

SECTION 01 78 21 CLOSEOUT SUBMITTALS

PART 1 - GENERAL

1.01 DATA BINDERS

- A.** Provide one complete set and two CD's in portable document file (.pdf) format. Provide commercial quality three ring binders with durable plastic covers. Identify project and type of data on face and side of binder. If multiple binders are required, identify as consecutively numbered volumes, identifying original documents as set number one. Provide information required by Contract Documents organized as outlined below. Include related documents under the heading to which each is most closely related.
- B.** Provide introductory information
 - 1.** Cover sheet giving complete project title and number, Contractor's name, address, phone number, name of project superintendent, and related general information.
 - 2.** Table of Contents to generally identify material in Binders. Reference and bind separately any over-size documents that cannot be neatly folded and included in this binder.

1.02 OPERATING & MAINTENANCE DATA BINDERS

- A.** Provide Product Data as outlined below:
 - 1.** Detailed Table of Contents for this part,
 - 2.** For each system or product: names, addresses, and telephone numbers of supplier, installer, and maintenance service company; drawing and specification reference; building location; manufacturer and model number,
 - 3.** Description of unit and component parts, clearly identifying the specific product or part installed. When manufacturer's cut sheets are used for product identification, plainly mark specific items included in Work, and
 - 4.** Related information required by Contract Documents, or furnished with items included in Project, that Owner may use for maintenance, operation, repair, renovation, or additions to Work.
- B.** Provide Operating and Maintenance Data as outlined below for mechanical and electrical systems, equipment, and products
 - 1.** Detailed Table of Contents for this part.
 - 2.** Manufacturer's printed operating and maintenance instructions supplemented with drawings and text to clearly illustrate proper operation and a logical sequence of maintenance procedures. These shall be the written manufacturer's data with the model and features of this installation clearly marked and edited to omit reference to products or data not applicable to this installation. This section shall include data on the following:
 - a.** Installation, startup and break-in instructions;
 - b.** All starting, normal shutdown, emergency shutdown, manual operation, seasonal changeover and normal operating procedures and data, including any special limitations;
 - c.** Operating and maintenance and installation instructions that were shipped with the unit;
 - d.** Preventative maintenance and service procedures and schedules;
 - e.** Troubleshooting procedures;
 - f.** Parts list, illustrations, assembly drawings and diagrams, edited to omit reference

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- to items that do not apply to this installation;
 - g.** List of any special tools required to service or maintain the equipment;
 - h.** Performance data, ratings and curves;
 - i.** Warranty, which clearly lists conditions to be maintained to keep warranty in effect and conditions that would affect the validity of the warranty; and,
 - j.** Any service contracts issued.
- 3.** As-installed control diagrams by controls manufacturer.
 - 4.** Installers' coordination drawings with as-installed color-coded piping diagrams and wiring diagrams.
 - 5.** Charts of valve tag numbers with the location and function of each valve.
 - 6.** Circuit directories of panel boards.
 - 7.** Instructions for care, with a list of manufacturer's recommended types of cleaning agents and methods.
 - 8.** List of materials and parts furnished for the Owner's use.
- C.** Supplemental Data. Provide written text and/or special drawings to provide necessary information, where manufacturer's standard printed data is not available and information is necessary for a proper understanding and operation and maintenance of equipment or systems, or where it is necessary to provide additional information to supplement data included in the manual or project documents.
- D.** Condensed Preventive Maintenance Instructions. Provide condensed typewritten excerpts from the manufacturers written instructions for weekly, monthly, quarterly, annual, etc. maintenance. The HVAC mechanical contractor shall prepare this summary with help from the equipment supplier.
- E.** Condensed Operating Instructions. Provide condensed instructions for start-up, shutdown, emergency operation, safety precautions, unusual features and troubleshooting suggestions. In addition, a copy of these instructions shall be clearly laminated and secured adjacent to the equipment where it can be easily read by operating personnel. These instructions shall be provided for boilers, furnaces, chillers, pumps, heat rejection equipment, large air handling units (greater than 10 tons), heat pump systems, control system, air compressors and dryers.
- F.** Controls and Test and Balance (TAB) O&M Data. Include control drawings for equipment and its components, including the sequence of operation. The Controls Contractor and TAB Contractor shall provide this data.
- G.** Commissioning Record and Testing Data. Provide data dedicated to documenting the commissioning process that includes all certifications and testing data.

1.03 PROJECT DATA BINDERS

- A.** Provide required forms completed for supplying data on building systems or assemblies.
- B.** Provide a complete listing of subcontractors and material suppliers, including dollar amount, company name, address, phone number, local representative, and information regarding diversity-owned business status. This information shall be submitted to Designer on the form exhibited as Section 01 78 88.
- C.** Provide certificates and acceptance information, including all closeout or termination documentation
 - 1.** Detailed Table of Contents for this part.
 - 2.** Certificate of Substantial Completion.
 - 3.** Use and Occupancy Permits.

4. Required TDEC Permits.
 5. Certificate(s) of Inspection or letter(s) of acceptance from:
 - a. Fire Marshal,
 - b. Department of Labor for boilers, pressure vessels, or elevators,
 - c. Public Health Authorities, and
 - d. other governing authorities as apply.
- D.** Guarantees, Warranties, Bonds, Certifications, and related documents
1. Detailed Table of Contents for this part.
 2. Contractor's warranty of the work.
 3. Guarantees, warranties, and bonds, executed by the respective vendors, manufacturers, suppliers and subcontractors.
 4. Certifications, including, but not limited, Section 00 65 01, Non-Use of Asbestos Containing Materials Affidavit-Contractor.
 5. Maintenance Agreements and service contracts.
 6. Complete information for each item:
 - a. Product or work item, and scope of installation;
 - b. Name of provider, with name of responsible principal, address and telephone number;
 - c. Beginning date and duration; and,
 - d. Information about instances which might affect validity, and proper procedure in case of failure

1.04 CONSTRUCTION AS-BUILT DOCUMENTS

The record copy of Contract Documents and approved submittals required by paragraph 3.11 of the Conditions shall be kept in good condition for submittal to Designer upon completion of construction activity. In the course of the Work, Contractor shall legibly mark these documents to record actual conditions of Work, including: location, depth, and identification of new and existing underground items, location by dimension and identification of utilities, valves, tap points, equipment, service access, test points, and related features, field changes in dimensions and detail, changes by addenda, change orders, and construction change directives, description and details of features for maintenance, service, replacement, or expansion of the Work.

END OF SECTION