"The more things change, the more they stay the same." This saying applies to the evolution of Denver's Central Platte Valley. As the location of Denver's birthplace at the confluence of South Platte River and Cherry Creek, the area became a 19th-century hub of industry and commerce. After decades of abandonment and neglect, the neighborhood has returned to a place of 21st-century technological advancement, cutting-edge business practices and community for the urban, creative class.

Part of this resurgence includes The Circa Building, a mixed-use development inspired by the area's 150 years of history of commerce and industry. This new four-story, 171,000-sf building offers Class A ground-floor retail and restaurant space, three levels of below-grade parking and 80,000 sf of office space above. Reminiscent of its 19th-century roots, the structure is built of traditional materials such as brick, steel and concrete, yet it is topped with 20,000 square feet of solar array, which helped the building achieve LEED Platinum certification.

"Helping transform Platte Street from a corridor between downtown Denver and the Highlands neighborhood into a true destination, The Circa Building represents a new chapter of development in the area, bridging modernity and history. We needed a general contractor who understood our vision and could make it a reality." ~ Harry Fuller, Unico Properties

Hard Rock a Hard Obstacle to Overcome

The project's physical location presented several challenging obstacles to overcome. The 29,000-square-foot site is adjacent to northbound I-25 and fronts Platte Street. It is also bound to the south by the heavily-used 16th Street Highland Pedestrian Bridge and an active pedestrian plaza. This area experiences a high level of urban traffic (the Highlands Pedestrian Bridge itself sees several thousand pedestrians and bicyclists daily), adding to the difficulties for safety, logistics, deliveries and laydown.

Once the site was cleared, grubbed and shoring underway, the team began the arduous task of excavating hard bedrock to 35 feet below street level. Blasting was not an option due to the site's proximity to the interstate and pedestrian bridge, so everything had to be done by machine.

The hard rocked proved to be a worthy contender in the battle of nature versus machine, with the rock breaking many tiger teeth on a 100,000-pound excavator, snapping a man-sized ripper in half, and cracking several welds on the arms of various excavators. Victory finally went to the earthwork subcontractor after 120+ days of removing 18,000 cubic yards of hard bedrock and another 10,000 cy of dirt, ash and rubble.

Swinerton used every inch of sidewalk and parking lane that the City permitted to create more space along the site's zero lot line perimeter. Temporary crane foundations in the sidewalk and street provided structural support for delivery and equipment staging, including a 111,000-pound crawler crane. Technology facilitated deliveries with a cloud-based delivery schedule that allowed all trades to log in and reserve the single delivery lane on Platte Street in 15-minute intervals.

Execution and Teamwork

Developed by Unico, a private real estate firm offering people-focused, results-driven investment, development, management and sustainability services, The Circa Building is the company's first ground-up building in Denver. Being Unico's first new build in Denver, Swinerton's philosophy on partnering and project execution was to establish a high level of quality from the start to ensure that The Circa Building reaches its potential as the location to work in the Central Platte Valley.

"As Unico's first ground-up project in Denver, we had high expectations for The Circa Building to deliver on time, on budget and with a high level of attention to detail."
~ Harry Fuller, Unico Properties

Unico hired Swinerton during Schematic Design to provide cost certainty. After our initial baseline estimate, as a proactive partner, Swinerton led preconstruction discussions with the design and engineering team, client and key subcontractors to identify and develop details and concepts to finalize a design that would work within Unico's budget parameters.

For example, given the site's geotechnical conditions, the original drilled pier foundation system, prevalent in Denver, was too costly as the caissons would need to be drilled through hard bedrock and likely encounter water due to the river's proximity. Swinerton analyzed a caisson foundation against several other options, and ultimately recommended a ring beam foundation system. Uncommon in Denver's soft claystone rock, this system is effective in areas where hard rock and shallow water tables coexist. The ring beam solution minimized the amount of equipment hauled in and out of the 35-foot excavation, increased schedule efficiency and created a safer work environment. Swinerton's preliminary work in solving the foundation quandary ensured the project started without delay and completed within the required schedule duration. It also saved the budget a considerable amount of money.

"When issues inevitably popped up, Swinerton was quick to provide collaborative solutions that kept the project running smoothly." ~ Harry Fuller, Unico Properties

Swinerton continuously surveyed and monitored foundations, precast and steel during construction for movement. This proactive approach identified challenges with the structure which could have required dismantling and rework if not discovered as work progressed. Used throughout the project, BIM 3D helped coordinate the first parking level where there was very little room to maintain ceiling height.

While all project aspects require quality attention, the exterior skin warranted additional focus to ensure the materials were of sound quality and that details worked correctly. An exterior skin mockup helped us catch, discuss and modify multiple conflicts. One conflict involved a detail behind the rain screen panels and curtainwall which could have allowed water and condensation to get trapped in the curtainwall system, and ultimately penetrate the building envelope. Project partnership resolved numerous issues such as this one.

Sustainable Solutions

Unico, architect Open Studio, Swinerton and its subcontractors have created an indoor/outdoor gathering place for tenants, neighbors and visitors with character and a nod toward history, combined with technology advancements for today's most demanding requirements. Sustainable features for tenants include six electric car charging stations in the 191-space parking structure, ample bicycle parking, locker rooms and showers. As a LEED Platinum building, occupants enjoy abundant natural light, fresh air, low-emitting materials and a state-of-the-art, highly efficient heat recovery VRF HVAC system. More than 500 solar panels generate 165 kWh of power, zeroing out 35% of the building's power requirements.

Working Safely

With 108,000 total worker hours on the job, there were no lost time accidents nor OSHA recordable incidents. One of the unique safety challenges of this structure was the precise erection of three levels of below-grade precast panels for parking. Our rigging techniques involved a highly skilled team of riggers and crane operators to set panels within mere inches of clearance between members and setting ramp sections on slopes. Before each critical pick, Swinerton's safety manager, superintendent and subcontractor erection team planned out every step and discussed what to do in case a situation deviated from the plan. This level of detailed discussion and plans carried throughout all phases of the 18-month construction schedule.

Recognizing the inherent safety risks the project presented through preplanning of all tasks, our safety manager and field operations team led pre-start coordination meetings, which included job walkthroughs with the workforce to identify and educate them on proper tool usage, specialized PPE needs, and 100% tool tie off when working overhead.

Any significant near-miss incident had a safety stand-down to address the situation with all tradespeople and management staff. Daily stretch and flex and safety meetings were held at the onset of every work day. With the location so close to pedestrian traffic, we installed full-height safety netting on the building's north side and at the Highlands Bridge before steel erection. The netting remained in place through glazing and envelope work.

Since the pedestrian bridge sat adjacent to the site, we monitored it during excavation for movement. During precast erection, we monitored the temporary crane foundation at the edge of the basement structure excavation for movement of any kind. This monitoring was critical in assuring no part of the structure was compromised during heavy picks. We followed the same methods when performing foundation work for the location of concrete pumps and trucks.

Contribution to Denver

As mentioned earlier, The Circa Building is Unico's first ground-up building in Denver. With several existing properties in Colorado already under ownership and operation, The Circa Building kicks off Unico's commitment to developing enduring projects that build on Denver's legacy of innovation and growth to create in-demand neighborhoods with a distinct place and identity.

The Central Platte Valley's metamorphosis started in the late 1980s with visionaries from the City and County of Denver and a handful of adventurous developers to reclaim the area from vagrants and create one of downtown Denver's vibrant mixed-use districts. Today, The Circa Building stands out as a boutique mixed-use option for those who value historical authenticity balanced with modern interpretation.


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