



## BUILDING SERVICES

### SINGLE FAMILY RESIDENTIAL INSPECTION GUIDELINES

#### BUILDING SERVICES STAFF

Ryan Studdard	Building Official/Bldg Services	817-743-4115	rstuddard@cityofkeller.com
Payne Randell	Senior Plans Examiner	817-743-4119	prandell@cityofkeller.com
Melinda Hernandez	Code Compliance Officer	817-743-4118	<a href="mailto:mhernandez@cityofkeller.com">mhernandez@cityofkeller.com</a>
Johnny Reyes	Code Compliance Officer	817-743-4117	jreyes@cityofkeller.com
Rachel Frazier	Administrative Secretary	817-743-4112	rfrazier@cityofkeller.com
Brooke Golwitzer	Permit Technician	817-743-4114	bgolwitzer@cityofkeller.com
Denise Doughty	Permit Technician	817-743-4113	ddoughty@cityofkeller.com

#### PUBLIC WORKS STAFF

Chad Bartee	City Engineer	817-743-4088	cbartee@cityofkeller.com
Dann Weesner	Drainage Inspector	817-743-4084	dweesner@cityofkeller.com

#### THIRD PARTY INSPECTIONS COUNTY WIDE INSPECTIONS

Kevin Davis	Inspector	972-998-6069	kdavis.cwis@gmail.com
Darren Williams	Inspector	817-480-0809	dwilliams.cwis@gmail.com

#### FIRE INSPECTIONS

Debra Crafton	Fire Marshal	817-743-4472	<a href="mailto:dcrafton@cityofkeller.com">dcrafton@cityofkeller.com</a>
Daniel Hughes	Fire Inspector	817-743-4470	dhughes@cityofkeller.com

#### GENERAL INFORMATION

- All contractors shall be registered annually with the City of Keller.
- Upon approval of a permit application, you will be contacted and advised of the permit fees.
- Permitted construction work hours:  
Weekdays 6:00 am – 7:00 pm, Weekends/Holidays 8:00am – 6:00 pm.
- Adopted Codes/Ordinances:  
2015 I-Codes (including local amendments), 2014 NEC, Unified Development Code.
- No dirt work, grading, and/or earth disturbance may occur without obtaining a permit.
- Inspection results can be obtained by calling 817-743-4120 or online at [www.cityofkeller.com](http://www.cityofkeller.com).
- Trash container shall be on site and of sufficient size for the job site at all times.
- Erosion control must be installed properly and maintained at all times.
- Trees shall be protected according to the Tree Preservation ordinance at all times.

## **JOB SITE REQUIREMENTS**

- All work shall be ready to be inspected for the type of inspection requested.
- The permit packet shall be on-site, readily accessible, and in obvious public view by 8:00 a.m.
- City approved plans, all previous inspections performed, and any required paperwork shall be in packet.
- The building address shall be clearly posted.
- Trash container shall be on site and of sufficient size for the job site at all times.
- Erosion control will be inspected at every inspection and must be installed properly and maintained at all times. If an inspection fails for improper Erosion Control, a separate Erosion Control inspection will automatically be scheduled for the second business day.
- Trees shall be protected according to the Tree Preservation at all times.

## **RED TAG ITEMS (Fees may be assessed)**

- Failure to meet **ANY** Job Site Requirements.
- Permit packet or approved building plans are not on job site.
- The building is locked or work is otherwise not available for inspection.
- Previous “red tag” items are still outstanding.
- Other violations of city/state ordinances/codes exist on the property.
- All outstanding fees must be paid prior to scheduling an inspection.
- Outstanding fees will prohibit inspections from being scheduled.

## **REQUESTING INSPECTIONS**

- **Project shall be ready before requesting an inspection.**
- Inspections may be requested 24 hours daily by calling 817-743-4120 or online at [www.cityofkeller.com](http://www.cityofkeller.com) and clicking on Building Inspections Online System.
- The General Contractor or company representative shall request inspections.
- Inspections requested after 7:00am will be scheduled the following business day, and all reasonable attempts will be made to perform the inspection.
- Incomplete permit information or inaccurate information may delay the inspection requested.
- **CANCELLATIONS AFTER 7:00 a.m.** shall be called to 817-743-4110. **DO NOT LEAVE A MESSAGE** on voicemail.
- Inspections will **NOT** automatically rollover in the event of wet, rainy, or bad weather days. The inspection **must** be rescheduled.
- If outstanding fees exist, the inspection will **NOT** be scheduled.

## **REQUIRED INSPECTIONS**

A “Passed” Rough Grade inspection is required prior to scheduling and receiving a Foundation inspection.

A “Passed” Drainage Final inspection is required prior to scheduling and receiving a Building Final inspection.

**All “Job Site Requirements” shall be met at each inspection.**

1. **Temporary Electric (T-Pole) [Inspection Code 100]:** Must comply with 2014 NEC.
2. **Rough Grade [Inspection Code 101]:**
  - Proper erosion control must be in place and maintained throughout all phases of construction.
  - Grading plans and 2 original form-board surveys are required in permit packet. (The inspector will take one for City records.)
  - Trees that will not be removed must be properly flagged with fluorescent tape. Trees that are within 20’ of the building pad must have orange protective fencing placed around the drip line.
  - The form-board survey shall show the foundation forms, dimensioned setbacks, lot corner elevations, top-of-form elevation, and any other pertinent grade elevations as shown on the grading plan.
  - Elevation stakes shall be placed at all four corners to clearly show lot elevation.
  - Lot shall be benched with drainage swales in place.
  - Retaining walls greater than a 1:1 ratio (height: distance from building foundation) shall also be in place. (Retaining walls exceeding 4’ in height measured from the bottom of the footing to the top of the wall require a separate permit.)

3. **Piers [Inspection Code 312]:** Piers may be inspected by a licensed professional engineer in lieu of a City inspection. If using an engineer for inspection, an original inspection report sealed by the engineer of record must be in the permit packet at the Foundation inspection.
4. **Plumbing Rough [Inspection Code 102]:** Must comply with Chapters 24-33 of the 2015 IRC.
  - Water service and sewer service lines shall be in place and connected.
  - All piping shall be bedded properly.
  - The test riser on the sanitary sewer shall be a 10-foot water column, or an air test may be used with a minimum of 5 lbs of pressure using a gauge in 1/10 lb increments.
  - The water-supply system shall be tested with water pressure not less than the working pressure of the system, or an air test may be used with a minimum pressure of 50 lbs of pressure using a gauge with 1 lb increments. **An air test is not allowed on plastic piping.**
  - **PVC joints must be sealed using a purple primer and CPVC joints must use an orange primer that conforms to ASTM F 493.**
  - **A test gauge must be placed on one hose bibb. If static pressure exceeds 80 psi, a pressure reducing valve must be installed.**
  - Connection of the private drain line to the City service line at the City-side cleanout shall be left exposed for a Sewer Tie-in inspection (performed by a Public Works Construction Inspector).
5. **Sewer Tie-in [Inspection Code 316]:** The wastewater system that extends from the public sewer main to the cleanout at the front property line shall be inspected by the Public Works Construction Inspector. This inspection shall be performed the same day as the Plumbing Rough inspection request.
6. **Foundation [Inspection Code 103]:** Must comply with Chapters 3 & 4 of the 2015 IRC.
  - One original certified form board survey shall be in permit packet.
  - Work must match the City-stamped foundation plan.
  - Exposed plumbing piping must be wrapped.
  - **If plastic water piping is used, a concrete-encased grounding electrode must be installed.**
  - An engineer's inspection report is not allowed in lieu of a City inspection.
7. **All Seconds [Inspection Code 104]:**
  - a) Framing – Must comply with Chapters 5-9 and 11 of the 2015 IRC
    - Houses with fire suppression systems must have been previously inspected by the fire marshal or fire inspector.
    - Structure is dried-in including roof covering (note: cedar shakes and shingles are not allowed).
    - **A water-resistive barrier of No. 15 asphalt felt, house wrap or other approved water-resistive barrier (such as Zip System® sheathing) shall be in place. (Note: painted plywood or OSB is not considered a water-resistive barrier.)**
    - All framing, fire blocking, draftstopping, bracing, rodent proofing and exterior sheathing is in place and windows and doors are installed.
    - Exterior sheathing shall be completely sealed and brick ties installed.
    - Windows, doors, and all openings must be properly flashed.
    - **Windows located more the 6' above the exterior grade must also be located at least 2' above the floor or fall protection is required.**
    - If stucco is to be installed, lathe and two layers of house wrap or felt to be in place.
    - Stairways shall comply with section R311.7 – maximum rise 7/34" and minimum tread 10" (with nosing). No nosing required on 11" treads.
    - Winding stairway treads are to be at least 6" at the inside of each tread. Minimum of 10" tread required measured 12" in from winder.
    - All studs and joists must conform to the maximum allowed for cutting, notching, and boring.
    - Wall bracing shall be installed as designed and specified.
    - Building envelope is sealed in accordance with energy code.
  - b) Rough-in Electrical – Must comply with the 2014 NEC
    - All rough-in wiring is complete.
    - Ground and neutral conductors will be made up in all panels.
    - **A ground must be connected to the cold water piping and a supplemental grounding rod must also be provided. If plastic water piping is used, a concrete-encased electrode must be used in addition to the grounding rod.**
    - Ground clamps used on ground rods must be listed for direct burial.

- Jetted tubs must be on a dedicated, GFCI protected circuit.
  - Outlets for carbon monoxide detectors are required outside each bedroom door and must be hardwired and interconnected.
- c) Top-out plumbing – Must comply with Chapters 25-32 of the 2015 IRC
- All soil, waste, vent and water supply pipes for all the fixtures are in place.
  - A water test is required.
  - Water heater drain lines must run to outside. Drain pans required.
  - Water heaters are not allowed in the attic.
  - Removable, self-draining, frost-proof hose bibs shall be installed and shall have vacuum breakers.
  - Combustion air inlets and grills shall be in place.
  - All vents shall be in place.
- d) Rough-in Gas – Must comply with Chapter 24 of the 2015 IRC
- All gas piping for all fixtures shall be in place.
  - Piping to be tested with a minimum of 10lbs of pressure shall use a gauge with 1/10 lb increments. For piping to be tested with 3lbs of pressure, a gauge with 1/10 lb increments and a pressure gauge not to exceed 6 psig shall be used.
  - Gas lines shall be properly secured and protected.
  - CSST gas lines shall be bonded to the electrical grounding system at the point where the gas service enters the building with a minimum 6 AWG copper wire.
- e) Rough-in Mechanical – Must comply with Chapters 12-23 of the 2015 IRC
- All duct work and concealed components are complete.
  - Flexible ducts must be supported and in such a way that the airflow is not restricted.
  - Duct insulation must be a minimum of R-8 in attics and R-6 in other areas outside the building envelope.
  - Exhaust ducts must terminate to the outdoors. Air shall not be exhausted into an attic, soffit, ridge vent or crawl space.
- f) Chimneys and Fireplaces – Must comply with Chapter 10 of the 2015 IRC
- Wood-burning fireplaces shall have a gasketed door and outdoor combustion air.
8. **Fire Wall (If applicable) [Inspection Code 306]:** Must comply with Section R302 of the 2015 IRC
- To be made after drywall is in place on fire-rated walls prior to applying any textured finish or paint.
  - Any penetrations must be sealed with fire caulk or other approved method.
  - Plastic electrical boxes are not allowed unless listed for such use.
  - Dryer vents cannot penetrate a firewall where openings are not allowed, and washer connections must be backed with a double layer of 5/8” type X gypsum board.
9. **Approach and Sidewalk [Inspection Code 106]:** Must comply with City detail
- Inspection may be made at any time before Final.
10. **Permanent Power [Inspection Code 107]:**
- All electric and gas piping work is complete.
  - Electrical system shall have all receptacles, switches and fixtures in place.
  - Receptacles shall be of the tamper-resistant type.
  - Arc-fault circuit interrupters (AFCI) are required in family rooms, dining rooms, living rooms, dens, bedrooms, offices, sunrooms, game rooms, media rooms, closets, hallways, and similar rooms and areas.
  - Ground-fault circuit interrupters (GFCI) are required for all receptacles located within 6’ from the outside edge of any sink and for all circuits in a kitchen, bathroom, outdoors, and garage including those for automatic garage doors openers and dedicated appliance circuits.
  - Where fixtures are not installed, the outlet shall be blanked off with a plate cover.
  - Gas system shall be complete including valves and equipment (with exception of dryer and range).
  - Gas test shall be performed.
  - Gas flex lines are not allowed through knockouts.
  - If applicable – jetted tub pump grounding to cold water supply with 12x12” access panel.
  - Where gas appliances have not been installed, the gas line must be capped to prevent accidental opening of a valve.
11. **Drainage Final [Inspection Code 108]:**

- Landscaping, turf, and drains shall be in place.
  - The City shall run a sewer-drain camera from a cleanout to the sewer main to check for any separation or blockage. If any separation or obstructions are found, it shall be the responsibility of the plumber to make repairs.
  - All areas of City Right of Way shall be clean.
  - The street, drive approach, sidewalks, storm drain inlets, manholes, water valves, handicap ramps, water meters/boxes and sanitary sewer cleanouts in the Right of Way shall be inspected.
12. **CSI will need to be completed before final inspection can be scheduled**
13. **Energy Inspection reports will need to be submitted before final inspection can be scheduled**
14. **Building Final [Inspection Code 109]:**
- The permanent address must be posted on the house or mailbox with numbers a minimum of 4" in height.
  - One full-length continuous handrail must be installed at each stairway with 4 or more risers. Ends must be returned to the wall or terminate at the Newel post. Handrails must be installed at a height of 34" – 38". Handrails shall have a space of not less than 1.5 inches between the wall and the handrail.
  - Safety glazing shall be identified in a permanent manner (etched on glass) where required by section R308.4.
  - Both smoke detectors and carbon monoxide detectors are required. Smoke detectors and carbon monoxide detectors must also be retrofitted with current code for all remodels and additions; however, battery powered units may be substituted in areas where no work is being performed.
  - A permanent certificate as provided in the permit packet shall be posted on the electrical panel. The certificate shall list the insulation R-values in the ceiling/roof, walls, floors, and ducts, the U-factors for fenestration, the solar heat gain coefficient of fenestration, and type and efficiency of the heating, cooling, and service water heating equipment. This is to be completed by the builder, an architect, or an engineer.
  - A permanent pull-down ladder must be installed to access appliances located in an attic. An access opening is required to all attic areas with a height of 30" or greater.
  - Attic insulation shall be in place and depth markers installed.
  - If using EnergyStar as method of energy code compliance, an official EnergyStar certificate must be in permit pack.
  - Air conditioning equipment and pads shall be set.
  - Programmable thermostats must be used for all heating/air conditioning units.
  - Water, electricity and gas shall be on at this time to verify proper operation of outlets and equipment.
  - Electric panel must be specifically and clearly labeled.
  - A permanent electrical outlet and lighting fixture controlled by a switch located at the required attic opening must be provided at or near any mechanical equipment.
  - All light fixtures must be installed or a blank plate must be in place.
  - A minimum of 50% of all light fixtures must have compact fluorescent bulbs or other high-efficacy lamps.
  - An exterior light fixture shall be in place at all egresses.
  - A removable access panel must be provided for jetted tubs.
  - All plumbing fixtures must be installed.
  - Street, alley, and all flatwork must be clean and clear of mud and debris.
  - The yard, garage, and attic must be clear of debris and trash.
  - If a lawn sprinkler system is installed, a separate permit must be issued.
  - Structures with fire-suppression systems shall have been inspected and approved by the Fire Marshal.

CITY OF KELLER  
 BUILDING SERVICES  
 1100 BEAR CREEK PKWY \* P.O. BOX 770 \* KELLER, TEXAS 76244  
 817-743-4110 \* Fax 817-743-4123 \* www.cityofkeller.com