

Talbot Mackenzie & Associates

Consulting Arborists

1042-1044 Richardson Street, Victoria, BC

Construction Impact Assessment &

Tree Preservation Plan

Prepared For:	Bart Johnson, 1248330 BC Ltd. 4044 Hollydene Place
	Victoria, BC 38N 3Z7

Prepared By: Talbot, Mackenzie & Associates Robert McRae ISA Certified PN-7125A TRAQ – Qualified

Original Date of Issuance: Date of Update Issuance: January 22, 2021

May 13, 2022

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Jobsite Property:	1042-1044 Richardson Street
Date of Site Visit(s):	May 12/August 24, 2020; January 22, 2021
Site Conditions:	No ongoing construction activity. Flat property with existing house (multiple rental units).

Summary:

- The proposal includes demolition of the existing dwelling, accessory building, driveway, and municipal sidewalk, followed by the construction of a new multi-unit residence with underground parking, associated landscaping, driveway, sidewalks, and underground servicing.
- 13 trees were inventoried on the subject property (#84 & 85 are bylaw protected--#79 has been removed as per permit #001966)—two of these are likely shared with 1050 Richardson St. (not bylaw protected; 1 (NT#1, bylaw protected) on the neighbour's property at 1035 McClure St; with a further two trees on the municipal boulevard fronting the subject property and two more fronting 1041 Richardson St.
- From the plans reviewed, it is our opinion that 13 trees will have to be removed from the site due to construction related impacts. As per the wishes of the neighbouring property and the City of Victoria, the retention status of NT1 has been converted to Retain, instead of Removal.
- Trees identified for retention can be isolated from the construction impacts by erecting and maintaining barrier fencing, as well as arborist supervision during demolition of the existing structures and any excavations to take place, including installation of landscaping features and irrigation systems, where these activities encroach on the critical root zones (CRZs) of trees to be retained.

Scope of Assignment:

- Inventory the existing bylaw protected trees and any trees on municipal or neighbouring properties that could potentially be impacted by construction or that are within three metres of the property line.
- Review the proposal to demolish the existing house and accessory building, followed by the construction of a new multi-unit residence with underground parking, driveway, sidewalks, associated landscaping, and underground servicing.
- Comment on how construction activity may impact existing trees.

• Prepare a tree retention and construction damage mitigation plan for those trees deemed suitable to retain given the proposed impacts.

Methodology:

- We visually examined the trees on the property and prepared an inventory in the attached Tree Resource Spreadsheet.
- Each bylaw protected tree was identified using a numeric metal tag attached to its lower trunk. Municipal trees and neighbours' trees were not tagged.
- Information such as tree species, DBH (1.4m), crown spread, critical root zone (CRZ), health, structure, and relative tolerance to construction impacts were included in the inventory.
- The conclusions reached were based on the information provided within the attached Conceptual Site Servicing plans from McElhanney (dated January 14, 2021) and Architectural plan from Christine Lincott Architects Inc. (dated January 11, 2021).
- A Tree Protection Site Plan was created using the servicing plan provided.

Limitations:

- No exploratory excavations have been conducted and thus the conclusions reached are based solely on critical root zone calculations, observations of site conditions, and our best judgement using our experience and expertise. The location, size and density of roots are often difficult to predict without exploratory excavations and therefore the impacts to the trees may be more or less severe than we anticipate.
- The extent of impacts to some trees will largely depend on the cut-slope prescribed by the geotechnical engineer during excavation for the foundations. Therefore, the proximity of excavation to trees (without shoring) can only be estimated and may be closer or farther from trees than we estimate.
- Where trees were not surveyed on the plans provided, we have added their approximate locations. The accuracy of our estimated locations has not been verified by a professional surveyor. Only the trees shown on the existing survey (attached as part of architectural plans) were professionally surveyed.

Trees to be Removed

- The following trees will likely require removal due to construction related impacts:
 - **#79, an 89cm DBH bylaw protected Black Locust** (*Robinia pseudoacacia*) has been removed as per permit #001966.
 - #84, a multi-stemmed Holly (*Ilex spp.*), is bylaw protected according to the sum of the largest stem (22cm DBH) and 60% of the two secondary stems (11cm & 10cm DBH). Removal recommended, as this tree is within the footprint of the proposed underground parking and immediately adjacent to the proposed driveway ramp.

- **#85, a 31cm bylaw protected Spruce** (*Picea spp.*). Removal recommended, as this tree is within the proposed sidewalk footprint. Sewer and drain laterals are also proposed immediately adjacent.
- **#80-83—Holly, Plum, and Hawthorne trees not protected under bylaw**. Removal recommended as these trees are within or immediately adjacent to the underground parking footprint and driveway ramp.
- **#86-88,** as well as **NT#4 & 5, plum trees not protected under bylaw**. Removal recommended as these trees are within the footprint of, or immediately adjacent to the proposed new paver path on the east side of the property. As some of these trees may be under shared ownership with 1050 Richardson St., the neighbours should be notified.
- NT#2, a 33cm DBH European Birch (*Betula pendula*) located on the municipal boulevard (ID: 15797). Removal recommended as new driveway is proposed immediately adjacent; hydro services (utility pole and/or box) are also proposed within the CRZ. In addition, the tree exhibits signs of bronze birch borer infestation, and the species is known to have relatively poor tolerance to construction impacts.

Potential Impacts to Trees and Mitigation Measures

- The following trees have been selected for retention and may be moderately impacted by construction activities:
 - NT#1, a Japanese Maple (*Acer palmatum*) on the north neighbouring property at 1035 McClure St., is bylaw protected according to multiple stem calculation (31cm DBH) and grows 1.3m from the existing fence (which is 0.5m north of the property line, according to the site survey). Underground parking is proposed within the CRZ, which could require an extensive excavation (at least 3m deep, according to the elevation plan). To retain this tree, excavation must be limited to the property line and alternative slope stabilizing techniques should be utilized to prevent the use of cut-slopes and over-excavation. It is anticipated that the adjacent parking spot (#8) could be retained. This tree should be isolated from the construction by erecting protective barrier fencing 3.5m from the trunk flare on the east, south and west sides of the tree (See Tree Management Plan).
 - NT#3, a Hawthorn (*Crataegus oxycantha*, ID: 15798) located on municipal boulevard, can be isolated from construction impacts by erecting and maintaining protective barrier fencing 2.5m from the base of the tree, along the sidewalk and curb edges. It is also recommended that the project arborist supervise the demolition of the

existing sidewalk—if structural roots are encountered, they should be preserved, and the new sidewalk be constructed above (see section "Paved Surfaces Above Tree Roots" and attached paved surfaces diagram) using permeable surface materials.

The project arborist should also supervise the installation of the proposed drain line within the CRZ of NT#3.

The following trees have been selected for retention and will likely experience minor impacts from construction activities:

- NT#6, a 15cm DBH Paper Birch (*Betula papyrifera*), is located on the municipal boulevard (ID#: 15809) across the street from the subject property. A new utility pole and hydro services are proposed just outside the CRZ. This tree can be isolated from the construction impacts by erecting and maintaining protective barrier fencing 2.0m from the base of the tree; to the curb and sidewalk edges.
- NT#7, a 36cm DBH Hawthorn (*Craetagus oxycantha*), is located on the municipal boulevard (ID#: 15810) across the street from the subject property. It is our understanding that water and storm services within the CRZ will not require upgrades or servicing. This tree can be isolated from the construction impacts by erecting and maintaining protective barrier fencing 2.0m from the base of the tree; to the curb and sidewalk edges.

Mitigation Measures

- Arborist Supervision: All excavation occurring within the critical root zones of protected trees should be completed under the direction or supervision of the project arborist. This includes (but is not limited to) the following activities within CRZs:
 - Demolition of existing dwelling and accessory building, sidewalks, driveway, and retaining walls, where they encroach on CRZs of trees to be retained.
 - Installation of any underground services that cross the CRZs of trees to be retained.
 - Installation of landscaping features and irrigation systems.
 - Excavation associated with the new sidewalk, curb, driveways, underground parking, as well as footings for new fencing.
- **Pruning Roots:** Any severed roots must be pruned back to sound tissue to reduce wound surface area and encourage rapid compartmentalization of the wound. Backfilling the excavated area around the roots should be done as soon as possible to keep the roots moist and aid in root regeneration. Ideally, the area surrounding exposed roots should be watered; this is particularly important if excavation occurs or the roots are exposed during a period of drought. This can be accomplished in a number of ways, including wrapping the roots in burlap or installing a root curtain of wire mesh lined with burlap, and watering the area periodically throughout the construction process.

• **Barrier fencing:** The areas surrounding the trees to be retained should be isolated from the construction activity by erecting protective barrier fencing. Where possible, the fencing should be erected at the perimeter of the critical root zones.

The barrier fencing must be a minimum of 4 feet in height, of solid frame construction that is attached to wooden or metal posts. A solid board or rail must run between the posts at the top and the bottom of the fencing. This solid frame can then be covered with plywood, or flexible snow fencing. The fencing must be erected prior to the start of any construction activity on site (i.e. demolition, excavation, construction), and remain in place through completion of the project. Signs should be posted around the protection zone to declare it off limits to all construction related activity. The project arborist must be consulted before this fencing is removed or moved for any purpose.

- **Minimizing Soil Compaction:** In areas where construction traffic must encroach into the critical root zones of trees to be retained, efforts must be made to reduce soil compaction where possible by displacing the weight of machinery and foot traffic. This can be achieved by one or a combination of the following methods (depending on the size of machinery and the frequency of use):
 - Placing a layer of geogrid (such as Combigrid 30/30) over the area to be used and installing a layer of crushed rock to a depth of 15 cm over top or a layer of hog fuel or coarse wood chips at least 30 cm in depth and maintaining it in good condition until construction is complete.
 - Installing a layer of hog fuel or coarse wood chips at least 20 cm in depth and maintaining it in good condition until construction is complete.
 - Placing two layers of 19mm plywood.
 - Placing steel plates
- **Demolition of the existing building:** The demolition of the existing house and any services that must be removed or abandoned, must take the critical root zone of the trees to be retained into account. If any excavation or machine access is required within the critical root zones of trees to be retained, it must be completed under the supervision and direction of the project arborist. If temporarily removed for demolition, barrier fencing must be erected immediately after the supervised demolition.

• Paved Surfaces Above Tree Roots:

If the new paved surfaces within the CRZs of retained trees require excavation down to bearing soil and significant roots are encountered in this area, this could impact the health or stability of the retained trees. If tree retention is desired, the following recommendations should be followed.

The objective of "no-dig" construction techniques is to avoid root loss and to instead raise the paved surface and/or its base material above the root systems of trees. This may result in the finished grade of the paved surface being raised above existing grade (the amount depending

on how close roots are to the surface and the depth of the paving material and base layers). Final grading plans should take this potential change into account (e.g. the resulting slope, grades of surrounding patios, etc.). Contractors should be informed that soils which are high in organic content will likely be left intact below the paved area.

Within the CRZs, the project arborist should supervise any excavation associated with constructing these hard surfaces, including the removal of the existing paving or turf. If significant roots are encountered, excavation should be stopped.

Depending on the amount of the critical root zone covered by the paved surface, the condition of the sub-grade and the amount of roots observed, it may be recommended that the paved surface be made permeable and that a geogrid material (such as CombiGrid 30/30 or similar) be used. The function of the geogrid is to reduce compaction and to disperse weight over soils high in organics and roots. The base material for the paving should be placed above this geogrid and should be clear washed gravels (3/4" clear) in order to inhibit future root growth and potential damage to paving as well as to ensure a well-draining aeration layer. An additional layer of filter cloth or geotextile fabric may be recommended to separate coarse and fine layers (if a finer material is required directly underneath the paving).

To allow water to drain into the root systems below, the project arborist may recommend that the surface be made of a permeable material (instead of conventional asphalt or concrete) such as permeable asphalt, paving stones, or other porous paving materials and designs such as those utilized by Grasspave, Gravelpave, Grasscrete and open-grid systems. If the paved surface is a driveway, it may be possible to construct a "ribbon driveway" with an unpaved area between the two strips of paving.

Ultimately, a geotechnical engineer may be consulted and in consultation with the project arborist, may specify their own materials and methods that are specific to the site's grading, soil conditions and requirements, while also avoiding root loss, reducing compaction to the sub-grade and ensuring the most long-term aeration and permeability.

- **Mulching**: Mulching can be an important proactive step in maintaining the health of trees and mitigating construction related impacts and overall stress. Mulch should be made from a natural material such as wood chips or bark pieces (not dyed) and be 5-8cm deep. No mulch should be touching the trunk of the tree. See "methods to avoid soil compaction" if the area is to have heavy traffic.
- **Blasting:** Care must be taken to ensure that the area of blasting does not extend beyond the necessary footprints and into the critical root zones of surrounding trees. The use of small low-concussion charges and multiple small charges designed to pre-shear the rock face will reduce fracturing, ground vibration, and overall impact on the surrounding environment. Only explosives of low phytotoxicity and techniques that minimize tree damage should be used. Provisions must be made to ensure that blasted rock and debris are stored away from the critical root zones of trees.

- **Scaffolding:** This assessment has not included impacts from potential scaffolding including canopy clearance pruning requirements. If scaffolding is necessary and this will require clearance pruning of retained trees, the project arborist should be consulted. Depending on the extent of pruning required, the project arborist may recommend that alternatives to full scaffolding be considered such as hydraulic lifts, ladders or platforms. Methods to avoid soil compaction may also be recommended (see "Minimizing Soil Compaction" section).
- Landscaping and Irrigation Systems: The planting of new trees and shrubs should not damage the roots of retained trees. The installation of any in-ground irrigation system must take into account the critical root zones of the trees to be retained. Prior to installation, we recommend the irrigation technician consult with the project arborist about the most suitable locations for the irrigation lines and how best to mitigate the impacts on the trees to be retained. This may require the project arborist supervise the excavations associated with installing the irrigation system. Excessive frequent irrigation and irrigation which wets the trunks of trees can have a detrimental impact on tree health and can lead to root and trunk decay.
- **Arborist Role:** It is the responsibility of the client or his/her representative to contact the project arborist for the purpose of:
 - Locating the barrier fencing
 - Reviewing the report with the project foreman or site supervisor
 - Locating work zones, where required
 - Supervising any excavation within the critical root zones of trees to be retained
 - Reviewing and advising of any pruning requirements for machine clearances
- **Review and site meeting**: Once the project receives approval, it is important that the project arborist meet with the principals involved in the project to review the information contained herein. It is also important that the arborist meet with the site foreman or supervisor before any site clearing, tree removal, demolition, or other construction activity occurs and to confirm the locations of the tree protection barrier fencing.

Please do not hesitate to call us at (250) 479-8733 should you have any further questions.

Thank you,

Robert McRae ISA Certified # PN-7125A TRAQ – Qualified

Talbot Mackenzie & Associates ISA Certified Consulting Arborists Attached: 2-page tree resource spreadsheet 1-page tree protection site plan 12-page building plans 1-page conceptual site servicing plan 1-page paved surfaces diagram (simple) 2-page tree resource spreadsheet methodology and definitions

Disclosure Statement

The tree inventory attached to the Tree Preservation Plan can be characterized as a limited visual assessment from the ground and should not be interpreted as a "risk assessment" of the trees included.

Arborists are professionals who examine trees and use their training, knowledge and experience to recommend techniques and procedures that will improve their health and structure or to mitigate associated risks.

Trees are living organisms, whose health and structure change, and are influenced by age, continued growth, climate, weather conditions, and insect and disease pathogens. Indicators of structural weakness and disease are often hidden within the tree structure or beneath the ground. It is not possible for an Arborist to identify every flaw or condition that could result in failure or can he/she guarantee that the tree will remain healthy and free of risk.

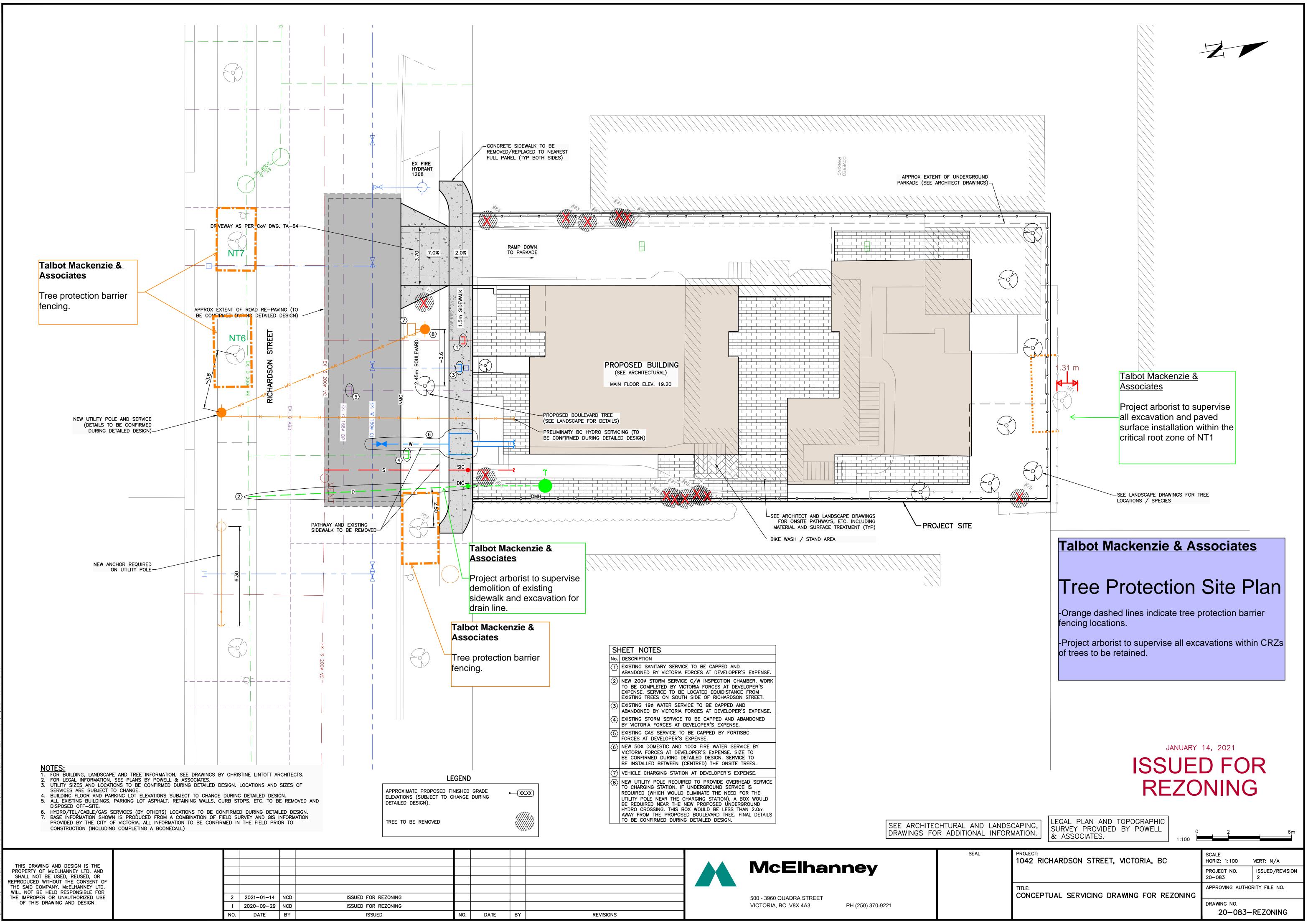
Remedial care and mitigation measures recommended are based on the visible and detectable indicators present at the time of the examination and cannot be guaranteed to alleviate all symptoms or to mitigate all risk posed.

		Location (On,	Bylaw	Name			Critical root	Crown	Condition		Retention				
Tag or ID #	Surveyed ? (Yes/No)	Off, Shared, City)	protected ? (Yes/No)	Common		dbh (cm)	zone radius (m)	spread (m)	Health	Structural	Suitability (onsite trees)		General field observations/remarks	Tree retention / location comments	Retention status
79		On-site	Y	Black Locust	Robinia	89 (at 1.1m)		14	Fair/poor		NS		Basal injury and decay, fruiting bodies on lower trunk, large deadwood, large pruning wounds, epicormic growth	Removed as per permit #001966.	X
80		On-site	N	Holly		16, 8	2	3	Good	Fair	Suitable		Asymmetric crown due to competition with #81		X
81	Yes	On-site	N	Hawthorn	Crataegus spp.	22	2	3	Good	Fair	Suitable	Good	Conflicting with Holly #80		x
82	Yes	On-site	N	Plum	Prunus spp.	16, 7	2.5	3	Fair	Fair	Suitable	Moderate			x
83	Yes	On-site	N	Holly	llex spp.	18, 18	3	4	Fair	Fair	Suitable	Good	One stem growing through fence		x
84	Yes	On-site	Y	Holly	llex spp.	22, 11, 10	3.5	4	Good	Fair	Suitable	Good			x
85	Yes	On-site	Y	Spruce	Picea spp.	31	4.5	5	Fair	Good	Suitable	Poor	Some lower crown dieback		x
86	Yes	On-site	N	Plum	Prunus spp.	14	1.5	4	Good	Fair	Suitable	Moderate	Pruned from hydro lines		x
87	No	On-site	N	Plum	Prunus spp.	10	1	2	Good	Fair	Suitable	Moderate	Suppressed		x
								_							
88 NT1		On-site Off-site	N Y	Plum Japanese Maple		18, 16 14,13,1 0,6		8	Good	Fair	Suitable	Moderate	Branches overhang fence 1m.	Neighbour's, 1.3m from existing property fence	X
NT2	Yes	Municipal	Municipal	European Birch	Betula pendula	33	5	10	Fair	Fair	Suitable	Poor	, upper crown dieback - likely bronze birch borer infestation, codominant union at 2m above ground	Municipal tree (ID#: 15797)	x

Prepared by: Talbot Mackenzie and Associates Box 48153 RPO Uptown Victoria, BC V8Z 7H6 Ph: (250) 479-8733 ~ Fax: (250) 479-7050 Email: tmtreehelp@gmail.com

Tener	Curried 2	Location (On,	-	Name		dlab			Condition	1	Retention	Deletive	Concret field	Tree retention / leastion	Retention
ID #	Surveyed ? (Yes/No)	Off, Shared, City)	protected ? (Yes/No)	Common	Botanical	dbh (cm)	zone radius (m)	spread (m)	Health	Structural	Suitability (onsite trees)		General field observations/remarks	Tree retention / location comments	status
NT3	Yes	Municipal	Municipal	Hawthorn	Crataegus oxyacantha	27	2.5	8	Fair	Fair	Suitable	Good	Small deadwood	Municipal tree (ID#: 15798), growing under hydro lines	Retain
NT4		On-site, possibly shared	N (possibly neighbour's)	Plum	Prunus spp.	5, 3	1	2	Fair	Poor	Suitable	Moderate	Decay at base	Growing near fence, possibly shared	x
NT5		On-site, possibly shared	N (possibly neighbour's)	Plum	Prunus spp.	7	1	2	Fair	Fair	Suitable	Moderate		On neighbour's side of fence, possibly shared	х
NT6	Yes	Municipal	Municipal	Paper Birch	Betula papyrifera	15	2	4	Good	Fair	Suitable	Poor	Hydro clearance pruning, codominant stems with included bark, surface root next to sidewalk.	Municipal tree (ID#: 15809),	Retain
NT7	Yes	Municipal	Municipal	Hawthorn	Craetagus oxycantha	36	3.5	8	Fair	Fair	Suitable	Good		Municipal tree (ID#: 15810).	Retain

Prepared by: Talbot Mackenzie and Associates Box 48153 RPO Uptown Victoria, BC V8Z 7H6 Ph: (250) 479-8733 ~ Fax: (250) 479-7050 Email: tmtreehelp@gmail.com



PROJECTS\20-083-00 1042 RICHARDSON STREET\10.0 DRAWINGS\20-083-REZONING.DWG 1/14/2021 10:01 AM 1AYO

1042/1044 RICHARDSON STREET **APPLICATION FOR REZONING & DEVELOPMENT PERMIT**





2 Site Context Plan 1:1000

OWNER

1248330 BC LTD. 4044 Hollydene Place Victoria, B.C. 250 893 9038 bartj.vi@gmail.com

Contact: Bart Johnson

ARCHITECTURAL

Christine Lintott Architects Inc. LADR Landscape Architects Unit 1 - 864 Queens Avenue Victoria, B.C. V8T 1M5 250 384 1969 christine@lintottarchitect.ca

Contact: Christine Lintott

LANDSCAPE

#3-864 Queens Avenue Victoria, BC V8T1M5 250 598 0105 cwindjack@ladrla.ca

Contact: Chris Windjack

SURVEY

Powell & Associates 250-2950 Douglas Street Victoria, BC V8T 4N4 250 382 8855

McElhanney Victoria BC V8X 4A3

250 370 9221

Contact: Nathan Dunlop

GEOTECHNICAL

Suite 500 - 3960 Quadra Street ndunlop@mcelhanney.com

Property Data

GENERAL PROPERTY INFORMATION	
PROJECT DESCRIPTION	NEW 6 STOREY INFILL RESIDENTIAL BUILDING
CIVIC ADDRESS	1042/1044 Richardson Street, Victoria BC
LEGAL DESCRIPTION	LOT 1663 VICTORIA CITY
PROPERTY IDENTIFICATION NUMBER (P.I.D.)	009-396-853
AUTHORITY HAVING JURISDICTION	CITY OF VICTORIA
APPLICABLE BUILDING CODE	BRITISH COLUMBIA BUILDING CODE, 2018 EDITION, INCLUDING ALL AMENDMENTS

Project Scope Summary

- 21-unit purpose built rental building with a mix of market and non-market (affordable) rental units.
- Retaining/replacing the 5 rental units of the existing buidlings which are to be removed •
- Diverse unit mix including:
- 4 three-bedroom units
- 14 one-bedroom units (six units offered at affordable rental rates, three adaptable units, one ground • level accesible unit)
- 3 studio units

Bicycle and mobility oriented design, situated on a dedicated All Ages and Abilities bicycle route, to • encourage alternatives modes of transportation by providing: level site access •

- more than required long-term bicycle parking spaces, provided on each floor in close proximity to unit entrances, and sized to accomodate several cargo bikes
- charging outlets provided for electric bikes •
- bike maintenance station at ground level ٠
- On-street electric MODO car-share is proposed, with memberships registered to each unit for the lifetime of • the building

FLOOR	AREA (ZONING)
Level	Area
LEVEL 1	225 m²
LEVEL 2	237 m²
LEVEL 3	237 m²
LEVEL 4	237 m²
LEVEL 5	226 m²
LEVEL 6	155 m²
	1317 m ²

FLOOR AREA (FA) = $1317m^2$ FSR = FA/SA = **1.97**

SITE AREA (SA) = 668 m^2

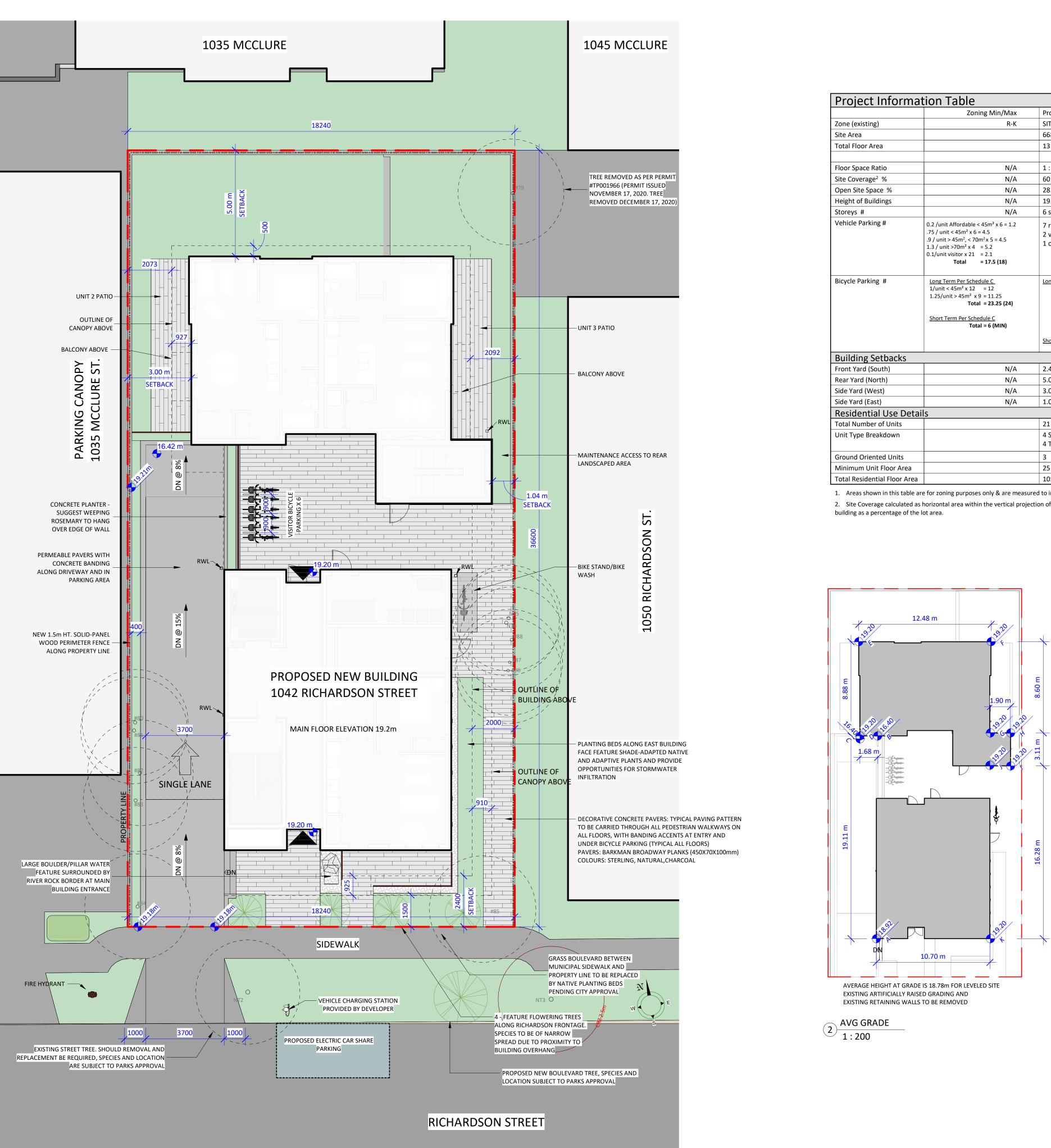
FSR CALCULATION

NOTE: THESE AREAS ARE USED FOR ZONING PURPOSES ONLY & ARE MEASURED TO THE INSIDE FACE OF EXTERIOR WALLS.

	Unit Area Scł	nedule	
Unit #	Name	Area	Affordable Housing
EVEL 1	-		
101	UNIT 1	44 m²	No
102	UNIT 2	46 m²	No
103	UNIT 3	44 m²	No
EVEL 2			
201	UNIT 4	46 m²	No
202	UNIT 5	44 m²	No
203	UNIT 6	25 m²	Yes
204	UNIT 7	88 m²	No
EVEL 3	1		
301	UNIT 8	46 m²	No
302	UNIT 9	44 m²	No
303	UNIT 10	25 m²	Yes
304	UNIT 11	88 m²	No
EVEL 4			
401	UNIT 12	46 m²	No
402	UNIT 13	44 m²	No
403	UNIT 14	25 m²	Yes
404	UNIT 15	88 m²	No
EVEL 5			
501	UNIT 16	46 m²	No
502	UNIT 17	44 m²	No
503	UNIT 18	26 m²	Yes
504	UNIT 19	36 m²	Yes
505	UNIT 20	39 m²	Yes
.EVEL 6			
601	UNIT 21	117 m²	No
		1053 m²	

		A (()
Unit Type	Area	Afforda
ontrype	/ eu	Housi
LEVEL 1		
1 Bedroom	44 m ² 46 m ²	No
LEVEL 2	_	1
1 Bedroom	44 m ² 46 m ²	No
3 Bedroom	88 m²	No
Studio	25 m²	Yes
LEVEL 3	_	1
1 Bedroom	44 m ² 46 m ²	No
3 Bedroom	88 m²	No
Studio	25 m²	Yes
LEVEL 4		
1 Bedroom	44 m ² 46 m ²	No
3 Bedroom	88 m²	No
Studio	25 m²	Yes
LEVEL 5		
1 Bedroom	44 m² 46 m²	No
1 Bedroom	26 m² 39 m²	Yes
LEVEL 6		
3 Bedroom	117 m²	No
Total Units		

		Christine Lintott Architects Inc.
DRAWIN		www.lintottarchitect.ca
Sheet Num		
A0.00	Cover Sheet	Issue Date
A0.01 A0.02	Site Plan and Project Data Site Survey	Submission for Rezoning and 2020-09-30 Development Permit
A0.03 A1.01 A1.02 A2.00 A2.01 A3.00 A3.01	Code Analysis and Spatial Separation Solar Shadow Study Context Renders Floor Plans Floor Plans Elevations Context Elevations	Re - Submission for Rezoning and 2021-01-11 Development Permit
A3.02 A4.00 C01 L01 L02	Exterior Materials Building Sections Civil Landscape Landscape	
		Revision
		No. Description Date
		Consultant
	1	
e - By Type	TOTAL UNIT COUNT: 21	
Affordable Housing 3	3 STUDIO UNITS 14 ONE BEDROOM - 3 ADAPTABLE - 2 GROUND LEVEL - 1 GROUND LEVEL ACCESSIBLE 4 THREE BEDROOM	
2]	
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1 21]	Cover Sheet
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1 Site Plan 1:100

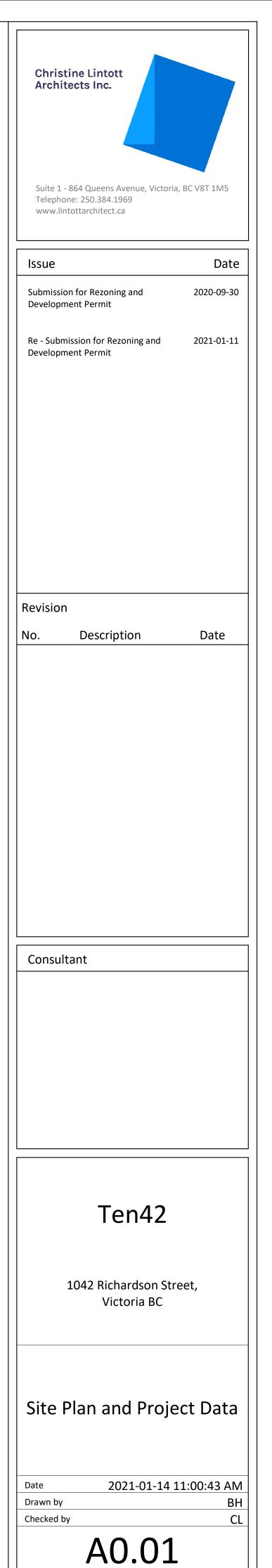
THIS DRAWING IS A COPYRIGHT DRAWING & SHALL NOT BE REPRODUCED OR REVISED WITHOUT WRITTEN PERMISSION FROM CHRISTINE LINTOTT ARCHITECT. THIS DRAWING SHALL CHECK & VERIFY ALL DIMENSIONS & REPORT ALL ERRORS & OMISSIONS TO CHRISTINE LINTOTT ARCHITECT. DO NOT SCALE THE DRAWINGS.

ect Informat		
	Zoning Min/Max	Proposed
xisting)	R-K	SITE SPECIFIC
а		668 m ²
oor Area		1317 m ²
ace Ratio	N/A	1:1.97
erage ² %	N/A	60.2 %
te Space %	N/A	28.7 %
of Buildings	N/A	19.47m
#	N/A	6 storeys
Parking #	$\begin{array}{ll} 0.2 \ / unit \ Affordable < 45m^2 \ x \ 6 = 1.2 \\ .75 \ / \ unit \ < 45m^2 \ x \ 6 = 4.5 \\ .9 \ / \ unit \ > 45m^2, \ < 70m^2 \ x \ 5 = 4.5 \\ 1.3 \ / \ unit \ > 70m^2 \ x \ 4 & = 5.2 \\ 0.1 \ / \ unit \ visitor \ x \ 21 & = 2.1 \\ \hline Total & = 17.5 \ (18) \end{array}$	7 resident 2 visitor 1 on-street electric car-share
Parking #	Long Term Per Schedule C 1/unit < 45m ² x 12 = 12 1.25/unit > 45m ² x 9 = 11.25 Total = 23.25 (24) Short Term Per Schedule C Total = 6 (MIN)	Long Term Per Schedule C P1 = 15 Lvl 2 = 12 Sub-Total = 27 Lvl 3-5 Additional = 34 Total = 27+34 = 61
		Short Term Per Schedule C Total = 6
ng Setbacks		
ard (South)	N/A	2.4m
rd (North)	N/A	5.0m
d (West)	N/A	3.0m
d (East)	N/A	1.0m
ential Use Detai	ls	
umber of Units		21
oe Breakdown		4 Studio Units, 13 One Bedroom Units 4 Three Bedroom Units
Oriented Units		3
m Unit Floor Area		25 m ²
sidential Floor Area		1053 m ²

2. Site Coverage calculated as horizontal area within the vertical projection of the exterior face of outermost walls of the

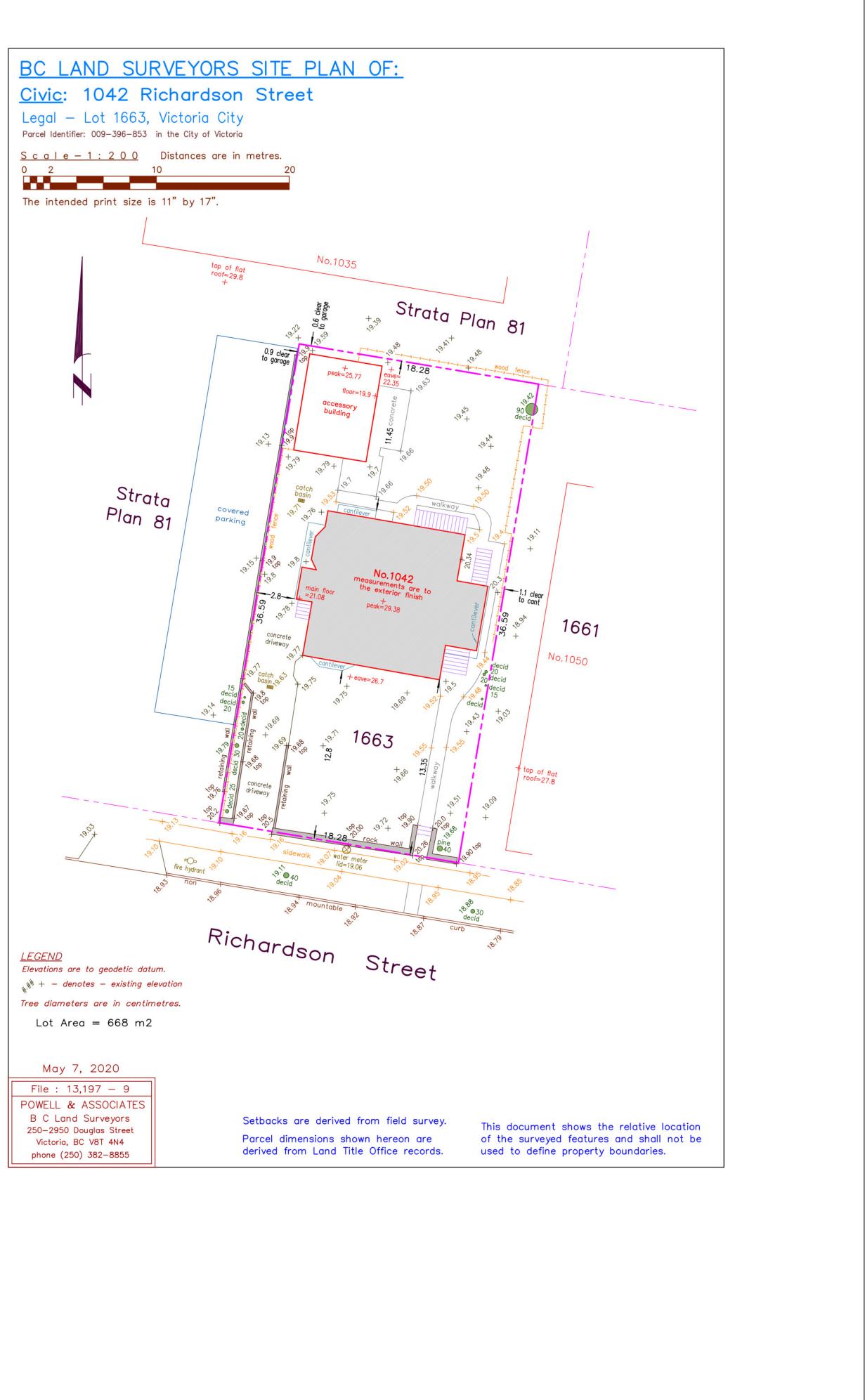
POINTS A&B:	((18.92+16.40 / 2) x 19.112	= 337.518
POINTS B&C:	((16.4.+16.4) / 2) X 1.68	= 27.552
POINTS D&E:	((19.20+19.20)/ 2) X 8.881	= 170.515
POINTS E&F:	((19.20+19.20) / 2) X 12.477	= 239.558
POINTS F&G:	((19.20+19.20) / 2) X 8.605	= 165.216
POINTS G&H:	((19.20+19.20) / 2) X 1.90	= 36.48
POINTS H&I:	((19.20+19.20) / 2) X 3.112	= 59.75
POINTS I&J:	((19.20+19.20) / 2) X 1.90	= 36.48
POINTS J&K:	((19.20+19.20) / 2) X 16.282	= 312.614
POINTS K&A:	((19.20+18.92) / 2) X 10.70	= 203.942
		= 1589.625

GRADE CALCULATION 1589.625 /84.64m = 18.78m



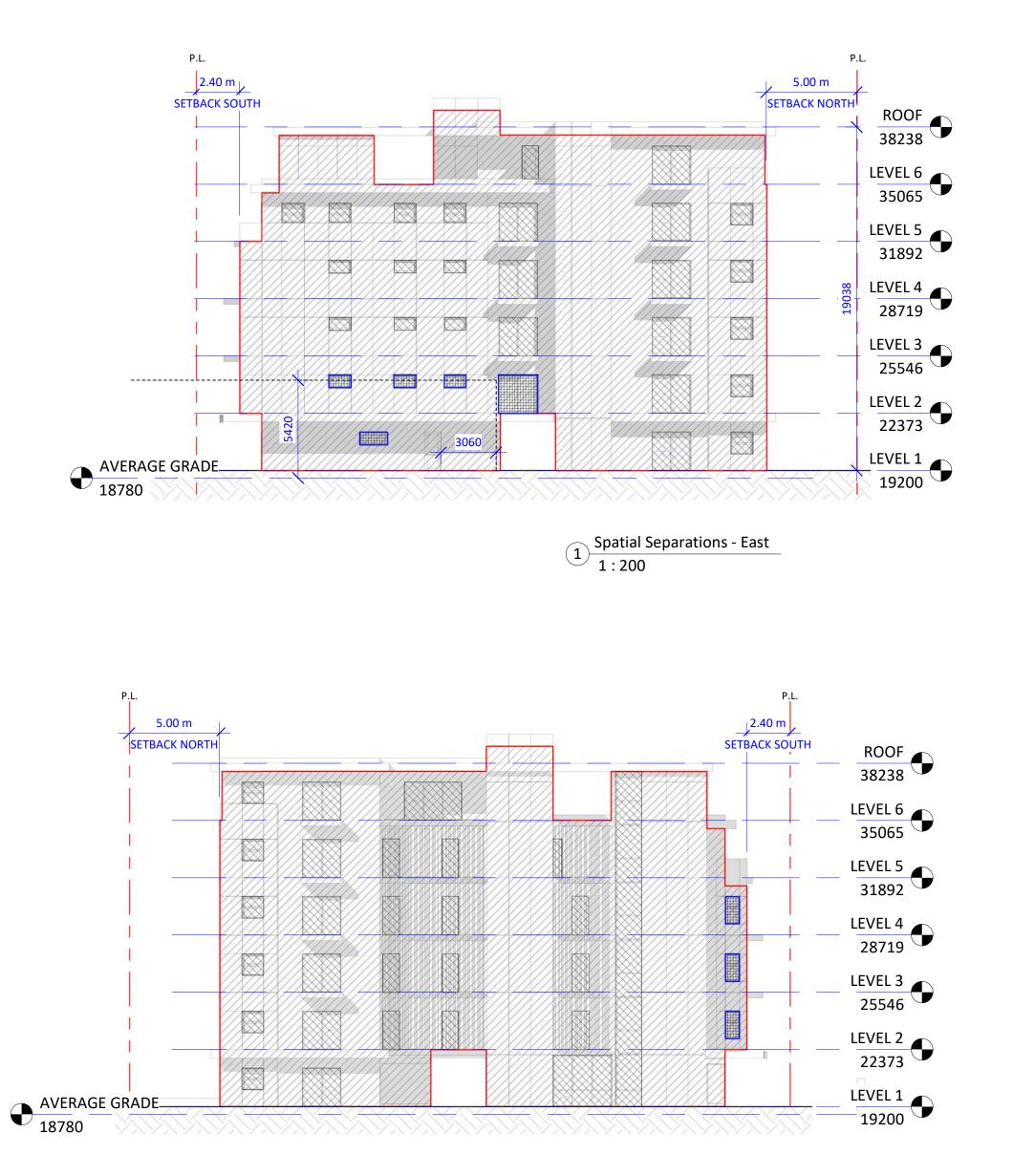
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Christine Lintott Architects Inc.	
Suite 1 - 864 Queens Avenue, Victoria, BC V8T 1M5 Telephone: 250.384.1969 www.lintottarchitect.ca	
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Submission for Rezoning and 2020-09-30 Development Permit))
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Revision	
No. Description Date	
Ten42	
1042 Richardson Street, Victoria BC	
Site Survey	
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GEN	IERAL INFORMATION		
NO.	ITEM	DESCRIPTION	REFERENCE
1	PROJECT TYPE	NEW CONSTRUCTION RENO. ADDITION TENANT IMPROVEMENT	-
2	GOVERNING BUILDING CODE	BRITISH COLUMBIA BUILDING CODE, 2018, INCLUDING ALL AMENDMENTS	-
3	BUILDING CODE PARTS APPLICABLE	PART: 1 2 3 4 5 6 7 8 9 10	DIV A - 1.1.2
4	MAJOR OCCUPANCY(IES)	A1 A2 A3 A4 B1 B2 C D E F1 F2 F3	3.1.2.
5	MULTIPLE MAJOR OCCUPANCIES	YES NO	3.1.3.
6	HEAVY TIMBER CONSTRUCTION ALTERNATE	PERMITTED PROPOSED N/A	3.1.4.6.
7	FIREWALL(S)	YES NO	3.1.10.
8	OCCUPANT LOAD	58 TOTAL	3.1.17.
		ROOM OCCUPANCY COUNT OCCUPANTS	
		STUDIO 2 3 6	
		1 BEDROOM 2 14 28	
		3 BEDROOM 6 4 24	
		<u>TOTAL</u> 58	
9	BUILDING AREA (m ²)	340 BUILDING AREA	1.4.1.2.
10	GRADE ELEVATION (m, GEODETIC)	+19.20 GRADE	1.4.1.2.
11	BUILDING HEIGHT (STOREYS)	6 ABOVE GRADE 0 BELOW GRADE 6 TOTAL	3.2.1.1.
12	FIRE ALARM & DETECTION SYSTEM	REQUIRED PROVIDED N/A	3.2.4.1.
13	AUTOMATIC SPRINKLER SYSTEM	REQUIRED PROVIDED N/A	3.2.5.12.
14	MEZZANINE(S)	YES NO	3.2.8.
15	INTERCONNECTED FLOOR SPACE	YES NO	3.2.8.2.
16	NUMBER OF STREETS FACING	1 STREET FACING	1.4.1.2.
17	FIRE DEPARTMENT ACCESS ROUTES	REQUIRED PROVIDED N/A	3.2.5.4.
18	HIGH BUILDING	YES NO	3.2.6.
19	ROOF ACCESS	REQUIRED PROVIDED N/A	3.2.5.3.
20	STANDPIPE SYSTEM	REQUIRED PROVIDED N/A	3.2.5.8.
21	LIGHTING AND EMERGENCY POWER	REQUIRED PROVIDED N/A SEE ELEC. DRAWINGS	3.2.7.
22	EMERGENCY GENERATOR	YES NO	3.2.7.
23	ACCESS FOR PERSONS W/ DISABILITIES	REQUIRED PROVIDED N/A	3.8.2.
24	ALTERNATE SOLUTIONS REQUIRED	YES NO SPRINKLER PROTECTION EXIT EGRESS PATH EXPOSED TO OPENINGS	DIV A - 1.2.1.1.(1)(& DIV C - 2.
CON	ISTRUCTION CLASSIFICATION	GROUP C, UP TO 6 STOREYS, SPRINKLERED	3.2.2.50.
25	CONSTRUCTION TYPE(S)	COMBUSTIBLE: PERMITTED PROPOSED N/A	
		<u>NON-COMBUSTIBLE:</u> PERMITTED PROPOSED N/A	
26	ASSEMBLY FIRE-RESISTANCE RATINGS	MIN. F.R.R. (HOURS): ¹ LOADBEARING	
		1 FLOOR ¹ - MEZZANINE ¹ 1 ROOF ELEMENTS TO HAVE SAME F.R.R. AS SUPPORTED ASSEMBLY	
27	BUILDING HEIGHT (STOREYS)	6 MAXIMUM 6 PROPOSED	
	BUILDING AREA (m ²)	1500 m2 MAXIMUM 340m2 PROPOSED	



Building Code Analysis - Spatial Separations

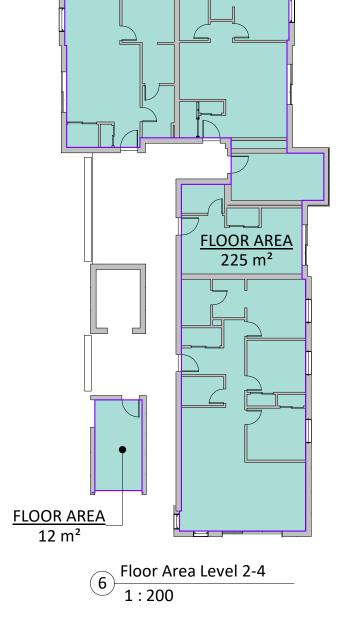
<u>NO.</u>	<u>ITEM</u>	DESCRIPTION	<u>REFERENCE</u>
6-1	SPATIAL SEPARATION AND EXPOSURE PROTECTION	<u>WALL AREA</u> <u>LIMITING</u> <u>MAXIMUM</u> <u>PROPOSED</u> DISTANCE $OPENINGS$ $OPENINGS$ NORTH: 269.2 m ² 5 m 40 % 12.26 % EAST: 514.8 m ² ≥ 1.04 m 12.37 % 11.7 % SOUTH: 271.2 m ² 11 m 100 % 32.4 % WEST: 514.5 m ² 2.5 m 20 % 19.79 %	3.2.3.1.
6-2	CONSTRUCTION OF EXPOSING BUILDING FACE	F.R.R. (HOURS) NON-COMBUSTIBLE WALL NON-COMBUSTIBLE CLADDING NORTH: 3/4 REQUIRED REQUIRED PROVIDED PROVIDED ¹ N/A N/A N/A N/A EAST: 1 REQUIRED REQUIRED PROVIDED PROVIDED PROVIDED N/A N/A N/A SOUTH: - REQUIRED REQUIRED PROVIDED PROVIDED PROVIDED PROVIDED PROVIDED PROVIDED PROVIDED N/A SOUTH: - REQUIRED REQUIRED WEST 1 REQUIRED PROVIDED PROVIDED PROVIDED PROVIDED PROVIDED ¹ N/A WEST 1 REQUIRED REQUIRED PROVIDED PROVIDED PROVIDED PROVIDED N/A N/A N/A N/A WEST 1 REQUIRED PROVIDED PROVIDED N/A N/A N/A N/A N/A	3.2.3.7.
6-3	PROTECTION OF EXIT FACILITIES (ALTERNATE SOLUTION)	CONSTRUCTION CLASSIFICATION ARTICLE 3.2.2.50.AT EAST, EXTERIOR EXIT PATH FROM STAIR TO STREET EXPOSED TO OPENINGS WITHIN 3m HORIZONTALLY AND 5m VERTICALLY. AT WEST, OPENINGS AT 90- DEGREE ANGLE TO EXIT STAIR ARE WITHIN 3m. IN LIEU OF CLOSURES (SHUTTERS) OR WIRED GLASS, ALTERNATE SOLUTION SHALL CONSIST OF A SPRINKLER HEAD AT INTERIOR SIDE OF EACH OPENING, COMPLETE WITH BAFFLES ETC WHERE REQUIRED BY NFPA-13, FOR EQUIVALENT PROTECTION BY WATER CURTAIN.3.2.3	

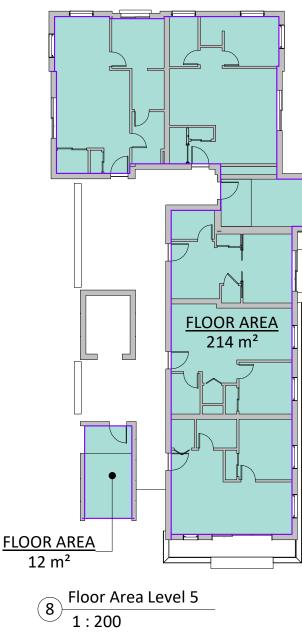


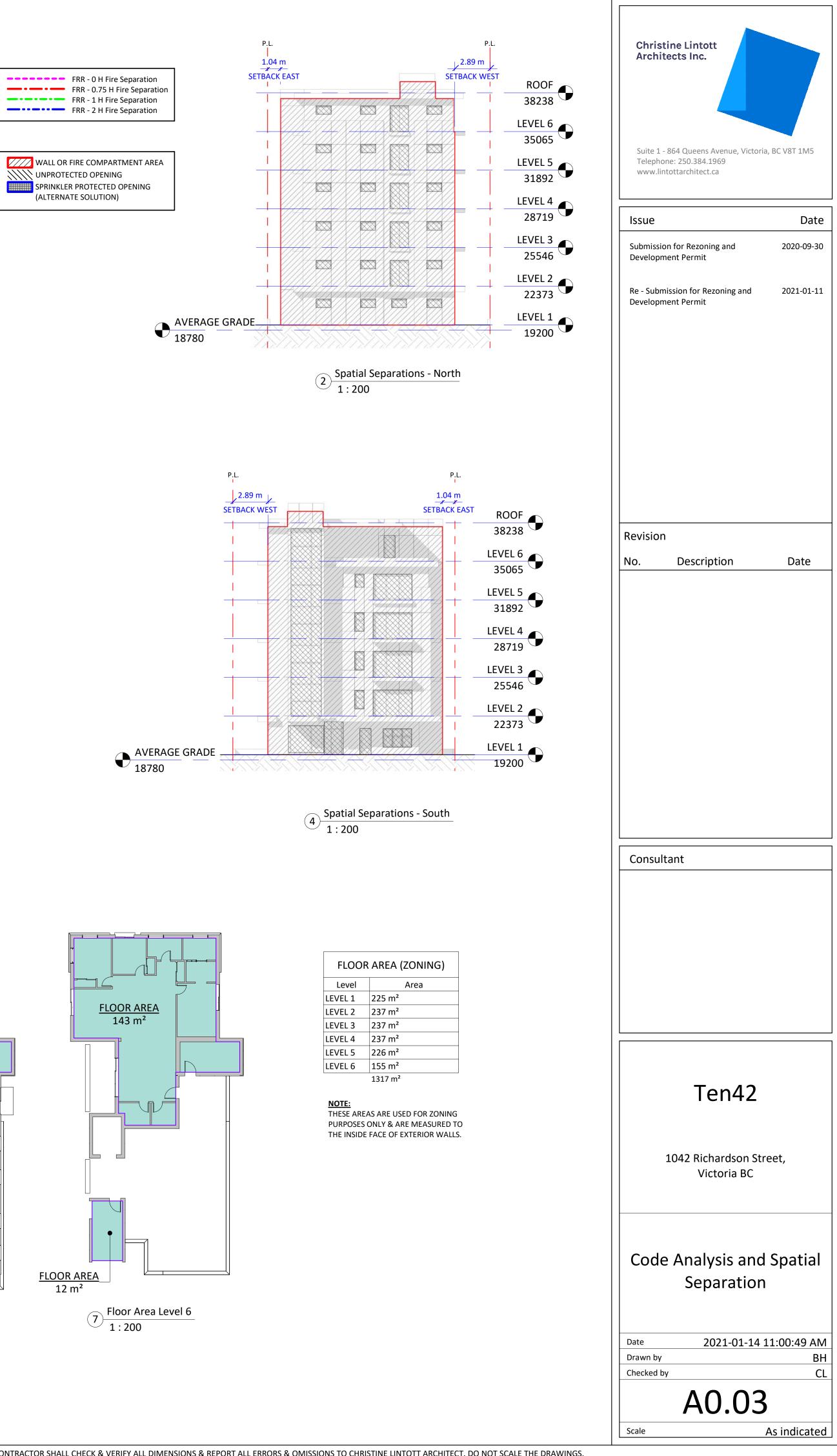


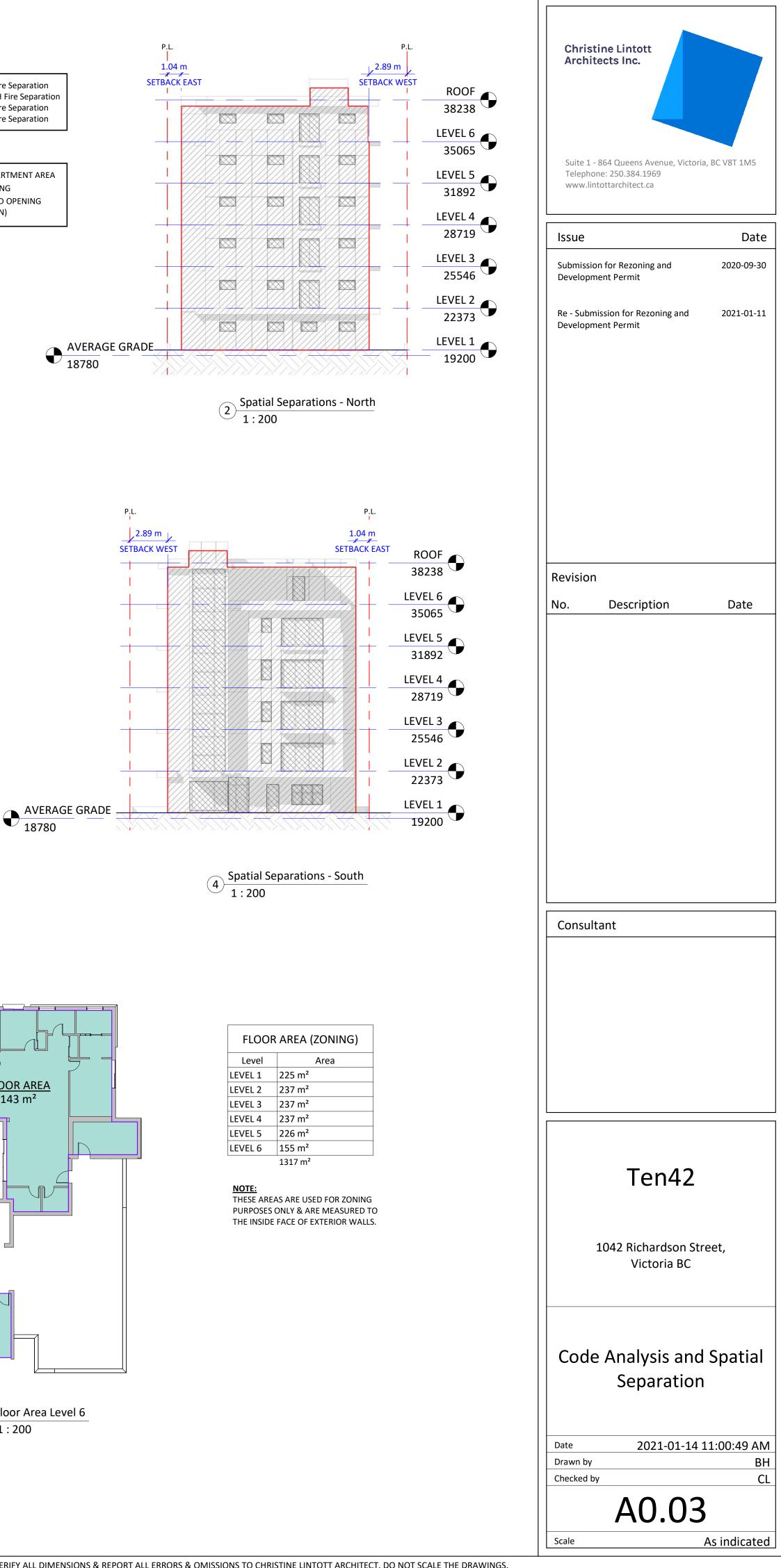


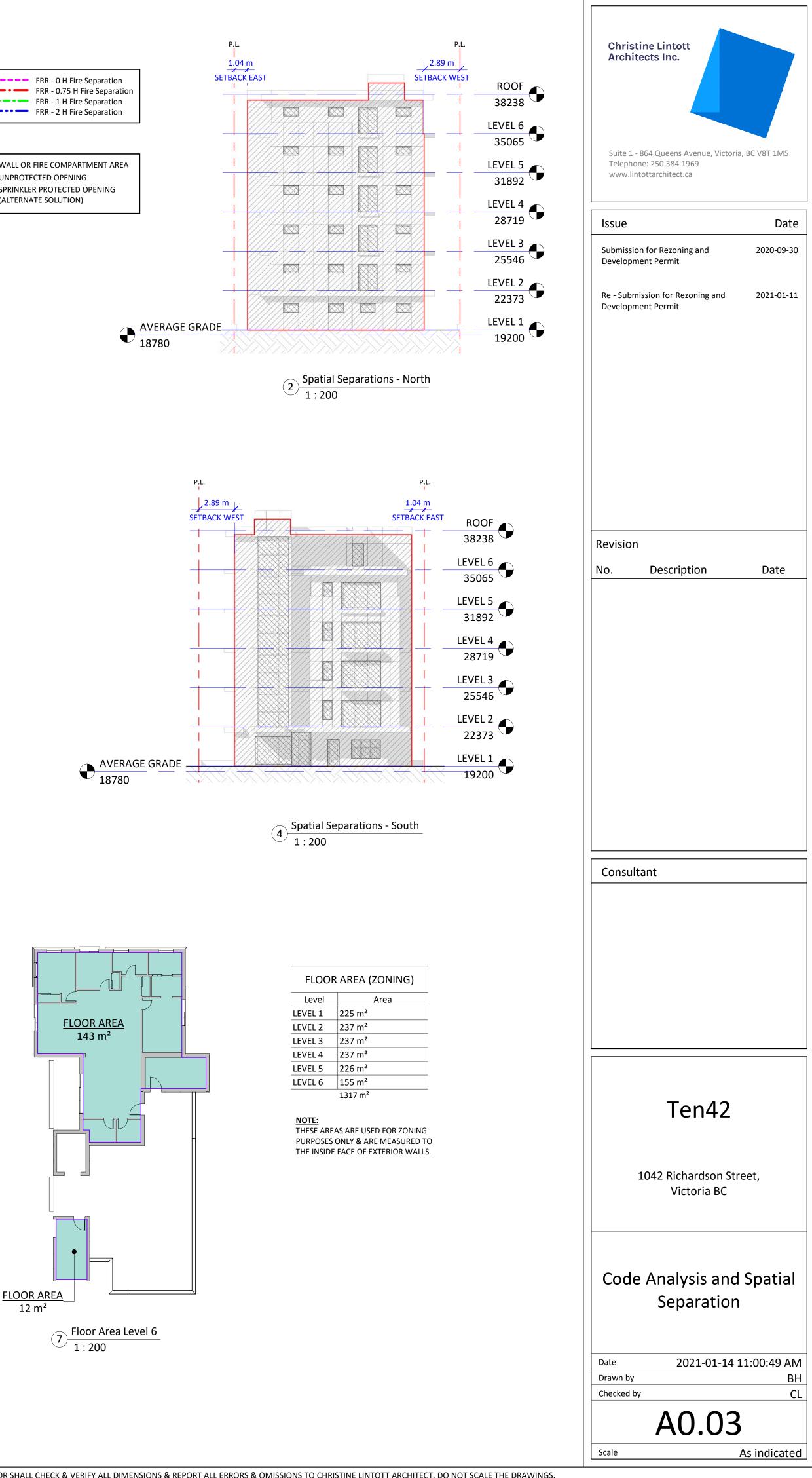


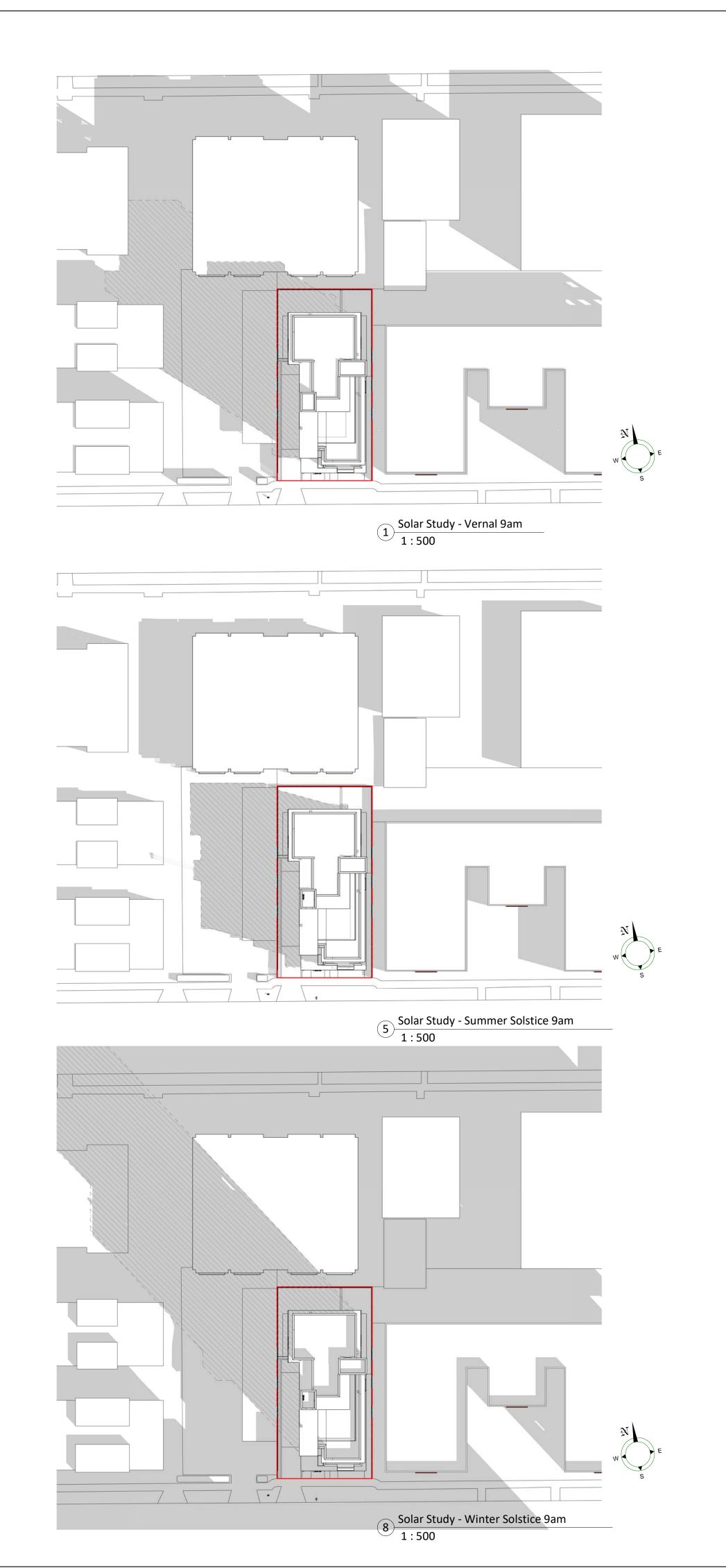


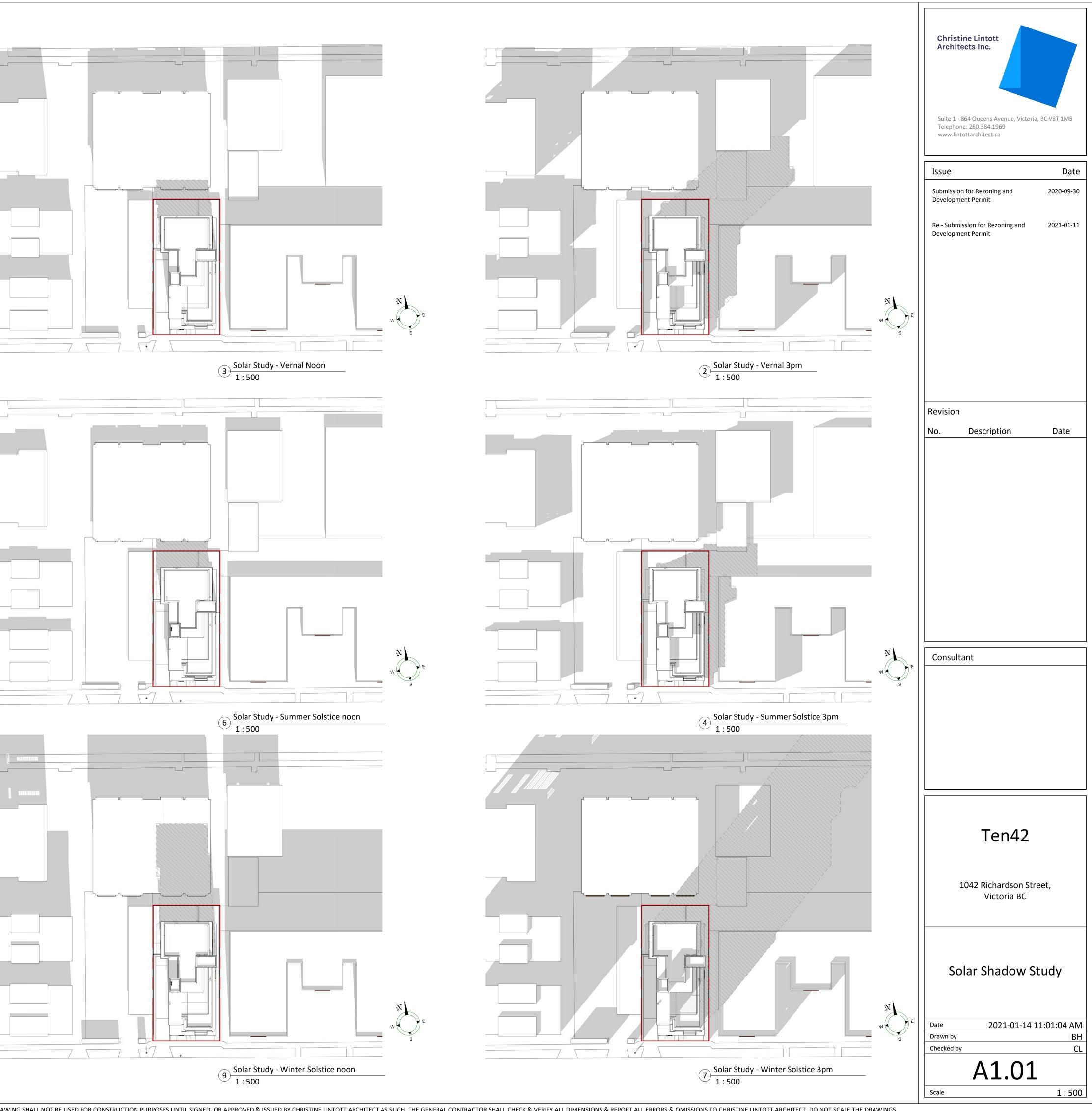












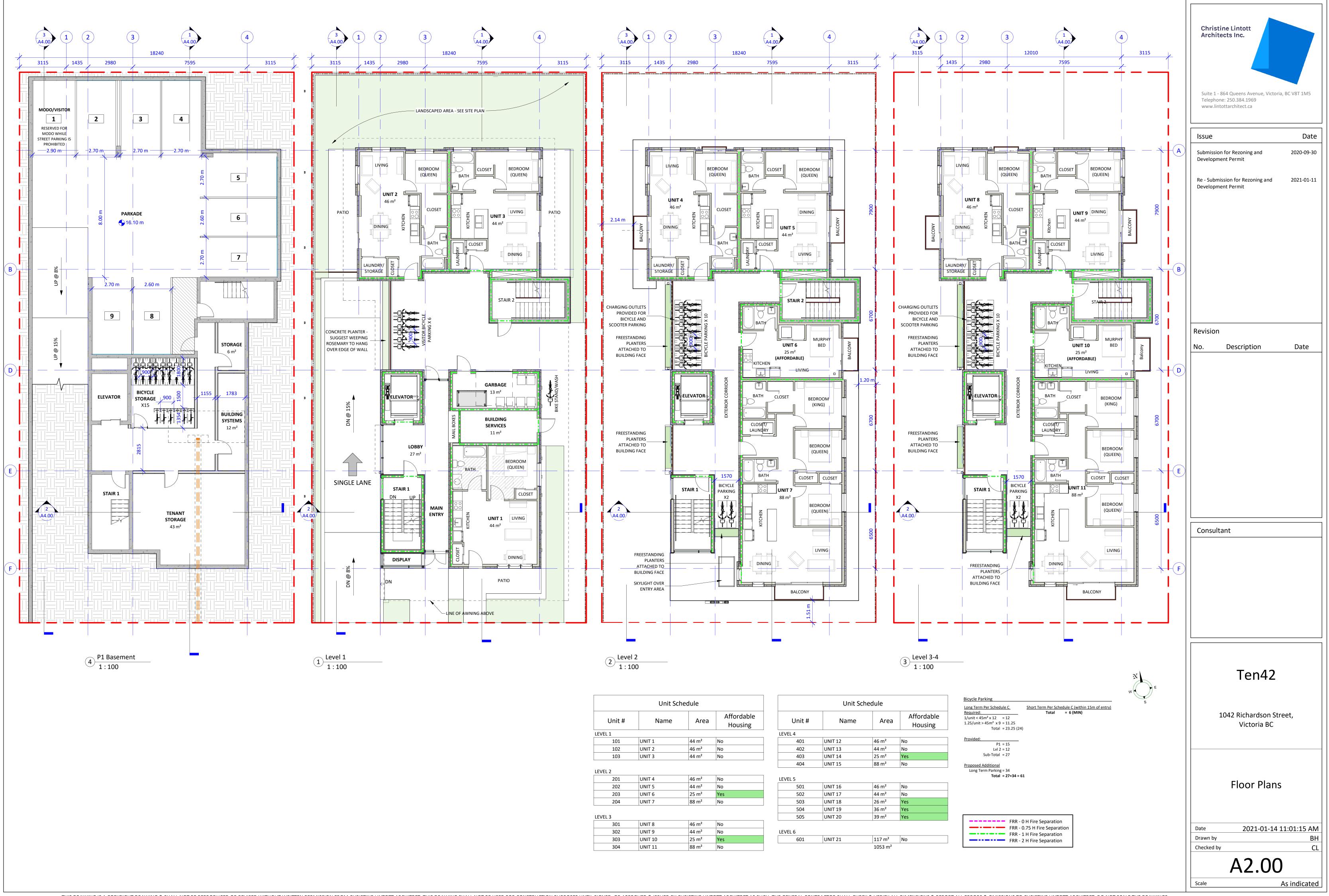






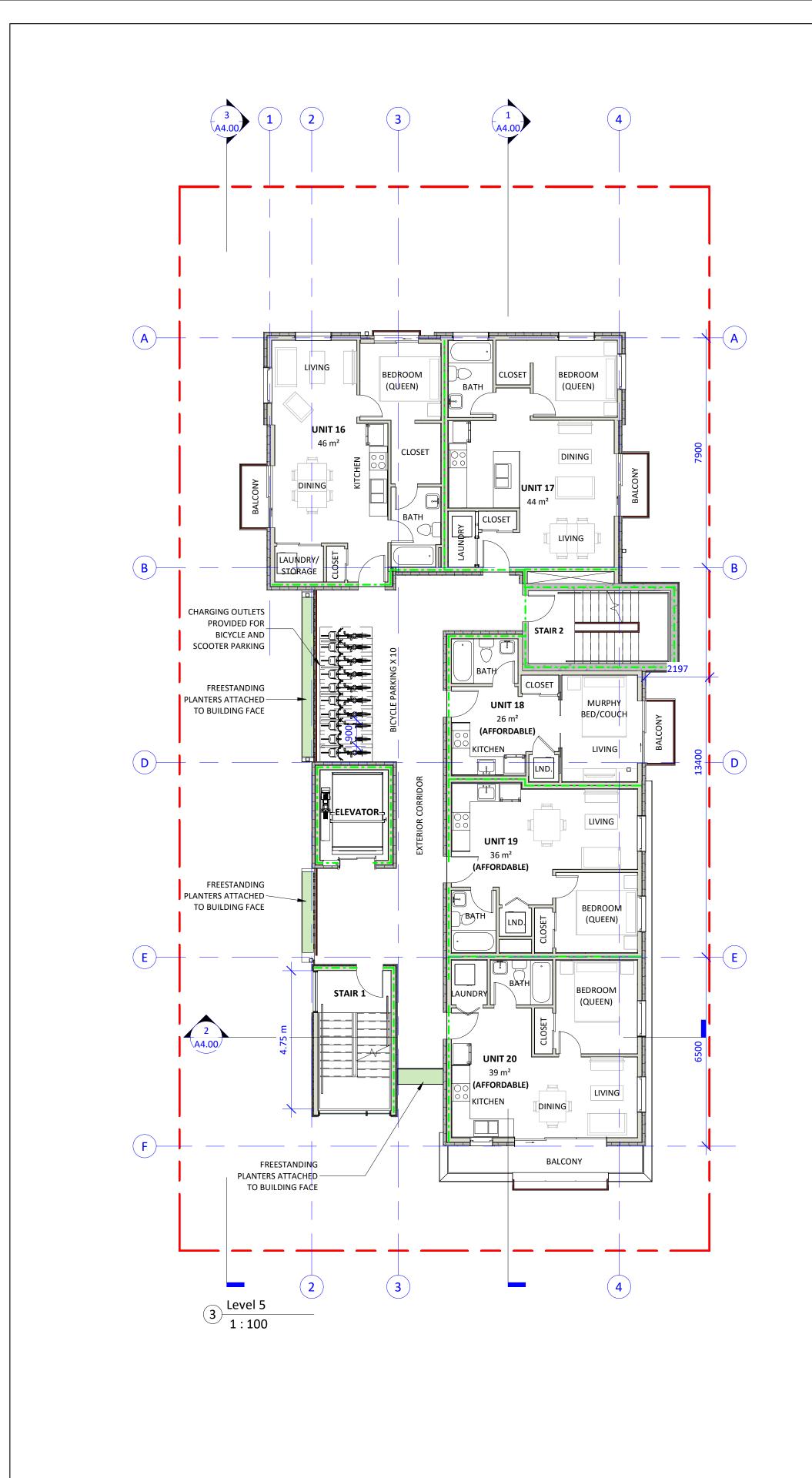
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$\widehat{}$	Level Z
	1:100
2	1:100

Unit Schedule				
Unit #	Name	Area	Affordable Housing	Unit #
LEVEL 1				LEVEL 4
101	UNIT 1	44 m²	No	401
102	UNIT 2	46 m²	No	402
103	UNIT 3	44 m²	No	403
				404
LEVEL 2				
201	UNIT 4	46 m²	No	LEVEL 5
202	UNIT 5	44 m²	No	501
203	UNIT 6	25 m²	Yes	502
204	UNIT 7	88 m²	No	503
				504
LEVEL 3				505
301	UNIT 8	46 m²	No	
302	UNIT 9	44 m²	No	LEVEL 6
303	UNIT 10	25 m²	Yes	601
304	UNIT 11	88 m²	No	





Date

Date

BH

	Unit Sch	nedule	
Unit #	Name	Area	Affordable Housing
LEVEL 1		·	
101	UNIT 1	44 m²	No
102	UNIT 2	46 m²	No
103	UNIT 3	44 m²	No
201 202	UNIT 4 UNIT 5	46 m ² 44 m ²	No No
203	UNIT 6	25 m ²	Yes
204	UNIT 7	88 m²	No
LEVEL 3			
301	UNIT 8	46 m²	No
302	UNIT 9	44 m²	No
303	UNIT 10	25 m²	Yes
304	UNIT 11	88 m²	No

	Unit Schedule			
Unit #	Name	Area	Affo Ho	
LEVEL 4				
401	UNIT 12	46 m²	No	
402	UNIT 13	44 m²	No	
403	UNIT 14	25 m²	Yes	
404	UNIT 15	88 m²	No	
LEVEL 5				
501	UNIT 16	46 m²	No	
502	UNIT 17	44 m²	No	
503	UNIT 18	26 m²	Yes	
504	UNIT 19	36 m²	Yes	
505	UNIT 20	39 m²	Yes	
LEVEL 6				
601	UNIT 21	117 m²	No	
		10-0 2		

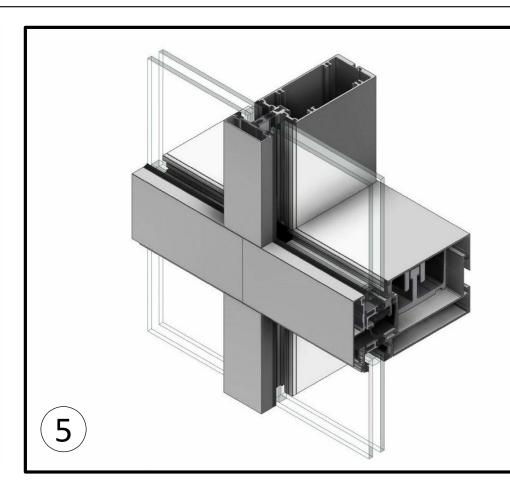






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	No. Description Date
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	Consultant
	Ten42
	1042 Richardson Street, Victoria BC
	Context Elevations
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1	FIBRE-CEMENT PANELS - DARK GREY
2	FIBRE-CEMENT PANELS - OFF WHITE
3	METAL RAILING AND DETAILS - RUST RED
4	VINYL WINDOWS - RUST RED
5	GLAZING WALL - ALUMINUM, CLEAR ANO

GLAZING WALL - ALUMINUM, CLEAR ANODIZED

PREFINISHED METAL FLASHING - CHARCOAL

(6)

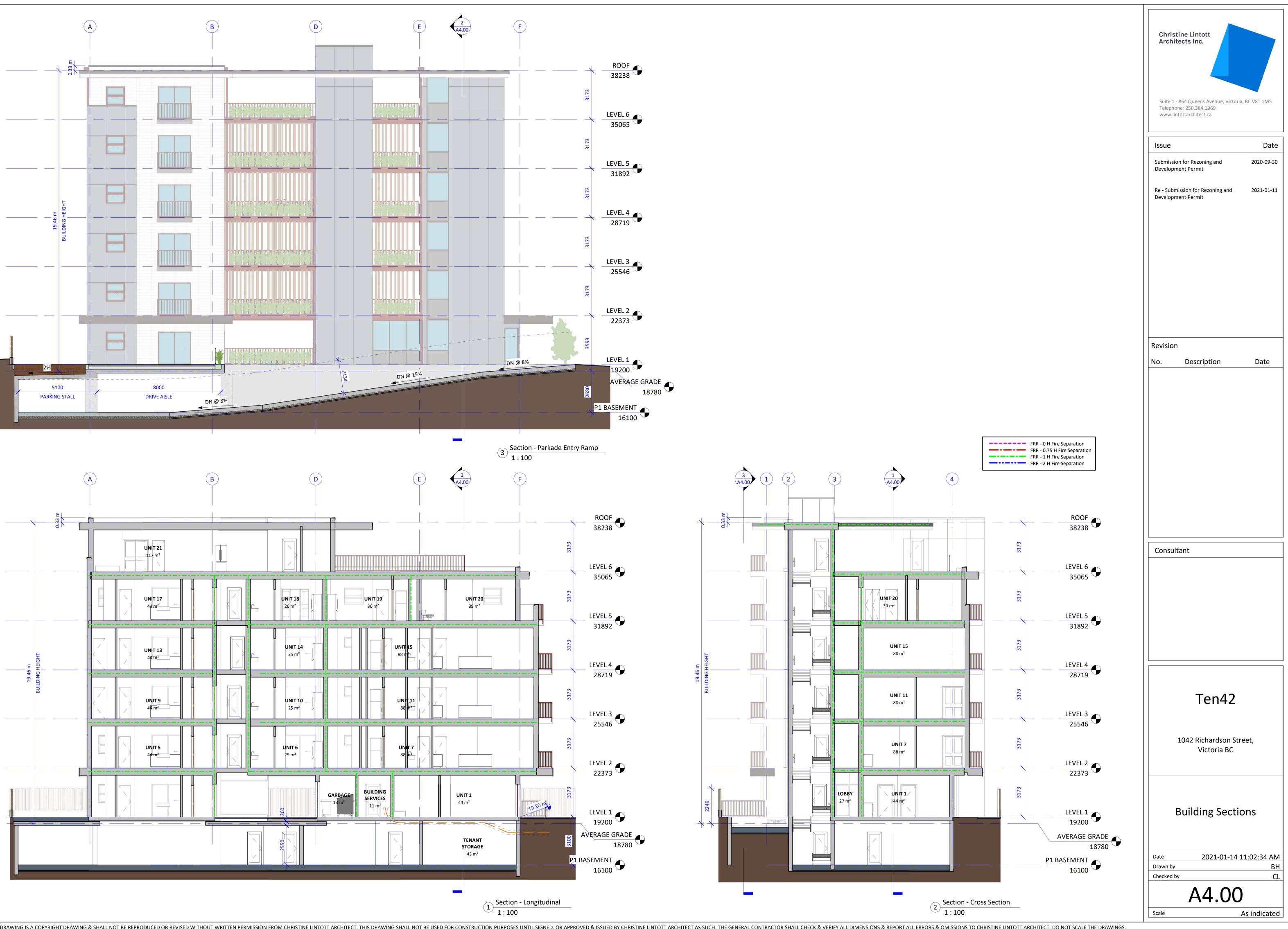


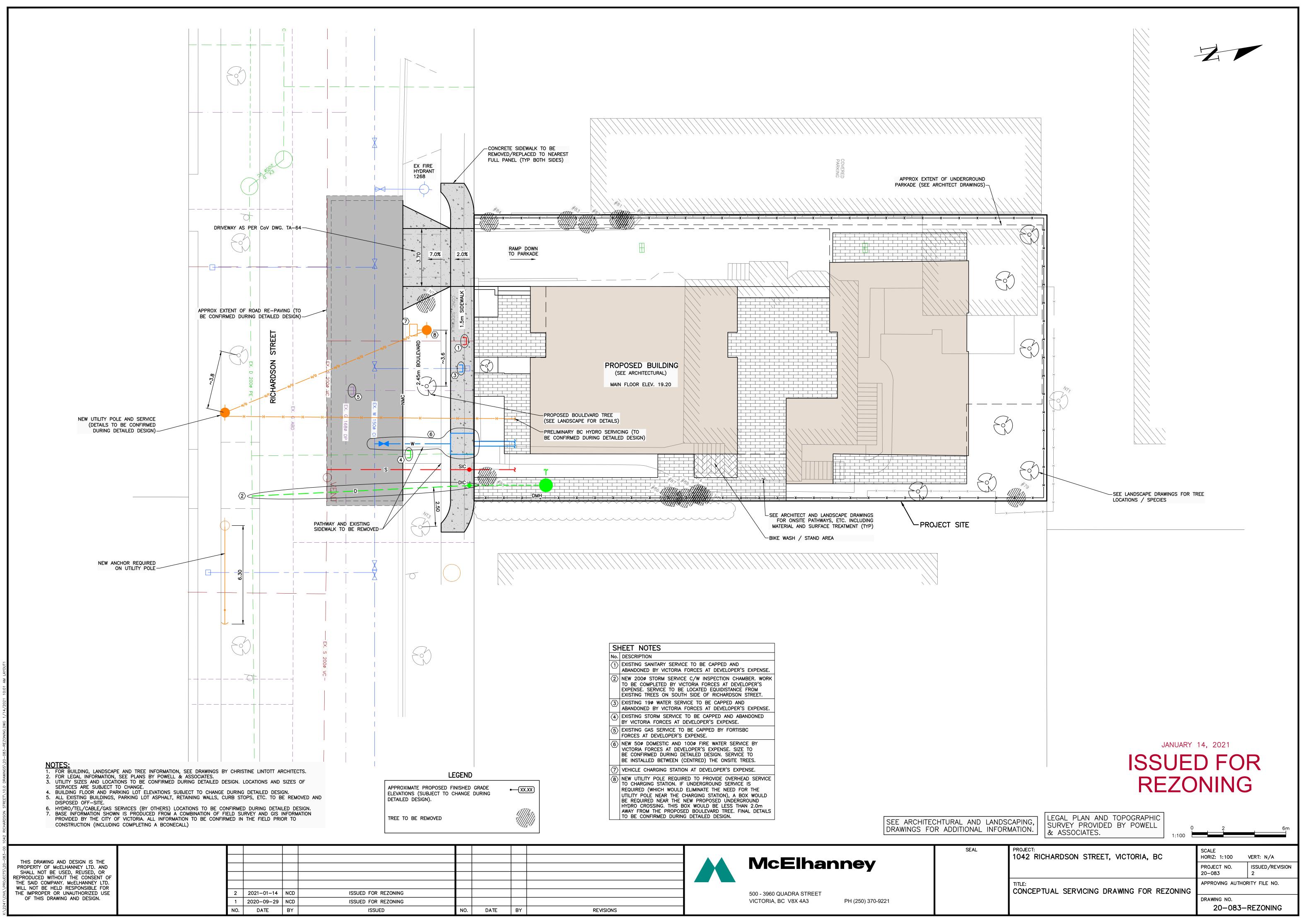
Christine Lintott Architects Inc. Suite 1 - 864 Queens Avenue, Victoria, BC V8T 1M5 Telephone: 250.384.1969 www.lintottarchitect.ca Date lssue Submission for Rezoning and 2020-09-30 Development Permit 2021-01-11 Re - Submission for Rezoning and Development Permit Revision Description Date No. Consultant Ten42 1042 Richardson Street, Victoria BC Exterior Materials 2021-01-14 11:02:27 AM Date Drawn by BH Checked by CL A3.02

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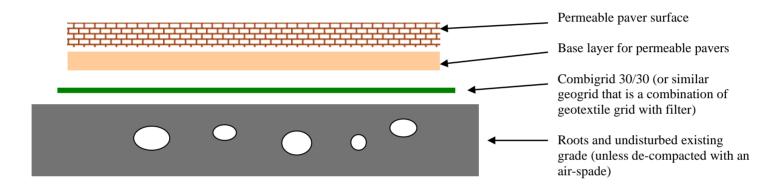




Talbot Mackenzie & Associates

Consulting Arborists

Diagram - Permeable paver surface crossing over Critical Root Zone



Specification #1 for Paved Surfaces Over Critical Root Zones (driveway, parking or walkway areas)

- 1. Minimal excavation to remove turf and loose soil for the required permeable surface, under the supervision of the project arborist. Root loss to be avoided.
- 2. A layer of Combigrid 30/30 geotextile is to be installed over the existing grade.
- 3. Construct base layer of well-draining material and permeable surface over geogrid layer to required grade.



Box 48153 RPO - Uptown Victoria, BC V8Z 7H6 Ph: (250) 479-8733 Fax: (250) 479-7050 Email: tmtreehelp@gmail.com

Tree Resource Spreadsheet Methodology and Definitions

<u>Tag</u>: Tree identification number on a metal tag attached to tree with nail or wire, generally at eye level. Trees on municipal or neighboring properties are not tagged.

NT: No tag due to inaccessibility or ownership by municipality or neighbour.

<u>DBH</u>: Diameter at breast height – diameter of trunk, measured in centimetres at 1.4m above ground level. For trees on a slope, it is taken at the average point between the high and low side of the slope.

- * Measured over ivy
- ~ Approximate due to inaccessibility or on neighbouring property

<u>**Crown Spread**</u>: Indicates the diameter of the crown spread measured in metres to the dripline of the longest limbs.

<u>Relative Tolerance Rating</u>: Relative tolerance of the tree species to construction related impacts such as root pruning, crown pruning, soil compaction, hydrology changes, grade changes, and other soil disturbance. This rating does not take into account individual tree characteristics, such as health and vigour. Three ratings are assigned based on our knowledge and experience with the tree species: Poor (P), Moderate (M) or Good (G).

<u>Critical Root Zone</u>: A calculated radial measurement in metres from the trunk of the tree. It is the optimal size of tree protection zone and is calculated by multiplying the DBH of the tree by 10, 12 or 15 depending on the tree's Relative Tolerance Rating. This methodology is based on the methodology used by Nelda Matheny and James R. Clark in their book "Trees and Development: A Technical Guide to Preservation of Trees During Land Development."

- 15 x DBH = Poor Tolerance of Construction
- $12 \times DBH = Moderate$
- $10 \times DBH = Good$

To calculate the critical root zone, the DBH of multiple stems is considered the sum of 100% of the diameter of the largest stem and 60% of the diameter of the next two largest stems. It should be noted that these measures are solely mathematical calculations that do not consider factors such as restricted root growth, limited soil volumes, age, crown spread, health, or structure (such as a lean).

Health Condition:

- Poor significant signs of visible stress and/or decline that threaten the long-term survival of the specimen
- Fair signs of stress
- Good no visible signs of significant stress and/or only minor aesthetic issues

Structural Condition:

- Poor Structural defects that have been in place for a long period of time to the point that mitigation measures are limited
- Fair Structural concerns that are possible to mitigate through pruning
- Good No visible or only minor structural flaws that require no to very little pruning

Retention Status:

- X Not possible to retain given proposed construction plans
- Retain It is possible to retain this tree in the long-term given the proposed plans and information available. This is assuming our **recommended mitigation measures are followed**
- Retain * See report for more information regarding potential impacts
- TBD (To Be Determined) The impacts on the tree could be significant. However, in the absence of exploratory excavations and in an effort to retain as many trees as possible, we recommend that the final determination be made by the supervising project arborist at the time of excavation. The tree might be possible to retain depending on the location of roots and the resulting impacts, but concerned parties should be aware that the tree may require removal.
- NS Not suitable to retain due to health or structural concerns