

PROJECT PROFILE

1650 Wewatta Station



Redevelopment Site Ideal for Blindside Waterproofing

When it was built in 1881, Denver Union Station was the transportation gateway to the West with 80 trains passing through it daily. But with the increasing popularity of air travel and more affordable cars, the rail station fell out of favor in the 1960s. Once filled with tourists, business travelers and troops, Union Station eventually sat quiet with just two Amtrak trains providing daily service.

That will change in late 2014 or early 2015 when the \$500 million transformation is complete of 42 acres of former rail yards into a sustainable, urban mixed-use development. The Old Glory will regain its former glimmer with a modern twist. When open, it will be one of the most extensive, diverse transportation hubs in the United States integrating light and commuter rail service with buses, taxis, limousines and bicycles.

One of the biggest projects of the redevelopment is the 21-story apartment building at 1650 Wewatta Street. The 272-unit project overlooking the Union Station train platform also will include 7,000 square feet of retail space. The project represents about one-third of what is called the “A” Block development site at Union Station.

The L-shaped parcel presented property line encroachment and space limitation design challenges typical of urban development. Architects had specified a blindside waterproofing system to limit over-excavation and reduce the development footprint of the building. In addition, blindside waterproofing would help the project achieve LEED® credits for sustainable site development.

1650 Wewatta Station at a glance

Location:

Denver, Co.

Developer:

Holland Partners

Architect:

Shears Adkins Rockmore

Waterproofing Contractor:

AAA Waterproofing

Carlisle Coatings & Waterproofing Products:

- MiraPLY-V
- MiraDRAIN 6000
- CCW Detail Tape
- CCW Tie Back Covers
- CCW Sure-Seal Lap Sealant
- CCW Weathered Membrane Cleaner
- MiraDRI® 860/861
- CCW LiquiSeal

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The specialty waterproofing method requires specialty waterproofing contractors and AAA Waterproofing of Denver was awarded the contract. With over 30 years' experience, AAA Waterproofing is a preferred subcontractor for customers in Colorado, Kansas, New Mexico, Utah and Wyoming. The company is an accredited contractor with the Air Barrier Association of America and has level three licensed installers, all with on-the-job experience installing blindside waterproofing.

On most projects, below-grade waterproofing is applied after the foundation walls have been poured. This project, however, required a blindside waterproofing solution where drainage and membranes would be applied over a lagging beam soil retention system. Architects had specified three waterproofing systems including MiraPLY™ manufactured by Carlisle Coatings & Waterproofing.

In the end, MiraPLY was chosen based on how easily it worked around irregular shapes, as well as its excellent UV exposure limits and durability. MiraPLY, is an innovative, self-adhering blindside waterproofing system that combines two proven waterproofing technologies for superior performance and longevity: thermoplastic polyolefin (TPO) and butyl alloy. It provides installers with the ease of a peel-and-stick product, yet is tough enough to withstand heavy construction and jobsite traffic. MiraPLY is offered in two grades, a less tacky horizontal version (MiraPLY-H) to accommodate foot traffic and a more aggressive vertical grade (MiraPLY-V) that aids in lateral adhesion. It can withstand exposure for up to 60 days allowing additional flexibility for jobsite scheduling.

Jason Pryor, AAA senior vice president, says his crew was comfortable installing MiraPLY and had great confidence in the product. "We believe MiraPLY is an upgrade from the traditional bentonite blindside waterproofing systems and it provided a cost savings over other pre-applied technologies," said Pryor.

Installing MiraPLY over 22,000 square feet went as planned, according to Pryor. "We began by cutting off all the lagging bolts flush with the nuts so that the bolts did not protrude into the waterproofing," Pryor said. "On the top six feet of lagging, we nailed 4' x 8' sheets of plywood. This was done to protect the waterproofing membrane later on when city codes specified that we had to remove the top four feet of lagging."

Before installing the MiraPLY, AAA crew members installed MiraDRAIN® 6000, a CCW drainage product that offers high-flow, high-compressive strength for vertical single-sided subsurface drainage applications. Over the course of a few weeks, the crew installed MiraPLY, detailing all seams with CCW Detail Tape. CCW Tie-back Covers were placed over all of the tie-back plates.

"After the general contractor removed the top four feet of lagging, per the city of Denver, we installed termination bar and CCW Sure-Seal® Lap Sealant to terminate the MiraPLY at the top of the foundation wall," Pryor said. "MiraPLY is a relatively easy product to install and our crew is very experienced with this type of blindside application. The job went fairly smooth and we will keep MiraPLY as an option for all below-grade waterproofing."

