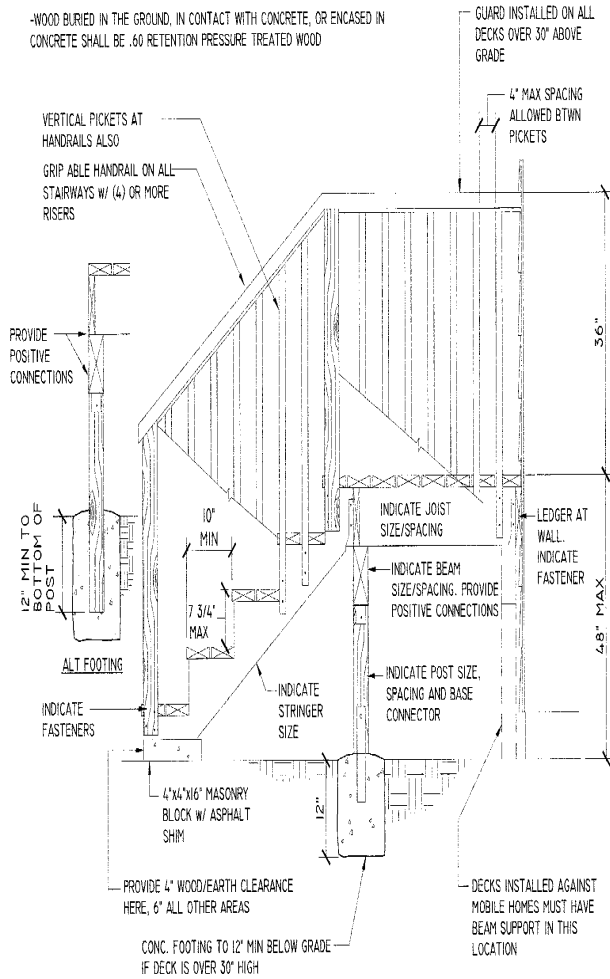


CONSTRUCTION MATERIALS  
 - CEDAR, REDWOOD, SUNWOOD, WOLMANIZED WOOD AND .40 RETENTION PRESSURE TREATED WOOD ARE ALL ACCEPTABLE MATERIALS FOR USE IN DECK CONSTRUCTION.

-WOOD BURIED IN THE GROUND, IN CONTACT WITH CONCRETE, OR ENCASED IN CONCRETE SHALL BE .60 RETENTION PRESSURE TREATED WOOD



**STANDARD EXTERIOR WOOD LANDING & STAIR CONSTRUCTION**

# DECKS, PATIOS & PORCHES INFORMATION



**CITY OF UNERWOOD  
 BUILDING & SAFETY DEPARTMENT  
 241 Third Street  
 Underwood, IA 51576**

**Phone: (712) 566-2373  
 Fax: (712) 566-2083  
 Inspection Line: (712) 309-2935  
[www.underwoodia.com](http://www.underwoodia.com)**

## PERMIT REQUIREMENTS

Building permits are required for all decks patios and/or porches that are attached, detached, or abutted to the home. Decks that are less than 30-inches above grade, are not attached to other structures, and are less than 120 square feet, do not require a submittal for a building permit, but still requires Planning & Zoning application submittal and approval.

## BUILDING CODE REQUIREMENTS

Footings must be extended below frost depth which is 42 inches in this area of Iowa.

Decks need to be designed for a 40 pound per square foot live load and balconies need to be designed for a 60 pound per square foot live load. Decks exposed to the weather must be constructed of approved wood with natural resistance to decay such as redwood, cedar, or treated wood. All members which form the structural support including horizontal members such as beams, joists, ledger boards, and decking and vertical members such as posts, poles, and/or columns need to be so constructed. Ledger boards must be bolted or lagged to the building and all connections between the deck and the dwelling must be flashed with metal flashing.

Columns and post supporting decks and balconies exposed to the weather or to water splash must be supported and connected to concrete piers or metal pedestals projecting above grade.

Columns and posts in contact with the ground or embedded in concrete or masonry must be of special pressure treated wood approved for ground contact (.60 treated).



Decks shall not overhang beams by more than two feet, nor shall beams overhang posts by more than a foot at the ends. Floor joist spacing at 24-inches on center requires 2x decking, and floor joist spacing at 16-inches on center requires 1x decking.

All decks, balconies, porches or patios, open sides of landings and stairs which are more than 30 inches above grade or a floor below must be protected by a guardrail not less than 36-inches in height. Open guardrails and stair railings require intermediate rails or an ornamental pattern such that a ball 4 inches in diameter cannot pass through (see standard detail).

If a stairway is to be provided, it must be not less than 36-inches in width. Stairways may be constructed having a 7 3/4-inch maximum rise (height) and a 10-inch minimum tread run (length). The largest tread rise and run may not exceed the smallest corresponding tread rise or run by more than 3/8-inch (see standard detail).



Handrails are required on all stairways having 4 or more risers. Handrails may not be less than 1 1/4-inches nor more than 2-inches in cross sectional area (diameter). Handrails must be installed not less than 34-inches no more than 38-inches above the nosing (front edge) of treads and they must be returned to a wall or post. The electrical code requires overhead power lines to be located a minimum of 10-feet above decks and platforms. Existing lines may need to be raised if a new deck is to be installed beneath them.



## INFORMATION NECESSARY WHEN APPLYING FOR A BUILDING PERMIT

Information necessary for the Building & Safety Division to do a proper job of plan review and to help the project go smoothly are as follows:

- Site Plan, Plot Plan or Survey
- Floor/Framing Plan
- Roof/Framing Plan (if applicable)
- Building Section(s)

The purpose of the plan review is for the plan examiner or inspector to use his or her code experience to inform you of potential problems or make suggestions, so the more information shown on the plans, the more likely your project will be successful. The following text and sample code drawings show the minimum detail expected so the permit process can proceed smoothly. Plans do not need to be professionally drawn, but should include all of the information requested. Plans must be drawn to an approved scale and fully dimensioned: Site (plot) plan approved scales; 1"=10', 1"=20' & 1"=30'/Construction plans (other than details) approved scales; 1/4"=1'-0" & 1/8"=1'-0" can be used if pre-approved by County Staff. All plans and drawings shall be on minimum 11"x17" paper plan sets. Your required plans should be as follows:

Site (plot) Plan drawing needs to show the following:

- Property or lot dimensions
- Location and size of the existing structure(s)
- Location and size of the proposed structure
- Setbacks from the property lines and other structures
- Distances between the structures
- Utility locations; electrical, sewer, water, phone, etc. (whatever is applicable)

Floor/Framing Plan should include the following:

- Proposed overall patio, porch and deck size
- Size and spacing of floor joists
- Size, location, and spacing of posts
- Size and location of beams
- Type and grade of lumber to be used
- Exterior rated electrical; lighting, switches and receptacles (if applicable)

Roof/Framing Plan should include the following (if applicable):

- Proposed (covered area) roof size
- Size and spacing of roof joists and/or rafters, ridges and eaves
- Size roof sheathing and roofing materials
- Size, location, and spacing of support posts
- Size and location of beams

Building Section(s) should include the following:

- Proposed construction cross section(s), from the existing building to the new deck
- Distances from finish grade to bottom of deck supports, deck floor and to covered roof (if applicable)
- Sizes and types of decking and roofing materials
- Size and spacing of floor and roof joists, beams, girders, etc...
- Construction or design of the guardrail requirements

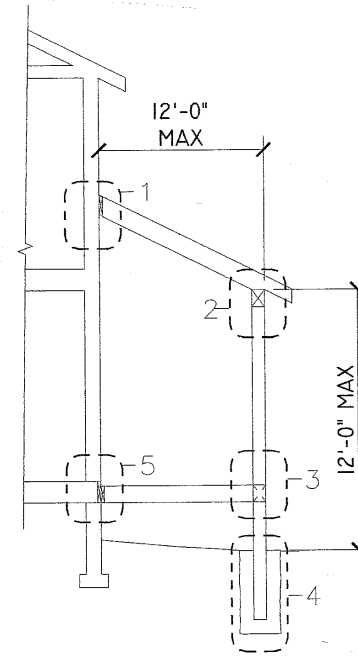
### REQUIRED INSPECTIONS

Inspections require a 24-hour notice. Call the Building & Safety Division at (712) 328-5846 to schedule the following required inspections:

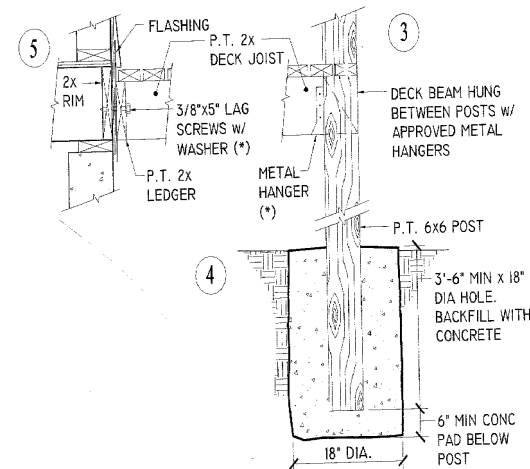
- **Footings:** After the footing holes are dug, but prior to the pouring of concrete.
- **Framing:** To be made after all framing, blocking, and bracing are in place and prior to closing the construction so as to make it accessible for inspection. This inspection can be at the same time as the final if all parts of the framing will be visible and accessible at the final inspection.
- **Final:** To be made upon completion of the deck and finish grading.
- **Other:** In addition to the above three inspections, the inspector may make or require other inspections to assert compliance with the provisions of the code or to assist you with your questions or concerns during the construction process.



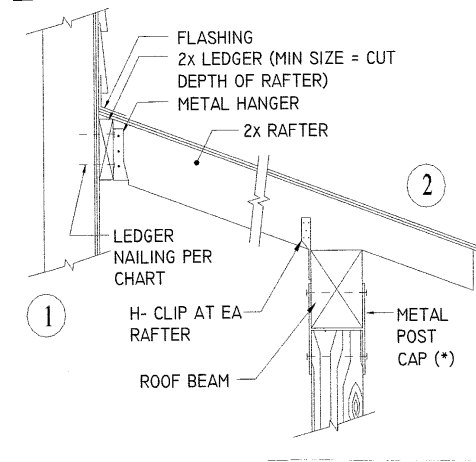
**IMPORTANT!**  
**INSPECTION REQUIRED BEFORE BACKFILLING CONCRETE**



### STANDARD CROSS SECTION CONSTRUCTION



### STANDARD DECK DETAIL CONSTRUCTION



### STANDARD PORCH/PATIO DETAIL CONSTRUCTION

#### REQUIRED LEDGER CONNECTION FOR EXT. DECKS USING MIN 3/8x5" LAG SCREWS W/WASHERS

	JOIST SPAN	6'	8'	10'	12'
SPACING OF LAG SCREWS	12"	2 SCREWS	2 SCREWS	2 SCREWS	3 SCREWS
	16"	2 SCREWS	3 SCREWS	3 SCREWS	4 SCREWS
	24"	4 SCREWS	4 SCREWS	4 SCREWS	6 SCREWS

#### REQUIRED LEDGER CONNECTION FOR COVERED PORCH USING MIN 16D COMMON NAILS

	RAFTER SPAN	6'	8'	10'	12'
NAIL SPACING	12"	2 NAILS	2 NAILS	3 NAILS	3 NAILS
	16"	2 NAILS	3 NAILS	3 NAILS	3 NAILS
	24"	42 NAILS	4 NAILS	4 NAILS	NAILS

**LAGS INTO MANUFACTURED LUMBER MUST HAVE APPROVAL DOCUMENTATION OR HAVE SOLID WOOD RIM BACKING w/ PENETRATING LAG SCREWS**

**(\*) FASTENERS USED IN P.T. WOOD MUST BE AS SPECIFIED BY WOOD MANUFACTURE**