

**Category: 13 – Best Building Project – GC (Over \$70M)**  
**Contractor: W.E. O’Neil Construction**  
**Project Name: S’Park Mixed Use Development**

S’Park, a 434,000 square foot, ground-up development includes two office buildings (Market, Railyards) and two residential buildings (Timber, Ciclo) with one underground parking garage to service the S’PARK district. This project included site infrastructure, essentially converting a 10-acre lumberyard in Boulder into a mixed-use neighborhood, phased over four years.

The interconnected community includes through-block ‘short cut’ routes that connect the site’s gardens and streets. S’PARK features a woonerf roadway and plaza and allows connection to public transportation adjacent to future commuter rail stations that will allow residents access to Denver and the airport. (see image #1)

**Stormwater Coordination**

During the initial infrastructure phase, as part of the City of Boulder’s overall stormwater management program, W.E. O’Neil had to install an underground detention system topped with drivable pavers. The pavers were permeable with a basin below that fills with water that gradually disperses into the city system. Coordination and completion of the system had to be done in phases for each of the vertical buildings. Construction completed within eight months for the site infrastructure, with the vertical construction spanning the course of four years. W.E. O’Neil worked with the city to create a customized approval system to make the process as seamless as possible with the owner.

**Navigating COVID-19**

W.E. O’Neil was actively constructing Railyards and finishing Ciclo and Timber when COVID-19 came to Colorado. The President of W.E. O’Neil joined the Boulder COVID task force to help collaborate with city officials to keep the development project moving forward safely. The construction team hired two COVID security patrolmen who were responsible for trade compliance with new safety protocols as well as sanitizing all common doorways, handrails, stairwells, and bathrooms twice a day.

The project team worked to address neighbor concerns regarding COVID safety, and minimized disruptions while neighbors were working from home. W.E. O’Neil had some COVID incidents on the project team but were able to work around it and keep the job moving forward. The team did not lose one day due to COVID disruptions.

### **Additional Information**

The S’Park district is a LEED v4 ND Silver development, a rating that requires green infrastructure, walkability, proximity to jobs, and retail, among many other requirements. It also was designed to exceed international energy codes by 15%.

A site-specific safety plan was developed and implemented for each phase of the project. There were no major injuries or lost time for this project.

"(S’Park) has been a true community collaboration that will provide an affordable housing option to many future generations of Boulder residents. The tremendous support received from the City of Boulder’s Housing Division has allowed the mixed-income vision for the S’PARK neighborhood become reality. We’d like to welcome the 38 households who have recently relocated to Ciclo and thank all of our many partners for helping us reach this milestone.” Kevin Knapp, Element Properties.

“BHP thanks Element and The John Buck Company and W.E. O’Neil for developing and constructing such a beautiful building and modeling best in class for what affordable housing can be in our community.” Jeremy Durham, Boulder Housing Partners

### **Timber (see image #2)**

Scope: The Timber mixed-use project includes retail, underground parking, 142 apartments, 8 townhomes, coworking and fitness areas, courtyards, pool and amenity space.

### Challenge: Project was overbudget from the start

Early in the schematic design phase, prior to being selected, the client communicated they were significantly over budget on one of the building components. To meet their budget, the client asked W.E. O’Neil to find a way to reduce the project cost by \$6M. Boulder Planning &

Development had already approved the project and technical documents so no changes could be made to the site or building elevations without incurring costly delays from resubmitting.

The client did not want to reduce scope or quality. A unique design component was a single level of below-grade parking and a single level of above-grade parking wrapped by apartments. This was understood to be the configuration needed to meet minimum parking requirements for the development and the design team's desire to avoid the seasonal ground water levels. (see images #3 and #4)

W.E. O'Neil proposed eliminating the above grade parking and replacing that space with rentable unit space mirroring the courtyard unit layout of the floor above. For parking, the construction team suggested going one level deeper for two levels of below-grade parking and manage the groundwater with foundations systems and dewatering components. The result was 20 additional units, and a significant increase in parking. The client agreed that the additional cost to add units and parking more than solved their budgetary challenges due to the increased overall efficiency and increased revenue potential.

W.E. O'Neil's out-of-the-box, creative thinking and understanding the project goals enabled them to improve the project's financial performance while saving considerable time and money by avoiding additional planning reviews from the city which would have delayed the project by more than a year.

#### Challenge: Complex MEP Coordination

Another unique challenge for this phase of the project was that out of 150 units there were 30 different types of units, with little repetition or stacking to integrate MEP systems. Each unit had four vents that needed to go to the exterior. The construction team led the collaborative effort with mechanical, electrical, plumbing trade partners and design consultants to coordinate these details using BIM.

#### Challenge: Quartz Tariffs in China

During construction the US government had just imposed a tariff on quartz made in China. This more than doubled the price of quartz. The construction team took a proactive approach and

evaluated different types of manufactured tops from all around the world. W.E. O’Neil helped source a composite glass top that exactly replicated the look of quartz that met the budget. (see image #5)

#### Challenge: Site Constraints & Delivery Issues

In order to minimize costs, street closures, and site constraints W.E. O’Neil installed a tower crane in the basement of the Timber garage. The team designed structural leave-outs in garage floors and ceilings so that the crane could extend through the garages and courtyard above the finished structure. This allowed the construction team to use the crane for all the substructure construction and vertical framing on top of the structure.

While the mix of uses and density of S’Park is a major benefit of the development, this also presented a challenge when it came to coordinating logistics for the multiple buildings under construction at the same time. The project team had to be creative with scheduling of material deliveries as well as exterior façade work to avoid impacting the other projects and the road infrastructure that was already in place. Furthermore, all projects had minimal property line setbacks, while both Railyards and Market were directly adjacent to the railroad tracks. (see image #6)

#### Challenge: Elevated Steel Planters

For the Ciclo and Timber projects, there were 25 elevated steel planters designed for the interior courtyards. The planters were prototypical in concept and needed a high level of detailed coordination with the building waterproofing systems and structural design. At both projects, the planters were installed on top of a concrete podium which had occupiable space below. W.E. O’Neil lead workshops with the design team, trade partners, owners and city officials to collaboratively coordinate these elements. (see images #7 and #8)

## **Railyards**

Scope: The newly constructed core and shell office building includes ground level retail. The structural steel building's architecture is inspired by the areas train tracks and historic warehouses. The Woonerf plaza is directly adjacent to the west of Railyards and is a one-acre plaza between Railyards and Timber that connects the office staff to the underground parking in the Timber building. (see image #9)

### Challenge: Continuous Air & Water Barrier

The construction team ran into some design challenges with the weather barrier. To resolve those challenges, W.E. O'Neil implemented a full exterior façade mockup separate from the building. The mockup took multiple design facets that were not fully coordinated between transitions and terminations. The mockup helped the construction team, designers, and owner arrive at a complete and efficient design for implementation.

## **Market**

Scope: New four story, 51,000 sf office building with ground-level retail space. There is an outdoor amenity deck on level three and three outdoor spaces on level four. (see image #10)

### Challenge: Incorporating Three Very Different Roofing Systems

This building was designed with interesting angles with no straight corners. It had a complex roofing system with EPDM roofing, standing seam roofing, and a liquid applied hydrotech waterproofing. There is also a walkable paver system that sits on top of the roofing system. The integral gutter system also tied into the roofing system. W.E. O'Neil brought in all the roofing manufacturers and the design team to establish new details to tie the systems in together to create a watertight building and secure warranties for a complete roofing system.

Image #1

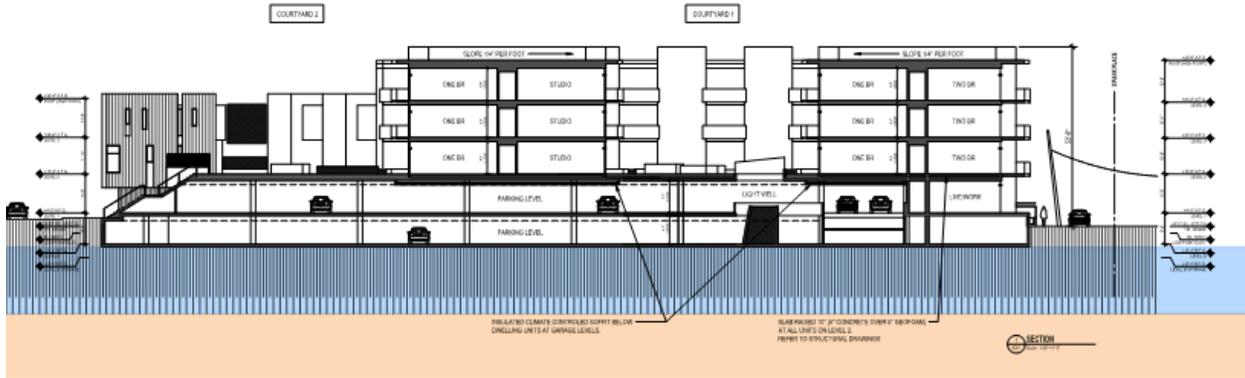


Image #2



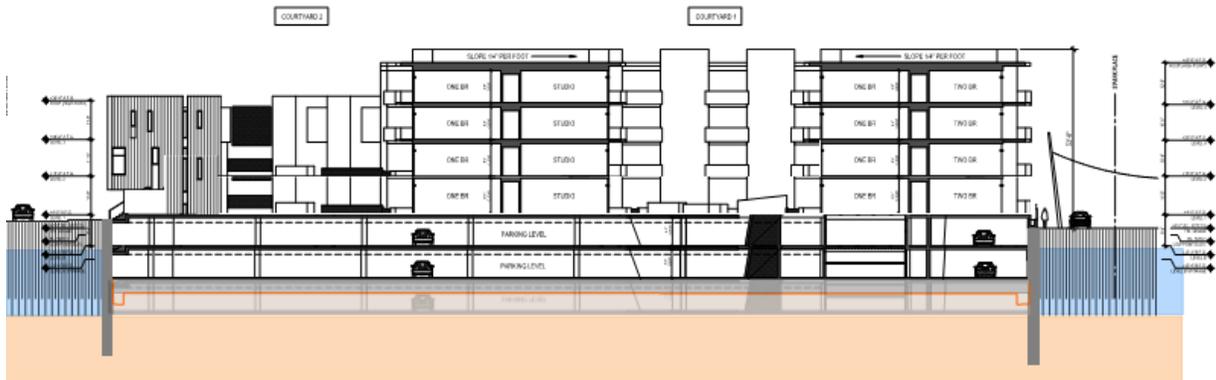
*Original Proposed Concept – Building Section*

*Image #3*



*W.E. O'Neil Proposed Value Adding Alternative – Increase Unit Count and Parking*

*Image #4*



*Image #5*



Image #6



Image #7



Image #8



Image #9



Image #10

