

SECTION 11 86 01 – OVERBRIDGE DEVICE

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. This Section of the Specifications covers the furnishing and installing of tubular frame high profile overbridge type raceway assemblies to facilitate the routing of 400 Hz, 60 Hz and/or control/communications services from the terminal to the point of use, which of necessity, traverse Passenger Loading Bridges (PLB's).
- B. Tubular frame high profile overbridge type raceway assembly mounted to Passenger Loading Bridges (PLB's).
 - 1. Devices may be referred to as "doglegs" or "pantagraphs".

1.2 RELATED SECTIONS

- A. Drawings, General Provisions of the Contract, including General and Special Conditions, as well as General electrical materials and methods of installation apply to work of this section.

1.3 REFERENCES

- A. NFPA 70 - National Electrical Code
- B. NFPA 70E - Standard for Electrical Safety in the Workplace
- C. DFW Design Criteria Manual

1.4 SUBMITTALS

- A. Product Data for required units based on specific Passenger Loading Bridge conditions.
- B. Installation, fastening details.
- C. Detailed assembly drawings including weights and structural data.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of documented experience.

1.6 DELIVERY, STORAGE, AND PROTECTION

- A. Provide units which do not require disassembly and reassembly because of movement into the final location and follow manufacturer's written instructions.

- B. Deliver equipment as a factory-assembled device with protective crating and covering.
- C. Store equipment and material in suitable facilities until delivery, installation, and acceptance by the Owner.
- D. Coordinate the delivery acceptance of this equipment at the job site. Receive, offload, store and protect this equipment until such time as it has been installed and accepted by the Owner.
- E. Properly dispose of all waste, including, but not limited to, packaging, crates, etcetera.

1.7 ENVIRONMENTAL REQUIREMENTS

- A. Maintain full motion of passenger loading bridge during and after installation of overbridge device.

1.8 WARRANTY

- A. Warranty shall commence on the Substantial Completion date, per Division 01 Specification Section 01 77 00.01 – Closeout Procedure- System Acceptance.

PART 2 - PRODUCTS

2.1 DESCRIPTION

- A. Overbridge device assembly shall be designed so that it connects and utilizes the side of either a two or three tunnel apron drive Passenger Loading Bridge as its sole means of attachment.
- B. It shall be supplied as a prefabricated structure consisting of a system of hinged joints interconnected by aluminum tubular mast assemblies that permit it to extend and retract synchronously with the Passenger Loading Bridge and at the same time contain and protect the flexible power cable(s) along with auxiliary and control cables as called for elsewhere in the documents.
- C. The overbridge device assemblies to the bridge, supports, and structure shall be mechanically designed to withstand the same dynamic operational requirements as the Passenger Loading Bridge, i.e., withstand wind loads of up to 110 MPH/ASCE 7-88 Exposure C, Factor 1.1, without impeding or restricting bridge motion and speed of operation in ambient temperatures from -20 to +122 degrees Fahrenheit.
- D. Provide and install standoff tubing devices as necessary if additional space is needed.
- E. All tubes shall have adequate anti-chaff provisions included to prevent unnecessary chaffing of cables.

2.2 SCOPE OF WORK

- A. As part of the construction, furnish and install Overbridge device assemblies as required to provide the means by which power, control and signaling wiring is extended from junction boxes mounted on the exterior of the Terminal/Gate position and the various units mounted along the length of the Passenger Loading Bridge subject to extension and retraction.

2.3 MANUFACTURERS

- A. JBT AeroTech
- B. Ameribridge
- C. Substitutions: as approved by engineer

2.4 MATERIALS

- A. Tubes: Aluminum.
- B. Brackets: Steel.

2.5 FACTORY FINISHING

- A. The overbridge device assembly shall be factory primed and finished with industrial grade enamel, electrostatically applied, and shall match finish of passenger loading bridge.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. The location of the welded overbridge device assemblies' attachments on the bridge tunnels and the degree of corrosion protection of the welded attachment points on the side of the bridge shall be coordinated with the Passenger Loading Bridge manufacturer, other equipment items and existing conditions.

3.2 STARTING EQUIPMENT

- A. Demonstrate proper operation of equipment to Owner 's designated representative.

3.3 ADJUSTING

- A. Adjust overbridge device for smooth operation with full motion of passenger loading bridge.

END OF SECTION 11 86 01