The Coloradan

Category 7: Best Building Project - Specialty Contractor (Over $10 Million)

Greiner Electric, LLC

Standing prominently as a fixture of Denver's burgeoning Union Station neighborhood development, the Coloradan is a 19-story, high-end residential development comprised of 334 for-sale condominium units, ground-level retail, and 447 parking spaces. The project features a mixture of home types, including studios, 1-2-and 3-bedrooms, affordable homes, and seven penthouses. Marketed as being built for Coloradans, by Coloradans, the building occupies one acre of prime downtown real estate directly adjacent to bustling Union Station, making it an ideal location for homeowners looking to live where they already work and play. The environmentally conscious building promotes sustainable living and boasts a Gold Certification under the LEED for Mid-rise Homes program.

The construction team was comprised of the following firms:

Client: East/West Partners

General Contractor: GE Johnson Construction

Architect: GBD Architects

Engineer: Glumac

Welcome to the Neighborhood

While the Coloradan's location is ideal for urbanites interested in walking to work and baseball games, it presented a host of challenges for the construction team. Situated just inches from the train platform and steps to the Union Station terminal on busy Wewatta Street, the site offered virtually no laydown or staging area. Further, foot and train traffic were a constant consideration, heightening the already paramount issue of safety oversight. In answer to the call, the Greiner team relied heavily on precision coordination, BIM, and prefabrication to support just-in-time delivery of material throughout all phases of the project. "Equipment and assemblies would arrive on site in sequenced, color coded boxes and we'd take it off the truck and put it immediately into the ground or wall," recalled Travis Seabolt, Greiner's Senior Project Manager.

Starting with the underground phase, the Greiner team was committed to maintaining the general contractor's aggressive schedule expectations. Entire underground duct banks were built in Greiner's controlled-environment prefabrication shop and transported to the site. Similarly, the team prefabricated much of the underground electric room assemblies. Upon arrival, they were staged in place and installed the same day. Ultimately, these tactics saved weeks' worth of field labor, allowed extra time for coordination among trades, and reduced hazard and risks associated with open holes and site clutter.

Let There Be Light

Coordination among trades is key to success for any job and one area in which that concept is abundantly apparent is as it relates to the temp power plan. Because every contractor needs lighting and power to advance their scope of work, the availability and reliability of that voltage (including high voltage to support the elevator contractor) is of utmost importance. On the Coloradan, Greiner took a proactive approach and incorporated temporary power into the permanent, in-slab wiring installation. This tactic saved critical time at the conclusion of the project when switching over from temp to permanent power, making for a seamless transition with no downtime. What's more, by tying into permanent wiring, the team effectively mitigated safety risks in the form of hanging wires (trip hazards), exposed wiring, and unexpected power disruption. All too often, temporary power is unintentionally disturbed when someone bumps into or unknowingly unplugs a wire, resulting in minutes or hours of wasted time spent pinpointing the source of the issue. By using permanent wiring as a part of the temp plan, it effectively ensured that the only crews with access to power sources were the ones that were supposed to have access. This kept the project running smoothly throughout its duration.

Another important consideration during construction is managing the cost of lighting and utilities. Greiner exclusively used LED construction lighting throughout the Coloradan and installed motion sensors to detect activity and only illuminate the spaces actually being worked in. Combined, these selections saved the general contractor significant cost by efficiently allocating energy resources.

Navigating a Challenging Design

With much of the building exposed to structure, that meant there was very little ceiling space in which to run wire and systems. As such, roughing-in early directly into the concrete was key to success later in the project. To ensure exact placements for ease of installation in later phases, Greiner's BIM department modeled the building with precision. Because of the diversity of units—334 total residences with about 90 different unit styles—there were no matching floor plates which eliminated the possibility of "stacking" to use common chases to run wire and conduit. The BIM model served as a road map, guiding the team to nooks and crannies that were used to get up the building vertically. Particularly, since these were for-sale condos, it would certainly not have been acceptable to mount a junction box in someone's living room that had nothing to do with the power in their home. Remarked Superintendent, Ray Drinkwater, "There was nothing cookie cutter about the design. There wasn't much repetition and nothing was stacked making things difficult. Our crew worked closely with BIM and Total Station to heavily coordinate our activities and mitigate time-wasting field conflicts."

Murphy's Law

Murphy's Law is the old adage that states that "anything that can go wrong, will," and while the Greiner team actively plans, coordinates, checks, and re-checks to ensure that isn't the case, sometimes you wind up with a big bucket of lemons. As the team was nearing the home stretch of the phased occupancy, 38-month project, they were struck with a serious setback. The project suffered a major water event that affected approximately 60 condos, requiring demolition and re-installation of all systems. As previously noted, the project schedule was aggressive to begin with but to then be forced to go back and re-work areas that were completed compounded the timeline significantly. As Denver's first for-sale condominium project in several years, and the only of its type in the desirable Union Station neighborhood, homes were being marketed and sold well before the project was completed. To put it in blunt terms, delaying the schedule was not an option. Faced with adversity, the Greiner team stepped up to the plate in a big way, relying on tried-and-true best practices and technology to shift into overdrive. Back at the office, the BIM group pulled the models from the affected units and expedited designs to prefabrication where they were re-created in an off-site, safety and quality-controlled environment. On site, boxes

arrived in color-coded groupings (much like before) for the staging crew to unpack and hustle into position. On their heels, the installation crews moved in and expertly installed the systems per the design specifications which was then checked and verified by the QA/QC staff with the goal of minimizing punch list items. With the affected homes rehabbed and back on schedule, the third-party testing commenced. Since the Coloradan was seeking a Gold LEED for Mid-rise Homes certification, one of the requirements was for each unit to be air tight. Blower tests were conducted, pressurizing units to look for even the tiniest holes and air leaks. Said Seabolt, "There was no option to cut corners. Everything had to be done right." In the end, hard work paid off and the team was able to get the project back on track, maintaining the original timeline and delivering on Greiner's commitment to the general contractor and the owner.

Leaving a Mark

With studios that sold out in just 22 hours, to say that the Coloradan was in high demand would be an understatement. Today, the building is home to residents, chic retail, and premier restaurants. The Coloradan has a unique style all its own described as, "style meets functionality, with just the right amount of luxury." As the area's only for-sale condo project and the first of its type in downtown Denver for years, the project serves as a testament for the interest in this market segment. The Coloradan blazed the trail for similar projects which have since followed. Socially and environmentally conscious, the project represents the future of the high-demand Denver urban housing market. Focuses on sustainable living, dedicated affordable housing, and access to transit are all central features to life at the Coloradan. As the neighborhood continues to evolve and take shape, Greiner Electric is proud to have been a part of this landmark project at historic Union Station.


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