Fremont
Building Official
Code Enforcement

Building Inspector
PO Box 120
295 Main Street
Fremont, NH03044
(603) 895-3200 Ext 18
(603) 895-3149 (Fax)

Guide toDecks

The International Residential Code (IRC) provides limited direction on the specific requirements for decks; while much of the prescriptive requirements may be contained elsewhere within specific provisions of the code, no specific deck section or chapter exist. This lack of prescriptive design reference makes it tough to gather, even the minimum requirements, directly from the code provisions.Live load, stairway width, riser height, tread depth, handrails, guards, balusters space, depth of footings, flashing and the like are all contained within the IRC in various sections or chapters of the code.

The American Forest & Paper Association's American Wood Council (AWC) formed a technical committee to address prescriptive provisions for residential wood deck construction. They developed a document based primarily on the IRC and modeled after "Typical Deck Detail" as initially published by Fairfax County, Virginia Department of Public Works. This became the basic for DCA 6 published in 2007 and applied on a national basis. DCA stands for Design for Code Acceptance. The latest version of DCA 6, titled "Prescriptive Residential Wood Deck Construction Guide" was updated for compliance with the latest 2009 version of the IRC. The document is posted on Fremont's web site and is the guiding source for deck construction here in Fremont. Compliance with this publication is a must.

Use this brief guideline of related code items for practical field application for safer and more compliant deck construction. The application of this guideline should help in application of the building codes for construction of decks. Most of the custom lumber yards can also design and spec out your deck requirements. Use this guide to assist you in the construction process. If you have any questions on any specifics related to your deck construction do not hesitate to call. Apply these basic minimum standards in your planning and build process.

Minimum live load design for a deck is 40 PSF, guardrails and handrails must withstand a single concentrated load of 200 pounds applied in either direction and balusters and panel fills must sustain a minimum applied load of 50 PSF. Toenail of guardrails into the deck flooring for support would not be consistent with the requirements and as such require positive anchors (bolts/lags and hardware) for attachment. Cutting or otherwise notching guard post is prohibited in the guideline.

All wood in contact with the ground shall be approved pressure preservative treaded wood suitable for ground contact. This includes all areas in contact with concrete or masonry. Any wood joist closer than 18 inches to the ground or any wood beam or girder closer than 12 inches to ground must be approved for ground contact.All other non-structural wood within 6 inches of the grade must be pressure preservative treaded wood.Composite and plastic flooring materials, if listed, may be used also.

Flashing is required at the connection to the structure. This must be applied such to prevent entry of water to the structural portions of the building. Aluminum flashing is not allowed for this purpose as it reacts negatively to pressure treated lumber. Various products exist – copper, stainless steel, UV resistant plastic, or galvanized steel coated with zinc coasting. House siding, or the exterior finish system of the structure, must be removed prior to the attachment of the deck.

Ledger boards must be attached with the use of positive anchors – bolts or lags. Positive anchor attachment is required to the primary structure; (except for free-standing decks).This will include lags or bolts at the ledger board as well as joist hangers to the ledger. The ledger board must be large as or larger than the joist size. In some instances where wood I-joist where used in the construction of the home, ledger boards cannot be attached and as such, in these instances, a free-standing deck is required. Attachments to bay windows or house overhangs are generally prohibited and in such cases a free-standing deck is the required alternative. Lag screws must be a minimum of ½" and be of galvanized or stainless steel. Newer wood screws approved for such applications may also be used (such as Ledger-Lok or Simpson Strong-Drive Screws).

All footings are to be placed to anticipated frost level and a minimum of 48 inches below grade.