

# Areas of opportunity.

# **Services**

## Construction

Access Roads
Antenna and Line Installation
Collocation Site Construction

Electrical

Fiber Work

Foundations

Grounding

Microwave Path Alignment

**Raw Land Site Construction** 

**Rooftop Site Construction** 

Small Cell Network Construction

(iDas/oDas)

**Tower Erection** 

**Tower Reinforcement** 

Waveguide/Sweep Testing

## **Construction Management**

Design/Build

**Materials Specification** 

Permitting

**Pre-Construction Consultation** 

Site Visit, Feasibility, Budget Analysis

## **Consulting Services**

**AM Detuning** 

**Drive Testing** 

**EME and NIR Studies** 

**Environmental Assessment:** 

NEPA, Phase I & II, SHPO

FAA 2C & 1A Certification

Interference/Inter-Modulation Studies

**RF Emissions** 

Site Acquisition:

Leases, Title, Regulatory

Compliance, Site Identification

Surveying

## **Engineering**

**Certified Welding Inspections** 

**Construction Drawings** 

Geo-Technical Reports

Materials Analysis

**Modification Drawings** 

Non-Destructive Testing:

Dye Testing, Level II Ultrasonic

Testing (UT), Magnetic Testing (MT)

**Post-Construction Inspections** 

Site Plans

Structural Analysis

**Tower Mapping** 

**Zoning Drawings** 

## **Repair & Maintenance**

**Generator Maintenance** 

**Grounds Keeping** 

**HVAC Maintenance** 

Lighting Service:

System Repair and Replacement

Site Maintenance:

Compound Repair and Improvement

**Tower Audits/Inspections** 

**Tower Maintenance** 

# **New/Emerging Market Services**

**EF&I Services** 

Fiber Optic Testing and Qualification

(PMD/CD)

Network and Inventory Audit

(Fiber/Equipment/Facilities)

## **Products**

#### **Towers**

Accessories

**Antennas** 

Antenna Mounts

**Grounding Products** 

Ice Bridges

**Jumpers** 

**Transmission Lines** 

# Small Cell Network Construction (iDas/oDas)

**Antennas** 

Conduits

Enclosures

**Fiber Optic Cables** 

Hand-Holes

**Lightning Protection** 

**Underground Electrical Vaults** 

Wireless Networking Equipment

# **Repair & Maintenance**

**Batteries** 

**Concealed Communication Towers** 

**Electrical Supplies** 

**Equipment Shelters** 

Flags

Generators

**Hand Tools** 

Locks

Paint/Coatings

**Replacement Lamps** 

Safety Equipment

Signage

**Standard Communication Towers** 

**Testing Equipment** 

**Tower Construction** 

**Tower Lighting:** 

Dual, Medium Intensity, High Intensity, Red Systems, White Systems

## **About Crown Castle**

Crown Castle owns, operates and leases more than 40,000 cell towers and more than 80,000 route miles of fiber supporting small cells and fiber solutions across every major US market. This nationwide portfolio of communications infrastructure connects cities and communities to essential data, technology and wireless service—bringing information, ideas and innovations to the people and businesses that need them.