



**STANDARD CONSTRUCTION OPERATING PROCEDURE**

City of New York Department of Design and Construction  
Division of Infrastructure Bureau of Construction

**SUBJECT: MONITORING STRUCTURES DURING CONSTRUCTION**

SCOP..... : 01 -010G

**CATEGORY....: ADMINISTRATIVE**  
**Subcategory : Submittals**

Keywords ..... : Vibration, Settlement,  
Structures

Supersedes... : N/A

Supplements.... : N/A

Sheet..... : 1 of 1

**APPROVED:**

*Assistant Commissioner - William F. Lipski, P.E.*

Issue Date..... : August 28, 2001

Infrastructure contracts may contain a specification (Contract Section 30.720 - Pre-Construction Report and Monitoring of Structures) that requires the Contractor to retain the services of a qualified firm to prepare a pre-construction report and to monitor the effects of construction activities on buildings and other structures within the defined influence line of the contract work. This is to ensure that the contractor's construction methods do not create or aggravate any potentially dangerous conditions or cause structural damage. The following procedure must be followed regarding the work to be done under this contract section.

**Approval of firm:**

Prior to commencing any work, unless otherwise permitted under the contract, the contractor must submit the name, qualifications and proof of insurance for the firm proposed to provide the engineering services required by this contract section to the Resident Engineer who will forward it to the Design Director for approval.

**Pre-Construction Report:**

After receiving Design approval of the proposed firm and prior to construction, the contractor must submit to the Resident Engineer six (6) copies of the pre-construction report incorporating the approved firm's findings and recommendations as described in the contract. The Resident Engineer will review the report and forward it to the Design Director for approval. No construction work is permitted to proceed until the pre-construction report is approved by the Design Director.

**During Construction:**

The Resident Engineer must ensure that all construction activities and monitoring are performed in accordance with the approved pre-construction report recommendations. The approved firm is required to perform monitoring during construction activity as specified and is to submit copies of all readings on the day they are taken. The Resident Engineer must be cognizant of the readings during the work day and take the steps necessary to modify construction activities as necessary if readings exceed acceptable levels. Construction reports, as outlined in the contract, are to be submitted to the Resident Engineer on a weekly basis. For vibration monitoring, the reports must indicate the specific construction activity (i.e., pile driving), the monitoring distance from the activity, and the readings. The firm is required to notify the Resident Engineer immediately if any of the criteria set forth in the pre-construction report are exceeded and the contractor must immediately stop and modify his construction operations in order to bring the readings below the pre-construction report limits. In addition, if the horizontal or vertical movement limit is exceeded, the contractor must immediately take steps to rectify the situation and prevent further movement of the structure. The Resident Engineer must immediately report any excessive horizontal or vertical movement of structures to the Borough Director.

**Post-Construction Reports:**

Within 30 days of the completion of all work which necessitated the monitoring, the firm shall submit a post construction reports as outlined in the contract to the Resident Engineer who will review it and forward it to the Design Director for approval.

**Post-Construction Settlement Monitoring:**

Settlement monitoring shall continue for five (5) months following the completion of work for buildings or structures within the defined radius of influence. Should there be an unusual event, such as abnormal flooding or a water main break, monitoring shall be performed within 24 hours of the event.