



A Lean safety story: All together in a new culture of caring

Project Description:

Jacobs implemented Lean practices on a large-scale greenfield pharmaceutical project to meet an aggressive schedule by optimizing workflows across multiple buildings. The strategy emphasized modular construction, prefabrication and integrated planning to increase worker safety and improve efficiency.

Key Lean Focus Areas:

- ▶ Last Planner System® (LPS®)
- ▶ Workflow/ Handoffs/ Reliability
- ▶ Respect for people
- ▶ Optimizing the Whole
- ▶ Gemba Walks

Actions Taken:

- ▶ Top-down construction that focused on synchronization of different trade groups
- ▶ Maximized worker safety
- ▶ Weekly walks with the client and team leadership to increase visibility and address real time challenges.
- ▶ Offsite work reduced onsite worker hours and exposure.
- ▶ Onsite full-time medics provided proactive care and decreased response time

What Worked:

- ▶ Large modular pipe racks and pre-built process skids
- ▶ Modular wall systems and optimized space planning
- ▶ Daily coordination meetings

Challenges:

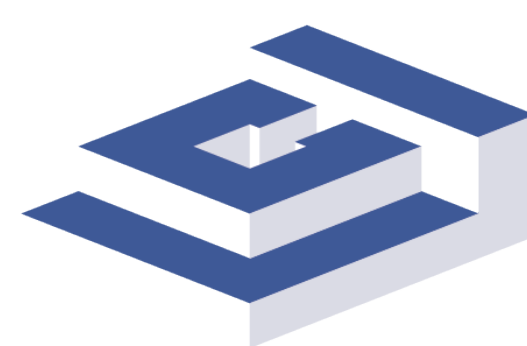
- ▶ Inconsistent LPS use across buildings
- ▶ Lack of group agreement/buy in on LPS
- ▶ Frequent changes and inconsistent priorities
- ▶ Lack of information sharing and feedback loops

Advice for others:

- ▶ When planning your work through LPS, evaluate your tasks for safety and engineer out hazards via constructability reviews.
- ▶ Think the work through in advance to best utilize tools, methods and personnel.

Value Delivered:

- ▶ Utilizing prefabrication increased safety and improved outcome predictability.
- ▶ Managed risk in advance.
- ▶ Streamlined planning with means, methods and tools determined in advance.



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