

"If I had two hours to chop down a tree I'd spend the first hour sharpening the ax." – Abraham Lincoln

*The construction process is very inefficient with **36%** of craft labor hours spent on **NON-INSTALLATION** activities!*

*This presents a **HUGE OPPORTUNITY** for contractors that take the time to become more proactive in pre-planning their projects.*

This is the amount of time spent moving around the jobsite, mobilizing and cleaning up every day, studying the plans, laying out the work and other activities not directly related to actual installation.

This "non-installation" time is spread evenly over the course of the typical project. A few minutes here, a few minutes there, day-by-day, spread over the entire crew. More than half of this "non-installation" time is spent on plans, layout and material logistics.

- What if you could shift those activities to the front of the project, the "Pre-Planning" stage?
- Could those activities be done more efficiently as a dedicated task rather than in the field a few minutes before going to work?
- How much money could you save in efficiency if more of the work was pre-planned? Could you get your crew to work a few minutes earlier?
- Could you minimize trips from the work areas to the job office / gang box if things were better planned?



How much would the bottom-line on your projects change if you could improve labor productivity by 5%?

Construction & Problems

Constructing a project is challenging; it is very messy. There will always be problems. Problems are a fact and they need to be factored into your plans.

Problems are often amplified on construction projects because of the separation of the design functions from the construction functions.

Architects, engineers and design consultants are often forced into “low-bid” contracts and the pressure to constantly deliver lower prices means cutting out on coordination between engineering disciplines, eliminating detail drawings, cutting down on elevations, minimizing plan-checking and peer reviews, etc.

All of the cost-cutting on the design side means that fewer and fewer conflicts are caught at the design stage and left for the contractors to figure out.

How you overcome problems will determine the success of your project.

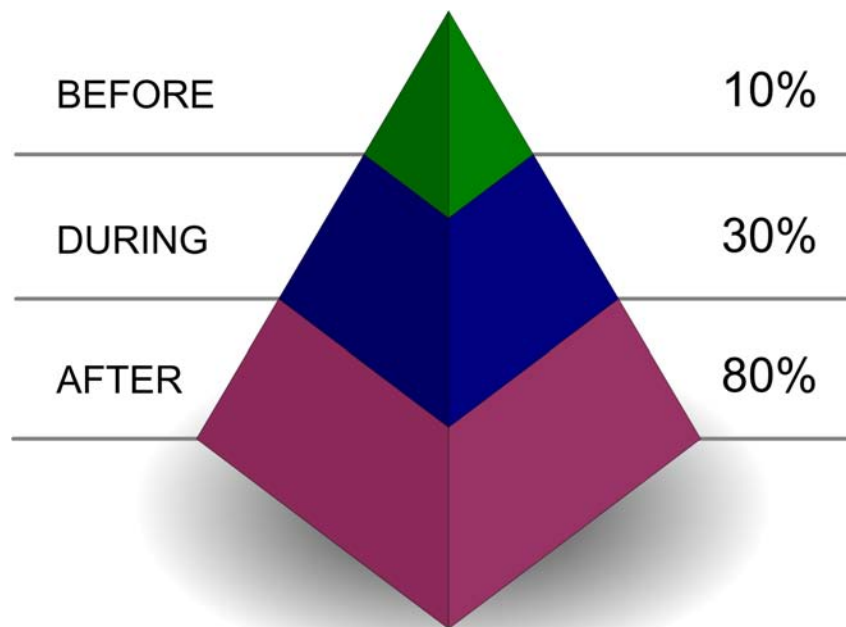
“If a problem has no solution, it may not be a problem, but a fact, not to be solved, but to be coped with over time.” – Shimon Peres (Rumsfeld's Rules)

The Cost of Problems

Problems are not usually recognized until you are right in the middle of them – at this point the problem will cost about 30% to fix – so if you are in the middle of a \$1,000 piece of work and discover a problem it will cost about \$1,300 before you are done.

In the worst case, when problems are discovered after the work is complete it will cost up to 80% to fix.

*Our focus needs to be on spending whatever resources are necessary to identify and solve problems **BEFORE** we are in the middle of construction.*



A 5,000 Man Hour Project

Pre-planning is just what it sounds like – it is about taking the time that is normally spent on planning throughout the project and shifting it to the beginning of the project.

When you look at what happens during the day for one person it just looks like a few minutes and it seems impossible to save any real time. Let's look at a 5,000 hour project and how the time is spent in the field.

DESCRIPTION	%	HOURS
Study Plans	3%	150
Material Procurement	3%	150
Receiving & Storage	3%	150
Mobilization	5%	250
Site Movement	5%	250
Layout & Marking	8%	400
Actual Installation	64%	3,200
Cleanup	3%	150
Breaks - Non-Productive	6%	300
TOTAL DAY	100%	5,000

Over a 1 year, 5,000 man hour project there are 6-7 hours per day spent on non-installation activities; a total of 1,800 man hours. We can plan our attack by focusing on four key areas:

1. Plans & layout – 11%, 550 hours
2. Material Logistics – 6%, 300 hours
3. Mobilization, cleanup and site movement – 13%, 650 hours
4. Breaks and other non-productive time – 6%, 300 hours

*A small company with 15 field employees can add **\$75,000** to the bottom-line just by decreasing non-installation activities by a few minutes per day.*

Planning & Layout – Where Can You Be Most Efficient?

There is no question that planning and layout has to be done. The question is when and where can it be done most efficiently?

- ❑ Pre-planning is about moving as many of the field layout, coordination and planning issues to the front of the project as possible.
- ❑ Pre-planning is about taking the activity out of the field and into a controlled environment that is specifically designed for efficient planning.
- ❑ Pre-planning is about taking advantage of tools that allow more accurate layout and communication of ideas.
- ❑ Pre-planning is about finding and resolving problems before you start working to minimize disruptions to progress and re-work.
- ❑ Pre-planning is about locating value-engineering and pre-fabrication opportunities well before construction starts.



There is no hard and fast rule about what pre-planning looks like. The process will look slightly different for each company and project type.

The goal is to build a culture into the company where people seek out opportunities to shift work from the project to a more controlled environment. It is about shifting the thought process from being reactive to proactive.

D. Brown Management provides Pre-Planning facilitation services that include critical training for the project team on pre-planning, impacted productivity and production tracking. During the sessions we focus on identifying risks and opportunities specific to your project. Working together we develop action-item lists and the outline of a project plan. These sessions can be done remotely to minimize the impact on your project team. Learn more at:

www.dbrownmanagement.com/preplan.htm

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