

## **American Academy Lincoln Meadows**

A 92,000 SF school in 35 weeks on a site with no existing utility as-builts for less than \$200/SF. It may sound impossible, but that's exactly the feat the American Academy Lincoln Meadows team accomplished. From start to finish, this project proved how a strong team and dedication can overcome even the most demanding job.

Beginning with Day One, this project was imbued with challenges. Completing a ground-up facility, including site work, in an incredibly short timeframe presented the first hurdle. The project was initially scheduled to start in October, however permitting issues arose causing the start date to push until December. Add to that 26 weather impactful delay days! However, with hundreds of kids ready to start school in August, our completion date remained firm. The utilities package was also exceptionally challenging because the Town of Parker was unable to provide as-builts for the utilities. This meant we had to use a linear boring technique [Photo 1] for the sanitary sewer system, which meant extensive potholing. Permitting continued to be an issue inside the building due to discrepancies between Town of Parker permitting and State of Colorado permitting. Site issues also continued until just before the school opened (30 days before it opened, to be exact). Because of unknown conditions of Twenty Mile Road involving utility conflicts and an abnormally thick (18") asphalt layer [Photo 2], we had to perform chemical stabilization instead of standard soil conditioning to the earth under the removed road in order to create a firm paving substrate where the road would be replaced. This consisted of mixing cement with water and the existing substrate, and there are only two subcontractors in Colorado who perform this type of work.

How did this dream team navigate this roadmap of dilemmas? Precisely because they were a dream team! This was the third American Academy project that Haselden, Cuningham Group Architects, and Inline Management had come together to build. Their communication, relationships, and problem-solving capabilities were unparalleled, and over the decade that they have worked together on these projects, they have yet to encounter an obstacle they cannot

overcome. Their team mentality allowed them to work together to come up with innovative solutions and bring this lightning-speed project in on-time and on-budget.

Several innovative solutions saved the day on this project. Virtual design and construction played an integral role. The entire job—including underground electrical and plumbing, foundations, and structural concrete—was modeled before building began. This allowed the team to find and eliminate conflicts between the foundations and the MEP systems without requiring any rework, which translated to no lost time and no extra cost. All of the building concrete was self-performed by Haselden, and our in-house VDC team modeled the concrete, allowing our team to build exact forms ahead of time based on the models [Photo 3]. Because of the model, the concrete team knew in advance precisely where the plumbing block-outs were, saving a tremendous amount of time in the field. This project is truly an example of using VDC/BIM to its full potential to make a project run smoothly. Another innovative solution we utilized to keep this ultra-fast-track project on course was essentially building from the inside out. Using a technique often seen in downtown high-rise construction—but not often in a K-12 setting—all interior elements that were not moisture-sensitive were built concurrently with the structural steel and exterior skin. This shaved months off the schedule, allowing the project to finish in record time. Finally, to guarantee the quality on the structure, the team brought in Haselden's dedicated quality control manager approximately half a dozen times throughout the project to perform detailed quality checks on systems such as the exterior envelope and drainage systems.

With a fast project, safety can be especially critical. Haselden developed a site-specific safety plan that addressed the unique issues related to this project. At the onset of the project, our entire team met to establish requirements, expectations, reporting needs, and lines of communication, and to review Haselden's safety program which stresses the importance of planning for safety early on and raising awareness to prevent accidents. All employees attended safety awareness training upon hire, and Haselden had an on-site management team that remained available at all times to address issues immediately. All subcontractors were clearly informed during orientation, in the bidding documents, and in the project manual of the safety expectations and requirements of the project and were expected to comply with all project requirements. The on-site safety team

was led by our site superintendent, assistant superintendent, and foreman. They conducted weekly project safety inspections, in addition to the random safety inspections performed by our Safety Department. Additionally, we held a monthly job-wide safety meeting the first Thursday of each month, either handing out safety awards or providing breakfast or lunch for all on-site personnel. Rounding out the site safety program was the daily JHA (job hazard analysis) and POD (plan of the day) meeting prior to the beginning of work commencing to ensure everyone on site was aware of work that was going on around them. This allowed everyone to communicate to their staff any safety concerns and not only where their team members would be working, but who else would be working in the same area. This was a benefit both from a safety standpoint and work coordination standpoint. Logging a total of 50,807 hours (Haselden), the project had zero accidents and zero injuries, including all subcontractors that worked on the site. Our site team was the leading force in raising awareness and championing positive attitudes regarding safety practices across the project site.

American Academy decided to build their third school because of the approximately 3,000 children on their waitlist. Because of this extraordinary number of families waiting to attend their school, they wanted to open as quickly as possible, while still adhering to their quality standards. By using techniques such as linear boring [Photo 4], the community was saved the inconvenience of shutting down Twenty Mile Road—the second busiest road in Parker. Despite the weather and permit delays, the Haselden team was able to deliver their building by the contract date, allowing the kids to start the 2017 school year. At the ribbon cutting ceremony on August 29<sup>th</sup>, Parker Mayor Mike Waid stated, “Thank you to the entire team for being so diligent and bringing this incredible facility to Parker and doing it in such a timely fashion.”



Photo 1 – Haselden Construction –  
American Academy Lincoln  
Meadows



Photo 2 – Haselden Construction –  
American Academy Lincoln  
Meadows

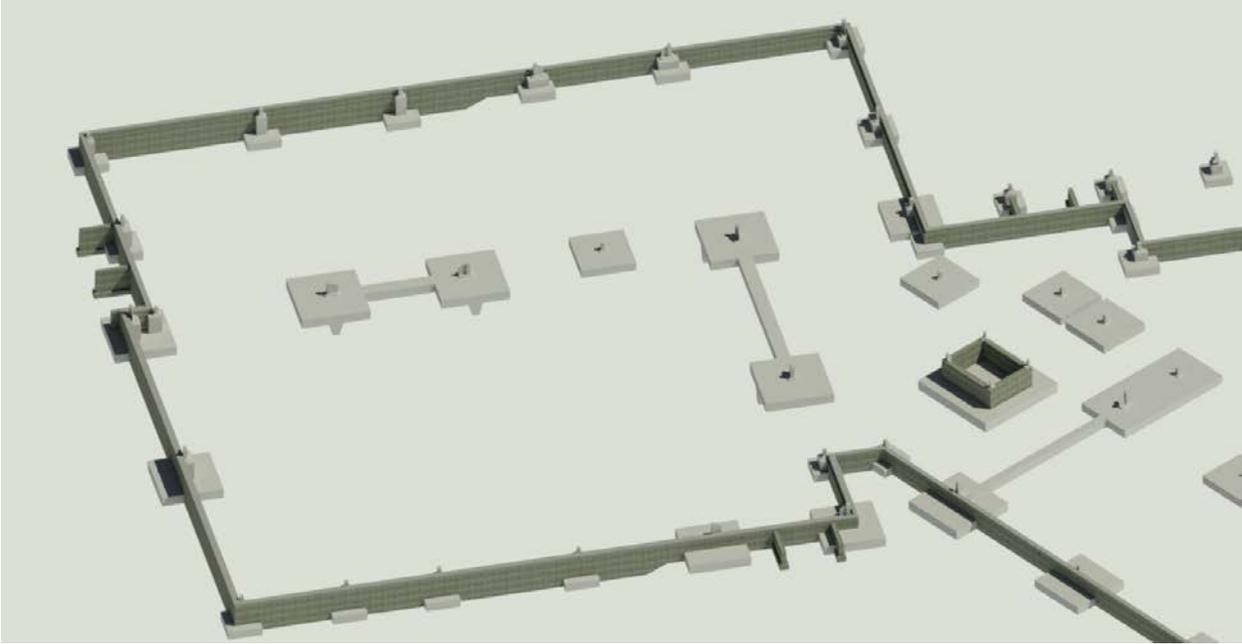


Photo 3 – Haselden Construction – American Academy Lincoln Meadows



Photo 4 – Haselden Construction – American Academy Lincoln Meadows



Photo 5 – Haselden Construction – American Academy Lincoln Meadows



Photo 6 – Haselden Construction – American Academy Lincoln Meadows



Photo 7 – Haselden Construction – American Academy Lincoln Meadows



Photo 8 – Haselden Construction – American Academy Lincoln Meadows



Photo 9 – Haselden Construction – American Academy Lincoln Meadows



Photo 10 – Haselden Construction – American Academy Lincoln Meadows