



BJC St. Peters Campus

St. Peters, Missouri

By Caryl Kinsey Fox, AIA | Based on an interview with Clay Goser, CEO Symphony Performance Improvement and Dirk Elsperman, COO Tarlton Construction

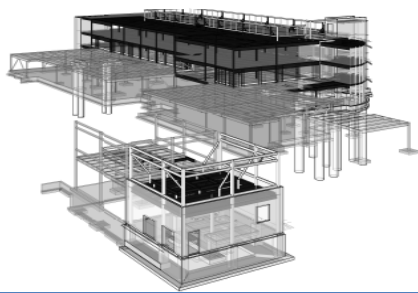
99% Post occupancy approval

65% Construction Contingency unused

4% Giveback from GMP

INSIDE:

- project information
- successes
- lessons learned
- insights into:
 - IFOA Contract
 - Value added examples
 - Waste reduction
 - Realistic scheduling
 - Metrics for the project
- interview excerpts



PROJECT INFORMATION

PROGRAM

- 73,000 SF Scope
- 18 new inpatient rooms (16% increase) shelled space for 46 more beds.
- New Inpatient Pharmacy
- Shelled office space for future

COST/ TEAM

- \$28M revised Budget
- Tarlton Construction Pratt Design Studio, KJWW Engineering, Murphy, Sacks Electric.

CHALLENGES

- 30% of the new program space built over existing space
- Maintain full campus operations
- 400% increase in sf during design
- 26 month total project schedule
- Subsurface + weather + strike = 64 days lost with no overall schedule extension.

SUCCESSSES

- ✓ 6 party IFOA (Integrated Form of Agreement) contract where everyone had skin in the game. Contract defined how core group would interact. Used GMP's and fixed fees. Subs signed "Lean Joining Agreements".
- ✓ The team was able to help the client learn that their program would cost 50% more (\$19M) than their budget (\$12M). As a result the owner got 400% increase in project square footage for only \$28M.
- ✓ Shared BIM modeling for Structural and MEP.
- ✓ Owner requested complete redesign of curtain wall one week before going out to bid. Redesign completed in 4 months.
- ✓ Construction team was able to help the owner with an fire, unrelated to construction by both assisting fire fighters and provide demo and patching.
- ✓ 90,000 man hours over 15 month.
- ✓ Only 1 incident which was treated from the first aid kit. One surprise OSHA inspection with 0 citations and 0 violations.

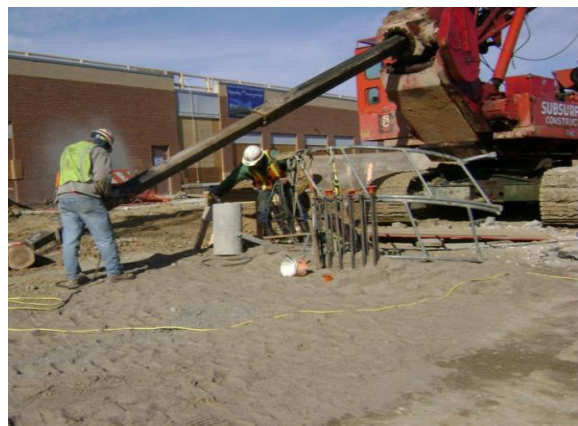
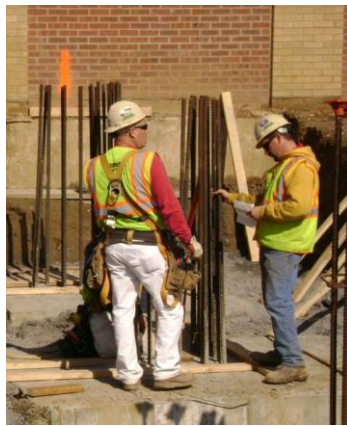
LESSONS LEARNED

DOs

- ✓ Bring on critical subs early
- ✓ Intensive and realistic coordination early leads to work efficiency
- ✓ Get field buy in, including daily coordination meetings.
- ✓ Abandon GMP as a Guaranteed Minimum Price

DON'Ts

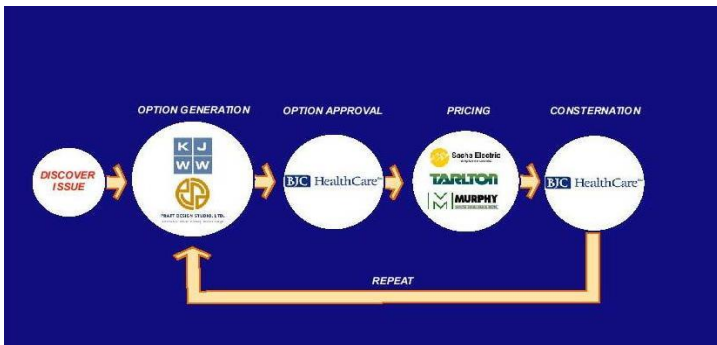
- ✗ Focus on individual costs to team members.
- ✗ Expect changes in the process without changing the contract.



INSIGHTS INTO:

SUBMITTAL & RFI PROCESS REFORMS

The traditional linear submittal process is huge time waste.



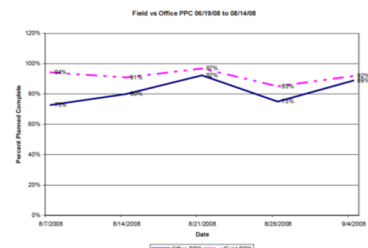
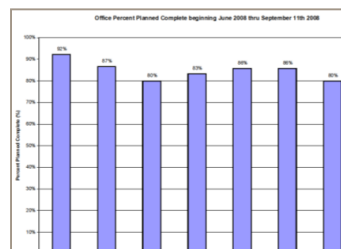
REALISTIC SCHEDULING

- Critical sub-contractors involved during design.
- Pull Plan Scheduling
 - “Big Room” concept
 - What can I do? What can you do?
 - Planning vs. Scheduling
- Weekly Work Plans (WWP)
 - Foreman’s weekly schedule
 - Ownership and Commitment



METRICS FOR THE PROJECT

- Commitment tracking - Field Labor PPC and Office PPC.
- Earned Value Analysis – verify T&M billing agrees with amount of work complete.
- Savings/ contingencies/ incentives –
 - Final cost less than original GMP
 - 4% cost savings on \$24M design/ construction
 - Core Team shares cost savings; portion to reward subs



Q. What was your impetus for trying IPD?

Working for the government, we constantly heard if we could do CM At Risk like the private sector, everything would be roses. What I found was the private sector had the exact same issues. The only continuity I saw was the owner. I realized that it had to be problems with how we were delivering projects. So on every project I either break the budget or I break the schedule. I either have buyers remorse or I didn't get the quality I wanted. Sometimes we meet all the success criteria but I will never hire them again because it was so painful.

Q. Did you think trying IPD was risky?

I don't think it was risky, I just wanted to try something new. My first job wouldn't be perfect but it would be better than past projects. In 2005 NIBS outlined the major problems with typical project delivery and developed a roadmap for IPD. We started this project in 2007 using some of these methodologies. We hired a LEAN consultant to work with the team, paid for with the projected saving we would see on the project.

According to Evertt Rogers, people fall into 4 categories, pioneers, early adopters, early majority, late majority, and laggards, I like to think of myself not as a risk taker but as an early adopter. Pioneers have really good ideas but don't know how to implement them. Early adopters aren't scared of new ideas and will find their advantages. The chasm is between the early adopters and the early majority, who want to come in when all the bugs are worked out. My future jobs would go smoother, but I could see real advantages to these methodologies.

Q. Does the owner need to drive this?

No, in fact from the team's perspective, if an owner isn't driving it, I would definitely suggest this process. You have to protect yourself from risk and if the owner happens to be the risk then the partners on the project should look to protect each other.

Q. Why did you choose this team?

Tarlton had minor healthcare experience, which put their team at a disadvantage. In the end, they hit a homerun. This made me realize how quick we judge firms based solely on their resumes. I looked at what each team brought, not the individual players. Tarlton had a good healthcare architect and a solid engineering firm (important since 40% of the risk in healthcare is

MEP). Tarlton builds clean rooms and pointed out the difference between a surgery suite and a clean room is that the clean room is built to much more exacting standards.

Q. How do you define Collaboration?

I think there are three levels, one is coordination, one is cooperation, but the third level is engaged collaboration. Cooperation happens as long as both parties benefit. Engaged collaboration starts with someone saying I need you to redraw your drawings because if you spend 100 hours and I save 300 hours we come out 200 ahead. So engaged collaboration happens when people look at the use of their resources to help other members of the team, understanding that the team ensures no one loses. You look out of other people's interests.

Collaboration includes everyone on the project. We tried to push our Super for a 5 min meeting around the plan table every morning. He said in hind sight he should have listened. Meeting ad hock, with one sub and then another takes 10 minutes and they don't get the benefit of hearing what the other said. Collaboration doesn't just happen at the top, it happens at every level of the project.

“If you were king for a day and there were no constraints, what would project delivery look like for this project.”

Quote from the RFP
Clay Goser, CEO
Symphony Performance
Improvement