

## **PERMIT HOLDERS RESPONSIBILITIES**

Part of the construction process is identifying the job location and having inspections done at specific stages of construction. Before the inspector can begin inspecting the job the following must be done by the permit holder:

1. The lot and the building location must be staked so the inspector can verify the location of the forms and footings relative to the lot lines.
2. The permit must be posted and visible from the road.
3. A street number or a sign indicating the owner or contractors name must identify the location (hand painted numbers or signs are fine).

### **INSPECTIONS**

There are a number of inspections required in each of the four codes (building, electrical, mechanical and plumbing); therefore, you must call us when you are ready for each type of inspection. Work must not proceed before the job is inspected and approved to continue. **NOTE: EACH PERMIT MUST BE OBTAINED SEPARATELY.** The most common inspections are:

#### **BUILDING**

- **FOOTING** – We would like to inspect prior to any concrete being poured, because if the forms are in the wrong location it is MUCH cheaper to move forms than concrete. If you do not have an approval of the forms, you **POUR AT YOUR OWN RISK**
- **FOUNDATION WALL** – After dampproofing/waterproofing, before backfill
- **ROUGH-IN** – When framing is completed, BEFORE drywalling and AFTER electrical, mechanical and plumbing inspections
- **FINAL** – When the project is complete and ready for occupancy and AFTER electrical, mechanical and plumbing final inspections

#### **ELECTRICAL**

- **UNDERGROUND** – If anything is to be covered by dirt or concrete
- **SERVICE** – When service is complete and ready for hook-up
- **ROUGH-IN** – Before insulating or drywalling, when wiring which will be hidden is complete
- **FINAL** – When all fixtures are set, plates are on and the building is ready to be occupied

#### **MECHANICAL**

- **UNDERGROUND** – After any piping or ducts have been installed underground, before you backfill or pour concrete. (please call and arrange inspection prior to scheduling concrete).
- **ROUGH-IN** – Before insulating, drywalling or concealing; any gas piping, fireplaces, ducts, chases, duct work or chimneys need to be firestopped and inspected. If the basement is to be unfinished let us know when you request your inspection. Having your gas line installed and under a pressure test during rough-in will save you the cost of an extra inspection. All gas piping requires a pressure test and inspection prior to use.
- **FINAL** – When all mechanical equipment (furnace, heat pump, boiler, air conditioning, exhaust fans and exhaust hoods) is complete, operating and the building is ready to occupy.

#### **PLUMBING**

- **UNDERGROUND** – When any piping has been installed underground before backfill or pouring concrete (Piping must be visible; please call and arrange inspection prior to scheduling concrete).
- **ROUGH- IN** – When all drain and water piping is installed and connected, supported and firestopped and before insulating, drywalling or concealing.
- **FINAL** – When all plumbing fixtures are set, sealed and operating, the water heater is operating and building is ready to occupy.

**\*NOTE:** Labeling drain openings avoids confusion, as the inspector may not have your building plan in hand.

**PLEASE, remember each job is different and goes at a different pace. Therefore, we have no idea when you are ready for any inspections unless you contact us to let us know. Also, please make sure that you are actually ready for inspection, because extra trips by the inspector could cost you an extra fee.**

**Thank you and good luck with your project!**

## **TIPS FOR CODE COMPLIANCE RESIDENTIAL BUILDING**

No information sheet such as this can substitute for a thorough knowledge of the building code; however, it may be helpful to know the areas where most commonly found problems occur. The code sections cited are Michigan Residential Code 2009

### **BUILDING PLANNING:**

- 1.** Foam plastic shall be separated from the interior of a building by an approved thermal barrier (1/2" drywall or equivalent) R316.4
- 2.** Habitable rooms, hallways, corridors, bathrooms, toilet rooms, laundry rooms and basements shall have a ceiling height of not less than 7 feet. Not more than 50 percent of a room or space is permitted to have a sloped ceiling less than 7 feet in height with no portion of the required floor area less than 5 feet in height. R305.1
- 3.** All habitable rooms or those to be occupied (including those in basements) must have window glass area of at least 8% of the total floor area (light requirement) with at least 1/2 openable (ventilation requirement), or an alternate mechanical ventilation system. R303.1
- 4.** Bathrooms must either have a window that opens or a vent fan. All fans and vents must vent outside. R303.3
- 5.** Basements, habitable attics and every sleeping room shall have at least one emergency escape and rescue opening providing a minimum net clear opening of 5.7 sq. ft. in the normal open position. The minimum net clear opening height shall be 24 inches, the minimum net clear opening width shall be 20 inches. An exterior door within the room is considered an emergency egress opening. R310
- 6.** A solid wood door not less than 1- 3/8" thick or equivalent, without glass, is required between a house and attached garage. A garage shall be completely separate from the residence and its attic by 1/2" drywall or equivalent on garage side. R302.5.1 R302.6
- 7.** Stairways – The greatest riser height (Max. 8 1/4") within any flight of stairs shall not exceed the smallest by more than 3/8". Minimum tread depth is 9". Stairways shall not be less than 3' in clear width and shall have minimum 6'8" headroom from top of tread to finished ceiling. R311.7.4
- 8.** Garage floor must be sloped to drain toward the main vehicle entry doorway. R309.1
- 9.** Maintain 6" of CLEARANCE between the bottom edge of the siding, sheathing and wall framing and top of the final grade below (driveway, sidewalk, patio slab, deck or top of the sod or landscape bark). R317.1
- 10.** Slope all final grades away from the building for drainage. R401.3
- 11.** Smoke detectors are required in each sleeping area, on each floor, and immediately adjacent to all sleeping areas, and in any basement. All detectors shall be wired together and receive their power from the building wiring with battery back up. R314.3
- 12.** Carbon monoxide alarms shall be installed in compliance with section R315.

## FOUNDATION:

1. Location – Check closely to be sure the location of your footing forms is in accordance with the site plan that you submitted for a building permit.
2. Footings must rest on undisturbed soil below the frost line. (42” below finished grade in the State of Michigan). R403.1.4
3. Anchorage ½” anchor bolts 6’ o.c., 7” into concrete, and not more than 12” from the corner are required in the top of the foundation wall for the purpose of securing the sill. An approved alternative is galvanized straps, IF installed according to manufacturers specs. R403.1.6
4. Dampproofing of exterior foundation walls enclosing interior spaces below grade is required. See code for specific requirements based on foundation type and space use. R406.1
5. Crawl spaces must be vented on all walls within 3’ of each corner. An access crawl hole 18” x 24” shall be provided under floor space. R408

## ROUGH-IN:

1. Fire blocking of ½” drywall, 23/32” plywood or 2” nominal lumber shall be provided to cut off all concealed draft openings such as occur at bulkheads, soffits, drop ceilings, spaces between stair stringers at the top and bottom of run to form a fire barrier between stories, boxed in joist runs, chimney chase, top and bottom of furring strips (basement), and between a top story and the room space. R602.8
2. Buildings shall be braced in conformance with section R602.10
3. Treated wood is required at the following locations:  
Joists within 18” of exposed ground, sills on masonry, sills within 8” of exposed ground, siding and sheathing within 6” of exposed ground, all wood in direct ground contact, all wood girders ending in exterior masonry walls and having less than ½” clearance of any side. R317
4. Rafter/joist notching – Notching at the ends of the rafter or ceiling/floor joists shall not exceed 1/4<sup>th</sup> of the depth. Notches in the top or bottom of the joists shall not exceed 1/6<sup>th</sup> the depth and shall not be located in the middle 1/3<sup>rd</sup> of the span. Holes bored in rafters or ceiling/floor joists shall not be within 2” of the top and bottom and their diameter shall not exceed 1/3<sup>rd</sup> the depth of the member. R502.8.1
5. Basement posts must be fastened to the floor. R407.3
6. Double floor joists as required next to framed openings, under bearing wall partitions or any concentrated load bearing area above (wood stoves, freezers, hot tubs, etc.) Joist headers around floor openings must be doubled if 4’ or longer, and corner fasteners used for any 6’ of longer. Any joist (decks included) must have at least 1-1/2” of end support or be in approved hangers. Hangers must be installed with the correct nails in all provided holes. R502
7. Provide a 22” x 30” access into all attic and concealed areas over 30” in height. R807.1
8. Chimney must top out at least 24” above any roof surface within 10’. Table R1003.9
9. Vent eaves and roof (or gable ends), including garages that have ceilings. R806.1
10. Trusses shall be installed and braced in accordance with manufacturers specifications. Truss members shall not be cut or altered. R802.10.4
11. Roofing felt (No. 15) is required beneath shingles. R905.2.7  
Ice and water shield shall extend from the eaves edge to a point at least 24” inside the exterior wall line of the building.
12. Sheathing paper, one layer of No. 15 felt or other approved weather-resistive materials shall be applied over sheathing of all exterior walls. R703.2
13. Trusses shall be connected to wall plates by use of approved connectors having a resistance to uplift of not less than 175 pounds and shall be installed in accordance with the manufacturers specifications. R802.10.5

## **FINISH:**

1. Handrails shall be provided on at least one side of stairways of 4 or more risers. R311.7.7
2. Guardrails – Open sides of stairs (including basement stairs); and porches, balconies, and raised floor areas located more than 30” above the floor or grade below shall have guardrails or spindles which will NOT allow passage of an object 4” or more in diameter. Minimum height is 36”, 34” on stairways. R312
3. Landings – A 3’ x 3’ landing is required on both sides of all exterior doors. Doors between the house and attached garage are not considered exterior doors, but the doors out of the garage are. R311.7.5.1
4. Flash any junction where a roof meets a wall, gable ends, roof projections, etc. R903.2, R905.2.8
5. Metal flash the top of any exposed window (not made with built-in flashing) or door opening, skirt boards and any projecting trim or belt boards. R703.8
6. Decks. Porches, stoops, balconies, and outside stairways must also meet all code requirements, including the following items. Flash between all wood frame and concrete, above all projections and the junction to the house. Decay resistant material must be used anywhere within 8” of earth or exposure of weather. All posts must be on concrete footing pads that rest on undisturbed earth, below the frost line and must withstand side sway. Use joist hangers as required if less than 1½” of end bearing. Joists must be sized and spaced to meet code. Double up the end trim and notch the support posts, or rest the joists on a beam over posts beneath. Railings must meet code requirements.

### **MICHIGAN TOWNSHIP SERVICES-ALLEGAN, INC.**

**111 GRAND STREET**

**ALLEGAN MICHIGAN 49010**

**269-673-3239 – 1-800-626-5964**

**FAX – 269-673-9583**

**[www.michigantownshipservices.org](http://www.michigantownshipservices.org)**

**[mtsallegran@frontier.com](mailto:mtsallegran@frontier.com)**