

Lower Allen Township Residential Building Permit & Plan Review Checklist

IRC applications: One- & Two-Family Dwellings

Date: _____ Address: _____

Application #: _____ Date application received: _____

		Applicant	Staff
		Location in application packet <i>(Plan page number)</i>	Plan review confirmation
Non-construction related items	Zoning, land development, storm water management, highway occupancy, and water & sewer requirements have been met?		
Comments:			
Detailed site plans	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, and proposed improvements to all property lines		
Comments:			
Detailed construction plans	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, and 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), and mechanical work to be completed		
	If non-conventional elements are being used, provide signed & sealed design or reports		
Comments:			
Building planning	Appropriate climatic & geographic design criteria per IRC		
	Floor loading:		

Building planning	Live load for living areas: 40 psf		
	Live load for sleeping areas & attics: 30 psf		
	Maximum for dead-loading: 20 psf		
	Ground snow load: 25 psf		
	Wind speed: 110 mph		
	Seismic design category: B		
	Weathering of concrete probability: severe		
	Frost line depth: 36 inches		
	Termite probability: moderate to heavy		
	Decay probability: slight to moderate		
	Winter design temperature: 10°F		
	Ice shield underlayment required: yes		
	Flood hazards: consult latest FIRM & FBFM		
	Air freeze index: 784		
Mean & annual temperature: 53.1°F			
Emergency escape & rescue opening: indicate required locations, sill height, openable height & width, openable area, and operational specifications			
Rooms & area: Identify every room with dimensions, ceiling heights, and floor location			
Stairs per PA UCC: 1. Maximum riser height 8 ¼ inches 2. Maximum variation of riser height within a flight of stairs 3/8 inch 3. Minimum tread depth 9 inches 4. Maximum tread depth variation within a flight of stairs 3/8 inch 5. Uniform tread projection of not more than 1 ½ inches (solid risers) 6. Stairway width 36" clear minimum 7. Stairway headroom 6'-8" minimum 8. Handrails allowed to project 3 ½ inches from each side into required stairway width			
Comments:			
Energy efficiency	Energy path being followed (Choose one) 1. <input type="checkbox"/> IRC Chapter 11 2. <input type="checkbox"/> International Energy Conservation Code 3. <input type="checkbox"/> PA Alternative 4. <input type="checkbox"/> REScheck		
	Inspection R-Value & type 1. Ceiling _____ 2. Walls _____ 3. Floors _____ 4. Basement _____		

Energy efficiency	5. HVAC Ducts _____ 6. Pipe insulation _____ 7. Attic hatch _____		
	U-Factor/SHGC ratings for windows & doors 1. Windows _____ 2. Doors _____		
	Appliance & plumbing fixture efficiencies 1. Furnace/air conditioning 2. Water heater 3. Toilets 4. Air changes per minute 5. Thermostat controls		
	Energy testing (third-party) 1. Air leakage testing report (blower door) 2. Duct sealing/pressure test report		

Comments:

Footings & Foundations	Soil: classification & load bearing capacity		
	Soil conditions: type, virgin, rocky, high-water table, or approved soil compaction testing/report		
	Footing type: trench, formed, and monolithic pour		
	Footing specifications: depth, width, thickness, slope, stepped, sleeves, and reinforcement information		
	Foundations: 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, and foundation ventilation		

Comments:

Framing	Floor framing: joist type, size, spacing, spans, bearing dimensions, grade, species, crush blocking, rim board material, notching & boring, protection against decay & wood destroying insects, joist hangers, sill plates, and sill seal installed		
	Sub-floor sheathing: type, thickness, nailing patterns, and gluing		
	Load beams: type, size, grade, support bearing & column/footing specifications, & manufacturers specifications if steel or engineered wood		
	Wall construction: Stud size, species, grade, height, tie down straps, pressure treated sill plates, and sill seal		
	Wall bracing method: type, locations, length		

Framing	If sheathing method: thickness, locations, interior sheer walls, nail patterns, and glue		
	Window & door openings: size, locations, tempered glazing required, sill height, fall protection, openable area, specifications for emergency escape, and rescue openings		
	Windows & door headers: type of material, size, spans, and bearing specifications		
	Roof framing: 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, and attachment to walls		
	Roof sheathing: type, thickness, nailing pattern, Hclips, fire-retardant sheathing locations with no penetrations		
	Concealed spaces do not exceed 1,000 square feet		
	Attic & crawl space access openings properly sized according to code		
	Notching & boring not exceeding code allowances		
	Building wrap: installed is a required location, listed, sealed/taped at all penetrations/seams		
	Protection of wood: against decay & wood destroying insects		
Comments:			
Mechanical	HVAC: type, size, location, efficiency, protected from damage, listed/labeled, ventilation air requirement, and type of fuel		
	Chimney & vents: type, size, construction, slope, height, clearances to combustibles, and point of termination		
	Condensate drainage: piping material, size, slope, point of termination, and overflow protection required		
	Fuel gas piping: type, size, supply PSI, support type & intervals, protected from damage, leak testing, sediment traps, shut off valves, enters structure above grade, and complies with pipe sizing tables		
	Clothes dryer exhaust: duct size, material, length, and point of termination		
	Environmental air exhaust duct: size, material, length, and point of termination		
	Supply, return & ventilation air ductwork: 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, and third-party leakage test approval		
	Appliances: combustion air requirements acceptable, accessible for service/repair/replacement, means if		

Mechanical	disconnecting electric power & fuel, source of ignition elevated 18 inches above finished floor in garages		
	Exhaust fans: capable of exhausting more than 400 cfm provided with make-up air		
	Unvented room heaters: 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, and unvented heaters cannot be only source of heat in a dwelling		
	Addition: provide design data to confirm current system can serve the additional heating load		
Comments:			
Plumbing	Pipe location: <input type="checkbox"/> above grade <input type="checkbox"/> below grade		
	Type of pipe: <input type="checkbox"/> supply <input type="checkbox"/> DWV <input type="checkbox"/> Gas		
	Below grade DWV Pipe: 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, and sewage/sump pits		
	Below grade supply piping: type, size, listing, valves & location, depth, foundation sleeves, freeze protection, backflow prevention, irrigation system, no private & public water cross-connections, leak testing, separation, and bedding & cover		
	Above grade DWV pipe: 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, and leak testing		
	Above grade supply piping: 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		
	Water heater: 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		
	Plumbing fixtures: final installation, vent, trap, adequate clearances, adequate water supply, adequate drainage, accessible for service or replacement, correct position of hot		

Plumbing	& cold on faucets, air-breaks, freeze proof sill faucets, energy code compliance, and shower control valve/operation		
	Source of potable water: public, private, pump specifications, adequate clearance from sources of contamination, approved potable water testing report, water treatment systems, & any non-potable water systems onsite		
	Sumps & ejectors: pit size/capacity, specifications of pump, check valve, full port shut-off valve, venting, effluent level controls/alarms, and point of discharge		
	Radon system, required? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Comments:			
Electrical	Service/panel: 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 sub-panels, equipment work clearances/height above finished floor/grade, light source near panel, all circuits labeled, conductor bending space, and enclosure type		
	Wiring methods: 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, and cutting notching framing		
	Required receptacle & lighting circuits: 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		
	Appliances: location, load demand, location of disconnects, listings, conductor type/sizing, overcurrent protection, grounding/bonding, damage protection, wet or damp locations, clearances for servicing, pools & spas, and equipment identification		
Comments:			

Fire-blocking	Garage/dwelling separation: 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		
	Firewall between dwelling units: type of material, fire resistance rating, continuity, continuous from foundation to roof deck, structural independence of townhouses, fire wall penetrations		
	Exterior wall fire-rating: separation to property line/other structures, opening type & size, penetration and projections		
	Other fire-protected areas: 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		
Comments:			
Insulation & ventilation	Exterior wall insulation: type, R-value, thickness, listed building wrap, and air leakage sealing		
	Floor cavity insulation: type, thickness, R-value, insulation against floor sheathing, adequately supported, and vapor barrier against heated side		
	Attic/Ceiling insulation: 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, and ventilation baffles in place		
	Basement/crawl space wall insulation: type, R-value, thickness, foam plastics insulation protected from fire, foam plastics insulation flame spread rating, and smoke developed index		
	Slab on grade: slab edge insulation R-value & thickness, vapor barrier, heated slab insulation Rvalue & thickness		
	Windows & doors: type, size, u-factor ratings, solar heat gain coefficient, air leakage, & factory energy rating seals		
	Water heater/piping: type, size, location, efficiency rating on manufacturers seal, pipe insulation R-value, hot & cold supply piping separation, and circulation pump		
	Mechanical/HVAC: type of system, size, outdoor ventilation air, efficiency rating with manufacturers seal, duct location & insulation R-values, thermostat controls, fan efficiencies, duct sealing, and pressure testing results		
	Final occupancy inspection: 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, and high efficacy lighting		
Comments:			
Drywall	House/garage separation: location, thickness, type of drywall, glued, penetration fire-stopping, and continuity		
	Drywall installation: spacing of framing, location, panel thickness, glued to framing, fasteners: type, length & spacing, type of drywall (moisture/mold resistant or fire), and orientation of drywall to framing		
Comments:			
Alarms/ suppression	Alarms: smoke & CO detectors, locations, interconnection, power source, and listing		
	Fire sprinklers: 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, and owner's manual		
	Fire sprinkler piping: type, size, location, piping support, freeze protection, listed piping & pipe cement, adequate water supply, hydraulic calculations, and hydro-static test		
Comments:			
Final/ occupancy	Exterior: 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, and no concrete/masonry in direct contact with un-treated wood		
	Egress/fire/safety: 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, and owner's manual		
	Interior: energy compliance certificate posted, factory & masonry fireplace/chimney installation, handrail/guards, radon system operational if installed		

Final/ occupancy	Electrical: panel circuits labeled, receptacle spacing & type, lighting & switching installed in required locations, final appliance installations, and appliance disconnects		
	Mechanical/HVAC: 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		
	Plumbing: final fixture installation, test operation, adequate supply of water, adequate clearances, drain traps, air gaps, shut off valves, faucet hot & cold position, backflow prevention, leaks, adequate temperature, adequate potable water supply, metal pipe bonding, main shut-off valve, cross-connection of public & private water		
	Water heater: 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, and source of ignition in garages		
	Required testing certificates: house blower door testing, HVAC duct leakage testing, well water testing, on-site sewage disposal by SEO or LATA, and approval of any special inspections		
Comments:			