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# **Building Construction Occupations**

## General Assessment Information

### Blueprint Contents

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**Test Type:** The Building Construction Occupations assessment is included in NOCTI's Teacher assessment battery. Teacher assessments measure an individual's technical knowledge and skills in a proctored proficiency examination format. These assessments are used in a large number of states as part of the teacher licensing and/or certification process, assessing competency in all aspects of a particular industry. NOCTI Teacher tests typically offer both a written and performance component that must be administered at a NOCTI-approved Area Test Center. Teacher assessments can be delivered in an online or paper/pencil format.

**Revision Team:** The assessment content is based on input from subject matter experts representing the following states: Kentucky, Maine, Michigan, New York, Oklahoma, Pennsylvania, and Wisconsin.



46.0415- Building  
Construction  
Technology



Career Cluster 2-  
Architecture and  
Construction



47-2031.01- Construction  
Carpenters

## Written Assessment

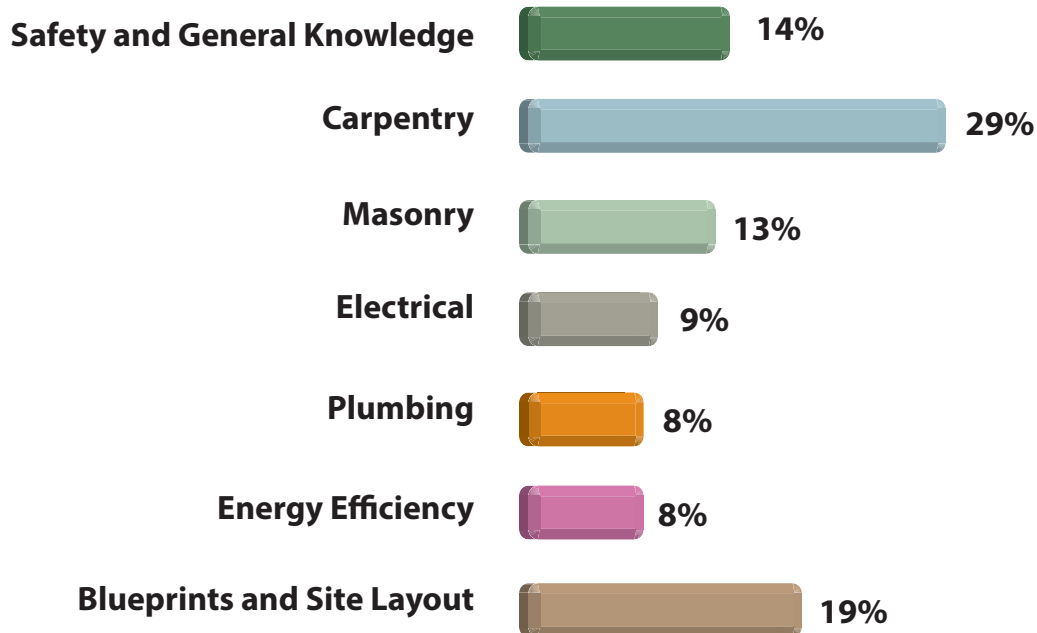
NOCTI written assessments consist of questions to measure an individual's factual theoretical knowledge.

**Administration Time:** 3 hours

**Number of Questions:** 143

**Number of Sessions:** This assessment may be administered in one, two, or three sessions.

### Areas Covered



## Specific Standards and Competencies Included in this Assessment

### Safety and General Knowledge

- Recognize issues and adhere to worksite safety guidelines (housekeeping and health related)
- Utilize appropriate personal protection equipment (PPEs)
- Demonstrate understanding of ladder and scaffold safety
- Recognize and adhere to governmental regulations (OSHA, MSDS, etc.)
- Demonstrate safe and appropriate use of hand tools
- Demonstrate safe and appropriate use of power tools

### Carpentry

- Identify carpentry materials
- Describe, layout, and construct wood floor framing
- Calculate, layout, and construct stairs
- Identify, layout, and construct wood wall framing
- Describe, calculate, and construct ceiling and roof framing
- Identify and install roofing materials (shingles, fasteners, and flashing)
- Identify, estimate, and install exterior windows and doors
- Identify, measure, and apply exterior finishes (siding and trim)
- List, describe, and install interior finishes (drywall, doors, and trims)



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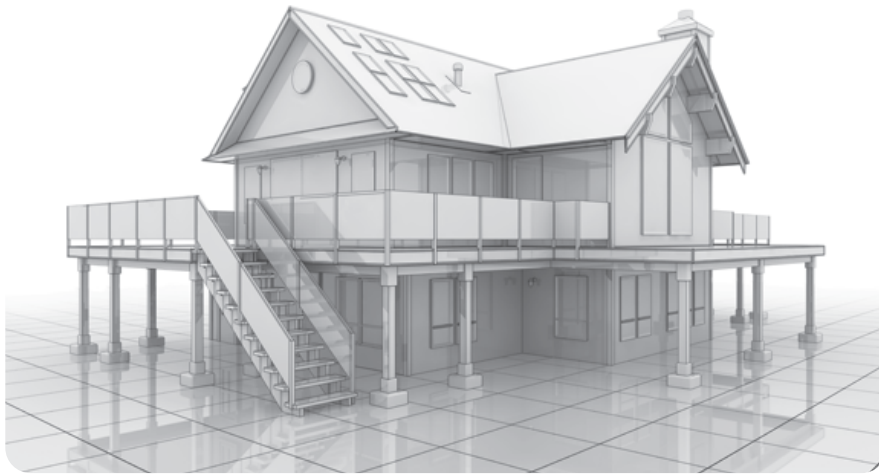
## Specific Standards and Competencies (continued)

### Masonry

- Identify, estimate, and install footings and foundations
- Identify, estimate, and install brick and block
- Identify, estimate, and place/pour concrete applications

### Electrical

- Identify, estimate, and install rough electrical
- Identify, estimate, and install finish electrical



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## Specific Standards and Competencies (continued)

### Plumbing

- Identify, estimate, and install rough plumbing (PVC, ABS, copper, PEX)
- Identify, estimate, and install finish plumbing fixtures

### Energy Efficiency

- Identify, estimate, and install insulation
- Recognize various ventilation applications
- Identify “green” construction technology

### Blueprints and Site Layout

- Recognize blueprint terms, symbols, and abbreviations
- Interpret blueprints
- Demonstrate use of architect’s scale
- Layout building using various calculations, squaring, and leveling methods



### Sample Questions

**An extension ladder should be rested on a base at \_\_\_\_\_ pitch.**

- A. 1:1
- B. 3:1
- C. 4:1
- D. 5:1

**To protect an outside drywall corner, it may be reinforced with a corner**

- A. board
- B. lath
- C. bead
- D. rite

**How many courses of concrete block are needed for a wall 8 feet high?**

- A. 12
- B. 14
- C. 16
- D. 17

**According to Underwriter's Laboratories, wire used specifically for ground should have insulation colored**

- A. green
- B. white
- C. blue
- D. orange

**Which gable roof requires the most lumber and shingles?**

- A. 8/12 pitch
- B. 6/12 pitch
- C. 5/12 pitch
- D. 1/12 pitch

## Performance Assessment

NOCTI performance assessments allow individuals to demonstrate their acquired skills by completing actual jobs using the tools, materials, machines, and equipment related to the technical area.

**Administration Time:** 2 hours and 25 minutes

**Number of Jobs:** 5

### Areas Covered:

#### 22% Soldering Pipe

Participant will correctly cut, ream, clean, flux, and solder copper tubing into a complete, finished product.

#### 19% Rafter Layout

Participant will position the rafter crown, create the correct rafter line length and overhang length, place and cut the bird's mouth correctly, and cut the tail plumb and ridge plumb correctly.

#### 11% Calculate and Cut a Stud

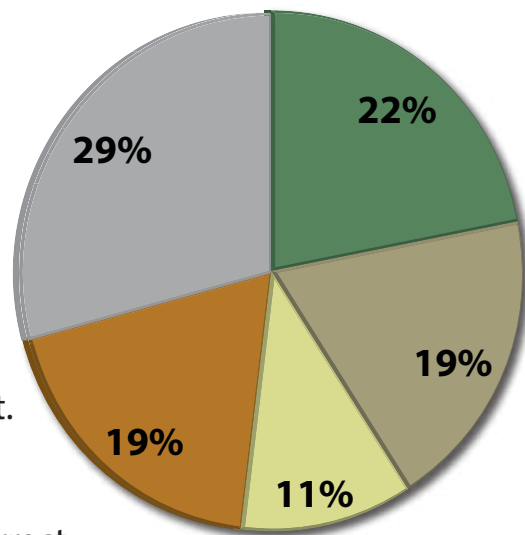
Participant will cut the stud to the correct length and shape.

#### 19% Rough and Finish Electrical

Participant will correctly set boxes, choose and install cables, pre-wire boxes, choose, wire, and install switch properly, split and wire the receptacle correctly.

#### 29% 8-Inch Block Wall Construction

Participant will construct the block course correctly, with correct wall height, length and straightness, as well as a correct wall plumb and level and full, finished joints.





## Sample Job

### 8-Inch Block Wall Construction

**Maximum Time:** 45 minutes

**Participant Activity:** The participant is to construct a block wall 47-5/8-inches long by 24-inch high, strike all joints using a convex jointer, and finish wall with a clean appearance.

