

SECTION 01 78 44

SPARE PARTS AND MAINTENANCE MATERIALS

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Spare parts.
- B. Maintenance materials.
- C. Keys, special tools, and test equipment.

1.02 RELATED SECTIONS

- A. Coordinate the work of this Section with the work specified in Section 01 78 23 - Operation and Maintenance Data, for lists of spare parts.
- B. Include operation and maintenance of special tools and test equipment in Operation and Maintenance Manuals specified in Section 01 78 23, Operation and Maintenance Data.
- C. Keys for finish hardware are specified in Contract Specifications Section 08 71 00 - Door Hardware.

1.03 MEASUREMENT AND PAYMENT

- A. Separate measurement or payment will not be made for work required under this Section. All costs in connection with the work specified herein will be considered to be included with the related item of work in the Bid Schedule of the Bid Form, or incidental to the Work.

1.02 SUBMITTALS

- A. General: Refer to Section 01 33 00, Submittal Procedures, for submittal requirements and procedures.
- B. Spare Parts Lists:
 - 1. Prepare and submit a complete list of recommended spare parts for all equipment, appliances, and systems as specified in the various individual Sections of the Contract Specifications, as applicable.
 - 2. The Spare Parts List shall include all spare parts as required to provide for the maintenance and repairs of all Contractor-furnished equipment and appliances for a period of two years after the date of the Acceptance of the Work.
 - 3. The Spare Parts List shall be organized in accordance with the Contract Specifications, by Section number and title.
 - a. The Spare Parts List shall include the part's generic name or description, its trade name, Contractor's part number, manufacturer's name, manufacturer's part number, retail price, quantity, and correlation with the pertinent Contract Specifications,

Contract Drawings, and Maintenance Manuals specified in Section 01 78 23, Operation and Maintenance Data.

- b. Spare parts shall be grouped by equipment category. Replacement parts common to more than one category shall be cross-referenced and indexed. Such common parts shall have only one part number.

C. Maintenance Materials List:

1. Prepare and submit a complete list of maintenance materials as specified in the various individual Sections of the Contract Specifications.
2. The Maintenance Materials List shall be organized in accordance with the Contract Specifications, by Section number and title. Include the quantities to be furnished.
3. Where maintenance materials are specified as a percentage of the materials installed, such percentages shall be translated to actual quantities of materials in the Maintenance Materials List.

D. Keys, Special Tools, and Test Equipment List:

1. Prepare and submit a complete list of the keys, special tools, and test equipment as specified in the various individual Sections of the Contract Specifications.
2. The Keys, Special Tools, and Test Equipment List shall be organized in accordance with the Contract Specifications, by Section number and title.

1.03 SPARE PARTS

A. Requirements:

1. Provide specific spare parts as specified in the individual Sections of the Contract Specifications.
2. Spare parts shall be identical to the parts installed in the Work.

B. Quantities: Provide quantities based on reliability requirements, replacement lead time, the Contractor's recommendations, and the following requirements:

1. Wear: Provide spare parts for components which may be expected to require regular replacement under normal maintenance schedules, such as mechanical parts subject to continuous operation.
2. Consumability: Provide spare parts for components with a life-expectancy of less than 5 years.
3. One-Time Limited Service: Provide spare parts which normally require replacement after performing their function one time, such as fuses.

4. Long Lead Time: Provide spare parts for components which are not readily available from distributors, such as for custom-fabricated components.
5. Exchange Assemblies: Provide assemblies which will be exchanged with malfunctioning units for installed equipment, and which must be inventoried as complete assemblies.

1.04 MAINTENANCE MATERIALS

A. Requirements:

1. Provide maintenance materials as specified in the individual Sections of the Contract Specifications.
2. Maintenance materials shall be identical to the materials installed in the Work.

B. Quantities: Provide quantities of materials as specified in the individual Sections of the Contract Specifications.

1.05 KEYS, SPECIAL TOOLS, AND TEST EQUIPMENT

A. Requirements: Provide sufficient keys, special tools and wrenches, and special test equipment and gages as required to access, start, maintain, and repair all the installed equipment, appliances, systems, and assemblies.

B. Quantities: Provide quantities of keys, special tools, and test equipment as specified in the individual Sections of the Contract Specifications.

1.06 BAR CODE

A. All spare parts with the manufacturer's or supplier's serial number or other identification shall also be identified with bar codes, coded in accordance with the District's Bar Coding System (AIAG Auto Industry Code 39) or equivalent. The System details will be provided by the Engineer.

1.07 PACKAGING

- A. Comply with applicable requirements of Section 01 60 00, Product Requirements. All spare parts, maintenance materials, keys, special tools, and test equipment shall be securely packaged in boxes, with the boxes clearly labeled as to the contents. Such labeling shall include: location and description of the equipment and the item, complete listing of all items in the box, and the quantity of each item included in the box.

1.08 DELIVERY

- A. Deliver spare parts, maintenance materials, keys, special tools, and test equipment to the warehouse location or locations specified in the Contract Specifications. Provide unloading service at the designated storage location for all delivered products.

- B. Prepare formal receipts for all such delivered products, and have them signed by the authorized District Representative at the location. A copy of all such receipts shall be submitted to the Engineer for information and record.

1.09 STORAGE

- A. Spare parts, maintenance materials, keys, special tools, and test equipment may be stored temporarily at the site of the work in suitable storage facilities until time to deliver these products to the locations designated in the Contract Specifications. Any such storage shall comply with the requirements specified in Section 01 60 00, Product Requirements.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

END OF SECTION 01 78 27