

## Big Dog Construction Services, Inc.

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Item #	Line Item	Notes	Unit Price		
PNC2119543R1--01-01	Request for Qualifications - Job Order Contract	<b>Supplier Product</b> <b>Code:</b> <b>Supplier</b> <b>Notes:</b> Original Bond and Confidential Financials will be hand delivered to the Purchasing Office.	<b>First Offer -</b> 1 / n/a		Y Y
				Supplier Total	\$0.00

Big Dog Construction Services, Inc.

Item: **Request for Qualifications - Job Order Contract**

Attachments

Contract Management Plan - JOC Contract Safety Manual.pdf



Prepared by  
Big Dog Construction Services, Inc.

# Job Order Contract Management Plan

Big Dog Construction Services, Inc.  
3730 Coconut Creek Pkwy, Suite 180  
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# Introduction

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## Introduction

### Purpose

This Construction Management Plan has been prepared in response to Broward County RFQ PNC2119543R1, Job Order Contract to document how the Job Order Contract Management team shall implement and conduct its management responsibilities during the Planning and Execution of assigned Job Orders during the contracted period.

A fundamental aim of this Plan is to ensure all projects are properly facilitated, integrated and coordinated so as to deliver certainty to the contract objectives.

### 1.0 Scope of this Plan

This Plan provides a holistic approach that:

- advises how the JOC management team will comply with the requirements of the contract relating to construction, renovation and maintenance orders.
- defines the project objectives and targets of particular relevance to the contract;
- describes constraints specific to the contract and the projects in general;
- describes the process for the identification and control of risks specific to the contract; and
- details the proposed strategy for the contract compliance, with particular regard to establishment resourcing, staff organization and quality control.

### 1.1 Proposed Work

The proposed work will require the construction of small capital improvement projects and facility maintenance and renovation projects.

### 1.2 Site Locations

The proposed site locations are distributed throughout Broward County and consist of various municipal buildings and facilities owned and managed by Broward County and occupied by various County agencies. These include locations at Port Everglades, Fort Lauderdale/Hollywood International Airport.

### 1.3 Precedence

Where ambiguity is detected between the procedures and requirements of this plan and the Job Order Contract, then the procedures in the Contract will take precedence.

### 1.4 Document Control

Amendments to this Management Plan are approved by the Project Manager and authorized for distribution to all holders of copies. Copies are not subject to automatic amendment/update and pan holders should verify currency of the document.

Revisions to this Management Plan will be made as required to reflect the current system requirements.

# Contract Management

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## 2.0 Contract Management

### 2.1 Approach

The major external opportunities to ensure contract success on this project are:

- Establishing robust communications protocols to ensure expectations and deliverables are understood.
- Use of collaborative processes throughout the work definition phase through final job completion.
- Ensuring existing staff is properly trained in use of the Giordian system.
- Ensuring minimal impact to client occupants when required.
- Development of continuous improvement processes that support routine post project reviews and KPI reporting follow-up.
- Participation in post work order audits to improve performance.
- Adoption and adherence to safety protocols and OSHA standards.

Upon commencement, our project team's immediate tasks will be to:

- Establish a project office and commence Giordian training.
- Place subcontractor partners under contract to provide services in support of contract requirements.
- Confirm the locations of existing services and obtain all necessary permits and licences and approvals; and
- Arrange for the installation of temporary services –

### 2.2 Approvals

An approved Job Order from the Owner is required prior to begin work on a project.

We foresee that some Job Orders will contain conditions that certain reports and documents will need to be completed, submitted and approved before actual work can commence. Some of these reports requiring approval could include:

- Construction Management Plan
- Construction Project Schedules
- Project Budgets and Schedule of Values
- Plans and Permits
- Project Cost Estimate
- Project Material List

Prior to commencing work, further approvals may be required from the owner, including but not limited to:

- Security Screening to access the job site
- Air Quality Testing for Mold and Mildew
- Application for Permit to Access Job sites with Company vehicles
- After Hours Access

In all cases, coordination with the Owner is required to ensure that all security, environmental and access issues/requirements are resolved and approved prior to commencement of work.

Proper planning, foresight and coordination will prevent job start delays. The net result is an overall reduction in total scope development and construction time.

# Contract Management

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## 2.3 Site Security

Some job sites will be secured using appropriate fences and/or secure doors and entryways, requiring access cards through gates manned with qualified security guards/traffic control officers. Staff members required to undergo necessary security checks will coordinate application with the owner to ensure proper clearance and staffing.

All uncleared visitors to a secure site will be required to report to the site office and will be appropriately escorted and registered in a visitor log book.

## 2.4 Public / Worker Safety

Prior to commencing work on site, all subcontractors will be required to submit a project specific Safety Management Plan. These plans will be reviewed by Big Dog CSI Project Management and our Safety Consultant, Larry Leiman, CSSM, for compliance with an overall Project Safety Plan. A copy of the Big Dog CSI Safety & Health Plan can be found in Appendix 1. (Information for Larry Leiman is also provided in Appendix 1.)

Once the project safety plans are reviewed and found to align with the BDCSI plan, all site staff and subcontractors will be required to complete a site-specific orientation before commencing work on site. The orientation will cover aspects relating to safety and amenity; including site access protocol, emergency evacuation procedures, location of first aid facilities, location of amenities, site hours, material handling, noise and dust policies and environmental management.

Based upon job scope and complexity, a Safety Committee may be established during the early stages of the project. The committee will have representatives from subcontractors and Big Dog CSI. It will conduct regular inspections of the project and will be actively involved in reviewing Safety Management Plans and making recommendations with regard to health and safety issues. All committee members will be adequately trained in the field of health and safety compliance.

Routine safety inspections are expected in order to increase safety awareness and prevent accidents. The Project Manager, Project Supervisor and/or BDCSI Safety consultant/officer will conduct these inspections and the inspection reports will be entered in the daily project log in the project's Procore file.

Big Dog CSI takes safety seriously. All of our job site staff is OSHA 10, CPR and First Aid certified. Project Supervisors are OSHA 30 certified.

# Contract Methodology

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## 3.0 Contract Methodology

### 3.1 General Conditions/Considerations

The JOC procurement system relies heavily on proper project planning and collaborative pricing that provides for fair profit balanced against owner cost savings. At first glance, the concepts of fair profit and owner savings may seem mutually exclusive, but these benefits can be realized through the JOC Process, which removes costly bureaucracy, adversarial attitudes associated with other delivery methods and rewards transparency and open communications between owner and contractor throughout the project. Of course, there are some limitations that can hinder the contractor's efforts to optimize the JOC experience. This is particularly true for SBE/CBE projects. Challenges with this contract using CBE/SBE subcontractors will include:

- Lack of bonding capacity for small businesses.
- Limited working capital, requiring fast and/or down payments for materials.
- Insufficient number of engaged S/CBE subcontractors to ensure 3 bids are available for estimates. (This has been a continuous problem while bidding previous projects.)
- Ability of CBE/SBE firms to mobilize quickly for "short fused" projects.

### 3.2 Use of In-house Forces and Project Staffing

The Project Manager for this project has more than 20 years of facility maintenance and construction experience. He previously served as the Executive Director of Plant Operations and Maintenance and Chief Facilities and Construction Officer for the Broward County School Board. Although he lacks Job Order Contracting experience, he is familiar with the system and its benefits, having investigated it in detail while at the School Board (to outsource certain trades and expedite project execution.) The Project Supervisor also has more than 20 years of construction experience in both commercial and government arenas. Their resumes are provided as part of Appendix 2.

Project administration will be handled by a seasoned project coordinator with more than ten years of experience. BDCSI is a Procore Project Management software user and all our management/administrative team members are Procore certified. Procore is a cloud-based application that allows the owner access to all project documentation, including drawings, project daily logs, safety inspection reports and photos.

Our in-house trades workforce will handle any carpentry, framing and drywall installation, demolition and minor handyman type facility repairs. We estimate that our forces will perform 15-20% of the projected work on this contract. The remainder will be performed by subcontractor partners. A list of employees & an equipment list are provided in Appendix 3.

### 3.3 Subconsultant Use

Some projects will require signed and sealed construction documents. BDCSI has relationships with both small and large local design and engineering firms for use when necessary. We have worked on projects with Cartaya and Associates and ACAI. Both firms have designed numerous projects for the Broward County Board of Commissioners. For projects involving air quality issues, we use Florida's preeminent air quality firm, The Mold Inspector. The BDCSI Safety Officer is also a consultant that covers all BDCSI projects.

### 3.4 Project Approach

Absent any preconceived notions about the JOC Program, we view the collaborative nature of project and scope development as extremely beneficial to the contracting process. Any process that reduces conflict, expedites the timeline from vision to construction and encourages transparent execution and open communication almost sounds to good to be true. However, for the process to work as designed, thorough training and complete understanding of the Giordian system, with emphasis on the Construction Task Catalog, is imperative. Once that is out of the way, we intend to approach each job as an opportunity to make "us" both look good. Every dollar we value engineer into (or out of) a project during a Joint Scope Meeting is a dollar that can be spent on the next project. We are prepared to perform our services using agreed upon means and methods, focused on efficiency and excellence and wanting you to be as proud of our work as we intend to be.

# Contract Methodology

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## 3.5 Past Performance

Big Dog Construction Services is in its seventh year of business. Our portfolio of work has included residential, commercial, retail and municipal projects. We have steadily grown our business without any formal marketing or advertising. All our work has come from referrals or from projects we were “chasing”. We do have experience at Port Everglades and Fort Lauderdale-Hollywood International Airport. We currently have a team at FLL Airport Terminal 4 working as a prime subcontractor on the new Consolidated Baggage Inspection System project. This is a 100% CBE \$2M+ contract involving finishes, millwork, flooring, drywall buildout and HVAC installation. We are also a CBE subcontractor on a concurrent \$3M contract to remove the existing and install the new Baggage Handling System in Terminal 4. At Port Everglades, we are providing a Project Engineer to the Prime Contractor and recently completed a \$500,000 project, assembling and installing several hundred 40-50-foot-deep poured in place piles as part of the new Terminal 2 and 4 Parking Garage Project. We hired 20 iron workers to tie the rebar for that project and have been asked to do the same for the new Convention Center Hotel project. These three projects are running concurrently.

When it comes to renovations, tenant improvements and buildouts, we have a number of successful projects under our belt. We are currently in the final phase of a \$1M renovation of Coconut Creek City Hall. We completed the first phase of this project two months early without a change order, earning a \$30,000 contract bonus. We are on track to do the same for the second phase. Earlier this year, we completed the \$355,000 buildout of new office space for Hensel-Phelps Construction, a large nationwide general contractor. Our \$580,000 office buildout for Rockridge Capital Holdings on the top floor at 500 E. Broward Blvd. was recognized by the Associated Builders & Contractors as the 2017 Small (less than \$1M) Project of the Year. Last year, we were contracted to complete over \$600,000 of work that was started (and then abandoned) by another contractor at the new Ball Park of the Palm Beaches. That project involved finish carpentry in the locker rooms, stucco and concrete work in the stadium, interior and exterior painting and final completion of the project punch list.

## 3.6 Workload of the Firm

A list of completed projects is attached as part of Appendix 4. Projects currently in production and being performed concurrently are listed below:

Bennett Residence  
Owner: Huizenga Holdings  
Contract Amount: \$1.6M  
Architect: Ahern & Associates  
Percent Complete: 10% (Contract signed 6/3/19)  
Scheduled Completion: 10/2020

Coconut Creek City Hall Renovations  
Contract Amount: \$1,100,000.00  
Architect: P2 Interiors  
Percent Completion: 75%  
Scheduled Completion: 1/2020

FLL Terminal 4 Consolidated Baggage Inspection System  
Owner: Broward County Aviation District  
Contract Amount: \$2,072,453.00 (subcontractor to The Whiting-Turner Contracting Co.)  
Architect: Graef  
Percent Complete: 50%  
Scheduled Completion: 12/2020

FLL Terminal 4 Consolidated Baggage Handling System (Purchase and Install) Owner:  
Broward County Aviation District  
Contract Amount: NTE \$3,000,000 (subcontractor to Daifuku, America)  
Architect: Graef  
Percent Complete: 30%  
Scheduled Completion: 12/2020

# Contract Methodology

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Associated Builders and Contractors (ABC) Building Common Space Renovation  
Owner: Associated Builders and Contractor  
Architect: Cartaya & Associates  
Contract Amount: \$248,000.00  
Percent Complete: 10%  
Scheduled Completion Date: 07/2020

Wellons Residence Addition  
Owner: Terry Wellons  
Architect: Florida Technical  
Contract Amount: \$415,681.00  
Percent Complete: 0% - Awaiting NTP  
Scheduled Completed: 10/2020

Broward County Convention Center Modernization (subcontractor to HJ Foundation)  
Owner: Broward County Board of Commissioners  
Architect: Fentress Architects  
Contract Amount: NTE \$200,000.00  
Percent Complete: 0% - Awaiting NTP  
Scheduled Completion: 2/2020

Piedt Residence Renovations  
Owner: Philip Piedt  
Architect: Storrs Architects  
Contract Amount: \$34,000.00  
Percent Complete: 0% - Awaiting NTP  
Scheduled Completion: 4/2020

Sherman Residence Renovations  
Owner: Bill & Jane Sherman  
Architect: NA  
Contract Amount: \$85,000.00  
Percent Complete: 0% - Awaiting NTP  
Scheduled Completion: 8/2020

As our company has grown, we have hired additional Project Management and Support staff while implementing the industry's Leading Construction Management software, ProCore, to handle increasingly larger projects. All our project managers are certified ProCore users. These investments in both human capital and technology have allowed us to efficiently manage a steadily growing portfolio of work with little impact on performance. When we have an issue, our experienced executive management team has more than 100 years of construction experience and the tenacity and focus to quickly resolve it. Weekly staff meetings are used to share experiences and resolve smaller issues in a team driven environment. The "Dog Pack" views teamwork, mentoring and collaboration as key components of our culture. And we know that our reputation is what brings us our work.

We are builders. We do not see challenges, we see opportunities. We start our project managers on smaller residential projects to cut their teeth and move them up to larger projects when ready. We take advantage of any opportunity to have our staff work alongside larger contractors that hire us. When awarded a project, the first thing we do is ensure that we staff it with qualified employees. Although we try to promote from within, when we need to add headcount, we do so selectively and carefully. With the right team in place, we have shown that we can professionally handle any job we are asked to perform.

## 3.7 Financial Ability

As demonstrated in the attached list of past projects and the list above, our company has managed multiple projects simultaneously with great success. We pride ourselves on our ability to pay our subcontractors and suppliers in a timely manner. As a growing SBE/CBE enterprise, we know the impact of waiting 90 days for

# Contract Methodology

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payment, particularly when performing large Government projects. Accordingly, we have financial reserves that have let us take on projects that required us to buy over a million dollars of material and pay our employees and subcontractors on time. We can do that. We also have lines of credit with a limited number of suppliers and our bank. We have yet to need to buy any large equipment, so we have yet to arrange a line of credit for that purpose.

Our bonding capacity will allow us to meet the requirements in the proposed agreement. The requested letter from our bonding company is provided as part of Appendix 4. The requested confidential financial statements have been provided under separate cover.

# Appendices

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## Appendices

### Appendix 1 – BDCSI Safety & Health Plan





# Safety Consulting & Training, Inc.

Phone: (954)-444-8564

Fax: (954)-389-3907

## Safety Topics

Site Safety  
Audits  
Accident  
Investigations  
Fatality  
Investigations  
Assist with  
OSHA  
Inspections  
OSHA Record  
Keeping  
Assist with  
OSHA Citations  
Expert  
Testimony

## 'Safety is Job #1'

### Larry D. Leiman, CCSM

Today's construction industry has unfortunately become an extremely dangerous accident prone industry. Being superseded by only the mining and fishing industries with higher fatality rates, the accident ratios industry-wide closely correlate to the volume of business within the industry, indicating that when a given industry's workload is high, safety levels and precautionary measures put in place to protect the company and employee from loss tend to receive less attention, and the end result is often costly.

Construction management must have a primary concern for employee and workplace safety, and a moral, economic, and legal commitment to ensure workplace safety.

The economic impact of workplace safety is ***the most obvious and tangible result of management's decisions***. In any construction job, the costs associated with an accident can be immense. Material losses (where no one gets hurt but materials or supply items are damaged or destroyed) are easily accounted for and nominal to remedy in most cases. Sometimes the specific accident increases the losses incurred by a company because of construction timeline delays involved in resolving the accident. That resulting cost is considerably higher than any materials loss in most cases.

When an accident involves employee injury or loss of life, the cost becomes more difficult to put a number on since "life, or returning to an equal quality of life" doesn't have a part number or a dollar value applicable in a broad definition.

One thing is certain: poor safety guidelines and precautionary measures result in accidents. Insurance companies base their premiums upon historical evidence and safety records, and in turn inevitably increase insurance premiums.

#### **You need a Construction Safety Policy in effect at all times.**

Bringing safety consciousness to construction organizations is my job, my life, and my compassion. I'm prepared to:

- Be an adviser to site management
- Undertake the safety responsibility on behalf of job sites
- Formulate the company's safety policies
- Advise management on recent industry related legislation and safety matters
- Assist in drafting of safety procedures
- Report and investigate any jobsite accidents with the full preparation and analysis of all safety records
- Provide certified Safety Training to all employees as necessary
- Provide a Safety Assessment Report of site management.
- Inspection of sites to ensure compliance with safety measures (Safe working methods, proper use of construction equipments, protective clothing, and availability of first aid)
- Provide industry information to jobsites on accidents that have happened elsewhere, to help generate safety consciousness within the respective project or jobsite (learn from other's mistakes).

For further information, please contact:

[Larry Leiman](#)

## Training Available

Trenching  
Shoring  
Confined Space  
Forklift  
Fall Protection  
Scaffold Safety

CPR / AED / First-Aid  
Training is also available  
in conjunction with any  
training course provided.





# **SAFETY & HEALTH MANUAL**

**September 21, 2018**

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## 0-CORPORATE SAFETY AND HEALTH POLICY STATEMENT

The personal safety and health of each employee and subcontractor of Big Dog Construction Services, Inc, is of primary importance. The prevention of occupationally induced injuries and illnesses is of such consequence that it will be given precedence over operating productivity whenever necessary. To the greatest degree possible, management will provide all mechanical and physical facilities required for personal safety and health in keeping with the highest standards.

Big Dog Construction Services, Inc, will maintain a Safety and Health Program conforming to the best practices of our construction industry. To be successful, such a program must embody the proper attitudes toward injury and illness prevention on the part of both management and employees. It also requires cooperation in all safety and health matters, not only between management and employee, but also between each employee and his fellow workers. Only through such a cooperative effort can a safety record in the best interest of all be established and preserved.

### OUR SAFETY AND HEALTH POLICY WILL INCLUDE:

- X Providing mechanical and physical safeguards to the maximum extent that is possible.
- X Developing and enforcing safety and health rules as per OSHA, that all employees cooperate with these rules as a condition of employment.
- X Conducting a program of safety and health inspection to find and eliminate unsafe working conditions or practices; to control health hazards and to comply fully with the safety and health rules for every job.
- X Training all employees in good safety and health practices.
- X Investigating promptly and thoroughly every accident to find out what caused it and to correct the problem to prevent recurrence.

We recognize that the responsibility for safety and health are shared:

Supervisors are responsible for developing the proper attitudes toward safety and health in themselves and in those they supervise and for the safety and health of all personnel involved.

Employees and subcontractors are responsible for wholehearted, genuine cooperation with all the aspects of the safety rules and health program. This includes but is not limited to compliance with safety rules and regulations set down by Federal, State and Local OSHA Standards and laws while performing their duties.

## **1A-OCCUPATIONAL SAFETY AND HEALTH ACT 1970**

In 1970 congress passed the Occupational Safety and Health Act and created OSHA a regulatory arm of the Department of Labor to enforce regulations governing a safe working environment. Following are some basic OSHA record-keeping requirements, postings and procedures on what to do in the event of an OSHA audit. It is important to understand, that if the procedures outlined in your safety manual are more stringent than the federal guidelines, OSHA can cite you for not following your own procedures.

### **FORM 300 / 300A**

This form will be maintained on a day to day basis. The information on this form is self-explanatory and is required by Law for mandatory record keeping.

The best method of keeping current and accurate on this form is to assign it to one person in the Corporate Office and have this person record it on a day to day basis, transferring information from the Worker's Compensation Form as it is completed.

### **SAFETY POSTER**

The OSHA Safety Poster is required by law to be posted at the employee bulletin board at each work location and is to be kept posted as long as the job is in process. In the event of Spanish speaking personnel who may not speak or understand English, a copy of the poster in Spanish must be posted.

### **YEARLY SUMMARY POSTING REQUIREMENTS**

At the close of the calendar year this summary must be posted for a period of three (3) months. It may be posted on February 1 of the New Year and kept posted until April 30. The summary is simply the OSHA 300A log which has it's totals transferred from the completed OSHA 300 log. When it is properly signed and completed, it must be posted. It may then be removed from the bulletin board after April 30 and filed for a period not to be less than 5 years.

### **INSPECTIONS / COMPLAINTS**

OSHA investigations and complaint investigations result in written findings, sometimes in fines and citations.

Each of the written citations dictates the posting requirements and the monetary fines, if any.

## INSPECTIONS

There are basically four (4) types of OSHA inspections:

1. Causal or walk on inspections.
2. High-risk industry inspections.
3. Inspections resulting from death or multiple injuries.
4. Complaint inspections.

The procedure for meeting with an OSHA Compliance Officer and the manner in which an inspection is conducted is outlined in the following procedure:

## OSHA COMPLIANCE INSPECTIONS

This procedure outlines the duties of the job supervisor and the S.H.E. Department for an OSHA inspection.

### PRELIMINARY REQUIREMENTS

#### NOTIFY COMPANY MANAGEMENT IMMEDIATELY OF THE IMPENDING INSPECTION

Determine:

1. Compliance Officer has proper credentials.
2. Type of inspection to be conducted. Get copy of complaint, if applicable.
3. Request:  
Ask the OSHA representative to delay the inspection until a representative of the S.H.E. Department can arrive to coordinate our effort to provide all pertinent information.  
In most cases, the OSHA Compliance Officer will honor this request and wait from a few hours to the next day to conduct the inspection.

### GENERAL CONSIDERATIONS

Compliance Officers should be treated courteously and given the information they request. Provide only the information that is requested. If information of confidential nature is requested, inform the inspector that Management approval is required and request an opportunity to obtain that approval. Avoid outright refusal of a request for information.

An OSHA inspection has three parts:

**Opening Conference:**

During the opening conference OSHA will let you know what type of audit they are performing, a routine walk-on or random audit, an audit as the result of a complaint or an audit due to a catastrophic event or death. They will introduce themselves and outline what they will require from you such as paperwork, documentation of safety meetings, training etc. they may even request interviews with employees

**Field Audits (Walk around):**

During the field audit(s) make notations as to everything the auditor asks about, looks at, or take pictures of. If possible take pictures of everything the auditor takes pictures of from the same side and angle they do.

**Closing Conference:**

During the closing conference they will make recommendations to improve your safety performance and discuss any discrepancies they have found. They may tell you of any citations they have written, but they are not required to disclose that information at the closing conference.

## **REPORTS**

A record of each OSHA inspection shall be filed with the S.H.E. Department on the form attached to this guideline. A S.H.E. Department representative will complete this report. The job supervisor will provide all the necessary information that is submitted on the report.

## **AFTER INSPECTION**

An exit meeting will be held to discuss any citations:

1. What are they?
2. When will they be issued?
3. Proposed penalties.
4. Period allowed for abatement.



## OSHA INSPECTION REPORT

Initial Inspection Date: \_\_\_\_\_

Date Report Received: \_\_\_\_\_

Inspection No: \_\_\_\_\_

Send copies to: Safety, Health and Environmental Department

All Federal and State OSHA inspections as well as those by NIOSH and MSHA should be reported on this form. It is to be submitted promptly for each inspection, normally within two days of the closing conference.

If the closing conference is delayed, submit an initial report as complete as possible; submit an amended report after the closing conference. In an amended report, only items 1, 2, 3, 4, 6 and items changed from the original report need be completed.

Inspections with no citations may require only one report. More complicated cases involving several citations and contested violations may require a number of updated amended reports.

If more space is required for any answer, attach a separate sheet. Attach copies of pertinent communications including complaints, citations, letters accompanying payment of fines, letters reporting completion of abatement, etc.

OSHA letter follow-up to employee complaint: Use this form to report inquiries from OSHA initiated by an employee complaint and resulting in a letter rather than an inspection. Answer items 1, 2, 3, 4, 5, 6 (date of OSHA letter), 16, 40 (date of response). Attach copy of OSHA letter and response.

1. Date this report submitted: \_\_\_\_\_
2. Is this an initial report or an amended report ?
3. If an amended report, what date was last report submitted?  
\_\_\_\_\_
4. Site Name: \_\_\_\_\_ Area: \_\_\_\_\_
5. Type of operation:
6. Opening conference date: \_\_\_\_\_



7. Closing conference date: \_\_\_\_\_
8. Duration of visit (hours): \_\_\_\_\_
9. Type of inspection: Safety Health Both \_\_\_\_\_
10. Were visitors from OSHA Federal State NIOSH MSHA \_\_\_\_\_
11. Name and Title of visitors:
12. OSHA region in which your unit is located - City: \_\_\_\_\_ Region No.:
13. Reason for the inspection: (Accident, Complaint, follow-up, Programmed (Formerly General Survey), Monitor, Other).
14. If programmed, was site exempted under OSHA Safety Inspection Scheduling System:
15. If complaint, date of complaint. Attach copy of complaint.
16. Was Management aware of this complaint before the inspection? If so when?
17. What was inspected?
18. Did scope of inspection exceed that of complaint or accident? \_\_\_\_\_
19. What measurements were made (e.g., air sampling for toxic vapors, noise, etc.) and did Company take duplicate samples?
20. Were photographs taken? Did Company unit take or secure duplicate photographs?
21. The names and titles of Company representative(s) who accompanied officer on inspection.
22. Did inspector request to see any of the Company safety and health records, records of occupational hazard measurements (e.g. toxic vapors, dusts, noise, etc.) or medical records (e.g., x-rays, physical function testing, etc.).  
YES NO \_\_\_\_\_
23. What other materials were asked for and received?

24. Did the officer have discussions with individual employees in the course of his inspections? List employees contacted and subject matter of conversation, if known.
25. Were questions directed to employee representative(s) and Company representative(s) alike in presence of one another?  
YES \_\_\_\_\_ NO \_\_\_\_\_
26. Summary of closing conference (attach on separate page).
27. Did inspector imply that citations(s) would be issued? \_\_\_\_\_
28. What violations were alleged?
29. changes were made?
30. If there was no closing conference and no citations issued, did case close as a result of no action by OSHA after 6 months from time of opening conference?  
YES \_\_\_\_\_ NO \_\_\_\_\_
31. List alleged violations and degree of severity (Repeat, Willful, Serious, Other, Deminimus), proposed penalties and abatement periods.
32. Was an informal conference held? If so, who attended?  
Were any of the alleged violations amended at this conference? If so, what?
33. Have any violations or penalties been contested? If so, which ones?
34. Date fine was paid for each individual violation (attach letter).
35. List final status of all violations if different from Items 33 and 35.
36. Do you have any general comments to make in way of a summary?
37. Date total case was officially closed (i.e., all fines paid, abatement accomplished, adjudication complete for all contests, etc.).

Signed: \_\_\_\_\_

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

## **1B-OSHA RECORD KEEPING REQUIREMENTS**

### **THE LOG OF OCCUPATIONAL INJURIES AND ILLNESSES. (OSHA FORM 300 & 300A)**

As the log of Occupational Injuries and Illnesses on which the occurrences, extent and outcome of cases are recorded during the year. The summary of Occupational Injuries and Illnesses is used to summarize the log at the end of the year to satisfy employer-posting obligations (this form must be posted from February 1<sup>st</sup> thru April 30th each year for the previous year).

- X These logs are used for recording and classifying recordable occupational injuries and illnesses and for noting the extent and outcome of each case. The log shows when the occupational injury occurred, to whom, what the injury or ill persons regular job was at the time of the injury or illnesses exposure, the department in which the person was employed, the kind of injury or illness, how much time was lost and whether the case resulted in a fatality, etc. The log consists of three parts:
- X A descriptive section, which identifies the employee and briefly describes the injury or illness.
  - X A section covering the extent of the injuries recorded.
  - X A section of the type and extent of the injury.

While most of the columns seem self explanatory, there are some important requirements to be considered when completing the log. OSHA will provide each employer with a workbook, upon request, and will explain how to fill out the required logs. For more information, contact the Company Director of Safety.

### **THE SUPPLEMENTARY RECORD OF OCCUPATIONAL INJURIES AND ILLNESSES. (OSHA 301)**

- X The Supplementary Record of Occupational Injuries and Illnesses, OSHA form 301, provides additional information on each case that has been recorded.
- For every injury or illness entered on this log, it is necessary to record additional information on the Supplementary Record, OSHA form 301 or equivalent. The supplementary record describes how the injury or illness exposure occurred, lists the objects or substances involved and indicates the nature of the injury or illness and the part (s) of the body affected.

### **OTHER REQUIRED POSTINGS**

OSHA requires that the following posters or information be posted in an area where employees will see them on a regular basis or in an area where the exposure occurs:

- X OSHA Safety and Health Poster,
- X Building exits, room capacities, floor loading, exposure to microwave, and other harmful radiation,
- X Emergency telephone numbers,
- X OSHA 300A log (Posted from Feb 1 thru April 30),
- X Operating permits.

## **2-ABRASIVE BLASTING**

**Applicable OSHA Standards: 29 CFR 1910.94**

### **PURPOSE**

To establish procedures outlining the safety requirements for abrasive blasting to protect our employees.

### **SCOPE**

This procedure applies to all employees and subcontractors working within our controlled worksites. This Abrasive Blasting Procedure covers the minimum requirements to perform abrasive blasting.

### **INTRODUCTION**

Abrasive blasting is primarily used for surface preparation of metal surfaces to prepare them to accept a coating or lining. This procedure covers the safety requirements pertaining to mechanical precautions, personal protective equipment, housekeeping and sanitation, administrative dust control methods, and respiratory protection.

### **PROGRAM**

#### **MECHANICAL PRECAUTIONS**

- Machines and hoses should be inspected frequently and all parts showing excessive wear should be repaired or replaced.
- Nozzles should be externally attached to the hose by a fitting, which will prevent accidental disengagement.
- Lengths of hose should be joined by external metallic connectors. The connectors shall have pin-clips to prevent dis-engagement. Anti-whip arresters may be used between each connector.
- All Bull Hoses, from the compressor to the abrasive blast pot, shall have pin-clips and anti-whip arresters on each end.
- A remote control "deadman" valve must be provided. Electric deadmen shall be low voltage (12 volt DC) and have continuous wire or plug connections provided.

## **PERSONAL PROTECTIVE EQUIPMENT**

- Operators should be equipped with heavy canvas or leather gloves and aprons. Safety shoes should also be worn.
- Eye, face, hearing and respiratory protection shall be supplied to all personnel working.
- Precautions shall be taken to protect personnel in the blasting zone including the blasting operator from excessive noise exposure by supplying and requiring the use of earplugs or muffs.
- Vortex tubes which cool the air supply to the blasters hood should be considered depending on season and exposure of the employee to heat sources.

## **HOUSEKEEPING AND SANITATION**

- Good housekeeping practices should be followed in abrasive blasting operation to prevent slips, trips, and falls.
- A facility should be available for blasters to wash before eating and after blasting operations.

## **ADMINISTRATIVE DUST CONTROL METHODS**

- Isolation
  1. As most of the blasting as possible should be done in a specified location. A blasting zone (where dust is visible) should be established and marked off with signs around the perimeter of the area such as:

### **CAUTION**

Abrasive Blasting Area, Eye and Ear Protection and Respirators  
Must Be Worn In This Area.

2. Blasting should not be done when wind direction and velocity carry visible dust to people unprotected by proper respirators.
- Enclosure
    1. Blasting of small objects should be done in an enclosure which is designed to specifically reduce the dust hazards.

## RESPIRATORY PROTECTION

- Apron and dust collar, properly fitted and properly worn, shall be used by all persons blasting. In addition to the hood, blasters should also wear a disposable respirator when working in a high dust concentration. This would provide protection when the blasting operation has ceased and the blaster is removing the air supplied equipment or when merely taking a break.
- Abrasive-blasting hoods shall be worn by all abrasive-blasting operators -
  1. At all times,
  2. When working inside of blast-clean rooms,
  3. When using silica sand in manual blasting operations where the nozzle and blast are not physically separated from the operator in an exhaust ventilated enclosure,
- Where concentrations of toxic dust dispersed by the abrasive blasting may exceed the limits set in paragraph 1919.93 OSHA and the nozzle and blast are not physically separated from the operator in an exhaust-ventilated enclosure.
- Particulate filter respirators, commonly referred to as dust-filter respirators, properly fitted, may be used for short, intermittent, or occasional dust exposure such as clean-up, dumping of dust collectors, or unloading shipments of sand at a receiving point, when it is not feasible to control the dust by enclosure, exhaust ventilation, or other means. Respirators used shall be certified for protection against the specific type of dust.
  1. Dust-filter respirators may be used to protect the operator of outside abrasive-blasting operations where non-silica abrasives are used on materials having low toxicities.
  2. Dust-filter respirators shall not be used for continuous protection where silica sand is used as the blasting abrasive, or toxic materials are blasted.
- Maintenance
  1. Respirators should be cleaned daily. This can be accomplished by use of vacuum or water.
  2. Respirators should be kept in maximum operating condition at all times.

3. After their daily cleaning, respirators and hoods should be kept and hung in an upright position to prevent sand spilling inside.
- Air Supply and Air Compressors for Abrasive Blasting Hoods
    1. Air supply shall be free of harmful quantities of dust, mists or noxious gases, and shall meet Grade D requirements.
    2. The air from the regular compressed air line of a compressor unit may be used for the abrasive-blasting hood if:
      - a. A trap and carbon filter is installed that will remove oil, water particulate and odor and is regularly maintained. A record of the maintenance of these filters should be kept.
      - b. A pressure reducing diaphragm or valve is installed to reduce the pressure to requirements of the particular type of abrasive blasting respirator.
      - c. An automatic control is provided to either sound an alarm or shut down the compressor in case of overheating.
      - d. Periodic checks should be made to ensure low amounts of carbon monoxide, >10 ppm, are not being emitted to the worker.

## **3-CONFINED SPACE ENTRY PROGRAM**

**Applicable OSHA Standard: 29 CFR 1926.1203, 1926.21(b)(6)**

### **PURPOSE**

This program contains requirements for practices and procedures to protect employees in The construction / general industry from the hazards of entry into permit-required confined spaces.

### **SCOPE**

This program applies to all employees and subcontractors working within company controlled worksites.

### **DEFINITIONS**

"Attendant" means an individual stationed outside a permit-required confined space who monitors the authorized entrants and who performs all attendant's duties assigned in the employer's permit-required confined space program.

"Authorized entrant" means an employee who is authorized by the company to enter a permit space.

"Confined space" means a space that:

- (1) Is large enough and so configured that an employee can bodily enter and perform assigned work; and
- (2) Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry.); and
- (3) Is not designed for continuous employee occupancy.
- (4) Or has inadequate ventilation.

"Entry" means the action by which a person passes through an opening into a permit-required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space.

"Entry supervisor" means the person (such as the foreman, or crew chief) responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as required by this company.

"Isolation" means the process by which a permit space is removed from service and completely protected against the release of energy and material into the space



by such means as: blanking or blinding; misaligning or removing sections of lines, pipes, or ducts; a double block and bleed system; lockout or tagout of all sources of energy; or blocking or disconnecting all mechanical linkages.

## GENERAL

The Project Superintendent shall evaluate the workplace to determine if any spaces are permit-required confined spaces. The client may provide a list when working at remote locations (see the Pre Job Checklist).

If the workplace contains permit spaces, the Project Superintendent in conjunction with the Site Safety Supervisor/Representative and the client, shall inform exposed employees, by posting danger signs or by any other equally effective means, of the existence and location of and the danger posed by the permit spaces.

**NOTE:** A sign reading DANGER -- PERMIT-REQUIRED CONFINED SPACE, DO NOT ENTER or using other similar language would satisfy the requirement for a sign.

If the Project Superintendent decides that company employees will not enter permit spaces, the Project Superintendent in conjunction with the Site Safety Supervisor/Representative, shall take effective measures to prevent its employees from entering the permit spaces.

If the Project Superintendent decides that company employees will enter permit spaces, the Project Superintendent in conjunction with the Site Safety Supervisor/Representative, shall develop and implement a site specific written permit space program that complies with this company and the Client's confined space entry procedures. The written program shall be available for inspection by employees.

## SITE SPECIFIC WRITTEN PROGRAM

Before entry into any confined space at any company controlled worksite, a site specific written program must be developed.

Signage must be posted at the entrance to the confined space reading:

"DANGER-PERMIT-REQUIRED CONFINED SPACE, DO NOT ENTER"

The Project Superintendent in conjunction with the Site Safety Supervisor/Representative will develop the site specific written program. The written program must be approved by the Safety Manager-Corporate.

The site specific written program must comply with OSHA 29 CFR 1926.1203 and contain the following elements:

- Measures necessary to prevent unauthorized entry;
- Methods used to identify and evaluate the hazards of permit spaces before employees enter them;
- Specify acceptable entry conditions;
- Methods used in isolating the permit space;
- Purging, inerting, flushing, or ventilating the permit space as necessary to eliminate or control atmospheric hazards;
- Providing pedestrian, vehicle, or other barriers as necessary to protect entrants from external hazards;
- Methods used to verify that conditions in the permit space are acceptable for entry throughout the duration of an authorized entry.
- Identify testing and monitoring equipment needed to comply with this company program.
- Identification of, authorized entrants, attendants and entry supervisors.
- Ventilating equipment needed to obtain acceptable entry conditions;
- Communications equipment necessary.
- Personal protective equipment insofar as feasible engineering and work practice controls do not adequately protect employees;
- Lighting equipment needed to enable employees to see well enough to work safely and to exit the space quickly in an emergency;
- Equipment, such as ladders, needed for safe ingress and egress by authorized entrants;
- Rescue and emergency services provided.
- Training provided to entry supervisors, authorized entrants and attendants.

## ENTRY PROCEDURE GUIDELINES

The following guidelines are provided to assist the Project Superintendent and the Site Safety Supervisor/Representative in preparing the site specific written program.

Any conditions making it unsafe to remove an entrance cover shall be eliminated before the cover is removed.

Lock out /Tag out procedures must be followed during a permit-required confined space entry.

All entrants must wear a safety harness with retrieval rope attached to the d-ring on the back of the harness.

**Note:** More often, it is the responsibility of the client to prepare a confined space for entry. Procedures must be developed to ensure that information concerning the preparation of confined spaces by the client is communicated to company personnel.

When entrance covers are removed, the opening shall be promptly guarded by a railing, temporary cover, or other temporary barrier that will prevent an accidental fall through

the opening and that will protect each employee working in the space from foreign objects entering the space.

Before an employee enters the space, the internal atmosphere shall be tested, with a calibrated direct-reading instrument, for the following conditions in the order given:

- {1} Oxygen content,
- {2} Flammable gases and vapors, and
- {3} Potential toxic air contaminants.

Individuals must not enter a confined space that is immediately hazardous to life or health. Initial testing to determine potential hazards that require entry must have an approved and documented Standard Operating Procedure with a two-level approval one of which must be the Project Superintendent, the other is the Safety Manager-Corporate.

There may be no hazardous atmosphere within the space whenever any employee is inside the space.

An employee may not enter the space until the forced air ventilation has eliminated any hazardous atmosphere. The forced air ventilation shall be so directed as to ventilate the immediate areas where an employee is or will be present within the space and shall continue until all employees have left the space. The air supply for the forced air ventilation shall be from a clean source and may not increase the hazards in the space.

The atmosphere within the space shall be continually tested to ensure that the continuous forced air ventilation is preventing the accumulation of a hazardous atmosphere and providing sufficient oxygen to the worker.

If a hazardous atmosphere is detected during entry, each employee shall leave the space immediately. The space shall be evaluated to determine how the hazardous atmosphere developed and measures shall be implemented to protect employees from the hazardous atmosphere before any subsequent entry takes place.

The entry supervisor shall verify that the space is safe for entry and that the pre-entry measures required by this company program have been taken, through a written certification that contains the date, the location of the space, and the signature of the person providing the certification. The certification shall be made before entry and shall be made available to each employee entering the space. This can be accomplished by means of an entry permit provided by the client.

The Project Superintendent shall designate the persons who are to have active roles (as, for example, authorized entrants, attendants, entry supervisors, or persons who test or monitor the atmosphere in a permit space) in entry operations, identify the duties of each such employee, and provide each such employee with the training required by this company program.

This company shall provide at least one attendant outside the permit space into which entry is authorized for the duration of entry operations.

The Project Superintendent in conjunction with the Site Safety Supervisor/Representative and the client shall develop and implement procedures for summoning rescue and emergency services, for rescuing entrants from permit spaces, for providing necessary emergency services to rescued employees, and for preventing unauthorized personnel from attempting a rescue. Emergency equipment must be inspected prior to any entrance into the confined space.

If an entrant is in need of rescue, the attendant's sole responsibility is to sound the alarm to evacuate any other entrants and summon emergency personnel. Under no circumstance should an attendant enter the confined space himself.

Before entry begins, the entry supervisor identified on the permit shall sign the entry permit to authorize entry.

The completed permit shall be made available at the time of entry to all authorized entrants, by posting it at the entry portal or by any other equally effective means, so that the entrants can confirm that pre-entry preparations have been completed.

All entrants must be signed in and out by the attendant every time they enter or exit the confined space.

The duration of the permit may not exceed the time required to complete the assigned task or job identified on the permit.

The entry supervisor shall terminate entry and cancel the entry permit when:

- The entry operations covered by the entry permit have been completed; or
- A condition that is not allowed under the entry permit arises in or near the permit space.
- Plant emergency system is activated

When the company arranges to have employees of another employer (contractor) perform work that involves permit space entry, the company shall:

- Inform the contractor that the workplace contains permit spaces and that permit space entry is allowed only through compliance with a permit space program meeting the requirements of this company program;
- Apprise the contractor of the elements, including the hazards identified and the company's experience with the space, that makes the space in question a permit space;

- Apprise the contractor of any precautions or procedures that the company has implemented for the protection of employees in or near permit spaces where contractor personnel will be working;
- Coordinate entry operations with the contractor, when both company personnel and contractor personnel will be working in or near permit spaces.
- Debrief the contractor at the conclusion of the entry operations regarding the permit space program followed and regarding any hazards confronted or created in permit spaces during entry operations.

## TRAINING REQUIREMENTS

The Project Superintendent shall ensure that training is provided so that all employees whose work is regulated by this company program acquire the understanding, knowledge, and skills necessary for the safe performance of the duties assigned under this section.

Training shall be provided to each affected employee:

- Before the employee is first assigned duties under this company program;
- Before there is a change in assigned duties;
- Whenever there is a change in permit space operations that presents a hazard about which an employee has not previously been trained;
- Whenever the Project Superintendent has reason to believe either that there are deviations from the permit space entry procedures required by this company program or that there are inadequacies in the employee's knowledge or use of these procedures.

The training shall establish employee proficiency in the duties required by this company program and shall introduce new or revised procedures, as necessary, for compliance with this section.

The Project Superintendent shall certify that the training required by this company program has been accomplished. The certification shall contain each employee's name, the signatures or initials of the trainers, and the dates of training. The certification shall be available for inspection by employees.

The training shall include the following:

1. Duties of authorized entrants:
  - a) Know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure;
  - b) Properly use equipment as required by the permit.

- c) Communication method used with the attendant as necessary to enable the attendant to monitor entrant status and to enable the attendant to alert entrants of the need to evacuate the space.
- d) Alert the attendant whenever the entrant recognizes any warning sign or symptom of exposure to a dangerous situation, or the entrant detects a prohibited condition;
- e) Exit from the permit space as quickly as possible whenever an order to evacuate is given by the attendant or the entry supervisor, the entrant recognizes any warning sign or symptom of exposure to a dangerous situation, the entrant detects a prohibited condition, or an evacuation alarm is activated.

2. Duties of attendants:

- a) Knows the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure;
- b) Is aware of possible behavioral effects of hazard exposure in authorized entrants;
- c) Continuously maintains an accurate count of authorized entrants in the permit space and ensures that the means used to identify authorized entrants who is in the permit space is accurate;
- d) Remains outside the permit space during entry operations until relieved by another attendant;
- e) Communicates with authorized entrants as necessary to monitor entrant status and to alert entrants of the need to evacuate the space.
- f) Monitors activities inside and outside the space to determine if it is safe for entrants to remain in the space and orders the authorized entrants to evacuate the permit space immediately under any of the following conditions;
  - If the attendant detects a prohibited condition;
  - If the attendant detects the behavioral effects of hazard exposure in an authorized entrant;
  - If the attendant detects a situation outside the space that could endanger the authorized entrants; or
  - If the attendant cannot effectively and safely perform all the duties required under this company program.
- g) Summon rescue and other emergency services as soon as the attendant determines that authorized entrants may need assistance to escape from permit space hazards;
- h) Takes the following actions when unauthorized persons approach or enter a permit space while entry is underway:
  - Warn the unauthorized persons that they must stay away from the permit space;
  - Advise the unauthorized persons that they must exit immediately if they have entered the permit space; and
  - Inform the authorized entrants and the entry supervisor if unauthorized persons have entered the permit space

- i) Performs non-entry rescues as specified by the site specific written program rescue procedure; and
- j) Performs no duties that might interfere with the attendant's primary duty to monitor and protect the authorized entrants.

3. Duties of entry supervisors:

- a) Knows the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure;
- b) Verifies, by checking that the appropriate entries have been made on the permit, that all tests specified by the permit have been conducted and that all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry to begin;
- c) Terminates the entry and cancels the permit as required.
- d) Verifies that rescue services are available and that the means for summoning them are operable;
- e) Removes unauthorized individuals who enter or who attempt to enter the permit space during entry operations; and
- f) Determines, whenever responsibility for a permit space entry operation is transferred and at intervals dictated by the hazards and operations performed within the space that entry operations remain consistent with terms of the entry permit and that acceptable entry conditions are maintained.
- g) Follow the chain of notification of the Host and Controlling contractor both when instituting the program and when reenergizing.

## WRITTEN PROGRAM REVIEW

The Safety Director will review the permit space program, using the canceled permits retained within 1 year after each entry and revise the program as necessary, to ensure that employees participating in entry operations are protected from permit space hazards.



## **4-EXCAVATION & TRENCHING SAFETY PROGRAM**

**Applicable OSHA Standards: 29 CFR 1926.650**

### **PURPOSE**

The purpose of this policy is to comply with the OSHA standard guidelines for the protection of employees working in and around excavations and trenches.

### **SCOPE**

This program applies to all of our controlled worksites where one of our, or a subcontract employee may be occupationally exposed to excavations and trenches.

Compliance is mandatory to ensure employee protection when working in or around excavations. The programs in this manual on confined space, hazard communication, lockout/tagout, respiratory protection, and any other safety programs or procedures deemed essential for employee protection, are to be used in conjunction with this program.

### **RESPONSIBILITIES**

It is the responsibility of each superintendent and supervisor to implement and maintain the procedures and steps set forth in this program. Each employee involved with excavation and trenching work is responsible to comply with all applicable safety procedures and requirements of this program.

### **DEFINITIONS**

**BENCHING** - A method of protecting employees from cave-ins by excavating the sides of an excavation to form one or a series of horizontal levels or steps, usually with vertical or near vertical surfaces between levels.

**CAVE-IN** - The separation of a mass of soil or rock material from the side of an excavation, or the loss of soil from under a trench shield or support system, and its sudden movement into the excavation, either by failing or sliding, in sufficient quantity so that it could entrap, bury, or otherwise injure and immobilize a person.

**COMPETENT PERSON** - One who is capable of identifying existing and predictable hazards in the surroundings or working conditions, which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.



**DURATION OF EXPOSURE** - The longer an excavation is open, the longer the other factors have to work on causing it to collapse.

**EXCAVATION** - Any man-made cut, trench, or depression in an earth surface, formed by earth removal.

**HAZARDOUS ATMOSPHERE** - An atmosphere which by reason of being explosive, flammable, poisonous, corrosive, oxidizing, irritating, oxygen deficient, toxic, or otherwise harmful, may cause death, illness, or injury.

**PROTECTIVE SYSTEM** - A method of protecting employees from cave-ins, from material that could fall or roll from an excavation, or from the collapse of adjacent structures. Protective systems include support systems, sloping and benching systems, shield systems, and other systems that provide necessary protection.

**SHIELD** - A structure that is capable of withstanding the forces imposed on it by a cave-in and thereby protects employees within the structure. Shields can be permanent structures or can be designed to be portable and moved along as work progresses. Shields can be premanufactured or job-built in accordance with 1926.652(c)(3) or (c)(4). Shields are also referred to as "trench boxes" or "trench shields."

**SLOPING** - A method of protecting workers from cave-ins by excavating to form sides of an excavation that are inclined away from the excavation to prevent cave-ins. The angle of incline required to prevent a cave-in varies with differences such as soil type, length of exposure, and application of surcharge loads.

**SURCHARGE LOADS** - Generated by the weight of anything in proximity to the excavation, push starts for a cave-in (anything up top pushing down). Common surcharge loads:

- weight of spoil pile
- weight of nearby buildings, poles, pavement, or other structural objects.
- weight of material and equipment

**TRENCH** - A narrow excavation below the surface of the ground, less than 15 feet wide, with a depth no greater than the width.

**UNDERMINING** - Undermining can be caused by such things as leaking, leaching, caving or over-digging. Undermined walls can be very dangerous.

**VIBRATION** - A force present on construction sites and must be considered. The vibrations caused by backhoes, dump trucks, compactors and traffic on job sites can be substantial.

## GENERAL REQUIREMENTS

Before any work is performed and before any employees enter the excavation, a number of items must be checked and insured:

- Before any excavation, underground installations must be determined. This can be accomplished by either contacting the local utility companies or the local "one-call" center for the area. All underground utility locations must be documented on the proper forms. All overhead hazards (surface encumbrances) that create a hazard to employees must be removed or supported to eliminate the hazard.
- If the excavation is to be over 20 feet deep, it must be designed by a professional engineer who is registered in the state where work will be performed.
- Adequate protective systems will be utilized to protect employees. This can be accomplished through sloping, shoring, or shielding.
- The worksite must be analyzed in order to design adequate protection systems and prevent cave-ins. There must also be an excavation safety plan developed to protect employees.
- Workers must be supplied with and wear any personal protective equipment deemed necessary to assure their protection.
- All spoil piles will be stored a minimum of two (2) feet from the sides of the excavation. The spoil pile must not block the safe means of egress.
- If a trench or excavation is 4 feet or deeper, stairways, ramps, or ladders will be used as a safe means of access and egress. For trenches, the employee must not have to travel any more than 25 feet of lateral travel to reach the stairway, ramp, or ladder.
- No employee will work in an excavation where water is accumulating unless adequate measures are used to protect the employees.
- A competent person will inspect all excavations and trenches daily, prior to employee exposure or entry, and after any rainfall, soil change, or any other time needed during the shift. The competent person must take prompt measures to eliminate any and all hazards.
- Excavations and trenches 4 feet or deeper that have the potential for toxic substances or hazardous atmospheres will be tested at least daily. Documentation of test data will be maintained throughout the course of the project. If the atmosphere is inadequate, protective systems will be utilized.

- If work is in or around traffic, employees must be supplied with and wear orange reflective vests. Signs and barricades must be utilized to ensure the safety of employees, vehicular traffic, and pedestrians.

## **COMPETENT PERSON RESPONSIBILITIES**

The OSHA Standards require that the competent person must be capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees, and have authorization to take prompt corrective measures to eliminate them and, if necessary, to stop the work.

### **A competent person is required to:**

- Have a complete understanding of the applicable safety standards and any other data provided.
- Identify the proper locations of underground installations or utilities, and ensure that the proper utility companies have been contacted.
- Conduct and document soil classification tests and reclassify soil after any condition changes.
- Determine adequate protective systems (sloping, shoring, or shielding systems) for employee protection.
- Conduct and document all air monitoring for potential hazardous atmospheres.
- Conduct and document daily and periodic inspections of excavations and trenches.
- Approve design of structural ramps, if used.

## **EXCAVATION SAFETY PLAN**

An excavation safety plan is required in written form. This plan is to be developed to the level necessary to ensure complete compliance with the OSHA Excavation Safety Standard and state and local safety standards.

### **Excavation safety plan factors:**

- Utilization of the local one-call system
- Determination of locations of all underground utilities

- Consideration of confined space atmosphere potential
- Proper soil protection systems and personal protective equipment and clothing
- Determination of soil composition and classification
- Determination of surface and subsurface water
- Depth of excavation and length of time it will remain open
- Emergency rescue system/procedure
- Proper adherence to all other applicable OSHA Standards, this Excavation and Trenching Safety Program, and any other coinciding safety programs.

## **SOIL CLASSIFICATION AND IDENTIFICATION**

The OSHA Standards define soil classifications within the Simplified Soil Classification Systems, which consist of four categories: Stable Rock, Type A, Type B, and Type C. Stability is greatest in Stable Rock and decreases through Type A and B to Type C, which is the least stable. Appendix A of the Standard provides soil mechanics terms and types of field tests used to determine soil classifications.

### **Stable Rock is defined as:**

- Natural solid mineral matter that can be excavated with vertical sides and remain intact while exposed.

### **Type A soil is defined as:**

- Cohesive soils with an unconfined compressive strength of 1.5 tons per square foot (TSF) or greater.
- Cemented soils like caliche and hardpan are considered Type A.

### **Soil is NOT Type A if:**

- It is fissured.
- The soil is subject to vibration from heavy traffic, pile driving or similar effects.
- The soil has been previously disturbed.
- The material is subject to other factors that would require it to be classified as a less stable material.

- The exclusions for Type A most generally eliminate it from most construction situations.

**Type B soil is defined as:**

- Cohesive soil with an unconfined compressive strength greater than .5 TSF, but less than 1.5 TSF.
- Granular cohesionless soil including angular gravel, silt, silt loam, and sandy loam.
- The soil has been previously disturbed except that soil classified as Type C soil.
- Soil that meets the unconfined compressive strength requirements of Type A soil, but is fissured or subject to vibration.
- Dry rock that is unstable.

**Type C soil is defined as:**

- Cohesive soil with an unconfined compressive strength of .5 TSF or less.
- Granular soils including gravel, sand and loamy sand.
- Submerged soil or soil from which water is freely seeping.
- Submerged rock that is not stable.

**Soil Test & Identification**

The competent person will classify the soil type in accordance with the definitions in Appendix A on the basis of at least one visual and one manual analysis. These tests should be run on freshly excavated samples from the excavation and are designed to determine stability based on a number of criteria: the cohesiveness, the presence of fissures, the presence and amount of water, the unconfined compressive strength, the duration of exposure, undermining, and the presence of layering, prior excavation and vibration.

The cohesion tests are based on methods to determine the presence of clay. Clay, silt, and sand are size classifications, with clay being the smallest sized particles, silt intermediate and sand the largest. Clay minerals exhibit good cohesion and plasticity (can be molded). Sand exhibits no elasticity and virtually no cohesion unless surface wetting is present. The degree of cohesiveness and plasticity depend on the amounts of all three types and water.

When examining the soil, three questions must be asked: Is the sample granular or cohesive? Fissured or non-fissured? What is the unconfined compressive strength measured in TSF?

**Methods of testing soils:**

- Visual test: If the excavated soil is in clumps, it is cohesive. If it breaks up easily, not staying in clumps, it is granular.
- Wet manual test: Wet your fingers and work the soil between them. Clay is a slick paste when wet, meaning it is cohesive. If the clump falls apart in grains, it is granular.
- Dry strength test: Try to crumble the sample in your hands with your fingers. If it crumbles into grains, it is granular. Clay will not crumble into grains, only into smaller chunks.
- Pocket penetrometer test: This instrument is most accurate when soil is nearly saturated. This instrument will give unconfined compressive strength in tons per square foot. The spring-operated device uses a piston that is pushed into a coil up to a calibration groove. An indicator sleeve marks and retains the reading until it is read. The reading is calibrated in tons per square foot (TSF) or kilograms per cubic centimeter.
- Thumb penetration test: The competent person attempts to penetrate a fresh sample with thumb pressure. If the sample can be dented, but penetrated only with great effort, it is Type A. If it can be penetrated several inches and molded by light pressure, it is Type C. Type B can be penetrated with effort and molded.
- Shearvane: Measures the approximate shear strength of saturated cohesive soils. The blades of the vane are pressed into a flat section of undisturbed soil, and the knob is turned slowly until soil failure. The dial is read directly when using the standard vane. The results will be in tons per square foot or kilograms per cubic centimeter.

The competent person will perform several tests along the depth and length of the excavation to obtain consistent, supporting data. The soil is subject to change several times within the scope of an excavation and the moisture content will vary with weather and job conditions. The competent person must also determine the level of protection based on what conditions exist at the time of the test, and allow for changing conditions.

## EXCAVATION PROTECTION SYSTEMS

The three basic protective systems for excavations and trenches are sloping and benching systems, shoring, and shields.

The protective systems shall have the capacity to resist without failure all loads that are intended or could reasonably be expected to be applied to or transmitted to the system. Every employee in an excavation shall be protected from cave-ins by an adequate protective system.

Exceptions to using protective system:

- Excavations are made entirely in stable rock
- Excavations are less than 5 feet deep and declared safe by a competent person

### **Sloping and Benching Systems**

There are four options for sloping:

- Slope to the angle required by the Standard for Type C soil, which is the most unstable soil type.
- The table provided in Appendix B of the Standard may be used to determine the maximum allowable angle (after determining the soil type).
- Tabulated data prepared by a registered professional engineer can be utilized.
- A registered professional engineer can design a sloping plan for a specific job.

Sloping and benching systems for excavations five (5) to twenty (20) feet in depth must be constructed under the instruction of a designated competent person.

Sloping and benching systems for excavations greater than twenty (20) feet must be designed and stamped by a registered professional engineer.

Sloping and benching specifications can be found in Appendix B of the OSHA Standard.

### **Shoring Systems**

Shoring is another protective system or support system. Shoring utilizes a framework of vertical members (uprights), horizontal members (whales), and cross braces to support the sides of the excavation to prevent a cave-in. Metal hydraulic, mechanical or timber shoring are common examples.

Different examples of shoring are found in the OSHA Standard under these appendices:

**Appendix C** - Timber Shoring for Trenches

**Appendix D** - Aluminum Hydraulic Shoring for Trenches

**Appendix E** - Alternatives to Timber Shoring

### **Shield Systems (Trench Boxes)**

Shielding is the third method of providing a safe workplace. Unlike sloping and shoring, shielding does not prevent a cave-in. Shields are designed to withstand the soil forces caused by a cave-in and protect the employees inside the structure. Most shields consist of two flat, parallel metal walls that are held apart by metal cross braces. Shielding design and construction is not covered in the OSHA Standards. Shields must be certified in design by a registered professional engineer and must have either a registration plate on the shield or registration papers from the manufacturer on file at the jobsite office.

**Any Repairs Or Modifications Must Be Approved By The Manufacturer.**

### **SAFETY PRECAUTIONS FOR SHIELD SYSTEMS**

- Shields must not have any lateral movement when installed.
- Employees will be protected from cave-ins when entering and exiting the shield (examples - ladder within the shield or a properly sloped ramp at the end).
- Employees are not allowed in the shield during installation, removal, or during any vertical movement.
- Shields can be 2 ft. above the bottom of an excavation if they are designed to resist loads at the full depth and if there are no indications of caving under or behind the shield.
- The shield must extend at least 18 inches above the point where proper sloping begins (the height of the shield must be greater than the depth of the excavation).
- The open end of the shield must be protected from the exposed excavation wall. The wall must be sloped, shored, or shielded. Engineer designed end plates can be mounted on the ends of the shield to prevent cave-ins.

## **PERSONAL PROTECTIVE EQUIPMENT**

It is Company policy to wear a hard hat, safety glasses, and work boots on the jobsite. Because of the potential hazards involved with excavations, other personal protective equipment may be necessary (examples - goggles, gloves, safety harness and lifeline, and respiratory equipment).



## INSPECTIONS

Daily inspection of excavations, the adjacent areas and protective systems shall be made by the competent person for evidence of a situation that could result in a cave-in, indications of failure of protective systems, hazardous atmospheres or other hazardous conditions.

- All inspections shall be conducted by the competent person prior to the start of work and as needed throughout the shift.
- Inspections will be made after every rainstorm or any other increasing hazard.
- All documented inspections will be kept on file in the jobsite safety files
- A copy of the Daily Excavation Checklist is located at the end of this program.

## TRAINING

The competent person(s) must be trained in accordance with the OSHA Excavation Standard, and all other programs that may apply (examples Hazard Communication, Confined Space, and Respiratory Protection), and must demonstrate a thorough understanding and knowledge of the programs and the hazards associated.

All other employees working in and around the excavation must be trained in the recognition of hazards associated with trenching and excavating.

## DAILY EXCAVATION CHECKLIST

<b>Client</b>		<b>Date</b>	
<b>Project Name</b>		<b>Approx. Temp.</b>	
<b>Project Location</b>		<b>Approx. Wind Dir.</b>	
<b>Job Number</b>		<b>Safety Rep</b>	
<b>Excavation Size (Length x Width x Depth)</b>		<b>Soil Classification</b>	
<b>Protective System Used</b>			
<b>Activities In Excavation</b>			
<b>Competent Person</b>			

Excavation > 4 feet deep?  Yes  No

If YES, complete a Confined Space Permit BEFORE any person enters the excavation.

**NOTE: Trenches over 4 feet in depth are considered excavations.**

**Any item below marked NO must be corrected or controlled BEFORE any person enters the excavation.**

YE S	NO	N/ A	POTENTIAL HAZARD
<b>GENERAL</b>			
			Employees protected from cave-ins & loose rock/soil that could roll into the excavation?
			Spoils, materials & equipment set back at least 4 feet from the edge of the excavation?
			Engineering designs for shoring &/or manufacturer's design specifications for trench box on site?
			Adequate signs posted and barricades provided?
			<b>Training (toolbox meeting) conducted w/ employees prior to entering excavation?</b>
<b>UTILITIES</b>			
			Utility company contacted & given 24 hours notice &/or utilities already located & marked?
			Overhead lines located, noted and reviewed with the operator?
			Utility locations reviewed with the operator & precautions taken to protect against contact?
			Utilities crossing the excavation supported, and protected from falling materials?
			<b>Underground installations protected, supported or removed when excavation is open?</b>

<b>WET CONDITIONS</b>			
			Precautions taken to protect employees from water accumulation (continuous dewatering)?
			Surface water or runoff diverted / controlled to prevent accumulation in the excavation?
			Inspection made after every rainstorm or other hazard increasing occurrence?
<b>HAZARDOUS ATMOSPHERES</b>			
			Air in the excavation tested for oxygen deficiency, combustibles, other contaminants?
			<b>Atmospheric hazards present?</b>
			Ventilation used in hazardous atmospheres?
			Emergency equipment available where hazardous atmospheres could or do exist?
			Safety harness and lifeline used?
			<b>Supplied air necessary (if yes, contact safety department)?</b>
<b>ENTRY &amp; EXIT</b>			
			Exit (i.e. ladder, sloped wall) no further than 25 feet from ANY employee?
			Ladders secured and extend 3 feet above the edge of the trench?
			Wood ramps constructed of uniform material thickness and cleated together at the bottom?
			<b>Employees protected from cave-ins when entering or exiting the excavation?</b>

***KEEP 1 COPY OF EACH DAILY EXCAVATION CHECKLIST ON SITE FOR THE PROJECT DURATION***

## 5-FALL PROTECTION

### Applicable OSHA Standards: 29 CFR 1926 Subpart M

### PURPOSE

The purpose of this policy is to comply with the OSHA standard to protect workers against falls from elevated work areas.

### SCOPE

This program applies to all of our controlled worksites where one of our, or a subcontract employee may be occupationally exposed to fall hazards.

### HAZARD IDENTIFICATION

As a general rule, any time a worker is at a height greater than 6 feet, a fall hazard exists. Where a fall hazard exists, there are two acceptable options; (1) eliminate the hazard, or (2) provide protection against it. Ideally, it is best to totally eliminate the hazard. Since that is often not possible, our Company requires that fall protection be required when an employee has the potential of falling a distance of 6 feet or greater.

### FALL SYSTEM SPECIFICATION

Safety harness lanyards shall be a minimum of 1/2-inch nylon, or equivalent, with the maximum length to provide for a fall of no greater than 6 feet, with a nominal breaking strength of 5,000 pounds. A Body harnesses consist of components made of nylon straps such as but not limited to: chest, shoulder, thigh, and waist strap designed with a tensile strength of 5000 pounds. The harness shall be designed to allow for suspension by a fall, and prevent the employee from tilting or falling out of the harness while suspended. All safety harness and lanyard hardware shall be drop forged or pressed steel, cadmium plated in accordance with type1, Class B plating specified in Federal Specification QQ-P-416. Surface shall be smooth and free of sharp edges. Lanyard hardware except for rivets shall be capable of withstanding a tensile loading of 5,000 pounds without cracking, breaking, or taking a permanent deformation.

### RULES AND GUIDELINES

In compliance with OSHA's Fall Protection Requirements, this company requires that all employees conform to 100% fall protection when working at a elevation of 6 feet or greater by means of guardrails, safety nets or personal fall arrest systems. A full body harness with a shock absorbing double lanyard shall be used for 100% fall protection. ***Lanyards are not to be connected to each other by means of the snap hook.***

Training shall include proper use as well as proper fitting according to size. ***Maximum working load is 310 pounds, unless labeled otherwise.***

All equipment must be visually inspected before each use. Equipment must not be altered in any way. Repairs must be performed only by the manufacturer or authorized agent. ***This includes adding wire or other foreign material to any part of a harness or lanyard, alterations to the double locking snap-hook or tying knots in lanyards is also not permitted.***

Fall arrest systems are designed for personal fall protection. ***Never use fall protection equipment for purposes other than those for which it was designed. Fall protection equipment should never be used for tag lines, hoisting, securing, or towing.***

Do not use a mixture of various manufacturer's components ( i.e. Miller harness with a Rose lanyard). Manufacturers will not assure safe use or liability for such mixtures.

Point of attachment shall not be conduit, lines too small to carry the load, which may be imposed on the line, or hot lines, which may damage or alter its ability to support a worker. ***The point of attachment must be capable of supporting a minimum dead weight of 5,000 pounds per person attached***

Always check for obstructions below the work area to make sure potential fall path is clear. When ***utilizing shock-absorbing lanyards, the lanyards units may elongate as much as 3-1/2 ft. during the shock-absorption process.***

Environmental hazards should be considered when selecting fall protection equipment. Polyester should be used in certain chemical or acidic environment. Lifelines shall be secured above the point of operation to an anchorage point or structural member capable of supporting a minimum dead weight of 5,000 pounds.

## **TRAINING**

Training shall be provided for each employee who might be exposed to fall hazards. Training shall include the following: proper donning and sizing of body harnesses; application limits; proper anchoring and tie-off techniques; estimation of free fall distance, including determination of deceleration distance, and the total fall distance to prevent striking a lower level; methods of use; and inspection and storage of the system. Careless or improper use of the equipment can result in serious injury or death.

## **INSPECTION 1926.502 (d)(21)**

Personal fall arrest systems shall be inspected prior to each use for wear, damage and other deterioration, and defective components shall be removed from service. Monthly inspection shall be rendered by a competent person.

## **IMPLEMENTATION OF 100% FALL PROTECTION PROGRAM**

A. Purpose

- To provide guidelines for maximum protection for all personnel against falls from elevations when working or traveling at elevations six feet (6') or more above ground level.

B. Goal

- Achieve 100% fall protection for all personnel when working six feet (6') or more above ground level.

C. Responsibility

- Project management and front line supervision are responsible for vigorously supporting this program and for aggressive implementation and enforcement to ensure 100% compliance by all personnel.
- The S.H.E. Department shall have full authority to ensure 100% enforcement of the program. The S.H.E. Department's primary responsibility however will be to support crafts during program implementation and for monitoring the program for compliance and advising supervisors and management on program status.
- In the event, a fall occurs or some other serious incident (near miss), the Safety, Health, and Environmental Department will investigate the circumstances to determine the root cause and correct any deficiencies that is found.
- The Safety, Health, and Environmental Department will review the Fall Protection Program annually and correct any deficiencies that are found to improve the procedures.
- Supervisors must analyze all elevated tasks as to fall protection needs and to assure adequate fall protection systems are provided. After analyzing the tasks, supervisors shall instruct employees involved in the specifics of the fall protection to be used.
- Field Supervisor will be responsible for making sure that all access to areas where leading edges and other operations that is taking place are controlled (Barricades and Tags, Signs etc.) to restrict access.

D. Procedures

- All employees will be required to wear an approved full body harness and shock absorbing lanyards when six feet (6') or more above the ground.
  - All departments shall make maximum use of primary fall protection systems such as scaffolds, aerial lifts, personnel hoists, etc. These systems shall be equipped with complete working/walking surfaces free of floor

openings, with standard guardrail systems and a safe means of access/egress.

- Employees traveling or working in elevated areas six feet (6') or more above a lower level or adjacent to a leading edge where a fall exposure exists shall make use of secondary fall protection in securing their safety lanyard at all times to a structure, lifeline or approved fall arresting device capable of supporting 5000 pounds. Employees working from or traveling in power work platforms or personnel lifting/ hoisting devices shall also properly secure their safety lanyards as noted In procedures below.
- Fall protection devices such as lifelines, safety harnesses/lanyards, etc. shall be Inspected before each use and on a regular basis for damage and/or deterioration. Defective equipment shall be removed from service and destroyed and/or repaired.
- Fall protection devices subjected to shock loading imposed during fall arresting shall be removed from service and the S.H.E. Department notified.
- Fall protection devices and systems shall not be used for any other purpose other than employee safeguarding.

#### E. Fall Protection Devices

##### 1. Primary Fall Protection Systems

- a. These systems provide walking and working surfaces in elevated areas which are free from floor openings and are equipped with standard guard rail systems on all open sides and with closure apparatus for ladder openings or other points of access when required. These systems include but are not limited to: scaffolds, pencil boards, aerial lifts ( JLG, scissors lifts, etc.) and other approved personnel hoisting devices.
- b. Standard guard rail systems consist of a top rail of 2 x 4 lumber or equivalent material approximately forty-two inches (42") above the walking/working surface, a mid rail at approximately twenty-one inches (21") above said surface and a four inch (4") tall toe board mounted at the walking/working surface. Upright support post spacing must not exceed eight feet (8') and the entire system must be capable of supporting 200 pounds force outward with minimum deflection. These systems are used to guard open sides of floors, platforms and walkways in elevated areas.
- c. Floor openings/hole covers are used to close openings and holes in floors, platforms and walkways. These covers must be capable of supporting the maximum potential load they may be subjected to. The cover must completely cover the opening/hole and be secured against accidental displacement. These covers must be marked **HOLE COVER -DO NOT REMOVE"**.

## 2. Secondary Fall Protection Systems

### a. Safety Harness/Lanyard Systems

- 1) These systems must be worn and used as a backup to the primary fall protection system noted above and in the absence of primary systems.
- 2) Only safety harnesses/lanyard systems furnished by the company may be used. Personal safety harnesses/lanyard system may not be used for fall protection.
- 3) Lanyards must be of the shock absorbing type when used for fall protection.
- 4) The fall protection lanyard shall be attached to the D-ring located in the middle back of the safety harness.
- 5) D-rings located at the waist may only be used for positioning and with rail type ladder climbing devices.
- 6) Work positioning lanyards are to be attached to D-rings at the waist belt location and be supported by an appropriate work belt. Positioning lanyards need not be of shock absorbing type and must be used for fall protection. The positioning lanyard must always be backed up by a properly secured shock absorbing fall protection lanyard. ***Position harnesses/ lanyards shall not be used without written approval from the S.H.E. department.***

### b. Lifeline

- 1) Lifeline systems are points of attachment for fall protection lanyards and must be capable of supporting at least 5000 pounds per person. Lifelines may be mounted either vertically or horizontally and are generally intended to provide mobility to personnel working elevated areas.
- 2) Horizontal lifelines must be made of at least three-eighths inch (3/8") wire rope cable properly supported to withstand at least 5000 pounds impact. Horizontal lifelines should be positioned so as to provide points of attachment at waist level or higher to personnel utilizing them. Lifelines shall not be used for any purpose other than fall protection. **Horizontal lifelines shall not be used without written approval and inspection by the S.H.E. Department.**
- 3) Vertical lifelines are used for personal fall protection when vertical mobility is required and may be comprised of static lifelines made of synthetic fiber rope or cable which are equipped with approved sliding rope or cable grabs or they may consist of self retracting reel lanyard/lifelines which are attached directly to a safety harness.



- Static rope lifelines with rope grabs are required for personnel working from spiders/sky-climbers and two-point suspension scaffolds. These types of lifelines can also be used to provide fall protection where tie points are limited and vertical mobility is required.
- Sliding rope grabs approved for the size rope used are the only method for securing a safety lanyard to a vertical lifeline. Lanyards **shall not** be attached to vertical lifelines by means of knots or loops.
- Rope grabs shall be positioned on the lifeline at least above the shoulder of the user. Lanyards that are utilized with a rope grab must meet manufactures specifications. **(No employee will utilize any lanyard longer than 3' or 4' depending on the type of rope grab when using a vertical lifeline system.**
- Tie-off using a knot in a rope (at any location) can reduce the lifeline strength by 50 percent or more. Tie-off of a rope lifeline around an "H" or "I" beam or similar support can reduce its strength as much as 70 percent due to the cutting action of the beam edges. Slings used should be made of a webbing sling or wire core lifeline around the beam; or the lanyard or lifeline should be protected from the edge; or free fall distance should be greatly minimized.
- Tie-off where the line passes over or around rough or sharp surfaces reduces strength drastically. Such a tie-off should be avoided or an alternative tie-off rigging should be used. Such alternatives may include use of a snap-hook d-ring connection, wire rope tie-off, an effective padding of the surfaces, or an abrasion-resistance strap around or over the problem surface.
- Employees must have a separate lifeline when the lifeline is vertical. The lifeline must remain in a vertical position and remain within six feet (6') of being perpendicular to the point of attachment to eliminate any swing in the event of a fall.
- A minimum of twelve feet (12') of lifeline should be allowed below the securing point of a rope grab type deceleration device, and the end terminated to prevent the device from sliding off the lifeline. Alternatively, the lifeline should extend to the ground or the next level below. **NOTE: Softeners should be used where lifelines contact sharp edges such as roof tank edges, and beam edges.**

- c. Knots --Knots for point of attachment have different efficiencies.
- 1) The **Clove Hitch**- Two half hitches, for securing a rope at a right angle to a post or pipe. To prevent this knot from coming loose, tie a half hitch over the clove hitch with the loose end of the rope. 75% efficient.
  - 2) The **Bowline**- A non-slipping eye knot that will not jam and is easily untied. 60% efficient.
  - 3) The **Timber Hitch**- for fastening a rope to a post at a right angle that will not slip under load but is easily untied.65% efficient.
- d. Rope Grab
- 1) Restraint: In this application, the rope grab is used in combination with a lifeline, lanyard (or connector) and the body harness to restrain or tether the user from reaching a hazard.
  - 2) The capacity for this equipment is designed for use by persons with a combined weight (person, clothing, tools, etc.) of no more than 310 pounds. **NOTE: No more than one person may be attached to a single lifeline.**
  - 3) The rope grab must be rigged such that there is no possible vertical free fall. Personal fall arrest system must be rigged in such a way to limit the free fall to a maximum of six feet (6') (reference ANSI Z359.1-1992) or five feet (5') per ANSI A10.14-1991.
  - 4) The rope grab may not be used with a lanyard connecting subsystem exceeding three feet (3' or 4').
  - 5) Before each use, visually inspect the rope grab. The rope grab must be inspected by a competent person other than the user at least annually.
  - 6) Avoid working where lifeline may cross or tangle with that of another worker.
  - 7) Do not allow the lanyard to pass under arms or between legs.
  - 8) Do not clamp, tie or otherwise prevent the rope grab lanyard connection lever from moving into locked" position.

- 9) In the event that a rope grab has been subjected to a fall arrest or impact force, it must be immediately removed from service and destroyed.
- e. Rope Grab Inspection
- 1) Inspect action of locking roller, it should be free to travel the full length of the guide slots.
  - 2) Inspect the lanyard connection lever for freedom of motion, there should be no binding or sticking. Inspect for wear on the nose of the lever (where it contacts the roller), the lever must push the roller into the rope.
  - 3) Inspect lever spring, it should be in its correct place and free from damage.
  - 4) Inspect detent pin, the top button should spring back up when pushed down. The pin should easily slide through the rope grab body and hinge.
  - 5) The rope grab hinge must pivot freely and close completely.
  - 6) Check that the gravity lock in the hinge works freely, when the rope grab is held upside down, the gravity lock should drop down and prevent the hinge from fully closing.
  - 7) Inspect the hinge for signs of rope wear, there should be no dips or depressions worn into the rope channel.
- f. Rope Grab attachment
- 1) Be sure the rope grab is in the "UP" position. An "UP" mark has been stamped into the rope grab. The "UP" end of the rope grab must be orientated towards the anchorage when installed onto the lifeline.  
  
**NOTE: *The rope grab hinge incorporates a stop, which will prevent the hinge from closing if the rope grab is not held upright and vertical.***
  - 2) Remove the detent pin and open the hinged rope retainer. Raise lanyard lever to full "UP" position. Insert lifeline into rope grab.
  - 3) Close hinged rope retainer and replace detent pin, make sure pin is locked (ball lock on end of pin). Attach the lanyard.

- 4) Test operation of rope grab by pulling down on the lanyard. You must not be able to pull the rope grab down the lifeline once the locking roller has fully engaged the lifeline.

g. Maintenance

- 1) An excessive buildup of dirt , paint, etc. may prevent the rope grab or lifeline from working properly, and in severe cases degrade the device or rope to a point where it has weakened and should be removed from service.
- 2) Do not lubricate the rope grab roller. The rope grab hinge, hinge pin and lanyard connection lever may be lubricated using a light oil or arousal such as WD-40. Clean off excess lubricant before using. Do not allow lubricant to contact lifeline.
- 3) ***Do not attempt to disassemble the rope grab.***
- 4) Store the rope grab and lifeline in a dry, clean environment out of direct sunlight. Avoid where chemical vapors may exist.

Thoroughly inspect the rope grab and lifeline after any period of extended storage.

h. Retractable Reel Lifeline

- 1) Retractable lifeline devices shall be attached to support capable of withstanding 5000 pounds impact loading.
- 2) Retractable lifeline devices shall be secured by means of shackles and wire rope chokers or synthetic slings. **NOTE: *Synthetic rope or natural fiber shall not be used to secure these devices.***
- 3) Each retractable lifeline device shall be equipped with a rope tag line for extending the device to elevations below the point of attachment.
- 4) The point of attachment of the retractable lifeline's double locking hook shall be directly to the d-ring of the employees safety harness that is located at the center of his/her back.

i. Temporary Work Platforms/Walkways (Scaffolds and Pencil Boards)

- 1) Every effort shall be made to ensure all temporary platforms/walkways are equipped with solid decks free of openings and with standard guard rail systems.
- 2) Employees working from temporary platforms shall have their safety lanyards secured to a lifeline or structure capable of supporting 5000 pounds impact loading, whenever possible.
- 3) Every temporary work platform or walkway twelve feet (12') or higher must be provided with a safe means of access/egress.

### 3. Personnel Lifts/Hoisting Devices

#### a. Aerial Lifts (JLG< Scissor, Snorkel, etc.)

- 1) Employees riding or working from these lifts must secure their safety lanyard to the designated anchor point (per manufacture) inside the lift basket at all times.
- 2) Lifts shall be placed on solid level surfaces to eliminate possibility of overturning. Any employee utilizing any type of lift devices will perform a pre-use inspection before the start of any operation.

#### b. Spiders and Sky Climbers

Employees riding in or working from these hoisting devices shall each be provided an independent lifeline and rope grab to which their lanyard shall be secured at all times when aloft.

#### c. Ladders

- 1) Permanent caged ladders may be ascended or descended without additional fall protection. Any ladder that exceeds 25' will have a break, fall arrest system, or a cage system in place before any employee utilize it.
- 2) Temporary construction ladders shall extend at least thirty-six inches (36") above their uppermost landing and be secured against displacement by means of a rope at the top section of the ladder.
- 3) Employees climbing ladders, which are not tied off at the top, must have another person hold the ladder at the bottom until it can be secured. This includes the last trip down after untying the ladder at the top.

- 4) When ascending or descending ladders, employees shall use both hands. Materials or tools shall not be carried in hands while using ladders.
- 5) Upon climbing to the elevation where the task is to be performed the person on the ladder shall properly secure their safety lanyard before doing anything else. Next, the ladder must be tied off before work can begin. When the task is complete the process is reversed with the safety lanyard being the last protective device detached prior to descent.
- 6) Absolutely no objects, tools, or material are to be carried in hands while climbing or descending ladders.
- 7) All ladders will be inspected before each use and a recorded inspection monthly.
- 8) All recorded inspections will be recorded on a vinyl decal located on the inside of the side rail.

#### 4. Rigging/Material Handling

Offloading Float Trailers -- Such operations as offloading float trailers requires special consideration that pertain to unique circumstances and situations, a few techniques observations to follow:

- 1) Is the load stable where it will not shift during handling and cause a fall?
- 2) Be always aware of trailer deck edges, watch where you step.
- 3) Do not stand between any load hoisted and the hoisting device
- 4) Use tag lines to control loads while standing clear of them.
- 5) Use ladders to access and egress float trailers.

## **SUMMARY**

Our Company bears the responsibility to educate its employees on proper selection, use, inspection, and maintenance of fall protection. It is the responsibility of the employee to apply the training that he/she has received as a key component of their daily activities.

## **6-FIRE PROTECTION**

**Applicable OSHA Standards: 29 CFR 1926.24,.150-.155**

### **PURPOSE**

The purpose of this policy is to outline prevention and protective measures which should be taken to ensure protection of personnel, property, and the environment from a fire incident.

### **SCOPE**

This program applies to all of our controlled worksites where one of our, or a subcontract employee may be occupationally exposed to fire hazards.

### **FIRE PREVENTION**

- Electrical wiring and equipment for light, heat or power purposes, must be installed in accordance with the national electric code. The proper type and size of fuses shall be used at all times. All equipment and portable tools are to be grounded. Explosion proof fixtures are required in hazardous classified locations.
- Housekeeping - Remove trash daily from the work areas and from the work site. Use trash drums to reduce extra handling. Put rags in closed containers. Rags used for solvent cleaning should be kept in a closed metal container until properly disposed of.
- Compressed Gas Cylinder - Separate full cylinders from "empty" cylinders in storage. Also, separate oxygen cylinders from fuel cylinders by 20 feet, or by a fire resistant barrier. Tie cylinders in a vertical position. Keep oil and grease away from oxygen valves. Turn cylinders off when not in use. Protect cylinders from excess heat (sun, open flame, equipment exhausts, sparks, slags, etc.) No cylinder storage inside buildings.
- Gasoline and Diesel Pumps - Service station type pumps require physical barriers to prevent damage to the pumps. "No Smoking or Open Flame" signs are also necessary. Dispensing nozzles shall be of an approved type.
  - Internal Combustion Engines - Turn off engine before refueling, and allow a minimum of fifteen (15) minutes for engine to cool off. Insulate exhaust stacks near combustible material. Keeps exhaust discharge away from flammable liquids (particularly truck exhausts).
- Material Storage - Outside - Storage areas containing combustible material (lumber, etc.), or non-combustible material in combustible containers (metal parts in wooden boxes) need to be separated from other material by at least twenty (20) feet on all sides to

help prevent the spread of fire and to allow fire equipment access. A single storage area cannot be larger than fifty (50) by one hundred and fifty (150) feet. All weeds, dead grass, and combustible trash need to be kept out of the storage areas and out of access ways.

- No Smoking or Open Flame Areas and Signs - Areas where flammable liquids are stored or dispensed need to be clearly identified. "NO SMOKING OR OPEN FLAME" signs need to be posted no more than 25 feet away from the hazard. Areas containing large quantities of combustible materials should also be identified and marked with the same signs. Cigarette butt cans will help prevent careless disposal of smoking materials.
- Open Flames - Welding torches, matches, heaters, and other open flames have caused many unnecessary fires. Check the area for possible hazards before lighting up.
- Sparks and Slag - Move flammable or combustible materials before starting to weld or burn. If material cannot be moved, cover it with fire retardant material.
- Tarps and Plastic Coverings - Tarps must be fire retardant. Plastic sheets must be flame resistant if they are to be used with flame or high heat operations. Tie tarps and plastic securely so they cannot blow loose.
- Temporary Heating Devices - No open burning of trash. Propane heating units need automatic fuel shut-off valves. Oil salamanders must be cool before being refilled, or being moved. All heaters need good clearance or non-combustible insulation on all sides, top and bottom.
- A temporary building shall not be erected where it will adversely affect any means of exit.
- No combustible material shall be stored with ten (10) feet of a building or structure.
- Roadways and access to storage areas must be maintained to accommodate the widest vehicle that may be used for fire fighting purposes.
- Material shall not be stored with thirty six (36) inches of a fire door opening.

## **FLAMMABLE AND COMBUSTIBLE LIQUID STORAGE**

- Only approved containers and portable tanks shall be used for storage and handling.
- Flammable Liquids - All - Liquids with a flash point below 140° F are referred to as "flammable liquids." Store in original containers until needed. All tanks, drums, containers, cans and cabinets are to be electrically grounded and labeled with the name of the material. Do not mix contents and labels. Handle small quantities (five [5] gallon



maximum) in "safety cans." Two main features of a safety can are a spring-loaded cap and a flame arrester.

- Flammable or Combustible Liquids shall not be stored in areas used for exits, stairways, or normally used for the safe passage of personnel.

## **INDOOR STORAGE OF FLAMMABLE AND COMBUSTIBLE LIQUIDS**

- No more than twenty five (25) gallons of flammable or combustible liquids are to be stored inside a building unless stored in an approved storage cabinet and labeled "flammable - keep fire away."
- No more than sixty (60) gallons of flammable or one hundred and twenty (120) gallons of combustible liquids may be stored inside of a single storage cabinet inside a building. No more than three (3) storage cabinets are allowed in a single building when containing the maximum amount allowed.
- Quantities of flammable or combustible liquids stored inside a building which exceed the amount of three storage cabinets must be stored in an approved storage room which meets the applicable requirements of The National Fire Protection Association. An aisle space of three feet wide must be maintained at all times in inside storage rooms.
- Materials which react with water shall not be stored in the same location as flammable or combustible liquids. A separate storage area should be provided for water reactive materials and conspicuously marked as such.
- Electrical wiring and equipment located in inside flammable and combustible liquid storage rooms shall be approved for hazardous locations.

## **STORAGE OF FLAMMABLE AND COMBUSTIBLE LIQUIDS OUTSIDE OF BUILDINGS**

- No more than 1,100 gallons of flammable or combustible liquids may be stored in any one outside storage area unless separated by a minimum aisle space of five (5) feet. Groups of containers shall not be nearer than twenty (20) feet to a building. Each container or outside storage area must be accessible by a twelve (12) foot wide access for a maximum distance of 200 feet.

## **HANDLING FLAMMABLE AND COMBUSTIBLE LIQUIDS**

- Dispensing of flammable or combustible liquids from one container to another shall be separated from other operations by a distance of not less than twenty five (25) feet.

- Dispensing of flammable or combustible liquids from one container to another shall be separated from other operations by a distance of not less than twenty five (25) feet.
- Containers shall be bonded when transferring flammable liquids from one container to another.
- Approved self-closing valves shall be used for dispensing of flammable or combustible liquids.
- Flammable or combustible liquids shall be drawn or transferred by either gravity or pump only. Never transfer by means of air pressure on the container or portable tank.
- Flammable liquids shall be kept in closed containers when not actually in use.
- Precautions shall be taken to eliminate leakage or spillage of flammable and combustible liquids where necessary such as the use of funnels.
- Leakage or spillage from flammable and combustible liquids must be promptly cleaned up and properly disposed of.

## **TRAINING**

- Work environments, classified as hot work, sometimes require the use of a trained fire watch. Whenever personnel are assigned as fire watch they shall be properly trained. Fire

watches are to be at the site prior to beginning hot work and thirty minutes after hot work is complete.

- All personnel which may be required to use fire extinguishers shall be trained in the proper type, use, care, and technique for incipient fire fighting.

## **FIRE EXTINGUISHERS - MOUNTING AND ACCESS**

Extinguishers are not to be left on the floor, or a scaffold, or on the ground. They are to be mounted on a wall, handrail, barricade, etc.

Extinguishers that have a total weight of more than forty (40) pounds are to be mounted with the top of the extinguisher no more than forty two (42) inches above the floor. Extinguishers weighing forty (40) pounds or less may be mounted with the top as high as five (5) feet above the floor. (Mounting all extinguishers at the forty two (42) inch height is a good habit.)

Extinguishers should be located where they can be easily seen. In cases where this is not practical, signs or red paint marking, need to be added to identify the location of the extinguisher.

Keep trash and stored material away from extinguishers to prevent blockage of the access to the extinguisher.

## **FIRE EXTINGUISHERS - INSPECTION AND TESTING**

### Monthly Inspections

Every fire extinguisher is to be visually inspected at least once a month. The inspection is to include:

1. Proper location?
2. Fully charged?
3. Seal wire not broken?
4. Free of any obvious defects or damage?

### Annual inspections:

A thorough examination of each extinguisher is to be conducted annually by an individual trained to examine, repair, and recharge extinguishers. An inspection tag is to be attached to each extinguisher showing the date of the annual examination, the date of the recharge, and the initials of the individual making the examination.

### Hydrostatic Tests:

Extinguishers more than five (5) years old may need a hydrostatic test if they are to remain in service.

## **FIRE EXTINGUISHERS - TYPES AND LOCATIONS**

### Buildings (Offices, Shops, Warehouses) (2-A UL Rating):

- Hazard Wood, paper, etc.
- Use 2000 gallon pressured water type extinguisher. For cold climates, specify anti-freeze.
- Number One extinguisher required for each three thousand (3000) square feet of floor space. Each floor is measured separately.

Location Mount the extinguisher so that the travel distance from any point is not more than seventy five (75) feet. Mount along the normal walkways.

### Temporary offices, trailers, sheds (2-A):

- Hazard Lumber, wooden boxes, etc.
- Use 2000 gallon pressured water type extinguisher.
- Number One extinguisher in each trailer or temporary building. If the trailer or building is divided into separate sections with solid partitions without doors, then each section needs one extinguisher.
- Location Mount inside, near the door.

Combustible material storage (outside) (2-A):

- Hazard Lumber, wooden boxes, etc.
- Use 2000 gallon pressured water type extinguisher.
- Number Not specified by OSHA, but approximately one extinguisher for each 25,000 square feet of storage area.
- Location Mount so that travel distance from any point is not more than one hundred (100) feet.

Combustible material storage (inside) (2-A):

- Hazard Lumber, packing material, cardboard boxes
- Use 2000 gallon pressured water type extinguisher.
- Number In addition to the extinguishers required for building for the building protection, provide one more extinguisher for every five thousand (5000) square feet of area occupied by combustible material storage.
- Location Mount extinguisher so that every point within the storage area is no more than seventy five (75) feet from an extinguisher.

Flammable liquid storage (inside) (20-B):

- Hazard Gasoline and diesel tanks, drums, etc.
- Use Twenty (20) pound dry chemical extinguisher
- Number One extinguisher for each eleven hundred (1100) gallons of flammable liquid.
- Location Mount between twenty five (25) and seventy five (75) feet from the storage area.

Flammable liquid storage (inside) (20-B):

- Hazard Small quantities of solvent, paint, etc.
- Use Twenty (20) pound dry chemical extinguisher
- Number One extinguisher for each storage area. This is in addition to the extinguishers required for general building protection.
- Location Mount between ten (10) and twenty five (25) feet from the storage area.

Flammable liquids (in use) (10-B):

- Hazard Flammable adhesives, solvent-cleaning vats, fuel fired heaters, etc.
- Use Ten (10) pound dry chemical extinguisher
- Number One extinguisher is needed within fifty (50) feet of the operation.
- If other dry chemical extinguishers are not needed for these hazards.

Gasoline and diesel pumps (20-B:C):

- Hazard Refueling trucks, etc.
- Use Twenty (20) pound dry chemical or use fifty (50) pound carbon dioxide extinguisher on wheels.
- Number One extinguisher
- Location Mount within seventy five (75) feet of the pumps.

Trucks dispensing flammable liquids (20-B:C):

- Hazard - Refueling cranes, air compressors, etc.
- Use Twenty (20) pound dry chemical. Order these extinguishers with a vehicle mounting bracket.
- Number One extinguisher on each truck
- Location Mount so it is accessible from the ground

Compressed gas cylinder storage (outside) (20B:C):

- Hazard - Propane, acetylene, etc.
- Use Twenty (20) pound dry chemical
- Number One extinguisher for each storage area, to be mounted within seventy five (75) feet. If a 20-B:C extinguisher already exists with seventy five (75) feet because of an adjacent storage area, etc., no additional extinguisher is needed for this site.

Welding and cutting operations:

- Hazard Sparks, slag, open flame, etc.
- Use - Any type of extinguisher or water hose
- Number - At least one extinguisher or water hose within seventy five (75) feet of each operation, and in the same room or area.
- Location - Existing extinguishers in the area can be used for this protection. Working at or near a combustible partition also requires fire protection on the other side of the partition.

Electrical - main supply panels - (10-B:C):

- Hazard Energized electrical parts
- Use - Fifteen (15) pound carbon dioxide extinguisher. Order the extinguisher with a non-metallic discharge horn.
- Number - Mount one extinguisher with fifty (50) feet.
- Location - If several main panels are widely separated, each panel will need a separate extinguisher.

Cranes, tower cranes, hoist engines - (5-B:C):

- Hazard Flammable liquids, electric
- Use - 20 pound dry chemical extinguisher.
- Number - One extinguisher for each piece of equipment
- Location - Mount near the operator's platform. Order vehicle mounting brackets for extinguishers on mobile equipment.

Wooden forms, scaffolds, etc. (2-A):

- Hazard Forms and scaffolding that are separated from other work areas
- such as cooling tower veils, chimney top-work platforms, etc.
- Use - 20 gallon pressured water type extinguisher.
- Number - Mount extinguishers so that one extinguisher is within seventy
- five (75) feet of any location.

Spray booths (20-B:C):

- Hazard - Flammable liquid particles. An automatic sprinkler system is required for spray booths. In addition, portable extinguishers are required.
- Use - Twenty (20) pound dry chemical or use fifty (50) pound
- Number - One extinguisher for each spray booth
- Location - Mount within twenty-five (25) feet of the spray booth.

## **7-FORKLIFT SAFETY POWERED INDUSTRIAL TRUCKS**

**Applicable OSHA Standards: 29 CFR 1910.178**

### **PURPOSE**

This program contains safety requirements relating to maintenance, and use of fork trucks, tractors, platform lift trucks, motorized hand trucks, and other specialized industrial trucks powered by electric motors or internal combustion engines.

### **SCOPE**

This program applies to all employees and subcontractors working within company-controlled worksites.

### **GENERAL**

Only trained and authorized operators shall be permitted to operate a powered industrial truck.

Modifications and additions which affect capacity and safe operation shall not be performed by the customer or user without manufacturers prior written approval. Capacity, operation, and maintenance instruction plates, tags, or decals shall be updated accordingly.

If the truck is equipped with front-end attachments other than factory installed attachments, the user shall request that the truck be marked to identify the attachments and show the approximate weight of the truck and attachment combination at maximum elevation with load laterally centered.

The user shall see that all nameplates and markings are in place and are maintained in a legible condition.

Where general lighting is less than 2 lumens per square foot, auxiliary directional lighting shall be provided on the truck.

The brakes of highway trucks shall be set and wheel chocks placed under the rear wheels to prevent the trucks from rolling while they are boarded with powered industrial trucks.

Wheel stops or other recognized positive protection shall be provided to prevent railroad cars from moving during loading or unloading operations.

Fork trucks shall not be driven up to anyone standing in front of a bench or other fixed object.

No person shall be allowed to stand or pass under the elevated portion of any truck, whether loaded or empty.

Unauthorized personnel shall not be permitted to ride on powered industrial trucks. A safe place to ride shall be provided where riding of trucks is authorized.

Do not place arms or legs between the uprights of the mast or outside the running lines of the truck.

When a powered industrial truck is left unattended, load engaging means shall be fully lowered, controls shall be neutralized, power shall be shut off, and brakes set. Wheels shall be blocked if the truck is parked on an incline.

A powered industrial truck is unattended when the operator is 25 ft. or more away from the vehicle which remains in his view, or whenever the operator leaves the vehicle and it is not in his view.

When the operator of an industrial truck is dismounted and within 25 ft. of the truck still in his view, the load engaging means shall be fully lowered, controls neutralized, and the brakes set to prevent movement.

A safe distance shall be maintained from the edge of ramps or platforms while on any elevated dock, or platform or freight car. Trucks shall not be used for opening or closing freight doors.

Only approved industrial trucks shall be used in hazardous locations.

Industrial trucks shall be used on stable grade unless designed for operation off-road.

## **TRAVELING**

All traffic regulations shall be observed, including authorized plant speed limits. A safe distance shall be maintained approximately three truck lengths from the truck ahead, and the truck shall be kept under control at all times.

The right of way shall be yielded to ambulances, fire trucks, or other vehicles in emergency situations.

Other trucks traveling in the same direction at intersections, blind spots, or other dangerous locations shall not be passed.



The driver is required to slow down and sound the horn at cross aisles and other locations where vision is obstructed. If the load being carried obstructs forward view, the driver shall be required to travel with the load trailing.

Railroad tracks shall be crossed diagonally wherever possible. Parking closer than 8 feet from the center of railroad tracks is prohibited.

The driver is required to look in the direction of, and keep a clear view of the path of travel.

Grades shall be ascended or descended slowly.

When ascending or descending grades in excess of 10 percent, loaded trucks shall be driven with the load upgrade.

On all grades the load and load engaging means shall be tilted back if applicable, and raised only as far as necessary to clear the road surface.

Under all travel conditions the truck shall be operated at a speed that will permit it to be brought to a stop in a safe manner.

Stunt driving and horseplay shall not be permitted.

The driver is required to slow down for wet and slippery floors.

Dockboard or bridgeplates, shall be properly secured before they are driven over. Dockboard or bridgeplates shall be driven over carefully and slowly and their rated capacity never exceeded.

Running over loose objects on the roadway surface shall be avoided.

While negotiating turns, speed shall be reduced to a safe level by means of turning the hand steering wheel in a smooth, sweeping motion. Except when maneuvering at a very low speed, the hand steering wheel shall be turned at a moderate, even rate.

## **LOADING**

Only stable or safely arranged loads shall be handled. Caution shall be exercised when handling off-center loads which cannot be centered.

Only loads within the rated capacity of the truck shall be handled.

The long or high (including multiple-tiered) loads which may affect capacity shall be adjusted.

Trucks equipped with attachments shall be operated as partially loaded trucks when not handling a load.

Extreme care shall be used when tilting the load forward or backward, particularly when high tiering. Tilting forward with load engaging means elevated shall be prohibited except to pick up a load. An elevated load shall not be tilted forward except when the load is in a deposit position over a rack or stack. When stacking or tiering, only enough backward tilt to stabilize the load shall be used.

## **OPERATION OF THE TRUCK**

If at any time a powered industrial truck is found to be in need of repair, defective, or in any way unsafe, the truck shall be taken out of service until it has been restored to safe operating condition.

Fuel tanks shall not be filled while the engine is running. Spillage shall be avoided.

Spillage of oil or fuel shall be carefully washed away or completely evaporated and the fuel tank cap replaced before restarting engine.

No truck shall be operated with a leak in the fuel system until the leak has been corrected.

Open flames shall not be used for checking electrolyte level in storage batteries or gasoline level in fuel tanks.

## **MAINTENANCE OF INDUSTRIAL TRUCKS**

Any power-operated industrial truck not in safe operating condition shall be removed from service. All repairs shall be made by authorized personnel.

Those repairs to the fuel and ignition systems of industrial trucks which involve fire hazards shall be conducted only in locations designated for such repairs.

Trucks in need of repairs to the electrical system shall have the battery disconnected prior to such repairs.

All parts of any such industrial truck requiring replacement shall be replaced only by parts equivalent as to safety with those used in the original design.

Industrial trucks shall not be altered so that the relative positions of the various parts are different from what they were when originally received from the manufacturer, nor shall they be altered either by the addition of extra parts not provided by the manufacturer or by the elimination of any parts. Additional counterweighting of fork trucks shall not be done unless approved by the truck manufacturer.

Industrial trucks shall be examined before being placed in service, and shall not be placed in service if the examination shows any condition adversely affecting the safety of the vehicle. Such examination shall be made at least daily. Where industrial trucks are used

on a round-the-clock basis, they shall be examined after each shift. Defects when found shall be immediately reported and corrected.

When the temperature of any part of any truck is found to be in excess of its normal operating temperature, thus creating a hazardous condition, the vehicle shall be removed from service and not returned to service until the cause for such overheating has been eliminated.

Industrial trucks shall be kept in a clean condition, free of lint, excess oil, and grease. Noncombustible agents should be used for cleaning trucks. Low flash point (below 100 deg. F.) solvents shall not be used. High flash point (at or above 100 deg. F.) solvents may be used. Precautions regarding toxicity, ventilation, and fire hazard shall be consonant with the agent or solvent used.

## **TRAINING**

All operators will be trained on the contents of this program:

- Before initial assignment;
- At least annually thereafter;
- When an operator is involved in an incident with a fork truck;

All operators must be certified through the company Powered Industrial Truck - Forklift Certification Program.

## **8-HEARING CONSERVATION PROGRAM**

**Applicable OSHA Standards: 29 CFR 1910.95(c)**

### **PURPOSE**

This is a developed hearing conservation program to comply with CFR 1910.95 and to provide guidelines to protect employees from potential hearing loss.

### **SCOPE**

This program will establish the minimum hearing protection requirements for employees.

### **RESPONSIBILITIES**

Contractors will be responsible for the enforcement and disciplinary action resulting from violation or failure of assigned persons to implement the requirements of this program.

The Director of Safety or designee will be responsible to provide for the monitoring of work activities to assure compliance to the requirements of this program.

The primary responsibility for the implementation of the requirements of this program will rest with the Supervisor.

### **REQUIREMENTS**

The standard permits an unprotected, 8-hour permissible exposure limit (PEL) of 90 decibel-A scale (dBA) for continuous noise. Higher unprotected exposure is allowed provided there are sufficient periods of noise exposure low enough to maintain a PEL below 90 dBA. The maximum allowable exposure level is 110 dBA for thirty minutes. Unprotected exposures above 110 dBA are not permitted regardless of duration.

OSHA Continuous Noise Exposure Limits Equaling 100% Dose – Table G-16

OSHA PEL, dBA	Maximum Duration	
	Minutes	(hrs.)
85	690	(16)
87	720	(12)
90	480	(8)
92	360	(6)
95	240	(4)
97	180	(3)
100	120	(2)
102	90	(1½)

105	60	( 1 )
110	30	(1/2)
115	15	(1/4)

The PEL is based on 100% dose of the allowed exposure. Table G-16 shows the noise level and corresponding time limits that result in a dose of 100%. 92 decibels for 8 hours is the same dose as 110 dBA for two hours.

The standard defines impact or impulse noise as noise with the duration of one second or less. The PEL for impact noise is 140 dBA, peak sound level.

The OSHA standard requires that employees be included in a hearing conservation program if their full shift exposure exceeds the action level by 50%. Employees working 12 hour shifts exceed the action level with a 12 hour average noise exposure of 82 dBA. Employees working 12 hour shifts exceed the permissible exposure limit of 100% dose at 87 dBA.

## HEARING PROTECTION

Hearing protection devices are available to employees who are exposed to noise above the action level. Employees who have shown a standard threshold shift measured on their annual audiogram must wear hearing protection at all times in the workplace. Hearing protection must be worn when an employee is working in an area above 90 dBA.

There are two types of hearing protection devices available. These are the circumoral device, better known as an ear-muff, and the insert device. Each type provides a different degree of protection and the employee must be properly trained in its use to obtain the maximum protection.

### A. Circumoral or "Ear Muffs"

Circumoral hearing protection seals the area around the entry to the ear canal by means of a liquid or foam filled cushion and has a band connecting each muff. Some models may also be attached to hard hats. This type of protection is easily donned and requires minimal training. It does not require fitting. They provide noise attenuation in a range of 15-25 dBA. The effectiveness of these devices is dependent on the seal around the ear. Temple bars on safety glasses can reduce the protection factor of ear muffs. One advantage of ear muffs is that they may be used in conjunction with insert type hearing protectors to maximize protection.

### B. Insert or "Ear Plugs"

Insert devices or "plugs" are available in pre-formed or user-formed styles and may be disposable or non-disposable. Insert plugs provide noise reductions in the

20-30 decibel range. These devices are inserted into the ear canal by the user and their effectiveness depends on proper insertion. Providing training to the user and practice by the user are imperative to insuring a good fit to insure maximum protection.

## AUDIOMETRIC TESTING

Audiometric testing is a means of determining if an employee's hearing is being adversely affected by noise exposure in the workplace.

- A. Baseline Audiogram (when applicable) - will be established against which subsequent audiogram can be compared. This should be accomplished at time of hiring.

Audiometric testing is to establish a baseline, which must be preceded by at least 14 hours without exposure to high noise levels. Hearing protection may be used prior to the audiometric test to insure the employee is not exposed to high noise levels.

An annual audiogram may be substituted for the baseline audiogram when in the judgment of the audiologist or physician making the evaluation:

1. The standard threshold shift revealed by the audiogram is persistent; or
2. The hearing threshold shown in the annual audiogram indicates significant improvement over the baseline audiogram.

- B. Annual Audiometric Testing (when applicable) - results should be compared to the baseline to identify any changes in an individual's hearing threshold. If the audiogram shows a 10 decibel reduction of hearing capability at 2000, 3000, or 4000 Hertz, a repeat audiometric test should be done within 30 days. This 10 dBA reduction at these frequencies is referred to as a "Standard Threshold Shift" (STS).

A repeat audiogram that shows a permanent threshold shift requires that a full assessment of the hearing loss be completed. Unless a physician has determined that the STS is not work related or aggravated by occupation noise exposure, the employer should insure that:

1. The employee is notified in writing within 21 days of the determination that the STS is permanent.
2. Employees should be trained in the use of hearing protection and required to use the protection devices.
3. The employee should be referred for a clinical audiological or otological

examination if additional testing is needed or if Contractors suspects a medical condition is caused or aggravated by wearing hearing protection.

## **EMPLOYEE TRAINING AND INFORMATION**

Hearing conservation training should be given to all employees. Training should consist of information on the physical nature of sounds, the effects of noise on the ear and the proper use of hearing protection. Employees that work in high noise areas (>85 dBA) should also be trained for a basic understanding of noise monitoring, work areas with high noise levels, and the purpose of audiometric testing.

Each employee that should be required to work in an area above the action level must complete and obtain an acceptable score on the Hearing Conservation Exam.

### **A. Record keeping**

This exam must be maintained in the employee training files at the Corporate Office.

Noise exposure monitoring records should be retained for at least two years. Audiometric test results should be retained for the duration of the employee(s) employment plus 30 years.

### **B. Access to Records**

Employees may have access to the noise exposure monitoring records and audiometric test results under the OSHA standard "Access to Employee Exposure and Medical Records", 29 CFR 1910.20. For access to these records, a written request for the records must be made to the Corporate Safety Department. Written request form will be distributed upon request.

## 9-ILLUMINATION

### Applicable OSHA Standards: 29 CFR 1926 Subpart D

#### PURPOSE

The purpose of this policy is to comply with the OSHA standard to ensure work areas have sufficient lighting.

#### SCOPE

This program applies to all of our controlled worksites where one of our, or a subcontract employee may be occupationally exposed to Illumination hazards.

#### GENERAL WORKING CONDITIONS

General Construction areas, ramps, runways, corridors, offices, shops, and storage areas shall be lighted to not less than the minimum illumination intensities listed in Table D-3 while any work is in progress:

**TABLE D-3 - MINIMUM ILLUMINATION INTENSITIES IN FOOT-CANDLES**

FOOT-CANDLES	AREA OF OPERATION
5	General construction area lighting.
3	General construction areas, concrete placement, excavation and waste areas, access ways, active storage areas, loading platforms, refueling, and
5	Indoors: warehouses, corridors, hallways, and exits.
5	Tunnels, shafts, and general underground work areas: (Exception: minimum of 10 foot-candles is required at tunnel and shaft heading during drilling, mucking, and scaling. Bureau of Mines approved cap lights shall be acceptable for use in the tunnel heading
10	General construction plant and shops (e.g., batch plants, screening plants, mechanical and electrical equipment rooms, carpenter shops, rigging lofts and active store rooms, mess halls, and indoor toilets and workrooms.)
30	First aid stations, infirmaries, and offices.

The lighting intensity shall be measured at the task/working surface in the plane in which the task/working surface is present. Lights shall, so far as possible, be placed so that they will not shine in the eyes of employees.



## TEMPORARY LIGHTS

Shall meet the following requirements:

Temporary lights shall be equipped with guards to prevent accidental contact with the bulb, except that guards are not required when the construction of the reflector is such that the bulb is deeply recessed.

Temporary lights shall be equipped with heavy-duty electric cords with connections and insulation maintained in safe condition. Temporary lights shall not be suspended by their electric cords, unless cords and lights are designed for this means of suspension. Splices, which have insulation equal to that of the cable, are permitted.

Cords shall be kept clear of working spaces and walkways or other locations in which they are readily exposed to damage.

Exposed non-current-carrying metal parts of temporary lights furnished by the employer shall be grounded either through a third wire in the cable containing the circuit conductors or through a separate wire which is grounded at the source of the current. Grounding shall be in accordance with the requirements of 1915.132(b).

Where temporary lighting from sources outside the vessel is the only means of illumination, portable emergency lighting equipment shall be available to provide illumination for safe movement of employees.

Employees shall not be permitted to enter dark spaces without a suitable portable light. The use of matches and open flame lights is prohibited. In non-gas free spaces, portable lights shall meet the requirements of 1915.13.

Temporary lighting stringers or streamers shall be so arranged as to avoid overloading of branch circuits. Each branch circuit shall be equipped with over-current protection of capacity not exceeding the rated current carrying capacity of the cord used.

## **10-HAZARDOUS COMMUNICATION PROGRAM/ GLOBAL HARMONIZATION (GHS)**

**Applicable OSHA Standard: 29 CFR 1910.1200, and 29 CFR 1926.59**

### **PURPOSE**

The purpose of this program is to ensure that the hazards of all chemicals produced or imported are evaluated, and that information concerning their hazards is transmitted to Company and our employees.

### **SCOPE**

This applies to any chemical, which is known to be present in any of our workplaces in such a manner that employees may be exposed under normal conditions of use or in a foreseeable emergency.

### **GENERAL**

The following written Hazardous Communication Program (HCP) is to be implemented for our personnel. The originals will be kept on file by the Corporate Office. The Safety Director will be responsible for ensuring the program is current and enforced.

A copy of this program is to be made available to an employee(s) upon hiring, and a copy will be supplied to any employee(s) upon written request.

The Safety Director will be contacted when a copy of the program is needed or required.

The program will be updated when new chemicals or hazards are introduced into the working environment, and reviewed annually.

The Purchasing Manager will check all chemical purchase requests (PR) to be sure a statement requesting a Material Safety Data Sheet (SDS) appears on the purchase request (PR) before being processed.

### **CONTAINER LABELING**

The tool room supervisor/attendant will be responsible for all containers of hazardous chemicals entering the workplace and will assure that the chemical containers are properly labeled with:

- Chemical name;
- Hazard warnings; and
- Name and address of the manufacturer,
- Importer, or responsible party.

No container(s) will be used until it has been checked, by the tool supervisor or competent person and an SDS is reviewed by Safety dept. and in file. If the chemical is to be transferred to a separate container, the tool attendant will ensure that the new container is properly labeled; i.e., that all secondary containers are labeled with an extra copy of the original manufacturer's label or with generic labels which have a block for identity and blocks for the hazard warning. For help with labeling, please contact the Site Safety Supervisor/Representative. The Vice President and Safety Director will review the labeling system annually and update as required.

The Site Safety Supervisor/Representative and craft foreman will ensure that the contents of material has properly identified. The foreman will also inform employees of the hazards associated with chemicals contained in material within the work areas.

## **SAFETY DATA SHEETS (SDS'S)**

The purchasing faction will be responsible for obtaining SDS's. The field clerical staff will maintain the SDS system at the construction site. The Site Safety Supervisor/Representative will review incoming data sheets for new and significant health/safety information and will ensure that the new information is given to the affected employees. Copies of all SDS sheets will be kept by the field clerks. The Site Safety Supervisor/Representative will review each SDS annually for accuracy and completeness.

The SDS system shall include:

- Current master inventory list of all SDS's indexed alphabetically and by vendor.
- The identity used on the SDS shall be the same as used on the container label.
- The chemical and common name of all ingredients determined to present a hazard shall appear on all SDS.
- The SDS shall list:
  - The physical and chemical characteristics of the chemical including vapor pressure, flash point, etc.
  - The fire, explosion, and reactivity hazard(s) of the chemical mixture including the boiling point, flash point and auto ignition temperature.
  - Health hazards of the chemical mixture including signs and symptoms of exposure and medical conditions recognized as aggravated by exposure with primary route(s) of entry.
  - Permissible exposure limit (PEL) or any other exposure limit used or recommended by the manufacturer, importer, or employer.
  - Whether on carcinogen listing (NTP) or has been found to be a potential carcinogen (IARC listing) or by OSHA.
  - Control measures including fire, engineering, proper personal protective equipment.

- General precautions for safe handling and use including protective measures during repair and maintenance and procedures for clean-up of spills and leaks.
- Emergency and first aid procedures.
- Date prepared or changed.
- Name, address, telephone numbers of manufacturer, importer, or responsible party to call in an emergency.

The SDS will be available for use by employees. Each Project Superintendent will keep a current and up-to-date copy of the program on file. New chemicals will not be used until a SDS has been obtained and reviewed for health hazards by the Site Safety Supervisor/Representative or Safety Director-Corporate.

## **EMPLOYEE TRAINING AND EDUCATION**

Before starting work, the respective supervisor/foreman of a new employee will go over their copy of the HCP and each SDS applicable to their job, i.e. handouts, video tapes, etc. Before any new chemical is used, all effected employees will be informed of its use. Employees will

Be instructed on safe use, and will be trained on hazards associated with the new chemical. All employees will attend additional training, as appropriate, to review the HCP and SDS. Appropriate reference material will also be discussed during the training session(s).

The minimum orientation and training for a new employee is as follows:

- An overview of the requirements contained in the Hazard Communication standard, 29 CFR 1926.59.
- Chemicals present in their workplace operations and this office.
- Location and availability of the written HCP.
- Physical and health effects of the hazardous chemicals listed on the inventory list of this program.
- Methods and observation techniques used to determine the presence or release of hazardous chemicals in the work area.
- How to lessen or prevent exposure to these hazardous chemicals through usage of control/work practices and personal protective equipment.
- Steps taken by company, to lessen or prevent exposure to the chemicals listed on the inventory list.
- Emergency procedures to follow if exposed to any chemicals, and Location of SDS files and location of hazardous inventory list.

Prior to a new chemical being introduced into any section of the workplace, each employee will be given information and training as outlined above and/or as outlined on the attached Employee Training Guidelines by the Site Safety Supervisor/Representative or Project Superintendent. SDS must be available prior to use.

After attending the training class, each employee will sign a form to verify that they attended the training, that the written HCP is made available for review, and that he/she understands the HCP.

Before entering an establishment, the Site Safety Supervisor/Representative will ascertain what hazards employees may be exposed to and then take appropriate action to protect the employees. If the employee has any question about what protection is needed, they should contact their foreman/Site Safety Supervisor/Representative immediately.

## **NON-ROUTINE TASKS**

Before any non-routine task is performed, employees must be advised and/or they must contact the Site Safety Supervisor/Representative for special precautions to follow and the foreman shall inform any other personnel who could be exposed.

In the event that such tasks are required, the Site Safety Supervisor/Representative or Project Superintendent/designee will provide the following information about such activity as it relates to the specific chemicals expected to be encountered:

- Specific chemical name(s) and hazard(s).
- Protective personal equipment required and safety measures to be taken.
- Measures that have been taken to lessen the hazards including ventilation, respirators, presence of other employee(s), and emergency procedures.

## **OTHER PERSONNEL EXPOSURE: (CONTRACTORS/SUBCONTRACTORS)**

It will be the responsibility of the Site Safety Supervisor/Representative to provide other personnel or outside contractors or subcontractors with the following information as follows:

- Hazardous chemicals to which they may be exposed to while in the workplace
- Measures to lessen the possibility of exposure.
- Location of SDS for all hazardous chemicals; and  
Procedures to be follow if theyare exposed.

The Project Superintendent/Site Safety Supervisor/Representative will also be responsible for contacting each contractor or subcontractors before work is started to gather and disseminate any information concerning chemical hazards the contractor or subcontractors bringing into the workplace, and vice versa.

## APPENDIX A

**The following chemicals are some of those regulated by OSHA as carcinogens in substance specific standards that include labeling requirements.**

- Asbestos
- 4-Nitrobyphenyl
- Alpha-Naphthylamine
- Methyl Chloromethyl Ether
- 3,3 Dichlorobenzidine (and its salts)
- Bis-Chloromethyl Ether
- Beta-Naphthylamine
- Benzidine
- 4-Aminodiphenyl
- Ethyleneimine
- Beta-Propiolactone
- 2-Acetylaminofluorene
- 4-Dimethylaminoazobenzene
- N-Nitrosodimethylamine
- Vinyl Chloride (and poly-vinyl Chloride)
- Inorganic Arsenic
- 1,2 Dibromo-3-Chloropropane
- Acrylonitrile
- Ethylene Oxide
- Formaldehyde
- Benzene

**HAZARD COMMUNICATION PROGRAM  
SOME POTENTIALLY HAZARDOUS SUBSTANCES  
COMMONLY FOUND ON CONSTRUCTION PROJECTS**

**Acetone**

Acetylene Gas  
Adhesives  
Aluminum etching agent  
Ammonia  
Anti-freeze  
Arsenic Compounds  
Asbestos  
Asphalt (Petroleum) fumes  
Benzene (arid derivatives)  
Bleaching agents  
Carbon Black  
Carbon Monoxide (In cylinders)  
Caulking Sealant agents  
Caustic Soda (sodium hydroxide)  
Chromate salts  
Chromium  
Cleaners  
Cleaning Agents  
Coal Tar Pitch  
Coatings  
Cobalt  
Concrete curing compounds  
Cresol  
Cutting oil (oil mist)  
De-emulsifier for oil  
Diesel gas, diesel oil  
Drywall  
Dusts (brick, cement block)  
Enamel  
Etching agents  
Ethyl alcohol  
Fiberglass, mineral wood  
Foam Insulation  
Freon 20, R20 (and others)  
Gasoline (petrol, ethyl)  
Glues  
Graphite  
Greases  
Helium (in cylinders)  
Hydraulic brake fluid

Hydrochloric acid -  
Hydrogen (in cylinders)  
Inks  
Insulations  
Iron  
Kerosene  
Lead  
Lime (calcium oxide)  
Limestone  
Lubricating oils  
Lye (sodium hydroxide, potassium hydroxide)  
Magnesium  
Metals (aluminum, nickel, copper,  
zinc, cadmium, Iron etc)  
Methanol (methyl alcohol)  
Methyl ethyl ketone (2-butanone)  
Motor oil additives  
Muriatic acid (hydrochloric acid)  
Naphtha (coal tar)  
Nitroglycerin  
Oxalic acid  
Ozone  
Paint Remover  
Paint Stripper  
Paints / Lacquers  
Particle Board  
Pentachlorophenol  
Photographic developers and fixers  
Photogravure Ink (copy machine)  
Plastics  
Polishes for metal floors  
Propanol  
Putty  
Resins, epoxy / synthetics  
Sealers  
Shellac  
Solder, flux (zinc chloride, fluorides, etc.)  
Solder, soft (lead, tin)  
Solvents  
Sulfuric acid  
Thinner, paint / lacquer

Tin  
Transite  
Turpentine, gum spirit, oil of turpentine  
Varnishes  
Waterproofing agents

Waxes  
Welding rods  
Wood alcohol (methanol)  
Wood preservative  
Xylene  
Zinc



## 11-LADDERS

**Applicable OSHA Standards: 29 CFR 1910.25, 1926.1053**

### PURPOSE

This program is to ensure the safe use, care and serviceability of portable ladders used in the workplace.

### SCOPE

This program applies to all employees and subcontractors working within Contractor controlled worksites.

### TYPES OF LADDERS

Just as jobs and people are different, so are ladders. Most workers don't realize that factory built ladders are classified by the weight that they are designed to hold. Ladder types include:

Type III	lightweight, holds a maximum of 200 pounds.
Type II	holds a maximum of 225 pounds.
Type I	holds a maximum of 250 pounds.
Type IA	holds up to 300 pounds.

Be sure to use a ladder that is strong enough to support your weight plus your tools and clothing.

Also, the material the ladder is made of should be taken into consideration. It is recommended that metal ladders not be used around energized electrical circuits or equipment or in places where they may come in contact with such circuits. If the ladder is fiberglass, avoid extreme heat; if it is wood, never paint it -- this could hide serious defects.

### CARE OF LADDERS

Ladders shall be maintained in good condition at all times, the joint between the steps and side rails shall be tight, all hardware and fittings securely attached, and the movable parts shall operate freely without binding or undue play.

Metal bearings of locks, wheels, pulleys, etc., shall be frequently lubricated.

Frayed or badly worn rope shall be replaced.

Safety feet and other auxiliary equipment shall be kept in good condition to insure

proper performance.

Before each use, employees shall inspect the ladder and those which have developed defects shall be withdrawn from service for repair or destruction and tagged or marked as "Dangerous, Do Not Use."

Rungs should be kept free of grease and oil.

Ladder components shall be surfaced so as to prevent injury to an employee from punctures or lacerations, and to prevent snagging of clothing.

Wood ladders shall not be coated with any opaque covering, except for identification or warning labels which may be placed on one face only of a side rail.

## **USE OF LADDERS**

Portable rung and cleat ladders shall, where possible, be used at such a pitch that the horizontal distance from the top support to the foot of the ladder is one-quarter of the working length of the ladder (the length along the ladder between the foot and the top support).

The ladder shall be so placed as to prevent slipping, and it shall be lashed, or held in position. Ladders shall not be used in a horizontal position as platforms, runways, or scaffolds.

Portable ladders shall be so placed that the side rails have a secure footing.

Ladder rungs, cleats, and steps shall be parallel, level, and uniformly spaced when the ladder is in position for use.

Ladders shall not be placed in front of doors opening toward the ladder unless the door is blocked upon, locked, or guarded.

Ladders shall not be placed on boxes, barrels, or other unstable bases to obtain additional height.

Ladders with broken or missing steps, rungs, or cleats, broken side rails, or other faulty equipment shall not be used; improvised repairs shall not be made.

A metal spreader or locking device shall be provided on each stepladder to hold the front and back sections in an open position when the ladder is being used.

Short ladders shall not be spliced together to provide long sections.

Ladders made by fastening cleats across a single rail shall not be used.

Ladders shall not be used as guys, braces, or skids, or for other than their intended purposes.

Tops of the ordinary types of stepladders shall not be used as steps.

On two-section extension ladders the minimum overlap for the two sections in use shall be as follows:

Size of ladder (feet)	Overlap (feet)
Up to and including 36	3
Over 36 up to and including 48	4
Over 48 up to and including 60	5

Ladder should be used to gain access to a roof unless the top of the ladder shall extend at least 3 feet above the point of support, at eave, gutter, or roofline.

The bracing on the back legs of step ladders is designed solely for increasing stability and not for climbing.

When ascending or descending, the climber must face the ladder.

Portable ladders shall have nonconductive siderails if they are used where the employee or the ladder could contact exposed energized parts.

Metal ladders shall not be used.

Except when portable ladders are used to gain access to fixed ladders (such as those on utility towers, billboards, and other structures where the bottom of the fixed ladder is elevated to limit access), when two or more separate ladders are used to reach an elevated work area, the ladders shall be offset with a platform or landing between the ladders.

Each employee shall use at least one hand to grasp the ladder when progressing up and/or down the ladder.

An employee shall not carry any object or load that could cause the employee to lose balance and fall.

## **TRAINING**

Contractor shall provide a training program for each employee using ladders and stairways, as necessary. The program shall enable each employee to recognize hazards related to ladders and stairways, and shall train each employee in the procedures to be followed to minimize these hazards.

The Project Superintendent shall ensure that each employee has been trained by a

competent person in the following areas, as applicable:

- The nature of fall hazards in the work area;
- The correct procedures for erecting, maintaining, and disassembling the fall protection systems to be used;
- The proper construction, use, placement, and care in handling of all stairways and ladders;
- The maximum intended load-carrying capacities of ladders and - The standards contained in 1926.1053 Subpart X.

Retraining shall be provided for each employee as necessary so that the employee maintains the understanding and knowledge acquired through compliance with this guideline.

## 12-LOCKOUT / TAGOUT

**Applicable OSHA Standards: 29 CFR 1910.147**

### PURPOSE

The purpose of this policy is to comply with the OSHA standard when working on equipment from injury caused by unexpected release of stored energy and any accidental start – up.

### SCOPE

This program applies to all of our controlled worksites where one of our, or a subcontract employee may be occupationally exposed to an unexpected release of stored energy and any accidental start – up.

### DEFINITIONS

**Acceptance** - The acknowledgment by the persons performing tasks that all isolating devices that may expose them to an unexpected release of energy are properly positioned and that all hazards associated with the job have been addressed and communicated by the owner.

**Addendum** - A shortened term for the Red Tag Master Addendum, a form on which all testing within the isolated system are recorded.

**Cable Tie** - A non-reusable, hand attached, self-locking device with a minimum breaking strength of no less than fifty pounds. (50 lb.) It is used to attach red tags to isolating devices.

**Crew Contact** - A person that has the responsibility of being the focal point of communication for a work crew.

**Energy Source** - Any source of energy that can be harmful to personnel, including chemical, electrical, thermal, mechanical, pneumatic, hydraulic, gravity, and radioactive.

**Exclusive Control** - When an individual performing a task is in continual attendance of, has visual contact with, and is in arms length of the isolating device(s).

**Individual Tag** - Lock and/or tag to be attached by an individual that can only be removed by that individual, except for provisions set forth in this document.

**Isolating Device** - A physical device that prevents the transmission or release of energy or materials. Examples include slide gates, slip blinds air gaps, valves, physical blocks, and

electrical disconnects.

**Isolation Procedure** - A documented energy control procedure which must contain, as a minimum:

- The intended use of the procedure.
- Steps for shutting down, isolating, blocking, and securing the isolated system.
- Steps for placing, removing, and transferring lockout/tagout devices, and the responsibility for them.
- Procedures for testing the isolated system to verify the effectiveness of the energy control and lockout/tagout procedures.

**Job Representative** - The person representing the workers performing the job. They assure that the requirements of this standard are met, including sufficient isolation. (A Job Representative can be a crew contact, a worker, or a supervisor.)

**Lockout** - The process of securing an isolating device to prevent accidental energizing, by using a lock or bolting. Lockout can also be used to provide "one-plus" protection on devices that would not normally be considered isolating devices.

**"One-Plus Lockout/Tagout"** - The requirement of an additional means of isolation or restraint, whenever tagout is used without locks, to prevent inadvertent operation of an isolating device. "One Plus" requires that two separate, unrelated actions must occur to defeat the source isolation.

**Operations Representative** - A person representing company operations that is qualified to isolate, lock and/or tag equipment. This person must have a full and clear understanding of the work to be performed.

**Operations Lock and/or Tag** - The first lock and /or tag to be attached to, and the last lock and/or tag to be removed from an isolating device by a qualified operations representative.

**Owner** - An individual who is in control of a specific piece of equipment or process.

**Red Tag** - The tag used for identifying all isolating devices in use for energy control. All locks will have red tags unless exempted by this standard. The tag will be of standardized design.

**Red Tag Master** - A document that is used to control an isolated system and provide information on that system.

**Red Tag Master Addendum** - A document that describes any equipment testing that may release energy within the isolated system. It can also be used to describe a minor scope change that will take place during a job.

**Release** - Certification by the person performing work that they have completed their task and will no longer be working on the isolated equipment.

**Red Tag Master Roster** - A form which contains individual "Acceptance" and "Release" for each person that will be working on isolated equipment under the Red Tag Master.

**Tagout** - The attachment of a standardized Red Tag to an isolating device. These tags indicate that the equipment must not be operated until the Red Tag is properly removed.

**Worker** - An individual directly responsible for an operation, service or maintenance task.

## LOCKOUT/TAGOUT SPECIFICATIONS

Locking and/or tagging a piece of equipment involves securing an isolating device to prohibit repositioning of the isolating device. There are certain specifications that must be followed when a piece of equipment is locked and/or tagged out.

For the purpose of tagging equipment, a Red Tag shall be affixed to each isolating device.

When line blinds and other isolating devices are used, they must be designed to adequately isolate the maximum amount of energy possible for the system being isolated.

In the case of slip blinds, they must be made visible, distinguishable from orifice plates, easily identifiable, compatible with the process materials, and capable of holding a cable tie for the purpose of attaching a Red Tag.

Red Tags must be legible.

Red Tags shall be attached to all isolating devices with a cable tie. In the case of locks, the Red Tag may be attached to the lock or shackle.

A Red Tag numbering system must be used, with each Red Tag number being unique. The Red Tag number must be recorded on the Red Tag when the Master System is used.

No Red Tags should be used longer than 90 days. Periods, which may exceed 90 days, shall require additional considerations such as permanent isolation or periodic replacement of Red Tags.

All Individual Red Tags shall be identified prior to installation. A qualified person shall install all Individual Red Tags. They must be removed before any Operations Tags.

Prior to any work being performed on an isolated system, there shall be a written procedure.

Any physical device that may be inadvertently repositioned must be made safe using the "One Plus Lockout/Tagout" system. "One Plus" requires an additional means of isolation or restraint whenever tagout is used without locks.

#### EXCEPTIONS:

While there are specifications for every lock and/or tag procedure, there are a few exceptions. These exceptions can include:

- Minor tool changes and adjustments. When routine, repetitive tool changes and adjustments that are integral to the use of the equipment for production take place during normal productions operations they are not subject to the Lockout/Tagout procedures outlined in this standard.
- Minor servicing operations. If minor servicing activities are routine, repetitive and integral to the use of the equipment for production they are not subject to the Lockout/Tagout standard. The work to be performed must be done using different measures which prevent accidental activation or moving of the device. These measures can include push buttons that have to be twisted and pulled out to activate, key-locked switches, or interlocks.
- Exclusive control. If a worker has exclusive control over a piece of equipment it means that the worker is in continual attendance of, has visual contact with, and is in arms reach of the isolating device.
- All Exceptions have to be approved by Form Works, Inc. Safety Department and shall have a documented safe operating procedure.

## RESPONSIBILITIES

#### OWNER RESPONSIBILITIES:

An individual who is in control of a specific piece of equipment or process is considered the owner.

As a minimum, the Owner must:

- Establish an isolation procedure for equipment. The steps that need to be taken to isolate the equipment, including who is responsible for each step, are a part of the isolation procedure.



- Specify and buy lockable equipment when available. The owner determines what type of new equipment is necessary to successfully administer a lock and/or tag.

#### OPERATIONS REPRESENTATIVE RESPONSIBILITIES:

The Operations Representative for a lockout/tagout procedure is the person representing plant operations who is qualified to isolate, lock and/or tag equipment. This representative must have a full and clear understanding of the work to be performed. As a minimum the Operations Representative for a Lockout/Tagout Procedure must:

- Attach the operations locks and/or tags on equipment requiring isolation. The Operations Representative is responsible for not only making sure that the locks and/or tags are on isolating devices, but also that the right locks and/or tags are used. This includes using "One- Plus" when necessary.
- Physically verify that residual energy and/or materials have been relieved, drained, disconnected, restrained or otherwise rendered safe. This verification can take place through inspections and testing.
- Review the condition of equipment with Job Representative and workers assigned to do the job before any work is started and assure proper accountability is in place. The Operations Representative is responsible for making sure that the workers know what's going on, and what each of their roles in the lockout/tagout procedure is.
- Address any concerns expressed by the workers and/or Job Representative regarding equipment isolation and preparation. The Operations Representative shall follow up concerns expressed by workers.
- Reviewing all addenda and communicate to Job Representative. The Operations Representative is responsible for communicating all information about the job, including any changes or additions to the procedures, to the Job Representative.
- Verify the "Release" and removal of locks and/or tags after the work is completed, and that equipment is returned to a safe operable condition.
- Notify personnel in the area that equipment is being placed back into service. This notification can be done over the radio, in the logbooks or in person.

## JOB REPRESENTATIVE RESPONSIBILITIES:

The person representing the workers performing the job is the Job Representative. It is the Job Representative's responsibility to ensure that the requirements of the Lockout/Tagout Safety Standard are met. A Crew Contact, a worker, or an operator can all be Job Representatives, however, the Job Representative cannot be the same person as the Operations Representative for any Red Tag Master. As a minimum, the Job Representative must:

- Review scope of job with the Operations Representative. The scope of the job includes the dates that the job will take place, a description of the job, and the reason that the job is being done.
- Resolve any differences with Operations Representative as they apply to the isolation of the systems. If the Job Representative has a concern about the isolation of the system, the differences must be brought to the attention of the Operations Representative and resolved.
- Review, verify, and confirm isolation of the system (by signing the Master). Once the Job Representative has read and signed the Red Tag Master, the isolation of the system is confirmed.

## WORKER RESPONSIBILITIES:

Any individual who is directly responsible for an operation, service or maintenance task falls into the category of Worker. As a minimum the Worker must:

- Review the status of the equipment prior to signing "Acceptance" of the job (as in the Red Tag Master System), and/or attaching individual locks and/or tags. Signing "Accepted" or attaching locks and/or tags means the Worker is aware of the isolation that is to take place and is in agreement with it.
- Communicate any concerns regarding equipment isolation and preparation to the Operations Representative. This communication must take place before a safe work permit is issued and work begins.
- Notify the Operations Representative of completion of work, any changes in job scope, or identification of any new hazards. The Worker must communicate with the Operations Representative concerning all aspects of the job.
- Sign "Release" for the Master System and/or remove individual locks and/or tags. This indicates completion of assigned tasks or intention not to work on the system.

- Return the equipment to a safe operable status relative to the work that was performed. (Replacing guards, housekeeping, etc.)

## **CORE LOCKOUT/TAGOUT PROCEDURE**

The Core Lockout/Tagout procedure is common to all lockout/tagout procedures. These common steps can be used to achieve 100% control and 100% accountability of all-isolating devices and personnel. As a common base for all other lockout/tagout procedures, personnel involved should complete their required steps in the order given:

### **OPERATIONS:**

- Establishes isolation procedure. (Master or Individual)
- Creates tag location listings and completes Operations Red Tags.
- Isolates the system.
- Verifies and tests isolation, and attaches operations locks and/or tags.
- Reviews jobs to be performed with Job Representative or Workers.
- Issues addenda as needed.

**JOB REPRESENTATIVE:** (Worker is Job Representative if the Individual System is used.)

- Verifies isolation.
- Reconciles any difference and updates tag location listing with Operations Representative.

### **WORKER:**

- Reviews isolation, signs "Acceptance" if the Master System is used, and, if desired, attaches Individual Tags.
- Completes a tag location listing if Individual Tags are to be used.
- Obtains Safe Work Permit.
- Begins work.
- Initiates Addendum if needed.
- Returns completed Safe Work Permit.
- Signs "Release" if Master System is used.
- Removes and signs Individual Tags.

### **OPERATIONS:**

- Removes and signs Operations Tags.
- Reconciles Tags.
- Makes equipment operable.

## INDIVIDUAL LOCKOUT/TAGOUT

The Individual Lockout/Tagout System requires that every person working within the isolated system attach his or her Individual lock and/or tag to each isolating device. The Individual System is mandatory for simple jobs. When this system is used the following rules must be followed:

- The Operations Representative must fully complete all information requested on the Red Tag. Once all of the information has been filled out, the
- Operations Representative is required to attach operation locks and or tags to each isolating device. After the Red Tags have been attached, the Operations Representative lists all attached tag numbers and their location. This is stored in a central location.
- Each Worker shall complete a required information on the Red Tag. Each worker is required to attach and Individual lock and/or tag to all appropriate isolating devices that have an Operations Tag attached. After the Red Tags have been attached, the worker must list all tag numbers and locations. This list must be displayed in a central location.
- After completing the work, the worker(s) must remove their locks and/or tags and fully reconcile with the Red Tag Location Listing. If the worker cannot account for all Red Tags, this must be brought to the attention of the Operations Representative. Successful removal of all Red Tags attached by the Worker must be noted on the Safe Work Permit.
- The Operations Representative removes the Operations locks and/or tags. The Red Tags must be signed to identify who removed them. The Operations Representative must have full reconciliation with the location listing prior to putting equipment back into service.
- The Operations Representative documents the reconciliation, removal and completion of the Lockout/Tagout by signing the "Tags Removed" section of the Red Tag Master. Any deficiencies found should be addressed promptly. The Red Tags must be retained for seven (7) days after the completion of the review.

**Note:** Troubleshooting or testing of equipment may require that the equipment be energized. If this is the case, a Red Tag Addendum must be used and all affected

workers must be notified prior to testing.

## LOCKOUT/TAGOUT MASTER SYSTEM

Jobs that are too complex to be managed under the Individual System must use the Red Tag Master System. This system consists of four parts:

### RED TAG MASTER:

- The Red Tag Master is the document that is used to control an isolated system and provide information on the system. When a Red Tag Master is used the following rules must be followed:
- One Red Tag Master must be completed for each system that is to be isolated. The attachment of locks and/or tags to isolating devices is the responsibility of the Operations Representative. All Red Tag Masters must be displayed in a central location.
- The location of all Red Tags (including Individual), locks, and line blinds must be listed on, or attached to, the Red Tag Master.
- The Red Tag Master number must be a documented unique number and not re-used within the department, or the job site.
- The use of an addendum must be noted on the Red Tag Master. Minor scope changes that may occur due to unforeseen circumstances must be communicated to all workers covered by the Red Tag Master. A description of the scope change, and "Acceptance" by the crew contact of the scope change must be recorded on the Red Tag Addendum. Multiple scope changes that have taken place within the isolated system, or major scope changes will require that a new Red Tag Master be issued.
- The Red Tag Master must list each crew that will be working on the isolated system and the task they will perform. Prior to any work being done, all workers must sign "Acceptance" on the Red Tag Master or Crew Roster to indicate that they fully understand the job to be performed and that they have reviewed, understood, and approved the isolation of the equipment. Once any worker has signed "Acceptance", Operations can no longer alter or remove Red Tags or test the system without using the Addendum or having all workers "Release" the system.
- A Crew Roster may be used as an extension of the master when additional space for signatures is required. In this case, the crew contact must sign the Red Tag Master and be identified on the Roster as the crew contact. All crewmembers must also sign the Crew Roster.

- A listing of all locks and/or tags must be maintained in a central location with the Red Tag Master.
- After each job is completed, all Red Tags will be accounted for, signed, "removed by," matched with the Red Tag Master and reviewed for accuracy. The crews contact whom closes the Crew Roster first makes sure that all personnel who have signed "Acceptance" on the Roster have also signed "Released". The crew contact then either writes "CLOSED" across the Roster or draws a large "X" through the bottom section of the Roster to indicate that the Roster is closed. Finally, the crew contact signs his individual "Release" on the Red Tag Master.

**Any discrepancy in the reconciliation of the Red Tags must be addressed promptly. The Red Tag Master and associated Red Tags must be retained for seven days after the completion of the review.**

#### RED TAGS/LOCKS:

Red Tags are to be used for identifying all isolating devices in use for energy control. When Red Tags/Locks are used, the following rules must be followed:

- Operations Tags and/or locks must not be removed until all workers have signed "Release" on the Red Tag Master and or the Red Tag Roster and removed any Individual Tags. The removal of Operations tags must be the last operation prior to putting the equipment back into service.
- Workers may attach their Individual locks and/or tags to isolating devices. All Individual Tags must be identified as such, and the location of all locks and/or tags must be recorded on a location listing with the Red Tag Master.
- All operating units must have a procedure to account for all keys.
- Red Tags cannot be altered, removed, or any system tested without using the Red Addendum. The addendum is used to communicate all activity once the workers have signed "Acceptance" on the Red Tag Master.
- All Red Tags must be retained with the Master seven days after completion of work.

## RED TAG MASTER ADDENDUM:

The Red Tag Master Addendum is used for recording tags that are added or removed from an already isolated system or those temporarily removed for testing of equipment. When the Red Tag Master Addendum is used, the following rules must be followed:

- The Addendum can be used only when authorized by an Operations Representative in conjunction with either a Job Representative or a Crew Contact. The Operations Representative and either the Job Representative or Crew Contact are responsible for the accurate completion of the form. If the Operations Representative authorizes the Addendum and a Crew Contact, then the Job Representative must be notified prior to the job task being performed.
- The Addendum must be used in cases where it is desirable to test certain equipment prior to full system clearance. (pump rotation, etc.). Operations may temporarily remove one or more tags to perform this check or position change when accompanied by a qualified person from the crew performing the work. In all cases, it will require that the workers present at the work site covered under the Red Tag Master be notified. This notification will include information on the nature of the Addendum, status of equipment, and duration of the test. Before any work interrupted by the Addendum may continue, the test must be completed in its entirety. The system must be returned to the safe pre-check condition.
- The Addendum must be displayed with the Red Tag Master.

## RED TAG MASTER ROSTER:

The Red Tag Master Roster contains individual "Acceptance" and "Release" for each person that will working on isolated equipment under the Red Tag Master. When using the Red Tag Master Roster the following rules must be observed:

- Prior to starting work, each person who will be working on the isolated system that may be affected by the addition or removal of Red Tags must sign "Acceptance" on the Roster. The Crew Contact is responsible for making sure that all workers have signed the Roster. The Crew Contact must be identified on the Roster.
- The Roster must be attached to the Red Tag Master.



- There will only be one Roster per Crew Contact working under a given Master. Workers may sign onto the Roster at any time as long as the Crew Contact has not closed the Roster and signed "Release" on the Master. Prior to beginning work, the workers must have specific details of the job to be performed and understand the isolation procedure through the use of the Safety Work Permit. It is the Crew Contact's responsibility to make sure all workers are on the Red Tag Master Roster.
- After prior agreement with Operations, workers are not required to "Release" the system until their task is complete, even if the task crosses shifts.
- Individuals who have attached their Individual locks and/or tags must sign "Accepted" and "Released" on the Red Tag Master Roster. Individual locks and/or tag numbers and the locations must be recorded and located with the Red Tag Master.

## **TAG AND/OR LOCK REMOVAL FOR UNAVAILABLE WORKER**

Procedures for the removal of locks and/or tags when an individual has failed to sign off of a completed job, or remove their individual locks and/ or tags, must include:

- Some form of verification that the individual is not at the facility. This verification should include contacting the supervisor.
- Attempted contact of the individual for verbal "Release". If release is obtained, only the person receiving the release can remove the lock and/or tag.
- If the employee cannot be contacted:
  1. Verify that the system is safe for removal or Red Tags and /or Locks.
  2. Approval by the Owners Representative or his documented designee is required before work can be released for that individual employee who failed to release or remove locks/tags.
  3. Notify the individual upon his or her return to the facility that locks and/or tags have been removed.



## AUDITS

An audit is a formal examination or review. As a minimum, the procedures listed below must be followed:

- At least annually, there will be audits of compliance at the Corporate level for this standard. This audit will be documented.
- Interviews of all persons around or performing a job task must be conducted. These interviews will be documented.
- Audits must include a representative sample of lockout/tagout work done. These audits will be documented.
- A qualified person not directly involved in the job that is being done must perform audits.

## TRAINING

Training on lockout/tagout procedures is required for all workers, both users and non-users.

- Training must be fully documented. The name of the trainer, the trainee, the dates of training, and whether the employee was trained as a user or a non-user of Lockout/Tagout Procedures needs to be documented.
- Training will be given to all new personnel concerning the Lockout/Tagout Process.
- Each work site shall provide training on an annual basis to ensure that everyone understands the purpose and function of the Lockout/Tagout Program.
- Retraining will be required annually. Retraining will also be required under the following special circumstances:
  1. When there is a change in the Lockout/Tagout Procedure.
  2. When an audit or incident reveals deviations from procedures.
  3. When either audit or incidents determine that inadequacies exist in personnel knowledge of or adherence to energy policies and/or procedures.
  4. When there are changes in equipment or job assignments (only the workers affected).

## 13-DRIVERS POLICY

Individuals assigned to company vehicles are responsible for the safer operation and maintenance of that vehicle. Company vehicles consist of the following:

- All vehicles that are owned, leased, rented, or hired by the company

The following has been prepared to protect the public, company and its employees and will serve as a guide in the operation of all company vehicles. Failure to comply with these guidelines will require revocation of company driving privileges.

### USERS OF COMPANY VEHICLES:

- Only authorized employees are permitted to operate company vehicles. No employees may drive a vehicle for the company unless prior authorization has been received from the Safety Director. Those authorized employees can be confirmed through the Safety Director or the current Driver authorization list.
- Non employee use of company vehicles is strictly prohibited.
- The employee must have a valid Drivers License with the proper endorsements.
- The employee must have the proper class of drivers' license to operate the vehicle he or she is driving. The proper drivers license classes are as follows:

Class A: Any tractor trailer combination that has an actual weight, declared weight or GVWR ( gross vehicle weight rating) or 26,001 LBS, or provided towed vehicle is more than 10,000.

Class B: Any single motor vehicle that has an actual weight, declared weight or GVWR of 26,001 LBS. or more, or any such vehicle towing a vehicle in excess of, 10,000 LBS or less.

Class C: Any motor vehicle that has an actual weight, declared weight or GVWR of less than 26,000 LBS. when endorsements "H"(Hazardous Materials) or "P" (Passenger Transport of 16 or more persons), would be required on the drivers license OR any combination of motor vehicles where the towing vehicle is less than 26,001 LBS GVWR and the towed vehicle has a GVWR of 10,000 LBS or less, but together they weight 26,001 LBS or more.

Class D: Any truck or truck tractor that has an actual weight, declared weight or GVWR of 8000 LBS or more but less than 26,001 LBS, or is more than 80 inches wide.

Class E: Motor vehicles less that 8,000 LBS

- The employee must not have in excess of six points as per the attached evaluation form.
- An employee operating a company vehicle while under the influence of an intoxicating beverage or drugs will be immediately terminated.
- An employee is required to report every vehicle violation and/or accident immediately upon its occurrence.

## **USAGE**

- Company vehicles are to be used for company business only.
- Drivers of company vehicles must observe and obey all traffic laws. In the event a citation is issued for a traffic infraction, the driver will be responsible for the payment of the fine.
- Seat belts must be worn when operating a company vehicle. If employees are involved in an accident and are not wearing a seat belt, it will be considered a blatant disregard of the Safety Policy. Failure to wear seatbelts while operating or riding passenger in a company vehicle may result in disciplinary action up to and including termination.
- Company Vehicles may be garaged only:
  - Where parking of the vehicle is not in violation of the law.
  - Where the vehicle is secure from vandalism and/or theft
  - Where permission is secured from the management
- All loads must be securely tied down to prevent shifting or dropping onto roadways.
- The transporting of combustible liquids is approved in approved containers only
- Non employee passengers are prohibited unless on company business
- Keys are never to be left in the ignition. Vehicle doors are to be locked when the vehicle is unattended

## **MAINTENANCE**

- Employees assigned a company vehicle are responsible for the routine maintenance of the company vehicle.
- All outside repairs or maintenance of the Company vehicle must be approved through the company's maintenance department.
- Employees assigned a company vehicle are responsible for keeping it clean, both inside and out.

- Only fuel recommended by the manufacture is to be used.

### **MISCELLANEOUS**

- Private vehicles are not to be used for transporting materials or company tools unless authorized by the Project Manager or Superintendent.
- Vehicle license plates must be mounted securely and display a valid sticker.
- Vehicle insurance and registration cards must be kept in the glove box of the vehicle. The registration form number must correspond with the license plate.
- In the event of an accident, adhere to the accident procedure and notify the Safety Director immediately.
- Company issued fuel cards are to be used by authorized personnel only.
- Fuel cards are to be used for company vehicles or vehicles authorized by the company only.

### **ADMINISTRATION AND TRAINING**

- Prior to an employee being given driving privileges for a company vehicle, the Safety Director will review that the employee's motor vehicle record for compliance with the guidelines established on the Driver Evaluation Form.
- Upon receipt of a reported accident or violation, the Safety Director will review the employees driving record and compliance with the Driver Evaluation Form.
- All employees driving a company vehicle will have their motor vehicle record reviewed annually by the Safety Director for compliance with company policy.

### **ACCIDENT PROCEDURE**

- Stop
  - Check for injuries and call for medical attention if necessary
  - Get witness information if possible
  - Call the local police jurisdiction
  - Notify the Safety Director and your Supervisor as soon as possible
- Complete the necessary company reports and submit to the Safety Director as soon as possible.
- Provide information required but do not, under any circumstances admit guilt, responsibility or offer a settlement of any kind.
- Once again, notify the Safety Director immediately, especially if there are injuries.

**DEVIATION FROM THIS POLICY COULD RESULT IN DISCIPLINARY ACTION UP TO AND INCLUDING TERMINATION.**

# DRIVER EVALUATION FORM

DATE REQUESTED: \_\_\_\_\_

EMPLOYEE NAME: \_\_\_\_\_

EMPLOYEES NUMBER: \_\_\_\_\_

- This is an updating procedure for the continual evaluation of a driving employee.
- The point procedure is the method used to evaluate all drivers of company vehicles.
- If the driver has an evaluation score in the excess of five points, serious consideration will be given to their qualifications to continue driving a company vehicle.

Factors Considered :

Number of accidents (within 3 years)

1 or 2	1 point per occurrence
3 or more	2 points per occurrence

Major moving infractions (within 3 years)

Driving under the influence of drugs/alcohol	7 points
Any driving alcohol related offense	7 points
Driving with a suspended license	7 points
Reckless Driving	7 Points
Speeding in excess of 21 over the posted limit	2 points
Hit and run	7 points

1. Other moving infractions or points.

1 or 2	1 Point per Occurrence
3 or more	2 Points per Occurrence

2. Non moving violations ( within 3 years)

1 point per occurrence

3. 3 or more suspensions of a license (within 3 years) 7 points

Grading points	Best: 0-2 points	Average: 3-4 points	Probation 5-6
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## 14-MOBILE CRANES AND HOIST

**Applicable OSHA Standards: 29 CFR 1926.251, 1926.1400**

### PURPOSE

To provide a guideline for the safe operation, use and inspection of mobile cranes and hoist.

### SCOPE

This program applies to crawler cranes, locomotive cranes, wheel mounted cranes of both truck and self-propelled wheel type, and any variations thereof which retain the same fundamental characteristics used at our worksites.

### DEFINITIONS

*Accessory-* A secondary part or assembly of parts which contributes to the overall function and usefulness of a machine.

*Axis of Rotation-* The vertical axis around which the crane superstructure rotates.

*Base-* The traveling base or carrier on which the rotating superstructure is mounted such as a car, truck, crawlers, or wheel platform.

*Boom Angle-* The angle between the longitudinal centerline of the boom and the horizontal. The boom longitudinal centerline is a straight line between the boom foot pin (heel pin) centerline and boom point sheave pin centerline.

*Boom Hoist-* A hoist drum and rope reaving system used to raise and lower the boom. The rope system may be all live reaving or a combination of live reaving and pendants.

*Boom-* Member hinged to the front of the rotating superstructure with the outer end supported by ropes leading to a gantry or A-frame and used for supporting the hoisting tackle.

*Boom Stop-* A device used to limit the angle of the boom at the highest position.

*Brake-* A device used for retarding or stopping motion by friction or power means.

*Cab-* A housing which covers the rotating superstructure machinery and/or operator's station. On truck-crane trucks a separate cab covers the driver's station.

*Clutch-* A friction, electromagnetic, hydraulic, pneumatic, or positive mechanical device for engagement or disengagement of power.

*Counterweight-* A weight used to supplement the weight of the machine in providing stability for lifting working loads.

*Crane Safe Work Permit -* The permit issued by the Project Superintendent or Site Crane Competent Person to the crane operator before any mobile hoisting work is performed.

*Crawler Crane-* Consists of a rotating superstructure with power plant, operating machinery, and boom, mounted on a base, equipped with crawler treads for travel. Its function is to hoist and swing loads at various radii.

*Critical Lift -* A lift where:

1. The load exceeds 80% of the crane's capacity.
2. Weight of the lift exceeds 50% of the load chart rating of the equipment being used and the lift is over power lines, process equipment, piping, or personnel are being lifted.
3. Two booms are required.
4. Poles or derricks have been erected.
5. Personnel are being lifted.
6. Crane is traveling with load.
7. Any lift in a Critical Lift Area.

*Designated-* Means selected or assigned by the company representative as being qualified to perform specific duties.

*Drum-* Cylindrical members around which ropes are wound for raising and lowering the load or boom.

*Dynamic-* Means loads introduced into the machine or its components by forces in motion.  
for hoisting and lowering loads.

*Gantry-* Structural frame, extending above the superstructure, to which the boom support ropes are reaved.

*Jib-* An extension attached to the boom point to provide added boom length for lifting specified loads. The jib may be in line with the boom or offset to various angles.

*Load (working) -* Means the external load, in pounds, applied to the crane, including the weight of load-attaching equipment such as load blocks, shackles, and slings.

*Load block [lower]* - Means the assembly of hook or shackle, swivel, sheaves, pins, and frame suspended by the hoisting ropes.

*Load block [upper]* - Means the assembly of hook or shackle, swivel, sheaves, pins, and frame suspended from the boom point.

*Load hoist*- A hoist drum and rope reaving system.

*Load Ratings*- Crane ratings in pounds established by the manufacturer.

*Locomotive Crane*- Consists of a rotating superstructure with power-plant, operating machinery and boom, mounted on a base or car equipped for travel on railroad track. It may be self-propelled or propelled by an outside source. Its function is to hoist and swing loads at various radii.

*Mobile Hoisting Equipment* - Conventional rigid boom cranes, hydraulic cranes, and flex-lifts.

*Outriggers*- Extendable or fixed metal arms, attached to the mounting base, which rest on supports at the outer ends.

*Reaving*- Means a rope system in which the rope travels around drums and sheaves.

*Rigging*- Any cables, chokes, slings, hooks, beams, spreaders, or other device used to attach or lift the load.

*Rope*- Refers to a wire rope unless otherwise specified.

*Side Loading*- A load applied at an angle to the vertical plane of the boom.

*Superstructure*- The rotating upper frame structure of the machine and the operating machinery mounted thereon.

*Swing*- Means the rotation of the superstructure for movement of loads in a horizontal direction about the axis of rotation.

*Swing Mechanism*- The machinery involved in providing rotation of the superstructure.

*Tackle*- Assembly of ropes and sheaves arranged for hoisting and pulling.

*Truck Crane*- Consists of a rotating superstructure with powerplant, operating machinery and boom, mounted on an automotive truck equipped with a powerplant for travel. Its function is to hoist and swing loads at various radii.



*Wheel Mounted Crane-* Consists of a rotating superstructure with powerplant, operating machinery and boom, mounted on a base or platform equipped with axles and rubber- tired

wheels for travel. The base is usually propelled by the engine in the superstructure, but it may be equipped with a separate engine controlled from the superstructure. Its function is to hoist and swing loads at various radii.

*Whipline-* A separate hoist rope system of lighter load capacity and higher speed than provided by the main hoist.

*Winch Head-* A power driven spool for handling of loads by means of friction between fiber or wire rope and spool.

## **RESPONSIBILITIES**

### **PROJECT SUPERINTENDENT:**

The Project Superintendent or his/her designate is responsible for assuring that:

- Employees know, understand, and comply with the requirements of this SHG.
- Employees are trained in the procedures and use of equipment they are to use to complete the job.
- Audit and inspect for compliance of this SHG.
- Each crane is on a regular (daily, monthly, annual) inspection schedule.
- Proof of regular inspections using the checklist in this Safety Guideline or equivalent are available.
- Rental or leased cranes have a valid annual certification sticker or other documents prior to the use of the cranes.
- Competent, qualified operators are used when lifting.
- A Crane Safe Work Permit is issued for the following:
  - a. All lifts with cranes having a capacity greater than ten (10) tons.
  - b. All critical lifts.
- Joint responsibility with the crane operator for the safe operation of the

crane(s) and the safety of the lift is maintained.

- Failure to comply with this SHG will result in disciplinary action, up to and including discharge.

#### CRANE OPERATORS:

The crane operator is responsible for:

- Knowing, understanding, and complying with this program.
- Inspecting cranes on a daily basis and reporting defects noted during these inspections.
- Reporting any unsafe conditions to supervision.
- Knowing the weight of loads PRIOR to lifting.
- Knowing the wind speed PRIOR to lifting.
- Performing a daily inspection using the Attachment D "Daily Operators Inspection Report" at the beginning of each days work PRIOR to the crane use. Any deficiencies that affect the safe operations of the crane shall be repaired PRIOR to use. Each daily inspection report shall remain with the operator during the operation of the crane and turned in at the end of the work day.
- Perform a lifting job specific pre-task using Attachment An "Operators Lift Pre-Task" for each lift.
- Insure the load, rigging, procedures, and lift are safe to use. The operator is responsible for the load and lift when the crane is connected to the load.
- Assume joint responsibility with the Site Superintendent for the safe operation of the crane(s) and the safety of the lift.
- Understand that failure to comply with this program will result in disciplinary action, up to and including discharge.

## GENERAL REQUIREMENTS

### PRE-LIFT:

Manufacture's lifting procedures and methods shall be observed at all times.

No modifications or additions which affect the capacity or safe operation of the equipment shall be made by anyone without the manufacturer's written approval. If such modifications or changes are made, the capacity, operation, and maintenance instruction plates, tags, or decals, shall be changed accordingly. In no case shall the original safety factor of the equipment be reduced.

All cranes shall have a qualified competent operator.

Inspect cranes when they arrive on site for mechanical integrity, load chart, operating manual and annual certification decal/sticker.

The crane operator must complete an "Operator's Lift Pre-Task" (Attachment A) and "Mobil Hoisting Safe Work Procedure" (Attachment G) PRIOR to lifting.

Rated load capacities, recommended operating speeds, special hazard warnings, or instructions shall be in a conspicuously place on all equipment, as required, and shall be visible to the operator while at the control station.

Inspect all rigging devices before use. Follow manufacturer's capacities and recommendations.

Obtain a Crane Safe Work Permit (Attachment E) for all cranes with capacities of ten (10) tons or more and critical lifts.

Work with lifts, cranes, or any hoisting equipment must be supervised at all times.

A qualified Signal Person and Qualified Rigger must be provided.

Wooden pads on outriggers will be used on all non-concrete surfaces. Mats will be used as needed.

The rear of the rotating superstructure of a crane will be barricaded to warn of the pinch point hazard.

The area where an overhead lift is made will be barricaded if personnel can have access and walk under the load.

Load block, headache ball, hooks, boom tip, and anti-two block devices shall be marked with highly visible fluorescent orange paint.

All jibs shall have positive stops to prevent their movement of more than 5 deg above the straight line of the jib and boom on conventional type crane booms. The use of cable type belly slings does not constitute compliance with this rule.

#### LIFTING:

Hand signals to crane operators will be given by a qualified signalman, shall be those prescribed by the applicable ANSI standard for the type of crane in use. An illustration of the signals shall be posted at the job site.

Rigging will be done by a qualified rigger.

All employees shall be kept clear of loads about to be lifted and of suspended loads.

There shall be no sudden acceleration or deceleration of the moving load.

Side loading of booms shall be limited to freely suspended loads. Cranes shall not be used for dragging loads sideways.

No hoisting, lowering, swinging, or traveling shall be done while anyone is on the load or hook.

On truck-mounted cranes, no loads shall be lifted over the front area except as approved by the crane manufacturer.

The operator shall test the brakes each time a load approaching the rated load is handled by raising it a few inches and applying the brakes.

Outriggers shall be used when the load to be handled at that particular radius exceeds the rated load without outriggers as given by the manufacturer for that crane. Where floats are used they shall be securely attached to the outriggers. Wood blocks used to support outriggers shall:

- Be strong enough to prevent crushing.
- Be free from defects.
- Be of sufficient width and length to prevent shifting or toppling under load.

Neither the load nor the boom shall be lowered below the point where less than two full wraps of rope remain on their respective drums.

When two or more cranes are used to lift one load, one designated person shall be responsible for the operation. He/she shall be required to analyze the operation and instruct all personnel involved in the proper positioning, rigging of the load, and the movements to be made.

In transit the following additional precautions shall be exercised:

- The boom shall be carried in line with the direction of motion.
- The superstructure shall be secured against rotation, except when negotiating turns when there is an operator in the cab or the boom is supported on a dolly.
- The empty hook shall be lashed or otherwise restrained so that it cannot swing freely.

Before traveling a crane with load, a designated person shall be responsible for determining and controlling safety. Decisions such as position of load, boom location, ground support, travel route, and speed of movement shall be in accord with his determinations.

A crane with or without load shall not be traveled with the boom so high that it may bounce back over the cab.

When rotating the crane, sudden starts and stops shall be avoided. Rotational speed shall be such that the load does not swing out beyond the radii at which it can be controlled. A tag or restraint line shall be used when rotation of the load is hazardous.

When a crane is to be operated at a fixed radius, the boom-hoist pawl or other positive locking device shall be engaged.

Ropes shall not be handled on a winch head without the knowledge of the operator.

While a winch head is being used, the operator shall be within convenient reach of the power unit control lever.

The operator shall not be permitted to leave his position at the controls while the load is suspended.

No person should be permitted to stand or pass under a load on the hook.

If the load must remain suspended for any considerable length of time, the operator shall hold the drum from rotating in the lowering direction by activating the positive controllable means of the operator's station.

#### OTHER REQUIREMENTS:

Cranes shall not be operated without the full amount of any ballast or counterweight in place as specified by the maker, but truck cranes that have dropped the ballast or counterweight may be operated temporarily with special care and only for light loads without full ballast or counterweight in place. The ballast or counterweight in place specified by the manufacturer shall not be exceeded.

Necessary clothing and personal belongings shall be stored in such a manner as to not interfere with access or operation.

Tools, oil cans, waste, extra fuses, and other necessary articles shall be stored in the tool box, and shall not be permitted to lie loose in or about the cab.

Refueling with small portable containers shall be done with an approved safety type can equipped with an automatic closing cap and flame arrester.

Machines shall not be refueled with the engine running.

A carbon dioxide, dry chemical or equivalent fire extinguisher shall be kept in the cab or vicinity of the crane.

Operating and maintenance personnel shall be made familiar with the use and care of the fire extinguishers provided.

#### OPERATIONS NEAR OVERHEAD ELECTRICAL LINES:

Except where electrical distribution and transmission lines have been de-energized and visibly grounded at point of work or where insulating barriers, not a part of or an attachment to the equipment or machinery, have been erected to prevent physical contact with the lines, equipment or machines shall be operated proximate to power lines only in accordance with the following:

Clearances of overhead power lines shall conform with OSHA standard 1926.1408

A person shall be designated to observe clearance of the equipment and give timely warning for all operations where it is difficult for the operator to maintain the desired clearance by visual means.

Cage-type boom guards, insulating links, or proximity warning devices may be used on cranes, but the use of such devices shall not alter the requirements of any other regulation of this part even if such device is required by law or regulation.

Any overhead wire shall be considered to be an energized line unless and until the person owning such line or the electrical utility authorities indicate that it is not an energized line and it has been visibly grounded.

Prior to work near transmitter towers where an electrical charge can be induced in the equipment or materials being handled, the transmitter shall be de-energized or tests shall be made to determine if electrical charge is

induced on the crane. The following precautions shall be taken when necessary to dissipate induced voltages:

- The equipment shall be provided with an electrical ground directly to the upper rotating structure supporting the boom; and
- Ground jumper cables shall be attached to materials being handled by boom equipment when electrical charge is induced while working near energized transmitters. Crews shall be provided with nonconductive poles having large alligator clips or other similar protection to attach the ground cable to the load.
- Combustible and flammable materials shall be removed from the immediate area prior to operations.

## INSPECTION REQUIREMENTS

The Crane Operator and the Crane Competent Person is responsible for performing inspections using Attachment D Daily Operators Inspection Report- Mobile Crane Operation, Attachment B Monthly Hydraulic Crane Inspection Report and Attachment C Monthly Inspection of Crawler, Locomotive & Truck Cranes.

A thorough, annual inspection of the hoisting machinery shall be made by a competent person, or by a government or private agency recognized by the U.S. Department of Labor. Form Works Inc. shall maintain a record of the dates and results of inspections for each hoisting machine and piece of equipment.

Any defects found will be repaired by a qualified person before the crane is used.

Wire rope shall be taken out of service when any of the following conditions exist:

- In running ropes, six randomly distributed broken wires in one lay or three broken wires in one strand in one lay;
- Wear of one-third the original diameter of outside individual wires.
- Kinking, crushing, bird caging, or any other damage resulting in distortion of the rope structure;
- Evidence of any heat damage from any cause;
- Reductions from nominal diameter of more than one-sixty-fourth inch for diameters up to and including five-sixteenths inch, one-thirty-second inch for diameters three-eighths inch to and including one-half inch, three-sixty-fourths inch for diameters nine-sixteenths inch to and including three-fourths inch, one-sixteenth inch for diameters seven-eighths inch to 1 1/8 inches inclusive, three-thirty-seconds inch for diameters 1 1/4 to 1 1/2 inches inclusive;
- In standing ropes, more than two broken wires in one lay in sections beyond end connections or more than one broken wire at an end connection.
- Wire rope safety factors shall be in accordance with American National Standards Institute

## **TRAINING REQUIREMENTS**

Training will be conducted on the requirements of this program annually, whenever this program is revised, and for new crane operators or newly hired operators.

Crane operators and the rigging crew will review this program prior to lifts. If the job has multiple lifts this program will be reviewed once prior to the jobs starting. All new crane operators and rigging crew members will review this program prior to starting work. Documentation of this review will be filed with the Site Superintendent or Site Safety Representative using Attachment F "Safe Work Practice Review Roster" of this program.

## **ATTACHMENTS**

- A. Operators Lift Pre-Task
- B. Monthly Hydraulic Crane Inspection Report
- C. Monthly Inspection of Crawler, Locomotive & Truck Cranes
- D. Daily Operators Inspection Report
- E. Crane Safe Work Permit
- F. Review Roster
- G. Mobil Hoisting Safe Work Procedure



# ATTACHMENT A

## OPERATORS LIFT PRE-TASK

To be filled out by operator of equipment and rigger foreman/lead person and signed by both.

**DATE:** \_\_\_\_\_ **Area of Work:** \_\_\_\_\_

Operators name (Printed): \_\_\_\_\_

Riggers name (Printed): \_\_\_\_\_

Equipment being used: \_\_\_\_\_

Load Description: \_\_\_\_\_

Load Total Weight: \_\_\_\_\_

Type of slings or Separators to be used and their maximum capacity:

\_\_\_\_\_

A) What line will be used:

1. Whip Line - Line Size: \_\_\_\_\_

Max. Capacity in lbs.: \_\_\_\_\_

Max. Boom Angle MINUS 10% for Safety Factor: \_\_\_\_\_

2. Block Line - Line Size: \_\_\_\_\_

Max. Capacity in lbs.: \_\_\_\_\_

Max Boom Angle MINUS 10% for Safety Factor: \_\_\_\_\_

3. Swing Radius: \_\_\_\_\_

B) What type of signal will be used? (Circle **YES** or **NO**)

1. Hand Signal - **YES** or **NO** - Will signal Person be in FULL View at ALL Times -

**YES** or **NO** - OR - Will Signal Person Be Relay Person - **YES** or **NO**

Signal Persons Name: \_\_\_\_\_

2. Two-Way Radio Used: **YES** or **NO**

Signal Person Name: \_\_\_\_\_

3. What Type of Warning will be given By Crane Operator when Swing

Begins: \_\_\_\_\_

C) Type of Surface Crane is on AND is it within one degree of

Level: \_\_\_\_\_

D) Has Pre-Lift Meeting been held with all involved with Lift and Crew in Area of Lift: **YES**  
or **NO**

E)

Operator Signature: \_\_\_\_\_

Rigger Signature: \_\_\_\_\_

Competent Person Signature: \_\_\_\_\_

# ATTACHMENT B

## MONTHLY HYDRAULIC CRANE INSPECTION REPORT

Owner: \_\_\_\_\_ Date: \_\_\_\_\_ Equipment No: \_\_\_\_\_  
 Manufacturer/Model: \_\_\_\_\_  
 Serial Number: \_\_\_\_\_ Date of Manufacture: \_\_\_\_\_  
 Maximum Capacity: \_\_\_\_\_ tons

Boom Length at Maximum Capacity: \_\_\_\_\_ ft.  
 Capacity Chart Posted in Cab:  YES  NO

	CONDITION
1. Identification & High-visibility Markings	_____
2. Hooks (pins-swivels)	_____
3. Hook block (pins-grease fittings)	_____
4. Boom Tip Sheaves	_____
5. Cable Drum (facing & becket)	_____
6. Hoist Line (Condition of cable, age)	_____
7. Main Boom (structural members-pins)	_____
8. Boom Extensions (structural members-pins)	_____
9. Cable Guides	_____
10. Boom Hoist Safety Device (check valve)	_____
11. Hydraulic System (hoses, pump, controls, reservoir)	_____
12. Hydraulic Outriggers	_____
13. Power Unit Instrumentation	_____
14. Tires (air pressure/damage)	_____
15. Steering Mechanism	_____
16. Cab, Platforms, Handrail, Steps, Glass, Access	_____
17. Lighting System	_____
18. Painting	_____
19. Fire Extinguisher	_____
20. Housekeeping	_____

OVERALL EVALUATION OF CONDITION  Good, Safe  Fair, Safe  Unsafe

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Operators Signature: \_\_\_\_\_

Competent Persons Signature: \_\_\_\_\_

# ATTACHMENT C

## MONTHLY INSPECTION OF CRAWLER, LOCOMOTIVE & TRUCK CRANES

Date: \_\_\_\_\_ Manufacturer: \_\_\_\_\_  
 Type: \_\_\_\_\_ Serial Number: \_\_\_\_\_

The following items must be inspected on a monthly basis including cranes that have been idle for six months or less:

	<b>Satisfactory</b>	<b>Unsatisfactory</b>
1. All control mechanisms for maladjustment interfering with proper operation:	_____	_____
2. All control mechanisms for excessive wear of components and contamination by lubricants or other foreign matter:	_____	_____
3. All safety devices for malfunction:	_____	_____
4. Deterioration or leakage in air or hydraulic systems:	_____	_____
5. Crane hooks with deformations or cracks. For hooks w/cracks or having more than 15% in excess of normal throat opening or more than 10 degree twist from the plane of the unbent hook:	_____	_____
6. Electrical apparatus for malfunctioning, signs of excessive deterioration, dirt, & moisture accumulation:	_____	_____
7. Deformed, cracked or corroded members, in the crane structure and boom:	_____	_____
8. Cracked or worn sheaves and drums:	_____	_____

- 9. Worn, cracked or distorted parts (pins, bearings, shafts, gears, rollers and locking devices): \_\_\_\_\_
- 10. Excessive wear of chain-drive sprockets and excessive chain stretch: \_\_\_\_\_
- 11. Excessive wear on brake and clutch system parts, linings, pawls, and ratchets: \_\_\_\_\_
- 12. Travel steering, braking, and locking devices for malfunction: \_\_\_\_\_
- 13. Excessively worn, damaged or under inflated tires: \_\_\_\_\_
- 14. Load, boom angle, and other indicators over their full range for and significant inaccuracies: \_\_\_\_\_
- 15. All ropes in use for deterioration or loss of original strength such as:
  - A. Reduction of rope diameter below nominal diameter due to loss of core support, internal or external corrosion, or wear of outside wires:
  - B. A number of broken outside wires and the degree of distribution of concentration of such broken wires.
  - C. Worn outside wires.
  - D. Corroded or broken wires at end connections.
  - E. Corroded, cracked, bent, worn, or improperly applied end connections.
  - F. Severe kinking, crushing, cutting, or unstranding.

**NOTE:** Rope sections in contact with equalizer sheaves or other sheaves where rope travel is limited or with saddles.

- 16. Hand signals poster: \_\_\_\_\_
- 17. Rated load capacities and  
operating instruction posted: \_\_\_\_\_

Operator Signature: \_\_\_\_\_

Competent Person Signature: \_\_\_\_\_

# ATTACHMENT D

## DAILY OPERATORS INSPECTION REPORT - MOBIL CRANE OPERATION

Date: \_\_\_\_\_ Manufacturer/Model: \_\_\_\_\_  
 Weight: \_\_\_\_\_ Capacity: \_\_\_\_\_ tons

Monthly Inspection Date: \_\_\_\_\_ Annual Cert. Date: \_\_\_\_\_

	Acceptable	Not Acceptable	Not Applicable
1. Load line - lubricated, wound properly on drum, condition:	_____	_____	_____
2. Whip line - lubricated, wound properly on drum, condition:	_____	_____	_____
3. Hook and safety latches on load block:	_____	_____	_____
4. Hook and safety latches on headache ball:	_____	_____	_____
5. Cable at wear points:	_____	_____	_____
6. Pins in becket:	_____	_____	_____
7. Wedges installed:	_____	_____	_____
8. Clamps on dead ends:	_____	_____	_____
9. Boom line (Conventional booms) lubricated, wound on drum properly, condition:	_____	_____	_____
10. Hydraulic oil lines:	_____	_____	_____
11. Outriggers, pads and pins:	_____	_____	_____
12. Lights, turn signals:	_____	_____	_____
13. Horn:	_____	_____	_____
14. Backup alarm:	_____	_____	_____
15. Oil:	_____	_____	_____
16. Water:	_____	_____	_____
17. Boom pins:	_____	_____	_____
18. Cotter pins:	_____	_____	_____
19. Steering:	_____	_____	_____
20. Tires/tracks:	_____	_____	_____
21. Controls operation:	_____	_____	_____
22. Brakes - swing winch - operate against engine power:	_____	_____	_____
23. Instruments:	_____	_____	_____
24. Legible load chart:	_____	_____	_____
25. Energized line warning marker	_____	_____	_____
26. Clean windshield, windows, Check wipers:	_____	_____	_____

- 27. Swing radius barricaded: \_\_\_\_\_
- 28. Operators certification card expiration date: \_\_\_\_\_
- 29. Overall evaluation of crane:  
**( ) Good-Safe ( ) Fair-Safe ( ) Unsafe**

Operator Signature: \_\_\_\_\_

Competent Person Signature: \_\_\_\_\_

## **ATTACHMENT E**

### **CRANE SAFE WORK PERMIT**

To Be Developed With Each Written Site Specific Plan





## ATTACHMENT G

### MOBIL HOISTING SAFE WORK PROCEDURE

This safe work procedure is designed to assist both crane operators and rigging crews in performing their jobs safely. It is not intended to replace any checklist or specific safe work procedures for critical lifts. Since it may be impractical to write a specific safe work procedure for each job and safe rigging and operating techniques are used to safely accomplish many different jobs the following safe work procedure shall apply.

#### BEFORE LEAVING STAGING AREA AT JOB SITE

1. Obtain job line up. This should be a question and answer session that eliminates doubts about the job(s) to be performed. Complete Attachment A "Operators Lift Pre-Task" form.
2. Visually inspect crane and test for safe operating condition using attachment D "Daily Operators Inspection Report".
3. Inspect slings, hooks, shackles, and other lifting equipment.
4. Crane operator must be familiar with the crane and qualified to operate it safely.

#### AT JOB SITE

1. Obtain a Safe Work Permit from client representative, as required.
2. Determine a safe work procedure. Write a specific safe work procedure for critical lifts and any non-routine lifts.
3. Know, OR ACCURATELY CALCULATE, the weight of the load. **NEVER MAKE A LIFT IF WEIGHT IS UNKNOWN.**
4. Check and verify the load radius - keep this distance as short as possible. The radius is measured with a tape from the center of rotation to the center of gravity of the load. Remember to allow for boom pull-down when lifting or the radius will increase, decreasing capacity.
5. Check the boom length and verify with the load chart. With hydraulic cranes this may be an estimate because the boom may not be marked with number indicators.
6. Verify crane's net capacity with the manufacturer's capacity chart for radius and boom length being used. Net capacity is obtained by subtracting the weight of ALL load handling devices (block, hook, ball, slings, wire rope, etc.) from the gross capacity listed on the manufacturer's capacity chart.

7. Inspect ground support conditions and use mats as necessary to support the crane.
8. Fully extend outriggers.
9. Insure crane deck is level. Remember most manufacturer's state "For every degree the crane is out of level you must subtract capacity by as much as 25%.
10. Complete a Crane Safe Work Permit (Attachment E) and a Critical Lift Check Sheet and Personnel Lifting Checklist .
11. Rig to prevent damage to equipment - use softeners and tag lines. Protect the load and the slings.
12. Inspect eye bolts before using and lift straight up only.
13. Rig to keep the load balanced. Use necessary slings, hitches, and tag lines to control the load.
14. Avoid sudden starts/stops and do not jerk the load. Failure to do this increases the shock load on the crane and rigging equipment, decreasing capacity.
15. Watch the vertical angle. A vertical angle is the angle formed by one leg of a two-legged sling and an imaginary vertical line extending down from the lifting hook. When this angle is more than 60 degrees the load on EACH sling leg increases greatly. Larger slings, hooks, shackles, etc. may be required. Use sling charts from standard rigging books or sling manufacturer's charts for sling capacity.
16. Lift with the load directly under the boom point. Cranes are designed to lift freely suspended loads and the capacity chart is not figured on side loads or loads to the front or rear of boom.
17. Always expect the unexpected. Be prepared to take evasive action.
18. Report problems to supervision.

Operator: \_\_\_\_\_ Date: \_\_\_\_\_

Rigging Crew: \_\_\_\_\_  
                  \_\_\_\_\_  
                  \_\_\_\_\_

## **15-PERSONNEL LIFTING / PERSONNEL PLATFORMS**

**Applicable OSHA Standards: 29 CFR 1926.550(g)**

### **PURPOSE**

The purpose of this program is to provide direction and guide lines and to establish the general requirements to implemented when Lifting Personnel with Mobile Cranes and Derricks.

### **SCOPE**

The scope of this program applies to all job site locations where Personnel Lifting is required. The requirements set forth in this program, shall be implemented to the fullest extent possible and shall be considered as a minimum requirement.

### **RESPONSIBILITIES**

Lifting Personnel with Mobile Cranes and Derricks

The use of a crane or derrick to hoist workers on a platform is prohibited, except when the erection, use, and dismantling of conventional means of reaching the work site, such as a personnel hoist, ladder, stairway, aerial lift, elevated work platform or scaffold, would be more hazardous, or is not possible because of structure design or worksite conditions.

In the event that a personnel lift is required, the following will be followed to provide for the safe design, construction, testing, use and maintenance of personnel platforms, and hoisting of personnel platforms on the load lines of cranes or derricks.

Critical Lift – is defined as the following:

- The load exceeds 80% of the crane capacity; or
- Weight of the lift exceeds 50% of the load chart rating for the equipment being used And the lift is over power lines, process equipment, piping, or personnel are being lifted; or
- Two booms are required; or
- Poles or derricks have been erected; or
- Personnel are being lifted; or

- Crane is traveling with a load; or
- Any lift in a Critical Lift Area.

**Critical Lift Area** – An area where hazardous chemicals are stored, transferred, or processed where the dropping of lifted load would pose a serious threat to personnel, environment, or the general public and areas over power lines.

**Failure** – means load refusal, breakage, or separation of components.

**Live Booms** – booms which lowering is controlled by a brake without aid from other devices which slow the lowering speeds.

**Maximum Intended Load** – means the total load of all workers, tools, materials, and other loads reasonably anticipated to be applied to a personnel platform or personnel platform components at any time.

**Personnel Lift Areas** – are areas where the use of a crane suspended personnel platform is the safest method and the use of any other device is not possible because of structural design or work site conditions.

**Prohibited Lift** – is defined as the following:

- A lift over personnel or a building occupied by personnel where dropping of the load would endanger occupants, unless building is vacated and a pre job critical lift form has been filled out and signed by a Supervisor, Site Safety Representative or Client; or
- The load exceeds 85% of the load chart of the crane, and a critical lift form can not be completed due to client signature refusal; or
- Soil or ground conditions are such that stability of the crane during the lift OR traveling with a load, cannot be guaranteed; or
- The wind speed is greater than thirty (30) mph, twenty (20) mph for personnel lifts, as measured by not greater than 6, 5 or greater for personnel lifts, on the Beauford Scale, using weather service, wind speed indicators, wind vanes, flags, smoke, steam vents, or large wind socks; or
- Dangerous weather conditions or other impending danger; or
- Traveling with personnel suspended in a personnel platform.

Procedures:

Lifting:

- Prohibited lifts shall not be made at any time.
- Areas where Critical Lifts are being performed shall be entirely barricaded or a standby person(s) shall be stationed in the area to keep unauthorized personnel from entering the lift area.
- Critical Lifts must be approved by the Project Superintendent, Site Safety Supervisor/Representative, and Client PRIOR to lifting.
- Equipment without lifting lugs, structural steel, and pipe shall not be lifted by a single choker in Critical Lift Areas unless precautions are taken to prevent the load from slipping out of the choker. Such precautions may require attaching stopping devices to the load or using two chokers when making the lift.
- Straight pieces of equipment, steel or pipe, lifted in a Critical Lift Area by a single choker, must have a secondary means of securing to prevent equipment from sliding out of the choker.
- The Critical Lift Checklist (Attachment – A) shall be used for critical lifts.
- A come-along or chain fall shall not be used as a lifting device.

Wind Speed:

- Crane lifts will be suspended when the wind speeds reach 30 mph. (sustained or gusts)
- Personnel Lifts will be suspended when the wind speed reaches 20 mph. (sustained or gusts)
- Oversize loads which create a “sail effect” on the crane, regardless of wind speed, will be evaluated on a case by case basis to insure the safety of the lift. The Site Superintendent and Safety Representative will make the evaluation.
- Lifts where the wind speed is 30 mph or greater and the crane and load are “shielded” from the wind force by structures will be evaluated on a case by case basis to insure the safety of the lift. The Site

Superintendent and the Safety Representative will make the evaluation.

- The following Beaufort Scale will be used whenever other means of measuring the wind force are not available. The Beaufort Scale is defined as a scale in which numbers from 0 to 12 indicate the force of the wind.

Beaufort Scale

Beaufort Number	Wind Cond.	Miles Per Hour	Description
0	Calm	less than 1	calm, smoke rises vertically
1	light air	1 to 3	direction of wind shown by smoke but not by wind vanes.
2	light	4 to 7	wind felt on face; leaves rustle; ordinary vane moved by wind.
3	gentle	8 to 12	leaves and small twigs in breeze constant motion; wind extends light flag.
4	moderate breeze	13 to 18	raises dust and loose paper, small branches are moved.
5*	fresh	19 to 24	small trees begin to sway, crested wavelets form on inlet waters.
6**	strong breeze	25 to 31	large branches in motion; electrical wire whistle, umbrella used with difficulty.
7	moderate	32 to 38	whole tree in motion; (inconvenience walking against wind)
8	fresh gale (or gale)	39 to 46	breaks twigs off tree; generally impedes progress.
9	strong gale	47 to 54	slight structure damage occurs; chimney pots and slates removed.

10	whole gale	55 to 63	trees uprooted; considerable structural damage occurs.
11	storm (or violent storm)	64 to 72	very rarely experienced; accompanied by wide spread damage.
12***	hurricane	73 to 136	devastation occurs

\* = Personnel lifts are prohibited at 20 mph level or greater

\*\* = Crane lifts are prohibited at 30 mph level or greater

\*\*\* = The United States uses 74 statute mph as the speed criteria for hurricane.

Operational Requirements:

- Cranes used for hoisting personnel must have a current inspection sticker.
- Load lines shall be capable of supporting, without failure, at least seven (7) times the maximum intended load, except where rotation resistance rope is used, the lines shall then be capable of supporting without failure, at least ten (10) times the maximum load intended.
- Load and boom hoist drum brakes, swing brakes, and locking devices such as pawls, or dogs shall be engaged and set when occupied personnel platform is in a stationary position.
- The load line hoist drum shall have a system or device on the power train, other than the load hoist brake, which regulates the lowering rate or speed of the hoist mechanism (controlled load lowering). Free fall is prohibited.
- The crane shall be uniformly level within one percent of level grade and located on firm footing. Cranes equipped with outriggers shall have them fully deployed following manufacturer's specifications, in so far as applicable, when hoisting personnel.
- The total weight of the loaded personnel platform and related rigging shall not exceed 50 percent of the rated capacity for the radius and configuration of the crane or derrick and must be reviewed during the critical lift plan.
- The use of machines having live booms (booms in which lowering is controlled by a brake without aid from other devices which slow the lowering speed) is prohibited.
- Cranes and Derricks with angle booms shall be equipped with a boom angle indicator, readily visible to the equipment operator.



- Canes with telescope booms shall be equipped with a device to indicate clearly to the operator, at all times, the boom's extended length, or an accurate determination of the load radius to be used during the lift shall be made prior to hoisting any personnel.

Personnel Platform Design and Specifications:

- Personnel platform and suspension systems shall be designed by a Qualified Professional Engineer or a qualified person competent in structural design.
- The suspension systems shall be designed to minimize tipping of the platform due to movement of personnel and tools or equipment occupying the platform.
- The personnel platform shall be capable of supporting, without failure, its own weight and at least five (5) times the maximum load intended.
- Each Personnel platform shall be equipped with a top guardrail approximately 42 inches high, a midrail and toeboards.
- The platform shall be enclosed at least from the toeboard to the midrail with either solid construction or expanded metal having openings no greater than ½ inch.
- A grabrail shall be installed inside the entire perimeter of the personnel platform. Access gates. If installed, shall not swing outward during hoisting. Access gates, including sliding or folding gates, shall be equipped with a restraining device to prevent accidental opening.
- Headroom shall be provided which allows personnel to stand upright in the platform
- In addition to the use of hard hats, workers shall be protected by overhead protection on the personnel platform when workers are exposed to falling objects.
- All welding of the personnel platform and its components shall be performed by a qualified welder familiar with the weld grades, types and material specified in the platform design.
- The personnel platform shall be conspicuously posted with a plate or other permanent marking which indicates the weight of the platform and its rated load capacity or maximum intended load. The platform must not be loaded in excess of its rated load capacity.

- Personnel platform shall not be used to hoist materials or tools when not hoisting personnel.

#### Personnel Platform Loading:

- The personnel platform shall not be loaded in excess of its rated load capacity. When a personnel platform does not have a rated capacity then the personnel platform shall not be loaded in excess of its maximum intended load.
- The number of workers occupying the personnel platform shall not exceed the number required for the work being performed.
- Personnel platforms shall be used only for workers, their tools and the materials necessary to do their work.
- Materials and tools for use during personnel lift shall be secured to prevent displacement and evenly distributed within the confines of the platform while the platform is suspended.

#### Rigging:

- When a wire rope bridle is used to connect the personnel platform to the load line, each bridle leg shall be connected to a master link or shackle in such a manner to ensure that the load is evenly divided among the bridle legs.
- Hooks on overhaul ball assemblies, lower load blocks, or other attachment assemblies shall be of a type that can be closed and locked, eliminating the hook throat opening. Alternatively, an alloy anchor type shackle with a bolt, nut and retaining pin may be used.
- Wire rope, shackles, rings, master links, and other rigging hardware must be capable of supporting, without failure, at least five (5) times the maximum intended load applied or transmitted to that component.
- Bridles and associated rigging for attaching personnel platforms to the hoist line shall be used only for the personnel platform and shall not be used for any other purpose when not hoisting personnel.

#### Trial Lift, Inspection, and Testing:

- A trial lift with the unoccupied personnel platform loaded at least to the anticipated lift weight shall be made from ground level, or any other location where personnel will enter the platform, to each location at which the personnel platform is to be hoisted and positioned. This trial lift is to be

performed immediately prior to placing personnel on the platform. The operator shall determine that all systems, controls, and safety devices are activated and functioning properly; that no interference exist; and that all configurations necessary to reach those work locations will allow the operator to remain under the 50% limit of the hoist's or cranes rated capacity. A single trial lift may be performed at one time for all locations that are to be reached from a single set up location.

- The trial shall be repeated whenever the crane or derrick is moved and set up in a new location or returned to a previously used location or if the lift route is changed.
- After the trial lift and just prior to hoisting personnel, the platform shall be hoisted a few inches and inspected to ensure that it is secure and properly balanced.
- Workers shall not be hoisted unless the following conditions are determined to exist:
  - a. Hoist ropes or lines shall be free of kinks.
  - b. Multiple part lines shall not be twisted around each other.
  - c. The primary attachment shall be centered over the platform.
  - d. The hoisting system shall be inspected if the load rope is slack to ensure all ropes are properly stated on drum and in sheaves.
- A visual inspection of the crane or derrick, rigging, personnel platform, and the crane or derrick base support or ground shall be constructed by a competent person immediately after the trial lift to determine whether the testing has exposed and defects or produced any adverse effects upon any component or structure. Any defects found must be corrected before hoisting personnel.
- At each job site, prior to hoisting workers in the personnel platform, and after any repair or modification, the platform and rigging shall be proof tested to 125% of the platforms rated capacity by holding it in a suspended position for five (5) minutes with the test load evenly distributed on the platform (this may be done concurrently with the trial lift). After proof testing, a competent person shall inspect the platform and rigging. Deficiencies found must be corrected and another proof test conducted. Do not lift personnel until proof testing requirements are satisfied.

Work Practices:

- Workers shall keep all parts of the body inside the platform during raising, lowering, and positioning. This provision does not apply to an occupant of the platform performing the duties of a signal person.
- Before workers exit or enter a hoisted personnel platform that is not landed, the platform shall be secured to the structure where the work is to be performed, unless securing to the structure creates an unsafe situation.
- Tag lines shall be used unless their use creates an unsafe condition.
- The crane or derrick operator shall remain at the controls at all times when the crane engine is running or the platform is occupied.
- Hoisting of workers shall be promptly discontinued upon indication of any dangerous weather conditions or other impending danger.
- Workers being hoisted shall remain in continuous sight of and in direct communication with the operator or signal person. Standard signals, hand or verbal, must be used and must be visible or audible to the operator at all times.
- Assure that the signal person(s) are knowledgeable in standard signals. In those situations where direct visual contact with the operator is not possible, and the use of a signal person would create a greater hazard for that person, direct communication alone such as radio may be used.
- Workers occupying the personnel platform shall use a body harness system with the lanyard appropriately attached to the lower load block or overhaul ball, or to a structural member within the personnel platform capable of supporting a fall impact for workers using the anchorage.
- If the lift is to be made adjacent to or over water and the danger of drowning exists the following condition shall apply:
  - a. Workers working over or near water, where the danger of drowning exists, shall be provided with U. U. Coast Guard approved life jackets or inflatable buoyant work vests.
  - b. Prior to and after each use, the buoyant work vest or life preserver shall be inspected for defects which would alter their strength or buoyancy. Defective vests will not be used.
  - c. Ring buoys with at least 90 feet of line shall be provided and readily available for emergency rescue operations. Distance between ring buoys shall not exceed 200 feet.

- d At least one (1) lifesaving skiff shall be immediately available at locations where workers are working over or adjacent to water.
- No lifts shall be made on another of the crane's or derrick's load lines while personnel are suspended on a platform.
- Cranes shall not travel while personnel are hoisted.
- An additional person must be positioned to observe for proper winding of the cable on the winch drum during the hoisting and lowering operation.

Pre-Lift Meeting:

- A meeting attended by the crane or derrick operator, signal person(s)(if necessary for the lift), workers (persons to be lifted), Site Superintendent, Safety Representative, crane competent person, and client representative shall be held, PRIOR to the lift, to review the job and assure all the requirements have been met and documented.
- This meeting shall be held PRIOR to the trial lift at each new work location, and shall be repeated for any workers newly assigned to the operation.
- Critical Lift Checklist and Daily Operator Inspection Report must be issued or completed for each job requiring the lifting of personnel.
- The attached checklist for lifting personnel must be completed to insure a safe lift. It shall be signed by the client representative, the crane operator, and the personnel being lifted.

Audits/Inspection Requirements:

- All equipment must be inspected prior to use.
- Supervision will inspect equipment and individual performance as work is being performed.

## ATTACHMENT 'A'

### PERSONNEL LIFTING CHECKLIST

Consideration must be given to other means of getting the job done and decisions shall be for the safest method available with the least exposure.

This checklist must be completed by all required representatives PRIOR to each job requiring lifting of personnel. This permit must be renewed if job scope, conditions, personnel, or equipment change. The lift must not be made or attempted until all questions can be answered "YES."

1. Have all chemical, electrical, fire, or temperature hazards been considered?  
 Yes       No
  
2. Are personnel wearing the required safety equipment to do the job; and has the proper safety equipment been supplied if working over or near water?  
 Yes       No
  
3. Has the anti-two block system been tested and found to be operable prior to this job?  
 Yes       No
  
4. Has the crane been visually inspected for safety and does it have a current legible inspection tag?  
  
Crane tag date: \_\_\_\_\_  
 Yes       No
  
5. Is the load to be lifted on the platform within the load capacity of the Personnel Platform?  
 Yes       No
  
6. Have the lifting cables been inspected and in good condition?  
 Yes       No
  
7. Is the cable wound on the drum correctly and smoothly?  
 Yes       No

8. Is the cable running free and not fouled?  
 Yes       No
9. Are the wedges, becket, and clamp in good condition and secure?  
 Yes       No
10. Is the crane on solid foundation and/or mats?  
 Yes       No
11. Are the outriggers extended and the crane level?  
 Yes       No
12. Is the safety lock on the hook in good condition?  
 Yes       No
13. Do flag person(s) and operator understand hand signals to be used?  
 Yes       No
14. Are personnel in the platform wearing fall protection?  
 Yes       No
15. Has the operator been instructed to remain at the crane controls while the personnel are in the platform?  
 Yes       No
16. If it is necessary to telescope the boom while hoisting personnel, have precautions been taken to prevent two-blocking?  
 Yes       No
17. Have calculations been made to assure that the load does not exceed 50% of the crane capacity while hoisting personnel? (attach calculations to this form)  
 Yes       No

18. Is the work platform properly secured to the load line?  
 Yes       No
19. Has the work platform been load tested prior to hoisting personnel?  
(attach copy of load testing calculations)  
 Yes       No
20. Has a trial lift and 125% proof test been made prior to hoisting personnel?  
(attach copy of proof testing results)  
 Yes       No
21. Has an observer been selected to observe for proper cable wrapping during lift?  
 Yes       No
22. Will the crane operator, flag person and/or personnel being lifted be able to  
maintain visual or verbal contact?  
 Yes       No
23. Has a Safe Work Permit been issued for the job?  
 Yes       No
24. Barricades up around all areas to cover swing radius, lifting area, work areas and  
landing areas?  
 Yes       No

\_\_\_\_\_  
Crane Operator

\_\_\_\_\_  
Client Representative or Permit Writer

\_\_\_\_\_  
Rigging Forman



Personnel Hoisted: (each individual must be in attendance and sign off)

_____	_____
_____	_____
_____	_____
_____	_____

\_\_\_\_\_  
Site Superintendent/Supervisor

\_\_\_\_\_  
Safety Supervisor/Safety Representative

Date: \_\_\_\_\_ Time: \_\_\_\_\_

## **16-RESPIRATORY PROTECTION PROGRAM**

**Applicable OSHA Standards: 29 CFR 1910.134**

### **PURPOSE**

The purpose of this policy is to comply with the OSHA standards on Respiratory Protection.

### **SCOPE**

This program applies to all of our controlled worksites where one of our, or a subcontract employee may be occupationally exposed to respiratory hazards.

### **RESPONSIBILITIES**

**MANAGEMENT** - It is management's responsibility to determine what specific applications require use of respiratory equipment. Management must also provide proper respiratory equipment to meet the needs of each specific application. Employees must be provided with adequate training and instructions on all equipment.

**MANAGEMENT/SUPERVISORY** - Superintendents, supervisors, foremen, or group leaders of each area are responsible for insuring that all personnel under their control are completely knowledgeable of the respiratory protection requirements for the areas in which they work. They are also responsible for insuring that their subordinates comply with all facets of this respiratory program, including respirator inspection and maintenance.

**EMPLOYEEES** - It is the responsibility of the employee to have an awareness of the respiratory protection requirements for their work areas (as explained by management), according to proper instruction, and for maintaining the equipment in a clean and operable condition.

### **GUIDELINES**

The guidelines in this program are designed to help reduce employee exposures against occupational dusts, fumes, mists, radionuclides, gases and vapors.

The primary objective is to prevent atmospheric exposure to these contaminants.

Where feasible, exposure to contaminants will be eliminated by engineering controls (example, general and local ventilation, enclosure or isolation, and substitution of a less hazardous process or material).

When effective engineering controls are not feasible, use of personal respiratory protective equipment may be required to achieve this goal and shall include the following sections, as applicable:

- Selection of respirators
- Medical evaluation
- Fit testing
- Types of respiratory equipment and their use
- Maintenance and care of respirators
- Breathing air quality and use
- Identification of filters, cartridges, and canisters
- Employee training and information
- Program evaluation

## **SELECTION OF RESPIRATORS**

Respirators are selected and approved by management. The selection is based upon the physical and chemical properties of the air contaminants and the concentration level likely to be encountered by the employee. The respirator program administrator will make a respirator available immediately to each employee who is placed as a new hire or as a transferee in a job that requires respiratory protection. Replacement respirators/pre- filters will be made available as required.

The Respirator Program Administrator for Form Works is the Safety Director.

More than one hazard may exist for a given operation and more than one respirator could be used to protect against a number of different air contaminant. Correct respirator selection for each situation however, is a complex job. Before proper respiratory protection can be assigned, we must consider the nature of the hazard, extent and limitations of respirators. It is important to select the right equipment for the job.

Evaluation of exposure to a toxic air-borne material necessitates:

- Identifying the type of contaminant (mist, dust, vapor, gas, and fume).
- Logging the name of the contaminant.

- Listing pertinent physical and chemical properties (LEL, Flash Point, etc.)
- Estimating or monitoring the concentration of the contaminant in the breathing zone and immediate work area.
- Noticing the Threshold Limit Value (TLV) both OSHA and ACGIH recommended levels.
- Comparing the surveyed levels to the recommended exposure limits. (Ceiling, short term, time-weighted average).
- Noting odor threshold, IDLH level, warning properties and if contaminant is an eye irritant.
- Evaluating whether the contaminant can be trapped by a given sorbent, efficiently; or would react with filter media.
- Recording if the contaminant may cause systemic poisoning by absorption through the skin.

The toxicology of a given contaminant can be assessed when all information outlined above is evaluated on a respirator selection work sheet.

The overall protection afforded by a given respirator design (and mode of operation) may be defined in terms of its assigned protection factor (APF) (To be Determined- Reserved by OSHA). The APF is a measure of the degree of protection afforded by a respirator, defined as the ratio of the concentration of contaminant in the ambient atmosphere to that inside the enclosure (usually inside the face piece) under conditions of use. Respirators should be selected so that the concentration inhaled by the APF's are selection and use guides, and should only be used when the employer has established a minimal acceptable respirator program as defined in Section 3 of the ANSI Z88.2-1969 Standard.

In addition to face pieces, this includes any type of enclosure or covering of the wearer's breathing zone, such as supplied-air hoods, helmets or suits.

Includes dusts, mists, and fumes only. Does not apply when gases or vapors are absorbed on particulates and may be volatilized or for particulates volatile at room temperature. Example: coke oven emissions.

Any single-use dust respirator (with or without valve) not specifically tested against a specified contaminant.

Dust filter refers to a dust respirator approved by the silica dust and includes all types of media, that is, both nondegradable mechanical type media and degradable resin-impregnated wool felt or combination wool-synthetic felt media.

Fume filter refers to a fume respirator approved by the lead fume test. All types of media are included.

High-efficiency filter refers to a high-efficiency particulate respirator. The filter must be at least 99.9% efficiency against 0.3 um DOP to be approved. Or P-100 series filters.

To be assigned based on dust or fume filter efficiency for specific contaminant.

For gases and vapors, an APF should only be assigned when published test data indicate the cartridge or canister has adequate sorbent efficiency and service life for a specific gas or vapor. In addition, the APF should not be applied in gas or vapor concentrations that are: (1) immediately dangerous to life, (2) above the lower explosive limit, and (3) cause eye irritation when using a half mask.

A positive pressure supplied-air respirator equipped with a half-mask face piece may not be as stable on the face as a full face piece. Therefore, the APF recommended is half that for a similar device equipped with a full face piece.

A positive pressure supplied-air respirator equipped with a full face piece provides eye protection but is not approved for use in atmosphere immediately dangerous to life. It is recognized that the face piece leakage, when a positive pressure mode. However, to emphasize that it basically is not for emergency use, the APF is limited to 100 x APF.

The design of the supplied-air hood, suit, or helmet (with a minimum of 170 liters/min. of air) may determine its overall efficiency and protection. For example, when working with the arms over the head, some hoods draw the contaminant into the hood-breathing zone. This may be overcome by wearing a short hood under a coat or overalls. Other limitations specified by the approval agency must be considered before using in certain types of atmospheres.

The SCBA operated in the positive pressure mode has been tested on a selected 31-man panel and the face piece recorded as < 0.01% penetration. Therefore, a PF of 1,000 + is recommended. At this time, the lower limit of detection 0.01% does not warrant listing a higher number. A positive pressure SCBA for an unknown concentration is recommended. This is consistent with the 1,000 + that is listed. It is essential to have an emergency device for use in unknown concentrations. A combination supplied-air respirator in pressure-demand or other positive pressure mode, with auxiliary self-contained air supply, is also recommended for use in unknown concentrations of contaminants immediately dangerous to life. Other limitations, such as skin absorption of HCN or tritium, must be considered.

The protection a respirator may provide for a worker is dependent upon the type of unit and the fit. A respirator protection factor is an indicator of how much protection a respirator may provide. The factor is the ratio of the contaminant concentrations outside vs. inside the respirator,  $P = C/C$ . This is determined by quantitative testing. The general rule of

thumb; however, says the protection factor is the approximate average effectiveness of a given respirator in qualitative tests with good face seal. Under normal operating conditions, the time-weighted average (TWA) concentration x protection factor = maximum concentration of a contaminant against which a particular type of respirator may be used.

For example: If an employee were spray painting with an enamel paint cut with toluol solvent and the measured TWA concentration was 200 ppm, and the TLV (ACGIH) is 100 ppm, then a half mask air purifying respirator with organic vapor trapping cartridges is satisfactory. Table II outlines protection factors for air-purifying and atmosphere- supply respirators. These protection factors serve as guidelines only, and should be used in conjunction with all sections of this respirator-training guide.

## WORK AREA MONITORING

To assure the adequacy of a respiratory protection program, monitoring shall be conducted on exposure hazards as a basis to provide for a continuing healthful environment for employees. Personal sampling equipment may be used in accordance with accepted industrial hygiene standards to sample each work area. Results of these samples will pinpoint areas where respiratory protection is required. A "Job Description - Respirator Specification" Form will also document what type of equipment should be worn for specific hazards present.

## CARTRIDGE CHANGE SCHEDULE

Using the present available air monitoring data, cartridges will be changed as follows

PER MANUFACTURES SPECIFICATIONS

## GUIDES FOR THE SELECTION OF RESPIRATOR

Hazard	Respirator
<i>GAS OR VAPOR CONTAMINANTS</i>	
Oxygen Deficiency	Self-contained breathing apparatus. Combination air-line respirator auxiliary positive pressure self- contained air supply.
Immediately dangerous to life or health	Self-contained breathing apparatus positive pressure mode.

Not immediately dangerous  
to life or health

Air-purifying, full face piece  
respirator with chemical canister (gas  
mask) escape only.  
Self-rescue mouth piece respirator  
(escape only).  
Combination air-line respirator with  
auxiliary positive pressure self-  
contained air supply.

Air-line respirator.  
Air-purifying, half-mask or full face  
piece respirator with chemical  
cartridge(s) or canister.

*PARTICULATE CONTAMINANTS*

Immediately dangerous  
to life or health

Self-contained breathing apparatus  
positive pressure mode.  
Air-purifying full face piece  
respirator with appropriate filter  
(for escape only).  
Combination air-line respirator with  
auxiliary positive pressure self-  
contained air supply.

Not immediately dangerous

Air-purifying, half-mask or full to life  
or health face piece respirator with  
filter pad cartridge(s). Air-line  
respirator. Air-line abrasive-blasting  
respirator

*COMBINATION GAS, VAPOR, AND  
PARTICULATE CONTAMINANTS*

Immediately dangerous to  
life or health

Self-contained breathing apparatus  
positive pressure mode.  
Air-purifying full face piece  
respirator with chemical canister and  
appropriate filter (for escape only).  
Combination air-line respirator (for  
escape only).

Not immediately dangerous  
to life or health

Combination air-line respirator with  
auxiliary positive pressure self-  
contained air supply.

Air-line respirator.  
Air-purifying, half-mask or full face  
piece respirator with chemical  
cartridge or canister and appropriate  
filter.

## CLASSIFICATION OF RESPIRATORY HAZARDS TO THEIR PROPERTIES WHICH INFLUENCE RESPIRATOR SELECTION

<u>Gas or Vapor Contaminants</u>	<u>Particulate Contaminants</u>
<p><i>Inert:</i> They do not react with substances under most conditions and create a respiratory hazard by displacing air and producing oxygen deficiency (for example, helium, neon, argon).</p> <p><i>Acidic:</i> Substances that are acids or that react with water to produce positively charged hydrogen ions. They taste sour and many are corrosive to tissues (for example, hydrogen chloride, sulfur dioxide, fluorine, nitrogen dioxide, hydrogen sulfide, and hydrogen cyanide).</p> <p><i>Alkaline:</i> Substances that are alkalis or that react with water to produce an alkali. When in water solutions, they taste bitter, and many are corrosive to tissues (for example, ammonia, amines, phosphine, arsine, and stibine).</p>	<p>Particles are produced by mechanical means by the disintegration processes of grinding, crushing, drilling, blasting and spraying; or by the physiochemical reactions such as combustion, vaporization, distillation, sublimation, cacination, and condensation. Particulate are classified as follows</p> <p><i>Dust:</i> A solid mechanically produced particle with sizes varying from submicroscopic to visible or macroscopic.</p> <p><i>Spray:</i> A liquid mechanically processed particle with size generally in the visible or macroscopic range</p> <p><i>Fume:</i> A solid condensation particle. Extremely small particle size, generally less than one micron in diameter.</p> <p><i>Mist:</i> A liquid condensation particle with sizes ranging from</p>



submicroscopic to visible or  
macroscopic

*Organic:* These are the  
compounds of carbon.  
Examples are saturated hydrocarbon  
(methane, ethane, butane),

*Fog:* A mist of sufficient  
concentration to perceptibly  
obscure vision.

unsaturated hydrocarbons  
(ethylene, acetylene),  
alcohols (methyl alcohol,  
propyl alcohol), ethers  
(methyl ether, ethyl ether),  
aldehydes (formaldehyde),  
ketones (dimethyl ketone),  
organic acids (formic acid,  
acetic acid), halides (chloro-  
form, carbon tetrachloride),  
amides (formamide, acetamide),  
nitriles (acetonitrile),  
isocyanates (toluene  
di-isocyanate), amines  
methylamine), epoxies (epoxy-  
ethane, propylene oxide), and  
aromatics (benzene, toluene,

*Smoke:* A system which includes the  
product of incomplete combustion of  
organic substances in the form of  
solid and liquid particles and  
gaseous products in air. Smoke is  
usually of sufficient concentration  
to perceptibly obscure vision.

xylene).

*Hydrides:* Compounds in which  
hydrogen is chemically bonded  
to metals and certain other  
elements (for example,  
diborane and lithium hydride).

### PROTECTION FACTORS FOR RESPIRATORS - RESERVED (3)

Concentrations in multiples of permissible exposure	Face Piece Pressure	Permissible Respirators limits
5X	-	Single use dust- Quarter- mask dust
10X	-	Half or quarter mask, high efficiency

50X	-	Full face piece, high efficiency
	-	Full face piece, supplied air Self-contained breathing apparatus (SCBA)
100X	+	Powered, high-efficiency, enclosures.
		Half-mask supplied air, Type C positive pressure demand mode.
1,000X	+	Supplied air with full face piece supplied air and auxiliary self-contained air support.
Emergency entry into unknown concentrations or fire fighting	+	Full face piece SCBA
Escape only 1/	+	Any SCBA - Any self rescuer

1/ In an atmosphere which is immediately dangerous to life or health.

NOTES:

1. Half-mask and quarter mask respirators should not be used if particulate matter causes eye irritation at the use concentrations.
2. Full face piece supplied-air respirators should not be used in an atmosphere which is immediately dangerous to life or health unless it is equipped with an auxiliary air supply which can be operated in the positive pressure.
3. Since OSHA has not updated their standard we are adopting the old standard.

Source: "Respirator Protection Factors," E. Hyatt. Los Alamos Scientific Laboratory Publication LA - 6084-MS, January 1976.

## **MEDICAL EVALUATION**

Each employee required to wear a respirator will fill out a Medical Evaluation Questionnaire. The Medical Evaluation Questionnaire will be read by a PLHCP. If the PLHCP determines a follow-up examination is necessary, the employee shall make themselves available, during regular business hours, for the follow-up examination. Once the PLHCP has performed all the required duties a written recommendation shall be rendered by the PLHCP for the type of respirator which can be worn.

Medical Evaluation Questionnaires are attached as Attachment II - English, and Attachment III - Spanish.

## **LIMITATIONS AND SURVEILLANCE**

Employees should be physically fit and able to perform job duties while wearing a respirator. If a physician determines that a worker has a severe cardiovascular or pulmonary dysfunction that would be aggravated by wearing a respirator; then by a written PLHCP opinion, that person would be exempted from a job requiring the use of a respirator.

Conditions that may prevent a person from using an atmosphere supplying respirator may include:

- Emphysema
- Chronic pulmonary obstructive disease
- X-ray evidence of pneumoconiosis
- Coronary artery disease
- Heart attack
- Bronchial asthma
- High blood pressure
- Epilepsy
- Diabetes
- Restrictive heart abnormalities
- Experiencing anxiety or any problems when wearing a respirator

- Open hole in the eardrum

"Persons should not be assigned to tasks requiring the use of respirators unless it has been determined that they are physically able to perform the work and use the equipment. A "yes" answer to any of the preceding questions would constitute a warning sign regarding the use of respirators. A medical opinion to confirm any of the above situations (answered "yes") should then be obtained. The respirator user's medical status should be reviewed periodically (for instance, annually)."

No beards or facial hair should interfere with the sealing surfaces of any respirator. If respiratory protective equipment is required for a job, no beards or long sideburns will be allowed, as they will not permit a good face seal.

Contact lenses cannot be worn in an atmosphere that necessitates the use of respirators.

No glasses

may be worn with a full face piece respirator, unless the face piece is fitted with an adapter.

Should a worker have exposure to certain toxic materials, periodic medical examinations such as urinalysis, blood chemistries, or bioassay may be required even though the employee wears the proper respiratory protective equipment.

## **FIT TESTING**

### **OSHA Issues Final Rule on Respiratory Protection Fit- Testing Protocol**

The U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) Aug. 4 issued a final rule detailing new quantitative fit-testing procedures to assist workers and employers in the proper fit and selection of respirators.

OSHA said the new Controlled Negative Pressure (CNP) REDON protocol is intended to focus on obtaining the best-fitting respirator. Additionally, the agency noted that the new protocol is less time-consuming than current approved fit-testing protocols.

The new rule requires three different test exercises followed by two redonnings of the respirator. The

three test exercises, listed in order of administration, are normal breathing, bending over and head shaking. The procedures for administering the CNP REDON protocol are summarized below:

- **Facing forward.** In a normal standing position, without talking, breathe normally for 30 seconds; then, while facing forward, hold breath for 10 seconds during sampling.
- **Bending over.** Bend at waist for 30 seconds and hold breath for 10 seconds during sampling.
- **Head shaking.** Shake head back and forth vigorously several times while shouting for approximately three seconds and, while facing forward, hold breath for 10 seconds during sampling.
- **First redonning.** Remove respirator, loosen all face-piece straps, and then redon the respirator mask; after redonning the mask, face forward and hold breath for 10 seconds during sampling.
- **Second redonning.** Remove respirator, loosen all face-piece straps, and then redon the respirator mask again; after redonning the mask, face forward and hold breath for 10 seconds during sampling.

Employees required to wear a respirator must be fitted properly and tested for a face seal prior to use of the respirator in a contaminated area. Manufacturers provide fitting instructions and use limitations on the product packaging.

Qualitative fit testing is acceptable for most hazards in the work place. (Refer to OSHA standards for specific direction.)

*Fitting* - For a respirator to work effectively, it must fit well and feel comfortable. All the care that went into proper respirator selection will not protect the worker if the face piece does not fit properly. Fitting is most critical for self-contained breathing apparatus and respirators used in IDLH atmospheres. There are two categories of fitting tests,

*Qualitative and Quantitative.*

1. Qualitative tests include:

Negative Pressure Test - Close off air inlet of canister, cartridge, or filter

with palms, inhale gently so that the face piece collapses. Hold breath for 10 seconds, if the face piece remains slightly collapsed and no inward leakage is detected, the respirator probably has an adequate fit.

- b. Positive Pressure Test - Close off exhalation valve, exhale gently into the face piece. If a positive pressure can be built up inside the face piece without excess outward leakage, the fit is good. Take care not to disturb placement of the face piece by placing undue pressure on the mask with hand.
- c. Banana Oil Testing - A worker is subjected to isoamyl acetate vapor (banana oil) adjacent to sealing surfaces of the respirator face piece. If there is a detectable odor inside the mask, then the face piece should be refitted in clean air; and the test repeated, switching respirators if necessary, until a fit is made.
- d. Irritant Smoke Test - Stannic chloride is impregnated on pumice in glass tubes. When the tube ends are broken, irritant smoke is released. The tester puffs smoke towards the wearer from increasingly shorter distances until the tube is within about 6 inches of the respirator, where the smoke is then directed toward potential sources of leakage. At this point, if no leakage has been detected, the wearer may cautiously begin various head movements to simulate use in particular job. This test has an advantage in that the wearer usually reacts involuntarily to leakage by coughing or sneezing. If there is a reaction, stop producing smoke immediately. The irritant smoke test is valid for testing both air-purifying and atmosphere-supplying respirators; but an air-purifying respirator must have high efficiency filters.

2. Quantitative test uses instruments to measure (quantify) the amount of test chemical outside vs. inside of the respirator. This type of test expresses the amount of leakage as a percentage of the challenge atmosphere outside of the mask. This test is excellent when face piece leakage must be minimized for work in IDLH atmospheres. A quantitative test may be required when employees are exposed to chemical agents like acrylonitrile, benzene, coal tar pitch volatiles or vinyl chloride.

When fitting any face piece the headstraps must be comfortable. Tightening the straps will sometimes reduce leakage, but the wearer may be unable to tolerate the respirator for any length of time; thus invalidating the fitting test for a normal job routine.

## **AIRLINE RESPIRATOR WITH ESCAPE BOTTLE**

The airline respirator with full face piece in the pressure- demand mode is designed for use in atmospheres immediately dangerous to life or health when used with an approved emergency

escape system. With the potential hazards involved when using this respirator, it is imperative that this type of equipment be inspected before and after each use. Before entry into a hazardous area, check the following:

- Hose length to the escape unit from a compressor or bottle cascade system should be adequate to perform all types of work, but not greater than 300 feet.
- All connections should be tight and free of leaks. Rubber hose from the face piece to the regulator and hand disconnect union should be hand tight only.
- The face piece and all hoses should be free of cracks and the regulators functioning normally at recommended pressures.
- The air pressure in the emergency escape bottle should be approximately 2100 pounds per square inch (PSI).
- Face seal on respirator should be good by using negative pressure test (See Section 5).
- Make sure the respirator works properly before entering a contaminated area.

When using an airline respirator with an emergency escape bottle:

- Never over-pressure the regulator.
- The bottle should be used for escape from a hazardous atmosphere. Do not breathe from the bottle during normal work. Do not turn on the air supply from the bottle except to escape from a hazardous area, if the main air supply has been cut off.

- After the escape cylinder has been used or the air pressure is below the recommended level (2100 psi), the foreman at the job site should be notified and the foreman should then see that this equipment is refilled with certified breathing air.
- Exposure to high levels of contaminants requires that all exposed skin be properly protected.

## **SELF CONTAINED BREATHING APPARATUS**

Self contained breathing apparatus (SCBA) should be used for emergencies like clean-up of a large spill, fire fighting, or rescue from a hazardous area. The equipment must be checked before and after each use and at least monthly. Routine inspection of this equipment assures that it will be ready for use in an emergency.

Thirty (30) minute SCBA units provide protection against most air-borne agents and are an excellent back-up system when tank cleaning, vessel entry or breaking into lines is done with airline-SCBA equipment.

### Before Using Any SCBA Equipment:

- Inspect the connections for tight fit and possible leaks.
- Inspect all parts of the respirator for damage or excessive wear. Check low air pressure alarm.
- Check the air pressure in the cylinder, it should read approximately 2100 psi, and check the air flow to the face piece.
- Make sure you can get a good face seal. Use the negative pressure fitting test\* to check the fit. Do not wear this apparatus if you have a beard, long side burns or wear glasses.
- Be sure you have been properly instructed before using this equipment.

### When Using SCBA Equipment:

- Do not attach the hose from the respirator face piece until you are ready to enter the contaminated area. This will conserve the air supply in the cylinder.
- If the alarm bell rings, signaling a lowered air supply, **LEAVE THIS CONTAMINATED AREA AT ONCE!**
- If air flow is insufficient for any reason, turn on the bypass valve to increase air flow to the face piece and leave the area immediately. Do not return to the hazardous area until the equipment is repaired or a new SCBA unit is issued.



### After Using SCBA Equipment:

- Close all valves and then de-pressure the hose through the by-pass valve.
- Tell the foreman that the cylinder has been discharged. The foreman should then see that the cylinder is properly charged with certified breathing air.
- This equipment should be inspected, tagged and properly stored to protect against damage and to insure ready use.

## **EMERGENCIES AND SPECIAL OPERATIONS**

Self-contained breathing apparatus may be required in specific areas for emergency use. This equipment will be used only by trained personnel when it is necessary to enter hazardous atmospheres. The following points should be considered:

- All potential users will be fully trained in the use of this equipment.
- When the equipment is used, it will be tested in an uncontaminated atmosphere prior to entering the hazardous area if possible.
- An employee will not work with this apparatus in a hazardous atmosphere on an individual basis. At least one additional employee suitably equipped with a similar breathing apparatus must be in contact with the first employee and must be available to render assistance if necessary.
- This equipment will be inspected monthly by trained department or group personnel.

There are certain situations where only one type of respiratory protection should be considered. For fire fighting and rescue from a hazardous atmosphere only self-contained breathing apparatus is acceptable. In confined spaces with IDLH atmospheres only SCBA, airline with escape bottle or other approved equipment should be used.

Emergencies, such as explosion and fire, release of high concentrations of toxic gas or vapor, and rescue will be discussed at those locations where incidents occur.

Special operations like tank cleaning, tower maintenance, turnarounds, clean up of large spills, etc., and the use of appropriate respirators, will be covered by safety personnel, superintendents or foremen.

Before entering areas that could be oxygen deficient or have chemical contaminants of unknown concentration, the work environment should be monitored with available equipment to determine exposure levels. If the proper equipment is not on hand or

special monitoring is required, contact our contract Safety Coordinator; if unavailable, contact Corporate Safety or customer's Safety personnel.

## **ADDITIONAL RESPIRATOR INFORMATION**

### **Canister Gas Masks**

Some operations require the use of canister masks to protect against chemical contaminants. This equipment is designed to filter harmful chemical agents from the air; however, this is not multi-purpose equipment and will not afford protection for all exposures. Each gas mask canister is made for protection from a certain agent or group of agents with similar properties. The manufacturer's instructions for proper use should be followed carefully.

Gas masks should not be used if any of the following conditions exists:

- Oxygen content in work area is below 19.5%.
- If contaminant concentrations are unknown or are likely to be very high.
- If the atmosphere has been determined to be immediately dangerous to life or health (IDLH).
- If any chemical agent in the work area has poor odor warning properties or is odorless like carbon monoxide.
- If the gas mask is not effective in filtering the chemical agent, i.e.: H<sub>2</sub>S - hydrogen sulfide.

If gas masks are used, then:

- Canisters must be used prior to the expiration date.
- Wearer must leave the contaminated area if:
- Any odor is detected within mask.
- The canister is noticeably causing an increase in breathing resistance.
- Gas mask canisters should be changed after each use.

- All instructions for proper use should be followed.

## **MAINTENANCE AND CARE OF RESPIRATORS**

The following points should be considered for respirator inspection and maintenance:

- The wearer of a respirator will inspect it daily whenever it is in use.
- Supervisor, foreman, or group leader will periodically spot check respirators for fit, usage, and condition:
- Respirators not discarded after one shift use, will be cleaned on a daily basis, according to the manufacturer's instructions, by the assigned employee or other person designated by the respirator program coordinator.
- Respirators not discarded after one shift use, will be stored in a suitable container away from areas of contamination.
- Whenever feasible, respirators not discarded after one shift use, will be marked or stored in such a manner to assure that they are worn only by the assigned employee. If used by more than one employee is required, the respirator will be cleaned between uses.

Maintenance of respiratory protective equipment is essential to the overall effectiveness of the program. Wearing a poorly maintained or malfunctioning respirator could be more hazardous than not having any respirators available. A worker wearing a defective respirator thinks he is fully protected when, in reality, he may not be. Emergency equipment must be maintained routinely. Self-contained breathing apparatus is generally used in the most hazardous and demanding circumstances; wearing a defective unit could have lethal results.

Equipment should be repaired by trained personnel or the manufacturer. Only designated replacement parts should be used when assembling respirators. Substitution of parts from a different brand or type of respirator invalidates approval of the device. All respiratory protective equipment should be cleaned and disinfected. For most respirators, hot soap and water and a hot rinse is adequate. Manufactured disinfectant

solutions aid in sterilization. Respirators used in atmospheres immediately dangerous to life or health or for emergencies or rescue should be cleaned after each use.

Respirators should be stored to protect against dust, sunlight, heat, extreme cold, high humidity, corrosive the respirator face pieces protected or store face pieces in sealed plastic bags in a metal cabinet. If equipment is issued to an employee, it is his/her

responsibility to keep it clean and store it in the proper manner. Emergency equipment should be readily available for use, not under lock and key, and strategically placed for ready access in an emergency.

All respirators should be inspected to check for tightness of the connections, fit of component parts and adjustment of straps on the face piece as follows:

- Air purifying - when inspecting this type of respirator, be sure to check the headstraps for wear and cracks; face piece for broken element holders or split lens, sealing of exhalation valve, and air purifying elements for correct type, expiration date, gasket seal, and previous use. Reusable air purifying respirators should be inspected before and after each use.
- Atmosphere supplying - although units differ in construction, examination should include: a check of headstraps and face piece, condition of lines or hoses and connections, and inspection of regulators, valve, cylinders and warning alarms. Most important- respirators for emergency use should be inspected monthly; and the person initializing the record tag should make certain that the SCBA equipment is in good working order. Atmosphere supplying equipment not used routinely should be inspected after use before it is put back into service.

## **BREATHING AIR QUALITY AND USE**

This section will assure that breathing air for atmosphere supplied-air respirators is of high quality. When supplied-air is used the following will be required:

- Compressed and liquid oxygen will meet Federal requirements
- Compressed breathing will be Type 1 - Grade D as described in ANSI/Compressed Gas Association Commodity Specification for Air, G-7.1-1989
- Compressors used to supply breathing air will be constructed and situated to prevent entry of contaminated air into the air-supply system, Minimize moisture, Have suitable in-line air filters, have a tag on the filter showing last date changed and signature of person changing filter
- Oil lubricated compressors shall have a high temperature alarm or CO alarm, or both; if only a high temperature alarm is used the air supply shall be monitored at intervals sufficient to prevent CO in the breathing air from exceeding 10 ppm

- Breathing air line couplings shall be incompatible with nonrespirable worksite air or gas systems. No asphyxiating substances shall be introduced into the breathing air system.

## **IDENTIFICATION OF FILTERS, CARTRIDGES, AND CANISTERS**

All filters, cartridges and canisters used in the workplace shall be labeled and color coded with the NIOSH approved label and that label will not be removed and will remain legible.

## **EMPLOYEE TRAINING AND INFORMATION**

Each employee, upon assignment to an area requiring respirators, must be instructed by his superintendent, supervisor, foreman, or group leader relative to their responsibilities in the respiratory program. The "Respirator Issuance and Training" card will be reviewed on a periodic basis with each employee. They will also be instructed in need, use, limitations, and care of their respirator(s).

There are basic components of training that are common to both workers and supervisors. Each person must have an opportunity to handle the respirator, check different fitting techniques, test face piece-to-face seal, and to wear the respirator in normal air prior to starting a job. In addition there should be a discussion of engineering and administrative controls in use, and why respirators also are needed. The nature of the respiratory hazard and what happens if the respirator is not worn, or used improperly should be explained. The employees should be informed why a particular type of respirator has been selected; and how to use respirators in emergencies and special operations.

1. Supervisors who oversee the daily activities of workers who wear respirators should be familiar with the following:
  - a. Work requirements and conditions necessitating the use of respirator protective equipment. These may include:
    - (1) Time of exposure to a contaminant
    - (2) The activity and mobility of the worker
    - (3) Eye protection needed
    - (4) Temperature extremes
    - (5) Face piece-to-face seal of various types of equipment
  - b. Nature and extent of hazards to which a worker may be exposed.
    - (1) Type of contaminant and its concentration
    - (2) Acute (short term) or chronic (long term) exposure potential
  - c. The general operation of the program; maintenance and inspection of equipment, issuance of respirators, and control of their use.

- d. Legal requirements pertinent to the use of respirators in a capacity as supervisor.

A Supervisor can get help and information from the Respirator Training Guide, Material Safety Data Sheets, or the Safety Department.

2. Since the worker will be directly exposed to contaminants, he/she must know:
  - a. The nature of the hazard and what might happen if a selected respirator is not worn.
  - b. What control measures are being considered in addition to wearing personal protective equipment?
  - c. Why a particular respirator was selected for that job.
  - d. The limitations of a specific respirator.
  - e. How to use any respirator assigned to him/her and to adjust the unit for a proper fit.
  - f. Maintenance, storage and cleaning of respirators.
  - g. How to recognize an emergency and use the proper equipment.

The supervisor will provide training with help from the Safety Department

3. The most effective respiratory protective equipment is that equipment which is worn. The best way to insure that the respirators will be worn is to handle objections to wearing the equipment. The worker must be motivated to wear the respirator by instilling in him the desire and need to wear the proper equipment. If objections to fit, size, type, etc., are handled, then there will be a greater likelihood that the worker will wear the respirator provided.

## **PROGRAM EVALUATION**

This program will be reviewed annually, or sooner if needed, to insure a state of the art Respiratory Protection Program.

## **17-SANITATION**

**Applicable OSHA Standard: 29 CFR 1910.141, 29 CFR 1926.51**

### **PURPOSE**

The purpose of this program is to provide directions and instructions for company requirements to be met for sanitation purposes.

### **SCOPE**

The scope of this program applies to all company jobsite locations where sanitation facilities are required. The requirements, as set forth in this program, should be implemented to the fullest extent possible.

### **RESPONSIBILITIES**

The primary responsibility for the implementation of the requirements of this program shall rest with the jobsite Supervisor, Foreman, or Leadman of record.

The Director of Safety or designee shall be responsible to provide for the monitoring of work activities to assure compliance to the requirements of this program and compliance to the Customer/Client safety requirements.

### **REQUIREMENTS**

#### **Potable Water:**

An adequate supply of potable water shall be provided in all places of employment.

Portable drinking water dispensers shall be designed, constructed, and serviced so that sanitary conditions are maintained, shall be capable of being tightly closed, and shall be equipped with a tap.

Any container used to distribute drinking water shall be clearly marked as to the nature of its contents and not used for any other purpose.

Open containers such as barrels, pails or tanks for drinking water from which the water must be dipped or poured, whether or not they are fitted with a cover, are prohibited.

Non-potable water shall not be used for washing any portion of the person, cooking or eating utensils, or clothing. Non-potable water may be used for cleaning work premises, other than food processing and preparation premises. Non-potable water outlets shall be identified by signs meeting the requirements of subpart G of 29 CFR 1926, to indicate clearly that the water is unsafe and is not to be used for drinking, washing, or cooking purposes.

**Toilet Facilities:**

General:

Toilet facilities, in toilet rooms separate for each sex, shall be provided in all places of employment in accordance the Table 1 below. The number of facilities to be provided for each sex shall be based on the number of employees of that sex for whom the facilities are furnished. Where toilet rooms will be occupied by nor more than one person at a time, can be locked from the inside, and contain at least one water closet, separate toilet rooms for each sex need not be provided. Where such single-occupancy rooms have more than one toilet facility, only one such facility in each toilet room shall be counted for the purpose of Table 1

**Table 1**

Number of Employee:	Number of water closets
1 to 15	1
16 to 35	2
36 to 55	3
56 to 80	4
81 to 110	5
110 to 150	6
over 150	1 additional fixture for each additional 40 employees

Each water closet shall occupy a separate compartment with a door and walls or partitions between fixtures sufficiently high to assure privacy. The sewage disposal method shall not endanger the health of employees.

Construction Jobsites:

Toilets shall be provided for employees, at a minimum, according to Table 2:



**Table 2**

Number of Employees	Minimum Number of Facilities
20 or less	1
20 or more	1 toilet seat and 1 urinal per 40 workers
200 or more	1 toilet seat and 1 urinal per 50 workers

Toilet facilities are not required on site if there is transportation readily available to nearby toilet facilities.

**Lavatories:**

Each lavatory will be provided with hot and cold running water or tepid running water and each lavatory shall also be provided with hand soaps or other cleansing agents.

Individual hand towels or sections thereof, of cloth or paper, warm air blowers or clean individual sections of continuous cloth toweling, convenient to the lavatories, shall be provided.

**Showers:**

Whenever showers are required by a particular standard, the showers shall have hot and cold running water or tepid running water.

Each shower shall be provided with body soap or other appropriate cleansing agents convenient to the shower.

One shower shall be provided for each 10 employees of each sex.

Employees who use shower shall be provided with individual clean towels

**Waste disposal:**

Any receptacle used for putrescible solid or liquid waste or refuse shall be so constructed that it does not leak and may be thoroughly cleaned and maintained in a sanitary condition. Such a receptacle shall be equipped with a solid, tight fitting cover, unless it can be maintained in a sanitary condition without a cover.

## **18-SCAFFOLDS**

**Applicable OSHA Standard: 29 CFR 1926 Subpart L**

### **PURPOSE**

The purpose of this program is to provide directions and instructions for company requirements to be implemented with the construction, erection, and dismantling of scaffolds and ladders.

### **SCOPE**

The scope of this program applies to all company jobsite locations where scaffolds and ladders may be used. The requirements, as set forth in this program, should be implemented to the fullest extent possible.

### **RESPONSIBILITIES**

The primary responsibility for the implementation of the requirements of this program shall rest with the jobsite Supervisor, Foreman, or Leadman of record.

The Director of Safety or designee shall be responsible to provide for the monitoring of work activities to assure compliance to the requirements of this program and compliance to the Customer/Client safety requirements.

The Project Manager, Vice President, or Chief Executive Office shall be responsible for the enforcement and disciplinary action resulting from violation or failure of assigned persons to implement the requirements of this program.

### **REQUIREMENTS**

The following requirements are applicable to all scaffolds:

Guardrails and Toeboards:

- Guardrails shall be constructed of 2" X 4" lumber, 1/2 inch wire rope, angle iron or the prefabricated rail(s) supplied by the scaffold manufacturer.
- Toprails shall be approximately 42 inches above the working surface.
- Midrails shall be approximately 21 inches above the working surface.

- Wire rope top rails and midrails shall be stretched tight with no more than an approximate 3 inch deflection.
- Toeboards shall extend a minimum of 4 inches above the working surface.
- When the placement of the scaffold work platform prevent the installation of guardrails, other fall protection equipment shall be used.
- Guardrails and toeboards shall be installed on all open sides and ends of scaffolds.
- Scaffolds and work platforms 4 feet to 10 feet high with a working surface of less than 45 inches shall have standard guardrails installed on all open sides and ends of the scaffold or platform.

#### Working Surfaces:

- Working surfaces shall be constructed of scaffold plank, aluminum deck boards or 3/4" construction grade plywood.
- Scaffold planking shall be scaffold grades or equivalent as recognized by approved grading rules for the species of wood used under the American Lumber Standards.
- Working surfaces shall be secured by nails, double wrap of #9 wire or cleats.
- Lumber sizes, when used in this program, refer to nominal size/thickness except where otherwise stated.
- Scaffold planks shall extend a minimum of 6 inches and a maximum of 12 inches over the end supports.
- If required, an access/egress ladder shall be provided.
- Scaffold planks shall not span more than 8 feet between supports/vertical legs.
- Scaffold planks and plywood shall be free of splits and burns.

#### Scaffold Footing and Anchorage:

- The footing or anchorage shall be capable of carrying the maximum intended load without settling or displacement.
- The uprights/vertical legs shall be plumb and securely braced to prevent swaying and displacement.

NOTE: The requirements for specific types of scaffolds and ladders are described below.

#### Tubular Welded Frame:

- Scaffold shall be cross-braced to assure scaffold is plumb, square, and rigid.
- Stacking pins shall only be secured with the manufacturer's pins or recommended bolts.
- Cross braces shall be secured, as designed by the manufacturer.
- Stationary scaffolds must be secured horizontally, every 26 feet of height and 30 feet horizontally, to prevent tipping.
- The height of rolling scaffolds, measured from the ground to the top rail, shall be no more than four times the minimum base dimension (length times the width).
- All wheels/casters shall be the same size, equipped with a positive locking device, and in good working condition.
- Wheels shall be locked while personnel are working from the scaffold.
- Personnel shall not be permitted on mobile scaffold while the scaffold is being moved.

#### Tube and Coupler (Tube-Lock):

- Uprights shall have a maximum spacing of 8 feet.
- Uprights shall be placed on secure bases and maintained plumb.
- Scaffolds shall be limited in heights and working levels to those permitted in Tables 2-10, 11, and 12 of OSHA 29 CFR 1926.451.
- Horizontal braces shall be installed completely around all exterior uprights and between interior uprights. Braces shall be installed every 6 feet of height.

- Platform supports shall be coupled/clamped directly to the horizontal braces and extend 4 inches to 12 inches beyond the horizontal braces.
- All horizontal bracing shall be coupled/clamped directly to the uprights.
- Diagonal bracing shall be installed at alternating 45 degree angles beginning with the corner upright and repeating every 5th upright on the perimeter. An alternating bracing pattern should be used.

#### One and Two Point Suspension Scaffolds:

- Cable shall be securely anchored and softeners shall be used when necessary.
- Cable shall be insulated at the anchor point from the motor to 4 feet above the motor and wherever the cable comes in contact with metal to prevent electrical arcing.
- Two-point suspension scaffold platforms shall remain level while being raised or lowered.
- Each employee shall wear a full body harness and be tied off to an **independent lifeline**. A lifeline shall be supplied for each employee.

#### Knee Brace/Cantilever:

- Knee brace/cantilever scaffolding shall be welded by a qualified welder and visually inspected before use.

#### Ladders:

- Ladders shall extend 36 inches above the landing.
- Extension and job-built ladders shall be secured to prevent movement or falling.
- Manufactured ladders shall be Class I or Class IA with properly working feet.
- The slope of the ladder from the base of the support shall be one(1) foot for every 4 feet of ladder length.
- All ladders shall be set on a firm base to prevent shifting and tipping.

- Ladders with broken or missing rungs or steps, broken or split siderails, or faulty or defective construction, shall not be used.
- Metal ladders shall not be used.
- Step ladders shall not be used as a leaning ladder.
- Employees shall not work off the top two steps of a stepladder.
- Personnel shall have both hands free of tools, materials, or equipment, while climbing and descending ladders.
- Personnel shall face the ladder when climbing and descending.

## **TRAINING REQUIREMENTS**

The Project Manager will be responsible for implementing the employee training and information program. The format for the program may include classroom instruction, safety tool box meetings, and other forms of group or singular instructions.

Instructions are normally communicated verbally or in writing through the employee's Supervisor. The Project Manager is responsible for assuring Supervisors are qualified or competent in the following areas:

- Fall hazards and falling object hazards.
- Electrical hazards (protection from electrical hazards for erecting, maintaining, and dismantling).
- Fall protection and protection systems.
- Proper and safe handling of materials.
- Trained in the maximum intended loads and load-carrying capacities.
- Any other pertinent requirements.
- All company employees will be trained in the above mentioned, along with any additional basic or site requirements.
- The company will insure that each employee follows the safety guidelines as set forth in Safe Work Practices.

## SCAFFOLDING INSPECTION REPORT

Client: \_\_\_\_\_

Job No: \_\_\_\_\_

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

Scaffold

Location: \_\_\_\_\_ Time: \_\_\_\_\_:\_\_\_\_\_AM/PM

Inspected by: \_\_\_\_\_

NOTE: Scaffold shall not be used unless these items are found satisfactory.

SECTION 1.	Yes	No	Comments
1. Base plates/screw jacks on firm contact with sills/deck to prevent settling.	_____	_____	_____
2. Scaffold appears to be level and verticals are plumb.	_____	_____	_____
3. Safe, proper access and egress provided to all work platforms.	_____	_____	_____
4. All platforms properly/tightly planked and secured from movement.	_____	_____	_____
5. All toeboards secured in place.	_____	_____	_____
6. All guardrails and midrails in place.	_____	_____	_____
7. Are vertical legs rigidly braced to prevent swaying.	_____	_____	_____
8. Scaffold anchored or equalized (4 to 1) to prevent movement (butts/ties installed).	_____	_____	_____
9. No energized, unprotected electrical is within 12 feet of the scaffold.	_____	_____	_____
10. Has the scaffold been tagged and has not been altered.	_____	_____	_____





## SCAFFOLD SAFETY AND COMPLIANCE TEST

NAME: \_\_\_\_\_ DATE: \_\_\_\_\_ SCORE: \_\_\_\_\_ SSN: \_\_\_\_\_

- \_\_\_\_\_ 1. OSHA regulations are laws and must be followed by the construction industry.
- True or False
- \_\_\_\_\_ 2. The safe use of a scaffold is the responsibility of all people involved with the scaffold.
- True or False
- \_\_\_\_\_ 3. Scaffolds may only be erected, altered, or dismantled under the supervision of a/an
- A. Authorized Person
  - B. Competent Person
  - C. Skilled Person
  - D. Qualified Person
- \_\_\_\_\_ 4. All scaffolds must be built on
- A. Anything that looks like it will hold the intended load firmly.
  - B. Base plates, mud sills, or other adequate firm foundation.
  - C. It makes no real difference as long as it is braced properly.
  - D. Solid ground.
- \_\_\_\_\_ 5. Scaffold mud sills help distribute the leg or vertical loads to the soil, asphalt, concrete, etc.
- True or False
- \_\_\_\_\_ 6. Where should the bottom runners be placed on the scaffold?
- A. Four inches from the bottom of the legs.
  - B. About knee high.
  - C. As close to the base as possible.
  - D. They should always be attached to the screw jacks.
- \_\_\_\_\_ 7. X-Bracing means to attach two braces on each side of the scaffold to form an X shape at all angles.
- True or False

- \_\_\_\_\_ 8. How high above the base should handrails be?
- A. 38 to 42 inches
  - B. 36 to 45 inches
  - C. 42 to 45 inches
  - D. None of the above
- \_\_\_\_\_ 9. An access ladder should be installed on all scaffolds more than
- A. 4 feet above or below a point of access
  - B. 3 feet above or below a point of access
  - C. 2 feet above or below a point of access
  - D. 1 foot above or below a point of access
- \_\_\_\_\_ 10. Ladders should be attached at a place on the scaffold that is less likely to cause
- A. Swaying
  - B. Damage
  - C. Tripping
  - D. Injury
- \_\_\_\_\_ 11. Each scaffold deck shall be fully planked so that the gap between each plank is no more than
- A. 2 inches
  - B. 1 inch
  - C. 3 inches
  - D. There can be no gaps
- \_\_\_\_\_ 12. The minimum board overhang is 10 inches past the bearerbar.
- True or False
- \_\_\_\_\_ 13. The maximum overhang of a board 10 feet or less is
- A. 18 inches
  - B. 10 inches
  - C. 12 inches
  - D. 9 inches
- \_\_\_\_\_ 14. When planks are overlapped, the minimum overlap is
- A. 14 inches
  - B. 12 inches
  - C. 16 inches
  - D. 8 inches

\_\_\_\_\_ 15. Toeboards are to be on all open sides of a scaffold when the deck is higher than

- A. 6 feet or more
- B. 8 feet or more
- C. 7½ feet or more
- D. 10 feet or more

\_\_\_\_\_ 16. Toeboards must be at least 3½ inches high and have no more than ¼ inch gap between the toeboard and the deck.

True or False

\_\_\_\_\_ 17. All scaffold end frames must be locked together to prevent

- A. Tipping
- B. To help scaffold stay plumb
- C. Swaying
- D. Uplift

\_\_\_\_\_ 18. A tube and coupler scaffold more than 125 feet in height must be designed by a competent engineer with at least two years scaffold experience.

True or False

\_\_\_\_\_ 19. Guys or ties should be placed as close to the verticals as possible.

True or False

\_\_\_\_\_ 20. The casters on mobile scaffolds should never be locked in case they need to be moved during emergencies.

True or False

\_\_\_\_\_ 21. Horizontal and diagonal bracing is not preferred on a mobile scaffold.

True or False

\_\_\_\_\_ 22. A scaffold that is made to be heavy-duty will hold 25 pounds per square foot.

True or False

- \_\_\_\_\_ 23. A screw jack shall be used on scaffolds to help
- A. Make it taller
  - B. Level it
  - C. Hold it in place
  - D. Keep it from falling over
- \_\_\_\_\_ 24. Knot holes in planks may be any size as long as they are not loose or missing.
- True or False
- \_\_\_\_\_ 25. A scaffold plank must weigh at least
- A. 45 pounds
  - B. 55 pounds
  - C. 65 pounds
  - D. None of the above is correct
- \_\_\_\_\_ 26. Scaffold planks that are 10 feet long or more may hang beyond the bearer bar by a minimum/maximum of \_\_\_\_\_ per the construction standard 29 CFR 1926.450.
- A. 6 - 14 inches
  - B. 8 - 18 inches
  - C. 6 - 18 inches
  - D. 6 - 12 inches
- \_\_\_\_\_ 27. Saw kerfs do not damage the integrity of the plank.
- True or False
- \_\_\_\_\_ 28. Scaffold erectors do not need to have an understanding of all the factors which may affect the strength, stability, and the effectiveness of a completed scaffold.
- True or False
- \_\_\_\_\_ 29. Scaffolds and their components shall be capable of supporting, without failure, at least four times the maximum intended load. This is known as a 4 to 1 safety factor.
- True or False
- \_\_\_\_\_ 30. On tube and coupler scaffold, the bearers shall be at least \_\_\_\_\_ but not more than \_\_\_\_\_ inches longer than the post spacing or runner spacing.
- A. Not less than 4", not more than 12"
  - B. Not less than 2", not more than 6"
  - C. Not less than 6", not more than 14"
  - D. None of the above

## SCAFFOLD SAFETY AND COMPLIANCE TEST

### ANSWER SHEET

1. T
2. T
3. B
4. B
5. T
6. C
7. F
8. D
9. C
10. C
11. B
12. F
13. C
14. B
15. D
16. T
17. D
18. F
19. T
20. F
21. F
22. F
23. B
24. F
25. D
26. D
27. F
28. F
29. T
30. A

## **19-TOOL SAFETY HAND & POWER**

### **Applicable OSHA Standards: 29 CFR 1910 Subpart P**

### **PURPOSE**

The purpose of this program is to provide direction and to establish the general requirements to be implemented when using tools, hand or power.

### **SCOPE**

The scope of this program applies to all job site locations where tool operations are or may be conducted. The requirements, as set forth in this program, shall be implemented to the fullest extent possible and shall be considered as the minimum requirements of this program.

### **RESPONSIBILITIES**

The primary responsibilities for the implementation of requirements of this program shall rest with the job site Supervisor, Foreman, or Leadsman of record.

The Director of Safety or designee shall be responsible to provide for the monitoring of the work activities to assure compliance to the requirements of this program and to the Customer/Client safety requirements.

The Project Manager, Vice President, or Chief Executive Officer shall be responsible for disciplinary action resulting from violation or failure of assigned persons to implement the requirements of this program.

### **SMALL TOOLS AND EQUIPMENT**

Many of the accidents and/or injuries which occur each year can be attributed to improper or unsafe use of tools or the use of tools which are in poor condition. The few extra seconds required examining tools and to use them properly can reduce the number of accident/injuries.

**NOTE:** Condition of tools; all hand, power, and similar equipment, whether furnished by the employee or employer, shall be maintained in a safe working condition.

### **GENERAL PRECAUTIONS**

- Never remove or interfere with the operation of any tool guard or safety features.

- Always use the right tool for the right job.
- Keep tools clean and check their condition prior to using. If heads or striking tools become mushroomed or burred, have them dressed. If handles of tools are splintered, broken, or loose, have them replaced.
- Tools must always be returned to their proper storage place and not left where they create a hazard.
- Do not carry tools in pockets. It is dangerous; especially if tools are sharp or pointed.
- Do not use excessive pressure or force on any hand tool or the use of cheaters to apply more force.
- Metal measuring tapes having metal strands woven into fabric, brassbound rules, wire or metal bound hose, or rope with wire core **shall not be used** when working on or near energized electrical circuits or equipment.
- Tools should either be dropped or thrown from place to place or from employee to employee.
- Tools that must be raised or lowered from one elevation to another shall be placed in an approved tool bucket or firmly attached to hand-line(rope).

**NOTE:** Handmade or job made tools should not be used. In the event a special tool is needed for a specific task for which no such manufactured tool exists, proper engineering design, specifications, and management approval shall be obtained prior to construction of such a tool.

## HAND TOOLS

- Employees shall inspect tools prior to use. Damaged or defective tools shall be tagged "Do not operate" and removed from service as soon as the defect or damage is discovered.
- Wooden handles of tools, such as hammers, picks, etc. **shall not be** taped or covered in such a way as to hide damage or defects.
- Cracked or damaged wooden handles of tools, such as hammers, shall be replaced immediately upon discovery of the damage.
- Hand tools shall be used only for the purpose for which they were intended.

- Tools shall not be altered such as welding extensions on wrench handles or pad eyes on hammer wrenches.
- Every tool was designed to do a certain job. Use it only for its intended purpose! Every tool requires care.
- Keep your hand tools in peak condition, sharp, clean, oiled, and not abused.
- Do not use tools for prybars.
- Do not use two wrenches to increase leverage capacity.

## **SCREWDRIVERS**

- Use the right size and type screwdriver for the job.
- Do not hold screwdriver tip in palm of hand. The screwdriver may slip causing injury.
- Screwdrivers should be filed properly to prevent slipping.
- Do not use a screwdriver as a prybar.

## **HAMMERS**

- Hammers shall have a clear path for back swing and the target area shall be free from obstructions.
- Hammers with mushroomed heads shall never be used as they might glance off the target or the damaged head may splinter and send metal fragments flying.
- Never hold, with you hands, any object to be struck with a hammer by another employee. Hold the object with pliers or another tong-type device.
- Wooden handles shall be kept free of splinters or cracks and shall be kept tight in the tool.

## **FILES**

- Do not use a file for a pry or hammer as it is brittle and breaks easily.
- Files should be fitted with wooden handles to protect employees from the pointed file end.



## PRY BARS

- Be sure bite of bar is secure under load by first applying a slight pressure.
- Check your own balance before exerting full force.
- A cheater bar **shall not be used** on prybars.

## WRENCHES

- Wrenches should be pushed away from the body, if possible, to reduce the chance of the wrench slipping and striking the user in the face or body.
- Adjustable (crescent) and combination wrenches should be snug on bolts and nuts to avoid slipping.
- Never use a wrench as a hammer or a hammer on a wrench that is not to be used as such.
- **Never** use a cheater on a wrench or "double wrench" a nut. Use a hammer wrench or impact instead.
- Wrenches shall not be used when jaws are sprung to the point that slippage occurs.

## DRILL BITS

- Avoid unsafe defects; worn or battered heads, over tempered, and dull cutting edges.
- Do not use drill as a reamer (get a larger bit), use proper bit for drilling steel or brass or copper without removing the lip, or change bits without unplugging cord.

## SHOVELS, PICK AXES AND AXES

- Be aware of unsafe defects; rough, loose, cracked, or split handles; dull or nicked edges, over tempered surfaces.
- Do not use a wedge, pry bar, or hammer.

## POWER TOOLS

- All tools shall be inspected for defects or damage prior to use. Tools found to be damaged or defective shall be immediately tagged "Do Not Use" and removed from service.

- Protective guards on power tools shall not be removed. **Do not use** tools without guards in place.
- Tools shall not be dropped or allowed to strike another object in such a fashion that damage may occur.
- The power source on tools shall be physically disconnected prior to attempting any repairs or attachment changes. Always double check to make sure no one has come along and plugged the cord back in.
- Employees shall avoid loose fitting clothing when operating power tools. Shirttails must be tucked in the trousers/pants while operating powertools.
- Electrical tools shall be of the double insulated type with Underwriters Laboratory approval or be of the three wires grounded type.
- All electrical tools and power cords must be inspected per the Assured Grounding program guidelines and display the proper color-codes for the current inspection period.
- All electrical tools and power cords must be used with a Ground Fault Interrupter to protect against faulty ground.
- Electrical tools shall not be hoisted or carried by their power cords.
- Employees shall not operate electrical tools while standing in water or wet locations.
- Extension cords shall be of the three wires grounded type and be continuous without splice or repair. Extension cords shall reflect the proper colorcode.
- Extension cords shall be kept clear of traffic aisles and shall not be placed across vehicle traffic paths unless guarded to prevent damage. (Recommend to run cords 7' over head to prevent tripping hazards).
- Extension cords shall not be placed through doorways unless stops or guards are put in place to prevent pinching of the cord by the door.
- Extension cords shall not be suspended by wire or nails.
- Do not operate power tools without instructions from your supervisor. (Note: Some activities will require permits before work begins).
- Torque: The circular or rotating motion in tools such as drills, impact wrenches, saws, etc. which results in a strong twisting force. Be prepared in case of jamming.

- Have good footing. Use two hands. Ask for help as necessary and be prepared to release the power switch or trigger.
- Flying objects can result from operating almost any power tool, so you must always:
  1. Warn people around you
  2. Use proper personal protective equipment
  3. Avoid contact with moving parts
  4. Keep moving parts directed away from your body
  5. Do not "swing around" with the tool running. Someone might be behind you
- Be sure replacement parts conform to correct specifications. For example, grinder wheels shall be approved for the maximum RPM of the machine, wood cutting bits shall be for woodwork only, etc.

## **ELECTRICAL SAFETY WITH POWER TOOLS**

The use of portable power tools can make a job go faster and easier. The misuse of portable power tools can cause electric shocks, burns, cuts and puncture wounds, severed fingers and limbs, broken bones, loss of eyesight, and even death. The slightest shock when using electrical equipment is an ominous warning of a potentially serious safety hazard. A slight shock when using the equipment in one location might result in electrocution if the body makes a little better contact with the earth or a grounded object in another location.

Electrocution is the leading cause of fatal injury in construction related activities. Most such injuries result from the use of portable tools powered by 110 volt electricity. Here are some things you should know to protect yourself from electric shock hazards:

- **HAZARDS OF USING ELECTRICAL POWER TOOLS ARE:**
  1. Electrical shock from improper grounding or from attempting to adjust, clean, or service the tool without disconnecting the power.
  2. Contact with rotating and fast moving parts. Poor housekeeping, broken bits and blades, and lack of concentration can lead to serious cuts or amputations.
  3. Fire caused by defective electrical cords, overheated motors, sparking, and working near flammable liquids or gases.

- YOU CAN PROTECT YOURSELF BY:
  1. Choosing the right tool for the job. This will depend on the work to be done. Most commonly used power tools include drills, saws, sanders, routers, and grinders.
  2. Know how to use the tools safely and properly by reading the owner's manual carefully before use, by getting training from an experienced tool user, and be practicing before actually doing the job.
  3. Repair tools when needed. Worn or defective electrical tools should be taken out of service and repaired immediately. Every time you use an improperly grounded or unguarded power tool, you are playing "Russian Roulette".
  4. Transport and store tools properly. Power tools should be transported with extra care. Always hold the handle (not the cord) with your finger off the trigger. Place each tool in a safe storage area after use, preferably in a locked cabinet or tool box.
  5. Keep your work area clean, dry, and orderly. Power tools should not be used when working on slippery floors, in poorly lighted work areas, or near flammable liquids or gases.
  6. Electric cords also deserve attention. They may become frayed leading to electrical shock or fire. Light-duty extension cords may become overheated when improperly used. They can also present tripping hazards.
  
- GROUND FAULT CURRENT INTERRUPTERS
  1. GFCIs will be required whenever a Form Works Inc. employee uses an extension cord or a receptacle that is not part of a permanent building or structure that exceeds 12 volts.
  2. Employees will visually inspect(pre – use) all cords, receptacles, attachment cap, that has the potential to become damaged.(external defects, such as deformed or missing pins or insulation
  3. GFCIs shall be used on all, 120 volt, single phase, 15 and 20-ampere receptacle outlets, which are not part of the permanent wiring of the building or structure.Receptacles on a two wire, single phase portable or vehicle mounted generator rated not more than 5kw, where the circuit conductors of the generator are insulated from the generator frame and all other grounded surfaces, need not be protected with GFCIs.

Note:

A jobsite close to electrical lines shall be pre-planned and written procedures outlined before attempting to do the job. The Safety Department must review and approve any procedures that involve working in an area that has any electrical exposure.

## **PNEUMATIC TOOLS (AIR) - General**

- When gas or diesel compressors furnish the air source, keep them outside or vent them to the outside to prevent carbon monoxide poisoning.
  1. If you are using a permanent source of air, make sure it is not oxygen. Oxygen mixed with the oil in your air hose and tool will or may cause an instant explosion and fire.
  2. All hoses exceeding 1/2 inch inside diameter shall have a safety device at the source of supply or branch line to reduce pressure in case of hose failure.
- Air hoses and connections shall be checked prior to each use for defects.
- Air hoses should be protected from vehicle traffic, pedestrians, and sharp objects.
- Attachments on air tools shall be secured by retainer pins and rings. The retainer rings should be taped to prevent accidental placement.
- All crows foot type air connections shall be safety wired or pinned.
- Disconnect source and "bleed" hose before breaking connection on any air tool. To insure proper bleeding close the valve at the air source and insure all valves and regulators between the source and the tool are in the open position before bleeding air from tool.
- Never crimp hoses to stop air.
- Do not let your hoses create tripping hazards. Keep out of traffic areas, walkways, stairs, etc.
- Never point a pneumatic hammer at anyone. There is always the chance the retainer may fail.
  1. The bit should be in contact with the work surface before pulling the trigger.
- Governors require strict maintenance to prevent dangerous over speeding of grinders, drills, wrenches, etc.
- Always wear eye, face, and ear protection when using airtools.
- Air used for cleaning machines shall be regulated to 30 psi or less.

1. When compressed air is used for cleaning purposes, a nozzle must be provided with a shut off valve at the outlet of the hose.
- Metatarsal and shin guards should be worn for complete foot protection when using ground tampers that leave the ground such as "pogo sticks". This is in addition to other PPE requirements.
  - Metatarsal guards and shin guards should be worn together when using pavement breakers or jackhammers. This is in addition to other PPE requirements.
  - Extreme care shall be taken when working with compressed air. It should never be blown against clothing or any part of the body.
  - Storage and cleaning are very important with any tool. Keep tools clean and stored properly where they belong.
  - Air tools shall not be hoisted or carried by their air hoses.

## **POWDER ACTIVATED TOOLS**

Hilti and Ramset are just two common names of powder activated tools. They should all be used with the same respect as a firearm. Remember the general safety items.

### **SPECIAL NOTE:**

*No one is permitted to use any powder activated tool unless the employee has a current operator's license issued by a licensed instructor by the manufacturer.*

## **CHAINFALLS AND COMEALONGS**

Employees have to rely on special lifting and hoisting equipment. Most of our work requires moving equipment and materials that can seldom be lifted by hand alone.

These portable hand hoists are very useful. Knowledge of the following portable hoisting tools and their safe use can save you much time in performing work duties and make lifting and pulling bulky items an easier task.

- Chainfalls and comealongs are designed to be operated by one employee only. If it takes two to raise or move a load, chances are the load is greater than the capacity of the lifting device or the device is malfunctioned. Never wrap the chain around the load.
- Know the weight of the load and capacity of the lifting device. **Do Not Exceed!**

- Periodic inspections, for instance monthly, or chainfalls and come along are required and must be documented.

## CHAINFALLS

- Lifting chainfalls are low speed, geared for precision lifting, and have built-in, no-slip brakes. There are two lifting hooks; one swivel hook mounted on the housing and the other located at the end of the lifting chain. Chainfalls are available in a variety of weight capacities ranging from 1/4 ton to 10 tons with assorted pulling chain lengths for longer reaches to the work area.
- Chainfalls is designed primarily for vertical lifting. The lifting hooks on the housing and chain are tempered but can be or partially straightened and shall therefore be provided with a safety clip latch to prevent hooks from being dislodged. Before making a lift with the chainfall, be sure the load is rigged properly and the lift area is barricaded and free of personnel. Make all lifts true vertically to prevent a shifting, swaying load and undo wear on the hoist. Never use a chainfall for a horizontal pull. The designed chain sprocket engagement will not be obtained.

## COMEALONG

- This compact hoist offers use in close area, toolbox size storage, and versatility in almost any lifting and pulling situation.
- The come along is most popular because of its heavy-duty construction and greater lifting ability. A ratchet lever moves the lifting chain or cable. The lever has three positions, **forward** for lifting or pulling, **neutral** for free gear travel, and **reverse** for lowering or releasing tension.
- Come along have one hook attached to the gear housing and one at the end of the lifting chain or cable. They are available in various lifting chain and cable lengths for longer reaching pulls and lifts. They range in capacities from 1/4 ton to 6 tons.
- Considered the most versatile of the hand-operated hoists, the come along can be used in vertical lifting (only in certain situation), pulling, and binding on any plane and in moving heavy objects. A ratchet movement of the hand lever, even under tension accomplishes pulling or releasing. Therefore, if it takes two employees to crank the hand lever, the hoist is overloaded for the job. Avoid using cable-type lever hoists if the cable is frayed or damaged. Never use a cheater bar on the handle of the come along.

## **PEDESTAL, BENCH, AND PORTABLE GRINDERS - General**

- Each employee is responsible for inspection of the grinder he/she is using.
- Wheel rating must exceed the maximum potential RPM of the grinder on which it is mounted.
- No special adapters, arbors, or other improvisation are not permitted, nor may more than one wheel be mounted between a single set of flanges.
- All abrasive wheels shall be mounted between flanges which are at least 1/3 the diameter of the wheel.
- On all portable tools, the control switch shall be instant-pressure controlled without a locking pin.
- Wheels should be stored in a dry place with constant temperature above freezing and protected from physical damage, which could cause cracking.
- Guards shall be installed and maintained.
- The proper respiratory protection shall be used in the event dust hazards exists.
- The proper eye/face, hand, and ear protection shall be used.
- Guards, work rests, eye shields, and other permanent protection devices shall not be removed from any grinding or buffing wheels.
- The tool room shall perform initial inspection and subsequent maintenance of all grinders. Inspections will be made on an established schedule and records maintained by the Tool Room and filed with the Safety Department.
- The using department shall be responsible for installing all wheels and determining that they are designed for the speed of the grinder. (Any questions, you should contact the Tool Room or Main Office).
- The using department shall be responsible for maintaining the maximum distance between the work rest and the wheel - 1/8" and tongue guard 1/4".
- Grinding shall not be performed on the side of the wheel.





## **20-ACCIDENT AND INCIDENT PROCEDURES**

### **INTRODUCTION**

Any injury or incident that could cause injury must be reported to the Safety, Health and Environmental Department.

Injuries will be documented on the following reports:

1. First Report of Injury or Illness
2. Employer's Supplemental Report of Injury
3. Supervisor's Investigation Report
4. Medical Questionnaire
5. Waiver of Immediate Professional Medical Attention

Incidents that do not result in injury must be thoroughly investigated. Incidents that result in the administering of First Aid will be recorded on the First Aid Register.

For all incidents, the job supervisor will write a summary of events that details the nature, cause and proposed remedy for the situation.

### **MEDICAL CARE OF AN INJURED EMPLOYEE**

When an employee is injured on the job, the company will provide him/her with the proper medical attention. Each job will be provided a listing of physicians, hospitals and ambulances to contact during an emergency.

An injured employee is encouraged to use the listed services because these services are qualified, by experience, to handle trauma cases. The employee, however, has the right to utilize the physician of his choice.

### **WHEN AN INJURY OCCURS**

1. The employee is to report ALL injuries immediately to the job supervisor. The S.H.E. Department maintains a First Aid Register on all injuries.
2. Should the employee require treatment by a physician, the company will provide transportation

3. Employees should not seek further medical treatment from a physician for a job injury without notifying his job supervisor.

## **EMERGENCY REPORTING OF SERIOUS INJURIES**

### **Contact the Director of Safety**

1. When reporting an accident, give the exact location, where the accident occurred, cause and if possible a brief description of the injuries.
2. Supervisors in the accident area will assist in performance of their emergency duties; i.e., clearing area of spectators, gathering witnesses, etc.
4. The injured person or persons should not be moved unless they are exposed to dangerous environment that could cause further injury.
5. Only trained personnel should administer first aid to the injured.
6. Begin accident investigation.

## **MEDICAL TREATMENT DURING IRREGULAR WORK HOURS**

In the event medical treatment is needed at any time other than normal working hours Monday through Friday, the case should be handled as outlined below:

1. If the First-Aid attendant determines that the injured should be seen by a Doctor immediately, supervision of the injured employee will arrange for this, contacting a medical facility from the Authorized Medical Facility list.
2. If none of these Doctors can be contacted, the injured should be taken to the nearest Hospital. The Emergency Room should be called and notified of the emergency that is on its way, and request the Doctor be on hand to administer treatment.
3. Transportation to the hospital will be arranged by the injured employee's supervision.

## **EMPLOYEE REFUSAL OF MEDICAL ATTENTION**

There are times it is important to seek medical attention for an injury, but an employee cannot be forced to accept medical attention, in the event an employee refuses medical

treatment for any reason, the WAIVER OF IMMEDIATE PROFESSIONAL MEDICAL ATTENTION form, Attachment "E", must be filled out.

## **INCIDENT AND ACCIDENT INVESTIGATION PROCEDURES**

The purpose of this procedure is to establish a method of investigating all serious incidents, accidents and lost time cases.

### **Purpose of Investigation**

1. Establish the exact, factual cause of the incident or accident.
2. Determine what steps must be taken to prevent recurrence of the same type of incident and to define exactly who is to initiate these preventive measures.

### **Investigation Committee**

The investigation committee will be composed of the following:

1. Area Safety, Health and Environmental Representative
2. Supervisor
3. All witnesses to the occurrence
4. Other personnel as deemed advisable

### **Timeliness of the investigation**

All investigations will begin on day of occurrence. This will prevent the possible loss of important information. Only on rare occasions will it be necessary to delay the investigation.

### **Investigating Procedure**

1. When the committee convenes and after the Area SHE representative has stated the purpose of the meeting, the supervisor of the crew involved will be asked to describe in detail:
  - The nature of the work being performed prior to and at the time of the incident.
  - The exact instructions given to the crew and especially the employees directly involved.

- The account of how work was planned and any specific safety instructions that were given.
2. During the establishment of facts, factors such as age of employee, length of experience in the type of work they were doing, service on the project, their injury record and all other pertinent information which will serve in formulating plans for the prevention of similar occurrences.
  3. Photographs should be taken whenever possible. Assure that time and conditions are noted and how these conditions differ from those at the time of the incident. The photographer should be careful not to take pictures, which may distort the view by an unusual camera angle.
  4. Written statements will be taken from witnesses and then the witnesses will be asked to sign the statements after they read them. If this procedure is questioned, explain that statements are being obtained from many people; and it is desirable to be able to read over the statement again, if necessary, to help keep separate the facts observed by different people. The written and signed statements should become a part of the Accident Investigation and made available for future use.
  5. Request to take pictures, received from authorities who are legally empowered to investigate accidents, (state, county, etc.) should be granted; however, someone should be assigned to accompany them to observe and protest anything unusual about their conduct.
  6. Based on the complete assembly of facts, step to prevent recurrence should be formulated.

## **REPORTING AN INJURY OR ILLNESS**

The following reports must be completed when an employee reports a work related injury or illness.

### **FIRST REPORT OF INJURY OR ILLNESS**

#### **PURPOSE:**

The purpose of the First Report of Injury or Illness is to provide the insurance carrier, Industrial Accident Board and the S.H.E. Department with a record of an injury to an employee.

#### INSTRUCTIONS:

- The First Report of Injury or Illness must be completed on all injuries or illnesses.
- It must be prepared by the job supervisor and submitted to the Safety Department by the end of the shift..
- Forms can be obtained from the Area Offices.

#### **EMPLOYERS SUPPLEMENTAL REPORT OF INJURY**

##### PURPOSE:

To report the change in status of an injured employee from that reported on the employer's First Report of Injury.

##### INSTRUCTIONS:

This report must be filed as follows:

- After a change in employee's status.
- 2 days after the First Report of Injury if the employee has not returned to work.
- Upon the employee's return to work after a disabling injury.
- In the event of the employee's death.  
**This report is completed and filed by the S.H.E. Department.**

#### **SUPERVISOR'S INVESTIGATION OF ACCIDENT**

- This report will be prepared by the job supervisor and submitted at the same time as the First Report of Injury or Illness.
- This report is for internal use only.
- Forms are available from the Area Offices. See Attachment C.

#### **MEDICAL QUESTIONNAIRE**

- The injured employee completes this report. The employee should complete this as soon as possible while the details of the accident are clear.

- Forms are available from the Area Offices. See attached example.

### **WAIVER OF IMMEDIATE PROFESSIONAL MEDICAL ATTENTION**

- In the event that an employee receives a minor injury and refuses medical attention, the attached waiver must be completed and signed by the employee.
- Forms are available from the Area Offices. See attached example.

### **LATE REPORTING ON AN INJURY OR ILLNESS**

The supervisor must complete the First Injury Report of Injury and the Supervisor's Investigation report when an injury is reported late. The First Injury Report will be notated as "ALLEGED". Additionally, the employee must complete the medical questionnaire. Submit all forms to the S.H.E. Department.

### **FATALITIES**

- The President or Safety Director will be the only person to release information.
- The President or Safety Director will notify the next of kin.
- The job supervisor will ensure that all witnesses report to a designated area in order to record their account of the events.
- The general area of the accident should not be changed or any item moved. Of course, appropriate corrective action must be taken if further injury is possible.

# ATTACHMENT "A"

## FIRST REPORT OF INJURY

Send the specified copies to your  
**Workers' Compensation Insurance Carrier**  
and the injured employee.

**\*Employers - Do not send this form to the  
Texas Workers' Compensation Commission,  
Unless the Commission specifically requests a direct filing.**

TWCC CLAIM #
--------------

CARRIER'S CLAIM #
-------------------

1. Name (Last, First, M.I.)		2. Sex F <input type="checkbox"/> M <input type="checkbox"/>		15. Date of Injury (m-d-y) - -		16. Time of Injury : am <input type="checkbox"/> pm <input type="checkbox"/>		17. Date Lost Time Began (m-d-y) - -	
3. Social Security Number - -		4. Home Phone ( )		5. Date of Birth (m-d-y) - -		18. Nature of Injury*		19. Part of Body Injured or Exposed*	
6. Does the Employee Speak English? If No, Specify Language YES <input type="checkbox"/> NO <input type="checkbox"/>									
7. Race White <input type="checkbox"/> Black <input type="checkbox"/> Asian <input type="checkbox"/>			8. Ethnicity Hispanic <input type="checkbox"/> Native American <input type="checkbox"/> Other <input type="checkbox"/>			21. Was employee doing his regular job? YES <input type="checkbox"/> NO <input type="checkbox"/>		22. Worksite Location of Injury (stairs, dock, etc.)*	
9. Mailing Address Street or P.O. Box City State Zip Code County									
10. Marital Status Married <input type="checkbox"/> Widowed <input type="checkbox"/> Separated <input type="checkbox"/> Single <input type="checkbox"/> Divorced <input type="checkbox"/>									
11. Number of Dependent Children			12. Spouse's Name			23. Address Where Injury or Exposure Occurred Name of business if incident occurred on a business site Street or P.O. Box City State Zip Code County			
13. Doctor's Name									
14. Doctor's Mailing Address (Street or P.O.Box) City State Zip Code									
30. Date of Hire (m-d-y) - -		31. Was employee hired or recruited in Texas? YES <input type="checkbox"/> NO <input type="checkbox"/>			32. Length of Service in Current Position Months ____ Years ____		33. Length of Service in Occupation Months ____ Years ____		
34. Employee Payroll Classification Code				35. Occupation of Injured Worker					
36. Rate of Pay at this Job \$ ____ Hourly \$ ____ Weekly		37. Full Work Week is: ____ Hours ____ Days			38. Last Paycheck was: \$ ____ for ____ Hours or ____ Days		39. Is employee an Owner, Partner, or Corporate Officer? YES <input type="checkbox"/> NO <input type="checkbox"/>		
40. Name and Title of Person Completing Form					41. Name of Business				
42. Business Mailing Address and Telephone Number Street or P.O. Box Telephone ( ) City State Zip Code					43. Business Location (If different from mailing address) Number and Street City State Zip Code				
44. Federal Tax Identification Number		45. Primary Standard Industrial Classification (SIC) Code* (4 digit)			46. Specific SIC Code* (4 digit)		47. Texas Comptroller Taxpayer No.		
48. Workers' Compensation Insurance Company					49. Policy Number				
50. Did you request accident prevention services in past 12 months? YES <input type="checkbox"/> NO <input type="checkbox"/> If yes, did you receive them? YES <input type="checkbox"/> NO <input type="checkbox"/>									
51. Signature and Title (READ INSTRUCTIONS ON INSTRUCTION SHEET BEFORE SIGNING) X _____ Date _____									



# ATTACHMENT "B"

## EMPLOYERS SUPPLEMENTAL REPORT OF INJURY

DO NOT SEND THIS FORM TO TEXAS WORKERS' COMPENSATION COMMISSION UNLESS REQUESTED.

CARRIER'S CLAIM # _____
TWCC # _____

**WHEN AND WHERE TO FILE:** For all injuries occurring January 1, 1991 or after that require a TWCC-1, Employer's First Report of Injury, to be filed, the employer must file by first class mail or personal delivery a Supplemental Report of Injury (TWCC-6) with the employer's workers' compensation carrier and the injured employee: 1) within 3 days after the injured employee returns to work; 2) within 3 days when the employee, after returning to work, has an additional day or days of disability because of the injury; 3) within 10 days after the end of each pay period in which the employee has an increase or decrease of earnings during the time the employee is entitled to temporary income benefits; 4) within 10 days after the employee resigns or is terminated. If the injured employee is no longer employed by the employer, the employee is responsible for providing information to the carrier about amounts of earnings or offers of employment. The employee may use a TWCC-6, Employer's Supplemental Report of Injury for this purpose. **An employee has disability if he/she is unable to work as a result of the injury or has returned to work earning less than pre-injury wages because of the injury.**

### EMPLOYEE INFORMATION

1. Employee's Name (Last, First M.I.) and Telephone No.  ( )	2. Social Security No.	3. Date of Injury (m-d-y)
4. Employee's Mailing Address (Street or P.O. Box)		
City	State	Zip Code

**TO EMPLOYER: Based on above rule requirements, check boxes which show reasons for filing Supplemental Report of Injury this date:**

<input type="checkbox"/> <b>employee returned to work</b> Complete Block 5a or 5b Complete Blocks 6 and 7	<input type="checkbox"/> <b>change in weekly earnings after injury</b> Complete Blocks 5a or 5b Complete Blocks 7 and 8	<input type="checkbox"/> <b>employee terminated/resigned</b> Complete Block 5a or 5b Complete Block 7 Complete Block 9	<input type="checkbox"/> <b>additional day(s) of disability</b> Complete Block 5b Complete Block 7
---	---	---	--

5. a) If initial filing of TWCC-6, first day of disability due to injury (m-d-y)	5. b) If second or subsequent filing of TWCC-6, give first day of disability due to injury <u>for this period only</u> (m-d-y)
6. Date of Return to Work _____ (Check box) <input type="checkbox"/> Full Duty, Full Pay <input type="checkbox"/> Limited Duty: Full Pay <input type="checkbox"/> Reduced Pay	7. Weekly and Hourly Earnings at Time of This Report \$ _____ weekly (Check box) <input type="checkbox"/> Same as Preinjury Wage \$ _____ hourly <input type="checkbox"/> Increase from Preinjury Wages <input type="checkbox"/> Decrease from Preinjury Wages
8. No. of Hours Working Weekly at Time of This Report (Check box) <input type="checkbox"/> Increase from Preinjury Hours Worked Weekly <input type="checkbox"/> Same as Preinjury <input type="checkbox"/> Decrease from Preinjury Hours Worked Weekly	9. If the employee resigns or is terminated, fill in the appropriate section. <input type="checkbox"/> Date of Resignation (m-d-y) _____ <input type="checkbox"/> Date of Termination (m-d-y) _____
10. If applicable, eight days of disability began on (m-d-y) [see above definition of disability]	9a. Reason for Resignation or Termination
11. Has injured employee died? If so, give date of death (m-d-y)	12. Was employee on limited duty at time of termination? Yes <input type="checkbox"/> No <input type="checkbox"/>

### EMPLOYER INFORMATION

13. Employer's Business Name	14. Telephone No.  ( )
15. Employer's Business Mailing Address (Street or P.O. Box)	
City	State
Zip Code	
16. Name of Workers' Compensation Carrier for Above Injury	
17. The information provided in this report is accurate to the best of my knowledge. It may be relied upon for evaluation of the named employee's eligibility for benefits.	
Signature and Title of Person Completing Form <input type="checkbox"/> Employer <input type="checkbox"/> Employee	Date

# ATTACHMENT "C"

## SUPERVISORS INVESTIGATION OF ACCIDENT

Employees Name: \_\_\_\_\_

Social Security Number: \_\_\_\_\_

Address: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Relative Phone Number: \_\_\_\_\_

Job Position/Title: \_\_\_\_\_

Task: \_\_\_\_\_

Tools Being Used: \_\_\_\_\_

Equipment Being Used: \_\_\_\_\_

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

Location Address: \_\_\_\_\_

Supervisors Name: \_\_\_\_\_

Date/Time of Injury or Illness: \_\_\_\_\_

Date/Time Injury or Illness Reported: \_\_\_\_\_

Name(s) of Witnesses: \_\_\_\_\_

Witnesses Phone Number(s): \_\_\_\_\_

Incident Resulted In:  Injury  Illness  Fatality  Property Damage

First Aid Given? \_\_\_\_\_ Medical Treatment Required? \_\_\_\_\_ Workdays Lost? \_\_\_\_\_

Describe How the Incident Occurred: \_\_\_\_\_

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

What Actions, Events, or Conditions Contributed most Directly to this Incident: \_\_\_\_\_

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

Corrective Action: \_\_\_\_\_

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

Corrective Action follow-up Date: \_\_\_\_\_

Employee Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Supervisor Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**ATTACHMENT "D"**

**MEDICAL QUESTIONNAIRE**

**PLEASE ANSWER THE FOLLOWING QUESTIONS IN YOUR OWN  
HANDWRITING:**

**NAME:** \_\_\_\_\_ **SS#** ----- \_\_\_\_\_  
**ADDRESS:** \_\_\_\_\_  
**CITY:** \_\_\_\_\_ **STATE:** \_\_\_\_\_ **ZIP** \_\_\_\_\_

**AGE:** \_\_\_\_\_ **CRAFT:** \_\_\_\_\_ **JOURNEYMAN OR HELPER**

**HOURLY RATE:** \_\_\_\_\_

**HOW LONG ON THIS PROJECT:** \_\_\_\_\_

**DATE OF OCCURRENCE:** \_\_\_\_\_

**EXACT TIME:** \_\_\_\_\_ **AM PM**

**WHERE DID OCCURRENCE HAPPEN?  
(EXACT LOCATION)**

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

**WHO WAS WORKING WITH YOU, LIST NAMES**

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

**IF LIFTING, WHAT DID YOU LIFT?**

\_\_\_\_\_

**HOW MUCH WOULD YOU SAY IT WEIGHED?**

\_\_\_\_\_

**DESCRIBE IN YOU OWN WORDS EXACTLY WHAT HAPPENED:**

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

**NAME OF SUPERVISOR:** \_\_\_\_\_

**HAVE YOU EVER INJURED OR HAD A PROBLEM WITH YOU BACK BEFORE  
TODAY?**

**IF YES, PLEASE DESCRIBE:**

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

**THE ABOVE IS TRUE AND CORRECT.**

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

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

**TODAY'S DATE IS** \_\_\_\_\_

## ATTACHMENT "E"

### WAIVER OF IMMEDIATE PROFESSIONAL MEDICAL ATTENTION

This is to certify that I have received what I consider to be a minor injury to my person, while working on the job for \_\_\_\_\_.

I have reported said injury to my supervisor, who has offered me immediate medical attention, which I do not wish to avail myself of at this time.

Signed: \_\_\_\_\_

Dated: \_\_\_\_\_

Witness: \_\_\_\_\_

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

Time: \_\_\_\_\_

## **21-PERSONAL PROTECTIVE EQUIPMENT**

**Applicable OSHA Standard: 29 CFR 1910 Subpart I**

### **PURPOSE**

Protective equipment, including personal protective equipment for eyes, face, head, and extremities, protective clothing, respiratory devices, and protective shields and barriers, shall be provided, used, and maintained in a sanitary and reliable condition wherever it is necessary by reason of hazards of processes or environment, chemical hazards, radiological hazards, or mechanical irritants encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact.

### **SCOPE**

This program applies to all employees and subcontractors working within company controlled worksites.

### **APPLICATION**

PPE devices alone should not be relied on to provide protection against hazards, but should be used in conjunction with guards, engineering controls, and sound manufacturing practices.

Our company will provide employees with the proper protective equipment (PPE) for use in their specific tasks.

This PPE includes but is not limited to eyes, face, head, respiratory, and extremities.

The PPE will be used, maintained and stored in accordance with the manufactures recommendations

### **EMPLOYEE OWNED EQUIPMENT**

Where employees provide their own protective equipment, the site safety supervisor or designated representative shall be responsible to assure its adequacy, including proper maintenance, and sanitation of such equipment.

### **DESIGN**

All PPE shall meet OSHA/NIOSH/ANSI standards and approval.

Where a standard may not apply a designated competent person will analyze the equipment and give approval or disapproval for the equipment's use.

## **HAZARD ASSESSMENT AND SELECTION**

Selection of PPE will be based on supervision assessment of the hazards associated with the job site and the recommendations included on the safe work permit provided by the client.

Prior to the beginning of any job task, supervision will determine the PPE necessary to safeguard the employees assigned to do the work. When the job tasks are complicated in nature the site safety supervisor and the client safety representative will be consulted for their expertise in determining the proper PPE for the task.

Supervision will ensure that the PPE is available and is included on the work permit. The information on the permit will be discussed with the crew assigned to do the work.

When reviewing the scope of work prior to the commencement of the job supervision will assess the hazards associated with the work and its environment. This assessment will be distributed to the site safety supervisor/representative so they can determine the needs of the job.

PPE determined for the job will be verbally communicated to the employees during a tool box safety meeting prior to the commencement of the job.

PPE will be ordered in various sizes and types to accommodate a variety of individuals who may be assigned work.

## **DEFECTIVE AND DAMAGED EQUIPMENT**

Defective or damaged equipment will not be used.

When PPE is removed for disposal it will be tagged as such, if not disposed of immediately.

## **TRAINING**

The company will provide training to each employee who is required to use PPE. Each such employee shall be trained to know at least the following:

- When PPE is necessary;
- What PPE is necessary;
- How to properly don, remove, adjust, and wear PPE;

- The limitations of the PPE; and,
- The proper care, maintenance, useful life and disposal of the PPE.

Each affected employee shall demonstrate an understanding of the training, and the ability to use PPE properly, before being allowed to perform work requiring the use of PPE.

When supervision has reason to believe that any affected employee who has already been trained does not have the understanding and skill required the employee must be retrained. Circumstances where retraining is required include, but are not limited to, situations where:

- Changes in the workplace render previous training obsolete; or
- Changes in the types of PPE to be used render previous training obsolete; or
- Inadequacies in an affected employee's knowledge or use of assigned PPE indicate that the employee has not retained the requisite understanding or skill.

Supervision shall verify that each affected employee has received and understood the required training through a written certification that contains the name of each employee trained, the date(s) of training, and that identifies the subject of the certification.

## **EYE AND FACE PROTECTION**

The minimum eye protection allowed outside of an office area is ANSI (Z.87.1-1989) approved side shield safety glasses.

Regular safety glasses are very similar in appearance to normal prescription glasses, but the safety glasses are designed to protect you from flying particles. Their lenses are impact-resistant and their frames are far stronger than regular eyeglasses. Safety glasses can be made with prescription lenses and equipped with side shields or tinted to offer additional protection.

Contact lenses are not allowed at work areas unless prior approval in writing by management.

Supervisors and the client will determine what tasks require other eye protection, such as chemical goggles and face shields.

Goggles that can be worn over corrective spectacles without disturbing the adjustment are acceptable.

Goggles are impact-resistant and are available with tinted lenses. Goggles provide a secure shield around the entire eye area to protect against hazards coming from any



direction. Goggles may have regular or indirect ventilation. Indirect ventilation may be required if a splash hazard exists.

Employees **shall** wear their eye protection to adequately protect themselves from hazards in the work area.

Questions about eye protection should be brought to your supervisor and resolved before the job is started. Special protection concerns should also be discussed with your supervisor.

All face and eye protection equipment shall be kept clean and in good repair.

Full-face shields are required to be worn over side shield safety glasses or chemical goggles for grinding and chipping and any other designated assignment.

Face shields and helmets are not in themselves protective eyewear. Rather, they are used in conjunction with eye protectors. Full-face shields are often used when a chemical, heat, or glare exposure exists. Helmets are used when welding or working with molten materials.

## **HEAD PROTECTION**

Approved hard hats (ANSI-Z89.1-1986) in good condition are required. Each affected employee shall wear protective helmets, designed to reduce electrical shock hazard. When near exposed electrical conductors, which could contact the head (ANSI -Z89.2-1971). Metal hard hats shall not be worn.

Hard hats are to be worn in work areas where there is a potential for injury to the head from falling or flying objects.

## **HAND PROTECTION**

The company will select and require employees to use appropriate hand protection when employee's hands are exposed to hazards such as those from skin absorption of harmful substances, severe cuts or lacerations, severe abrasions, punctures, chemical burns, thermal burns, and harmful temperature extremes.

The selection of the appropriate hand protection will be based on an evaluation of the performance characteristics of the hand protection relative to the task(s) to be performed, conditions present, duration of use and the hazards and potential hazards identified.

All field employees should obtain work gloves suitable for the work they will perform. Gloves shall be worn when required.

Try to imagine your life without the use of your hands. Being unable to perform the simplest task, such as turning on a light switch. No machine or tool can compare with the versatility of the human hand. Hands are used to operate machinery, perform delicate

surgery, create new inventions, and build today's homes and businesses. Hands are an essential part of your business production. It's up to you to protect them.

Hand injuries account for approximately 1/3 of all disabling job-related injuries each year. Pinch points cause over 80% of these injuries. These injuries are of all kinds, such as cuts, bruises, fractures, and amputations. Approximately 20% of these injuries become infected. Hand injuries are most common in the construction, manufacturing, and processing industries. There are certain precautions that must be taken to prevent hand injury.

Pinch points must be identified and properly guarded. Workers must be aware of their existence and potential danger and instructed in the proper safety precautions needed to prevent injury. Any machinery being serviced should be properly locked out and tagged. Employees should never be allowed to clean, adjust, or repair machines while in motion or energized.

Hand protection is another precaution to use in preventing hand injuries. Hand protection is nothing new to industry. Its importance, however, cannot be overstated.

Approved work gloves can be useful in preventing cuts, bruises, and abrasions resulting from handling rough materials or sharp objects. Be mindful of wearing gloves at the wrong time and in the wrong place. This would involve jobs where gloves may be caught by moving parts or machinery. Gloves can also be effective in minimizing hand infections, such as dermatitis, which occurs in nearly every type of industry. Avoid wearing rings or jewelry while working with hand/power tools and around machinery. A little foresight will go a long way in keeping the skin on your hands and your hand as part of your body.

Follow these basic safety rules to keep hand and fingers strong, healthy and free of injury:

- Wear work gloves when handling items that are heavy, abrasive, or have sharp points and edges.
- Don't use substitutes like bolts or wrenches for hammering. Use a regular hammer when needed.
- Don't operate tools and machines with missing guards.
- Don't try to repair, adjust, or clear moving machinery parts. Shut the machinery down first.
- Use tag lines to control heavy loads when they are hoisted into place.
- Be aware of pinch points on gears, chain and belt drives, rigging, concrete chutes and keep hands and fingers clear of them.

- Wear work gloves when working with wet concrete, very hot or cold objects, or caustic chemicals.

## **FOOT PROTECTION**

Each affected employee shall wear protective footwear when working in areas where there is a danger of foot injuries due to falling and rolling objects, or objects piercing the sole and where such employee's feet are exposed to electrical hazards.

Protective footwear need comply with (ANSI Z41-1991). Steel-toed shoes, with a defined heel are required on many work sites. The company requires the wearing of steel-toed shoes for anyone in the field with the exception of office personnel who are restricted to the office trailers.

## **ASSESSMENT GUIDELINES**

Conduct a walk-through survey of the areas in question. The purpose of the survey is to identify sources of hazards to workers and co-workers. Consideration should be given to the basic hazard categories:

- Impact
- Pinch points
- Penetration
- Compression (roll-over)
- Chemical
- Heat
- Harmful dust (air quality)
- Light (optical) radiation
- Fall
- Access and egress

During the walk-through survey the safety officer should observe:

- Sources of motion; i.e., machinery or processes where any movement of tools, machine elements or particles could exist, or movement of personnel that could result in collision with stationary objects;
- Sources of high temperatures that could result in burns, eye injury or ignition of protective equipment, etc.;
- Types of chemical exposures;
- Sources of harmful dust;
- Sources of light radiation, i.e., welding, brazing, cutting, furnaces, heat treating, high intensity lights, etc.;
- Sources of falling objects or potential for dropping objects;
- Sources of sharp objects which might pierce the feet or cut the hands;
- Sources of rolling or pinching objects which could crush the feet;
- Layout of workplace and location of co-workers; and
- Any electrical hazards.

In addition, injury/accident data should be reviewed to help identify problem areas.

Following the walk-through survey, it is necessary to organize the data and information for use in the assessment of hazards. The objective is to prepare for an analysis of the hazards in the environment to enable proper selection of protective equipment.

Having gathered and organized data on a workplace, an estimate of the potential for injuries should be made. Each of the basic hazards should be reviewed and a determination made as to the type, level of risk, and seriousness of potential injury from each of the hazards found in the area. The possibility of exposure to several hazards simultaneously should be considered.

## **SELECTION GUIDELINES**

After completion of the assessment procedures, the general procedure for selection of protective equipment is to:

- Become familiar with the potential hazards and the type of protective equipment that is available, and what it can do; i.e., splash protection, impact protection, etc.

- Compare the hazards associated with the environment; i.e., impact velocities, masses, projectile shape, radiation intensities, with the capabilities of the available protective equipment.
- Select the protective equipment, which ensures a level of protection greater than the minimum required to protect employees from the hazards.
- Fit the user with the protective device and give instructions on care and use of the PPE. It is very important that end users be made aware of all warning labels for and limitations of their PPE.

## SELECTION CHART GUIDELINES FOR EYE AND FACE PROTECTION

Some occupations (not a complete list) for which eye protection should be routinely considered are: carpenters, electricians, machinists, mechanics and repairers, millwrights, plumbers and pipe fitters, sheet metal workers and tinsmiths, assemblers, sanders, grinding machine operators, lathe and milling machine operators, sawyers, welders, laborers, chemical process operators and handlers, and timber cutting and logging workers. The following chart provides general guidance for the proper selection of eye and face protection to protect against hazards associated with the listed hazard "source" operations.

### EYE AND FACE PROTECTION SELECTION CHART

Source	Assessment of Hazard	Protection
IMPACT - Chipping, grinding machining, masonry work, woodworking, sawing, drilling, chiseling, powered fastening, riveting, and sanding.	Flying fragments, objects, large chips, particles sand, dirt, etc.	Spectacles with side protection goggles, face shields. For severe exposure, use faceshield.
HEAT-Furnace operations, pouring, casting, hot dipping, and welding.	Hot sparks  Splash from molten metals High temperature exposure	Faceshields, goggles, spectacles with side protection For severe exposure use faceshield. Faceshields worn over goggles. Screen face shields, reflective face shields.
CHEMICALS-Acid and chemicals handling, degreasing plating.	Splash  Irritating mists	Goggles, eyecup and cover types. For severe exposure, use face shield. Special-purpose goggles.
DUST - Woodworking,..... buffing, general dusty conditions.	Nuisance dust	Goggles, eyecup and cover types.

LIGHT and/or RADIATION - Welding: Electric arc	Optical radiation .	Welding helmets, hoods or welding shields. Typical shades: 10-14.
Welding: Gas	Optical radiation .	Welding goggles or welding face shield. Typical shades: gas welding 4-8, cutting 3-6, brazing 3-4.
Cutting, Torch brazing, Torch soldering	Optical radiation ..	Spectacles or welding face- shield. shades, 1.5-3.
Glare.....	Poor vision	Spectacles with shaded or special-purpose lenses, as suitable.

## SELECTION GUIDELINE FOR HEAD PROTECTION

All head protection (helmets) is designed to provide protection from impact and penetration hazards caused by falling objects. Head protection is also available which provides protection from electric shock and burn. When selecting head protection, knowledge of potential electrical hazards is important. Class A helmet, in addition to impact and penetration resistance; provide electrical protection from low-voltage conductors (they are proof tested to 2,200 volts). Class B helmets, in addition to impact and penetration resistance, provides electrical protection from high-voltage conductors (they are proof tested to 20,000 volts). Class C helmet provide impact and penetration resistance (they are usually made of aluminum which conducts electricity), and should not be used around electrical hazards.

Where falling object hazards are present, helmets must be worn. Some examples include: working below other workers who are using tools and materials which could fall; working around or under conveyor belts which are carrying parts or materials; working below machinery or processes which might cause material or objects to fall; and working on exposed energized conductors. Some examples of occupations for which head protection should be routinely considered are: carpenters, electricians, linemen, mechanics and repairers, plumbers and pipe fitters, assemblers, packers, wrappers, sawyers, welders, laborers, freight handlers, stock handlers, and warehouse laborers.

## SELECTION GUIDELINES FOR FOOT PROTECTION

Safety shoes and boots which meet the ANSI Z41-1991 Standard provide both impact and compression protection. Where necessary, safety shoes can be obtained which provide puncture protection. In some work situations, metatarsal protection should be provided, and in other special situations electrical conductive or insulating safety shoes would be appropriate.

Safety shoes or boots with impact protection would be required for carrying or handling materials such as packages, objects, parts or heavy tools which could be dropped. For other activities where objects might fall onto the feet. Safety shoes or boots with compression protection would be required for work activities involving skid trucks (manual material handling carts) around bulk rolls (such as paper rolls) and around heavy pipes, all of which could potentially roll over an employee's feet. Safety shoes or boots with puncture protection would be required where sharp objects such as nails, wire, tacks, screws, large staples, scrap metal etc., could be stepped on by employees causing a foot injury.

Some occupations (not a complete list) for which foot protection should be routinely considered are: shipping and receiving clerks, carpenters, electricians, machinists, mechanics and repairmen, plumbers and pipe fitters. Structural metal workers, assemblers, drywall installers and lathers, packers, wrappers, craters, punch and stamping press operators, brick layers, welders, laborers, freight handlers, gardeners and grounds-keepers, stock handlers and warehouse laborers.

## **SELECTION GUIDELINES FOR HAND PROTECTION**

Gloves are often relied upon to prevent cuts, abrasions, burns, and skin contact with chemicals that are capable of causing local or systemic effects following dermal exposure. OSHA is unaware of any gloves that provide protection against all potential hand hazards, and commonly available glove materials provide only limited protection against many chemicals. Therefore, it is important to select the most appropriate glove for a particular application and to determine how long it can be worn, and whether it can be reused.

It is also important to know the performance characteristics of gloves relative to the specific hazard anticipated; e.g., chemical hazards, cut hazards, flame hazards, etc. Using standard test procedures should assess these performance characteristics. Before purchasing gloves, the employer should request documentation from the manufacturer that the gloves meet the appropriate test standard(s) for the hazard(s) anticipated. Other factors to be considered for glove selection in general include:

- As long as the performance characteristics are acceptable, in certain circumstances, it may be more cost effective to regularly change cheaper gloves than to reuse more expensive types; and,
- The work activities of the employee should be studied to determine the degree of dexterity required the duration, frequency, and degree of exposure of the hazard, and the physical stresses that will be applied.

With respect to selection of gloves for protection against chemical hazards:

- The toxic properties of the chemical(s) must be determined; in particular, the ability of the chemical to cause local effects on the skin and/or to pass through the skin and cause systemic effects;

- Generally, any "chemical resistant" glove can be used for drypowders;
- For mixtures and formulated products (unless specific test data are available), a glove should be selected on the basis of the chemical component with the shortest breakthrough time, since it is possible for solvents to carry active ingredients through polymeric materials; and,
- Employees must be able to remove the gloves in such a manner as to prevent skin contamination.



## **22-BACK SAFETY**

### **PURPOSE**

An aggressive Back Safety Program is essential in preventing situations which are capable of causing injury or impairment to the back.

### **SCOPE**

This program applies to all employees and subcontractors working within Company controlled worksites.

### **APPLICATION**

Lifting and carrying heavy loads puts a severe strain on the back, and can result in a disabling back injury if done improperly. Such injuries can be avoided by planning the lift in advance. Here are a few common-sense safety rules for planning heavy lifts:

1. Whenever possible, avoid manual lifting of very heavy loads or those which will be very awkward to handle. Use mechanical lifting aids such as forklifts or hand trucks, etc. for such loads.
2. Avoid "Lazy man's loads." Don't attempt to lift and carry more objects at one time than can be safely and comfortably handled.
3. Don't carry any bulky load, which will obstruct the view when handled. Get help for such loads.
4. Choose the carrying route and the place where the load will be put down, in advance.
5. Clean up and remove slipping and tripping hazards in the areas where the load will be handled.
6. Make sure that there is enough room to carry and turn the load while avoiding contact with other objects in the areas where the load will be handled. Move other objects out of the way.
7. Choose handhold on the load, which permit a firm and comfortable grip on the load. Check the load for sharp edges, and use work gloves if needed to protect the hands.
8. Size up the load, and get help if it appears to be too heavy or awkward to lift and carry alone.
9. When more than one person will lift and carry a load, their activities should be

coordinated as follows:

- a. Each person should know in advance the carrying route, and where the load will be put down.
- b. Each person should know in advance his or her holding place on the load.
- c. Select one person to signal and direct the other lifters.
- d. The load should be lifted and put down on the count of "three" given by the person directing the lifters.

To prevent back injury, follow these rules for planning heavy lifts. Preventing back injuries is a lot easier than correcting them.

### **"BACK INJURIES"**

Structurally your back is one of the weakest members of your body. Many of you have already experienced some form of structural failure in your back -- if not, the odds are high that you will in the future.

Eight out of every ten Americans currently suffers from some sort of back pain, and most of them don't have jobs that are as hard or strenuous as yours.

Everyday your occupation requires you to perform various kinds of lifting, carrying, bending, twisting, climbing, pushing and pulling loads that are often heavy and awkward.

Taking time to lift and carry properly can save you a "big pain in the back."

We can all learn an important lesson from leading crane manufacturers -- many new models are equipped with computers that will not allow the matching to over lift -- your brain is your personal computer -- program it to do the same.

Here is some safety rules to prevent back injury in routine work situations.

1. Avoid overstraining when heavy loads are to be moved, lifted, or carried. Whenever possible, get help, or use mechanical aids such as a crane, loader, lift truck, hand truck, wheelbarrow, or dolly.
2. Don't attempt to push or pull objects that weigh more than yourself without help or mechanical aid.
3. Slipping and tripping is the number one cause of sprains and strains. Prevent them by good housekeeping. Clean up and remove scrap and debris regularly.

Pick up and put away-unused tools and materials. Clean up spills or oil, grease, hydraulic fluid and other slippery substances.

4. When working in awkward or unnatural positions, be aware of the strain, which might be put on the back. Don't overstrain in such positions. Avoid sudden, jerky, or twisting motions.
5. Set up properly for work that is hard to reach. Use ladders, scaffolds, etc. to create a safe work platform, which permits reaching the work without straining. Position yourself to the work so that it and the tools and materials are reachable without bending, twisting, and straining.
6. Tools that slip and let go when you are straining on them can cause you to wrench your back out of place. Select those, which are in good condition, provide a good grip on the work, and have enough power and leverage to do the work without straining.
7. Jumping down from one level to another often results in strains and sprains to the back, knee, or ankle. Descend with care! Avoid jumping down by use of ladders, step stools, stairways, or ramps.
8. When walking or working in very muddy or wet areas follow these precautions to avoid slip and falls:
  - a. Look ahead and plan a walking route in the driest or wet areas.
  - b. Use caution when walking on wet or slippery surfaces.
  - c. Spread sand, gravel, dry earth, or use plywood or planks to create safe work surfaces.
  - d. If a front-end loader is available, use it to level out work areas.
9. When liquid chemicals are heavily used, it is better to install pipelines and outside storage tanks instead of manually handling them.

## 23-FIRST AID

This policy is meant to prepare employees for common emergencies in the event a qualified first responder is not immediately available.

This policy applies to all First Aid Providers of the Company. These personnel should be contacted immediately in the event of an accident. Employees not designated as first aid providers should not attempt to provide first aid unless a designated person can not be found.

### **BLEEDING**

Bleeding may flow from a vein, artery, or both. Venous bleeding is darker red in color and flows continuously. Arterial bleeding is bright red in color and usually spurts from the wound. Arterial bleeding is more critical, because blood is lost faster leading to a greater blood loss.

### **EXTERNAL BLEEDING**

Put on rubber/latex gloves before providing assistance, call EMS (911) if bleeding is severe.

- X Place a thick, clean compress (sterile gauze or a soft clean cloth such as a handkerchief, towel or undershirt) directly over the entire wound and press firmly with the palm of your hand.
- X Continue to apply steady pressure.
- X Do not disturb any blood clots that form on the compress.
- X If blood soaks through the compress, do not remove the compress, but add another pad over it and press firmly over a wider area.
- X Continue pressure for up to 15 minutes. This should be long enough for a response by either a trained first responder or EMS.

### **Tourniquet**

Use a tourniquet only in life threatening situations such as an amputation or when severe bleeding can not be stopped. This is not a preferred method and should only be attempted by a trained first responder.

- X Tie two full knots over the stick.
- X Twist the stick to tighten the tourniquet around the stick to hold it in place.
- X Seek Medical Attention immediately. EMS should have been called at the onset of the injury.

Tourniquets are the last resort in the attempt to stop bleeding and should only be attempted by trained first responders unless it is an immediate step to save a life.

### **INTERNAL BLEEDING**

Internal bleeding is not always obvious. You may suspect bleeding if the victim has been in an accident, fallen or received a severe body blow.

### **Symptoms:**

- X Vomit that resembles coffee grounds or is red in color.
- X Coughed up blood that is red and / or frothy (bubbly).
- X Stools that are black or contain bright red blood.
- X Paleness.
- X Cold, clammy skin.

- X Rapid and weak pulse.
- X Light headed.
- X Distended swollen stomach.
- X Mental confusion.

**Seek Medical Attention Promptly**

- X Do not give the person anything to drink.

**BROKEN BONES**

A break or a crack in a bone is a fracture. A fracture may be closed or open. In a closed fracture, the bone does not come through the skin. In an open fracture, there is a wound that extends down the bone or part of the bone and may be protruding through the skin.

Do not move the victim unless they are in immediate danger such as a fire, explosion, gas inhalation or traffic or any other situation that may worsen the injury. If a victim must be moved, make every attempt to immobilize the injury first.

**Immediate Treatment**

- X Stop severe bleeding.
- X Do not try to push back any part of the bone that is protruding.
- X Do not wash the wound or apply any medication.
- X Gently apply pressure with a sterile pad or a clean cloth to stop bleeding.
- X Splinting an open break is the same as for a closed break.
- X Treat for shock if necessary.
- X Call EMS promptly.
- X Apply splints if a paramedic or other trained personnel are not readily available.
- X Handle the victim very gently so as not to increase the severity of the injury.

**Splinting**

- X Always splint by securing the splint beyond the joint and below the joint below the injury.
- X Objects that can be used for splinting include boards, straight sticks, rolled up newspapers, folded cardboard or umbrellas.
- X Padding such as soft cloth, towels or blankets should be placed between the splint and the skin of the injured part.
- X Splints can be tied in place with belts, neckties, strips of cloth, rope or string.
- X Do not tie the splint so tightly that the tie interferes with the circulation.

**BURNS**

Initial treatment of burns helps to decrease the temperature to the burned area and helps to prevent further heat injury to the skin and underlying tissues.

**Immediate Attention**

- X Put the burned area in cold water or apply a cold compress (do not use ice).
- X Gently pat the area dry with a clean cloth. Cover the burn with a dry sterile bandage.
- X Seek medical attention if the burn is extensive, develops blistering, or if there is a flash burn around the mouth or nose.

### **Severe Burns**

- X Treat burns as above.
- X Elevate burned hands, arms, or feet.
- X Watch for shock and treat accordingly.
- X Do not give the victim alcohol.

### **CO2 / LPG or Cold Burn**

LPG is composed of ethane, propane, butane and their isomers. These gases are colorless, flammable when handled or shipped as liquid vapor pressure of 16 PSIG to 550 PSIG at 70 degrees F. They are low in toxicity, slightly anesthetic and have a mild odor, ranging from aromatic to faintly disagreeable.

- X Simple burns of the skin should be treated by flushing with water and may be bandaged or left open.
- X Extensive burns should be referred to a doctor.
- X Most important is the possibility of getting this liquid into the eye. Therefore, safety or chemical goggles should be worn when handling this liquid gas.

### **Chemical Burns**

As quickly as possible, flush the burned area with large quantities of running water for at least five minutes.

- X Speed of flushing and quantity of water are both important in minimizing injury.
- X Use a garden hose, shower, buckets of water, etc.
- X Continue to flush while removing clothing from the burned area. Do not remove clothing that is stuck to the skin.
- X After flushing, follow the instructions on the label of the chemical or the MSDS.
- X Cover the burn with a clean bandage.
- X Read the Material Safety Data Sheet (MSDS) for other first aid measures.

### **BREATHING EMERGENCIES**

If breathing has stopped, the victims tongue, lips and fingernail beds become blue and there is loss of consciousness.

### **Immediate Treatment**

- X Clear the air passage and lift the tongue forward.
- X Tilt the head back by lifting under the neck and pulling the jaw forward.
- X Pinch the victim=s nostrils shut and place your mouth over the victim=s mouth to blow deep breaths into the victim.
- X While using a one way air valve, blow two full breaths so that the victims chest rises (take a deep breath between each of your breaths).
- X Check for exhaling air and check pulse to be sure of heart activity.
- X If no breathing or heart activity is noted, continue with **Cardio Pulmonary Resuscitation (CPR)**.

## **CHOKING**

The Heimlich maneuver (abdominal thrust) is the method of choice when a person is choking. Back blow-hitting the victim forcefully and repeatedly between the shoulders blades with the palm of your hand are used only if the Heimlich maneuver is not effective.

To know whether to begin treatment for choking, look for the universal choking sign, a person who is choking will involuntarily grasp the front of their neck and be trying to gasp for breath with no success. If the person is coughing, allow them too. Do not try to slap them on the back, this may lodge the foreign object.

### **Immediate Treatment**

- X If the victim can speak, cough or breathe, do not interfere in any way with their efforts to cough up the object.
- X If the victim cannot breathe, stand behind them and place your weak fist with the thumb side against the victims stomach, slightly above the navel and below the ribs and breastbone.
- X Hold your fist with your other hand and give four (4) quick, forceful, upward thrusts.
- X Do not squeeze on the ribs with your arms. Just use your fist in the abdomen.
- X It may be necessary to repeat the Heimlich maneuver 6-10 times.
- X If the victim is lying down or is unconscious, turn the victim onto their back. Straddle the victim and put the heel of your hand on the victim=s stomach, slightly above the navel, below the ribs. Put your free hand on top of your other hand to provide additional force. Keep the elbows straight. Give four (4) quick forceful downward thrusts toward the head.
- X It may be necessary to repeat the maneuver 6-10 times.

## **DEHYDRATION**

Dehydration occurs when there is a lack of water in the body. This can occur when there is vomiting, excessive heat and sweating, diarrhea, or lack of fluid intake.

### **Treatment**

- X Move the victim into the shade or other cool place.
- X Replace lost fluids and body chemicals by giving the victim water, tea, carbonated beverages (shake up well to eliminate fizz), a commercial electrolyte replacement fluid (e.g., Gatorade, Quench, etc.) or clear broth.

## **ELECTRICAL SHOCK**

If you are the first person offering first aid, remember: Do not touch the victim directly until the source of the electrical current is turned off or the victim is no longer in contact with it. Victims who have been struck by lightning can be touched immediately because they are no longer connected to the electricity.

### **Immediate Treatment**

- X Maintain an open airway. Restore breathing and circulation if necessary.
- X Obtain medical help immediately.

## **EYE INJURY**

If the eye injury is caused by getting a chemical in the eye, this can be very serious and immediate action is necessary. A foreign body is annoying but not necessarily critical for immediate treatment. Anything penetrating into the eye is critical and requires immediate medical treatment.

### **Chemicals in the Eye**

- X Immediately flush the eye with the copious amount of water for 15 minutes.
- X Be sure to lift and separate the eyelids so that all parts of the eye will be reached by the water.
- X Do not allow the victim to rub the eyes.
- X Seek medical attention.

### **Foreign particle in the Eye**

- X Wash the eye with water or eye irrigation solution to try to remove the particle.
- X If not removed by irrigation, try the corner of a soft handkerchief.
- X If this is unsuccessful, obtain medical treatment.

### **Objects Penetrating the Eyeball**

- X Do not attempt to remove the object or wash the eye.
- X Seek medical attention immediately

## **GAS LEAKS AND OTHER POISONOUS FUMES**

Be extremely cautious when rescuing a victim from an area filled with smoke, chemicals, or gas fumes. It is best not to attempt a rescue alone. Before entering the area, rapidly inhale and exhale two or three times, take a deep breath and hold it. Remain close to the ground, crawl while entering and rescuing the victim. If the area is extremely hot or heavy with fumes, it is best for the rescuer to have an independent air supply.

### **Immediate Treatment**

- X Get the victim to fresh air immediately.
- X Maintain an open airway. Restore breathing and circulation if necessary.
- X Seek medical attention even if the victim seems to recover.

## **HEAD INJURY**

X All head injuries must be taken seriously, as they can result in brain or spinal cord damage. Any victim found unconscious must be assumed to have a head injury until determined otherwise by a medical professional. Anyone with a head injury may also have a neck injury.

### **Immediate Treatment**

- X Maintain an open airway.
- X Keep the victim lying down and quiet. If the victim must be moved, handle them very carefully remembering to stabilize the neck.
- X Control any serious bleeding.
- X Do not give anything by mouth.



## **HEART ATTACK**

A heart attack is a life threatening emergency. Any or all of the following may be present: Chest pain, indigestion pain, pain that radiates to either arm (usually the left), shoulders neck or jaw, profuse sweating, nausea or vomiting, and extreme weakness. Very often, the victim may be in denial of having a heart attack.

### **Immediate Treatment**

- X Gently place the victim in a comfortable position. This is either sitting up or in a semi-sitting position.
- X Loosen tight clothing, especially around the victims neck area.
- X Keep the victim warm.
- X If the victim stops breathing, start CPR.
- X Seek Medical attention immediately.

## **HEAT INJURY**

Heat injuries are heat cramps, heat exhaustion, and heat stroke.

### **HEAT CRAMPS**

These are muscle pains and spasms caused by a loss of salt from the body due to profuse sweating in hot temperatures.

- X Have the victim sit or lie quietly in a cool place.
- X Gently massage the affected area.
- X Give clear cool fluids (water, juice, tea) with one teaspoon of salt per glass.
- X Give one half glass of liquids every 15 minutes.
- X Seek medical attention if cramping continues or if victim begins to vomit.

### **HEAT EXHAUSTION**

This can occur after prolonged exposure to high temperature and humidity. Symptoms are any of the following: slightly elevated body temperature, pale and clammy skin, profuse sweating, dizziness, nausea or vomiting, and weakness.

### **Immediate Treatment**

- X Move victim to shade or a cool place.
- X Have the victim lie down.
- X Raise victims feet about 12-18 inches.
- X Loosen victims clothing.
- X Give clear liquids (juice, water, tea) with one teaspoon of salt per glass.
- X Place cool wet cloths on the victims forehead and body.
- X Use a fan to cool, or remove the victim to an air conditioned room.
- X If the symptoms are severe, become worse, or last longer than an hour, seek medical attention.

## **HEAT STROKE**

This is a life threatening emergency. One or all of the following may be present: high body temperature, red, hot, and dry skin. Sweating will be absent. Victims will have a rapid, strong pulse, and confusion will be obvious or the victim will be unconscious.

### **Immediate Treatment**

- X CALL 911 IMMEDIATELY.
- X Undress the victim and place them in a tub of cold water or under a running hose. Sponge the bare skin with water or alcohol. Apply cold packs to the body.
- X Continue treatment until the body temperature falls below 101 degrees.
- X Do not overcool. Check body temperature frequently.
- X Do not give the victim alcohol.

## **FROSTBITE**

Skin is pink just before frostbite develops and then changes to a white, grayish-yellow as frostbite develops. Victim feels cold and numb and is usually unaware of frostbite.

### **Immediate Treatment**

#### **DO**

- X Cover the frostbitten part with a warm hand or woolen material. If fingers or hands are frostbitten, have victim hold his hand in his armpit next to his body.
- X Bring the victim inside as soon as possible. Place frostbitten part in lukewarm water.
- X Gently wrap the part in blankets if lukewarm water is not available or is impractical to use.
- X Let circulation reestablish itself naturally. When the part is warmed, encourage the victim to exercise fingers and toes. Give the victim a warm, nonalcoholic drink.

#### **DO NOT**

- X Massage the affected area.
- X Rub affected parts with snow or ice. Rubbing frostbitten tissue increases the risk of gangrene.
- X Use hot water, hot water bottles or heat lamps over the frostbitten area.

## **SHOCK**

Shock is a medical condition secondary to serious disease or injury. It is a life threatening situation in which the body's vital functions are seriously threatened. Prompt recognition of this condition is essential. Any or all of the following may be present: weakness, difficulty breathing, dizziness, rapid weak pulse, low blood pressure, moist and clammy skin and unconsciousness.

### **Immediate Treatment**

- X Maintain an open airway.
- X Keep the victim lying down.
- X Elevate legs 12 to 18 inches.
- X Cover the victim enough to prevent loss of body heat.
- X If shock is due to an insect sting, remove the stinger by gently scraping out the stinger with a knife blade, card edge, etc. Place a cold pack on the sting area.
- X If the shock is due to blood loss or fluid loss and the victim is conscious, you may give them

- fluids, especially if medical care is several hours away.
- X Seek medical attention.

## **WOUNDS**

A wound is an injury in which the skin is broken. The objectives in treating a wound consists of 1.) Stopping the bleeding, 2.) Preventing contamination and infections, 3.) Preventing or treating for shock in necessary, 4.) Seeking medical attention if necessary, and 5.) Assuring that the victim has an up to date tetanus shot.

### **Immediate Treatment**

- X Apply direct pressure to control bleeding.
- X When bleeding has stopped, wash with soap and water.
- X Do not attempt to remove foreign material that is deeply embedded.
- X Rinse thoroughly under running water and pat dry.
- X If the wound is not severe enough to require medical attention, you may use an antibiotic ointment with a sterile dressing.
- X If cut is slightly gaping, apply a butterfly bandage to bring the skin together at the edges.
- X Seek medical attention if the bleeding does not stop. If the wound was caused by an obvious dirty object, or an object is embedded in the wound or if there is any doubt about tetanus immunization.

## **SPINAL INJURY**

Never move a victim with a suspected spine injury without trained medical assistance, unless the victim is in immediate danger from fire, explosion or other life threatening situations. Any movement of the neck, head or back may result in paralysis or death. With a severe back or neck injury, the victim may not be able to move arms, fingers, legs, feet or toes. The victim may also have tingling or pain in the neck, back or down the arms and legs.

### **Immediate Treatment**

- X If the victim must be moved, immobilize the back and neck with a reasonably short, wide board. The board should reach down to the patients buttocks.
- X Place the boards behind the victims head, neck and back, keeping these body parts in alignment.
- X Tie the board around the victims forehead, under the armpits and around the lower abdomen.
- X Do not bend or twist the victims head, neck or body.
- X Move the victim very gently and slowly.
- X If the victim is not breathing, tilt the head back slightly to maintain an open airway. Restore breathing if necessary.
- X A victim with a suspected back or neck injury must be taken to the hospital lying down.
- X Place folded blankets, towels or clothing at the victims side, head and neck to keep them from rotating.
- X Seek medical attention.

## **INSECT AND SPIDER BITES**

It needs to be emphasized that a sting or bite to a hypersensitive person can be fatal in minutes, so do not underestimate the danger of spider and insect bites/stings. A person stung by a wasp, bee, yellow jacket, ant, fire ant or any other stinging insect will have pain and swelling. The stinger should be removed by scraping. Do not use tweezers or fingers as venom will be squeezed into the skin. In the case of a bee sting, ice or sting kill could be applied to the area. A hypersensitive person should see his/her doctor to obtain a kit to carry at all times in case of a sting or bite. The kit may save a life. Employees and Supervisors should be informed of this and in fact learn how to use the sting kit.

### **Immediate Treatment**

- X Make the victim lie down as soon as possible.
- X Apply an ice pack over the bite if possible.
- X Transport the victim to a physician or hospital immediately.
- X Do not allow the victim to walk.
- X Do not give alcohol in any form.

### **VENOMOUS SNAKE BITES**

Most snake bites are not fatal. The factors concerning severity of symptoms are:

- X The bite as related to the size of the snake.
- X The amount of venom actually injected.
- X The type of snake.

In the event of a snake bite, the following actions should be taken:

- X Avoid panic.
- X It is helpful to the doctor in treating the victim to have a positive identification of the specie of the snake. Please try to remember what the snake looked like, the size, color and pattern of its markings. Do not attempt to catch the snake or kill it as this may lead to another bite.
- X Get to the nearest hospital quickly.

Do not do the following:

- X Do not apply a tourniquet
- X Do not apply ice.
- X Do not cut the bite and apply suction.
- X Never give alcohol in any form.

### **AMPUTATION**

Amputation is the partial or complete severing of a body part, such as an ear, finger, arm, foot, or leg. Sometimes the part can be reattached, especially when you take proper care of the severed part and stump.

### **Immediate Treatment**

- X CALL EMS
- X Administer first aid for any life threatening conditions (e.g. severe bleeding). Then administer first aid for any other injuries.
- X Find and save the severed body part as it may be possible to reattach it or use it for repair purposes. Be careful to do no further harm to the part or to the stump. Gently rinse off any

debris If ice is available, wrap the part in a moistened dressing (a clean towel, washcloth or gauze will do). Place the wrapped part in a plastic bag or sealed container, then place it on a bed of ice and water. Cooling the part will keep it viable for about 18 hours. Do not use dry ice and do not place the part directly on the ice. If ice is not available, place the part directly in a plastic bag or a sealed container without wrapping it in a dressing. The part will remain viable for about 4 to 6 hours. Label the container holding the part with the victims name and the time of the accident. Keep the part with the victim. Do not take it to the hospital separately.

- X Check the victims vital signs. Open the airway if necessary, check breathing and circulation. If necessary, begin rescue breathing, CPR or bleeding control.
- X Calm and reassure the victim. Amputation is painful and extremely frightening.
- X Control bleeding by applying direct pressure to the wound; by elevating the injured area; and if necessary, by using pressure point bleeding control.
- X Take steps to prevent shock. Lay the victim flat, raise his/her feet 8-12 inches, and cover the victim with a coat or blanket. Do not place the victim in this position if you suspect any head, neck, back or leg injury or if position makes the victim uncomfortable.
- X Stay with the victim until you have medical help.

**DO NOT**

- X Do not forget that saving the victims life is more important than saving the body part.
- X Do not overlook other, less obvious injuries.
- X Do not attempt to push any part back into place.
- X Do not decide that a body part is too small to save.

## **24-BLOODBORNE PATHOGENS**

### **Applicable OSHA Standards: 29 CFR 1910.1030**

### **PURPOSE**

This company is committed to providing a Safe and Healthful work environment. In pursuit of this endeavor, the following Exposure Control Plan (ECP) is provided to eliminate or minimize occupational exposures to bloodborne pathogens.

### **SCOPE**

The base of this Plan is to meet the re-accrument of the OSHA Bloodborne Pathogens Standard, Title 29 Code of Federal Regulations 1910.1030. It will provide protection for employees through the use of "Universal Precautions." Universal Precautions assume that all blood and body fluids are infectious for bloodborne pathogens, and must be treated accordingly

All employees will have an opportunity to review this plan at any time during their work shifts by contacting the Safety Director. Employees seeking copies of the Plan may contact the Safety Director. A copy of the Plan is available free of charge and with in 15 days of the request. The Safety Director will also be responsible for reviewing and updating the ECP annually or sooner if necessary. To reflect any new or modified tasks and procedures which affect occupational exposure, and to reflect new or revised employee posters with occupational exposure.

### **EMPLOYEE EXPOSURE DETERMINATION**

Occupational exposure to blood and body fluids is limited to our designated first-aid responders.

In the event of a first-aid incident of blood or other potentially infectious materials are present, the first-aid responder(s) is (are) instructed to report to the Safety Director before the end of his (their) workshift(s).

The Safety Director will maintain a report, which describes name of the first aider, as well as the date, time and description of the incident. He/she will ensure that any first aider that desires the vaccine series after a all incident will receive it as soon as possible, but not later than twenty-four hours after the incident.

The Safety Director will train first-aid providers on the specifics of the reporting procedures and to all others training associated with Bloodborne Pathogen requirements.

## **ENGINEERING CONTROLS AND WORK PRACTICES**

Engineering controls and work practice controls will be used to prevent or minimize exposure. Hand washing facilities are available at all jobsites. Employees will wash after administering first aid. All equipment will be decontaminated or discarded in appropriate containers.

## **PERSONAL PROTECTIVE EQUIPMENT**

First-aid responders will use Personal Protective Equipment appropriate for administering the first-aid required. All jobsite first-aid kits contain gloves, eye protection, resuscitation bags and mouthpieces.

## **LABELING**

Biohazard warning labels will be placed on all containers for wastes, which may be contaminated with blood or body fluids, and red bags will be used as required.

## **HOUSEKEEPING**

If a first-aid incident occurs, the first-aid responders will take precautions to decontaminate work surfaces, tools and equipment. Personal protective equipment will be used during cleanup.

Mechanical means such as tongs, forceps or a brush and a dust pan will be used to pick up contaminated broken glassware. The waste will be treated as regulated waste and disposed of in closable and labeled or color-coded containers. When storing, handling, transporting or shipping, place other regulated waste in containers that are constructed to prevent leakage. The waste will be discarded according to federal, state, and local regulations.

In the event of a first-aid incident in which the first-aid responders' clothes become contaminated, the following actions will be taken:

- Contaminated laundry will be handled as little as possible and with a minimum of agitation. Appropriate Personal protective equipment will be worn when handling contaminated laundry.
- Contaminated laundry will be placed in color-coded bags at its location of use, and taken by a commercial launderer. The launderer will be given the appropriate warnings.

## TRAINING

All designated first-aid responders will receive training conducted by the Safety Coordinator. The training program will cover, at a minimum, the following elements:

- A copy and explanation of the standard.
- Epidemiology and symptoms of bloodborne pathogens.
- Modes of transmission.
- The Exposure Control Plan and a way to obtain a copy.
- Methods to recognize exposure tasks and other activities that may involve exposure to blood.
- Use and limitations of Engineering Controls, Safe Work Practices, and PPE.
- PPE types, use, location, removal, handling, decontamination, disposal and basis for selection.
- Hepatitis B Vaccine offered free of charge. Training will be given prior to vaccination on its safety, effectiveness, benefits, and method of administration.
- Emergency procedures for blood and other potentially infectious materials. Exposure incident procedures post-exposure evaluation and follow-up signs and labels.

## POST EXPOSURE EVALUATION AND FOLLOW-UP

If an exposure incident occurs, contact the Safety Coordinator immediately. A confidential medical evaluation and follow-up will be conducted by MRO. The following will be performed:

- Document the routes of exposure and how exposure occurred.
- Identify and document source individual, unless infeasible or prohibited by State or local law.
- Obtain consent and test source individual's blood, document the source's blood test results.
- If the source individual a known to be infected, testing need not be repeated.



- Provide the exposed employee with the source individual's test results, and if information about applicable disclosure laws and regulations concerning the source identity and infectious status.
- After obtaining consent, collect exposed employee's blood as soon as feasible after the exposure incident and test blood for HBV and HIV serological status.
- If the employee does not give consent for HIV serological testing during the collection of blood for baseline testing, preserve the baseline blood sample for at least 90 days.

## **POST EXPOSURE EVALUATION**

The circumstances of exposure incidents will be reviewed to determine if procedures, protocols and/or training need to be revised.

## **HEALTH CARE PROFESSIONALS**

Health care professionals responsible for employee's HB vaccination, post-exposure evaluation and follow-up will be given a copy of the OSHA Bloodborne Standard. The health care professional evaluating an employee after an exposure incident will also receive the following:

- A description of the employee's job duties relevant to the exposure incident.
- Route(s) of exposure.
- Circumstances of exposure.
- If possible, results of the source individual's blood test.
- Relevant employee medical records, including vaccination status.

## **HEALTH CARE PROFESSIONAL'S WRITTEN OPINION**

The designated Health Care Professional will provide the employee with a copy of the evaluating health care professional's written opinion within 15 days after completion of the evaluation. The written opinion for post-exposure evaluation and follow-up will be

limited to whether or not the employee has been informed of the results of the medical evaluation and any medical conditions which may require further evaluation and treatment For H B vaccinations. The opinion will be limited to whether the employee required or received the vaccine. All other diagnoses must remain confidential and not be included in the written report.

## RECORDKEEPING

### Medical Records:

Medical records are maintained for each employee with exposure in accordance with 29FCR-1910,20. In addition to the requirements of 29 CFR 1910. 20, the medical record will include:

- The name and social security number of employee
- A copy of the employee's Hepatitis B vaccinations and any medical records relative to the employee's ability to receive vaccination.
- A copy of all results of examinations, medical testing, and follow-up procedures as required.
- A copy of all Health Care Professional written opinion(s) as required by the standard.

Employee medical records will be kept confidential and will not be disclosed or reported without the employee's express written consent except as required by the standard or by law. Employee medical records shall be maintained for at least the duration of employment plus 30 years.

Employee medical records shall be provided (within 15 working days) upon written request of the employee or to anyone having written consent of the employee.

### Training Records:

Bloodborne pathogen training records will be maintained by the Safety Coordinator at a designated location

### Transfer of Records:

If our company ceases to do business and there is not a successive employer, the employer shall notify the Director of the National Institute for Occupational Safety and Health (NIOSH) at least 3 months prior to scheduled records disposal, and prepare to transmit them to the Director.

## CREDENTIAL INFORMATION

### Designated First-Aid Providers:

Medical Evaluations Performed By:  
Designated Health Care Professional:  
Location of Training Records:

## **25-EYEWASH AND SAFETY SHOWER FACILITIES**

**Applicable OSHA Standards: 29 CFR 1910.151( C )**

### **PURPOSE**

The purpose of this program is to provide a system for providing and maintaining proper eyewash and body drenching equipment.

### **SCOPE**

Suitable facilities for the quick drenching or flushing of the eyes and body shall be provided within company work areas for immediate emergency use if the areas contain injurious corrosive materials.

### **CONSTRUCTION STAFF RESPONSIBILITIES**

#### **WORK SITE SAFETY COORDINATOR:**

The work site safety coordinator is responsible for surveying each area of the work site to determine if injurious corrosive materials are being used in the area. In areas where such materials are being used, he shall acquire suitable facilities for quick drenching or flushing of the eyes and body. This equipment is to be available no more than 100 feet from the work area (the equipment is to be located where an injured employee can reach it within 10 seconds). The provided equipment must meet the following specifications:

- Permanently installed emergency showers must be attached to a water supply that is capable of delivering a minimum of 30 gallons of clean water per minute.
- Self contained or portable emergency showers must be capable of delivering a minimum of 20 gallons of clean water per minute continuously for at least 15 minutes.
- Installed and portable emergency eyewash units must be capable of delivering not less than 0.4 gallons of clean water per minute. Portable eyewash units must be capable of delivering water continuously for at least 15 minutes. The water must be readily available to wash both eyes simultaneously with flushing streams that rise to approximately equal heights.

- The equipment must be protected from freezing or freeze-protected equipment must be installed. Portable units must be constructed of material that will not corrode in the presence of the flushing fluid.

The Work Site Safety Coordinator will instruct all employees and contractor personnel on the operation of this equipment before they are allowed to work in the area. He will also inspect and document the inspections of safety equipment monthly or in accordance with the manufacturer's instructions. Inspection tags located with the equipment may be used for this purpose.

**WORK SITE FOREMAN:**

The Work Site Foreman is responsible for installing the showers and eye wash equipment at the direction of the Work Site Safety Coordinator.

**PROJECT MANAGER:**

The Project Manager is responsible for monitoring the status of safety shower and eye wash equipment as part of his monthly Project Manager Safety Audit.

## 26-MISCELLANEOUS FORMS

### 26A-JOB SAFETY ANALYSIS

**FACILITY:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**JOB #:** \_\_\_\_\_

**LOCATION:** \_\_\_\_\_

**FOREMAN:** \_\_\_\_\_

**DESCRIPTION OF JOB ACTIVITIES:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**PERMITS REQUIRED/SPECIAL PRECAUTIONS:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ **PERMIT TO ENTER** \_\_\_\_\_ **OPEN/BLINDED:** \_\_\_\_\_

\_\_\_\_\_ **OTHER:** \_\_\_\_\_

\_\_\_\_\_ **HOT WORK** \_\_\_\_\_ **COLD WORK**

**POTENTIAL HAZARDS/ACTION TAKEN:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**WORK CREW SIGN OFF BEFORE WORK BEGINS:**

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**PRIMARY ASSEMBLY POINT:**

\_\_\_\_\_

**SECONDARY ASSEMBLY POINT:**

\_\_\_\_\_

## 26B-SAFETY INSPECTION CHECK LIST

Location \_\_\_\_\_ Job # \_\_\_\_\_ Date \_\_\_\_\_

( ) OK (X) Needs Attention Superintendent \_\_\_\_\_

**HOUSEKEEPING:**

Storage of Material \_\_\_\_\_  
Disposal of Waste \_\_\_\_\_  
Tripping, Slipping \_\_\_\_\_  
Other \_\_\_\_\_

**SPIDER & POWER STAGES:**

Cables \_\_\_\_\_  
Inspection Placard \_\_\_\_\_  
Hooks & Clamps \_\_\_\_\_  
Tank Rollers \_\_\_\_\_  
Safety Lines & Harness \_\_\_\_\_  
Other \_\_\_\_\_

**LADDERS:**

Safety Feet \_\_\_\_\_  
Tied Off \_\_\_\_\_  
Electrical Exposures \_\_\_\_\_  
Rungs Recessed/Broken \_\_\_\_\_  
Rails \_\_\_\_\_  
Safety Lines & Harness \_\_\_\_\_  
Other \_\_\_\_\_

**BULLETIN BOARD:**

Medical Kit \_\_\_\_\_  
OSHA Posters \_\_\_\_\_  
Emerg. #'s Posted \_\_\_\_\_  
MSDS Displayed \_\_\_\_\_

**WALKING/WORKING SURFACE:**

Handrails \_\_\_\_\_  
Barricades \_\_\_\_\_  
Oil, Water \_\_\_\_\_  
Scrap, Rubbish \_\_\_\_\_  
Other \_\_\_\_\_

**COMMENTS:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**SCAFFOLDS:**

Footing \_\_\_\_\_  
Handrails \_\_\_\_\_  
Fall Protection \_\_\_\_\_  
Properly Erected \_\_\_\_\_  
Properly Supported \_\_\_\_\_  
Other \_\_\_\_\_

**FIRE PROTECTION:**

Extinguisher Charged \_\_\_\_\_  
Extinguisher Tagged \_\_\_\_\_

**PERSONAL PROTECTIVE EQUIPEMENT:**

Safety Glasses w/Side Shields \_\_\_\_\_  
Full Body Harness \_\_\_\_\_  
Goggles \_\_\_\_\_  
Steel Toed Boots \_\_\_\_\_  
Hard Hats \_\_\_\_\_  
Hearing Protection \_\_\_\_\_  
Gloves \_\_\_\_\_  
Respirators \_\_\_\_\_  
Air Fed Hoods \_\_\_\_\_  
Long Sleeve Shirts/FRC's \_\_\_\_\_

**FLAMMABLE STORAGE AREA:**

Grounding & Bonding \_\_\_\_\_  
Warning Signs \_\_\_\_\_  
Extinguisher \_\_\_\_\_  
Flame Arrester \_\_\_\_\_  
Materials Properly Labeled \_\_\_\_\_

**EQUIPMENT:**

Hoses Wired \_\_\_\_\_  
Good Condition \_\_\_\_\_  
Warning Signs \_\_\_\_\_  
Grounding Required \_\_\_\_\_  
Electrical Cords \_\_\_\_\_  
Shacks Tied Down \_\_\_\_\_  
Barricades \_\_\_\_\_  
Other \_\_\_\_\_

This inspection covered the regulations of the owner facility, our company requirements, and any government regulations which may apply.

Signature \_\_\_\_\_ Reviewed With: \_\_\_\_\_

## 26C-JOB HAZARD ANALYSIS (JHA)

FACILITY: \_\_\_\_\_ DATE: \_\_\_\_\_ JOB #: \_\_\_\_\_

LOCATION: \_\_\_\_\_ FOREMAN: \_\_\_\_\_

Complete this form by:

- 1) Identify the Task you are going to perform in the **TASK** column.
- 2) List the Potential Hazards for the task in the **POTENTIAL HAZARDS** column.
- 3) List the Safe Job Procedure to eliminate the Hazard in the **SAFE WORK PROCEDURES** column.
- 4) Identify who will mitigate the Potential Hazards in the **ACTION BY** column.
- 5) Identify the Completion Date of the mitigation in the **COMPLETION DATE** column.

TASK	POTENTIAL HAZARDS	SAFE WORK PRACTICES	ACTION BY	COMPLETION DATE

## 26D-SDS INVENTORY

**NUMBER**                      **CHEMICAL NAME**                      **STREET NAME**

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## **27-PROJECT SUPERINTENDENT SAFETY EVALUATION**

### **PURPOSE**

To evaluate the safety performance of Project Superintendents and site specific safety plans, OSHA regulations and applicable client safety rules and regulations.

### **SCOPE**

Applies to all Project Superintendents in charge of any work site over which we control.

### **PROJECT SUPERINTENDENT SAFETY RESPONSIBILITIES**

The Project Superintendent is responsible for the enforcement of all safety rules and regulations at each work site for which he/she is assigned. The safety role of the Project Superintendent includes assurance that;

- A current and up to date Safety and Health Guide along with a site-specific safety plan is on site and accessible to all employees.
- Each General Foreman and Craft Foreman maintains a thorough working knowledge of the Safety Policies and Procedures Manual and the clients safety manual requirements.
- All employees successfully complete all required safety training such as our new hire orientation, appropriate safety council and client site specific orientation before assignment to a job.
- All affected employees attend periodic OSHA required safety training when scheduled.
- Client safety rules and regulations are passed on to our employees assigned to that particular worksite.
- Only authorized employees will operate motor vehicles, aerial platform lifts, forklifts, cranes or any other piece of equipment that requires specialized training.
- Safety meetings of meaningful and appropriate topics are held with all employees on a regular basis.
- Appropriate investigation of all accidents and injuries are conducted in a timely manner.
- Job site safety audits are conducted jointly with the Site Safety Supervisor/Safety

Representative and all recommendations of such audits are completed in a timely manner.

- All employees have the authority and duty to refuse to perform any job they think is unsafe and bring it to the attention of their Craft Foreman before work is continued.
- An OSHA required competent person is on site at all times for any particular job requiring such.

## **EVALUATION PROCEDURES**

- On a quarterly basis, the Safety Director-Corporate will evaluate the safety performance of each Project Superintendent.
- The evaluation will be conducted by means of an interview and a worksite walk through with the Project Superintendent.
- Attachment “A” Project Superintendent Safety Evaluation Form will be completed jointly by the Safety Director-Corporate and the Project Superintendent being evaluated.
- Upon completion of the audit both the Safety Director-Corporate and the Project Superintendent will sign the audit form.
- The signed form will be forwarded to the Construction Manager and then to the Company President for review and approval.

### PROJECT SUPERINTENDENT SAFETY EVALUATION FORM

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

Job Number: \_\_\_\_\_

Worksite Location: \_\_\_\_\_

Project Superintendent: \_\_\_\_\_

Note: Each section must be completed jointly by the Safety Director-Corporate and the Project Superintendent.

#### 1.0 \_\_\_\_\_ AND CLIENT SAFETY POLICIES AND PROCEDURES MANUAL

1.1 Is our Safety and Health Guide and a site specific safety plan on site and available to all employees?

Yes     No     N/A

Comments:

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1.2 Have all General Foremen and Craft Foremen been trained on the contents of our safety and health manual and site specific safety plan and is there documentation of such?

Yes     No     N/A

Comments:

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**1.3** Has the client been furnished a copy of our Safety and Health Manual and site specific safety plan?

┘ Yes      No      NA

Comments:

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**1.4** Do you have a copy of the client safety manual on site?

┘ Yes      No      NA

Comments:

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**1.5** Have all General Foremen and Craft Foremen been trained on the contents of the client safety manual and is there documentation of such?

┘ Yes      No      NA

Comments:

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## 2.0 SAFETY TRAINING

2.1 Have all employees received New Hire Orientations and is there documentation of such?

Yes     No     NA

Comments:

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2.2 Have all affected employees received the following OSHA required training and is there documentation of such?

Lockout/Tagout

a) Authorized employees	Yes	No	N/A
b) Affected employees	Yes	No	N/A

Confined Space Entry

a) Entry Supervisor	Yes	No	N/A
b) Authorized Entrants	Yes	No	N/A
c) Attendants	Yes	No	N/A

Scaffolds	Yes	No	N/A
Fall Protection	Yes	No	<del>NA</del>
Respiratory Protection	Yes	No	<del>NA</del>
Trenching and Excavation	Yes	No	N/A
PPE	Yes	No	N/A
Hazard Communication	Yes	No	<del>NA</del>
Emergency Action Plans	Yes	No	<del>NA</del>

Comments:

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**2.3** Have all employees been trained on all applicable client safety rules and regulations and is there documentation of such?

Yes       No       NA

Comments:

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**3.0 EQUIPMENT OPERATORS**

**3.1** Are only authorized employees allowed to operate the following equipment and is there documentation such as operator certification cards?

Motor Vehicles	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Aerial Platform Lifts	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Forklifts	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Cranes	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Other	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A

Comments:

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**4.0 SAFETY MEETINGS**

**4.1** Are safety meetings being held and documented on a regular basis?

Yes       No       NA

Comments:

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4.2 Describe safety meeting activity as to frequency, responsibility, topic selection and documentation.

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**5.0 ACCIDENT/INCIDENT INVESTIGATIONS**

5.1 Are all serious accident/incidents and near misses being investigated in a timely manner (within 48 hours)?

Yes     No     N/A

Comments:

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5.2 What are the current frequency rates for the preceding 3 months for this worksite?

	Month	_____	_____	_____
First Aid Cases		_____	_____	_____
OSHA Recordables		_____	_____	_____
Lost Time Accidents		_____	_____	_____
Fatalities		_____	_____	_____

**6.0 SAFETY AUDITS**

6.1 Are job site safety audits being conducted jointly with the Site Safety Supervisor/Safety Representative and all recommendations of such audits completed in a timely manner?

Yes     No     N/A

Comments:

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**6.2** Are job site safety audits conducted jointly with the client and all recommendations of such audits completed in a timely manner?

┆ Yes      No      NA

Comments:

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## 7.0 GENERAL

**7.1** Are all employees informed that they have the authority and duty to refuse to perform any job they think is unsafe and bring it to the attention of their Craft Foreman before work is continued?

┆ Yes      No      NA

Comments:

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7.2 Have all OSHA required competent persons required for this site been identified? If yes, list below:

┘ Yes      No      N/A

Employee Name	Competency
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

**8.0 OVERALL EVALUATION**

A. Number of applicable questions \_\_\_\_\_

B. Number of questions answered yes \_\_\_\_\_

Percent of Safety Compliance = (B/A)\*100 \_\_\_\_\_

Comments:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**9.0 SIGNATURES**

Safety Director \_\_\_\_\_ Date \_\_\_\_\_

Project Superintendent \_\_\_\_\_ Date \_\_\_\_\_

Construction Manager \_\_\_\_\_ Date \_\_\_\_\_

Company President \_\_\_\_\_ Date \_\_\_\_\_

## **28-AERIAL LIFTS AND WORK PLATFORMS**

**Applicable OSHA Standards: 29 CFR 1910.67, 1926.453**

### **PURPOSE**

To provide training and qualification guidelines for the safe operation of aerial lifts and powered manned platforms.

### **SCOPE**

This safety and health guide applies to all employees and subcontractors working within our controlled worksites.

### **QUALIFICATION REQUIREMENTS**

All aerial lift operators are required to be fully qualified and competent in the operation of each piece of equipment they are required to operate. All New Hire operators are required to:

- Provide proof of training and or experience valid within one (1) year and pass an examination prior to acceptance or;
- Successfully complete the Aerial Lift Training Program. (Ref. Section 2.0)

Acceptable forms of proof of training and or experience are:

- Previous employers' certification card dated; (some facilities do not recognize proof of training from other facilities)
- Verification of ABC class room training;
- Verification of any participating Safety Council classroom training.

### **AERIAL LIFT TRAINING PROGRAM**

The Aerial Lift Training Program is intended for all operators. This program is generic in nature and is supplemented with manufactures Operating and Safety Handbook and video. The training program consists of:

- OSHA Standards Overview;
- Overview of manufacturers operation manual;
- Viewing of video-tape training film
- Written examination
- Satisfactory check out by a qualified person

Successful completion of this program requires;

- Classroom instruction;
- Written examination;  
 A score of between 80% and 100% will require a review of missed questions, if any, and the score corrected to 100%.

A score of below 80% will require complete retraining and testing.

- Field evaluation.

## OSHA STANDARDS OVERVIEW

Standards 29 CFR 1910.67 and 1926.453 of the Occupational Safety and Health Administration (OSHA) covers the operation of vehicle-mounted elevating and rotating work platforms and aerial lifts. In summary, these standards spell out specific requirements as to the construction, modification, and safe use of the equipment and training of operators. For more information concerning these standards ask the Site Safety Supervisor for assistance or contact the nearest OSHA office.

### I. References

- Manufacturers Operation and Safety Handbook
- Manufacturers Operator Training Video

### II. Aerial Lift Vocabulary and Parts

Aerial platform lifts are used as manlifts whenever work is being performed overhead, such as painting tanks, working on pipelines, etc. The aerial platform lift is one of the first tools to consider when performing the job.

- A. As with most specialized equipment, aerial platform lifts have a vocabulary of their own. Before you start learning about platform lifts, you need to make sure that you know the different parts and terms. Some common terms are as follows:

<b>Term</b>	<b>Meaning</b>
Auxiliary Power	Control used to lower the basket in an emergency.
Basket	Enclosed area where operator controls the aerial platform lift and performs all necessary work from this area.
Basket Controls	Controls usually located in the front middle of the basket area.
Basket Rotate Left	Control used to only rotate the basket left.

Basket Rotate Right	Control used to only rotate the basket right.
Choke	Control used to help start the gas engine when it is cold.
Deadman Switch	Foot switch that must be depressed before any of the controls on the aerial platform lift will operate.
Drive Forward	Control used to move the aerial platform forward.
Drive Reverse	Control used to move the aerial platform backwards.
Drive Speed	Control used to set the speed to which the aerial platform will travel.
Emergency lowering Valve	Valve used to lower the basket when the aerial platform lift has no power.
Emergency Stop	Control used to kill the aerial platform lift in an emergency situation.
Engine Speed	Control used to set the engine speed.
Extending Axles	Axles that extend, used to stabilize the aerial platform lift.
Forward and Reverse Arrows	Arrows used to indicate travel direction.
Ground Controls	Controls used to operate the aerial lift from the ground in case of an emergency. Also know as auxiliary controls
Level Warning Light	Light that indicates that the base is 5 degrees or more out of level-don't swing, raise or scope if out of level.
Lift Down	Control used to lower the boom down.
Lift Up	Control used to lift the boom up.
Maximum Weight Placard	Placard on the aerial platform lift used stating the amount of weight the lift can handle.
On/Off Ignition	Control used to turn the ignition on or off.
Outriggers	Stabilizing devices used to stabilize the aerial platform lift.
Start Button	Button used to start the aerial platform lift
Steer Left	Control used to turn the aerial platform left when traveling.
Steer Right	Control used to turn the aerial platform right when traveling.
Swing Left	Control used to swing the boom to the left.
Swing Right	Control used to swing the boom to the right.
Telescope In	Control used to retract the boom.
Telescope Out	Control used to extend the boom.
Tilt Down	Control used to tilt the basket down.
Tilt Up	Control used to tilt the basket up.

- B. Aerial Platform Lift Parts: (Reference manufacturers “Operating and Safety Handbook”.)

### III. Operating Procedures

- A. (Reference manufacturers video)
- B. (Reference manufacturers “Operating and Safety Handbook”)

### IV. General Safety Rules

- A. Only authorized, trained employees shall operate an aerial lift.
- B. Lower basket to grade level to gain access to the platform.
- C. Aerial lifts operated near energized overhead lines shall be operated so that a minimum clearance of 10ft. (305 cm) is maintained.
- D. Lift controls shall be tested prior to use to determine that such controls are in safe working condition. (See Attachment “A”)
- E. Belting off to an adjacent pole, structure, or equipment while working from an aerial lift shall not be permitted.
- F. Employees shall always stand firmly on the floor of the basket, and shall not sit or climb on the edge of the basket or use planks, ladders, or other devices for a work position.
- G. A full body harness shall be worn and a lanyard attached to the boom or basket when working from an aerial lift. (Ref. Fall Protection Policy)
- H. Boom and basket load limits specified by the manufacturer shall not be exceeded.
- I. Outriggers, when used, shall be positioned on pads or a solid surface. Wheel chocks shall be installed before using an aerial lift on an incline.
- J. Climbers shall not be worn while performing work from an aerial lift.
- K. The insulated portion of an aerial lift shall not be altered in any manner that might reduce its insulating value.

- L. Do not travel with the boom elevated or extended. However, it may be necessary to extend the boom while moving a few feet to position it.
- M. Aerial lifts may not be "field modified" for uses other than those intended by the manufacturer.
- N. Do not exceed the machine placard maximum platform load.
- O. Always look in the direction you are moving the unit, and be aware of everything above, below and around you. Never move the unit without a ground person.
- P. Do not attach wires or cables to the platform. Many aerial lifts have a place to plug in an electrical cord cord.
- Q. Other personnel should be restricted from passing or working underneath the raised platform.
- R. A malfunctioning lift shall be shutdown and removed from service until repaired.
- S. Attachments

Attachment "A" Aerial Platform Lift Operators Daily Checklist  
Attachment "B" Aerial Platform Lift Written Examination  
Attachment "C" Aerial Platform Lift Operational Field Checkout  
Attachment "D" Aerial Platform Lift Certification

## Attachment “A”

### Aerial Platform Lift Operators Daily Checklist

Name	Date	Equipment Number

Inspection	OK	Requires Repair
1. Hydraulic system (Look for leaks)		
2. Basket Condition (Look for loose objects or damage)		
3. Fuel Supply		
4. Tire Condition		
5. Engine Oil Level		
6. Battery Water Level		
7. Check ground controls both emergency and with engine running		
8. Required Safety Equipment: <ul style="list-style-type: none"> <li>• Fire extinguisher</li> <li>• Fall Protection</li> <li>• Respirator if required</li> <li>• Eye Wash</li> </ul>		
9. Brakes (Brakes engage when drive lever is in neutral)		
10. All switch and control name decals legible		
11. Check each function: <ul style="list-style-type: none"> <li>• Lift up</li> <li>• Lift down</li> <li>• Swing right</li> <li>• Swing left</li> <li>• Telescope in</li> <li>• Telescope out</li> <li>• Platform lever up</li> <li>• Platform lever down</li> <li>• Drive forward</li> <li>• Drive reverse</li> <li>• Steer right</li> <li>• Steer left</li> <li>• Check operation of platform controls on emergency power</li> </ul>		

Do not use equipment and notify Supervisor if any defects or malfunctions are found.

Return checklist to Supervisor.

## Attachment “B”

### Aerial Platform Lift Written Classroom Examination

Name: \_\_\_\_\_ SS # \_\_\_\_\_

Date: \_\_\_\_\_ Grade: \_\_\_\_\_ Instructor: \_\_\_\_\_

Match the terms with the correct meaning:

1.

Term	Answer	Meaning
Tilt Down		1. Light indicating base is 5 degrees or more out of level-don't swing, raise or scope if out of level.
Tilt Up		2. Arrows used to indicate the basket location to the drive wheels.
Telescope Out		3. Axles that extend, used to stabilize the aerial platform lift.
Telescope In		4. Button used to start the aerial platform lift
Swing Right		5. Control used to extend the boom.
Swing Left		6. Control used to help start the gas engine when it is cold.
Steer Right		7. Control used to kill the aerial platform lift in an emergency situation.
Steer Left		8. Control used to lift the boom up.
Start Button		9. Control used to lower the basket in an emergency
Outriggers		10. Control used to lower the boom down.
On/Off Ignition		11. Control used to move the aerial platform backwards.
Maximum Weight Placard		12. Control used to move the aerial platform forward.
Lift Up		13. Control used to only rotate the basket left.
Lift Down		14. Control used to only rotate the basket right.
Level Warning Light		15. Control used to retract the boom.
Ground Controls		16. Control used to set the engine speed.
Forward and Reverse Arrows		17. Control used to set the speed to which the aerial platform will travel.
Extending Axles		18. Control used to swing the boom to the left.
Engine Speed		19. Control used to swing the boom to the right.
Emergency Stop		20. Control used to tilt the basket down.
Emergency lowering Valve		21. Control used to tilt the basket up.
Drive Speed		22. Control used to turn the aerial platform left when



		traveling.
Drive Reverse		23. Control used to turn the aerial platform right when traveling.
Drive Forward		24. Control used to turn the ignition on or off.
Deadman Switch		25. Controls used to operate the aerial lift from the ground in case of an emergency.
Choke		26. Controls usually located in the front middle of the basket area.
Basket Rotate Right		27. Enclosed area where operator controls the aerial platform lift and performs all necessary work from this area.
Basket Rotate Left		28. Foot switch that must be depressed before any of the controls on the aerial platform lift will operate.
Basket Controls		29. Placard on the aerial platform lift used stating the amount of weight the lift can handle.
Basket		30. Stabilizing devices used to stabilize the aerial platform lift.
Auxiliary Power		31. Valve used to lower the basket when the aerial platform lift has no power.

Circle the most correct answer:

2. Who may operate an aerial lift?
  - a) All employees.
  - b) Only authorized personnel.
  - c) Skilled craftsman.
  - d) Your Supervisor.
  
3. What type of fall restraint is required?
  - a) Body belt.
  - b) Full body harness with lanyard attached to the boom or basket.
  - c) None.
  - d) Anything you want.
  
4. How many items can be stacked on the floor of the basket?
  - a) None.
  - b) Anything up to 500#.
  - c) Varies with the weight of the personnel.
  - d) As many as you can get.

5. What is the distance that must be maintained when operating near electrical lines?
  - a) The width of the basket.
  - b) Half the elevation of the platform.
  - c) 10 ft up to 50 kV
  - d) 50 feet from all powerlines

Answer True or False circle one:

6. A daily checklist must be filled out before operating an aerial platform list.  
True  
False
7. A ground control is the place you ground electrical circuits on the aerial lift.  
True  
False
8. The operator must keep his/her arms legs and other body parts inside the basket while operating the aerial lift.  
True  
False

## Answer key

1.

<b>Term</b>	<b>Answer</b>	<b>Meaning</b>
Tilt Down	20	1. Light indicating base is 5 degrees or more out of level don't swing, raise or scope if out of level.
Tilt Up	21	Arrows used to indicate the direction of travel
Telescope Out	5	Axles that extend, used to stabilize the aerial platform lift.
Telescope In	15	Button used to start the aerial platform lift
Swing Right	19	Control used to extend the boom.
Swing Left	18	Control used to help start the gas engine when it is cold.
Steer Right	23	Control used to kill the aerial platform lift in an emergency situation.
Steer Left	22	Control used to lift the boom up.
Start Button	4	Control used to lower the basket in an emergency
Outriggers	30	Control used to lower the boom down.
On/Off Ignition	24	Control used to move the aerial platform backwards.
Maximum Weight Placard	29	Control used to move the aerial platform forward.
Lift Up	8	Control used to only rotate the basket left.
Lift Down	10	Control used to only rotate the basket right.
Level Warning Light	1	Control used to retract the boom.
Ground Controls	25	Control used to set the engine speed.
Forward and Reverse Arrows	2	Control used to set the speed to which the aerial platform will travel.
Extending Axles	3	Control used to swing the boom to the left.
Engine Speed	16	Control used to swing the boom to the right.
Emergency Stop	7	Control used to tilt the basket down.
Emergency lowering Valve	9	Control used to tilt the basket up.
Drive Speed	17	Control used to turn the aerial platform left when traveling.

Drive Reverse	11	Control used to turn the aerial platform right when traveling.
Drive Forward	12	Control used to turn the ignition on or off.
Deadman Switch	28	Controls used to operate the aerial lift from the ground in case of an emergency.
Choke	6	Controls usually located in the front middle of the basket area.
Basket Rotate Right	14	Enclosed area where operator controls the aerial platform lift and performs all necessary work from this area.
Basket Rotate Left	13	Foot switch that must be depressed before any of the controls on the aerial platform lift will operate.
Basket Controls	26	Placard on the aerial platform lift used stating the amount of weight the lift can handle.
Basket	27	Stabilizing devices used to stabilize the aerial platform lift.
Auxiliary Power	31	Valve used to lower the basket when the aerial platform lift has no power.

Circle the most correct answer:

2. Who may operate an aerial lift?
  - All employees.
  - Only trained authorized personnel.
  - Skilled craftsman.
  - Your Supervisor.
  
3. What type of fall restraint is required?
  - e) Body belt.
  - f) Full body harness with lanyard attached to the boom or basket.
  - g) None.
  - h) Anything you want.
  
4. How many items can be stacked on the floor of the basket?
  - e) None.
  - f) Anything up to 500#.
  - g) Varies with the weight of the personnel.
  - h) As many as you can get.

5. What is the distance that must be maintained when operating near electrical lines?
- e) The width of the basket.
  - f) Half the elevation of the platform.
  - g) 10 ft up to 50 kV
  - h) 50 feet from all powerlines

Answer True or False circle one:

6. A daily checklist must be filled out before operating an aerial platform list.  
True  
False
7. A ground control is the place you ground electrical circuits on the aerial lift.  
True  
False
8. The operator must keep his/her arms legs and other body parts inside the basket while operating the aerial lift.  
True  
False
9. An aerial lift may be modified by anyone.  
True  
False
10. The Deadman switch must be depressed before the aerial lift will operate.  
True  
False

## Attachment “C”

### Aerial Platform Lift Operational Field Checkout

Name: \_\_\_\_\_ SS # \_\_\_\_\_

Date: \_\_\_\_\_ Grade: \_\_\_\_\_ Observer/Instructor: \_\_\_\_\_

<b>Operation</b>	<b>Satisfactory</b>	<b>Needs Improvement</b>
Performs proper checklist inspection.		
Approaches points properly		
Removes any obstacles in the path of travel		
Slows down at corners or intersections		
Looks where he/she is going		
Travels in reverse properly		
Corners properly		
Starts, stops and performs moves smoothly		
Obeys plant traffic rules		
Demonstrates knowledge of all control functions		
Avoids uneven terrain		
Parks the lift properly		
Operates the aerial lift following all safety rules and regulations that apply.		

## Attachment "D"

### Aerial Platform Lift Qualification

Name: \_\_\_\_\_ SS # \_\_\_\_\_

Date: \_\_\_\_\_ Certified by: \_\_\_\_\_

The above has satisfied all the requirements of the Aerial Lift Operator Qualification Program as listed:

	Instructor Init.	Date
1. Aerial Lift Operator Training Program (If required)	_____	_____
2. Written Examination	_____	_____
3. Operational Field Examination	_____	_____

Qualified to operate aerial platforms of the following size and type:

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## 29-RIGGING

**Applicable OSHA Standard: 29 CFR 1926.251**

### PURPOSE

To establish minimum requirements for the use and inspection of wire rope, slings, hooks, and sheaves and provides guidelines to insure safe practices in the use of these lifting devices.

### SCOPE

This applies to all of our employees and contract employees working at all of our controlled worksites.

### DEFINITIONS

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

*Designated Person* - a person selected by the employer as being qualified to perform specific duties. Refer to Competent or Qualified Person definitions.

*Frequent inspections* - daily to monthly intervals.

*Inspection Records* - certification records which include the date of inspection, signature of the person who performed the inspection and the serial number, or other identifier, of the equipment being inspected. This certification record shall be kept readily available.

*Lay* - The amount of twist, the angle of the strands, and the angle of metal threads in the strands.

*Periodic inspections* - one to twelve month intervals.

*Qualified Person* - one who, by possession of a recognized degree, certification, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated their ability to solve or resolve problems relating to the subject matter, the work, or the project.

*Running Ropes* - wire rope used in lifting. Lifting lines from the hook or load block down the boom and wound on to the auxiliary or main hoisting drums.



*Standing Ropes* - a supporting wire rope which maintains a constant distance between the points of attachment to the two components connected by the rope as in the pendent lines or bridal assembly.

*Strand* - Metal fibers twisted, plaited, or laid parallel to form a unit for further twisting or plaiting into wire rope.

*Sheaves* - a pulley which rotates as the running rope moves around it when raising or lowering the load block.

*Slings* - a lifting attachment used to connect the load to the load block or hook. Material of construction can be of wire rope, alloy steel chain, natural or synthetic fiber rope (conventional three strand construction), metal mesh, or synthetic web (nylon, polyester, and polypropylene) and rated for specific weights depending on the way it is connected to the load.

*Wire Rope* - a cable specifically designed in various sizes and weight capacities for use in lifting.

## **RESPONSIBILITIES**

### Project Superintendent

- Insure that these requirements are met.
- Participate in the required audit process.
- Insure a competent person is designated for inspection.

### General Foreman

- Employees know, understand, and comply with these requirements.
- Employees are trained in the procedures and use of equipment they are to use to complete the job.
- A competent person to inspect all lifting equipment prior to use and during use to make sure it is in safe operating condition is designated.
- Audits for compliance on a periodic (monthly) basis are conducted.
- Corrections to all deviations or inadequacies are completed in a timely manner.

- Failure to comply with these requirements will result in disciplinary action, up to and including discharge.

Individuals - are responsible to:

- Know, understand, and comply with these requirements.
- Inspect equipment, review procedures, and review and complete checklist(s) PRIOR to use.
- Report any unsafe conditions to supervision.
- Know that failure to comply with these requirements will result in disciplinary action, up to and including discharge.

## PROCEDURES

Wire rope, hooks, slings and sheaves shall be Inspected initially when purchased or received, before use, and monthly for:

- Evidence of overloading, or;
- Excessive wear, or;
- Damage (broken wires, kinking, crushing, cutting, and corrosion from heat, weather, or chemical attack).

Defective equipment shall be immediately cut and discarded or returned to supplier/rental company.

Slings that are damaged or defective shall not be used.

Slings shall not be shortened with knots, bolts, or other make-shift devices.

Slings shall be padded or protected from sharp edges.

The area below suspended loads shall be kept clear of personnel.

Slings shall not be pulled from under a load resting on the sling.

Web slings and natural or synthetic rope slings shall not be used where temperatures exceeds 180 degrees F.

Slings shall not be loaded in excess of their rated load capacities.

Hands or fingers shall not be placed between the sling and its load while the sling is being tightened around the load.

## WIRE ROPE

Wire rope shall be immediately taken out of service and discarded when ever any of the following conditions exist:

- In running ropes (lifting lines), six (6) randomly distributed broken wires in one lay or three (3) broken wires in one strand in one lay;
- One outer wire broken at the point of contact with the core of the rope which has worked its way out of the rope structure and protrudes or loops out from the rope structure.
- Wear of one-third (1/3) the original diameter of outside individual wires. Kinking, crushing, bird caging, or any other damage resulting in distortion of the wire rope structure;
- Evidence of any heat damage from any cause;
- Reduction from nominal diameter of the following:
  - a. More than one-sixty-fourth (1/64) inch for diameters up to and including five-sixteenths (5/16) inch;
  - b. One-thirty-second (1/32) inch for diameters three-eighths (3/8) inch to and including one-half (1/2) inch;
  - c. Three-sixty-fourths (3/64) inch for diameters nine-sixteenths (9/16) inch to and including three-fourths (3/4) inch;
  - d. One-sixteenths (1/16) inch for diameters seven-eighths (7/8) inch to one and one-eighths (1/8) inch inclusive, and;
  - e. Three-thirty-seconds (3/32) inch for diameters one and one-fourth to one and one-half (1/4 to 1/2) inches inclusive;
- In standing ropes, more than two (2) broken wires in one lay in sections beyond end connections or more than one broken wire at an end connection.
- When evidence of core failure in rotation resistant ropes is recognized by a lengthening of the lay and localized reduction in diameter.

- Wire rope safety factors shall be in accordance with American National Standards Institute (ANSI) B30.5-1968 or SAE J959-1966.

## HOOKS

The load block shall be inspected every ten (10) hours or daily for the following:

- Hook pivots freely,
- Sheaves rotates freely,
- End play in the thrust bearing.
- Evidence of corrosion from heat, weather, or chemical attack.

Hooks, hook bolts and nuts shall be disassembled and inspected every five-hundred (500) hours or annually by a magnetic-particle process and replaced if one of the following conditions exist:

- One (1) or more cracks are found on the hook, threads, or nut,
- Wear, cracks, pulling, or other damage,
- Any thread damage
- Hardness of nut not following manufacturer's recommendations.

Rental mobile hoisting equipment hook assemblies shall be disassembled and inspected upon arrival to site unless proof of annual inspection is current.

Hooks shall be immediately taken out of service and destroyed or returned to rental company when any of the following conditions exist.

- Cracked, gouges, or other indications of wear, or;
- Opened more than fifteen (15%) percent of the normal throat opening measured at the narrowest point, or;
- Twisted more than ten (10) degrees from the plane of the unbent hook.
- Evidence of corrosion from heat, weather, or chemical attack.
- Any evidence of damage or wear that would make use unsafe.

## SLINGS

Wire rope slings shall not be used in excess of the rated load capacities shown in 29 CFR 1910.184 Table N-184-3 through N-184-14.

Slings not included in these tables shall be used only in accordance with sling manufacture's recommendations.

Each sling shall be marked to show rated capacities.

Each sling shall be marked for inspection identification.

The safe operating temperature ranges are:

Fiber core wire rope of all grades shall be permanently removed from service and destroyed if exposed to temperatures in excess of 200 degrees F.

Non fiber core wire rope of any grade is 60 degrees F. to 400 degrees F. When used above or below this range the sling manufacture's recommendations shall be followed.

End attachments shall be proof tested by the sling manufacturer or equivalent entity at twice their rated capacity PRIOR to initial use.

The certificate of proof testing shall be maintained for the life of the sling.

Wire rope slings shall be immediately taken out of service and destroyed when any of the following conditions exist:

- More than two (2) broken wires in one lay in sections beyond end connections or more than one (1) broken wire at end connections, or;
- Safe operating temperature exceeded, or;
- Ten (10) randomly distributed broken wires in one rope lay, or five (5) broken wires in one strand in one rope lay, or;
- Wear or scraping of one-third (1/3) the original diameter of outside individual wires, or;
- Kinking, bird caging, crushing or any other damage resulting in distortion of the wire rope structure, or;
- End attachments that are cracked, deformed, or worn, or;

- Hooks that have been opened more than fifteen (15%) percent of the normal throat opening measured at the narrowest point or twisted more than ten (10) degrees from the plane of the unbent hook, or;
- Corrosion from heat, weather, or chemical attack of the rope or endattachment.

Alloy Steel Chain:

- Alloy steel chain slings shall not be used in excess of the rated load capacities found in 29 CFR 1910.184 Table N-184-1.
- Slings not included in this table shall be used only in accordance with sling manufacturer's recommendations.
- Each alloy steel chain sling shall be marked to show rated capacity.
- Each alloy steel chain sling shall be marked for inspection identification.
- The safe operating temperature ranges are:
  - a. Reduction of maximum working load limits found in Table N-184-1 according to manufacturer's recommendations when exposed to service temperatures in excess of 600 degrees F.
  - b. Immediately and permanently removed from service when heated to 1000 degrees F. or above.
- End attachments shall have a rated capacity at least equal to that of the alloy steel chain with which they are used.
- Use of alloy steel chain slings is not recommended. If it is to be used either:
  - a. New chains are purchased, used one time, and destroyed, or;
  - b. After use, if kept, all applicable regulatory inspections are met.
- The following inspections are to be performed if kept:
  - a. Permanently affixed, durable identification stating size, grade, rated capacity, and reach.
  - b. Attachments - hooks, rings, oblong links, pear shaped links, or other attachments shall have a rated capacity equal to the alloy steal chain.

- c. Makeshift links or fasteners formed of bolts or rods, or other such attachments shall not be used.
  - d. Periodic inspection on a regular basis based on the following criteria:
    1. Frequency of use.
    2. Severity of service conditions.
    3. Nature of lifts being made.
    4. Experience gained on the service life of slings used in similar circumstances.
    5. Not greater than twelve (12) months.
- The most recent month in which an inspection was made shall be recorded and maintained for the life of the alloy steel chain.
  - The designated competent person shall inspect for the following:
    - a. Wear
    - b. Defective welds
    - c. Deformation
    - d. Increase in length
  - Proof testing shall be conducted before use and each new, repaired, or reconditioned alloy steel chain sling, including all welded components in the sling assembly by the sling manufacturer or equivalent entity, in accordance with paragraph 5.2 of the American Society of Testing and Materials Specification A391-65, and ANSI G61.1-1968.
  - The certificate of proof test shall be maintained for the life of the alloy steel sling.
  - Alloy steel chain slings shall be immediately removed from service when:
    - a. Hooks are cracked, or;
    - b. Opened more than fifteen (15%) per cent of the normal throat opening measured at the narrowest point, or;

- c. Twisted more than ten (10) degrees from plane of the unbent hook.

Natural or Synthetic Fiber Rope:

- Made from conventional three strand construction fiber rope shall not be used with loads in excess of the rated load capacities prescribed in Tables N-184-16 through N-184-19 of 29 CFR 1910.184.
- Fiber rope slings shall have a diameter of curvature meeting at least the minimums specified in Figures N-184-4 and N-184-5.
- Slings not included in these tables shall be used only in accordance with the manufacturer's recommendations.
- Each fiber rope sling shall be marked to show rated capacities.
- Each fiber rope sling shall be marked for inspection identification.
- The safe operating temperature range is from minus 20 degrees F. to plus 180 degrees F. The manufacturer's recommendations are to be used when used outside this range.
- Sliced fiber rope is not to be used unless the requirements of 29 CFR 1910.184 (h)(3) "Splicing" are used.
- End attachments shall not have sharp edges or projections.
- Natural or synthetic fiber rope slings shall be immediately taken out of service if any of the following conditions are present:
  - a. Abnormal wear,
  - b. Powdered fiber between strands,
  - c. Broken or cut fibers,
  - d. Variations in the size or roundness of strands,
  - e. Discoloration or rotting, or;
  - f. Distortion of hardware in the sling.
- Use of repaired or reconditioned fiber rope slings is prohibited.

Synthetic Web:



- Synthetic web slings shall not be used with loads in excess of the rated load capacities found in 29 CFR 1910.184 Tables N-184-20 through N-184-22.
- Slings not included in these tables shall be used only in accordance with sling manufacturer's recommendations.
- Each sling shall be marked to show rated capacities for each type of hitch and type of synthetic web material.
- Each sling shall be marked for inspection identification.
- Webbing shall be of uniform thickness and width and selvage edges shall not be split from the webbing's width.
- Fittings shall be of a minimum breaking strength equal to that of the sling and have no sharp edges or projections.
- Stitching shall be the only method of attachment of fittings to webbing and to form eyes.
- The following restrictions apply:
  - a. Nylon web slings are not to be used where fumes, vapors, sprays, mists, or liquids of acids or phenols are present.
  - b. Polyester and polypropylene web slings are not to be used where fumes, vapors, sprays, mists, or liquids of caustics are present.
  - c. Web slings with aluminum fittings shall not be used where fumes, vapors, sprays, mists, or liquids of caustics are present.
- Synthetic web slings of polyester or nylon shall not be used at temperatures in excess of 180 degrees F. Polypropylene web slings shall not be used at temperatures in excess of 200 degrees F.
- Repaired synthetic web slings are not to be used unless the repair is done by the sling manufacturer or an equivalent entity.
- Each repaired sling shall be proof tested to twice the rated capacity by the sling manufacturer or an equivalent entity PRIOR to returning to service.
- The certificate of the proof test shall be maintained for the life of the sling.
- Synthetic web slings shall be immediately removed from service if any of the following conditions exist:

- a. Acid or caustic burns,
- b. Melting or charring of any part of the sling,
- c. Snags, punctures, cuts or tears,
- d. Broken or worn stitches,
- e. Distorted fittings.

Metal Mesh:

- Metal mesh slings shall not be used in excess of their rated capacities as found in 29 CFR 1910.184 Table N-184-15.
- Slings not found in this table shall be used in accordance with manufacturer's recommendations.
- Each metal mesh sling shall have permanently attached to it a durable marking that states the rated capacity for vertical basket hitch and choker hitch loadings.
- Each metal mesh sling shall be marked for inspection identification.
- Handles shall have a rated capacity at least equal to the metal fabric.
- Handle attachment shall conform to the following:
  - The rated load capacity of the sling is not reduced,
  - The load is evenly distributed across the width of the fabric,
  - Sharp edges or projections will not damage the fabric.
- All new and repaired metal mesh slings shall be proof tested by the manufacturer or equivalent entity PRIOR use.
- The certificate of proof testing shall be maintained for the life of the sling.
- The safe operating temperatures are as follows:
  - Non impregnated metal mesh slings minus 20 degrees F. though plus 550 degrees F.
  - Polyvinyl chloride or neoprene impregnated metal mesh slings zero degrees to plus 200 degrees F.

- Operations outside these temperature ranges OR all other impregnating materials the sling manufacturer's recommendations shall be followed.
- Only the sling manufacturer or equivalent entity can repair metal mesh slings.
- Metal mesh slings shall be immediately removed from service if any of the following conditions exist:
  - Broken weld or brazed joint along the sling edge,
  - Reduction in wire diameter of twenty-five (25%) per cent due to abrasion or fifteen (15%) per cent due to corrosion,
  - Lack of flexibility due to distortion of fabric,
  - Distortion of the female handle so the depth of the slot is increased more than ten (10%) per cent,
  - Distortion of either handle so that the width of the eye is decreased more than ten (10%) per cent
  - A fifteen (15%) per cent reduction of the original cross sectional area of metal at any point around the handle eye,
  - Distortion of either handle out of its plane.

Sheaves:

- Sheaves shall be inspected for:
  - a. Groove depth, width, contour, and smoothness
  - b. Broken or chipped flanges
  - c. Cracks in hubs and spokes
  - d. Signs of rope contact with sheave guards
  - e. Sheave bearings and shaft
  - f. Out of round condition
  - g. Alignment with other sheaves
  - h. Sheaves too small or large for diameter of rope used

## **AUDIT REQUIREMENTS**

All equipment must be inspected PRIOR to use.

Supervision will inspect equipment and records of inspections as work is being performed.

No formal audit is required.

## **TRAINING REQUIREMENTS**

Training will be conducted on these requirements annually, whenever these requirements are revised, and for new crane operators and riggers or newly hired crane operators and riggers.

## **30-ROPE, CABLE AND SLING INSPECTION**

### **USE AND INSPECTION OF WIRE ROPES, HOOKS, SLINGS, AND SHEAVES**

#### DEFINITIONS:

*Qualified Person* - Any person by possession of a degree, certificate, professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his/her ability to solve or resolve problems relating to the subject matter, the work, or the project.

*Competent Person* - One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to workers, and who has the authorization to take prompt corrective measures to eliminate them.

*Daily inspections* - Inspection of ropes, cables, and slings shall be made daily by a qualified person.

*Monthly inspections* - Monthly inspections which include the date of inspection, the signature of the person who performed the inspection and the serial number, or other identifier, of the ropes, cables and slings shall be made monthly on an inspection form.

*Lay* - The amount of twist, the angle of the strands, and the angle of metal threads in the strand.

*Running Ropes* - Wire ropes used in lifting. Lifting lines from the hook or load block down the boom and wound on to the auxiliary or main hoisting drums.

*Standing Ropes* - A supporting wire rope which maintains a constant distance between the points of attachment to the two components connected by the rope as in the pendent lines and bridal assembly.

*Strand* - Metal fibers twisted, plaited, or laid parallel to form a unit for further twisting or plaiting into wire rope.

*Sheaves* - A pulley which rotates as the running rope moves around it when raising or lowering the load block.

*Slings* - A lifting attachment used to connect the load to the load block or hook. Material of construction can be of wire rope, alloy steel chain, natural or synthetic fiber rope (conventional three strand construction), metal mesh, or synthetic web

(nylon, polyester, and polypropylene) and rated for specific weights depending on the way it is connected to the load.

*Wire Rope* - A cable specifically designed in various sizes and weight capacities for use in lifting.

#### RESPONSIBILITY:

Project Superintendent:

Will ensure that all qualified workers know, understand, and comply with the requirements of this standard.

Workers are trained in the procedures and use of equipment they are to use to complete the job.

Audit and inspect for compliance.

Corrections to all deviations or inadequacies are completed in a timely manner.

Report any unsafe conditions to supervision immediately.

#### PROCEDURES:

Wire rope, hooks, slings and sheaves shall be:

Inspected initially when purchased or received, before use, and;

Monthly for:

- Evidence of overloading, or;
- Excessive wear, or;
- Damaged (broken wires, kinking, crushing, cutting, and corrosion from heat, weather, or chemical attack).

Defective equipment shall be immediately cut and discarded or returned to supplier/rental company.

Slings that are damaged or defective shall not be used.

Slings shall not be shortened with knots, bolts, or other make-shift devices.

Slings shall be padded or protected from sharp edges.

The area below suspended loads shall be kept clear of personnel.

Slings shall not be pulled from under a load resting on the sling.

Web slings shall not be used where temperatures exceed 180 degrees F.

Slings shall not be loaded in excess of their rated load capacities.

Hands, fingers or feet shall not be placed between the sling and it's load while the sling is being tightened around the load.

#### WIRE ROPE:

Wire rope shall be taken "Out of Service" immediately and discarded when ever any of the following conditions exist:

In running ropes (lifting lines), six (6) randomly distributed broken wires in one lay or three (3) broken wires in one strand in one lay.

One outer wire broken at the point of contact with the core of the rope which has worked its way out of the rope structure and protrudes or loops out from the rope structure.

Wear of one-third (1/3) the original diameter of outside individual wires. Kinking, crushing, bird caging, or any other damage resulting in distortion of the wire rope structure.

Evidence of any heat damage from any cause.

Reduction from nominal diameter of the following:

- More than one-sixty-fourth (1/64) inch for diameters up to and including five-sixteenths (5/16) inch;
- One-thirty-second (1/32) inch for diameters three-eighths (3/8) inch to and including one-half (1/2) inch;
- Three-sixty-fourths (3/64) inch for diameters nine-sixteenth (9/16) inch to an including three-fourths (3/4) inch;
- One-sixteenth (1/16) inch for diameters seven-eighths (7/8) inch to one and one-eighths (1-1/8) inch inclusive, and;

- (1-1/4) to one and one-half (1-1/2) inches inclusive;
- In standing ropes, more than two (2) broken wires in one lay in sections beyond end connections or more than one broken wire at an end connection.
- When evidence of core failure in rotation resistant ropes is recognized by a lengthening of the lay and localized reduction in diameter.
- Wire rope safety factors shall be in accordance with American National Standards Institute (ANSI) B30.5-1968 or SEA J959-1966.

#### HOOKS:

The load block shall be inspected every ten (10) hours or daily for the following:

- Hook pivots freely,
- Sheaves rotate freely,
- End play in the thrust bearings,
- Evidence of corrosion from heat, weather, or chemical attack.

Hooks, hook bolts and nuts shall be disassembled and inspected every five-hundred (500) hours or annually by a magnetic-particle process and replaced if one of the following conditions exists:

- One (1) or more cracks are found on the hook, threads, or nut;
- Wear, cracks, pulling, or other damage;
- Any thread damage;
- Hardness of nut not following manufacturers' recommendations.

Rental mobile hoisting equipment hook assemblies shall be disassembled and inspected upon arrival to site unless proof of annual inspection is current.

Hooks shall be immediately taken "Out of Service" and destroyed or returned to the rental company when any of the following conditions exist:

- Cracked, gouges, or other indications of wear, or;
- Opened more than fifteen (15%) percent of the normal throat opening measured at the narrowest point, or;



- Twisted more than (10) degrees from the plane of the unbent hook; or;
- Evidence of corrosion from heat, weather, or chemical attack, or;
- Any evidence of damage or wear that would make use unsafe.

SLINGS:

Wire Rope -

- Wire rope slings shall not be used in excess of the rated load capacities shown in 29 CFR 1910.184 Table N-184-3 through N-184-14.
- Slings not included in these tables shall be used only in accordance with sling manufacturer's recommendations.
- Each sling shall be marked to show rated capacities.
- Each sling shall be marked for inspection identification.
- The safe operating temperature ranges are:
  - i. Fiber core wire rope of all grades shall be permanently removed from service and destroyed if exposed to temperatures in excess of 200( F.
  - ii. Non fiber core wire rope of any grade is 60( F. to 400( F. When used above or below this range the sling manufacturer's recommendations shall be followed.
- End attachments shall be proof tested by the sling manufacturer or equivalent entity at twice their rated capacity PRIOR to initial use.
- The certificate of proof testing shall be maintained for the life of the sling.
- Wire rope slings shall be immediately taken "Out of Service" and destroyed when any of the following conditions exist:
  - i. More than two (2) broken wires in one lay in sections beyond end connections or more than one (1) broken wire at end connections, or;
  - ii. Safe operating temperature exceeded, or;

- iii. Ten (10) randomly distributed broken wires in one rope lay, or five (5) broken wires in one strand in one rope lay, or;
- iv. Wear or scraping of one-third (1/3) the original diameter of outside individual wires, or;
- v. Kinking, bird caging, crushing or any other damage resulting in distortion of the wire rope structure, or;
- vi. End attachments that are cracked, deformed, or worn, or;
- vii. Hooks that have been opened more than fifteen (15%) percent of the normal throat opening measured at the narrowest point or twisted more than ten (10) degrees from the plane of the unbent hook, or;
- viii. Corrosion from heat, weather, or chemical attack of the rope or end attachment.

Synthetic Web -

- a. Synthetic web slings shall not be used with loads in excess of the rated load capacities.
- Slings should be used only in accordance with sling manufacturer's recommendations.
- Each sling shall be marked to show rated capacities for each type of hitch and type of synthetic material.
- Each sling shall be marked for inspection identification.
- Webbing shall be of uniform thickness and width and selvage edges shall not be split from the webbing's width.
- Fittings shall be inspected and found to have no sharp edges or projections.
- Stitching shall be the only method of attachment of fittings to webbing and to form eyes.
- The following restrictions apply:
  - i. Nylon web slings are not to be used where fumes, vapors, sprays, mists, or liquids of acids or phenolics are present.

- ii. Polyester and polypropylene web slings are not to be used where fumes, vapors, sprays, mists, or liquids of caustics are present.
  - iii. Web slings with aluminum fittings shall not be used.
- Synthetic web slings of polyester or nylon shall not be used at temperatures in excess of 180( F. Polypropylene web slings shall not be used at temperatures in excess of 200( F.
  - Repaired synthetic web slings are not to be used unless the repair is done by the sling manufacturer or an equivalent entity.
  - Each repaired sling shall be proof tested to twice the rated capacity by the sling manufacturer or an equivalent entity prior to returning to service.
  - The certificate of the proof test shall be maintained for the life of the sling.
  - Synthetic web slings shall be immediately removed from service if any of the following conditions exist:
    - i. Snags, punctures, cuts or tears,
    - ii. Broken or worn stitches,
    - iii. Distorted fittings.

SHEAVES:

Inspect for the following:

- Groove Depth, width, contour, and smoothness.
- Broken or chipped flanges.
- Cracks in hubs and spokes
- Signs of rope contact with sheaves guards.
- Sheaves bearings and shaft.
- Out of round condition.

- Alignment with other sheaves.
- Sheaves too small or large for diameter of rope used.

AUDIT REQUIREMENTS:

- All equipment must be inspected daily prior to use.
- Supervision will inspect equipment and records of inspection as work is being performed.

TRAINING REQUIREMENTS:

Training will be conducted on the requirements of this standard annually, or whenever there are changes to the standard.

# 31A-Big Dog Construction Services Silica Exposure Control Program

## 1.0 Applicability and Scope

### 1.1 Applicability

This Written Exposure Control Plan (Plan) applies to **Big Dog Construction Services Inc.** personnel who are potentially exposed to airborne concentrations of respirable crystalline silica (silica) because of their work activities or proximity to the work locations where airborne silica is being emitted. This Plan also applies to **Big Dog Construction Services Inc.** superintendents, foremen, or safety personnel who may be responsible for overseeing a subcontractor's operations that have the potential to expose personnel to airborne concentrations of silica at or above regulatory and industry action levels and exposure limits.

### 1.2 Scope

This Plan describes the hazards associated with projects involving potential exposure to airborne concentrations of silica and the issues to be addressed during these projects. These projects include, but are not limited to:

- Use of stationary masonry saws used to cut concrete, tile, concrete masonry block, sheet rock, gypsum fiber roof board, or any other product containing quartz.
- Handheld power saws used to cut concrete, asphalt, concrete masonry block, sheet rock, gypsum fiber roof board, or any other product containing quartz.
- Walk-behind saws used to cut concrete or asphalt.
- Rig-mounted or free standing core saws or drills (including impact and rotary hammer drills) used to penetrate concrete, concrete masonry block, sheet rock, gypsum fiber roof board, or any other structural component or product containing quartz.
- Jackhammers and handheld powered chipping tools used to demolish or modify concrete, concrete masonry block, or any other structural component or product containing quartz.
- Vehicle mounted hammers or chipping tools used to demolish concrete, concrete masonry block, or any other structural component or product containing quartz.
- Handheld grinders or cut-off wheels used for mortar removal or cutting/grinding of concrete, concrete masonry block, sheet rock, gypsum fiber roof board, or any other structural component or product containing quartz.
- Walk-behind milling machines or bead blasters used for surfacing activities on concrete, concrete masonry block, asphalt, or any other product containing quartz.
- Installation or demolition of sheet rock, including mudding, taping, texturizing activities with quartz containing materials.
- Hand or power tool sanding of painted surfaces. Current latex paint products contain quartz and the painted substrate (sheet rock, concrete masonry block, concrete) contains quartz.
- Drivable asphalt milling machines used to mill asphalt roadways or walkways.
- Ball mills or crushing equipment used to size products containing quartz.
- All housekeeping operations associated with the activities described above.

**Big Dog Construction Services Inc.** employees who work in proximity to silica-related operations must be aware of safe work practices and take all necessary precautions associated with avoiding and minimizing airborne silica exposure.

## 2.0 Regulatory Review

Occupational Safety and Health Administration (OSHA) 29 CFR 1926.1153: Respirable Crystalline Silica (Construction Industry) and 29 CFR 1910.1053: Respirable Crystalline Silica (General Industry), contain regulatory requirements specific to respirable crystalline silica. This Written Exposure Control Plan is developed in accordance with the requirements in 29 CFR 1926.1153(g).

## 3.0 Project Planning

### 3.1 Training Requirements

**Big Dog Construction Services Inc** employees who anticipate working on projects where they could be exposed to airborne silica will be provided training in silica hazards in accordance the **Big Dog Construction Services Inc**. Company program established to comply with the hazard communication standard (29 CFR 1910.1200). Each employee will have access to labels on containers of crystalline silica and safety data sheets, and be provided information on the health hazards of silica including cancer, lung effects, immune system effects, and kidney effects. In addition, **Big Dog Construction Services Inc** employees will be provided training and information regarding specific activities identified in this Plan that could result in airborne silica exposure, and the specific engineering controls, work practices and respiratory protection requirements to mitigate the potential airborne silica exposures. This training will provide a discussion of silica hazards, initial exposure determination either by complying with 29 CFR 1926.1153 Table 1 requirements or air monitoring, specific engineering and work practice control measures, personal protective equipment (PPE), and medical surveillance requirements. The training will also identify the **Big Dog Construction Services Inc**. competent person for silica exposure identification and determination of control requirements. All **Big Dog Construction Services Inc** employees will be provided with access to a copy of 29 CFR 1910.1153 and be trained on the contents of 29 CFR 1926.1153.

### 3.2 Medical Surveillance Requirements

**Big Dog Construction Services Inc** shall institute medical surveillance for any employees required by this Plan to where a respirator 30 or more days per year. Initial medical surveillance consists of medical and work history with emphasis on: past, present, and anticipated exposure to silica, dust and other agents affecting the respiratory system; any history of respiratory system dysfunction, including signs and symptoms of respiratory disease (e.g., shortness of breath, cough, wheezing); history of tuberculosis; and smoking status and history; a physical examination with emphasis on the respiratory system; chest X-ray (a single postero-anterior radiographic projection or radiograph of the chest at full inspiration recorded on either film (no less than 14 x 17 inches and no more than 16 x 17 inches) or digital radiography systems), interpreted and classified according to the International Labor Office (ILO) International Classification of Radiographs of Pneumoconiosis by a NIOSH-certified B Reader; a pulmonary function test to include forced vital capacity (FVC) and forced expiratory volume in one second (FEV1) and FEV1/FVC ratio, administered by a spirometry technician with a current certificate from a NIOSH approved spirometry course; testing for latent tuberculosis infection; and any other tests deemed appropriate by the Occupational Medicine Provider. Subcontractors are responsible for implementing a medical surveillance program for their employees.

### 2.3 Competent Person Requirements

**Big Dog Construction Services Inc** shall identify a competent person to inspect and oversee all activities with potential airborne silica exposure. Subcontractors working on projects within the scope of this Program shall appoint a competent person capable of executing the duties described herein. The competent person must have training in the inspection of work areas and equipment and in the determination of safe working conditions. This person shall have a working knowledge of the 1926.1153

standards, shall be capable of identifying airborne silica hazards, shall determine the need for initial and additional exposure monitoring, shall recommend and implement engineering and work practice controls, shall establish levels of PPE, and shall have the authority to take action to eliminate hazards and correct incidences of noncompliance.

## 2.4 Planning Activities

Projects where anticipated activities involve concrete cutting, grinding, sandblasting, drilling, coring, or other abrasive operations are treated as potential sources for airborne silica exposure. Additionally, existing structures and materials such as sheetrock, any painted surfaces with low volatile organic compounds, tile, brick, or some insulation products may contain silica. Likewise, new material installation may involve silica-containing mortar, paints, or insulation. Where process knowledge indicates the presence of silica, **Big Dog Construction Services Inc** will either implement all controls required by 1926.1153 Table 1- Exposure Control Methods for Selected Construction Operations or conduct an initial determination in accordance with 29 CFR 1926.1153(d)(2).

## 3.0 Project Execution

### 3.1 Safe Work Practices

The requirements of this section are to be followed by **Big Dog Construction Services Inc.** employees, who may be exposed to airborne concentrations of silica at or above the regulatory limits.

#### 3.1.1 Exposure Assessment

**Big Dog Construction Services Inc** will comply with and implement all controls required by 1926.1153 Table 1- Exposure Control Methods for Selected Construction Operations.

- An exposure assessment is required when employees may be exposed to airborne silica at or above the action level in order to determine the extent to which employees are exposed and the appropriate exposure controls required.
- An initial determination of exposure shall be made at the beginning of operations. The determination shall consist of the collection of personal air samples representative of a full shift including at least one sample for each job classification in each work area, either for each shift, or for the shift with the highest exposure level.
- During the initial determination, until such time that actual airborne concentrations are determined, personnel shall be protected by respiratory protection based on task- specific anticipated airborne concentrations of silica as illustrated in Table 2 below:
- During the initial determination, and in addition to the levels of respiratory protection required, personnel shall be provided with protective clothing and equipment, hygiene facilities, and training.
- Whenever a change in equipment, process, controls, or personnel occurs, or a new task has been initiated, an additional exposure assessment is required.
- When an assessment determines that exposure has occurred above the action level but below the PEL, additional monitoring shall be required at least every 6 months. Additional monitoring shall continue until such time that the monitoring results fall below the action level on two separate occasions at least 7 days apart.
- When monitoring yields results above the PEL, then quarterly monitoring is required. In addition, the quarterly monitoring may be suspended when additional monitoring results fall below the action level on two separate occasions at least 7 days apart.

- Where the competent person can clearly demonstrate, in the absence of air monitoring data, that a work activity will not create airborne silica concentrations in excess of the action level, then air monitoring may be unwarranted. Where a negative initial determination is reached without air monitoring, the competent person must develop a written explanation as to why exposures are not expected to exceed the action level.

### **3.1.2 Communication of Hazards**

- Each employee shall be provided training and demonstrate knowledge and understanding of the following:
  - Health hazards associated with exposure to respirable crystalline silica
  - Specific tasks that could result in exposure to respirable crystalline silica
  - Specific measures that are required to protect employees from exposure to respirable crystalline silica, including engineering controls, work practices, and required use of respiratory protection
  - The contents of the 29 CFR 1926.1153
  - The identity of the competent person
  - Purpose and description of the medical surveillance program
- A written compliance program shall be made available to all affected employees.
- In addition, notification to owners, contractors, and other personnel working in the area shall be made.

### **3.1.3 Control Methods**

- Engineering and work practice controls, including administrative controls, shall be implemented to reduce and maintain employee exposure to silica at or below the PEL, to the extent that such controls are feasible.
- Where all feasible engineering and work practice controls that can be instituted are not sufficient to reduce employee exposure to or below the PEL, such controls shall be used, nonetheless, to reduce employee exposure to the lowest feasible level (and in conjunction with respiratory protection).
- Respiratory protection shall be selected based on guidance in 1926.1153 Table 1 or based on a Certified Industrial Hygienist's or competent person's assessment of the potential airborne exposure that may be created by the means and methods of work (high energy operations with high airborne dust generation or low energy operations with low dust generation).
- When using mechanical ventilation to control exposure, regularly evaluate the system's ability to effectively control exposure.
- If administrative controls are used to limit exposure, establish and implement a job rotation schedule that includes employee identification as well as the duration and exposure levels at each job or work station where each affected employee is located.
- A written compliance program shall be established and implemented prior to the start of operations within the scope of this Written Compliance Plan. The written program shall outline the plans for maintaining employee exposure below the PEL.
- Maintain all surfaces as free as possible from accumulations of silica. Select methods for cleaning surfaces and floors that minimize the likelihood of silica becoming airborne (such as using a HEPA vacuum).



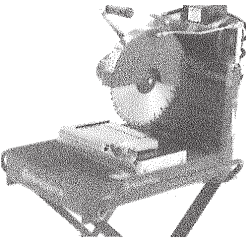

- If vacuuming is the method selected, specialized vacuums with HEPA filtration are required. Methods to use and empty vacuums in a manner that minimizes the reentry of silica into the workplace shall be described and used. Use of household vacuums with HEPA filters are not allowed at any time for the collection of dust or debris that contains silica.
- Never use compressed air to remove silica from any surface unless it is used in conjunction with a ventilation system designed to capture the airborne dust created while using the compressed air.
- Employees shall not eat, drink, smoke, chew tobacco or gum, or apply cosmetics in any areas where exposure to silica is above the PEL (in other words, regulated areas).
- Do not allow employees to leave the workplace wearing any protective clothing or equipment that is required to be worn during their work shift without HEPA vacuum removal of dust.
- Where feasible, install shower facilities and require employees who work in regulated areas to shower at the end of their work shift. Also provide an adequate supply of cleaning agents and clean towels.
- Provide hand washing facilities for use by employees working in regulated areas. Furthermore, require employees to wash their hands and face at the end of the work shift and prior to eating or entering eating facilities, drinking, smoking, or applying cosmetics.
- Eating facilities or areas shall be provided for employees working in regulated areas. These facilities shall be maintained free of silica contamination and shall be readily accessible to those employees.

### **3.2.5 Personal Protective Equipment (PPE)**

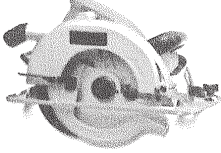
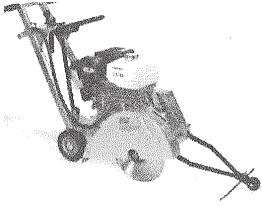
Respiratory protection must be used for the following conditions:

- During periods when employee exposure to airborne silica exceeds the PEL
- For work operations where engineering and work-practice controls are not sufficient to reduce employee exposure to or below the PEL
- During periods when an employee requests a respirator
- During periods when respirators are required to provide interim protection while conducting initial exposure assessments
- Powered air-purifying respirators (PAPR) shall be provided to employees who request such a respirator to use where it will provide adequate protection.
- Employees shall be provided, at no cost, protective work clothing and equipment including cotton coveralls or similar full-body clothing, gloves, hats, shoes or disposable shoe coverlets, face shields, vented goggles, or other appropriate PPE.



**31B-OSHA Table One Specified Silica Control Methods**  
**TABLE 1: SPECIFIED EXPOSURE CONTROL METHODS**  
**WHEN WORKING WITH MATERIALS CONTAINING CRYSTALLINE SILICA**

Equipment/Task	Engineering and Work Practice Control Methods	Required Respiratory Protection and Minimum Assigned Protection Factor (APF)		What does full and proper implementation require?*
		≤4 hours /shift	>4 hours /shift	
(!) Stationary masonry saws 	Use saw equipped with integrated water delivery system that continuously feeds water to the blade.  Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	None	None	Water Controls: i An adequate supply of water for dust suppression is used; ii The spray nozzle is working properly to apply water at the point of dust generation; iii The spray nozzle is not clogged or damaged; and iv All hoses and connections are intact
(ii) Handheld power saws (any blade diameter) 	Use saw equipped with integrated water delivery system that continuously feeds water to the blade.  Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. iii When used outdoors. iv When used indoors or In an enclosed area.	None  APF 10	APF 10  APF 10	Water Controls: iii An adequate supply of water for dust suppression is used; iv The spray nozzle is working properly to apply water at the point of dust generation; v The spray nozzle is not <b>clogged</b> or damaged; vi All hoses and connections are intact.

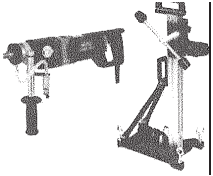
**TABLE 1: SPECIFIED EXPOSURE CONTROL METHODS  
WHEN WORKING WITH MATERIALS CONTAINING CRYSTALLINE SILICA†**

Equipment/Task	Engineering and <b>Work Practice Control Method</b>	Required Respiratory Protection and Minimum Assigned Protection Factor (APF)		What does <i>full and proper</i> implementation require?*
		:S 4 hours /shift	>4 hours /shift	
(iii) Handheld power saws for cutting fiber-cement board (with blade diameter of 8 inchH or less)  	For tasks performed <u>outdoors only</u> :  ■■ Use saw equipped with commercially available dust collection system.  ■■■ Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.  ■■■ Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency.	None	None	Dust Collection Systems:  ■■■ The shroud or cowl is intact and installed in accordance with the manufacturer's instructions;  ■■■ The hose connecting the tool to the vacuum is intact and without kinks or tight bends;  ■■ The filter(s) on the vacuum are cleaned or changed in accordance with the manufacturer's instructions to prevent clogging; and  ■■■ The dust collection bags are emptied to avoid overfilling.
(iv) Walk-behind saws  	Use saw equipped with integrated water delivery system that continuously feeds water to the blade.  Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.  ■■ When used outdoors.  ■■■ When used indoors or in an enclosed area.	None  <b>APF10</b>	None  <b>APF10</b>	Water Controls:  ■■■ An adequate supply of water for dust suppression is used;  ■■ The spray nozzles are working properly to apply water at the point of dust generation;  ■■■ The spray nozzles are not clogged or damaged; and  ■■■ All hoses and connections are intact.

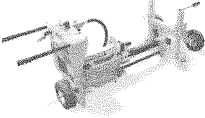
**TABLE 1: SPECIFIED EXPOSURE CONTROL METHODS  
WHEN WORKING WITH MATERIALS CONTAINING CRYSTALLINE SILICAT**

Equipment/Task	Engineering and Work Practice Control Methods	Required Respiratory Protection and Minimum Assigned Protection Factor (APF)		What does <i>full and proper</i> implementation require?•
		:iii 4 hours /shift	>4 hours /shift	
<p>(v) <b>Drivable</b> saws</p> 	<p>For tasks performed <u>outdoors only</u>:</p> <ul style="list-style-type: none"> <li>i Use saw equipped with integrated water delivery system that continuously feeds water to the blade.</li> <li>ii Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.</li> </ul>	None	None	<p>Water Controls:</p> <ul style="list-style-type: none"> <li>iii An adequate supply of water for dust suppression is used;</li> <li>i The spray nozzles produce a pattern that applies water at the point of dust generation;</li> <li>ii The spray nozzles are not clogged or damaged; and</li> <li>iii All hoses and connections are intact</li> </ul>
<p>(vi) Rig-mounted core saws or drills</p> 	<ul style="list-style-type: none"> <li>ii Use tool equipped with integrated water delivery system that supplies water to cutting surface.</li> <li>iii Operate and maintain <b>tool</b> in accordance with manufacturer's instructions to minimize dust emissions.</li> </ul>	None	None	<p>Water Controls:</p> <ul style="list-style-type: none"> <li>iii An adequate supply of water for dust suppression is used;</li> <li>ii The spray nozzles produce a pattern that applies water at the point of dust generation;</li> <li>iii The spray <b>nozzles</b> are not clogged or damaged; and</li> <li>iii All hoses and connections are intact.</li> </ul>


**TABLE 1: SPECIFIED EXPOSURE CONTROL METHODS  
WHEN WORKING WITH MATERIALS CONTAINING CRYSTALLINE SILICAT**

Equipment/Task	Engineering and Work Practice Control Methods	Required Respiratory Protection and Minimum Assigned Protection Factor (APF)		What does <i>full and proper</i> implementation require?•
		≤4 hours /shift	>4 hours /shift	
<p>(vii) Handheld and stand-mounted drills (including impact and rotary hammer drills)</p> 	<ul style="list-style-type: none"> <li>■ Use drill equipped with commercially available shroud or cowling with dust collection system.</li> <li>■ Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.</li> <li>■ Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism.</li> <li>■ Use a HEPA-filtered vacuum when cleaning holes.</li> </ul>	None	None	<p>Dust Collection Systems:</p> <ul style="list-style-type: none"> <li>■ The shroud or cowling is intact and installed in accordance with the manufacturer's instructions;</li> <li>■ The hose connecting the tool to the vacuum is intact and without kinks or tight bends;</li> <li>■ The filter(s) on the vacuum are cleaned or changed in accordance with the manufacturer's instructions; and</li> <li>■ The dust collection bags are emptied to avoid overfilling.</li> </ul>

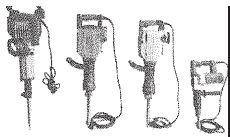
**TABLE 1: SPECIFIED EXPOSURE CONTROL METHODS  
WHEN WORKING WITH MATERIALS CONTAINING CRYSTALLINE SILICA**

Equipment/Task	Engineering and Work Practice Control Methods	Required Respiratory Protection and Minimum Assigned Protection Factor (APF)		What does <i>full and proper</i> implementation require?*
		≤ 4 hours /shift	>4hours /shift	
<p>(viii) Dowel drilling rigs for concrete</p> 	<p>For tasks performed <u>outdoors only</u>:</p> <ul style="list-style-type: none"> <li>• Use shroud around drill bit with a dust collection system. Dust collector must have a filter with 99% or greater efficiency and a filter-cleaning mechanism.</li> <li>• Use a HEPA-filtered vacuum when cleaning holes.</li> </ul>	APF10	APF10	<p>Dust Collection Systems:</p> <ul style="list-style-type: none"> <li>• The shroud is intact and installed in accordance with the manufacturer's instructions;</li> <li>• The hose connecting the tool to the vacuum is intact and without kinks or tight bends;</li> <li>• The filter(s) on the vacuum are cleaned or changed in accordance with the manufacturer's instructions; and</li> <li>• The dust collection bags are emptied to avoid overfilling.</li> </ul>

**TABLE 1: SPECIFIED EXPOSURE CONTROL METHODS  
WHEN WORKING WITH MATERIALS CONTAINING CRYSTALLINE SILICAT**

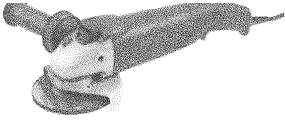
Equipment/Task	Engineering and Work Practice Control Methods	Required Respiratory Protection and Minimum Assigned Protection Factor (APF)		What does <i>full and proper</i> implementation require?•
		:lii4 hours /shift	>4hours /shift	
(ix) Vehicle-mounted drilling rigs for rock and concrete  	Use dust collection system with close capture hood or shroud around drill bit with a low-flow water spray to wet the dust at the discharge point from the dust collector.  OR  Operate from within an enclosed cab and use water for dust suppression on drill bit.	None	None	Dust Collection Systems:  a The shroud or hood is intact and installed in accordance with the manufacturer's instructions;  iiiii The hose connecting the tool to the vacuum is intact and without kinks or tight bends;  iiiii The filter(s) on the vacuum are cleaned or changed in accordance with the manufacturer's instructions; and  iiiii The dust collection bags are emptied to avoid overfilling.  Water Controls:  iiiii An adequate supply of water for dust Suppression is used;  iiiii The spray nozzles are working properly and produce a pattern that applies water on the discharge point from the dust collector;  iiiii The spray nozzles are not clogged or damaged; and  iiiii All hoses and connections are intact.

**TABLE 1: SPECIFIED EXPOSURE CONTROL METHODS  
WHEN WORKING WITH MATERIALS CONTAINING CRYSTALLINE SILICAT**

Equipment/Task	Engineering and Work Practice Control Methods	Required Respiratory Protection and Minimum Assigned Protection Factor (APF)		What does fr. III and proper implementation require?*
		:S 4 hours /shift	>4hours /shift	
<p>(x) Jackhammers and handheld powered chipping tools</p> 	<p>Use tool with water delivery system that supplies a continuous stream or spray of water at the point of impact.</p> <p>ii When used outdoors.</p> <p>iiii When used indoors or in an enclosed area.</p> <p style="text-align: center;">OR</p> <p>Use tool equipped with commercially available shroud and dust collection system.</p> <p>Operate and maintain tool In accordance with manufacturer's instructions to minimize dust emissions.</p> <p>Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism.</p> <p>iiii When used outdoors.</p> <p>iiii When used indoors or in an enclosed area.</p>	<p>None</p> <p>APF10</p>	<p>APF10</p> <p>APF10</p>	<p>Water Controls:t:</p> <p>n An adequate supply of water for dust suppression is used;</p> <p>iiii The water sprays are working properly and produce a pattern that applies water at the point of dust generation;</p> <p>iii The spray nozzles are not <b>clogged</b> or damaged; and</p> <p>ii AH hoses and connections are intact.</p> <p>Dust Collection Systems:</p> <p>iiii The shroud is intact and installed in accordance with the manufacturer's instructions;</p> <p>■ The hose connecting the tool to the vacuum is intact and without kinks or tight bends;</p> <p>ii The filter(s) on the vacuum are cleaned or changed in accordance with the manufacturer's instructions; and</p> <p>iiii The dust collection <b>bags</b> are emptied to avoid overfilling.</p>




**TABLE 1: SPECIFIED EXPOSURE CONTROL METHODS  
WHEN WORKING WITH MATERIALS CONTAINING CRYSTALLINE SILICAT**

Equipment/Task	Engineering and Work Practice Control Methods	Required Respiratory Protection and Minimum Assigned Protection Factor (APF)		What does <i>full and proper</i> implementation require?•
		:ii 4 hours /shift	>4 hours /shift	
<p>(xi) Handheld grinders for mortar removal (I.e., <b>tuckpointing</b>)</p> 	<p>Use grinder equipped with commercially available shroud and dust collection system.</p> <p>Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.</p> <p>Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter-cleaning mechanism.</p>	APF10	APF25	<p>Dust Collection Systems:</p> <ul style="list-style-type: none"> <li>    The shroud is intact, encloses most of the grinding blade, and is installed in accordance with the manufacturer's instructions;</li> <li>     The hose connecting the tool to the vacuum is intact and without kinks or tight bends;</li> <li>     The filter(s) on the vacuum are cleaned or changed in accordance with the manufacturer's instructions;</li> <li>     The dust collection bags are emptied to avoid overfilling;</li> <li>     The blade is kept flush against the surface whenever possible; and</li> <li>    The tool is operated against the direction of blade rotation, whenever practical.</li> </ul>






**TABLE 1: SPECIFIED EXPOSURE CONTROL METHODS  
WHEN WORKING WITH MATERIALS CONTAINING CRYSTALLINE SILICA†**

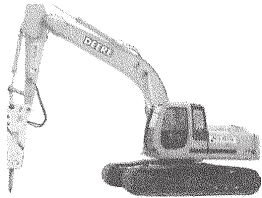
Equipment/Task	Engineering and Work Practice Control Methods	Required Respiratory Protection and Minimum Assigned Protection Factor (APF)		What does full and proper implementation require?*
		≤ 4 hours /shift	>4hours /shift	
<p>(xiv) Small drivable milling machines (less than half-lane)</p> 	<p>Use a machine equipped with supplemental water sprays designed to suppress dust. Water must be combined with a surfactant.</p> <p>Operate and maintain machine to minimize dust emissions.</p>	None	None	<p>Water Controls:</p> <ul style="list-style-type: none"> <li>    An adequate supply of water for dust suppression is used;</li> <li>    The spray nozzles are working properly and produce a pattern that applies water at the point of dust generation;</li> <li>    The spray nozzles are not clogged or damaged; and</li> <li>    e AU hoses and connections are intact.</li> </ul>




**TABLE 1: SPECIFIED EXPOSURE CONTROL METHODS  
WHEN WORKING WITH MATERIALS CONTAINING CRYSTALLINE SILICAT**


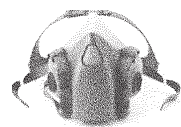


Equipment/Task	Engineering and Work Practice Control Methods	Required Respiratory Protection and Minimum Assigned Protection Factor (APF)		What does <i>full and proper</i> implementation require?•
		≤ 4 hours /shift	>4hours /shift	
<p><b>(xvi) Crushing machines</b></p> 	<p>Use equipment designed to deliver water spray or mist for dust suppression at crusher and other points where dust is generated (e.g., hoppers, conveyers, sieves/sizing or vibrating components, and discharge points).</p> <p>Operate and maintain machine in accordance with manufacturer's instructions to minimize dust emissions.</p> <p>Use a ventilated booth that provides fresh, climate-controlled air to <b>the</b> operator, or a remote control station.</p>	None	None	<p>Water Controlstt:</p> <p>iiii Nozzles are located upstream of dust generation points and positioned to thoroughly wet the material;</p> <p>ii The volume and size of droplets is adequate to sufficiently wet the material (optimal droplet size is between 10 and 150 µm); and</p> <p>iiiii Spray nozzles are located far enough from the target area to provide complete water coverage but not so far that the water is carried away by wind.</p>

**TABLE 1: SPECIFIED EXPOSURE CONTROL METHODS  
WHEN WORKING WITH MATERIALS CONTAINING CRYSTALLINE SILICA**

Equipment/Task	Engineering and Work Practice Control Methods	Required Respiratory Protection and Minimum Assigned Protection Factor (APF)		What does full and proper implementation require?
		≤ 4 hours /shift	>4 hours /shift	
<p>(xvii) Heavy equipment and utility vehicles used to abrade or fracture silica-containing materials (e.g., hoe-ramming, rock ripping) or <b>used</b> during demolition activities involving silica-containing materials****</p> 	<p>Operate equipment from within an enclosed cab.</p> <p>When employees outside of the cab are engaged in the task, apply water and/or dust suppressants as necessary to minimize dust emissions.</p>	<p>None</p> <p>None</p>	<p>None</p> <p>None</p>	<p>No additional information provided. Refer to the engineering and work practice control methods outlined.</p>

**TABLE 1: SPECIFIED EXPOSURE CONTROL METHODS  
WHEN WORKING WITH MATERIALS CONTAINING CRYSTALLINE SILICA**

Equipment/Task	Engineering and Work Practice Control Methods	Required Respiratory Protection and Minimum Assigned Protection Factor (APF)		What does full and proper implementation require?*
		≤4 hours /shift	>4 hours /shift	
(xviii) <b>Heavy</b> equipment and utility vehicles for tasks such as grading and excavating but not including: demolishing, abrading, or <b>fracturing</b> silica-containing materials  	Apply water and/or dust suppressants as necessary to minimize dust emissions.  OR  When the equipment operator is the only employee engaged in the task, operate equipment from within an enclosed cab.	None	None	The following scenarios are examples of when the employer must use water and/or dust suppressants as necessary to minimize dust emissions:  • Equipment for grading and excavating is not equipped with enclosed, pressurized cabs.  OR  • Employees other than the <b>operator</b> are engaged in the task. If water or dust suppressants are applied as necessary to minimize visible dust, the employer need not provide an enclosed, filtered cab for the operator.

APF 10 requires fit test		APF 25	
			
Dust Mask/Half Mask	Half Mask (Elastomeric)	Loose-Fitting Powered Air Purifying Respirator (PAPR)	Hooded Powered Air-Purifying Respirator (PAPR)



t (1) When implementing the control measures specified in Table 1, each employer shall:

- i. *For tasks performed using wet methods*, apply water at flow rates sufficient to minimize release of visible dust. The appropriate water flow rates for controlling silica dust emissions can vary; therefore, it is necessary to follow manufacturers' instructions when determining the required flow rate for dust suppression systems on a given worksite. Integrated water systems must be developed specifically for the type of tool in use so they will apply water at the appropriate dust emission points based on tool configuration and do not interfere with other tool components or safety devices.

Any slurry generated when using water to suppress dust should be cleaned up to limit secondary exposure to silica dust when the slurry dries following procedures described in the employer's *Written Exposure Control Plan*.

When working in cold temperatures, where there is a risk of water freezing, additional work practices such as insulating drums, wrapping drums with gutter heat tape or adding environmentally-friendly antifreeze.

- ii. *For tasks performed using commercially available, dust collection systems (i.e. LEV)*, use equipment that is designed to effectively capture dust generated by the tool being used and does not introduce new hazards such as obstructing or interfering with safety mechanisms. The "commercially available" limitation is meant only to eliminate on-site improvisations of equipment by the employer. When employers use methods other than commercially available systems for dust suppression, they must conduct exposure assessments and comply with the PEL.

Some Table 1 entries for dust collection systems specify use of cyclonic pre-separators and filter cleaning mechanisms to prevent buildup of debris on filters that result in less dust capture. A cyclonic pre-separator collects large debris before the air reaches the filters. A filter cleaning mechanism prevents the need for manually cleaning filters to prevent buildup of debris (caking). Some vacuums are equipped with a gauge indicating filter pressure or an equivalent device (e.g., timer to periodically pulse the filter) to help employees in determining when it is time to run a filter cleaning cycle.

- i. *For tasks performed indoors or in enclosed areas*, provide a means of exhaust as needed to minimize the accumulation of visible airborne dust. Indoors or in an enclosed areas mean areas where airborne dust can build up unless additional exhaust is used. Sufficient air circulation in enclosed or indoor environments is important to ensure the effectiveness of the control strategies and to prevent the accumulation of airborne dust. The means of exhaust necessary could include: the use of portable fans (box fans, floor fans, and axial fans), portable ventilation systems, or other systems that increase air movement and assist in the removal and dispersion of airborne dust. To be effective, the ventilation must be set up so that movements of employees during work, or the opening of doors and windows, will not negatively affect the airflow.
- ii. *For measures implemented that include an enclosed cab or booth*, ensure that the enclosed cab or booth:
  - a. Is maintained as free as practicable from settled dust;
  - b. Has door seals and closing mechanisms that work properly;
  - c. Has gaskets and seals that are in good condition and working properly;
  - d. Is under positive pressure maintained through continuous delivery of fresh air;
  - e. Has intake air that is filtered through a filter that is 95% efficient in the 0.3-10.0 µm range (e.g., MERV-16 or better); and
  - f. Has heating and cooling capabilities.

(2) Where an employee performs more than one task on **Table 1** during the course of a shift, and the total duration of all tasks combined is more than four hours, the required respiratory protection for each task is the respiratory protection specified for more than four hours per shift. If the total duration of all tasks on Table 1 combined is less than four hours, the required respiratory protection for each task is the respiratory protection specified for **less** than four hours per shift.

\* Refer to **OSHA's Small Enfill's Compliance Guide** for more information.

† The water delivery system is not required to be integrated or mounted on the tool, it can be assembled and installed by the employer. Acceptable water delivery systems include direct connections to fixed water lines or portable water tank systems. These water delivery systems can be operated by one worker or could require a second worker to supply the water at the point of impact.

§ The integrated water delivery system can be a free-flowing water system designed for blade cooling as well as manufacturers' systems designed for dust suppression alone. This option applies only when grinders are used outdoors.

‡ The water spray systems can be installed so that they can be activated by remote control.

\*\* When the operator exits the enclosed cab and is no longer actively performing the task, the operator is considered to have stopped the task. However, if other abrading, fracturing, or demolition work is performed by other heavy equipment and utility vehicles in the area while an operator is outside the cab, that operator is considered to be an employee "engaged in the task" and must be protected by the application of water and/or dust suppressants.

# Appendices

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## Appendix 2

### Resumes & Qualifications



## THOMAS LINDNER

Coral Springs, Florida  
954-695-1470 • [tlindnerhd@gmail.com](mailto:tlindnerhd@gmail.com)  
[www.linkedin.com/in/thomaselindner](http://www.linkedin.com/in/thomaselindner)

### Facilities and Construction Management Professional

Dynamic, results-oriented executive with military background and extensive experience in both public and private sectors. Strategic innovator and analytical problem-solver, able to support sustainable growth in fast-paced environments and challenging conditions. Turnaround expert, adept at transforming and realigning operations, processes, and teams to function at optimal capacity. Committed to providing superior service to all customers, internal and external and willing to 'roll up my sleeves' to make service commitments.

With a proven ability to guide industry-leading companies to new levels of performance and profitability and a demonstrated capacity to motivate multidisciplinary teams to organize around enterprise objectives, I have developed a well-earned reputation for exemplary work ethic and capacity to lead by example.

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Strategic Leadership • Teambuilding • Mentoring • Change Management • Project Management • Negotiation  
Design / Construction • Utilities Services • Disaster Recovery • Environmental Compliance • Safety  
Value Engineering • Process Improvement • Fiscal Management • Organizational Development • Communications

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#### PROFESSIONAL EXPERIENCE

**BIG DOG CONSTRUCTION SERVICES, Coconut Creek, Florida** **2017 – Present**  
*Top 21 South Florida General Contractor, performing renovation and new construction projects for both commercial/government and private residential clients in the Tri-County corridor.*

**Vice President, Preconstruction Services**

Leads the Preconstruction effort to include scope development, estimating, bidding, client and subcontractor relations, client proposals and anything else required to land the contract. Has implemented industry best practices and new processes that have enhanced professionalism and led to quadrupling revenue from the previous year.

**CHARTER SCHOOLS USA, Fort Lauderdale, Florida** **2013 – 2017**  
*America's largest Charter School provider, with 87 schools in 7 states serving 100,000 students with over 5000 employees*

**Area Director, Facilities Support Team**

Managed Facilities Operations in existing schools and executed new school start-ups during a period of rapid growth which doubled the company's school portfolio in four years. Instilled best practices and a culture of accountability and customer service in Facilities staff while containing maintenance costs and building effective on-site teams supporting a best in class learning environment.

Created operating and capital budgets and executed major repairs and capital improvements in a multi-state 25 school, 2 Million square foot portfolio. Managed all facets of grounds and building maintenance.

*Selected Achievements*

- Executed company-wide roll out of new Maintenance Management software system and served as System Administrator. Provided necessary staff support and recurring dashboard reports that tracked Department performance. Implemented and managed the resident capital planning tool.
- Forged relationships with local service providers to leverage pricing that resulted in improved service to our schools and business growth for the supplier, as new schools were built. This “win-win” situation created engaged business partners that went above & beyond.
- Consistently maintained the highest Quality Assurance and School Safety Inspection scores by implementing proven processes that standardized expectations, promoted awareness and involved all stakeholders in creating a safe and secure learning environment.

**BROWARD COUNTY SCHOOL DISTRICT, Fort Lauderdale, Florida**

**2004 – 2013**

*Country's 6th-largest school district, with 275 schools serving 257,000 students*

**Chief Facilities and Construction Officer (2010 – 2013)**

Appointed by Superintendent to assume critical role in midst of major corruption investigation involving Board Members and unprecedented budget cuts. Provided strategic leadership to Executive Director of Construction and Design, Director of Real Estate and Growth Management, Director of Plant Operations and Maintenance, Safety Director, Energy Manager, Manager of Custodial and Grounds, and Manager of Support Services.

Identified and developed opportunities to streamline procedures, cut costs, and restore transparency. Partnered with colleagues, staff, and contractors to implement process improvements and manage ongoing projects. Personally addressed customer-service and safety issues as needed.

*Selected Achievements*

- Recovered \$36M in capital funds by collaborating with consultants, legal staff, auditors, and contractors to close out hundreds of projects dating as far back as 2004.
- Restored transparency and ethical accountability to contractor-selection process.
- Completed strategic downsizing of Plant Operations staff over 3-year period to minimize impact on schools and staff & ensured that all cuts were transparent to customers.
- Administered \$70M payroll and construction budgets of more than \$75M. Prepared financial agenda items and presented them for School Board approval.

**Executive Director, Physical Plant Operations Division (2004 – 2010)**

Oversaw all aspects of Facilities Operations for 275 schools and 20 administrative sites encompassing 39M square feet of conditioned space, and 4500 acres of grounds. Led 1000 unionized employees and more than 100 contractors. Managed annual budget of \$150M - \$185M. Spearheaded division transformation by focusing on customer service, attention to detail, and organizational commitment. Identified and developed opportunities to improve processes. Served as member of Council of Great City Schools (CGCS) Peer Review Team, providing consulting audits to school districts throughout the USA.

*Selected Achievements*

- Decreased \$185M budget by 5% for 4 consecutive years and trimmed work-order backlog by 25% despite 10% growth in space and substantial workforce reductions.
- Increased productivity, reduced delays, enhanced customer service, and cut costs by value-engineering all major work processes; after full implementation, 2010/2011 expenditures were at 2004/2005 levels and customer satisfaction rating was 99%.
- Slashed annual contracted services budget by \$2.4.M by drafting and executing comprehensive business plans and introducing innovative cross-training programs.
- Managed all Disaster Preparedness planning and recovery operations from Hurricanes Katrina and Wilma. Both storms resulted in multi-million-dollar FEMA claims and Recovery Plans were awarded the District's Sterling Total Quality award.

- Optimized stockroom operations by developing online catalog system, eliminating more than \$3M in obsolete inventory through online auction, and cut overhead by 18%. Improvements led to significant reduction in equipment downtime by making critical parts more accessible.
- Developed planned maintenance schedule to improve indoor air quality recognized by Environmental Protection Agency as a top program nationwide for 8 consecutive years.

**JM FAMILY ENTERPRISES, INC., Deerfield Beach, Florida**

**2000 – 2004**

*Privately-owned company providing financing and marketing services to automotive dealerships nationwide. Distributes Toyota vehicles in 5 southeastern states and owns the country's largest Lexus dealership. 4000 employees.*

**Director, Facilities Management**

Directed facility operations and maintenance at Corporate Facilities in 4 states. Sites included corporate office buildings (1.8 million sq. ft.) and family residences, mailroom operations, Print and Document Services, Warehousing and Shipping Services. Led team of 5 managers and 85 employees.

*Selected Achievements*

- Supported development and maintenance of collaborative campus culture during a period of explosive growth; made key contributions to company being selected as one of Fortune's Top 20 Places to Work, a distinction the company maintained for several years.
- Guided capital-improvement plan from proposal through successful completion, averaging \$1.5M per year; consistently delivered projects on-time and under-budget.
- Increased warehouse staff output by more than 30% while improving customer satisfaction and achieving 15% reduction on costs.

**ADDITIONAL HISTORY**

**AUTONATION, INC., Fort Lauderdale, Florida**

**1997 – 2000**

**National Manager, Facilities**

- Created Facility Maintenance function for start-up company that grew to 750 automotive retail and rental locations in 3 years.
- Introduced successful asset management program company-wide, establishing site accountability for high-value equipment and benchmarking age and repair history of support systems; this served as baseline for repair/replace and preventive maintenance decisions, saving millions of dollars each year.
- Cut utility costs by millions of dollars each year by aggregating company energy portfolio and negotiating best rates and high-usage-customer incentives.
- Managed as many as 10 major capital improvement projects simultaneously across multiple states with no service interruptions; consistently completed projects on-time and under-budget.

**UNITED STATES NAVY - Destroyer Captain, USS John Hancock (DD-981) 1995 - 1997**

**EDUCATION / PROFESSIONAL DEVELOPMENT**

**Master of Science in Operations Analysis**

Naval Postgraduate School, Monterey, California

**Bachelor of Science in Engineering Management**

United States Naval Academy, Annapolis, Maryland

**SELECT COMPUTER SKILLS:** Microsoft Office • Facility Dude CMMS • SAP • Lawson  
Procure • QuickBooks • Adobe Pro

**ATTACHMENT B**  
**KEY PERSONNEL**  
**GENERAL SUPERINTENDENT**

1) Firm's Name: Big Dog Construction Services, Inc.

2) General Superintendent's Name : David Heller

3) Type of Key Personnel:  Primary Assigned to the Contract Full Time     Additional Staff on As-Needed Basis

4) # of Years with the Firm: 1 year

5) # of Years Experience with Job Order Contracting: None

6) Client Type Experience & # of Years Experience: Years 14

Public Works     Aviation     Port     Other: Retail Renovation and new Buildouts

7) Experience: (Check ALL boxes that apply)

- Interior Renovation     Mechanical Upgrades     Electrical Upgrades     Concrete Floor
- Medical Center     Exterior / Interior painting     Roofing Replacement/Repair     Boiler Replacement
- Bituminous Paving     Concrete     Masonry     Exterior Facade     Security Camera Installation
- Canopy Replacement/Repair     Elevator Repair/Replacement     Escalator Repair/Replacement
- Duct bank repair / installation     Outdoor light installation     Fire Suppression System Installation
- Steel Erection     Landscaping     Fencing     Earthwork / Site Work     Other (Attach Additional Sheet)

8) **ATTACH RESUME**     Yes

9) Licenses, Training, and Industry Recognized Certifications. List any and all State and County Licenses, Specialty Training, and Industry Recognized Certifications

OSHA 30	



# DAVID HELLER

4899 NW 53rd Circle, Coconut Creek FL 33073 · (323) 791 2804  
[Fiberglass00@aol.com](mailto:Fiberglass00@aol.com)

To secure a full-time position as a field superintendent with an innovative construction company in a fast-paced environment.

## EXPERIENCE

01/2019 – Present

### **LEAD SUPERINTENDENT, BIG DOG CONSTRUCTION SERVICES, INC.**

- Complete Renovation of Coconut Creek City Hall: including restrooms, lobby, reception area, offices and conversion of existing covered patio to new City Manager's Office. First phase of project completed 60 days early with NO change orders.
- Managed project while building remained occupied. Created and fostered positive client relationship that resulted in early project completion.

06/2015 – 01/2019

### **GENERAL SUPERINTENDENT, SPACIO DESIGN BUILD**

- Conversion of an existing historical hotel on South Beach: including - two restaurants, two gyms, spa, lobby, mezzanine, terraces, pools, and porte cochere.
- Managing construction while the hotel stays operational and keeping a positive relationship with ownership and hotel management.
- Full demolition of a 3-story building, keeping the perimeter walls, and building floors and roof back structurally. Interior buildouts starting in phases, coordinating with hotel and inspectors.
- Working daily with engineers/architects/interior designers/owner's reps to help design and incorporate the best possible solutions to succeed. Responsible for interviewing/hiring team members: Project coordinators/project managers/superintendents and training them.

12/2006 – 10/2007

### **FIELD SUPERINTENDENT, MIAMI SYSTEMS, INC.**

- Handled all aspects of commercial interior renovation construction through site management.
- Interacting with the building officials, City Managers, senior plan reviewers and inspectors; including the fire department, mechanical, electrical, structural, plumbing, architectural, demolition, and LV/Data.
- Working hand- in-hand with numerous architects, and engineers to comply with the Florida Building codes, Florida Accessibility Codes, Florida Energy Efficiency Codes for building construction.
- Handling all sub-contractor's insurance requirements (general liability, state certification, county certification, and workers compensation).
- Preparing close-out packages to supply to the owners after the project has been completed and ensuring complete client satisfaction.

**10/2005 – 10/2006**

**PROJECT MANAGER, LENNAR HOMES INC.**

- Responsible for running and scheduling 272 homes and 212 homes at two simultaneous condominium conversions.
- Managed everything from the critical deadlines we had to meet, to the minor issues that arise daily.
- Ran our staff and conducted daily meetings with my 15 employees who worked for me who were extremely productive.
- Managed the demolition of these homes, drywall knockdown, to full on mold and mildew extraction, to the custom paint, flooring (wood laminate, tile, Berber carpet or **standard** carpet), plumbing, cabinetry, resurfacing kitchen countertops, upgrade stainless steel appliances, electrical, granite countertops in kitchen and secondary bathrooms.
- Dealt with code compliance officers/inspectors, submitting/reviewing permits and plans for the City of Coconut Creek and the Town of Davie.
- Performed the home presentations and walk-through with the homeowners who purchased their homes and made sure they were completely satisfied.

## **EDUCATION**

**12/2002**

**B.S. BUSINESS MANAGEMENT & MARKETING, FAU**

**08/1996**

**HIGH SCHOOL GRADUATE, SPANISH RIVER HIGH SCHOOL**

## **SKILLS**

- Strong organizational and detail-oriented skills
- Effectively handles multiple tasks simultaneously
- Demonstrated ability to acquire and apply knowledge rapidly
- Independent; works with minimal supervision and contributes to a team
- OSHA 10
- Pro Log & Pro Core & Microsoft Applications

## RECENT PROJECT LIST

- Grille 401 – Las Olas
- Marriott – South Beach
- Starbucks – South Beach
- Magic City Renovations – Miami
- Versace – Boca Raton
- Breitling – Sawgrass Mills Mall
- Philipp Plein – Aventura
- Chi Seafood – Miami Beach
- Adena Grille – Hallandale Beach
- Gulfstream Sales Office – Hallandale Beach
- Mayors Jeweler’s – Boca Raton
- Rolex – Boca Raton
- Tag Heuer – Boca Raton
- Santos Buffet & Sushi – Coconut Creek
- Aldo – Pembroke Pines
- Perfumania – Pembroke Pines
- Build A Bear Workshop – PGA Mall
- 1826 Collins Restaurant & Lounge – South Beach
- The Mexican Restaurant – Boca Raton
- Lemongrass – Boca Raton, Boynton, Ft. Lauderdale
- The Cheese Course – Boca Raton, Hallandale, Midtown, Plantation, Pinecrest
- Sur La Table – Boca Raton
- Deli on Rye – Boca Raton
- Pummerola – Boca Raton
- Tutti Frutti – Kendall, Hammocks, Boca Raton, Aventura
- Stephano’s – Hypoluxo
- For Eyes – Coral Springs
- Swarovski – Brickell City Center
- Sweet Point Bakery – Midtown
- Gyroville – Boca Raton, Plantation, Pembroke Pines
- Salon Salon – Coconut Creek
- Flutters Ice Cream – Coconut Creek
- Al Stephens Salon & Beauty School – Coconut Creek

**ATTACHMENT B2**  
**KEY PERSONNEL**  
**CONTRACT COORDINATOR**

1) Firm's Name: Big Dog Construction Services, Inc.

2) Project COORDINATOR Name : Marcy Cabanas

3) Type of Key Personnel:  Primary Assigned to the Contract Full Time  Additional Staff on As-Needed Basis

4) # of Years with the Firm: One Year

5) # of Years Experience with Job Order Contracting: 10

6) Client Type Experience & # of Years Experience: Years 10

Public Works  Aviation  Port  Other: \_\_\_\_\_

7) Experience: (Check ALL boxes that apply)

Interior Renovation  Mechanical Upgrades  Electrical Upgrades  Concrete Floor

Medical Center  Exterior / Interior painting  Roofing Replacement/Repair  Boiler Replacement

Bituminous Paving  Concrete  Masonry  Exterior Facade  Security Camera Installation

Canopy Replacement/Repair  Elevator Repair/Replacement  Escalator Repair/Replacement

Duct bank repair / installation  Outdoor light installation  Fire Suppression System Installation

Steel Erection  Landscaping  Fencing  Earthwork / Site Work  Other (Attach Additional Sheet)

8) **ATTACH RESUME**  Yes

9) **Licenses, Training, and Industry Recognized Certifications.** List any and all State and County Licenses, Specialty Training, and Industry Recognized Certifications

OSHA 10 \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## **Marcy L Cabanas**

(954) 464-0075

**OBJECTIVE:** Construction Management position offering a variety of duties and responsibilities requiring the use of current knowledge while offering the opportunity for mastery of new skills and continued growth. To be an integral part of an organization that appreciates, recognizes and acknowledges the work and dedication of their employees, in and to the overall success of the organization.

**PROFILE:** Experienced professional with 25+ years of construction employment; most of those years working in construction coordination on both private (commercial and residential development) and public sector projects. Over this period, approximately 92 percent of my construction projects were completed on time and within budget.

### **EXPERIENCE:**

#### **Project Coordinator – Big Dog Construction Services, Inc.**

**June 2019-Present**

Creation of project related correspondence, set-up and maintenance of project files. Assisted in creating company processes using “Flow Chart” methodology for handling all project documents.

Maintaining/Reporting all projects financial status to the company Executive Team. Prepare purchase orders and sub-contracts within the Procore management software program. Report on Job costing, job reconciliations of estimated vs. actual budget maintenance, verification of labor, equipment and materials received pricing, and cost coding to appropriate budget allocation. Coordinate with Project Managers to complete projects ahead of deadline and under budget. Assist in obtaining permits from necessary agencies and ensure expedient permit close-out at project completion. Assist in preparation of RFI's, RFQ' PCO's, CO's, FWO's, NTO's, time and material-based contracts.

#### **Bid Coordinator/SAGE Administrator – Hinterland Group, Inc.**

**2017-2019**

Implementation and set-up of all modules utilizing SAGE/Timberline, transitioning from a number of interactive programs (i.e.: Timberscan, QuickBooks, Excel), managing subcontracted programmer hired to directly import budgets, contracts & job costs including payroll directly into SAGE, creation of cost codes and categories for proper job costing along with creating proper policies and procedures for all other employee to use. Preparation of all documentation beginning with invitations to bid, completion of all bid documents including creation of a Qualification and Certification package to submit with Bid Package. Created Bid/Job number system with tracking of each project. Creating project files and coordinating the flow of documents and information (i.e. specifications, plans, transmittals, submittals, RFI's, PCO'c, CO's, tracking all job costs, monthly AIA invoicing...etc.) Utilization of my years of construction knowledge combined with a high level of detailed orientation to maintain project documentation on a number of “continuing” Job Order Contracts including but not limited to WUD 16-094R; Pipeline Continuing WUD 16-014; WUD 17-058; WUD 14-047; Road & Bridge PBC - Crews & Equipment; Lift Station Repairs & Rehabilitation CWPB; CWPB 14566; City of Fort Lauderdale – Stormwater Construction Contract; FDOT E5U37; E5U38; E5U19; E1Q95-RO E4S32-RO; E4T26; from start up, creating project schedules, maintain detailed and organized records of all project related materials.

## **Marcy L Cabanas**

### **Human Resources/Project Manager – DP Development/RAPID Milling & Paving 2010 - 2017**

Creation of project related correspondence, set-up and maintenance of project files. Assist in creating project schedules and documented status on daily, weekly and monthly basis. Maintain pictorial project history from pre-construction status through project completion. Evaluation and selection of vendors, sub-contractors, prepare purchase orders and sub-contracts including but not limited to Broward County Highway Bridge Maintenance Division Contracts Q1001001B1; M0864903B1 & subsequent Job Order Contracts. Job costing, take-offs, reconciliation and budget maintenance, verification of labor, equipment and materials received pricing, and cost coding to appropriate budget allocation. Coordinate with supervisory personnel and prioritize tasks to complete projects ahead of deadline and under budget. Obtain permits from necessary agencies and ensure expedient permit close-out at project completion. Preparation of RFI's, RFQ' RCO's, PCO's, CO's, FWO's, NTO's, locates, time and material billings, pay applications requests with all supporting documentation, including AIA invoicing. Attend progress meetings and relay progress-to-date and proposed progress both verbally and visually with pictures, project schedule etc. Address concerns, provide feed-back and prompt follow-up. Build, facilitate and maintain strong client relationships. Within (3) years of starting RAPID Milling & Paving, LLC; by the end of 2017 they are slated to earn \$3-4.5M annual revenue.

### **Project Manager/Office Manager – Olympia Paint Covering, Deerfield, FL 2009 – 2018**

Created over more than \$1.1M in new construction business, maintained existing & new clients while tracking construction schedules, permitting, NTO, NOC, schedule of values, time sheets for over 200 employees' job P&L analysis and all many other facets. Responsibilities including but not limited to estimating new work, establishing new leads, maintaining customer base, cost forecasts, billing, correspondence, company representation, purchase orders, invoice reviews, change orders, subcontracts, scheduling, etc. Multiple contracts were based upon a WA#/WO# numbering system.

### **Comptroller/Accounting Manager - MAQ Management, Margate, FL 2008 – 2009**

Maintain all accounting needs year-round and facilitate accountant's year-end requirements for forty individual S Corporations. Bank account reconciliations (80+), accounts payable/receivable, maintain company/personal financial statements, maintain interest rates for all loans, mortgages, and lines of credit, monthly sales tax requirements. Create streamlined accounting policies and procedures while changing over to a paperless office.

### **Accounting/Human Resource Manager - Kenco Electric, Coconut Creek, FL 2005 – 2007**

Handling of all day to day operations and accounting procedures; Vendor/Customer Service, Accounts Payable/Receivable/Payroll/Sales Tax and Payroll Taxes. Implementation of an Employee Handbook, all new office and warehouse/inventory procedures and adding a 401K increased the general morale of 200 plus employees.

### **Casino Dealer - Seminole Indian Casino & (2) Out-Of-State Casinos - Coconut Creek, FL 2003 – 2005**

Handled all aspects of dealing a variety of poker games, Texas Holdem, 7 Card Stud, Omaha others.

## **Marcy L Cabanas**

**Project Manager/Accounting Dept - Glenn Wright C&D, Inc. Ft. Lauderdale, FL                      2000 – 2003**

Responsibilities included Vendor/Subcontractor Management, Customer Service, Accounts/Payable/Receivable, Supervision of Deliveries, Purchasing, Processing Change Orders, Invoicing, and various other tasks. Office methods were improved by developing computer management procedures.

**Project Manager Assistant - Shaw Contract Flooring, Orlando, FL    1999 – 2000**

Supervised (3) Project Manager's accounts totaling \$3.5 million per year. Successfully developed new systems which in turn increased project productivity and quality of work. Constantly looking for and discovering simpler and more effective methods of streamlining operations. Analyzed sales reports to compare actual versus projected sales.

**PROGRAM TECHNOLOGY:**

Extensive knowledge of several software programs including but not limited to; MS Office, QuickBooks, Peachtree, SAGE & Procore

**CERTIFICATIONS:**

ISO 9001: 2015 Requirements

SAGE 300 CRE

Procore Super-user

# Appendices

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Appendix 3

Employees and Equipment

Submission Bond

Other Requested Documentstion





**OFFICE OF ECONOMIC AND SMALL BUSINESS DEVELOPMENT**

**Governmental Center Annex**

115 S. Andrews Avenue, Room A680 • Fort Lauderdale, Florida 33301 • 954-357-6400 • FAX 954-357-5674

April 22, 2019

Ms. Rhonda Rosenof  
**BIG DOG CONSTRUCTION SERVICES, INC.**  
6308 NW 65<sup>th</sup> Terrace  
Parkland, Florida 33067

Dear Ms. Rosenof:

The Broward County Office of Economic and Small Business Development (OESBD) is pleased to announce that your firm's **County Business Enterprise (CBE)** and **Small Business Enterprise (SBE)** certifications have been renewed.

Your firm's certifications are continuing from your anniversary date but are contingent upon the firm verifying its eligibility annually through this office. You will be notified in advance of your obligation to continue eligibility in a timely fashion. However, the responsibility to ensure continued certification is yours. Failure to document your firm's continued eligibility for the CBE and SBE programs within **thirty (30) days** from your anniversary may result in the expiration of your firm's certifications. Should you continue to be interested in certification after it has expired, you will need to submit a new application, and all required supporting documentation for review.

To review current Broward County Government bid opportunities, visit: [www.broward.org/Purchasing](http://www.broward.org/Purchasing) and click on "Current Solicitations and Results." Also, from this website, you can log into your firm's profile in BidSync to ensure you have added all appropriate classification codes. Bid opportunities over \$3,500 will be advertised to vendors via e-mail and according to classification codes, so please ensure that both the Purchasing Division and OESBD are apprised of your current e-mail address.

Your primary certification group is: **Construction Services**. This is also how your listing in our directory will read. You may access your firm's listing by visiting the Office of Economic and Small Business Development Directory, located on the internet at: [www.broward.org/EconDev](http://www.broward.org/EconDev) and click on "Certified Firm Directories."

Your firm may compete for, and perform work on Broward County projects in the following areas:

**NAICS CODE:** 236118, 236220, 238390

We look forward to working with you to achieve greater opportunities for your business through county procurement.

Sincerely,

A handwritten signature in black ink, appearing to read "Sandy-Michael McDonald", written over a light blue circular stamp.

Sandy-Michael McDonald, Director  
Office of Economic and Small Business Development

**Cert Agency: BC-CBE SBE**  
**ANNIVERSARY DATE: MAY 3<sup>RD</sup>**



RICK SCOTT, GOVERNOR

JONATHAN ZACHEM, SECRETARY



**STATE OF FLORIDA  
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION**

**CONSTRUCTION INDUSTRY LICENSING BOARD**

THE GENERAL CONTRACTOR HEREIN IS CERTIFIED UNDER THE  
PROVISIONS OF CHAPTER 489, FLORIDA STATUTES

**ROSENOF, DAVID JASON**

BIG DOG CONSTRUCTION SERVICES, INC.  
6308 NW 65TH TERRACE  
PARKLAND FL 33067

**LICENSE NUMBER: CGC1520372**

**EXPIRATION DATE: AUGUST 31, 2020**

Always verify licenses online at [MyFloridaLicense.com](http://MyFloridaLicense.com)



Do not alter this document in any form.

This is your license. It is unlawful for anyone other than the licensee to use this document.



# *State of Florida*

## *Department of State*

I certify from the records of this office that BIG DOG CONSTRUCTION SERVICES, INC. is a corporation organized under the laws of the State of Florida, filed on January 3, 2012, effective January 1, 2012.

The document number of this corporation is P12000001063.

I further certify that said corporation has paid all fees due this office through December 31, 2018, that its most recent annual report/uniform business report was filed on January 18, 2018, and that its status is active.

I further certify that said corporation has not filed Articles of Dissolution.

*Given under my hand and the  
Great Seal of the State of Florida  
at Tallahassee, the Capital, this  
the Eighteenth day of January,  
2018*



*Ken DeFries*  
*Secretary of State*

Tracking Number: CC0009457172

To authenticate this certificate, visit the following site, enter this number, and then follow the instructions displayed.

<https://services.sunbiz.org/Filings/CertificateOfStatus/CertificateAuthentication>

Form **W-9**  
(Rev. November 2017)  
Department of the Treasury  
Internal Revenue Service

## Request for Taxpayer Identification Number and Certification

**Give Form to the  
requester. Do not  
send to the IRS.**

▶ Go to [www.irs.gov/FormW9](http://www.irs.gov/FormW9) for instructions and the latest information.

Print or type.  
See Specific Instructions on page 3.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank. <b>Big Dog Construction Services, Inc.</b>	
2 Business name/disregarded entity name, if different from above	
3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only <b>one</b> of the following seven boxes.  <input type="checkbox"/> Individual/sole proprietor or single-member LLC <input type="checkbox"/> C Corporation <input checked="" type="checkbox"/> S Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate  <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ _____ <b>Note:</b> Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is <b>not</b> disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.  <input type="checkbox"/> Other (see instructions) ▶ _____	4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):  Exempt payee code (if any) _____  Exemption from FATCA reporting code (if any) _____  <i>(Applies to accounts maintained outside the U.S.)</i>
5 Address (number, street, and apt. or suite no.) See instructions. <b>3730 Coconut Creek Pkwy, Suite 180</b>	Requester's name and address (optional)
6 City, state, and ZIP code <b>Coconut Creek, FL 33066</b>	
7 List account number(s) here (optional)	

### Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

**Note:** If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

<b>Social security number</b>									
<b>or</b>									
<b>Employer identification number</b>									
4	5	-	4	2	4	0	5	5	6

### Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

**Certification instructions.** You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

<b>Sign Here</b>	Signature of U.S. person ▶ <i>Phonda Rose</i>	Date ▶ <i>6/5/18</i>
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### General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

**Future developments.** For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to [www.irs.gov/FormW9](http://www.irs.gov/FormW9).

### Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)

- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

*If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, later.*



**Big Dog Construction Services, Inc.**

**CGC 1520372**

Phone: 954-757-8015 • Fax: 866-604-2459  
3730 Coconut Creek Pkwy #180  
Coconut Creek, FL 33066  
BigDogCSI.com

7 November 2019

Broward County Board of Commissioners  
115 South Andrews Avenue  
Fort Lauderdale, Florida 33301

Subject: CONTRACTOR ASSURANCE STATEMENT  
PROJECT DESCRIPTION: PNC2119543R1 – Job Order Contract

To whom it may concern:

I, Thomas E. Lindner, Vice President & Authorized Official/Agent on behalf of Big Dog Construction Services, Inc. do hereby agree to comply with the County Business Enterprise (CBE) requirements of the solicitation, between Broward County and Big Dog Construction Services, Inc. for Project PNC2119543R1 – Job Order Contract.

1. I do hereby affirm that Big Dog Construction Services, Inc. will comply with the County's non-discrimination policy by providing a non-discrimination Statement and;
2. Acknowledge the CBE percentage goal established on the project and;
3. Agree to engage in good faith effort solicitation of approved Broward County Small Business Development Program firms to achieve the project goals as indicated in the solicitation.

Authorized Agent of Vendor

Thomas E. Lindner, Vice President



**Big Dog Construction Services, Inc.**

**CGC 1520372**

Phone: 954-757-8015 • Fax: 866-604-2459  
3730 Coconut Creek Pkwy #180  
Coconut Creek, FL 33066  
BigDogCSI.com

7 November 2019

Broward County Board of Commissioners  
115 South Andrews Avenue  
Fort Lauderdale, Florida 33301

Subject: Bonding Companies Used by Big Dog CSI since 2014  
re: PROJECT DESCRIPTION: PNC2119543R1 – Job Order Contract

To whom it may concern:

Big Dog Construction Services, Inc. has only used one bonding company since inception.

Company information is as follows:

Nielson Hoover & Company  
8000 Governors Square Blvd., Suite 101  
Miami Lakes, FL 33016  
<http://nielsonbonds.com>

Points of contact/agent:

Kristi Messel, CCSR  
Contract Bond Specialist  
[kmessel@nielsonbonds.com](mailto:kmessel@nielsonbonds.com)  
Direct: 305.722.2679  
Main: 305.722.2663 Ext. 1115  
Fax: 305.558.9650

Jarrett Merlucci  
Surety Bond Specialist  
[jmerlucci@nielsonbonds.com](mailto:jmerlucci@nielsonbonds.com)  
Direct: 305.722.2664  
Main: 305.722.2663 Ext. 1102  
Cell: 954.232.4423  
Fax: 305.558.9650



Thomas E. Lindner, Vice President



November 7, 2019

Broward County Board of County Commissioners  
115 South Andrews Avenue  
Ft. Lauderdale, FL 33301

**RE: BIG DOG CONSTRUCTION SERVICES, INC.**  
**Project: PNC2119543R1 – Job Order Contract**

To Whom It May Concern:

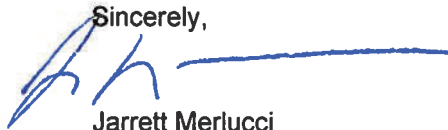
This letter is to advise you that since 2017, our office has been providing Performance & Payment Bonds for Big Dog Construction Services, Inc. Their Surety is United States Fire Insurance Company, which carries an A.M. Best Rating of A XII and is listed in the department of the Treasury's Federal Register.

Based upon normal and standard underwriting at the time of the request, we should be in a position to provide Performance and Payment Bonds in the amount of \$3,000,000 for single size projects and \$3,000,000 total aggregate. They currently have \$3,000,000 available. It must be understood; however, that we reserve the right to review all contractual documents prior to final commitment to issue any bonds.

Big Dog Construction Services, Inc. is an excellent contractor and we hold them in high regard. We feel extremely confident in them and encourage you to offer them an opportunity to execute any upcoming projects.

This letter is not an assumption of liability, nor is it a bid or performance and payment bond. It is issued only as a bonding reference requested by our respected client.

Sincerely,



Jarrett Merlucci  
Resident Agent



**Big Dog Construction Services, Inc.**

**CGC 1520372**

Phone: 954-757-8015 • Fax: 866-604-2459  
3730 Coconut Creek Pkwy #180  
Coconut Creek, FL 33066  
BigDogCSI.com

7 November 2019

Broward County Board of Commissioners  
115 South Andrews Avenue  
Fort Lauderdale, Florida 33301

Subject: Bonding Companies Used by Big Dog CSI since 2014  
re: PROJECT DESCRIPTION: PNC2119543R1 – Job Order Contract

To whom it may concern:

Big Dog Construction Services, Inc. has only used one bonding company since inception.

Company information is as follows:

Nielson Hoover & Company  
8000 Governors Square Blvd., Suite 101  
Miami Lakes, FL 33016  
<http://nielsonbonds.com>

Points of contact/agent:

Kristi Messel, CCSR  
Contract Bond Specialist  
[kmessel@nielsonbonds.com](mailto:kmessel@nielsonbonds.com)  
Direct: 305.722.2679  
Main: 305.722.2663 Ext. 1115  
Fax: 305.558.9650

Jarrett Merlucci  
Surety Bond Specialist  
[jmerlucci@nielsonbonds.com](mailto:jmerlucci@nielsonbonds.com)  
Direct: 305.722.2664  
Main: 305.722.2663 Ext. 1102  
Cell: 954.232.4423  
Fax: 305.558.9650

Thomas E. Lindner, Vice President



## BIG DOG CSI CURRENT STAFF LISTING

Rosenof, Lisa	Admin Asst.
Leannais, Joseph	Carpenter-Lead
Walker, Christopher O	Estimator
Payne, Travis	Labor foreman
Longinos, Ryan J	Laborer
Pons Jr. , Jorge	Working Foreman
Rosenof, David J	President
Cabanas, Marcy L	Project Coordinator
Hodge, Samuel L	Project Executive
Cozadinos, Alexander	Project Manager
Dobias, Joseph	Project Manager
Williams, John	Project Manager
Pons-Alonso, Jorge	Project Manager (Associate)
Bofill, Luis	Superintendent
Heller, David	Superintendent
Rosenof, Rhonda L	Vice President (Executive)
Lindner, Thomas	Vice President (Preconstruction Services)
10 Tradesman	Ironworker
11 Tradesman	Millwright



**Big Dog Construction Services, Inc.**

**CGC 1520372**

Phone: 954-757-8015 • Fax: 866-604-2459  
3730 Coconut Creek Pkwy #180  
Coconut Creek, FL 33066  
BigDogCSI.com

22 November 2019

Broward County Board of Commissioners  
115 South Andrews Avenue  
Fort Lauderdale, Florida 33301

Subject: OWNED EQUIPMENT LISTING

As a small, but growing company, Big Dog CSI has not yet needed to purchase any major construction equipment, preferring to rent or lease equipment as necessary. Company assets include the following equipment:

- Tile saw and table
- Power tools to include saws, drills, nail guns, etc.
- Small portable generators
- Air scrubbers (for use when finishing drywall or during floor demolition)
- Infrared Detection System
- Moisture detection meters
- Company vehicles (one Van and one Pickup Truck)
- Scaffolding
- Various ladders
- Shop vacuums
- Carpet cleaning equipment (vacuums and rug shampoo machine)
- Paint spraying system
- Pressure washer
- Portable lighting systems
- Hand tools
- Drywall lifts
- Traffic Barriers

If any other equipment is required for Project PNC2119543R1 – Job Order Contract, we have accounts in place with the appropriate suppliers to lease, rent or purchase that equipment.

Sincerely

*Thomas E. Lindner*

Thomas E. Lindner, Vice President

**PROPOSAL BOND**

This form must be completed and submitted with the Vendor's submittal. Failure to comply will deem vendor non-responsive.

BY THIS BOND, we Big Dog Construction Serivces, Inc., as Principal, hereinafter called VENDOR, and Philadelphia Indemnity Insurance Company, as Surety, are bound to the Board of County Commissioners of Broward County, Florida, as Obligee, hereinafter called County, in the Amount of Five Thousand And No/100 (\$ 5,000.00 ) for the payment whereof VENDOR and surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

WHEREAS, the County is seeking to contract with a firm (registered with the Florida Department of State, Division of Corporations) for the County agencies; and

WHEREAS, the County is utilizing a request for proposals (RFP) solicitation process for this project and VENDOR in response to Solicitation No. PNC2119543R1 agrees and is bound that:

The CONDITION OF THIS BOND is that if:

VENDOR submits a timely proposal in response to the County's solicitation process; THEN THIS BOND WILL REMAIN IN FULL FORCE AND EFFECT UNTIL CONTRACT AWARD. If the VENDOR is awarded the Agreement, but fails to enter into the Agreement, (including providing a Performance and Payment Guaranty, evidence of insurance, and other requirements stated herein) then the VENDOR and surety, jointly and severally, shall be liable to the County for the full sum herein stated which shall be due and payable to the County immediately upon demand of the County, in good and lawful money of the United States of America; as liquidated damages for failure thereof of said VENDOR; OTHERWISE THE BOND SHALL REMAIN IN FULL FORCE AND EFFECT.

No right of action shall accrue on this bond to or for the use of any person or corporation other than County named herein; and

In the event suit is brought upon this bond by the County, surety shall pay reasonable attorneys' fees and costs incurred by the County in such suit.

Signed and sealed this 20th day of November, 2019.

WITNESSES:

  
Secretary  
(CORPORATE SEAL)


Big Dog Construction Services, Inc.  
(Name of Corporation)  
By   
(Signature and Title)  
David Rovenof, President  
(Type Name and Title Signed Above)

IN THE PRESENCE OF:



SURETY COMPANY:

Philadelphia Indemnity Insurance Company

By   
Agent and Attorney-in-Fact  
Jarrett Merlucci

Address: One Bala Plaza, Suite 100  
(Street)

Philadelphia, PA 19004  
(City/State/Zip Code)

Telephone No.: (610) 617-7900

**PHILADELPHIA INDEMNITY INSURANCE COMPANY**  
One Bala Plaza, Suite 100  
Bala Cynwyd, PA 19004-0950

**Power of Attorney**

KNOW ALL PERSONS BY THESE PRESENTS: That PHILADELPHIA INDEMNITY INSURANCE COMPANY (the Company), a corporation organized and existing under the laws of the Commonwealth of Pennsylvania, does hereby constitute and appoint Charles J. Nielson, David R. Hoover, Charles D. Nielson and Jarrett Merlucci of Nielson, Hoover & Company, its true and lawful Attorney-in-fact with full authority to execute on its behalf bonds, undertakings, recognizances and other contracts of Indemnity and writings obligatory in the nature thereof, issued in the course of its business and to bind the Company thereby, in an amount not to exceed \$50,000,000.

This Power of Attorney is granted and is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of PHILADELPHIA INDEMNITY INSURANCE COMPANY on the 14<sup>th</sup> of November, 2016.

**RESOLVED:** That the Board of Directors hereby authorizes the President or any Vice President of the Company: (1) Appoint Attorney(s) in Fact and authorize the Attorney(s) in Fact to execute on behalf of the Company bonds and undertakings, contracts of indemnity and other writings obligatory in the nature thereof and to attach the seal of the Company thereto; and (2) to remove, at any time, any such Attorney-in-Fact and revoke the authority given. And, be it

**FURTHER RESOLVED:** That the signatures of such officers and the seal of the Company may be affixed to any such Power of Attorney or certificate relating thereto by facsimile, and any such Power of Attorney so executed and certified by facsimile signatures and facsimile seal shall be valid and binding upon the Company in the future with respect to any bond or undertaking to which it is attached.

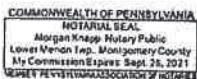
IN TESTIMONY WHEREOF, PHILADELPHIA INDEMNITY INSURANCE COMPANY HAS CAUSED THIS INSTRUMENT TO BE SIGNED AND ITS CORPORATE SEAL TO BE AFFIXED BY ITS AUTHORIZED OFFICE THIS 27<sup>TH</sup> DAY OF OCTOBER, 2017.



(Seal)

Robert D. O'Leary Jr., President & CEO  
Philadelphia Indemnity Insurance Company

On this 27<sup>th</sup> day of October, 2017, before me came the individual who executed the preceding instrument, to me personally known, and being by me duly sworn said that he is the therein described and authorized officer of the PHILADELPHIA INDEMNITY INSURANCE COMPANY; that the seal affixed to said instrument is the Corporate seal of said Company; that the said Corporate Seal and his signature were duly affixed.



(Notary Seal)

Notary Public:

residing at:

Bala Cynwyd, PA

My commission expires:

September 25, 2021

I, Edward Sayago, Corporate Secretary of PHILADELPHIA INDEMNITY INSURANCE COMPANY, do hereby certify that the foregoing resolution of the Board of Directors and the Power of Attorney issued pursuant thereto on the 27<sup>th</sup> day of October, 2017 are true and correct and are still in full force and effect. I do further certify that Robert D. O'Leary Jr., who executed the Power of Attorney as President, was on the date of execution of the attached Power of Attorney the duly elected President of PHILADELPHIA INDEMNITY INSURANCE COMPANY.

In Testimony Whereof I have subscribed my name and affixed the facsimile seal of each Company this 20th day of November, 2019.



Edward Sayago, Corporate Secretary  
PHILADELPHIA INDEMNITY INSURANCE COMPANY



# Appendices

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## Appendix 4

### Completed Projects Forms

### Select Completed & Current Projects (3 year AIA 305)

### References

**ATTACHMENT C**  
**COMPARABLE CONSTRUCTION EXPERIENCE**  
**PROJECTS EQUAL TO OR LESS THAN \$50,000**

1) Firm's Name: Big Dog Construction Services, Inc.

2) Agency/Client Name: Caryn Gardner Young

3) Project Name: Gardner Young Bath Renovation

4) Project Number: N/A 5) Project Value: \$12,142

6) **Achieved or Anticipated Final Acceptance after January 1, 2014**  Yes  No

7) **Company Role:**  Sub Contractor  Prime Contractor

8) **Agency:**  County  City  Private  Other: \_\_\_\_\_

9) **Project Type:**  Public Works  Aviation  Port  Other: Renovation

10) **Percentage of Self Performed Work with the Company's Trades:** 75 %

11) **Project Type:** (Check ALL boxes that apply to the Scope of Work)

- Interior Renovation  Mechanical Upgrades  Electrical Upgrades  Concrete Floor
- Medical Center  Exterior / Interior painting  Roofing Replacement/Repair  Boiler Replacement
- Bituminous Paving  Concrete  Masonry  Exterior Facade  Security Camera Installation
- Canopy Replacement/Repair  Elevator Repair/Replacement  Escalator Repair/Replacement
- Duct bank repair / installation  Outdoor light installation  Fire Suppression System Installation
- Steel Erection  Landscaping  Fencing  Earthwork / Site Work  Other (Attach Additional Sheet)

12) **Client Reference for Construction:** (It is your responsibility to assure that the contact information listed is correct. If your reference can not be contacted, this project may not be considered.)

<b>Reference's contact:</b> <u>Caryn Gardner Young</u>	<b>Name</b>	<b>Owner</b> _____	<b>Title</b>
---	-------------	-----------------------	--------------

Telephone: 561-891-9788 Email Address: carynyoung@gmail.com

13) **Description of Any Problems or Major Issues Encountered During the Project (If Any) and What Was Done to Resolve:** *(Attach Additional Information As Necessary)*

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**ATTACHMENT D**  
**COMPARABLE CONSTRUCTION EXPERIENCE**  
**PROJECTS BETWEEN \$50,000 AND \$250,000**

1) Firm's Name: Big Dog Construction Services, Inc.

2) Agency/Client Name: Eliot Fenton

3) Project Name: Fenton Residence Renovation

4) Project Number: N/A 5) Project Value: \$67,633

6) **Achieved or Anticipated Final Acceptance after January 1, 2014**  Yes  No

7) **Company Role:**  Sub Contractor  Prime Contractor

8) **Agency:**  County  City  Private  Other: \_\_\_\_\_

9) **Project Type:**  Public Works  Aviation  Port  Other: Renovation

10) **Percentage of Self Performed Work with the Company's Trades:** 25 %

11) **Project Type:** (Check ALL boxes that apply to the Scope of Work)

- Interior Renovation  Mechanical Upgrades  Electrical Upgrades  Concrete Floor
- Medical Center  Exterior / Interior painting  Roofing Replacement/Repair  Boiler Replacement
- Bituminous Paving  Concrete  Masonry  Exterior Facade  Security Camera Installation
- Canopy Replacement/Repair  Elevator Repair/Replacement  Escalator Repair/Replacement
- Duct bank repair / installation  Outdoor light installation  Fire Suppression System Installation
- Steel Erection  Landscaping  Fencing  Earthwork / Site Work  Other (Attach Additional Sheet)

12) **Client Reference for Construction:** (It is your responsibility to assure that the contact information listed is correct. If your reference can not be contacted, this project may not be considered.)

<b>Reference's</b>	<b>contact:</b>	<b>Name</b>	<b>Owner</b>	<b>Title</b>
_____	_____	_____	_____	_____

Telephone: 954-895-9777 Email Address: eliot@bellsouth.net

13) **Description of Any Problems or Major Issues Encountered During the Project (If Any) and What Was Done to Resolve:** *(Attach Additional Information As Necessary)*

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

**ATTACHMENT C**  
**COMPARABLE CONSTRUCTION EXPERIENCE**  
**PROJECTS EQUAL TO OR LESS THAN \$50,000**

1) Firm's Name: Big Dog Construction Services, Inc.

2) Agency/Client Name: Double Eagle Distribution

3) Project Name: Double Eagle Column Replacement

4) Project Number: NA 5) Project Value: \$7,255.00

6) **Achieved or Anticipated Final Acceptance after January 1, 2014**  Yes  No

7) **Company Role:**  Sub Contractor  Prime Contractor

8) **Agency:**  County  City  Private  Other: \_\_\_\_\_

9) **Project Type:**  Public Works  Aviation  Port  Other: Building Repair (Structural)

10) **Percentage of Self Performed Work with the Company's Trades:** 70 %

11) **Project Type:** (Check ALL boxes that apply to the Scope of Work)

- Interior Renovation  Mechanical Upgrades  Electrical Upgrades  Concrete Floor
- Medical Center  Exterior / Interior painting  Roofing Replacement/Repair  Boiler Replacement
- Bituminous Paving  Concrete  Masonry  Exterior Facade  Security Camera Installation
- Canopy Replacement/Repair  Elevator Repair/Replacement  Escalator Repair/Replacement
- Duct bank repair / installation  Outdoor light installation  Fire Suppression System Installation
- Steel Erection  Landscaping  Fencing  Earthwork / Site Work  Other (Attach Additional Sheet)

12) **Client Reference for Construction:** (It is your responsibility to assure that the contact information listed is correct. If your reference can not be contacted, this project may not be considered.)

**Reference's contact:** Greg Zielinski **Name** Facility Manager **Title**

Telephone: 954-426-2970 Email Address: gregz@doubleeagledist.com

13) **Description of Any Problems or Major Issues Encountered During the Project (If Any) and What Was Done to Resolve:** *(Attach Additional Information As Necessary)*

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

**ATTACHMENT C**  
**COMPARABLE CONSTRUCTION EXPERIENCE**  
**PROJECTS EQUAL TO OR LESS THAN \$50,000**

1) Firm's Name: Big Dog Construction Services, Inc.

2) Agency/Client Name: Rockridge Capital Holdings

3) Project Name: Rockridge Restroom Renovations

4) Project Number: N/A 5) Project Value: \$33,672.00

6) **Achieved or Anticipated Final Acceptance after January 1, 2014**  Yes  No

7) **Company Role:**  Sub Contractor  Prime Contractor

8) **Agency:**  County  City  Private  Other: \_\_\_\_\_

9) **Project Type:**  Public Works  Aviation  Port  Other: Renovation

10) **Percentage of Self Performed Work with the Company's Trades:** 35 %

11) **Project Type:** (Check ALL boxes that apply to the Scope of Work)

- Interior Renovation  Mechanical Upgrades  Electrical Upgrades  Concrete Floor
- Medical Center  Exterior / Interior painting  Roofing Replacement/Repair  Boiler Replacement
- Bituminous Paving  Concrete  Masonry  Exterior Facade  Security Camera Installation
- Canopy Replacement/Repair  Elevator Repair/Replacement  Escalator Repair/Replacement
- Duct bank repair / installation  Outdoor light installation  Fire Suppression System Installation
- Steel Erection  Landscaping  Fencing  Earthwork / Site Work  Other (Attach Additional Sheet)

12) **Client Reference for Construction:** (It is your responsibility to assure that the contact information listed is correct. If your reference can not be contacted, this project may not be considered.)

Reference's contact: Donna Brandt Name: Executive Assistant Title: \_\_\_\_\_

Telephone: 954 495-2309 Email Address: dbrandt@rockridge-llc.com

13) **Description of Any Problems or Major Issues Encountered During the Project (If Any) and What Was Done to Resolve:** *(Attach Additional Information As Necessary)*

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

**ATTACHMENT C**  
**COMPARABLE CONSTRUCTION EXPERIENCE**  
**PROJECTS EQUAL TO OR LESS THAN \$50,000**

1) Firm's Name: Big Dog Construction Services, Inc.

2) Agency/Client Name: Seminole Tribe of Florida - Coconut Creek Casino

3) Project Name: New Facilities Department Workshop

4) Project Number: N/A 5) Project Value: \$50,000.00

6) **Achieved or Anticipated Final Acceptance after January 1, 2014**  Yes  No

7) **Company Role:**  Sub Contractor  Prime Contractor

8) **Agency:**  County  City  Private  Other: \_\_\_\_\_

9) **Project Type:**  Public Works  Aviation  Port  Other: Construction

10) **Percentage of Self Performed Work with the Company's Trades:** 35 %

11) **Project Type:** (Check ALL boxes that apply to the Scope of Work)

- Interior Renovation  Mechanical Upgrades  Electrical Upgrades  Concrete Floor
- Medical Center  Exterior / Interior painting  Roofing Replacement/Repair  Boiler Replacement
- Bituminous Paving  Concrete  Masonry  Exterior Facade  Security Camera Installation
- Canopy Replacement/Repair  Elevator Repair/Replacement  Escalator Repair/Replacement
- Duct bank repair / installation  Outdoor light installation  Fire Suppression System Installation
- Steel Erection  Landscaping  Fencing  Earthwork / Site Work  Other (Attach Additional Sheet)

12) **Client Reference for Construction:** (It is your responsibility to assure that the contact information listed is correct. If your reference can not be contacted, this project may not be considered.)

<b>Reference's</b>	<b>contact:</b>	<b>Name</b>	<u>Facilities Manager</u> <b>Title</b>
<u>Roberto Montero</u>			

Telephone: 954 283-2736/(M) 954 448-3317 Email Address: roberto.montero@stofgaming.com

13) **Description of Any Problems or Major Issues Encountered During the Project (If Any) and What Was Done to Resolve:** *(Attach Additional Information As Necessary)*

Jurisdictional issue between city and the Tribe. We worked with both entities to continue work while the conflict was resolved until the tribe assumed permit and inspection jurisdiction.

**ATTACHMENT C**  
**COMPARABLE CONSTRUCTION EXPERIENCE**  
**PROJECTS EQUAL TO OR LESS THAN \$50,000**

1) Firm's Name: Big Dog Construction Services, Inc.

2) Agency/Client Name: Rebecca Stone

3) Project Name: Stone Residence Repairs and Renovations

4) Project Number: N/A 5) Project Value: \$43,301.00

6) **Achieved or Anticipated Final Acceptance after January 1, 2014**  Yes  No

7) Company Role:  Sub Contractor  Prime Contractor

8) Agency:  County  City  Private  Other: \_\_\_\_\_

9) Project Type:  Public Works  Aviation  Port  Other: Remediation & Improvements

10) Percentage of Self Performed Work with the Company's Trades: 20 %

11) Project Type: (Check ALL boxes that apply to the Scope of Work)

- Interior Renovation  Mechanical Upgrades  Electrical Upgrades  Concrete Floor
- Medical Center  Exterior / Interior painting  Roofing Replacement/Repair  Boiler Replacement
- Bituminous Paving  Concrete  Masonry  Exterior Facade  Security Camera Installation
- Canopy Replacement/Repair  Elevator Repair/Replacement  Escalator Repair/Replacement
- Duct bank repair / installation  Outdoor light installation  Fire Suppression System Installation
- Steel Erection  Landscaping  Fencing  Earthwork / Site Work  Other (Attach Additional Sheet)

12) Client Reference for Construction: (It is your responsibility to assure that the contact information listed is correct. If your reference can not be contacted, this project may not be considered.)

Reference's contact:	Name	Owner	Title
<u>Rebecca Barnett</u>			

Telephone: 954 592-1749 Email Address: rebecca@rebeccabarnett.com

13) Description of Any Problems or Major Issues Encountered During the Project (If Any) and What Was Done to Resolve: (Attach Additional Information As Necessary)

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**ATTACHMENT D**  
**COMPARABLE CONSTRUCTION EXPERIENCE**  
**PROJECTS BETWEEN \$50,000 AND \$250,000**

1) Firm's Name: Big Dog Construction Services, Inc.

2) Agency/Client Name: Balfour Beatty Construction

3) Project Name: Heritage Place

4) Project Number: N/A 5) Project Value: \$114,889.00

6) **Achieved or Anticipated Final Acceptance after January 1, 2014**  Yes  No

7) **Company Role:**  Sub Contractor  Prime Contractor

8) **Agency:**  County  City  Private  Other: \_\_\_\_\_

9) **Project Type:**  Public Works  Aviation  Port  Other: Commercial Construction

10) **Percentage of Self Performed Work with the Company's Trades:** 100 %

11) **Project Type:** (Check ALL boxes that apply to the Scope of Work)

- Interior Renovation  Mechanical Upgrades  Electrical Upgrades  Concrete Floor
- Medical Center  Exterior / Interior painting  Roofing Replacement/Repair  Boiler Replacement
- Bituminous Paving  Concrete  Masonry  Exterior Facade  Security Camera Installation
- Canopy Replacement/Repair  Elevator Repair/Replacement  Escalator Repair/Replacement
- Duct bank repair / installation  Outdoor light installation  Fire Suppression System Installation
- Steel Erection  Landscaping  Fencing  Earthwork / Site Work  Other (Attach Additional Sheet)

12) **Client Reference for Construction:** (It is your responsibility to assure that the contact information listed is correct. If your reference can not be contacted, this project may not be considered.)

<b>Reference's contact:</b>	<b>Name</b>	<b>Project Manager</b>	<b>Title</b>
<u>Veersammy Samuel</u>		<u>Project Manager</u>	

Telephone: 239 896 4269 Email Address: vsamuel@balfourbeatty.com

13) **Description of Any Problems or Major Issues Encountered During the Project (If Any) and What Was Done to Resolve:** *(Attach Additional Information As Necessary)*

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

**ATTACHMENT D**  
**COMPARABLE CONSTRUCTION EXPERIENCE**  
**PROJECTS BETWEEN \$50,000 AND \$250,000**

1) Firm's Name: Big Dog Construction Services, Inc.

2) Agency/Client Name: BCAD/Hensel Phelps Construction

3) Project Name: FLL Airport Welcome Sign

4) Project Number: PNC2115316P1 5) Project Value: \$110,882.00

6) **Achieved or Anticipated Final Acceptance after January 1, 2014**  Yes  No

7) **Company Role:**  Sub Contractor  Prime Contractor

8) **Agency:**  County  City  Private  Other: \_\_\_\_\_

9) **Project Type:**  Public Works  Aviation  Port  Other: \_\_\_\_\_

10) **Percentage of Self Performed Work with the Company's Trades:** 60 %

11) **Project Type:** (Check ALL boxes that apply to the Scope of Work)

- Interior Renovation  Mechanical Upgrades  Electrical Upgrades  Concrete Floor
- Medical Center  Exterior / Interior painting  Roofing Replacement/Repair  Boiler Replacement
- Bituminous Paving  Concrete  Masonry  Exterior Facade  Security Camera Installation
- Canopy Replacement/Repair  Elevator Repair/Replacement  Escalator Repair/Replacement
- Duct bank repair / installation  Outdoor light installation  Fire Suppression System Installation
- Steel Erection  Landscaping  Fencing  Earthwork / Site Work  Other (Attach Additional Sheet)

12) **Client Reference for Construction:** (It is your responsibility to assure that the contact information listed is correct. If your reference can not be contacted, this project may not be considered.)

Reference's Kevin Curry contact: \_\_\_\_\_ Name Project Superintendent Title \_\_\_\_\_

Telephone: 305-763-2181 Email Address: kcurry@henselphelps.com

13) **Description of Any Problems or Major Issues Encountered During the Project (If Any) and What Was Done to Resolve:** (Attach Additional Information As Necessary)

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Rev. 7/14

**ATTACHMENT D**  
**COMPARABLE CONSTRUCTION EXPERIENCE**  
**PROJECTS BETWEEN \$50,000 AND \$250,000**

1) Firm's Name: Big Dog Construction Services, Inc.

2) Agency/Client Name: Bianca Boie as agent for Mauricio Dongo

3) Project Name: Dongo Condo Renovation

4) Project Number: N/A 5) Project Value: \$168,210.00

6) **Achieved or Anticipated Final Acceptance after January 1, 2014**  Yes  No

7) **Company Role:**  Sub Contractor  Prime Contractor

8) **Agency:**  County  City  Private  Other: \_\_\_\_\_

9) **Project Type:**  Public Works  Aviation  Port  Other: Renovations/Improvements

10) **Percentage of Self Performed Work with the Company's Trades:** 20 %

11) **Project Type:** (Check ALL boxes that apply to the Scope of Work)

- Interior Renovation  Mechanical Upgrades  Electrical Upgrades  Concrete Floor
- Medical Center  Exterior / Interior painting  Roofing Replacement/Repair  Boiler Replacement
- Bituminous Paving  Concrete  Masonry  Exterior Facade  Security Camera Installation
- Canopy Replacement/Repair  Elevator Repair/Replacement  Escalator Repair/Replacement
- Duct bank repair / installation  Outdoor light installation  Fire Suppression System Installation
- Steel Erection  Landscaping  Fencing  Earthwork / Site Work  Other (Attach Additional Sheet)

12) **Client Reference for Construction:** (It is your responsibility to assure that the contact information listed is correct. If your reference can not be contacted, this project may not be considered.)

**Reference's contact:** Bianca Boie **Name** owner/agent **Title**

Telephone: 561 370-9749 Email Address: bianca@biancaboieinteriors.com

13) **Description of Any Problems or Major Issues Encountered During the Project (If Any) and What Was Done to Resolve:** *(Attach Additional Information As Necessary)*

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



**ATTACHMENT D**  
**COMPARABLE CONSTRUCTION EXPERIENCE**  
**PROJECTS BETWEEN \$50,000 AND \$250,000**

1) Firm's Name: Big Dog Construction Services, Inc.

2) Agency/Client Name: Huizenga Holdings

3) Project Name: Huizenga Residence Renovations

4) Project Number: N/A 5) Project Value: \$85,000.00

6) **Achieved or Anticipated Final Acceptance after January 1, 2014**  Yes  No

7) **Company Role:**  Sub Contractor  Prime Contractor

8) **Agency:**  County  City  Private  Other: \_\_\_\_\_

9) **Project Type:**  Public Works  Aviation  Port  Other: Pre-sale Renovations

10) **Percentage of Self Performed Work with the Company's Trades:** 30 %

11) **Project Type:** (Check ALL boxes that apply to the Scope of Work)

- Interior Renovation  Mechanical Upgrades  Electrical Upgrades  Concrete Floor
- Medical Center  Exterior / Interior painting  Roofing Replacement/Repair  Boiler Replacement
- Bituminous Paving  Concrete  Masonry  Exterior Facade  Security Camera Installation
- Canopy Replacement/Repair  Elevator Repair/Replacement  Escalator Repair/Replacement
- Duct bank repair / installation  Outdoor light installation  Fire Suppression System Installation
- Steel Erection  Landscaping  Fencing  Earthwork / Site Work  Other (Attach Additional Sheet)

12) **Client Reference for Construction:** (It is your responsibility to assure that the contact information listed is correct. If your reference can not be contacted, this project may not be considered.)

**Reference's contact:** Alex Muxo **Name** CEO **Title**

Telephone: 954 627-5015 Email Address: amuxo@huizenga.com

13) **Description of Any Problems or Major Issues Encountered During the Project (If Any) and What Was Done to Resolve:** *(Attach Additional Information As Necessary)*

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

**ATTACHMENT E**  
**COMPARABLE CONSTRUCTION EXPERIENCE**  
**PROJECTS GREATER THAN \$250,000**

1) Firm's Name: Big Dog Construction Services, Inc.

2) Agency/Client Name: Huizenga Holdings

3) Project Name: Williams Island Marina Yachmasters Office

4) Project Number: NA 5) Project Value: \$2,502,000.00

6) **Achieved or Anticipated Final Acceptance after January 1, 2014**  Yes  No

7) **Company Role:**  Sub Contractor  Prime Contractor

8) **Agency:**  County  City  Private  Other: \_\_\_\_\_

9) **Project Type:**  Public Works  Aviation  Port  Other: Tenant Buildout

10) **Percentage of Self Performed Work with the Company's Trades:** 20 %

11) **Project Type:** (Check **ALL** boxes that apply to the Scope of Work)

- Interior Renovation  Mechanical Upgrades  Electrical Upgrades  Concrete Floor
- Medical Center  Exterior / Interior painting  Roofing Replacement/Repair  Boiler Replacement
- Bituminous Paving  Concrete  Masonry  Exterior Facade  Security Camera Installation
- Canopy Replacement/Repair  Elevator Repair/Replacement  Escalator Repair/Replacement
- Duct bank repair / installation  Outdoor light installation  Fire Suppression System Installation
- Steel Erection  Landscaping  Fencing  Earthwork / Site Work  Other (Attach Additional Sheet)

12) **Client Reference for Construction:** (It is your responsibility to assure that the contact information listed is correct. If your reference can not be contacted, this project may not be considered.)

Reference's contact: Name Alex Muxo Title CEO

Telephone: 954 627 5015 Email Address: amuxo@huizenga.com

13) **Description of Any Problems or Major Issues Encountered During the Project (If Any) and What Was Done to Resolve:** (Attach Additional Information As Necessary)

\_\_\_\_\_

**ATTACHMENT E**  
**COMPARABLE CONSTRUCTION EXPERIENCE**  
**PROJECTS GREATER THAN \$250,000**

1) Firm's Name: Big Dog Construction Services, Inc.

2) Agency/Client Name: Hensel-Phelps Construction

3) Project Name: Hensel-Phelps Office Buildout

4) Project Number: NA 5) Project Value: \$356,490.00

6) **Achieved or Anticipated Final Acceptance after January 1, 2014**  Yes  No

7) **Company Role:**  Sub Contractor  Prime Contractor

8) **Agency:**  County  City  Private  Other: \_\_\_\_\_

9) **Project Type:**  Public Works  Aviation  Port  Other: Tenant Buildout

10) **Percentage of Self Performed Work with the Company's Trades:** 20 %

11) **Project Type:** (Check **ALL** boxes that apply to the Scope of Work)

- Interior Renovation  Mechanical Upgrades  Electrical Upgrades  Concrete Floor
- Medical Center  Exterior / Interior painting  Roofing Replacement/Repair  Boiler Replacement
- Bituminous Paving  Concrete  Masonry  Exterior Facade  Security Camera Installation
- Canopy Replacement/Repair  Elevator Repair/Replacement  Escalator Repair/Replacement
- Duct bank repair / installation  Outdoor light installation  Fire Suppression System Installation
- Steel Erection  Landscaping  Fencing  Earthwork / Site Work  Other (Attach Additional Sheet)

12) **Client Reference for Construction:** (It is your responsibility to assure that the contact information listed is correct. If your reference can not be contacted, this project may not be considered.)

Reference's contact: Name Callie Hepler Title Project Manager

Telephone: 407 697-3770 Email Address: chepler@henselphelps.com

13) **Description of Any Problems or Major Issues Encountered During the Project (If Any) and What Was Done to Resolve:** (Attach Additional Information As Necessary)

\_\_\_\_\_

**ATTACHMENT E**  
**COMPARABLE CONSTRUCTION EXPERIENCE**  
**PROJECTS GREATER THAN \$250,000**

1) Firm's Name: Big Dog Construction Services, Inc.

2) Agency/Client Name: BCAD/Whiting Turner Contracting Co.

3) Project Name: FLL Airport Terminal 4 CBIS

4) Project Number: Z1434304P1 5) Project Value: \$1,554,612

6) **Achieved or Anticipated Final Acceptance after January 1, 2014**  Yes  No

7) **Company Role:**  Sub Contractor  Prime Contractor

8) **Agency:**  County  City  Private  Other: \_\_\_\_\_

9) **Project Type:**  Public Works  Aviation  Port  Other: \_\_\_\_\_

10) **Percentage of Self Performed Work with the Company's Trades:** 25 %

11) **Project Type:** (Check ALL boxes that apply to the Scope of Work)

- Interior Renovation  Mechanical Upgrades  Electrical Upgrades  Concrete Floor
- Medical Center  Exterior / Interior painting  Roofing Replacement/Repair  Boiler Replacement
- Bituminous Paving  Concrete  Masonry  Exterior Facade  Security Camera Installation
- Canopy Replacement/Repair  Elevator Repair/Replacement  Escalator Repair/Replacement
- Duct bank repair / installation  Outdoor light installation  Fire Suppression System Installation
- Steel Erection  Landscaping  Fencing  Earthwork / Site Work  Other (Attach Additional Sheet)

12) **Client Reference for Construction:** (It is your responsibility to assure that the contact information listed is correct. If your reference can not be contacted, this project may not be considered.)

Reference's contact: Name Darwin Botero Title Sr. Project Manager

Telephone: 954-868-0742 Email Address: darwin.botero@whitingturner.com

13) **Description of Any Problems or Major Issues Encountered During the Project (If Any) and What Was Done to Resolve:** (Attach Additional Information As Necessary)

\_\_\_\_\_

**ATTACHMENT E**  
**COMPARABLE CONSTRUCTION EXPERIENCE**  
**PROJECTS GREATER THAN \$250,000**

1) Firm's Name: Big Dog Construction Services, Inc.

2) Agency/Client Name: City of Coconut Creek

3) Project Name: Coconut Creek City Hall

4) Project Number: Bid 04-18-18-11 5) Project Value: \$1,100,000.00

6) **Achieved or Anticipated Final Acceptance after January 1, 2014**  Yes  No

7) **Company Role:**  Sub Contractor  Prime Contractor

8) **Agency:**  County  City  Private  Other: \_\_\_\_\_

9) **Project Type:**  Public Works  Aviation  Port  Other: Buildout & New Construction

10) **Percentage of Self Performed Work with the Company's Trades:** 15 %

11) **Project Type:** (Check **ALL** boxes that apply to the Scope of Work)

- Interior Renovation  Mechanical Upgrades  Electrical Upgrades  Concrete Floor
- Medical Center  Exterior / Interior painting  Roofing Replacement/Repair  Boiler Replacement
- Bituminous Paving  Concrete  Masonry  Exterior Facade  Security Camera Installation
- Canopy Replacement/Repair  Elevator Repair/Replacement  Escalator Repair/Replacement
- Duct bank repair / installation  Outdoor light installation  Fire Suppression System Installation
- Steel Erection  Landscaping  Fencing  Earthwork / Site Work  Other (Attach Additional Sheet)

12) **Client Reference for Construction:** (It is your responsibility to assure that the contact information listed is correct. If your reference can not be contacted, this project may not be considered.)

Reference's contact: Name Lou Italice Title Public Works Project Manager

Telephone: 954 973-6780 Email Address: litalico@coconutcreek.net

13) **Description of Any Problems or Major Issues Encountered During the Project (If Any) and What Was Done to Resolve:** (Attach Additional Information As Necessary)

\_\_\_\_\_

**ATTACHMENT E**  
**COMPARABLE CONSTRUCTION EXPERIENCE**  
**PROJECTS GREATER THAN \$250,000**

1) Firm's Name: Big Dog Construction Services, Inc.

2) Agency/Client Name: BCAD/Southwest Airlines/Hunt-AECOM

3) Project Name: FLL Terminal 1 Expansion

4) Project Number: N/A 5) Project Value: \$1,400,000

6) **Achieved or Anticipated Final Acceptance after January 1, 2014**  Yes  No

7) **Company Role:**  Sub Contractor  Prime Contractor

8) **Agency:**  County  City  Private  Other: \_\_\_\_\_

9) **Project Type:**  Public Works  Aviation  Port  Other: \_\_\_\_\_

10) **Percentage of Self Performed Work with the Company's Trades:** 50 %

11) **Project Type:** (Check ALL boxes that apply to the Scope of Work)

Interior Renovation  Mechanical Upgrades  Electrical Upgrades  Concrete Floor

Medical Center  Exterior / Interior painting  Roofing Replacement/Repair  Boiler Replacement

Bituminous Paving  Concrete  Masonry  Exterior Facade  Security Camera Installation

Canopy Replacement/Repair  Elevator Repair/Replacement  Escalator Repair/Replacement

Duct bank repair / installation  Outdoor light installation  Fire Suppression System Installation

Steel Erection  Landscaping  Fencing  Earthwork / Site Work  Other (Attach Additional Sheet) <sup>\*\*</sup>

12) **Client Reference for Construction:** (It is your responsibility to assure that the contact information listed is correct. If your reference can not be contacted, this project may not be considered.)

Reference's contact: Name Jack Newgent Title Project Manager

Telephone: 304 713-3202 Email Address: jack.newgent@aecom.com

13) **Description of Any Problems or Major Issues Encountered During the Project (If Any) and What Was Done to Resolve:** (Attach Additional Information As Necessary)

\_\_\_\_\_

\*\* Performed General Conditions work, Drywall installation, cleaning, FF&E assembly, tarmac escorting and other tasks as assigned.

## PROJECT LIST: 2016-2019

### **Sunspire Health Recovery Road**

Owner: Sunspire Health  
Architect: Williamson Dacar  
Contract Amount: \$382,957.00  
Percent Complete: 100%  
Scheduled Completion: Completed

### **Persist Office Buildout**

Owner: Persist Communications, LLC  
Architect: Hamed Rodriguez  
Contract Amount: \$320,000.00  
Percent Complete: 100%  
Scheduled Completion: Completed

### **Hite Renovation**

Owner: Joshua Hite  
Architect: NA  
Contract Amount: \$22,700.00  
Percent Complete: 100%  
Scheduled Completion: Completed

### **Hensel Phelps 888 Office Buildout**

Owner: M. Austin Forman  
Architect: Cartaya & Associates  
Contract Amount: \$356,870.00  
Percent Complete: 100%  
Scheduled Completion: Completed

### **Associated Builders and Contractors (ABC) Building Common Space Renovation**

Owner: Associated Builders and Contractor  
Architect: Everglades Design  
Contract Amount: \$248,000.00  
Percent Complete: 10%  
Scheduled Completion Date: 30 April 2020

### **Agnoli Kitchen Renovation**

Owner: Michael Agnoli  
Architect: NA  
Contract Amount: \$29,100.00  
Percent Complete: 100%  
Scheduled Completion: Completed

### **Ball Park of the Palm Beaches**

Owner: County of Palm Beach  
Architect: HKS Inc.  
Contract Amount: \$600,000.00  
Percent Complete: 100%  
Scheduled Completion: Completed

### **FLL Airport Southwest Airlines Terminal 1 Expansion**

Owner: Broward County Aviation District  
Architect: ACAI & Associates  
Contract Amount: \$1,423,000.00  
Percent Complete: 100%  
Scheduled Completion: Completed

### **Michelson Building Exterior Renovation**

Owner: 3rd Ave. Condo Assoc. of Fort Lauderdale, Inc.  
Architect: NA  
Contract Amount: \$262,000.00  
Percent Complete: 100%  
Scheduled Completion: Completed

### **Reynolds Home Renovation**

Owner: Dan Reynolds (AFL-CIO)  
Architect: Axiom Structures  
Contract Amount: \$51,000.00  
Percent Complete: 100%  
Scheduled Completion: Completed

### **FLL Terminal 4 Consolidated Baggage Inspection System**

Owner: Broward County Aviation District  
Contract Amount: \$2,072,453.00 (subcontractor to The  
Whiting-Turner Contracting Co.)  
Percent Complete: 50%  
Scheduled Completion: February 2020

### **FLL Terminal 4 Baggage Handling System**

Owner: Broward County Aviation District  
Architect: Cartaya and Associates  
Contract Amount: NTE \$3,000,000.00 (subcontractor to  
Jordim International)  
Percent Complete: 40%  
Scheduled Completion: November 2020

### **Coconut Creek Casino Facilities Shop**

Owner: Seminole Tribe of Florida  
Architect: Richard Simon  
Contract Amount: \$54,967.00  
Percent Complete: 100%  
Scheduled Completion: Completed

### **FLL Airport Welcome Sign**

Owner: Broward County Aviation District  
Contract Amount: \$62,000.00 (subcontractor to Hensel  
– Phelps Construction Corp.)  
Architect: Cartaya and Associates  
Percent Complete: 100%  
Completed: July 2019

**Port Everglades Terminal 2 & 4 Garage Piles**

Owner: Broward County Port Authority  
Contract Amount: \$500,000 (Subcontractor to HJ  
Foundations/Stiles-Pirtle JV)  
Percent Complete: 100%  
Scheduled Completion: Completed

**Coconut Creek City Hall Renovations**

Contract Amount: \$974,000.00  
Architect: P2 Interiors  
Percent Completion: 45%  
Scheduled Completion: Feb 2020

**Rockridge Capital Holdings Office Buildout**

Owner: Rockridge Capital Holdings  
Contract Amount: \$580,000.00  
Architect: MPA  
Percent Complete: 100%  
Schedule Completion: Completed\*

**\*Winner: 2017 Associated Builders & Contractors  
Small (less than \$1M) Project of the Year**

**Bennett Residence**

Owner: Huizenga Holdings  
Contract Amount: \$1.6M  
Architect: Ahern & Associates  
Percent Complete: 10% (Contract signed 6/3/19)  
Scheduled Completion: 8/2020

**Huizenga Residence Renovations**

Owner: Huizenga Holdings  
Architect: NA  
Contract Amount: \$100,000.00  
Percent Complete: 100%  
Scheduled Completion: Completed

**Wellons Residence Addition**

Owner: Terry Wellons  
Architect: Florida Technical  
Contract Amount: \$415,681.00  
Percent Complete: 100%  
Scheduled Completed: 8/2020

**Williams Island Marina Yachtmaster's Office**

Owner: Huizenga Holdings  
Contract Amount: \$1.4M  
Architect: Design Momentum  
Percent Complete: 100%  
Scheduled Completion: Completed

**Hyatt Regency Pier 66 ADA Ramps**

Owner/Client: Moss Construction  
Contract Amount: \$42,000.00  
Percent Completion: 100%  
Scheduled Completion: Completed

**NW Medical Center Concrete Repairs**

Owner/Client: Halladay Properties  
Architect: NA  
Contract Amount: \$12,000.00  
Percent Completion: 100%  
Scheduled Completion: Completed

**FLL Terminal 1 X-Ray Equipment Installation**

Owner/Client: Dorma Kaba, Inc.  
Architect: NA  
Contracted Amount: \$22,800.00  
Percent Complete: 100%  
Scheduled Completion: Completed

**Pompano Beach Water Treatment Plant**

Owner/Client: Florida Design Contractors  
Contracted Amount:  
Architect: NA  
Percent Complete: 100%  
Scheduled Completion: Completed

**Reflections Las Olas Concrete Pad**

Owner/Client: Reflections Condo Association  
Architect: NA  
Contracted Amount: \$3,200.00  
Percent Complete: 100%  
Scheduled Completion: Completed

**Coconut Creek Casino Parking Garage**

Owner: Seminole Tribe of Florida  
Contracted Amount: \$15,736.54  
Architect: NA  
Percent Complete: 100%  
Scheduled Completion: Completed





**Vendor Reference Verification Form**

Broward County Solicitation No. and Title: PNC2119543R1 JOB ORDER CONTRACT

Reference for: BIG DOG CONSTRUCTION SERVICES, INC.

Organization/Firm Name providing reference:

HUIZENGA HOLDINGS, INC.

Contact Name: ALEX MUÑOZ Title: S.V.P. Reference date: 11/6/2019

Contact Email: amunoz@huizenega.com Contact Phone: 954-627-5015

Name of Referenced Project: WILLIAMS ISLAND MARINA & BENNETT RESIDENCE

Contract No. N/A Date Services Provided: 2013 to 2014 Project Amount: 1.8 million (BR.) # 2.5 million (WI)

Vendor's role in Project:  Prime Vendor  Subconsultant/Subcontractor

Would you use this vendor again?  Yes  No If No, please specify in Additional Comments (below).

**Description of services provided by Vendor:**

Full Construction Services.

**Please rate your experience with the referenced Vendor:**

	Needs Improvement	Satisfactory	Excellent	Not Applicable
1. Vendor's Quality of Service				
a. Responsive	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Accuracy	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Deliverables	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Vendor's Organization:				
a. Staff expertise	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Professionalism	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Turnover	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Timeliness of:				
a. Project	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Deliverables	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Project completed within budget	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Cooperation with:				
a. Your Firm	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Subcontractor(s)/Subconsultant(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Regulatory Agency(ies)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Additional Comments: (provide on additional sheet if needed)

\*\*\*THIS SECTION FOR COUNTY USE ONLY\*\*\*

Verified via:  EMAIL  VERBAL Verified by: \_\_\_\_\_ Division: \_\_\_\_\_ Date: \_\_\_\_\_

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**Vendor Reference Verification Form**

Broward County Solicitation No. and Title:  
**PNC2119543R1 - Job Order Contract**

Reference for: Big Dog Construction Services

Organization/Firm Name providing reference:  
Hunt Construction Group (AECOM Hunt)

Contact Name: Jack R. Newgent Title: Project Controls Manager Reference date: 11/06/2019

Contact Email: jack.newgent@aecom.com Contact Phone: \_\_\_\_\_

Name of Referenced Project: Ball Park of the Palm Beaches

Contract No. Various Date Services Provided: 08/12/2017 to 07/30/2018 Project Amount: \$ 650,000.00

Vendor's role in Project:  Prime Vendor  Subconsultant/Subcontractor

Would you use this vendor again?  Yes  No If No, please specify in Additional Comments (below).

**Description of services provided by Vendor:**

General Conditions, General Requirements Contract and Scope Contracts for the FLL Terminal 1 renovation and expansion project

Please rate your experience with the referenced Vendor:	Needs Improvement	Satisfactory	Excellent	Not Applicable
1. Vendor's Quality of Service				
a. Responsive	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Accuracy	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Deliverables	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Vendor's Organization:				
a. Staff expertise	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Professionalism	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Turnover	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Timeliness of:				
a. Project	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Deliverables	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Project completed within budget	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Cooperation with:				
a. Your Firm	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Subcontractor(s)/Subconsultant(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Regulatory Agency(ies)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Additional Comments:** (provide on additional sheet if needed)

Highly motivated, Quality and Safety oriented, always went above and beyond expectations.

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Verified via:  EMAIL  VERBAL Verified by: \_\_\_\_\_ Division: \_\_\_\_\_ Date: \_\_\_\_\_

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**Vendor Reference Verification Form**

Broward County Solicitation No. and Title:  
**PNC2119543R1, Job Order Contract**

Reference for: **Big Dog Construction Services, Inc.**

Organization/Firm Name providing reference:  
**City Of Coconut Creek**

Contact Name: **Louis Italico** Title: **Project Manager** Reference date: **11/06/2019**

Contact Email: **litalico@coconutcreek.net** Contact Phone: **954 973-6780**

Name of Referenced Project: **City Hall remodel**

Contract No.	Date Services Provided:	Project Amount:
09-26-18-11	01/10/2019 to 11/06/2019	\$ 1,100,000.00

Vendor's role in Project:  Prime Vendor  Subconsultant/Subcontractor

Would you use this vendor again?  Yes  No If No, please specify in Additional Comments (below).

**Description of services provided by Vendor:**

Remodeled City Hall Lobby and City Mangers Suite

**Please rate your experience with the referenced Vendor:**

	<b>Needs Improvement</b>	<b>Satisfactory</b>	<b>Excellent</b>	<b>Not Applicable</b>
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1. Vendor's Quality of Service				
a. Responsive	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Accuracy	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Deliverables	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Vendor's Organization:				
a. Staff expertise	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Professionalism	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Turnover	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Timeliness of:				
a. Project	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Deliverables	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Project completed within budget	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Cooperation with:				
a. Your Firm	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Subcontractor(s)/Subconsultant(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Regulatory Agency(ies)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Additional Comments: (provide on additional sheet if needed)

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Verified via:  EMAIL  VERBAL Verified by: \_\_\_\_\_ Division: \_\_\_\_\_ Date: \_\_\_\_\_

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**Vendor Reference Verification Form**

Broward County Solicitation No. and Title:

**PNC2119543R1 - JOB ORDER CONTRACT**

Reference for: Big Dog Construction

Organization/Firm Name providing reference:

Rockridge Capital Holdings, LLC

Contact Name: Donna Brandt

Title: Exec Asst.

Reference date: 11/06/2019

Contact Email: dbrandt@rockridge-llc.com

Contact Phone: 954-495-2309

Name of Referenced Project: Multiple Projects

Contract No.

Date Services Provided:

Project Amount:

Various

01/15/2014 to 11/06/2019

\$ 1,400,000.00

Vendor's role in Project:  Prime Vendor  Subconsultant/Subcontractor

Would you use this vendor again?  Yes  No If No, please specify in Additional Comments (below).

**Description of services provided by Vendor:**

Miscellaneous maintenance and numerous sites, Office Buildout, Home Remodels, GC for Pool construction.

Please rate your experience with the referenced Vendor:	Needs Improvement	Satisfactory	Excellent	Not Applicable
1. Vendor's Quality of Service				
a. Responsive	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Accuracy	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Deliverables	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Vendor's Organization:				
a. Staff expertise	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Professionalism	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Turnover	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Timeliness of:				
a. Project	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Deliverables	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Project completed within budget	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Cooperation with:				
a. Your Firm	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Subcontractor(s)/Subconsultant(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Regulatory Agency(ies)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Additional Comments:** (provide on additional sheet if needed)

\*\*\*THIS SECTION FOR COUNTY USE ONLY\*\*\*

Verified via:  EMAIL  VERBAL Verified by: \_\_\_\_\_ Division: \_\_\_\_\_ Date: \_\_\_\_\_

All information provided to Broward County is subject to verification. Vendor acknowledges that inaccurate, untruthful, or incorrect statements made in support of this response may be used by the County as a basis for rejection, rescission of the award, or termination of the contract and may also serve as the basis for debarment of Vendor pursuant to Section 21.119 of the Broward County Procurement Code.

Supplier: **Big Dog Construction Services, Inc.**

**Standard Instructions to Vendors  
Request for Proposals, Request for Qualifications, or Request for Letters of Interest**

Vendors are instructed to read and follow the instructions carefully, as any misinterpretation or failure to comply with instructions may lead to a Vendor's submittal being rejected.

**Vendor MUST submit its solicitation response electronically and MUST confirm its submittal in order for the County to receive a valid response through BidSync. Refer to the [Purchasing Division website](#) or contact BidSync for submittal instructions.**

**A. Responsiveness Criteria:**

In accordance with Broward County Procurement Code Section 21.8.b.65, a Responsive Bidder [Vendor] means a person who has submitted a proposal which conforms in all material respects to a solicitation. The solicitation submittal of a responsive Vendor must be submitted on the required forms, which contain all required information, signatures, notarizations, insurance, bonding, security, or other mandated requirements required by the solicitation documents to be submitted at the time of proposal opening.

Failure to provide the information required below at the time of submittal opening may result in a recommendation Vendor is non-responsive by the Director of Purchasing. The Selection or Evaluation Committee will determine whether the firm is responsive to the requirements specified herein. The County reserves the right to waive minor technicalities or irregularities as is in the best interest of the County in accordance with Section 21.30.f.1(c) of the Broward County Procurement Code.

Below are standard responsiveness criteria; refer to **Special Instructions to Vendors**, for Additional Responsiveness Criteria requirement(s).

**1. Lobbyist Registration Requirement Certification**

Refer to **Lobbyist Registration Requirement Certification**. The completed form should be submitted with the solicitation response but must be submitted within three business days of County's request. Vendor may be deemed non-responsive for failure to fully comply within stated timeframes.

**2. Addenda**

The County reserves the right to amend this solicitation prior to the due date. Any change(s) to this solicitation will be conveyed through the written addenda process. Only written addenda will be binding. If a "must" addendum is issued, Vendor must follow instructions and submit required information, forms, or acknowledge addendum, as instructed therein. It is the responsibility of all potential Vendors to monitor the solicitation for any changing information, prior to submitting their response.

**B. Responsibility Criteria:**

Definition of a Responsible Vendor: In accordance with Section 21.8.b.64 of the Broward County Procurement Code, a Responsible Vendor means a Vendor who has the capability in all respects to perform the contract requirements, and the integrity and reliability which will assure good faith performance.

The Selection or Evaluation Committee will recommend to the awarding authority a determination of

a Vendor's responsibility. At any time prior to award, the awarding authority may find that a Vendor is not responsible to receive a particular award.

Failure to provide any of this required information and in the manner required may result in a recommendation by the Director of Purchasing that the Vendor is non-responsive.

Below are standard responsibility criteria; refer to **Special Instructions to Vendors**, for Additional Responsibility Criteria requirement(s).

## 1. **Litigation History**

- a. All Vendors are required to disclose to the County all "material" cases filed, pending, or resolved during the last three (3) years prior to the solicitation response due date, whether such cases were brought by or against the Vendor, any parent or subsidiary of the Vendor, or any predecessor organization. Additionally, all Vendors are required to disclose to the County all "material" cases filed, pending, or resolved against any principal of Vendor, regardless of whether the principal was associated with Vendor at the time of the "material" cases against the principal, during the last three (3) years prior to the solicitation response. A case is considered to be "material" if it relates, in whole or in part, to any of the following:
  - i. A similar type of work that the vendor is seeking to perform for the County under the current solicitation;
  - ii. An allegation of fraud, negligence, error or omissions, or malpractice against the vendor or any of its principals or agents who would be performing work under the current solicitation;
  - iii. A vendor's default, termination, suspension, failure to perform, or improper performance in connection with any contract;
  - iv. The financial condition of the vendor, including any bankruptcy petition (voluntary and involuntary) or receivership; or
  - v. A criminal proceeding or hearing concerning business-related offenses in which the vendor or its principals (including officers) were/are defendants.
- b. For each material case, the Vendor is required to provide all information identified in the **Litigation History Form**. Additionally, the Vendor shall provide a copy of any judgment or settlement of any material case during the last three (3) years prior to the solicitation response. Redactions of any confidential portions of the settlement agreement are only permitted upon a certification by Vendor that all redactions are required under the express terms of a pre-existing confidentiality agreement or provision.
- c. The County will consider a Vendor's litigation history information in its review and determination of responsibility.
- d. If the Vendor is a joint venture, the information provided should encompass the joint venture and each of the entities forming the joint venture.
- e. A vendor is required to disclose to the County any and all cases(s) that exist between the County and any of the Vendor's subcontractors/subconsultants proposed to work on this project during the last five (5) years prior to the solicitation response.
- f. Failure to disclose any material case, including all requested information in connection with each such case, as well as failure to disclose the Vendor's subcontractors/subconsultants litigation history against the County, may result in the Vendor being deemed non-responsive.

## 2. **Financial Information**

- a. All Vendors are required to provide the Vendor's financial statements at the time of submittal



in order to demonstrate the Vendor's financial capabilities.

- b. Each Vendor shall submit its most recent two years of financial statements for review. The financial statements are not required to be audited financial statements. The annual financial statements will be in the form of:
  - i. Balance sheets, income statements and annual reports; or
  - ii. Tax returns; or
  - iii. SEC filings.

If tax returns are submitted, ensure it does not include any personal information (as defined under Florida Statutes Section 501.171, Florida Statutes), such as social security numbers, bank account or credit card numbers, or any personal pin numbers. If any personal information data is part of financial statements, redact information prior to submitting a response the County.

- c. If a Vendor has been in business for less than the number of years of required financial statements, then the Vendor must disclose all years that the Vendor has been in business, including any partial year-to-date financial statements.
- d. The County may consider the unavailability of the most recent year's financial statements and whether the Vendor acted in good faith in disclosing the financial documents in its evaluation.
- e. Any claim of confidentiality on financial statements should be asserted at the time of submittal. Refer to **Standard Instructions to Vendors**, Confidential Material/ Public Records and Exemptions for instructions on submitting confidential financial statements. The Vendor's failure to provide the information as instructed may lead to the information becoming public.
- f. Although the review of a Vendor's financial information is an issue of responsibility, the failure to either provide the financial documentation or correctly assert a confidentiality claim pursuant the Florida Public Records Law and the solicitation requirements (Confidential Material/ Public Records and Exemptions section) may result in a recommendation of non-responsiveness by the Director of Purchasing.

### 3. Authority to Conduct Business in Florida

- a. A Vendor must have the authority to transact business in the State of Florida and be in good standing with the Florida Secretary of State. For further information, contact the Florida Department of State, Division of Corporations.
- b. The County will review the Vendor's business status based on the information provided in response to this solicitation.
- c. It is the Vendor's responsibility to comply with all state and local business requirements.
- d. Vendor should list its active Florida Department of State Division of Corporations Document Number (or Registration No. for fictitious names) in the **Vendor Questionnaire**, Question No. 10.
- e. If a Vendor is an out-of-state or foreign corporation or partnership, the Vendor must obtain the authority to transact business in the State of Florida or show evidence of application for the authority to transact business in the State of Florida, upon request of the County.
- f. A Vendor that is not in good standing with the Florida Secretary of State at the time of a

submission to this solicitation may be deemed non-responsible.

- g. If successful in obtaining a contract award under this solicitation, the Vendor must remain in good standing throughout the contractual period of performance.

#### 4. **Affiliated Entities of the Principal(s)**

- a. All Vendors are required to disclose the names and addresses of “affiliated entities” of the Vendor’s principal(s) over the last five (5) years (from the solicitation opening deadline) that have acted as a prime Vendor with the County. The Vendor is required to provide all information required on the **Affiliated Entities of the Principal(s) Certification Form**.
- b. The County will review all affiliated entities of the Vendor’s principal(s) for contract performance evaluations and the compliance history with the County’s Small Business Program, including CBE, DBE and SBE goal attainment requirements. “Affiliated entities” of the principal(s) are those entities related to the Vendor by the sharing of stock or other means of control, including but not limited to a subsidiary, parent or sibling entity.
- c. The County will consider the contract performance evaluations and the compliance history of the affiliated entities of the Vendor’s principals in its review and determination of responsibility.

#### 5. **Insurance Requirements**

The **Insurance Requirement Form** reflects the insurance requirements deemed necessary for this project. It is not necessary to have this level of insurance in effect at the time of submittal, but it is necessary to submit certificates indicating that the Vendor currently carries the insurance or to submit a letter from the carrier indicating it can provide insurance coverages.

#### C. **Additional Information and Certifications**

The following forms and supporting information (if applicable) should be returned with Vendor’s submittal. If not provided with submittal, the Vendor must submit within three business days of County’s request. Failure to timely submit may affect Vendor’s evaluation.

##### 1. **Vendor Questionnaire**

Vendor is required to submit detailed information on their firm. Refer to the **Vendor Questionnaire** and submit as instructed.

##### 2. **Standard Certifications**

Vendor is required to certify to the below requirements. Refer to the **Standard Certifications** and submit as instructed.

- a. **Cone of Silence Requirement Certification**
- b. **Drug-Free Workplace Certification**
- c. **Non-Collusion Certification**
- d. **Public Entities Crimes Certification**
- e. **Scrutinized Companies List Certification**

##### 3. **Subcontractors/Subconsultants/Suppliers Requirement**

The Vendor shall submit a listing of all subcontractors, subconsultants, and major material suppliers, if any, and the portion of the contract they will perform. Vendors must follow the instructions included on the **Subcontractors/Subconsultants/Suppliers Information Form** and submit as instructed.



#### D. Standard Agreement Language Requirements

1. The acceptance of or any exceptions taken to the terms and conditions of the County's Agreement shall be considered a part of a Vendor's submittal and will be considered by the Selection or Evaluation Committee.
2. The applicable Agreement terms and conditions for this solicitation are indicated in the **Special Instructions to Vendors**.
3. Vendors are required to review the applicable terms and conditions and submit the **Agreement Exception Form**. If the **Agreement Exception Form** is not provided with the submittal, it shall be deemed an affirmation by the Vendor that it accepts the Agreement terms and conditions as disclosed in the solicitation.
4. If exceptions are taken, the Vendor must specifically identify each term and condition with which it is taking an exception. Any exception not specifically listed is deemed waived. Simply identifying a section or article number is not sufficient to state an exception. Provide either a redlined version of the specific change(s) or specific proposed alternative language. Additionally, a brief justification specifically addressing each provision to which an exception is taken should be provided.
5. Submission of any exceptions to the Agreement does not denote acceptance by the County. Furthermore, taking exceptions to the County's terms and conditions may be viewed unfavorably by the Selection or Evaluation Committee and ultimately may impact the overall evaluation of a Vendor's submittal.

#### E. Evaluation Criteria

1. The Selection or Evaluation Committee will evaluate Vendors as per the **Evaluation Criteria**. The County reserves the right to obtain additional information from a Vendor.
2. Vendor has a continuing obligation to inform the County in writing of any material changes to the information it has previously submitted. The County reserves the right to request additional information from Vendor at any time.
3. For Request for Proposals, the following shall apply:
  - a. The Director of Purchasing may recommend to the Evaluation Committee to short list the most qualified firms prior to the Final Evaluation.
  - b. The Evaluation Criteria identifies points available; a total of 100 points is available.
  - c. If the Evaluation Criteria includes a request for pricing, the total points awarded for price is determined by applying the following formula:
$$\frac{(\text{Lowest Proposed Price}/\text{Vendor's Price}) \times (\text{Maximum Number of Points for Price})}{\text{Price Score}}$$
  - d. After completion of scoring, the County may negotiate pricing as in its best interest.
4. For Requests for Letters of Interest or Request for Qualifications, the following shall apply:
  - a. The Selection or Evaluation Committee will create a short list of the most qualified firms.
  - b. The Selection or Evaluation Committee will either:

- i. Rank shortlisted firms; or
- ii. If the solicitation is part of a two-step procurement, shortlisted firms will be requested to submit a response to the Step Two procurement.

## **F. Demonstrations**

If applicable, as indicated in Special Instructions to Vendors, Vendors will be required to demonstrate the nature of their offered solution. After receipt of submittals, all Vendors will receive a description of, and arrangements for, the desired demonstration. In accordance with Section 286.0113 of the Florida Statutes and pursuant to the direction of the Broward County Board of Commissioners, demonstrations are closed to only the vendor team and County staff.

## **G. Presentations**

Vendors that are found to be both responsive and responsible to the requirements of the solicitation and/or shortlisted (if applicable) will have an opportunity to make an oral presentation to the Selection or Evaluation Committee on the Vendor's approach to this project and the Vendor's ability to perform. The committee may provide a list of subject matter for the discussion. All Vendor's will have equal time to present but the question-and-answer time may vary. In accordance with Section 286.0113 of the Florida Statutes and the direction of the Broward County Board of Commissioners, presentations during Selection or Evaluation Committee Meetings are closed. Only the Selection or Evaluation Committee members, County staff and the vendor and their team scheduled for that presentation will be present in the Meeting Room during the presentation and subsequent question and answer period.

## **H. Public Art and Design Program**

If indicated in **Special Instructions to Vendors**, Public Art and Design Program, Section 1-88, Broward County Code of Ordinances, applies to this project. It is the intent of the County to functionally integrate art, when applicable, into capital projects and integrate artists' design concepts into this improvement project. The Vendor may be required to collaborate with the artist(s) on design development within the scope of this request. Artist(s) shall be selected by Broward County through an independent process. For additional information, contact the Broward County Cultural Division.

## **I. Committee Appointment**

The Cone of Silence shall be in effect for County staff at the time of the Selection or Evaluation Committee appointment and for County Commissioners and Commission staff at the time of the Shortlist Meeting of the Selection Committee or the Initial Evaluation Meeting of the Evaluation Committee. The committee members appointed for this solicitation are available on the Purchasing Division's website under [Committee Appointment](#).

## **J. Committee Questions, Request for Clarifications, Additional Information**

At any committee meeting, the Selection or Evaluation Committee members may ask questions, request clarification, or require additional information of any Vendor's submittal or proposal. It is highly recommended Vendors attend to answer any committee questions (if requested), including a Vendor representative that has the authority to bind.

Vendor's answers may impact evaluation (and scoring, if applicable). Upon written request to the Purchasing Agent prior to the meeting, a conference call number will be made available for Vendor participation via teleconference. Only Vendors that are found to be both responsive and responsible to the requirements of the solicitation and/or shortlisted (if applicable) are requested to participate in a final (or presentation) Selection or Evaluation committee meeting.

## **K. Vendor Questions**

The County provides a specified time for Vendors to ask questions and seek clarification regarding solicitation requirements. All questions or clarification inquiries must be submitted through BidSync by the date and time referenced in the solicitation document (including any addenda). The County will respond to questions via Bid Sync.

## **L. Confidential Material/ Public Records and Exemptions**

1. Broward County is a public agency subject to Chapter 119, Florida Statutes. Upon receipt, all submittals become "public records" and shall be subject to public disclosure consistent with Chapter 119, Florida Statutes. Submittals may be posted on the County's public website or included in a public records request response, unless there is a declaration of "confidentiality" pursuant to the public records law and in accordance with the procedures in this section.
2. Any confidential material(s) the Vendor asserts is exempt from public disclosure under Florida Statutes must be labeled as "Confidential", and marked with the specific statute and subsection asserting exemption from Public Records.
3. To submit confidential material, three hardcopies must be submitted in a sealed envelope, labeled with the solicitation number, title, date and the time of solicitation opening to:

Broward County Purchasing Division  
115 South Andrews Avenue, Room 212  
Fort Lauderdale, FL 33301

4. Material will not be treated as confidential if the Vendor does not cite the applicable Florida Statute (s) allowing the document to be treated as confidential.
5. Any materials that the Vendor claims to be confidential and exempt from public records must be marked and separated from the submittal. If the Vendor does not comply with these instructions, the Vendor's claim for confidentiality will be deemed as waived.
6. Submitting confidential material may impact full discussion of your submittal by the Selection or Evaluation Committee because the Committee will be unable to discuss the details contained in the documents cloaked as confidential at the publicly noticed Committee meeting.

## **M. Copyrighted Materials**

Copyrighted material is not exempt from the Public Records Law, Chapter 119, Florida Statutes. Submission of copyrighted material in response to any solicitation will constitute a license and permission for the County to make copies (including electronic copies) as reasonably necessary for the use by County staff and agents, as well as to make the materials available for inspection or production pursuant to Public Records Law, Chapter 119, Florida Statutes.

## **N. State and Local Preferences**

If the solicitation involves a federally funded project where the fund requirements prohibit the use of state and/or local preferences, such preferences contained in the Local Preference Ordinance and Broward County Procurement Code will not be applied in the procurement process.

## **O. Local Preference**

Except where otherwise prohibited by federal or state law or other funding source restrictions, a local Vendor whose submittal is within 5% of the highest total ranked Vendor outside of the preference area will become the Vendor with whom the County will proceed with negotiations for a

final contract. Refer to **Local Vendor Certification Form (Preference and Tiebreaker)** for further information.

## **P. Tiebreaker Criteria**

In accordance with Section 21.31.d of the Broward County Procurement Code, the tiebreaker criteria shall be applied based upon the information provided in the Vendor's response to the solicitation. In order to receive credit for any tiebreaker criterion, complete and accurate information must be contained in the Vendor's submittal.

1. **Local Vendor Certification Form (Preference and Tiebreaker);**
2. **Domestic Partnership Act Certification (Requirement and Tiebreaker);**
3. **Tiebreaker Criteria Form: Volume of Work Over Five Years**

## **Q. Posting of Solicitation Results and Recommendations**

The Broward County Purchasing Division's [website](#) is the location for the County's posting of all solicitations and contract award results. It is the obligation of each Vendor to monitor the website in order to obtain complete and timely information.

## **R. Review and Evaluation of Responses**

A Selection or Evaluation Committee is responsible for recommending the most qualified Vendor(s). The process for this procurement may proceed in the following manner:

1. The Purchasing Division delivers the solicitation submittals to agency staff for summarization for the committee members. Agency staff prepares a report, including a matrix of responses submitted by the Vendors. This may include a technical review, if applicable.
2. Staff identifies any incomplete responses. The Director of Purchasing reviews the information and makes a recommendation to the Selection or Evaluation Committee as to each Vendor's responsiveness to the requirements of the solicitation. The final determination of responsiveness rests solely on the decision of the committee.
3. At any time prior to award, the awarding authority may find that a Vendor is not responsible to receive a particular award. The awarding authority may consider the following factors, without limitation: debarment or removal from the authorized Vendors list or a final decree, declaration or order by a court or administrative hearing officer or tribunal of competent jurisdiction that the Vendor has breached or failed to perform a contract, claims history of the Vendor, performance history on a County contract(s), an unresolved concern, or any other cause under this code and Florida law for evaluating the responsibility of a Vendor.

## **S. Vendor Protest**

Sections 21.118 and 21.120 of the Broward County Procurement Code set forth procedural requirements that apply if a Vendor intends to protest a solicitation or proposed award of a contract and state in part the following:

1. Any protest concerning the solicitation or other solicitation specifications or requirements must be made and received by the County within seven business days from the posting of the solicitation or addendum on the Purchasing Division's website. Such protest must be made in writing to the Director of Purchasing. Failure to timely protest solicitation specifications or requirements is a waiver of the ability to protest the specifications or requirements.

2. Any protest concerning a solicitation or proposed award above the award authority of the Director of Purchasing, after the RLI or RFP opening, shall be submitted in writing and received by the Director of Purchasing within five business days from the posting of the recommendation of award for Invitation to Bids or the final recommendation of ranking for Request for Letters of Interest and Request for Proposals on the Purchasing Division's website.
3. Any actual or prospective Vendor who has a substantial interest in and is aggrieved in connection with the proposed award of a contract that does not exceed the amount of the award authority of the Director of Purchasing, may protest to the Director of Purchasing. The protest shall be submitted in writing and received within three (3) business days from the posting of the recommendation of award for Invitation to Bids or the final recommendation of ranking for Request for Letters of Interest and Request for Proposals on the Purchasing Division's website.
4. For purposes of this section, a business day is defined as Monday through Friday between 8:30 a.m. and 5:00 p.m. Failure to timely file a protest within the time prescribed for a proposed contract award shall be a waiver of the Vendor's right to protest.
5. As a condition of initiating any protest, the protestor shall present the Director of Purchasing a nonrefundable filing fee in accordance with the table below.

<u>Estimated Contract Amount</u>	<u>Filing Fee</u>
\$30,000 - \$250,000	\$ 500
\$250,001 - \$500,000	\$1,000
\$500,001 - \$5 million	\$3,000
Over \$5 million	5,000

If no contract proposal amount was submitted, the estimated contract amount shall be the County's estimated contract price for the project. The County may accept cash, money order, certified check, or cashier's check, payable to Broward County Board of Commissioners.

## **T. Right of Appeal**

Pursuant to Section 21.83.d of the Broward County Procurement Code, any Vendor that has a substantial interest in the matter and is dissatisfied or aggrieved in connection with the Selection or Evaluation Committee's determination of responsiveness may appeal the determination pursuant to Section 21.120 of the Broward County Procurement Code.

1. The appeal must be in writing and sent to the Director of Purchasing within ten (10) calendar days of the determination by the Selection or Evaluation Committee to be deemed timely.
2. As required by Section 21.120, the appeal must be accompanied by an appeal bond by a Vendor having standing to protest and must comply with all other requirements of this section.
3. The institution and filing of an appeal is an administrative remedy to be employed prior to the institution and filing of any civil action against the County concerning the subject matter of the appeal.

## **U. Rejection of Responses**

The Selection or Evaluation Committee may recommend rejecting all submittals as in the best interests of the County. The rejection shall be made by the Director of Purchasing, except when a solicitation was approved by the Board, in which case the rejection shall be made by the Board.

## V. Negotiations

The County intends to conduct the first negotiation meeting no later than two weeks after approval of the final ranking as recommended by the Selection or Evaluation Committee. At least one of the representatives for the Vendor participating in negotiations with the County must be authorized to bind the Vendor. In the event that the negotiations are not successful within a reasonable timeframe (notification will be provided to the Vendor) an impasse will be declared and negotiations with the first-ranked Vendor will cease. Negotiations will begin with the next ranked Vendor, etc. until such time that all requirements of Broward County Procurement Code have been met. In accordance with Section 286.0113 of the Florida Statutes and the direction of the Broward County Board of Commissioners, negotiations resulting from Selection or Evaluation Committee Meetings are closed. Only County staff and the selected vendor and their team will be present during negotiations.

## W. Submittal Instructions:

1. Broward County does not require any personal information (as defined under Section 501.171, Florida Statutes), such as social security numbers, driver license numbers, passport, military ID, bank account or credit card numbers, or any personal pin numbers, in order to submit a response for ANY Broward County solicitation. **DO NOT INCLUDE** any personal information data in any document submitted to the County. If any personal information data is part of a submittal, this information must be redacted prior to submitting a response to the County.
2. **Vendor MUST submit its solicitation response electronically and MUST confirm its submittal in order for the County to receive a valid response through BidSync.** It is the Vendor's sole responsibility to assure its response is submitted and received through BidSync by the date and time specified in the solicitation.
3. The County will not consider solicitation responses received by other means. Vendors are encouraged to submit their responses in advance of the due date and time specified in the solicitation document. In the event that the Vendor is having difficulty submitting the solicitation document through Bid Sync, immediately notify the Purchasing Agent and then contact BidSync for technical assistance.
4. Vendor must view, submit, and/or accept each of the documents in BidSync. Web-fillable forms can be filled out and submitted through BidSync.
5. After all documents are viewed, submitted, and/or accepted in BidSync, the Vendor must upload additional information requested by the solicitation (i.e. Evaluation Criteria and Financials Statements) in the Item Response Form in BidSync, under line one (regardless if pricing requested).
6. Vendor should upload responses to Evaluation Criteria in Microsoft Word or Excel format.
7. If the Vendor is declaring any material confidential and exempt from Public Records, refer to Confidential Material/ Public Records and Exemptions for instructions on submitting confidential material.
8. After all files are uploaded, Vendor must submit and **CONFIRM** its offer (by entering password) for offer to be received through BidSync.



9. If a solicitation requires an original Proposal Bond (per Special Instructions to Vendors), Vendor must submit in a sealed envelope, labeled with the solicitation number, title, date and the time of solicitation opening to:

Broward County Purchasing Division  
115 South Andrews Avenue, Room 212  
Fort Lauderdale, FL 33301

A copy of the Proposal Bond should also be uploaded into Bid Sync; this does not replace the requirement to have an original proposal bond. Vendors must submit the original Proposal Bond, by the solicitation due date and time.

Supplier: **Big Dog Construction Services, Inc.**

**VENDOR QUESTIONNAIRE AND STANDARD CERTIFICATIONS**  
**Request for Proposals, Request for Qualifications, or Request for Letters of Interest**

Vendor should complete questionnaire and complete and acknowledge the standard certifications and submit with the solicitation response. If not submitted with solicitation response, it must be submitted within three business days of County's request. Failure to timely submit may affect Vendor's evaluation.

**If a response requires additional information, the Vendor should upload a written detailed response with submittal; each response should be numbered to match the question number.** The completed questionnaire and attached responses will become part of the procurement record. It is imperative that the person completing the Vendor Questionnaire be knowledgeable about the proposing Vendor's business and operations.

1. Legal business name:**Big Dog Construction Services, Inc.**
2. Doing Business As/ Fictitious Name (if applicable):
3. Federal Employer I.D. no. (FEIN):**45-4240556**
4. Dun and Bradstreet No.:**Big Dog Construction Services**
5. Website address (if applicable): **3730 Coconut Creek Pkwy, Ste 180**
6. Principal place of business address: **Big Dog Construction Services  
3730 Coconut Creek Pkwy, Ste 180**
7. Office location responsible for this project:
8. Telephone no.:**9546951470** Fax no.:**8666042459**
9. Type of business (check appropriate box):
  - Corporation (specify the state of incorporation): **FL**
  - Sole Proprietor
  - Limited Liability Company (LLC)
  - Limited Partnership
  - General Partnership (State and County Filed In)
  - Other - Specify
10. List Florida Department of State, Division of Corporations document number (or registration number if fictitious name): **P12000001063**
11. List name and title of each principal, owner, officer, and major shareholder:
  - a) **David Rosenof, President/Owner**
  - b) **Rhonda Rosenof, Executive V.P./Owner**
  - c) **Thomas Lindner/Vice President**
  - d)
12. AUTHORIZED CONTACT(S) FOR YOUR FIRM:

Name: **Thomas Lindner**



Title: **Vice President**

E-mail: **tlindner@bigdogcsi.com**

Telephone No.: **9547578015**

Name: **Rhonda Rosenof**

Title: **Executive V.P.**

E-mail: **rosenof@bigdogcsi.com**

Telephone No.: **9547578015**

13. Has your firm, its principals, officers or predecessor organization(s) been debarred or suspended by any government entity within the last three years? If yes, specify details in an attached written response.  Yes  No
14. Has your firm, its principals, officers or predecessor organization(s) ever been debarred or suspended by any government entity? If yes, specify details in an attached written response, including the reinstatement date, if granted.  Yes  No
15. Has your firm ever failed to complete any services and/or delivery of products during the last three (3) years? If yes, specify details in an attached written response.  Yes  No
16. Is your firm or any of its principals or officers currently principals or officers of another organization? If yes, specify details in an attached written response.  Yes  No
17. Have any voluntary or involuntary bankruptcy petitions been filed by or against your firm, its parent or subsidiaries or predecessor organizations during the last three years? If yes, specify details in an attached written response.  Yes  No
18. Has your firm's surety ever intervened to assist in the completion of a contract or have Performance and/or Payment Bond claims been made to your firm or its predecessor's sureties during the last three years? If yes, specify details in an attached written response, including contact information for owner and surety.  Yes  No
19. Has your firm ever failed to complete any work awarded to you, services and/or delivery of products during the last three (3) years? If yes, specify details in an attached written response.  Yes  No
20. Has your firm ever been terminated from a contract within the last three years? If yes, specify details in an attached written response.  Yes  No
21. Living Wage solicitations only: In determining what, if any, fiscal impacts(s) are a result of the Ordinance for this solicitation, provide the following for informational purposes only. Response is not considered in determining the award of this contract.  
Living Wage had an effect on the pricing.  Yes  No  
 N/A
- If yes, Living Wage increased the pricing by% or decreased the pricing by%.

**Cone of Silence Requirement Certification:**

The Cone of Silence Ordinance, Section 1-266, Broward County Code of Ordinances prohibits certain communications among Vendors, Commissioners, County staff, and Selection or Evaluation Committee members. Identify on a separate sheet any violations of this Ordinance by any members of the responding firm or its joint ventures. After the application of the Cone of Silence, inquiries regarding this solicitation should be directed to the Director of Purchasing or designee. The Cone of Silence terminates when the County Commission or other awarding authority takes action which ends the solicitation.

The Vendor hereby certifies that: (check each box)

- The Vendor has read Cone of Silence Ordinance, Section 1-266, Broward County Code of Ordinances; and
- The Vendor understands that the Cone of Silence for this competitive solicitation shall be in effect beginning upon the appointment of the Selection or Evaluation Committee, for communication regarding this

solicitation with the County Administrator, Deputy County Administrator, Assistant County Administrators, and Assistants to the County Administrator and their respective support staff or any person, including Evaluation or Selection Committee members, appointed to evaluate or recommend selection in this RFP/RLI process. For Communication with County Commissioners and Commission staff, the Cone of Silence allows communication until the initial Evaluation or Selection Committee Meeting.

- The Vendor agrees to comply with the requirements of the Cone of Silence Ordinance.

**Drug-Free Workplace Requirements Certification:**

Section 21.31.a. of the Broward County Procurement Code requires awards of all competitive solicitations requiring Board award be made only to firms certifying the establishment of a drug free workplace program. The program must consist of:

1. Publishing a statement notifying its employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the offeror's workplace, and specifying the actions that will be taken against employees for violations of such prohibition;
2. Establishing a continuing drug-free awareness program to inform its employees about:
  - a. The dangers of drug abuse in the workplace;
  - b. The offeror's policy of maintaining a drug-free workplace;
  - c. Any available drug counseling, rehabilitation, and employee assistance programs; and
  - d. The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;
3. Giving all employees engaged in performance of the contract a copy of the statement required by subparagraph 1;
4. Notifying all employees, in writing, of the statement required by subparagraph 1, that as a condition of employment on a covered contract, the employee shall:
  - a. Abide by the terms of the statement; and
  - b. Notify the employer in writing of the employee's conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or of any state, for a violation occurring in the workplace NO later than five days after such conviction.
5. Notifying Broward County government in writing within 10 calendar days after receiving notice under subdivision 4.b above, from an employee or otherwise receiving actual notice of such conviction. The notice shall include the position title of the employee;
6. Within 30 calendar days after receiving notice under subparagraph 4 of a conviction, taking one of the following actions with respect to an employee who is convicted of a drug abuse violation occurring in the workplace:
  - a. Taking appropriate personnel action against such employee, up to and including termination; or
  - b. Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a federal, state, or local health, law enforcement, or other appropriate agency; and
7. Making a good faith effort to maintain a drug-free workplace program through implementation of subparagraphs 1 through 6.

The Vendor hereby certifies that: (check box)

- The Vendor certifies that it has established a drug free workplace program in accordance with the above requirements.

**Non-Collusion Certification:**

Vendor shall disclose, to their best knowledge, any Broward County officer or employee, or any relative of any such officer or employee as defined in Section 112.3135 (1) (c), Florida Statutes, who is an officer or director of, or has a material interest in, the Vendor's business, who is in a position to influence this procurement. Any Broward County officer or employee who has any input into the writing of specifications or requirements, solicitation of

offers, decision to award, evaluation of offers, or any other activity pertinent to this procurement is presumed, for purposes hereof, to be in a position to influence this procurement. Failure of a Vendor to disclose any relationship described herein shall be reason for debarment in accordance with the provisions of the Broward County Procurement Code.

The Vendor hereby certifies that: (select one)

- The Vendor certifies that this offer is made independently and free from collusion; or
- The Vendor is disclosing names of officers or employees who have a material interest in this procurement and is in a position to influence this procurement. Vendor must include a list of name(s), and relationship(s) with its submittal.

**Public Entities Crimes Certification:**

In accordance with Public Entity Crimes, Section 287.133, Florida Statutes, a person or affiliate placed on the convicted vendor list following a conviction for a public entity crime may not submit on a contract: to provide any goods or services; for construction or repair of a public building or public work; for leases of real property to a public entity; and may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity; and may not transact business with any public entity in excess of the threshold amount provided in s. 287.017 for Category Two for a period of 36 months following the date of being placed on the convicted vendor list.

The Vendor hereby certifies that: (check box)

- The Vendor certifies that no person or affiliates of the Vendor are currently on the convicted vendor list and/or has not been found to commit a public entity crime, as described in the statutes.

**Scrutinized Companies List Certification:**

Any company, principals, or owners on the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or the Scrutinized Companies that Boycott Israel List is prohibited from submitting a response to a solicitation for goods or services in an amount equal to or greater than \$1 million.

The Vendor hereby certifies that: (check each box)

- The Vendor, owners, or principals are aware of the requirements of Sections 287.135, 215.473, and 215.4275, Florida Statutes, regarding Companies on the Scrutinized Companies with Activities in Sudan List the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or the Scrutinized Companies that Boycott Israel List; and
- The Vendor, owners, or principals, are eligible to participate in this solicitation and are not listed on either the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or the Scrutinized Companies that Boycott Israel List; and
- If awarded the Contract, the Vendor, owners, or principals will immediately notify the County in writing if any of its principals are placed on the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or the Scrutinized Companies that Boycott Israel List.

I hereby certify the information provided in the Vendor Questionnaire and Standard Certifications:

<b>Thomas Lindner</b>	<b>Vice President</b>	<b>10/30/2019</b>
<hr/>	<hr/>	<hr/>
*AUTHORIZED SIGNATURE/NAME	TITLE	DATE

Vendor Name: **Big Dog Construction Services, Inc.**

\* I certify that I am authorized to sign this solicitation response on behalf of the Vendor as indicated in Certificate as to Corporate Principal, designation letter by Director/Corporate Officer, or other business authorization to bind on behalf of the Vendor. As the Vendor's authorized representative, I attest that any and all statements, oral, written or otherwise, made in support of the Vendor's response, are accurate, true and correct. I also acknowledge that inaccurate, untruthful, or incorrect statements made in support of the Vendor's response may be used by the County as a basis for rejection, rescission of the award, or termination of the contract and may also serve as the basis for debarment of Vendor pursuant to Section 21.119 of the Broward County Procurement Code. I certify that the Vendor's response is made without prior understanding, agreement, or connection with any corporation, firm or person submitting a response for the same items/services, and is in all respects fair and without collusion or fraud. I also certify that the Vendor agrees to abide by all terms and conditions of this solicitation, acknowledge and accept all of the solicitation pages as well as any special instructions sheet(s).

**Supplier: Big Dog Construction Services, Inc.**

**LOBBYIST REGISTRATION REQUIREMENT CERTIFICATION FORM**

The completed form should be submitted with the solicitation response but must be submitted within three business days of County's request. Vendor may be deemed non-responsive for failure to fully comply within stated timeframes.

The Vendor certifies that it understands if it has retained a lobbyist(s) to lobby in connection with a competitive solicitation, it shall be deemed non-responsive unless the firm, in responding to the competitive solicitation, certifies that each lobbyist retained has timely filed the registration or amended registration required under Broward County Lobbyist Registration Act, Section 1-262, Broward County Code of Ordinances; and it understands that if, after awarding a contract in connection with the solicitation, the County learns that the certification was erroneous, and upon investigation determines that the error was willful or intentional on the part of the Vendor, the County may, on that basis, exercise any contractual right to terminate the contract for convenience.

The Vendor hereby certifies that: (select one)

- It has not retained a lobbyist(s) to lobby in connection with this competitive solicitation; however, if retained after the solicitation, the County will be notified.
- It has retained a lobbyist(s) to lobby in connection with this competitive solicitation and certified that each lobbyist retained has timely filed the registration or amended registration required under Broward County Lobbyist Registration Act, Section 1-262, Broward County Code of Ordinances.

It is a requirement of this solicitation that the names of any and all lobbyists retained to lobby in connection with this solicitation be listed below:

Name of Lobbyist:

Lobbyist's Firm:

Phone:

E-mail:

Name of Lobbyist:

Lobbyist's Firm:

Phone:

E-mail:

**Authorized Signature/Name: Thomas Lindner Date: 10/30/2019**

**Title: Vice President**

**Vendor Name: Big Dog Construction Services, Inc.**

**Supplier: Big Dog Construction Services, Inc.**

**Office of Economic and Small Business Requirements: Small Business Enterprises**

- A. In accordance with the Broward County Business Opportunity Act of 2012, codified in Section 1-81 of the Broward County Code of Ordinances, as amended (the "Business Opportunity Act"), this solicitation is reserved for Small Business Enterprises (SBE).
- B. Only Vendors that are currently certified as SBEs or obtain SBE certification prior to the solicitation due date will be eligible for award of this contract award. Vendors are SBE-certified to provide goods and/or services to the County based on the Vendors' demonstration to the Office of Economic and Small Business Development (OESBD) that they provide such goods and/or services during the normal course of their respective businesses. Brokers are not eligible for certification.
- C. An SBE-certified Vendor must provide a commercially useful function for a project. A SBE-certified Vendor that seeks to act as a broker or does not provide a commercially useful function on a project shall be subject to decertification by OESBD.
- D. It is the Vendor's responsibility to ensure it is compliant with the Business Opportunity Act related requirements and solicitation deadlines by contacting OESBD to verify the Vendor's current SBE status or to obtain the applicable SBE certification.
- E. For detailed information regarding SBEs or to find the application for certification, contact OESBD at (954) 357-6400 or visit the website at: [www.broward.org/EconDev/SmallBusiness](http://www.broward.org/EconDev/SmallBusiness).

**Supplier: Big Dog Construction Services, Inc.**

**Office of Economic and Small Business Requirements: CBE Reserve**

- A. In accordance with the Broward County Business Opportunity Act of 2012, Section 1-81, Code of Ordinances, as amended (the "Business Opportunity Act"), this solicitation is reserved for County Business Enterprise (CBE) firms (CBE Reserve).
- B. CBEs and nonCBEs may respond to the solicitation.
- C. The low, responsive and responsible, or the highest-ranked, responsive and responsible CBE, with capacity to perform, will be recommended for award, consistent with all applicable terms and conditions of Broward County's Procurement Code and subject to entering into an agreement acceptable to the County, as applicable. If no CBE is determined responsive and responsible, a non-CBE may be awarded the contract, with the establishment of at least a twenty-five percent (25%) CBE participation goal (unless the CBE goal is waived or otherwise modified by Board action), or the County may reject all responses submitted.
- D. It is the Vendor's responsibility to ensure compliance with the CBE requirements and adhere to solicitation deadlines. The Vendor must contact OESBD to verify current CBE status or to obtain CBE certification.
- E. The Work may only be performed by CBEs. The Vendor must perform one hundred percent (100%) of the Work as the prime Vendor or the prime Vendor may subcontract portions of Work to other CBEs. If the prime Vendor intends subcontract any portion of the Work, the Vendor must complete a Letter of Intent (refer to Section F below).
- F. CBE Program Requirements: Vendor should submit all required forms and information with its solicitation submittal as matter of responsibility. If the required forms and information are not provided with the Vendor's solicitation submittal, then Vendor must supply the required forms and information no later than three (3) business days after request by OESBD. Vendor may be deemed non-responsible for failure to fully comply with this solicitation and CBE Program Requirements within these stated timeframes.
1. Vendor should include in its solicitation submittal a **Letter of Intent Between Bidder/Offeror and County Business Enterprise (CBE) Subcontractor/Supplier (LOI)** for each CBE the Vendor intends to use to achieve the assigned reserve or CBE participation goal. If the Vendor is a CBE performing 100% of the work, an LOI should be submitted stating that 100% of the work will be completed by the CBE.
- The form is available at the following link:  
<http://www.broward.org/EconDev/Documents/CBELetterOfIntent.pdf>
2. If Vendor is unable to attain the CBE participation goal or reserve, Vendor should include in its solicitation submittal an **Application for Evaluation of Good Faith Efforts** and all of the required supporting information.
- The form is available at the following link:  
<http://www.broward.org/EconDev/WhatWeDo/Documents/GoodFaithEffortEval.pdf>
- G. A certified firm must provide a commercially useful function for the Project and may not act as a broker. A certified firm that seeks to act as a broker, or that does not provide a commercially useful function for the Project shall be subject to decertification by OESBD.
- H. Vendors are encouraged to purchase materials from certified CBE firms whenever possible.



- I. A joint venture is only eligible for award if all members of the joint venture are certified CBE firms.
- J. OESBD maintains an online directory of CBE firms. The online directory is available for use by Vendors at <https://webapps4.broward.org/smallbusiness/sbdirectory.aspx>.
- K. For detailed information regarding the CBE Program contact the OESBD at (954) 357-6400 or visit the office's website at: <http://www.broward.org/EconDev/SmallBusiness/>
- F. If awarded the contract, Vendor agrees to and shall comply with all applicable requirements of this solicitation, the Business Opportunity Act, and the CBE Program in the award and administration of the contract, including the following:
  1. No party to this contract may discriminate on the basis of race, color, sex, religion, national origin, disability, age, marital status, political affiliation, sexual orientation, pregnancy, or gender identity and expression in the performance of this contract.
  2. All entities that seek to conduct business with the County, including Vendor or any Prime Contractors, Subcontractors, and Bidders, shall conduct such business activities in a fair and reasonable manner, free from fraud, coercion, collusion, intimidation, or bad faith. Failure to do so may result in the cancellation of this solicitation, cessation of contract negotiations, revocation of CBE certification, and suspension or debarment from future contracts.
  3. If Vendor fails to meet or make Good Faith Efforts (as defined in the Business Opportunity Act) to meet the CBE participation commitment (the "Commitment"), including CBE reserve, then Vendor shall pay the County liquidated damages in an amount equal to fifty percent (50%) of the actual dollar amount by which Vendor failed to achieve the Commitment, up to a maximum amount of ten percent (10%) of the total contract amount, excluding costs and reimbursable expenses. An example of this calculation is stated in Section 1-81.7, Broward County Code of Ordinances.
  4. Vendor shall comply with all applicable requirements of the Business Opportunity Act in the award of this contract. Failure by Vendor to carry out any of these requirements shall constitute a material breach of the contract, which shall permit the County to terminate this contract or to exercise any other remedy provided under this contract, the Broward County Code of Ordinances, the Broward County Administrative Code, or other applicable laws, with all such remedies being cumulative.
  5. Vendor shall pay its CBE subcontractors and suppliers, within fifteen (15) days following receipt of payment from the County, for all completed subcontracted work and supplies. If Vendor withholds an amount from CBE subcontractors or suppliers as retainage, such retainage shall be released and paid within fifteen (15) days following receipt of payment of retained amounts from the County.
  6. Vendor understands that the County will monitor Vendor's compliance with the CBE Program requirements. All Vendors must provide OESBD with a Monthly Utilization Report (MUR) to confirm its compliance with the Commitment agreed to in the contract; timely submission of the MUR every month throughout the term of the contract, including amendment and extension terms, is a condition of the County's payment of Vendor under the contract.

This form is also available online at:

[www.broward.org/econdev/SmallBusiness/Pages/compliance.aspx](http://www.broward.org/econdev/SmallBusiness/Pages/compliance.aspx)



**Supplier: Big Dog Construction Services, Inc.**

**LITIGATION HISTORY FORM**

The completed form(s) should be returned with the Vendor's submittal. If not provided with submittal, the Vendor must submit within three business days of County's request. Vendor may be deemed non-responsive for failure to fully comply within stated timeframes.

- There are no material cases for this Vendor; or
- Material Case(s) are disclosed below:

Is this for a: (check type) <input type="checkbox"/> Parent, <input type="checkbox"/> Subsidiary, or <input type="checkbox"/> Predecessor Firm?	If Yes, name of Parent/Subsidiary/Predecessor:
	Or No <input type="checkbox"/>
Party	
Case Number, Name, and Date Filed	
Name of Court or other tribunal	
Type of Case	Bankruptcy <input type="checkbox"/> Civil <input type="checkbox"/> Criminal <input type="checkbox"/> Administrative/Regulatory <input type="checkbox"/>
Claim or Cause of Action and Brief description of each Count	
Brief description of the Subject Matter and Project Involved	
Disposition of Case  (Attach copy of any applicable Judgment, Settlement Agreement and Satisfaction of Judgment.)	Pending <input type="checkbox"/> Settled <input type="checkbox"/> Dismissed <input type="checkbox"/>  Judgment Vendor's Favor <input type="checkbox"/> Judgment Against Vendor <input type="checkbox"/>  If Judgment Against, is Judgment Satisfied? <input type="checkbox"/> Yes <input type="checkbox"/> No
Opposing Counsel	Name: Email: Telephone Number:

**Vendor Name: Big Dog Construction Services, Inc.**

Supplier: **Big Dog Construction Services, Inc.**

**AFFILIATED ENTITIES OF THE PRINCIPAL(S) CERTIFICATION FORM**

The completed form should be submitted with the solicitation response but must be submitted within three business days of County's request. Vendor may be deemed non-responsive for failure to fully comply within stated timeframes.

- a. All Vendors are required to disclose the names and addresses of "affiliated entities" of the Vendor's principal(s) over the last five (5) years (from the solicitation opening deadline) that have acted as a prime Vendor with the County.
- b. The County will review all affiliated entities of the Vendor's principal(s) for contract performance evaluations and the compliance history with the County's Small Business Program, including CBE, DBE and SBE goal attainment requirements. "Affiliated entities" of the principal(s) are those entities related to the Vendor by the sharing of stock or other means of control, including but not limited to a subsidiary, parent or sibling entity.
- c. The County will consider the contract performance evaluations and the compliance history of the affiliated entities of the Vendor's principals in its review and determination of responsibility.

The Vendor hereby certifies that: (select one)

- No principal of the proposing Vendor has prior affiliations that meet the criteria defined as "Affiliated entities"
- Principal(s) listed below have prior affiliations that meet the criteria defined as "Affiliated entities"

Principal's Name:

Names of Affiliated Entities:

Principal's Name:

Names of Affiliated Entities:

Principal's Name:

Names of Affiliated Entities:

Authorized Signature Name: **Thomas Lindner**

Title: **Vice President**

Vendor Name: **Big Dog Construction Services, Inc.**

Date: **10/24/2019**

Supplier: **Big Dog Construction Services, Inc.**

**DOMESTIC PARTNERSHIP ACT CERTIFICATION FORM (REQUIREMENT AND TIEBREAKER)**

Refer to Special Instructions to identify if Domestic Partnership Act is a requirement of the solicitation or acts only as a tiebreaker. If Domestic Partnership is a requirement of the solicitation, the completed and signed form should be returned with the Vendor's submittal. If the form is not provided with submittal, the Vendor must submit within three business days of County's request. Vendor may be deemed non-responsive for failure to fully comply within stated timeframes. To qualify for the Domestic Partnership tiebreaker criterion, the Vendor must currently offer the Domestic Partnership benefit and the completed and signed form must be returned at time of solicitation submittal.

The Domestic Partnership Act, Section 16 ½ -157, Broward County Code of Ordinances, requires all Vendors contracting with the County, in an amount over \$100,000 provide benefits to Domestic Partners of its employees, on the same basis as it provides benefits to employees' spouses, with certain exceptions as provided by the Ordinance.

For all submittals over \$100,000.00, the Vendor, by virtue of the signature below, certifies that it is aware of the requirements of Broward County's Domestic Partnership Act, Section 16-½ -157, Broward County Code of Ordinances; and certifies the following: (check only one below).

- 1. The Vendor currently complies with the requirements of the County's Domestic Partnership Act and provides benefits to Domestic Partners of its employees on the same basis as it provides benefits to employees' spouses
- 2. The Vendor will comply with the requirements of the County's Domestic Partnership Act at time of contract award and provide benefits to Domestic Partners of its employees on the same basis as it provides benefits to employees' spouses.
- 3. The Vendor will not comply with the requirements of the County's Domestic Partnership Act at time of award.
- 4. The Vendor does not need to comply with the requirements of the County's Domestic Partnership Act at time of award because the following exception(s) applies: **(check only one below)**.
  - The Vendor is a governmental entity, not-for-profit corporation, or charitable organization.
  - The Vendor is a religious organization, association, society, or non-profit charitable or educational institution.
  - The Vendor provides an employee the cash equivalent of benefits. (Attach an affidavit in compliance with the Act stating the efforts taken to provide such benefits and the amount of the cash equivalent).
  - The Vendor cannot comply with the provisions of the Domestic Partnership Act because it would violate the laws, rules or regulations of federal or state law or would violate or be inconsistent with the terms or conditions of a grant or contract with the United States or State of Florida. Indicate the law, statute or regulation (State the law, statute or regulation and attach explanation of its applicability).

Thomas Lindner	Vice President	Big Dog Construction Services, Inc.	10/24/2019
<b>Authorized Signature/Name</b>	<b>Title</b>	<b>Vendor Name</b>	<b>Date</b>



**Supplier: Big Dog Construction Services, Inc.**

**AGREEMENT EXCEPTION FORM**

The completed form(s) should be returned with the Vendor's submittal. If not provided with submittal, it shall be deemed an affirmation by the Vendor that it accepts the terms and conditions of the County's Agreement as disclosed in the solicitation.

The Vendor must either provide specific proposed alternative language on the form below. Additionally, a brief justification specifically addressing each provision to which an exception is taken should be provided.

- There are no exceptions to the terms and conditions of the County Agreement as referenced in the solicitation; or
- The following exceptions are disclosed below: (use additional forms as needed; separate each Article/ Section number)

Term or Condition Article / Section	Insert version of exception or specific proposed alternative language	Provide brief justification for change

**Vendor Name:** tlindner@bigdogcsi.com

**Supplier: Big Dog Construction Services, Inc.**

**RFP-RFQ-RLI LOCATION ATTESTATION FORM (EVALUATION CRITERIA)**

The completed and signed form and supporting information (if applicable, for Joint Ventures) should be returned with the Vendor's submittal. If not provided with submittal, the Vendor must submit within three business days of County's request. Failure to timely submit this form and supporting information may affect the Vendor's evaluation. Provided information is subject to verification by the County.

A Vendor's principal place of business location (also known as the nerve center) within Broward County is considered in accordance with Evaluation Criteria. The County's definition of a principal place of business is:

1. As defined by the Broward County Local Preference Ordinance, "Principal place of business means the nerve center or center of overall direction, control and coordination of the activities of the bidder [Vendor]. If the bidder has only one (1) business location, such business location shall be considered its principal place of business."
2. A principal place of business refers to the place where a corporation's officers direct, control, and coordinate the corporation's day-to-day activities. It is the corporation's 'nerve center' and in practice it should normally be the place where the corporation maintains its headquarters; provided that the headquarters is the actual center of direction, control, and coordination, i.e., the 'nerve center', and not simply an office where the corporation holds its board meetings (for example, attended by directors and officers who have traveled there for the occasion).

The Vendor's principal place of business in Broward County shall be the Vendor's "Principal Address" as indicated with the Florida Department of State Division of Corporations, for at least six months prior to the solicitation's due date.

Check one of the following:

- The Vendor certifies that it has a principal place of business location (also known as the nerve center) within Broward County, as documented in Florida Department of State Division of Corporations (Sunbiz), and attests to the following statements:

1. Vendor's address listed in its submittal is its principal place of business as defined by Broward County;
2. Vendor's "Principal Address" listed with the Florida Department of State Division of Corporations is the same as the address listed in its submittal and the address was listed for at least six months prior to the solicitation's opening date. A copy of Florida Department of State Division of Corporations (Sunbiz) is attached as verification.
3. Vendor must be located at the listed "nerve center" address ("Principal Address") for at least six (6) months prior to the solicitation's opening date;
4. Vendor has not merged with another firm within the last six months that is not headquartered in Broward County and is not a wholly owned subsidiary or a holding company of another firm that is not headquartered in Broward County;
5. If awarded a contract, it is the intent of the Vendor to remain at the referenced address for the duration of the contract term, including any renewals, extensions or any approved

interim contracts for the services provided under this contract; and

6. The Vendor understands that if after contract award, the County learns that the attestation was erroneous, and upon investigation determines that the error was willful or intentional on the part of the Vendor, the County may, on that basis exercise any contractual right to terminate the contract. Further any misleading, inaccurate, false information or documentation submitted by any party affiliated with this procurement may lead to suspension and/or debarment from doing business with Broward County as outlined in the Procurement Code, Section 21.119.

If the Vendor is submitting a response as a Joint Venture, the following information is required to be submitted:

- a. Name of the Joint Venture Partnership
- b. Percentage of Equity for all Joint Venture Partners
- c. A copy of the executed Agreement(s) between the Joint Venture Partners

Vendor does not have a principal place of business location (also known as the nerve center) within Broward County.

**Vendor Information:**

Vendor Name: **Big Dog Construction Services, Inc.**

Vendor's address listed in its submittal is:

**3730 Coconut Creek Pkwy, Suite 180  
Coconut Creek, FL 33066**

The signature below must be by an individual authorized to bind the Vendor. The signature below is an attestation that all information listed above and provided to Broward County is true and accurate.

<b>Thomas Lindner</b>	<b>Vice President</b>	<b>Big Dog Construction Services, Inc.</b>	<b>10/24/2019</b>
Authorized Signature/Name	Title	Vendor Name	Date

**Supplier: Big Dog Construction Services, Inc.**

**RFP-RLI-RFQ LOCAL PREFERENCE AND TIE BREAKER CERTIFICATION FORM**

The completed and signed form should be returned with the Vendor's submittal to determine Local Preference eligibility, however it must be returned at time of solicitation submittal to qualify for the Tie Break criteria. If not provided with submittal, the Vendor must submit within three business days of County's request for evaluation of Local Preference. Proof of a local business tax should be submitted with this form. Failure to timely submit this form or local business tax receipt may render the business ineligible for application of the Local Preference or Tie Break Criteria.

In accordance with Section 21.31.d. of the Broward County Procurement Code, to qualify for the Tie Break Criteria, the undersigned Vendor hereby certifies that (check box if applicable):

- The Vendor is a local Vendor in Broward County and:
  - a. has a valid Broward County local business tax receipt;
  - b. has been in existence for at least six-months prior to the solicitation opening;
  - c. at a business address physically located within Broward County;
  - d. in an area zoned for such business;
  - e. provides services from this location on a day-to-day basis, and
  - f. services provided from this location are a substantial component of the services offered in the Vendor's proposal.

In accordance with Local Preference, Section 1-74, et. seq., Broward County Code of Ordinances, a local business meeting the below requirements is eligible for Local Preference. To qualify for the Local Preference, the undersigned Vendor hereby certifies that (check box if applicable):

- The Vendor is a local Vendor in Broward and:
  - a. has a valid Broward County local business tax receipt issued at least one year prior to solicitation opening;
  - b. has been in existence for at least one-year prior to the solicitation opening;
  - c. provides services on a day-to-day basis, at a business address physically located within the Broward County limits in an area zoned for such business; and
  - d. the services provided from this location are a substantial component of the services offered in the Vendor's proposal.

Local Business Address: **3730 Coconut Creek Pkwy., Suite 180  
Coconut Creek, FL 33066**

Vendor does not qualify for Tie Break Criteria or Local Preference, in accordance with the above requirements. The undersigned Vendor hereby certifies that (check box if applicable): The Vendor is not a local Vendor in Broward County.

<b>Thomas Lindner</b>	<b>Vice President</b>	<b>Big Dog Construction Services, Inc.</b>	<b>10/24/2019</b>
<b>AUTHORIZED SIGNATURE/NAME</b>	<b>TITLE</b>	<b>COMPANY</b>	<b>DATE</b>



**Supplier: Big Dog Construction Services, Inc.**

**VOLUME OF PREVIOUS WORK ATTESTATION FORM**

The completed and signed form should be returned with the Vendor's submittal. If not provided with submittal, the Vendor must submit within three business days of County's request. Failure to provide timely may affect the Vendor's evaluation.

**This completed form MUST be included with the Vendor's submittal at the time of the opening deadline to be considered for a Tie Breaker criterion (if applicable).**

Points assigned for Volume of Previous Work will be based on the amount paid-to-date by the County to a prime Vendor **MINUS** the Vendor's confirmed payments paid-to-date to approved certified County Business Enterprise (CBE) firms performing services as Vendor's subcontractor/subconsultant to obtain the CBE goal commitment as confirmed by County's Office of Economic and Small Business Development. Reporting must be within five (5) years of the current solicitation's opening date.

Vendor must list all received payments paid-to-date by contract as a prime vendor from Broward County Board of County Commissioners. Reporting must be within five (5) years of the current solicitation's opening date.

Vendor must also list all total confirmed payments paid-to-date by contract, to approved certified CBE firms utilized to obtain the contract's CBE goal commitment. Reporting must be within five (5) years of the current solicitation's opening date.

In accordance with Section 21.31.d. of the Broward County Procurement Code, the Vendor with the lowest dollar volume of work previously paid by the County over a five-year period from the date of the submittal opening will receive the Tie Breaker.

**The Vendor attests to the following:**

Item No.	Project Title	Contract No.	Department/ Division	Date Awarded	Prime: Paid to Date	CBE: Paid to Date
1.						
2.						
3.						
4.						
5.						
6.						
7.						

Grand Total      **\$0.00**              **\$0.00**

Has the Vendor been a member/partner of a Joint Venture firm that was awarded a contract by the County?

Yes        No   

If Yes, Vendor must submit a **Joint Vendor Volume of Work Attestation Form**.

**Vendor Name:**

**Authorized Signature/Name**

**Title**

**Date**

**VOLUME OF PREVIOUS WORK ATTESTATION JOINT VENTURE FORM**

If applicable, this form and additional required documentation should be submitted with the Vendor's submittal. If not provided with submittal, the Vendor must submit within three business days of County's request. Failure to timely submit this form and supporting documentation may affect the Vendor's evaluation.

If a Joint Venture, the payments paid-to-date by contract provided must encompass the Joint Venture and each of the entities forming the Joint Venture. Points assigned for Volume of Previous Work will be based on the amount paid-to-date by contract to the Joint Venture firm **MINUS** all confirmed payments paid-to-date to approved certified CBE firms utilized to obtain the CBE goal commitment. Reporting must be within five (5) years of the current solicitation's opening date. Amount will then be multiplied by the member firm's equity percentage.

In accordance with Section 21.31.d. of the Broward County Procurement Code, the Vendor with the lowest dollar volume of work previously paid by the County over a five-year period from the date of the submittal opening will receive the Tie Breaker.

**The Vendor attests to the following:**

Item No.	Project Title	Contract No.	Department/ Division	Date Awarded	JV Equity Percent	Prime: Paid to Date	CBE: Paid to Date
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
Grand Total						<b>\$0.00</b>	<b>\$0.00</b>

Vendor is required to submit an executed Joint Venture agreement(s) and any amendments for each project listed above. Each agreement must be executed prior to the opening date of this solicitation.

**Vendor Name: Big Dog Construction Services, Inc.**

**Thomas E. Lindner**  
Authorized Signature/Name

**Vice President**  
Title

**11/22/2019**  
Date

Supplier: **Big Dog Construction Services, Inc.**

**Insurance Requirements: (Refer to the Insurance Requirement Form)**

- A. The insurance requirement designated in the **Insurance Requirement Form** indicates the minimum coverage required for the scope of work, as determined by the Risk Management Division. Vendor shall provide verification of compliance such as a Certificate of Insurance, or a letter of verification from the Vendor's insurance agent/broker, which states the ability of the Vendor to meet the requirements upon award. The verification must be submitted within three business days of County's request. Vendor may be deemed non-responsive for failure to fully comply within stated timeframes. Final award shall be subject to receipt and acceptance by the County of proof of meeting all insurance requirements of the bid.
- B. Without limiting any of the other obligations or liabilities of Vendor, Vendor shall provide, pay for, and maintain on a primary basis in force until all of its work to be performed under this Contract has been completed and accepted by County (or for such duration specified), at least the minimum insurance coverage and limits set forth in the Insurance Requirement Form under the following conditions listed below. If a limit or policy is not indicated on Insurance Requirement certificate by a checked box, it is not required as a condition of this contract.
1. Commercial General Liability with minimum limits per occurrence, combined single limit for bodily injury and property damage, and when indicated a minimum limit per aggregate. County is to be expressly included as an Additional Insured in the name of Broward County arising out of operations performed for the County, by or on behalf of Vendor, or acts or omissions of Vendor in connection with general supervision of such operation. If Vendor uses a subcontractor, then Vendor shall require that subcontractor names County as an Additional Insured.
  2. Business Automobile Liability with minimum limits per occurrence, combined single limit for bodily injury and property damage. Scheduled autos shall be listed on Vendor's certificate of insurance. County is to be named as an additional insured in the name of Broward County.

Note: Insurance requirements for Automobile Liability are not applicable where delivery will be made by a third party carrier. All vendors that will be making deliveries in their own vehicles are required to provide proof of insurance for Automobile Liability and other pertinent coverages as indicated on the Insurance Requirement certificate, prior to award. If deliveries are being made by a third party carrier, other pertinent coverages listed on the Insurance Requirement certificate are still required.

Vendor should indicate how product is being delivered:

Vendor Name: **Big Dog Construction Services, Inc.**

Company Vehicle: Yes  or No

If Common Carrier (indicate carrier):

Other: **tlindner@bigdogcsi.com**

3. Workers' Compensation insurance to apply for all employees in compliance with Chapter 440, the "Workers' Compensation Law" of the State of Florida and all applicable federal

laws. The policy must include Employers' Liability with minimum limits each accident. If any operations are to be undertaken on or about navigable waters, coverage must be included for the U.S. Longshoremen & Harbor Workers Act and Jones Act.

4. Excess Liability/Umbrella Insurance may be used to satisfy the minimum liability limits required; however, the annual aggregate limit shall not be less than the highest "each occurrence" limit for the underlying liability policy. Vendor shall endorse County as an Additional Insured unless the policy provides coverage on a pure/true "Follow-form" basis.
5. Builder's Risk or equivalent coverage (such as Property Insurance or Installation Floater) is required as a condition precedent to the issuance of the Second Notice to Proceed for projects involving but not limited to: changes to a building's structural elements, work compromising the exterior of the building for any extended period of time, installation of a large single component, or remodeling where the cost of remodeling is 20% or more the value of the property. Coverage shall be, "All Risks" Completed Value form with a deductible not to exceed Ten Thousand Dollars (\$10,000.00) each claim for all perils except for wind and flood.
6. For the peril of wind, the Vendor shall maintain a deductible that is commercially feasible which does not exceed five percent (5%) of the value of the Contract price. Such Policy shall reflect Broward County as an additional loss payee.
7. For the peril of flood, coverage must be afforded for the lesser of the total insurable value of such buildings or structures, and the maximum amount of flood insurance coverage available under the National Flood Program. Vendor shall maintain a deductible that is commercially feasible and does not exceed five percent (5%) of the value of the Contract price. Such Policy shall reflect Broward County as an additional loss payee.
8. The County reserves the right to provide Property Insurance covering the Project, materials, equipment and supplies intended for specific installation in the Project while such materials, equipment and supplies are located at the Project site, in transit, or while temporarily located away from the Project site. This coverage will not cover any of the Vendor's or subcontractors' tools, equipment, machinery or provide any business interruption or time element coverage to the Vendor(s).
9. If the County decides to purchase Property Insurance or provide for coverage under its existing insurance policy for this Project, then the insurance required to be carried by the Vendor may be modified to account for the insurance being provided by the County. Such modification may also include execution of Waiver of Subrogation documentation.
10. In the event that a claim occurs for this Project and is made upon the County's insurance policy, for other than a windstorm, Vendor will pay at least Ten Thousand Dollars (\$10,000.00) of the deductible amount for such claim.
11. Waiver of Occupancy Clause or Warranty: Policy must be specifically endorsed to eliminate any "Occupancy Clause" or similar warranty or representation that the building (s), addition(s) or structure(s) in the course of construction shall not be occupied without specific endorsement of the policy. The Policy must be endorsed to provide that the Builder's Risk coverage will continue to apply until final acceptance by County.
12. Pollution Liability or Environmental Impairment Liability: including clean-up costs, with minimum limits per claim, subject to a maximum deductible per claim. Such policy shall remain in force for the minimum length of time indicated, include an annual policy aggregate and name Broward County as an Additional Insured. Vendor shall be responsible for all deductibles in the event of a claim.

13. Professional Liability Insurance with minimum limits for each claim, subject to a maximum deductible per claim. Such policy shall remain in force for the minimum length of time indicated. Vendor shall notify County in writing within thirty (30) days of any claim filed or made against its Professional Liability Insurance policy. Vendor shall be responsible for all deductibles in the event of a claim. The deductible shall be indicated on the Vendor's Certificate of Insurance.
- C. Coverage must be afforded on a form no more restrictive than the latest edition of the respective policy form as filed by the Insurance Services Office. If the initial insurance expires prior to the completion and acceptance of the Work, renewal certificates shall be furnished upon expiration. County reserves the right to obtain a certified copy of any insurance policy required by this Section within fifteen (15) calendar days of a written request by County.
  - D. Notice of Cancellation and/or Restriction: the policy(ies) must be endorsed to provide Broward County with at least thirty (30) days' notice of cancellation and/or restriction.
  - E. The official title of the Certificate Holder is Broward County. This official title shall be used in all insurance documentation.
  - F. Broward County's Risk Management Division reserves the right, but not the obligation, to review and revise any insurance requirements at the time of contract renewal and/or any amendments, not limited to deductibles, limits, coverages and endorsements based on insurance market conditions affecting the availability or affordability of coverage; or changes in the scope of work/specifications affecting the applicability of coverage.

Supplier: **Big Dog Construction Services, Inc.**

**Workforce Investment Program Requirements:**

- A. In accordance with Broward County Workforce Investment Program, Administrative Code, Section 19.211, the Workforce Investment Program (Program) this solicitation is a covered contract if the open-end contract award value exceeds \$500,000 per year or if the individual project value exceeds \$500,000 under a fixed-term contract. The Program encourages Vendors to utilize CareerSource Broward (CareerSource) and their contract partners as a first source for employment candidates for work on County-funded projects, and encourages investment in Broward County economic development through the hiring of economically disadvantaged or hard-to-hire individuals.
- B. Compliance with the Program, including compliance with First Source Referral and the Qualifying New Hires goals, is a matter of responsibility. Vendor should submit the **Workforce Investment Program Certification Form** with its response. If not provided with solicitation submittal, the Vendor must supply within three business days of County's request. Vendor may be deemed non-responsible for failure to comply within stated timeframes.
- C. The following is a summary of requirements contained in the Program. This summary is not all-inclusive of the requirements of the Program. If there is any conflict between the following summary and the language in the Program, the language in the Program shall prevail. In compliance with the Program, Vendor (and/or its subcontractors) shall agree to:
1. be bound to contractual obligations under the contract;
  2. use good faith efforts to meet First Source Referral goal for vacancies that result from award of this contract;
  3. publicly advertise any vacancies that are the direct result of this contract, exclusively with CareerSource for at least five (5) business days;
  4. review qualifications of CareerSource's Qualified Referrals and use good faith efforts to interview Qualified Referrals that appear to meet the required qualifications;
  5. use good faith efforts to hire Qualifying New Hires (as defined by the Program) for at least fifty percent (50%) of the vacancies (rounded up) that are the direct result of this contract;
  6. obtain a hired worker's written certification, attesting to a status as a Qualifying New Hire, Economically Disadvantaged Worker, or Hard-to-Hire worker (if applicable);
  7. retain records relating to Program requirements, including: records of all applicable vacancies; job order requests to CareerSource; qualified referral lists; and records of candidates interviewed and the outcome of the interviews.
  8. provide to the County any documents and records demonstrating Vendor's compliance and good faith efforts to comply with the Program;
  9. submit to the County an annual report by January 31<sup>st</sup> and within 30 days of contract completion or expiration; and

10. ensure that all of its subcontractors comply with the requirements of the Program.

- D. Further information about the Program, Vendor's obligations, and the Qualifying New Hire's certification form may be obtained on the Office of Economic and Small Business Development website:

[broward.org/econdev/Pages/WorkforceInvestmentProgram.aspx](http://broward.org/econdev/Pages/WorkforceInvestmentProgram.aspx). Vendor is responsible for reading and understanding requirements of the Program.

- E. Subcontractors: Vendor's subcontractors shall use good faith efforts to meet the First Source Referral and the Qualifying New Hires goals, in accordance with the Program. The Vendor shall include in any subcontracts a requirement that the all subcontractors comply with the Program requirements. The Vendor shall be responsible for compliance by any subcontractor with the Program as it applies to their subcontract.
- F. Reporting: Vendor shall maintain and make available to County upon request all records documenting Vendor's compliance and its subcontractors' compliance with the requirements of the Program, and shall submit the required reports to the Contract Administrator annually by January 31 and within thirty (30) days after the conclusion of this contract. Failure to timely comply with reporting requirements shall constitute a material breach of this contract.
- G. Evaluation: The Contract Administrator will document the Vendor's compliance and good faith efforts as part of the Vendor's Performance Evaluation.
- H. Failure to demonstrate good faith efforts to meet the First Source Referral and the Qualifying New Hires goal shall constitute a material breach of this contract.



## WORKFORCE INVESTMENT PROGRAM CERTIFICATION FORM

This form(s) should be returned with the Vendor's submittal. If not provided with solicitation submittal, the Vendor must supply information within three business days of County's request. Vendor may be deemed non-responsible for failure to comply within stated timeframes.

In accordance with the Workforce Investment Program:

**Big Dog Construction Services, Inc.** (Vendor) agrees to be bound to the contractual obligations of the Workforce Investment Program, Broward County Administrative Code Section 19.211, requiring our firm to use good faith efforts to meet the First Source Referral Goal and the Qualifying New Hires Goal.

The statement must be signed by an authorized signatory of the firm. Receipt of the signed statement from the Vendor is a matter of responsibility. A firm not offering an affirmative response in this regard will be found "non-responsible" to the solicitation and not eligible for further evaluation or award.

**Thomas E Lindner**  
AUTHORIZED SIGNATURE/NAME

**Vice President**  
TITLE

**11/08/2019**  
DATE