University of Texas at Austin
Facilities Services
Project Management & Construction Services
Construction Safety Policy

Table of Contents

Safety Policy Statement

The University of Texas at Austin(UT) Facilities Services and Project Management & Construction Services (PMCS) Construction Safety Policy incorporates polices and procedures for the prevention of injury, property damage, fire damage, and occupational illness. No function of our organization is so critical as to require or justify a compromise of safety.

The Construction Safety Policy is in place to ensure a safe workplace at all times. It allows operations to be conducted in a manner as to provide protection for all individuals, including University faculty, staff, students, and visitors. UT Facilities Services and PMCS employees, contractors, and subcontractors, and all others employed on a job site, as well as anyone else who comes on the site for any reason during construction, are expected to conduct their work in a safe manner and are required to comply with established safety programs. By contract, every contractor on a project site is obligated to perform all work in a safe manner. By contract, every contractor on a project site is obligated to conform to the requirements of the Federal Occupational Safety and Health Act (OSHA) of 1970 and all additions and revisions thereto, as well as all other applicable Federal, State, and Local requirements and the UT Facilities Services and PMCS Construction Safety Policy.

All supervisory employees must accept their personal responsibility for the prevention of accidents and for conducting all operations under their direction in a safe and efficient manner.

With the cooperation and assistance of everyone, University projects can be accomplished with quality, success, and safety.

Program Effectiveness

The effectiveness of the safety program depends upon the active participation and cooperation of all employees and the coordination of their efforts in carrying out a few basic responsibilities:

1. Plan all work to minimize potential risk of personal injury, property damage, and the loss of productive efforts.
2. Establish and maintain a system for early detection and correction of unsafe practices and conditions.
3. Ensure adequate protection of adjacent public and private properties to maintain safety of the public at all sites.
4. Establish and conduct safety training programs for employees through:
    a. Safety meetings.
    b. Investigations of accidents and near miss accidents to determine cause and the necessary corrective actions.
    c. Safety training and refresher training.
    d. Use of proper work procedures, personal protective equipment, and mechanical guards.
    e. Maintenance of records of accidents and losses for contractor files.

Meetings

During the Pre-Construction meeting, a safety conference will be held with each new contractor prior to working for UT Facilities Services and PMCS. The Safety Coordinator or an assigned designee will issue the Facilities Services and PMCS Construction Safety Policy with special instructions to the contractors in support of the program. The Safety Coordinator or their designee will discuss safety goals, contents of the manual, and other related information with the contractors. All Project Superintendents and Project Managers will be required to attend this orientation before coming on the site.

Contractor meetings will be held as necessary and as directed by the Project Managers and Safety Coordinator. All contractors are required to hold weekly "tool box" safety meetings for all employees. Topics related to work assigned and current safety problems will be discussed. Monthly meetings for supervisory employees will also be required. The Project Managers will monitor these "tool box" meetings through personal attendance or by reviewing a copy of the meeting report. The weekly report of this meeting and the attendees must be forwarded to the Project Manager.

Prior to starting any major operation that would require lock-out/tagout procedures, a meeting must be set up by the Project Manager and every Project Superintendent and contractor safety representative affected by the work. Specific requirements of the Facilities Services and PMCS Lockout/Tagout or Confined Space Programs will be reviewed by the involved parties prior to the commencement of work.

Program Enforcement

The Facilities Services and PMCS Construction Safety Policy is a mandatory program for all contractors working in coordination with Facilities Services and PMCS on any projects on the University of Texas at Austin campus or associated properties. Should an eminently dangerous situation exist or be discovered, all work in the area of the danger will be stopped immediately until corrections are made.

Should the Project Manager or any authoirized UT personnel find contractor areas or individuals being or acting in non-compliance with OSHA or the Construction Safety Policy, they shall have the authority to order immediate correction of the non-compliant occurrence.

Repeated violations or lack of cooperation with regard to the Construction Safety Policy by employees of a contractor or any subcontractors will indicate non-compliance with provisions included in the contract and may be reason for termination of the contractor's contract. The type and number of violations determine the type and degree of discipline.

In order to enforce the provisions of the Construction Safety Policy, the following actions will be taken:

1. Periodic inspection checklists completed by the Project Managers.

2. Unannounced inspections by the Facilities Services Safety Coordinator.
3. Observations made during periodic site visits by staff personnel (Associate Directors, Project Managers or Construction Coordinators, Safety personnel, etc.) will be addressed by the Project Manager or Construction Coordinator where any safety issues are noted. A copy of all observations will be provided to the Safety Coordinator for collection and trending.

Accident Investigation and Reporting Requirements

For all fatalities, cases requiring hospitalization, or possible lost-time injuries, the Project Manager or Construction Coordinator is to be notified immediately. Copies of all accident reports must be filed with the Construction Manager within eight (8) hours.

Any accident or incident resulting in a lost-time injury, fatality, damage to property or equipment, a serious "near miss," or the recognition of a potential hazard to health and environment is to be investigated by a committee comprised of designated managers, coordinators, safety professionals and individuals not involved in the incident. In the case of a serious injury or death, the Directors of Facilities Services and PMCS will appoint a Committee of Inquiry to investigate the incident. The investigation shall begin promptly after the incident. Results of the investigation and recommendations for preventive action shall be documented within five (5) workdays of the incident.

The Project Manager shall provide a Monthly Progress Report, a safety report covering safety activities for the preceding month for all the projects they maintain. The report should include:

1. The accident experience, minor, recordable, and lost-time for the month.
2. All Safety Deficiency reports and documentation of tool box safety meetings completed for the month.
3. A review and summary of the safety activities, problem areas, and contemplated action, including fire hazards and environmental hazards.

These reports will be filed in the contractor's permanent file with the University of Texas at Austin PMCS department.

Correction of Violations

All Project Managers, Construction Coordinators and the Facilities Services Safety Coordinator have the authority to instruct contractors to correct violations of safety regulations or unsafe conditions on the spot.

Post-Construction Review

Near the end of the project, a Lessons Learned meeting will be conducted by the Project Manager to review the project history for opportunities to improve safety performance for future work. The post-construction review meeting will include the, Project Manager, Construction Coordinator, Safety Coordinator, and significant contractor superintendents and supervisors. Those attending will review the contractor's safety record file including

accident experience, safety procedures, and other relevant information and recommendations will be made where appropriate.

Job Hazard Analysis

A job hazard analysis (JHA) will be conducted on non-routine projects and projects considered a high risk of injury to involved parties or bystanders. A Project Manager will help assess when JHA's are required on particular projects. The analysis will assess each aspect of a task and address the items which could result in an injury to an individual. This involves an evaluation of the mechanics of the operation, identifying what can go wrong, and how to do it safely. Follow link to form: \\Flint\project_delivery\AE_Standards\Construction Phase\General Forms\HazardousAnalysis.rtf

Alcohol, Drugs, and Other Prohibited Articles

The University of Texas Facilities Services and PMCS prohibit the use, possession, distribution, or sale on the project premises, facilities, or work places of any of the following: alcoholic beverages, intoxicants, drugs, and/or related drug paraphernalia.

Employees must not report for duty or perform work while under the influence of any drug, alcoholic beverage, or intoxicant. Employees on the project premises may be subject to removal if found to have such prohibited articles or are under the influence of any of the above substances.

Asbestos

No asbestos material will be used on University projects. Asbestos waste and asbestos-contaminated materials shall be collected and disposed of in accordance with 40 CFR 763, Subpart G by appropriate licensed personnel. Prior to removing any asbestos, the Environmental Health & Safety department (EHS) must be contacted for instructions. This department must also be contacted if asbestos is found on a site and also prior to the demolition of any building or any other facility, whether or not any asbestos is present. Prior to any building demolition a Texas Department of Health (TDH) form must be completed.

Combustion Engines/Indoors

Internal combustion engines used by the contractor must not be operated inside of buildings.

Compressed Air

Compressed air shall not be used to clean dust from an individual's clothes or body; the air could enter the body at openings or breaks in the skin, resulting in a serious injury.

When air pressure is used to clean chips and dirt from material, ensure that eye protection is worn and that the air stream is directed away from employees and other persons. The maximum pressure that may be used for this purpose is 30 psi.

Compressed Gas Cylinders

Valve protection caps shall be in place and secured when transporting, moving, and storing compressed gas cylinders. Cylinder valves shall be closed when work is finished, when cylinders are empty, or being moved.

Compressed gas cylinders shall be secured, either roped or chained, in an upright position at all times, except when being hoisted or carried.

Oxygen and gas regulators shall be in proper working condition while in use. Hoses shall be periodically inspected and replaced if abrasions or cuts are discovered.

Compressed gas cylinders of acetylene, propane, etc. not intended for immediate or continuing use, shall not be stored in buildings or anywhere near a heat source. Oxygen cylinders in storage shall be separated from fuel-gas cylinders or combustible materials (especially oil or grease), a minimum distance of twenty (20) feet or by a noncombustible barrier at least five (5) feet high having a fire-resistance rating of at least one-half (1/2) hour.

If a leak develops in a cylinder, it shall be removed immediately to a safe location.

Cylinders shall be permanently marked or stenciled to identify the type of gas in the cylinder.

Use of highly flammable, explosive, or toxic gases (hydrogen, chlorine, formaldehyde, etc.) must be approved in writing by EHS.

Cranes

General

The following are requirements of the contractor to ensure that cranes are capable of handling their loads properly, safely, and with the greatest efficiency. Prior to the selection, delivery, erection, use, or removal of any crane equipment, the Project Superintendent shall review this section of the Construction Safety Policy with the persons involved in the operation to ensure compliance. The inspection report for the cranes, shovels, derricks, tractors, and pans is simply a check-off list that ensures certain items were inspected by a competent, authorized person who shall be the operator. This report must be available to the Safety Officer, or their designee, throughout the crane operation.

Rated load capacities, operating instructions and special hazard warnings shall be conspicuously posted on all equipment and shall be visible to the operator while at the control station. An illustration of hand signals to crane operators shall be posted at the job site.

Inspection

Periodic and Annual Inspections shall be performed in accordance with the manufacturer's recommendations and as required by OSHA standards. Annual crane inspections shall be performed by an approved third-party inspection service. Additionally, cranes shall be inspected:

1. After set up and prior to initial lift.
2. Before each shift.
3. After every malfunction.

Daily inspections shall be performed by a competent person checking for the following items:

1. All control mechanisms for maladjustment interfering with proper operation.
2. All control mechanisms for excessive wear of components and contamination by lubricants or other foreign matter.
3. All safety devices for malfunction.
4. Deterioration or leakage in air or hydraulic system.
5. Crane hooks with deformation or cracks; sling and choker for broken strands, fraying or kinking.
6. Electrical apparatus for malfunctioning, signs of excessive wear, dirt and moisture accumulation.

Record Keeping

All records pertaining to crane inspections shall be kept with the crane or in the contractor's site field office. If during any safety inspection the operator or supervisor cannot produce the required crane inspection sheets to the Safety Officer, or their assigned designee, or to the project manager, the crane shall be shut down as soon as possible and inspected immediately.

Selection and Erection

The operator is responsible for selecting a crane of sufficient capacity and with the appropriate design features to be suitable for the intended lift. The operator shall comply with the manufacturer's specifications and limitations applicable to the operation of any and all cranes and derricks. Where manufacturer's specifications are not available, the limitations assigned to the equipment shall be based on the determination by a qualified engineer competent in this field. Such determinations shall be documented and recorded and retained at the job site. Once the appropriate crane has been selected, the operator is responsible for obtaining the appropriate permits to transport the equipment to the job site. The delivery of the crane shall be scheduled by the operator, the Project Superintendent, and any local agencies having jurisdiction over routes of transportation and any utilities that may need to be cleared and UT must have a minimum of one week notification no less than 48 hours prior to the crane delivery. The contractor must submit a Job Hazard Analysis for approval by the Safety Officer or their assigned designee. At the job site, the operator will be responsible for the following:

1. Proper placement of the crane in relation to the load to be handled and the landing area so as to obtain the best-rated lift capacity.
2. Leveling of the crane to within one (1) degree of level and rechecking the level a minimum of three (3) times during the 8-hour work shift.
3. The proper placement and use of outriggers for all lifts except where the manufacturer permits otherwise for assembly of boom only.
4. The determination of stable or unstable ground or footing. Should any additional equipment such as floats, cribbing, timbers, or other structural members be needed, they shall be of proper design and sufficiency to uniformly distribute the load.
5. The installation and maintenance of crane swing radius protection.

Load Ratings: The operator will be responsible for making the following determinations.

The weight of all auxiliary handling devices such as hoist blocks, headache balls, rigging, or hooks shall be considered by the operator as part of the total load. Additionally, the weight of all items added to the load at the site must be determined and added to the total weight. Some manufacturers require that the load cable also be considered as part of the total load weight, in which case the manufacturer's specifications shall be followed precisely.

The operator shall obtain a copy of the Bill of Lading with the item weight clearly legible. This information will be used to determine total load weight.

Ground Stability

Total imposed load, supporting surface area, bearing pressure, and soil stability shall be considered when determining ground stability.

It is the responsibility of the operator to ensure that all the appropriate considerations have been taken to ensure the safe operation of the crane, derrick, or other equipment.

Operator Qualifications

Cranes shall be operated by the following personnel:

1. Designated operators who have been licensed by an approved agency or union.
2. Trainees who are under the direct supervision of the designated operator.
3. Inspectors certified for crane inspection.
4. Test and maintenance personnel when necessary.

No other persons shall be in or on the crane during operations. Exceptions are supervisors whose duties may require their presence.

Operating Procedures

The operator shall **not**:

1. Engage in any practice that may divert his or her attention while engaged in crane operations.

2. Operate the crane if physically or mentally unfit, or if taking prescription drugs that may affect his/her judgment.
3. Respond to any signal that is unclear or is given by anyone other than appointed signalman. Exception: The operator shall respond to a *stop* signal given by anyone.
4. Permit trainees to make initial lifts. The operator shall perform the first lift to determine lift stability, crane function, and safety in general.
5. Suddenly accelerate or decelerate a moving load.
6. Swing loads over personnel.
7. Permit side-loading of booms. Lifts shall be limited to freely suspended loads. Cranes shall not be used to drag loads sideways.

The operator shall have final responsibility and control over the crane operations. Whenever there is any doubt as to safety, the operator shall have the authority to stop and refuse to handle the loads until safety has been assured.

The operator shall be familiar with the crane and its care, the operator's manual, and load charts. The operator shall be responsible for notifying his or her supervisor of any needed adjustments or repairs, and for logging his or her findings in the crane log.

Upon request, the operator shall demonstrate his or her ability to determine total load weight and its relationship to the crane load charts.

No crane shall be loaded beyond its rated capacity.

Neither the crane nor any part of the load shall contact any obstructions.

When loads are to be handled, the operator and supervisor shall determine concurrently that the weight of the load is known within plus or minus five percent (±5%) before the load is lifted.

Loads shall be attached to the hook by means of slings or other approved devices. No open hooks shall be used for lifts higher than two (2) feet. Hooks used for lifts in excess of two (2) feet shall have hook safety latches or be safety wired to prevent slings from jumping off of the hook.

Cutting and Welding

When practical, objects to be welded, cut, or heated shall be moved to a designated safe location. If the objects cannot be readily moved, all movable fire hazards in the vicinity shall be taken to a safe place or otherwise protected. Suitable fire extinguishing equipment shall be immediately available in the work area and shall be maintained in a state of readiness for instant use and proper personal protective equipment, including safety glasses, shall be worn by all parties in the work are.

Before heat is applied to a drum, container, or hollow structure, a vent or opening shall be provided for the release of any built-up pressure during the application of heat. In addition, drums, containers, or hollow structures which have contained toxic or

flammable substances shall – before cutting, welding, or heating is undertaken on them – be evaluated by EHS to ensure that they have been thoroughly cleaned of such substances, ventilated, and tested.

The contractor will provide non-combustible or flame-proof shields or screens to protect all persons from direct rays or arc. In addition, the contractor shall ensure that no persons in the area are exposed to hot particles.

Contractors shall ensure that their employees performing the work shall be knowledgeable of and comply with National Fire Prevention Standards on cutting and welding operations.

Special precautions must be taken if cutting or welding will be done within fifty (50) feet of solvent operations.

Electrical Safety

General

All electrical wiring and equipment shall be a type listed by Underwriters Laboratories (UL®), Factory Mutual Engineering Corporation (FM), or any another recognized test or listing agent for the specific application. All installations will comply with the National Electrical Safety Code (NESC), or National Electrical Code (NEC). It is the contractor's responsibility to see that these installations comply with the NESC and other related organizations.

All work must be done by personnel familiar with code requirements and qualified for the class of work being performed. When it is necessary to work on energized lines and equipment, workers must use rubber gloves and other protective equipment or hotline tools meeting the provisions of the American National Standards Institute (ANSI). At least two persons shall be assigned to work on energized lines.

Before work begins, the contractor's competent electrical supervisor shall verify whether any part of an electric power circuit, exposed or concealed, presents a danger to any employee. All equipment as well as circuits to be worked on shall be de-energized before work starts. Live parts of wiring or equipment shall be guarded to protect all persons or objects from injuring themselves. Suitable barriers or other means shall be provided to ensure that the workspace for electrical equipment must never be used as a passageway when energized parts of electrical equipment are exposed. Transformer banks or high-voltage equipment shall be protected from unauthorized access. Entrances not under constant observation must be kept locked. Signs warning of high voltage and prohibiting unauthorized entrance will be posted at entrances. Metallic enclosures shall always be grounded.

Gates or doors to enclosures for electrical equipment shall always swing outward to provide clearance from installed equipment. Electrical wire or flexible cord passing

through work areas shall be covered or elevated to protect it from damage by foot traffic, vehicles, sharp corners, projections, or pinching. Electrical panel covers shall always be in place after work operations are complete.

Overhead Lines

Before beginning operations adjacent to overhead lines, it is the responsibility of the contractor to coordinate all activities with the Project Manager. Any overhead wire shall be considered energized until the official designated representative confirms that it is not an energized line and has been visibly grounded. Do not complete operations adjacent to overhead lines until the following conditions are satisfied:

Power has been shut off and positive means have been taken to prevent the lines from being energized.

Equipment, or any part, does not have the capability of coming within the minimum clearance from energized overhead lines, or the equipment has been positioned and blocked to ensure no part, including cables, can come within the minimum safe clearance established by related regulations.

Battery Charging

Battery charging installations shall be located in areas designated for that purpose. Batteries of the non-seal type will be located in enclosures with outside vents or in well-ventilated rooms to prevent the escape of fumes, gases, or electrolyte spray into other areas. Ventilation must be provided to ensure diffusion of the gases from the battery to prevent the accumulation of an explosive mixture. It is the responsibility of the contractor to communicate with the Project Manager as to where these battery charging locations are and where the emergency facilities for quick drenching of the eyes and body are located, should exposure occur. This equipment shall be used for flushing and neutralizing spilled electrolytes, protecting the charging apparatus from mechanical damage, fire protection, and ventilation dispersal of fumes from batteries.

When charging batteries, the vent caps shall be kept in place to avoid electrolyte spray. Employees must check to see that vent caps function properly.

Electrical Tools and Equipment

Portable and/or Cord Plug-Connected Equipment

The non-current-carrying metal parts of portable and/or plug-connected equipment shall be grounded. Portable tools and appliances protected by an approved system of double insulation, or its equivalent, need not be grounded. Where such an approved system is employed, the equipment shall be distinctively marked.

Each tool, extension cord set, attached cap, plug and receptacle of cord sets, and any equipment connected by cord and plug, shall be visually inspected before each day's use for external defects, such as deformed or missing pins or insulation damage, and/or

indication of possible internal damage. Equipment found defective may not be used until repaired or replaced.

Electrical tools and equipment shall not be used in hazardous locations without prior written approval issued by the Project Manager and the Facilities Safety Coordinator.

Fixed Equipment

Exposed, non-current-carrying metal parts of fixed electrical equipment, including motors, generators, frames and tracks of electrically operated cranes, electrically driven machinery, etc., must be grounded.

Effective Grounding

The path from circuits, equipment, structures, and conduits, or enclosures to ground **shall**:

1. Be permanent and continuous.
2. Have ample carrying capacity to conduct safely the current liable to be imposed on it.
3. Have impedance sufficiently low to limit the potential above ground and to result in the operation of the over-current devices in the current.

Ground Resistance

Driven rod electrodes shall, where practicable, have a resistance to ground not to exceed 25 ohms. Where the resistance is not as low as 25 ohms, two or more electrodes connected in parallel shall be used.

Testing of Grounds

Grounding circuits shall be checked to ensure that the circuit between the ground and the grounded power conductor has a resistance that is low enough to permit sufficient current to flow to cause the fuse or circuit breaker to interrupt.

Extension Cords

Extension cords used with portable electric tools and appliances shall be heavy duty and of the three wire grounding type. The cords shall conform to the type and configuration required by the OSHA standards.

Temporary Wiring

All temporary wiring shall be effectively grounded in accordance with the National Electric Code, Articles 305 and 310.

All switches shall be enclosed and grounded. Panel boards shall have provisions for closing and locking the main switch and fuse box compartment.

Precautions shall be taken to make any necessary open wiring inaccessible to unauthorized personnel.

All 120 volt and 15- and 20-amp receptacle outlets on the site which are not part of the permanent wiring of the building shall use Ground Fault Circuit Interrupters.

Cables passing through work areas shall be covered or elevated to protect them from damage and to eliminate hazards to employees.

Suitable means shall be provided for identifying all electrical equipment and circuits, especially when two or more voltages are used on the same job. All circuits shall be marked for the voltage and the area of service they provide.

Assured Equipment Grounding Conductor Program

Unless ground fault protection is provided at all circuits, an Assured Equipment Grounding Conductor Program shall be established on the construction site covering all cord sets, receptacles which are not part of the permanent wiring of the building or structure, and equipment connected by cord and plug which are available for use or used by employees. This program shall comply with the following requirements:

Each tool, extension cord set, attached cap, plug and receptacle of cord sets, and any equipment connected by cord and plug, except cord sets and any receptacles which are not fixed and not exposed to damage, shall be visually inspected before each day's use for external defects, such as deformed or missing pins or insulation damage and/or indication of possible internal damage. Equipment found damaged or defective may not be used until repaired or replaced.

The following test shall be performed on all cord sets, receptacles that are not a part of the permanent wiring of the building or structure, and cord and plug-connected equipment required to be grounded:

All equipment grounding conductors shall be tested for continuity and shall be electrically continuous.

Each receptacle and attachment cap or plug shall be tested for correct attachment of the equipment grounding conductor. The equipment grounding conductor shall be connected to its terminal.

All required tests shall be performed:

Before first use;
Before equipment is returned to service following repairs;
Before equipment is used after any incident which can be reasonably suspected to have caused damage (for example, when cord is run over) and;
Receptacles, which are fixed and not exposed to damage, shall be tested at intervals not exceeding six (6) months.

The Contractor and the Site Superintendent shall not make available or permit the use by employees of any equipment that has not met the requirements of this section.

Tests performed as required in this paragraph shall be recorded. This test record shall identify each receptacle, cord set, and cord- and plug-connected equipment that passed the test, and shall indicate the last date it was tested or the interval for which it was tested. This record shall be kept by means of logs, color-coding, or other effective means, and shall be maintained until replaced by a more current record. The record shall be available on the job site for inspection by any affected employee.

Copies of the Assured Equipment Grounding Program and the Electrical Inspection Log shall be maintained by each contractor and will be available for reference.

Illumination

Construction areas, aisles, stairs, ramps, runways, corridors, offices, shops, and storage areas where work is in progress shall be lighted with natural or artificial illumination that meets or exceeds the minimum illumination requirements governed by law.

Temporary lighting shall be equipped with guards to prevent accidental contact with the bulb. The guards shall be of non-conductive material. Temporary lights shall not be suspended by their electrical cords unless cords and lights are designed for this means of suspension.

Small Tools

General

All hand and power tools and equipment shall be maintained in a safe condition. The contractor is responsible for the condition of all tools and equipment used by his or her employees. The use or issuance of unsafe tools is not permitted.

Hand Tools

Wrenches, including adjustable, pipe, end, and socket wrenches, shall not be used when jaws are sprung to the point that slippage occurs.

Impact tools, such as drift pins, wedges, and chisels, shall be kept free of mushroomed heads.

The wooden handles of tools shall be kept free of splinters or cracks and shall be kept tight in the tool.

Power, Air or Fuel Actuated Tools

Electric Power Tools

Electric power-operated tools shall either be of the approved double-insulated type or grounded.

The use of electrical cords and hoses for hoisting or lowering tools shall not be permitted.

Pneumatic Power Tools
Pneumatic power tools shall be secured to the hose or whip by some positive means to prevent the tool from becoming accidentally disconnected.

Safety clips or retainers shall be securely installed and maintained on pneumatic impact (percussion) tools to prevent attachments from being accidentally expelled.

All pneumatically driven nailers, staplers, and other similar equipment provided with automatic fastener feed, which operate at more than 100 psi pressure at the tool, shall have a safety device on the muzzle to prevent the tool from ejecting fasteners, unless the muzzle is in contact with the work surface. Only trained authorized personnel may use this equipment.

The manufacturer's safe operating pressure for hoses, pipes, valves, filters, and other fittings shall not be exceeded.

All hoses exceeding 1/2-inch inside diameter shall have a safety device at the source of supply or branch line to reduce pressure in case of hose failure.

Airless spray guns, the type which atomize paints and fluids at high pressures (1,000 pounds or more per square inch), shall be equipped with automatic or visible manual safety devices, which will prevent pulling of the trigger to prevent release of the paint or fluid until the safety device is manually released. In lieu of the above, a diffuser nut, which will prevent high pressure, high velocity release while the nozzle tip is removed, plus a nozzle tip guard, which will prevent the tip from coming into contact with the operator, or other equivalent protection, shall be provided. Pneumatic Power Tools for use only by authorized personnel.

Abrasive Blast Cleaning Nozzles
The blast cleaning nozzles shall be equipped with an operating valve, which must be held open manually. A support shall be provided on which the nozzle may be mounted when it is not in use.

Fuel Powered Tools
All fuel powered tools shall be stopped while being refueled, serviced, or maintained. When fuel powered tools are used in enclosed spaces, the applicable requirements for concentrations of toxic gases and use of personal protective equipment shall apply.

Hydraulic Power Tools
The fluids used in hydraulic powered tools shall be fire-resistant fluids and these fluids shall retain their operating characteristics at the most extreme temperatures to which they will be exposed. The manufacturer's safe operating pressures for hoses, valves, pipes, filters, and other fittings shall not be exceeded.

Powder-Actuated Tools

Only employees who have been trained and authorized in the operation of the particular tool in use shall be allowed to operate a powder-actuated tool.

The tool shall be tested each day before loading to see that safety devices are in proper working condition. The method of testing shall be in accordance with the manufacturer's recommended procedure.

Any tool found not in proper working order, or that develops a defect during use, shall be immediately removed from service and not used until properly repaired.

Personal protective equipment shall be used when required.

Tools shall not be loaded until just prior to the intended firing time. Neither loaded nor empty tools are to be pointed at any persons. Hands shall be kept clear of the open barrel end. Loaded tools shall not be left unattended.

Fasteners shall not be driven into very hard or brittle materials including, but not limited to, cast iron, glazed tile, surface-hardened steel, glass block, live rock, face brick, or hollow tile.

Driving into materials easily penetrated shall be avoided unless such materials are backed by a substance that will prevent the pin or fastener from passing completely through, creating a flying missile hazard on the other side.

No fastener shall be driven into a spalled area caused by an unsatisfactory fastening.

Tools shall not be used in explosive or flammable atmospheres.

All tools shall be used with the correct shield, guard, or attachment recommended by the manufacturer.

Powder-actuated tools used by employees shall meet all other applicable requirements of American National Standards Institute, A10.3-1970, Safety Requirements for Explosive-Actuated Fastening Tools.

Elevated Work

General Requirements

A stairway or ladder shall be provided at all personnel points of access where there is a break in elevation of 19 inches (48 cm) or more, and no ramp, runway, sloped embankment, or personnel hoist is provided.

A double-cleated ladder or two or more separate ladders shall be provided when ladders are the only means of access or exit from a working area for 25 or more employees, or when a ladder is to serve simultaneous two-way traffic.

When a building or structure has only one point of access between levels, that point of access shall be kept clear to permit free passage of employees. When work must be done such that free passage at that point of access is restricted, a second point of access shall be provided and used.

When a building or structure has two or more points of access between levels, at least one point of access shall be kept clear to permit free passage of persons.

Contractors shall provide and install all stairway and ladder fall protection systems required and shall comply with these requirements before employees begin the work that necessitates the installation and use of such fall protection devices.

Ladders

The construction, installation, and use of ladders shall conform to the latest edition of the safety codes for portable wood ladders, (ANSI A14.1); portable metal ladders, (ANSI A14.2); fixed ladders, (ANSI A14.3); and job-made ladders, (ANSI A14.4). All ladders shall be used in the manner and for the purposes for which they were designed and constructed.

All portable ladders shall be of sufficient length and will be placed so that workers will not stretch or assume a hazardous position. The supports on which a ladder rests, both top and bottom, shall be rigid and capable of supporting loads without displacement. Ladders shall be secured by top, bottom, and intermediate fastenings as required to hold them rigidly in place.

Ladders shall be inspected daily before use and those with broken or missing rungs, broken or split side rails, or are otherwise damaged shall not be used.

All portable ladders shall be equipped with non-skid safety feet and shall be placed on a stable base. The access areas at the top and bottom of ladders in use shall be kept clear.

The side rails shall extend 36 inches above the landing. When this is not practical, grab rails shall be installed. All ladders in use shall be tied, blocked, or otherwise secured to prevent accidental displacement.

Portable metal ladders shall not be used where they may become electrically energized.

Job made ladders shall be fabricated in compliance with OSHA regulations. The general rules applying to the use of manufactured ladders also apply to the use of job made ladders.

Any fixed ladder more than 20 feet in height or any fixed ladder where the fall distance can be more than 20 feet shall be provided with a ladder climbing safety device complying with applicable regulations.

Scaffolding

Scaffolds, including two-point suspension swinging scaffolds, shall be designed, built, and inspected by competent persons. To avoid the use of makeshift platforms, each task shall be carefully planned to ensure that scaffolding is used where required and that such scaffolding conforms to the applicable OSHA regulations, including being equipped with guardrails, mid-rails, toe boards, and access ladders. Employees working on swinging scaffolds shall be protected by safety harnesses, lanyards, and lifelines securely attached to the building above the level of the work platform.

Concrete Forms

All equipment and materials used in concrete construction and masonry work shall meet ANSI-A10.9-1970 "Safety Requirements for Concrete Construction and Masonry Work."

Employees working more than six (6) feet above any adjacent working surface, placing reinforcing steel in walls, piers, columns, etc., shall be provided with a safety harness, or equivalent devices.

Employees shall not be permitted to work above vertically protruding reinforcing steel unless such steel has been protected to eliminate impalement hazards.

The riding of concrete buckets for any purpose shall be prohibited, and working crews shall be kept out from under suspended concrete buckets.

Floor and Wall Openings

To control conditions where there is potential of employees or materials falling through the floor, roof, perimeter edges, or wall openings, such openings shall be protected and marked with a warning sign.

All perimeter protection and floor and wall opening protection shall be maintained at all times. If substantial barriers are not in place, the situation shall be rectified immediately.

Standard Railing

A standard railing shall consist of a top rail, intermediate (or mid-) rail, toe board, and posts. The following are OSHA Fall Protection Systems criteria established in 1926.502:

Top edge height of top rails, or equivalent guardrail system members, shall be 42 inches plus or minus (±) 3 inches above the walking/working level. When conditions warrant, the height of the top edge may exceed the 45-inch height, provided the guardrail system meets all other criteria. The top rail shall be smooth surfaced throughout its length and made of at least 2-inch by 4-inch stock, 3/8-inch double clamped wire rope or its equivalent, secured to withstand a 200-pound horizontal force with minimum deflection.

The mid-rail shall be installed halfway between the top rail and the floor, runway, platform, or ramp. The ends of the rail shall not overhang the terminal posts except when it does not constitute a projection hazard. The mid-rail shall be made of at least 1-inch by 6-inch stock or its equivalent.

The toe board, 4-inch minimum height, shall be securely fastened in place and have not more than 1/4-inch clearance above the floor level.

Other Railings
Other types, sizes, and arrangements of railing construction are acceptable, provided they meet the following requirements:

A smooth surfaced top rail approximately 42 inches above the floor.

A strength to withstand the minimum of 200-pound top rail pressure with a minimum of deflection.

For specific material requirements, please refer to OSHA regulations.

Stair Railings
A stair railing shall be constructed similar to a standard railing, but the vertical height shall not be more than 34 inches nor less than 30 inches from the top rail to the surface of the tread in line with the face of the riser at the forward edge of the riser. All handrails shall be provided with a clearance of approximately three (3) inches between the handrail and any other surface or object.

Covered Floor Openings
Floor openings shall be capable of supporting the maximum intended floor load and so installed as to prevent accidental displacement. Covers shall be distinctively marked and anchored. For purposes of covering, a floor opening is defined as any opening up to 16 square feet. All others must be protected with top and intermediate rail and toe board.

Stairways
During construction, stairs shall be provided on all structures that are two or more floors or more than 20 feet in height. The following are all requirements:

1. Stairway placement shall follow, as soon as practical, placement of the upper floor deck.
2. All parts of stairways shall be free of hazardous projections. Debris and other loose material shall not be allowed to accumulate on the stairways.
3. Permanent steel stairways having hollow pan type treads and landings that are to be used prior to concrete placement shall have the pans filled with solid material to the level of the nosing.
4. Temporary stairs shall have a landing not less than 30 inches wide, in the direction of travel, for every 12 feet of vertical rise. Wooden treads for temporary service shall be full width.
5. Riser height and tread width shall be uniform throughout any flight of stairs.

Safety Nets

Safety nets shall be provided by the contractor when work places are more than twenty-five (25) feet above ground or other surfaces where the use of ladders, scaffolds, platforms, other means are impractical. **No work operations will take place until the safety net is in place and has been tested.**

Safety nets shall extend eight (8) feet beyond the edge of the work surfaces where employees are exposed and shall be installed as close under the work surface as practical, but in no case more than twenty-five (25) feet below the work surface. Nets shall be hung with sufficient clearance to prevent the user's contact with surfaces or structures below. Clearances shall be determined by impact load testing.

The mesh size of the nets shall not exceed six (6) inches by six (6) inches. All nets shall meet accepted standards of 17,500 foot pounds minimum impact resistance as determined and certified by the manufacturer, and shall bear a label of proof test. Edge ropes shall have a minimum breaking strength of 5,000 pounds. Forged steel safety hooks or shackles shall be used to fasten the net to its supports. Connections between net panels shall develop the full strength of the net.

Safety Harnesses and Lifelines

Each contractor shall be responsible for providing and requiring the use of safety harnesses, lifelines, and lanyards when employees are exposed to a fall of six (6) feet or greater. The use of safety belts is not acceptable for fall protection. Specific plans for the rescue of employees shall be developed by the contractor, and must be submitted on the Job Analysis for acceptance prior to the start of this activity.

Any safety harness, lifeline, or lanyard actually subjected to in-service loading shall be immediately removed from service and shall not be used again for employee safeguarding. All safety harnesses, lifelines, and lanyards shall meet or exceed OSHA 29 CFR 1926.502 standards. Safety harnesses/lanyards shall be constructed with a minimum 1/2 inch nylon strap, or equivalent, with a maximum length to arrest a fall in no greater than six (6) feet nor contact any lower level. The lanyard shall have a nominal breaking strength of 5,000 pounds. Dee-rings and snap hooks shall be capable of sustaining a minimum tensile load of 5,000 pounds.

Lifelines shall be secured above the point of operation to an anchorage or structural member capable of supporting a minimum dead weight of 5,400 pounds. Lifelines used in areas not subject to cutting or abrasion shall be a minimum of 3/4-inch manila rope or equivalent with a minimum breaking strength of 5,400 pounds.

Hoists and Elevators

Temporary personnel elevators and material hoists shall be constructed, installed, and maintained in compliance with the manufacturer's instructions and the provisions of applicable statutes and regulations. No elevators or hoists are to be used for the movement of materials and personnel until the devices have been certified and licensed by a third party inspector qualified to approve the equipment and a Job Hazard Analysis

has been submitted and approved by UT Safety Coordinator. No person shall be allowed to ride on a material hoist except for the purposes of inspections and maintenance.

Crane Suspended Work Platforms

The use of crane suspended work platforms shall be permitted only when other means of reaching the work is infeasible. All crane suspended work platforms shall be in compliance of 29 CFR Section 1926.550 and have a current safety inspection certificate. A Job Hazard Analysis must be completed and approved prior to the use of a suspended work platform.

Emergency Preparedness

General

In order that necessary emergency services may be supplied promptly, the contractor shall post in a conspicuous place a list of emergency telephone numbers along with the type of information to be transmitted for each emergency situation.

All accidents shall be handled by the ranking person present, with whoever is available to assist. The ranking person shall direct someone to notify emergency services as necessary. The Project Superintendent shall be notified as soon as possible without delaying assistance to the injured.

In accidents resulting in injury to personnel, those individuals qualified in first aid shall assist the injured, stabilize their condition, and arrange for the appropriate emergency response.

Except when necessary to avoid further injury or to prevent additional damage to the work, equipment will not be moved, nor will the position of items, parts, pieces, controls, etc. be changed until photographs have been made and notes taken by the person designated to conduct the accident investigation. As soon as the accident investigation has been conducted, the contractors concerned will be directed to clean-up/repair in order to return to a normal work site.

Alarms

Contractors must designate an assembly point outside of the building, where the contractor personnel will meet if the building is evacuated. The assembly point should be at least 100 feet from the building and clear of access roads that may be needed by the fire department, campus police, or EMS.

All contractor personnel must evacuate the building immediately upon activation of an alarm, an evacuation notice, or instructions from campus police and should proceed to their assembly point.

Contractor personnel should use the most direct route out of the building to reach the assembly point, but must not use elevators or passageways that will be closed off by the operations of automatic fire doors.

Contractors should notify emergency personnel if their personnel cannot be accounted for, or if there is reason to believe their area was not cleared. Contractors' personnel must remain outside the building until emergency personnel authorize re-entry.

The campus police officers are available 24 hours a day, seven days a week and are professionally prepared to respond to any type of campus emergency. To obtain help during emergency situations call 911 on any campus phone or (512)471-4441 from an off campus phone line.

Accident Involving Serious Injury or Death

Persons qualified to administer first aid will assist the injured, stabilize their condition, and will arrange for transportation to the hospital emergency room if further treatment is required. When using a campus phone, call 911.

The Project Superintendent should be notified once the injured has been assisted and s/he will take the appropriate action and direct other personnel and relevant persons to assist as necessary. **Immediate notification to EHS is required in the event of a fatality or serious injuries that may lead to a fatality.**

All non-essential personnel shall be removed from the area.

Rescue personnel shall be provided assistance as requested.

An accident/injury report should be drafted by the Project Superintendent and filed with the Project Manager within twenty-four (24) hours of the occurrence.

A designated person shall conduct an accident investigation within twenty-four (24) hours of the accident. Within the immediate area of the accident scene, nothing shall be disturbed or removed after proper evacuation of the injured personnel. Except when necessary to avoid further injury, equipment will not be moved, and the position of items, parts, pieces, controls, etc. will not be changed until photographs have been made and notes taken by the person designated to make the investigation and report. As soon as the accident investigation is complete, the contractor will be notified to return to the site and clean-up/make repairs to return the site to normal.

Property Damage Accidents

Immediate notification to a Project Manager is required in the event of property damage accidents.

Severe Weather

Each contractor shall keep an updated list of after-hours telephone numbers for all of the contractor's supervisors and shall ensure that the field trailers and subcontractor's field trailers are anchored in at least three locations. These procedures are intended to prepare the project site in the event of severe weather conditions.

Upon notification of a Severe Weather Watch by the U.S. Weather Bureau, the following actions are to be taken:

1. All materials shall be secured to prevent them from becoming airborne during high winds. Scrap materials should be picked up and trash containers should be covered.
2. Crawler and mobile cranes shall have booms lowered at the end of the shift. Cranes not capable of lowering booms shall be permitted to weather-vane or free-swing. Check to assure that swinging booms will not contact other objects such as power lines, structures, etc.

Bomb Threat

When a bomb threat is received or a suspicious article is found, the Project Superintendent will take the following actions:

DO NOT HANDLE THE OBJECT.

Evacuate the area, notify others in area, and immediately call the campus police at 911.

Environmental Spill

In the event of a spill of environmentally damaging materials, immediate response is required. All personnel shall follow and observe the standard precautions for handling the materials as detailed in the manufacturer's product Material Safety Data Sheets (MSDS), including the use of proper personal protective equipment.

Emergency responders are available from EHS when a biological, chemical, or radioactive spill occurs. Responders are also available for other hazardous incidents such as possible gas leaks, indoor-air quality, and drinking water concerns.

EHS should be notified immediately in the event of:

1. Any spill that threatens to enter a storm sewer or watercourse.
2. All petroleum spills, e.g. hydraulic fluid, transmission fluid, diesel, gasoline, etc.
3. Any hazardous or unknown material spill, e.g. many solvents, cleaners, etc.
4. Any discharge from your site which you suspect may be in violation of City Code, State regulations, or other applicable laws and regulations, e.g. discharges which are cloudy, foul smelling, colored, contain chemicals, or heavy sediment loads.

Notification can be accomplished by calling EHS at (512) 471-3511 (press "0" during the recording if not during normal working hours).

Have your name, number, location, and any other pertinent information available at the time of the call. It is important to inform the safety office and the police if any one has been injured or if there has been a personal exposure.

The Project Superintendent shall be notified as soon as possible to initiate the appropriate notification to the Project Manager. If safe to do so, every effort shall be made to contain

the materials with the use of absorbent materials or other appropriate means until proper handling and disposal personnel arrive on site. Particular attention needs to be taken to avoid contamination of surface water, storm sewers, sanitary sewers, porous ground, plants, and animals. Please be advised of the storm water protection program instituted by EHS.

A full investigation will be completed and filed within twenty-four (24) hours of the occurrence and placed in the contractor's permanent file.

Excavations and Trenching

An excavation/trenching plan, approved by a professional engineer, must be submitted by the contractor before approval can be granted for these types of operations. The plan must clearly identify any tunnels or utility lines. The contractor must comply with all requirements outlined by OSHA 29 CFR 1926.650-.652 and Appendices A-F. The contractor must have an approved Job Hazard Analysis on file with UT prior to the start of excavation.

Any channel, gutter, or ditch over four (4) feet in depth and eight (8) feet or under in width is identified as a trench. A channel over eight (8) feet in width or diameter is an excavation. All excavated material shall be placed so that the base of the pile is at least one (1) foot from the edge of the excavation.

Shoring

The determination and design of the supporting system shall be based on consideration of the following elements: depth of the cut; anticipated changes in the soil due to air, sun, and water; ground movement caused by vehicle vibration or blasting; and earth pressures (not only the angle of repose). The contractor shall ensure that trenches five (5) feet and over in depth shall be shored and walls cut back to protect employees from cave-in. All trenching requiring shoring, those in excess of 5'-0", shall require a professional engineer's seal of the shoring design. A competent person will inspect the trench(s) daily and provide a written certification that all shoring and/or trench construction is safe for the workmen. Trench shoring shall be installed by a competent person.

Ladders or other means of egress shall be provided in each excavation. No more than twenty-five (25) feet of lateral travel shall be required to reach any such ladder.

Trench Shields

Trench shields shall be used in tightly cut trenches and shall be high enough for the trench depth. Workers are to remain within the shield and shall not be permitted to work between piping and the shield sides. Keep any dirt spoils (2) feet or more from the edge of the trench.

Blasting

Blasting is prohibited on any projects. Other means of demolition and excavation shall be utilized in accordance with a written procedure which shall be submitted for review.

Fire Prevention and Control

General Prevention Procedures

All fires, regardless of how minor or if burned out prior to discovery, shall be reported in writing to Fire Prevention Services (FPS). As in the case of accidents and injuries, the information derived from these reports will materially assist in identifying those areas and conditions that are particularly fire hazardous. The report will be analyzed and, if possible, corrective action to eliminate the hazard will be taken immediately.

There shall be no unauthorized open fires. Each contractor shall take all precautions necessary to prevent fires as a result of his or her operations. Where flame cutting torches, blow torches, or welding tools are required to be used within a building, the contractor must submit a Job Hazard Analysis and the analysis must be approved by the Facilities Services Safety Coordinator prior to the start of the work. When welding tools or torches of any type are in use, the contractor shall have available, in the immediate vicinity of the work, a fire extinguisher of the dry chemical. The fire extinguisher shall be provided and maintained by the contractor.

All flammable and combustible materials shall be stored, piled, and handled with respect to their fire potential characteristics and potential environmental hazards. Please refer to the Chemical Safety Section regarding storage requirements.

No volatile liquids shall be used for cleaning agents or as fuels for motorized equipment or tools within the building without coordination with the Project Manager and the written consent of Fire Protective Services. Bulk storage of volatile liquids shall not be permitted within a building at any time.

All materials shall be stored, handled, and piled with due regard to their fire characteristics. Non-compatible materials, which may create a fire hazard, shall be segregated by a barrier having a fire resistance of at least one (1) hour. Material shall be piled to minimize the spread of fire internally and to permit convenient access for fire fighting. Stable piling shall be maintained at all times.

Combustible trash must be removed by the contractor from the work area and stored at a safe distance from all buildings and other combustible materials **each working day**.

No temporary building shall be erected where it will adversely affect any means of exit without the written consent of Fire Prevention Services. Temporary buildings, when located within another building or structure, shall be of either noncombustible construction or of combustible construction having a fire resistance of not less than one (1) hour.

Nonsmoking Policy

No smoking, matches, or open flames will be permitted within fifty (50) feet of the area where flammable liquids or gases are used, transferred, or stored, unless conditions warrant greater clearances. Smoking will not be permitted in any campus building, indoor

facility, or indoor site at the University of Texas at Austin except in specifically designated smoking areas.

Grinding

All grinding machines shall be supplied with sufficient power to maintain the spindle speed at safe levels under all conditions of normal operation. Grinding machines shall be equipped with safety guards in conformance with ANSI, B7.1-1970, "Safety Code for the Use, Care, and Protection of Abrasive Wheels." On offhand grinding machines, work rests shall be used to support the work. Work rests shall be kept adjusted closely to the wheel with a maximum opening of 1/8-inch to prevent the work from being jammed between the wheel and the rest, which may cause wheel breakage. The work rest shall be securely clamped after each adjustment. The adjustment shall not be made with the wheel in motion. Goggles or other suitable eye protection equipment shall be worn by the contractor's employees when using grinders, buffing wheels, and wire wheels.

Hazard Communication

General

OSHA requires that each employee potentially exposed to hazardous chemicals in the workplace be advised of the potential hazards and how to guard against those hazards. Contractors must also comply with the Texas Hazard Communication Act (THCA). Each contractor whose employees are potentially exposed to hazardous chemicals must develop a list of all such chemicals used on the project; gather and post material safety data sheets (MSDS) for those materials; label all chemicals; and train all potentially exposed personnel in the hazards and their controls for all listed materials.

Material Safety Data Sheets

All chemicals used by the contractor must have a material safety data sheet (MSDS) included in the submittals and copies of the MSDSs will be brought to the pre-construction conference and provided to Facilities Services Safety Coordinator. MSDSs shall also be maintained at the job site.

Container Labeling

All chemicals must be labeled with the contractor chemical identification label to identify ownership. The contractor's chemical identification label is intended to track and identify contractor's chemicals while at the University of Texas at Austin campus. It is also the contractor's responsibility to ensure that each material is labeled with the following information per OSHA requirements: The chemical or common name of the potentially hazardous chemical; the name and address of the manufacturer, importer or distributor; and appropriate hazard warnings. OSHA also requires the same labeling requirements for "intermediate" containers such as small storage containers, process containers in which potentially hazardous chemicals are mixed, and transport containers. It is the contractor's responsibility to label and store the chemicals in accordance with all Federal/State/Local Hazard Communication Standards.

Hazardous Non-Routine Tasks and Nearby Work

In the event that an employee is assigned to perform or work near a hazardous task, that is non-routine to his or her work, the employee will be given additional information and training related to the hazardous chemicals which may be encountered in the non-routine task. The information will include the specific chemical hazards of the task, the controls and protective measures required, the types of personal protective equipment required, how to use the equipment, the nature of the other work being performed in or near the non-routine task, and what emergency procedures are involved with the task.

Chemicals in Unlabeled Pipes, Vessels, etc.

Before any repair or modification of chemical pipelines or tanks may begin, a written procedure or job hazard analysis must be formulated describing the hazards involved and a written verification must be obtained indicating the pipeline or tank has been flushed. Consultation with EHS must occur.

Chemical Safety

Chemical containers must not be placed directly on the ground. A secondary container must be used, so any container leaks may be detected/contained.

If in the course of work, the contractor's employees find hazardous or unlabeled materials, it is their responsibility to contact EHS at **471-3511.**

Accumulation of vapors, from hazardous materials should be prevented by careful handling and by providing adequate ventilation.

Chemicals are not to be discharged into any sewer, placed in trash containers, or emptied onto the ground. Empty chemical containers shall be disposed of off-site, in accordance with all Federal/State/Local regulations by the contractor.

All waste chemicals shall be collected in proper containers and disposed of daily by the contractor in accordance with State/Local regulations.

Limit the quantities at any one location to those actually necessary, but not to exceed the limits set below.

Prohibit smoking and eliminate other possible ignition sources wherever flammable liquids are stored or used.

Provide fire barriers, fire alarms, and fire equipment, as appropriate, at all locations of storage and use.

Use only approved containers for all transportation and handling.

Label every container used for flammable liquids with the name of the material and the words "Danger- Flammable- Keep away from heat, sparks, and open flames- Keep closed when not in use."

Contractors shall ensure that flammable chemicals are stored in an approved flammable liquid storage cabinet when storage is required inside a building. Contractors shall ensure that flammable liquids are dispensed in safety cans (with flash screens) and that these containers be clearly identified by the contractor as to their contents using their contractor chemical label.

It is the responsibility of the contractors to ensure that their personnel use proper respiratory protection and personal protective equipment when the hazard of the chemical operations material requires such protection.

Lead

Any work operations involving the disturbance of lead require communication with EHS for specific instructions. Specific regulatory compliance is required when abating lead materials for target housing and child occupied facilities. The Project Manager shall ensure that proper pre-planning is conducted when lead abatement activities are a part of work operations.

Lockout/Tagout Procedures

Contractors must abide by the minimum requirements set forth by the Facilities Services and PMCS Lockout/Tagout (LOTO) Polices and Procedures. No person will remove the lockout/tagout device of another person or attempt to reenergize or start-up a machine or piece of equipment without the clear and specific authorization of the person that established the safe clearance. Please refer to the Facilities Services and PMCS LOTO Polices and Procedures for compliance.

Mold

If contractors or their employees observe anything that appears to be an area contaminated with mold or mildew, or if unsure what the contamination constitutes, it is the responsibility of the contractor to contact the Project Manager or Construction Coordinator who in turn will schedule an assessment of the area with the Enviornmental Health and Safety Specialist. **Never disturb an area that is thought to be contaminated with mold/mildew.**

Overhead Work

No overhead work shall be performed by a contractor when, as a result of that work, the possibility exists of objects falling and striking any person. The area under work should be properly barricaded to ensure falling objects do not present a hazard to those persons under the work operations. Hard hats shall be worn by all employees at all times on the job site.

Personal Protective Clothing and Equipment

It is the contractor's responsibility to ensure protective equipment, including personal protective equipment for eyes, face, head, and extremities, protective clothing, respiratory devices, and protective shields and barriers, be provided, used, and maintained in a

sanitary condition wherever it is necessary by reason of hazards of processes or environment, chemical hazards, radiological hazards, biological hazards, or mechanical irritants encountered in an manner capable of causing injury or impairment in function of any part of the body through absorption, inhalation, or physical contact to his or her employees.

All construction/renovation sites are designated as hard hat areas. The contractor is responsible for posting appropriate signs to designate the work area and the Personal Protective Equipment (PPE) requirements and is also responsible for ensuring all entrants to the work area comply with the PPE requirement.

Pre-cast Concrete and Structural Steel Erection

Permanent Flooring

Permanent floors shall be installed as soon as practical following the erection of structural members. At no time shall there be more than four (4) floors or 48 feet of unfinished bolting or welding above the foundation or uppermost secured floor.

Temporary Flooring

The erection floor shall be solidly planked over its entire surface except for access openings. Planking shall be not less than two (2) inches thick, full size undressed, and shall be laid tight and secured against movement.

On structures not adaptable to temporary floors, safety nets shall be installed and maintained whenever the potential fall distance exceeds two (2) stories or twenty-five (25) feet.

Perimeter Protection

A safety railing shall be installed and maintained around the periphery of all floors during pre-cast panel and structural steel erection in compliance with NFPA, OSHA or IBC requirements.

When loads are being hoisted, avoid walking under the lift or permitting an employee to be exposed to the swing of the lift. No one shall be permitted to ride the load under any circumstances. A tag line shall be used to control all loads. Christmas tree rigging, or the lifting of more than one piece at one time, is forbidden.

For the protection of other crafts on the project, areas under lifts shall be roped or barricaded and signs shall be posted in the erection area, **"Danger Overhead Work".**

Radiation

Before contractors operate a radiological, laser, x-ray, or non-ionizing radiation device/machine, they must contact EHS Radiation Safety section at 471-3511 for specific University requirements. Any radioactive, laser, or x-ray device must be safely designed, constructed, installed, used, stored, handled, transported, and disposed of in accordance

with 25 TAC §289. Employees must report any loss, theft, damage, or overexposure to the EHS Radiation Safety section immediately.

Operations involving radiation hazards will be performed under the direction of a qualified person designated as responsible for radiation safety, with the assistance of the EHS Radiation Safety Section. A Job Hazard Analysis will be required and approved by the UT Safety Coordinator prior to the start of this work.

Roof Safety

If roof operations are performed, it is required that a minimum of two (2) employees be within sight and hearing of each other. Employees who work within ten (10) feet of the edge of a roof shall wear a harness type safety belt and lifeline, or some type of fall protection shall be instituted. This protection is not required if the roof has a permanent or portable railing. When lifting or swinging heavy material over roofs, the area under the roof must be unoccupied or properly barricaded.

Sanitation

Housekeeping

The site, work areas, and all premises occupied by the contractor and the contractor's personnel will be maintained in a clean, healthy, and sanitary condition.

Work areas, passageways, and stairs, in and around building and structures, shall be kept clear of debris. Construction materials shall be stored in an orderly manner. Storage areas and walkways on the site shall be maintained free of dangerous depressions, obstructions, and debris. Construction equipment shall be stored or placed in an orderly manner.

Good housekeeping on the job is mandatory and every employee must do his or her part daily to minimize dust and to clean-up the work area for safety and cleanliness. Controls shall be instituted which keep dirt from being tracked into areas outside the workspace. Immediate cleanup is required when dust, dirt, or debris extends to surrounding areas outside the workspace.

Failure to maintain adequate housekeeping and perform daily cleanup will result in verbal warnings presented to the contractor. Upon receipt of these warnings, it is the contractor's responsibility to immediately take action to perform the clean-up/housekeeping. If verbal warnings are not heeded, the UT Custodial Services will be called in and the Contractor will be back charged.

Facilities

The locations of lunch areas and employee toilet facilities will be designated by the Project Manager at the Pre-Construction Meeting.

Refuse and Garbage

The site will be cleaned. Garbage and refuse will be collected at least daily and removed from the building/work site and properly disposed of by the Contractor.

Site Security and Public Protection

Contractors shall take necessary action to protect and maintain public use of sidewalks, entrances to buildings, lobbies, corridors, aisles, doors, exits, and vehicular roadways unless unfeasible based on scope of project. The contractor shall protect the public with use of proper barricades, including sidewalk sheds, canopies, catch platforms, fences, guardrails, shields, etc., ensuring adequate visibility as required by law or regulations.

Protection shall guard against flying materials, falling or moving materials and equipment, hot or hazardous materials, open flames, energized electric circuits, sparks, or other potential hazards/exposures. During the period when any barricade, fence, shed, or similar barricade device is removed for purposes of work, a watchman shall be placed at the opening to ensure unauthorized entry is restricted.

Appropriate warnings, signs, and instructional safety signs shall be conspicuously posted where necessary. A signalman shall control the movement of motorized equipment in areas where the public might be endangered. Warning lights, meeting the requirements of governing authorities, shall be provided and maintained from dusk to sunrise along areas barricaded from public access. These warning signs and lights shall be placed at both ends of such protection or obstruction and not over twenty (20) feet apart alongside of such protection or obstructions.

With respect to operations being performed on public roadways, all Tx-DOT and/or municipality requirements for public safety will be observed.

Site security is of utmost importance. Controlled access to the work site, to protect the public and to restrict access by unauthorized individuals, is the responsibility of the contractor.

Sparks and Open Flames

Contractors must notify the Construction Coordinator 48 hours prior to performing this type of work so that the Coordinator may request a fire alarm disable. The contractor must always have an approved and current fire extinguisher within reach when performing this work. Sparks and the use of open flames/welding are strictly prohibited in areas where flammable liquids, gases, or highly combustible materials are stored, handled, or processed.

Speed Limits

Contractors and employees shall observe speed limits and all other traffic regulations posted on the University of Texas at Austin campus and in the Facilities Complex. The speed limit within the Facilities Complex is 5 mph.

Spill Prevention

It is the responsibility of the contractor to be prepared to contain spills to prevent spreading. Small areas are easier to clean than large ones. Keep absorbent materials such as clay (kitty litter), polypropylene booms and pads, rags, and sawdust on hand for clean up of spilled liquids. Any remediation should be supervised by UT Environmental Health and Safety Specialists.

Clean-Up

Absorbent materials can be used effectively to clean up various materials spilled on pavement, water, and soil. Soil or other media, which have been contaminated with petroleum or other pollutants, must be excavated or remediated in accordance with applicable laws and regulations to prevent contaminated discharges to a storm drain or waterway. Excavated contaminated materials must be stored in containers or on plastic and covered so as to ensure that the contamination is not flushed back onto the ground during a rainstorm.

Contaminated Material Disposal

Proper disposal of waste materials depends partly on the type of contaminant. Hazardous wastes (such as flammable petroleum products and solvents, thinners, etc.) and materials contaminated with hazardous wastes are considered regulated wastes and should be containerized for transport and disposal by a permitted company in accordance with applicable laws and regulations. Disposal also depends on the amount of contaminant.

The contractor shall be familiar with the section titled “Emergency Preparedness—Environmental Spill” to address who the appropriate contacts are should a spill occur.

Storm Water Control

The contractor will be responsible for submitting a “Notification of Construction Activities” to EHS for any construction project, regardless of size, that disturbs soil, ground cover, or uses water (including pressure washing) that will be discharged onto or into soil or into a drain. Included are indoor projects that will have a staging area that is located outside on an unpaved surface. The following are specific instructions regarding requirements for storm water control:

Equipment Cleaning

Equipment must be cleaned in a manner that does not create any discharge of cleaning agents, paints, oil, or other pollutants to a storm sewer or waterway. Soaps and detergents must never be discharged to the ground or off-site. When rinsing painting equipment outside, rinse water must be contained in a bucket or other container. Water-based or latex paint rinse water may be discharged to the sanitary sewer. Oil-based paint wastes, including solvents and thinners, cannot be disposed of in the sanitary sewer; they must be collected and disposed of through the contractor's disposal company in accordance with applicable laws and regulations. Cement-handling equipment must be rinsed in a contained area and there must be no drainage off-site.

Pressure Washing
Discharges from pressure washing must not be allowed to enter a storm sewer or waterway and must be contained and removed according to applicable state laws and regulations. If the rinsate only contains water and dirt or sediment it may be spread on the ground with prior permission from Facilities Services and/or PMCS and only if it will not enter a storm sewer or waterway. Depending on the content of the material, it may also be possible to discharge to a sanitary sewer with prior permission from EHS. (Permission to discharge to sanitary sewer may take up to five (5) working days.)

Waste Disposal
Any trash or debris must be contained on-site and disposed of in a recycling bin or waste receptacle in accordance with applicable laws and regulations to prevent wind or rain from carrying it off-site into a storm drain or waterway. Petroleum wastes, such as waste oil and used oil filters, must be containerized for recycling or disposal by the contractor. Non-hazardous solid wastes, such as general construction debris, may be recycled or disposed of in the trash container. Never dispose of liquid wastes of any kind in dumpsters.

Sediment
Proper erosion and sedimentation controls must be in place to prevent sediment or silt run-off. Sediment (including cement) should never be rinsed off the site; instead it must be cleaned up in a manner that does not allow it to reach a storm drain or waterway. Equipment tires must be cleaned before leaving the site to avoid tracking sediment into the roadway or off the site. All vehicles must leave the site through a stabilized construction entrance meeting the requirements of the University's Construction Standard regarding Erosion and Sedimentation Controls.

Site Dewatering, Tank, & Pipe Testing
Discharges from dewatering, hydrostatic tank testing, or pipe pressure testing must be free from sediment, chemicals, and any other pollutants. Some discharges, such as those from underground storage tank pits, may require City of Austin temporary discharge permits. The contractor is responsible for obtaining such permits.

Petroleum
Spills of hydraulic fluid, oil, and other petroleum products must be immediately cleaned up to prevent discharge of these fluids with storm water run-off. Petroleum contaminated soil must be cleaned up and disposed of properly in accordance with applicable laws and regulations. Storage containers must be kept closed, clean, and free of oily residue.

Separators or Traps
Before removing oil/water separators or traps connected to storm sewers, the materials in them must have been tested (by Toxicity Characteristic Leachate Procedure or TCLP) within the last two years before they are cleaned out. Be aware that this test may take three weeks to complete if a recent test has not been completed. The contractor is solely responsible for accommodating the time for such testing and no claims for delay arising

out of such testing will be permitted. Documentation of the test results must be submitted to EHS staff for review and approval before emptying or removing the trap.

Tarpaulins

When tarpaulins are required for the reflection of hot slag, dust, paint drippings, etc., or as security barriers, contractors shall ensure that the tarpaulins are flame resistant and in good condition.

Transporting Material and Equipment

The contractor shall ensure that piping, conduit, or other material over ten (10) feet long is carried by two employees, each one supporting one end of the material to be transported.

Carts, tools, material and equipment shall not be left unattended in aisles or walkways.

Work Permits

Confined Space Entry

When work in confined spaces is scheduled, special consideration is required. Please refer to the Facilities Services and PMCS Confined Space Policies & Procedures to determine the requirements outlined by Facilities Services and PMCS. A contractor's Confined Space Program must meet or exceed all requirements established by the National Institute for Occupational Safety and Health (NIOSH), and the Occupational Safety and Health Administration (OSHA). Prior to starting work, the contractor must coordinate with the Project Manager and the Facilities Services Safety Coordinator and must submit a Job Hazard Analysis form for approval.

The contractor is responsible for providing equipment and special instructions for his/her workers, such as ventilating units, respirators, safety harnesses and lifelines, etc., and for conformance to all applicable safety standards.

Guardrail Openings

Work that requires the opening of guardrails or the removal of hole covers shall be approved in advance by the Project Manager and the Facilities Services Safety Coordinator. Particular attention shall be given to the alternative means of fall protection, which will be required to safely perform the work and protect other workers in the vicinity of the fall exposure. Specific plans for providing alternative fall protection shall be described in the request for approval of a Job Hazard Analysis.

Summary

The rules and regulations covered in this document are not all inclusive. Contractors shall provide for their employees: additional safety instructions and standards, particularly OSHA standards and the OSHA General Duty Clause, as they apply to their employees' work.