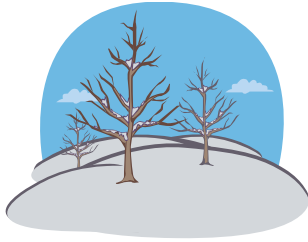


Roaring Brook News

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The focus of this issue is the construction site, construction operations, and construction safety. We hope that our feature article will give you some useful concepts to consider.

The construction process is complex.

Anyone who has participated in a construction project knows that the process of conceiving, designing and producing a completed project is complex and involves many people with specialized expertise. Owners, financial institutions, engineers, architects, production planners and many other people are often involved in the design and planning of the project. However, in the end, the physical aspects of the project must be produced by construction managers, construction contractors and construction workers, who segment the work into individual construction items to be delivered according to an organized work plan.

It's important to plan for what is not on the project plans.

In the construction industry, many of the things that need to be done at the project site are not specifically detailed on the project plans. In fact, it is customary for the project plans to describe the finished product in detail without giving detailed instructions regarding the means and methods to be used for delivering the finished product. Determination of the means and methods of construction is left to the discretion of the construction team that is engaged to deliver the finished project.

Two important and related items that are not detailed on the plans are temporary fixtures for constructing the work and construction safety planning. Both of these items have potentially enormous effects on the overall success of the project and on the welfare of the members of the construction team.

Don't forget the fixtures.

Construction fixtures are those items that are used to construct the project but that usually do not get incorporated into the finished product. Examples are shoring and bracing for excavations, construction staging, formwork, falsework, and temporary hoisting apparatus. These items allow construction of the project but do not become a part of the finished work. In many cases these items are as mechanically and structurally complex as the work to be constructed. Their purpose is to allow safe and efficient construction of the project. Design of construction fixtures must be approached with adequate regard for their importance in the construction process.

Design of construction fixtures is one of the work items that is often overlooked in project planning. Since these elements of the work have immediate and direct effects on the efficiency of production and on the safety of the construction workers, it is important to give detailed consideration to the design of construction fixtures. It's just good safety and business practice.



**It's Winter Now
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Plan Your Spring Projects Now

Civil, Structural and Construction Engineering

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Construction Site Safety: It Requires a Proactive Approach

Make Construction Safety Part of Construction Planning.

Few things have as direct an impact on the success of a construction project as the safety of the workers on the site. A safe project, with good safety practices and a good safety plan, promotes efficiency and timely completion of the project. A project that lacks good safety practices and has a poor safety plan is an invitation to tragedy and is at risk financially.

The importance of planning for good project safety cannot be over emphasized. Safety planning is a team effort. It must be a continuing effort that involves all participants in the project, from the owners to the individual workers. A proactive approach to project safety can have positive and immediate results and can contribute to successful project completion.

This article is not intended to assign detailed responsibility for any aspect of safety to a specific project team member. Every project is different. Project safety requirements and responsibilities will, therefore, differ among projects and will differ over time as the process of construction progresses.

Safety is everyone's responsibility.

It seems like a simplistic concept. How can everyone be responsible for the same thing? The answer lies in the dynamic nature of construction operations. For example, the operations manager of a construction company may have the responsibility to order the correct size of lifting equipment for installation of the

steel framing for a building. At the moment of making that decision, that manager has a great influence on the overall safety of the jobsite. At the time of lifting the individual pieces of steel, however, the individual workers and the crane operator have a much more direct control over the project safety than the managers on the project have. At that point in time, they are the ones who must make the final check that the lifting apparatus is safe, that the work area is clear for lifting, and that they are wearing their own personal safety equipment. In fact, at some point during the project every worker will need to make decisions that will affect his or her own safety as well as the safety of his or her co-workers.

Safety consciousness happens a little at a time.

Implementing a project safety plan takes continual effort and attention. Keeping the jobsite clean and free from tripping hazards is a daily task. Doing frequent safety talks with individual work crews is an important element in raising the level of safety awareness among the project workers. Not overlooking minor safety infractions is important, because immediate correction of minor problems promotes awareness and reduces the number of small mishaps on the job.

Above all, it is important to lead by example. When you go on a project site, wear all of your required personal protective equipment and show that you are aware of project safety by conducting yourself appropriately. Make safety your high priority and others will follow.

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Some Tips for Safe Lifting and Hoisting Operations

One of the most common operations in construction is the lifting of heavy loads. This operation is also one of the most hazardous. Here are some things to consider when planning and executing lifting or hoisting operations.

Get the right size and type of equipment.

The right size and type of equipment depends not only on the weight of load to be lifted, but also on the size of the load, the shape of the load, and the space where the lifting must occur. Planning for a safe lift must provide for a stable, safe place to locate the crane or other lifting equipment, a stable place to initially position the load, a free path through which to move the load, and a stable, clear area to set the load at the end of the lift.

Keep in mind that the size of a crane required for a lift depends on how far the crane must be positioned from the load. Anyone who has looked at a crane load chart has seen how a crane's load lifting capacity diminishes rapidly as the load moves away from the center of the crane as the crane boom is extended. Remember that the crane must lift the load and any equipment used to attach the load, for example, the block, spreader bars, and slings.

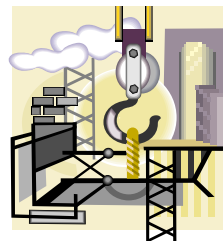
Do not underestimate the size of equipment required. Conditions at the time of the lift may not be perfect. To be safe, it is important to have some extra capacity planned into the lifting equipment to allow for minor field changes at the time of the lift.

Do a sketch and a practice run before you lift.

Get accurate estimates of the load to be lifted and sketch the arrangement of the equipment and load at various points during the lift to make certain you have considered all load configurations. Determine the types of auxiliary equipment needed, such as tag lines, slings, and hardware, and be certain you assemble and inspect them before using them in the lift.

Make a practice run with no load to be certain that the crane can reach all necessary positions and that the pathway is clear in all directions. If there are any problems, do not lift the load until the problems are solved. Provide any specific, required training for workers well in advance of engaging the load and lifting.

Safe lifting requires thought, practice, and good planning.

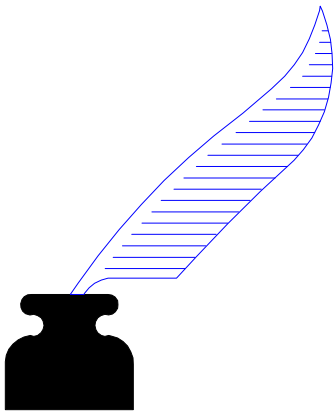


Need Help Evaluating Your Lifting Equipment?

When you need help evaluating your lifting equipment, give us a call. We provide inspections of cranes and other lifting equipment, including mobile units and units fixed inside your buildings. We'll also help you organize your inspection schedule for efficiency. Call and ask for Paul Serrano for more details.

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We Welcome Your Comments

If you have thoughts, opinions or suggestions that you would like to share with us, please contact us using any of the methods or addresses listed below. We want to serve our customers better and look forward to hearing from you.

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