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SECTION 01 45 00 QUALITY CONTROL

PART 1 - 1 GENERAL

1.1 SUMMARY

- A. This Section describes requirements regarding quality assurance and control of installation, references, field samples, inspections and testing laboratory services, and manufacturers' field services and reports.

1.2 QUALITY ASSURANCE/CONTROL OF INSTALLATION

- A. The Subcontractor shall maintain an adequate inspection system and perform such tests and inspections as will ensure that the work performed under the subcontract conforms to the subcontract requirements. The Subcontractor shall maintain complete inspection records and make them available to NTESS. As a minimum, the Subcontractor shall perform the following:
 - 1. Test, inspect, and monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
 - 2. Comply fully with manufacturers' instructions, including each step-in sequence.
 - 3. Request clarification from Sandia Delegated Representative (SDR) before proceeding should manufacturers' instructions conflict with Subcontract Documents,
 - 4. Comply with specified standards as a minimum quality for the Work.
 - 5. Perform work by persons qualified to produce workmanship of specified quality.
 - 6. Secure products in place with positive anchorage devices properly sized to withstand stresses, vibration, physical distortion, disfigurement, and seismic Zone D accelerations per the 2010 California Building Code (CBC).
- B. All work is subject to independent inspection and test by NTESS at all places and at reasonable times before acceptance to ensure strict compliance with the Subcontract Documents. NTESS will perform inspections and tests in a manner that will not unnecessarily delay the work. NTESS may charge the Subcontractor any additional cost of inspection or test when work is not ready at the time specified by the Subcontractor for inspection or test, or when prior rejection makes re-inspection or retest necessary. NTESS's tests or inspections are for the sole benefit of NTESS and do not:
 - 1. Relieve the Subcontractor of responsibility for providing adequate quality control measures to include test and inspections.
 - 2. Relieve the Subcontractor of responsibility for damage to or loss of material before acceptance.
 - 3. Constitute or imply acceptance.
 - 4. Affect the guarantee / warranty to NTESS after acceptance of the completed work.
- C. The presence or absence of NTESS inspections or tests does not relieve the Subcontractor from any contract requirement.

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- D. The Subcontractor shall promptly furnish, without additional charge, all facilities, labor, and material reasonably needed for performing such safe and convenient inspections and tests as required for verification of compliance with Subcontract Documents.
- E. The Subcontractor shall, without charge, replace or correct work found not to conform to subcontract requirements.
- F. The Subcontractor shall promptly segregate and remove rejected material from the premises.

1.3 REFERENCES

- A. Abbreviations and acronyms are included throughout the Subcontract Documents to reference codes and standards which establish qualities, workmanship and materials, and which establish methods for testing and reporting on the pertinent characteristics. It is the Subcontractor's responsibility to verify the detailed requirements of the specifically referenced codes and standards and to verify that materials and products incorporated into the work conform to or exceed the specified requirements. Materials and products incorporated into the Work which fail to conform to the specified requirements will be considered non-conforming work.
- B. See Specification Section 01 42 00, References.

1.4 FIELD SAMPLES

- A. Provide field samples at the site as required by individual Specification Sections for review. Field Samples shall be at least 2 ft. square, unless otherwise noted.
- B. Acceptable samples shall represent a quality level for the Work. Gain acceptance of field samples from SDR. Do not proceed with work until field samples are accepted by SDR.
- C. Where field sample is specified in individual Specification Sections to be removed, clear area after field sample has been accepted by SDR.

1.5 INSPECTION AND TESTING LABORATORY SERVICES

- A. The SDR will appoint, employ, and pay for services of a firm for verification of compliance with the Subcontract requirements.
- B. The Subcontractor shall employ, and pay for services of a testing firm to perform inspection and testing required by paragraph "Quality Assurance/Control of Installation" and to assure compliance with Subcontract requirements.
- C. The firm will perform inspections, tests, and the other services specified in individual Specification Sections.
- D. Subcontractor's Responsibilities:
 - 1. Secure and deliver to the testing laboratories adequate quantities of representative samples of materials proposed for use and which require testing.

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2. Provide to the testing laboratories and the SDR the preliminary design mix proposed to be used for concrete, and other materials mixes which require review by the testing and laboratory.
3. Furnish copies of product test reports as required.
4. Furnish incidental labor and facilities.
 - a. To provide access to Work to be tested.
 - b. To obtain and handle samples at the project site or at the source of the product to be tested.
 - c. To facilitate inspections and tests.
 - d. For storage and curing of test samples.
5. Notify SDR 48 hours in advance of operations to allow for witnessing of Subcontractor's tests.

1.6 TEST REPORTS

- A. The Subcontractor's testing laboratory shall distribute copies of all reports directly to SDR.
- B. The SDR will forward one (1) copy of all NTESS testing reports to Subcontractor upon written request.

1.7 MULTIPLE TESTS AND INSPECTIONS

- A. Certain portions of the Work will be tested and/or inspected at various stages, sometimes off the site, between their inception and final positioning in the completed Work. Nothing in any prior approval or satisfactory test result shall govern if at any subsequent time the Work, or portion thereof, is found not to conform to the Subcontract Documents.

1.8 ADDITIONAL TESTING AND INSPECTION

- A. If initial tests or inspections made by NTESS' testing laboratory reveal that materials do not comply with Subcontract Documents, or if the SDR has reasonable doubt that materials comply with Subcontract Documents, additional tests and inspections shall be made.
 1. If additional tests and inspections establish that materials comply with Subcontract Documents, all costs for such tests and inspections shall be paid by NTESS.
 2. If additional tests and inspections establish that materials do not comply with Subcontract Documents, all costs of such tests and inspections shall be deducted from the Subcontract Sum.

1.9 MANUFACTURERS' FIELD SERVICES AND REPORTS

- A. Submit qualifications of manufacturer's observer to SDR thirty (30) days in advance of required observations.
- B. When specified in individual Specification Sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of

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equipment, testing, adjusting, and balancing of equipment as applicable, and to initiate instructions when necessary.

- C. Subcontractor shall report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

PART 2 - PRODUCTS

2.1 COUNTERFEIT / SUSPECT PRODUCT WARRANTY

- A. NTESS reserves the right to request documentation proving authenticity of any product or components within supplied product, installed or provided by the Subcontractor, as required by the Contract Documents.
- B. The Subcontractor shall expressly warrant that no counterfeit products or components in supplied products shall be provided and installed. The Subcontractor expressly warrants that all products, and components within, provided under this Subcontract, have a rightful transfer of good title thereto and are delivered free of any rightful claims of any third person by way of infringement of any intellectual property right. This warranty shall begin upon NTESS' acceptance of the substantial completion and shall extend for a period of the manufacturer's warranty period or one year, whichever is longer.
- C. If any nonconformity or counterfeit products appear before or during the warranty period, the Subcontractor shall promptly repair or replace the suspected product at the Subcontractor's expense. Transportation of replacement product, return of non-conforming product and all labor associated with these repairs shall be at the Subcontractor's expense.
- D. NTESS shall notify the Subcontractor of nonconforming products within a reasonable time after discovery. The Subcontractor shall notify NTESS of whether it chooses to make repairs or replacements within three (3) working days after notice of nonconformity. If the repair or replacement or re-performance of services is not timely, NTESS may elect to return the nonconforming product and repair and/or replace at the Subcontractor's expense.

PART 3 - EXECUTION - Not Used

END OF SECTION