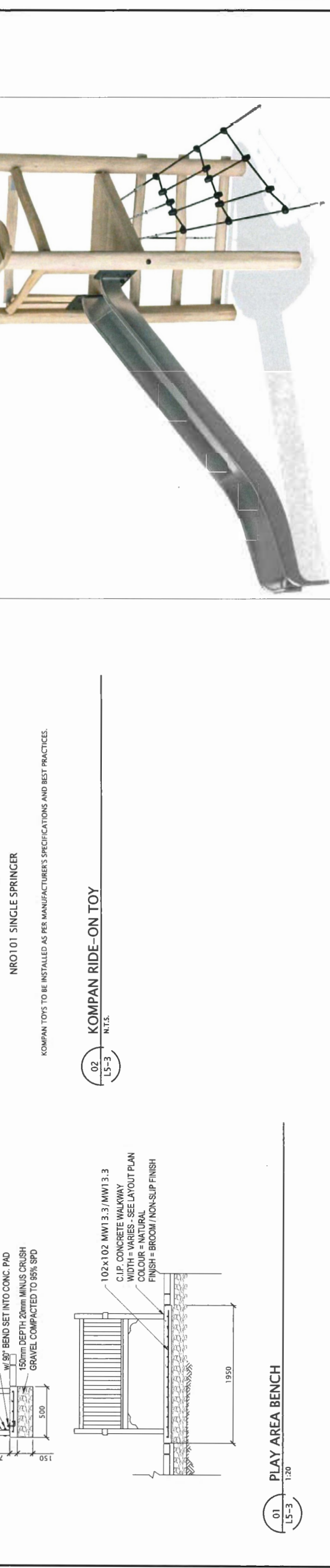
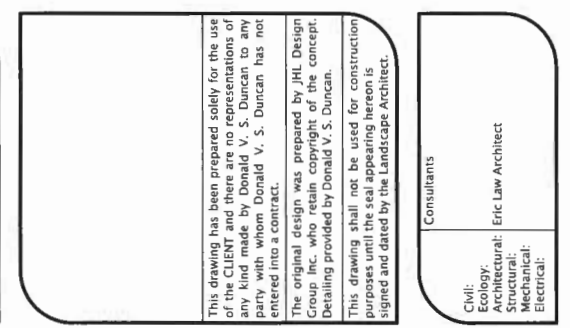
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Consultants

Civil: Ecology: Structural: Mechanical: Electrical: Consultants

Civil: Ecology: Structural: Mechanical: Electrical: Consultants

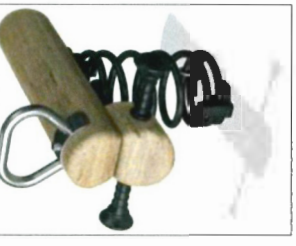
Donald V. S. Duncan
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603 - 220 Eleventh Street
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KOMPAN NRO304 TOWER SLIDE

KOMPAN TOWER SLIDE

03 L5-3 1:20



NRO101 SINGLE SPRINGER

KOMPAN TOYS TO BE INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS AND BEST PRACTICES.

02 L5-3 1:20

KOMPAN RIDE-ON TOY

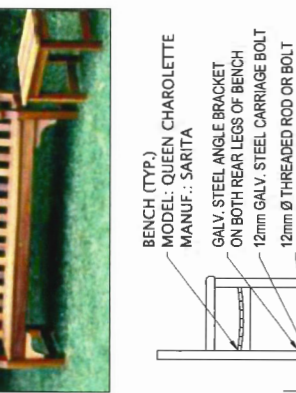
02 L5-3 1:20



05 L5-3 1:20

BIKE RACK

05 L5-3 1:20



BENCH (TYP.)
MODEL: QUEEN CHAROLETTE
MANUF.: SARITA

GALV. STEEL ANGLE BRACKET
ON BOTH REAR LEGS OF BENCH

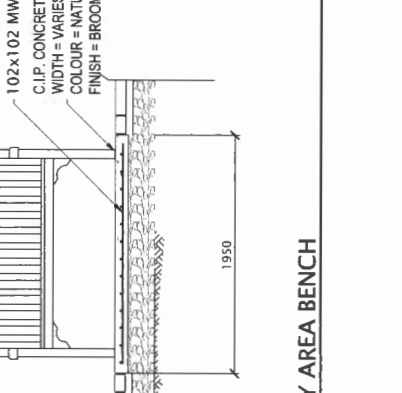
12mm Ø THREADED ROD OR BOLT
w/ 90° BEND SET INTO CONC. PAD

150mm DEPTH 20mm MINUS CRUSH
GRAVEL COMPACTED TO 95% SPD

01 L5-3 1:20

PLAY AREA BENCH

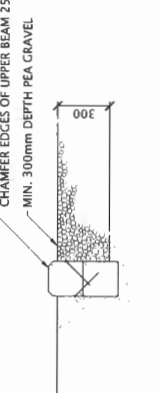
01 L5-3 1:20



04 L5-3 1:20

PLAY AREA BORDER

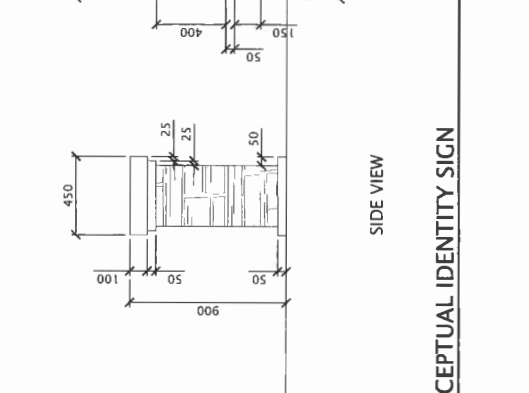
04 L5-3 1:20



06 L5-3 1:20

CONCEPTUAL IDENTITY SIGN

06 L5-3 1:20



PLAN # 3H FEB 19 2019
DP 16-741329

DATE	ISSUED FOR	REV
2018-12-06	DP SUBMISSION	0
2019-01-16	DP RE-SUBMISSION	A

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The original design was prepared by JHL Design Group Inc. who retain copyright of the concept. Detailing provided by Donald V. S. Duncan.

This drawing shall not be used for construction purposes until the seal appearing hereon is signed and dated by the Landscape Architect.

Consultants

Civil:
Ecology:
Architectural:
Structural:
Mechanical:
Electrical:

Eric Law Architect



DVSD Donald V. S. Duncan
DEVELOPMENT CONSULTANT
LANDSCAPE ARCHITECT

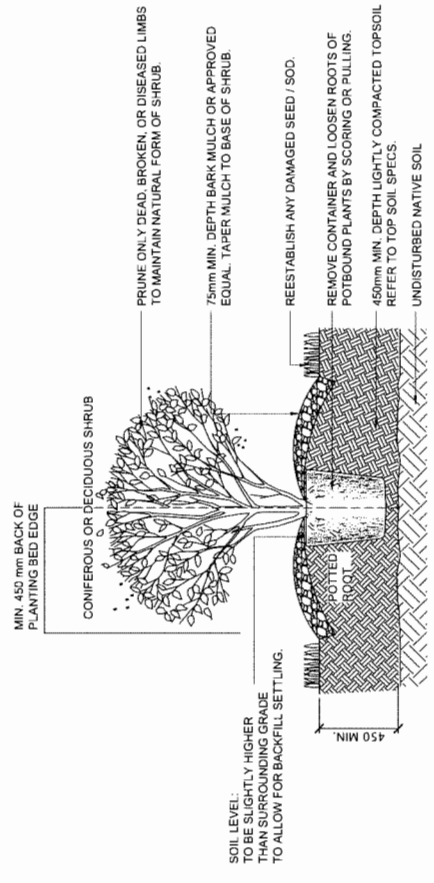
603 - 220 Eleventh Street
New Westminster BC
Canada V3L 0N9
778-771-1322
dv@duncan@gmail.com

Project Leader
D.Duncan
Drawn by
D.Duncan
Revision

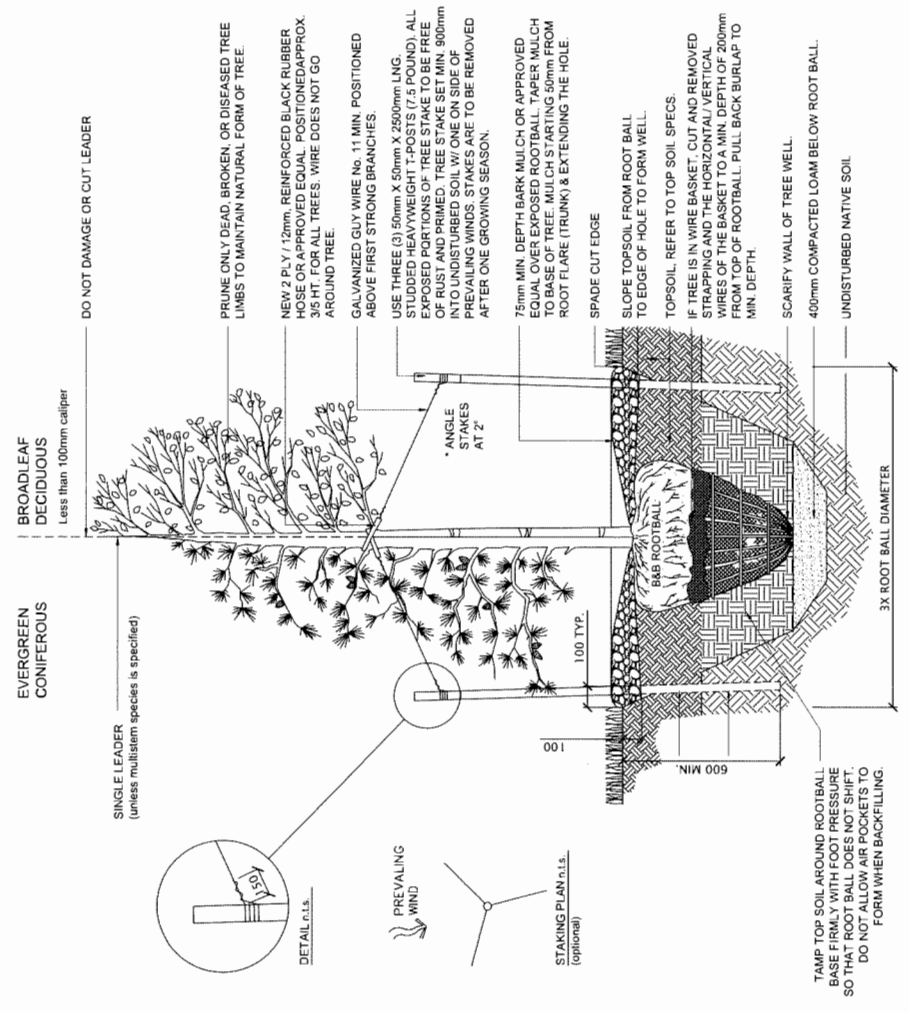
PROPOSED TOWNHOUSE
9560 9580 9584 Granville Avenue
Richmond, British Columbia
Canada

Drawing Title
SOFT LANDSCAPE

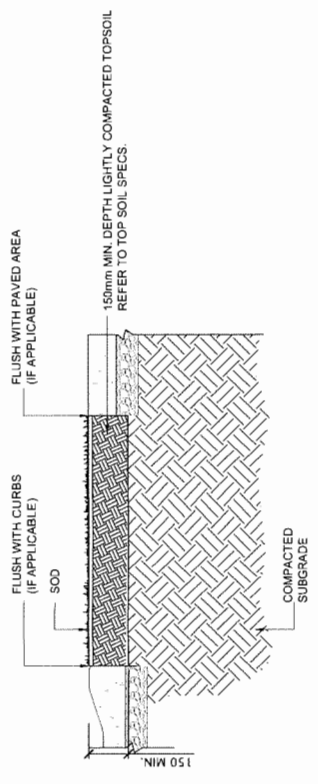
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0 1m
Project No. 18-0039
Drawing No. L5-4



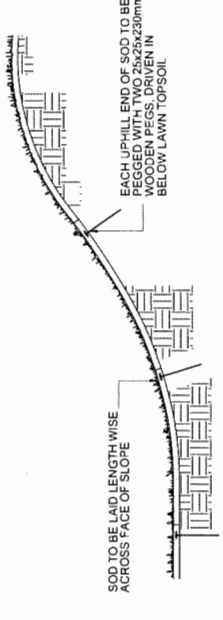
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N.T.S.
L5-4



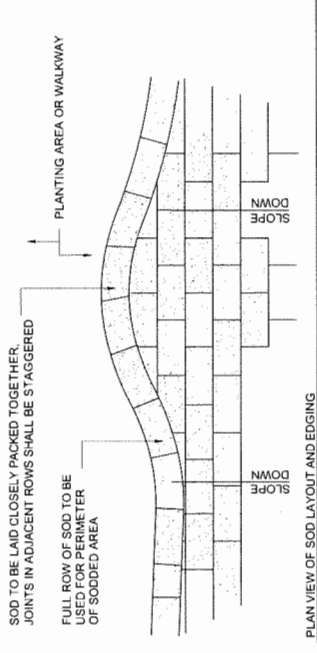
02 TREE INSTALLATION
N.T.S.
L5-4



SECTION THROUGH SOD



CROSS-SECTION OF 3H:1V SLOPE

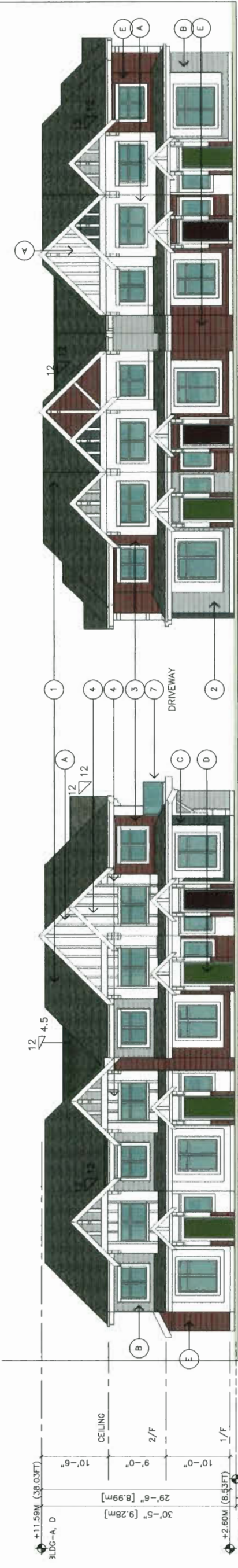


03 LAWN INSTALLATION
N.T.S.
L5-4

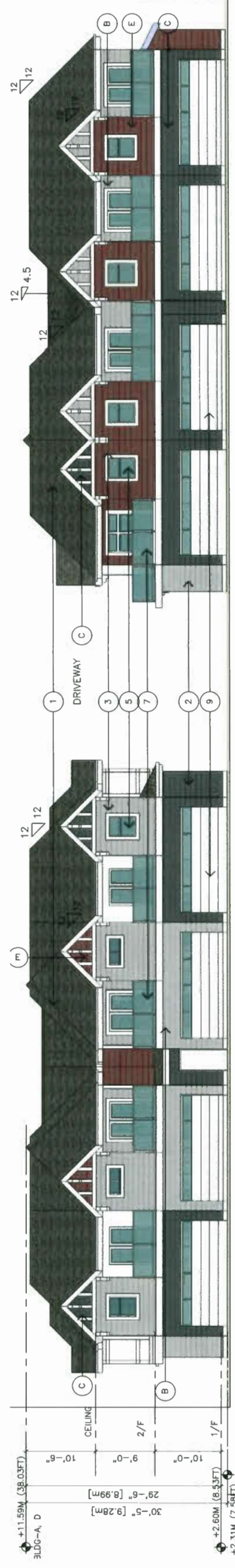
PLAN # 3 I FEB 19 2019
DP 16-741329

ISSUED:

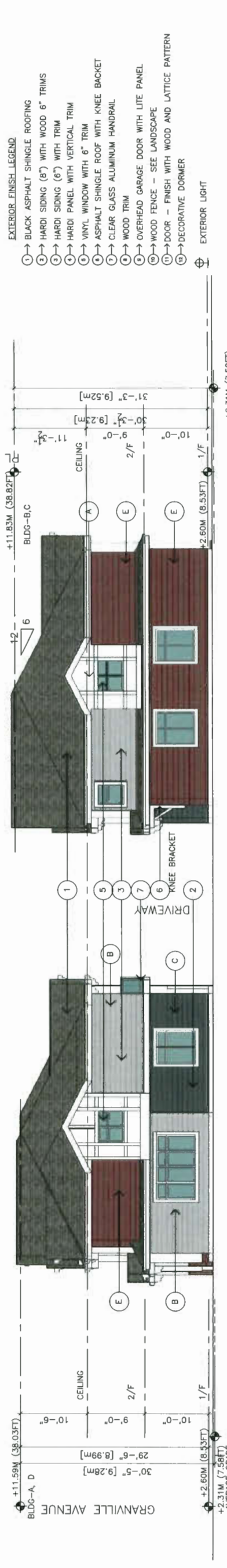
- 2016.08.10 FOR DEVELOPMENT PERMIT APPLICATION
- 2016.07.31 FOR CITY REVIEW
- 2017.06.19 FOR CITY ADP REVIEW
- 2018.01.23 FOR CITY REVIEW
- 2018.07.10 FOR CITY REVIEW
- 2018.12.07 FOR CITY REVIEW
- 2019.01.25 FOR CITY REVIEW



1 NORTH ELEVATION (FACING GRANVILLE AVE)
 A6 1/8" TO 1'-0"



2 SOUTH ELEVATION (FACING INTERNAL AISLE)
 A6 1/8" TO 1'-0"



3 WEST ELEVATION
 A6 1/8" TO 1'-0"



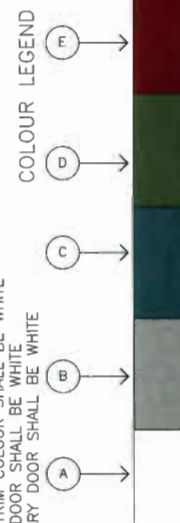
4 EAST ELEVATION
 A6 1/8" TO 1'-0"

- EXTERIOR FINISH LEGEND
- 1 → BLACK ASPHALT SHINGLE ROOFING
 - 2 → HARDI SIDING (6") WITH WOOD 6" TRIMS
 - 3 → HARDI SIDING (6") WITH TRIM
 - 4 → HARDI PANEL WITH VERTICAL TRIM
 - 5 → VINYL WINDOW WITH 6" TRIM
 - 6 → ASPHALT SHINGLE ROOF WITH KNEE BRACKET
 - 7 → CLEAR GLASS ALUMINUM HANDRAIL
 - 8 → WOOD TRIM
 - 9 → OVERHEAD GARAGE DOOR WITH LITE PANEL
 - 10 → WOOD FENCE - SEE LANDSCAPE
 - 11 → DOOR - FINISH WITH WOOD AND LATTICE PATTERN
 - 12 → DECORATIVE DORMER

- EXTERIOR COLOUR
- A → HARDIE COLOUR PLUS PREFINISH ARCTIC WHITE
 - B → HARDIE COLOUR PLUS PREFINISH PEARL GREY
 - C → HARDIE COLOUR PLUS PREFINISH EVENING BLUE
 - D → MATCH HARDIE COLOUR PLUS PREFINISH MOUNTAIN SAGE
 - E → HARDIE COLOUR PLUS PREFINISH COUNTRYLANE RED

ALL HARDIE TRIM OR CORNER TRIM SHALL BE WHITE

ALL WINDOW TRIM COLOUR SHALL BE WHITE
 ALL GARAGE DOOR SHALL BE WHITE
 ALL SECONDARY DOOR SHALL BE WHITE



REVISION

- 2017.10.30 REVISED AS PER ADP COMMENTS
- 2017.10.30 REVISED AS PER ADP COMMENTS
- 2018.12.07 REVISED AS PER CITY'S EMAIL COMMENTS
- 2018.12.21 REVISED AS PER CITY'S EMAIL COMMENTS

PROPOSED TOWNHOUSE AT
9560-3584 GRANVILLE AVE
RICHMOND BC

ELEVATIONS

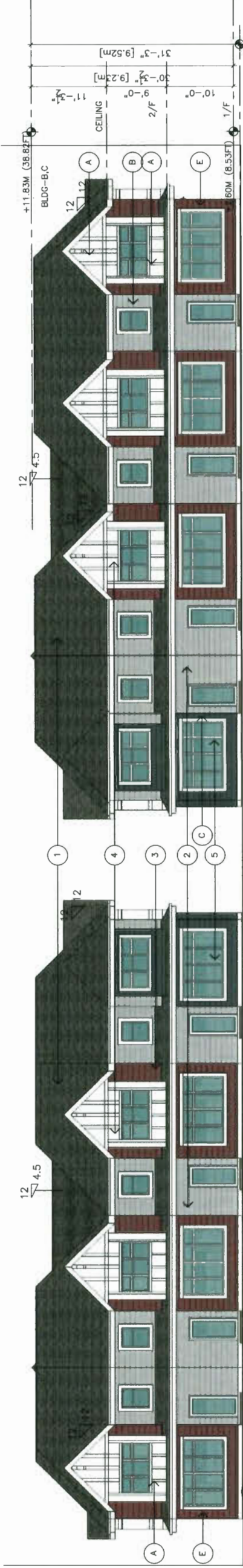
PROJECT NUMBER: 14-30
 ISSUED: 1/25/2019
 DRAWN BY: EL
 CHECKED BY: EL
 FILENAME: 14-30_NGU_190125-DP.DWG

A11

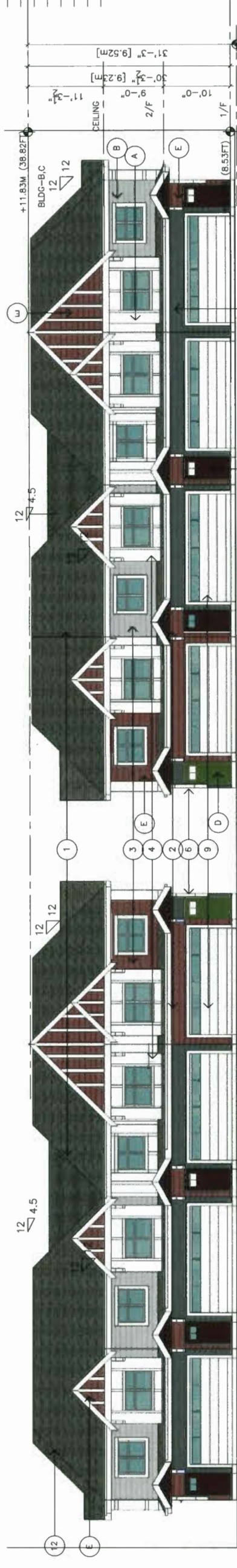
DP 16-741329 PLAN # 4 DP 16-741329 FEB 19 2019

SEE OTHER SHEETS FOR

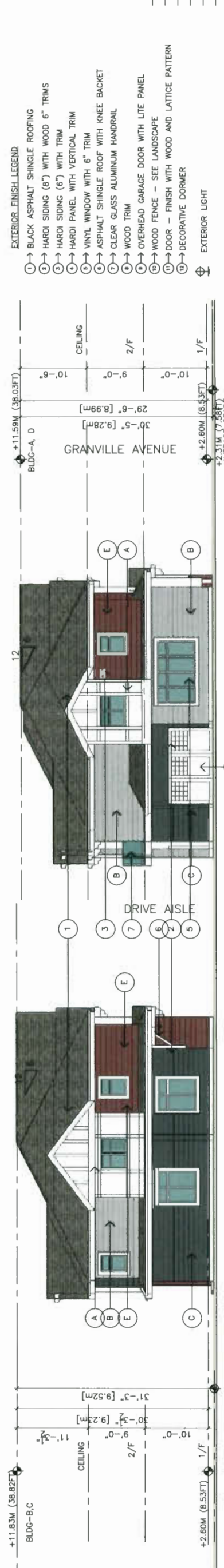
ISSUED	DESCRIPTION
1. 2016.08.10	FOR DEVELOPMENT PERMIT APPLICATION
2. 2016.07.31	FOR CITY REVIEW
3. 2017.09.19	FOR CITY ADP REVIEW
4. 2018.01.23	FOR CITY REVIEW
5. 2018.07.10	FOR CITY REVIEW
6. 2018.12.07	FOR CITY REVIEW
7. 2019.01.25	FOR CITY REVIEW



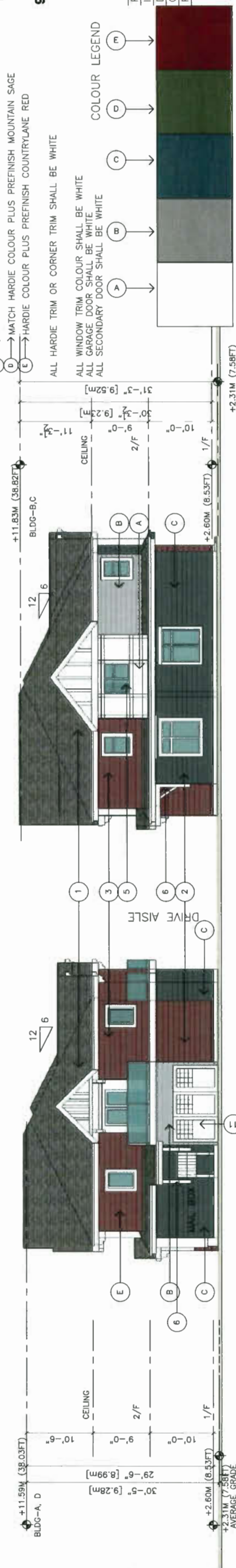
REFER TO **1** SOUTH ELEVATION (REAR YARD)
 1/8" TO 1'-0"



REFER TO **2** NORTH ELEVATION (FACING INTERNAL AISLE)
 1/8" TO 1'-0"



REFER TO **3** WEST ELEVATION (FACING ENTRANCE AISLE)
 1/8" TO 1'-0"



REFER TO **4** EAST ELEVATION (FACING ENTRANCE AISLE)
 1/8" TO 1'-0"

- EXTERIOR FINISH LEGEND**
- ① → BLACK ASPHALT SHINGLE ROOFING
 - ② → HARDI SIDING (8") WITH WOOD 6" TRIMS
 - ③ → HARDI SIDING (6") WITH TRIM
 - ④ → HARDI PANEL WITH VERTICAL TRIM
 - ⑤ → VINYL WINDOW WITH 6" TRIM
 - ⑥ → ASPHALT SHINGLE ROOF WITH KNEE BRACKET
 - ⑦ → CLEAR GLASS ALUMINUM HANDRAIL
 - ⑧ → WOOD TRIM
 - ⑨ → OVERHEAD GARAGE DOOR WITH LITE PANEL
 - ⑩ → WOOD FENCE - SEE LANDSCAPE
 - ⑪ → DOOR - FINISH WITH WOOD AND LATTICE PATTERN
 - ⑫ → DECORATIVE DORMER
 - ⊕ → EXTERIOR LIGHT

- EXTERIOR COLOUR**
- A → HARDIE COLOUR PLUS PREFINISH ARCTIC WHITE
 - B → HARDIE COLOUR PLUS PREFINISH PEARL GREY
 - C → HARDIE COLOUR PLUS PREFINISH EVENING BLUE
 - D → MATCH HARDIE COLOUR PLUS PREFINISH MOUNTAIN SAGE
 - E → HARDIE COLOUR PLUS PREFINISH COUNTRYLANE RED
- ALL HARDIE TRIM OR CORNER TRIM SHALL BE WHITE

- COLOUR LEGEND**
- A → ALL WINDOW TRIM COLOUR SHALL BE WHITE
 - B → ALL GARAGE DOOR SHALL BE WHITE
 - C → ALL SECONDARY DOOR SHALL BE WHITE

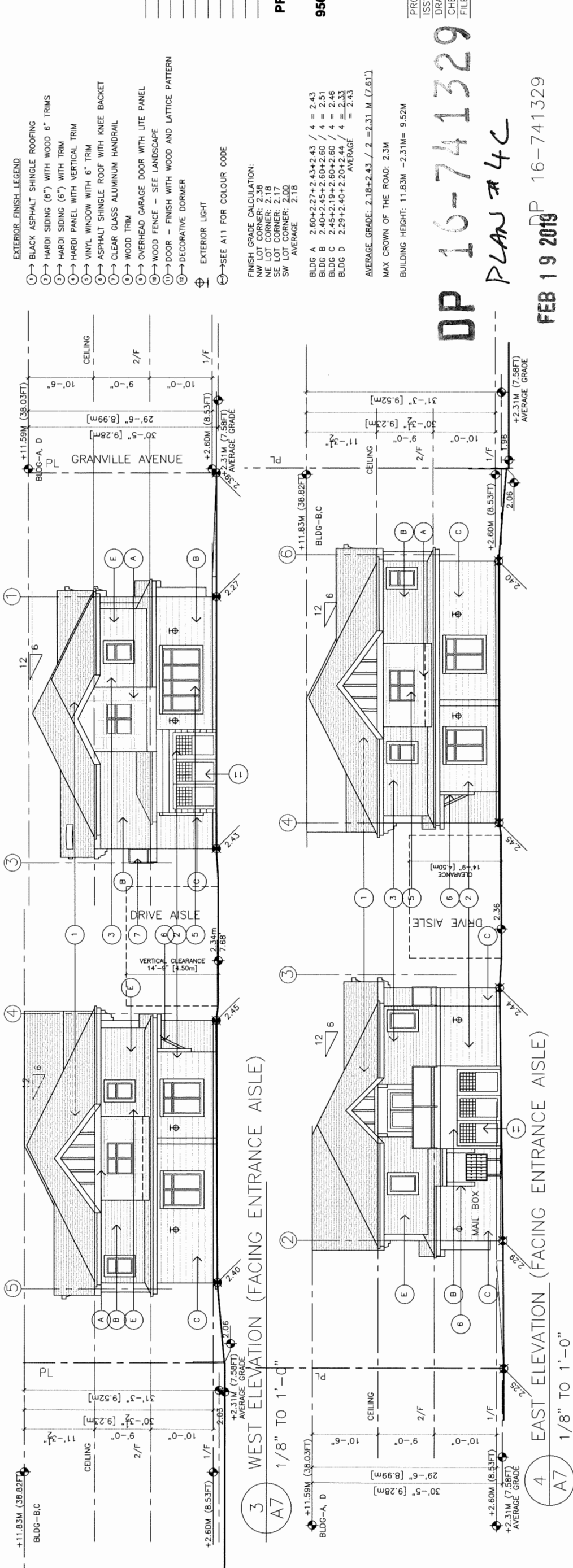
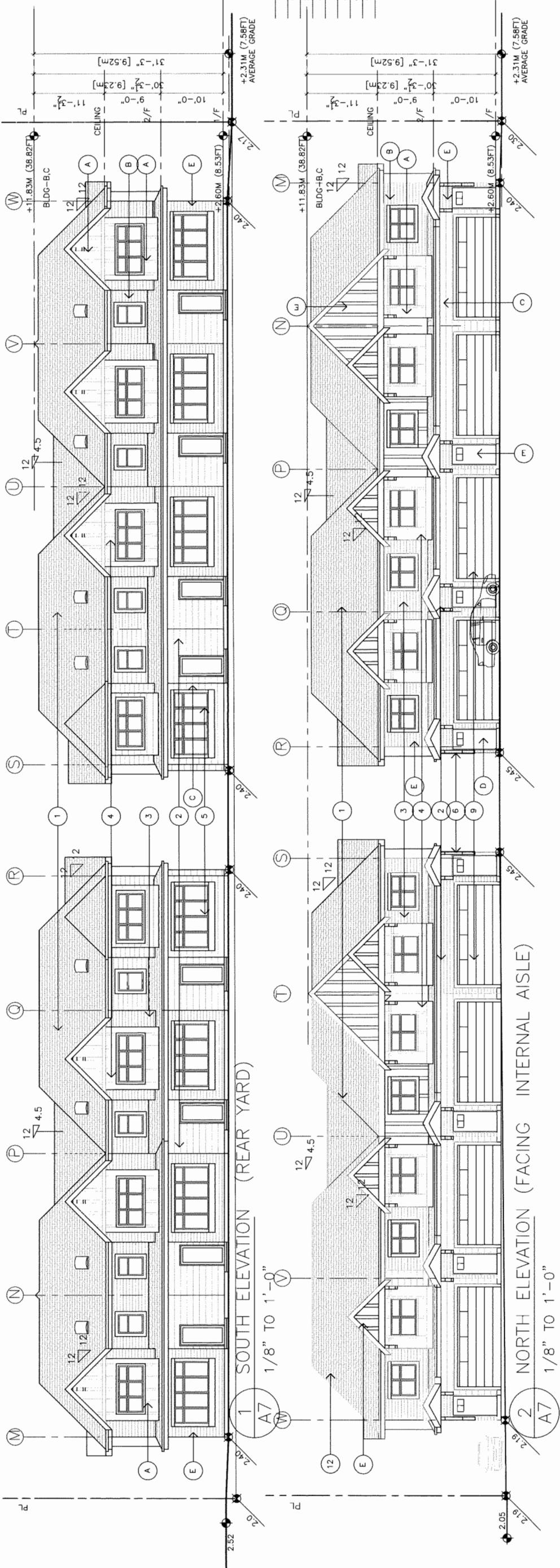


REVISION	DESCRIPTION
1.	2018.07.31 REVISED AS PER CITY COMMENTS
2.	2017.10.30 REVISED AS PER ADP COMMENTS
3.	2018.12.07 REVISED AS PER CITY'S FINAL COMMENTS
4.	2018.12.21 REVISED AS PER CITY'S FINAL COMMENTS

PROPOSED TOWNHOUSE
AT
9560-9584 GRANVILLE AVE
RICHMOND BC

PROJECT NUMBER: 14-30
 ISSUED: 1/25/2019
 DRAWN BY: EL
 CHECKED BY: EL
 FILENAME: 14-30_NGU_190125-DP.DWG

ISSUED	REVISION
1 2016.08.10 FOR DEVELOPMENT PERMIT APPLICATION	1 2016.12.21 REVISED AS PER CITY'S EMAIL COMMENTS
2 2016.07.31 FOR CITY REVIEW	2 2016.12.07 REVISED AS PER CITY'S EMAIL COMMENTS
3 2017.09.19 FOR ADP REVIEW	3 2017.10.30 REVISED AS PER ADP COMMENTS
4 2018.01.23 FOR CITY REVIEW	4 2018.01.21 REVISED AS PER CITY'S EMAIL COMMENTS
5 2018.07.10 FOR CITY REVIEW	5 2018.07.31 REVISED AS PER CITY COMMENTS
6 2018.12.07 FOR CITY REVIEW	6 2019.01.25 FOR CITY REVIEW
7 2019.01.25 FOR CITY REVIEW	



- EXTERIOR FINISH LEGEND**
- ① BLACK ASPHALT SHINGLE ROOFING
 - ② HARDI SIDING (8") WITH WOOD 6" TRIMS
 - ③ HARDI SIDING (6") WITH TRIM
 - ④ HARDI PANEL WITH VERTICAL TRIM
 - ⑤ VINYL WINDOW WITH 6" TRIM
 - ⑥ ASPHALT SHINGLE ROOF WITH KNEE BRACKET
 - ⑦ CLEAR GLASS ALUMINUM HANDRAIL
 - ⑧ WOOD TRIM
 - ⑨ OVERHEAD GARAGE DOOR WITH LITE PANEL
 - ⑩ WOOD FENCE - SEE LANDSCAPE
 - ⑪ DOOR - FINISH WITH WOOD AND LATTICE PATTERN
 - ⑫ DECORATIVE DORMER
 - ⊕ EXTERIOR LIGHT
 - ⊖ SEE A11 FOR COLOUR CODE

FINISH GRADE CALCULATION:
 NW LOT CORNER: 2.38
 NE LOT CORNER: 2.17
 SE LOT CORNER: 2.17
 SW LOT CORNER: 2.00
 AVERAGE: 2.18

BLDG A $2.60+2.27+2.43+2.43 / 4 = 2.43$
 BLDG B $2.40+2.45+2.60+2.60 / 4 = 2.51$
 BLDG C $2.45+2.19+2.60+2.60 / 4 = 2.46$
 BLDG D $2.29+2.40+2.20+2.44 / 4 = 2.33$
 AVERAGE = 2.43

AVERAGE GRADE: $2.18+2.43 / 2 = 2.31$ M (7.61')
 MAX CROWN OF THE ROAD: 2.3M
 BUILDING HEIGHT: $11.83M - 2.31M = 9.52M$

PROPOSED TOWNHOUSE
AT
9560-9584 GRANVILLE AVE
RICHMOND BC
ELEVATIONS

PROJECT NUMBER: 14-30
 ISSUED: 1/25/2019
 DRAWN BY: EL
 CHECKED BY: EL
 FILENAME: 14-30_NGUL_190125-DP.DWG

DP 16-741329
PLAN # 4C

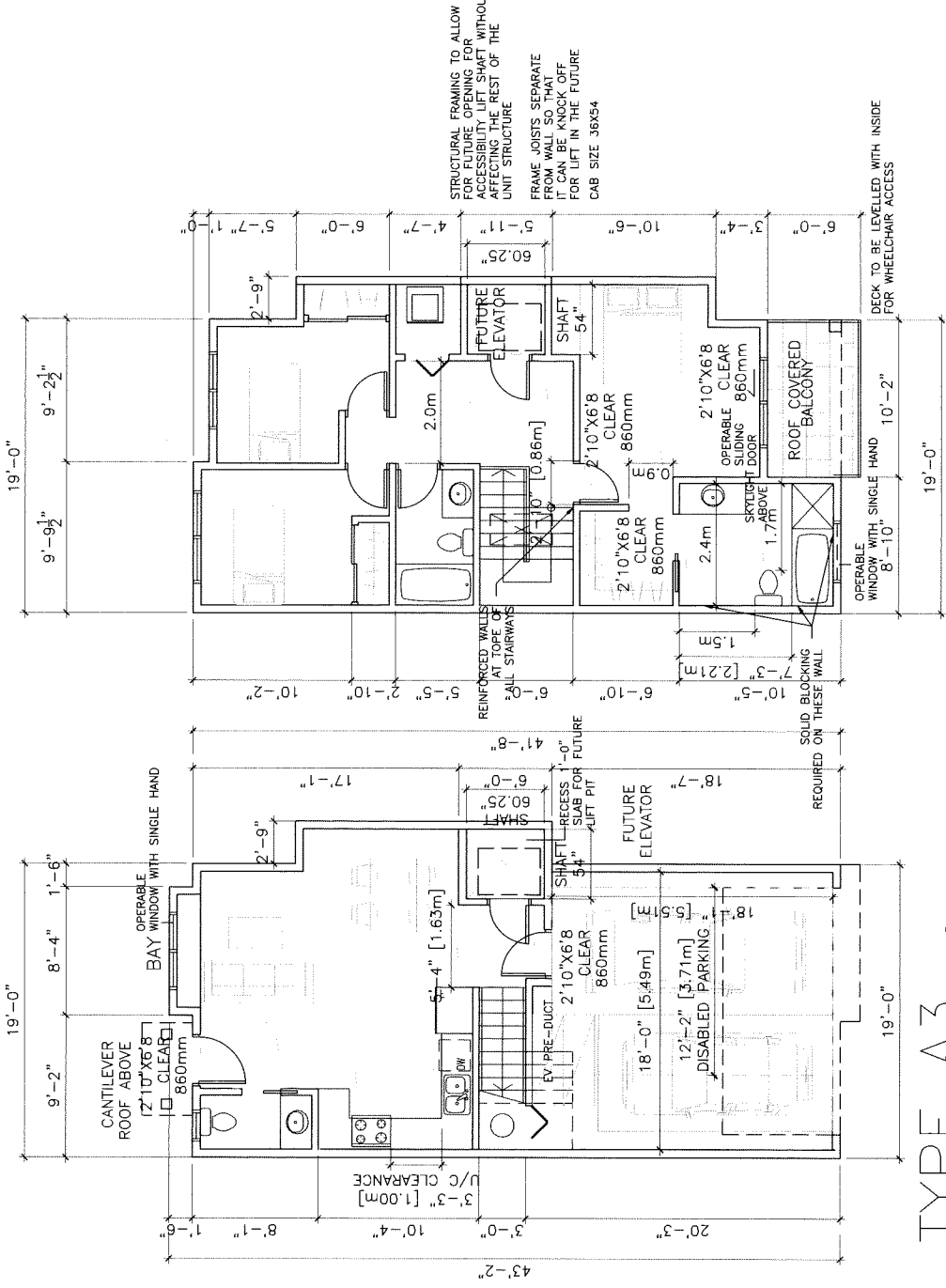
FEB 19 2019 DP 16-741329

A7

DEVELOPMENT PERMIT

ISSUED
1. 2016.08.10 FOR DEVELOPMENT PERMIT APPLICATION
2. 2016.07.31 FOR CITY REVIEW
3. 2017.08.19 FOR CITY ADP REVIEW
4. 2018.01.23 FOR CITY REVIEW
5. 2018.07.10 FOR CITY REVIEW
6. 2018.12.07 FOR CITY REVIEW
7. 2019.01.25 FOR CITY REVIEW

DOORS & DOORWAYS	VERTICAL CIRCULATION	HALLWAYS	GARAGE	BATHROOM (MIN. 1)	KITCHEN	WINDOWS	OUTLETS & SWITCHES
CONVERTIBLE UNIT GUIDELINES - ENTRY DOORS ARE A MINIMUM 863 MM BUT IDEALLY 914 MM AND HAVE CLEAR ACCESS. - ENTRY DOOR CLEAR EXTERIOR FLOOR SPACE MIN. 1220 MM DEPTH BY DOOR WIDTH PLUS 600 MM ON LATCH SIDE (NOT NEEDED IF ROUGH IN WIRING PROVIDED FOR FUTURE AUTOMATIC DOOR OPENER). - INTERIOR DOORS TO MAIN LIVING AREAS, 1 BATHROOM AND 1 BEDROOM, MIN. 800 MM CLEAR OPENING WITH FLUSH THRESHOLDS MAX. 13 MM HEIGHT. DEMONSTRATE WHEELCHAIR ACCESS BETWEEN THE HALLWAY AND ROOMS AND WIDEN HALLWAY AND/OR DOORWAY(S) IF NECESSARY TO SECURE ACCESS. - PATIO/BALCONY MIN. 860 MM CLEAR OPENING. NOTE HOW ACCESSED. - ALL INTERIOR THRESHOLDS WITHIN UNITS COMPLY WITH BC BUILDING CODE. - LEVER-TYPE HANDLES FOR ALL DOORS. - STAIR LIFT, STAIRCASE WIDTH, FRAMING SUPPORT, AND LANDINGS, AS NOTED ON FLOOR PLANS IN COMPLIANCE WITH MANUFACTURER SPECIFICATIONS. - VERTICAL LIFT, DERESSED SLAB AREA, AND LANDINGS, AS NOTED ON FLOOR PLANS IN COMPLIANCE WITH MANUFACTURER SPECIFICATIONS. FRAMING TO ACCOMMODATE SHAFT CONSTRUCTION WITHOUT IMPACT TO SURROUNDING STRUCTURE. - AT THE TOP OF ALL STAIRWAYS, WALLS ARE REINFORCED WITH 2" X 12" SOLID LUMBER AT 914 MM TO CENTRE. - MIN. 900 MM WIDTH. - MIN. 1 ACCESSIBLE PARKING SPACE WITH MIN. 4 M GARAGE WIDTH. - ACCESS FROM GARAGE TO LIVING AREA MIN. 800 MM CLEAR OPENING. - TOILET CLEAR FLOOR SPACE MIN. 1020 MM AT SIDE AND IN FRONT. - 2" X 12" SOLID LUMBER IN ALL BATHUB, SHOWER, AND TOILET LOCATIONS. - LEVER-TYPE HANDLES FOR PLUMBING FIXTURES. - PRESSURE AND TEMPERATURE CONTROL VALVES ARE INSTALLED ON ALL SHOWER FAUCETS. - CABINETS UNDERNEATH SINK(S) ARE EASILY REMOVED. DEMONSTRATE BATH AND SHOWER CONTROLS ARE ACCESSIBLE (LAYOUT OR FIXTURE PLACEMENT). - CLEAR AREA NEEDED UNDER FUTURE WORK SPACE. - PLUMBING AND GAS PIPES (IN-WALL AND IN-FLOOR) LOCATED CLEAR OF UNDER COUNTER AREA OF FUTURE WORK SPACE (STOVE, SINK & MIN. 810 MM WIDE COUNTER). ALL PIPES ARE BROUGHT IN NO HIGHER THAN 304 MM TO THE CENTRE OF THE PIPE FROM FLOOR LEVEL. - - CABINETS UNDERNEATH SINK ARE EASILY REMOVED. - 1500 MM TURNING DIAMETER OR TURNING PATH DIAGRAM. - LEVER-TYPE HANDLES FOR PLUMBING FIXTURES. - MIN. 1 WINDOW THAT CAN BE OPENED WITH A SINGLE HAND (BATHROOM, KITCHEN, LIVING ROOM) - PLACEMENT LOCATIONS OF ELECTRICAL OUTLETS: BESIDE WINDOW, BOTTOM OF STAIRWAYS, BESIDE TOILET, ABOVE EXTERNAL DOORS (OUTSIDE AND INSIDE), ON FRONT FACE OF KITCHEN COUNTER, WITHIN PROXIMITY OF CONTROL CENTRE FOR SMART HOME OPTIONS. - UPGRADE TO FOUR-PLEX OUTLETS IN MASTER BEDROOM, HOME OFFICE, GARAGE, AND RECREATION ROOM.							



TYPE A3
 3 BEDROOM + DEN



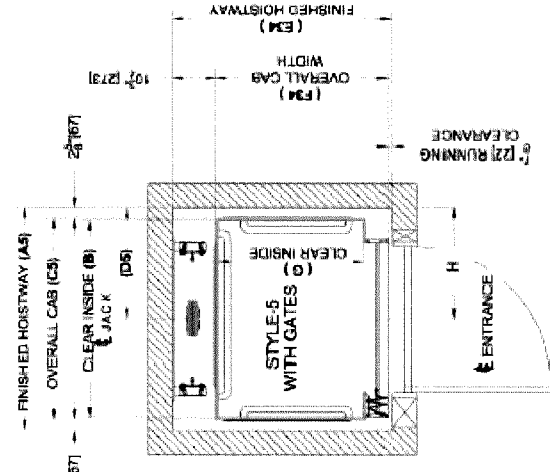
1 LEVEL 1
 3/16" TO 1'-0"

TYPE-A3-GF
 TOTAL UNIT AREA: ±1291 SQ. FT. INCLUDING STAIR

2 LEVEL 2
 3/16" TO 1'-0"

TYPE-A3-2F

On / Off Same Side Front Configuration Style 5:



Cab Size	A5	B	C5	D5	E34	F34	G	H
36" x 48"	54 1/4"	48"	49"	27 1/8"	53 1/8"	42 1/4"	36"	27 1/8"
36" x 54"	60 1/4"	54"	55"	30 1/8"	53 1/8"	42 1/4"	36"	30 1/8"

PROPOSED TOWNHOUSE AT
9560-9584 GRANVILLE AVE
RICHMOND BC
UNIT PLANS

PROJECT NUMBER: 14-30
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FEB 19 2019

DP 10-741329 A10

REFERENCE PLAN

DP 16-741329