

# RESIDENTIAL ROUGH-IN INSPECTION CHECKLIST

All sub-trade rough-ins (plumbing, gas, mechanical and electrical) must be completed and inspected before insulation.



Building permits must be on site and posted in order to receive inspections. All doors and windows must be installed in order to receive rough inspections. **DO NOT INSULATE EXCEPT CONCEALED WALLS, SUCH AS BEHIND SHOWERS AND CANTILEVERED FLOORS.** Air barriers must be installed as well in these concealed areas. Do not stack sheet rock along walls. All construction debris that will impede the inspection process must be removed. Inspections will not be conducted if rough framing or trade work is still in progress.

Every structure must have a 3/0 by 6/8 side-hinge exit door. Basements, habitable attics and sleeping room must have an emergency egress window or exit door. The window sash must open clear at least 20 inches wide, 24 inches tall, be within 44 inches of the floor and have an overall opening size of 5.7 net clear feet (821") or 5.0 for grade level openings. A sleeping room is any room with a clothes closet. (R310)

Every stair must be a minimum of 3 foot wide and have a 3-foot by 3-foot landing at the top and bottom unless it meets one of the exceptions in the code. Stair headroom, measured from the slope of the stairs, must be a minimum of 6'-8". (R311.7)

Glazing in windows in hazardous locations must be tempered. (ie.: doors, next to doors, over tubs, large picture windows, in stairwells, etc.). (R308.4)

All structural members, their size, spans and method of attachment are to be in accordance with the code. Any alternative material not prescribed in the code must be approved by the Building Official. (R301)

Cuts, notches and holes bored in laminated veneer lumber, glue-laminated members or I-joist are not permitted beyond the manufacturer's installation guide. Truss members shall not be altered in any way without the approval of the truss engineer. Truss design drawings shall be provided at time of inspection. Use "hurricane clips" and room tie-downs as specified per manufacturer or as required per Table R802.5.2. (R502.8, R502.11, R802.10.1)

Stud size and spacing. (R602.3) Studs require full bearing. (R602.3.4) Plate anchors per (R403)

Any framing member that has been cut or notched beyond allowances must be reinforced. (R602.6)

Wall bracing according to Design Category C and portal framing per R602.6

Attic areas shall be ventilated. A 22 inch by 30 inch minimum access shall be provided. A larger opening may be required when equipment is located in the attic. (R807.1, M1305.1.2).

Plates shall be anchored with minimum 1/2-inch-diameter anchor bolts spaced not greater than 6 feet on center or approved anchors or anchor straps spaced as required to provide equivalent. Bolts shall extend not less than 7 inches into concrete or grouted cells. There shall be not fewer than two bolts per plate section with one bolt located not more than 12 inches or less than (7) bolt diameters from ends

Plywood, OSB and EIFS requires a weather resistant membrane (30# felt or house wrap) between masonry veneer, siding and stucco. Foam plastic may be used if separated from the interior with 1/2" sheetrock. (R703.9, R316) Foam plastic in attics and crawl spaces shall have a thermal barrier per R316.5.3 and R316.5.4

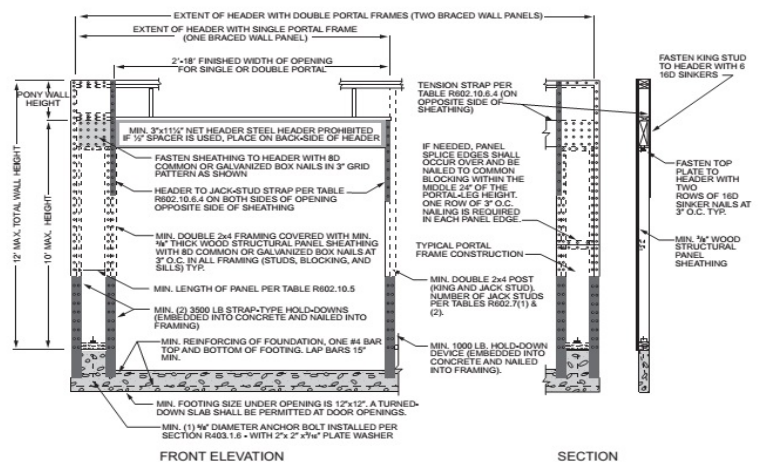
Flash porches, windows, doorsills and nailing flanges per manufacturer. Wall sheathing should be at least 6 inches from grade. (R703.8, R319.1)

A flight of stairs shall not have a vertical rise of more than 151" between floor levels or landings. (R311.7.3)

Header and girder spans per Table R602.7(1), Table R602.7(2) and R602.7(3).

Floor Joist span per Table R502.3.1(1) and R502.3.1(2) Floor Cantilever per R502.3.3 Joist bearing per R502.4 and R502.6- Where the header joist span exceeds 4 feet (1219 mm), the trimmer joists and the header joist shall be doubled and of sufficient cross section to support the floor joists framing into the header. R502.10

Draftstopping and fireblocking per R302.11 and R302.12



**This checklist is in no way to be considered as an all-inclusive checklist**

# PLUMBING ROUGH-IN INSPECTION CHECKLIST

The International Plumbing Code is referenced standard with Ga. Amendments
Proper pipe materials, fittings and slope. Support shall be per table 308.5. Cleanouts per 708
Water pressure-reducing valve per 604.8 and water hammer arrestors shall be installed at all quick-closing valves per 604.9 Provide backflow protection per 608.14.
Drain systems shall be tested by water with no evidence of leaking. Fill to the highest flood level rim. A 5psi air test may be used during freezing conditions. Water piping shall be tested and not less than the operating pressure-(80-100 psi) (312.2 and 312.5)
3/4" minimum main water service required with a minimum of 160psi working pressure. ( 603.1 and 605.3) Water fixture supply piping per table 604.5
Where pipe is installed through holes in plates or studs less than 1.25 inches from the edge of the member, shield plates shall be installed and extend 2" above the bottom plate and 2" below top plate. (305.6)
Use anti-scald shower valves 412.3
Vent terminals min. 6 inches above the roof. Roof boots should be installed. (903.1, 903.3).
Vent terminals shall not be within 10 feet horizontally of openings into the building unless it is at least 3 feet higher than the opening. (903.5)
Each plumbing fixture shall be separately trapped. The trap shall be placed as close as possible to the fixture outlet. The vertical distance from the fixture outlet to the trap weir shall not exceed 24 inches (610 mm). The distance of a clothes washer standpipe above a trap shall conform to Section 802.4.3. A fixture shall not be double trapped. Standpipes shall extend not less than 18 inches (457 mm) but not greater than 42 inches (1066 mm) above the trap weir. Access shall be provided to standpipes and drains for rodding(802.4.3)

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TABLE 909.1

TABLE 704.1

TABLE 506  
MINIMUM CAPACITIES FOR RESIDENTIAL WATER HEATERS<sup>1, 2, 3</sup>

MAXIMUM DISTANCE OF FIXTURE TRAP FROM VENT		
SIZE OF TRAP (inches)	SLOPE (inch per foot)	DISTANCE FROM TRAP (feet)
1 1/4	1/4	5
1 1/2	1/4	6
2	1/4	8
3	1/8	12
4	1/8	16

SLOPE OF HORIZONTAL DRAINAGE PIPE

SIZE (inches)	MINIMUM SLOPE (inch per foot)
2 1/2 or less	1/4 <sup>a</sup>
3 to 6	1/8 <sup>a</sup>
8 or larger	1/16 <sup>a</sup>

Fuel	Gas	Elec	Gas	Elec	Gas	Elec	Gas	Elec
# of Bedrooms	1	2	3	4	5	6	7	8
1 to 1 1/2 Baths	FHR (gal)	40	40	45	45	48	48	...
# of Bedrooms	2	3	4	5	6	7	8	9
2 to 2 1/2 Baths	FHR (gal)	47	47	60	60	62	62	70
# of Bedrooms	3	4	5	6	7	8	9	10
3 to 3 1/2 Baths	FHR (gal)	60	60	67	67	70	70	72

FHR = First Hour Rating, 1 gal = 3.7854 L, 1 gph = 1.05 mL/s

1. Tankless Water Heaters shall be sized and installed per manufacturer's recommendations.
2. Water heaters for single family dwellings having more than six bedrooms and/or 3 1/2 baths shall be sized per manufacturer's recommendations.
3. Table 506 reflects the minimum requirements for one or multiple water heating units.

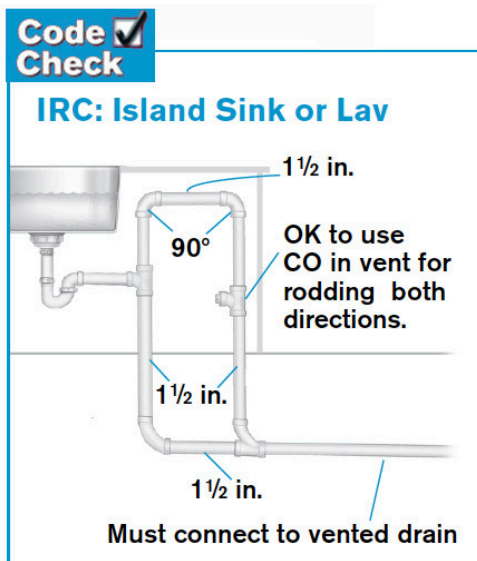
TABLE 706.3

FITTINGS FOR CHANGE IN DIRECTION

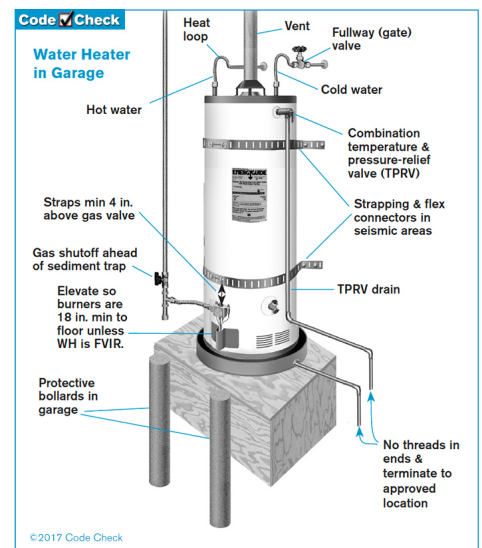
TYPE OF FITTING PATTERN	CHANGE IN DIRECTION		
	Horizontal to vertical	Vertical to horizontal	Horizontal to horizontal
Sixteenth bend	X	X	X
Eighth bend	X	X	X
Sixth bend	X	X	X
Quarter bend	X	X <sup>a</sup>	X <sup>a</sup>
Short sweep	X	X <sup>a,b</sup>	X <sup>a</sup>
Long sweep	X	X	X
Sanitary tee	X <sup>c</sup>	—	—
Wye	X	X	X
Combination wye and eighth bend	X	X	X

For SI: 1 inch = 25.4 mm.

- a. The fittings shall only be permitted for a 2-inch or smaller fixture drain.
- b. Three inches or larger.
- c. For a limitation on double sanitary tees, see Section 706.3.



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# MECHANICAL ROUGH-IN INSPECTION CHECKLIST

Gas pipe shall be installed per the 2018 IFGC and and pressure tested. A minimum test of 10 psi and the gauge must be calibrated to discern any leak. Mechanical gauges used to measure test pressure shall have a range such that the highest end of the scale is not more than five times the test pressure. Appliances shall not be located in sleeping rooms, bathrooms, toilet rooms, storage closets or surgical rooms, or in a space that opens only into such rooms or spaces, except where permitted per 303.3

Use only appropriate piping materials (copper, CSST, black steel and wrought iron). Properly size and support gas piping. No unions, couplings, bushings and flared fittings shall be in concealed locations. Protect copper or CSST piping through wood members with shield plates. Protect piping against corrosion when passing through foundation walls and exposed to exterior locations. (G2411-G2417, M1308.2)

Fireplaces, vented or un-vented, must be installed. If gas is to be used in such fireplaces, the gas lines must be run and tested. (G2417.1)

The vent termination for a mechanical draft system shall not be mounted directly above or within 3 feet horizontally from an oil tank vent or a gas meter and shall not be closer than 3 feet of an interior corner formed by two walls perpendicular to each other. (M1804.2.6.3-M1804.2.6.5).

Fueled fired appliances are restricted in sleeping rooms, bathrooms and storage closets. See manufacturer's guidelines for exceptions. (G2406.2).

Air returns must be installed. Prohibited in kitchens, bathrooms, garages and within 10 feet of a fueled fired appliance. (M1602.2)

Supply boots must be installed and insulated in non-conditioned spaces conducive to condensation. (M1602.2).

Condensate and HVAC line sets should be installed and fire-stopped. (M1411, M1412).

All chimneys and vents shall be inspected for proper size and clearances. A mechanical draft venting system shall terminate at least 2 feet higher than any air inlet with 10 feet. (G2427.6.5)

Kitchen exhaust shall comply with M1503. Exhaust system exhausting in excess of 400 cfm shall have MUA (M1503.6)

Bathroom exhaust fans must be installed in every bathroom and water closet and duct run to outside air. (R303.3)

Air for combustion, ventilation and dilution of flue gases for appliances installed in buildings shall be provided by application of one of the methods prescribed in Sections 304.5 through 304.9. Where the requirements of Section 304.5 are not met, outdoor air shall be introduced in accordance with one of the methods prescribed in Sections 304.6 through 304.9. Combustion air ducts shall comply with 304.11.

The maximum length of the exhaust duct shall be 35 feet (10 668 mm) from the connection to the transition duct from the dryer to the outlet terminal. Where fittings are used, the maximum length of the exhaust duct shall be reduced in accordance with Table M1502.4.5.1. Exhaust duct joints shall be sealed in accordance with Section M1601.4.1 and shall be mechanically fastened. Ducts shall not be joined with screws or similar fasteners that protrude more than 1/8 inch (3.2 mm) into the inside of the duct.

Condensate from cooling coils and evaporators shall be conveyed from the drain pan outlet to an approved place of disposal. In addition to the requirements of Section M1411.3, a secondary drain or auxiliary drain pan shall be required where damage to any building components will occur as a result of overflow from the equipment drain pan. The auxiliary pan drain shall discharge to a conspicuous location or provided with a water-level detection device conforming to UL 508 shall be installed that will shut off the equipment.

Attics containing appliances shall be provided with an opening and passageway large enough to allow removal of the largest appliance, but not less than 30 inches high and 22 inches wide and not more than 20 feet in length (M1305.1.2). The passageway shall have continuous solid flooring not less than 24 inches wide. A level service space not less than 30 inches deep and 30 inches wide shall be present along all sides of the appliance where access is required.

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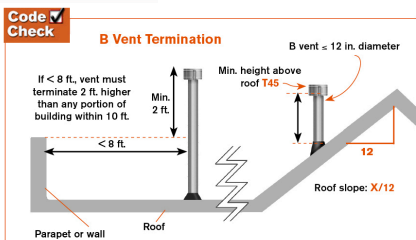
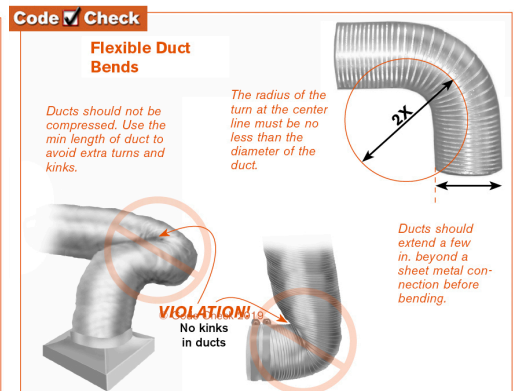
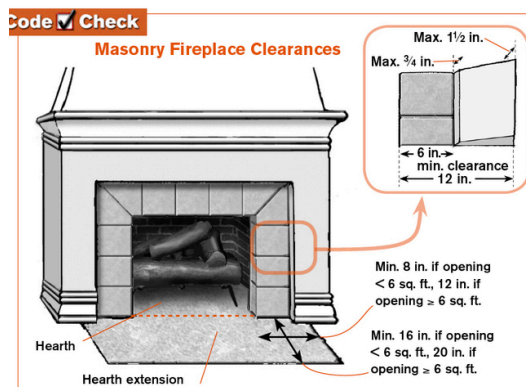


TABLE 45 B VENT TERMINATION (F117)		IRC 2427.6.3 & UMC 802.6.2	
Roof Slope	Min Height (ft.)	Roof Slope	Min Height (ft.)
Flat to 6/12	1	>11/12 to 12/12	4
>6/12 to 7/12	1 1/4	>12/12 to 14/12	5
>7/12 to 8/12	1 1/2	>14/12 to 16/12	6
>8/12 to 9/12	2	>16/12 to 18/12	7
>9/12 to 10/12	2 1/2	>18/12 to 20/12	7 1/2
>10/12 to 11/12	3 1/4	>20/12 to 21/12	8



# ELECTRICAL ROUGH-IN INSPECTION CHECKLIST

The Electrical installation must comply with the 2020 NEC. The panel must be installed with conductors run into box. Breakers aren't required and the service feeders must be run to the required outdoor emergency disconnect (230.85)
30" wide x 36" deep x 6'-6" high working space required at all electrical equipment per 110.26 .
Penetrations through fire blocking and draftstopping shall be protected in an approved manner to maintain the integrity of the element penetrated.
SFD require a minimum 100 amp service per 230.79; others require 60 amp minimum. The sub-panel must isolate neutrals from the grounds. (250.24(5)). Conductors shall be sized per 310.15. A minimum of 14ga copper is required for 15 amp branch circuits, 12ga for 20 amp. and 10ga copper for 30amp circuits.
A grounding electrode system is required and each electrode specified in section 250.52 shall be bonded together (accessible mechanical connections 250.68). A #4 min grounding electrode conductor required per 250.66.
A four wire circuits are required for stoves and dryers. (250.140)
Panel box locations must meet clearance (30 inches wide and 36 inches deep by 6'-6" high) and cannot be located in a bathroom or clothes closet. (E3305)
Receptacle spacing on walls shall not be more than 12 feet apart, within 6 feet of a door and on any wall over 2 feet in length. (210.52)
A minimum two 20-amp circuits are required for kitchen counter top receptacles, one in the laundry, one for the garage and one for the bathrooms. All must be wired with 12-gauge wire size (210.52)
Kitchen countertop receptacle spacing is basically every 4 feet on center, with one receptacle required in any island or peninsula (210.52) and counter top space 12" or greater.
Box fill per count indicated in plastic boxes (314.6) or per 314.16 for metal.
Holes closer than 1 ¼" from edge of member shall be protected with nail guards. (300.4)
Bond all metal gas pipes and air ducts (250.104(B)).
Ceiling fan boxes listed for support ( 422.18)
Use UL listed fixtures as designed or tested. (ceiling fans, wet and damp locations, recessed can lights, etc.)
Luminaries in clothes closets must meet the required clearances (12" measured horizontally) from the fixture to the nearest point of shelf. Fixtures designed for candescent bulbs must meet the required clearances for candescent luminaries. Inserting a fluorescent bulb will not reduce the clearances required. (410.16)
Smoke detector s/CO wiring is required. One is required inside each sleeping room, immediately outside the sleeping room and each floor level and habitable spaces. They must be hard wired, interconnected and have battery backup. Refer to manufacture's installation instructions for specific application but in general, they must be located within 12 inches of the ceiling and 3 feet from any source of air movement (returns, registers, ceiling fans, etc).
Receptacles shall not be installed within 3' horizontally or 8' vertically from the top of a tub or shower threshold. Luminaires installed within this space must be for a wet location and recessed (410.10(B)).
A service receptacle within 25" of furnace or A/C (210.63)

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