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## **CONSTRUCTION PROJECT SAFETY PLANNING**

### ***Success in Achieving Zero Employee Injury Requires “Safe Production” Planning***

#### **Safety Planning**

When the initial CII Zero Injury Safety Research was performed in 1990-1993, the planning for safe work ranked high as a zero injury culture building technique. This planning is to be done in three distinct project phases: 1. Pre-Project Safety Planning, 2. Pre-job Safety Planning and 3. Pre-task Safety Planning. All affected personnel are to be in attendance; i.e. for 1 and 2, Top Project Leaders (both Engineering and Operations), Purchasing Executive, Project Safety Director, Project Engineers, Project Schedulers, Project Superintendents and Craft Superintendents. These meetings are called by and chaired by Project Leadership. Item 3, Pre-task planning is accomplished by the Craft Foreman and crew so the crew is all present when each pre-task plan is made.

#### **Pre-Project Safety Plan**

The CII research found a strong contribution to an injury free project when safety planning begins in the project planning stages, and points out the benefits to injury free project execution. This means all parties to be engaged in the construction of a project should gather and spend significant time discussing the various phases of the project and what safety considerations should be observed during each phase. This should include site clearing, excavation, underground work, foundations, steel erection, equipment lifting and setting, piping installations, electrical, insulation and start-up. Each of these phases has distinct safety considerations that if planned and provided will enhance protection of the workforce from undue hazards.

#### **Pre-Job Safety Plan**

Each phase of the work is considered a job; i.e., excavation, underground, etc. This planning goes into more detail than safety planning accomplished in the phases mentioned above, heavy lifts included. It is timed to slightly precede the beginning of each phase. In these meetings all affected parties again go over the steps to be taken to accomplish the job and safety precautions highlighted and assignments made to insure each aspect of phase execution and safety oversight is adequately covered.

#### **Pre-Task Safety Plan**

Safety planning at the Pre-Task level is in fact “Safe Production Micro-planning.” Prior to each task, foremen and crew devote the time necessary to plan properly the details of each specific task to be accomplished. This is typically craft-specific planning but at times can involve multi-craft operations. The foreman or a selected craft volunteer will lead the safety planning discussion, outlining each step in the construction sequence, and highlighting the safety considerations at each step. This planning is done using a Task Planning Form to record the details with emphasis on safety. Each member of the crew then signs the plan. Should any change be thought necessary then a new crew meeting is convened to reassess the plan, make any changes and then re-sign the plan. This procedure is followed at the outset of each new task. A given crew may prepare multiple Pre-task plans during the course of a shift’s work. As a minimum on repetitive or continuing work a new Pre-task plan is made by each crew at the beginning of each shift. The pre-task plans should be reviewed by the General Foreman and/or Superintendent during each shift to insure completeness, clarity, and quality. At the end of the shift the pre-task plans are passed by the foremen to the superintendent and ultimately to the safety function for oversight and filing.

### **Safety Planning Truism**

One can plan work and leave considerations of safety out;  
However, one can never plan safety and leave the work out.  
Plan safe production!

### **NAC Safety White Papers**

Through the Position Papers on Safety, the National Academy of Construction has summarized for corporate executives the practices being successfully applied by others, and is recommending that American businesses inside and outside construction investigate and use the safety research of CII. Many users of CII safety research have achieved consecutive work-hours exceeding one million without an OSHA/BLS Recordable injury.

The nine research-based CII Zero Injury safety leadership categories are:

1. Demonstrated Management Safety Commitment;
2. Staffing for Safety;
3. Safe Work Planning, Pre-Project and Pre-Task;
4. Safety Education, Orientation and Specialized Training;
5. Employee Involvement, Behavior Safety and Safety Perception Surveys;
6. Evaluation and Recognition of Safety Performance;
7. Contractor Selection and Management;
8. Accident/Incident Investigation Including Near Misses;
9. Drug and Alcohol Testing.

Please see web site [www.naocon.org](http://www.naocon.org) for a complete set of the previous 15 NAC Safety White Papers.

### **The ROI of Zero Injury Safety Performance**

It is often heard from employers that the cost of implementation of the nine Construction Industry Institute zero injury safety initiatives is expensive. This is true! There is significant cost to the employer to apply the zero injury research. However this investment has a proven rate of return of 400% to 500% per annum when compared to the costs of BLS average injury rate performance for the construction industry in America. When implemented properly the Zero Injury Safety Leadership concept results in injury becoming a very rare event thus protecting your workforce from harm.

### **More Information?**

Information and details on the increasingly popular “Zero Injury Safety Leadership Concept” are available from the following source: Construction Industry Institute, 3925 W. Braker Lane (R4500), Austin, TX 78759-5316 Ph (512) 232-3004.

[www.construction-institute.org](http://www.construction-institute.org)

See the NAC website at [www.naocon.org](http://www.naocon.org) for copies of the Safety Whitepaper series.

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