

SECTION 14 92 00 - PNEUMATIC TUBE SYSTEMS

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. Extent of Pneumatic Tube System is indicated on drawings.

1.2 QUALITY ASSURANCE

- A. Material and equipment to be provided shall be products of manufacturers regularly engaged in the manufacture of the product and shall essentially duplicate material and equipment that have been in satisfactory use at least 5 years.
- B. Coordination: Pneumatic tube system tubing, stations, monitors, exhausters, and related equipment to be coordinated with Architectural, Mechanical, Electrical, and Fire Protection Drawings.
- C. Related Work: Power to pneumatic tube system furnished and installed under Electrical Work of Division 16.
- D. No deviation to the pneumatic system described shall be allowed unless authorized in writing a minimum of 15 days prior to bid date.
- E. The installation shall be made by the Manufacturer or his directly supervised authorized representatives.
- F. The total responsibility for materials, installation, warranty, and instruction on operation and maintenance shall be directly with the Pneumatic Tube System Installer.

1.3 SUBMITTALS

- A. Product Data: Submit product data for each type of product included in this section. For Pneumatic Tube Stations, include roughing-in dimensions and details showing mounting methods, relationships of box and trim to surrounding construction, and cabinet type and materials.
- B. Samples: Submit for verification purposes, samples of each required finish. Prepare samples on metal of same gage as used for actual production run.
 - 1. For initial selection of colors and finishes, submit manufacturer's color cards showing full range of standard colors available.
- C. Shop Drawings: Drawings showing the routing of all tubes; the locations of all stations; the space required for all tubing, switches, valves, and selection equipment between stations; the location, capacity, horsepower, and space requirements of all exhausters and the description and space requirements of the

automatic exchange device, shall be submitted for approval. Provide 3 sets of blue line prints and 1 set of reproducible sepias for review.

1.4 PRODUCT HANDLING

- A. Deliver Pneumatic Tube System Equipment only after wet operations in building are completed.
- B. Protect finished surfaces from soiling and damage during handling and installation. Keep covered with polyethylene film or other protective covering.

1.5 JOB CONDITIONS

- A. Verification of Dimensions: The installer shall be responsible for the coordination and proper relation of his work to the building structure and to the work of other trades. The Installer shall visit the premises and familiarize himself with details of the work and working conditions to verify dimensions in the field and to advise the Contractor of any discrepancy before performing any work.

1.6 CATALOG STANDARDS

- A. Manufacturer's catalog numbers may be shown on drawings for convenience in identifying certain Pneumatic Tube Equipment. Unless modified by notation on drawings or otherwise specified, catalog description for indicated number constitutes requirements for such equipment.
- B. The use of catalog numbers, and specified requirements; set forth in drawings and specifications, are not intended to preclude the use of any other acceptable manufacturer's product or procedures which may be equivalent, but are given for purpose of establishing standard of design and quality for materials, construction, and workmanship.

1.7 WARRANTY

- A. Material and workmanship shall be warranted by the Manufacturer to be free from defects, if properly operated and maintained, for a period of one year from the date the system is put into use or from the date of system acceptance, whichever is first. Any material proven defective shall be repaired or replaced at no charge. Normal wear on carriers is not under warranty.
- B. The Owner shall be responsible for providing preventive maintenance for the Pneumatic Tube System from the date the warranty period commences.
- C. Maintenance Service: Provide full maintenance service by skilled, competent employees of the Pneumatic Tube System Installer for period of 3 months following date of substantial completion. Include monthly preventative maintenance, performed during normal working hours. Include repair/replacement of worn or

defective parts of components and lubrication, cleaning, and adjusting as required for proper elevator operation in conformance with specified requirements. Include 24 hour/day, 7 days/week emergency call-back service. Exclude only repair/replacement due to misuse, abuse, accidents, or neglect caused by persons other than Installer's personnel.

- D. Continuing Maintenance: Installer shall provide a continuing maintenance proposal to Owner, in the form of a standard yearly (or other period) maintenance agreement, starting on date construction contract maintenance requirements are concluded. State services, obligations, conditions, and terms for agreement period, and for renewal options.

1.8 CODES

- A. All Pneumatic Tube System equipment and installation work performed as a part of this specification shall conform to the latest edition of all applicable state and local codes and regulations.

1.9 OPERATION AND MAINTENANCE MANUALS

- A. Upon completion of the installation, the Pneumatic Tube System Manufacturer shall provide a Service Manual. This manual shall be compiled of product data and related information appropriate for the Owner's maintenance, operation, and repair of equipment furnished as part of this specification, and shall include a cataloged list of spare parts.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Manufacturer: Subject to compliance with requirements, provide the following:
1. Swisslog; TransLogic Recessed Station
 - a. 4 inch Tube System
 - b. IQ Control Panel
 - c. Standard Dispatcher

2.2 DESCRIPTION

- A. New station shall tie into existing system for fully functional, integrated operation.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Approval of Materials and Equipment: As soon as practicable, and before starting installation of materials or equipment, the Contractor shall submit for approval a complete list of materials and equipment to be incorporated in the work. This shall include catalog numbers, shop drawings, cuts, tube-fabrication drawings, and other descriptive data required to ensure compliance with the specification requirements. A complete electrical connection diagram for each electrically controlled component having more than one automatic or manual control device shall be submitted for approval. Approval of the proposed materials and equipment based on manufacturer's published data will be tentative only. Final approval will be based on compliance of the materials and equipment with the Contract documents.
- B. Workmanship: Materials and equipment shall be installed in accordance with the recommendations of the manufacturer and as approved. Installation shall be accomplished by workmen skilled in this type of work.
- C. Welding: Welding shall be in accordance with ANSI/AWS D1.1.
- D. Installation of tubing shall be as indicated. Joints shall be made airtight by methods recommended by the manufacturer and as approved. Lines shall be installed straight, level, and plumb, shall be securely in place, and shall be braced against any motion caused by the passage of carriers. Tubing passing through openings in Fire Rated Wall of floor assemblies shall be sealed to comply with applicable Fire Code requirements.
- E. Testing: After the pneumatic tube system installation is completed, the Contractor shall conduct an operating test for approval. The equipment shall be demonstrated to operate in accordance with the specifications. Each run of tubing shall be tested by the passage of five fully loaded carriers dispatched at 10-second intervals. Fully loaded carriers shall be dispatched simultaneously from the central station in each dispatch tube followed at 10-second intervals by additional carriers, in the same tubes, until five carriers have been dispatched in each tube. The elapsed time for delivery shall be measured, and the average velocity computed. Washers and skirts or rubbing bands of carriers shall be examined for scratches. Scratches are an indication of faulty tube installation which shall be corrected before acceptance of the Architect and Owner's Representative. The Contractor shall furnish instruments and personnel required for the tests; the Owner will furnish electrical power.
- F. Operation and Maintenance Instructions: Complete operation and maintenance instructions for each piece of equipment shall be bound in book form and submitted. Approved diagrams of the entire tubing system shall be framed under glass and posted at locations designated. Upon completion, a competent engineer shall be provided by the Contractor for a period of not less than 3 days to instruct in the operation and maintenance of the system.
- G. Operating and Instruction Manual:

1. Furnish 3 sets, bound and indexed, including:
 - a. Component and part descriptions.
 - b. Starting and stopping procedures.
 - c. General operating instructions.
 - d. Specific maintenance and troubleshooting instructions.
 - e. Recommended service schedule for adjustment, lubrication and inspection.
 - f. Recommended spare parts inventory.
 - g. As-built drawings.

 - H. Training:
 1. Provide operator training to all personnel who will use the system.
 2. Provide maintenance training to all personnel who will service the system:
 - a. On-site by start up technician.

 - 3.2 ADJUST AND CLEAN
 - A. Moving Parts: Carefully check and adjust moving parts to insure smooth, near-silent, and accurate operation. Ensure that moving parts work freely and fit neatly.

 - B. Clean exposed and semi-exposed surfaces. Touch-up shop applied finishes to restore damaged or soiled areas.
 1. Damaged Work: Repair equal to new undamaged work, or replace with new units, as acceptable to Architect.
- END OF SECTION