

Section 8.10

MONITORING EXISTING STRUCTURES AND NOISE ABATEMENT

8.10.1 Purpose

To set forth a procedure to ensure the contractor performs inspection, settlement, vibration, groundwater and noise monitoring in compliance with the Contract Documents and applicable Laws.

8.10.2 Authority

Sections 20.23(3)(a), and 334.048(3), Florida Statutes (F.S.)

8.10.3 References

Section 335.17 Florida Statutes (F.S.)
Title 23, Part 772, Code of Federal Regulation
Sections 108 and 455, Standard Specifications

8.10.4 Scope

The principal users of this document include the State Construction Office (SCO), District Construction Offices (DCO), District Operations Centers, District Materials and Research Offices (DMRO), District Geotechnical Engineer (DGE), the State Materials Office (SMO), and Construction Engineering and Inspection (CEI) firms working for the Department.

8.10.5 General

This chapter emphasizes the enforcement of contract provisions requiring Districts and the State Construction Office to conduct Quality Assurance (QA) reviews of the monitoring of existing structures procedure and noise issues during construction.

8.10.6 Definitions

For the purpose of this procedure, all references to the Project Administrator (PA), the Resident Engineer (RE) or the Project/Program Manager (PM) who oversee Consultant CEI shall be either Florida Department of Transportation (Department) or Consultant personnel, whichever is applicable.

8.10.7 Inspection and Monitoring Plans

(A) Resident Level Responsibilities

The RE (or PA) shall receive the inspection and monitoring plans from the Contractor as required by the Contract Documents. Within two (2) working days, the RE (or PA) shall forward the monitoring plans to the DGE for review and recommendations.

The RE (or PA), within two (2) working days of receipt of the DGE's comments shall forward them to the Contractor. The RE (or PA) shall perform a concurrent separate review of the monitoring plans, incorporate their own comments to the ones received from the DGE, and forward them to the Contractor.

The RE (or PA) shall upload monitoring plan submittals and DGE's recommendations and comments into the Department's electronic document management system, including revisions and addenda.

At any time during construction, the DGE may recommend rejection or revisions to the monitoring plans. The RE (or PA) shall notify the Contractor of this rejection or requested revisions within one (1) working day of receiving the recommendation from the DGE. The notification shall contain the reason(s) for rejection or revisions of the monitoring plan.

(B) District Materials and Research Office (DMRO) Level Responsibilities

The DGE shall make comments to the RE (or PA) on monitoring plans within five (5) working days of receiving the submittal. In addition, if during construction it is observed that the monitoring plan is not providing adequate information, the DGE may recommend rejections or revisions to the monitoring plan.

8.10.8 Inspection and Monitoring

(A) Resident Level Responsibilities

The RE (or PA) must ensure the Contractor performs the monitoring and inspection requirements indicated in the Contract Documents. In addition to the Monitoring of Existing Structures table in the plans, some Contracts include Special Provisions, Technical Special Provisions or Plan notes requiring special monitoring for noise, vibration, settlement, or groundwater monitoring as well as inspection and documentation of adjacent structures. The RE (or PA) must ensure the Contractor performs the settlement, vibration, and groundwater monitoring at the correct locations in accordance with the contract documents and the approved settlement and vibration monitoring plan. The RE (or PA) must ensure the Contractor periodically submits to the CEI office records of noise, settlement, vibration, and groundwater during the monitoring period. When the Contract Documents specify a maximum noise threshold level, the RE (or PA) must ensure the Contractor submits to the CEI records of noise measurements on a weekly basis or as otherwise required by the Contract Documents, during the monitoring period.

The RE (or PA) must verify the settlement, vibration, groundwater fluctuation, or noise threshold limits are not exceeded. When any of these limits are exceeded or damage is detected, the RE (or PA) must ensure the Contractor performs a corrective action in accordance with the Contract Documents. The RE (or PA) shall also notify the DGE and DCE and submit the monitoring records as soon as possible. If the DGE recommends to the RE (or PA) to revise the installation procedures associated with excessive settlement, vibration or damage, the RE (or PA) shall notify the Contractor of this required revision within one (1) working day of receiving the recommendation.

The RE (or PA) shall ensure that the Construction Inspection **QA Critical Requirements** are met. The **QA Critical Requirements** are located at the following web site:

<http://www.fdot.gov/construction/CONSTADM/Guidelist/GuideIndex.shtm>

(B) District Materials and Research Office (DMRO) Level Responsibilities

If after evaluating the data, it is established that the construction activities have produced damage or movements or vibrations that exceed the thresholds established in the contract documents, the DGE shall issue a notification to the RE (or PA) recommending a revision to the applicable installation procedure. The RE (or PA) shall notify the Contractor of this

required revision within one (1) working day of receiving the recommendation.

8.10.9 Noise, Settlement and Vibration Complaints

The RE (or PA) shall review the project construction schedule and the nature of the activities generating noise and/or vibration, which may disturb residents or businesses in the area. Also, there may be work time restrictions (for example, night or weekend work). The RE, PA, and the inspection staff should review and become familiar with these restrictions.

The RE (or PA) shall document any complaints received during construction. Documentation should include, at a minimum:

- a. The nature of the complaint.
- b. The name and address of the individual making the complaint.
- c. The area or structures that are the subject of the complaint.
- d. The type of construction operation alleged to be generating the noise and/or vibration.

Upon receiving any verbal or written complaints for noise, vibration, or settlement, the RE (or PA) shall promptly request the Contractor to address it. In addition, the RE (or PA) shall:

- a. Make sure the Contractor documents the alleged damage and addresses it.
- b. If necessary, request the Contractor to measure and record noise and/or vibration levels, and conduct settlement monitoring.
- c. Review and file any documentation and monitoring report submitted by the Contractor or Contractor's specialty consultant.
- d. Document any corrective action performed by the Contractor.

The RE (or PA) shall review and notify the Noise Specialist of any repeated noise or vibration complaints or any patterns of noise and vibration complaints including verbal complaints, particularly if the complaints are widespread or if a change of construction method is being proposed by the Contractor. The RE (or PA) shall also consider scheduling noise and/or vibration monitoring during construction operations utilizing a specialty consultant or the District Materials Office. Conduct the monitoring at noise and/or vibration sensitive sites or during specific operations for which complaints have been received. In addition, the RE (or PA) shall document and notify the Noise Specialist of any corrective action or modifications undertaken by the Contractor to its construction methods or schedule.

8.10.10 Property Access Requests

The RE (or PA) shall also contact property owners and arrange access to a property for inspection and monitoring by the Contractor. The RE (or PA) shall prepare letters on behalf of the Department and deliver them to the property owners to allow inspection and monitoring by personnel engaged by the Contractor. These letters shall be sent via Certified Mail. Property Inspection will be required in the following instances:

- To investigate a complaint by an owner that Contractor's activities have adversely impacted or are adversely impacting a property.
- To perform the inspections required in accordance with Section 108 of the Standard Specifications.

The RE (or PA) shall maintain, in the project files, the letters requesting access to properties and any responses received from the property owners. When an owner does not respond to a certified letter, the RE (or PA) shall document, in the project files, all attempts made to contact the owner to facilitate inspection and monitoring on the property, including information showing whether the owner responded to the Department's requests.

8.10.11 District Construction Responsibilities

The District Construction Office (DCO) shall perform QA reviews of the Residencies to verify that the Contractor is in compliance with all Contract Documents and with all applicable laws and commitments relating to monitoring existing structures, noise and vibration mitigation. When appropriate, the DCO shall notify other State and Local Government Agencies in the event of complaints or non-compliance.

8.10.12 State Construction Responsibilities

State Construction Office shall perform Process Reviews of the Districts periodically.

8.10.13 Training

None.

10.1.14 Forms

None.