



Fire/Accident Repair/Restoration - Typical Construction Notes

Codes (as applicable)

- 2018 International Residential Code & Northbrook Amendments
- 2017 National Electrical Code & Northbrook Amendments
- 2014 Illinois State Plumbing Code & Northbrook Amendments to 2012 International Plumbing Code
- 2018 International Mechanical Code & Northbrook Amendments
- 2018 International Fuel Gas Code & Northbrook Amendments
- 2018 International Fire Code (applicable for new residences & additions/alterations that have an existing fire protection system)-separate permit submittal/review required
- 2018 Illinois Energy Conservation Code

In an effort call your attention to some frequently overlooked code/construction requirements here in Northbrook, below are some code comments that may apply to your project and may not have been included on the attached permit drawings.

Number	Code Section	Comment
G1	<i>Applicable only for additions and alterations:</i>	If there is an existing fire protection system (sprinklers) in the residence, a separate Fire Protection Permit Application submittal is required to be submitted for review and approval.
A1	<i>2018 IRC R 302.5.1 Garage Opening Protection. Openings from a private garage directly into a room used for sleeping shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 1 3/8" in thickness, solid or honeycomb core steel doors not less than 1 3/8", or 20 minute fire rated doors, equipped with a self-closing device.</i>	If the door into the garage is being replaced, it must comply with the code requirements.
A2	<i>2018 IRC R 302.6 amended Garage Separation. All walls and ceilings of a garage adjacent to the residence to which it is attached shall be completely separated from the residence and its attic areas by means of 5/8" type x drywall applied to the garage side. All other walls shall be protected by 1/2 Inch drywall applied to the garage side.</i>	If the garage drywall is being replaced, it must comply with code requirements.
A3	<i>2018 IRC R314.2.2 Smoke Alarms -Alterations, repairs and additions. When alterations, repairs or additions requiring a permit occur, the individual dwelling unit shall be equipped with smoke alarms located as required for new dwellings; EXCEPTIONS: Work involving the exterior surfaces of dwellings, such as the replacement of roofing or siding, the addition or replacement of windows or doors, or the addition of a porch or deck. Or the installation, alteration or repairs of plumbing or mechanical systems. 2018 IRC Section R 314.3 Smoke Alarm Locations. Smoke alarms shall be installed in the following locations: in each sleeping room; Outside each separate sleeping area in the immediate vicinity of the bedrooms; On each additional story of the dwelling, including basements and habitable attics but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story</i>	Provide smoke alarms in all required locations.

below the upper level; Smoke alarms shall be installed not less than 3 feet horizontally from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by this section. See R314.3.1 for installation of alarms near cooking appliances.

*2018 IRC R314.4 **Interconnection.** Where more than one smoke alarm is required to be installed within an individual dwelling unit in accordance with R314.3 (Location), the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual dwelling unit. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.*

*2018 IRC R314.5 **Combination alarms.** Combination smoke and carbon monoxide alarms shall be permitted to be used in lieu of smoke alarms.*

*2018 IRC R314.6 **Power source.** Smoke alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and, when primary power interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection. Smoke alarms shall be permitted to be battery operated when installed in a building without commercial power or in a building that undergoes alterations, repairs or additions regulated by Section R314.2.2.*

A4	<i>2018 IRC R315 amended Carbon Monoxide Alarms - Carbon monoxide detectors shall be installed – within 15’ of bedrooms. Power source same as smoke detectors.</i>	Provide carbon monoxide alarms in all required locations.
A5	<i>2018 IRC R317.1 Protection Against Decay - Protection of wood and wood-based products from decay shall be provided in the following locations by the use of naturally durable wood or wood that is preservative-treated in accordance with AWPAC U1. [locations include but not limited to: sill and sleepers in contact with concrete or masonry slab, wood structural floor when closer than 18” to the exposed ground or in crawl spaces or unexcavated areas within the periphery of the building foundation, wood framing members that rest on concrete foundations -see code for all locations]</i>	Any new framed walls must have treated lumber (including the plate) where in contact with concrete.
A6	<i>2018 IRC Table R503.2.1.1(2) Subfloor.</i>	Any replaced subfloor must meet code requirements.
A7	<i>2018 IRC Section R803 Roof Sheathing</i>	Any replaced roof sheathing must meet code requirements.
A8	<i>2018 IRC R703.2 Water-resistive barrier. One layer of No. 15 asphalt felt, free from holes and breaks, complying with ASTM D226 for Type 1 felt or other approved weather resistive barrier shall be applied over studs or sheathing of all exterior walls. [See code for correct installation]</i>	Under any new siding or masonry veneer, provide a code approved weather resistive membrane.

A9 2018 IRC R703.4 **Flashing.** Approved corrosion-resistant flashing shall be applied shingle-fashion in such a manner to prevent entry of water into the wall cavity or penetration of water to the building structural framing components. The flashing shall extend to the surface of the exterior wall finish. Approved corrosion-resistant flashings shall be installed at all required locations including, but not limited to the following, exterior window and door openings, at the intersections of chimneys or other masonry construction with frame or stucco walls, under and the ends of masonry, wood or metal copings and sills, continuously above all projecting wood trim, where exterior porches, decks or stairs attach to a wall of floor assembly of wood-frame construction, at wall and roof intersections.

At locations of new siding/windows/roofing/etc., provide flashing as required.

A10 2018 IRC R 806.1 **Roof Ventilation.** Enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters shall have cross ventilation for each separate space by ventilating openings protected against the entrance of rain or snow. 2018 IRC R806.2 **Minimum vent area.** The minimum net free ventilation area shall not be less than 1/150 of the area of the vented space. 2018 IRC R806.3 **Vent and insulation clearance.** Where eave or cornice vents are installed, blocking, bridging and insulation shall not block the free flow of air. Not less than a 1" space shall be provided between the insulation and the roof sheathing and at the location of the vent. 2018 IRC R806.5 **Unvented attic and unvented enclosed rafter assemblies.** Unvented attics and unvented enclosed roof framing assemblies created by ceilings that are applied directly to the underside of the roof framing members and structural roof sheathing applied directly to the top of the roof framing members/rafters, shall be permitted under the following conditions... [see code for conditions]

If the roof structure is being rebuilt, or insulation replaced, provide attic venting per code.

A11 2018 IRC R905.1.2 **Ice Barriers.** An ice barrier that consists of at least two layers of underlayment cemented together or of a self-adhering polymer modified bitumen sheet, shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches inside the exterior wall line of the building, except for detached accessory structures that contain no conditioned floor area.

If the roof structure is being rebuilt, provide Ice Shield Underlayment per code. (Municipal Amendment R301.2(1) affirmative for Ice Shield Underlayment)

A12 2018 IECC **Energy Efficiency**

Any opened walls or ceilings are required to be **filled** with insulation **up to** the prescriptive requirement R values indicated in the code. (For your information these R-values represent common batt insulation values which fit in the respective cavities without compression - R15 in 2x4 walls; R20 in 2x6 walls; R49 in ceilings as feasible.)