

Secondary Suite Design Guide Development Services

Secondary Suite Design Guide

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A secondary suite is a second self-contained dwelling unit that is located within a primary dwelling unit, where both dwelling units are registered under the same land title. A suite may be located in a Single Detached House, a Semi-detached or Duplex House, or a Row House. A <u>secondary suite</u> is commonly below the principal dwelling unit of the House, but may be on the same level as or above it and may have more than one storey.

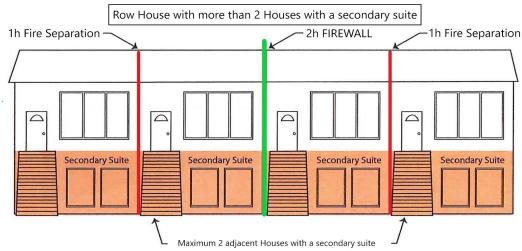
Each unit in a Semi-detached House or Row House is considered a "House" for this purpose. A House may not contain more than two dwelling units: the main home, referred to in this guide as the principal dwelling, and the secondary suite, as well as any common spaces such as storage, service rooms, laundry or halls and stairs used for access and egress (exit) routes.

If you intend to add a secondary suite in future, be certain to review the **<u>Suite Rough-In</u>** section.

Firewall requirements in a Row House

There is a limit of two Row House units with a secondary suite in a Row House unless it is constructed with a firewall such that no more than two secondary suites will exist (in addition to the principal dwelling units) between firewalls, firewall and end wall, or end walls of the structure. This firewall requirement is more stringent than the typical 1h fire-resistance rated separation party wall in a Row House that contains no more than two Houses with a secondary suite in the entire building.

A firewall is a robust type of non-combustible fire separation designed to remain standing if part of the structure on one side of it collapses in a fire. Establishing a firewall after the Row House is constructed is impractical and so an alternative solution would be required to provide an equal or better level of safety and performance to a firewall. See Letter of Acknowledgement re: NBC(AE):B:9.10.11.2. if you wish to proceed with new Row House construction without firewall provisions or construct one or two Houses only with a secondary suite in an existing Row House. Where required firewall(s) design is a gypsum shaftliner "area separation wall" system, review potential solution in Policy 19-03 - Area Separation Walls about systems using non-loadbearing protective walls. Other types of firewalls require engineering review and consideration of parapets, combustible projections, etc., per NBC(AE).



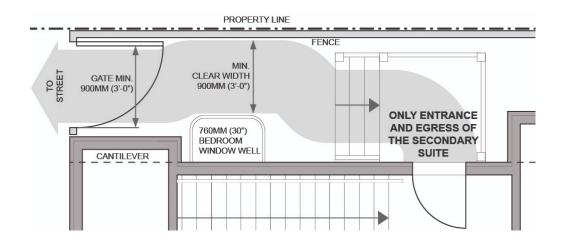
Note: Apartment buildings per NBC(AE):B:9.10.14. have more than two dwelling units and thus may not have secondary suites. Note: Row Houses with 5 or more dwelling units require professional involvement per NBC(AE):C:2.4.2.1.(3), however 2.4.2.1.(1) indicates secondary suites are not to be considered as dwelling units when calculating the total number of dwelling units.

Source: National Building Code-2019 Alberta Edition and NRC. Every project is unique. Commentary and clarification is for information only and may not apply to conditions or circumstances specific to a particular project. Refer to NBC-2019AE for exact wording and final determination of compliance. 21 November 2023

Exterior access and egress/exit planning

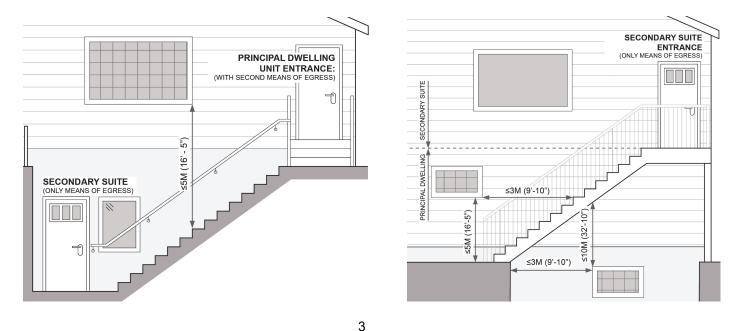
A 'means of egress' is the route from anywhere in a building to the exterior ground level and from there to a safe place such as a public roadway.

Where a secondary suite cannot be accessed by emergency responders (fire or ambulance) through the principal dwelling main door, ensure an exterior 900 mm clear width path is available from the street to the suite entrance door. Any gate along this path must be non-locking and capable of opening to 900 mm (see figure below).



A suite exterior exit doorway, passageway and stair (or ramp) exposed to a window or hazard from the common area or other suite in a House with a secondary suite will need to be protected if there is not an alternate means of egress from the suite. Specifics are discussed here:

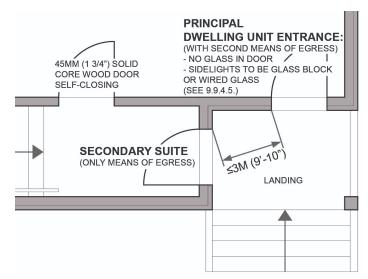
If there is not a second 'means of egress' **other than by an exterior exit stair**, then that stair must be protected from all the windows of the other dwelling and common spaces located within 3m (10') horizontally of the exit stair, below it, or up to 5m above it. This also applies to windows in exterior doors, and also applies to an exterior exit ramp (see figures below; NBC(AE):B:9.9.4.4.)



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If there is not a second 'means of egress' **other than by a single exterior exit door**, then that door must be protected from all windows of the other dwelling and common spaces located within 3m (10') horizontally of the exit door(s) in facing walls or walls built at angles < 135°. This also applies to windows in exterior doors (see figure on the right; NBC(AE):B:9.9.4.6.)

If there is not a second 'means of egress' **other than by an exterior deck or veranda platform passageway** that is located more than 1.5m (5') above the finished ground level, where one dwelling is located above the other dwelling or



common spaces, then that passageway must be protected from windows of the other dwelling and common spaces below it by building the passageway with minimum ³/₄h fire-resistance-rated floor assembly **or** provide more than one exit stair (or ramp), i.e., provide two ways off the passageway, in opposite directions, so there is an alternate route to safely get down to ground level. (see NBC(AE):B:9.9.9.3.)

Protection of window openings may be with wired glass (per NBC(AE):B:9.10.13.5.), or glass block (per NBC(AE):B:9.10.13.7). 20-minute fire-protection rated labeled closures--rated windows, doors or shutters tested in accordance with NBC(AE):B:9.10.3.1. and installed and maintained per NFPA-80 and the manufacturer installation instructions--are also acceptable. Establishing a desirable protective measure after the House is constructed is sometimes impractical and so an alternative solution would be required to provide an equal or better level of safety and performance to the window openings protection; for example, sprinkler-protection may be considered.

Interior access and egress/exit for a secondary suite

The access and exit from each dwelling may not be through the other dwelling or through a service room. All rooms that make up a secondary suite are to be contained within the suite, and not accessed by moving through common areas or the principal dwelling. Ensure that

- any **hall**, **corridor or passageway** within a suite or in the common space is to be unobstructed clear width ≥ 860mm (34"),
- unobstructed clear height of the walking surface leading to the exterior, including over the stairs, \geq 1.95m except that the clear height may be \geq 1.85m under beams/ducts; an obstruction is anything projecting into required minimum provisions (width X height),
- any doorway providing access to exit and exit from a secondary suite is
 - ≥ 1980mm (78") high,
 - ≥ 810mm (32") wide, and
 - may swing inward.

Egress from sleeping rooms

Every room intended for sleeping in an unsprinklered building requires emergency egress: a door to the exterior OR <u>egress window</u>, <u>as shown here</u>, with the following characteristics:

- openable from the inside without removing sashes or any hardware and without keys, tools or special knowledge,
- any security bars and exterior protective cover must open from inside without keys, tools or special knowledge,
- the window has to remain open on its own and have an unobstructed area ≥0.35m2 (3.77ft² or 543in²) with any/all dimensions ≥ 380mm (15"), and
- any **window well** must extend ≥ 760mm (30") ahead of the window or outward-swinging sash.

Two or more areas are considered a combination room if the opening between the areas occupies the **larger** of $3m^2$ or $\ge 40\%$ of the area of the wall measured on the side of the dependent area. Where the dependent area is a bedroom, provide direct passage between the two areas.

Stairs, ramps and landings

Stair or ramp width is to be \ge 860mm (34"), measured from wall to wall with any projections into the 860mm width not exceeding 100mm (4") in total.

If there is 30" clear between typical obstructions such as a handrail and a wall opposite the handrail, the stair is usually acceptable.

Stair rise, the vertical nosing-to-nosing dimension, in all cases must be in the range of 125-200mm (5"-7%").

Stair run, the horizontal nosing-to-nosing dimension, for rectangular treads must be in the range 255-355mm (10"-14"),

Height over stairs, ramps or landings is

- measured vertically from a line drawn tangent to the tread/landing nosings to the lowest point overhead, and
- clear height must be ≥ 1950mm (76¾"), except it may be ≥1850mm (72¾") under beams and ducts in a secondary suite.

Spiral Stairs are permitted to be used as the means of egress from a floor area serving no more than 3 persons (see NBC(AE):B:9.8.4.7.).

A **landing** as wide as the flight that leads to it is required, so \geq 860mm (34") minimum follows on stair width. Where another flight leads to the same landing, that would also result in a dimension \geq 860mm. Hence, the minimum landing dimension inside a House with the secondary suite is 860mm each way. An exterior landing is required to be slightly larger at minimum 900mm long, and at least as wide as the stair which is \geq 860mm.

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Guards and handrails

Guards must be installed

- inside and outside where a difference >600mm (24") in elevation between a walking surface and a lower adjacent surface exists, where the walking surface is not against a non-climbable wall that is at least as high as the required guard,
- at sides of flights of steps >2 risers (or 400mm ramp rise) where there is no wall,
- at windows in flights of stairs or at landings <900mm (36") above the walking surface OR the window must be with non-openable, strengthened guard glass (labeled), or
- outside,where the ground slopes away at ≥1:2 (~30⁰) within 1.2m (48") of the step or ramp served by the guard.

Height of guards for flights of steps or for landings is

- measured vertically from a line drawn through the leading edge of treads to top of guard,
- ≥900mm (36") from walking surface to top of the guard for any location inside the House with a secondary suite,
- ≥1070mm (42") from the walking surface outside the House, except ≥900 (36") where the difference between the walking surface and a lower adjacent surface is ≤1800mm (71").

Openings in guards are to prevent

- passage of a 100mm diameter sphere where a guard is required, and
- where a guard is not required, passage of a 100mm diameter sphere OR have openings that will permit the passage of a 200mm spherical object to reduce risk of entrapment in the guard.

Design of guards must be engineered **unless** the construction provides demonstrated effective performance, as most commonly-accepted wood guards of workmanlike construction do. Any aluminum, steel, vinyl, composite, and/or glass guard/handrail system must have CCMC evaluation approval, documentation, or engineering indicating compliance with current NBC(AE). No member, attachment or opening between 140mm and 900mm above the walking surface being guarded may facilitate climbing on a guard protecting a level more than 4.2m (13'9") above the adjacent level.

Handrails must be

- graspable and with no obstruction on or above them to break a handhold,
- with \geq 50mm (2") clearance to the guard or wall (\geq 60mm if the surface is rough/abrasive),
- continuous from floor level to any intermediate landings, and through any stair winder, and
- connected to wall/support \leq 300mm (12") from ends and \leq 1.2m (4') between OR engineered.

Height of handrails for flights of steps is

- measured vertically from a line drawn through the leading edge of treads to top of handrail,
- 865mm (34") to 1070mm (42") except 865mm to 965mm for a ramp. Extra handrails, e.g., for children, may be outside this range.

No handrail is required where a flight of steps is 1, 2 or 3 risers from landing to landing, landing to floor, or on a ramp with a rise \leq 400mm (16").

Heating, Ventilating and Air Conditioning (HVAC) systems

A separate, independently-controlled heating/ventilation system must serve the secondary suite, and may not be interconnected/ducted with the remainder of the house. A heat source alone, without ventilation, is not sufficient. The typical solutions are:

- a separate forced-air furnace for the suite, with independent, dedicated ductwork,
- hydronic radiant heating and independent ventilation such as heat recovery ventilator (HRV), or
- electric baseboard heating with independent ventilation such as an HRV.

Ventilation air is filtered, heated fresh air to provide acceptable indoor air quality. Ventilation air is not required in common spaces. Ventilation is often provided through an insulated fresh air duct from outside to the return air duct of the forced-air furnace system where it is warmed and then distributed throughout the space served by the forced air furnace. A primary ventilation fan must be installed; this exhaust fan must be interlocked with the forced-air furnace to introduce a balanced amount of ventilation air into the suite through the fresh air duct. Kitchen and bathroom exhaust fans must be installed to remove smoke, steam, heat and odours.

A Heat Recovery Ventilator (HRV) or Energy Recovery Ventilation (ERV) is another common solution to satisfy the need for ventilation supply and exhausting air.

Make-up air is replacement air to prevent excessive depressurization, required to compensate for the operation of appliances and exhaust equipment such as kitchen and bath fans, fireplace, clothes dryer, built-in vac, etc. An air exhaust system or a <u>non-direct-vent</u> fuel-burning appliance removes air from a house, creating a slight negative pressure inside. In certain cases the natural flow of air up a chimney can be reversed, leading to risk of carbon monoxide poisoning. Depressurization can also contribute to increased entry of soil gas (radon) through basement floor and wall cracks.

Newer or renovated houses are generally more tightly constructed than older ones, with less-draughty windows, newer weather stripping and caulking. This increases the probability that infiltration of air from joints and penetrations in the exterior walls of the house may not be able to supply enough air to compensate for simultaneous operation of exhaust fans, fireplaces, clothes dryers, furnaces and space heaters, so it's necessary to introduce preheated outdoor make-up air to the space.

Combustion air proportionate to combined btu/h input of all <u>non-direct-vent</u> fuel-burning appliances must be provided to the rooms containing the appliance(s).

Additionally, check that these miscellaneous conditions are satisfied in the House:

- no return air grilles or return air duct openings inside a furnace room,
- gas dryer vent pipe is galvanized, otherwise galvanized or aluminum; not corrugated flex duct,
- covers installed on hydronic or electric baseboard radiant heating,
- yellow-jacket CSST flex gas line is **not** permitted to connect directly to an appliance; a labelled factory-made flex gas connector is permitted from appliance to connection point behind it, and
- observe <u>cooktop clearance to cabinets</u> or hood fan listed here, with any over-the-range microwave/fan unit installed according to the manufacturer's directions.

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Electrical supply

A completed "<u>Electrical Inspection Load Calculation</u>" form must be submitted with this application before an electrical permit can be issued.

Alarms for smoke detection and carbon monoxide detection

<u>Smoke alarms</u> must be hardwired and located in:

- every bedroom AND in the hallway / between the bedrooms and the general floor area,
- common spaces including interior shared means of egress, and
- all ancillary spaces such as storage rooms, washroom, laundry room, or service/furnace/ mechanical rooms that are accessed from the common area (those **not** within the principal dwelling or the secondary suite).

Smoke alarms **must** be interconnected so when one sounds then all of them sound. Alarms that use a wireless interconnection system are acceptable, provided they conform with CAN/ULC-S531, "Smoke-Alarms" and are installed per manufacturer direction.

<u>Carbon monoxide alarms</u> must be located in a House that has an attached garage or any fuel-burning appliances (gas furnace, solid-fuel-burning fireplace, etc.) in:

- every bedroom **OR** in the hallway/within 5m of bedroom doors,
- service/furnace/mechanical rooms with gas-fired appliances not within the suite, and
- any room with a wood-burning fireplace, wood stove or other solid-fuel-burning appliance.

Carbon monoxide alarms in a House with a secondary suite **must** be interconnected so when one sounds then all of them sound. Alarms that use a wireless interconnection system are acceptable, provided they conform with CAN/CSA-6.19,"Residential Carbon Monoxide Alarming Devices" and are installed per manufacturer direction.

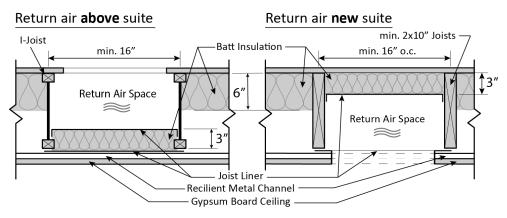
Sound Separation

Sound absorbing material (eg., batt insulation or cellulose fill) must be installed in walls and floor-ceiling assemblies between the secondary suite and the principal dwelling, as well as between the suite and non-suite space where noise may be generated (e.g., shared laundry, furnace room). Sound protection requirement is satisfied where

- ceiling cavities are filled with ≥150mm (6") thick batts or cellulose sound-absorbing material,
- wall cavities are filled (not overfilled) with batts or cellulose sound-absorbing material, and
- resilient channels ('sound bar') are installed on one side of the walls and on the underside of the floor-ceiling assemblies.

Return air runs through floor joist or wall stud cavities may not be blocked with, communicate with, or be exposed directly to fibre materials that may get into the airstream and circulate through occupied space. Use a joist liner to separate non-ducted return air space where resilient channel (sound-bar) and/or insulation is present. Where return air is non-ducted in a House with a secondary suite, it is acceptable to reduce the batt insulation to \geq 75mm (3") but isolate it from the airstream with joist liner, gypsum, etc. The HVAC installer needs to ensure that the remaining space is sized to allow sufficient air flow back to the furnace. In older homes with 2x8 floor joists or in large homes there may be a need to use two joist spaces for the return air to each furnace. An acceptable arrangement related to a secondary suite follows:

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Alternatively, select and construct an assembly

- with an STC rating ≥43, per the NBC(AE) 'Assembly and Sound Tables 9.10.3.1.-A / 9.10.3.1.B.', or
- with adjoining constructions which together provide an ASTC rating \geq 40.

Or, finally, if the assemblies already exist (e.g., ceiling in) or cannot be found in NBC(AE), provide an acoustical-engineer-stamped report prior to final inspection demonstrating ASTC ≥40 ASTC is achieved.

Confirm which compliance path is being followed on the <u>Sound Separation Declaration</u> form and provide it with the building permit application.

Fire protection

A continuous smoke-tight barrier of a minimum 12.7mm (½") thick standard gypsum board is required on the underside of floor-ceiling assemblies and on both sides of wall framing to separate:

- the principal dwelling and the secondary suite from each other,
- common spaces including interior shared means of egress from the rest of the house,
- storage, laundry, and other common-area ancillary rooms from the rest of the house, and
- **all** rooms containing any fuel-fired space-heating or cooling appliance, fuel-fired service water heater or gas laundry dryer from the rest of the house.

Doors in smoke-tight barriers must be minimum 45mm solid-core wood, with self-closer.

Structural and building changes

Changes to beams/columns/bearing walls/floor frame

To accommodate suite construction, a bearing wall may need to be removed and replaced with a beam, or perhaps a column location under an existing beam needs to be adjusted. Structural changes to a House may be made as part of the suite project. Clearly indicate the proposed changes on the drawings. Where structural changes are not strictly designed to Part 9 of NBC (AE) they need to be designed by an engineer.

Window openings, for egress or general improvement

Engineer-stamped design is required for changes to a foundation wall where any of the following conditions is present:

- the existing typical cast concrete foundation wall is degraded due to poor original quality/placement, age/soil conditions, adjacent driveway stresses or poorly drained soils subject to freeze-thaw cycling, and so on,
- enlarging an existing opening or making a new opening in a typical cast concrete foundation wall will result in a window opening more than 1.2m wide,

- enlarging an existing opening or making a new opening in a typical cast concrete foundation wall where a point load (from any beam or wall opening exceeding 3m in length) is above or within 300mm (12") of the proposed opening,
- the length of foundation wall remaining between any two window openings is less than the average of the widths of the two window openings,
- the sum of the widths of all openings on one foundation wall face after alteration will exceed 25% of that wall length, measured from interior side,
- a window opening is to be cut or enlarged in any PWF, ICF, precast, block or brick wall; OR
- a new basement-level entrance is proposed; engineer design is also required for the retaining wall and new and existing footing frost protection. Show plans for the steps up to grade, weeping tile provisions, and lower landing drains if not a covered entrance.

List any plans for work on these that may need attention before a suite can be established:

- Foundation repair
- Weeping tile installation or replacement
- Sump pit installation (any sump lid must be securely fastened down with a gasket seal)
- <u>Backwater valve installation</u> (requires a plumbing permit).

Health

Waterproof finish(es) shall be provided to a height of

- ≥1800mm (72") above the floor in a shower stall,
- \geq 1200m (48") above the rim of a bathtub equipped with a shower, and
- \geq 400mm (16") above the rim of a bathtub not equipped with a shower.

Joints between wall tiles and a bathtub are to be suitably caulked with mildew-resistant sealant. Glass other than safety glass shall not be used for a shower or bathtub enclosure.

Consult <u>Soil Gas Vent Termination</u> guidance to complete a soil gas/radon rough-in system, if desired, if testing has demonstrated actionable levels in the house. AHS regulations indicate requirements to address actionable levels of soil gas/radon detected in rental premises. See various established resources, like <u>The Lung Association</u> or <u>EvictRadon</u> for more information.

Operable windows require insect screens installed when open. Wall vent hoods and other exterior building envelope penetrations should be properly flashed and sealed so precipitation, insects and vermin cannot enter. Review the <u>Homeowner's Guide to Flood Prevention</u> for good property drainage tips.

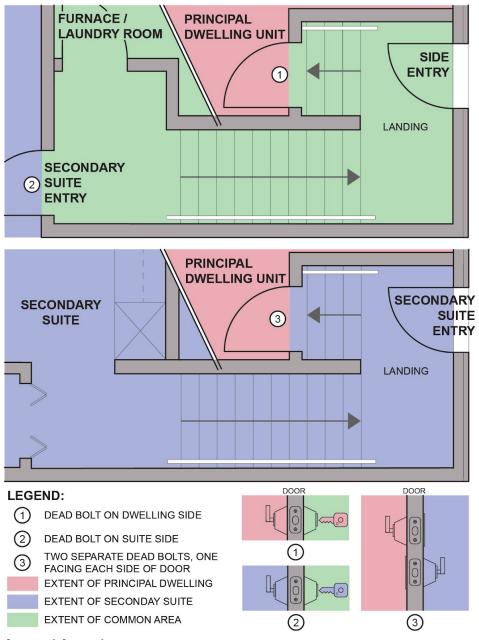
Security

Every entry door into a dwelling--principal dwelling or secondary suite--must be provided with a means of resistance to forced entry--typically a deadbolt lock (NBC(AE):B:9.7.5.2.). This applies to interior suite doors from the common area, and also applies to any door located directly between the principal dwelling and the secondary suite where there is no common area, which must have two separate deadbolts operable from opposite sides not using a common key, so that mutual agreement is required for the door between the two to be unsecured.

For example, if a suite entrance is locked off from the principal dwelling at an interior door such as at a back/side entry, so that the basement stair and entire basement is part of a basement

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secondary suite, then the 1¾" solid-core demising door at the top of the basement stair must have separate deadbolts operable from opposite sides not using a common key. (This is depicted in figures below.)



General considerations

The Landlord and Tenant Act and Public Health Act <u>Housing Regulation</u> governing rental accommodation, and the <u>Alberta Housing Regulation and Minimum Housing and Health</u> <u>Standards</u> help create conditions that enable a safe and harmonious relationship between all occupants of a House with a secondary suite.

"Notice of Entry" obligations of the Landlord and Tenant Act should come to mind when deciding the location of a water shut-off, furnace room and other facilities that may end up within the secondary suite. The building code does not dictate access; however, depending on circumstances, it may later prove a good idea to include some utility control /device relocation in the permit.

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Energy Efficiency

NBC(AE):B:9.36 Energy Efficiency applies to any house built with permits issued **after** 31 October 2016 and any further construction such as a secondary suite. Equipment is to conform to Table 9.36.3.10 and Table 9.36.4.2. Where the original house efficiency is determined by the performance path energy model, the provided mechanical system efficiencies are typically of higher efficiency than the minimum prescriptive efficiencies, and may **not** be reduced in the construction of the secondary suite without re-model of the House.

NBC(AE):B:9.36 does not apply to a house built with permits issued **prior** to 01 November 2016. Follow <u>Standata guidance</u> for component and system efficiencies. Generally, 9.25 thermal insulation, air barrier and vapour barrier requirements are the minimum permissible, though any lawfully-existing construction predating the minimum values may remain.

Additional information is under the heading <u>National Building Code - Alberta Edition 9.36 (NBC(AE)</u> <u>9.36</u>). For background and resources, see the <u>National Research Council Canada</u>, or established trade and industry sources such as "<u>BILD Alberta Codes</u>" (see edmonton.ca/energycodes).

Asbestos Management

Anyone proposing to alter a building shall provide plans and specifications describing any necessary asbestos management and abatement work to Alberta Occupational Health & Safety (OHS). Be prepared to provide confirmation to your trades and the permit office if asked whether asbestos-containing materials with the potential to release fibres have been dealt with per Alberta Occupational Health and Safety regulations (see NBC(AE):C:2.2.13.1.(6)).

OHS administers oversight of asbestos remediation **if** needed; <u>guidance is provided here</u>. The permit office does not issue permits for abatement work alone. Review the <u>Alberta Asbestos</u> <u>Abatement Manual</u> to learn about asbestos work in a homeowner-occupied house.

Fire Safety Plan

We recommend you review Fire Code-mandated <u>Fire Safety Planning For Construction</u>, <u>Renovation and Demolition Sites</u>, specifically for small buildings. It is the building permit holder's and owner's obligation to ensure measures are in place for the protection of persons on or about the work site.

New Home Buyer Warranty

<u>New Home Buyer Protection Act</u> does not apply to alterations to an existing House for a secondary suite that do not result in substantial above-basement level increase in floor area. You can get more information <u>here</u> if the secondary suite is part of a new addition project.

Inspections

All permits require inspection. A secondary suite may be constructed as part of a new house, or as a home improvement project to an existing house.

In a <u>New House</u> project, the secondary suite is included within the scope of the project and work is expected to proceed on the suite space at about the same rate as the rest. As <u>inspections generally</u> <u>follow project progress</u>, extra inspections for the suite-related parts may be needed if work lags. This applies to trades work as well as building permit-related progress.

In a <u>Home Improvement Project</u> involving construction of the secondary suite, an interim 'ready-to-cover' building inspection is required **in addition to and only after** respective trade rough-in inspections. This specific building inspection is intended to review work performed that is to be covered up by gypsum board and other concealing materials. The inspector should be able to see many of the elements discussed in this guide: access and egress provisions; sleeping room egress window; stairs and landings; smoke alarm and carbon monoxide alarm locations (not yet installed); any structural work (e.g., window openings, column or bearing wall modification, etc.); and sound protection provisions, including the resilient channel called when using the common prescriptive compliance path.

Work for a <u>Suite Rough-In</u>, where some work toward a future suite project is undertaken and documented, also requires inspection for a record of acceptable work at time of construction. Inspections will progress to the stage of work listed on the Suite Rough-In Checklist.

Sometimes a plan changes as work progresses. Some minor changes to plans and specifications for an issued Building Permit may be made after construction begins without engaging in the Permit Revision process. Review the <u>Part 9 Project Product Swap and Plan Revision Procedure</u> for details. Other changes are managed through the online <u>Permit Revision</u> process.

Ensure the requirements are met **before** requesting inspection, to avoid an infraction for not building according to plan.

Remember the general rule that work intended to be covered must first be inspected. Standard inspections can be requested under the 'INSPECTIONS' heading on the project dashboard at <u>SelfServe.edmonton.ca</u>, or by calling 311 (outside Edmonton, call 780-442-5311).

A set number of inspections is included in any permit, and extra inspection fees will be incurred if the limit is exceeded. Extra inspection can be requested by contacting the respective advisors: **HVAC tech desk** for concealed duct inspection or similar: <u>by email</u> or dial 780 496 3118 **Plumbing & Gas desk** for additional rough-in inspections or similar: <u>by email</u> or dial 780 496 3117 **Electrical tech desk** for additional rough-in inspections or similar: <u>by email</u> or dial 780 496 6674

Suite Rough-In Considerations

A project incorporating future-suite rough-in provisions requires forward-thinking planning and some construction done in advance to provide a future homeowner with an efficient and simplified path to creating or completing construction of a secondary suite within a house constructed in accordance with NBC2019AE:B:9.10.15., i.e., single detached, semi-detached or side-by-side row house dwelling unit.

Source: National Building Code-2019 Alberta Edition and NRC. Every project is unique. Commentary and clarification is for information only and may not apply to conditions or circumstances specific to a particular project. Refer to NBC-2019AE for exact wording and final determination of compliance. 21 November 2023

To capture specific information on projects that incorporate secondary suite rough-in design and construction provisions for **future completion** under **separate** permits, a rough-in checklist provides the current permit applicant, permit office and (future) homeowner with a consistent, shareable report of a planned path to creating or completing a secondary suite under a separate building permit application in future.

The checklist, intended to be separated out from this guide and submitted with the building permit application, identifies common key stages of suite planning and construction; the current building permit applicant is to indicate which work will be completed within this current building permit scope of work. Currently-proposed construction **and** future suite plans are to be shown on the suite rough-in plans and/or specifications for the specific address, for permit holder, permit office and future homeowner reference.

The current Zoning Bylaw requires that a Development Permit be approved before a secondary suite is constructed and operated. In the case of a suite rough-in project, the secondary suite may be operated as a separate dwelling unit only **after** future valid Development Permit approval and successful completion of all necessary future safety codes permits by a future homeowner. In addition to a mandatory Building Permit to complete the suite-related work, future trades permit requirement depends on the level of work remaining after the original permits, which document suite rough-in work, are successfully concluded. For clarity, **any permit or permit condition indicating that a project has suite rough-in is not permission to construct or operate a secondary suite, but rather represents a record of work undertaken in support of a future set of permits to construct and operate a secondary suite.**

In any dwelling unit, a wet bar or second/spice kitchen does not in itself constitute a secondary suite or separate dwelling unit, unless an attempt is made to operate that part of the house as a separate household or dwelling unit in contravention of the Zoning Bylaw and/or Safety Codes Act. In the context of a house, a "housekeeping unit or suite", "in-law suite", "granny flat" or any similarly-termed or intended self-contained accommodation is deemed equivalent to a dwelling unit. This unit must be constructed as a secondary suite to achieve minimum safety levels and avoid future enforcement of suite regulations when the current intended related party no longer occupies the space and a separate party moves in that is not part of the principal housekeeping unit.

The balance of work, being all work not listed in the checklist and inspected as having been completed, **must** be conducted under separate permits when the house owner elects to proceed to completion of this suite rough-in. This additional work **must** comply with any changes that may occur to plans, property, codes or bylaws after the permits that incorporate suite rough-in are completed.

Checklist is found on the next 6 pages ...

PRINT, COMPLETE, SIGN AND SUBMIT THIS CHECKLIST WITH BUILDING PERMIT APPLICATION This checklist represents Building Permit applicant confirmation of planning and partial construction to be done at time of a construction project, for a future secondary suite to be completed at a later date under separate but mandatory permits.

PLANNING Suite rough-in plans are to be submitted at time of application for permits for construction, clearly outlining the extent of work to be done with the current project, and must be recorded on this form as well. This record is subject to review and potential amendment at the time of the future mandatory Development Permit and Building Permit application to complete the suite, in the context of any changes that may have occurred to the plan, property, codes or bylaws. Code references are to Div B of the National Building Code - 2019 Alberta Edition (NBC2019(AE):B).
 Exterior access path from street to exterior door serving the future suite entrance planned to meet Access Guideline Exterior egress path fire exposure protection for the future suite space is addressed by A, B or C as indicated: A the principal dwelling and the future secondary suite both have at least 2 separate means of egress; OR B the entire building is served by an automatic fire sprinkler system; OR C these exit protections are confirmed: no exit stair/ramp passes near any glazing of the other dwelling or common spaces [9.9.4.4.]; and no exit door is exposed to nearby glazing of the other dwelling and common spaces [9.9.4.6.]; and no exit passageway deck/veranda/platform >1.5m (5') above the finished ground level is exposed to windows of the other dwelling and common spaces below it [9.9.9.3.] or has at least two ways off the passageway in opposite directions. Electrical service to and into the house is sized per the Load Calculation Form which must be submitted with the Description of the other dwelling form which must be submitted with the Description of the other dwelling form which must be submitted with the Description of the other dwelling form which must be submitted with the
 building permit application. Gas service to and into the house is sized for any additional planned suite loads. Egress window for emergency egress to exterior from every room used/intended to be used for sleeping is addressed by A or B as indicated: A no egress windows provided as the entire building is served by an automatic fire sprinkler system; OR B egress window (0.35m² minimum clear area with 380mm minimum dimensions) OR exterior door direct to outside from room.
 Egress window well specific requirement for below-grade egress windows is addressed by A,B or C as indicated: A no egress window wells required as there are no below-grade windows; OR B no egress window wells provided as the entire building is served by an automatic fire sprinkler system; OR C egress window well extends at least 760mm ahead of window/out-swinging sash for at least one window in each room used/intended to be used for sleeping.
 Interior access and egress paths do not pass through the other dwelling or a service room. Minimum dimensional requirements after finishes are planned and incorporated into the suite rough-in plan are addressed by all of A to D as indicated: A 860mm hall width in suite and common spaces, and stair width; and B 1950mm ceiling height in suite, common spaces and stair, with min 1850mm under ducts/beams; and C 1980mm height doorways of minimum 810mm width that do not swing over stairs for doors/doorways along the access to exit or at the exit; and
 D clearances to various appliances and fixtures to be installed in service rooms. Proposed heat source (forced air or electric furnace, etc.) is specified on the suite rough-in plan and aligns with an appropriate 9.36. energy efficiency path. Row house suite firewall requirement where there may be 3 or more suites in the row house is addressed by A, B, C or D as indicated: A not applicable - this project involves a single detached house or semi-detached house only; OR
 B firewall(s) constructed; OR C alternative solution to a firewall is submitted for review and recording as an Accepted Variance; OR D future possible firewall need acknowledged on <u>Firewall Acknowledgement Letter</u> submitted with building permit application, and no further provisions are made.

CONSTRUCTION per NBC2019(AE) of the proposed suite rough-in construction. Steps to be taken in conjunction with the current project, for both suite and common space:		
PARTITION FRAMING in wood [9.23.1.] or metal [9.24.1.] per suite rough-in plan submitted with building permit application.		
 SUITE SPACE includes future suite and its wall/floor/ceiling boundaries A no suite space interior and boundary partitions framed OR B partition framing of the suite space is done as follows: partially completed suite space framing (shown on suite rough-in plan) all suite space partitions framed bulkhead, furring, box-outs for installed duct, beam , etc. framed SOUND PROTECTION for walls and floor-ceiling assemblies bety 	 COMMON SPACE not contained within the suite space nor the principal dwelling A no common space partitions framed OR B partition framing of common space is done as follows: partially completed common space framing (shown on suiterough-in plan) all common space partitions framed bulkhead, furring, box-outs for installed duct, beam , etc. framed 	
may be generated [9.11.1.1.], per suite rough-in plan submitted with a building permit application. See <u>Secondary Suite Design</u> <u>Guide</u> section for Sound Protection for concealed duct and forced-air furnace return air space treatment suggestions.		
 no sound protection is yet installed for the suite space boundary to the other dwelling or to common space where noise may originate, <i>OR</i> sound protection is addressed by 1, 2 or 3 and done as follows: 1 prescriptive solution 6"+ thick batt/cellulose sound-absorbing material in floor-ceiling assembly batt/cellulose sound-absorbing material in wall framing resilient channel installed underside joists resilient channel installed one side of wall frame 2 assembly with minimum STC 43 provided or ASTC 40+ specified adjoining constructions, per <u>Sound Separation</u> <u>Confirmation</u> submitted with building permit application 3 acoustical sound test to be performed before final occupancy inspection, per <u>Sound Separation Confirmation</u> submitted with building permit application 		
FIRE & SMOKE PROTECTION of smoke-tight barrier of $\frac{1}{2}$ " gypsut taped and fasteners coated. Complete both columns as applicable	m board (floor-ceiling and on both sides of walls), with joints le.	
 SUITE SPACE includes future suite and its wall/floor/ceiling boundaries no fire- and smoke-protection gypsum board is installed <i>OR</i> installed gypsum board protection listed in 1, 2 and 3 and done as follows: 1 Service room within suite space is addressed by A or B as indicated: A no service rooms contained within the suite space <i>OR</i> B service room is contained within suite space and the following is done: no gypsum yet installed within the suite space service room suite space service room ceiling gypsum board installed suite space service room walls gypsum board fire taped suite space service room walls gypsum board fire taped General area within suite space is addressed by A or B as indicated: A no gypsum yet installed within the general suite space <i>OR</i> 	 COMMON SPACE not contained within the suite space or the principal dwelling no fire- and smoke-protection gypsum board is installed OR installed gypsum board protection listed in 1, 2, 3 and 4 and done as follows: 1 Common space stair and/or corridor is addressed by A or B as indicated: A there is no common space stair/corridor OR B common space stair/corridor exists and the following is done: no gypsum yet installed in the common space stair/corridor common stair/corridor space ceiling gypsum board installed common stair/corridor walls gypsum board fire taped common space stair/corridor walls gypsum board fire taped 2 Common space stair/corridor walls gypsum board fire taped a there are no common space service rooms OR 	

B the following is done:	B common space service rooms exist and the following is done:	
suite space general area ceiling gypsum board installed	no gypsum yet installed in the common space service rooms	
suite space general area ceiling gypsum board taped	common space service room ceiling gypsum board installed	
suite space general area walls gypsum board installed	common space service room ceiling gypsum board fire taped	
suite space general area walls gypsum board taped	common space service room walls gypsum board installed	
3 Bulkhead/furring, etc. for duct, beams, etc. is addressed by A or B	common space service room walls gypsum board fire taped	
as indicated:	3 Common ancillary space is addressed by A or B as indicated:	
A no bulkhead, furring, box-out, etc. is required OR	A there are no common space ancillary spaces OR	
B bulkhead/furring, etc. is called for and the following is done:	B common ancillary spaces exist and the following is done:	
no bulkhead/furring, etc. gypsum yet installed	no gypsum yet installed in the common ancillary space	
suite space bulkhead gypsum board installed	common ancillary space ceiling gypsum board installed	
suite space bulkhead gypsum board taped	common ancillary space ceiling gypsum board fire taped	
	common ancillary space walls gypsum board installed	
	common ancillary space walls gypsum board fire taped	
	4 Bulkhead/furring, etc. for duct, beams, etc. is addressed by A or B as indicated:	
	A no bulkhead, furring, box-out, etc. is required <i>OR</i>	
	B bulkhead/furring, etc. is called for and the following is done:	
	no bulkhead/furring gypsum yet installed	
	common space bulkhead/furring gypsum board installed	
	common space bulkhead/furring gypsum board taped	
DOORS in a smoke-tight barrier wall are required to be minimum 45mm solid-core wood (SCW), latching, and with self-closer, addressed by A or B as indicated:		
A no solid-core wood doors are required in the project O	R	
B solid-core wood doors are required, and the following	s done:	
no SCW doors yet installed		
SCW door to suite space service room(s) installed		
SCW door to suite space installed		
SCW door to the principal dwelling installed		
SCW doors for doorways through smoke-tight barriers s	erved from the common space installed	
ALARMS for smoke detection and carbon monoxide (CO) detect	ion, addressed by A or B as indicated :	
A only alarms required in absence of suite space installed	and operational; otherwise none done OR	
B additional smoke and CO alarms are required and the fo	ollowing is done:	
no provisions yet made for additional required alarms		
all required smoke and CO alarm wiring is roughed-in and labeled		
all required smoke alarms are interwired and operational		
all required CO alarms are interwired and operational		
SECURITY and PERSONAL PROTECTION in each dwelling is provided by a means of resistance to forced entry [9.7.5.2.] provided by A or B as indicated :		
A no interior locks required as there are no interior door.	vavs between the principal dwelling and suite space OP	
 A no interior locks required as there are no interior doorways between the principal dwelling and suite space OR B locks are required and the following is done: 		
no interior locks yet installed		
in the interior locks yet installed single-side keyed locks to SCW doors for suite space and principal dwelling doors from common space are installed		
single side koved lasks to SCW dears for suite space and	d principal dwolling doors from common space are installed	
	d principal dwelling doors from common space are installed ner way) and <i>not</i> sharing a key as there is no common space	

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TRADES PERMITS Depending on the level of work successfully inspected in each of the following disciplines, IF the applicable green highlighted text box is checked and work completed, no additional trade permit is required to complete that trade work.		
HVAC SYSTEMS duct and HRV circulation may not occur between principal and secondary suites; common areas do not require active ventilation systems.		
HEATING SYSTEM to serve the suite space is provided by 1, 2 or 3 as indicated:		
1 Forced air furnace heating/ventilating specified, and the following is done:		
🔲 no forced air furnace installation started		
supply/return ducts only installed for future tie-in to future furnace		
supply/return ducts only installed, tied to main furnace duct/plenum, requiring future modification		
separate furnace operational		
2 Hydronic Radiant Heating specified, and the following is done:		
no hydronic heat system installation yet started		
only boiler/approved hot water heater installed		
underfloor radiant lines installed, air-tested, capped, labeled, thermostats roughed-in		
underfloor radiant heating operational		
radiant wall heat system operational		
3 Electric Radiant Heating specified, and the following is done:		
no electrical heat system installation yet started		
conductors, thermostat(s) rough-in only		
electric radiant heating operational		
VENTILATING SYSTEMS listed in 1, 2, 3 and 4, and done as follows:		
1 General Venting to serve the suite space is provided as indicated:		
suite space forced-air furnace intended to provide general ventilation		
no general ventilation provisions yet installed		
suite space HRV or ERV piping roughed-in only, labeled		
suite space HRV or ERV system operational		
2 Bathroom Venting to serve the suite space is provided as indicated:		
no WC/bathroom ventilation provisions yet started		
exterior vent termination(s) completed		
only bath fan(s) duct rough-in completed to exterior		
bath fan(s) installed/vented/operational OR		
 HRV or ERV operational 3 Kitchen Venting to serve the suite space is provided as indicated: 		
 no kitchen ventilation provisions yet started exterior vent termination completed 		
kitchen fan duct rough-in only completed to exterior; labeled with max permissible fan cfm and reason for limitation		
kitchen canopy fan installed/vented/operational		
4 Clothes Dryer Venting to serve the suite space is addressed by A or B as indicated:		
A no dryer venting required OR		
B dryer venting required and the following is done:		
no dryer ventilation provisions yet started		
exterior vent termination completed		
dryer duct rough-in completed to exterior		
PLUMBING SYSTEM and GAS SYSTEM listed in 1 to 7		

1 Drains and venting is done as follows:
no underfloor wastewater drain provisions yet started
underfloor wastewater drains are rough-in installed, capped, labeled
above floor wastewater drains and venting are installed, capped and ready for fixture installation
2 Water supply is done as follows:
no water supply lines installed
hot and cold water supply lines are installed, connected to supply, valved and/or capped at termination points
3 Plumbing fixture connection:
no plumbing fixtures yet installed/connected to previously-inspected rough-in supplies/drains
shower or tub installed, connected to drain only/supply lines roughed-in
shower or tub installation [including bathtub/shower splash and wall protection within the BP]
water closet installation
lavatory installation
kitchen sink installation
4 Clothes Washer to serve the suite space is addressed by A or B as indicated:
A no dedicated suite clothes washer planned <i>OR</i>
B suite clothes washer to be provided for and the following is done:
no suite laundry provisions yet installed
suite laundry plumbing rough-in to drain/vent, to water supply lines (valves)
suite clothes washer installation
5 Gas supply to serve the suite space is addressed by A or B as indicated:
A no suite gas supply required OR
B suite gas supply required and the following is done:
no suite gas supply provisions yet started
gas supply piping installed; tested, valved, capped at termination, labeled
gas supply piping installed, <u>connected to supply</u> , tested, valved capped at termination point, labeled
6 Flue gas venting to serve the suite space is addressed by A or B as indicated:
A no suite flue gas venting is required OR
B suite flue gas venting required and the following is done:
no flue gas venting provisions for future appliances yet started
flue gas venting provisions for future appliances installed
7 Gas-fired appliance connection
gas-fired space heating and water-heating appliance installation
gas-fired decorative appliance installation (e.g., fireplace) - specify on plan
gas range or exterior barbecue connection to previously inspected gas piping
gas-fired clothes dryer appliance connection to previously inspected gas piping
ELECTRICAL SYSTEM listed in 1 and 2
The Load Calculation Form is completed and submitted.
1 Panel and service to serve the project is done as follows:
no electrical provisions started;
separate service/distribution panel and panel plug installed
subpanel installed and panel plug installed
2 Branch circuits to serve the suite space are done as follows:
only perimeter (frost wall) convenience receptacles operational

 some branch circuits roughed-in, shown on plan all branch circuits roughed-in, including kitchen receptacles, shown on plan some branch circuits for power and lighting operational, shown on plan receptacle installation complete light fixture final installation complete The balance of work, being all work not listed above as having been completed, must be conducted under separate permits when the house owner elects to proceed to completion of this suite rough-in project. A permit or permit condition indicating that a project has suite rough-in is not permission to construct or operate a secondary suite, but rather represents a record of work undertaken in support of a future set of permits to construct and operate a secondary suite.		
SIGNATURE OF BUILDING PERMIT APPLICANT	PRINT NAME	
CITY FILE NO. or PROJECT MUNICIPAL ADDRESS:	PRINT DATE:	
PRINT NOTES:		

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