SUPERIOR SAFETY CODES INC.
PERMITS & INSPECTIONS

Permit Handbook

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Introduction

Superior Safety Codes Inc. is an Authorized Accredited Agency in the Province of Alberta dedicated to providing you, our client, with the best service possible relating to the Safety Codes Industry.

"Our mission is to provide all individuals ethical and timely service through an absolute commitment to integrity."

This booklet provides information on some of the more common items we encounter, and is designed as a quick reference guide only. It should not be used as an instructional manual. Superior Safety Codes Inc. are not liable in any way for the possible incorrect interpretation of the information contained in this handbook and highly recommend that qualified contractors be hired for your installation/construction project.

If you require further clarification or have any questions specific to your project, please call us at 1-866-999-4777.

FREQUENTLY ASKED QUESTIONS:

When do I need a permit?

Any matters affecting life safety require permits. Generally speaking, whenever building, adding on to, renovating or relocating a structure, you will require one or all of the following permits: Building, Electrical, Gas, Plumbing or Private Sewage.

What are the benefits of obtaining a permit?

The major benefit of obtaining a permit is knowing that the installation conforms to the safety standards that have been adopted under the Safety Codes Act of Alberta, and that inspections will be provided by a certified Safety Codes Officer.

Who can I call if I have questions about my construction project?

You can contact any one of Superior Safety Codes' offices and a Safety Codes Officer will be more than happy to answer your questions.

Is there a difference between a development permit and a building permit?

Yes. A development permit deals with Municipal By-law requirements such as zoning, and any restrictions on what type of building you may be able to construct. Development permits are strictly approved by the Municipality.

A building permit ensures construction projects comply with the requirements of the Alberta Building Code. Receiving inspections during construction are also part of the building permit process. Building permits are issued by Superior Safety Codes and, in some instances, the Municipality.

What other permits do I require?

Electrical, gas, plumbing and private sewage permits may also be required depending on the nature of the project. Please consult one of Superior Safety Codes' offices.

Who should apply for the permits, me or my contractor?

If you are hiring certified contractors to do the work, they should be obtaining the required permits.

If you are doing the work yourself, you can obtain the permits provided you are the owner and you live or will be living at the premises (some restrictions may apply).

What services do I get with my permit?

Services include, but are not limited to, permit issuance, plans examination, technical advice, site inspections and reports and a final status report (Permit Services Report).

How long are my permits valid?

Depending on the type of project, permits are typically valid for two years, provided work is commenced within 90 days of permit issuance and the project is not suspended for more than 120 days and. Time extensions may be granted upon written request. (*Your approved permit will have an expiry date on it.)*

I have obtained my permits, now I have decided not to proceed with my project, can I get a refund?

Providing you have not started the work and the permit has not expired, you may be entitled to a refund. A processing charge may apply.

How much notice does Superior Safety Codes require when I am ready for an inspection?

We request that you give us at least 2 days-notice for proper scheduling.

I am building a garage; can I build it on a slab?

A garage can be built on a slab providing it is no larger than 55 square meters. If you exceed 55 square meters then engineering will be required.

I am moving in a manufactured (or modular) home. Do I need a building permit?

Yes. Your home was built off-site to a standard, however, the onsite work such as the foundation/or blocking, stairs and landings still fall under the Alberta Building Code requirements and need to be permitted.

I have an older home that requires updating. Do I need to re-wire/re-plumb the entire house to meet today's standards?

You are only required to bring the effected systems up to today's standards. It is however; highly recommended to bring all systems up to date.

I am installing a new furnace in my home, do I require a permit?

If you have to make alterations to your gas piping and/or venting, you will require a permit.

I am building a deck; do I need a permit?

Yes, if the deck will be 2 feet or greater above grade, you will require a building permit.

I am constructing a pole shed, do I need a building permit?

Yes, unless the intended use of the pole shed is strictly as a farm building on land designated for Agricultural use. Pole sheds require engineering due to the nature of their construction materials.

PERMIT APPLICATION REQUIREMENTS

All permits will be issued in accordance with the Safety Codes Act and Regulations. Permits are available to customers via fax, email, mail and walk-in.

Building Permits

In order to issue a building permit, the applicant must (at minimum) submit the following:

- The number of complete sets of construction drawings (typically 2) required is determined by the authority having jurisdiction. The drawings are to include: elevations, floor plan, foundation, cross section and detailed site plan.
- Completed permit application
- New Home Buyers Protection Act Registration (http://www.municipalaffairs.alberta.ca/home_warranties_faqs#que1nhw)
- Builders' License (www.builderlicensing.alberta.ca)
- Energy Efficiency Documentation
- Method of payment
- Copy of the Approved Municipal Development Permit

Building Permit applications must be reviewed by a Building Safety Codes Officer prior to issuance.

Electrical Permits

In order to issue an electrical permit, the applicant must submit:

- Completed Permit Application
- Method of Payment

Note: For commercial and industrial electrical installations it will be at the discretion of the Electrical Safety Codes Officer as to whether construction documents (including plans and specifications) will be required.

Gas Permits

In order to issue a gas permit, the applicant must submit:

- Completed permit application
- Method of payment

Plumbing Permits

In order to issue a plumbing permit, the applicant must submit:

- Completed permit application
- Method of payment

Private Sewage Disposal System Permit

In order to issue a Private Sewage Disposal System permit, the applicant must submit:

- Completed permit application
- A detailed site plan *(in accordance with the requirements from the Private Sewage Systems Standard of Practice)*
- B66 Tank Certification, high level alarm information
- Effluent filter information, pump specifications
- Soil profile log form providing the results from two (2) tests pits with a copy of the soil analysis report with GPS coordinates
- Munsell chart colors
- Expected volume of sewage per day
- The criteria used to determine the expected volume of sewage per day
- Description and details of all sewage system treatment and effluent disposal component(s).
- Details of the method(s) used to determine the soil effluent loading rate, including the results of the method(s) and who they were conducted by, and the depth to the water table from ground surface
- Method of payment

Private Sewage Disposal System Permit applications must be reviewed by a Level 2 Plumbing Safety Codes Officer prior to issuance.

Completed Permit Application Forms

Building, electrical, gas, plumbing and private sewage permit applications should be considered complete when, at minimum, the following information is provided:

- ✓ Application date
- ✓ Estimated completion date
- ✓ Owner's name, mailing address, phone number and email address (if they have email)
- ✓ Contractor's name, mailing address, phone number and email address (if a contractor permit)
- ✓ Street address or rural address
- ✓ Lot, block, and plan, when applicable
- ✓ Long legal, when applicable
- ✓ Project Information
- ✓ Type of Work
- ✓ Detailed description of work
- ✓ **Building permit** – project value, square footage
- ✓ **Electrical permit** – square footage, installation cost, amps, volts, phase
- ✓ **Gas permit** – number of outlets (residential), BTU's and outlets (commercial)
- ✓ **Plumbing permit** – number of fixtures
- ✓ Application is signed, if signed digitally must be a valid legal esignature
- ✓ Valid certification number provided for contractor permits

Inspection Requests

Inspections are an integral part of the permitting and construction process. It is imperative that inspections are conducted at various stages of a project. The permit fee includes the inspections so there is no additional charge for our Safety Codes Officers to attend site. Please contact our office at 1.866.999.4777 to arrange for an inspection or you can put in the request online through our website at https://secure.superiorsafetycodes.com/requests.

RESIDENTIAL BUILDING INFORMATION

RESIDENTIAL BUILDING PERMIT INFORMATION & CHECKLIST REQUIREMENTS

APPLICATION REQUIREMENTS – *Along with your approved development permit from the Municipality, ensure the listed supporting documentation is included with the completed building permit application, or delays may occur with regards to issuing the building permit.*

NEW HOME BUYERS PROTECTION ACT – *Since February 1, 2014, When constructing a new home, cabin, garage with living quarters or moving in a manufactured home you **must** provide New Home Warranty Registration at time of application.*

NATIONAL ENERGY CODE (NEC) – *The NEC came into effect November 1, 2016. Ensure the 9.36 Compliance Report is completed and submitted with the building permit applications and documentation.*

CONSTRUCTION OF NEW HOMES & ADDITIONS

- □ site plan □ floor plan(s)
- □ foundation plan □ elevation views
- □ building cross sections
- □ roof truss layouts □ manufactured floor joist layouts (Layouts can be on site at the framing stage)
- □ engineered stamped drawings for attached garage if it is pile and grade beam
- □ Preserved Wood Foundations require plans designed by an Engineer, registered in the Province of Alberta. (unless designed to the CAN/CSA S406-16 (R2003)
- □ Hydronic Heating design information and designer certification

STORAGE BUILDINGS / GARAGES / SHEDS / CARPORTS

- □ site plan □ floor plan
- □ elevation views □ building cross sections
- □ roof truss and beam design information
- □ Hydronic Heating design information and designer certification (if applicable)
- □ pole buildings require engineering

Foundation Requirements:

- □ 4 foot frost wall and strip footing
- □ concrete slab over 55 sq. meters (592 sq. ft.) must be engineered
- □ engineered grade beam and pile
- □ any other foundation will require a structural engineered stamped plan

Wall Requirements:

- □ walls up to 3.6 m in height are acceptable
- □ walls over 3.6 m will require an engineered stamped plan.

BASEMENT DEVELOPMENTS & SUITES AND MINOR RENOVATIONS

- □ floor plan showing layout of new walls, bathrooms, bedrooms, windows and doors

MANUFACTURED, MODULAR, MOBILE HOMES

- □ site plan □ floor plan
- □ foundation plan** □ CSA, QAI or Intertek #
- □ Serial # □ AMA #
- □ square footage □ year of manufacture
- □ elevation views

ONE ROOM ADDITIONS & MANUFACTURED SUNROOMS

- □ site plan □ floor plan
- □ foundation plan** □ cross section view
- □ elevation views
- □ if manufactured sunroom, supplier's full product information is required or an engineer's approval

***** NOTE: Pile foundations require engineering***

HOT TUBS / SWIMMING POOLS

- □ site plan with dimensions of tub/pool □ fence info

ROOF MOUNTED SOLAR PANELS

- □ roof layout showing anchorage of panels and railing system *(manufacturer's specifications required to be submitted or must be engineered)*
- □ existing roof structure to be identified

DECKS

- □ site plan □ foundation plan** □ floor layout
- □ cross section view

HANDICAP RAMPS

- □ site plan □ foundation plan** □ cross section view

HVAC INSTALLATIONS (not with new construction)

- □ Replace duct work and venting; provide detailed description of work
- □ Hydronic heating; provide the design information and heat loss calculations

WOOD STOVES (including fireplaces, pellet and coal stoves)

- □ floor plan □ references to certification listing
- □ manufacturers installation instructions

NOTE: Pile foundations require engineering

Construction checklists for additions, decks, garages, mobile homes and wood stoves are also available.

Contact Superior Safety Codes at 1.866.999.4777 if you require any information regarding building permits or drawings that are required.

RESIDENTIAL BUILDING INFORMATION

Foundation Requirements

There are several variations of building foundations that can be used. Each is designed for various purposes and has specific requirements. Remember, this information is to be used as a guide only. Please contact our office for more detailed information.

Concrete Strength

The compressive strength of unreinforced concrete after 28 days shall be not less than:

15 MPa for walls, columns, fireplaces and *chimneys*, footings, *foundation* walls, grade beams and piers,

20 MPa for floors other than those in garages and carports

32 MPa Garage slabs, carport slabs and the exterior steps

Height

Concrete foundation walls must extend a minimum of 150 mm (6”) above finished grade level.

Anchorage

Building frames must be anchored to the foundation unless specific analysis is conducted.

Anchorage – Mobile Homes

Anchorage for mobile homes is to prevent the structure from overturning.

Mobile homes shall be rated as to their resistance to overturning and installed in accordance with the manufacturer’s instructions.

FOUNDATION TYPES

Thickened Slab

The Alberta Building Codes states that thickened slabs are allowed up to 55m^2 (592 ft^2).
Slabs greater than 55 m^2 require engineering.

Concrete Foundation Wall on Strip Footings

The thickness of concrete foundation wall relies on the height and lateral support at the top of foundation. An 8" thick foundation would be permitted in most residential construction.

Concrete Strip Footing

10" x 4" minimum supporting one floor

14" x 4" minimum supporting two floors

18" x 6" minimum supporting three floors

Depth of footings must be at least 1.2 m (4') below finish grade.

Pile and Grade Beam

A pile and grade beam foundation requires engineering

Pier Type Foundation (typically wood blocking for mobile homes)

Piers shall be spaced not more than 3.5 m apart. The height of piers shall not exceed three times their least dimension at the base of the pier.

Slab on Ground

Granular material under the slab is recommended, but not mandatory.

Thickness of slab shall not be less than 3" exclusive of topping. When concrete topping is provided, it shall not be less than 20 mm.

PWF Foundation

A preserved wood foundation may be either designed by a professional engineer or be designed and constructed in conformance to the CSA standard CAN/CSA S-406-16 (R2003) (dependent on size or complexity).

ICF (Insulated Concrete Foundation)

ICF foundation wall must conform to the Alberta Building Code (ABC) with the following conditions:

- must be listed under CCMC,
- must be created under direct supervision of a certified installer.
- Construction must be in compliance with the manufacturer's specifications.
- Must be protected from the interior with a minimum 15-minute thermal barrier (i.e. ½" drywall).

Screw Pilings

Screw pilings must be either pre-engineered or custom engineered. They must also be fabricated by a CWB certified welder. A torque report will be required to be submitted prior to the final inspection.

USEFUL CONSTRUCTION TIPS

Mark the location of the joists and beams

Start at one side and work towards the other using a measuring tape and a pencil to mark the location of the floor joists and beams, keeping with the engineers required joist spacing as per the structural plan, or the manufacturer's specifications.

Install the beams and floor joists

Install the beams as specified on the plan. The ends of the beams should rest in the notches provided for that purpose in the foundation wall (if specified on the plan). Based on the beams length and load-bearing requirements, it is determined how many adjustable posts are required in the basement. There are several types of beams: steel beams, LVL (laminated veneer lumber), several types of I joists. Joists must be attached to the beams with joist hangers.

Sub Floor

Before laying down the sub floor panels, spread a construction adhesive over the joists. The adhesive will increase the rigidity of the floor and reduces and/or prevents squeaking.

Lay the sub floor sheets perpendicularly to the joists in order to conform to building codes and get maximum rigidity. Be sure not to align seams with unsupported joints. Screws are recommended as an alternative method of fastening the sub floor.

When using tongue and groove sub floor, use a piece of wood to hit the edges of the panels to reduce edge damage.

Assemble the exterior walls

Assemble the walls horizontally on the floor. Lay the bottom plate where you want to erect the wall and nail the studs perpendicularly onto it. Be sure to nail the studs on 16 in. centers. Install top plates – two 2" x 6" (38 mm x 152 mm) nailed together – on top of the studs.

Build window headers

Headers transmit their weight to the king studs located on either side of the window opening. To install a header, all you need to do is make a sandwich of lumber and plywood consisting of two 2" x 10" (38 mm x 235 mm) and a piece of ½" plywood nailed together. Header material may vary according to super-imposed load e.g. LVL, Glue Lam or Timber Stand products.

Once the outside walls are framed, it's time to install the sheathing. The sheathing consists of large panels measuring 4 ft. x 8 ft. (1.22 m x 2.44 m), which act as a screen against wind and rain and stiffens the structure.

Erect inside partitions

There are load-bearing walls that support the weight of the ceiling of the upper floor and non-load bearing walls whose only role is to divide space into rooms. Load-bearing walls are built with 2" x 6" (38 mm x 140 mm) studs and require double plates.

Non-load-bearing walls don't need double plates. They can be built of 2" x 4" (38 mm x 89 mm) studs.

Use a chalk string to mark the interior partitions on the floor. The chalk string is easy to use and prevents errors. First erect the longer partitions, then the cross-partitions before erecting the closet and vestibule partitions.

Miscellaneous Information

There are **energy efficiency** requirements for buildings that deal with the energy used by buildings. These requirements look at the building envelope and the design and construction of heating, ventilation, air conditioning and service water heating equipment. All conditioned spaces are required to meet the energy efficiency requirements, please contact your local safety codes officer to discuss these requirements.

The distance between houses (spatial separation) determines the construction type, fire rating (if any) and maximum window sizes allowed by code. The main consideration is how quickly the fire department is able to respond to a fire. You may be required to confirm whether your fire department can respond in less than 10 minutes.

Soil gas (mainly radon) mitigation measures must be roughed-in to basement slabs. This consists of a 4" ABS or PVC pipe located at the center of the slab and often routed to the mechanical room. The pipe protruding from the slab is to be capped and identified as a radon rough-in. This pipe is for future use should radon be detected at some point. The perimeter of the slab is to be caulked/sealed to prevent soil gas ingress.

Flashing must be installed at:

1-every horizontal junction between cladding elements
2-every horizontal offset in the cladding, and
3-every horizontal line where cladding materials change

Flashing end dams are to be installed above/below windows etc.

Roof ventilation is to be provided at 1 square foot for every 300 square feet of insulated ceiling area. The ventilation of flat roofs or roofs with a slope of less 1 in 6 requires at least 1/150 of the insulated ceiling area. Vents may be roof type, eave type, gable-end type or any combination thereof, and are to be distributed uniformly on opposite sides of the *building*,

Crawl spaces are to be ventilated by natural or mechanical means. Natural ventilation must be at least 1 ft² of unobstructed vent for every 50 m² of floor area.

Attic or crawl space access hatchways are to be at least 500 mm x 700 mm (20" x 28") and attic hatches are to be insulated and be weather-stripped around the perimeter.

A smoke alarm is to be installed on every floor level, every bedroom and also in hallways within 5m (~16') of bedroom doors. Smoke alarms are to be interconnected so that if one is set off, they will all sound.

A carbon monoxide alarm is to be installed inside each bedroom or outside each bedroom within 5 m of each bedroom door. Combination smoke/carbon monoxide alarms are readily available to avoid the installation of multiple devices.

Attached garages require walls and ceilings to be covered with:

a) ½" drywall,

b) lath & plaster, or

c) a material that will remain in place and prevent the passage of flames for at least 15 minutes. Using this method will require written confirmation be submitted that the product meets or exceeds the requirements of CAN/ULC-S101, "Fire Endurance Tests of Building Construction and Materials".

Any door between the garage and the house is to be tight fitting, weather-stripped, and fitted with a self-closing device.

Bedroom windows are to have a clear opening area of 542 square inches with no dimension less than 15 inches. For example, the open area could be 15"x37" or 23"x24" etc.

Secondary Suites

Significant changes to the requirements of Secondary Suites were adopted in the building code. Please contact Superior Safety Codes Inc. for further information regarding secondary suites.

You can go on the Safety Codes Council website for tips on secondary suites:

https://ebs.safetycodes.ab.ca/documents/webdocs/PI/safety-tips_secondary-suites_april2021.pdf

Hot Tubs and Swimming Pools

If you are planning to install a swimming pool, you will likely need one or more permits. As the homeowner, you are responsible for getting all required permits.

You can go on the Safety Codes Council website for tips on hot tubs and swimming pools:

https://ebs.safetycodes.ab.ca/documents/webdocs/PI/safety-tips_pool-tubs-spas_july2019.pdf

RESIDENTIAL ELECTRICAL INFORMATION

Service

Utility owned equipment does not comply with the definition of service box as per the Canadian Electrical Code. Therefore, a service must be installed. Acceptable service is a combination panel with a main breaker and a barrier with a bond screw from the neutral to the enclosure, or a fusible switch with the neutral bonded to the enclosure. The ground wire from either two ten (10) foot ground rods placed ten (10) feet apart or one ground plate two feet deep or other methods of grounding and shall be ran continuous and attached directly to the neutral bar (not enclosure) in the consumer's service portion of the panel. The service equipment must not be more than ten feet inside the building.

Installing outlets, switches, ceiling fittings, etc.

Plan your needs and the locations for the outlets.

Draw up a list of all the devices you will be putting into your home: appliances, washer, dryer, electric heating system (if this is what you are planning), lamps, water heater, etc. Determine the electrical needs for each room. The layout of your furniture will give you a starting point for selecting the location of some of the outlets.

For interior design purposes, remember it's always better to have more outlets than to use extension cords. Who knows what you may want or need later on, a heat pump, garbage disposal unit, home theatre, air exchange system, etc.

If you are planning on doing this work yourself, make sure the power is off at the breaker box before doing any electrical work. Outlets and switches shall be installed in switch boxes. These are placed between the studs (except the boxes with plates that are nailed to the stud). For duplex switches, join two or more boxes by removing the knock out(s) in each box.

To connect the outlets, loosen the screw terminals. Splice the cable back far enough to allow at least 6 in. (152 mm) of wire to stick out and remove the outer casing on each wire. Remove the insulating sleeve and bare approximately 1 in. (25 mm) of the copper wire. Install the appropriate connector. The connector is a metal piece to which the metal box is screwed. Use a wire nut to fasten the wires. To connect the wires to the outlet, use long-nose pliers to make a loop on the bare end wire to hook clockwise around the terminal screw. Tighten the screw.

Dining Area (which forms part of a kitchen)

Put at least one receptacle on a separate circuit in the area.

Laundry Room and area

Install a separate circuit and include at least one receptacle for the washing machine and another one in a convenient location.

Utility Room or area

Install at least one receptacle on a separate circuit for the utility room.
Install one receptacle in each undeveloped area.

Note: Built in vacuum motors require a receptacle on a separate circuit located adjacent to the unit.

Bathrooms and Washrooms

Install one duplex receptacle, protected by a Class A Ground Fault Circuit Interrupter (GFCI) within 1 m (39 inches) of the wash basin. This GFCI receptacle must be located at least 1 m (39 inches) away from a bathtub or shower stall. Measure this distance between the receptacle and the inside edge of the bathtub or shower without piercing a wall, partition or similar obstacle. Receptacles installed in areas (i.e. Bedrooms) that are not separated from the bathroom by a door, should be protected by a Class A Ground Fault Circuit Interrupter if they are within 3 m of a tub or shower.

Outdoor

Provide at least one receptacle on a separate circuit. Receptacles located on the dwelling, including attached carports and attached garages are to be protected by a ground fault circuit interrupter.

Electric Range

- Provide a 40-amp circuit breaker with a 2-pole common trip.
- Use #8 copper wire (NMD-90).
- Use a 50-amp receptacle rated 125/150 volt (14-50R).

Receptacles (General)

- Install duplex receptacles in the walls of every finished room or area so that no point along the floor line of any usable wall space is more than 1.8 m (6 feet) horizontally from a receptacle. The usable wall space includes a wall space of 900 mm (3 feet) or more in width but doesn't include doorways, windows that extend to the floor, fireplaces or other permanent installations that would limit the use of the wall space.
- Ground all receptacles.

- Connect the receptacles so that the silver terminal screw (or the screw identified as “white”) on the receptacle is connected to the white circuit wire, the brass terminal screw (or the screw identified as “black” or “hot”) on the receptacle is connected to the black (or red) circuit wire.
- Connect only one wire under each terminal screw.

Receptacles (General)

- Arc Fault Circuit Interrupters (AFCI) are required on new circuits feeding receptacles in a dwelling unit, except for kitchen counter, island, and peninsula receptacles, kitchen refrigerator receptacles, bathroom GFCI receptacles, and single receptacles for sump pumps. AFCI protection is also not required for receptacles located in a detached garage.

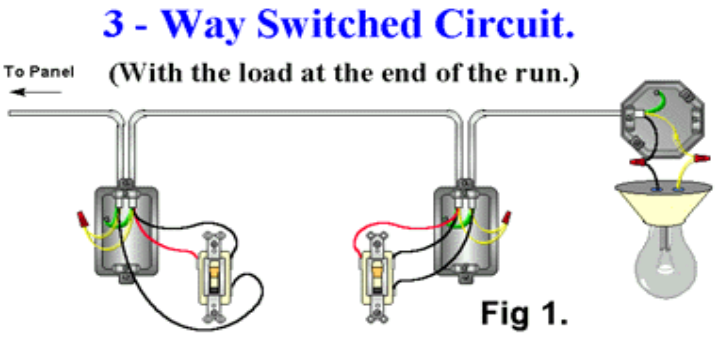
Kitchen Receptacles

- Provide a sufficient number of split receptacles and/or 120-volt, 20-amp receptacles along the wall behind the counter work surface so that no point along the wall line is more than 900 mm (3 feet) from a receptacle outlet measured horizontally along the wall line. Sinks, built-in equipment, and isolated work surfaces less than 300 mm (1 foot) long at the wall line may be excluded from this requirement. Install a minimum of two – 3 wire circuits but no more than two split receptacles on that circuit.
- As an alternative to a 3-wire split receptacle is the use of a 12/2 NMD cable supplied by a 20-amp breaker and connected to a 20-amp, T-slot receptacle.
- All receptacles within 1.5 m of a sink must be protected by a ground fault circuit interruption.
- Refrigerators, dishwashers and microwave ovens require separate circuits.

Stairway Lighting

Three-way switching is required on stairway lighting when a stairway has 4 or more risers and is leading to a finished area or to an outside entrance. Refer to Figure 1 for a simple 3 way switching wiring diagram.

Figure 1



Smoke Alarms

- Install smoke alarms on each floor level, including basements.
- Install smoke alarms in each bedroom as well as 1 located in the common area within 5 m (18 feet) of bedrooms.
- Smoke alarms are to be powered from a branch circuit containing lighting. Smoke alarms are not to be installed on a GFCI or AFCI part of the circuit.
- When more than one smoke detector is being installed, interconnect the smoke detectors with 14/3 NMD-90 cable and connect according to manufacturers instructions.

Note: The Alberta Building Code permits only wired-in smoke alarms (Alberta Building Code Article 9.10.18.3).

Garages

- Provide at least one separate circuit to the garage and one duplex receptacle for each car space. The lighting may come off this circuit.

- Using the same trench for gas sub-service lines and electrical power conductors may be permitted provided there is a minimum separation of 450 mm or 18 inches.
  - Local authority must be consulted (i.e. electrical/gas utility)

Electric Dryer

- Provide a 30-amp circuit breaker with a 2-pole common trip.

- Use #10 copper wire (NMD-90).

- Use a 30-amp receptacle rated 125/250 volt (14-30R).

General Rules for Non-Metallic Sheathed Cables:

1. Use only copper conductors.

2. Use 14 AWG copper wire for general purpose wiring (lights and receptacles).

3. Provide over-current protection of 15 amperes for general purpose wiring (lights and receptacles).
   Install a maximum of twelve outlets on a general-purpose circuit (lights and receptacles).

4. Run cable as a loop system in continuous lengths between outlet boxes, junction boxes and panel boxes. Make joints, splices and taps in the outlet boxes.

5. Where cables pass through a hole in a joist or stud, bore the hole 32 mm (1.25 inches) back from the face of the stud or joist or protect the wires from driven nails by using metal plates.

6. Secure wires every 1.5 m (5 feet) when run on the sides of joists or studs and 300 mm (12 inches) from each outlet box.

7. Protect wires that are exposed within 1.5 m (5 feet) of the floor.

8. Keep cables a minimum of 25 mm (1 inch) from heating ducts.

9. Where cables run through or along metallic studs, joists, sheathing or cladding, ensure that the cables are:

10.

- protected from mechanical damage both during and after installation.
- protected by an insulation insert secured to the opening in the stud, and,
- isolated from the stud by an insulating material supported to the member.

11. Protect cables from mechanical damage and from driven nails and screws when they are installed behind baseboards or horizontally behind cupboards.

12. Sub-panels may be added to existing service panel boards provided the main service panel has a main disconnecting device.

13. Where communication cables are to be installed in joists or studs, maintain a minimum separation of 50 mm (2 inches) from any power non-metallic sheath cable.

OUTLET BOXES

1. Set outlet boxes with the finished wall or ceiling and secure them to studs or joists.

2. Ground all outlet boxes.

3. Ensure all junction boxes are accessible after installation.

4. Leave at least 150 mm (6 inches) of wire out of each outlet box for joints and connection of equipment.

5. Surround the outlet boxes with a moisture barrier when the wall or ceiling requires a vapour barrier.

The maximum number of conductors permitted in outlet boxes is:

Light Fixtures

Common Types	Dimensions	Capacity (ml) (cu-in)	#14	General Usage
Octagonal	4 x 1 ½	245 (15)	8	Light or junction
Square	4 x 1 ½	344 (21)	12	Junction
#1103	3 x 2 x 1 ½	131 (8)	3	Switch or plug
#1102	3 x 2 x 2	163 (10)	4	Switch or plug
#1104	3 x 2 x 2 ½	204 (12.5)	5	Switch or plug
#1104	3 x 2 x 3	245 (15)	7	Switch or plug

Note: When a dimmer switch, a timer, or a GFCI receptacle is used in an outlet box, reduce the number of permitted conductors by three.

6. Install three-way switches according to Figure 1.

7. Totally enclosed light fixtures must be installed in clothes closets.

RESIDENTIAL GAS INFORMATION

- Gas installations should be done by a Journeyman Gasfitter; however, homeowners are allowed to install gas lines and appliances if they own and reside in the home.

- Air tests are witnessed by the gas supplier or by means set out by the local authority, the Safety Codes Officer does not witness an air test.

- When using corrugated stainless-steel tubing (CSST), you MUST use the brand`s certified installation and sizing instructions. CSST also requires you to have a ticket to install before you run it in your home.

- Majority of venting for the energy efficient appliances are to be done to the manufacturer's certified instructions.

- Secondary lines to buried 15 to 24 inches below grade with a tracer wire. They can be deeper when required for added protection. For example, a farm field where equipment is working up the land.

- All underground piping shall rise above ground before entering a building.

- All propane tank sets and installations require a permit.

Table A.2
Maximum capacity of natural gas in thousands of Btuh for Schedule 40 pipe and plastic pipe, including fittings, for pressures of 7 in w.c. up to 14 in w.c. based on a pressure drop of 1 in w.c.

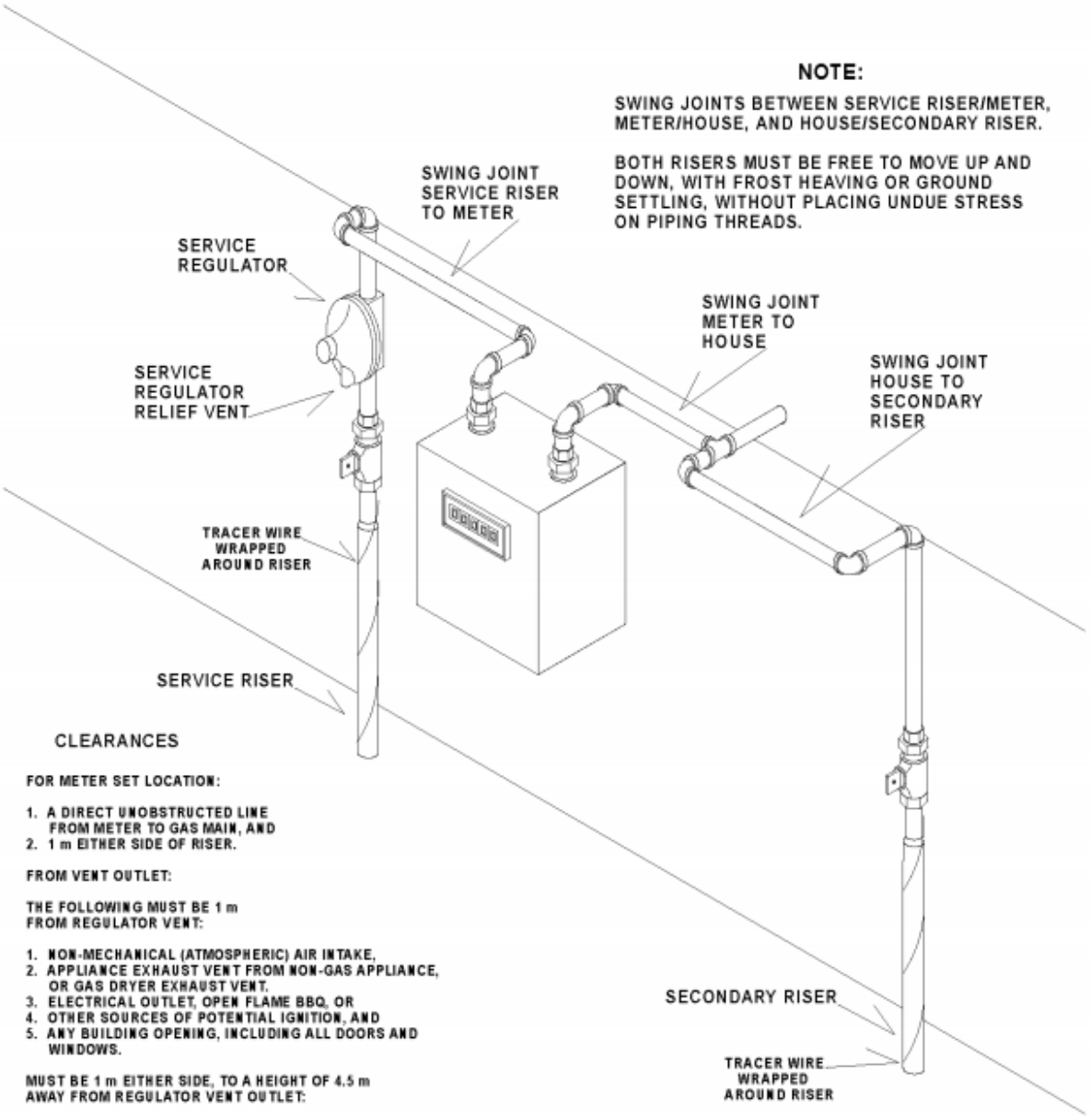
(See Clauses 6.3.2, 6.3.4, 6.3.5, A.2.3, A.2.4, A.2.6, A.3.5, E.1.2, and E.2.2.)

(a) Imperial

Length of pipe, ft	Pipe size (NPS)								
	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
10	227	474	894	1 835	2 749	5 295	8 439	14 919	30 429
20	156	326	614	1 261	1 890	3 639	5 800	10 253	20 914
30	125	262	493	1 013	1 517	2 922	4 658	8 234	16 795
40	107	224	422	867	1 299	2 501	3 986	7 047	14 374
50	95	199	374	768	1 151	2 217	3 533	6 246	12 739
60	86	180	339	696	1 043	2 008	3 201	5 659	11 543
70	79	166	312	640	959	1 848	2 945	5 206	10 619
80	74	154	290	596	893	1 719	2 740	4 843	9 879
90	69	145	272	559	837	1 613	2 571	4 544	9 269
100	65	137	257	528	791	1 524	2 428	4 293	8 756
125	58	121	228	468	701	1 350	2 152	3 805	7 760
150	52	110	207	424	635	1 223	1 950	3 447	7 031
175	48	101	190	390	584	1 126	1 794	3 171	6 469
200	45	94	177	363	544	1 047	1 669	2 950	6 018
250	40	83	157	322	482	928	1 479	2 615	5 333
300	36	75	142	291	437	841	1 340	2 369	4 832
350	33	69	131	268	402	774	1 233	2 180	4 446
400	31	64	121	249	374	720	1 147	2 028	4 136
450	29	61	114	234	351	675	1 076	1 903	3 881
500	27	57	108	221	331	638	1 017	1 797	3 666
600	25	52	98	200	300	578	921	1 628	3 321
700	23	48	90	184	276	532	847	1 498	3 056
800	21	44	83	171	257	495	788	1 394	2 843
900	20	42	78	161	241	464	740	1 308	2 667
1 000	19	39	74	152	228	438	699	1 235	2 519
1 200	17	36	67	138	206	397	633	1 119	2 283
1 400	16	33	62	127	190	365	582	1 030	2 100
1 600	15	30	57	118	177	340	542	958	1 954
1 800	14	29	54	111	166	319	508	899	1 833
2 000	13	27	51	104	156	301	480	849	1 732

(Continued)

Gas Meter with Connection to Secondary Gas Line



CLEARANCES

FOR METER SET LOCATION:

1. A DIRECT UNOBSTRUCTED LINE FROM METER TO GAS MAIN, AND
2. 1 m EITHER SIDE OF RISER.

FROM VENT OUTLET:

THE FOLLOWING MUST BE 1 m FROM REGULATOR VENT:

1. NON-MECHANICAL (ATMOSPHERIC) AIR INTAKE,
2. APPLIANCE EXHAUST VENT FROM NON-GAS APPLIANCE, OR GAS DRYER EXHAUST VENT.
3. ELECTRICAL OUTLET, OPEN FLAME BBQ, OR
4. OTHER SOURCES OF POTENTIAL IGNITION, AND
5. ANY BUILDING OPENING, INCLUDING ALL DOORS AND WINDOWS.

MUST BE 1 m EITHER SIDE, TO A HEIGHT OF 4.5 m AWAY FROM REGULATOR VENT OUTLET:

1. AN APPLIANCE EXHAUST OUTLET. (NOTE: KEEP DIRECT VENT FURNACE AND BOILER VENTS THAT CAN CAUSE ICE BUILD UP AWAY FROM GAS METER LOCATION REGARDLESS OF HEIGHT).

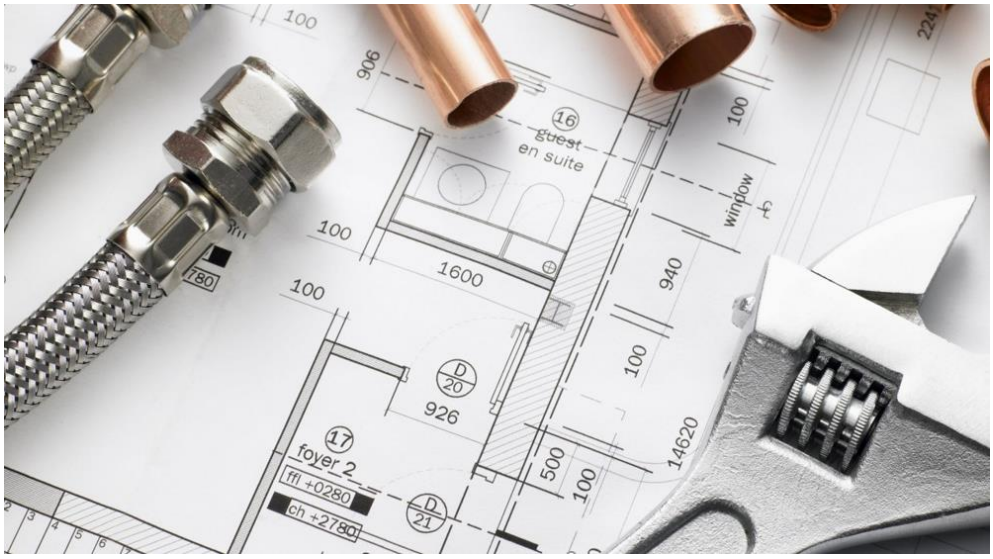
MUST BE 3 m RADIALLY AWAY FROM VENT AND, 1 METRE EITHER SIDE, TO A HEIGHTH OF 4.5 m ABOVE THE 3 m RADIUS:

1. A MECHANICAL (FAN ASSISTED) AIR INTAKE.

MUST BE HIGHER FROM VENT TO OVERHANG, THAN DEPTH OF OVERHANG.

NOTE: VENT MAY BE PIPED TO A MORE SUITABLE LOCATION, BY REMOVING THE BUG SCREEN FROM VENT OUTLET AND THREADING IN AN ELBOW TO DIRECT VENT PIPING AWAY. REMEMBER TO REINSTALL BUG SCREEN INTO DOWN TURNED ELBOW AT END OF VENT LINE.

RESIDENTIAL PLUMBING INFORMATION



Planning your rough-in plumbing

Plumbing requires a lot of planning. You first need to make a list of all the fixtures that need to be connected to the water supply, and determine their precise location. Rough-in plumbing includes all water, drainage and vent piping, including the piping under the floor.

Legally, you can do rough plumbing work yourself, but you need to comply with plumbing codes and municipal standards dealing with such things as connections to the municipal water supply system, and materials used for drain pipes.

Plumbing Materials

Water systems can be plastic or copper pipe and fittings. The choice is yours.

PEX, a new arrival in plumbing materials, is used more and more in the manufacturing of supply pipe and features good durability, more flexibility, and can be connected without soldering.

The drainage network is made of ABS (acrylonitrile-butadiene-styrene plastic), or PVC pipe, a very rigid plastic which has replaced the cast iron pipe. Special glue is required to assemble this material.

The Plumbing Plan

Draw your plan from the list of the fixtures (toilets, showers, wash basins, sinks, outside taps, etc) and electrical appliances you think you may want to add in the near future.

The plumbing plan includes:

- water distribution system;
- drainage system;
- vent lines

Water Distribution System

Water is brought to your house under pressure through a ¾ in. or 1 in. pipe which is connected to the main shut-off. It splits into two separate pipes (one for hot water, one for cold water) coming out of the water heater. From that point on, these two lines run through the house, side by side, and connect to the various fixtures and appliances. On your plan, locate the water heater in the basement, as close as possible to the chimney. Keep in mind the water distribution system to the main fixtures and appliances for the kitchen and bathrooms in order to minimize the length of the required pipes.

Water heater shut off

Install a shut off at the inlet (cold water side) connection of the water heater so you can turn off the system in case of emergencies or for maintenance purposes.

Fixture shut offs

Install a shut-off designed to cut off the water supply only to the fixture to which it's attached (in case of an emergency or for maintenance or repair purposes). Toilets must have a shut off.

The DWV (Drainage, Waste and Vent) System

One main stack must run from the basement through to the attic. The minimum size must be 3 inches and increase to 4 inches before passing through the roof.

Main Cleanout

A main cleanout must be installed as soon as you enter the building.

The Vent Lines

The plumbing system could not do its job without air. Every trap requires a vent which in turn is connected to a network of other vents or may go separately and directly to the outdoors and must terminate through the roof. There are many different ways to vent fixture traps.

Vents balance the pressure in the pipes thus allowing P-traps to do their job. P-traps hold a small quantity of water in waste pipes which is used to stop sewer gases that would otherwise find their way back into the house. All sanitary fixtures are fitted with P-traps, except for toilets in which P-traps are integral.

PRIVATE SEWAGE SYSTEM INFORMATION

How safe, effective, and economical an onsite sewage system greatly depends on the installation, use and maintenance of the system. Properly used and maintained systems provide years of service. Proper use begins with waste disposal habits. Individuals determine how much, and what enters the system. Many of us were used to "just flushing and it went away", and had never heard of onsite sewage systems until we moved to a rural setting. Coming up with and sticking to proper use and maintenance guidelines will go a long way to maximizing the longevity of an onsite sewage system.

The suggestions outlined below are meant to give some insights into most conventional systems and help with developing proper use and maintenance habits. More sophisticated systems may require additional maintenance. For specific information about a particular system, contact Superior Safety Codes Inc.

Note: All systems should be designed and installed by a qualified and certified Private Sewage Installer.

Tips for Using Your Onsite Sewage System:

- Make efforts to minimize the amount of water that goes into the onsite sewage system; typical water use is about 227 litres (50 gallons) per day for each person. Try not to exceed that amount. Having a water meter installed will help you monitor your water use.

- Systems are designed to handle domestic wastewater. Things that do not break down easily (facial tissue, large amounts of vegetable scrapings, coffee grounds, chemicals, paints, oils, sanitary napkins, applicators, condoms, medicines, pesticides, poisons, strong disinfectants, etc.) can damage and substantially increase need for cleaning the septic tank.

- Restrict the use of in-sink garbage disposals. They add a large amount of organic and inorganic material to your sewage, which may exceed your system's capacity and cause it to fail.

- Do not pour grease or cooking oil down the drain (including toilet). Grease is hard to break down. It will eventually move plug drains and possibly your field.

- Keep your fixtures in good repair. A slow running toilet can add large amounts of water. A running toilet discharging ¼ gallon per minute will result in 360 gallons per day. This is more water than a sewage system for a 3-bedroom home is designed for. To test the toilet, put a few drops of food colouring in the toilet tank. If it shows up in the bowl, it is leaking. It may take as long as an hour for colour to show in the bowl.

Tips for Maintaining Your Onsite Sewage System

- Wastewaters "not included" in the system's design shall not be put into the system. This may include wastewater from:
    - foundation weeping tile drains,
    - a hot tub, spa or hydro massage bath exceeding a 2-person capacity,
    - a swimming pool,
    - an iron filter,
    - water conditioning equipment that generates excessive amounts of wastewater
- Have a diagram showing the location of your septic tank and disposal field.
- If not already in place, install watertight manhole extensions to simplify septic access.
- Make sure the access lids are structurally sound, secure and childproof.
- If access lids are buried, consider raising them above grade to facilitate access.
- Have the septic tank checked annually to determine how often the tank needs to be pumped out. (Typically, tanks are pumped out by a vacuum truck approximately every two years).
- If pumps are used in the system, have any pump screens cleaned (make sure they are re-installed) and have the control operations checked.
- Maintain adequate vegetative cover over the disposal field. Keep the grass trimmed.
- Direct eavestrough down spouts and other surface water flows away from the septic tank and disposal field.
- Systems are installed near the surface – keep automobiles and heavy equipment off of the system. The piping and septic tanks can be damaged by heavy traffic, and traffic will compact the ground reducing its ability to absorb sewage effluent. In winter, traffic (even from snowmobile paths) will drive frost into the system causing it to freeze.
- Do not plant a garden over a septic field.

Commonly asked questions:

1. Will I need to pump the tank?

Yes, every person using the plumbing system contributes solids that will accumulate in the septic tank. These solids (sludge) collect, and are digested very slowly by microorganisms in the anaerobic environment of the septic tank. Solids accumulate over a period of time and reduce the storage capacity of the septic chamber. This reduced storage capacity allows less time for the sewage to be in the tank so solids will not separate from the water as well. Also, there is a quantity of grease, soap curds and other materials that float on the surface of the liquid (scum). Both sludge and scum must be removed from the septic tank periodically and disposed of in a safe manner, usually by hiring a vacuum truck.

If a septic tank is not cleaned soon enough, suspended solids and organic materials will not settle out, and will be discharged into the soil absorption portion of a system. The additional suspended solids and organic material will clog the soil, eventually causing failure of the system. It can be very expensive to fix.

2. How will I know when to have the Septic Tank pumped out?

Tanks should be checked every year in the spring or early summer to determine how much sludge and scum has accumulated. The size of the septic tank and the waste received affects how often it needs to be pumped out. A septic tank with 300 mm of sludge in its first compartment is ready to be pumped out. Pumping a tank more often than is required is much better than leaving it to the last minute. Having the tank pumped out in the spring will allow the biological action to re-establish quicker during the warm summer months. It is not necessary to thoroughly scrub and flush the septic chamber until it is visibly clean. The small amount of sludge that remains on the floor and walls will "re-seed" the septic tank, and contribute to the establishment of its normal operation.

Vacuum trucks are available to pump out septic tanks. They are capable of doing an excellent job without spillage. (You might want to ask your neighbors who they use when they need their tank pumped, or look in the "Yellow Pages" under Septic Tank and Cleaning Systems – Cleaning). The pumper will take the septage to an approved site such as a municipal treatment plant. Inquire about where your pumped sewage will go. For more information, see the Private Sewage Handbook.

3. Are septic tank additives necessary?

No. These products include biologically based materials (bacteria, enzymes, and yeast), inorganic chemicals (acids and bases), or organic chemicals (including solvents). If the additives reduce the need for regular pumping of the septic tank, the question must be asked, "where did the septage go?" If the additive increases the level of biological activity in the tank, the additional digestion of the sludge can increase the amount of gas given off by the microorganisms digesting the solids. The gas bubbles up and can cause the suspended material in the sewage to be buoyed and not settle out in the tank as it should. It is then carried into the final soil port of the system and can plug the soil pores that accept the water. Other chemicals emulsify greases, which will then not float and be trapped as scum in the tank.

They will then flow out to the soil and plug the soil pores. Some of these products may contain chemicals that will damage the effluent absorption portion of the system and will percolate down through the soil to contaminate groundwater and nearby wells. Systems work on natural biological processes similar to composting.

4. Is special care needed for a disposal field?

Yes, there are things you can do to help maintain the disposal field. Disposal fields do not have an unlimited capacity. Limiting water use can help prevent hydraulically overloading a system. Once a disposal field is overloaded with water, the soil becomes saturated. Water moves slower through saturated soil and the oxygen is driven out of the soil. The aerobic soil microorganisms (and larger worms etc.) are driven away, slowing the digestion of the organic particles in the sewage where there is lack of air. Worms and other such insects that keep soil spaces open will also move out. Once saturated, the system will take a long time to recover. A continuously overburdened system will fail and is hard to rejuvenate.

Good water conservation practices and immediately repairing any leaky faucets or toilets can help reduce the amount of wastewater to be treated. Keep grass cut short and direct surface runoff water away from the field area. Do not allow heavy traffic over the disposal field area. Continued traffic, even things like snowmobiles, over disposal field or treatment mound during the winter can cause frost to go deeper into the ground and freeze the system.

5. Is your existing system effectively treating sewage?

Some older systems such as leaching cesspools do not provide adequate treatments. The cesspools were dug deep in the ground, so there is little biological activity and oxygen in the soil to properly treat the effluent. The bottom of the cesspool may also be close to a shallow water table, which would allow untreated sewage into the groundwater. Cesspools often had a large lid at or just below ground, which can create a hazard if the lid is not sound, as someone could fall into them. They were often built out of lumber, which can rot and collapse over time. If you have a cesspool, even if installed when codes allowed their use, you should consider replacing it to enhance the level of treatment you provide for your sewage, in order to prevent groundwater contamination.

Other older systems may not have been designed to treat the increased amount of sewage you now generate in your home. You need to consider the use your family puts on the system. Failures don't always result in effluent coming to the surface. Systems are not intended to simply dispose of sewage ("make it disappear"). Systems must adequately treat wastewater prior to its reintroduction into the environment (the ground water). Have your system evaluated and know what you have.

Private Sewage System Minimum Distances

If there is not a main building between the disposal system and the water course the minimum distance between the effluent disposal component of the private sewage system and the water course is 90 meters.

Septic tanks, sewage holding tanks or sewage effluent tanks shall not be located within:

- 10 meters (33 ft.) from any water source or water well;
- 10 meters (33 ft.) from any water course;
- 1 meter (3.25 ft.) from any property line, and
- 1 meter (3.25 ft.) from any building.

A disposal field, measured from any part of a weeping lateral trench shall not be located within:

- 1.5 meters (5 ft.) from any property line;
- 100 meters (330 ft.) from a municipal licensed water well;
- 10 meters (33 ft.) from any basement or cellar;
- 15 meters (50 ft.) from any water source or water well;
- 15 meters (50 ft.) from any water course, except as provided in Article 2.1.2.4;
- 1 meter (3.25 ft.) from any non-basement building; and
- 5 meters (17 ft.) from a septic tank.

A treatment mound shall not be located within:

- 3 meters from any property line;
- 100 meters (330 ft.) from a municipal licensed water well
- 15 meters from any water source or water well;
- 15 meters from any water course;
- 3 meters from a septic tank;
- 10 meters from any basement or cellar; and
- 10 meters from any (non-basement) building.

An effluent discharge to the ground surface shall not be located within:

- 50 meters (165 ft.) from any water source or water well;
- 100 meters (330 ft.) from a municipal licensed water well;
- 45 meters (150 ft.) from any water course, except as required by article 2.1.2.4;
- 45 meters (150 ft.) from a building; and
- 90 meters (300 ft.) from any boundary property line.

An open discharge system shall not be installed on a property located within a quarter section where **more than 4** parcels, excluding the remnant of the parcel, have been subdivided out of the quarter section.

A lagoon serving a single-family dwelling or duplex shall not be located within:

- 100 meters (330 ft.) from any water source or water well;
- 100 meters (330 ft.) from a municipal licensed water well;
- 90 meters (300 ft.) from any water course;
- 30 meters (100 ft.) from any property line, and
- 45 meters (150 ft.) from a building.

LFH At-grade systems shall not be located within:

- 15 meters (50 ft.) of a water source or water well;
- 100 meters (330 ft.) from a municipal licensed water well;
- 15 meters (50 ft.) of a water course, except as restricted in Article 2.1.2.4;
- 3 meters (10 ft.) of a property line where the ground is level or less than 1% slope;
- 6 meters (20 ft.) of a property line where the slope is 1% or more;
- 3 meters (10 ft.) from any tank installed with this system, and
- 10 meters (33 ft.) of a building.

Definitions:
Water Source – a man-made or natural source of potable water.
Water Course – a river, stream, lake, creek, swamp, marsh or other natural body of water marked by the shore, or a canal, reservoir or other man-made surface feature intended to contain water for a specified use, whether it contains or conveys water continuously or intermittently, but not does not include surface water run-off drainage ditches, such as those found at the side of roads.

NON-RESIDENTIAL BUILDING INFORMATION

Submission Requirements

In order to issue a building permit, the applicant must submit:

- The number of complete sets of construction drawings (typically two) required is determined by the authority having jurisdiction. The drawings are to include but are not limited to, the building classification, elevations, floor plans, foundation details, cross section and site plan.
- Completed permit application.
- Energy Efficiency Documentation.
- Engineer's Schedules, when applicable.
- Method of payment.
- Copy of the Municipal Development Permit.
- Detailed Site plan.

Drawings

The information presented in this document are guidelines only that deal primarily in determining the basic building structure requirements relative to building size and classification. Other requirements in the code such as barrier free standards, health, safety measures at construction site, multiple occupancies, heating and ventilation, interior fire separations and safety in general must also be considered.

If you have questions or require assistance regarding code or permit requirements, please contact Superior Safety Codes Inc.

Building Classification and Professional Involvement Information

Permits are required on any building that falls under the scope of the Alberta Building Code. A building permit must be obtained prior to the start of construction. Other required permits that may be required are Electrical, Plumbing, Gas and Private Sewage Disposal.

Building Classification and Professional Involvement Information

Reminders: Professional Involvement for Part 9 or Part 3 buildings

- Where required in Part 2 of the Alberta Building Code, for buildings requiring professional involvement, Schedules A1, A2, B1, and B2 must be submitted.
- If drawings are required to be imprinted with the seals or stamps of a registered architect or a professional engineer, the drawings must sealed or stamped by the respective professional.

The building classification (type of occupancy) building area, building height, and the number of stories must be identified to determine the following:

- Construction material required - combustible or non-combustible.
- Fire resistance ratings for floors, roof, and load-bearing wall, columns, beams etc.
- Numbers and location of exits.
- Requirements for fire protection such as sprinkler, fire alarm, standpipe systems, hydrants.
- Water supply for fire fighting.

The following benefits may help you determine construction methods for your project.

Firewalls

Firewalls may be used to divide one building into two or more smaller buildings so that less restrictive code requirements may apply. The results:

- Reduces building areas that may eliminate the need for sprinkler/fire alarm system.
- Water supply for fire fighting may be eliminated.
- May be used to separate major occupancies that are otherwise prohibited by the code to be in the same building.
- To have the option to choose from combustible or non-combustible construction.
- May be used to keep the building under Part 9 of the code except for A, B, and F1 occupancies.

Masonry Firewall

Sprinkler Systems

- Allows construction of larger buildings using combustible material.
- Eliminates certain types of roof assembly's fire resistance rating.
- Eliminate certain room fire rated separations.
- Increases limits of surface flame spread rating.
- Can reduce the required fire resistance rating of exposing building face, increases the area of unprotected openings, and/or reduce the limiting distance.
- Increases exit travel distance and permits larger room floor area.
- An appropriate sprinkler system allows bigger size of glazing in interior fire separations, and in some cases, it may be possible to allow windows in exposed building faces.
- Sprinkler systems allow for more design options in buildings such as interconnected floor spaces and exiting through lobbies, which would otherwise not be permitted in the Alberta Building Code.

Sprinklers

Non-Combustible Construction

- Allows increased building size.
- In some cases, eliminates fire resistance rating of roof, floor, mezzanine, and supporting elements.
- Decreases limiting distance for exposed building faces with proper fire resistance rating.
- Note: Fabrication and Erection of Steel shall be done by a certified welder under the Canadian Welding Bureau.

Non-combustible construction

Professional Involvement Chart

Professional Seal Requirements of the Alberta Building Code

Classification Division B Group A, B 2.4.2.1.(1)(a)	Max 300 m^2	Max 150 m^2 Max 150 m^2	Max 100 m^2 Max 100 m^2 Max 100 m^2	Three Storeys Max	[1]Seals/ Stamps Not Required
	> 300 m^2	> 150 m^2 > 150 m^2	> 100 m^2 > 100 m^2 >100 m^2	More Than Three Storeys	[2]Architect and Engineer
Classification Division B Group C 2.4.2.1.(2)(b)	Max Units: 4	Dwelling	Single Family		[1]Seals/ Stamps Not Required
	Apartments or Similar 2.4.2.1.(3)(a) **[3]5 to 20 Dwelling Units**			Three Storeys Max	[2]Architect or Engineer
	2.4.2.1.(3)(a) **More Than 20 Dwelling Units**			More Than Three Storeys	[2]Architect and Engineer
	Hotel, Motel or Similar 2.3.3.1.(2)(d) Max 400 m^2	Max 200 m^2 Max 200 m^2	Max 130 m^2 Max 130 m^2 Max 130 m^2	Three Storeys Max	[1]Seals/ Stamps Not Required
	Hotel, Motel or Similar 2.4.2.1.(2)(c) > 400 m^2	> 200 m^2 > 200 m^2	> 130 m^2 > 130 m^2 > 130 m^2	More Than Three Storeys	[2]Architect and Engineer
Classification Division B Group D, E 2.4.2.1.(2)(d)	Max 500 m^2	Max 250 m^2 Max 250 m^2	Max 165 m^2 Max 165 m^2 Max 165 m^2	Three Storeys Max	[1]Seals/ Stamps Not Required
	> 500 m^2	> 250 m^2 > 250 m^2	> 165 m^2 > 165 m^2 > 165 m^2	More Than Three Storeys	[2]Architect and Engineer

Classification Division B Group F 2.4.1.2.(2)(d)					
Max 500 m^2	Max 250 m^2 Max 250 m^2	Max 165 m^2 Max 165 m^2 Max 165 m^2	Three Storeys Max	[1]Seals/ Stamps Not Required
> 500 m^2	> 250 m^2 > 250 m^2	> 165 m^2 > 165 m^2 > 165 m^2	More Than Three Storeys	Architect or Engineer
Occupant load designed: Greater than 28 m^2 / person				
> 500 m^2	> 250 m^2 > 250 m^2	> 165 m^2 > 165 m^2 > 165 m^2	More Than Three Storeys	[2]Architect and Engineer
Occupant load designed: Less than 28 m^2 / person				

Mixed Occupancies
2.4.2.1.(3)(c)

Occupant load designed: Greater than 28 m^2 / person
Major Use Must be Group F Occupancy
Other occupancy not to exceed 400 m^2
Total on all floor areas, 500 m^2

Group F Major Occupancy	Other Occupancy

Notes to Chart:

1) Professional Seals/Stamps may be required if the complexity of a project may give rise to special safety concern or structural part(s) of a building that are not prescribe under the acceptable provisions of Division B, Part 9 of ABC.

2) The owner/registered professionals are also required to submit to the Authority Having Jurisdiction Schedules A-1, A-2, B-1, and B2 prior to the issuance of building permit.

General Notes

- **Building area means the greatest horizontal area of a building above grade within the outside surface of the exterior walls of the building or within the outside surface of exterior walls and center line of firewalls.**
- **Building height means the number of storeys contained between the roof and the floor of the first storey.**
- **This Chart is a quick reference to determine professional involvement requirements relative to the size of building in terms of the building area, building height, and building classification.**
- **For detailed application of this chart, please consult with Superior Safety Codes Inc.**