



Residential Building, Energy, Plumbing, Gas & Mechanical Code Inspections:

Introduction to Inspections:

The Town of Farragut created this reference handout to provide an overview of the Town's inspection(s) process for residential construction. This handout will help assist contractors, homeowners, superintendents and other trades people or individuals conducting work in the Town of Farragut.

Though this handout provides an overview of our inspection process, the format cannot provide a comprehensive listing of all code requirements that affect any specific residential project. Construction professionals should secure a copy of the most current adopted code for the Town of Farragut, see the [2018 Town of Farragut Adopted Codes Handout](#) for a complete list of current adopted codes. Sections and chapters cited in this narrative relate to the adopted code. Links to purchase and view the adopted codes are located on the Town's website at www.townoffarragut.org.

General Information:

Town Code Officials will make both routine and required inspections during construction. It is the responsibility of the Builder or Permit Holder to request inspections online through our online permitting and inspections module, MGO. When requesting an inspection, you can enter any specific requests or special notes as needed. For more information on requesting inspections through MGO, the Town's online permitting and inspections software, see the "How to create a new user account for MGO" booklet.

All inspection requests must be submitted the business day prior to and before 3:00 p.m. Eastern Time to be scheduled for the next business day. Inspections requested after 3:00 p.m. will not be scheduled until the following business day. Depending on availability, inspectors will schedule inspections for the following day and to best accommodate your specific requests, however, there are times when it could take two or more days before an inspector can conduct the inspection. In the event an inspector is not available on the requested date the Town will notify you directly.

The Town of Farragut does not issue permits for or conduct Electrical Inspections. For electrical and low voltage inspections, please contact the State Electrical Inspector at (865)-986-6591. State electrical inspections must be completed prior to the Town of Farragut rough-in framing and final inspections.

Project Posting:

The Permit Holder must post the permit and project street address at the jobsite location and it shall be visible from the street. The address numbers and letters must be a minimum of four inches (4") in height and a minimum of one-half inch ($\frac{1}{2}$ ") stroke width.

Please Note: A copy of the reviewed and approved plans shall be kept on site at the time of all inspection(s) (per 2018 IRC Section R106.3.1).

Upon arrival to the scheduled inspection, the inspector will verify the address and permit are posted and ask to see the printed, reviewed and approved, stamped plans. Failure to



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post your permit and address as required and/or have the reviewed, printed plans on site as required could result in an automatic failure of any scheduled inspection. A re-inspection fee will apply, and a re-inspection will be required. All failed inspections are subject to re-inspection fees and the re-inspections will not be conducted until all fees are paid. See the Towns adopted [Fee Schedule](#) for more information on re-inspection fees.

Types of Residential Inspections are as follows: (see below for general details on each inspection type and some of what the inspector will typically observe on each type of inspection):

1. Footing
2. Plumbing Slab Rough-in
3. Energy Slab
4. Crawl Space / Basement (main floor framing prior to sub-floor)
5. Plumbing Rough-in
6. Gas Rough-in
7. Mechanical Rough-in
8. Fireplace Rough-in
9. Exterior Wall Covering and Flashing
10. Framing
11. Energy Wall (Insulation - Energy Efficiency)
12. Gas/Mechanical Final
13. Plumbing Final
14. Building Final (please note engineering, as-built survey's, other documentation and/or other Town department approvals may be required prior to the final inspection being conducted).

Types of Residential Inspections and General Details:

1. **Footing Inspection:** Inspections for footings and/or foundations shall be made after piers or trenches are excavated; forms have been erected; and all reinforcing steel and bulkheads are in place as required. The inspection must occur before any placement of concrete. Footing inspections shall include excavations for thickened slabs intended for the support of load bearing walls, partitions, structural supports, and/or equipment. Deck footings must be inspected and as deemed necessary; any/all existing footings and/or soil conditions may require verification from a State of TN Licensed Engineer.

1.a. Engineered Footings: See Handout, [Engineered Soil and Footing Letter Requirements](#), for more information

1.b. Foundation Survey: If required, the foundation survey must be submitted to the Town of Farragut's code's office online within fifteen (15) days of the foundation/footing inspection, and/or prior to any framing work being conducted. Failure to submit the survey will result in the issuance of a "STOP WORK ORDER" and it will be posted on the property by the Town of Farragut Building Official, Codes Official or designee.

1.c. As-Built Survey: If required, the as built survey must be submitted and approved prior to requesting a final inspection.



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2. **Plumbing Slab:** Prior to placement of concrete, water service piping and all (DWV) drain, waste and vent piping pressure test (5 psi for 15 minutes for DWV piping and 100 psi for water piping) is performed upon completion of rough-in piping installation. Hot water piping insulation, sleeves through foundations, no piping in grade beams, approved fittings and connections, and radon right of way piping are some additional items verified during this inspection.
3. **Energy Slab:** Prior to placement of concrete, an energy slab inspection shall be required to confirm slab perimeter insulation has been installed per code. The inspector will verify the vapor barrier, radon right of way and any required grade beams are installed.
4. **Crawlspace / First Floor Framing:** Prior to the installation of the first-floor subfloor, an inspection is required to ensure correct installation of the mud sill plate anchoring system, support piers and pilasters, beams, girders, crawl space clearances, slope, drainage, and, if applicable, squash blocking and blocking panels. If pre-engineered i-joint or floor trusses are used, those products must be installed per the reviewed, stamped and approved engineered layouts.

NOTE: See 2018 IRC Section R109.1.2 Plumbing, mechanical, gas and electrical systems inspection. Rough inspection of plumbing, mechanical, gas and electrical systems shall be made prior to covering or concealment, before fixtures or appliances are set or installed, and prior to framing inspection.

5. **Plumbing Rough-in:** Water service piping and all (DWV) drain, waste and vent piping pressure test (5 psi for 15 minutes for DWV piping and 100 psi for water piping) is performed upon completion of rough-in piping installation. Hot water piping insulation, approved fittings and connections, guards and/or structural plates/shoes for piping protection, and the continuance of radon right of way piping as required are some additional items verified during this inspection.
6. **Gas Rough-in:** Prior to acceptance and initial operation, all piping installations shall be visually inspected, and pressure tested. Gas Piping Systems shall be tested at Minimum as follows: The test medium shall be air, nitrogen, carbon dioxide or an inert gas. Oxygen shall not be used as a test medium. Mechanical gauges used to measure test pressures shall have a range such that the highest end of the scale is not greater than five times the test pressure. The test pressure to be used shall be not less than 1 1/2 times the proposed maximum working pressure, but not less than 3 psig (20 kPa gauge), irrespective of design pressure. The test duration shall be not less than 10 minutes.
7. **Mechanical Rough-in:** Prior to acceptance and initial operation, all ventilation and duct system installations shall be visually inspected. All duct and/or vent piping seams and/or connections must be fastened and/or sealed and/or insulated as required pending application and per code.
8. **Fireplace Rough-in:** Prior to concealment all site built, or prefabricated fireplace installations shall be visually inspected. Site built fireplaces must meet or exceed the requirements of the 2018 IRC Chapter 10, section R1001 and prefabricated or factory-built fireplaces must comply with section R1004. Required clearances, ventilation, combustion air, fire-stopping and fire-blocking, etc. are some common items inspected during the fireplace rough-in inspection.



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- 9 Exterior Wall Covering and Flashing:** This inspection involves the weather-resistant exterior wall envelope. At the time of the inspection, all exterior walls are to be covered, taped, etc. to verify the house wrap or other material (zip systems) has been properly installed. The finished roofing materials, drip edge and all flashing installed. All windows installed, taped and sealed as required by the manufacturer.
- 10 Framing Rough-in:** The Framing rough-in inspection is conducted after the sub-contractors (sub), plumbing rough-in, gas/mechanical rough-in, fireplace rough-in, and electrical rough-in inspections have been conducted and approved. The framing will be checked to verify it matches the reviewed and approved plans and no alterations or modifications were made. Pre-engineered layouts will be verified to ensure proper installation of engineered systems and or materials. All structural framing members must be properly installed per code and/or the engineered specifications without over notching, cutting, boring, drilling, etc.
- 11 Energy Code / Insulation:** The wall cavity insulation inspection takes place prior to concealment and after the building framing, rough ins for plumbing, gas, mechanical and fireplace inspection(s) have been conducted and approved. An insulation Certificate of Compliance must be completed and both, provided to the Town and permanently posted in an approved location.

11.a. Energy Efficiency Certificate of Compliance (EECOC): Third party testing for Energy Conservation is required per the IECC (International energy Conservation Code). A duct blaster test and a blower door test are required, and the results of the testing must be completed by the testing agency and both, provided to the Town and permanently posted in the home.
- 12 Mechanical Final:** The Mechanical Final inspection includes verifying all required vents are operational and properly terminated, combustion and make-up air requirements are met, programmable thermostats installed, and the space the appliances are installed in are protected and accessible as required by code.
- 13 Gas Final:** All gas piping, shut-offs, regulators, manifolds, etc. are on pressure test as required (same test as rough-in inspection). All gas appliances must be properly installed with proper clearances from combustibles and for service access per manufacturer. The maximum system BTU load shall be calculated, and piping sizes verified to ensure the system and all connected appliances will operate and function as designed by the manufacturer. The Town of Farragut Inspector must be able to see the original manufacturers label on all appliances to verify BTU loads.
- 14 Plumbing Final:** The plumbing final typically takes place at the same time as, the Building Final inspection. The inspector typically verifies all final fixtures are installed per plan and operational with the proper supply shut off valves in place and drainage "traps" installed, scald prevention devices and water hammer arrestors installed on applicable fixtures as required, proper termination of condensate drains and appliance pans as required and access to equipment, pumps, and/or appliances as required.
- 15 Building Final:** Typical exterior items that are inspected and reviewed during the final inspection are: final grading and drainage away from structure, exterior stairways and walkways from the primary exterior point of egress to the public way, fall protection, guardrails, handrails, landings, some deck construction and permanent stabilization of the site.



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Typical interior items that are inspected and reviewed during the final inspection are: lighting and ventilation requirements, energy code compliance reports are posted and on site as required, safety-glazing at hazardous locations, emergency egress from bedrooms, fire-stopping in the garage area, interior stairways, handrails, guardrails, and landings, smoke and carbon monoxide detectors, operational fireplaces/furnaces, water heaters, combustion air requirements, whirlpool tub access, attic/crawl space access, ventilation and fire protection as required. This is list is not all inclusive, just a few of the most common items we observe that result in failed final inspections for not being completed, installed or operational while we are on site conducting the inspection.

Any deviation from the approved plans will delay the issuance of a certificate of occupancy until the site and/or structure is brought into compliance with the approved plans.

Temporary Certificate of Occupancy

As stated in the code, "Final Inspection shall be made after the building is complete and prior to occupancy" (R109.1.6)." Occupancy is the possession or tenancy, or the act of taking possession of the property. A new structure cannot be occupied with any furniture, personal possessions, tenants, owners, etc. until at minimum a Temporary Certificate of Occupancy has been issued.

The Building Official is authorized to issue a "Temporary Certificate of Occupancy" before completion of the entire work covered by the permit and provided that such portion or portions shall be occupied safely as defined in the 2018 IBC 111.3 and IRC 110.4. The certificate is valid for a maximum of 30 days. Work shall be completed, and a final approved inspection obtained prior to expiration of the TCO. A [Temporary Certificate of Occupancy Agreement](#) form must be completed and submitted to the Building Official for review and the TCO application fee must be paid in full prior to any TCO being issued.

Please consult with the Building Official or an inspector about your specific project in the event you feel a TCO will be requested.

Swimming Pool Inspections

All swimming pools, spas, and hot tubs shall be installed following the current adopted codes, see the [2018 Town of Farragut Adopted Codes Handout](#) for additional information. Typically, most swimming pools require 3 inspections. 1. Footing/excavation – this inspection is conducted after the site has been prepared for the pool but prior to the placement of a fiberglass pool and/or any gravel fill and/or any placement of concrete (gunite), 2. Rough-in Plumbing – all underground piping shall be exposed and on a pressure test (as outlined above under plumbing rough-in inspections) for this inspection, and 3. Final inspection - the final inspection will not be approved until all safety barriers, alarms, equipment and final site stabilization has been installed and in working condition. Alarms must be permanently secured/installed and operational. Please Note: Fiberglass, Vinyl, and Concrete (gunite) Pool installations will vary. It is very important to speak to an inspector about your specific project and the required inspections.



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State Electrical Inspections

The Town of Farragut "DOES NOT" Permit and/or Inspect Electrical Systems. The State of TN Electrical Inspectors Office is responsible for all permitting and inspections of electrical systems. The Town of Farragut will verify the Rough-in Electrical Inspection has been conducted and approved prior to the framing inspection and the Final Electrical Inspection has been conducted and approved prior to the Building Final Inspection being conducted. Please contact the State Electrical Inspector at (865)-986-6591 for more information.