HAZARD IDENTIFICATION & RISK ASSESSMENT

If all employees and subcontractors followed established OSHA compliant procedures to accomplish their job tasks, the probability of an accident would be minimal and, should an accident/incident occur, the probability of severity would be minimal.

For example, if an employee were working above six feet from a lower level and had had training in fall protection including a) the need to know where fall protection is required b) selection of fall protection systems which are appropriate for given situations, c) construction and installation of safety systems, d) supervision and inspection of employees, e) implementation of safe work procedures (including, for example, area clear of debris, dry, firm walking/working surface, etc), and, f) training in selection, use, and maintenance of fall protection systems the probability of falling is minimal and if a fall started to occur, the guard rail system or the personal fall protection equipment would prevent contact with the lower level and the possibility of injury.

In spite of the above, a formal hazard identification and risk assessment process is in place to identify potential hazards. We will use area specific analysis/inspections utilizing JSA’s and JHA’s which are valid only if all employees as well as our subcontractors are actively involved in the process.

All employees and subcontractors must be actively involved in our formal hazardous identification process. All hazards identified will be reviewed by all employees concerned.

The hazard identification process will be used for routine and non-routine activities as well as new processes, changes in operation, products, or services as applicable.

Hazards will be classified and ranked based on severity of possible injury and probability that an accident will occur.

Our procedures are as follows:

The supervisor, working with employees and subcontractors who actually perform a task will use a worksheet for that task listing all components of the task. Working together, they will list all things that could go wrong resulting in an accident. Finally, specific steps will be developed to eliminate the probability of an accident. These steps will be transferred to our task analysis form which will be kept on the job site. An example is below:
## Sample Individual Task Worksheet

**Task:** Accessing a roof using a fixed Ladder

<table>
<thead>
<tr>
<th>Job Steps</th>
<th>Hazards</th>
<th>Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Getting ladder</td>
<td>1. Hurt back lifting ladder</td>
<td>1. Use proper lifting techniques</td>
</tr>
<tr>
<td>2. Setting ladder against wall</td>
<td>2. Defective ladder breaks</td>
<td>2. Inspect ladder before use</td>
</tr>
<tr>
<td>3. Climbing ladder</td>
<td>3. Ladder sinks into ground</td>
<td>3. Set ladder on firm, solid, level foundation</td>
</tr>
<tr>
<td>4. Accessing roof</td>
<td>4. Ladder falls over</td>
<td>4. Tie-off ladder, extend 3’ above roof edge, ensure proper angle</td>
</tr>
<tr>
<td>5. Reverse Process</td>
<td>5. Employee falls off ladder.</td>
<td>5. Use 3-point climbing technique</td>
</tr>
<tr>
<td></td>
<td>6. Hurting back</td>
<td>6. Use proper lifting techniques</td>
</tr>
</tbody>
</table>

### Severity Class:

1 = Catastrophic  
Death or long term hospitalization.

2 = Critical  
Requires short term hospitalization

3 = Marginal  
Clinic outpatient treatment

4 = Negligible  
First aid at job site and keep working

### Probability of an Accident

1 = Frequent

2 = Likely

3 = Occasional

4 = Seldom

5 = Unlikely

See Sample Form Below:
### Job Hazard Analysis (JHA)

**Activity/Work Task:**

**Project Location:**

**Contract Number:**

**Date Prepared:**

**Prepared By:**

**Reviewed By:**

**Notes (Field Notes, Review Comments, etc.):**

### Risk Assessment Code (RAC) Matrix

<table>
<thead>
<tr>
<th>Severity</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequent</td>
</tr>
<tr>
<td>Catastrophic</td>
<td>E</td>
</tr>
<tr>
<td>Critical</td>
<td>E</td>
</tr>
<tr>
<td>Marginal</td>
<td>H</td>
</tr>
<tr>
<td>Negligible</td>
<td>M</td>
</tr>
</tbody>
</table>

**Step 1:** Review each "Hazard" with identified safety "Controls" and determine RAC (See Above)

"**Probability**" is the likelihood to cause an incident, near miss, or accident and identified as: Frequent, Likely, Occasional, Seldom, or Unlikely.

"**Severity**" is the outcome/degree if an incident, near miss, or accident did occur and identified as: Catastrophic, Critical, Marginal, or Negligible.

**Step 2:** Identify the RAC (Probability/Severity) as E, H, M, or L for each "Hazard" on JHA. Annotate the overall highest RAC at the top of JHA.

### Controls

**Equipment To Be Used**

**Training**

**Inspection Requirements**
The order of precedence and effectiveness of hazard control is as follows:

1. Engineering controls.
2. Administrative controls.
3. Personal protective equipment.

Engineering controls include the following:

- Elimination/minimization of the hazard -- Designing the facility, equipment, or process to remove the hazard, or substituting processes, equipment, materials, or other factors to lessen the hazard;
- Enclosure of the hazard using enclosed cabs, enclosures for noisy equipment, or other means;
- Isolation of the hazard with interlocks, machine guards, blast shields, welding curtains, or other means; and
- Removal or redirection of the hazard such as with local and exhaust ventilation.

Administrative controls include the following:

- Written operating procedures, work permits, and safe work practices;
- Exposure time limitations (used most commonly to control temperature extremes and ergonomic hazards);
- Monitoring the use of highly hazardous materials;
- Alarms, signs, and warnings;
- Buddy system; and
- Training.

Personal Protective Equipment -- such as respirators, hearing protection, protective clothing, safety glasses, and hardhats -- is acceptable as a control method in the following circumstances:

- When engineering controls are not feasible or do not totally eliminate the hazard;
- While engineering controls are being developed;
When safe work practices do not provide sufficient additional protection; and

During emergencies when engineering controls may not be feasible.

Use of one hazard control method over another higher in the control precedence may be appropriate for providing interim protection until the hazard is abated permanently. In reality, if the hazard cannot be eliminated entirely, the adopted control measures will likely be a combination of all three items instituted simultaneously.

By dedicated assignment, appropriate documentation of completion, and implementation of controls, the above methods and procedures ensure identified hazards are addressed and mitigated.

All employees will be training in the hazard identification process including the use and care of proper PPE.

Part of our review process of all identified hazards and the corrective measures to eliminate them will be a concentrated effort to ensure that the corrective measures do not create hazards in and of themselves. This review process will involve the Safety Director, supervisors, the employees, and subcontractors.