# GENERAL

## Summary

### Provide all services, labor, materials, tools, and equipment required for the complete and proper installation of outside plant cable (OSP) entrance protection and termination for copper cabling as called for in these specifications and related drawings.

## System Description

### If the local telephone company (telco) is installing the outside plant copper cable:

#### Coordinate the telco design and follow their standards for copper protection.

### If the low voltage contractor is installing the outside plant copper cable, then follow the details in this section.

#### All pairs of both ends of new copper cable shall be protected and shields shall be grounded at both ends.

#### Both primary and secondary protection shall be provided.

#### Primary protection shall, as a minimum performance requirement, conform to UL listing 497.

#### Secondary protection shall, as a minimum performance requirement, conform to UL listing 497A.

#### Protectors shall be solid-state technology. No air-gap or gas tube protectors are allowed.

#### Protectors shall be 300V nominal clamping voltage and with 350 mA sneak current protection.

#### All pairs of the OSP multi-pair copper cable entering a building shall be spliced or otherwise connected to a fusible-link cable at least two gauges finer than the entrance cable.

#### The fusible-link cable shall be at least 0.6 m (2 ft.) in length but then, after having met this minimum length requirement, kept as short as possible.

#### The fusible-link cable shall be connected to and be an integral part of a Building Entrance Terminal (BET) protection system.

## Submittals

### Product Data: Submit manufacturer’s product information for Building Entrance Terminal assembly

## Quality Assurance

### Comply with section 270000.

## Delivery, Storage, and Handling

### Comply with section 270000.

# PRODUCTS

## Manufacturers

### There is no preferred manufacturer.

## Materials and Fabrication

### BET technology to include fusible link.

### Protector technology: 5-Pin, 300V, 350 mA.

### Miscellaneous parts and material required to complete a successful installation of the BET technology, such as splice case and associated hardware

# EXECUTION

## Examination

### Comply with section 270000.

## Installation

### Copper outside plant cabling

#### Install a Building Entrance Terminal protector unit for every 100 pairs of OSP entrance cable or entrance tie cable as specified in the drawings.

#### Mount the protector units in columns of not more than three units, with the top surface of the upper-most unit 6 feet A.F.F. Use mounting hardware recommended by the manufacturer.

#### Bond all protectors in each BET together using 1/0 AWG (6 AWG allowed) ground wire, in daisy chain style. Connect a segment of ground wire from the top unit to the Telecommunication Grounding Buss Bar in the telecommunications room. Install 100 5-pin protector units for each protector terminal.

#### Splice entrance cable or entrance tie cable to 26 AWG protector terminal fuse cable pigtails. Secure the splice case vertically on the TR wall as shown on the contract drawings.

#### The Contractor shall bond the shield of each OSP cable to the Telecommunication Grounding Buss Bar (TGBB) provided at the entrance facilities using 1/0 AWG copper wire.

#### At the termination end of multi-pair OSP cables, the Contractor shall provide six feet of managed service slack.

#### Label Building Entrance Terminals according standards listed in section 270000.

### Test all terminated pairs of each copper backbone cable segment from the BET output field through the installed protector for the following:

#### Continuity to remote end

#### Shorts between any two or more conductors

#### Transposed pairs

#### Reversed pairs

#### Split pairs

#### Grounded conductor.

#### Shield continuity.

### Adjustments

#### Comply with section 270000.

END OF SECTION 271113