

REGIONAL DISTRICT OF NANAIMO
ELECTORAL AREA PLANNING COMMITTEE
TUESDAY, OCTOBER 13, 2009
6:30 PM

(RDN Board Chambers)

A G E N D A

PAGES

CALL TO ORDER

DELEGATIONS

MINUTES

- 3-5 Minutes of the regular Electoral Area Planning Committee meeting held September 8, 2009.

BUSINESS ARISING FROM THE MINUTES

COMMUNICATIONS/CORRESPONDENCE

UNFINISHED BUSINESS

PLANNING

DEVELOPMENT PERMIT APPLICATIONS

- 6-12 Development Permit Application No. PL2009-781 - Christopher Turko on behalf of Cheung - 1895 Stewart Road - Electoral Area 'E'.
- 13-18 Development Permit Application No. PL2009-790 - King - 1975 Widgeon Road & 3005 Oakdowne Road - Electoral Area 'H'.
- 19-34 Development Permit Application No. PL2009-745 - O'Connor - 750 Parry's Park Road - Electoral Area 'G'.

DEVELOPMENT PERMIT WITH VARIANCE APPLICATIONS

35-49 Development Permit with Variances Application No. PL2009-748 - Law & Parker – 3417 Carmichael Road - Electoral Area 'E'

DEVELOPMENT VARIANCE PERMIT APPLICATIONS

50-66 Development Variance Permit Application No. PL2009-498 - Ewasiuk & Anderson - 3617 Dolphin Drive - Electoral Area 'E'.

ADDENDUM

BUSINESS ARISING FROM DELEGATIONS OR COMMUNICATIONS

NEW BUSINESS

ADJOURNMENT

IN CAMERA

REGIONAL DISTRICT OF NANAIMO

**MINUTES OF THE ELECTORAL AREA PLANNING COMMITTEE
MEETING HELD ON TUESDAY, SEPTEMBER 8, 2009, AT 6:30 PM
IN THE RDN BOARD CHAMBERS**

Present:

Director D. Bartram	Chairperson
Director J. Burnett	Electoral Area A
Director M. Young	Electoral Area C
Director G. Holme	Electoral Area E
Alternate	
Director D. Niwa	Electoral Area F
Director J. Stanhope	Electoral Area G

Also in Attendance:

M. Pearse	Senior Manager, Corporate Administration
P. Thorkelsson	General Manager, Development Services
D. Lindsay	Manager, Current Planning
N. Tonn	Recording Secretary

CALL TO ORDER

The Chairperson welcomed Alternate Director Niwa and Dale Lindsay, Manager of Current Planning, to the meeting.

MINUTES

MOVED Director Holme, SECONDED Director Burnett, that the minutes of the Electoral Area Planning Committee meeting held July 14, 2009 be adopted.

CARRIED

PLANNING

DEVELOPMENT PERMIT APPLICATIONS

Development Permit Application No. 60927 – Cowen – 1435 Grieg Road – Electoral Area ‘G’.

MOVED Director Stanhope, SECONDED Director Young, that Development Permit Application No. 60927, to permit the construction of two dwelling units on the property legally described as Strata Lot 2, District Lot 129, Nanoose District, Strata Plan VIS6121 Together with an Interest in the Common Property in Proportion to the Unit Entitlement of the Strata Lot as shown on Form V, be approved subject to the conditions outlined in Schedules No. 1 to 4.

CARRIED

Development Permit Application No. 60919 – Fern Road Consulting Ltd. for Rothwell – 231, 235 & 241 Hilliers Road – Electoral Area ‘G’.

MOVED Director Stanhope, SECONDED Director Young, that Development Permit Application No. 60919 submitted by Fern Road Consulting Ltd., on behalf of R. Rothwell, in conjunction with the subdivision on the parcel legally described as Lot 1, District Lots 91 and 42, Newcastle District and of District Lot 144, Nanoose District (situated in Newcastle District), Plan 13306, Except Part in Plan VIP59597 and designated within the Environmentally Sensitive Features Development Permit Area for aquifer protection pursuant to the “Electoral Area ‘G’ Official Community Plan Bylaw No. 1540, 2008”, be approved, subject to the conditions outlined in Schedules No. 1 and 2 of the corresponding staff report.

CARRIED

Development Permit Application No. 60933 – Mardaga – 3790 Mallard Place – Electoral Area ‘E’.

MOVED Director Holme, SECONDED Director Burnett, that Development Permit Application No. 60933, to construct a dwelling unit and accessory building within the Environmentally Sensitive Features Development Permit Area pursuant to “Regional District of Nanaimo Nanoose Bay Official Community Plan Bylaw No. 1400, 2005”, for the property legally described as Lot 22, District Lot 78, Nanoose District, Plan 28595, be approved subject to the conditions outlined in Schedules No. 1 to 4.

CARRIED

DEVELOPMENT PERMIT WITH VARIANCE APPLICATIONS

Development Permit with Variance Application No. 60932 & Request for Frontage Relaxation – Judge – 1712 Vowels Road – Electoral Area ‘A’.

MOVED Director Burnett, SECONDED Director Young, that Development Permit with Variance Application No. 60932, submitted by Pauline Judge, in conjunction with the subdivision on the parcel legally described as Lot 3, Section 1, Range 7, Cranberry District, Plan 725 Except Part in Plans VIP69195 and VIP69231, located at 1712 Vowels Road and designated within the Fish Habitat Development Permit Area pursuant to the “Electoral Area ‘A’ OCP Bylaw No. 1240, 2001”, be approved subject to the conditions outlined in Schedule No. 1 of the corresponding staff report and the notification requirements pursuant to the *Local Government Act* with respect to the proposed variances outlined in Schedule No. 1.

CARRIED

MOVED Director Burnett, SECONDED Director Young, that the request for relaxation of the minimum 10% frontage requirement for proposed section 946 parcel in conjunction with the subdivision of the property, be approved.

CARRIED

DEVELOPMENT VARIANCE PERMIT APPLICATIONS

Development Variance Permit Application No. 90904 – Martindale & Collinge – 3150 Farrar Road – Electoral Area ‘A’.

MOVED Director Burnett, SECONDED Director Young, that Development Variance Permit Application No. 90904, to permit the conversion of an existing agriculture building to a residential dwelling unit, and to legalize the siting of an existing equipment building, on the subject property legally described as Lot A, Section 6, Range 5, Cedar District, Plan 36559, Electoral Area ‘A’, be approved subject to the conditions outlined in Schedules No. 1 to 3 and the notification requirements of the *Local Government Act*.

CARRIED

OTHER

Request for Frontage Relaxation – Skelding – 6610 Doumont Road – Electoral Area ‘C’.

MOVED Director Young, SECONDED Director Holme, that the request for relaxation of the minimum 10% frontage requirement in conjunction with the two lot subdivision of the property legally described as That Part of Lot 1, District Lot 35, Wellington District, Plan 3225, Lying Northerly of a Line Drawn Parallel to and Perpendicularly Distant 2.645 Chains Northerly From the Southerly Boundary of Said Lot, be approved.

CARRIED

Temporary Use Permit Applications No. 0901 & 0902 – Earthbank Resource Systems and Fern Road Consulting Ltd. for Fritzsche and Wenngatz – Corner of Hodge’s and Fritzsche Roads – Electoral Area ‘G’.

MOVED Director Stanhope, SECONDED Director Young, that the notes from the Public Information Meeting held on July 6, 2009 be received.

CARRIED

MOVED Director Stanhope, SECONDED Director Young, that Temporary Use Permit Applications No. 0901 and No. 0902, submitted by Earthbank Resources Systems Ltd. and Fern Road Consulting Ltd. on behalf of Irene Wenngatz and Volkhard Fritzsche, for the properties legally described as District Lot 19, Nanoose District, Except That Part in Plan 13475; and Lot C, District Lot 26, Nanoose District, Plan VIP80909, to permit a commercial composting operation and accessory retail sales be approved, subject to the conditions of permit outlined in Schedule No. 1, and subject to comments received as a result of the notification requirements pursuant to the *Local Government Act*.

CARRIED

Building Strata Conversion Application – Fern Road Consulting Ltd. for Medd – 1057 & 1065 Page Road – Electoral Area ‘G’.

MOVED Director Stanhope, SECONDED Director Holme, that the request from Fern Road Consulting Ltd., on behalf of Andrew John Medd for the building strata conversion as shown on the Proposed Strata Plan as Lot D, District Lot 78, Newcastle District, Plan VIP54784, be approved subject to the conditions being met as set out in Schedules No. 1 and 2 of the corresponding staff report.

CARRIED

ADJOURNMENT

MOVED Director Holme, SECONDED Director Young, that this meeting terminate.

CARRIED

TIME: 6:41 PM

CHAIRPERSON



CAC APPROVAL	
EAP	1 Oct 13 09
COW	
RHD	
BOARD	

MEMORANDUM

TO: Dale Lindsay
Manager of Current Planning

DATE: September 30, 2009

FROM: Susan Cormie
Senior Planner

FILE: PL 2009-781

SUBJECT: Development Permit Application No. PL 2009-781
C Turko on behalf of P Cheung
Electoral Area 'E' – 1895 Stewart Road, Folio No. 769.010161.300

PURPOSE

To consider an application for a development permit in conjunction with the creation of a bare land strata lot subdivision at 1895 Stewart Road in Electoral Area 'E'.

BACKGROUND

The parent parcel, legally described as Lot A, District Lot 137, Nanoose District, Plan VIP51554 Except Part in Plan VIP65704, is located at 1895 Stewart Road in Electoral Area 'E' (*See Attachment No. 1 for location of subject property*).

The property, which is 10.4 ha in size, is currently zoned Rural 5 (RU5) and is within Subdivision District 'D' (*2.0 ha minimum parcel size with or without community services*) as per the "Regional District of Nanaimo Land Use and Subdivision Bylaw No. 500, 1987". The parent parcel currently contains one dwelling unit and accessory buildings.

Surrounding land uses include Davenham Road (unconstructed) and resource management zoned property (Crown land) to the north, resource management zoned property to the east; Stewart Road and rural zoned properties to the south; and resource management and rural zoned properties to the west.

The parent parcel is within the following applicable development permit areas established by the Nanoose Bay Official Community Plan Bylaw No. 1400, 2005:

- The Sensitive Ecosystem Protection Development Permit Area, in this case for the protection of wetland, terrestrial herbaceous, and woodland ecosystems; and
- The Watercourse Protection Development Permit Area, in this case for a wetland located within the parent parcel.

As such, a Development Permit is required prior to development of the site.

Proposed Development

The applicant is proposing to construct four bare land strata lots which will meet the parcel averaging provisions of the provincial **Bare Land Strata Regulation**. Each bare land strata lot is proposed to be served with private potable water and septic disposal systems (*see Schedule No. 2 for proposed subdivision layout*). The proposed common property is for the purposes of providing access from Stewart Road.

As part of the application, the applicant has submitted Riparian Assessment and Biophysical Inventory Reports.

ALTERNATIVES

1. To approve Development Permit Application No. PL 2009-781 as submitted, subject to the conditions outlined in Schedules No. 1 and 2.
2. To deny the Development Permit as submitted and provide staff with further direction.

DEVELOPMENT IMPLICATIONS

Environmentally Sensitive Features

The submitted Biological Inventory highlights a number of features found on the parent parcel including a wetland and associated riparian area and a terrestrial herbaceous habitat. The report provides a number of recommendations including reducing access roads and driveways, sediment and erosion control measures, limiting land clearing to outside March 1st to July 1st in any given year, and limiting the areas of clearing for future dwelling units. The report also recommends incorporating mitigative and environmental protection measures be carried out during development of the site, which will be incorporated into the Conditions of Approval (*see Schedule No. 1*). The applicant's agent has indicated that the applicant is in concurrence with the recommendations of the report.

The submitted Riparian Assessment establishes a Streamside Protection and Enhancement Area (SPEA) of 15.0 metres for the northern, eastern, and western edges and 30.0 metres for the southern edge of the wetland. Measures include the installation of silt and snow fencing during construction. In addition, as part of the monitoring requirements, a post development report is to be submitted to both the Ministry of Environment and the Regional District of Nanaimo.

Site Servicing

The applicant has applied for septic disposal approval to the Central Vancouver Island Health Authority.

Proof of potable water is subject to the approval of the Approving Officer.

The Ministry of Transportation and Infrastructure is responsible for the storm drainage. As part of the subdivision review process, the Regional Approving Officer will examine the storm water management of the parent parcel and may impose conditions as required.

SUSTAINABILITY IMPLICATIONS

In keeping with Regional District of Nanaimo Board policy, the applicant has completed the "Sustainable Community Builder Checklist". Staff notes that the proposal is not in keeping with the direction of the OCP to have a minimum 8.0 ha parcel size or 4.0 ha where a number of criteria can be met. These policies from the OCP have yet to be implemented and evaluation of the proposal is based on current zoning regulations.

VOTING

Electoral Area Directors – one vote, except Electoral Area 'B'.


SUMMARY

Prior to the development (subdivision) of the subject property a development permit is required. The subject property is within the Sensitive Ecosystem Protection and Watercourse Protection Development Permit Areas pursuant to the Nanoose Bay OCP. The applicant has provided environmental reports, which identified a Streamside Protection Enhancement Area (SPEA) for the wetland and the area of the terrestrial herbaceous, habitat. The submitted report includes a number of recommendations for protecting these sensitive areas. These requirements are consistent with the applicable guidelines outlined in the Sensitive Ecosystem Protection and Watercourse Development Permit Area (*see Schedule No. 1 for Conditions of Approval*).

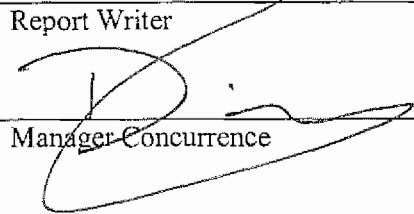
As the application is consistent with the requirements of the applicable development permit guidelines, staff recommends approval of the development permit.

RECOMMENDATION

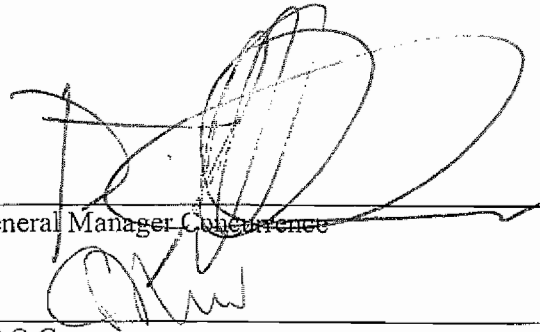
That Development Permit Application No. PL 2009-781 in conjunction with a bare land strata subdivision, be approved subject to the conditions outlined in Schedules No. 1 and 2 of the corresponding staff report.



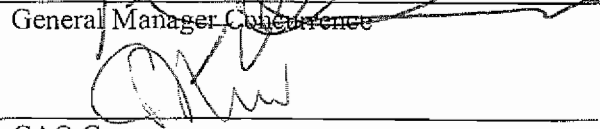
Report Writer



Manager Concurrence



General Manager Concurrence



CAO Concurrence

Schedule No. 1
Development Permit Application No. PL 2009-781
Conditions of Approval

The following sets out the conditions of approval for Development Permit No. PL 2009-781:

1. Subdivision

The subdivision of the lands shall be in substantial compliance with Schedule No. 2 (to be attached to and forming part of this Permit).

2. Sensitive Ecosystem Areas

The Summary and Recommendations outlined in the Biophysical Inventory 1895 Stewart Road prepared by Chatwin Engineering Ltd. and dated October 6, 2008 (to be attached to and forming part of Development Permit No. PL 2009-781 as Schedule No. 3) shall be followed including the installation of snow fencing outside the drip line of the trees within the SPEA.

3. Riparian Assessment

The measures and monitoring as set out in the Riparian Area Assessment No. 1127 prepared by Sarah Bonar and dated October 9, 2008 (to be attached to and forming part of the development permit as Schedule No. 4) are to be completed.

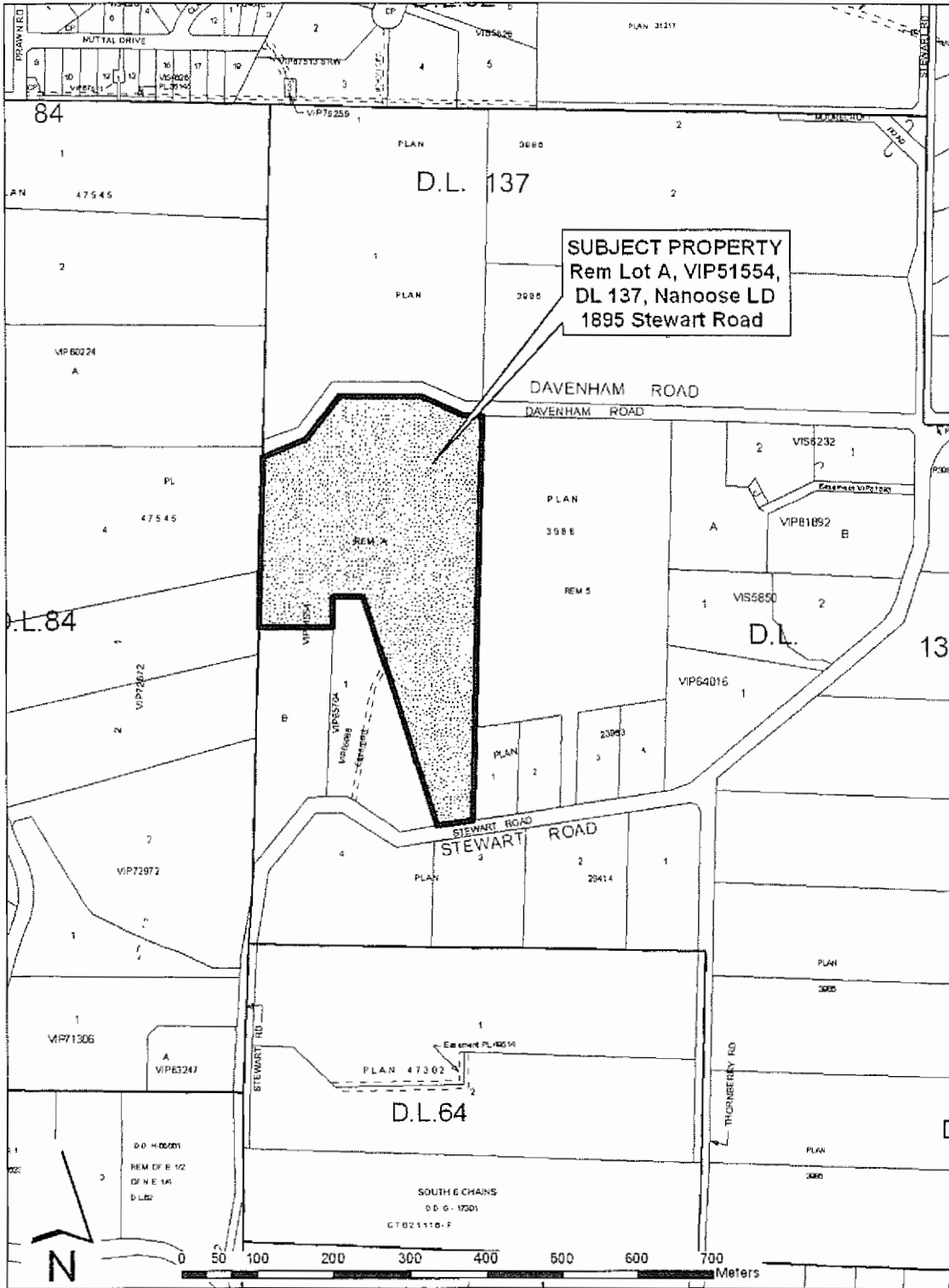
4. Land Clearing

a. Land clearing shall be in accordance with the recommendations of the Biophysical Inventory 1895 Stewart Road prepared by Chatwin Engineering Ltd. and dated October 6, 2008:

1. That land development activities be planned, designed and implemented in a manner that minimizes adverse impacts to the site's ecosystems. The preliminary land development plan for the project should incorporate the use of reduced access road and driveway width in order to minimize land clearing as well as the impervious surface area on the roadway if paving is required.
2. Due to the proximity of the wetland to the proposed driveway extension, proper sediment and erosion control measures should be in place during construction as per the Regional District of Nanaimo's requirements. If possible, conduct land clearing during dry summer months. Install silt fencing, hay bales or other sediment control measures down-slope of the construction area.
3. If possible, limit land clearing to outside the period of March 1st to July 1st in a given year to consider the incubation and fledging of bird species on site, or have a biologist examine the site to identify whether nests are in use and that active nests are protected during land clearing operations.
4. That land clearing of trees and vegetation be limited close to within the footprint of buildings in order to retain the natural features of the property as well as groundwater recharge during precipitation.
5. Install snow fencing outside of the drip line of the trees within the Streamside Protection and enhancement Area (SPEA) to protect the trees during excavation. Ensure machinery does not inadvertently damage upper portions of trees within the protected area during land clearing activity.

6. A certified arborist should be retained to determine the overall health and firmness of large trees located close or leaning towards the direction of the development in order to determine whether they will be a danger to human life or structure.
7. That a minimum buffer of 10m be preserved around the open meadow in order to reduce wind-throw potential, and to maintain a shaded buffer along the edge.
8. That a geotechnical engineer be retained to provide recommendations for house location and storm water management during the development planning stage for the proposed parcels.
9. When the location of proposed structures is decided, that a certified arborist be retained to determine the overall health and firmness of nearby trees to determine whether they are a danger to human life or structures.
10. If clearing of vegetation is proposed near the terrestrial herbaceous meadow, that an additional survey for rare plants should be completed during the flowering season in the spring to confirm the presence of any rare flowers.

Attachment No. 1 Location of Subject Property





CAC / APPROVAL		GW
EAP	✓	Oct 13 09
COW		
REP		
BOARD		

MEMORANDUM

TO: Dale Lindsay
Manager of Current Planning

DATE: September 30, 2009

FROM: Susan Cormie
Senior Planner

FILE: PL 2009-790

SUBJECT: Development Permit Application No. PL 2009-790, E. King and W. King
Electoral Area 'H' - 1975 Widgeon Road & 3005 Oakdowne Road

PURPOSE

To consider an application for a Development Permit in conjunction with a subdivision at 1975 Widgeon Road and 3005 Oakdowne Road in Electoral Area 'H'.

BACKGROUND

The subject property, legally described as Lot 5, District Lot 89, Newcastle District, Plan 1884, is located at 1975 Widgeon Road and 3005 Oakdowne Road in Electoral Area 'H' (see Attachment No. 1 for location of subject property).

The site, which is 5.5 ha in size, is zoned Rural 1 (RU1) and is situated within Subdivision District 'D' (RU1D) (2.0 ha minimum parcel size with or without community services) as per the "Regional District of Nanaimo Land Use and Subdivision Bylaw No. 500, 1987".

The parent parcel currently contains two single dwelling units and accessory buildings. Surrounding land uses include the Strait of Georgia to the north; a rural zoned parcel to the east; Widgeon Road, the E&N Railway Corridor, and rural zoned parcels to the south; and Oakdowne Road and a rural zoned parcel to the west.

The property is designated within the following applicable Development Permit Areas pursuant to Electoral Area 'H' Official Community Plan Bylaw No. 1335, 2003:

- The Environmentally Sensitive Features Development Permit Area (DPA) and
- The Hazard Lands Development Permit Area (DPA)

Proposed Development

The applicant is proposing to create two new parcels, both greater than the minimum 2.0 ha parcel size (see Schedule No. 2 for Proposed Plan of Subdivision). The parcels are proposed to be served with individual potable water wells and individual private septic disposal systems.

As part of the application process, the applicant has submitted Geotechnical, Hydrogeological and Environmental Assessment Reports.

ALTERNATIVES

1. To approve Permit Application No. PL 2009-790, as submitted, subject to the conditions outlined in Schedules No. 1 and 2.
2. To deny the Development Permit as submitted and provide staff with further direction.

DEVELOPMENT IMPLICATIONS

Environmentally Sensitive Development Permit Area

The submitted Environmental Report concludes that as there is no development activity to occur within the Development Permit Area (DPA), there are no impacts. With respect to the existing 'hut' building located within this DPA, this building is considered to be non-conforming and according to the applicant is vacant and not in use. The applicant's Environmental Professional recommends that the building remain in place as there could be more impact to the environment if it is removed.

With respect to the eagle nest tree, the applicant's Environmental Professional has determined that the no disturbance setback is entirely located within the Hazard Land Development Permit Area and as there is no development occurring within this area, no impact within the 60.0 metre radius is expected.

With respect to aquifer protection, the applicant's Professional Engineer has determined that the proposed development will not negatively impact the aquifer.

Hazards Lands Development Permit Area

The applicant's Professional Engineer has determined that the proposed subdivision will have no impact on the steep slopes and provides recommendations for protection of the slope by avoiding the dumping of refuse, not removing vegetation, and not discharging water near the crest of the slope or on the slope face. These recommendations have been included as a Condition of Development in Schedule No. 1. As per Board policy, staff also recommends that the applicant be required to register this Geotechnical Report on title of the parent parcel as a section 219 covenant and includes a save harmless clause that releases the Regional District of Nanaimo from all losses and damages as a result of erosion and/or landslide.

Through this application process, it has come to staff's attention that the applicant previously constructed drainage works within the Hazard Land and Environmentally Sensitive Development Permit Areas without a Development Permit in place. The applicant has submitted a letter from a Geotechnical Engineer indicating that these works are not contributing to erosion of the slope face.

Site Servicing

The applicant has applied for septic disposal approval to the Central Vancouver Island Health Authority.

Proof of potable water is subject to the approval of the Approving Officer.

The Ministry of Transportation and Infrastructure is responsible for the storm drainage. As part of the subdivision review process, the Regional Approving Officer will examine the storm water management of the parent parcel and may impose conditions as required.

SUSTAINABILITY IMPLICATIONS

In keeping with Regional District of Nanaimo Board policy, the applicant has completed the "Sustainable Community Builder Checklist". As part of the Development Permit application process, the applicant has provided an Environmental Assessment for the protection of the coastal area and an eagle nest tree, which include recommendations on the enhancing this area, thus promoting a healthy and productive ecosystem.

VOTING

Electoral Area Directors – one vote, except Electoral Area 'B'.

SUMMARY

Prior to the development of the subject property a Development Permit is required. The subject property is within the Sensitive Environmentally Features and Hazard Lands Development Permit Areas pursuant to the Electoral Area 'H' OCP. The applicant has provided an Environment and Geotechnical/Hydrogeological Report which conclude that the subdivision will not negatively impact the environmental features or the hazard land area.

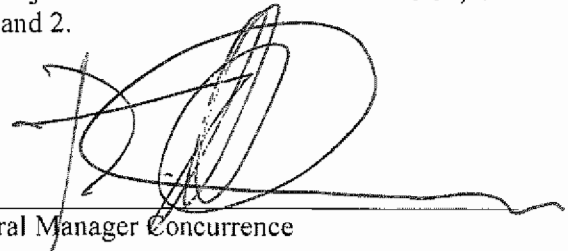
As the application is consistent with the applicable development permit guidelines staff recommends approval of the development permit.

RECOMMENDATION

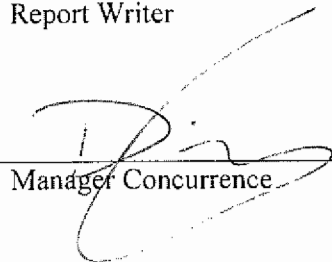
That Development Permit Application No. PL2009-790, in conjunction with a two lot subdivision, be approved subject to the conditions outlined in Schedules No. 1 and 2.



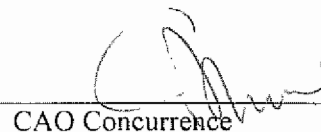
Report Writer



General Manager Concurrence



Manager Concurrence



CAO Concurrence

Schedule No. 1
Development Permit Application No. PL 2009 - 790
Conditions of Approval

The following sets out the conditions of approval with respect to Development Permit No. PL 2009 – 790:

1. Subdivision

The subdivision of the lands shall be in substantial compliance with Schedule No. 2.

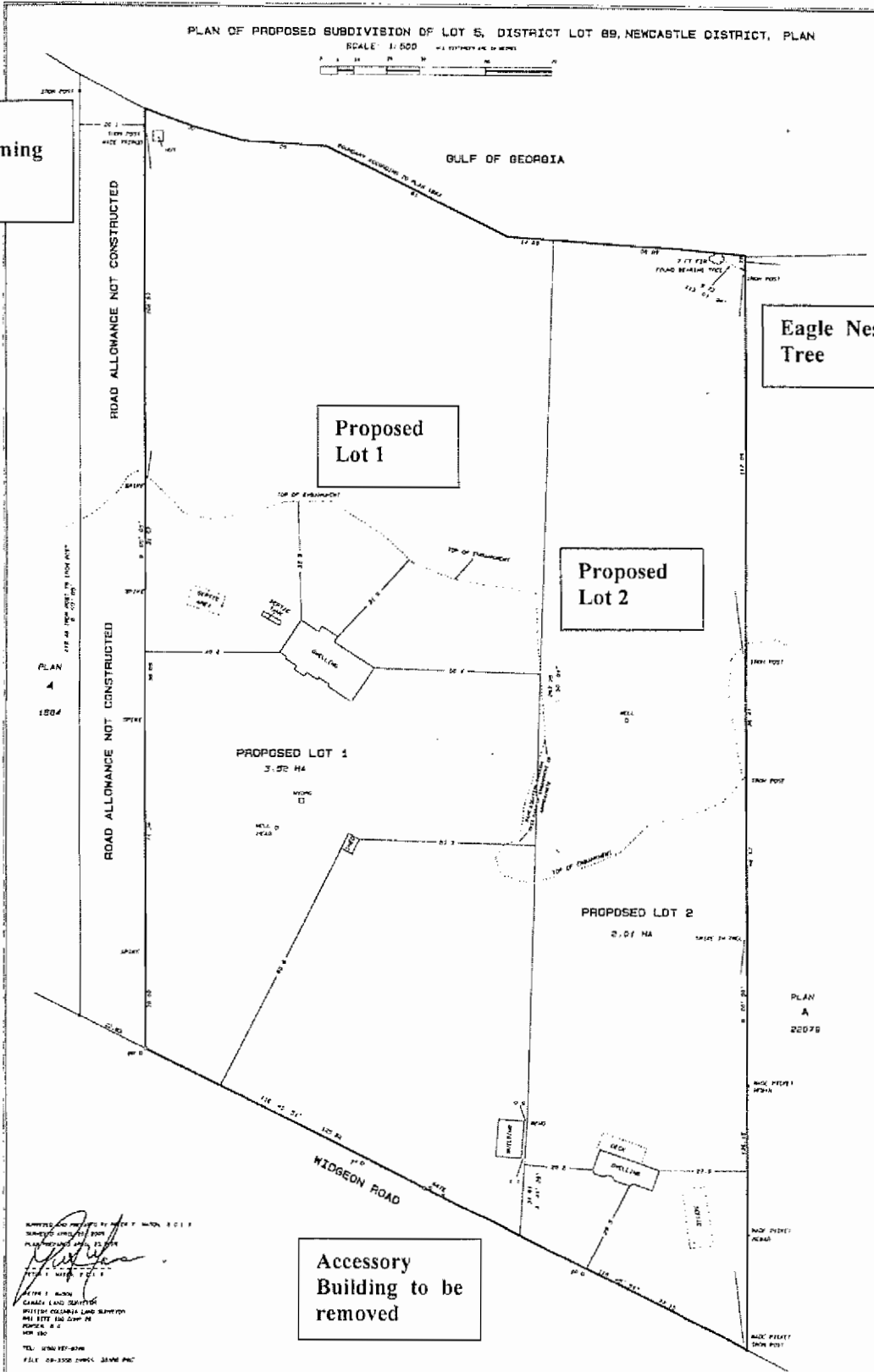
2. Environmental Assessment

There shall be no land clearing or removal of vegetation or disturbance of soils within 60.0 metre radius of the eagle nest tree or the 30.0 metre coastal area as measured from the natural boundary of the Strait of Georgia as set out in the report entitled Environmental Assessment of 1975 Widgeon Road and 3005 Oakdowne Road, Qualicum Beach, prepared by Toth and Associates Environmental Services and dated September 12, 2009 (to be attached to and forming part of this development permit as Schedule No. 3).

3. Geotechnical / Aquifer Assessment

- a. Recommendation No. 3. c.as set out in the report entitled “1975 Widgeon Road, Qualicum Beach BC Geotechnical Assessment: Subdivision” prepared by Lewkowich Engineering Associates Ltd. and dated September 16, 2009 (to be attached to and forming part of this development permit as Schedule No. 4) shall be followed.
- b. The applicant, at the applicant's expense, is to prepare and register a section 219 covenant that registers the geotechnical report entitled “1975 Widgeon Road, Qualicum Beach BC Geotechnical Assessment: Subdivision” prepared by Lewkowich Engineering Associates Ltd. and dated September 16, 2009 and includes a save harmless clause that releases the Regional District of Nanaimo from all losses and damages as a result of erosion and/or landslide. This document is to be registered concurrently with the plan of subdivision at Land Title Office, Victoria. Applicant’s solicitor is to submit a legal letter undertaking to register this document concurrently with the plan of subdivision.

Schedule No. 2
Development Permit No. PL 2009 - 790
Proposed Plan of Subdivision



Attachment No. 1 Location of Subject Property





CAO APPROVAL	
EAP	✓ Oct 13 09
CCW	
RHD	
BOARD	

MEMORANDUM

TO: Dale Lindsay
Manager of Current Planning

DATE: October 1, 2009

FROM: Elaine Leung
Planner

FILE: PL2009-745

SUBJECT: Development Permit Application No. PL2009-745 – O’Connor
Electoral Area ‘G’ – 750 Parry’s Park Road

PURPOSE

To consider an application for a Development Permit to construct an addition to an existing dwelling unit located at 750 Parry’s Park Road in Electoral Area ‘G’.

BACKGROUND

The subject property legally described as Lot A, District Lot 128, Nanoose District, Plan VIP57518, is located at 750 Parry’s Park Road in Electoral Area ‘G’ (see Attachment No. 1 for location of subject property).

The subject property, which is approximately 2.6 hectares in size, is surrounded by commercial zoned lot to the north (Parry’s RV Park), a rural lot to the west, and a recreation zoned lot to the south. The Englishman river flows at the rear of the property. (see Attachment No. 1 for location of the subject property).

The subject property is zoned Rural 1 (RU1) as per "Regional District of Nanaimo Land Use and Subdivision Bylaw No. 500, 1987".

The subject property is within the following applicable Development Permit Area:

- The Hazard Lands Development Permit Area due to flooding hazards

As such the Development Permit is required prior to development of the site.

Proposed Development

The applicants are proposing to construct a 47.5 m² addition in size to the north side of their existing dwelling unit. They have confirmed they are 38.0 metres from the present natural boundary of the Englishman River.

ALTERNATIVES

1. To approve the Development Permit as requested subject to the conditions outlined in Schedules No. 1-3.
2. To deny the Development Permit as submitted and provide Staff with further direction.

DEVELOPMENT IMPLICATIONS

Hazard Lands Development Permit Area

A geotechnical hazards assessment has been submitted by Ground Control Geotechnical Engineering Ltd., in support of the application (*Schedule No. 3*). The report confirms the existing dwelling unit was constructed in approximately 2003, and the underside of the main floor was constructed above the recommended geodetic flood plain elevation of 9.75 metre, and that the subject property can be safely developed and for the intended use.

Ground Control has recommended construction be done with a minimum floor elevation of 10.0 metres. In addition, portions of the structured below the design flood elevation should be constructed entirely of materials not susceptible to water damage. Concrete footings should be embedded a minimum of 0.6 metres below the natural ground surface. Given the recommendation of the Geotechnical Engineer and the location of the subject property within the Englishman River Floodplain, staff recommend that a section 219 covenant which 'saves harmless' the RDN be registered on title as a condition of the Development Permit.

Given that the applicant has submitted a geotechnical report confirming the land is safe and suitable for construction, staff recommend approval of the development permit as outlined in Schedules No. 1-3.

SUSTAINABILITY IMPLICATIONS

In keeping with Regional District of Nanaimo Board Policy, the applicant has completed the "Sustainable Community Builder Checklist". Staff note that the proposed application is for an addition to an existing dwelling unit. The applicants have submitted a Geotechnical Report confirming the proposed development is safe for the intended use.

VOTING

Electoral Area Directors – one vote, except Electoral Area 'B.'

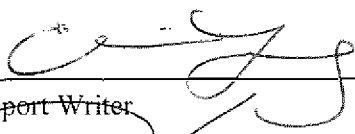
SUMMARY/CONCLUSIONS

Prior to development of the site, a Development Permit is required.

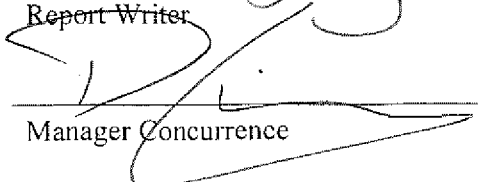
The subdivision is within the Hazards Lands Development Permit Area. As there does not appear to be any negative impact on adjacent properties, and given the recommendations of the Geotechnical Report, Staff recommends approval of the Development Permit.

RECOMMENDATION

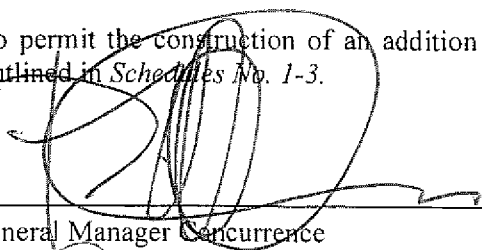
That Development Permit Application No. PL2009-745, to permit the construction of an addition to a residential dwelling be approved subject to the conditions outlined in *Schedules No. 1-3*.



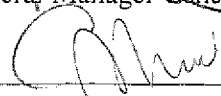
Report Writer



Manager Concurrence



General Manager Concurrence



CAO Concurrence

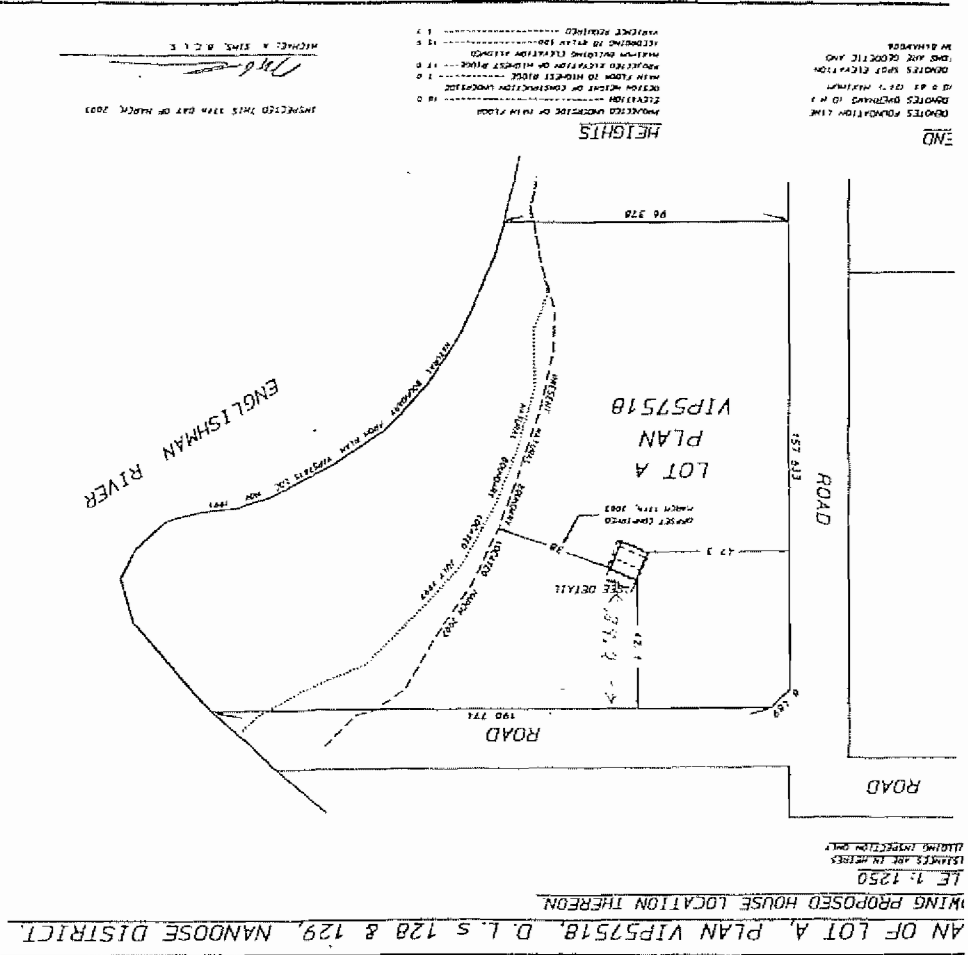
Schedule No. 1
Terms of Development Permit No. PL2009-745
Conditions of Approval

The following sets out the conditions of approval with respect to Development Permit No. PL2009-745:

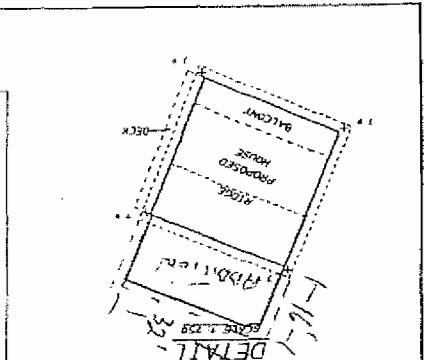
Conditions of Approval:

1. The proposed addition for the existing dwelling unit shall be sited in accordance with the site plan prepared by Sims & Associates attached as *Schedule No. 2*.
2. The property owner is required to apply for and receive a building permit for the proposed addition through the RDN Building Services Department.
3. The applicant is required to provide confirmation of building setbacks by a British Columbia Land Surveyor at the final inspection.
4. The applicant shall develop the subject property in accordance with the recommendations established in the geotechnical engineer's report dated July 28, 2009 prepared by Ground Control Geotechnical Engineering Ltd. attached as *Schedule No. 3*.
5. Staff shall withhold the issuance of this permit until the applicant, at the applicant's expense, registers a section 219 covenant that registers the Geotechnical Report prepared by Ground Control Geotechnical Engineering Consultants Ltd. dated July 28, 2009 and includes a save harmless clause that releases the Regional District of Nanaimo from all losses and damages as a result of erosion.

Schedule No. 2
Development Permit No. PL2009-745
Site Plan



SIMS ASSOCIATES
B.C. LAND SURVEYORS
222 KING ROAD, SUITE 101
VICTORIA, BRITISH COLUMBIA V8V 1S1
Phone: 252-3311
Fax: 252-3244
E-mail: simsa@simsa.com



RECEIVED
AUG 06 2009
REGIONAL DISTRICT
OF NANAIWAO

03-19

Schedule attached to and forming
part of B.O.V Decision 03-19

**Schedule No. 3
Development Permit No. PL2009-745
Geotechnical Report (Page 1 of 11)**

Geotechnical Engineering Ltd.
2781 Lana Road, Nanaimo, BC
Phone/Fax: (250) 458-1759

File: KOC-001
July 28, 2009

Kerry O'Connor
750 Parry's Park Road
Parksville, B.C.
V9P 1T8

**SUBJECT: GEOTECHNICAL HAZARDS ASSESSMENT
PROJECT: PROPOSED ADDITION TO EXISTING SINGLE-FAMILY HOUSE
LOCATION: 750 PARRY'S PARK ROAD, PARKSVILLE, B.C.**

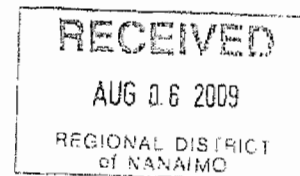
Dear Mr. O'Connor:

1. Introduction

- a. As requested, Ground Control Geotechnical Engineering Ltd. (Ground Control) has carried out a geotechnical hazards assessment of the above site. This report provides a summary of our findings and recommendations.

2. Background and Proposed Development

- a. The subject property is currently developed with two single-family residences. Based on plans and verbal information you have provided, we understand that you propose to construct a small addition onto the house that is located within the northern portion of the property. We understand that the proposed addition will have plan dimensions of 14' x 24' and will be located on the north side of the existing structure. The addition will be of standard low-rise residential wood frame construction. Foundations will be concrete strip footings supporting either a concrete wall or a concrete pier foundation.
- b. It is understood that a geotechnical hazards assessment is required in support of your application for a development and/or building permit. Our assessment, as described in this report, has been carried out to satisfy this requirement.



**Schedule No. 3
Development Permit No. PL2009-745
Geotechnical Report (Page 2 of 11)**

Geotechnical Hazards Assessment

File: KOC-001

July 28, 2009

Page 2 of 11

3. Assessment Objectives

- a. Our assessment, as summarized within this report, is intended to meet the following objectives:
 - i. Determine whether the land is geotechnically safe for the intended purpose (addition to single-family residential house), where 'safe' is defined as a probability of a geotechnical failure or another substantial geotechnical hazard resulting in property damage of less than 10 percent in 50 years, however, when assessing safety from flood related hazards, we have used a one-in-200 year flood level, which is the prescribed flood event in BC.
 - ii. Identify any geotechnical deficiency that might impact the design and construction of the development, and prescribe the geotechnical works and any changes in the standards of the design and construction of the development that are required to ensure the land, buildings, and Works and Services are developed and maintained safely for the use intended; and
 - iii. Acknowledge that Approving Officers may rely on this report when making a decision on applications for the development of the land.

4. Assessment Methodology

- a. Aerial photographs for the site (summer 2005) were reviewed to assess visible land features.
- b. A site reconnaissance was carried out on July 21, 2009. Richard McKinley, P.Eng. walked the site accompanied by the client and noted pertinent site features and potential geotechnical hazards. Shallow soil conditions at the proposed building location were readily visible within shallow excavations made by the owner in preparation for construction. Soil conditions were also visible within the cut banks of the adjacent river.
- c. Flood plain maps for the Englishman River (Drawing 85-23-6 prepared by the BC Ministry of the Environment) were assessed to determine the inferred 200-year flood extents and elevations of the Englishman River at the site.

Richard McKinley
P.Eng.

Schedule No. 3
Development Permit No. PL2009-745
Geotechnical Report (Page 3 of 11)

Geotechnical Hazards Assessment

File: KOC-001

July 28, 2009

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- d. A 2003 survey plan prepared by Sims Associates was reviewed. This plan, provided by the client, shows design elevations for the existing house, as well as showing the changing location of the natural boundary of the adjacent river in 1991, 1997, and 2002
- e. A technical paper entitled *The Vulnerability of Lower Englishman River to Modelled Climate Change*, by Weston, Guthrie, and McTaggart-Cowan, Canadian Water Resources Journal, Volume 28, No.4, 2003 was reviewed as a source of background information. The subject site was included within the study area of this paper.

5. Site Conditions

5.1. General

- a. The subject lot is located on the west bank of the Englishman River, at the terminus of Parry's Park Road.
- b. The property has an area of about 2.6 Ha (6.6 acres) and is vegetated with lawn and landscape gardens as well as scattered mature and semi-mature trees (principally cedar, Douglas fir, maple).
- c. Adjacent properties include Parry's RV Park to the north, other residential properties to the west and south, and the Englishman River to the east.
- d. We understand from discussions with the client that the existing house was built in 2003, and that the underside of the main floor was constructed at or above elevation 10.0m GSC based on expected flood elevations. We further understand that about 100 dump truck loads of rock and soil fill were used to raise the ground elevation around and under the house to about 8m GSC, which places the house on a mound about two metres above the surrounding natural ground.
- e. The existing house is shown in its current configuration on the next page.

[Signature]
[Illegible text]

Schedule No. 3
Development Permit No. PL2009-745
Geotechnical Report (Page 4 of 11)

Geotechnical Hazards Assessment
File: KOC-001
July 28, 2009
Page 4 of 11



Existing house, looking north from the centre of the property.



Location of the proposed addition: north side of the house

Schedule No. 3
Development Permit No. PL2009-745
Geotechnical Report (Page 5 of 11)

Geotechnical Hazards Assessment
File: KOC-001
July 28, 2009
Page 5 of 11

5.2. Soil Conditions

- a. Soils within the depth of residential house construction are expected to be channel floodplain deposits placed by past flood events from the adjacent Englishman River. Channel floodplain soils are typically variable deposits of gravel, sand and silt materials.
- b. Soil exposed within shallow excavations on the future building site consisted of compact poorly-graded sand with silt (Unified Classification Group Symbol SP-SM). Soil conditions visible within soil exposures along the bank of the river typically consisted of silty sand with gravel. No bedrock outcroppings were observed at the site.

5.3. Groundwater Conditions

- a. Due to the relatively permeable nature of the local soils, the natural groundwater table is expected to be coincident with the water level of the adjacent river. As such, groundwater levels can be expected to fluctuate seasonally with cycles of precipitation and the corresponding fluctuations in river level.

5.4. River/Flood Information

- a. The property is within the floodplain of the Englishman River in an area with a history of flooding. As a response to the frequent flooding of the area, local permanent structures are typically elevated to raise interior spaces and other vulnerable portions of the buildings above expected flood water levels.
- b. The following pertinent information is paraphrased from the technical paper *The Vulnerability of Lower Englishman River to Modeled Climate Change* mentioned earlier:
 - i. The Englishman River is primarily a rain-driven hydrologic system. The majority of flow occurs during the fall and winter months (October to April), with decreasing discharges in the spring, and the summer being characterized by low discharges.
 - ii. The river rises relatively quickly in response to rainfall due to the lack of lakes that might otherwise moderate peak flows through storage. The March 13 2003 flood rose about 2m in 24 hours, as an example.

Schedule No. 3
Development Permit No. PL2009-745
Geotechnical Report (Page 6 of 11)

Geotechnical Hazards Assessment
File: KOC-001
July 28, 2009
Page 6 of 11

- iii. Climate change is expected to increase future peak flows within the river by an estimated 8% by 2020, 14% by 2050, and 17% by 2080. As an example, the current 15-year flood discharge will occur potentially more frequently, predicted to become the 10-year flood discharge by 2020.
- c. Floodplain maps confirm that the site is within the 200-year floodplain. The indicated flood elevation is 9.75m GSC (Geodetic Survey of Canada datum).
- d. Flood risk areas are typically categorized into two zones; the floodway, where further development is discouraged, and the flood fringe where flood-proofed development is possible. The MOE flood maps do not specifically delineate these two zones for the Englishman River. Based on our observations of the site, the location of the addition is far enough removed from the main channel of the river to be considered within the flood fringe; the proposed addition will be greater than 38m back from the natural boundary of the river (as is the existing house).
- e. The Englishman River has been gauged by the Water Survey of Canada at their "Englishman River near Parksville (08HB002)" station sporadically in the 1910s and then continuously since 1979. The annual hydrograph of the Englishman River follows the typical pattern for large streams on the East Coast of Vancouver Island with the greatest flows occurring from November through February.
- f. Since continuous recording began in 1979, the largest recorded floods on the Englishman River occurred in 1979, 1980 and 1983, with the fourth largest flood in 1990. Longer records available from the "Tsable River near Fanny Bay (08HB024)" to the north and "Nanaimo River near Cassidy (08HB034)" to the south (two local WSC stations with longer records and similar watershed areas) suggest that large floods may also have occurred in the early 1960s, in 1968, and in 1974. The 1974 flood was unusually large on Southern Vancouver Island and it is the flood of record at the Nanaimo gauge. Unfortunately, no information regarding conditions at the site during these flood events has been discovered for comparison. The owner did confirm that in about 2004 a flood event did result in water covering the low portions of the property, but did not affect the mounded building site, and that the flood waters were 'slow moving'.

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10:29:33 AM

Schedule No. 3
Development Permit No. PL2009-745
Geotechnical Report (Page 7 of 11)

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File: KOC-001
July 28, 2009
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- g. The Sims Associates survey plan indicates a very significant advancement (about 15 metres) of the river's natural boundary towards the building site from 1991 to 1997, with a smaller advancement (about 4 to 5 metres) from 1997 to 2003).
- h. Based on client concerns that continued westward migration of the river bank would eventually threaten the building site, a significant bank stabilization program was undertaken in 2004, consisting of 6 large rock groynes installed at selected spacings along the river bank. These measures were designed and approved by Fisheries and Oceans Canada and the design drawings were provided by the client for our review.
- i. Since installation, it appears that the rock groynes have stabilized and even reversed the previous westward migratory trend of the river bank. We observed that the rock groynes are functioning as expected, and are currently accreting river sediments and building new land along the bank that is slowly being re-vegetated. A soil berm has also been constructed along the top of the riverbank to provide additional 'freeboard' against river flooding.
- j. The 38 metre separation of the building from the river bank is considered sufficient to allow for any renewed bank erosion (none expected) to be identified and remedied long before the building is jeopardized.

6. Conclusions & Recommendations

6.1. General

- a. From a geotechnical perspective the proposed development is considered 'safe' for the intended use (as defined earlier in Section 3.a.i), provided the recommendations in this report are followed.
- b. The following sections discuss geotechnical issues affecting the site.

[Signature]
Geotechnical Engineer

Schedule No. 3
Development Permit No. PL2009-745
Geotechnical Report (Page 8 of 11)

Geotechnical Hazards Assessment
File: KOC-001
July 28, 2009
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6.2. Flooding Issues - General

- a. The principal geotechnical hazard associated with this site is flooding. Based on our assessment, fall and winter flooding will be a semi common occurrence, and on rarer occasions the site will be subject to significant flooding.
- b. To protect against building damage during flooding, the interior spaces and water susceptible components of the addition should be constructed with a minimum floor elevation of 10 metres GSC. This exceeds the 9.75m elevation recommended on the flood maps so it will provide a small measure of increased protection relative to predicted flow increases from climate change, plus it will matches the elevation of the existing main floor.

6.3. Flooding Issues and Concrete Foundations

- a. Portions of structures below the design flood elevation should be constructed entirely of materials not susceptible to water damage. We understand that the client proposes to support the north side of the addition on a concrete foundation wall or on reinforced concrete piers, with the south side of the addition supported off the north wall of the existing structure. In either case a full strip footing will be used in lieu of isolated pad footings that which could individually defeated by floodwater scour.
- b. Concrete footing should be embedded a minimum of 0.6 m below the natural ground surface for protection from scour. This is a minimum depth; more is always better.
- c. The foundation is not considered likely to be exposed to significant forces from flowing water, because it will be located on the downstream side of the existing building, protected by the existing structure's foundation surrounding soil mound.

Geotechnical Engineering
Professional Engineer
No. 123456789

Schedule No. 3
Development Permit No. PL2009-745
Geotechnical Report (Page 9 of 11)

Geotechnical Hazards Assessment
File: KOC-001
July 28, 2009
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6.4. Flood Issues Unrelated to Property Damage

- a. The recommendations provided in this report are suitable to make the proposed addition 'safe' from a property-damage point of view.
- b. There are various lifestyle and life-safety issues imposed by living within a flood plain area, such as the potential for damage to possessions and property stored below the flood level (e.g. parked cars), loss of site access or having persons stranded on site due to floodwaters, and many others.
- c. Consideration of these issues is not within the scope of our assessment. We will assume that all current and future site owners and users are aware of these issues and personally accept all consequences accruing from these non-geotechnical flood-related risks.

6.5. Slopes

- a. There are no significant slopes within or near potential building sites, therefore no special requirements are necessary to address slope issues.

6.6. Foundation Support Conditions

- a. The site should be suitable for the support of foundations for residential structures on standard spread/strip footings meeting the requirements of the BC Building Code. The natural compact sand has sufficient bearing capacity for residential foundation loads.
- b. Place footings only on an unyielding native mineral-soil subgrade. Prior to placement of footings, remove any unsuitable materials such as organic matter (topsoil, roots) and any soft or loose soils.

6.7. Seismic Issues

- a. No compressible or liquefiable soils have been identified at this site, nor are any expected below the investigation depth
- b. No unusual seismic design requirements have been identified for this site.

Geotechnical Engineering
Professional Engineer
No. 123456789

**Schedule No. 3
Development Permit No. PL2009-745
Geotechnical Report (Page 10 of 11)**

Geotechnical Hazards Assessment
File: KOC-001
July 28, 2009
Page 10 of 11

6.8. Permanent Drainage

- a. As buildings will be raised on flood-resistant foundations, no unusual permanent drainage provisions will be required. As such, conventional requirements of the B.C. Building Code pertaining to building drainage are considered suitable at this site.
- b. Due to the elevated nature of the addition (no crawlspace or basement), it is considered acceptable to delete the requirements for footing level drains.
- c. Lot surfaces should be grading to direct surface water away from the building.

7. Acknowledgements

- a. Ground Control Geotechnical Engineering Ltd. acknowledges that this report may be requested by Approving Officers and Building Inspectors as a precondition to the issuance of a building or development permit and that this report, or any conditions contained in this report, may be included in a restrictive covenant filed against the title to the subject property. It is acknowledged that the Approving Officers and Building Officials may rely on this report when making a decision on application for the subdivision or development of the land.
- b. We acknowledge that this report has been prepared solely for, and at the expense of, the owner of the subject land.

8. Limitations

- a. The conclusions and recommendations submitted in this report are based upon the data obtained from surface observations and shallow excavations. Although not expected, should undiscovered conditions become apparent later (e.g. during excavation for construction) our office should be contacted immediately to allow reassessment of the recommendations provided.
- b. The current scope of investigation was selected to provide an assessment of obvious geotechnical hazards. If stakeholders in these matters desire a greater degree of certainty, additional investigations can be carried out.

[Signature]
Geotechnical Engineer

**Schedule No. 3
Development Permit No. PL2009-745
Geotechnical Report (Page 11 of 11)**

Geotechnical Hazards Assessment

File: KOC-001

July 28, 2009

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- c. Our recommendations apply to the specific proposed structure and building location described in Section 2. Other structures or locations may have unique requirements and so our recommendations should not be considered applicable to other locations or other developments, even within the same property.

9. Closure

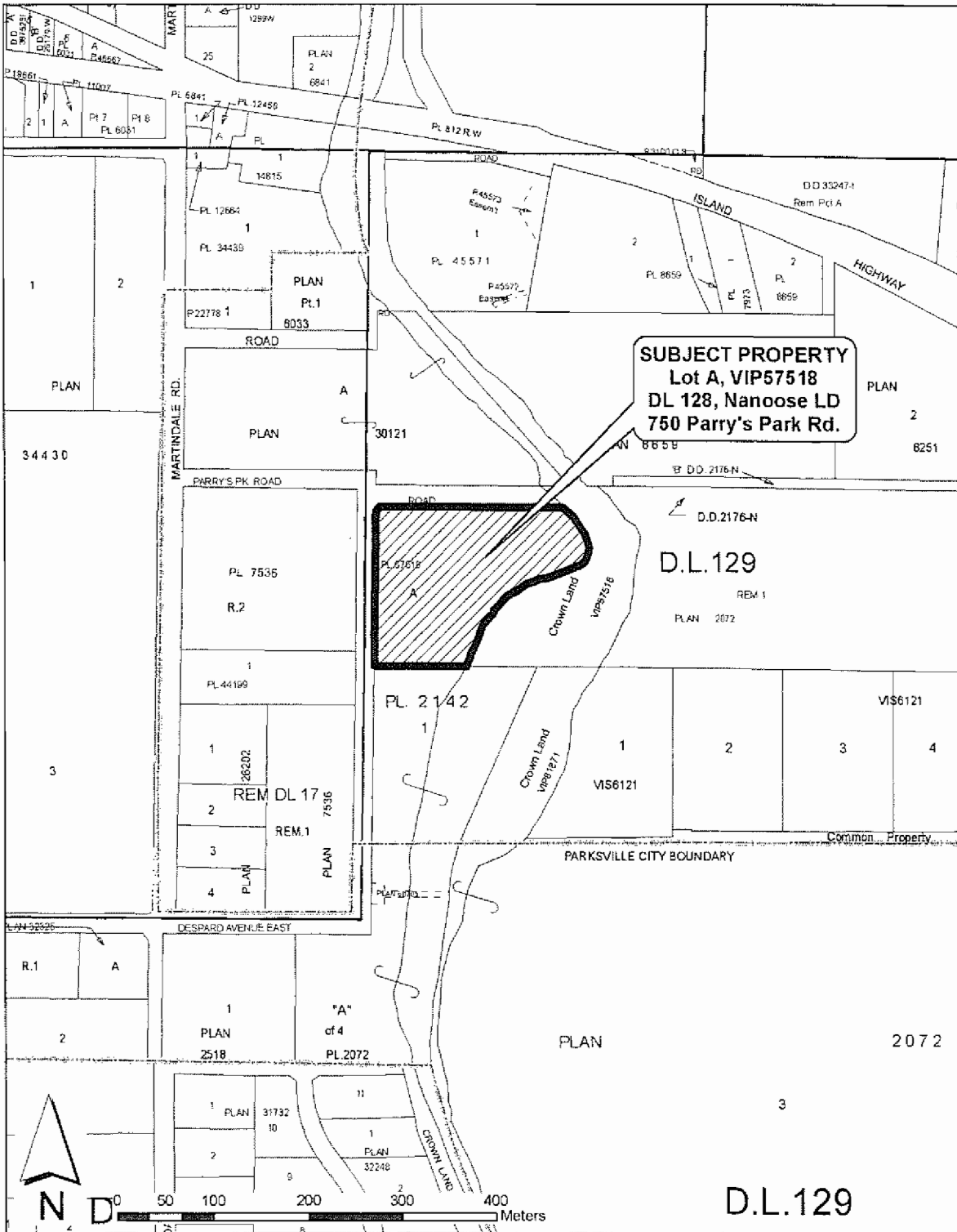
- a. Ground Control Geotechnical Engineering Ltd. appreciates the opportunity to be of service on this project. If you have any comments, or additional requirements at this time, please contact us at your convenience.

Respectfully Submitted,

Ground Control Geotechnical Engineering Ltd.

Richard McKinley, P. Eng.
Geotechnical Engineer

Attachment No. 1 Location of Subject Property





	CHIEF APPROVAL	CAN
EAP	✓	Oct 13 '09
CCW		
RHD		
BOARD		

MEMORANDUM

TO: Dale Lindsay
Manager of Current Planning

DATE: September 30, 2009

FROM: Elaine Leung
Planner

FILE: PL2009-748

SUBJECT: Development Permit with Variance Application No. PL2009-748
Electoral Area 'E' – 3417 Carmichael Road – Law/Parker

PURPOSE

To consider an application for a Development Permit with Variance in order to allow for the construction of a single dwelling unit on 3417 Carmichael Road of Electoral Area 'E'

BACKGROUND

The subject property, legally described as Lot 8, District Lot 78, Nanoose District, Plan VIP78139, is located on Carmichael Road in Electoral Area 'E' (see *Subject Property Map - Attachment No. 1*). The property is 1,700 m², is surrounded by residential lots, and is zoned Residential 1 (RS1), as per "Regional District of Nanaimo Land Use and Subdivision Bylaw No. 500, 1987."

The subject property is within the following applicable Development Permit Area (DPA) established by the Nanoose OCP "Regional District of Nanaimo Electoral Area 'E' Official Community Plan Bylaw No. 1400, 2005":

- The Sensitive Ecosystem Protection DPA.

As such, a Development Permit is required prior to the construction of a single dwelling unit.

Proposed Development/Requested Variance

The applicants are proposing to construct a single dwelling unit on the subject property. The applicants have requested to vary Section 3.4.61 Maximum Dwelling Unit Height of "Regional District of Nanaimo Land Use and Subdivision Bylaw No. 500, 1987" by increasing the maximum dwelling unit height from 8.0 metres to 9.0 metres.

ALTERNATIVES

1. To approve Development Permit with Variance No. PL2009-748 subject to the conditions outlined on Schedules No. 1 – 4.
2. To deny Development Permit with Variance No. PL2009-748, and provide further direction to staff.

DEVELOPMENT IMPLICATIONS

Sensitive Ecosystem Protection Development Permit Area

The applicants have submitted an Environmental Assessment Report (Schedule No. 4) prepared by a Qualified Environmental Professional. The report confirms that there was no presence of rare species of plants and/or wildlife species. However, the report recommends that tree cutting and other significant land alteration activities take place outside of the bird-nesting season between April and July of each year.

Proposed Variance

Like many of the lots in this area, there are physical challenges on the site, including a gradual slope on the property and the presence of rock features. Due to the topography constraints, and the available building envelope, the front of the proposed dwelling unit will be raised to maintain a level elevation with the rest of the dwelling, in order to construct it as a one storey rancher. Therefore, the applicants request to increase the maximum height from 8.0 metres to 9.0 metres. The Building Department has confirmed that the height calculations submitted by the applicant are correct. The applicants note that the proposed dwelling would comply with maximum height restrictions as a one storey rancher, if the lot had been level.

The proposed variance is reasonable and in Staff's opinion will not negatively impact the subject property or adjacent properties.

PUBLIC CONSULTATION

As part of the required public notification process, property owners located within a 50 metre radius, will receive notice of the proposal and will have an opportunity to comment on the proposed variance, prior to the Board's consideration of the permit.

SUSTAINABILITY IMPLICATIONS

The applicant has completed the "Sustainable Community Builder Checklist," as per Regional District of Nanaimo Board policy. This proposal is in keeping with the character of the adjacent properties, and represents infilling of a residential lot. The proposed single dwelling unit will be constructed to current building code standards which reflect reduced environmental impact and energy efficient design elements.

VOTING

Electoral Area Directors – one vote, except Electoral Area 'B'.

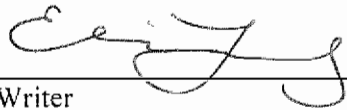
SUMMARY/CONCLUSIONS

The Development Permit with Variance, if approved, will allow the construction of an over height dwelling unit on a property within a Sensitive Ecosystem Development Permit Area. The applicant has submitted an Environmental Assessment consistent with the requirements set out in the Development Permit Guidelines, as per the Nanoose Bay Official Community. Staff recommends that the requested Development Permit with Variance be approved subject to the terms outlined in Schedules No. 1 - 4 of this report.

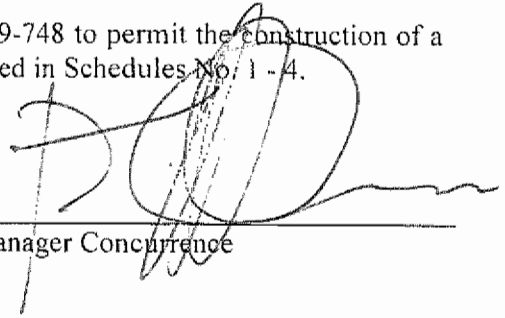
RECOMMENDATION

That

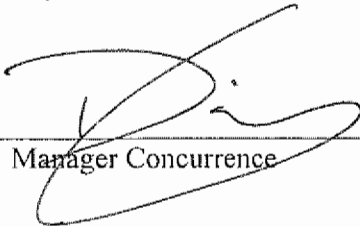
1. Staff be directed to complete the required notification, and
2. The Development Permit with Variance application No. PL2009-748 to permit the construction of a single dwelling unit be approved subject to the conditions outlined in Schedules No. 1 - 4.



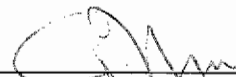
Report Writer



General Manager Concurrence



Manager Concurrence



CAO Concurrence

Schedule No. 1
Development Permit with Variance No. PL2009-748

The following sets out the conditions of approval for Development Permit with Variance No. PL2009-748.

Conditions of Approval:

1. The proposed single dwelling unit shall be sited in accordance with site survey prepared by J.E. Anderson, BCLS dated July 23, 2009 attached as *Schedule No. 2*.
2. The single dwelling unit shall be constructed in accordance with the building elevations submitted by the applicant attached as *Schedule No. 3*.
3. The Environmental Assessment Report prepared by Cascadia Biological Services and dated July 17, 2009 (to be attached and forming part of the development permit as Schedule No. 4) shall be followed.
4. The applicant shall complete the recommendations concerning environmental monitoring as set out in Schedule No. 4, 'Attachment 3: Specific Recommendations for Works within Development permit Areas', to the satisfaction of a Qualified Environmental Professional.
5. The applicant shall provide confirmation of building height and setbacks by a British Columbia Land Surveyor at the framing stage of construction.

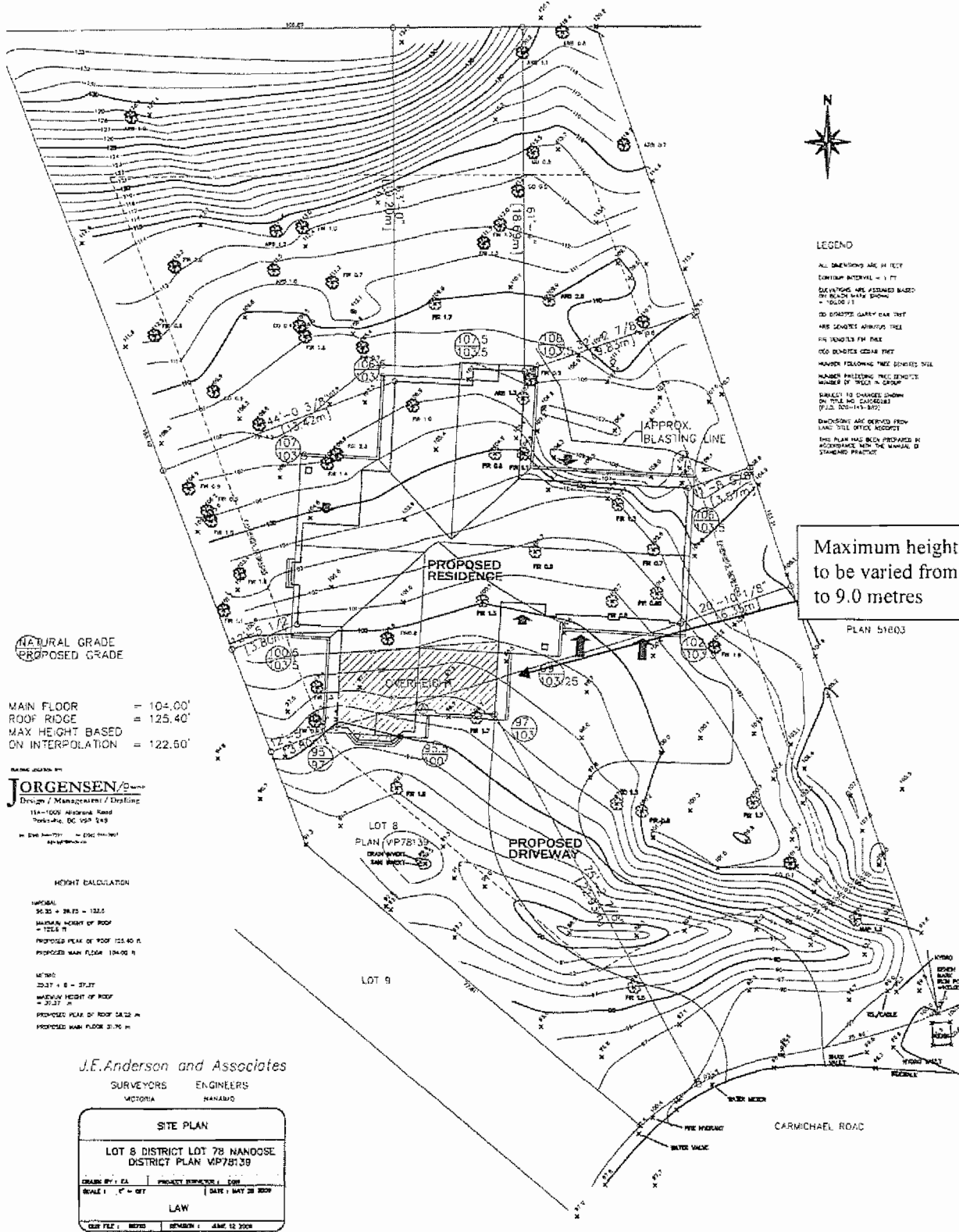
Proposed Variance:

With respect to the lands, "Regional District of Nanaimo Land Use and Subdivision Bylaw No. 500, 1987," the following variance is proposed:

1. **Section 3.4.61 Maximum Dwelling Unit Height** is proposed to be varied from the 8.0 metres to 9.0 metres, to permit the construction of a residential dwelling unit as shown on *Schedule No. 2*.

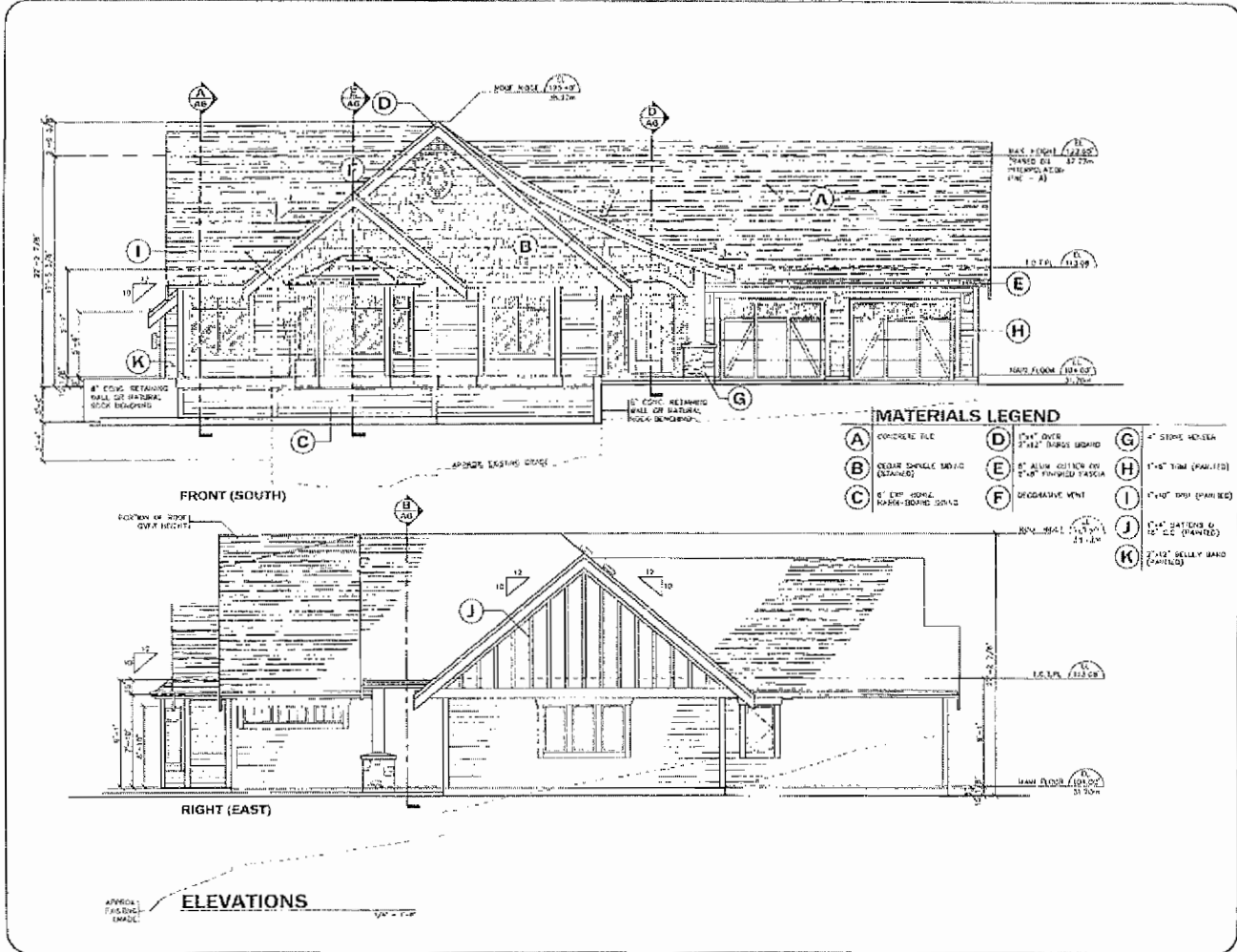
Schedule No. 2
 Site Plan

REM. D.L. 78



Maximum height is requested to be varied from 8.0 metres to 9.0 metres

Schedule No. 3
 Building Elevations
 (Page 1 of 2)



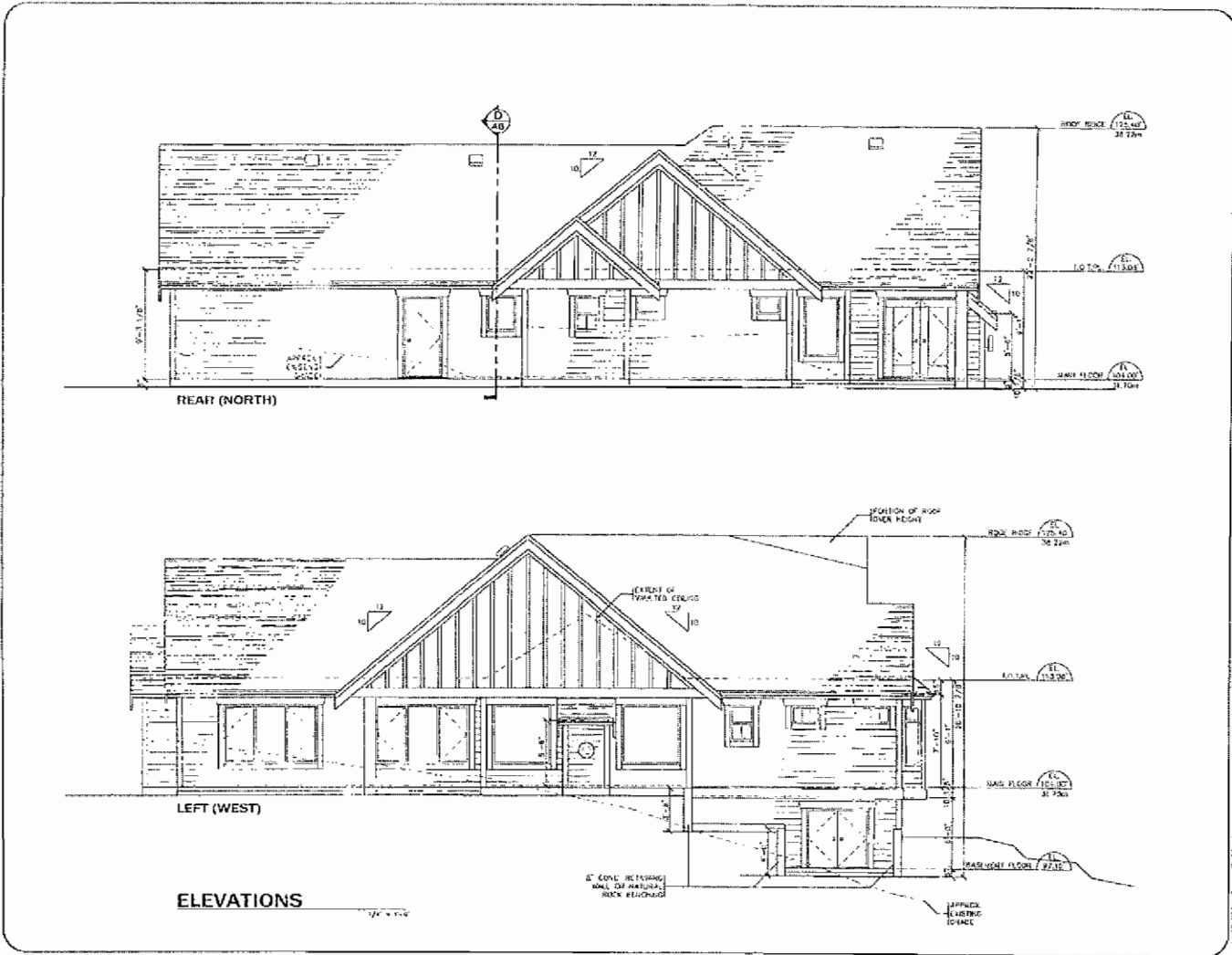
NO.	DATE	BY	CHKD.	APP'D.
1	09/30/09	JL	JL	JL
2				
3				
4				

Parker/Law Residence

JORGENSEN
 Design & Construction / Drafting
 14001 Alaskan Road
 Suite 4, BC V4T 2A8
 (604) 273-1111

PROJECT: Parker/Law Residence	
DATE: 09/30/09	SCALE: A4/6
DRAWN BY: JL	CHECKED BY: JL
APPROVED BY: JL	DATE: 09/30/09

Schedule No. 3
 Building Elevations
 (page 2 of 2)



NO. 001	1 - 1/2"	PL
NO. 002	2 - 1/2"	PL
NO. 003	3 - 1/2"	PL
NO. 004	4 - 1/2"	PL

Parker/Law Residence

JORGENSEN
 Design / Management / Building
 1501 NEW BRUNSWICK ROAD
 PISCATAWAY, NJ 08854-2445
 TEL: 732-928-1000
 FAX: 732-928-1001
 WWW: www.jorgensen.com

PROJECT: Parker/Law Residence

DATE: 08/20/09

SCALE: 1/2" = 1'-0"

NO. 001: J09955

NO. 002: A5/6

**Schedule No. 4
Environmental Report
(Page 1 of 7)**



Cascadia Biological Services
1442 White Pine Terrace
Victoria, BC
V9B 6J3

July 17th, 2009

Regional District of Nanaimo
Development Services
6300 Hammond Bay Road
Nanaimo, BC V9T 6N2

Attn: Geoff Garbutt

Dear Geoff,

Please find attached the Development Permit Area (DPA) application regarding proposed activities for Lot 8 on Carmichael Road. Proposed activities within the defined lot above include works associated with site clearing for a proposed building site as well as for stand thinning and utility placement (refer to Attachment I for site location). The proposed works required for house site clearing and preparation are over an area measuring approximately 324 m² (18m X 18m – Primary Cut Area - PCA) with thinning occurring over the Secondary Cut Area (SCA) which measures approximately 852 m². Please refer to Attachment II for PCA and SCA locations. Overall, a total of 18 Douglas fir and 1 arbutus tree are proposed to be removed from the PCA as well as a total of 15 Douglas fir trees from the SCA. At the time of our assessment in July 2009, the lot was in a natural state with only small disturbances notes i.e grass clippings from neighbour's yard etc. Vegetation within the lot consists primarily of Douglas fir (dominant) in an older second-generation stand structure with lesser concentrations of Garry oak (<5 trees noted) as well as arbutus (<10 trees noted). The understory consists primarily of salal, sword fern, ocean spray and Oregon grape. Refer to Plates 1-3 in Attachment IV for typical site photographs.

Overall, the lot is not deemed to have exceptional environmentally significant attributes as no rare species of plants and/or wildlife species were noted. This includes the absence of wildlife dens, wildlife trees and/or red/blue-listed species with the BC Conservation Data Centre (BC CDC). That being said, Cascadia Biological recommends that tree cutting and other significant land alteration activities take place outside of the bird-nesting season between April and July of each year. Overall, the proposed disturbances will result in the removal of 32 trees with diameter breast height (DBH) measurements exceeding 20cm.

All works proposed will adhere to the recommendations outlined in Attachment III as well as current government regulations including but not limited to BMP - Develop with

**Schedule No. 4
Environmental Report
(Page 2 of 7)**

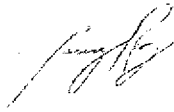


Care: Environmental Guidelines for Urban and Rural Land Development in British Columbia

Please find below a list of attachments included with this application addressing the appropriate assessments required as per the Nanaimo Regional Districts – Application for Development Permit form:

- Proposed works location map (Attachment I)
- Lot 8 - Proposed House Site and Clearing Map (Attachment II)
- Specific Recommendations for Works Proposed within the DPA (Attachment III)
- Typical Site Photographs (Attachment IV)

Sincerely,

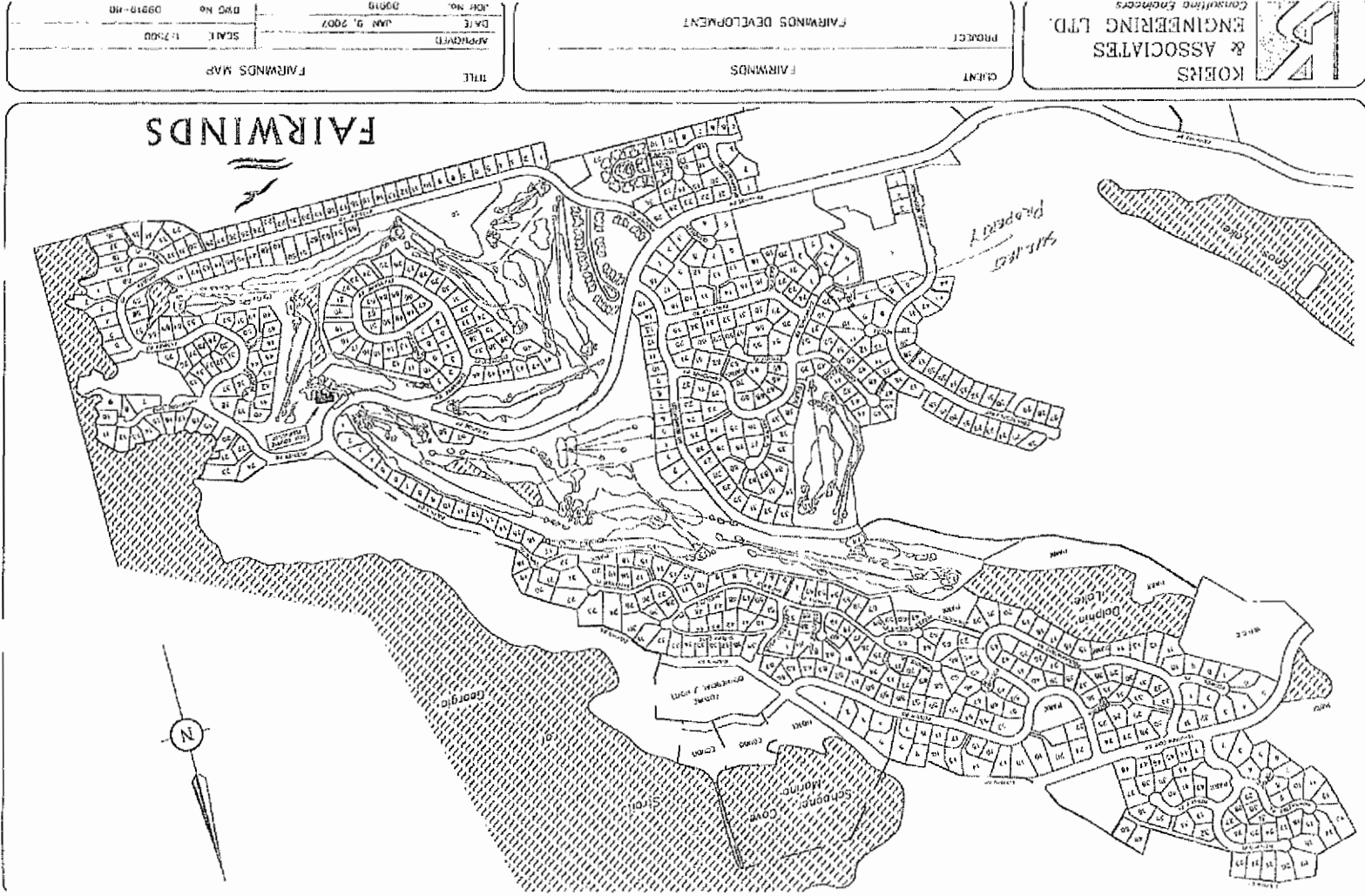


Thomas Roy, R.P. Bio. QEP



Phone: (250) 474-0102
Cell: (250) 888-4864
Email: cascadiabiological@shaw.ca

Schedule No. 4
 Environmental Report
 (Page 3 of 7)



**Schedule No. 4
Environmental Report
(Page 4 of 7)**



Attachment III

**Specific Recommendations for Works Within Development Permit
Areas**

Lot 8 Carmichael

July 17th 2009

Works within development permit areas designated as environmentally sensitive

- A Professional Biologist on site will periodically monitor work (once a week during site clearing activities) within DPA and adhere to all recommendations as outlined in the BMP - Develop with Care: Environmental Guidelines for Urban and Rural Land Development in British Columbia As well:
 - Ensure construction will proceed smoothly without harmful alteration of habitat;
 - Provide long-term monitoring for disturbed sites until green-up is established and the soils at the site are stable.
- Heavy equipment (excavators etc.) working in and around DPA will be monitored for leaks (oil, hydraulic fluid etc.) daily.
- Sediment control measures will be installed along the perimeter of disturbed areas where required.
- Sensitive habitats within construction areas will be flagged/delineated with high visibility flagging and fencing in order to minimize impacts and overall disturbances.
- Detailed direction to contractors will be given to ensure that no erosion or sediment movement will occur and that no silt will be released to watercourses during the construction and post construction phase.

Tree Cut Within DPA

- Minimize tree cuts in areas outside of the building footprint. Note: Given the mixed ecosystem consisting of Douglas fir (dominant) and arbutus and Garry oak (sub-dominant), Cascadia Biological would support thinning out the Douglas fir trees to allow for the sub-dominants

**Schedule No. 4
Environmental Report
(Page 5 of 7)**



Cascadia Biological Services
to flourish throughout the entire property. This will involve removing the
Douglas fir trees within the SCA as outlined in Attachment II

**Schedule No. 4
Environmental Report
(Page 6 of 7)**

Attachment IV – Typical Site Photographs



Plate #1 – View of proposed access location into Lot 8

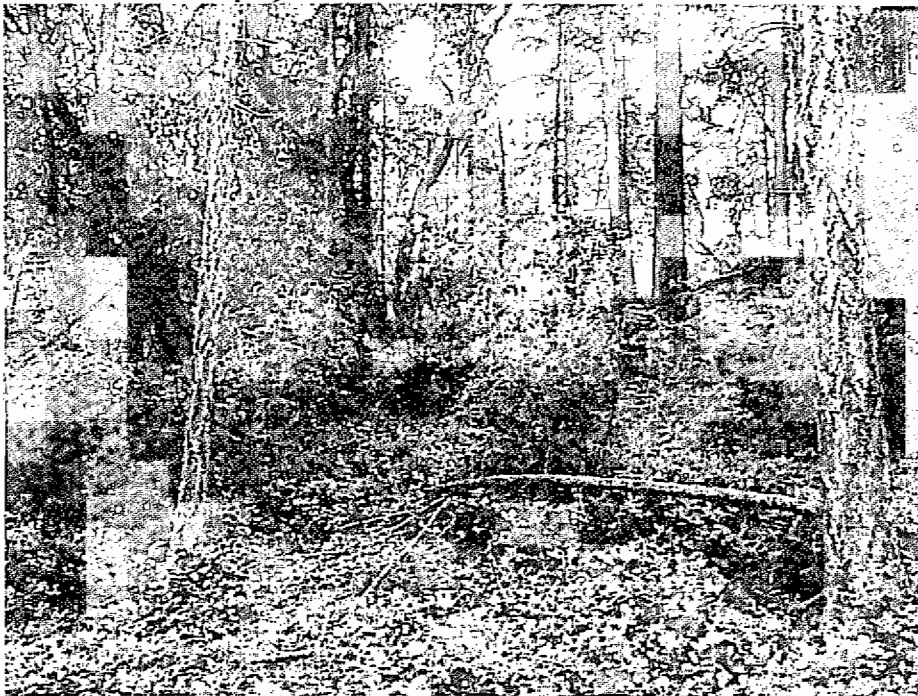


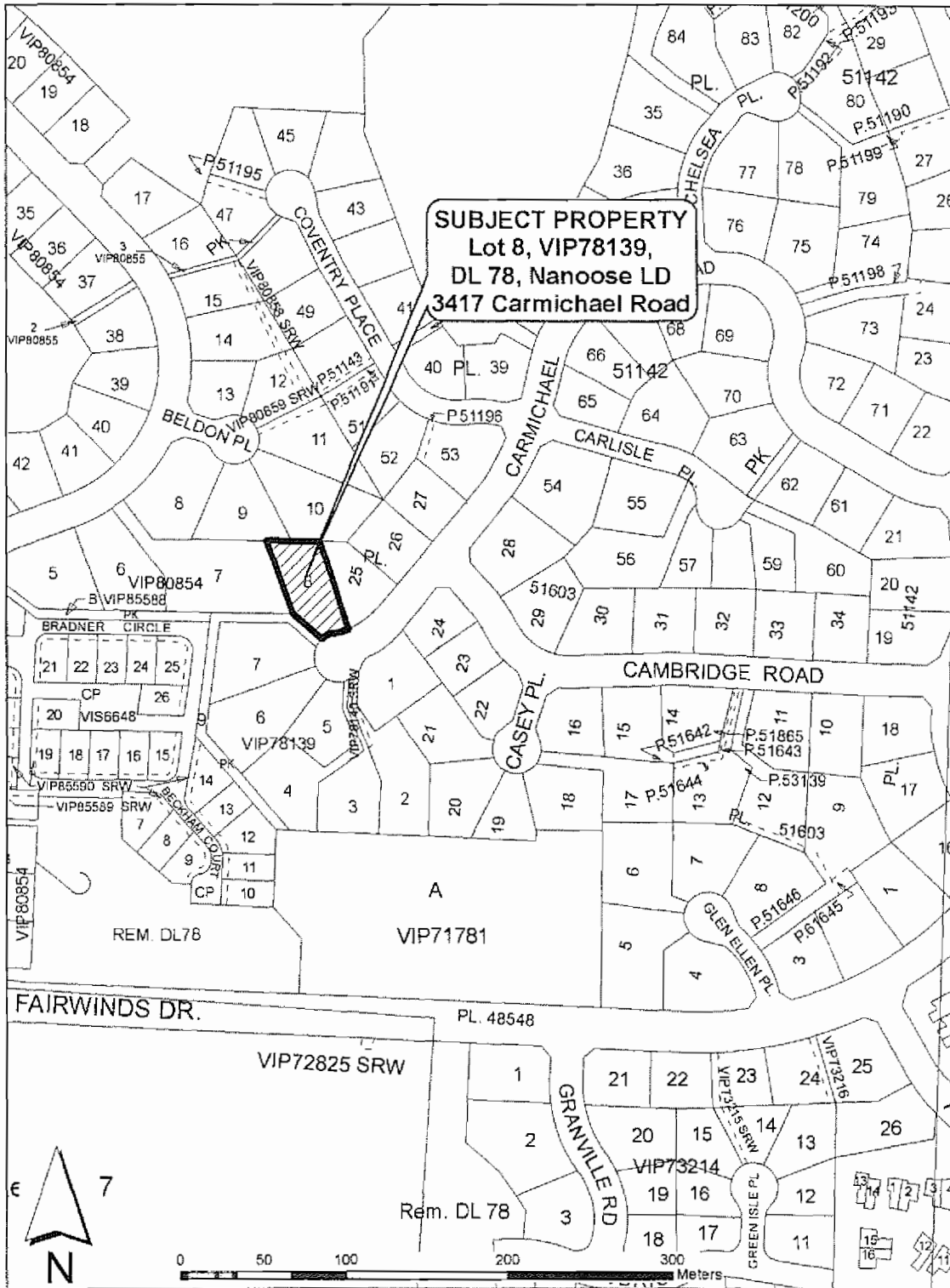
Plate #2 – Typical view within the proposed PCA

**Schedule No. 4
Environmental Report
(Page 7 of 7)**



Plate #3 – Typical view of understorey within the proposed PCA

Attachment No. 1 Location of Subject Property



BCGS MAPSHEET. 02F 030.14



CAO/AM APPROVAL	30
EAP	✓ Oct 13 09
COW	
RHD	
BOARD	

MEMORANDUM

TO: Dale Lindsay
Manager of Current Planning

DATE: October 1, 2009

FROM: Elaine Leung
Planner

FILE: PL 2009-498

SUBJECT: Development Variance Permit Application No. PL 2009-498
Electoral Area 'E' - Ewasiuk/JE Anderson - 3617 Dolphin Drive

PURPOSE

To consider an application for a Development Variance Permit to permit the repair and construction of a retaining wall and to legalize the location and height of an existing single dwelling unit, at 3617 Dolphin Drive in Electoral Area 'E'.

BACKGROUND

The subject property is located at 3617 Dolphin Drive, legally described as Lot 8, District Lot 78, Nanoose District, Plan 19688 (*see Attachment No. 1 for location of the subject property*). The property is approximately 690 m² in size, and it is zoned Residential 1 (RS1) as per the "Regional District of Nanaimo Land Use and Subdivision Bylaw No. 500, 1987."

The subject property is designated within the following Development Permit Areas (DPA's); Farmland Protection which satisfies the exemption provisions and Watercourse Protection which satisfies the exemption provisions, pursuant to "Regional District of Nanaimo Electoral Area 'E' Official Community Plan Bylaw No. 1400, 2005."

There is currently a single dwelling unit and retaining wall on the subject property. The retaining wall, which acts as the foundation support of the dwelling unit, has begun to fail. The applicants propose the remediation and repair of the existing retaining wall. In addition, for further support, they propose to construct an addition to the wall by extending the retaining wall towards the eastern lot line. The proposed and existing walls will be over 1.0 metre in height, and therefore are considered a 'structure' as defined in Zoning Bylaw 500. Subsequently, the applicants are requesting a Development Variance Permit to reduce the required interior side yard setback from 2.0 metres to 0.0 metres to recognize the location of both the proposed and existing retaining walls.

In addition, the applicants wish to legalize the location and height of the existing dwelling, in order to proceed with the construction.

According to our RDN records, the existing dwelling unit and retaining wall were constructed without Building Permits. Therefore, the Building Department has requested that the applicant apply for, and obtain a Building Permit for the existing and proposed works on the subject property. The Building Department has confirmed that the height calculations of the existing dwelling unit as 9.1 metres.

ALTERNATIVES

1. To approve Development Variance Permit No. PL 2009-498 subject to the conditions outlined in Schedules No. 1 - 5 and the notification requirements of the Local Government Act.
2. To deny the Development Variance Permit No. PL 2009-498, and provide further direction to staff.

DEVELOPMENT IMPLICATIONS

The applicants are requesting approval for a setback variance to reduce the required interior side lot line setback from 2.0 metres to 0.0 metres to permit the construction of a retaining wall. In addition, to legalize and recognize the location and height of the existing dwelling unit, the applicants are requesting to relax the maximum dwelling height from 8.0 metres to 9.1 metres, and to relax the minimum setback from the natural present boundary from 15.0 metres to 9.0 metres. The dwelling unit is not being proposed to go any closer to the natural present boundary, and there are no plans for any change in use of the existing dwelling unit. The location of the proposed and existing retaining wall are outlined on the survey prepared by J.E Anderson & Associates attached as *Schedule No. 2*.

Given that the applicant has submitted engineered drawings for the proposed retaining wall, showing it is engineer certified, and suitable for construction, staff recommend that a Section 219 covenant 'save harmless' clause be registered on title as a condition of the Development Variance Permit.

The applicants have provided the following justifications for the requested setback variance:

- The applicants have submitted an Engineering Report prepared by Lewkowich Geotechnical Engineering Ltd, dated October 28, 2008 (see attached), in support of the application. It confirms that the existing retaining wall is failing, and remediation works are necessary.
- The applicants have submitted engineered drawings for the retaining wall, demonstrating they will be engineered certified, constructed sound and suitable for use.
- There are no implications for adjacent property owners with respect to the requested variance.

In staff's opinion, the applicants have provided justification for the requested variance. The variance is not expected to negatively impact adjacent property owners and as such staff recommends approval.

Public Consultation Process

As part of the required public notification process, property owners and tenants located within a 50.0 metre radius, will receive a direct notice of the proposal, and will have an opportunity to comment on the proposed variance, prior to the Board's consideration of the application.

VOTING - Electoral Area Directors – one vote, except Electoral Area 'B'.

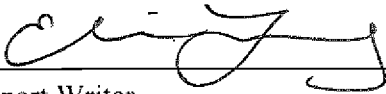
SUMMARY/CONCLUSIONS

This Development Variance Permit, if approved, will allow for the repair of an existing dwelling unit and construction of a new retaining wall. The permit will also legalize the height and location of an existing dwelling unit. The applicants have submitted engineered drawings for the retaining wall, showing it will be engineer certified, and suitable for safe use. Staff recommends that the requested Development Variance Permit be approved subject to the terms outlined in Schedules No. 1 - 5 of this report.

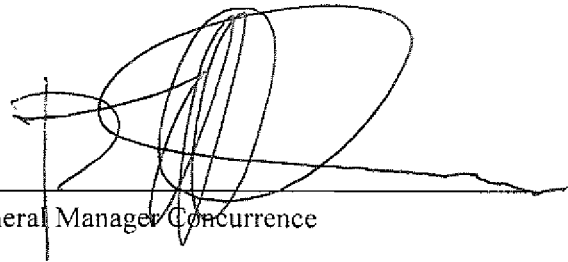
RECOMMENDATION

That:

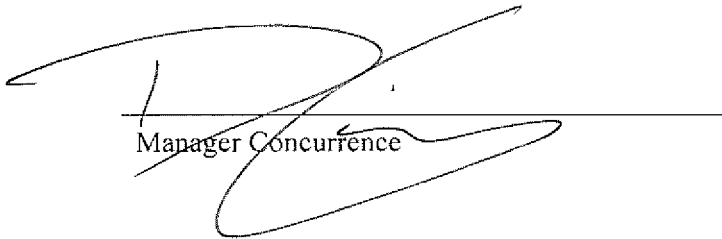
1. Staff be directed complete the required notification; and
2. The Development Variance Permit Application No. PL2009-498, to permit the repair and construction of retaining walls, and to legalize the height and location of an existing dwelling unit be approved subject to the conditions outlined in Schedules No. 1 – 5.



Report Writer



General Manager Concurrence



Manager Concurrence



CAO Concurrence

Schedule No. 1
Development Variance Permit No. PL2009-498
Conditions of Approval/Requested Variance

Bylaw No. 500, 1987 – Requested Variance

With respect to the lands, “Regional District of Nanaimo Land Use and Subdivision Bylaw No. 500, 1987,” the following variance is proposed:

1. **Section 3.4.61, Minimum Setback Requirements** is hereby to be varied by reducing the minimum interior side lot line setback from 2.0 metres to 0 metres for the retaining wall only, as shown on *Schedule No. 2*.
2. **Section 3.4.61 Maximum Height Restriction** is hereby to be varied by relaxing the maximum height of a dwelling unit from 8.0 metres to 9.1 metres, as shown on *Schedule No.2* and *Schedule No. 3*.
3. **Section 3.3.9b Minimum Setback from the Sea** to be varied by relaxing the minimum setback from the natural present boundary from 15.0 metres to 9.0 metres.

Conditions of Approval

1. The retaining wall shall be sited in accordance with survey prepared by J.E Anderson & Associates dated June 19, 2009 attached as *Schedule No. 2*.
2. The dwelling unit elevations shall be developed in accordance with the Building Elevations prepared by Village Design & Drafting dated September 2009. (see *Schedule No. 3*.)
3. The property owner is required to apply for and receive a building permit for the retaining wall through the RDN Building Services Department.
4. The applicant shall develop the subject property in accordance with the recommendations established in the geotechnical engineer’s report dated October 20, 2008, prepared by Lewkowich Geotechnical Engineering Ltd. attached as Schedule No. 5.
5. Staff will withhold the issuance of this permit until the applicant, at the applicant’s expense, registers a Section 219 covenant that registers the Geotechnical Report prepared by Lewkowich Geotechnical Engineering Ltd, dated October 20, 2008 and includes a save harmless clause that releases the Regional District of Nanaimo from all losses and damages as a result of erosion.
6. The applicant is required to provide confirmation of building setbacks by a British Columbia Land Surveyor at the final inspection of the retaining wall.

Schedule No. 2 Development Variance Permit Site Plan

J.E. ANDERSON & ASSOCIATES
 B.C. Land Surveyors - Consulting Engineers
 Victoria- Nanaimo- Parksville, B.C.
 Ph: 758-4601 Fax: 758-4880

SKETCH PLAN

File: 85903 Civic: Dolphin Drive, Nanaimo, BC
 Legal: Lot 8, District Lot 75, Nanaimo District, Plan 19688 Scale: 1:250
 Dimensions are in metres and are derived from Plan 19688.
 This sketch does not constitute a redefinition of the legal boundaries
 therein described and is not to be used in any manner which would assume some
 This sketch plan has been prepared in accordance with the Manual of Standard Practices and is
 Certified Correct this 19th day of June, 2009.

This document is not valid unless
 originally signed and sealed.

B.C.L.S.

© Copyright 2009 J.E. Anderson & Associates. All rights reserved. No person may copy, reproduce, transmit or
 alter this document in whole or in part without the consent of the signatory.
 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.
 Subject to changes, input notations, and interests shown on Title No. E23767 (P.L.D. 003-E1B-145)
 Datum for elevations is datum.

Elevation shown plus (typical)

Scale 1:250

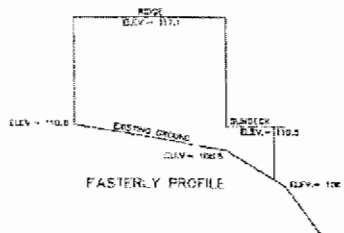


HEIGHT
 MAXIMUM PEAK = 108.4+6.0 = 114.4
 EXISTING PEAK = 117.1
 VARIANCE REQUESTED 0.7 METRES

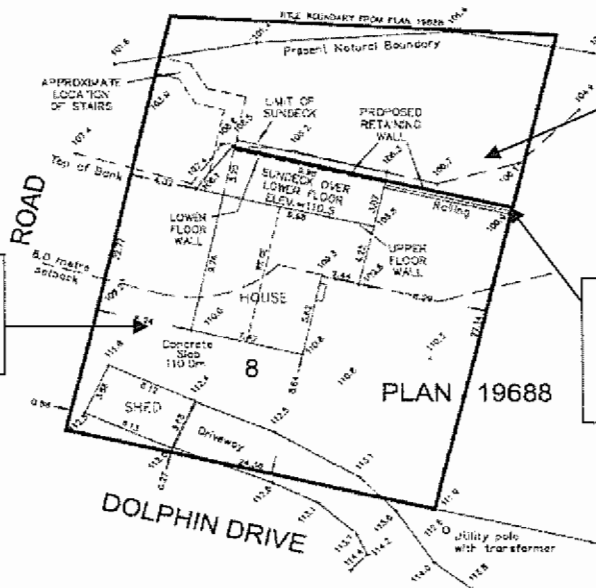
SETBACK FROM TOP OF BANK
 SETBACK REQUIRED 8.0
 EXISTING SETBACK 0.0
 VARIANCE REQUESTED 8.0 METRES

SETBACK FROM PRESENT NATURAL BOUNDARY
 SETBACK REQUIRED 15.0
 EXISTING SETBACK 8.0
 VARIANCE REQUESTED 7.0 METRES

EXISTING LOT COVERAGE = 23%



STRAIT OF GEORGIA



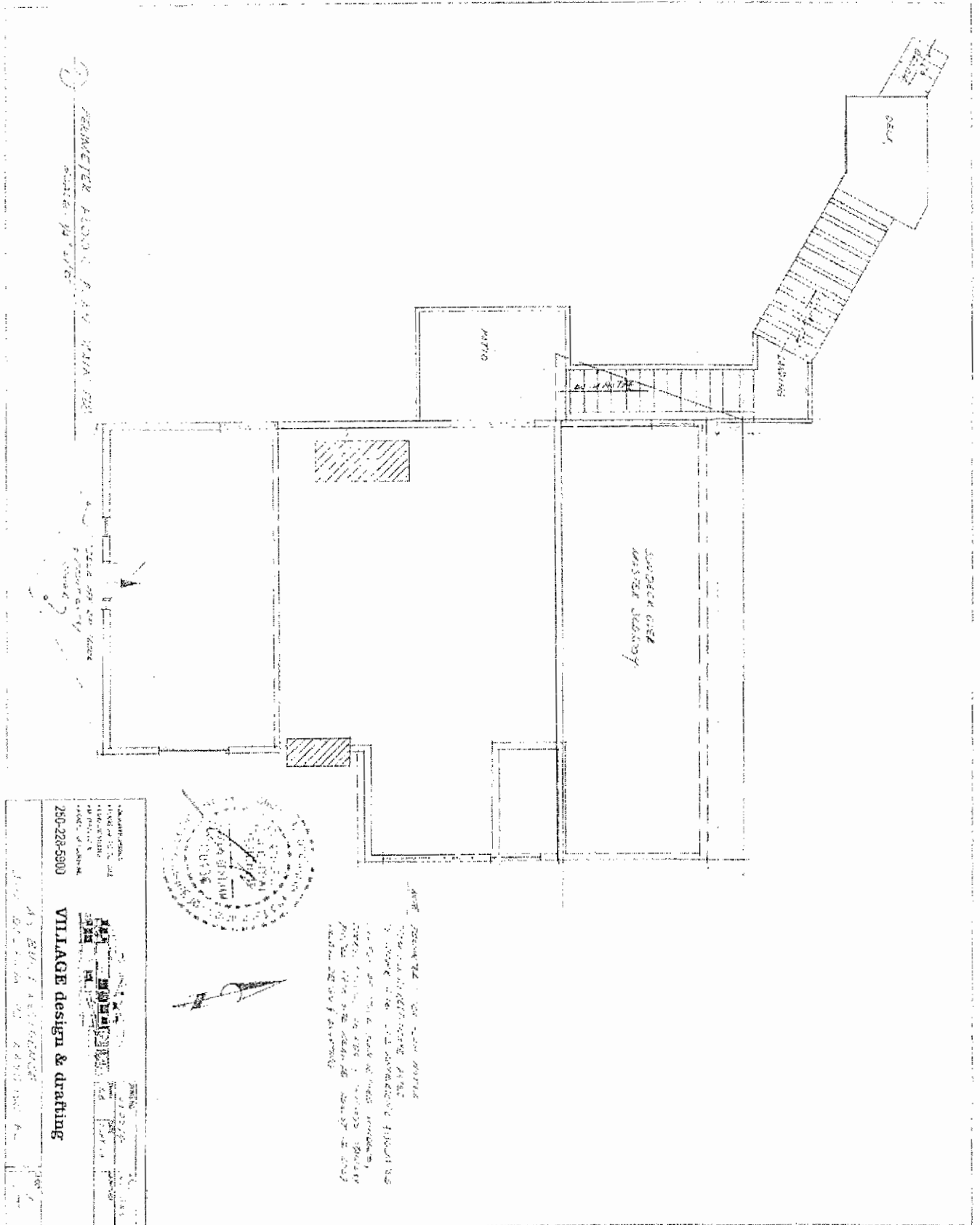
Minimum natural present
 boundary setback is requested
 to be varied from 15.0 metres
 to 9.0 metres

Minimum interior side lot
 line setback is requested to be
 varied from 2.0 metres to 0.0
 metres

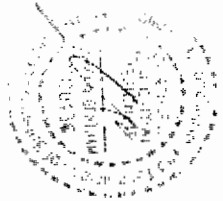
Maximum height is requested
 to be varied from 9.0 metres
 to 9.1 metres



Schedule No. 3 Building Elevation Drawings

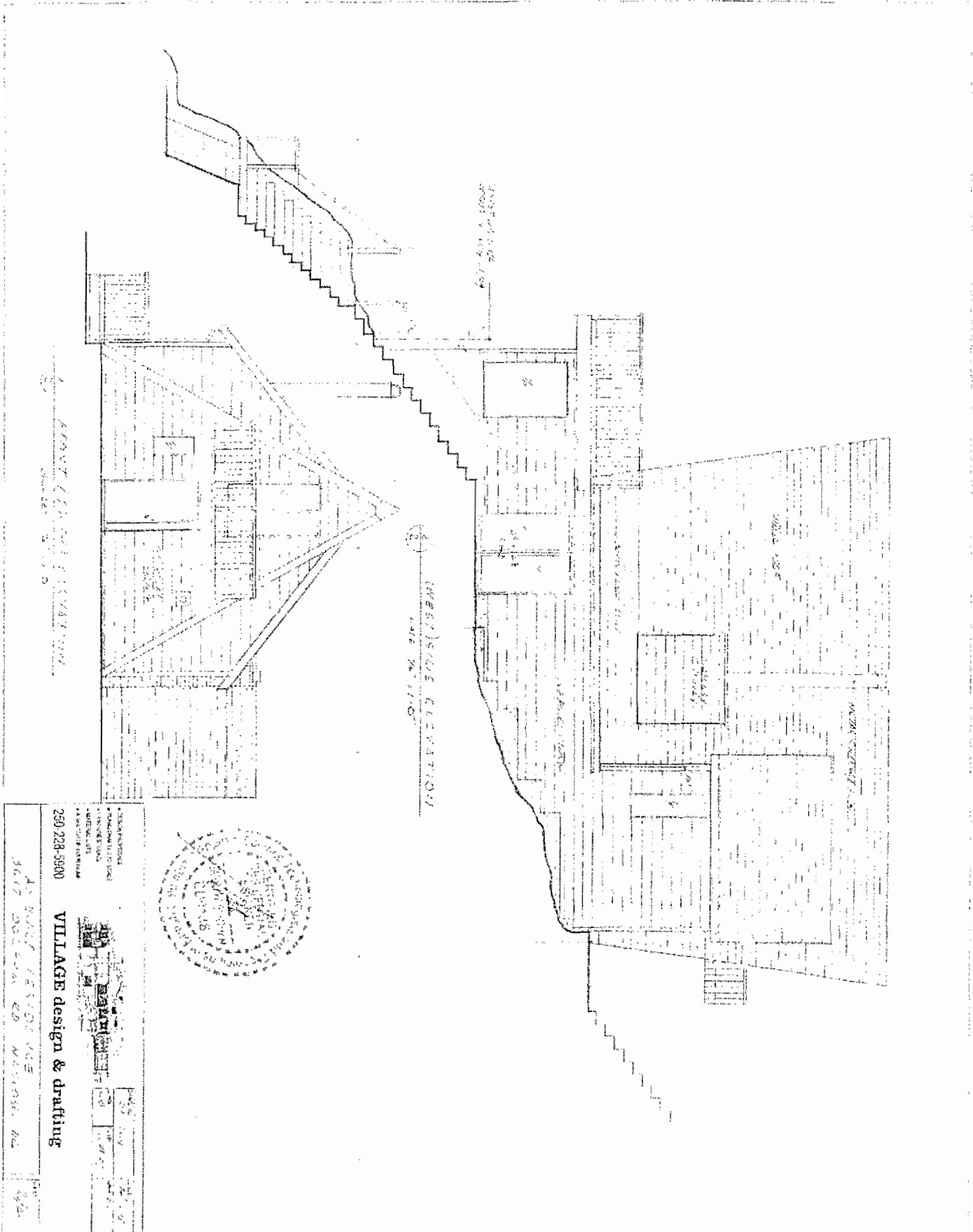


250-228-5900
 VILLAGE design & drafting
 1100 S. 10th St. #100
 Lincoln, NE 68502
 www.village-drafting.com

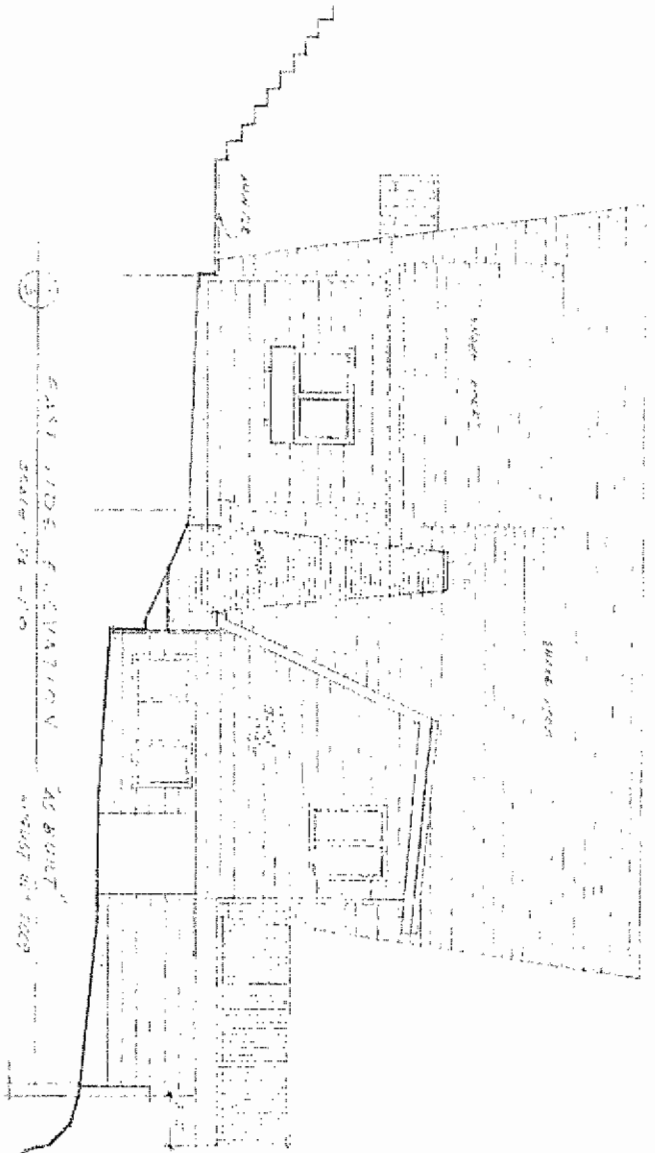


ALL DIMENSIONS ARE TO FACE UNLESS NOTED OTHERWISE
 ALL WALLS ARE 12\"/>

Building Elevations Continued

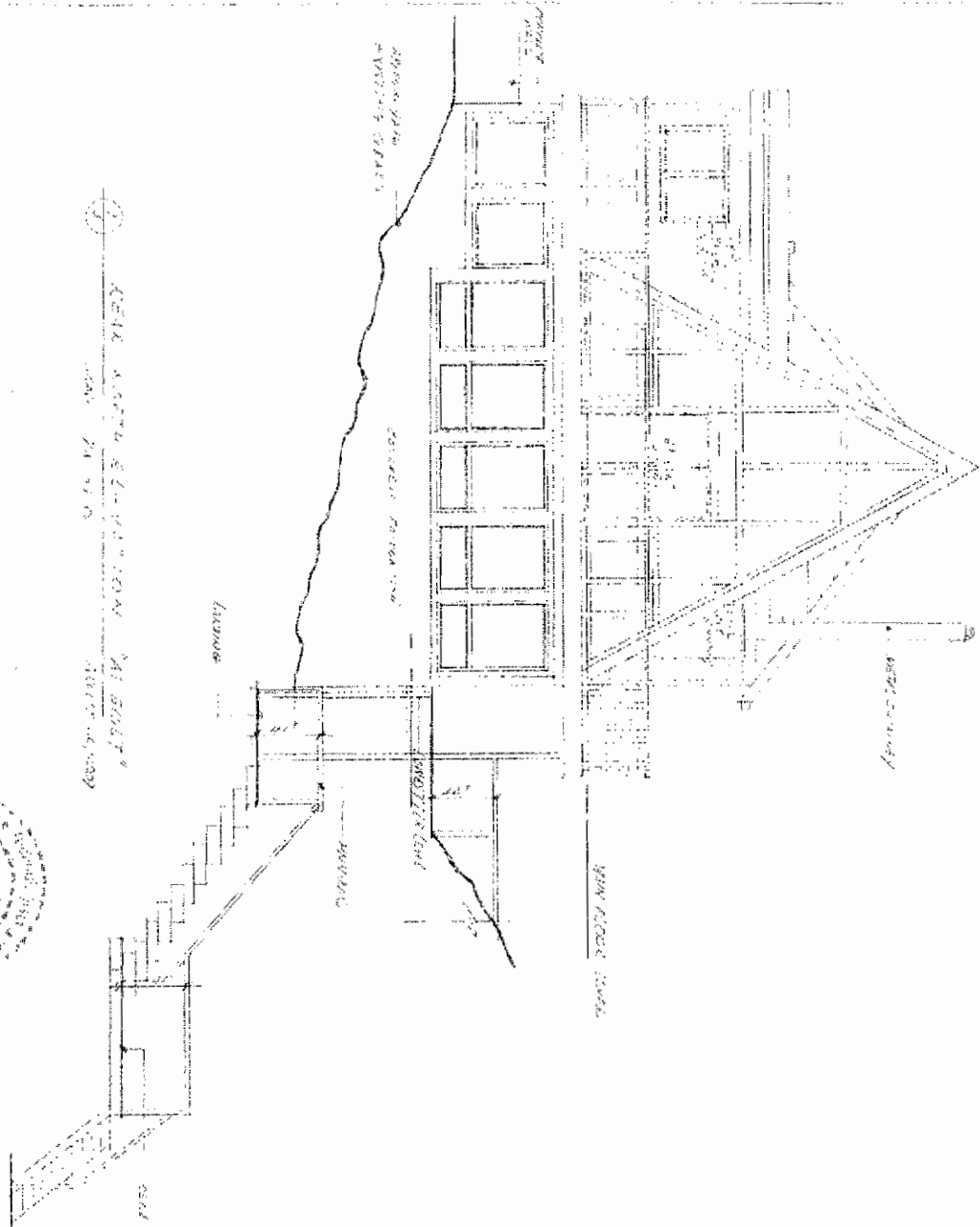


Elevations Continued



PROFESSIONAL ENGINEER JAMES E. EWASIUK, P.E. 250-228-5900 45 BOUT VILLAGE 3817 EDISON RD MANASSAS VA		VILLAGE design & drafting 250-228-5900 45 BOUT VILLAGE 3817 EDISON RD MANASSAS VA	DATE: 10/1/09 DRAWN BY: J.E. CHECKED BY: J.E. SCALE: 3/4" = 1'-0"
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Building Elevations Continued



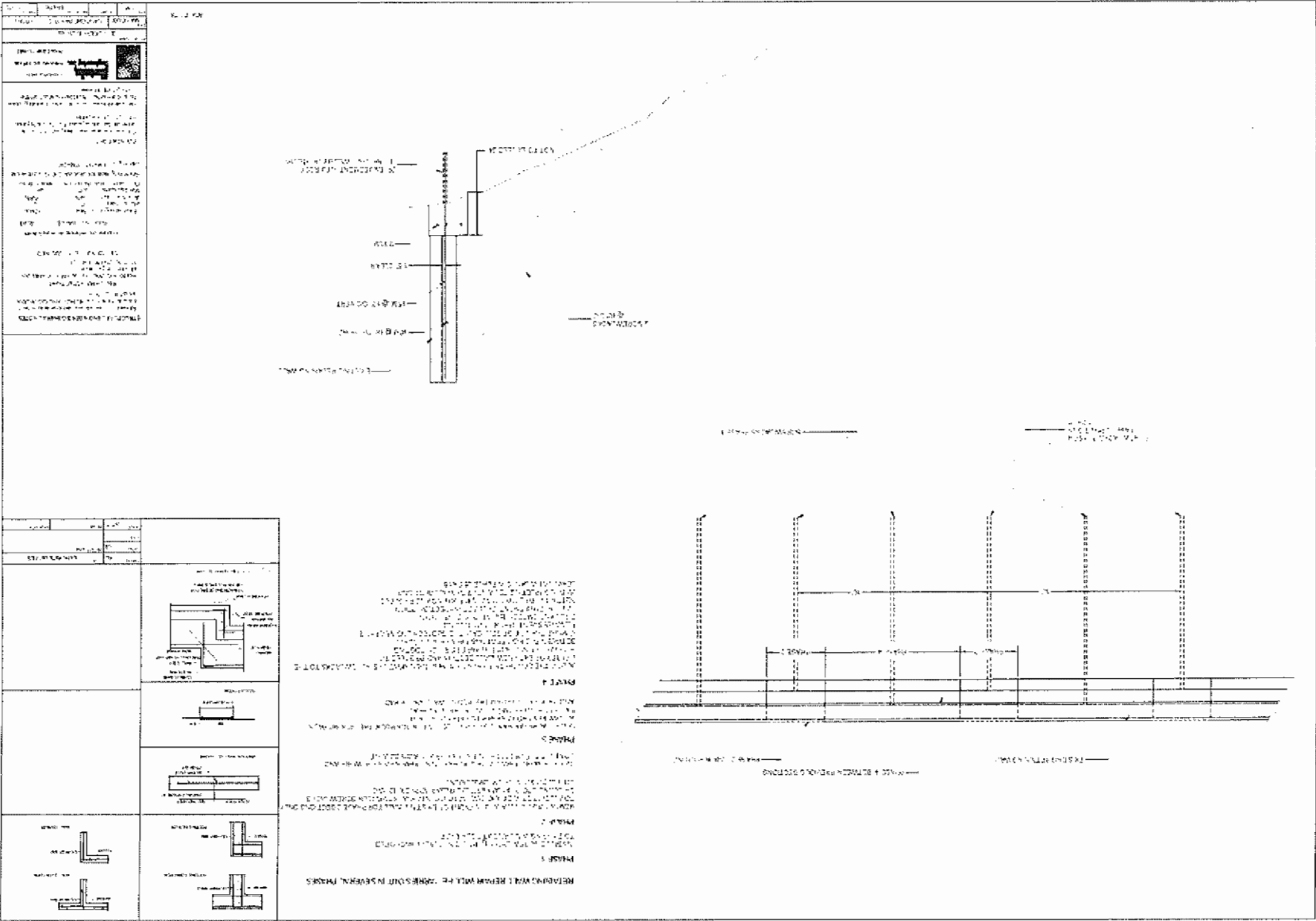
290-228-6900

VILLAGE design & drafting

375 EAST FORT AVENUE
ANN ARBOR, MI 48106

DATE	DESCRIPTION	BY	CHK
10/01/09	REVISION	JEANETTE	JEANETTE
10/01/09	ISSUE	JEANETTE	JEANETTE

Schedule No. 4
 Engineering Drawings



Engineering Drawings Continued

09 - 056

BRITISH COLUMBIA BUILDING CODE 2006

SCHEDULE B-1

Forming Part of Regulation 277, Division 2 of the
British Columbia Building Code

Form B-1 (Rev. 2006)

ASSURANCE OF PROFESSIONAL DESIGN AND COMMITMENT FOR FIELD REVIEW

- Notes:
- (i) This letter must be submitted along with Schedule B-2 before issuance of a building permit. A separate letter must be submitted by each registered professional.
 - (ii) This letter is endorsed by: Architectural Institute of BC, Association of Professional Engineers and Geoscientists of BC, Building Officials' Association of BC, and Union of BC Municipalities.
 - (iii) In this letter the words in italics have the same meaning as in the British Columbia Building Code.

To: *The authority having jurisdiction*

REGIONAL DISTRICT OF NANAIMO

Name of Authority

Re: EWASIUKE RESIDENCE

- RETAINING WALL

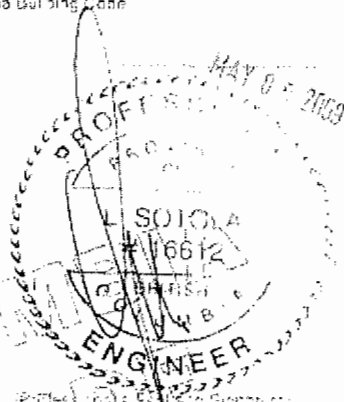
Name of Project (Print)

3617 DOLPHIN DRIVE - NANOOSE BAY, BC

Address of Project (Print)

LOT 8, DL 78, NANOOSE LD, PL VIP19688

Local Description of Project (Print)



The undersigned hereby gives assurance that the design of the *retaining wall* will be in accordance with the *British Columbia Building Code* and all applicable enactments, regulations, codes and standards, and that the design is necessary and justified for every use of it.

- ARCHITECTURAL
- STRUCTURAL
- MECHANICAL
- PLUMBING
- FIRE SUPPRESSION SYSTEMS
- ELECTRICAL
- GEOTECHNICAL — temporary
- GEOTECHNICAL — permanent

05/05/2009

components of the plans and supporting documents prepared by this registered professional in support of the application for the building permit as outlined on the attached Schedule B-2 substantially comply with the BC Building Code and other applicable enactments respecting safety except for construction safety aspects.

The undersigned hereby undertakes to be responsible for field reviews of the above referenced components during construction as indicated on the attached "SUMMARY OF DESIGN AND FIELD REVIEW REQUIREMENTS" (SCHEDULE B-2).

* For authority having jurisdiction's use only.

Engineering Drawings Continued

09 - 056

BRITISH COLUMBIA BUILDING CODE 2006

Schedule B-1 - Continued

3617 DOLPHIN DR - NANOOSE BAY, BC

STRUCTURAL

The undersigned also undertakes to notify the authority having jurisdiction in writing as soon as possible if the undersigned's contract for field review is terminated at any time during construction.

I certify that I am a registered professional as defined in the British Columbia Building Code.

Ludek Solola, P.Eng., Struct.Eng., MStructE.

Engineer/Professional's Name (Print)

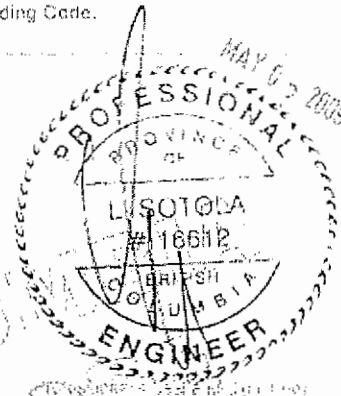
4105 APPLE GATE

Address (Print)

NANAIMO, BC

(250) 751-0433

Phone No.



05/05/2009

Date

If the Registered Professional is a member of a firm, complete the following:

I am a member of the firm SOTOLA ENGINEERING INC.

and I sign this letter on behalf of the firm

(Print Name of Firm)

Note: The above letter must be signed by a registered professional. The British Columbia Building Code defines a registered professional to mean:

- (a) a person who is registered or licensed to practise as an architect under the Architects Act, or
- (b) a person who is registered or licensed to practise as a professional engineer under the Engineers and Geoscientists Act.

* For authority having jurisdiction's use only

ORR: [Signature]

Engineering Drawings Continued

09 - 0 5 b

BRITISH COLUMBIA BUILDING CODE 2006

SCHEDULE B-2

Forming Part of Subsection 2.2.7, Division B of the
British Columbia Building Code

SUMMARY OF DESIGN AND FIELD REVIEW REQUIREMENTS

- Notice: (a) This letter must be submitted along with Schedule B-1 before issuance of a building permit.
(b) This letter is endorsed by: Architectural Institute of BC, Association of Professional Engineers and Geoscientists of BC, Building Officials' Association of BC, and Union of BC Municipalities.
(c) In this letter the words in italics have the same meaning as in the British Columbia Building Code.

Registered Professional's Name (Print): Ludek Sotola, P.Eng., Struct. Eng., M.I.Struct.E.

Name of Project (Print): EWASIUK RESIDENCE - RETURNING UNIT

Address of Project (Print): 3617 DOLPHIN DRIVE - NANOOSE BAY, BC

(Delete applicable items below and cross out and initial only those items not applicable to this project)

ARCHITECTURAL

- 1.1 Fire resisting assemblies
- 1.2 *Fire separations* and their continuity
- 1.3 *Closures*, including tightness and operation
- 1.4 Egress systems, including *access to exit* within *suites* and *floor areas*
- 1.5 Performance and physical safety features (guardrails, handrails, etc.)
- 1.6 Structural capacity of architectural components, including anchorage and seismic restraint
- 1.7 Sound control
- 1.8 Landscaping, screening and site grading
- 1.9 Provisions for fire fighting access
- 1.10 Access requirements for *persons with disabilities*
- 1.11 Elevating devices
- 1.12 Functional testing of architecturally related fire emergency systems and devices
- 1.13 Development Permits and conditions therein
- 1.14 Interior signage, including acceptable materials, dimensions and locations
- 1.15 Review of all applicable shop drawings
- 1.16 Interior and exterior finishes
- 1.17 Damp-proofing and/or water proofing of walls and slabs below grade
- 1.18 Roofing and flashings
- 1.19 Wall cladding systems
- 1.20 Thermal insulation systems, including condensation control and cavity ventilation
- 1.21 Exterior glazing
- 1.22 Integration of building envelope components
- 1.23 Environmental separation requirements (Part 5)

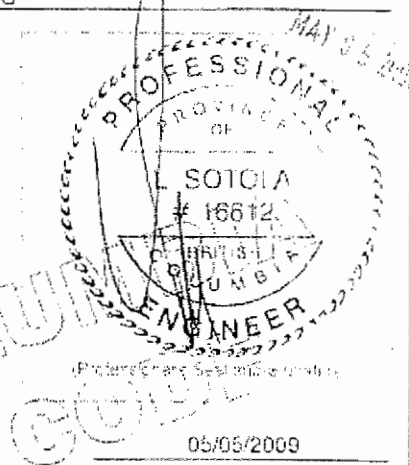
STRUCTURAL

- 2.1 Structural capacity of structural components of the *building*, including anchorage and seismic restraint
- 2.2 Structural aspects of *deep foundations*
- 2.3 Review of all applicable shop drawings
- 2.4 Structural aspects of *uplifted post-tensioned concrete design and construction*

MECHANICAL

- 3.1 HVAC systems and devices, including high building requirements where applicable
- 3.2 *Fire dampers* at required *fire separations*
- 3.3 Continuity of *fire separations* at HVAC penetrations
- 3.4 Functional testing of mechanically related fire emergency systems and devices
- 3.5 Maintenance manuals for mechanical systems
- 3.6 Structural capacity of mechanical components, including anchorage and seismic restraint
- 3.7 Review of all applicable shop drawings

* For authority having jurisdiction's use only



Engineer Drawings Continued

U9-056

BRITISH COLUMBIA BUILDING CODE 2006

Schedule B-2 - *Continued*

Address of Project (Print): 3617 DOLPHIN DR - NANOOSE BAY BC

Registered Professional's Name (Print): Ludek Sotola, P.Eng., Struct.Eng.

PLUMBING

- 4.1 Roof drainage systems
- 4.2 Site and foundation drainage systems
- 4.3 Plumbing systems and devices
- 4.4 Continuity of fire separations at plumbing penetrations
- 4.5 Functional testing of plumbing related fire emergency systems and devices
- 4.6 Maintenance manuals for plumbing systems
- 4.7 Structural capacity of plumbing components, including anchorage and seismic restraint
- 4.8 Review of all applicable shop drawings

FIRE SUPPRESSION SYSTEMS

- 5.1 Suppression system classification for type of occupancy
- 5.2 Design coverage, including concealed or special areas
- 5.3 Compatibility and location of electrical supervision, ancillary alarm and control devices
- 5.4 Evaluation of the capacity of city (municipal) water supply versus system demands and domestic demand, including pumping devices where necessary
- 5.5 Qualification of welder, quality of welds and material
- 5.6 Review of all applicable shop drawings
- 5.7 Acceptance testing for "Contractor's Material and Test Certificate" as per NFPA Standards
- 5.8 Maintenance program and manual for suppression systems
- 5.9 Structural capacity of sprinkler components, including anchorage and seismic restraint
- 5.10 For partial systems — confirm sprinklers are installed in all areas where required
- 5.11 Fire Department connections and hydrant locations
- 5.12 Fire hose stations
- 5.13 Functional testing of fire suppression systems and devices

ELECTRICAL

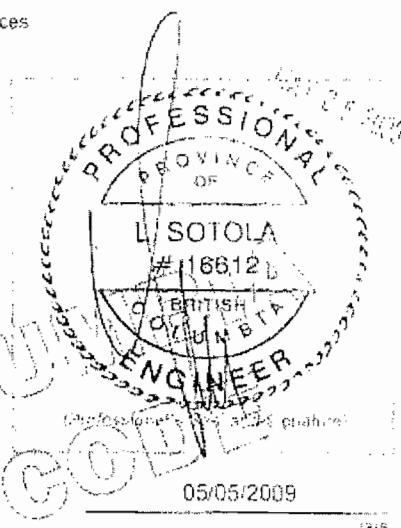
- 6.1 Electrical systems and devices, including high building requirements where applicable
- 6.2 Continuity of fire separations at electrical penetrations
- 6.3 Functional testing of electrical related fire emergency systems and devices
- 6.4 Electrical systems and devices maintenance manuals
- 6.5 Structural capacity of electrical components, including anchorage and seismic restraint
- 6.6 Clearances from buildings of all electrical utility equipment
- 6.7 Fire protection of wiring for emergency systems
- 6.8 Review of all applicable shop drawings

GEOTECHNICAL — Temporary

- 7.1 Excavation
- 7.2 Shoring
- 7.3 Underpinning
- 7.4 Temporary construction dewatering

GEOTECHNICAL — Permanent

- 8.1 Bearing capacity of the soil
- 8.2 Geotechnical aspects of deep foundations
- 8.3 Compaction of engineered fill
- 8.4 Structural considerations of soil, including slope stability and seismic loading
- 8.5 Backfill
- 8.6 Permanent dewatering
- 8.7 Permanent underpinning



* For authority having jurisdiction's use only

**Schedule No. 5
Engineering Report**

Lewkovich Geotechnical Engineering Ltd.



TECHNICAL MEMORANDUM

Dennis Ewasiuk and Anne Dobbie
4330 W. 2nd Ave.
Vancouver, BC
V6R 1K3

File: G6861.01
October 20, 2008

ATTENTION: Mr. Dennis Ewasiuk and Anne Dobbie

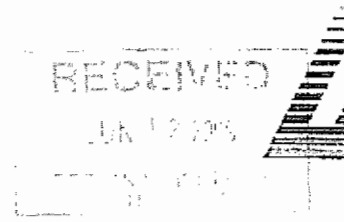
PROJECT: 3617 DOLPHIN DRIVE, NANOOSE, B.C.
SUBJECT: RETAINING WALL AND FOOTING WALL OBSERVATION

1. As requested, Lewkovich Geotechnical Engineering Ltd. (LGE) observed the retaining wall and footing wall at the above project on October 17, 2008. The retaining wall to the east of the residence was reported to have been built over 30 years ago. The footing wall was placed 10-15 years ago when the master bedroom and bathroom were added to the residence.
2. There were several cracked tiles and open cracks in the mortar between tiles in the master bathroom, at the rear of the residence. There was also an audible "air gap" through the base of the rear wall in the master bathroom. There was also a large crack observed in the outside corner of the bathroom.
3. The footing wall and the retaining wall had cracked in several different areas. They were also bowed out at the North East corner of the residence (north west side of retaining wall). The sill of the footing wall under the master bedroom is visibly lower than the rest of the footing wall, indicating settlement. This is the location where the audible "air gap" was heard inside the master bathroom.
4. The footing wall and retaining wall were observed to have been poured directly on the existing ground surface, without removal of organic matter. There were at least two tree stumps located directly under these walls. These tree stumps are presently rotting, causing settling of the footing wall and retaining wall.
5. It is LGE's opinion that the retaining wall and footing wall at the rear of the residence are beginning to fail. The organic matter underneath the footing and retaining walls is decaying, causing settlement, cracking, and bowing of the walls. There are several options for remediation; listed in no particular order below. Please note that a Structural Engineer will be required to determine anchor size and anchor locations at the footing/bedrock interface, relative to building loads, as well as for

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Engineering Report Continued

CLIENT: DENNIS EWASIUK AND ANNE DOBBIE
PROJECT: 3617 DOLPHIN DRIVE, NANOOSE, B.C.
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the design of poured concrete retaining and footing walls.

- a. The residence could be underpinned by some methodology that extends building foundations down to underlying bedrock. (This recommendation applies to the rear wall foundation elements only.) Because of the limited access to the building, as well as the interior foundations, as well as the depth to the bearing layer, the most practicable method of underpinning would consist of a form of piling. A method of underpinning that should be considered consists of helical anchors that are drilled to the bearing layer. Equipment needed for this type of installation is relatively light and portable. Please note that our office shall observe all installations to determine whether the founding depth has been obtained. A local contractor that utilizes such anchors (proprietary name in this case being Chance Anchors) is Gallant Homes (Byron Gallant), who can be reached at 250-714-1991. We have experience in observing their installations, and consider them to be a reputable contractor.
 - b. The existing footing wall and retaining wall could be removed and replaced in small sections, as long as the base of the new footing wall and retaining wall are founded on and pinned into bedrock.
 - c. The master bedroom and bathroom suite addition can be removed, and the original pad footings for the deck can be replaced if founded on bedrock.
6. Lewkowich Geotechnical Engineering Ltd. appreciates the opportunity to be of service on this project. If you have any comments, or if we can be of further assistance, please contact us at your convenience.

Respectfully Submitted,
Lewkowich Geotechnical Engineering Ltd.



Chris Hudec, M.A.Sc., P.Eng.
Project Engineer

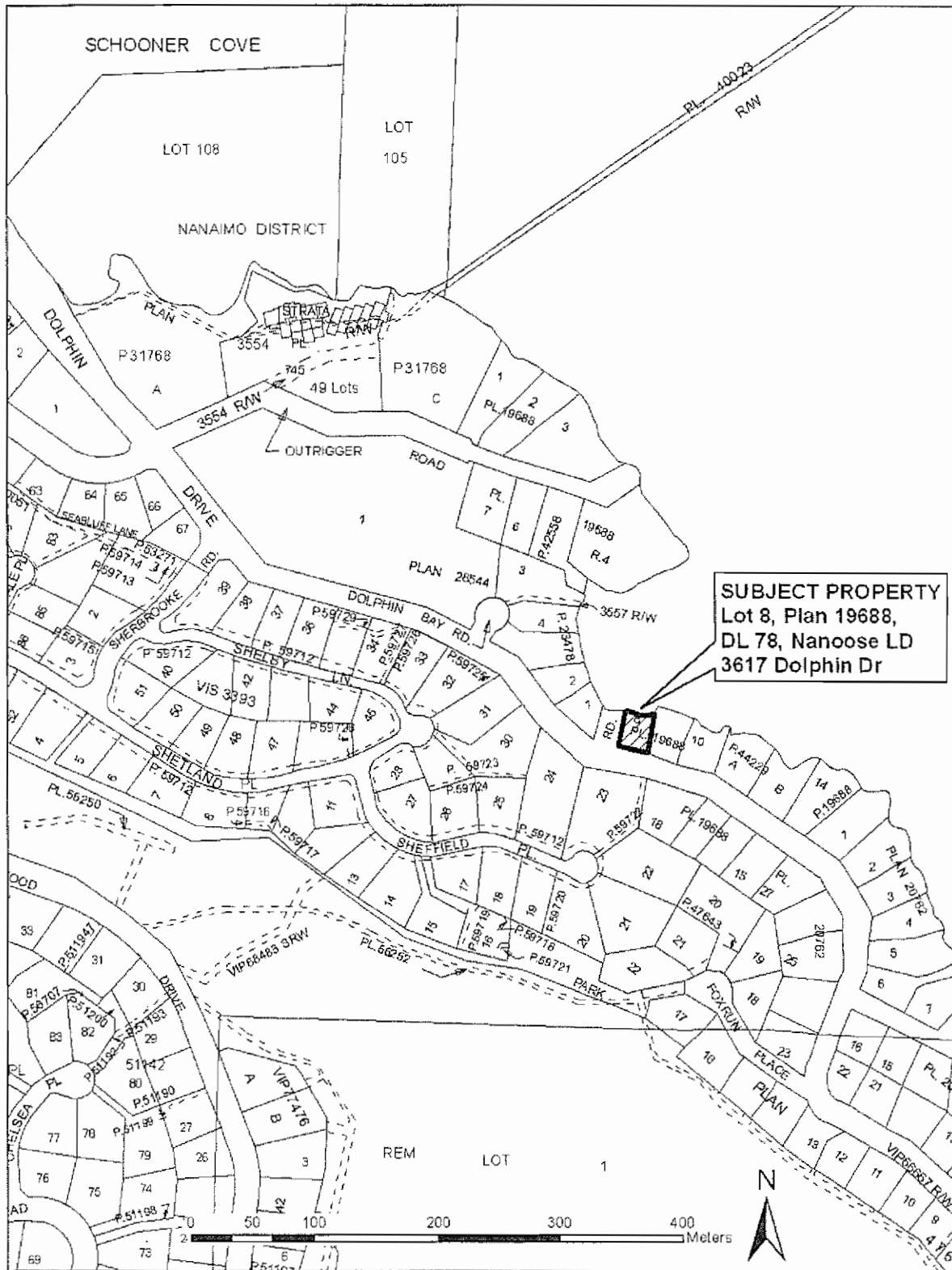
Reviewed By:

A handwritten signature in black ink that reads "M. Ren". The signature is written in a cursive, flowing style.

Matthew Ren, B.Sc., M.Sc.

Lewkowich Geotechnical Engineering Ltd.

Attachment No. 1 Location of Subject Property



SUBJECT PROPERTY
Lot 8, Plan 19688,
DL 78, Nanoose LD
3617 Dolphin Dr