



How Granger Construction used PlanGrid to improve coordination and avoid rework at the University of Michigan

Granger Construction constructed the University of Michigan's massive Athletics South Competition and Performance Project, a \$168M project with a tight 24-month timeline. It's a multi-building site that includes a throwing field, indoor and outdoor track buildings, a lacrosse building with a synthetic turf field, and more. They're all connected to a sports performance center, and spread over 22 acres.



Selecting the mobile solution for the field

Three key challenges were top of mind for Granger going into this project:

1. It was going to be incredibly cumbersome to keep everyone up to date with changes, particularly if it meant running across 22 acres with rolls of printouts every time a change was made.
2. Tracking issues was also going to be a challenge on a job that size. There were bound to be thousands of changes, and being able to easily find and track the relevant information for each one would be nearly impossible.
3. In the big picture, it was also going to be a logistical feat to track what was happening across the entire project and keep the work flowing smoothly.



Finding the mobile solution for the field

When Granger made its initial bid for the project, they were considering a software investment that would allow them to reduce costs associated with paper - reducing the amount of sheets and other documents they had to print, and the amount of time and labor required to distribute them.

With this in mind, Granger had previously deployed tablets and software solutions into the field with mixed results. Because the prior tablet usage wasn't strictly enforced, the company didn't experience the rewards it had anticipated from their use. The management team recognized that ease of use for the foremen and on-site workers was going to determine whether in-the-field software was adopted. That, and the lure of having the most current drawings available at any given moment.

The project manager Greg Brand and project engineer considered three construction apps, and settled on PlanGrid because of what they personally had experienced in the field. The team had first hand experience of how beneficial PlanGrid would be if they could get everyone on board.

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“A lot of people use PlanGrid and are enthusiastic about it. They see PlanGrid and understand that they always have all the most up-to-date drawings.”

— **Greg Brand**
Project Manager, Granger Construction



Implementing PlanGrid across 22 acres

Before the University of Michigan's athletics project got underway, Granger bought PlanGrid licenses for all of its subcontractors, and mandated that everyone use it across the build.

To get everyone up to speed with the software, they made sure everyone's device was loaded with PlanGrid, and offered a two-day, in-house course. The training went smoothly and they even developed some super users who recognized PlanGrid's ability to keep their drawings current. They were ready to deploy on a full-blown project.

Tracking issues

The time spent tracking issues on this project could have been overwhelming. With PlanGrid, the issue tracking tool made life easier for everyone, and the rolling issues log gives the owner and project manager a sense of how the project is moving along. As construction now moves into its final phases, ten punch lists have been created for different areas of the project, so it's still easy to get a sense of where each piece of the project stands.

For the team on the ground, the markups and issue tracking tool means electronic RFIs are resolved faster, and everyone is aligned when discussing specific issues. They all have access to the same information and photos, and it's incredibly easy to add attachments using the issue tracking tool. No printing is required — they just pin photos to the appropriate sheet. It's also convenient and fast, so the whole team is able to find the right details and photos exactly when they need them, without the frustration of searching through emails.

By saving time, Granger not only saved money, but kept the project on track to meet its targeted deadlines.

Tracking progress

The team used progress photos throughout the project to keep track of changes and reference them directly on the drawings. Before PlanGrid, it was hard to locate the most up-to-date photos when there were potentially hundreds with the same name. With PlanGrid, it was incredibly easy to pin photos directly to a drawing, or search and find photos at the touch of a button. That meant it was easy to track progress in each area and coordinate work among the trades, which results in a better workflow and an efficient use of labor.

Today, everyone on the project uses PlanGrid: the architect, subcontractor, superintendent, project manager, project engineer, inspectors, commissioners, and administrative assistants. It's a relief to the whole team, from the office to the field, knowing that everyone is on the same page. It's no coincidence that some subcontractors who first used it on this project now use it in their work outside of Granger.

Whenever anyone uploads an update, they know everyone will receive it. The whole team is working from the most current set, understands what's happening, and knows what needs to be addressed. With FTP sites, there's no guarantee that's happening. Every Granger project is now moving toward being fully onboard with PlanGrid.

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“The results we've seen here have made everybody in the company want to get on board.”

— **Chris Scharlach**
Superintendent, Granger Construction

Catching changes, avoiding rework and saving time with PlanGrid

The Granger team quickly appreciated how much time PlanGrid helped them save. Because they were able to distribute new drawings to the entire team electronically, people were always confident that they had the most current drawings, and no longer had to run across the site distributing endless rolls of printouts. The time and money they save by not printing changes is incredible—their printing costs have dropped to negligible amounts. They've taken their distribution costs from up to six labor hours spent over two or three days for every change, to instant distribution with zero labor hours. There's no more running back and forth to the trailer, and that means very real labor savings.

Greg Brand explained that before PlanGrid, if the architect issued a CCD, it was emailed to everyone to print out. The subs' office would rarely get changes into the field in time, and the contractor might not even have the most current drawings. That could result in time-consuming and expensive rework.

Early in the project, the Granger team used PlanGrid to identify changes that weren't included in the CCD—there were 1,500 of them.

Using PlanGrid, they were able to quickly recognize changes, notify the team, and price themselves correctly during the bidding process. This process proved vastly superior to printing out the last few versions of the sheets, and visually inspecting the different pages by flipping back and forth.

What's more, they've reduced the quality gaps that happen when multiple versions are used and changes aren't caught in time. That reduces rework, which is another incredible vehicle for saving up to four percent of a project's total cost.

Key Results

- **Nearly 100%** reduction in printing budget
- **6 hours** saved per change order
- **Over 1,500** changes detected

