Construction Risk Engineering

Pre-Job Safety Planning Mini-Guide

CHUBB®

This mini- guide provides insights and information that can assist a construction organization as it incorporates safety planning into its operational culture.

Introduction

Success in the construction industry depends heavily on essential and effective planning. Pre-planning activities include formation of progress schedules, procurement of long lead items, value engineering, site logistics, securing permits and coordination of trades.

In recent years pro-active organizations have realized the value and importance of incorporating safety in the operational process of their construction projects, adding pre-job safety planning to their activities.

Accidents and losses impact a construction organization's cost of risk and have the potential to affect its competitiveness. Often accidents are the result of ineffective processes, deficient procedures, poor execution, or poor and inadequate planning.

A pro-active safety culture within a construction organization requires that pre-job safety planning be woven into the operational process.

Why Conduct Safety Pre-Planning?

A 1980's Construction Industry Institute research study identified pre-project/pre-task planning as the single most effective tool contractors have to prevent accidents on their project sites. A followed up study in the 1990's confirmed this conclusion.

Pre-job planning may be the most important tool of any safety program. It is a pro-active approach to safety. Pre-job safety planning requires a contractor to plan work in advance, identify potential exposures and give sufficient consideration to controlling exposures.

The goal of pre-job planning is to reduce risk, which in turn minimizes production disruption, enhances efficiency, increases worker morale and lowers cost.

When, Where and How To Pre-Plan?

Pre-job safety planning is a process that should be performed through all stages of a project, from bidding and project award/subcontract procurement through pre-task/operation.

1. Bid Stage
During the bidding process safety personnel should work with estimators to ensure that proper safety elements and cost are incorporated in the bid price. Key considerations include:

- Develop overview and understanding of project scope of work and associated potential exposures.
- Determine necessary procedures and controls to ensure sufficient time and budget have been allocated.
- Pre-engineer safety elements that need to be incorporated in the fabrication of material or equipment associated with the different elements of the project.

2. Project Award/Subcontractor Procurement Stage

Developing a project-specific safety plan should begin once a construction company has been awarded the project, as a joint effort between the project management team and safety personnel. The safety program/plan should address actions to be implemented and executed throughout the course of the project. Key considerations include:

- Contain all the elements of a written safety & health program that meets or exceeds mandated federal, state and/or local safety standards.
- Include identification of field management personnel, their roles and responsibilities from a safety prospective, subcontractor selection and safety management procedures, emergency evacuation and preparedness, logistics planning, accident investigation and reporting procedures, employee orientation, safety training requirements, safety meetings, substance abuse testing procedures and formation of a safety committee.
- "Build the project on paper," addressing and identifying each major phase/operation associated with the project. For each phase/operation, identify the scope of work involved, exposures associated with that activity, controls that need to be implemented to eliminate and/or control the exposure and the safety equipment/ material needed to safely perform the work.
- Develop a detailed "Fall Management Plan" for projects with operations/ activities involving working from heights, at minimum addressing activities where potential fall exposures may be encountered; means and methods implement and execute to eliminate and/or control these exposures and employee training requirements, as well as an outline of procedures in place to review and discuss the plan with workers engaged in the operation/activities.

Initially, the safety plan may be somewhat generic, as all aspects of the project may not have been finalized and subcontractors procured. However, the project team should have a good understanding of the overall project at hand, as well as the potential exposures expected to be encountered, to intelligently formulate a safety plan. Before each new phase/operation the plan should be fined tuned.

Once the process of selecting and procuring subcontractors has begun:

- Require each subcontractor to develop and submit to the General Contractor /CM a project-specific safety plan addressing the scope of work.
- A subcontractor's job-specific safety program/plan should contain all elements of a written safety and health program to meet or exceed mandated federal, state and/or local safety standards.
- A job-specific safety plan should include the name and responsibilities from a safety prospective of the subcontractor's management personnel involved with the project, scope of work associated with the operation, equipments that will be utilized to perform the work, detailed identification of exposures associated with each of the subcontractor's operation/activities and clear explanation of controls that will be implemented to eliminate and/or control these exposures.

Once the subcontractor's job-specific safety plan is available:

- Meet with the senior subcontractor management to discuss the plan and convey expectations regarding safety on the project.
- Request changes and enhancements necessary for the subcontractor to implement its plan.

Requiring subcontractors to develop a project-specific safety plan enables construction organizations to determine if they have efficiently pre-planned the safety aspects of work to ensure a pro-active safety culture will exist on the project.

3. Pre Task/Operational Stage

During the pre-task/operational stage of a project, the pre-job safety plan should be fine tuned from generic to specific. At this point of the operation/activity more information about means and methods is available, which enables a construction organization to address specific issues in greater detail.

Safety professionals refer to this step either as Job Safety Task Analysis (JSTA) or Job Task Analysis (JTA). Key considerations include:

- A JSTA should be performed by each contractor at the start of any new operation or activity.
- The JSTA should be completed by the contractor superintendent and/or foreman prior to the start of activity.
- The JSTA should clearly outline the scope of work, equipment that will be utilized to facilitate the work, identification of the exposures associated with the work and identification of the controls that will be implemented to eliminate and/or control the exposures.
- Once the JSTA. Is completed and reviewed, the superintendent and/or foreman should meet with the crew performing the activity to discuss the JSTA.

When utilized properly a JSTA is an effective and powerful tool from a safety as well as an operational prospective. To be performed correctly, it requires the individual(s) who complete the tool to carefully and thoroughly understand the activity at hand by pro-actively assessing the exposures associated with the operation and consciously devoting the necessary resources to ensure a safe execution of the work. Equally important is reviewing the JSTA with the employees engaged in the activity, soliciting their input on how the activity may be performed more efficiently and safely.

Summary

Pre-job safety planning is a review of construction activities prior to and during the lifecycle of a construction project to identify and eliminate potential loss exposures. The objective is to reduce the potential for accidents, increase productivity and help control potential losses that may negatively impact the success and profitability of a project.

In addition to this mini-guide, Chubb USA has developed a Job Safety Task Analysis (JSTA) tool that construction organizations may find beneficial in their continued safety efforts. For further information please contact an Chubb/ESIS® construction risk engineering representative.

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