



BUIST

Raising The Standard

Electrical | Technology | Engineering



Distributed Antenna System

CASE STUDY

Lumbermen's Inc. cellular signal failure resolved with a Distributed Antenna System (DAS) system.

INTRODUCTION

The Beginning

As a longtime client of Buist, Lumbermen's approached us with concerns about failing cell signals in their Byron Center headquarters. Buist Technology Solutions addressed their needs by conducting a Cellular Site Survey to assess the signal strength of three major carriers (AT&T, T-Mobile, and Verizon) across their campus. The results were shocking: their primary carrier, Verizon, had no cellular signal in the executive suites and spotty connections throughout the rest of the facility. To resolve this issue, Buist recommended implementing a Distributed Antenna System (DAS).

What is DAS

DAS is a network of spatially separated antenna nodes connected to a common source via a transport medium. It is specifically designed to enhance wireless connectivity and coverage in areas where traditional cell tower signals struggle to penetrate, such as large buildings, stadiums, campuses, or urban areas.

Types of DAS

There are two types of DAS systems: **Donor DAS** and **Backhaul DAS**. A Donor DAS operates as a repeater by capturing the existing cellular tower signal and transmitting it through FCC-approved devices and antennas.

In contrast, a Backhaul DAS directly connects to the carrier's network via a hardline, typically using fiber. Each type of DAS has its benefits and considerations. For instance, a Backhaul DAS provides a more consistent and reliable connection because it directly interfaces with the carrier's network.



Above: Coverage unit located in the second floor IT closet.

It's important to recognize that not all DAS solutions are created equal. While systems available on platforms like Amazon or Costco may be suitable for residential use or small retail environments, they are unlikely to meet the demands of a business environment.



IMPLEMENTATION

After evaluating the survey results and Buist's expert recommendations, Lumbermen's selected a single-connection Donor DAS system to enhance their Verizon connectivity. Buist's team installed antennas throughout the headquarters and configured the necessary equipment.

Following the installation, Buist conducted a post-implementation site survey to assess the improvements in cellular service. The results were amazing. Areas that were previously dead zones now enjoyed strong, reliable connectivity. The executive suites, which had been completely without signal, were seamlessly integrated into Verizon's network, and coverage across the entire facility became reliable.

This successful transformation highlights Buist's dedication to **Raising The Standard** in the technology industry and beyond.



Above: Coverage unit located in the first floor IT closet.

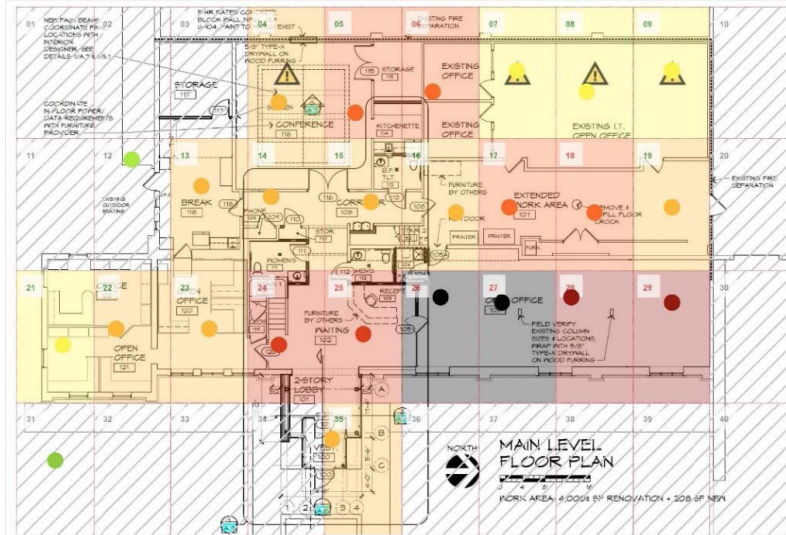


RESULTS

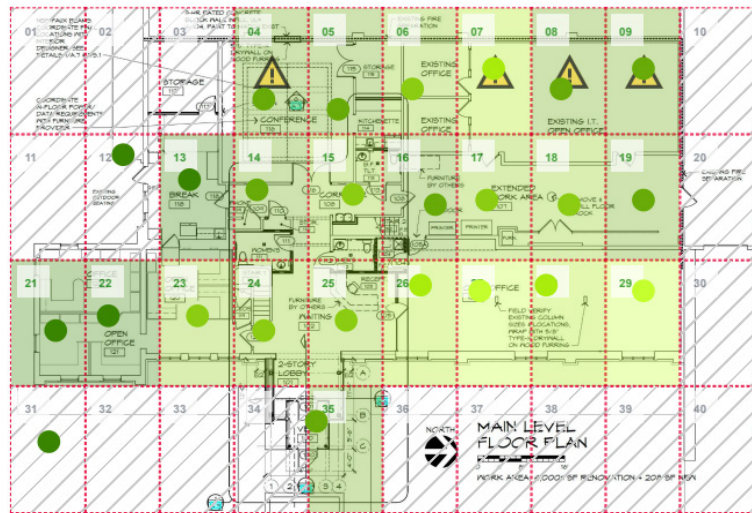
Signal Strength Legend

FirstNet/Cellular

- > -75 dBm
- > -80 dBm
- > -85 dBm
- > -90 dBm
- > -95 dBm
- > -100 dBm
- > -105 dBm
- > -110 dBm
- > -115 dBm
- > -120 dBm
- > -125 dBm
- > -130 dBm
- No Data
- Disabled
- Critical



BEFORE



AFTER

Before installing a Distributed Antenna System (DAS), Lumbermen's faced significant data and critical cellular service challenges with their primary carrier, Verizon. After deploying a single-carrier donor system, Lumbermen's headquarters now benefits from reliable, strong signal coverage across the entire campus.



MORE INFORMATION

1. Contact us
2. Assess your current coverage
3. Review results
4. Design and implement a tailored solution
5. Experience improved cellular connectivity

The Distributed Antenna System (DAS) is one of the many advanced services offered by our Technology Solutions team. From seamless network solutions to cybersecurity measures and cutting-edge compute and storage capabilities, we ensure your systems remain secure, efficient, and prepared for the future. Our team leverages the latest technologies and industry expertise to create customized solutions tailored to your needs.

At Buist, we provide Electrical, Engineering, and Technology services to our local partners with a commitment to exceptional customer service and long-lasting relationships. For over 60 years, we have been Raising the Standard, delivering innovative solutions that drive success and make a lasting impact.

Interested? Contact us

TODAY

Visit our website www.buist.com for more information.

