

# Residential building permit and Plan review checklist

**IRC applications: 1 & 2 family dwellings & additions**

Date: \_\_\_\_\_

Application # \_\_\_\_\_

Address: \_\_\_\_\_

Date application received: \_\_\_\_\_

		Applicant	Staff
		<i>Location in application packet (Plan page number)</i>	<i>Plan review conformation</i>
<b>Non-construction Related items</b>	Zoning, land development, storm water management, highway occupancy, & water & sewer requirements have been met?		
<b>Comments:</b>			
<b>Detailed Site plans</b>	Drawn to scale, plans include property lines, public streets, rights of ways, sidewalks, public & private easements, existing & proposed buildings, driveways, swimming pools, patios, sheds/accessory structures, location of water & sewer laterals or onsite systems, exact dimensions from all existing & proposed improvements to all property lines		
<b>Comments:</b>			
<b>Detailed construction plans</b>	2 completed sets of construction plans provided		
	Plans indicate design construction code/edition		
	Plans indicate flood information if in flood zone		
	Plans indicate detailed information regarding lumber types, size & spacing		
	Identify any engineered building members such as roof trusses, floor joist systems or wall systems		
	Plans provide detailed information for plumbing, electrical, energy (efficiency) & mechanical work to be completed		
	If non-conventional elements are being used, provide signed & sealed design or reports		
<b>Comments:</b>			
<b>Building planning</b>	Appropriate climatic & geographic design criteria per IRC		
	Floor loading:		

<b>Building planning</b>	live-load for living areas = <b>40 psf</b> live-load for sleeping areas and attics = <b>30 psf</b> maximum for dead-loading = <b>20 psf</b>		
	Ground snow load = <b>25 psf</b>		
	Wind speed = <b>90 mph</b>		
	Seismic design category = <b>B</b>		
	Weathering of concrete probability = <b>severe</b>		
	Frost line depth = <b>36 inches</b>		
	Termite probability = <b>moderate to heavy</b>		
	Decay probability = <b>slight to moderate</b>		
	Winter design temperature = <b>10 degrees F</b>		
	Ice shield underlayment required = <b>yes</b>		
	Flood hazards = consult latest <b>FIRM &amp; FBFM</b>		
	Air freeze index = 784		
	Mean & annual temperature = 53.1 degrees F		
<b>Emergency escape &amp; rescue opening:</b> indicate required locations, sill height, openable height & width, openable area, operational specifications			
<b>Rooms &amp; area-</b> Identify every room with dimensions, ceiling heights & floor location			
<b>Stairs per PA. UCC:</b> <ol style="list-style-type: none"> <li>1. Maximum riser height 8-1/4 inches</li> <li>2. Maximum variation of riser height within a flight of stairs 3/8 inch</li> <li>3. Minimum tread depth 9 inches</li> <li>4. Maximum tread depth variation within a flight of stairs 3/8 inch</li> <li>5. Uniform tread projection of not more than 1-1/2 inches (solid risers)</li> <li>6. Stairway width 36" clear minimum</li> <li>7. Stairway headroom 6'-8" minimum</li> <li>8. Handrails allowed to project 3-1/2 inches from each side into required stairway width</li> </ol>			
<b>Comments:</b>			
<b>Energy efficiency</b>	Energy path being followed (Choose one)  <ol style="list-style-type: none"> <li>1. <input type="checkbox"/> IRC Chapter 11</li> <li>2. <input type="checkbox"/> International Energy Conservation Code</li> <li>3. <input type="checkbox"/> PA. Alternative</li> <li>4. <input type="checkbox"/> REScheck</li> </ol>		

	<b>Inspection R-Value &amp; type</b>  1. Ceiling _____ 2. Walls _____ 3. Floors _____ 4. Basement _____ 5. HVAC Ducts _____ 6. Pipe insulation _____ 7. Attic hatch _____		
	<b>U-Factor/SHGC ratings for windows &amp; doors</b>  1. Windows _____ 2. Doors _____		
	<b>Appliance &amp; plumbing fixture efficiencies</b>  1. Furnace/air conditioning 2. Water heater 3. Toilets 4. Air changes per minute 5. Thermostat controls		
	<b>Energy testing (Third-party)</b>  1. Air leakage testing report (blower door) 2. Duct sealing/pressure test report		
<b>Comments:</b>			
<b>Footings &amp; Foundations</b>	<b>Soil classification &amp; load bearing capacity</b>		
	<b>Soil conditions</b> -Type, virgin, rocky, high-water table or approved soil compaction testing/report		
	<b>Footing type</b> -trench, formed, monolithic pour		
	<b>Footing specifications</b> -depth, width, thickness, slope, stepped, sleeves & reinforcement information		
	<b>Foundations</b> -type, height, thickness, height of unbalanced backfill, reinforcement specifications, height above final grade, sill plate anchors (type, size & spacing), foundation drainage, slab on grade insulation, pipe sleeves & penetrations, damp proofing/water proofing & foundation ventilation		
<b>Comments:</b>			
<b>Framing</b>	<b>Floor framing</b> -joist type, size, spacing, spans, bearing dimensions, grade, species, crush blocking, rim board		

<b>Framing</b>	material, notching & boring, protection against decay and wood destroying insects, joist hangers, sill plates, sill seal installed,		
	<b>Sub-floor sheathing</b> - type, thickness, nailing patterns & gluing		
	<b>Load beams</b> - type, size, grade, support bearing & column/footing specifications & manufacturers specifications if steel or engineered wood		
	<b>Wall construction</b> -Stud size, species, grade, height, tie down straps, pressure treated sill plates & sill seal		
	<b>Wall bracing method</b> -type, locations, length, <b>if sheathing method</b> -thickness, locations, interior sheer walls, nail patterns & glue		
	<b>Window &amp; door openings</b> -size, locations, tempered glazing required, sill height, fall protection, openable area, specifications for emergency escape and rescue openings		
	<b>Windows &amp; door headers</b> -type of material, size, spans & bearing specifications		
	<b>Roof framing</b> -layout design, pitch, framing type, size, span, bearing specifications, species, grade, design-loads & engineered wood manufacturers specifications, snow loading, bracing, hangers, engineered trusses with stamped design, raised heel design & attachment to walls		
	<b>Roof sheathing</b> -type, thickness, nailing pattern, H-clips, fire-retardant sheathing locations with no penetrations		
	<b>Concealed spaces</b> do not exceed 1,000 square feet		
	<b>Attic &amp; crawl space access openings</b> properly sized according to code		
	<b>Notching &amp; boring</b> not exceeding code allowances		
	<b>Building wrap</b> -Installed is a required location, listed, sealed/taped at all penetrations/seams		
<b>Protection of wood</b> - against decay & wood destroying insects			
<b>Comments:</b>			
<b>Mechanical</b>	<b>HVAC</b> -type, size, location, efficiency, protected from damage, listed/labeled, ventilation air requirement & type of fuel		
	<b>Chimney &amp; vents</b> -type, size, construction, slope, height, clearances to combustibles & point of termination		
	<b>Condensate drainage</b> -piping material, size, slope, point of termination & overflow protection required		

<b>Mechanical</b>	<b>Fuel gas piping</b> -type, size, supply psi, support type & intervals, protected from damage, leak testing, sediment traps, shut off valves, enters structure above grade & complies with pipe sizing tables		
	<b>Clothes dryer exhaust</b> -duct size, material, length & point of termination		
	<b>Environmental air exhaust duct</b> -size, material, length & point of termination		
	<b>Supply, return &amp; ventilation air ductwork</b> -type, size, layout, return air locations, all habitable spaces provided with a source of heat, located in or out of heated envelope, insulation R-value, ductwork support type & intervals, seams & connections sealed & third-party leakage test approval		
	<b>Appliances</b> -combustion air requirements acceptable, accessible for service/repair/replacement, means if disconnecting electric power & fuel, source of ignition elevated 18 inches above finished floor in garages		
	<b>Exhaust fans</b> -capable of exhausting more than 400 cfm provided with make-up air		
	<b>Unvented room heaters</b> -proper room sizing to comply with manufacturers combustion air requirements, not installed in prohibited locations, 40,000 btu/h maximum size of any single unvented heater, 10,000 btu/h maximum in bedrooms, 6,000 btu/h in bathroom & unvented heaters cannot be only source of heat in a dwelling		
	<b>Addition</b> -provide design data to confirm current system can serve the additional heating load		
<i>Comments:</i>			
<b>Plumbing</b>	<b>Pipe location:</b> <input type="checkbox"/> above grade <input type="checkbox"/> below grade		
	<b>Type of pipe:</b> <input type="checkbox"/> supply <input type="checkbox"/> DWV <input type="checkbox"/> Gas		
	<b>Below grade DWV Pipe</b> -type, size, listing, slope, depth, cleanout location & accessibility, trap location/size, vent location/size, foundation sleeves/sealing, change of direction fittings, primer/glue type, leak testing, bedding & cover, separation & sewage/sump pits		
	<b>Below grade supply piping</b> - type, size, listing, valves & location, depth, foundation sleeves, freeze protection, backflow prevention, irrigation system,		

<b>Plumbing</b>	no private & public water cross-connections, leak testing, separation & bedding & cover		
	<b>Above grade DWV pipe</b> -type, size, listing, slope, cleanout location & accessibility, trap location/size, vent location/size, piping support & spacing, change of direction/fittings, protection from damage, freeze protection, primer/glue, air admittance valves & leak testing		
	<b>Above grade supply piping</b> -type, size, listing, insulation, pipe support intervals, backflow protection, shut-off valve location & accessibility, hot & cold-water pipe separation, freeze protection, protection from damage, no private & public water cross-connection, leak testing & no supply and wastewater connections		
	<b>Water heater</b> -type, size, location, efficiency, thermal expansion, TPR piping, accessible for service & replacement, drain pan required, protection from damage, ignition source 18 inches above finished garage floor, cold water shut-off valve, fuel shutoff valve/electric disconnect		
	<b>Plumbing fixtures</b> - final installation, vent, trap, adequate clearances, adequate water supply, adequate drainage, accessible for service or replacement, correct position of hot & cold on faucets, air-breaks, freeze proof sill faucets, energy code compliance & shower control valve/operation		
	<b>Source of potable water</b> -public, private, pump specifications, adequate clearance from sources of contamination, approved potable water testing report, water treatment systems & any non-potable water systems onsite		
	<b>Sumps &amp; ejectors</b> -pit size/capacity, specifications of pump, check valve, full port shut-off valve, venting, effluent level controls/alarms & point of discharge		
	<b>Radon system</b> , required? <input type="checkbox"/> YES <input type="checkbox"/> NO		
<b>Comments:</b>			
<b>Electrical</b>	<b>Service/panel</b> -location, amps, clearances, estimated load calculation, equipment listings, service disconnects & locations, conductor type/size, overhead or underground, depth of below grade conductors, clearances of overhead conductors, conduit type & size, bedding & cover, below grade warning ribbon, equipment mounting, grounding & bonding, equipment damage protection, below grade raceway seal, contact hazards, isolated grounds in		

<b>Electrical</b>	sub-panels, equipment work clearances/height above finished floor/grade, light source near panel, all circuits labeled, conductor bending space & enclosure type		
	<b>Wiring methods</b> -equipment attachments, correct type of conductors for location, correct type & size conductor/breaker, arc fault locations, ground fault locations, location, type & size of conduits, protection from damage, grounding/bonding, terminal listed for wire type/size, wire bending, conduit & box fill/installation, wet & damp locations, gas pipe bonding, enclosures/splices accessible for service, below grade cover requirements, stud & joist cavities used for air handling & cutting notching framing		
	<b>Required receptacle &amp; lighting circuits</b> - location & spacing of receptacles/type, location & spacing of lighting/type, Location of light switching, location of interconnected smoke & c/o detectors, 2–20-amp kitchen circuits, 20-amp bathroom, laundry & garage circuits, listings of devices, IC/airtight listed can lights		
	<b>Appliances</b> -location, load demand, location of disconnects, listings, conductor type/sizing, over-current protection, grounding/bonding, damage protection, wet or damp locations, clearances for servicing, pools & spas & equipment identification		
<b>Fire-blocking</b>	<b>Garage/dwelling separation</b> -fire resistance rating, from the dwelling/attic, habitable space above garage, no openings between garage & sleeping rooms, type of fire-stopping material/thickness, continuity, 20-minute fire-rated door, fire wall penetrations, structure supporting floor/ceiling assemblies used for separation		
	<b>Firewall between dwelling units</b> -type of material, fire resistance rating, continuity, continuous from foundation to roof deck, structural independence of townhouses, fire wall penetrations		
	<b>Exterior wall fire-rating</b> -separation to property line/other structures, opening type & size, penetration and projections		
	<b>Other fire-protected areas</b> -under stair protection, fire-protection of floors, draft/fire-stopping, listed fire-stopping materials, concealed spaces more than 1,000 square foot, insulation clearance to combustibles & flame spread ratings & smoke-developed index, foam plastic locations & quantity		
<b>Comments:</b>			

<b>Insulation &amp; ventilation</b>	<b>Exterior wall insulation</b> -type, R-value, thickness, listed building wrap & air leakage sealing		
	<b>Floor cavity insulation</b> -type, thickness, R-value, insulation against floor sheathing, adequately supported & vapor barrier against heated side		
	<b>Attic/Ceiling insulation</b> -type, thickness, R-value, vapor barrier against heated side, attic hatch insulation, fire spread rating & smoke developed index, sealed recess lighting & type IC if in contact with insulation & ventilation baffles in place		
	<b>Basement/crawl space wall insulation</b> -type, R-value, thickness, foam plastics insulation protected from fire, foam plastics insulation flame spread rating & smoke developed index		
	<b>Slab on grade</b> -slab edge insulation R-value & thickness, vapor barrier, heated slab insulation R-value & thickness		
	<b>Windows &amp; doors</b> -type, size, u-factor ratings, solar heat gain coefficient, air leakage & factory energy rating seals		
	<b>Water heater/piping</b> -type, size, location, efficiency rating on manufacturers seal, pipe insulation R-value, hot & cold supply piping separation & circulation pump		
	<b>Mechanical/HVAC</b> -type of system, size, outdoor ventilation air, efficiency rating with manufacturers seal, duct location & insulation R-values, thermostat controls, fan efficiencies, duct sealing & pressure testing results		
	<b>Final occupancy inspection</b> -approved blower door leakage test report, approved duct sealing/pressure testing report, energy certificate posted, attic insulation markers for blow-in or spray insulation, attic hatch insulation/sealing & high efficacy lighting		
<b>Comments:</b>			
<b>Drywall</b>	<b>House/garage separation</b> -location, thickness, type of drywall, glued, penetration fire-stopping & continuity		
	<b>Drywall installation</b> -spacing of framing, location, panel thickness, glued to framing, fasteners-type-length & spacing, type of drywall (moisture/mold resistant or fire) & orientation of drywall to framing		
<b>Comments:</b>			



<b>Alarms/suppression</b>	<b>Alarms</b> -smoke & c/o detectors, locations, interconnection, power source & listing		
	<b>Fire sprinklers</b> -waiver, NFPA 13D or IRC, riser location, head location, type of heads, temperature rating of heads, coverage limitations, heat source separation, freeze protection, sprinkler head obstructions, protection from damage & paint/caulking, valve tag installed & owner's manual		
	<b>Fire sprinkler piping</b> -type, size, location, piping support, freeze protection, listed piping & pipe cement, adequate water supply, hydraulic calculations & hydro-static test		
<b>Comments:</b>			
<b>Final/occupancy</b>	<b>Exterior</b> -House number posted, final grade/landscaping completed, slope away from building, foundation 6 inches above final grade, driveway completed, Exterior penetration sealed, sidewalks completed, accessory structures complete, gutters/downspout discharging away from structure, exterior of structure complete, swimming pools, hot tubs & spas complete with approved fencing installed, proper sump discharge & no concrete/masonry in direct contact with un-treated wood		
	<b>Egress/fire/safety</b> -garage & dwelling fire separation, means of egress, emergency escape & rescue openings, window fall protection, Smoke & carbon monoxide detectors, operable windows and doors, fire sprinklers installation-valve tag & owner's manual		
	<b>Interior</b> -energy compliance certificate posted, Factory & masonry fireplace/chimney installation, handrail/guards, radon system operational if installed,		
	<b>Electrical</b> -panel circuits labeled, receptacle spacing & type, lighting & switching installed in required locations, final appliance installations & Appliance disconnects		
	<b>Mechanical/HVAC</b> -final equipment/ operational installation, condensate piping, condensate overflow shut-off switch, final venting, combustion air, work clearances, gas pipe bonding, programmable thermostat, disconnecting means, fuel shut-off, clearance to combustibles, outside air operational, habitable space heat sources, unvented room heater installation, sources of ignition in garages		

	<p><b>Plumbing</b>-final fixture installation, test operation, adequate supply of water, adequate clearances, drain traps, air gaps, shut off valves, faucet hot &amp; cold position, backflow prevention, leaks, adequate temperature, adequate potable water supply, metal pipe bonding, main shut-off valve, cross-connection of public &amp; private water,</p>		
	<p><b>Water heater</b>-final installation, test operation, disconnecting means, work clearances, fuel shut off valve, TPR valve/piping, expansion tank, cold water supply shut-off valve, final venting, combustion air, drainage pan &amp; source of ignition in garages</p>		
	<p><b>Required testing certificates</b>-house blower door testing, HVAC duct leakage testing, well water testing, on-site sewage disposal by SEO or LATA &amp; approval of any special inspections</p>		
<p><b>Comments:</b></p>			