

**PRESTRESSED CONCRETE SPECIAL INSPECTOR  
JOB TASKS**

**EXAM ID: 92**

- **90 multiple-choice questions – 60 code/30 structural plan reading**
- **Two-part examination: must have a passing score on both parts at the same time**
- **3-1/2-hour time limit: 2 hours for code portion and 1-1/2 hours for plan portion**
- **Open book**

**The basis of the content of the Prestressed Concrete Special Inspector exam shall be from the commencement of form work through the transfer of prestressing force to the element.**

- |            |   |             |
|------------|---|-------------|
| <b>01.</b> | <b>General Requirements</b>   | <b>2%</b>   |
|            | <b>0101. Duties and Responsibilities</b>  | <b>1/2%</b> |
|            | Comply with special inspection requirements of the enforcing jurisdiction. Review approved plans and specifications for project details that pertain to special inspection requirements.  |             |
|            | <b>0102. Notification of Discrepancies</b>  | <b>1/2%</b> |
|            | Notify the contractor of deviations from approved plans and specifications. If the deviations are uncorrected, notify the architect or engineer of record and the building official of deviations.  |             |
|            | <b>0103. Inspection Reports</b>   | <b>1%</b>   |
|            | Submit progress reports to the architect or engineer of record and the building official, describing tests which were performed and compliance of work. Submit final summary report stating whether work requiring special inspection was in conformance with the approved construction documents and applicable provisions of the building code. |             |
| <b>02.</b> | <b>Concrete Quality</b>   | <b>5%</b>   |
|            | <b>0201. Mix Verification</b>   | <b>2%</b>   |
|            | Verify that individual batch tickets indicate delivery of the approved mix as specified. Verify time limits of mixing, total water added, and proper consistency and workability for placement.   |             |
|            | <b>0202. Testing</b>  | <b>1%</b>   |
|            | Determine the required type, quantity and frequency of tests to be performed on fresh and hardened concrete. Observe sampling of concrete, field testing of fresh concrete, and making of test specimens.   |             |

0203. **Specimen Handling and Protection** **1%**
- Provide or arrange for proper specimen identification, site storage and protection, and transportation to the testing laboratory.
0204. **Test Reports** **1%**
- Provide or arrange for communication of field testing results to the architect or engineer of record and to the building official.
- 03. Reinforcement 48%**
0301. **Quality** **8%**
- Verify that reinforcing steel and tendons are of the type, grade and size specified and are in conformance with acceptable quality standards. Verify that the reinforcing steel and tendon system are fabricated in conformance with acceptable quality standards. Verify that the condition of tendons at the time of concrete placement are free of oil, dirt, and excessive rust, and are properly coated and/or sheathed as specified.
0302. **Tolerances** **8%**
- Verify that reinforcing steel and tendons are located within specified tolerances, and are adequately supported and secured to prevent displacement during concrete placement.
0303. **Cover** **5%**
- Verify that minimum concrete cover is provided.
0304. **Placement** **10%**
- Verify that placement of reinforcing steel and tendons (or ducts) comply with spacing, profile and quantity requirements, as indicated by the installation drawings and approved plans.
0305. **Details** **6%**
- Verify that hooks, bends, ties, stirrups and supplemental reinforcement are fabricated and placed as specified.

0306. **Splices** **7%**
- Verify that required lap lengths, stagger and offsets are provided. Verify proper installation of approved mechanical connections per the manufacturer's instructions and/or evaluation reports. Verify that welds have been inspected and approved as specified.
0307. **Prestressed Rock and Soil Anchors** **4%**
- Verify that prestressed rock and soil anchors are fabricated and installed as specified.
- 04. Prestressing and Grouting** **35%**
0401. **Concrete Strength** **8%**
- Verify that the required concrete strength has been attained prior to transferring prestressing forces.
0402. **Stressing** **13%**
- Verify proper equipment calibration. Verify that proper stressing ( or tensioning) sequences are used, proper jacking forces are applied, and acceptable elongations are attained and recorded.
0403. **Anchorage Protection** **7%**
- Verify that tendons and anchorages are properly sealed or otherwise protected as specified.
0404. **Post-Tensioning Ducts/Grouting** **7%**
- Verify that ducts including inlets and outlets are of the required size, are mortar-tight and are located correctly. Verify that proper grout materials, strength and grouting pressures are used as specified.
- 05. Formwork, Joints and Embedments** **5%**
0501. **Formwork Construction** **2%**
- Verify that formwork will provide concrete elements of the specified size and shape.

0502. **Construction Joints** **1-1/2%**
- Verify that the location and preparation of construction joints are in accordance with the approved plans, specifications, and applicable codes and standards.
0503. **Embedments** **1-1/2%**
- Verify that the type, quantity, size, spacing, condition, and location of embedded items are as specified.
- 06. Concrete Placement, Protection and Curing** **5%**
0601. **Pre-placement** **1%**
- Verify acceptable condition of the place of deposit before the concrete is placed.
0602. **Placement** **1%**
- Verify that methods of conveying and depositing concrete avoid contamination, segregation of the mix, and displacement of reinforcement, embedments, and forms.
0603. **Consolidation** **1%**
- Verify that concrete is being properly consolidated during placement.
0604. **Protection** **1%**
- Verify that concrete is protected from ambient temperature extremes during placement and curing.
0605. **Curing** **1%**
- Verify that concrete is being cured as specified by approved plans, specifications and applicable codes.