

**Part 1            General**

**1.1            ADMINISTRATIVE REQUIREMENTS**

- .1    Pre-warranty Meeting:
  - .1    Convene meeting two week prior to contract completion with [contractor's representative and Departmental Representative and Departmental Representative, in accordance with Section 01 31 19 - Project Meetings to:
    - .1    Verify Project requirements.
    - .2    Review manufacturer's installation instructions and warranty requirements.
  - .2    Departmental Representative and Departmental Representative to establish communication procedures for:
    - .1    Notifying construction warranty defects.
    - .2    Determine priorities for type of defects.
    - .3    Determine reasonable response time.
  - .3    Contact information for bonded and licensed company for warranty work action: provide name, telephone number and address of company authorized for construction warranty work action.
  - .4    Ensure contact is located within local service area of warranted construction, is continuously available, and is responsive to inquiries for warranty work action.

**1.2            ACTION AND INFORMATIONAL SUBMITTALS**

- .1    Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2    Two weeks prior to Substantial Performance of the Work, submit to the Departmental Representative four final copies of operating and maintenance manuals in English.
- .3    Provide spare parts, maintenance materials and special tools of same quality and manufacture as products provided in Work.
- .4    Provide evidence, if requested, for type, source and quality of products supplied.

**1.3            FORMAT**

- .1    Organize data as instructional manual.
- .2    Binders: vinyl, hard covered, 3 'D' ring, loose leaf 219 x 279 mm with spine and face pockets.
- .3    When multiple binders are used correlate data into related consistent groupings.
  - .1    Identify contents of each binder on spine.
- .4    Cover: identify each binder with type or printed title 'Project Record Documents'; list title of project and identify subject matter of contents.
- .5    Arrange content by systems under Section numbers and sequence of Table of Contents.

- .6 Provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.
- .7 Text: manufacturer's printed data, or typewritten data.
- .8 Drawings: provide with reinforced punched binder tab.
  - .1 Bind in with text; fold larger drawings to size of text pages.

#### **1.4 CONTENTS - PROJECT RECORD DOCUMENTS**

- .1 Table of Contents: provide title of project;
  - .1 Date of submission; names.
  - .2 Addresses, and telephone numbers of Consultant and Contractor with name of responsible parties.
  - .3 Schedule of products and systems, indexed to content of volume.
- .2 For each product or system:
  - .1 List names, addresses and telephone numbers of subcontractors and suppliers, including local source of supplies and replacement parts.
- .3 Product Data: mark each sheet to identify specific products and component parts, and data applicable to installation; delete inapplicable information.
- .4 Drawings: supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams.
- .5 Typewritten Text: as required to supplement product data.
  - .1 Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions specified in Section 01 45 00 - Quality Control.

#### **1.5 AS -BUILT DOCUMENTS AND SAMPLES**

- .1 Maintain, in addition to requirements in General Conditions, at site for Departmental Representative one record copy of:
  - .1 Contract Drawings.
  - .2 Specifications.
  - .3 Addenda.
  - .4 Change Orders and other modifications to Contract.
  - .5 Reviewed shop drawings, product data, and samples.
  - .6 Field test records.
  - .7 Inspection certificates.
  - .8 Manufacturer's certificates.
- .2 Store record documents and samples in field office apart from documents used for construction.
  - .1 Provide files, racks, and secure storage.
- .3 Label record documents and file in accordance with Section number listings in List of Contents of this Project Manual.

- .1 Label each document "PROJECT RECORD" in neat, large, printed letters.
- .4 Maintain record documents in clean, dry and legible condition.
  - .1 Do not use record documents for construction purposes.
- .5 Keep record documents and samples available for inspection by [Departmental Representative].

#### **1.6 RECORDING INFORMATION ON PROJECT RECORD DOCUMENTS**

- .1 Record information on set of black line opaque drawings.
- .2 Use felt tip marking pens, maintaining separate colours for each major system, for recording information.
- .3 Record information concurrently with construction progress.
  - .1 Do not conceal Work until required information is recorded.
- .4 Contract Drawings and shop drawings: mark each item to record actual construction, including:
  - .1 Measured depths of elements of foundation in relation to finish first floor datum.
  - .2 Field changes of dimension and detail.
  - .3 Changes made by change orders.
  - .4 Details not on original Contract Drawings.
  - .5 References to related shop drawings and modifications.
- .5 Specifications: mark each item to record actual construction, including:
  - .1 Manufacturer, trade name, and catalogue number of each product actually installed, particularly optional items and substitute items.
  - .2 Changes made by Addenda and change orders.
- .6 Other Documents: maintain manufacturer's certifications, inspection certifications, field test records, required by individual specifications sections.
- .7 Provide digital photos, if requested, for site records.

#### **1.7 MATERIALS AND FINISHES**

- .1 Building products, applied materials, and finishes: include product data, with catalogue number, size, composition, and colour and texture designations.
- .2 Instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .3 Moisture-protection and weather-exposed products: include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .4 Additional requirements: as specified in individual specifications sections.

## **1.8 MAINTENANCE MATERIALS**

- .1 Spare Parts:
  - .1 Provide spare parts, in quantities specified in individual specification sections.
  - .2 Provide items of same manufacture and quality as items in Work.
  - .3 Deliver to site location as directed; place and store.
  - .4 Receive and catalogue items.
    - .1 Submit inventory listing to Departmental Representative.
    - .2 Include approved listings in Maintenance Manual.
  - .5 Obtain receipt for delivered products and submit prior to final payment.
- .2 Extra Stock Materials:
  - .1 Provide maintenance and extra materials, in quantities specified in individual specification sections.
  - .2 Provide items of same manufacture and quality as items in Work.
  - .3 Deliver to site location as directed; place and store.
  - .4 Receive and catalogue items.
    - .1 Submit inventory listing to Departmental Representative.
    - .2 Include approved listings in Maintenance Manual.
  - .5 Obtain receipt for delivered products and submit prior to final payment.
- .3 Special Tools:
  - .1 Provide special tools, in quantities specified in individual specification section.
  - .2 Provide items with tags identifying their associated function and equipment.
  - .3 Deliver to site location as directed; place and store.
  - .4 Receive and catalogue items.
    - .1 Submit inventory listing to Departmental Representative.
    - .2 Include approved listings in Maintenance Manual.

## **1.9 DELIVERY, STORAGE AND HANDLING**

- .1 Store spare parts, maintenance materials, and special tools in manner to prevent damage or deterioration.
- .2 Store in original and undamaged condition with manufacturer's seal and labels intact.
- .3 Store components subject to damage from weather in weatherproof enclosures.
- .4 Remove and replace damaged products at own expense and for review by Departmental Representative.

## **1.10 WARRANTIES AND BONDS**

- .1 Develop warranty management plan to contain information relevant to Warranties.
- .2 Submit warranty management plan, 30 days before planned pre-warranty conference, to Engineer approval.

- .3 Warranty management plan to include required actions and documents to assure that Departmental Representative receives warranties to which it is entitled.
- .4 Provide plan in narrative form and contain sufficient detail to make it suitable for use by future maintenance and repair personnel.
- .5 Submit, warranty information made available during construction phase, to Departmental Representative for approval prior to each monthly pay estimate.
- .6 Assemble approved information in binder, submit upon acceptance of work and organize binder as follows:
  - .1 Separate each warranty or bond with index tab sheets keyed to Table of Contents listing.
  - .2 List subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.
  - .3 Obtain warranties and bonds, executed in duplicate by subcontractors, suppliers, and manufacturers, within ten days after completion of applicable item of work.
  - .4 Verify that documents are in proper form, contain full information, and are notarized.
  - .5 Co-execute submittals when required.
  - .6 Retain warranties and bonds until time specified for submittal.
- .7 Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial Performance is determined.
- .8 Conduct joint 4 month and 9 month warranty inspection, measured from time of acceptance, by Departmental Representative.
- .9 Include information contained in warranty management plan as follows:
  - .1 Roles and responsibilities of personnel associated with warranty process, including points of contact and telephone numbers within the organizations of Contractors, subcontractors, manufacturers or suppliers involved.
  - .2 Provide list for each warranted equipment, item, feature of construction or system indicating:
    - .1 Name of item.
    - .2 Model and serial numbers.
    - .3 Location where installed.
    - .4 Name and phone numbers of manufacturers or suppliers.
    - .5 Names, addresses and telephone numbers of sources of spare parts.
    - .6 Warranties and terms of warranty: include one-year overall warranty of construction. Indicate items that have extended warranties and show separate warranty expiration dates.
    - .7 Cross-reference to warranty certificates as applicable.
    - .8 Starting point and duration of warranty period.
    - .9 Summary of maintenance procedures required to continue warranty in force.
    - .10 Cross-Reference to specific pertinent Operation and Maintenance manuals.

- .11 Organization, names and phone numbers of persons to call for warranty service.
- .12 Typical response time and repair time expected for various warranted equipment.
- .3 Contractor's plans for attendance at 4 and 9 month post-construction warranty inspections.
- .4 Procedure and status of tagging of equipment covered by extended warranties.
- .5 Post copies of instructions near selected pieces of equipment where operation is critical for warranty and/or safety reasons.
- .10 Respond in timely manner to oral or written notification of required construction warranty repair work.
- .11 Written verification to follow oral instructions.
  - .1 Failure to respond will be cause for the Departmental Representative to proceed with action against Contractor.

**END OF SECTION**