

## SECTION 27 13 23 – BACKBONE CABLING REQUIREMENTS

## PART 1 - GENERAL

## 1.1 DESCRIPTION

- A. Intra-building backbone cabling will consist of fiber optics and copper of either indoor or indoor/outdoor rating.
- B. Inter-building cabling will consist of fiber optics indoor/outdoor rated.
- C. All equipment, sleeves, bushings, fire-stop and accessories needed to make a complete and functional system are to be a part of the bid whether specifically stated in the specification, shown on plans or not.

## 1.2 QUALITY ASSURANCE

- A. All equipment shall be UL listed. All installations shall comply with the NEC.
- B. Refer Section 27 01 00 for additional requirements.
- C. Coordinate any work in this space with other trades that will be utilizing space in this area.
- D. System Installers
  - 1. Shall have no less than 3 years of documented work experience on projects of equivalent size and technical difficulty. If you are using a Subcontractor their installers must meet the requirements, this is a requirement of the installer not the bidder.
  - 2. “Experience” is defined as the completion of an operational system, with the system being successfully operated by the customer for its intended purpose for at least one year.
  - 3. Must have current certification, from the Manufacturer, on the system to be installed
- E. Comply with BISCI Customer-Owned Outside Plant recommendations.

## 1.3 SUBMITTALS AND PRODUCT DATA

- A. Include shop drawings depicting wiring and connection diagrams in addition to the requirements in other parts of this Specification.
- B. The drawing submitted need to show the amount of space, mounting design, and layout of the proposed system.
- C. Submit cut sheets on cable, splice cases, and all support pieces for the installation.

## PART 2 - PRODUCTS

### 2.1 MATERIAL

- A. Fiber Optic
  - 1. Strand count as indicated on plans.
  - 2. Cable grade as requested on plans.
  - 3. Cable design and jacket material based on location to be installed and codes applicable to the install location.
- B. Splice Case
  - 1. All exterior grade gel filled cabling will splice to interior grade cabling when entering the building per code requirements.

## PART 3 - EXECUTION

### 3.1 CABLES

- A. All Cables within the Equipment room shall be routed to avoid any electrical interference. Location of devices shown on plans are for reference only, they do not designate the layout of the space.
- B. Cables are to be run through D-Rings leaving room for growth.
- C. Cables will be supported and secured in a professional manner.
- D. Any Cable-run through, within, or terminating in the space will be labeled with a To-From indication.
- E. Fiber will have a 30' service loop at each end. Loop will be located to have as little impact of space as possible while still readily available if needed.
- G. A cable indication tag will be placed before termination easily visible indicating from location and fiber grade.
- H. Fiber optic cable will get a service loop at each vault along its path. The loop will be once around the vault and will be supported above water line in the vault. Each loop will be tagged with a cable identification tag indicating To-From locations, strand or pair count, and grade or cable i.e. 62.5/125 or category.
- I. The fiber will terminate in a Fiber Shelf at both ends by means requested on plans. The fiber end connector will be as requested on plans.

## PART 4 - DOCUMENTATION

### 4.1 LABELING

- A. All cables terminating within the Equipment Room are to be labeled at the termination point and within 6" of the end of the cable on the sheath.

- B. Labeling will be done with a P-Touch or some other means of mechanical printing device. Labeling that is used on the cables is to be the same as the labeling shown on the as-builts to be submitted at the end of the project.

END OF SECTION