

# Construction Engineering

**COMMDEX's Construction Engineering service** works with you to design cost efficient, fault tolerant and intrinsically safe telecommunications facilities. Backed by our highly experienced teams of engineers, planners and managers, we offer a full range of pre-, during and post-construction services under the umbrellas of Facilities Planning and Construction Management.

## Facilities Planning

During the pre-construction phase, our Facilities Planning Consultants will analyze your requirements to create a forward-thinking design that will satisfy today's needs and be flexible enough to accommodate future growth. Working directly with your user groups, we will help you design cost efficient, fault-tolerant and intrinsically safe telecommunications facilities including cell sites, control offices, dispatch centers and master switches.

## Construction Management

During the construction phase, our Construction Management services provide you with the appropriate expertise required to minimize risk and ensure quality construction throughout the building process. We will be your "eyes and ears on the ground" to manage the infrastructure construction and ensure quality construction and cost savings throughout the building process.



## Construction Engineering Solutions

### Facilities Design

- » Value engineering & constructability analysis
- » Mission critical data center design
- » Control center design
- » Grounding and surge protection
- » Electrical and backup power (UPS and generator)
- » (N+1)2 redundancy designs

### Management of Pre-construction Activities

- » Site visits
- » Site acquisition
- » Zoning approvals
- » Regulatory (FAA, FCC, NEPA, SHPO ) permits
- » Construction drawings
- » Material ordering (antenna, lines, equipment, etc.)
- » Bidding and contractor selection
- » Construction estimating and budget preparation
- » Detailed construction schedules

### Management of Construction Activities

- » Site/utility/construction permit coordination
- » Ongoing monitoring and site/technical inspections
- » Manage change order applications
- » Coordinate offsite storage facilities
- » Claim resolution
- » Monitor and manage safety and accident prevention programs
- » Ongoing organized record keeping
- » Implement and manage quality review program
- » Ensure strict conformity of all laws, rules and regulations

### Disaster Recovery Planning

- » Analysis of existing facilities
- » Analysis of single points of failure
- » Backup power and grounding analysis
- » Reliability and redundancy evaluations
- » Fault tolerant design

