

**SECTION 02 15 00
SHORING AND BRACING**

PART 1 - GENERAL

1.01 - RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification sections, apply to the work of this section.

1.02 - SUMMARY

- A. Extent of Shoring and Bracing Work includes, but is not limited to, the following:
 - 1) Shoring and bracing necessary to protect any work scheduled to remain, walls, structural steel, utilities and other work.
 - 2) Maintenance of shoring and bracing.
 - 3) Removal of shoring and bracing, as required.
- B. Types of shoring and bracing system to be determined by contractor, who shall be solely responsible for their structural capacity and use.

1.03 - SUBMITTALS

- A. Layout Drawings: If required, provide layout drawings for shoring and bracing system and other data prepared and sealed by a registered Professional Engineer licensed in the State of the New York. System design and calculations must be acceptable to local authorities having jurisdiction.

1.04 - QUALITY ASSURANCE

- A. Regulations: Comply with local codes and ordinances of governing authorities having jurisdiction.

1.05 - JOB CONDITIONS

- A. Before starting work, check and verify governing dimensions and elevations. Survey condition of adjoining AREAS. Take photographs to record any prior settlement or cracking of structures, pavements, and other improvements. Prepare a list of such damages, verified by dated photographs, and signed by a representative of the Owner, General Contractor, and others conducting investigation.
- B. Survey adjacent structures and improvements, establishing exact elevations at fixed points to act as benchmarks. Clearly identify benchmarks and record new and existing elevations. Locate datum level used to establish benchmark elevations sufficiently distant so as not to be affected by movement resulting from excavation operations.
- C. During removals, adjust benchmarks weekly. Maintain accurate log of surveyed elevations for comparison with original elevations. Promptly notify Architect if changes in elevations occur or if cracks, sags or other damage is evident.

PART 2 - PRODUCTS

2.01 - MATERIALS

- A. General: Provide suitable shoring and bracing materials which will support loads imposed. Materials need not be new, but should be in serviceable condition.
- B. If wood is part of shoring system near existing structures, use pressure preservative treated materials or remove before placement of backfill.

PART 3 - EXECUTION

3.01 - SHORING

- A. Wherever shoring is required, locate the system to clear permanent construction and to permit forming and finishing of concrete surfaces. Provide shoring system adequately anchored and braced to resist earth and hydrostatic pressures.
- B. Shoring systems retaining earth on which the support or stability of existing structures is dependent must be left in place at completion of work.

3.02 - BRACING

- A. Locate bracing to clear columns, floor framing construction, and other permanent work. If necessary to move a brace, install new bracing prior to removal of original brace.
- B. Do not place bracing where it will be cast into or included in permanent concrete work, except as otherwise acceptable to Architect and Structural Engineer.
- C. Install internal bracing, if required, to prevent spreading or distortion to braced frames.
- D. Maintain bracing until structural elements are rebraced by other bracing or until permanent construction is able to withstand lateral earth and hydrostatic pressures.
- E. Remove sheeting, shoring and bracing in stages to avoid disturbance to underlying soils and damage to structures, pavements, facilities, and utilities.
- F. Repair or replace, as acceptable to Architect, adjacent work damaged or displaced through installation or removal of shoring and bracing work at no cost to the Owner.

- - E N D - - -