

An aerial photograph of a tall, red and white lattice tower situated in a rural landscape. The tower is the central focus, rising from a concrete base. The surrounding area includes a large field of golden-brown corn, a line of trees with vibrant autumn foliage in shades of orange, yellow, and red, and a few residential buildings with white roofs. The sky is filled with dramatic, blue and white clouds. The overall scene conveys a sense of infrastructure development in a natural setting.

TURNKEY SITE DEVELOPMENT

PUBLIC SAFETY  
INFRASTRUCTURE

BUILDING A WORLD OF DIFFERENCE®



**BLACK & VEATCH**



BLACK & VEATCH

# VALUE ADD

**VALUE ENGINEERED — BUILT TO LAST**

Black & Veatch has the reputation of being a valued partner within the telecommunications industry. Our team has deployed more than 100,000 RF communication sites across the country, allowing us to partner with all of the major carriers to deliver turnkey sites nationwide. We also offer our site development expertise to serve the needs of state and local government agencies. We have experience working directly with state and local jurisdictions or as a subcontractor to the major land mobile radio (LMR) vendors, as well as with LMR systems used by utilities.

Through this experience, we offer the following advantages to our clients:

**Regulations.** Our regional offices have site acquisition experts specialized in zoning, permitting and licensing requirements. We have NEPA, SHPO and FCC/FAA certified professionals that can assist with federal licensing. In addition, we have partnerships with the major carriers and tower leasing companies and can assist with tower leases.

**Engineering Experts.** Our certified civil, structural and electrical professional engineers are regionally located and understand the local conditions. We can identify any challenges associated with your sites early in the process and help you select the best sites to meet your coverage needs. This minimizes engineering complications, helping you meet regulatory approval deadlines.

**Cost & Schedule Control.** Black & Veatch promotes the idea of separating out site development in the LMR procurement process and releasing a separate RFP for that portion of the work. By following this approach, the project would be bid properly from the start, decreasing the chance for costly change orders and schedule flux to occur during the project lifecycle.

The benefits of working directly with a site development expert include:

- We will identify any site specific challenges early in the process and assist with selecting the optimal sites, leading to cost and schedule control.
- The schedule can be optimized by getting a head start on the site development efforts, while concurrently conducting the LMR vendor procurement.
- Multiple levels of price mark-ups will be avoided by working directly with a site development company.
- We will assist with planning for future tower loading from carriers, leading to future revenues that can offset maintenance costs.
- Higher quality and quick handoff's with integrated, self-perform teams.

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# DESIGN-BUILD CAPABILITIES

## ONE COMPANY — DESIGN TO DELIVERY

Our in-house experts will manage all of your site development needs, from site acquisition to engineering design, regulatory approvals and procurement through project and construction management.

### Site Acquisition Services

- Site selection
- Alternate site identification
- Site lease negotiations
- Zoning applications
- Zoning neighborhood meetings
- Zoning and antenna height maps
- Permits and license applications
- Tribal and wetland regulations
- Bureau of Land Management regulations
- Regulatory compliance (FAA/FCC)
- Environmental compliance (NEPA/SHPO)

### Engineering Services

- Site condition analysis
- Site access path designs
- Tower designs
- Tower loading analysis
- Tower remediation plans
- Foundation design and plans
- Drainage and dewatering plans
- Shelter designs and modifications
- Antenna mount and wind loading analysis
- Preliminary and as-built drawings
- Electrical and grounding design

### Site Construction

- Project and construction management
- In-house construction crews
- Approved and trained subcontractors
- Manage site specific safety plan
- Supervise field crews
- Workmanship/quality management
- Telco and utility coordination
- Site cutover plans
- Site acceptance testing
- Resolve punch list items

### Procurement Management

- Procure construction materials
- Enterprise Procurement System (EPS)
- Asset Inventory Management System (AIMS)
- Contractor approval and selection
- Procure, expedite and track materials
- Track lead times
- Materials management
- Materials distribution
- Materials storage
- Warranty administration





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# LEGACY

## **NATIONAL FOOTPRINT WITH LOCAL SERVICE!**

- Founded in 1915 and headquartered in Overland Park, Kansas
- Over 60 U.S. offices and 110 worldwide offices
- Global workforce of more than 10,000 professionals
- Extensive experience in mission critical communication systems
- Designed and/or constructed approximately 25% of the United States communication infrastructure
- Deployed over 100,000 wireless sites nationwide
- Deployed more than 40,000 miles of optical fiber systems
- Local offices and local talent — meeting regional needs
- Registered engineers in all 50 states
- Engineering News-Record (ENR) Rankings (2016)
  - Ranked 10 in Top 100 Design-Build Firms
  - Ranked 1 out of Top 5 in Towers and Antennae
  - Ranked 2 out of Top 15 in Telecommunications (ranked #1 for six consecutive years (2010-2015))
- Quality assurance and quality control - ISO 9001:2015 certified
- Industry Leading Safety Rating EMR = 0.38

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