RECOMMENDATIONS:

That Committee of Council recommend to Council that:

- The zoning of 1884, 1904, 1912, 1920, and 1930 Harbour Street; 1887, 1893, and 1911 Prince Street; and 1155 Pitt River Road be amended from RS1 (Residential Small Scale 1) to Rth3 (Residential Townhouse 3).
- 2. Prior to adoption of the amending bylaw, the following conditions be met to the satisfaction of the Director of Development Services:
 - a. Installation of tree protection fencing for retained trees;
 - b. Registration of legal agreements to ensure buildings are designed to incorporate recommendations of the Acoustical Evaluation and for the construction of a sound attenuation fence along Mary Hill Road;
 - c. Completion of road closure and sale of Prince Street;
 - d. Consolidation of the site and dedication of corner cuts; and
 - e. Submission of plans, fees and securities for off-site works and services including relocation of the existing Prince Street sanitary main and installation of flashing pedestrian beacons and streetlighting at Pitt River Road and Harbour Street crosswalks.

PREVIOUS COUNCIL/COMMITTEE ACTION

February 23, 2021 – Council granted Third Reading to Official Community Plan and Zoning Bylaw amendments to enable a mixed-use townhouse/apartment and commercial development on the site. *This amending bylaw expired on February 23, 2023.*

REPORT SUMMARY

This report provides for consideration of an application to amend the zoning of 1884, 1904, 1912, 1920, and 1930 Harbour Street; 1887, 1893, and 1911 Prince Street; and 1155 Pitt Harbour Road from RS1 (Residential Small Scale 1) to Rth3 (Residential Townhouse 3) to permit the development of a 43-unit townhouse development. The proposed change in land use is in keeping with the sites Residential Townhouse land use designation and policies of the Official Community Plan and the development is designed to generally comply with the regulations of the proposed RTh3 zone. The report recommends a set of conditions be met as part of the rezoning approval.

BACKGROUND

Proposal: The applicant has proposed to rezone nine RS1 (Residential Small Scale 1) properties at the juncture of Harbour Street, Pitt River Road and Mary Hill Bypass to Rth3 (Residential Townhouse 3) to enable the development of a 43-unit townhouse project.



The site was previously subject to an Official Community Plan and Zoning Bylaw amendment application to permit construction of a mixed-use development containing ground floor commercial space, low rise apartment buildings, and ground-oriented townhomes. This application received third reading in 2021. The site subsequently sold to new owners who determined they wished to proceed with a townhouse development.

Context: The proposed 9,595 m² (103,279.7 ft²) site is located to the east Pitt River Road between Harbour Street and the Mary Hill Bypass. The nine lots (1884, 1904, 1912, 1920, and 1930 Harbour Street; 1887, 1893, and 1911 Prince Street; and 1155 Pitt Harbour Road) have been vacant for a number of years and are in a naturalized state. The site slopes downward north to south from Harbour Street to the Mary Hill Bypass. 1155 Pitt River Road and 1911 and 1893 Prince Street are located within the floodplain and have a minimum flood construction level of 5.15m elevation.



Location Map

Surrounding land uses include houses along the north edge of Harbour Street, a gas station and Marian Kroeker Park to the west of Pitt River Road, and existing townhouse complexes east of the site.

Policy and Regulations:

OCP Land Use Designation and Policies: The land use designation in the Official Community Plan (OCP) for the site is Townhouse Residential and the properties are currently zoned RS1. OCP housing policies allow for Council consideration of rezoning to a townhouse zone, including the Residential Townhouse 3 (RTh3) zone, and encourage a variety of housing types to accommodate the needs of Port Coquitlam's population and demand for multi-family housing.



Report To: Department: Approved by: Meeting Date:

Zoning: The proposed Residential Townhouse 3 (RTh3) zone is intended to accommodate and regulate attached townhouses accessed from an internal driveway with a maximum permit density of one townhouse per 220m² of land area.

Housing Needs Report: The 2022 Housing Needs Report identified the need for additional groundoriented dwelling units with three or more bedrooms.

Development Permit: Development of the site for townhouse uses would be subject to the Intensive Residential and Environmental Conservation development permit area designations of the OCP. The Intensive Residential objectives and design guidelines promote coordination of siting and building design; use of high-quality cladding materials; consideration of the relationship between buildings and open areas; and the overall visual impact of buildings and landscaping. The Environmental Conservation objectives and guidelines encourage sustainable development and building design; efficient use of energy, water and other resources; and reduction of waste and pollution.

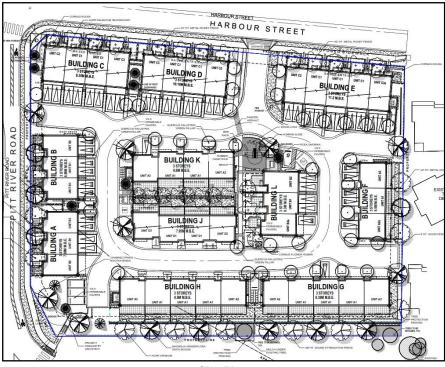
Archeology: The BC Archeology Branch has identified the site as being in proximity to a known archaeological site. The applicant has advised they have met archaeological assessment and permit requirements from the Branch; confirmation from the Branch will be required prior to issuance of a Building Permit.

Project Description: The proposal includes 43 3-storey townhouse units within 11 buildings. The unit mix included 21 3-bedroom and 27 4-bedroom units, ranging in size from 141.5 m² (1,524 ft²) to 180.6 m² (1,945 t²).

The development is designed with townhomes fronting onto both Pitt River Road and Harbour Street; these units will have pedestrian entrances accessed from the sidewalk, with small landscaped entries and rooftop decks oriented south. The units along the Mary Hill Bypass are designed with rear entry off an internal driveway; these units have a small back yard (separated from the bypass with a sound attenuating fence) and an enclosed balcony on the second level. Three units face the adjoining townhouse development; these units have small patios and second floor balconies with a fence and trees to help provide for privacy. Three buildings are clustered within the interior of the site, with entrances from the interior driveway.

Pedestrian access to the interior of the site is provided by a series of walkways from surrounding roads. Vehicle access to the site is provided from Harbour Street with a circular driveway allowing circulation throughout the site. Each townhouse unit has an attached 2-car garage with some units having additional one or two parking spaces on their driveway aprons. An accessible parking stall in located near the entrance to the site and visitor parking is provided between units and a cluster of three spaces located near the southwest corner of the site.





Site Plan

Project Profile

Bylaw Regulation	Requirement	Proposed	Variance
Minimum lot area	1,000m ²	9,582.5 m ²	-
Density (units per area)	1 unit per 220m ² (43)	43 units	-
Building Lot Coverage	40%	39.2%	-
Front setback (Harbour Street)	7.5 m	3.1 m	4.4 m
Rear setback (Mary Hill Bypass)	7.5 m	6.6 m	0.9 m
Interior side setback (1872	1.8/3.5 m (window to a	1.8/3.5 m	-
Harbour Street)	habitable roof)		
Exterior side setback (Pitt River	3.5 m	3.5 m	-
Road)			
Useable open space	30 m ² per unit	46.3 m ² per unit	-
Family friendly units	25% (10 units)	100% (43)	-
Building height	10.5 m	9.3 m – 11.56 m	0.92 m – 1.56 m
Parking:	-	-	-
Residential Off-street spaces	2 spaces per unit (86)	134	-
Visitor	1 space per 5 units (9)	7 spaces	2 spaces
Accessible	1 per 100 stalls or part (1)	1 space	-
Small car	25% of provided (33)	16 spaces	-



Report To: Department: Approved by: Meeting Date:

The townhouses are designed in a contemporary style that incorporates flat roofs and geometric massing. The material pallete is a mix of cementitious panels and horizontal siding in white, greys, and wood tones, with black trim. The design provides an articulated façade with variable setbacks and vertical expression.



Pitt River Road Elevation

View from Pitt River Road / Mary Hill Bypass

The applicant confirm the design of the buildings would incorporate recommendations of an acoustical consultant (see Attachment 2) to ensure the townhouses meet the Canadian Mortgage and Housing Corporation's (CMHC) maximum acceptable road noise levels for dwellings. These recommendations include upgraded window and exterior door assemblies and double layers of drywall. In addition, the applicants have included a sound attenuation fence along the Mary Hill Bypass as to the acoustical consultant recommended by the Ministry of Transportation and Infrastructure (MOTI).

The proposal includes a landscape plan containing a variety of trees, shrubs, grasses, and ground cover plants intended to beautify and provide screening between adjacent uses and soften the edges of the development. This includes a line of magnolias and paperbark maple trees and the sound attenuating fence along the Mary Hill Bypass. The landscape plan also includes a playground, benches and a picnic table (located to the north of Building L) as on-site amenities for the future residents.

The project also includes a number of measures to conform with the requirements of the Environmental Conservation DPA, incorporating a high level of mechanical and envelope efficiency in line with the City's Step Code 3 requirements. Thermally broken window frames and high-performance glazing, along with operable windows allowing for cross-ventilation, are included. The on-site landscaping is designed to promote opportunities for passive cooling. Water conservation is promoted through low-flow fixtures and drought tolerant planting. A rain sensor is proposed to be included with the irrigation system.



A full description of the building and landscape design and environmental conservation measures will would be provided at development permit stage if the rezoning proceeds.

Trees: The project arborist report (Attachment 3) identifies 86 on-site trees, 80 of which are proposed for removal. The majority of these trees either conflict with the locations of the proposed buildings, pathways, driveways, and other site improvements, or are otherwise in poor condition or dead. Two trees, a black walnut and bitter cherry, along south side of the site along Mary Hill Bypass are to be retained, along with four trees within the municipal boulevard/MOTI right-of-way. In accordance with the Tree bylaw, 91 replacement trees are required. The landscape plans include 98 replacement trees.

Variance Requests: To achieve the proposed design, the applicant is requesting several variances. Shorter setbacks along Harbour Street and Mary Hill Bypass are requested so that the site has enough depth for units along Harbour Street to have both garage and parking pads (providing for. increased off-street resident parking). A reduction in two visitor parking spaces requested in order to provide space for a larger, more functional play space; the applicants note the additional off-street resident spaces will help off-set visitor demand to the site.

Variances to the maximum townhouse height requirements (ranging from 0.92m to 1.56m) are requested for several of the buildings. The applicants note the variances are due to accommodate the sloping site. The applicants further note the screening being proposed along the east side of the site will help mitigate the requested height variance and, due to the site sloping downward from Harbour Street, the three buildings located along the south side of Harbour Street do not require variances.

All requested variances would be confirmed through issuance of a development permit.

Off-site Works and Services: The applicant is required to provide a number of off-site works and services in accordance with the Subdivision Servicing Bylaw. Road and frontage improvements, including sidewalk, boulevard landscaping, drainage, and street lighting are required along Pitt River Road and Harbour Street. Dual pedestrian controlled flashing beacons at the Pitt River Road/Harbour Street intersection are also required to create safer pedestrian crossings similar to other intersections along the Pitt River Road corridor. The proposed sidewalks and RRFBs are consistent with the draft 2024 Master Transportation Plan. A 5m x 5m corner-cut road dedication is required to accommodate the off-site infrastructure.

Required utility works include the capping off and abandonment of existing water, sanitary, and storm services; replacement of the Pitt River Road water main and provision of a fire hydrant on Harbour Street at the entrance to the development; and rerouting of the existing sanitary main within Prince Street should Prince Street be closed and sold. This Prince Street sanitary main provides service to



the neighbouring developments east of the site. Storm service and third-party utilities are also required.

A traffic impact assessment provided by the applicant noted the existing road network can accommodate the increased traffic demands without requiring any significant upgrades.

Road Closure and Land Purchase: The applicant has requested to purchase Prince Street, an unopened road, and incorporate that land into the proposed development. The inclusion of Prince Street in the proposal would increase the site area by approximately 1,350 m². In accordance with normal process, the road closure, purchase and sale would be completed prior to bylaw adoption.



Prince Street

DISCUSSION

The OCP establishes how the community is intended to develop, designates lands for uses in keeping with these policies, and provides guidance on the types of housing the City should encourage. The proposed rezoning aligns with the site's OCP townhouse land use designation and policies to encourage housing choice and options and reflects findings of the Housing Needs Report which recommends the construction of more ground and family-oriented housing. Staff note that recent Federal and Provincial direction is for municipalities to enable construction of more "missing middle" or ground-oriented housing.

Staff note the proposed project fits well into the existing form and character of the neighbourhood and is designed to provide for an attractive lively street presence. The development exceeds the City's requirements for family friendly units and the required number of resident parking space, and the requested variances are be minor and not to have a detrimental effect on the overall form, character or function of the development. Offsite works will support the development and include improvements to the pedestrian network in the area.



Report To: Department: Approved by: Meeting Date:

Staff recommend that Committee of Council forward the rezoning application to Council with a recommendation to support consideration of the rezoning with specified conditions to ensure tree protection, registration of legal agreements to ensure adherence to acoustical measures, closure and purchase of Prince Street, and all required off-site works.

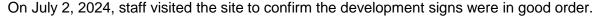
FINANCIAL IMPLICATIONS

It is anticipated that in addition to revenue from the sale of the lane, there will be an increase in property tax and utility revenue with the addition of the new development.

PUBLIC ENGAGEMENT

The applicant hosted an open house on in July 2023 at the TriCity Church; the meeting was attended by 17 members of the community and comment forms were collected from eight attendees. The comments received were generally supportive of the proposal (see Attachment 5). A few concerns were raised about the proposal which included a desire for commercial space within the development, traffic issues resulting from a potential access to the site off of Pitt River, and pedestrian safety at the Pitt River Road/Harbour crossings.

Several verbal and written submission were received by staff noting a desire to see commercial space within the new development (concern that the area does not currently have a grocery store within walking distance), concerns regarding sufficient parking and rooftop decks proposed for the buildings fronting Harbour Street.









Report To: Department: Approved by: Meeting Date:

<u>OPTIONS</u> (\checkmark = Staff Recommendation)

#	Description	
1	Recommend to Council that the zoning of 1884, 1904, 1912, 1920, and 1930 Harbour Street; 1887, 1893, and 1911 Prince Street; and 1155 Pitt Harbour Road be amended from RS1 (Residential Small Scale 1) to Rth3 (Residential Townhouse 3) and that specified conditions be met prior to adoption of the rezoning bylaw.	
2	Request additional information or amendments to the application to address specfied issues prior to making a decision on the application.	
3	Recommend to Council that the rezoning application be refused.	

ATTACHMENTS

Attachment 1: Architectural and Landscape Drawings

Attachment 2: Acoustical Evaluation, Brown Strachan Associates

Attachment 3: Arborist Report. VDZ+A

Attachment 4: Public Information Meeting Summary, Comments Forms, and Emails (Redacted)

Lead author(s): Paul Cloutier





GREYSTONE

MARY HILL BYPASS, PITT RIVER RD & HARBOUR ST, PORT COQUITLAM, BC

VIEW FROM MARY HILL BYPASS

the nerdy 604 821 9088 nerdyarchitect.ca



GREYSTONE

MARY HILL BYPASS, PITT RIVER RD & HARBOUR ST, PORT COQUITLAM, BC

> DATE 2024.02.06 JOB NO. 2301



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 B
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VIEW FROM PITT RIVER ROAD

VIEW FROM MARY HILL BYPASS



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MARY HILL BYPASS, PITT RIVER RD & HARBOUR ST, PORT COQUITLAM, BC





VIEW FROM ENTRY ON HARBOUR STREET

VIEW FROM PEDESTRIAN ENTRANCE ON MARY HILL BYPASS

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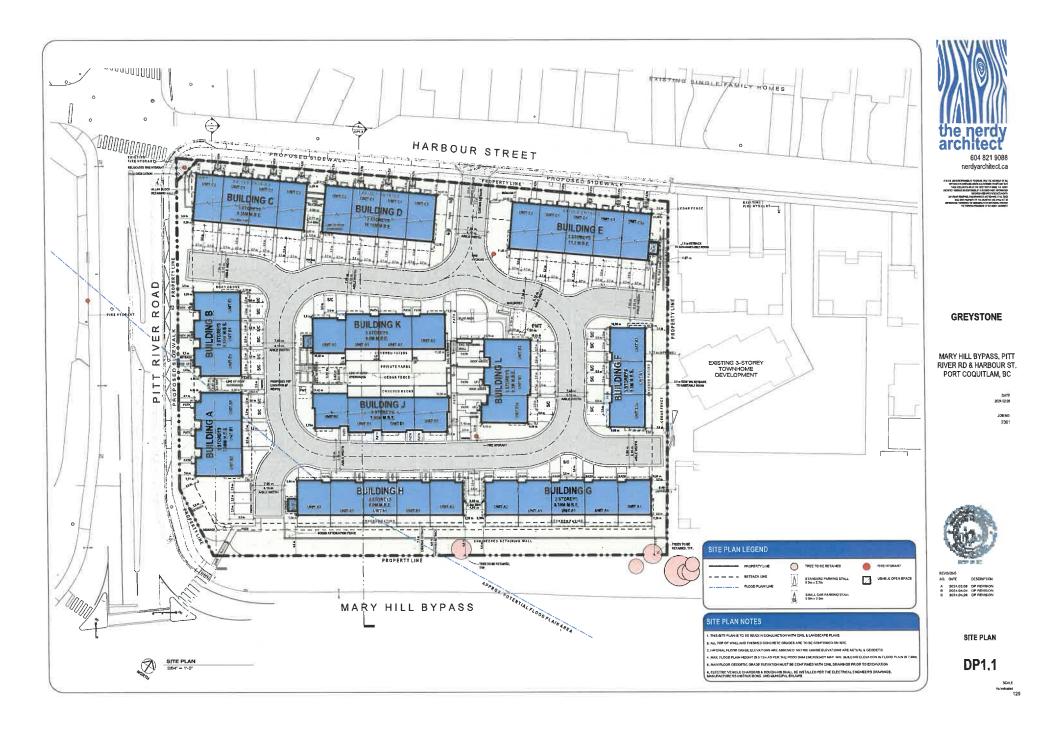
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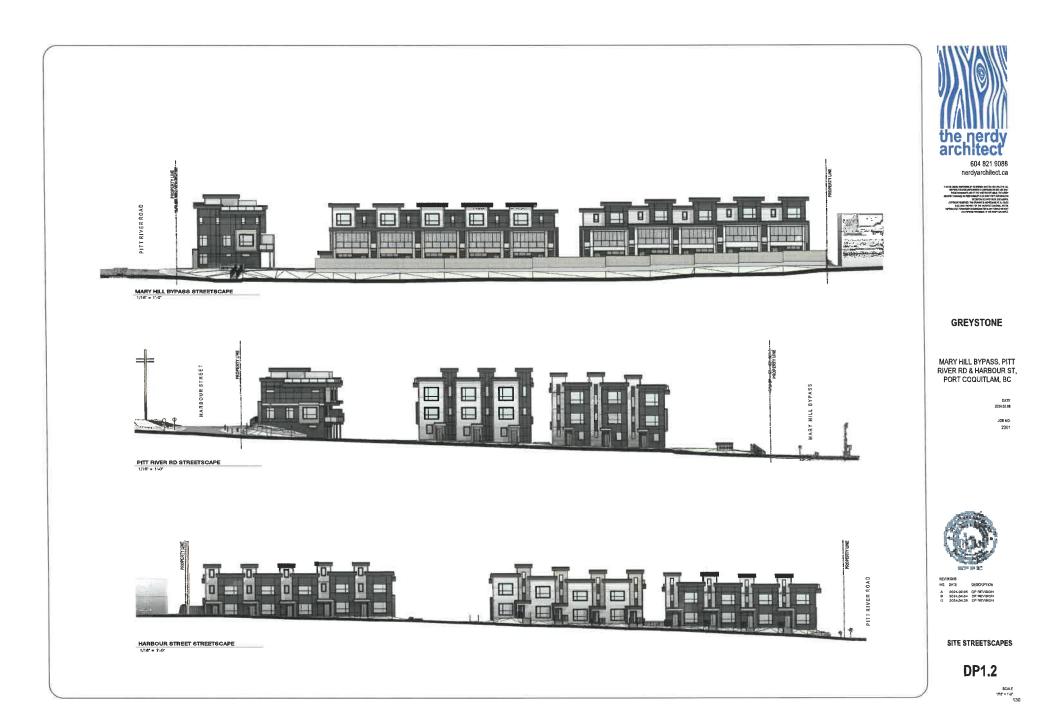
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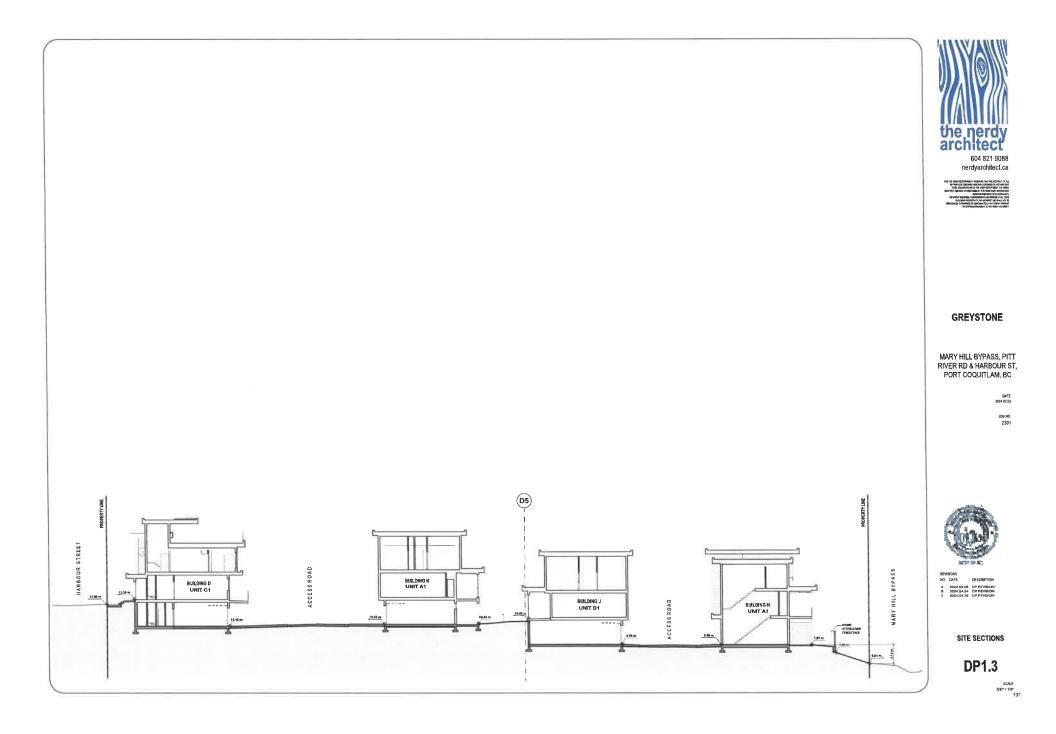
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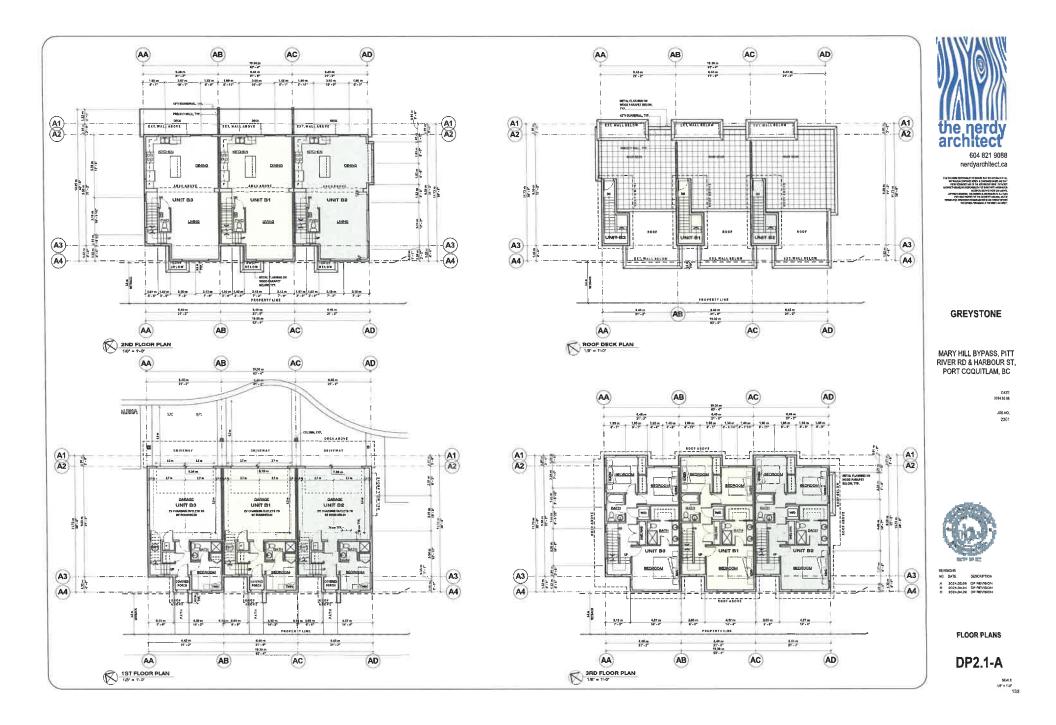
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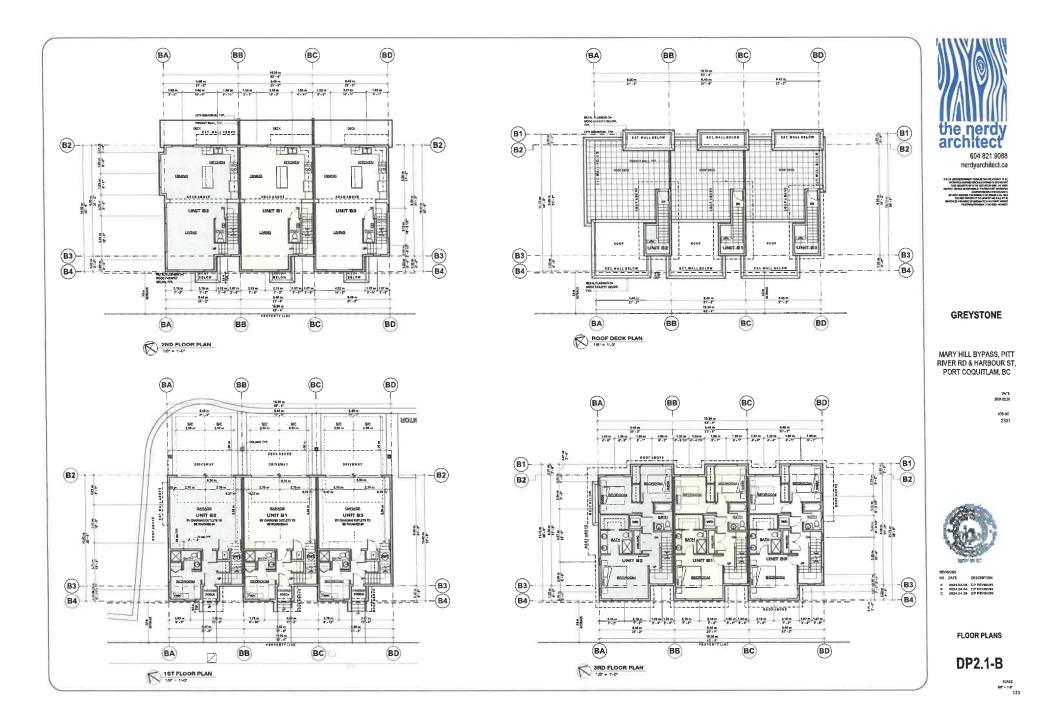
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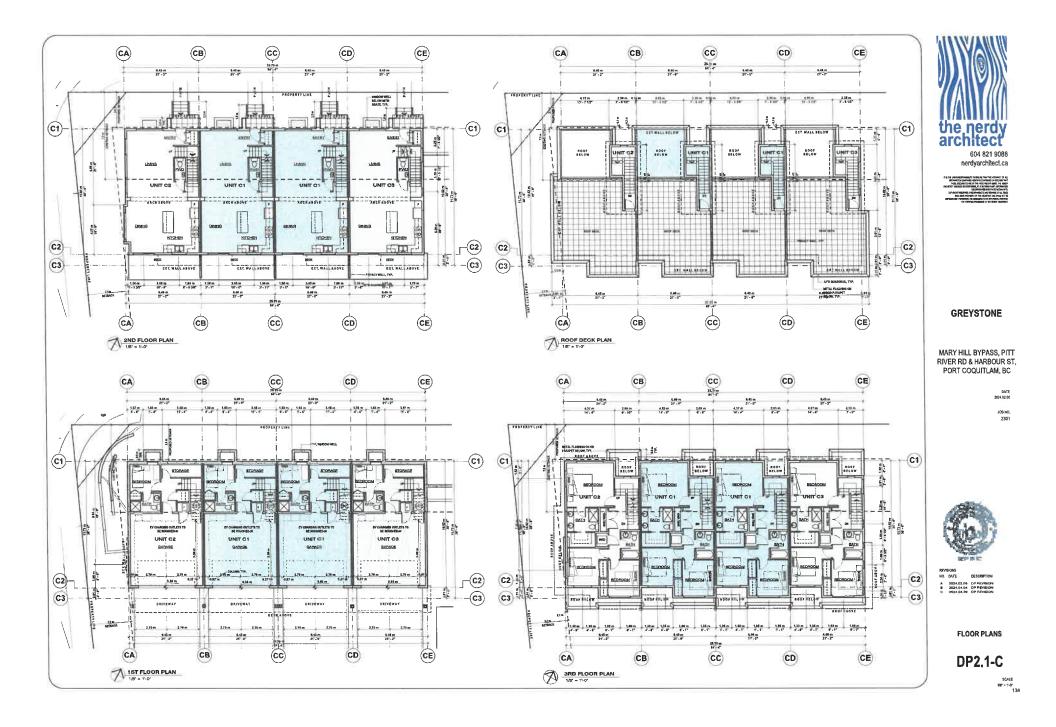


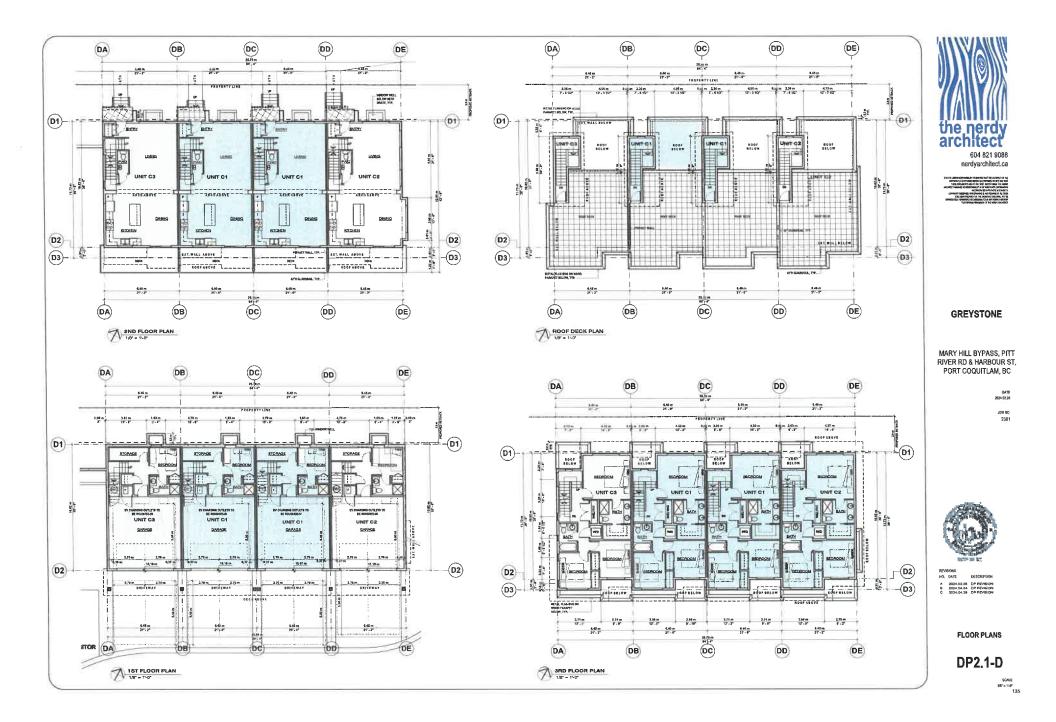


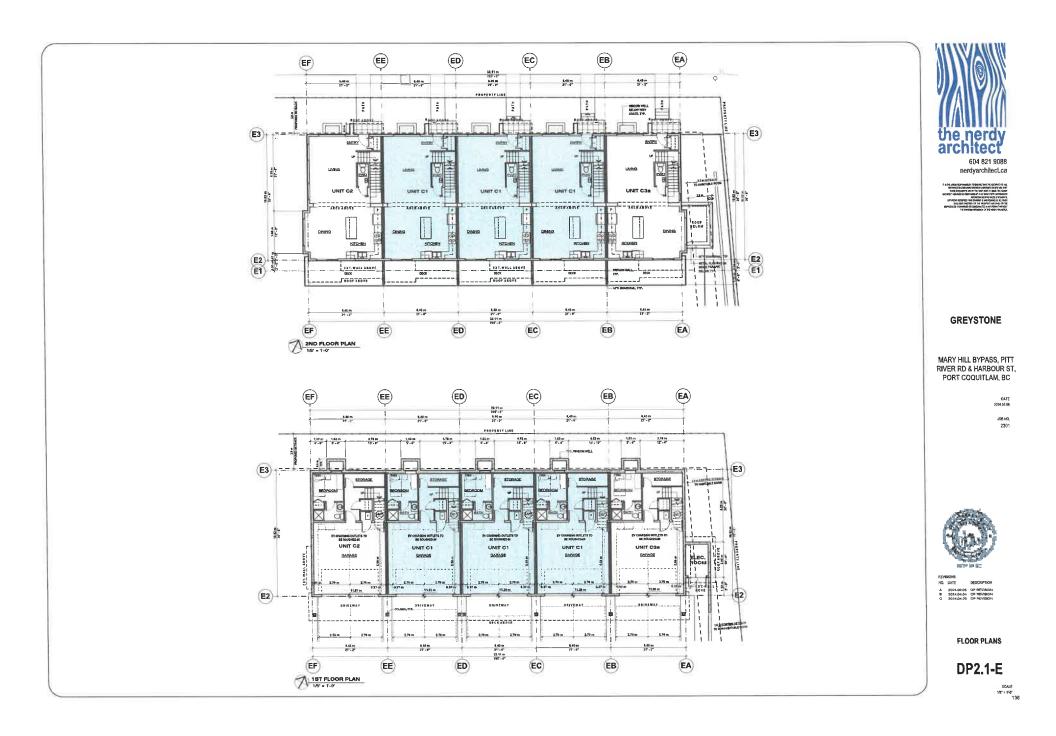


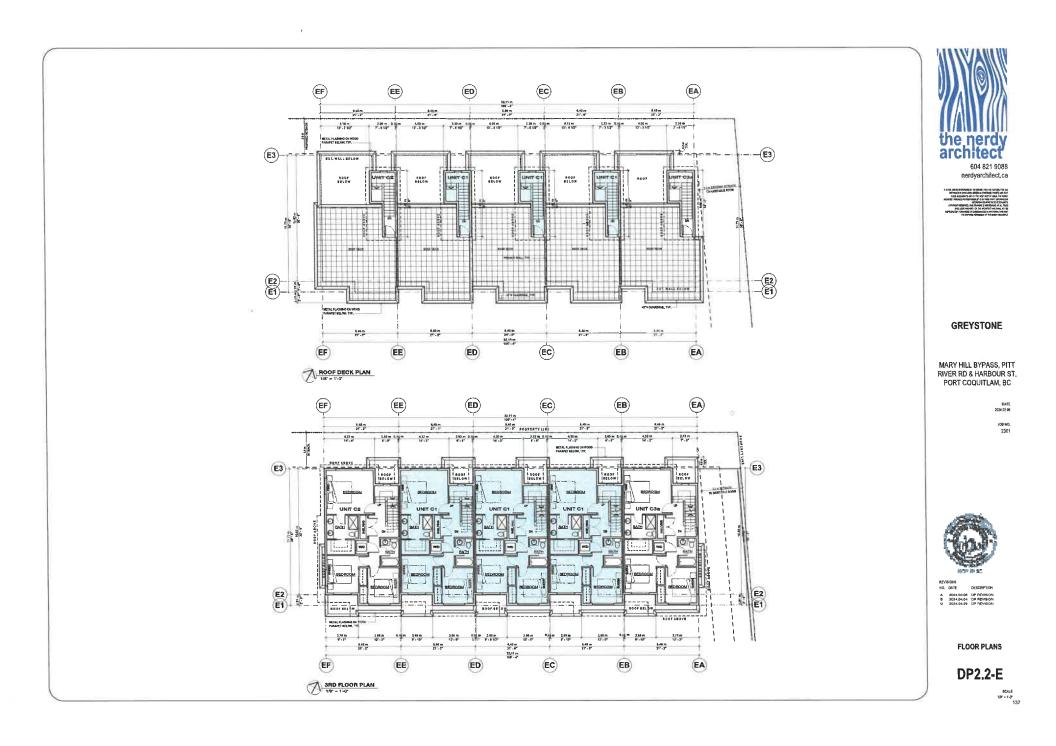


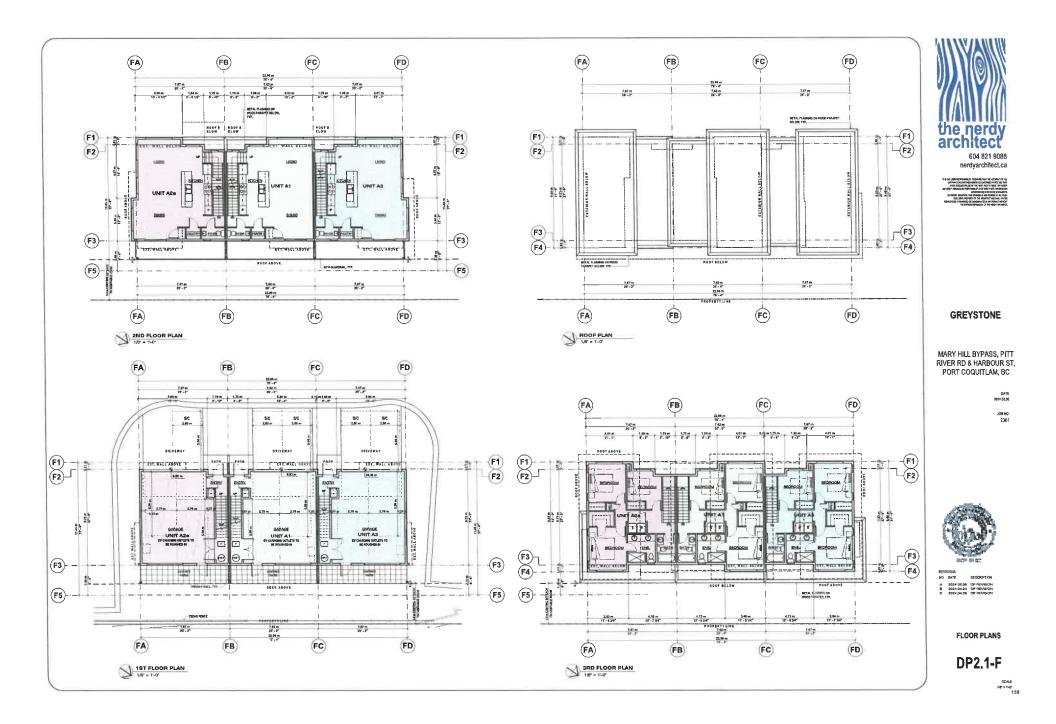


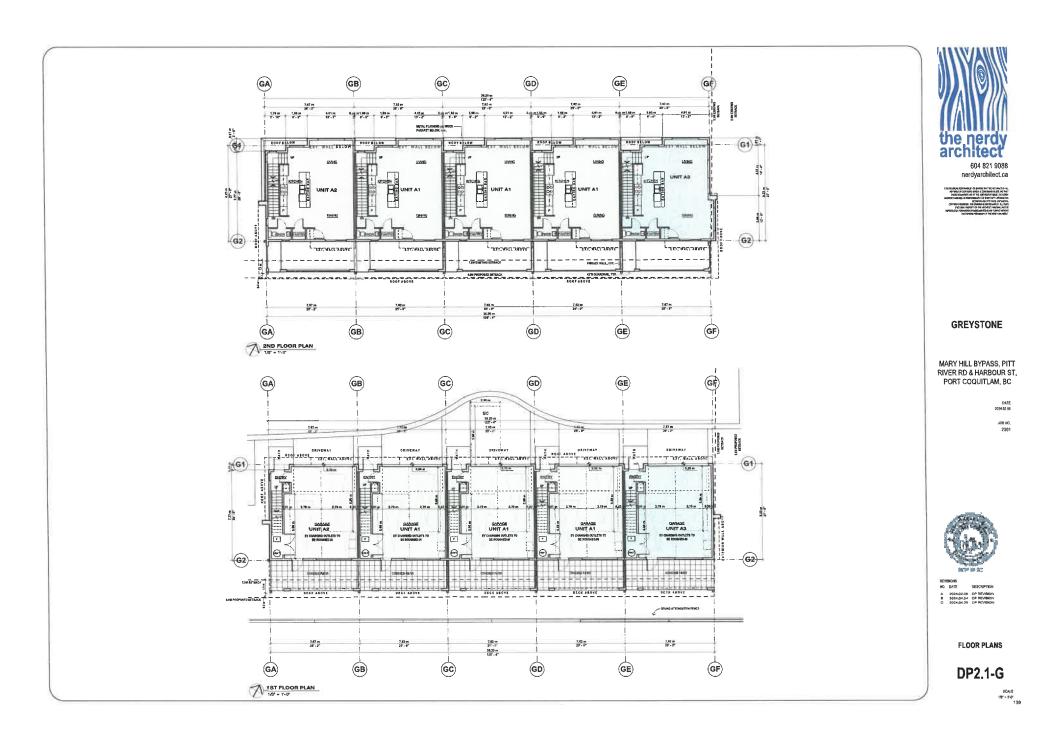


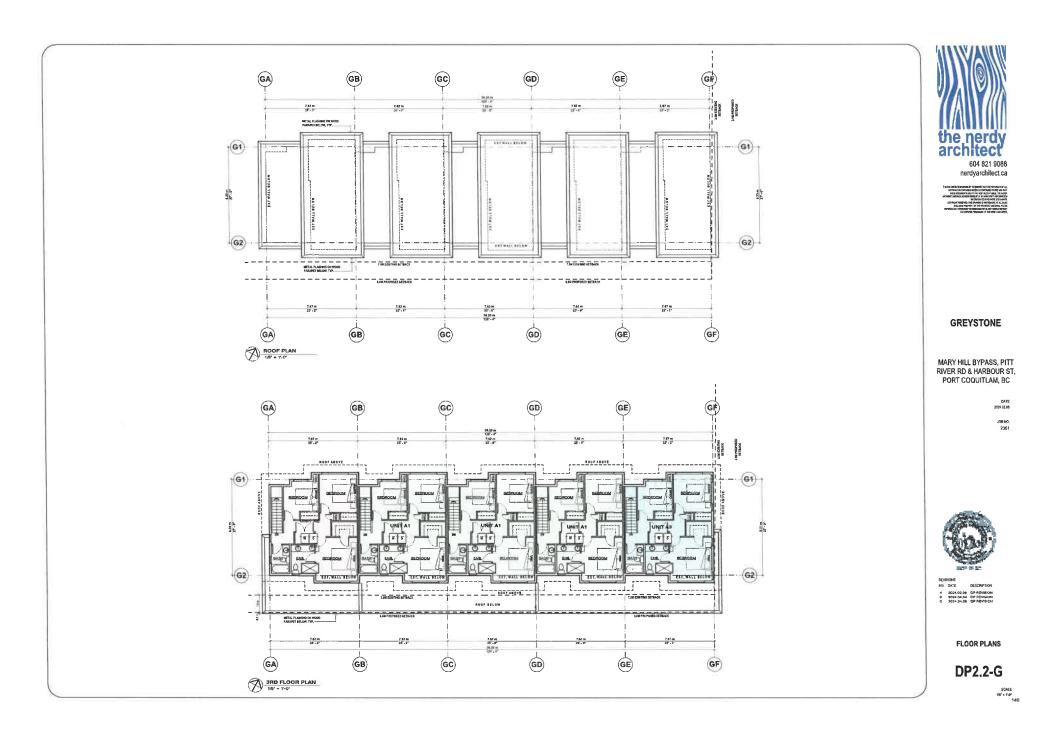


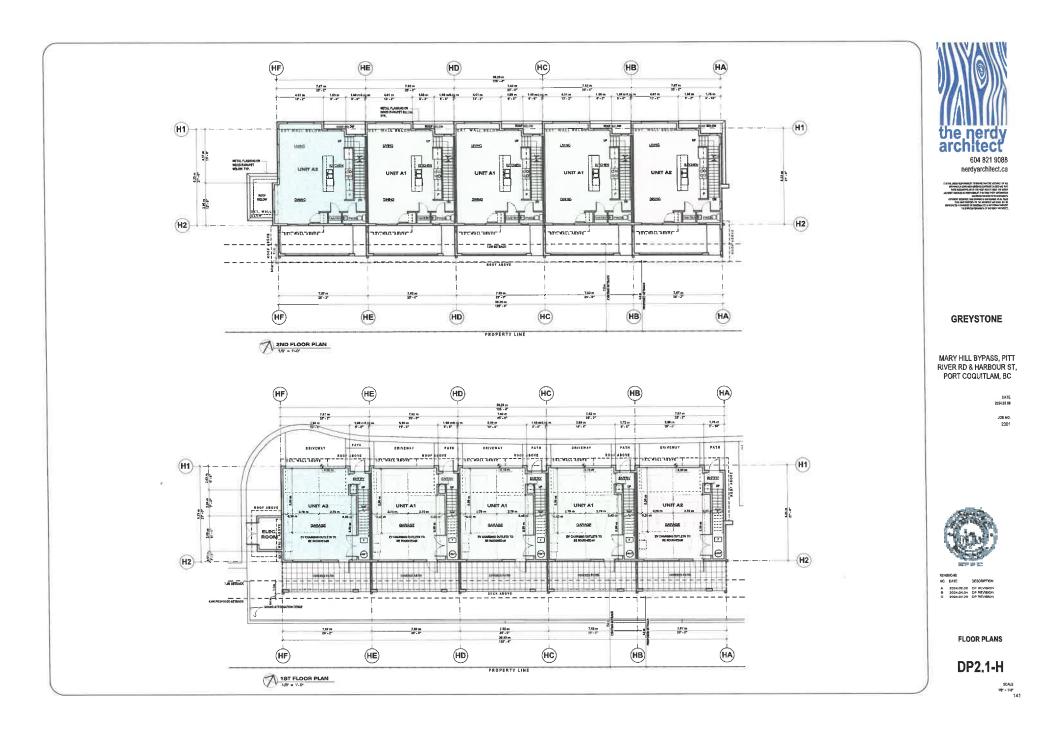


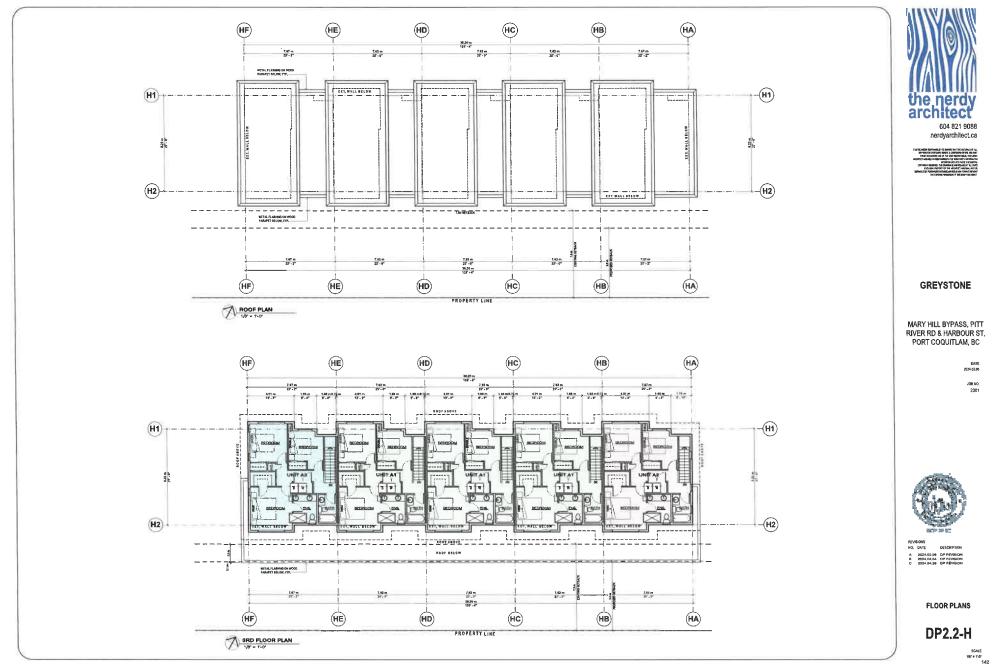


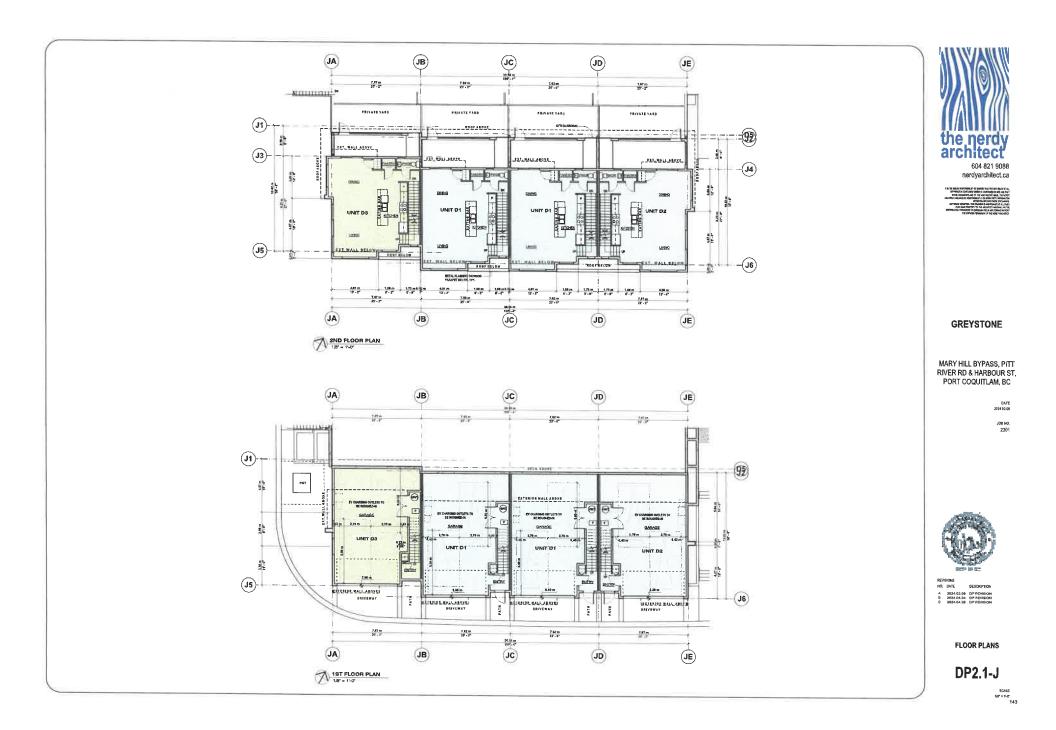


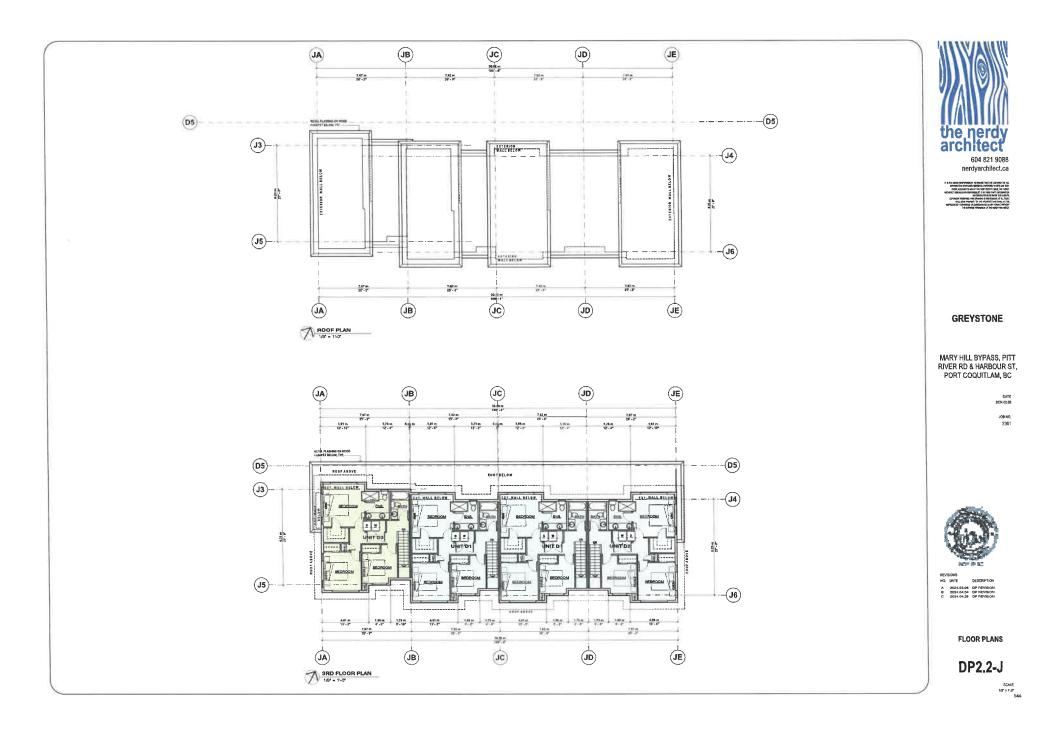


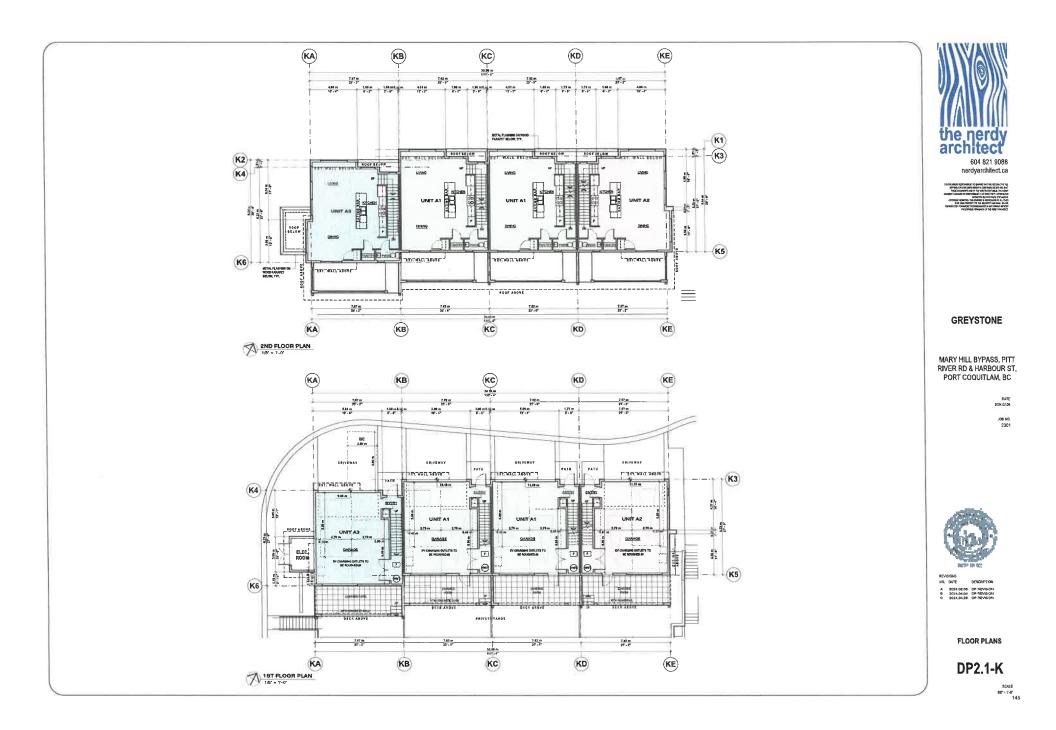


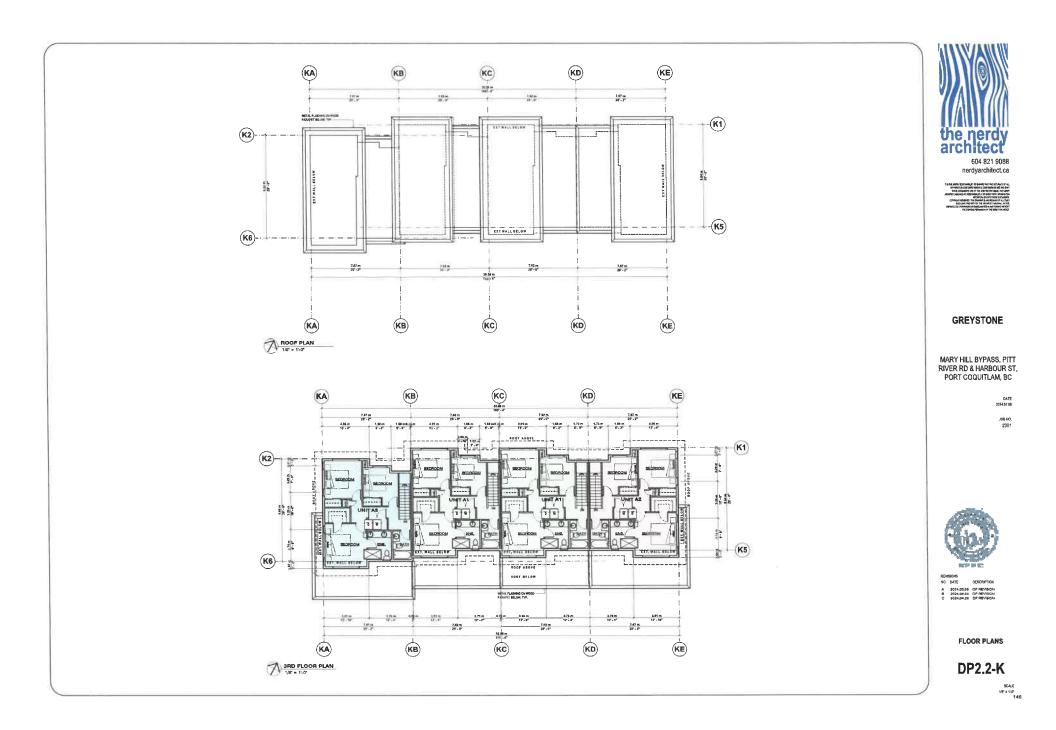


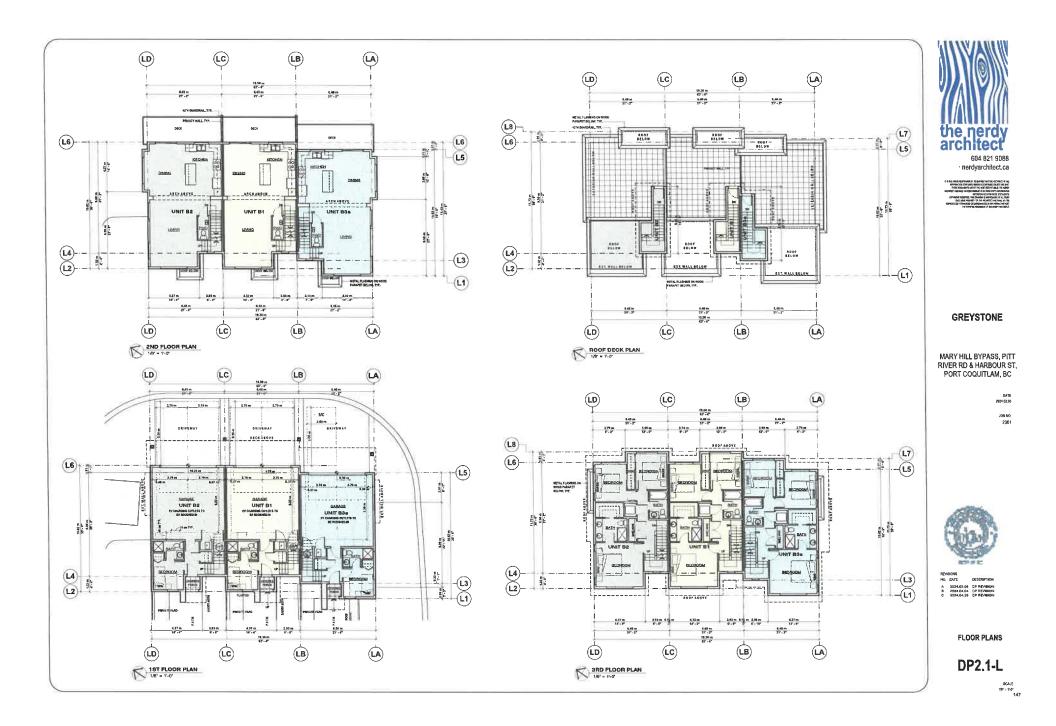












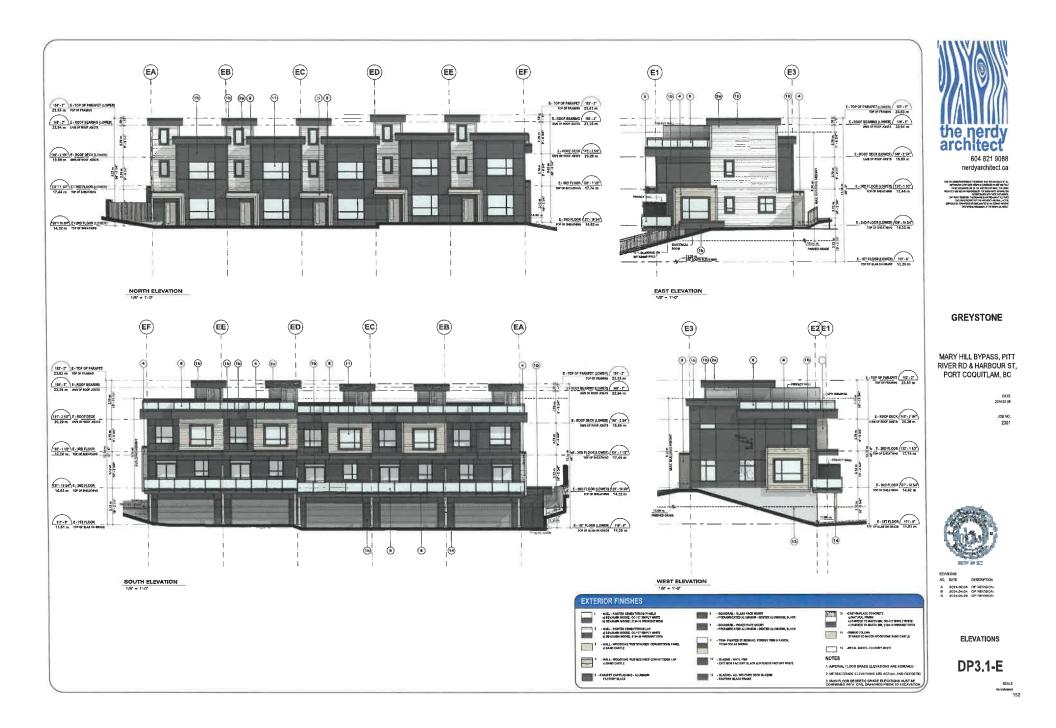






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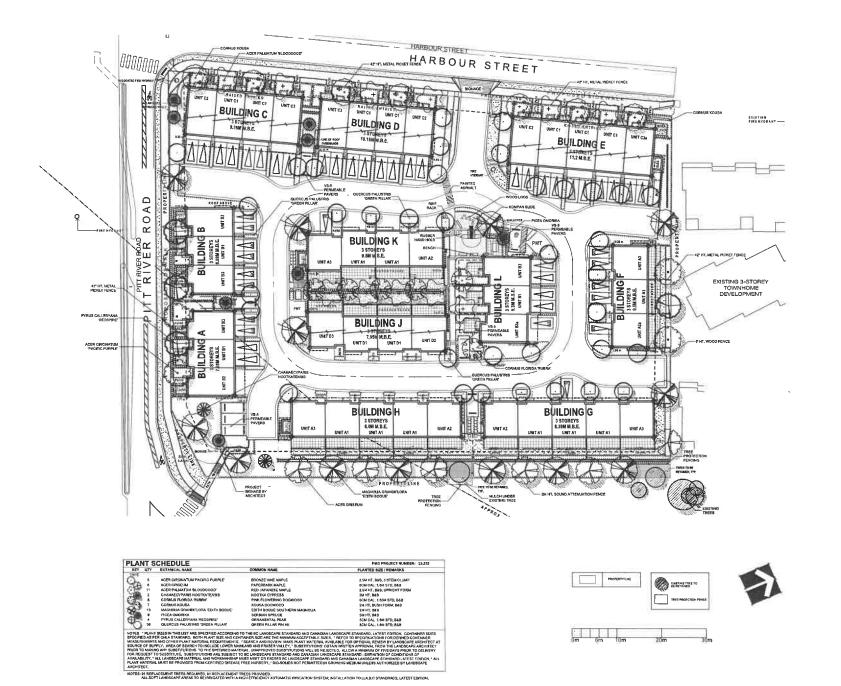
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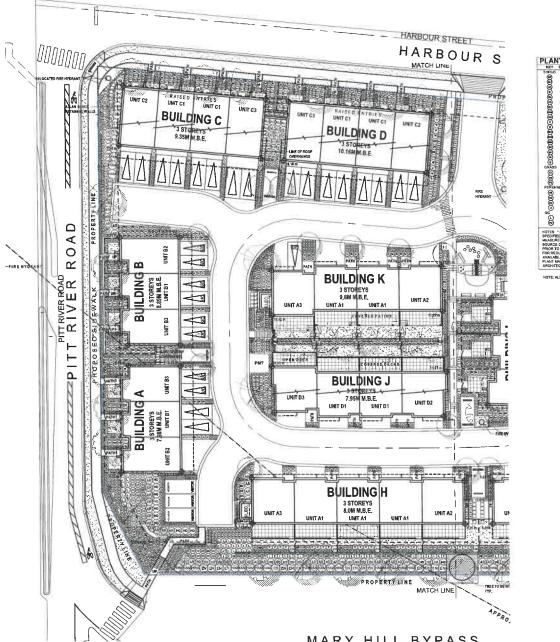
PRINCE STREET AND PITT RIVER ROAD PORT COQUITLAM, BC

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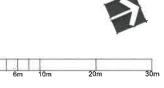
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8	181	BUXUS MICROPHYLLA WINTER CENT	UTT F-LEAF BOX	#3 POT. 40CM
8	14	CHOISYA TERNATA 'SUNDANCE'	MEXICAN MOCK DRANGE	#3 POT: 50CM
8	252	CORNUS SERICEA	REDTWIG DOGWOOD	#3 POT: 69CM
8	32	ENKIANTHUS CAMPANULATUS	ENGANTHUS	43 POT: SOCM
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8	60	HYDRANGEA QUERCIFOLIA	GAKLEAF HYDRANGEA	#3 FOT BOCM
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43 UNIT TOWNHOUSE DEVELOPMENT

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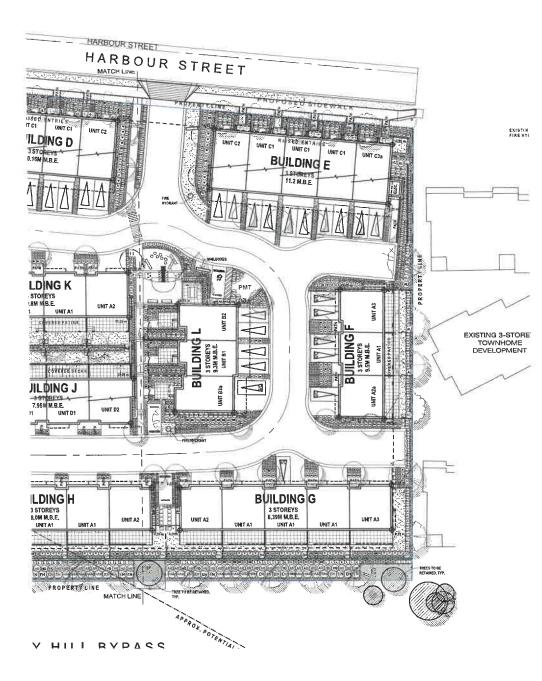
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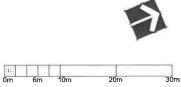
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Sulte C100 - 4185 SUII Creek Drive Burnaby, Britsh Columbia, V5C 6G9 p: 804 294-0011 ; 1: 604 294-0022

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ARCHITECT Suite C100 - 4185 Still Creek Drive Burneby, British Columbia, V5C 6G9 p: 694 294-0011 : f: 604 294-0022

SEAL

43 UNIT TOWNHOUSE DEVELOPMENT

24JAN 16

PRINCE STREET AND PITT RIVER ROAD PORT COQUITLAM, BC

TARD UPDATED NEW SITE PLAN NEW SITE PLAN

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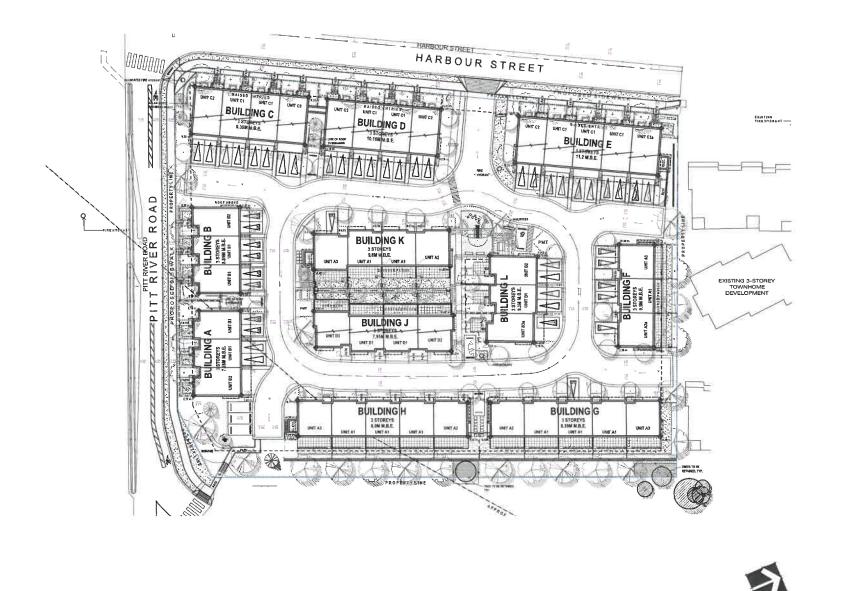
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43 UNIT TOWNHOUSE DEVELOPMENT PRINCE STREET AND PITT RIVER ROAD PORT COQUITLAM, BC

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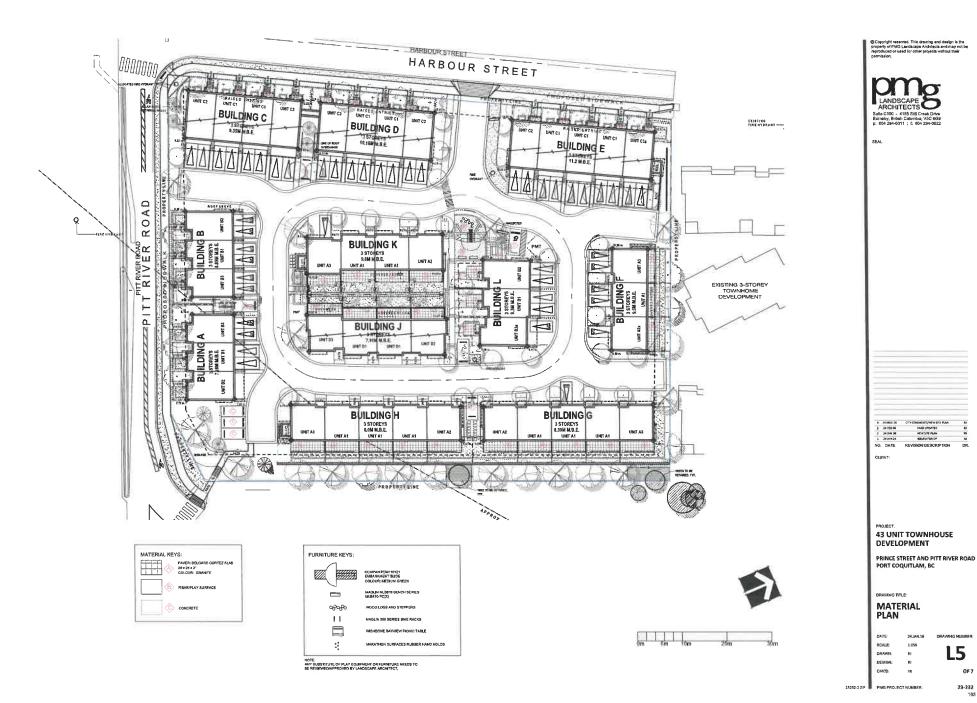
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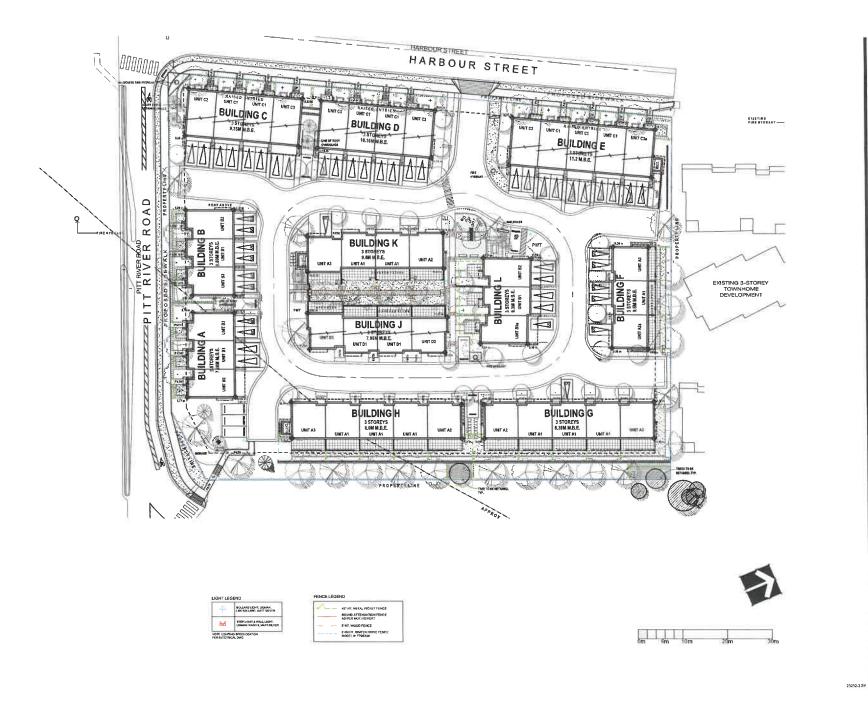


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LANDSCAPE ARCHITECTS Suite C100 - 4185 Still Creek Drive Burraby, British Catumbia, VSC 659 Di: 640 264 C011 : f. 660 284-0022

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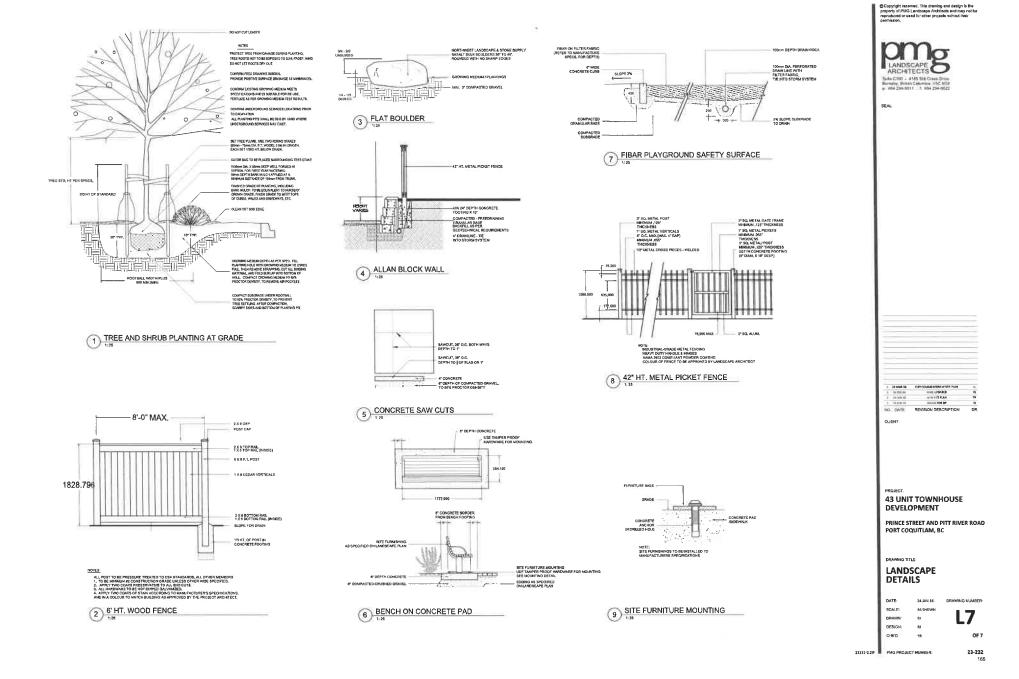
PROJECT. 43 UNIT TOWNHOUSE DEVELOPMENT

PRINCE STREET AND PITT RIVER ROAD PORT COQUITLAM, BC

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Project: A04.182

March 6, 2024

Caliber Projects Ltd. 205 - 6360 202 Street Langley, BC V2Y 1N2

Attention: Mr. Riley Schmidt, Development Manager

Dear Mr. Schmidt:

<u>Re: Greystone - 1884-1930 Harbour Street, 1887-1911 Prince Street</u> and 1155 Pitt River Road, Port Coquitlam (City File #: RZ000261 & DP000551)

Appended is our updated report entitled "Greystone - Acoustical Evaluation", which considers the current proposed townhouse development.

Please call if you have any questions.

Yours very truly,

BROWN STRACHAN ASSOCIATES

Aaron Peterson, P.Eng.

AP/sb/24Mar/Caliber-Greystone.ttl.wpd

GREYSTONE ACOUSTICAL EVALUATION

Prepared for: CALIBER PROJECTS LTD.

Aaron Peterson, P.Eng. Andrew R. Fawcett, P.L.Eng., AScT. March 6, 2024



130 - 1020 Mainland Street Vancouver Canada V6B 2T5 604 689 0514 bsa@brownstrachan.com

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2.0 DESIGN CRITERIA

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- 3.2 Façade Upgrades
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- 4.0 DISCUSSION
- 4.1 Method of Evaluation
- 4.2 Traffic Noise
- 4.3 Sound Attenuation Fence
- 4.4 Interior Noise
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APPENDIX



GREYSTONE - ACOUSTICAL EVALUATION

1.0 INTRODUCTION

Brown Strachan Associates (BSA) have been retained by Caliber Projects Ltd. to conduct an acoustical evaluation of the proposed Greystone townhouse development at 1884-1930 Harbour Street, 1887-1911 Prince Street and 1155 Pitt River Road, Port Coquitlam (City File: RZ000261 & DP000551), as designed by The Nerdy Architect on drawings issued for DP Revisions 2024.02.06 (appended).

In response to comment 10 of the City of Port Coquitlam Application Review letter dated 1 November 2023 (appended), the terms of reference of this report are to assess future traffic noise at the proposed development and to recommend acoustical façade upgrades to satisfy indoor noise design criteria recommended in the Canada Mortgage and Housing Corporation (CMHC) publication Road and Rail Noise: Effects on Housing (print appended). This report considers noise from future traffic on the Mary Hill Bypass (Provincial Highway 7B), Pitt River Road and Harbour Street.

2.0 DESIGN CRITERIA

The proposed townhouse development has been evaluated with respect to the following CMHC indoor noise level design criteria:

Room	Noise Levels (Decibels)
Bedrooms	35
Living, dining and recreation rooms	40
Kitchen, bathrooms and hallways	45

The noise level design criteria above are A-weighted 24-hour equivalent levels, Leq(24) in decibels (dB).

3.0 <u>RECOMMENDATIONS</u>

The following are acoustical recommendations to satisfy the CMHC design criteria, based on the drawings indicated above, and should be referenced in the tender documents. These recommendations may be revised based on the final building design, façade details, window and exterior door shop drawings, etc. The IFT drawings and preliminary window / exterior door shop drawings should be reviewed with reference to the recommendations in this report.



Notations should be included on the construction drawings indicating that the acoustical recommendations in this report will be incorporated into the final design and construction, as concurred with or amended by the City of Port Coquitlam.

Coordination of Code requirements, acoustical recommendations, field reviews, letters of assurance, construction or occupancy certification requirements, etc., should be provided by the Registered Professional of Record (RPR).

Noise sources or acoustical design considerations for which insufficient information exists at this stage have not been evaluated, e.g. equipment, etc. Considerations such as structural, thermal, building envelope or performance requirements, fire ratings, etc., should be designed by others.

3.1 <u>Disclosure</u>

In addition to any legal agreements required by the City of Port Coquitlam (ref. comment 11.e. of the Application Review letter, appended), full disclosure should be made to prospective residents that the development site is along an arterial traffic/transit route, with vehicular traffic, trucks and buses operating day and night. The disclosure should indicate that traffic/transit sources cause noise and possible vibration, which may be annoying to some individuals. The City of Port Coquitlam, Translink and the Ministry of Transportation & Infrastructure (MoTI) may have specific disclosure wording satisfying their requirements.

3.2 <u>Recommended Exterior Design Levels For Traffic Noise</u>

At the most exposed locations along the Mary Hill Bypass, the recommended exterior design level for traffic/transit noise is Leq(24) = 73 dB (appended), which considers an unobstructed view from the upper floors of the townhouses over the proposed sound attenuation fence to traffic on the Mary Hill Bypass (see 4.2 Traffic Noise and 4.3 Sound Attenuation Fence).

3.3 Façade Upgrades

Sound transmission through the façade has been evaluated based on the window and exterior door areas indicated on the drawings, and conventional façade construction including exterior finishes comparable to cementitious cladding (elevations appended). To satisfy the CMHC design criteria, recommended window, exterior door and wall upgrades are indicated on the appended Greystone - Façade Upgrade Schedule (Schedule).

Where OITC acoustical ratings are specified on the appended Schedule, the window and exterior door supplier(s) should submit fenestration test reports per ASTM E90 representative of their proposed assemblies, i.e. complete window frame and exterior door assemblies with



proposed glazing (not generic glazing-only data). At substantial completion, and as supporting documentation for the RPR, the supplier(s) should confirm in writing that their rated assemblies, as installed on site, are equivalent to their tested assemblies and conform fully with this report and the appended Schedule.

Window and exterior door assemblies should satisfy Code requirements, including airtightness, etc. Considerations such as wind loading, safety, structural, thermal requirements, visual specifications, etc., should be checked for all windows and exterior doors (by others), and may dictate thicker glazed units than the references indicated on the Schedule (subject to BSA review of specified ASTM E90 acoustical test reports). Glazing may require strengthened glass to satisfy Code requirements or considerations such as structural, visual, manufacturer's weight or size restrictions, etc., e.g. mullions may be required.

3.4 <u>Ventilation & Equipment</u>

Sound transmission through the façade has been evaluated based on windows and doors in the closed position. Ventilation details, thermal requirements, etc., should be designed by a mechanical consultant. Equipment should be selected to satisfy Code acoustical requirements, e.g. 6.2.1.1 & 9.32.3.5, and the City of Port Coquitlam Noise Control Bylaw, 1994, No. 2891. For equipment considered critical, near townhouses, decks or roof decks, amenity areas, adjacent buildings or properties, BSA should review the proposed installation details.

If make-up air ducts penetrating the façade are required to satisfy ventilation requirements, the ducts should be designed to provide a noise reduction of about 50 dB for exterior noise, e.g. nom. 6ft. of 4" diameter acoustically lined ductwork or flexible connector. Where specified, ERV/HRV systems should be designed with equivalent treatment to reduce sound transmission into the townhouses. Exhaust ducts to the exterior from suite bathrooms, kitchens, etc., do not require acoustical upgrades such as lining.

4.0 <u>DISCUSSION</u>

4.1 <u>Method of Evaluation</u>

The method of evaluation used in this report gives detailed consideration of sound insulation referencing NRC's IBANA-Calc analysis software and related validation studies (see 4.4 Interior Noise, below). To determine possible façade upgrades necessary to satisfy the indoor design criteria, evaluation of the proposed façade construction is based on Leq(24) traffic sound transmission, windows and doors in the closed position, rooms with the greatest exposure to noise and the largest exterior wall, window and door areas with respect to floor area.



4.2 <u>Traffic Noise</u>

Future traffic noise exposure has been evaluated based on the forecasted 2030 a.m & p.m. peak hour traffic data in the CTS Traffic Impact Assessment (TIA) of 5 April 2018, prepared for the mixed-use development previously proposed on this site (appended). CTS confirm that an updated TIA is not warranted for the currently proposed townhouse development (CTS letter of 3 January 2024, appended). The a.m. + p.m. peak hour data are considered equivalent to 13% of the daily total traffic (MoTI ref. data appended). All local roads in this area have been evaluated based on the posted speed limits, i.e. 70 km/h on Mary Hill Bypass, 50 km/h on Pitt River Road and Harbour Street. The City's truck route and Translink Transit System maps have been considered (prints appended).

Based on the CTS traffic data, site observations and previous acoustical studies in the area, the following design volumes have been used to evaluate future traffic noise at the development site:

	Vehicles per day (vpd)	% Heavy vehicles
Mary Hill Bypass (E. / W.Bnd):	41,900 / 36,100	5
Pitt River Road (N. + S.Bnd):	10,800	1
Harbour Street (E. + W.Bnd):	1,500	1

Design traffic noise levels have been derived from statistical tables in CMHC's Road and Rail Noise: Effects on Housing, developed by NRC. These tables have been used on numerous housing site assessments throughout Metro Vancouver, including recent studies in this area, with good correlation between measured and calculated levels (typically +/-1 dB for normal traffic conditions). For the design volumes, the CMHC calculated future traffic noise level is Leq(24) = 73 dB at the most exposed locations along the Mary Hill Bypass (printouts appended), which considers an unobstructed view to traffic from the upper floors of the townhouses over the sound attenuation fence recommended by the MoTI.

To check that the CMHC traffic noise calculations correlate with traffic in this area, sample daytime measurements were conducted at a Test Location approximately 1.5m north of the south property line along Mary Hill and 28m west of the east property line. The average measured Leq = 74 dBA (Table 2 & Graph: SUMM, appended). For the observed traffic, the calculated CMHC equivalent traffic noise level is Leq(24) = 75 dB (printout: predict, appended). The difference is attributed to westbound traffic on Mary Hill moving slower than the 70 km/h posted speed limit, likely as a result of congestion at the Pitt River Road intersection (printout: predict2). No corrections have been made to the recommended exterior design levels for this local site condition.



4

4.3 <u>Sound Attenuation Fence</u>

The analysis in this report considers an unobstructed view to traffic on the Mary Hill Bypass. For the sound attenuation fence recommended by the MoTI (ref. comment 10 of the Application Review letter), a conventional 2-3m high solid barrier/fence weighing nominally 2psf will reduce traffic noise where the line-of-sight to vehicles is interrupted. Where the line-of-sight is over the barrier, e.g. upper floor living/dining rooms and bedrooms in Buildings G & H, etc., no reduction to the design traffic noise levels has been considered.

4.4 Interior Noise

Noise in the townhouses has been evaluated referencing NRC's IBANA-Calc analysis software, related validation studies, statistical third octave band traffic source data normalized to future design conditions and façade transmission loss data. Detailed calculations of traffic sound transmission through the façade are summarized in Table 1 and include the absorption typical of furnished rooms (printouts appended). Table 1 shows the sound levels transmitted by each sound path, such as windows and exterior walls, and compares the total sound to the Leq(24) design criterion.

The analysis in this report indicates the interior sound levels satisfy the design criteria. Sound levels can vary relative to calculated levels due to normal variation in transportation activity, including traffic speed and volume, on-site performance of façade components, flanking sound transmission, room absorption, possible contribution of other sources, etc.

This report, or review of related documentation such as disclosure statements, legal agreements or restrictive covenants, window and door shop drawings, manufacturer's fenestration acoustical data, etc., is not a certification of on-site noise levels, or any aspect of the construction details. See appended Acoustical Evaluation Reports - Background Information.

5.0 <u>CONCLUSION</u>

Provided the recommendations in this report are implemented, our evaluation indicates the design of the proposed Greystone townhouse development satisfies the CMHC indoor noise level design criteria. The IFT drawings and preliminary window / exterior door shop drawings should be reviewed with reference to the recommendations in this report and the appended facade upgrade Schedule.



APPENDIX



GREYSTONE - FAÇADE UPGRADE SCHEDULE

This two page schedule forms part of the Brown Strachan Associates (BSA) acoustical report dated 6 March 2024 and should be read with the full report. It is the supplier's responsibility to ensure that the rated windows and exterior doors, as installed on site, fully conform to this schedule and report (confirm in writing, when requested). Meet all Code requirements. The IFT drawings and preliminary window / exterior door shop drawings should be reviewed with reference to the following upgrades.

Unless otherwise indicated in table below, provide all townhouses with conventional exterior construction, including window and exterior door assemblies with standard thermal glazing. Specified façade upgrades are applicable to all exterior walls, doors and windows in a given room, including rooms extending over multiple façades.

T/H Bldg.	Units	Rooms	Window & Door Upg.	Exterior Wall Upg.
	B1 & B3	West Bedrooms	OITC 32	2x GWB
	DIGDS	Liv./Din./Kit. & East Bedrooms	OITC 29	
А		Living/Dining/Kitchen	OITC 32	2x GWB
	B2	Corner Bedrooms (two full ext. walls)	OITC 32	2x GWB on Res.
		East Bedroom	OITC 29	
В	B1, B2 & B3	Bedrooms (all) & Living Room	OITC 29	
С	C1 & C3	South Bedrooms	OITC 29	
C	C2	Liv./Din./Kit. & Bedrooms (all)	OITC 29	
F	A2a	Liv./Din./Kit. & Bedrooms (all)	OITC 29	
		Dining Room*	OITC 32	
	A1	South Bedroom	OITC 35	2x GWB on Res.
		North Bedrooms	OITC 29	
	A2	Dining Room*	OITC 32	
G & H		South Bedroom	OITC 35	2x GWB on Res.
Gan		North Bedrooms	OITC 29	
		Living/Dining*/Kitchen	OITC 32	2x GWB
	A3	South Bedroom	OITC 35	2x GWB on Res.
	A3	North Corner Bedroom (two ext. walls)	OITC 29	2x GWB
		North Bedroom (one ext. wall)	OITC 29	
	D1	South Bedrooms	OITC 29	
J	D2 & D3	Living/Dining/Kitchen	OITC 29	
		Bedrooms (all)	OITC 29	
L	B3a	Living/Dining/Kitchen	OITC 29	
L	DJa	Bedrooms (all)	OITC 29	

* Where fully glazed decks are specified, e.g. Lumon, etc., facade upgrades are not required.

page 1 of 2



GREYSTONE - FAÇADE UPGRADE SCHEDULE (cont'd)

Legend

- *OITC 35:* Provide OITC 35 rated window and exterior door assemblies (Note: stringent design requirement possibly requiring triple glazing and/or thick laminated glazing.)
- OITC 32: Provide OITC 32 rated window and exterior door assemblies (typ. with laminated glazing, e.g. 6-13-6Lam glazing).
- OITC 29: Provide OITC 29 rated window and exterior door assemblies (typ. with 6-13-4 or 6-13-6 thermal glazing).
- 2x GWB: Provide two layers of 5/8" Type X drywall (2x GWB) directly to suite side of exterior wall framing (exclude closets, ensuites and exterior walls with cabinetry).
- 2x GWB Provide 1/2" 25ga. single web resilient metal channels attached directly to suite side of exterior walls at 24" o.c., with on Res.:
 2x GWB (exclude closets and ensuites). The following note should be included on construction drawings: "Where resilient furring is specified, install according to manufacturer's instructions. Ensure drywall screws do not contact framing. Do not install furring between layers of drywall or between sheathing & drywall."

Provide window and exterior door assemblies satisfying Code airtightness requirements. Where OITC acoustical ratings are specified, provide fenestration test reports per ASTM E90, as tested on representative window and exterior door assemblies, i.e. complete window frame and door assemblies with proposed glazing (not generic glazing only data). For all glazing in windows and exterior doors, check considerations such as wind loading, safety, structural requirements, visual specifications, etc. If necessary, provide thicker glazed units than the references indicated above (subject to BSA review of specified ASTM E90 test reports). Glazing may require strengthened glass to satisfy Code requirements and may have a size limitation to satisfy structural requirements, visual specifications, manufacturer's weight or size restrictions, etc., e.g. mullions may be required. See Acoustical Evaluation Reports - Background Information (appended to report).

Schedule based on Townhouse drawings issued for DP Revision dated 2024.02.06.

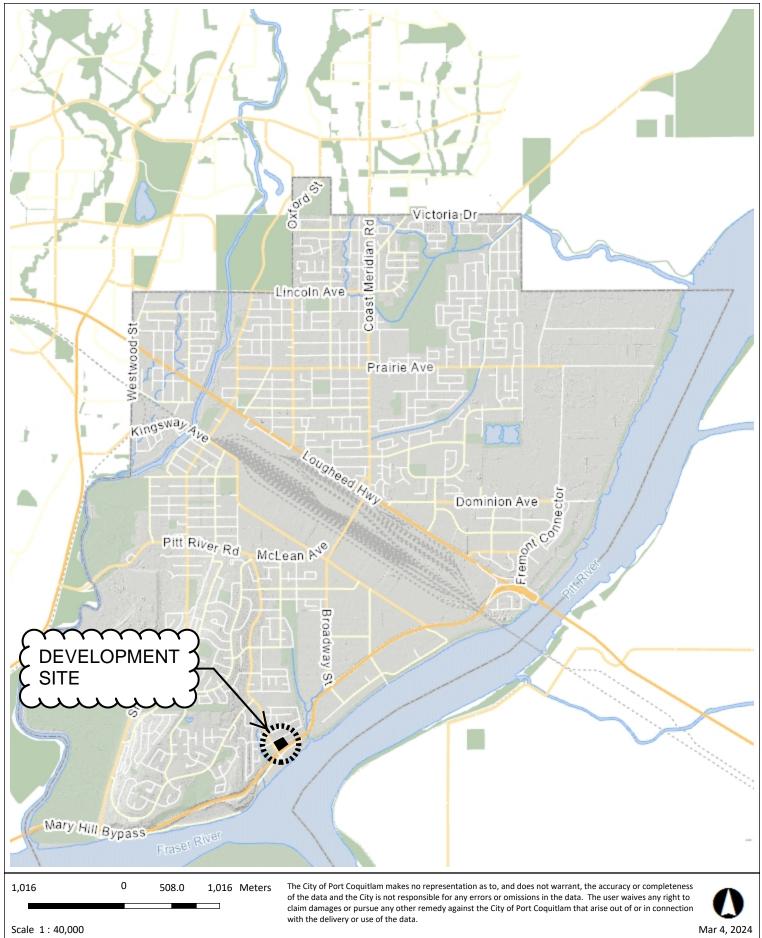
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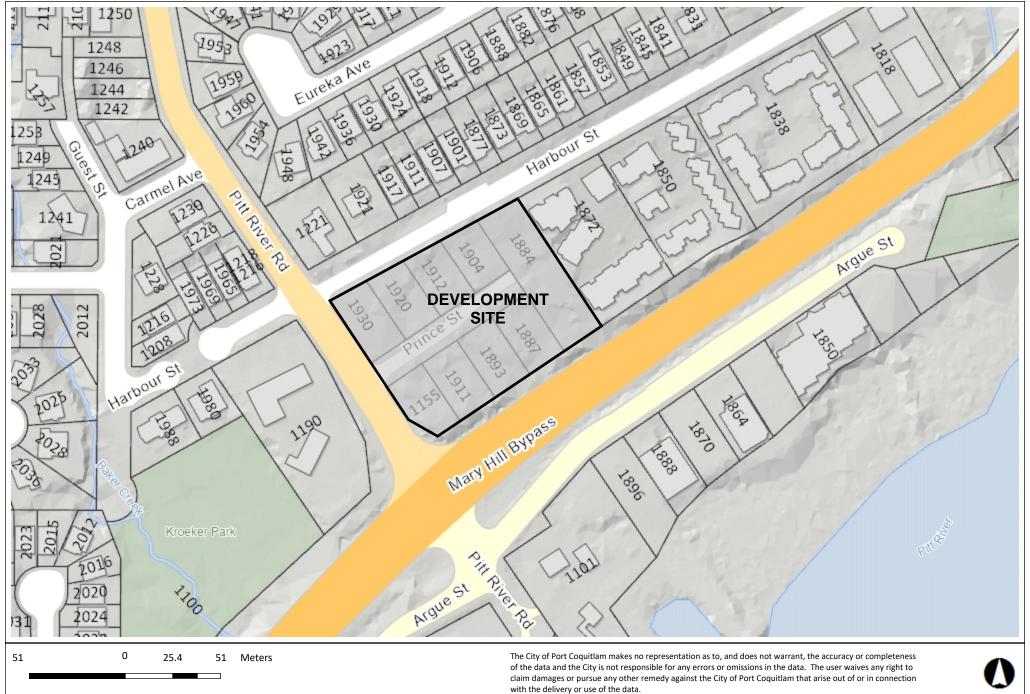
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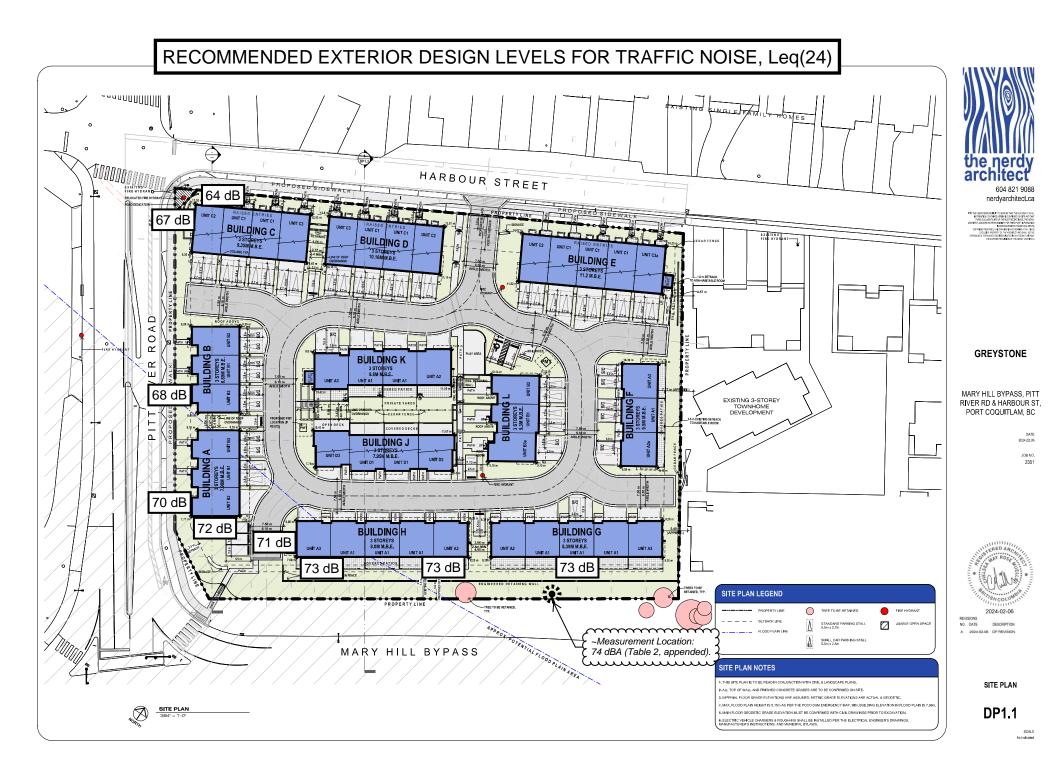


GREYSTONE











GREYSTONE

MARY HILL BYPASS, PITT RIVER RD & HARBOUR ST, PORT COQUITLAM, BC



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GREYSTONE

MARY HILL BYPASS, PITT RIVER RD & HARBOUR ST, PORT COQUITLAM, BC

> DATE 2024.02.06 JOB NO. 2301



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Min. Lot Width: 36 Min. Lot Frontage: 18 Min. Lot Depth: 28	lm Im		
2.3 PERMITTED USES Townhouses			
2.4 RESIDENTIAL ZONE F	REGULATIONS		
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7 PARKING		,	
REQUIRED OFF-STREET 2 per dwelling unit x 43 unit 1 visitor space per 5 dwellin	PARKING SPA Is = 85 parking Ing units x 43 un	CES spaces required.134 PF its = 9 parking spaces r	ROVIDED (16 SMALL CAR) regured 9 PROVIDED.
PARKING SPACE STAND	ARDS:	h una ce build no an cae	uired by this Bylaw shall conform to the following regulations:
a. 75% of the parking so	aces shall have	a minimum unobstruct	ed length of 5.5 metres, a minimum upobeloucted width of 2.7 metres
b. The remaining 25% of	the parking spo	cos shall have a minim	sum unobstructed length of 5 metres, a minimum unobstructed width of 2,5 metres and a minimum
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A maximum of 25% of the r Small car width: 2.5m		atalis may be designat	ed for small car parking.
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ACCESSIBLE PARKING S			
ACCESSIBLE PARKING S Where more than 50 off str stalls or part thereof.	eet parking stal	is are required to be pro	WITH DISABILITIES ovided, parking spaces shall be provided in the ratio of 1 accessible parking space for every 100
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AREA - SF

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7.697.8

INSULATED AREA

1,222.8 3,011.8 3,022.8 440.3

7,697.7 (690.4) 7,697.7 (690.4)

UNITS

2

TOTAL AREA

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ALL WEATHER INSULATED DECKS AREA

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UNIT TYPE

B1 B2 B3

TOTAL

STOREY

3 ROOF

UNIT SUM

UNIT TYPE

C1 C2 C3

TOTAL

STOREY

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TOTAL

FLOOR AREA - SF (SV

TOTAL

BUILDING C INFORMATION

4 4

ALL WEATHER DECKS

LOOR AREA - SF (SM

BEDROOMS

4

		UNIT SUMMARY			
AREA - SF	UNITS	UNIT TYPE	BEDROOMS	AREA - SF	UNITS
1,835.0 1,865.0 1,847.0	1 1 1	C1 C2 C3a	4 4 4	1,913.1 1,947.0 1,947.0	3 1 1
5547.0	3	TOTAL		9,633.3	\$
		FLOOR AREA -	SF (SM)		
INSULATED AREA	TOTAL AREA	STOREY	ALL WEATHER DECKS	INSULATED AREA	TOTAL ARE
768.5 2,178.3 2,269.8 330.4	768.5 2,178.3 2,269.8 330.4	1 2 3 ROOF		1,532.2 3,775.3 3,775.8 550.0	1,379.3 3,739.3 3,775.9 388.9
5,547.0 (515.3)	5,547.0 (515.3)	TOTAL		9,633.3 (895.0)	9,633.3 (895.)

BEDROOMS

3

ALL WEATHER DECKS

538.3

AREA - SF

1,525.2 1,554.9 1,550.4

4.630.6

INSULATED AREA

343.1 2,123.6 2,163.9

538.3 (50.0) 4,630.6 (430.2) 5,168.9 (480.2)

UNIT SUMMARY

UNIT TYPE

A1 A2a A3

TOTAL

FLOOR AREA - SI

STOREY

TOTAL

UNITS

1

TOTAL AREA

343.1 2,661.9 2,163.9

UNIT SUMMARY

UNIT TYPE

D1 D2 D3

TOTAL

STOREY

LOOR AREA - SF (

BUILDING J INFORMATION

REDROOMS

3

ALL WEATHER DECKS

711.2

AREA - SF

1,524.5 1,550.6 1,549.6

6.149.2

INSULATED AREA

447.7 2,818.1 2,853.4

TOTAL 711.2 (98.1) 6,149.2 (571.3) 6,860.4 (637.4)

	BUILDING G	INFORMATION			BUILDIN
UNITS	UNIT SUMMARY UNIT TYPE	BEDROOMS	AREA - SF	UNITS	UNIT SUM UNIT TY
2 1 1	A1 A2 A3	3 3 3	1,525,4 1,538,2 1,551,3	3 1 1	A1 A2 A3
4	TOTAL		7,005.8	5	TOTA
	FLOOR AREA -	SF (SM)			FLOOR AF
TAL AREA	STOREY	ALL WEATHER DECKS	INSULATED AREA	TOTAL AREA	STORE
1,223.4 8,011.8 1,022-8 440.2	1 2 3 RODF	802.7	569.0 3,493.3 3,603.6	569.0 4,396.0 3,603.6	1 2 3 ROOF
8.2 (715.2)	TOTAL	892.7 (82.9)	7,665.8 (712.2)	8,558.6 (795.1)	TOTA
	BUILDING H	NFORMATION			BUILDIN
	UNIT SUMMARY				UNIT SUM

BUILDING H	NFORMATION			BUILDING LINI	
UNIT SUMMARY				UNIT SUMMARY	
UNIT TYPE	BEDROOMS	AREA - SF	UNITS	UNIT TYPE	
A1 A2 A3	3 3 3	1,525.6 1,538.3 1,551.0	3 1 1	B1 B2 B3a	
TOTAL		7,866.1	5	TOTAL	Ī
FLOOR AREA - 8	IF (SM)			FLOOR AREA - SF	s
STOREY	ALL WEATHER DECKS	INSULATED AREA	TOTAL AREA	STOREY	4
2 3 RODF	893.0	569.0 3,493.3 3,603.8	669.0 4.388.3 3.603.7	1 2 3 R00F	
TOTAL	893.0 (83.0)	7,666.1 (712.2)	8,559-1 (795.2)	TOTAL	
				· · · ·	-

UNITS

2

TOTAL AREA

447.7 3,529.3 2,883.4

UNIT SUMMA	RY BEDROOMS	AREA - SF	UNITS
A1 A2 A3	3 3 3	1,525,7 1,551.9 1,552.6	2 1 1
TOTAL	-	6,155.9	4
FLOOR AREA	• 8F (SM)		
STOREY	ALL WEATHER DECKS	INSULATED AREA	TOTAL ARE
1 2 3 ROOF	706.9	452.1 2,818.7 2,885.2	452.1 3,526.1 2,855.2
TOTAL	706.9 (65.7)	6.155.9 (471.9)	6.862.8 (637.)

	BUILDING LI	INFORMATION		
	UNIT SUMMARY			
	UNIT TYPE	BEDROOMS	AREA - SF	UNITS
	B1 B2 B3a	4 4 4	1,835.9 1,862.3 1,859.8	1
	TOTAL		5,558.0	3
	FLOOR AREA - 8	BF (SM)		
REA	STOREY	ALL WEATHER DECKS	INSULATED AREA	TOTAL AREA
:	1 2 3 R00F	:	768.7 2,196.7 2,268.6 324.0	768.7 2,196.7 2,268.6 324.0
5.2)	TOTAL		5,558.0 (516.4)	5,558.0 (516.4)

DRAW	ING INDEX - DP
000.0	COVER SHEET

DP0.1	BENDERINGS
DP0.2	PROJECT DATA & DRAWING INDEX
DP1.1	SITE PLAN
	SITE STREETSCAPES
DP1.3	SITE SECTIONS
DP2.1-A	FLOOR PLANS
DP3.1-A	ELEVATIONS
DP2.1-B	FLOOR PLANS
DP3.1-B	ELEVATIONS
DP2.1-C	FLOOR PLANS
DP3.1-C	ELEVATIONS
DP2.1-D	FLOOR PLANS
DP3.1-D	ELEVATIONS
DP2.1-E	FLOOR PLANS
DP2.2-E	FLOOR PLANS
DP3.1-E	ELEVATIONS
DP2.1-F	FLOOR PLANS
DP3.1-F	ELEVATIONS
DP2.1-G	FLOOR PLANS
DP2.2-G	FLOOR PLANS
DP3.1-G	ELEVATIONS
DP2.1-H	FLOOR PLANS
DP2.2-H	FLOOR PLANS
DP3.1-H	ELEVATIONS
DP2.1-J	FLOOR PLANS
DP2.2-J	FLOOR PLANS
DP3.1-J	ELEVATIONS
DP2.1-K	FLOOR PLANS
	FLOOR PLANS
DP3.1-K	ELEVATIONS
	FLOOR PLANS
DP3.1-L	ELEVATIONS

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LANDSCAPE ARCHITECT:	PMG LANDSCAPE ARCHITECTS LTD. C100 4185 STILL CREEK DRIVE BURNABY, BC VSC 6G9 604-204-0011
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SURVEYOR:	MURRAY & ASSOCIATES 201 - 124/8 82 AVENUE SURREY, BC V3W 3E9 604-597-9189
ARBORIST:	VDZ+A 100 - 9181 CHURCH ST FORT LANGLEY, BC, V1M 2R8 804-482-0104



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GREYSTONE

MARY HILL BYPASS, PITT RIVER RD & HARBOUR ST, PORT COQUITLAM, BC

> DATE 2024.02.06 JOB NO. 2301



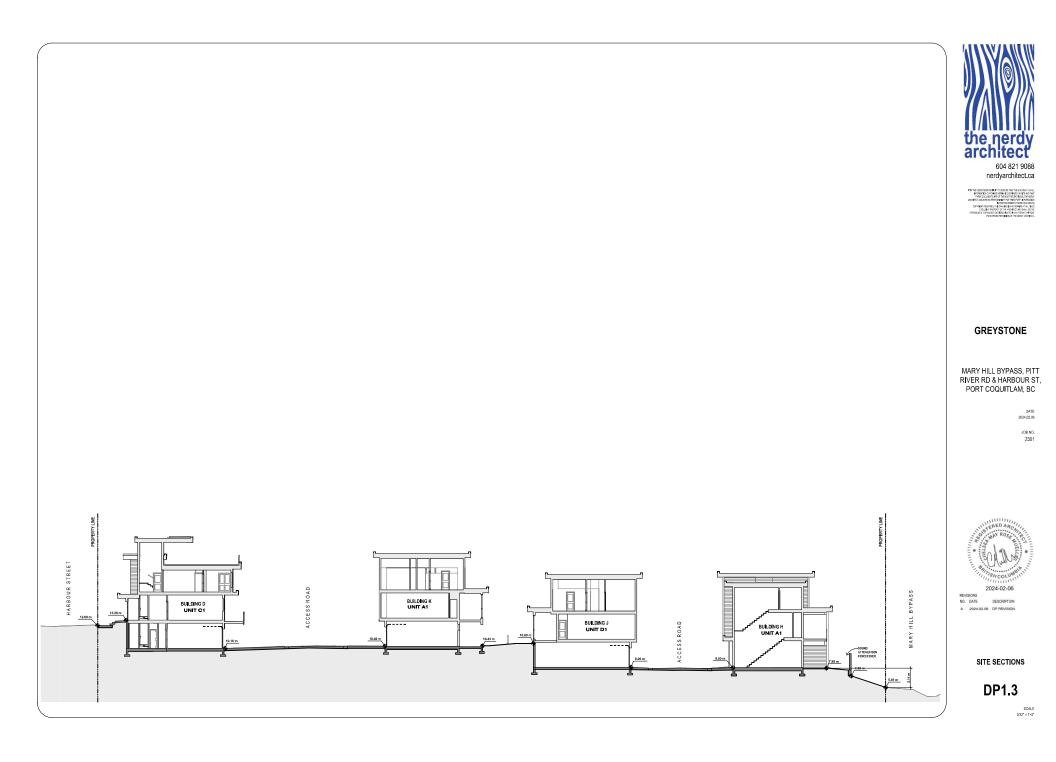
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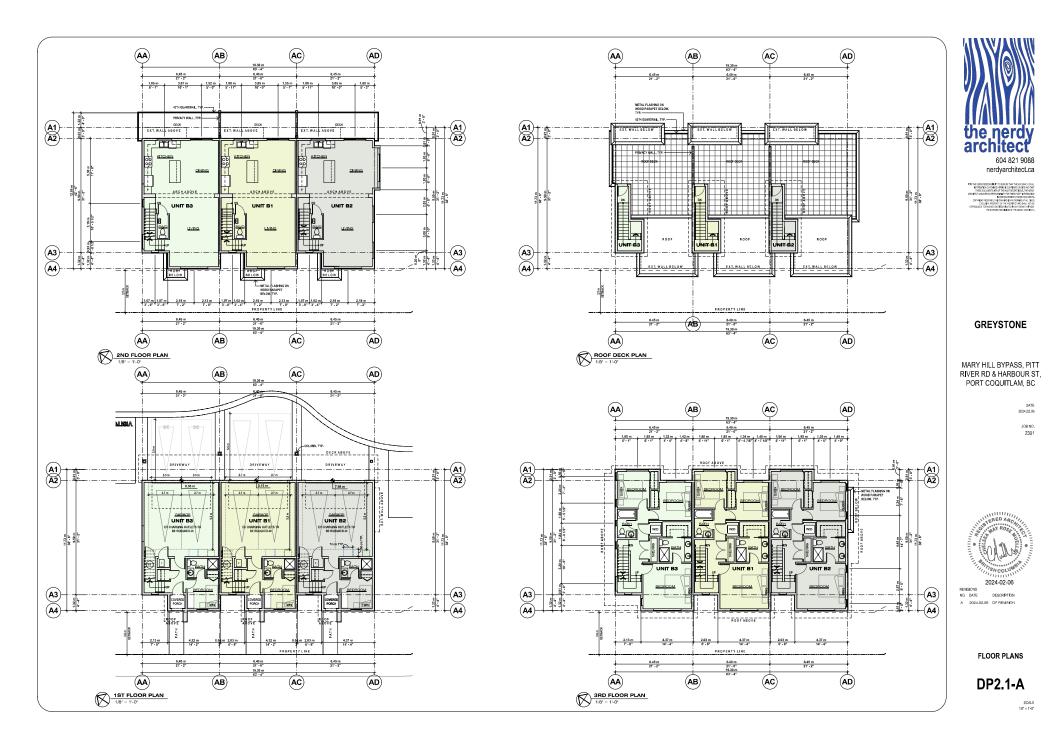
PROJECT DATA & DRAWING INDEX

DP0.2

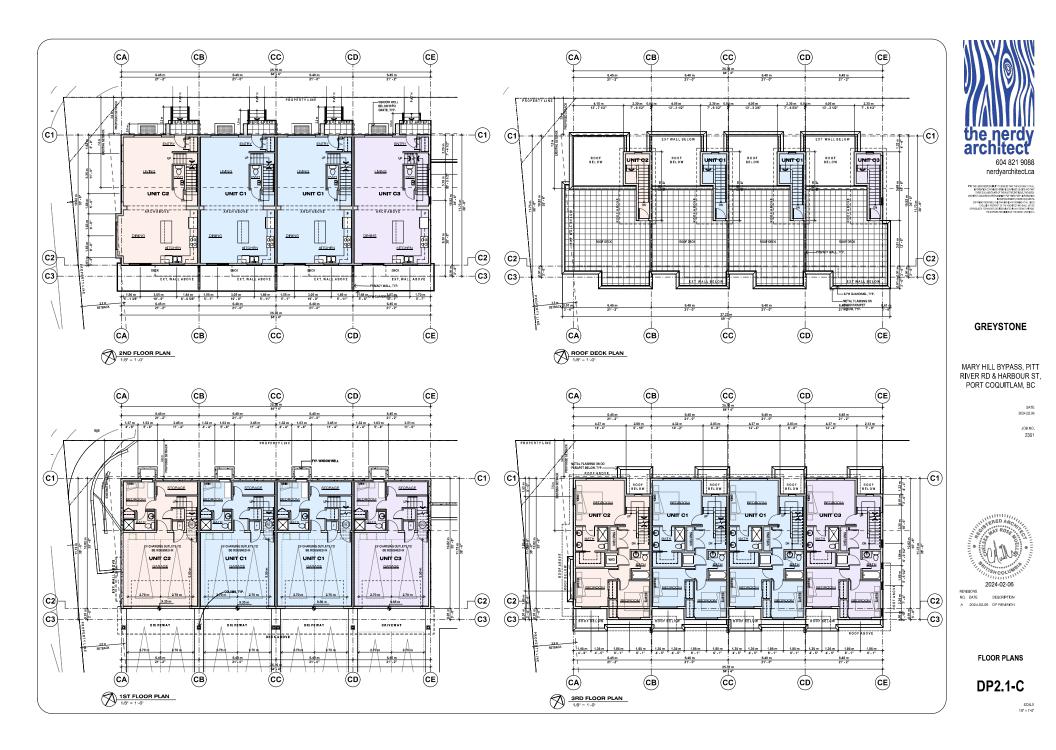
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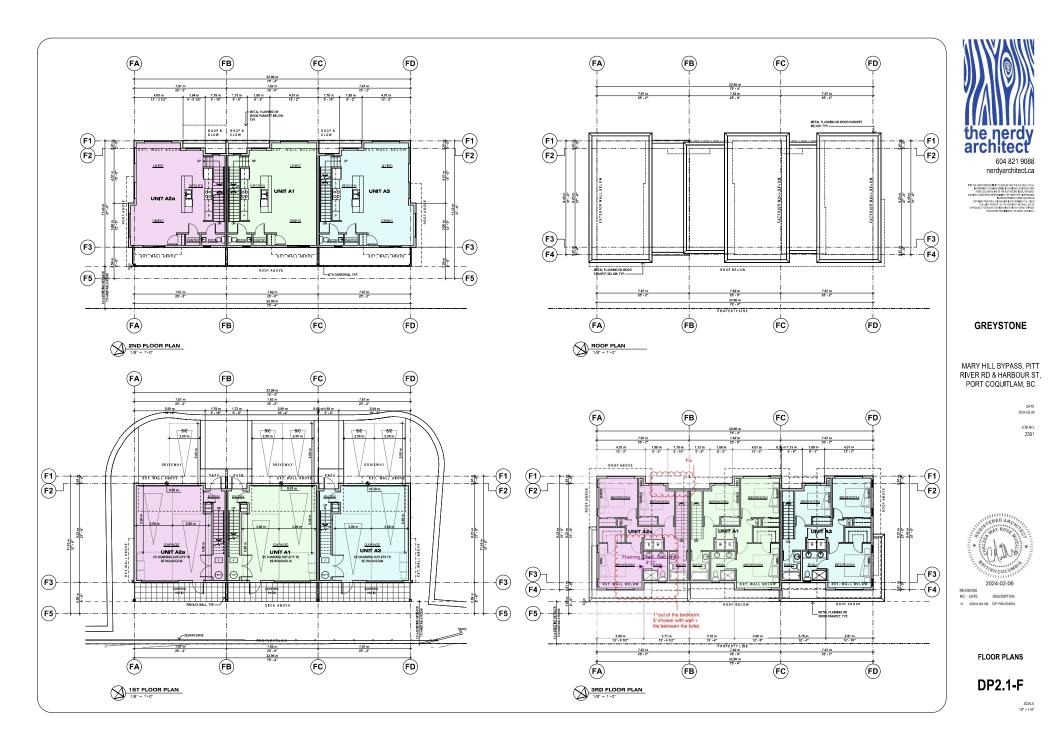


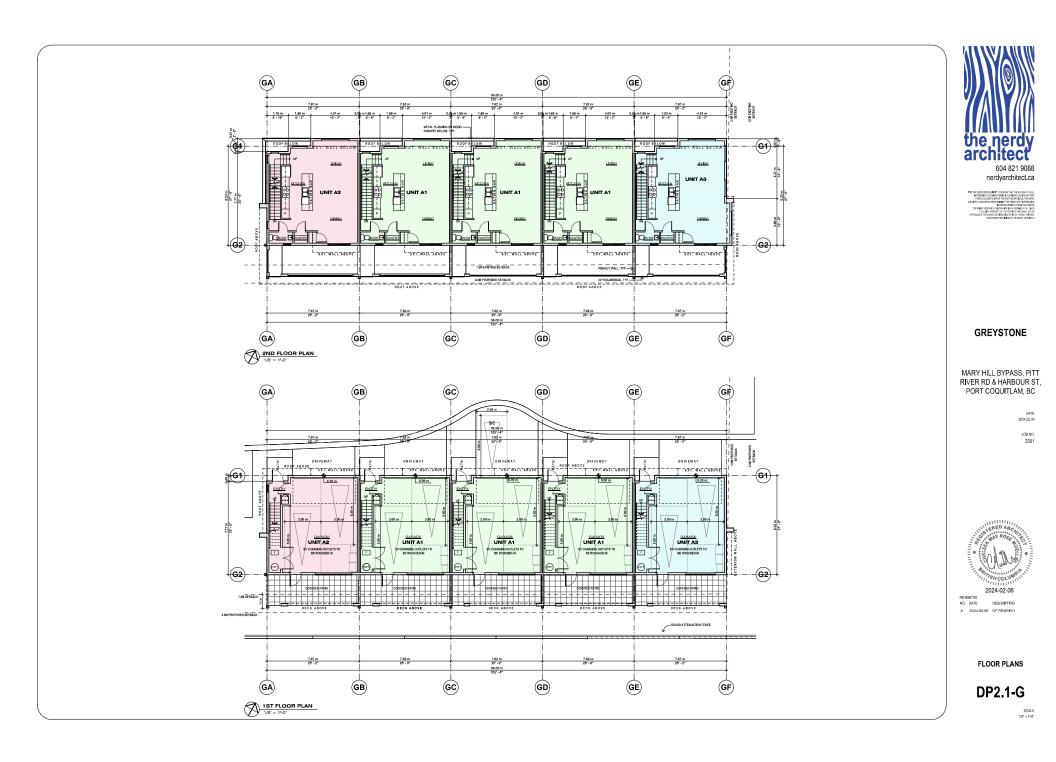


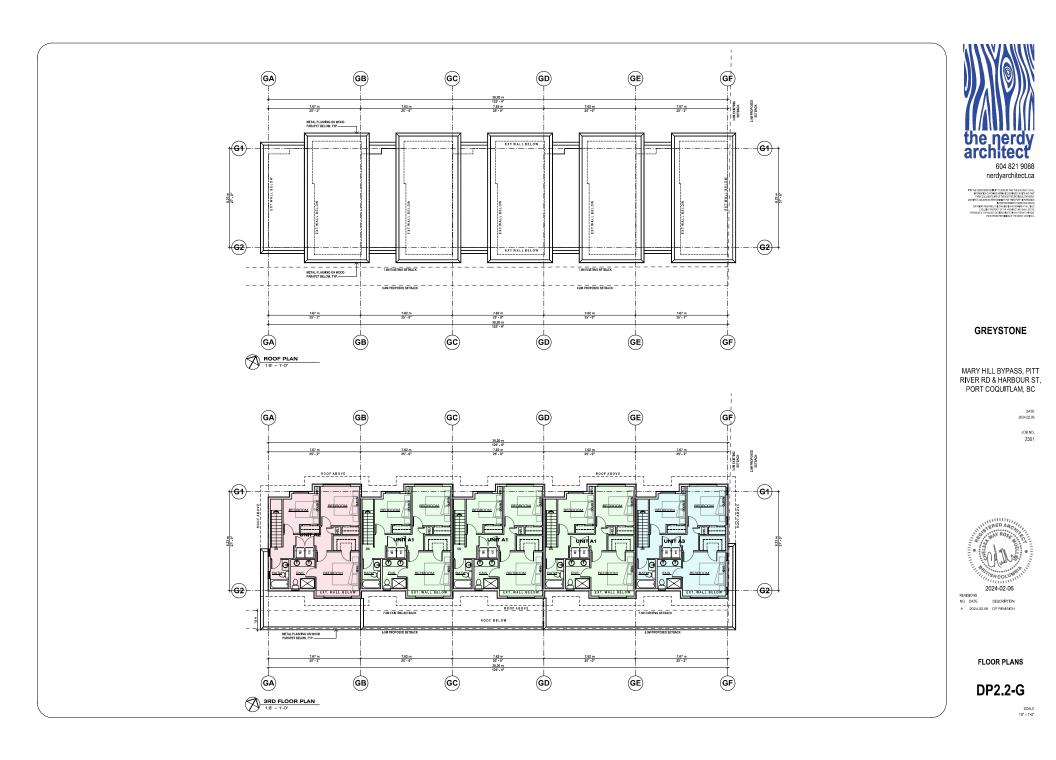


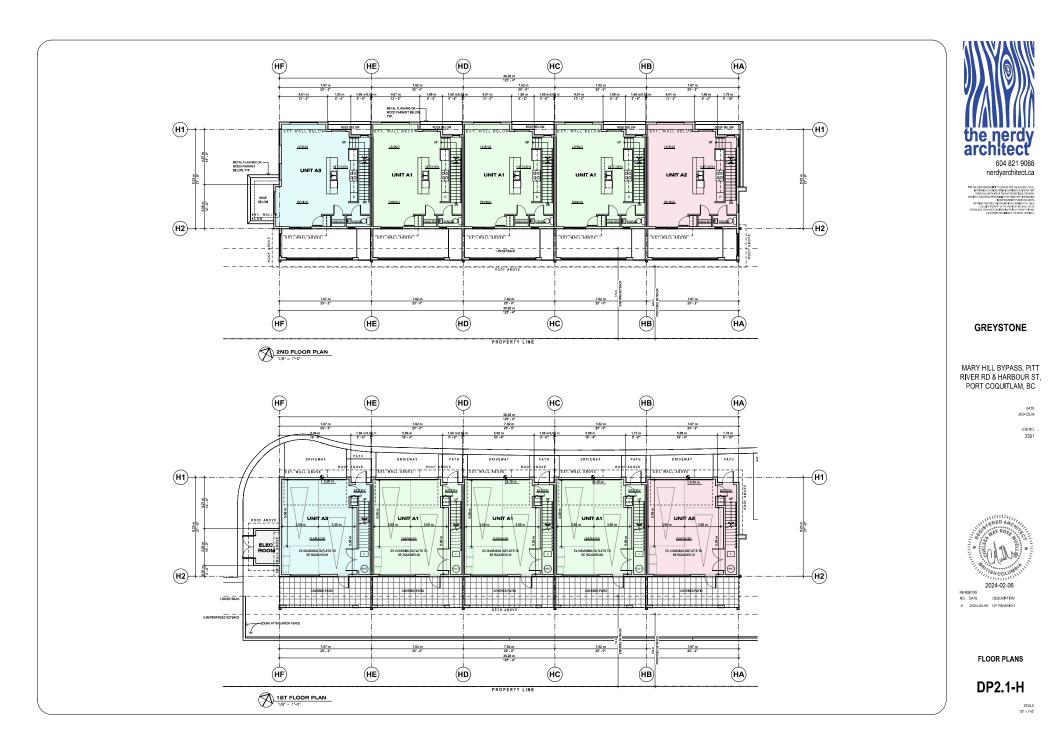


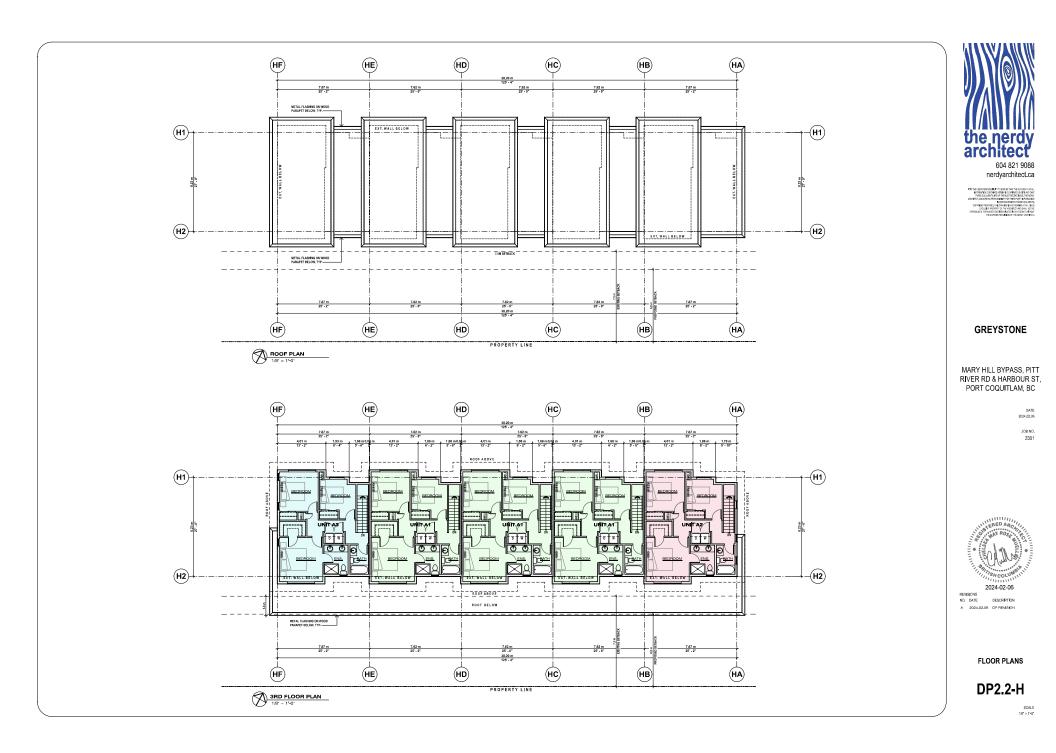


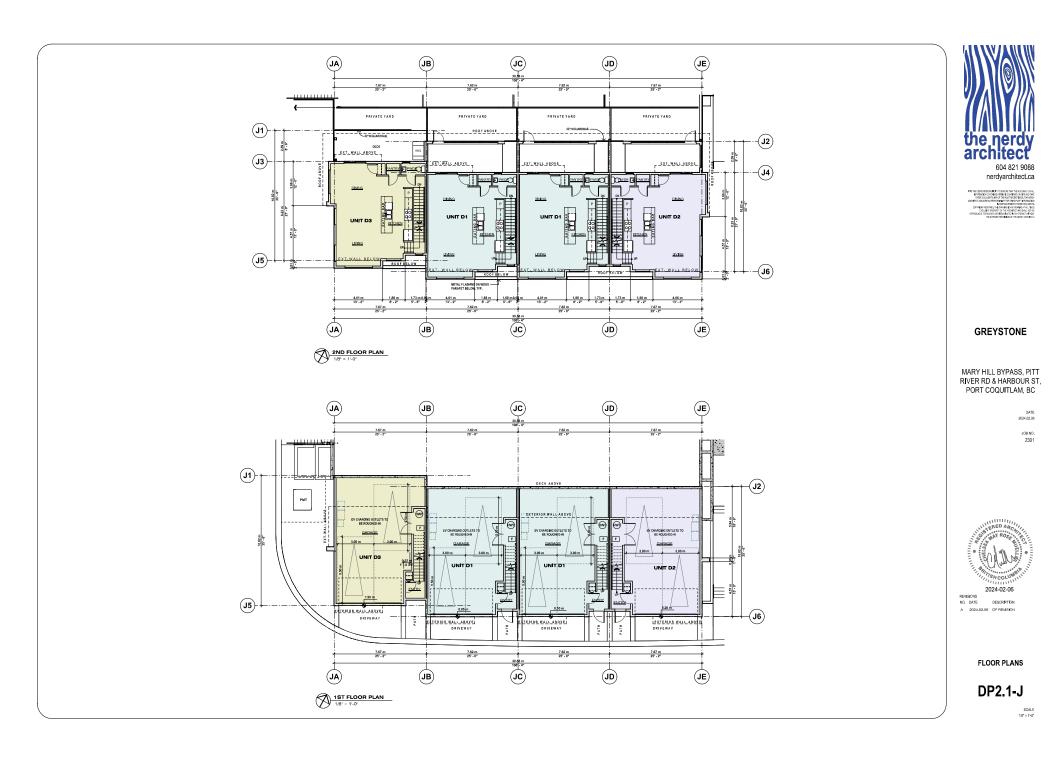


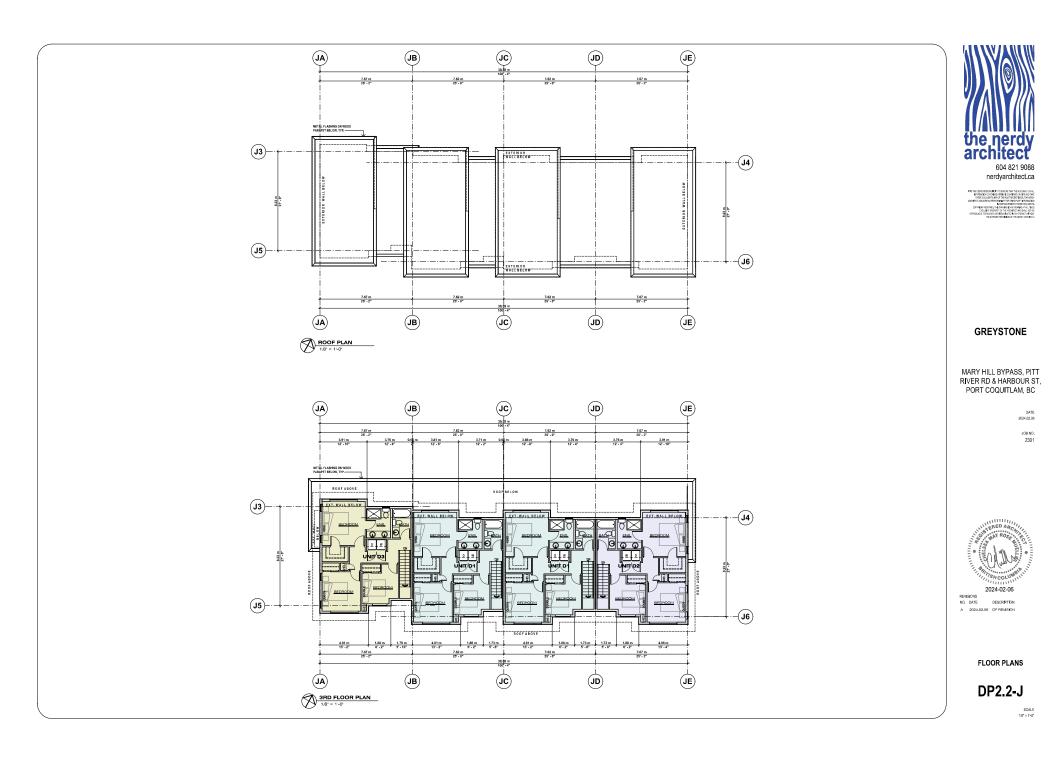


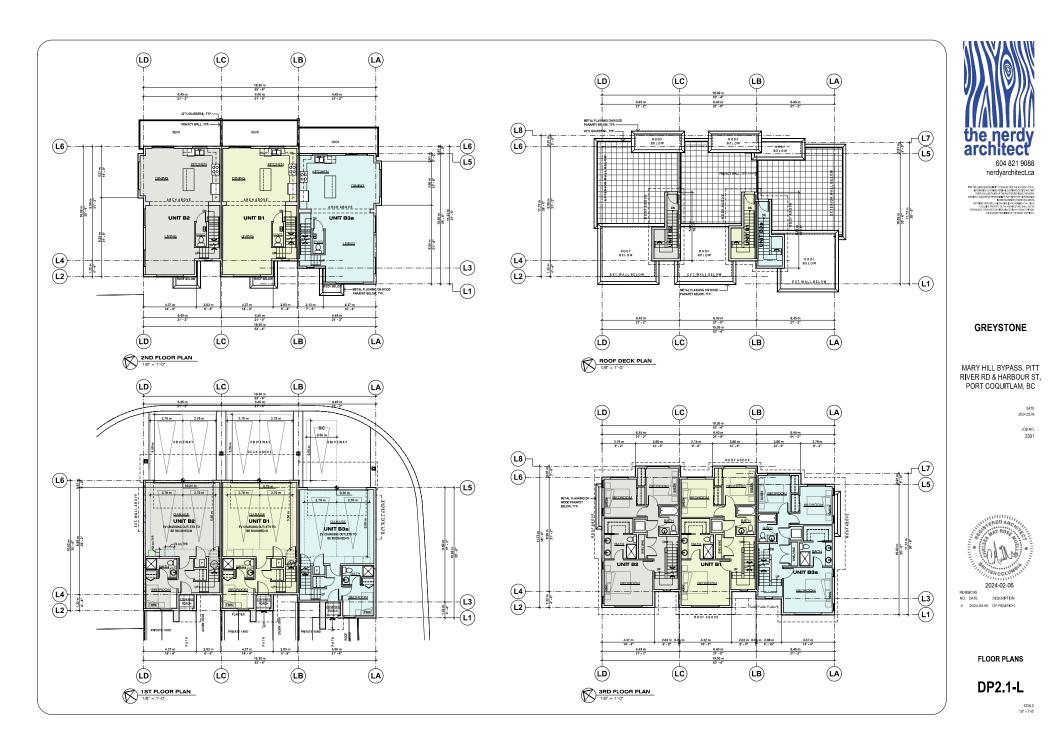




























					Турі	ical Interior Nois	e Level Calcu	lation						
					(/	Analysis ref. NR	C's IBANA-Ca	alc)						
#/UNIT	LOCATION	ROOM	ROOM	FAÇADE(S)	EXTERIOR		FAÇADE	S/A	S/A	TYPE	NOISE	INTERIOR	TYP. CONST.	MARGIN
ELEM	/ SUITE	TYPE	ABSORP		NOISE		AREA		(dB)	OF	REDUCTION	LEVEL	/ DESIGN CRIT.	(dB)
			(A) sq.m		LEVEL (dB)		(S) sq.m			FAÇADE	(dB)	(dB)	(dB)	
1.	Bldg. A	Master Bedroom	14.3	Pitt River	70	Window:	4.9	0.34	-4.7	G36	40.7	29.3	OITC 32 rated wind	ow
	Unit Type B2	(SW corner)	((West, incl. return		Cladding:	13.0	0.91	-0.4	Wf41	41.4	28.6	Fibre-cem. w.res. cl	han. + 2x GWB
	3rd Floor			South	72	Windows:	1.5	0.10	-9.8	G36	45.8	26.2	OITC 32 rated wind	ow
						Cladding:	11.0	0.77	-1.1	Wf41	42.1	29.9	Fibre-cem. w.res. cl	han. + 2x GWB
											TOTAL Lp=	35	35	0
2	Bldg. A	Master Bedroom	14.3	Pitt River	70	Window:	4.9	0.34	-4.7	G36	40.7	29.3	OITC 32 rated wind	ow
	Unit Type B1 3rd Floor	(West façade)	(sim. to B2)	(West, incl. retur	m walls)	Cladding:	17.5	1.22	0.9	Wf38	37.1	32.9	Fibre-cement w.2x	GWB
	3rd Floor										TOTAL Lp=	34	35	1
3.	Bldg. H	Master Bedroom	13.4	Mary Hill	73	Window:	4.2	0.31	-5.1	G39	44.1	28.9	OITC 35 rated fenes	stration
	Unit Type A3	(SW corner)	(5	South, incl. return	wall)	Cladding:	10.5	0.78	-1.1	Wf41	42.1	30.9	Fibre-cem. w.res. cl	han. + 2x GWB
	3rd Floor	· · · · ·		West	71	Window:	0.7	0.06	-12.6	G39	51.6	19.4	OITC 35 rated fenes	stration
						Cladding:	11.5	0.86	-0.7	Wf41	41.7	29.3	Fibre-cem. w.res. cl	han. + 2x GWB
											TOTAL Lp=	35	35	0
4.	Bldg. H	Master Bedroom	13.4	Mary Hill	73	Window:	4.2	0.31	-5.1	G39	44.1	28.9	OITC 35 rated fenes	stration
	Unit Type A1	(South façade)				Cladding:		0.97	-0.1	Wf41	41.1	31.9	Fibre-cem. w.res. cl	
	3rd Floor										TOTAL Lp=	34	35	1

TABLE 1: GREYSTONE, PORT COQUITLAM

-Bedrooms considered with 10 ft. clg. ht.

N.B.: Other windows may satisfy design criteria, subject to BSA analyses of final development drawings, façade details and manuf. fenestration acoustical test reports per ASTM E90.

Noise reduction data referencing NRC's IBANA-Calc, related validation studies and statistical traffic source data.

G29: Standard thermal glazing.

- G33: OITC 29 rated window fenest. (typ. 6-13-4 or 6-13-6 thermal glazing)
- G36: OITC 32 rated window (typ. 6Lam-13-6 glazing)
- G39: OITC 35 rated fenestration (stringent design requirement)
- G41: OITC 37 rated fenestration (very stringent design requirement)

W34: Standard lightweight ext. construction, e.g. vinyl siding, metal panel, etc.

- W36: w. 2x interior GWB, or equivalent.
- W39: w. 2x interior GWB on resilient channels.
- W45: Heavy exterior finish, e.g. concrete, stone, brick, etc., or equiv. deep void construction.
- Ws36: Spandrel assembly with furred GWB assembly, 1x GWB, or equivalent.

Ws38: Spandrel assembly with furred GWB assembly, 2x GWB, or equivalent.

- Ws41: Spandrel assembly with furred GWB assembly, 2x GWB on resilient channels.
- Wf36: Fibre-cement cladding, or equivalent.
- Wf38: Fibre-cement cladding w. 2x interior GWB.
- Wf41: Fibre-cement w. 2x interior GWB on resilient channels.

- sID27: Standard sliding glass door with standard thermal glazing (OITC 24)
- sID30: OITC 27 rated slider (typ. w.6/4 glazing)
- sID31: OITC 28 rated slider (typ. w.6Lam/4 glazing)
- slD32: OITC 29 rated slider (typ. w.6Lam/6 glazing)
- sID35: OITC 32 rated slider (stringent design requirement).
- sID38: OITC 35 rated slider (very stringent design requirement).
- swD29: Standard exterior swing door with standard thermal glazing (OITC 26) swD32: OITC 29 rated swing door (typ. w.6/4 glazing)
- swD33: OITC 30 rated swing door (typ. w.6Lam/4 glazing)
- swD35: OITC 32 rated swing door (stringent design requirement).

REVERBERATION TIME ANALYSIS

Bldg. A: Unit Type B2, 3rd Floor, Master Bedroom (west).

FLOOR AREA VOLUME	15.3 sq m. 46.5 cu m.		IGTH GHT	4.1 m. 3.0 m.		3.8	3 m.		
INDEX MATER	RIAL	LIB#	AREA	125	250	500	1kHz	2kHz	4kHz
12-Interior D	Studs, 16"oc	30	1 2 20 23	0.3 0.2 6.0 6.5	0.3 0.2 2.4 2.9	0.2 0.2 1.2 1.6	0.1 0.1 1.0 1.2	0.1 0.1 1.0 1.2	0.1
22-Interior D	Studs, 16"oc	30	5 2 18 25	1.0 0.2 5.5 6.7	1.0 0.2 2.2 3.3	0.7 0.2 1.1 2.0	0.3 0.1 0.9 1.4	0.1 0.9	0.1
FLOOR-CLG 31-Typical ca 32-Drywall ce GROUP 3 TOTA	eiling.	1 23	11 15 27	1.0 2.3 3.3		0.8	2.8 0.8 3.6	0.8	
COMMON 41-Double Bed 42-Misc. Furn 43-AIR, 60% R GROUP 4 TOTA	1. 2m x 1m RH, per 1000 m^	17 33 3101	1 1 0	4.5 1.5 0.2 6.2	5.0 1.8 0.2 6.9	5.5 2.0 0.2 7.7	2.0	2.0	2.0
TOTAL ABSORPI ROOM CONSTANI			74		20.0		17.7	18.9	21.1
SABINE REVERE FITZROY REVER NORRIS E REVE	RB TIME			0.33 0.34 0.30	0.47	0.53	0.52		0.46
23-Drywall c 30-Interior 33-Misc. Fur 44-Glass, dc	ed 2m x 1.5m on Studs, 16"oc ceiling. Door cn. 2m x 1m			0.09 4.50 0.30 0.15 0.15 3.00 0.20 3.30	0.10 5.00 0.12 0.10 0.11 3.50 0.20 3.30	0.20 5.50 0.06 0.05 0.10 4.00 0.15 3.30	0.25 6.00 0.05 0.05 0.07 4.00 0.07 3.30	$\begin{array}{c} 0.30 \\ 6.00 \\ 0.05 \\ 0.05 \\ 0.06 \\ 4.00 \\ 0.05 \\ 10.00 \end{array}$	0.35 6.00 0.05 0.05 0.07 4.00 0.03 30.00



REVERBERATION TIME ANALYSIS

Bldg. H: Unit Type A3, 3rd Floor, Master Bedroom (SW corner).

FLOOR AREA VOLUME	13.2 sq m. 40.0 cu m.		IGTH GHT	3.7 m. 3.0 m.	WIDTH	3.6	5 m.		
INDEX MATER	RIAL	LIB#	AREA	125	250	500	1kHz	2kHz	4kHz
12-Interior D	Studs, 16"oc	30	4 3 14 22	0.8 0.5 4.3 5.7	0.8 0.4 1.7 2.9	0.6 0.3 0.9 1.8	0.3 0.2 0.7 1.2	0.2	0.2
22-Interior D	Studs, 16"oc	30	1 2 20 22	0.1 0.2 6.0 6.4	0.1 0.2 2.4 2.7	0.1 0.2 1.2 1.5	0.1 0.1 1.0 1.2	0.0 0.1 1.0 1.1	0.1
FLOOR-CLG 31-Typical ca 32-Drywall ce GROUP 3 TOTA	eiling.	1 23	9 13 22	0.8 2.0 2.8	0.9 1.3 2.2	1.8 0.7 2.5		2.8 0.7 3.4	
42-Misc. Furn	RH, per 1000 m^	17 33 3101	1 1 0	1.5	5.0 1.8 0.1 6.9	2.0	2.0	6.0 2.0 0.4 8.4	2.0 1.2
TOTAL ABSORPI ROOM CONSTANI			67 67		19.0		16.9	17.9	
SABINE REVERE FITZROY REVER NORRIS E REVE	RB TIME			0.31	0.44	0.48 0.48	0.48 0.50	0.46 0.50 0.45	0.42
23-Drywall c 30-Interior 33-Misc. Fur 44-Glass, dc	ed 2m x 1.5m on Studs, 16"oc ceiling. Door cn. 2m x 1m			0.09 4.50 0.30 0.15 0.15 3.00 0.20 3.30	0.10 5.00 0.12 0.10 0.11 3.50 0.20 3.30	0.20 5.50 0.06 0.05 0.10 4.00 0.15 3.30	0.25 6.00 0.05 0.05 0.07 4.00 0.07 3.30	$\begin{array}{c} 0.30 \\ 6.00 \\ 0.05 \\ 0.05 \\ 0.06 \\ 4.00 \\ 0.05 \\ 10.00 \end{array}$	$\begin{array}{c} 0.35 \\ 6.00 \\ 0.05 \\ 0.05 \\ 0.07 \\ 4.00 \\ 0.03 \\ 30.00 \end{array}$

BSA CMHC ROAD AND RAIL NOISE v4.3g RUN DATE: 04-MAR-24 File: G-S

CALIBER PROJECTS / THE NERDY ARCHITECT PROJECT NUMBER: A04.182 Bldg. G: Future traffic noise at south façade.

Mary Hill WB Mary Hill EB Pitt River Rd

POSTED SPEED	70 kph	46.1	70 kph	46.1	50 kph	42.5	
VOLUME PER DAY	36100	45.6	41900	46.2	10800	40.3	
% OF TRUCKS	5.0%	2.2	5.0%	2.2	1.0%	0.7	
DISTANCE	23.5m	1.1	36.Om	-0.8	100.Om	-5.2	
GROUND EFFECT.	(N)	0.0	(N)	0.0	(N)	0.0	
INCLUDED ANGLE	180 deg	0.0	180 deg	0.0	60 deg	-4.8	-Eff. view to P.R.R
GRADIENT	1.0%	0.3	0.0%	0.0	5.0%	1.7	allows for refl.
INTERSECTION	108.Om	1.0	108.Om	1.0	108.Om	1.0	effects.
BARRIER EFFECT	#1 (N)	0.0	#2 (N)	0.0	#3 (N)	0.0	
	-		-		-		
		70.3d	В	68.7dB		50.2dH	3

TOTAL TRAFFIC NOISE LEVEL: 73dB Leq (24hr)

BSA CMHC ROAD AND RAIL NOISE v4.3g RUN DATE: 04-MAR-24 File: H-S-E

CALIBER PROJECTS / THE NERDY ARCHITECT PROJECT NUMBER: A04.182 Bldg. H: Future traffic noise at south façade, east end.

Mary Hill WB Mary Hill EB Pitt River Rd

 70 kph 46.1
 70 kph 46.1
 50 kph 42.5

 36100 45.6
 41900 46.2
 10800 40.3

 5.0% 2.2
 5.0% 2.2
 1.0% 0.7

 24.0m 1.0
 36.5m -0.9
 70.0m -3.7

 (N)
 0.0
 (N)
 0.0

 POSTED SPEED.. VOLUME PER DAY % OF TRUCKS... DISTANCE.... GROUND EFFECT. INCLUDED ANGLE 180 deg 0.0 180 deg 0.0 60 deg -4.8 GRADIENT..... 1.0% 0.3 0.0% 0.0 5.0% 1.7 INTERSECTION.. 80.0m 1.0 80.0m 1.0 80.0m 1.0 BARRIER EFFECT #1 (N) 0.0 #2 (N) 0.0 #3 (N) 0.0 ____ ____ ____ 70.2dB 68.6dB 51.7dB

TOTAL TRAFFIC NOISE LEVEL: 73dB Leq (24hr)

BSA CMHC ROAD AND RAIL NOISE v4.3g RUN DATE: 04-MAR-24 File: H-S-W

CALIBER PROJECTS / THE NERDY ARCHITECT PROJECT NUMBER: A04.182 Bldg. H: Future traffic noise at south façade, west end.

Mary Hill WB Mary Hill EB Pitt River Rd POSTED SPEED.. 70 kph 46.1 70 kph 46.1 50 kph 42.5

 36100
 45.6
 41900
 46.2
 10800
 40.3

 5.0%
 2.2
 5.0%
 2.2
 1.0%
 0.7

 26.0m
 0.6
 38.5m
 -1.1
 37.0m
 -0.9

 (N)
 0.0
 (N)
 0.0
 (N)
 0.0

 VOLUME PER DAY % OF TRUCKS... DISTANCE.... GROUND EFFECT. INCLUDED ANGLE180 deg0.0180 deg0.060 deg-4.8GRADIENT....1.0%0.30.0%0.05.0%1.7INTERSECTION..53.0m2.053.0m2.053.0m2.0 #1 (N) 0.0 #2 (N) 0.0 #3 (N) 0.0 BARRIER EFFECT ____ _____ _____ 70.8dB 69.4dB 55.5dB

TOTAL TRAFFIC NOISE LEVEL: 73dB Leq (24hr)

BSA CMHC ROAD AND RAIL NOISE v4.3g RUN DATE: 04-MAR-24 File: H-W

CALIBER PROJECTS / THE NERDY ARCHITECT PROJECT NUMBER: A04.182 Bldg. H: Future traffic noise at west façade.

Mary Hill WB Mary Hill EB Pitt River Rd

 70 kph 46.1
 70 kph 46.1
 50 kph 42.5

 36100 45.6
 41900 46.2
 10800 40.3

 5.0% 2.2
 5.0% 2.2
 1.0% 0.7

 27.0m 0.5
 39.5m -1.2
 36.0m -0.8

 (N) 0.0
 (N) 0.0
 (N) 0.0

 POSTED SPEED.. VOLUME PER DAY % OF TRUCKS... DISTANCE..... GROUND EFFECT. 120 deg -1.8 120 deg -1.8 120 deg -1.8 -Allows for refl. INCLUDED ANGLE GRADIENT..... 1.0% 0.3 0.0% 0.0 5.0% 1.7 from Bldg. A. INTERSECTION.. 53.0m 2.0 53.0m 2.0 53.0m 2.0 #1 (N) 0.0 #2 (N) 0.0 #3 (N) 0.0 BARRIER EFFECT _____ ____ ____ 67.5dB 68.9dB 58.6dB

TOTAL TRAFFIC NOISE LEVEL: 71dB Leq (24hr)

BSA CMHC ROAD AND RAIL NOISE v4.3g RUN DATE: 04-MAR-24 File: A-S-W

CALIBER PROJECTS / THE NERDY ARCHITECT PROJECT NUMBER: A04.182 Bldg. A: Future traffic noise at south facade, west end.

Mary Hill WB Mary Hill EB Pitt River Rd

 70 kph 46.1
 70 kph 46.1
 50 kph 42.5

 36100 45.6
 41900 46.2
 10800 40.3

 5.0% 2.2
 5.0% 2.2
 1.0% 0.7

 37.5m -1.0
 50.0m -2.2
 14.0m 3.3

 (N)
 0.0
 (N)
 0.0

 POSTED SPEED.. VOLUME PER DAY % OF TRUCKS... DISTANCE..... GROUND EFFECT. INCLUDED ANGLE180 deg0.0180 deg0.090 deg-3.0GRADIENT....1.0%0.30.0%0.05.0%1.7INTERSECTION..48.0m2.048.0m2.048.0m2.0 BARRIER EFFECT #1 (N) 0.0 #2 (N) 0.0 #3 (N) 0.0 ____ _____ _____ 69.2dB 68.3dB 61.5dB

> _____ TOTAL TRAFFIC NOISE LEVEL: 72dB Leg (24hr) _____

> > BSA CMHC ROAD AND RAIL NOISE v4.3q RUN DATE: 04-MAR-24 File: A-W-S

CALIBER PROJECTS / THE NERDY ARCHITECT PROJECT NUMBER: A04.182 Bldg. A: Future traffic noise at west façade, south end.

	Mary Hill WB	Mary Hill EB	Pitt River Rd
POSTED SPEED VOLUME PER DAY % OF TRUCKS DISTANCE GROUND EFFECT. INCLUDED ANGLE GRADIENT INTERSECTION BARRIER EFFECT	70 kph 46.1 36100 45.6 5.0% 2.2 38.5m -1.1 (N) 0.0 90 deg -3.0 1.0% 0.3 49.0m 2.0 #1 (N) 0.0	51.0m -2.3 (N) 0.0 90 deg -3.0 0.0% 0.0 49.0m 2.0 #2 (N) 0.0	50 kph 42.5 10800 40.3 1.0% 0.7 13.0m 3.6 (N) 0.0 180 deg 0.0 5.0% 1.7 49.0m 2.0 #3 (N) 0.0 B 64.8dB

TOTAL TRAFFIC NOISE LEVEL: 70dB Leg (24hr) _____

BSA CMHC ROAD AND RAIL NOISE v4.3g RUN DATE: 04-MAR-24 File: B-W-S

CALIBER PROJECTS / THE NERDY ARCHITECT PROJECT NUMBER: A04.182 Bldg. B: Future traffic noise at west façade, south end.

Mary Hill WB Mary Hill EB Pitt River Rd

 70 kph 46.1
 70 kph 46.1
 50 kph 42.5

 36100 45.6
 41900 46.2
 10800 40.3

 5.0% 2.2
 5.0% 2.2
 1.0% 0.7

 64.0m -3.3
 76.5m -4.1
 12.5m 3.8

 (N) 0.0
 (N) 0.0
 (N) 0.0

 90 deg -3.0
 90 deg -3.0
 180 deg 0.0

 1.0% 0.3
 0.0% 0.0
 5.0% 1.7

 74.0m 1.0
 74.0m 1.0
 74.0m 1.0

 POSTED SPEED.. VOLUME PER DAY % OF TRUCKS... DISTANCE..... GROUND EFFECT. INCLUDED ANGLE GRADIENT..... INTERSECTION.. #1 (N) 0.0 #2 (N) 0.0 #3 (N) 0.0 BARRIER EFFECT ____ _____ _____ 62.9dB 62.4dB 64.0dB

TOTAL TRAFFIC NOISE LEVEL: 68dB Leq (24hr)

BSA CMHC ROAD AND RAIL NOISE v4.3g RUN DATE: 04-MAR-24 File: C-W-N

CALIBER PROJECTS / THE NERDY ARCHITECT PROJECT NUMBER: A04.182 Bldg. C: Future traffic noise at west façade, north end.

Mary Hill E+W Pitt River Rd Harbour St.

POSTED SPEED VOLUME PER DAY % OF TRUCKS	70 kph 78000 5.0%	48.9	50 kph 10800 1.0%		50 kph 1500 1.0%	31.8
DISTANCE GROUND EFFECT.	110.Om		14.0m (N)		11.5m (N)	4.2
INCLUDED ANGLE GRADIENT	90 deg		180 deg 5.0%	0.0	90 deg 4.0%	
INTERSECTION BARRIER EFFECT	115.0m #1 (N)		115.0m #2 (N)	1.0	20.0m #3 (N)	
	-	63.9d		 63.5dB		 53.5dB

TOTAL TRAFFIC NOISE LEVEL: 67dB Leq (24hr)

BSA CMHC ROAD AND RAIL NOISE v4.3g RUN DATE: 04-MAR-24 File: C-N-W

CALIBER PROJECTS / THE NERDY ARCHITECT PROJECT NUMBER: A04.182 Bldg. C: Future traffic noise at north façade, west end.

Mary Hill E+W Pitt River Rd Harbour St.

POSTED SPEED	70 kph 46.1	50 kph 42.5	50 kph 42.5
VOLUME PER DAY	78000 48.9	10800 40.3	1500 31.8
% OF TRUCKS	5.0% 2.2	1.0% 0.7	1.0% 0.7
DISTANCE	111.0m -5.7	15.0m 3.0	10.5m 4.6
GROUND EFFECT.	(N) 0.0	(N) 0.0	(N) 0.0
INCLUDED ANGLE	30 deg -7.8	90 deg -3.0	180 deg 0.0
GRADIENT	1.0% 0.3	5.0% 1.7	4.0% 1.3
INTERSECTION	116.0m 1.0	116.0m 1.0	21.0m 2.0
BARRIER EFFECT	#1 (N) 0.0	#2 (N) 0.0	#3 (N) 0.0
	59.0dB	60.2dE	56.9dB

TOTAL TRAFFIC NOISE LEVEL: 64dB Leq (24hr)



BSA CMHC ROAD AND RAIL NOISE v4.3g RUN DATE: 29-FEB-24 File: Predict1

CALIBER PROJECTS / THE NERDY ARCHITECT PROJECT NUMBER: A04.182 Predicted traffic noise level at Test Location.

Mary Hill WB Mary Hill EB

POSTED SPEED	70 kph 4	46.1	70 kph	46.1
VOLUME PER DAY	38880 4	15.9	51000	47.1
% OF TRUCKS	9.0%	3.4	7.0%	2.8
DISTANCE	16.5m	2.6	29.Om	0.1
GROUND EFFECT.	(N)	0.0	(N)	0.0
INCLUDED ANGLE	150 deg -	-0.8	150 deg	-0.8
GRADIENT	1.0%	0.5	0.0%	0.0
INTERSECTION	98.Om	1.0	98.Om	1.0
BARRIER EFFECT	#1 (N)	0.0	#2 (N)	0.0
			-	
		72 . 7dB		70.3dB

TOTAL TRAFFIC NOISE LEVEL: 75dB Leq (24hr)

BSA CMHC ROAD AND RAIL NOISE v4.3g RUN DATE: 29-FEB-24 File: Predict2

CALIBER PROJECTS / THE NERDY ARCHITECT PROJECT NUMBER: A04.182 Predicted traffic noise level at Test Location.

Mary Hill WB Mary Hill EB

POSTED SPEED	60 kph	44.5	70 kph	46.1	-Estimated traffic speed.
VOLUME PER DAY	38880	45.9	51000	47.1	W.Bnd slowing to light at
% OF TRUCKS	9.0%	3.5	7.0%	2.8	Pitt River Road.
DISTANCE	16.5m	2.6	29.Om	0.1	
GROUND EFFECT.	(N)	0.0	(N)	0.0	
INCLUDED ANGLE	150 deg	-0.8	150 deg	-0.8	
GRADIENT	1.08	0.5	0.0-8	0.0	
INTERSECTION	98.Om	1.0	98.Om	1.0	
BARRIER EFFECT	#1 (N)	0.0	#2 (N)	0.0	
	-		-		
		71.2d	B	70.3dE	3

TOTAL TRAFFIC NOISE LEVEL: 74dB Leq (24hr)

Measurement Test Location.

TABLE 2:Measured samples of daytime traffic noise level approximately 1.5m north of south property
line and 28m west of east property line (11-Oct-2018, ~2:00pm).
Conditions: Effective view to traffic on Mary Hill Bypass is ~150 deg. W.Bnd traffic moving

slower than 70km/h posted speed limit (Est. 60 km/h).



2 min. Leg Samples

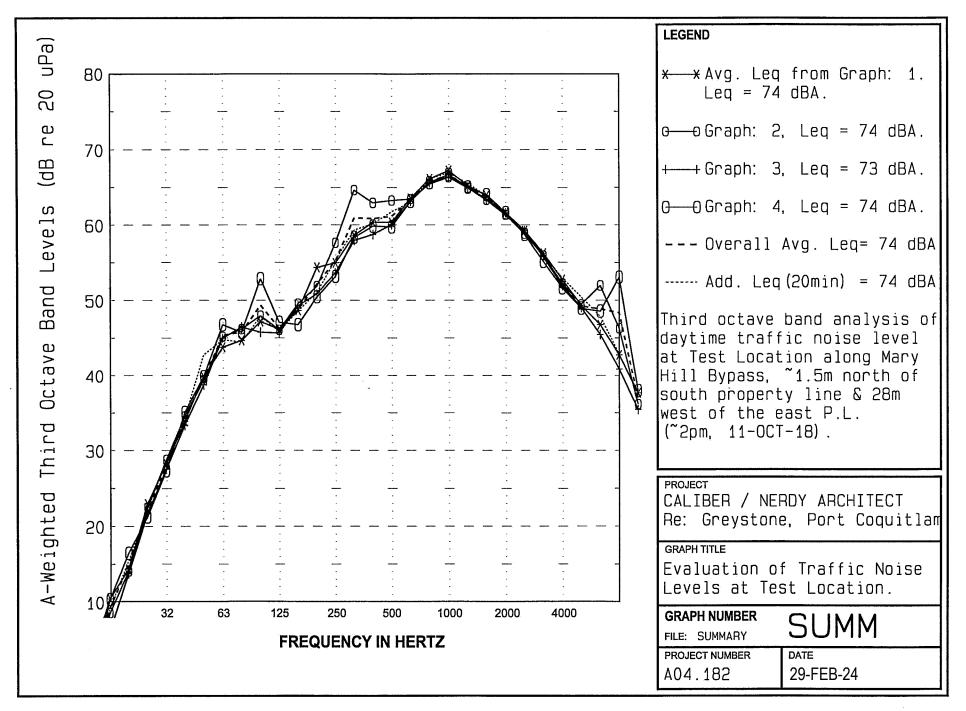
74.5	Dump truck c/w jake brake W.Bnd
72.9	
74.3	
73.8	
73.1	
74.2	
72.2	
76.2	Loud motorbike W.Bnd
74.0	
72.8	Aircraft overhead
72.7	
74.2	
73.5	
73.5	Bus W.Bnd (#791)
74.0	
73.3	
=====	
74	dBA

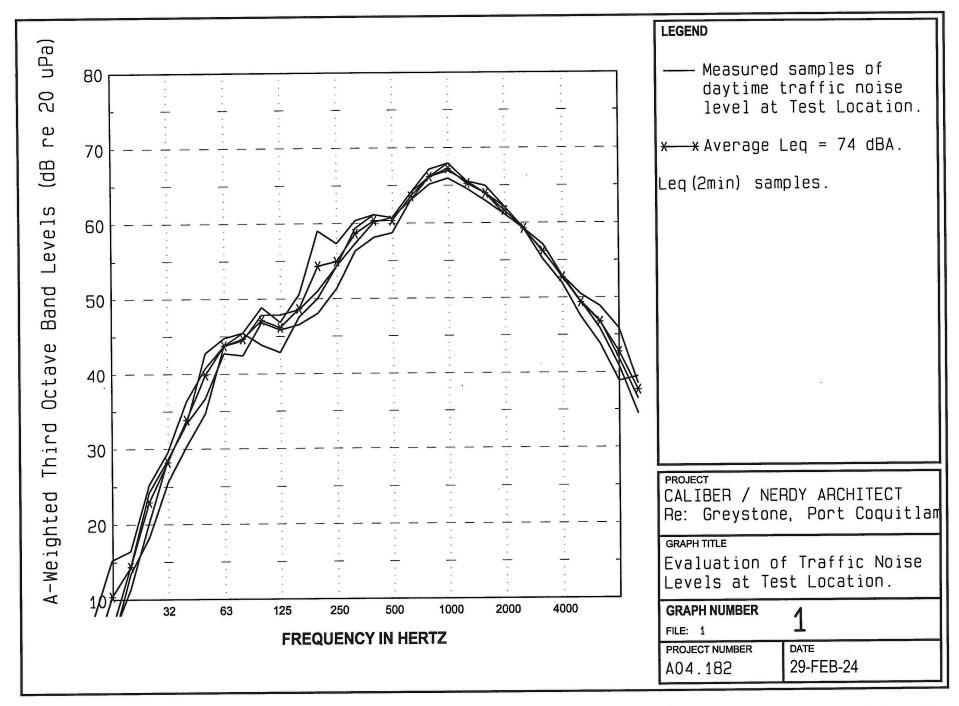
Traffic Counts on Mary Hill Bypass:

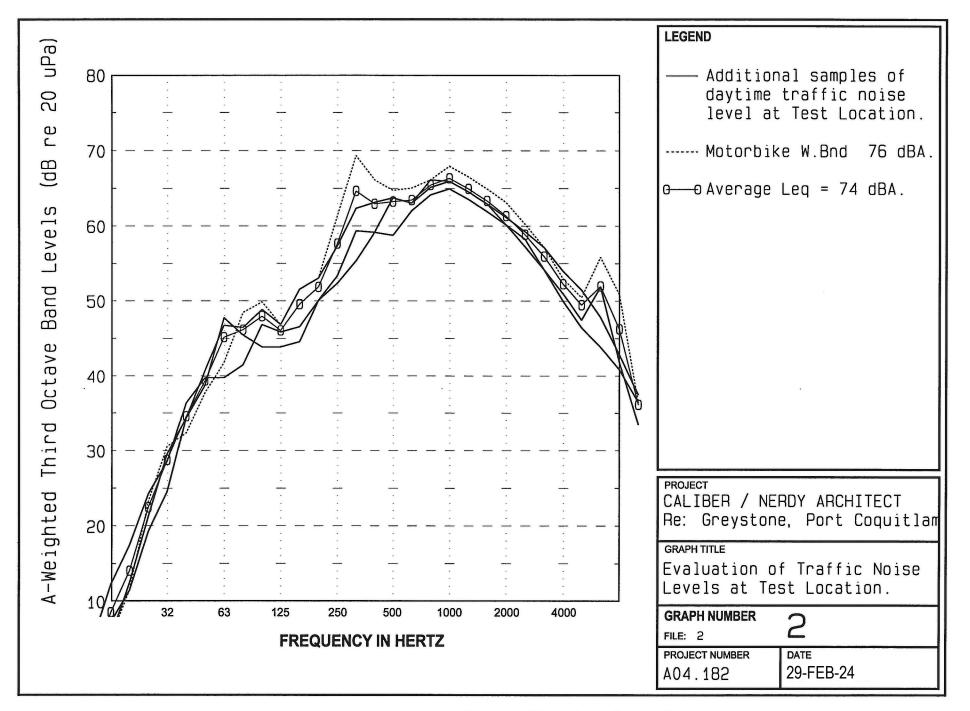
Direction	VPH	% Heavy Veh.	Equiv. 24 hour Volume
Westbound:	1620	9	38,880
Eastbound:	2125	7	51,000

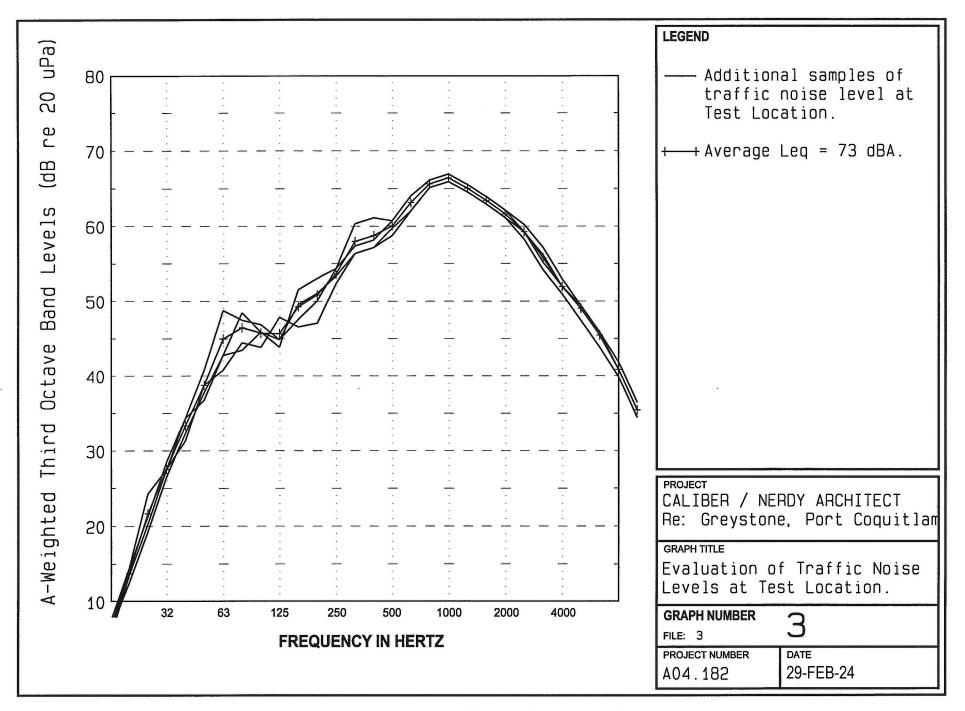
=:

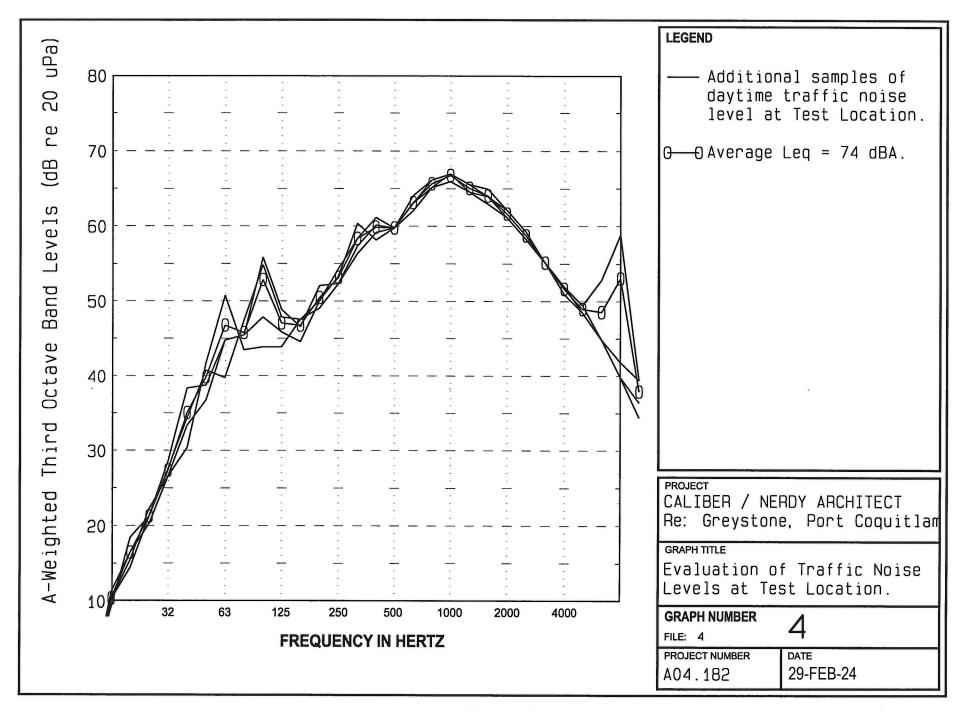












Greystone Development Traffic Impact Assessment

Prepared for:

Schmidt & Associates Development Planning Ltd.



Prepared by:





84a moody street port moody, bc canada v3h 2p5





Date: Our File No: April 5, 2018 5776-01

BY EMAIL

Laurie Schmidt Schmidt & Associates Development Planning Ltd. Suite 1440, 1166 Alberni Street Vancouver, BC V6E 3Z3

Dear Mr. Schmidt,

Re: Greystone Development, Port Coquitlam - FINAL Traffic Impact Assessment

Creative Transportation Solutions Ltd. (CTS) is pleased to submit this FINAL Traffic Impact Assessment for the proposed mixed-use Greystone Development in the City of Port Coquitlam.

The primary objectives of this assignment were:

- 1. To conduct a traffic impact assessment of the proposed mixed-use Greystone Development; and
- 2. To prepare a report that documents the technical analysis, key findings and recommendations (if any) to meet the transportation requirements of development as set out by the City of Port Coquitlam and Ministry of Transportation and Infrastructure (MOTI).

FIGURE 18 2030 (Build-out + 10 Years) Weekday Morning Peak Hour Base + Site Traffic Volumes

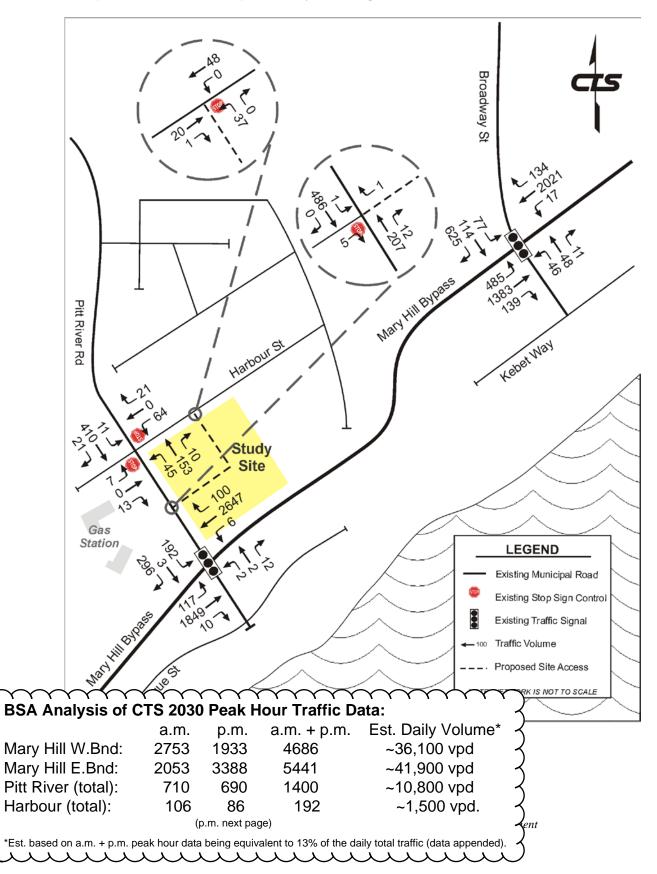
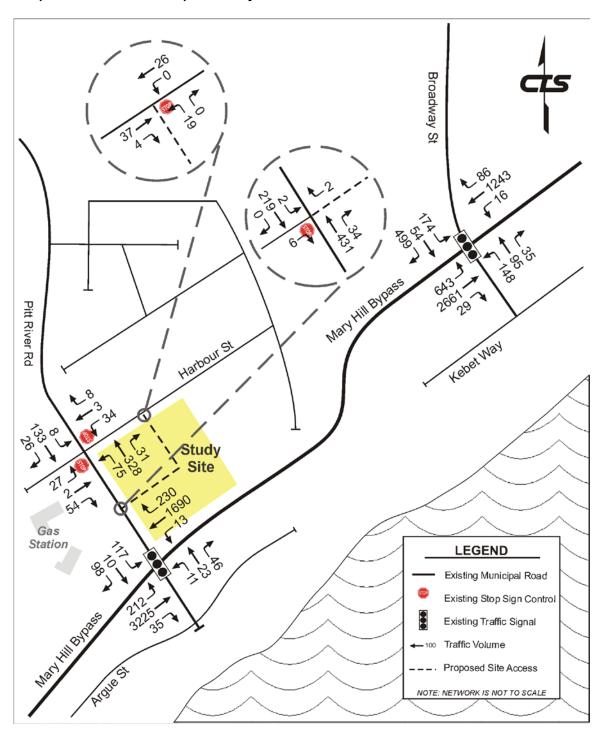


FIGURE 19 2030 (Build-out + 10 Years) Weekday Afternoon Peak Hour Base + Site Traffic Volumes



British Columbia Ministry of Transportation

Daily Volume from 08/18/2007 through 08/23/2007

Site Names: 16-191EW

County:

Funct. Class:

Location: Route 7B (Marv Hill Bypass). 0.8 Km East Of United Boulevard. Coquitlam

Seasonal Factor Type:ConsistentDaily Factor Type:ConsistentAxle Factor Type:ConsistentGrowth Factor Type:Consistent

	08/19/2007			0	8/20/2007	,	0	8/21/2007	7	0	8/22/2007		0	8/23/200	7	(08/24/200	7	0	8/25/200	7
	Road	Neg	Pos	Road	Neg	Pos	Road	Neg	Pos	Road	Neg	Pos	Road	Neg	Pos	Road	Neg	Pos	Road	Neg	Pos
00:00	1,139	401	738	608	201	407	550	174	376	658	207	451	680	205	475						
01:00	757	288	469	320	99	221	327	94	233	378	130	248	416	143	273						
02:00	517	188	329	231	102	129	285	128	157	289	128	161	334	171	163						
03:00	326	118	208	250	149	101	258	162	96	270	163	107	333	187	146						
04:00	294	161	133	598	438	160	594	425	169	584	432	152									
05:00	524	313	211	2,178	1,737	441	2,239	1,746	493	2,321	1,814	507									
06:00	782	472	310	3,145	2,072	1,073	3,068	1,948	1,120	3,060	1,966	1,094									
07:00	959	606	353	3,276	1,985	1,291	3,383	1,980	1,403	3,365	2,037	1,328									
08:00	1,158	723	435	3,069	1,819	1,250	3,068	1,847	1,221	3,274	1,924	1,350									
09:00	1,623	1,034	589	2,829	1,654	1,175	3,152	1,912	1,240	3,064	1,816	1,248									
10:00	2,183	1,416	767	3,068	1,793	1,275	2,970	1,729	1,241	3,165	1,871	1,294									
11:00	2,564	1,473	1,091	3,177	1,760	1,417	3,292	1,822	1,470	3,230	1,738	1,492									
12:00	2,874	1,613	1,261	3,198	1,718	1,480	3,404	1,772	1,632	3,326	1,773	1,553									
13:00	3,065	1,681	1,384	3,223	1,661	1,562	3,521	1,746	1,775	3,543	1,727	1,816		\mathcal{F}	1 4 00	vvvv	$\frac{1}{1}$		fic Da	$\frac{1}{1}$	
14:00	3,206	1,604	1,602	3,744	1,676	2,068	3,926	1,712	2,214	4,119	1,780	2,339		1		-				<u>ia.</u> }	
15:00	3,055	1,378	1,677	4,342	1,652	2,690	4,041	1,671	2,370	4,542	1,817	2,725		ζAΜ	+ PM	peak	hour	data a	are	2	
16:00	3,054	1,372	1,682	4,549	1,612	2,937	4,558	1,623	2,935	4,631	1,581	3,050		{ eau	ivalen	t to 1	3% of	dailv	traffic		
17:00	3,049	1,372	1,677	4,220	1,403	2,817	4,398	1,475	2,923	4,340	1,457	2,883		Lui	<u> </u>	<u> </u>	, i i i	, in the	, in the	u J	<u> </u>
18:00	2,601	1,138	1,463	3,272	1,142	2,130	3,708	1,299	2,409	3,658	1,336	2,322									
19:00	2,146	1,001	1,145	2,441	1,019	1,422	2,808	1,114	1,694	2,872	1,211	1,661									L
20:00	2,036	1,014	1,022	1,899	756	1,143	2,210	959	1,251	2,402	958	1,444									L
21:00	1,915	868	1,047	1,725	686	1,039	1,971	788	1,183	2,213	909	1,304									L
22:00	1,474	606	868	1,395	530	865	1,513	569	944	1,704	652	1,052									L
23:00	903	321	582	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	300	654		351	770	\sim 1082	382	700	1.5(2)		1.055						ļ
Volume	42,204	21,161	21,046	/	27,964	29,747	60,365	29,046	31,319	62,090	29,809	32,281	1,763	706	1,057						
AM Peak Vol	2,564	1,473 0.93	1,09	3,281	2,085	1,417	3,383	2,053	1,47	3,516	2,131	1,492									<u> </u>
AM Peak Fct	0.87				0.96			0.97			0.92	0.90									<u> </u>
AM Peak Hr	11:00	11:00	11:00	6:30 4,577	5:45	11:00 2.978	7:00	6:15	11:00	7:30 4,706	7:15	11:00 3.050									<u> </u>
PM Peak Vol	3,206	1,689	· 7	4,5//		· · · ·	4,615	1,776	· · · /	4,706		- ,									
PM Peak Fct	0.97	0.98						0.95				0.95									<u> </u>
PM Peak Hr	14:00 0.940	12:30	15:30	16:30 0.940	12:30	16:30 0.940	16:30 0.940	14:15	16:15 0.940	15:15 0.940	15:00 0.940	0.940	0.940	0.940	0.940						<u> </u>
Seasonal Fct									0.940						0.940						
Daily Fct	1.168	1.168	1.168	1.041	1.041	1.041	0.984	0.984	0.984	0.960	0.960	0.960	0.941	0.941	0.941						<u> </u>
Axle Fct	0.500		0.500	0.500	0.500		0.500	0.500		0.500	0.500		0.500	0.500							
Pulse Fct	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000						

Created 10/10/2007 4:48:00PM

NEG AADT 26,136

POS AADT 27,617



Tuesday, January 09, 2018

Vehicle Classification Summary

Project: Municipality: Weather: #5776: Greystone Mixed Use Traffic Impact Assessment Port Coquitlam Cloudy, Sunny

		Vehicle Classification			
Time Period	Entering Intersection	Passenger Cars	Heavy Vehicles (3 or more axles)		Total
Morning (07:00 - 09:00)	Volume	7,531	302		7,833
	%	96.1%	3.9%		100.0%
Midday (11:00 - 13:00)	Volume	5,315	447		5,762
	%	92.2%	7.8%		100.0%
Afternoon (15:00 - 18:00)	Volume	12,665	270		12,935
	%	97.9%	2.1%		100.0%
Total (7 Hours)	Volume	25,511	2,049		26,530
	%	96.2%	3.8%		100.0%
		(u		

Mary Hill Design = 5% heavy veh.



Tuesday, January 09, 2018

Vehicle Classification Summary

Project: Municipality: Weather: #5776: Greystone Mixed Use Traffic Impact Assessment Port Coquitlam Cloudy, Sunny

	Entering Intersection	Vehicle Classification				
Time Period		Passenger Cars	Heavy Vehicles (3 or more axles)			Total
Morning	Volume	1,115	5			1,120
(07:00 - 09:00)	%	99.6%	0.4%			100.0%
Midday (11:00 - 13:00)	Volume	748	0			748
	%	100.0%	0.0%			100.0%
Afternoon (15:00 - 18:00)	Volume	1,957	0			1,957
	%	100.0%	0.0%			100.0%
Total (7 Hours)	Volume	3,820	<u>~</u>			3,825
	%	99.9%	(0.1%			100.0%
			\overline{u}			

Pitt River Road & Harbour Street Design = 1% heavy veh.



Date: Cour File No:

January 3, 2024 5776-01

BY EMAIL

Riley Schmidt Development Manager Suite 205, 6360 202nd Street Langley, BC V2Y 1N2

Dear Mr. Schmidt:

Re: Greystone Development, Port Coquitlam – Updated Traffic Impact Assessment Rationale

The following comparatively analyses and rationalizes the lack of need for an updated Traffic Impact Assessment for the redevelopment of the Greystone site, in Port Coquitlam.

<u>Site</u>

The 2018 Greystone Development proposal comprised 132 condominium units and 12,000 ft² (1,114.84 m²) of commercial/retail.

The 2024 Greystone Development proposal comprises 43 townhome units and no commercial/retail. The 2024 Greystone Development proposal is substantially less in unit number and scale.

Traffic Generation

The 2018 Greystone Development proposal was expected to generate an additional 52 vehicle trips (14 inbound, 38 outbound) in the morning peak hour and 61 vehicle trips (40 inbound, 21 outbound) in the afternoon peak hour.

The 2024 Greystone Development proposal is expected to generate an additional 21 vehicle trips (5 inbound, 16 outbound) in the morning peak hour and 25 vehicle trips (15 inbound, 10 outbound) in the afternoon peak hour. The 2024 Greystone Development proposal is expected to generate between 41% and 48% fewer vehicle trips, than the 2018 Greystone Development proposal.

Note that new development generating less than 30 new vehicle trips generally does not warrant a Traffic Impact Assessment, by traffic engineering standards.

Capacity Analysis

The 2018 Greystone Development proposal included capacity analysis for the intersection of Harbour Road and Pitt River Road. The level of service for all current and future design conditions for the intersection, was LOS A (Excellent).

Given the 2024 Greystone Development proposal is expected to generate between 41% and 48% fewer vehicles trips, it can also be expected that the level of service for all current and future design conditions for the intersection, will be LOS A (Excellent).

<u>Parking</u>

The 2024 Greystone Development proposal will:

- 1. Meet the residential and visitor vehicle parking requirements per the City of Port Coquitlam Parking and Development Management Bylaw No. 3525, Section 6 – Required Off-Street Parking Spaces.
- 2. Meet the bicycle parking requirements per City of Coquitlam *Zoning Bylaw No. 3630, Section 10 Bicycle Facilities.*
- 3. Meet the loading requirements per the City of Port Coquitlam *Parking and Development Management Bylaw No. 3525, Section 11 Required Off-Street Loading Spaces.*

<u>Access</u>

The 2024 Greystone Development proposal intends on maintaining a single point of access on Harbour Road at the same location as that identified by the 2018 Greystone Development proposal. There will be no point of access on Pitt River Road.

The driveway crossing will be designed with sufficient width and throat length to accommodate turning movements for a garbage truck and/or fire truck and to ensure no queue spill back onto the adjacent street. Internally, the drive aisle shall be of sufficient width to accommodate turning movements for a garbage truck and/or fire truck.

Sight lines to/from the point of access on Harbour Road meet the minimum for a Stopping Sight Distance for a road posted at 50 km/h. That is 65 meters.

<u>Summary</u>

Given the preceding comparative analysis and rationalization, CTS confirms that an Updated Traffic Impact Assessment for the 2024 Greystone Development proposal, is not warranted.

In closing, please contact the undersigned should there be questions and/or comments concerning this Updated Traffic Impact Assessment Rationale.

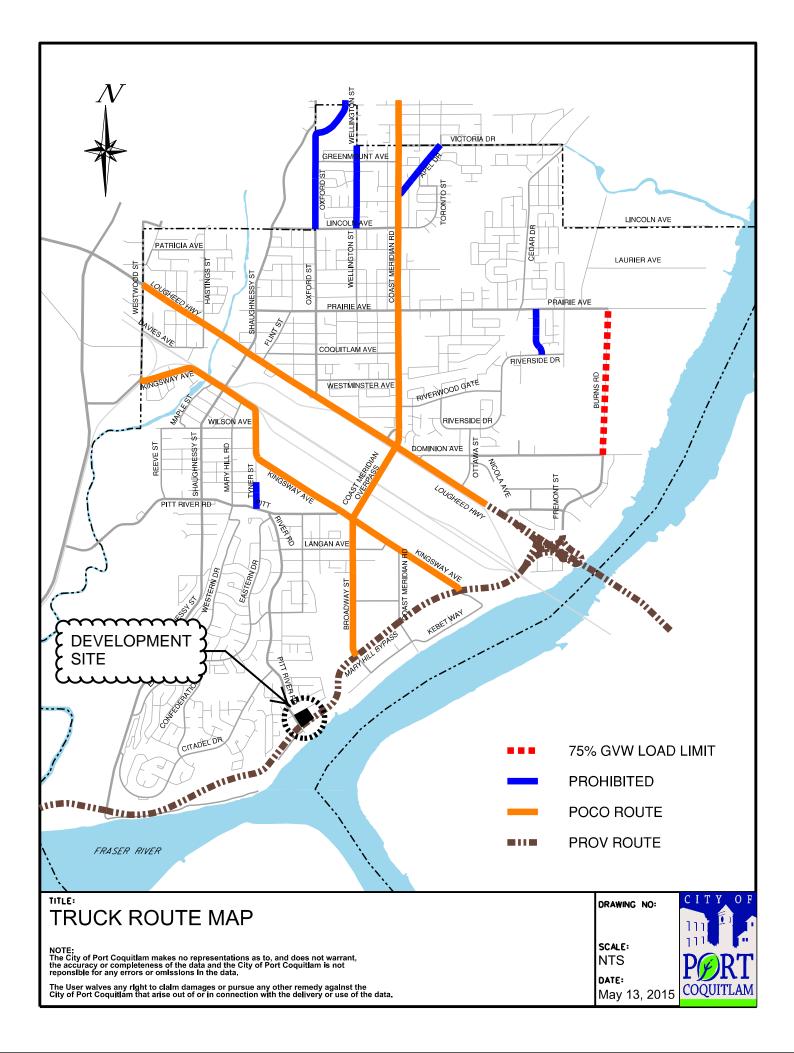
Yours truly,

CREATIVE TRANSPORTATION SOLUTIONS LTD. PERMIT TO PRACTICE NO. 1000697

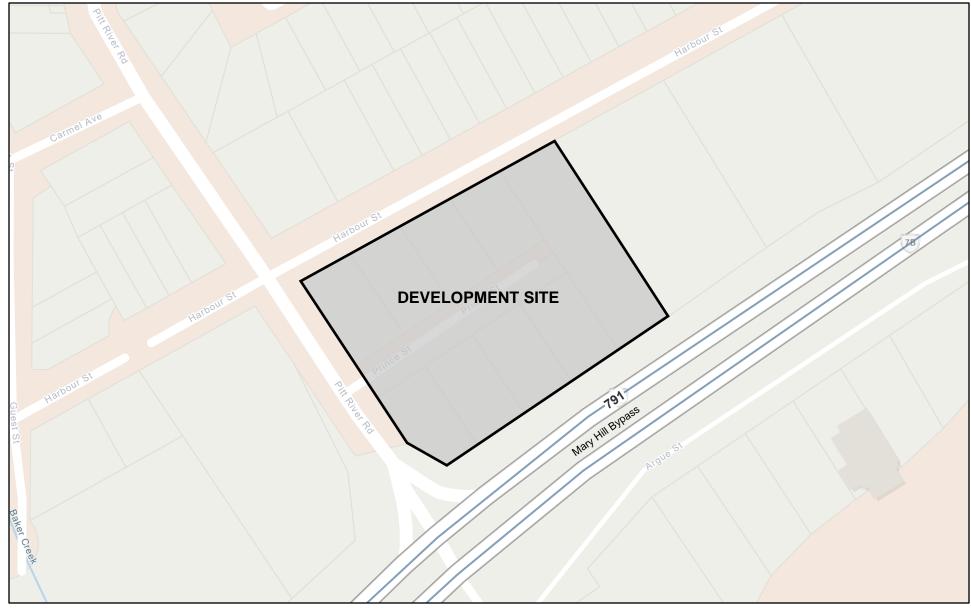
Brent A. Dozzi, P. Eng. Senior Traffic Engineer and Project Manager

Phone: (604) 936-6190 x 237 Email: <u>bdozzi@cts-bc.com</u>





TransLink System Map



04/03/2024, 18:01:01

Lines

Basic



TransLink

Esri Community Maps Contributors, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US





File Number: RZ000261 & DP000551 لللا

November 1, 2023

Prince Holding Ltd c/o Jerry Pol Caliber Projects 205-6360 202 Street Langley, BC V2Y 1N2 jerry@caliberprojects.com

VIA EMAIL

Dear Jerry Pol,

\sim		mmmmmm
RE:	Application Review	$\langle \rangle$
	Project Address:	1884, 1904, 1912, 1920, & 1930 Harbour Street, 1911, 1893, & 1887 \prec
		Prince Street & 1155 Pitt River Road
ىر	mm	

We are pleased to advise that the City has completed its review of the rezoning and development permit applications received April 13, 2023 for a proposed residential townhouse (RTh3) development at 1884, 1904, 1912, 1920, & 1930 Harbour Street, 1911, 1893, & 1887 Prince Street & 1155 Pitt River Road. The applications have been reviewed to determine how the proposal complies to the policies of the Official Community Plan (OCP), OCP development permit area (DPA) objectives and guidelines and the zoning, parking and other city bylaws. Our detailed comments and requests for further information and revision are noted below.

Planning Division Comments (rezoning stage)

- Proposed Use: The OCP designates the site as Residential Townhouse which can allow for City Council consideration of rezoning to a townhouse zone. The application requests rezoning of the properties from Residential Single Dwelling 1 (RS1) to Residential Townhouse 3 (Rth3) to permit development of a 43-unit townhouse development; this is consistent with the sites Residential Townhouse OCP land use designation.
- 2. Community Consultation: Thank you for hosting a community information meeting July 24, 2023 and providing a summary of input received. Staff also received some public input following the information meeting. While the summary you provide is generally supportive a few comments noted concern about transportation impact, parking management, desire for inclusion of some commercial uses, view impacts,

and loss of mature trees at the site. It is likely these matters may also be raised at the public hearing. If you have any further information on these matters you may want to provide it to staff for inclusion in the staff report.

- **3.** Road Closure and Land Purchase: The application indicates a desire to include the Prince Street land area in the site development. This will require City Council approval of a road closure bylaw and purchase of the Prince Street land from the City. In determining the land value, the City will hire a qualified third-party appraiser. On September 28, 2023 you confirmed Caliber Projects would bare the appraisal cost and our Corporate Office will provide quotes from appraisal firms for your review and selection shortly. You will note in the Development Engineering comments below there is also a sanitary sewer located in Prince Street. If you wish the road to be closed you will need to reroute the sanitary sewer.
- **4. Transportation Impact Assessment:** The 2018 CTS Traffic Impact Assessment was prepared for the previous mixed-use development. Please provide additional information from CTS that confirms the recommendations would be consistent for the revised townhouse proposal.
- 5. MOTI Preliminary Approval: As the site is within 800m of a Provincial controlled access highway, approval of the rezoning by the Ministry of Transportation and Infrastructure (MOTI) is required. With receipt of the rezoning application we referred the application to MOTI and have received their preliminary approval. Please note the Ministry strongly recommended sound-attenuation fencing along the High 7B frontage. Staff will likely include sound attenuation fencing as a rezoning condition.
- **6. Restrictive Covenant:** A restrictive covenant (CA5778882) is registered on title, please confirm if this restriction impacts the proposed development.
- **7. Statutory Right of Way:** The existing SRW (Plan 81834) on 1884 Harbour Street contains a municipal sanitary sewer that runs through Prince Street to Pitt River Road. To consider release of the SRW the City requires relocation of the service. Please see comments below from Development Engineering and confirm your intentions.
- 8. Corner Cut: Note that a 5m x 5m corner cut land dedication will be required (see comments below from Development Engineering) at the corner of Harbour Street and Pitt River Road. Please update architectural, landscape, and subdivision plans to reflect the corner cut. Note that structures such as retaining walls will not be permitted in the corner cut area.
- 9. Common Amenities: Policies of the OCP encourage quality housing design and recognizes the need for social and recreational opportunities. You have proposed an outdoor amenity area near the southwest corner of the site adjacent to the Mary Hill Bypass/Pitt River Road Intersection. This location does not seem well suited for an amenity area given that an average of 74 dBA is reported in the acoustic report adjacent Mary Hill Bypass. Staff recommend locating an amenity space away from the Mary Hill Bypass towards the interior of the site. We would also like to see the amenity space redesigned/expanded to not just provide seating but also provide a guality children's play area to support families.
- **10. Acoustic Consultant Report:** The 2018 Brown Strachan Associates letter you provided was prepared for the previous mixed-use development. Please provide an updated and comprehensive acoustic report that assesses the current proposed townhouse development and provides clear and prescriptive acoustic mitigation measures to address highway noise. This report should consider the sound attenuation fence

recommend by MOTI and propose clear noise mitigation measures. This report and the mitigation measures will be the basis of a legal agreement noted below.

1. Potential Rezoning Conditions: Please note staff anticipate recommending to Council the following rezoning conditions:

- a. Installation of tree protection for off and on-site retained trees;
- b. Completion of road closure and sale of Prince Street;
- c. Site consolidation and dedication of corner cuts;
- d. Completion of design and submission of fees and securities for off-site works and services;
- e. Registration of a legal agreements:
 - i. to ensure the buildings are design to implement the recommendations of an acoustic study, and
 - ii. to ensure installation of the recommended sound attenuation fence.

Please note the above rezoning conditions are subject to change as the application progresses.

- **12. Flood Plain:** Please note the southern corner of the site is located within the flood plain boundary. The habitable floor elevation for the site is 5.15m geodetic and the zoning bylaw restricts construction below the habitable floor elevation.
- **13. Zoning Regulations:** Please confirm/clarify the following:
 - a. Lot Area: Please update the lot area calculation to reflect the consolidated (or net) site area. This should reflect the final consolidated site with the addition of Prince Street and any required corner cuts or road dedication subtracted.
 - b. Density of Development: Please ensure the density of development calculation reflects the consolidated lot area.
 - c. Open Space: The zoning bylaw requires a minimum of 30m² of usable open space per townhouse dwelling unit. This typically includes semi-private attached yards, usable balconies and rooftop outdoor space. Please include a table confirming the open space per each dwelling unit in the project data.
 - d. Height: You have proposed buildings with a flat roof. In the case of a flat roof the zoning bylaw defines height as the vertical distance from the finished grade adjacent to a building, structure, fence or wall to the highest point of a roof surface. The bylaw further clarifies stair towers may be excluded from the height calculation.
 - i. Please ensure the finished grade elevation is shown for each building corner.
 - ii. Please ensure the section drawings for each building indicate the height for each building measured from the average finished grade to the highest point of the flat roof.
 - e. Setbacks/Projections/Variances:
 - i. Please note that for this site the yards and associated building setbacks are as follows:
 - Front yard (north/Harbour Street) 7.5m min.
 - Exterior side yard (west/Pitt River Road) 3.5m min.
 - Interior side yard (east/1872 Harbour Street) 1.8m or 3.5m to habitable space with windows.
 - Rear yard (south/Mary Hill Bypass) 7.5m min.

CMHC's "Road and Rail Noise: Effects on Housing" -(NHA 5156 08/86, ISBN 0-662-11021-0).

Section C — Recommended Levels of Traffic Noise

The acceptance of noise depends on both the characteristics of that noise and the activities of the listeners. The activities most affected by noise fall into two categories, corresponding to two different criteria. For activities similar to speech communication (including listening to radio and television), the first requirement is that the noise level does not interfere significantly with comfortable speech communication or with listening to soft music. The other important category is sleeping: noise, especially at night, should not interfere with normal sleep patterns.

To deal with the fluctuating noise level from road or rail traffic, it is convenient to describe it in terms of the equivalent level (Leq). This is the level of a steady sound having the same energy, at a given time, as the fluctuating sound. For the purposes of this document, the A-weighted 24-hour equivalent sound level is used as the basic noise descriptor. This noise measure has been extensively tested in numerous social surveys. Of the commonly used noise descriptors, it is among the easiest to measure or to predict accurately, and no other descriptor has been shown to provide a significantly better prediction of the community response to noise.

Hereafter "noise level" expressed in decibels (dB) should be taken to mean the A-weighted 24-hour equivalent sound level.

The maximum equivalent level that will not impair sustained conversational speech is 40 dB. Noise above this level causes people to raise their voices and therefore is not acceptable for a quiet indoor environment. In order to hear quieter passages of music, a level of about 35 dB would be preferred. Communication in a slightly raised voice is acceptable in kitchens and bathrooms and usually in outdoor recreation areas. Sleep arousal and interference with going to sleep depend on the level of noise and on the fluctuations in level or character that occur. A useful criterion is that the maximum levels should not exceed the indoor background level by more than about 5 dB. Quiet interior levels range from 25 to 35 dB. Normally night-time traffic is less than day-time traffic and the 24-hour average level provides a fair measure of maximum night-time levels. The maximum level acceptable in bedrooms is 35 dB.

Outdoor noise levels should be considered as well as indoor because residential areas ought to include some space for outdoor recreation, such as patios, balconies and play areas. Experience indicates that somewhat higher noise levels are generally more acceptable outside than inside. An appropriate outdoor noise level is 55 dB, which would correspond typically to an indoor level of 40 dB. These levels would permit conversation at close range or in a slightly raised voice most of the time. Such background noise may serve the purpose of masking more specific sounds, such as conversation on a neighbour's patio.

To meet these various criteria of acceptable noise levels, the levels given in Table 1 are recommended:

	Maximum acceptable levels of ro rail traffic noise in dwellings outdoor recreation areas.			
Ć	Room	Noise	Level	4
(Bedrooms	35	dB	3
4	Living, dining, recreation rooms Kitchens, bathrooms, hallways,	40	dB	3
6	utility rooms	45	dB)
کے	Outdoor recreation area	55 J	dB)

ACOUSTICAL EVALUATION REPORTS - BACKGROUND INFORMATION

Development applications for housing, hotels, childcare facilities and institutional projects often include a requirement to demonstrate that the proposed construction satisfies acoustical design criteria set by the municipality. The criteria are generally defined by By-laws, Guidelines or Restrictive Covenants, e.g. OCPs, CMHC, NRC, BS, HUD, etc. On the basis that subjective reaction to noise varies significantly, full disclosure should be made to prospective residents that the building is subject to noise and vibration which may be annoying to some individuals, as outlined below.

Municipal design criteria are inside noise levels based on an Leq acoustical analysis. Monitored site measurements are used to check the analysis and site conditions. BSA Acoustical Evaluation reports (reports) recommend facade upgrades necessary to satisfy the design criteria for sources such as future road traffic, rail and aircraft noise. An outline of the design process to determine the effect of design revisions is documented in the reports. To satisfy the criteria, an analysis of third octave acoustical data from a representative ASTM E90 test of the proposed fenestration is required (not an OITC rating only). Aircraft and train noise generally require a higher OITC rated facade than traffic. Increased glazing in a given room generally results in a higher OITC requirement. Fenestration performance can vary significantly between similar products. Unless significant design margin exists, a generic description of proposed fenestration is not adequate to demonstrate compliance with the design criteria.

Where commercial and industrial sources are a primary consideration, such sources are evaluated based on the maximum levels allowed under local By-laws unless measurements on site and/or other operational data indicate lower noise levels. Construction sources are generally covered under local By-laws and are not considered representative of the future noise environment.

The analysis appended to a report does not consider potential noise issues other than as described above, e.g. unusual traffic, rail or aircraft conditions, peak sound transmission from individual vehicles, ground or airborne transmitted vibration, changes to existing infrastructure other than as indicated on drawings evaluated, emergency signals, construction or maintenance related activity, public utilities noise, privacy between suites (e.g. Code 5.8 & 9.11), isolation of suites from CRUs, offices, common or amenity areas, music rooms, fitness rooms, pools, water features, parkades, garbage, recycling, building services such as HVAC or plumbing systems, elevators, mechanical or electrical equipment, terraces or balconies, subjective reaction, non-acoustical items (e.g. failure of facade or glazing from any cause, infiltration of precipitation, condensation, mould, mildew or other fungus), etc. BSA does not undertake unmonitored 24 hour measurements as a design basis because of the risk of design deficiencies introduced by unusual conditions such as traffic diversions, extraneous sources, etc.

BSA reports and related correspondence are supporting documents for registered professionals, as defined in the Code (BCBC Div. C, 2.3.1.2, 2018). A report and related documentation such as review of window and door shop drawings, fenestration acoustical data, covenants, disclosure statements, etc., are not a BSA certification of on-site noise levels or any aspect of the construction details. BSA does not undertake the responsibility of the Architect, Coordinating Registered Professional, Registered Professional of Record or Building Envelope Professional. BSA does not provide Schedule B or C services, etc., or field review services. Other professionals should be retained for overall project co-ordination, field review, Code related advice, co-ordination of BSA's recommendations with contractors, trades, suppliers, etc.

File: Acoustical Evaluation Reports.wpd/19Aug

