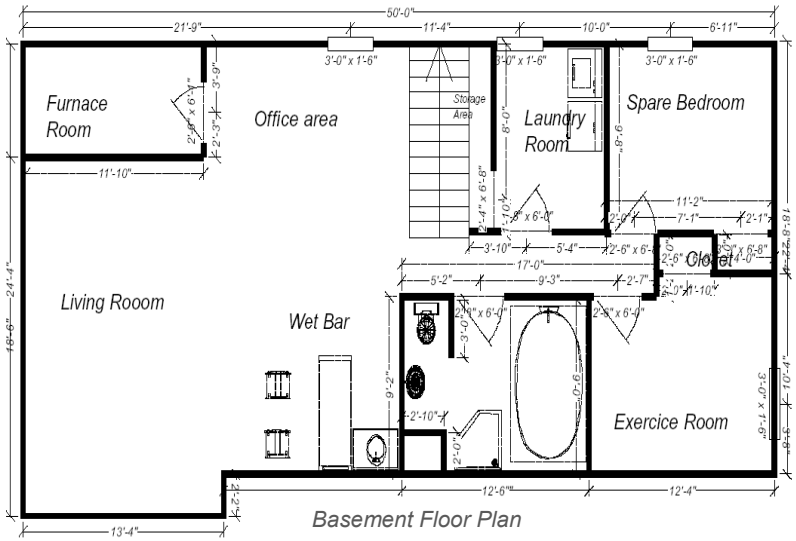
EASTERN
INTERLAKE
PLANNING DISTRICT

Serving the RM of Gimli, Municipality of Bifrost-Riverton, Town of Arborg and the Town of Winnipeg Beach

Renovations, Basement Development and Secondary Suites

Construction requirements for renovations, development of a basement in a residential dwelling and secondary suites.



February 2024

Introduction: When a renovation to a residence, or the development of a basement is undertaken, the work must meet the requirements of the current Manitoba Building, Plumbing and Electrical Codes.

A building permit is your assurance that the work will meet current code requirements, and therefore is a small investment in comparison to the cost of renovations or basement development.

Is a building permit required for renovations to the interior or exterior of a residential dwelling?

If the renovations include structural changes such as moving walls, installing larger windows, adding windows / doors, changing the roof, moving or adding plumbing fixtures etc., a building permit is required.

If the renovation work does not involve structural changes to the building, a permit may be required depending on the scope of the renovations. Contact the Eastern Interlake Planning District office for this information as it varies between municipalities.

Is a building permit required to develop a previously unfinished basement into a recreation room, family room, etc.?

Yes.

Note: If you are intending to make structural alterations to the basement, such as moving beams, teleposts or other structural components, it is recommended that you seek professional advice before proceeding with the drawings.

Is a building permit required for the development of a secondary suite?

Yes, a building permit is required to develop a secondary suite in a residential dwelling or on a residential property. The Manitoba Building Code (MBC) sets the standards for secondary suites. These standards include size limitations, fire and smoke separations, exiting requirements, use of common spaces, smoke and CO alarms, heating and ventilation requirements etc.

Secondary suites may be located in any story of the residential dwelling and may occupy more than one story. Secondary suites can be an addition to an existing residence or be designed into a new residential dwelling. The secondary suite can be a ground-level suite detached from a larger single-family home (Garden or Granny Flat), or a suite above a detached garage (Coach House or Laneway housing). The MBC requirements for secondary suites are outlined in the Secondary Suite section of this booklet.

Documentation required when applying for a Building Permit:

1. Completed Building Permit Application on Cloudpermit; link can be found on www.interlakeplanning.com
2. PDF of the complete set of drawings (blueprints) . Foundation must by designed and sealed by a structural Engineer.
3. Surveyor's Building Location Certificate (BLC) showing the location of the new residence and any/all other existing structures on the site, with all distances to property lines and between structures clearly marked.
4. Lot Grade Permit (if applicable) Please contact your municipality if a Lot Grade Permit is required.

Are plans required for a building permit for the development of an unfinished basement or a secondary suite?

Yes a floor plan layout (drawn to scale) shall include:

i) the use of all rooms;
ii) the location of all windows (including sizes);
iii) plumbing fixtures (existing and new); and
iv) furnace and other mechanical equipment.

In addition to the floor plan, detailed drawings for all structural alterations are required. Additions to a residence for a Secondary Suite or detached Garden Suite or Coach House (above or at grade) will require a complete set of plans.

How much does a building permit cost?

The permit fee depends on the extent of structural alterations and the number of plumbing fixtures. Contact the Eastern Interlake Planning District office for this information.

What are the requirements for bedroom windows in basements?

Purpose: Windows must furnish occupants with:

- natural light;
- provide an exit in an emergency from the bedroom area; and
- supply natural ventilation.

Ability to open: Each bedroom must have at least one outside window. This window must be openable from the inside without the use of tools or special knowledge (except where a door provides direct access to the exterior).

Unobstructed area when open: The window must provide an unobstructed opening with a minimum area of 0.35 sq. m. (3.77 sq. ft.) with no dimension less than 380 mm (15 in.).

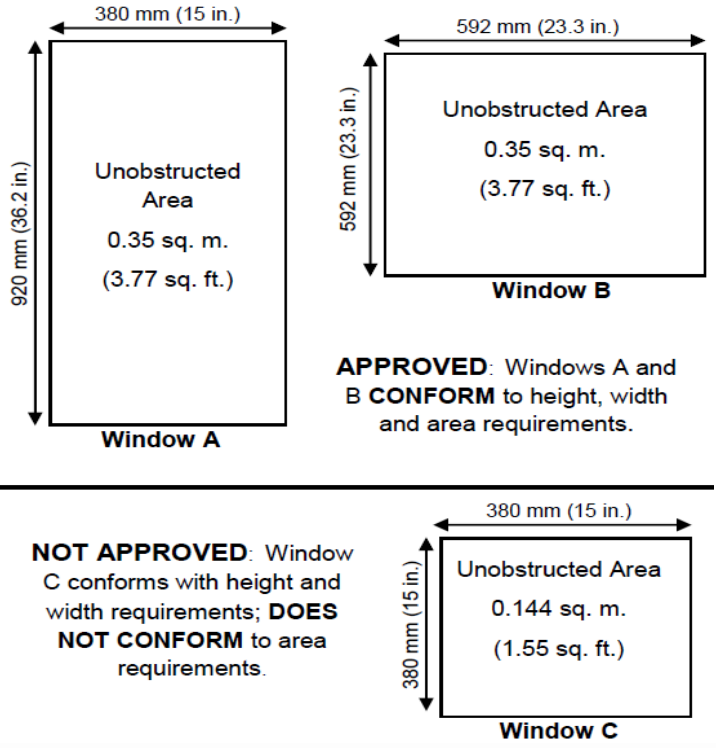
Note: Although the minimum dimensions required for height and width are 380 mm (15 in.), a window that is 380 mm by 380 mm (15 in. by 15 in.) would not comply with the minimum area requirements. See FIGURE 1.

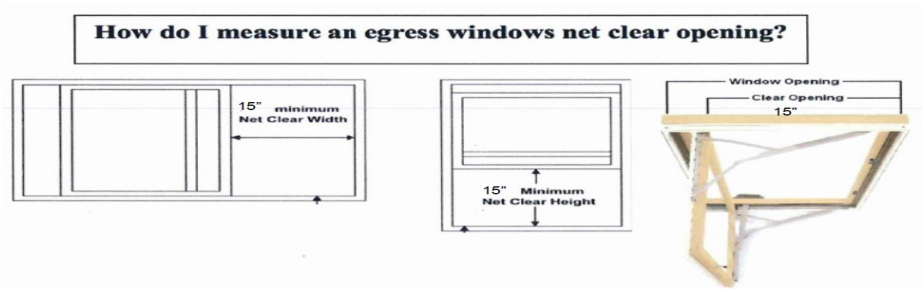
Window opening into a window-well: Where a window required for a bedroom opens into a window-well, a clearance of at least 550 mm (22 in.) must be provided in front of the window. Where the sash swings toward the window-well, the operation of the sash must not reduce the clearance in a manner that would restrict escape in an emergency.

What if my existing basement windows do not meet the above dimensions and area requirements for bedrooms?

Then a bedroom would not be permitted in the basement!

FIGURE 1 - Bedroom Window Area and Dimensions.





Are there requirements for ceiling heights?

Yes. The minimum heights are shown in TABLE 1.

The heights of rooms or spaces are measured from the finished floor to the ceiling surface.

What are the requirements for doors?

Required doors: A door must be provided at each entrance to a dwelling.

Doorway sizes: Doorway openings must be designed to accommodate not less than the door sizes shown in TABLE 2 for both swing type doors and folding doors.

TABLE 1 - Room Heights

Room or Space	Minimum Heights	Minimum Area Over Which Minimum Height Must Be Provided (1) (2)
Bedroom (other than master) or sleeping spaces	2.1m (6ft. 11in.)	Lesser of the area of the space or 3.5 sq. m. (38 sq ft.)
Unfinished basement including laundry area therein	2m (6ft. 7in.)	Area under beams in laundry areas and in any location that would normally be used for passage to laundry and storage areas.
Bathroom, water-closet room	2.1m (6ft. 11in.)	Lesser of the area of the space or 2.2 sq. m. (24 sq. ft.)
Passage, hall (3) and finished rooms not specifically mentioned above	2.1m (6ft. 11in.)	Area of the space

(1) Areas in rooms or spaces over which ceiling height is not less than the minimum specified in Table 1 must be contiguous with the entry or entries to those rooms or spaces.

(2) Area of the space must be measured at floor level.

(3) Hallways must have a width of at least 860 mm (34 in.)

TABLE 2 - Minimum Size of Doors

At Entrance to	Width	Height
Stairs to a floor level that contains a finished space	810 mm (32 in.)	1980 mm (6 ft. 6 in.)
Utility rooms	810 mm (32 in.)	1980 mm (6 ft. 6 in.)
Walk-in closet	610 mm (24 in.)	1980 mm (6 ft. 6 in.)
Bathroom or room containing a toilet *	610 mm (24 in.)	1980 mm (6 ft. 6 in.)
Rooms not mentioned above	760 mm (30 in.)	1980 mm (6 ft. 6 in.)

Note to TABLE 2: **A doorway to at least one bathroom in a dwelling must accommodate a door of not less than 760 mm (30 in.) wide. This means that if an existing bathroom is provided with a door of not less than 760 mm (30 in.) wide then the minimum door width in any other bathroom can be 600 mm (24 in.).*

What are the requirements for guards on stairs to basements?

Purpose: Guards are intended to act as barriers to prevent people from falling over the edge of stairs onto the floor below.

Required guards: When an interior stair has more than 2 risers, the sides of the stair and the landing or floor level around the stairwell must be enclosed by walls or be protected by guards.

Height of guards: Guards for stairs within dwellings must be not less than 900 mm (35 in.) in height measured vertically above a line drawn through the outside edges of stair nosings, and not less than 900 mm (35 in.) in height above landings. See FIGURE 2.

Openings in guards: Openings through a guard must be of a size as to prevent the passage of a spherical object having a diameter of 100 mm (4 in.) unless it can be shown that the location and size of openings that exceed this limit do not represent a hazard. See FIGURE 2.

Loads on Guards: Guards shall be constructed to resist the specified loads prescribed in Table 9.8.8.2. of the Manitoba Building Code.

What are the requirements for handrails on stairs to basements?

Purpose: Handrails are intended to provide people with support and guidance when climbing stairs.

Required Handrails: When a stair has more than 2 risers a handrail must be provided on:

1) At least one side of the stair if it is less than 1100 mm (43 in.) in width; and
2) On two sides of the stair if it is 1100 mm (43 in.) in width or greater.

Height of handrails: Handrails on stairs must be not less than 865 mm (34 in.) and not more than 965 mm (38 in.) in height, measured vertically from a line drawn through the outside edges of the stair nosing.

Note: In those cases where a stair requires both a guard and a handrail, a reasonable solution is to provide a guard which also acts as a handrail. See FIGURE 2

Handrail Clearance: A clearance of not less than 50 mm (2 in.) must be provided between each handrail and the wall to which it is fastened.

Handrail projection: Handrails and stair stringers must not project more than 100 mm (4 in.) into the required width of the stairway.

Design: Required handrails must be constructed so as to be continually graspable along their entire length with no obstruction on or above them to break a handhold, except when the handrail is interrupted by newels at changes in direction.

Attachment of handrails:

1) Handrails must be attached to wood studs, wood blocking, steel studs or masonry at points spaced not more than 1.2 m (4 ft.) apart with a 50 mm (2 in.) clearance to any surface behind.
2) Attachment to wood studs and blocking required in sentence 1) above must consist of not less than 2 wood screws at each point, penetrating not less than 32mm (1.25 in.) into solid wood. Handrails must be able to resist a concentrated load of 0.7 kN at any point.

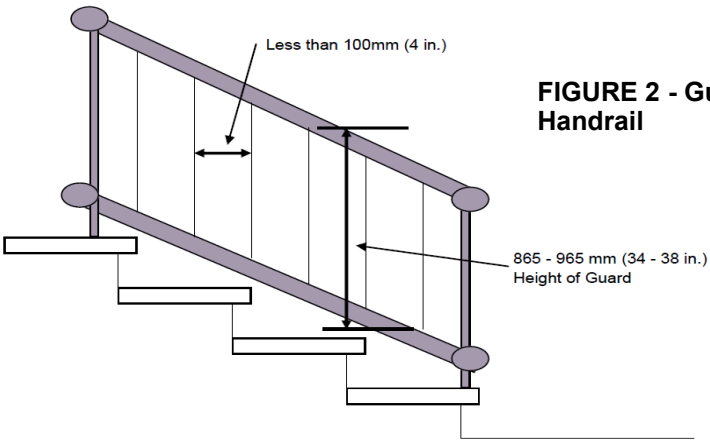


FIGURE 2 - Guard/ Handrail

What are the requirements for smoke alarms?

Purpose: A smoke alarm detects smoke from a fire and warns the occupants with an audible alarm.

Required Smoke Alarms: Smoke alarms conforming to CAN/ ULC-S531, "Smoke Alarms" must be installed in each dwelling.

Location of smoke alarms: Wired-in smoke alarms must be installed on or near the ceiling. Sufficient smoke alarms must be installed on each level, including basements and on any storey with sleeping rooms as well as in each sleeping room and in a location between the remainder of the storey and the sleeping rooms, eg. hallway.

Power supply: Smoke alarms must be permanently connected to an electrical circuit and must have no disconnect switch between the breaker or fuse and the smoke alarm.

Interconnection of Smoke Alarms: Where more than one smoke alarm is required in a dwelling, the smoke alarms must be wired so that the activation of one alarm will cause all alarms within the dwelling unit to sound. Wireless alarms may be permitted for alterations or renovations

What are the requirements for Carbon Monoxide (CO) Alarms?

Every dwelling unit that contains a fuel fired appliance or an attached garage requires carbon monoxide alarms conforming to CAN/CSA -6.19. Installed in each bedroom or outside within 5m of each bedroom door.

Solid Fuel Burning Appliance: A carbon monoxide alarm shall be mechanically fixed on or near the ceiling in each room containing a solid-fuel appliance.

Is there a recommended construction method for partition walls?

Yes! All non-load bearing partition walls in the basement should be constructed as "floating partitions". In this type of construction it is recommended that a small space of 19 mm (0.75 in.) or more be left at the top or the bottom of each partition wall. The reason for constructing partitions as 'floating" is that concrete basement floors can move upward when there is an increase in the moisture content of the soil. The small spaces at the top or bottom of the partition walls will help to absorb any upward movements of the concrete floor. This could prevent any walls constructed above the concrete floor from being pushed up against the floor joists of the main floor.

Are there minimum stud specifications for partition walls?

Yes. The minimum size and spacing of studs for a **non-load bearing** partition walls are 38 x 38 mm (2 x 2 in.) at 400 mm (16 in.) spacing. The maximum height permitted for this size of stud is 2.4 m (7 ft. 10 in.). It is recommended that a larger stud size be used in order to allow the installation of insulation or electrical wiring in the wall.

What are the purposes of insulation and vapour barriers?

Insulation and vapour barriers are the principal building components which manage the flow of heat, air and water vapour.

What are the minimum insulation requirements for exterior basement walls?

Foundation walls enclosing a heated space should be insulated to a minimum thermal resistance of R-22. The insulation is to be placed from the underside of the subfloor to the basement floor or 7ft. 10in. below the exterior ground level, whichever is less. The MBC has a minimum thermal resistance requirement of an effective minimum R -value of 15.9 as a wall assembly. Concrete basement walls formed with insulated concrete forms (ICF) meet the minimum code requirements for R value.

Can foamed plastics, used as an insulation on a basement wall, be left exposed?

No! The Building Code expressly denies the use of foamed plastics for interior finishes. This is because the material is considered to be a fire hazard when left exposed. This includes ICF walls and spray foam used to insulate joist header cavities. Where foamed plastic is used on interior walls it must be covered by any of the approved interior finishes listed in the Building Code, i.e. drywall, plastering, plywood, hardboard, particle board, wafer board, strand board or wall tile (plastic or ceramic).

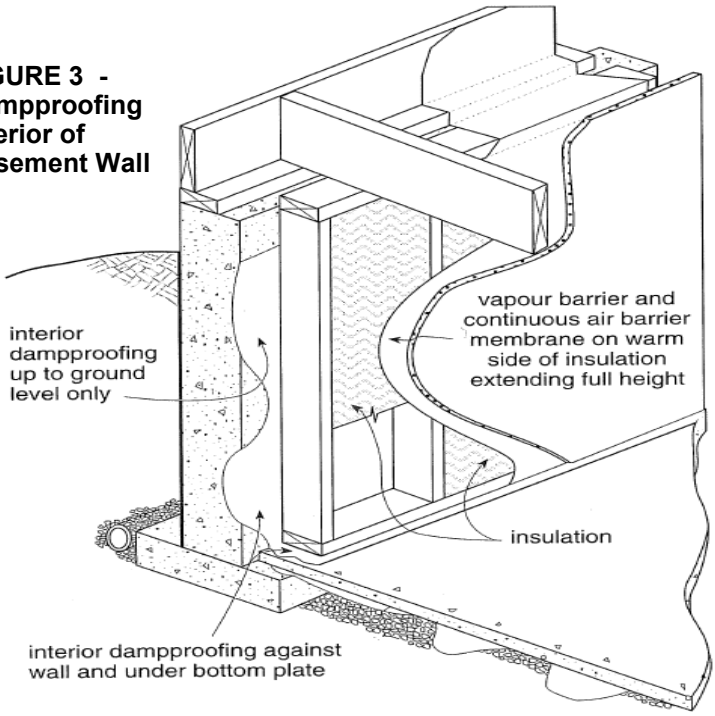
Caution: If your basement is a concrete block basement or an older reinforced concrete basement, then insulating it to minimum code requirements may subject it to increased frost pressure as heat loss to the soil through the basement wall is reduced. Clay backfill and poor drainage will increase the frost action and compound the problem. Possible solutions are:

- **Improve Drainage**: Excavate around the basement to replace drain pipe and drain stone and back fill with granular soil to within one foot of the finished ground line, top off with clay and landscape.
- **Frost Protection:** Excavate a trench around the basement and bury rigid foam insulation of a thickness and width that has been determined by a structural Engineer, cover with clay, and landscape.
- **Insulating** the interior basement walls to just below the exterior finished ground line to allow heat loss through the concrete wall to reduce the action of frost.

What are the requirements for the installation of vapour barriers?

A 6 mil polyethylene sheet vapour barrier conforming to Standard CAN/CGSB51.34-M must be installed on the warm side of insulation to protect the entire surface of exterior basement walls to the underside side of the sub-floor. Basements constructed with ICF blocks and rim joists that are insulated with foam products do not require vapour barrier. Rim joists insulated with foamed plastic products must be protected.

FIGURE 3 - Dampproofing Interior of Basement Wall



What are the requirements for exhaust ventilation for bathrooms?

Ventilation in bathrooms or any rooms containing a toilet must be provided by a mechanical exhaust system (fan) to the outdoors with a minimum capacity of 25 L/s (50 cfm).

NOTE: Natural ventilation (i.e. an openable window) is considered to be suitable only for summer use and tends not to be used in winter, thus resulting in unacceptable indoor air quality.

Does my house require ventilation?

Yes, all dwelling units require a source of fresh outside air to provide:

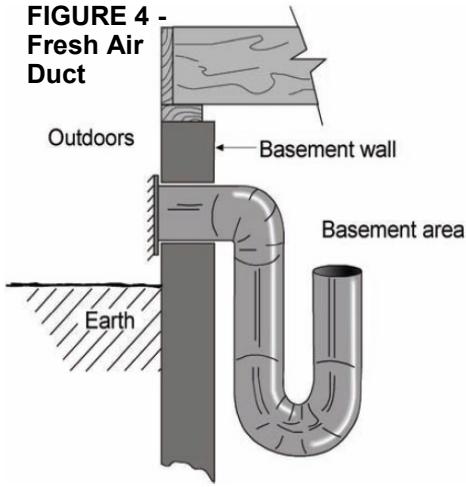
1) Replacement (makeup) air for all systems that exhaust air to the outdoors (such as bathroom exhaust fans and clothes dryers, etc.); and
2) Combustion and dilution air for fuel fired appliances (such as wood stoves, gas furnaces and hot water tanks, etc.).

This make up air can be provided by several methods depending on the heating and ventilation systems in the house. Some options are:

- Heat Recovery Ventilator (HRV);
- Air Supply Fan
- Fresh Air Supply Duct to the Return Air Duct of a Forced Air Furnace; or
- Fresh Air Insulated Duct Work, as shown in Figure 4.

Since many different factors affect ventilation conditions it is strongly recommended that a qualified heating/ ventilation contractor be contacted before making any changes to assist in the correct design and installation of the system.

FIGURE 4 - Fresh Air Duct



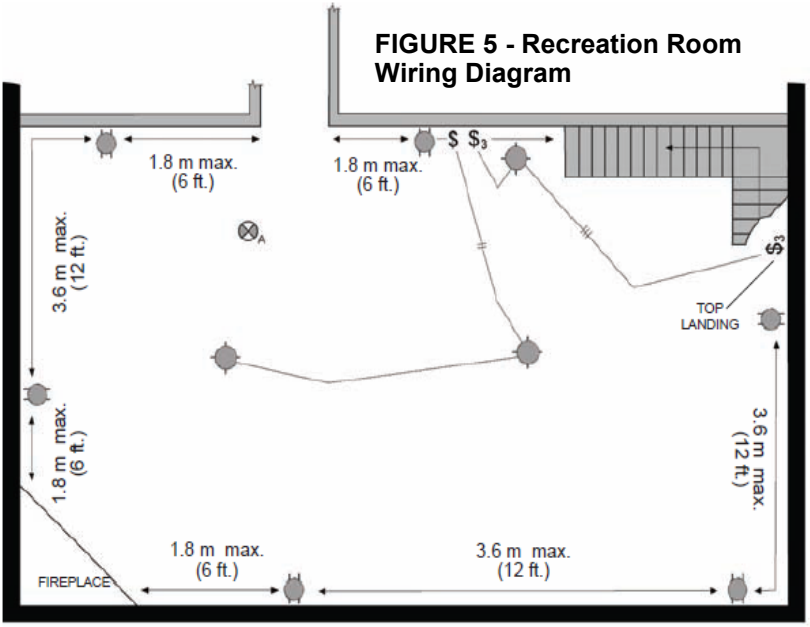
Are there electrical requirements for basement developments?

Yes. The Electrical Code requires that where basement walls are being finished with drywall, wood paneling or like material to within 450 mm (18 in.) of the floor, receptacles must be installed in these walls. In addition, the Building Code requires that a lighting outlet be provided in each room.

When is an electrical permit required?

An electrical permit must be obtained from Manitoba Hydro prior to the construction, alteration, repair or extension of any electrical installation.

FIGURE 5 - Recreation Room Wiring Diagram



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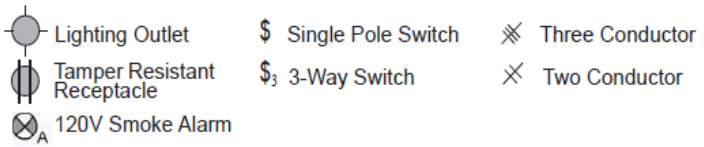


NOTE TO FIGURE 5: All electrical wiring must be inspected prior to covering with insulation or wallboard.

What information is required to make the application for a plumbing permit?

To obtain a plumbing permit, the homeowner must present a plumbing diagram for the proposed installation with the following details:

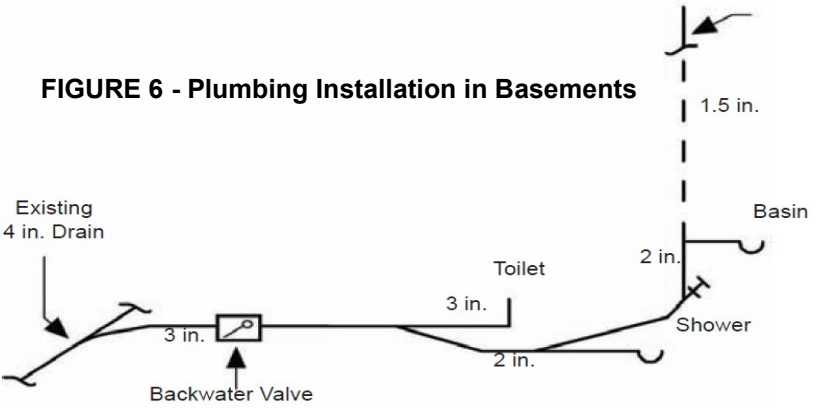
1) The diagram must have a view from the side;
2) Be drawn as single line;
3) Show the drain and vent; and
4) Show the location of each fixture.

An example of a typical plumbing diagram is shown in FIGURE 6.

Is there other information available on the regulations for plumbing installations?

Yes! A booklet with information for homeowners called "Plumbing Installations" has been written to provide homeowners with some of the more common plumbing regulations and to provide information on the extent to which the plumbing work must be completed prior to requesting an inspection. It is recommended that the booklet be reviewed prior to commencing the project.

FIGURE 6 - Plumbing Installation in Basements



SECONDARY SUITES

A secondary suite is a self contained accessory dwelling unit located either within a permanent single-family dwelling, or in an accessory building on a single zoning site. A secondary suite contains a single housekeeping unit and has its own separate access, cooking, sleeping and sanitary facilities which are separate from and not shared with those of the principal dwelling.

Secondary Suites: Accessory Units (attached or within principal dwelling):

- Not more than one Secondary Suite shall be permitted within a principal dwelling.
- Not more than one Secondary Suite shall be permitted on a single zoning site.
- The property containing a Secondary Suite shall contain a permanent habitable single-family (detached) dwelling.
- The principal dwelling must be an existing permanent structure occupied by the owner.
- A minimum of one off-street parking space must be provided for the secondary suite.

Maximum Floor Area:

- Shall not exceed 80% of the total habitable floor space of the **principal dwelling* to a maximum of 80 m sq. (861 sq. ft.), whichever is the lesser.

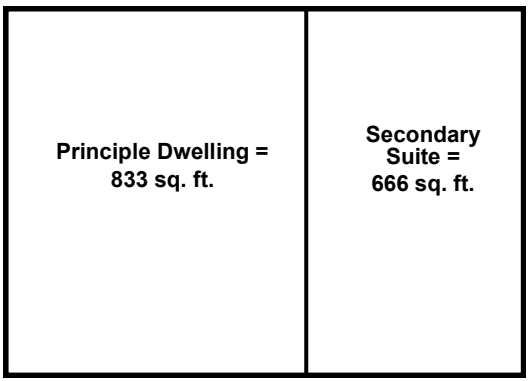
*In the case where the existing dwelling is being split to provide for a secondary suite the *Principle Dwelling* is not the total square footage of the entire dwelling prior to the separation. It is the amount required after separation. An example of how to calculate the principal dwelling area is shown below:

Total Sq.Ft. of Home x .555 = Required Principle Dwelling Area Sq.Ft.

Once you have your Principle Dwelling Area you can now determine the amount allowed for your Secondary Suite, as follows:

Principle Dwelling Sq. Ft. x 80% = Allowable Secondary Suite Sq. Ft.

Example of a 1,500 Sq. Ft. Home
1500 x .555 = 833 sq. ft.
833 sq. ft. x 80% = 666 sq. ft.



Amenity space:

- An exterior private amenity space such as a deck or patio shall be provided for the Secondary suite.
- Minimum area: 7.5 m sq. (80 sq. ft.).
- Minimum Dimension: (length or width) no less than 1.5m (4.9ft.).

A secondary suite may be located in the basement, main floor or second floor of a residence, or in areas from several stories. When a basement or second storey area of a 1 ½ storey residence is used for a secondary suite there are minimums to maintain. Please refer to TABLE 3 below.

TABLE 3 - Minimums

Ceiling heights	1.95m (6 ft. 4¾ in.)
Clear height under beams and ducts	1.85m (6 ft.)
Height over stairs and landings	1.95m (6 ft. 4¾ in.)
Stairs: Min. Width	860mm (32 ½ in.)
Doors: Min. Height	1.98m (6 ft. 6 in.)
Doors: Min. Width	810mm (32 in.)
Door to bathroom facility	760mm (30 in.)
Hallway minimum width	860mm (34 in.)

Fire Protection required between the Residence and the Secondary Suite

A smoke-tight barrier in lieu of a fire separation

Structural Components: Light framed walls, columns, arches, and beams as well as load bearing steel elements (beams, columns etc.) that support floors between the residence and its secondary suite, including their common spaces and service room shall be protected by not less than ½ in. thick gypsum board.

Exits: The exit in a house with a secondary suite shall be protected by a continuous smoke-tight barrier of not less that ½ in. thick gypsum board installed on both sides of walls separating the exit from the remaining building and the underside of the floor–ceiling framing separating the exit from the remainder of the building.

Smoke–Tight Barriers between rooms and common spaces in houses with a secondary suit: The wall and floor assembles separating the residence from the secondary suite, including common spaces, are to be constructed as a continuous barrier against the spread of fire and retard the passage of smoke. The continuity of the smoke-tight barrier is to be maintained where it abuts another smoke-tight barrier, a floor, a ceiling, a roof or an exterior wall assembly.

Walls and floor-ceiling framing that separate the dwelling units from each other (or dwelling units from ancillary or common spaces) are to be protected by a continuous smoke-tight barrier of not less than 12.7mm (½ in.) thick gypsum board installed on both sides of walls and the underside of floor-ceiling framing. All gypsum board joints are to be taped and penetrations (in the assemblies) are to be sealed using flexible sealants to maintain the integrity of the smoke-tight barrier over the entire surface.

Protection of Openings in Smoke Tight Barriers

Openings in the required smoke tight barriers are to be protected by closures conforming to MBC clause 9.10.13.. Doors in smoke tight barriers must be solid core wood doors a minimum of 45mm (1 ¾") thick with a self closing device.

Smoke Alarms and Carbon Monoxide Alarms

Smoke alarms in a secondary suite shall be wired so that the activation of any smoke alarm causes all smoke alarms within the house to sound. Smoke alarms shall be installed in each sleeping room, in each storey including the basement, and in common spaces and ancillary spaces. Where carbon monoxide alarms are required because of a attached garage or fuel fired appliances in the house, then combination Smoke/ Carbon Monoxide Alarms shall be installed and wired so that they are interconnected between suites and activation of any one Smoke or CO alarm will cause all the Smoke or CO alarms in the house and secondary suite to sound.

Heating and Ventilation

Individual temperature controls are required for each suite and common areas. To prevent smoke spread by ducted HVAC systems, there can be no interconnection of ducts between suites or their common areas. Therefore heating, ventilation and air conditioning can provide a challenge to the development of a secondary suite in an existing house.

Sound Transmission Rating (STC) between Suites

A sound transmission rating of not less then 43 is required for walls and floors between residence and its secondary suite.
This can be achieved with insulation filled cavities, and resilient channels and gypsum board on both sides. Normally a sound transmission rating of 50 is required between residential suites.

Protection of Soffits

Where a common roof or attic space spans more than one residence and the secondary suite, the portion of soffit enclosing a projection less than 2.5m (8' 3") vertically above a window or door and is less that 1.2m (4 ft.) from either side of the window or door shall be protected with fire resistant soffits.

Secondary Suite: Accessory Unit, <u>Detached</u> (ie: Coach House & Garden Suite):

- Not more than 1 Secondary suite on an established zoning site.
- The exterior of the secondary suite should be similar to the principal residence.
- The zoning site containing the secondary suite shall contain a permanent habitable single family dwelling .
- A minimum of one off-street parking space must be provided for the secondary suite.

Maximum Floor Area:

- Shall not exceed 80% of the total habitable floor space of the principal dwelling or 80 sq.m (861 sq.ft.), whichever is the lesser.

Building Height (maximum):

- Coach House (above grade) as permitted by zoning by-laws.
- Garden Suite and Coach House (at grade) as permitted by zoning by-laws.

Separation from the Principal Dwelling (minimum)

- As determined by the zoning by-laws.

Amenity Space:

- An exterior, private amenity space such as a deck or patio shall be provided for the Secondary Suite.
- Minimum area: 7.5 m sq. (80.7 sq. ft.)
- Minimum Dimension: (length or width) no less than 1.5 m (4.9 ft.)

Construction requirements:

Construction of the Secondary Suite must comply with the Manitoba Building Code. All new foundations shall be designed and sealed by a structural Engineer.

Who enforces all of these requirements?

The Eastern Interlake Planning District is responsible for monitoring construction for compliance with the Building Code and By-Laws. This monitoring is carried out by means of a permit approval process and site inspections.

The ultimate responsibility for compliance rests with the owner and contractor.

Is there any way that compliance with a certain aspect of the Building Code can be waived?

The Eastern Interlake Planning District does not have the authority to waive the requirements but it does have the authority to accept equivalents which meet the intent of the Building Code. If you feel you can satisfy a Building Code requirement by using an equivalent building material or construction method, please contact the Building Inspector.

When do I contact someone for inspection of the work?

The owner and contractor are equally responsible for notifying our office for the necessary inspections .

The following inspections are required, if applicable based on the project:

1) Footing forming/Piles/Piers/Thickened edge slab steel and forming - house and attached garage
2) Basement wall & grade beam steel and forming/PWF framing
3) Drain tile and damp proofing prior to backfill
4) Basement floor drain tile, plumbing, sump, granular fill and soil gas barrier
5) Framing - Engineered truss/floor etc. info. on site
6) Plumbing drain waste and vent installation
7) Insulation and vapor barrier
8) Final Inspection

EASTERN INTERLAKE PLANNING DISTRICT

Box 1758

62 Second Avenue

Gimli, Manitoba R0C 1B0

Phone: 204-642-5478

Fax: 204-642-4061

Email: eipd@mymts.net

Web: www.interlakeplanning.com