

# Fiber Riser Cable Ordering Guide

Internal Use Only

## 1. Introduction

This job aid has been developed to supplement the core network installation documents to assist network and data center deployment teams in the procurement and installation of fiber riser cables.

This document is intended for installations where the fiber provider places the demarcation point near the deployed network equipment, but not inside the cage or cabinet. If the fiber provider is to terminate directly at the network equipment, the need for this document is not necessary.

Fiber cables rated with 'Riser' qualifications are to be strictly used when connecting end-points located on different floors of a building, utilizing elevator shafts, conduits, and other pathways. If 'Plenum' rated cables are available, they may substitute the use of the 'Riser' cable and can be extended to fiber raceways and other air spaces.

## 2. Scope

Fiber riser cables are required to connect core network devices at any given level of a building to the transport carrier demarcation point. The construction of new fiber risers shall follow the engineering documentation specified at each location and constructed in accordance to Core Engineering teams.

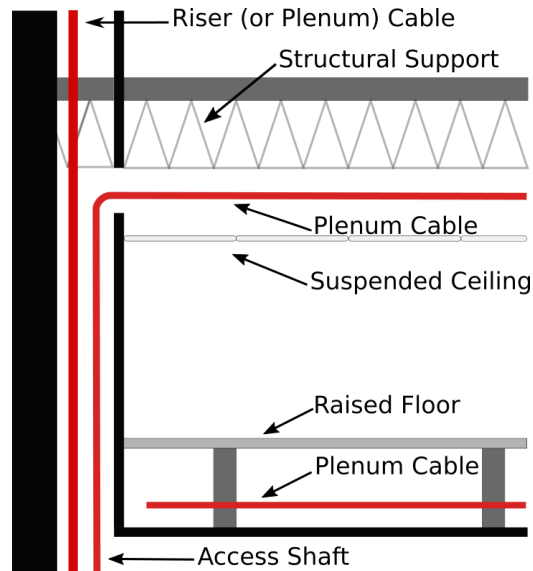
## 3. Re-Issue Version

This is the first version, 1.0

## 4. Reference Documents

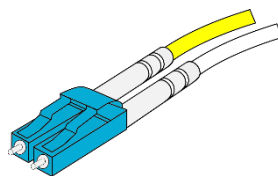
JA-TBD	Cable Labeling Procedures
JA-TBD	Installation Guidelines
JA-TBD	Data Center Deployment Guide

## 5. Procedures



### 5.1 Measure the Cable Distance

- A.** Measure the distance from the carrier demarc to the XYZ network cabinet.
- B.** If the cage or cabinet has not yet been constructed, use the available construction drawings to estimate the distance.
- C.** Add an additional 20 to 30 feet to the estimated distance to adjust for slack and service loop. (Convert the distance to meters if required.)
- D.** If dual paths are used, obtain measurements for both fiber risers.



### 5.2 Verify Cable Connector Type

- A.** The XYZ Telecommunications equipment utilize LC-type connectors.
- B.** Verify with the fiber carrier the type of connector used at the demarc point. The document may be known as the Fiber Distribution Plan (FDP). The demarc will typically have LC-type connectors and this is the preferred connection.

### 5.3 Fiber Cable Specifications

**A.** The following specifications can be used to obtain appropriate type of fiber:

1. Single Mode
2. 24 inch breakout/fan-out
3. Ultra-Physical Contact (UPC) Single-Mode LC type connectors
4. Plenum rated or armored sheathed
5. 24 strand fiber
6. 1310nm // OS1 9/125 // LSZH Specification

### 5.4 Cable Sourcing

**A.** Listed below are some common fiber cable providers. Installation sub-contractors and building owners may be able to supply the fiber cable, provided they are able to match cable specifications:

1. Anixter
2. Cable Wholesale
3. Wesco
4. Grainger
5. Graybar
6. Local vendors – Most local general contractors have contacts for sourcing fiber cables and other materials.

### 5.5 Qualified Fiber Installation Contractors

**A.** Only qualified fiber installation contractors are permitted to handle and install the requested riser cables. The contractors should be license and bonded per local laws and regulations. Fiber cables are susceptible to damage if mishandled.

**B.** Utilize the suggestions of local fiber carriers to source qualified fiber installation and fiber splicing contractors. If questions arise during the sourcing, quotation, or installation process, contact the project managers in charge of the installation project to escalate the questions and/or concerns.

**C.** When working with a contracting service, it is very important to not confuse the location of the demarc point of the delivered circuit(s).

### 5.6 Fiber Cable Installation

**A.** Once fiber riser requirements and installation resources have been identified, installation steps can proceed with the guidance of core engineering installation team.

**B.** If fiber riser cables with pre-terminated ends are to be used, be sure to protect the cable ends and sheath while pulling through the conduit/access shaft.

**C.** If fiber splicing is required at some point, only certified technicians are allowed to perform the task.

**D.** Once the fiber riser is installed, test each fiber strand for any breaks or bad connections. Tests should be conducted with a scope test and all results recorded. If any breaks or bad connections are found, attempt to locate the issue and fix. If unable to fix the bad fiber, assess the available fiber count if enough strands are installed to continue the project. If available fiber count does not reach project requirements, additional fiber riser cables will need to be installed. For any concerns, escalate to project managers.

## 5.6 Project Completion

**A.** Once the required fiber riser cables have been installed and tested, provide the completed documentation to project management and core network engineering teams for record and verification.

**B.** Schedule local loop tests with the fiber provider to verify demarc port assignments and verify light levels to ensure the fiber is free of errors and good light levels are detected.

**C.** Provide the results to the core network engineer team so they may continue with device deployment and configurations.

## 6. Approvals

<b>Date Created</b>	2/10/2020	
<b>Last Revised</b>	2/10/2020	
	<b>Name</b>	<b>Approval Date</b>
	<Name>	
	<Name>	

## 7. Document History and Subject Matter Experts

\*These are the individuals who contributed to the preparation and release of this document:

<b>Name/Title</b>	<b>Department</b>	<b>Completion Date</b>