

## SECTION 01400 QUALITY REQUIREMENTS

### GENERAL

#### 1.1 SECTION INCLUDES

1. Quality control and control of installation.
2. Tolerances
3. References.
4. Mock-up requirements.
5. Testing and inspection services.
6. Examination.
7. Preparation.

#### 1.2 QUALITY CONTROL AND CONTROL OF INSTALLATION

1. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
2. Comply with manufacturers' instructions, including each step in sequence.
3. When manufacturers' instructions conflict with Contract Documents, request clarification from Owner's Representatives before proceeding.
4. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
5. Perform Work by persons qualified to produce required and specified quality.
6. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

#### 1.3 TOLERANCES

1. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.

2. Comply with manufacturers' tolerances. When manufacturers' tolerances conflict with Contract Documents, request clarification from Owner's Representatives before proceeding.
3. Adjust products to appropriate dimensions; position before securing products in place.

#### 1.4 REFERENCES

1. For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of standard, except when more rigid requirements are specified or are required by applicable codes.
2. Conform to reference standard by date of issue current on date of Contract Documents, except where specific date is established by code.
3. Obtain copies of standards where required by product specification sections.
4. When specified reference standards conflict with Contract Documents, request clarification from Owner's Representatives before proceeding.
5. Neither contractual relationships, duties, nor responsibilities of parties in Contract nor those of Architect/Engineer shall be altered from Contract Documents by mention or inference otherwise in reference documents.

#### 1.5 MOCK-UP REQUIREMENTS

1. Tests will be performed under provisions identified in this section and identified in respective product specification sections.
2. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.
3. Accepted mock-ups shall be comparison standard for remaining Work.
4. Where mock-up has been accepted Architect and Owner's Representatives and is specified in product specification sections to be removed; remove mock-up and clear area when directed to do so Owner's Representatives.

#### 1.6 TESTING AND INSPECTION SERVICES

1. Contractor will employ and pay for services of an independent testing agency or laboratory acceptable to Owner's Representative to perform specified testing.

1. Prior to start of Work, submit testing laboratory name, address, and telephone number, and names of full time specialist and responsible officer.
  2. Submit copy of report of laboratory facilities inspection made by Materials Reference Laboratory of National Bureau of Standards during most recent inspection, with memorandum of remedies of deficiencies reported by inspection.
2. The independent firm will perform tests, inspections and other services specified in individual specification sections and as required by Owner's Representatives.
    1. Laboratory: Authorized to operate in Puerto Rico.
    2. Laboratory Staff: Maintain full time registered Engineer on staff to review services.
    3. Testing Equipment: Calibrated at reasonable intervals with devices of an accuracy traceable to National Bureau of Standards or accepted values of natural physical constants.
3. Testing, inspections and source quality control may occur on or off project site.
  4. Testing and employment of testing agency or laboratory shall not relieve Contractor of obligation to perform Work in accordance with requirements of Contract Documents.
  5. Re-testing or re-inspection required because of non-conformance to specified requirements shall be performed by same independent firm on Owner's Representatives.
  6. Agency Responsibilities:
    1. Test samples of mixes submitted by Contractor.
    2. Provide qualified personnel at site. Cooperate with Owner/s Representatives, in performance of services.
    3. Perform specified sampling and testing of products in accordance with specified standards.
    4. Ascertain compliance of materials and mixes with requirements of Contract Documents.
    5. Promptly notify Owner's Representatives, of observed irregularities or non-conformance of Work or products.
    6. Perform additional tests required by Owner's Representatives.
    7. Attend preconstruction meetings and progress meetings.
  7. Agency Reports: After each test, promptly submit five copies of report to Owner's Representatives, Architect/Engineer and to Contractor. When requested Owner's Representatives, provide interpretation of test results. Include the following:
    1. Date issued.
    2. Project title and number.
    3. Name of inspector.

4. Date and time of sampling or inspection.
  5. Identification of product and specifications section.
  6. Location in Project.
  7. Type of inspection or test.
  8. Date of test.
  9. Results of tests.
  10. Conformance with Contract Documents.
8. Limits On Testing Authority:
1. Agency or laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.
  2. Agency or laboratory may not approve or accept any portion of the Work.
  3. Agency or laboratory may not assume duties of Contractor.
  4. Agency or laboratory has no authority to stop the Work.

## PART 2 PRODUCTS

Not Used.

## PART 3 EXECUTION

### 3.1 EXAMINATION

1. Verify existing site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.
2. Verify existing substrate is capable of structural support or attachment of new Work being applied or attached.
3. Examine and verify specific conditions described in individual specification sections.
4. Verify utility services are available, of correct characteristics, and in correct locations.

### 3.2 PREPARATION

1. Clean substrate surfaces prior to applying next material or substance.
2. Seal cracks or openings of substrate prior to applying next material or substance.
3. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying new material or substance in contact or bond.

END OF SECTION