



Hardin County

Planning and Development Commission

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Building Code Clarification Handout, #2015, June 2015

Footing Inspection Checklist

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These requirements are taken from the following adopted codes and ordinances in Hardin County: *2013 Kentucky Residential Code, IRC Code 2012, the Hardin County, KY Development Guidance System, and from the Storm Water Management Ordinances.* Refer to these codes if more detailed information is needed.

Disclaimer: This is not a listing of all code sections involving building or utilities which involve this subject, but only the sections most often questioned. Refer to the *2013 Kentucky Residential Code* book for information not listed in this handout and for other requirements of the building code.

At the request of owners and builders, **the following is a basic listing of requirements the building inspector looks for at time of Footing Inspection.** It is anticipated that owners and builders will use this checklist to be sure they are ready for the inspection and prior to calling to request the footing inspection.

- 1. Building permit has been applied for and obtained.** Permit fees have been paid. (R105.7)
- 2. Building permit has been posted on project site and is visible from street.** The building permit or copy thereof shall be kept on the site of the work until the completion of the project. (R319.1). Building drawings are on-site and available to the workers. Access to the site is to be furnished by Owner.
- 3. The lot number or street number has been posted on site visible from the street using 4" high numbers or larger.** (R321.1).
- 4. The new construction project** (house, addition, garage, pool, shed, etc.) **has been measured exactly and located on the property by a licensed surveyor or other responsible trained person to assure it is in the same location described on the approved permit application, and is not in conflict with the property line building setbacks; the drainage and utility easements of recorded subdivision plats; the private subdivision restrictions established by the developer; and not in conflict with the Development Standards, Residential Districts.** (R106.2)
- 5. The requirements of the Storm water Runoff Ordinances have been installed to prevent erosion onto neighboring properties, adjacent streams and ditches, and onto streets adjacent to the property, before disturbance of the site begins.** [Kentucky Erosion Prevention & Sediment Control Field Guide]

Specifically the following (where appropriate) Storm Water Runoff Ordinance requirements will be expected:

- A. The construction entrance (driveway) has been installed a minimum of 20 feet wide by 50 feet long. The end of the entrance where it meets the main road shall be flared.
 - B. A temporary culvert or driveway tile has been installed.
 - C. Gravel used in construction of the pad is large enough that vehicles do not carry it off. #2 size rock or #3 rock is typically used. At least 6 inches thickness of gravel should be installed for the entire length and width of the construction entrance. Gravel material is being added where surface voids are visible.
 - D. Areas downhill of the building footprint that are likely to receive erosion and water runoff have been protected with properly installed sediment traps, silt fences, vegetation buffers, and silt check dams of rock or other approved products. Silt fences should be installed on the ground contour below bare soil areas.
 - E. Seeding or mulching of all bare soil areas that are not being worked after 21 consecutive days has been established.
 - F. Mulch or grass is established on bare areas that are at final grade.
- 6. The bottom of the footing is dug at 24 inches below finished grade minimum.** Where backfill is to be added to obtain the 24 inch depth, the footing has been dug a minimum of 12 inches into solid subgrade soil. (R403.1.4). The minimum frost depth shall be measured from the proposed finish grade to the bottom of the footing.
 - 7. All loose dirt fill and debris has been removed from the interior of the footing. Compacted footing soil is free of vegetation, roots and branches. The footing is clear of water.** (R403.1.4 Amendments)
 - 8. The footing is not bearing on frozen soil.** (R403.1.4.1 Frost Protection). The width of the footing is no less than 12 inches (if one-story) and no less than 16 inches (if two-story) and as established by Table R403.1 and Figure R403.1(1). Spread footings

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shall be at least 6 inches thick. Footing projections shall be at least 2 inches past all sides of the foundation wall and shall not exceed the thickness of the footing..

9. The top surface of the footings is level. The bottom surface of the footings shall not have a slope exceeding one unit vertical in 10 units horizontal (10 percent slope). Footings shall be stepped when the slope exceeds one unit vertical in 10 units horizontal. (R403.1.5)

10. All footings shall be supported on undisturbed natural soils or engineered fill. (R403.1)

11. Rebar in Footing (Optional in Seismic Design Category, "B", Hardin County), (R301.2.2) **At least two runs of ½" dia. #4 reinforcing steel rebar shall be placed in the bottom 1/3 of the footing and be placed on steel rebar supports.** Ends are to be overlapped and tied together with wire; minimum concrete coverage shall be 3" around the steel. Where rebar is used the bars must be supported to the proper height on metal "chairs".

12. The electric "Ufer Ground" has been installed in the footing. Ufer ground can be 20 LF of #2 or #4 copper wiring laid inside the footing and the same wire is long enough to reach to the location of the main electrical panel of the house. Ufer ground can be (1) L-shaped piece of #4 steel rebar connected to the other steel rebar in the footing and sticking out in sufficient length for connection at the location of the main electrical panel of the house. (2014 NFPA 70 National Electrical Code).

13. Concrete shall have a minimum compressive strength of 2500 psi or better, and as established in Table R402.2, Weathering Potential "Severe". (Applies to basement walls, footings and foundations, and other concrete not exposed to the weather). Concrete in these locations that may be subject to freezing and thawing during construction shall be air entrained concrete. Concrete total air content (percent by volume of concrete) shall be not less than 5% or more than 7%. (Table R402.2)

14. The foundation drainage system has been installed. Drains shall be installed around all concrete or masonry foundations that retain earth and enclose habitable or usable spaces located below grade, and shall be installed per the requirements of (R405.1), and shall be covered by an approved filter membrane. **Perforated drains shall be surrounded with an approved filter membrane....**

15. Footings on or adjacent to slopes. The placement of buildings on or adjacent to slopes steeper than 1 unit vertical in 3 units horizontal (33.3 percent slope) shall conform to (Sections R403.1.7.1 through R403.1.7.4).

16. Sill plate bolting in concrete/masonry = ½" diameter bolts at 6' o.c. and within 12" but not less than 7 bolt diameters (typically 3.5") from corner, and from the ends of each plate, bolt shall have a 7" embedment. Attached to plate with washer & nut tightened down to plate. (R404.3). (R403.1.6 and R602.11)

17. Slabs on ground with turned-down footings shall have a minimum of one #4 bar at the top and bottom of the footing. 2 total minimum. (R403.1.3.2) These shall be supported vertically with #3 or larger vertical dowels.

18. Concrete basement walls shall be designed and constructed with rebar reinforcing in compliance with Table R404.1.2(8). (Page 30, 2013 KRC Amendments February 2014).

19. Basement floor slabs shall be installed a minimum of 3 ½" thick. (Figure R404.1.5(2))