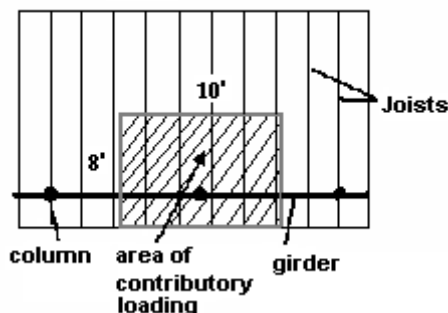




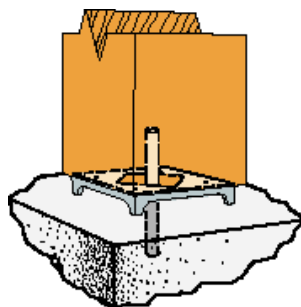
# FAQ

## DECK DESIGN

- Q. I would like to build a deck. Do I need a permit?
- A. Yes, Homeowners are required to obtain a permit to construct a deck.
- Q. How large a deck can I build?
- A. An uncovered deck that is elevated above ground level may project half the distance of the minimum required yard setback, but no more than fifteen (15) feet.
- Q. How deep do footers have to be?
- A. 32" to the bottom of the footer.
- Q. What are the required dimensions for the footers?
- A. The size of the footers depends on the contributory loads to be carried; that is to say, how much of the deck load is being carried by each footing; however, the minimum diameter is 12". The live load for a deck is 40 lbs. per square foot and the dead load is 10 lbs. per square foot, giving a total of 50 lbs. for each square foot of deck. This load is carried to the ground by the beams and columns that support the joists. The ground is assumed to have a bearing capacity of 2000 lbs. per square foot so the size of the footing is determined by the area of the deck carried to a column multiplied by 50 lbs. and then divided by 2000. The example below shows how to determine the area of contributory load. Let's say that the area below is 8' by 10'. That would give an area of 80 square feet, so figure  $(80 \times 50) / 2000$  for a footer size of 2 square feet. The area of a circle is calculated by the formula  $\pi r^2$  (pi times radius squared) so for this deck, a 1'8" diameter footing would be required.

**Example Footer Sketch**

- Q. Do I need to fill the hole to the top with concrete?
- A. No, you need a minimum of 8 inches of concrete under the column. One thing to remember, though, is that even pressure treated lumber will rot over time when buried in the ground so it is recommended that you pour your footings up to grade and use a post base to keep the wood column off the ground.



- Q. What size lumber do I need for my floor joists?
- A. Although there are many factors that may affect joist spans, such as cantilevers, the chart below is a basic guide that can be used to plan your deck. It assumes the use of #2 Southern pine, pressure treated, and installed at 16" on center as this is the typical lumber used for decks.

Size	Allowable Span
2x6	9'9"
2x8	12'10"
2x10	16'1"
2x12	18'10"

- Q. When do I need a guardrail around the deck?
- A. The International Residential Code states that "Porches, balconies or raised floor surfaces located more than 30 inches above the floor or grade below shall have guards not less than 36 inches in height." Although the requirement for needing guardrails is 30" above grade, it is recommended that a rail be installed if the deck

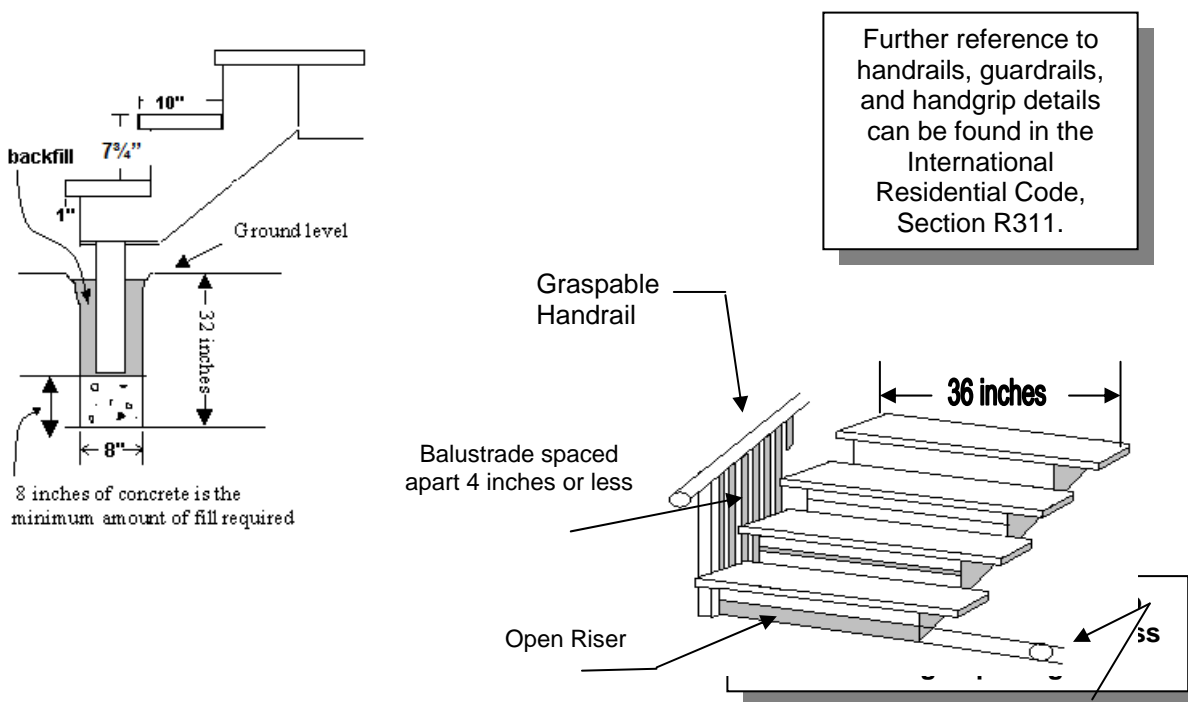
is more than 18" above grade. Guardrails are also required on both sides of steps that are more than 30" above grade.

Q. How far apart do my balusters have to be?

A. Building code requires that guardrails "shall have intermediate rails or ornamental closures which do not allow passage of an object 4 inches or more in diameter." Simply put, if you can pass a 4" ball through any opening in your guardrail, it will not pass code. In addition, guardrails cannot be ladderlike.

Q. What are the dimensions I need to use for my stair?

A. The minimum tread dimension must be at least 10" overall (9" tread with a 1" nosing). That means that the tread must extend at least 1" past a riser. The riser dimension, or height from tread to tread, can be no more than 7 $\frac{3}{4}$ " and should not vary from step to step. The stair must be a minimum of 36" wide. Risers cannot have an opening greater than 4 inches.



***This drawing does not encompass all possible variations in the construction of stairs (other codes may apply). Please discuss these variations with the Plan Examiner.***

Q. Do I need to have my footings inspected?

A. New Castle County will currently allow footing inspections, for decks only, to be completed by use of photo documentation. Please include a picture of the deck layout in regard to the footing locations (Site photo). Also, please have a photograph depicting the depth and the width of the hole provided for the footing (Acceptable media would be Polaroids, processed photos, or digital images).

Q. When do I need a handrail on my steps?

A. A handrail is required when there are four or more risers. The handrail height shall be between 34" and 38" measured vertically from the nosing of the tread.

Q. How should my deck be attached to my house?

A. This is one of the most critical areas of deck construction, as up to half the weight of the deck hangs on the house. The ledger board (the board that the joists will be attached to) should be securely bolted to the bandboard, if nominal lumber, of the house framing with a minimum of 1/2" bolts. See the chart below to determine proper sizing and spacing requirements. If the ledger board is to be attached to the bandboard of the house framing, and the bandboard is a manufacture wood product (MWP), the attachment must be made strictly in accordance with the manufacturer's specifications. All siding must be removed so that a good connection is made and compatible flashing shall be installed. If your ledger board is to be attached to masonry or concrete, proper anchoring systems must be used. Your local hardware store can show you different products available for this purpose.

JOIST SPAN	BOLT SIZE & SPACING
10'	1/2" @ 2' 7/8" @ 2'9"
10' – 15'	1/2" @ 1'4" 7/8" @ 2'
15' – 20'	1/2" @ 1' 7/8" @ 1'6"

The FAQ series only summarizes or highlights portions of the New Castle County Code. In all applications, the New Castle County Code must be consulted. The language in the Code prevails over the FAQ.

05/14/03  
Revised: 02/24/06  
12/15/08  
07/21/15



Residential Deck building permits are available to be processed using eServices – a web-based software program that uses digital files to simplify document review and approval. This software can be accessed through the New Castle County eServices (eApply and ePlans) webpage ([www.nccde.org/eplans](http://www.nccde.org/eplans)). Should you have any questions or need assistance, please contact Customer Service at 302-395-5400.

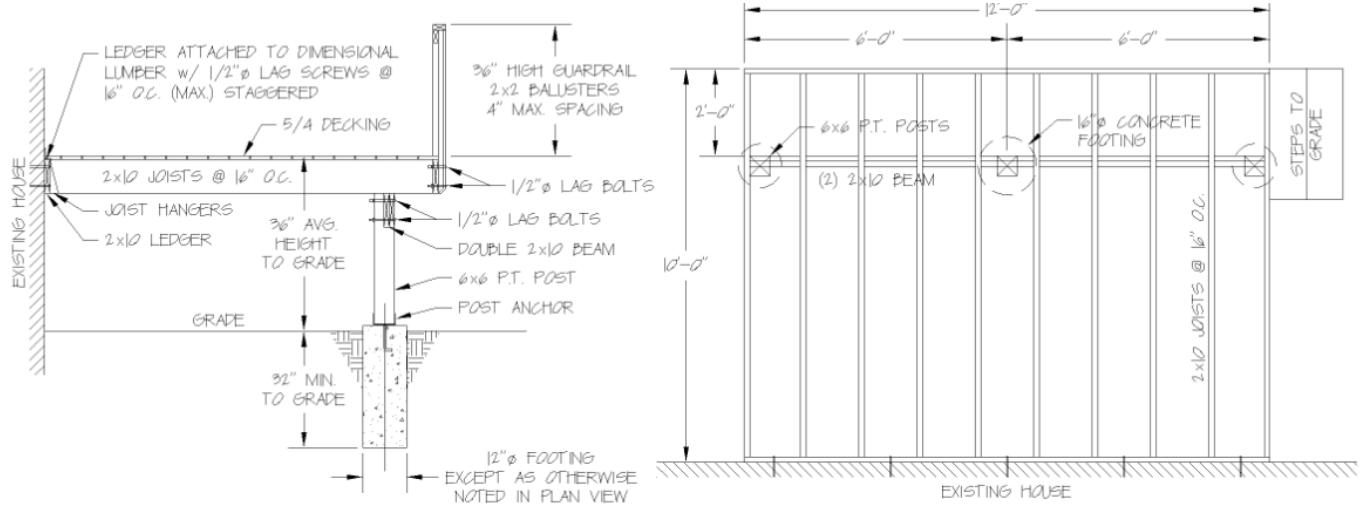
**Documents Required by New Castle County**

- Building Permit Application**
- Building Contractor License** (The licensed person performing the building work, or an authorized representative thereof, must secure the appropriate permits. A license packet may be obtained at the Land Use Department. A homeowner may secure a building permit without a license if the homeowner is performing all building work and the home is not for sale or any part for rent.)
- Building Plans – Three (3) Sets** (Drawings need to include: (1) cross section showing from the bottom of the footer to the top of the rail and (2) top view showing framing, dimensions, etc. Computerized drawings are acceptable as long as they include a cross section (not provided by most lumber yards).
- Current Plot Plan – Three (3) Sets – Sealed by a Surveyor/Engineer identifying all Existing and Proposed Improvements to Lot** (Proposed improvements include all work covered under this project)
- Demolition Permit** (A separate demolition permit will be required for any demolition work performed in association with the building permit. (If applicable, see the Demolition Permit Requirements Sheet for additional information)
- Verification of Paid Taxes/Sewer** (Property taxes and sewer billing fees must be paid on the property for which you are requesting a building permit and on any tax parcel that such landowner owns in NCC prior to building permit submission (NCC Code 06.03.012.H) This will be verified as part of the application process.
- Variance(s) from the NCC Board of Adjustment** (May be required if construction will encroach into the building setbacks for the property. Any required variances must be granted prior to permit issuance. An application and additional information are available on the NCC website or at Land Use Customer Service.

**Fees**

- Building Permit Fee:** \$12 per \$1,000 of Valuation (\$142 Minimum)
- Certificate of Occupancy:** \$60
- Zoning Permit Fee:** 10% of Building Permit Fee (\$21 Minimum / \$145 Maximum)
- NCC Volunteer Fire Assistance Fund Fee:** 0.5% of Valuation
- Engineering Fee:** A Floodplain/Wetland review fee of \$65 per review may apply to applicable projects

**SAMPLE DECK DRAWINGS**



TYPICAL DECK SECTION

TYPICAL DECK LAYOUT



NEW CASTLE COUNTY

**Building Permit Application  
Residential Deck**

**DEPARTMENT OF LAND USE**

87 READS WAY, NEW CASTLE, DE 19720

PHONE: 302-395-5400 • WWW.NCCDELU.ORG • EMAIL: PERMITS@NCCDE.ORG

REV. 04/30/2013

A/P No. \_\_\_\_\_

**JOB LOCATION**

Tax Parcel No. \_\_\_\_\_ [\_\_\_\_\_]

Street Address/City/Zip \_\_\_\_\_

Lot No. \_\_\_\_\_ Subdivision \_\_\_\_\_

**OWNER INFORMATION**

I am the Homeowner acting as the Contractor of Record.

Name \_\_\_\_\_

Phone No. \_\_\_\_\_ Email \_\_\_\_\_

A homeowner acting as the Contractor of Record is also required to submit the Homeowner Affidavit form.

**CONTRACTOR INFORMATION**

NCC License No. \_\_\_\_\_ Company Name \_\_\_\_\_

Contact Name \_\_\_\_\_

Phone No. \_\_\_\_\_ Email \_\_\_\_\_

**ACKNOWLEDGEMENT**

I, the undersigned, hereby certify that I own the above-referenced property or act as an authorized agent for the contractor/owner (see NCC Authorized Agent form) and have the authority to make this application; that the information is complete and correct; and that the construction and/or use will conform to New Castle County code and other applicable laws and regulations which relate to the property.

Applicant's Signature \_\_\_\_\_ Date \_\_\_\_\_

Applicant's Name (Please Print) \_\_\_\_\_

**DECK PROJECT DETAILS**

Attached     Detached     Renovation or Repair to existing deck

Deck Dimensions \_\_\_\_\_ by \_\_\_\_\_ Total Square Footage \_\_\_\_\_

Number of Levels \_\_\_\_\_ Height off the ground \_\_\_\_\_

Additional Information \_\_\_\_\_

Projects including the demolition of existing structures will require a separate demolition permit.

NOTE TO APPLICANTS – NCC reserves the right to refuse permit applications/submissions with incomplete or missing information. Applicants are required to write "n/a" if an item on the form does not apply to the proposed project.