

SECTION 01 78 00
CLOSEOUT SUBMITTALS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Project record documents.
- B. Record Project Manual.
- C. Project Record Drawings (As-builts).
- D. Operation and maintenance data, preventive maintenance instructions.
- E. Product warranties and bonds.
- F. Maintenance contracts.
- G. Spare parts and maintenance materials.

1.2 RELATED SECTIONS

- A. Section 01 31 00 – PROJECT MANAGEMENT AND COORDINATION:
 - 1. Coordination Drawing Requirements.
 - 2. CAD File Requirements for base sheets to prepare Project Record Drawings (As-builts).

1.3 PROJECT RECORD DOCUMENTS

- A. General: Record documents shall reflect actual “as-built” condition and the products installed. Include all changes and deviations from original Contract Documents, and incorporate information from:
 - 1. Original Contract Documents.
 - 2. Addenda.
 - 3. Change orders.
 - 4. Construction change directives.
 - 5. Field directives, and instructions from the Owner, Architect or regulatory authorities having jurisdiction.
- B. Project Record Documents include, but are not limited to:
 - 1. Record Project Manual.
 - 2. Project record drawings (as-builts).
 - 3. Final Site Survey.
 - 4. Operation and maintenance data, preventive maintenance instructions.
 - 5. Materials and finishes manual.
 - 6. Product warranties and bonds.
 - 7. Maintenance contracts.
 - 8. Record of all test reports and inspections.
 - 9. Wall charts and data such as valve diagrams, electrical panel board directories, and similar information.
- C. Labeling and identification of Record Documents
 - 1. Clearly label all record documents with name of Project and the words “Record Document”.
 - 2. Date progressive entries of information as appropriate.
 - 3. Date Record Documents with the final submission date.

1.4 SUBMITTAL QUANTITY REQUIREMENTS

- A. Furnish Architect with the following quantities of each submittal:
 - 1. Record Project Manual: 3 bound copies.
 - 2. Project record drawings (as-builts):
 - a. 2 sets of Drawings in Autocad™ version 2003 format. Verify release version and disc type with Owner prior to submittal.
 - b. 1 “blackline print” set of Drawings.
 - 3. Final Site Survey: 4 copies.
 - 4. Operation and maintenance data, preventive maintenance instructions: 3 bound copies.
 - 5. Product warranties and bonds: 2 copies
 - 6. Maintenance contracts: 2 copies
 - 7. Record of all test reports and inspections: 4 copies.

1.5 RECORD PROJECT MANUAL

- A. The Contractor is responsible to maintain a Project Manual reflecting revisions and changes to the Original Issue Project Manual.
 - 1. Clearly label the Record Project Manual as “Record Document Specifications, in a three ring binder.
 - 2. Do not use Record Project Manual for construction purposes; protect from loss in a secure location.
 - 3. Record all variations and deviations to the Contract Documents, including changes made by Addenda, Bulletin, Change Order, Change Directive and other modifications to the Contract.
 - a. Cut and paste revisions into their applicable specification section.
 - b. Identify all changes with cross-reference to appropriate Addendum Number, Modification Number, Change Order Number etc.
 - 4. In each individual Specification Section, under “Part 2 – Products”, identify all manufacturers and products which are actually used as part of the Work.
 - 5. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
- B. Record Project Manual: Provide prior to request for Final Acceptance.
 - 1. Manuals shall be in 8-1/2 by 11 inch pages and bound in 3-ring (D-shape) binders with durable plastic covers. Internally subdivide the binder contents by Division with permanent page dividers.
 - 2. Label front cover and spine of each binder with laser printed titles, dates, and project information.
 - 3. All information from “in-progress” manual shall be clearly and completely transferred.
 - 4. Pages shall be undamaged.

1.6 PROJECT AS-BUILT DRAWINGS

- A. The General Contractor is responsible to maintain a clean, undamaged set of blue or black line whiteprints of Contract Drawings and shop drawings for preparing the AS-BUILT drawings.
 - 1. Where shop drawings are used, record a cross-reference at the corresponding location on the Contract Documents.
- B. Do not use AS-BUILT Documents for construction purposes; protect from loss in a secure location. Mark-up these drawings to show clearly and completely the actual installation reflecting all changes made in the Work during construction.
 - 1. Mark whichever drawing is most capable of showing conditions accurately.
 - 2. Record all variations and deviations to the Contract Documents, including changes made to schedules, details, and all architectural changes to structure, exterior enclosure, interior partitions and ceilings.

3. Record new information that is important to the Owner, but was not shown on the Contract Drawings or shop drawings.
 4. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
- C. The fire protection, plumbing, mechanical and electrical trades shall be responsible to the Contractor to keep the record documents for their portions of the work marked currently to record all changes in the mechanical and electrical work made during construction.
- D. The Architect may periodically inspect these record drawings, and their proper maintenance may be a condition precedent to approval of applications for periodic payments.
- E. Deliver all Project Record Documents, shop drawings, product data, and samples to the Architect for the Owner's use, upon completion of the Work and prior to request for Final Acceptance of the Work.
- F. In addition, at the completion of the work, the General Contractor is responsible for the preparation and submittal of neat, clean well drafted, and complete AS-BUILT drawings, at no additional costs to the Owner. These reproducible Project AS-BUILT Documents shall be transmitted to the Architect as a condition precedent to final payment, and include documents prepared by the fire protection, plumbing, mechanical and electrical trades.

1.7 OPERATION AND MAINTENANCE MANUALS

- A. Prepare data in the form of an instructional manual. Furnish manuals which contain all of the following groups of equipment:
1. Fire protection system.
 2. Utilities and plumbing systems.
 3. Heating, ventilation and air conditioning system.
 4. Electrical systems.
- B. Furnish bound and properly identified Manuals prior to request for Final Acceptance.
1. Manuals shall be in 8-1/2 by 11 inch pages and bound in three "D ring" capacity binders with durable plastic covers. Internally subdivide the binder contents with permanent page dividers.
 - a. Arrange content by section number and systems, process flow, under section numbers and sequence as listed in the Table of Contents of this Project Manual.
 - b. Drawings: Preferable 11 inches in height bound in with text with reinforced punched binder tab. Fold drawings larger than 8-1/2 by 11 inches to size of text pages. Provide a drawing pocket for Drawings larger than 11 by 17 inches; locate pocket inside rear cover or bound in with text.
 2. Each manual shall include the same following minimum information:
 - a. Table of Contents.
 - b. Directory of Contractor, subcontractors, and major equipment supplies listing addresses, phone numbers and appropriate emergency phone numbers.
 - 1) Include local sources of supplies and replacement parts.
 - c. Directory of Architect and consultants listing addresses and phone numbers.
 - d. Operation and maintenance instructions. Provide schematic diagrams of control systems, circuit directories for each electric panel and charts showing the tagging of all valves.
 - e. Air and water test and balancing reports.
 - f. Maintenance and cleaning instructions for finishes.
 - g. Product and manufacturer's Certificates.
 - h. Photocopies of all extended warranties and bonds.
 3. Submit one copy of completed volume in final form 21 days prior to Final Inspection. This copy will be returned after final inspection with Architect's comments; Revise and submit all volumes to Owner.

- C. For each item of equipment, include description of equipment, component parts and accessories. Identify function, normal operating characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts. Additionally provide the following for each item:
1. Panelboard circuit directories: Provide electrical service characteristics, controls and communications.
 2. Include color coded wiring diagrams as installed.
 3. Operating procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.
 4. Maintenance requirements: Include routine procedures and guide for trouble-shooting; disassembly, repair, and re-assembly instructions; alignment, adjusting, balancing, and checking instructions.
 - a. Maintenance drawings: Supplement product data to illustrate relation of component parts of equipment and systems, to show control and flow diagrams. Do not use project Record Documents as maintenance drawings.
 5. Provide servicing and lubrication schedule, and list of lubricants required.
 6. Include manufacturer's printed operation and maintenance instructions.
 7. Include sequence of operation by controls manufacturer.
 8. Provide control diagrams by controls manufacturer as installed.
 9. Provide Contractor's coordination drawings, with color coded piping diagrams as installed.
 10. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
 11. Provide original manufacturer's parts (OEM) list, illustrations assembly drawings, and diagrams required for maintenance.
 - a. Provide list of original manufacturer's spare parts (OEM), current prices, and recommended quantities to be maintained in storage.
 - b. Include local source of supplies and replacement parts, and any other data pertinent for procurement procedures.
 12. Additional requirements: As specified in individual specification Sections.
- D. Standards:
1. Measurements: Provide all measurements in U.S. standard units such as feet and inches, pounds, and cfm; provide additional measurements in the "International System of Units" (SI).
 2. Abbreviations: Provide complete nomenclature of all parts of all equipment; include part numbers of all replaceable parts.

1.8 PRODUCT WARRANTIES AND BONDS

- A. Categories of Specific Warranties: Warranties on the work are in several categories, including those of General Conditions, and including (but not necessarily limited to) the following specific categories related to individual units of work specified in sections of Divisions 2 through 32 of these Specifications:
1. Special Project Warranty (Guaranty): A warranty specifically written and signed by contractor for a defined portion of the work; and, where required, countersigned by subcontractor, installer, manufacturer or other entity engaged by Contractor.
 2. Specified Product Warranty: A warranty which is required by Contract Documents, to be provided for a manufactured product incorporated into the work; regardless of whether manufacturer has published a similar warranty without regard for specific incorporation of product into the work, or has written and executed a special project warranty as a direct result of Contract Document requirements.
 3. Coincidental Product Warranty: A warranty not specifically required by Contract Documents (other than as specified in this Section), but which is available on a product incorporated into the work, by virtue of the fact that manufacturer or product has

published warranty in connection with purchases and use of product without regard for specific applications except as otherwise limited by terms of warranty.

- B. Refer to individual section of Divisions 2 through 28 for the determination of units of work which are required to be specifically or individually warranted, and for the specific requirements and terms of those warranties (or guarantees).
- C. General Limitations: It is recognized that specific warranties are intended primarily to protect Owner against failure of the work to perform as required, and against deficient, defective, and faulty materials and workmanship, regardless of sources. Except as otherwise indicated, specific warranties do not cover failures in the work which result from: 1) Unusual and abnormal phenomena of the elements, 2) The Owner's misuse, maltreatment or improper maintenance of the work, 3) Vandalism after time of substantial completion, or 4) Insurrection or acts of aggression, including war.
 - 1. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products, nor does it relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.
- D. Related Damages and Losses: In connection with Contractor's correction of warranted work which has failed, remove and replace other work of project which has been damaged as a result of such failure, or must be removed and replaced to provide access for correction of warranted work.
 - 1. Consequential Damages: Except as otherwise indicated or required by governing regulations, special project warranties and product warranties are not extended to cover damage to building contents (other than work of Contract) which occurs as a result of failure of warranted work.
- E. Reinstatement of Warranty Period: Except as otherwise indicated, when work covered by a special project warranty or product warranty has failed and has been corrected by replacement or restoration, reinstate warranty by written endorsement for the following time period, starting on date of acceptance of replaced or restored work.
 - 1. A period of time ending upon date original warranty would have expired if there had been no failure, but not less than half of original warranty period of time.
- F. Replacement Cost, Obligations: Except as otherwise indicated, costs of replacing or restoring failing warranted units or products is Contractor's obligation, without regard for whether Owner has already benefited from use through a portion of anticipated useful service lives.
- G. Rejection of Warranties: Owner reserves the right, at time of substantial completion or thereafter, to reject coincidental product warranties submitted by Contractor, which in opinion of Owner tend to detract from or confuse interpretation of requirements of Contract Documents.
- H. Contractor's Procurement Obligations: Do not purchase, subcontract for, or allow others to purchase or sub-subcontract for material or units of work for project where a special project warranty, certification or similar commitment is required, until it has been determined that entities required to countersign such commitments are willing to do so.
- I. Specific Warranty Forms: Where a special project warranty (guaranty) or specified product warranty is required, prepare a written document to contain terms and appropriate identification, ready for execution by required parties. Submit draft to Owner (through Architect) for approval prior to final executions.

1.9 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual specification Sections.

- B. Deliver materials to on-site location designated by the Owner; obtain receipt.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION