**Revision of Section 206**

**Shoring**

**Notice**

The Standard Special Provision (SSP) on the following page revises or modifies CDOT’s*Standard Specifications for Road and Bridge Construction.* The Construction Engineering Services Branch has reviewed, approved, and issued it. Use as written without change. Do not use modified versions of it on CDOT construction projects. Do not use the following special provision on CDOT projects in a manner other than specified in the instructions without approval by CDOT’s Standards and Specifications Unit. The instructions for use appear below.

Other agencies using the *Standard Specifications for Road and Bridge Construction*to administer construction projects may use this special provision appropriately and at their own risk.

**Instructions for use on CDOT construction projects:**

Use the following standard special provision on all projects with shoring.

 **Revision of Section 206**

**Shoring**

**Revise Section 206 of the Standard Specifications as follows:**

**Remove and replace 206.09 of the Standard Specifications as follows: Materials and Construction Requirements**

**206.09** The Contractor shall locate, size, design, and construct shoring that provides all necessary rigidity and supports the loads imposed to facilitate construction as shown on the plans. Shoring used to facilitate construction is considered temporary and shall have a design life 1-1/2 times the expected construction service life.

When the height of shoring exceeds 5 feet above the base of the excavation, the Contractor shall submit working drawings per subsection 105.02. The drawings shall be submitted to the Project Engineer for information only. The drawings shall be electronically sealed by the Contractor’s Engineer. The Contractor shall design for internal and external stability of temporary shoring, such as, but not limited to, bearing capacity, settlement, sliding, overturning, internal compound stability, and global stability. All proof and verification testing of the shoring elements shall be of the number and method per the applicable design manual and are the responsibility of the Contractor. The Contractor’s Engineer, or their designated representative, shall be on site during proof and verification testing to validate results.

All proof, verification, and material testing of the shoring elements shall be the responsibility of the Contractor and shall be reported to the Project Engineer the day after the test was performed. For soil nail walls, proof testing shall be performed per the Revision of Section 504 Soil Nail Wall.

The Contractor shall conduct additional proof and verification testing at the Project Engineer’s request. Sufficient corrosion protection shall be provided in consideration of the temporary shoring design life and is the responsibility of the Contractor. Temporary shoring shall be designed for actual construction-related loads, such as phasing, stockpiles, and operation of large cranes or other large equipment near the area of the shoring. These drawings shall be electronically sealed by the Contractor’s Engineer and provided to the Project Engineer at least 10 days before the start of work. Shoring construction shall conform to the shoring drawings provided to the Project Engineer. The Contractor shall conduct any necessary site-specific evaluation to ensure shoring design, construction, and performance.

The Contractor shall have performed and documented an independent review of their shoring design and drawings at the designated areas before submittal. The Contractor’s Engineer shall electronically seal the independent review shoring design and drawings.

The shoring plans shall detail the methods to control site drainage during the life of the shoring. The Contractor shall actively control drainage and surface runoff during the duration of construction to direct runoff away from the areas above and behind the shoring. A shoring site drainage quality control plan shall be included as part of

the Contractor’s Engineer’s shoring plans and shall be part of the submittal to the Project Engineer. The plan shall include measures to prevent ponding water near the shoring area and maintenance of drainage to convey water away from and around the shoring excavation vicinity.

If the embankment, construction, traffic, or any other surcharge is in excess of what the original shoring was designed for and is to be placed adjacent to the shoring, the Contractor shall provide a signed letter from the Contractor’s Engineer before the load placement stating that the shoring will support the additional load.

Shoring shall be designed and constructed per the requirements listed in this specification, along with requirements in current AASHTO and FHWA design manuals, including, but not limited to:

(1) AASHTO Guide Design Specifications for Bridge and Temporary Works, (2) AASHTO Construction Handbook for Bridge Temporary Works, including Division I,

(3) Section 5 of the AASHTO LRFD Bridge Design Specifications for allowable stress or load factor design; or

(4) AASHTO LRFD Bridge Design Specifications, including current interims for load and resistance factor design.

If a shoring type is to be used that is not detailed in these four documents, the shoring type design method shall be submitted to the Project Engineer for review and acceptance. The Contractor’s Engineer shall be on-site and perform construction inspection of the shoring during the first two days of active shoring construction, during any shoring element verification testing, and at the completion of shoring construction. Shoring drawings shall include the following information:

**Revise Section 206.11 as follows:**

**Basis of Payment**

**206.11** The accepted quantities of shoring measured as provided above will be paid for at the contract unit price bid.

Payment will be made under:

|  **Pay Item**  |  **Pay Unit** |
| --- | --- |
|  Shoring (Area \_\_\_\_)  |  Lump Sum |

Payment for shoring will be full compensation for all labor, materials, and equipment required to design, construct, test, maintain, and dewater.

Removal of the shoring shall include removal of all shoring elements. The removal area shall be specified in the plans.

Removal of shoring will not be measured and paid for separately but shall be included in the work.

The Department will pay for additional proof and verification testing requested by the Project Engineer, per subsection 109.04, if the testing passes. The Contractor shall pay for additional testing if the testing fails.

Other incidental shoring that is not included as a pay item will not be measured and paid for separately but shall be included in the work.