



## BUILDING DEPARTMENT

# BUILDING CODE COMPLIANCE

100 Highridge Drive  
Lakewood Village, TX 75068  
(972) 294-5555 Office (972) 292-0812 Fax  
[linda@lakewoodvillagetx.us](mailto:linda@lakewoodvillagetx.us)

REVISED: 04/13/2017

## GOAL

The focus of plan review and building inspections are to ensure **quality** construction. As the builder, you shall require your designer, engineer, and subcontractors to draw, specify, and build structures that reflect the code requirements and other regulations adopted by the Town. **Our** best effort will achieve the goals of safety, energy efficiency, and quality construction.

## BUILDING CODES

- 2015 International Energy Conservation Code
- 2011 National Electrical Code
- 2012 International Residential Code
- 2012 International Mechanical Code
- 2012 International Plumbing Code
- 2012 International Fuel Gas Code

## ENERGY CONSERVATION

### Minimum

#### 2015 INTERNATIONAL ENERGY CONSERVATION CODE

All residential construction shall comply with the following simplified energy requirements. Alternatively, the builder may provide other approved energy compliance documentation. (i.e.; MecCheck, ResCheck, IC3 or Energy-star)

- Attic Insulation (blown) = R38
- Exterior Sloped Ceilings (blanket) = R19
- Floor insulation (blanket) = R19
- Exterior Wall Insulation = R13
- Environmental Air Duct in unconditioned Spaces = R6 (supply & return)
- Windows = U.65 SHGC = .40
- A/C system efficiency minimum of 13 SEER.

Each window assembly (doors with 50 % or more glazing) is required to display at the time of insulation a certificate rating label indicating the National Fenestration Rating Council has tested the assembly. The label shall not be removed until after insulation inspection has been completed and approved. Window assemblies, which do not bear a certification rating will be failed and removed from the window opening.



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### Preferred

#### ENERGY STAR HOMES

Requires third party rater plan review and inspection/testing by RESNET agency certified for the State of Texas. Voluntary compliance shall require two complete copies of rater analysis with building plan submission for building permit. Raters A/C must be within 1% of plan/permit area. Builders shall employ the same rater for plan review, inspection, and testing.

A Third Party verification form must be completely filled out, indicating final "HERS" rating score prior to the builders request for final inspection and Certificate of Occupancy.

The Town shall not issue a Certificate of Occupancy until all required documentation has been submitted and verified to be in compliance with EPA regulations.

#### RESCHECK OR IC3 ENERGY ANALYSIS

ResCheck or IC3 Energy analysis shall be signed by an ICC certified energy inspector / plans examiner.

## LESSONS LEARNED

The intent of this section is to provide guidance for builders or general contractors regarding the deficiencies commonly found during inspections. As the builder, you shall require subcontractors to build structures that reflect the code requirements and other regulations adopted by the Town. **Our** best effort will achieve the goals of safety, energy efficiency, and quality construction.

The following information is **provided as reference** and shall **not** be considered all inclusive:

### T-POLE

- Address and permit posted shall be onsite.
- Ground fault protection shall be included on all 20 and 30 amp circuits.
- Pole shall be braced and grounded.
- Plugs and breakers shall be contained in a weather proof enclosure.

### PLUMBING GROUND ROUGH

- Address and permit shall be posted onsite.
- Proper fittings shall be used in system.
- Short sweep fittings shall be prohibited under slab.
- Vents, traps, and trap arms shall be properly sized.
- Minimum ¾ inch water service with cut-off valve shall be installed.
- Minimum twenty (20) foot copper service line to inside forms, no PEX shall be allowed under slab.
- Hose bibb with tamper proof vacuum breaker shall be installed. Water shall be on to dwelling or be air tested to a minimum fifty (50) psi.
- Copper lines shall be sleeved, taped, or painted where exposed to concrete;
- All dwelling sewers (yard lines) shall be a minimum four inch (4) with a four inch (4) double or two-way cleanout.



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- Turns in sewers shall be achieved with one-eighth (1/8) or one-sixteenth (1/16) bends. Short radius fittings shall be prohibited.
- Water and sewer lines shall be in separate trenches or in a common trench with water line placed on a solid shelf twelve inches (12) above sewer line.
- All underground PVC and copper shall be bedded with sand or clean soil.
- Form board survey shall be available for the Building Official.

### WATER / SEWER TAPS

- All taps shall be closed and buried the next day upon passing the inspection.

### FOUNDATION

- Address and permit shall be posted.
- Post tension or other engineered plans shall be on jobsite at time of inspection.
- Minimum concrete thickness shall be four inch (4) or greater.
- Beam width and depth shall comply with approved engineer designs.
- Chairs shall be under reinforced steel and tendons.
- Exposed copper shall be sleeved and protected.
- All PVC DWV lines in beams shall be wrapped protected from concrete.
- Forms shall be adequately braced, with brick ledge installed if applicable.
- Block-outs for tubs and showers shall be in place.
- Anchorage shall be in place at time of inspection.
- Approved engineer inspection report shall be onsite.
- Rough grading for positive drainage away from slab shall be complete after concrete placement and removal of forms.
- All weight tickets shall be on file with the Town prior to next inspection.

### FLATWORK

- Town sidewalks shall be minimum 4' wide with ¼ "per foot slope from property line to street.
- Expansion joints shall be installed where abutting existing concrete and every twenty (20) feet.
- Reinforcement shall be #3 bars at 16" on center each way.
- Sidewalk marking for control joints shall be five feet (5) on center.
- Drive approaches shall be six (6) inches in depth and reinforced with #3 rebar dowelled into existing concrete at sixteen (16) inch on center placed on compacted soil.
- Water meter boxes shall be flush to final grade, including sod, and meters and fittings shall be fully accessible;
- Water meters shall not be located in any flat work.
- Handicap ramps shall conform to the Texas Accessibility Standards (T.A.S.).
- All fire hydrant and main line cut-off valves shall be clearly located and be flush to final grade.

### PLUMBING TOP OUT

- All vents shall extend through roof minimum 6" with flashings properly installed.



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- Properly size vents, traps, and trap arms.
- Horizontal vents below forty-two (42) inches above floor shall be prohibited.
- All plumbing shall be stack vented. Flat venting shall be prohibited.
- All water pipes in exterior walls shall be insulated.
- All copper lines and stub outs shall be strapped and supported.
- All plumbing walls shall require minimum 2" X 6" framing.
- All water heaters shall be in an approved drip pan. T and P lines and drain lines shall terminate to the exterior of the building.
- A water test shall be required on all plumbing above slab regardless of the number of stories of the finished dwelling.
- Cleanouts shall be installed above arm tie-ins.
- Approved shower pans shall be installed and tested.
- All shower valve risers shall be capped and tested.
- All exterior hose bibs shall be frost proof and protected where passing through masonry material.
- Water heater installations shall comply with 2012 IECC requirements.
- Air admittance valves shall not be installed without prior approval from the Building Official.

### MECHANICAL ROUGH

- Flex duct shall be properly supported and turns made in a manner that will not restrict air flow.
- Approved splice connectors shall be used at joints in duct work.
- All duct insulation shall be minimum R6.
- Primary condensate drains shall tie into a wet trap.
- Bath exhaust fans shall terminate to the exterior of structure.
- Dryer vent shall be metallic duct with maximum length of twenty-five (25) feet, with no more than two (2) ninety (90) degree bends. Two (2) feet shall be deducted for each ninety (90) degree fitting.
- Insulation on A/C refrigerant lines shall comply with the 2012 IECC.
- All seams and joints in metallic duct boots shall be sealed with mastics.
- Mechanical storage equipment areas shall comply with 2012 IECC.
- All plenum spaces shall be in compliance with 2012 IRC requirements.
- All wood burning or gas fireplaces shall have fresh air intake from outside of structure.

### SHEATHING AND NAILING PATTERN

- Wind bracing shall comply with the 2012 IRC nailing schedule.

### FRAMING

- All bottom plates on masonry or concrete shall be pressure treated. Plates will be secured in compliance with the 2012 IRC.
- Joist and rafter spans shall be installed per span charts.
- Valleys, hips, and ridges shall be no less than two (2) inch nominal thickness and not less in depth than the end cut of the rafters.



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- Purlins shall be at least the same size as the rafter, with struts four (4) feet on center.
- Joists over four (4) feet in length that terminate other than on a bearing wall shall be pressure blocked or joist hangers must be installed.
- Fur downs, chimneys, ceilings of different heights, vertical wall spaces over ten (10) feet in height, roof lines, and open risers on stairs shall be fire blocked.
- Stairs, landings, handrails, and guardrails shall comply with the 2012 IRC;
- Metal fireplaces shall be installed according to manufactures specifications;
- Vapor barrier shall be installed at brick ledge behind sheathing;
- Brick ties shall be in place where applicable;
- Masonry supported by wood members shall comply with the 2012 IRC; and
- Any beam / ceiling joist over four (4) with an opposing load shall be TRIPPLED regardless of span.

### ELECTRICAL ROUGH

- Aluminum or copper clad aluminum conductors prohibited.
- Panel shall be grounded to cold water piping and supplemental ground rod or UFER ground.
- Bonding strap or screw shall be installed.
- Receptacles shall be installed per 2012 IRC requirements.
- All Romex in return air spaces shall be sleeved.
- All branch circuits that supply 125 volt 15 and 20 amp **outlets** in dwelling unit bedrooms shall be Arc Fault protected.
- Smoke detectors shall be installed per 2012 IRC requirements and manufactures installation instructions.
- All Romex extending through masonry shall be protected.
- Bonding / grounding bushing shall be installed a service nipple where applicable.
- All electrical wiring shall be 12 AWG wiring.

### INSULATION

- All insulation in walls, ceilings, ductwork, and windows shall comply with the Town's simplified prescriptive requirements, the 2012 International Energy Conservation Code or Energy-Star.
- A copy of the third party insulation inspection shall be received by the Town prior to next inspection.

### ELECTRICAL RELEASE FOR METERS

- Conduit and disconnect shall be installed for A/C condensers.
- Connections shall be made up at meter base and panel.
- Cold water and ground rod clamps shall be secured in place.
- All receptacles, switches, and fixtures shall be in place or blanked off.
- HVAC equipment shall be installed and wiring in place.

### GAS RELEASE FOR METER

- Low pressure systems shall be air tested at fifteen (15) psi. Medium pressure systems shall be air tested at sixty (60) psi.



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All gas supply openings shall have valves; any un-used openings shall have a valve and a cap.

### BUILDING FINAL

- Water meter and valve boxes shall be set to grade and cleaned out so connections and valves are visible.
- Cracked / broken sidewalks or approaches are prohibited.
- Final grade, positive drainage, swell location, and sod must be in place.
- Smoke detectors shall be in place and operable.
- Required exit hardware shall be installed.
- Weather stripping shall be installed at all exterior doors.
- Windows shall be free of cracks or breaks.
- A/C unit shall be operational and mounted on level concrete pad.
- Window screens shall be installed.
- House numbers of contrasting colors shall be installed at front of house.
- Blown insulation shall be in place with certification paperwork at attic entrance.
- GFCI's shall be operational at all locations.
- All outstanding fees shall be paid in full.
- Final grade survey shall be on site at time of inspection.
- Notarized termite letter shall be on site at time of inspection.
- Customer Service Inspection letter shall be filled out and signed by licensed plumber or TCEQ licensed CSI inspector;
- Energy rough and energy final inspection approvals.
- The irrigation permit and back-flow test report shall be onsite if irrigation system has been installed.
- Dwelling shall be move-in ready and lot and street shall be clean from debris and mud.

### NOTICE

I hereby certify that I have read and examined the Town of Lakewood Village Building Code Compliance form and understand the "Lessons Learned" section is provided as a reference aid in the compliance of all required building codes and ordinances adopted by the Town of Lakewood Village.

Builder or General Contractor Signature	Date
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