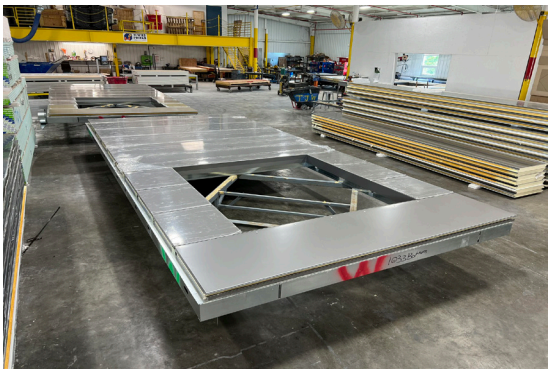
# Case Study:
## U.S. Department of Agriculture - Normandy, MO

TJ WIES PREFAB
Safety. Efficiency. Certainty.

## Project Overview

**Client:** U.S. Department of Agriculture (USDA)
**General Contractor:** McCarthy Building Companies
**Prefab Partner:** TJ Wies Contracting
**Location:** Normandy, Missouri
**Project Size:** 83,000 sq. ft.
**Prefab Scope:** 27,000 sq. ft. of prefabricated VERSAWALL® panels
**Projected Completion:** Summer 2025

## Project Background

The USDA's new Midwestern Lab Facility in North St. Louis County is designed to support farm-to-table food safety strategies across the country. The 83,000-sq-ft facility includes microbiology and chemistry labs, a processing center, administrative offices, two loading docks, and a large warehouse for field operations.

To speed up construction and reduce site disruption, McCarthy Building Companies partnered with TJ Wies Prefab to fabricate and install more than **27,000 sq. ft. of VERSAWALL® "all-in-one" metal wall panels**—weighing between 1,800 and 3,500 pounds each.

## Design & Planning

Prefabrication was selected to **accelerate the building enclosure**, ultimately saving time on the project schedule and improving on-site coordination. TJ Wies Prefab utilized **standardized components** for the VERSAWALL® system, which streamlined the fabrication and installation process.

Although BIM and digital twin technologies were not leveraged for this project, the success of prefabrication relied heavily on early planning and logistics alignment.

## Fabrication & On-Site Assembly

All panels were **manufactured in TJ Wies' St. Peters, MO prefab facility** and transported via tractor trailers to the jobsite in Normandy. Once on-site, TJ Wies' team completed installation of the **entire exterior enclosure in just 30 days,** using a six-person crew.

Despite facing field challenges related to **out-of-plumb structural steel** and **concrete stem wall alignment,** TJ Wies' crews made real-time adjustments to embed locations and panel beds—keeping the project on track.

## Schedule & Efficiency Gains

Prefabrication helped cut the wall installation time by **more than 50%** compared to traditional methods. This significant time savings supported the broader project goal of having the structure enclosed quickly, allowing other trades to begin interior work sooner.

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### Cost & Material Impact

While prefabrication carries a **higher upfront cost,** it yielded long-term savings through:

- **Labor efficiency** (fewer on-site workers over less time)
- **Material waste reduction** (studs ordered to exact lengths—no on-site trimming)
- **Fewer rework issues** (panels were quality-checked before leaving the shop)

These benefits contributed to overall **cost control and construction reliability.**

### Challenges & Solutions

**Key Challenges:**

- Tolerances related to structural steel and concrete misalignment
- Coordination between design intent and field realities

**Solutions:**

- Field teams adjusted concrete embeds on-site
- Panel fabrication beds were recalibrated to match actual field dimensions

These adaptive strategies ensured the prefabricated elements fit seamlessly into the evolving field conditions.

### Sustainability & Quality

- **Material Efficiency:** Exact material orders eliminated waste from offcuts
- **Low Environmental Impact**: Fewer deliveries and faster install reduced on-site disruption
- **Improved Quality Control:** Panels were constructed under controlled conditions at TJ Wies' facility

### Conclusion

This project reaffirms TJ Wies Contracting's ability to deliver large-scale prefabrication solutions that drive efficiency, quality, and value. The USDA Midwestern Lab stands as a model for how prefab can power high-performance, mission-driven construction.

### Results & Lessons Learned

**Outcomes:**

- 50% reduction in on-site panel installation time
- Improved construction sequencing and quality
- Lower material waste and site labor

**Lessons for Future Projects:**

- Earlier communication with the GC's construction team could help identify and resolve site-specific conditions before fabrication begins.
- Continued use of prefab will remain a priority, especially when schedule certainty and enclosure speed are top goals.

"TJ Wies Prefab collaborated closely with McCarthy, the design team, and the client to deliver a best-value solution for the exterior. The team achieved a cost-effective approach that accelerated the schedule while preserving the metal panel design and quality the client envisioned."

- **Mark Duda**, Vice President of Preconstruction, McCarthy Building Companies, Central Region