**Company**

**SITE-SPECIFIC**

**FALL PROTECTION PLAN**

* Project Name:
* Project Number:
* Project Location/Address:
* Project Activity:
* Project Superintendent:
* Steel Erection Foreperson:
* Date of Pre-Work Safety Meeting:
* Date of Safety Plan:
* Plan Prepared by:
* Plan Approved by:
* Plan Supervised by:

 **PLAN REVISIONS**

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| --- | --- | --- | --- |
| Date | Description of Revision | Revised By | Approved By |
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**SAMPLE POLICY**

(Company) is dedicated to the protection of its employees from on-the-job injuries. All employees of (Company) have the responsibility to work safely on the job. The purpose of this plan is to compliment the (Company) Safety and Risk Management Program by addressing specific safety concerns for fall protection on this project and to ensure that each employee is trained and made aware of the safety provisions which are to be implemented by this plan prior to the start of erection.

This Fall Protection Plan has been prepared and designated for this project after careful consideration of both conventional and non-conventional means to fall protection. This plan is designed to enable employees to recognize the fall hazards on this project and to establish the procedure 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 their 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 erection foreperson or supervisor and the concern addressed before proceeding.

As with other (Company) safety policies and procedures, they cannot be administered, implemented, monitored and enforced by any one individual. The total objective of a safe, accident free work environment can only be accomplished by a dedicated, concerted effort by every individual involved with the project from management down to the last employee. Each employee must understand their value to the company; the costs of accidents, both monetary, physical and emotional; the objective of the safety policy and procedures; the safety rules that apply to the safety policies and procedures; and what their individual role is in administering, implementing, monitoring, and compliance of their safety policies and procedures. This tends to allow for a more personal approach to compliance through planning, training, understanding and cooperative effort, rather than by strict enforcement. If for any reason an unsafe act persists, strict enforcement will be implemented which could result in a loss of employment.

It is the joint responsibility of both the project superintendent and the steel erection foreperson to implement this Fall Protection Plan. These two individuals are responsible for continual safety checks of their operations and to enforce the safety policies and procedures. As leaders, it is the responsibility of these two individuals 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 their supervisors. It is also the responsibility of the employee to bring to their supervisors attention any unsafe or hazardous conditions or acts that may cause injury to either themselves or any other employee.

**ANY CHANGES TO THIS FALL PROTECTION PLAN MUST BE**

**APPROVED BY**

**THE \_\_\_\_\_ SAFETY/RISK MANAGER**

**FALL PROTECTION SYSTEMS**

**TO BE USED ON THIS PROJECT**

Fall protection harnesses and lanyards

Retractable lanyards

Fall protection beamers and chokers, when lifeline not available

Standing seam clamps, 5000lb rating

Wire rope and Beam Guard system

Sky-Web II Fall Protection and Insulation Support System

Controlled Decking Zone with Control Line

**PLAN IMPLEMENTATION**

The structure being erected is a pre-engineered building. The building consists of typical steel components (e.g.; columns, beams, bar joist, and metal decking). All structural, roofing and siding components and trims installed by (Company) are integral, and fall in the scope and realm of steel erection.

***The maximum height at which workers are subjected to falls is:***

**Emergency Rescue Procedure:**

* There will be man lifts readily available for fall/suspension rescue on this project.
* If self-rescue is impossible, or if rescue cannot be performed promptly, the worker should be trained to "pump" his/her legs frequently to activate the muscles and reduce the risk of venous pooling. Footholds can be used to alleviate pressure, delay symptoms, and provide support for "muscle pumping."
* Immediately respond to a worker who has suffered a fall/suspension using a man lift to reach the area and safely position the basket underneath him/her and perform rescue.
* Continuously monitor of the suspended worker for signs and symptoms of orthostatic intolerance and suspension trauma.
* Ensure that a worker receives standard trauma resuscitation once rescued.
* If the worker is unconscious, keep the worker's air passages open and obtain first aid.
* Monitor the worker after rescue, and ensure that the worker is evaluated by a health-care professional. The worker should be hospitalized when appropriate. Possible delayed effects, such as kidney failure, which is not unusual in these cases, are difficult to assess on the scene.

*The Erection and Fall Protection Procedures are discussed in further detail as follows:*

**COLUMNS**

Workers disconnecting crane rigging used for lifting and setting columns will do so whenever possible by using a man lift, which eliminates the need for ladders. Workers making disconnects from ladders will ascend the ladder wearing a body harness with lanyard. The workers will secure the top of the ladder against deflection and be tied-off to the column. In most cases the rebar hook lanyard will tie-off directly to an available bolt hole in the column. In most cases the rebar hook system should be sufficient, but a carabineer can be used to create an anchor point.

Tie-off can also be achieved by attaching a vertical lifeline to the lifting eye or available bolt hole on the top of the column, prior to lifting and used in conjunction with a rope grab to form as an anchorage. If available, manlifts shall be used to make the disconnect.

For columns too high for the use of a ladder, 36 ft. or higher, an added cable can be used to reduce the height of the disconnect point so that a ladder can be used. This cable will be left in place until some point in the erection process that it can be safely removed. If man lifts are available they can be used to make the disconnect. In some instances, columns can be hooked from the crane by using an erection tube or shackle with a pull pin which is released from the ground after the column is stabilized.

Columns will be adequately connected and/or braced to safely support the weight of the ladder bearing a worker.

**Use a co-worker to help steady ladders!!!!!!!!!**

**MAIN BEAM SECTIONS / SECONDARY STRUCTURAL**

Where practicable, these sections will be assembled on the ground and lifted into place by the crane. Prior to hoisting, workers shall install the *Beam Guard* cable system to be assembled main beam sections. Final alignment and connection to the columns shall be made by workers attaching their Personal Fall Arrest Systems (PFAS) to the anchorage cable. Workers may also use man-lifts, scissor-lifts or ladders. Workers using ladders to connect must tie-off to a suitable anchorage, similar to methods and techniques described for columns.

Creating anchorages on main beam sections can also be achieved through the use of an anchorage device known as a Beamer or Beam Clamp.

Secondary structural components will be installed using the *Beam Guard* cable system or from inside of man-lifts, maintaining 100% fall protection.

**BAR JOIST**

Where practical, these members will be connected by workers using either man-lifts and/or scissor-lifts. Workers, who are required to use the main beam members as a walking/working surface, must use a Personal Fall Arrest System (PFAS) attached to the *Beam Guard* cable system. When not in motion and in a stationary mode for the purpose of connecting, fastening or resting, all employees will be tied-off using an appropriate (PFAS) to the rafter beam or bar joist.

Other acceptable anchorage options are: **beam clamps, cross arm straps, back-biter lanyards and/or an available bolt hole in the main beam rafter.**

**BAR JOIST – continued**

Workers can also use manually propelled mobile scaffolds, man-lifts or scissor-lifts.

*Bar joist is an acceptable tie-off anchorage when: 1. The bar joist is connected to the main frame. 2. Anchorage to the bar joist shall occur as near as practicable to the main frame connection.*

**DECK PANELS**

During installation of deck panels, the work deck continuously increases in area as more and more units are positioned and secured. Thus, the unprotected roof perimeter is constantly modified as the leading edge changes location as each unit is installed. Skyweb II with perimeter warning lines will be used as fall protection during roofing operations.

**FALL PROTECTION SYSTEMS USED**

**The application of Skyweb II fall protection and insulation support system with perimeter warning lines is compliant with OSHA fall protection standards:**

Mr. Richard Van Auken
Human Resources and Safety Manager
Butler Construction
P.O. Box 269000
Kansas City, Missouri 64126

Dear Mr. Van Auken:

This is in response to your February 24 letter requesting the Occupational Safety and Health Administration (OSHA) to comment further on the Sky-Web system. I apologize for the delay of this response.

We appreciate the time and effort made by Butler Construction to acquaint OSHA with the capabilities and benefits of the Sky-Web system. However, as explained at the February 21 meeting with you, it is the policy of the Occupational Safety and Health Administration not to approve or endorse products. The variable working conditions at jobsites and possible alteration or misapplication of an otherwise safe product could easily create a hazardous condition beyond the control of the product manufacturer. However, we have reviewed the information provided by Butler Construction and it appears the Sky-Web system, if properly installed and maintained, would provide adequate interior fall protection and be in compliance with OSHA's fall protection standards.

Sky-Web will be installed above the roof purlins. This is a passive restraint system that protects workers from falls at the leading edge of a roof. It does this by providing a “web” of knotted nylon mesh that is attached to the perimeter of the roof's secondary structural members. The Sky-Web installation will be inspected and certified by the (Company) Competent Person before being used as leading edge fall protection.

**The application of Controlled Decking Zone:**

The lower eave height, (19’6 ½ ”), and the upper eave height (25’5 ½”) are between the 15’ and 30’ OSHA requirement, a Controlled Decking Zone will be used during the installation of deck panels. The control line shall be erected and maintained as soon as possible to restrict access and demarcate the Controlled Decking Zone.

As per OSHA in Subpart R, 1926.751, Definitions:

**“Controlled Decking Zone** (CDZ) means an area in which certain work (for example, initial installation and placement of metal decking) may take place without the use of guardrail systems, personal fall arrest systems, fall restraint systems, or safety net systems and where access to the zone is controlled.”

**“Metal decking** means a commercially manufactured, structural grade, cold rolled metal panel formed into a series of parallel ribs; for this subpart, 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.”

**Appendix D to Subpart R -- Illustration of the Use of Control Lines to Demarcate Controlled Decking Zones (CDZs):**

**Non-mandatory Guidelines for Complying with § 1926.760(c)(3)**

**(1)** When used to control access to areas where leading edge and initial securement of metal deck and other operations connected with leading edge work are taking place, the controlled decking zone (CDZ) is defined by a control line or by any other means that restricts access.

**(1)(i)** A control line for a CDZ is erected not less than 6 feet (1.8 m) nor more than 90 feet (27.4 m) from the leading edge.

**(1)(ii)** Control lines extend along the entire length of the unprotected or leading edge and are approximately parallel to the unprotected or leading edge.

**(1)(iii)** Control lines are connected on each side to a guardrail system, wall, stanchion or other suitable anchorage.

**(2)** Control lines consist of ropes, wires, tapes, or equivalent materials, and supporting stanchions as follows:

**(2)(i)** Each line is rigged and supported in such a way that its lowest point (including sag) is not less than 39 inches (1.0 m) from the walking/working surface and its highest point is not more than 45 inches (1.3 m) from the walking/working surface.

**(2)(ii)** Each line has a minimum breaking strength of 200 pounds (90.8 kg).

[66 FR 5277, Jan. 18, 2001]

The control line, constructed of metal stanchions and nylon pennant rope, shall be maintained six (6) feet from the unprotected edges and with fifteen (15) feet of the leading edge.

During the installation of deck panels, the area marked by control lines will be considered a Controlled Decking Zone. Only (Company) employees who have received fall protection training and have had steel erection experience of at least two (2) previous jobs shall be permitted on the deck.

**ENFORCEMENT**

Constant awareness of the respect for fall hazards, and compliance will all safety rules are considered conditions of employment with (Company) The job-site Superintendent, as well as individuals in the Safety and Personnel Department, reserves the right to issue discipline warnings to employees, up to and including termination, for failure to follow the guidelines of this program.

**RESCUE COMMUNICATION**

In the event of a fall, the following people will be notified as soon as possible:

1. Job Foreman

2. Job Supervisor

3. Safety Director

4. Local emergency services, if necessary.

**ACCIDENT INVESTIGATIONS**

Any accident or near miss that may occur shall be investigated and reported. It is an integral part of (Company)’s safety program that documentation takes place as soon as possible so that the cause of prevention can be identified to prevent reoccurrence.

The following procedures and documentation will be completed by the job Foreman or Supervisor as part of the accident or fall investigation:

1. Interviews with witnesses.

2. Accident/near miss report

In the event that an accident or near miss occurs, this plan shall 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 THIS PLAN**

Any changes to this plan must be approved by the Company safety/risk manager. This plan shall be reviewed by the safety risk/manager and steel erection foreman as the job progresses to determine if additional practices, procedures or training needs to be implemented by (Company 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 jobsite.

SAFETY DIRECTOR APPROVAL \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_