



Orange County Erectors, Inc.

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# **SAFETY PROGRAM**

Originally Issued July 1, 1991.

*Last Revision July 1, 2015*

**Labor- Management Safety Committee**

**Injury & Illness Prevention Program**

**Fire Prevention& Emergency Action Plan**

**Fall Protection Plan**

**Code of Safe Practices**

**Drug & Alcohol Abuse Program**

**Fleet Safety Policy**

**Heat Illness Prevention & Policy**

**Hazard Communication Program**

**MSDS**



Orange County Erectors, Inc.

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## Contractor's License

	State Of California <b>CONTRACTORS STATE LICENSE BOARD</b> <b>ACTIVE LICENSE</b>	
License Number	<b>347098</b>	Entity <b>CORP</b>
Business Name	<b>ORANGE COUNTY ERECTORS INC</b>	
Classification(s)	<b>C51 B</b>	
Expiration Date	<b>10/31/2016</b>	<a href="http://www.cslb.ca.gov">www.cslb.ca.gov</a>
		

## **Company Safety Policy**

Orange County Erectors, Inc. believes that everyone benefits from a safe and healthy work environment. It is therefore the intention of Orange County Erectors, Inc. to provide the safest possible work environment for our employees and to take practical steps necessary to prevent injury to our personnel.

In the interest of employee safety we have created and implemented a *Labor-Management Safety Committee*, an *Illness and Injury Prevention Program*, a *Fire Prevention & Emergency Action Plan*, a *Fall Protection Plan* and a *Hazard Communication Program*.

The role of the *Labor-Management Safety Committee* is to promote safety at Orange County Erectors, Inc. and improve communication on safety issues.

The *Injury and Illness Prevention Program* was created to identify, evaluate and prevent workplace hazards.

The *Fire Prevention & Emergency Action Plan* was created to protect the lives and physical safety of employees in the event of an emergency.

The *Fall Protection Plan* was created to protect Ironworkers from falls when they are working at heights in excess of 30 feet.

The purpose of the *Hazard Communication Program* is to ensure that employees are made aware of the hazardous properties of the materials with which they work, their safe handling procedures and measures to take to protect themselves from these hazards.

The single most important and effective person in our efforts to reduce on the job injuries is you. Remember that negligence on your part, or that of a fellow employee, could result in an injury to you and others.

For this reason we request that all employees immediately report any unsafe conditions and/or procedures to their supervisor or the company *Injury and Illness Prevention Program administrator*.

Think about your own safety and well-being as well as that of your fellow employees. Please take the time to familiarize yourself with these important safety programs.

Richard Lewis  
*President.*

## **Labor-Management Safety Committee By-Laws**

The Labor-Management Safety Committee has been created to oversee and evaluate the safety policies of Orange County Erectors, Inc. The committee by-laws are as follows:

1. The committee shall be composed of a Chairperson, IIPP Program Administrator, Vice President of Production, Director of Field Operations, Field Superintendent, Shop Foremen, Office Representative, Hazard Communication Program Administrator, and any number of committee members as deemed necessary to properly carry out the purpose of the committee.
  - a) The CHAIRPERSON shall be appointed by the President of the Corporation. The CHAIRPERSON should have management status, be interested in loss control, possess the ability to organize and conduct meetings, and have adequate time to devote to committee activities.
  - b) The IIPP PROGRAM ADMINISTRATOR shall be appointed by the President of the Corporation. The IIPP PROGRAM ADMINISTRATOR shall have the responsibility for implementing the Illness and Injury Prevention Program. This shall include employee training, inspections, investigations and all documentation of such. The IIPP PROGRAM ADMINISTRATOR shall keep available and furnish copies of the company's Illness and Injury Prevention Program to all employees.
  - c) The VICE PRESIDENT OF PRODUCTION shall be responsible to represent and report on operations safety. The VICE PRESIDENT OF PRODUCTION shall be responsible to report to the IIPP program administrator all required Illness and Injury Prevention Program documentation, including employee training, weekly field and shop safety meeting minutes and monthly inspection documentation.
  - d) The DIRECTOR OF FIELD OPERATIONS AND the FIELD SUPERINTENDENT shall be responsible to represent and report on field erection safety. The DIRECTOR OF FIELD OPERATIONS AND the FIELD SUPERINTENDENT shall be responsible to report to the IIPP Program Administrator all required Illness and Injury Prevention Program documentation, including employee training, weekly field safety meeting minutes and monthly inspection documentation. The DIRECTOR OF FIELD OPERATIONS AND the FIELD SUPERINTENDENT shall also be responsible to report to Hazard Communication Program Administrator on all required Hazard Communication Program documentation.
  - e) The SHOP FOREMEN shall be responsible to represent and report on shop fabrication safety. The SHOP FOREMEN shall be responsible to report to the IIPP Program Administrator all required Illness and



- Injury Prevention Program documentation, including employee training, weekly shop safety meeting minutes and monthly inspection documentation. The SHOP FOREMEN shall also be responsible to report to Hazard Communication Program Administrator on all required Hazard Communication Program documentation.
- f) The OFFICE REPRESENTATIVE shall be responsible to represent and report on office and general work area safety. The OFFICE REPRESENTATIVE shall be responsible to report to the IIPP Program Administrator all Illness and Injury Prevention Program documentation, including employee training, annual office safety meeting minutes and quarterly inspection documentation. The OFFICE REPRESENTATIVE shall also be responsible to report to Hazard Communication Program Administrator on all required Hazard Communication Program documentation.
  - g) The HAZARD COMMUNICATION PROGRAM ADMINISTRATOR shall be responsible to represent and report on the Hazard Communication Program. This shall include advising of any chemical hazards in the normal course of work, current hazard labeling system and protective measures to be taken. The HAZARD COMMUNICATION PROGRAM ADMINISTRATOR shall keep current all Material Safety Data Sheets (MSDS). The HAZARD COMMUNICATION PROGRAM ADMINISTRATOR shall keep available and furnish copies of the company's Hazard Communication Program to all employees.
2. The Labor-Management Safety Committee shall meet no less than quarterly and shall keep minutes of such meetings for a period of not less than three (3) years.
  3. The Labor-Management Safety Committee shall review and evaluate the Illness and Injury Prevention Program. Including:
    - a) Review and evaluate all information supplied by employees relating to safety.
    - b) Review and evaluate all reported accidents, injuries and illness.
    - c) Review and evaluate all scheduled and periodic inspections of work areas.
    - d) Review and evaluate all employee training.
    - e) Review and evaluate the Hazard Communication Program
  4. The Labor-Management Safety Committee shall review and evaluate the Hazard Communication Program.
  5. The Labor-Management Safety Committee shall review and evaluate the Fire Protection & Emergency Action Plan. Including:
    - a) Review and evaluate fire extinguisher plan and placement.
  6. The Labor-Management Safety Committee shall review and evaluate the Fall Protection Program.
  7. The Labor-Management Safety Committee shall review any other safety issues and recommendations as necessary to promote or maintain a safe work environment.

# **Injury & Illness Prevention Program**

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# **Injury and Illness Prevention Program**

## **RESPONSIBILITY**

All employees are expected to work conscientiously to implement and maintain the Injury and Illness Prevention Program.

The Injury and Illness Prevention Program administrator has the authority and responsibility for implementing the provisions of this program. Any questions regarding the program should be directed to the program administrator.

## **SENIOR MANAGEMENT**

Senior management must set policy and provide leadership by participation, example and a demonstrated interest in the program.

Their responsibilities include:

- developing policy;
- allocation of adequate resources;
- ensuring responsibility;
- and reviewing and evaluating results.

### **Injury and Illness Prevention Program Administrator**

The IIPP program administrator is responsible to ensure that all provisions of the Injury and Illness Prevention Program are implemented.

His/her responsibilities include:

- advising senior management on safety and health policy issues;
- maintaining current information on local, state and federal safety and health regulations;
- act as liaison with governmental agencies;
- planning, organizing, and coordinating safety training;
- preparing and distributing company policies and procedures on safety and health issues;
- developing a *Code of Safe Practices* and inspection guidelines;
- arranging for safety and health inspections and follow up to insure necessary corrective action is completed;
- making sure that an adequate supply of personal protective equipment is available;
- establishing accident report and investigation procedures and maintaining injury and illness records (OSHA log 300);
- reviewing injury and illness trends;
- establishing a system for maintaining records of inspection, hazard abatement and training.

### **Supervisors**

Supervisors are responsible to ensure that employees know and abide by the company policies and procedures on safety. They are expected to do everything within their control to assure a safe workplace in their area.

Their responsibilities include:

- keeping abreast of safety and health regulations affecting the operations they supervise;
- ensuring that each subordinate is able to complete each assigned task safely;
- conducting on the job safety training of those employees that they supervise;
- advising IIPP program administrator of training needs of subordinates;
- making sure equipment and machines are in safe operating condition;
- ascertaining that subordinates follow safe work practices and health regulations;
- ensuring that employees under their direction wear required protective equipment;
- correcting unsafe and unhealthy conditions within their power;
- investigating accidents to discover causes and identifying corrective action to prevent future occurrences; conducting periodic inspections of their work areas according to the appropriate inspection check lists.

## **COMPLIANCE**

Management is responsible to ensure that company safety and health policies and procedures are clearly communicated and understood by all employees. Managers and supervisors are expected to enforce the rules fairly and uniformly.

All employees are responsible for utilizing safe work practices, for following all directives, policies and procedures and for assisting in maintaining a safe work environment.

As part of an employees regular performance review, the employee will be evaluated on his or her compliance with safe work practices.

Employees, who make a significant contribution to the maintenance of a safe workplace, as determined by the program administrator, will receive a written acknowledgment that will be maintained in the employee's personnel file.

Employees who fail to follow safe work practices and/or procedures or who violate the company's safety rules or directives will be subject to disciplinary action, up to and including termination.

Disciplinary measures are progressive and can involve up to four steps:

1. Should a safety and health violation be noted, the supervisor is to informally discuss the behavior with the employee, stating the potential dangerous result and outlining the correct procedure, then retrain the employee to ensure understanding.
2. A second violation should generate a formal written warning to the employee.
3. The third infraction results in suspension of the employee.
4. A fourth violation may lead to employee termination.

These progressive disciplinary measures are intended as a guideline for supervisors. Depending on the severity or nature of the infraction some steps may be omitted.

## **COMMUNICATION**

The company recognizes that open, two way communication between management and staff on health and safety issues is essential to an injury free, productive workplace. The following system of communication is designed to facilitate this continuous flow of safety and health information between management and staff in a form that is readily understandable.

- Communication of safe working conditions, work practices and required personal protection equipment is included in initial and all subsequent training.
- From time to time, the Orange County Erectors, Inc. will post and/or distribute written safety notifications. Employees should check company bulletin boards regularly for such postings. Safety related memos and documents are to be read promptly. Questions about the meaning or implementation of this information should be directed to immediate supervisors for clarification.
- Weekly tail-gate meetings for shop fabrication and field erection employees. As needed monthly safety meetings for office employees.
- All employees are encouraged to inform their supervisor or the IIPP program administrator of any matter which the employee perceives to be a workplace hazard and/or a potential workplace hazard. Employees are also encouraged to make safety suggestions and safety training suggestions. If an employee so wishes, he or she may make such notification anonymously by depositing such notice in the IIPP program administrator's mailbox. An *Employee Report of Safety Hazard* form (appendix B-2) may be utilized by the employee.
- All suggestions will be reviewed by the IIPP program administrator who will initiate an investigation of each report of a hazard, potential hazard or safety suggestion in accordance with the Injury and Illness Prevention Plan. Any directives issued as a result of the investigation shall be distributed to all employees affected by the hazard or shall be posted on appropriate bulletin boards.

**Employees have been advised that there will be no reprisals or other job discrimination for expressing any concern, comment, suggestion or complaint about a safety related matter.**

### **Identification, Evaluation and Abatement of Workplace Hazards**

Hazard control is the fundamental purpose of the Injury and Illness Prevention Program. Orange County Erectors, Inc. uses the following systems to identify hazards that exist or develop in the workplace, describe how to correct those hazards and initiate the steps to prevent their recurrence:

### **ASSESSMENT OF HAZARDS**

Inspection of the workplace is our primary tool to identify unsafe conditions and practices. While we encourage all employees to continuously identify and correct hazards and poor safety practices, certain situations require a formal evaluation and documentation. Along with each inspection and/or investigation the IIPP program administrator shall evaluate the severity of the hazard identified.

### **FREQUENCY OF INSPECTIONS**

Inspections are conducted to verify compliance with *Codes of Safe Practice* and other safety requirements, and to identify any new or additional hazards.

The IIPP program administrator will conduct an inspection or investigation whenever any of the following occur:

1. Routinely in the following work areas:
  - a) Administrative offices every three (3) months;
  - b) Fabrication shop and field erection job sites every three (3) months.

The time and frequency of inspections will be set by the IIPP program administrator according to the type of work being performed in each workplace.

Prior to the periodic inspection, the inspector should review workplace injury reports and inspection reports which have been filed since the last investigation or inspection. The *Hazard Assessment Checklist* form (appendix B-1) is to be used by the inspector.

2. The introduction of new substances, processes, procedures or equipment that present a new safety and health hazard.
  - a) Each supervisor is responsible for promptly reporting to the IIPP program administrator whenever a new substance (i.e. chemical or solvent), new work procedure or technique, and/or new equipment is introduced which may pose a safety risk. An *Employee Report of Safety Hazard* form (appendix B-2) shall be used by the supervisor.
  - b) Each supervisor's report should include an evaluation of the potential hazards, training and/or other steps to be taken to provide abatement solutions of any potential hazards.
  - c) Based upon the information, IIPP program administrator will conduct an inspection and issue any directive which may be necessary.
3. The IIPP program administrator becomes aware of a new or previously unrecognized hazard, either independently or by a receipt of information from an employee, including receipt of An *Employee Report of Safety Hazard* form (appendix B-2).
4. Occurrence of an occupational injury, occupational illness, or near miss accident.
5. From time to time, the IIPP program administrator may conduct unannounced inspections.

These scheduled inspections are documented on the *Hazard Assessment* form (appendix B-3) and are maintained at the IIPP program administrator's office.

## **ABATEMENT OF HAZARDS**

1. The *Hazard Assessment Checklist* form (appendix B-1) or *Hazard Assessment* form (appendix B-3) completed during the inspection/investigation will be used by the IIPP program administrator to describe the measures taken to abate the hazard or correct the unsafe work practice. Action to be taken may include, but are not limited to:
  - a) fixing or replacing defective equipment;
  - b) implementing safer procedures;
  - c) installing guards or modifying equipment;
  - d) employee training;
  - e) additional safety equipment;
  - f) posting warning notices.

All such action taken and the dates they are completed shall be documented on the appropriate forms.

When the corrective action will involve multiple steps or can not be completed promptly an action plan will need to be developed. The *Hazard Abatement* form (appendix B-4) is to be used for this purpose and filed at the IIPP program administrator's office

While corrective action is in progress necessary precautions are to be taken to protect or remove employees from exposure to the hazard.

2. Employees shall not enter an imminent hazard area without prior specific approval of the IIPP program administrator. Employees expected to correct the imminent hazard shall be properly trained and provide with necessary safeguards.

## **ACCIDENT INVESTIGATIONS**

The purpose of an accident investigation is to find the cause of an accident and prevent further occurrences, not to assign blame. A thorough and properly competed accident investigation is necessary to obtain facts. The investigation should focus on causes and hazards. The analysis of what happened and why it happened is aimed at determining how it can be prevented in the future. For more information see the *Basic Rules for Accident Investigation* (appendix C-1).

## **INJURY AND ILLNESS**

The occurrence of an occupational injury and/or illness precipitates a document called *Supervisor's Accident/Incident Report* (appendix C-3). This report is completed by the injured employees' supervisor and a copy of this report is to be sent to the IIPP program administrator within 24 hours of the occurrence. Upon receipt the IIPP program administrator will:

1. Report fatalities and serious injuries or illness immediately by phone or fax to the nearest office of the Division of Occupational Safety and Health (CCR Title 8, Section 342).
2. Investigate the incident by visiting the site, interviewing the victim and witnesses.

## **ACCIDENTS**

The majority of accidents do not cause injury or illness, but result in property equipment damage and/or lost time, etc.. These accidents usually indicate an unsafe act, faulty procedure or hidden hazard. Investigations of these occurrences are conducted at the discretion of the supervisor or program administrator.

All investigation facts, findings and recommendations shall be fully documented on the *Accident Investigation* form (appendix C-2). This report is filed in accordance with the instructions in the record keeping section of this program.

## **EMPLOYEE SAFETY TRAINING**

Training is essential to maximize the skills and knowledge of all employees. Orange County Erectors, Inc. incorporates safety as an integral part of training; employees need to work productively, safely and efficiently. The supervisor is the essential link in ensuring the proper outcome.

The Supervisor must know how to perform a designated job and be aware of the safety and health hazards facing employees under their immediate supervision. Supervisors are responsible for ensuring that they themselves and those under their direction receive training on general workplace safety as well as on safety and health issues specific to each job.

With this in mind, safety training will be conducted with the following considerations:

## **SUPERVISORS**

1. The program administrator will consult with supervisors to determine training topics and needs of supervisors; these include human relations, trainer skills, production skills and familiarization with hazard and risks faced by employees.
2. Supervisors who recognize their own need for training are encouraged to submit a direct request for training in any area in which they feel deficient.

## **EMPLOYEES**

Supervisors are expected to assess training needs of all employees under their direction. They are to train those they supervise in general workplace safety and give them specific instructions with regard to hazards unique to any job assignment, to the extent that such items have not already been covered in other training.

Employee safety training is provided in the following circumstances:

- Initial training for all current employees upon establishment of this Injury and Illness Prevention Program on June 24, 1991.
- Retraining for all current employees upon revision of this Injury and Illness Prevention Program.
- New employees are provided initial training upon hiring and prior to assignment for which they have not previously received training. If the position is supervisory, such training shall include a familiarization with hazards and risks faced by the employees under the supervisor's direction.
- Training shall be provided whenever new substances, process, procedures or equipment are introduced which pose a new hazard.
- Training shall be provided whenever the supervisor or IIPP program administrator becomes aware of a previously unrecognized hazard.
- All employees will participate in periodic refresher safety training involving general workplace safety, job specific hazards, and/or hazardous materials as applicable.

Documentation of training is recorded on the *Employee Safety Training Acknowledgment* form (appendix A-1) or on the *Supervisor's Safety Meeting* form (appendix D-3). These records are maintained in the individual employee's personnel file and/or the IIPP program administrator's office.

## **RECORD KEEPING REQUIREMENTS**

No operation can be successful without record keeping which enables the company to learn from past experience and make corrections for future operations. In addition, government regulations require that records be kept of the steps taken to establish and maintain the company's Injury and Illness Prevention Program.

Each supervisor will maintain an updated copy of the Orange County Erectors, Inc. Injury and Illness Prevention Program.

The IIPP program administrator will retain the following records on file for at least three (3) years 8 CCR §3203(D):

1. Master copy of the Injury and Illness Prevention Program (as well as updates and changes).



2. Documents that verify that the company has maintained on-going two way communication with employees. Examples include:
  - a) memos, letters, etc. to employees on safety and health issues;
  - b) new employee safety orientation session acknowledgment forms;
  - c) employee suggestions and company responses.
3. All records of inspections or investigations including date, name of person who performed the inspection or investigation, the unsafe conditions and and/or work practices identified, and the corrective action taken and the date of correction. Forms covered under this section include:
  - a) reports of safety hazards;
  - b) hazard assessment checklists;
  - c) hazard assessment forms;
  - d) hazard abatement records;
  - e) accident investigation reports.
4. Records reflecting the safety and health training received by employees. These records should contain the employee's name, training date, type of training and identification of the trainer. Some examples include:
  - a) employee safety meeting minutes (tailgate meetings);
  - b) employee safety training verifications.

## **LABOR-MANAGEMENT SAFETY COMMITTEE**

In accordance with the requirements of 8 CCR §3203(C) and to promote a safe work environment, Orange County Erectors, Inc. has developed a *Labor-Management Safety Committee*. This committee meets on a quarterly basis or as made necessary after an accident, occupational injury or illness, or hazardous unusual occurrence is reported.

This committee is composed of the following members:

1. Chairperson
2. IIPP Program Administrator
3. HR Manager
4. Vice President of Production
5. Director of Field Operations
6. Field Superintendent
7. Shop Foremen
8. Shipping & Receiving Coordinator
9. Any other Members as deemed necessary

The bylaws of this committee are part of this manual and are available for review at the IIPP program administrator's office.

## **Corporate Review and Approval**

The management of Orange County Erectors, Inc., having fully reviewed the above program, hereby approves the revisions to the Injury and Illness Prevention Program Originally dated July 1, 1991, revised and updated July 1, 2015 set forth in these pages and approves all reasonable measures necessary to implement them.

The following persons have the authority and responsibility for implementing the Injury and Illness Prevention Program:

\_\_\_\_\_  
Richard Lewis  
*President*

\_\_\_\_\_  
*Date*

\_\_\_\_\_  
Joe Pennachio  
*Director of Safety*  
*Injury and Illness Prevention Program Administrator*

\_\_\_\_\_  
*Date*

## **Fire Prevention & Emergency Action Plan**

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- Welding and Cutting Operations Page: 22
- Housekeeping and Maintenance Page: 23

## **Fire Prevention and Emergency Action Plan**

Orange County Erectors, Inc. being conscious of employee safety has developed these procedures in order to insure that a maximum effort, on a sustaining basis, is made to protect the lives and physical safety of all personnel, as well as safeguard the physical facilities of the company.

The scope and application of this plan is to comply with California Code of Regulations, Title 8, Section 3221, Fire Prevention Plan, and, Section 3220 Emergency Action Plan.

### **Emergency Action Plan – Field**

In compliance with governmental regulations and codes, all field personnel are instructed to review and, if necessary, follow the Emergency Action of the General Contractor at each job site. The rational is to coordinate the efforts of all sub-contractors on a particular job so that in the event of an emergency, all will act in unison. All field foremen will be trained in First Aid and CPR and our basic Emergency Action Plan.

### **Emergency Action Plan – Offices and Shops**

Due to the nature of the industry Orange County Erectors, Inc. is engaged in [fabrication and erection of structural steel], and the continual use of flammable gases and welding equipment, the first line of defense is to evacuate the physical facilities in the event of fire, earthquake, or other emergency/disaster.

- a. In conjunction with, and developed with the assistance of the Anaheim Fire Department an evacuation plan for all facilities is carried out as a drill on an annual basis in the month of October.
- b. The need for evacuation will be announced over the public address system followed by three beeps. The messages and beeps will be repeated until all areas are evacuated. The receptionist will summon assistance from local medical and fire department resources and alerting local authorities by calling 911. It will be the responsibility of the supervisor on duty in the primary area where the emergency occurs to alert the receptionist/operator.
- c. A diagram of the “exit” or evacuation plan is posted at prominent locations throughout the facilities and is attached to this appendix.
- d. Immediately after evacuation, all personnel will reassemble on the North East corner of the intersection of La Palma and Pauline Streets.
- e. No employee of Orange County Erectors, Inc. will be trained to provide rescue or medical assistance since response time from professional Para Medics and area Fire Departments is minimal. No fire brigade is authorized under this plan.
- f. The IIPP Administrator will notify the proper authorities [i.e. fire department and police department] if any individual is missing. For

the purposes of this Plan, and to oversee the various areas of the physical plant, the shop foreman on duty will be the responsible agent for the shop personnel over whom he has authority; the La Palma office staff will be supervised by the Controller and the VP of Production. All exits, doors or other opening have signage designating the status of egress, i.e. "exit," "not an exit."

- g. The Vice President or his authorized delegate will, with each new employee, or reassignment of current employees, review those parts of the emergency action plan with the employee to protect the employee in the event of an emergency.
- h. The written plan is maintained at locations in shops I and II, as well as in the office of the IIPP Administrator and the office of the VP of Production so as to be readily available for the reference and review for all employees.
- i. Supervisors, line employees, or officials of the various governmental agencies who assist in the execution or compliance with this plan may contact the IIPP Administrator for additional information or explanation of duties under the plan.

## **Extinguishers**

Orange County Erectors, Inc. has established and implemented this written fire safety policy which requires the immediate and total evacuation of employees from the workplace upon the sounding of the fire alarm signal and which includes an emergency action plan and a fire prevention plan which meet the requirements of Sections 3220 and 3221.

As a result, Orange County Erectors, Inc. under the authority of California Code of Regulations, Title 8, Section 6151, Portable Fire Extinguishers, paragraph (b)(1) and (2) is exempt from Section (d) of the code referencing Selection and Distribution of extinguishers.

However, the company has determined that the placement of Class A, B and C extinguishers throughout the shops may be beneficial to the health and welfare of its employees and has elected to utilize the following procedures:

- 1. Portable extinguishers for use by employees have been placed at intervals not exceeding 50 feet (15.2m) travel distance.  
The IIPP Administrator will designate a responsible employee the responsibility of seeing that all:
  - a. Portable fire extinguishers shall be subjected to an annual maintenance check. Stored pressure extinguishers do not require an internal examination. The IIPP Administrator shall record the annual maintenance date and retain this record for one year after the last entry or the life of the shell, whichever is less.
  - b. Alternate equivalent protection shall be provided when portable fire extinguishers are removed from service for maintenance and recharging.
  - c. Hydrostatically tested by a firm licensed to do so by the State of California on a frequency not to exceed five years.

- d. Physically accounted for and visually checked to assure that pressure readings are proper and that the extinguishers are undamaged on a monthly basis. The individual performing this examination will date and initial a card attached to each extinguisher when the inspection is performed.

Orange County Erectors, Inc will provide an educational program to familiarize employees with the general principles of fire extinguisher use and the hazards involved with the incipient stage of fire fighting. Training will be provided by the Human Resource Manager upon initial employment and at least annually thereafter.

## **Welding and Cutting Operations**

The procedure relative to use of cutting and welding equipment and instructions for the safety of Orange County Erectors, Inc. employees and the care of equipment based on:

1. The fire potentials of the plant facilities, welding and cutting will only be allowed and approved in the general fabrication areas of Shops I, II, III, and the rail shop.
2. The on-duty shop foreman of each referenced area will approve welding and cutting procedures in that department.
3. The duty foreman will assure that only approved apparatus, such as torches, manifolds, regulators or pressure reducing valves, and acetylene generators, be used.
4. Supervisors and shop foreman who are experienced and have had appropriate training are responsible to personally or through the use of classes, instruct all shop personnel in the proper and safe use of equipment and processes to be used.
5. It shall be the responsibility of the shop foreman to assure that fire-extinguishing equipment is operative and at locations prescribed by the IIPP Administrator. [See Extinguishers above.]

## **Housekeeping and Maintenance**

Recognizing that housekeeping and maintenance of facilities and equipment in a key ingredient to reducing fire danger, Orange County Erectors, Inc. constantly monitors and corrects conditions that might cause or contribute combustible conditions.

The *Hazard Assessment Checklist* contains safety and health hazard assessment items, and is utilized quarterly or more frequently as necessary to evaluate all physical facilities of Orange County Erectors, Inc.

The IIPP Administrator and the supervisor(s) of the plant being inspected accomplish an inspection and walk through of facilities. Critical items are corrected immediately and all items are reported to, and reviewed by the Labor-Management Safety Committee that meets quarterly or on a more frequent basis.

## **Fall Protection Plan**

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# **Fall Protection Plan**

## **Introduction**

This plan has been adopted to meet the requirements of Cal and Federal OSHA standards in order to protect employees in the “Erection of Structures” construction [Cal/OSHA Section 1710] from falls whenever workers are exposed to a fall of thirty feet or more. All our affected employees have been advised on this written plan. The plan will be available for inspection by our employees and their authorized representatives upon request. The plan applies to all our employees who find they cannot use conventional fall protection equipment. The purpose of this plan is to ensure that all our employees are protected against fall hazards while working leading edge or the initial phase of steel erection work. The company is committed to a safe and accident-free job site. The appendix of this written program contains definitions for many of the terms defined in the OSHA standard. To avoid any misunderstanding, readers should refer to these definitions.

## **Policy**

Orange County Erectors, Inc., is dedicated to the protection of its employees from on-the-job-injuries. All employees of our company have the responsibility to work safely on the job. The purpose of this plan is: (a) to supplement our standard safety policy by providing safety standards specifically designed to cover fall protection, and (b) to ensure that each employee is trained and made aware of the safety provisions that are to be implemented by this plan prior to the start of construction.

This Fall Protection Plan addresses the use of other than conventional fall protection at a number of areas of the project. It also identifies specific activities that require non-conventional means of fall protection. These areas include:

- a. Leading edge & initial phase erection work
- b. Unprotected sides or edges.

This plan is designed to enable employees to recognize the fall hazards on this job and to establish the procedures that are to be followed in order to prevent falls to lower levels or through holes and openings in walking/working surfaces. Each employee will be trained in these procedures and strictly adhere to them except when doing so would expose the employee to a greater hazard. If, in the employee’s opinion, this is the case, the employee is to notify the foreman of the concern, and the concern is to be addressed before proceeding.

Safety policy and procedures on any one-project cannot be administered, implemented, monitored and enforced by any one individual. The total objective of a safe, accident-free work environment can be accomplished only by a dedicated, concerned effort by every individual involved with the project. Each employee must understand:

- a. His or her value to the company
- b. The costs of accidents, both monetary, physical and emotional
- c. The objectives of the safety policy and procedures.
- d. The safety rules that apply to the safety policy and procedures
- e. His or her role in administering, implementing, monitoring, and complying with safety policy and procedures.

This allows for a more personal approach to compliance through planning, training, understanding and cooperative effort, rather than by strict performance. If for any reason an unsafe act persists, strict enforcement will be implemented. It is the responsibility of the Erection Superintendent to implement this Fall Protection Plan. He is responsible for continued observational safety checks of work operations and enforcement of the safety policy and procedures. The job foreman also is responsible to correct any unsafe acts or conditions immediately. It is the responsibility of the employee to understand and adhere to the procedures of this plan and to follow the instructions of the foreman. It is also the responsibility of the employee to bring to management's attention any unsafe or hazardous conditions or acts that may cause injury to either themselves or any other employee.

## **Training**

We have adopted an employee-training program so that all employees who will be exposed to fall hazards will acquire the understanding, knowledge and skills necessary for the safe performance of their assigned duties.

Training will be provided to each employee. We will ensure that a competent person qualified in the following areas has trained each employee:

- a. The nature of all hazards in the work area.
- b. The correct procedures for erecting, maintaining, disassembling and inspecting the fall protection system to be used.
- c. The use and operation of guardrail systems, personal fall arrest systems, waning line systems, safety monitoring systems, controlled access zones and other protection to be used.
- d. The correct procedures for the handling and storage of equipment and materials.

The training must be conducted in a manner that will establish employee proficiency in the duties required by the OSHA standard. It will cover the various systems and procedures we have adopted. It also will introduce new or revised procedures, as necessary, in order to accomplish full compliance with the fall protection standard

Upon its completion, we will execute a written certification that the training required by the OSHA standard has been accomplished. The certification will contain each employee's name, the signatures or initials of the trainers, and the dates of training. The certification will be available for inspection by employees and their authorized representatives at the local job site address.

## **Conventional Fall Protection Systems**

### **Personal Fall Arrest Systems**

In this particular erection sequence and procedure, personal fall arrest systems requiring body belt/harness, lifeline and lanyards will not reduce possible hazards to workers and will create offsetting hazards during their usage at the leading edge of steel decking installation.

Leading edge erection is conducted by employees who are specifically trained to do this type of work and are trained to recognize the fall hazards. The nature of such work normally exposes the employee to the fall hazard for a short period of time, and installation of all protection systems for a short duration is not feasible because it exposes the installers of the system to the same fall hazard, but for a longer period of time.

It is necessary that the employee be able to move freely without encumbrance in order to guide the section of steel decking into final position without having lifelines attached that will restrict the employee's ability to move about at the point of erection.

A typical procedure requires two or more workers to maneuver around each other as steel decking sheet is positioned to fit into the structure. If they are attached to a lifeline, part of their attention must be diverted from their main task of positioning the steel decking to the task of avoiding entanglements of their lifelines or avoiding tripping over lanyards. Therefore, if these workers were attached to lanyards, more fall potential would result than from not using such a device.

In this specific erection sequence and procedure, retractable lifelines do not solve the problem of two workers becoming tangled. In fact, such a tangle could prevent the lifeline from retracting as the worker moved, thus potentially exposing the worker to a fall greater than 6 feet. Also, a worker crossing over the lifeline of another worker can create a hazard because the movement of one person can unbalance the other. In the event of a fall by one person, there is a likelihood that the other person will be caused to fall as well.

Employees tied to a lifeline can be trapped by moving steel decking sheets. The employee becomes restrained by the lanyard or retractable lifeline and cannot get out of the path of the moving load.

The sudden movement of a steel decking sheet being placed by two employees may be caused by a numbers of factors. When this happens an employee may immediately have to move a considerable distance to avoid injury. If a tied-off body belt/harness is being used, the employee could be trapped. Therefore, there is a greater risk of injury if the employee is tied to the structure for this specific erection sequence and procedure.

When necessary to move away from a retractable device, the worker cannot move at a rate greater than the device-locking speed, typically 3.5 to 5 feet per second. When moving toward the device, it is necessary to move at a rate that does not permit cable slack to build up. This slack may cause cable retraction acceleration and cause a worker to lose his or her balance by applying a higher than normal jerking force on the body when the cable suddenly becomes taut after building up momentum. This slack can also cause damage to the internal spring-loaded drum, uneven coiling of cable on the drum, and possible cable damage.

The factors causing sudden movement for this location include:

1. Cranes
  - a. Operator error
  - b. Site conditions [soft or unstable ground]
  - c. Mechanical failure
  - d. Structural failure.
  - e. Rigging failure

- f. Crane signal/radio communication failure.
- 2. Weather Conditions
  - a. Wind [strong wind/sudden gusting]—particularly a problem with the large surface areas of steel decking sheets
  - b. Snow/rain [visibility]
  - c. Fog
- 3. Structure/Product Conditions
  - a. Lifting eye failure.
  - b. Bearing failure or slippage.
  - c. Product failure.
- 4. Human Effort
  - a. Incorrect or misunderstood crane signals.
  - b. Misjudged elevation of member
  - c. Misjudged speed of member.
  - d. Misjudged angle of member.

Providing attachment at a point above the walking/working surface also would create fall exposure for employees installing their devices. Final positioning of a steel decking sheet requires it to be moved in such a way that it must pass through the area that would be occupied by the lifeline and the lanyards attached to the point above. Resulting entanglements of lifelines and lanyards on a moving member could pull employees from the work surface. Also, the structure is being created and, in most cases, there is no structure above the members being placed. The ANSI A10.14-1001 “American National Standard for Construction and Demolition Operations – Requirements for Safety Belts, Harnesses, Lanyards and Lifelines for Construction and Demolition Use,” states that the anchor point of a lanyard or deceleration device should, if possible, be located above the wearer’s belt or harness attachment. ANSI A10.14 also states that a suitable anchorage point is one that is located as high as possible to prevent contact with an obstruction below should the worker fall. Most manufacturers also warn in the user’s handbook that the safety block/retractable lifeline must be positioned above the D-ring [above the work space of the intended user], and OSHA recommendations that fall arrest and restraint equipment be used in accordance with the manufacturer’s instructions. We adopt the following:

- a. Attachment of a retractable device to a horizontal cable near floor level or using the inserts in the floor or roof members may result in increase free fall due to the dorsal D-ring of the full-body harness riding higher than the attachment point of the snap hook to the cable or insert: [e.g., 6-foot tall worker with a dorsal D-ring at 5 feet above the floor or surface, reduces the working length to only one foot, by placing the anchorage 5 feet away from the fall hazard.] In addition, impact loads may exceed maximum fall arrest forces [MAF] because the fall arrest D-ring would be 4 to 5 feet higher than the block/retractable lifeline anchored to the walking/working surface, and the potential for swing hazards is increased.
- b. Manufacturers also require that workers not work at a level where the point of snap hook attachment to the body harness is above the device because this will increase the free fall distance and the deceleration distance. It will cause higher forces on the body in the event of an accidental fall.

- c. Manufacturers recommend an anchorage for the retractable lifeline that is immovable and is independent of the user's support systems. A movable anchorage is one that can be moved around [such as equipment or wheeled vehicles] or that can deflect substantially under shock loading [such as a horizontal cable or very flexible beam.] In the event of a very flexible anchorage, a shock load applied to the anchorage during the fall arrest can cause oscillation of the flexible anchorage such that the retractable brake mechanism may undergo one or more cycles of locking/unlocking/locking [ratchet effect] until the anchorage deflection is dampened. Therefore, use of moveable anchorage involves critical engineering and safety factors and should only be considered after fixed anchorage has been determined to not be feasible.
- d. Horizontal cables used as an anchorage present an additional hazard due to amplification of the horizontal component of maximum arrest force of a fall transmitted to the points where the horizontal cable is attached to the structure. This amplification is due to the angle of sag of a horizontal cable and is most severe for small angles of sag. For a sag angle of 2 degrees, the horizontal force on the points of cable attachment can be amplified by a factor of 15.
- e. It is also necessary to install the retractable device vertically overhead to minimize swing falls. If an object is in the worker's swing path [or that of the cable], hazardous situations exist: [1] the swing horizontal speed of the user may be high enough to cause injury when an obstacle in the swing path is struck by either the user or the cable; and [2] the total vertical fall distance of the user may be much greater than if the user had fallen only vertically without a swing fall path.
- f. With retractable lines, overconfidence may cause the worker to engage in inappropriate behavior, such as approaching the perimeter of a floor or roof at a distance appreciable greater than the shortest distance between the anchorage point and the leading edge. Though the retractable lifeline may arrest a worker's fall before he or she has fallen a few feet. The lifeline may drag along the edge of the floor or beam and swing the worker like a pendulum until the line has moved to a position where the distance between the anchorage point and floor edge is the shortest distance between two points. Accompanying this pendulum swing is a lowering of the worker, with the attendant danger that he or she may violently impact the floor or some obstruction below.
- g. The risk of a cable breaking is increased if a lifeline is dragged sideways across the rough surface or edge of a steel member at the same moment that the lifeline is being subjected to a maximum impact load during a fall. The competent person, who can take into account the specialized operation being performed on this project, should determine when and where a designated erector cannot use a personal fall arrest system.

# **Non-Conventional Fall Protection Systems**

## **General Requirements**

Where conventional fall protection systems cannot be used or create a greater hazard at the leading edge and during initial connecting activity, we plan to do this work using a safety monitoring system and expose only a minimum number of employees for the time necessary to actually accomplish the job. We are designating the following trained employees as erectors, and they are permitted to enter the controlled access zones and work without the use of conventional fall protection.

<b>Safety Monitor:</b>	<b>Joe Pennachio</b>
<b>Designated Erector</b>	<b>Keith Bell</b>
<b>Designated Erector</b>	<b>Steve Salcedo</b>
<b>Designated Erector</b>	<b>Eric Rosa</b>
<b>Designated Erector</b>	<b>Anthony Sanchez</b>

Only individuals with the appropriate experience, skills and training will be authorized as designated erectors under the safety monitoring system and will have been trained in the following areas:

- a. Recognition of the fall hazards in the work area at the leading edge.
- b. Avoidance of fall hazards using established work practices that have been made know to the employees.
- c. Recognition of unsafe practices or working conditions that could lead to a fall such as windy conditions.
- d. The function, use and operation of safety monitoring systems, guardrail systems, body belt and harness systems, controlled access zones and other protection to be used.
- e. The correct procedure for erecting, maintaining, disassembling and inspecting the system(s) to be used.
- f. Knowledge of construction sequence or the erection plan.

## **Safety Monitoring System**

A safety monitoring system means a fall protection system in which a competent person is responsible for recognizing and warning employees of all fall hazards. The duties of the safety monitor are to:

- a. Warn by voice when approaching the open edge in an unsafe manner.
- b. Warn by voice is there is a dangerous situation developing that cannon be seen by another person involved with product placement, such as a member getting out of control.
- c. Make the designated erectors aware they are in a dangerous area.
- d. Be competent in recognizing fall hazards.
- e. Be on the same walking/working surface as the monitored employee and within visual sighting distance of the monitored employees.
- f. Be close enough to communicate orally with the employees.
- g. Not allow other responsibilities to encumber monitoring. If the safety monitor becomes too encumbered with other responsibilities, the monitor will (1) stop the erection process; and (2) turn over other responsibilities to a designated erector; or (3) turn over the safety monitoring function to another.

- h. Designate a competent person. The safety monitoring system will not be used when the wind is strong enough to cause loads with large surface areas to swing out of radius, or result in loss of control of the load, or when weather conditions cause the walking/working surfaces to become icy or slippery.
- i. The safety monitor may also be performing work as an erector.

## **Controlled Access Zones**

When using this written plan to implement the fall protection options available, workers must be protected through limited access to high hazard locations. Before any non-conventional fall protection systems are used as part of the work plan, a controlled access zone (CAZ) will be clearly defined by the competent person as an area where a recognized hazard exists. The demarcation of the CAZ will be communicated by the competent person in a recognized manner, either through a control line, signs, wires, tapes, ropes or chains.

We will take the following steps to ensure that the CAZ is clearly marked or controlled by the competent person:

- a. All access to the CAZ must be restricted to authorized entrants.
- b. All workers who are permitted in the CAZ will be listed in the appropriate sections of the plan [or be visibly identifiable by the competent person] prior to implementation.
- c. The competent person will ensure that all protective elements of the CAZ be implemented prior to beginning of work.

## **Fall Protection for Special Areas**

### **Floor and Roof Members**

During installation of the steel decking floor and/or roof members, the work deck continuously increased in area as more and more units are being erected and positioned.

Thus, the protected floor/roof perimeter is constantly modified with the leading edge changing location as each sheet is installed. The fall protection for workers at the leading edge will be assured by a properly constructed and maintained controlled access zone not more than 25 feet away from the leading edge supplemented by a safety monitoring system to ensure the safety of all designated erectors working within the area defined by the controlled access zone.

### **Detailing**

Employees exposed to falls of 6 feet or more to lower levels, who are not actively engaged in leading edge work and who are working less than 6 feet from an unprotected edge will be tied off at all times. Employees engaged in these activities, but who are more than 6 feet from an unprotected edge as defined in the controlled access zones, do not require fall protection.

## Enforcement

Constant awareness of and respect for fall hazards, and compliance with all safety rules are considered conditions of employment. The job site superintendent, as well as individuals in the safety and personnel department, reserves the right to issue disciplinary warnings or employees, up to and including termination, for failure to follow guidelines of this plan.

## Accident Investigations

All accidents that result in injury to workers, regardless of their nature, will be investigated and reported. It is an integral part of any safety program that documentation takes place as soon as possible so that the cause and means of prevention can be identified to prevent a reoccurrence. In the event that an employee falls or there is some other related, serious incident occurring, this plan will be reviewed to determine if additional practices, procedures, or training need to be implemented to prevent similar types of falls or incidents from occurring.

## Changes to Plan

A qualified person will review this plan as the job progresses to determine if additional practices, procedures or training need to be implemented by the competent person to improve or provide additional fall protection. Workers will be notified and trained, if necessary, in the new procedures. A copy of this plan and all approved changes will be maintained at the job site.

## Glossary of Terms

Anchorage is a secure point of attachment for lifelines, lanyards or deceleration devices.

Body Belt [safety belt] is a strap with means both for securing it around the waist and for attaching it to a lanyard, lifeline or deceleration device.

Body Harness has straps that may be secured about the employee in a manner that will distribute the fall arrest forces over at least the thighs, pelvis, waist, chest and shoulders with means for attaching it to other components of a personal fall arrest system.

Buckle is any device for holding the body belt or body harness closed around the employee's body.

Competent Person is capable of identifying existing and predictable hazards in the surroundings or working conditions that are unsanitary, hazardous or dangerous to employees, and who has the authority to take prompt corrective measures to eliminate them,.

Connector is a device that is used to couple [connect] parts of the personal fall arrest system and positioning device system. It may be an independent component of the D-ring system, such as a carabiner, or it may be an integral component of part of the system [such as a buckle or D-ring sewn into a body belt or body harness, or a snap-hook spliced or sewn to a lanyard or self-retracting lanyard.]

Controlled Access Zone [CAZ] means an area in which certain work [e.g., overhead bricklaying] may take place without the use of guardrail systems, personal fall arrest systems, of safety net systems and access to the zone is controlled.



Deceleration Device is any mechanism, such as a rope grab, rip-stitch lanyard, specially woven lanyard, tearing or deforming lanyards, automatic self-retracting lifeline lanyards, etc., that serves to dissipate a substantial amount of energy during a fall arrest, or otherwise limit the energy imposed on an employee during fall arrest.

Deceleration Distance is the additional vertical distance a falling employee travels, excluding lifeline elongation and free fall distance, before stopping, from the point at which the deceleration device begins to operate. It is measured as the distance between the location of an employee's body belt or body harness attachment point at the moment of activation [at the onset of fall arrest forces] of the deceleration device during a fall and the location of that attachment point after the employee comes to a full stop.

Equivalent means alternative designs, materials or methods to protect against a hazard that the employer can demonstrate will provide an equal or greater degree of safety for employees than the methods, materials or designs specified in the standard.

Failure is load refusal breakage or separation of component parts. Load refusal is the point where the ultimate strength is exceeded.

Free Fall is the act of falling before a personal fall arrest system begins to apply force to arrest the fall.

Free Fall Distance is the vertical displacement of the fall arrest attachment point on the employee's body belt or body harness between onset of the fall and just before the system begins to apply force to arrest the fall. This distance excludes deceleration distance and lifeline/lanyard elongation, but includes any deceleration device slide distance or self-retracting lifeline/lanyard extension before they operate and fall arrest forces occur.

Guardrail System is a barrier erected to prevent employees from falling to a lower level.

Hole is a gap or void 2 inches [5.1 centimeters] or more in its least dimension in a floor, roof or other walking/working surface.

Infeasible means that it is impossible to perform the construction work using a conventional fall protection system, safety net system, or personal fall arrest system, or that it is technologically impossible to use any one of these systems to provide fall protection.

Lanyard is a flexible line of rope, wire or strap that generally has a connector at each end for connection the body belt harness to a deceleration device, lifeline or anchorage.

Leading Edge is the edge of a floor, roof or form work or other walking/working surface [such as the deck] that changes location as additional floor, roof decking or form work sections are placed, formed or constructed. A leading edge is considered to be an "unprotected side and edge" during periods when it is not actively and continuously under construction.

Lifeline is a component consisting of a flexible line for connection to an anchorage at one end to hand vertically [vertical lifeline], or for connection to an anchorage at both ends to stretch horizontally [horizontal lifeline], and that serves as a means for connecting other components or a personal fall arrest system to the anchorage.

Low Sloped Roof is a roof having a slope less than or equal to 4 in 12 [vertical to horizontal].

Lower Levels are those areas or surfaces including, but not limited to, ground levels, floors, platforms, ramps, runways, excavation pits, tanks, material water, equipment, structures or portions thereof.

Mechanical Equipment is all motor or human-propelled wheeled equipment used for roof work, except wheelbarrows and mop rafts.

Opening means a gap or void 30 inches [76 centimeters] or more high and 18 inches [48 centimeters] or more wide, in a wall or partition, through which employees can fall to a lower level.

Personal Fall Arrest System is a system used to arrest an employee in a fall from a working level. It consists of an anchorage, connectors, a body belt or body harness and may include a lanyard, deceleration device, lifeline or suitable combinations. As of January 1, 1998, the use of a body belt for fall arrest will be prohibited.

Positioning Device System is a body belt or body harness system rigged to allow an employee to be supported on an elevated vertical surface, such as a wall, and work with both hands free while leaning.

Qualified Person means one who, by possession of a recognized degree, certificate, or other professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his or her ability to solve or resolve problems relating to the subject matter, the work, or the project.

Rope Grab is a deceleration device that travels on a lifeline and automatically, by friction, engages the lifeline and locks to arrest the fall of an employee.

Roof is the exterior surface on the top of a building. This does not include floors or form work which, because a building has not been completed, temporarily becomes the top surface of a building.

Roofing Work is the hoisting, storage, application, and removal of roofing materials and equipment, including related insulation, sheet metal and vapor barrier work, but not including the construction of the roof deck.

Safety-Monitoring System is a safety system in which a competent person is responsible for recognizing and warning employees of fall hazards.

Self-Retracting Lifeline/Lanyard is a deceleration device containing a drum-wound line that can be slowly extracted from, or retracted onto, the drum under slight tension during normal employee movement, and which, after onset of a fall automatically locks the drum and arrests the fall.

Snap Hook is a connector comprised of a hook-shaped member with a normally closed keeper, or similar arrangement, that may be opened to permit the hook to receive an object and, when released, automatically closes to retain the object. Snap hooks are generally one of two types:

- a. The locking type with a self-closing keeper that remains closed until pressed open for connection or disconnection; or
- b. The non-locking type with a self-closing keeper that remains closed until pressed open for connection or disconnection. As of January 1, 1998, the use of a non-locking snap hook as part of a personal arrest systems and positioning device systems will be prohibited.

Steep Roof is a roof having a slope greater than 4 in 12 [vertical to horizontal].

Toe Board is a low protective barrier that will prevent the fall of materials and equipment to lower levels and will provide protection from falls for workers.

Unprotected Sides and Edges are any side or edge [except at entrances to points of access] of a walking/working surface, e.g., floor, roof, ramp, or runway, where there is no wall or guardrail system at least 39 inches [1.0 meter] high.

Warning Line System is a barrier erected on a roof to warn employees that they are on an unprotected roof side or edge, and that designates an area in which roofing work may take place without the use of guardrail body belt or safety net systems to protect employees in the area.

Work Area is that portion of a walking/working surface where job duties are being performed.

Walking/Working Surface is any surface, whether horizontal or vertical, on which an employee walks or works, including, but not limited to, floors, roofs, ramps, bridges, runways, form work and concrete reinforcing steel but not including ladders, vehicles or trailers, on which employees must be located in order to perform their job duties.

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## **Code of Safe Practices**

All persons shall follow these safe practices rules, render every possible aid to safe operations, and report all unsafe conditions or practices to the foreman or superintendent.

Foreman shall insist on employees observing and obeying every, regulation and order as is necessary to the safe conduct of the work, and shall take such action as is necessary to obtain observance.

All employees shall be given frequent accident prevention instructions. Instructions shall be given at least every ten working days.

Anyone known to be under the influence of drugs or intoxicating substances that impair the employee's ability to safely perform the assigned duties shall not be allowed on the job while in that condition.

Horseplay, scuffling, and other acts that to have an adverse influence on the safety or well-being of the employees shall be prohibited.

Work shall be well planned and supervised to prevent injuries in the handling of materials and in working with equipment.

No one shall knowingly be permitted or required to work while the employee's ability or alertness is so impaired by fatigue, illness, or other causes that it might unnecessarily expose the employee or others injury.

Employee's shall be instructed to ensure that all guards and other protective devices are in a proper place and adjusted, and shall report deficiencies promptly to the foreman or superintendent.

Workers shall not handle or tamper with any electrical equipment, machinery, or air or water lines in a manner not within the scope of their duties, unless they have received instructions from their foreman.

All injuries shall be reported promptly to the foreman or superintend so that arrangements can be made for medical or first aid treatment.

Use proper lifting techniques, including material handling equipment and tow-persons lifts, whenever possible.

Inappropriate footwear or shoes with thin or badly worn soles shall not be worn.

Material, tools, or other objects shall not be thrown from buildings or structure until proper precautions are taken to protect others from the falling objects.

All personal protective equipment, such as safety glasses/ goggles, hearing protection, hard hats, and respiratory protection, must be kept in good condition and worn on the job site when required.

Only authorized personnel who have been trained and certified shall operate machinery and equipment.

All ladders are maintained in good condition, and the proper type and rating is used for each job.

All extension cords should have a grounding conductor and be rated for the power tool(s) used on the job.

All hazardous materials used on the job are listed and there is a written hazard communication program dealing with Material Safety Data Sheets (MSDSs), labeling, and employee training.

## **Código de Prácticas Seguras**

Todas las personas deberán seguir estas reglas prácticas seguras, hacen toda la ayuda posible a las operaciones seguras y reportar todas las condiciones o prácticas inseguras al capataz o superintendente.

Capataz deberá insistir en la observación de los empleados y obedeciendo todas, la regulación y el orden que sea necesario para la realización segura de la obra, y adoptarán las medidas que sean necesarias para obtener la observancia.

Todos los empleados deben recibir instrucciones de prevención de accidentes frecuentes.

Instrucciones Se dará por lo menos cada diez días hábiles.

Cualquier persona que se sabe que bajo la influencia de drogas o sustancias intoxicantes que deterioran la capacidad del empleado para realizar con seguridad las tareas asignadas no se permitirá en el trabajo, mientras que en esa condición.

Payasadas, forcejeos, y otros actos que para tener una influencia adversa sobre la seguridad o el bienestar de los empleados deben ser prohibidas.

El trabajo deberá estar bien planificado y supervisado para evitar lesiones en el manejo de los materiales y en el trabajo con el equipo.

Nadie a sabiendas se permita o exija a trabajar mientras que la capacidad o el estado de alerta del empleado es tan perjudicados por la fatiga, enfermedad, u otras causas que podría exponer innecesariamente la lesión de los empleados u otros.

Empleado de se encargarán de asegurar que todos los protectores y otros dispositivos de protección están en un lugar adecuado y ajustado, y se informarán deficiencias sin demora al capataz o superintendente.

Los trabajadores no deberán manejar o manipular cualquier equipo eléctrico, maquinaria, o líneas de aire o el agua de una manera no dentro del ámbito de sus funciones, a menos que hayan recibido instrucciones de su capataz.

Todas las lesiones se notificarán con prontitud al capataz o superintend de manera que se pueden hacer arreglos para el tratamiento de la ayuda médica o primera.

Utilice técnicas de elevación adecuadas, incluyendo el equipo de manejo de materiales y de remolque-personas ascensores, siempre que sea posible.

Calzado inadecuado o zapatos con suelas delgadas o mal gastados no deberán ser usados.

Materiales, herramientas u otros objetos no deben ser arrojados edificios o estructura de forma hasta que se tomen las precauciones necesarias para proteger a otros de los objetos que caen.

Todos los equipos de protección personal, tales como gafas de seguridad / gafas de protección, protección para los oídos, cascos, y protección respiratoria, debe mantenerse en buenas condiciones y se usa en el lugar de trabajo cuando sea necesario.

Sólo personal autorizado que han sido entrenados y certificados deberán operar maquinaria y equipo.

Todas las escaleras se mantienen en buenas condiciones, y el tipo y la calificación se utiliza para cada trabajo.

Todos los cables de extensión deben tener un conductor a tierra y ser valorados por la herramienta (s) de energía utilizada en el trabajo.

Todos los materiales peligrosos utilizados en el trabajo están en la lista y hay un programa de comunicación de peligros por escrito se trata de hojas de seguridad (MSDS), el etiquetado, y la capacitación de los empleados.

**Orange County Erectors, Inc.**  
**Employee Safety Training Acknowledgment**

Name of Employee: \_\_\_\_\_

Date of Training: \_\_\_\_\_

Name of Trainer: \_\_\_\_\_

Training Subject: \_\_\_\_\_

Training Materials Used: \_\_\_\_\_

I, \_\_\_\_\_, hereby certify that I have  
(employee name)  
received training as described above in the following areas :

- The potential occupational hazards in the general work area and associated with my job assignment.
- The ***Code of Safe Practices*** which indicate the safe work conditions, safe work practices and personal protective equipment required for my work.
- The hazards of any chemicals to which I may be exposed and my right to information contained on ***Material Safety Data Sheets*** for those chemical, and how to understand this information.
- My right to ask any questions, or provide any information to the employer on safety either directly or anonymously without fear of reprisal.
- Disciplinary procedures the employer will use to enforce compliance the ***Code of Safe Practices***.

I understand this training and agree to comply with the ***Code of Safe Practices*** for my work area.

\_\_\_\_\_  
Employee Signature

\_\_\_\_\_  
Date

Injury and Illness Prevention Plan    Appendix A-1

## **Shop Fabrication and Field Erections Safety Orders**

### **Code of Safe Practices**

#### **GENERAL**

1. All persons shall follow these safe practices rules, render every possible aid to safe operations, and report all unsafe conditions or practices to the foreman or superintendent.
2. Foreman shall insist on employees observing and obeying every applicable Company, State or Federal regulation and order as is necessary to the safe conduct of the work, and shall take such action as is necessary to obtain compliance.
3. All employees shall be given frequent accident prevention instructions. Tailgate meetings shall be given at least every 10 working days. When applicable, the accident prevention instructions shall also include specific instruction on the safe use, care, maintenance of fall protection equipment (i.e. fall arrest systems, positioning device systems, safety nets, etc.) used at the jobsite.
4. Anyone known to be under the influence of drugs or intoxicating substance which impair the employees ability to safely perform the assigned duties shall not be allowed on the job while in that condition.
5. Horseplay, scuffling and other acts which tend to have an adverse influence on the safety or well-being of the employees shall be prohibited.
6. Work shall be well planned and supervised to prevent injuries in the handling of materials and in working together with equipment.
7. No one shall knowingly be permitted or required to work while the employees ability or alertness is so impaired by fatigue, illness, or other cause; that they might unnecessarily expose the employee or others to injury.
8. Employees shall not enter manholes, under,-round vaults, chambers, tanks silos, or other similar places that receive little ventilation unless it has been determined that it is safe to enter.
9. Employees shall be instructed to ensure that all guards and other protective devices are in proper places and adjusted, and shall report deficiencies promptly to the foreman or superintendent.
10. Crowding or pushing when boarding or leaving any vehicle or other conveyance shall be prohibited.
11. Workers shall not handle or tamper with any electrical equipment, machinery, or air or water lines in a manner not within the scope of their duties, unless they have received instructions from their foreman.
12. All injuries shall be reported promptly to the foreman or superintendent so that arrangements can be made for medical or first aid treatment.
13. When lifting heavy objects, the large muscles of the leg instead of the smaller muscles of the back shall be used.
14. Inappropriate footwear or shoes with thin or badly worn soles must not be worn.
15. Materials, tools, or other objects shall not be thrown from buildings or structures until proper precautions are taken to protect others from the falling objects.
16. Do not smoke or allow smoking where there is a possibility of flammable fumes.
17. When you are pulling or prying, be sure that you are properly positioned and in the clear so that you will not be caught between, thrown off, or cause injury to another, if the pry



- slips or the piece suddenly falls into place.
18. Hard hats must be worn in all areas indicated.
  19. Proper type safety glasses or goggles must be worn where there is a danger of injury to the eyes from flying objects, molten metals, injurious light and heat rays, gaseous fumes, acids, liquids or dust.
  20. Wear gloves except while working around machinery. Discard torn gloves.
  21. Employees shall cleanse themselves thoroughly after handling hazardous substances and follow special instructions from authorized sources.
  22. Hod carriers should avoid the use of extension ladders when carrying loads. Such ladders may provide adequate strength, but the rung position and rope arrangement make such climbing difficult and hazardous for this trade.
  23. Work shall be so arranged that employees are able to face a ladder and use both hands while climbing.
  24. Gasoline shall not be used for cleaning purposes.
  25. No burning, welding, or other source of ignition shall be applied to any enclosed tank or vessel, even if there are some openings, until it has first been determined that no possibility of explosion exists and authority for the work is obtained from the foreman or superintendent.
  26. Any damage to scaffolds, falsework, or other supporting structures shall be immediately reported to the foreman and repaired before use.
  27. Inspect all ladders before use for breaks and safety shoes. Avoid reaching to either side when working from a ladder. Never slide down a ladder. Ladders must extend 3' above opening and be tied securely.
  28. Never stand over an air line, hydraulic line or any other line under pressure. If an air line breaks, do not go near it or attempt to grab it until the pressure is shut off. Never point an air hose at another employee or use compressed air for dusting clothing.
  29. All oxygen or acetylene cylinders must be transported, stored, and secured in an upright position.
  30. Never interchange oxygen or acetylene regulators, hose or other burning apparatus. Make certain that the hose is secured to the connections and that all fittings are tight and equipment is in good working order.
  31. Before installing the required regulator wipe the valve of oxygen and gas cylinders to clear the valves of any dust, dirt, grease or other foreign material which may have accumulated during the shipment or storage.
  32. Always place the burning hose so that it will not be trampled on, run over or present a tripping hazard.
  33. Never allow cylinders to come into contact with live wires or ground wires from electrical equipment. Do not store material on cylinders.
  34. Use no oil, grease or any other lubricant on burning apparatus. Burning equipment does not require lubrication. Oil or grease in the presence of oxygen under pressure will ignite violently. DO not handle cylinders or burning apparatus with greasy hands, gloves or clothing.
  35. Before starting to burn, look around to make certain that flame, sparks or hot metal will not be likely to start a fire. When burning any pieces, be sure that you will not fall when piece is burned and also that piece burned will not fall or swing where other men are working.
  36. When work is performed from thrust-outs or similar locations, such as trusses, beams, purlins, or plates of 4-inch nominal width, or greater, at elevations exceeding 15 feet

above ground, water surface, or floor level below and where temporary guardrail protection is impracticable, employees shall use approved personal fall protection systems.

37. Approved personal fall arrest, personal fall restraint or positioning systems shall be worn by those employees whose work exposes them to falling in excess of 7 1/2 feet from the perimeter of a structure, unprotected sides and edges, leading edges, through shaft-ways and openings, sloped roof surfaces steeper than 7:12, or other slopped surface steeper than 40 degrees not otherwise adequately protected.
38. Body belts shall not be used as part of a personal fall arrest system.
39. All floats shall be not less than 3'x6'x3/4" in size, when possible and practical, and supporting ropes shall be 1" manila rope or the equivalent. Personal fall arrest systems must be worn at all times when working on floats.
40. Scaffolds must be stabilized, planked and have proper railings and toe boards.
41. Bulbs on emergency and temporary lights must have guards.
42. Barricade and post OFF LIMITS signs on unreleased stairs.
43. Proper respiratory equipment must be worn when spray painting or welding when toxic fumes are present.
44. Never permit any open flame to come into contact with any part of a cylinder.
45. Always stay clear of suspended or swinging loads.
46. Stay at the end of the load so as not to be caught by the drift of the load.

### **Use of Tools and Equipment**

47. All tools and equipment shall be maintained in good condition.
48. Damaged tools or equipment shall be removed from service and tagged "DEFECTIVE".
49. Pipe or Stillson wrenches shall not be used as a substitute for other wrenches.
50. Only appropriate tools shall be used for a specific job.
51. Wrenches shall not be altered by the addition of handle-extensions or "cheaters".
52. Files shall be equipped with handles and not used to punch or pry.
53. A screwdriver shall not be used as a chisel.
54. Wheelbarrows shall not be pushed with handles in an upright position.
55. Portable electric tools shall not be lifted or lowered by means of the power cord. Ropes shall be used.
56. Electric cords shall not be exposed to damage from vehicles.
57. In locations where the use of a portable power tool is difficult, the tool shall be supported by means of a rope or similar support of adequate strength.
58. When chipping, impacting or grinding in a confined area ear plugs must be worn.

### **Machinery and Vehicles**

59. Only authorized persons shall operate machinery or equipment.
60. Drivers of all vehicles must wear seat belts.
61. Loose or frayed clothing, long hair, dangling ties, finger rings, etc.. shall not be worn around moving machinery or other areas where they may become entangled.
62. Machinery shall not be serviced, repaired or adjusted while in operation, nor shall oiling of moving parts be attempted, except on equipment that is designed or fitted with safeguards to protect the person performing the work.
63. Where appropriate, lock-out procedures shall be used.

64. Employees shall not work under vehicles supported by jacks or chain hoists without protective blocking that will prevent injury if jacks or hoists should fail.
65. Air hoses shall not be disconnected at compressors until the hose line has been bled.
66. All excavations shall be visually inspected before backfilling to ensure that it is safe to backfill.
67. Excavating equipment shall not be operated near tops of cuts, banks, or cliffs if employees are working below.
68. Tractors, bulldozers, scrapers and carryalls shall not operate where there is a possibility of overturning in dangerous areas like edges of deep fills, cut banks, and steep slopes.
69. When loading where there is a probability of dangerous slides or movement of material, the wheels or treads of loading equipment, other than that riding on rails, should be turned in the direction which will facilitate escape in case of danger, except in a situation where this position of the wheels or treads would cause a greater operational hazard.
70. When unloading trucks, make sure that the truck is level and wherever possible, have the chokers in place before loosening the binders.
71. See that there is no loose material or tools riding on the load when it is hoisted.
72. Keep hands off the loads so that they may nest and not pinch your fingers.
73. Never move a truck with a load unless it is properly secured.
74. When operating Scissorlift and Snorkelift, all platform occupants must wear an approved safety belt.
75. When driving or moving a Scissorlift or Snorkelift platform, check clearance amount the lift to avoid contact with structures or other hazards. Always look in the direction of motion.

## **Subchapter 4. Construction Safety Orders**

### **Article 29. Erection and Construction**

#### **§1709. General Requirements.**

(a) No building, structure, or part thereof, or any temporary support or scaffolding in connection therewith shall be subjected to any load beyond its design load strength, unless the employer determines, based on information received from a qualified person who is experienced in structural design, that the structure or portion of the structure is capable of safely supporting the load. For the purpose of this subsection, the design load strength refers to the load bearing capacity of a structural member(s) computed on the basis of the allowable stresses which are assumed in the design.

#### **(b) Bracing.**

(1) Trusses and beams shall be braced laterally and progressively during construction to prevent buckling or overturning.

(2) The first member shall be plumbed, connected, braced and/or guyed against shifting before succeeding members are erected and secured to it.

(3) The total system shall be adequately braced and stabilized to the foundation, to suitable anchors buried in the ground, or by other equivalent method(s).

(4) Beams, trusses and other material being lifted and placed by cranes or other hoisting apparatus shall not be released from the crane or hoisting apparatus until the person detaching the load has verified that the load has been secured or supported to prevent inadvertent movement.

#### **(c) Wood Floor Construction.**

(1) In the erection of a building having double wood floor construction, the rough flooring shall be completed as the building progresses, including the tier below the one on which floor joists are being installed.

(2) For single wood floor or other flooring systems, the floor immediately below the story where the floor joists are being installed shall be kept planked or decked over.

(d) Erection Guide for Trusses and Beams Over 25 Feet Long. The employer shall provide an erection plan and procedure prepared by a civil engineer currently registered in California which shall be followed and kept available on the job site for inspection by the Division.

Note: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

## **HISTORY**

1. Renumbering from section 1710 filed 11-1-73; effective thirtieth day thereafter (Register 73, No. 44).
2. Amendment filed 6-21-85; effective thirtieth day thereafter (Register 85, No. 25).
3. Editorial correction adding article heading (Register 91, No. 23).
4. Amendment of section heading, designation of first paragraph as subsection (a) and new subsections (b)-(d) filed 5-1-2002; operative 5-1-2002. Submitted to OAL for printing only pursuant to Labor Code section 142.3(a)(3) (Register 2002, No. 18).
5. Amendment of subsection (a) filed 12-29-2010; operative 1-28-2011 (Register 2010, No. 53).

## **Subchapter 4. Construction Safety Orders**

### **Article 29. Erection and Construction**

#### **§1710. Erection of Structures.**

(a) Scope and application.

(1) This section sets forth requirements to protect employees from the hazards associated with steel erection activities involved in the construction, alteration, and/or repair of single and multi-story buildings, bridges, and other structures where steel erection occurs. The requirements of this section apply to employers engaged in steel erection unless otherwise specified.

Exception: This section does not cover electrical transmission towers, communication and broadcast towers, or tanks.

NOTE: Additional requirements for work on steel framed structures are contained in Article 20, Section 1635(b) of these orders.

(2) Steel erection activities include hoisting, connecting, welding, bolting, and rigging structural steel, steel joists and metal buildings; installing metal deck, siding systems, miscellaneous metals, ornamental iron and similar materials; and moving from point-to-point to perform these activities.

(3) The duties of controlling contractors under this section include the duties specified in (c)(1) & (3), (f)(2)(B), (j)(2) and (o) of this section.

(4) Effective date for the design component requirements of this section. This section contains a number of provisions that address the safety of certain structural components referred to as "component requirements." The design component requirements contained in subsections, (e)(1)(A), (f)(1), (g)(4), (g)(5), (g)(6), (h)(1)(A)1., (h)(1)(G)1., (i)(2), and (i)(5) will not apply to the project if the project was permitted, or steel erection commenced prior to the effective date of May 1, 2002.

(b) Definitions.

"Anchored bridging" means that the steel joist bridging is connected to a bridging terminus point.

"Bolted diagonal bridging" means diagonal bridging that is bolted to a steel joist or joists.

"Bridging clip" means a device that is attached to the steel joist to allow the bolting of the bridging to the steel joist.

"Bridging terminus point" means a wall, a beam, tandem joists (with all bridging installed and a

horizontal truss in the plane of the top chord) or other element at an end or intermediate point(s) of a line of bridging that provides an anchor point for the steel joist bridging.

"Cold forming" means the process of using press brakes, rolls, or other methods to shape steel into desired cross sections at room temperature.

"Column" means a load-carrying vertical member that is part of the primary skeletal framing system. Columns do not include posts.

"Connector" means an employee who, working with hoisting equipment, is placing and connecting beams or other structural members.

"Constructibility" means the ability to erect structural steel members in accordance with Section 1710 without having to alter the over-all structural design.

"Construction load" (for joist erection) means any load other than the weight of the employee(s), the joists and the bridging bundle.

"Controlled Decking Zone (CDZ)" means an area established specifically for the initial placement and securing of metal decking where access to the area is restricted and work may take place without the use of a personal fall protection system when the provisions of Section 1710(n) are met.

"Controlled load lowering" means lowering a load by means of a mechanical hoist drum device that allows a hoisted load to be lowered with maximum control using the gear train or hydraulic components of the hoist mechanism. Controlled load lowering requires the use of the hoist drive motor, rather than the load hoist brake, to lower the load.

"Controlling contractor" means a prime contractor, general contractor, construction manager or any other legal entity which has the overall responsibility for the construction of the project - its planning, quality and completion.

"Critical lift" (used in Appendix C to Section 1710) means a lift that exceeds 75 percent of the rated capacity of the crane or derrick, or requires the use of more than one crane or derrick.

"Derrick floor" (working floor) means an elevated floor of a building or structure that has been designated to receive hoisted pieces of steel prior to final placement.

"Double connection" means an attachment method where the connection point is intended for two pieces of steel which share common bolts on either side of a central piece.

"Double connection seat" means a structural attachment that, during the installation of a double connection, supports the first member while the second member is connected.

"Erection bridging" means the bolted diagonal bridging that is required to be installed prior to releasing the hoisting cables from the steel joists.

"Girt" (in systems-engineered metal buildings) means a "Z" or "C" shaped member formed from

sheet steel spanning between primary framing and supporting wall material.

"Metal decking" means a commercially manufactured, structural grade, cold rolled metal panel formed into a series of parallel ribs; for this section, this includes metal floor and roof decks, standing seam metal roofs, other metal roof systems and other products such as bar gratings, checker plate, expanded metal panels, and similar products. After installation and proper fastening, these decking materials serve a combination of functions including, but not limited to: a structural element designed in combination with the structure to resist, distribute and transfer loads, stiffen the structure and provide a diaphragm action; a walking/working surface; a form for concrete slabs; a support for roofing systems; and a finished floor or roof.

"Multiple lift rigging" means rigging manufactured by rigging suppliers that facilitates the attachment of up to five independent loads to the hoist rigging of a crane.

"Permanent floor" means a structurally completed floor at any level or elevation (including slab on grade).

"Post" means a structural member with a longitudinal axis that is essentially vertical, that weighs 300 pounds or less and is axially loaded (a load presses down on the top end), or is not axially loaded, but is laterally restrained by the above member. Posts typically support stair landings, wall framing, mezzanines and other substructures.

"Project structural engineer of record" means the registered, California licensed engineer responsible for the design of structural steel framing and whose seal appears on the structural contract documents.

"Purlin" (in systems-engineered metal buildings) means a "Z" or "C" shaped member formed from sheet steel spanning between primary framing and supporting roof material.

"Safety deck attachment" means an initial attachment that is used to secure an initially placed sheet of decking to keep proper alignment and bearing with structural support members.

"Shear connector" means headed steel studs, steel bars, steel lugs, and similar devices which are attached to a structural member for the purpose of achieving composite action with concrete.

"Steel erection" means the construction, alteration or repair of steel buildings, bridges and other structures, including the installation of metal decking and all planking used during the process of erection.

"Steel joist" means an open web, secondary load-carrying member of 144 feet (43.9 m) or less, designed by the manufacturer, used for the support of floors and roofs. This does not include structural steel trusses or cold-formed joists.

"Steel joist girder" means an open web, primary load-carrying member, designed by the manufacturer, used for the support of floors and roofs. This does not include structural steel trusses.

"Steel truss" means an open web member designed of structural steel components by the project



structural engineer of record. For the purposes of this section, a steel truss is considered equivalent to a solid web structural member.

"Structural steel" means a steel member, or a member made of a substitute material. These members include, but are not limited to, steel joists, joist girders, purlins, columns, beams, trusses, splices, seats, metal decking, girts, and all bridging, and cold formed metal framing which is integrated with the structural steel framing of a building.

"Systems-engineered metal building" means a metal, field-assembled building system consisting of framing, roof and wall coverings. Typically, many of these components are cold-formed shapes. These individual parts are fabricated in one or more manufacturing facilities and shipped to the job site for assembly into the final structure. The engineering design of the system is normally the responsibility of the systems-engineered metal building manufacturer.

"Tank" means a container for holding gases, liquids or solids.

(c) Site layout and construction sequence.

(1) Approval to begin steel erection. Before authorizing the commencement of steel erection, the controlling contractor shall ensure that the steel erector is provided with the following written notifications:

(A) The concrete in the footings, piers and walls and the mortar in the masonry piers and walls has attained, on the basis of an approved test method of field-cured samples (i.e. appropriate ASTM standard test method), either 75 percent of the intended minimum compressive design strength or sufficient strength to support the loads imposed during steel erection.

(B) Any repairs, replacements and modifications to the anchor bolts were conducted in accordance with Section 1710(f)(2).

(2) Commencement of steel erection. A steel erection contractor shall not erect steel unless it has received written notification that the concrete in the footings, piers and walls or the mortar in the masonry piers and walls has attained, on the basis of an approved test method of field-cured samples (i.e., appropriate ASTM standard test method), either 75 percent of the intended minimum compressive design strength or sufficient strength to support the loads imposed during steel erection.

(3) Site layout. The controlling contractor shall ensure that the following is provided and maintained:

(A) Adequate access roads into and through the site for the safe delivery and movement of derricks, cranes, trucks, other necessary equipment, and the material to be erected and means and methods for pedestrian and vehicular control.

Exception: This requirement does not apply to roads outside of the construction site.

(B) A firm, properly graded, drained area, adequately compacted to support the intended loads, readily accessible to the work with adequate space for the safe storage of materials

and the safe operation of the erector's equipment.

(4) Pre-planning of overhead hoisting operations. All hoisting operations in steel erection shall be pre-planned to ensure that the requirements of Section 1710(d)(1) are met.

(5) Site-specific erection plan. Where employers elect, due to conditions specific to the site, to develop alternate means and methods that provide employee protection in accordance with Sections 1710(d)(9), 1710(h)(1)(C) or 1710(h)(5)(D), a site-specific erection plan shall be developed by a qualified person and be available at the work site. Guidelines for establishing a site-specific erection plan are contained in Appendix C of this section.

(d) Hoisting and rigging.

(1) Working under loads.

(A) Routes for suspended loads shall be pre-planned to ensure that no employee is working below a suspended load except as necessary for:

1. Connectors making the initial connection of the steel; or
2. Riggers when hooking or unhooking of the load.

(B) When working under suspended loads, the following criteria shall be met:

1. Materials being hoisted shall be rigged to prevent unintentional displacement;
2. Hooks with self-closing safety latches or their equivalent shall be used to prevent components from slipping out of the hook; and
3. All loads shall be rigged by a qualified rigger.

(2) Multiple Lift Rigging Procedure.

(A) A multiple lift shall only be performed if the following criteria are met:

1. A multiple lift rigging assembly is used;
2. A maximum of five members are hoisted per lift;
3. Rigging procedures shall prevent hazardous contact between the structural steel members being hoisted and adjacent structures or workers;
4. Only beams and similar structural members are lifted;
5. All employees engaged in the multiple lift have been trained in these procedures in accordance with Section 1710(q)(3)(A); and
6. No crane is permitted to be used for a multiple lift where such use is contrary to the

manufacturer's specifications and limitations.

(B) Components of the multiple lift rigging assembly shall be specifically designed and assembled to support the maximum capacity for the total assembly and for each individual attachment point. This capacity, certified by the manufacturer, shall be based on the manufacturer's specifications with a 5 to 1 safety factor for all components.

(C) The total load shall not exceed:

1. 75 percent of the rated capacity of the hoisting equipment specified in the hoisting equipment load charts;
2. The rigging capacity specified by the manufacturer.

(D) The multiple lift rigging assembly shall be rigged with members:

1. Attached at their center of gravity and maintained reasonably level;
2. Rigged from top down; and
3. Rigged at least 7 feet (2.1 m) apart.

(E) The members on the multiple lift rigging assembly shall be set from the bottom up.

(F) Controlled load lowering shall be used whenever the load is over the connectors.

(3) Whenever there is any doubt as to safety, the crane or derrick operator shall have the authority to stop and refuse to handle loads until safety has been assured.

(4) Metal decking bundles shall be landed on framing members so that enough support is provided to allow the bundles to be unbanded without dislodging the bundles from the supports.

(5) Temporary loads placed on a derrick floor shall be distributed over the underlying support members so as to prevent local overloading of the deck material.

(6) Bundle packaging and strapping shall not be used for hoisting unless specifically designed for that purpose.

(7) If loose items such as dunnage, flashing, or other materials are placed on the top of metal decking bundles to be hoisted, such items shall be secured to the bundles.

(8) Cranes or derricks may be used to hoist employees on a personnel platform when work under this section is being conducted, provided the provisions of General Industry Safety Orders, Section 5004 [except for subsection (c)] are met.

(9) Safety latches on hooks shall not be deactivated or made inoperable except:

(A) When a qualified rigger has determined that the hoisting and placing of purlins and single joists can be performed more safely by doing so; and

(B) When the steel erector develops and implements a site-specific erection plan that ensures the load will not travel over or expose employees in other trades to the hazards of suspended loads.

NOTE: Other applicable regulations pertaining to hoisting and rigging operations for the use of cranes and derricks in steel erection construction are contained in the General Industry Safety Orders, Group 13, Cranes and Other Hoisting Equipment.

(e) Walking/working surfaces.

(1) Shear connectors and other similar devices.

(A) Tripping hazards. Shear connectors (such as headed steel studs, steel bars or steel lugs), reinforcing bars, deformed anchors or threaded studs shall not be attached to the top flanges of beams, joists or beam attachments so that they project vertically from or horizontally across the top flange of the member until after the metal decking, or other walking/working surface, has been installed.

(B) Installation of shear connectors on composite floors, roofs and bridge decks. When shear connectors are used in construction of composite floors, roofs and bridge decks, employees shall lay out and install the shear connectors after the metal decking has been installed, using the metal decking as a working platform.

NOTE: Section 1710(n)(8) prohibits the installation of shear connectors within a controlled decking zone.

(f) Column anchorage.

(1) General requirements for erection stability.

(A) All columns shall be anchored by a minimum of 4 anchor rods (anchor bolts).

Exception: When columns are braced or guyed to provide the stability to support an eccentric load as specified in subsection (f)(1)(B) of this section.

(B) Each column anchor rod (anchor bolt) assembly, including the column-to-base plate weld and the column foundation, shall be designed to resist a minimum eccentric gravity load of 300 pounds (136.2 kg) located 18 inches (.46m) from the extreme outer face of the column in each direction at the top of the column shaft.

(C) Columns shall be set on level finished floors, pre-grouted leveling plates, leveling nuts, or shim packs which are adequate to transfer the construction loads.

(D) All columns shall be evaluated by a competent person to determine whether guying or bracing is needed; if guying or bracing is needed, it shall be installed.

(2) Repair, replacement or field modification of anchor rods (anchor bolts).

(A) Anchor rods (anchor bolts) shall not be repaired, replaced or field-modified without the approval of the project structural engineer of record.

NOTE: Minor adjustment of anchor rods (anchor bolts) that do not affect the structural integrity of anchor rods (anchor bolts) are not considered "repairs" for the purposes of this subsection.

(B) Prior to the erection of a column, the controlling contractor shall provide written notification to the steel erector if there has been any repair, replacement or modification of the anchor rods (anchor bolts) of that column.

(g) Beams and columns.

(1) During the final placing of solid web structural members, the load shall not be released from the hoisting line until the members are secured with at least two bolts per connection, of the same size and strength as shown in the erection drawings, drawn up wrench-tight or the equivalent as specified by the project structural engineer of record, except as specified in subsection (g)(3) of this section.

(2) A competent person shall determine if more than two bolts are necessary to ensure the stability of cantilevered members; if additional bolts are needed, they shall be installed.

(3) Diagonal bracing. Solid web structural members used as diagonal bracing shall be secured by at least one bolt per connection drawn up wrench-tight or the equivalent as specified by the project structural engineer of record.

(4) Double connections at columns and/or at beam webs over a column.

(A) When two structural members on opposite sides of a column web, or a beam web over a column, are connected sharing common connection holes, at least one bolt with its wrench-tight nut shall remain connected to the first member unless a shop-attached or field-attached seat or equivalent connection device is supplied with the member to secure the first member and prevent the column from being displaced (See Appendix B of this section for examples of equivalent connection devices).

(B) If a seat or equivalent device is used, the seat (or device) shall be designed to support the load during the double connection process. It shall be adequately bolted or welded to both a supporting member and the first member before the nuts on the shared bolts are removed to make the double connection.

(5) Column splices. Each column splice shall be designed to resist a minimum eccentric gravity load of 300 pounds (136.2 kg) located 18 inches (.46 m) from the extreme outer face of the column in each direction at the top of the column shaft.

(6) Perimeter columns. Perimeter columns shall not be erected unless:

(A) The perimeter columns extend a minimum of 48 inches (1.2 m) above the finished floor to permit installation of perimeter safety cables prior to erection of the next tier, except where constructibility does not allow.

(B) The perimeter columns have holes or other devices in or attached to perimeter columns at 42-45 inches (107-114 cm) above the finished floor and the midpoint between the finished floor and the top cable to permit installation of perimeter safety cables (wire rope) required by subsection (l)(3) of this section, except where constructibility does not allow.

(h) Open web steel joists.

(1) General.

(A) Except as provided in subsection (h)(1)(B) of this section, where steel joists are used and columns are not framed in at least two directions with solid web structural steel members, a steel joist shall be field-bolted at the column to provide lateral stability to the column during erection. For the installation of this joist:

1. A vertical stabilizer plate shall be provided on each column for steel joists. The plate shall be a minimum of 6 inch by 6 inch (152 mm by 152 mm) and shall extend at least 3 inches (76 mm) below the bottom chord of the joist with a 13/16 inch (21 mm) hole to provide an attachment point for guying or plumbing cables.
2. The bottom chords of steel joists at columns shall be stabilized to prevent rotation during erection.
3. Hoisting cables shall not be released until the seat at each end of the steel joist is field-bolted, and each end of the bottom chord is restrained by the column stabilizer plate.

(B) Where constructibility does not allow a steel joist to be installed at the column:

1. An alternate means of stabilizing joists shall be installed on both sides near the column and shall:
  - a. Provide stability equivalent to subsection (h)(1)(A) of this section;
  - b. be designed by a qualified person;
  - c. be shop installed; and
  - d. be included in the erection drawings.
2. Hoisting cables shall not be released until the seat at each end of the steel joist is field-bolted and the joist is stabilized.

(C) Where steel joists at or near columns span more than 60 feet (18.3 m), the joists shall

be set in tandem with all bridging installed unless an alternative method of erection, which provides equivalent stability to the steel joist, is designed by a qualified person and is included in the site-specific erection plan.

(D) A steel joist or steel joist girder shall not be placed on any support structure unless such structure is stabilized.

(E) When steel joist(s) are landed on a structure, they shall be secured to prevent unintentional displacement prior to installation.

(F) No modification that affects the strength of a steel joist or steel joist girder shall be made without the approval of the project structural engineer of record.

(G) Field-bolted joists.

1. Except for steel joists that have been pre-assembled into panels, connections of individual steel joists to steel structures in bays of 40 feet (12.2 m) or more shall be fabricated to allow for field bolting during erection.

2. These connections shall be field-bolted unless constructibility does not allow.

(H) Steel joists and steel joist girders shall not be used as anchorage points for a fall arrest system unless written approval to do so is obtained from a qualified person.

(I) A bridging terminus point shall be established before bridging is installed. (See Appendix A of this section.)

(2) Attachment of steel joists and steel joist girders.

(A) Each end of "K" series steel joists shall be attached to the support structure with a minimum of two 1/8-inch (3 mm) fillet welds 1 inch (25 mm) long or with two 1/2-inch (13 mm) bolts, or the equivalent.

(B) Each end of "LH" and "DLH" series steel joists and steel joist girders shall be attached to the support structure with a minimum of two 1/4-inch (6 mm) fillet welds 2 inches (51 mm) long, or with two 3/4-inch (19 mm) bolts, or the equivalent.

(C) Except as provided in subsection (h)(2)(D) of this section, each steel joist shall be attached to the support structure, at least at one end on both sides of the seat, immediately upon placement in the final erection position and before additional joists are placed.

(D) Panels that have been pre-assembled from steel joists with bridging shall be attached to the structure at each corner before the hoisting cables are released.

(3) Erection of steel joists.

(A) Both sides of the seat of one end of each steel joist that requires bridging under Tables A and B shall be attached to the support structure before hoisting cables are released.

(B) For joists over 60 feet, both ends of the joist shall be attached as specified in subsection (h)(2) of this section and the provisions of subsection (h)(4) of this section met before the hoisting cables are released.

(C) On steel joists that do not require erection bridging under Tables A and B, only one employee shall be allowed on the joist until all bridging is installed and anchored.

(D) Employees shall not be allowed on steel joists where the span of the steel joist is equal to or greater than the span shown in Tables A and B except in accordance with subsection (h)(4) of this section.

(E) When permanent bridging terminus points cannot be used during erection, additional temporary bridging terminus points are required to provide stability. (See Appendix A of this section.)

Table A. Erection Bridging for Short Span Joists

Joist .....	Span - Feet
8K1.....	NM
10K1.....	NM
12K1.....	23-0
12K3.....	NM
12K5.....	NM
14K1.....	27-0
14K3.....	NM
14K4.....	NM
14K6.....	NM
16K2.....	29-0
16K3.....	30-0
16K4.....	32-0
16K5.....	32-0
16K6.....	NM
16K7.....	NM
16K9.....	NM
18K3.....	31-0
18K4.....	32-0
18K5.....	33-0
18K6.....	35-0
18K7.....	NM
18K9.....	NM
18K10.....	NM
20K3.....	32-0
20K4.....	34-0
20K5.....	34-0
20K6.....	36-0
20K7.....	39-0



20K9.....	39-0
20K10.....	NM
22K4.....	34-0
22K5.....	35-0
22K6.....	36-0
22K7.....	40-0
22K9.....	40-0
22K10.....	NM
22K11.....	NM
24K4.....	36-0
24K5.....	38-0
24K6.....	39-0
24K7.....	43-0
24K8.....	43-0
24K9.....	44-0
24K10.....	NM
24K12.....	NM
26K5.....	38-0
26K6.....	39-0
26K7.....	43-0
26K8.....	44-0
26K9.....	44-0
26K10.....	49-0
26K12.....	NM
28K6.....	40-0
28K7.....	43-0
28K8.....	44-0
28K9.....	45-0
28K10.....	49-0
28K12.....	53-0
30K7.....	44-0
30K8.....	45-0
30K9.....	45-0
30K10.....	50-0
30K11.....	52-0
30K12.....	54-0
10KCS1.....	NM
10KCS2.....	NM
10KCS3.....	NM
12KCS1.....	NM
12KCS2.....	NM
12KCS3.....	NM
14KCS1.....	NM
14KCS2.....	NM
14KCS3.....	NM
16KCS2.....	NM
16KCS3.....	NM
16KCS4.....	NM

16KCS5.....	NM
18KCS2.....	35-0
18KCS3.....	NM
18KCS4.....	NM
18KCS5.....	NM
20KCS2.....	36-0
20KCS3.....	39-0
20KCS4.....	NM
20KCS5.....	NM
22KCS2.....	36-0
22KCS3.....	40-0
22KCS4.....	NM
22KCS5.....	NM
24KCS2.....	39-0
24KCS3.....	44-0
24KCS4.....	NM
24KCS5.....	NM
26KCS2.....	39-0
26KCS3.....	44-0
26KCS4.....	NM
26KCS5.....	NM
28KCS2.....	40-0
28KCS3.....	45-0
28KCS4.....	53-0
28KCS5.....	53-0
30KCS3.....	45-0
30KCS4.....	54-0
30KCS5.....	54-0

NM=diagonal bolted bridging not mandatory.

Table B. Erection Bridging for Long Span Joists

Joist .....	Span - Feet
18LH02.....	33-0.
18LH03.....	NM.
18LH04.....	NM.
18LH05.....	NM.
18LH06.....	NM.
18LH07.....	NM.
18LH08.....	NM.
18LH09.....	NM.
20LH02.....	33-0.
20LH03.....	38-0.
20LH04.....	NM.
20LH05.....	NM.
20LH06.....	NM.

20LH07.....	NM.
20LH08.....	NM.
20LH09.....	NM.
20LH10.....	NM.
24LH03.....	35-0.
24LH04.....	39-0.
24LH05.....	40-0.
24LH06.....	45-0.
24LH07.....	NM.
24LH08.....	NM.
24LH09.....	NM.
24LH10.....	NM.
24LH11.....	NM.
28LH05.....	42-0.
28LH06.....	46-0.
28LH07.....	54-0.
28LH08.....	54-0.
28LH09.....	NM.
28LH10.....	NM.
28LH11.....	NM.
28LH12.....	NM.
28LH13.....	NM.
32LH06.....	47-0 through 60-0.
32LH07.....	47-0 through 60-0.
32LH08.....	55-0 through 60-0.
32LH09.....	NM through 60-0.
32LH10.....	NM through 60-0.
32LH11.....	NM through 60-0.
32LH12.....	NM through 60-0.
32LH13.....	NM through 60-0.
32LH14.....	NM through 60-0.
32LH15.....	NM through 60-0.
36LH07.....	47-0 through 60-0.
36LH08.....	47-0 through 60-0.
36LH09.....	57-0 through 60-0.
36LH10.....	NM through 60-0.
36LH11.....	NM through 60-0.
36LH12.....	NM through 60-0.
36LH13.....	NM through 60-0.
36LH14.....	NM through 60-0.
36LH15.....	NM through 60-0.

NM = diagonal bolted bridging not mandatory.

(4) Erection bridging.

(A) Where the span of the steel joist is equal to or greater than the span shown in Tables A

and B, the following shall apply:

1. A row of bolted diagonal erection bridging shall be installed near the midspan of the steel joist;
2. Hoisting cables shall not be released until this bolted diagonal erection bridging is installed and anchored; and
3. No more than one employee shall be allowed on these spans until all other bridging is installed and anchored.

(B) Where the span of the steel joist is over 60 feet (18.3 m) through 100 feet (30.5 m), the following shall apply:

1. All rows of bridging shall be bolted diagonal bridging;
2. Two rows of bolted diagonal erection bridging shall be installed near the third points of the steel joist;
3. Hoisting cables shall not be released until this bolted diagonal erection bridging is installed and anchored; and
4. No more than two employees shall be allowed on these spans until all other bridging is installed and anchored.

(C) Where the span of the steel joist is over 100 feet (30.5 m) through 144 feet (43.9 m), the following shall apply:

1. All rows of bridging shall be bolted diagonal bridging;
2. Hoisting cables shall not be released until all bridging is installed and anchored; and
3. No more than two employees shall be allowed on these spans until all bridging is installed and anchored.

(D) For steel members spanning over 144 feet (43.9 m), the erection methods used shall be in accordance with subsection (g) of this section.

(E) Where any steel joist specified in subsections (h)(3)(B) and (h)(4)(A), (h)(4)(B), and (h)(4)(C) of this section is a bottom chord bearing joist, a row of bolted diagonal bridging shall be provided near the support(s). This bridging shall be installed and anchored before the hoisting cable(s) is released.

(F) When bolted diagonal erection bridging is required by this section, the following shall apply:

1. The bridging shall be indicated on the erection drawing;

2. The erection drawing shall be the exclusive indicator of the proper placement of this bridging;
3. Shop-installed bridging clips, or functional equivalents, shall be used where the bridging bolts to the steel joists;
4. When two pieces of bridging are attached to the steel joist by a common bolt, the nut that secures the first piece of bridging shall not be removed from the bolt for the attachment of the second; and
5. Bridging attachments shall not protrude above the top chord of the steel joist.

(5) Landing and placing loads.

(A) During the construction period, the employer placing a load on steel joists shall ensure that the load is distributed so as not to exceed the carrying capacity of any steel joist.

(B) Except for subsection (h)(5)(D) of this section, no construction loads are allowed on the steel joists until all bridging is installed and anchored and all joist-bearing ends are attached.

(C) The weight of a bundle of joist bridging shall not exceed a total of 1,000 pounds (454 kg). A bundle of joist bridging shall be placed on a minimum of three steel joists that are secured at one end. The edge of the bridging bundle shall be positioned within 1 foot (.30 m) of the secured end.

(D) No bundle of decking may be placed on steel joists until all bridging has been installed and anchored and all joist bearing ends attached, unless all of the following conditions are met:

1. The employer has first determined from a qualified person and documented in a site-specific erection plan that the structure or portion of the structure is capable of supporting the load;
2. The bundle of decking is placed on a minimum of three steel joists;
3. The joists supporting the bundle of decking are attached at both ends;
4. At least one row of bridging is installed and anchored;
5. The total weight of the bundle of decking does not exceed 4,000 pounds (1816 kg); and
6. The edge of the construction load shall be placed within 1 foot (.30 m) of the bearing surface of the joist end.

(i) Systems-engineered metal buildings.

(1) All of the requirements of this section apply to the erection of systems-engineered metal buildings except subsection (f) (column anchorage) and subsection (h) (open web steel joists).

(2) Each structural column shall be anchored by a minimum of four anchor rods (anchor bolts).

(3) Rigid frames shall have 50 percent of their bolts or the number of bolts specified by the manufacturer (whichever is greater) installed and tightened on both sides of the web adjacent to each flange before the hoisting equipment is released.

(4) Construction loads shall not be placed on any structural steel framework unless such framework is safely bolted, welded or otherwise adequately secured.

(5) In girt and eave strut-to-frame connections, when girts or eave struts share common connection holes, at least one bolt with its wrench-tight nut shall remain connected to the first member unless a manufacturer-supplied, field-attached seat or similar connection device is present to secure the first member so that the girt or eave strut is always secured against displacement.

(6) Both ends of all steel joists or cold-formed joists shall be fully bolted and/or welded to the support structure before:

(A) Releasing the hoisting cables;

(B) Allowing an employee on the joists; or

(C) Allowing any construction loads on the joists.

(7) Purlins may only be used as a walking/working surface when installing safety systems, after all permanent bridging has been installed and fall protection is provided.

(8) Construction loads may be placed only within a zone that is within 8 feet (2.5 m) of the center-line of the primary support member.

(j) Falling object protection.

(1) Securing loose items aloft. All materials, equipment, and tools, which are not in use while aloft, shall be secured against accidental displacement.

(2) Protection from falling objects other than materials being hoisted. The controlling contractor shall bar other construction processes below steel erection unless overhead protection for the employees below is provided.

(k) Permanent Flooring -Skeleton Steel Construction in Tiered Buildings.

(1) The permanent floors shall be installed as the erection of structural members progresses, and there shall be not more than eight stories between the erection floor and the uppermost

permanent floor, except where the structural integrity is maintained as a result of the design.

(2) At no time shall there be more than four floors or 48 feet, whichever is less, of unfinished bolting or welding above the foundation or uppermost permanently secured floor, except where structural integrity is maintained as a result of the design.

(l) Temporary Flooring -Skeleton Steel Construction in Multistory Buildings.

(1) The derrick or erection floor shall be solidly planked or decked except for access openings. Planking or decking of equivalent strength, shall be of proper thickness to carry the working load. Planking shall be not less than 2 inches thick full size undressed, and shall be laid tight. Both planking and decking shall be secured.

(2) On buildings or structures not adaptable to temporary floors, and where scaffolds or approved fall protection is not used, safety nets shall be installed and maintained whenever the potential fall distance exceeds two stories or 30 feet, whichever is less.

(3) The exposed edges of all temporary planked and metal decked floors at the periphery of the building, or at interior openings, such as stairways and elevator shafts shall be protected by a single 3/8-inch minimum diameter wire rope of 13,500 pounds minimum breaking strength located between 42 and 45 inches above design finish floor height. Other guardrail protection may be used if equal fall protection is provided.

Note: If the periphery fall protection is intended to be used as a catenary line, it shall meet the provisions of Section 1710(m)(4).

(4) Midrail protection.

(A) Midrail protection shall be installed as soon as the metal decking has been installed; and

(B) Shall be installed prior to the decked area being used by trades other than the steel erector or decking crew.

(5) Framed metal deck openings shall have structural members turned down to allow continuous deck installation except where not allowed by structural design constraints or constructibility.

(6) Metal decking holes and openings shall not be cut until immediately prior to being permanently filled with the equipment or structure needed or intended to fulfill its specific use and which meets the strength requirements of Section 1632(b) of these orders, or shall be immediately covered.

(7) Where skeleton steel is being erected, a tightly planked and substantial floor shall be maintained within two stories or 30 feet, whichever is less, below and directly under that portion of each tier of beams on which any work is being performed.

Note: Where a planked floor is not practical, subsection (l)(2) of this section applies.

(A) When gathering and stacking temporary floor planks, the planks shall be removed successively, working toward the last panel of the temporary floor so that the work is always done from the planked floor.

(B) When gathering and stacking temporary floor planks from the last panel, the employees assigned to such work shall be protected by an approved personal fall protection system attached to a catenary line or other substantial anchorage.

(m) Working and Traveling on the Skeleton Steel of Multistory Buildings or Structures.

(1) Connecting.

(A) When connecting beams or other structural members at the periphery or interior of a building or structure where the fall distance is greater than two stories or 30 feet, whichever is less, iron workers shall be provided with and use a personal fall protection system as described in Article 24 tied-off to either columns, pendant lines secured at the tops of columns, catenary lines, or other secure anchorage points.

(B) At heights over 15 and up to 30 feet above a lower level, connectors shall be provided with a personal fall arrest system, positioning device system or fall restraint system and wear the equipment necessary to be able to be tied off; or be provided with other means of protection from fall hazards in accordance with subsection (m).

NOTE: For fall protection requirements associated with work above reinforcing steel and similar projections, see Section 1712 of the Construction Safety Orders.

(C) Shinning of Columns.

1. When connecting beams or other structural members at columns the practice of shinning (vertically climbing up or down) columns to access workpoints shall be permitted where the fall distance does not exceed two stories or 30 feet, whichever is less.

2. Where the fall distance exceeds two stories or 30 feet, whichever is less, iron workers shall be provided with and use a personal fall protection system as described in Article 24 tied-off to either columns, pendant lines secured at the tops of columns, catenary lines, or other secure anchorage points.

(2) Work Other Than Connecting.

When performing any other work at a work point, iron workers shall be provided with and use personal fall protection as described in Article 24 where the fall distance is greater than 15 feet.

(3) Traveling at Periphery or Interior of Building.

(A) When moving from work point to work point or releasing slings, and the fall distance



is greater than 30 feet or two stories, whichever is less, connectors:

1. Shall coon or walk the bottom flange (inside flange of peripheral beams);
2. May walk the top surface of securely landed decking bundles; or
3. May walk the top flange if they are tied-off to catenary lines or use other fall protection in accordance with Article 24.

(B) When moving from work point to work point or releasing slings, and the fall distance is greater than 15 feet for other than connecting, iron workers:

1. Shall coon or walk the bottom flange (inside flange of peripheral beams);
2. May walk the top surface of securely landed decking bundles; or
3. May walk the top flange if they are tied-off to catenary lines or use other fall protection in accordance with Article 24.

(4) Pendant lines, catenary lines and other lines used to secure workers shall be used in accordance with the Construction Safety Orders, Section 1670.

(5) If the procedure specified in subsection (m)(1) above is impractical, perimeter safety nets shall be installed at a distance of no more than 25 feet below the work surface and extend at least 8 feet beyond the perimeter of the building or structure. Nets shall meet the requirements set forth in accordance with Section 1671.

(n) Controlled Decking Zone (CDZ). A CDZ is an area established specifically for the initial placement and securing of metal decking where access to the area is restricted and work may take place without the use of a personal fall protection system.

(1) A controlled decking zone is permitted only in that area of the structure over 15 feet and up to 30 feet above a lower level when it can be shown that the use of a personal fall protection system is impractical or creates a greater hazard.

(2) The CDZ shall be limited to that area where metal decking is initially being installed and forms the leading edge work.

(3) The implementation of a CDZ shall be under the supervision of a competent person.

(4) The employer shall document the reasons why the use of conventional fall protection systems (guardrails, personal fall arrest systems, positioning device systems, fall restraint systems or safety nets) are infeasible or why their use would create a greater hazard.

(A) The name or other method of identification for each employee (e.g., job title) who is designated to work in the CDZ must be documented.

(B) The documentation required by this subsection shall be in writing and shall be

available at the job site.

(5) Where a CDZ is being used, the employer shall assure that a safety monitoring system is provided and shall designate a competent person to monitor the safety of employees within the CDZ. The safety monitor shall comply with the following requirements:

- (A) The safety monitor shall be competent to recognize fall hazards;
- (B) The safety monitor shall warn the employee when it appears that the employee is unaware of a fall hazard or is acting in an unsafe manner;
- (C) The safety monitor shall be within visual sighting distance of the employee;
- (D) The safety monitor shall be close enough to communicate orally with the employee;
- (E) The safety monitor shall not have other responsibilities which could take the monitor's attention from the monitoring function; and
- (F) The safety monitor shall not be located within the CDZ.

(6) In each CDZ, the following shall apply:

- (A) Each employee working within a CDZ shall be protected from fall hazards greater than two stories or 30 feet, whichever is less, by the use of a personal fall protection system.
- (B) Access to a CDZ shall be limited to only those employees engaged in leading edge work.
- (C) The boundaries of a CDZ shall be designated and clearly marked. The CDZ shall be defined by a control line or by any equivalent means that restrict access.

1. Control lines shall meet the requirements of Section 1671.2(a)(4) through (a)(6).
2. When control lines or equivalent means are used, they shall be erected not less than 6 feet from the unprotected leading edge.
3. The CDZ shall not be more than 90 feet wide and 90 feet deep from any leading edge.
4. Signs meeting the requirements of the General Industry Safety Orders, Section 3340 shall be posted to warn unauthorized persons to stay out of the CDZ.

(7) Safety deck attachments shall be performed in the CDZ from the leading edge back to the control line and shall have at least two attachments for each metal decking panel. The area of decking without completed safety deck attachments shall not exceed 3000 square feet.

(8) Final deck attachments, installation of shear connectors, and flashing shall not be performed in the CDZ.

(9) Where a CDZ is being used, the employer shall assure that each affected employee has been provided training in accordance with subsection (q)(3)(C) of this section.

(o) Custody of guardrail systems. Wire rope or other guardrail protection provided by the steel erector shall remain in the area where steel erection activity has been completed, to be used by other trades, only if the controlling contractor or its authorized representative:

(1) Has directed the steel erector to leave the wire rope or other guardrail protection in place; and

(2) Has inspected and accepted control and responsibility of the wire rope or other guardrail protection prior to authorizing persons other than steel erectors to work in the area.

(p) Smoke dome or skylight fixtures that have been installed, are not considered covers for the purpose of this section unless they meet the strength requirements of Section 1632(b) of these orders.

(q) Training.

The following provisions supplement the requirements of Section 1509 "Injury and Illness Prevention Program" regarding the hazards associated with structural steel erection.

(1) Training personnel. Training required by this section shall be provided by a qualified person(s).

(2) Fall hazard training. The employer shall provide a training program for all employees exposed to fall hazards. The program shall include training and instruction in the following areas:

(A) The recognition and identification of fall hazards in the work area;

(B) The use and operation of guardrail systems (including perimeter safety cable systems), personal fall arrest systems, positioning device systems, fall restraint systems, safety net systems, and other protection to be used;

(C) The correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection systems to be used;

(D) The procedures to be followed to prevent falls to lower levels and through or into holes and openings in walking/working surfaces and walls; and

(E) The fall protection requirements for structural steel erection.

(3) Special training programs. In addition to the training required in subsections (q)(1) and (q)(2) of this section, the employer shall provide special training to employees engaged in the following activities.

(A) Multiple lift rigging procedure. The employer shall ensure that each employee who performs multiple lift rigging has been provided training in the hazards associated with multiple lifts including the following areas:

1. The proper inspection and removal of hoisting slings, eye-hooks and other rigging components used in multiple lift rigging.
2. Procedures for determining the proper sling length for structural members.
3. The use of rated load charts and capacities for manufactured rigging equipment.
4. The design and use of manufactured rigging assemblies.
5. Proper rigging techniques to maintain a distance of 7 feet between structural members being hoisted.
6. Instruction that no more than 5 structural members can be hoisted per lift.
7. Proper techniques for rigging structural members from the top down and setting structural members from the bottom up.
8. Procedures and techniques for rigging structural members at the center of gravity.
9. Procedures to ensure that no crane is used for multiple lifts that violates the crane manufacturer's specifications.
10. Procedures to ensure that no load exceeds 75 percent of the rated capacity for the hoisting equipment as specified in the hoisting equipment load charts.
11. The use of controlled load lowering on hoisting equipment used for multiple lifts.
12. Procedures for performing multiple lifts that are site-specific.
13. Procedures for preplanning overhead routes of suspended loads.

(B) Connector procedures. The employer shall ensure that each connector has been provided training in the following areas:

1. The nature of the hazards associated with connecting; and
2. Shinning of columns, access, proper connecting techniques and work practices required by subsections (g)(4) and (m) of this section.

(C) Controlled Decking Zone Procedures. Where CDZs are being used, the employer shall assure that each employee has been provided training in the following areas:

1. The nature of the hazards associated with work within a controlled decking zone; and

2. The establishment of CDZs, access, proper installation techniques and work practices required by subsection (n) of this section.

<General Materials (GM) - References, Annotations, or Tables>

Note: Authority cited: Section 142.3, Labor Code. Reference: Sections 142.3, 7252, 7253, 7254, 7258, 7261, 7262 and 7266, Labor Code.

## **History**

1. Amendment of subsection (b) filed 5-3-78; effective thirtieth day thereafter (Register 78, No. 18). For prior history, see Register 76, No. 41.
2. Amendment of subsection (e)(1)(C) filed 5-12-83; effective thirtieth day thereafter (Register 83, No. 20).
3. Amendment filed 6-21-85; effective thirtieth day thereafter (Register 85, No. 25).
4. New subsections (i)-(i)(2) filed 12-15-93; operative 1-14-94 (Register 93, No. 51).
5. Amendment of subsections (g)(1), (g)(2), (g)(3)(A)-(B) and (g)(5) filed 4-23-98; operative 5-23-98 (Register 98, No. 17).
6. Amendment of subsections (g)(1)-(2) filed 7-2-98; operative 8-1-98 (Register 98, No. 27).
7. New subsection (a)(4) filed 7-25-2001; operative 8-24-2001 (Register 2001, No. 30).
8. Amendment of section heading, section and Note and new Appendices A and B filed 5-1-2002; operative 5-1 2002. Submitted to OAL for printing only pursuant to Labor Code section 142.3(a)(3) (Register 2002, No. 18).
9. Amendment of section and Appendix A heading and new Appendix C filed 7-3-2003; operative 8-2-2003 (Register 2003, No. 27).
10. Amendment of subsection (f)(1)(A) filed 3-15-2006; operative 4-14-2006 (Register 2006, No. 11).
11. Change without regulatory effect amending appendices A and B filed 5-19-2008 pursuant to section 100, title 1, California Code of Regulations (Register 2008, No. 21).
12. Amendment of subsection (k)(2) filed 6-6-2008; operative 7-6-2008. Submitted to OAL for printing only pursuant to Labor Code section 142.3(a)(3) (Register 2008, No. 23).

## **Subchapter 4. Construction Safety Orders**

### **Article 29. Erection and Construction**

#### **§1712. Reinforcing Steel and Other Similar Projections.**

(a) Scope. This section applies to all work sites and locations where employees work around or over exposed, projecting, reinforcing steel or other similar projections.

(b) Definitions.

**Job-Built.** As used in this section, protective covers and troughs usually constructed at the job-site of wood or other materials of equal or greater strength and designed specifically for covering exposed ends of reinforcing steel or other similar projections at a specific job-site.

**Protective Covers.** Manufactured or job-built apparatus designed to cover exposed ends of reinforcing steel or other similar projections so as to prevent impalement.

**Troughs.** Manufactured or job-built protective covers designed to cover two or more exposed ends of reinforcing steel or other similar projections so as to prevent impalement, and which meet the applicable requirements in subsection (d).

(c) Protection from Reinforcing Steel and Other Similar Projections.

(1) Employees working at grade or at the same surface as exposed protruding reinforcing steel or other similar projections, shall be protected against the hazard of impalement by guarding all exposed ends that extend up to 6 feet above grade or other work surface, with protective covers, or troughs.

(2) Employees working above grade or any surface and exposed to protruding reinforcing steel or other similar projections shall be protected against the hazard of impalement. Protection shall be provided by:

(A) The use of guardrails, or

(B) Approved fall protection systems meeting the design requirements of Article 24, or

(C) Protective covers as specified in subsection (d).

(3) Protective covers shall not be used to protect against impalement where the maximum height of fall exposure, to the top of the protective cover, exceeds 7 1/2 feet, unless the protective covers meet the requirement of subsection (d)(4)(D).

(d) Protective Covers, Specifications, Testing and Approval.

(1) Protective covers shall be made of wood, plastic, or other materials of equal or greater strength.

(2) Protective covers shall have a minimum 4-inch by 4-inch square surface area, or if round, a minimum diameter of 4 1/2 inches.

(3) Manufactured protective covers shall meet the following requirements:

(A) Manufactured protective covers shall be approved as provided for in Section 1505 and be legibly marked with the manufacturer's name or logo.

(B) Manufactured protective covers made before October 1, 2000 shall, at the minimum, be capable of withstanding the impact of a 250-pound weight dropped from a height of 10 feet without penetration failure of the cover.

(C) Manufactured protective covers made on or after October 1, 2000 shall meet the testing requirements of Section 344.90.

(4) Job-built protective covers shall meet the following requirements:

(A) Job-built protective covers shall be designed as specified by an engineer currently registered in the State of California. A copy of the engineering drawing(s) depicting the job-built protective covers shall be kept at the worksite and made available to the Division upon request.

Exception: Job-built troughs as depicted in Appendix Plate C-25 may be used as a substitute for engineered or manufactured protective covers when employees are working at heights not greater than 6 feet above grade or other working surface.

(B) Job-built wood protective covers and troughs shall be constructed of at least "Standard Grade" Douglas Fir, as graded by either the Western Lumber Grading Rules 98, handbook, effective March 1, 1998, published by the Western Wood Products Association, or the Standard No. 17 Grading Rules for West Coast Lumber, handbook, effective September 1, 1991 and revised January 1, 2000, published by the West Coast Lumber Inspection Bureau, which are hereby incorporated by reference.

(C) Job-built protective covers, except for troughs as depicted in Appendix Plate C-25, shall, at the minimum, be capable of withstanding the impact of a 250-pound weight dropped from a height of 10 feet without penetration failure of the cover.

Note: The drop test requirement in subsection (d)(4)(C) applies to protective covers used to prevent employee impalement where the employee is exposed to fall heights of up to 7 1/2 feet.

(D) Drop test specifications for job-built protective covers listed in subsection (d)(4)(C) shall be modified where fall heights greater than 7 1/2 feet are anticipated, to ensure that the protective cover can withstand increased impact loading.

(e) Fall Protection.

Employees shall not be permitted to place or tie reinforcing steel in walls, piers, columns, etc., more than 6 feet above an adjacent surface, unless a personal fall protection system is used in accordance with Section 1670 or other method affording equivalent protection from the hazard of falls from elevated surfaces.

Exception: Point-to-point horizontal or vertical travel on reinforcing steel up to 24 feet above the surface below providing there are no impalement hazards.

(f) Securing Reinforcing Steel.

(1) Reinforcing steel for walls, piers, columns, and similar vertical structures shall be guyed and supported to prevent collapse.

(A) Guys, supports, and braces shall be installed and removed as directed by a qualified person.

(2) Wire mesh rolls shall be secured to prevent dangerous recoiling action.

NOTE

Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

## **History**

1. Renumbering from section 1713 filed 11-1-73; effective thirtieth day thereafter (Register 73, No. 44).

2. Amendment of subsection (a) and new subsections (b), (c) and (d) filed 2-19-75; effective thirtieth day thereafter (Register 75, No. 8).

3. Amendment of subsection (a) filed 4-27-79; effective thirtieth day thereafter (Register 79, No. 17).

4. Amendment filed 6-21-85; effective thirtieth day thereafter (Register 85, No. 25).

5. Repealer of subsection (a) and adoption of subsections (a)-(d)(5), relettering and amendment of former subsection (b) to subsection (e), relettering of former subsection (c) to subsection (f), and relettering of former subsection (d) to subsection (g) filed 11-8-93; operative 12-8-93 (Register 93, No. 46).

6. Amendment of subsection (e) filed 7-30-97; operative 8-29-97 (Register 97, No. 31).

7. Amendment of section heading and section filed 2-3-2004; operative 3-4-2004 (Register 2004, No. 6)



## **Subchapter 4. Construction Safety Orders**

### **Article 29. Erection and Construction**

#### **§1716. Bolting, Riveting, Fitting-Up and Plumbing.**

(a) General requirements:

- (1) Containers shall be provided for storing or carrying rivets, bolts, and drift pins, and secured against accidental displacement when aloft.
- (2) Pneumatic hand tools shall be disconnected from the power source, and pressure in hose lines shall be released, before any adjustments or repairs are made.
- (3) Air line hose sections shall be tied together except when quick disconnect couplers are used to join sections.

(b) Bolting

- (1) When bolts or drift pins are being knocked out, means shall be provided to keep them from falling.
- (2) Impact wrenches shall be provided with a locking device for retaining the socket.

(c) Riveting

- (1) Riveting shall not be done in the vicinity of combustible material unless precautions are taken to prevent fire.
- (2) When rivet heads are knocked off, or backed out, means shall be provided to keep them from falling.
- (3) A safety wire shall be properly installed on the snap and on the handle of the pneumatic riveting hammer and shall be used at all times. The wire size shall be not less than No. 9 (B & S gauge), leaving the handle and annealed No. 14 on the snap, or equivalent.

(d) Plumbing-up

- (1) Connections of the equipment used in plumbing-up shall be properly secured.
- (2) The turnbuckles shall be secured to prevent unwinding while under stress.
- (3) Plumbing-up guys related equipment shall be placed so that employees can get at the connection points.
- (4) Plumbing-up guys shall be removed only under the supervision of a competent person.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

### **History**

1. Renumbering and amendment of former section 1810 to section 1716 filed 1-13-87; effective thirtieth day thereafter (Register 87, No. 4). For history of former section 1716, see Register 85, No. 25.



Orange County Erectors, Inc.

## **Hazard Assessment Checklist**

**Date:** \_\_\_\_\_

**Location:** \_\_\_\_\_

**Inspected By:** \_\_\_\_\_

**Ratings Evaluation:** S= Satisfactory U=Unsatisfactory NA= Not Applicable

**If Unsatisfactory Priority is:** H=High M=Medium L=Low

<b>Media Postings</b>				
<b>Item</b>	<b>S</b>	<b>U</b>	<b>NA</b>	<b>Description of Abatement</b>
1. Is the Cal/OSHA poster "Safety and Health Protection on the Job" properly displayed?				
2. Are emergency telephone numbers posted where they can be easily found?				
3. Are MSDS fact sheets available and is the binder current?				
4. Is the current CA poster regarding Discrimination, Payday Notice, Minimum Wage, Unemployment, ect. Available?				
<b>Emergency Action Plan</b>				
<b>Item</b>	<b>S</b>	<b>U</b>	<b>NA</b>	<b>Description of Abatement</b>
1. Is the Fire/ Emergency Evacuation Plan current?				
2. Is a drill executed on a regular basis?				
3. Do all employees know what their responsibilities are in an emergency?				
<b>Fire Protection</b>				
<b>Item</b>	<b>S</b>	<b>U</b>	<b>NA</b>	<b>Description of Abatement</b>

1. Is the Fire Protection Plan current?				
2. Are passageway or openings which might be mistaken for exits properly marked " <i>Not an Exit</i> "?				
3. Does the Anaheim Fire Department conduct an annual inspection?				
4. Are exits free of obstructions?				
5. Are fire extinguishers serviced annually?				
6. Are all extinguishers checked monthly?				
<b>General Work Environment</b>				
<b>Item</b>	<b>S</b>	<b>U</b>	<b>NA</b>	<b>Description of Abatement</b>
1. Are all work-sites clean and orderly?				
2. Are all spilled materials or liquids cleaned up immediately?				
3. Are toilets and washing facilities clean and sanitary?				
4. Are all work areas adequately illuminated?				
5. Is there adequate mechanical ventilation to insure removal of air born toxics?				
<b>Walkways</b>				
<b>Item</b>	<b>S</b>	<b>U</b>	<b>NA</b>	<b>Description of Abatement</b>
1. Are aisles and passageways kept clear?				
2. Are aisles properly marked?				
<b>Medical Services and First Aid</b>				
<b>Item</b>	<b>S</b>	<b>U</b>	<b>NA</b>	<b>Description of Abatement</b>
1. Are emergency phone numbers posted?				
2. Are first aid kits easily accessible and is adequate available and maintained?				

3. Are key personnel trained in CPR and are classes offered annually?				
4. Are eye wash stations available and located for easy accessibility?				

### **Personal Protection Equipment**

<b>Item</b>	<b>S</b>	<b>U</b>	<b>NA</b>	<b>Description of Abatement</b>
1. Are proper respirator provided to all employee who have potential exposure to air born toxic substances?				
2. Are safety glasses provided for all shop employee or visitors to the shop areas?				
3. Are hearing protection devices available to all employees?				
4. Are gloves provided to employee as conditions warrant?				

### **Materials and Supplies**

<b>Item</b>	<b>S</b>	<b>U</b>	<b>NA</b>	<b>Description of Abatement</b>
1. Are paint and other toxic or flammable liquids stored in approved storage cabinets?				
2. Are all fluids not in original container in unbreakable and marked vessels?				
3. Are rags or other materials which have been exposed to flammable fluids disposed of properly?				
4. Are all full and empty bottles of gasses and oxygen properly stored?				

### **Equipment**

<b>Item</b>	<b>S</b>	<b>U</b>	<b>NA</b>	<b>Description of Abatement</b>
1. Are all personnel who operate forklifts trained or certified?				
2. Are forklifts inspected				

daily and is the written checklist maintained?				
3. Are overhead cranes inspected by a certified agency at least annually?				
4. Are chains, slings, hooks and grabs physically inspected weekly?				
5. Are all trucks equipped with fire extinguishers?				
6. Are powder accurate tools operated only by employees certified in their use?				
7. Are powder accurate tools locked in a secure place when not in use?				
8. Are pedestal grinders protected with guards and shields?				
9. Are all bottles turned off on cutting equipment when not in use?				
10. Are welders cleaned weekly to remove dust and contaminants?				
11. Are hand tools such as chisels, punches reconditioned to eliminate mushroomed heads as necessary?				
12. Are pneumatic and hydraulic hoses checked regularly for damage?				
13. Are air compressors serviced regularly and intake filters change?				
14. Have compressed air tanks been inspected by the State of California?				
15. Is defective equipment tagged as not usable?				
16. Are all ladders frequently inspected for safety?				
<b>Electrical</b>				
<b>Item</b>	<b>S</b>	<b>U</b>	<b>NA</b>	<b>Description of Abatement</b>
1. Are portable electrical tools and equipment grounded or				

double insulated?				
2. Do extension cords being used have a grounding conductor?				
3. Are multiple plug adapters prohibited?				
4. Is exposed wiring and cords with frayed insulation replaced or repaired?				
5. Are unused electrical enclosures, i.e. junction boxes, switches, receptacle fitted with covers or plates?				

**Additional Comments/ Observations By Inspector:**

Orange County Erectors, Inc.  
Employee Report of Safety Hazard

This form is for use by employees who wish to provide a safety suggestion or report an unsafe workplace condition or practice.

**Description of Unsafe Condition or Practice:**

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---

**Cause or Other Contributing Factor:**

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**Employee's Suggestion for Improving Safety:**

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**Has this matter Been Reported to your Supervisor ? YES / NO**

Employee Name (optional) \_\_\_\_\_

Department \_\_\_\_\_ Date \_\_\_\_\_

Orange County Erectors, Inc. will investigate any report or question as required by our Injury and Illness Prevention Program and advise the employee who provided the information, or the workers in the area of concern, of the response.

**Employees are advised that use of this form, or other reports of unsafe conditions or practices, is protected by law. It is illegal for any employer to take any action against an employee in reprisal for exercising rights to participate in communications involving safety.**

Orange County Erectors, Inc.  
Hazard Assessment Form

Date of Inspection: \_\_\_\_\_

**Reason for inspection:**

New Equipment or Substance (explain):

☐

\_\_\_\_\_  
\_\_\_\_\_

New Process or Procedure (explain):

☐

\_\_\_\_\_  
\_\_\_\_\_

Revised Process or Procedure (explain):

☐

\_\_\_\_\_  
\_\_\_\_\_

Name of persons conducting inspection: \_\_\_\_\_

Name of persons consulted: \_\_\_\_\_

Description of Investigation (attach additional sheets as necessary):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Findings of Investigation including identification of hazard (attach additional sheets as necessary):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Steps taken to abate hazard and dates of such steps (attach additional sheets as necessary):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



Orange County Erectors, Inc.  
Hazard Abatement Record

Safety items identified during the \_\_\_\_\_ inspection of \_\_\_\_\_ were submitted  
date of \_\_\_\_\_ location of \_\_\_\_\_  
for review and the following action plan has been developed to resolve each specific safety item  
(hazards, needed policies, etc.) by set completion dates and by those assigned responsibility:

	<b>Major action steps to be taken</b>	<b>Priority</b>	<b>Projected completion date</b>	<b>Actual completion date</b>
1				
2				
3				
4				

Hazard abatement completed:

\_\_\_\_\_

Signature of Safety Manager

\_\_\_\_\_

Date

Safety Manager's comments:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## BASIC RULES FOR ACCIDENT INVESTIGATION

The purpose of an investigation is to find the cause of an accident and prevent further occurrences, not to fix the blame.

An unbiased approach is necessary to obtain objective findings.

Visit the accident scene as soon as possible while the facts are fresh and before witnesses forget important details.

If possible, interview the injured worker at the scene of the accident and "walk" him or her through a re-enactment.

All interviews should be conducted as privately as possible.

Interview witnesses one at a time. Talk with anyone who has knowledge of the accident, even if they did not actually witness it.

Consider taking signed statements in cases where facts are unclear or there is an element of controversy.

Document details graphically. Use sketches, diagrams and photos as needed, and take measurements when appropriate.

Focus on causes and hazards. Develop an analysis of what happened, how it happened and how it could have been prevented.

Determine what caused the accident itself, not just the injury.

Every investigation should include an action plan. How will you prevent such accidents in the future?

If a third party or defective product contributed to the accident, save any evidence. It could be critical to the recovery of claims costs.

*Every employer shall report immediately (within 24 hours) by telephone or telegraph to the nearest District Office of the Division of Occupational Safety and Health any serious injury or illness, or death, of an employee occurring in a place of employment or in connection with any employment (see CCR Title 8, Section 342).*

Accident Investigation Appendix C-1



Orange County Erectors, Inc.

## **EMPLOYEE ACCIDENT/INCIDENT INVESTIGATION REPORT**

DATE OF INCIDENT:	EMPLOYEE(S) NAME:
DESCRIPTION OF ACCIDENT/INCIDENT:	
PARTS OF BODY AFFECTED:	
WERE ESTABLISHED RULES, REGULATIONS AND PROCEDURES BEING FOLLOWED?: <b>YES</b> <b>NO*</b>	
WAS PERSONAL PROTECTIVE EQUIPMENT WORN?: <b>YES</b> <b>NO*</b>	
* IF <b>NO</b> , PLEASE SPECIFY WHICH <i>CODE OF SAFE PRACTICES</i> HAS BEEN VIOLATED?:	
WHAT COULD BE DONE TO PREVENT A SIMILAR ACCIDENT/INCIDENT FROM OCCURRING?:	
WAS THE UNSAFE CONDITION, PRACTICE, OR PROTECTIVE EQUIPMENT PROBLEM?	

CORRECTED IMMEDIATELY?	
<b>YES</b>	<b>NO</b>
IF <b>NO</b> , WHAT HAS BEEN DONE TO ASSURE CORRECTION?:	
WHAT CORRECTIVE ACTION IS PLANNED?:	
PERSON RESPONSIBLE FOR CORRECTION:	
CORRECTIVE ACTION COMPLETED:	<b>YES</b> <b>NO</b>
IF <b>NO</b> , PLEASE SPECIFY REASON:	
COMPLETED BY:	TITLE
DATE:	
REPORT PREPARED BY:	TITLE
DATE:	
REVIEWED BY:	TITLE
DATE:	

## **SUPERVISOR'S ACCIDENT/INCIDENT REPORT**

Employee's Name \_\_\_\_\_ Job Position \_\_\_\_\_

\_\_\_\_\_

Date of accident \_\_\_\_\_ Hour of injury \_\_\_\_\_

When reported \_\_\_\_\_

Place of accident (address or specific location, etc.)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Specific body part(s) injured

\_\_\_\_\_

\_\_\_\_\_

Type of injury (puncture, sprain, etc.)

\_\_\_\_\_

Was first aid required? Y \_\_\_\_\_ N \_\_\_\_\_ Lost time expected? Y \_\_\_\_\_ N \_\_\_\_\_ Uncertain  
at this time \_\_\_\_\_

Property damage involved? Y \_\_\_\_\_ N \_\_\_\_\_ Describe damage:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

How did the accident occur? (describe object, activity, material or substance involved?)

\_\_\_\_\_

---

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Was personal protective equipment needed? Y\_\_\_\_ N\_\_\_\_ Which? \_\_\_\_\_ Available?  
Y\_\_\_\_ N\_\_\_\_ Used? Y\_\_\_\_ N\_\_\_\_

What (if any) unsafe acts contributed to the accident?

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Corrective action to be taken for unsafe act (e.g., discipline, additional training)

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---

---

What (if any) unsafe conditions contributed to the accident?

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---

Has this condition been reported previously? Y \_\_\_\_ N \_\_\_\_ To whom?

---

Corrective action to be taken for unsafe condition(s)?

---

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---

Was accident caused by anyone not on employer's payroll? If so, who?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Were there witnesses? Y\_\_\_\_\_ N\_\_\_\_\_ Name(s) & phone numbers:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Is modified duty available for the injured worker? If yes,

describe\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**SIGNATURE OF SUPERVISOR**

\_\_\_\_\_ **DATE** \_\_\_\_\_

Please use the reverse side of this form for additional information.  
OCE Accident Reporting Procedures – Effective April 1, 2013

## **SUPERVISOR'S SAFETY MEETING RECORD**

MEETING DATE	JOB NAME	JOB #
TIME	MEETING LENGTH	CONDUCTED BY

### **1. ATTENDANCE**


### **2. SUBJECTS REVIEWED AT EACH MEETING**

- ☐ Current Specific Worksite Hazards
- ☐ Discussion of Recent Accidents/Near Misses & Prevention
- ☐ Emergency Procedures

### **3. SELECTED SAFETY SUBJECTS: Suggested Topics for Discussion.**

- |   |  |
|---|--|
| <input type="checkbox"/> Accident Reporting/Follow-up<br><input type="checkbox"/> Personal Protective Equipment<br><input type="checkbox"/> Equipment Maintenance<br><input type="checkbox"/> Hand Tool Safety<br><input type="checkbox"/> Use of Power Tools<br><input type="checkbox"/> Ladder Safety | <input type="checkbox"/> Fall Protection<br><input type="checkbox"/> Good Housekeeping<br><input type="checkbox"/> Lifting/Back Care<br><input type="checkbox"/> Chemical Hazards<br><input type="checkbox"/> Vehicle Safety<br><input type="checkbox"/> Other _____ |
|---|--|

### **4. ACTION TO BE TAKEN BEFORE THE NEXT MEETING**


### **BY WHOM:**

\_\_\_\_\_

- ☐ Original – Office     
 ☐ Yellow Copy – General Contractor     
 ☐ Pink Copy – Shop/Field Department



## **Drug & Alcohol Abuse Program**

• Policy	Page: 89
• Purpose	Page: 89
• Scope	Page: 89
• Definitions	Page: 89
• Education	Page: 90
• Prohibited Activities	Page: 90
• Discipline	Page: 91
• Drug and Alcohol Testing of Job Applicants	Page: 91
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• Acknowledgment Employer's Copy	Page: 94

# **Drug and Alcohol Abuse Policy**

## **1. Policy**

1.1 Orange County Erectors, Inc. has a vital interest in maintaining a safe, healthy, and efficient working environment. Being under the influence of a drug or alcohol on the job poses serious safety and health risks to the user and to all those who work with the user. The use, sale, purchase, transfer, or possession of an illegal drug in the workplace, and the use, possession, or being under the influence of alcohol also poses unacceptable risks for safe, healthy, and efficient operations.

1.2 Orange County Erectors, Inc. has the right and obligation to maintain a safe, healthy, and efficient workplace for all of its employees, and to protect the organization's property, information, equipment, operations and reputation.

1.3 Orange County Erectors, Inc. recognizes its obligations to its member companies for the provision of services that are free of the influence of illegal drugs and alcohol, and will endeavor through this policy to provide drug-and alcohol-free services.

1.4 Orange County Erectors, Inc. further expresses its intent through this policy to comply with federal and state rules, regulations or laws that relate to the maintenance of a workplace free from illegal drugs and alcohol.

1.5 As a condition of employment, all employees are required to abide by the terms of this policy and to notify Orange County Erectors, Inc. management of any criminal drug statute conviction for a violation occurring in the workplace no later than five days after such conviction.

## **2. Purpose**

2.1 This policy outlines the goals and objectives of Orange County Erectors, Inc. drug and alcohol testing program and provides guidance to supervisors and employees concerning their responsibilities for carrying out the program.

## **3. Scope**

3.1 This policy applies to all departments, all employees and all job applicants. The term employee includes contracted employees.

## **4. Definitions**

4.1 **Alcohol** means any beverage that contains ethyl alcohol (ethanol), including but not limited to beer, wine and distilled spirits.

4.2 **Company premises or company facilities** means all property of Orange County Erectors, Inc. including, but not limited to , the offices, facilities and surrounding areas on Orange County Erectors, Inc.-owned or -leased property, parking lots, and storage areas. The term also includes - Orange County Erectors, Inc. owned or -leased vehicles and equipment wherever located.

4.3 **Contraband** means any article, the possession of which on Orange County Erectors, Inc. premises or while on Orange County Erectors, Inc. business, causes an employee to be in violation of Orange County Erectors, Inc. work rule or law. Contraband includes illegal drugs and alcoholic beverages, drug paraphernalia, lethal weapons, firearms, explosives, incendiaries, stolen property, counterfeit money, untaxed whiskey, and pornographic materials.

4.4 **Drug testing** means the scientific analysis of urine, blood, breath, saliva, hair, tissue, and other specimens of the human body for the purpose of detecting a drug or alcohol.

4.5 **Illegal drug** means any drug which is not legally obtainable; any drug which is legally obtainable but has not been legally obtained; any prescribed drug not legally obtained; any prescribed drug not being used for the prescribed purpose; any over-the-counter drug being used

at a dosage level other than recommended by the manufacturer or being used for a purpose other than intended by the manufacturer; and any drug being used for a purpose not in accordance with bona fide medical therapy. Examples of illegal drugs are cannabis substances, such as marijuana and hashish, cocaine, heroin, methamphetamine, phencyclidine (PCP), and so-called designer drugs and look-alike drugs.

**4.6 Legal drug** means any prescribed drug or over-the-counter drug that has been legally obtained and is being used for the purpose for which prescribed or manufactured.

**4.7 Reasonable belief** means a belief based on objective facts sufficient to lead a prudent person to conclude that a particular employee is unable to satisfactorily perform his or her job duties due to drug or alcohol impairment. Such inability to perform may include, but not be limited to, decreases in the quality or quantity of the employee's productivity, judgment, reasoning, concentration and psychomotor control, and marked changes in behavior. Accidents, deviations from safe working practices, and erratic conduct indicative of impairment are examples of "reasonable belief" situations.

**4.8 Under the influence** means a condition in which a person is affected by a drug or by alcohol in any detectable manner. The symptoms of influence are not confined to those consistent with misbehavior, nor to obvious impairment of physical or mental ability, such as slurred speech or difficulty in maintaining balance. A determination of being under the influence can be established by a professional opinion, a scientifically valid test, such as urinalysis or blood analysis, and in some cases by the opinion of a layperson.

## **5. Education**

5.1 Supervisors and other management personnel are to be trained in:

- a. detecting the signs and behavior of employees who may be using drugs or alcohol in violation of this policy;
- b. intervening in situations that may involve violations of this policy;
- c. recognizing the above activities as a direct job responsibility.

5.2 Employees are to be informed of:

- a. the health and safety dangers associated with drug and alcohol use;
- b. the provisions of this policy.

## **6. Prohibited Activities**

### **6.1 Legal Drugs**

a. The undisclosed use of any legal drug by any employee while performing Orange County Erectors, Inc. business or while on Orange County Erectors, Inc. premises is prohibited.

However, an employee may continue to work even though using a legal drug if Orange County Erectors, Inc. management has determined, after consulting with Orange County Erectors, Inc. health and/or human resources officials, that such use does not pose a threat to safety and that the using employee's job performance is not significantly affected. Otherwise, the employee may be required to take leave of absence or comply with other appropriate action as determined by Orange County Erectors, Inc. management.

b. An employee whose medical therapy requires the use of a legal drug must report such use to his or her supervisor prior to the performance of Orange County Erectors, Inc. business. The supervisor who is so informed will contact Orange County Erectors, Inc. designated human resources officials for guidance.

c. Orange County Erectors, Inc. at all times reserves the right to judge the effect that a legal drug may have on job performance and to restrict the using employee's work activity or presence at the workplace accordingly.

## 6.2 Illegal Drugs and Alcohol

a. The use, sale, purchase, transfer, or possession of an illegal drug or of alcohol by any employee while on Orange County Erectors, Inc. premises or while performing Orange County Erectors, Inc. business is prohibited.

## 7. Discipline

7.1 Any employee who possesses, distributes, sells, attempts to sell, or transfers illegal drugs on Orange County Erectors, Inc. premises or while on Orange County Erectors, Inc. business will be discharged.

7.2 Any employee who is found to be in possession of or under the influence of alcohol in violation of this policy will be subject to discipline up to and including discharge.

7.3 Any employee who is found to be in possession of contraband in violation of this policy will be subject to discipline up to and including discharge.

7.4 Any employee who is found through drug or alcohol testing to have in his or her body a detectable amount of an illegal drug or of alcohol will be subject to discipline up to and including discharge except that, depending on the circumstances of the case and the employee involved, the employee may be offered a one-time opportunity to enter and successfully complete a rehabilitation program that has been approved by Orange County Erectors, Inc. . During rehabilitation, the employee will be subject to unannounced drug or alcohol testing. Upon return to work from rehabilitation, the employee will be subject to unannounced drug or alcohol testing for a period of 60 months. Any test that is confirmed as positive during or following rehabilitation will result in discharge.

## 8. Drug and Alcohol Testing of Job Applicants

8.1 All applicants for employment, including applicants for part-time and seasonal positions and applicants who are former employees, are subject to drug and alcohol testing.

8.2 An applicant must pass the drug test to be considered for employment.

8.3 An applicant will be notified of Orange County Erectors, Inc. drug and alcohol testing policy prior to being tested; will be informed in writing of his or her right to refuse to undergo such testing; and will be informed that the consequence of refusal is termination of the pre-employment process.

8.4 An applicant will be provided written notice of this policy, and by signature will be required to acknowledge receipt and understanding of the policy.

8.5 If an applicant refuses to take a drug or alcohol test, or if evidence of the use of illegal drugs or alcohol by an applicant is discovered, either through testing or other means, the pre-employment process will be terminated.

## 9. Drug and Alcohol Testing of Existing Employees

9.1 [EMPLOYER] will notify employees of this policy by:

a. Providing to each employee a copy of the policy, and obtaining a written acknowledgement from each employee that the policy has been received and read.

b. Announcing the policy in various written communications and making presentations at employee meetings.

9.2 Orange County Erectors, Inc. may perform drug or alcohol testing:

a. Of any employee who manifests “reasonable belief” behavior.

b. Of any employee who is involved in an accident that results or could result in the filing of a Workers’ Compensation claim.

c. On a random basis of any employee.

d. Of any employee who is subject to drug or alcohol testing pursuant to federal or state rules, regulations or laws.

9.3 An employee's consent to submit to drug or alcohol testing is required as a condition of employment and the employee's refusal to consent may result in disciplinary action, including discharge, for a first refusal or any subsequent refusal.

9.4 An employee who is tested in a "reasonable belief" situation may be suspended pending receipt of written tests results and whatever inquiries may be required.

## **10. Appeal of an Alcohol or Drug Test Result**

10.1 An applicant or employee whose drug or alcohol test reported positive will be offered the opportunity of a meeting to offer an explanation. The purpose of the meeting will be to determine if there is any reason that a positive finding could have resulted from some cause other than drug or alcohol use. Orange County Erectors, Inc., through its health and/or human resource officials, will judge whether an offered explanation merits further inquiry.

10.2 An employee whose drug or alcohol test is reported positive will be offered the opportunity to:

a. Obtain and independently test, at the employee's expense, the remaining portion of the urine specimen that yielded the positive result;

b. Obtain the written test result and submit it to an independent medical review at the employee's expense.

10.3 The employee may use Orange County Erectors, Inc. medical benefits, to the extent that coverage may apply, for meeting the costs of 10.2 (a) and (b);

10.4 During the period of an appeal and any resulting inquiries, the pre-employment selection process for an applicant will be placed on hold, and the employment status of an employee may be suspended. An employee who is suspended pending appeal will be permitted to use any available annual leave in order to remain in an active pay status. If the employee has no annual leave or chooses not to use it, the suspension will be without pay.

## **11. Rehabilitation and Employee Assistance**

11.1 Rehabilitation assistance in lieu of discharge may be offered:

a. To any employee who has requested rehabilitation assistance provided that the request is unrelated to an identification of the employee as a violator of this policy.

b. To any employee who has violated this policy, provided that the violation does not involve selling or transferring illegal drugs, or serious misconduct.

11.2 An employee who is in rehabilitation will be suspended, except that--when indicated by the circumstances of the case and the written recommendation of a licensed physician or recognized rehabilitation professional--an employee may be permitted to work while undergoing rehabilitation on an outside-of-work basis. The written recommendation must include a statement to the effect that the employee's presence in the workplace will not constitute a safety hazard to the employee, co-workers or others.

11.3 An employee whose rehabilitative therapy involves drug maintenance, hospitalization or detoxification will not be considered for the exception from suspension described in 11.2.

11.4 An employee who is in rehabilitation or who has completed rehabilitation will be allowed to return to work upon presentation of a written release signed by a licensed physician or recognized rehabilitation professional. The release must include a statement to the effect that the employee's presence in the workplace will not constitute a safety hazard to the employee, co-worker or others.

11.5 Rehabilitation assistance given by Orange County Erectors, Inc. will be:

- a. Limited to those medical benefits that may be available in the employee's medical benefits plan.
- b. Obtained through a rehabilitation program that has been pre-approved by Orange County Erectors, Inc.
- c. Obtained by the employee during times that will not conflict with the employee's work time, except that the employee may use any available sick leave or annual leave to be absent from the job with pay.

11.6 Orange County Erectors, Inc. will provide to any employee, upon request and at no cost to the employee, information concerning local resources that are available for the treatment of drug and alcohol related problems.

## **12. Inspections and Searches**

12.1 Orange County Erectors, Inc. may conduct unannounced general inspections and searches for drugs or alcohol on Orange County Erectors, Inc. premises or in Orange County Erectors, Inc. vehicles or equipment wherever located. Employees are expected to cooperate.

12.2 Search of an employee and his or her personal property may be made when there is reasonable belief to conclude that the employee is in violation of this policy.

12.3 An employee's consent to a search is required as a condition of employment, and the employee's refusal to consent may result in disciplinary action, including discharge, even for a first refusal.

12.4 Illegal drugs, drugs believed to be illegal, and drug paraphernalia found on Orange County Erectors, Inc. property will be turned over to the appropriate law enforcement agency and the full cooperation given to any subsequent investigation. Substances that cannot be identified as an illegal drug by a layman's examination will be turned over to a forensic laboratory for scientific analysis.

12.5 Other forms of contraband, such as firearms, explosives, and lethal weapons, will be subject to seizure during an inspection or search. An employee who is found to possess contraband on Orange County Erectors, Inc. property or while on Orange County Erectors, Inc. business will be subject to discipline up to and including discharge.

12.6 If an employee is the subject of a drug-related investigation by Orange County Erectors, Inc. or by a law enforcement agency, the employee may be suspended pending completion of the investigation.

## **13. Confidentiality**

13.1 All information relating to drug or alcohol testing or the identification of persons as users of drugs and alcohol will be protected by Orange County Erectors, Inc. as confidential unless otherwise required by law, overriding public health and safety concerns, or authorized in writing by the persons in question.

## **Applicant's Consent to Drug/Alcohol Testing (Employee's Copy)**

I understand it is the policy of the company/organization to conduct drug and/or alcohol tests of job applicants for the purpose of detecting drug and/or alcohol abuse, and that one of the requirements for consideration of employment with the company/organization is the satisfactory passing of the company's/organization's drug and/or alcohol test(s).

For the purpose of being further considered for employment, I hereby agree to submit to a drug and/or alcohol test.

I understand that favorable test results will not necessarily guarantee that I will be employed by the company/organization.

If I am accepted for employment, I agree to take drug and/or alcohol tests whenever requested by the company/organization, and I understand that the taking of such tests is a condition of my continued employment.

I also give consent to the testing agency to release to the company/organization and other officially interested parties the results of my tests.

At this time I consent to a drug and/or alcohol test.

---

(Signature)

(Date signed)

---

(Printed name)

(Signature of witness)

## **Applicant's Consent to Drug/Alcohol Testing (Employer's Copy)**

I understand it is the policy of the company/organization to conduct drug and/or alcohol tests of job applicants for the purpose of detecting drug and/or alcohol abuse, and that one of the requirements for consideration of employment with the company/organization is the satisfactory passing of the company's/organization's drug and/or alcohol test(s).

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I understand that favorable test results will not necessarily guarantee that I will be employed by the company/organization.

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I also give consent to the testing agency to release to the company/organization and other officially interested parties the results of my tests.

At this time I consent to a drug and/or alcohol test.

---

(Signature)

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(Date signed)

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(Printed name)

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(Signature of witness)



## **Fleet Safety Policy**

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# **Fleet Safety**

## **1. Policy**

- 1.1 To establish a written policy that covers administrative control, maintenance and safe operation of company owned vehicles or personal vehicles used for company business.

## **2. Responsibilities**

- 2.1. The Fleet Safety Policy Administrator has the responsibility to implement this fleet safety policy by:
  - 2.1.1. Directing all supervisors and employees to comply with this policy;
  - 2.1.2. Tracking and documenting all vehicle maintenance and vehicle accidents;
  - 2.1.3. Reporting on a regular basis to the Labor-Management Safety Committee on company fleet safety.
- 2.2. Managers and Supervisors have the responsibility to:
  - 2.2.1. Identify and train existing and newly selected vehicle operators to comply with this policy;
  - 2.2.2. ensure that all vehicles can be operated safely or are taken out of service for repairs;
  - 2.2.3. Required and enforce compliance with this policy.
- 2.3. Employees have the responsibility to:
  - 2.3.1. comply with this policy;
  - 2.3.2. Assist with the identification of vehicle operational problems.

## **3. Policy Procedures**

- 3.1. New Driver Selection
  - 3.1.1. All applicants hired as vehicle operators shall provide proof of the proper classification of vehicle license.
  - 3.1.2. All vehicle operator applicants shall submit a completed Driver History Form (see appendix A) to the Fleet Safety Policy Administrator
  - 3.1.3. All applicants hired as vehicle operators will undergo a Motor Vehicle Record (MVR) check from the California Department of Motor Vehicles (DMV).
  - 3.1.4. Any vehicle operator applicant defined as a "High Risk Driver" (see section 3.2.5) will be ineligible to operate company vehicles or to operate a personal vehicle for company business.
  - 3.1.5. Commercial Motor Vehicle operator applicants will be asked to submit to a DOT Physical Examination as part of the application process.
  - 3.1.6. Appropriate safety training will be provided to all successful vehicle operator applicants before being allowed to operate a company vehicle (see appendix B)
- 3.2. Monitoring Existing Drivers
  - 3.2.1. Fleet Safety Administrator will maintain records of the different types of vehicles and vehicle combinations each driver is capable of driving. Driver Proficiency and Authorized Vehicles form will be used (see appendix C).
  - 3.2.2. All existing drivers who operate company owned vehicles shall provide proof of the proper classification of vehicle license.

3.2.3. Existing drivers may be asked to submit to annual DOT Physical Examination

3.2.4. All existing drivers who operate company owned vehicles will have their Motor Vehicle Record checked annually by the Fleet Safety Policy Administrator.

3.2.5. If a driver's license is suspended or revoked or if the driver is classified as a "High Risk Driver" then the driver will not be allowed to drive any company vehicles or any vehicles for Company business

3.2.6. A driver is classified as a "High Risk Driver" if their motor vehicle record check indicates that the driver has one or more of the following:

- a. Violations within the last 5 years:
  - i. Conviction for an alcohol and/or drug related driving offense.
  - ii. Refusal to submit to a Blood Alcohol Content (BAC) test.
  - iii. Conviction of speeding in excess of 25 MPH.
  - iv. Criminal conviction (e.g., felony, negligent homicide, manslaughter hit and run, etc.).
- b. Violations incurred in the last 3 years:
  - i. Any combination of 3 or more moving violations, "At Fault Accidents", or "Preventable Accidents".
  - ii. Driving with a suspension, revocation, or administrative restriction.
  - iii. Leaving the scene of an accident as defined by state laws.
  - iv. Reckless driving.
- c. Violations incurred in last 12 months:
  - i. Any combination of 2 or more moving violations, "At Fault Accidents", or "Preventable Accidents".

3.2.6 The Fleet Safety Policy Administrator will maintain a list of drivers eligible to operate company owned vehicles.

#### **4. Vehicle Operation Safety Rules**

4.1. All employees who drive a company owned vehicle or personal vehicle on company business must abide by the following safety rules:

4.1.1. Employees are required to obey all federal, state, local, and company traffic laws and regulations.

4.1.2. Drivers shall carry their state drivers license at all times while operating motor vehicles. Licenses must be the proper classification for the vehicle driven.

4.1.3. Current required documentation should be maintained in Vehicles at all times (i.e. insurance card, accident packet, vehicle registration).

4.1.4. Employees are responsible for all traffic citations while operating company vehicles or personal vehicles on company business.

4.1.5. Seat belts and shoulder harnesses are to be worn at all times.

4.1.6. Engines are to be stopped and ignition keys removed when parking, refueling, or leaving the company vehicles. Vehicles must be locked when unattended to avoid criminal misconduct.

4.1.7. Vehicles must be parked in legal spaces and must not obstruct traffic.

4.1.8. A vehicle when loaded with any material extending 4 feet or more beyond its rear shall have a red flag or cloth 12 inches square attached by day, or a red light

visible for 300 feet by night, on the extreme end of the load. Trailers shall be fastened to hitches, and safety chains shall be secured, as required by state law, before moving vehicles.

4.1.9. Articles, tools, equipment, etc. placed in vehicles or truck cabs are to be hung or stored in such a manner as not to impair vision or in any way interfere with proper operation of the vehicle.

4.1.10. Construction type equipment shall travel no more than 25 mph without exception. This equipment shall use the right lane, except when turning left. And headlights shall be on at all times. A slow moving vehicle sign shall also be displayed on the rear of the vehicle.

4.1.11. No smoking is allowed in company vehicles.

4.1.12. Operating a company vehicle while under the influence of alcohol and other drugs is prohibited as stated in the Company Drug and Alcohol Abuse Policy. Violators are subject to termination of employment.

4.1.13. Company vehicles shall not be used for illegal purposes, or "for hire".

4.1.14. Radio or tape deck equipped headphones are not allowed to be worn while operating a motor vehicle, except for emergency two way radios.

4.1.15. The use of cellular phones or two-way radios is permitted only if used with a hands free device. If one is not available you must pull over to the side of the road in a safe manner to use your phone or radio.

## **5. Vehicle Maintenance and Safety Inspections**

5.1. All vehicle operators are required to inspect their assigned vehicle daily prior to operation to ensure that it is in safe working condition. This includes but is not limited to properly working brakes, horns, and back up alarms. The attached Driver's Daily Vehicle inspection form (see appendix D) must be used and turned in to the Fleet Safety Policy Administrator. Records of daily vehicle inspections will be kept on file for 3 months. Daily inspections are the responsibility of the regular vehicle operator.

5.2. All company owned vehicles shall receive regularly scheduled maintenance per manufacturer's recommendations. These inspections are not to exceed 90-day period and include but are not limited to break adjustments, break system components and leaks, steering and suspension systems, tires and wheels, vehicle with any connecting devices. Preventive Maintenance and Safety Inspection Report must be filled out and filed. A copy of the last maintenance report must be kept in the vehicle for at least 3 months. The scheduled maintenance is performed by third party organization (e.g. Anaheim Truck & Auto, Union 76 Station). It is the responsibility of the regular vehicle operator to follow these guidelines to assure safe operation of all vehicles.

5.3. Any special maintenance or safety issues regarding a company owned vehicle should be reported promptly to the Fleet Safety Policy Administrator. Before the vehicle is driven again any safety defects must be repaired.

5.4. A record of all company owned vehicle maintenance and repairs shall be maintained by the Fleet Safety Policy Administrator

- 5.5. All vehicles shall be cleaned weekly or as needed. This includes the exterior and the interior of the vehicles. This is the responsibility of the regular vehicle operator.
- 5.6. Biennial Inspection of Terminals (BIT) will be conducted by California Highway Patrol Officer every 24 months as required by California Vehicle Code (i.e.) Section 34501.12. BIT report must be reviewed by Fleet Safety Policy administrator and Fleet Supervisor. If any non-compliance occurs, corrective actions must be taken and documented. A copy of the BIT report is kept on file with company Fleet Safety Policy.

## **6. Insurance Requirements for Vehicle Operation**

- 6.1. All employees driving their own vehicles on company business are required to have auto liability insurance on their vehicles in at least the minimum amount required by current state law (bodily injury per person, bodily injury per accident/property damage).

## **7. Vehicle Emergency Procedures**

- 7.1. In the event that it is absolutely necessary to stop on a highway or city street in case of an emergency, use extreme caution:
  - 7.1.1 Warning signals and hazard lights shall be used.
  - 7.1.2. Flares, fuses, warning flags, reflector triangles or other emergency equipment shall be used to give adequate advance warning, where applicable for commercial vehicles,
  - 7.1.3. Rotating beacon shall be used, if the vehicle is so equipped.

## **8. Accident Reporting**

- 8.1. Driver's Conduct at the Scene of an Accident:
  - 8.1.1. Take immediate action to prevent further damage or injury.
  - 8.1.2. Pull onto the shoulder or side of the road.
  - 8.1.3. Activate hazard lights (flashers) and place warning signs promptly (see vehicle emergency procedures).
- 8.2. Assist any injured person, but do not move them unless they are in danger of further injury.
- 8.3. If someone is injured, request medical assistance.
- 8.4. Contact the police
- 8.5. If your phone is not operational, write a note giving the location and seriousness of the accident and give it to a reliable motorist and ask him/her to contact the police.
- 8.6. The vehicle should not be left unattended, except in an extreme emergency.
- 8.7. Exchange identifying information with the other driver. Make no comments about assuming responsibility.
- 8.8. Secure names, addresses, and phone numbers of all witnesses, or the first person on the scene if no one witnessed the accident.
- 8.9. Call the company immediately and report the accident to the Fleet Safety Policy Administrator
- 8.10. Wait for further instructions from the Fleet Safety Policy Administrator.
- 8.11. A post-accident drug test may be required by the Fleet Safety Policy Administrator per the Company's Drug and Alcohol Abuse Policy

## **9. Completing the Vehicle Accident Report Form**

- 9.1. Complete the Vehicle Accident Report (see Appendix E) and provide it to the Fleet Safety Policy Administrator. Write legibly. Answer all questions completely, or mark "not known". Use additional sheets of paper as needed to provide pertinent information
- 9.2. The Vehicle Accident Report is to determine why the accident occurred and what can be done to *prevent* future accidents of this type.

## **10. Vehicle Accident Retraining**

- 10.1. For all company owned vehicle accidents, accident preventability will be determined by an accident *review* by the Fleet Safety Policy Administrator and the Labor-Management Safety Committee.
- 10.2. In the interests of fleet and employee safety, all employees having a preventable vehicle accident may be scheduled for retraining as follows:
  - 10.2.1. Reviewing with the Fleet Safety Policy Administrator the actions leading up to the vehicle accident and how to prevent future accidents from occurring.
  - 10.2.2. Retraining with an experienced company driver on defensive driving skills.
  - 10.2.3. Enrolling in an approved defensive driving training course.
- 10.3. The type and length of safety retraining will be at the discretion of the Fleet Safety Policy Administrator

## **11. Personal Use of Company Vehicles**

- 11.1. Is not permitted without approval of an officer of the company.
- 11.2. Children are prohibited from using company vehicles.
- 11.3. The employee must be on the list of eligible drivers maintained by the Fleet Safety Policy Administrator.
- 11.4. Only the authorized employee may operate the vehicle.

## **12. Definitions**

- 12.1. Accident: Any incident involving a "Motor Vehicle" that results in bodily injury or property damage.
- 12.2. At-fault Accident: An accident where the driver received a moving violation ticket issued by a police officer.
- 12.3. BAC: Blood Alcohol Content.
- 12.4. Commercial Motor Vehicle: A vehicle as defined by section 34500 of the California Vehicle Code, and in particular any truck having more than 3 axles or that exceed 40 feet in length.
- 12.5. Company Fleet: A group of company owned or leased vehicles.
- 12.6. Company Vehicle: A motor vehicle owned by or lease to the company, including a temporary replacement vehicle.
- 12.7. DMV: Department of Motor Vehicle.
- 12.8. DOT: Department of Transportation.
- 12.9. Driver: An employee assigned a company vehicle or who operates a Motor Vehicle
- 12.10. Drug and Alcohol Abuse Policy: Refers to the company's Drug and Alcohol Abuse Policy

- 12.11. DUI: Driving under the influence.
- 12.12. OWI: Driving while intoxicated.
- 12.13. Fleet Safety Policy Administrator: The Fleet Safety Policy Administrator is designated by the President of the Company. They have full authority to implement and administer the Fleet Safety Policy.
- 12.14. Motor Vehicle: A company vehicle or any other motor vehicle while being operated on company business.
- 12.15. MVR: Motor Vehicle Record.
- 12.16. Preventable **Accident**: Any accident where the driver could have avoided the accident.
- 12.-17. Serious **Accident**: Any accident where there is a fatality or an injury requiring the transportation of the injured party from the accident site to a medical treatment facility.
- 12.18. Vehicle **Operator**: A person who drives a "motor vehicle".

## **Fleet Safety Policy Acknowledgement** **(Employee's Copy)**

The Orange County Erectors, Inc. Fleet Safety Policy is based on our conviction that the welfare of our employees, their families and the public must be one of the major considerations in all our operations.

It is therefore our policy to do everything reasonable to prevent injury to employees and their families, damage to property and to protect Orange County Erectors, Inc. and the public from the results of auto accidents.

Every attempt should be made to reduce the possibility of auto accidents. Practicing safe driving and accident prevention is a fundamental responsibility to this organization and will take precedence over expediency or short cuts.

Every driver who regularly drives a vehicle on company business should follow the Vehicle Operation Safety Rules (see item 4) stated in the Fleet Safety Policy.

Access to a company car is limited to the employee. Children, other relatives, friends or other persons will not drive company cars unless necessary and approved by the Fleet Safety Policy Administrator.

I recognize that being assigned a company car is a privilege and not a right.

By signing my name below, I acknowledge that I have received and reviewed the Orange County Erectors, Inc. Fleet Safety Policy and will abide by its rules

*Print Employee's Name* \_\_\_\_\_

*Signature* \_\_\_\_\_ *Date* \_\_\_\_\_



## **Fleet Safety Policy Acknowledgement** **(Employer's Copy)**

The Orange County Erectors, Inc. Fleet Safety Policy is based on our conviction that the welfare of our employees, their families and the public must be one of the major considerations in all our operations.

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By signing my name below, I acknowledge that I have received and reviewed the

Orange County Erectors, Inc. Fleet Safety Policy and will abide by its rules

*Print Employee's Name* \_\_\_\_\_

*Signature* \_\_\_\_\_ *Date* \_\_\_\_\_

## **Heat Illness Prevention Program & Policy**

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## **Heat Illness Prevention Program & Policy**

Orange County Erectors (OCE) has established the following **Heat Illness Prevention Standard Program** and procedures in accordance with Cal-OSHA Guidelines and regulations – Title 8 California code (T8 CCR) Section 3395 effective May 1, 2015.

On each Jobsite which OCE is present and working the designated Person responsible for implementing this program is by default; The OCE Foreman, General Foreman, or Director of Safety (if he is present on the Job). Foreman and/or General Foreman may re-assign this task to another Ironworker working under OCE as long as his name and contact information is posted and/or made clear to each employee working onsite.

In order to successfully accomplish this task and provide correct number of water containers / shade structures and what size per OSHA Regulations, The designated person will evaluate and consider the following individual conditions present at each Jobsite (such as, but not limited to):

Size of the Crew

Length of the work-shift

The ambient Temperature

The presence of personal protective equipment or additional sources of heat

The Designated person will ensure that all requirements are met, or exceed the suggested guidance provided by Cal-OSHA and will complete a checklist daily on the days where temperature exceeds 80 degrees Fahrenheit. All this information will be communicated to work crew daily at the Tailgate morning meeting prior to starting the work day.

### **Provisions of Water**

Drinking water containers (of five to 10 gallons each) will be brought to the site, so that at least two quarts per employee are available at the start of the shift. All workers whether working individually or in smaller crews, will have access to potable drinking water. Paper cone rims or bags of disposable cups and the necessary cup dispensers will be made available to workers and will be kept clean until used.

As part of the Effective Replenishment Procedures, the water level of all containers will be checked periodically (e.g. every hour, every 30 min), and more frequently when the temperature rises. Water containers will be refilled with cool water, when the water level within a container drops below 50 percent. Additional water containers (e.g. five gallon bottles) will be carried, to replace water as needed.

Water will be fresh, pure, and suitably cool and provided to employees free of charge. Supervisors will visually examine the water and pour some on their skin to insure that the water is suitably cool. During hot weather, the water must be cooler than the ambient temperature but not so cool as to cause discomfort.

Water containers will be located as close as practicable to the areas where employees are working (given the working conditions and layout of the worksite), to encourage the frequent drinking of water. If field terrain prevents the water from being placed as close as possible to the workers, bottled water or personal water containers will be made available, so that workers can have drinking water, readily accessible.

Since water containers are smaller than shade structures, they can be placed closer to employees than shade structures. **Placing water only in designated shade areas or where**

**toilet facilities are located is not sufficient.** When employees are working across large areas, water will be placed in multiple locations. For example, on a multi-story construction site, water should be placed in a safely accessible location on every floor where employees are working.

All water containers will be kept in sanitary condition. Water from non-approved or non-tested water sources (e.g., untested wells) is not acceptable. If hoses or connections are used, they must be governmentally approved for potable drinking water systems, as shown on the manufactures label.

Daily, workers will be reminded of the location of the water coolers and of the importance of drinking water frequently. When the temperature exceeds or is expected to exceed 80 degrees Fahrenheit, brief 'tailgate' meetings will be held each morning to review with employees the importance of drinking water, the number and schedule of water and rest breaks and the signs and symptoms of heat illness.

When the temperature equals or exceeds 80 degrees Fahrenheit or during a heat wave, pre-shift meetings before the commencement of work to encourage employees to drink plenty of water, and remind employees of their right to take a cool-down rest when necessary will be conducted. Additionally, the number of water breaks will be increased.

Supervisors/foreman will lead by example and workers will be reminded throughout the work shift to drink water.

Individual water containers or bottled water provided to workers will be adequately identified to eliminate the possibility of drinking from a co-workers container or bottle.

## **Definitions**

Shade - "Shade" means blockage of direct sunlight. One indicator that blockage is sufficient is when objects do not cast a shadow in the area of blocked sunlight. "Shade" is Not adequate when heat in the area of shade defeats the purpose of shade, which is to allow the body to cool.

Example is a car sitting in the sun. Shade may be provided by any natural or artificial means that does not expose employees to any unsafe or unhealthy conditions and that does not deter or discourage access or use.

## **Access to Shade**

Shade structures will be opened and placed as close as practical to the workers, when the temperature equals or exceeds 80 degrees Fahrenheit. When the temperature is below 80 degrees Fahrenheit, access to shade will be provided promptly, when requested by an employee.

**Note:** The interior of a vehicle may not be used to provide shade unless the vehicle is air-conditioned and the air conditioner is on.

Enough shade structures will be available at the site, to accommodate all of the employees who are on such a break at any point in time. During meal periods there will be enough shade for all of the employees who choose to remain in the general area of work or in areas designated for recovery and rest periods. (Employers may rotate employees in and out of meal periods, as with recovery and rest periods.)

Daily, workers will be informed of the location of the shade structures and will be encouraged to take a five minute cool-down rest in the shade. An employee who takes a preventative cool-down rest break will be monitored and asked if he/she is experiencing symptoms of heat illness and in no case will the employee be ordered back to work until signs or symptoms of heat illness have abated. (*See also the section on Emergency Response for additional information*)

Shade structures will be relocated to follow along with the crew and they will be placed as close as practical to the employees, so that access to shade is provided at all times. All employees on a recovery, rest break or meal period, will have full access to shade so they can sit in a normal posture without having to be in physical contact with each other.

In situations where trees or other vegetation are used to provide shade (such as in orchards), the thickness and shape of the shaded area will be evaluated, before assuming that sufficient shadow is being cast to protect employees.

In situations where it is not safe or feasible to provide access to shade (e.g. during high winds), a note will be made of these unsafe or unfeasible conditions, and of the steps that will be taken to provide shade upon request.

For non-agricultural employers, in situations where it is not safe or feasible to provide shade (mobile equipment and vehicle hazards, high winds), a note will be made of these unsafe or unfeasible conditions, and of the steps that will be taken to provide alternative cooling measures but with equivalent protection as shade.

## **Monitoring the Weather**

### **Producers**

The Supervisor will be trained and instructed to check in advance the extended weather forecast. Weather Forecasts can be checked with the aid of the internet <http://www.nws.noaa.gov>, or by calling the National Weather Service phone numbers (see CA numbers below) or by checking the weather channel TV Network. The Work schedule will be planned in advance, taking into consideration whether high temperatures or a heat wave is expected. This type of advance planning should take place all summer long.

#### **CALIFORNIA Dial-A-Forecast**

**Eureka 707-443-7062**

**Hanford 559-584-8047**

**Los Angeles 805-988-6610 (#1)**

**Sacramento 916-979-3051**

**San Diego 619-297-2107 (#1)**

**San Francisco 831-656-1725 (#1)**

Prior to each workday, the forecasted temperature and humidity for the worksite will be reviewed and will be compared against the National Weather Service Heat Index to evaluate the risk level for heat illness. Determination will be made of whether or not workers will be exposed at a temperature and humidity characterized as either “extreme caution” or “extreme danger” for heat illnesses. It is important to note that the temperature at which these warnings occur must be lowered as much as 15 degrees if the workers under consideration are in direct sunlight.

Prior to each workday, the supervisor will monitor the weather (using <http://www.nws.noaa.gov/> or with the aid of a simple thermometer, available at most hardware stores) at the worksite. This critical weather information will be taken into consideration, to determine, when it will be necessary to make modifications to the work schedule (such as stopping work early, rescheduling the job, working at night or during the cooler hours of the day, increasing the number of water and rest breaks).

A thermometer will be used at the jobsite to monitor for sudden increases in temperature, and to ensure that once the temperature exceeds 80 degrees Fahrenheit, shade structures will be opened and made available to the workers. In addition, when the temperature equals or exceeds 95

degrees Fahrenheit, additional preventive measures such as the High Heat Procedures will be implemented.

### **High Heat Procedures**

For purposes of this section only, “heat wave” means any day in which the predicted high temperature for the day will be at least 80 degrees Fahrenheit **and** at least ten degrees Fahrenheit higher than the average high daily temperature in the preceding five days.

During a heat wave or heat spike, the work day will be cut short or rescheduled (example conducted at night or during cooler hours).

During a heat wave or heat spike, and before starting work, tailgate meetings will be held, to review the company heat illness prevention procedures, the weather forecast and emergency response. In addition, if schedule modifications are not possible, workers will be provided with an increased number of water and rest breaks and will be observed closely for signs and symptoms of heat illness.

Each employee will be assigned a “buddy” to be on the lookout for signs and symptoms of heat illness and to ensure that emergency procedures are initiated when someone displays possible signs or symptoms of heat illness.

High Heat Procedures are additional preventive measures that Orange County Erectors will use when the temperature equals or exceeds 95 degrees Fahrenheit.

Pre-Shift meetings will be held prior to the commencement of work shift to review the high heat procedures, encourage employees to drink plenty of water and remind employees of their right to take a cool-down rest when necessary.

Effective communication by voice, direct observation (applicable for work crews of 20 or fewer), mandatory buddy system, or electronic means will be maintained, so that employees at the worksite can contact a supervisor when necessary. If the supervisor is unable to be near the workers (to observe them or communicate with them), then an electronic device, such as a cell phone or text messaging device, may be used for this purpose if reception in the area is reliable.

Frequent communication will be maintained with employees working by themselves or in smaller groups (keep tabs on them via phone or two-way radio), to be on the lookout for possible symptoms of heat illness. The employee(s) will be contacted regularly and as frequently as possible throughout the day, since an employee in distress may not be able to summon help on his or her own.

Effective communication and direct observation for alertness and/or signs and symptoms of heat illness will be conducted frequently. When the supervisor is not available, a designated alternate responsible person must be assigned, to look for signs and symptoms of heat illness. If a supervisor, designated observer, or any employee reports any signs or symptoms of heat illness in any employee, the supervisor or designated person will take immediate action commensurate with the severity of the illness (see Emergency Response Procedures).

Employees will be reminded constantly throughout the work shift to drink plenty of water and take preventative cool-down rest break when needed.

***In addition to the High Heat Procedures listed above, the following High Heat Procedures apply only to AGRICULTURAL WORK SITES.***

When the temperature equals or exceeds 95 degrees, employees will be provided one 10 minute “preventative cool-down rest period” every 2 hours. (During the first 8 hours of a shift, the cool-down periods may be provided at the same time as the rest periods already required by Industrial Welfare Commission Order No. 14.)

Employees working longer than 8 hours will be provided an additional 10 minute cool-down rest period every 2 hours. (For example, if the shift extends beyond 8 hours, an additional rest period is required at the end of the 8<sup>th</sup> hour of work. If the shift extends beyond 10 hours, another is required at the end of the 10th hour, and so on.)

All employees will be required to take the cool-down rest periods and merely offering the opportunity for a break is not enough.

Once the temperature equals or exceeds 95 degrees, records will be kept documenting the fact that mandatory cool-down rest periods are provided and taken.

### **Emergency Response Producers**

Prior to assigning a crew to a particular worksite, workers and the foreman will be provided a map of the site, along with clear and precise directions (such as streets or road names, distinguishing features and distances to major roads), to avoid a delay of emergency medical services.

Prior to assigning a crew to a particular worksite, efforts will be made to ensure that a qualified and appropriately trained and equipped person is available at the site to render first aid if necessary.

Prior to the start of the shift, a determination will be made of whether or not a language barrier is present at the site and steps will be taken (such as assigning the responsibility to call emergency medical services to the foreman or an English speaking worker) to ensure that emergency medical services can be immediately called in the event of an emergency.

All foremen and supervisors will carry cell phones or other means of communication, to ensure that emergency medical services can be called. Checks will be made to ensure that these electronic devices are functional prior to each shift.

When an employee is showing symptoms of possible heat illness, steps will be taken immediately to keep the stricken employee cool and comfortable once emergency service responders have been called (to reduce the progression to more serious illness). Under no circumstances will the affected employee be left unattended.

At remote locations such as rural farms, lots or undeveloped areas, the supervisor will designate an employee or employees to physically go to the nearest road or highway where emergency

responders can see them. If daylight is diminished, the designated employee(s) shall be given reflective vest or flashlights in order to direct emergency personnel to the location of the worksite, which may not be visible from the road or highway.

During a heat wave or hot temperatures, workers will be reminded and encouraged to immediately report to their supervisor any signs or symptoms they are experiencing.

Employees and supervisors training will include every detail of these written emergency procedures.

#### **PROCEDURES FOR HANDLING A SICK EMPLOYEE:**

When an employee displays possible signs or symptoms of heat illness, a trained first aid worker or supervisor will check the sick employee and determine whether resting in the shade and drinking cool water will suffice or if emergency service providers will need to be called.

A sick worker will not be left alone in the shade, as he or she can take a turn for the worse!

When an employee displays possible signs or symptoms of heat illness and no trained first aid worker or supervisor is available at the site, emergency service providers will be called.

*Emergency service providers will be called immediately if an employee displays signs or symptoms of heat illness (decreased level of consciousness, staggering, vomiting, disorientation, irrational behavior, incoherent speech, convulsions, red and hot face), does not look OK or does not get better after drinking cool water and resting in the shade. While the ambulance is in route, first aid will be initiated (cool the worker: place the worker in the shade, remove excess layers of clothing, place ice pack in the armpits and groin area and fan the victim).*

**DO NOT LET A SICK WORKER LEAVE THE SITE, AS THEY CAN GET LOST OR DIE BEFORE REACHING A HOSPITAL!**

If an employee does not look OK and displays signs or symptoms of severe heat illness (decreased level of consciousness, staggering, vomiting, disorientation, irrational behavior, incoherent speech, convulsions, red and hot face), and the worksite is located more than 20 minutes away from a hospital, call emergency service providers, communicate the signs and symptoms of the victim and request Air Ambulance.

#### **Acclimatization**

Acclimatization is the temporary and gradual physiological change in the body that occurs when the environmentally induced heat load to which the body is accustomed is significantly and suddenly exceeded by sudden environmental changes. In more common terms, the body needs time to adapt when temperatures rise suddenly, and an employee risks heat illness by not taking it easy when a heat wave strikes or when starting a new job that exposes the employee to heat to which the employee's body hasn't yet adjusted.



Inadequate acclimatization can be significantly more perilous in conditions of high heat and physical stress. Employers are responsible for the working conditions of their employees, and they must act effectively when conditions result in sudden exposure to heat their employees are not used to.

The weather will be monitored daily. The supervisor will be on the lookout for sudden heat wave(s), or increases in temperatures to which employees haven't been exposed to for several weeks or longer.

**During a heat wave or heat spike, the work day will be cut short (example 12 p.m.), will be rescheduled (example conducted at night or during cooler hours) or if at all possible cease for the day.**

Any new Employee or those employees who have been newly assigned to a high heat area will be closely observed by the supervisor or designee for the first 14 days. The intensity of the work will be lessened during a two-week break-in period (such as scheduling slower paced, less physically demanding work during the hot parts of the day and the heaviest work activities during the cooler parts of the day (early morning or evening). Steps taken to lessen the intensity Of the workload for new employees will be documented.

The Supervisor, or the designee will be extra-vigilant with new employees and stay alert to the presence of heat related symptoms. New employees will be assigned a "buddy" or experienced coworker to watch each other closely for discomfort or symptoms of heat illness.

During a heat wave, all employees will be observed closely (or maintain frequent communication via phone or radio), to be on the lookout for possible symptoms of heat illness.

Employees and supervisors will be trained on the importance of acclimatization, how it is developed and how these company procedures address it.

## **TRAINING (SUPERVISORY AND EMPLOYEE)**

To be effective, training must be understood by employees and given in a language the employees understand. All employers must maintain records of the training showing the date of training, who performed the training, who attended training and subject(s) covered.

Supervisors will be trained prior to being assigned to supervise other workers. Training will include this company's written procedures and the steps supervisors will follow when employees' exhibit symptoms consistent with heat illness.

Supervisors will be trained on their responsibility to provide water, shade, cool-down rests, and access to first aid as well as the employees' right to exercise their rights under this standard without retaliation.

Supervisors will be trained in appropriate first aid and/or emergency responses to different types of heat illness, and in addition, that heat illness may progress quickly from mild symptoms and signs to serious and life threatening illness.

Supervisors will be trained on how to track the weather at the job site (by monitoring predicted temperature highs and periodically using a thermometer).

Supervisors will be instructed on, how weather information will be used to modify work schedules, to increase number of water and rest breaks or cease work early if necessary.

All employees and supervisors will be trained prior to working outside. Training will include all aspects of implementing an effective Heat Illness Prevention Plan including but not limited to; providing sufficient water, providing access to shade, high-heat procedures, emergency response procedures and acclimatization contained in the company's written prevention procedures.

Employees will be trained on the steps that will be followed for contacting emergency medical services, including how they are to proceed when there are non-English speaking workers, how clear and precise directions to the site will be provided and the importance of making visual contact with emergency responders at the nearest road or landmark to direct them to their worksite.

When the temperature is expected to exceed 80 degrees Fahrenheit, short 'tailgate' meetings will be held to review the weather report, to reinforce heat illness prevention with all workers, to provide reminders to drink water frequently, to inform them that shade can be made available upon request and to remind them to be on the lookout for signs and symptoms of heat illness.

New employees will be assigned a "buddy" or experienced coworker to ensure that they understand the training and follow company procedures.

## **COLD TEMPERATURES**

Anyone working in a cold environment may be at risk of cold stress. Some workers may be required to work outdoors in cold environments and for extended periods, for example, snow cleanup crews, sanitation workers, police officers and emergency response and recovery personnel, like firefighters, and emergency medical technicians. Cold stress can be encountered in these types of work environment. The following frequently asked questions will help workers understand what cold stress is, how it may affect their health and safety, and how it can be prevented.

### **How cold is too cold?**

What constitutes extreme cold and its effects can vary across different areas of the country. In regions that are not used to winter weather, near freezing temperatures are considered "extreme cold." A cold environment forces the body to work harder to maintain its temperature. Whenever temperatures drop below normal and wind speed increases, heat can leave your body more rapidly.

Wind chill is the temperature your body feels when air temperature and wind speed are combined. For example, when the air temperature is 40°F, and the wind speed is 35 mph, the effect on the exposed skin is as if the air temperature was 28°F.

Cold stress occurs by driving down the skin temperature and eventually the internal body temperature (core temperature). This may lead to serious health problems, and may cause tissue damage, and possibly death.

What are the risk factors that contribute to cold stress?

Some of the risk factors that contribute to cold stress are:

- Wetness/dampness, dressing improperly, and exhaustion
- Predisposing health conditions such as hypertension, hypothyroidism, and diabetes
- Poor physical conditioning

### **How does the body react to cold conditions?**

In a cold environment, most of the body's energy is used to keep the internal core temperature warm. Over time, the body will begin to shift blood flow from the extremities (hands, feet, arms, and legs) and outer skin to the core (chest and abdomen). This shift allows the exposed skin and the extremities to cool rapidly and increases the risk of frostbite and hypothermia. Combine this scenario with exposure to a wet environment, and trench foot may also be a problem.

What are the most common cold induced illnesses/injuries?

- Hypothermia
- Frostbite
- Trench Foot

### **What is hypothermia?**

**Hypothermia occurs** when body heat is lost faster than it can be replaced and the normal body temperature (98.6°F) drops to less than 95°F. Hypothermia is most likely at very cold temperatures, but it can occur even at cool temperatures (above 40°F), if a person becomes chilled from rain, sweat, or submersion in cold water.

What are the symptoms of hypothermia?

- Mild symptoms:
  - An exposed worker is alert.
  - He or she may begin to shiver and stomp the feet in order to generate heat.
- Moderate to Severe symptoms:

- As the body temperature continues to fall, symptoms will worsen and shivering will stop.
- The worker may lose coordination and fumble with items in the hand, become confused and disoriented
- He or she may be unable to walk or stand, pupils become dilated, pulse and breathing become slowed, and loss of consciousness can occur. A person could die if help is not received immediately.

○

### **What can be done for a person suffering from hypothermia?**

- Call 911 immediately in an emergency; otherwise seek medical assistance as soon as possible.
- Move the person to a warm, dry area.
- Remove wet clothes and replace with dry clothes, cover the body (including the head and neck) with layers of blankets; and with a vapor barrier (e.g. tarp, garbage bag). Do **not** cover the face.
- If medical help is more than 30 minutes away:
  - Give warm sweetened drinks if alert (no alcohol), to help increase the body temperature. Never try to give a drink to an unconscious person.
  - Place warm bottles or hot packs in armpits, sides of chest, and groin. Call 911 for additional rewarming instructions.
- If a person is not breathing or has no pulse:
  - Call 911 for emergency medical assistance immediately.
  - Treat the worker as per instructions for hypothermia, but be very careful and do not try to give an unconscious person fluids.
  - Check him/her for signs of breathing and for a pulse. Check for 60 seconds.
  - If after 60 seconds the affected worker is not breathing and does not have a pulse, trained workers may start rescue breaths for 3 minutes.
  - Recheck for breathing and pulse, check for 60 seconds.
  - If the worker is still not breathing and has no pulse, continue rescue breathing.
  - Only start chest compressions per the direction of the 911 operator or emergency medical services<sup>\*</sup>

Reassess patient's physical status periodically.

## **Hazard Communication Program**

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# **Hazard Communication Program**

## **General Statement of Hazardous Material Policy**

The purpose of this statement is to inform all Orange County Erectors, Inc. employees that the company is complying with the OSHA Hazard Communication Standard, Title 29, Code of Federal Regulations 190 and 1200, by complying a hazardous chemicals list, using Material Safety Data Sheets, ensuring that containers are labeled and providing employees with appropriate training.

This program applies to all work operations in our company where employees may be exposed to hazardous substances under normal working conditions or during an emergency situation.

The Hazard Communication Program Administrator is the program coordinator. The Hazard Communication Program Administrator has overall responsibility for the program.

Under this program employees will be informed of the contents the Hazard Communication Standard, the hazardous properties of the material with which they work, safe handling procedures, and measures to take to protect themselves from these materials.

## **List of Hazardous Materials**

The Hazard Communication Program Administrator will make a list of all the hazardous chemicals and related work practices used in the facility, and will update the list as necessary. Our list of chemicals identifies all of the chemicals used. A separate list is available for each work area and is posted there. Each list also identifies the corresponding MSDS for each chemical. A master list of these chemicals will be maintained by and is available from the Hazard Communication Program Administrator.

## **Material Safety Data Sheets**

Material Safety Data Sheets provide employees with specific information on the chemicals they use at work. The Hazard Communication Program Administrator maintains a binder of MSDS on every substance on the company list of hazardous chemicals. The MSDS will be a fully completed OSHA form 174 or equivalent. All MSDS are available for employees to consult at the Safety and Health Manager's office. The Field Superintendent will ensure that each work site maintains the MSDS for hazardous materials used in that area.

The Hazard Communication Program Administrator is responsible for acquiring and updating MSDS. He will contact the chemical manufacturer or vendor if additional research is necessary or if the MSDS was not supplied with the initial shipment.

## **Hazardous Material Labels and Other Forms of Warning**

The Hazard Communication Program Administrator will ensure that all hazardous chemicals are properly labeled and updated as necessary. Labels should list at least the chemical identity, appropriate hazard warnings, and the name and address of the manufacturer, importer or other responsible party. The Hazard Communication Program Administrator will refer to the corresponding MSDS in verifying label

information. Containers that are received will be checked by Shipping & Receiving to make sure all containers are properly labeled.

If there are a number of stationary containers within a work area that have similar contents and hazards, signs will be posted on them to convey the hazard information. On stationary process equipment regular process sheets, batch tickets, blend tickets and similar written materials will be substituted for container labels. These written materials are made readily available to employees.

If chemicals are transferred from a labeled container to a portable container that is intended only for an individual's immediate use no labels are required on the portable container. Pipes or piping systems will not be labeled but their contents will be described in training sessions.

## **Notification to Outside Contractors of Hazardous Materials**

The Hazard Communication Program Administrator, upon notification by the responsible supervisor, will advise outside contractors in person, or by writing, of any chemical hazards that may be encountered in the normal course of their work on the premises, the labeling system in use, the protective measures to be taken, and the safe handling procedures used. In addition, the Hazard Communication Program Administrator will notify these individuals of the location and availability of Material Safety Data Sheets. Each contractor bringing chemicals on-site must provide the Hazard Communication Program Administrator with appropriate hazard information on these substances, including labels used and precautionary measures to be taken in working with these chemicals.

## **Hazardous Materials Non-Routine Tasks**

When you are required to perform hazardous non-routine tasks (e.g. cleaning tanks, entering confined spaces, etc.) a special training session will be conducted to inform you of the hazardous chemicals to which you might be exposed and the proper precautions to take to reduce or avoid exposure.

## **Hazardous Materials Safety Training**

Everyone who works with or is potentially exposed to hazardous chemicals will receive initial training of the Hazard Communication Standard and the safe use of those hazardous chemicals by the Hazard Communication Program Administrator or his designated appointee. Whenever a new hazard is introduced additional training will be provided. Regular safety meetings will also be used to review the information presented in the initial training. Foremen and other supervisors will be trained regarding hazards and appropriate protective measures so they will be able to answer questions from employees and provide daily monitoring of safe work practices.

Training will emphasize the following items:

1. Summary of the Hazard Communication Standard and this written program;
2. Chemical and physical properties of hazardous materials (e.g. flash point, reactivity, etc.) and the methods that can be used to detect the presence or release of chemicals (including chemicals in unlabeled pipes).
3. Physical hazards of chemicals (e.g. potential for fire, explosion, etc.).

4. Health hazards, including signs and symptoms of exposure, associated with exposure to chemicals and any medical conditions known to be aggravated by exposure to the chemicals.
5. Procedures to protect against hazards including required personal protective equipment and its proper use and maintenance, work practices or methods to assure proper use and handling of chemicals, and procedures for emergency responses.
6. Work procedures to follow to assure protection when cleaning hazardous chemical spills and leaks.
7. Where Material Safety Data Sheets are located, how to read and interpret the information on both labels and MSDS and how employees may obtain additional hazard information.



## **MSDS**

- Acetylene
- Anchoring Cement
- Arcair- Air Carbon Electrodes
- Cement Based Patching Mortar
- Diesel Fuel #2
- Gasoline- Unleashed
- HD- 5Propane Fuel
- Hilti- HIT HY 500
- Hydraulic Oil AW ISO 32
- Lincoln Electric- Covered Electrode
- Lincoln Electric- Flux Cored Electrode
- Oxygen- Compressed
- Paint Related Material
- Sprayon- Zinc- Rich Cold Galvanizing Compound
- Structural Steel Primer- Gray