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APPENDIX SS-02

Modified Supplemental Specification 878
(Contract Document)

State of Ohio
Department of Transportation
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Innerbelt Bridge
Construction Contract Group 1 (CCG1)

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5 - Addendum No. 5 - New Appendix

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
Modified SUPPLEMENTAL SPECIFICATION 878
INSPECTION AND COMPACTION TESTING of UNBOUND MATERIALS

June 3, 2010

.01 Description.
This work consists of performing inspection, compaction testing and documentation for Items 203, 204, 205, 206, 304, 307, 411, 503, 603 and select granular backfill for MSE walls.

.02 Personnel Requirements.
Provide a Registered Engineer to supervise technicians' work and act as liaison with Department and ICQM personnel. Have the Registered Engineer available to discuss questions and problems which arise relative to construction, inspection and compaction testing and be available at the bimonthly progress meetings.

Provide at least one lead technician with NICET Level II, Construction Materials Testing – subfield Soils certification and 5 years relevant experience per project.

Provide technicians with NICET Level II, Construction Materials Testing – subfield Soils certification, and 2 years relevant experience, at all times for every operation requiring inspection, compaction testing and documentation. At a minimum, provide full time inspection and documentation, when unbound material is being placed.

Provide a list of all required personnel to the ICQM for acceptance 7 days prior to the work.

.03 Field Test Methods.
Perform inspections and compaction tests according to Supplement 1015. Use the online documentation forms from the Construction Inspection Manual of Procedures (http://www.dot.state.oh.us/construction/OCA/default.htm).

Use Table 1015.10-1 in Supplement 1015 Compaction Testing of Unbound Materials for the different materials, minimum testing frequencies and the appropriate test or method for controlling each material.

.04 Test Equipment.
Provide the serial number, manufacturer, model number, calibration data, and frequency of calibrations for nuclear gauges. Provide documentation of the 3 block calibration (minimum every 18 months), leak tests (minimum every 6 months), and stability tests (minimum every project) for each gauge.

Perform standard counts at intervals recommended in the manufacturers operating manual and at least once a week.

Define the procedure for performing a stability check on nuclear gauges which are not within the tolerance range after the standard count and during the interval between calibrations. Standard counts derived during the stability check for stable gauges may be used in lieu of the manufacturer's standards. Do not use gauges found to be unstable until repaired and calibrated.

.05 Acceptance of Field Inspection.
At the start of compaction operations and quality control testing, DBT and ICQM personnel will perform nuclear moisture and density tests at the same location. The test results must agree before compaction operations may continue.

.06 Compaction Equipment.
Provide a list of all proposed compaction equipment including make, model, and weight or applied force at which each roller will be operated. If adding ballast to a roller, indicate the type and quantity of ballast along with the method for verifying the gross weight. Include manufacturer's specifications for the compaction capabilities for each roller or define the procedures that will be used to verify the compaction capabilities of each roller.

.07 Notification of Non-compliance.
Immediately notify the ICQM and the DBT when any field tests note non-compliance.

.08 Forms, Documentation, Weekly and Final Reports.
Provide accurate inspection information, tests, and calculations. Report the inspection and compaction tests on Department forms defined in S-1015. Provide the inspections, compaction test results and measurements to the ICQM daily. Provide a summary of the inspections, compaction tests and measurements weekly. Include all inspections, measurements and compaction test results including failing lots, moisture checks, etc. Have the Registered Engineer sign the weekly and final reports certifying that all the inspections and compaction tests meet all the contract requirements. Submit the final report 30 days after the completion of the work.

.09 Quality Assurance/Verification Testing.
The Department and ICQM will perform quality assurance (QA) and Quality Verification (QV) tests to verify that the inspections and compaction testing conform to the Items of Work. The ICQM will test every 5th lot for acceptance. The tested lot will be determined at random. The lot results will be recorded. If the material does not require a compaction test, such as rock or hard shale, and it is being placed according to the specifications then the material will not be QA tested.

If the random quality assurance lot fails, the ICQM will test one additional lot of the original five. If only the original lot fails, re-compact the failed lot. If the original and second lot fails, re-compact all five lots represented by the original quality assurance lot tests. Notify the Engineer when any re-compacted lot is ready for quality assurance verification.

After re-compaction, the ICQM will either test all five lots for acceptance or witness the testing and documentation by the field inspection personnel. If any lot fails again the ICQM will stop construction until the lead technician determines and resolves the problem and submits a plan to eliminate future problems.