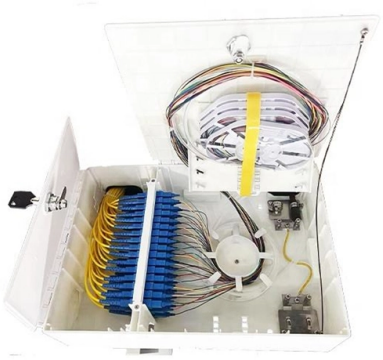
Shared Optical Cable Line Pole Route



Overview

This document provides technical specifications for the aerial installation of fiber optic cable (FOC) networks.

Key Takeaways

A shared optical cable line pole route involves deploying fiber optic cables on existing utility poles, often alongside power lines, using specialized aerial cables and careful planning to ensure safety, compliance, and network reliability.

Overview of Shared Pole Routes

Shared pole routes allow fiber optic cables to be installed on existing utility poles, reducing the need for new pole construction and lowering deployment costs. This method is particularly useful in areas where underground installation is difficult due to rocky terrain, uneven ground, or high costs. Fiber can be installed aerially using All-Dielectric Self-Supporting (ADSS) cables, which are non-conductive and can safely run near high-voltage power lines.

Planning and Survey

Before installation, a detailed site survey is essential. Engineers map the route, assess terrain, identify existing utility infrastructure, and determine potential obstacles such as buildings, waterways, or other utilities. The survey also identifies pole ownership, required permits, and locations for splice points and slack storage.

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Proper planning ensures compliance with local regulations and safety standards. Cable Types and InstallationADSS cables are commonly used for shared pole routes because they are lightweight, self-supporting, and UV-resistant, with carbon black additives to protect against sunlight. These cables can be lashed to existing communication lines or installed on poles using non-metallic hardware.

Installation involves stringing the cable between poles, maintaining proper tension, and ensuring adequate clearance from power lines and other utilities.

Safety and Compliance

Working on aerial fiber installations requires trained personnel and personal protective equipment, including safety harnesses, hard hats, gloves, and steel-toed boots. Compliance with standards such as the National Electrical Safety Code (NESC) is critical, including maintaining proper clearances between communication cables and power conductors. Pole loading analysis (PLA) is performed to ensure that the pole can safely support the additional weight and tension of the fiber cable without risk of failure.

Best Practices

Route Design: Plan for minimal sag, proper tension, and accessible splice points. Pole Sharing: Obtain permissions from pole owners and ensure poles are “made ready” for additional cables. Installation: Use pulleys, tensioners, and clamps to string cables safely.

Avoid metallic attachments near power lines. Maintenance: Regular inspections for weather damage, UV degradation, and pole integrity.

Training and Certification

Specialized training, such as the Shared Pole Route Specialist Course, covers survey, layout, aerial route construction, and safe installation practices near power lines. Certification ensures that personnel are knowledgeable about both technical and safety requirements.

Conclusion

Shared optical cable line pole routes provide a cost-effective and efficient method for deploying fiber networks, especially in challenging terrains. Success depends on careful planning, proper cable selection, adherence to safety standards, and thorough pole loading analysis to ensure long-term reliability and compliance.

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Article Content

Globe Fiber Optic Aerial Installation Standards

This document provides standards and guidelines for aerial installation of fiber

Aerial Fiber Optic Cable Installation Standards

This document provides technical specifications for the aerial installation of fiber optic cable (FOC) networks. It outlines PLDT standards for pole line hardware, including concrete poles, pole clamps,

Lashed Aerial Installation of Fiber Optic Cable

Refer to the cable specification sheet for the specific allowed tension for each cable . Coils are required for all ribbon gel-free and gel-filled armor cables that are in a butt-type closure any other closure, or

FOA Standard For Installing Fiber Optic Cable Plants

An outside plant cable installation may require several different types of cables depending on the method of installation and the route of the cable plant, e.g. where some cables are installed

Mixing Fiber and Power Lines in Aerial Fiber Deployments

Street lights, existing telephone poles, power lines, street signs, buildings and trees all jostle for position, especially in urban areas. Plotting a route through these

The FOA Reference For Fiber Optics

Utilities build fiber optic networks in similar ways that others build them, aerial and underground, but they also mix aerial cables in their power distribution cables,

Fiber Optic Network Construction

The cables are attached to the poles with clamps and spacers to maintain proper distance and tension. Because it''s faster and less disruptive,

How to build a fibre network

If this option is followed but the cable is found to be damaged once in situ during construction work inside the property, cables must be replaced before the fibre service can be tested and called off by

FIBER OPTIC STANDARDS

The attachment of communication cables to transmission line poles is limited to JEA owned fiber optic cables only. The installation and maintenance of cable facilities in this location must be performed by

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Design Guide

Design of the fiber optic cable plant requires coordinating with everyone who is involved in the network in any way, including IT personnel, company management, architects and engineers, etc. to ensure all

Aerial Fiber Optic Cable – Types & Installation Tips

If there is no existing messenger line at the installation site, we can choose a self-supporting aerial fiber optic cable. As the name suggests, the structure of this fiber optic cable allows

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Design Principles of Fiber Optic Aerial Pole Route

At the time of maximum loading of stresses on the aerial fiber optic cables, the temperature to be considered is 10 deg C. The design strength of materials used for the pole route

101 Guidelines for Fiber Optic Cable Installation

Cables that are installed in the vicinity of high-voltage power lines should be grounded, including all-dielectric cables. Maintain proper clearance between the fiber optic cable and power cable at all times.

Installing Aerial Fiber – What Are the Options?

1. First, a series of temporary cable supports, chutes or tangent blocks are installed at each pole along the route. 2. Next, a pull line is threaded through the cable supports and attached to the outside of

The FOA Reference For Fiber Optics -Outside Plant

Cables on poles sharing electrical and telecom/CATV cables must be installed in the telecom space with proper clearance from both electrical cables and other low

How to build a fibre network

Routing of cables where the cables are above head height within false ceiling systems. Routing of cables internally where access points require use of access equipment with fixed barriers or

Overhead Fiber Optic Cable Installation: Requirements

In the realm of optical fiber deployment, overhead installation remains a critical method for rapid and cost-effective network expansion. As a leading

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