

# DISTRICT OF MISSION



INSPECTION SERVICES DEPARTMENT

## INSPECTION SERVICES DEPARTMENT

### GUIDE TO BUILDING PERMIT APPLICATIONS

#### *MULTI-FAMILY, COMMERCIAL, INDUSTRIAL & INSTITUTIONAL*

This guide has been produced to assist potential applicants only and may not depict every situation.

It is advisable to discuss proposals with Municipal staff prior to preparing detailed working plans or making application for a building permit. They will assist in providing information regarding Zoning Bylaw criteria, acceptable location of access(es), the location, depth and size of existing service connections to the property, required services (including off site servicing), applicable development cost charges, floodproofing requirements, etc.

#### MUNICIPAL ENGINEERING DEPARTMENT

- a) Local Government Act, Section 938(6) may require as a condition of the issuance of a building permit that the owner of the land being developed provide certain off-site works and services adjacent to the property. It is advisable to ascertain with the Department if this provision, and to what extent, may be applicable.
- b) Access(es) - will advise as to acceptable locations.
- c) Sanitary, Storm and Water Services - will assist in giving the location, depth and size of the existing services, including the cost of connecting. It will also advise as to the cost and acceptability of proposed new connections.
- d) May be able to advise as to other government agency approvals required (i.e. culverting water courses, etc.).

#### COMMUNITY DEVELOPMENT (PLANNING) DEPARTMENT

- a) Zoning Bylaw criteria will assist in providing the zoning designation of the property and floodproofing requirements, if applicable.
- b) Whether or not the property is within a mandatory development permit area.

**FIRE/RESCUE SERVICE (33330 7TH AVENUE, 820-3793 OR 820-3794)**

- a) The location and details pertaining to firefighting provisions, including access routes, fire hydrants and fire department connections should be reviewed with the Fire/Rescue Service for acceptability prior to finalizing working drawings.
- b) The Fire/Rescue Service also reviews and administers the provisions of the Building Code pertaining to fire detection, suppression and alarm systems, including exit and emergency lighting, on behalf of the Inspection Services Department.

**INSPECTION SERVICES DEPARTMENT**

- a) Development Cost Charges Bylaws

These bylaws provide schedules of development cost charges to be imposed within certain specified areas of the municipality to assist in paying the capital cost of providing, altering or expanding sewage, water, drainage and highway facilities and public open space, or any of them, in order to service directly or indirectly a development for which the charges are imposed. These charges are imposed at the time of subdivision approval, or prior to the issuance of the building permit.

- b) Letters Covering Design or Inspection

These letters may be required depending on the size or scope of the project. Acceptable form letters will be provided by the Department and are to be submitted prior to the issuance of a permit.

- c) Building Code Analysis

A detailed Building Code Analysis prepared by the building's designer must be provided at the time of application (refer to the attached example).

- d) Required Plans

Three (3) complete sets of scale drawings must be submitted. Drawings should be to scale of sufficient size to clearly indicate all dimensions and pertinent information.

**SITE PLANS**

- a) Architectural fully dimensioned site plan showing:
  - i. the civic address and full legal description of the property.
  - ii. the location and dimensions of required road dedications, existing or required rights-of-ways or easements.
  - iii. the name and extent of streets and lanes adjoining the property, including the location of fire hydrants and the traveled portion of the street scaled from the property line to the gutter line or back of the sidewalk, and where neither exist, from the edge of the pavement.
  - iv. the location and width at existing or proposed access(es) to the property, including locations of any services, (ditches, fire hydrants, kiosks, hydro and telecommunication poles, etc.) that may be affected by the access(es).
  - v. the name and location of watercourses on or adjoining the property.
  - vi. the location of existing and proposed buildings by dimension from property lines and where a watercourse exists, from the natural boundary of the watercourse.
  - vii. existing and finished ground levels, including finished floor elevations.
  - viii. the size, location and number of on-site parking and loading spaces.
  - ix. fire-fighting provisions, the location of on-site fire hydrants and fire department connections and the dimensions of access routes, including their turning radius.

Zoning Bylaw Compliance Calculations

Site plans must include the following information:

Zoning:	_____	Off-Street Parking (Sec. 106)
Lot Area:	_____	Required _____ Actual _____
Floor Area:	_____	Loading
Lot Coverage:	_____	Off-Street Loading (Sec. 107)
Density:	_____	Required Size _____
Recreation Space:	_____	Actual _____

b) Site Servicing and Drainage

Plans are to be prepared by a Professional Engineer, unless authorized by the Inspection Services Department. The plans shall show:

- i. the location and dimensions of required road dedications, existing or required rights-of-ways or private easements.
- ii. the name of the streets and lanes adjoining the property and the extent of the traveled portion scaled from the property line to the gutter line or back of the sidewalk, and where neither exist from the edge of the pavement.
- iii. the location of watercourses or ditches on or adjacent to the property.

- iv. the location and width of existing or proposed access(es) to the property, including the location of any services or improvements on the street that may be affected by the access such as fire hydrants or hydro poles.
- v. the location, size and depth (invert elevations) at existing or proposed service connections to the property. It is the responsibility of the owner (through his consultant) to make certain such service connections are of sufficient depth and of a capacity to service the property, including future development.
- vi. the location, size, depth (invert elevations) and grade of the on-site storm, and sanitary works, including all appurtenances.
- vii. the location and size of the on-site waterworks, including all appurtenances.
- viii. the location of access route for fire-fighting, driveways and parking areas, including details and specifications for the type of pavement, base material and curbs. (In accordance with Section 106.7 of Zoning Bylaw No. 1831-1989, curbs are required). Access routes must be designated to a H/20 loading standard.
- ix. a surface drainage plan containing sufficient information to **clearly** demonstrate the direction and collection of storm run-off and as to whether or not it may affect adjacent property, including streets or lanes. The plan must include the established **datum** at the ground floor of the building and the ground levels including the adjacent property(ies) and street(s).

## **OTHER**

Building plans to be in accordance to Section 2.3 of the B.C. Building Code, 1998, and the following:

- a) basement and foundation plans
- b) floor plans (indicate proposed use of each portion of the floor area)
- c) roof plans, unless all information pertinent to the roof is shown on other drawings
- d) exterior elevation of each face of the structure including finished grade level
- e) building cross sections and stair sections
- f) exterior wall sections from foundation through roof
- g) large scale details and sections where necessary
- h) structural plans with structural steel and reinforced concrete details as required
- i) shop drawing and specifications of all fabricated members included in the structural frame
- j) interior finish schedule
- k) door and window schedule
- l) details of sound separation, smoke control and fire protection. For fire protection, show the following and note specifications where necessary, if applicable:
  - i. division of the building by firewalls
  - ii. the building area
  - iii. the degree of fire separations of storeys, shafts and special rooms or areas, including the location and rating of closures in fire separations

- iv. the source of information for fire resistance ratings of elements of construction (to be indicated on large-scale sections) i.e. Supplement N.B.C. 1990 Gypsum Association Fire Resistance Design Manual, U.L.C. Manual, Wharnock Hersey, etc.
- v. the location of exits

Note: an addition or alteration to an existing building requires submission of floor plans showing existing and any new exits.

- m) schematic drawing of heating, plumbing, electrical and other mechanical trades. Sprinkler drawing if required. Fire alarm drawing if required. Stand pipe drawing if required

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## APPENDIX

To assist in processing your application, the designer(s) provide this department with a DETAILED CODE ANALYSIS of the building.

The following is an "EXAMPLE ONLY" of some of the sections of the Building Code this analysis should address. Please expand on this information to fully explain your proposal.

Address of project: \_\_\_\_\_

Architect or Engineer: \_\_\_\_\_ Tel. \_\_\_\_\_ Fax \_\_\_\_\_

Project Coordinator: \_\_\_\_\_ Tel. \_\_\_\_\_ Fax \_\_\_\_\_

1. USE AND OCCUPANCY (B.C. BUILDING CODE 1998)
 

Building Area:	Building Areas Separated by firewalls
Existing _____	_____
Addition or New _____	_____
Total _____	_____
2. OCCUPANCY CLASSIFICATION (SEC. 3.2.2.19 - 3.2.2.83)
 

No. of Streets: _____	No. of Storeys: _____
Sprinklers/Standpipes: _____	Area of Mezzanine: _____
Group: _____ Div: _____	Section: _____
Type of Construction: _____ (Combustible or Non-Combustible)	
3. REQUIRED FIRE SEPARATION OF AREAS (SEC. 3.1.8)
 

\_\_\_\_\_

\_\_\_\_\_
4. FIRE FIGHTING PROVISION (SEC.3.2.5)
 

Provide drawings showing compliance. i.e. access routes, streets, hydrant location, access panels, Fire/Rescue Service connection, etc.
5. SPATIAL SEPARATION (SEC.3.2.3)
 

Provide calculations indicating permitted openings, limiting distance, required wall rating, etc.
6. FIRE ALARM AND DETECTION SYSTEMS (SEC. 3.2.4)
 

\_\_\_\_\_
7. HIGH RISE REQUIREMENTS (SEC.3.2.6)
 

Provide details
8. INTERCONNECTED FLOOR REQUIREMENTS (SEC.3.2.8)
 

Provide details
9. EXIT REQUIREMENTS (SEC. 3.4)
 

Explanation of exiting from floor areas. i.e. number, travel distance, area served.
10. PLUMBING FACILITIES (SEC. 3.7) (Occupant Load 3.1.16)
 

Male _____	Female _____
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11. HANDICAPPED REQUIREMENTS (SEC. 3.8)
 

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NOTE: The more complete the Code Analysis, the quicker this department will be able to process your proposal.

## CODE ANALYSIS

### BUILDING AREA:

Compartment P - 3,423 m<sup>2</sup> (greater than 600m<sup>2</sup>)

### OCCUPANCY:

3.1.2.1 (1) Group F3 Parking Garage (Basement) and Group C

### OCCUPANCY CLASSIFICATION:

3.2.1.2 (1) Storage garage is considered a separate building if floor above basement and exterior walls are constructed as 2 hour fire separations.

3.2.1.5 (1) Basement parking garage shall be sprinklered.

3.2.2.53 & 3.2.2.29

(1) Group F3 - any height, any area, Group C any height any area

(2) Non combustible construction

(a) Floor assemblies - 2 hour fire separation

(b) Mezzanines - 1 hour fire resistance rating

(c) Roof assemblies - 1 hour fire resistance rating

(d) Load bearing walls, columns, and arches - fire resistance rating equivalent to supported assembly

### FIRE SEPARATIONS:

3.1.8.1 (4) Firewall - Non combustible with 2 hour fire resistance rating

(6) Firewall - May terminate over basement parking

(10) Firewall - Supported by structure with 2 hour fire resistance rating

3.3.1.1 (1) Between suites and adjacent rooms  $\frac{3}{4}$  hour fire separation

3.3.1.3 (3) (a) Public corridor - 1 hour fire separation

Public corridor -  $\frac{3}{4}$  hour fire separation where floor assembly does not exceed  $\frac{3}{4}$  hour

3.3.4.2 (3) Storage room not within suite - 1 hour fire separation and sprinklered

3.3.7.6 (11) Storage garage and other occupancies - 1  $\frac{1}{2}$  hour fire separation

3.4.4.1 (1) Exits -  $\frac{3}{4}$  hour fire separation and at least equal to floor assembly above

- 3.5.2.1 (2) (b) Service rooms - 1 hour fire separation
- 3.5.3.1 (1) Elevator shaft - basement - 1 ½ hour fire separation  
Elevator shaft - residential - ¾ hour fire separation  
Service shaft - basement - 1 hour fire separation  
Service shaft - residential - ¾ hour fire separation
- 3.5.2.6 Garbage rooms - 1 hour fire separation and sprinklered

**FIRE FIGHTING PROVISION:**

- 3.2.5 See Site Plan A 1.10  
See Electrical and Mechanical Drawings

**SPATIAL SEPARATION:**

Openings in basement are protected as per report by Rolf Jenson & Assoc.

Based on 1985 B.C. Building Code



## CODE ANALYSIS

### BUILDING AREA:

Compartment	A - 537.83 m <sup>2</sup> (less than 600m <sup>2</sup> )
	B - 565.14 m <sup>2</sup> (less than 600 m <sup>2</sup> )
	C - 352.85 m <sup>2</sup> (less than 600 m <sup>2</sup> )
	D - 557.25 m <sup>2</sup> (less than 600 m <sup>2</sup> )
	E - 538.94 m <sup>2</sup> ( less than 600 m <sup>2</sup> )

### OCCUPANCY:

2.1.2 (b) Group C - Residential - 3 storeys less than 600 m2

### OCCUPANCY CLASSIFICATION:

9.10.2.1	Group C residential
9.10.8.1	Group C up to 3 storeys floor assemblies - ¾ hour fire separation
9.10.8.30	Loadbearing walls, columns and arches - fire resistance rating equivalent to supported assembly

### FIRE SEPARATIONS:

9.10.9.18	Between suites and adjacent rooms - ¾ hour fire separation
9.10.9.21	Public corridor - ¾ hour fire separation
9.9.4.2	Exits ¾ hour fire separation

### FIRE FIGHTING PROVISION:

9.10.19	See site plan A 1.10 See electrical and mechanical drawings
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### SPATIAL SEPARATION:

9.10.14.1	Building is divided into compartments with a minimum ¾ hour fire separation. Minimum building setback is 6.4m (21'-0") Maximum compartment area does not exceed area which permits 90% openings
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**EXIT REQUIREMENTS:**

- 9.9.8.4                            2 exits provided from each floor area  
   30m (98') maximum travel distance to first exit
- 9.9.3.4                            1100 mm width of exit corridor  
   900 mm width of other exits

Based on 1985 B.C. Building Code

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