University Endowment Lands

Form

SFD BUILDING PERMIT APPLICATION

Applications by appointment only

Application Date:	Lot:	Block:
PROJECT INFORMATION		**Page 1 of 3**

Project Address: Dev. Permit No.:

REGISTERED OWNER(S) OF THE PROPERTY

Name:

Address: Postal Code:

Phone No.: Cell No.: Email:

APPLICANT'S NAME *(if different than registered owner, submit a Letter of Authorization)*

Name *(Company & Contact Person)*:

Address: Postal Code:

Phone No.: Cell No.: Email:

CONTRACTOR

Name *(Company & Contact Person)*:

Address: Postal Code:

Phone No.: Cell No.: Email:

ARCHITECT OR DESIGNER

Name *(Company & Contact Person)*:

Address: Postal Code:

Phone No.: Cell No.: Email:

PROPOSED WORK

☐ New	☐ Addition	☐ Alteration	☐ Demolition	☐ Other *(e.g. plumbing, SW connections, etc.)*

Description of work:

Signature of Owner/Agent Date

Personal information contained on this form is collected by the University Endowment Lands under Section 27(2) of the Freedom of Information and Protection of Privacy Act and will be used for the purpose of processing your permit application. If you have any questions about the collection, use or disclosure of this information, please contact the Deputy Manager at 5495 Chancellor

BUILDING PERMIT APPLICATION REQUIREMENTS

SINGLE FAMILY DWELLING UNITS

Project Address:

Applications that do not provide the following information will not be accepted.

DOCUMENTS REQUIRED		Page 2 of 3
# of Copies	**Documents**	**Submitted**
1	**Building Permit Application** completed by the owner or authorized agent.	❑
1	**Building Permit Application (Demolition)** completed by the owner or authorized agent. (for redevelopment projects)	❑
1	**Title Search** from the Land Title Office for proof of property ownership or **Certificate of Title** from BC Online. Documents must be no more than 60 days old, complete with copies of all covenants, easements, rights of way, and any other encumbrances.	❑
1	**Letter of Authorization** if the applicant/agent is not the property owner. (Refer to the Letter of Authorization, form included).	❑
1	**HPO Registration Form** which specifies owner builder/contractor (registration number required) or **Owner Building Declaration.**	❑
1	**Letter of Confirmation** signed by the applicant, that the proposed Building Permit plans are consistent with the approved Development Permit plans. (Refer to the Letter of Confirmation, form included).	❑
1	**Project Registry of Registered Professionals (RPs)** retained who have submitted Letters of Assurance that is signed by the applicant. (Refer to the Project Registry of Registered Professional (RPs), form included).	❑
	Letters of Assurance from the applicable registered professionals of record.	❑
1	**Project Cost Breakdown.** Include fees of all Registered and/or Design Professionals.	❑
1	**Plumbing Fixture Count.** (Refer to the Plumbing Fixture Count For Plumbing Permit Fee Calculation, form included).	❑
1	**Hazardous Materials Reporting** (HazMat survey). (Refer to the Hazardous Material Reporting, bulletin included).	❑
1	**Section 9.36 Energy Efficiency Requirements** effective January 01, 2020, applications for building permits must show compliance with Step 3 of the BC Energy Step Code. • Submit a *BC Energy Compliance Report: Pre-Construction* form completed by a Certified Energy Advisor, licensed by Natural Resources Canada. • Submit printed copy of HOT2000 Full House or energy model	❑ ❑
1	**Section 9.32 Ventilation Requirements** effective December 19, 2014, applications for building permits must show compliance with new requirements to the BC Building Code for ventilation of residential dwelling units. Submit Ventilation Checklist 1 through 4 from the Thermal Environmental Comfort Association (TECA).	❑

BUILDING PERMIT APPLICATION REQUIREMENTS

SINGLE FAMILY DWELLING UNITS

DRAWINGS REQUIRED			Page 3 of 3
#of Copies	**Drawings**	**Maximum sheet size A1**	**Submitted**
2	**Survey Plan** **BC Land Surveyor Plan** certified by BCLS noting CVD28GVRD Datum. Documents shall be sealed and signed originals. (Refer to the BCLS Survey Requirements checklist included).		❑
2	**Architectural Plans** ○ Site Plan(s) (1/8" scale). ○ Floor plans, elevations, and cross sections (1/4" scale). ○ Construction assemblies, general notes, and sufficient details to demonstrate compliance with the current BC Building Code (BCBC) (E.g. Detail drawings of exterior and interior guards). ○ Height elevations must reference CVD28GVRD Datum. (Refer to the Architectural Plan Requirements checklist included).		❑
2	**Landscape Drawings** ○ Landscape drawings shall be consistent with the Development Permit application.		❑
2	**Structural Drawings** ○ Signed and sealed by a Professional Engineer, as defined by the current BCBC, along with the applicable Letters of Assurance. *(Note: The specific requirements for Lateral Bracing shall be incorporated. Refer to the Seismic Design For Part 9 Buildings Single and Two Family Dwellings Lateral Bracing Requirements bulletin included).* ○ Design data for UEL: Vancouver (Granville & 41 Ave) as per BCBC 2018 Table C-2.		❑
2	**Building Envelope Plans and Details** ○ Signed and sealed by a Registered Professional, as defined by the current BCBC, along with the applicable Letters of Assurance. ○ Details are required showing the material specific to the project: type of insulation, cladding, rainscreen, etc.		❑
3	**Stormwater Management and Site Drainage Plan (SMP)** ○ A stormwater and site drainage layout plan in accordance with the prescriptive requirements of the UEL Stormwater Policy. (Refer to the On-site Stormwater Management policy included). ○ Layout plan to match the scale of the site plan. *(Note: The construction of a new single-family dwelling may require the installation of new water, storm and sanitary services. The owner is responsible for the cost of the new services which are additional to the building permit fee).*		❑
2	**Demolition Plan** ○ Hazardous Material Plan ○ Report documenting how work will comply with 5.6 of the BC Fire Code and 8.2 of the BC Building Code.		❑

LETTER OF AUTHORIZATION

I/We _____, the owner(s)/authorized signatory of the property legally described
Print Name/Corporation

as _____ at _____
Legal Description **Street Address**

authorize _____ to act as my/our agent for all purposes in relation to the
Print Name
application and/or issuance of the

- ❑ Development Permit
- ❑ Building Permit
- ❑ Building Permit (Demolition)
- ❑ Bylaw Amendment (Rezoning)
- ❑ Subdivision
- ❑ Other _____

from the University Endowment Lands.

I/we acknowledge the authority of the agent to bind me/us in all matters related to the application and work to be performed under the permit(s). The person signing the permit documents acknowledges that his/her signature is as the agent for the owner and that he/she is authorized to bind the owner, who will be deemed to know of and to understand the contents of these documents. Where the owner or agent is a corporation, the individual signing must have signing authority for the corporation (***a copy of the certificate of incorporation, notice of articles, and director information is required***).

Signature of Owner/Authorized Signatory	**Print Name**	**Date (DD/MM/YYYY)**
Owner/Authorized Signatory Mailing Address	**Phone Number**	**E-mail Address**
Signature of Agent	**Print Name**	**Date (DD/MM/YYYY)**
	Phone Number	**E-mail Address**
Signature of Witness	**Print Name**	**Date (DD/MM/YYYY)**
		Phone Number

The University Endowment Lands reserves the right to request proof of identity for any reason as it relates to the Letter of Authorization. Providing false or misleading information is illegal and will be prosecuted to the fullest extent of the law.

LETTER OF CONFIRMATION

Date: _____

To: **The Manager**
University Endowment Lands
5495 Chancellor Boulevard
Vancouver, BC V6T 1E2

Re: _____
Civil Address

_____
Legal Description

The purpose of this notification is to confirm that the plans and specifications submitted for the Building Permit pursuant to Section 12 of the ***Land Use, Building and Community Administration Bylaw*** are consistent with the plans approved for Development Permit no._____ and that there are no changes from those plans.

_____	_____	_____
Signature of Registered Owner or Agent	**Print Name**	**Date**

University Endowment Lands

Form

PROJECT REGISTRY OF REGISTERED PROFESSIONALS (RPs)

Project Address:	**Date:**
Property Owner (or Authorized Agent):	

The LETTERS OF ASSURANCE OF PROFESSIONAL DESIGN AND COMMITMENT FOR FIELD REVIEW listed below have been submitted for this project. The University Endowment Lands (UEL) is relying on the ***Registered Professional's*** assurance that their area of responsibility complies with the current BC Building Code.

DISCIPLINE		**OFFICE USE**	
		B	**C-B**
ARCHITECTURAL			
STRUCTURAL			
BLDG ENVELOPE			
FIRE SUPPRESSION SYSTEMS			
PLUMBING (Stormwater Mgmt Plan)			
GEOTECH (Temporary)			
GEOTECH (Permanent)			
Other			

It is your responsibility to notify the Building Inspector of any additional Registered Professional***s*** that have been retained for the project or of the date any of these ***Registered Professional(s)*** cease to be retained by you. If any ***Registered Professional*** ceases to be retained at any time during construction, work on the above project shall stop until such time as:

(a) a new ***Registered Professional*** is retained, and
(b) a new **LETTER OF ASSURANCE OF PROFESSIONAL DESIGN AND COMMITMENT FOR FIELD REVIEW** is filed with the ***University Endowment Lands***.

This form must be completed and signed by the applicant and submitted at the time of Building Permit application.

Applicant of above property - Signature

University Endowment Lands

Form

PLUMBING FIXTURE COUNT
FOR PERMIT FEE CALCULATION

Project Address:				**Postal Code:**
Lot:	**Block:**	**District Lot:**	**Plan No.:**	**Roll No.:**
Registered Owner(s) of the Property				
Name:		Phone:		Fax:
Address:				
Contractor				
Name:		Phone:		Fax:
Address:				
Building Use:		**District Zone:**		

Fixtures

Floor	Water Closet	Wash Basin	Bath Tub	Shower	Sinks	Automatic Washer	Wash Tubs	Dish Washer	Floor Drain	Roof Drain	Other Fixtures
Basement											
First											
Second											
Third											
Fourth											
Fifth											
Sixth											
Roof											
Total											

Other Plumbing Work:

HAZARDOUS MATERIALS REPORTING

Purpose:

The purpose of this bulletin is to inform owners, design professionals and contractors of the WorkSafeBC requirements for hazardous material reporting in accordance with Occupational Health and Safety (OHS) Regulation **20.112** of the OHS Regulation. For the actual regulations, go to:
http://www2.worksafebc.com/publications/OHSRegulation/Part20.asp#SectionNumber:20.112

Background:

WorkSafeBC requires a survey for hazardous materials be completed before any demolition work begins, including demolition as part of a renovation. A copy of this survey must be submitted to the University Endowment Lands (UEL) prior to the issuance of a demolition of a building or part of a building.

For renovation work, a UEL Inspector may ask that the Hazardous Materials Survey be produced. If it cannot be produced, the Inspector may stop the inspection to ensure his/her safety and the safety of those around.

Hazardous materials include asbestos, drywall, the contents in aboveground and underground storage tanks, PCBs, abandoned chemicals and others. All hazardous materials **must** be identified, removed and recycled or disposed of prior to demolition of the building in accordance with all relevant regulations. The survey to identify these materials must be completed by a qualified person as defined in the OHS regulation.

Note: Depending on the nature and scope of the hazardous materials, a building permit may be required for this pre-demolition work.

Documentation that provides evidence these materials have been identified, removed and disposed of properly is required to be kept for a six month period and produced upon request. This documentation may include, but is not limited to, surveys, clearance letters, receipts and waste manifests. Information provided by the survey will be placed in the UEL's files and will be subject to the Freedom of Information and Protection of Privacy Act.

Failure to remove hazardous materials or provide documentation upon request may result in a STOP WORK ORDER or further action taken by the UEL and/or WorkSafe BC.

If you have any questions, please contact the Building Department at 604-660-1808 or WorkSafeBC at 604-276-3100.

UNIVERSITY ENDOWMENT LANDS

SINGLE FAMILY HOME BC ENERGY STEP CODE REQUIREMENTS – STEP 3

POLICY

Purpose:
The purpose of this bulletin is to update owners, designers, and builders about the University Endowment Lands' (UEL) BC Energy Step Code (Step Code) requirements.

Background:
The Step Code is an amendment to the BC Building Code that provides a performance-based path intended to support a market transformation from current energy efficiency requirements to net zero energy ready buildings by 2032. The path to net zero energy ready buildings is set out through a series of increasingly stringent requirements for energy use, thermal energy demand, and airtightness identified as Steps 1-5 in the Step Code and the UEL has committed to taking these incremental steps as a part of its overarching commitments to improving energy efficiency in the built environment.

- January 1st, 2019: applicants required to achieve an airtightness of 3.0 ACH @ 50Pa or less.
- July 1st, 2019: implemented Step 2 of the Step Code.
- **January 1, 2020: implemented Step 3** of the Step Code which includes a blower door test requirement to achieve air leakage of 2.5 ACH @ 50Pa or less to determine a home's airtightness.

Application:
In support of the transformation from current energy standards to net zero by 2032, all Building Permit applications for new single-family homes applied for on or after January 1, 2020 are required to achieve air leakage of 2.5 ACH @ 50Pa or less. This airtightness standard is recognized in Step 3 of the Step Code requirements. In addition, Building Permits applied for on or after January 1, 2020 must meet the remaining performance requirements of Step 3; this requires the submission of additional information at the time of Building Permit application and additional requirements at the time of Final Inspection.

Additional Required Building Permit Documents:

- BC Energy Compliance Report: Pre-Construction form completed by a Certified Energy Advisor, licensed by Natural Resources Canada.
- Printed copy of HOT2000 Full House report.
- Printout of an email from the Energy Advisor's Service Organization acknowledging receipt of the "p-file" corresponding to the HOT2000 Full House Report or if using a Registered Professional in place of an Energy Advisor (sometimes the EA is also a RP), submit electronic copy of the building energy model (provided on USB flash drive) instead.
- For each Energy Advisor, a copy of a valid certificate of insurance for no less than $2 million of general liability insurance and $1 million in errors and omissions insurance or if using a Registered Professional then provide Schedules along with a certificate of insurance.
- Plan drawings clearly showing all energy efficiency upgrades noted in Section B of the BC Energy Compliance Report: Pre-Construction form. List all Section B upgrades on the front sheet of plan drawings.

Link to the Pre-Construction form: http://energystepcode.ca/app/uploads/sites/257/2019/03/BCESC-Compliance-Report_PreConstruction_Effective-20181210.pdf

Blower Door Test Requirement:

A blower door test requirement to achieve air leakage of 2.5 ACH @ 50Pa or less to determine the home's airtightness will be implemented and administered at the Mid- Construction (pre-drywall) stage:

- At the Mid-Construction (pre-drywall) stage, the builder will be required to do a mid-construction blower door test once the air tightness layer has been installed. This allows for corrective action to be taken to remedy problems and to improve the airtightness of the building envelope before the final blower door test.
- Submit a Mid-Construction form, completed by the Energy Advisor or Registered Professional, indicating pre-drywall blower door test results and verification of all building energy efficiency upgrades.
- If 2.5 ACH @ 50Pa is not achieved on the first test, the UEL building inspection cannot proceed. The project must reduce air leakage and clearly noted on the Mid-Construction report how this will be achieved before final inspection.

Link to the Mid-Construction form: http://energystepcode.ca/app/uploads/sites/257/2019/08/Mid-Construction-BC-Standard-Verification-Report.pdf

Requirements before Final Inspection:

- Post Construction (Occupancy) blower door test conducted by a Certified Energy Advisor or a Registered Professional.

Requirements at Final Inspection:

- A BC Energy Compliance Report: As-Built form, completed by the Energy Advisor or Registered Professional, indicating post-construction blower door test results and verification of all building energy efficiency upgrades.
- A revised electronic copy of the energy model for each building as constructed. Note that the post-construction blower door test result must be used in the energy model.
- EnerGuide Rating System, Passive House Certification or other home energy label, affixed on or near the electrical panel.

Link to the As-Built form: http://energystepcode.ca/app/uploads/sites/257/2019/03/BCESC-Compliance-Report_AsBuilt_Effective-20181210.pdf

Jonn Braman, Manager
University Endowment Lands

Kamelli Mark, Deputy Manager
University Endowment Lands

BCLS SURVEY REQUIREMENTS

Two (2) copies of the original survey plans signed and sealed by a BC Land Surveyor must be submitted for all development permit and building permit applications.

A list of survey control monument locations and their respective geodetic elevation values are available of the University Endowment Lands (UEL) office.

The following information must be shown on the survey plan:

- ❑ **CVD28GVRD Datum** is referenced;
- ❑ Civic address of the subject property;
- ❑ PID and legal description of the subject property;
- ❑ Verification of lot size and dimensions;
- ❑ Existing grades at all corners of the property;
- ❑ General topography of the property with sufficient grades throughout the site;
- ❑ Existing grades of adjacent property(ies) at regular intervals, approximately 10 feet into the neighbouring sites;
- ❑ Finished grades of all the existing buildings shown at all the corners;
- ❑ Roof and floor elevations of existing principal building;
- ❑ Location of all existing buildings. Indicate where building setbacks are taken from (i.e., foundation wall, exterior siding, etc.);
- ❑ Location and roof elevations of adjacent houses;
- ❑ Location of lanes, easements, and rights-of-way;
- ❑ Location of existing driveways and width at property line;
- ❑ Location of boulevard trees, fire hydrants, water meters, streetlights, etc.;
- ❑ Location of any existing significant landscaping (large trees, hedges, etc.) as reference for new landscape designs;
- ❑ Existing and proposed grades at top and bottom of retaining walls; and
- ❑ Outline of proposed buildings plotted on the survey plan with finished and natural grades shown at the building corners.

ARCHITECTURAL PLAN REQUIRMENTS

FOR BUILDING PERMIT SUBMISSION

The applicant must submit 2 complete sets of architectural plans as part of the building permit application. Incomplete submissions or those with insufficient detail will not be accepted.

Note: Additions, alterations and accessory buildings may require less detail and information. However, all pertinent information to the construction of such will be required on the BP plans.

Building Permit Applications must comply with and reference the current BC Building Code. Include each of the following items and *check each box for completion of the item*.

1. Survey (1/8" = 1'-0")

- ☐ 2 sealed originals are required

2. Site Plan (1/8" = 1'-0")

- ☐ Designer's name, address and contact information
- ☐ North arrow, civic address, legal description, streets and lanes
- ☐ Covenants, easements and rights-of-way
- ☐ Building Code reference
- ☐ Zoning summary and floor areas calculations
- ☐ Proposed building and accessory building outline. Outermost walls, including the basements or upper floor overhangs, are to be included
- ☐ Existing and finished grade elevations at each building corner
- ☐ Dimension setbacks perpendicular from all property lines to the building(s)
- ☐ Proposed driveway location, access width, slope and area
- ☐ All cantilevers and overhangs (including roof overhangs) are to be shown and dimensioned
- ☐ All retaining walls are to be shown on the site plan specifying top and bottom elevations
- ☐ Dimension the setbacks from the property lines and adjacent retaining walls

3. Floor Plans (1/4" = 1'-0")

- ☐ Overall building depths and widths of all buildings
- ☐ Fully dimensioned, room use and sizes
- ☐ Windows, doors and skylights including the sizes and swings
- ☐ Plumbing fixtures, appliances and fireplaces
- ☐ Type of heating system
- ☐ Location of smoke alarm and carbon monoxide detectors

Continued……

4. Elevations (1/4”=1’-0”)

- ☐ All four elevations for house and accessory building
- ☐ Show elevations of all finished floors, top plates, parapet walls and roof peaks
- ☐ Specify the existing and finished grades at building corners
- ☐ Show spatial separation calculations: limiting distance, exposed building face, allowable unprotected and proposed openings
- ☐ Specify roof slopes

5. Cross Sections (1/4” = 1’-0”)

- ☐ Floor to ceiling dimensions including crawl and roof spaces
- ☐ Label all roof, floor, wall and foundation assemblies
  *(**Note**: Assemblies must show the materials that are specific to the project applied for and materials must be consistent with the details provided by the Bldg Envelope professional)*
- ☐ Elevations at each finished floor, uppermost ceiling and roof peak
- ☐ Cross section through stairs to floor above indicating headroom clearance above stairways
- ☐ Provide roof and deck venting information where applicable
- ☐ Provide a detail for roof decks over habitable spaces
- ☐ Dimension and label any crawl spaces

6. Details (appropriate scale)

- ☐ General notes
- ☐ Exterior/ interior guards and handrail details and dimensions
- ☐ Straight stairs – Stair rise, run, treads
- ☐ Curved stairs – minimum/ maximum and average runs and radius

SEISMIC DESIGN FOR PART 9 BUILDINGS SINGLE AND TWO FAMILY DWELLINGS

LATERAL BRACING REQUIREMENTS

The purpose of this bulletin is to inform owners, architects, designers, and contractors of the structural design requirements to resist lateral loads due to wind and earthquake occurrences for Part 9 buildings (single and two family dwellings). The lateral bracing requirements are illustrated in the free 28-page resource, *Illustrated Guide for Seismic Design of Houses* located at www.hpo.bc.ca/seismic-design-guide.

Effective immediately, plans forming part of building permit application must clearly show how the proposed building complies with the new requirements for lateral bracing. The design criteria for the braced wall bands and panels must be shown on the structural engineered set of the building permit plans. Applications will not be accepted if the following information is not shown on the plans.

Information on Structural Drawings

The 2018 BCBC requires all Part 9 buildings, including single and two family dwellings, to be designed to resist lateral loads due to wind and earthquake occurrence using ONE of the following methods:

A. **Part 9** Article 9.23.13.4. to 9.23.13.7. of the 2018 BC Building Code,
B. **Part 4** of the BC Building Code, *or*
C. Good engineering practice such as that provided in CWC 2009, "Engineering Guide for Wood Frame Construction" (**Part B** *or* **Part C**).

> Mixing and matching of these three methods is not acceptable.
>
> Structural Design using Part 4 of the BCBC or Part B or C of the CWC must be done by a Registered Professional Engineer.

To demonstrate code compliance the structural engineer must declare which option is being used for the design of the lateral loads using the following statement (if CWC 2009 is used, state whether Part B or Part C is being used):

> *"I, _____, have reviewed and confirmed that the lateral resistance of this building for wind and earthquake is designed in accordance with _____."*

General Structural Notes must specify the requirements of the 2018 BCBC applicable to the design, including but not limited to:

- The seismic region where the proposed construction is located (see Table C-2 in Division B Appendix C of the BCBC). For the University Endowment Lands use:

  Vancouver (Granville and 41st Ave).
- Whether it is light construction or heavy construction (buildings with tile roofs or concrete topping on floors) (see 9.23.13.2. and 9.23.13.3. of the BCBC).
- Climatic loads, such as snow (S), rain (Sr), wind (q) and seismic (Sa).
- Live loads of all floors.
- Dead loads of exterior walls, floors and roofs. Indicate if roof tile, concrete topping and/or stone cladding are used.
- Specification and standards for sheathing, lumber, fasteners, steel connectors, hold-downs, anchor bolts, etc.
- Assumed soil bearing capacity.

If Part 9 of the 2018 BCBC or Part C of CWC 2009 is used to design for lateral loads, then the following information must be shown of the structural drawings:

- Braced wall panels must be hatched and labelled BW.
- Details of braced wall panels including type of sheathing, fastener size and spacing of nails.
- Percentage (%) of braced wall panels in each braced wall band at each floor level.
- Anchorage of braced wall panels including material, size, spacing (braced wall bands must be aligned with bands on the storeys below and above and be a full storey in height).

Note any exceptions or trade-offs used in the design complete with dimensions. See 9.23.13.5.(3), 9.23.13.5.(4), 9.23.13.5.(5) and 9.23.13.7. for options.

If Part 4 of 2018 BCBC & Part B of CWC 2009 is used to design for lateral loads, then the following information must be shown of the structural drawings:

- Site Classification.
- Acceleration-based site coefficient (Fa).
- Rd and Ro.
- Building Base Shear.
- Total factored shearwall shear force in each direction at each storey.
- Strength of shearwall and total length of shearwalls required in each direction at each storey.
- All shearwalls (those used to resist lateral forces and may include exterior walls) must be hatched and labelled “SW”.
- All drag struts must be shown as dotted lines.
- Shearwall details including framing, type of sheathing, nailing size and spacing, blocking.
- Details of all elements participating in the load path including drag struts, hold-downs, straps, etc. to show how forces are transferred from roof to foundation.

Quality of Structural Drawings
Structural drawings must comply with the following requirements:

- All structural notations must be legible and of good drafting quality. Hand written notations will not be accepted.
- Structural drawings may need to be separate from the architectural drawings if the combined structural and architectural drawings are not legible.
- All notes and details must be on the structural drawings. Notes and details on separate sheets (of different sizes) attached to the structural drawings will not be accepted.
- If revisions are needed, two complete sets of revised drawings (signed, sealed and dated) by the structural engineer are required. At the discretion of the plan checkers, minor revisions may be done by hand by the structural engineer with their initials on the original submitted drawings. “Cut and paste” sheets will not be accepted.

Good Engineering Practice
The Building Department may request the professional engineers to submit Structural Design Calculations and/or confirmation of independent review as outlined in the *Quality Management Guidelines* published by Association of Professional Engineers and Geoscientists of BC (APEGBC) to ensure the design is in compliance with the current BC Building Code.

The APEGBC requires all professional engineers to design in accordance with good engineering practice. In terms of Part 9 buildings, including single family dwellings, this means using the latest CWC as a minimum. Further information can be obtained from the *Guidelines for Professional Structural Engineering Services for Part 9 Buildings in British Columbia* published by APEGBC.

Field Reviews by the Structural Engineer of Record
The Structural Engineer of Record must submit a field memo at the sheathing inspection, the framing inspection and the insulation inspection (if applicable) to confirm that the construction, including braced walls and shearwalls, at that stage are constructed according to the drawings submitted for building permit and are in general compliance with the BC Building Code.

Further Information
The *Illustrated Guide for Seismic Design for Houses* provides explanatory material, colour illustrations and checklists for designers and other professionals to assist in applying the requirements to their design and plans.

Renovations and Additions
All renovations and additions should be designed to the current 2018 BCBC, including the lateral resistant to wind and earthquake loads. When an existing home is going through a major renovation or addition, a Registered Professional Engineer should be engaged to confirm that the addition or renovation does not reduce the level of structural performance of the existing structure below the level that existed prior to the level of the addition or renovation. (Refer to the “Guidelines of Professional Structural Engineering Services for part 9 buildings in British Columbia” published by APEGBC.)

This information is provided for convenience only and is not in substitution of applicable UEL Bylaws or Provincial or Federal Codes or laws. You must satisfy yourself that any existing or proposed construction or other works comply with such bylaws, codes and other laws.

ON-SITE STORMWATER MANAGEMENT POLICY

SINGLE FAMILY LOTS

Purpose:

The purpose of this bulletin is to inform owners, builders and professional engineers of the University Endowment Lands (UEL) requirements pertaining to the UEL Stormwater Management policy.

Background:

The UEL stormwater management policy applies to all single family lots at the time of redevelopment, including renovations and additions. A Registered Professional Engineer must be retained to design and assure that the installation of on-site stormwater management systems in accordance with this policy. Plans and supporting documents of the design shall be submitted to the UEL for approval at the Building Permit application stage.

Application:

The following stormwater release rate applies to individual lots:

A Maximum Stormwater release rate of 3 L/s in a 1:5 year peak storm event.

In all cases the UEL will provide no greater than one 4 inch storm service connection to the property.

A number of methods may be used to comply with the above requirements, including infiltration and detention. Refer to the Metro Vancouver Stormwater Source Control Design Guidelines 2005 for recommended methods and practices at:

http://waterbucket.ca/rm/2011/06/21/metro-vancouver-develops-design-guidelines-to-complement-water-balance-model/

Single Family Dwelling Erosion and Sediment Control (ESC) Plan: Guideline for Applicants

An erosion and sediment control (ESC) plan is designed to prevent deleterious materials from entering the public storm sewer during construction. The ESC plan (minimum size 11”x17”) must be created by a Qualified Professional and must adhere to generally accepted best management practices. The ESC plan must be submitted to the UEL for approval in advance of any work, along with a commitment letter(s). The ESC plan may include some or all of the following:

1. **Installation of sediment controls specific to the site**
   - Prior to any soil disturbance, protective materials and methods must be in place to prevent anything but clear rainwater runoff entering the stormwater system.
   - Protect vegetation and trees. Clear only the areas necessary (leave vegetation in areas that don’t require disturbance). Use vegetated buffers where possible.
   - Direct surface drainage around work areas (keep clean water clean).
   - Create temporary sediment-detention facilities on-site. Pass water originating on-site through a sediment pond, sediment trap, filter, or tank before allowing to enter drain inlets as clear water. Note the method on the ESC plan.
2. **Installation of dewatering system**
   - Control dewatering. Any water pumped or drained from the site must be treated for sediment or contamination. Only clear water should enter drain inlets. Note the dewatering method on the ESC plan.
3. **Protection of Drain Inlets**
   - Protect all storm drain inlets from sediment with catch basin filters.
   - Inspect drains, catch basins and other stormwater components to maintain good working order. Ensure filters are kept in position and free from debris, replace when necessary.
4. **Proposed Construction Access (e.g. for vehicles and equipment)**
   - Minimize vehicle access points. Access is generally restricted to existing/proposed driveway.

- Stabilize vehicle entrance access points with crushed rock to minimize mud and dirt tracked onto the paved surfaces. Avoid muddy ramps that track mud onto streets and into storm drains.
- Clean road surfaces when muddy or dirty and at the end of the workday. Shovel and sweep. Do not flush the road with water to remove debris.

5. **Stockpile Protection**
   - Cover stockpiles with plastic to minimize sediment run off and material erosion.
6. **Soil Stabilization**
   - Soil stabilization includes temporary seeding, mulching, geotextiles and sod stabilization. Identify potential areas of erosion and proposed protection methods on the ESC plan.
7. **Slope Protection**
   - Design and construct cut slopes to minimize erosion.
   - Divert runoff around slopes and disturbed area with pipe drains.
8. **ESC Maintenance**
   - Ensure that all control measures are maintained in good working order during site construction.
   - All ESC best management practices should be regularly inspected and maintained on site to ensure continued performance of their intended function.
   - UEL may conduct random inspections and/or water sampling to ensure ESC maintenance.

MECHANICAL UNITS
LOCATION AND NOISE LEVELS

The purpose of this bulletin is to define the allowable location and noise levels of mechanical units such as air conditioning units, exhaust fans, heat pumps, generators, etc.

The noise emitted from these units often violates the noise bylaw and staff are receiving an increasing number of complaints from residents concerning this noise.

The *Land Use, Building and Community Administration Bylaw* (the Bylaw) defines a structure as "any residence, building, fence, machinery, equipment, ornaments, or other man-made or manufactured items".

As mechanical units fall under this definition, there is no provision in the Bylaw for these units to be permitted in required yards unless they are enclosed in an accessory building in compliance with the Bylaw.

Please note that **in all cases it is the property owner's responsibility** to ensure that the noise emitted from the mechanical unit complies with the Noise Control Bylaw, Schedule 6 of the Bylaw, and does not unreasonably disturb "the quiet, peace, rest, enjoyment, comfort or convenience of persons in the neighbourhood or vicinity".

If a mechanical unit is found to be unreasonably disturbing a neighbouring resident, the property owner must then take the necessary steps to bring the noise level into compliance with the Bylaw.

In effort to avoid complaints after these units are installed, the University Endowment Lands (UEL) Building Department is asking architects, designers and building contractors to address this issue at the early stages of design and construction as it can be difficult to remedy this problem after these units are in place.

HEATING SYSTEM REQUIREMENTS

The purpose of this bulletin is to inform building permit applicants, building and heating contractors of the certification requirements for heating systems when applying for a building permit for single family dwellings, duplexes, row houses and townhouses.

The design, installation, certification and required documentation for heating systems must be in accordance with and meet the criteria detailed in the table below. All plans and documents are to be sealed by the appropriate individuals and submitted for review prior to commencement of work.

System Type	Design Criteria	Required Documents	Required Certification ∗
Hydronic (Hot Water)	• CSA B214-01 Installation Code for hydronic heating system • Good engineering practices	• Room by room heat loss summary • Radiant panel layout, baseboard lengths *(where applicable)* • Boiler room layout	• TECA Certified Designer or • Registered Professional *(supply Letters of Assurance)*
Forced Air	• HRAI Digest • Quality First Forced Air Guidelines • Good engineering practices	• Room by room heat loss summary • Duct system design layout	• TECA Certified Designer or • HRAI Certified Designer or • Registered Professional *(supply Letters of Assurance)*
Geothermal (Ground Source)	• Good engineering practices	• Room by room heat loss summary • Piping layout, exterior and interior *(where applicable)*	• Registered Professional *(supply Letters of Assurance)*

∗ **Upon completion of installation,** submit a copy of the University Endowment Lands (UEL) Heating System Certification of Installation form.

SPRAY-IN-PLACE THERMAL INSULATION

The purpose of this bulletin is to inform owners, design professionals and contractors of the UEL requirements pertaining to the use of spray-in-place thermal insulation in wood-frame construction, namely in single family dwellings.

There are many products of this nature available in the marketplace, ranging from low density to medium density foam, each with a variety of chemical compositions and characteristics. The following requirements apply to the use of these materials in the UEL.

Spray Applied Rigid Polyurethane Foam
(*Medium density in conformance with CAN/ULC-S705.1)*

This type (as referenced in Section 9.25.2.2 of the 2018 BC Building Code) is permitted outright. Submit the following supporting documentation:

- Proof that the product is in conformance with the CAN-ULC standard.
- Copy of the Licensed Installer's certification.

Medium Density Foam Products
(Other than those in conformance with CAN/ULC-S705.1)

Products of this type that have been tested by the Canadian Construction Materials Centre (CCMC) will be accepted. Submit the following supporting documentation:

- The CCMC evaluation report confirming that the thermal resistance performance is equivalent to that required in Article 9.25.2.1 of the BC Building Code.
- Copy of the Licensed Installer's certification.

Other Spray-in-Place Products
Other spray-in-place products may be accepted on the basis of the Alternative Solution provisions of the BC Building Code (BCBC). Submissions for alternative solutions must provide the following:

- Documentation of Alternative Solutions in accordance with Division C – Part 2 –Subsection 2.3.1 of the 2018 BC Building Code.
- Letters of Assurance (BCBC) from a BC Registered Professional.
- Copy of the Licensed Installer's certification.

The installation of spray-in-place foam insulation must also comply with other BC Building Code requirements pertaining to wall and roof construction unless otherwise approved as an Alternative Solution (i.e. vapour barrier and venting).

The information of the specific type of insulation to be used must be on the building permit plans.

Note: *All required documentation must be submitted to the UEL Building Department prior to the installation of the insulation/vapour barrier inspection.*

DRIVEWAYS ON PUBLIC PROPERTY
FOR SINGLE FAMILY DWELLING UNITS

The purpose of this policy is to define the location, design and number of driveway entrances permitted in the Single Family District within the University Endowment Lands (UEL).

The UEL frequently receives requests for new driveway entrances across public property. It is the intent of this policy to ensure that, as the community redevelops, the existing streetscapes across public property are maintained.

New driveway entrances within the UEL shall be constructed to maintain consistency with the existing entrances in the area. The original driveway entrances were constructed and spaced with the intent of maintaining as much green space as possible.

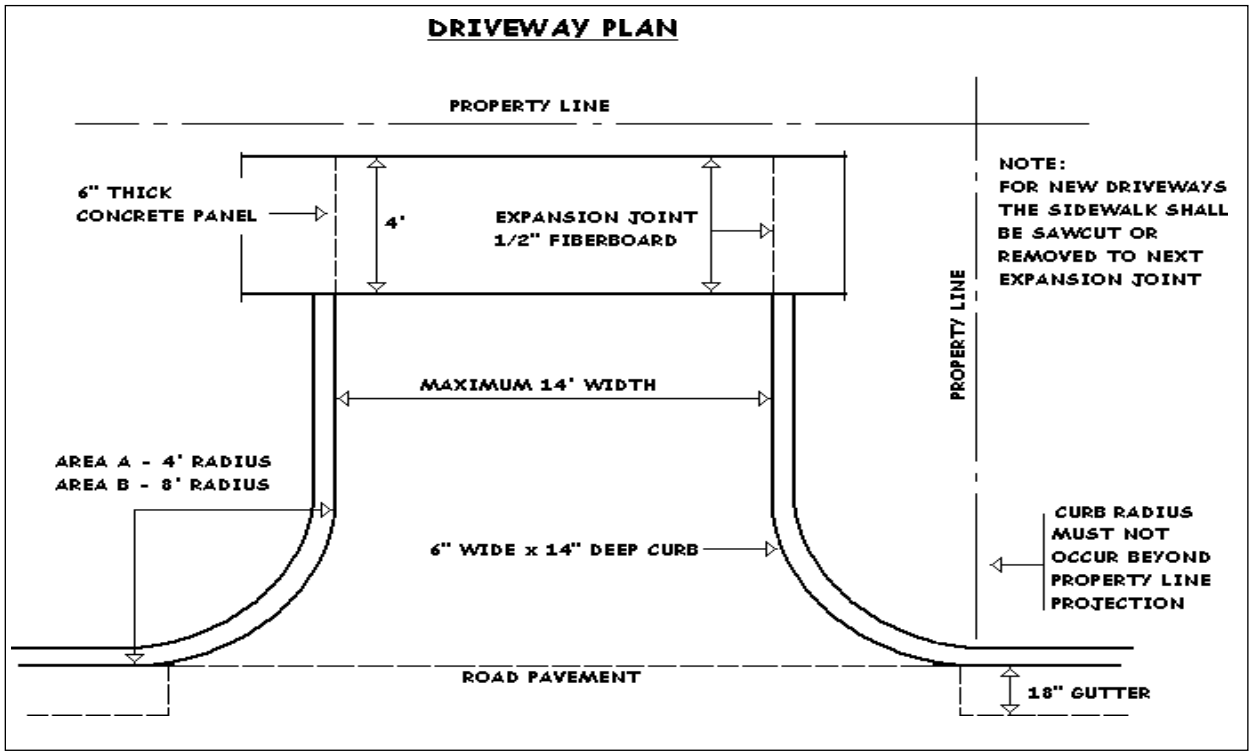
The following requirements must be met before approval of any new driveway entrances across public property:

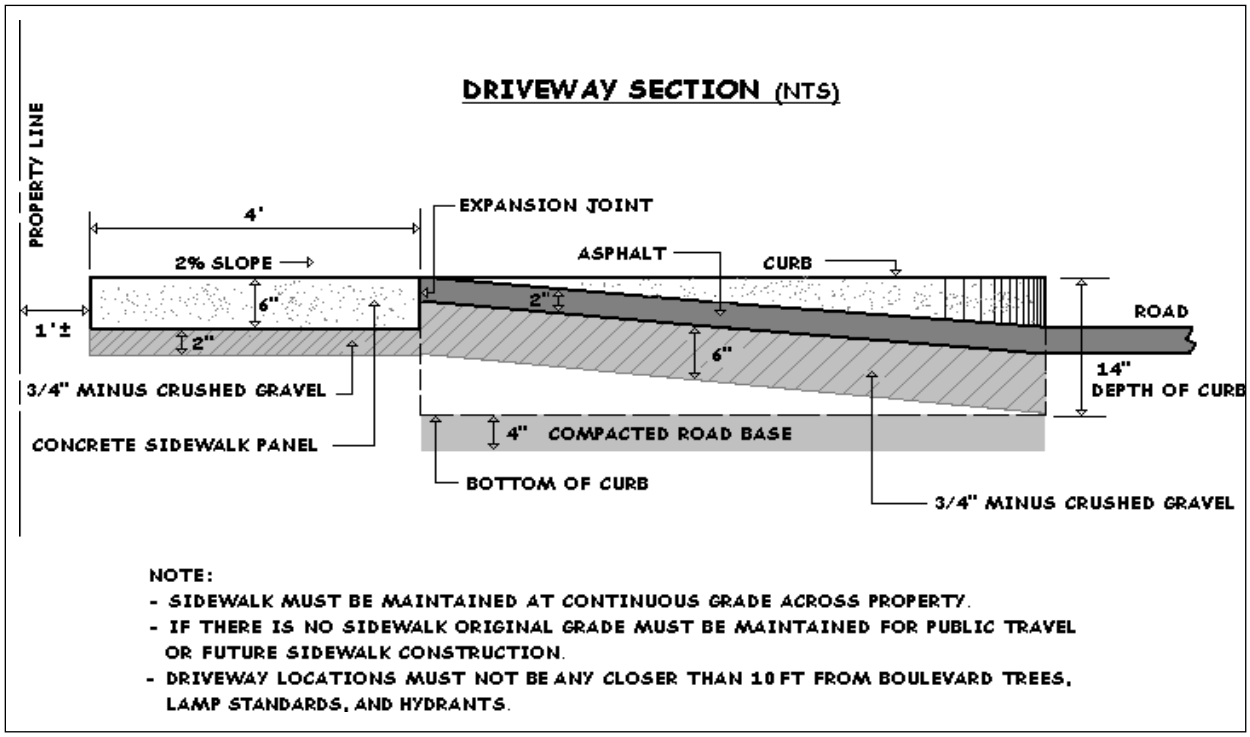
1. New driveway entrances shall be constructed at right angles to the street and the curb radius must be consistent with others in the area. No portion of the curb radius shall occur beyond the projected property lines of adjacent sites. Refer to the Driveways on Public Property policy for specifications.
2. The maximum width of a driveway entrance is 14 feet.
3. Sidewalk grades and grades along the property line must be maintained and any adjustments to the driveway grade must take place on private property.
4. Driveway entrance material shall be blacktop or removable pavers.
5. Properties with a frontage of less than 125 feet are permitted only one driveway entrance. No more than two driveway entrances are permitted for any property within the UEL Single Family District.
6. New driveways in Area C must be accessed from the lanes.
7. Curbs must have a trowelled finish and sidewalks must have a broom finish.
8. Trees, lamp standards and fire hydrants will not be moved to accommodate new driveway entrances.
9. Where lane access is available driveways will not be permitted to access the front street.
10. The Superintendent of Public Works will determine if the construction of the driveway shall be carried out by UEL staff or a private contractor. A private contractor must request a form inspection prior to placement of concrete or asphalt.

Where a driveway provides access to Chancellor Boulevard or University Boulevard, exceptions may be made to the above requirements to permit safe entrance and egress. In such cases, approval from the University Endowment Lands and the Ministry of Transportation and Highways must be granted.

Specification drawings for driveway entrances form part of this policy.

DRIVEWAYS ON PUBLIC PROPERTY SPECIFICATIONS
FOR SINGLE FAMILY DWELLING UNITS





SITE RULES SIGN

The "SITE RULES" sign shown below must be posted on site before a Building Permit can be issued. The sign must be black lettering on a white background and durable enough to last the duration of the project.

4 Ft

TEXT SIZE

SITE RULES — 2½"

UNIVERSITY ENDOWMENT LANDS — 1½"

PROJECT ADDRESS:_____

HOURS OF WORK — 1"

Monday to Friday: 7:30 A.M. - 7:00 P.M.
Saturday: 9:00 A.M. - 4:00 P.M.
Sundays and Statutory Holidays – No Work

SITE CLEAN UP

Site must be kept clean at all times. Deposit paper, food scraps, cans, construction waste and other garbage in proper receptacles. Municipal street, sidewalk and boulevards must be kept clean at all times.

RADIOS

Radio volume must be kept low enough so that it is not annoying to the surrounding community.

MATERIAL DELIVERY

Material shall be delivered during regular working hours.

MATERIAL HOARDING

Construction material shall be kept on site and not stored on the sidewalk, boulevard or street.

PARKING

Parking must comply with UEL parking regulations.
Do not block or crowd driveways.

In case of problems, please contact the site superintendent.

NAME: _____
PHONE: _____

4 Ft

DEVELOPMENT/ BUILDING PERMIT APPROVALS AND PROPERTIES FOR SALE

This policy is being introduced to address the practice of marketing for sale, properties within the single family zones of the UEL, that are in the process of the development and/or building permit approval process.

Processing of development and building permits is a complex and time consuming procedure that takes up a large amount of staff time and resources. The practice of marketing properties for sale during the DP or BP approval process creates a great deal of uncertainty as to whether the proposed development will be accepted by a new owner. Therefore, the following policy is in effect to address this matter:

Processing of development and building permit applications for single family homes that are listed for sale, will be suspended until such time as the property has been transferred or removed from the market.

In the case of a property transfer, in order to reactivate the file, the following documents must be submitted to the University Endowment Lands (UEL) Administration Office:

- Proof of ownership; provide a copy of a Certificate of Title from the Land Title and Survey Authority (LTSA), and photo identification of the new owner.

- From the new owner, a request in writing to transfer the DP or BP application into their name(s). The request shall explicitly acknowledge that the new owner accepts the DP or BP application as it is and clearly state that no amendments will be forthcoming for the development or building permit application under review.

Important Notes:

- *Any changes to the proposed development will result in the cancellation of the application.*

- *A Development Permit issued shall be void 6 months after the date of issuance, unless the development authorized by the permit has meanwhile been commenced, or the Development Permit has been extended, or a building permit for the development has been issued and is unexpired.*

University Endowment Lands
Administration