

# ENGINEERING SERVICES

**DATA DRIVEN. RESULTS ORIENTED.  
YOUR BROADBAND SUCCESS.**

Rural America needs access to broadband. But closing the digital divide can be complicated—and with so many service providers facing increased competition, mounting costs, supply chain issues and eroding revenues, you need more than a quick fix.

**CHR Solutions** has the technology and the expertise to help you make informed decisions that enable you to get the job done efficiently, on budget and on time. From feasibility studies to network design to construction, we partner with you every step of the way to optimize your operation and increase your speed to market.

“

CHR helped to train and guide us through the fiber-to-the-home design, engineering and permitting processes. They have become my go to liaison with city, county and state permitting authorities. If you want to work with people that are willing to help and get your foot in the door in your state right-of-ways, I highly recommend CHR (they even do wireless & tower engineering too)!

- Jason Pond, CEO, Grizzly Broadband, LLC

**Our Experience. Your Advantage.**

Years of service to Rural  
Providers including utilities

**75+**

Professional Engineers  
licensed in

**44 STATES**

Fiber-To-The-Home

**TOP 100**

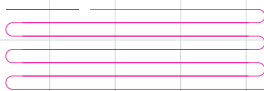
Broadband Communities  
Magazine

2022

**TOP 100**  
FTTH leaders

**x7**  
years  
in a row

Over **50,000** fiber miles  
engineered of various sizes



from 1 mile to 2,000 miles

Over

**2M**

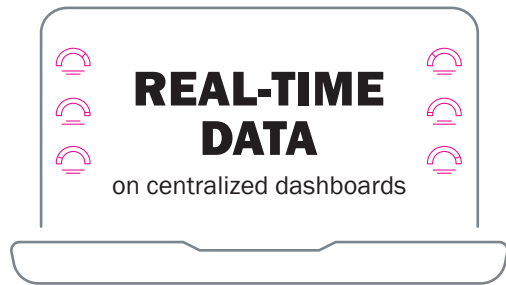
FTTx passings  
designed



## THE DATA DIFFERENCE

By leveraging real-time data, CHR can help your team work smarter, not harder.

Our proprietary Geographic Platform, part of our Engineering Services solution, makes it easy to forecast challenges, streamline operations, and make data-driven decisions. And our engineers and consultants are equipped to help you minimize risk, manage technology implementation and provide long-term solutions to the challenges you face.



## YOUR ENGINEERING, FIELD SERVICES AND TECHNOLOGY PARTNER

For over 75 years, CHR has provided comprehensive service to independent and rural service providers. Our engineers are continually researching new and emerging technologies to ensure our clients have the information required to make informed decisions. And with our innovative use of data, we can help you leverage and improve your existing infrastructure to support new services and sources of revenue.

Whether you are looking for engineering designs or a full end-to-end solution, CHR comes to the table with engineering, construction and project management experience, allowing us to manage your project holistically and design solutions that will cut costs and improve your return on investment.

### PROFESSIONAL ENGINEERING AND OUTSIDE PLANT

- Network Planning & Design
- PE Certification
- Plans & Specifications Preparation
- Complete Project Management
- Access Equipment Engineering
- Network Evolution Plans

### FTTx

- Active Ethernet Designs
- PON Designs (GPON/NGPON)
- Aerial and Buried
- Splitter Placement
- Service Integration
- Residential and Commercial Design and Deployment (including multi-dwelling)

### DATA AND VOICE

- Transport Networks and DWDM
- TDM to IP Migration
- Network Design and Implementation
- Network Integration
- CAD/GIS Services
- Loans and Grant Application Assistance
- Wireless Engineering
- Construction Management
- Outside Plant Engineering
- Grounding Audits
- Product Recommendations
- OSP Layout and Design
- OSP Staking Services
- OSP Inspection Services
- Feasibility Studies
- MPLS, VPLS, and VLANs
- Carrier Grade Softswitch Migration
- Voice over IP (VoIP)