

**DATE:** September 5, 2018**FILE:** 3060-20/DP 17B 18**TO:** Chair and Directors  
Electoral Areas Services Committee**FROM:** Russell Dyson  
Chief Administrative OfficerSupported by Russell Dyson  
Chief Administrative Officer*R. Dyson***RE: Industrial Development Permit – 1671, 1673 and 1675 Ryan Road East  
(Lenco Development Ltd., Fernco Development Ltd. and Norco  
Development Ltd.)  
Lazo North (Electoral Area B)  
Lot 1, District Lot 114, Comox District, Plan 2280, PID 006-412-335****Purpose**

To consider an Industrial Development Permit (DP) application for three proposed mini-storage warehouse buildings (Appendix A).

**Recommendation from the Chief Administrative Officer:**

THAT the Comox Valley Regional District Board approve Development Permit DP 17B 18 on the property described as Lot 1, District Lot 114, Comox District, Plan 2280, PID 006-412-335 (1671, 1673 and 1675 Ryan Road East) for the construction of three mini-storage warehouse buildings subject to the development permit not being issued until a landscape security deposit in the amount of \$34,932.82 (125 per cent of the \$27,946.25 estimate) has been satisfactorily received by the Comox Valley Regional District;

AND FINALLY THAT the Corporate Legislative Officer be authorized to execute the development permit.

**Executive Summary**

- The subject property is located at 1671, 1673 and 1675 Ryan Road East.
- On June 26, 2018, the Comox Valley Regional District (CVRD) Board rezoned the southern half of the lot from Country Residential One (CR-1) to Industrial Light (IL) zone. The entire property is now zoned IL.
- With this approval, the applicant submitted an industrial DP application to expand their mini-storage business with three new mini-storage buildings.
- New buildings in an industrial zoned property triggered the requirement for an Industrial Form and Character DP.
- The submitted site plan and building elevations illustrate the form and character of the proposed buildings. These buildings will be constructed in a similar form and character as the existing mini-storage buildings. The proposed buildings will be between approximately 557 square metres to 650 square metres in floor area. Each building will be constructed as steel buildings and include metal cladding and metal roofs. The exterior walls of the buildings will be “fox grey,” and the overhead doors will be white and the roof will be galvanized in colour.
- The submitted landscape plan features a 3 metre landscape buffer around the property to create screening for the neighbours. The existing trees and vegetation will remain and will be supplemented by an additional 10 Maple and 69 Cedar trees. There will also be a 1.8 metre high chain link fence.

- The submitted rainwater management plan was deemed acceptable by engineering services staff.
- The Advisory Planning Commission (APC) B reviewed the proposal on August 16, 2018. They supported the proposal.
- The issuance of the DP is supportable.

Prepared by:

Concurrence:

**B. Chow**

**A. Mullaly**

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Brian Chow, MCIP, RPP  
Rural Planner

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Alana Mullaly, M.Pl., MCIP, RPP  
Acting General Manager of Planning and  
Development Services

**Stakeholder Distribution (Upon Agenda Publication)**

Applicant	✓
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**Background/Current Situation**

The subject property is approximately 3.7 hectares in size and is located at 1671, 1673 and 1675 Ryan Road East, in the Lazo North area (Electoral Area B) (Figure 1). The property is bound by residential lots to the east, Town of Comox to the south, commercial and residential lots to the west, and commercial and industrial lots across Ryan Road East to the north. Currently, the property has two industrial light spec buildings and three mini-storage buildings on the northern half of the lot (Figure 2).

On June 26, 2018, the CVRD Board rezoned the southern half of the lot from CR-1 to IL zone. This rezoning resolved the split zoned situation and enabled the applicant to expand their light industrial uses. The entire property is now zoned IL. With this recent approval, the applicant submitted an Industrial DP application to expand their mini-storage business with three new mini-storage buildings, labeled as Buildings I, J and K on Figure 3.

Official Community Plan Analysis

“Rural Comox Valley Official Community Plan, Bylaw No. 337, 2014” (OCP) designates the subject property within Settlement Expansion Areas. The OCP contains development permit area (DPA) guidelines.

Development Permit Areas

This property is within two DPAs. As the property is zoned IL, new buildings or changes to existing buildings will trigger the requirement for an industrial DP. This DP is for the form and character of the proposed development. The second DP is the Aquatic and Riparian Habitat DP, as one of the three mini-storage warehouse buildings is within 30 metres of a watercourse. The second DP will be reviewed and considered by a CVRD Officer as delegated authority.

The industrial DP application is reviewed relative to the DPA guidelines.

*Form and Character*

According to the applicant, these proposed buildings will be constructed in a similar form and character as the existing mini-storage buildings (Figures 4 to 7). The proposed buildings will be between approximately 557 square metres to 650 square metres in floor area. Each building will be steel, clad with metal roofs. The exterior walls of the buildings will be “fox grey,” and the

overhead doors will be white and the roof will be galvanized in colour. These buildings are single storey, low profile, and are architecturally coordinated in a light industrial setting.

#### *Landscaping*

The Landscape Plan (Figure 8), prepared by PMG Landscape Architects, features a 3 metre landscape buffer around the property to create screening for the neighbours. The existing trees and vegetation will remain and will be supplemented by an additional 10 Maple and 69 Cedar trees. There will also be a 1.8 metre high chain link fence.

#### *Construction Phase*

The three proposed buildings is the first phase of the expansion. There will be six additional mini-storage warehouse buildings in the future. The additional buildings will likely be similar in form and character as these three buildings, and they will form a 3 by 3 building grid pattern on the property. The applicant will submit new DP application for these future buildings.

#### *Outside Storage*

The proposal does not include any outside storage. These buildings will replace any outside parking of vehicles. There is already a central waste and recycling facility on the property from a previous DP approval.

#### *Screening*

The existing trees and vegetation around the edge of the property will be retained. These will be supplemented by the proposed landscaping plan. The proposed lighting is compliant with the CVRD DarkSky Policy and will not shine directly into adjacent residential properties. The proposal does not feature anything that will require additional screening.

#### *Parking*

The proposal does not require additional parking areas. There are existing parking spaces within the front yard of the lot. Parking for the mini-storage warehouse buildings are currently handled by the adjacent lot, which is owned by the same owner. Customers park just outside of their units for loading and unloading of their belongings.

#### *Rainwater Management*

A Rainwater Management Plan was prepared by Chris Durupt, P.Eng. of McElhanney Consulting Services Ltd. The rainwater management plan ensures that rainwater be managed entirely on-site. The plan provides best management practices, which include retaining native vegetation beyond the developed area, concentrating site runoff to discharge into an infiltration facility and using permeable gravel hard surfacing for site parking and access. The proposed infiltration gallery will be a rock trench of 585 square metres in area and 0.75 metres deep. This gallery should be located a minimum of 5 metres away from any buildings or septic disposal fields. Proper installation and routine maintenance of the best management practices in the plan will provide sufficient storage and infiltration. This rainwater management plan was reviewed by engineering services staff and was deemed consistent with the DPA guidelines.

### **Policy Analysis**

Sections 488 to 491 of the *Local Government Act* (RSBC, 2015, c. 1) (LGA) authorizes a local government to manage different types of development that occur in specific areas. The LGA allows a local government to designate DPAs and to establish guidelines within its OCPs to protect the natural environment, to protect development from hazardous conditions, and to regulate the form and character of commercial, industrial and multifamily residential development. Pursuant to Section 85 of Bylaw No. 337, development on properties zoned in Part 900 of the Zoning Bylaw requires a

DP for new buildings or changes to existing buildings.

### **Options**

The board could approve or deny this industrial DP. The board could deny the application only if the board is of the opinion that the proposal is not consistent with DPA guidelines. Given the above discussion, planning staff recommends approval of the DP.

### **Financial Factors**

Applicable fees have been collected for this application under Bylaw No. 328 being the “Comox Valley Regional District Planning Procedures and Fees Bylaw No. 328, 2014.” In order to ensure that the landscape plan is implemented, a landscape security deposit is required. As a subject condition of the execution of the DP, the applicant will need to submit 125 per cent of the landscaping cost estimate of \$27,946.25, which is \$34,932.82. Upon confirmation that the landscaping has been implemented by a Qualified Professional, this security deposit will be returned to the applicant.

### **Legal Factors**

This report and the recommendations contained herein are in compliance with the LGA and CVRD bylaws.

### **Regional Growth Strategy Implications**

The subject property is designated as a Settlement Expansion Area in the Regional Growth Strategy (RGS). MG Policy 1E-5, “New Development within Settlement Expansion Areas,” states:

*“New development within Settlement Expansion Areas will be phased in an orderly manner in order to ensure that appropriate infrastructure capacity is available, that new development does not detract from compact growth options within Municipal Areas, and that the financial stability of Municipal Areas is not negatively impacted.”*

As part of the subject property is already zoned for industrial use, the proposal does not require any changes to the existing land use; therefore, issuance of a DP is consistent with the policy of the RGS.

### **Intergovernmental Factors**

When the southern half of the property was rezoned from CR-1 to IL, a referral was sent to the Town of Comox for comments. The referral mentioned that it is the intention of the applicant to expand their mini-storage warehouse business. The Town of Comox did not provide a response to this rezoning application that facilitates this proposed development.

As the subject property is on Ryan Road, the applicant has received a highway access permit from the Ministry of Transportation and Infrastructure (MoTI) for the existing industrial buildings and mini-storage warehouse buildings. In a previous DP application, MoTI confirmed that additional permits are not required when there is no proposal for additional access points to Ryan Road.

### **Interdepartmental Involvement**

This DP has been circulated to internal departments for review and comments. Engineering services staff reviewed the rainwater management report and deemed it to be consistent with the DPA guidelines. Other departments do not have any concerns associated with this DP.

### **Citizen/Public Relations**

Public notification is not required for a DP application. The APC for Lazo North (Electoral Area B) met on August 16, 2018, to review this application. The APC members supported this DP

application.

Attachment: Appendix A – “Development Permit DP 17B 18”

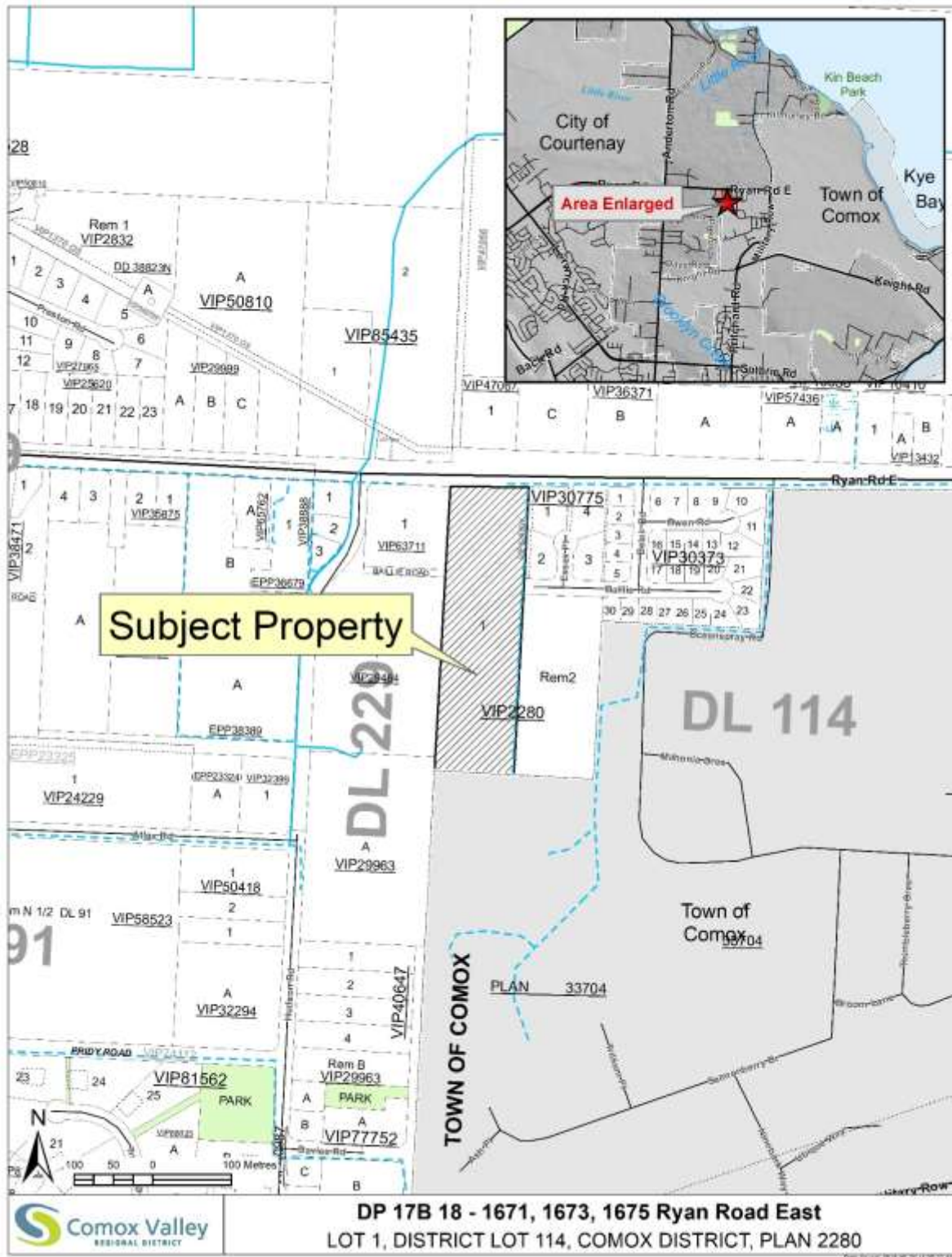


Figure 1: Subject Property Map



Figure 2: Air Photo

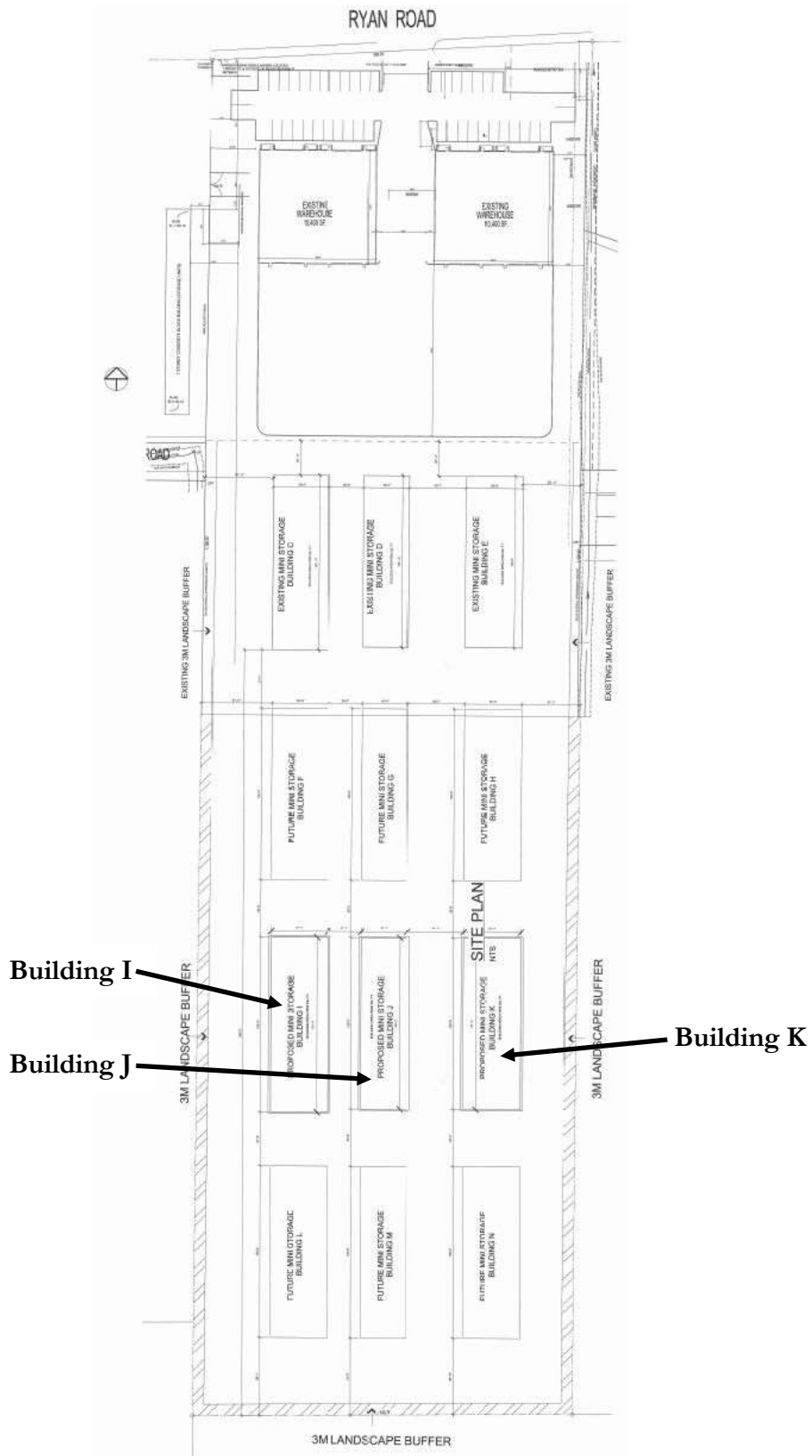


Figure 3: Site Plan





Figure 4: An Existing Mini-Storage Warehouse Building as an Example

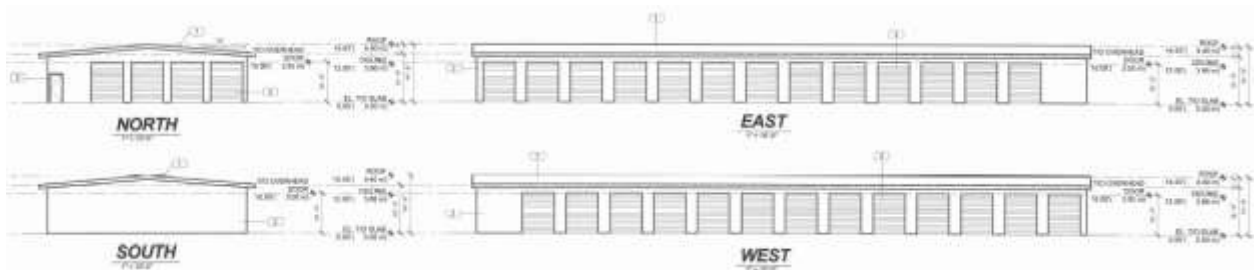


Figure 5: Building I Elevations

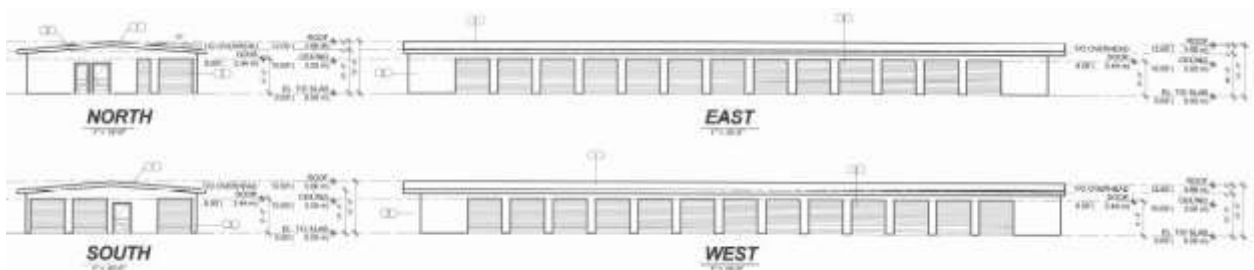


Figure 6: Building J Elevations

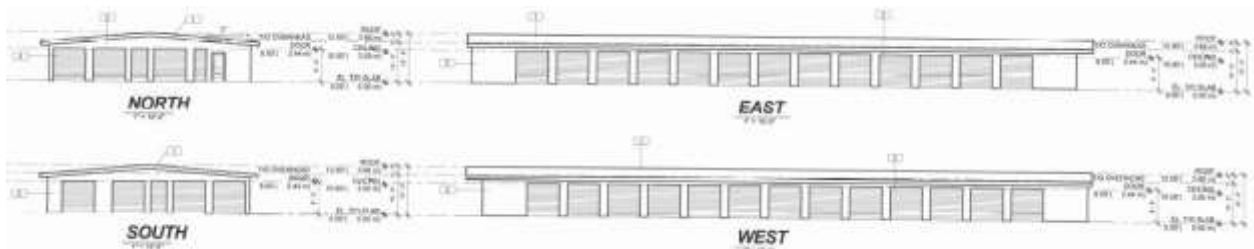
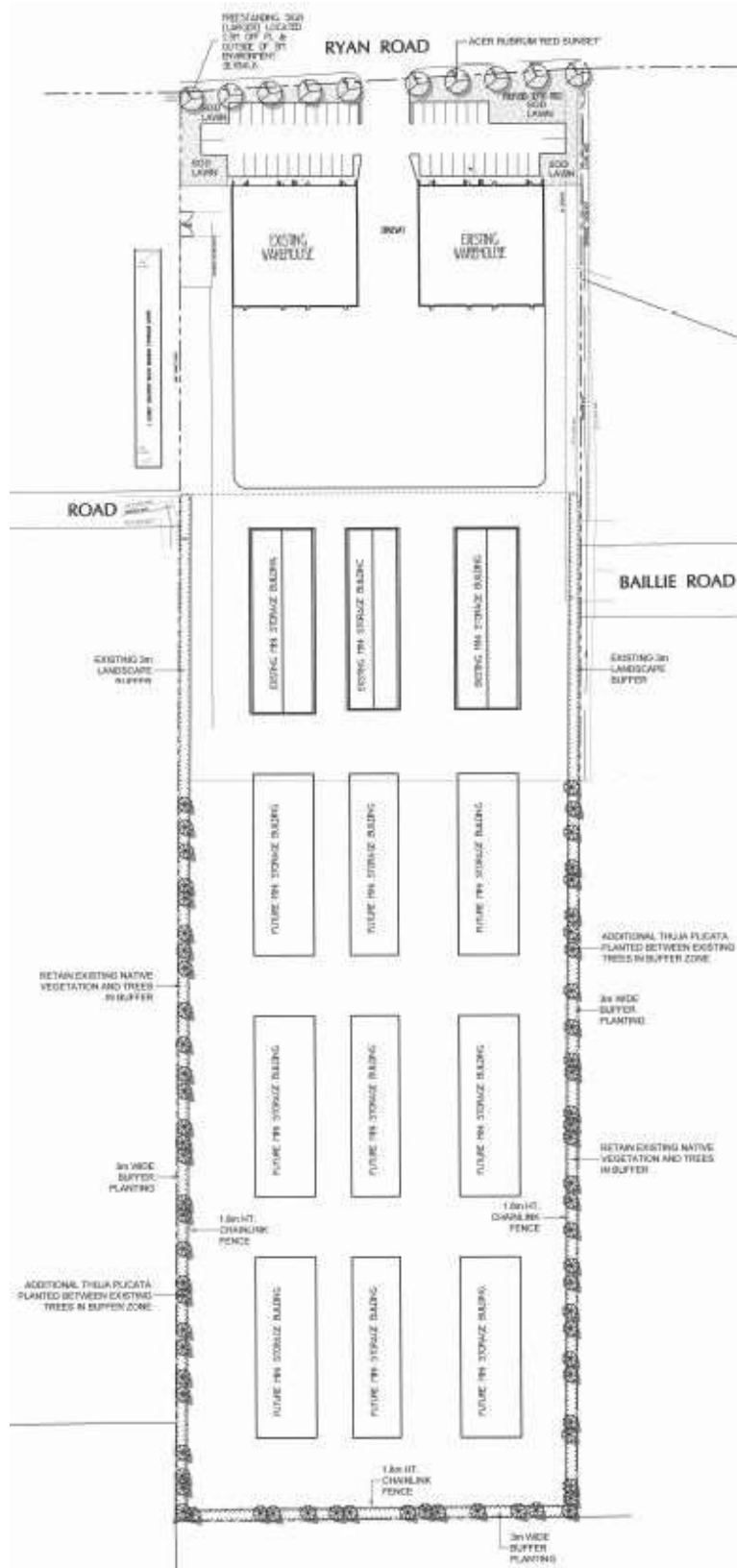


Figure 7: Building K Elevations



PLANT SCHEDULE				PMG PROJECT NUMBER: 17-252
KEY	QTY	BOTANICAL NAME	COMMON NAME	PLANTED SIZE / REMARKS
TREE	10	ACER FRURUM 'RED SUNSET'	RED SUNSET MAPLE	6CM CAL; 2M STD; B&B
	69	THUJA PLICATA	WESTERN RED CEDAR	3M HT; B&B

Figure 8: Landscape Plan

**DP 17B 18**

**TO:** Lenco Development Ltd., Fernco Development Ltd. and Norco Development Ltd.

1. This Development Permit (DP 17B 18) is issued subject to compliance with all of the bylaws of the Comox Valley Regional District (CVRD) applicable thereto, except as specifically varied or supplemented by this permit for the **construction of three mini-storage warehouse buildings.**

2. This Development Permit applies to, and only to, those lands within the CVRD described below:

**Legal Description:** Lot 1, District Lot 114, Comox District, Plan 2280

**Parcel Identifier (PID):** 006-412-335 **Folio:** 771 01968.000

**Civic Address:** 1671, 1673 and 1675 Ryan Road East

3. The land described herein shall be developed in accordance with the following terms and conditions and provisions of this permit:

**Construction and Development Activities:**

i. THAT the three proposed mini-storage warehouse buildings are constructed and externally finished in accordance to the submitted Site Plan and Architectural Drawings hereto attached as Schedule A;

ii. THAT development is in accordance with the Rainwater Management Plan, prepared by McElhanney Consulting Services and dated October 27, 2017, hereto attached as Schedule B;

iii. THAT no construction material or debris be dumped on Ryan Road East, during or after site development and that such material be disposed of offsite at an approved location;

**Landscaping:**

iv. THAT the proposed landscaping for the property is completed and maintained in accordance with the submitted Landscape Plan, prepared by PMG Landscape Architects and dated July 31, 2018, and listed plantings hereto attached as Schedule C;

v. THAT the applicant provide a Landscape Security Deposit subject to the requirements of Bylaw No. 328 being the "Comox Valley Regional District Planning Procedures and Fees Bylaw No. 328, 2014." The amount of the Security Deposit is at 125 per cent of the cost estimate of plant materials and labour of \$27,946.25, which is \$34,932.82. The release of this deposit is upon completion of the works and submission of a confirmation from a Qualified Professional that the landscaping has been implemented according to the Landscape Plan.

**Signage and Lighting:**

vi. THAT all buildings, structures, signage and landscaping be non-illuminated or softly lit in compliance with the CVRD's DarkSky Policy hereto attached as Schedule D;

- vii. THAT no lighting be installed along any property lines adjacent to residential developments;
  - viii. THAT neither signs nor any external building surfaces shall be equipped with flashing, oscillating or moving lights or beacons.
4. This Development Permit is issued following the receipt of an appropriate site declaration from the Property Owner.
  5. This Development Permit (DP 17B 18) shall lapse if construction is not substantially commenced within two (2) years of the CVRD Board’s resolution regarding issuance of the development permit (see below). Lapsed permits cannot be renewed; however, a new application for a second development permit can be applied for in order to complete the remainder of the work.
  6. This Development Permit is *not* a Building Permit.

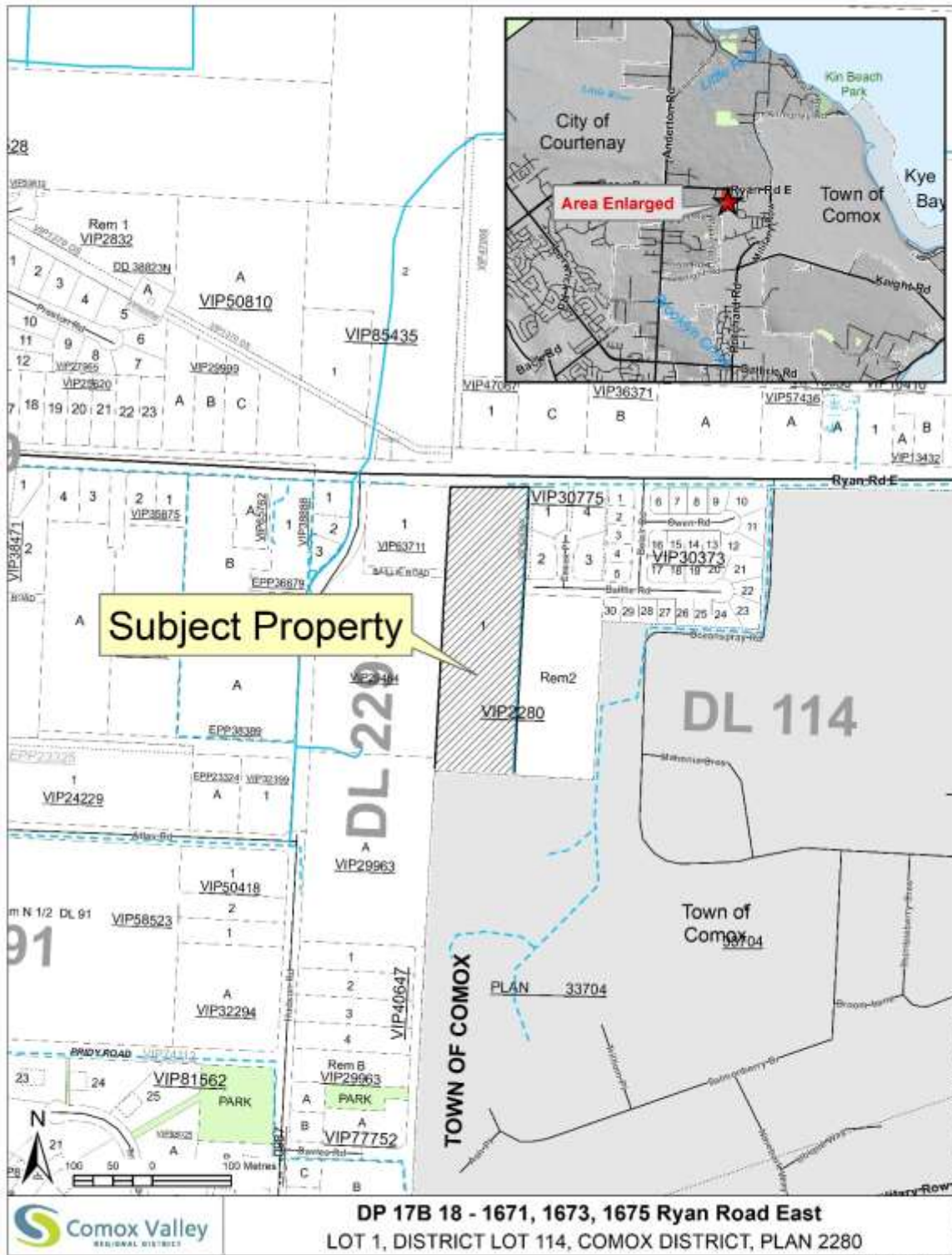
CERTIFIED as the **DEVELOPMENT PERMIT** issued by resolution of the board of the Comox Valley Regional District on \_\_\_\_\_.

\_\_\_\_\_  
James Warren  
Corporate Legislative Officer

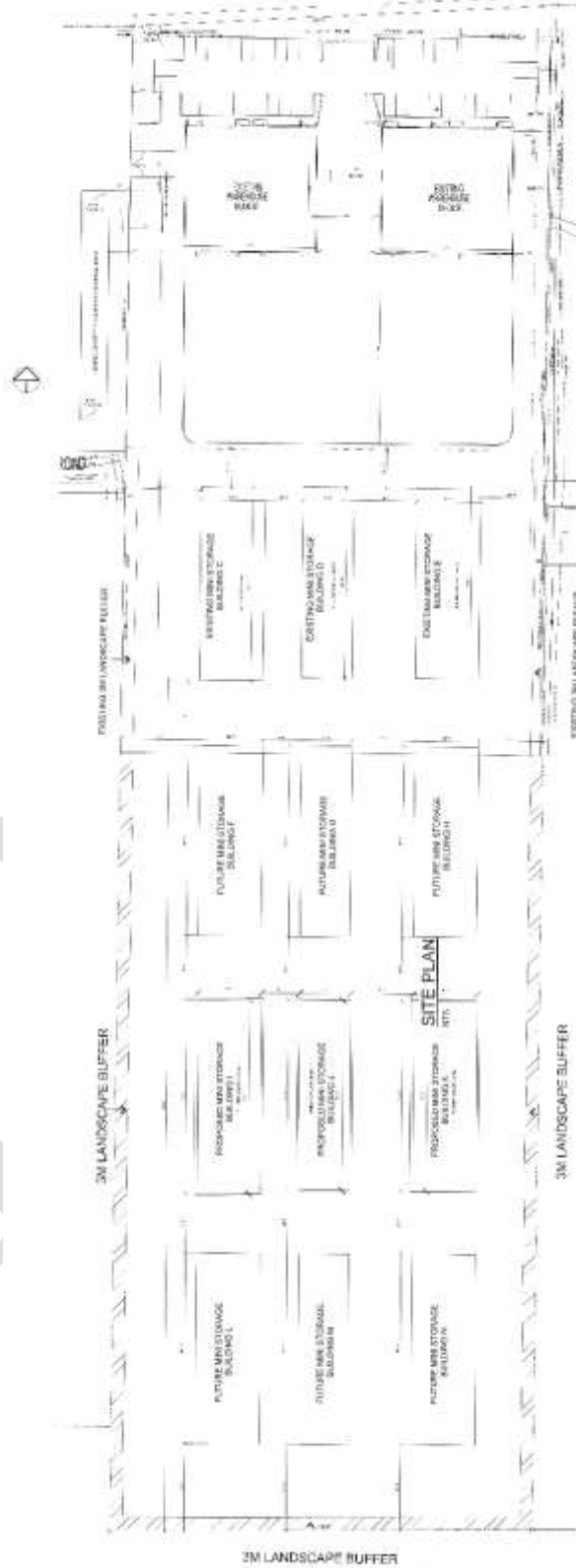
Certified on \_\_\_\_\_

- Attachments:
- Schedule A – “Subject Property Map and Site Plan”
  - Schedule B – “Rainwater Management Plan”
  - Schedule C – “Landscape Plan and Cost Estimates”
  - Schedule D – “CVRD DarkSky Policy”

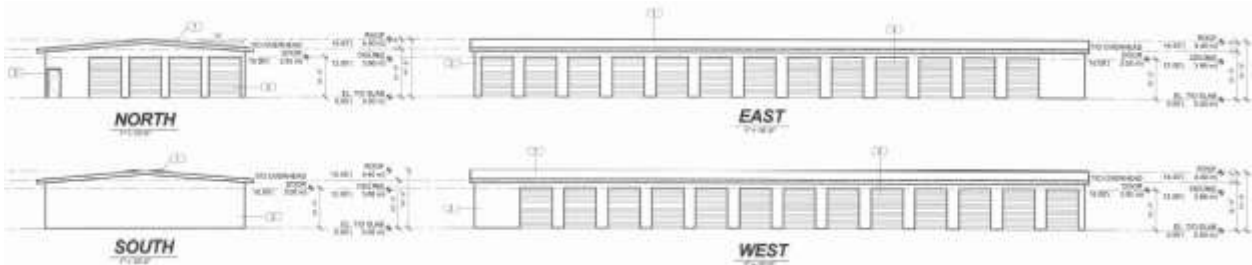
### Schedule A Subject Property Map



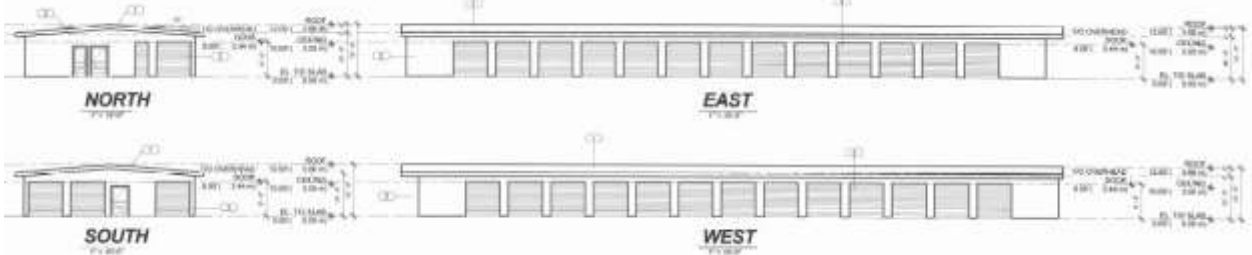
### Site Plan RYAN ROAD



Proposed Buildings



Building I



Building J



Building K



McElhanney Consulting Services Ltd.  
 495 Sixth Street  
 Courtenay, BC V9N 6V4  
 Tel: (250) 338-5495  
 www.mcelhanney.com

## D E S I G N   B R I E F

	<b>RAINWATER MANAGEMENT PLAN IN SUPPORT OF          DEVELOPMENT PERMIT APPLICATION          LOT 1, DISTRICT LOT 114, COMOX DISTRICT, PLAN 2280          1671 RYAN ROAD, COMOX, BC</b>
<b>Date:</b>	<b>August 17, 2018</b>
<b>Our Reference:</b>	<b>2211-47206-01 T2002</b>

**To:**                    **Noort Developments Ltd.**  
                               **Attention: Mr. Jason Hendricks**

**Prepared By:**     **Chris Durupt, P.Eng.**

**Reviewed By:**    **Randy Watson, P.Eng.**

### 1 INTRODUCTION

The following Rainwater Management Plan has been prepared on behalf of Noort Development Ltd., in support of a development permit application for the southern half of the above noted parcel. The intent of this plan is to develop a baseline for the existing site, outline performance targets for post-development runoff, and provide an overview and sizing of selected rainwater mitigation infrastructure.

### 2 SITE DESCRIPTION

The 3.7 hectare parcel is zoned Industrial Light (IL). The front half of the site has been developed and contains commercial retail space in the front and storage warehouses in the rear. The existing self contained rainwater management system for the developed portion of the site consists of permeable landscaping, gravel surfacing, storage/infiltration galleries, and outlet controls which discharge mitigated runoff to the Ryan Road ditching.

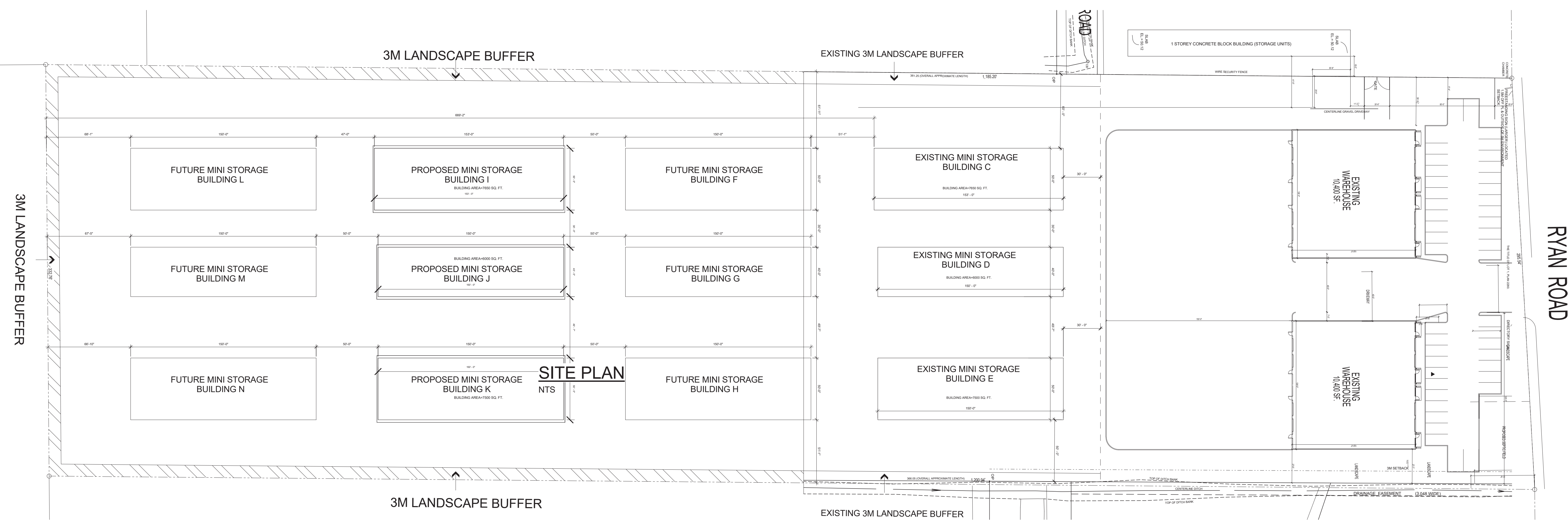
The back 1.890 hectares of the property is undeveloped. The property is predominantly cleared and covered in low vegetation. The site ranges in elevation from 51 m around the middle of the property to 48 m geodetic along the south border. The property generally drains east to the existing seasonal drainage ditch that runs along the east boarder of the property conveying runoff to Ryan Road.

### 3 PROPOSED DEVELOPMENT

The owner is proposing nine additional storage units and gravel access/parking for the undeveloped portion of the property. See attached architectural site plan for an overview of the proposed development.



No.	Date	Rev. Description	Dr.



**SITE PLAN**

JOB / ADDRESS NO:  
**1671 RYAN RD.  
 COMOX B.C.**

FILE NO:  
**0645**

DATE:  
**7/25/2018 9:52:21 AM**

SCALE:  
**1" = 40'-0"**

DRAWN:  
**Author**

**NH**  
**NOORT HOMES**  
 7857 Sixth St.  
 Burnaby, B.C.  
 V3N 3N4  
 TEL (604) 526 3604 FAX (604) 526 7651

#### 4 EXISTING RUNOFF AND PERFORMANCE TARGETS

A hydraulic model was developed using SWMM software, enabling analysis of existing and post-development site response to a variety of design rainfall events. Only that portion of the site proposed for development has been assessed. Rainwater management infrastructure for the rear of the site will be completely separate from the existing, developed portion of the site. Simulations were completed for the 24-hour SCS Type 1A distribution MAR (Mean Annual Rainfall), 2, and 5 Year rainfall events. Design rainfall events were derived from Environment Canada's Comox A rain gauge (1021830). Model input variables, based on existing site parameters, are summarized in **Table 1** below. The results of the modeled existing site response are summarized in **Table 2**.

**Table 1: Existing Site-Specific Storm Water Management Parameters**

Parameter	Existing
Area (ha)	1.8895
Width (m)	164
Slope (%)	5.0
% Impervious	15.0
N Imperv	0.01
N Perv	0.2
Dstore Imperv mm	2
Dstore Perv mm	7
Zero % imperv	25
Curve number	77

**Table 2: Existing Runoff Quantities**

24 Hour Rainfall Distribution	Total Precipitation	Existing Runoff	
		Peak Rate (l/s)	Total Volume (m <sup>3</sup> )
MAR	48mm	7.5	303
2-Year SCS	59mm	14.5	446
5-Year SCS	74mm	30.5	667

Per CVRD Bylaw No. 337, permanent design features for ground infiltration and retention of runoff from impervious surfaces, based on the principles of low impact development, have been designed to limit post-development runoff to amounts near the existing runoff quantities outlined in **Table 2** above. Details of the permanent design features are outlined in **Section 5** below.

## 5 DESIGN ELEMENTS

The recommended Best Management Practices (BMPs) to be implemented for this project have been developed to reduce post-development peak runoff rates, and provide qualitative treatment of runoff. The following BMPs are proposed for the site:

- Retain/re-establish native vegetation beyond the developed area.
- Place 300 mm of amended topsoil in any new landscaped (pervious) areas.
- Concentrated site runoff to discharge into an infiltration facility with the below specifications.
- Direct unconcentrated runoff from impervious surfaces to landscaping and permeable areas.
- Use permeable gravel hard surfacing for site parking and access.

### 5.1 Infiltration Gallery

Surface drainage from the proposed development will be routed through a 585 square metre by 0.75 m deep rock trench infiltration gallery. The infiltration gallery has been modeled in SWMM software with a hydraulic conductivity of 40 mm/hr (based on insitu measurements completed by H2O Environmental, undertaken in phase 1 of the development), a total base area of 585 m<sup>2</sup>, and a depth of 0.75 m. The gallery will consist of a perforated pipe bedded in drain rock (porosity approximately equal to 0.4). A longevity factor of 0.75 was used in this analysis to account for plugging of pore spaces and degradation over time. This equates to an effective storage capacity of 130 m<sup>3</sup>. To ensure long-term efficacy, the gallery will be situated downstream of a grit sump and upstream of a control manhole.

The control manhole will have two orifices controls: a lower 64 mm diameter orifice set at the invert of the infiltration gallery and an upper 102 mm diameter orifice set at 0.5 m above the base of the infiltration gallery. The control manhole will also have an overflow pipe set 0.7 m above the base of the infiltration gallery. The overflow pipe will be sized at detailed design based on the available slope and a required capacity of 128 lps (5 year peak flow). Overflow from the control manhole will be directed to the existing drainage ditching along the east side of the property.

The infiltration gallery should be designed by a professional engineer and should be located a minimum of 5 metres away from any buildings or septic disposal fields.

## 6 QUALITY

Runoff from the storage facility roofs and the gravel parking/access is expected to have negligible contaminates. The gravel parking lot will act as a first defence by infiltrating the first flush of rainfall. All concentrated runoff will then be routed through a grit sump, equipped with a hydrodynamic separator, upstream of the proposed infiltration gallery. The hydrodynamic separator will remove any large particulate. Groundwater recharge through infiltration will serve to further improve/ polish site runoff.

## 7 POST-DEVELOPMENT RUNOFF

The post-developed site was modeled using SWMM software. Simulations were completed for the 24-

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hour SCS Type 1A distribution MAR (Mean Annual Rainfall), 2, and 5 Year rainfall events. Model input parameters derived are summarized in **Table 3** below.

**Table 3: Site-Specific Storm Water Management Parameters**

Parameter	Existing	Post Development
Area (ha)	1.8895	1.8895
Width (m)	164	250
Slope (%)	5.0	2.0
% Impervious	15.0	69
N Imperv	0.01	0.01
N Perv	0.2	0.2
Dstore Imperv mm	2	2
Dstore Perv mm	7	20
Zero imperv	25	25
Curve number	77	77

**Table 4** compares existing and post-development simulated runoff for the site. The analysis shows that with the use of BMPs as proposed herein, runoff can be detained, infiltrated and released with peak rates below existing rates and total volumes below existing quantities up to the 5-year design storm. This is further demonstrated in **Figures 1 through 3**.

**Table 4: Post-Development Runoff Quantities**

24 Hour Distribution	Total Precipitation	Existing Runoff		Post-Development Runoff With BMP's	
		Peak Rate (l/s)	Total Volume (m <sup>3</sup> )	Peak Rate (l/s)	Total Volume (m <sup>3</sup> )
MAR	48mm	7.5	303	6.9	147
2-Year SCS	59mm	14.5	446	14.5	248
5-Year SCS	74mm	30.5	667	30.5	490

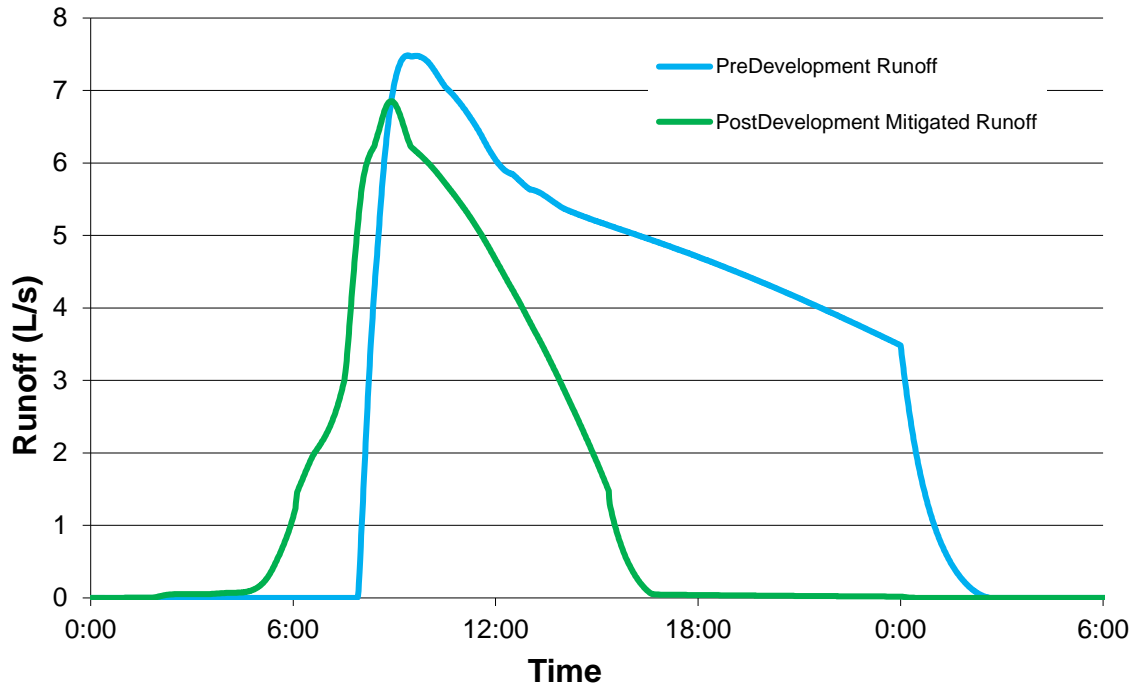


Figure 1 – BMP Performance: MAR Event

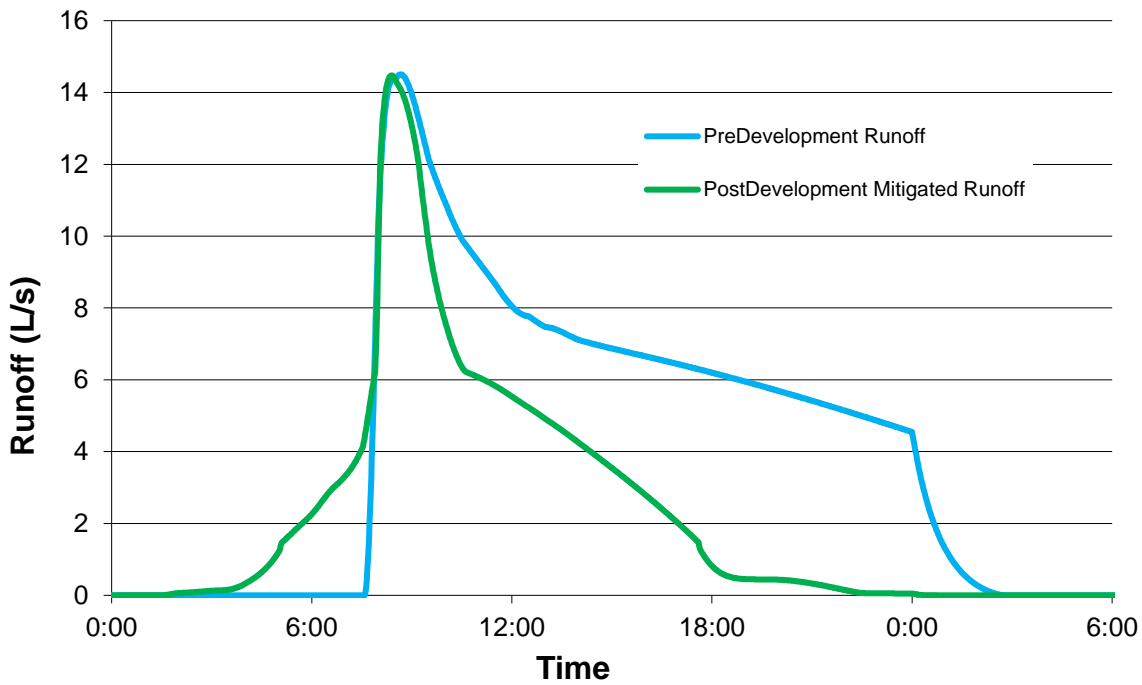
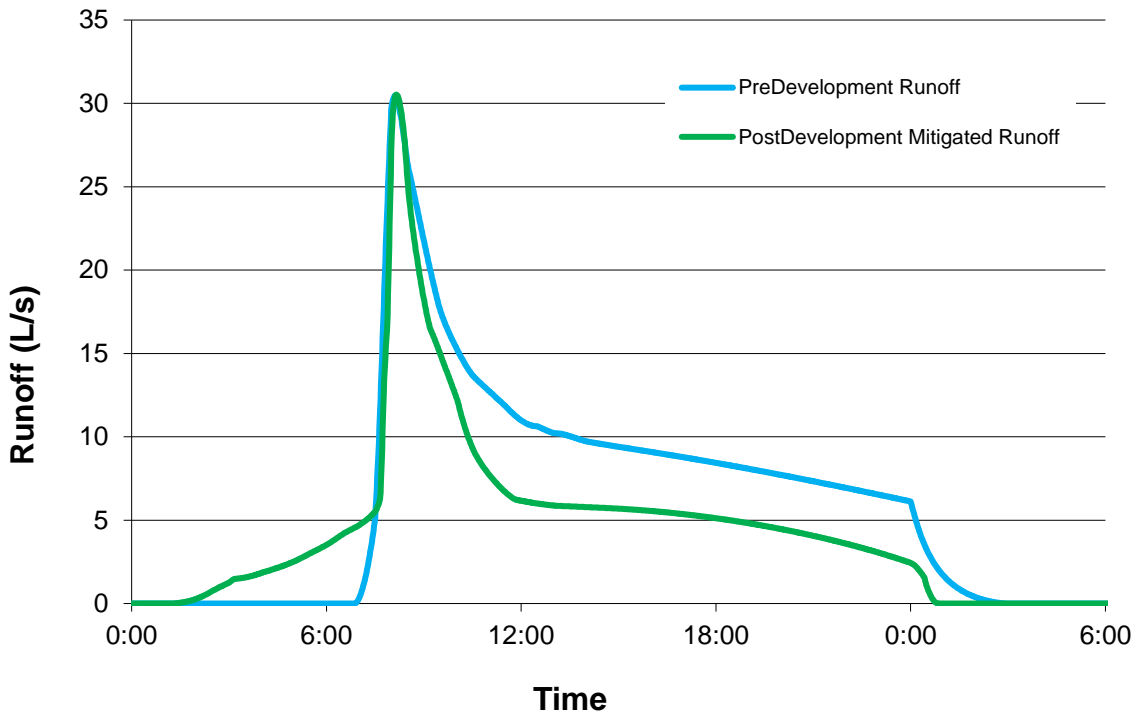


Figure 2 – BMP Performance: 2-Year SCS Event



**Figure 3 – BMP Performance: 5-Year SCS Event**

## 8 MAINTENANCE

The infiltration system and the onsite storm conveyance system will require regular maintenance. All catchbasins, the hydrodynamic separator, control manhole and perforated pipe should be checked twice annually for sediment/debris build-up, and cleaned accordingly. It is recommended to schedule this maintenance just before the rainy season (September) and just after the rainy season (April). Additionally, to avoid premature failure, all runoff should be directed away from the infiltration gallery during construction to avoid being clogged with silt laden runoff.

## 9 CONVEYANCE

A downstream capacity analysis of the adjacent ditching to the east of the property and roadside ditching downstream of the property has not been completed at this time. The proposed development and associated drainage infrastructure has been designed to limit post-development flow to at or below existing peak rates and total volumes up to the 5 year design storm.

## 10 SEDIMENT AND EROSION CONTROL

Prior to, or in conjunction with, any land clearing, grading or construction, sediment and erosion control measures should be implemented to ensure the works will be undertaken in such a manner that will preclude conveyance and discharge of fine silts and clay particles into the receiving environment. Construction should be scheduled for the drier summer months, which will reduce the chance of rain



and erosion. As rain is always a possibility, a sediment and erosion control plan should be in place prior to construction.

As a minimum, sediment and erosion control measures should be implemented based on the requirements of the provincial document entitled "*Develop with Care 2014: Environmental Guidelines for Urban and Rural Land Development in British Columbia*", and in compliance with the WLAP's (former MoELP's) "*Environmental Best Management Practices for Urban and Rural Land Developments in British Columbia*", June 2004.

During construction, a containment system should be employed. The containment system should utilize perimeter silt fencing and cut-off ditches with check dams, which should be installed per *Develop with Care 2014* Guidelines. In general, the following guidelines should be used:

- A containment system should be employed which will eliminate the conveyance and discharge of fine silts and clay particles into the receiving environment.
- Construction activity to be curtailed or postponed completely during periods of wetter weather.
- Stripping of existing organic topsoil should be undertaken during periods of dry weather only.
- No accumulations of sediment/mud should be tracked onto the municipal road.
- In the event of heavy precipitation, the contractor should ensure a cessation of all works on the site.

## 11 CONCLUSION

Modeling shows that the proper installation and routine maintenance of the Best Management Practices described herein will provided sufficient storage and infiltration assistance to limit post-development peak rates to at or near existing rates and total volumes below existing levels for storm events up to and including the 5-year rainfall event.

Yours truly,

MCELHANNEY CONSULTING SERVICES LTD.



Chris Durupt, P. Eng.

CD/njg

Reviewed by:

Randy Watson, P.Eng.

### REVISION HISTORY

Date	Status	Revision	Author
August 17, 2018	Final	Rev.0	CD

### LIMITATION

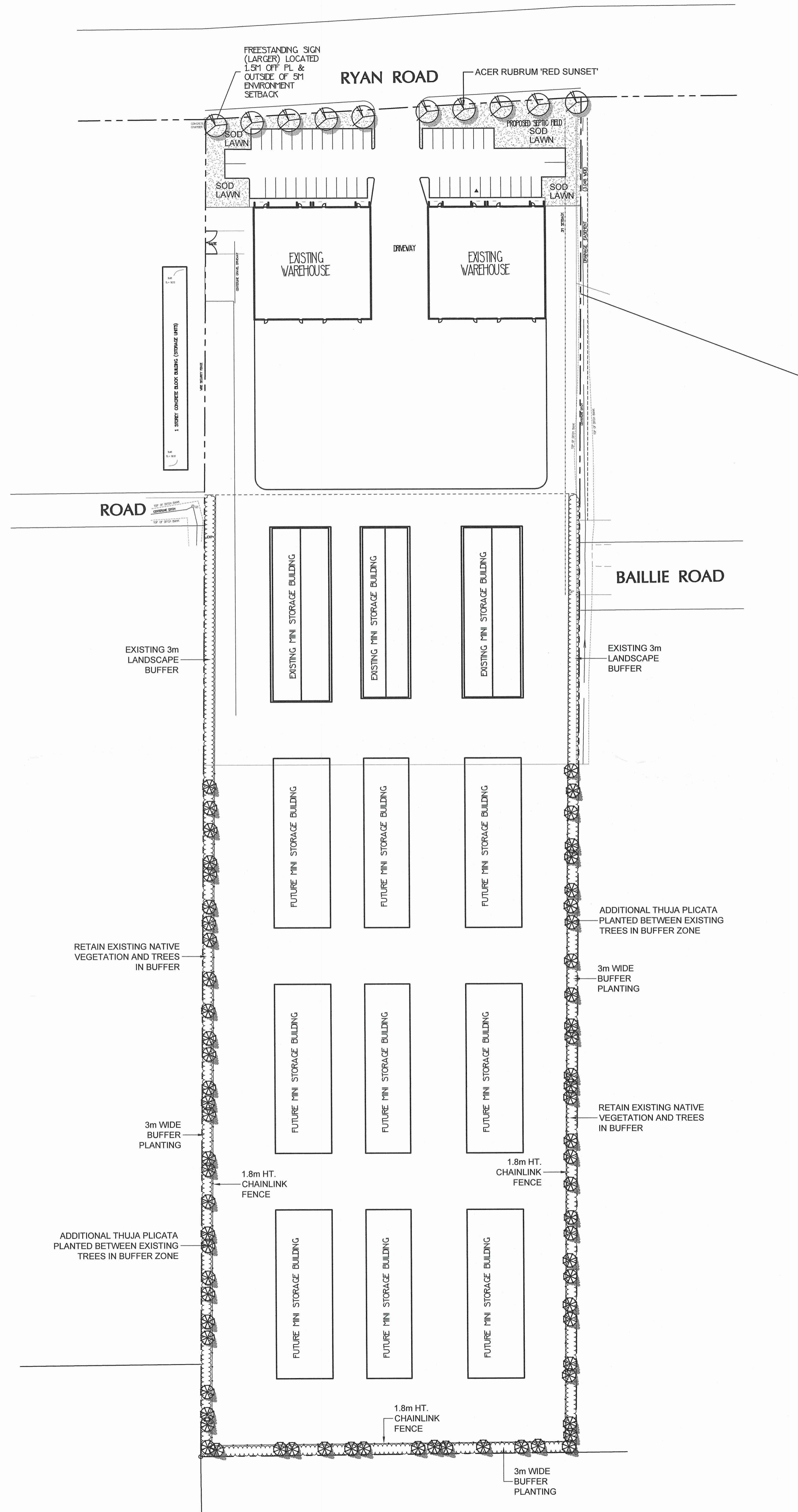
This report has been prepared for the exclusive use of Noort Developments Ltd. The material in it reflects the best judgement of the Consultant in light of the information available to the Consultant at the time of preparation. As such, McElhanney, its employees, sub-consultants and agents will not be liable for any losses or other consequences resulting from the use or reliance on the report by any third party.



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Burnaby, British Columbia, V5C 6G9  
p: 604 294-0011 ; f: 604 294-0022

PLANT SCHEDULE				PMG PROJECT NUMBER: 17-252
KEY	QTY	BOTANICAL NAME	COMMON NAME	PLANTED SIZE / REMARKS
TREE	10	ACER RUBRUM 'RED SUNSET'	RED SUNSET MAPLE	6CM CAL; 2M STD; B&B
	69	THUJA PLICATA	WESTERN RED CEDAR	3M HT; B&B

NOTES: \* PLANT SIZES IN THIS LIST ARE SPECIFIED ACCORDING TO THE CANADIAN LANDSCAPE STANDARD, LATEST EDITION. CONTAINER SIZES SPECIFIED AS PER CNLA STANDARDS. BOTH PLANT SIZE AND CONTAINER SIZE ARE THE MINIMUM ACCEPTABLE SIZES. \* REFER TO SPECIFICATIONS FOR DEFINED CONTAINER MEASUREMENTS AND OTHER PLANT MATERIAL REQUIREMENTS. \* SEARCH AND REVIEW: MAKE PLANT MATERIAL AVAILABLE FOR OPTIONAL REVIEW BY LANDSCAPE ARCHITECT AT SOURCE OF SUPPLY. AREA OF SEARCH TO INCLUDE LOWER MAINLAND AND FRASER VALLEY. \* SUBSTITUTIONS: OBTAIN WRITTEN APPROVAL FROM THE LANDSCAPE ARCHITECT PRIOR TO MAKING ANY SUBSTITUTIONS TO THE SPECIFIED MATERIAL. UNAPPROVED SUBSTITUTIONS WILL BE REJECTED. ALLOW A MINIMUM OF FIVE DAYS PRIOR TO DELIVERY FOR REQUEST TO SUBSTITUTE. SUBSTITUTIONS ARE SUBJECT TO CANADIAN LANDSCAPE STANDARD - DEFINITION OF CONDITIONS OF AVAILABILITY. ALL LANDSCAPE MATERIAL AND WORKMANSHIP MUST MEET OR EXCEED CANADIAN LANDSCAPE STANDARD'S LATEST EDITION. ALL PLANT MATERIAL MUST BE PROVIDED FROM CERTIFIED DISEASE FREE NURSERY



SEAL:

NO.	DATE	REVISION DESCRIPTION	DR.

CLIENT:

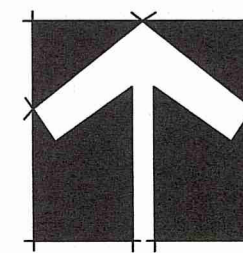
PROJECT:

**SELF-STORAGE**

Comox Valley Regional District  
 1671 RYAN ROAD **RECEIVED**  
 COMOX, BC File: **DR 17B18**  
 AUG 01 2018  
 To: \_\_\_\_\_  
 CC: \_\_\_\_\_

**LANDSCAPE PLAN**

DATE: 17.NOV.07 DRAWING NUMBER:  
 SCALE: 1"=60'-0" **L1**  
 DRAWN: DO  
 DESIGN:  
 CHK'D: PCM **OF 1**  
 PMG PROJECT NUMBER: **17-252**







July 31, 2018

**NOORT INVESTMENTS**

101 - 403, 6th Street

New Westminster

Fax: 604-526-7651

**Attention: Glen Noort and Jason Hendricks**

**Re: PMG File No.: 17-252**  
**Self Storage 1671 Ryan Road East, Comox**

The following cost estimate for bonding purposes was based on our Landscape Plans dated Nov. 7, 2017

		Size	Approximate Quantity	Unit Price	Total Price
1	Earthwork:				
	a) Topsoil (cost per yd <sup>3</sup> )		79	\$ 23.00	1,817.00
2	Fences & Walls (cost per lin.ft.)				
	a) 6' ht chainlink fence		505.5	\$ 13.50	6,824.25
3	Plant Material:				
	a) Trees				
	1) Acer Rubrum 'Red Sunset'	6 cm cal.	10	\$ 148.50	1,485.00
	2) Western Red Cedar	3 m ht.	69	\$ 165.00	11,385.00
	c) Installation			50%	6,435.00
4	Totals	Total for 1			1,817.00
		Total for 2			6,824.25
		Total for 3			19,305.00
		<b>TOTAL</b>			<b>\$ 27,946.25</b>

Please note that this is only an estimate, and is subject to change due to economic conditions, availability of materials, and actual site conditions at the time of construction.

Yours truly,

Marissa Campbell  
 PMG Landscape Architects Ltd.

Reviewed By: Pat Campbell

<b>Subject:</b> DarkSky	
<b>Category:</b> Community Planning Services	<b>Policy Reference:</b> 3010-00

### Purpose

1. To include a set of guidelines to be considered regarding exterior lighting for commercial, industrial, and multi-family residential unit development. These regulations include an interpretation section to define the various terms, standardize how light systems are designed, constructed and installed, and to reduce glare, light trespass and obtrusive light while conserving energy and resources. Safety, security and productivity shall be maintained and encouraged while reducing the degradation of the nighttime visual environment.

### Scope

2. The scope of this policy includes the various electoral area official community plans that have a form and character development permit area for commercial, industrial or multi-unit family residential development.

### Guiding Principle

3. To guide commercial, industrial and multi-family residential development to have exterior lighting that does not negatively impact the quality of life for adjacent neighbours nor create any light pollution.

### Interpretation

4. The following are definitions relating to this DarkSky policy:
  - a) **Abandonment:** The relinquishment of a property, or the cessation of a use or activity by the owner or tenant for a period of six months, excluding temporary or short term interruptions for the purpose of remodeling, maintaining, or otherwise improving or rearranging a facility. A use shall be deemed abandoned when such use is suspended as evidenced by the cessation of activities or conditions that constitute the principle use of the property.
  - b) **Development project:** Any multi-family residential, commercial, industrial or mixed use subdivision plan or development plan which is submitted to the regional district for approval.
  - c) **Direct illumination:** Illumination resulting from light emitted directly from a lamp or luminaire, not light diffused through translucent signs or reflected/bounced from other surfaces such as the ground or building faces.
  - d) **Filtered light:** Light from a light source that is covered by a glass, acrylic or other cover that restricts the amount of non-visible radiation (infrared, ultraviolet) emitted by the light fixture.
  - e) **Fully shielded fixture:** An outdoor light fixture shielded in such a manner that all light emitted by the fixture, either directly from the lamp or indirectly from the fixture, is projected below the horizontal as certified by the manufacturer.

- f) Glare: Harsh, uncomfortable bright light emitting from a luminaire causing reduced vision or momentary blindness when shining into one's cone of vision.
- g) Installed lighting: Attached, or fixed in place, whether or not connected to a power source.
- h) Light trespass: Exterior light fixtures shining light beyond one's property line.
- i) Multi-unit family residential: properties zoned and utilized for multi-unit family residential use.
- j) Outdoor light fixture: Outdoor electricity powered illuminating devices, outdoor lighting or reflective surfaces, lamps and similar devices, either permanently installed or portable, which are used for illumination or advertisement. Such devices shall include, but are not limited to, search, spot and flood lights for: buildings and structures; recreational areas; parking lot lighting; landscaping and architectural lighting; billboards and other signs (advertising or other); street lighting; product display area lighting.
- k) Outdoor recreation facility: A facility used and equipped for the conduct of sports, leisure and/or entertainment.
- l) Partially shielded light fixture: An outdoor light fixture shielded in such a manner that more than zero but less than ten percent of the light emitted directly from the lamp or indirectly from the fixture is projected at angles above the horizontal, as certified by the manufacturer.
- m) Sign: Any object, device, display, structure, or part thereof, which is used to advertise, identify, display, direct or attract attention to any object, service, event or location by any means including words, letters, figures, design, symbols, fixtures, colours, illumination or projected image.
- n) Sign, indirectly lit: Any sign facing that reflects light from a source intentionally directed upon it.
- o) Sign, internally lit: Any sign that has the source of light entirely enclosed within the sign and not directly visible to the eye.
- p) Temporary lighting: Lighting which does not conform to the provisions of the DarkSky policy and will not be used for more than one thirty day period within a calendar year may be permitted, subject to approval from the regional district, with a possible one, thirty day extension. Temporary lighting is intended for uses that by their nature are limited in duration; example: holiday decorations, civic events or construction projects.
- q) Up light: Any light from a luminaire that shines above the horizontal plane causing illumination of the sky.

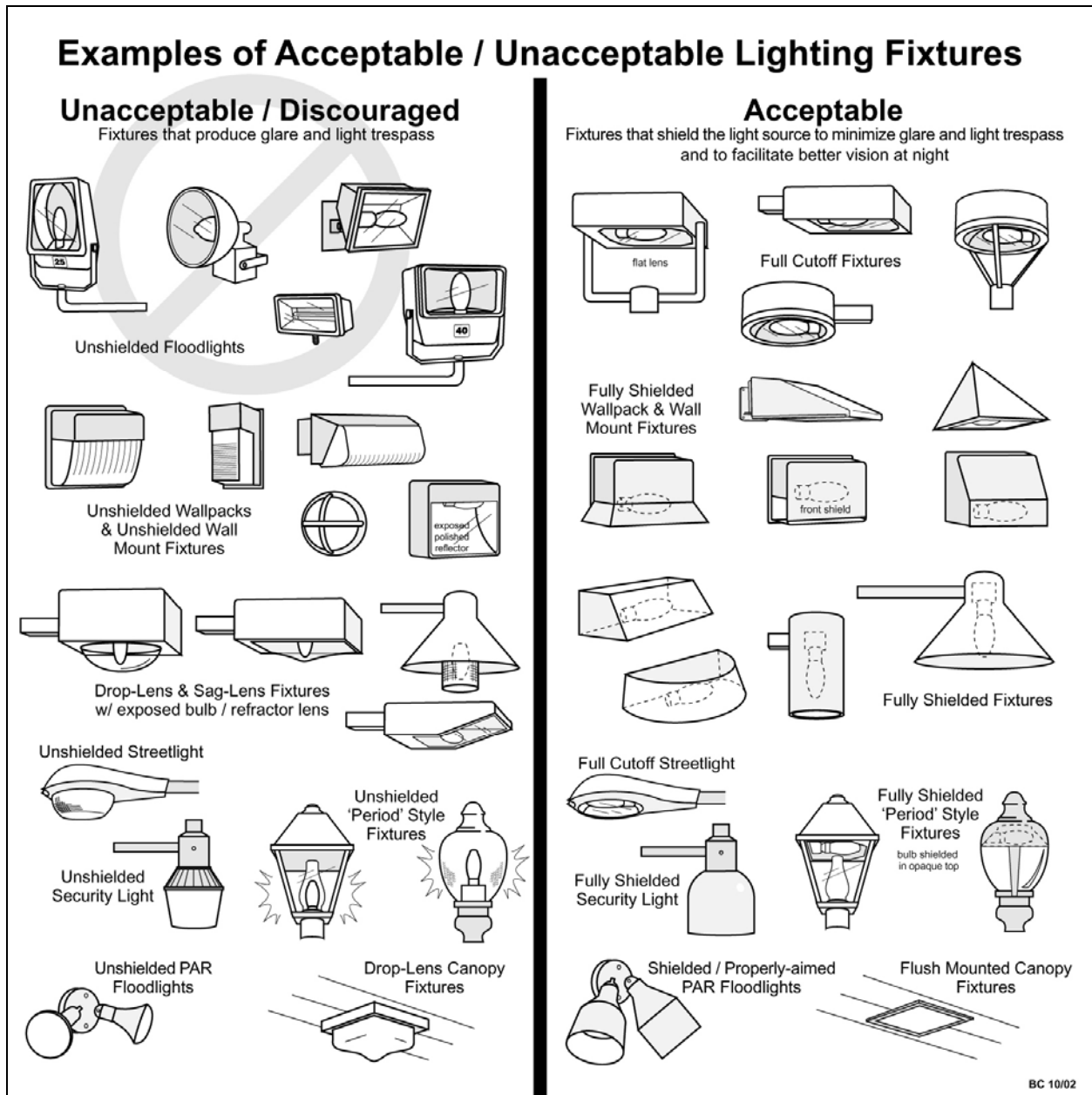


Figure One: Sample of light fixtures that are discouraged and recommended as part of the DarkSky policy.

**Policy Statements**

5. Shielding of outdoor light fixtures
  - a) All outdoor lighting fixtures shall be shielded to minimize up-light. Mounted incandescent type fixtures shall be shielded. Lighting is encouraged to be activated by motion sensors versus being on all the time.
  - b) Outdoor floodlighting shall be shielded in such a manner that the lighting system will not produce light trespass.

6. Limiting trespassing of light beyond property lines
  - a) All light fixtures shall be located, aimed and or shielded so as no direct light trespasses beyond the property line on which the light is mounted.
  
7. Non-conforming light fixtures
  - a) In addition to other exemptions provided in the regional district DarkSky policy, an outdoor lighting fixture not meeting these provisions shall be allowed if the fixture is extinguished by an automatic shutoff device between sundown and sunrise.
  - b) No outdoor recreational facility, whether public or private, shall be illuminated after sundown except when the facility is in use. Outdoor lighting is encouraged to be on only when the field is in use, such as by a user pass activation system.
  - c) The use of searchlight, laser light, or any similar high intensity light for outdoor advertising or entertainment, except in emergencies by police and fire personnel is prohibited. Temporary exemption to this may be granted if approved by the General Manager of Community Planning Services.
  
8. Effective Date
  - a) The development permit must conform to the DarkSky policy that exists at the time of application. When existing lighting fixtures are considered inoperable, all replacements are subject to all the provisions of the DarkSky policy. The light will be considered inoperable when the housing of the fixture requires replacement or when the lens, lamp, and ballast need to be replaced.
  
9. New Construction
  - a) All exterior lighting installed shall be approved by the International DarkSky Association (IDA) and must be installed correctly.
  
10. Exemptions
  - a) The following are exempt from the requirements of the DarkSky policy:
    - i. Single-family development (less than or equal to three dwelling units on one property and zoned residential). Note: the regional district does encourage single-family development to seriously consider the installation of IDA approved lighting.
    - ii. Outdoor lighting fixtures existing and legally installed prior to the implementation of the DarkSky policy.
    - iii. Outdoor advertising signs of the type constructed of translucent materials and wholly illuminated from within do not require shielding. Dark backgrounds with lighter coloured lettering or symbols are preferred to minimize detrimental effects.
    - iv. Navigational and general life safety lighting systems required at airports and other transportation installations.

**Approval History**

Policy adopted:	December 13, 2007
Policy amended:	