#### BASE ENGINEERING INC.

#### **CONSULTING ENGINEERS & SURVEYORS**

1010 N. QUEBEC STREET, ALLENTOWN, PA 18109-1607



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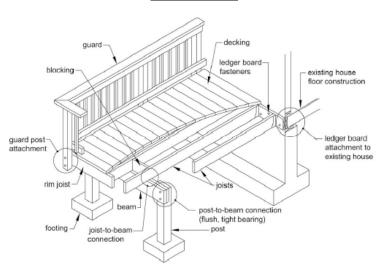
BaseEngineering@BaseEng.com

CIVIL ● STRUCTURAL ● MUNICIPAL ● ELECTRICAL ● MATERIAL HANDLING ● MECHANICAL ● SUPERVISION

### **Residential Deck Construction Details**

- The following details are taken from the American Wood Council's Deck Building Guide (2015) and the International Residential Code (IRC 2015/2018). Details not found in the noted sources are recommended as good industry practice. As this is a guide only, contact the authority having jurisdiction for additional requirements or modifications to the following information.
- 2. All lumber shall be pressure treated or naturally resistant to decay. All framing hardware and fasteners (joist hangers, nails, anchors, mechanical fasteners, etc.) shall resist corrosion.
- 3. Decks supporting uniform live loads exceeding 40 psf, large concentrated loads such as hot tubs, or roofs need to be designed by a licensed engineer.
- 4. Alternative construction materials or methods not recognized by the PAUCC shall be evaluated by the ICC Evaluation Service, Inc. or by other accredited agency. Manufacturer's installation instructions and evaluation reports shall be submitted for review prior to use.

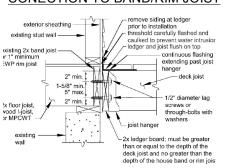
#### **DECK TERMS**

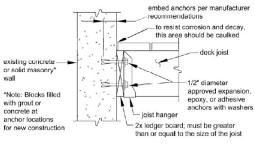


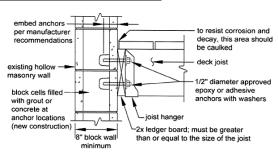
#### **LEDGERS**

CONNECTION TO CONCRETE/MASONRY WALL

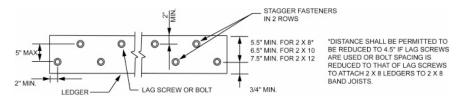
#### CONECTION TO BAND/RIM JOIST







#### FASTENER SPACING DETAIL

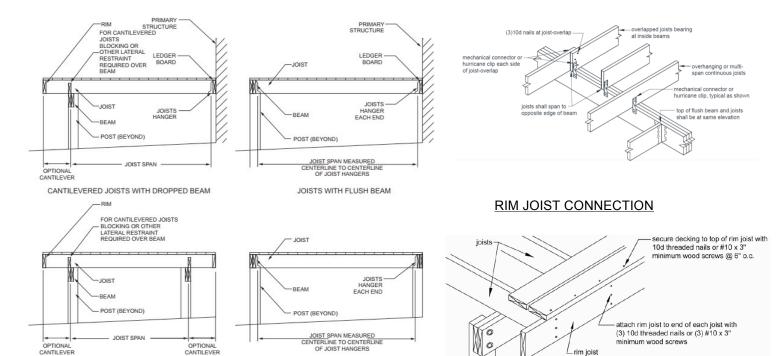


#### **JOISTS**

#### TYPICAL JOIST LAYOUTS

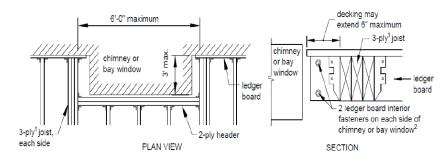
JOISTS ON FREE-STANDING DECK WITH DROPPED BEAM

#### JOIST TO BEAM CONNECTION



#### FRAMING AT CHIMNEY OR BAY WINDOW

JOISTS ON FREE-STANDING DECK WITH FLUSH BEAM



#### **BEAMS**

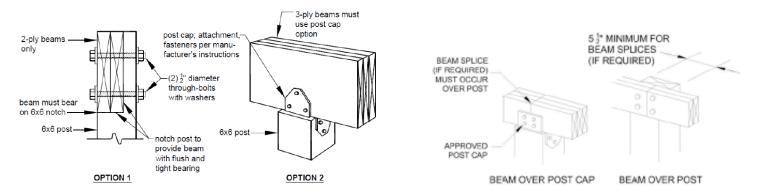
#### BEAM ASSEMBLY DETAIL

# 10d threaded nail or #10 wood screw ≥3" long, staggered in 2 rows 2 threaded nails or screws at each end or splice end; splices shall be located only over interior posts (Figure 3) If a beam is constructed with 3-members, attach each outside member to the inside member as shown here.

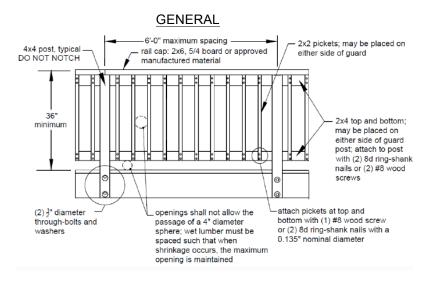
#### BEAM TO POST CONNECTION DETAIL

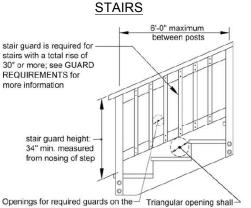


#### BEAM TO POST CONNECTION DETAILS



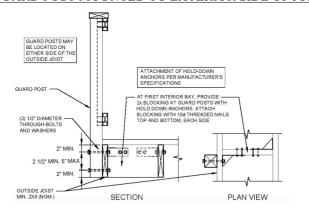
#### **GUARDS**





not permit the passage of a 6" diameter sphere.

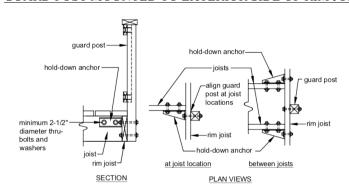
#### GUARD POST MOUNTED TO EXTERIOR SIDE OF JOIST



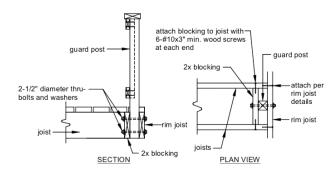
#### GUARD POST MOUNTED TO EXTERIOR SIDE OF RIM JOIST

sides of stair treads shall not allow

a sphere 4-3/8" to pass through.



#### GUARD POST MOUNTED TO INTERIOR SIDE OF RIM JOIST





#### **STAIRS**

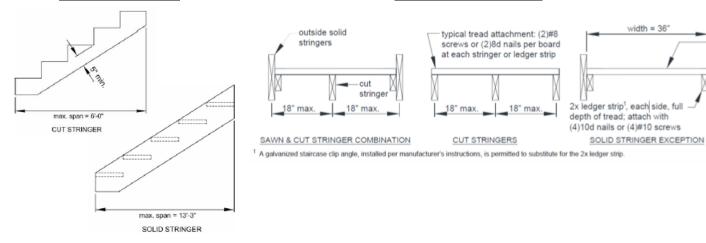
#### STAIR STRINGERS

#### TREAD CONNECTIONS

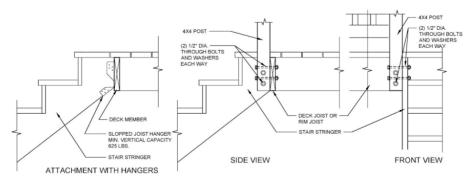
2x wood

material

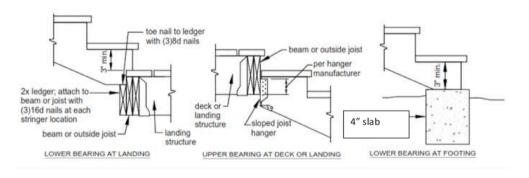
only



#### STAIR STRINGER CONNECTIONS

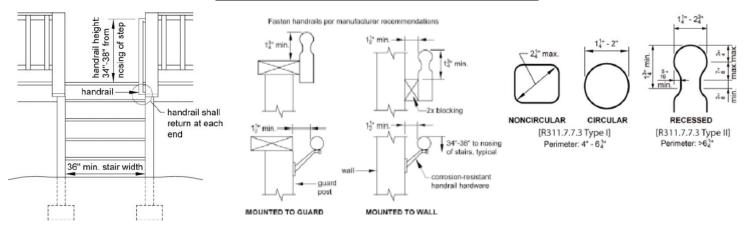


#### STAIR STRINGER CONNECTIONS AT LANDINGS



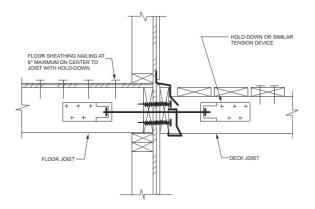
#### **HANDRAILS**

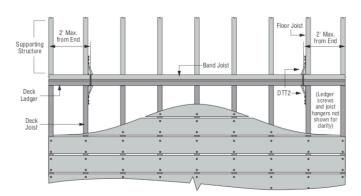
#### HANDRAIL MOUNTING AND GRIP REQUIREMENTS



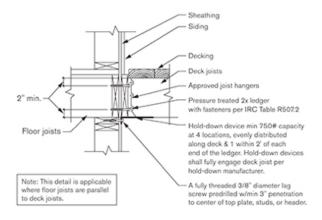
#### LATERAL LOAD REQUIREMENTS

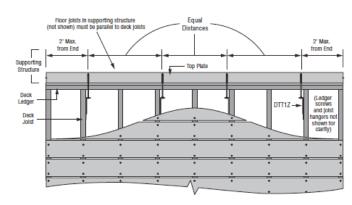
#### 1,500 POUND CONNECTOR INSTALLATION





#### 750 POUND CONNECTOR INSTALLATION





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MECHANICAL

## **Residential Deck Framing Plan**

MUNICIPAL ● ELECTRICAL ● MATERIAL HANDLING ●

