

Greiner Electric, LLC  
BP Lower 48 (BPX Energy) Headquarters  
Category 6: Best Building Project,  
Specialty Contractor \$6 -\$10 Million  
AGC - 2019 ACE Awards  
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## **OVERVIEW STATEMENT**

As the electrical contractor for both the core and shell and interior buildout of BP's Lower 48 (BPX Energy) Headquarters, Greiner Electric had the incredible opportunity to see this project develop from the ground up. The overlaps in the core and shell team's work with the interior team's efforts resulted in complications in schedule and extra hurdles for all involved. With perseverance and quick problem-solving, Greiner was able to mitigate a number of these challenges and bypass additional costs to the owner. In addition, the electrical team utilized creative solutions to work with and around other trades. The use of prefabrication and strategic manhour planning led to the office's interior work being completed on schedule, which allowed the owner and tenant, BP, to move employees into the space on time. With a dedication to collaboration and a unique set of resources, Greiner Electric was able to build, inside and out, a highly successful, high-end office space for one of the nation's largest natural gas producers.

## **PROJECT NARRATIVE**

When BP expanded their offices to Denver's Platte Street, they joined the 450,000 square feet of new commercial space that has arisen in that area over the last five years. The BP Lower 48 (BPX Energy) Headquarters is a welcome addition to the popular Lower Highlands (LoHi) neighborhood, and occupies the top three floors of the Riverview building at 1700 Platte. Greiner Electric had the distinct privilege of being the chosen electrical contractor for both the core and shell and tenant interiors for the building.

Alongside Saunders Construction, Tryba Architects, and BCER Engineering, Greiner joined the BP core and shell project, called "1710 Platte". It was the summer of 2016, and the electrical team began work on the building that consisted of two, four and five-story towers with an atrium connection and a three-level, below-grade parking garage. The 330,000 square foot multi-tower headquarters was soon to be home to an energy division of BP, with a contractual obligation to move into the space on time. Any delays to this happening could have resulted in the tenant being able to negate the lease. Right away, this need set the tone for the pace and pressure of the project, urging crews of every trade to stay on schedule and coordinate efficiently with the rest of the project team. A good portion of this responsibility fell upon Greiner Electric, as many subcontractors were brought on under their responsibility, and many of the rest relied heavily on Greiner for rough-ins and power sources. With so much riding on the electrical work, the team knew that their success would equal the project's success.

In October of 2017, the Greiner team began work on BP's interior space with Saunders Construction, Stantec, and Columbine Engineering. The project took off at full-speed, intending to reach completion within only six months. BP's contractual obligation to move into the space on time remained through this portion of the work. That fact added immense pressure to the interior completion, above and beyond normal delivery. The need for a highly fast-tracked schedule presented a number of hurdles for the electrical team, impacting every bit of conduit, fixture, installation, and trade coordination that took place.

Greiner Electric provided services, materials, and installation for the following interior elements:

- 1,200 lighting control points
- 1,500 light fixtures, including multiple custom-made and high-end fixtures
- Electric for a 52' table made from lightning-felled pine
- Central Dimming Controls
- Network Lighting Controls
- Emergency + Exit Lighting
- Pathways for Communications Systems
- Connections and Circuits for Residential Appliances and Drink Coolers/Dispensers
- Rough-In for Communication components, AV, Security, and Intercom System
- UPS System with 80 kVA UPS and 14-minute backup
- Wall and Lighting for 240 glass-enclosed offices
- Illuminated Handrails
- Completely lighted handrail for 3-story, X-shaped staircase
- Branch Power
- Mechanical Connections
- Temporary Power and Lighting per OSHA requirements

The entire project took roughly two years to complete, with tight deadlines, pressurized coordination needs, and significant challenges in both the core and shell and tenant finish phases. With two separate and delegated Greiner teams tackling each phase, the electrical team was able to mitigate numerous risks and complete the high-end office space in time for BP to occupy, and really enjoy, the facility.

### **A Highly Compressed Schedule from Beginning to End** ***Core + Shell***

The core and shell portion of the headquarters was originally slated to be completed within twelve months, an aggressive goal. The project encountered a huge setback, putting the already fast-paced schedule in jeopardy. In an unfortunate turn of events, a substantial amount of the building faced structural issues and had to be deconstructed and replaced after the initial installation. This resulted in trades having to deconstruct and reconstruct work in place. For the Greiner team, this meant they had to make core and shell and tenant interior work happen simultaneously as opposed to one after the other, including the building's core electrical and life safety systems, and on an unchanged deadline. To make up for lost time and to help other trades meet their deadlines, the Greiner team utilized their prefabrication capabilities for as much underground and overhead conduit racks as they could. They also doubled their crew size and put in overtime to make up for the project's lost time.

In addition, Greiner Electric took a hands-on, proactive approach to every task asked of them - small or large, planned or unplanned. They had security (cameras and card readers), fire alarm, and lightning protection all under their guidance. This dictated every other trade's work and made Greiner the top-tier subcontractor under Saunders Construction. There were several instances in which the electrical team was relied on to get the project moving again - from providing power to elevator crews, providing rough-in for mechanical contractors, and setting up generators and power for proper site heating. Greiner went above and beyond, and made sure the general contractor, and everyone else onsite, knew they were allies with unrelenting work ethic. This willingness to do whatever was asked of them ultimately led to the completion, success, and

timely occupation of the facility.

### ***Tenant Finish***

The Greiner tenant finish crew provided electrical contracting services for floors one, three, four, and five of the Riverview building, beginning their work well before the core and shell team were finished with their portion and moved out of the space. This was due largely in part to the same structural issues that affected the core and shell team, putting both phases of work in jeopardy of meeting BP's timeline. When the interiors team arrived, the building was not dried in, there was no roof, and the facility had no permanent power. These issues presented significant challenges to interior electrical installation, spurring the team into creative and thoughtful problem-solving.

An early plan of action incurred was the strategic use of the firm's prefabrication capabilities. One of the first major concerns of the owner and general contractor was the challenge of running large conduits along the building's corridors. The Greiner team coordinated this stretch of conduit with the firm's BIM specialists in order to generate exact size, length, and placement within the office space. Once the BIM models had been created, plans were handed down to the prefabrication department to build the conduit racks in-house to exact specifications. Those exacted racks were then shipped to the site intact and installed within a fraction of the normal construction time. Not only was the schedule improved upon, but health and safety of personnel prioritized by having less men on-site for less time. Overall, the electrical team prefabricated roughly 20% of the entire project, saving man hours, reducing time on-site, and lowering the opportunity for job site accidents.

Another creative approach used by Greiner Electric was the installation of fixtures above the ceiling before the ceiling was fully in place. The crossover of trades can be precarious to navigate, and it's imperative that teams communicate with and work in conjunction with each other. Instead of waiting for the ceiling team to complete their piece and putting themselves behind in their estimated schedule, the electrical team installed the facility's fixtures on top of the future ceiling grid and panel space. Once the ceiling components were in place, the fixtures were easily dropped through to their correct position. This installation helped to keep the interior work on-track and made room for other trades to work without significant interruption.

### **Success on Platte Street**

Greiner Electric's long term involvement in the BP office headquarters is a testament to their dedication, quality of work, and willingness to take whatever measures were necessary to get the job done. Today, BP occupies one of the best pieces of real estate in Denver, in a building with access to 500 miles of hike and bike trails, a ten minute walk to the Union Station light rail stop, and stunning views of downtown. The facility's high-end look and feel and highly praised interior offer its tenants luxury and modern comfort, the results of persistence and meticulous coordination from the electrical team.



















