

Achieving Safety Excellence in Construction: Beyond Compliance

Bob Pacheco, CSP
Regional Director
Adolfo Reynaga, O MS
Regional Director
Banda Group International, LLC
Rio Rancho, New Mexico

Introduction

Based on years of combined experience, Banda Group International (BGI) has designed a combination of principles and concepts that can be incorporated into an existing safety program and results in a project where safety is integrated into all aspects of the project. This experience has been proven time and time again in the support of a wide variety of construction projects including high-tech, industrial, green energy, commercial, residential and heavy construction, both nationally and internationally. Implementation of some or all of the concepts outlined in this document will allow companies to take their existing safety programs to the next level of performance where injuries and incidents are not accepted as part of getting the job done.

Many organizations operate at a reactive level and concentrate only on maintaining compliance with the required regulations. You will find that the above principles can create a worksite that is not only free of recognized hazards, but one that is free from injury to employees, free from costly impacts resulting from incidents, and a workplace with improved employee morale.

Concepts to be covered during the presentation will assist the safety professional in the workplace in achieving safety excellence beyond compliance from project start to finish. Below is a summary description of the concepts presented in this program.

Critical Elements of a Written World Class Safety Program: Having a strong, dynamic, written safety program is the core of any good safety system. Benefits for the company and the project include:

- Reduced injuries,
- Lower insurance rates,
- Reduction of workers compensation, loss time / recordable cases,
- Minimize damage to company assets resulting from incidents,
- Community relationship,
- Improve employees morale and productivity and
- Zero impact to schedule and client impact.

As the owner, general contractor or sub-contractor, it is crucial to have a site-specific safety program in place for the project. Many companies have safety programs, but having a system in which all programs are reviewed and balanced against the scope of work allows for a proactive approach and ensures all the required elements are in place prior to the start of work. Meeting with contractors and subcontractors prior to project mobilization is a key to success and allows for a proper review and feedback. This meeting also allows for sub-contractors to make key additions to their programs and communicate and train all affected personnel.

Ergonomics in Construction

The construction environment can be physically demanding on a daily basis, which makes it important for employees to maintain good physical health and practice ergonomic principles. The ergonomic and stretch and flex program can help:

- Reduce the risk and severity of back and musculoskeletal disorder (MSD) types of injuries that are prevalent on the job,
- Reduce soft-tissue injuries based on static loading, repetition, force, contact stress, awkward posture and vibration
- Create exercises that help target muscles used in a wide range of physical activities.

Ergonomic as well as a stretch and flex program in construction will keep employees alert and ready for the task at hand, and in the long run it will contribute to reducing the potential for work injuries. Taking the time to conduct ergonomic assessments, and train employees will also contribute to reducing the potential for a work injury.

Emergency Protocols

By establishing contingency plans prior to an event, you will significantly reduce the number and severity of injuries that can result during an emergency situation. Contingency plans take into account the location of fire extinguishers, emergency showers/eyewashes, and evacuation routes. Emergency protocols also establish locations of muster points, the notification chain, and other important concepts that create order during an otherwise chaotic event.

Industrial Hygiene

Hazardous compounds are prevalent throughout a construction site. Many companies do not consider industrial hygiene principals on the construction site. By establishing baselines, a true determination of engineering/administrative controls and required PPE for a given task can be made. Again, through proactive planning, impacts, costs, confusion and illnesses can be minimized by understanding what the hazards will be and when those hazards will occur.

Safety Incentive Programs

The company program must include a recognition program which explains how contractors, management, or employees will be recognized for safe behaviors and accomplishments. The incentive program must include the different recognition classifications for the individual, the company or the project. Some examples to consider:

- Safety auditing program improvement
- Improvement of pre-task plans

- Reduction of injuries
- On-the-spot rewards

Types of rewards can include: lunch for crew, company, project, etc., project t-shirts, hazard mitigation contests, safety tokens/coupons, and recognition in front of peers at group meetings.

Design for Safety

Planning safety into your design helps the company incorporate the company EHS policy, operability, local, state, and federal standards, before construction begins. Advantages to designing for safety are: safety is incorporated at the start of the planning phase, much less expensive to change the design before starting, allowing for an easier commissioning process, and allows all interested parties to discuss and capture needs.

Contractor/Supplier Pre-Qualifications

In today's market it is very crucial to pre-screen your contractors prior to using them on your projects. The need for a pre-construction meeting to communicate to all potential construction companies is crucial to cover contractual requirements, site specific conditions, and work scope challenges. Key points to keep in mind when pre-qualifying companies are: the ability to perform the work, past projects, safety program, safety history and visiting current projects to determine if the company follows what they present.

EHS Staffing

Dedicating people to specifically monitor safety, health and environmental issues ensures the project is completed in a safe manner and that the product is safe for the end user. Setting the criteria for proper education, certifications, adequate experience, and ability to interact with the workforce ensures a quality EHS staff. Allocating sufficient funds for EHS staffing and establishing an EHS staff from the planning stage will help to complete the project with minimal or zero incidents.

What is Pre-Task Planning (PTP)?

An organization of task steps in an easily understood sequence that eliminates hazards to both personnel and equipment by the application of adequate control measures. A PTP should be a daily tool implemented on all construction jobs and is proven to reduce injuries. Key points to remember when implementing a PTP on a job site:

- Breaks down tasks into individual steps,
- Highlights ergonomics and materials handling,
- Encourages employee participation,
- Plans safety into work
- Together the foreman & task performer(s) will:
 - Discuss
 - Analyze
 - Define task hazards and
 - Identify safe work practices

Measurement for Success

Understanding the effectiveness of the safety program can only be done by measurement. Measuring leading indicators, behavior auditing and auditing of conditions is a proactive means of identifying trends, risky behaviors or holes in the training program. Measuring lagging indicators, near misses, first aids, recordables, etc. is also important to understand the overall safety culture and reverse negative trends. Ensuring that injury cases are managed by following prescriptions of medical professionals, establishing a return to work program, and contracting occupational health services can all lead to reduced severity of incidents. The above tools not only provide indicators for focus areas, but by directly interacting with the workforce, the safety professional is able to understand and prevent incidents on the spot.

Following incidents, it is important to fully understand the events, decisions, and factors that contributed to the event. This understanding will lead to real mitigations and effective prevention of reoccurrences. This can only be accomplished by creating an incident analysis program that seeks facts, is focused on the specific incident, establishes controls and mitigations, and communicates the key findings to the affected workforce.

Training

The best program in the industry will fall short every time if the work force is not adequately trained. Training communicates the processes, procedures, rules, and management commitment from the safety program to directly the employees exposed to the hazards. A training program must be specific to the audience, reflect specific site conditions and expectations, and must be interactive.

Conclusion

The construction industry has always been one fraught with hurdles: ever present hazards, a constantly changing work force, time constraints, and unexpected scope changes. Even with these hurdles, a construction project can be completed safely, time after time, by establishing a comprehensive and dynamic written safety program. **Achieving Safety Excellence in Construction: Beyond Compliance** will provide the safety professional with a tool box of tips, program elements, and strategies all designed to drive down incidents and minimize impacts.

We would very much like to extend an opportunity to everyone within the American Society of Safety Engineers (ASSE) to share in our knowledge in order to reverse the negative injury trending seen on construction sites around the world. We, as safety professionals, must hold the final line on ensuring all employees are given the best possible safety techniques and innovations.