

How Hausmann Construction Modernized a 100-Year-Old Middle School with Cupix

LOCATION:

Lincoln, NE

FIRM TYPE:

General Contractor

PRIMARY INDUSTRY:

Education, Residential

PROJECT TYPE:

Middle School Renovation

PROJECT SIZE:

150,000 sqft

No two days look alike for Derek Hays, Construction Technology Director at Hausmann Construction.

One day, he might be processing BIM files and uploading them to Procore for subcontractors. Another day, you might catch him in the field, capturing site footage with a drone or a 360° camera.

"I'm a 'tech-y' person, but not everybody is," Derek acknowledges. "And if they can't use the data and they don't see the value in it, they're not going to trust that system."

On the Park Middle School renovation project for Lincoln Public Schools in Nebraska, it was going to be crucial for Hausmann to work off the most accurate data possible. The school, built in 1926, needed a complete Indoor Air Quality (IAQ) overhaul to improve occupant comfort and reduce air contaminants.

"We were going to have to gut all of the mechanical and a lot of the plumbing," says

Derek, "All the duct work in this existing school had to be ripped out and replaced with new systems."

In addition to the MEPFP work, Hausmann was also responsible for interior improvements like new flooring, paint, and cabinetry, and exterior improvements like a new soccer field, basketball court, and two pickleball courts.

"These projects, whether they're a new consolidated school or an addition to a new gym, are unique to the school district and the community," says Derek. "They have a tremendous community impact."

Since the renovation was the school district's first project using BIM from start to finish, traditional methods like redlined PDFs weren't going to cut it. But with Cupix's reality capture and spatial intelligence solutions, Hausmann delivered a full BIM as-built model through simple 360° captures, balancing technical sophistication and simplicity at every stage.

10x Faster captures compared to terrestrial scanners

1-2 captures taken per week over 18 months

How Cupix's site documentation made the grade

Before the Park Middle School project, Derek had already been evaluating different reality capture solutions. And after buying a new dual camera kit, he was ready to put the technology to the test.

"I walked the exact same path with these different software platforms and evaluated all of the major players in this space at once," says Derek. "We really landed on Cupix for the image quality, as well as how easy it is to get the captures."

With Cupix, Hausmann's field teams can sync the TwinCapture app on their mobile device to a 360° camera, hit record, then walk the jobsite as usual. After the capture is complete, Cupix then processes the captures into both 2D and 3D imagery.

According to Derek, it's easy for people to start using all the Cupix features since there's a minimal learning curve.

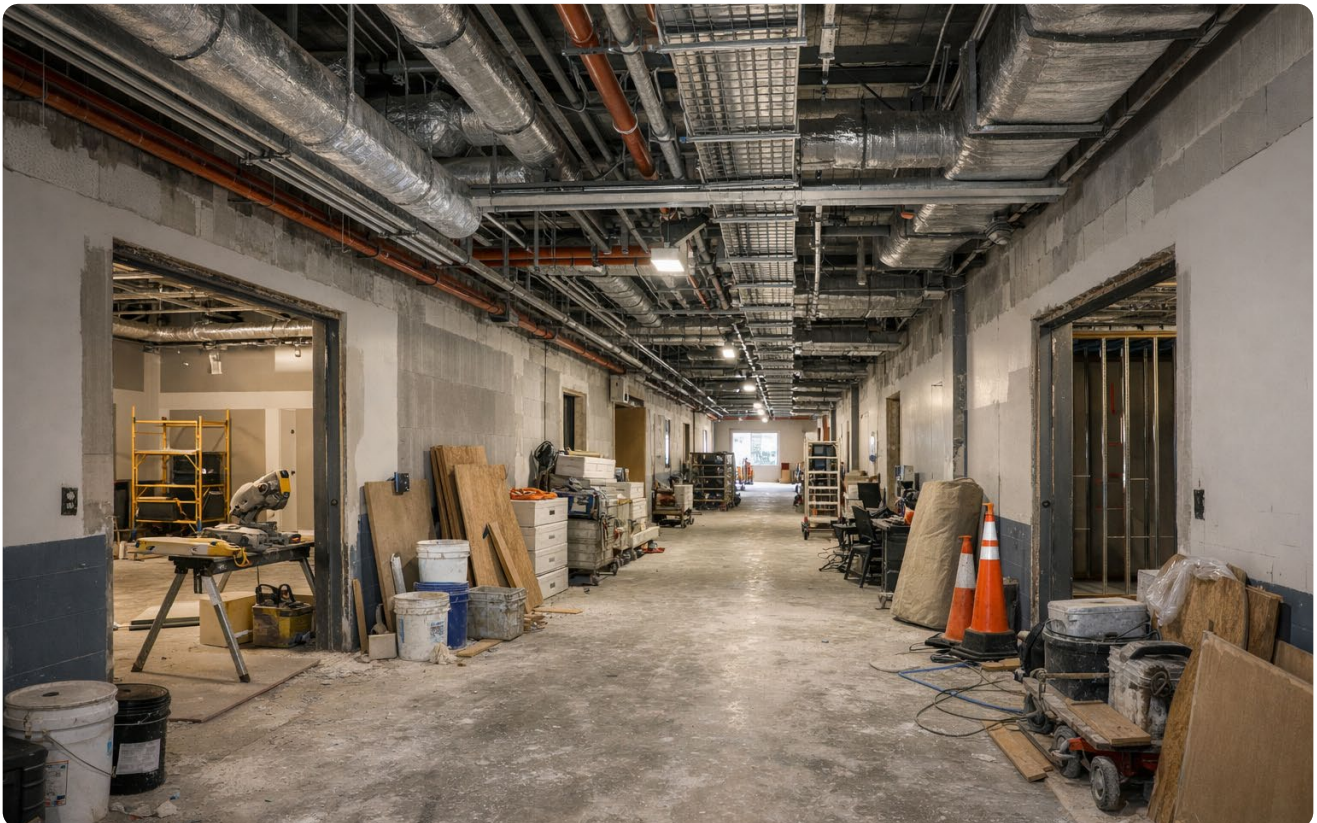
"I like that Cupix is simple enough and intuitive enough to use that 'non-tech-y' people can get the most value out of that data."

Lewis Wenman

Lead BIM Manager at Bouygues UK

says Derek. "I've got a superintendent on a couple of my projects that will not do a project without Cupix."

On the Park Middle School project, Hausmann deployed Cupix across every major documentation and coordination workflow, performing 360° walks once or twice per week throughout the 18-month build. Each walk covered the multi-level, 150,000-square-foot facility in about two hours, with 10 users regularly accessing the data.



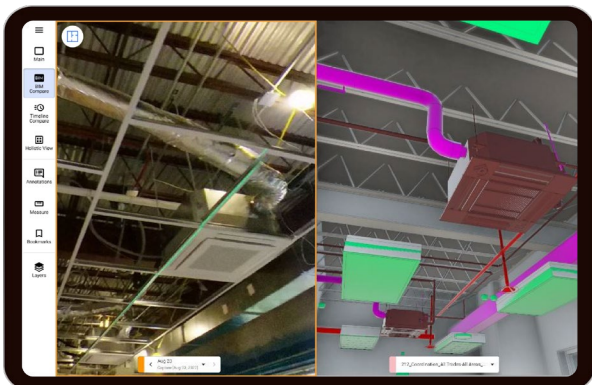
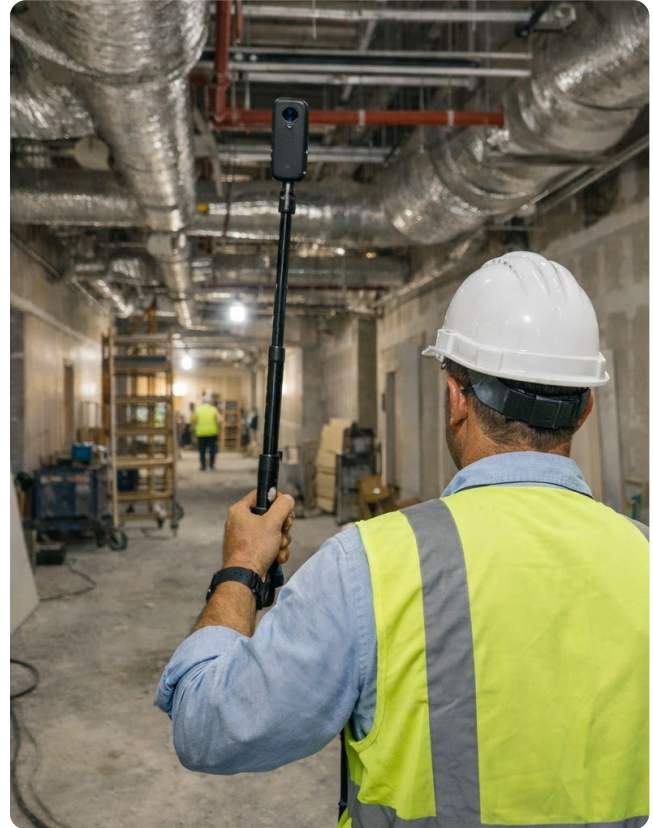
Key documentation use cases included:

- **10x faster captures**

Derek estimates that documenting the entire school site with a terrestrial scanner would have taken two or three workdays and required strict set-up points. But with Cupix, that potential 20-hour task took just two hours to complete, and happened on a more regular basis with biweekly captures. Processing was also faster—after “all the magic happens on the back-end,” Hausmann teams have usable data in 24 hours, vs. having to manually stitch together terrestrial scans.

- **Punchlist and issue tracking via OmniNotes (voice, text, and image annotations)**

Derek used Cupix’s OmniNotes feature extensively, pausing during captures to flag specific locations and use the highest-quality image. Flagged items were pushed directly from Cupix into Procore as tracked observations or issues, turning what had been a manual, disconnected workflow into a single continuous documentation loop.



- **Faster dispute resolution with visual evidence**

When a subcontractor disputed the installation timeline for work in a specific room, the superintendent pulled up the relevant Cupix walk, identified the capture date, and resolved the conversation on the spot. “Photos don’t lie,” Derek adds. “What would typically take hours or even days to find, you can find in about two minutes with Cupix.”

- **Remote visibility for owners and executives**

The Hausmann team regularly shared current and historical 360° captures with district representatives and project executives. This near-real-time visibility into site progress saved on travel time and costs, a capability Derek says has been consistently well received by clients, particularly school districts new to major capital projects.

But easy site captures and remote collaboration weren’t the only reasons Hausmann relied on Cupix for this project. They would also need robust BIM features—and Cupix delivered.

Clashing BIM with the real world

Since Hausmann was contractually obligated to provide an as-built BIM model of all the renovations, that made the Park Middle School project “Cupix-worthy,” per Derek.

“I really liked having the side-by-side comparison view, and the ability to transport BIM objects onto the 360° captures,” says Derek. “Not only does that help visualize what’s coming if the materials haven’t been installed yet, but also helps visualize if that material has been installed in the right place.”

That’s a problem Derek had experienced firsthand on a school project that didn’t use Cupix. Without 360° capture and model comparison, teams didn’t catch that window units were shorter than the window openings until the units were already on-site.

Had Cupix been deployed, the mismatch between the BIM model and actual masonry conditions would have been apparent weeks earlier, while the masons were still on site to correct it.

“Any amount of rework is too much,” says Derek. “There’s plenty of technology available to completely avoid rework if you just apply the technologies available.”

And on the Park Middle School project, Cupix empowered key BIM use cases like:

- **As-built BIM verification**

Rather than relying solely on field redlines, Derek was able to use the BIM Compare feature in Cupix to “verify if the model matches the real world or not.” When discrepancies emerged—particularly between MEPFP models and actual site conditions—Derek shared access to the relevant Cupix SiteView directly with subcontractors’ off-site BIM teams.

- **Subcontractor coordination**

By sharing Cupix SiteViews with MEPFP subcontractors, off-site BIM teams could compare captures against their models and finalize as-built updates remotely, reducing the coordination lag between field conditions and model accuracy throughout the project. “It put it on the subcontractors to incorporate the markups they’re getting from the field,” adds Derek.

- **Faster as-built BIM model creation**

At the end of the project, Derek was able to export the 3D “dollhouse” Cupix created as a point cloud for further BIM modeling in Revit. He could also download the Cupix 3D as-built and hand it off to the school district to use for facilities management, space planning, logistics, and more.



Reopening Park Middle School

Derek and the Hausmann team delivered the 14-phase IAQ project on time and on budget, with the new facilities reopening in January 2023.

The project also received national recognition, as Lincoln Public Schools was honored with the “Best in Class: Energy Efficiency Plus Health Award” from the United States Department of Energy in September 2023. As a result of the renovations, the school has seen a 61% decrease in energy use intensity and a 43% decrease in annual energy costs.

Helping deliver these big projects in small-town, rural America is one of Derek’s favorite parts of working in construction.

“Being a part of the process and seeing the project come to life all the way from design through construction is very fulfilling for me,” says Derek. “Once the ribbon cutting ceremony happens and the school district and the community can see that space for the first time, you can feel the excitement.”

What’s next for Hausmann

Hausmann is using Cupix on a project-by-project basis, prioritizing jobs with contractual BIM deliverables. The field teams are also pushing more for Cupix, and Derek notes that having 360° documentation on hand is extremely beneficial, as it provides a clear visual record of jobsite conditions at any point in time.

As Hausmann’s in-house drone operator, Derek is also testing out Cupix’s drone data processing features.

“Being able to have that single source of truth for drone data and 360° walks adds tremendous value for every project that needs both capture methods,” adds Derek.

For companies that are still debating reality capture solutions, Derek encourages them to give it a try.

“Cupix is simple to use, and robust,” says Derek. “It’s a very, very powerful tool for everybody, from the senior executives and owners, clients, to everybody working on that project in the field.”

