

**SITE DATA - EXISTING HOUSE AND LOT - 1104 LYALL STREET**

LEGAL DESCRIPTION- AMENDED LOT 3, (DP 1484361), SECTION 11, ESQUIMALT DISTRICT, PLAN 4724  
 PREVIOUS ZONING - RD-3  
 CURRENT ZONING - SITE SPECIFIC

	EXISTING HOUSE	PROPOSED DUPLEX	COMBINED - as applicable
LOT AREA	444.30 M <sup>2</sup> (10218.14 FT <sup>2</sup> )	444.30 M <sup>2</sup> (10218.14 FT <sup>2</sup> )	
LOT WIDTH	23.98 M (78.81')	23.98 M (78.81')	
SETBACKS			
FRONT	1.66 M (5.45')	23.98 M (78.81')	
REAR	21.14 M (69.36')	5.70 M (18.70')	
SIDE WEST	10.81 M (35.47')	3.28 M (10.76')	
SIDE EAST	2.56 M (8.40')	1.50 M (4.92')	
SIDE COMBINED	12.98 M (42.57')	4.78 M (15.68')	
TO BUILDING	5.83 M (19.13')	5.83 M (19.13')	
AVERAGE GRADE	11.24 M (36.88')	11.34 M (37.20')	
BUILDING HEIGHT	5.84 M (19.16')	7.02 M (22.99')	
FLOOR AREA			
UPPER FLOOR	41.58 M <sup>2</sup> (448.80 FT <sup>2</sup> )	162.51 M <sup>2</sup> (1744.21 FT <sup>2</sup> )	
MAIN FLOOR	44.65 M <sup>2</sup> (479.11 FT <sup>2</sup> )	162.51 M <sup>2</sup> (1744.21 FT <sup>2</sup> )	
BASEMENT	51.85 M <sup>2</sup> (556.12 FT <sup>2</sup> )	N/A	
GARAGE	43.72 M <sup>2</sup> (468.51 FT <sup>2</sup> )	N/A	
GARAGE ALLOWANCE	-43.72 M <sup>2</sup> (-468.51 FT <sup>2</sup> )	N/A	
TOTAL FLOOR AREA 1ST AND 2ND STOREYS	144.24 M <sup>2</sup> (1552.97 FT <sup>2</sup> )	325.02 M <sup>2</sup> (3498.42 FT <sup>2</sup> )	
F.S.R.	0.15 FSR	0.34 FSR	0.49 FSR (ALLOWED BY SITE SPECIFIC ZONING IS 0.55)
SITE COVERAGE	11.51%	14.08%	30.59%
PARKING	1 SPACE	3 SPACE (+1 VISITOR)	

**DRAWING LIST**

DP1 SITE PLAN & SITE DATA  
 DP2 FLOOR PLANS AND ELEVATIONS



ISSUED FOR DP  
 DECEMBER 14, 2018



1161 NEWPORT AVE  
 Victoria, B.C. V8S 5E6  
 Phone: (250) 360-2144  
 Fax: (250) 360-2115

Drawn By: L.HORVAT

Date: Dec. 10, 2018

Scale: AS NOTED

Project:  
 DUPLEX @ 1104  
 LYALL STREET  
 (strata property)

Title:  
 SITE PLAN AND  
 SITE DATA

Revision: Sheet:

**A1**

Proj. No. -

SYMBOL LEGEND  
 [Symbol] EXISTING GRADE  
 [Symbol] PROPOSED GRADE  
 [Symbol] EXISTING GRADE

SITE PLAN BASED ON:  
 February 2, 2017

File: 12.499 - 13  
 POWELL & ASSOCIATES  
 B.C. Land Surveyors  
 250-2950 Douglas Street  
 Victoria, BC V8T 4H4  
 phone (250) 382-8855

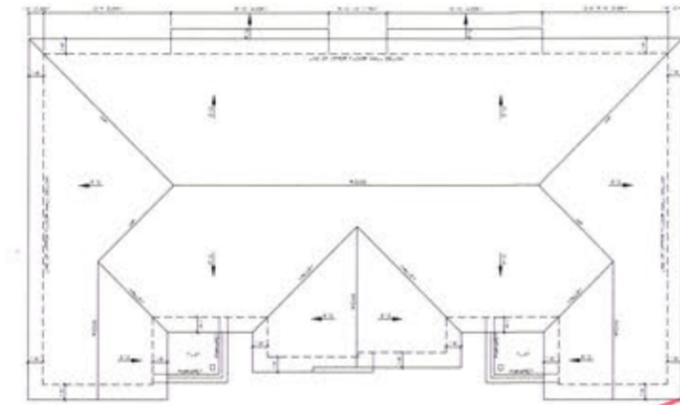
1 Site Plan  
 A1 Scale 1:100



1 Main Floor Plan  
 DP2 Scale 1/8" = 1'-0"



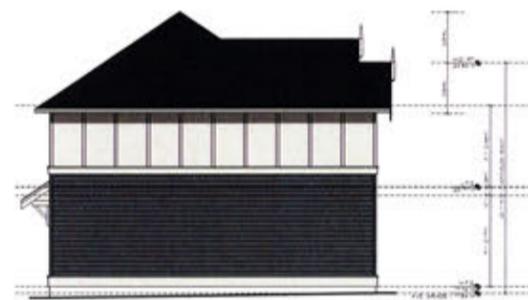
2 Upper Floor Plan  
 DP2 Scale 1/8" = 1'-0"



3 Roof Plan  
 DP2 Scale 1/8" = 1'-0"



FRONT ELEVATION



SIDE ELEVATION (E)



REAR ELEVATION



SIDE ELEVATION (W)

4 Exterior Elevations  
 DP2 Scale 1/8" = 1'-0"

### FINISH LEGEND

	<b>ROOFING</b> MALAKKEY FIBERGLASS SHINGLE COLOUR: MIDNIGHT BLACK
	<b>SIDING</b> HARDE PANEL COLOUR: COBBLESTONE (ALL TRIM, FASCIA AND DOWNSPOUTS TO MATCH COLOUR)
	<b>SIDING</b> HARDE PLANK LAP SIDING COLOUR: IRON GRAY
	<b>EXTERIOR DOORS</b> BEHR STAIN AND SEALER COLOUR: TUGBOAT (SG-141)
	<b>WINDOWS</b> VINYL WINDOWS COLOUR: DG KING WHITE

ISSUED FOR DP  
 DECEMBER 13, 2018



1161 NEWPORT AVE  
 Victoria, B.C. V8S 5E6  
 Phone: (250) 360-2144  
 Fax: (250) 360-2115

Drawn By: L.HORVAT

Date: Dec. 10, 2018

Scale: AS NOTED

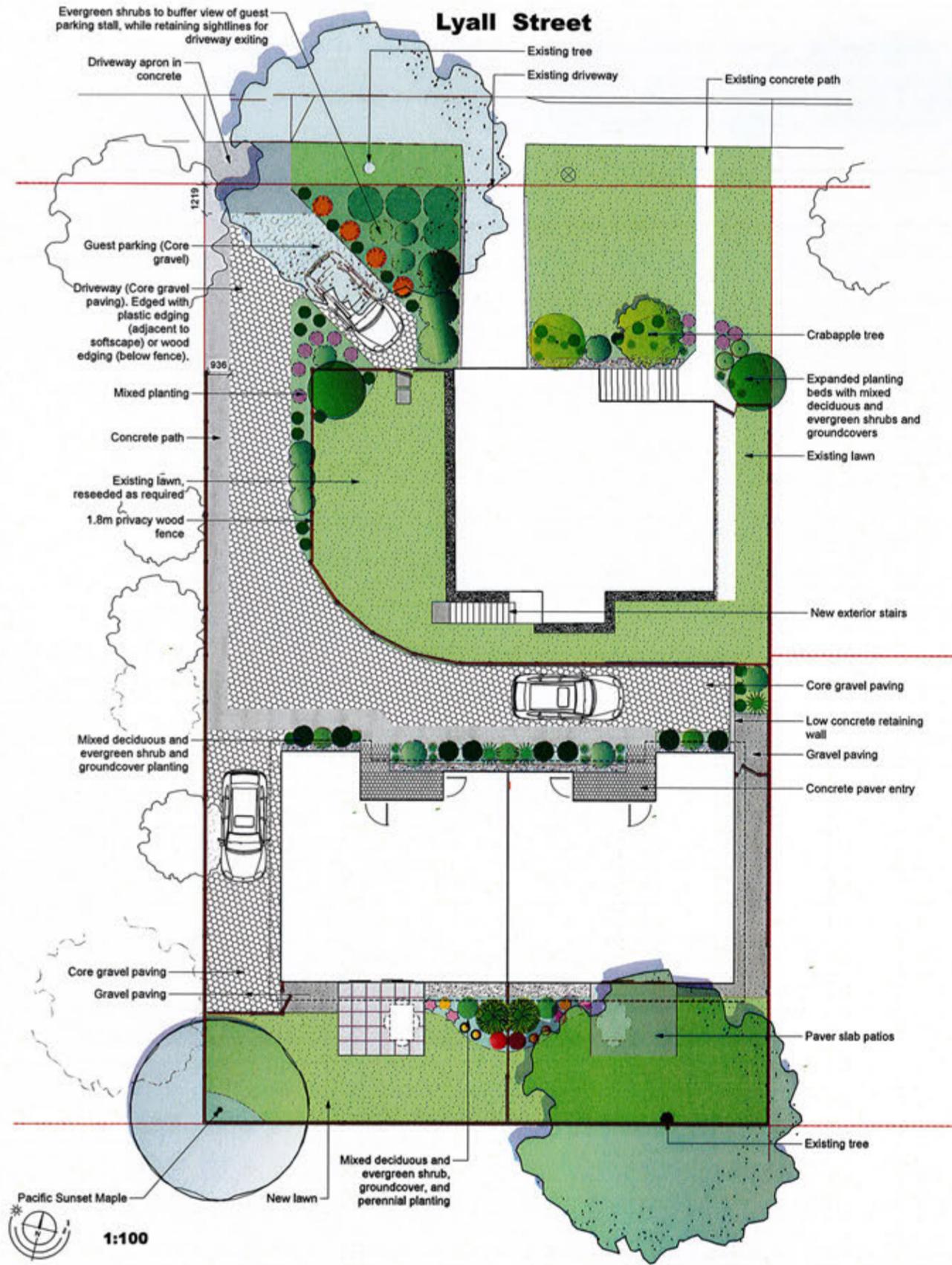
Project:  
 DUPLEX @ 1109  
 LYALL STREET  
 (strata property)

Title:  
 FLOOR PLANS  
 AND ELEVATIONS

Revision: Sheet:

**DP2**

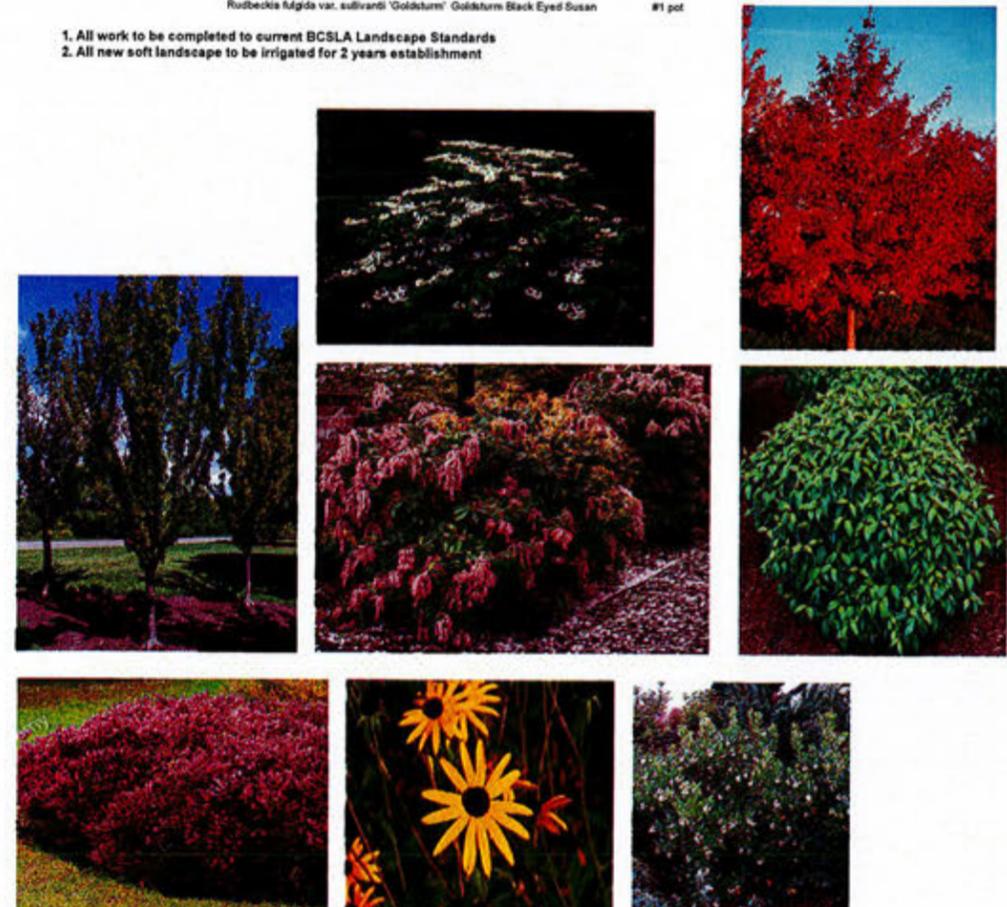
Proj.No. -



**Recommended Nursery Stock**

Category	Botanical Name	Common Name	Size
<b>Trees</b> 2	Acer 'Warrenii' PACIFIC SUNSET	Pacific Sunset Maple	5cm cal.
	Malus 'Adirondack'	Crabapple	5cm cal.
<b>Large Shrubs</b> 3	Hemamelis mollis 'Pallida'	Pallida Chinese Witch Hazel	#3 pot
	Viburnum plicatum tomentosum 'Mariesii'	Doublefile Viburnum	#3 pot
<b>Medium Shrubs</b> 19	Arbutus unedo 'Compacta'	Compact Strawberry Bush	#2 pot
	Pieris japonica 'Valley Rose'	Japanese Pieris	#2 pot
	Ribes sanguineum 'White Icicle'	White Flowering Currant	#2 pot
	Viburnum davidii	David Viburnum	#3 pot
	Crabapple tree		
<b>Small Shrubs</b> 27	Azalea 'Snowbird'	Snowbird Azalea	#2 pot
	Cornus sericea 'Kelsey'	Kelsey's Dwarf Red-Osier Dogwood	#2 pot
	Erica x darleyensis 'Kramer's Role'	Kramer's Role Heather	#1 pot
	Pieris japonica 'Prelude'	Prelude Lily Of The Valley	#2 pot
	Spiraea thunbergii 'Ogori'	Golden Bridalweath Spirea	#2 pot
<b>Groundcovers</b> 31	Arctostaphylos uva-ursi 'Vancouver Jade'	Vancouver Jade Kinnikinnick	#1 pot
	Erica x darleyensis 'Kramer's Role'	Kramer's Role Heather	#1 pot
<b>Perennials, Annuals and Ferns</b> 39	Anemonehebe lessortiana	Pheasant's Tail Grass	#1 pot
	Blechnum spicant	Deer Fern	#1 pot
	Carex testacea	Orange New Zealand Sedge	#1 pot
	Erigeron x 'Wayne Roderick'	Wayne Roderick Fleabane	#1 pot
	Polystichum munitum	Sword Fern	#2 pot
	Rudbeckia fulgida var. sullivanti 'Goldsturm'	Goldsturm Black Eyed Susan	#1 pot

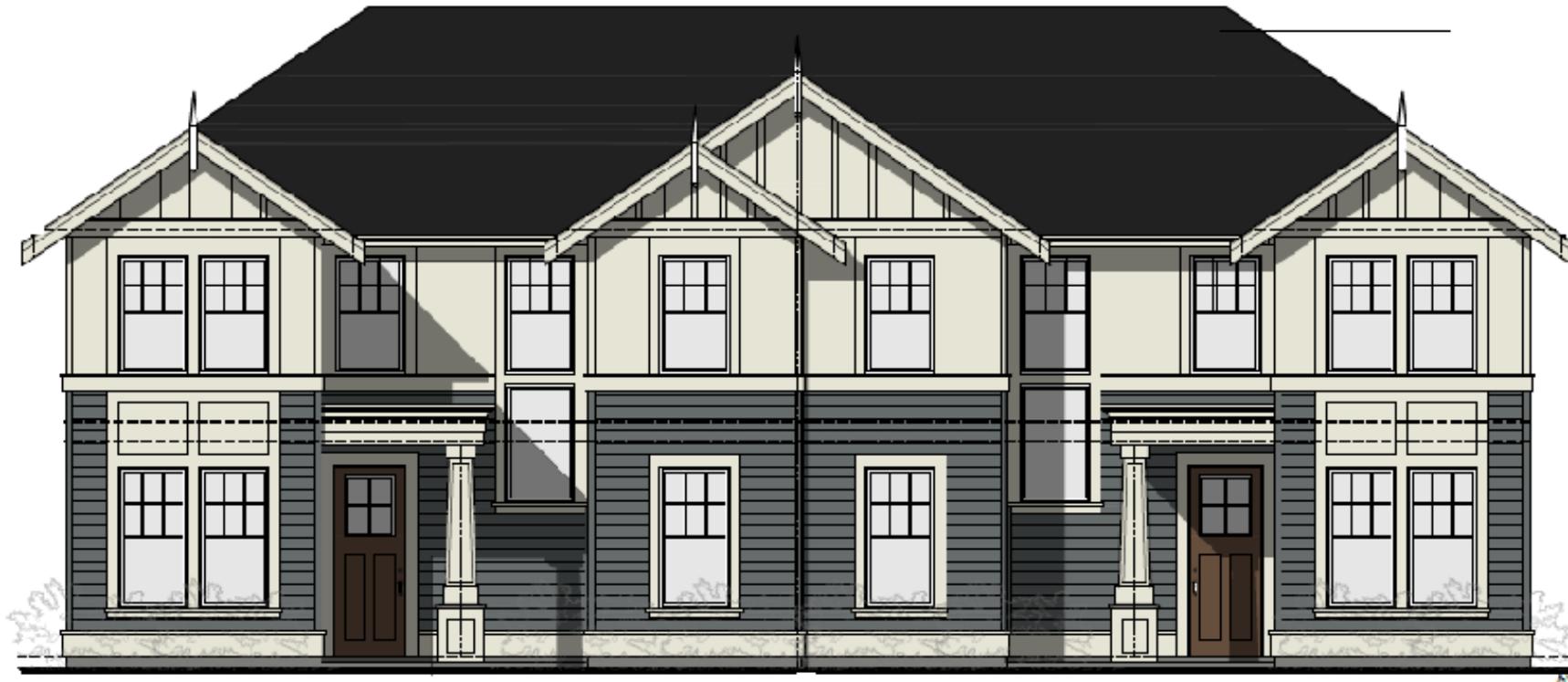
1. All work to be completed to current BCSLA Landscape Standards
2. All new soft landscape to be irrigated for 2 years establishment



- Revision 8 Mar-26-2019
- Revision 7 Feb-28-2019
- Revision 6 Feb-19-2019
- Revision 5 Dec-13-2018
- Revision 4 Dec-11-2018
- Revision 3 Nov-14-2018
- Revision 2 Nov-7-2018
- Revision 1 Jun-8-2018

# 1109 Lyall Street - Landscape Concept Plan

COLOR SCHEME - PROPOSED REZONING  
1109 LYALL, ESQUIMALT, BC



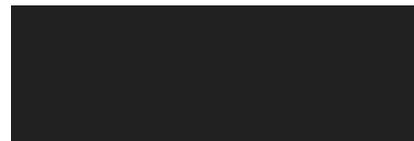
SIDING UPPER FLOOR  
Hardi Panel Color: Cobblestone



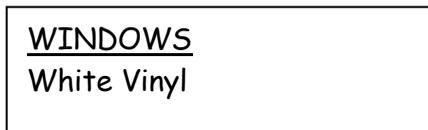
EXTERIOR DOORS  
Behr Stain Color: Tugboat SC-141



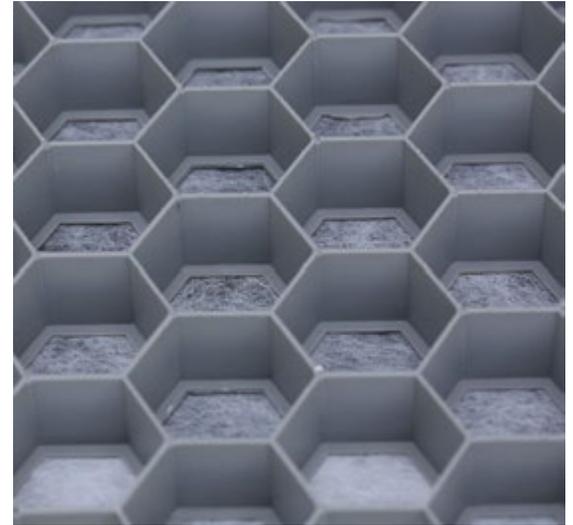
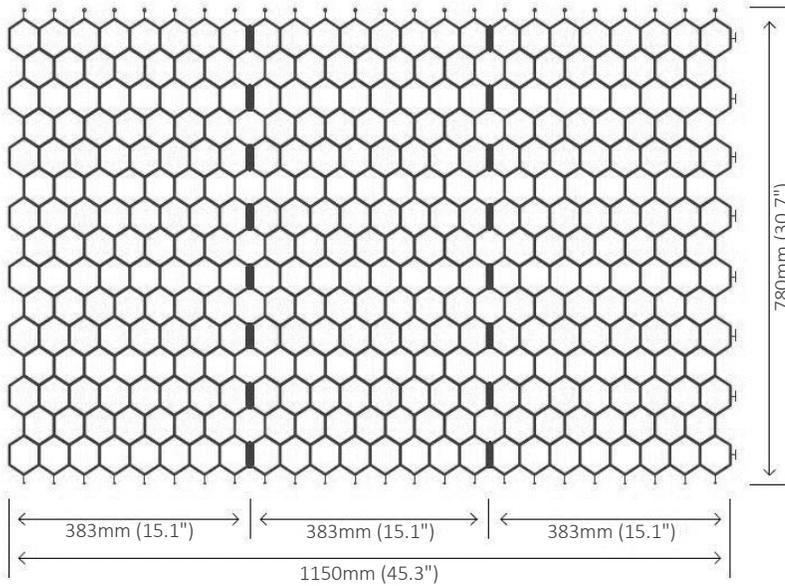
SIDING LOWER FLOOR  
Hardi Plank Color: Iron Gray



ROOF  
Fibreglass Shingle Color: Midnight Black



WINDOWS  
White Vinyl



**TECHNICAL SPECIFICATIONS**

<b>Material</b>	100% recycled polypropylene or virgin polypropylene
<b>Colour</b>	White (virgin) or Grey (recycled)
<b>Grid Dimension (in)</b>	45.3" x 30.7" x 1.4" (1150mm x 780mm x 35mm)
<b>Grid Weight (lbs)</b>	6.4 lbs/m <sup>2</sup> (2.9kg/m <sup>2</sup> )
<b>Cell Shape</b>	Honeycomb
<b>Cell Dimension(in)</b>	2.0" x 1.4" x 0.09" (50mm x 35mm x 2.3mm)
<b>Cell Wall Thickness</b>	0.09" (2.3mm)
<b>Crush Resistance (unfilled)</b>	> 30 700 lbs/sq.ft. (150 tons/m <sup>2</sup> )
<b>Load Bearing Capacity (filled)</b>	> 51 200 lbs/sq.ft. (Over 250 tons/m <sup>2</sup> )
<b>Temperature Range</b>	-52°C to- +90°C
<b>Chemical Resistance</b>	Excellent
<b>UV Resistance</b>	Excellent
<b>Suggested Aggregate Size (in)</b>	0.2"-0.6"(5-15mm)

**SUITABLE FOR**

Residential parking, driveways, RV parking/access lanes, public pedestrian applications, bicycle trails, slope stabilization, etc.

**CERTIFICATES/COMPLIANT**

**AFNOR:** NF EN ISO 844:2009 (determination of compressive properties).

**SGS:** ASTM D1621-04A (compressive test standard).

**LEED:** Used in SUDS and LEED compliant porous paving BMPs for ideal draining and minimal environmental impact.

**ADA Compliant:** Used in ADA disability compliant surfaces for pedestrians, bicycles, & wheelchair traffic.

**Environmentally Approved:** Maryland Department of the Environment, Montgomery County, and City of Victoria, British Columbia.

Showcasing the strength of our grid:  
[youtube.com/watch?v=PBdXBigpj0g](https://youtube.com/watch?v=PBdXBigpj0g)



## HOMEOWNER INSTALLATION FOR CORE Gravel 50-35HDR

COREgravel - Honeycomb Gravel Stabilizer Panels:

Panels are  $\pm 45.3" \times \pm 30.7" \times 1.4"$  (1.15 m x .78 m x 35mm) (MEDIUM) heavy duty black/white or grey injection-molded polypropylene panel having a factory applied geotextile fabric fused to the bottom and are capable of supporting wheelchairs and occasional light truck traffic. Compressive strength is tested under ASTM D 1621-04a and is 1016 kg/0.0175 m<sup>2</sup>. Loading capacity is > 250 tons/m<sup>2</sup>, > 350 psi, when filled with gravel over the specified base.

### CORE GRAVEL HONEYCOMB CELL INFILL MATERIALS

Specifier Notes:

A. For a permeable system, fill cells with clean, angular or round stones, gravel or decorative stones.

B. Infill gravel sizes range between 1/8" to 1/2", but the ideal size is 3/8", and can be either clear or pre-washed of all fines before delivering to the site. No gravel less than 1/8" nor more than 1/2" is recommended.

D. Install infill gravel by back-dumping into the cells from buckets mounted on rubber-tired tractors. Avoid sharp turns of the tractor, driving only on gravel-filled cells. Spread gravel laterally from the pile using power brooms, blades, flat bottomed shovels and/or wide asphalt rakes to fill the cells. Depending on the size of the project, you can compact the gravel with a vibrating plate compactor. If using pea gravel, no plate compaction is necessary.

### INSTALLATION

1. Excavate area allowing for unit thickness and top layer. Leave 45 mm (1.8 inches) for COREgravel® 50-35 (35 mm) and top layer (10 mm) to meet final grade.
2. Excavate and shape foundation soils to grades, elevations, and dimensions as necessary for your site, or as per drawings. Be sure water will flow away from any structures.
3. If site requires a structural base, fill with 3/4" road crush as necessary. A typically homeowner driveway will require a minimum of 2" of road crush, but site specific conditions may call for a deeper subbase. Maximum base layer: 6" (i.e. parking lot).
4. Compact your base layer with a vibratory plate, compactor, or roller.

5. Place the panels. Position the panels on the prepared subgrade with geotextile face down. Cut to shape with aviation shears or skill saw with fine-toothed blade. Use protective gloves to avoid abrasions. Top of hexagon cell panels should be 1 cm (10 mm) below adjacent hard surfaced pavements or final grade.
6. All hard surfaces abutting areas to receive Gravel Surfacing shall be in place prior to commencing work. Finished gravel work should be no more than 1/2" below adjacent hard surfaces.
7. Place first row of panels against a stationary edge if possible. The panels have interlocking connectors. You can install panels 'side by side' or in a 'herring bone' pattern; either method works. No anchors are needed for gravel stabilizer panels installed on slopes less than 20 degrees.
8. Fill cells with chosen infill. Maximum particle size of granular infill material should not exceed  $\frac{1}{2}$ ". Minimum particle size can be 1/8" to allow porosity. Cell walls must be sufficiently covered with infill to prevent any equipment or load bearing vehicular traffic from damaging the grid.
9. Install edge restraint if desired. Standard metal, plastic, concrete edge restraints or concrete curbing may be used.
10. You can: Water stones thoroughly for an immediate finished look!

### **Post-Placement**

- A. Reserve a few 5 g. buckets of infill stones on site to top dress as necessary over the next year. Once the area is fully packed, top dressing is no longer necessary.
- B. Snow plowing – Use shovels or blades with plastic blades. If using a metal blade, set blade 2" above gravel surface, leaving a layer of snow. This system is free draining during freeze/thaw events.
- C. Use of salt for de-icing is allowed.



Tom Tanton  
12 Marlborough Street  
Victoria, BC V8V 4A5

June 30, 2017

## Rainwater Rewards Pre-Approval Notice: 12 Marlborough St

Dear Tom,

The City of Victoria has reviewed your Rainwater Rewards application for installing 144 square metres of plastic grid permeable paving.

Your application has received pre-approval and work may proceed.

The work as proposed will qualify for a rebate of \$750 and an ongoing credit of 10% off of the annual stormwater utility bill, conditional on the following:

- Any changes to the submitted plan must receive approval from the City;
- Construction must be done in accordance with the requirements outlined in the City of Victoria Rainwater Management Standards and/or the manufacturer's directions;
- Conditions of any City approvals must be met;
- An inspection must be completed at completion of project – please notify the City when ready; Proof of completed work must be submitted, including photos and relevant invoices;
- Maintenance requirements are carried out.

Please contact the City at 250.361-0443 or [stormwater@victoria.ca](mailto:stormwater@victoria.ca) if any changes are made to the approved design or if you have any questions.

Thank you for participating in the City of Victoria's Rainwater Rewards program.

Sincerely,  
Adam Steele  
Engineering and Public Works  
City of Victoria

*- products & inv  
- spcs.*

# RYZUK GEOTECHNICAL

Engineering & Materials Testing

28 Crease Avenue, Victoria, BC, V8Z 1S3 Tel: 250-475-3131 Fax: 250-475-3611 www.ryzuk.com

February 24, 2016

File No: 7361-1

Tom Tanton  
805-325 Maitland Street  
Victoria, BC  
V9A 7E9

Dear Sir,

Re: Core Gravel Permeable Paving

As requested, we have undertaken a review of the Core Gravel Permeable Paver product with consideration for possible use within the City of Victoria. We understand that you have proposed utilizing this product, however it does not meet the requirements of the City. Our associated comments and recommendations are provided herein, and our work has been undertaken in accordance with and is subject to the attached Terms of Engagement.

The City of Victoria offers a financial incentive for the implementation of stormwater management techniques in residential developments. According to the City, this program is “designed to encourage property owners to consider managing rainwater when undertaking other improvements to their properties”. This reduction of stormwater runoff provides many benefits for both the municipality and the environment.

It is widely accepted that impermeable surfaces from roofs, driveways, etc., contribute stormwater more rapidly to the municipal drain system resulting in more severe peak flows which can overwhelm stormwater infrastructure. These flows can be in part attenuated to pre-development rates by property owners who opt to install permeable materials in key locations. As an additional benefit, water quality is generally improved as stormwater undergoes a natural filtration process as it infiltrates into the ground.

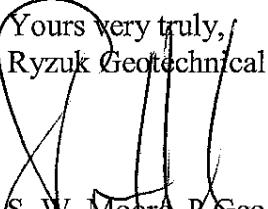
We understand that the City of Victoria considers plastic grid gravel retaining systems to be unsuitable for the incentive program due to potential for failure of the plastic grid over time. While we do note that this is contrary to the literature available on the City’s website that specifically includes these types of systems in the listed examples of permeable pavers, we have considered the rationale for excluding these types of systems and make a counter argument that they should be accepted. That said, we are aware that the topic of acceptable permeable pavers is currently being evaluated by the City as part of a larger review of the stormwater management program.

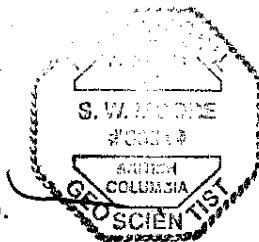
We are of the opinion that the potential for the plastic grid to degrade over time is not well founded. Typically, plastic products have had the opposite problem – whereby they do not degrade over time and therefore result in environmental problems whether it be in landfills or in plastic waste in the ocean. We are aware that some plastics are susceptible to breakdown due to ultraviolet exposure, however, we believe that in this instance it is an issue of proper installation techniques to limit the risk of such occurring within the Core Gravel product. Our review of the product as well as the corporate literature indicates that the potential for the plastic grid to break under wheel loads, which is a more likely mechanism of failure of the system, can be mitigated with proper installation and maintenance of the system. When installed properly, the plastic cells are fully infilled with gravel and therefore are not directly bearing any load from the vehicle traffic. The load is induced onto the gravel within the cells, and the cells simply provide lateral restraint to the gravel. Similar to any other type of pavement structure or paver system, it will be necessary to ensure that adequate subgrade is present prior to placement of the system.

On the basis of the above, it is our professional opinion that the Core Gravel Permeable Paver system should be allowed by the City on your property. It may well be that you approach them and offer yours as a demonstration project, whereby you have the system installed as per the manufacturer specifications. Perhaps we review the subgrade to ensure that you have satisfactory subgrade as well as the completed product, which may provide the City with some additional confidence that these systems could be used more commonly within the district. We would therefore recommend that you approach the City and determine if you could receive their conditional approval.

We hope the preceding is suitable for your purposes at present. If we can be of further assistance, please contact us.

Yours very truly,  
Ryzuk Geotechnical

  
S. W. Moore, P. Geo.  
Geoscientist  
SWM/cam



Attachment – Terms of Engagement

## TERMS OF ENGAGEMENT

### GENERAL

Ryzuk Geotechnical (the Consultant) shall render the Services, as specified in the agreed Scope of Services, to the Client for this Project in accordance with the following terms of engagement. The Services, and any other associated documents, records or data, shall be carried out and/or prepared in accordance with generally accepted engineering practices in the location where the Services were performed. No other warranty, expressed or implied is made. The Consultant may, at its discretion and at any stage, engage sub-consultants to perform all or any part of the Services.

Ryzuk Geotechnical is a wholly owned subsidiary of C. N. Ryzuk & Associates Ltd.

### COMPENSATION

All charges will be payable in Canadian Dollars. Invoices will be due and payable by the Client on receipt of the invoice without hold back. Interest on overdue accounts is 24% per annum.

### REPRESENTATIVES

Each party shall designate a representative who is authorized to act on behalf of that party and receive notices under this Agreement.

### TERMINATION

Either party may terminate this engagement without cause upon thirty (30) days' notice in writing. On termination by either party under this paragraph, the Client shall forthwith pay to the Consultant its Charges for the Services performed, including all expenses and other charges incurred by the Consultant for this Project.

If either party breaches this engagement, the non-defaulting party may terminate this engagement after giving seven (7) days' notice to remedy the breach. On termination by the Consultant under this paragraph, the Client shall forthwith pay to the Consultant its Charges for the Services performed to the date of termination, including all fees and charges for this Project.

### ENVIRONMENTAL

The Consultant's field investigation, laboratory testing and engineering recommendations will not address or evaluate pollution of soil or pollution of groundwater. The Consultant will cooperate with the Client's environmental consultant during the field work phase of the investigation.

### PROFESSIONAL RESPONSIBILITY

In performing the Services, the Consultant will provide and exercise the standard of care, skill and diligence required by customarily accepted professional practices and procedures normally provided in the performance of the Services contemplated in this engagement at the time when and the location in which the Services were performed.

### INSURANCE

Ryzuk Geotechnical is covered by Professional Indemnity Insurance as follows:

1. \$ 2,000,000 each and every claim
2. \$ 4,000,000 aggregate
3. \$ 5,000,000 commercial/general liability coverage

### LIMITATION OF LIABILITY

The Consultant shall not be responsible for:

1. the failure of a contractor, retained by the Client, to perform the work required for the Project in accordance with the applicable contract documents;
2. the design of or defects in equipment supplied or provided by the Client for incorporation into the Project;
3. any cross-contamination resulting from subsurface investigations;
4. any Project decisions made by the Client if the decisions were made without the advice of the Consultant or contrary to or inconsistent with the Consultant's advice;
5. any consequential loss, injury or damages suffered by the Client, including but not limited to loss of use, earnings and business interruption;
6. the unauthorized distribution of any confidential document or report prepared by or on behalf of the consultant for the exclusive use of the Client
7. Subsurface structures and utilities

The Consultant will make all reasonable efforts prior to and during subsurface site investigations to minimize the risk of damaging any subsurface utilities/mains. If, in the unlikely event that damage is incurred where utilities were unmarked and/or undetected, the Consultant will not be held responsible for damages to the site or surrounding areas, utilities/mains or drilling equipment or the cost of any repairs.

The total amount of all claims the Client may have against the Consultant or any present or former partner, executive officer, director, stockholder or employee thereof under this engagement, including but not limited to claims for negligence, negligent misrepresentation and breach of contract, shall be strictly limited to the amount of any professional liability insurance the Consultant may have available for such claims.

No claim may be brought against the Consultant in contract or tort more than two (2) years after the date of discovery of such defect.

## DOCUMENTS AND REPORTING

All of the documents prepared by the Consultant or on behalf of the Consultant in connection with the Project are instruments of service for the execution of the Project. The Consultant retains the property and copyright in these documents, whether the Project is executed or not. These documents may not be used on any other project without the prior written agreement of the Consultant.

The documents have been prepared specifically for the Project, and are applicable only in the case where there has been no physical alteration to, or deviation from any of the information provided to the Consultant by the Client or agents of the Client. The Client may, in light of such alterations or deviations, request that the Consultant review and revise these documents.

The identification and classification as to the extent, properties or type of soils or other materials at the Project site has been based upon investigation and interpretation consistent with the accepted standard of care in the engineering consulting practice in the location where the Services were performed. Due to the nature of geotechnical engineering, there is an inherent risk that some conditions will not be detected at the Project site, and that actual subsurface conditions may vary considerably from investigation points. The Client must be aware of, and accept this risk, as must any other party making use of any documents prepared by the Consultant regarding the Project.

Any conclusions and recommendations provided within any document prepared by the Consultant for the Client has been based on the investigative information undertaken by the Consultant, and any additional information provided to the Consultant by the Client or agents of the Client. The Consultant accepts no responsibility for any associated deficiency or inaccuracy as the result of a miss-statement or receipt of fraudulent information.

## JOBSITE SAFETY AND CONTROL

The Client acknowledges that control of the jobsite lies solely with the Client, his agents or contractors. The presence of the Consultant's personnel on the site does not relieve the Client, his agents or contractors from their responsibilities for site safety. Accordingly, the Client must endeavor to inform the Consultant of all hazardous or otherwise dangerous conditions at the Project site of which the Client is aware.

The client must acknowledge that during the course of a geotechnical investigation, it is possible that a previously unknown hazard may be discovered. In this event, the Client recognizes that such a hazard may result in the necessity to undertake procedures which ensure the safety and protection of personnel and/or the environment. The Client shall be responsible for payment of any additional expenses incurred as a result of such discoveries, and recognizes that under certain circumstances, discovery of hazardous conditions or elements requires that regulatory agencies must be informed. The Client shall not bring about any action or dispute against the Consultant as a result of such notification.

## FIELD SERVICES

Where applicable, field services recommended for the Project are the minimum necessary, in the sole discretion of the Consultant, to observe whether the work or a contractor retained by the Client is being carried out in general conformity with the intent of the Services. Any reduction from the level of services recommended will result in the Consultant providing qualified certifications for the work.

## DISPUTE RESOLUTION

If requested in writing by either the Client or the Consultant, the Client and the Consultant shall attempt to resolve any dispute between them arising out of or in connection with this Agreement by entering into structured non-binding negotiations with the assistance of a mediator on a without prejudice basis. The mediator shall be appointed by agreement of the parties. If a dispute cannot be settled within a period of thirty (30) calendar days with the mediator, the dispute shall be referred to and finally resolved by arbitration under the rules of the arbitrator appointed by agreement of the parties or by reference to a Judge of the British Columbia Court.



# MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard • Baltimore MD 21230  
410-537-3000 • 1-800-633-6101 • [www.mde.state.md.us](http://www.mde.state.md.us)

Martin O'Malley  
Governor

Robert M. Summers, Ph.D.  
Secretary

Anthony G. Brown  
Lieutenant Governor

March 12, 2013

Ms. Caroline Rutledge, AscT, QEP  
Core Systems  
P.O. Box 1545  
Comox, BC V9M 8A2

Dear Ms. Rutledge:

Thank you for your recent email to the Maryland Department of the Environment (MDE), Water Management Administration (WMA) regarding the COREgravel<sup>®</sup> permeable paving surface. WMA has evaluated the product description and supporting information with respect to potential treatment applications in Maryland. We offer the following:

In Maryland, environmental site design (ESD) must be used to the maximum extent practicable (MEP) to reduce runoff and mimic natural hydrologic conditions. The use of ESD planning techniques and treatment practices must be exhausted before any approved structural practices may be used. The COREgravel<sup>®</sup> system is a proprietary type of reinforced turf. Reinforced turfs that are designed in accordance with the criteria found in Chapter 5 (see pp. 5.52 to 5.54) and Appendix B.4 (see p. B.4.4) of the 2000 Maryland Stormwater Design Manual may be used to meet the ESD mandate. WMA has no objection to this product's use as a reinforced turf provided all pertinent design criteria as listed are met.

In addition, WMA does not object to the use of COREgravel<sup>®</sup> pavers for redevelopment or pretreatment provided they are accepted locally. However, local jurisdictions may request that a letter from MDE/WMA be provided verifying product classification. Please consider this that letter. Thank you again for your interest. If you have any additional questions, please contact me at 410-537-3550 or [scomstock@mde.state.md.us](mailto:scomstock@mde.state.md.us).

Sincerely,

Stewart R. Comstock, P.E.  
Regulatory & Compliance Engineer  
Sediment, Stormwater & Dam Safety Program











