



# CELL BLOCKS®

## Used For Major Telecommunications Carrier at Rural Ridge Top Idaho

**The precast concrete post tensioned foundation satisfied the design criteria and was installed in one day.**

As a result of a lease not being renewed on an existing tower, a major telecommunications carrier needed a temporary solution to continue to provide cell services in a rural area of Idaho. The carrier desired a definitive solution, a small footprint, no digging and an easy removal solution. The site was also identified as having Indian artifacts. Furthermore, the

site was on top of a ridge reachable only by a dirt lane. Cell Blocks® provided a foundation that minimized disruption to the existing ground and allowed for future site removal with very little impact on the land.

### THE DESIGN

Structural drawings and calculations were provided to the carrier and the on-site contractor Strata, Inc.

### DESIGN & CONSTRUCTION TEAM

#### Owner

Major Telecommunications Carrier

#### General Contractor

Strata, Inc.

#### Oldcastle Infrastructure Product(s)

Precast Concrete CELL BLOCKS® Foundation  
(9 PRECAST CELL BLOCKS )

## Cell Blocks® Used For Major Telecommunications Carrier at Rural Ridge Top in Idaho



A 6-inch layer of granular material was placed on existing ground and compacted.



Unloading the precast concrete Cell Blocks

**Cell Blocks are an engineered foundation system made from individual precast concrete Blocks that are assembled in various configurations and post-tensioned providing a foundation for a monopole and equipment.**

The blocks were prefabricated at a precast manufacturing facility near Reno, NV. Anchor bolts and templates were provided to the precast facility by the monopole supplier and cast in. The post tension GR 150 galvanized steel bars, hex nuts and plates were ordered from DSI America, Inc.

### **THE SOLUTION**

After the (9) Cell Blocks were prefabricated they were transferred up the mountain by a straight bed truck carrying two blocks each trip.

The Strata Inc. work crew transferred and placed the nine Cell Blocks in one day atop the pre-prepared granular base material. The minimum allowable soil bearing requirement was 1500 psf.

The post tension bars, hex nuts and plates were immediately inserted to begin the hydraulic post tensioning process. The post tensioning sequence was completed the next morning. Cell Blocks provided a certified hydraulic pump and 100 ton jack to post tension the steel bars to the specified tension force of over 132,000 pounds each.

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After the Cell Blocks foundation is post tensioned it is immediately at full load strength and ready for installation of the monopole. The tower was set immediately after the blocks were post tensioned using the same crane that set the blocks.

The structural advantage of the Cell Block foundation was that, once post tensioned, the foundation was instantly full strength. Cell Blocks Inc. provided an experienced representative, on-site, for the duration of the block installation and post tensioning process. The representative was able to ensure proper construction and assure the quality of the completed foundation.

Using post tensioned precast concrete CELL BLOCKS for this wireless facility facilitated the installation to be extremely dependable, preserved the safety of the Indian artifacts, and is removable in the future.

No cast in place concrete was needed for this cell tower installation. We are looking forward to a bright future with this product line and design in the United States.

### About Oldcastle Infrastructure

Oldcastle Infrastructure, A CRH Company, is the leading provider of building materials, products and services for infrastructure projects to several market sectors nationwide, including: Building Structures, Communications, Energy, Transportation and Water.

### For More Information Contact:

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