

Category: 11 – Best Building Project – General Contractor (Over \$70 Million)

Contractor: Haselden Wyoming Constructors

Project Name: Laramie High School

Situated on 43 acres, the new, 300,000 SF Laramie High School is truly a state-of-the-art facility. Classrooms include science labs, music rooms, art labs, and production labs (auto shop, wood shop, welding, culinary arts, and flex labs), providing myriad specialized learning spaces, plus open areas for gathering.

Amenities include a phenomenal stadium and practice field (both with synthetic turf), tennis courts, two gymnasiums, three-tiered auditorium, Olympic pool with concrete dive platforms, and commons area with 30-foot ceilings and amazing views. Security is a priority in the school which boasts multiple panic buttons and several safe zones within each pod.

The building's exterior skin is predominately stone, brick, and metal panel.

This project presented its share of challenging situations, which Haselden met with individualized solutions. Anticipating working during the extreme cold and wind (sometimes 60 mph) of the typical Wyoming winter, we built time into the schedule to handle associated delays. This was a challenge itself given the tight, 24-month timeframe required to allow opening for the 2016-2017 school year (a 28-month schedule would be appropriate for a project of this size and complexity). The project finished right on time.

The project's budget project went through several iterations. Originally issued as a design-bid-build, the lowest bid returned at \$93M for a \$78M budget. The state reissued the contract as CMaR (construction manager at risk) and increased the budget to \$85M. Therefore, when Haselden won the project, we needed to bridge the \$8M gap between design and budget through value engineering. This had to be done without affecting the opening date, meaning no changes to the square footage or footprint since altering the original foundations/footings design would greatly affect the timeline. A key factor that accomplished this was issuing multiple bid packages, allowing us to begin critical path trades while still value engineering. Strategic value

engineering ensured no loss of quality finishes or aesthetic value. Instead we saved through methods such as opening specifications away from sole sourcing to allow for more competition. We modified the building skin, saving approximately \$1.8 million, and saved over \$1.5 million by involving the MEP team early in a design-assist role.

In addition to the more obvious challenges of schedule and budget, smaller issues also occurred throughout the project. One involved a flooding issue early in the project. While pouring slabs and installing underground rough-ins, a front rolled in bringing torrential rains. Portions of the building filled with water and mud, requiring us to dig up the plumbing, sewer, and electrical work already placed in order to replace the mud with dry dirt. While the financial cost of paying the subs to redo the work was covered under the builder's risk claim, we still had to make up the lost time in the schedule.

The complexity of this project offered many opportunities for this team to showcase exemplary management skills. Specifically, our safety manager for the project developed several unique programs to ensure smooth and safe operations throughout the duration of the project. At the start of the project, he enrolled Haselden in OSHA SHARP (Safety Health Award Recognition Program). This is a voluntary consultation program wherein OSHA rotates regularly scheduled visits to a company's job sites every month to perform compliance audits. This resulted in OSHA visits to LHS approximately every other month. Haselden is the only general contractor in Wyoming that is part of SHARP. Additionally, we have encouraged our subcontractors to join the program, and to date, eight subs have done so.

Proactive planning to ensure complex operations such as the natatorium beam lift, auditorium scaffold construction, and Olympic pool excavation occurred safely and smoothly was an important part of the project. The 76,000 pounds natatorium beam constituted one of the largest lifts the company had ever done. To ensure safety, Haselden invited OSHA for a consultation early on, and notified everyone on the site regarding the details of the critical lift. We coordinated with the steel erectors and the crane company to obtain a special crane equipped for the substantial load, and one of only two crane operators in the state certified to operate it. Because of the combined weight of the crane and load, a special operation for compacting the

ground under the crane was required. The entire process happened as planned with no unexpected issues. The auditorium scaffold was another situation that required special consideration. Four stories high, it was used by subs and Haselden. Structural engineer Martin/Martin Wyoming designed the scaffold bracing system to keep weight allowances uniform across the platform. We developed a grid system and calculated how much weight could be in each square foot – including people, tools, and equipment – then scheduled and assigned grid sections. Each day we met with the foreperson each sub and determined who would be working in each grid and the corresponding weight load distribution. This ensured a safe and efficient work area. The Olympic-size pool was the other major safety consideration. Swimming pool manufacturers have an exemption to the requirement of bracing and shoring after excavating 6 feet. To combat possible cave-in hazards, we asked for an OSHA consultation and they recommended bringing in the fire department to determine any possible rescue needs. The Laramie Fire Department visited our site and evaluated possible scenarios, as well as working with Haselden to determine the best site access points. We also brought in four shifts of the Laramie Police Department for tours. Our safety manager sent the Fire and Police Departments a site map with all entrances and gate numbers marked, and trained all our employees on specific procedure if there was an emergency at the pool site (what to tell 911, what gate number to send emergency personnel to, and to post a Haselden supervisor at the gate to guide emergency vehicles).

Several innovative systems and materials were used in the construction of this project. In addition to industry standards such as the use of BIM, our mechanical contractor prefabricated the hydronic piping systems which were delivered to the site as complete units ready to be hoisted into the air. Additionally, our masonry subcontractor used a cutting-edge brick laying machine for portions of the brick work. Material-wise, walls made of reclaimed snow fences are used throughout the auditorium and in the commons area.

Unfortunately, a serious accident did occur during this project. A steel beam gave way, and the workers tied off to the beam were injured. Thankfully there were no fatalities and the workers recovered – one of them even taking part in the topping off ceremony. OSHA's investigation found Haselden was not at fault and no violations were issued to Haselden or the steel erector.

With the exception of this incident, the safety record on this project was exemplary. Haselden developed a rigorous and comprehensive safety policy that addressed safety on every level. Before construction began, our project superintendent worked in conjunction with the corporate safety department to develop a site-specific safety policy crafted for Laramie High School's unique characteristics, detailing safety training for all subcontractors and employees.

Before any Haselden employee arrived on site, they received at least 10 hours of safety and health training to prepare them for proper hazard recognition and reporting abatement techniques. Haselden employees logged 82,448 hours with no lost time.

Employees also received a site orientation which included the site-specific safety program, emergency action plans, and owner policies. Weekly safety and health training meetings were conducted for all Haselden and subcontractor employees, and monthly site-wide meetings addressed any safety or health concerns. Ongoing training and certification for Haselden employees and subcontractors helped promote the significance of a safety culture at the project. Supplementary education included scaffold training for the masonry sub and excavation training for the earthwork sub. Additionally, newly-hired employees wore red hardhats so field managers knew who to closely mentor.

A fairly new program we began during this project is called "I Got Your 6." This program rewarded employees of contractor and subcontractors for catching and correcting behavior that could be done in a safer manner.

Given the weather in Laramie, stormwater and erosion control were major considerations on the project. We created a new best management practice to handle the stormwater flow from the city of Laramie and other construction work in the area that was causing discharge onto our site, working with the Laramie city engineer to obtain approval to put reinforced straw bale barriers in their detention pond.

The new Laramie High School serves all of Albany County and is vital to the community. Haselden was instrumental in providing tours throughout the construction to members of the

community, school board, students, and faculty. Not only will the campus be used for school, but also for community events. In the words of Wyoming Governor Matt Mead, “This project truly represents the best of what we can do when a community comes together, when the state comes together, when community leaders, educators, teachers, students come together and say, ‘This is what we want, let’s build it, it’s a dream for the future.’”









