

Category: 5 – Best Building Project – Specialty Contractor (\$2 - \$6 Million)

Contractor: RK Steel

Construction Project Name: The Coloradan

With Denver’s ever-growing population, the need for residential spaces are in high demand. To accommodate Denverites and their love to live in our dynamic city, the artistic vision of The Coloradan was born. Made for Coloradans and built by Coloradans, this \$125 million structure is located in the heart of Denver. This bustling complex is nestled up to the busiest transportation hub in Colorado and sold half of its units in less than two months. With over 150,000 daily riders coming through Denver Union Station each day, The Coloradan is by far one of the most popular new buildings to visit in Denver. RK Steel was contracted by GE Johnson Construction Company to perform the full structural and miscellaneous steel scope of work for this new premier project.

The 19-story building accommodates 334 for-sale condominium units, roughly 19,000 square feet of ground-floor retail and restaurants, and tenant amenities including a pool and landscaped deck. The Coloradan is also home to Union Hall, a 1,800-square-foot, arts-centric event gallery that welcomes art newbies and enthusiasts alike. The project is supported by roughly 452 parking spaces located in two below-grade levels and three podium levels. The Coloradan was constructed by GE Johnson Construction Company and the project architect was GBD. This is one of the first buildings in Denver to allot several “affordable residences” to those individuals who fit within a certain income bracket making this project even more valuable for the city of Denver.

RK Steel performed the full structural and miscellaneous steel scope of work for this new premier project. The building’s features and components include: stairs, rails, fencing, fifteen custom canopies, custom light-boxes, 85 garage screens with GKD Mesh from Germany, a massive pedestrian stair linking the building to Denver Union Station, string art support steel, pool amenities, CORTEN privacy screens, a beautiful sprawling mezzanine stair, elevator

support steel, mechanical screens, a storage mezzanine and over 2,500 feet of 11-line cable rail barrier on all parking levels.

RK Steel managed the processes required for the design, fabrication and installation of structural steel and miscellaneous metal packages on this project. In addition, RK Steel's CAD team and project management experts stayed up-to-date with the latest design software to ensure that The Coloradan was executed with precision. At RK Steel, quality starts the minute we make contact with our customers. RK Steel is proud to be an AISC certified contractor. Our processes are streamlined to ensure our customers receive predictable results that exceed expectations.

RK Steel is committed to being hands on when it comes to quality, working collaboratively with the project team to ensure complete customer satisfaction. Through active involvement in all phases of the project, we deliver the highest quality finished product.

Our jobsite specific quality control plan is detailed in the following process:

- The estimating and operation teams, present, and then turnover the project to RK Steel where a plan is developed to maintain control of high-risk activities and issues that are identified.
- Training requirements are identified about specialized products and procedures so that instructional meetings can be scheduled and guidelines may be addressed.
- Project-specific quality assurance plans are developed for each major element of the project prior to the start of construction activity.
- Preparatory meetings are held prior to each major work element, ensuring all parties are in agreement about the work that will be performed.
- Initial inspections of all completed work are conducted by investing parties to ensure the finish product meets the requirements and intent that has been established.

RTD COMPLIANCE AND ZERO LAY DOWN SPACE

RK Steel overcame several challenges while working on The Coloradan. The site is connected to Denver Union Station which posed spatial challenges in a congested downtown area, as well as complying with RTD's various strict rules and regulations. RK's sequence of construction had to be modified on several occasions, and because there was no lay down space, all site construction had to be completed within two feet of the building base. Due to the space constraints, RK Steel had to abide by a two-day install schedule; if something could not be installed within that time frame, major delays would impact the entire site.

Because of the above noted restrictions, RK Steel had to fabricate garage screens, prime and paint them in the lay down area, and then transport the material to the site with the equipment for final installation. The stainless mesh panels had to be approached delicately, something most ironworkers don't know how to do, the team took the extra steps to protect and install with precision.

The on-site work space for assembly was not very accommodating in relation to the size of the garage screen frames and so they had to be arranged in a particular manor, which made rigging and hoisting a challenging task. After moving in swing stages and man lifts, the RK Steel field crew then started the installation of the decorative gold banding feature. This purely aesthetic addition was more art-based than structural steel, however the RK crew was up for the task moving through the process as efficiently as their normal steel work.

ARCHITECTURAL CHANGES

As always, RK Steel strives to bring the vision of the architect to life while remaining on schedule. Despite ongoing revisions to the plans, RK Steel executed the work flawlessly for The Coloradan. The revisions to the original scope of work included: additions of interior fireplace support steel, storage areas that required heavy structural framing, garage entry barriers, rail and stair design changes, and additional features in the pool amenity deck. Because art inspired much

of the detail work, several labor-intensive details were installed to the interior of the building to bring the architect's overall vision to complete fruition.

WEATHER DELAYS

Although main delays were caused by architectural led changes, weather did play a role in some of the delays. High winds made it difficult to complete some of the more in-depth, on site projects.

Because The Coloradan is 19-stories tall, the tower crane used for hoisting RK Steel's materials had limited operations during high wind days. These limitations caused the RK Steel field crew to delay the installation of items which were located on the pool amenity deck (located on the 18th level). Unfortunately, because the materials were already fabricated and power coated in large assemblies (in order to eliminate unnecessary field work), there wasn't an alternative way to mobilize the heavy materials (i.e. fencing sections, rails, etc.) to this location. However, when the weather cooperated, the RK Steel team worked as quickly and efficiently as possible to make sure the allotted tower crane time was not wasted and that the materials were transported securely and safely. Even with inclement weather conditions, RK Steel worked as a cohesive, cooperative and efficient team.

INNOVATION

In the lobby of The Coloradan, there is a large string art installation called Corolla, created by artist, Ines Esnal. From a structural point of view, Corolla is suspended by a 6-post cylindrical support with integrated angles forming attachments that are mounted in three places: the window frame of the building's entrance, the mezzanine level guardrail and the double-height ceiling. The colored elastic cords are stretched and threaded through the powder-coated perforated steel structure, dissolving into the architecture as hidden knots at the three points of attachment. The result is a vaulted apparition— a floating chandelier of string, color and light— which evolves from

a tight, star-shape symmetry in the center, to asymmetrically twisting planes as it gets pulled towards the periphery, compelling even the busiest passerby to pause and look straight up.

RK Steel fabricated the massive barrel structure, coordinated for 6,500 holes to be drilled into various points on the support members and then strategically installed it in the lobby. To ensure the installation was safe for RK Steel employees, and other trades working nearby, a spider crane was brought in to hang the massive structure. The artist commented, “The work of RK Steel was just perfect, exactly as specified in the drawings with no mistakes. In this case, everything was precise, and exactly tailored to the space like I had envisioned.”

RK Steel is proud to be a part of Colorado history and honored to have contributed to this captivating project. The Coloradan is a source of pride and although the journey wasn’t always easy, the RK Steel team stuck together and achieved a true work of art.

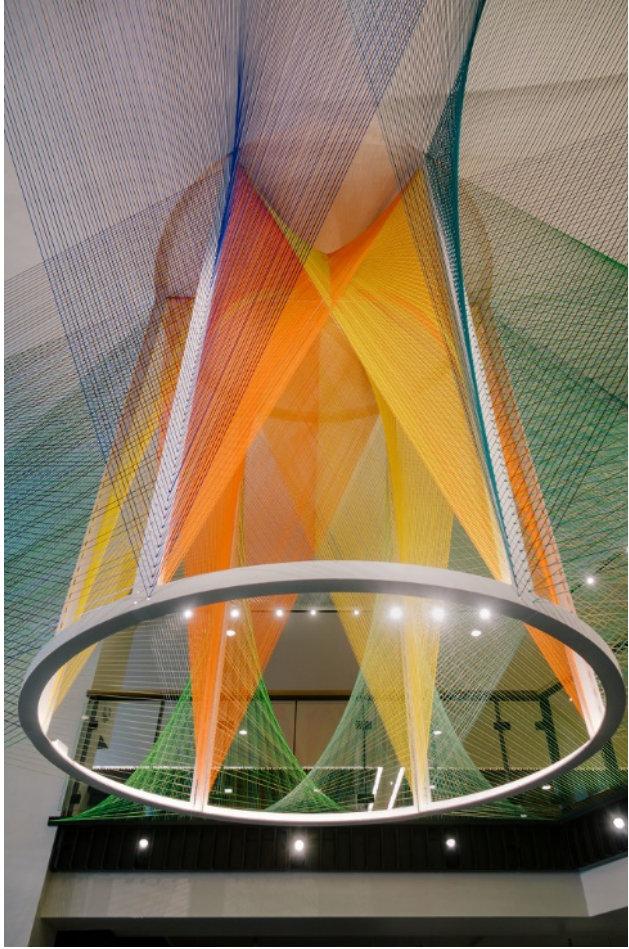


Figure 1: Ines Esnal Corolla



Figure 2: Corolla Art Installation

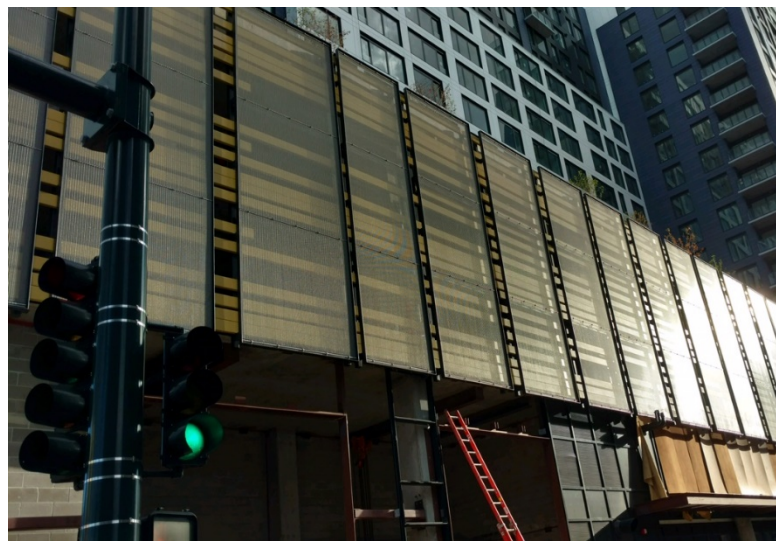


Figure 3: Golden Screens



Figure 4: Interior View of Garage Screen Frame



Figure 5: Level 18 Pool Access Main Gate



Figure 6: Mezzanine Stairs and Rails



Figure 7: Pedestrian Stair Installation



Figure 8: String Art Frame



Figure 9: The Coloradan Lot 2016



Figure 10: View of the Coloradan from Union Station