

Safety and Health Plan

Company Guidelines

A-1 INTRODUCTION

Stafford Corp is committed to maintaining the health and safety of all employees, subcontractors and the general public. The Stafford Safety and Health Plan is written to comply with all applicable OSHA safety regulations and other recognized industry standards. All Federal, State, and local health and safety regulations are recognized by this plan and are to be met by all personnel working at a Stafford job site.

The purpose of this plan is to set forth minimum safety requirements. Any omissions from this plan do not relieve personnel from the responsibility of using good judgment. Safety awareness is a responsibility that each individual must share in order to provide a safe workplace.

A-2 POLICY STATEMENT

Stafford has accorded this plan their highest support, priority and participation. Stafford believes that employees, subcontractors and subcontractor employees must likewise give the same commitment to this Safety and Health Plan. Compliance with this Safety and Health Plan is required for everyone working at a Stafford job site.

Employees and subcontractors on Stafford's job sites, whether it be in an office or on a construction location, are responsible for working safely and productively, always remaining aware of hazards in their jobs. They are expected to follow recognized safe work practices, including the use of personal protective equipment (PPE).

Individuals who willfully or repeatedly violate the policies and procedures covered in this Safety and Health Plan are subject to corrective action, up to and including termination and/or expulsion from company property. Lack of mention of any specific safety or health topic does not relieve anyone from the responsibility of acting in a safe manner in all situations.

Subcontractors, in addition to complying with the Safety and Health Plan, must also comply with pertinent safety regulations and recognized construction industry safety practices. Each subcontractor is responsible for having their own safety and health plan.

A-3 GOALS

Stafford's overall goal is to provide a work environment as safe and free of hazards as possible, thus achieving a safe, accident and injury free job site.

A-4 RESPONSIBILITIES

A-4.1 STAFFORD CONSTRUCTION COMPANY

The management at Stafford Construction is committed to this Safety and Health Plan and will provide a copy to all employees and subcontractors. Stafford has the right and responsibility to stop the work and/or enforce disciplinary action on any employee or subcontractor who is using unsafe work practices or disregarding Stafford's safety policies.

A-4.1.1 Discipline

Stafford maintains a strict discipline policy regarding violation of safety and health rules, policies and procedures. A violation is determined to be a willful intent to not comply with any company rule, or any other act of insubordination or noncooperation.

At the first occurrence of a violation, a verbal warning will be given to the employee. The verbal warning will specify the violation, give instruction as to how the employee should correct his/her action, and inform the employee that compliance is expected. The employee is also informed of the consequences if he/she commits the violation again. After a second violation, the employee is given written Notice of Disciplinary Action restating the information discussed in the verbal warning. The employee will also understand that a third violation will result in termination.

If a third violation occurs, Stafford has the right to immediately terminate the employee and/or remove the individual from the job site. The Third-Offense Notice will be posted clearly on the job site notifying all individuals of this policy.

A-4.2 GENERAL SUPERINTENDENT RESPONSIBILITIES

The Project Manager has the foremost responsibility to serve as a model for Stafford, exemplifying the use of safe and healthful practices. They will verify that all Job Superintendents are supporting and enforcing safety and health awareness by continuously inspecting job sites.

A-4.3 JOB SUPERINTENDENT RESPONSIBILITIES

The Job Superintendent is completely responsible for job site safety, requiring that all subcontractors and personnel comply with stated safety requirements. The Job Superintendent will establish an operating atmosphere that allows safety and health to be managed with the same emphasis as overall production, cost and quality control. Additional responsibilities are to:

- Notify the Project Manager in the event of an accident.
- Be familiar with the laws pertaining to safety and their basic requirements.
- Provide a copy of the Safety and Health Plan and make it accessible to all employees/subcontractors on the job site.
- Carry out the Hazard Communication Program (see Section A-6.2).
- Monitor the entire Safety and Health Plan to see that it is carried out at the work site level.
- Verify that necessary PPE is available and used.
- Care for all injuries properly and file related reports, as appropriate.
- Keep all first aid and other safety supplies fully stocked.
- Conduct weekly safety meetings and document on meeting logs/forms.
- Follow up on all recommendations or suggestions from weekly safety meetings and document in the daily log.
- Identify and correct any operational oversights which could pose a safety or health hazard.
- Take immediate action regarding any unsafe conditions.
- Notify management if any subcontractor is creating a safety hazard and is reluctant or slow to correct the problem. Note any problems in the daily log.
- Collect and maintain MSDS sheets in notebook on job site.

A-4.3.1 Safety Meetings

Safety meetings are intended to increase the level of awareness to safety issues and, through discussion, aid in identifying potentially hazardous situations. The Job Superintendent will conduct weekly safety meetings to address pertinent safety topics and any accidents or incidents which may have occurred on the job site. The Employee Safety Meeting form will be signed by Stafford personnel and subcontractors attending the meetings.

Sample topics for safety meetings are located in Safety Meeting Topics. Situation specific safety meetings will also be held before performing a new or unique activity on site.

A-4.3.2 Safety Records

A Daily Inspection Log (daily log) will be completed by the Job Superintendent and will reflect current site conditions, as well as any identified hazards or unsafe practices. A copy of the daily log will be filed on site and one copy will be sent to the Stafford Corporate Office to be retained in the permanent job file.

A-4.3.3 Accident/Incident Records

The Job Superintendent will complete an investigation of any accidents using the Accident/Incident Interview Techniques as a guide. Following the investigations, the Accident/Incident Report will be completed for every accident or incident which occurs on the job site or on company business. A copy of the report will be kept on permanent file in the Stafford Office.

A-4.4 SUBCONTRACTOR RESPONSIBILITIES

All subcontractors of Stafford Construction Services and their personnel are required to be aware of and comply with all Federal, State and local safety rules and regulations. Subcontractors are responsible for their acts of omission and commission to the full extent of the applicable laws. Additionally, subcontractors are required to:

- Comply with all rules stated in the Stafford Safety and Health Plan.
- Participate in Stafford job site safety meetings.
- Adhere to their own safety and health plan which complies with all applicable laws and requirements.
- Be responsible for their personnel's safety on the job site.
- Assign a job foreman that is responsible for completion of the work on the job site.
- Be available to the Job Superintendent to address any safety concerns.
- Insure that all employees are properly trained, equipped and supervised.
- Supply all health and/or safety equipment and materials used in the performance of work.
- Promptly correct any safety hazards.
- Notify Stafford immediately in the event of an injury or accident and file appropriate reports promptly.
- Provide MSDS's.

A-4.5 INDIVIDUAL RESPONSIBILITIES

All individuals on a Stafford job site or office, are responsible for their own individual safety and the safety of their fellow workers. Disregard of the Safety and Health Plan and its requirements are grounds for disciplinary action and/or termination. Additionally, it is each individual's responsibility to:

- Participate in safety training/meetings for employees.
- Acquire a working knowledge of and abide by this Safety and Health Plan and all regulations concerning their scope of work.
- Know where a copy of the Safety and Health Plan is readily available.
- Work to protect all company owned, public and private property.
- Report all accidents, injuries or unsafe conditions to a supervisor immediately and seek first aid treatment if necessary.

- Know location of first aid equipment, fire fighting equipment and other safety devices.
- Possess and utilize any and all appropriate personal protective equipment (PPE).
- Never perform any potentially hazardous task unless properly trained. Seek training when appropriate.

A-5 EMERGENCY RESPONSE PROGRAM

The Emergency Response Program is provided as a resource for handling on-the-job accidents, injuries or other hazardous events.

A-5.1 EMERGENCY RESPONSE COORDINATION

The Job Superintendent will act as the Emergency Response Coordinator at the job site and is responsible for carrying out this Emergency Response Program. In the office, the Project Coordinator or a designated office safety coordinator, Coordinator has the responsibility to:

- Notify local or regional fire, police and/or other emergency professionals, as required.
- Protect all personnel in emergency events, stop all work and coordinate their removal from danger as quickly as possible.
- Contact a corporate office immediately in the case of emergency.
- Stand by and be prepared to provide emergency professional(s) with information so that they may respond as required.
- Establish leadership during emergency events and enact the Emergency Action Plan.
- Establish appropriate emergency alerting mechanism on work site.
- Inform employees, subcontractors and their employees of emergency alerting mechanisms in each job site.

A-5.2 EMERGENCY ACTION PLAN

Personnel will be trained and drilled in the duties specified in this action plan. The action plan will be reviewed annually and new training conducted as necessary.

A-5.2.1 Subcontractor Emergency Action Plan

Subcontractors are responsible at all times for the safety of their employees. They will insure that all of their employees are fully trained and familiar with site specific emergency action plans.

A-5.4 ACCIDENT/INCIDENT REPORT

For the above incidents, or any other event requiring medical attention, an Accident/Incident Report must be completed by the Job Superintendent and supplied to the Project Manager within twenty-four (24) hours of the accident or incident. The Project Manager will forward the report to Stafford management.

A-5.5 EMERGENCY INFORMATION

Emergency telephone numbers, an Emergency Escape Route Form, and contacts must be posted in the construction trailer near the phone. Update periodically, as necessary.

A-5.6 FIRST AID

First Aid is the emergency care given to an injured or ill person until professional medical help can be obtained. The first aid provider will give only such care as is necessary to provide immediate life support or comfort and will not perform non-emergency medical procedures, unless instructed by medical personnel.

A first aid kit and manual will be located in each job site trailer. Refer to the first aid manual for appropriate information when it is necessary to provide first aid.

A-5.6.1 Subcontractors & First Aid

Subcontractors are encouraged to have at least one person who is certified in CPR and first aid.

A-5.7 FIRE

Any one discovering or suspecting a fire will immediately alert workers to fire danger, call fire department and notify the Emergency Response Coordinator, (ERC)

The ERC will evaluate the situation for damage control and assign people to use fire extinguishers, if the fire is controllable. Evacuation procedures will immediately be carried out. All individuals will evacuate safely and quickly, leaving all lights on for fire fighters and closing, not locking, all doors.

A-5.8 EXPLOSION

In the event of an explosion, personnel will be instructed to take cover under tables, desks or other objects which give protection against flying debris or glass. Follow evacuation procedures and the Emergency Action Plan.

A-5.9 FUEL SPILLS

In the event of a fuel spill, attempt to contain the spill. Notify the Emergency Response Coordinator, who will in turn notify the fire department immediately. Keep all potential ignition sources away from the spill.

A-5.10 TORNADOES

In all job sites where there is a potential for tornadoes, it is important to know the local source for tornado warning notification, i.e. a siren, radio, news report. Once it has been determined that an area is under a tornado warning, personnel must take shelter as is appropriate to their location.

A-5.11 LIGHTNING

During storms with lightning, personnel should stay clear from all construction equipment and seek shelter inside a grounded, non-metal

structure. If no other shelter is available, remain inside of vehicles.

A-6 SAFETY & HEALTH PROGRAMS

Stafford has developed six Safety and Health Programs to inform and guide personnel when performing tasks on the job site. All subcontractors are responsible for also establishing their own safety programs as part of their own safety and health plan, as is necessary to protect their employees, the public and the environment.

A-6.1 TRAINING PROGRAM

Training is an integral part of the Stafford Corp safety program. Training consists of the following: **Safety Orientation:** New employees will go through a safety orientation that includes review of:

The Stafford Corp safety program;
Hazard communication program;
Accident reporting procedures;
Designated medical providers;
Required personal protective equipment;
Controlled Substance program;
Stafford Corp disciplinary procedures.

Once the initial safety orientation is complete, new employees will have a site-specific orientation covering unique hazards specific to the project.

Weekly Toolbox Safety Meetings

A toolbox safety meeting will be conducted weekly on projects that will last for two weeks or longer in duration. The job site supervisor will conduct a 5 – 10 minute toolbox safety meeting, covering a topic that is relevant to the work scheduled for the upcoming week.

Note: Attendance at weekly toolbox safety meetings is mandatory for all Stafford Corp personnel!

Annual OSHA Certified Training Course

A-6.2 Hazard Communication Program

Stafford Corp will provide employees with information about hazardous chemicals on the worksite through this hazard communication program, which includes container-labeling requirements, Material Safety Data Sheets (MSDS) and employee information and training guidelines. Each jobsite superintendent or foreman will make the written hazard communication program available, upon request to:

Employees; Their designated representatives; Subcontractor personnel that may be exposed.

A-6.2.1 Labeling

Each container of hazardous chemicals or hazardous materials on the jobsite shall be properly labeled. The labels will list: 1. The identity of the container or materials; 2. Appropriate hazard warnings; 3. The name and address of the manufacturer, importer or other responsible party. To further ensure that employees are aware of the chemical hazards of materials used in their work areas, secondary containers shall be labeled with either an extra copy of the manufacturer's label, or with a sign or generic label that lists the container's contents and appropriate hazard warnings.

A-6.2.2 Material Safety Data Sheets

Copies of Material Safety Data Sheets for all hazardous chemicals to which employees may be exposed are kept in a MSDS binder or file at each jobsite and are readily accessible to employees in the work area during each work shift. Project supervisors or their designated representatives shall be responsible for obtaining, maintaining and updating the MSDS file.

A-6.2.3 Employee Training

All employees shall attend a safety session on hazardous chemicals in their work area at the time of their initial work assignment or as a part of their new employee orientation.

All training shall be documented.

A-6.3 PERSONAL PROTECTIVE EQUIPMENT PROGRAM

The Occupational Safety and Health Act (OSHA) mandates that employers must ensure that all employees are using appropriate personal protective equipment (PPE) in all operations where employees are exposed to hazardous conditions. In those instances where employees are required to provide their own PPE, the supervisor shall ensure that the employee maintains equipment is a safe and sanitary condition.

A-6.3.1 Head Protection

All Stafford Corp employees are required to wear hard-hats when exposed to overhead hazards or working near heavy equipment. Workers inside equipment that has rollover protection systems (ROPS) installed are not required to wear a hard hat unless they leave the equipment.

A-6.3.2 Eye Protection

All employees are required to wear safety glasses when the risk for eye injury is present from flying particles. Supplemental protection may be required such as full-face shields when involved with operations such as grinding, heavy cutting, welding, etc.

Each affected employee who is exposed to injurious or hazardous light radiation use equipment with filter lenses that have a shade number appropriate for the work being performed.

Employees who wear prescription lenses must wear eye protection that incorporates the prescription in its design, or eye protection that can be worn over the prescription lenses without disturbing the proper position of either type of lens.

A-6.3.3 Foot Protection

Appropriate work shoes are required on construction projects. Shoes must have a heavy-duty non-slip sole and a heel. Tennis shoes and thongs are not acceptable. Steel toe or safety toe boots and/or metatarsal guards may be required for certain applications.

A-6.3.4 Ear Protection

Ear protection is required if sound levels are not reduced to within acceptable limits and personnel is exposed to noise levels greater than or equal to 90 dBA for more than eight hours at a time.

A-6.3.5 Hand Protection

Chemical resistant gloves must be worn where there is a reasonable chance that workers hands will be exposed to hazardous chemicals or other hazards, as defined by OSHA regulations.

Leather or abrasive resistant gloves will be worn at all times when operating powered equipment, fabricating sheet metal or piping, welding, grinding, chipping, or as required by the individual task.

A-6.3.6 Electrical Worker Protection

Proper rubber protective equipment will be worn by electrical workers.

A-6.3.7 Appropriate Clothing

Level D clothing, as specified by OSHA regulation is recommended: coveralls or long pants, shirts with sleeves and gloves. Long hair must be appropriately restrained, kept out of the eyes and away from machinery.

Jewelry of any type is not allowed when working with or near equipment. Torn clothing which may catch on equipment is not permitted. Red safety vest are required when working in or near traffic.

A-6.3.8 Subcontractor PPE Program

Subcontractors are required to have a PPE program as part of their own safety and health plan. Subcontractors are responsible for their employee's safety and will direct their employees to wear the proper level PPE and work clothing, as is appropriate for each job site situation. All PPE must be safely and adequately designed to protect the worker from hazards inherent in the work performed.

A-6.4 FIRE EXTINGUISHER PROGRAM

Fire extinguishers will be placed prominently on job sites where they are readily available in case of emergency. The number of fire extinguishers on the site will be in compliance with local fire codes.

A-6.5 FIRE SAFETY

Fires can occur quickly and violently through a lack of attention to safety precautions. The following preventative measures shall be followed at all times.

- Keep all vessels containing flammable liquids tightly closed or vented in such a way as to prevent ignition from open flames or sparks.
- Properly identify all vessels containing flammable liquids.
- No smoking will be allowed on the site, or only allowed in designated areas, if gasoline vapors could possibly be present.
- Use only approved electrical equipment in hazardous areas.
- Do not change light bulbs in a hazardous area when the electrical circuit is on.
- Use only approved electrical equipment in hazardous areas.
- Clean up all spills of flammable liquid immediately and isolate the area affected from any source of ignition.
- Store oily rags in closed metal containers and dispose of them frequently.
- Do not weld or cut in areas which are subject to vapors, until the vessel or area has been gas freed and monitored as such. Each area must be continuously monitored with an explosimeter to assure the absence of an explosive atmosphere during welding or cutting. The maximum permissible reading is 0%.
- Do not subject pipe which has been in petroleum service to any air pressure testing.
- Visually inspect fire fighting equipment such as smoke detectors, extinguishers and fire blankets to insure proper operation.

A-6.5.1 Smoking

Smoking is not allowed on job site premises at any time when gasoline vapors or any other fire hazard may be present.

A-7 SPECIFIC PROCEDURES

Stafford personnel are employed only in supervisory positions and subcontractors are employed to conduct specific procedures on the job site. Subcontractors will refer to Section B., Subcontractors Safety & Health Guidelines, for specific procedures for some commonly encountered tasks and events.

A7.1 HOUSEKEEPING

The job superintendent will ensure that the subcontractors maintain the job site in a neat and orderly manner. Construction trash will be removed at regular intervals. Tools and other construction equipment must be properly stored when not in use, according to the superintendent's discretion. The following housekeeping procedures will aid personnel in maintaining an orderly job site. Slips, trips & falls are one of the leading causes of accidents on a construction project. A site with poor housekeeping also has a

poor safety record. In addition, the general appearance of the project advertises the quality and pride that Stafford Corp takes in our work.

1. Projects will be maintained in a clean and well-organized way. Each subcontractor is responsible for cleaning up the job site each day as directed by Job Superintendent.
2. Materials will be stockpiled in a manner that will prevent them from falling over, creating hazards to the public and creating tripping and/or impalement hazards to workers on the site.
3. Access / egress routes will be maintained free of materials and hazards that will slow or prevent access/egress by emergency responders.
4. Scraps and debris will be picked up and stockpiled or disposed of at the end of every work shift.
5. Bend or pull protruding nails and screws immediately from scraps. Place nails and screws in trash bins or collection devices. Never leave them unattended on the floors or surfaces.

A7.2 ELECTRICAL CORDS

All electrical cords must be in good condition and ground fault (GFI) protected. Cords that are damaged must be discarded or repaired by a qualified technician. Repairing with electrical or duct tape is not acceptable. When in doubt, discard any damaged cords.

A7.3 ADDITIONAL PROCEDURES AND RULES

1. OSHA posters will be prominently displayed.
2. Horseplay, running or improper riding of heavy equipment is prohibited on Stafford business or job sites for everyone, personnel and subcontractors.
3. Possession, sale, use and/or manufacture or weapons while on company business is prohibited.
4. Materials stored in tiers will be stacked, racked, blocked or otherwise secured to prevent sliding, falling or collapse.
5. Floor openings, open sided floor and wall openings will be guarded by standard railings and toeboards or covers.
6. No construction loads will be placed on a concrete structure, or portion of, unless a person qualified in structural design states it is capable of supporting the load(s).
7. All equipment left unattended at night, adjacent to a highway or construction areas, will have appropriate lights, reflectors and/or barricades identify the equipment.
8. A stairway or ladder will be provided at all personnel points of access where there is a break in elevation of 19 inches or more, and no ramp, runway, sloped embankment or hoist is provided.
9. Subcontractors will periodically check all machinery and equipment to verify it is in good operating condition.
10. All forklifts will be inspected daily.
11. All unfinished construction areas must be properly marked and barricaded overnight.

PART B- SUBCONTRACTOR SAFETY AND HEALTH GUIDELINES

B-1 PURPOSE

All subcontractors employed by Stafford Construction are responsible for complying with the Stafford Safety and Health Plan. They are additionally responsible for having a subcontractor's safety and health plan in place to protect their own workers. Although each subcontractor will need to modify their safety and health plan according to the type of work they perform, Stafford is providing the following guidelines which can assist subcontractors in designing or enhancing their plans.

B-2 PROGRAMS

B-2.1 MONITORING PROGRAM

All potential hazards must be appropriately monitored to insure the safety of all personnel, the jobsite, the public and the environment. Specific hazards to be monitored and respective safe levels of exposure are:

**SAFE LEVELS FOR
CONTAMINANTS**

**Vapors-As specified by appropriate
monitoring equipment
Hydrocarbons-Less than 300ppm
(Breathing Zone)**

**Hydrocarbons-Less than 20% (Soil)
Benzene-Less than 1ppm**

B-2.1.1 Vapor Contaminants

Job sites will be monitored to evaluate the breathing zone and the potential for worker

exposure to vapor contaminants, as dictated by the situation. Calibrate monitoring equipment daily to an appropriate calibration standard (i.e. n-Hexane gas). The necessary actions to control concentration levels will be determined on a site basis, depending on the suspected vapor contaminants

B-2.1.2 Hydrocarbons in the Breathing Zone

When monitoring for the concentration of total hydrocarbons in the breathing zone, the site must be abandoned at the point the monitor reads 300ppm. Work can resume when the monitor shows the vapor concentration is less than 300ppm.

B-2.1.3 Hydrocarbon Contaminated Soil

When working with hydrocarbon contaminated soil, the explosive level of the soil must be closely monitored. Most monitoring equipment that measures explosively requires sufficient oxygen (19.5%) in order to operate properly. If the soil reaches the lower explosive limit (LEL), it can be ignited by a cigarette or spark from the equipment (ex. Backhoes bucket striking rock). When the concentration on the explosimeter reaches greater than or equal to 20% of the LEL, all excavation work shall stop until the concentration has dissipated and reads less than 20%.

B-2.1.4 Benzene

When monitoring for the concentration of benzene in the breathing zone, the site must be abandoned when monitor reads 1ppm. Work can resume when the monitor shows the vapor concentration is less than 1ppm.

B-2.1.5 Contaminated Work Zones

Any contaminated work zone will be designated as a Restricted Access work zone. The area must be clearly marked as contaminated and all unnecessary personnel kept out of the area.

The purpose of restricting access to the work zone is to provide ingress and egress for personnel and equipment and to minimize the potential for exposure. Any person required to do work in the restricted work zone must work with another person at the contaminated site (buddy system).

B-2.1.6 Subcontractor Monitoring Program

Any subcontractor who may be required to work with hazards must have a site specific monitoring program as part of their own safety and health plan. The program must outline procedures to be used for monitoring any hazardous substances that may potentially be encountered.

B-2.2 MEDICAL SURVEILLANCE PROGRAM

All individuals encountering hazardous substances must be monitored for health and fitness for employment in such jobs. It is the responsibility of any subcontractor who has individual workers handling hazardous to provide such monitoring.

B-2.2.1 Subcontractor Medical Surveillance Program

Any subcontractor who may be required to work with hazardous substances must have a medical surveillance program as part of their own safety and health plan. The purpose of the programs is to assess and monitor all individual workers for health and fitness for employment in jobs encountering hazardous substances

In the event there is an unforeseen incident of exposure to hazardous site conditions, the following information must be obtained by the Job Superintendent, and maintained by Stafford Construction Corporation's management for 30 years: date, time, location, blood gas level, material involved, level of exposure and medical treatment received.

B-2.3 DECONTAMINATION PROGRAM

If there is any possibility that exposure to hazardous contamination has occurred, people, vehicles and equipment must be inspected to determine if decontamination is necessary. The goal of decontamination is to minimize the potential harm to people and the environment by eliminating or reducing the hazards of the chemical contaminant.

A sufficient supply of clean water must be readily available to wash individual workers, equipment or vehicles if contamination with hazardous substance is identified or suspected. Soap must also be available for site workers to wash off any possible contamination. All used water from washing process must be contained and disposed of in accordance with applicable safety and health regulations An Accident/Incident Report Form must be obtained from the Job

Superintendent and filled out and filed with Stafford's management.

B-2.3.1 Subcontractor Decontamination Program

Any subcontractor who may be required to work with hazardous contaminants must have a site specific decontamination program as part of their own safety and health plan. The procedures must be tailored to the specific hazards of the site and will vary in complexity and number of steps, depending on the level of hazard and the workers exposure to the hazard.

B-2.4 SPILL CONTAINMENT PROGRAM

Hazardous substances and contaminated soils, liquids, and other residues shall be handled, transported, labeled and disposed of in accordance with OSHA regulations. Unlabeled drums and containers are considered to contain hazardous substances and will be handled accordingly until the contents are positively identified and labeled. Drums and containers used during a site cleanup shall meet the appropriate DOT, OSHA and EPA regulations for the waste that they contain.

B-2.4.1 Drum and Container Movement

Site operations shall be organized to minimize the amount of drum or container movement. Prior to any movement of drums or containers, all individual workers exposed to the transfer operation shall be warned of any potential hazards, associated with the contents and provided with any necessary PPE.

B-2.4.2 Subcontractor Spill Containment Program

Any subcontractor(s) who may be required to handle drums or containers holding hazardous waste must have a spill containment program as part of their own safety and health plan. The spill containment program must outline procedures to be used in the event that it is necessary to contain and isolate the entire volume of the hazardous substance(s) being transported.

B-2.5 RESPIRATOR PROGRAM

Stafford's superintendents will not use respirators. In any situation where it is necessary to wear a respirator, or related equipment, only subcontractors will provide the equipment and training, specified by OSHA.

B-2.5.1 Subcontractor Respirator Program

Any subcontractors who may be required to wear a respirator must have a respirator program as part of their own safety and health plan that satisfies the requirements of OSHA regulations. This written program must include standard operating procedures governing the selection, training, use and care of respirators that may be used.

The subcontractor's program must also ensure that personnel are medically certified by a physician as fit to wear a respirator. The subcontractor(s) will instruct and train individual workers in the need, use, sanitary care and limitations of the issued respiratory equipment. Additionally, all respirators are to be fit tested upon issuance and seal tested before worn.

B-3 SPECIFIC PROCEDURES

B-3.1 UNDERGROUND STORAGE TANK (UST) REMOVAL

It is essential to understand that USTs are used to store petroleum fuels which are highly flammable or explosive, and need to be treated with extreme caution. Since only vapors, not liquids, will burn or explode when mixed with oxygen, a full tank may be less explosive than one that is nearly empty, but is equally flammable.

Petroleum products become trapped in seams and joints, and will outgas over time. Even after residual product has been removed, tanks cannot be guaranteed to remain vapor free, and must be treated appropriately. All sources of ignition must be eliminated. One twenty ABC minimum fire extinguishers are required on site during tank removal operations.

B.3.1.1 Sources of Ignition

Eliminating all potential sources of ignition around the work area is of the utmost importance. The subcontractor must consider all possible sources of ignition, along with direction of the wind. Examples of ignition sources include: all smoking materials; non-explosion-proof electrical equipment; welding; sparks from

metal/concrete contact; internal combustion engines; static electricity; and lightning.

Any possible source of ignition should be located upwind from the tank and outside the path of probable vapor travel.

B-3.1.2 Equipment

If pumps are used to remove liquids from the tank they must be explosion-proof in accordance with NFPA 70B Class I, Division I, Group D or air driven. All equipment (pump motors and suction hoses) must be grounded firmly bonded to the tank to prevent electrostatic buildup (sparks) and possible explosion. No work should be done when an electrical storm is impending, or in progress.

B-3.1.3 Petroleum Fuel Vapors

All vapors from the tank must be vented at a minimum height of 12 feet above ground and three (3) feet above any adjacent roof lines. Several components of petroleum fuels contain compounds, such as benzene and xylene that can result in chronic, long-term effects. Monitor worker exposure so that they remain within acceptable exposure limits at all times.

Hydrocarbon vapors are heavier than air and will tend to accumulate in the lowest point of the excavation. The vapor pressures of hydrocarbon solutions increase with temperatures and therefore are more of a concern on hot days versus cold.

B-3.1.3.1 Health Hazards

Petroleum fuels are not only flammable and explosive; they are also hazardous to human health. Caution must be taken to avoid prolonged worker exposure to petroleum hydrocarbon vapors. Hydrocarbon toxicity may result in signs of dizziness, loss of coordination and unconsciousness. Any individual exhibiting any of these signs should be immediately removed to fresh air and obtain medical attention as soon as possible.

B-3.1.4 Underground Storage Tank Removal

In order to safely remove or move USTs, subcontractors must strictly adhere to the following procedures. Any variation from these procedures may potentially cause an explosion, fire, human injury, environmental contamination and /or other hazardous events.

B-3.1.4.1 Government Agency Inspections

The subcontractor must arrange for all necessary inspections, i.e. Fire Marshall, Environmental Health Department, Building and Codes Department, or any other department that requires notification of UST removal.

B-3.1.4.2 Drain Product Lines

To drain petroleum product from the lines, unscrew the two hexagonal bolts on the corners of the sub pump and allow the product form the lines to drain into the tank without spilling on the ground. After the screws are removed, the top half of the sub pump is lifted up to complete draining.

B-3.1.4.3 Remove SubPumps

When all product is drained out of the subpump, the subcontractor will remove it from the riser pipe.

B-3.1.4.4 Purge Product Lines

Purge all product lines with nitrogen. Introduce nitrogen under low pressure to avoid the generation of static electricity. The Discharging device must be grounded

B-3.1.4.5 Remove Product From Tank

Remove remaining product from the tanks and dispose of it through a state certified hazardous waste hauler approved by Stafford.

B-3.1.4.6 Excavate Tanks

Excavate to the top of the tanks in compliance with all applicable OSHA regulations.

B-3.1.4.7 Purge Tanks

Before a tank can be moved or removed, it must first be inerted (all oxygen removed) or purged (all flammable vapors removed).

Extreme caution must always be exercised when handling or working around tanks. Evacuate the tanks of residual vapor by one of the methods described below. It is important to recognize that the tanks may continue to be a source of flammable vapors even after following the specified procedures.

Assess the vapor concentrations in the tank and work area with a combustible gas indicator prior to starting work in the tank area or on the tank. Readings of 20%, or less, of the LEL must be obtained before the

tank is considered safe for removal from the ground. Most combustible gas indicators require sufficient amount of oxygen in order to operate properly; therefore, the oxygen level in the tank must be checked prior to checking the LEL.

The methods allowed by Stafford in order to purge the tanks are:

1. Inset 15 to 25 pounds of dry ice (CO₂) per 1,000 gallons of tank volume into the tank. The crushed dry ice should be distributed evenly over the greatest possible area in the tank to promote rapid evaporation. As the dry ice vaporizes, flammable vapors will flow out of the tank and may surround the area. To control this situation, plug all tank openings, except the vent, after introducing the solid CO₂ and continue to observe all normal safety precautions regarding flammable or combustible vapors within the tank to be displaced.
2. Triple rinse the tanks using a hose wand and about 100 gallons of water per 10,000 gallon tank, per rinse. Please note that if this method is used, the subcontractor is responsible for having certified hazardous waste hauler transport the hazardous liquid under a hazardous waste manifest at the subcontractor's cost and liability.
3. Ventilate the tank using an eductor-type air mover usually driven by compressed air as illustrated in Figure 1, Page 21. The eductor-type air mover must be properly bonded to prevent the generation and discharge of static electricity. When using this method, the fill (drop) tube should remain in place to insure ventilation at the bottom of the tank. Tanks equipped with fill (drop) tubes are not removable should be purged by this method. An eductor extension shall be used to discharge vapors a minimum of twelve feet above grade.
4. Ventilate with diffused air blower, as illustrated in Figure 2, Page 21. When using this purging method, it is imperative that the air-diffusing pipe is properly bonded to prevent the discharge of a spark. Fill (drop) tubes must be removed to allow proper diffusion of the air in the tank. Provide air supply from a compressor that has been checked to insure a clean air supply that is free from volatile vapors. Air pressure in the tank must not exceed five pounds per square inch gauge.

NO OTHER METHOD WILL BE ALLOWED WITHOUT COMPANY APPROVAL!

In all of these cases, vent the tank vapors from the tank at minimum height of twelve (12) feet above grade and three (3) feet above any adjacent roof lines until the tank is purged of flammable vapors. Continue to regularly test the tank atmosphere and excavation area for flammable or combustible gas indicator. The testing will be performed regularly until the tank is removed from the site.

B-3.1.4.9 Bill of Sale

The subcontractor must complete and sign a Stafford bill of sale for the tanks and lines and attach a check for \$1.00. A testing agent designated by Stafford must receive this form and check before the tanks can be transported.

B-3.1.4.10 Verify Lower Explosive Limit

Prior to removing a tank from the site, check the tank atmosphere with a combustible gas indicator to insure that it does not exceed 20% of the LEL.

B-3.1.4.11 Label Tank

Once a tank is removed from the ground, it must be labeled with the following information using (2) inch letters and shown in at least two places in the tank.

**TANK LABEL
TANK HAS CONTAINED
FLAMMABLE LIQUID
NOT GAS FREE,
NOT SUITABLE FOR FOOD OR
DRINK
LEAD VAPORS MAY BE RELEASED
IF HEATED.**

B-3.1.4.12 Remove Tank

Remove the tank from the site on the same day the tank is removed from the ground. When the tank is hauled off, the 1/8 inch vent hole must be located at the uppermost point of the tank.

B-3.1.4.13 Scrapping Tank

Dispose of the tank after it is removed from the site by cold cutting it into scrap. As a minimum, both ends of the tank must be removed and the shell cut into three pieces. The subcontractor will verify this requirement by giving Stafford a letter from the salvage yard stating the tank number and detailing how it was dismantled. The letter of verification will be retained in Stafford's project file.

B-3.2 CONFINED SPACE ENTRY

A confined space is a space which has limited openings for entry and exit and/or unfavorable natural ventilation. A confined space can be open topped if it is four (4) feet deep or more. Examples of confined spaces are: submersible pump sumps; underground storage tanks; underground storage tank manways; recovery system vaults; tank hole excavation and trenches.

No one is allowed to enter an underground storage tank with out special permission from the Stafford Job Superintendent assigned to the project.

B-3.2.1 Safe Entry Checklist

Entry into a confined space is regulated by OSHA standards, which require a checklist-type permit to be completed and posted at the confined space site before entry. A safe entry checklist provided by subcontractor must be completed on any Stafford job site before entering a confined space. The check list should be posted immediately outside the entry of the confined space. After the work is complete, the permit and check list need to be returned to Stafford management and placed in the project file.

CONFINED SPACE ENTRY REQUIREMENTS

Oxygen Content -Between 19.5 % & 21%
Lower Explosive Limit-Less than or = to 10 %
Personnel -Two, in areas without supplied O₂
Personnel-Three in areas with supplied O₂

B-3.2.2 Oxygen Content/Flammable Vapors

No person shall enter a confined space where he/she suspects there is an insufficient oxygen atmosphere or an accumulation of flammable or toxic vapors without appropriate PPE and written Stafford permission. Prior to entering any confined space, it must be checked for sufficient oxygen content and flammable vapors. The oxygen content must be greater than 19.5% and less than 21% for entry to be permissible without proper PPE.

An oxygen-enriched atmosphere (above 21%) will cause flammable materials, such as clothing and hair, to burn violently when ignited. Therefore, never use pure oxygen to ventilate space. Ventilate with normal air.

B-3.2.3 Monitoring Equipment and Lower Explosive Limit

Monitoring equipment which is used to measure explosive limits require oxygen to work properly. First, check the oxygen level, and then check the explosive level. The LEL must be less than or equal to 10% for entry to be permissible.

B-3.2.4 Confined Space Entry Requirements

Two (2) persons are required for entry into a confined space-one to enter the space and the other to remain at the opening for communication with the person in the confined space. Entry into confined spaces requiring supplied air is normally not required and needs special written permission from the Job Superintendent before it will be allowed. Where permission for entry into such an area is given, a minimum of three (3) persons are required-one person to call for emergency assistance, if necessary. The distance between the observer and the emergency response person shall not exceed 100 feet.

B-3.3 EXCAVATION AND TRENCHING

Extreme caution must be taken during excavation and trenching phases of a project. Dangers are always present when digging due to unknown object underground. Additionally, unstable and dynamic soil conditions create major safety hazards when construction personnel are working in and around an excavation.

Subcontractors must comply with applicable OSHA construction regulations.

OSHA defines the difference between a trench and excavation as:

*Trench- a narrow excavation made below the ground's surface where the excavation's depth is greater than its width (which must not exceed fifteen (15) feet).
Excavation-any cut, cavity, trench or depression formed by earth removal.*

B-3.3.1 General Safety Considerations

Specific safety measures are necessary when working with excavation and trenching.

B-3.3.1.1 Hard Hats

Hard hat must be worn by all individuals working in tank excavations or trenches.

B-3.3.1.2 Daily Inspections

Excavations five (5) feet deep or more will be inspected daily by the subcontractor's site safety officer for security and soil movement. If evidence of possible cave-ins or slides are apparent, all work in the excavation will cease until the necessary precautions have been taken to safeguard the personnel.

B-3.3.1.3 Clear Spoils

Keep spoils a minimum of two (2) feet from the edge all excavations and trenches that are four (4) feet deep or more and where personnel may be required to enter.

B-3.3.1.4 Water Accumulation

Do not allow water to accumulate in any trench or excavation. The subcontractor's site safety officer will inspect all excavations after every rainstorm to verify it is free of water. Protection against slides and cave-ins will be increased, if necessary.

B-3.3.1.5 Walkways and Sidewalks

Keep walkways and sidewalks clear excavated material, or other obstructions. Non sidewalk or walkway will be undermined, unless shored to carry a minimum live load of 125 pounds per square foot.

B-3.3.1.6 Loaded Equipment and Personnel

Personnel are not allowed under loads handled by power shovels, derricks or hoists. To avoid being hit by any spillage, individual workers are required to stand away from any vehicle while it is being loaded.

B-3.3.2 Pre-dig

All surface and underground encumbrances which may cause a hazard must be removed before any excavation or trenching is performed.

B-3.3.2.1 Contact Local Utilities

Contact the appropriate local utilities regarding placement of their underground lines. Often, they will provide personnel to mark the location of their underground lines.

B-3.3.2.2 Verify Survey Information

If the subcontractor is marking the lines, any survey information must first be verified with the local service agency that locates underground utilities. Mark the line locations at the surface prior to digging

B-3.3.2.3 Dig by Hand

Dig by hand all areas marked for underground utilities, until the installation is uncovered.

B-3.3.2.4 Remove Foreign Objects

All trees, boulders and other surface objects that may create a hazard must be removed, or made safe, prior to digging.

B-3.3.3 Excavating

During excavation many precautions are necessary to insure that the excavation does not cave in, adjacent objects are not destroyed and personnel are not injured.

B-3.3.3.1 Shore Adjacent Walls

A shoring system, sloping of the ground or some other equivalent means will be used in all excavations where there is danger of any wall or face movement, which could result in injury.

B-3.3.3.2 Determine Angle Systems

When determining the angle systems to be used for shoring, there will be a careful evaluation of pertinent factors such as: depth of cut; possible variation in water content of the material while the excavation is open; anticipated changes in materials from exposure to air, sun, water, or freezing; loading imposed by structures, equipment, overlying material or stored material; and vibration from equipment, blasting, traffic or other sources.

B-3.3.3.3 Excavate to Angle of Repose

Excavate all slopes to at least the angle of repose, except for areas where solid rock allows for line drilling or presplitting. Flatten the angle of repose when excavation has water conditions, silty material, loose boulders and areas where erosion, deep frost action and slide planes appear.

B-3.3.3.4 Storage of Excavated Materials

Store and retain excavated or other material at least 2 feet or more from edge of excavations where construction personnel may be required to enter.

B-3.3.3.5 Support Systems

Support systems designed by a qualified person will be present when an excavation is in excess of 20 feet in depth, adjacent to structures or improvements or subject to vibration or ground water.

B-3.3.3.6 Stabilize Backfilled Areas

Excavations adjacent to previously backfilled excavation or a fill particularly when separation is less than the depth of the excavation, must be sloped and shored specifically to prevent cave-ins. Except in hard rock, excavations below the base of the footing of any foundation or retaining wall is not permitted, unless the wall is underpinned. Any and all other precautions must be taken to insure the stability of adjacent walls.

B-3.3.3.7 Stabilization of Adjoining Buildings

If the stability of adjoining buildings or walls is endangered by excavations; shoring, bracing, or underpinning will be provided as necessary to insure their safety. Such shoring, bracing or underpinning shall be inspected daily or more often as conditions warrant by the subcontractor's site safety officer. Any identified problems will be promptly corrected. An example is the protection of the canopy and building footing during an underground storage tank replacement.

B-3.3.3.8 Stabilization for Heavy Objects

When operating heavy equipment or placing heavy objects on a level above and near an excavation, the side of the excavation must be shored, sloped, or otherwise supported, as is necessary to resist any extra pressure due to such superimposed loads.

B-3.3.3.9 Barricades

Install substantial stop logs or barricades when mobile equipment is utilized or allowed adjacent to excavations. All wells, pits, tank holes, etc., shall be barricaded or covered with adequate protection.

B-3.3.3.10 Entering Excavations

Never raise or lower personnel into an excavation by the excavation equipment.

B-3.3.3.11 Monitoring

Test air in any location where oxygen deficiency or gaseous conditions are possible.

B-3.3.4 Trenching

Banks more than 5 feet high will be shored, laid back to a stable slope or supported by some other equivalent means, when the subcontractor's site safety officer determines that individual workers may be exposed to moving ground cave-ins.

The sides of trenches in hard compact soil including embankments will be shored or otherwise supported when the trench above the 5 foot level may be sloped to preclude collapse, but shall not be steeper than a one foot rise to each 1/2 foot horizontal.

B-3.3.5 Barricades and Signs

The proper use of signs at a facility conveys safety awareness to individuals as well as visitors to the property. Examples are signs to point out dangers, to caution personnel of potential danger to give directions and to serve as reminders.

Barricades must be used when there is an open tank hole or utility trench. Proper barricades such as flashing barricades, reflective ribbon, and safety fencing are required to be used for open trenches and when working near a street.

A 6-foot high chain link fence is required to enclose tank hole areas during excavation and must remain in place until storage tanks have been properly backfilled to within 4 feet of final grade.

The color scheme on safety is as follows: Danger White letters on a red background Caution Yellow on black
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B-3.4 EQUIPMENT SAFETY

Many different types of equipment are used in the job site, and the experience that each individual may have in using the equipment can vary greatly. It is the responsibility of each individual to seek assistance and training when using equipment which is new to them, or which they are fully experienced in operation.

B-3.4.1 Air Compressors

B-3.4.1.1 Operating Instructions

Equipment operators must be familiar with air compressor operating and maintenance instructions.

B-3.4.1.2 Guards on Pulleys and Belts

All rotating pulleys and belts on compressors and electric motors must be completely guarded.

B-3.4.1.3 Deteriorated Cords

Any flexible cords or plugs on electric motor driven compressors must be periodically checked and replaced when appropriate.

B-3.4.1.4 Drain Accumulated Liquids

The air tank drain valve must be opened frequently to prevent excessive accumulation of liquid.

B-3.4.1.5 Safety Relief Valves

Air tanks must be protected by adequate safety relief valve(s). These valves must be tested at regular intervals to insure that they are in good operating condition. There will be no valves between the air tank and the safety valve.

B-3.4.1.6 Pressure Controller Gauge

The pressure controller and gauge must be monitoring regularly to verify that they are in good operating condition.

B-3.4.1.7 Distance from UST

Keep air compressors as far way from the tank and dispenser areas as reasonable for use.

B-3.4.1.8 Barricades

Use cones and/or barricades to close off the area being worked in to prevent spectators and vehicles from coming too close. Use cones to protect the compressor and/or work vehicles

B-3.4.1.9 Protection While Jack Hammering

Eye and ear protection must be worn while jack hammering. Steel toed shoes/boots should be worn while jack hammering.

B-3.4.1.10 Compressor Hoses

Do not lay compressor hoses where they may be tripped over. Store or place hoses away from main walkways and passages.

B-3.4.1.11 Blowing Air

Do not use compressed air to blow dust/dirt from clothes on the jobsite.

B-3.4.2 Concrete Saws

B-3.4.2.1 Operating Instructions

Equipment operators should be familiar with the operating and maintenance instructions for the concrete saw.

B-3.4.2.2 Refueling

Engines must be stopped while concrete saw is being refuels, serviced or maintained. The fuel shall be transported, handled and stored in accordance with pertinent OSHA regulations.

B-3.4.2.3 Eye and Ear Protection

Eye protection is required while operating equipment. Ear protection is strongly recommended.

B-3.4.3 Steam Cleaner and Pressure Washer

B-3.4.3.1 Operating Instructions

Equipment operators should be familiar with and use steam cleaner and pressure washer operating and maintenance instructions.

B-3.4.3.2 Eye and Hand Protection

Eye and hand protection are required while operating this equipment. Face shields, goggles and insulated rubber gloves are strongly recommended.

B-3.4.3.3 Refueling

Turn off the equipment completely before refueling and/or servicing. The fuel shall be transported, handled and stored in accordance with pertinent OSHA regulations.

B-3.4.3.4 Spraying Water

Do not spray water on electrical components

B-3.4.3.5 Grip Cleaning Wand

Grip steam cleaning wand securely before starting washer. Serious injury can occur if an unsecured wand starts to whip.

B-3.4.3.5 Flying Debris

Protect the public and all property from flying debris and wand discharge.

B-3.14.4 Front-end Loaders

B-3.4.4.1 Safety Belts

Safety belts are to be worn by personnel at all times while operating the front end loader.

B-3.4.4.2 Reverse Alarm

An audible reverse alarm must be installed and functional.

B-3.4.4.3 Fire Extinguisher

Each loader will be equipped with a fire extinguisher.

B-3.4.4.4 No Riders

Riders will not be allowed in the loader's cab, except for training purposes.

B-3.4.4.5 Misuse of Bucket as Transportation

The bucket is never to be used to transport personnel.

B-3.4.4.6 Unattended Loaders

Loaders left running but unattended are to have the shift lever locked in neutral and the emergency brake engaged.

B-3.4.5 Cranes

B-3.4.5.1 Operating Instructions

The equipment operator must be familiar with and comply with the manufactures specifications and limitations applicable to the operation of any and all cranes and derricks.

B-3.4.5.2 Equipment Inspection

The equipment must be inspected prior to each use (and during long periods of use) to insure it is in safe operating condition. Any identifies deficiencies will be repaired, or defective parts replaced before continued use.

B-3.4.5.3 Guards on Moving Parts

Guards will be placed around all moving parts such as shafts, belts, gears, pulleys, sprockets, spindles, drums, fly wheels and chains, if such parts are exposed to contact to contact by any personnel, or otherwise create a hazard. All installed guards will meet the requirements if applicable ANSI Standards.

B-3.4.5.4 Barricades

Barricades will be placed around accessible areas within the swing radius of the crane's rear of the rotating superstructure. Barricades will be either permanently or temporarily mounted, in such a manner as to prevent anyone from being struck or crushed by the crane.

B-3.4.5.5 Reinforcing for Heavy Loads

If the soil conditions will not bear the anticipated load, timbers or some other suitable material must be used to distribute the load. Outrigger operation must be verified prior to lifting any loads.

B-3.4.5.7 Overhead Electrical Wires

All overhead wires are assumed to be energized. In order to be considered otherwise, the local electrical authority must verify the wires are not energized and the lines must be visibly grounded.

B-3.4.6 Ladders

B-3.4.6.1 Compliance with Standards

All portable and fixed wood and metal ladders are to be in compliance with applicable ANSI standards.

B-3.4.6.2 Inspection

Inspect all ladders prior to each use. Loose or missing parts, cracks, splinters, or knots in upright, braces, steps or rungs must be noted and repaired prior to use.

B-3.4.6.4 Extension Ladder Placement

When placing an extension ladder, the distance from the foot of the ladder to the object against which it will lean must be approximately ¼ the length of the ladder.

B-3.4.6.5 Step Ladder Placement

When placing a step ladder, fully extend the legs and lock the cross braces into place.

B-3.4.6.6 Portable Ladder Placement

Place portable ladders on a substantial base, and clear the area around the top and bottom of the ladder. The ladder must be tied, blocked or otherwise secured to prevent the ladder from being displaced.

B-3.4.6.7 Aluminum Ladder Rivets

Inspect aluminum or other metal ladders regularly for burrs or loose rivets. Never use metal ladders or ladders with metal side rails for electrical work or in areas where the ladders may come into contact with electrical equipment.

B-3.4.6.8 Grip Side Rails

Grip the side rails at all times while using the ladder. If it is not practical to grip the side rails, grip the rungs securely with both hands while ascending or descending.

B-3.4.6.9 Prohibited Activities

The following activities are prohibited:

- Walking under a scaffold or ladder when personnel are working on it;
- Working on a high ladder in a strong wind;
- Placing a ladder in front of a door without locking the door or placing a person on guard;
- Leaving tools on ladder.

B-3.4.10 Side Rail Strength

Continuous side rails are preferred, but if splicing is necessary to attain the required length, then the splice must have the equivalent strength of a continuous side rail of the same length.

Side rails on a single cleat ladder up to 16 feet long must be made from 2 x 4 inch lumber. A single cleat ladder, 16 to 30 feet long, must have side rails made from 3 x 6 inch lumber. A double cleat ladder, up to 12 feet long, should have side rails made from 2 x 4 inch lumber.

B-3.4.7.1 Scaffolds

B-3.4.7.1 Compliance Standards

All scaffolds will be erected, maintained and utilized in accordance with applicable OSHA regulations.

B-3.4.7.2 Inspection Condition

Inspect scaffolds before each installation and periodically thereafter. Maintain all parts of the scaffold such as bolts, nuts, fittings, clamps, wire ropes and outrigger beams and their fastenings in solid and good working condition. Scaffold construction must be constructed from nails or bolts, which are of adequate size and in sufficient numbers at each connection to develop the designed strength of the scaffold. Nails will not be

subjected to a straight pull and shall be driven full length.

B-3.4.7.3 Secure Footings

The footing or anchorage for scaffolds must be sound, rigid and capable of carrying a maximum intended load without settling or displacement. Do not support scaffolds or planks with unstable objects such as barrels, boxes, loose brick, or concrete blocks.

B-3.4.7.4 Guardrails and Toeboards

Install guardrails and toeboards on all open sides and/or ends of platforms more than 10 feet above the ground.

Guardrails must all be made of 2 x 4 inch lumber or the equivalent, installed no less than 36 inches or not more than 42 inches high, with a midrail (when required) of 1 x 4 inch lumber or equivalent. Supports should be positioned at intervals not to exceed 10 feet. Toeboards will be a minimum of 4 inches in height.

B-3.4.7.5 Maximum Load

Scaffolds and their components must be capable of supporting without failure, at least four times the maximum intended load.

B-3.4.7.6 Safety Screen

Scaffolds must have screen consisting of No.18 gauge US standard 1.2 inch wire mesh or the equivalent between the toeboard and the guardrail, extending along the entire opening, where persons are required to work and/or pass under the scaffold.

B-3.4.7.7 Planking Platforms

Overlap all planking or platforms a minimum 12 inches or secure from movement in a comparable manner. Extend scaffold planks over their end supports not less than six inches and not more than 18 inches.

B-3.4.7.8 Secure Poles, Legs or Uprights

The poles, legs, or uprights of scaffolds must be plumb and securely, rigidly braced to prevent swaying and displacement.

B-3.4.7.9 Storms and High Winds

Working from scaffolds is not permitted during storms or high winds.

B-3.4.7.10 Scaffold Suspension

Wire or fiber rope, used for scaffold suspension must be capable of supporting at least 6 times the intended load to be supported by the scaffold.

B-3.4.7.11 Horizontal Movement

Do not alter or move scaffolds horizontally while they are in use or occupied.

B-3.4.7.12 Staging in Elevated Positions

Staging for use in elevated positions must be provided with hand rails and toeboards. The span between the supports of a scaffold shall not exceed 8 feet.

B-3.4.8 Power and Hand Tools

B-3.4.8.1 Compliance with Standards

Electric power-operated tools will either be of the approved double-insulated type or grounded in accordance with applicable OSHA regulations.

B-3.4.8.2 Maintain Safe Condition

Maintain all hand and power tools and similar equipment in a safe condition. Subcontractors will not issue or permit the use of unsafe hand and power tools

B-3.4.8.3 Guard Moving Parts

Any moving parts on power tools must be protected by a guard. Examples are belts, gears, shafts, pulleys, sprockets, spindles, drums. Fly wheels, chains, or other reciprocating, rotating or moving parts of equipment. Guarding shall meet the requirements as set forth in applicable ANSI standards.

B-3.4.8.4 Person Protective Equipment

Use appropriate personal protective equipment to safeguard against potential hazards while operating/using hand and power tools.

B-3.4.8.5 Wrenches

Do not use wrenches, including adjustable, pipe end and socket, when jaws are sprung to the point that slippage occurs.

B-3.4.8.6 Impact Tools

Keep impact tools such as drift pins, wedges, and chisels, free of mushroomed heads.

B-3.4.8.7 Tool Handles

Keep the wooden handles of tools free of splinters or cracks and tight in the tool.

B-3.4.8.8 Electric Cords

Do not use electric cords or hoses for hoisting or lowering tools.

B-3.4.8.9 Pneumatic Tools

Secure pneumatic power tools to the hose or whip by appropriate means to prevent the operator from accidentally losing control of the tool.