



C·V·R·D

**NOTICE OF
ELECTORAL AREA SERVICES COMMITTEE MEETING**

**Tuesday,
May 18, 2010
Regional District Board Room
175 Ingram Street, Duncan, BC**

2:00 pm

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NOTE: A copy of the full agenda package is available at the CVRD website www.cvrld.bc.ca

| | | |
|----------------------|----------------------|--------------------------|
| Director B. Harrison | Director M. Marcotte | Director L. Iannidinardo |
| Director K. Cossey | Director G. Giles | Director L. Duncan |
| Director I. Morrison | Director K. Kuhn | Director M. Dorey |

Minutes of the Electoral Area Services Committee Meeting held on Tuesday, April 20, 2010 at 3:00 pm in the Regional District Board Room, 175 Ingram Street, Duncan, BC.

PRESENT

Director B. Harrison, Chair
Director M. Marcotte, Vice Chair
Director L. Iannidinaro
Director G. Giles
Director K. Kuhn
Director I. Morrison
Director M. Dorey
Director L. Duncan
Absent: Director K. Cossey

CVRD STAFF

Tom Anderson, General Manager
Rob Conway, Manager
Mike Tippett, Manager
Brian Farquhar, Parks and Trails Manager
Dana Leitch, Planner
Brian Duncan, Chief Building Inspector
Warren Jones, Administrator
Cathy Allen, Recording Secretary

APPROVAL OF AGENDA

The Chair noted changes to the agenda which included 14 listed items of new business, three additional new items of Business, one listed new Closed Session item and one additional new Closed Session item.

It was Moved and Seconded
That the agenda, as amended, be accepted.

MOTION CARRIED

M1 - MINUTES

It was Moved and Seconded
That the minutes of the April 6, 2010 EASC meeting be accepted.

MOTION CARRIED

BUSINESS ARISING

There was no business arising.

DELEGATIONS

D1 - Carrier

Dana Leitch, Planner, presented Application No. 4-A-09RS (Danny Carrier/J.E. Anderson & Associates), to rezone the subject property located at the south end of Rozon Road in Mill Bay, from F-1 to R-3A to permit a bare land subdivision of 40 lots.

Danny Carrier, agent, was present and provided further information to his application.

The Committee directed questions to staff and the applicant.

It was Moved and Seconded

1. That Official Community Plan and Zoning amendment bylaws for Application No. 4-A-09RS (Baranti Developments) be prepared that would permit a bare-land subdivision of 40 lots, and that the bylaws be forwarded to the Regional Board for consideration of 1st and 2nd readings.
2. That a public hearing be scheduled with Directors Harrison, Cossey, and Giles appointed as Board delegates, following submission of a draft covenant by the applicants committing to the dedication 4.39 ha of land on the southern portion of the property at the time of subdivision.
3. That application referrals to the Ministry of Transportation and Infrastructure, the Vancouver Island Health Authority, the Ministry of Environment, the Ministry of Community and Rural Development, School District No. 79, Malahat First Nation, Cowichan Tribes, Mill Bay Waterworks District, CVRD Public Safety Department, CVRD Parks and Trails Division, and the CVRD Water Management Division, be accepted.

MOTION CARRIED

D2 - Sjoberg

Barbara Stone spoke in place of Leslie Sjoberg, on behalf of the Cowichan Music Festival regarding the upcoming Performing Arts BC finals being held May 23 – 27. Ms. Stone provided a background to the Cowichan Music Festival operations and advised of the opportunities they provide for performers. They are a non-profit organization with a 14 person executive and a 65 volunteer base. Ms. Stone stated that the Festival needs money to host the Provincial Finals and advised that they have presented to several local companies and governments who have provided donations and grants and asked if the CVRD could also support them with a grant.

Several Directors stated they felt the organization was worthy of support and advised that they were prepared to provide a grant in aid.

Ms. Stone thanked Directors for listening and for their support.

STAFF REPORTS

SR1 – Landscape Security – The Brick

Rob Conway, Manager, reviewed Staff Report dated April 14, 2010, regarding Landscape Security for Application No. 1-E-08DP (The Brick).

It was Moved and Seconded

That the irrevocable letter of credit provided for Development Permit No. 1-E-08DP (Parhar Property Management Ltd.) be drawn upon respecting non-compliance of landscaping requirements.

MOTION CARRIED

SR2 – Mill Bay Historical Society

It was Moved and Seconded

1. That an annual financial contribution service be created for the Mill Bay/Malahat Historical Society with a maximum requisition limit of \$10,000 to assist with costs associated with the collection, preservation, restoration and presentation of historical artifacts and archives of Mill Bay/Malahat and the surrounding South Cowichan area.
2. That CVRD Bylaw No. 3380 – Mill Bay/Malahat Historical Society annual Financial Contribution Service Establishment Bylaw, 2010, be forwarded to the Board for consideration of three readings and following provincial and voter approval, be considered for adoption.
3. That voter approval to establish the Mill Bay/Malahat Historical Society Annual Financial Contribution Service be obtained through an alternative approval process.

MOTION CARRIED

SR3 – Fire Tender #2

Dan Derby, Manager, reviewed revised Staff Report dated March 30, 2010, regarding Replacement Fire Tender #2 for Malahat Fire Protection Service Area.

It was Moved and Seconded

1. That the services of Bob Hamilton Enterprises Inc. be obtained to undergo negotiations, inspection and purchase of a used fire tender on behalf of the CVRD Malahat Fire Rescue Service.
2. That the Board approve the sole source purchase of a used fire tender for the Malahat Volunteer Fire Rescue Service, the overall expenditure of which will not exceed \$100,000.
3. That a Reserve Fund expenditure bylaw be prepared authorizing expenditure of no more than \$36,308 from the Malahat Fire Protection Specified (Local Service) Area Machinery and Equipment Reserve Fund (CVRD Establishment Bylaw No. 1301, cited as the Malahat Fire Protection Specified (Local Service) Area Machinery and Equipment Reserve Fund Establishment By-law No. 1, 1990) for the purpose of purchasing machinery and equipment, and that the reserve fund bylaw be forwarded to the Board for consideration of three readings and adoption.

MOTION CARRIED

SR4 – Area I Habitat Fund

It was Moved and Seconded
That CVRD Bylaw No. 3384 – Nature and Habitat Fund Establishment Bylaw, 2010 be forwarded to the Board for consideration of three readings and adoption.

MOTION CARRIED

SR5 – Parks Capital Project Schedule

Ryan Dias, Parks Operation Superintendant, reviewed Staff Report dated April 20, 2010, regarding Revised 2010 Minor Capital Projects Schedule for Community and Sub-Regional Parks.

It was Moved and Seconded
That the 2010 Major and Minor Capital Work Program revised Schedule dated April 18th for Community and Sub-Regional Parks be further revised to remove Area C Manley Creek Box Steps Installation, Area C Beach Accesses Rip Rap Improvements, and Area C Cenotaph Rock Retaining Wall (if funding for the Area C washroom building involves parks), and that the further revised Schedule be adopted as the order and priority list for undertaking completion of capital project work approved in the 2010 budget.

MOTION CARRIED

It was Moved and Seconded
That staff be directed to organize a meeting with participating Bright Angel Park Directors to discuss the washroom building project.

MOTION CARRIED

PARKS

PK1 - Minutes

It was Moved and Seconded
That the minutes of the Area F Parks Commission meeting of March 4, 2010 be referred back to Commission to be amended.

MOTION CARRIED

PK2 - Minutes

It was Moved and Seconded
That the minutes of the Area F Parks Commission meeting of April 1, 2010, be received and filed.

MOTION CARRIED

PK3 - Resignation

It was Moved and Seconded
That the resignation of Linden Collette from the Area C Parks Commission be accepted and that a letter of appreciation be forwarded to Linden Collette.

MOTION CARRIED

**CORRESPOND-
ENCE**

C1 –Grant in Aid

It was Moved and Seconded
That the grant in aid request (Area D) to Cowichan Bay Improvement Area in the amount of \$500 to support their second annual prawn festival, be approved.

MOTION CARRIED

INFORMATION

IN1 – Building Report

Brian Duncan, Chief Building Inspector, reviewed the March 2010 building report.

A question and answer session ensued.
It was suggested that Mr. Duncan provide a staff report regarding new solar heating Building Code regulations.

It was Moved and Seconded
That the March 2010 building report be received and filed.

MOTION CARRIED

NEW BUSINESS

**NB1 – Bright Angel
Park Works Yard**

Ryan Dias, Parks Operation Superintendent, reviewed Staff Report dated April 20, 2010, regarding Bright Angel Park works yard upgrade.

It was Moved and Seconded
That staff report dated April 20, 2010 from Ryan Dias, Parks Operations Superintendent, regarding Bright Angel Park Works Yard upgrade, be referred to a meeting being arranged by staff with participating Bright Angel Parks Directors.

MOTION CARRIED

**NB2 – Parks
Resignation**

It was Moved and Seconded
That the resignation of Donna Einarsson from the Area D Parks Commission be accepted and that a letter of appreciation be forwarded to Ms. Einarsson.

MOTION CARRIED

**NB3 to NB16 –
Grants in Aid**

It was Moved and Seconded

That the following grant in aid requests be approved:

- Grant-in-aid (Area I) to Cowichan Lake Salmonid Enhancement in the amount of \$1,000 to support their Coho south study.
- Grant-in-aid (Area I) to Lake Days Society in the amount of \$300 to assist with costs to hold the Lake Days dance.
- Grant-in-aid (Area I) to Lake Days Society in the amount of \$500 to assist with costs to hold the “Breakfast in the Town” event.
- Grant-in-aid (Area I) to Lake Cowichan Secondary School in the amount of 250to assist with Grad 2010 dry grad costs.
- Grant-in-aid (Area I) to Cowichan Lake District Chamber of Commerce in the amount of \$4,000 to assist the Tourist Info Centre costs.
- Grant-in-aid (Area I) to Cowichan Lake Lady of the Lake Society in the amount of \$1,200 to assist with costs related to the Ambassador Programme.
- Grant-in-aid (Area I) to Wilderness Watch in the amount of \$750 to assist with truck insurance costs.
- Grant-in-aid (Area I) to Cowichan Lake Secondary School Grad 2010 (Chris Friesen) in the amount of \$500 to assist with prom night costs.
- Grant-in-aid (Area D) to Cowichan Music Festival Society in the amount of \$500 to assist with hosting the Performing Arts BC Provincial Finals.
- Grant-in-aid (Area C) to Frances Kelsey School in the amount of \$500 to provide a third bursary to a graduating Cobble Hill student.
- Grant-in-aid (Area C) to Cowichan Music Festival Society in the amount of \$500 to assist with costs to stage the Performing Arts BC Provincial Finals.
- Grant-in-aid (Area C) to Cobble Hill LERN Program in the amount of \$250 to assist with costs in developing Cobble Hill’s LERN Program.
- Grant-in-aid (Area A) to Cowichan Music Festival Society in the amount of \$500 to assist with hosting the Performing Art BC Provincial Finals.
- Grant-in-aid (Area E) to Cowichan Music Festival Society in the amount of \$500 to assist with hosting the Performing Art BC Provincial Finals.

MOTION CARRIED

**NB17 – Cowichan
Station School**

It was Moved and Seconded

That staff be directed to produce a report to EASC regarding the process and draft bylaw to create an annual financial contribution service for the Cowichan Station Area Association (Cowichan Station School) with a maximum requisition limit of \$20,000.

MOTION CARRIED

NB18 – AVICC

It was Moved and Seconded

That a letter be forwarded to the Mayor of Powell River expressing sincere thanks and appreciation for the excellent job hosting the recent AVICC conference.

MOTION CARRIED

NB19 – Lease Renew

It was Moved and Seconded

That Director Iannidinardo be permitted to add a new item of business to the agenda at this point.

MOTION CARRIED

It was Moved and Seconded

That a letter be forwarded to the Minister of Agriculture and Lands and/or appropriate Minister requesting a meeting with the Minister, Area D Director L. Iannidinardo, and the CVRD Board Chair, to explain the CVRD's position that expiring Lease No. 105062 (Block A of District Lot 160, Cowichan District - Hokensen/boat repair business) not be renewed due to existing OCP review process.

MOTION CARRIED

CLOSED SESSION

It was Moved and Seconded

That the meeting be closed to the public in accordance with the *Community Charter* Part 4, Division 3, Section 90(1), subsections as noted in accordance with each agenda item.

MOTION CARRIED

The Committee moved into Closed Session at 4:35 pm.

RISE

The Committee rose and reported out respecting adjournment of the Paldi court hearing.

ADJOURNMENT

It Was Moved and Seconded

That the meeting be adjourned.

MOTION CARRIED

The meeting adjourned at 4:50 pm.

Chair

Recording Secretary

Minutes of the Electoral Area Services Committee Meeting held on Tuesday, May 4, 2010 at 2:00 pm in the Regional District Board Room, 175 Ingram Street, Duncan, BC.

PRESENT

Director B. Harrison, Chair
 Director M. Marcotte, Vice Chair
 Director L. Iannidinardo
 Director G. Giles
 Director K. Kuhn
 Director I. Morrison
 Director M. Dorey
 Director L. Duncan
 Absent: Director K. Cossey

CVRD STAFF

Tom Anderson, General Manager
 Rob Conway, Manager
 Mike Tippett, Manager
 Brian Farquhar, Parks and Trails Manager
 Alison Garnett, Planning Technician
 Jill Collinson, Planning Technician
 Brian Duncan, Chief Building Inspector
 Warren Jones, Administrator
 Cathy Allen, Recording Secretary

APPROVAL OF AGENDA

The Chair noted changes to the agenda which included five listed items of new business, and one additional New Business item.

It was Moved and Seconded
 That the agenda, as amended, be accepted.

MOTION CARRIED

M1 - MINUTES

The minutes of the April 20, 2010 EASC meeting were unavailable.

DELEGATIONS

D1 - Sampson

Bruce Sampson, Chair of the Economic Development Commission, was present regarding the Cowichan Regional Area Agricultural Plan. Mr. Sampson reviewed background to preparation of the Plan.

Ian Christison, Chair of the Area Agriculture Steering Committee, was also present and advised he has been involved in preparation of the Plan since 1987.

Graham Myers, Chair of the Cowichan Agricultural Society, provided a power point presentation for the Agricultural Plan which outlining process, reports generated, vision, strategic direction, action plan, goals, partnerships, and steering committee recommendations.

It was requested that the Board establish an agricultural advisory committee to address issues and actions identified in the Area Agricultural Plan.

The Committee directed questions to the delegates.

It was Moved and Seconded

That the Regional District Board establish an Agricultural Advisory Committee comprised of government, community, farmers and other stakeholders to address the issues and actions identified in the Area Agriculture Plan; and to advise the Board on issues of importance to the agricultural community, and on ALR exclusion applications as well as other matters referred to it.

MOTION CARRIED

D2 - Tassell

Jill Collinson, Planning Technician, presented Application No. 4-G-10DP (Tassell/Boscher) to alter the shoreline of property located at 11193 Chemainus Road located in the Ocean Shoreline DPA.

Brian Tassell, applicant, was present and added further information to the application.

The Committee directed questions to staff and the applicant.

It was Moved and Seconded

That Application No. 4-G-10DP be approved, and that a development permit be issued to Brian Tassell, on behalf of, Robert Boscher, for that part of Lot 12, District Lot 34, Oyster District, Plan 2519, shown outlined in red on Plan 298R, except part in Plan 33268, to permit repair of a 10 metre section of a ± 3 metre tall riprap retaining wall, repair 28 metres of scour protection along the retaining wall footings, and removal of 2-3 trees along the bank subject to the development complying with the recommendations noted in Simpson Geotechnical Ltd report, dated April 12, 2010.

MOTION CARRIED

D3 - Bell

Alison Garnett, Planning Technician, presented Application No. 1-B-10DVP (Charles Bell) to vary the permitted height of an accessory building located at 1487 Mahon Road.

Charles Bell, applicant, was present.

The Committee directed questions to staff and the applicant.

It was Moved and Seconded

That Application No. 1-B-10DVP by Charles and Jill Bell for a variance to Section 8.3(b)(2) of Zoning Bylaw No. 985, by increasing the height limit for an accessory building from 7.5 metres (24.6 ft.) to 9.5 metres (31 ft.) on Lot 1, Shawnigan Lake Suburban Lots, Malahat District, Plan 32805, be approved.

MOTION CARRIED

D4 - Walerius

Dwain Walerius was present regarding a request to allow the existing bathtub to remain in his shop located at 5175 Lee Road.

The Committee directed questions to staff and the delegate.

The Chair noted that the matter will be dealt with under agenda item SR1.

STAFF REPORTS

SR1 – Accessory Building Fixture

Nino Morano, Bylaw Enforcement Officer, presented Staff Report dated April 28, 2010, regarding 5175 Lee Road, Accessory Building Fixture.

It was Moved and Seconded

That the request by Dwain and Lynda Walerius to allow the accessory building fixture in the workshop located at 5175 Lee Road, be approved, and that one bathing facility (bathtub) and one sink be permitted to remain in the accessory building subject to the land owner registering a covenant re-affirming that the structure will not be used as a dwelling.

MOTION CARRIED

SR2 – Dangerous Dogs

Tom Anderson, General Manager, presented Staff Report dated April 28, 2010, regarding Dangerous Dog Situation on Cowichan First Nations lands.

It was Moved and Seconded

That the Regional District take the necessary steps to convey the dangerous situation that exists with packs of roaming dogs on the Cowichan First Nations lands and that the Cowichan Tribes be requested to take immediate action to rectify this situation before someone is seriously injured.

MOTION DEFEATED

It was Moved and Seconded

That the CVRD contact Cowichan Tribes regarding the dangerous dog situation that exists on Cowichan First Nations lands in order to find an immediate amiable solution to the situation.

MOTION CARRIED

SR3 – Bylaw Enforcement Officials

It was Moved and Seconded

1. That the Regional Board appoint Brian Duncan as a Bylaw Enforcement Official.
2. That the Regional Board appoint Grant Breckenridge as a Bylaw Enforcement Official.
3. That the Regional Board appoint Norm Knodel as a Bylaw Enforcement Official.
4. That the Regional Board appoint Ian McDonald as a Bylaw Enforcement Official.
5. That the Regional Board appoint Gary Anderson as a Bylaw Enforcement Official.

MOTION CARRIED

SR4 –Transfer from Reserve

SR4 will be dealt with under new agenda item NB3.

APC

AP1 - Minutes

It was Moved and Seconded

That the minutes of the Area A APC meeting of April 13, 2010, be received and filed.

MOTION CARRIED

**CORRESPOND-
ENCE**

C1 – Grant in Aid

It was Moved and Seconded

That a grant in aid (Area C) be given to Evergreen Independent School in the amount of \$3,500 to assist with repair and upgrading of the original Cobble Hill School.

MOTION CARRIED

NEW BUSINESS

**NB1 – Mill Bay WW
Trail Agreement**

Brian Farquhar, Parks and Trails Manager, presented Staff Report dated May 3, 2010, from Ryan Dias, Parks Operations Superintendent, regarding Mill Bay Waterworks District Trail Agreement.

It was Moved and Seconded

That the Board Chair and Corporate Secretary be authorized to execute an agreement with the Mill Bay Waterworks District to permit the maintenance and operation of a short section of CVRD’s Mill Springs Trail located on property owned by Mill Bay Waterworks District, legally described as Lot 4, District Lots 46&60, VIP 68911, Malahat District to address issues pertaining to liability and indemnification, insurance coverage provisions and use of the lands for community trail purposes.

MOTION CARRIED

**NB2 -- Release of
Covenant**

Brian Farquhar, Parks and Trails Manager, presented Staff Report dated May 4, 2010, regarding release of covenant FB307700 for Cottyn Subdivision off Sylvester Road, Area B.

It was Moved and Seconded

That the Board Chair and Corporate Secretary be authorized to execute the necessary documents to release Covenant FB307700 in favour of the Cowichan Valley Regional District concurrent with the transfer of lands to the Regional District for park purposes, per the conditions of the covenant, at time of registration of the subdivision of Lot 3, District Lot 96, Malahat District, Plan 32725.

MOTION CARRIED

NB3 – Area F Parks Project

Brian Farquhar, Parks and Trails Manager, presented staff report dated May 3, 2010, regarding Reserve Fund Bylaw for Electoral Area F Community Parks Project.

It was Moved and Seconded

That a Reserve Fund Expenditure bylaw be prepared authorizing the expenditure of no more than \$20,000 from the Community Parks General Reserve Fund (Area F – Cowichan Lake South/Skutz Falls) for the purpose of completing the Mesachie Lake Park ball field expansion upgrade; and that the bylaw be forwarded to the Board for consideration of three readings and adoption.

MOTION CARRIED

NB4, NB5 – Minutes

It was Moved and Seconded

That the minutes of the Area G Parks Commission meeting of April 12, 2010 be received and filed.

MOTION CARRIED

It was Moved and Seconded

That the minutes of the Area C Parks Commission meeting of April 22, 2010, be received and filed.

MOTION CARRIED

NB6 – Application No. 3-G-10DP

Director Dorey stated that he has a development permit application (No. 3-G-10DP - Archdekin) presently before his APC but they have not yet had an opportunity to discuss it. He noted that the application is straight forward and would like to have a recommendation made tonight so that the applicants can move forward.

Alison Garnett, Planning Technician, stated that she has been working on the file and that staff's perspective is to approve the application.

It was Moved and Seconded

That Application No. 3-G-10DP be approved and that a development permit be issued to Murray Archdekin and Gwen Robinson, for Lot 1, District Lot 34, Oyster District, Plan 4347, to construct a single family dwelling and garage, subject to complying with the recommendations noted in the Lewkowich Engineering Associates Ltd. report dated April 26, 2010.

MOTION CARRIED

CLOSED SESSION

It was Moved and Seconded
That the meeting be closed to the public in accordance with the *Community Charter* Part 4, Division 3, Section 90(1), subsections as noted in accordance with each agenda item.

MOTION CARRIED

The Committee moved into Closed Session at 3:50 pm.

RISE

The Committee rose without report.

ADJOURNMENT

It was Moved and Seconded
That the meeting be adjourned.

MOTION CARRIED

The meeting adjourned at 4:16 pm.

Chair

Recording Secretary

DI



Report on Subdivision Servicing Bylaw

Cowichan Valley
Regional District

May 2010



Report on Subdivision Servicing Bylaw

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1. Introduction

The Cowichan Valley Regional District (CVRD) has contracted Landworks Consultants Inc. (Landworks) to review and revise its Subdivision Servicing Bylaw No. 1215.

The CVRD, like many areas of southern and mid-Vancouver Island, has been experiencing significant development pressure as the population expands. Development has a number of impacts on a community, ranging from the availability of a wider variety of goods, services and housing to strained infrastructure and compromised ecosystems. The CVRD is cognizant not only of these impacts, but also of the growing body of experience and knowledge dealing with a more sensitive way of planning and developing. The CVRD wants to ensure that an updated subdivision servicing bylaw reflects the most current, sustainable and ecologically-sound practices for green infrastructure or alternative development standards.

During the proposed of drafting the new bylaw, Landworks reviewed a number of documents published by the federal and provincial governments, other regional districts, municipalities and other agencies and organizations. A complete list of the literature consulted is included in Section 8 of this report.

The CVRD Electoral Area Official Community Plans (OCPs), zoning bylaws and other relevant documents were reviewed for pertinency to this project and for the purpose of drawing staff's attention to policies and provisions that may need revising subsequent to the adoption of a revised subdivision servicing bylaw.

2. Rationale

Subdivision Servicing Bylaw No. 1215 was initially adopted in 1990 and updated from time to time. The bylaw contains brief sections on water supply, sewage disposal, drainage and highways. The bylaw is supplemented by Schedule "A": Community Water System Standards and Specifications and Schedule "B": Specifications for Design and Installation of Sanitary Sewers and Appurtenances", the latter dated 1987.

The revised bylaw is intended to reflect an environmental approach to development, resulting in subdivision servicing standards that include the most current and emerging professional standards being used for new development projects in the region. It proposes a more holistic approach to development which builds on values that contribute to improved community health using subdivision design principles. The direction being proposed recommends using "green infrastructure" which utilizes the earth's natural systems far better than conventional infrastructure does, servicing the built environment with less of an impact on the natural environment and preserving sensitive ecosystems and preserving habitat and providing for overall improved community health.

Organizations such as West Coast Environmental Law, Ducks Unlimited Canada, the Coalition for Action on Vancouver Island (CAVI), stewardship and conservation groups, and others promote the use of green infrastructure. "Taking a greener approach to infrastructure development not only mitigates the potential environmental impacts of development (e.g. improving stream health and reducing energy use) but makes economic sense as well, when all of the impacts of conventional development on 'natural capital' and the services rendered by natural capital are taken into account. By softening the environmental footprint, avoiding waste and finding efficiencies, local governments can increase their long term sustainability."¹

3. Green Infrastructure

Collaboration between the federal and provincial government and conservation agencies has resulted in the development of Green Bylaws Toolkit. The Toolkit defines "green infrastructure" and lists its components as follows:

"The term 'green infrastructure' refers to the ecological components, both natural and engineered, that serve and protect ecosystems.

"Green infrastructure includes:

- undeveloped areas, both natural and altered (Greenfield), including sensitive ecosystems;
- parks and greenways that link habitat and provide recreation opportunities;
- ditches, rivers, creeks, streams, and wetlands that retain and carry rain or stormwater, improve water quality, and provide habitat;
- working lands such as agricultural, forested, and grassland grazing areas, including seasonally flooded agricultural lands;
- aquifers and watersheds that provide drinking water;
- engineered wetlands and detention ponds that retain rain or stormwater and improve infiltration; and
- trees, rooftop gardens, and community gardens that clean air and cool urbanized areas in the summer."²

The Toolkit goes on to list economic benefits of green infrastructure. These include:

¹ *The Green Infrastructure Guide: Issues, Implementation Strategies and Success Stories*, Susan Rutherford, West Coast Environmental Law, 2007, p. 6, referencing a phrase used by Nancy Olewiler in *The Value of Natural Capital in Settled Areas of Canada*

² *Green Bylaws Toolkit for Conserving Sensitive Ecosystems and Green Infrastructure*, prepared by Environmental Law Clinic, University of Victoria Faculty of Law, and Deborah Curran & Company for The Wetland Stewardship Partnership, Ducks Unlimited Canada, Grasslands Conservation Council of British Columbia, Environment Canada and the Province of British Columbia, 2007, p. 10

- water quality – natural wetlands provide waste-cleansing services;
- air quality – tree cover and high vegetation remove pollutants from the air;
- rainwater management – retention of tree cover helps mitigate rainwater runoff during peak events; and
- flood control – wetlands act as natural storage areas for flood control.

The Toolkit and Sensitive Ecosystems Inventory use the term “sensitive ecosystem” to refer to fragile and/or rare portions of relatively unmodified landscape with relatively uniform dominant vegetation. The seven sensitive ecosystems that have been mapped for much of Vancouver Island are coastal bluff, sparsely vegetated, terrestrial herbaceous, wetland, riparian, woodland and older forest.³

Green infrastructure also includes engineered design features that take a “design with nature” approach⁴, to both mitigate the potential impacts of existing and future development and growth and to provide valuable services. These features include such designs as:

- disconnected roof leaders, grassy swales and rain gardens, which promote infiltration and groundwater recharge;
- roadside curb cuts that direct road runoff onto grassy swales and rain gardens;
- permeable pavement and green roofs, which reduce runoff;
- rock pits and other catch basins and detention ponds to detain rain water, slow it down and reduce/avoid the impact of peak flows;
- water-conserving infrastructure such as low-flow fixtures, metering systems and systems for water reclamation and redistribution;
- energy-conserving systems such as district heat distribution, landfill gas recovery, sewer heat recovery and industrial process heat recovery; and
- green building features.⁵

4. Revisions to Bylaw

4.1 Format

The format of the revised bylaw differs somewhat from Bylaw No. 1215 in its organization. Standard terms are contained in the sections entitled Administration, Interpretation, and

³ *Sensitive Ecosystems Inventory: East Vancouver Island and Gulf Islands, 1993 – 1997: Volume 2: Conservation Manual*, by M. McPhee, P. Ward, J. Kirkby, L. Wolfe, N. Page, K. Dunster, N. Dawe and I. Nykwist for Environment Canada, Province of British Columbia and Habitat Conservation Trust Fund, 2000, p. 9

⁴ The principles of designing with nature are explained in detail in the publication *Design with Nature* by Wallace McHarg Roberts & Todd (WMRT), 1969.

⁵ *The Green Infrastructure Guide: Issues, Implementation Strategies and Success Stories*, by Susan Rutherford, West Coast Environmental Law, 2007, p. 5

Bylaw Implementation. A new section, Subdivision Requirements and Regulations, contains general requirements and instructive guidelines that apply universally.

Extensively-expanded schedules that pertain to the various aspects of subdivision servicing are attached to the bylaw. These offer applicants the choice of meeting **Performance Standards**⁶ or following **Prescriptive Standards** as outlined in each schedule. The schedules are as follows:

- Schedule A Community Water Systems
- Schedule B-1 Community Sewer System Areas
- Schedule B-2 Community Sewer Systems
- Schedule C Drainage System Specifications
- Schedule D Fire Protection Infrastructure Specifications
- Schedule E-1 Street Lighting Areas
- Schedule E-2 Street Lighting Specifications
- Schedule F Underground Wiring Areas
- Schedule G Transit Bays and Their Location
- Schedule H Site Planning and Development
- Schedule I Roads

4.2 Definitions

As a result of the environmental focus of the bylaw revisions, a number of definitions were added. These include such terms as bioswales, flood construction level, floodplain, floodproofing, green infrastructure, leave strips, low impact development, purple pipes, raingarden, water balance model, xeriscaping, etc.

4.3 Approval Process

While the Ministry of Transportation's approving officer retains subdivision approval authority, the approving officer relies heavily on CVRD staff's comments. The CVRD wishes to exercise greater influence over the design and implementation of subdivision plans.



It is recommended that the CVRD create a Development Procedures pamphlet or brochure and require applicants to have a pre-design meeting with staff to ensure that applicants are aware of the CVRD's environmental approach and requirements.

4.4 Application Fees

Subdivision application fees are currently retained for Planning Department services, but not for Engineering staff's time.

⁶ The Performance Standards, as acknowledged in Section 4.7, are those found in the City of Campbell River's "Design Standards 2007".



⁷ Indicates a 'green idea'.



It is suggested that the CVRD consider the implementation of service fees to recover costs incurred when staff from various departments review subdivision applications - Engineering, Parks, Public Safety and others - in addition to the current fees charged by the Development Services department. This will enable staff time allocated to reviewing applications to be recovered whether it be Engineering staff accessing Performance Standards or Parks staff reviewing trail standards in a proposed subdivision. Any proposed fee increases should however only be considered on an incremental or phased basis through periodical amendments to the CVRD Fees and Procedures, or comparable, bylaw.

4.5 Approach and Substance

It is acknowledged that Landworks is not an engineering firm and does not have the expertise to determine the most appropriate technical standards for inclusion in the revised bylaw as **Prescriptive Standards**. We have assumed that the CVRD's standards in Bylaw No. 1215 are the up-to-date as outlined in the Master Municipal Construction Documents Association (MMCD) Volume II. We rely on CVRD engineering staff to determine best techniques and drawings to be prescribed. We have concentrated in shifting the focus of subdivision servicing from conventional engineering standards to responding to, working with and enhancing the natural environment and its systems. Introducing the option of "designing with nature" through the use of **Performance Standards** is the most significant change contained in the draft bylaw.

There are also new sections on fire hazard areas and protection (Section 3.5 and Schedule D); rainwater management (Schedule C1) and harvesting (Schedule C2); lighting (Schedules E-1 and E-2); site planning and development and landscaping (Schedule H); bicycle systems (Schedule I2); and pedestrian systems (Schedule I3).

4.6 Guidelines and Encouragement

Section 3, Subdivision Requirements and Regulations, of the draft bylaw is entirely new. This section contains general requirements that apply to all subdivision applications, including environmental considerations, domestic water sources, sewage disposal, fire protection, etc.

The schedules are devoted to specific services, such as water, roads, drainage, sewerage, etc., as described in Section 5 below. They contain general instructions, Performance Standards, Prescriptive Standards and, where a subdivision servicing bylaw is not the most appropriate document to prescribe or where the CVRD lacks the authority to require, encouragement. For example, "The Regional District strongly encourages site development, xeriscaping and landscape plans that minimize water usage and reflect water conservation measures." Similarly, "Incorporating laneways into the design of subdivision into smaller lots is also encouraged in order to minimize the amount of impervious surface, to move traffic off the streets, to facilitate moving houses forward on the lots, and to allow the developer to consider additional green alternatives."

4.7 Performance Standards

The introduction of the concept of Performance Standards was prompted by a number of factors. These include:

- The MMCD drafted the "Green Design Guidelines Manual" in 2005. The Guidelines are intended to "replace or augment MMCD Design Guidelines" and are "expected to evolve and expand as more demonstration projects are initiated and as current projects are evaluated". Hence the "Green Design Guidelines Manual" has not been – and, in fact, may never be – "finalized", rather may continue to evolve with experience in the field.
- Changing provincial regulations are designed to enable local governments to implement "green" bylaws. Bill 27 requires local governments to include greenhouse gas emission reduction targets in their plans, as well as enabling them to establish development permit areas to promote energy and water conservation. The bill also allows reserve funds for off-street parking spaces to be used for alternative transportation infrastructure, such as cycling or walking paths.
- The BC Building Code is being "greened up" to require energy- and water-efficient standards, techniques and fixtures in all buildings.
- The City of Campbell River's "Design Standards 2007", approved in principle for adoption by Council, are slated for adoption following the monitoring of some pilot projects and subsequent tweaking of the standards. Although the City of Campbell River, as a municipality, has its own approving officer, and MOT approves subdivision plans for the regional districts, many of the concepts contained in this document reflect the direction that the CVRD wishes to pursue. Hence, they have been used in the revised subdivision servicing bylaw. "Design Standards 2007" offers developers the option of meeting Performance Standards or following Prescriptive Standards.
- The used of the proposed "Environmental Checklist" being contemplated by the CVRD.



Performance Standards are intended for use by the more experienced or sophisticated developers and their contractors and for qualified professionals such as engineers, hydrologists and landscape architects. The onus is on the developer/applicant to demonstrate that the specific Performance Standards are being met by the subdivision design being presented, which means meeting or beating the Prescriptive Standards. There will likely be a need to incorporate flexibility into small-scale "mom-and-pop" developments that would place an unnecessary financial or process burden on individuals completing this scale of development.

5. The Schedules

In all Schedules, Prescriptive Standards are those contained in the Master Municipal Construction Documents (MMCD), including the “greener” option of MMCD’s Green Design Guidelines Manual, as amended from time to time.

5.1 Schedule A: Community Water Systems

As an option to the MMCD Prescriptive Standards, Schedule A outlines the Performance Standards for community water systems.

5.2 Schedule B-1: Community Sewer System Areas

The schedule contains maps showing the locations where a community sewer system is a requirement of subdivision.

5.3 Schedule B-2: Community Sewer Systems

The section on Community Sewer Systems contains Performance Standards for these.

5.4 Schedule C: Drainage Specifications

This schedule contains detailed descriptions of the Performance Standards for rainwater management systems, runoff control, drainage collection systems, rainwater storage, and water quality improvements. It also describes the requirements for roof drainage.

Rainwater management is considered critical for protecting natural systems and aquatic ecosystems, as well as protection of property and improvements. Rainwater management systems that are proposed using Performance Standards must be accompanied by a report containing specific criteria outlined in this section.

The section on rainwater harvesting encourages this activity. In fact, it is suggested that harvested rainwater will be considered as augmentation for the water requirements in Schedule A. Under appropriate circumstances, with screening, filtering and treatment, it could satisfy potable water requirements for various forms of development. An illustration in the revised bylaw indicates how rainwater harvesting can augment or satisfy water requirements for development. The entire subject will require discussion with CVRD staff.

Rainwater harvesting is now being used as an alternative or supplement to potable water on Galiano Island, Salt Spring Island, Thetis Island, the Juan de Fuca electoral area, and in areas where low-volume wells go dry in summer, where there is limited piped water supply, or where the quality of well water is poor. It is also used by conservationists, commercial greenhouses and in some urban public buildings.

The section on Runoff Control introduces the requirement for post-development flows equal to pre-development flows. Options are provided for assessing pre- and post-development flows so that they may be compared.

Under Drainage Collection Systems, examples of alternatives to the conventional drainage pipe include swales/bioswales and road-side rain gardens.

In the section of Rainwater Storage, the importance of retaining natural wetlands is emphasized. Rainwater may be stored in natural systems, constructed wetlands, rain gardens, detention ponds or underground facilities.

5.5 Schedule D: Fire Protection Infrastructure Specifications

Fire Protection is a new section. The main requirements in this section are minimum flow for fire-fighting purposes, a firebreak adjacent to high fire hazard wildlands and access to wildlands at distances no greater than 200 metres. The remainder of the section draws attention to the CVRD's ability to require restrictive covenants and to stipulate where it feels that water reservoirs are critical, and encourages consideration of water conservation and the potential fire hazard.

Fire protection is discussed for areas with and without municipal or local water systems. In areas with water systems, the requirements are very specific with regards to fire hydrants.

5.6 Schedule E-1: Street Lighting Areas

The schedule contains maps showing where ornamental street lighting is permitted and specifies that ornamental street lighting is not permitted in two electoral areas.

5.7 Schedule E-2: Street Lighting Specifications

Schedule E-2, a new schedule, includes Performance Standards as well as the requirements for rural, low-density residential and resource areas (Zone 1), medium-density residential (suburban) areas (Zone 2) and higher-density (urban) residential, mixed-use, commercial, institutional and industrial areas (Zone 3).

5.8 Schedule F: Underground Wiring Areas

Areas where underground wiring is required at the time of subdivision are shown on maps in this schedule.

5.9 Schedule G: Transit Bays and Their Location

Transit bays are to be incorporated into the design of all roads.

5.10 Schedule H: Site Planning and Development

Although Schedule H is a new one, it contains the relevant sections from Bylaw No. 1215 on site clearing, grubbing, burning and clean-up, as well as sections – and Performance Standards – on the requirement for erosion and sediment control and for landscaping.

A new section on Driveways and Parking Areas provides guidelines for access, driveway design, driveway and parking area materials and parking area design, as well as specifications for driveway culverts. This section introduces the requirement for porous or

permeable driveways and off-street outside parking areas. Use of pervious/porous standards by the Capital Regional District can be found at their website: www.crd.bc.ca/watersheds/lid/permeable.htm.

The new section of Landscaping covers landscape materials and finished treatments, with illustrations. This section requires xeriscaping and the use of indigenous plants on all public rights-of-way, highways and parkland – and encourages these practices on private lands.

5.11 Schedule I: Roadways

The CVRD has expressed the wish to have new subdivisions designed so that new roads are planned in the regional transportation context. As noted in the OCP Recommendations in Section 6.10 above, it is recommended that the CVRD combine the road network plans for all electoral areas into a Regional Transportation Plan, secure MOT agreement, and adopt the plan so that the regional transportation context is clear.

Alternative road standards are being used more frequently and more broadly. MOT has agreed that the Islands Trust may designate some roads as “scenic/heritage” roads on the Gulf Islands of Bowen (prior to Bowen becoming a municipality), Denman, Hornby, Gabriola, Galiano, Gambier, Lasqueti, North and South Pender, Saturna and Salt Spring. These roads have the following functional classes: main rural, minor rural and residential rural. Their designation cannot be used to restrict vehicles from using them.

When the Town of Gibsons reconstructed Franklin Road, local residents objected to the conventional guidelines for a collector road and instead opted for a narrower, environmentally-responsible design. The reconstruction entailed the following design features: 6 metre pavement width, flush-mounted curbs, bioswales, pervious pipe systems and porous pavement sidewalk. The resulting road was shown to be better for the environment, resulted in a cost reduction of more than \$250,000 on a conventional design (a savings of more than 30%) and was a more accurate reflection of the community’s values.⁸

Schedule I includes Performance Standards for roads, while the Prescriptive Standards remain much the same as in Bylaw No. 1215. The changes include the need to design road networks to fit into the CVRD’s (as approved by MOTI) Regional Transportation Plan, new narrower paved road surfaces (6 m for local roads, 8 for collector and 12 for arterial), a requirement for porous road shoulders, a section on road drainage and encouraged incorporation of laneways.

New in Schedule I are sections on Bicycle and Pedestrian Systems, in line with the CVRD’s desire to facilitate bicycling and walking as alternatives to driving. Bicycle lanes are required

⁸ InfraGuide Case Study: Town of Gibsons B.C. Reconstructs Franklin Road

on all collector and arterial roads. Where the subdivision plan is for an area that has a Parks & Trails Master Plan, any trails and paths that are shown in the subdivision area must be included in the plan.

5.12 Additional Considerations

The use of performance standards by the CVRD could give rise to concerns regarding maintenance issues and related costs when swales or other forms of green infrastructure are used to manage both on-site and off-site drainage. New and larger developments occurring in the CVRD are considering these approaches. It may be prudent for the CVRD to consider the establishment of service areas for functions such as drainage, stormwater retention works, street lighting, etc., at subdivision stage to ensure their proper funding when development occurs.

6. Development Review

As noted in our original proposal, forms of development and levels of servicing are inextricably related. Typically development takes one of four dominant forms described below.

Associated with the four forms of development is the concern of the impact on sensitive environments and habitat. Protecting sensitive environments and habitats is an essential component of sustainability, maintaining green infrastructure and maintaining ecological diversity. Not all forms of development necessarily affect sensitive resources equally, but they all have the potential to have a negative effect if they are not properly designed.

One of the legislative foundations for assessing development applications in any of the four forms of development identified is through the use of the provincial Sensitive Ecosystem Inventory (SEI) mapping. The CVRD is able to address concerns over environmental protection, protection of sensitive ecosystems and conservation of habitat is through the designation of Development Permit Areas and Development Approval Information Areas that require an applicant to provide prescribed information. Once of these requirements are in effect, where they are not already in place, the CVRD will be able to possibly accommodate development while also protecting sensitive environments.

Other considerations related to development, particularly in more remote or distant resource and rural areas, is the potential long-term impact of development on these lands in the CVRD on the broader environmental quality. When development locates in areas not in proximity to existing jobs and services, environmental costs can become evident only subsequent to development being in place. These costs can be primarily in relation to commuting, impacts on wildlife, effects on water quality, etc., which cumulatively have the potential to be significant.

6.1 Resource Areas

Vast portions of the CVRD are devoted to forestry and agriculture with some resource extraction and processing. These areas include large, often unsubdivided blocks of land and large-lot development. Typically they are located in more remote portions of the Regional District in Electoral Areas A, B, E, F, G, H and I. Services in resource areas are generally limited to roads – although many will be private or Forest Service roads – and fire protection. Any water or sewerage will be fully contained on site. It is not expected that this will – or should – change.

Nonetheless, it is likely that, with the removal of forest lands from forest-land status by the Ministry of Forests in 2007, development pressures will likely increase on these former forest lands. The CVRD has already zoned forest lands in large-lot zones in order to maintain resource lands in forest uses; however, this will not preclude development and bylaw amendment applications from being filed for these lands. Policies found in OCP and provisions of Zoning Bylaws for Electoral Areas where resource lands are located should be complementary to the requirements of a revised Subdivision Servicing Bylaw in terms of direction, content and effect.

Although forest lands encompass a large area of resource lands in CVRD Electoral Areas, there are also large areas of agricultural lands within the Regional District. Unlike forest resource lands, lands within the Agricultural Land Reserve (ALR) have an additional level of protection afforded them through this designation that complements the OCP designations and zoning that are in place. Agricultural lands outside the ALR, however, could face development pressures similar to forest lands, should a willing applicant endeavour to undertake a development.

Although the large lot-size zones for forest lands protect them to a significant level, the technology available for on-site sewage treatment through 'package' plants could potentially make strata developments attractive to some, notwithstanding the provision that requires minimum lot sizes to be met. When this form of development occurs in areas that are primarily resource-oriented, significant pressure can be placed on requirements for fire protection, bylaw enforcement and animal control as well as maintaining potentially extensive road systems.

Although not related to lot servicing per se, development in distant resource locations increases the need for commuting for shopping, school, recreation and employment as well as for deliveries of goods to residents in the development. This increases the carbon footprint of development through the use of privately-owned vehicles.

6.2 Rural Areas

Six of the nine electoral areas have pockets of rural development; only Areas 'D' (Cowichan Bay), 'G' (Saltair/Gulf Islands) and 'I' (Youbou/Meade Creek) do not have areas designated as rural. Rural areas are characterized by large lots with on-site services. Many uses in rurally-designated areas are residential in nature; however, agriculture is often practiced on them in various forms – small holdings, hobby farms, keeping a horse, and similar activities. Similarly a typical use of properties in rural areas is for single-family residential use, with ancillary farming, possibly a small business or a bed-and-breakfast operation being located on the property.

Typically located between the suburban development found in Regional District villages or communities and resource lands, rural lands offer an option that appeals to a cross-section of the population that wishes to live close to the forest, enjoy a quiet environment and own a larger parcel of land. These properties are served by on-site wells for potable water and septic tanks to treat domestic sewage. Few additional services are required, however, fire protection services are usually in place within these areas, and there is often a grid network of local roads serving the residential development.

As with development locating on resource lands, extensive development in rural areas can place pressure on Regional District services such as fire protection and bylaw enforcement. Other services such as roads, schools, etc., are also affected when extensive rural development occurs, and these have a potential negative impact on carbon sequestration. As rural areas are usually closer to service centres than resource lands, their effect on services and the environment may not be as great when travelling distances are considered. Nonetheless, the higher residential density permitted in rural areas, when combined with commuting needs, may impact servicing costs, and their carbon footprint may be greater than when resource lands are developed for residential use.



Rural area roads may be affected by the proposed floodplain requirements in Section 3.4 and the roadway surface widths in Schedule D: 6 m for local roads, 8 m for collector roads and 12 m for arterial roads.

6.3 Suburban Areas

All electoral areas have suburban residential areas, generally consisting of smaller lots with either a community water or sewer system or both. Subdivision plans for suburban area will be impacted by the revised subdivision servicing bylaw, and some developments may be apt candidates for the Performance Standards approach, as such developments often encompass larger areas of land.

Suburban areas in the CVRD include areas such as the Douglas Hill subdivision in Cobble Hill and the residential development in the Telegraph/Meredith Voutrait area. The area between Hardy and Noowick Roads could also be considered *suburban from a servicing perspective*, however, with the concentration and expansion of urban-type residential densities in the area, it is growing towards a more urban character. Densities in these and other areas cannot be intensified without increased levels of service. They are logical areas to consider for intensification, development and re-development as a result of their location in close proximity to retail, financial, educational and other services which also serve as employment centres.

There will be additional pressures in rural areas to expand development onto non-ALR lands, former forestry lands and vacant, zoned residential land in the future. These pressures will be primarily a result of higher land costs in Capital Regional District (CRD) and the *willingness of workers to commute to jobs in the CRD from the southern areas of the CVRD*. Continuing the pattern of rural development provides for a lifestyle alternative that is attractive to many people. It reinforces the role of having housing as the consumer of the landscape, however, and results in sprawl. The development pattern increases the need for additional roads and other services and affects the natural environment, often in a detrimental way. It may be that suburban development on one service, usually water should be abandoned as a large-scale form of development, (à-la Mill Bay form), in favour of providing full urban-level services including piped water and sewer and rainwater management systems that are adapted to the landscape and designed with nature.

Smaller-scale residential development in areas situated away from urban centres such as Mill Bay 'village' may be appropriate in certain areas. Developments should be clustered, small in scale and reflect a density that complements the rural character of surrounding area – what is good development on the land rather than what is permitted under the zoning of the land.

These are issues that need to be considered now by the CVRD in its OCPs, local area plans and zoning bylaws because of their direct relationship to how development on the land occurs and is managed. Consideration of these broader issues, including the location of residential settlement areas, denser urban development, servicing and defined urban containment boundaries could form part of a Regional Plan for the CVRD. Although the focus of this discussion has been on the Mill Bay area, other areas in the CVRD such as Shawnigan Lake, Cobble Hill village and outlying areas of Cowichan Bay could be included, as well as the Saltair area to the north.



Suburban subdivision designers and developers will need to be familiar with the revised subdivision servicing requirements. They – and developers in urban areas – must

also be made aware of the Parks & Trails Master Plans for Electoral Areas 'A' (Mill Bay/Malahat), 'B' (Shawnigan Lake) and 'D' (Cowichan Bay).



Where suburban forms of development are proposed in any area of the CVRD, they should be assessed in terms of community sustainability including the impact of suburban form of development on sensitive ecosystems and natural habitat, in order to manage the sprawl orientation of this form of development.

6.4 Urban Areas

Urban areas have the most densely developed residential neighbourhoods and often contain commercial and institutional uses. These areas generally have community water and occasionally community sewerage. Urban areas will be particularly appropriate areas to benefit from implementation of the revisions to the subdivision servicing bylaw, especially with regards to lighting and permeable surfaces.

Development patterns in areas on full municipal services can accommodate increased residential densities, commercial coverage and mixed-use developments. Approaches to development that seek to make full use of all existing services, including roads systems, emergency services, schools and community services, or expanding them in a logical, sequential manner provide for an aspect of sustainable development. When integrated with ecosystem protection measures and habitat conservation, as well as *designing with nature*, a more complete community evolves.

Consideration should be given by the CVRD to extending services outside existing urban areas within the Regional District as a means to establish development containment boundaries and limit future sprawl. Expansion should include suburban areas on water services that located in close proximity to serviced areas where services from the urban areas can be readily extended. Frequently, peripheral areas experience septic field break-outs or are susceptible to breakouts in coming years due to effluent-loading of soils. Current problems could be corrected and potential future events prevented by connecting problem areas to adjacent full-service systems. Areas such as the serviced portions of Cowichan Bay and Eagle Heights could potentially accommodate peripheral suburban developments that might be experiencing septic problems. Connecting these peripheral areas to full services would likely result in increased residential densities within them; however, their location adjacent to urban development would result in more complete communities.



Developers in urban areas would benefit greatly from a pre-development meeting with staff and a discussion of the green approach to design and construction. They should

also be made aware of the upcoming changes to the BC Building Code, which some of the guidelines in the revised subdivision servicing bylaw anticipate.



The CVRD should consider coordinating its revised subdivision servicing bylaw with a long term sustainability strategy or similar regional strategy to guide development within its boundaries,. A strategy of this nature would apply to all areas of the CVRD including resource, rural, suburban and urban areas within the Electoral Areas as well as applying to development occurring within municipalities. For example integrating a Regional Sustainability Strategy or similar approach would link the proposed subdivision servicing bylaw with the CVRD's OCPs, local area plans and zoning bylaws and give consideration to establishing urban containment boundaries, with associated residential densities, commercial coverage and mixed-use developments, around communities with water and sewer services. This approach would provide for the implementation of a CVRD-based, regionally-accepted strategy over time.



In addition to considering an applied strategic approach within the CVRD and coordinated with municipalities within its boundaries, the CVRD may wish to consider recommending to provincial agencies, First Nations and other regulatory stakeholders affected by development to coordinate reviews through a Technical Review Committee. This group would meet to discuss subdivision applications from their regulatory or consultative perspective and would offer comments and approaches on how to best deal with issues stemming from the application. Having a coordinated discussion among potentially affected interests would have the effect of improving the understanding of different issues requiring consideration by different agencies and governments and would likely improve the length of time required to consider and deal with a subdivision application.



The CVRD should consider approaching MOTI to discuss the use of this performance-based approach to subdivision and development prior to approving a revised subdivision servicing bylaw. Having candid discussions with MOTI could result in steps being taken to permit improved consideration of CVRD concerns relative to alternate standards for rural roads, maintenance of drainage works, lighting and other services within MOTI r.o.w.'s by the Ministry. This could result in the CVRD being provided with improved decision-making authority when dealing with potential approval of subdivision applications.

7. Electoral Area OCPs

Many of the Electoral Area OCPs contain policies that are identical or similar to policies found in other OCPs. The following policies have been selected as examples, not as a comprehensive list of often-duplicated policies from all OCPs, that influence zoning and subdivision servicing standards.

7.1 Area 'A' – Mill Bay/Malahat

Policy 10.3.9: ... request subdivision applicants to provide access through new subdivisions via paths and trails ...

Policy 10.3.11: The foreshore area and all ocean front road ends should remain open for the public subject to environmental and engineering constraints, and the provision of reasonable pedestrian access shall be encouraged.

Policy 12.3.1: The discharge of untreated sewage into the waters of Saanich Inlet or other watercourse is prohibited.

Policy 12.3.3: The Regional Board encourages new development in the vicinity of Mill Bay Village to connect to a community sewage collection, treatment and disposal system ...

Policy 12.3.4: ... encourages the monitoring of individual septic systems ...

Policy 12.3.5: ... the Regional Board will continue to explore approaches to remedying or preventing the pollution of the groundwater supply, Saanich Inlet and local watercourses ...

Policy 12.3.6: ... prevent non-point source pollution.

Policy 12.3.7: New development shall be encouraged to connect to community water systems ...

Policy 12.3.8: All watercourses and groundwater aquifers in the area shall be protected ...

Policy 12.3.11: The board shall continue to examine the feasibility and practicality of establishing a bulk water system for the south end ...

Policy 12.3.12: ... encourages a review of groundwater monitoring ...

7.2 Area 'B' – Shawnigan Lake

Policy 10.8: CVRD Subdivision Bylaw should be amended to require the dedication and construction of walkways in new residential subdivisions where such walkways provide more convenient linkages between residential area, schools, parks, community facilities and major roads. Such dedications may have to be considered as part of the five percent land dedication for park purposes.

Policy 12.13: ... encourages the construction of future community water systems to a standard that would permit the efficient and easy interconnection of separate systems and make it possible to eventually consolidate various water systems ...

Policy 10.17: The Ministry is further encouraged to give more favourable consideration to those subdivisions that are purposefully designed to increase on-site storm water retention and to decrease peak storm water flows.

Policy 10.19: CVRD Subdivision Bylaw should be amended to require adequate fire protection standards (including hydrants) for new community water systems (or extensions of existing systems) constructed at the time of subdivision of land.

7.3 Area 'C' – Cobble Hill

Policy 8.1.4: ... give due regard to the implications for hazardous and environmentally sensitive areas, freshwater management and natural resource management policies ...

Policy 8.1.7: ...adequate building setbacks shall be required along common lot lines with an agricultural parcel.

Policy 12.3.3: All new small lot subdivisions be furnished with standard size fire hydrants at regular intervals ...

Policy 13.1.5: ... encourages the Ministry to prohibit the construction of roads where it would cause land slippage, erosion or excessive runoff or would damage environmentally sensitive lands.

Policy 13.1.8 (e): All new roads shall be constructed in a manner in a manner which shows due regard for the natural landscape and quality of environment.

Policy 13.1.10: ... encourage the establishment of walkways and crosswalks with or separate from existing road allowance.

Policy 14.1.1: Any major expansions to existing water distribution networks should be of a standard that will permit the eventual connection to a bulk water system.

Policy 14.1.2: Prior to subdivision of land ... at a parcel size less than two hectares ... determine if water service can be made available to a proposed development without jeopardizing the water supplies of already established users ...

7.4 Area 'D' – Cowichan Bay

Policy 11.8: The establishment of a network of walking, cycling and equestrian trails and associated facilities shall be encouraged ...

Policy 11.11: Expansion of existing water systems shall be encouraged only where the proposed expansion will serve an area designated for further staged development ...

Policy 11.15: ... shall not assume responsibility for any private sanitary sewer lines or sewage treatment facilities unless such lines and facilities are constructed to a standard acceptable to the Regional District and are integrated into a unified sewage treatment and disposal system.

7.5 Area 'E' – Cowichan Station/Sahtlam/Glenora (Cowichan-Koksilah, EA E and Part of F)

Policy 11.1.1: Any major expansions to existing water distribution networks should be of a standard that will permit the eventual connection to a bulk water system.

Policy 11.1.3: Water supply shall be proven for both water quality and quantity prior to the subdivision of land being approved and any subdivision with five or more connections shall be serviced by an approved community water supply or utility.

Policy 11.1.5: ... the existence of a water licence for a parcel of land does not necessarily provide an adequate potable service of water to support a subdivision of that land.

Policy 12.1.12: The road configuration in new subdivisions should be designated in a manner which enables the utilization of passive solar energy in as many lots as are reasonably possible.

7.6 Area 'F' – West Cowichan (Cowichan Lake South/Skutz Falls)

Policy 13.3: Prior to permitting the establishment of any additional community water systems in the Plan area, the feasibility of obtaining a connection to an already established system shall be considered.

Policy 13.7: Septic fields and other sewage disposal systems should be well removed from watercourses and constructed, operated and maintained in a manner which precludes effluent from reaching the drainage network.

Policy 13.8: The discharge of untreated sewage into any watercourse is prohibited.

Policy 13.9: All sewage effluent disposed of by means of a community owned and operated treatment facility should, as a minimum standard, be required to incorporate primary and secondary treatment.

Policy 13.15: ... the degree of fire protection be maximized for area residents, where feasible, especially in areas prone to wildfire hazard.

Policy 13.16: ... adequate fire protection standards be utilized, including fire hydrants located at regular intervals for new subdivisions on community water systems.

7.7 Area 'G' – Saltair/Gulf Islands

Policy 18.1: ... advocates the establishment of a community sewage collection and treatment system ...

Policy 18.5: ... support the construction of privately-owned and operated sewage treatment plants in support of a commercial or institutional use ...

Policy 19.7: Local roads should not be widened except where necessary for safety reasons or to better accommodate cycling or pedestrian use.

Policy 19.9: ... encourages the retention of indigenous plant communities on road allowances ...

Policy 19.10: The creation of a network of walking and cycling paths should be provided ...

7.8 Area 'H' – North Oyster/Diamond

Policy 12.1.7: ... improve public access to water areas for recreation and fire protection ...

Policy 13.1.5: All watercourses and known groundwater aquifers shall be protected from activities which would reduce their suitability as a source of domestic water supply or for fish, shellfish or wildlife habitat.

Policy 13.1.8: ... encouraged to require the preparation of an engineering report on potential quantity and quality of storm water flows for any subdivision of land ...

7.9 Area 'I' – Youbou/Meade Creek

Policy 9.10: The Greenway system will provide linkages with trails ...

Policy 10.7: Pedestrian and cycling trails will be developed ...

Policy 11.4: Where a parcel of land is not connected to a community owned and operated sewer system, all sewage effluent originating on that parcel will be disposed of on that parcel in an acceptable means of ground disposal ...

7.10 OCP Recommendations



Suggested OCP considerations and amendments:

- i. As OCPs are the overall guiding documents for land-use planning and development, these documents inform the respective zoning bylaws – and, to a large extent, the subdivision servicing bylaw. We believe that there is considerable merit to creating a region-wide sustainability strategy with the goals and objectives that are universal. These would include, for example, the social, economic and environmental goals listed in the Mill Bay/ Malahat OCP, as well as any of the guidelines in the revised subdivision servicing bylaw that are not already iterated in the OCP (or OCPs).

The region-wide sustainability strategy would focus on resource and rural areas and include supportive policies to retain them in these uses.

Development would be directed to existing settled areas in the broader OCP, supplemented with the Regional District sustainability strategy, and would be augmented by local area or neighbourhood plans, such as the Cobble Hill Village Neighbourhood Plan, as well as neighbourhood or local area plans for Cowichan Bay, Shawnigan Lake, Mill Bay, etc.

- ii. It is suggested that the CVRD combine the various electoral area transportation plans into a comprehensive regional transportation plan, meet with MOT to obtain agreement on the plan, and adopt the plan as part of the region-wide sustainability strategy. This would make it easier for the CVRD to ensure that road networks in new subdivision plans could be integrated into the regional transportation context. The transportation plan should also include *cycling and walking alternatives, as well as connectivity objectives.*
- iii. The OCP or neighbourhood plans might contain a new section entitled "Built-Form Goals" or "Built-Environment Goals". This section would be the appropriate place to list the goals that are promptly revisions to the BC Building Code.

- iv. The Performance Standards that are in the draft subdivision servicing bylaw should be anticipated in the objectives of the OCP.
- v. It would be useful to include floodplain maps and designations in the OCP and to allow for future increases in the extent of floodplains as a possible consequence of climate change.
- vi. If the CVRD wishes to be in the position to determine whether an applicant provides park land or cash in lieu, then under Section 941 (2) of the Local Government Act, the OCP (or local area plans) must contain policies and designations respecting the location and type of future parks. The CVRD may ask that all or part of the park land dedication take the form of trails or greenway connections.
- vii. The OCPs will eventually be expected to include greenhouse gas emission reduction targets, as well as policies and actions for achieving those targets, as required by Bill 27. Either the OCP or local area plans can be used to designate development permit areas to promote energy conservation, water conservation and reduction of greenhouse gas emissions, as permitted by Bill 27 additions to Section 919 (1) of the Local Government Act and in keeping with the revised subdivision servicing bylaw.
- viii. Ensure that OCPs contains policies regarding providing buffers between new development and land in the ALR as well as wildland.
- ix. Ensure that the OCPs contains adequate goals, objective and policies to enable the CVRD to recommend approval or denial of a subdivision application, including all residential subdivisions, based on the need for location within a fire protection service area.
- x. Suggested OCP goals:
 - Encourage development patterns such as compact, comprehensive neighbourhoods that allow less reliance on automobiles for mobility and result in reduction in vehicle miles traveled and corresponding greenhouse gas emissions. Following this smart growth principle allows residents to choose to live, work, shop and play in close proximity. Compact, mixed-use development also enhances the viability of public transit and local businesses.
 - Preserve existing trees that can sequester carbon dioxide and require the planting of new trees, shrubs and ground cover.
 - Promote alternative energy generation such as solar and wind power that do not generate greenhouse gasses as do oil, gas and coal-fired power plants.

- Encourage mixed-use development in areas where there are services and that are served by public transit.
- Encourage the inclusion of a variety of housing styles and sizes, including secondary dwellings and suites, as well as housing that allows aging in place, in all new subdivision plans.

8. Electoral Area Zoning Bylaws

Zoning bylaws, in addition to specifying use and density of parcels of land in the various zones, also dictate the minimum lot size and maximum lot coverage. These restrictions are generally a function of the level of servicing, but they also help determine the character of an area and its growth potential.

Required building setbacks from roads are generally 7.5 m for residential uses (6 m in the case of multi-family buildings, 4 m for a specific comprehensive development), varying from 4.5 to 9 m for industrial uses; and from watercourses, 15 m (30 m for aggregate and mineral processing).

8.1 Area 'A' – Mill Bay/Malahat

| Zone | Minimum Lot Size | | | Max. Lot Coverage |
|--|---|----------------------|-----------------------|-------------------|
| | With Community Water & Sewer | With Community Water | With On-Site Services | |
| F-1 Primary Forestry | | | 80 ha | 20% |
| F-2 Secondary Forestry | | | 4 ha | 20% |
| A-1 Primary Agriculture | | | 12 ha | 30% |
| A-2 Secondary Agriculture | | | 2 ha | 30% |
| A-3 Veterinary | | | 2 ha | 30% |
| A-4 Agricultural Recreation | | | 12 ha | 30% |
| R-1 Rural Residential | | | 2 ha | 30% |
| R-2 Suburban Residential | 0.4 ha | 0.4 ha | 1 ha | 30% |
| R-2A Suburban Residential Restricted | 0.4 ha | 0.4 ha | 1 ha | 30% |
| R-3 Urban Residential | 0.1675 ha | 0.2 ha | 1 ha | 25% |
| R-3A Urban Residential (limited height) | 0.165 ha | 0.2 ha | 1 ha | 25% |
| R-5 Comprehensive Urban Residential | 15 units per ha | | | 40% |
| MP-1 Manufactured Home Park | 0.2 ha 15 units per ha | | | |
| RM-1 Low Density Multi-Family Residential | 20 units per ha | | | 40% |
| RM-2 Medium Density Multi-Family Residential | 35 units per ha | | | 40% |
| CD-1 Stonebridge Village Mixed Use | 62 units per ha residential, 17 uph personal care | | | 40% |
| C-1 Local Commercial | 0.1 ha | 0.3 ha | 1 ha | 50% |
| C-2 General Commercial | 0.1 ha | 0.3 ha | 1 ha | 50% |
| C-3 Service Commercial | 0.1 ha | 0.3 ha | 1 ha | 50% |
| C-4 Tourist Recreational Commercial | 0.2 ha | 0.4 ha | 1 ha | 20% |
| P-1 Parks & Institutional | 0.2 ha | 0.4 ha | 1 ha | 40% |
| P-2 Rural Recreation | 8 ha | 8 ha | 8 ha | 20% |
| I-1A Light Industrial Mini Warehousing | 0.2 ha | 0.4 ha | 1 ha | 30% |
| I-2 General Industrial | 0.1 ha | 0.4 ha | 1 ha | 50% |

8.2 Area 'B' – Shawnigan Lake

| Zone | Minimum Lot Size | | | Max. Lot Coverage |
|--|------------------------------|----------------------|-----------------------|-------------------|
| | With Community Water & Sewer | With Community Water | With On-Site Services | |
| A-1 Primary Agricultural | 12 ha | 12 ha | 12 ha | 30% |
| A-1A Modified Primary Agricultural (greenhouses) | 12 ha | 12 ha | 12 ha | 30% (50%) |
| A-2 Secondary Agricultural (greenhouses) | 2 ha | 2 ha | 2 ha | 30% (50%) |
| F-1 Primary Forestry | 80 ha | 80 ha | 80 ha | 30% |
| F-1A Primary Forestry – Kennel | 20 ha | 20 ha | 20 ha | 30% |
| F-2 Secondary Forestry | 4 ha | 4 ha | 4 ha | 30% |
| R-1 Rural Residential | 2 ha | 2 ha | 2 ha | |
| R1A Limited Rural Res. | 2 ha | 2 ha | 2 ha | 15% |
| R-2 Suburban Residential | 0.4 ha | 0.4 ha | 1 ha | 30% |
| R-2A Limited Suburban Res. | 1 ha | 1 ha | 1 ha | 30% |
| R-3 Urban Residential | 0.2 ha | 0.2 ha | 1 ha | 30% |
| R-4 Rural Community Res. | 8 ha | 8 ha | 8 ha | 10% |
| R-6 Urban Residential (Mobile Home) | 0.8 ha | 0.8 ha | 1 ha | 20% |
| MP-1 Mobile Home Park | 2 ha | 2 ha | 2 ha | |
| C-1 Village Commercial | 1100 sq m | 1675 sq m | 1 ha | 50% |
| C-2A Local Commercial | 1100 sq m | 1675 sq m | 0.8 ha | 50% |
| C-2B Local Commercial | 1100 sq m | 1675 sq m | 0.8 ha | 50% |
| C-2 Local Commercial | 1100 sq m | 1675 sq m | 0.8 ha | 50% |
| C-3 Service Commercial | 1100 sq m | 1675 sq m | 0.8 ha | 50% |
| C-4 Tourist Rec. Commercial | 0.8 ha | 0.8 ha | 0.8 ha | 20% |
| C-5 Neighbourhood Pub | 1100 sq m | 1675 sq m | 0.8 ha | 40% |
| P-1 Parks & Institutional | 0.2 ha | 0.4 ha | 1 ha | 40% |
| P-2 Parks & Recreation | 20 ha | 20 ha | 20 ha | 15% |
| I-1 Light Industrial | 0.2 ha | 0.4 ha | 0.8 ha | 50% |
| I-1A Light Industrial | 0.2 ha | 0.4 ha | 1 ha | 50% |
| I-1B Sawmilling | 1 ha | 1 ha | 1 ha | 50% |
| I-1C Light Industrial | 0.2 ha | 0.4 ha | 0.8 ha | 50% |
| I-3 Medium Industrial | 0.2 ha | 0.4 ha | 1 ha | 50% |

8.3 Area 'C' – Cobble Hill

| Zone | Minimum Lot Size | | | Max. Lot Coverage |
|--|------------------------------|----------------------|-----------------------|-------------------|
| | With Community Water & Sewer | With Community Water | With On-Site Services | |
| A-1 Agricultural | 12 ha | 12 ha | 12 ha | 30% |
| A-2 Secondary Agricultural | 2 ha | 2 ha | 2 ha | 30% |
| A-4 Agricultural-Recreation | 12 ha | 12 ha | 12 ha | 30% |
| F-1 Primary Forestry | 80 ha | 80 ha | 80 ha | 30% |
| F-2 Forestry | 4 ha | 4 ha | 4 ha | 30% |
| R-1 Rural Residential | 2 ha | 2 ha | 2 ha | 30% |
| R-2 Suburban Residential | 0.4 ha | 0.4 ha | 2 ha | 30% |
| R-3 Urban Residential | 0.09 ha | 0.2 ha | 2 ha | 20% |
| R-5 Comprehensive Urban Residential | 0.09 ha | 0.2 ha | 0.8 ha | 50% |
| R-6 Urban Residential (Mobile Home) | 0.8 ha | 0.8 ha | 0.8 ha | 20% |
| MP-1 Mobile Home Park | 2 ha | 2 ha | 2 ha | |
| C-2 Local Commercial | 1100 sq m | 1675 sq m | 0.8 ha | 50% |
| C-3 Service Commercial | 1100 sq m | 1675 sq m | 0.8 ha | 50% |
| C-4 Tourist Rec. Comm. | 1100 sq m | 1675 sq m | 0.8 ha | 20% |
| C-5 Neighbourhood Pub | 1100 sq m | 1675 sq m | 0.8 ha | 40% |
| C-6 Community Service | 1100 sq m | 1675 sq m | 0.8 ha | 15% |
| C-7 Marine & Recreational Vehicle Commercial | 1100 sq m | 1675 sq m | 0.8 ha | 50% |
| C-8 Mixed Commercial – Residential | 1100 sq m | 1675 sq m | 0.8 ha | 50% |
| P-1 Parks & Institutional | 0.2 ha | 0.4 ha | 1 ha | 40% |
| P-2 Institutional Forestry/ Agriculture | 12 ha | 12 ha | 12 ha | 20% |
| P-3 Utility | 1100 sq m | 1100 sq m | 1100 sq m | 40% |
| I-1 Light Industrial | 0.2 ha | 0.4 ha | 0.8 ha | 50% |
| I-1A Light Industrial (Mini Warehousing) | 0.2 ha | 0.4 ha | 0.4 ha | 30% |
| I-1B Light Industrial (Mini Warehousing) | 0.2 ha | 0.4 ha | 0.8 ha | 30% |
| I-1C Light Industrial - Limited | 0.2 ha | 0.4 ha | 0.8 ha | 50% |
| I-3 Transportation Based Industrial | 2 ha | 2 ha | 2 ha | 50% |

8.4 Area 'D' – Cowichan Bay

| Zone | Minimum Lot Size | | | Max. Lot Coverage |
|--|------------------------------|----------------------|-----------------------|-------------------|
| | With Community Water & Sewer | With Community Water | With On-Site Services | |
| A-1 Primary Agricultural | 12 ha | 12 ha | 12 ha | 30% |
| A-1A Primary Agricultural – Processing (greenhouses) | 0.5 ha | 0.5 ha | 0.8 ha | 30% (50%) |
| A-4 Agricultural Recreation | 12 ha | 12 ha | 12 ha | 30% |
| A-5 Agricultural Market | 0.8 ha | 0.8 ha | 2 ha | 50% |
| R-2 Suburban Residential | 0.2 ha | 0.4 ha | 0.8 ha | 30% |
| R-2(A) Two-Family Suburban Residential | 0.2 ha | 0.4 ha | 0.8 ha | 30% |
| R-3 Urban Residential | 700 sq m | 0.2 ha | 0.8 ha | 30% |
| R-3A Urban Residential – Duplex | 700 sq m | 0.2 ha | 0.8 ha | 30% |
| RM-2 Medium Density Multi-Family | | | | 40% |
| RM-3 High Density Multi-Family Residential | 0.2 ha | 0.8 ha | 0.8 ha | 65% |
| MP-1 Mobile Home Park | 2 ha | 2 ha | 2 ha | |
| C-1 Convenience Store | 1100 sq m | 1675 sq m | 1675 sq m | 50% |
| C-2 Local Commercial | 1100 sq m | 1675 sq m | 0.8 ha | 50% |
| C-2(A) Local Commercial | 1100 sq m | 1675 sq m | 0.8 ha | 50% |
| C-3 Service Commercial | 1100 sq m | 1675 sq m | 0.8 ha | 50% |
| C-4 Tourist Recreational Commercial | 1100 sq m | 1675 sq m | 0.8 ha | 20% |
| C-5 Neighbourhood Pub Commercial | 1100 sq m | 1675 sq m | 0.8 ha | 40% |
| P-1 Parks & Institutional | 0.2 ha | 0.4 ha | 1 ha | 40% |
| I-1 Light Industrial | 0.2 ha | 0.4 ha | 0.4 ha | 50% |
| I-2 Heavy Industrial | 0.2 ha | 0.4 ha | 0.4 ha | 50% |
| I-3 Transportation Based Industrial | 0.8 ha | 0.8 ha | 0.8 ha | 20% |
| I-4 Aggregate & Mineral Processing | 0.8 ha | 0.8 ha | 0.8 ha | 20% |
| W-3 Water Marina | 1100 sq m | 1675 sq m | 0.4 ha | |
| W-3A Boat Moorage | 1100 sq m | 1675 sq m | 0.4 ha | |

8.5 Area 'E' – Cowichan Station/Sahtlam/Glenora

| Zone | Minimum Lot Size | | | Max. Lot Coverage |
|---|------------------------------|----------------------|-----------------------|-------------------|
| | With Community Water & Sewer | With Community Water | With On-Site Services | |
| F-1 Primary Forestry | 80 ha | 80 ha | 80 ha | 30% |
| F-2 Secondary Forestry | 4 ha | 4 ha | 4 ha | 30% |
| A-1 Primary Agricultural | 12 ha | 12 ha | 12 ha | 30% |
| A-1C Agricultural Conversion | 8 ha | 8 ha | 8 ha | 30% |
| A-1L Primary Agri. 1 Lease | 2.5 ha | 2.5 ha | 2.5 | 50% |
| A-2 Secondary Agricultural | 2 ha | 2 ha | 2 ha | 30% |
| A-5 Agricultural Market | 1 ha | 1 ha | 1 ha | 50% |
| A-6 Special Agricultural | 38 ha | 38 ha | 38 ha | 20% |
| R-1 Rural Residential | 5 ha | 5 ha | 5 ha | 30% |
| R-2 Suburban Residential | 0.4 ha | 0.4 ha | 2 ha | 30% |
| R-3 Urban Residential | 0.09 ha | 0.2 ha | 2 ha | 25% |
| R-4 Medium Density Res. | 1 ha | | | 40% |
| RM-1 Low Density Multi-Family Residential | 20 units per ha | | | 40% |
| RM-2 Medium Density Multi-Family Residential | 30 units per ha | | | 40% |
| RC-1 River Corridor | 20 ha | 20 ha | 20 ha | 20% |
| MP-1 Manufactured Home Park | 2 ha | 2 ha | 2 ha | |
| R-5 Comprehensive Development Residential | | | | 20% |
| C-1 Convenience Store | 0.1 ha | 0.3 ha | 1 ha | 50% |
| C-2 Local Commercial | 0.1 ha | 0.3 ha | 1 ha | 50% |
| C-4 Tourist Recreational Commercial | 0.2 ha | 0.4 ha | 1 ha | 20% |
| P-1 Parks & Institutional | 0.2 ha | 0.4 ha | 1 ha | 40% |
| River Corridor Conservat'n | 10 ha | 10 ha | 10 ha | |
| P-3 Outdoor Recreation | 1 ha | 1 ha | 1 ha | 20% |
| I-1 Light Industrial | 0.1 ha | 0.3 ha | 1 ha | 50% |
| I-2 Heavy Industrial | 0.1 ha | 0.3 ha | 1 ha | 50% |
| I-4 Aggregate & Mineral Processing Industrial | 0.8 ha | 0.8 ha | 1 ha | 20% |
| I-5 Restricted Light Ind. | 0.2 ha | 0.4 ha | 0.8 ha | 50% |
| T-1 Railway Transportation | | | | |

8.6 Area 'F' – Cowichan Lake South/Skutz Falls

| Zone | Minimum Lot Size | | | Max. Lot Coverage |
|----------------------------------|------------------------------|----------------------|-----------------------|-------------------|
| | With Community Water & Sewer | With Community Water | With On-Site Services | |
| A-1 Primary Agricultural | 12 ha | 12 ha | 12 ha | 30% |
| A-3 Golf Course/ Agricultural | 12 ha | 12 ha | 12 ha | 10% |
| F-1 Forest Reserve | 80 ha | 80 ha | 80 ha | 20% |
| F-2 Secondary Forest Reserve | 4 ha | 4 ha | 4 ha | 20% |
| F-2A Forestry/Residential | 3.5 ha | 3.5 ha | 3.5 ha | 30% |
| LR-1 Lakefront Residential | 2500 sq m | 2500 sq m | 1 ha | 20% |
| LR-2 Lakefront Residential | 2200 sq m | 2 ha | 2 ha | 30% |
| RC-3 River Corridor | 20 ha | 20 ha | 20 ha | 20% |
| RC-4 River Corridor | 12 ha | 12 ha | 12 ha | 20% |
| R-1 Rural Residential | 2 ha | 2 ha | 2 ha | 30% |
| R-2 Suburban Residential | 4000 sq m | 4000 sq m | 2 ha | 30% |
| R-3 Urban Residential | 695 sq m | 2000 sq m | 2 ha | 25% |
| C-1 Local Commercial | 1000 sq m | 3000 sq m | 1 ha | 50% |
| C-2 General Commercial | 1000 sq m | 3000 sq m | 1 ha | 50% |
| C-3 Service Commercial | 1000 sq m | 3000 sq m | 1 ha | 50% |
| C-4 Tourist Commercial | 2000 sq m | 4000 sq m | 1 ha | 20% |
| C-4A Resort Commercial | 1100 sq m | 2000 sq m | 1 ha | 20% |
| C-5 Neighbourhood Pub Commercial | 1000 sq m | 3000 sq m | 1 ha | 40% |
| C-6 Guest House Commercial | 1000 sq m | 3000 sq m | 1 ha | 20% |
| I-1 Light Industrial | 2000 sq m | 4000 sq m | 1 ha | 50% |
| I-2 Heavy Industrial | 2000 sq m | 4000 sq m | 1 ha | 50% |
| P-1 Parks | None | None | None | |
| P-2 Institutional | 2000 sq m | 4000 sq m | 1 ha | 40% |
| Water Zones (all) | None | None | None | |
| U-1 Private Utility | None | None | None | |

8.7 Area 'G' – Saltair/Gulf Islands

| Zone | Minimum Lot Size | | | Max. Lot Coverage |
|---|------------------------------|----------------------|-----------------------|-------------------|
| | With Community Water & Sewer | With Community Water | With On-Site Services | |
| A-1 Agricultural Resource | 20 ha | 20 ha | 20 ha | 30% |
| F-1 Forestry/Natural Resource | 20 ha | 20 ha | 20 ha | 20% |
| R-2 Suburban Residential | 0.4 ha | 1 ha | 1 ha | 25% |
| R-3 General Residential | 0.2 ha | 0.4 ha | 1 ha | 35% |
| MP-1 Manufactured Home Park Residential | 2 ha | 2 ha | 2 ha | |
| C-2 Local Commercial | 0.4 ha | 0.4 ha | 1 ha | 50% |
| C-3 Service Commercial | 0.4 ha | 0.4 ha | 1 ha | 50% |
| C-4 Tourist Commercial | 0.4 ha | 0.4 ha | 1 ha | 20% |
| C-5 Neighbourhood Pub Commercial | 0.4 ha | 0.4 ha | 1 ha | 40% |
| P-1 Parks | N/A | N/A | N/A | |
| T-1 Railway Transportation | N/A | N/A | N/A | |
| P-2 Institutional | 2 ha | 2 ha | 2 ha | 40% |
| All W-Zones | N/A | N/A | N/A | 50% |

8.8 Area 'H' – North Oyster/Diamond

| Zone | Minimum Lot Size | | | Max. Lot Coverage |
|--|------------------------------|----------------------|-----------------------|-------------------|
| | With Community Water & Sewer | With Community Water | With On-Site Services | |
| A-1 Primary Agricultural (greenhouses) | 12 ha | 12 ha | 12 ha | 15% (50%) |
| A-2 Secondary Agricultural (greenhouses) | 2 ha | 2 ha | 2 ha | 15% (50%) |
| A-2A Restricted Secondary Agricultural (greenhouses) | 1.2 ha | 1.2 ha | 1.2 ha | 15% (50%) |
| F-1 Primary Forestry | 80 ha | 80 ha | 80 ha | 10% |
| F-2 Secondary Forestry | 20 ha | 20 ha | 20 ha | 10% |
| R-1 Rural Residential (greenhouses) | 2 ha | 2 ha | 2 ha | 20% (30%) |
| R-2 Suburban Residential (greenhouses) | 0.4 ha | 0.4 ha | 2 ha | 20% (30%) |
| R-10 Rural Water Conservancy (greenhouse) | 8 ha | 8 ha | 8 ha | 10% (30%) |
| MP-1 Mobile Home Park | 2 ha | 2 ha | 2 ha | |
| MH-1 Manufactured Home Residential | 325 sq m | 325 sq m | 2 ha | 35% |
| C-2 Local Commercial | 1100 sq m | 1675 sq m | 0.8 ha | 50% |
| C-2B Local Commercial | 1100 sq m | 1675 sq m | 0.8 ha | 50% |
| C-3 Service Commercial | 1100 sq m | 1675 sq m | 0.8 ha | 50% |
| C-4 Tourist Recreational Commercial | 1100 sq m | 1675 sq m | 0.8 ha | 15% |
| GL-1 Guest Lodge | 4 ha | 4 ha | 4 ha | 15% |
| P-1 Parks & Recreation | | | | 15% |
| P-2 Institutional | 1100 sq m | 1675 sq m | 0.8 ha | 40% |
| P-2A Institutional | 0.8 ha | 0.8 ha | 0.8 ha | 40% |
| I-1 Light Industrial | 0.2 ha | 0.4 ha | 0.8 ha | 50% |
| I-2 Heavy Industrial | 2 ha | 2 ha | 2 ha | 50% |
| U-1 Utility (LNG) | 10 ha | 10 ha | 10 ha | 20% |

8.9 Area 'I' – Youbou/Meade Creek

| Zone | Minimum Lot Size | | | Max. Lot Coverage |
|---|------------------------------|----------------------|-----------------------|-------------------|
| | With Community Water & Sewer | With Community Water | With On-Site Services | |
| F-1 Forest Reserve | 80 ha | 80 ha | 80 ha | 20% |
| F-2 Forest Reserve | 4 ha | 4 ha | 4 ha | 20% |
| LR-1 Lakefront Residential | 2500 sq m | 2500 sq m | 1 ha | 20% |
| LR-2 Lakefront Residential | 1600 sq m | N/A | N/A | 30% |
| LR-5 Lakefront Residential | 1600 sq m | N/A | N/A | 30% |
| LR-6 Bald Mountain Lakefront Cottage Res. | 16 ha | 16 ha | 16 ha | 30% |
| LR-7 Lakefront Residential | 1200 sq m | 1200 sq m | 1200 sq m | 30% |
| LR-8 Lakefront Residential | 2 ha | 2 ha | 2 ha | 10% |
| LR-9 Lakefront Residential | 1.2 ha | 1.2 ha | 1.2 ha | 25% |
| LR-10 Lakefront Res. | 1.6 ha | 1.6 ha | 1.6 ha | 20% |
| R-2 Suburban Residential | 4000 sq m | 4000 sq m | 2 ha | 30% |
| R-3 Urban Residential | 695 sq m | 2000 sq m | 1 ha | 25% |
| MHR-4 Manufactured Home Residential | 2 ha | 2 ha | 2 ha | |
| R-5 Residential | 1000 sq m | 1000 sq m | 1000 sq m | 30% |
| R-6 Residential | 1 ha | 1 ha | 1 ha | 10% |
| R-7 Residential | 1.9 ha | 1.9 ha | 1.9 ha | 25% |
| RM-1 Multi-Family Res. | 4.5 ha | 4.5 ha | 4.5 ha | 15% |
| RM-2 Multi-Family Res. | 1.3 ha | 1.3 ha | 1.3 ha | 15% |
| RM-3 Multi-Family Res. | 3.5 ha | 3.5 ha | 3.5 ha | 15% |
| RM-4 Multi-Family Res. | 2.5 ha | 2.5 ha | 2.5 ha | 20% |
| RM-5 Multi-Family Res. | 3 ha | 3 ha | 3 ha | 20% |
| C-2 General Commercial | 1000 sq m | 3000 sq m | 1 ha | 50% |
| C-3 Service Commercial | 1000 sq m | 3000 sq m | 1 ha | 50% |
| C-4 Tourist Commercial | 2000 sq m | 4000 sq m | 1 ha | 20% |
| C-5 Neighbourhood Pub | 1000 sq m | 3000 sq m | 1 ha | 40% |
| C-7 Waterfront Commercial | 8000 sq m | N/A | N/A | 30% |
| I-1 Light Industrial | 2000 sq m | 4000 sq m | 2 ha | 50% |
| I-2 Heavy Industrial | 2000 sq m | 4000 sq m | 2 ha | 50% |
| P-1 Parks | N/A | N/A | N/A | |
| P-2 Institutional | 2000 sq m | 4000 sq m | 1 ha | 40% |
| P-2A Institutional Retreat | 0.2 ha | 0.2 ha | 0.2 ha | 40% |
| All W-Zones | N/A | N/A | N/A | |

8.10 Zoning Recommendations



Suggested zoning considerations and amendments:

- i. Decrease the maximum lot coverage percentages permitted. This can be justified by specifying that the percentage of the lot coverage refers to impervious surfaces. By minimizing paved/concreted surfaces, impervious surfaces can be limited to roofs of structures.
- ii. Introduce mixed-use zoning in urban and suburban areas. Mixing land uses is the first smart growth principle cited by Smart Growth BC.
- iii. Reduce off-street parking requirements for mixed-use zones and for buildings based on the activities and circumstances related to transportation needs (for example, developments that provide car share or bus passes for residents, or projects well served by public transit). These may require justification to be provided to MOT.
- iv. Set up a reserve fund for off-street parking and use at least part of that fund for alternative transportation infrastructure such as walking and cycling paths. This is enabled by Bill 27 amendments to Section 906 of the Local Government Act. In addition, the CRD has initiated a program for pathways as an element of transportation on Salt Spring Island under the Public Transit Service it provides on the Island. This option could be investigated by the CVRD.
- v. Allow and encourage shared parking arrangements.
- vi. Allow live-work units in all residential zones.
- vii. Require minimum percentage of accessory or secondary dwelling units in all single-family developments.
- viii. Prohibit single-use buildings in commercial zones.
- ix. Accept plazas, community gardens, green roofs, etc., as open space in urban areas.
- x. Allow density bonusing and expedited processing incentives (possible?) for infill, mixed-used developments, cluster housing, solar concepts, green roofs, living walls, etc.

- xi. Establish a maximum building footprint for residential development, which would result in better rainwater management.
- xii. Relax building height restrictions to compensate for smaller building footprint.
- xiii. Require a minimum percentage of homes in subdivisions to be oriented for passive solar access (on an east/west axis).
- xiv. Establish maximum lot size or minimum density in serviced areas to encourage compact development.
- xv. Permit duplex and multi-family housing in more zones or as special/conditional uses in all zones.
- xvi. Permit manufactured/modular housing in all residential zones if they meet all applicable Building Code standards.
- xvii. Provide density bonuses when affordable or workforce housing and when a variety of housing products are incorporated into a development.
- xviii. Establish fire-management zones in high fire hazard areas, where defensible space must be created. Trees adjacent to forest lands could be removed and replaced in non-hazardous locations or make a contribution to a community tree fund.
- xix. List wind energy systems (wind turbines) as exceptions to height restrictions and screening requirements.
- xx. Allow rain gardens, drainage swales, water storage tanks, cisterns and similar rainwater collection facilities in all zones.
- xxi. Require multi-family dwellings and seniors' congregate care facilities with an elevator to be built to include Basic Adaptable Housing standards. These include barrier-free access to all suites and amenity areas, wider doorways, manoeuvring room at suite entries and corridors, access to a main-floor bathroom, reinforcement of bathroom walls for future installation of grab bars, and accessible door handles, switches and outlets. The District of Saanich attaches the Basic Adaptable Housing standards as a schedule to its Zoning Bylaw and are on its website:
http://www.saanich.ca/business/development/plan/pdfs/mand_bldg.pdf

- xxii. Encourage the incorporation of Enhanced Adaptable Housing Design Guidelines in all apartment buildings. These provide a higher level of accessible and adaptable features than Basic Adaptable Housing standards and are appropriate, for example, for seniors' housing. The Design Guidelines, as well as voluntary design guidelines for ground-oriented (single-family and townhouse) housing, are also on Saanich's website: http://www.saanich.ca/business/development/plan/pdfs/vol_guidelines.pdf

9. Related Issues

9.1 Building Permit Stage

The following are some recommendations that could be applied at building permit stage:

- Require provision of bicycle racks in all multi-family, mixed-use and commercial developments.
- Require green roofs on all multi-family and commercial buildings.
- Require sprinkler systems or added water resources for homes over a certain size to ensure availability for fire fighting.
- Require new buildings of high-energy-consuming uses to generate on-site energy using renewable resources such as geothermal, solar or wind.
- Require all apartment, multi-family and congregate care buildings with an elevator and common corridor to comply with the Basic Adaptable Housing standards.
- Require a limit on the amount of impervious surface as a percentage (i.e., 40%) of site area.
- Require rainwater (stormwater) management systems.

9.2 Climate Change

While there is wide-spread concern regarding the changes that climates around the globe are undergoing and that are expected to continue into the foreseeable future, there is a great deal of uncertainty as to the nature and extent of the changes to be expected. In fact, one of the few points of extensive agreement is the unpredictability of actual changes. Most of us believe, however, that we can anticipate more marked extremes.

The CVRD may wish to consider developing and adopting a climate change adaptation strategy, perhaps including a flood management plan. An immediate action it could take is to prohibit the burning of organic waste as a means of disposing of land-clearing debris for development and require its disposal at the Bing Creek Landfill facility.

9.3 Local Government Act

Under Section 905.1 of the LGA, a local government may, by bylaw, enter into a phased development agreement with a developer. Although nothing in Sections 905.1 through 905.5 refers to servicing, it would seem logical to include the timing and standards for the

infrastructure, along with the phasing and timing of the development, in the agreement. It can be assumed that any change to the agreed-upon infrastructure – like zoning changes – would require the written agreement of both parties.

Section 937.1 enables “a council” to enter, by bylaw, into a development works or servicing agreement with a developer; to provide a formula for imposing all or part of the cost of the works on the property owner; to specify when the costs imposed become a debt payable; to refrain from approving the plan (or building permit, development permit, or development variance) until the debt is paid; or to borrow the funds needed to provide work specified in the agreement. However, this section refers specifically to a “municipality” and “municipal authority”.

Section 938 empowers local governments to, by bylaw, do one or more of the following:

- (a) regulate and prescribe minimum standards for the dimensions, locations, alignment and gradient of highways in connection with subdivisions of land;
- (b) require that, within a subdivision, highways, sidewalks, boulevards, boulevard crossings, tr bays, street lighting or underground wiring be provided, and be located and constructed in accordance with the standards established by bylaw;
- (c) require that, within a subdivision, a water distribution system, a fire hydrant system, a sewage collection system, a sewage disposal system, a drainage collection system or a drainage disposal system be provided, located and constructed in accordance with the standards established in the bylaw.

According to Section 938 (3), however, local governments are not able to impose those conditions in (b) and (c) above on a subdivision under the Strata Property Act. See Section 3.11 of the revised subdivision bylaw. However, MOTI has indicated that local government (the CVRD) can and should set the standards for services. As roads within bare-land strata developments are privately owned, MOTI approves only the connection between strata roads and public roads, as well as connectivity to lands beyond the strata development.

Under Section 939, a local government may require a developer to provide extended services or oversizing to serve off-site future needs. The cost of the oversizing may be paid by the developer or by the regional district. In both instances, the party who paid the cost of the extended services is entitled to recover those costs as and when other property owners pay to connect to the services. If the developer pays the cost of oversizing, she or he is only entitled to latecomer charges for a period of 15 years from completion date of the service.

Section 941 deals with the provision of park land upon subdivision. The decision to provide land or cash in lieu of land belongs to the applicant/owner unless the CVRD’s OCPs contain “policies and designations respecting the location and type of future parks”. In the latter case, the CVRD can make the determination.

9.4 Accessibility

The provincial program Measuring Up represents an opportunity for the CVRD to partner with people with disabilities, the business sector and other community leaders or groups to assess and improve local accessibility and inclusion. The program's website, http://www.2010legaciesnow.com/measuring_up/, includes a guide to assist communities to assess, prioritize and take action on accessibility and inclusion issues. The role of the local government applicant is to gather a group of community representatives to collaborate on the implementation of the program and to administer the fund throughout the process. Funding up to \$25,000 per community is available. The next deadline for applications is 10 October 2008.

9.5 Unopened Road Ends

The CVRD sought clarification of MOT's policy regarding unopened road ends that access waterfront. Once a "road" has been dedicated – whether it is constructed or not – the process to transfer ownership involves a road closure and disposal which generally entails offering the land to adjacent property owners first. MOT is reluctant to go through this rather complicated procedure.

MOT is, on the other hand, quite willing to enter into a lease agreement with the CVRD to manage an unopened road end and develop as a path to permit public access to the water.

9.6 Road Cleaning

The CVRD may wish to advise MOTI that a \$10,000 letter of credit (or bond) should be taken to ensure that roads are cleaned after construction vehicles have used them.

9.7 Fire Protection

It is recommended that fire protection be addressed on a regional basis using improvement districts or local service areas.

10. Literature Review

The following documents and websites were reviewed for relevance and possible application to this project. Those documents that were particularly helpful in drafting the revised subdivision servicing bylaw for the CVRD are highlighted in green type.

10.1 CVRD Documents:

1. Mill Bay/Malahat OCP Bylaw No. 1890
2. Shawnigan Lake OCP Bylaw No. 1010
3. Cobble Hill OCP Bylaw No. 1210 Schedule C: Cobble Hill Neighbourhood Village Plan
4. Cowichan Bay OSP Bylaw No. 925
5. Cowichan-Koksilah OCP Bylaw No. 1490
6. West Cowichan OCP Bylaw No. 1945
7. Saltair OCP Bylaw No. 2500

8. North Oyster – Diamond OCP Bylaw No. 1497
9. Youbou/Meade Creek OCP Bylaw No. 2650
10. Central Sector Liquid Waste Management Plan
11. South Sector Liquid Waste Management Plan
12. Community Wildfire Protection Plan
13. Cowichan Basin Water Management Plan
14. Draft Environmental Strategy for the CVRD
15. "Regional Districts Road Standards: Pilot Standards and Cross-Sections" (draft)

10.2 Other Regional Districts' Documents:

16. Regional District of Nanaimo, Bylaw No. 500, Part 4, Subdivision Regulations
17. Sunshine Coast Regional District, Subdivision Servicing Bylaw
18. Comox Valley Zoning Bylaw, Part 500, Subdivision Regulations
19. Campbell River Area, Subdivision Control Bylaw
20. Columbia Shuswap Regional District, Subdivision Servicing Bylaw No. 592
21. Regional District of Nanaimo, Development Variance Permit Application Requirements and Sustainable Community Builder Checklist
22. Regional District of Nanaimo, draft Stormwater Management Plan
23. Capital Regional District, Code of Practice for Streets and Roads, and Model Code of Practice for Construction and Development Activities

10.3 Municipal Documents:

24. Municipality of North Cowichan, Subdivision Bylaw No. 1851
25. City of Langford, Subdivision and Development Servicing Bylaw Number 500
26. City of Campbell River, Subdivision Bylaw No. 1340
27. City of Campbell River, Engineering Services Department, Design Standards 2007
28. City of Chilliwack, Subdivision and Development Bylaw No. 3055; and City of Chilliwack: Policy and design Criteria Manual for Surface Water Management
29. Town of Gibsons, Subdivision and Development Bylaw No. 733
30. District of Lantzville, Subdivision and Development Bylaw No. 55
31. Bowen Island Municipality, Building Bylaw No. 65, Appendix "G" – Green Design Building Checklist
32. City of Vancouver, Impermeable Materials Site Coverage in RS Zones Bulletin
33. District of Saanich Zoning Bylaw, Schedule B, For the Control of Light Pollution
34. City of Dawson Creek OCP, "Dark-Sky Friendly" Policy
35. "Addressing the Interface Fire Hazard: A Case Study of the District of Langford"
36. City of Coquitlam "Low Impact Development Policy and Procedures Manual", a neighbourhood-specific supplement to the City-wide "Stormwater Policy and Design Manual"
37. District of Saanich, "Adaptable Housing, Requirements and Design Guidelines"

10.4 Federal and Provincial Agency Documents:

38. Local Services Act, Subdivision Regulations
39. "Subdivision Standards", Vancouver Island Health Authority
40. "Stormwater Planning: A Guidebook for British Columbia"
41. "Beyond the Guidebook: Context for Rainwater Management and Green Infrastructure in British Columbia"
42. B.C. Climate Action Charter
43. Bill 27: Local Government (Green Communities) Statutes Amendment Act, 2008, available on the website: http://www.leg.bc.ca/38th4th/1st_read/gov27-1.htm, along with explanatory notes and transitional provisions; highlights of Bill 27 provided by Chris Jensen, Infrastructure Resource Manager, and Meagan Gergley, A/Manager of Legislation Policy and Research, Ministry of Community Development
44. "Practices for Sustainable Communities", CMHC
45. "Land Development Guidelines for the Protection of Aquatic Habitat"
46. "Develop with Care: Environmental Guidelines for Urban and Rural Land Development in British Columbia"
47. "Flood Hazard Area Land Use Management Guidelines"
48. Flood Hazard Statutes Amendment Act, 2003
49. Land Title Act, Sections 86 and 219
50. Strata Property Act
51. Fish Protection Act, Riparian Areas Regulation
52. Water Act, Ground Water Protection Regulation
53. "Living Water Smart: British Columbia's Water Plan"
54. B.C. Building Code, Changes effective 5 September 2008
55. "Water Sustainability Action Plan for British Columbia: Framework for Building Partnerships"
56. "FireSmart: Protection Your Community from Wildfire"
57. "InfraGuide: Roads and Sidewalks: Road Drainage, Design Alternatives and Maintenance"
58. InfraGuide Case Study: "Town of Gibsons B.C. Reconstructs Franklin Road: A Balance of Economic Needs, Social Inclusiveness and Environmental Success"
59. "Resources from Waste: Integrated Resource Management Phase I Study Report"
60. Letter from Ministry of Transportation to Islands Trust, April 1996, re scenic/heritage road designations on a number of Gulf Islands
61. Province of B.C.'s "2010 Legacies Now: Measuring Up" website

10.5 Other Agencies and Individuals:

62. "Green Infrastructure Supplement for Subdivisions: Report on the Green Infrastructure Consultation"
63. Sustainable Communities Network website
64. "Cities Preparing for Climate Change: A Study of Six Urban Regions"

65. "Master Municipal Construction Document (MMCD), Volume II"
66. "Green Design Guidelines Manual", draft 2005 (MMCD)
67. "The Green Infrastructure Guide: Issues, Implementation Strategies and Success Stories", WCEL
68. "The Green Buildings Guide: Tools for Local Governments to Promote Site Sustainability", WCEL
69. "Smart Bylaws – Summary", WCEL
70. "Green Bylaws Toolkit for Conserving Sensitive Ecosystems and Green Infrastructure"
71. "Thinking Beyond Pipes and Pumps: Top 10 Ways Communities Can Save Water and Money", The POLIS Project on Ecological Governance, UVic
72. "Water Supply for Public Fire Protection", Fire Underwriters Survey
73. "Keeping the Rural Vision: Protecting Rural Character and Planning for Rural Development", Washington State Community, Trade & Economic Development
74. "Green Development: Integrating Ecology and Real Estate", Rocky Mountain Institute
75. "Sustainable Community Development Code: A Code for the 21st Century", Rocky Mountain Land Use Institute, in "Planning in Focus" on Municipal Research and Services Centre of Washington (MRSC) website
76. "Rural by Design", Randall Arendt
77. Planning in Focus, Local Government Planning News and Information, Municipal Research and Services Center of Washington website
78. Resources from Waste: Integrated Resource Management Study
79. "Greenhouse Gas Action Plan" website, BC Climate Exchange
80. Community Energy Association website
81. Local Government Commission (Sacramento) website
82. Smart Growth BC website



COWICHAN VALLEY REGIONAL DISTRICT

Subdivision
Servicing Bylaw
No. 3215, 2010

May 2010

COWICHAN VALLEY REGIONAL DISTRICT

Subdivision Servicing Bylaw No. 3215, 2009

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1.0 ADMINISTRATION

1.1 Title

This Bylaw may be cited as the "Cowichan Valley Regional District Subdivision Bylaw No. 3215, 2009."

1.2 Application

The provisions of this Bylaw apply to the subdivision of all lands within Electoral Areas A, B, C, D, E, F, G, H and I of the CVRD, unless specifically exempted by a regulation herein.

Note: This Bylaw should be used in conjunction with the appropriate Official Community Plan, Zoning Bylaw and other bylaws that are in force in each CVRD Electoral Area.

1.3 Purpose

This Bylaw is adopted pursuant to Section 938 of the Local Government Act, which authorizes the regulation and provision of the following works and services in respect of the subdivision of land: requirements for the provision of domestic potable water services, requirements for a sewage collection treatment and disposal systems, requirements for a drainage collection and disposal systems, requirements for fire protection; requirements for street lighting, underground wiring and transit bays; requirements for site planning and development; and requirements for highways, sidewalks, boulevards, boulevard crossings and establishment of permissible road alignment, road gradient, road location and roadway dimensions.

1.4 Schedules and Appendices to this Bylaw

The following schedules are attached to, and form part of, this Bylaw:

Schedule A: Community Water System Specifications

Schedule B-1: Community Sewer System Areas

Schedule B-2: Community Sewer System Specifications

Schedule C: Drainage System Specifications

Schedule D: Fire Protection Infrastructure Specifications

Schedule E-1: Street Lighting Areas

Schedule E-2: Street Lighting Specifications

Schedule F: Underground Wiring Areas

Schedule G: Transit Bay and Exchange Locations

Schedule H: Site Planning and Development

Schedule I: Roads

The following appendices are attached to this Bylaw:

Appendix 1: Covenant for water treatment following subdivision

Appendix 2: Covenant for drainage works on site

1.5 Severability

If any section, subsection, clause or phrase of this Bylaw is for any reason held to be invalid by the decision of any court of competent jurisdiction, such decision will not affect the validity of the remaining portions of this Bylaw.

2.0 INTERPRETATION

2.1 Definitions

In this Bylaw, unless the context otherwise requires,

“approval” means approval in writing from the authority having jurisdiction;

“Approving Officer” means Approving Officer designated as such pursuant to the Land Title Act;

“bare land strata plan” means a bare land strata plan as defined by the Strata Property Act;

“boundary adjustment” means a type of subdivision that does not create any additional parcels;

“community sewer system” means a system of sewerage works or sewage collection, treatment and disposal which serves 50 residential unit equivalents or more, or as prescribed by the appropriate zoning bylaw, and which is owned, operated and maintained by the CVRD or a municipality incorporated under the Local Government Act

“community water system” means a system of waterworks which serves 50 residential unit equivalents or more and which is owned, operated and maintained by an Improvement District under the Water Act or Local Government Act, the CVRD, Lidstech Holdings Ltd. or Burnum Utility Co. Ltd. or a municipality incorporated under the Local Government Act and where the water quality meets or exceeds the Health Canada Guidelines for Canadian Drinking Water Quality.

“CVRD” means the Cowichan Valley Regional District;

“drainage collection system” means a system of natural and man-made elements used to contain, convey, absorb and store rain water;

“highway” includes a street, road, laneway, bridge, viaduct and any other way open to the use of the public, but does not include a private right-of-way on private property or a common property road;

“improvement district” means an improvement district pursuant to the Water Act or the Local Government Act or Community Charter;

“owner” means a person registered on title of the property at the Land Title & Survey Office as owner of land;

“ornamental street lighting” means street lighting systems that are operated either as a CVRD local service area function or a private service, but do not include critical location service streetlights installed at the direction of the CVRD;

“parcel” means any lot, block or other area in which land is held or into which land is subdivided or any remaining portion of the land being subdivided;

“potable water” means water that is approved for drinking purposes in accordance with the Health Act and which meets the Canadian Drinking Water Standard;

“professional engineer” means a person who is registered or duly licensed as such under the provisions of the Engineering Profession Act of British Columbia;

“professional geoscientist” means a person who is registered or licensed under the Engineers and Geoscientists Act;

“qualified professional” means an applied scientist or technologist specializing in a particular applied science or technology including, but not necessarily limited to agrology, biology, chemistry, engineering, geology or hydrogeology and

- (a) who is registered in British Columbia with their appropriate professional organization, acting under that association’s Code of Ethics and subject to disciplinary action by that association, and
- (b) who, through suitable education, experience, accreditation and knowledge, maybe reasonably relied on to provide advice within their area of expertise;

“qualified well driller” means a person who is registered with the Comptroller of Water Rights under Section 2 of the Ground Water Protection Regulation;

"strata lot" means a strata lot as defined by the Strata Property Act;

"stream" means any of the following:

- (a) a watercourse, whether it usually contains water or not,
- (b) a pond, lake, river, creek or brook
- (c) a ditch, spring or wetland that is connected by surface flow to something referred to in paragraph (a) or (b);

"subdivider" means a person undertaking the subdivision of land;

"subdivision" means the division of land into two or more parcels in accordance with the Land Title Act, the Strata Property Act and any other legislation regulating the division of land;

"transit" means a public transit service operated by the Cowichan Valley Regional District;

"watercourse" means stream;

"zone" means a zone established under the Zoning powers of the Local Government Act.

2.2 Compliance with Bylaw

(a) No person may:

- (i) install works and services that are required or permitted by this Bylaw;
- (ii) subdivide land in the Electoral Areas of the CVRD;

without the prior written consent of the CVRD and in accordance with the provisions of this Bylaw.

(b) No person may install works or services in an area in which such works and services are prohibited by this Bylaw.

Note: The regulations in this Bylaw are in addition to the requirements of the Subdivision Regulations under the Local Services Act. Compliance with this Bylaw does not preclude the requirement to comply with provincial and federal agencies such as the Ministry of Environment, Ministry of Health, Ministry of Community Development, Fisheries and Oceans Canada, Environment Canada and others.

2.3 Approval Authority

No land within the Electoral Areas of the CVRD may be subdivided until the subdivision has received the approval of the Approving Officer.

2.4 Applications and Fees

Applications for subdivision must be submitted to the appropriate District Office of the Provincial Ministry of Transportation and Infrastructure (MOTI) for consideration by the Approving Officer.

CVRD subdivision fees are those specified in Schedule B of CVRD Development Application Procedures and Fees Bylaw No. 2255, as amended.

2.5 Excess or Extended Services and Latecomer Payments

Pursuant to Section 939 of the Local Government Act, the CVRD may require that the owner of lands being subdivided or developed provide excess or extended services to provide access to or serve land other than the land being subdivided or developed, in which case latecomer payments will apply to the lands to which excess or extended services are provided.

- 2.6 Design requirements for services may be provided by subdividers by conventional design or through performance-based standards, as provided for in Schedules A to I attached to this bylaw.

3.0 SUBDIVISION REQUIREMENTS AND REGULATIONS

3.1 All Services

A person applying for subdivision of land in the Cowichan Valley Regional District must comply with all requirements of this Bylaw, including:

1. provision of potable domestic water;
2. provision of sewage disposal;
3. provision of fire protection services;
4. provision of drainage management infrastructure;
5. provision of street lighting;
6. provision of underground wiring;
7. provision of transit bays;
8. provision of site planning and development;
9. provision of roads.

3.2 Potable Domestic Water

Potable water must be provided for all residential purposes as required by this Bylaw. In addition, the CVRD's fire protection requirements must also be satisfied.

For boundary adjustments proposed on parcels that already have a source of water, the following provisions under Section 3.2 do not apply provided the water source would not be compromised by the adjustment.

For the purpose of satisfying the provisions of this Section, proof of water for all other proposed subdivisions prior to final approval means one of the following:

(a) Surface Source of Domestic Water

Where the proposed source of water is a surface supply, the subdivider will provide a valid domestic water license, or written evidence from the authority having jurisdiction over surface water allocation that a water license will be issued prior to registration of a plan of subdivision, with a minimum volume of 2273 litres per day. The subdivider must ensure that there is no net impact to natural functions and stream and watershed health.

Water quality testing at the time of subdivision is not required.

The subdivider will enter into a Restrictive Covenant pursuant to Section 219 of the Land Title Act, in the general form of the example in Appendix 1 to this Bylaw, respecting the requirement to treat the surface water source prior to the source being used for domestic purposes.

Where rainwater harvesting is used as a secondary source of water and is used for landscape irrigation purposes the primary source requirement for potable domestic water may be reduced by 30% when proof of source requirements for landscape irrigation are proven to the satisfaction of the CVRD Engineer.

(b) Groundwater Source of Domestic Water

Where the proposed source of domestic water is from the ground, the subdivider will provide:

- (i) A well on each parcel capable of producing a minimum per minute yield of 4.5 litres if the test is conducted during the period between June 1st and October 31st, and 9 litres per minute if the tests are conducted between November 1st and May 31st; or
- (ii) A well on each new parcel capable of producing a minimum daily yield of 2273 litres, and a letter from a qualified well driller or qualified professional with groundwater assessment experience stating that the well is adequate for domestic use; or
- (iii) A groundwater capability report, prepared by a professional engineer with groundwater assessment experience, which provides reasonable assurance that all of the parcels in the subdivision will be capable of supporting wells that would produce the minimum water yield in Section 3.2(b)(i).

Where, under (i) and (ii) above, a water quality test indicates the presence of any organism or material that would cause the source not to meet the Canadian Drinking Water Standard, and where the proof of water is under (iii) above, the subdivider will enter into a Restrictive Covenant pursuant to Section 219 of the Land Title Act, in the general form of the example in Appendix 1 to this Bylaw, respecting the requirement to treat the groundwater source to remove the contaminant prior to the source being used for domestic purposes. Water testing is not required for case (iii) above, at the time of subdivision.

(c) Shared Wells

Where a well is shared by two or more households with appropriate easements, the requirements of section (b) above apply for each household to be supplied.

Evidence must be provided to the CVRD that the water source meets or exceeds the Canadian Drinking Water Guidelines.

(d) Rainwater Harvesting

Rainwater may be harvested and stored to form part or all of the daily domestic water volume requirements provided that quantities to be used as potable water are filtered or treated to meet or exceed the Canadian Drinking Water Guidelines.

Where rainwater harvested separately on a parcel for landscape irrigation requirements, water harvested for that requirement is exempt from treatment provided it is stored in a separate containment system and that no cross-connections between water stored for landscape irrigation purposes and domestic purposes are created.

Where rainwater harvested separately on a parcel for landscape irrigation requirements, the volume of water harvested for that purpose may be used to proportionally reduce the required volume for domestic purposes for that parcel as approved by the CVRD and the Provincial Approving Officer.

(e) Combined Sources of Domestic Water

Where the source of domestic water for a parcel is proposed to be provided by using a combination of water sources, surface sources and/or ground water sources and/or rainwater harvesting or a combination thereof, the subdivider will assure that all water quality and volume requirements established in this bylaw in relation to provision of domestic water for that parcel are met.

Where volumes are proven to a specific level for one source but fall below bylaw requirements for that source a subdivider may only use other sources to augment the primary source with another source or a combination of other

sources to meet bylaw requirements with the approval of the CVRD and the Provincial Approving Officer and in all cases the total volume and quality for domestic water required by this bylaw are achieved for the parcel.

The use of combined sources, and possible increased reliance on rainwater harvesting is intended to conserve surface and ground water sources and improve watershed and ecosystem health and maintain their diversity in keeping with design with nature principles.

(e) Community Water Service Connection

Where the proposed source of domestic water is a community water service, the subdivider will provide written evidence from the community water service provider or improvement district to the CVRD that the parcel to be subdivided is within a service area and that a water connection has been provided for prior to final approval, and that there is sufficient water available for the number of parcels proposed.

If the community water service is owned and operated by the CVRD, water meters must be installed for all new parcels.

3.3 Sewage Disposal

Boundary adjustments on parcels with sewage treatment and disposal connections or systems already in place are not subject to this section, provided that the sewage system and any reserve field area are not compromised by the adjustment.

For all other types of subdivision, proof of sewage disposal prior to final approval is required in one of the following forms:

(a) Individual On-site Sewage Disposal

Where the proposed or required method of sewage disposal for a proposed subdivision is an individual treatment system on each parcel, the Health Authority having jurisdiction will advise the Approving Officer of its requirements.

(b) Community Sewer Service Connection

Where the proposed or required method of sewage disposal for a proposed subdivision is connection to a community sewer system, the subdivider will present written evidence from the CVRD Engineering and Environmental Services Department to both the Approving Officer and CVRD Planning and Development Department, indicating that the parcel to be subdivided is within a community sewer service area, and has been provided with service connection prior to final approval.

All work necessary to connect the proposed parcels to the system will be the responsibility of the subdivider, and will be carried out in accordance with the specifications and standards set out in Schedule B-2 to this Bylaw.

Areas within the CVRD where a community sewer service connection is required or prohibited are set out in Schedule B-1 to this Bylaw.

(c) Other Sewer Service Area Connection

Where the proposed method of sewage disposal for a proposed subdivision is connection to a sewer system other than an individual on-site sewage disposal system or a community sewer system, the subdivider will provide to the Approving Officer written evidence from the service provider that the proposed parcels will be connected to the system.

3.4 Drainage

Where a subdivision is proposed that would create at least three new parcels and the smallest parcel would be less than 2 hectares in area, one of the following must apply:

- (a) Where the subdivision is in a CVRD drainage service area, written approval from the CVRD Engineering and Environmental Services Department to both the Approving Officer and the CVRD Planning and Development Department is required, indicating that the proposed parcels are within the service area and that the number of connections required is available.
- (b) Where a subdivider of land proposes to create a drainage system for the subdivision which would be turned over to the CVRD as a service area, and the CVRD has agreed in principle to assume responsibility for the system, the system will be constructed in accordance with Schedule C of this Bylaw.
- (c) Where the subdivision is not located in an existing or proposed CVRD drainage service area, a drainage report by a qualified professional will be submitted by the applicant, which will encourage the management of rainwater on site. The acceptance of this report is a prerequisite for final subdivision approval.

The subdivider must prove the CVRD with a rainwater management plan to be followed during site works and construction to avoid negative impacts on adjacent and lower-elevation properties. The subdivider will incorporate natural drainage patterns or specify and meet natural drainage requirements in a site management plan. Site design with nature can be achieved through adaptive design, landscaping and site orientation. Some on-site rainwater management techniques are described in Schedule C to this Bylaw. The CVRD's Official Community Plans may also have drainage requirements that would take effect at the time of subdivision or building construction. Should the qualified professional conclude that special measures to address drainage are required at the time of building construction, the subdivider will enter into a covenant with the CVRD which requires the qualified professional's

recommendations to be implemented as a condition of final occupancy for a building permit.

3.5 Fire Protection Service Areas

- (a) All subdivisions proposed within the CVRD, other than those specifically exempted by Section 3.5(b) below, will be required to be in a fire protection service area prior to subdivision approval. Within such areas, the subdivider will provide firefighting infrastructure as specified in Schedule D to this Bylaw.
- (b) All subdivisions proposed within the CVRD which are located in an Electoral Area Land Use Bylaw zone under one or more of the following categories:
 - (i) Forestry, other than residential;
 - (ii) Agriculture;
 - (iii) Parks, Parks/Institutional, Parks/Recreational;
 - (iv) Recreation;
 - (v) Water;
 - (vi) Transportation; or
 - (vii) Utility

and where the proposed parcels, following subdivision, would be greater than 8 hectares in area, may not be required to be within a fire protection service area. The CVRD will generally not be able to service such areas, unless they are within a fire protection area at the time of application for subdivision.

3.6 Street Lighting

Schedule E-1 sets out those areas within the CVRD's Electoral Areas that require, permit or prohibit the installation of ornamental street lighting.

Schedule E-2 sets out the illumination specifications for ornamental street lighting installed by a subdivider, whether it is owned and operated by the CVRD as a local service area, or maintained by a strata corporation or utility.

3.7 Underground Wiring

- (a) Schedule F sets out those areas within the CVRD's Electoral Areas that require the installation of underground electrical, telephone and cable television services at the time of subdivision.
- (b) Notwithstanding Section 3.7(a) above, subdivisions that would require the installation of fewer than three new power poles are not required to have underground wiring.

3.8 Transit Bays

Schedule G-1 sets out areas within which transit bays, exchanges and shelters may be required at the time of subdivision.

3.9 Roads

Roads within the CVRD are the jurisdiction of MOTI and will be designed and built to MOTI specifications. The CVRD may accept alternate road standards that are approved by the Approving Office, that are appropriate for rural areas and, at the same time, are designed to ensure safety and efficiency. Schedule H contains the preferred standards.

3.10 Road Design

In order to meet the potential for performance standards, the CVRD encourages the use of designing-with-nature principles in lot layout design when subdivision applications are made.¹

3.11 Landscaping

All landscaping on public rights-of-way, highways and parkland to be dedicated upon subdivision will be done in accordance with Schedule H3.0 of this bylaw.

4.0 BYLAW ADMINISTRATION

4.1 Enforcement

Any person who violates any of the provisions of the Bylaw may, on summary conviction, be liable to a penalty not exceeding \$10,000 plus all costs related to prosecution.

Every day in which a violation occurs will be deemed to be a separate violation and the person violating the provisions of the Bylaw will be subject to the penalty and cost of prosecution liabilities as applicable.

4.2 Repeal

Subdivision Bylaw No. 1215 is hereby repealed.

4.3 Adoption

This Bylaw will come into full force and effect upon the date of its adoption by the Board of Directors of the Cowichan Valley Regional District.

Read a first time on the _____ day of _____

Read a second time on the _____ day of _____

¹ The principles of designing with nature are explained in detail in the publication "Design with Nature" by Ian L. McHarg.

SCHEDULE A

Community Water System Specifications

For CVRD-owned and operated community water systems, the specifications for extensions to the services and connections are described in the Master Municipal Construction Documents (MMCD), including MMCD's Green Design Guidelines Manual, as amended from time to time.

Notwithstanding the MMCD, any person subdividing a parcel in a CVRD community water service area must obtain the specific direction and prior written approval of the Engineering and Environmental Services Department prior to making service line connections or installing infrastructure on the parcel to be subdivided, or under a highway, road or statutory right-of-way.

Performance Standards for Water Systems

To assist those applicants who choose to use MMCD's Green Design Guidelines Manual, the following Performance Standards are provided for additional guidance. A subdivision project based on Performance Standards must meet or exceed MMCD Prescriptive Standards.

Performance-based systems are intended to focus on improved water conservation and management with related reductions of water quantities consumed and treated in order to maintain and prolong limited supplies.

The CVRD has initiated an awareness campaign to encourage residents to reduce water use and to conserve water, particularly during drier summer months.

The Performance Standards for water systems are:

- The required professional qualification for applicants using the Performance Standards approach for water system design is a professional engineer with a minimum of 5 years' experience in Water System Design.
- Designers and developers are encouraged to include demand-management provisions in their projects, including:
 - (a) appropriate location of individual wells on approved lots
 - (b) development of appropriately-sized community water systems
 - (c) rainwater harvesting
 - (d) water-conserving fixtures and appliances
 - (e) efficient landscape irrigation design and practices
 - (f) water metering and
 - (g) grey water recycling.
- Where demand-management provisions are included in a development, and related operations procedures are enforceable by CVRD bylaw or contract, the CVRD will

consider project-specific calculations of water demand and determine related water supply sizing.

- Other aspects of a proposed system will be equivalent to or better than the Prescriptive Standards contained in MMCD.
- Performance Standards will be considered where it is demonstrated that their application will provide for appropriate functioning of the relevant system or systems.

SCHEDULE B-1

Community Sewer System Areas

The areas within which community sewer system connection is a requirement of subdivision are shown on Maps B-1a through B-1i.

Where Urban Containment Boundaries exist in a CVRD Official Community Plan, the community sewer services will not normally be permitted to expand beyond them – connection is not permitted unless the Health Authority has advised the CVRD that a health hazard exists and connection to a community sewer system is required to address the hazard, and the CVRD agrees to extend the service to eliminate the hazard. In no cases will subdivision be approved in such areas on the basis of the community sewer system being present.

SCHEDULE B-2

Community Sewer System Specifications

The infrastructure of a community sewer system will generally conform to the specifications of the Master Municipal Construction Documents (MMCD), including MMCD's Green Design Guidelines Manual, as amended from time to time.

Notwithstanding the MMCD, any person subdividing a parcel in a community sewer service area must obtain the specific direction and prior written approval of the Engineering and Environmental Services Department prior to making service line connections or installing infrastructure under a highway, road or statutory right-of-way.

Performance Standards for Sanitary Sewer Systems

To assist those applicants who choose to use MMCD's Green Design Guidelines Manual, the following Performance Standards are provided for additional guidance. A subdivision project based on Performance Standards must meet or beat MMCD Prescriptive Standards.

The Performance Standards for sanitary sewer systems are:

- The required professional qualification for applicants using the Performance Standards approach for sanitary sewer system design is a professional engineer with a minimum of 5 years' experience in Sanitary Sewer System Design.
- Designers and developers are encouraged to include demand-management provisions in their projects, including:
 - (a) low-flow fixtures and appliances (toilets, faucets, showers, dish- and clothes-washers)
 - (b) inflow and infiltration reduction programs
 - (c) installation of dual piping systems for black and grey water
 - (d) installation of treatment systems for grey water recycling
 - (e) water metering
- Where demand-management provisions are included in a development, and related operations procedures are enforceable by CVRD bylaw, strata bylaw or contract, the CVRD will consider project-specific calculations of sewage flows and related sanitary sewer sizing.
- Use of appropriate trenchless technologies is encouraged for sewer rehabilitation and replacement. Trenchless technology is not anticipated for new works.
- Other aspects of a proposed system will be 'equivalent' to or better than the Prescriptive Standards contained in the MMCD.

SCHEDULE C

Drainage System Specifications

The infrastructure of a drainage system that the CVRD will be operating will generally conform to the specifications of the MMCD, including MMCD's Green Design Guidelines Manual, as amended from time to time.

Notwithstanding the MMCD, any person subdividing a parcel in an area where a CVRD-owned and operated drainage service area is in existence or proposed must obtain the specific direction and prior approval of the Engineering and Environmental Services Department prior installing any infrastructure.

To assist those applicants who choose to use MMCD's Green Design Guidelines Manual, the following Performance Standards are provided for additional guidance. A subdivision project based on Performance Standards must meet or beat MMCD Prescriptive Standards.

C1.0 RAINWATER MANAGEMENT

C1.1 Performance Standards for Rainwater Management Systems

Rainwater management is a key component of protecting quality of life, property and aquatic ecosystems. Rainwater is also a resource for groundwater recharge, water supply and recreational uses.

Rainwater management systems should be designed for the complete spectrum of rainfall events: small storms, large storms (e.g., a mean annual rainfall) and extreme storms (peak flows).

Managing rainwater effectively through utilization of natural systems and green infrastructure has many benefits, from protecting watersheds and habitat to preserving sensitive ecosystems and conserving critical resources. Limiting the amount of impervious surfacing within watersheds, in subdivision areas and on individual parcels is one means of maintaining natural hydrology.

The CVRD recommends limiting the amount of impervious surfaces on all parcels to a maximum of 40% of the parcel in subdivisions with both community water and community sewer services. Impervious surfaces in large lot subdivisions, 2 ha or more minimum parcel size, are not to exceed 20%. Pervious or permeable materials must be

used for driveways and uncovered parking areas on all parcels, and are recommended for patios and decks.

Where a subdivision application proposes a minor change such as a lot-line adjustment or where the number of lots to be created is three or fewer the CVRD may consider waiving the requirements of this section, **C1.0** of this Bylaw.

The Performance Standards for rainwater management systems are:

- The required professional qualifications for applicants using the Performance Standards approach for Rainwater Management System Design are:
 - (a) Professional Engineer with a minimum of 5 years' experience in stormwater management engineering;
 - (b) Landscape Architect (BCLSA) with experience in stormwater or rainwater management landscapes for soil/planting/irrigation design; or
 - (c) Professional Engineer with experience in Soil Hydraulics and/or Hydrogeology for soil infiltration capacity assessments.
- Prior to developing a rainwater management system for any site an applicant for subdivision will determine the predevelopment flow for the Mean Annual Rainfall (MAR) event (55 mm in a single 24-hour period) for the area to be subdivided and will design the site rainwater management system to replicate predevelopment peak rate (natural) flows during construction and at full build-out.
- For rainfall events yielding up to one-half the MAR depth ($\frac{1}{2}$ of 55 mm, or 27.5 mm, in 24 hours), the entire rainfall depth will be captured on site for infiltration and/or for evapotranspiration (volume and control of the quality of water leaving the site).
- For rainfall events yielding between one-half the MAR and the MAR, the rainfall will be detained on site to reduce the resulting runoff to the pre-development peak rate (peak control).
- For rainfall events exceeding the MAR, runoff will be conveyed safely to the point it enters a CVRD or community storm system (peak control), where such a system is in place.

Proposals for approval of Rainwater Management Systems using the Performance Standards approach will be in report form with accompanying plans and details included, signed and sealed by the responsible professional, and will include information on the following to the satisfaction of the CVRD:

- tributary areas in the catchment area with existing and ultimate land uses;
- details indicating how the local catchment area relates to the Cowichan Basin Water Management Plan, as developed, expanded and implemented by the CVRD or other approved local watershed plan;
- survey plans showing contours at 1.0-metre elevation intervals;

- existing watercourses including environmental classifications and/or fish presence information;
- a detailed explanation and illustration of the means used to apply continuous-flow modeling using currently-accepted hydrologic and hydraulic modeling software and practices. Selection of computer programs requires review of the historical application of each program in watersheds similar to those under consideration. Local authority approval of computer program selection should be obtained before design is commenced;
- layouts of existing green infrastructure and natural and proposed systems;
- major flow paths;
- lot grading patterns and final site slope elevations;
- results of on-site infiltration testing of soils at the elevation of the proposed infiltration;
- design of proposed infiltration facilities, if appropriate, including location, sizing, detail cross-sections and typical profiles.
- locations, sizes and hydraulic grade line (HGL) elevations of proposed detention facilities, if appropriate;
- other proposed mitigation measures, as appropriate;
- proposed minimum building elevations (MBE) and 100-year HGL of major flowpaths;
- pre- and post-development flows, with and without the impact mitigation measures;
- current and future upstream and downstream flows and system capacities;
- a plan for monitoring of performance by qualified professionals during site clearing, excavation, construction and maintenance periods and
- a maintenance plan for implementation subsequent to completion of the approved subdivision.

C1.2 Runoff Control

The CVRD requires site-specific rainwater management solutions designed by an engineer to manage site runoff. Design standards for site-specific rainwater management will also include requirements to manage rainwater events and run-off during site preparation and construction periods.

All development other than single-family residential and cluster residential will incorporate best management practices on-site, either in the form of a planter box, raingarden or similar biofiltration facility. Multiple facilities may be used to service the site layout and grading, but must receive and manage rainwater runoff from all impervious surfaces, including roof tops. All facilities must

- (a) be constructed with suitable top soil growing/filter medium at the rate of 0.75 m³ for every 10 m² of impervious surface; and
- (b) be provided with an overflow to the adjacent roadside drainage system. A surface flow path is preferred; however, shallow sub-surface piping may be

used within the limits of the site, provided that it is capable of day-lighting, with positive drainage, into the adjacent roadside system.

The CVRD requires that low-impact development techniques be incorporated in all developments and that the developer provide rainwater management plans and drainage systems that will achieve the following:

- (a) preserve site characteristics, including natural terrain and habitat, drainage patterns, soil structure and native vegetation to the maximum extent possible;
- (b) preserve the natural hydrologic cycle, including vegetative rainfall interception and evapotranspiration, and groundwater infiltration and percolation to the extent that subsurface conditions permit;
- (c) mimic natural rainfall capture capacity in areas of site disturbance;
- (d) reduce the rate of post-development site runoff to pre-development levels of a 10-year rainfall event;
- (e) ensure a "zero net increase or decrease" (post-development flows equal to pre-development flows) in runoff to maintain constant downstream supply;
- (f) demonstrate no net increase or decrease in runoff from the site;
- (g) reduce erosion and sediments through the retention of landscaping and other appropriate methods; and
- (h) address downstream impacts of peak rain runoffs created by the development.

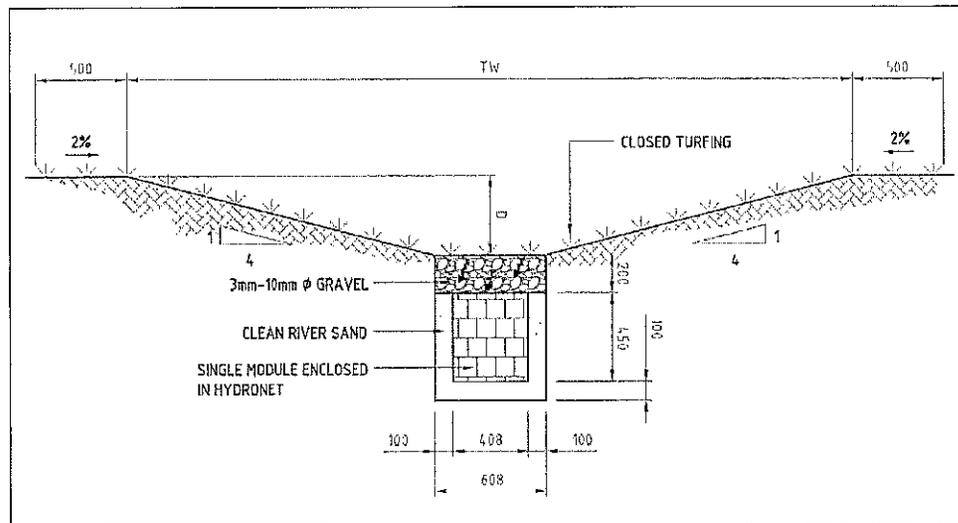
The water balance model, a professional hydrologist, a qualified professional or a combination of these in addition to currently-accepted hydrologic and hydraulic modeling software and practices may be used to determine pre- and post-development flows. The qualified professional used must sign-off on methodology employed.

In all new subdivisions, significant native or historic trees of 15 cm diameter at breast height or greater and soils must be retained to assist in rainwater management, manage the hydrological system of the site, preserve ecosystem values and protect sensitive habitat. No trees with significant root zones and canopy outside the identified building envelope, the septic field area indicated in materials filed with the local health authority pursuant to the sewerage system regulation under the Health Act and driveway access area may be removed. Removal of existing native overburden must be minimized and pre-approved.

In all subdivisions, new lots must have a minimum 30-cm thick organic soil layer maintained or replaced with material of similar quantity and quality on surfaces that will be vegetated. Retaining native soils through stockpiling for future placement is encouraged during construction phases.

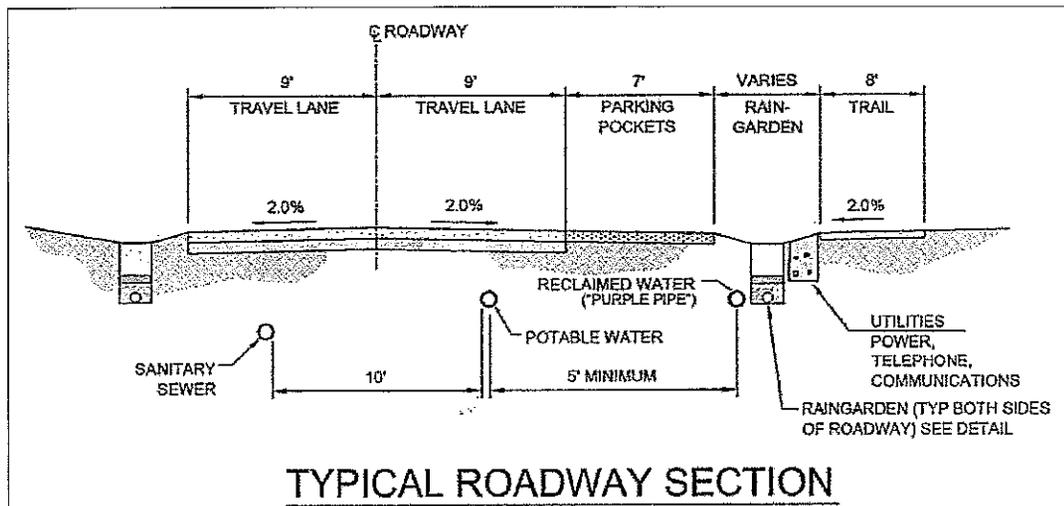
C1.3 Drainage Collection Systems

All subdivision applications for new developments will require a rainwater management plan and drainage system that will retain natural flows on the land as long as possible and will maximize ground water recharge. In large-lot developments where existing soil or site conditions make a drainage system necessary to protect the established amenities of adjoining properties or roads, a bioswale, ditch or raingarden with rainwater management capabilities which may flow to a watercourse or other ditch acceptable to the Approving Officer will be permitted.



This illustration is one of several grass swale designs.

Bioswales or ditches should be located immediately adjacent to the shoulders of roadways, with freeboard to ensure that water levels do not reach the bottom of granular levels under minor storm conditions.



TYPICAL ROADWAY SECTION

Typical Roadway Cross-Section with Raingarden

Where a highway exists adjacent to the proposed subdivision but no drainage main has been installed, the existing ditches will be enhanced to accommodate the new and existing flows. If a piped system is required and authorized by the CVRD then the mains will be installed along the frontage of the subdivision and connected to the acceptable outlet. To maintain the integrity of an existing ditch system, the CVRD may require water dissipators where connector mains flow into existing ditches.

In determining whether the design of any drainage collection system for a proposed subdivision is adequate to provide satisfactory drainage, the Approving Officer will require a developer to satisfy the requirements of this Bylaw and will require:

- (a) a drainage study (sealed by a qualified professional engineer or a qualified professional landscape architect with experience in stormwater or rainwater management) to determine:
 - i. the drainage characteristics of the site,
 - ii. the drainage characteristics upstream and downstream from the site,
 - iii. design options including on-site retention/storage, overland flow, channel capacity and volume/storage, and storage retention and routing,
 - iv. impact of eventual discharge of the water from the subdivision,
 - v. environmental and physical impacts;
- (b) on-site retention and storage facilities as outlined in this Bylaw including design standards to manage rainwater and run-off during site preparation and construction periods;
- (c) the channel capacity of the system given the volume and storage capacity.

A copy of the drainage collection system design and plans, as approved, will be deposited with the Approving Officer.

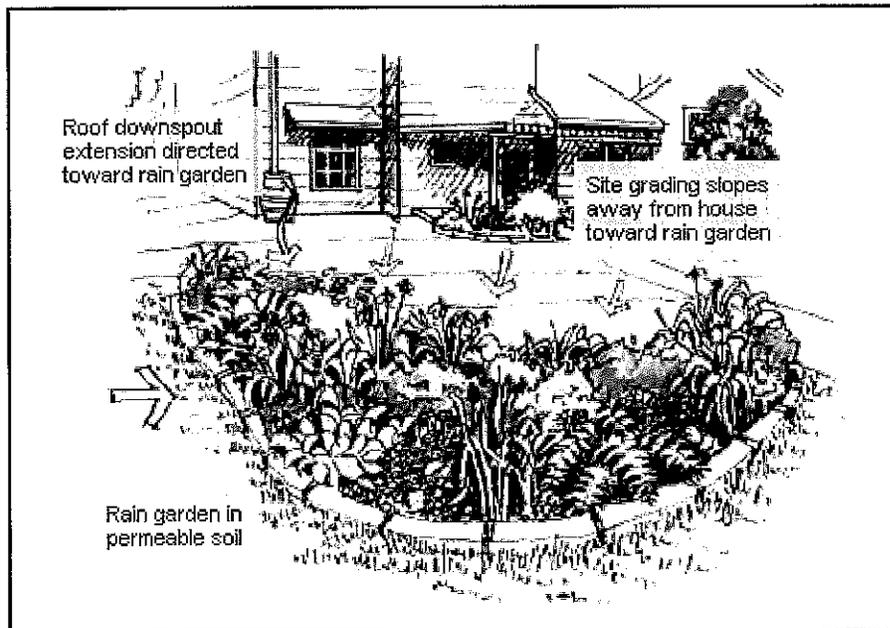
C1.4 Rainwater Storage

Rainwater will be managed using green infrastructure methods as much as possible. Natural wetland areas, swamps and ponds will be incorporated into low impact development designs. Natural wetlands, ponds and swamps may not be negatively impacted and/or destroyed for development without the written approvals from the CVRD, the Ministry of the Environment if works within a stream be required or from Fisheries and Oceans Canada if a harmful alteration and destruction of fish habitat is proposed and an authorization is required.

Rainwater storage in natural water bodies may be combined with a constructed wetland, raingarden or provided in a separate detention facility such as a pond or underground

detention chamber. The storage volume requirement will be proportional to the percentage of peak Mean Annual Rainfall (MAR) event (55 mm in a single 24-hour period) which is infiltrated to ground as determined by the applicant's qualified professional and approved by the CVRD. Corresponding maximum site release rates will be at a rate approved by the CVRD based on the applicant's qualified professional's calculations.

The detention facility will have normal overflow capacity for the Mean Annual Rainfall (MAR) event (55 mm in a single 24-hour period) that is routed in a way that does not threaten downstream property, ecosystems and habitat with erosion or flooding.



A raingarden is a planted or stone-covered bed specifically designed to receive rainwater and allow it to be slowly absorbed into the soil (infiltration).

Rainwater storage volumes may be reduced if used in combination with an on-site infiltration system designed in accordance with accepted engineering practice. The reduction in the storage requirement will be proportional to the percentage of peak Mean Annual Rainfall (MAR) event (55 mm in a single 24-hour period) post-development discharge that is infiltrated to ground as determined by a qualified professional and approved by the CVRD. Rainwater storage may be eliminated if peak minor event post-development discharge downstream from an infiltration system does not exceed the MAR.

On-site infiltration systems will incorporate appropriate pre-treatment systems to prevent clogging of the soils with fine materials.

If downstream drainage facilities do not have capacity to accommodate the MAR then the on-site detention facility will be designed to accommodate 150% of the MAR or it's the pre-development flow level for the site as determined by the CVRD.

C1.5 Water Quality Improvements

Rainwater quality improvements for developments will preferably be achieved with a constructed wetland. This may be done on an individual lot, a commonly-owned lot or a lot to be dedicated to the CVRD for the purpose of rainwater management. For developments of 10 lots or less, sequential and continuous treatment during and subsequent to rainwater events using oil/grit separators followed by a grassed swale or bioswale is acceptable. Proprietary treatment or multi-chamber methods may also be used if similar efficiencies in pollutant removal can be certified by a qualified professional.

Treatment facilities will be designed on the basis of the post-development peak "6-month" rain event, which is deemed to be 60% of the 2-year peak flow. Constructed wetlands and grassed swales or bioswales should provide water surface areas equivalent to 1% of the contributory catchment area. This surface area will be calculated as the extent of ponding caused in the wetland or bioswale by a 6-month rain event.

- For rainfall events yielding up to one-half the MAR depth ($\frac{1}{2}$ of 55 mm, or 27.5 mm, in 24 hours), the entire rainfall depth will be captured on site for infiltration and/or for evapotranspiration (volume and quality control).
- For rainfall events yielding between one-half the MAR and the MAR, the rainfall will be detained on site to reduce the resulting runoff to the pre-development peak rate (peak control).
- For rainfall events exceeding the MAR, runoff will be conveyed safely to the point it enters a CVRD or community storm system (peak control), where such a system is in place.

Hydraulic overflow capacities for constructed wetlands will be the same as for detention facilities, as outlined in section C1.1.

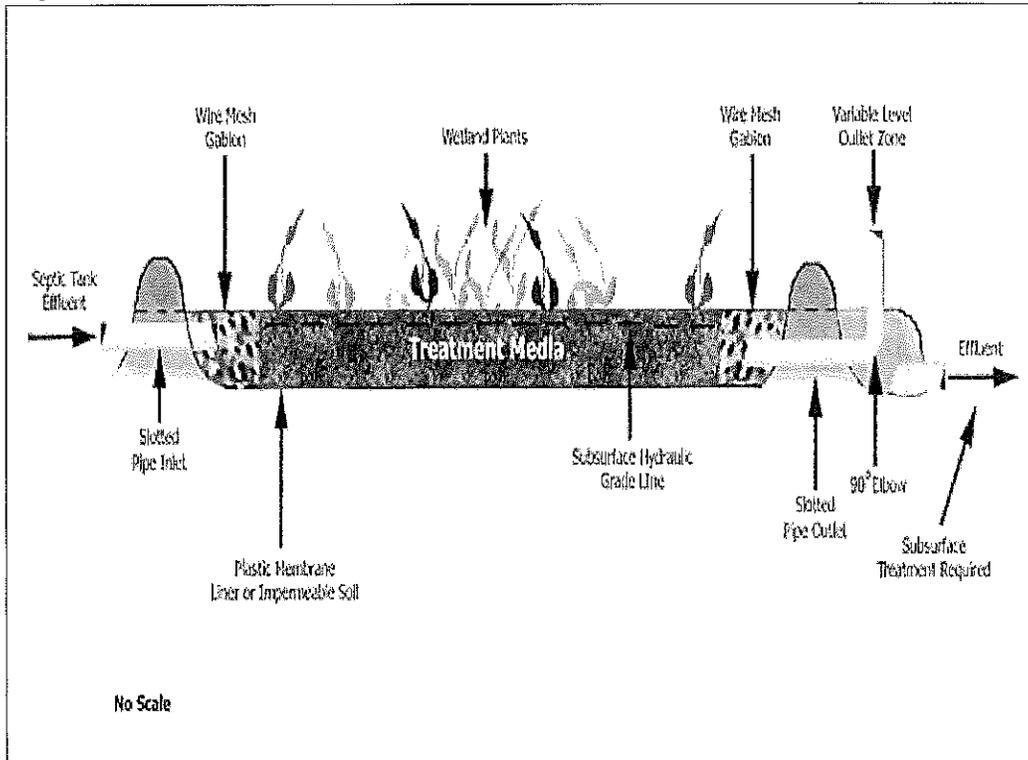
Constructed wetlands will be designed by an engineer or a qualified professional who specializes in wetland designs. The constructed wetland plan will be signed and sealed by the engineer or qualified professional, and provided to the CVRD and the Approving Officer.

There are two basic types of constructed wetlands that where possible will be used to enhance natural systems:

- (a) subsurface systems have no visible standing water, and are designed so that the wastewater flows through a gravel substrate beneath the surface vegetation; and

- (b) surface flow systems have standing water at the surface and are more suited to larger constructed wetland systems such as those designed for municipal wastewater treatment.

The following sketch provided for information purposes illustrates a type of free water constructed wetland with a combination of open water areas and some floating vegetation as well as emergent plants rooted in the soil bottom.



Constructed wetland

C1.6 Oil/Grit Chambers

The developer's engineer or qualified professional will supply sufficient information to satisfy the CVRD and the Approving Officer that removal efficiency of oil, grit and similar substances can be achieved.

Submission of a clean-out and maintenance plan, maintenance schedules and proof of maintenance of oil/grit separators and chambers during construction will be required prior to final approval of the proposed subdivision.

C1.7 Roof Drainage

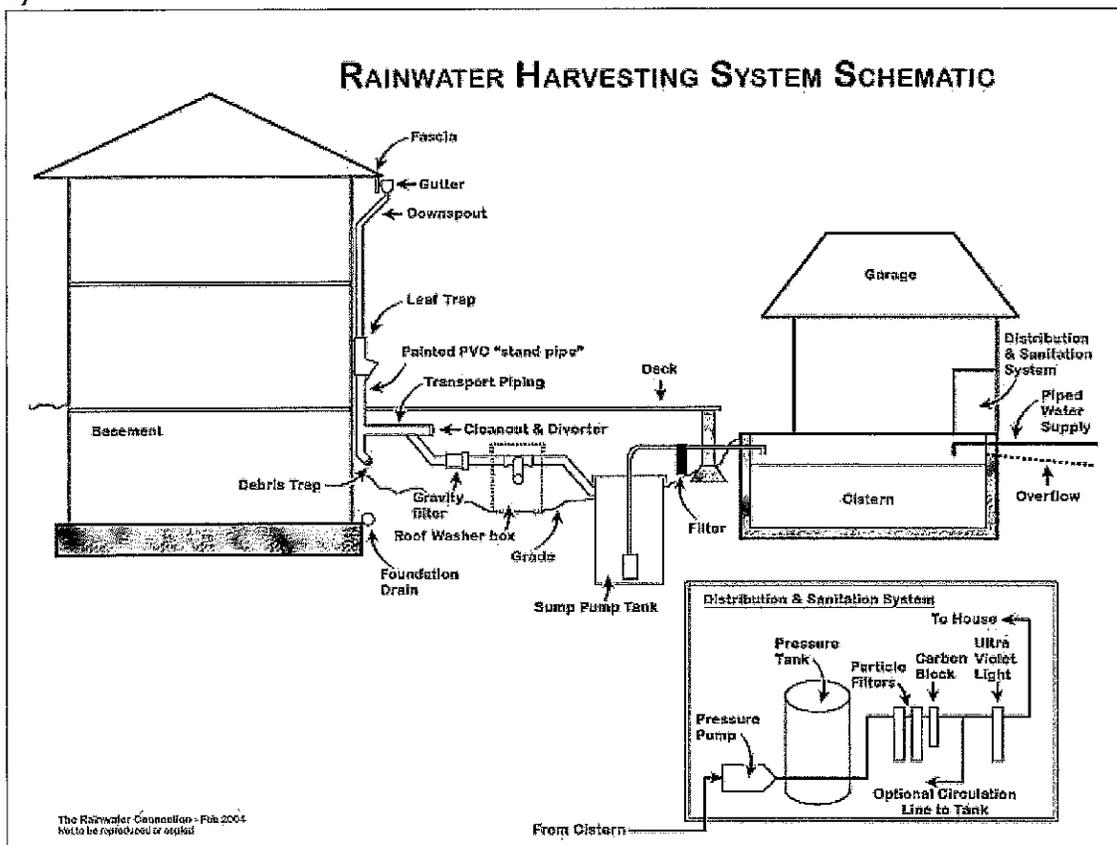
- (a) Roof drainage from single-family residential and cluster residential housing where not harvested for domestic or irrigation purposes must be directed to ground and must mimic predevelopment volumes, flow and flow rates and direction. All roof drainage which discharges to an approved storm drainage collection system with

proper site grading and daylight into an adjacent swale, raingarden or ditch and must mimic predevelopment volumes, flow and flow rates and direction

- (b) Roof drainage from all other use buildings will discharge to a planter box, raingarden incorporated into the perimeter of the building or to an on-site biofiltration facility.

C2.0 RAINWATER HARVESTING

Rainwater may be harvested on individual lots in barrels, cisterns or in-ground collection systems, dugouts or retention ponds as a source of non-potable water for irrigation and other similar uses or as potable water for domestic use provided that the water is filtered or treated to meet or exceed the Canadian Drinking Water Guidelines. Water collected in this manner for potable water purposes may be used to augment domestic water requirements and will require treatment as specified in Schedule A. A rainwater harvesting system is described in the BC Building Code as a type of private water supply system.



Example of a rainwater harvesting system

SCHEDULE D

Fire Protection Infrastructure Specifications

Where fire protection is a requirement of subdivision, the minimum standard will be that of NFPA 1142: Standard on Water Supplies for Suburban and Rural Fire Fighting. Additional matters are addressed in the parts of Schedule D below.

D1.0 WATER SUPPLY & FIRE HYDRANTS

D1.1 Areas WITHOUT Municipal or Local Water Systems

The subdivider will be solely responsible for providing the fire department with a suitable water supply for the purpose of fire protection. This suitability will be determined by the Fire Chief or CVRD Public Safety General Manager and may consist of a dry pipe system plumbed into a water source such as a pond, or other static water source such as an above ground storage tank.

The owner will also:

- Maintain the water supply as well as any fire department water connections;
- Maintain reasonable access to the fire departments water connection;
- Notify the Fire Chief in the event that there are any maintenance issues with water source and or its connections that may make this source inoperable to the fire department.

D1.2 Areas WITH Municipal or Local Water Systems

Standard:

Water supply systems used for fire protection purposes will be installed and maintained in accordance with NFPA 24, Standard for the Installation of Private Fire Service Mains and Their Appurtenances, or NFPA 1142, Standard on Water Supplies for Suburban and Rural Fire Fighting.

Fire Hydrant Marking:

Fire hydrants will be marked in a uniform manner and will be made visible from the road by reflective marking and signage as designated by the Fire Chief. (NFPA 1141, Chapter 9, 9.1.3)

Fire Hydrant Location:

Fire hydrants located in parking areas will be protected by barriers that will prevent physical damage from vehicle without obstructing hydrant operations. (NFPA 1141, Chapter 9, 9.1.5)

Fire hydrants will be located within 1.8 m (6 ft.) of the edge of the pavement unless the fire department determines another location is more acceptable for fire department use. (NFPA 1141, Chapter 9, 9.1.6)

A fire hydrant should be located on the end of dead end mains on cul-de-sacs.

Fire Hydrant Spacing:

Fire hydrants will be installed at a spacing not to exceed 150 m of vehicle travel distance.

Where the proposed buildings warrant, the fire department will require additional hydrants and closer spacing.

The fire department will approve the required fire flow and designate the location of hydrants so the at least one hydrant will be within 90 m of any point of entry into the building.

Fire Hydrant Specifications:

All fire hydrants will be AWWA approved and will meet the following criteria:

- Hydrants will be the three-way type with two 2½-inch nozzles and one 4 inch steamer.
- The barrel will be a minimum of 6 inches in diameter.
- The operating nut will open counter clockwise.
- Hydrants will be traffic type (break away).
- Hydrants will be painted to these specifications:

(a) Hydrants and all exposed parts will be painted with the required primer and finish coats in accordance with current AWWA standards.

(b) The outlet caps will be painted according to flow rates represented:

| | |
|--------|-------------------|
| Red | 500 gpm or less |
| Orange | 500 - 1,000 gpm |
| Green | 1,000 - 1,500 gpm |
| Blue | 1,500 gpm or over |

Threads on fire hydrant outlets will be American National Fire Hose Connection Screw Threads. (NFPA 1141, Chapter 9, 9.1.7)

Fire hydrants will be supplied by not less than a 150 mm diameter main installed on a looped system or by not less than a 200 mm diameter main if the system is not looped

or the fire hydrant is installed on a dead-end main exceeding 91.5 m in length. (NFPA 1141, Chapter 9, 9.2.6)

In residential areas a public main not less than 150 mm is required for fire hydrant service and should have a minimum of 750 gpm at 20 psi residual pressure.

Private Fire Hydrants:

Private fire hydrants will be installed and maintained according to the National Fire Protection Association Standard (NFPA) 24, and the local water authority.

Fire Department Hose Connections for Supply:

The fire department connection for supply will be outfitted with 6.2 cm (2-1/2") female couplings and one 10.1 cm (4") coupling with **National Standard** threads.

The hose connection will be arranged to face the street, driveway or fire access route as specified by the Fire Chief or his designate.

Fire department hose connections will be arranged so the lowest point on the inlet connection is between 61 and 106 cm above finished grade at its location.

Locking FDC caps will be required as deemed necessary by the Fire Chief.

Fire department connections will not be located more than 30.5 m from the access roadway.

Water Supply and Fire Flow:

Fire District hose connections and controlling valves used in connection with fire protection facilities will be installed at locations and to the specifications approved by the Fire Chief or his designate.

Where the existing fire flow on a system is inadequate, or a new system is proposed, engineering design calculations to verify fire flow availability will be provided to the Fire Chief by the developer.

Required fire flow for buildings will be determined in accordance with the requirements of the current edition of "Water Supply for Public Fire Protection – A Guide to Recommended Practice", published by the Fire Underwriters Survey.

Fire flows are also subject to the following minimum requirements:

| Developments (without sprinklers) | Minimum Fire Flow |
|--|--------------------------|
| Single Family Residential | 60 L/s |
| Apartments, Townhouses | 90 L/s |
| Commercial | 150 L/s |
| Institutional | 150 L/s |
| Industrial | 225 L/s |

Water Supply Pipe Diameters:

| | Minimum Diameter |
|--|-------------------------|
| Distribution Mains | 200 mm |
| Fire Hydrant Connections | 150 mm |
| Service Connections (with Fire Sprinklers) | 50 mm |

For looped distribution mains with lengths less than 500 m, the diameter can be reduced to 150 mm, providing that fire flow requirements can be met.

Privately Owned Water Systems:

The delivery of the required fire flow by private water systems is permissible, provided that:

- (a) The design and installation are based on sound engineering principles and nationally recognized good practice. NFPA Standard 24, Current Edition, "Standard for the Installation of Private Fire Service Mains and Their Appurtenances," will be used. The system will be designed and engineered to meet the required fire flows as established by the current edition of "Water Supply for Public Fire Protection – A Guide to Recommended Practice", published by the Fire Underwriters Survey.

Engineering calculations to verify the anticipated flows will be submitted at the time of plan review.

- (b) Provisions will be made to keep reservoirs and tanks full and in a ready condition at all times.
- (c) The water supply will be capable of delivering the required fire flow as recommended by the Fire Underwriters.

D2.0 FIRE PROTECTION

Much of the rural area of the CVRD is forestry and resource land. The danger of forest fires represents a source of concern for people living in these rural areas and for adjacent suburban neighbourhoods. The CVRD, as part of the development of its **draft** "Community Wildfire

Protection Plan- **July 2006**", has mapped all areas of the region and determined the fire hazard risk to each community. The Plan and associated maps should be reviewed periodically to ascertain the fire hazard level applicable to each proposed subdivision plan or bare-land strata plan as a requirement of approval of a proposed subdivision.

This section of Schedule D is intended to supplement Section D.1 above and to provide additional Performance Standards for the planning, developing and protection of areas in high interface fire hazard zones.

D2.1 Access to Wildland

Where a proposed subdivision borders wildland, forest land with significant long-term fuel loading that is considered to be a high fire hazard area, the following must be provided:

- (a) a firebreak along the edges of the subdivision bordering the high hazard area; and
- (b) access to the wildland from internal roads at distances no greater than 200 metres for fire-fighting purposes.

D2.2 Restrictive Covenants

Where new lots are created in high interface fire hazard zones the CVRD may require a qualified professional in the field of Wildland/urban interface fire protection to determine and prepare a report on required protection measures to meet or exceed current levels of interface fire protection for the degree of hazard present.

The CVRD may, under Section 219 of the Land Title Act, require a covenant to be registered on title of new lots created in high interface fire hazard areas to address interface fire protection measures (i.e., fuel-free zones around structures, on-going vegetation maintenance, fire-resistant building materials and design, and the installation of roof and exterior sprinklers).

D2.3 Supplementary Water Supply

In new subdivisions located within high hazard areas, supplementary water for fire-fighting purposes is recommended. A supplementary water supply can be provided through rainwater harvesting or other means and can be a gravity-fed system installed uphill of the new residences; vented, steel-bolted upright tanks on concrete slab; water barrels, in-ground storage facilities or other means, serviced with appropriate pump mechanisms.

D2.4 Water Reservoirs

The CVRD may assess and determine the need for new water reservoirs for fire-fighting purposes for new subdivisions. Should a new water reservoir be deemed necessary for protection within or near a proposed subdivision, the CVRD may accept the dedication of

land in the appropriate location for the construction of a water reservoir and may require the installation of a reservoir to CVRD specifications on the lot as a prerequisite for subdivision approval. A lot used for this public-use purpose is exempt from the minimum lot size.

D2.5 Driveways

All driveways must be designed to allow access to the largest emergency vehicle likely to be operated on the driveway. This includes fire trucks and other emergency vehicles.

Driveways will be surfaced with a suitable material, preferably pervious, as described in section H2.3 of this Bylaw.

Additional details on driveway design are included in section H2.0 **Driveways and Parking Areas**.

SCHEDULE E-1

Street Lighting Areas

The areas within which installation of ornamental street lighting is permitted are shown on Maps E-1a through E-1i.

Ornamental street lighting is not permitted in:

- (a) Electoral Area G;
- (b) Electoral Area H.

In all other areas, ornamental street lighting is neither required nor prohibited.

SCHEDULE E-2

Street Lighting Specifications

E-2.1 Dark Sky Requirements

The following requirements apply in the CVRD, where street lighting is either proposed or required at the time of subdivision:

- (a) Lighting systems, both private and public, will be designed to minimize obtrusive (spill light, glare and sky glow).
- (b) Spill light, also known as trespass light, is luminance falling beyond the area that is being lighted. For roadways, the limits of the road dedication will represent the boundary for spill light. For pathways, the limits of the path will represent the boundary for spill light.
- (c) The desired maximum spill light luminance level is 8.0 lux between 6 am and 10 pm, and 3.0 lux between 10 pm and 6 am, provided that the lighting provisions within the roadway are not compromised.
- (d) Methods to mitigate obtrusive light include such things as adjusting light height, wattage, partial- or full-cutoff optics, and external shielding.
- (e) The most energy efficient form of lighting is to be incorporated. Operations and maintenance costs are to be considered in the design.
- (f) All lighting systems are to be designed by a qualified lighting engineer. Design submissions to the CVRD will include luminance calculations and distribution diagrams.

E-2.2 Performance Standards for Lighting Systems

- (a) Roadway lighting designs should be prepared under the direction of a design professional that has the appropriate experience and is registered with the Association of Professional Engineers and Geoscientists of British Columbia or the Institute of Electrical and Electronics Engineers (IEEE).
- (b) Lighting calculations are based on the illuminance methods described in IES RP-8. Lighting calculations will be done using appropriate software (i.e., AGI32, LumanMicro or Visual) designed to carry out the required calculations using the luminaire manufacturer's IES photometric files.
- (c) Certified calculation drawings will be submitted by the applicant for review by the CVRD showing, at a minimum, calculated average illuminance, average to minimum uniformity, isolux line showing adequate coverage on all areas of the roadway, life cycle costing, energy use calculations, GHG emissions and manufacturer and catalogue number of luminaires used in calculations.

E-2.3 Lighting in the CVRD

Lighting at the appropriate intensity will only be required in the areas noted on **Schedule E-1**, attached to and forming part of this Bylaw.

E-2.4 Lighting in Rural Areas

In rural areas, low-density residential neighbourhoods (i.e., with on-site services), resource land areas and parks, no decorative lighting is required on streets, roads or publicly-owned lands.

Lighting on private parcels should be installed no higher than 3 metres above grade, of a low level illuminance and directed downward at paths, trails and driveways and not into adjacent properties.

E-2.5 Lighting in Suburban Areas

In residential areas where residential densities are somewhat higher than in rural areas, a slightly higher level of lighting is viewed as appropriate. In this zone, the average maintained horizontal illuminance may not exceed 5 lux.

E-2.6 Lighting in Urban Areas

In urban-form subdivisions and in multi-family residential, commercial, industrial and institutional developments, a higher level of lighting is considered appropriate.

Adequate lighting will be provided in all areas frequented by pedestrians and vehicles, particularly underground parkades and surface parking lots, primary and secondary streets, laneways and linear corridors. Lighting will be 'Dark Sky Friendly' and not shine directly into adjacent properties.

Lighting fixtures will be placed on automatic shut-off timing devices to prevent unnecessary lighting during daylight hours and to conserve energy.

In urban areas, the following requirements apply:

- (a) the average maintained horizontal illuminance may not exceed 215 lux; and
- (b) the average horizontal illuminance must be reduced to approximately 5 lux between 11:00 p.m. or the closure of the facility to the public, whichever is later, and sunrise. This may be accomplished by automatic timing devices except in those cases where an irregular schedule of the facility or business makes this impractical.

For commercial buildings and facilities, the following requirements apply:

- (a) no more than 5% of the total light output will be emitted at an angle of 90 degrees or higher from vertical;
- (b) the lighting power densities for exterior areas will not exceed 80% and for building facades and landscape features will not exceed 50%, as defined in ASHRAE/IESNA Standard 90.1-2004, Exterior Lighting Section, without amendments; and
- (c) all site and building mounted luminaires may produce a maximum initial illuminance value of no greater than 2.2 horizontal and vertical lux at the site boundary, and no greater than 0.11 horizontal lux 4.6 metres beyond the site. For site boundaries that

abut public rights-of-way, light trespass requirements may be met relative to the *curb line instead of the site boundary.*

E-2.7 Lighting Sources

All lighting should be effective, efficient and non-polluting. All lighting must be warm or "white" light; i.e., incandescent, compact fluorescent, LED (white) or metal halide sources that achieve maximum energy conservation.

SCHEDULE F

Underground Wiring Areas

The areas within which installation of underground wiring is required at the time of subdivision are shown on Maps F-1a through F-1x. This requirement only applies where more than one additional wiring pole would have to be installed if the subdivision was undertaken with overhead wiring.

The installation of underground wiring is permitted but not mandatory in areas not shown on Maps F-1a through F-1x.

The specifications for underground wiring are the responsibility of BC Hydro, the local telephone company and the local cable company.

SCHEDULE G

Transit Bays and Their Location

Transit bay locations for buses will be incorporated into the design of all roads as required by the CVRD. The minimum length of a transit bay is 20 metres.

SCHEDULE H

Site Planning & Development

H1.0 SITE CLEARING

The CVRD encourages developers, subdividers and designers to employ the principles of “designing with nature” when site planning and development is undertaken and prior to any alteration of land occurring. Natural areas should be preserved and protected to the greatest extent possible prior to, during and subsequent to development. Houses should be sited to take advantage of solar heat and light in order to maximize energy conservation and efficiency.

Uncontrolled site clearing can often result in irreparable damage to landscape components such as sensitive ecosystems and native flora and fauna. The CVRD requires pre-approval for any and all site work and requires site clearing to be managed in keeping with sound ecosystem preservation criteria and established best management practices on a site-specific basis. In addition, site clearing must have regard for erosion and sediment control, impacts on downstream environments and development and the CVRD will require related management plans to be filed prior to commencement of work to assure best environmental management practices are in effect.

The fundamental principles of “green design” include avoidance of clearcutting of a site, minimizing disturbance of soils across the entire site and minimizing removal of all natural vegetation and trees. Soils should only be disturbed and moved on an as-needed basis, with stabilization and re-vegetation implemented wherever possible. Topsoil, base and aggregate materials stockpiled during subdivision development will be reused on-site wherever possible to preserve non-renewable natural resources.

H1.1 Erosion and Sediment Control

In areas with slopes or in proximity to watercourses, off- and on-site runoff must be intercepted and managed to avoid alteration of the quantity and quality of water in watercourses, protect sensitive ecosystems and preserve habitat. Acceptable methods of retaining eroded sediments on-site include surface protection, sediment traps, silt fences, interceptor ditches, bioswales, gravel berms, check dams, bale structures, culverts and, as a last line of defence, sediment control ponds. These methods should be employed where appropriate in accordance with Schedule C, sections C1.1 to C1.6, of this Bylaw, as supplemented in the document “Land Development Guidelines for the Protection of Aquatic Habitat”.

Temporary sediment basins will have surface areas equivalent to 1% of the contributory development area. All runoff will be directed to a sediment basin except where it is impractical to construct a sediment basin due to the very small catchments involved. In this case silt fencing will be installed to intercept all overland runoff before it leaves the development site.

Temporary storm drain inlet protection will consist of geotextile fabrics and gravel filters placed over catch basins and other inlets to prevent inflow of sediments.

The developer will provide a sediment basin clean-out and management plan prior to initiating any on-site works and will arrange for the removal of sediment from the basin when the available storage volume accumulates to within two-thirds of the design volume of the basin.

Temporary sediment control will remain in place until the development area is 90% built out and landscaping is established and stabilized. Sediment basins may be converted to constructed wetlands at this time.

H1.2 Performance Standards for Erosion and Sediment Control

To assist those applicants who choose to use MMCD's Green Design Guidelines Manual, the following Performance Standards are provided for additional guidance. A project based on Performance Standards must meet or beat MMCD Prescriptive Standards.

All developments using the Performance Standards approach will submit a site-specific Erosion and Sediment Control Plan prepared by a qualified professional, including:

- the stated performance target (A or B as noted below),
- the nature of the project,
- the timing of all construction phases,
- the potential for environmental impacts,
- the mitigation measures and monitoring process proposed, and
- a plan drawing with typical details and either drawing notes or specifications to provide adequate guidance for the contractor performing the work.

Performance Target A: Erosion and sediment control measures will be designed and maintained to remove a minimum of 80% of the annual Total Suspended Solids (TSS) load conveyed by runoff from all new development.

Performance Target B: At the point of discharge into the receiving body, rainwater runoff will not exceed suspended solid levels of 25 mg/L above background levels of the receiving waters during dry conditions and 75 mg/L during storm events. Where spawning areas are situation in the receiving waters, the rainwater runoff will not, at any time, increase suspended solid levels above background levels of the receiving waters. (BC Environment standard)

H1.3 Clearing and Grubbing

As noted in Section H1.0 above, site clearing should be limited to the extent necessary to service and construct the intended use.

All material excavated for site servicing and construction will be removed from the ground surface and to a minimum depth of 300 mm below ground surface. Topsoil will be stockpiled as required and will be stored separately from hardpan soils from deeper excavation.

All sewer alignments will be cleared and grubbed to a sufficient width to allow for proper installation of the system components. Significant grade changes are discouraged. Where alignments traverse virgin areas, care must be taken to ensure that the cleared strip is only wide enough to permit proper excavation and temporary storage of excavated material. All necessary precautions will be taken to preserve the indigenous aesthetic values of the location. Waste material will be disposed of and removed to locations obtained by the developer.

On parcels of 4,000 m² or larger, trees and brush will be cleared and managed to protect structural improvements in accordance with the vegetation management strategy in Chapter 3 of the publication "FireSmart: Protecting Your Community from Wildfire" and the CVRD's draft "Community Wildfire Protection Plan".

On parcels of less than 4,000 m², any debris along with all trees and brush that are cut, except those selected for preservation, will and, along with all stumps, logs, roots, rotten wood and other organic materials, removed from the site and disposed of by approved means other than open burning. Curtain barriers are acceptable on site.

All other rubbish and debris existing on the site will be removed and disposed of at an approved CVRD landfill site or by other approved means. Trees will be felled within the designated clearing area, and those falling outside this area will be cut up and returned to the clearing area for disposal.

Individual leaning or dangerous trees or snags adjacent to but outside the designated clearing area may be pruned to minimize threats to structures subsequent to evaluation by a qualified arborist and approval by the CVRD and disposed of at an approved CVRD landfill site.

Wildlife trees located on a site subject to clearing must be identified in a site management plan and on a survey plan submitted to the CVRD. No wildlife trees may be taken down or removed from any site being cleared for development. Potentially dangerous wildlife tree(s) will be assessed by a qualified arborist **and** a qualified biologist to determine the suitability of its/their removal. Any wildlife trees determined

to be danger trees may only be felled with minimal interference to other sensitive environmental elements and must be left on site to maintain its/their wildlife function.

Excavations resulting from removal of tree trunks, roots or other material will be filled by the developer as a part of the clearing and grubbing operation.

H1.4 Burning

Burning of trees, brush, stumps, logs, roots, rotten wood, and other organic materials will only be permitted in conformity with CVRD Bylaw 2020, the CVRD Land Clearing Bylaw, to minimize the carbon footprints of development and reduce greenhouse gas emissions into the atmosphere. The developer or contractor must contact CVRD staff regarding greenhouse gas emission restrictions or standards before proceeding with burning.

H1.5 Clean-up

The working area will be maintained in an orderly manner and will not be encumbered with equipment, materials or debris.

Clean-up will be a continuing process from the start of the work to final acceptance of the project.

The applicant will provide security to the CVRD in the form of an irrevocable letter of credit or similar surety in the amount of 110% of the estimated cost of clean-up to be held until completion of the project.

The applicant will file a Project Solid Waste Management Plan with the CVRD outlining how waste will be minimized and how materials will be separated, recycled and disposed of during the course of construction up to and including completion of the project.

The developer will at all times, and without further order, keep property on which work is in progress free from accumulations of waste materials or rubbish caused by employees, by contractors or by the work.

Accumulations of waste materials that might constitute a fire hazard will not be permitted.

All heavy vehicles leaving a construction site will be required to undergo a tire and chassis wash to minimize spillage onto public roads.

Spillage from the developer's hauling vehicles on travelled public or private roads will be promptly cleaned up.

On completion of construction, the developer will remove all temporary structures, rubbish and waste materials resulting from his operations.

H2.0 DRIVEWAYS AND PARKING AREAS

The amount of impervious or non-porous material on all parcels being considered for development must be minimized as a measure to manage rainwater runoff.

H2.1 Access

Where the subdivision plan includes laneways or alleyways or where the parcels to be created back onto a laneway or alleyway, vehicular access to the parcels may be from the laneway or alleyway.

The maximum design grade for driveways will not exceed 12% unless the design is reviewed and approved by the local Fire Improvement District having authority.

Where access to a parcel is provided from a laneway or alleyway, the CVRD will not require a curb-cut, let-down or driveway access from the highway frontage.

H2.2 Driveway Design

Driveways in rural, large lot areas must be designed to meet the minimum FireSmart guidelines. In all areas, driveways must be designed in accordance with the latest edition of the "Manual on Geometric Design Standards for Canadian Roads and Streets" in order to allow access to the largest emergency vehicle likely to be operated on the driveway.

Driveways should be not less than 5 metres in width and no steeper than 15%.

H2.3 Driveway and Parking Area Materials

Finishing driveways and all exterior off-street vehicle parking areas with pervious materials as gravel, crushed stone, packed earth, unit pavers, interlocking pavers, grass pavers (grasscrete), structural grass, permeable asphalt or permeable concrete is encouraged.

H2.4 Driveway Culverts

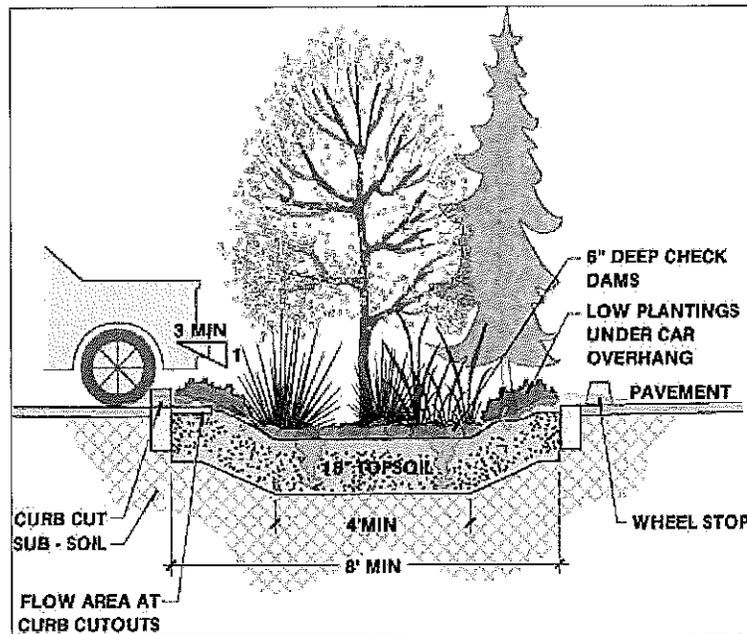
Minimum size will be 300 mm, however sizing will be established based on design flow. Capacity must be provided to capture the MAR event (55 mm in a single 24-hour period). Acceptable culvert material includes:

- Aluminized CSP
- Concrete
- Minimum cover will be 300 mm

- Ornamental stone used to anchor driveway culverts will blend tightly to the invert of the culvert.

H2.5 Parking Area Design

In multi-family residential, commercial, industrial and institutional subdivisions, parking areas will be drained with low impact development techniques such as raingardens or bioswales to accommodate pre-development flows in accordance with the rainwater management requirements of **Schedule C** of this bylaw.



Parking area swale

H3.0 LANDSCAPING

The CVRD strongly encourages site development, xeriscaping and landscape plans that minimize water usage and reflect water conservation measures.

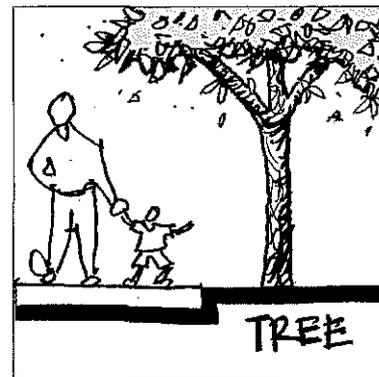
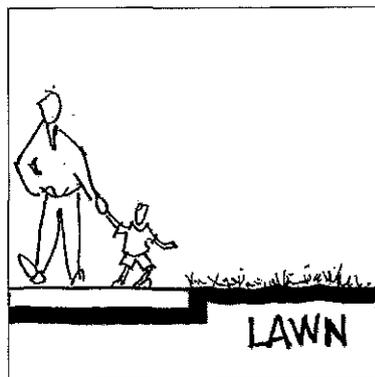
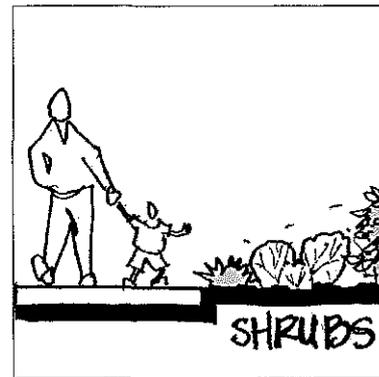
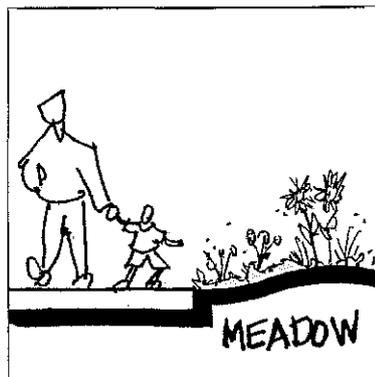
H3.1 Landscape Materials

All landscaping on public rights-of-way, highways and parkland to be dedicated upon subdivision will be xeriscaping, consisting of indigenous, drought-tolerant, fire-resistant plants.

Landscaping on public rights-of-way, highways and parkland in high interface fire hazard areas must be developed in accordance with CVRD standards for fire-resistant vegetation including deciduous trees and leafy plants.

Residents and property owners in high interface fire hazard areas are encouraged to xeriscape and to landscape their property with fire-resistant vegetation as recommended in the FireSmart Guide. Landscaping requirements for subdivisions may be established in required Development Permit design conditions.

Landscaping Finished Treatments



H3.2 Finished Landscaping Treatment

All landscaped finishing treatment must be to BCLSA standards:

- (a) Sod, with a minimum of 150 mm of suitable topsoil, reinforced where profile grade exceeds 5%, or
- (b) Ornamental landscaping with a minimum of 450 mm of organic topsoil through the invert and side slope. Landscape plantings will provide a variety of low maintenance native species, with consideration for maintaining sight lines for vehicles entering and exiting the roadway, as well as irrigation demands, erosion

control and weed control. The invert of the channel will be top dressed with a blend of ornamental "river rock" to assist with erosion control. The blend of rock will consist of:

- 300-450 mm diameter randomly placed with an average spacing of 3 metres
- 50-75 mm diameter – 2/3 by volume
- 25 mm diameter – 1/3 by volume

The 300-450 mm stone will be partially buried within the smaller stones, not placed on top. All stone will be rounded, not fractured. The edges of the rock lining will be scattered into the adjacent soil to avoid a hard edge appearance. The applicant must submit a landscape plan prepared by a Registered BC Landscape Architect (BCLSA) for review and approval by the CVRD. It is strongly encouraged that the applicant consult with CVRD staff prior to design to ensure that the proposal achieves a proper aesthetic fit with other areas of the neighbourhood.

The following list contains species deemed to be appropriate for landscaping on CVRD roads:

1. *Acer griseum* Paperbark Maple
2. *Acer palmatum* "Trompenburg"
3. *Acer palmatum* "Bloodgood"
4. *Cercis Canadensis*
5. *Cornus kousa* (various cultivars)
6. *Crataegus crus-galli inermis* (Thornless Cockspur)
7. *C.X. lavalleyi*
8. Various *Ginkgo Biloba* cultivars
9. *Hibiscus syriacus*
10. *Parrotia pesica* (particularly Vanessa and Inges Ruby Vase)
11. *Sorbus aria*
12. *Styrax japonica*

SCHEDULE I

Roads

11.0 ROADWAYS

The CVRD wishes to retain the rural character of many areas of the Cowichan Valley and, at the same time, wishes to provide for and encourage walking and the use of non-motorized forms of transportation. The CVRD is discussing the desirability and practicality of alternative, varying road standards with MOTI. The essence of these alternative standards is outlined below.

All roads within the CVRD (except roads within a bare-land strata development) will be constructed to the specifications of the MOTI as determined with the CVRD and the applicant for subdivision. Construction standards for roads will require the approval of the provincial Approving Officer.

1.1.E Road Network

Roads within a proposed subdivision must be designed to comply with the Regional Transportation Plan. Roads should be designed using looped networks capable of accommodating two-way access. Particularly in high fire hazard areas, dead-end streets and cul-de-sacs should be avoided.

Where any subdivision contains parcels less than 90 metres in width, intersecting highways will be dedicated at intervals not greater than 400 metres and on the same side of the highway and beginning at any existing lateral highway, except:

- (a) where difficult terrain or other natural features render vehicle access impracticable, or
- (b) where the pattern of existing subdivision precludes the necessity of providing access.

11.2 Performance Standards for Road Systems

The Performance Standards for roads within the CVRD are intended to:

- Accommodate motor vehicle traffic in a manner compatible with the natural environment in which the road is located.
- Employ traffic calming measures as appropriate to maximize road safety.
- The impervious surface area of paved rural road surfaces will be minimized within the road right-of-way to minimize rainwater runoff.
- Minimize impervious areas overall.
- Allow space for rainwater infiltration and water quality treatment within the road right of way.
- Provide emergency access for fire, police and ambulance vehicles.

- Minimize crossing distances and maximize safety of pedestrians at intersections.
- Minimize curb radii at intersections – while recognizing that larger radii may be required on specific corners on bus routes, for emergency vehicles and in commercial areas.
- Provide for safe and efficient bicycle use on the roadway, and optionally, on off-street multi-use pathways and provide continuity of connection to the bicycle network.
- Provide linear corridors constructed of suitable pervious material on at least one side of local roads and both sides of arterial and collector roads, and provide continuity of connections in the pedestrian network.
- Design road, bicycle and pedestrian networks to avoid indirect and lengthy travel paths, and to encourage walking to school, business, commercial or recreation areas.
- Include managed vegetation, street trees and landscaping as part of the road design.
- Design utility alignments and surface fixtures to avoid conflict points with vehicles, pedestrians and cyclists.
- Locate utilities in a common trench where practical.
- Avoid slopes that exceed 3:1 in the cross-section, or provide native shrub/groundcover landscape treatments to slopes steeper than 3:1.
- Minimize right-of-way width commensurate with meeting the above guidelines.
- Use the illustrations provided below as guidelines to developing roads, crosswalks, lanes, rights-of-way and other facilities providing access to subdivision improvements.
- The proposed road system will be 'equivalent' to or better than the Prescriptive Standards in the sections below.
- The required professional qualification for applicants using the Performance Standards approach for Road Design is: Professional Engineer with a minimum of 10 years' experience in transportation engineering and desirably Professional Transportation Operations Engineer.

11.3 Right-of-Way Width

The minimum width of any road right-of-way in any proposed subdivision will be 20 metres, except:

- (a) where the Approving Officer deems a lesser minimum width better suited to use or local conditions; or
- (b) where a road is a frontage road, then it will have a minimum right-of-way width of 12 metres, unless the Approving Officer deems a lesser or greater minimum width better suited to use or to local conditions; or
- (c) where a roadway is a laneway, then it will have a minimum width of 6.0 metres; or
- (d) where in the opinion of the Approving Officer terrain and soil conditions are such that a roadway having a width of 7.3 metres plus the width required to maintain any fill material or any cut material at the natural angle of repose of that material; plus

- (e) the additional width required for any drainage facilities including ditches needed to drain the roadway, plus
- (f) any further width required for the physical protection of the roadway by construction of fences, barricades or walls that cannot be contained within a 20-metre right-of-way, then the minimum width will be of sufficient land to support, drain and protect such roadway as described above;
- (g) where additional rights-of-way are required to protect a major road network or a controlled-access highway.

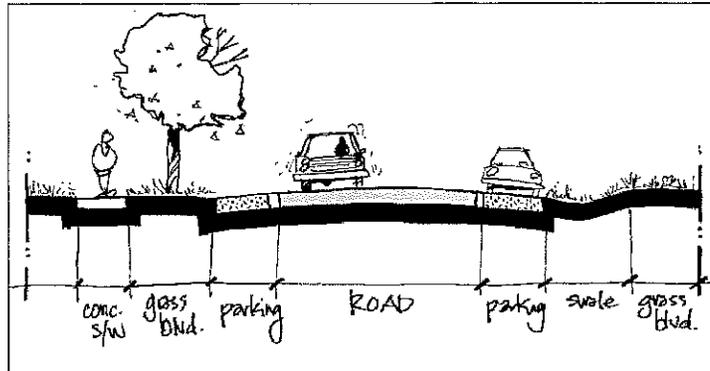
11.4 Public Road Construction Standards

Unless otherwise approved by the Approving Officer to permit the use of **11.2 Performance Standards for Road Systems**, the following standards will apply to roads in the CVRD. Performance standards for road systems and standards noted in this section may be combined to achieve desired environmental and road safety results:

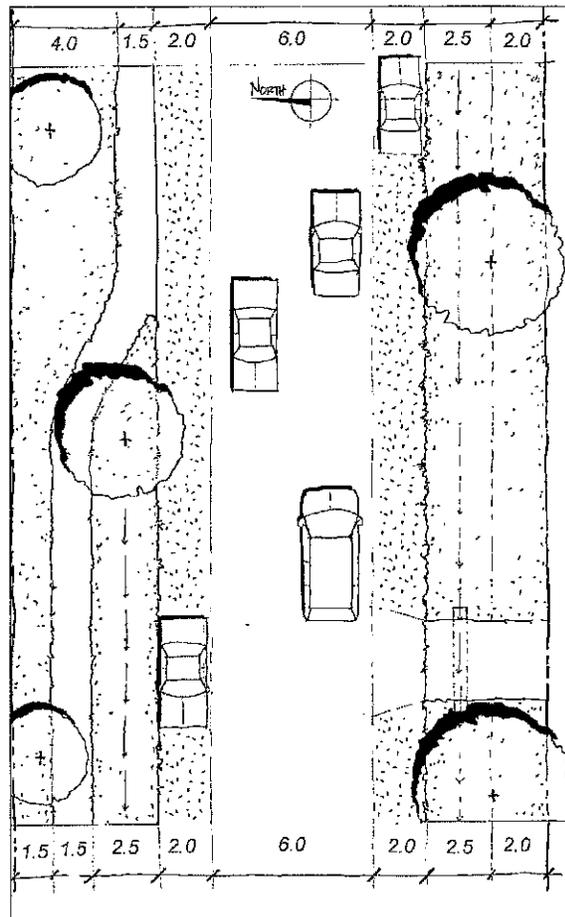
| CVRD Roads | Road Functions | | | | | Paving (curb to curb) |
|-------------------|---------------------------|-------------------------------|---------------------------|----------------------|--------------------------|---------------------------------|
| | Right-of-Way Width | Long-Term Travel Lanes | Walkways/ Pathways | Bicycle Lanes | On-Street Parking | |
| Rural | 20 m | 2 | 5 m | Yes | No | 6.0 m |
| Suburban | 20 m | 2 | 5 m | Yes | Occasional | 8.0 m |
| Urban | 20 m | 2 | 5 m | Yes | Occasional | 12 m |

- (a) Reference will be made to MMCD for description of suitable materials for roadway construction;
- (b) All organic soils will be removed from the proposed paved roadway areas and for a suitable distance into the proposed drainage works area;
- (c) Swales, rain gardens, curtain drains, French drains or California drains are preferred over ditches for dealing with road run-off;
- (d) Swales, rain gardens, curtain drains, French drains or California drains will be constructed to specifications approved by the CVRD;
- (e) Removed organic soils will be replaced with a granular sub-base or compacted suitable sub-grade;
- (f) Compaction of sub-grade materials will be approved by the Approving Officer;
- (g) Where fill depth at the roadway shoulder exceeds 1.0 m the shoulder width will be increased to 2.0 m;
- (h) The road way and shoulders will be underlain with 200 mm of 75 mm minus pit run gravel covered with 50 mm of 19 mm granular base material and finished with 75 mm of suitable porous asphalt
- (i) Roadway shoulders will be 1.5 m in width and finished with 75 mm of compacted crushed gravel;

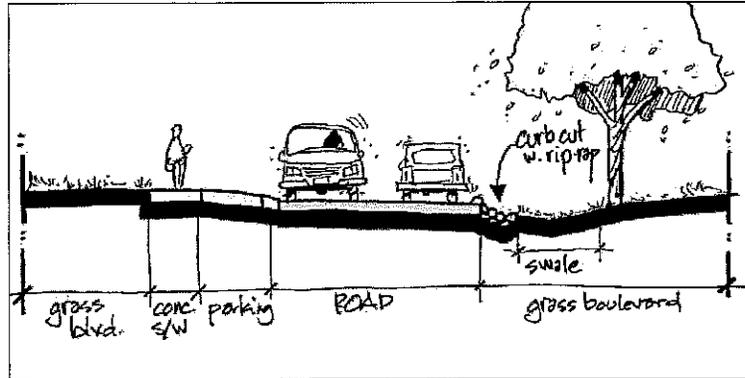
- (j) Ditches and drainage works will have a minimum 1.0 m offset to the road shoulders and a minimum depth on 0.50 m and a maximum depth of 0.75 m;
- (k) Roadway shoulder and drainage work sides will be constructed to a 2:1 slope with a 0.5% minimum gradient;
- (l) Rock cuts will have a maximum 1:4 slope;
- (m) Rock cut overburden will not encroach within 0.50 m from the top of the slope;
- (n) Finished roadways will have a 2.5% slope from centre-line to road edge.



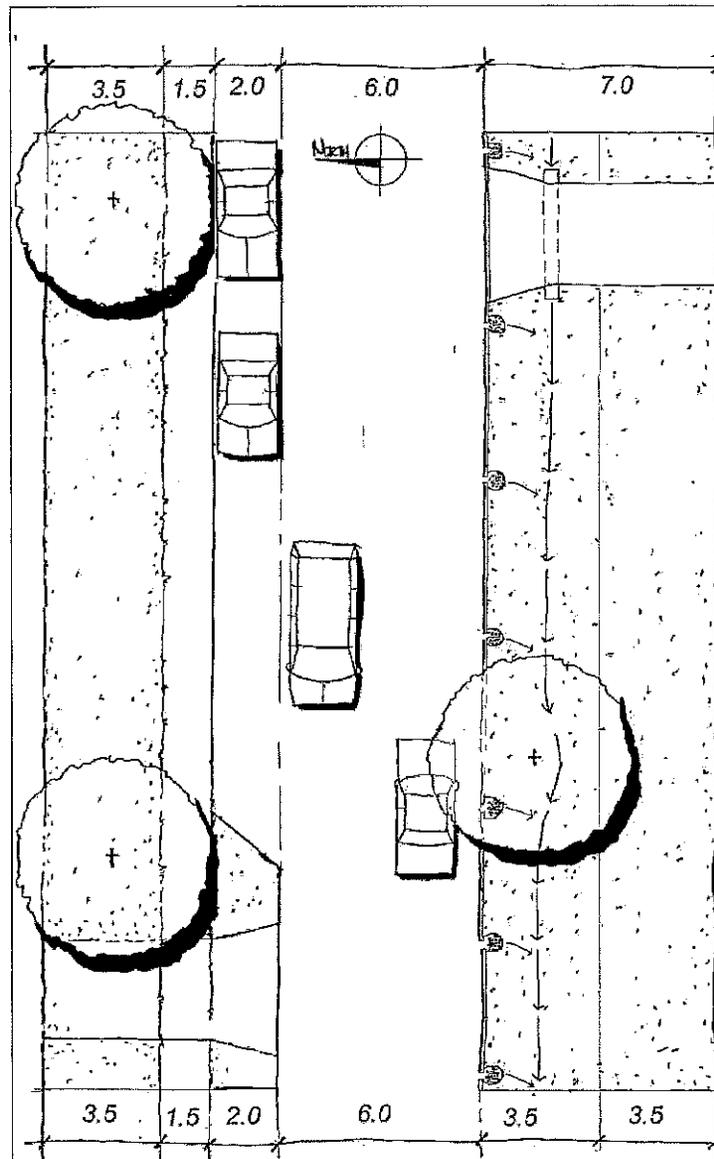
Typical rural road cross-section



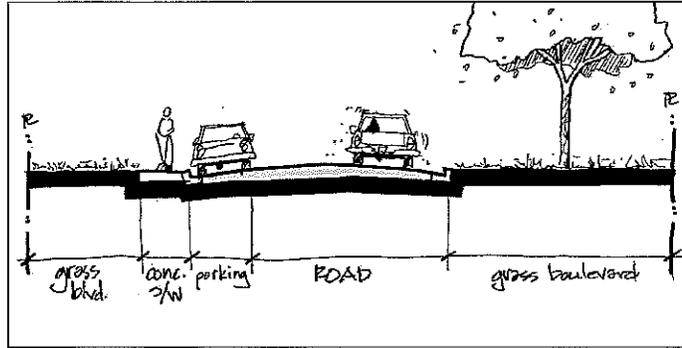
Typical rural road plan view



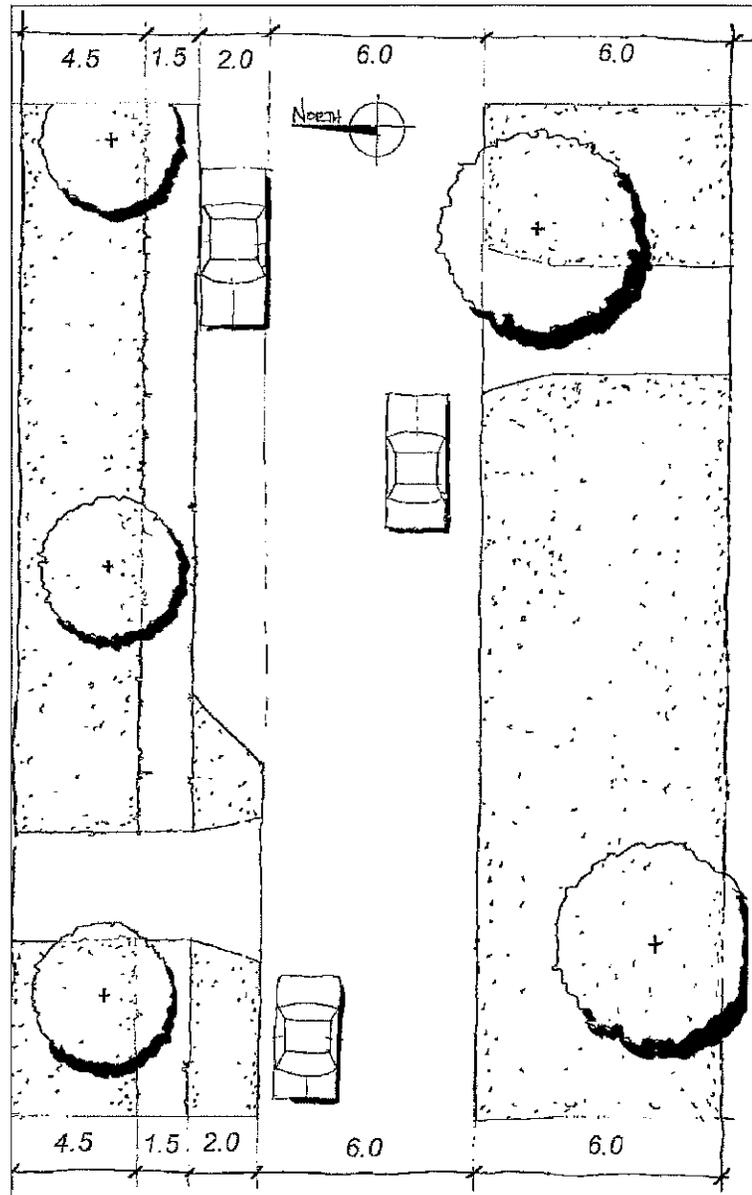
Typical suburban road cross-section



Typical suburban road plan view



Typical urban road cross-section



Typical urban road plan view

11.5 Curve Standards and Specifications

Horizontal curves will be permitted where the configuration of the right-of-way requires curvature for a constant offset and where the design velocity exceeds 1 m/sec.

Horizontal curvature must be uniform throughout the curves and must not be less than 60 metres radius.

Vertical curves will be permitted under special circumstances where excessive rock cuts are to be avoided and where energy dissipation is required.

11.6 Road Gradients

The vertical alignment of all roads will be set to serve adjacent properties and must not be steeper than 12% unless the design is reviewed and approved by the Approving Officer.

11.7 Roadway Surfaces

In all subdivisions of three or more lots, where the smallest lot created is less than 2 hectares, all roadways created will be surfaced to a good all-weather standard acceptable to the Approving Officer prior to subdivision approval.

The maximum paved surface width will be 6 metres for rural roads, 8 metres for suburban roads and 12 metres for urban roads as outlined in section I1.4. Paved and marked bicycle lanes will be provided on suburban and urban roads in accordance with **12.0 Bikeways** of this bylaw. These surface widths may be reviewed by the Approving Officer or a delegated representative with the CVRD and the applicant on a case-by-case basis and may be revised if deemed necessary.

Pedestrian walkways may be provided on paved or unpaved shoulders or optionally on off-street multi-use pathways and will be constructed in accordance with **13.0 Pedestrian Systems** of this bylaw.

Road shoulders will be of a permeable material such as gravel or crushed stone.

11.8 Roadway Drainage

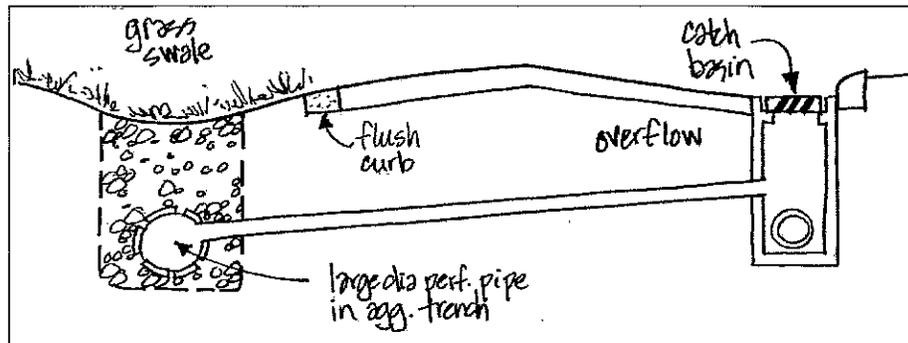
When swales, raingardens or other forms of green infrastructure parallel the roadway on one side only, or where extreme topography exists, roadways may be designed with cross-falls from 1% to 4%. Cross-falls will be considered only when other designs are impractical.

When a cross-fall occurs at an intersection, the variation in the crown of an urban road will be made by smooth transition over 15 m minimum each side of the intersection. The crown of the minor roadway will be varied to suit the profile of the major road. The

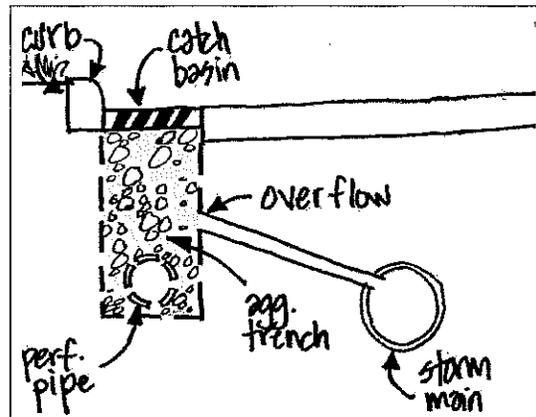
maximum rate of cross-fall variation will be 1% per 10 m on a suburban road and 2% per 10 m on a rural road. Extra care and consideration must be given to the pavement drainage when selecting the length of transition.

On lanes and walkways and in other similar developments, drainage may be accomplished by a centre-line valley or a cross-fall at 2%.

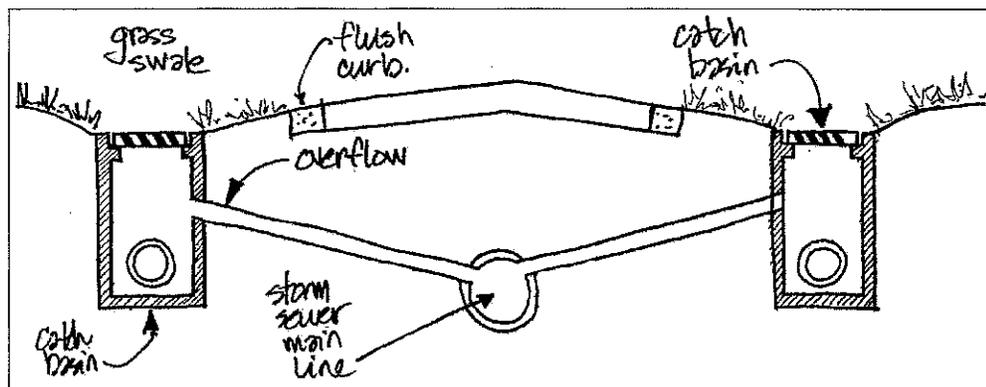
Typical Drainage Options for Roads



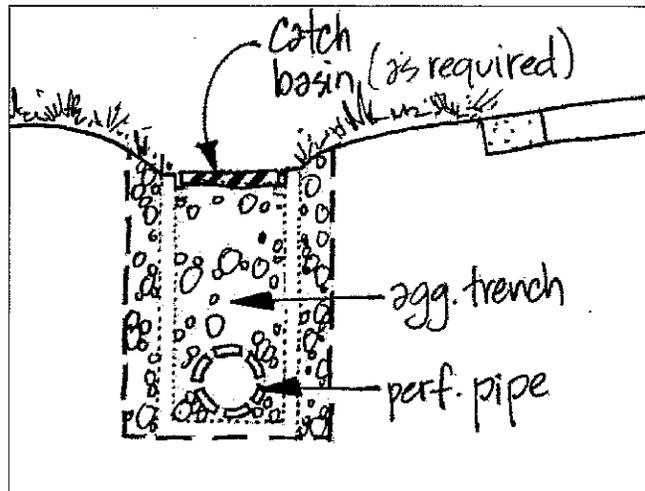
Catch basin grass swale to aggregate trench



Curb catch basin perforated pipe



Catch basin grass swale flush curb main storm line



Catch basin aggregate trench perforated pipe

a) Road Side Swales and Off-line Channels

The principal strategy for rainwater management on roads will be to use road-side swales and rain gardens and other forms of green infrastructure. Culverts may only be used to cross roads, where required, and for driveways. Storm sewers may be used as approved by the CVRD, where preferred rainwater management techniques cannot be practically applied due to constraining topography or depth of soil.

i. Rights-of-Way

All swales and off-line channels servicing more than one property will be designated within a statutory right-of-way if located outside of a road dedication. The minimum width of the off-road right-of-way will be 4.5 meters or the width of the swale/channel centered on the swale/channel measured from top of bank to top of bank plus 2 meters, whichever is greater.

ii. Location

Roadside swales are to be located between the roadway edge and pedestrian walkway where possible or at the discretion of the CVRD.

iii. Dimensions

All swales, channels and associated culverts will convey all rainwater event flows. Final dimensions will provide a minimum 15 cm freeboard under the major flow condition. Minimum and maximum dimensions are as follows:

- Minimum base width: 0.5 meters
- Maximum side slope: 2:1

- Minimum depth from top of slope to invert: 0.50 m except 0.55 m where driveway culverts are required
- Maximum depth from top of slope to invert: 0.75 m
- Minimum hydraulic profile grade: 0.05%. If less, lawn drains and a shallow under drain system will be provided to prevent prolonged periods of stagnant water.
- Maximum hydraulic profile grade: 5.0%. If greater, ornamental rock check dams or similar structure, will be used to create a step pool configuration, except where reinforced sod is used (see item iv below).

iv. Roadway Culvert Crossings

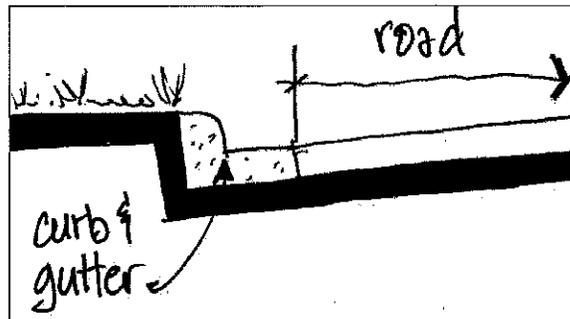
Minimum size will be 450 mm, however sizing will be established based on design flow. Capacity must be provided for the major flow. Acceptable culvert material includes:

- Concrete
- Open bottom aluminized CSP
- Minimum cover will be 300 mm
- Ditch inlets will be provided on upstream end as per MMCD requirements.
- Outlet structures will be provided on downstream end as per MMCD requirements.

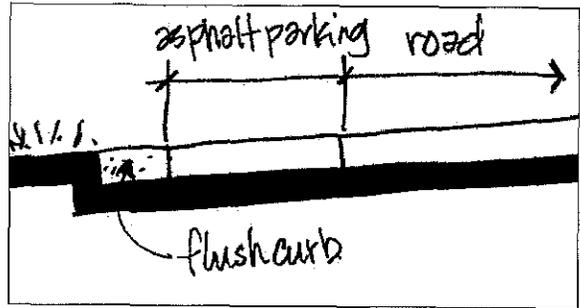
I1.9 Road Edge Interface

Road design, drainage and road/edge interface areas will be integrated within the required right-of-way and will incorporate requirements of I1.8 Roadway Drainage. Options for road edge interface design are provided below. Road edges will generally be designed in keeping with these options subject to the approval of the Approving Officer.

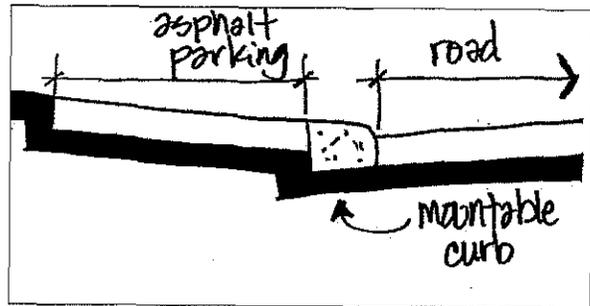
Typical Road Edge Interface Design Options



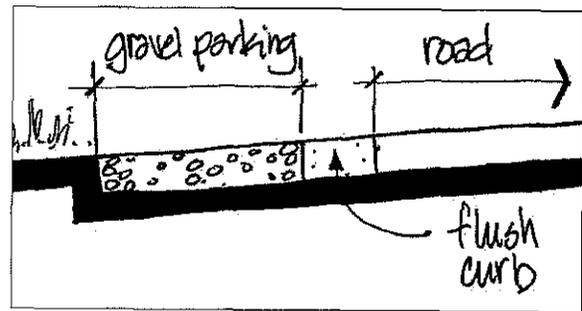
Curb and gutter



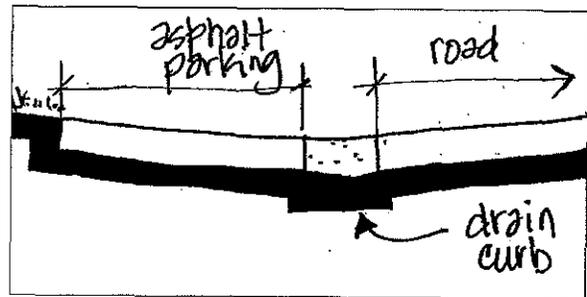
Flush curb asphalt parking



Asphalt parking mountable/roll-over curb



Flush curb gravel parking



Drain curb asphalt parking

I1.10 Intersections

The number of highway intersections within a subdivision will be kept to a minimum and, where practicable,

- (a) Y-shaped intersections will be avoided;

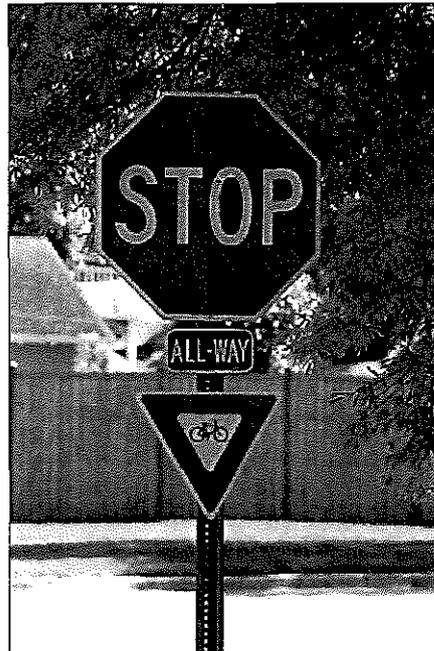
- (b) T-shaped intersections will only be used when the intersecting highway is to carry a small amount of local traffic;
- (c) intersections will not be located in or near sharp curves or near the crest of any rise or hill;
- (d) intersections of more than four highways will be avoided.

Wherever practicable, no intersection will be less than 40 metres from any other intersection or likely future intersection. Measurement will be made along the centre line of the intersected highway.

Unless extremely difficult terrain or the pattern of existing subdivision precludes it, a minimum of 15 metres of an intersection leg will be as close to right angles with the intersected highway as practicable. This distance will be measured at the boundary of the intersecting leg on the side of the contained angle.

11.11 Intersection Signage

Signage at intersections will include signage for bicycle lanes and routes as noted in the following illustration:



Typical intersection signage

11.12 Bus Stop Locations

Bus stop locations for public transit will be incorporated into the design of all roads as required by the CVRD. See Schedule G to this bylaw.

I1.13 Laneways

Laneways will be provided by the owner prior to subdivision approval where terrain and natural features render vehicular access practicable and where:

- (a) they form an extension of any existing system of laneways; or
- (b) the Approving Officer deems it necessary to provide secondary access in order that reasonable traffic flow can be assured on the main highway.

Incorporating laneways into the design of subdivision into smaller lots is also encouraged in order to minimize the amount of impervious surface, to move traffic off the streets, to facilitate moving houses forward on the lots, and to allow the developer to consider additional green alternatives.

Laneways will be constructed will be constructed of a permeable material such as gravel, crushed stone, packed earth, bricks, interlocking pavers, grasscrete, structural grass, permeable paving or porous concrete.

Laneway widths will be not less than 6 metres and not more than 10 metres.

I1.14 Cul-de-Sacs

Where a cul-de-sac is unavoidable in any proposed subdivision, a highway that is a cul-de-sac will have a terminal area for a turn-around the size of which will be determined by taking into consideration the local snow, terrain and soil conditions, provided that any such area will be large enough to contain a circle with a radius of 15 metres.

I1.15 Driveway Access

Except where laneways are located adjacent to the back property line of lots, vehicular access will be provided by the owner prior to subdivision approval from the travelled portion of the highway onto the parcel where required by the CVRD or the Approving Officer.

In cases where a parcel is adjacent to a controlled-access highway, a highway, other than the controlled-access highway, or a laneway will be provided to provide access to all parcels prior to subdivision approval.

As a condition of subdivision, the provision of public highway or laneway access to all parcels created (including the remainder of the parent parcel) will be required.

I1.16 Utilities

The Approving Officer may require that utilities such as telephone and hydro be underground as recommended by the CVRD.

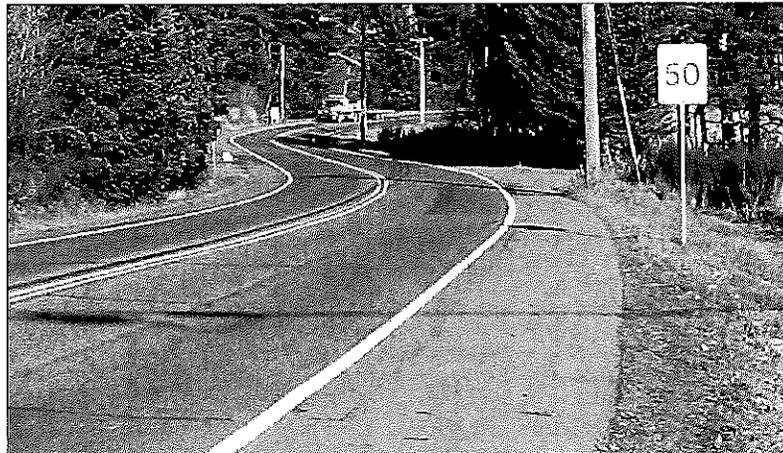
11.17 Dedications for Linear Corridors

In addition to road requirements under this bylaw, where applicable, an applicant will be required to provide dedications of land not less than 7 m in width specifically for linear corridors where safe access to water and natural features are required or are indicated in a CVRD or Electoral Area parks plan separate from road rights-of-way required by the Provincial Approving Officer.

12.0 BIKEWAYS

12.1 Bicycle Lanes

Bicycle lanes must be provided on both sides of all collector and arterial roads.



Typical bicycle lane

Bicycle lanes will be a minimum 1.0 metre in width and separated from vehicular travel lanes by a painted white stripe.

Bicycle lanes and routes will be constructed of similar materials as the required road surface.

12.2 Bicycle Routes

Local roads will be considered to be bicycle routes, where bicycles share the travel lane with motorized vehicles. Bicycle Routes will be posted with signage similar to the Bike Route sign below.



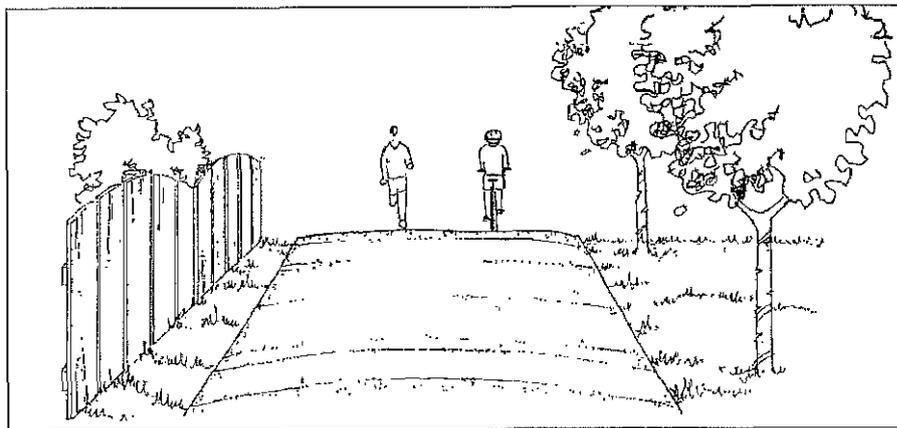
Typical bike route signage

12.3 Bike or Multi-Use Paths

Multiple-use will be designed to accommodate pedestrians as well as bicyclists. Walkways and multi-use pathways included in a subdivision approved by the Approving Officer must be designed in keeping with the following guidelines.

(a) Multi-use Corridors

Shared paths will be located within a minimum 3.0-metre wide dedication with a minimum finished surfaced width of 3.0 metres. The finished surfaced area may be of packed earth, crush stone compacted in place or other porous materials such as chips, pavers, pervious concrete or porous asphalt.



Typical shared bicycle/pedestrian path

In rural areas, multi-use paths will be designed to accommodate pedestrians, bicycles and equestrians.

Additional guidelines for safe bicycle path or multi-use path design, as well as additional bikeway design criteria, include the following:

- Minimum stopping sight distance for bicycles
- Lateral clearance for stopping sight distance
- Lateral clearance for bicycles on horizontal curves

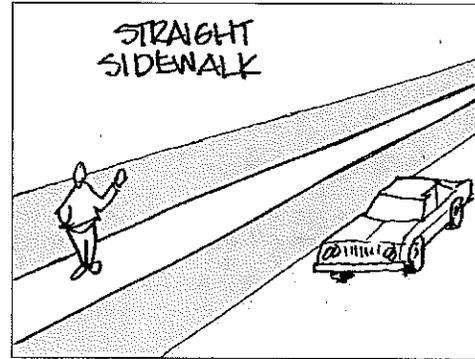
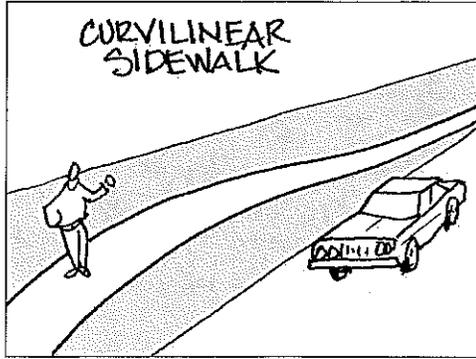
- Crest vertical curves for bicycles
- Minimum radii for paved bikeways
- Horizontal clearance for lanes
- Typical mid-block bike-path road crossing
- Minimum sight distance for bike path crossing
- Typical intersection treatment for through bike lane
- Bike lane at right-turning roadway
- Bike lane at right-turn auxiliary lane
- Typical bikeway ramps
- Bikeways crossing freeway exit type ramps
- Bikeways crossing freeway entrance type ramps
- Bikeway crossing railway tracks
- Bike lane delineators

(b) Walkway and Multi-Use Path Materials

Acceptable materials for walkways and multi-use pathways will include: porous asphalt, porous concrete, reinforced clear crush gravel (off-street paths and private sidewalks), and unit pavers/ blocks with joint and foundation to provide for drainage. All porous structures will be designed with a filter layer and reservoir layer and accommodate lateral drainage.

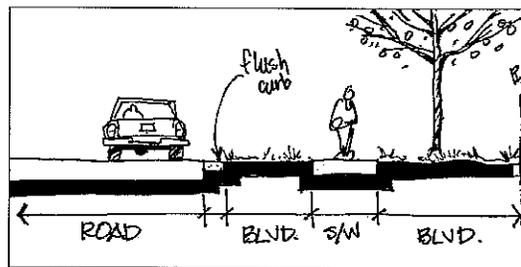
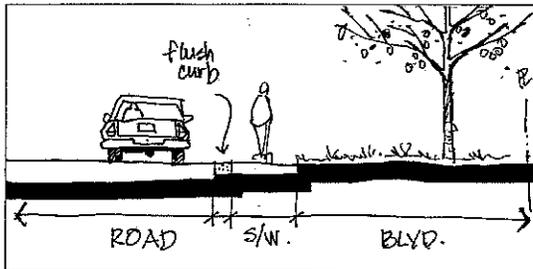
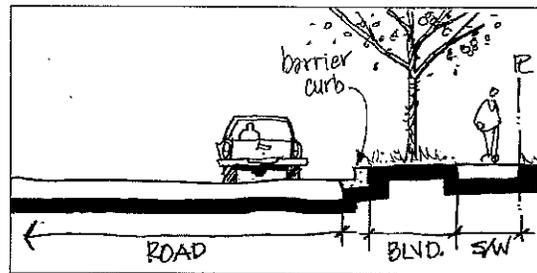
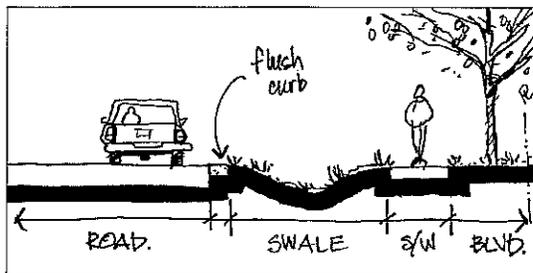


Crushed stone multi-use path



The location of pedestrian walkways and multi-use pathways will maximize ease of walking coupled with pedestrian/vehicle separation distances maximizing pedestrian safety as illustrated below.

(c) Walkway & Multi-Use Pathway/Road Relationships



13.0 PEDESTRIAN SYSTEMS

13.1 Pedestrian Corridors

Pedestrian trails, walkways and paths will be constructed within a proposed subdivision to connect with walkways, paths or trails that abut the subdivision area.

Pedestrian trails, walkways and paths do not include sidewalks proposed for a subdivision unless agreed upon by the CVRD.

Where an area is being subdivided and trails or paths are shown conceptually on relevant Parks & Trails Master Plans, these must be included in the subdivision plan, and their construction will form part of the conditions of subdivision approval.

The minimum right-of-way width of all walkways, paths and trails (excluding a sidewalk) in any subdivision will be 3 metres. The surfaced area must be a minimum of 1.5 metres wide, of an all-weather material and wheelchair accessible. The surfaced area may be of packed earth, crush stone compacted in place or other permeable materials such as chips, pavers, permeable asphalt or permeable concrete or as determined by the CVRD.

APPENDIX 1
Restrictive Covenant for Water Treatment Following Subdivision

**SECTION 219 WATER TREATMENT COVENANT
BETWEEN:**

(the "Owner")

AND:

COWICHAN VALLEY REGIONAL DISTRICT,
175 Ingram Street, Duncan, BC, V9L 1N8

(the "CVRD")

WHEREAS:

- A. The Owner is the registered owner in fee simple of that parcel of land in _____, British Columbia which is legally described as:
(the "Land");
- B. The Owner proposed to subdivide the Land according to the plan of Subdivision, a reduced copy of which is attached as Schedule "A";
- C. CVRD's Subdivision Bylaw No.33xx (the "Bylaw") requires each parcel in a proposed subdivision to have a proven source of potable water, and that the water quality meets the standards and conditions specified in the Bylaw;
- D. The Land will not be connected to a community water system and instead, water to the Land will be supplied by a private source located on the Land (the "Source");
- E. Chemical or biological analysis of water from the Source indicates that the water is not potable, as specified in the Bylaw, or the source cannot be tested at the time of subdivision;
- F. Because the parcels in the Owner's proposed subdivision will not have a source of potable water, then, as a condition of subdivision approval, the owner has agreed to grant the CVRD a covenant agreeing to treat the water;
- G. Section 219 of the Land Title Act provides that there may be registered as a charge against the title to land a covenant, whether of a positive or negative nature, in respect of the use of land or the use of a building on or to be erected on land;
- H. The Owner wishes to grant this Covenant to the CVRD in the interests of confirming the water treatment requirement to the Owner and all future owners, tenants, lenders and others;

NOW THEREFORE in consideration of the promises below and the sum of One Dollar (\$1.00) paid by the CVRD to the Owner, and other good and valuable consideration (the receipt and sufficiency of which the parties acknowledged), the parties covenant and agree, pursuant to Section 219 of the Land Title Act, as follows:

Restriction on use of Land

1. The Owner will not use the Land or any building or structure located on the Land for any residential or domestic purpose unless the Owner is in full compliance with this Covenant.

Water Treatment System

- 2.1 For the purposes of this agreement, “potable water” means water that meets the standards for potable water prescribed from time to time by the British Columbia Drinking Water Protection Act and regulations under that Act, or any legislation that replaces that Act, and if that Act is repealed and not replaced, means water that is safe to drink and fit for domestic purposes without further treatment.
- 2.2 The Owner will install one or more water treatment systems (the “System”) that will deliver potable water to each building and structure on the Land in which water is used or required to be used for human consumption.

Owner’s Responsibilities

3. The Owner is solely responsible, at the Owner’s expense, to comply with all laws, regulations and orders of all authorities having jurisdiction over the Well and water used for human consumption and in addition to or in the absence of such laws, regulations and orders over the following matters, the Owner will:
 - (a) upgrade, replace, clean, disinfect, service and otherwise maintain the System as necessary from time to time;
 - (b) be responsible for the installation, monitoring, effectiveness and all other aspects of the System in accordance with the manufacturer’s recommendations and best practices applicable to the System; and
 - (c) be solely responsible for testing, and will test, the water in the Well or at the point of delivery to a building or structure, if the System is installed at that point, on a monthly basis or, at the Owner’s discretion, more frequently.

Applicable Laws

4. The Owner acknowledges that there are or may be federal, provincial and local government laws, regulations and orders affecting the Well and private drinking water supplies and the Owner acknowledges that the acceptance of this Covenant by the CVRD does not relieve the Owner from complying with all applicable aspects of those requirements.

Discharge Against Public Interest

5. In respect of a possible application to discharge this Covenant pursuant to the provisions of the Property Law Act, the Owner acknowledges that it is in the public interest that this Covenant remain registered against the title to the Land.

Indemnity

6. The Owner releases and indemnifies and saves harmless the CVRD and its elected and appointed officials, officers, employees and agents, from and against any and all liabilities, losses, suits, actions, damages, claims, demands, costs and other harm arising out of or in any way connected with this Covenant or its subject-matter.

Disposition of Land

7. The Owner will not sell, transfer, lease, rent or otherwise dispose of the Land or propose to do any of them without giving all purchasers, tenants and affected persons written notice of this Covenant.

Inspections

8. The CVRD and any of its officers and employees may inspect the Land and any building or structure on the Land, for the purpose of ascertaining compliance with this Covenant, upon not less than 24 hours notice in writing to the Owner and to any tenants in occupation.

No Obligations on CVRD

9. The rights given to the CVRD by this Covenant are permissive only and nothing in this Covenant:
 - (a) imposes any duty of care or other legal duty of any kind on the CVRD to the Owner or to anyone else;
 - (b) obliges the CVRD to enforce this Covenant, which is a policy matter within the sole discretion of the CVRD; or
 - (c) obliges the CVRD to perform any act or to incur any expenses for any of the purposes set out in this Covenant.

No Effect on Laws or Powers

10. This Covenant does not:
 - (a) affect or limit the discretion, rights or powers of the CVRD under any enactment or at common law, including in relation to the use or subdivision of the Land; or
 - (b) affect or limit any law or enactment relating to the use or subdivision of the Land.

Interpretation

11. Reference in this Covenant to:
 - (a) the singular includes a reference to the plural, and references to the plural includes a reference to the singular, unless the context requires otherwise,
 - (b) a particular numbered section or lettered schedule is a reference to the corresponding numbered section or lettered schedule of this Covenant,
 - (c) an "enactment" is a reference to an enactment as that term is defined in the Interpretation Act on the reference date of this Covenant,
 - (d) any enactment is a reference to that enactment as amended, revised, consolidated or replaced, and
 - (e) a party is a reference to a party to this Covenant.

Covenant Runs With the Land

12. Every obligation and covenant of the Owner in this Covenant constitutes both a contractual obligation and a covenant granted under Section 219 of the Land Title Act in respect of the Land and this Covenant burdens the Land and runs with it and binds the successors in title to the Land. This Covenant burdens and charges all of the Land and any parcels into which it may be subdivided by any means and any parcel into which the land is consolidated.

Registration

13. The Owner will do everything reasonably necessary, at the Owner's expense, to ensure that this Covenant is registered against title to the Land with priority over all financial charges, liens and encumbrance registered, or the registration of which is pending, at the time of application for registration of this Covenant.

Waiver

14. An alleged waiver of any breach of this Covenant is effective only if it is an express waiver in writing of the breach in respect of which the waiver is asserted. A waiver by the CVRD of a breach of this Covenant by the Owner does not operate as a waiver of any other breach of this Covenant.

Severance

15. If any part of this Covenant is held to be invalid, illegal or unenforceable by a court having the jurisdiction to do so, that part is to be considered to have been severed from the rest of this Covenant and the rest of this Covenant remains in force unaffected by that holding or by the severance of that part.

No Other Covenants

16. Covenant is the entire agreement between the parties regarding its subject.

Enurement

17. This Covenant binds the Owner and his successors, heirs, executors and administrators.

Further Acts

18. The Owner must do everything reasonably necessary to give effect to the intent of this Covenant, including execution of further instruments.

Deed and Contract

19. By executing and delivering this Covenant the Owner intends to create both a Contract and a deed executed and delivered under seal.

Priority Agreement

20. _____ is the registered holder of a charge by the way of (insert as applicable – Mortgage and Assignment of Rents) against the within described property which said charge is registered in the Land Title Office at Victoria, British Columbia, under

number _____ and _____ respectively, for and in consideration of the sum of One Dollar (\$1.00) paid by the Grantee to the said Charge holder (the receipt whereof is hereby acknowledged), agrees with the Grantee, its successors and assignees, that the within Section 219 Covenant will be an encumbrance upon the within described property in priority to the said charge(s) in the same manner and to the same effect as if it(they) had been dated and registered prior to the said charge(s).

As evidence of their agreement to be bound by the terms of this instrument, the parties hereto have executed the Land Title Act Form C which is attached hereto and forms part of this Agreement.

Schedule "A" – Reduced Subdivision Plan

Form C (insert later in PDF format)



D2

STAFF REPORT

ELECTORAL AREA SERVICES COMMITTEE
OF MAY 18, 2010

DATE: May 12, 2010 **FILE NO:** 1-H-10DVP
FROM: Jill Collinson, Planning Technician **BYLAW NO:** 1020
SUBJECT: Development Variance Permit Application No. 1-H-10DVP (McCullough)

Recommendation:

That the application 1-H-10 DVP, made by **Brian McCullough**, for a variance to Section 5.13(a) of Zoning Bylaw No. 1020, decreasing the setback from a watercourse from 15 metres to 9.1 metres on Lot 1, District Lot 23, Oyster District, Plan 18300 **be approved**, subject to a survey confirming approved setback of 9.1 metres, registration of restrictive covenant 9 metres from the natural boundary of Ladysmith Harbour, erection of silt fencing along top of bank during building construction, and a geotechnical engineers report to be completed prior to obtaining building permit.

Purpose:

To consider an application to relax the setback from the ocean to allow for construction of a single family dwelling

Background:

Location of Subject Property: 4991 Reiber Road

Legal Description: Lot 1, District Lot 23, Oyster District, Plan 18300 (PID 003-902-641)

Owner: Nanaimo Ladysmith Schools Foundation

Applicant: Brian McCullough

Size of Parcel: ± 0.31 hectares (0.76 acres)

Existing Zoning: R-2 (Suburban Residential)

Minimum Lot Size Under Existing Zoning: 2.0 Hectares

Existing Plan Designation: Suburban Residential

Existing Use of Property: Vacant

Existing Use of Surrounding Properties:

North: Agricultural & Residential (A-1 & R-2)
 South: Ladysmith Harbour & Residential (R-2)
 East: Agricultural (A-1)
 West: Ladysmith Harbour

Services:

Road Access: Reiber Road
Water: Well
Sewage Disposal: Proposed septic field

Agricultural Land Reserve Status: Property is not located within the ALR

Environmentally Sensitive Areas: The CVRD Environmental Planning Atlas identifies the subject property as being within the Shoreline Sensitive Area.

Archaeological Site: We do not have record of any archaeological sites on the subject property

The Proposal

The subject property is zoned R-2 (Suburban Residential) and is located at 4991 Reiber Road in Electoral Area H-North Oyster/Diamond. It borders Ladysmith Harbour to the southwest and Brenton Page Road to the northeast. Public road access officially ends at the subject property's northern parcel line and an easement (143369G) allows access to the waterfront parcels of land immediately south of 4991 Reiber Road. This easement divides the 0.76 acre lot roughly in half. The portion of the subject property northeast of the easement, extending to Brenton Page Road, is a steep, heavily vegetated bank, approximately 25+ metres in height and presents significant topographical challenges to building. The portion of the subject property southwest of the easement has a hedge, a flat lawn area with a steep rocky cliff dropping off towards Ladysmith Harbour. The subject property northeast of the easement is very steep it is not an acceptable location for the proposed home. Consequently, the location of proposed construction is southwest of the easement.

The applicant is proposing to construct a single family dwelling, with attached garage, in the southern corner of the lot. Building siting is proposed to be 9.1 metres from the high watermark of Ladysmith Harbour. A Development Variance Permit is required as location of the proposed construction falls within the 15 metre required setback from a watercourse stipulated in Section 5.13(a) of Zoning Bylaw 1020.

Planning Division Comments:

The setback from a watercourse variance of 5.9 metres has been requested to allow the applicant to build a two-storey, 2900sq.ft home 9.1 metres from the high watermark of Ladysmith Harbour. The entirety of the subject property is 0.76 acres, however approximately half of the lot is a steep embankment. The property width from the high watermark to the easement is ± 25.6 metres; however, the buildable portion of the subject property, from the top of the

foreshore bank to the easement, is ± 16.5 metres in width. As the applicant proposing to site the the dwelling near the top of the foreshore bank, Staff consulted with the Building Department resulting in recommendation of a geotechnical engineer report pertaining to bank stability during the building application process.

The previous owner used the property as a summer camping spot. Onsite there is a well-house, deck/platform and extensive beach access stairs complete with a small lookout area. There are also two existing retaining walls with the smaller of the two underneath a hedge along the boundary with the easement, and the other atop of the waterfront bank providing support for the existing deck/platform area.

The applicant has indicated that septic field placement will be immediately northeast of the easement in the bank area extending up to Brenton Page Road. Staff recommended the applicant consult a lawyer as to the legality of having active septic lines running across the easement. Further, due to the nature of the slope and septic field site, Staff has also recommended that the applicant involve a geo-technical engineer for the construction of the septic field.

As was noted above, the property is located within a Shoreline Sensitive Area identified by the CVRD Environmental Planning Atlas. This is not regulatory, it is simply meant to identify properties that may require special measures during development to protect sensitive shoreline features. In this case, the site proposed for construction is 9.1 metres from the water's edge at the top of the bank. To mitigate negative effect on the shoreline, silt fencing is recommended at the top of the bank during the construction process. Also, a restrictive covenant is recommended for the protection, preservation, conservation and maintenance of vegetation within 9 metres of the present natural boundary of Ladysmith Harbour.

Staff is recommending approval of the 9.1 setback from a watercourse request based on the topographical limitations of the lot and site constrictions, subject to the recommended mitigative actions to minimize negative impact on the shoreline.

Surrounding Property Owner Notification and Response:

A total of six letters were mailed-out or hand delivered, as required pursuant to CVRD Development Application and Procedures and Fees Bylaw No. 3275. The notification letter described the purpose of this application and requested comments regarding this variance within a recommended time frame. During period provided for a written reply, we have received three letters – a supporting letter from an immediate neighbour, and two letters in opposition to the variance request.

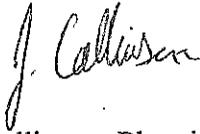
Options:

1. That the application 1-H-10 DVP, made by **Brian McCullough**, for a variance to Section 5.13(a) of Zoning Bylaw No. 1020, decreasing the setback from a watercourse from 15 metres to 9.1 metres on Lot 1, District Lot 23, Oyster District, Plan 18300 **be approved**, subject to a survey confirming approved setback of 9.1 metres, registration of a restrictive covenant 9 metres from the natural boundary of Ladysmith Harbour, erection of silt fencing along top of bank during building construction, and a geotechnical engineers report to be completed prior to obtaining building permit.

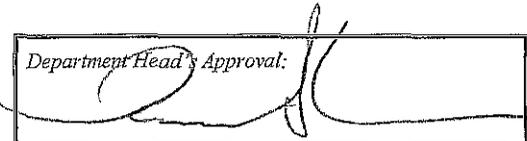
2. That the application 1-H-10 DVP, made by **Brian McCullough**, for a variance to Section 5.13(a) of Zoning Bylaw No. 1020, decreasing the setback from a watercourse from 15 metres to 9.1 metres on Lot 1, District Lot 23, Oyster District, Plan 18300 **be approved**,
3. That the application 1-H-10 DVP, made by **Brian McCullough**, for a variance to Section 5.13(a) of Zoning Bylaw No. 1020, decreasing the setback from a watercourse from 15 metres to 9.1 metres on Lot 1, District Lot 23, Oyster District, Plan 18300 **be denied**.

Option 1 is recommended.

Submitted by,



Jill Collinson, Planning Technician
Development Services
Planning and Development Department

| |
|--|
| <i>Department Head's Approval:</i>  |
| <i>Signature</i> |

JC/ca

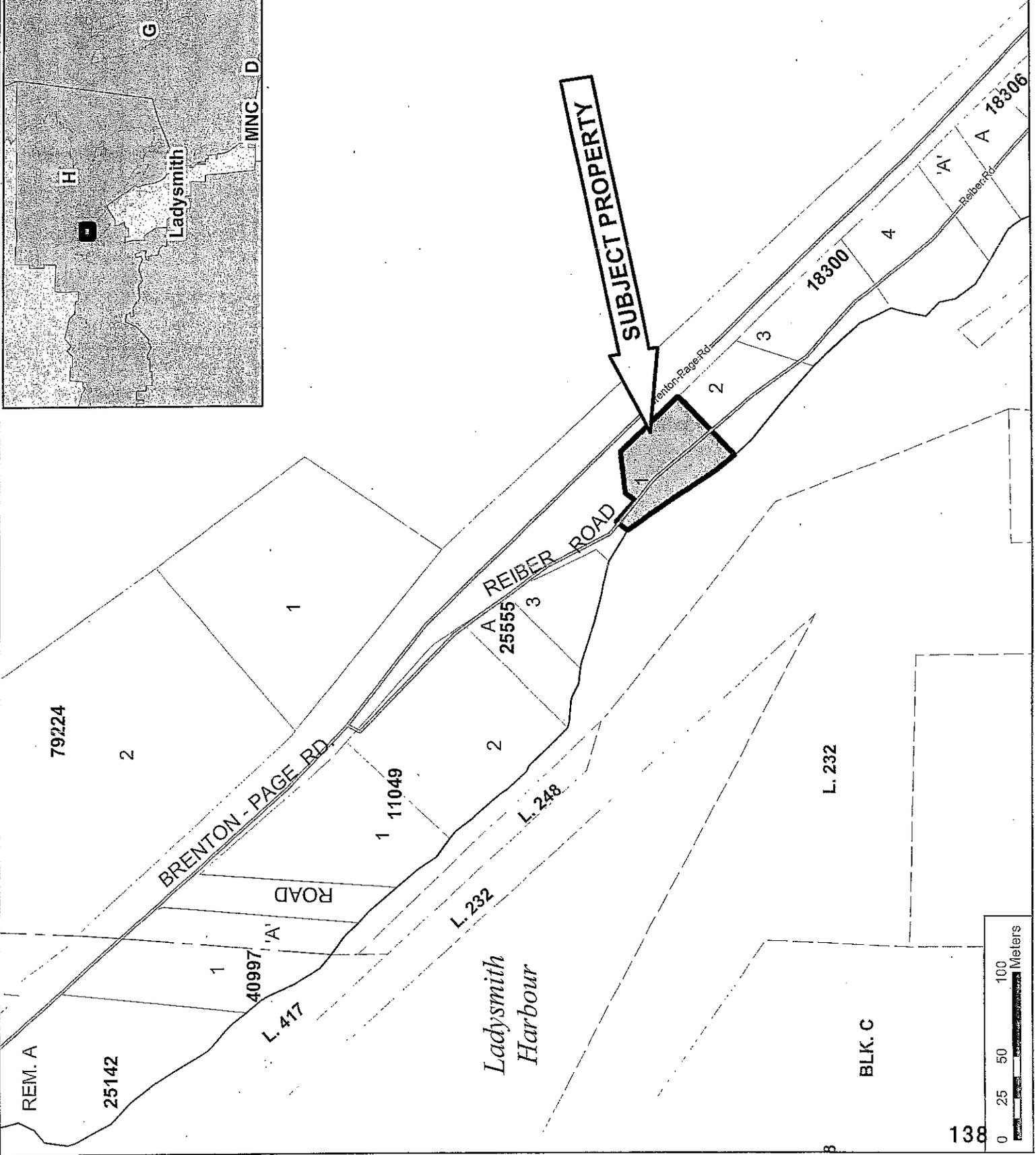
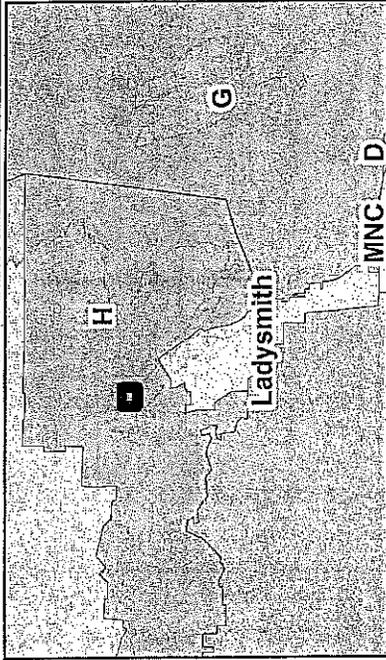
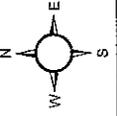


This map is compiled from various sources for internal use and is designed for reference purposes only. The Regional District does not warrant the accuracy. All persons making use of this compilation are advised that amendments have been consolidated for convenience purposes only and that boundaries are representational.

The original Bylaws should be consulted for all purposes of interpretation and application of the Bylaws.

FILE: 1-H-10-DVP

Legend
 Subject Property



5.13 Setback from a Watercourse

- (a) Notwithstanding any other provisions of this bylaw, no habitable building shall be located within 15 metres of the high water mark of a watercourse, lake or the sea.
- (b) Notwithstanding any other provision of this bylaw, no building used for the accommodation of livestock shall be located within 30 metres of the high water mark of a watercourse, lake or the sea.

5.14 Siting of Kennel Buildings

Within a zone in which kennels are a permitted use, buildings and structures for the accommodation of dogs including dog runs, shall not be located within 45 metres of a parcel line.

5.15 Residential Use in Non-Residential Zones

Notwithstanding the setback requirements of this bylaw, where a single family dwelling is permitted in a commercial, industrial or institutional zone, the following setbacks shall apply:

| | |
|----------------|---|
| Front: | 7.5 metres |
| Interior Side: | 10% of the lot width or 3 metres, whichever is less |
| Exterior Side: | 4.5 metres |
| Rear: | 4.5 metres |

5.16 Residential Use of Water Lease Lots

Notwithstanding any other provision of this bylaw, a water lease lot shall not be used for residential purposes.

5.17 Minimum Setback from a Highway

Notwithstanding any other provision of this bylaw, no structure other than a fence shall be located within 4.5 metres of a highway other than a lane.

5.18 Mobile Home

A mobile home use shall only be permitted in those zones in which it is specifically listed as a permitted use.

2.2 R-2 ZONE - SUBURBAN RESIDENTIAL

Subject to compliance with the General Requirements in Part Five of this Bylaw, the following provisions apply in this Zone:

(a) Permitted Uses

The following uses and no others are permitted in an R-2 Zone:

1. one single family residential dwelling or mobile home;
2. agriculture, horticulture, silviculture;
3. home occupation;
4. sale of products grown and reared on a farm;
5. bed & breakfast accommodation;
6. daycare, nursery school accessory to a dwelling;
7. separate or secondary suite.

(b) Conditions of Use

For any parcel in an R-2 Zone:

1. The parcel coverage shall not exceed 20 percent for all buildings and structures except for greenhouses which shall not exceed a site coverage of 30 percent;
2. The setbacks for the types of parcel lines set out in Column I of this section are set out for all structures in Column II:

| COLUMN I Type of Parcel Line | COLUMN II Residential & Accessory Uses | COLUMN III Agricultural & Accessory Use |
|---------------------------------|---|---|
| Front | 7.5 metres | 15 metres |
| Side (Interior or (Exterior) | 3.0 metres from one side parcel line and ten percent of the parcel width from the other parcel line up to a maximum of 3 metres | 15 metres |
| Rear | 4.5 metres | 15 metres |

B. C. LAND SURVEYOR'S CERTIFICATE OF PROPOSED HOUSE LOCATION ON:
LOT 1, PLAN 18300, DISTRICT LOT 23, OYSTER DISTRICT.

SCALE 1:300
 0 5 10 15 metres
 DISTANCES ARE IN METRES.

NOTES:

CIVIC ADDRESS: 4991 BRENTON PAGE ROAD

LOT DIMENSIONS ARE DERIVED FROM PLAN YIP87229.

HOUSE DESIGN FROM BRIAN McCULLOUGH
 DRAWINGS RECEIVED NOV. 3/09.

THE UNDERSIGNED CONFIRMS THAT HE HAS BEEN
 RETAINED BY BRIAN McCULLOUGH TO PROVIDE
 FOUNDATION LAYOUT IN ACCORDANCE WITH THE
 FOUNDATION LOCATION SHOWN ON THIS PLAN.

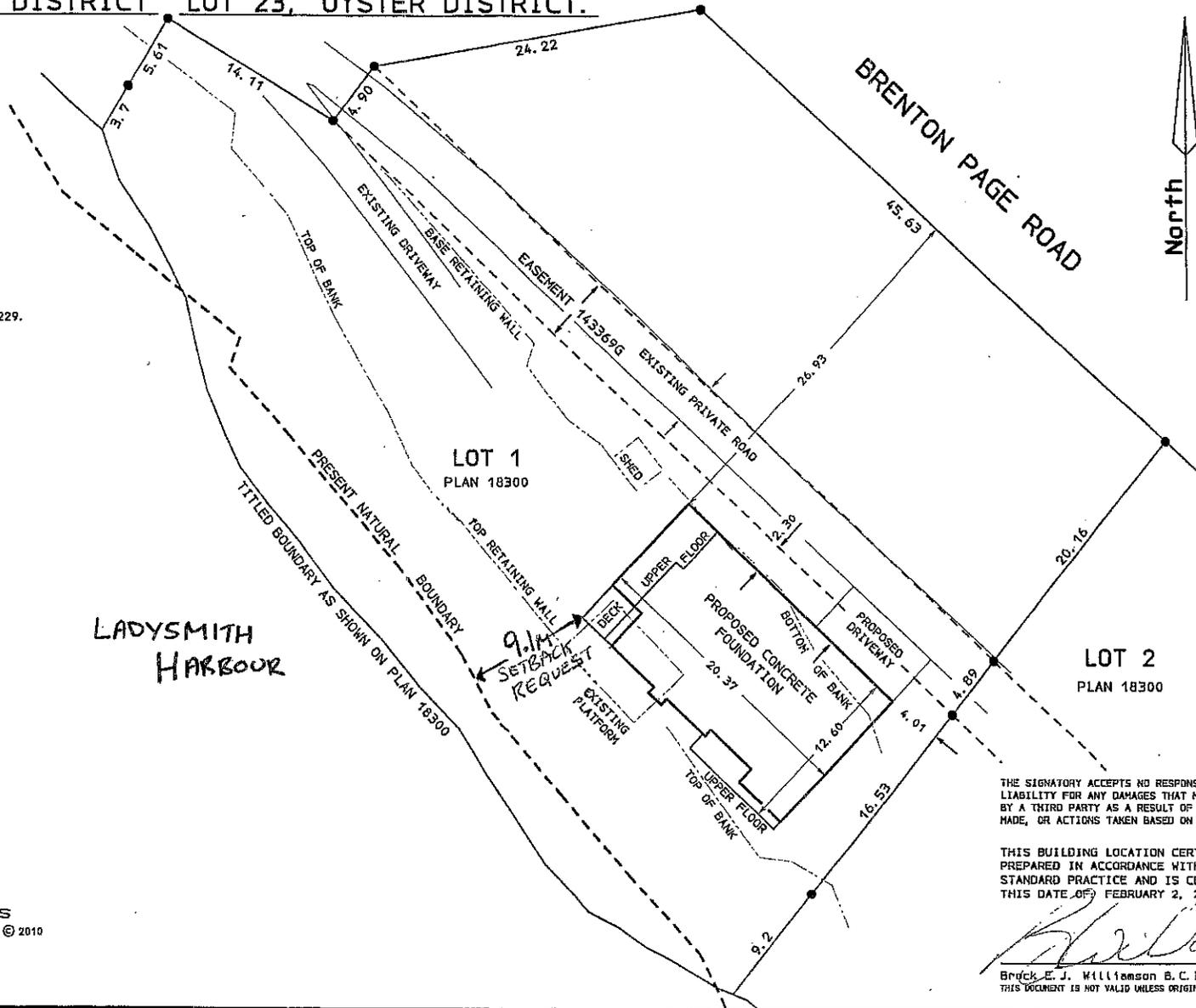
● STANDARD IRON POST FOUND.

THIS PARCEL MAY BE SUBJECT TO REGISTERED CHARGES
 & PERMITS:
 - EASEMENT 143369G
 THIS PLAN DOES NOT PURPORT TO VERIFY
 COMPLIANCE WITH THE RESTRICTIONS THEREIN.

THIS PLAN PURPORTS TO POSITION ONLY THE ACTUAL
 AND/OR PROPOSED IMPROVEMENT(S) SHOWN RELATIVE
 TO ONLY THE BOUNDARIES SHOWN OF OR APPURTENANT
 TO THE ABOVE DESCRIBED PARCEL(S).
 THIS PLAN PROVIDES NO WARRANTY OR REPRESENTATION
 WHATSOEVER WITH RESPECT TO THE LOCATION OF ANY
 OTHER ACTUAL OR PROPOSED IMPROVEMENT(S) RELATIVE
 TO ANY BOUNDARY OF OR APPURTENANT TO THE ABOVE
 DESCRIBED PARCEL(S).
 THIS PLAN IS NOT TO BE USED TO RE-ESTABLISH
 BOUNDARY LINES.

LADYSMITH
 HARBOUR

WILLIAMSON & ASSOCIATES
 PROFESSIONAL SURVEYORS © 2010
 3088 BARONS ROAD HANAIMO B.C. V9T 4B5
 PHONE: 250-756-7723 FAX: 250-756-7724
 EMAIL: WAPS@TELUS.NET
 FILE: 09086-4



THE SIGNATORY ACCEPTS NO RESPONSIBILITY OR
 LIABILITY FOR ANY DAMAGES THAT MAY BE SUFFERED
 BY A THIRD PARTY AS A RESULT OF ANY DECISIONS
 MADE, OR ACTIONS TAKEN BASED ON THIS DOCUMENT.

THIS BUILDING LOCATION CERTIFICATE HAS BEEN
 PREPARED IN ACCORDANCE WITH THE MANUAL OF
 STANDARD PRACTICE AND IS CERTIFIED CORRECT
 THIS DATE OF FEBRUARY 2, 2010.

[Signature]
 Bruce E. J. Williamson B.C.L.S.
 THIS DOCUMENT IS NOT VALID UNLESS ORIGINALLY SIGNED AND SEALED.



April 13, 2010

Cowichan Valley Regional District
1 Ingram Street
Duncan, BC V9L 1N8

Attention: Jill Collinson

Dear Jill:

**Re: 4991 Reiber Road
Lot 1, District Lot 23, Oyster District, Plan 18300 (PID 003-902-641)**

File Number 1-H-10DVP (McCullough)

As per our conversation this afternoon we the owners of 5014 and 5020 Reiber Road would like to object to the proposed variance.

We are opposed to the applicant constructing a single family dwelling on the subject property 9.1 metres (29.86 feet) from the high water mark in Ladysmith Harbour. Also the proposal to locate a septic system above the existing easement will jeopardize his water system and his adjacent neighbours including ours.

Thank you for bring this proposal to our attention.

Yours truly

Muriel Reiber for Jim Reiber

Muriel Reiber

Jim and Muriel Reiber



Jill Collinson, Planning Technician
CVRD Planning and Development Dept.
175 Ingram St
Duncan BC
V9L 1N8



April 6, 2010

RE: File Number 1-H-10DVP (McCullough)

Dear Jill

After reading the application put forth by Brian McCullough, I am curious as to why this variance needs to be granted in the first place. Is the lot, as it currently stands, too small to fit a house? If it is simply to get closer to the water, then please note that I do NOT agree. As a shellfish farmer in the immediate area any potential impact on any of my farms would be a concern.

I am not against sound development, but I do not want this variance to set a precedent. I would not like to see houses being built that close to the high water mark – the existing setback was put in place for a reason.

In addition, my concern is soil erosion during and after construction. I am also concerned with runoff from the house – I can only assume that the authorities have granted permission for a septic system.

I would also be curious as to what the comments from DFO would be concerning the requested changes to the setbacks.

Regards

Leo P. Limberis, President / General Manager
Limberis Seafood Processing Ltd

Deb Bumphrey

From: CVRD Development Services
Sent: Tuesday, March 30, 2010 2:43 PM
To: Deb Bumphrey
Subject: FW: file No 1-H-10DVP (McCullough)

From: jack mckinley [mailto:piperjack@shaw.ca]
Sent: Tuesday, March 30, 2010 1:53 AM
To: CVRD Development Services
Subject: file No 1-H-10DVP (McCullough)

Re: 4991 Brenton Page Rd, Lot 1, District Lot 23, Oyster District, Plan 18300, (PID 003-902-641)

Please be advised as the owner of lot 2, the property adjacent to the subject variance application, we support Mr McCullough's application to decrease the setback to 9.1 meters from the R-2 zoning require of 15 meters.

Please be advised, also, that the address that you show for our property, Lot 2, District Lot 23, Plan 18300, is incorrect. The correct address is 4990 **Brenton Page Road**. Rieber road terminates at the entrance to Lot 1. The access road through lots 1 to 4 is a legal easement through these properties and is not a continuation of Reiber Road as indicated on the drawing you have provided to us. Street address and postal addresses are taken from Brenton Page Road as all properties border on this road and not Reiber Road. We are not sure of why or when the change occurred, however, it would be most helpful to myself and the other residents on this easement if you could initiate steps to correct this deficiency.
Thankyou.

Yours Truly

Jack McKinley
250-245-2877



COWICHAN VALLEY REGIONAL DISTRICT

DEVELOPMENT VARIANCE PERMIT

NO: 1-H-10 DVP (DRAFT)

DATE: MAY XX, 2010

TO: BRIAN MCCULLOUGH

ADDRESS: 211 FERNTREE PLACE

NANAIMO BC V9T 5M1

1. This Development Variance Permit is issued subject to compliance with all of the bylaws of the Regional District applicable thereto, except as specifically varied or supplemented by this Permit.
2. This Development Variance Permit applies to and only to those lands within the Regional District described below (legal description):

Lot 1, District Lot 23, Oyster District, Plan 18300 (PID 003-902-641)
3. Zoning Bylaw No. 1020, applicable to Section 5.3(A) varied as follows: The setback from a watercourse is decreased from 15 metres to 9.1 metres to allow for the construction of a single-family dwelling, subject to the following conditions;
 - *Legal survey confirming approved setback of 9.1 metres*
 - *Registration of restrictive covenant 9 metres from the natural boundary of Ladysmith Harbour,*
 - *Erection of silt fencing along top of bank during building construction,*
 - *A geotechnical engineers report completed prior to obtaining a building permit.*
4. The following plans and specifications are attached to and form a part of this permit.
 - *Schedule A – Site Plan*
5. The land described herein shall be developed in substantial compliance with the terms and conditions and provisions of this Permit and any plans and specifications attached to this Permit shall form a part thereof.

This Permit is NOT a Building Permit. No certificate of final completion shall be issued until all items of this Development Variance Permit have been complied with to the satisfaction of the Development Services Department.

6. **AUTHORIZING RESOLUTION NO. XXX-XX PASSED BY THE BOARD OF THE COWICHAN VALLEY REGIONAL DISTRICT THE XXth DAY OF MAY 2010.**

**Tom Anderson, MCIP
General Manager, Planning and Development Department**

Subject to the terms of this Permit, if the holder of this Permit does not substantially start any construction within 2 years of its issuance, this Permit will lapse.

NOTE:

I HEREBY CERTIFY that I have read the terms and conditions of the Development Permit contained herein. I understand and agree that the Cowichan Valley Regional District has made no representations, covenants, warranties, guarantees, promises or agreements (verbal or otherwise) with BRIAN MCCULLOUGH other than those contained in this Permit.

Signature

Witness

Owner/Agent

Occupation

Date

Date



D3

STAFF REPORT

ELECTORAL AREA SERVICES COMMITTEE
OF MAY 18, 2010

DATE: May 12, 2010 **FILE NO:** 2-B-09 DP
FROM: Jill Collinson, Planning Technician **BYLAW NO:** 985
SUBJECT: Application No. 2-B-09 DP
(Ramina Dhillon)

Recommendation:

That the application by **Ramina Dhillon** for a variance to Section 5.14(a) of Zoning Bylaw No. 985, to decrease the setback from Shawnigan Lake from 15 metres (49.2 feet) to 9.8 metres (32.1 feet) at 2024 Cullin Road, Lot A, Shawnigan Lake Suburban Lots, Plan 22742, (*PID 000-105-759*), **be approved**, subject to

- Approval from the Department of Fisheries and Oceans,
- Compliance with RAR Report by QEP Adam Compton,
- Receipt of an irrevocable letter of credit in a form suitable to the CVRD, equivalent to 125% of the landscape costs, to be refunded if the plantings are successful and to the satisfaction of a Qualified Environmental Professional,
- Survey confirming compliance with the approved setback of 9.8 metres.

Purpose: To consider the issuance of a Development Permit for the construction of a single-storey, single-family dwelling located within 15m of the high water mark of Shawnigan Lake.

Background:

Location of Subject Property: 2024 Cullin Road

Legal Description: Lot A, Shawnigan Lake Suburban Lots, Plan 22742, (*PID 000-105-759*)

Date Application and Complete Documentation Received: November 9, 2009
Draft RAR(updated): May 4th, 2010

Owner: Ramina Dhillon

Applicant: See above

Size of Parcel: 0.08ha (0.198 acres)

Size of Parcel: 0.08ha (0.198 acres)

Existing Zoning: R-3

Minimum Lot Size Under Existing Zoning: 1.0ha (2.47acres)

Existing Plan Designation: Urban Residential

Existing Use of Property: Residential

Existing Use of Surrounding Properties:

North: Commercial (Zoned C-4)

South: Residential (Zoned R-3)

East: Shawnigan Lake

West: Cullin Road

Services:

Road Access: Cullin Road

Water: Shawnigan Lake

Sewage Disposal: On-site system (Nayadic Aerobic Treatment)

Agricultural Land Reserve Status: The subject property is not within the ALR.

Environmentally Sensitive Areas: The subject property is located on Shawnigan Lake, and is therefore subject to the Riparian Areas Regulation Development Permit Area.

Archaeological Sites: The CVRD has no knowledge of an archaeological site on the subject property.

The Proposal:

An application has been made for the issuance of a Development Permit in accordance with the Riparian Areas Regulation Development Permit Area policies found within Official Community Plan (OCP) Bylaw No. 1010 for the purpose of constructing a single-family dwelling conforming to R-3 zoning AND for a variance to Zoning Bylaw No. 985, Sec 5.14 Setback from a Watercourse. The applicants are requesting a relaxation of the setback from Shawnigan Lake from 15 metres to 9.8 metres, or a variance of 5.2 metres.

Policy Context:

Shawnigan Lake Official Community Plan's lake protection policies are intended to protect environmentally sensitive areas near the lake and are to be considered when reviewing development applications. This waterfront subject property is under the OCP designation of 'Urban Residential' and if created today regulations require a minimum lot size of 1.0 ha. As this lot was created around 1900, it is inconsistent with the urban residential development standards that are in place today.

The subject property is located within the Riparian Areas Regulation Development Permit Area (RAR DPA) as specified within Official Community Plan (OCP) Bylaw No. 1010. Section 12.8 of the OCP outlines the guidelines for Riparian Areas Regulations Development Permit Area. As the subject property is within a development permit area, prior to construction a development permit is required.

General Site Comments:

The 800 sq.m subject property is located at 2024 Cullin Road, along the northern shore of Shawnigan Lake. It should be noted that the entirety of the subject property is within 30m of the Lake and the majority of the property is within 15 metres from the high watermark. The subject property is the last lot on the dead-end of Cullin Road and is situated in a predominantly R-3 zoned area with the exception of Shawnigan Lake Beach Estates to the immediate north (C-4 Tourist Recreational Commercial Zone). Like many lots on the shores of Shawnigan Lake, the shoreline has been altered by recreational and residential use, with a large portion of the subject property being lawn. Existing structures on site are located within the setback area and SPEA and include a 38sq.m cabin (412sq.ft), extensive deck and boardwalk area. The subject property is fenced, flat, and one of the smallest waterfront lots at the northern portion of Shawnigan Lake. The owners of the property are proposing to remove the existing cabin and decking to allow for construction of an 118sq.m (1280sq.ft) single-storey residence extending 5.2 metres into the setback for a watercourse. The owners have also agreed to restore the lakefront area and portion of the lawn with native vegetation.

Planning Division Comments:

The applicant has retained the services of Adam Compton, a Qualified Environmental Professional (QEP) to conduct a Riparian Areas Regulation (RAR) Assessment for the proposed development. In the RAR draft report, the QEP has determined the stream protection and enhancement area (SPEA) to be a 15m zone from the high water mark of Shawnigan Lake. Coincidentally, Zoning Bylaw No. 985 stipulates the same setback distance from the high water mark in Sec. 5.14, Setback from a Watercourse. Since the proposed development encroaches into the SPEA, the QEP is unable to issue a formal copy of the RAR report until the necessary agencies have been contacted and responded; in this case it is the CVRD Board, the Ministry of Environment (MOE) and the Department of Fisheries and Oceans (DFO). In order for the application to continue onward to MOE and DFO, the CVRD Board would need to support the proposal by authorizing the issuance of a development permit. If the application passes the Board and receives authorization from MOE and from DFO, then a formal RAR report will be issued. Upon the formalization of the RAR report and any conditions of the permit, the CVRD could issue a building permit. A draft copy of the RAR report is attached for your reference.

The Planning and Development Department supports this variance request. The existing onsite cabin and extensive deck and are located entirely within the setback to the watercourse and SPEA. The landscaping plan will be implemented upon removal of the existing structure (cabin and deck) and will follow the recommendations provided in the RAR report. The applicant is required to provide a post-development report, completed and signed-off by a Qualified Environmental Professional, to verify compliance with the landscaping plan prior to release of the letter of credit. As the applicants are proposing to construct a single-story, modest-sized home on a restrictive lot, are removing the existing cabin and decking, and will be restoring a

portion of the subject property, Staff believe that this application will achieve an environmental benefit and is recommending approval of the Development Permit with a 5.2 metre variance to the 15 metre setback from a watercourse.

Surrounding Property Owner Notification and Response:

A total of thirty-nine (39) letters were mailed-out or hand delivered, as required pursuant to CVRD Development Application and Procedures and Fees Bylaw No. 3275. The notification letter described the purpose of this application and requested comments regarding this variance within a recommended time frame. During period provided for a written reply, we received seven letters (attached). Five letters were opposed to the variance request - all received from owners in Shawnigan Lake Beach Estates. The remaining two did not oppose the application, provided it does not set a precedent for the neighbourhood.

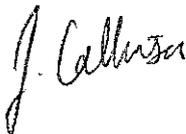
Options:

1. That the application by **Ramina Dhillon** for a variance to Section 5.14(a) of Zoning Bylaw No. 985, to decrease the setback from Shawnigan Lake from 15 metres (49.2 feet) to 9.8 metres (32.1 feet) at 2024 Cullin Road, Lot A, Shawnigan Lake Suburban Lots, Plan 22742, (PID 000-105-759), **be approved**, subject to;
 - Approval from the Department of Fisheries and Oceans
 - Compliance with RAR Report by QEP Adam Compton
 - Receipt of an irrevocable letter of credit in a form suitable to the CVRD, equivalent to 125% of the landscape costs, to be refunded if the plantings are successful and to the satisfaction of a Qualified Environmental Professional,
 - Survey confirming compliance with the approved setback of 9.8 metres

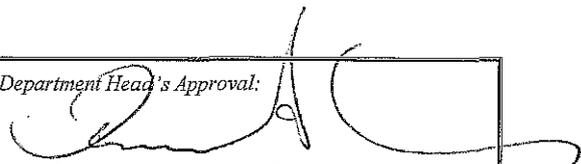
2. That the application by Ramina Dhillon for a variance to Section 5.14(a) of Zoning Bylaw No. 985, to decrease the setback from a watercourse from 15 metres (49.2 feet) to 9.8 metres (32.1 feet) at 2024 Cullin Road, Lot A, Shawnigan Lake Suburban Lots, Plan 22742, (PID 000-105-759), **be denied**, and that the Development Permit application be amended to comply with applicable setbacks and development permit guidelines.

Option 1 is recommended.

Submitted by,



Jill Collinson
 Planning Technician
 Development Services Division
 Planning and Development Department

| |
|---|
| <p>Department Head's Approval:</p>  |
| <p>Signature</p> |

JC/ca
 Attachments



COWICHAN VALLEY REGIONAL DISTRICT
DEVELOPMENT PERMIT WITH VARIANCE

NO: 2-B-09DP/VAR

DATE: MAY XX, 2010

TO: RAMINA DHILLON

ADDRESS: 3375 MIDLAND ROAD

VICTORIA, BC V8R 6G3

1. This Development Permit is issued subject to compliance with all of the bylaws of the Regional District applicable thereto, except as specifically varied or supplemented by this Permit.
2. This Development Permit applies to and only to those lands within the Regional District described below (legal description):

Lot A, Shawnigan Lake Suburban Lots, Plan 22742, (PID 000-105-759)

3. Authorization is hereby given for the construction of an single family dwelling on the subject property in accordance with the attached Schedules and subject to;
 - *Approval from the Department of Fisheries and Oceans,*
 - *Compliance with RAR Report by QEP Adam Compton, dated May 5th, 2010*
 - *Receipt of an irrevocable letter of credit in a form suitable to the CVRD, equivalent to 125% of the landscape costs, to be refunded if the plantings are successful and to the satisfaction of a Qualified Environmental Professional,*
 - *Survey confirming compliance with the approved setback of 9.8 metres.*

Furthermore, this permit varies Section 5.14 of Zoning Bylaw No. 985 by allowing the setback to the watercourse to be reduced from 15 metres to 9.8 metres.

4. The land described herein shall be developed in substantial compliance with the terms and conditions and provisions of this Permit and any plans and specifications attached to this Permit shall form a part thereof.

5. The following schedules are attached:
 - Schedule A – RAR DRAFT Report by Adam Compton, R.P. Bio dated May 5th, 2010
 - Schedule B – Site Plan
7. This Permit is not a Building Permit. No certificate of final completion shall be issued until all items of this Development Variance Permit have been complied with to the satisfaction of the Development Services Department.

ISSUANCE OF THIS PERMIT HAS BEEN AUTHORIZED BY RESOLUTION NO. XX-XXX(XX) PASSED BY THE BOARD OF THE COWICHAN VALLEY REGIONAL DISTRICT THE XXTH DAY OF JUNE 2010.

**Tom Anderson, MCIP
General Manager
Planning and Development Department**

NOTE: Subject to the terms of this Permit, if the holder of this Permit does not substantially start any construction within 2 years of its issuance, this Permit will lapse.

I HEREBY CERTIFY that I have read the terms and conditions of the Development Permit contained herein. I understand and agree that the Cowichan Valley Regional District has made no representations, covenants, warranties, guarantees, promises or agreements (verbal or otherwise) with RAMINA DHILLON other than those contained in this Permit.

Signature

Witness

Owner/Agent

Occupation

Date

Date



This map is compiled from various sources for internal use and is designed for reference purposes only.

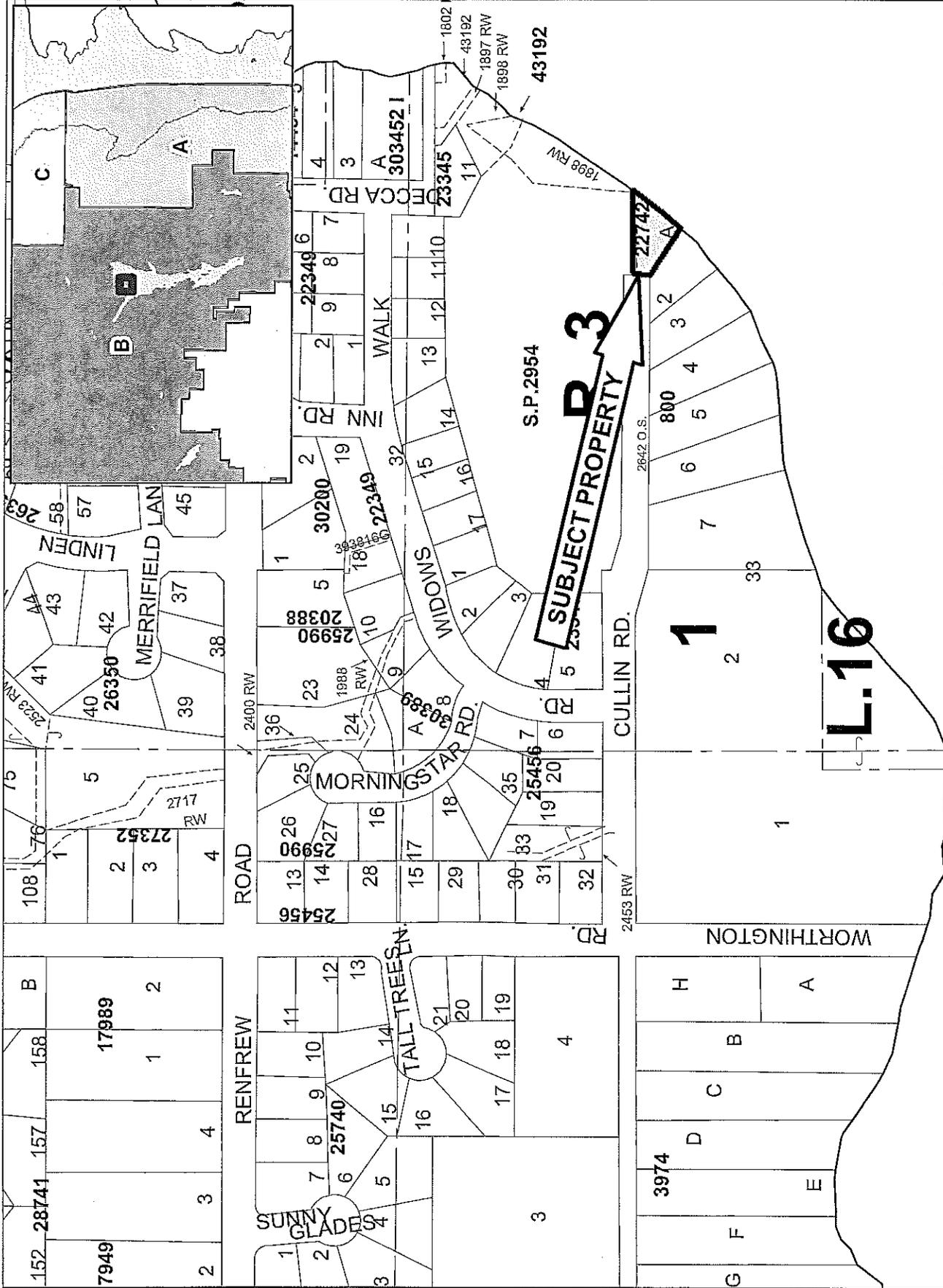
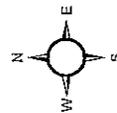
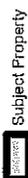
The Regional District does not warrant the accuracy.

All persons making use of this compilation are advised that amendments have been consolidated for convenience purposes only and that boundaries are representational.

The original Bylaws should be consulted for all purposes of interpretation and application of the Bylaws.

**FILE: 2-B-09-DP
-VAR**

Legend



Shawnigan Lake



8.5 R-3 ZONE - URBAN RESIDENTIAL

(a) Permitted Uses

The following uses and no others are permitted in an R-3 Zone:

- (1) single family residential dwelling;
- (2) horticulture;
- (3) home occupation-service industry;
- (4) bed and breakfast accommodation;
- (5) daycare nursery school accessory to a residence; and
- (6) small suite or secondary suite

(b) Conditions of Use

For any parcel in an R-3 Zone:

- (1) the parcel coverage shall not exceed 30 percent for all buildings and structures;
- (2) the height of all buildings and structures shall not exceed 10 metres except for accessory buildings which shall not exceed a height of 7.5 metres;
- (3) the setbacks for the types of parcel lines set out in Column I of this section are set out for all structures in Column II:

| COLUMN I Type of Parcel Line | COLUMN II Residential Use | COLUMN III Accessory Residential Use |
|---|---|---|
| Front Side (Interior) | 7.5 metres 10% of the parcel width or 3 metres whichever is less | 7.5 metres 10% of the parcel width or 3.0 metres whichever is less or 1.0 metres if the building is located in a rear yard |
| Side (Exterior) Rear | 4.5 metres 4.5 metres | 4.5 metres 4.5 metres |

(m) Any home occupation-service industry must comply with all Regional Provincial and Federal Environmental Protection Regulations.

5.13 Bed and Breakfast Regulations

In the zones permitted a bed and breakfast use shall:

- (a) Be completely contained within a single family dwelling which is the principal use on the parcel.
- (b) Be conducted by the Principal resident who may employ not more than one person on the premises.
- (c) Not involve the use of more than three rooms at any one time for guest accommodation.
- (d) In the case of commercially zoned premises not involve the use of more than 8 rooms at any one time for guest accommodation.

→ 5.14 Setback from a Watercourse

- (a) Notwithstanding any other provisions of this bylaw no dwelling shall be located within 15 metres of the high water mark of a watercourse or a lake.
- (b) Notwithstanding any other provision of this bylaw no building used for the accommodation of livestock shall be located within 30 metres of the high water mark of a watercourse or a lake sandpoint or well.

5.15 Siting of Kennel Buildings

Within a zone in which kennels are a permitted use buildings and structures for the accommodation of dogs including dog runs shall not be located within 45 metres of a parcel line.

5.16 Residential Use in Non-Residential Zones

Notwithstanding the setback requirements of this bylaw where a single family dwelling is permitted in a commercial industrial or institutional zone the following setbacks shall apply:

| | |
|---------------|--|
| Front | 7.5 metres |
| Interior Side | 10% of the lot width or 3 metres whichever is less |
| Exterior Side | 4.5 metres |
| Rear | 4.5 metres |

12.8 RIPARIAN AREAS REGULATION DEVELOPMENT PERMIT AREA

12.8.1 CATEGORY

This development permit area is designated pursuant to Section 919.1(1)(a) of the *Local Government Act* – protection of the natural environment, its ecosystems and biological diversity.

12.8.2 DEFINITIONS

For the purposes of this Development Permit Area, the terms used herein have the same meaning that they do under the *Riparian Areas Regulation* (BC Reg. 376/2004).

12.8.3 JUSTIFICATION

The province of British Columbia's *Riparian Areas Regulation (RAR)*, under the *Fish Protection Act*, aims to protect fish habitat. This regulation requires that residential, commercial or industrial development as defined in the *RAR*, in a Riparian Assessment Area near freshwater features, be subject to an environmental review by a Qualified Environmental Professional (QEP).

12.8.4 RIPARIAN ASSESSMENT AREA

The Riparian Area Regulation Development Permit Area is coincidental with the Riparian Assessment Area as defined in the *Riparian Areas Regulation*. It is indicated in general terms on Figure 5f – RAR Development Permit Area Map. Notwithstanding the areas indicated on Figure 5f, the actual Development Permit Area will in every case be measured on the ground, and it will be:

- a) for a stream, the 30 metre strip on both sides of the stream, measured from the high water mark;
- b) for a 3:1 (vertical/horizontal) ravine less than 60 metres wide, a strip on both sides of the stream measured from the high water mark to a point that is 30 metres beyond the top of the ravine bank, and
- c) for a 3:1 (vertical/horizontal) ravine 60 metres wide or greater, a strip on both sides of the stream measured from the high water mark to a point that is 10 metres beyond the top of the ravine bank.

12.8.5 APPLICABILITY

A development permit must be applied for, and issued by the Cowichan Valley Regional District, prior to any of the following activities occurring, where such activities are directly or indirectly related to existing or proposed residential, commercial or industrial land uses in any Zone or Land Use Designation:

- a) removal, alteration, disruption or destruction of vegetation;
- b) disturbance of soils;
- c) construction or erection of buildings and structures;
- d) creation of nonstructural impervious or semi-impervious surfaces;
- e) flood protection works;
- f) construction of roads, trails, docks, wharves and bridges;
- g) provision and maintenance of sewer and water services;
- h) development of drainage systems;
- i) development of utility corridors;
- j) subdivision as defined in section 872 of the *Local Government Act*.

12.8.6 GUIDELINES

Prior to undertaking any of the development activities listed in Section 12.8.5 above, an owner of property within the Riparian Areas Regulation Development Permit Area shall apply to the CVRD for a development permit, and the application shall meet the following guidelines:

- a) A qualified environmental professional (QEP) will be retained at the expense of the applicant, for the purpose of preparing a report pursuant to Section 4 of the *Riparian Areas Regulation*. The QEP must certify that the assessment report follows the assessment methodology described in the regulations, that the QEP is qualified to carry out the assessment and provides the professional opinion of the QEP that:
 - i) if the development is implemented as proposed there will be no harmful alteration, disruption or destruction of natural features, functions and conditions that support fish life processes in the riparian area; and
 - ii) the streamside protection and enhancement area (SPEA) that is identified in the report is protected from the development and there are measures identified to protect the integrity of those areas from the effects of development; and
 - iii) the QEP has notified the Ministry of Environment and Fisheries and Oceans Canada, both of whom have confirmed that a report has been received for the CVRD; or
 - iv) confirmation is received from Fisheries and Oceans Canada that a harmful alteration, disruption or destruction of natural features, functions and conditions that support fish life processes in the riparian area has been authorised in relation to the development proposal.
- b) Where the QEP report describes an area designated as Streamside Protection and Enhancement Area (SPEA), the development permit will not allow any development activities to take place therein, and the owner will be required to implement a plan for protecting the SPEA over the long term through measures to be implemented as a condition of the development permit, such as:
 - a dedication back to the Crown Provincial,
 - gifting to a nature protection organisation (tax receipts may be issued),
 - the registration of a restrictive covenant or conservation covenant over the SPEA confirming its long-term availability as a riparian buffer to remain free of development;
 - management/windthrow of hazard trees;
 - drip zone analysis;
 - erosion and stormwater runoff control measures;
 - slope stability enhancement.
- c) Where the QEP report describes an area as suitable for development with special mitigating measures, the development permit will only allow the development to occur in strict compliance with the measures described in the report. Monitoring and regular reporting by professionals paid for by the applicant may be required, as specified in a development permit;
- d) If the nature of a proposed project in a riparian assessment area evolves due to new information or some other change, a QEP will be required to submit an amendment

- report, to be filed on the notification system;
- e) Wherever possible, QEPs are encouraged to exceed the minimum standards set out in the *RAR* in their reports;
 - f) Shawnigan Lake is subject to natural water level fluctuations on an annual basis. Winter water (high) levels often flood shoreline areas of the lake. These shoreline areas provide important fish habitat, especially during winter periods. The QEP assessment must pay special attention to how the site may be within an active floodplain; the QEP should also assess the existence of floodplain plant species that are important fish refuge areas during high water, and clearly delineate exactly where the high water mark is on the site.

12.8.7 EXEMPTIONS

In the following circumstances, a development permit will not be required:

- a) Renovations, repairs and maintenance to existing buildings that are protected by Section 911 of the *Local Government Act*;
- b) Minor interior and exterior renovations to existing buildings, excluding any additions or increases in building volume;
- c) Removal of invasive non-native vegetation such as Gorse, Scotch Broom, and its immediate replacement with native vegetation;
- d) Creation of a passage or trail not more than 1.5 metres in width cleared of vegetation, which does not involve the removal of any tree greater than 5 metres in height or with a diameter at breast height (DBH) of 10 centimetres, to allow for passage to the water on foot.

12.8.8 VIOLATION

Every person who:

- a) violates any provision of this Development Permit Area;
 - b) causes or permits any act or thing to be done in contravention or violation of any provision of this Development Permit Area;
 - c) neglects to do or refrains from doing any act or thing required under this Development Permit Area;
 - d) carries out, causes or permits to be carried out any development in a manner prohibited by or contrary to this Development Permit Area;
 - e) fails to comply with an order, direction or notice given under this Development Permit Area; or
 - f) prevents or obstructs or attempts to prevent or obstruct the authorised entry of the Administrator, or person designated to act in the place of the Administrator;
- commits an offence under this Bylaw. Each day's continuance of an offence constitutes a new and distinct offence.

12.8.9 CONCURRENT DEVELOPMENT PERMIT AREAS

Where more than one development permit area applies to land in the Riparian Areas Regulation Development Permit Area (RARDPA), a single development permit may be issued. Where other DPA guidelines would conflict with those of the RARDPA, the latter shall prevail.

November 4, 2009

File: 2449

Gin & Ab Dhillon
3375 Midland Road
Victoria, BC V8R 6G3

Re: Riparian Areas Regulation Assessment – 2024 Cullin Road, Shawnigan Lake.

This letter has been prepared to summarize the results of a Riparian Areas Regulation (RAR) assessment I conducted at 2024 Cullin Road, Shawnigan Lake. The assessment was needed as you are planning to construct a home within 30 m from the high water mark of Shawnigan Lake. Within the Cowichan Valley Regional District (CVRD) any development within 30 m of a fish bearing watercourse requires an RAR Assessment to determine appropriate riparian setbacks.

I conducted a site visit on September 2, 2009, to assess the riparian area on the subject property. I have prepared a draft RAR Assessment Report for Gin and Ab Dhillon (the owners) for submission to the CVRD. It is understood that CVRD must support the draft RAR Report before the report can be finalized, submitted to DFO for specific, necessary approval and then submitted to the RAR Online Notification System.

Assessment Results

The RAR Assessment Report and site plan contained within it details all of the assessment results. The following is intended as a supplementary summary of the RAR assessment's methods and results.

Under a "detailed" RAR Assessment, the required Streamside Protection and Enhancement Area (SPEA or riparian setback) for lakes is 15 m unless on the south side of the lake where it gets extended to 30 m. The SPEA is measured from the High Water Mark (HWM), where the HWM:

"means the visible high water mark of a stream where the presence and action of the water are so common and usual, and so long continued in all ordinary years, as to mark on the soil of the bed of the stream a character distinct from that of its banks, in vegetation, as well as in the nature of the soil itself, and includes the active floodplain."

In the absence of a legally established HWM elevation that can be consistently used to determine the HWM along Shawnigan Lake, the HWM location was

Riparian Areas Regulation Assessment – 2024 Cullin Road, Shawnigan Lake

estimated using visual indicators such as changes in vegetation, changes in slope, evidence of beach scour and the upper extent of rafted debris from recent flooding. Due to the extent of flooding of Shawnigan Lake during the winter months, the high water mark and active floodplain extend well within the east side of the subject property: only the western corner of the property is not within the 15 m SPEA.

It is proposed that a 1280 sq ft home be constructed on the subject property in addition to the existing small cottage (412 sq ft). As there is little room to create any new development within the portion of the property that is outside of the 15 m SPEA, the proposed development is partially within the 15 m SPEA (as measured from the HWM). The entire proposed development would be within a previously disturbed lawn area west of the existing cottage.

Any developments that propose encroachment into SPEAs must be specifically supported by the local government and often by federal and provincial agencies (DFO and MOE, respectively). As the proposed development encroaches within 10 m of the HWM, the local government cannot use discretionary powers to modify setbacks (as per the Implementation Guidebook), rather specific DFO approval is required.

As there is limited room to develop outside of the 15 m SPEA, there is a case to be made that the proposed encroachment be approved under a case of "undue hardship". As such, the *draft Protocol for Management of Riparian Areas s Variances Between the Department of Fisheries and Oceans and the Ministry of Environment* was followed to determine whether the proposed development met the criteria for undue hardship.

The site plan contained within the draft RAR Assessment Report shows the owner's preferred option for development. The site plan shows that the proposed development meets the area of allowable development criteria for "brownfield sites" (70% or more of the site has been developed and the proposed development is less than 40% of the total potentially developable area).

While the proposed development could be moved further back, away from the HWM to minimize encroachment, little would be gained, ecologically, by doing so. The entire proposed development is within existing lawn where no natural vegetation is present. If the property is not further developed (left as is), the lawn will likely remain in perpetuity as property owners are allowed to continue to use the property as they always have, so there is realistically no riparian vegetation or potential riparian vegetation at the proposed building site. Moving the proposed home further from the high water mark would only mean more lawn is left between the home and the lake. Reducing the size of the proposed home and moving the site entirely outside of the 15 m SPEA would mean that a large area of lawn would be left between the home and the HWM.

For consideration, Inveresk Design Build Inc. has prepared a report that includes drawings showing the owner's preferred option for development as well as two other potential options for development. One option shown is to locate the home a bit further back from the HWM to somewhat minimize encroachment. The other option shown is to reduce the footprint of the home and locate it entirely outside of the SPEA, in which case there would be no room left for parking and pedestrian use to the west of the home.

To add ecological benefit to the proposed development, the owners are proposing to remove the large deck to the south of the existing cottage and the small retaining wall along the top of the beach. In place of these structures, the beach would be landscaped with native vegetation. As such, the proposed development offers an opportunity to improve and enhance the SPEA, without creating any further impacts other than replacing a portion of the lawn area with a reasonably sized home.

Given that no riparian vegetation or potential riparian vegetation is to be removed, a portion of the existing beach will be restored and the proposed development meets the area of allowable development criteria, I am supportive of the owner's preferred development option. I would also be supportive of the option to locate the home a bit further back from the HWM should local, provincial and/or federal levels of government favor this option; however, it is my opinion that negligible environmental benefits would be gained by doing so.

Once the CVRD has determined if/how either of the two proposed development options involving encroachment can be supported, the RAR Report and site plan will be finalized and submitted to DFO for approval of the proposed encroachment. DFO must provide written support for the proposed development and that correspondence would then be attached to the RAR Report, which would then be submitted via the RAR Online Notification System.

DISCLAIMER / STATEMENT OF LIMITATIONS

This report was prepared exclusively for Gin and Ab Dhillon by Streamline Environmental Consulting Ltd. The quality of information, conclusions and estimates contained herein is consistent with the level of effort expended and is based on: i) information available at the time of preparation; ii) data collected by Streamline Environmental Consulting Ltd. and/or supplied by outside sources; and iii) the assumptions, conditions and qualifications set forth in this report. This report is intended to be used by Gin and Ab Dhillon only. Any other use or reliance on this report by any third party is at that party's sole risk.

Riparian Areas Regulation Assessment – 2024 Cullin Road, Shawnigan Lake

Thank you for retaining Streamline Environmental Consulting Ltd. to assist you with your development plans. Please do not hesitate to contact me if you have any questions.

Sincerely,

Streamline Environmental Consulting Ltd.

Adam Compton, B.Sc., R.P. Bio.

Riparian Areas Regulation: Assessment Report

Date

I. Primary QEP Information

| | | | |
|----------------|-----------------------------|-------------|--|
| First Name | Adam | Middle Name | |
| Last Name | Compton | | |
| Designation | R.P.Bio. | Company | Streamline Environmental Consulting Ltd. |
| Registration # | 1605 | Email | adam.compton@shaw.ca |
| Address | Unit B 6451 Portsmouth Road | | |
| City | Nanaimo | Postal/Zip | V9V 1A3 |
| Prov/state | BC | Country | Canada |
| | | Phone # | 250-390-2627 |

II. Secondary QEP Information (use Form 2 for other QEPs)

| | | | |
|----------------|--|-------------|--|
| First Name | | Middle Name | |
| Last Name | | | |
| Designation | | Company | |
| Registration # | | Email | |
| Address | | | |
| City | | Postal/Zip | |
| Prov/state | | Country | |
| | | Phone # | |

III. Developer Information

| | | | |
|------------|-------------------|-------------|---------------|
| First Name | Gin & Ab | Middle Name | |
| Last Name | Dhillon | | |
| Company | | | |
| Phone # | (250) 889-6915 | Email | 280se@live.ca |
| Address | 3375 Midland Road | | |
| City | Victoria | Postal/Zip | V8R 6G3 |
| Prov/state | BC | Country | Canada |

IV. Development Information

| | | | |
|--------------------------|---|-----------------------|---------------|
| Development Type | Construction: Single Family Residential | | |
| Area of Development (ha) | 0.01 | Riparian Length (m) | 36 |
| Lot Area (ha) | 0.08 | Nature of Development | redevelopment |
| Proposed Start Date | 2010-06-01 | Proposed End Date | 2011-12-31 |

V. Location of Proposed Development

| | | | |
|----------------------------------|-----------------------------------|----------|------------------|
| Street Address (or nearest town) | Shawnigan Lake | | |
| Local Government | Cowichan Valley Regional District | City | |
| Stream Name | Shawnigan Lake | | |
| Legal Description (PID) | 000-105-759 | Region | Vancouver Island |
| Stream/River Type | Lake | DFO Area | South Coast |
| Watershed Code | 920-235800 | | |
| Latitude | 48 | 38 | 57 |
| Longitude | 123 | 38 | 22 |

Completion of Database Information includes the Form 2 for the Additional QEPs, if needed. Insert that form immediately after this page.

Table of Contents for Assessment Report

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Section 1: Description of Fisheries Resources Values and a Description of the Development proposal

Species Present:

The provincial Fish Wizard website (www.fishwizard.com) lists the following species present in Shawnigan Lake: Atlantic salmon, brook trout, brown catfish (formerly brown bullhead), catfish (general), coho salmon, cutthroat trout, kokanee, lake whitefish, prickly sculpin, rainbow trout, smallmouth bass, threespine stickleback and yellow perch.

Fish Habitat Present:

Shawnigan Lake provides typical lake habitat conditions for many species of fish. The specific habitat provided at the subject property is unknown.

Current Riparian Vegetation Condition:

Riparian vegetation has largely been disturbed by residential development throughout this area. An existing 412 sq. ft. cottage is located near the edge of the high water mark of the lake. The cottage is surrounded by large decks on the east and south sides. Portions of the decks extend out over the beach. Much of the remainder of the subject property is comprised of lawn. Some mature coniferous and deciduous trees are present along the outer margins of the property.

Connectivity to Downstream Habitats:

The outlet of Shawnigan Lake is Shawnigan Creek, which drains into the sea at Mill Bay.

Nature of Development:

The proposed development is to construct a modest sized home within the existing disturbed lawn area. Due to the extent of flooding of Shawnigan Lake during the winter months, the high water mark extends well within the east side of the subject property, only the western corner of the property is not within the 15 m SPEA. As such, a portion of the proposed house is within the 15 m SPEA.

Specific Activities Proposed:

Proposed development includes the following:

- Construction of a ~1200 sq. ft. house within the lawn area northwest of the existing cottage.
- Removal of the existing cottage and decks.
- Where the structures are to be removed, landscaping with native vegetation will be conducted over the lower (southern) area and a new lawn will be planted over the upper (northern) area (see Site Plan).
- Construction of a 5' wide stone path from the new house to the existing boardwalk and floating dock.

2. Results of Detailed Riparian Assessment

Refer to Chapter 3 of Assessment Methodology

Date: 2009-11-04

Description of Water bodies involved (number, type)

1, lake

| | |
|-------------------|---|
| Stream | |
| Wetland | |
| Lake | x |
| Ditch | |
| Number of reaches | 1 |
| Reach # | 1 |

Channel width and slope and Channel Type (use only if water body is a stream or a ditch, and only provide widths if a ditch)

| | Channel Width(m) | Gradient (%) | |
|-----------------------------|-------------------|--------------|--|
| starting point upstream | | | I, <u>Adam Compton</u> (<i>name of qualified environmental professional</i>), hereby certify that: a) I am a qualified environmental professional, as defined in the <i>Riparian Areas Regulation made under the Fish Protection Act</i> ; b) I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Gin & Ab Dhillon</u> (<i>name of developer</i>); c) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and d) In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation. |
| | | | |
| | | | |
| downstream | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| Total: minus high /low mean | | | |
| | | | |
| Channel Type | R/P C/P S/P | | |

Site Potential Vegetation Type (SPVT)

| | Yes | No | |
|---------------|---|-------------------------------------|---|
| SPVT Polygons | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Tick yes only if multiple polygons, if No then fill in one set of SPVT data boxes I, <u>Adam Compton</u> (<i>name of qualified environmental professional</i>), hereby certify that: a) I am a qualified environmental professional, as defined in the <i>Riparian Areas Regulation made under the Fish Protection Act</i> ; b) I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Gin & Ab Dhillon</u> (<i>name of developer</i>); c) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and d) In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation. |
| Polygon No: | 1 | | Method employed if other than TR |
| SPVT Type | LC | SH | |
| | <input type="checkbox"/> | <input type="checkbox"/> | x |
| Polygon No: | | | Method employed if other than TR |
| SPVT Type | LC | SH | |
| | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Polygon No: | | | Method employed if other than TR |
| | <input type="checkbox"/> | <input type="checkbox"/> | |

FORM 1

Riparian Areas Regulation - Qualified Environmental Professional - Assessment Report

SPVT Type

Zone of Sensitivity (ZOS) and resultant SPEA

| | | | | | | | |
|---|---|---|-----|--------------------------|--|-------------------------------------|---|
| Segment No: | 1 | If two sides of a stream involved, each side is a separate segment. For all water bodies multiple segments occur where there are multiple SPVT polygons | | | | | |
| LWD, Bank and Channel Stability ZOS (m) | 15 | | | | | | |
| Litter fall and insect drop ZOS (m) | 15 | | | | | | |
| Shade ZOS (m) max | 0 | South bank | Yes | <input type="checkbox"/> | No | <input checked="" type="checkbox"/> | x |
| Ditch | Justification description for classifying as a ditch (manmade, no significant headwaters or springs, seasonal flow) | | | | | | |
| Ditch Fish Bearing | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> | If non-fish bearing insert no fish bearing status report | | |
| SPEA maximum | 15 | (For ditch use table3-7) | | | | | |

| | | | | | | | |
|---|--|---|-----|--------------------------|----|--------------------------|--|
| Segment No: | | If two sides of a stream involved, each side is a separate segment. For all water bodies multiple segments occur where there are multiple SPVT polygons | | | | | |
| LWD, Bank and Channel Stability ZOS (m) | | | | | | | |
| Litter fall and insect drop ZOS (m) | | | | | | | |
| Shade ZOS (m) max | | South bank | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> | |
| SPEA maximum | | (For ditch use table3-7) | | | | | |

| | | | | | | | |
|---|--|---|-----|--------------------------|----|--------------------------|--|
| Segment No: | | If two sides of a stream involved, each side is a separate segment. For all water bodies multiple segments occur where there are multiple SPVT polygons | | | | | |
| LWD, Bank and Channel Stability ZOS (m) | | | | | | | |
| Litter fall and insect drop ZOS (m) | | | | | | | |
| Shade ZOS (m) max | | South bank | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> | |
| SPEA maximum | | (For ditch use table3-7) | | | | | |

I, Adam Compton (*name of qualified environmental professional*), hereby certify that:

a) I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the *Fish Protection Act*;

b) I am qualified to carry out this part of the assessment of the development proposal made by the developer Gin & Ab Dhillon (*name of developer*);

c) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and

d) In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation.

Comments

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Section 3. Site Plan

See following page

Site Plan

Section 4. Measures to Protect and Maintain the SPEA

| | |
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| <p>1. Danger Trees</p> | <p>According to the RAR Assessment Methods (Page 48), danger trees include "standing dead trees that are vertical or lean towards the work area, as well as some live trees with large dead branches or tops". One such tree is present immediately east of the existing cottage. The tree is a dead shore pine that is leaning towards the existing cottage. The tree was deemed dangerous due to a combination of dead limbs, sloughing bark, tree lean, and rooting problems.</p> <p>It is recommended that the tree be removed. Replacement is not necessary as there are adjacent maturing trees that will have more room to grow with this tree removed.</p> <p>The tree shall be removed before commencing removal of existing structures.</p> <p>I am certified as a Danger Tree Assessor by The Wildlife Tree Committee of BC (Parks & Recreation Module, Certification # P0656).</p> |
| <p>I, <u>Adam Compton</u> (name of qualified environmental professional), hereby certify that:</p> <p>e) I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</p> <p>f) I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Gin & Ab Dhillon</u> (name of developer);</p> <p>g) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and in carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation</p> | |
| <p>2. Windthrow</p> | <p>It is my professional opinion that this measure does not apply to the site. Given that no additional clearing of mature vegetation is required, the proposed development is not expected to increase the risk of windthrow for the remaining trees within the SPEA.</p> <p>By signing below I am indicating that based on the above rationale, it is my professional opinion that this site does not warrant a windthrow assessment by a qualified professional. I am not a qualified windthrow assessor and am therefore not qualified to carry out this part of the assessment. I have not carried out this part of the assessment; I have only provided an opinion based on my observations and the guidance provided by the RAR Assessment Methods.</p> |
| <p>I, <u>Adam Compton</u> (name of qualified environmental professional), hereby certify that:</p> <p>a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</p> <p>b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Gin & Ab Dhillon</u> (name of developer);</p> <p>c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and in carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation</p> | |
| <p>3. Slope Stability</p> | <p>It is my professional opinion that this measure does not apply to the site. The property generally has gently sloping topography and slope instability indicators were not observed.</p> |

| | |
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| | <p>By signing below I am indicating that based on the above rationale, it is my professional opinion that this site does not warrant a slope stability assessment by a qualified professional. I am not a qualified slope stability specialist and am therefore not qualified to carry out this part of the assessment. I have not carried out this part of the assessment; I have only provided an opinion based on my observations and the guidance provided by the RAR Assessment Methods.</p> |
| <p>I, <u>Adam Compton</u> (<i>name of qualified environmental professional</i>), hereby certify that:</p> <p>a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</p> <p>b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Gin & Ab Dhillon</u> (<i>name of developer</i>);</p> <p>c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and in carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation</p> | |
| <p>4. Protection of Trees</p> | <p>The proposed development will not result in the loss of any trees with the exception of the danger tree. Remaining trees within the SPEA must not be disturbed or damaged due to construction activities.</p> <p>Care should be taken to ensure damage to the trees within the SPEA does not result from development of the site. The following 'do's' and 'don't's' are from the RAR methodologies and are relevant to this site:</p> <ul style="list-style-type: none"> • Do not trench through the root zone of a tree • Do not pave around trees • Do not change the ground level around the tree • Do not allow any parking under trees • Do not allow concrete washout or other pollutants to contaminate the soil around trees • Communicate tree protection plans to everyone involved in the project. Write damage clauses into any service contract to provide financial penalties to any contractors who damage trees. • Monitor the impacts of construction activities. If roots have been cut make sure they weren't shattered by a backhoe or other equipment. Broken roots should be cut cleanly with a saw. • Mulch about the base of trees to retain moisture. Vertical mulching may be necessary where roots have been severely impacted by machinery or fill. • Prune any broken limbs with clean cuts. <p>The highest risk of damaging trees within the SPEA is likely the proposed removal of the existing structures (cottage and deck) along the top of the beach and removal of the danger tree. Large trees are immediately adjacent to these structures and small trees and shrubs are present beside and beneath a portion of these structures. Care must be taken during removal of these structures to avoid damaging native trees and shrubs.</p> <p>As the landscaping plan indicates that a significant area of</p> |

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Riparian Areas Regulation - Qualified Environmental Professional - Assessment Report

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| | <p>the footprint of the existing structures will be replanted with native trees and shrubs, any vegetation damaged during construction will be adequately replaced.</p> |
| <p>I, <u>Adam Compton</u> (<i>name of qualified environmental professional</i>), hereby certify that:</p> <p>a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</p> <p>b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Gin & Ab Dhillon</u> (<i>name of developer</i>);</p> <p>c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation</p> | |
| <p>5. Encroachment</p> | <p>The Decision Matrix to Determine Barrier Requirements (Figure 8 of Access Near Aquatic Areas) was followed and the result was "barrier not required".</p> <p>Given that the proposed development is partially within the SPEA and all of the proposed development is within previously cleared areas, marking the location of the SPEA to prevent encroachment during construction is not necessary.</p> |
| <p>I, <u>Adam Compton</u> (<i>name of qualified environmental professional</i>), hereby certify that:</p> <p>a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</p> <p>b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Gin & Ab Dhillon</u> (<i>name of developer</i>);</p> <p>c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation</p> | |
| <p>6. Sediment and Erosion Control</p> | <p>Given the flat topography of the property, erosion and sediment control is not a significant concern at this site. However, measures are required to prevent impacts to the SPEA and potential water quality issues:</p> <ul style="list-style-type: none"> • During construction, all exposed soils must be protected from erosion during rainfall events by covering with poly, tarps or straw/hay mulch. • Upon completion of construction, all exposed soils within the property shall be protected from erosion by either hard (concrete, pavement, riprap, gravel crush etc.) or soft (grass seed and straw/hay mulch, landscaping, erosion control blankets etc.) methods to ensure sediment laden runoff into the lake does not occur. • Do not conduct earthworks during significant rainfall events. <p>Upon completion of construction, temporary sediment control structures must be removed.</p> <p>The attached Site Plan contains the landscaping plan, which will be implemented upon removing the existing structures (cottage and decks). The landscaping plan will be finalized in the field by the Environmental Monitor once the structures are removed. The factors that will be used to finalize the plan will include but not be limited to: time of year of planting, density, abundance and diversity of existing vegetation, soil conditions, roots of existing trees etc. It is likely that the existing landscape plan and the final plan will be very similar, but it is recognized that there</p> |

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| | <p>needs be some flexibility for the environmental monitor to exercise discretion to meet the objectives of restoring and stabilizing the site.</p> <p>The following criteria will be met by the final landscape plan:</p> <ul style="list-style-type: none"> • The average density of trees and shrubs within the area to be restored shall be no greater than 0.75 m (includes any trees and shrubs that are naturally growing at the site). • The minimum pot size of all native shrubs to be planted at the site shall be 1 gallon. • There shall be at least 4 different species planted at the site to provide diversity. <p>Structure removal beyond the identified high water mark shall only occur during the reduced risk timing window for works in and about a watercourse (June 15 to September 15) and must be conducted entirely outside of the wetted area of the lake at that time. A Water Act Section 9 Notification shall be submitted to Ministry of Environment at least 1 month prior to conducting any works beyond the High Water Mark.</p> <p>If the time of year that the structure removal is complete is deemed to not be conducive to immediate implementation of the landscaping plan, temporary measures will be required:</p> <ul style="list-style-type: none"> • At a minimum, all exposed soil areas shall be seeded with a reclamation seed mix approved by the environmental monitor. • The exposed soils shall then be covered with a 1" layer of straw (not hay) mulch. <p>The above seeding and mulching requirement will also be implemented upon completion of the native shrub planting so that any exposed soils between the shrubs are adequately protected from erosion.</p> |
| <p>I, <u>Adam Compton</u> (<i>name of qualified environmental professional</i>), hereby certify that:</p> <p>a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</p> <p>b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Gin & Ah Dhillon</u> (<i>name of developer</i>);</p> <p>c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and in carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation</p> | |
| <p>7. Stormwater Management</p> | <p>Given that this is a single family residence, stormwater management is not a significant concern.</p> <p>By signing below I am indicating that based on the above rationale, it is my professional opinion that this site does not warrant an additional stormwater management assessment by a qualified professional. I am not a qualified stormwater management specialist and am therefore not qualified to</p> |

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| | carry out this part of the assessment. I have not carried out this part of the assessment; I have only provided an opinion based on my observations and the guidance provided by the RAR Assessment Methods. |
| <p>I, <u>Adam Compton</u> (<i>name of qualified environmental professional</i>), hereby certify that:</p> <p>a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</p> <p>b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Gin & Ab Dhillon</u> (<i>name of developer</i>);</p> <p>c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation</p> | |
| 8. Floodplain Concerns (highly mobile channel) | <p>Floodplain concerns are not applicable as the lake is not a "highly mobile channel".</p> <p>By signing below I am indicating that based on the above rationale, it is my professional opinion that this site does not warrant a floodplain hazard assessment by a qualified professional. I am not qualified to assess floodplain hazards and am therefore not qualified to carry out this part of the assessment. I have not carried out this part of the assessment; I have only provided an opinion based on my observations and the guidance provided by the RAR Assessment Methods.</p> |
| <p>I, <u>Adam Compton</u> (<i>name of qualified environmental professional</i>), hereby certify that:</p> <p>9. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</p> <p>10. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Gin & Ab Dhillon</u> (<i>name of developer</i>);</p> <p>11. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation</p> | |

Section 5. Environmental Monitoring

As per the RAR, environmental monitoring is required for land development projects within the Riparian Assessment Area. Given the relatively low risk for environmental impacts within the SPEA to occur during construction of this project, environmental monitoring required is likely to be minimal:

Initial Site Visit:

Prior to commencing any development (including removal of existing structures) on this property an environmental monitor (QEP from Streamline Environmental Consulting Ltd.) must be contacted to conduct a site visit and attend a pre-work meeting with primary contractor(s) conducting the work.

The objective of this initial meeting will be to confirm that all contractors are aware of any relevant measures, conditions and requirements specified in the RAR Assessment Report including the Sediment and Erosion Control Measures. Also, a communications plan will be developed during this meeting to deal with any environmental incidents or emergencies that may arise during the course of construction. At a minimum the communications plan will contain contact numbers for the environmental monitor and appropriate provincial, federal and local contacts for potential environmental emergencies (hydrocarbon spills, water quality etc.). The environmental monitor must be immediately contacted in the event of any such emergency.

Site Visits During the Removal of Existing Structures:

The environmental monitor shall be on site periodically, as deemed necessary by the environmental monitor, during removal of the existing structures to verify that the measures contained in the RAR Report are being adhered to (especially avoiding damage to native vegetation and preventing the introduction of sediment laden runoff into the lake).

The environmental monitor shall conduct a site visit immediately after the structures are removed to finalize the landscaping plan and, if necessary, ensure temporary erosion and sediment control measures are implemented.

Site Visits During Planting:

The environmental monitor shall be on site periodically, as deemed necessary by the environmental monitor, during the planting of native shrubs to verify compliance with the final landscaping plan and erosion and sediment control measures.

Post Construction Site Visit:

The RAR requires that a post-development report be prepared by a QEP to certify that "the conditions set out in assessment reports have been properly implemented". Specifically, the QEP should ensure that all measures to protect the SPEA were properly followed.

Given the location of the site that is to be restored, it is recognized that a severe storm event during winter months could cause damage to planted vegetation before it is adequately established. As such, the post construction site visit shall be conducted during the spring following the first winter after planting is completed. The environmental monitor shall inspect the survival of the planted stock and determine whether any additional planting or erosion and sediment control measures are necessary at the site. The owner shall follow any recommendations provided by the environmental monitor and a final inspection shall be carried out by the environmental monitor upon implementation of such measures.

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Additional Site Visits:

The potential need for additional site visits will be discussed during the pre-work meeting. The communications plan developed at the initial site visit will provide the contact number for the environmental monitor who must be contacted in the event of an environmental emergency. The following is a list of potential reasons to contact the environmental monitor and determine whether an additional site visit is required:

- hydrocarbon spills
- generation of sediment laden runoff into the SPEA or the lake
- any damage to existing riparian vegetation within the SPEA

Section 6. Photos

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| Label | Photo 1. Sep. 2, 2009. Looking southeast from existing driveway at west corner of property. |
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| Label | Photo 2. Sep. 2, 2009. Looking northwest at proposed building site. |
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Riparian Areas Regulation - Qualified Environmental Professional - Assessment Report

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| Label | Photo 3. Sep. 2, 2009. Looking northeast from south property boundary. Photo shows existing cottage, decks and boardwalk to the dock. The deck in the foreground is proposed for removal. Blue flagging and red line indicates ~ location of High Water Mark. |
| |  |
| Label | Photo 4. Sep. 2, 2009. Looking southeast towards lake. |
| |  |

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| Label | Photo 5. Sep. 2, 2009. Looking northwest at deck that is proposed for removal and where native vegetation would be re-established. |
| |  |
| Label | Photo 6. Sep. 2, 2009. View of danger tree (dead pine) that leans towards existing cottage. |
| |  |

Section 7. Professional Opinion

Assessment Report Professional Opinion on the Development Proposal's riparian area.

Date

1. I/We Adam Compton

Please list name(s) of qualified environmental professional(s) and their professional designation that are involved in assessment.)

hereby certify that:

- a) I am/We are qualified environmental professional(s), as defined in the Riparian Areas Regulation made under the *Fish Protection Act*,
- b) I am/We are qualified to carry out the assessment of the proposal made by the developer Gin & Ab Dhillon (name of developer), which proposal is described in section 3 of this Assessment Report (the "development proposal"),
- c) I have/We have carried out an assessment of the development proposal and my/our assessment is set out in this Assessment Report; and
- d) In carrying out my/our assessment of the development proposal, I have/We have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation; AND

2. As qualified environmental professional(s), I/we hereby provide my/our professional opinion that:

- a) if the development is implemented as proposed by the development proposal there will be no harmful alteration, disruption or destruction of natural features, functions and conditions that support fish life processes in the riparian assessment area in which the development is proposed, **OR**
(Note: include local government flex letter, DFO Letter of Advice, or description of how DFO local variance protocol is being addressed)

- b) if the streamside protection and enhancement areas identified in this Assessment Report are protected from the development proposed by the development proposal and the measures identified in this Assessment Report as necessary to protect the integrity of those areas from the effects of the development are implemented by the developer, there will be no harmful alteration, disruption or destruction of natural features, functions and conditions that support fish life processes in the riparian assessment area in which the development is proposed.

[NOTE: "qualified environmental professional" means an applied scientist or technologist, acting alone or together with another qualified environmental professional, if

- (a) the individual is registered and in good standing in British Columbia with an appropriate professional organization constituted under an Act, acting under that association's code of ethics and subject to disciplinary action by that association,
- (b) the individual's area of expertise is recognized in the assessment methods as one that is acceptable for the purpose of providing all or part of an assessment report in respect of that development proposal, and
- (c) the individual is acting within that individual's area of expertise.

Jill Collinson

From: miriam cooke-dallin [whoandhim@yahoo.com]
Sent: Friday, February 19, 2010 12:36 PM
To: Jill Collinson
Subject: RE: Variance 2024 Cullin Rd, Shawnigan Lake

February 19, 2010
Jill Collinson, Planning Technician
Development Services Division
Planning and Development Department
175 Ingram Street
Duncan, BC
V9L 1N8

RE: Application for Variance, 2024 Cullin Rd
Ms Collinson

I would like to clarify my position re: our recent telephone conversation.

The property in question at 2024 Cullin Rd has been a bit of a white elephant since its creation. It not only was too small to allow for the setback, but also was too small to build a safe and efficient septic field. New technology in treating sewage has fixed one of the problems. The question of the setback, however, is never going to be solved without allowing a variance. I do not want to be unfair to Ramina Dhilon or whomever she represents, but at the same time I fear that if I do not object to this variance it will open the door to other landowners around the lake, and especially on our stretch of the shore, to demand the same lenience.

What really concerns me is will open the door for other landowners to apply and get variance to build closer to the lake or for new *waterfront* lots to be created with smaller frontages. In this area, the Crawfords, Ditchburns, Smith/Dallins, Ian Muir, Townsends and Worthingtons all maintained the riparian zone for decades. There are no concrete retaining walls on the shore and we eschew the use of chemical or other fertilizers for our lawns. We have left the lakeshore for the mink, racoons, and bird life to use for shelter. We try not to interfere in any way with the natural plants. Relaxing the setback generally would mean more encroachment on the riparian area by buildings and docks. The proposed improvement of the riparian area would satisfy me on this account for this particular property, but my question is does this set a precedent? Can a future applicant for variance say "you let them do it so you have to let us do it too?"

In summary, I will not object to this variance, if I am *guaranteed* that

- the concessions indicated in the diagram which accompanies the permit letter will be met; i.e., that the existing building is torn down and the riparian area returned to natural plantings.
- that allowance of this variance does not set precedence for other applicants to insist on equal treatment; that each application is decided on its own particular merit.

Sincerely,

Miriam Cooke-Dallin

Jill Collinson

From: CVRD Development Services
Sent: Monday, February 08, 2010 8:30 AM
To: Jill Collinson
Subject: FW: File number 2-B-09DP/VAR (Dhillon)

From: David and Jackie Richards [mailto:shawnigan1@shaw.ca]
Sent: Sunday, February 07, 2010 10:11 PM
To: CVRD Development Services
Cc: slang-2@shaw.ca; G D
Subject: File number 2-B-09DP/VAR (Dhillon)

Hello Jill,

I have just received your letter re the variance application made by Ramina Dhillon. I do think a single-storey dwelling would be much more suitable for the property than a multi-level home. I do have one concern in that we built a new home on our property approximately 4 yrs ago and we did build within the guidelines with regards to the setback. On either side of me are small cottages which no doubt will come down to make room for new homes during the time I will be living here. If Mr. Dhillon is given permission to build closer to the water would this set a precedent for other properties in the neighborhood? There would certainly be an impact on my view if my neighbors were allowed to build farther forward.

I have no doubt the proper procedures would be followed with consideration to the impact on the environment. Mr. Dhillon did mention to me that the dept. of fisheries had been consulted.

I do hope this would not set a precedent as I would love to see Mr. Dhillon able to carry out his plan for the property, it looks like a lovely home and would be a welcome addition to the neighborhood.

I will await your reply, thank you,
Jackie (Richards)
2032 Cullin Rd.
Shawnigan Lake



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Jill Collinson

From: CVRD Development Services
Sent: Wednesday, February 17, 2010 9:56 AM
To: Jill Collinson
Subject: FW: file 3 2-B-09DP/VAR (Dhillon) 2024 Cullin Road

-----Original Message-----

From: K. Myles [mailto:kmyles@shaw.ca]
Sent: Monday, February 15, 2010 1:01 PM
To: CVRD Development Services; Keith Myles
Subject: file 3 2-B-09DP/VAR (Dhillon) 2024 Cullin Road

To: Jill Collinson, Planning Technician

I would like to express my concern about the proposed variance Application file 3 2-B-09DP/VAR (Dhillon)

Relaxing the setback from 15 metres to 9.8 metres resulting in a variance of 6.2 metres is a request for over 40% variation of Zoning Bylaw No. 985 Section 5.14.

This seems to be an excessive request, which if granted, would set a precedent for other applicants seeking such extensive variances.

As well, granting this request would also negate what the intent of Bylaw 985 Section 5.14 to be - that is - to protect the watercourse, lake, or sea.

Should the applicant receive approval for this variance, it would be prudent for the CVRD to request that the dwelling that is currently on the property be removed prior to the granting of any building permit.

Harold Myles
2016 Kendal Avenue
Victoria, V8P 1R8

Jill Collinson

From: CVRD Development Services
Sent: Wednesday, February 17, 2010 9:57 AM
To: Jill Collinson
Subject: FW: File Number 2-B-09DP/VAR (Dhillon)

From: Shane King-Pemberton Holmes [mailto:shanekingsells@shaw.ca]
Sent: Tuesday, February 16, 2010 9:40 AM
To: CVRD Development Services
Subject: File Number 2-B-09DP/VAR (Dhillon)

Attention Jill Collinson, Planning Technician
Development Services Division
Planning and Development Department
CVRD

Re: 2024 Cullin Road (Lot A, Shawnigan Lake Suburban Lots, Plan 22742 PID 000-105-759)
File Number 2-B-09DP/VAR (Dhillon)

Hello Jill. My name is Shane King and I own a property at #28-2046 Widow's Walk (directly beside 2024 Cullin Road). I am writing this email in opposition of Mr Dhillon's proposed variance adjustment. I feel that the current minimum setback from the high water mark has been put in place for a reason. I have been up at the property in the middle of winter to see the waterline as far back halfway up the property. This poses a concern with regards to the natural environment of the shoreline. I also have a large concern that the variance proposal will reduce my views of the water which will also reduce the value of my recreation property and the other 30 owners at The Shawnigan Beach Resort. The property at 2024 Cullin Road was purchased by Mr Dhillon in 2009 with a difficult building envelope, limiting the size of a potential home and distance to the shoreline. It would be upsetting to see this variance passed to benefit 1 owner at the expense of 30 others.

Please feel free to contact me if you have any further questions.

Kind regards

Shane King

Real Estate Consultant
MLS® Silver Award 2009
Pemberton Holmes Ltd.
Cell: (250) 661-4277
Fax: (250) 590-9448
Website: www.shaneking.ca



Jill Collinson

From: CVRD Development Services
Sent: Wednesday, February 17, 2010 9:58 AM
To: Jill Collinson
Subject: FW: File Number 2-B-09DP/VAR (Dhillon)

From: Jones, Douglas [mailto:Douglas.Jones@nbf.ca]
Sent: Tuesday, February 16, 2010 11:45 AM
To: CVRD Development Services
Subject: File Number 2-B-09DP/VAR (Dhillon)

Attention: Jill Collinson, Planning Technician
Development Services Division
Planning and Development Department
CVRD

**Re: 2024 Cullin Road (Lot A, Shawnigan Lake Suburban Lots, Plan 22742 PID 000-105-759)
File Number 2-B-09DP/VAR (Dhillon)**

Dear Jill,

My name is Barbara Joan Jones and I own unit #6 at 2046 Widow's Walk. I am writing this email in opposition of Mr Dhillon's proposed variance adjustment for the following reasons:

1. the size of the variance being requested is excessive in relation to the current bylaw
2. it is difficult to understand where the high water mark has actually been set
3. I have concerns on how this proposal, if approved, would affect the views of each unit in our complex
4. I have concerns on how this proposal, if approved, would negatively affect the value of our investment

In closing, the ecology of the Lake has been an issue for quite some time. By approving this application we would put further strain on the land and it would set a poor precedent for future variance requests. If we are attempting to preserve the Lake by restricting and controlling new construction, I feel that this variance is not in the best interest of the Lake and surrounding area.

Please feel free to contact me if you have any further questions.

Regards,
Barbara Joan Jones
#6 - 2046 Widow's Walk
Shawnigan Lake, BC

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Jill Collinson

From: Fraser Ramsay [framsay@ramsaygroup.com]
Sent: Tuesday, February 16, 2010 10:54 AM
To: Jill Collinson
Subject: File Number 2-B-09DP/VAR (Dhillon)

Attention: Jill Collinson, Planning Technician
Development Services Division
Planning and Development Department CVRD

Re: 2024 Cullin Road (Lot A, Shawnigan Lake Suburban Lots, Plan 22742 PID 000-105-759
File Number 2 – B-09DP/VAR (Dhillon)

Dear Jill Collinson

My name is Fraser Ramsay, my wife is Bonnie Reside; we own a property Unit #30-2046 Widows Walk (directly beside 2024 Cullin Road).

I am writing this email in opposition of Mr. Dhillon's proposed variance adjustment, to allow them to build a house 9.8meters from the high water mark; the current Zoning Bylaw 985, states minimum 15meters form the high water mark, they are requesting it be varied to 9.8 meters a difference of 5.2meters, equaling 17feet.

My concerns are one of precedence setting, altering the zoning of one property will set precedence for others, and also the fear that after the variance is granted that the proposed height of this building will be increased to the maximum of 10 meters, as per the allowable zoning. Zoning for this area, as per the information provided states that a house, 10meters in height, can potentially be built on this property which is a grave concern as well.

I feel, if passed, it will negatively affect our views of the water, and future property values, by creating a visual obstruction, and also if built to the potential of the zoning, would greatly inhibit/block sunlight onto our property, which is an additional and extreme negative given the seasonal recreational use of our property.

In the end having a (30 foot/10 meter) structure, 5.2meters, (17 feet) further into the property, towards the waterline, I feel is a substantial negative; I am not willing to support this request for an allowance for this variance.

We would like to be good neighbours, but unfortunately, we must try and protect our own interests and the interest's of the other neighbour's around this referenced property.

It is our feeling that this property should be developed under the confines of the current development R-3 Zoning and Bylaws as stated.

Thank you for your review and consideration of the above and not allow this variance to pass.

Respectfully Yours

Fraser Ramsay
Work Ph # 1-250-656-5314 ext 234
Cell Ph # 1-250-888-7842

C.V.R.D.
RECEIVED

FEB 15 2010

1070 Donwood Drive,
Victoria, B.C.,
V8X 4G3,
Feb. 9, 2010.

CVRD,
175 Ingram Street,
Duncan, B.C.,
V9L 1N8

Attn. Jill Collinson
Development Services Division.
RE: File # 2-B-09DP/VAR (Dhillon)

We wish to register our opposition to the request to relax the required setback for the proposed new building on this property from 15 meters to 9.8 meters.

This proposal shows no respect for the lake which is already polluted or for the Zoning Bylaw which was created to protect it. It will also set a precedent.

When our friend, Ben Metcalfe, who was the former owner died, we crawled around under the house with the idea of purchasing it. It was built on pilings and quite accessible underneath. Others did the same, and at that point in time we could not see any connection of plumbing to anything outside ! Would you please tell me when and how a permit was issued for disposal on this property ?

Sincerely,



Gordon and Joan Alston-Stewart

1070 Donwood Drive,
Victoria, B.C.,
V8X 4G3,
Feb. 9, 2010.

CVRD,
175 Ingram Street,
Duncan, B.C.,
V9L 1N8

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Sincerely,



Gordon and Joan Alston-Stewart



SRI

STAFF REPORT

ELECTORAL AREA SERVICES COMMITTEE MEETING OF MAY 18, 2010

DATE: May 12, 2010

FILE NO:

FROM: Tom R. Anderson, General Manager

BYLAW NO:

SUBJECT: Draft Subdivision Servicing Bylaw

Action:

Committee direction is requested so that the Draft Subdivision Servicing Bylaw may be presented to the Ministry of Transportation and Infrastructure for consideration.

Purpose:

To obtain Committee direction on moving the Draft Subdivision Servicing Bylaw forward.

Financial Implications:

N/A

Interdepartmental/Agency Implications:

Once direction has been obtained from the Committee, key provincial government agencies will be presented a copy for their consideration.

Background:

In 2008, the Planning and Development Department received approval and funding to proceed with the drafting of a new Subdivision Servicing Bylaw for the Regional District. Landworks Consultants were hired to undertake the work due to their significant involvement in shaping the *Green Bylaws Toolkit* which promotes alternative development standards.

An interdepartmental steering committee within the Regional District was formed with representation from Engineering, Environment, Public Safety, Parks, Building Inspection and Planning to provide guidance to the consultant in the drafting of the bylaw. The final draft of that work is presented to the Committee which will now also play a key role in setting new standards for future development in the Regional District.

Many of the standards outlined in the Bylaw may be new to this region but are in actual fact quite commonly found in other local governments servicing bylaws. Other standards found in our draft bylaw are considered "leading edge" and have been incorporated into the bylaw as a way to push the "green" agenda as directed at the start of this project. In his presentation to Committee, the Consultant, will highlight these new standards and identify those which are

moving the “green” initiative forward. I have requested that he outline the significance of these standards so that the Committee may understand the impacts they will have on new development proposals. Your question is: Will we lead or will we follow?

Once the Committee has provided their direction, staff and the consultant will meet with the Ministry of Transportation and Infrastructure to outline to them just how these new standards may impact their part of the development approvals process. The Consultant will provide the Committee with some insight on proposed alternate road and drainage standards and related maintenance that may cause some consternation with Ministry officials so that you are aware of these possible points of contention.

Submitted by,

A handwritten signature in black ink, appearing to read 'Tom R. Anderson', written over a horizontal line.

Tom R. Anderson,
General Manager
Planning and Development Department

TRA/ca



SR2

STAFF REPORT

ELECTORAL AREA SERVICES COMMITTEE MEETING OF MAY 18, 2010

DATE: May 12, 2010

BYLAW NO: 3389

FROM: Kathleen Harrison, Legislative Services Coordinator

SUBJECT: Bylaw No. 3389 – A Bylaw to Create an Annual Financial Contribution Service for the Cowichan Station Area Association.

Recommendations:

1. That it be recommended to the Board that an annual financial contribution service be created for the Cowichan Station Area Association with a maximum requisition limit of \$20,000.00 to assist with costs associated with the operation and maintenance of buildings and lands located at 2375 Koksilah Road (former Cowichan Station School Site) and the delivery of community based programs and services, heritage projects and community events.
2. That "**CVRD Bylaw No. 3389 – Cowichan Station Area Association Annual Financial Contribution Service Establishment Bylaw, 2010**", be forwarded to the Board for consideration of first three readings, and following provincial and voter approval, be considered for adoption.
3. That it be recommended to the Board that voter approval to establish the Cowichan Station Area Association Annual Financial Contribution Service be obtained through an alternative approval process.

Purpose: To introduce Bylaw No. 3389 that provides for an annual financial contribution to the Cowichan Station Area Association with a maximum requisition limit of \$20,000.00 to assist with costs associated with the operation and maintenance of buildings and lands located at 2375 Koksilah Road (former Cowichan Station School Site) and the delivery of community based programs and services, heritage projects and community events; and to confirm the *Alternative Approval Process* as the means of obtaining voter approval for the establishment of this service.

Financial Implications: The maximum amount of money that may be requisitioned annually in support of this service is the greater of \$20,000.00 or \$0.03774 per \$1,000.00 of net taxable land and improvements. The average costs to taxpayers within the proposed service area with property assessed at \$100,000.00 would be approximately \$2.95 annually.

.../2

Interdepartmental/Agency Implications: This bylaw requires the approval of the service area voters and the Inspector of Municipalities before it can be adopted. Pursuant to Section 797.5 of the *Local Government Act* and Section 84 of the *Community Charter*, voter approval may be obtained through an alternative approval process for the establishment of this proposed service.

Background: The following recommendation was endorsed at the April 20, 2010 Electoral Area Service Committee meeting:

That staff be directed to produce a report to EASC regarding the process and draft bylaw to create an annual financial contribution service for the Cowichan Station Area Association (Cowichan Station School) with a maximum requisition limit of \$20,000.

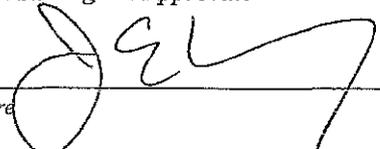
Therefore, an annual financial contribution service bylaw, in the amount of \$20,000.00, for the Cowichan Station Area Association has been drafted and is attached for consideration.

Submitted by



Kathleen Harrison
Legislative Services Coordinator

Attachment: Bylaw No. 3389

| |
|---|
| <p><i>Division Manager's Approval:</i></p>  <p>_____ <i>Signature</i></p> |
|---|



COWICHAN VALLEY REGIONAL DISTRICT

BYLAW NO. 3389

**A Bylaw to Establish a Service to Provide an Annual Financial Contribution to
the Cowichan Station Area Association
Within Electoral Area E – Cowichan Station/Sahtlam/Glenora.**

WHEREAS pursuant to sections 796 and 800 of the *Local Government Act*, a regional district may, by bylaw, establish and operate any service that the Board considers necessary or desirable for all or part of the regional district;

AND WHEREAS the Board of the Cowichan Valley Regional District wishes to establish a service for the purpose of assisting with costs associated with the operation and maintenance of buildings and lands located at 2375 Koksilah Road and the delivery of community based programs and services, heritage projects, and community events by the Cowichan Station Area Association, within Electoral Area E – Cowichan Station/Sahtlam/Glenora;

AND WHEREAS the Board of the Cowichan Valley Regional District has obtained the approval of the service area electors in accordance with Section 801.3 of the *Local Government Act* and Section 86 of the *Community Charter*;

NOW THEREFORE the Board of Directors of the Cowichan Valley Regional District, in open meeting assembled, enacts as follows:

1. **CITATION**

This bylaw may be cited for all purposes as "**CVRD Bylaw No. 3389 – Cowichan Station Area Association Annual Financial Contribution Service Establishment Bylaw, 2010**".

2. **SERVICE BEING ESTABLISHED**

The service being established under the authority of this bylaw is a service for the purpose of providing an annual financial contribution to assist with costs associated with the operation and maintenance of buildings and lands located at 2375 Koksilah Road and the delivery of community based programs and services, heritage projects, and community events by the Cowichan Station Area Association, within Electoral Area E – Cowichan Station/Sahtlam/Glenora. The service shall be known as the "Cowichan Station Area Association Annual Financial Contribution Service".

.../2

3. SERVICE AREA BOUNDARIES

The boundaries of the service area are the boundaries of Electoral Area E – Cowichan Station/Sahtlam/Glenora.

4. PARTICIPATING AREA

Electoral Area E – Cowichan Station/Sahtlam/Glenora is the only participating area for this service.

5. METHOD OF COST RECOVERY

The annual cost of providing this service shall be recovered by one or more of the following:

- a) property value taxes requisitioned and collected on the basis of the net taxable value of land and improvements within the service area, as per the *Local Government Act*;
- b) revenues raised by other means authorized by the *Local Government Act* or another Act.

6. MAXIMUM REQUISITION

The maximum amount of money that may be requisitioned annually in support of this service shall be the greater of \$20,000.00 or an amount equal to the amount that could be raised by a property value tax of \$0.03774 per \$1,000.00 of net taxable value of land and improvements within the service area.

READ A FIRST TIME this _____ day of _____, 2010.

READ A SECOND TIME this _____ day of _____, 2010.

READ A THIRD TIME this _____ day of _____, 2010.

I hereby certify this to be a true and correct copy of Bylaw No. 3389 as given Third Reading on the _____ day of _____, 2010.

Corporate Secretary

Date

APPROVED BY THE INSPECTOR OF MUNICIPALITIES this _____ day of _____, 2010.

ADOPTED this _____ day of _____, 2010.

Chairperson

Corporate Secretary



SRS

STAFF REPORT

ELECTORAL AREA SERVICES COMMITTEE MEETING MAY 18, 2010

DATE: May 3, 2010 **FILE NO:** 0540-20-EASC/07
FROM: Daniel Derby, General Manager, Public Safety
SUBJECT: Reserve Fund Expenditure Bylaw – Honeymoon Bay Fire Hall Roof

Recommendation:

That a Reserve Fund expenditure bylaw be prepared authorizing expenditure of no more than \$6,400 from the Honeymoon Bay Fire Protection Local Service Area Capital Reserve Fund (CVRD Establishment Bylaw No. 1897, cited as the Honeymoon Bay Fire Protection Local Service Area Capital Reserve Fund Establishment Bylaw, 2000) for the purpose of repairing the roof of the Honeymoon Bay Fire Hall, and that the reserve fund bylaw be forwarded to the Board for consideration of three readings and adoption.

Financial Implications:

The 2010 Honeymoon Bay Volunteer Fire Department budget allocated \$58,600 from current revenue and \$6,400 from reserve funds to pay for \$65,000 in repairs to the Fire Hall roof. However, the quote for repairs is \$66,500. The extra \$1,500 will be funded through use of Contingency Funds. The current balance in the reserve fund established under Bylaw No. 1897 is approximately \$100,903.

Background:

It was determined last Winter that the Honeymoon Bay Fire Hall roof needed to be replaced. The roofing system will be removed and replaced with a new standing seam metal roofing system prior to next Winter. As part of the re-roofing program, sheeting will be replaced, attic ventilation will be improved and any water damage will be repaired.

Submitted by,

Daniel J. Derby
General Manager, Public Safety

/bw



SR4

STAFF REPORT

ELECTORAL AREA SERVICES COMMITTEE MEETING OF MAY 18, 2010

DATE: May 12, 2010

FILE NO:

FROM: Tom R. Anderson, General Manager

BYLAW NO:

SUBJECT: Building Sustainable Communities Conference

Action:

Direction of the Committee is requested.

Purpose:

To obtain direction on which Directors may attend the Fresh Outlooks Conference in Kelowna from November 15th – 18th!

Financial Implications:

It is our understanding that \$5,000 was allotted in the 2010 Electoral Area Services Budget (250) to allow Directors to attend this conference.

Interdepartmental/Agency Implications:

N/A

Background:

In order that we may be able to take advantage of the Early Registration Fees, it is requested that the Committee provide direction on who will be attending this conference so that registrations and reservations can be placed. Attached is the cover and conference fee pages for your information. Directors are encouraged to visit www.freshoutlookfoundation.org to view the conference outline.

Submitted by,

A handwritten signature in black ink, appearing to read "T. Anderson", with a long horizontal flourish extending to the right.

Tom R. Anderson,
General Manager
Planning and Development Department

TRA/ca
attachment



Building *SustainAble* Communities

November 15th-18th, 2010

Delta Grand Resort & Conference Centre
KELOWNA, BC

With more than
100 Speakers
from the
public, private,
non-profit and
academic sectors

MONDAY, NOVEMBER 15th
**CHAMPIONING CHANGE:
A Sustainability Planning Forum**

TUESDAY, NOVEMBER, 16th
**Pollution Prevention & Mitigation
Green Economic Development**

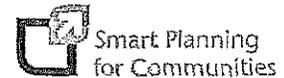
WEDNESDAY, NOVEMBER 17th & THURSDAY, NOVEMBER 18th
Community Sustainability

(featuring a wide range of social, cultural,
environmental and economic topics)

Hosted & Facilitated by the Fresh Outlook Foundation
EMAIL: jo@freshoutlookfoundation.org • PHONE: 250-766-1777
www.freshoutlookfoundation.org

Register
by June 30th and
SAVE!
• Free registration to
CHAMPIONING
CHANGE
• No HST

SPONSORED BY:



Register for the full conference, for a day, a half day... or even a single session by visiting
www.freshoutlookfoundation.org

FIRST NAME _____ LAST NAME _____
 ORGANIZATION _____ TITLE _____
 MAILING ADDRESS _____
 CITY _____ POSTAL CODE _____
 PHONE NUMBER _____ EMAIL ADDRESS _____

CHAMPIONING CHANGE: A Sustainability Planning Forum (November 15th, 2010)

- Free (sponsors, speakers, facilitators, volunteers and with BSC ULTRA EARLY BIRD Package)
- Students \$29
- Non-profit representatives \$49
- Early registration (by September 17th) \$59
- Registration \$79
- Late registration \$99

REGISTRATION PACKAGES FOR BSC (3 full days plus 3 light breakfasts, 3 lunches, and the ECO-EX Wine & Cheese)

- Free (speakers, sponsors, draw winners, volunteers)
- Students \$299
- Non-profit representatives (not including government) \$449
- ULTRA EARLY BIRD Registration including CHAMPIONING CHANGE (by June 31st) \$549
- Early Registration not including CHAMPIONING CHANGE (between July 1st & September 17th) \$599
- Registration not including CHAMPIONING CHANGE (between September 17th & November 5th) \$649
- Late Registration not including CHAMPIONING CHANGE (between November 5th and 16th) \$699

TUESDAY, NOVEMBER 16th (1 full day plus light breakfast and lunch)

- Free (speakers, sponsors, draw winners, volunteers)
- Students \$ 99
- Non-profit representatives (not including government) \$149
- Early Registration (before September 17th) \$199
- Registration (between September 17th & November 5th) \$229
- Late Registration (between November 5th and 16th) \$249
- Half-day am (not including breakfast or lunch) \$ 99
- Half-day pm (not including lunch) \$ 99
- ECO-EX Trade Show Wine & Cheese \$ 19

WEDNESDAY, NOVEMBER 17th (1 full day plus light breakfast and lunch)

- Free (speakers, sponsors, draw winners, volunteers)
- Students \$ 99
- Non-profit representatives (not including government) \$149
- Early Registration (before September 17th) \$199
- Registration (between September 17th & November 5th) \$229
- Late Registration (between November 5th and 16th) \$249
- Half-day am (not including breakfast or lunch) \$ 99
- Half-day pm (not including lunch) \$ 99

THURSDAY, NOVEMBER 18th (1 full day plus light breakfast and lunch)

- Free (speakers, sponsors, draw winners, volunteers)
- Students \$ 99
- Non-profit representatives (not including government) \$149
- Early Registration (before September 17th) \$199
- Registration (between September 17th & November 5th) \$229
- Late Registration (between November 5th and 16th) \$249
- Half-day am (not including breakfast or lunch) \$ 99
- Half-day pm (not including lunch) \$ 99

SUB-TOTAL \$ _____

GST (5%) #132988569 (before July 1st) \$ _____

HST (12%) #132988569 (after July 1st) \$ _____

TOTAL \$ _____

To register for a single session, simply show up at the Delta Grand 30 minutes before the session's scheduled time. Registration by session is \$30 including HST.

API

Minutes of the Electoral Area G (Saltair)
Advisory Planning Commission
May 5, 2010

In attendance: Ted Brown, Ruth Blake, David Thomas, Director Mel Dorey

Also in attendance: Murray Archdekin and Gwennith Robinson (applicants)

The purpose of the meeting was to review Development Permit Application No. 3-G-10 DP (Archdekin and Robinson)

The Meeting, which was held on site, was called to order at 7:00 p.m. by Chairman Ted Brown.

The applicants provided the Commission with background information with respect to the application, noting that the purpose of the application was to replace an existing dwelling with a new dwelling and garage within the Ocean Shoreline Development Permit area. A geotechnical study was commissioned by the applicants which concluded that the site is safe and suitable for the intended development. The study made several recommendations setting out actions which would help maintain or improve bank stability for this property. The applicants advised that it was their intention to incorporate these recommendations into their development plans for the site.

Following questioning of the applicants and discussion, the following motion was made:

That the Advisory Planning Commission recommend approval of the Development Permit Application subject to the inclusion of the recommendations of the geotechnical study as part of the development approval.

Carried Unanimously

Ted Brown
Chairman
Saltair Advisory Planning Commission

CI



CVRD

COWICHAN VALLEY REGIONAL DISTRICT

SUBMISSION FOR A GRANT-IN-AID (ELECTORAL AREAS)

Submitted by Director IANNI DINARDO Area D

Grantee: _____ Grant Amount \$ 500.00

NAME: COWICHAN BAY IMPROVEMENT ASSOCIATION

ADDRESS: P.O. BOX 23 COWICHAN BAY BC.
VORINI

Contact Phone No: Jeff Quinton

PURPOSE OF GRANT: SUPPORT FOR LOW TIDE DAY

REQUESTED BY: Levi L. Dinnard
Director Requesting Grant

| ACCOUNT NO. | AMOUNT | GST CODE |
|-------------------|----------|----------|
| 01-2-1950-108-114 | \$500.00 | 10.0 |

FOR FINANCE USE ONLY

BUDGET APPROVAL [Signature]

VENDOR NO. _____

Disposition of Cheque:

Mail to above address: _____

Return to _____

Attach to letter from _____

Other _____

RECEIVED
CVRD
MAY - 6 2010

Approval at Regional Board Meeting of _____

Financial Services Department

Finance Authorization

Cowichan Bay Improvement Association
P.o. Box 23 Cowichan Bay, B.C.
V0R1N1

May 03, 2010

Lori Iannidinardo
Director Electoral Area D
C.V.R.D
175 Ingram St.
Duncan B.C.

Dear Lori,

Please accept this letter as a formal request for funding support for Low Tide Day May 15, 2010. This year marks the 11th year of cleaning the estuary and surrounds and providing science programming for the children.

As you know most of our costs for the day are gifts in kind but we do have some outlays for washrooms, hand wash stations and some food and refreshment items.

It is in this regard that we ask for consideration of Grant in Aid Funding. Five Hundred Dollars would make the difference and add greatly to this worthy event. I sincerely thank you for your assistance in carrying this request forward on our behalf.

Yours truly,

Jeff Quinton
Low Tide Chairperson



C.V.R.D.

MEMORANDUM

DATE: May 11, 2010

TO: Tom R. Anderson, General Manager, Planning and Development Department

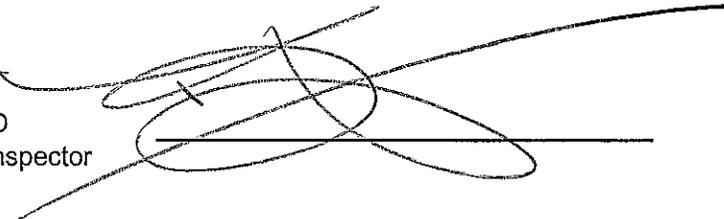
FROM: Brian Duncan, Chief Building Inspector

SUBJECT: BUILDING REPORT FOR THE MONTH OF APRIL, 2010

There were 65 Building Permits and 2 Demolition Permit(s) issued during the month of March, 2010 with a total value of \$ 7,318,003

| Electoral Area | Commercial | Institutional | Industrial | New SFD | Residential | Agricultural | Permits this Month | Permits this Year | Value this Month | Value this Year |
|----------------|-------------------|---------------|-----------------|---------------------|-------------------|--------------|--------------------|-------------------|---------------------|----------------------|
| "A" | 20,000 | | | 1,565,995 | 96,270 | | 15 | 33 | 1,682,265 | 3,622,138 |
| "B" | | | | 1,437,470 | 117,500 | | 14 | 50 | 1,554,970 | 4,941,175 |
| "C" | 100,000 | | 1,500 | 2,013,922 | 145,120 | | 20 | 44 | 2,260,542 | 5,127,909 |
| "D" | 1,000 | | | 373,240 | | | 4 | 16 | 374,240 | 1,237,280 |
| "E" | | | | 208,550 | 206,270 | | 5 | 22 | 414,820 | 2,523,690 |
| "F" | | | | 270,870 | 15,336 | | 3 | 9 | 286,206 | 713,066 |
| "G" | | | | | 241,880 | | 2 | 11 | 241,880 | 1,263,020 |
| "H" | | | | | | | 0 | 6 | 0 | 419,182 |
| "I" | | | | 453,080 | 50,000 | | 4 | 9 | 503,080 | 986,703 |
| Total | \$ 121,000 | \$ - | \$ 1,500 | \$ 6,323,127 | \$ 872,376 | \$ - | 67 | 200 | \$ 7,318,003 | \$ 20,834,163 |

B. Duncan, RBO
 Chief Building Inspector
 BD/db



NOTE: For a comparison of New Housing Starts from 2007 to 2010, see page 2
 For a comparison of Total Number of Buildig Permits from 2007 to 2010, see page 3

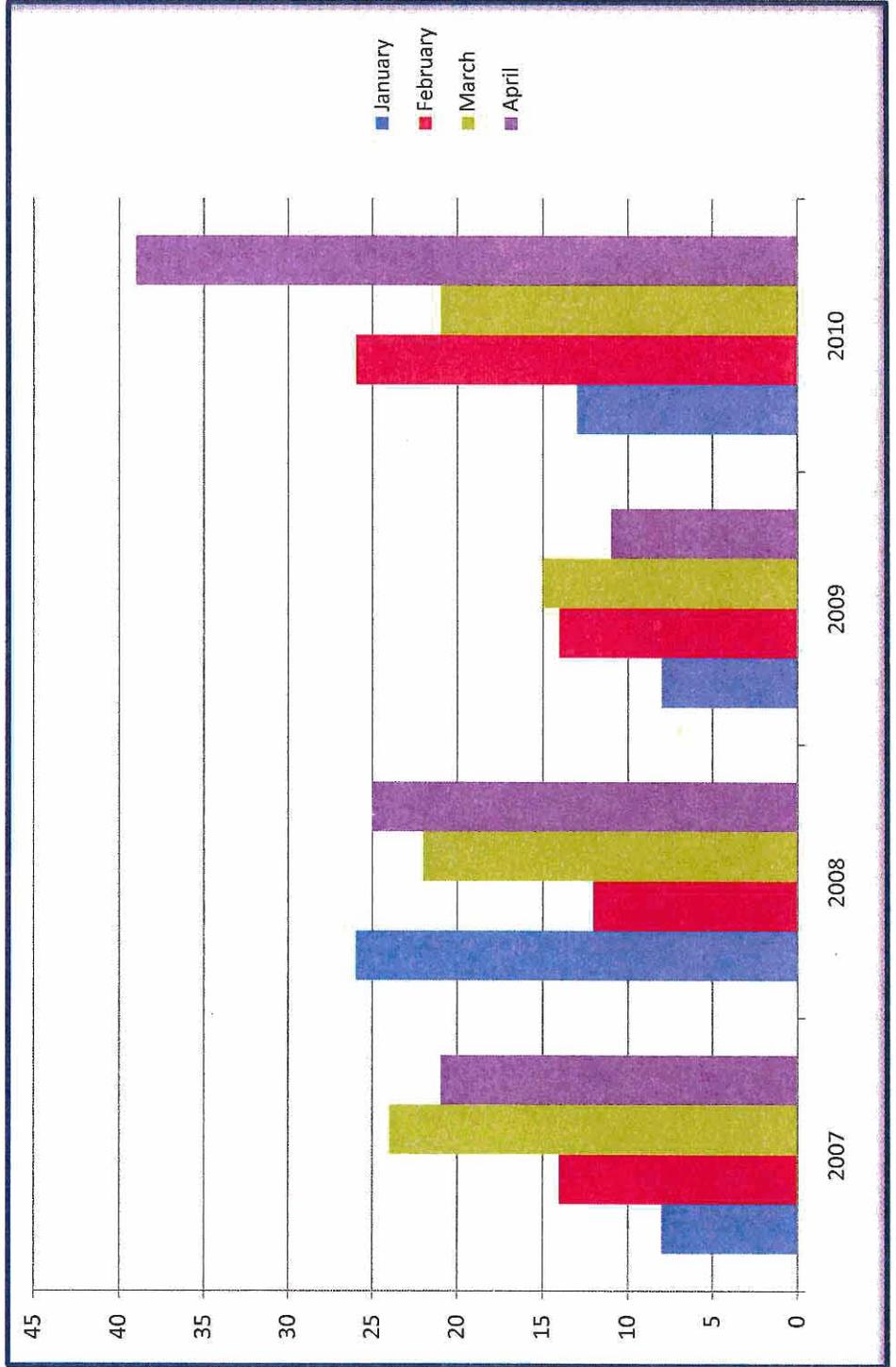
INT



C.V.R.D

Total of New Housing Starts

| | 2007 | 2008 | 2009 | 2010 |
|----------|------|------|------|------|
| January | 8 | 26 | 8 | 13 |
| February | 14 | 12 | 14 | 26 |
| March | 24 | 22 | 15 | 21 |
| April | 21 | 25 | 11 | 39 |





C.V.R.D

Total Building Permits Issued

| | 2007 | 2008 | 2009 | 2010 |
|----------|------|------|------|------|
| January | 26 | 50 | 23 | 35 |
| February | 28 | 30 | 32 | 44 |
| March | 24 | 48 | 36 | 54 |
| April | 54 | 63 | 34 | 67 |

