



**VILLAGE OF BEECHER**  
BUILDING DEPARTMENT  
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Beecher, IL 60401  
708-946-2261/ 708-946-3764 Fax  
[www.villageofbeecher.org](http://www.villageofbeecher.org)

## **DECKS---CONCRETE PATIOS**

1. Complete permit application.
2. Submit a copy of the plat of survey showing the proposed location of the deck or patio.
3. Submit a copy of your contractor's proposal showing the description of the work to be completed. Contractor must be licensed by the Village before your permit will be issued.
4. Contact J.U.L.I.E. (Utility Location Service) at 811 to locate underground utilities and to obtain dig number.
5. Submit approval letter from developer or homeowner's association, when applicable.

## **DECK REQUIREMENTS**

1. Decks/porches must conform to building setback lines. 25 ft. from the front, and 10% of width of the lot not to exceed the existing foundation line of the primary structure.
2. Posts must be resistant to rot and decay.
3. Piers must be set in concrete at 42" deep to the existing grade. Post hole inspections are required.
4. Decks over 30" above the ground must have a 36" high railing attached to the deck on all exposed sides. The guard must be capable of withstanding 200-pound load directly applied to the rail. Maximum spacing between vertical balusters is 4".
5. Stairs with 3 or more risers must have a continuous handrail on at least one side (2 steps = 3 risers).
6. Stairs must be a minimum of 3 feet wide.
7. Provide detailed information on the stairs. The riser height shall not exceed 7-1/4" and the tread shall not be less than 10 inch nosing to nosing. All stair risers must be of equal height. A guardrail system must also be provided for on elevated decks. Additionally, a separate and continuous handrail must be installed at least on one side for residential decks.
8. DO NOT COVER ESCAPE WINDOWS.

9. Provide a detailed sketch of the proposed deck. The plans should clearly identify the following areas:
  - A. Provide information on the concrete piers, depth and diameter.
  - B. Provide information on the post size and connection to the concrete pier.
  - C. Provide information on sway bracing for elevated decks over 4 feet.
  - D. Provide information on the size, spans, and spacing of the floor joists. Also include the species of lumber. Elevated deck/balconies must be designed at 60 pound live load and decks 4 feet or lower, 40 pound live load.
  - E. Provide information on the size, span and spacing of the beams. Also, indicate the species of lumber.
  - F. Provide a detailed diagram of the ledger board connection to the dwelling. If attaching to masonry the bolts must pass through into the rimmer board for a positive connection. Additionally, provide information on joist hanger where applicable.
  - G. If you plan to construct a PVC deck, provide complete details from the manufacturer for installation requirements.

### **CONCRETE PATIOS**

IF A PATIO REQUIRES MORE THAN A 10" CHANGE IN GRADE, A DECK MAY NEED TO BE BUILT.

1. Patios are to have top soil removed and 4" compacted granular fill for a base. Concrete is to be a minimum 4" thick. Wire mesh is required. Pre-pour inspection is required.
2. Maintain proper stair requirements. Any/all stairs must be equal in height.

### **INSPECTION REQUIREMENTS**

The permit holder is responsible for scheduling inspections. To schedule an inspection, please call SafeBuilt at 1-815-255-9047. Please have your permit number available.

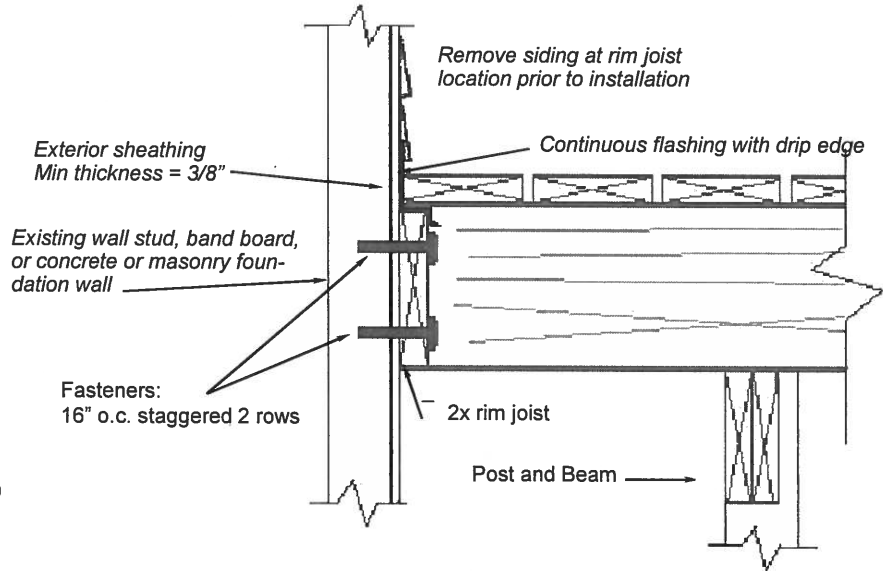
**HOMEOWNER IS RESPONSIBLE TO FOLLOW ALL CODES AND ORDINANCES.**

# Construction Details: Attaching to the House

Correctly attaching your new deck to your existing home is critical to preventing collapses. A common issue that can cause deck failures and loss of life are decks that pull away from homes because of missing or inadequate house attachments.

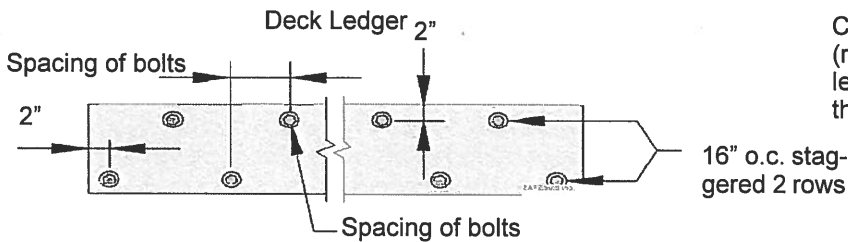
## Cross-Section

Attach the deck rim joist to the existing house exterior wall as shown. The wall must be sheathed with a minimum 3/8" structural panel sheathing. Use non-corrosive lag screws or through-bolts when fastening to an existing band board or wall stud; use expansion anchors or epoxy anchors when fastening to concrete or masonry. Fasteners shall be 16" on center (o.c.) and staggered in 2 rows. Note: place spacers (washers) behind rim joist to prevent trapping water.



Sample attachment detail

## Fastener Spacing



Correct placement of fasteners in deck ledgers (rim joists). Bolts must be placed in the deck ledgers as shown with spacing determined by the below table.

| Joist Span (feet)                | 6' and Less | 6'-1" to 8' | 8'-1" to 10' | 10'-1" to 12' | 12'-1" to 14' | 14'-1" to 16" | 16'-1" to 18" |
|----------------------------------|-------------|-------------|--------------|---------------|---------------|---------------|---------------|
| Spacing (1/2" bolt with washers) | 36"         | 36"         | 34"          | 29"           | 24"           | 21"           | 19"           |

On-Center Spacing of Fasteners

### Notes:

1. The maximum gap between the face of the ledger board and face of the house band joist shall be 1/2-inch (13mm)
2. Ledgers shall be flashed to prevent water from contacting the house band joist
3. Bolts shall be staggered as depicted above
4. Deck ledger shall be 2x8 PPT No. 2 Southern Pine (minimum) or other approved method and material as established by standard engineering practice

Decks shall be constructed in accordance with the International Residential Code.

For residential applications using the following methods a total design load of 50 psf is required:

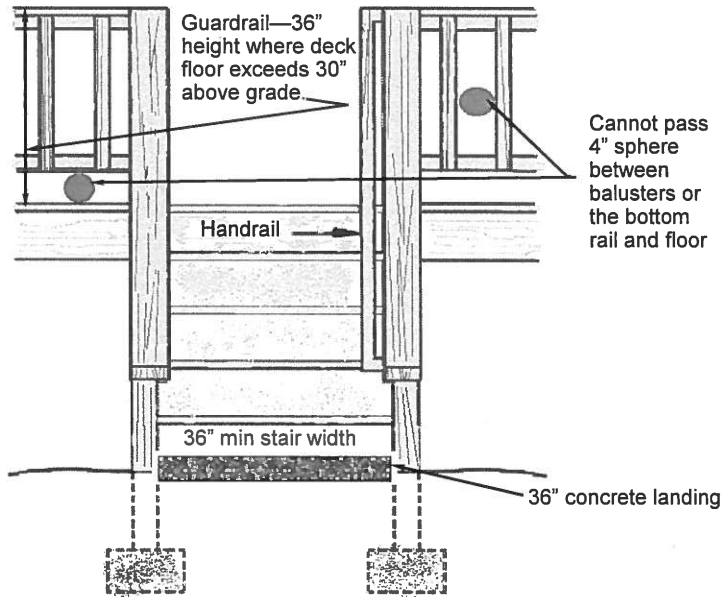
- Conventional framing
- Wood I-joist with rim board may require registered design professional.
- The deck ledger connection to floor truss system shall be designed & approved by the truss manufacturer's design professional.



### REMINDER:

Permits are only issued after plan review. The time required to conduct this review will depend on the completeness of the information received in the plans.

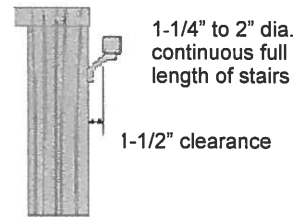
# Construction Details: Guardrails • Stairs • Handrail



All decks 30" high or more above finished grade, are required to have a guardrail. Note: If you are providing a guardrail where the deck is 29" or less above the guardrail must meet the same requirements.

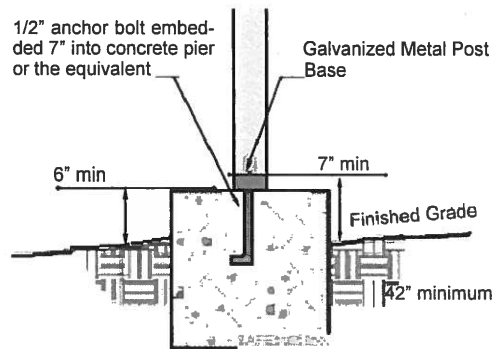
Handrails are required on one side of the stairs with 4 or more risers 34" to 38" above stair nosing.

Handrail cross-section



# Construction Details: Footing Requirements

The building code lists several requirements for footings based on use of the deck (loads) and soil conditions. At a minimum, footings shall be at least 42 inches deep. Additionally, the deck posts must be attached to the footing according to code to prevent lateral movement and uplift (wind and cantilevered forces). Deck posts must also be either a natural decay-resistant or preservative-treated wood, or supported by a metal pedestal projecting 1" above the concrete and 6" above exposed earth to prevent moisture rot.



Sample footing detail

# Additional Information

What will the building inspector look at?

**A typical deck project will require the following inspections:**

1. **Footings** Foundation inspections shall be made after trenches are excavated, reinforcement steel is in place, forms erected, and PRIOR to placing of concrete
2. **Final** Inspection made AFTER the deck is completed

**The permit technician will let you know the required inspections for your project when the permit is issued.**

Want to know more? Need more help?

We hope you found the information in this guide useful. If you have any questions, please feel free to contact us.

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