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Morrison Yard

Preserving Design Intent When The Build Doesn't Match the Drawings

WHILE THE COMPLETED BUILDING APPEARS CLEAN AND PRECISE, ACHIEVING THAT RESULT MEANT SOLVING PROBLEMS COMMON TO NEARLY EVERY CONSTRUCTION PROJECT.

Project: Morrison Yard

Location: Charleston, SC

Building Type: Office Development

General Contractor: Balfour Beatty

Developer: The Keith Corporation

Scope:

- 27,000 SF ACM Panels (Alucobond)
- 41,200 SF Morin MX-1 Box Rib Panels
- Custom Architectural Sheet Metal Features
- Laser Scanning and As-Built Modeling Support

PROJECT OVERVIEW

Located on the Charleston waterfront, Morrison Yard is a landmark office development featuring more than 68,000 square feet of architectural cladding, including 27,000 square feet of ACM panels and over 41,000 square feet of roll-formed aluminum wall panels. Kistler was responsible for nearly every exterior cladding element on the project outside of the curtain wall and brick facade.

While the completed building appears clean and precise, achieving that result meant solving problems common to nearly every construction project: The building in the field rarely matches the building in the drawings.

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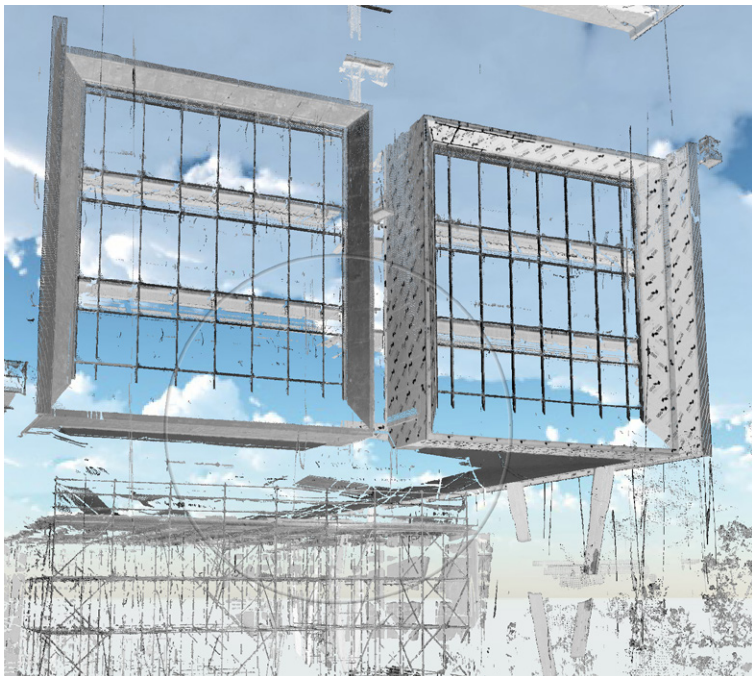


SOLVING THE MAJOR CHALLENGES

Every trade on a project works within acceptable tolerances. Structural steel, concrete, framing, waterproofing, glazing, and curtain wall systems may all meet their individual requirements. By the time cladding installation begins, small deviations have accumulated into dimensional differences that no longer match the original design.

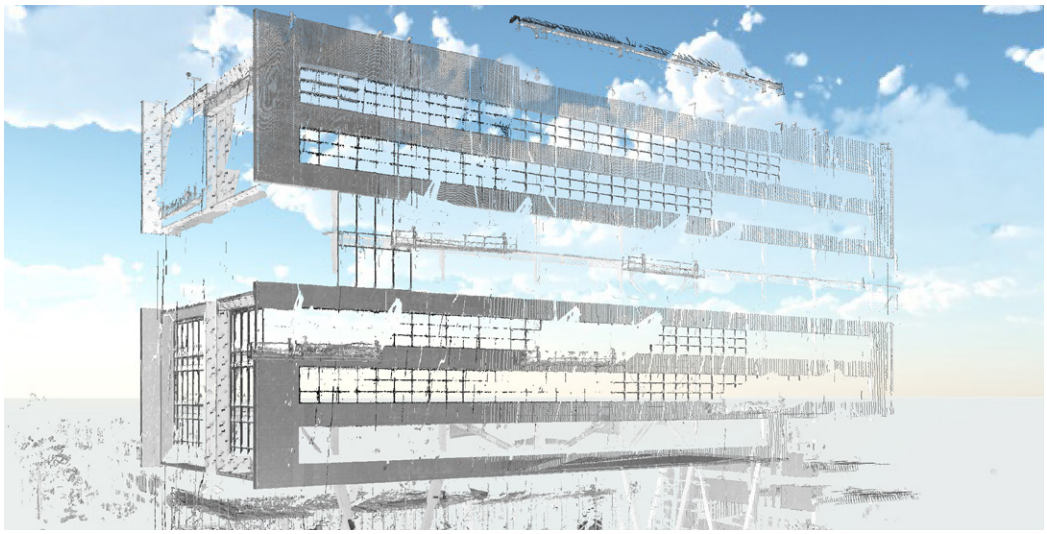
Morrison Yard is a good example of how these add up over time and dramatically change the build from the original plans.

One of the most visible problems showed up around the building's signature picture-frame window openings. Areas that were intended to be square and uniform varied from opening to opening. Angles no longer aligned, window depths changed across the same assembly, and structural elements that appeared consistent in the drawings were noticeably different in the field. Fabricating panels directly from the design documents would have resulted in misaligned joints, uneven reveals, and a finished appearance that differed from the architect's intent.

Elsewhere on the building, the issues revolved around the signature vertical fins that visually traced lines across the entire building, without interruption. The original design called for extruded aluminum fins within the curtain wall. To maintain the same appearance across the windows, Kistler developed custom-formed sheet metal fins that continued those lines beyond the glazing system, creating the appearance of a single continuous design language.

The difficulty was not manufacturing the fins themselves. It was maintaining perfectly straight visual lines across long runs where the underlying framing, curtain wall, and structural elements were no longer perfectly aligned. Even minor inconsistencies would have been visible from across the site and disrupted the strong horizontal and vertical geometry that defined the building's appearance.

Although the challenges appeared in different areas of the project, they shared the same root cause: the building being constructed was not identical to the building represented in the drawings. Kistler's role was to find those differences, engineer around them, and ensure the finished facade still looked exactly as the architect intended.



ONE SOLUTION: SCAN FIRST, FABRICATE SECOND

For ACM systems, field verification is standard operating procedure at Kistler. Using FARO laser scanning technology, Kistler captured precise as-built conditions around the most complex areas of the building, creating detailed point-cloud models of the actual structure rather than relying solely on construction documents.

The scans revealed issues that were impossible to fully understand from field measurements alone:

- Window framing that was out of alignment
- Inconsistent depths around picture-frame openings
- Soffits with visible "bellying"
- Column conditions that differed from structural assumptions
- Variations that required custom panel shaping and adjustment

The scan itself didn't solve the problem, but it identified the problems. Kistler's engineering team then adjusted panel geometry, sub-framing layouts, and fabrication drawings to meet field conditions while preserving the appearance the architect intended.

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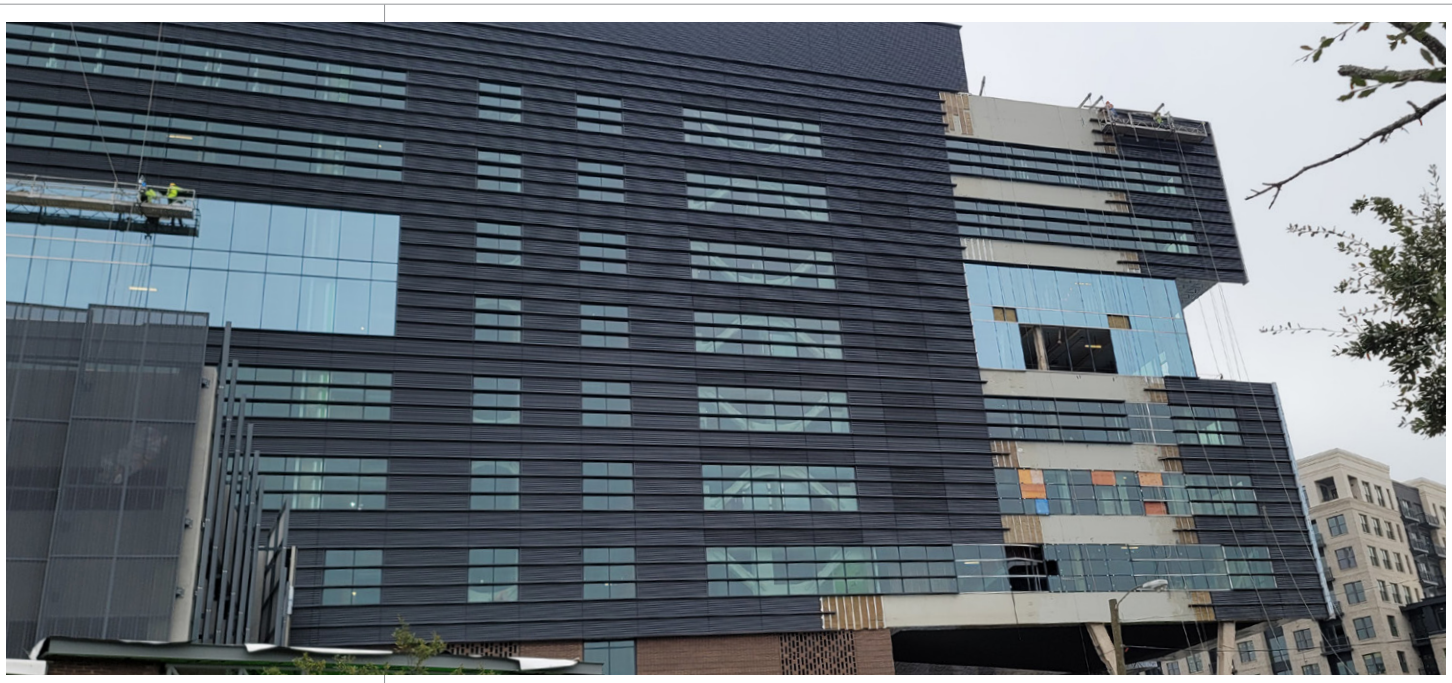

ONE SMART CHANGE BEFORE IT BECAME A PROBLEM

Not every challenge at Morrison Yard was the result of field conditions. Some were prevented before they ever became an issue. The building's long runs of roll-formed aluminum panels were designed to create strong, uninterrupted horizontal lines across the facade. While visually striking, large metal panels introduce their own problems.

As temperatures change, the panels will expand and contract. On long runs, that movement can be significant. Without proper separation between panel sections, overlapping panels can rub against each other during these expansion and contraction cycles. Over time, that contact will wear through the finish and create thin silver lines that become visible across the facade.

Kistler recommended incorporating vertical T-shaped separators between panel sections. These elements were not part of the original design intent, but they offered the necessary space for thermal movement while maintaining the clean appearance of the facade.

It was a small adjustment but years from now, when the panels continue to look as intended, that detail will be one of the reasons why.

One of the hallmarks of a successful project is a client willing to listen to experienced trade partners. Morrison Yard is a good example. The project team saw the long-term value of the recommendation, and the result is a facade designed not only to look good on opening day, but to continue looking good for decades.

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THE RESULT

The finished building maintains the clean lines, consistent reveals, and visual rhythm envisioned in the original design despite significant variations in the underlying structure.

Most occupants and visitors will never know the challenges hidden behind the panels, but that's the point. We help fix or hide the unsightly blemishes that happen during the build. Our field team simply makes the building look like it was always supposed to.