

CASE STUDY: BJC - Edwardsville, IL



**TJ WIES
PREFAB**
Safety. Efficiency. Certainty.

PROJECT OVERVIEW

Project Name: BJC Edwardsville Clinic Prefab

Project Manager: Jake Moyers

General Contractor: Impact Strategies

Location: Edwardsville, IL

Building Type: Medical Office Building (MOB)

Size: 22,000 sq ft

Construction Timeline (Fabrication & Install):

- Fabrication: 4 weeks
- Installation: 10 days

Approximate Time Saved: Approx. 4 weeks

BACKGROUND & OVERVIEW

This 22,000-square-foot medical center required a fast-tracked schedule and high-quality construction to meet the demands of modern healthcare delivery. Prefabrication was selected as a strategic solution to reduce multi-trade durations, improve efficiency, and accelerate the overall project timeline. For this project 278 prefabricated wall panels were used, and of those 38 were prefinished headwalls with fully tested and installed Medical Gas and Electrical inwall.

By shifting work off-site, the team minimized on-site congestion, improved coordination, and ensured consistent quality—key factors in healthcare construction.

DESIGN & PLANNING

The project incorporated **headwall assemblies and frame-only panel systems**, designed specifically for prefabrication.

A strong emphasis was placed on:

- **BIM coordination**
- **Standardized components**
- **Advanced logistics planning**

Using BIM modeling and CAD layouts, the team ensured precise alignment between design intent and field installation, allowing for seamless integration of prefabricated components.

FABRICATION & ASSEMBLY

All components were manufactured at the **TJ Wies Prefab Innovation Center** and transported to the jobsite by **Negwer Materials**.

On-site installation was highly efficient:

- Prefabricated assemblies were delivered on pallets
- Materials were staged according to install sequence
- Crews followed a clearly defined workflow

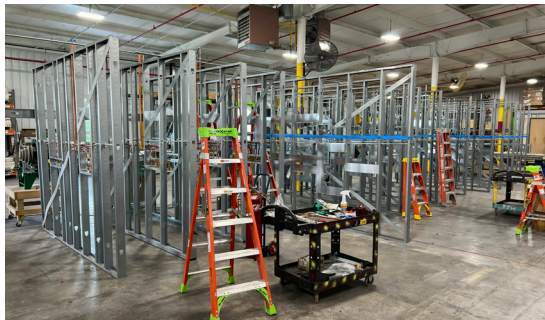
This approach optimized **sequence, speed, and coordination**, significantly reducing installation time.

SCHEDULE & EFFICIENCY

Prefabrication resulted in a **30% reduction in overall build time** compared to traditional construction methods.

- No major delays were encountered
- Installation was completed in just **10 days**
- Trade stacking and field conflicts were minimized

The streamlined process allowed the project team to stay ahead of schedule from start to finish.



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COST IMPLICATIONS

The project realized measurable cost savings through:

- Reduced labor hours on-site
- Lower material waste
- Shortened project duration

Overall, prefabrication contributed to a **lower total project cost**, driven primarily by schedule efficiencies and reduced field labor.

CHALLENGES & SOLUTIONS

Key challenges included:

- Tight tolerances
- Multi-trade coordination
- Transportation limitations
- Change management

These were mitigated through **early and continuous coordination with MEP partners**, eliminating the need for time-consuming field adjustments typical in traditional construction.

SUSTAINABILITY & QUALITY

Prefabrication played a significant role in improving both sustainability and quality:

- **Reduced material waste**
- **Lower on-site environmental impact**
- **Enhanced quality control through QA/QC processes**

By fabricating in a controlled environment, the team eliminated rework and ensured consistent, high-quality assemblies.

STAKEHOLDER COLLABORATION

Collaboration was driven by:

- **ACC (Autodesk Construction Cloud)**
- **Integrated BIM coordination**
- **Active involvement from all MEP partners**

Technology enabled real-time coordination and accurate representation of as-built conditions, ensuring alignment across all teams.



OUTCOMES & LESSONS LEARNED

The project delivered strong results across the board:

- **Time Savings:** 4 weeks
- **Cost Savings:** Reduced labor and overall project costs
- **Quality:** Improved consistency and zero rework

The team unanimously supports the continued use of prefabrication, with a key takeaway being the importance of **earlier coordination and partner buy-in** to maximize results.



“WORKING WITH TJ WIES PREFAB STREAMLINED OUR BJC PROJECTS IN A BIG WAY. THEIR PREFABRICATED HEADWALLS AND MULTI-TRADE ASSEMBLIES IMPROVED QUALITY, REDUCED INSTALL TIME, AND HELPED US STAY AHEAD OF SCHEDULE—MAKING DELIVERY FASTER AND MORE EFFICIENT.”

— CLAYTON REHKEMPER

