

Greiner Electric, LLC
Eating Recovery Center
Category 5: Best Building Project,
Specialty Contractor \$2 -\$6 Million
AGC - 2019 ACE Awards
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OVERVIEW STATEMENT

The Eating Recovery Center of Denver is a nationally-known psychiatric, in-patient hospital that aims to help those who suffer from eating disorders. The building, under Brinkman Construction's lead, began construction in the fall of 2017 and quickly advanced a 15-month schedule. Greiner Electric had the incredible opportunity to aid in the fast-paced and challenging construction of the facility, providing electrical services for patient dorms, exam rooms, reception areas, commercial kitchens, and two spas. The three-story, 63,000 square foot building with parking garage encountered a code change mid-project, which required the Greiner team to replace current material with psychiatric-grade items, such as anti-ligature lighting fixtures and pick-proof caulking. With this hurdle in front of them, Greiner utilized BIM and prefabrication to address these changes and reduce onsite schedule durations for tasks such as underground duct banks and overhead conduit racks by up to 70%. With Greiner Electric's help, the project is an incredible success, and the facility is positively impacting hundreds of lives every year.

PROJECT NARRATIVE

In 2017, Greiner Electric joined the construction team for Denver's eighth Eating Recovery Center (ERC), a cutting edge, inpatient psychiatric hospital focused on clients with eating disorders. The nearly \$30 million design assist project involved a 63,000 square foot, three-story medical building for treatment of both adult and adolescent patients. Patient care ranges from virtual counseling to 24-hour intensive, highly focused, and multi-disciplinary care.

The construction team consisted of the following firms:

Owner - Eating Recovery Center
General Contractor - Brinkman Construction
Architect - Boulder Associates
Engineer - Farnsworth Group

The clinic treats Anorexia Nervosa, Avoidant/Restrictive Food Intake Disorder (ARFID), Binge Eating Disorder, Bulimia, Diabulimia, and Other Specified Feeding and Eating Disorders (OSFED). The Center offers various treatment methods including inpatient, residential, partial hospitalization, intensive outpatient, and virtual intensive outpatient, to cater to a wide variety of patient types. The mix of patients and treatments requires a mix of building uses and needs - from warm and inviting reception areas to hospital-grade examination rooms and nurses' stations. Each subcontracted trade, including electrical contracting, was given a wide array of tasks to accommodate each unique space. Greiner worked hard to make thoughtful lighting, distribution, and low voltage decisions throughout the facility.

Because the Center is focused on relationships with food at its core, the facility required a state-of-the-art kitchen facility to provide patients with nourishment and socialization. Other building uses include classrooms for family training, social spaces for group therapy, dormitory-style residential rooms, office spaces, rejuvenation spas, medical examination rooms, and hospital-like

emergency systems. The entire structure sits atop a 55,000 square foot parking garage.

Eight weeks before completion, Greiner was thrown a serious curve ball regarding the facility's generator, but the team was able to meet the challenge with great success. They were able to save the owner substantial money, maintain schedule, and avoid a minimum eight week delay to the opening of the facility by figuring out how to properly shed enough load from the emergency generator to avoid adding last minute elevator inspection requirements.

To further complicate this task, Greiner was informed at the last minute that seventy Fan Powered VAV's would also now require a dual power source, that was not originally indicated or coordinated. This quick change warranted further ingenuity for a solution, which the electrical team handled tactfully and efficiently.

Greiner participated in both the core and shell and tenant improvement of the Center, with the following items addressed in our scope and in the field:

- Lighting
- Lighting Controls
- Normal and Emergency Electrical Distribution
- Low Voltage Raceways
- Cost estimates at each phase of design
- Constructibility support during design
- All receptacles were hospital grade, tamper resistant with polycarbonate coverplates and tamper resistant screws.
- A 16-zone programmable lighting control panel with dimming capabilities was provided on each floor.
- AV systems included:
 - * Television cabling
 - * Ceiling mounted speakers
 - * Projection screens
 - * Ceiling mounted projectors
 - * Intercom
 - * Paging speakers

Ensuring Patient Safety + Comfort

As ERC is a psychiatric hospital, it was imperative that patient safety take top priority during design and construction. Greiner took every precaution necessary to ensure a secure building and grounds by means of electrical equipment and systems. The team incorporated anti-ligature materials, shatter proof windows, shatter proof light fixtures, outlet plates with security screws, and pick-proof caulking with patient safety factored into every decision. The challenges of a completely protected space were numerous, but our team worked to comb over every detail of our design and installation and come up with thoughtful solutions to all challenges.

One such way the Greiner team ensured the accuracy and safety of our electrical components was through 360-degree imaging and video of the space. The electrical team labeled the space and video with dates and room numbers every time they filmed. This ensured that photo and video would be taken in the same order each time, making it easy to review imagery, return to

the site with prepared materials, and to make organized inspections of the space.

Beyond patient safety and security, patient comfort was also a high priority. A floor-level heating component was installed in the building's reception area to provide patients with an inviting and comforting experience as they first entered the space. Treatment rooms, exam rooms, and spa areas were fitted with ambient light and amber lighting was installed in patient rooms to give them a sense of tranquility. Many other spaces took advantage of the facility's large sources of natural light.

Virtual aquariums were installed on the second and third floor lobbies by the Greiner team. This element provides patients and visitors alike with a whimsical, fun experience while waiting to check in or while visiting with friends and family. This element, though small, contributes to a peaceful and secure environment for all occupants.

Adhering to a Rigorous Schedule

The project's 15-month schedule provided the construction team with a variety of challenges. The first came in the form of hospital-grade facility codes and requirements.

The Greiner team was required to use EMT conduit throughout the building and make way for a generator in the parking garage that would lend itself to the separation of systems (general and life safety). An area dedicated to "defend in place" also mandated the team pay special attention to systems and equipment in that space. Each of the special systems and requirements needed extra time to put into place.

The second hurdle the electrical team faced was the adjustment of code requirements in the middle of the project. This required the team to send fixtures back to the factory to be retro-fitted to the new specifications and system positions and designations to change. This posed a huge challenge to the electrical work, both in the prefabrication shop and on the job site. The team worked to get ahead of these issues, providing quick turnaround and using prefabrication capabilities to make up time in other phases of the project. As the electrical trade was the most impacted by the changing code, it was imperative that the team resolved issues quickly and made way for additional trades to follow. To recover the schedule, Greiner sent the original fabrications back to prefabrication to be reworked. In doing this, the team came up with a phrase they still use in similar situations to this day: "Rehab the Prefab."

Flexibility to a Changing Code

When Greiner Electric began working on Denver's eighth Eating Recovery Center, the specified code under which the building fell was from 2007 and did not include certain safety measures a psychiatric facility demands. Mid-way through the project's life, a new code was adopted for the building's completion. In July 2018, the construction team changed directions and began compliance to an updated, hospital-grade code.

This change resulted in on-the-fly modifications to the entire light fixture package and other electrical systems centered around patient safety concerns. The majority of the original items were already on site and in many cases installed. The new fixtures required specialized impact/tamper resistant construction not originally required which also greatly changed the rough-in provisions already in place. Some of the fixtures already installed had to be shipped back to factories or adjusted onsite to accommodate the newly adopted code requirements. Considering

this was an active jobsite with a schedule that had to be met, changing roughly 1000 fixtures is no small feat. To further complicate this, the ceiling types needed to change from grid to drywall to accommodate patient safety requirements.

Greiner is pleased to report that they completed over 31,816 hours of work and the on-the-fly modifications on this project without a single lost time or recordable injury.

A Successful ERC

Even with the many project challenges Greiner was presented with, the electrical team was able to use their ingenuity, prefabrication capabilities, and meticulous coordination to help successfully construct the Eating Recovery Center project on schedule. It is a testament to Greiner Electric's creative problem-solving and desire to produce exceptional work that the Center is a safe and healing space for patients.









