Category: 3 – Meeting the Challenge of a Difficult Job – GC

Contractor: The Beck Group

Project Name: The Royal Gorge Bridge and Park Visitor Center

The 10-mile-long Royal Gorge is narrow, steep and one of the deepest canyons in Colorado. It is also home to what was once the highest bridge in the world, the 1929-built Royal Gorge Bridge. The bridge is at the center of Royal Gorge Park, a visitor's attraction owned by nearby Cañon City, Colorado and run by a private operator, the Royal Gorge Bridge & Park.

On June 11, 2013, the park was devastated by the Royal Gorge Fire. Nearly everything in the 360-acre park was destroyed. The resulting design and construction effort to bring the Royal Gorge Bridge and Park back to life provided significant challenges through the fast-tracked project, due in no small part to working in close proximity to a 1,000+ foot vertical canyon wall.

The Royal Gorge Bridge and Park is a vital economic engine for southern Colorado. According to Mike Bandera, Vice President and General Manager of the park, the impact of the fire was "48 out of 52 buildings and attractions were gone along with an 85-year-old park's contributions to the regional economy."

Faced with a compressed timeline and a project without a known budget, the owner selected a fully integrated design and build delivery model. The Beck Group was selected August 2, 2013, as both architect and general contractor.

The mandate was clear: Reopen the park as soon as possible. The team would start from a literal pile of smoldering rubble, with an undetermined budget since insurance proceeds would not be fully resolved until after the construction started. In less than 13 months from award, the Beck team would take the project from a scorched site to grand opening.

The project did not simply involve the replacement of the existing facilities, but encompassed a complete re-envisioning of the private tourist attraction. Branding dovetailed with an intense charrette process, pulling both the owner and city forward through a spirited process. Running parallel to the design process, a focused insurance reconciliation aimed to align construction costs and code requirements between the original 1940s construction and today. Beck acted as the cost consultant and claims analysis on behalf of the owner through the complicated insurance negotiations.

The hyper-speed design schedule included a new master plan, vertical buildings on both sides of the Gorge, and site-built water and sewage treatment infrastructure. Water is pumped up from the Arkansas River nearly 1,300 feet below the site and treated for use throughout the park. This critical infrastructure was also destroyed in the fire. Crews accessed work at the bottom of the Gorge on twice-daily railcar service for workers, material and equipment.

To support the speed of construction, a steel services subcontractor was selected early on to provide budgeting and design input. The steel services subcontractor provided design and

detailing input to match the architectural intent and stay within budget. Once the plumbing, mechanical and electrical subcontractors were selected through a competitive process for the construction of the south side Visitor Center, they were retained to provide design-build services for the remainder of the buildings.

The City Council in Cañon City encouraged Beck to use as many local resources as possible because much of the community was dependent on the tourism industry associated with the park. Beck hired a variety of local resources and coached many of the area subcontractors to stretch their work scope beyond the work they would typically perform. The concrete subcontractor was a local contractor and turned out to be a critical player on the project team. Through creative partnerships, the concrete subcontractor milled bridge timbers, installed siding and decking, installed site utilities, paved the parking lot, painted the building, and installed miscellaneous metals.

Once subcontractors were hired, they had to begin work immediately in order to build the project in seven months. The architectural Revit model was shared with the structural engineer and the steel services subcontractor to create the structural model. This in turn was used for clash detection with the mechanical, electrical and fire sprinkler models. Once clashes were resolved subcontractors were confident to build their components in advance off-site. Plumbing fixtures for the bathrooms were built in the shop on frames and delivered to the site as bathroom blocks. All ductwork was fabricated in the shop and was delivered a month early.

Sitting in a conference room, Beck and its subcontractors wrote out all the construction activities and durations, then posted them on a schedule board. The activities were ordered and arranged, then recorded and entered as the construction schedule. The aggressive schedule included the construction of the visitor center, a stand-alone bathroom building, sewage plant and water plant. Demolition took five months. A ground breaking ceremony was held January 27, 2014, and the park reopened August 30, 2014 - three days ahead of the 13-month challenge.

While speed of design and construction was critical to the success of the project, the on-site team never lost sight of the need to uphold Beck’s strict safety policies. Working on the edge of the famous Royal Gorge required strict fall protection standards with clearly defined work boundaries on the ledges of the 1,250-foot-deep canyon. Permanent warning lines and signage established 100% fall protection borders parallel to the work site. Daily safety orientation took place for every new employee on the site to review specialized safety requirements. The project recorded zero work time accidents or injuries.

Using LEED® Silver design standards, as do all Beck design and build projects, the project takes into design addresses energy conservation, reduced water consumption, improved indoor air quality and material selection. The entire team was sensitive to the sustainable requirements of the Royal Gorge Bridge and Park’s, rooted in a locale of extraordinary natural beauty. Beck’s team was also committed to the long-term legacy of the regional tourist attraction, which averages 300,000 visitors per year.

According to park officials, the Royal Gorge Bridge and Park project generates $35 million per year in tourism economic impact for the area. The project doesn’t merely contribute to the

community. It is the community for the tourism industry. Recognizing the project's regional impact, Colorado Governor John Hickenlooper is scheduled to speak at the park September 12, 2014, along with City Council members. The event will celebrate the park's re-opening and recognize the impact it has made on the local economy and workforce.

Mike Bandera, Vice President and General Manager of the Royal Gorge Bridge and Park, assessed the impact of the park's rebuilding:

> *The Beck Group has been an excellent team member in the rebuilding of the Royal Gorge Bridge & Park, Canon City, Colorado. The park was closed for 14 months due to the Royal Gorge Fire, June 11, 2013, which destroyed 90 percent of the park, 48 out of 52 buildings and attractions were gone along with an 85-year-old park's contributions to the regional economy. Fortunately, North America's, and one of the world's highest suspension bridges, the Royal Gorge Bridge stood relatively unscathed as both sides of the Royal Gorge raged with fire. The Beck Group understood that time was critical for the park to be up and running again and commanded all of their resources to make it happen in record time. The park is like a small city, The Beck Group was also responsible for constructing a water, and waste water management system, unlike most construction projects where water and sewer is readily available.*
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> *Timing is/and was critical as the Royal Gorge Bridge and Park is one of the main economic drivers in Southern Colorado. The tourism economic impact of the park for the area is $35 million a year. The City of Canon City owns the park but has leased it to the Royal Gorge Company of Colorado since 1947. The Royal Gorge Company of Colorado was primarily responsible for the rebuilding process. The lease payment based on park sales has averaged $1.6 million over the past few years that goes directly to the City budget. Over the past several years, the park has averaged 300,000 guests, and over 26 million since the bridge was opened in 1929. It remains the largest paid attraction in the Southern Colorado. Locally, the park has contributed $5 million to Fremont County in paid vendors and sales, and close to $ 2 million in paid wages, per year. The park is also a major contributor of several thousand dollars per year to local organizations such as Boys and Girls Club, The Canon City Chamber, and gives charitable organizations use of their facility to raise money. The closing of the park was felt in many ways throughout the region, and it was important to have it re-opened as soon as possible.*
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> *Sixteen local sub-contractors were hired by the Beck Group which greatly helped with the economy in our rural area. The Beck Group met with the City of Canon City Council many times, and came up with the outstanding design of the Visitor Center according to their wish for a "National Park" themed look that would last for many decades.*


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