

# Western Washtenaw Construction Authority

Manchester, Freedom, Bridgewater Townships  
Manchester Village  
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## RESIDENTIAL CODE INFORMATION

*The following represents areas of common questions and violations of the 2003 Michigan building code. This is not intended to be inclusive but aid to the builder so as to alleviate problems in the field. Other code sections may or may not apply. **Building, Plumbing, Electrical, and Mechanical work must meet the current appropriate codes for the type of work. The code takes precedence over any omission on the plans.***

**R305.1** Min ceiling height over plumbing fixtures is 6 ft. 8 in.

**R 308** Safety glazing: within 24 inches of a door, above a tub or shower, in a stairway enclosure, windows greater than 9 sq. ft. and within 18 inches of the floor. (other cases apply also)

**R309 Attached garages.** With living space above a 5/8 type x drywall on ceiling and common walls and ½ inch drywall on balance of walls is required. Where there is not living space above, ½ drywall separation is required from floor to roof boards. A 1 3/8 solid core or hollow metal door shall be used. May not pass through a bedroom.

**R310.1 Egress windows** Every room used for sleeping and basements shall have a window that meets egress requirements. 1. Net clear opening 5.7 sq. ft. 2. 20 inches clear width. 3. 24 inches clear height. 4. Clear opening not greater than 44 inches above floor. 5. Grade level window may be reduced to 5.0 sq. ft. The window panels may not be removed to meet egress. Basement windows more than 44 inches below grade shall have a stairway or ladder from a minimum 3 ft x 3 ft window well.

**311.4 Doors:** One 3 ft. x 6 ft 8 in. side swinging door shall be provided that does not lead through the garage. All other doors shall be at least 24 inches in width. Doors may not swing out over a step or stairs. (except storm doors) All exterior doors shall have a landing on the exterior side of the doorway at least 36" in the direction of travel. (Except where there are 2 or less risers.)

**311.5 Treads and risers.** Risers shall not be greater than 8 1/4". Open risers shall not have openings greater than 4" where guards would be required. Tread shall be min. 9" measured from nosing to nosing. Where less than 11" tread nosings are required. Nosing shall be ¾ to 1 ¼ " in addition to the tread measurement. There shall not be variation exceeding 3/8" in riser height or tread depth. Stairways at doors shall be measured from the top of the threshold.

**R311.5.2 Stairway with winders** shall have a tread depth of not less than 10 " at a point not more than 12 " (measured from nosing to nosing) where the tread is narrower and the min. tread depth shall not be less than 6 ". The treads shall be of equal width and symmetrical.

**R311.5.6.3 Graspable handrails** are required on all stairs with 4 or more risers. They shall be continuous without interruption by newel posts or other obstructions, located between 34" -38" above nosing and the ends shall return to the wall. Handrails, which form part of a guardrail, shall be 34"- 38" above step nosing. Clearance between wall and handrail shall not be less than 1 ½". Graspable handrails shall consist of a cross section of at least 1 1/4 " and not greater than 2 1/4 " and a perimeter dimension of not less than 4" and not greater than 6 1/4 ". Handrails with a perimeter greater than 6 ¼ inches shall have a groove on both sides not less that 5/16 inch deep starting ¾ inch from the top of the railing.

**R 312 Guardrails** are required on any exterior walking surface over 30" from floor or grade. Openings in guards shall be designed such that a 4" ball will not pass through the guard at any point including open treads. Residential guards shall be 36" in height minimum from the finished floor or stairway nosing

**R 313.1 Smoke alarms** shall be hard wired, interconnected, and have a battery back up. Smoke alarms are required in the following locations. 1. Inside each bedroom. 2. In the immediate vicinity outside of the bedroom. 3. In each story including basement. When remodeling smoke detectors shall be installed wherever possible to comply with code.

**316.1 Kraft faced insulation** shall be protected with a thermal barrier (commonly drywall) and may not be left exposed.

**602.8 Fireblocking:** Fire blocking shall be provided between horizontal (Floor joist) and vertical (wall stud) spaces. Soffits, dropped ceilings, wall cavities greater than 10' in height, stairways, ceiling and floor openings, and concealed sleeper spaces require fireblocking. In concealed horizontal spaces greater than 10 ft. in width shall be fireblocked.

**E3802.11 Arc fault protection:** Each bedroom shall be protected by an arc fault circuit interrupter

**2605 Plumbing support:** plumbing shall be supported as per table p2605.1, Pipe shall be supported under stacks. Tub and shower spouts shall be supported.

## Inspection Schedule

Site must be clearly and visibly marked with address, owner and contractors name prior to any inspections being done. A re-inspection fee and/or failed inspections may result from not posting address.

### Building Inspections

**Footings:** After holes are dug, forms are set and ready for concrete. All footings shall be 42 inches deep. Footings for decks and garages must be inspected. Footings shall not be placed over disturbed soil. Jumps in elevation must be vertical. Weep tile connections through footings must be in place. Rebar shall be placed so that it has a minimum 2" concrete cover. Footings placed on disturbed soils or concrete that has been poured without an inspection will require a third party registered State of Michigan Engineers report.

**Backfill:** After damp proofing is completed with drain tile and 6" of pea stone over the tile and above the top of the footing. A sock type tile or a filter fabric over the stone must be used. Anchor bolts or straps shall be in place. Organic debris (straw etc) removed from backfill area. Access to hole must be provided. The drain tile shall follow the damp proofing.

**Subsoil:** Before basement floor is placed. Posts installed and centered on footings, 4" pea stone or washed gravel floor base or sand leveled and vapor barrier installed. 2' of insulation at walkout walls with slab isolated from the exterior by insulation. Interior drain tile shall be installed and run to a sump crock or to daylight. Provisions for radon reduction shall be installed.

**Rough Building:** All framing completed. Electrical, mechanical and plumbing rough inspections ready and/or completed. All portions of the building must be visible. Siding, roofing, windows and doors may be installed. Engineered floor and roof truss drawings and approved plans must be on site. Any modification to trusses shall have engineering approval. All firestop and draftstop must be installed.

**Insulation:** After insulation is installed and before drywall is installed. Vapor barrier shall be installed on all wall spaces including small spaces. Provide a proper fit in small stud spaces and cut around electrical boxes. Windows and doors insulated. Framing gaps sealed. Items not completed on Rough inspection may be inspected at this time. Vapor barrier may not be left exposed in attics etc. Time spent on good tight insulation will last the life of the house.

**Final Building:** When house is completed. Electrical, mechanical and plumbing completed and inspected. All stairways, guardrails and handrails installed. Smoke detectors interconnected and working. One means of egress must be completed allowing exit to the outside, including steps and/or guardrails and handrails where required. (Not through garage or sliding door).

### **Electrical Inspections**

**Temporary Service:** Before energized. One GFCI Protected outlet required.

**Permanent Service:** Entrance wires run and secured. Panel bonded to ground. Circuits labeled. One GFI outlet installed.

**Underground Electrical:** All conduit or wiring run underground must be visible.

**Rough Electrical:** All concealed wiring run and boxes set. Grounds secured together.

**Final Electrical:** All wiring completed and energized. Gas line and water lines bonded. All devices installed. GFCI outlets installed in kitchen and bathrooms. Arc fault protected outlets installed in bedrooms.

### **Plumbing Inspections**

**Underground Plumbing:** All plumbing run under the basement or buried in the ground inside the house. All lines must be visible. Lines must be air tested.

**Sewer Inspection:** The drain line from the house to the septic tank or to the main sewer line.

**Rough Plumbing:** All concealed plumbing (supply and drain with vents) completed and pressure test in place. Shower pans must be inspected prior to covering.

**Final Plumbing:** All plumbing completed and functional. All fixtures installed, connected and operational. Maximum water temperature is 120 degrees.

### **Village of Manchester – Water & Sewer Inspections:**

**There are 2 separate departments responsible for inspections and both parties MUST do inspections before covering.**

**From Property Line to House:** Western Washtenaw Construction Authority is responsible.

**From Cleanout at property line to Curb Stop:** The Village Of Manchester is responsible. Please call 734-428-7877 for inspection.

### **Mechanical Inspections**

**Rough Mechanical:** All concealed mechanical equipment and ductwork completed. Return air chase on outside walls insulated with approved materials. Bathroom fans installed and vents run to exterior.

**Rough Fireplace:** After fireplace and flue is installed. Any portion of the fireplace not visible shall be required to be made visible.

**Gas piping:** All gas piping must be visible and pressure tested with 40# at time of inspection.

**Underground Piping:** All in-ground ductwork or in-floor hot water heat prior to covering. Tubing for in floor heat shall be pressurized.

**LP Tank & Line:** Tank set and permanent gas line run 18” below grade and visible, protection where coming out of the ground.

**Final Fireplace:** All work on prefab units completed. Instruction on site

**Final Mechanical:** When all mechanical appliances are connected and operational.

**Requirements for Certificate of Occupancy:** (See C of O requirements list)

- All required inspections completed.
- Health department Certificate of Approval issued.
- All additional inspection fees paid.
- Zoning approval (Where required)
- Temporary C of O may be granted with the Building Official's approval and a fee of \$25.00 paid.