



# Decks

April 2020

*City of Milan*  
*Building Department*  
*Guide to building a*  
*Deck*



City of Milan Building Department  
147 Wabash Street  
734-439-7089

# **INTRODUCTION**

## **Decks**

The City of Milan has prepared this Guidebook to assist you in the process of building a deck within our City. This Guidebook contains information that will help you understand the Building Permit and construction process from application to completion. We have included details for areas that have generated confusion or delays in the past. The information is presented in a start-to-finish sequence to guide you as you progress through your project.

**Before You Build**.....Page 2  
Issues that should be checked at the beginning of your project.

**Codes Currently in Effect**.....Page 3  
A list of current codes that will apply to your project.

**From Application to Completion**.....Page 4-6  
This is intended to be your general guide through the complete process. It provides information on the application requirements, permits and inspections.

**Inspection Requests**.....Page 7  
Contains details required for requesting an inspection, making sure your job is ready for inspection, the time inspections are done and what the inspection reports mean.

**Construction Requirements**.....Page 8  
A general guide to help you understand and apply the Building Code requirements to your project. This information should be used as you prepare your construction drawings and construct your Deck.

**Plot Plan Requirements**.....Page 9  
A list of the items that are required to be shown on the Plot Plan. This list should be given to the person preparing your Plot Plan. Please take time to make sure your drawings are complete. Plot Plans that contain all necessary information and details will help expedite the review process.

**Sample Deck Drawings**.....Page 10 & 11

This Guidebook contains many procedures and requirements. We urge you to read through it completely. It may save you valuable time in completing your project. We hope this Guidebook is helpful, and we encourage you to provide us with any suggestions you may have as we continue to work toward improving our permitting process.

**NOTE: This Guidebook is only intended to be a guide and is not all inclusive of the Building Code. For complete details of all requirements, please refer to the 2015 Michigan Residential Code. The information in this Guidebook is subject to change without notice.**

# **BEFORE YOU BUILD**

## **Decks**

The following should be checked at the beginning of your project. Any of these items can affect the type, location, cost and length of time it takes to build your deck.

**Deck** – A structure that may or may not be connected to the main building. This structure could be ground level or over a walk-out door. This guide is designed as an outline for decks, not as a step by step procedure.

**Size** – Decks, whether free standing or attached to the building require a Building Permit. Dimensional requirements are detailed in the City of Milan Zoning Section 4.60 which can be found online at <http://milanmich.org>. Briefly, decks shall be located a minimum of 20 feet from the rear lot line and shall meet side yard setbacks. The total lot coverage of all structures (home, detached accessory building, shed, and deck cannot exceed 30 percent of the lot size. Please contact the Building Department at 734-439-7089 if you have any questions.

**Location** – Decks cannot be built in any front yard or in any easement, or on a vacant lot. **Please note: Corner lots have two (2) front yards.**

**Setbacks** – Dimensional requirements are detailed in the City of Milan Zoning Section 4.60 which can be found online at <http://milanmich.org>.

**Height** – Deck finished floor 30 inches or higher from the ground must have a guardrail system around the deck. See Guardrails below.

**Guardrails** – Shall be able to withstand a 200lb load in either direction. Guardrails shall not be less than 36 inches measured from the finished decking to the top of the guardrail. On stairs, the height shall not be less than 34 inches. Vertical spindles shall have a maximum opening of 4 inches between adjacent spindles. Both are detailed in Section R312.1 of the 2015 Michigan Residential Code.

**Steps** – Stairs shall have a minimum clear width of 36 inches. Riser Height is 8 ¼ inches maximum. Tread depth is 9 inches minimum. Open risers are permitted provided they do not allow passage of a four-inch sphere. Step design is detailed in Section R311 of the 2015 Michigan Residential Code.

**Handrails** – Graspable handrail is required on one side of stairs with four or more risers at height between 34 and 38 inches. Handrails design is detailed in Section R311.7.8 of the 2015 Michigan Residential Code.

**Drainage** – When installing a deck, make sure the walking surface slopes away from the home. Also, ensure the ground under the deck is a pervious surface and it slopes away from the home.

These are some of the common items that may cause delays in the permit process. If your project is beyond the scope of this Guidebook, additional requirements may be necessary. Please call the Building Department at 734-439-7089 if you have questions.

**Note: This Guidebook is only intended to be a guide and is not all inclusive of the 2015 Michigan Residential Code. For complete details of all requirements, please refer to the 2015 Michigan Residential Code. The information in this Guidebook is subject to change without notice.**

# **CODES CURRENTLY IN EFFECT**

## **Decks**

**City of Milan**

April 2020

**Building:** 2015 Michigan Residential Code

**Plumbing:** 2015 Michigan Residential Code

**Electrical:** 2015 Michigan Residential Code

**Mechanical:** 2015 Michigan Residential Code

**Energy Code:** 2015 Michigan Residential Code

Code Books can be purchased by going to the Michigan Department of Labor & Economic Growth, Bureau of Construction Codes & Fire Safety, Lansing, MI 48909, or their website at: <http://michigan.gov/bcc> - Codes & Standards.

# **FROM APPLICATION TO COMPLETION**

## **Decks**

### **1. Information Required On the Building Permit Application**

#### **A. Building Permit Application**

- Forms are available online at <http://milanmich.org> or at the Building Department counter. Applications shall be filled out completely.

#### **B. Plot Plan – Three Copies**

- Please show your existing house, any accessory structures and the proposed deck.
- Please indicate the size of the deck, setbacks and the distances to all property lines and easements.

#### **C. Construction Drawings – Two Sets**

- Plans that contain all the necessary information and details will help expedite the plan review process. Plans shall match Plot Plans.

#### **D. Owners** may submit a Building Permit application for work on property that is or will be, upon completion, their place of residence. Owners of rental property may submit a Building Permit application to do maintenance and alterations to the rental property.

**Please Note:** Any Contractor, hired by an Owner for a contract price of \$600.00 or more, shall be licensed in accordance with the State of Michigan Residential Builders Laws.

### **2. Registration of Builder’s License**

- A Builder shall be currently registered with the City of Milan to be able to submit a Building Permit application.
- Builders not currently registered can register at the time of application by providing the following:
  - The original or a copy of the Builder’s license
  - Contractor Registration Form
    - The form shall have an original signature by the License Holder
    - The form shall be notarized (if not presented by License Holder)
- A Contractor Registration Form is available at our counter or online at <http://milanmich.org>
- Note: All information noted above shall be submitted with the applicable Building Permit Application.

### **3. Plans Reviewed and Approved**

- All Building Permit Applications for decks will be processed within a reasonable amount of time.

#### **Permit Requirements**

- Construction drawings and Plot Plans will be reviewed for compliance with City Ordinances and the 2015 Michigan Residential Code.
- Plans are reviewed in the order they are received, based on the application date. Plan review time varies depending on the Building Department’s workload.
- Plans that contain all the necessary information and details will help expedite the Plan Review process.
- The Permit Applicant will be notified if the plans do not meet Zoning Ordinance, grade, or Building Code requirements, or if any additional information is required.

#### 4. **Permit Ready**

- When the permit has been processed, the Permit Applicant will be contacted to let them know the Building Permit is ready to be picked up.

**Note:**

- All Permit fees are due at the time of Permit issuance.
- Permit fees may be paid by cash, credit card, or check.
- Permits that have no activity for more than 6 months may be canceled.
- Once the Building Permit is issued, an Electrical Permit can be obtained (as applicable).

#### 5. **Electrical Permit** (as applicable) may be obtained after the Building Permit has been issued.

- All items to be installed shall be listed on the Electrical Permit.
- Items not listed shall be added to the Electrical Permit prior to the Final Electrical Inspection.

**When all required permits are obtained, construction may begin. Revisions to the structure or grade after issuance of the Building Permit may require re-submittal and Building Department approval.**

The following items shall be maintained throughout the construction process:

- The street address shall be posted on the house and visible from the street.
- The street shall be kept clean.
- All construction materials and debris shall be contained on the property.
- Temporary soil erosion control shall be erected and maintained.

#### 6. **Inspections** (See “Inspection Requests” – page 7)

Once your Building Permit has been issued, you can begin construction. Your deck will be reviewed and inspected in accordance with the requirements of the 2015 Michigan Residential Code. As your project progresses, the Building Department will need to perform the following inspections:

##### **A. Footing Inspection** – After footings are dug all organic materials shall be removed from footing and slab areas.

- Approved plans shall be on site for all inspections when a Building Permit has been issued.
- These inspections may be done separately depending on your construction sequence.
- Common items the Inspector looks for are:
  - Location and size of the deck shall match the approved plans.
  - Property line shall be clearly marked to verify the distance between the property lines and the structure (if applicable).
  - Footings are being installed in accordance with the approved plans.
  - If the home was completed within the last five years, footings are not permitted in the over-dig area of the foundation which is typically 30 inches.
  - All vegetation has been removed from the ground area (if applicable).
  - A pervious surface is underneath the deck area.
  - Ground slopes away from the home.

##### **B. Rough Framing Inspection** – Once the deck framing is complete and before the decking is installed, an inspection of the framing is required.

- Approved plans shall be on site for all inspections.
- Common items the Inspector looks for during inspections:
  - Grading is in accordance with the approved plans.
  - The grade slopes away from the structure – a min. 6 inches within first 10 feet.
  - Pressure treated lumber is used for all structure framing.

- All wood in contact with the ground shall be approved pressure treated wood suitable for ground contact.
  - Proper sizing for joists and beams are installed.
  - All screws, nails, bolts washers, and nuts used with pressure treated wood shall be hot-dipped zinc-coated galvanized steel, stainless steel, silicon bronze or copper.
  - Hardware and connectors (joist hangers or post anchors) shall be protected as per the manufacture’s recommendations.
- C. Underground Electrical Inspection** (as applicable) – After wire or conduit is installed and all underground Electrical work is completed.
- Shall be inspected before covering. Please note: Proper materials shall be used.
  - Wiring from the house to the structure shall be at least 18 inches below grade
  - All work shall comply with the 2015 Michigan Residential Code.
- D. Final Electrical Inspection** (as applicable) – After all Electrical equipment, switches, plugs, covers, and fixtures have been installed and are operational.
- A minimum clearance of 3 feet is required between the roof and all Electrical service wires.
  - Proper operation of ground fault circuit interrupters and breaker sizes are checked. Ground fault circuit interrupters (GFCI) are required for Electrical protection in all decks.
  - The Inspector may need access to the inside of the house to complete the inspection. An adult of at least 18 years of age shall be present for the Inspector to enter the house.
- E. Final Building and Grade Inspections** – After Electrical Inspections are done and finalized.
- A Rough Building Inspection is required prior to a Final Building Inspection to review the structure prior to installation of the decking material.
  - Approved plans shall be on site for all inspections.
  - Common items the Inspector looks for during inspections:
    - Final Grade is in accordance with the approved plans.
    - Pressure treated lumber is used for all structure framing.
    - All wood in contact with the ground shall be approved pressure treated wood suitable for ground contact.
    - Wood-plastic composite materials shall be installed per the manufacturer’s specifications.
    - Deck slopes away from the home.

This itemized list is provided as a guide to help you understand the process for building a deck in the City of Milan. It covers the most common types of projects. If your project is beyond the scope of this Guidebook it may require additional information.

Inspections or Permits. Please call the Building Department at 734-439-7089 if you have any questions.

# **INSPECTION REQUESTS**

## **Decks**

**Contact the Building Department to schedule the inspection.**

- At this time, you will be required to provide the following information:
  - **The Street Address of the job site.**
  - **The Permit Number.**
  - **The type of Inspection you are requesting.**

Inspections will be done Monday through Friday. Inspections may be available outside the normal business hours by special arrangement.

**A request to cancel an Inspection needs to be called in to the Building Department at 734-439-7089 before 9:00 a.m. on the day of the requested Inspection.**

**Please make sure your project is ready for your inspection. If your project is not ready for an inspection, the inspection will not be completed and a \$55.00 re-inspection fee may be charged. The following items shall be completed or in place at the time of the inspection:**

- Safe access to the job site and throughout the area to be inspected.
- Approved plans and truss drawings on site.
- The job ready for inspection.
- The Street address and lot number posted and visible from the street.
- Temporary soil erosion control properly installed (if applicable).
- The street kept clean.
- All construction materials and debris contained on the project property.

**Inspection results will be left on site after each inspection has been completed.**

- Green Tag –** Your Inspection has been approved.
- Inspector's Report –** Your Inspection has not been approved. The Report will contain a list of items that need to be addressed before calling for a re-inspection. A \$55.00 re-inspection fee will be charged for any items not corrected at the time of the second inspection. Inspections shall be approved before proceeding with the next phase of your construction project.

It is your responsibility as the permit holder to check the job site for the inspection results. Please read the information on all Inspection Reports. If you have any questions regarding this information, call the City of Milan Building Department at 734-439-7089.



# **CONSTRUCTION REQUIREMENTS**

## **Decks**

This information is provided as a general guide to help you apply the standard Building Code requirements to your project. It covers the most common types of projects. The actual Building Code language may contain additional requirements that may apply if your project is beyond the scope of this Guidebook.

Your Accessory Structure will be reviewed and inspected in accordance with the requirements of the 2015 State of Michigan Residential Code and the City of Milan Zoning Ordinances.

### **1. Permits**

- Building Permit is required for the construction of the deck.
- Electrical Permit is required for any electrical work on the deck or surrounding area.

### **2. Footings**

- Footings shall follow Section R403.1 of the 2015 Michigan Residential Code. At a minimum, must be at least 42 inches deep.
- Footings shall rest on undisturbed soil.

### **3. Framing**

- Section R507 of the 2015 Michigan Residential Code details construction. Briefly:
  - Joist hangers installed on all concealed beams.
  - R507.7.1 details the Post to Beam Connection. The post is notched for the beam, which is then bolted, or the beam is set on top of the post using the proper bracket.
  - Joist to Beam Connection can no longer be nailed when the joist is sitting on top of the beam. Joist hangers or another mechanical fastener must be used.
  - All screws, nails, bolts washers, and nuts used with pressure treated wood shall be hot-dipped zinc-coated galvanized steel, stainless steel, silicon bronze or copper.
  - Treated lumber is used for all structure framing. All wood in contact with the ground shall be approved pressure treated wood suitable for ground contact. The American Wood Protection Administration (AWPA) grades pressure treated wood as follows:
    - AWPA UC4A or UC4B for Ground Contact or Imbedded in the Ground
    - AWPA UC3B for Above Ground Exposed Wood
  - The house siding must be removed prior to installation of the ledger board. R703.4 Continuous Flashing with a drip edge is required at the ledger board when attached to wood frame construction.
  - I-Joist used for the bond of the home must have a 2x band board, or a minimum 1-inch thick engineered wood product capable of supporting a deck. If neither are present, then a free-standing deck is required.

### **4. Electrical (as applicable)**

- Part VIII of the 2015 Michigan Residential Code details installation. Briefly:
  - Proper operation of ground fault circuit interrupters and breaker sizes are checked. Ground fault circuit interrupters (GFCI) are required for electrical protection on decks.
  - Any underground wiring shall be at least 18 inches deep and must be inspected before the trench is filled in.

### **5. Decking**

- All wood decking materials must be pressure treated (within 18 inches of the ground), redwood, or cedar.
- Wood-Plastic Composite decking materials shall be installed per the manufacturer's instructions.

# **PLOT PLAN REQUIREMENTS**

## **Decks**

Three sets of plot plans containing all the information and details noted below shall be submitted with the Building Permit Application. The Plot Plan may be drawn by the Homeowner, Contractor, Land Surveyor, Engineer or Architect. Special circumstances may require the Plot Plan to be drawn by a licensed Engineer, Architect or Land Surveyor. This will be determined during the Plan Review process.

The Plot Plan shall contain the following information:

### **General**

- Builder's name, address, and telephone number.
- The North arrow, street right-of-way and street name.
- Plot Plan scale shall be between 1" = 20' and 1" = 50'.
- The preferred Plot Plan size is 8 ½" x 14". If it is necessary to go to a larger size, please do not exceed 18" x 24".
- Temporary soil erosion control measures may be required based on a field inspection.

### **Zoning**

- The location and dimensions of all structures on the lot, including proposed structures and distances from lot lines and/or existing structures shall be indicated.
- Plot Plans shall have all lot dimensions indicated.
- The Plot Plan footprint and the construction drawings shall be consistent with each other.
- Decks shall be at least 20 feet from the rear property line.

### **PLEASE NOTE:**

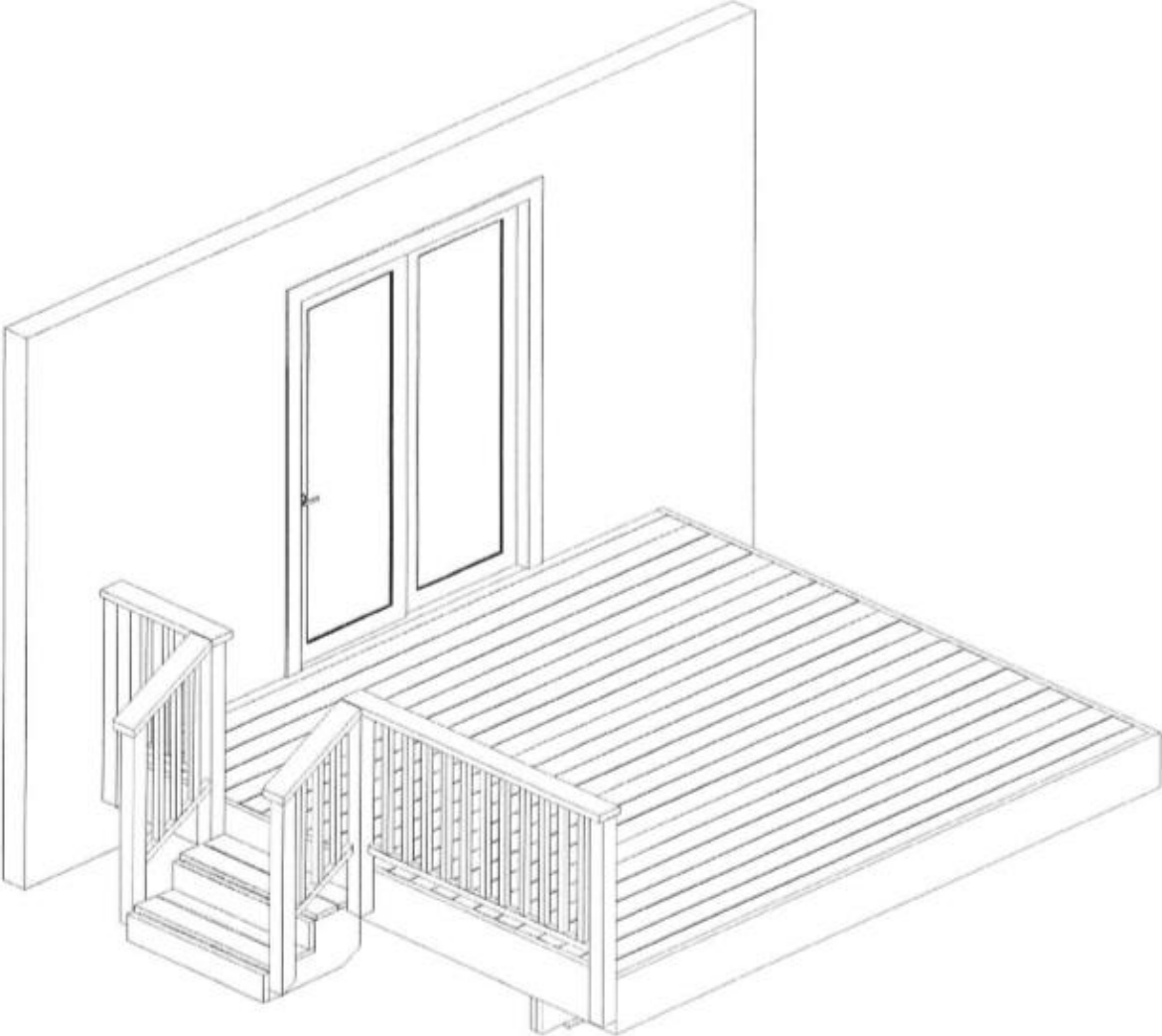
Per Zoning Ordinance Section 4.60, decks, whether free standing or attached to the building require a Building Permit. Dimensional requirements are detailed in the City of Milan Zoning Section 4.60 which can be found online at <http://milanmich.org>. Briefly, decks shall be located a minimum of 20 feet from the rear lot line and shall meet side yard setbacks.

Decks cannot be built in the front yard or in any easement, or on a vacant lot. Note: corner lots have two (2) front yards.

The total lot coverage of all structures (home, detached accessory building, shed, and deck) cannot exceed 30 percent of the lot size.

**SAMPLE DECK DRAWING**

**Elevation**



**SAMPLE DECK DRAWING**  
**Framing**

