



EAST

PEGASUS LINK CONSTRUCTORS

Sub-Contractor Handbook



IMPORTANT NOTICE

This handbook is presented as a guideline to some of the company's current procedures and Health, Safety and Environmental (HSE) requirements, and they will be changed and updated by the company when necessary. This information is not intended to create a contract between the company and any employee. Nothing in this handbook binds the company to any specific procedures, requirements, policies, benefits, working conditions, or privileges of employment or to a definite period of employment. As an employee, you are completely free to leave employment with the company at any time you choose, with or without notice. Similarly, the company has the same right to end the employment relationship.

THIS HANDBOOK IS NOT A CONTRACT.

Print Full Name:

Signature:

Date:

TABLE OF CONTENTS

Table of Contents

TABLE OF CONTENTS	3
Policy Against Discrimination and Harassment.....	9
Inclement Weather/Natural and Civil Emergencies.....	11
COMMUNICATION	11
Problem Solving Procedure	11
PROJECT RULES	12
Telephone Calls	12
Visiting Other Work Areas.....	12
Property Removal.....	12
Solicitation and Distribution.....	12
CONDUCT VIOLATIONS	13
Employee Discipline.....	13
SECURITY	14
SAFETY REQUIREMENTS	15
General	15
Pedestrian Safety.....	16
Vehicle Safety	16
SAFETY TECHNIQUES.....	17
General	17
Job Hazard Analysis (JHA) Pre-task Planning.....	17
Distractions.....	18
Meetings.....	18
Inspections.....	18
Lightning	18

HOUSEKEEPING.....	19
General	19
Trash, Waste, and Scrap Disposal.....	19
Grounds Maintenance.....	20
SIGNS AND BARRICADES.....	21
ANYONE WHO MAKES A HOLE OR OPENING IS RESPONSIBLE FOR PHYSICAL PROTECTION.....	23
Placement.....	23
Material	23
Access	23
Slips/Trips	24
MATERIAL HANDLING	24
General	24
By Hand.....	24
Mechanical Handling	25
Material Preparation	25
Stability Control.....	25
Rigging	25
Miscellaneous Tools and Equipment.....	26
Ropes and Slings	26
Reflective Garments	27
Head	28
Eye and Face Protection	28
Precautions.....	29
Ear Protection.....	29
Fingers, Hands, and Wrists Gloves	29

Tool Holders	29
Tag Lines	30
Do not wrap tag lines around your hands or body. Restrictions.....	30
Back	30
Legs, Thighs, Knees, Shins, and Ankles	30
ALL POINTS DOWN	30
Feet and Toes	31
Safety Harnesses	31
Life Jackets or Buoyant Work Vests.....	32
Respiratory (Breathing)	32
TOOLS.....	32
General	32
Hand Tools	33
Portable Power Tools Restrictions	33
Guarding	34
MOBILE EQUIPMENT	34
General	34
Cranes	35
Work Near Overhead Electrical Lines.....	36
Material Handling Equipment	36
Material Hoists	36
Motor Vehicles and Power Equipment	36
Cars, Trucks, and ATV's.....	37
LOCKOUT AND TAGOUT.....	37
PERMITS.....	38
Confined Space Permit	38

Hot Work Permit.....	39
TRAFFIC CONTROL DEVICES	39
LADDERS AND SCAFFOLDS	39
Ladders	39
Straight and Extension Ladders	40
Stepladders.....	41
Scaffolds	41
Patented Metal Scaffolding	42
Suspended Scaffolding	42
WORK PLATFORMS	43
OVERHEAD STRIPPING BUGGY.....	43
EXCAVATION AND TRENCHING	44
WELDING AND CUTTING	44
General	44
Protective Clothing	45
Welding (Electric)	45
Burning (Gas)	46
ELECTRICAL	48
General	48
FIRE PROTECTION	49
General	49
Extinguishers	49
Combustibles	50
Refueling.....	50
Smoking	50
Flammables	50
Liquids – Flammable	50
HAZARDOUS MATERIALS	52

Corrosive Liquids (Acids and Caustics)	52
• ALL LIQUID CONTAINERS MUST BE PROPERLY IDENTIFIED AS TO CONTENTS.	52
Radioactive Material	52
HAZARD COMMUNICATION.....	53
(Right to Know).....	53

WELCOME

Welcome to Pegasus Link Constructors (PLC) and the I635 East LBJ Project. You are joining a team that has a long and successful history of executing projects in Texas!! Safety is a team effort involving everyone and as a part of this team, you are expected to work safely, follow the safety requirements of the project and look out for your coworkers and others on the project. PLC's goal is to deliver a quality job, done safely while meeting all of our customers' expectations. Your safety as well as the safety of our team, the public and our client is a value that will **NEVER** be compromised! A successful project must have an uncompromising safety culture.

PLC will maintain a safety and health program that conforms to the best practices of bridge and highway construction. To succeed, such a program must embody the proper attitudes toward incident prevention on the part of management, our supervisors and you as a member of the PLC team. It also requires cooperation in all safety, health and environmental (HSE) matters, not only between supervisor and employee, but also between each employee and their coworkers. Only through such a cooperative effort can a safety program in the best interest of all be established and preserved.

It is the expectation that everyone will share the responsibility for creating a safe and healthy workplace with the highest possible safety standards. This does not occur by chance, but is the result of a commitment by each of us to include safety in the planning and execution of all tasks involved in completing this project.

PLC is committed to providing a safe and healthy work environment for you and our entire PLC team as well as the general public in the surrounding areas. **This commitment to safety will not be compromised!** I expect every employee to have the same commitment to the high standards of safety and health as we do. Take the time to absorb the safety training you receive upon your employment with the company, and if a safety concern arises, **STOP**, and contact your supervisor immediately to ensure that your concern is addressed.

I look forward to working with you. Welcome to the Pegasus Link Constructors team!

Stephen Varnell, PMP

A handwritten signature in black ink that reads "Stephen Varnell". The signature is written in a cursive, flowing style.

Project Director

Policy Against Discrimination and Harassment

PLC is firmly committed to maintaining a positive, respectful and productive environment that is free of any form of harassment or intimidation to ensure that all employees are treated with dignity and respect. As such, harassment and discrimination based on race, sex, religion, national origin, age, veteran status, disability, sexual orientation, color, gender identity, ancestry, or any other legally protected criteria is expressly prohibited. ***Whether or not the offending employee meant to give offense, or believes his or her comments or conduct was welcomed, is not significant.*** Rather, the company's policy is violated when other employees, whether recipients or observers, are in fact offended by comments or conduct directed at a protected class. The company's commitment to providing a harassment-free and discrimination-free environment applies to all PLC employees, including supervisors and managers, at all times.

Prohibited harassment may include, but is not limited to, emails, jokes, letters, posters, screen savers, pictures, objects, propositions, graphic displays, suggestions, advances, epithets, slurs, sexual or derogatory comments, negative stereotyping, threats, assaults, or any physical interference with an employee's normal work or movement. It may also include written or graphic material placed on walls, bulletin boards, electronic media circulated in the workplace or elsewhere on the company's premises that may be offensive towards an individual or group because of a protected class.

In particular, unlawful sexual harassment is defined as any unwelcome sexual advance, request for sexual favors, or other sexual conduct of a verbal or physical nature when:

- Submission to such conduct is made either explicitly or implicitly a term or condition of a person's employment;
- Submission or rejection of such conduct by an individual is used as the basis for an employment decision affecting that person; or
- Such conduct has the purpose or effect of unreasonably interfering with an individual's work performance or creating an intimidating, hostile or offensive working environment.

Examples of sexual harassment include, but are not limited to, unwanted sexual advances or propositions, offering employment advantages in exchange for sexual favors, making or threatening reprisals after a negative response to sexual advances, leering, making sexual gestures, displaying of sexually suggestive objects, pictures, cartoons or posters, verbal abuse or jokes of a sexual nature, sexual innuendos, graphic verbal commentaries about an individual's body, sexually degrading words used to describe an individual, and suggestive or obscene letter, notes or invitations.

The prohibition against sexual harassment pertains not only to employees, managers and supervisors, but also to clients, subcontractors, and suppliers as well.

All employees have the responsibility to ensure a workplace free from harassment and discrimination. Supervisory personnel are expected to uphold company standards by providing a climate of open communication for employees and encouraging their use of the open-door policy.

Employees who believe they are victims of harassment and/or discrimination have a responsibility to report the incident immediately to their supervisor or manager, a member of the management team, or to Human Resources. The company will not retaliate, nor will it tolerate retaliation, against employees who, in good faith, report harassment or who cooperate in the subsequent investigation.

Inclement Weather/Natural and Civil Emergencies

Due to the critical nature of our work, PLC will not be closed on _____ days of inclement weather. Employees should call their supervisor in the event of inclement weather/natural and civil emergencies, including but not limited to, rain, snow, ice, freezing rain, flooding, etc. Employees should also make every effort to remain at work in the event inclement weather/natural and civil emergencies occur during the work day.

Field employees will only be paid for the hours worked. However, at the discretion of their supervisors, employees may make up time missed during the same pay week in which the time was missed.

Employees unable to make it to work are expected to notify their immediate supervisor in accordance with the Timeliness and Absenteeism policies set forth in this handbook.

COMMUNICATION

Problem Solving Procedure

Whenever people work together for an extended period of time, problems and misunderstandings can occur. It is important to PLC that your questions and problems are addressed and resolved whenever possible. We encourage you to discuss any concerns you may have with your immediate supervisor so that a satisfactory resolution may be obtained. Should appropriate action not occur within a reasonable time, you should follow PLC Open Door Policy.

PROJECT RULES

Telephone Calls

Personal telephone calls are not allowed while working. If you need to make a call, wait until breaks or lunch. The workforce is distributed over several areas, making it difficult to contact employees for personal calls. An emergency call, however, will receive prompt attention and you will be notified as soon as possible. You will be provided with a telephone number that may be given to your family for use in emergency situations. Whenever possible, personal calls should not interfere with work.

The use of personal telephones during working hours is prohibited, and the use of mobile telephones or other devices while operating a company vehicle or equipment is prohibited.

Visiting Other Work Areas

You must remain in your own work area except when duties require that you go to another work area. If you must go to another work area for any reason, first notify your supervisor. Do not loiter in that area – return promptly to your regular work area.

Property Removal

It is not permissible to remove either the company's or the client's property from the site for personal use. Unauthorized possession of company, client or another employee's property may result in immediate termination and/or legal action.

Solicitation and Distribution

Solicitation and distribution of literature by non-employees on company property is prohibited. Employees are prohibited from soliciting or distributing literature on company property during work time. For the purposes of this policy, "work time" includes the working times of both the employee doing the soliciting/distributing and the employee to whom

the soliciting/distributing is being directed.

CONDUCT VIOLATIONS

Employee Discipline

Rules of conduct are necessary to ensure efficient and safe operation. They are established to protect everyone on the project/site and will be enforced fairly and impartially. They are for your benefit, and you are expected to conduct yourself within these rules. If you have any questions about the rules, you should discuss them with your supervisor to ensure your complete understanding.

Failure to observe the expected standards of performance and behavior, and/or violations of policies, will result in appropriate disciplinary action. Appropriate disciplinary action will depend upon the circumstances and may include a documented oral warning, written reprimand, suspension (with or without pay), demotion, or termination of employment. Records of disciplinary action will be placed in your personnel file.

Conduct violations that could result in disciplinary action, up to and including termination, include but are not limited to:

1. Failure to follow PLC's safety policies
2. Violating PLC's policy against discrimination and harassment
3. Failing to follow PLC's EEO policy
4. Excessive or repeated absenteeism/tardiness
5. Absences of three (3) or more days without proper notification
6. Unsatisfactory job performance
7. Incapacitation due to alcohol, drugs, or other substances
8. Insubordination, including failure to comply with a supervisor's instructions, refusal to work, refusal to carry out work assignments, abusive language or conduct toward a supervisor, or disrespectful attitude toward a supervisor
9. Dishonesty, including falsification of any employment application data
10. Providing or maintaining improper or false records
11. Disorderly conduct

12. Possession of dangerous weapons, alcohol or illegal substances on company property
13. Disregard or misuse of company, client or another employee's property, equipment or supplies
14. Leaving the work area or project site without proper authorization
15. Gambling during working hours
16. Sleeping during working hours
17. Solicitation or distribution of literature on company property during working hours
18. Disregard for safety rules and/or other acts that endanger you and/or others
19. Willful violation of any company or client secrecy or confidentiality
20. Unauthorized possession of and/or use of photographic equipment or recording devices
21. Violations of starting or quitting time procedures
22. Conduct that adversely affects the company
23. Cashing another employee's paycheck
24. Refusal to submit to search
25. Failing chemical screening test
26. Smoking in a restricted area

SECURITY

To maintain project security, all employees entering or leaving the project are subject to an inspection of lunch boxes, packages, and bundles at the request of project management or security.

Employees may also be requested by project management and/or security to submit to an inspection of their persons or their vehicles at any time while they are on Company or client property. Any vehicle entering or leaving the project is also subject to inspection. Such requests by project management will occur only with the utmost discretion and consideration for the employee. Refusing to allow such inspection is grounds for immediate termination.

All PLC employees will be subject to substance abuse screening. All newly hired employees and transferred employees will be screened after the decision is made to hire on this project. Substance abuse screening will also be required upon a showing of suspicious behavior or activity, including post accidents. Also, all employees will be subject to periodic random substance abuse screening. Refusal to submit to such screening or a positive result of such screening without a legitimate medical reason (proper prescription in the employee's name) will result in grounds for immediate termination.

SAFETY REQUIREMENTS

General

*The safety rules and guidelines covered in this handbook are considered to be basic only. Each employee on this project is obligated to comply with all federal, state and local safety requirements, as well as PLC's Site Specific HSE Programs, where the **most stringent** requirement **shall apply**. These combined practices, procedures and regulatory requirements constitute the minimum level of performance expected from each employee. All employees shall adhere to these requirements for the performance of their work on this project to promote the safety of themselves and their fellow coworkers. A personal commitment from you to the safety on this project will prove to be an invaluable asset to the success of this project.*

A safe place to work is the goal of everyone. Through everyone's efforts, we constantly strive to improve safety techniques and reduce hazards.

You are urged to do your part in making the workplace a safe area for yourself and others. The overall safety program can be improved by properly using the safety equipment provided, by avoiding unsafe practices and acts, by cooperating with your supervisor, and by following these guidelines.

With participation and commitment, safety will work for you!

The safety requirements listed on the following pages must be read carefully and followed when you are on the project. Your safety and the safety of your coworkers can be accomplished only through the constant efforts of each employee. Use this portion of the handbook as a reference guide when working in different situations and environments.

It is our policy to ensure that every reasonable precaution is taken to prevent accidents. Even though every precaution is taken, you may encounter potential hazards; therefore, always follow good common-sense safety habits. Always use safety equipment provided for your protection. Unsafe conditions or practices should be reported to your supervisor immediately.

Any injury, regardless of how minor, **must be reported** to your supervisor **immediately**. Your supervisor will direct you to a person who is trained to provide first aid.

Ask your supervisor if you are not sure of proper work procedures. You may endanger yourself and others by guessing.

Pedestrian Safety

Pedestrians should walk on the left side of roads facing construction/public traffic unless told to do otherwise. Do not take shortcuts. Remember rolling construction equipment has the right away. NEVER walk in front of any vehicle, truck or piece of equipment, unless eye contact is made with the driver and the driver motions for you to proceed.

Vehicle Safety

Drivers must observe posted speed limit signs and practice safe driving procedures at all times. Strict compliance with project parking regulations is required. Employees must not use PLC motor vehicles unless assigned to do so by their supervisor and unless they have received operating and safety instructions.

Any employee who operates a vehicle must have a valid drivers' license,

which will be verified through motor vehicle records. The use of cellular phones or other devices while driving PLC equipment or vehicles is strictly prohibited.

SAFETY TECHNIQUES

General

Experience has proven that the following “safety tools” contribute dramatically to an injury-free workplace. These safety tools must be applied consistently by supervisor and employee alike. This section provides guidelines for you, the employee, on the proper use of these tools.

Job Hazard Analysis (JHA) Pre-task Planning

All jobs and tasks can be analyzed for hazards/risks. A properly analyzed job will indicate what safety measures must be taken. JHA instructions provide the needed safety measures. Each employee will be responsible for understanding the JHA, asking questions regarding procedures they do not understand and signing in and out daily.

Field superintendents and supervisors incorporate the JHA into their daily field responsibilities. Supervisors shall give JHA instructions to employees prior to work assignments. Providing JHA instructions is a requirement.

Any supervisor or foreman neglecting the JHA procedure, whether involved in an accident/incident or not, is committing the most serious offense possible in PLC’s safety procedure manual.

You are responsible for understanding and following the safest means to perform your assignment. If you don’t understand, **ASK**; if your supervisor does not explain the safest way to approach your task, **ASK**. Physical limitations should be discussed with your supervisor and your human

resources representative.

Distractions

The mind being in one place and the body in another spell's danger. Distractions can result in accidents and personal injury. If you have a personal situation persistently bothering you, tell your supervisor.

Meetings

Foremen will hold documented weekly safety meetings for the entire crew. The purpose of these meetings is to place accident prevention foremost in your mind and to acquaint you with the necessary overall preventive action. Participate in the meetings, contribute your know-how for the less experienced, and ask questions if you don't understand. Make sure you sign a statement of attendance for these meetings.

Inspections

You are responsible for making a quick visual inspection of each tool or piece of equipment before using it. Defects should be tagged immediately, and supervision should be notified.

Make a quick check of your work area at the start of the shift each day to ensure a safe working condition – condition of shoring, access, power equipment moving in, new excavations, occupancy with other groups, workers moving in overhead, or any other changing condition.

Documented safety inspections shall be performed daily by the operator on all rolling construction equipment, heavy vehicles, aerial lifts, mobile equipment and cranes. Noted deficiencies shall be immediately reported to your supervisor and corrected in a timely manner.

Lightning

- Avoid exposure at high elevations, such as bridge decks, piers and caps.
- Do not group together. If caught out in the open, crouch down with

your feet together, without touching another person or object.

- Avoid a depression with standing or running water or a stream.
- Crane operations will be suspended when, in the opinion of the supervisor, lightning is moving toward the work area – loads will be secured and all personnel will stay away from the crane until the lightning has ceased.

HOUSEKEEPING

General

Keeping your area neat encourages safe work habits.

Major housekeeping considerations are:

- Keep tools and work materials in proper containers
- Store trash, waste, and scrap in proper containers
- Store materials safely
- Put cigarette stubs in butt cans
- Keep small items in boxes or bins
- Keep walk areas and bridge decks clear of tools, welding rod stubs, metal shavings, etc.
- Keep walkways clear
- Ensure that work tables are occupied only by work at hand and the tools required for the work being done
- Store or contain material so that fire has no place to start.
- Clean up tools and work areas as your work progresses
- Keep cords and hoses laid flat outside of walkways
- Keep all material, tools, and equipment in a stable position (tied, stacked, chocked, etc.) to prevent rolling or falling
- Maintain clear access to all work areas
- Keep all walkways/stairways clear of debris

Trash, Waste, and Scrap Disposal

All trash, waste, and scrap (such as scrap metal, oily rags, broken glass, and aerosol cans) must be placed in properly identified containers (labeled as to contents).

Grounds Maintenance

Always wear the proper type gloves when performing grounds keeping duties, such as:

- Pulling trash bags from containers
Note: Never support the bottom of a trash bag with your hand(s).
- Handling chemicals
- Handling tree and brush material
- Any items with sharp or rough edges

Eye and/or face protection should be worn:

- While using a “weed eater”, leaf blower, grass cutting, or other grounds keeping equipment that may cause material to become airborne
- In designated areas of the site

Hearing protection should be worn:

- While using a leaf blower, “weed eater”, or lawn mower
- While using any high-noise-producing equipment
- In designated areas of the site

When using electrical and gasoline powered equipment:

- Review instructions and ask questions of your supervisor if you are not sure how to operate the equipment
- Always disconnect, unplug, or shut down equipment before servicing or making adjustments
- Do not disable or by-pass any safety device or switch
- Inspect hoses, electrical cords, ground prongs, and leads for damage and excessive wear
- Do not smoke when refueling equipment

- Do not fill gas containers in the bed of pickup trucks
- Tag defective equipment for repairs and make your supervisor aware of it

SIGNS AND BARRICADES

Barricades are required around excavations, deck openings, leading edges, and certain types of overhead work.

Warning Barricades offer no physical protection, but serve to alert personnel in an area of a hazard. Warning barricades must be set back 6 feet minimum from the hazard. If 6 feet is not feasible, a protective barricade should be used. If the hazard is a potential fall of 6 feet or more, a protective barricade must be used, unless an alternative fall protection plan has been approved by the PLC Management.

Three (3) types of barricade tape will be utilized on this project as a visual warning for employees (red = hazard; yellow/black = caution; red/black = danger).

Red barricade tape will be accompanied with signs or tags to clearly communicate the hazard and include the following:

- Supervisor/foreman who placed the barricade tape
- Purpose or reason for the barricade (the hazard[s])
- Company Name

Yellow/Black Barricade Tape - This type of barricade tape shall serve as a caution to indicate to employees that potential hazard exists. Employee may enter without permission from contractor. This barricade tape shall be used for, but not limited to the following:

- Excavation less than (4) feet in depth
- Identification of trip hazards, low hanging objects, etc.
- Material storage on the site

Red/Black Barricade Tape - This type of barricade tape indicates DANGER

and that a potential serious hazard may be present. No employee, other than those assigned to work inside a RED barricade, may enter without first obtaining permission from the erector of the tape. This barricade tape is used for, but is not limited to, the following:

- Overhead work
- Live electrical components
- Scaffold under construction
- Around swing radius of equipment with a rotating superstructure
- Excavation (4) feet in depth to 5 feet 11 inches

Erect the tape to enclose the specific area to be protected only. Do not block passageways or access ways unless entirely necessary. If passageways or access ways must be blocked, contact supervision for coordination with other crafts and/or possible alternatives.

Erect tape in a secure and neat manner that will maintain a height of between 40" and 45" from the floor or ground surface. A second strand shall be placed half the distance between the top strand and the ground.

An entrance gate in the barricade needs to be erected to prevent employees from stepping over or ducking under the barricade tape when coming in and out.

The only employees allowed to enter a RED barricade area will be the craft assigned to tasks by the foreman responsible for the barricade and are aware of the hazard(s) there-in.

Protective Barricades not only warn of a hazard, but provide physical isolation or protection from the hazard.

Examples include guardrails or cables set at the proper height around an opening or edge.

Note: In areas of high public exposure and accessibility, it is recommended that construction areas are barricaded and posted "Construction Areas — Hard Hat and Eye Protection Required" with a

physical boundary (such as hard barriers or orange construction fencing, where practical) to control access and warn of potential hazards.

Always respect and obey all signs and barricades on this project. Remove signs and barricades as soon as they are no longer needed.

ANYONE WHO MAKES A HOLE OR OPENING IS RESPONSIBLE FOR PHYSICAL PROTECTION.

Bridge Deck Openings Hole Covers

- Hole covers or standard railing must be provided for all holes or openings through floors or walls
- Do not store material or equipment on a hole cover
- Standard railing and toe boards shall guard stair tower openings, with the exception of the entrance
- A standard railing or the equivalent shall guard all open sided floors or platforms six (6) feet or more above adjacent floor or ground level

Placement

- Hole covers must have a sign reading, **“WARNING – TEMPORARY COVER. DO NOT REMOVE UNLESS AUTHORIZED”** or otherwise identified
- Covers must be cleated, wired, or otherwise secured to prevent displacement
- Covers must extend adequately beyond the edge of the hole

Material

Three-quarter (3/4) inch plywood may be used, provided that one dimension of the opening is less than eighteen (18) inches; otherwise, two (2) inch lumber is required.

Access

- Routes leading to and from all work locations must be free of obstructions and properly lighted
- Check with your supervisor if you have questions about the appropriate route and access to be used in and out of excavations, on to bridge decks, or elevated work
- Ladders must not be blocked
- Do not block any emergency equipment such as fire extinguishers or first aid equipment.

Slips/Trips

- Practice safe walking skills, particularly in congested areas
- Pay attention to where you are stepping
- Keep your hands free for balance
- Pay particular attention to adverse weather-related conditions (ice, snow, mud, lightning, etc.)
- Clean up spills immediately
- Use handrails
- Wear slip-resistant shoes
- Use walkways and designated accesses where provided
- Keep work areas clean and well lighted

MATERIAL HANDLING

General

Stack, store, or spot material so that it can be reached easily by workers and material handling equipment.

By Hand

- Lift with the legs; keep back straight; and do not use your back muscles
- Know the weight of objects to be handled. If weight is excessive or the size of the object is cumbersome, ask for help or consult your supervisor
- Use appropriate gloves when handling material or tools with your hands

Mechanical Handling

- Obtain rigging instructions from your supervisor before beginning.
- Know the weight of the object to be handled.
- Know the capacity of the handling device (crane, forklift, etc.) that you intend to use.
- Use tag lines to control loads.
- Only qualified employees shall operate material handling equipment.
- No passengers are permitted on material handling equipment

Material Preparation

- Clean up ragged metal edges
- Remove or bend flush all protruding nails and wires
- Store on dunnage for ease of handling

Stability Control

Ensure that your body, materials, tools, and equipment are safe from unexpected movement such as falling, slipping, rolling, tripping, blowing, or other uncontrolled motion.

- Once rigging has been released, do not move trucks (i.e., flat beds), hauling equipment, or materials
- Chock all materials and equipment (i.e., pipe, drums, tanks, reels, trailers, wagons, etc.) as necessary to prevent rolling
- Immediately put an absorbent on all grease and oil spills, then proceed with clean up
- When working at heights, secure tools, equipment and wrenches against falling

Rigging

- Know the proper use of chokers, shackles, and clamps
- Never raise a load over people

- Use tag lines to control the load
- Know the capacities of rigging equipment and the weights of loads
- Always perform a visual inspection of rigging equipment prior to use

Miscellaneous Tools and Equipment

Hooks, Shackles, Beam Clamps, and Chokers

- All hooks must have a safety latch
- Always place the load in the center of the hook and never on the point
- Get approval from your supervisor prior to rigging from any structural member to ensure that it will support the load being raised
- Hooks, shackles, and beam clamps should be inspected before use. Do not exceed the capacity marked on the equipment

Ropes and Slings

- Wire: Inspect for frays, kinks, broken wires, bird caging, and worn spots before using
- Fiber: Inspect for excessive broken fibers, wear, burns from burning and cutting operations, and deteriorated inner and outer strands before use
- ***Note: If sling has wear indicator thread showing, remove sling from service.***

SAFE WORKING LOAD CHART * (In Tons)

Wire Rope Size (In.)	Straight Pull	Choke Hitch	Basket Hitch
3/8	1.1	0.8	2.2
7/16	1.5	1.1	3.0
1/2	2.0	1.5	4.0
9/16	2.5	1.8	5.0
5/8	3.1	2.3	6.2
3/4	4.5	3.3	9.0
7/8	6.5	4.8	13.0
1	7.9	5.9	15.8

(Chart does not apply to crane reeving)

Revision 01
 Figures above are for 6 x 37 improved plow steel, fiber core, mechanical eye splice.

PERSONAL PROTECTIVE EQUIPMENT

Clothing

All clothing worn must comply with general work and safety practices.

- Do not wear clothing or jewelry that could get caught in machinery or otherwise cause an accident (i.e., dragging pants, baggy shirts, torn or loose long sleeves, torn clothing, etc.)
- Shirts with a minimum of a four (4) inch sleeve and covers the upper body
- Overalls or pants must not have loose, torn, or dragging fabric
- Pant legs without cuffs are recommended

Reflective Garments

Employees not directly exposed to roadway traffic that are working adjacent to, in or around roadway or jobsite traffic will wear a high visibility reflective vest of a minimum Class III or other suitable garments in conformance with national or state standards, whichever applies. These vests must be donned prior to exiting a vehicle / equipment, or entering a work area.

For all daytime or nighttime roadway direct exposure, where any employee is not protected by a hard barrier, the project will require the exposed employee(s) to use reflectorized high-viz coverall suits or full-dress (vest and Class E pants) with reflectivity conforming to improve safety in work zones by making workers more visible in various lighting and working conditions.

Leg gaiters shall be used anytime an employee is working within 20 feet

to adjacent to traffic without a physical barrier such as concrete traffic barrier.

Head

During work hours, employees must wear hard hats, which are in good condition and that meet ANSI Z89.1 and ANSI Z89.2.

- The bill of the hard hat must face forward unless a safety device (welding hood) is attached
- Hair must be contained in a manner that will not cause danger to an employee from fire or entanglement in machinery
- Welders are to wear hard hats in combination with welding hood. No soft cap welding
- No cowboy style hard hats permitted on the project
- No stickers on hard hat unless provided for identification from PLC
- Hard hats are not to be worn over the top of Baseball caps or any other style hat which impedes proper fitting of the hard hat.

Eye and Face Protection

All employees and visitors must wear ANSI approved safety glasses with side shields in all work areas with the exception of offices or equipment with fully enclosed cabs.

- Additional eye and/or face protection such as goggles, face shields, and welding shields are required at all times when engaged in operations such as welding, burning, grinding, chipping, drilling, to prevent chemicals from being splashed into the eyes or face, and while using a pressure washer or air hose.
- Employees engaged in welding operations must use filter lenses or plates of not less than No. 10 shade.
- Employees engaged in helping welders should not look directly at the welding process and must use approved eye protection at all times.
- Burning goggles with a minimum No. 4 density and plastic cover plate on both sides of the filter lens are required for all gas welding and burning.

- Eye wash solution will be provided at concrete pouring operations.

Precautions

- Flush eyes with water for fifteen (15) minutes if contact with chemicals is suspected. Seek immediate medical treatment.
- Never try to remove foreign matter yourself. Seek immediate medical treatment if you suspect you have something in your eye.
- Keep hands away from eyes.
- Report all incidences to your supervisor.

Ear Protection

Hearing protection will be provided and must be worn when ambient or local noise levels exceed 85 dba.

Examples where hearing protection shall be worn include but are not limited to pile driving, jack hammering, rattling up beams, high noise producing pieces of heavy equipment, and working around batch plants and pug mills.

Always ensure that earplugs, earmuffs and other hearing protection devices are clean prior to use.

Fingers, Hands, and Wrists Gloves

Suitable gloves should be worn when handling materials and equipment. Gloves will be provided and should be worn when activities present the potential for a hand injury. Examples of activities where gloves shall be worn include but are not limited to the handling of sharp objects, certain chemicals, welding, burning and cutting operations, demolition operations, the handling of wood materials, etc.

Plastic or rubber-coated gloves are to be used for special types of work (i.e., solvents, chemically treated materials, etc.)

Tool Holders

Use tool holders when driving stakes or wedges or when holding star drills, bull points, and similar driven tools.

Tag Lines

Tag lines are used to control loads and to keep individuals at a safe distance from all lifts made by mechanical equipment. **KEEP HANDS OFF THE LOAD!**

Do not wrap tag lines around your hands or body.

Restrictions

- Materials should be secured when using power tools. Do not depend on your ability to hold material against the power of a machine.
- Rings and other jewelry are discouraged in the project work areas and should be removed while using power tools, working with electrical components, welding equipment, electronic equipment, or other equipment/machinery that has the potential to cause injury.

Back

- Use your legs when lifting objects. Do not use back muscles. Keep back straight.
- Never try to lift more than you can handle safely; consider size, shape, and weight. **GET HELP** and/or consult your supervisor.
- Where possible, use a mechanical means for lifting heavy objects.

Legs, Thighs, Knees, Shins, and Ankles

- Overalls and pants must not have loose, torn, or dragging fabric. Pant legs without cuffs are recommended.
- Pointed tools must not be carried in pockets. A canvas or leather tool sheath hung from the belt is acceptable.

ALL POINTS DOWN

- Shin guards, chaps, spats, etc., are to be considered when using some special equipment such as chain saws or brush hooks, and where snake bites are possible.
- Consider stability before stepping into spots where material could shift.

Feet and Toes

- All leather industrial safety toe work boots that come above the ankles are required to be worn in all work areas with the exception of offices.
- Rubber boots with safety toe protection will be provided on jobs subject to chemically hazardous conditions.
- Metatarsal foot guards must be worn when using jack hammers, tampers, or similar equipment.

Safety Harnesses

Safety harnesses must be worn and tied off when working on any of the following:

- Any suspended platform or stage.
- Any scaffold tagged incomplete.
- In areas more than six (6) feet above any adjacent working surface.
- When placing and tying reinforcing steel in walls, piers, or columns.
- When assembling and disassembling scaffolding.
- When using mechanical aerial lifts.

Safety harnesses must be arranged so that the support point is in the rear.

Excess lanyard length must be so arranged to avoid tripping hazards.

Lanyards must be secured to a substantial overhead object capable of supporting a minimum of five thousand four hundred (5,000) pounds dead weight.

Maximum fall distance allowed is six (6) feet.

Life Jackets or Buoyant Work Vests

Employees working over or near water hazards such as bridge construction shall be provided with U.S. Coast Guard-approved life jackets or work vests.

- Life jackets or buoyant work vests shall be inspected for defects which would alter their strength or buoyancy. Defective units shall be removed from service.
- Always wear a life jacket or buoyant work vest properly adjusted with buckles and straps properly fastened.

Respiratory (Breathing)

Appropriate respirators will be provided by PLC site management and are to be used for protection against excessive concentrations of dusts, fumes, or oxygen deficiency.

Respiratory protection will be provided for special work processes such as concrete sawing, grinding, or removal (respirable silica and dust), shot blasting or removal of lead painted materials (lead paint), application of certain paints, and/or use of specific chemicals.

- Any employee whose job entails a reasonable expectation of having to wear a respirator must maintain a clean-shaven face in the seal area.
- If you are required to use a respiratory protection device, make sure you have been medically cleared, fitted, tested, and received instructions on its use.
- Make sure that all respiratory protection equipment is inspected regularly and is maintained in good condition.
- Reusable respiratory equipment must be cleaned and stored in a dust-proof container between uses.

TOOLS

General

- Only qualified persons are to use tools and equipment.
- Do not operate any tool without proper instructions.
- Some activities will require permits before starting work.
- Tools and equipment must be in good condition.
- Tools or guards must not be altered.
- Tools are to be used only for their designed purpose.
- Personal hand tools are subject to inspection at any time.
- Job or home-made tools are prohibited on the project.

Hand Tools

- Every tool was designed to do a certain job. Use a tool only for its intended purpose.
- Every tool needs care. Keep your hand tools in peak condition – sharp, clean, oiled, dressed, and not abused.
- Worn tools are dangerous (i.e., the “teeth” in a pipe wrench can slip if worn smooth, an adjustable wrench can slip if the jaws are sprung, loose hammer heads can fly off hammers, etc.).
- Tools subject to impact (i.e., chisels, star drills, etc.) tend to “mushroom”. Tools should be dressed by a qualified person to avoid flying fragments.
- Use tool holders.
- Don’t force tools beyond their capacity or use “cheaters” to increase the capacity.
- Don’t use tools as pry bars.

Portable Power Tools

Restrictions

Operation of portable power tools without instruction from your supervisor is prohibited.

Note: Some activities require permits and training before starting work.

Major Hazards

- No alteration of any kind is allowed.
- Torque is the circular or rotating motion in tools such as drills, impact wrenches, and saws that results in a strong twisting force. Be prepared in case of jamming.
- Have good footing, use two (2) hands, obtain assistance when needed, and be ready to release the power switch or trigger. (This should be fail-safe so that it cannot be locked “on”. Also, watch for “coasting” or idling motion.)
- Flying objects can result from operating almost any power tool. You should always warn people around you and use the proper eye protection.
- Contact with moving parts can be hazardous. Keep moving parts directed away from your body. Never touch a power part (i.e., drills, chucks, blades, bits, etc.) unless the power source is disconnected.
- Beware of swinging around with the tool running; someone may be beside you.
- Tool condition should be monitored. Examine power tools before each use. Look for damaged parts, loose fittings, and frayed or cut electrical cords. Tag and return defective tools for repair.
- Air must be shut off or the electrical cord unplugged before making tool adjustments. Air must be “bled down” before replacement or disconnection.
- Powder actuated tools are to be only be used by qualified persons.

Guarding

Proper guards or shields must be installed on all power tools before use. Do not use improper tools or tools without guards in place. No “homemade” handles or extensions (“cheaters”) are permitted.

MOBILE EQUIPMENT

General

Do not operate any mobile equipment or vehicle on this project unless you have been approved to do so by project management.

PLC site management will provide you with equipment that is safe to use. You will be responsible for inspecting your equipment before each work shift. If the equipment becomes defective in any way, notify your supervisor at once and place a **“Defective – Do Not Use”** tag on it.

Know the limitations and specifications of the equipment you use. Do not exceed those limits. Do not use the equipment for other than its intended purpose.

Work must not be done on equipment or vehicles while they are in operation unless the plan has been reviewed and approved by PLC HSE Manager. The equipment/vehicles must be shut down, locked and tagged, or otherwise immobilized.

Cranes

- All crane operators must be qualified per OSHA for each make and model crane to be operated.
- The operator must conduct and document inspection of his/her assigned crane prior to each work shift.
- The operator is solely responsible for the safe operation of his/her assigned crane.
- The operator has full responsibility for the safety of a lift and must not execute any lift until it can be completed safely.
- A copy of the manufacturer’s operator’s manual must be located in each crane. This manual must be reviewed and understood by the assigned crane operator.
- The crane operator must understand and be able to determine the crane’s capacity.
- A legible copy of the crane’s load chart must be in the crane cab whenever it is being operated.
- Accessible areas within the swing radius of the rotating superstructure counterweight of a crane must be barricaded to prevent employees and equipment from being struck or crushed by the counterweight.
- The load shall not be swung over any person(s).
- Crane outriggers must be leveled and fully extended when making a lift.
- For pick and carry operations, consult the manufacturer's operator's

manual and operation notes.

Work Near Overhead Electrical Lines

Work within 33 feet requires a “Working Near Overhead Power Lines” permit from PLC HSE Department.

All overhead wires are considered energized; unless PLC Engineering has clarified that the utility company has visibly de-energized and locked out.

If accidental contact with a live overhead power line occurs, while operating a crane, stay in the cab. Do not attempt to step from the crane to the ground. This may result in a fatal electrocution.

Material Handling Equipment

- All material handling machines must have backup alarms, horns, rollover protection structure, and seat belt.
- The operator shall be qualified by the project on each make and model machine.

Material Hoists

- Hoists are to be operated only by a qualified operator.
- Passengers are not permitted – hoists are for material only.
- Know the weight of the material and the capacity of the elevator or hoist.
- Materials must be secured so they cannot shift and must not extend beyond the cage limits.
- Follow instructions and use a signal system posted at each landing.
- Keep hands and body clear of all landings and openings.

Motor Vehicles and Power Equipment

Vehicles and mobile equipment are to be operated only by authorized qualified employees.

Cars, Trucks, and ATV's

The driver is responsible for the safety of all passengers and the stability of any materials being hauled. Use the following guidelines:

- Wear safety restraint devices (i.e., seat belts).
- Project speed limit of 10 mph in worker occupied areas and 30 mph in non-occupied construction areas off the public roadway. Obey all speed limit and other regulatory signs on public roadways.
- Give the right-of-way to construction equipment, and watch for foot traffic.
- Look to the rear and sound your horn before backing.
- Shut off the engine before refueling.
- Inspect the vehicle prior to each use.
- Mount and dismount only when the vehicle is stopped.
- Keep hands, arms, feet, legs, and bodies inside.
- All personnel must be seated.
- Personnel may not ride on or in the bed of any vehicle or equipment. Passengers shall be in the seated position, in a properly anchored seat with the seat belts fastened in place, before the vehicle/equipment is set in motion.
- A flagman should direct the backing of a vehicle in congested areas.
- No more than three (3) persons may ride on the front seat of any vehicle.
- Unless the vehicle has approved cab protection, truck drivers must dismount from the cab and remain clear while the truck is being loaded by power equipment.
- Drivers are not permitted to dismount from the cab of any dump/bottom dump trucks while loading and after loading.
- Drivers are not permitted to use cell phones or text while driving PLC equipment.

LOCKOUT AND TAGOUT

Danger tags are placed on switches and valves that must not be operated. They are printed with the words **“DO NOT OPERATE”** or equivalent.

Danger tags (with lockout device) are used to prevent operation of a switch, valve, or piece of equipment in cases where someone may get hurt or equipment may be damaged.

All employees engaged in lock and tag operations must be properly trained.

Observe the following guidelines for Lock and Tag:

- Place the lock and tag personally—do not have someone else do it.
- Sign, date, and include your supervisor name on the tag.
- Tags must be legible.
- Have a qualified lock and tag all electrical before you place your tag.
- Use only the standard danger tag.
- Try the switch after locking and tagging and prior to starting work to ensure you have locked out the correct one.
- Remove your lock and tag when you have completed your work.
- A lock removal procedure and form must be used to remove the lock of any person who is not on-site only with the approval of the Project Director or designee.
- Do not remove someone else's tag or operate a valve switch, or device that has another person's danger tag attached. **DOING SO MAY RESULT IN IMMEDIATE REMOVAL FROM THE JOBSITE.**
- Do not lock and tag a device unless specifically instructed to do so by your supervisor.

PERMITS

Permits are site specific. When required, they must be properly authorized before work may begin. All permits must be posted at a designated spot at the work site. Read the applicable permit and follow instructions.

Confined Space Permit

A confined space is normally considered an enclosure having limited means of access and egress (i.e., tanks, vessels, bins, silos, boilers, pits,

septic tanks, sewers, underground utilities, pipelines, or similar structures not designed for continuous human occupancy).

Do not enter a tank or confined space in operation areas until a valid Confined Space Permit, signed by the responsible supervisor, is posted at the work site and you are in compliance with this permit.

Hot Work Permit

Required for flame or spark producing activity within 50 feet to fuel storage areas or combustible material storage areas (i.e., welding, cutting, and grinding etc.).

TRAFFIC CONTROL DEVICES

The TMUTCD contains the standards and basic principles governing the design and usage of traffic control devices in Texas. The provisions of the TMUTCD shall apply to all aspects of the project.

Employees on this project who are designated to flag traffic shall be trained and certified.

LADDERS AND SCAFFOLDS

Ladders

- Attach a rope to the top rung of stepladders or to the third rung from the top of straight and extension ladders to provide a tie-off rope when the ladder is set up (applies to ladders more than 6 feet in height).
- Stepladders must be fully opened and set level. Work facing the ladder with both feet on the rungs.
- Always face the ladder when climbing or descending.
- Inspect ladders before use.
- Ladders are not to be painted except for numbering purposes.

- Do not use ladders for skids, braces, workbenches, or any purpose other than climbing.
- If it is necessary to place a ladder in or over a doorway, barricade the door and post warning signs.
- While ascending or descending a ladder, do not carry anything that will prevent holding on with both hands.
- Always maintain a three-point contact when ascending or descending ladders or access points.
- Keep both feet on the ladder rungs.
- Do not reach out too far. Keep feet on the ladder at all times. Keep your belt buckle between the side rails of the ladder. Change the position of the ladder as often as necessary.
- Face a ladder when working from it.
- A safety harness is required if it is necessary to work while exposed to a fall of six (6) feet or more.
- No metal ladders allowed on the project.
- When not in use, the ladder should be returned to the proper storage area.
- Report damaged ladders to your supervisor for repair or disposal.

Straight and Extension Ladders

- Place the ladder so that the distance from the base of the supporting object to the base of the ladder is one-fourth ($1/4$) the distance of the base of the ladder to the top of the supporting object.
- The top of the ladder must extend at least three (3) feet beyond the supporting object when the ladder is used for access to an elevated work area.
- After an extension section has been raised to the desired height, check to see that safety dogs or latches are engaged and that the extension rope is secured to a rung at the base section of the ladder.
- Extension ladder sections must be overlapped a minimum of three (3) rungs.

- Do not take extension ladders apart to use either section separately.

Stepladders

- Stepladders should always be opened and set level on all four (4) feet, with spreaders locked in place.
- Stepladders should never be used like a straight ladder.
- Never stand on top of a stepladder (on the platform) or one step down from the platform.
- Never place tools or materials on the steps or platform of a stepladder.

Scaffolds

- Before starting work on a scaffold, inspect it to determine that guardrails, toe boards, and decking are in place, all wheels are locked on moveable scaffolds, and that locking pins are in place.
- All scaffolds must be inspected daily and signed off by a scaffolding competent person who is capable of identifying existing and predictable hazards.
- When working on any scaffold platform not equipped with standard guardrails or complete decking, and appropriately tagged - personnel must wear safety harnesses with the lanyard properly tied off to a substantial object capable of supporting at least 5,000 pounds of force.
- When working on any scaffold (rolling, stationary, or suspended) in the vicinity of energized electrical lines or equipment, employees must ensure that no part of the scaffold or his/her body can come in contact with the electrical lines or equipment. (A minimum separation distance of fifteen (15) feet is required.)
- Do not change or remove scaffold members unless qualified and authorized to do so.
- Scaffolds deemed incomplete or still under construction must be red tagged and not be used.
- No one is allowed to ride on a rolling scaffold when it is being moved. Remove or secure all tools and materials on the deck before moving.

- Rolling scaffolds shall be used only on level, smooth surfaces, or the wheels must be contained in wooden or channel iron runners.
- Watch overhead clearance when moving a scaffold.
- Do not climb on or work on any scaffold guardrails, mid-rails, or brace members.
- Use a designated ladder to ascend and descend from the scaffold.
- The erection of a scaffold exceeding fifty (50) feet above the base plates must be reviewed and approved by PLC site management.
- All scaffolds must be erected level and plumb on a firm base.
- Scaffolds must be tied off or stabilized with outriggers when the height is more than four (4) times the smaller base dimension.
- Scaffolds must be tied off horizontally every thirty (30) feet.
- Scaffolds must be as complete as possible. All scaffold platforms must be equipped with standard forty-two (4-inch-high guardrails rigidly secured (not wired) and standard twenty-one (21) inch high mid-rails, completely decked with safety plank or manufactured scaffold decking and rigidly secured toe boards on all four (4) sides.
- Adjusting or leveling screws must not be used on scaffolds equipped with wheels. Adjusting screws must not extend more than twelve (12) inches of thread.
- All scaffolds must be able to support four (4) times their maximum intended load. Check with your supervisor for safe working loads on all scaffolds.
- Do not alter any scaffold member by welding, burning, butting, drilling, or bending.
- Do not rig from scaffold guardrails, mid-rails, or braces.

Patented Metal Scaffolding

Parts and sections of scaffolding made by one manufacturer are not to be used with those of another manufacturer.

Suspended Scaffolding

- Swinging stages and floats require special approval by PLC site management.
- Attach and secure safety harnesses before stepping on scaffolds and do not remove them until clear of the scaffold. Tie off to an

independent lifeline or building structure. Use one lifeline per person.

WORK PLATFORMS

- All work platforms, either attached to formwork or bridge decks, shall be fully planked.
- Top rails, mid-rails, and toe boards shall be complete and capable of withstanding the design load.
- When handrails are incomplete, 100% tie-off policy will apply.

OVERHEAD STRIPPING BUGGY

- The platforms used in these operations must be designed with a minimum safety factor of five, and they must be designed by a qualified Professional Engineer who is competent in structural design.
- Each platform must provide a complete standard guardrail system consisting of a top rail, mid rail and toe board that meets all of OSHA's criteria.
- An approved ladder for ingress and egress must be provided.
- A plate or other permanent markings that clearly indicates the platform's weight and rated capacity or maximum intended load will be attached to the platform.
- The buggy must be inspected prior to use daily by a competent person, this inspection documented on a scaffold tag affixed to the buggy.
- The buggy cannot be occupied while being relocated. If buggy is hitched to a vehicle, the key to the vehicle must be in the buggy occupants' possession at all times, the vehicle doors locked and the vehicle clearly tagged out of service at the drivers' side window.
- Wheels will be chocked at all times while in use.
- Full body harness will be worn and 100% tie-off required for each person in the basket.
- If the work is performed over water, a U.S. Approved work vest will be worn in addition to the safety harness.

EXCAVATION AND TRENCHING

- A competent person must be designated and trained in the recognition of trenching and excavation hazards.
- Appropriate documentation to meet the OSHA trenching and excavation standards are to be kept on site at all times.
- Excavations must be barricaded to alert pedestrians and vehicle operators. Proper access must be provided.
- All dirt must be piled at least two (2) feet from the edge of the excavation and must be at least three (3) feet high when used as a barricade.
- Barricade excavation areas before the hole is opened.
- Excavations must be sloped or shored when deeper than four (4) feet.
- The maximum legal slope without soil classification is thirty-four (34) degrees or one and one half (1-1/2) feet horizontal to one (1) foot vertical. Any steeper protective system used must be permitted.
- Check all excavation walls and shoring before entering and after a heavy rain or thaw. These inspections must be performed and documented by a competent person.
- No one is permitted in an excavation when equipment is working next to the edge.
- Excavations must be provided with a ladder for access and egress in intervals of twenty-five (25) feet. The
- ladder(s) must extend three (3) feet above the edge of the excavation and must be secured.
- Employees are not allowed to ride in the bucket of excavating equipment.

WELDING AND CUTTING

General

- Be sure that all fittings, couplings, and connections are tight.

- Do not look at the welding arc even if you have tinted lenses. The ultraviolet rays from the welding operation may burn your eyes.
- Keep welding leads and burning hoses clear of passageways and doorways. Protect them from damage as necessary.
- Inspect all leads, grounds, clamps, welding machines, hoses, gauges, torches, and cylinders daily before use.
- No welding or burning is to be done on a closed vessel or tank, or on any vessel or tank that has not been decontaminated (cleaned).
- Each welder is responsible for containing sparks and slag and/or removing combustibles to prevent fire.
- A ten (10) pound or larger, ABC dry-chemical fire extinguisher must be within twenty (20) feet of any welding, burning, or open-flame work. Be sure you know how to operate the extinguisher.
- A "Fire-watch" may also be required. Check with your supervisor.
- Proper barriers or screens should be erected in operating areas to prevent inadvertent exposure of employees to the arc (flashburn).
- Welders are to wear hard hats whenever working in construction areas.

Protective Clothing

Protective clothing required for welding and burning varies with the size, nature, and location of the work to be performed.

- Only cotton, woolen, or special fire-retardant synthetic clothing should be worn. Generally, synthetics are very flammable and melt, causing more serious burns when exposed to flames and high temperature.
- All welders should wear flameproof gauntlet gloves.
- Clothing should be free from oil and grease.
- Flameproof leather (or suitable material) aprons should be considered if heavy welding is anticipated.

Welding (Electric)

- All work must have a separate and adequate ground. The ground lead must be pulled from the machine to the work location.
- Do not leave a rod in the electrode holder when you lay it down or

leave it unattended.

- Put stub ends in a proper container – not on the ground.
- You are responsible for turning your machine off at the end of your shift.
- An approved welding helmet must be worn. Use no less than a No. 10 filter plate, with safety plate on both sides of the filter plate.
- Do not weld, butt, or burn near or over aerosol cans or other flammables.

Burning (Gas)

- Before connecting regulators to cylinders, carefully open the cylinder valve a crack to blow out any foreign particles. After the regulator is connected, stand to one side of the gauge while the cylinder valve is opened. Open the cylinder valve slowly. Be certain that the second stage of the regulator is closed before opening the cylinder valve.
- Open valves on fuel gas cylinders (i.e., propane, acetylene, natural gas, etc.) a quarter turn only. Open oxygen cylinder valves wide open. The valve wrench must be kept in place during use.
- Do not exceed fifteen (15) psi on the torch side of the gauge when using acetylene.
- When lighting a torch, open the fuel gas valve on the torch before opening the oxygen valve. Use an approved spark lighter. Do not use matches, cigarettes, butane, gas cigarette lighters, or hot work to light a torch.
- All compressed gas cylinders should be kept in bottle carts while in transit or in use.
- All burning rigs must be broken down at the end of the shift, with regulators removed and protective caps screwed down hand tight on compressed gas cylinder bottles.
- Compressed-gas cylinders must be tied off vertically to an adequate support while in storage, transit, or use.
- Keep oil and grease away from oxygen regulator hoses and fittings. Do not store wrenches, dies, cutters, or other grease-covered tools in the same compartment with oxygen equipment.
- Do not use compressed gas to clean your clothing, blow out anchor holes, or otherwise clean your work area.

- All hoses, gauges, and torches must be inspected regularly.
- Approved burning goggles must be worn. Use at least a No. 4 filter with a safety lens on both sides of the filter.
- Never leave a torch in a vessel, tank, or other closed container because of the potential hazard of gas leakage.
- Never use oxygen in pneumatic tools to pressurize a container, to blow out lines, or as a substitute for compressed air or other gases.
- Place cylinders and hoses where they will not be exposed to sparks and slag from a burning operation.
- Handle cylinders with care, as follows:
 - Lift to upper levels with approved cages only.
 - Do not strike an arc on cylinders.
 - Do not use cylinders as rollers.
 - Do not lift with slings or by protective cap.
 - Anti-flashback arrestors shall be installed on all gas cylinders or built into the regulators.

NOTE: Check valves inside torches are not a substitute for anti-flashback arrestors.

Compressed Air

- Check hoses and couplings daily before use.
- Use only hoses designated to handle compressed air.
- Never crimp, couple, or uncouple pressurized hoses. Shut off the valve and bleed down the hose first.
- All hose couplings must be provided with a positive locking device (i.e., safety clips).
- Compressed air for cleaning workbenches and machinery must not exceed thirty (30) psi.
- Keep hoses off the ground or floor wherever they interfere with walkways, roads, etc.
- Horse play with compressed air is strictly forbidden. Never point an air hose at anyone.
- Hoses exceeding one-half (1/2) inch inside diameter shall have a safety device at the source of the compressed air to reduce pressure in case of hose failure.

- A safety clip or retainer must be installed to prevent attachments, such as chisels on a chipping hammer, from being unintentionally shot from the barrel.

ELECTRICAL

General

Any employee working in the vicinity of energized power distribution lines must ensure that no part of his/her body, tools, or equipment shall come within fifteen (15) feet of the power lines. If the job requirements do not permit this, specific safety precautions must be taken to ensure employee safety.

Electrical Hot work means working on or near energized electrical lines or equipment and is not to be done unless a request is reviewed and approved by PLC site management. This work is only authorized to be performed by qualified electricians.

- All disconnects for motors and apparatuses, and each service feeder or branch circuit at the point where it divides, must be marked to include what it controls.
- All energized electrical panels and outlets must be covered against accidental contact with conductive material.

Never run cords or hoses through water.

PERIODIC

EQUIPMENT INSPECTION PROGRAM

On construction projects, portable tools and equipment have much exposure and are vulnerable to damage. Many hazards are created when this equipment is improperly used and maintained. For an additional safety measure, this equipment is scheduled for detailed periodic inspections. All fall protection equipment, electrical equipment, pneumatic tools and hoses, rigging equipment, and ladders, must follow PLC's color code inspection procedure. These quarterly color code inspections do not in any way relieve the responsibility of the end user to conduct a daily visual inspection prior to every use.

The crew supervisor and / or foreman will have the responsibility ensure the equipment inspections are performed on a quarterly basis.

The employee using the equipment or cord is responsible for assuring that it has the proper marking for the quarter.

Four colors are used, one for each quarter of the year.

Assured Equipment Grounding Conductor Program Color Code		
Month #	Month Tested	Color of tape to apply to cord
1st Quarter	January - March	WHITE
2nd Quarter	April - June	GREEN
3rd Quarter	July - September	RED
4th Quarter	October - December	ORANGE

FIRE PROTECTION

General

Permits are required in hazardous locations for welding, burning, or other open flames. Check with your supervisor.

Extinguishers

Know the location of the nearest fire extinguisher and how to operate it. Know the type of fire on which it should be used. Check the label. Be aware that a fire may generate toxic fumes.

Fire extinguishers of the proper type and size must be within twenty (20) feet of each open-flame operation being performed.

A fire extinguisher will be designated for each fuel storage area, fuel truck, and crane. Other will be placed as needed. Do not remove a fire extinguisher from a designated area unless it is an emergency.

Return extinguishers for servicing promptly after any discharge.

Combustibles

Combustible material under or near welding and burning operations must be moved a safe distance away or covered with fire-retardant material.

Refueling

Portable power equipment must not be refueled while running or when hot. Attach the ground wire before refueling.

Smoking

Smoking is allowed on this project with the exception of inside of offices or refueling areas. Discard butts in approved containers, never in waste baskets or trash cans.

Flammables

Store flammables in properly labeled containers and in designated areas. Keep flammables away from smoking, welding, burning, or other sources of heat.

Liquids – Flammable

Take precautionary measures when using any flammable liquid (i.e., review SDS, product label, etc.). Spraying of liquids increases the fume and vapor problem, and creates fire and explosion hazards. Do not use any of the following liquids until told specifically to do so. Do not mix different liquids or chemicals unless specifically told to do so. Obtain a complete Safety Task Assignment (STA) including respirator, ventilation, and skin-

protection requirements.

- Petroleum Fuels
- Solvents
- Thinners
- Degreasers
- Protective Coatings
- Acids
- Caustics

HAZARDOUS MATERIALS

Corrosive Liquids (Acids and Caustics)

- Do not store, handle, apply, or use acids or caustics unless you have been trained to do so and have received a detailed Safety Task Assignment (STA).
- When disconnecting flanges, expect to encounter pressurized corrosive liquid and protect yourself accordingly. Check contents through a bleed or drain valve, etc., before beginning work.
- Where required, use acid coat, hood, boots, and gloves; barricade the area; and have standby and emergency water immediately available.
- Never add water to acid. If dilution is needed, add acid to water.
- Dispose of chemically soaked material in the proper container.
- **ALL LIQUID CONTAINERS MUST BE PROPERLY IDENTIFIED AS TO CONTENTS.**

Hazardous Waste

Flammables, corrosives, toxic materials, and highly reactive materials require special disposal. See your supervisor or hazardous waste coordinator for the proper container for these materials.

Radioactive Material

Keep clear of all radioactive material and areas where work is being done with radioactive material.

When a mobile nuclear sealed source is being used to gauge the soil density, the tester will ensure everyone is clear for a safe distance before beginning. Following any instructions to stay clear of the testing area until the test is complete.

HAZARD COMMUNICATION

(Right to Know)

If you are working with hazardous chemicals, or may come in contact with them, PLC site management will provide you information and training concerning these hazardous chemicals.

This training should include, but not be limited to:

- An explanation of the Hazard Communication Standard.
- Notification of the training requirements of the Hazard Communication Standard.
- An explanation of the project/site Hazard Communication Program and its location.
- Detailed information on applicable federal, state, and local regulatory standards.
- Notification of the locations of the hazardous chemicals.
- A description of the hazard rating labeling system.
- A description of the material Safety Data Sheets (SDS), their use, and location. If you have any concerns or desire any information concerning chemicals in your workplace, ask your supervisor for information.

HANDBOOK ACKNOWLEDGEMENT

This is to acknowledge that I have received my copy of PLC's Employee Handbook and Safety Guidelines. I have received an orientation on its contents as well as other project/site rules and policies. The rules in this handbook are not intended to cover all possible situations. I understand that I should not engage in any activity that could create a safety hazard. I will read and abide by all rules and regulations in this handbook and any additional rules and regulations of my job. I understand that working safely, complying with and obeying any and all project/site safety rules, regulations, and standards is required on this project/site. Violation of company and project/site safety rules, regulations, and standards could result in disciplinary action including termination of employment. I understand that I have the right to terminate my employment at any time, with or without cause, and that the Company has a similar right.

I UNDERSTAND FURTHER THAT THIS HANDBOOK AND THE RULES AND REGULATIONS IT CONTAINS DO NOT IN ANY WAY CONSTITUTE A CONTRACT (EITHER EXPRESSED OR IMPLIED) OF EMPLOYMENT BETWEEN THE COMPANY AS MY EMPLOYER AND ME FOR ANY INDEFINITE OR SPECIFIED PERIOD OF TIME.

I also understand that this handbook and the rules and regulations it contains do not in any way relieve me from my responsibility to comply with safety rules and responsibilities as defined in PLC's Site Specific HSE Manual while working on this project/site.

Print Full Name: _____

Signature: _____

Position: _____

ID Number: _____ Date: _____

WITNESSED: (PLC SUPERVISOR)

Print Full Name: _____

Signature: _____

Title: _____

Note: This page and the Handbook Acknowledgement contain the same wording. After being properly endorsed and witnessed, the Handbook Acknowledgement becomes a part of your personnel file.