



## CONTRACTORS STATE LICENSE BOARD LICENSE EXAMINATION STUDY GUIDE



### STRUCTURAL STEEL (C-51)

#### Content of the Examination

The Structural Steel (C-51) Examination is divided into five major sections:

##### 1. Planning and Estimating (20%)

- Reviewing plans and specifications
- Conducting site visits
- Coordinating with other trades
- Estimating equipment and material

##### 2. Job Preparation (15%)

- Developing drawings
- Storing material
- Determining placement of material

##### 3. Shop Fabrication (20%)

- Processing material
- Creating holes and slots in material
- Cleaning and priming members
- Loading and transporting material

##### 4. Field Erection (20%)

- Erecting and securing material
- Installing beams and trusses
- Installing high strength bolts
- Finishing joints and connections

##### 5. Safety (25%)

- Working in elevated areas
- Hoisting and rigging
- Correcting safety hazards
- Operating lift equipment
- Using personal protective equipment (PPE)

*\*Percentages are approximate\**

#### Test Site Policy

This is a closed-book examination. No reference materials may be used during the examination. All materials brought to the examination site must be left in an unmonitored area at your own risk.

#### Test Strategy

This is a multiple-choice examination with four choices per question. Examination questions are written to provide only one BEST answer. Some questions require mathematical computation. A calculator will be provided.

There is no penalty for guessing. If you are unsure about a particular question, it is better to try to answer the question than to leave the question blank.

Plenty of time is provided to answer all examination questions, so be sure to read each question and its four choices completely and carefully before selecting the BEST possible answer to the question.

## Sample Questions

Below are three typical examination questions. The correct answer is underlined.

1. The specifications call for the steel to be galvanized. If steel tubes cost \$1.35 per pound and galvanizing costs \$1,000 per ton, how much would it cost to purchase and galvanize five 40-foot tubes that weigh 59.32 pounds per foot?
  - a. \$4,389
  - b. \$11,864
  - c. \$16,016
  - d. \$21,948
2. Before fabricating, which of the following material verifications is the MOST critical?
  - a. Checking the mill scale roughness
  - b. Checking for degree of camber
  - c. Checking for specification compliance
  - d. Checking for correct lengths
3. Which of the following would be the MOST commonly found in a moment connection?
  - a. A base plate
  - b. A cap plate
  - c. A lintel brace
  - d. A continuity plate

*\*All questions are written and reviewed by licensed contractors who are actively working in the trade\**

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## Resources

*Publisher information for reference books and code is provided below. Other sources for reference books may be found online. **California code books can be viewed online: [www.dgs.ca.gov/bsc](http://www.dgs.ca.gov/bsc)***

**2019 California Building Code.** California Code of Regulations, Title 24. International Code Council. PHONE: (800) 786-4452 INTERNET: [www.iccsafe.org](http://www.iccsafe.org)

**California Vehicle Code.** Department of Motor Vehicles.

INTERNET:

<http://leginfo.legislature.ca.gov/faces/codes.xhtml>, click on Vehicle Code - VEH

**Standard Symbols for Welding, Brazing, and Nondestructive Examination, A2.4.** American Welding Society.

PHONE: (800) 443-9353

INTERNET: [www.aws.org](http://www.aws.org)

**State of California General Industry & Electrical Safety Orders (Cal/OSHA) and State of California Construction & Electrical Safety Orders (Cal/OSHA), 2019.** California Code of Regulations, Title 8. Mancomm.

PHONE: (877) 626-2666

INTERNET: [www.mancomm.com](http://www.mancomm.com)

VIEW ONLINE:

[www.dir.ca.gov/dosh/LawsAndRegulations.htm](http://www.dir.ca.gov/dosh/LawsAndRegulations.htm)

**Steel Construction Manual.** American Institute of Steel Construction (AISC).

PHONE: (312) 670-2400

INTERNET: [www.aisc.org](http://www.aisc.org)

**Structural Welding Code – Steel, D1.1.** American Welding Society.

PHONE: (800) 443-9353

INTERNET: [www.aws.org](http://www.aws.org)

**Structural Welding Code – Sheet Steel, D1.3.**

American Welding Society.

PHONE: (800) 443-9353

INTERNET: [www.aws.org](http://www.aws.org)

**Structural Welding Code – Reinforcing Steel, D1.4.**

American Welding Society.

PHONE: (800) 443-9353

INTERNET: [www.aws.org](http://www.aws.org)

*\*Publisher information is current as of 8/19\**