



**To:** Development Permit Panel

**Date:** April 20, 2023

**From:** Wayne Craig  
Director, Development

**File:** DP 22-019430

**Re:** Application by Talvinder Jagde for a Development Permit at  
10151 Ainsworth Crescent

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### Staff Recommendation

That a Development Permit be issued which would:

1. Permit the construction of a coach house at 10151 Ainsworth Crescent on a site zoned "Single Detached with Granny Flat or Coach House Edgemere (REI)";
2. Vary the provisions of Richmond Zoning Bylaw 8500 to:
  - a) increase the maximum setback that a coach house is permitted to be located from the south property line from 2.0 m to 5.95 m: and,
  - b) decrease the minimum setback that a coach house is permitted to be located from the north property line from 2.0 m to 0.90 m.

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

WC:le  
Att. 5

## Staff Report

### Origin

Talvinder Jagde, authorized agent for the property owners (Jim Kirk, Prabherjot Saini, and Robyn Kirk), has applied to the City of Richmond for permission to develop a 58.3 m<sup>2</sup> (627.5 ft<sup>2</sup>) coach house at 10151 Ainsworth Crescent on a site zoned "Single Detached with Granny Flat or Coach House – Edgemere (RE1)". A copy of a location map is attached (Attachment 1). The site currently contains one single detached house, which is proposed to be demolished (Attachment 2).

### Development Information

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

### Background

Development surrounding the subject site is as follows:

- To the north: A single detached house on a lot zoned "Single Detached with Granny Flat or Coach House - Edgemere (REI)".
- To the south: A single detached house on a lot zoned "Single Detached with Granny Flat or Coach House - Edgemere (REI)".
- To the east: Across Ainsworth Crescent, a single detached house on a lot zoned "Single Detached with Granny Flat or Coach House - Edgemere (RE1)".
- To the west: Across the rear lane, a single detached house on a lot zoned "Single Detached with Granny Flat or Coach House - Edgemere (RE1)".

### Staff Comments

The proposed scheme attached to this report has satisfactorily addressed the significant urban design issues and other staff comments identified as part of the review of the subject Development Permit application. In addition, it complies with the intent of the design guidelines for coach houses in the Edgemere neighbourhood contained in the City's Official Community Plan (OCP), and complies with the "Single Detached with Granny Flat or Coach House Edgemere (RE1)" zone except the below noted variances.

### Zoning Compliance/Variations

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

1. Increase the maximum setback that a coach house is permitted to be located from the south property line from 2.0 m to 5.95 m.
2. Decrease the minimum setback that a coach house is permitted to be located from the north property line from 2.0 m to 0.90 m.

The applicant has requested the above variances in order to locate the coach house safely outside of the tree protection zone of a significant tree (Tree ID# os3 - Douglas Fir, DBH 110 cm) located on the neighbouring property to the south (see Tree Retention and Replacement Plan, Attachment 4). In order to ensure that the entirety of the proposed coach house and garage are located outside of the Tree Protection Zone, while also maintaining consistency with Coach House design guidelines, the applicant proposes to shift the coach house and garage to the north side of the property.

***Staff supports the proposed variances as they provide for the retention of a significant tree (a 15 m tall Douglas fir with a diameter of 110 cm) which is in good condition. The City Arborist has reviewed the submitted Arborist Report and supports the efforts taken to shift the proposed coach house and garage as far to the north as possible, such that the development is located entirely outside of the Tree Protection Zone.***

***The proposed variances do not interfere with the overall design of the coach house which is generally consistent with the Development Permit guidelines. The applicant has also provided a shadow analysis (Attachment 5) that demonstrate that the variances to the setback requirements in the zone will not result in undue shadowing of the adjacent property to the north.***

## **Analysis**

### ***Conditions of Adjacency***

- The proposed coach house design relates to the proposed single detached housing form, character and scale of the surrounding neighbourhood.
- The proposed location of the coach house, which is set back between 1.5 m and 3.0 m from the rear lane, provides an adequate buffer to the adjacent lot to the west.
- The majority of the floor space in the coach house building is proposed on the ground floor (60 per cent, i.e., entry, powder room, living, kitchen/dining), and the portion of the floor space located in the upper half-storey of the coach house is located in the middle of the overall building.
- There are no windows proposed on the north or south side elevations to address concerns of overlook into the neighbouring properties. There are windows proposed on the west and east elevations of the coach house to provide passive surveillance of the lane and maximize light penetration.

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

- Consistent with the OCP guidelines for coach houses in the Edgemere neighbourhood, the proposed primary pedestrian entry to the coach house is from the rear lane, and secondary pedestrian access to the coach house is proposed via a pathway from Ainsworth Crescent along the south side of the property.
- The west elevation of the coach house that faces the lane has been designed as the primary facade, with a main window off the living area at grade, wood posts with stone bases on either side of the covered front porch, as well as exterior wall and landscape lighting to enhance visibility and appearance of the lane as a public space.

- Consistent with zoning, private outdoor space for the exclusive benefit of the coach house is proposed in the form of a screened and landscaped yard off the south side of the coach house. Access to the private outdoor space is from the front door of the coach house.
- A single shared garbage and recycling enclosure is proposed for the site for use by the residents of the property. The enclosure, which is adequately sized to contain the required number of containers for the single detached house and coach house, is set back 1.5 m from the rear property line and is screened by wood fencing, gates, and a variety of soft landscaping.
- The proposed site plan provides on-site parking in compliance with the Zoning Bylaw, including: two parking spaces for the principal dwelling in the garage off the lane and one unenclosed and permeable parking space for the coach house with access from the lane.
- Prior to development permit issuance, the applicant shall provide a letter of undertaking or contract with a certified arborist for the supervision of all works to be completed within the Tree Protection zone of trees #os3 and os4, including landscaping and footing preparation and installation.

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

- The proposed exterior building materials and colours of the coach house are consistent with the building styles in the neighbourhood, and include horizontal white Hardie-plank siding with black trim and grey stone accents.
- The primary facade of the coach house facing the lane is proposed to be visually broken into smaller components through the inclusion of a covered front porch, and an upper covered deck.

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

- Tree retention and removal was assessed as part of this application. One significant 110 cm Douglas fir tree (Tree ID # os3) and a 23 cm magnolia tree (Tree ID# os4) which are in proximity to the proposed coach house and located on the neighbouring property to the south are required to be retained and protected. Tree protection fencing must be installed and inspected prior to issuance of a Demolition Permit for the existing single detached house or the Building Permit for the coach house. The proposed Tree Retention and Removal Plan is included in Attachment 4.
- There are no on-site trees in the area of the proposed coach house and garage. Future assessment of on-site tree retention and removal associated with any new single-family dwelling to be constructed on the property will be assessed and reviewed at the time of the building permit application for the single-family dwelling.
- The applicant proposes to plant three new trees on-site adjacent to the proposed coach house and garage.
- The area surrounding the coach house main entrance, adjacent to the rear lane, is proposed to be treated with a combination of shrubs and flowering plants to enhance the appearance of the lane.
- The private open space for the coach house is proposed at grade, in the rear yard to the south of the coach house, and is defined through the planting of shrubs.

The proposed open space is adequately sized and shaped to comply with the "Single Detached with Granny Flat or Coach House Edgemere (RE1)" zone.

- Prior to DP issuance, the applicant is required to submit a Landscaping Security for the proposed works, based on 100 per cent of the cost estimate provided by the Landscape Architect (including a 10 per cent contingency, soft and hard landscaping, fencing and installation).

#### ***Crime Prevention Through Environmental Design***

- Consistent with the design guidelines for coach houses in the OCP, the proposed coach house design enables natural surveillance by locating windows and living areas overlooking the lane.
- Similarly, the applicant proposes exterior lighting on the eaves facing the lane, as well as porch lighting at the coach house's main entry to maintain visibility and safety. The lighting will be designed to limit spillover onto adjacent lots.

#### ***Energy Efficiency***

- The applicant has indicated that they intend to achieve Step 3 of the BC Energy Step Code, and will provide a Low Carbon Energy System, consistent with the City's requirements.

#### **Conclusions**

The applicant is seeking permission to build a coach house in the rear yard of the subject property at 10151 Ainsworth Crescent in the Edgemere neighbourhood.

The proposal aims to respect the existing character of the immediate surrounding neighbourhood which consists of single detached housing, by conforming to the design guidelines for coach houses in the OCP. The proposed construction of the coach house complies with the requirements of the "Single Detached with Granny Flat or Coach House - Edgemere (RE1)" zone, with the exception of the two variances requested to allow for the retention of a significant tree.

On this basis, staff recommends support for this Development Permit application.



Laurel Eyton  
Planning Technician  
(604-276-4262)

LE:js

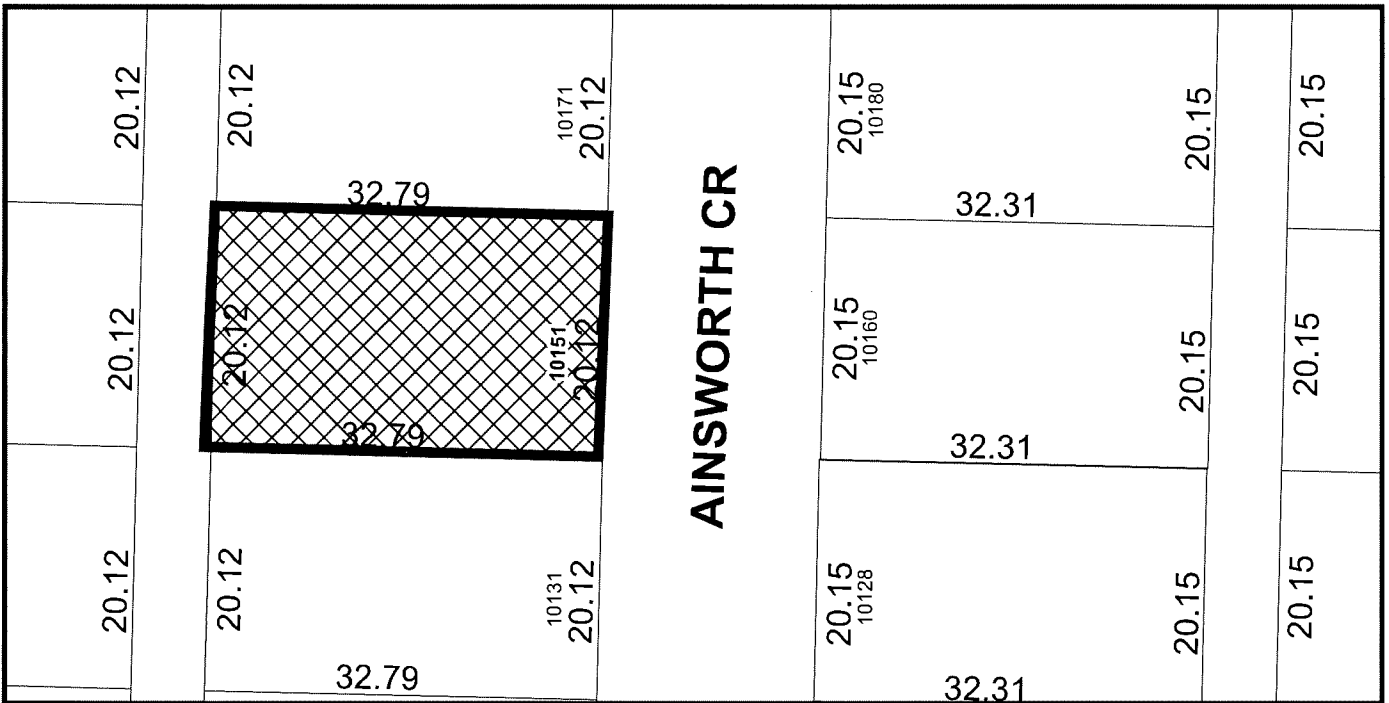
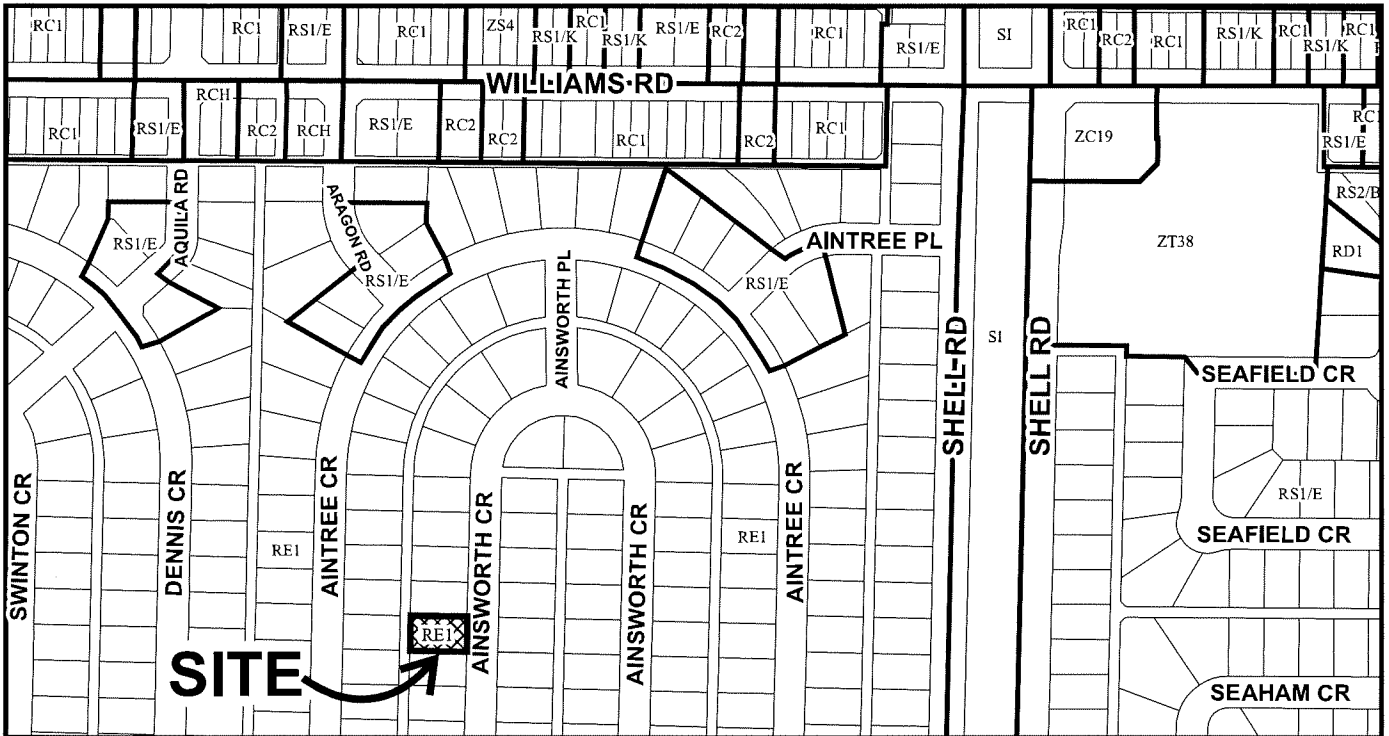
- Att. 1: Location Map  
2: Survey Plan  
3: Development Application Data Sheet  
4: Tree Retention and Replacement Plan  
5: Shadow Study

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

- Registration of a flood indemnity covenant on Title.
- Receipt of a Letter-of-Credit for landscaping in the amount of 100 per cent of the costs of soft and hard landscaping, installation, and a 10 per cent contingency.
- Receipt of a Letter of Undertaking from Arborist indicating that they will be on site to supervise all works within the Tree Protection Zone, and within 1.0 m of the Tree Protection Zone. The contract/letter of undertaking must include the scope of work to be supervised, any protection measures required to ensure tree protection, as well as a provision for the Arborist to submit a post-construction impact assessment report to the City for review.

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

- Demonstrate compliance with the Development Permit plans.
- Demonstrate compliance with the applicable level of the BC Energy Step Code.
- Install tree protection fencing to City standard around the driplines of any protected trees in accordance with the City's Tree Protection Information Bulletin (TREE-03), which must remain in place until construction and landscaping is completed.
- The applicant is required to obtain a Building Permit for any construction hoarding associated with the proposed development. If construction hoarding is required to temporarily occupy a street, or any part thereof, or occupy the air space above a street or any part thereof, additional City approvals and associated fees may be required as part of the Building Permit. *For further information on the Building Permit, please contact Building Approvals Department at 604-276-4285.*
- Submission of a construction traffic and parking management plan to the satisfaction of the City's Transportation Department (<http://www.richmond.ca/services/ttp/special.htm>).



DP 22-019430

Original Date: 08/23/22  
 Revision Date:  
 Note: Dimensions are in METRES



No. DP 22-019430

To the Holder: Talvinder Jagde  
Property Address: 10151 Ainsworth Crescent  
Address: 6391 No. 5 Road, Richmond BC

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1. This Development Permit is issued subject to compliance with all of the Bylaws of the City applicable thereto, except as specifically varied or supplemented by this Permit.
2. This Development Permit applies to and only to those lands shown cross-hatched on the attached Schedule "A" and any and all buildings, structures and other development thereon.
3. The "Richmond Zoning Bylaw 8500" is hereby varied to:
  - a) increase the maximum setback that a coach house is permitted to be located from the south property line from 2.0 m to 5.95 m; and,
  - b) decrease the minimum setback that a coach house is permitted to be located from the north property line from 2.0 m to 0.90 m.
4. Subject to Section 692 of the Local Government Act, R.S.B.C.: buildings and structures; off-street parking and loading facilities; roads and parking areas; and landscaping and screening shall be constructed generally in accordance with Plans #1 to #8 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 based on 100% of the cost estimate for the proposed works around the coach house (including 10% contingency, soft and hard landscaping, fencing and installation) 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 22-019430**

To the Holder: Talvinder Jagde  
Property Address: 10151 Ainsworth Crescent  
Address: 6391 No. 5 Road, Richmond BC

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

This Permit is not a Building Permit.

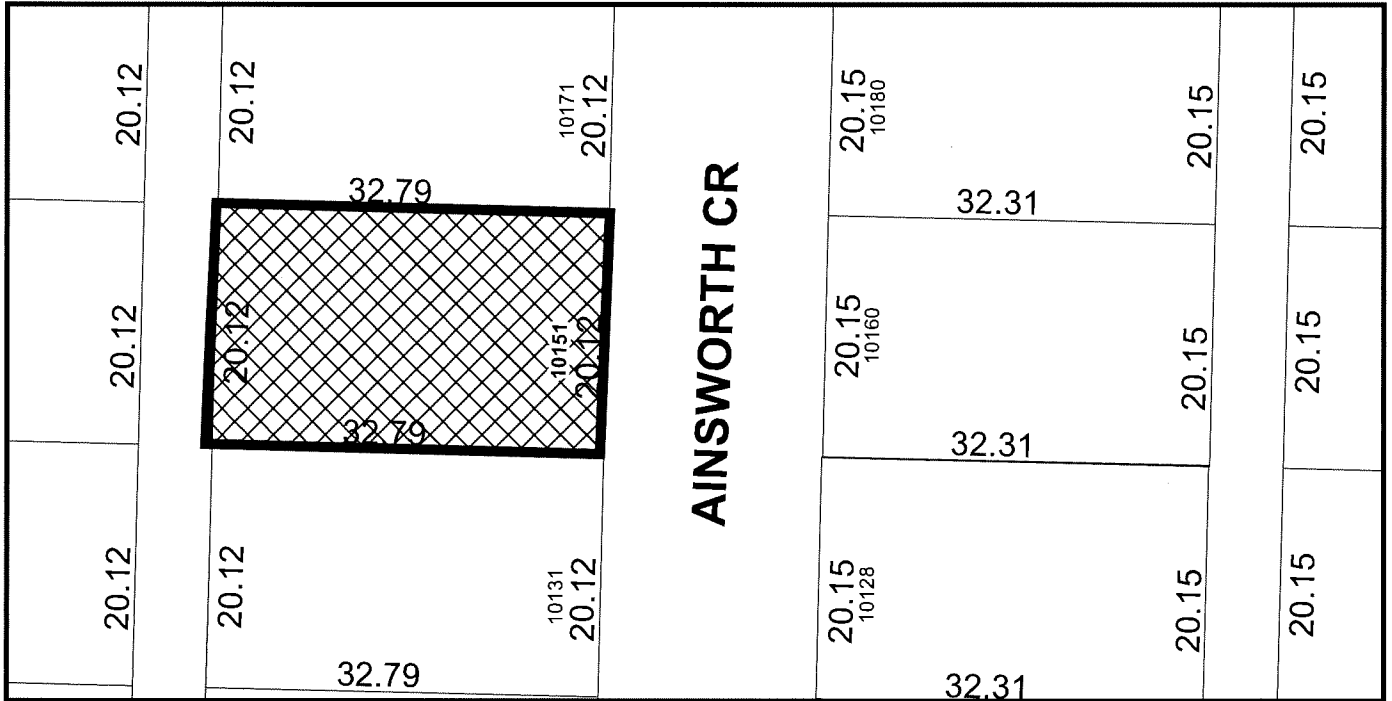
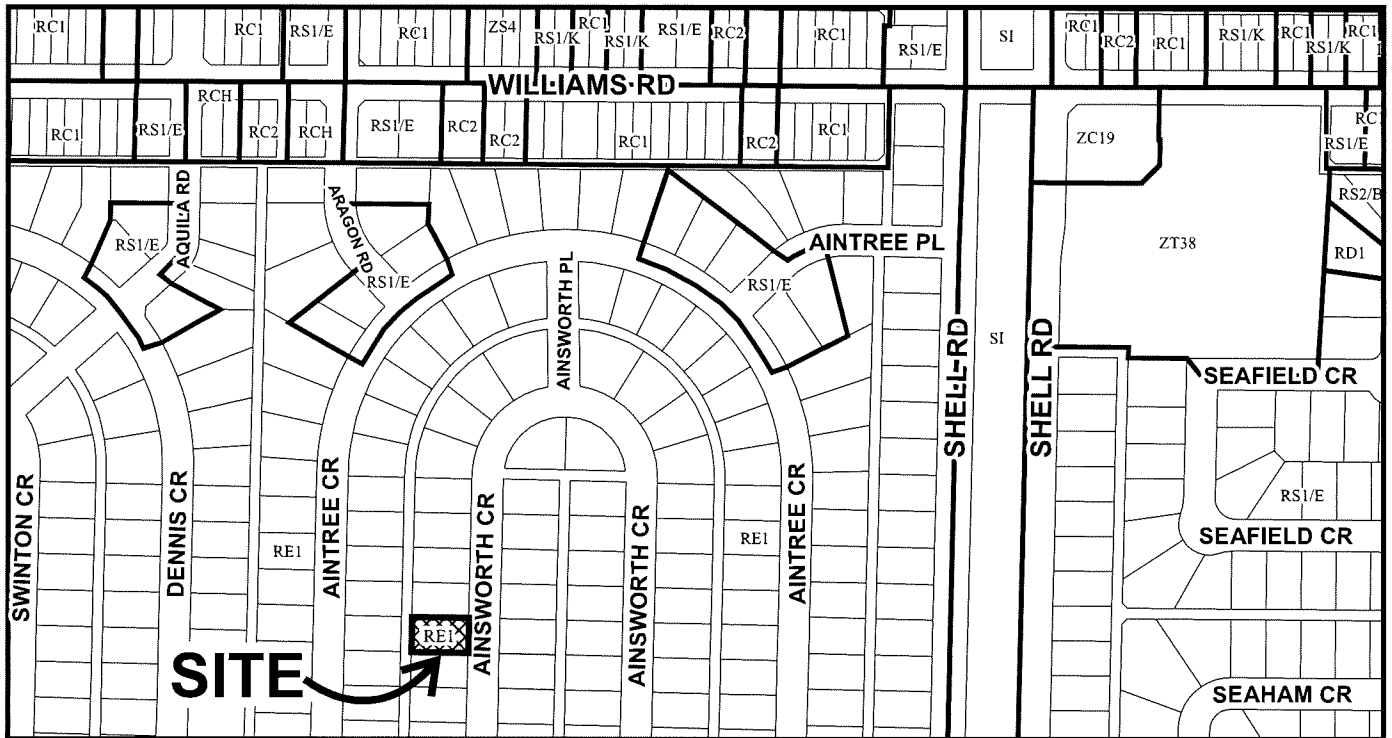
AUTHORIZING RESOLUTION NO. ISSUED BY THE COUNCIL THE  
DAY OF , .

DELIVERED THIS DAY OF , .

\_\_\_\_\_  
MAYOR



City of  
Richmond



|  |  |  |
|--|--|--|
|  | <p><b>DP 22-019430</b><br/><b>SCHEDULE "A"</b></p> | <p>Original Date: 08/23/22<br/>Revision Date:<br/>Note: Dimensions are in METRES</p> |
|--|--|--|

**TOPOGRAPHIC SURVEY OF LOT 31**  
**BLOCK 13 SECTION 35 BLOCK 4 NORTH RANGE 6 WEST**  
**NEW WESTMINSTER DISTRICT PLAN 20611**

#10151 AINSWORTH CRESCENT,  
 RICHMOND, B.C.  
 P.I.D. 000-448-320

**NOTE:**

Elevations shown are based on  
 City of Richmond HPN  
 Benchmark network.  
 Benchmark: GCM #51649  
 Control Monument 77H4983  
 Elevation: 1.001m  
 Benchmark: GCM #393264  
 Control Monument 77H4549  
 Elevation: 1.553m

**LEGEND:**

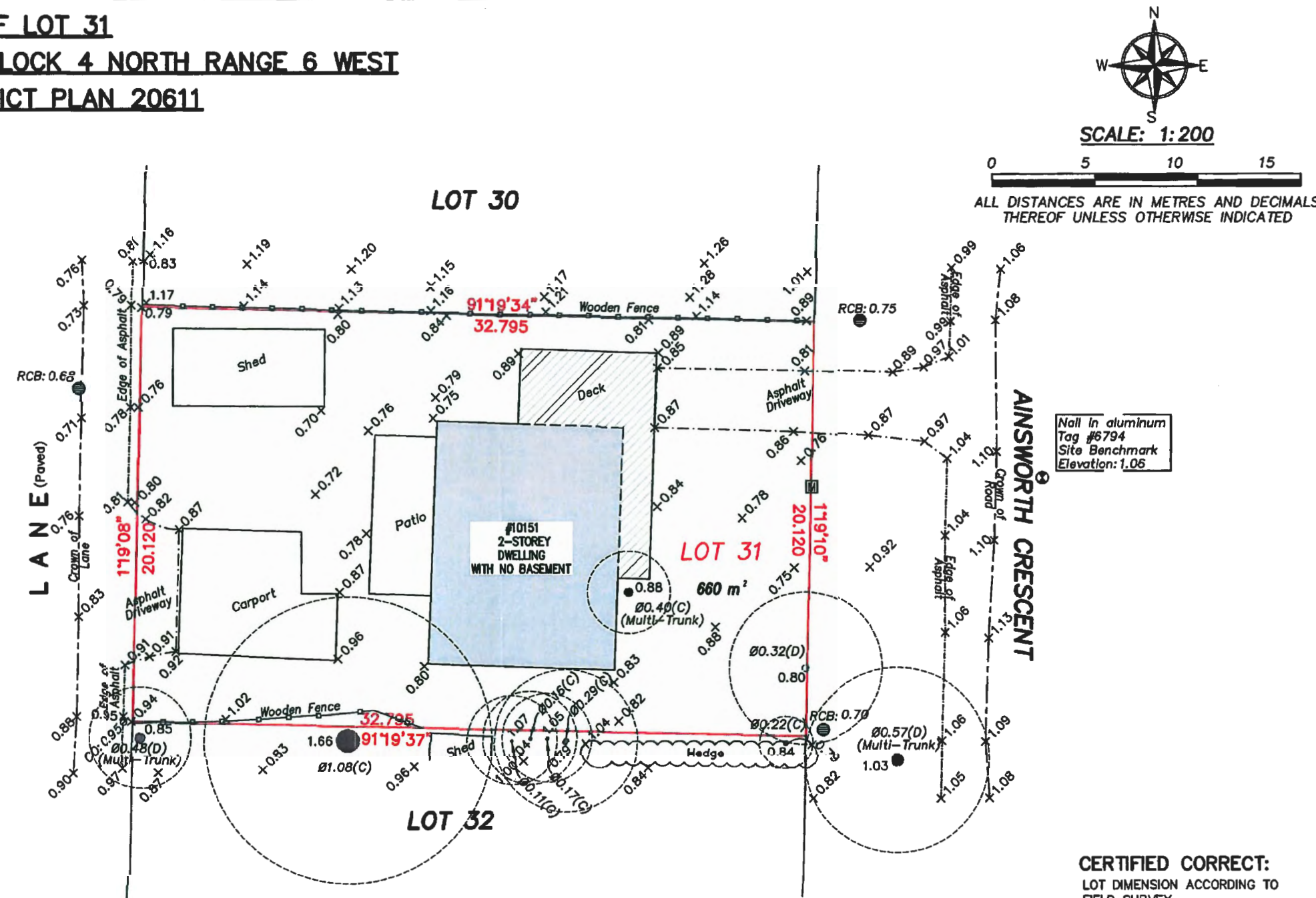
- (c) denotes conifer
- (D) denotes deciduous
- denotes round catch basin
- denotes water meter
- ⊙ denotes cleanout

© copyright  
 J. C. Tam and Associates  
 Canada and B.C. Land Surveyor  
 115 - 8833 Odlin Crescent  
 Richmond, B.C. V6X 3Z7  
 Telephone: (604) 214-8928  
 Fax: (604) 214-8929  
 E-mail: office@jctam.com  
 Website: www.jctam.com  
 Job No. 7946  
 FB-415 P25-26; FB-417 P10  
 Drawn By: LK

DWG No. 7946-TOPO

**NOTE:**

Use site Benchmark Tag #6794 for  
 construction elevation control.



Nail in aluminum  
 Tag #6794  
 Site Benchmark  
 Elevation: 1.05

**CERTIFIED CORRECT:**  
 LOT DIMENSION ACCORDING TO  
 FIELD SURVEY.

Johnson Tam  
 JQQ5M3  
 Digitally signed by  
 Johnson Tam JQQ5M3  
 Date: 2022.07.13  
 21:23:07-00'

JOHNSON C. TAM, B.C.L.S., C.L.S.

JULY 4th, 2022.



**DP 22-019430**

**Attachment 3**

Address: 10151 Ainsworth Crescent

Applicant: Talvinder Jagde

Owners: Jim Kirk, Prabherjot Saini, and Robyn Kirk

Planning Area(s): Shellmont

|                         | Existing                    | Proposed  |
|-------------------------|-----------------------------|---|
| <b>Site Area:</b>       | 659 m <sup>2</sup>          | 659 m <sup>2</sup>                                    |
| <b>Land Uses:</b>       | Single detached residential | Single detached residential with detached coach house |
| <b>OCP Designation:</b> | NRES                        | NRES  |
| <b>Zoning:</b>          | RE1                         | RE1   |
| <b>Number of Units:</b> | 1                           | 1 Single Detached House<br>1 Coach House              |

|   | Bylaw Requirement   | Proposed   | Variance           |
|---|---|--|--------------------|
| Floor Area Ratio:   | Max. 0.6 x 464.5 m <sup>2</sup> + 0.3 x remainder = 337 m <sup>2</sup> (3,627 ft <sup>2</sup> ) | 0.6 x 464.5 m <sup>2</sup> + 0.3 x remainder = 337 m <sup>2</sup> (3,267 ft <sup>2</sup> )     | none permitted     |
| Coach House Size  | Min. 33 m <sup>2</sup> and Max. 60 m <sup>2</sup>   | 58.3 m <sup>2</sup> (627.5 ft <sup>2</sup> )   | no                 |
| Lot Coverage:   | Building: Max. 45%<br>Non-porous surfaces: Max. 70%<br>Live Landscaping: Min. 20%               | Building: Max. 45%<br>Non-porous surfaces: Max. 70%<br>Live Landscaping: Min. 20%              | no                 |
| Setback – Side Yard, north (coach house):                 | Min. 2.0 m  | 0.9 m  | Variance Requested |
| Setback – Side Yard, south (coach house):                 | Max. 2.0 m  | 5.95 m   | Variance Requested |
| Setback – Rear Yard (coach house):                        | Min. 1.2 m for max. 65% of rear façade; 3.0 m for min. 35% of rear façade; min. 1.5 m to entry  | Min. 1.2 m for max. 65% of rear façade; 3.0 m for min. 35% of rear façade; min. 1.5 m to entry | no                 |
| Separation between single detached house and coach house: | Min. 4.5 m  | 5.4 m  | no                 |
| Height (m) (coach house):                                 | Max 1 ½ storeys or 6.0 m  | Max 1 ½ storeys or 6.0 m   | no                 |
| Lot Size:   | Min. 550 m <sup>2</sup>   | 660 m <sup>2</sup>   | none permitted     |
| Off-street Parking Spaces – (coach house):                | Min. 1  | 1  | no                 |
| Amenity Space – Outdoor (coach house):                    | Min. 30 m <sup>2</sup>  | 31.4 m <sup>2</sup>  | no                 |

**ARBORIST SUPERVISION REQUIRED:**  
 -Landscape work that enters the TPZ of trees ci1, os1 & #372  
 -House foundation footing preparation and installation & Landscape paver installation inside TPZ of tree os2  
 -House & Coach House foundation footing preparation and installation, park pad installation, walkway paver and landscape work inside the TPZ of tree os3



**Tree Plan for Construction at  
 10151 Ainsworth Crescent,  
 Richmond**

**Date: December 20, 2022**

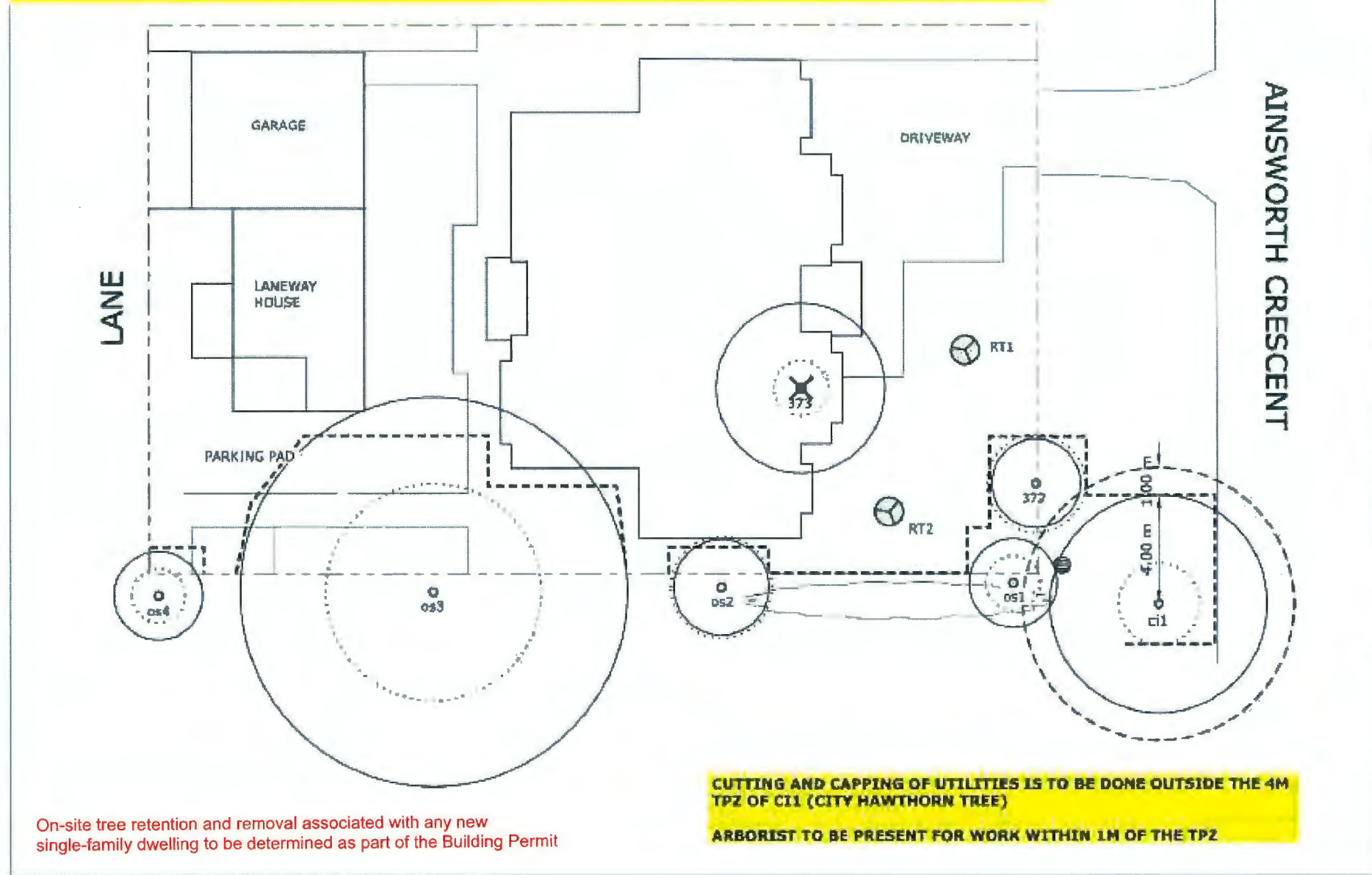
**Tree Inventory**

| Tag | Species           | DBH (cm) | TPZ (m) |
|-----|-------------------|----------|---------|
| ci1 | Hawthorn          | 34       | 4.00    |
| 372 | Hawthorn          | 25       | 1.50    |
| 373 | Cypress           | 48       | 2.88    |
| os1 | Scots Pine        | 21       | 1.50    |
| os2 | Western Red Cedar | 27       | 1.62    |
| os3 | Douglas Fir       | 110      | 6.60    |
| os4 | Magnolia          | 23       | 1.50    |

**Replacement Trees**

| Tag | Species      | Size    |
|-----|--------------|---------|
| RT1 | Callery Pear | 8cm cal |
| RT2 | Callery Pear | 8cm cal |

Replacement tree selection, planting and maintenance to meet or exceed BCLNA/BSCLA Landscape Standards



**Legend**

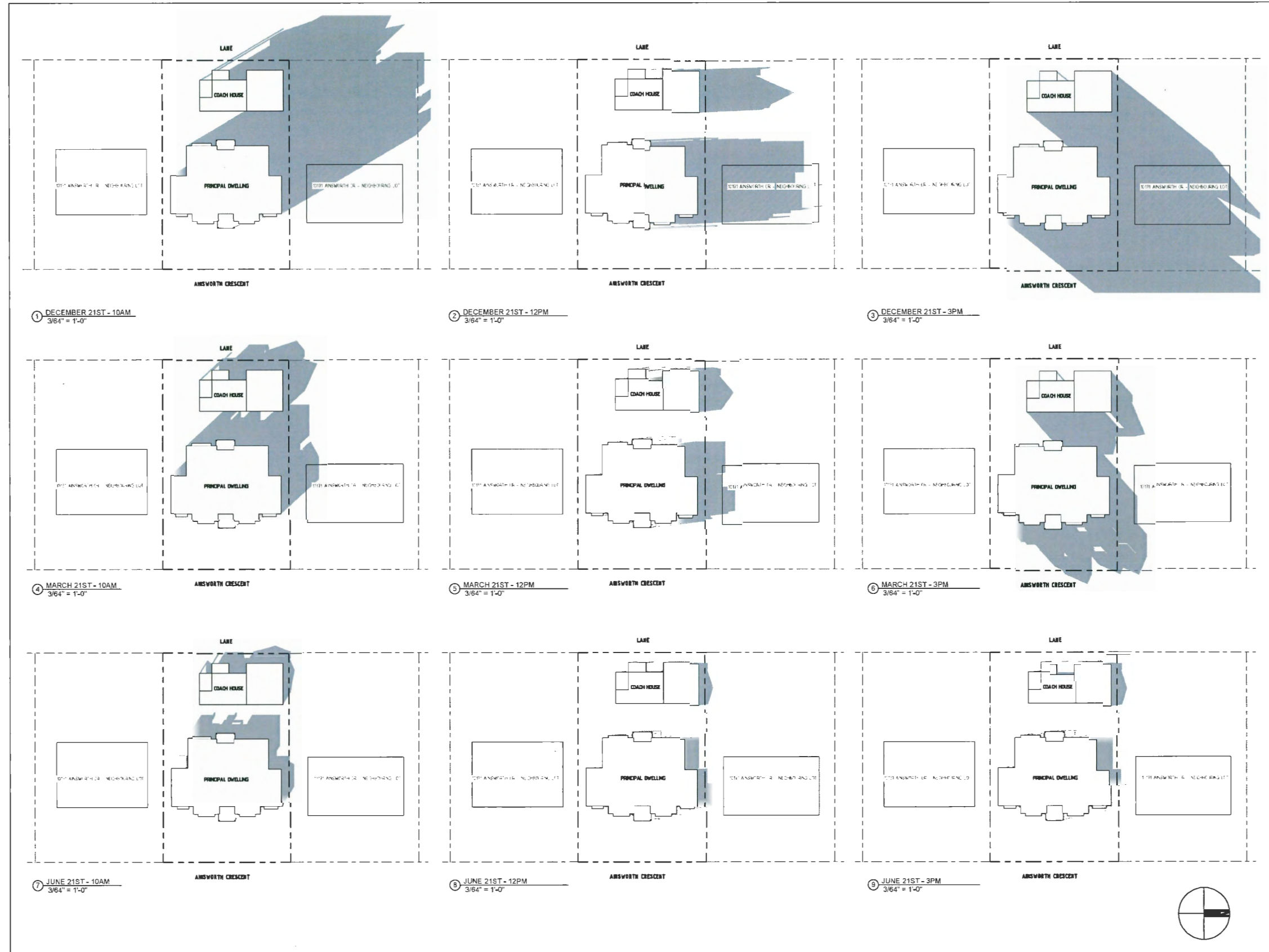
-dripline-

● = Undersize tree

x = remove tree

-tree barrier-

1m 1:150 5m



**AWANA GROUP**

Email: Tahinderj19@gmail.com  
Phone: (778) 862-5563

**GENERAL NOTES**

- THE DOCUMENTS AND DESIGN ARE AT ALL TIMES THE EXCLUSIVE PROPERTY OF AWANA GROUP AND MAY NOT BE REPRODUCED WITHOUT PRIOR WRITTEN CONSENT.
- THE GENERAL CONTRACTOR AND SUB-TRADES SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND LEVELS PRIOR TO COMMENCEMENT OF WORK ON SITE.
- ANY ERRORS, DISCREPANCIES, OMISSIONS SHALL BE IMMEDIATELY REPORTED TO AWANA GROUP BEFORE COMMENCEMENT OF WORK ON SITE.
- AWANA GROUP DOES NOT WARRANT THAT THE DRAWINGS ARE TO SCALE. THE DRAWINGS SHALL NOT BE SCALED.
- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS NOTED OTHERWISE.

PROJECT  
**RANA RESIDENCE**  
10151 AINSWORTH CRESCENT, RICHMOND, B.C.

DRAWING TITLE  
**SHADOW STUDY**

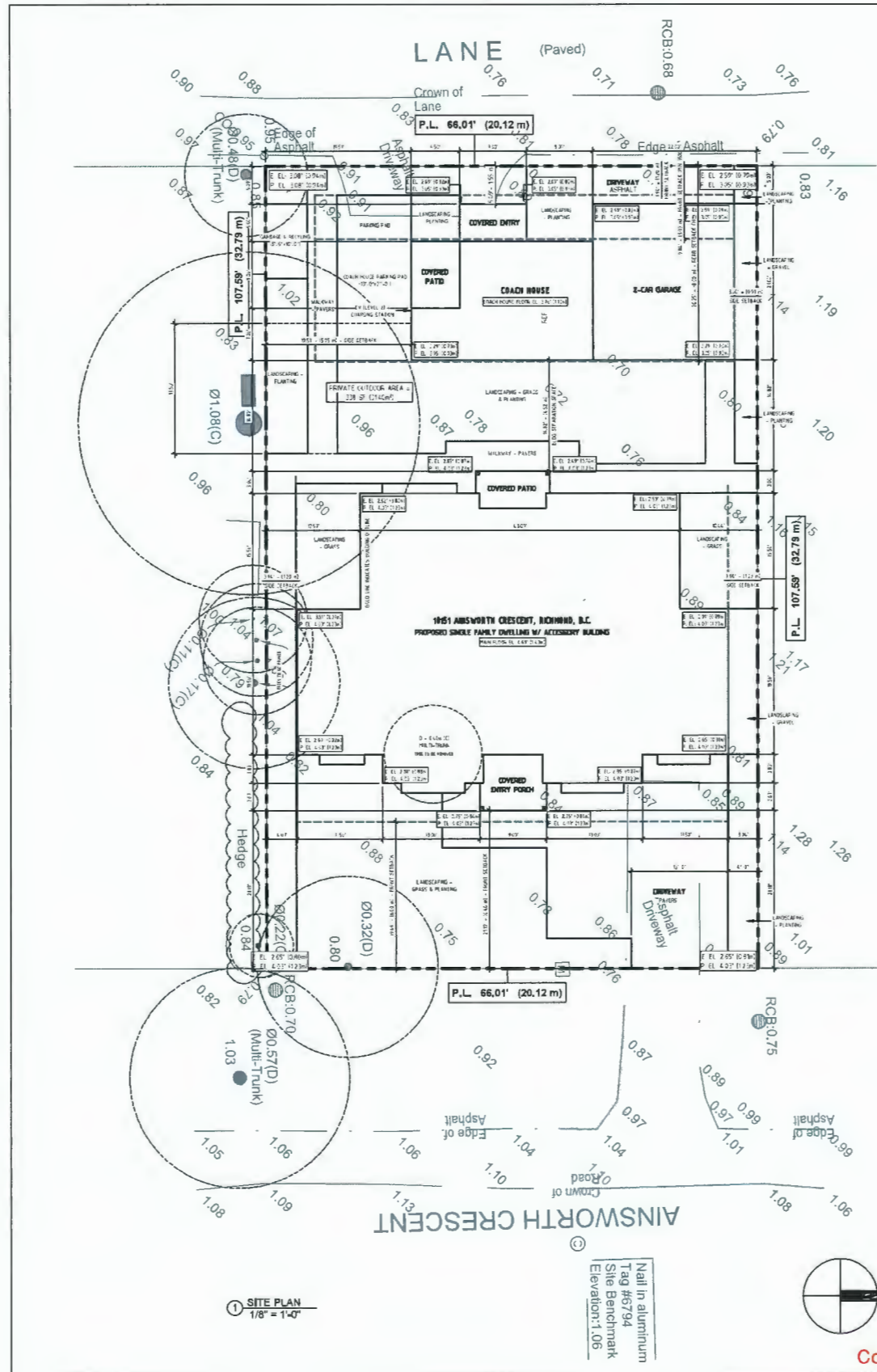
PROJECT NUMBER  
2219

DRAWN  
TJ

DATE  
APRIL 16TH, 2023

SCALE  
As indicated

DRAWING NO.  
**A3.00**



CONTEXT PLAN  
N.T.S.

- GENERAL NOTES:**
- ALL WORK SHALL CONFORM TO THE STANDARDS OF BRITISH COLUMBIA BUILDING CODE 2018
  - IN CASE OF A DISCREPANCY BETWEEN SPECIFICATIONS OF THESE DRAWINGS AND OF APPLICABLE REGULATIONS, THE MORE STRINGENT SHALL APPLY
  - ALL EXTERIOR AND OVERALL DIMENSIONS ARE TO THE OUTSIDE FACE OF THE SHEATHING
  - ALL LUMBER TO BE SPPA NO. 2 OR BETTER, EXCEPT AS NOTED OTHERWISE
  - JOISTS TO BE RESTRAINED FROM TWISTING AT END SUPPORTS AND AT INTERVALS OF MAXIMUM 7'-0" OVER BRIDGING, SOLO BRIDGING, TOPPING/SITTING, ETC.
  - ALL WOOD MEMBERS IN CONTACT WITH CONCRETE TO BE PROTECTED WITH A CSA APPROVED PRESERVATIVE
  - ALL LUMBER, FLOOR BOARDS AND RAILINGS OF EXTERIOR BALCONIES, BRACKETS AND PATIOS TO BE TREATED WITH A CSA APPROVED WOOD PRESERVATIVE
  - CALL OUT AROUND ALL EXTERIOR OPENINGS
  - PREVENT ALUMINUM FLASHING HEAD OVER ALL EXTERIOR OPENINGS
  - ALL EXTERIOR DOORS TO BE WEATHER STRIPPED
  - ALL GLAZING WITHIN 1" OF FLOOR TO BE SAFETY GLASS
  - ALL GLAZED SHOWER OR BATH TUB ENCLOSURES, GLAZED DOORS AND BUILT-IN WINDOWS WITHIN 7'-0" OF DOOR/DOCK TO BE SAFETY GLASS
  - ALL PRECUT DOORS SHALL CONFORM TO B.C.C. 9.6.12.02
  - ALL EXTERIOR WINDOWS AND GLAZED DOORS TO BE DOUBLE GLAZED IN ALUMINUM/UPVC FRAMES, EXCEPT AS NOTED OTHERWISE
  - ALL GLASS IN NON-FACTORY-BUILT SKYLIGHTS SHALL BE LAMINATED, TEMPERED OR WIRE GLASS
  - ALL WINDOWS, DOORS & SKYLIGHTS SHALL CONFORM TO B.C.C. 9.2.2.2 (1) & (2)
  - ALL EXTERIOR DOORS SHALL CONFORM TO B.C.C. 9.1.5.2
  - ALL WINDOWS LOCATED WITHIN 2 METERS OF ADJACENT GROUND LEVEL SHALL CONFORM TO B.C.C. 9.1.5.1
  - ALL BIRDSCREEN WINDOWS SHALL CONFORM TO B.C.C. REQUIREMENTS. EACH BIRDSCREEN SHALL HAVE AT LEAST ONE OUTSIDE WINDOW OPENABLE FROM INSIDE AND THE USE OF FOOLS OR SPECIAL KNOWLEDGE (W/ UNSTRUCTURED OPENING W/ AREA NOT LESS THAN 0.15 M<sup>2</sup> AND NO DIMENSION LESS THAN 25 mm)
  - ALL HANDRAILS TO BE 2"-8" MINIMUM AND 2'-4" MAXIMUM ABOVE STAIR RISING
  - ALL EXTERIOR HANDRAILS TO BE 2'-4" MINIMUM
  - ALL RAILING GATES SHALL BE DESIGNED TO PREVENT THE PENETRATION OF A SPHERICAL OBJECT OF MINIMUM 1"
  - INSTALLED SMOKE ALARMS SHALL CONFORM TO B.C.C. 9.12.9
  - ALL FACTORY-BUILT PREFABRICATED AND THEIR INSTALLATION SHALL CONFORM TO B.C.C. 9.2.2.8
  - PREVENT RISKS OF ATTACHMENT IN UNSTRUCTURED AREA PER VENTILATION
  - FLOOR FINISHES IN BATHROOMS TO BE IMPERVIOUS
  - CEILING WALL/SHOWER ARCADE TILES AND SHOWERS TO BE OF WATER RESISTANCE TYPE
  - ALL INTERIOR FINISHES AS PER OWNER'S SPECIFICATIONS

**PROJECT SUMMARY**

**PROPERTY DESIGNATION:** RESIDENTIAL

**OWNER ADDRESS:** 10151 AINSWORTH CRESCENT, RICHMOND, B.C.

**LEGAL DESCRIPTION:** LOT 21, SECTION 25, BLOCK 14, PLAN M-20581, FPO 304-148-300

**ZONING:** SINGLE DETACHED WITH COACH HOUSE - RESIDENCE 3600

**PROPOSAL:** PROPOSED SINGLE FAMILY HOUSE W/ DETACHED COACH HOUSE (GROUP C)

**LOT DIMENSIONS:**

|            |            |                       |
|------------|------------|-----------------------|
| LOT WIDTH: | 66.01'     | 20.12 m               |
| LOT DEPTH: | 107.59'    | 32.79 m               |
| LOT AREA:  | 7073.57 SF | 326.24 m <sup>2</sup> |

**ZONING ANALYSIS**

**HEIGHT CALCULATION (RESIDENTIAL BUILDING)**

ALLOWABLE MAX. BUILD HEIGHT: 3 1/2 STOREYS BUT SHALL NOT EXCEED RESIDENTIAL VERTICAL LOT DEPTH & WIDTH ENVELOPE

**PROPOSED BUILDING HEIGHT:** 28.54' (8.69m) \*REFER TO SHEET A210 & A211

**HEIGHT EXCEEDED (RESIDENTIAL BUILDING):** NONE

**ALLOWABLE MAX. BUILD HEIGHT:** 36.00'

**PROPOSED BUILDING HEIGHT:** 36.00' (10.97m) \*REFER TO SHEET A211

**SETBACKS (RESIDENTIAL BUILDING)**

|                            |                  |                  |
|----------------------------|------------------|------------------|
| FRONT LOT LINE SETBACK:    | REQUIRED: 10.00' | PROPOSED: 10.00' |
| INTERIOR LOT LINE SETBACK: | 13.00'           | 13.00'           |
| REAR LOT LINE SETBACK:     | 10.00'           | 10.00'           |

**LANDSCAPING (RESIDENTIAL BUILDING)**

|                                    |                  |                  |
|------------------------------------|------------------|------------------|
| FRONT LOT LINE SETBACK:            | REQUIRED: 13.00' | PROPOSED: 13.00' |
| INTERIOR LOT LINE SETBACK (NORTH): | 13.00'           | 13.00'           |
| INTERIOR LOT LINE SETBACK (SOUTH): | 13.00'           | 13.00'           |
| REAR LOT LINE SETBACK:             | REQUIRED: 10.00' | PROPOSED: 10.00' |

**ALLOWABLE GROSS FLOOR AREA (COVERED PORCHES):** 363.00 SF (33.75m<sup>2</sup>) x 0.70 = 254.10 SF (23.74m<sup>2</sup>)

**PROPOSED GROSS FLOOR AREA (COVERED PORCHES):**

|               |                                    |
|---------------|------------------------------------|
| MAIN FLOOR:   | 881.50 SF (81.50m <sup>2</sup> )   |
| SECOND FLOOR: | 124.42 SF (11.50m <sup>2</sup> )   |
| EXTERIOR:     | 108 SF (10.00m <sup>2</sup> )      |
| IRRV:         | 215.52 SF (20.00m <sup>2</sup> )   |
| TOTAL:        | 1329.44 SF (123.00m <sup>2</sup> ) |

**ALLOWABLE GROSS FLOOR AREA (UNCOVERED PORCHES):** 363.00 SF (33.75m<sup>2</sup>) x 0.70 = 254.10 SF (23.74m<sup>2</sup>)

**PROPOSED GROSS FLOOR AREA (UNCOVERED PORCHES):**

|                           |                                  |
|---------------------------|----------------------------------|
| COVERED ENTRY:            | 43.00 SF (4.00m <sup>2</sup> )   |
| COVERED PATIO:            | 48 SF (4.48m <sup>2</sup> )      |
| EXTERIOR - COVERED ENTRY: | 477.00 SF (44.40m <sup>2</sup> ) |
| TOTAL:                    | 578 SF (53.56m <sup>2</sup> )    |

**LANDSCAPING (RESIDENTIAL BUILDING)**

|  |       |                                    |
|--|-------|------------------------------------|
| TOTAL LOT LANDSCAPING REQUIRED:        | 55%   | 3880.00 SF (358.00m <sup>2</sup> ) |
| PROPOSED TOTAL LANDSCAPING:            | 65.7% | 4670 SF (433.85m <sup>2</sup> )    |
| TOTAL FRONT YARD AREA:                 | 401X  | 1293.11 SF (120.31m <sup>2</sup> ) |
| TOTAL FRONT YARD LANDSCAPING REQUIRED: | 55%   | 714.61 SF (66.19m <sup>2</sup> )   |
| PROPOSED FRONT YARD LANDSCAPING:       | 65.7% | 736 SF (68.31m <sup>2</sup> )      |

**DRAWING LIST**

| No.   | SHEET NAME            |
|-------|-----------------------|
| A0.00 | COVER SHEET           |
| A1.00 | FLOOR PLANS           |
| A2.00 | AREA PLANS            |
| A3.00 | ELEVATIONS & SECTIONS |
| A4.00 | 6-4000W STUDY         |

**AWANA GROUP**

Email: TahiroddinD@gmail.com  
Phone: (778) 942-5542

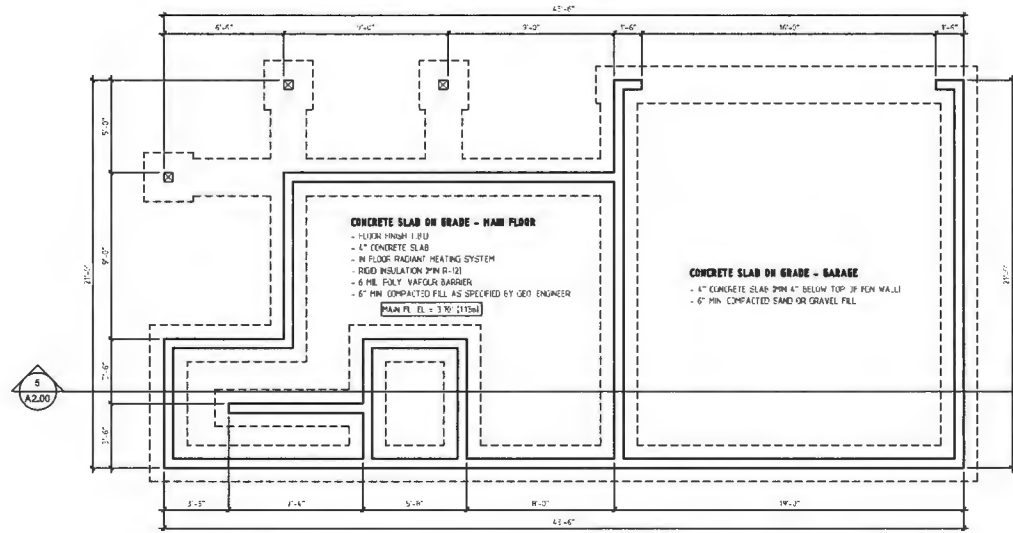
- GENERAL NOTES:**
- THE DOCUMENTS AND DESIGN ARE AT ALL TIMES THE EXCLUSIVE PROPERTY OF AWANA GROUP AND MAY NOT BE REPRODUCED WITHOUT PRIOR WRITTEN CONSENT.
  - THE GENERAL CONTRACTOR AND SUB-TRADES SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND LEVELS PRIOR TO COMMENCEMENT OF WORK ON SITE.
  - ANY ERRORS, DISCREPANCIES, OMISSIONS SHALL BE IMMEDIATELY REPORTED TO AWANA GROUP BEFORE COMMENCEMENT OF WORK ON SITE.
  - AWANA GROUP DOES NOT WARRANT THAT THE DRAWINGS ARE TO SCALE. THE DRAWINGS SHALL NOT BE SCALED.
  - ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS NOTED OTHERWISE.

**PROJECT:** RANA RESIDENCE  
10151 AINSWORTH CRESCENT, RICHMOND, B.C.

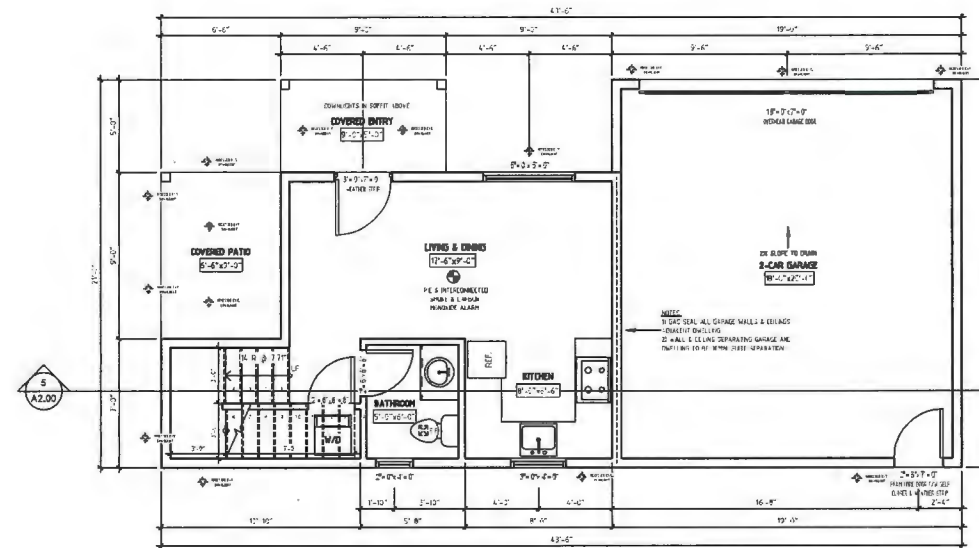
**DRAWING TITLE:** COVER SHEET

|                 |                  |
|-----------------|------------------|
| PROJECT NUMBER: | 2217             |
| DRAWN:          | TJ               |
| DATE:           | APRIL 16TH, 2023 |
| SCALE:          | As indicated     |
| DRAWING NO.:    | <b>A0.00</b>     |

Coach House to comply with BC Building Code

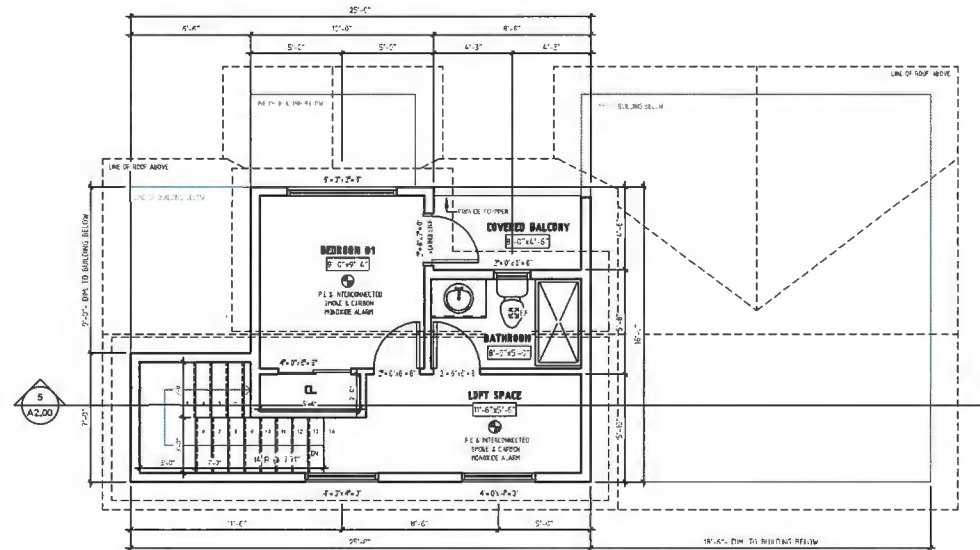


1 FOUNDATION PLAN - COACH HOUSE  
1/4" = 1'-0"



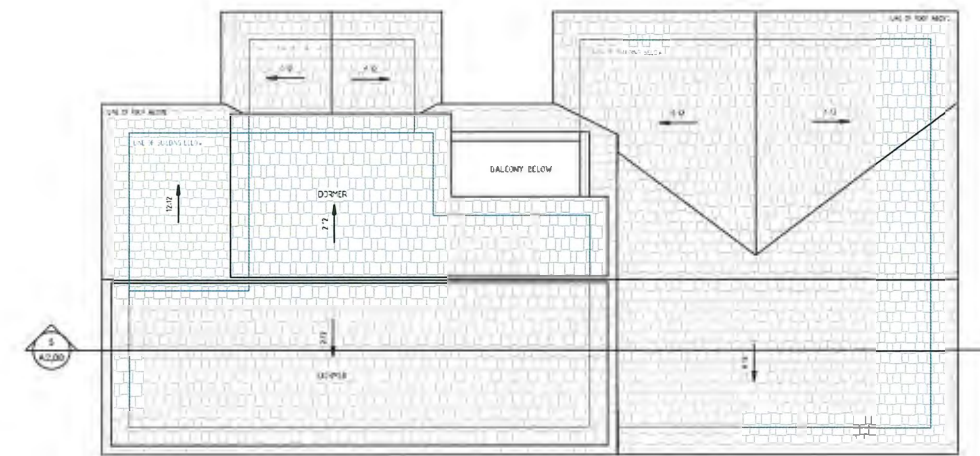
2 MAIN FLOOR - COACH HOUSE  
1/4" = 1'-0"

CEILING HEIGHT = 8'-0"  
 MAIN FLOOR AREA = 341.83 SF (31.76m<sup>2</sup>)  
 GARAGE AREA = 430.50 SF (39.99m<sup>2</sup>)  
 COVERED ENTRY AREA = 47.50 SF (4.41m<sup>2</sup>)  
 CARPORT AREA = 79.50 SF (7.39m<sup>2</sup>)



3 UPPER FLOOR - COACH HOUSE  
1/4" = 1'-0"

CEILING HEIGHT = 8'-0"  
 UPPER FLOOR AREA = 285.67 SF (26.54m<sup>2</sup>)  
 BALCONY AREA = 39.67 SF (3.69m<sup>2</sup>)



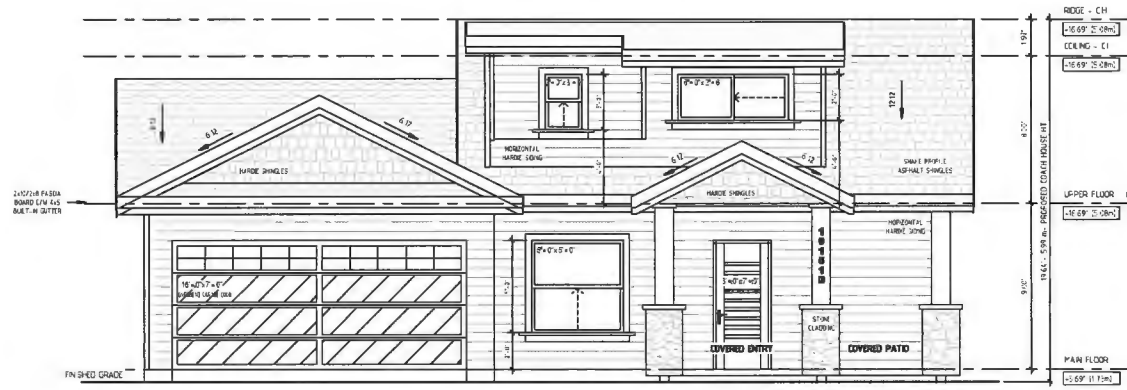
4 ROOF PLAN - COACH HOUSE  
1/4" = 1'-0"

NOTES:  
 1) VENT AND DRAIN LOCATIONS TO BE COORDINATED ON SITE BY CONTRACTOR  
 2) VENTILATION AT 1/300 OF INSULATED AREA  
 3) OVERHANG TO BE 1'-6" UNLESS NOTED OTHERWISE

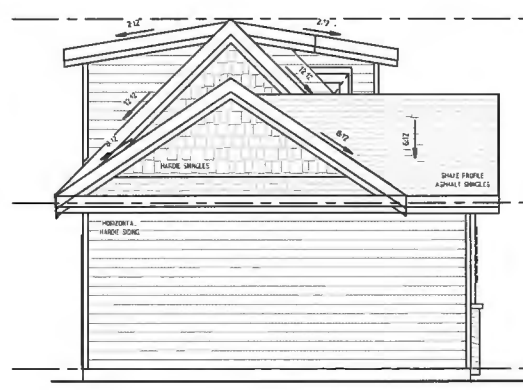
Coach House to comply with BC Building Code

|  |  |   |
|--|--|---|
| <p><b>AWANA GROUP</b><br/>                 Email: <a href="mailto:Tatinderj@gsaill.com">Tatinderj@gsaill.com</a><br/>                 Phone: (778) 862-5563</p> <p><b>GENERAL NOTES:</b></p> <ul style="list-style-type: none"> <li>- THE DOCUMENTS AND DESIGN ARE AT ALL TIMES THE EXCLUSIVE PROPERTY OF AWANA GROUP AND MAY NOT BE REPRODUCED WITHOUT PRIOR WRITTEN CONSENT.</li> <li>- THE GENERAL CONTRACTOR AND SUB-TRADES SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND LEVELS PRIOR TO COMMENCEMENT OF WORK ON SITE.</li> <li>- ANY ERRORS, DISCREPANCIES, OMISSIONS SHALL BE IMMEDIATELY REPORTED TO AWANA GROUP BEFORE COMMENCEMENT OF WORK ON SITE.</li> <li>- AWANA GROUP DOES NOT WARRANT THAT THE DRAWINGS ARE TO SCALE, THE DRAWINGS SHALL NOT BE SCALED.</li> <li>- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS NOTED OTHERWISE.</li> </ul> | <p>PROJECT<br/> <b>RANA RESIDENCE</b><br/>                 10151 AINSWORTH CRESCENT, RICHMOND,<br/>                 B.C.</p> | <p>PROJECT NUMBER<br/>                 2217</p> |
|  | <p>DRAWING TITLE<br/> <b>FLOOR PLANS</b></p>   | <p>DRAWN<br/>                 TJ</p>            |
|  | <p>DATE<br/>                 APRIL 16TH, 2023</p>  | <p>SCALE<br/>                 As indicated</p>  |
|  | <p>DRAWING NO.<br/> <b>A1.00</b></p>   |   |

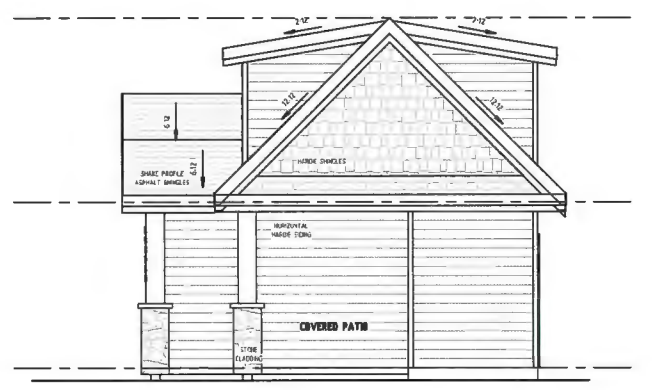




1 FRONT (WEST) ELEVATION - COACH HOUSE  
1/4" = 1'-0"



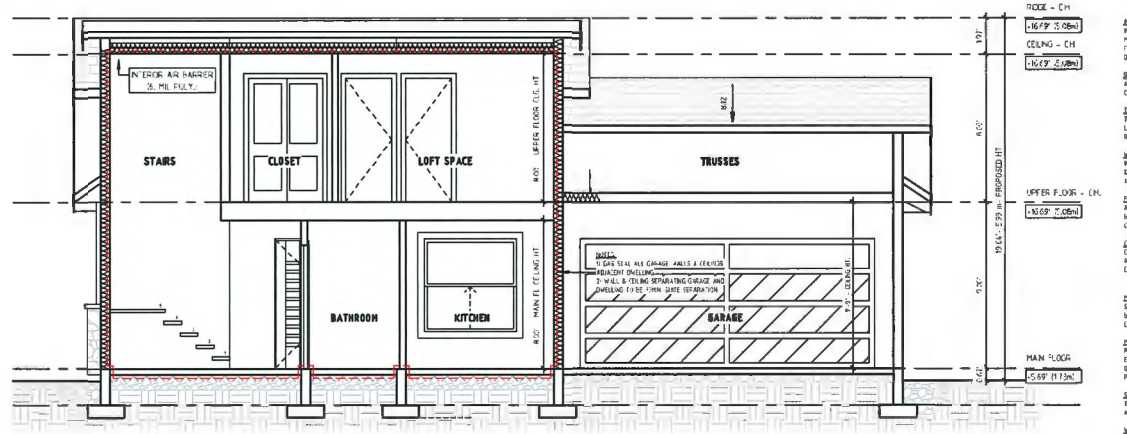
2 LEFT (NORTH) ELEVATION - COACH HOUSE  
1/4" = 1'-0"



3 RIGHT (SOUTH) ELEVATION - COACH HOUSE  
1/4" = 1'-0"



4 REAR (EAST) ELEVATION - COACH HOUSE  
1/4" = 1'-0"



5 SECTION 1  
1/4" = 1'-0"

**WALL ASSEMBLIES**

**EXTERIOR WOOD STUD WALL (2nd) - STUCCO OR STONE TILE OR SIDING**  
 - 2"X4" ALUMINUM STUCCO OR STONE TILE LATH OR STONE TILE LATH  
 - 1/2" METAL LATH OR HARDIE PLANK OR VINYL SIDING  
 - 3/8"X2" PLYWOOD STRIPBACK @ 16" O.C. OVER ROOF  
 - 1/2" FLYWOOD SHEATHING  
 - 2x6 #2 SPF WOOD STUDS @ 16" O.C.  
 - BATT INSULATION IN CAVITY PER R-10  
 - 6 MIL POLY VAPOUR BARRIER  
 - 1/2" GYPSUM WALLBOARD

**INTERIOR WOOD STUD WALL (2nd) OR (2nd)**  
 - 1/2" GYPSUM WALLBOARD  
 - 2x4 OR 2x6 #2 SPF WOOD STUDS @ 16" O.C.  
 - 1/2" GYPSUM WALLBOARD

**EXTERIOR FOUNDATION WALL**  
 - 8" CONCRETE FOUNDATION WALL EXCEPT AS NOTED OTHERWISE  
 - CONTINUOUS REINFORCED CONCRETE FOOTING AS PER STRUCTURAL DRAWINGS

**INTERIOR FOUNDATION WALL**  
 - 2x6 #2 SPF WOOD STUDS @ 16" O.C.  
 - 6" CONCRETE CURB  
 - CONTINUOUS REINFORCED CONCRETE FOOTING AS PER STRUCTURAL DRAWINGS

**BOTTOM PLATE ON CONCRETE**  
 - 2x4 OR 2x6 #2 SPF WOOD STUDS (AS REQUIRED) SILL PLATE  
 - 6 MIL POLY VAPOUR BARRIER OR GLOSS CELL PLATE GASKET BETWEEN CONCRETE AND SILL PLATE  
 - 5/8" DIAMETER ANCHOR BOLTS @ 4'-0" O.C. MAX

**WALL PENETRATIONS**  
 - ALL PENETRATIONS THROUGH THE BUILDING ENVELOPE MUST BE MADE AIRTIGHT BY SEALING ALL JOINTS AND GAPS BETWEEN THE STRUCTURAL COMPONENTS WITH AN AIR BARRIER MATERIAL.

**WATER RESISTANT BARRIER (WRB)**  
 - ALL PENETRATIONS THROUGH THE BUILDING ENVELOPE MUST BE MADE AIRTIGHT BY SEALING ALL JOINTS AND GAPS BETWEEN THE STRUCTURAL COMPONENTS WITH AN AIR BARRIER MATERIAL.

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**FLOOR ASSEMBLIES**

**CONCRETE SLAB ON GRADE - GARAGE**  
 - 4" CONCRETE SLAB MIN 4" BELOW TOP OF FIN FLOOR  
 - 6" MIN COMPACTED SAND OR GRAVEL FILL

**CONCRETE SLAB ON GRADE - MAIN FLOOR**  
 - FLOOR FINISH 1 B.O.  
 - 4" CONCRETE SLAB  
 - IN FLOOR RADIANT HEATING SYSTEM  
 - RIGID INSULATION MIN R-10  
 - 6 MIL POLY VAPOUR BARRIER  
 - 6" MIN COMPACTED FILL AS SPECIFIED BY GEOTECHNICAL ENGINEER

**FRAMED FLOOR - SECOND FLOOR**  
 - FLOOR FINISH 1 B.O.  
 - 1 1/2" LIFT-TIGHT CONCRETE TOPPING W/ IN FLOOR RADIANT HEATING SYSTEM  
 - 5/8" 1x6 PLYWOOD SUB-FLOORING, GLED & NAILED  
 - FLOOR JOISTS AS PER STRUCTURAL DRAWINGS (W/ CROSS BRACING/BRACING AS REQUIRED @ 16" O.C. MAX)  
 - 1/2" GYPSUM WALLBOARD

**FRAMED FLOOR - DECK OVER EXT.**  
 - OSB/DECK VINYL FINISH  
 - 5/8" 1x6 PLYWOOD SUB-FLOORING, GLED & NAILED  
 - FLOOR JOISTS AS PER STRUCTURAL DRAWINGS (W/ CROSS BRACING/BRACING AS REQUIRED @ 16" O.C. MAX)  
 - VENTED ALUMINUM OR VINYL SOFFIT

**NOTES:**  
 1) GAS SEAL FLOOR OVER GARAGE W/ 6 MIL POLY VAPOUR BARRIER  
 2) INSULATE FLOOR OVER EXTERIOR W/ BATT INSULATION (MIN R-10)  
 3) USE 1 LAYER OF 5/8" TYPE X GYPSUM BOARD FOR JOINT SUTURE SEPARATION

**NOTES:**  
 1) GAS SEAL FLOOR OVER GARAGE W/ 6 MIL POLY VAPOUR BARRIER  
 2) INSULATE FLOOR OVER EXTERIOR W/ BATT INSULATION (MIN R-10)  
 3) USE 1 LAYER OF 5/8" TYPE X GYPSUM BOARD FOR JOINT SUTURE SEPARATION

**NOTES:**  
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 3) USE 1 LAYER OF 5/8" TYPE X GYPSUM BOARD FOR JOINT SUTURE SEPARATION

**NOTES:**  
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 3) USE 1 LAYER OF 5/8" TYPE X GYPSUM BOARD FOR JOINT SUTURE SEPARATION

**NOTES:**  
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**NOTES:**  
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**NOTES:**  
 1) GAS SEAL FLOOR OVER GARAGE W/ 6 MIL POLY VAPOUR BARRIER  
 2) INSULATE FLOOR OVER EXTERIOR W/ BATT INSULATION (MIN R-10)  
 3) USE 1 LAYER OF 5/8" TYPE X GYPSUM BOARD FOR JOINT SUTURE SEPARATION

**ROOF ASSEMBLY**

**ROOF**  
 - SHAKE PROFILE ASPHALT SHINGLES  
 - FELT UNDERLAY  
 - 1/2" FLYWOOD SHEATHING  
 - SAFETY ANCHORS TO DECK TRUSSES AS PER STRUCTURAL

**FLAT ROOF (OVER EXT.)**  
 - 2 LAYERS OF TYPICAL EPDM MEMBRANE  
 - 5/8" PLYWOOD SHEATHING  
 - ROOF JOISTS AS PER STRUCTURAL DRAWINGS (W/ CROSS BRACING/BRACING AS REQUIRED @ 16" O.C. MAX)  
 - VENTED ALUMINUM OR VINYL SOFFIT

**NOTES:**  
 1) PROVIDE CANT STRIP ALONG CURB WALL  
 2) PROVIDE FLASHING WITH CRIP EDGE & END DAMPS

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**NOTES:**  
 1) PROVIDE CANT STRIP ALONG CURB WALL  
 2) PROVIDE FLASHING WITH CRIP EDGE & END DAMPS

- ROOFING: SHAKE PROFILE ASPHALT SHINGLES - BLACK
- FASCIA: 2x10/2x8 FASCIA BOARD - BLACK
- WALLS: HORIZONTAL HARDIE SIDING - WHITE
- WALLS: HORIZONTAL HARDIE SHINGLES - WHITE
- BUILT-UP POSTS: BOARD & BATTEN - WHITE
- BUILT-UP COLUMN BASE: STONE CLADDING - GREY
- WINDOWS: MULLIONS & SASH - BLACK

MATERIAL BOARD  
1/4" = 1'-0"

Coach House to comply with BC Building Code

|   |   |  |
|---|---|--|
| <p><b>AWANA GROUP</b></p> <p>Email: <a href="mailto:Talriderj@awana.com">Talriderj@awana.com</a><br/>Phone: (778) 863-5563</p> <p><b>GENERAL NOTES:</b></p> <ul style="list-style-type: none"> <li>- THE DOCUMENTS AND DESIGN ARE AT ALL TIMES THE EXCLUSIVE PROPERTY OF AWANA GROUP AND MAY NOT BE REPRODUCED WITHOUT PRIOR WRITTEN CONSENT.</li> <li>- THE GENERAL CONTRACTOR AND SUB-TRADES SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND LEVELS PRIOR TO COMMENCEMENT OF WORK ON SITE.</li> <li>- ANY ERRORS, DISCREPANCIES, OMISSIONS SHALL BE IMMEDIATELY REPORTED TO AWANA GROUP BEFORE COMMENCEMENT OF WORK ON SITE.</li> <li>- AWANA GROUP DOES NOT WARRANT THAT THE DRAWINGS ARE TO SCALE. THE DRAWINGS SHALL NOT BE SCALED.</li> <li>- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS NOTED OTHERWISE.</li> </ul> | <p>PROJECT<br/><b>RANA RESIDENCE</b><br/>10151 AINSWORTH CRESCENT, RICHMOND, B.C.</p> | <p>PROJECT NUMBER<br/>2217</p>   |
|   | <p>DRAWING TITLE<br/><b>ELEVATIONS &amp; SECTIONS</b></p>                             | <p>DRAWN<br/>T.J.</p> <p>DATE<br/>APRIL 16TH, 2023</p> <p>SCALE<br/>As indicated</p> <p>DRAWING NO.<br/><b>A2.00</b></p> |

**LANDSCAPE CONTRACT DOCUMENTS**

**PROJECT: LANDSCAPE FOR COACH HOUSE**

LOCATION: 10151 AINSWORTH CRESCENT, RICHMOND  
 CLIENT: HARK RANA  
 BUILDING DESIGNER: TALVINDER JAGDE  
 LANDSCAPE ARCHITECT CONSULTANT: SW LANDSCAPE ARCHITECT  
 ATTN: STEVE WONG 778 834-8959 stevewong234@gmail.com  
 www.swlandscapearchitect.com

**SUMMARY OF LANDSCAPE SCOPE OF WORK**

SUMMARY: THE LANDSCAPE PORTION OF THE PROJECT INCLUDES ALL LANDSCAPE WORKS ASSOCIATED WITH THE CONSTRUCTION OF A NEW COACH HOUSE DEVELOPMENT. THIS INCLUDES BUT NOT LIMITED TO, REMOVAL AND DISPOSAL OF EXISTING MATERIAL, SITE PREPARATION, GRADING AND DRAINAGE, THE SUPPLY AND INSTALLATION OF GROWING MEDIUM, LANDSCAPE PLANTS, MULCH, IRRIGATION SYSTEM, CIP CONCRETE WALKWAYS/STAIRS, ASPHALT, FENCING, GATES, TIMBER CURB, ONE YEAR WARRANTY AND ONE YEAR LANDSCAPE MAINTENANCE. CONTRACTOR IS RESPONSIBLE FOR PROVIDING WATER FEED IN ORDER TO ALLOW FOR THE INSTALLATION OF A COMPLETE, FUNCTIONING LANDSCAPE IRRIGATION SYSTEM. LANDSCAPE DESIGN/WORKS IS TO BE COORDINATED WITH ALL OTHER WORK ON THIS SITE.

**LANDSCAPE LIST OF DRAWINGS**

- L0 COVER SHEET
- L1 LAYOUT
- L2 PLANTING PLAN
- L3 TREE MANAGEMENT PLAN
- L4 DETAILS

**GENERAL CONDITIONS OF THE CONTRACT**

-REFER TO GENERAL CONDITIONS OF CONTRACT, BY PRIME CONSULTANT  
 -REFER TO, AND COORDINATE THESE CONTRACT DOCUMENTS WITH THE CONTRACT DOCUMENTS OF THE OTHER CONSULTANTS AND THE MAIN CONTRACT

**LANDSCAPE SPECIFICATIONS**

1. CANADIAN LANDSCAPE STANDARD (CLS), SECOND EDITION  
 COPYRIGHT: 2020, ISBN: 978-0-9950714-1-4  
 -PUBLISHED JOINTLY BY:  
 CANADIAN SOCIETY OF LANDSCAPE ARCHITECTS  
 12 FORTILLON CRESCENT, OTTAWA ON K2M 2W5  
 1-613-968-4775 csb@csa.ca  
 CANADIAN NURSERY LANDSCAPE ASSOCIATION  
 7856 FIFTH LINE SOUTH MILTON ON L9T 2X8  
 1-888-446-3499 cnla-acpp.ca

**SUPPLEMENTARY SPECIFICATIONS- PROJECT SPECIFIC:**

9. LANDSCAPE MAINTENANCE: ADD: PER SECTION 9.1.5, ESTABLISHMENT AND WARRANTY MAINTENANCE. THE MAINTENANCE PERIOD WILL BE FOR 1 CALENDAR YEAR FROM DATE OF ACCEPTANCE. PER SECTION 9.1.7, MAINTENANCE LEVEL FOR THIS PROJECT WILL BE AT LEVEL 3 "MODERATE"

**CLS SPECIFICATIONS**

- 1. SCOPE OF THE STANDARD
- 2. CONTRACT ADMINISTRATION
- 3. SITE PREPARATION AND PROTECTION
- 4. GRADING AND DRAINAGE
- 5. GROWING MEDIUM
- 6. PLANTS AND PLANTING
- 7. MULCHING
- 8. SEEDING AND SODDING
- 9. LANDSCAPE MAINTENANCE
- 10. IRRIGATION SYSTEMS
- 11. INTEGRATED PEST AND VEGETATION MANAGEMENT
- 12. HARDSCAPE
- 13. LANDSCAPE OVER STRUCTURES
- 14. INTERIOR LANDSCAPE N/A

APPENDIX A: LIST OF TABLES AND FIGURES  
 APPENDIX B: BASIC CONTENTS OF A LANDSCAPE COMMISSIONING PLAN  
 APPENDIX C: CANADIAN NURSERY STOCK STANDARD, NINTH EDITION  
 APPENDIX D: NATIONAL VOLUNTARY CODE OF CONDUCT FOR THE ORNAMENTAL HORTICULTURE INDUSTRY  
 GLOSSARY OF TERMS AND DEFINITIONS

- 2. MMCD (LATEST EDITION) SPECIFICATIONS AND DRAWINGS, WITH MUNICIPAL SUPPLEMENTARY SPECIFICATIONS AND ALL APPLICABLE MUNICIPAL BY-LAWS.
- 3. CAN/CSA-Z614-14 CHILDREN'S PLAY SPACES AND EQUIPMENT AND IPEMA (INTERNATIONAL PLAY EQUIPMENT MANUFACTURERS ASSOCIATION) STANDARD, SPECIFICATIONS FOR PLAY SURFACES TO INCLUDE ASTM F292/1951/2075/2223/355

**NOTES:**

- 1. IN CASE OF CONFLICTING SPECIFICATIONS THE MOST STRINGENT SPECIFICATION PREVAILS
- 2. CONTRACTOR TO PROVIDE DIGITAL PHOTOS TO THE LANDSCAPE ARCHITECT FOR ALL WORK THAT WILL BE BURIED OR CONCEALED IN ORDER TO CONFIRM THAT THE WORK MEETS SPECIFICATIONS AND APPLICABLE STANDARDS
- 3. CONTRACTOR TO PROVIDE DIGITAL PHOTOS OF ALL PLANT MATERIAL AT THE NURSERY FOR LANDSCAPE ARCHITECT APPROVAL PRIOR TO SHIPPING. PHOTOS ARE TO BE REPRESENTATIVE OF THE PLANTS TO BE SHIPPED AND CLEARLY SHOW THE QUALITY AND SIZE OF THE PLANTS. A MEASURING STICK SHOULD BE USED WHERE NECESSARY TO SHOW THE HEIGHT OF A PLANT.

**GENERAL PROJECT AND CONTRACTOR NOTES**

1. Contractor shall review these plans thoroughly, make a detailed site visit, and shall immediately bring any inconsistency, site layout problem, or any other request for clarification to the Landscape Architect for resolution prior to the delivery of any bid. Failure to do so shall cause the Contractor to be ineligible for extras relating to such matters.
2. Contractor shall submit reproducible shop drawings to Landscape Architect for Owner's approval.
3. Contractor shall co-ordinate with all trades to provide complete working systems.
4. Drawings of existing facilities are, in general, diagrammatic. Exact locations shall be determined by the Contractor from field measurements taken by Contractor's personnel. Actual arrangement of the work shall follow locations shown on the drawings within the constraints of existing equipment and construction. Dimensions shall govern these drawings and they are not to be scaled. Any scales on drawings are only for the Contractor's convenience. Drawing and notes to drawings are correlative and have equal authority and priority. Should there be discrepancies in themselves or between them, Contractor shall base bid pricing on the most expensive combination of quality and/or quantity of the work indicated. In the event of discrepancies, the appropriate method of performing the work and/or items to be incorporated into the scope of the work shall be determined by the appropriate design professional (eg Landscape Architect, Architect, Engineer)
5. Contractor is responsible for the safety, actions and conduct of his employees and his subcontractors' employees while in the project area, adjacent areas and in the building and its vicinity.
6. All work described by these documents shall be performed in full accordance with all applicable codes and standards.
7. All materials, finishes, manufactured items, and equipment shall be installed in full accordance with the supplier's or manufacturer's written recommendations or these documents, whichever is more stringent.
8. Requests to substitute any product, technique, or material shall be submitted in writing to Landscape Architect for approval. Samples, product information, and drawings shall be required prior to substitution approval. Proposed substitution shall be of equal quality and performance specification to that originally specified.
9. All workmanship, material, and equipment shall be guaranteed for one year from date of Owner acceptance. Any failure or deterioration within this period shall be corrected by the contractor at the contractor's expense.
10. Coordinate landscape drawings with architect/engineer and all other consultant drawings.

**GENERAL LANDSCAPE NOTES**

1. All landscape works are to meet the specifications and standards of the latest edition of the CANADIAN LANDSCAPE STANDARD, published by the Canadian Society of Landscape Architects and the Canadian Nursery Landscape Association.
2. All landscape works to be carried out by a contractor with minimum 5 years' experience doing work similar in scope and size, and on at least 3 comparable projects. The contractor needs to be a member in good standing with the appropriate trade organization: eg, B.C. Landscape and Nursery Association (BCLNA), Irrigation Industry Association of B.C. (IIABC). Execution of work to be under the direct supervision of qualified industry certified technicians.
3. All grades to meet adjacent grades at property line. All stormwater is to be contained on site and away from adjacent properties. All hard surfaces to be sloped a minimum of 1.5%, and all lawn areas to be sloped a minimum of 2% to avoid standing water. Contractor is ultimately responsible for ensuring there is no standing water on site over an extended period.
4. No slopes to be steeper than 2.5 horizontal: 1 vertical.
5. All plant material and growing medium to meet Canadian Landscape Standard #1 specifications. Plant search area is to be any plant nursery within the Lower Mainland. Plant substitutions are only allowed if approved by Landscape Architect. Suggested plant substitutions shall be of similar species and of at least equal size to those originally specified.
6. All shrub beds to contain minimum 18" (450) mm depth of approved growing medium over scarified subgrade. All lawn areas to contain minimum 6" (150) mm of approved growing medium over scarified subgrade.
7. All guardrails are required wherever the fall height is over 2 ft. Guardrails to be a minimum 42" high from any climbable surface surface. Maximum openings between pickets to be under 4".
8. Stairs to have consistent rise/run for risers and treads. Stair treads to slope 2% to front edge of tread for drainage and constructed with materials or finishes to prevent slip falls. All stairs over 2 risers to have handrails between 32" to 38" high from the front of stair treads, and to extend 12" past the end of top/bottom treads.
9. Exterior ramps to adhere to BC Building code if greater than 5% slope. Ramps to be maximum of 8.3% and minimum 5" width. Handrails required on both sides. Construction to adhere to BC Building code.
10. All retaining walls and structures over 4 ft, in height or if there are issues with soil stability require signoff from the appropriate engineer (eg structural, geotechnical). Contractor to provide engineer stamped shop drawings for Landscape Architect.
11. Landscape installation to be reviewed by registered Landscape Architect.

**GENERAL TREE NOTES**

1. Any permitted tree removal(s) must be performed by a qualified professional.
2. No grade changes are to occur within the critical root zones of any retained trees. Any exposed roots from lines of excavation must be covered with burlap and then poly plastic in an effort to prevent dessication of exposed roots; this root curtain must be removed prior to backfilling. Trees must be adequately watered during the entire construction process.
3. The removal of existing organics within the critical root zones of retained trees must be performed manually, when installing new plant material within the critical root zones of retained trees, if large roots (1.5" diameter and larger) are encountered, then new plantings must be shifted to accommodate. No more than 3" of additional soil for new landscaping may be added within any critical root zone.
4. Any excavation work or work within the protection zone of retained trees requires the supervision of a certified arborist. This includes, but is not limited to; demolition, the installation of any permeable or impermeable surfaces (concrete, asphalt, pavers, etc.), installation of permanent or temporary services (gas, sewer, storm, sanitary, communication, electrical, irrigation, etc.), during the installation of patios, driveways, or any hardscape, during the installation of footings for fences, walls, decorative walls, retaining walls, decks, and deck footings.
5. Construction materials must not be stored within the tree protection zone (TPZ) of trees to be retained, and TPZ fencing to remain intact for the entire construction process. Signage must be clearly posted on each side of the barrier indicating 'Tree protection zone-Do not enter or modify'. Contact your project arborist for any TPZ barrier issues.
6. Refer to arborist report and drawing where applicable.

**MATERIALS LIST-COORDINATE WITH SPECIFICATIONS**

1. ASPHALT: 3" of compacted hot mix asphalt applied in 2 lifts over 4" of well compacted ¾" minus base course per municipal and MMCD specifications.
2. FENCE- POST SADDLE BRACKET: By Simpson Strong-Tie, WUB44RHDG for full dimension 4" post, galvanized with 15M rebar.
3. FENCE-WOOD: Full dimension #2 and better cedar boards, finished with 2 coats of Sikken's semi-transparent cedar stain. Posts and kick board to be full dimension wood, incised and rated for ground contact approved per CCA/MCA PT.
4. GATE HARDWARE: Hardware should be in black finish by Onward Hardware with 3 heavy duty 8" strap hinges (923 FBR), adjustable-tension gate spring (304 FBR), gate latch (301 FBR) gate pull (478 FBR) and a rubber gate stopper (480 BPYRC) or pre-approved equivalent. If lockable latch is required: Lockable Latch by National Hardware. V6203, N346-202 for keyed access from both sides and with polymer and stainless steel construction.
5. GRAVEL EDGE: Gravel edge around the building to be ¾" clean drain rock, minimum 4" depth.
6. GROWING MEDIUM: In accordance with CLS standards, latest edition. For Turf Areas: Level 1H (High Traffic Lawn Areas), containing by weight: 70-90% sand, maximum 25% fines (max 20% clay), 3-5% organic matter, with pH between 6-7; For Planting Areas: Level 1P (Planting Areas), containing by weight: 50-70% sand, maximum 25% fines (max 20% clay), 10-20% organic matter, with pH between 4.5-6.5. Supplied by Veratec Engineered Products (www.veratecgroup.com), DENBOW (www.denbow.com), SUMAS GRO MEDIA (www.sumasgromedia.com) or equivalent. 6" min for lawn areas on grade, 18" min for planted areas on grade, over scarified base, or as otherwise specified. A current representative soil analysis is to be done by Pacific Soil Analysis, Richmond to confirm soil sample meets specifications prior to shipping. If after shipping the quality of the soil is in question, further sampling and testing by Pacific Soil Analysis will be required at contractor's expense. If it is determined that the soil does not meet CLS Specifications, the soil is to be removed at contractor's expense. Contact information for Pacific Soil Analysis is: #5-11720 Voyageur Way, Richmond, BC V6X 3G9; Phone (604) 273-8226. For growing medium on roof, see section under Green Roof.
7. IRRIGATION: Supply and installation required for a complete automatic, inground irrigation system to provide supplemental water efficiently and uniformly. All components to be new, and includes all pipes, sleeves, valves, in-ground irrigation boxes, sprinkler heads, solenoid wires, controller and rain sensor. Hose bibs and quick couplers to be on their separate zone. Controller to have 2 extra zones for future expansion and if installed outside, to have controller and wiring secured in a lockable, weatherproof metal box. Irrigation components to be Rainbird, Toro or Hunter. Irrigation design and installation per Canadian Landscape Standards, latest edition. Design to be completed by a qualified designer/contractor with IIABC. Shop drawings for the irrigation design are to be provided by contractor and to be approved by the landscape architect prior to installation. Contractor is responsible for providing a water service line and connecting irrigation system to water service line complete with backflow preventor, pressure reducing valve and isolation valves. Contractor to adjust irrigation controller, sprinkler heads and commission system in addition to providing as-built drawings and a one year warranty.
8. LANDSCAPE EDGING: HDPE edging by Precision Edging (PE 20C) 7/16" by 4", screwed to plastic spikes (1.25" by 12") every 2' OC.
9. MULCH: To be composted fir bark, having dark brown, fine texture and ½" minus, applied evenly at a 2" depth over plant beds. Available from Augustin Soil and Mulch (604 465-193) or equivalent.
10. PAVERS-PERMEABLE: AQUAPAVE by Abbotsford Concrete Products, Standard Series, 4 5/16" by 8 3/4" by 3 1/8" inches, Natural colour, running bond with soldier course in Charcoal colour, installed per manufacturer's instructions.
11. PLANT MATERIAL: All plant material are to meet current Canadian Landscape Standard (CLS) #1 and installed according to current CLS standards by qualified contractor. Plant search is generally throughout the Lower Mainland except as indicated otherwise. Any plant substitutions must be approved by Landscape Architect.
12. RETAINING WALL-CONCRETE: Per applicable industry standards. Concrete to be reinforced with rebar as shown on drawings. Drawings are to be confirmed with structural engineer. For retaining walls over 4' high, or where there may be issues with global stability, stamped engineered drawings are required. Provide shop drawings for consultant review prior to placing showing expansion and control joints.
13. SOD: All sod to be sand based sod (Perennial rye/Kentucky bluegrass) with no netting. Supplied by Bos Sod Farms or equivalent. No clay or silt soil to be allowed.
14. WOOD: Per industry standards. All exterior wood to be rot resistant, either western red cedar, yellow cedar, robinia, ipe or pressure treated (PT). Minimum standard to be #2 and better. Wood to be finished with minimum 2 coats of an approved exterior grade finish. All wood in contact with ground to be incised, ground contact approved per CCA/MCA PT. All cuts to be sealed prior to installation.

NOTE: ALL MATERIALS SHOWN ON DRAWINGS ARE NOT NECESSARILY INCLUDED IN THIS MATERIALS LIST. CONTRACTOR IS RESPONSIBLE FOR DETERMINING ALL MATERIALS REQUIRED TO COMPLETE LANDSCAPE WORKS PER CONTRACT DOCUMENTS.



AERIAL VIEW OF PROJECT SITE - 10151



STREET VIEW OF PROJECT SITE

| No. | Date      | Issue/Revision Notes |
|-----|-----------|----------------------|
| A   | 1/8/2023  | FOR COORDINATION     |
| B   | 1/11/2023 | SUBMIT FOR BP        |

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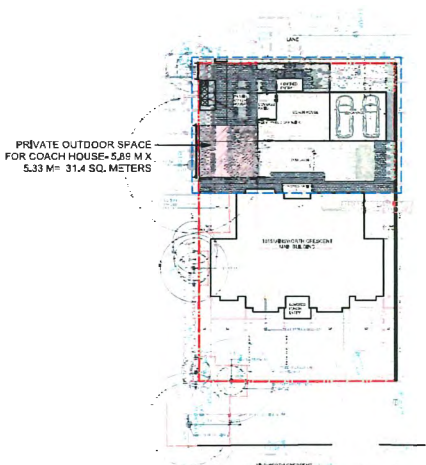
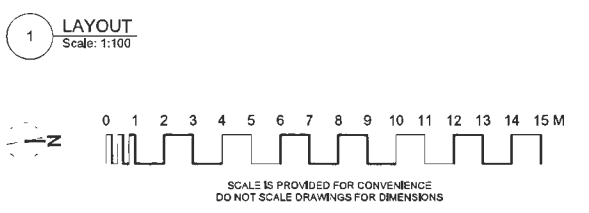
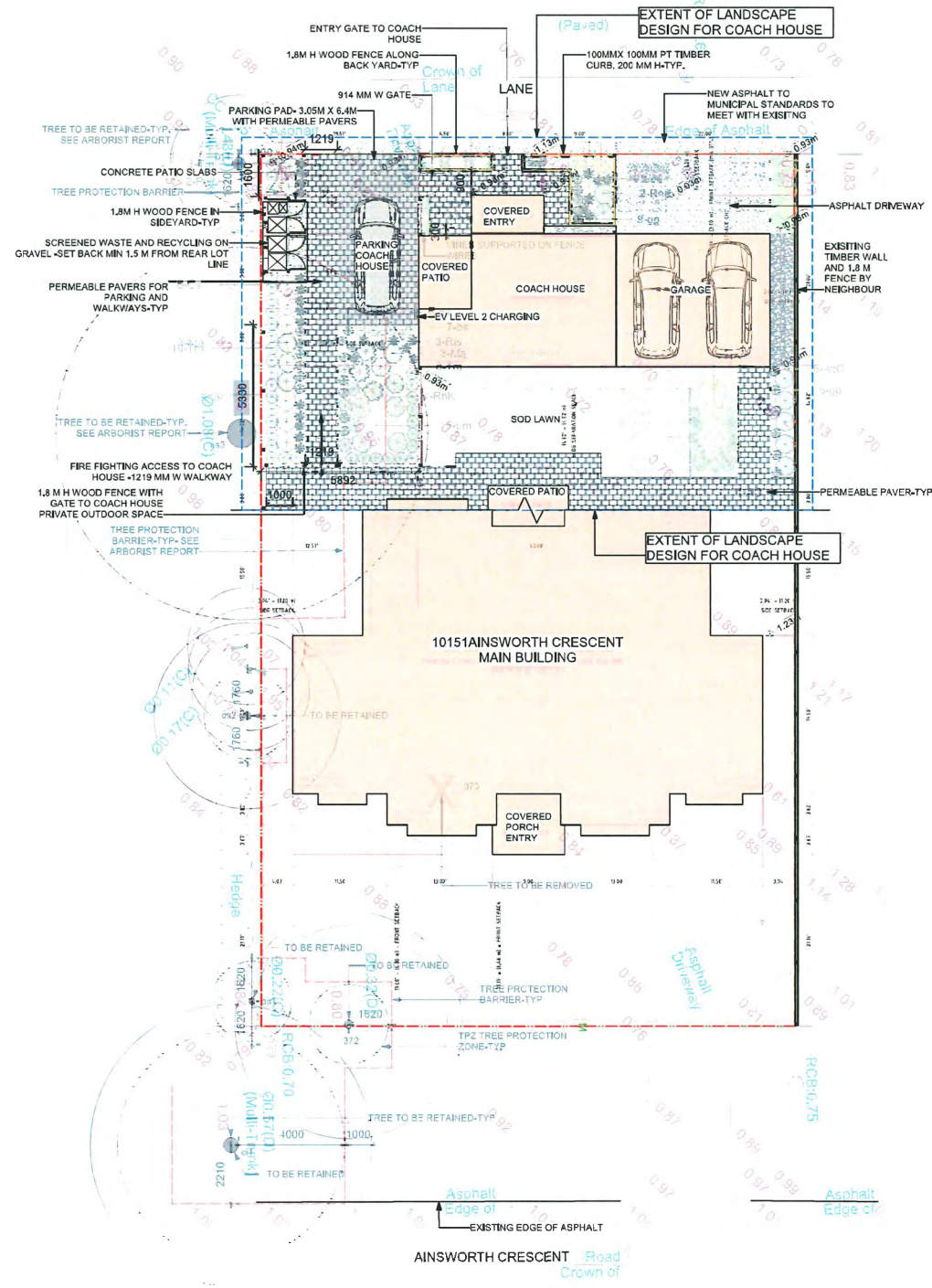
SW LANDSCAPE ARCHITECT  
 919 MELBOURNE AVENUE, NORTH VANCOUVER  
 www.swlandscapearchitect.com

HARK RANA

RANA RESIDENCE  
 10151 AINSWORTH CRESCENT  
 RICHMOND, BC

COVER SHEET

|                            |                     |
|----------------------------|---------------------|
| Author: STEVE WONG         | Project ID: 2022-18 |
| Client: SW                 | Scale: AS NOTED     |
| Date: DECEMBER 2022        | Sheet No: L-0       |
| Location: AINSWORTH v1.vwx | of 5                |



2 COACH HOUSE PRIVATE OUTDOOR SPACE  
Scale: 1:300

**COACH HOUSE PRIVATE OUTDOOR SPACE**  
 TOTAL PROPOSED 31.4 SQ M  
 AREA REQUIRED 30.0 SQ M

**GENERAL PROJECT AND CONTRACTOR NOTES**

- Contractor shall review these plans thoroughly, make a detailed site visit, and shall immediately bring any inconsistency, site layout problem, or any other request for clarification to the Landscape Architect for resolution prior to the delivery of any bid. Failure to do so shall cause the Contractor to be ineligible for extras relating to such matters.
- Contractor shall submit reproducible shop drawings to Landscape Architect for Owner's approval.
- Contractor shall co-ordinate with all trades to provide complete working systems.
- Drawings of existing facilities are, in general, diagrammatic. Exact locations shall be determined by the Contractor from field measurements taken by Contractor's personnel. Actual arrangement of the work shall follow locations shown on the drawings within the constraints of existing equipment and construction. Dimensions shall govern these drawings and they are not to be scaled. Any scales on drawings are only for the Contractor's convenience. Drawing and notes to drawings are correlative and have equal authority and priority. Should there be discrepancies in themselves or between them, Contractor shall base bid pricing on the most expensive combination of quality and/or quantity of the work indicated. In the event of discrepancies, the appropriate method of performing the work and/or items to be incorporated into the scope of the work shall be determined by the appropriate design professional (eg Landscape Architect, Architect, Engineer)
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- All work described by these documents shall be performed in full accordance with all applicable codes and standards.
- All materials, finishes, manufactured items, and equipment shall be installed in full accordance with the supplier's or manufacturer's written recommendations or these documents, whichever is more stringent.
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- All workmanship, material, and equipment shall be guaranteed for one year from date of Owner acceptance. Any failure or deterioration within this period shall be corrected by the contractor at the contractor's expense.
- Coordinate landscape drawings with architect/engineer and all other consultant drawings.

**LEGEND**

- ↑ 219.33' EXISTING ELEVATION
- ↑ 219.33' PROPOSED ELEVATION
- ↑ TW / 222.25' PROPOSED TOP OF WALL
- ↑ BW / 223.81' PROPOSED BOTTOM OF WALL
- ↑ TC / 223.81' PROPOSED TOP OF CURB
- ↑ BC / 223.81' PROPOSED BOTTOM OF CURB
- PROPERTY LINE
- +—+— AREA DRAIN
- +—+— TRENCH DRAIN
- ASPHALT
- CONCRETE
- FIBAR
- SAND
- STONEWORK
- SLABS/TILES
- WOOD DECK
- GRAVEL
- GRASS

| No. | Date      | Issue/Revision Notes |
|-----|-----------|----------------------|
| A   | 1/9/2023  | FOR COORDINATION     |
| B   | 1/11/2023 | SUBMIT FOR BP        |

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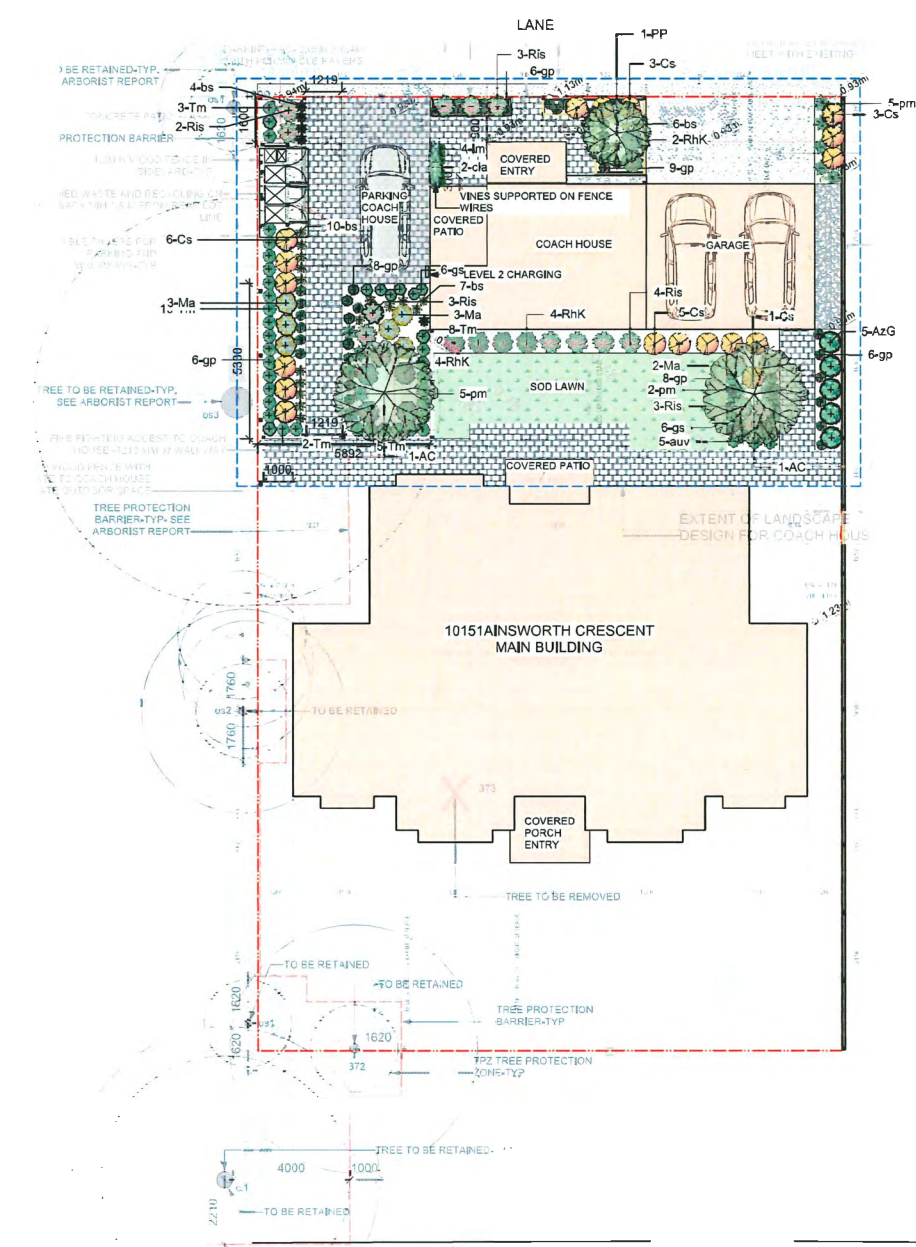
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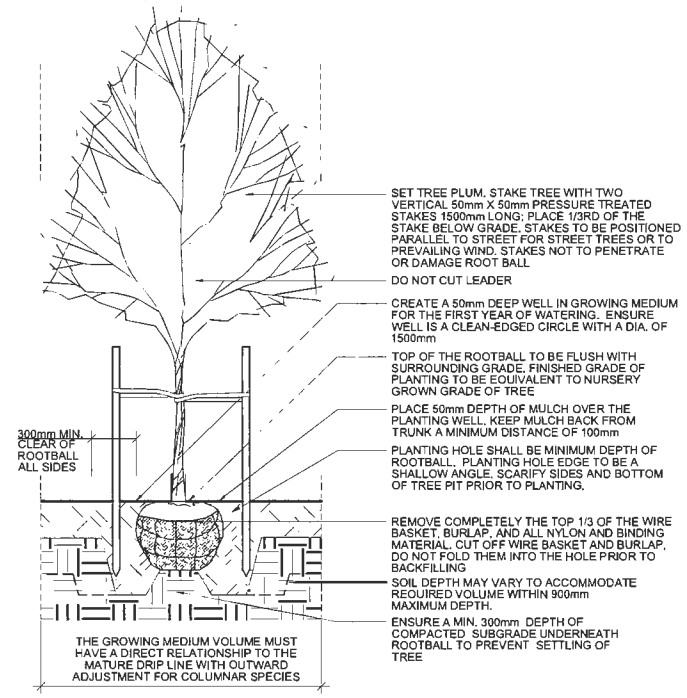
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 RICHMOND, BC

LAYOUT

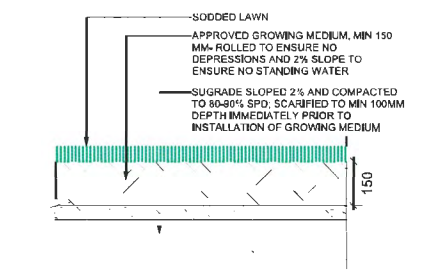
|                                  |                       |
|----------------------------------|-----------------------|
| Prepared BY<br>STEVE WONG        | Project ID<br>2222-36 |
| Checked BY<br>SW                 | Job<br>AS NOTED       |
| Date<br>DECEMBER 2022            | Draw No.<br>L-1       |
| Client Name<br>AINS WORTH v1.dwg | Sheet<br>5            |



6 PLANTING PLAN  
Scale: 1:100



1 TREE PLANTING DETAIL  
Scale: N/A

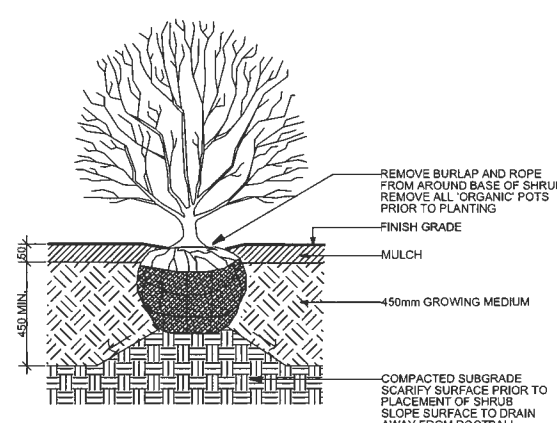


2 SODDED LAWN  
Scale: 1:10

PLANT LIST 10151 AINSWORTH CR., RMD

| Botanical Name  | Common Name           | No. | Size   | Spacing  | Sym |
|---|-----------------------|-----|--------|----------|-----|
| <b>TREES</b>  |                       |     |        |          |     |
| <i>Acer circinatum</i>                                | Wine maple            | 2   | 7 cm   | as shown | AC  |
| <i>Parrotia persica</i> 'Spiré'                       | Parrotia              | 1   | 7 cm   | as shown | PP  |
| <b>SHRUBS</b>   |                       |     |        |          |     |
| <i>Azalea</i> 'Girard Fuchsia'                        | Azalea                | 5   | #2 pot | as shown | AzG |
| <i>Cornus stolonifera</i>                             | Redtwig dogwood       | 18  | #2 pot | as shown | Cs  |
| <i>Mahonia aquifolium</i>                             | Oregon grape          | 8   | #2 pot | as shown | Ma  |
| <i>Rhododendron</i> 'Kalinka'                         | Rhododendron          | 10  | #2 pot | as shown | RhK |
| <i>Ribes sanguinulum</i>                              | Red flowering currant | 15  | #2 pot | as shown | Ris |
| <i>Taxus media</i> 'Hilli'                            | Yew                   | 34  | 1.2 m  | as shown | Tm  |
| <b>VINES, GROUND COVERS AND HERBACEOUS PERENNIALS</b> |                       |     |        |          |     |
| <i>Arctostaphylos uva-ursi</i>                        | Kinnikinnick          | 5   | #1 pot | as shown | auv |
| <i>Blechnum spicant</i>                               | Deer fern             | 27  | #1 pot | as shown | bs  |
| <i>Clematis armandii</i>                              | Evergreen clematis    | 2   | #1 pot | as shown | cl  |
| <i>Gaultheria procumbens</i>                          | Wintergreen           | 43  | #1 pot | as shown | gp  |
| <i>Gaultheria shallon</i>                             | Salal                 | 12  | #1 pot | as shown | gs  |
| <i>Liriope muscari</i> 'Big Blue'                     | Lily turf             | 4   | #1 pot | as shown | lm  |
| <i>Polystichum munifolium</i>                         | Western sword fern    | 12  | #1 pot | as shown | pm  |

Contractor to be certified by BCLNA  
All plants and installation to meet or exceed latest Canadian Landscape standard (CLS) #1 standards  
Contractor to verify numbers and placement of plants prior to installation



- NOTES:  
1. SHRUB TO BE PLANTED WITH ELEVATION OF TOP OF ROOTBALL OR POT LEVEL WITH FINISH GRADE OF GROWING MEDIUM.  
2. COMPOSTED BARK MULCH AT 50mm DEPTH TO BE KEPT AT LEAST 50mm AWAY FROM STEMS OF SHRUB.  
3. PLANTING PIT MUST BE FREE DRAINING

3 SHRUB PLANTING DETAIL  
Scale: N/A

**IRRIGATION:** Supply and installation required for a complete automatic, inground irrigation system to provide supplemental water efficiently and uniformly. All components to be new, and includes all pipes, sleeves, valves, in-ground irrigation boxes, sprinkler heads, solenoid wires, controller and rain sensor. Hose bibs and quick couplers to be on their separate zone. Controller to have 2 extra zones for future expansion and if installed outside, to have controller and wiring secured in a lockable, weatherproof metal box. Irrigation components to be Rainbird, Toro or Hunter. Irrigation design and installation per Canadian Landscape Standards, latest edition. Design to be completed by a qualified designer/contractor with IIABC. Shop drawings for the irrigation design are to be provided by contractor and to be approved by the landscape architect prior to installation. Contractor is responsible for providing a water service line and connecting irrigation system to water service line complete with backflow preventor, pressure reducing valve and isolation valves. Contractor to adjust irrigation controller, sprinkler heads and commission system in addition to providing as-built drawings and a one year warranty.

**GENERAL PLANTING NOTES**

- GROWING MEDIUM:** In accordance with CLS standards, latest edition. For Turf Areas: Level 1H (High Traffic Lawn Areas), containing by weight: 70-90% sand, maximum 25% fines (max 20% clay), 3-5% organic matter, with pH between 6-7; For Planting Areas: Level 1P (Planting Areas), containing by weight: 40-80% sand, maximum 25% fines (max 20% clay), 10-20% organic matter, with pH between 4.5-6.5. Supplied by Veratec Engineered Products (www.veratecgroup.com), DENBOW (www.denbow.com), SUMAS GRO MEDIA (www.sumasgromedia.com) or equivalent; 6"min for lawn areas on grade, 18" min for planted areas on grade, over scarified base, or as otherwise specified. A current representative soil analysis is to be done by Pacific Soil Analysis, Richmond to confirm soil sample meets specifications prior to shipping. If after shipping the quality of the soil is in question, further sampling and testing by Pacific Soil Analysis will be required at contractor's expense. If it is determined that the soil does not meet CLS Specifications, the soil is to be removed at contractor's expense. Contact information for Pacific Soil Analysis is: #5-11720 Voyageur Way, Richmond, BC V6X 3G9; Phone (604) 273-8226.
- MULCH:** To be composted fir bark, having dark brown, fine texture and 1/2" minus, applied evenly at a 2" depth over plant beds. Available from Augustine Soil and Mulch (604-465-5193) or equivalent.
- PLANT MATERIAL:** All plant material are to meet current Canadian Landscape Standard (CLS) #1 and installed according to current CLS standards by qualified contractor. Plant search is generally throughout the Lower Mainland except as indicated otherwise. Any plant substitutions must be approved by Landscape Architect.
- IRRIGATION:** Supply and installation required for a complete automatic, inground irrigation system to provide supplemental water efficiently and uniformly. All components to be new, and includes all pipes, sleeves, valves, in-ground irrigation boxes, sprinkler heads, solenoid wires, controller and rain sensor. Controller to have 2 extra zones for future expansion and if installed outside, to have controller and wiring secured in a lockable, weatherproof metal box. Irrigation components to be Rainbird, Toro or Hunter. Irrigation design and installation per Canadian Landscape Standards, latest edition. Design to be completed by a qualified designer/contractor with IIABC. Shop drawings for the irrigation design are to be provided by contractor and to be approved by the landscape architect prior to installation. Contractor is responsible for providing water service and connecting irrigation system to water service complete with backflow preventor, pressure reducing valve and isolation valves. Contractor to adjust irrigation controller, sprinkler heads and commission system in addition to providing as-built drawings and a one year warranty.

| No. | Date      | Issue/Revision Notes |
|-----|-----------|----------------------|
| A   | 1/8/2023  | FOR COORDINATION     |
| B   | 1/11/2023 | SUBMIT FOR BP        |

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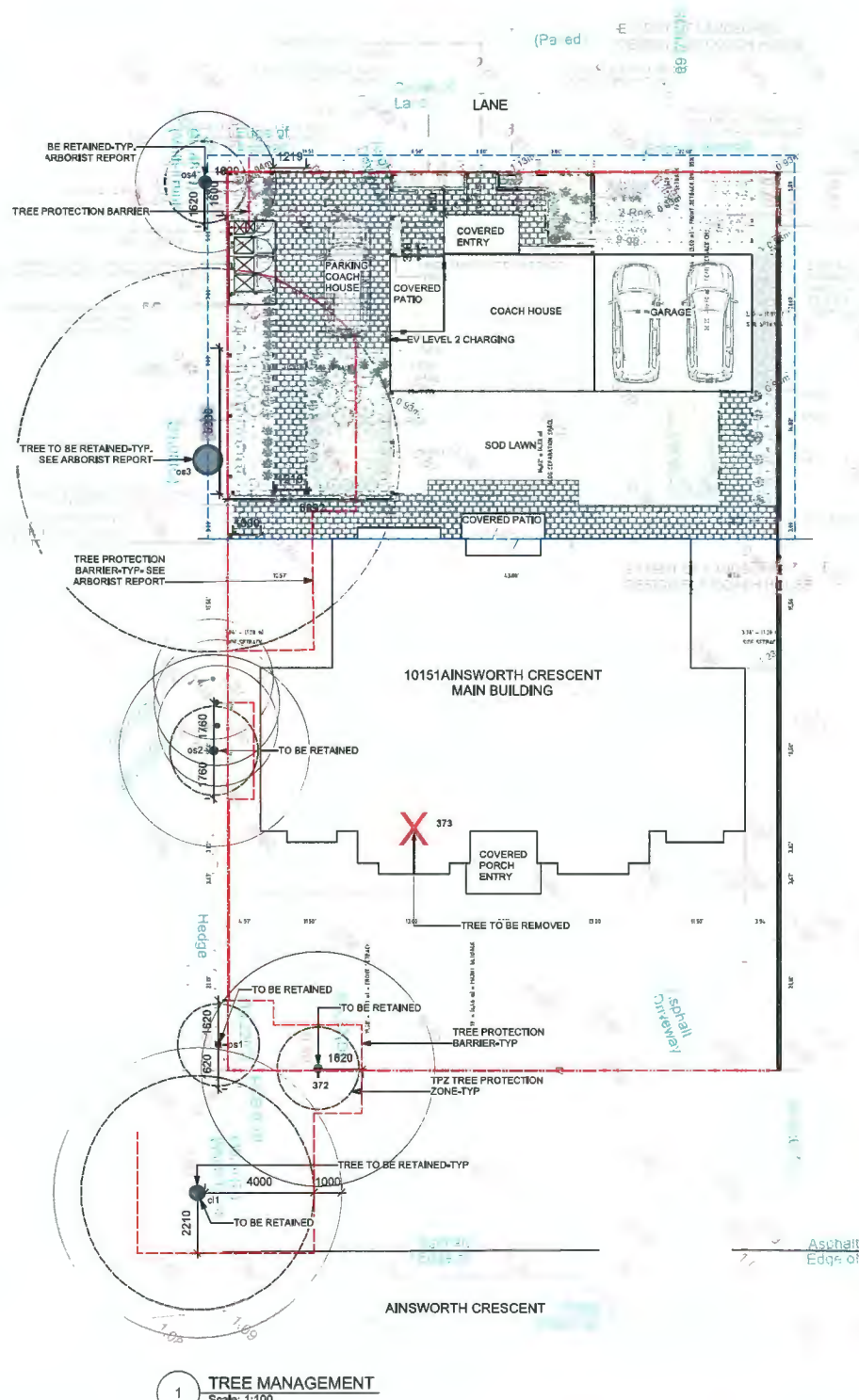
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HARK RANA

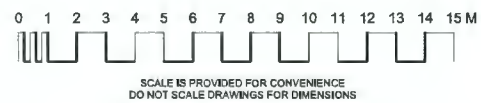
RANA RESIDENCE  
10151 AINSWORTH CRESCENT  
RICHMOND, BC

PLANTING PLAN

|                                   |                        |
|-----------------------------------|------------------------|
| Prepared By<br>STEVE WONG         | Project No.<br>2022-36 |
| Client<br>SW                      | Notes<br>AS NOTED      |
| Date<br>DECEMBER 2022             | Sheet No.<br>L-2       |
| City/Region<br>AINSWORTH v1.1.vwx | Total Sheets<br>5      |



1 TREE MANAGEMENT  
Scale: 1:100

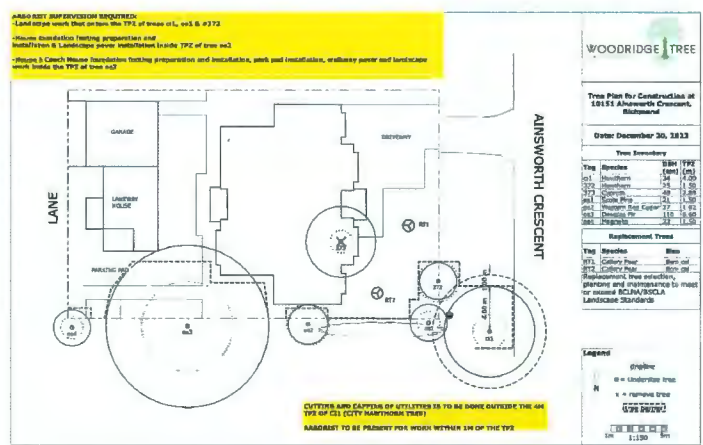


SCALE IS PROVIDED FOR CONVENIENCE  
DO NOT SCALE DRAWINGS FOR DIMENSIONS

Tree Inventory and Assessment

- DBH - Diameter at 1.4m height measured in centimeters
  - on trees with multiple stems the 3 largest sections measured at 1.4m are combined to make up the total.
- critical root zone (TPZ) = dbh x 6 unless otherwise specified
- LCR = Live crown ratio, percentage of live crown remaining
- ci - City owned tree
- CR - Crown radius
- os - off site tree

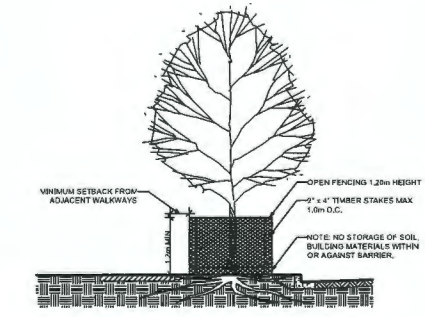
| ID  | Common Name       | Botanical Name               | DBH (cm)                | LCR (%) | CR (m) | Specialty & Comments   | Action   | TPZ (m) |
|-----|-------------------|------------------------------|-------------------------|---------|--------|--|--|---------|
| ci1 | Hawthorn          | <i>Crataegus laevigata</i>   | 12+<br>12+<br>10+<br>34 | 70      | 1.5    | Multi-stem tree from the base. The canopy begins around 2.4m, and has some small deadwood. City requires a 4m protection zone area for the tree. Cutting and capping of services is to be carried out outside the 4m TPZ.  | Retain<br>Install a tree barrier 4.00m from the tree<br>Arborist to supervise any work within 1m of the TPZ  | 4.00    |
| 372 | Hawthorn          | <i>Crataegus laevigata</i>   | 25                      | 20      | 2      | Single stem, splitting to multiple codominant leaders around 2m with bark indentations. The tree base bulges. The canopy has significant deadwood. Proposed building does not conflict with the tree location. Landscape work will enter the TPZ of the tree   | Retain<br>Install a tree barrier 1.50m from the tree<br>Arborist supervision recommended for landscape work that enters the TPZ  | 1.50    |
| 373 | Cypress           | <i>Chamaecyparis spp.</i>    | 18+<br>30+<br>48        | 90      | 1      | Multi-stem tree from 0.5m. Tree is 0.5m from the existing house. Canopy has light deadwood on the interior. The tree location conflicts with the proposed building footprint   | Remove   | 2.88    |
| os1 | Scots Pine        | <i>Pinus sylvestris</i>      | 21                      | 20      | 1      | Single stem with multiple codominant leaders beginning around 2m. The canopy is around 3m and concentrated at the tree top. Proposed building does not conflict with the tree location. Landscape work will enter the TPZ of the tree  | Retain<br>Install a tree barrier 1.50m from the tree<br>Arborist supervision recommended for landscape work that enters the TPZ  | 1.50    |
| os2 | Western Red Cedar | <i>Thuja plicata</i>         | 27                      | 70      | 2      | Single stem, splitting to multiple codominant leaders around 3m with bark indentations. Canopy has been pruned back from the subject's house. Tree is along a hedge row, and the canopy has light deadwood on the interior. Landscape paver installation will enter the TPZ of the tree. House foundation preparation and installation will enter the TPZ. | Retain<br>Install a tree barrier 1.50m from the tree<br>Arborist supervision recommended for landscape work & house footing preparation and installation that enters the TPZ                                     | 1.50    |
| os3 | Douglas Fir       | <i>Pseudotsuga menziesii</i> | 110                     | 70      | 4      | Single stem, splitting to multiple codominant leaders around 4-5m with bark indentations. The canopy begins around 5-6m and has some light deadwood on the interior. The tree sits in a slightly raised garden bed. Installation of landscape work (soil, pavers etc.), house foundation, coach house, park pad installation enters the TPZ of the tree.   | Retain<br>Install a tree barrier 6.50m from the tree<br>Arborist supervision recommended for house & coach house footing preparation and installation, park pad installation, walkway pavers and landscape work. | 6.50    |
| os4 | Magnolia          | <i>Magnolia spp.</i>         | 9+<br>7+<br>7+<br>23    | 60      | 1      | Multi-stem tree from the base. Tree has been previously topped with regenerated leaders. The canopy has some small deadwood. Garbage and recycling area installation will enter the TPZ of the tree  | Retain<br>Install a tree barrier 1.50m from the tree<br>Arborist supervision recommended for garbage and recycling area installation and landscaping that enters the TPZ   | 1.50    |



2 DIAGRAM FROM ARBORIST REPORT  
Scale: NTS

GENERAL TREE NOTES

- Any permitted tree removal(s) must be performed by a qualified professional.
- No grade changes are to occur within the critical root zones of any retained trees. Any exposed roots from lines of excavation must be covered with burlap and then poly plastic in an effort to prevent desiccation of exposed roots; this root curtain must be removed prior to backfilling. Trees must be adequately watered during the entire construction process.
- The removal of existing organics within the critical root zones of retained trees must be performed manually, when installing new plant material within the critical root zones of retained trees, if large roots (1.5' diameter and larger) are encountered, then new plantings must be shifted to accommodate. No more than 3" of additional soil for new landscaping may be added within any critical root zone.
- Any excavation work or work within the protection zone of retained trees requires the supervision of a certified arborist. This includes, but is not limited to; demolition, the installation of any permeable or impermeable surfaces (concrete, asphalt, pavers, etc.), installation of permanent or temporary services (gas, sewer, storm, sanitary, communication, electrical, irrigation, etc.), during the installation of patios, driveways, or any hardscape, during the installation of footings for fences, walls, decorative walls, retaining walls, decks, and deck footings.
- Construction materials must not be stored within the tree protection zone (TPZ) of trees to be retained, and TPZ fencing to remain intact for the entire construction process. Signage must be clearly posted on each side of the barrier indicating 'Tree protection zone-Do not enter or modify'. Contact your project arborist for any TPZ barrier issues.
- Refer to arborist report and drawing, Prepared by Davey resource group, Dated January 31, 2022. Refer to and coordinate with other project drawings.



SCHEDULE A - TREE PROTECTION BARRIER

| TRUNK DIAMETER (CM) | MINIMUM SETBACK FROM TRUNK (METERS) |
|---------------------|-------------------------------------|
| 10                  | 1.2                                 |
| 15                  | 1.5                                 |
| 20                  | 2.0                                 |
| 25                  | 2.5                                 |
| 30                  | 3.0                                 |
| 35                  | 3.5                                 |
| 40                  | 4.0                                 |
| 45                  | 4.5                                 |
| 50                  | 5.0                                 |
| 55                  | 5.5                                 |
| 60                  | 6.0                                 |
| 65                  | 6.5                                 |
| 70                  | 7.0                                 |
| 75                  | 7.5                                 |
| 80                  | 8.0                                 |
| 85                  | 8.5                                 |
| 90                  | 9.0                                 |
| 95                  | 9.5                                 |
| 100                 | 10.0                                |

NOTE: TREE PROTECTION BARRIERS MUST BE AT LEAST 1.20m IN HEIGHT AND CONSTRUCTED OF EITHER SNOW FENCING SECURELY FASTENED TO 2x4 TIMBER STAKES, OR METAL STAKES SPACED NO FURTHER THAN 1.00m APART.

3 TREE PROTECTION BARRIER  
Scale: N/A

ONSITE TREE SUMMARY

TREES REMOVED 1  
TREES PLANTED 3

REFER TO ARBORIST REPORT BY WOODBRIDGE TREE CONSULTING ARBORIST, UPDATED DEC. 20, 2022

| No. | Date      | Issue/Revision Notes |
|-----|-----------|----------------------|
| A   | 1/8/2023  | FOR COORDINATION     |
| B   | 1/11/2023 | SUBMIT FOR BP        |

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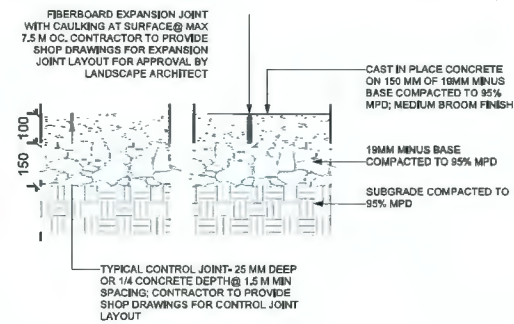
SW LANDSCAPE ARCHITECT  
919 MELBOURNE AVENUE, NORTH VANCOUVER  
www.swlandscapearchitect.com

HARK RANA

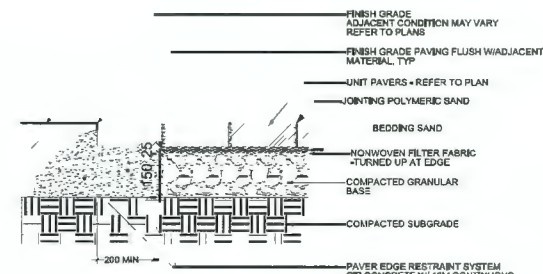
RANA RESIDENCE  
10151 AINSWORTH CRESCENT  
RICHMOND, BC

TREE MANAGEMENT

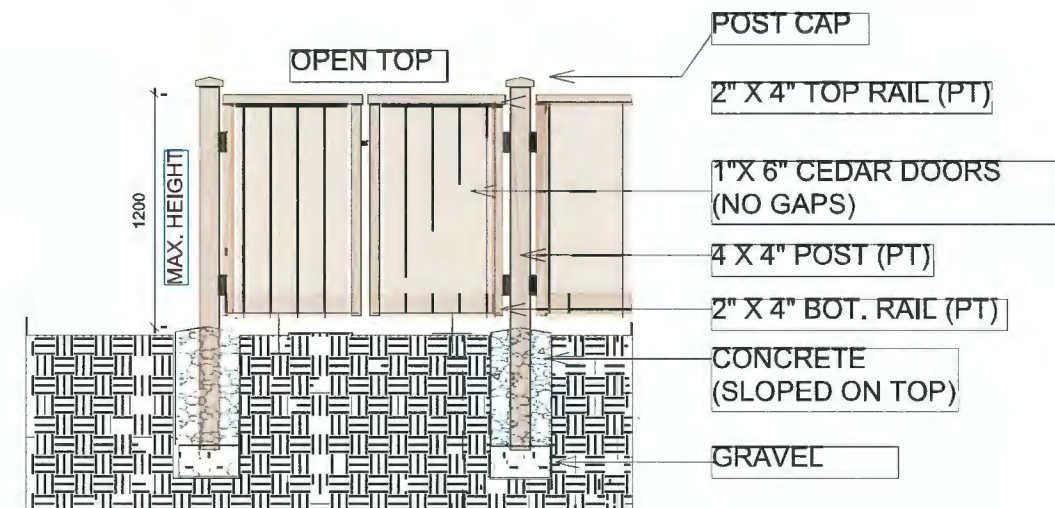
|                                    |                       |
|------------------------------------|-----------------------|
| Prepared by<br>STEVE WONG          | Project ID<br>2022-36 |
| Drawn by<br>SW                     | Job<br>AS NOTED       |
| Date<br>DECEMBER 2022              | Sheet No.<br>L-3      |
| City/Region<br>AINS WORTH v1.1.vwx | of<br>5               |



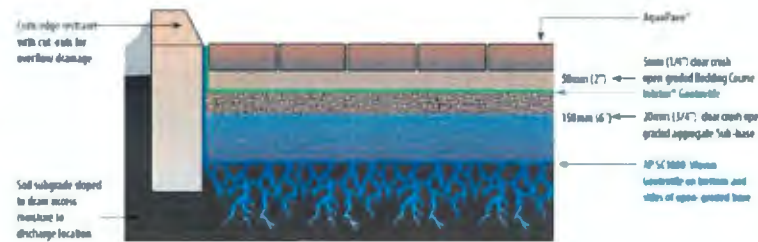
1 CIP FLATWORK  
Scale: 1:10



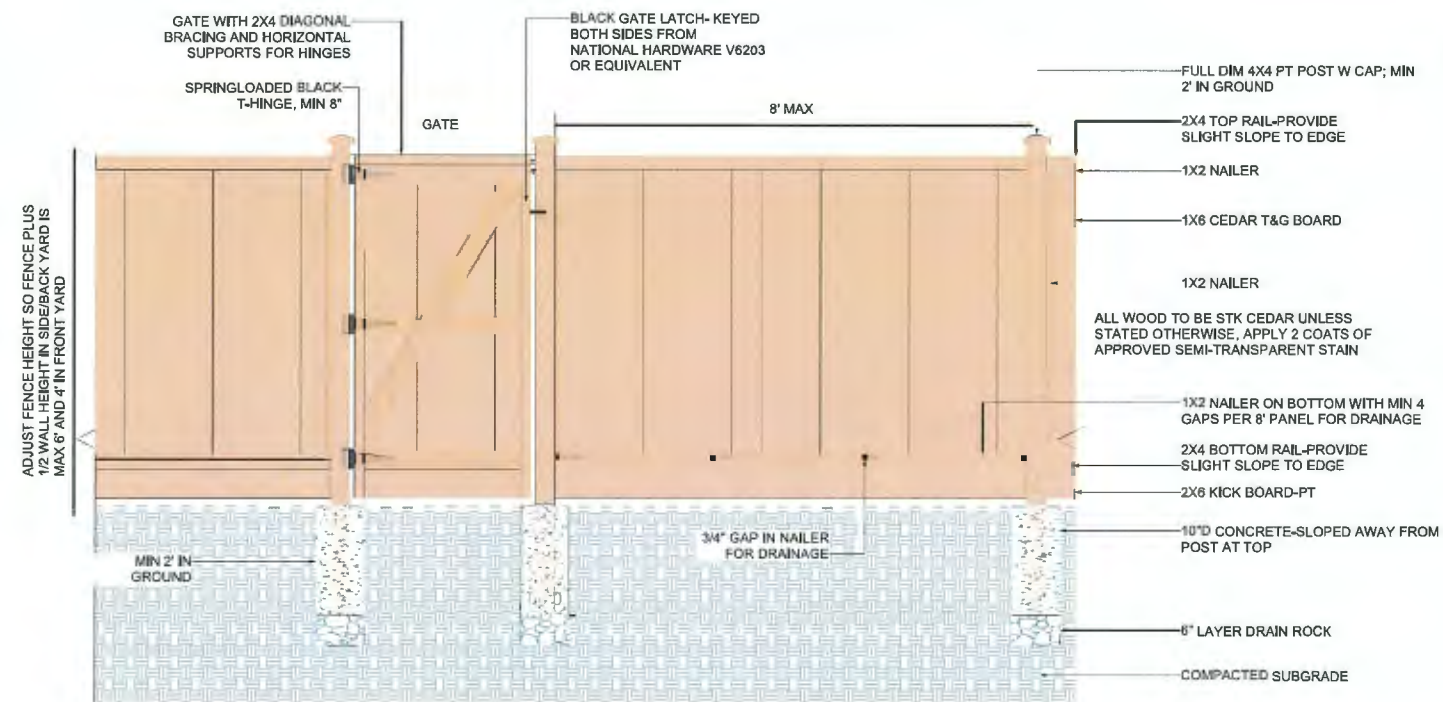
2 PATIO SLAB EDGE ON GRADE  
Scale: 1:10



5 REFUSE/ORGANICS SURROUND  
Scale: 1:15



3 PERMEABLE PAVERS- AQUAPAVE  
Scale: NTS



4 WOOD FENCE ON GRADE  
Scale: 1:15

| No. | Date      | Issue/Revision Notes |
|-----|-----------|----------------------|
| A   | 1/8/2023  | FOR COORDINATION     |
| B   | 1/11/2023 | SUBMIT FOR BP        |

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Client: HARK RANA

Project Title: RANA RESIDENCE  
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RICHMOND, BC

Sheet Title: DETAILS

|                             |                     |
|-----------------------------|---------------------|
| Prepared by: STEVE WONG     | Project ID: 2022-36 |
| Drawn by: SW                | Scale: AS NOTED     |
| Date: DECEMBER 2022         | Sheet No: L-4       |
| Client: AINSWORTH v1_LV.WXG | Page: 5             |