

THE BUFFALO AND FORT ERIE PUBLIC BRIDGE  
AUTHORITY

**ADDENDUM NO. 2**

To the

SPECIFICATIONS AND BID DOCUMENTS

*TO FURNISH LABOR, MATERIALS AND  
EQUIPMENT FOR THE*



CROSSING PATHS  BUILDING FUTURES  
THE PEACE BRIDGE

**R.F. WILLSON BUILDING MECHANICAL AND  
ELECTRICAL UPGRADE PROJECT**

April, 2019

**Addendum Issued: 5/15/2019**

**ADDENDUM NO. 2**

**ITEM 1 – REFERENCE PROJECT MANUAL, TABLE OF CONTENTS**

Delete: In the Supplemental Specifications (Part II - Section 2) of the Bid Documents, Table of Contents, Division 26 – Electrical, delete Section 262923 Variable Frequency Motor Controllers from the index. This section is not part of the Project Manual. See attachment – Addendum No.2 Table of Contents.

Add: In the Supplemental Specifications (Part II - Section 2) of the Bid Documents, Table of Contents, Division 26 – Electrical, add Section 263600 Transfer Switches in the index. This section is included in the Project Manual. See attachment – Addendum No.2 Table of Contents.

Delete: In the Supplemental Specifications (Part II - Section 2) of the Bid Documents, Table of Contents, Division 27 – Communications, delete all (5) sections shown in the index. They are not part of the Project Manual. See attachment – Addendum No.2 Table of Contents.

Add: In the Supplemental Specifications (Part II - Section 2) of the Bid Documents, add Section 280513 Conductors and Cables for Electronic Safety and Security as shown in the index. See attachments – Addendum No.2 Table of Contents and Addendum No.2 Section 280513 Conductors and Cables for Electronic Safety and Security.

END OF ADDENDUM NO. 2

JMR/TAN/RKD/AK:ak 05/15/2019

Attachments:

- Addendum No.2 – Table of Contents
- Addendum No.2 – Section 280513 Conductors and Cables for Electronic Safety and Security

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**ISSUED FOR TENDER**

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SECTION 280513 - CONDUCTORS AND CABLES FOR ELECTRONIC SAFETY AND SECURITY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
  - 1. Fire alarm wire and cable.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified layout technician, installation supervisor, and field inspector.
- B. Source quality-control reports.
- C. Field quality-control reports.

1.5 QUALITY ASSURANCE

- A. Testing Agency Qualifications: An NRTL.
  - 1. Testing Agency's Field Supervisor: Currently certified by BICSI as an RCDD to supervise on-site testing.

1.6 FIELD CONDITIONS

- A. Do not install conductors and cables that are wet, moisture damaged, or mold damaged.
  - 1. Indications that wire and cables are wet or moisture damaged include, but are not limited to, discoloration and sagging of factory packing materials.

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PART 2 - PRODUCTS

2.1 FIRE ALARM WIRE AND CABLE

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  - 1. Comtran Corporation.
  - 2. Draka Cableteq USA.
  - 3. Genesis Cable Products; Honeywell International, Inc.
  - 4. Rockbestos-Suprenant Cable Corp.
  - 5. West Penn Wire.
- B. General Wire and Cable Requirements: NRTL listed and labeled as complying with NFPA 70, Article 760.
- C. Signaling Line Circuits: Twisted, shielded pair, size as recommended by system manufacturer.
  - 1. Circuit Integrity Cable: Twisted shielded pair, NFPA 70, Article 760, Classification CI, for power-limited fire alarm signal service Type FPL. NRTL listed and labeled as complying with UL 1424 and UL 2196 for a 2-hour rating.
- D. Non-Power-Limited Circuits: Solid-copper conductors with 600-V rated, 75 deg C, color-coded insulation.
  - 1. Low-Voltage Circuits: No. 16 AWG, minimum.
  - 2. Line-Voltage Circuits: No. 12 AWG, minimum.
  - 3. Multiconductor Armored Cable: NFPA 70, Type MC, copper conductors, Type TFN/THHN conductor insulation, copper drain wire, copper armor with outer jacket with red identifier stripe, NRTL listed for fire alarm and cable tray installation, plenum rated, and complying with requirements in UL 2196 for a 2-hour rating.

2.2 SOURCE QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to evaluate cables.
- B. Cable will be considered defective if it does not pass tests and inspections.

PART 3 - EXECUTION

3.1 INSTALLATION OF HANGERS AND SUPPORTS

- A. Comply with requirements in Section 260529 "Hangers and Supports for Electrical Systems" for installation of supports for cables.

3.2 FIRE ALARM WIRING INSTALLATION

- A. Comply with NECA 1 and NFPA 72.
- B. Wiring Method:

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1. Install wiring in metal raceway according to Section 260533 "Raceways and Boxes for Electrical Systems."
  2. Minimum conduit size shall be 3/4 inch.
  3. Install plenum cable in environmental air spaces, including plenum ceilings.
  4. Cables and raceways used for fire alarm circuits, and equipment control wiring associated with the fire alarm system, may not contain any other wire or cable.
  5. Fire-Rated Cables: Use of 2-hour, fire-rated fire alarm cables, NFPA 70, Types MI and CI, is not permitted.
  6. Signaling Line Circuits: Power-limited fire alarm cables shall not be installed in the same cable or raceway as signaling line circuits.
- C. Wiring within Enclosures:
1. Separate power-limited and non-power-limited conductors as recommended by manufacturer.
  2. Install conductors parallel with or at right angles to sides and back of the enclosure. Bundle, lace, and train conductors to terminal points with no excess.
  3. Connect conductors that are terminated, spliced, or interrupted in any enclosure associated with the fire alarm system to terminal blocks.
  4. Mark each terminal according to the system's wiring diagrams.
  5. Make all connections with approved crimp-on terminal spade lugs, pressure-type terminal blocks, or plug connectors.
- D. Cable Taps: Use numbered terminal strips in junction, pull, and outlet boxes, cabinets, or equipment enclosures where circuit connections are made.
- E. Color-Coding: Color-code fire alarm conductors differently from the normal building power wiring. Use one color-code for alarm circuit wiring and another for supervisory circuits. Color-code audible alarm-indicating circuits differently from alarm-initiating circuits. Use different colors for visible alarm-indicating devices. Paint fire alarm system junction boxes and covers red.
- 3.3 FIRESTOPPING
- A. Comply with requirements in Section 078413 "Penetration Firestopping."
- 3.4 GROUNDING
- A. For low-voltage wiring and cabling, comply with requirements in Section 260526 "Grounding and Bonding for Electrical Systems."
- 3.5 IDENTIFICATION
- A. Identify system components, wiring, and cabling. Comply with requirements for identification specified in Section 260553 "Identification for Electrical Systems."
- 3.6 FIELD QUALITY CONTROL
- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.

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- B. End-to-end cabling will be considered defective if it does not pass tests and inspections.
- C. Prepare test and inspection reports.

END OF SECTION 280513