GRAY & BECKER

Safety Manual

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Gray & Becker Construction Services, LP
Corporate Safety Policy Manual

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EQUAL EMPLOYMENT OPPORTUNITY

(EEO POLICY)

The policy of Gray And Becker Construction Services, LP is to fully comply with applicable federal, state and local laws, rules, regulations and guidelines in the area of non-discrimination in employment. Discrimination against employees and applicants due to race, color, religion, sex (including sexual harassment), national origin, disability and age (40 years or older) is prohibited. The Gray And Becker Construction Services, LP policy supports and is in concurrence with the Taft Administration Policy commitment to prohibit discriminatory employment practices.

Equal Employment Opportunity and Non-Discriminatory behavior commitments with Gray And Becker Construction Services, LP include, but are not limited to, the areas of hiring, promotions, demotions, or transfers, recruitment, layoff or termination, rate of compensation and in-service training.

Gray And Becker Construction Services, LP's EEO Policy complies with the State Equal Opportunity Coordinator's office and further details the company's action plan.

In summary, our EEO Policy outlines the comprehensive commitment to equal opportunity and non-discrimination made by Gray And Becker Construction Services, LP. Strategies for affirming the company's commitment to Equal Employment Opportunity include the dissemination of this statement to all employees and displaying the required EEO Posters including the Texas Workforce Commission Laws.

Persons who believe they have been subject to employment discrimination by a Gray And Becker Construction Services, LP Company employee should contact a member of the Board of Directors to discuss the complaint(s). If it becomes necessary to formalize a discrimination charge, Gray And Becker Construction Services, LP shall make every effort to resolve the complaint(s) within the timeframe established by the (Texas Administrative Code, Title 40, Part 20, Chapter 819)

Gray And Becker Construction Services, LP's employees are required to assist in the effort to achieve Equal Employment Opportunities. Any willful or deliberate violation of the EEO Policy by a Gray And Becker Construction Services, LP employee will be subject to appropriate disciplinary action. Any member of the Board of Directors has full authority for the administration of the program.

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Gray & Becker Construction Services, LP

AFFIRMATIVE ACTION PLAN

The employment policies and practices of Gray And Becker Construction Services, LP are to recruit and to hire employees without discrimination based upon race, color, religion, sex, sexual orientation, national origin, age or disability and to treat them equally with respect to compensation and opportunities for advancement, including upgrading, promotion and transfers.

This company submits this plan to assure compliance with Executive Order #11246 and/or other subsequent orders that may pertain to this program and to reaffirm its continued commitment to a program of Equal Employment Opportunity and Merit Employment Policies.

It agrees to assert leadership within the community and to put forth maximum effort to achieve full employment and utilization of the capabilities and productivity of all our citizens without regard to race, color, sex, sexual orientation, national origin, age or disability.

The company further recognizes that the effective application of a policy of merit employment involves more than just a policy statement and will, therefore, undertake a program of Affirmative Action to make known that equal employment opportunities are available on the basis of individual merit and to encourage all persons to seek employment with the company and to strive for advancement on this basis.

Robert Ellis, C.E.O. & Chairman of the Board

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Gray & Becker Construction Services, LP
Aerial Lift Safety Policy

There are two basic types of aerial lifts. Scissors Lifts which go straight up and down and Articulating Boom Lifts which articulate and move side to side and stretch out from their base.

No matter which type you use, you must be properly trained, therefore only authorized employees may operate and/or ride in an aerial lift. You may not use the lift as a crane - if the materials will fit within the confines of the operator's basket you may carry it as long as it does not cause you to exceed the lift's capacity. Otherwise you must use an alternate means of lifting it. No modification of the lift or any of its components without written authorization form the lift's manufacturer.

Personal Fall Protection consisting of a full-body harness and non-shock absorbing lanyard sized to prevent the occupant from leaving the lift basket is required inside all articulating boom lifts. Scissors lifts do not require additional Fall Protection, unless the lift is equipped with a fall protection anchor point. In either case you may only tie off to the designated fall protection anchor point. Never tie off to the railing or boom arm! Also, keep in mind that this is more for "Ejection Protection" than it is Fall Protection. The Guardrails are your fall protection.

Climbing onto the toe board, railings or using a ladder to gain additional height is prohibited. Under extremely limited circumstances, exiting the lift in an elevated position may be done with permission from the Safety & Risk Manager. This would be possible only when the person leaving the lift is protected by 100% Fall Protection and no other feasible alternative is possible.

Using the lift as an elevator can only be done when the floor of the lift is level with the level you wish to exit onto. You must exit and reenter through the lift's gate and not climb over the rails. If you are exiting into an area requiring Personal Fall Arrest gear, you must maintain 100% protection at all times.

Traveling with the lift's occupant basket elevated significantly above the base level is prohibited. Always lower yourself down close to the base level if your need to travel from point to point. Positioning movements while elevated are permitted as long as it can be done without moving the lift more than one lift's vehicle's length.

All lift capacities may be posted and the posted capacity must be honored. The lift must be equipment with an audible backup/movement alarm or the moving of the lift may only be done under the supervision of a spotter employee.

Complete an Aerial Lift Inspection prior to each day's use. Also, complete an area inspection looking for overhead obstructions, floor defects, spilled liquids such as oil and grease as well as other floor obstructions. All such obstructions must be physically removed or contained prior to operating the lift. The lift may not be used as a bumper car to move obstructions out of the way.

See Addendum for copy of Gray & Becker's Aerial Lift Inspection Sheet.

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Asbestos Awareness Policy

RE: 29-CFR-1926.1101

Gray & Becker Construction Services, LP recognizes that Asbestos is a mineral derived from the Earth. It is mined much like coal and is used as a thermal barrier against heat. In the late 19th and early 20th centuries, Asbestos was widely used in building materials, laboratory instruments, and automobile parts. Due to the nature of our work, we do not anticipate working with or in the area of ACBM.

Examples of where Asbestos was used include:

Anywhere insulation was used in HVAC Systems, particularly Boilers, Pipe Wraps, and Duct Linings. On residential housing it was found in siding tiles, roofing shingles, attic insulation (Vermiculite), pipe insulation, boiler wraps and door linings, floor tiles, win- dow glazing, and all of the adhesives used to attach these products to substrates. Mom even had a pair of oven mitts and trivets for her table and counter tops.

Anywhere inexpensive filler was needed such as in floor tile, ceiling tiles, dry- wall board, joint compound, mastics, window glazing, Asbestos was found. In reality, just about anything that was made using wet methods to mixing ingredients together to form a product, Asbestos found its way into the mix.

Asbestos was banned from most products by the U.S.A. in the early 1980's, but many products still are permitted to use Asbestos. Products such as Roofing Cements are still made today with Asbestos. Roofing cement is a thick tar-like substance that contains the fibers of Asbestos making it almost impossible for them to break free and become airborne.

Asbestos is still used in products that are banned from using it here in the U.S.A. Products imported from other countries such as Mexico and China contain Asbestos. For this reason it is important for us to remain vigilant with knowing what to watch for and always request a Safety Data Sheet with all new products. We import brake shoes and pads, clutch pads and insulated wire still today that contain Asbestos.

Asbestos will appear naturally in different colors. White, Blue, Brown, with the most common for tradesmen to see is the fluffy white power. This is also the most dangerous! The smaller and flu er Asbestos becomes, the more likely it is that you will inhale or ingest it. The smaller it is, like needing a microscope to see it, the further it will travel into your lungs. Once it is in your body, it will remain there

for the rest of your life. Once it gets into the air it remains airborne until it is physically removed by HEPA Filtration. If it settles on a surface it will easily get swept up in air currents as people walk by. For this reason, if you suspect Asbestos is present in any area you are working in, leave immediately and contact your supervisor. NEVER attempt to clean up spilled or damaged Asbestos! NEVER! If you damage it accidentally, leave the area and report the damage to building management immediately.

Gray & Becker Construction Services, LP has made the decision that we will not use Asbestos Containing Building Materials (ACBM). Asbestos Containing Materials (ACM) and Presumed Asbestos Containing Materials (PACM) will however crop up in various projects that we take on as we move into the future. It is important that our employees know the following:

. 1) How to recognize ACBM and PACM?

. 2) How to recognize damage to ACBM and PACM?

. 3) How to work in an area containing In-Tact Non-Damaged ACBM and PACM?

. 4) What to do if they discover damaged ACBM or PACM?

Gray & Becker will work in buildings that have Asbestos Containing Building Materials. We will only work in these buildings if the ACBM is undamaged and likely to remain undamaged during the course of our work. If the ACM, ACBM, or PACM is damaged or likely to become damaged during our work, we will require the building owner to abate the Asbestos prior to our mobilization onto the project. Employees will abide by warning signs and labels and will not disturb the asbestos containing material. Signs and labels shall identify the material which is present, its location, and appropriate work practices which, if followed, will ensure that asbestos containing material (ACM) and/or presumed asbestos containing material (PACM) will not be disturbed.

Building owners are required by USEPA Law to survey their buildings for Asbestos and report the location, type and condition of Asbestos identified to building occupants and companies called to work in those buildings. Once suspected Asbestos is found by any of our employees, we will require the building owner to provide written documentation that the suspect building material has been surveyed and it is safe for us to work.

Job titles requiring Asbestos Awareness Training: Estimators.

Project Superintendents.
Any Hourly field employee.
Any Housekeeping personnel in buildings containing ACBM.

Asbestos Awareness Training will be conducted upon hire and as an Annual Requirement. Asbestos awareness training is required for employees who work in areas that contain or may contain asbestos and the training is documented. Asbestos awareness training is required for employees whose work activities may contact asbestos containing material (ACM) or presumed asbestos containing material (PACM) but do not disturb the ACM or PACM during their work activities.

Awareness Training may range from 1 to 8 hours, and may include such topics as:

- Background information on asbestos.

- Health effects of asbestos.

- Worker protection programs.

- Locations of ACM and Presumed Asbestos-Containing Material (PACM) in buildings.

- Recognition of ACM and PACM damage and deterioration.

- The O&M program for specific buildings.

- Proper response to fiber release episodes.

Asbestos can be inhaled, ingested, and can spliced the same as wood and get under your skin. Health effects of asbestos including respiratory disease and various types of cancer. Exposure to asbestos has been shown to cause lung cancer, asbestosis, mesothelioma, and cancer of the stomach and colon.

When working on multi-employer worksites Gray & Becker employees shall be protected from exposure. If employees working immediately adjacent to a

CLASS I ASBESTOS JOBS ARE EXPOSED TO ASBESTOS DUE TO THE INADEQUATE CONTAINMENT OF SUCH JOB, WE SHALL EITHER REMOVE THE EMPLOYEES FROM THE AREA UNTIL THE ENCLOSURE BREACH IS REPAIRED OR PERFORM AN INITIAL EXPOSURE ASSESSMENT.

END OF ASBESTOS POLICY

Bloodborne Pathogens Policy

Gray & Becker holds employee safety and health as one of our top priorities. Construction has a higher than average chance for injuries and we expect our employees and sub-contractors to follow all established OSHA and other regulatory rules regarding first aid and exposure to Bloodborne Pathogens.

Gray & Becker will provide training at the time of initial assignment to tasks where occupational exposure may take place, and at least annually thereafter. Annual training for all employees shall be provided within one year of their previous training. All Employees will receive this training.

OSHA requires that if we can "reasonably anticipate exposure" of employees to infectious material to prepare and implement a written exposure control plan.

Under circumstances in which differential between body fluids is difficult or impossible, all body fluids will be considered potentially infectious.

Access to a copy of the exposure control plan shall be provided in a reasonable time, place, and manner.

If providing hand washing facilities is not feasible, an appropriate antiseptic hand cleanser in conjunction with cloth/paper towels or antiseptic towelettes will be provided by the company's superintendent and shop manager.

When the possibility of occupational exposure is present, PPE is to be provided at no cost to the employee such as gloves, gowns, etc. PPE shall be used unless employees temporarily declined to use under rare circumstances. All Employees exposed to BBP shall practice Universal Precautions. Universal Precautions are defined as the caregiver never allowing unprotected skin to skin or skin to fluid contact between themselves and any person or infectious substance. PPE shall be repaired & replaced as needed to maintain its effectiveness. PPE used in BBP situations is disposable and must be discarded when the incident is complete.

All equipment or environmental surfaces shall be cleaned & decontaminated after contact with blood or other infectious materials. Water with Household Bleach is an effective disinfectant. Commercial Disinfectants are also approved such as Clorox Clean up®

Hepatitis B vaccine will be made available to all employees that have occupational exposure at no cost to the employee(s). Those employees are field su-

perintendents and any employee trained and responsible for rendering first aid and CPR. Custodians are also included in this free vaccine group.

Accurate medical records for each employee with occupational exposure will be maintained for at least the duration of employment plus 30 years.

Training records shall be maintained for 3 years from the date of training.

All employees giving first aid or CPR or cleaning up bodily fluids will wear appropriate PPE consisting of liquid proof gloves, safety glasses and face shield and if necessary disposable coveralls. Employees will wash their hands and and any exposed skin that may have been contaminated immediately upon finishing first aid and clean up duties.

Do Not continue to wear any clothing that is soiled. Change as soon as possible.

All Used PPE will be collected in a garbage bag, sealed, and hand delivered into a large dumpster. It will not be placed in regular trash cans or anything that then is emptied by hand.

Exposure Control Plan
POLICY
Gray & Becker Construction Services, Inc. is committed to providing a safe and healthful work environment for our entire staff. In pursuit of this goal, the following exposure control plan (ECP) is provided to eliminate or minimize occupational exposure to bloodborne pathogens in accordance with OSHA standard 29 CFR 1910.1030, “Occupational Exposure to Bloodborne Pathogens.”

The ECP is a key document to assist our organization in implementing and ensuring compliance with the standard, thereby protecting our employees. This ECP includes:
▪Implementation of various methods of exposure control, including:
Universal precautions
Engineering and work practice controls Personal protective equipment Housekeeping
Hepatitis B vaccination
Post-exposure evaluation and follow-up
Communication of hazards to employees and training Recordkeeping
Procedures for evaluating circumstances surrounding exposure

Determination of employee exposure
incidents
Implementation methods for these elements of the standard are discussed in the subsequent pages of this ECP.

PROGRAM ADMINISTRATION
Jean Spradlin, Controller, and the Shop Manager are responsible for implementation of the ECP. The Controller will maintain, review, and update the ECP at least annually, and whenever necessary to include new or modified tasks and procedures. Contact location/phone number:

- Those employees who are determined to have occupational exposure to blood or other potentially infectious materials (OPIM) must comply with the procedures and work practices outlined in this ECP.

- Maintain all necessary personal protective equipment (PPE), engineering controls (e.g., sharps containers), labels, and red bags as required by the standard. (Name of responsible person or department will ensure that adequate supplies of the aforemen- tioned equipment are available in the appropriate sizes. Contact location/phone number:

- Ensuring that all medical actions required by the standard are performed and that appropriate employee health and OSHA records are maintained. Contact location/phone number:

- Training, documentation of training, and making the written ECP available to employees, OSHA, and NIOSH representatives. Contact location/phone number:

EMPLOYEE EXPOSURE DETERMINATION
The following is a list of all job classifications at our establish- ment in which all employees have occupational exposure:
Job Title Department/Location
FIRST AID AND CPR TRAINED EMPLOYEES - CORPORATE-WIDE
CUSTODIANS AND THOSE INDIVIDUALS RESPONSIBLE FOR HOUSEKEEPING IN THE OFFICE.

The Controller And Shop Manager Are Responsible For Providing Ppe And Disposal Services For All Bbp Collections.

The following is a list of job classifications in which some employees at our establishment have occupational exposure. Included is a list of tasks and procedures, or groups of closely related tasks and procedures, in which occupational exposure may occur for these individuals:
Example:

Job Title Department/Location	Task/Procedure	
First Aid/CPR Giver	All Debts	Performing First Aid/CPR
Custodian	Office/Shop	Clean and Emptying Trash
Outside Janitorial	All	Clean and Emptying Trash

NOTE: Part-time, temporary, contract and per diem employees are covered by the bloodborne pathogens standard. The ECP should describe how the standard will be met for these employees.

METHODS OF IMPLEMENTATION AND CONTROL Universal Precautions
All employees will utilize universal precautions.
Exposure Control Plan
Employees covered by the bloodborne pathogens standard receive an explanation of this ECP during their initial training session. It will also be reviewed in their annual refresher training. All employees can review this plan at any time during their work shifts by contacting (Name of responsible person or department). If requested, we will provide an employee with a copy of the ECP free of charge and within 15 days of the request.

(Name of responsible person or department) is responsible for reviewing and updating the ECP annually or more frequently if necessary to reflect any new or modified tasks and procedures that affect occupational exposure and to reflect new or revised employee positions with occupational exposure.

Engineering Controls and Work Practices
Engineering controls and work practice controls will be used to prevent or minimize exposure to bloodborne pathogens. The specific engineering controls and work practice controls used are listed below:Universal Precautions will be used and all exposed disposal products will be sealed in a leakproof container and placed directly into trash dumpster so that no further human contact is necessary.

Not currently applicable to our company:
Sharps disposal containers are inspected and maintained or replaced by (Name of responsible person or department) every (list frequency) or whenever necessary to prevent overfilling.
This facility identifies the need for changes in engineering controls and work practices through (Examples: Review of OSHA records, employee interviews, committee activities, etc.)

We evaluate new procedures and new products regularly by
Keeping Abrest Of Changes In Osha Regulations And American Red Cross Training.

Both front-line workers and management officials are involved in this process in the following manner: INITIAL TRAINING AND ANNUAL REFRESHER TRAINING
JEAN SPRADLIN is responsible for ensuring that these recommendations are implemented.
Personal Protective Equipment (PPE)
PPE is provided to our employees at no cost to them. Training in the use of the appropriate PPE for specific tasks or procedures is provided by GEORGE BARTON).
The types of PPE available to employees are as follows:
NYTRIL GLOVES; SAFETY GLASSES, FACE SHIELDS AND TYVEC COVERALLS, DUCT TAPE

PPE is located SHOP RESTROOM and may be obtained through (Name of responsible person or department). EMPLOYEES MAY ACCESS PPE DIRECTLY OR ASK SHOP MANAGER FOR ACCESS TO IT.
All employees using PPE must observe the following precautions:

Wash hands immediately or as soon as feasible after removing gloves or other PPE.
Remove PPE after it becomes contaminated and before leaving the work area.
Used PPE may be disposed of in (TRASH BAGS - BOXES FOR SHARPS - MAGIC MARKERS FOR LABELING AND DUCT TAPE FOR SEALING)

Wear appropriate gloves when it is reasonably anticipated that there may be hand contact with blood or OPIM, and when handling or touching contaminated items or surfaces; replace gloves if torn, punctured or contaminated, or if their ability to function as a barrier is compromised.

Is not compromised; discard utility gloves if they show signs of cracking, peeling, tearing, puncturing, or deterioration.

Utility gloves may be decontaminated for reuse if their integrity
Never wash or decontaminate disposable gloves for reuse.
Wear appropriate face and eye protection when splashes, sprays, spatters, or droplets of blood or OPIM pose a hazard to the eye, nose, or mouth.

Contaminated by blood or OPIM, in such a way as to avoid contact with the outer surface.
The procedure for handling used PPE is as follows:
Used Contaminated PPE is to be disposed of in seal plastic bag or sealed label box and placed directly into trash dumpster - Never just a trash can.

Housekeeping
Regulated waste is placed in containers which are closable, constructed to contain all contents and prevent leakage, appropriately labeled or color-coded (see the following section “Labels”), and closed prior to removal to prevent spillage or protrusion of contents during handling.
▪
Remove immediately or as soon as feasible any garment contaminated -
The procedure for handling sharps disposal containers is:
Sharps (Glass, broken glass, etc. shall be scooped up with a dust pan and placed into a label box, sealed and placed directly into the dumpster as listed above.

The procedure for handling other regulated waste is: (may refer to specific procedure by title or number and last date of review) BBP generated by our company is NOT Considered Regulated Waste and may be placed directly into the Solid Waste Stream.

Contaminated sharps are discarded immediately or as soon as possible in containers that are closable, puncture-resistant, leak proof on sides and bottoms, and appropriately labeled or color-coded. We used thick walls cardboard boxes. No Special color or coding. Mark plainly on the outside that it contain Bloodborne Pathogens.

Bins and pails (e.g., wash or emesis basins) are cleaned and decontaminated as soon as feasible after visible contamination.

Broken glassware that may be contaminated is only picked up using mechanical means, such as a brush and dustpan.

Laundry

The following contaminated articles will be laundered by this company:
Personal Clothing employees are not willing to throw away.

Laundering will be performed by any employee trained in Universal precautions
.
The following laundering requirements must be met:

- handle contaminated laundry as little as possible, with minimal agitation
- place wet contaminated laundry in leak-proof, labeled or color- coded containers before transport. Use (specify either red bags or bags marked with the biohazard symbol) for this purpose.
- wear the following PPE when handling and/or sorting contaminated laundry: (List appropriate PPE).

Labels
The following labeling methods are used in this facility:

Equipment to be Labeled Label Type (size, color)

Contaminated Trash
Soiled Laundry

Any Person Trained in BBP Clean up is responsible for ensuring that warning labels are affixed or red bags are used as required if regulated waste or contaminated equipment is brought into the facility. Employees are to notify Any Person Trained in BBP Clean up if they discover regulated waste containers, refrigerators containing blood or OPIM, contaminated equipment, etc., without proper labels.

HEPATITIS B VACCINATION

George Barton will provide training to employees on hepatitis B vaccinations, addressing safety, benefits, efficacy, methods of administration, and availability.

The hepatitis B vaccination series is available at no cost after initial employee training and within 10 days of initial assignment to all employees identified in the exposure determination section of this plan. Vaccination is encouraged unless: 1) documentation exists that the employee has previously received the series; 2) antibody testing reveals that the employee is immune; or 3) medical evaluation shows that vaccination is contraindicated.

However, if an employee declines the vaccination, the employee must sign a declination form. Employees who decline may
request and obtain the vaccination at a later date at no cost. Documentation of refusal of the vaccination is kept at (List location).

Vaccination will be provided by Personal Physicians or any Local Pharmacy offering it.

Following the medical evaluation, a copy of the health care professional's written opinion will be obtained and provided to the employee within 15 days of the completion of the evaluation. It will be limited to whether the employee requires the hepatitis vaccine and whether the vaccine was administered.

POST-EXPOSURE EVALUATION AND FOLLOW-UP

Should an exposure incident occur, contact George Barton at the following number 330-550-9205 .

An immediately available confidential medical evaluation and follow-up will be conducted by any Local Medical Professional. Following initial first aid (clean the wound, flush eyes or other mucous membrane, etc.), the following activities will be performed:

Document the routes of exposure and how the exposure occurred.

- Identify and document the source individual (unless the employer can establish that identification is infeasible or prohibited by state or local law).
- individual tested as soon as possible to determine HIV, HCV, and HBV infectivity; document that the source individual's test results were conveyed to the employee's health care provider.
- HBV positive, new testing need not be performed.

▪individual's test results and with information about applicable disclosure laws and regulations concerning the identity and infectious status of the source individual (e.g., laws protecting confidentiality).
▪soon as feasible after exposure incident, and test blood for HBV and HIV serological status
▪during collection of blood for baseline testing, preserve the baseline blood sample for at least 90 days; if the exposed employee elects to have the baseline sample tested during this waiting period, perform testing as soon as feasible.
▪Obtain consent and make arrangements to have the source
If the source individual is already known to be HIV, HCV and/or Assure that the exposed employee is provided with the source

After obtaining consent, collect exposed employee's blood as
If the employee does not give consent for HIV serological testing

ADMINISTRATION OF POST-EXPOSURE EVALUATION AND FOLLOW-UP
George Barton ensures that health care professional(s) responsible for employee's hepatitis B vaccination and post-exposure evaluation and follow-up are given a copy of OSHA's bloodborne pathogens standard.
- route(s) of exposure
- circumstances of exposure
- if possible, results of the source individual's blood test
- relevant employee medical records, including vaccination status
- (Name of responsible person or department) provides the employee with a copy of the evaluating health care professional's written opinion within 15 days after completion of the evaluation.

PROCEDURES FOR EVALUATING THE CIRCUMSTANCES SURROUNDING AN EXPOSURE INCIDENT
George Barton will review the circumstances of all exposure incidents to determine:
- engineering controls in use at the time
- work practices followed
- a description of the device being used (including type and

George Barton ensures that the health care professional evaluating an employee after an exposure incident receives the following:
- a description of the employee's job duties relevant to the exposure incident
- brand of protective equipment or clothing that was used at the time of the exposure incident (gloves, eye shields, etc.)
- location of the incident (O.R., E.R., patient room, etc.)
- procedure being performed when the incident occurred
- employee's training

Jean Spradlin will record all percutaneous injuries from contaminated sharps in a Sharps Injury Log.

- If revisions to this ECP are necessary (Responsible person or department) will ensure that appropriate changes are made. (Changes may include an evaluation of safer devices, adding employees to the exposure determination list, etc.)

EMPLOYEE TRAINING

All employees who have occupational exposure to bloodborne pathogens receive initial and annual training conducted by

(Name of responsible person or department). (Attach a brief description of their qualifications.)

All employees who have occupational exposure to bloodborne pathogens receive training on the epidemiology, symptoms, and transmission of bloodborne pathogen diseases. In addition, the training program covers, at a minimum, the following elements:

1. a copy and explanation of the OSHA bloodborne pathogen standard
2. an explanation of our ECP and how to obtain a copy
3. an explanation of methods to recognize tasks and other activities
4. that may involve exposure to blood and OPIM, including what constitutes an exposure incident
5. controls, work practices, and PPE
6. decontamination, and disposal of PPE
7. its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine will be offered free of charge
8. contact in an emergency involving blood or OPIM
9. occurs, including the method of reporting the incident and the medical follow-up that will be made available
10. an explanation of the use and limitations of engineering
11. an explanation of the types, uses, location, removal, handling,
12. an explanation of the basis for PPE selection
13. information on the hepatitis B vaccine, including information on
14. information on the appropriate actions to take and persons to
15. an explanation of the procedure to follow if an exposure incident
16. information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident
17. an explanation of the signs and labels and/or color coding required by the standard and used at this facility
18. an opportunity for interactive questions and answers with the person conducting the training session.

Training materials for this facility are available at Austin Texas Main Office

RECORDKEEPING

Training Records

Training records are completed for each employee upon completion of training. These documents will be kept for at least three years at (Location of records).

The training records include:

the dates of the training sessions

the contents or a summary of the training sessions

the names and qualifications of persons conducting the training

the names and job titles of all persons attending the training sessions

Employee training records are provided upon request to the employee or the employee's authorized representative within 15 working days. Such requests should be addressed to

Jean Spradlin, Corporate Controller.

Medical Records

Medical records are maintained for each employee with occupational exposure in accordance with 29 CFR 1910.1020, "Access to Employee Exposure and Medical Records."

Jean Spradlin is responsible for maintenance of the required medical records. These confidential records are kept in our Corporate Office in Austin, Texas for at least the duration of employment plus 30 years.

Employee medical records are provided upon request of the employee or to anyone having written consent of the employee within 15 working days. Such requests should be sent to

Jean Spradlin, Gray & Becker, 9809 Beck Circle, Austin, TX 78758, Phone 512-836-1545.

OSHA Record keeping

An exposure incident is evaluated to determine if the case meets OSHA's Record keeping Requirements (29 CFR 1904). This determination and the recording activities are done by (Name of responsible person or department).

Sharps Injury Log

- In addition to the 1904 Record keeping Requirements, all percutaneous injuries from contaminated sharps are also recorded in a Sharps Injury Log. All incidences must include at least:
- date of the injury
- type and brand of the device involved (syringe, suture needle) department or work area where the incident occurred explanation of how the incident occurred.

This log is reviewed as part of the annual program evaluation and maintained for at least five years following the end of the calendar year covered. If a copy is requested by anyone, it must have any personal identifiers removed from the report.

HEPATITIS B VACCINE DECLINATION (MANDATORY)
I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to myself. However, I decline hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

Signed: (Employee Name)_____Date:_____

CRANES

The use of cranes on construction sites to lift heavy equipment, building materials, protective systems, erect steel, etc. is inherently dangerous and an essential part of our work. All parties who are responsible for the use of cranes while working at Gray & Becker Construction are expected to comply with Subpart CC of 29 CFR 1926 1400 (et al.) as the standard pertains to their work.

The responsibility for compliance with the standard in its entirety falls upon the individual crane contractor in so much as it is dictated by the standard.

The following sections provide excerpts and highlights of the crane standard as well as general guidelines and procedures for crane use and operation on the Gray & Becker Construction job sites.

The procedures in these sections ensure that employees understand crane and derrick safety training, operation, and maintenance practices. These requirements are also designed to ensure that procedures are in place to protect the health and safety of all employees.

Responsible Parties
The following personnel (as dictated by the standard and dependent on the type of crane being utilized and the work being done) must be provided by the crane contractor in order to safely operate a crane on Gray & Becker Construction property or job sites:

- Assembly / Disassembly Director (A/D Director)
- Competent Person
- Qualified Person
- Qualified Rigger
- Qualified Signal Person

Note: OSHA clearly defines the roles and responsibilities of each of the above mentioned positions.

Lift Plans
A lift plan must be provided to the Gray & Becker Construction Project Manager for review and approval, prior to performing any lifting operations. The lift plan must include:

- The type, size, model, lifting capacity, certification date and serial number of the crane to be used.
- A list of items to be lifted/moved, including a description of each item's weight, dimensions, center of gravity, and presence of hazardous toxic materials.

- The plan may include sketches showing lifting points, methods of attachment, sling angles, load vectors, boom and swing angles, crane orientations, related capacities, and other factors affecting the equipment and lifting operation.
- The name of the Operator, Rigger and Competent Person.
- Applicable rigging to be used as well as precautions and safety measures.
- A pre-lift meeting to review the plan, must be held before the actual lift, and be attended by the operator rigger(s), competent person and others as required.

A Critical Lift Plan and Critical Lift Checklist must be completed by the subcontractor and submitted to Gray & Becker Construction Project Manager when any of the following conditions exist:

- The load exceeds 75 % of the crane's load chart
- Whenever the load and/or travel radius is expected to travel over any portion of an occupied building
- The load exceeds 100 tons
- If the lift involves multiple cranes, a system must be instituted by the controlling entity to coordinate operations.
- The crane is being used to lift personnel
- Gray & Becker Construction has determined that the plan and checklist are necessary

Crane Operators

Crane operation shall only be conducted by properly licensed operators. Before operating on any Gray & Becker Construction worksite, crane operators must provide the following current documentation to verify that they are properly trained and licensed in the operation of the crane which they are intending to operate:

- National Certified Crane Operators License
- State of New Jersey Crane Operator's License
- Medical Certificate

Crane operators cannot be engaged in activities that distract their attention while operating the equipment (i.e. cell phones – unless used for signaling purposes, iPods etc.).

Crane and Wire Rope Inspections

Crane Inspections

Cranes must meet periodic inspection criteria as defined in the OSHA standard. All cranes must also meet the design, construction, and testing criteria as set forth in 29 CFR 1926.1433 through 1926.1441. If a manufacturer's inspection criteria exceed the requirements as defined in the OSHA standard, the crane must be inspected to meet the criteria of the manufacturer. Prior to beginning work on the site, the crane subcontractor must verify the following inspections:

- Post-assembly inspection by a qualified person to verify that the crane was configured in accordance with the manufacturer equipment criteria.
- Annual Inspection by a qualified party.
- Periodic Monthly Inspections by a competent person. If equipment has been idle for 3 months or greater, a monthly inspection must be conducted by a competent person prior to use on the site.
- Daily inspections should be conducted by a competent person prior to each shift.

Wire Rope Inspections

Prior to beginning work on the site, the crane subcontractor must provide verification of the following wire rope inspections:

- Annual Inspection by a qualified third party (other than the crane company).
- Periodic Monthly Inspections by a competent person.
- Daily inspections should be conducted by a competent person prior to each shift.

Deficiencies identified in any wire rope inspection must be documented, categorized, and corrected as indicated in the standard before any work can begin.

Crane Operations

A. Swing Radius/Work Area
B. Signals
C. Fall Protection
D. Crane Maintenance

The crane operator shall be familiar with and shall follow manufacturer operating procedures in order to safely operate the crane. In addition, the crane shall be operated in accordance with all local, state, and federal guidelines. Cranes shall also be operated within the Federal Aviation Administration (FAA) guidelines. Proper permitting and notifications, if applicable, are the responsibility of the crane contractor.

Written information regarding the ground conditions of the area where the crane will be operated will be provided to the contractor responsible for the crane and its operations prior to the assembly of the crane. Known underground hazards (such as steam lines, underground vaults, voids, tanks, utilities, underground building encumbrances, etc.) identified in drawings, documents, soil analyses, or otherwise known or recognized as potential hazards must be presented to Gray & Becker Construction by the General Contractor or Site Owner. Ground conditions must meet the conditions identified in the standard prior to assembly / disassembly of the crane (i.e. firm, drained, graded soils, sufficient to support the crane in conjunction with blocking or mats).

Assembly/Disassembly of a crane must be supervised by a person who is considered both a competent and qualified person. The manufacturer's procedures and prohibitions must be complied with when assembling and disassembling equipment.

Prior to assembling the crane, the contractor must determine if any part of the equipment, load line, or load (including rigging and lifting accessories) can come closer than 20 feet to a power line. If so, the contractor must meet the requirements set forth in 29 CFR 1926.1407 through 29 CFR 1926.1411. For electric transmission and distribution lines rated 50 kV or less, a minimum distance of 10 feet must be maintained from any part of the crane or its load unless the lines are de-energized and visibly grounded. For lines rated over 50kV, the clearance distance should be increased in accordance with Table A in 29 CFR 1926.1408 which provides minimum clearance distances when working in proximity to power lines.

If it is determined that any part of the equipment, load line or load could get closer than 20 feet to a power line then at least one of the following measures must be taken:

1) Ensure the power lines have been de-energized and visibly grounded

2) Ensure no part of the equipment, load line or load gets closer than 20 feet to the power line

3) Determine the line's voltage and minimum approach distance permitted in Table A of Subpart CC.

Prior to operation, the crane must have all safety devices and operational aids installed and functioning properly as defined in the standard.
The crane operator shall have available in the cab at all times and follow the operators manual, maintenance manual and load charts. They shall also have the current annual inspection record. ANSI's **Standard Hand Signals for Lifting** shall be posted on the crane or in a nearby conspicuous location.

It is the responsibility of the crane operator to cease crane operations whenever deficiencies are identified in an inspection, or when wind speeds or adverse weather conditions could affect the safe operation of the crane. The crane operator must obey a stop (or emergency stop) signal no matter who gives it.

The operator also has the authority to stop operation whenever there is a concern as to safety. The operator can refuse to handle loads until a qualified person has determined that safety has been assured.

The path of each load must be planned to prevent swinging loads from passing over workers. It is the responsibility of the subcontractor to utilize the necessary precautions (barricades, horns, spotters) to keep workers out of the swing path. At no time are workers permitted to stand beneath suspended or swinging loads.

No lifting of personnel will be permitted until a qualified person and engineer have verified and approved of the plan ensuring that all requirements of the standard have been met and that no additional potential safety hazards exist. Gray & Becker Construction reserves the right to review and cancel, for any reason, any lift plan / operation that intends to use a crane to lift personnel.

Equipment must be inspected monthly by a competent person. The inspection must be documented. Documentation must include the following: items checked, results of inspection, and name and signature of the inspector. Documentation must be retained for 3 months. (Documented monthly inspection not required if the daily inspection is documented and records are retained for 3 months)

A. Swing Radius/Work Area

Each employee who works in or near the crane, is required to be trained in the hazards associated with and how to recognize “struck by and pinch / crush” hazard areas.

Control lines, warning lines, guardrails, or barriers must be erected and maintained in order to mark the boundary of the hazard area and keep untrained individuals outside the area.

Once in the hazard area, an employee is required to notify the operator of their presence any time that they have gone to a location inside the hazard area that may be outside the view of the operator and will no longer be within the view of the operator. The operator shall not rotate the equipment until the employee has indicated that they are in a safe position.

No employees are allowed within the fall zone (whether the crane is moving or not) except for employees who meet the falling conditions:

- They are engaged in hooking, unhooking, guiding, or receiving a load.
- They are engaged in the initial attachment of the load to a component or structure.
- They are operating a concrete hopper or bucket.

If employees are within the fall zone and are engaged in hooking, unhooking, guiding a load, or the initial attachment of the load, the following conditions must be met:

- The material being hoisted must be rigged to prevent unintentional displacement.
- Hooks with self-closing latches or the equivalent must be used.
- The materials must be rigged by a qualified rigger.

The rigging of all equipment shall be performed by a qualified rigger. The qualified rigger shall inspect all rigging equipment prior to each lift, and any equipment found to be worn, damaged, or defective shall be removed from service immediately. Synthetic slings must not be used where the potential for the webbing to be cut exists. Softeners shall be provided where necessary to protect slings, regardless of type, against sharp edges.

B. Signals

A qualified signal person must be provided when any of the following conditions exist:

- The point of operation is not in full view of the operator.
- When the equipment is traveling, and the view in the direction of travel is obstructed.
- Whenever the operator or person handling the load determines the site specific safety concerns warrant a signal person.

The signal person and the operator must meet prior to the beginning of the operation and discuss and agree upon a method of communication. If hand signals are utilized, both the operator and the signal person must provide documented proof of training of the “Standard Method” of hand signals as can be found in Appendix A of OSHA’s crane standard.

If radios or cell phones are used to communicate, they must be tested on-site prior to beginning operations. They must be transmitted through a dedicated channel unless there are multiple cranes and shared communications are required for coordination.

C. Fall Protection

Fall protection shall be provided any time an employee is exposed to a fall hazard greater than 6 feet. Anchor points as well as training in the use of fall protection systems must meet subpart M requirements and criteria.

D. Crane Maintenance

Maintenance, inspection, and repair personnel are permitted to operate the equipment only when the following requirements are met:

- The operation is limited to the functions necessary to perform maintenance, inspect the equipment, or verify its performance.
- The operation is completed under the direct supervision of a properly licensed operator or the maintenance personnel are familiar with the operation limitations, characteristics and hazards associated with the type of equipment being worked on.
- Maintenance and repair personnel must be a qualified person with respect to the equipment and repair tasks performed.
- Cranes may be modified only with permission of the manufacturer or licensed Professional Engineer familiar with said crane.

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Discipline Policy

Gray & Becker holds employee safety and health as one of our top priorities. Discipline is essential to an orderly and safe work environment. Following established and published work rules, governmental standards, building codes, and directives issued by supervisory personnel are essential to an orderly job site.

Job Foremen, Site Superintendents, Safety Officials, and Company Management all act as supervisors on the job site and office. They enforce safety rules and company directives.

Examples of safety rules which everyone must follow include the wearing of standard Personal Protective Equipment when working on a job site or in the shop. Also, using proper Fall Protection and guarding fall hazards; keeping guards in place on tools; arriving and quitting work at established times and on time are examples of actions we consider standing rules that need no further explanation and which immediate corrective action will be required when found out of compliance by a supervisor.

Horseplay, fighting and criminal conduct among other serious infractions are grounds for immediate termination of employment without warning.

Violation of our Drug Free Safety Program (Substance Abuse Policy) carry separate sanctions not covered by this discipline policy. Violations of the DFSP do not carry discipline, but the policy does carry suspensions and terminations as consequences for non-compliance. Gray & Becker is not responsible if a client refuses to allow someone back on site after a DFSP violation.

Gray & Becker does not recognize Medical Marijuana and will not recognize a doctor's Fitness for Duty when it is related to marijuana or marijuana products.

Our Discipline Policy is progressive. Meaning most violations start with a verbal warning. Repeat violations escalate to a single day suspension then multiple day suspensions and ultimately termination of employment. All discipline is documented in writing, including Verbal Warnings; and future consequences. If the employee issued discipline is not suspended, he/she will correct the violations immediately prior to doing anything else. If the employee is suspended,

they will be required to undergo retraining before being permitted to return to the job site or work at another project we control.

If the employee is a Union Tradesman, violations resulting in suspension where the employee chooses to not return to Gray & Becker or our Sub-contractor, the Union will be notified of the circumstance surrounding their departure.

Some violations are so egregious that Termination is immediately possible and necessary. These include acts of violence, criminal activity, or refusal to comply with a direct order of a supervisor on a safety concern.

Physical inspections of work areas are conducted to ensure compliance with safety rules and company policies.

See appendix for Discipline Written Record form.

Electrical Safety

Gray & Becker holds employee safety and health as one of our top priorities. Electricity is widely used in our industry and we expect our employees and sub-contractors to follow all established OSHA and other regulatory rules regarding its use along with the equipment they connect to electrical service.

Employees who face a risk of electric shock but who are not qualified persons shall be trained and familiar with electrically related safety practices. All employees shall be trained in safety related work practices and clearance distances that pertain to their respective job assignments.

Safe work practices shall be employed to prevent electric shock or other injuries resulting from either direct or indirect electrical contacts when work is performed near or on equipment or circuits which are or may be energized. Gray & Becker Employees have no need to work with electricity that is not enclosed in protective enclosures and they will not open electrical panels if it involves removing screws or gaining access to open electrical connections.

Conductors and parts of electrical equipment that have been de-energized but not been locked or tagged out shall be treated as live parts.

Lockout and Tagging. While any employee is exposed to contact with parts of fixed electric equipment or circuits which have been de-energized, the circuits energizing the parts shall be locked out or tagged or both.

Applies to work performed on exposed live parts (involving either direct contact or by means of tools or materials) or near enough to them for employees to be exposed to any hazard they present.

Only qualified persons may work on electric circuit parts or equipment that have not been de-energized. Such persons shall be made familiar with the use of special precautionary techniques, PPE, insulating & shielding materials and insulated tools. Gray & Becker does not employ any such Qualified or Competent Persons and will not work with Live Electrical Circuits unprotected.

When working near overhead lines, a clearance distance of 10 feet must be maintained or the lines will be de-energized and grounded.

When an unqualified person is working in an elevated position near overhead lines, the location shall be such that the person and the longest conductive object he or she may contact cannot come closer to any unguarded, energized overhead line than the following distances:

- For voltages to ground 50kV or below – 10 feet (305 cm);
- For voltages to ground over 50kV – 10 feet (305 cm) plus 4 inches (10 cm) for every 10kV over 50kV.

Qualified employees must adhere to the approach distances in Table S2 of 29-CFR-1910.303, when working in the vicinity of overhead lines? **Gray & Becker Does Not Employ Qualified or Competent Electrical Workers.**

Vehicles and Equipment will maintain a minimum distance of 10 feet from all overhead electrical lines. If a crane or other tall piece of equipment comes within 20 feet of overhead lines we will seek to have them insulated or shut down.

Employees may not enter spaces containing exposed energized parts unless illumination is provided that enables the employees to work safely. Light may come from an adjacent area.

When necessary, protective shields, protective barriers or insulating material shall be provided.

Only Fiberglass ladders will be used when working near overhead electrical lines and buss bars.

Qualified Electrical workers will wearing appropriate FR Non Conductive Clothing or make sure what is conductive is insulated. **Gray and Becker does not employ Qualified Electrical Workers.**

Fall Prevention & Protection Policy

Reference: 29 CFR 1910 & 1926

Policy: It is the policy of Gray & Becker Construction Services, Inc. to prevent Falls and protect its employees from Falls and from Falling Objects during our elevated work. This policy will address these topics including both operations and maintenance and construction rules. All systems used in this policy will meet applicable OSHA, ANSI, ASTM requirements and are developed by a qualified person.

PROGRAM:
WORKING SURFACES AND PLATFORMS – Should work be on a work surface or platform which is 6 feet or more above the surrounding surface, guardrails, mid-rails, and toe boards are required. Scaffolds are excluded from 6 foot level.

SIX FOOT (6) CRITERIA – Should work being performed be over 6 feet from the lower surface, fall protection engineered systems are required. This will be guardrails, barrier cables, or other engineered protection. If these barriers are not feasible, then Personal Fall Arrest systems will be used. Fall Restraint Systems are not required on portable ladders so long as the ladder is not set up adjacent to a level lower than its feet and the ladder is a portable ladder.

SIX FOOT (6) CRITERIA FOR EXCAVATIONS: If the excavation or trench is not readily visible due to vegetation or other natural growths, fall protection must be in place to prevent accidental falls into the open excavation. When the work is left open over night and the site is not secure the excavations will be barricaded o to prevent falls open excavations. If the public has access to the open excavation, Extraordinary Precautions will be put into place to guard against their accessing the open excavation.

FOUR FOOT (4) CRITERIA – Employees not on a construction site and who are completing warranty or maintenance work or work inside our shop are required to engage fall protection at the 4 foot level.

WHY MULTIPLE STANDARDS? OSHA has a General Industry Standard and a Construction Standard. All operations and maintenance activity falls under the General Industry Standards and all construction activity falls under the Construction Standard. All actions and equipment discussed in this policy will comply with the applicable OSHA Standard. General Industry has a four foot protection level and Construction has a 6 foot level, 10 foot level, 15 foot level and 30 foot level. The Construction Standard also recognizes Excavation and Steel Erection as unique and we must comply with all five requirements.

FALL ARREST SYSTEMS – A fall arrest system is comprised of a full harness, lanyard, and appropriate tie off apparatus.

FALL ARREST DISTANCE – A person may not fall more than 2 feet without their Fall Arrest Equipment engaging to arrest the fall. Once fully engaged the fall arrest distance will be limited to not more than 1,800 lbs. of force and 6 feet. If the distance to the next lower level is less than 6 feet the Lanyard must be sized accordingly to prevent contact with that level or hazard.

WORK FROM MAN LIFTS AND OTHER LIFT EQUIPMENT – When working from articulating man lifts or other such equipment, all personnel will wear a Fall Arrest Harness and be tied off to the anchor point provided in the lift basket. It is suggested that the lanyard used be a positioning lanyard to limit the employee from being ejected out of the basket. Positioning lanyard are not shock absorbing and generally short.

AUTHORIZATION FOR WORK REQUIRING FALL PROTECTION – Before any work being performed, supervisory personnel will review the work and work area and, should fall hazards exist which require more than basic fall protection and/or fall arrest, an OSHA Compliant Site Specific Fall Control Plan will be developed by a Qualified Supervisor. This plan will be reviewed with all personnel who are affected by the plan and include, but not be limited to, client or other people affected by the Plan. In addition, a Controlled Access Zone may be required. This will be determined by the Competent Supervisor authorizing the work.

ROOFING WORK ON LOW-SLOPE ROOFS – Each employee engaged in roofing activities on low-slope roofs, with unprotected sides and edges 6 feet or more

above lower levels shall be protected from falling by guardrail systems, personal fall arrest systems, or a combination of warning line system and guardrail system, or warning line system and personal fall arrest system, or warning line system and safety monitoring system. Or, on roofs 50-feet or less in width, the use of a safety monitoring system alone [i.e. without the warning line system] is permitted with permission of the Director of Risk Management.

LOW-SLOPE ROOF – a roof having a slope less than or equal to 4" in 12" (vertical to horizontal).

STEEP ROOF – Roof having slope greater than 4":12" Steep roofs may not employ safety monitoring or warning line systems. Protection on Steep Roofs mainly involves anchor points at the peak or scaffolds at the eaves to eliminate a fall. If anchors are used at the peak, Retractable Lanyards or 5/8" rope grabs are used to permit employees vertical and lateral movement. Swing factor must be taken into consideration when anchor points allow employees near a side edge.

SAFETY MONITORING SYSTEM – a safety system in which a competent (Monitor) person is responsible for recognizing and warning employees of fall hazards on roofs too small to accommodate conventional fall arrest or fall prevention equipment.

SAFETY MONITOR – The Competent Person in charge of alerting employees under his supervision of fall risks. The Safety Monitor will have no other assignments and must be on the same level as the people being monitored and must be capable of voice communications.

TRAINING AND INFORMATION – General information regarding falls and the OSHA Standards applicable to this work will be presented to all employees. In addition, specific fitting and use of the Fall Arrest System will be covered in the program. Employees found deficient in their level of knowledge will be retrained prior to being put back into a fall protection situation. Training is required whenever an employee is assigned to work in a Fall Protection area; is found to be deficient in his/her knowledge necessary to remain safe, or; whenever the conditions change requiring a change in fall protection procedures. A signed training log will be maintained in the Corporate Office for all Fall Protection

Training. The log will detail the training, instructor, times and dates, and certification from instructor that training was adequate. Training will emphasis that when an employee falls, a plan must be already be in place to immediately rescue that fallen employee.

WARNING LINES - Warning lines are erected as a warning to prevent employees from getting near a fall hazard. Warning Lines must be flagged at 6 foot intervals with high visibility flags, on stanchions capable of withstanding a 16 lb. tip over force and the Warning Line must not dip lower than 34 nor rise above 39 inches from the surface. If wheeled equipment is used on the roof, a Warning Line must be at least 10 feet back from any open edge. Breaking strength of the line must be at least 500 lb. and the line must be secured to each stanchion so that if it is cut between any two stanchions it will not fall from the remaining.

LEADING EDGE – Leading edge is defined as a walking surface that has an open edge that continually changes due to construction or demolition. Example: Laying new decking.

PARAPET WALL – A vertical continuation of the exterior wall above the roof deck. May be as little as a couple of inches or as great as 12 feet or more. May only count as fall protection if at least 39 inches high.

MANSARD ROOF – Common on plaza walkway roofs. Slopes increase toward bottom of roof with top almost vertical. On larger buildings they are used for additional living space.

HORIZONTAL LIFT LINE - Horizontal Lift Lines are set up and designed to allow lateral movement of employees on a single level. Anchor points and life lines must be chosen with the 5,000 lb. anchorage level per person protected as a prime directive. Also needing to be considered is spacing between anchor points. Each anchor point must independently anchor the life line and not simply act as a pass through point. The more anchor points used the safe the life line since, if one person falls, everyone within same section of line is also likely to fall. Shock Absorbing lanyards are required when tied to a Horizontal Life Line.

GUARDRAILS, MID RAILS – Guardrails and Mid rails must be as follows: Guardrails must withstand a 200lb. force pushing outward or downward upon

them; they must be mounted at 42 inches plus/minus 3 inches; so between 39 and 45 inches above the deck. Mid rail must be erected anytime the guardrail does not have a barrier beneath it at least 19 inch high. Mid rails will be mounted at 19 inches or roughly 1⁄2 way between any lower level and the guardrail. Mid rail must withstand a 150 lb. load outward or downward placed upon them. Guardrails and Mid rails made of wire rope must be flagged every six feet with high visibility flagging and must be at least one quarter inch nominal diameter wire rope. Steel & Plastic Banding is prohibited as a Guardrail or Mid rail. Wire rope needs to meet the sag rules, so it must be stretched tight to comply.

PRE-WORK CHECK & THE FALL PROTECTION PLAN

Prior to beginning work in any area or on any structure or equipment where fall hazards exist, a pre-work check must be completed that includes the following items:

ROOFS – 100% protected by parapet walls at least 39 inches high; guardrail systems; or higher building walls of penthouses or other connected buildings.

Rescue - If an employee falls and is stopped by the fall arrest system or nets, a plan must be in place prior to their fall for their prompt rescue.

WALL OPENINGS TO LEVELS BELOW – Must be closed by intact building structure capable of withstanding 200 lb. force. Windows with sills below 39 inches must have protection installed such as a guardrail or expanded metal screen.

FLOOR OPENINGS OF TWO INCHES OR LARGER – Must meet roof requirement or hole must be covered with plate capable of withstanding twice the anticipate load that may cross over the hole cover. The Cover must be conspicuously labeled as a “Hole” or “Cover” and secured to prevent displacement.

If fall hazards exist and cannot be eliminated by guardrails or building design, and pre-cast concrete or Leading Edge work is taking place a written plan will be developed to address areas open to fall hazards. This will include hazards generated by work affecting the general public such as items falling from buildings onto public sidewalks.

Work Procedures - If any one of the conditions described in Pre-Work Check is not met for the area or piece of equipment posing a potential fall hazard, then employees may not perform that work until the condition is met. If the condition cannot be remedied immediately, a supervisor or Safety Director must be notified of the problem.

If the situation calls for use of fall protection devices, such as harnesses, or positioning or restraining devices, then the employee must don such protective equipment before beginning the work and use it as intended throughout the duration of the work. Only employees specifically trained in Fall Protection including Arresting & Restraint Systems may wear Fall Protection Equipment.

All equipment used for fall protection must be specifically designed for that purpose and may not be used for any other purpose. Harness, Lanyard and any other connecting components must be compatible and connecting devices sized to prevent rollout. All snap hooks must be double-locking.

All anchorages used to secure fall arrest equipment will be independent of any anchorage used for support or to suspend platforms, except in single elevator shafts where dummy cars are positioned below.

To protect the public and workers below, anytime a guardrail is placed at the edge of the working level a toe board will also be installed to prevent objects from being kicked o the edge of the level. Toe boards are to be no further o the walking level than 1⁄4 inch and must be 3 1⁄2 inch high capable of withstanding a 50 lb. force applied laterally. A piece of 2X4 lumber is generally acceptable as a toe board when laid on edge. Toe boards are not required when guardrails are used on the interior of a level away from any edges.

Only employees trained in such work are permitted to perform it. To prevent slipping, tripping, and falling, all places of employment, passageways, storerooms, and service rooms must be kept clean and orderly and in a sanitary condition. The floor of every workroom will be maintained in a clean and, so far as possible, dry condition. Where wet processes are used, drainage will be maintained and false floors, platforms, mats, or other dry standing places are provided where practicable.

If working in an area where pedestrian traffic is a concern, walkway protection will be erected to protect the public, if the walkway cannot be closed and barricaded off. This is generally done using scaffolding with layered plywood tops set up and layered based upon the risk involved with the objects that might drop and the distance they may fall. This includes entrances and exits of buildings, public sidewalks, etc.

SCAFFOLDING – Scaffolding has a 10ft. fall protection rule. This is generally two bucks without feet, casters or screw jacks. The only acceptable forms of fall protection on scaffolding is guardrails, mid rails and toe boards, unless employees tie o to an anchor point above them and independent of the scaffold.

When screw jacks, casters, or feet & mud sills increase the height of the first level to greater than 5 feet all other occupied levels will require guardrails, mid rails and toe boards.

ACCESS TO WORKING LEVELS AND ROOFS – When working on a level accessed by ladder, the ladder must be secured and extend at least 3 feet above that landing level. In addition, the fall protection system in place must be configured so as to require a person to negotiate at least one turn in the protection barrier to gain access to the ladder from the elevated open area. We will not permit the ladder to be the only barrier to a fall.

DEBRIS CHUTES & ROPE HOISTS – Debris Chutes will be guarded when not in use. Employees loading the chute will be protected by a guardrail system or be tied o to an approved anchor point. Employees will not enter the chute to clear blockages. Rope Hoists and associated landing areas will be protected by guardrail when not in use.

SKYLIGHTS AND VENTILATION SHAFTS – Sky Lights and Ventilation Shafts will be treated as a Fall Hazard and protected with guardrails or Warning Lines set back at least 6 feet; 10 feet if wheeled equipment is on same level.

STEEL ERECTION – Steel Erection has conflicting rules on Fall Protection. Fall protection for Steel Erection is required at 15 feet about the lower level.

Suffice it to say that certain trained “Connector” employees may work at heights exceeding the 6 foot fall protection limit. These heights can be up to 30 feet, but only apply to specifically trained Iron Worker Connectors.

AERIAL LIFTS – Employees using aerial lifts may be required to use a fall arrest harness and lanyard. Employees using articulating boom lifts must tie o to the manufacturer’s anchor point inside the lift basket. Employees in scissors lifts are not required to tie off.

Aerial lifts will not be used as elevators unless the floor of the lift can be positioned at the same level as the level the employee steps o and onto. They must leave through the lift’s gate and not climb over or through the railings. If the level they exit onto requires fall protection they must be protected as soon as they step off of the lift or be in a 100% tie-off system.

It is highly recommended that employees in aerial lifts use a positioning lanyard instead of a 6 ft shock absorbing lanyard when inside the lift basket. The point of tying off is not for fall protection, but rather ejection protection. Therefore the shorter the lanyard, the better when in an aerial lift.

The Safety Department will conduct regular unannounced audits of all job sites and operations to include equipment and personnel. Project Managers will also be held accountable for checking on their job site with each visit.

All Falls and Near Miss Incidents must be reported and investigated by the Safety Department so that procedures may be reviewed and changed, if necessary.

Anytime working with leading edge systems a Written Site Specific Fall Protection Plan must be place that is written by a Qualified Person skilled in Fall Protection Systems and Dangers.

Fire Protection Policy

Gray & Becker holds employee safety and health as one of our top priorities. The risk of fire is substantial in construction and due to the motor fuels and sealants used in our industry we have need to stock and use portable fire extinguishers OSHA and other regulatory rules regarding their use will be followed.

All refueling of internal combustion engines will occur with the engine off. A fire extinguisher will be ready at hand.

A Fire Extinguisher will be placed on our jobs so that we are never more than 100 feet from an extinguisher. If we have 5 gallons or more of flammable liquids we will have an extinguisher within 50 feet of that flammable liquid, but not closer than 10 feet.

All Employees will be trained upon assignment to the job site, office or shop in the use of portable fire extinguishers and benefit and hazards associated with fighting an incipient stage fire. The PASS Method will be used in putting out an incipient fire. If more than one extinguisher is needed, evacuate and call 9-1-1 for professional fire service help.

Annual Refresher Trainer will be given all employees.

Portable fire extinguishers will be inspected each month. Check for the dial to be in the charged Green Area of the dial. Check that the Pin is sealed by the zip tie; check that hose and hose bell are firming attached and not clogged by dirt or insect nests. And finally check that the cylinder is not damaged or severely dented.

Fire Extinguishers should be mounted and Not set on the floor or furniture. Due to the nature of our business setting extinguishers on the ground may be our only option in the field. Office and Shop Extinguishers will be mounted not more than 5 feet from the floor and protected from being blocked or obscured.

All Fire Extinguishers must be inspected annually by a third party fire extinguisher vendor licensed to recharge and inspect extinguishers.

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First Aid & CPR

Gray & Becker holds employee safety and health as one of our top priorities. Construction has a higher than average chance for injuries and we expect our employees and sub-contractors to follow all established OSHA and other regulatory rules regarding first aid and CPR.

In the absence of an infirmary, clinic, hospital, or physician, that is reasonably accessible in terms of time and distance to the worksite, which is available for the treatment of injured employees, a person who has a valid certificate in first aid and CPR shall be available at the worksite to render first aid.

A valid certificate in first aid training must be obtained from the American Red Cross or equivalent training that can be verified by documentary evidence.

First aid supplies shall be easily accessible when required. It is the policy of Gray & Becker that injured employees perform first aid on themselves whenever possible to minimize the possible transmission of Bloodborne Pathogens. Whenever injuries are severe, a trained employee will insure the injured is cared for until professional medical care is available.

First aid kits shall consist of appropriate items which will be adequate for the environment in which they are used. For construction operations, items shall be stored in a weather proof container with individual sealed packages of each type of item.

Gray & Becker will ensure the availability of adequate first aid supplies, and periodically reassess the demand for supplies and adjust their inventories. For construction operations, first aid kits shall be checked before being sent out to each job and at least weekly.

Proper equipment for prompt transportation of the injured person to a physician or hospital or a communication system for contacting necessary ambulance service shall be provided. Emergency Phone Numbers will be posted along with a map to the nearest emergency room.

Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities shall be provided within the work area. First Aid kits will have emergency saline eye wash available to span the gap between injury and EMS Arrival.

Forklifts and Industrial Trucks

Gray and Becker prides itself on its Safety and Employee Health initiatives. Powered Industrial Trucks and forklifts are critical to our business and we have developed this safety program address Forklift and Industrial Truck Safety.

All employees are required to be trained and certified prior to operating each specific type of equipment.

Formal instruction may include lecture, discussion, interactive computer learning, videos, and written materials. Practical training involves instructor demonstrations and trainee exercises. Operator evaluation & critiques are required.

All trainers must have the knowledge and ability to teach and evaluate operators.

The training content should include forklift operating instructions, use of controls, capacity and load stability as a minimum.

Mandatory refresher training shall be provided to the operator when:
- the operator has been observed to operate the vehicle in an unsafe manner,
- the operator has been involved in an accident or near-miss incident, and/or
- the operator has received an evaluation that reveals that the operator is not operating the truck safely.

Operators are required to be re-evaluated every three (3) years.

Equipment shall be examined before being placed in service. Such examination shall be made at least daily. Where industrial trucks are used on a round-the-clock basis, they shall be examined after each shift. Defects when found shall be immediately reported and corrected. All inspections shall be documented on a specific form for each vehicle.

The operator must verify trailer chocks, supports, and dock plates prior to loading/unloading. Trailer chocks are required when loading or unloading.

Forklift type vehicles will not be used to elevate personnel. This includes Lulls, Bobcats and Forklifts and Front end Loaders.

Interior driving speed shall not exceed that of a fast paced walk. Use care on wet floors as vehicles will slide.

Passengers shall not be carried, used as counter-weights or stand on forks.

Pedestrians shall always have the right of way over any powered industrial construction vehicle.

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Waste Management

Gray & Becker prides itself on its Safety and Employee Health initiatives. A top priority next to safety and health is protection of the environment. The following details our waste management philosophies.

Gray & Becker will estimate the waste that will be generated prior to work being performed so that the need for containers and waste removal, if necessary, can be determined. Generally, we generate wood dunnage, scrap metal, foam and fiberglass from insulation and panel filling. Depending on the size of the building the amount of each will vary. Dunnage is often recycled on site by other contractors using it for staging their supplies and equipment. This is advantageous to use since we are usually one of the first in and first out of the job site.

Waste materials should be properly stored and handled to minimize the potential for a spill or impact to the environment. During outdoor activities, receptacles must be covered to prevent dispersion of waste materials and to control the potential for run-off.

Employees will be instructed on the proper disposal method for wastes. This may include general instruction on disposal of non-hazardous wastes, trash, or scrap materials. If wastes generated are classified as hazardous, employees must be trained to ensure proper disposal. (We do not generate Hazardous Wastes.)

Gray & Becker Construction encourages proper segregation of waste materials to ensure opportunities for reuse or recycling. We will recycle all scrap metal generated from our work. That scrap metal revenue will be credit back to Gray and Becker Construction Services, LP unless redirected by written contract.

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Hand AND/OR Power Tools

Gray & Becker Construction Services, LP prides itself on its safety and employee health initiatives. Hand and Power Tools are an essential part of our work and we take great pride in making sure our employees use these tools properly and maintain them in a safe condition.

Whether furnished by Gray & Becker or the employee, tools shall be maintained in a safe condition. Tools will be inspected prior to each use. Tools with cases will be returned to their cases at the end of each workday.

Guards shall be in place and operable at all times. The guard may not be manipulated in such way that will compromise its integrity or compromise the protection in which intended. Guarding shall meet the requirements set forth in ANSI B15.1.

Employees using hand and power tools and exposed to the hazard of falling, flying, abrasive, and splashing objects, or exposed to harmful dust, fumes, mists vapors, or gases shall be provided with particular PPE necessary to protect them from the hazard.

Unsafe tools shall either be identified as unsafe by tagging or locking the controls to render them inoperable or shall be physically removed from its place of operation. Defective tools will be repaired or removed from the job site by the end of the day.

Handles shall be firmly attached to the toolhead and non-splintered. Heads of Chisels shall not be mushroomed. Tools will be used for only the purpose for which they were designed. Cords will be free of cuts and tape. Blades and drill bits are to be sharp. All power tools will have a manufacturer's label firmly attached and legible.

Step Ladders will only be used in their open A Frame Configuration and employees will not step on the top step or apex platform.

Electrical tools will have cords and casings inspected prior to each use. Electrical services shall be protected by GFCI.

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Hazard Communication Program

March 1, 2017

1. Introduction

The management of Gray & Becker Construction Services, LP is committed to preventing accidents and ensuring the safety and health of our employees. We will comply with all applicable federal and state health and safety rules. Under this program employees are informed of the contents of the OSHA Hazard Communications Standard, the hazardous properties of chemicals with which they work, safe handling procedures and measures to take to protect themselves from these chemicals. Theses chemicals may be physical or health-related. This written hazard communication plan is available at the following location for review by all employees: Main Office, Gray & Becker Construction Services, LP, Austin, Texas.

2. Identifying Hazardous Chemicals

A list is attached to this plan that identifies all hazardous chemicals with a potential for employee exposure at this workplace.

Detailed information about the physical, health, and other hazards of each chemical is included in a Safety Data Sheet (SDS); the product identifier for each chemical on the list matches and can be easily cross-referenced with the product identifier on its label and on its Safety Data Sheet.

3. Identifying Containers of Hazardous Chemicals

The labeling system to be used by Gray & Becker Construction Services, LP will follow the requirements in the 2012 revision of the OSHA Hazard Communication Standard to be consistent with the United Nations Globally Harmonized System (GHS) of Classification of Labeling of Chemicals. The label on the chemical is intended to convey information about the hazards posed by the chemical through standardized label elements, including symbols, signal words and hazard statements.

All hazardous chemical containers used at this workplace will have:

1. The original manufacturer's label that includes a product identifier, an appropriate signal word, hazard statement(s), pictogram(s), precautionary statement(s) and the name, address, and telephone number of the chemical manufacturer, importer, or other responsible party
2. A label with the appropriate label elements just described

3. Workplace labeling that includes the product identifier and words, pictures, symbols, or combination that provides at least general information regarding the hazards of the chemicals.

Our Director of Risk Management will ensure that all containers are appropriately labeled. No container will be released for use until this information is verified. Workplace labels must be legible and in English.
Hard Copies of the SDS and HAZCOM Program are available from the Corporate Controller at our Austin, Texas Office.

Small quantities intended for immediate use may be placed in a container without a label, provided that the individual keeps it in their possession at all times and the product is used up during the work shift or properly disposed of at the end of the work day. However, the container should be marked with its contents.

4. Keeping Safety Data Sheets (previously known as Material Safety Data Sheets)
The manufacturer or importer of a chemical is required by OSHA to develop a Safety Data Sheet (SDS) that contains specific, detailed information about the chemical's hazard using a specified format. The distributor or supplier of the chemical is required to provide this SDS to the purchaser.
SDS's are readily available to all employees during their work shifts. Employees can review SDS for all hazardous chemicals used at this workplace.

The SDS's are updated and managed by Shop Manager. If a SDS is not immediately available for a hazardous chemical, employees can obtain the required information by calling Director of Risk Management at 330-550-9205.

5. Training Employees about Chemical Hazards
Before they start their jobs or are exposed to new hazardous chemicals, employees must attend a hazard communication training that covers the following topics:
- An overview of the requirements in OSHA's Hazard Communication Standard.
- Hazardous chemicals present in their workplace.
- Any operations in their work area where hazardous chemicals are used.
- The location of the written hazard communication plan and where it may be reviewed.
- How to understand and use the information on labels and in Safety Data Sheets.
- Physical and health hazards of the chemicals in their work areas.
- Methods used to detect the presence or release of hazardous chemicals in the work area.
- Steps we have taken to prevent or reduce exposure to these chemicals.

• How employees can protect themselves from exposure to these hazardous chemicals through use of engineering controls/work practices and personal protective equipment.
• An explanation of any special labeling present in the workplace. o What are pictorgrams?
o What are the signal words?
All SDS are stored in Hard Copy at G&B Main Office, Austin, Texas and can be emailed or faxed anywhere in the world.
o What are the hazard statements?
o What are the precautionary statements?

• Emergency procedures to follow if an employee is exposed to these chemicals.
The Director of Risk Management is responsible to ensure that employees receive this training. After attending the training, employees will sign a form verifying that they understand the above topics and how the topics are related to our hazard communication plan.
Prior to introducing a new chemical hazard into any department , each employee in that department will be given information and training as outlined above for the new chemical hazard.

6. Informing Employees who do Special Tasks
Before employees perform special (non-routine) tasks that may expose them to hazardous chemicals, their supervisors will inform them about the chemicals' hazards. Their supervisors also will inform them about how to control exposure and what to do in an emergency. The employer will evaluate the hazards of these tasks and provide appropriate controls including Personal Protective Equipment all additional training as required.
Examples of special tasks that may expose employees to hazardous chemicals include the following: (include examples of special (non-routine) tasks).

7. Informing contractors and other employers about our hazardous chemicals
If employees of other employer(s) may be exposed to hazardous chemicals at our workplace (for example, employees of a construction contractor working on-site) It is the responsibility of (name of person or job title) to provide contractors and their employees with the following information:
• The identity of the chemicals, how to review our Safety Data Sheets, and an explanation of the container labeling system.
• Safe work practices to prevent exposure.
The Director of Risk Management will also obtain a Safety Data Sheet for any hazardous chemical a contractor brings into the workplace.

HCS Pictograms and Hazard Follows

Hazard Communications Pictogram List:

- Carcinogen
- Mutagenicity
- Reproductive Toxicity
- Respiratory Sensitizer
- Target Organ Toxicity
- Aspiration Toxicity

- Flammables
- Pyrophorics
- Self-Heating
- Emits Flammable Gas
- Self-Reactives
- Organic Peroxides

- Irritant (skin and eye)
- Skin Sensitizer
- Acute Toxicity
- Narcotic Effects
- Respiratory Tract Irritant
- Hazardous to Ozone Layer (Non-Mandatory)

Gas Cylinder

- Gases Under Pressure

Corrosion

- Skin Corrosion/Burns
- Eye Damage
- Corrosive to Metals

Exploding Bomb

- Explosives
- Self-Reactives
- Organic Peroxides

Flame Over Circle

- Oxidizers

Environment (Non-Mandatory)

- Aquatic Toxicity

Skull and Crossbones

- Acute Toxicity (Fatal or Toxic)

Employees shall be provided with effective information and training on hazardous chemicals in their work area at the time of their initial assignment, and whenever a new physical or health hazard the employees have not previously been trained about is introduced into their work area. Information and training may be designed to cover categories of hazards (e.g., flammability, carcinogenicity) or specific chemicals. Chemical-specific information must always be available through labels and safety data sheets.

A written hazard communication program has been developed, implemented, and maintained at each workplace that describes how labels & other forms of warning, safety data sheets, & employee information will be met.

An inventory of all hazardous chemicals used by your company is being maintained. Each chemical on the list should have the same name as shown on its corresponding Safety Data Sheet (SDS).

The program includes methods we will use to inform employees of the hazards of non-routine tasks. Training employees on non-routine tasks, such as the cleaning of reactor vessels, and informing workers on the hazards associated with chemicals contained in unlabeled pipes in their work areas should occur.

Container labels will contain the following information: Product identifier; signal word; hazard statement(s); pictogram(s); precautionary statement(s); and name, address, and telephone number of the chemical manufacturer, importer or other responsible party.

Program should have specific methods for providing other employer information concerning hazardous chemicals at job sites, methods of providing SDS sheets, methods of precautionary measures to be taken & methods of providing information on labeling systems. Where employees must travel between work places during a work shift (multi job sites), the written program may be kept at a primary job site. If there is no primary, then the program should be sent with employees.
SDSs shall be maintained and readily accessible in each work area. SDSs can be maintained at the primary work site. However, they should be available in case of an emergency. SDS must be made available, upon request, to employees, their designated representatives, the Assistant Secretary & the Director.

LADDER SAFETY

REFERENCE: 29-CFR-1926.1053

Gray & Becker Construction Ladders come in several sizes and many different types. Straight Ladders, Step Ladders, Extension Ladders, Fixed Ladders, Caged Ladders, Chicken Ladders, Scaffold Ladders. Each and every one of the different types of ladders has rule covering their use and construction. Gray & Becker Construction will follow the published rules of OSHA and ANSI.

Extension & Straight Ladders:

All of our ladders will be fiberglass ladders. They will be free of defects and bear manufacturers' labels denoting their capacity, configuration requirements, and ANSI compliance. These warnings and limits will not be exceeded or ignored.

Extension ladders will consist of two sections. A Top half and Bottom half. The top half will never be used as a separate ladder. The top half does not have the necessary safety features for it to be used as a stand alone separate ladder.

Extension and Straight ladders will be set up at a 4 to 1 ratio with the feet 1 foot out from the structure for every 4 feet up the structure the ladder touches.

The straight and extension ladders will be secured at the top landing and extend at least 3 rungs above that landing. The base feet will be arranged properly for the surface they are resting upon. Claw feet cantilevered into the earth for bare ground and rubber feet flat on solid surfaces.

Employees will never stand on the top three rungs of a straight or extension ladder.

Step Ladders (A-Frame)

Step ladders may only be used in their open and locked position. Never lean a step ladder against a structure and climb it.

Never climb onto the top step or top pivot platform of a step ladder.

Make sure all four feet of a step ladder are equally touching the floor or ground. It must also exceed the top exit point by 3 feet.

Step ladders must also extend 3 feet above a level if the employee intends to exit the ladder from any point other than the bottom rung.

General

No matter what type of ladder is used, employees must use three points of contact when climbing up or down. Working from a ladder may be done as long as the employee does not have to extend their torso outside of the vertical line confines of the ladder's side rails. In other words, no leaning to the sides.

Prior to each use, the ladders will be inspected for defects including splitting fiberglass rails, bent or missing rungs, missing or illegible manufacturers' warning or identification stickers. Defective ladders will be tagged out of service and removed from the job.

Ladders will be marked for capacity and employees will honor that capacity.

Ladders transported on a ladder rack will be monitored for vibration damage. To avoid vibration damage to the fiberglass make sure the ladder is either secured tight against the ladder rack or the ladder rack is cushioned with an insulating material such as pipe wrap or carpeting to cushion the vibrations of the metal rack agains the fiberglass.

No ladder may ever be used horizontally or for a purpose other than that they were designed.

Any job-made straight ladders must meet standards set forth on 29-CFR-1926.1053 inclusive.

Hearing Conservation Program

Gray & Becker Construction Services, LP prides itself on its Safety and Values its Employee's Health. With this in mind we have adopted this Hearing Conservation Policy.

A training program shall be provided for all Gray & Becker Construction employees who are exposed to action level noise(85 dbA on an 8 hour time-weighted average basis). The training shall be repeated annually for each employee. Training shall be updated consistent to changes in PPE and work processes. The employer shall make available to affected employees copies of the noise exposure procedures and shall also post a copy in the workplace. The employer shall also allow the Assistant Secretary and the Director access to records.

A continuing effective hearing conservation program shall be administered when employees are exposed to sound levels greater than 85 dbA on an 8 hour time-weighted average basis.

When information indicates that employee exposure may equal/exceed the 8 hr time-weighted avg. of 85 decibels, a monitoring program shall be implemented to identify employees to be included in the hearing conservation program.

An audiometric testing program must be established and maintained by making audiometric testing available to all employees whose exposures equal or exceed an 8-hr. time-weighted avg. 85 decibels.

Within 6 months of an employee's first exposure at or above the action level, a valid baseline audiogram shall be established against which future audiograms can be compared. When a mobile van is used, the baseline shall be established within 1 yr.

Testing to establish a baseline audiogram shall be preceded by at least 14 hours without exposure to workplace noise. Hearing protection may be used to meet the requirement. Employees shall also be notified to avoid high levels of noise.

At least annually after obtaining the baseline audiogram, Gray & Becker Construction shall obtain a new audiogram for each employee exposed at or above an 8-hour time-weighted average of 85 decibels. Each employee's annual audiogram shall be compared to that employee's baseline audiogram to determine if the audiogram is valid and if a standard threshold shift has occurred. If a comparison of the annual audiogram to the baseline audiogram indicates a standard threshold shift, the employee shall be informed of this fact in writing, within 21 days of the determination.

Unless a physician determines that the standard threshold shift is not work related or aggravated by occupational noise exposure, the employer shall ensure that employees already using hearing protectors shall be refitted and retrained in the use of hearing pro-

tectors and provided with hearing protectors offering greater attenuation if necessary. The employee shall be referred for a clinical audiological evaluation or an otological examination, as appropriate, if additional testing is necessary or if the employer suspects that a medical pathology of the ear is caused or exasperated by the wearing of hearing protectors.

This is done at no cost to employee(s). Hearing protection shall be replaced as necessary. Gray & Becker Construction shall ensure that hearing protectors are worn. Employees shall be properly trained in the use, care & fitting of protectors.

Gray & Becker Construction shall evaluate hearing protection for the specific noise environments in which the protector will be used.

Accurate records of all employee exposure and audiometric measurements shall be maintained as required by the regulation. 30 Years past the employee's last work day.

Rigging and Material Handling Policy

REF:29-CFR-1926.250-.252

Gray and Becker prides itself on its Safety & Employee Health. Rigging and Material Handling is an everyday part of our business and we have adopted these rules to keep our job site safe.

Rigging equipment shall be inspected to ensure it is safe. Rigging equipment for material handling shall be inspected prior to use on each shift and as necessary during its use to ensure that it is safe.

Defective equipment shall not be used and removed from service immediately.

Rigging equipment shall not be loaded beyond its recommended safe working load. Identification markings, indicating rated capacity for the type(s) of hitches used, the angle upon which it is based, and the number of legs, if more than one, shall be permanently affixed to the rigging.

Rigging equipment not in use shall be removed from the immediate work area so as not to present a hazard to employees.

Tag lines shall be used unless their use creates an unsafe condition.

Hooks on overhaul ball assemblies, lower load blocks, or other attachment assemblies shall be of a type that can be closed and locked, eliminating the hook throat opening. Alternatively, an alloy anchor type shackle with a bolt, nut and retaining pin may be used.

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

General

All materials stored in tiers shall be stacked, racked, blocked, interlocked, or otherwise secured to prevent sliding, falling or collapse.

Maximum safe load limits of floors within buildings and structures, in pounds per square foot, shall be conspicuously posted in all storage areas, except for floor or slab on grade. Maximum safe load limits shall not be exceeded.

Aisles and passageways shall be kept clear to provide for the free and safe movement of material handling equipment and employees. Such areas shall be kept in good repair.

When a difference in road or working levels exist, means such as ramps or grading shall be used to ensure the safe movement of vehicles between the two levels.

Material storage.

Material stored inside buildings under construction shall not be placed within 6 feet of any hoist way or inside floor openings, nor within 10 feet of an exterior wall which does not extend above the top of the material stored.

Each employee required to work on stored material in silos, hoppers, tanks, and similar storage areas shall be equipped with personal fall arrest equipment meeting the requirements of 29-CFR-1926 Subpart M.

Non-compatible materials shall be segregated in storage.

Bagged materials shall be stacked by stepping back the layers and cross-keying the bags at least every 10 bags high.

Materials shall not be stored on scaffolds or runways in excess of supplies needed for immediate operations.

Brick stacks shall not be more than 7 feet in height. When a loose brick stack reaches a height of 4 feet, it shall be tapered back 2 inches in every foot of height above the 4-foot level.

When masonry blocks are stacked higher than 6 feet, the stack shall be tapered back one-half block per tier above the 6-foot level.

Lumber:

Used lumber shall have all nails withdrawn before stacking.

Lumber shall be stacked on level and solidly supported sills.

Lumber shall be so stacked as to be stable and self-supporting.

Lumber piles shall not exceed 20 feet in height provided that lumber to be handled manually shall not be stacked more than 16 feet high.

Structural steel, poles, pipe, bar stock, and other cylindrical materials, unless racked, shall be stacked and blocked so as to prevent spreading or tilting.

"Housekeeping." Storage areas shall be kept free from accumulation of materials that constitute hazards from tripping, fire, explosion, or pest harborage. Vegetation control will be exercised when necessary.

"Dock boards (bridge plates)."

Portable and powered dock boards shall be strong enough to carry the load imposed on them.

Portable dock boards shall be secured in position, either by being anchored or equipped with devices which will prevent their slipping.

Handholds, or other effective means, shall be provided on portable dock boards to permit safe handling.

Positive protection shall be provided to prevent railroad cars from being moved while dock boards or bridge plates are in position.

RIGGING GENERAL

1. Rigging equipment for material handling shall be inspected prior to use on each shift and as necessary during its use to ensure that it is safe. Defective rigging equipment shall be removed from service.
2. Employers must ensure that rigging equipment:
    a. Has permanently affixed and legible identification markings as prescribed by the manufacturer that indicate the recommended safe working load;
    b. Not be loaded in excess of its recommended safe working load as prescribed on the identification markings by the manufacturer; and
    c. Not be used without affixed, legible identification markings, required by paragraph (a)(2)(i) of this section.
    d. Rigging equipment, when not in use, shall be removed from the immediate work area so as not to present a hazard to employees.
    e. When Loads are lifted by crane or helicopter a tag line shall be affixed to at least one end and used to steady its launch and control its landing.

3. Special custom design grabs, hooks, clamps, or other lifting accessories, for such units as modular panels, prefabricated structures and similar materials, shall be marked to indicate the safe working loads and shall be proof-tested prior to use to 125 percent of their rated load.

4. **"SCOPE."** This section applies to slings used in conjunction with other material handling equipment for the movement of material by hoisting, in employments covered by this part. The types of slings covered are those made from alloy steel chain, wire rope, metal mesh, natural or synthetic fiber rope (conventional three strand construction), and synthetic web (nylon, polyester, and polypropylene).

5. **"INSPECTIONS."** Each day before being used, the sling and all fastenings and attachments shall be inspected for damage or defects by a competent person designated by the employer. Additional inspections shall be performed during sling use, where service conditions warrant. Damaged or defective slings shall be immediately removed from service.

6. **"ALLOY STEEL CHAINS".**
    a. Welded alloy steel chain slings shall have permanently affixed durable identification stating size, grade, rated capacity, and sling manufacturer.

    b. Hooks, rings, oblong links, pear-shaped links, welded or mechanical coupling links, or other attachments, when used with alloy steel chains, shall have a rated capacity at least equal to that of the chain.

    c. Job or shop hooks and links, or makeshift fasteners, formed from bolts, rods, etc., or other such attachments, shall not be used.

    d. Employers must not use alloy steel-chain slings with loads in excess of the rated capacities (i.e., working load limits) indicated on the sling by permanently affixed and legible identification markings prescribed by the manufacturer.

    e. Whenever wear at any point of any chain link exceeds that shown in Table H-2, the assembly shall be removed from service.

7. **"INSPECTIONS."**
    a. In addition to the inspection required by other paragraphs of this section, a thorough periodic inspection of alloy steel chain slings in use shall be made on a regular basis, to be determined on the basis of (A) frequency of sling use; (B) severity of service conditions; (C) nature of lifts being made; and (D) experience gained on the service life of slings used in similar circumstances. Such inspections shall in no event be at intervals greater than once every 12 months.

    b. The employer shall make and maintain a record of the most recent month in which each alloy steel chain sling was thoroughly inspected, and shall make such record available for examination.

8. **"WIRE ROPE"**
    a. Employers must not use improved plow-steel wire rope and wire-rope slings with loads in excess of the rated capacities (i.e., working load limits) indicated on the sling by permanently affixed and legible identification markings prescribed by the manufacturer.
    b. Protruding ends of strands in splices on slings and bridles shall be covered or blunted.
    c. Wire rope shall not be secured by knots, except on haul back lines on scrapers.

d. The following limitations shall apply to the use of wire rope:
    i. An eye splice made in any wire rope shall have not less than three full tucks. However, this requirement shall not operate to preclude the use of another form of splice or connection which can be shown to be as efficient and which is not otherwise prohibited.
    ii. Except for eye splices in the ends of wires and for endless rope slings, each wire rope used in hoisting or lowering, or in pulling loads, shall consist of one continuous piece without knot or splice.
    iii. Eyes in wire rope bridles, slings, or bull wires shall not be formed by wire rope clips or knots.
    iv. Wire rope shall not be used if, in any length of eight diameters, the total number of visible broken wires exceeds 10 percent of the total number of wires, or if the rope shows other signs of excessive wear, corrosion, or defect.
e. When U-bolt wire rope clips are used to form eyes, Table H-20 shall be used to determine the number and spacing of clips.
    i. When used for eye splices, the U-bolt shall be applied so that the "U" section is in contact with the dead end of the rope.
f. Slings shall not be shortened with knots or bolts or other makeshift devices.
g. Sling legs shall not be kinked.
h. Slings used in a basket hitch shall have the loads balanced to prevent slippage.
i. Slings shall be padded or protected from the sharp edges of their loads.
j. Hands or fingers shall not be placed between the sling and its load while the sling is being tightened around the load.
k. Shock loading is prohibited.
l. A sling shall not be pulled from under a load when the load is resting on the sling.

9. **"Minimum sling lengths."**
    a. Cable laid and 6 X 19 and 6 X 37 slings shall have minimum clear length of wire rope 10 times the component rope diameter between splices, sleeves or end fittings.
    b. Braided slings shall have a minimum clear length of wire rope 40 times the component rope diameter between the loops or end fittings.
    c. Cable laid grommets, strand laid grommets and endless slings shall have a minimum circumferential length of 96 times their body diameter.

10. **"Safe operating temperatures."** Fiber core wire rope slings of all grades shall be permanently removed from service if they are exposed to temperatures in excess of 200 deg. F (93.33 deg. C). When non-fiber core wire rope slings of any grade are used at temperatures above 400 deg. F (204.44 deg. C) or below minus 60 deg. F (15.55 deg. C), recommendations of the sling manufacturer regarding use at that temperature shall be followed.
    a. **"End attachments."**
        i. Welding of end attachments, except covers to thimbles, shall be performed prior to the assembly of the sling.
        ii. All welded end attachments shall not be used unless proof tested by the manufacturer or equivalent entity at twice their rated capacity prior to initial use. The employer shall retain a certificate of proof test, and make it available for examination.
    b. Wire rope slings shall have permanently affixed, legible identification markings stating size, rated capacity for the type(s) of hitch(es) used and the angle upon which it is based, and the number of legs if more than one.
    c. **Natural rope, and synthetic fiber.**
        i. Employers must not use natural- and synthetic-fiber rope slings with loads in excess of the rated capacities (i.e., working load limits) indicated on the sling by permanently affixed and legible identification markings prescribed by the manufacturer.
    d. All splices in rope slings provided by the employer shall be made in accordance with fiber rope manufacturers recommendations.
        i. In manila rope, eye splices shall contain at least three full tucks, and short splices shall contain at least six full tucks (three on each side of the center line of the splice).
        ii. In layed synthetic fiber rope, eye splices shall contain at least four full tucks, and short splices shall contain at least eight full tucks (four on each side of the center line of the splice).
        iii. Strand end tails shall not be trimmed short (flush with the surface of the rope) immediately adjacent to the full tucks. This precaution applies to both eye and short splices and all types of fiber rope. For fiber ropes under 1-inch diameter, the tails shall project at least six rope diameters beyond the last full tuck. For fiber ropes 1-inch diameter and larger, the tails shall project at least 6 inches beyond the last full tuck. In applications where the projecting tails may be objectionable, the tails shall be tapered and spliced into the body of the rope using at least two additional tucks (which will re-

quire a tail length of approximately six rope diameters beyond the last full tuck).

iv. For all eye splices, the eye shall be sufficiently large to provide an included angle of not greater than 60 deg. at the splice when the eye is placed over the load or support.

v. Knots shall not be used in lieu of splices.

e. **"SAFE OPERATING TEMPERATURES."** Natural and synthetic fiber rope slings, except for wet frozen slings, may be used in a temperature range from minus 20 deg. F (-28.88 deg. C) to plus 180 deg. F (82.2 deg. C) without decreasing the working load limit. For operations outside this temperature range and for wet frozen slings, the sling manufacturer's recommendations shall be followed.

f. **"SPLICING."** Spliced fiber rope slings shall not be used unless they have been spliced in accordance with the following minimum requirements and in accordance with any additional recommendations of the manufacturer:

i. In manila rope, eye splices shall consist of at least three full tucks, and short splices shall consist of at least six full tucks, three on each side of the splice center line.

ii. In synthetic fiber rope, eye splices shall consist of at least four full tucks, and short splices shall consist of at least eight full tucks, four on each side of the center line.

iii. Strand end tails shall not be trimmed flush with the surface of the rope immediately adjacent to the full tucks. This applies to all types of fiber rope and both eye and short splices. For fiber rope under 1 inch (2.54 cm) in diameter, the tail shall project at least six rope diameters beyond the last full tuck. For fiber rope 1 inch (2.54 cm) in diameter and larger, the tail shall project at least 6 inches (15.24 cm) beyond the last full tuck. Where a projecting tail interferes with the use of the sling, the tail shall be tapered and spliced into the body of the rope using at lest two additional tucks (which will require a tail length of approximately six rope diameters beyond the last full tuck).

iv. Fiber rope slings shall have a minimum clear length of rope between eye splices equal to 10 times the rope diameter.

v. Knots shall not be used in lieu of splices.

vi. Clamps not designed specifically for fiber ropes shall not be used for splicing.

vii. For all eye splices, the eye shall be of such size to provide an included angle of not greater than 60 degrees at the splice when the eye is placed over the load or support.

g. **"End attachments."** Fiber rope slings shall not be used if end attachments in contact with the rope have sharp edges or projections.
h. **"Removal from service."** Natural and synthetic fiber rope slings shall be immediately removed from service if any of the following conditions are present:
    i. Abnormal wear.
    ii. Powdered fiber between strands.
    iii. Broken or cut fibers.
    iv. Variations in the size or roundness of strands.
    v. Discoloration or rotting.
    vi. Distortion of hardware in the sling.
i. Employers must use natural- and synthetic-fiber rope slings that have permanently affixed and legible identification markings that state the rated capacity for the type(s) of hitch(es) sed and the angle upon which it is based, type of fiber material, and the number of legs if more than one.
j. Synthetic webbing (nylon, polyester, and polypropylene).
    i. The employer shall have each synthetic web sling marked or coded to show:
        1. Name or trademark of manufacturer.
        2. Rated capacities for the type of hitch.
        3. Type of material.
    ii. Rated capacity shall not be exceeded.
    iii. "**Webbing."** Synthetic webbing shall be of uniform thickness and width and selvage edges shall not be split from the webbing's width.
    iv. **"Fittings."** Fittings shall be:
        1. Of a minimum breaking strength equal to that of the sling; and
        2. Free of all sharp edges that could in any way damage the webbing.
k. **"Attachment of end fittings to webbing and formation of eyes."** Stitching shall be the only method used to attach end fittings to webbing and to form eyes. The thread shall be in an even pattern and contain a sufficient number of stitches to develop the full breaking strength of the sling.
l. **"Environmental conditions."** When synthetic web slings are used, the following precautions shall be taken:
    i. Nylon web slings shall not be used where fumes, vapors, sprays, mists or liquids of acids or phenolics are present.

ii. Polyester and polypropylene web slings shall not be used where fumes, vapors, sprays, mists or liquids of caustics are present.
iii. Web slings with aluminum fittings shall not be used where fumes, vapors, sprays, mists or liquids of caustics are present.

m. **"Safe operating temperatures."** Synthetic web slings of polyester and nylon shall not be used at temperatures in excess of 180 deg. F (82.2 deg. C). Polypropylene web slings shall not be used at temperatures in excess of 200 deg. F (93.33 deg. C).
n. **"Removal from service."** Synthetic web slings shall be immediately removed from service if any of the following conditions are present:
    i. Acid or caustic burns;
    ii. Melting or charring of any part of the sling surface;
    iii. Snags, punctures, tears or cuts;
    iv. Broken or worn stitches; or
    v. Distortion of fittings.
o. **Shackles and hooks.**
    i. Employers must not use shackles with loads in excess of the rated capacities (i.e., working load limits) indicated on the shackle by permanently affixed and legible identification markings prescribed by the manufacturer.
    ii. The manufacturer's recommendations shall be followed in determining the safe working loads of the various sizes and types of specific and identifiable hooks. All hooks for which no applicable manufacturer's recommendations are available shall be tested to twice the intended safe working load before they are initially put into use. The employer shall maintain a record of the dates and results of such tests.
    iii. Hooks shall be equipment with appropriately sized safety latch to prevent disengagement of the rigging.
    iv. Only Painted Shackle Pins will be used. (And we will not paint them)
        1. Pins are NOT interchangeable – Keep with its shackle.
        2. Do Not Substitute bolts or other pins for missing pins.

Material Handling and Disposal Methods

11. Whenever materials are dropped more than 20 feet to any point lying outside the exterior walls of the building, an enclosed chute of wood, or equivalent material, shall be used. For the purpose of this paragraph, an enclosed chute is a slide, closed in on all sides, through which material is moved from a high place to a lower one.

12. When debris is dropped through holes in the floor without the use of chutes, the area onto which the material is dropped shall be completely enclosed with barricades not less than 42 inches high and not less than 6 feet back from the projected edge of the opening above. Signs warning of the hazard of falling materials shall be posted at each level. Removal shall not be permitted in this lower area until debris handling ceases above.
13. All scrap lumber, waste material, and rubbish shall be removed from the immediate work area as the work progresses.
14. Disposal of waste material or debris by burning shall comply with local fire regulations.
15. All solvent waste, oily rags, and flammable liquids shall be kept in fire resistant covered containers until removed from worksite.
16. No One is to be allowed under a suspended load.

TABLE H - 1. -- RATED CAPACITY (WORKING LOAD LIMIT), FOR ALLOY STEEL CHAIN SLINGS (1)

Rated Capacity (Working Load Limit), Pounds
[Horizontal angles shown in parentheses](2)

Chain size, inches	Single branch sling-- 90 deg. loading	Double sling vertical angle (1) 30 deg. (60 deg.)	45 deg. (45 deg.)	60 deg. (30 deg.)
1/4.....	3,250	5,560	4,550	3,250
3/8.....	6,600	11,400	9,300	6,600
1/2.....	11,250	19,500	15,900	11,250
5/8.....	16,500	28,500	23,300	16,500
3/4.....	23,000	39,800	32,500	23,000
7/8.....	28,750	49,800	40,600	28,750
1.....	38,750	67,100	54,800	38,750
1 1/8...	44,500	77,000	63,000	44,500
1 1/4...	57,500	99,500	81,000	57,500
1 3/8...	67,000	116,000	94,000	67,000
1 1/2...	80,000	138,000	112,900	80,000
1 3/4...	100,000	172,000	140,000	100,000

TABLE H - 1. -- RATED CAPACITY (WORKING LOAD LIMIT), FOR ALLOY STEEL CHAIN SLINGS(1)

(CONTINUED)

Rated Capacity (Working Load Limit), Pounds
[Horizontal angles shown in parentheses](2)

Chain size, inches	Triple and quadruple sling vertical angle (1)		
	30 deg. (60 deg.)	45 deg. (45 deg.)	60 deg. (30 deg.)
1/4.....	8,400	6,800	4,900
3/8.....	17,000	14,000	9,900
1/2.....	29,000	24,000	17,000
5/8.....	43,000	35,000	24,500
3/4.....	59,500	48,500	34,500
7/8.....	74,500	61,000	43,000
1.....	101,000	82,000	58,000
1 1/8...	115,500	94,500	66,500
1 1/4...	149,000	121,500	86,000
1 3/8...	174,000	141,000	100,500
1 1/2...	207,000	169,000	119,500
1 3/4...	258,000	210,000	150,000

Footnote(1) Other grades of proof tested steel chain include Proof Coil, BBB Coil and Hi-Test Chain. These grades are not recommended for overhead lifting and therefore are not covered by this code

Footnote(1) Rating of multileg slings adjusted for angle of loading measured as the included angle between the inclined leg and the vertical.

Footnote(2) Rating of multileg slings adjusted for angle of loading between the inclined leg and the horizontal plane of the load.

TABLE H - 2. -- MAXIMUM ALLOWABLE WEAR AT ANY POINT OF LINK

Chain size, (inches)	Maximum allowable wear (inch)
1/4	3/64
3/8	5/64
1/2	7/64
5/8	9/64
3/4	5/32
7/8	11/64
1	3/16
1 1/8	7/32
1 1/4	1/4
1 3/8	9/32

1 1/2	5/16
1 3/4	11/32

TABLE H - 3. -- RATED CAPACITIES FOR SINGLE LEG SLINGS

6x19 and 6x37 Classification Improved Plow Steel Grade Rope
With Fiber Core (FC)

Rope		Rated capacities, tons (2,000 lb)					
		Vertical			Choker		
Dia (inches)	Constr	HT	MS	S	HT	MS	S
1/4	6x19	0.49	0.51	0.55	0.37	0.38	0.41
5/16	6x19	0.76	0.79	0.85	0.57	0.59	0.64
3/8	6x19	1.1	1.1	1.2	0.80	0.85	0.91
7/16	6x19	1.4	1.5	1.6	1.1	1.1	1.2
1/2	6x19	1.8	2.0	2.1	1.4	1.5	1.6
9/16	6x19	2.3	2.5	2.7	1.7	1.9	2.0
5/8	6x19	2.8	3.1	3.3	2.1	2.3	2.5
3/4	6x19	3.9	4.4	4.8	2.9	3.3	3.6
7/8	6x19	5.1	5.9	6.4	3.9	4.5	4.8
1	6x19	6.7	7.7	8.4	5.0	5.8	6.3
1 1/8	6x19	8.4	9.5	10.0	6.3	7.1	7.9
1 1/4	6x37	9.8	11.0	12.0	7.4	8.3	9.2
1 3/8	6x37	12.0	13.0	15.0	8.9	10.0	11.0
1 1/2	6x37	14.0	16.0	17.0	10.0	12.0	13.0
1 5/8	6x37	16.0	18.0	21.0	12.0	14.0	15.0
1 3/4	6x37	19.0	21.0	24.0	14.0	16.0	18.0
2	6x37	25.0	28.0	31.0	18.0	21.0	23.0

TABLE H - 3. -- RATED CAPACITIES FOR SINGLE LEG SLINGS

(CONTINUED)

6x19 and 6x37 Classification Improved Plow Steel Grade Rope
With Fiber Core (FC)

Rope		Rated capacities, tons (2,000 lb)		
		Vertical Basket(1)		
Dia (inches)	Constr	HT	MS	S

1/4	6x19	0.99	1.0	1.1
5/16	6x19	1.5	1.6	1.7
3/8	6x19	2.1	2.2	2.4
7/16	6x19	2.9	3.0	3.3
1/2	6x19	3.7	3.9	4.3
9/16	6x19	4.6	5.0	5.4
5/8	6x19	5.6	6.2	6.7
3/4	6x19	7.8	8.8	9.5
7/8	6x19	10.0	12.0	13.0
1	6x19	13.0	15.0	17.0
1 1/8	6x19	17.0	19.0	21.0
1 1/4	6x37	20.0	22.0	25.0
1 3/8	6x37	24.0	27.0	30.0
1 1/2	6x37	28.0	32.0	35.0
1 5/8	6x37	33.0	27.0	41.0
1 3/4	6x37	38.0	43.0	48.0
2	6x37	49.0	55.0	62.0

Footnote(1) These values only apply when the D/d ratio for HT slings is 10 or greater, and for MS and S Slings is 20 or greater where:
D=Diameter of curvature around which the body of the sling is bent; d=Diameter of rope.
HT = Hand Tucked Splice and Hidden Tuck Splice.
For hidden tuck splice (IWRC) use values in HT columns.
MS = Mechanical Splice.
S = Swaged or Zinc Poured Socket.

TABLE H - 4. -- RATED CAPACITIES FOR SINGLE LEG SLINGS

6x19 and 6x37 Classification Improved Plow Steel Grade Rope With Independent Wire Rope Core (IWRC)

Rope		Rated capacities, tons (2,000 lb)					
		Vertical			Choker		
Dia (inches)	Constr	HT	MS	S	HT	MS	S
1/4	6x19	0.53	0.56	0.59	0.40	0.42	0.44
5/16	6x19	0.81	0.87	0.92	0.61	0.65	0.69
3/8	6x19	1.1	1.2	1.3	0.86	0.93	0.98
7/16	6x19	1.5	1.7	1.8	1.2	1.3	1.3
1/2	6x19	2.0	2.2	2.3	1.5	1.6	1.7
9/16	6x19	2.5	2.7	2.9	1.8	2.1	2.2
5/8	6x19	3.0	3.4	3.6	2.2	2.5	2.7
3/4	6x19	4.2	4.9	5.1	3.1	3.6	3.8
7/8	6x19	5.5	6.6	6.9	4.1	4.9	5.2
1	6x19	7.2	8.5	9.0	5.4	6.4	6.7
1 1/8	6x19	9.0	10.0	11.0	6.8	7.8	8.5
1 1/4	6x37	10.0	12.0	13.0	7.9	9.2	9.9

1 3/8	6x37	13.0	15.0	16.0	9.6	11.0	12.0
1 1/2	6x37	15.0	17.0	19.0	11.0	13.0	14.0
1 5/8	6x37	18.0	20.0	22.0	13.0	15.0	17.0
1 3/4	6x37	20.0	24.0	26.0	15.0	18.0	19.0
2	6x37	26.0	30.0	33.0	20.0	23.0	25.0

TABLE H - 4. -- RATED CAPACITIES FOR SINGLE LEG SLINGS

(CONTINUED)

6x19 and 6x37 Classification Improved Plow Steel Grade Rope
With Independent Wire Rope Core (IWRC)

Rope		Rated capacities, tons (2,000 lb)		
		Vertical Basket(1)		
Dia (inches)	Constr	HT	MS	S
1/4	6x19	1.0	1.1	1.2
5/16	6x19	1.6	1.7	1.8
3/8	6x19	2.3	2.5	2.6
7/16	6x19	3.1	3.4	3.5
1/2	6x19	3.9	4.4	4.6
9/16	6x19	4.9	5.5	5.8
5/8	6x19	6.0	6.8	7.2
3/4	6x19	8.4	9.7	10.0
7/8	6x19	11.0	13.0	14.0
1	6x19	14.0	17.0	18.0
1 1/8	6x19	18.0	21.0	23.0
1 1/4	6x37	21.0	24.0	26.0
1 3/8	6x37	25.0	29.0	32.0
1 1/2	6x37	30.0	35.0	38.0
1 5/8	6x37	35.0	41.0	44.0
1 3/4	6x37	41.0	47.0	51.0
2	6x37	53.0	61.0	66.0

Footnote(1) These values only apply when the D/d ratio for HT slings is 10 or greater, and for MS and S slings is 20 or greater where:
D=Diameter of curvature around which the body of the sling is bent; d=Diameter of rope.
HT = Hand Tucked Splice. For hidden tuck splice (IWRC) use Table
H-3 values in HT column.
MS = Mechanical Splice.
S = Swaged or Zinc Poured Socket.

TABLE H - 5. -- RATED CAPACITIES FOR SINGLE LEG SLINGS

Cable Laid Rope -- Mechanical Splice Only

7x7x7 & 7X7X19 Constructions Galvanized Aircraft Grade Rope
7x6x19 IWRC Construction Improved Plow Steel Grade Rope

Rope		Rated capacities, tons (2,000 lb.)		
Dia (inches)	Constr	Vertical	Choker	Vertical basket(1)
1/4	7x7x7.....	0.50	0.38	1.0
3/8	7x7x7.....	1.1	0.81	2.2
1/2	7x7x7.....	1.8	1.4	3.7
5/8	7x7x7.....	2.8	2.1	5.5
3/4	7x7x7.....	3.8	2.9	7.6
5/8	7x7x19.....	2.9	2.2	5.8
3/4	7x7x19.....	4.1	3.0	8.1
7/8	7x7x19.....	5.4	4.0	11.0
1	7x7x19.....	6.9	5.1	14.0
1 1/8	7x7x19.....	8.2	6.2	16.0
1 1/4	7x7x19.....	9.9	7.4	20.0
3/4	(2)7x6x19	3.8	2.8	7.6
7/8	(2)7x6x19	5.0	3.8	10.0
1	(2)7x6x19	6.4	4.8	13.0
1 1/8	(2)7x6x19	7.7	5.8	15.0
1 1/4	(2)7x6x19	9.2	6.9	18.0
1 5/16	(2)7x6x19	10.0	7.5	20.0
1 3/8	(2)7x6x19	11.0	8.2	22.0
1 1/2	(2)7x6x19	13.0	9.6	26.0

Footnote(1) These values only apply when the D/d ratio is 10 or greater where: D=Diameter of curvature around which the body of the sling is bent; d=Diameter of rope.
Footnote(2) IWRC.

TABLE H - 6. -- RATED CAPACITIES FOR SINGLE LEG SLINGS

8-Part and 6-Part Braided Rope

6x7 and 6x19 Construction Improved Plow Steel Grade Rope
7x7 Construction Galvanized Aircraft Grade Rope

Component ropes		Rated capacities, tons (2,000 lb)					
Diameter (inches)	Constr	Vertical		Choker		Basket vertical to 30 deg.(1)	
		8-Part	6-Part	8-Part	6-Part	8-Part	6-Part

3/32.....	6x7	0.42	0.32	0.32	0.24	0.74	0.55
1/8.....	6x7	0.76	0.57	0.57	0.42	1.3	0.98
3/16.....	6x7	1.7	1.3	1.3	0.94	2.9	2.2
3/32.....	7x7	0.51	0.39	0.38	0.29	0.89	0.67
1/8.....	7x7	0.95	0.71	0.71	0.53	1.6	1.2
3/16.....	7x7	2.1	1.5	1.5	1.2	3.6	2.7
3/16.....	6x19	1.7	1.3	1.3	0.98	3.0	2.2
1/4.....	6x19	3.1	2.3	2.3	1.7	5.3	4.0
5/16.....	6x19	4.8	3.6	3.6	2.7	8.3	6.2
3/8.....	6x19	6.8	5.1	5.1	3.8	12.0	8.9
7/16.....	6x19	9.3	6.9	6.9	5.2	16.0	12.0
1/2.....	6x19	12.0	9.0	9.0	6.7	21.0	15.0
9/16.....	6x19	15.0	11.0	11.0	8.5	26.0	20.0
5/8.....	6x19	19.0	14.0	14.0	10.0	32.0	24.0
3/4.....	6x19	27.0	20.0	20.0	15.0	46.0	35.0
7/8.....	6x19	36.0	27.0	27.0	20.0	62.0	47.0
1.....	6x19	47.0	35.0	35.0	26.0	81.0	61.0

Footnote(1) These values only apply when the D/d ratio is 20 or greater where: D=Diameter of curvature around which the body of the sling is bent; d=Diameter of component rope.

TABLE H - 7. -- RATED CAPACITIES FOR 2-LEG AND 3-LEG BRIDLE SLINGS

6x19 and 6x37 Classification Improved Plow Steel Grade Rope With Fiber Core (FC)

Rope		Rated capacities, tons (2,000 lb)					
		2-Leg bridle slings					
Dia [inches]	Constr	30 deg(1) (60 deg)(2)		45 deg. angle		60 deg(1) (30 deg)(2)	
		HT	MS	HT	MS	HT	MS
1/4	6x19	0.85	0.88	0.70	0.72	0.49	0.51
5/16	6x19	1.3	1.4	1.1	1.1	0.76	0.79
3/8	6x19	1.8	1.9	1.5	1.6	1.1	1.1
7/16	6x19	2.5	2.6	2.0	2.2	1.4	1.5
1/2	6x19	3.2	3.4	2.6	2.8	1.8	2.0
9/16	6x19	4.0	4.3	3.2	3.5	2.3	2.5
5/8	6x19	4.8	5.3	4.0	4.4	2.8	3.1
3/4	6x19	6.8	7.6	5.5	6.2	3.9	4.4
7/8	6x19	8.9	10.0	7.3	8.4	5.1	5.9
1	6x19	11.0	13.0	9.4	11.0	6.7	7.7
1 1/8	6x19	14.0	16.0	12.0	13.0	8.4	9.5
1 1/4	6x37	17.0	19.0	14.0	16.0	9.8	11.0

1 3/8	6x37	20.0	23.0	17.0	19.0	12.0	13.0
1 1/2	6x37	24.0	27.0	20.0	22.0	14.0	16.0
1 5/8	6x37	28.0	32.0	23.0	26.0	16.0	18.0
1 3/4	6x37	33.0	37.0	27.0	30.0	19.0	21.0
2	6x37	43.0	48.0	35.0	39.0	25.0	28.0

TABLE H - 7. -- RATED CAPACITIES FOR 2-LEG AND 3-LEG BRIDLE SLINGS

[Continued]

6x19 and 6x37 Classification Improved Plow Steel Grade Rope With Fiber Core (FC)

Rope		Rated capacities, tons (2,000 lb)					
		3-Leg bridle slings					
Dia [inches]	Constr	30 deg(1) (60 deg)(2)		45 deg. angle		60 deg(1) (30 deg)(2)	
		HT	MS	HT	MS	HT	MS
1/4	6x19	1.3	1.3	1.0	1.1	0.74	0.76
5/16	6x19	2.0	2.0	1.6	1.7	1.1	1.2
3/8	6x19	2.8	2.9	2.3	2.4	1.6	1.7
7/16	6x19	3.7	4.0	3.0	3.2	2.1	2.3
1/2	6x19	4.8	5.1	3.9	4.2	2.8	3.0
9/16	6x19	6.0	6.5	4.9	5.3	3.4	3.7
5/8	6x19	7.3	8.0	5.9	6.5	4.2	4.6
3/4	6x19	10.0	11.0	8.3	9.3	5.8	6.6
7/8	6x19	13.0	15.0	11.0	13.0	7.7	8.9
1	6x19	17.0	20.0	14.0	16.0	10.0	11.0
1 1/8	6x19	22.0	24.0	18.0	20.0	13.0	14.0
1 1/4	6x37	25.0	29.0	21.0	23.0	15.0	17.0
1 3/8	6x37	31.0	35.0	25.0	28.0	18.0	20.0
1 1/2	6x37	36.0	41.0	30.0	33.0	21.0	24.0
1 5/8	6x37	43.0	48.0	35.0	39.0	25.0	28.0
1 3/4	6x37	49.0	56.0	40.0	45.0	28.0	32.0
2	6x37	64.0	72.0	52.0	59.0	37.0	41.0

HT = Hand Tucked Splice.
MS = Mechanical Splice.
Footnote(1) Vertical angles.
Footnote(2) Horizontal angles.

TABLE H - 8. -- RATED CAPACITIES FOR 2-LEG AND 3-LEG BRIDLE SLINGS

6x19 and 6x37 Classification Improved Plow Steel Grade Rope With Independent Wire Rope Core (IWRC)

Rope		Rated capacities, tons (2,000 lb)					
		2-Leg bridle slings					
Dia (inches)	Constr	30 deg.(1) (60 deg.)(2)		45 deg. angle		60 deg.(1) (30 deg.)(2)	
		HT	MS	HT	MS	HT	MS
1/4	6x19	0.92	0.97	0.75	0.79	0.53	0.56
5/16	6x19	1.4	1.5	1.1	1.2	0.81	0.87
3/8	6x19	2.0	2.1	1.6	1.8	1.1	1.2
7/16	6x19	2.7	2.9	2.2	2.4	1.5	1.7
1/2	6x19	3.4	3.8	2.8	3.1	2.0	2.2
9/16	6x19	4.3	4.8	3.5	3.9	2.5	2.7
5/8	6x19	5.2	5.9	4.2	4.8	3.0	3.4
3/4	6x19	7.3	8.4	5.9	6.9	4.2	4.9
7/8	6x19	9.6	11.0	7.8	9.3	5.5	6.6
1	6x19	12.0	15.0	10.0	12.0	7.2	8.5
1 1/8	6x19	16.0	18.0	13.0	15.0	9.0	10.0
1 1/4	6x37	18.0	21.0	15.0	17.0	10.0	12.0
1 3/8	6x37	22.0	25.0	18.0	21.0	13.0	15.0
1 1/2	6x37	26.0	30.0	21.0	25.0	15.0	17.0
1 5/8	6x37	31.0	35.0	25.0	29.0	18.0	20.0
1 3/4	6x37	35.0	41.0	29.0	33.0	20.0	24.0
2	6x37	46.0	53.0	37.0	43.0	26.0	30.0

TABLE H - 8. -- RATED CAPACITIES FOR 2-LEG AND 3-LEG BRIDLE SLINGS

[Continued]

6x19 and 6x37 Classification Improved Plow Steel Grade Rope With Independent Wire Rope Core (IWRC)

Rope		Rated capacities, tons (2,000 lb)		
		3-Leg bridle slings		
Dia (inches)	Constr	30 deg.(1) (60 deg.)(2)	45 deg. angle	60 deg.(1) (30 deg.)(2)

		HT	MS	HT	MS	HT	MS
1/4	6x19	1.4	1.4	1.1	1.2	0.79	0.84
5/16	6x19	2.1	2.3	1.7	1.8	1.2	1.3
3/8	6x19	3.0	3.2	2.4	2.6	1.7	1.9
7/16	6x19	4.0	4.4	3.3	3.6	2.3	2.5
1/2	6x19	5.1	5.7	4.2	4.6	3.0	3.3
9/16	6x19	6.4	7.1	5.2	5.8	3.7	4.1
5/8	6x19	7.8	8.8	6.4	7.2	4.5	5.1
3/4	6x19	11.0	13.0	8.9	10.0	6.3	7.3
7/8	6x19	14.0	17.0	12.0	14.0	8.3	9.9
1	6x19	19.0	22.0	15.0	18.0	11.0	13.0
1 1/8	6x19	23.0	27.0	19.0	22.0	13.0	16.0
1 1/4	6x37	27.0	32.0	22.0	26.0	16.0	18.0
1 3/8	6x37	33.0	38.0	27.0	31.0	19.0	22.0
1 1/2	6x37	39.0	45.0	32.0	37.0	23.0	26.0
1 5/8	6x37	46.0	53.0	38.0	43.0	27.0	31.0
1 3/4	6x37	53.0	61.0	43.0	50.0	31.0	35.0
2	6x37	68.0	79.0	56.0	65.0	40.0	46.0

HT = Hand Tucked Splice.
MS = Mechanical Splice.
Footnote(1) Vertical angles.
Footnote(2) Horizontal angles.

TABLE H - 9. -- RATED CAPACITIES FOR 2-LEG AND 3-LEG BRIDLE SLINGS

Cable Laid Rope - Mechanical Splice Only
7x7x7 and 7x7x19 Construction Galvanized Aircraft Grade Rope
7x6x19 IWRC Construction Improved Plow Steel Grade Rope

Rope		Rated capacities, tons (2,000 lb)		
		2-Leg bridle slings		
Dia (inches)	Constr	30 deg.(1) (60 deg.)(2)	45 deg. angle	60 deg.(1) (30 deg.)(2)
1/4	7x7x7	0.87	0.71	0.50
3/8	7x7x7	1.9	1.5	1.1
1/2	7x7x7	3.2	2.6	1.8
5/8	7x7x7	4.8	3.9	2.8
3/4	7x7x7	6.6	5.4	3.8
5/8	7x7x19	5.0	4.1	2.9
3/4	7x7x19	7.0	5.7	4.1
7/8	7x7x19	9.3	7.6	5.4
1	7x7x19	12.0	9.7	6.9
1 1/8	7x7x19	14.0	12.0	8.2
1 1/4	7x7x19	17.0	14.0	9.9
3/4	7x6x19 IWRC.	6.6	5.4	3.8

7/8.....	7x6x19 IWRC.	8.7	7.1	5.0
1.....	7x6x19 IWRC.	11.0	9.0	6.4
1 1/8....	7x6x19 IWRC.	13.0	11.0	7.7
1 1/4....	7x6x19 IWRC.	16.0	13.0	9.2
1 5/16...	7x6x19 IWRC.	17.0	14.0	10.0
1 3/8....	7x6x19 IWRC.	19.0	15.0	11.0
1 1/2....	7x6x19 IWRC.	22.0	18.0	13.0

TABLE H - 9. -- RATED CAPACITIES FOR 2-LEG AND 3-LEG BRIDLE SLINGS

[Continued]

Cable Laid Rope - Mechanical Splice Only
7x7x7 and 7x7x19 Construction Galvanized Aircraft Grade Rope
7x6x19 IWRC Construction Improved Plow Steel Grade Rope

Rope		Rated capacities, tons (2,000 lb)		
		3-Leg bridle slings		
Dia (inches)	Constr	30 deg.(1) (60 deg.)(2)	45 deg. angle	60 deg.(1) (30 deg.)(2)
1/4.....	7x7x7	1.3	1.1	0.75
3/8.....	7x7x7.....	2.8	2.3	1.6
1/2.....	7x7x7.....	4.8	3.9	2.8
5/8.....	7x7x7.....	7.2	5.9	4.2
3/4.....	7x7x7.....	9.9	8.1	5.7
5/8.....	7x7x19.....	7.5	6.1	4.3
3/4.....	7x7x19.....	10.0	8.6	6.1
7/8.....	7x7x19.....	14.0	11.0	8.1
1.....	7x7x19.....	18.0	14.0	10.0
1 1/8....	7x7x19.....	21.0	17.0	12.0
1 1/4....	7x7x19.....	26.0	21.0	15.0
3/4.....	7x6x19 IWRC.	9.9	8.0	5.7
7/8.....	7x6x19 IWRC.	13.0	11.0	7.5
1.....	7x6x19 IWRC.	17.0	13.0	9.6
1 1/8....	7x6x19 IWRC.	20.0	16.0	11.0
1 1/4....	7x6x19 IWRC.	24.0	20.0	14.0
1 5/16...	7x6x19 IWRC.	26.0	21.0	15.0
1 3/8....	7x6x19 IWRC.	28.0	23.0	16.0
1 1/2....	7x6x19 IWRC.	33.0	27.0	19.0

Footnote(1) Vertical angles.
Footnote(2) Horizontal angles.

TABLE H- 10. -- RATED CAPACITIES FOR 2-LEG AND 3-LEG BRIDLE SLINGS

8-Part and 6-Part Braided Rope
6x7 and 6x19 Construction Improved Plow Steel Grade Rope
7x7 Construction Galvanized Aircraft Grade Rope

Rope		Rated capacities, tons (2,000 lb)					
		2-Leg bridle sling					
Dia (in.)	Constr	30 deg(1) (60 deg)(2)		45 deg angle		60 deg (1) (30 deg)(2)	
		8-Part	6-Part	8-Part	6-Part	8-Part	6-Part
3/32	6x7	0.74	0.55	0.60	0.45	0.42	0.32
1/8	6x7	1.3	0.98	1.1	0.80	0.76	0.57
3/16	6x7	2.9	2.2	2.4	1.8	1.7	1.3
3/32	7x7	0.89	0.67	0.72	0.55	0.51	0.39
1/8	7x7	1.6	1.2	1.3	1.0	0.95	0.71
3/16	7x7	3.6	2.7	2.9	2.2	2.1	1.5
3/16	6x19	3.0	2.2	2.4	1.8	1.7	1.3
1/4	6x19	5.3	4.0	4.3	3.2	3.1	2.3
5/16	6x19	8.3	6.2	6.7	5.0	4.8	3.6
3/8	6x19	12.0	8.9	9.7	7.2	6.8	5.1
7/16	6x19	16.0	12.0	13.0	9.8	9.3	6.9
1/2	6x19	21.0	15.0	17.0	13.0	12.0	9.0
9/16	6x19	26.0	20.0	21.0	16.0	15.0	11.0
5/8	6x19	32.0	24.0	26.0	20.0	19.0	14.0
3/4	6x19	46.0	35.0	38.0	28.0	27.0	20.0
7/8	6x19	62.0	47.0	51.0	38.0	36.0	27.0
1	6x19	81.0	61.0	66.0	50.0	47.0	35.0

TABLE H- 10. -- RATED CAPACITIES FOR 2-LEG AND 3-LEG BRIDLE SLINGS

[Continued]

8-Part and 6-Part Braided Rope
6x7 and 6x19 Construction Improved Plow Steel Grade Rope
7x7 Construction Galvanized Aircraft Grade Rope

Rope		Rated capacities, tons (2,000 lb)
		3-Leg bridle sling

Dia (in.)	Constr	30 deg(1) (60 deg)(2)		45 deg angle		60 deg(1) (30 deg)(2)	
		8-Part	6-Part	8-Part	6-Part	8-Part	6-Part
3/32	6x7	1.1	0.83	0.90	0.68	0.64	0.48
1/8	6x7	2.0	1.5	1.6	1.2	1.1	0.85
3/16	6x7	4.4	3.3	3.6	2.7	2.5	1.9
3/32	7x7	1.3	1.0	1.1	0.82	0.77	0.58
1/8	7x7	2.5	1.8	2.0	1.5	1.4	1.1
3/16	7x7	5.4	4.0	4.4	3.3	3.1	2.3
3/16	6x19	4.5	3.4	3.7	2.8	2.6	1.9
1/4	6x19	8.0	6.0	6.5	4.9	4.6	3.4
5/16	6x19	12.0	9.3	10.0	7.6	7.1	5.4
3/8	6x19	18.0	13.0	14.0	11.0	10.0	7.7
7/16	6x19	24.0	18.0	20.0	15.0	14.0	10.0
1/2	6x19	31.0	23.0	25.0	19.0	18.0	13.0
9/16	6x19	39.0	29.0	32.0	24.0	23.0	17.0
5/8	6x19	48.0	36.0	40.0	30.0	28.0	21.0
3/4	6x19	69.0	52.0	56.0	42.0	40.0	30.0
7/8	6x19	94.0	70.0	76.0	57.0	54.0	40.0
1	6x19	22.0	91.0	99.0	74.0	70.0	53.0

Footnote(1) Vertical angles.
Footnote(2) Horizontal angles.

TABLE H - 11. -- RATED CAPACITIES FOR STRAND LAID GROMMET -- HAND TUCKED

Improved Plow Steel Grade Rope

Rope body		Rated capacities, tons (2,000 lb)		
Dia (inches)	Constr	Vertical	Choker	Vertical basket(1)
1/4	7x19	0.85	0.64	1.7
5/16	7x19	1.3	1.0	2.6
3/8	7x19	1.9	1.4	3.8
7/16	7x19	2.6	1.9	5.2
1/2	7x19	3.3	2.5	6.7
9/16	7x19	4.2	3.1	8.4
5/8	7x19	5.2	3.9	10.0
3/4	7x19	7.4	5.6	15.0
7/8	7x19	10.0	7.5	20.0
1	7x19	13.0	9.7	26.0
1 1/8	7x19	16.0	12.0	32.0
1 1/4	7x37	18.0	14.0	37.0
1 3/8	7x37	22.0	16.0	44.0
1 1/2	7x37	26.0	19.0	52.0

Footnote(1) These values only apply when the D/d ratio is 5 or greater where: D=Diameter of curvature around which rope is bent. d=Diameter of rope body.

TABLE H - 12. -- RATED CAPACITIES FOR CABLE LAID GROMMET -- HAND TUCKED

7x6x7 and 7x6x19 Constructions Improved Plow Steel Grade Rope
7x7x7 Construction Galvanized Aircraft Grade Rope

Cable body		Rated capacities, tons (2,000 lb)		
Dia (inches)	Constr	Vertical	Choker	Vertical basket(1)
3/8	7x6x7	1.3	0.95	2.5
9/16	7x6x7	2.8	2.1	5.6
5/8	7x6x7	3.8	2.8	7.6
3/8	7x7x7	1.6	1.2	3.2
9/16	7x7x7	3.5	2.6	6.9
5/8	7x7x7	4.5	3.4	9.0
5/8	7x6x19	3.9	3.0	7.9
3/4	7x6x19	5.1	3.8	10.0
15/16	7x6x19	7.9	5.9	16.0
1 1/8	7x6x19	11.0	8.4	22.0
1 5/16	7x6x19	15.0	11.0	30.0
1 1/2	7x6x19	19.0	14.0	39.0
1 11/16	7x6x19	24.0	18.0	49.0
1 7/8	7x6x19	30.0	22.0	60.0
2 1/4	7x6x19	42.0	31.0	84.0
2 5/8	7x6x19	56.0	42.0	112.0

Footnote(1) These values only apply when the D/d ratio is 5 or greater where: D=Diameter of curvature around which cable body is bent., d=Diameter of cable body.

TABLE H - 13. -- RATED CAPACITIES FOR STRAND LAID ENDLESS SLINGS -- MECHANICAL JOINT

Improved Plow Steel Grade Rope

Rope body		Rated capacities, tons (2,000 lb)		
Dia (inches)	Constr	Vertical	Choker	Vertical basket(1)
1/4	(2)6x19	0.92	0.69	1.8

3/8	(2)6x19	2.0	1.5	4.1
1/2	(2)6x19	3.6	2.7	7.2
5/8	(2)6x19	5.6	4.2	11.0
3/4	(2)6x19	8.0	6.0	16.0
7/8	(2)6x19	11.0	8.1	21.0
1	(2)6x19	14.0	10.0	28.0
1 1/8	(2)6x19	18.0	13.0	35.0
1 1/4	(2)6x37	21.0	15.0	41.0
1 3/8	(2)6x37	25.0	19.0	50.0
1 1/2	(2)6x37	29.0	22.0	59.0

Footnote(1) These values only apply when the D/d ratio is 5 or greater where: D=Diameter of curvature around which rope is bent. d=Diameter of rope body.
Footnote(2) IWRC.

TABLE H - 14. -- RATED CAPACITIES FOR CABLE LAID ENDLESS SLINGS -- MECHANICAL JOINT

7x7x7 and 7x7x19 Constructions Galvanized Aircraft Grade Rope
7x6x19 Construction Improved Plow Steel Grade Rope

Cable body		Rated capacities, tons (2,000 lb)		
Dia (inches)	Constr	Vertical	Choker	Vertical basket(1)
1/4	7x7x7	0.83	0.62	1.6
3/8	7x7x7	1.8	1.3	3.5
1/2	7x7x7	3.0	2.3	6.1
5/8	7x7x7	4.5	3.4	9.1
3/4	7x7x7	6.3	4.7	12.0
5/8	7x7x19	4.7	3.5	9.5
3/4	7x7x19	6.7	5.0	13.0
7/8	7x7x19	8.9	6.6	18.0
1	7x7x19	11.0	8.5	22.0
1 1/8	7x7x19	14.0	10.0	28.0
1 1/4	7x7x19	17.0	12.0	33.0
3/4	(2)7x6x19	6.2	4.7	12.0
7/8	(2)7x6x19	8.3	6.2	16.0
1	(2)7x6x19	10.0	7.9	21.0
1 1/8	(2)7x6x19	13.0	9.7	26.0
1 1/4	(2)7x6x19	16.0	12.0	31.0
1 3/8	(2)7x6x19	18.0	14.0	37.0
1 1/2	(2)7x6x19	22.0	16.0	43.0

Footnote(1) These values only apply when the D/d value is 5 or greater where: D=Diameter of curvature around which cable body is bent. d=Diameter of cable body.
Footnote(2) IWRC.

TABLE H -15. -- MANILA ROPE SLINGS

[Angle of rope to vertical shown in parentheses]

Rope dia. nominal in inches	Nominal weight per 100 ft in pounds	Minimum breaking strength in pounds	Rated capacity in pounds (safety factor=5)				
			Eye and eye sling				
					Basket hitch; Angel of rope to horizontal		
			Vertical hitch	Choker hitch	90 deg (0 deg)	60 deg (30 deg)	45 deg (45 deg)	30 deg (60 deg)
1/2	7.5	2,650	550	250	1,100	900	750	550
9/16	10.4	3,450	700	350	1,400	1,200	1,000	700
5/8	13.3	4,400	900	450	1,800	1,500	1,200	900
3/4	16.7	5,400	1,100	550	2,200	1,900	1,500	1,100
13/16	19.5	6,500	1,300	650	2,600	2,300	1,800	1,300
7/8	22.5	7,700	1,500	750	3,100	2,700	2,200	1,500
1	27.0	9,000	1,800	900	3,600	3,100	2,600	1,800
1 1/16	31.3	10,500	2,100	1,100	4,200	3,600	3,000	2,100
1 1/8	36.0	12,000	2,400	1,200	4,800	4,200	3,400	2,400
1 1/4	41.7	13,500	2,700	1,400	5,400	4,700	3,800	2,700
1 5/16	47.9	15,000	3,000	1,500	6,000	5,200	4,300	3,000
1 1/2	59.9	18,500	3,700	1,850	7,400	6,400	5,200	3,700
1 5/8	74.6	22,500	4,500	2,300	9,000	7,800	6,400	4,500
1 3/4	89.3	26,500	5,300	2,700	10,500	9,260	7,500	5,300
2	107.5	31,000	6,200	3,100	12,500	10,500	8,800	6,200
2 1/3	125.0	36,000	7,200	3,600	14,500	12,500	10,000	7,200
2 1/4	146.0	41,000	8,200	4,100	16,500	14,000	11,500	8,200
2 1/2	166.7	46,500	9,300	4,700	18,500	16,000	13,000	9,300
2 5/8	190.8	52,000	10,500	5,200	21,000	18,000	14,500	10,500

TABLE H - 15. -- MANILA ROPE SLINGS

[Continued]

[Angle of rope to vertical shown in parentheses]

Rope dia. nominal	Nominal weight per	Minimum breaking	Rated capacity in pounds (safety factor=5)		
			Endless sling		
					Basket hitch; Angel of rope to horizontal
			Vertical	Choker	

nal in inches	100 ft in pounds	stren-gth in pounds	cal hitch	hitch	90 deg (0 deg)	60 deg (30 deg)	45 deg (45 deg)	30 deg (60 deg)
1/2	7.5	2,650	950	500	1,900	1,700	1,400	950
9/16	10.4	3,450	1,200	600	2,500	2,200	1,800	1,200
5/8	13.3	4,400	1,600	800	3,200	2,700	2,200	1,600
3/4	16.7	5,400	2,000	950	3,900	3,400	2,800	2,000
13/16	19.5	6,500	2,300	1,200	4,700	4,100	3,300	2,300
7/8	22.5	7,700	2,800	1,400	5,600	4,800	3,900	2,800
1	27.0	9,000	3,200	1,600	6,500	5,600	4,600	3,200
1 1/16	31.3	10,500	3,800	1,900	7,600	6,600	5,400	3,800
1 1/8	36.0	12,000	4,300	2,200	8,600	7,500	6,100	4,300
1 1/4	41.7	13,500	4,900	2,400	9,700	8,400	6,900	4,900
1 5/16	47.9	15,000	5,400	2,700	11,000	9,400	7,700	5,400
1 1/2	59.9	18,500	6,700	3,300	13,500	11,500	9,400	6,700
1 5/8	74.6	22,500	8,100	4,100	16,000	14,000	11,500	8,000
1 3/4	89.3	26,500	9,500	4,800	19,000	16,500	13,500	9,590
2	107.5	31,000	11,000	5,600	22,500	19,500	16,000	11,000
2 1/3	125.0	36,000	13,000	6,500	26,000	22,500	18,500	13,000
2 1/4	146.0	41,000	15,000	7,400	29,500	25,500	21,000	15,000
2 1/2	166.7	46,500	16,500	8,400	33,500	29,000	23,500	16,500
2 5/8	190.8	52,000	18,500	9,500	37,500	32,500	26,500	18,500

TABLE H - 16. -- NYLON ROPE SLINGS

[Angle of rope to vertical shown in parentheses]

Rope dia. nomi-nal in inches	Nomi-nal weight per 100 ft in pounds	Mini-mum break-ing stren-gth in pounds	Rated capacity in pounds (safety factor=9)					
			Eye and eye sling		Basket hitch; Angel of rope to horizontal			
			Verti-cal hitch	Choker hitch	90 deg (0 deg)	60 deg (30 deg)	45 deg (45 deg)	30 deg (60 deg)
1/2	6.5	6,080	700	350	1,400	1,200	950	700
9/16	8.3	7,600	850	400	1,700	1,500	1,200	850
5/8	10.5	9,880	1,100	550	2,200	1,900	1,600	1,100
3/4	14.5	13,490	1,500	750	3,000	2,600	2,100	1,500
13/16	17.0	16,150	1,800	900	3,600	3,100	2,600	1,800
7/8	20.0	19,000	2,100	1,100	4,200	3,700	3,000	2,100
1	26.0	23,750	2,600	1,300	5,300	4,600	3,700	2,600
1 1/16	29.0	27,360	3,000	1,500	6,100	5,300	4,300	3,000
1 1/8	34.0	31,350	3,500	1,700	7,000	6,000	5,000	3,500

1 1/4	40.0	35,625	4,000	2,000	7,900	6,900	5,600	4,000
1 5/16	45.0	40,850	4,500	2,300	9,100	7,900	6,400	4,500
1 1/2	55.0	50,350	5,600	2,800	11,000	9,700	7,900	5,600
1 5/8	68.0	61,750	6,900	3,400	13,500	12,000	9,700	6,900
1 3/4	83.0	74,100	8,200	4,100	16,500	14,500	11,500	8,200
2	95.0	87,400	9,700	4,900	19,500	17,000	13,500	9,700
2 1/8	109.0	100,700	11,000	5,600	22,500	19,500	16,000	11,000
2 1/4	129.0	118,750	13,000	6,600	26,500	23,000	18,500	13,000
2 1/2	149.0	133,000	15,000	7,400	29,500	25,500	21,000	15,000
2 5/8	168.0	153,900	17,100	8,600	34,000	29,500	24,000	17,000

TABLE H - 16. -- NYLON ROPE SLINGS

[Continued]

[Angle of rope to vertical shown in parentheses]

Rope dia. nominal in inches	Nominal weight per 100 ft in pounds	Minimum breaking strength in pounds	Rated capacity in pounds (safety factor=9)					
			Endless sling					
			Vertical hitch	Choker hitch	Basket hitch; Angel of rope to horizontal			
					90 deg (0 deg)	60 deg (30 deg)	45 deg (45 deg)	30 deg (60 deg)
1/2	6.5	6,080	1,200	600	2,400	2,100	1,700	1,200
9/16	8.3	7,600	1,500	750	3,000	2,600	2,200	1.500
5/8	10.5	9,880	2,000	1,100	4,000	3,400	2,800	2,000
3/4	14.5	13,490	2,700	1,400	5,400	4,700	3,800	2,700
13/16	17.0	16,150	3,200	1,600	6,400	5,600	4,600	3,200
7/8	20.0	19,000	3,800	1,900	7,600	6,600	5,400	3,800
1	26.0	23,750	4,800	2,400	9,500	8,200	6,700	4,800
1 1/16	29.0	27,360	5,500	2,700	11,000	9,500	7,700	5,500
1 1/8	34.0	31,350	6,300	3,100	12,500	11,000	8,900	6,300
1 1/4	40.0	35,625	7,100	3,600	14,500	12,500	10,000	7,100
1 5/16	45.0	40,850	8,200	4,100	16,500	14,000	12,000	8,200
1 1/2	55.0	50,350	10,000	5,000	20,000	17,500	14,000	10,000
1 5/8	68.0	61,750	12,500	6,200	24,500	21,500	17,500	12,500
1 3/4	83.0	74,100	15,000	7,400	29,500	27,500	21,000	15,000
2	95.0	87,400	17,500	8,700	35,000	30,500	24,500	17,500
2 1/8	109.0	100,700	20,000	10,000	40,500	35,000	28,500	20,000
2 1/4	129.0	118,750	24,000	12,000	47,500	41,000	33,500	24,000
2 1/2	149.0	133,000	26,500	13,500	53,000	46,000	37,500	26,500
2 5/8	168.0	153,900	31,000	15,500	61,500	53,500	43,500	31,000

TABLE H - 17. -- POLYESTER ROPE SLINGS

[Angle of rope to vertical shown in parentheses]

Rope dia. nominal in inches	Nominal weight per 100 ft in pounds	Minimum breaking strength in pounds	Rated capacity in pounds (safety factor=9)					
			Eye and eye sling					
			Vertical hitch	Choker hitch	Basket hitch; Angel of rope to horizontal			
					90 deg (0 deg)	60 deg (30 deg)	45 deg (45 deg)	30 deg (60 deg)
1/2	8.0	6,080	700	350	1,400	1,200	950	700
9/16	10.2	7,600	850	400	1,700	1,500	1,200	850
5/8	13.0	9,500	1,100	550	2,100	1,800	1,500	1,100
3/4	17.5	11,875	1,300	650	2,600	2,300	1,900	1,300
13/16	21.0	14,725	1,600	800	3,300	2,800	2,300	1,600
7/8	25.0	17,100	1,900	950	3,800	3,300	2,700	1,900
1	30.5	20,900	2,300	1,200	4,600	4,000	3,300	2,300
1 1/16	34.5	24,225	2,700	1,300	5,400	4,700	3,800	2,700
1 1/8	40.0	28,025	3,100	1,600	6,200	5,400	4,400	3,100
1 1/4	46.3	31,540	3,500	1,800	7,000	6,100	5,000	3,500
1 5/16	52.5	35,625	4,000	2,000	7,900	6,900	5,600	4,000
1 1/2	66.8	44,460	4,900	2,500	9,900	8,600	7,000	4,900
1 5/8	82.0	54,150	6,000	3,000	12,000	10,400	8,500	6,000
1 3/4	98.0	64,410	7,200	3,600	14,500	12,500	10,000	7,200
2	118.0	76,000	8,400	4,200	17,000	14,500	12,000	8,400
2 1/8	135.0	87,400	9,700	4,900	19,500	17,000	13,500	9,700
2 1/4	157.0	101,650	11,500	5,700	22,500	19,500	16,000	11,500
2 1/2	181.0	115,900	13,000	6,400	26,000	22,500	18,000	13,000
2 5/8	205.0	130,150	14,500	7,200	29,000	25,000	20,500	14,500

TABLE H - 17. -- POLYESTER ROPE SLINGS

[Continued]

[Angle of rope to vertical shown in parentheses]

Rope dia. nominal	Nominal weight per 100 ft	Minimum breaking strength	Rated capacity in pounds (safety factor=9)		
			Endless sling		
			Vertical hitch	Choker hitch	Basket hitch; Angel of rope to horizontal

in inches	in pounds	gth in pounds	hitch		90 deg (0 deg)	60 deg (30 deg)	45 deg (45 deg)	30 deg (60 deg)
1/2	8.0	6,080	1,200	600	2,400	2,100	1,700	1,200
9/16	10.2	7,600	1,500	750	3,000	2,600	2,200	1,500
5/8	13.0	9,500	1,900	950	3,800	3,300	2,700	1,900
3/4	17.5	11,875	2,400	1,200	4,800	4,100	3,400	2,400
13/16	21.0	14,725	2,900	1,500	5,900	5,100	4,200	2,900
7/8	25.0	17,100	3,400	1,700	6,800	5,900	4,800	3,400
1	30.5	20,900	4,200	2,100	8,400	7,200	5,900	4,200
1 1/16	34.5	24,225	4,800	2,400	9,700	8,400	6,900	4,800
1 1/8	40.0	28,025	5,600	2,800	11,000	9,700	7,900	5,600
1 1/4	46.3	31,540	6,300	3,200	12,500	11,000	8,900	6,300
1 5/16	52.5	35,625	7,100	3,600	14,500	12,500	10,000	7,100
1 1/2	66.8	44,460	8,900	4,400	18,000	15,500	12,500	8,900
1 5/8	82.0	54,150	11,000	5,500	21,500	19,000	15,500	11,000
1 3/4	98.0	64,410	13,000	6,400	26,000	22,500	18,000	13,000
2	118.0	76,000	15,000	7,600	30,500	26,500	21,500	15,000
2 1/8	135.0	87,400	17,500	8,700	35,000	30,500	24,500	17,500
2 1/4	157.0	101,650	20,500	10,000	40,500	35,000	29,000	20,500
2 1/2	181.0	115,900	23,000	11,500	46,500	40,000	33,000	23,000
2 5/8	205.0	130,150	26,000	13,000	52,000	45,000	37,000	26,000

TABLE H - 18. -- POLYPROPYLENE ROPE SLINGS

[Angle of rope to vertical shown in parentheses]

Rope dia. nominal in inches	Nominal weight per 100 ft in pounds	Minimum breaking strength in pounds	Rated capacity in pounds (safety factor=6)				
			Eye and eye sling		Basket hitch; Angel of rope to horizontal		
			Vertical hitch	Choker hitch	90 deg (0 deg)	60 deg (30 deg)	45 deg (45 deg)	30 deg (60 deg)
1/2	4.7	3,990	650	350	1,300	1,200	950	650
9/16	6.1	4,845	800	400	1,600	1,400	1,100	800
5/8	7.5	5,890	1,000	500	2,000	1,700	1,400	1,000
3/4	10.7	8,075	1,300	700	2,700	2,300	1,900	1,300
13/16	12.7	9,405	1,600	800	3,100	2,700	2,200	1,600
7/8	15.0	10,925	1,800	900	3,600	3,200	2,600	1,800
1	18.0	13,300	2,200	1,100	4,400	3,800	3,100	2,200
1 1/16	20.4	15,200	2,500	1,300	5,100	4,400	3,600	2,500
1 1/8	23.7	17,385	2,900	1,500	5,800	5,000	4,100	2,900
1 1/4	27.0	19,950	3,300	1,700	6,700	5,800	4,700	3,300

1 5/16	30.5	22,325	3,700	1,900	7,400	6,400	5,300	3,700
1 1/2	38.5	28,215	4,700	2,400	9,400	8,100	6,700	4,700
1 5/8	47.5	34,200	5,700	2,900	11,500	9,900	8,100	5,700
1 3/4	57.0	40,850	6,800	3,400	13,500	12,000	9,600	6,800
2	69.0	49,400	8,200	4,100	16,500	14,500	11,500	8,200
2 1/8	80.0	57,950	9,700	4,800	19,500	16,500	13,500	9,700
2 1/4	92.0	65,550	11,000	5,500	22,000	19,000	15,500	11,000
2 1/2	107.0	76,000	12,500	6,300	25,500	22,000	18,000	12,500
2 5/8	120.0	85,500	14,500	7,100	28,500	24,500	20,000	14,500

TABLE H - 18. -- POLYPROPYLENE ROPE SLINGS

[Continued]

[Angle of rope to vertical shown in parentheses]

Rope dia. nominal in inches	Nominal weight per 100 ft in pounds	Minimum breaking strength in pounds	Rated capacity in pounds (safety factor=6)					
			Endless sling					
			Vertical hitch	Choker hitch	Basket hitch; Angel of rope to horizontal			
					90 deg (0 deg)	60 deg (30 deg)	45 deg (45 deg)	30 deg (60 deg)
1/2	4.7	3,990	1,200	600	2,400	2,100	1,700	1,200
9/16	6.1	4,845	1,500	750	2,900	2,500	2,100	1,500
5/8	7.5	5,890	1,800	900	3,500	3,100	2,500	1,800
3/4	10.7	8,075	2,400	1,200	4,900	4,200	3,400	2,400
13/16	12.7	9,405	2,800	1,400	5,600	4,900	4,000	2,800
7/8	15.0	10,925	3,300	1,600	6,600	5,700	4,600	3,300
1	18.0	13,300	4,000	2,000	8,000	6,900	5,600	4,000
1 1/16	20.4	15,200	4,600	2,300	9,100	7,900	6,500	4,600
1 1/8	23.7	17,385	5,200	2,600	10,500	9,000	7,400	5,200
1 1/4	27.0	19,950	6,000	3,000	12,000	10,500	8,500	6,000
1 5/16	30.5	22,325	6,700	3,400	13,500	11,500	9,500	6,700
1 1/2	38.5	28,215	8,500	4,200	17,000	14,500	12,000	8,500
1 5/8	47.5	34,200	10,500	5,100	20,500	18,000	14,500	10,500
1 3/4	57.0	40,850	12,500	6,100	24,500	21,000	17,500	12,500
2	69.0	49,400	15,000	7,400	29,500	25,500	21,000	15,000
2 1/8	80.0	57,950	17,500	8,700	35,000	30,100	24,500	17,500
2 1/4	92.0	65,550	19,500	9,900	39,500	34,000	28,000	19,500
2 1/2	107.0	76,000	23,000	11,500	45,500	39,500	32,500	23,000
2 5/8	120.0	85,500	25,500	13,000	51,500	44,500	36,500	25,500

TABLE H - 19. -- SAFE WORKING LOADS FOR SHACKLES

(In tons of 2,000 pounds)

Material size (inches)	Pin diameter (inches)	Safe working load
1/2	5/8	1.4
5/8	3/4	2.2
3/4	7/8	3.2
7/8	1	4.3
1	1 1/8	5.6
1 1/8	1 1/4	6.7
1 1/4	1 3/8	8.2
1 3/8	1 1/2	10.0
1 1/2	1 5/8	11.9
1 3/4	2	16.2
2	2 1/4	21.2

TABLE H - 20. -- NUMBER AND SPACING OF U-BOLT WIRE ROPE CLIPS

Improved plow steel, rope diameter (inches)	Number of clips		Minimum spacing (inches)
	Drop forged	Other material	
1/2	3	4	3
5/8	3	4	3 3/4
3/4	4	5	4 1/2
7/8	4	5	5 1/4
1	5	6	6
1 1/8	6	6	6 3/4
1 1/4	6	7	7 1/2
1 3/8	7	7	8 1/4
1 1/2	7	8	9

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HOT WORK PROCEDURES

Ref: 29-CFR-1926.150-159 & .350-.354

POLICY

Gray & Becker Construction Services, LP prides itself on its Safety and Employee Health programs. This includes Welding and Hot Work procedures. This will include electric arc welding, oxyacetylene welding and cutting, soldering, brazing, plasma cutting, and any other activity such as metal grinding and gouging which produces sparks or flames. Care will be taken to safeguard surrounding from catching fire and protection adjacent workers from the dangers of flash resulting from the intense light energy released during welding operations and debris generated from grinding ad gouging operations. Anytime hot work is a Hot Work Permit will be completed prior to beginning work.

PROCEDURES:

Prior to beginning work outlined above, the employee will:

1. Fill Out a Gray & Becker Construction Hot Work Permit (Attached to this policy)
2. Clear the area surrounding his/her work zone of all combustible materials.
    a. Place fire resistant coverings over anything that cannot be moved out of the way.
3. Erect Flash Screens, if surroundings do not offer protection to others from flash being generated.
4. Make sure a properly rated ABC Fire Extinguisher is ready at hand.
5. If appropriate, notify building owner of planned actions and/or post a Fire Watch which should be in place for a minimum of thirty minutes after work is completed.

When complete, the employee will:

1. Secure the welding equipment and fuels, making sure that if electric, it is disconnected from power supply and if it is oxyacetylene, the bottles are closed and hoses bleed.
2. If the Hot Work was grinding, the employee will police the area of all grinding fines.
3. The employee will then restore the area to its prior condition by returning any items removed for safe-keeping or removing any fire blankets placed for protection.
4. If building owner was notified they will be apprised of the end of work and offered inspection of the area for fire safe conditions.

Supervisors and Employees welding must be trained in the type of welding being done; the necessary prep of the work piece and area and the required safety setup to minimize flash hazards and fire hazards. This includes Hot Work Set up and Procedures.

Welders are required to clear the area of flammable and combustible materials and if that is not possible, must erect shields or place fire blankets on the materials which cannot be moved.

If flammable or combustible material cannot be moved or shielded then the hot work will not be done.

Fire Watch will be posted when required by client or when there is significant flammable or combustible materials present. Fire Watch Personnel will receive training in Keeping the area clear of combustibles and skills needed in fighting incipient stage fires and sounding alarm. They will remain posted for at least 30 Minutes past the last Hot Work activity.

Prior to commencing Hot Work, employees will fill out and have available the attached Hot Work Permit. Additional Paperwork may be required from client. A Fire Extinguisher will be ready at hand during all hot work.

If the Hot Work will generate hazardous fumes which cannot managed and which may affect other employees or the client then fume extraction ventilation must be employed with filtering.

Any defective equipment, company owned or rented, must be removed from service and returned for repair. If equipment is needed and unavailable the job must be delayed until the equipment is replaced.

All Employees, especially supervisor, welders, and fire watch personnel involved in Hot Work will receive training in the use of dry chemical ABC Fire Extinguishers. Employees will be trained in the PASS Method of Pulling the Pin, Aiming the Discharge Hose at the base of the flames, Squeezing the Extinguisher Trigger and Sweeping back and forth across the base of the flames.

Employees are trained to sound the alarm if the fire cannot be easily extinguished with a single fire extinguisher.

End of Policy
Permit to Follows
HOT WORK PERMIT **Gray & Becker Construction Services, LP**

Date _____ Time_____Client_____

Name of Person(s) Performing Work? Supervisor?

_____

Specific Location of Work

_____

For specific requirements refer to General Industry Standards 1910.146; 1910.252; .253; .254 and .272 and Construction Standards 1926.803; .350; . 352 and .353.

What if anything, needs to be guarded or shielded from this work?
Is all flammable and combustible materials protected from the Hot Work? Is Fire Watch Needed?_____ Are Appropriate Fire Extinguishers in Place?

At Point of Operation_____Within 15 Feet of Compressed Gasses_____
With Fire Watch_____
Time Hot Work concluded_____

_____
Authorized Signature – Supervisor Person Performing Hot Work

If Fire Watch is used Name of Fire Watch Person-

_____

Time Concluded_____

Hot Work is Any Work using Heat through Electric, Fuels, or Gasses and Any Abrasion Metal Work.

Welding, Brazing, Soldering, Plasma Cutting, Torch Cutting, Chop Sawing Metal, Grinding Metal.

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LEAD AWARENESS

Reference: 29 CFR 1926.62

Policy

Our policy is to educate Gray & Becker Construction Services, LP employees on the hazards of over exposure to Lead in construction and areas where they may encounter Lead including methods needed in avoiding exposure to Lead. Training will be done upon hire, prior to assignments where Lead Renovation is taking place or Lead Containing Structure may be disturbed, and annually thereafter.

Lead was widely used on construction, particularly in paint and plumbing. Our work puts us in direct contact with Lead during demolition of structures and renovation of structures.

Lead is a Central Nervous System Depressant. It is most readily ingested, inhaled, and absorbed into the human body. Our primary contact with Lead will be in painted structures being dismantled. We will find Lead in any painted surface painted in 1978 or earlier. Lead was a major ingredient in paint prior to 1979. So, when we dismantle a structure or its systems that were painted prior to 1979, we must consider them to be containing Lead. We may not disturb more than two square feet of a surface containing Lead without being licensed as a Lead Renovation Contractor and having at least one person Certified as a Lead Renovation Specialist supervising Lead job sites.

Lead will also be found in plumbing pipes. When working with older plumbing pipes containing lead, employees should wear gloves and not abrade the pipe to minimize creating dust and airborne debris.

It is important for Gray & Becker and its employees to know the difference between Lead Renovation and Lead Abatement. The difference is simple, but SIGNIFICANT.

If the purpose of the project is to remove Lead from the property, the project is Lead Abatement.
If the purpose of the project is to remove windows, doors, piping, etc. and dismantle a building or part thereof for the purpose of remodeling or building new, and these structures contain Lead, then the project is Lead Renovation.

Lead Abatement requires companies and each employee to hold abatement licenses much the same as Asbestos. Most owners will choose to have a Renovation done in that the same end result occurs in the eyes of the property owner. His building is completed and the red tape is eliminated.

Upon under taking a contract involving LEAD Renovation, Gray & Becker will assign an appropriately credentialed supervisor to train and oversee employees on that job site.

Outside of renovation projects, All employees will be trained at time of hire on the following Lead Awareness issues: This training will be document in the hiring process.

General Rules for Construction Employees regarding Lead.

Always obey all warning signs and labels

Never Use High Heat to remove Lead from surfaces (>1,100 Degrees)

Never Dry Sand or Grind Lead Paint without HEPA Vacuum Filtration and then only if within 1 foot of electrical hazard – Must use wet methods.

Never Use Methylene Chloride to dissolve Lead Paint. It releases Highly Toxic Fumes.

Wet Methods and Low Heat Are preferred methods of removing lead paint from surfaces.

Paint must be removed prior to torch cutting or welding.

When drilling into a painted surface to mount hangers, etc. Use HEPA Vacuum to collect dust as it is generated or a dollop of shaving cream to trap the dust before it becomes airborne.

Always wash your hands and face after contacting Lead and Lead Coated Building Products. Never eat, smoke, or apply cosmetics in an area that contains lead or until you have left that area and washed up.

Even if we are on a job site in which we are not the contractor working with Lead, these rules apply the same.

If another contractor is exposing our employees to Lead our employees will leave the area until such time as the other contractor contains the risks generated.

END OF POLICY

ELECTRICITY & LOTO PROGRAM AND POLICY

Reference: 29 CFR 1910.134; 1926 Subpart K

POLICY

It is the policy of Gray & Becker Construction Services, LP to help ensure the safety and health of our employees by establishing effective policy and procedures in all areas of Safety, Health, and Environment. For Hazardous Energy Dangers the Competent Person responsible for program management is the Safety Director. The Safety Director shall govern all divisions in regard to Electrical Safety.

Additionally, it is the policy of our company that all employees who may service or maintain energized equipment at a particular job site, be trained in the effective neutralization of all energy sources and be provided the necessary devices to perform this task. This training will be completed prior to first assignment and annually thereafter. All Training will be documented. Untrained employees will not work on or around any unprotected live circuits. All Employees will undergo Electrical Awareness Safety Training prior to working with or around electrical equipment or electrical distribution panels. The Procedures and documents will be audited at least annually and the results documented. Deficiencies will be addressed in the form of retraining. All tools and cords will be inspected prior to use with a complete inspection done whenever the tool of cord rotates through the shop from a job site. This program is intended to prevent inadvertent contact with live electrical parts resulting in shock, burns, or electrocution. With this goal in mind, all employees will treat all exposed electrical circuits, switches and contacts as “Live” electrical feeds even when they are locked and tagged out of service.

This policy requires all employees practice safe work practices to prevent shock when working with or using electricity. Employees will utilize proper personal protective equipment for the hazards potentially present for the work at hand. Arc Flash Apparel will be used on any open panel, switch box, junction box, or similar enclosure and only those employees specifically trained including knowledge of electrical magnitudes and equipped for Arc Flash Protection will engage in this work. Gray & Becker employees will NOT work with Electrical Work requiring Arc Flash Protection.

LOCKOUT TAGOUT PROCEDURE (GENERAL)

This policy will outline the REQUIRED steps necessary to ensure that when an employee needs to work on a tool or piece of equipment, including utility systems, that they will have the requisite knowledge to locate, identify, neutralize and verify neutrality of any and all energy sources feeding the areas being worked.

It is important to realize that although most people believe this applies only to electrical energy, this policy covers all energy sources including but not limited to hydraulic; pneumatic; thermal; gravitational, kinetic; electric; radiological; and potential energy stored in capacitors.

Step ONE is to notify all affected persons that you plan to shut down the identified system and the anticipated time you plan to have it out of service. LOTO is a REQUIRED Procedure.

Step TWO in Lockout Tagout is to identify the scope of work and what power sources feed it.

Step THREE is to neutralize all energy sources by turning them off at their localized source and first tagging it out of service and then placing a appropriate locking system on the control to prevent its re-energization. This step is repeated for each identified source of energy. It may also be required to bleed and blank some energy sources in which case locks and tags would be applied on all blanked flanges. Also, it may be necessary to block, lock or bleed certain systems in a logical order to avoid potential energy.

Step FOUR involves activating all start up switches, knobs, and controls to verify all energy has been neutralized. If anything starts or moves, go back to Step TWO and find the sources of energy feeding that unexpected start up and neutralize them. Once Step FOUR is complete with no un-neutralized energy present on your work, Return all switches, knobs and controls to the off position and proceed to Step FIVE.

(It is always better to use additional protection such as blocking to prevent point of operation motion and not rely solely on locks and tags alone)

Step FIVE is completing your work and then removing your tools and equipment from all points of operation.

Step SIX involves notifying everyone contacted in Step TWO that you are about to release all energy sources and start up the processes affected by your lock-out.

Step SEVEN is to remove all locks, tags, and blanks (in a logical order) and then operate the process to see that it is now working properly.

When you apply a lock or tag it must identify you by name, company name, and a contact number. If you leave the work locked out at the end of the work day, notify everyone that you are doing so and will be returning at a given time to complete work.

Each person working on a locked out system must place his/her own lock on the energy sources. If the source will not accommodate multiple locks and tags, a group lockbox and hasp will be used. A Lead Worker will be in charge of the Group Lockout.

If a lock or tag must be removed by someone other than the person that applied it, a Competent Person Supervisor must be involved in the decision and inspection of work being done. The lock and tag will only be removed under the order of this Competent Supervisor, if the original person is not available and the system is safe to start back up. If this Competent Supervisor cannot verify safety in cutting off a lock or tag, the system will remained locked out until such time as it is guaranteed safe or the original lock owner completes his/her work and unlocks their locks.

A written report must be completed into the daily log sheet whenever a Competent Supervisor over-rides someone else's lock and tag system.

At least annually, an Audit of Lockout Tagout will be done by the Safety Director. Spot inspections of specific application will be made and count as the audit. Training on Lockout Tagout will be done prior to any employee using it and at least annually thereafter. The Safety Director will certify any employee eligible to conduct Lockout Tagout duties. All training will be documented and done prior to assignment and at least annually thereafter.

General Electrical Safety

All exposed electrical conductors will be treated as live electrical circuits at all times. Employees will not approach within 10 feet open electrical panels with exposed conductors or enter a room with such a panel open. Gray & Becker-

Employees will not open electrical panels past the layman switch and will not remove screws, breakers, or knockout hole covers.

Cords: Electrical cords cannot be spliced. If a cord is damaged or cut, it must be cut at that point and thrown away or if the pieces are long enough replacement plug ends may be attached to keep the cord in service. Electrical Tape is not acceptable for electrical cord repairs.

All Extension cords used in Construction must be 3-wire grounded cords. All Tool Cords must also be 3-wire ground cords unless the tool is a Double-Insulated Tool.

Cords must be protected, if placed across a roadway or path for vehicles.

Cords must be inspected prior to each use. A Documented Inspection will be completed each time the tool or cord is returned the the shop to be placed into stock or resent out after repairs. All such tools and cords should be rotated through the shop at least annually for this reason.

All Cords, Tools or Extension cords, must be plugged into a tested GFCI Outlet. The GFCI must be tested prior to plugging into it and if a pigtail is used, it must be plugged in first then the extension cord or tool plugged into the pigtail. This will result in the pigtail tripping, if the length or capacity of the cord causes the neutral to wavier. Do Not change the GFCI location to the opposite end of the cord as this will leave the entire length of the cord unprotected and put employees at risk.

Testing a GFCI requires the “Test” button to be depressed which will trip the “Breaker” button adjacent to it. The testing employee will hear a noticeable click or pop when the breaker trips. To reset the breaker, simply depress the button until it locks closed. This test must be completed each time someone plugs into the GFCI; regardless if someone else is already plugged into it. For this reason anyone plugging in late must verify that it is safe to temporarily disrupt the power supply, as it may be supporting a mag-drill or other device dependent on the power source.

Temporary Lights and Cords powering them must be suspended at least seven feet above the working floor level. Splices in the Temporary Light Cords must be (And this is an exception to the earlier rule) secure and fully taped so that no strain is placed on the individual connections. All hanging points must be

made without using the temporary light strand conductor wires and must be secured without using wire on light string connections.

Tools and Cords not up to code will be removed from service, tagged as out of service, and returned to the shop or discarded as a appropriate.

Cords will be suspended when wet conditions present no other options to keep the cords out of water.

All Ladders will have non-conductive side rails.

Overhead Electrical Lines

We will keep 20 feet back from all suspended electrical lines unless adequate shielding is in place to allow a closer distance to be maintained. If we must be within 10 feet of overhead electrical lines they will be shut down and grounded. Only properly credentialed employees will be permitted to work within the 10 foot exclusion area around overhead electrical lines. All other personnel must maintain at least a 10 foot clearance.

BOXES AND PANELS

All electrical box knockout holes must be blanked with the knockout plug, or if missing and not used by a connector a replacement knockout plug. Empty holes or taped holes are dangerous and not acceptable.

All Electrical Panels and Switches must have the cover closed. We will not permit employees to work where panel covers are missing on energized panels and switches unless the employee is Arc Flash Qualified and Authorized by Dispatch to work on Live Circuits. Gray & Becker employees are not qualified for Arc Flash.

All Electrical buss bars, lugs, and de-energized parts will be treated as live electrical parts.

Plug adapters WILL NOT BE USED.

Untrained persons must maintain a distance of at least 10 feet back from exposed electrical conductors and may not enter electrical distribution rooms without suitable escort.

All Electrical Panels and distribution room will be properly illuminated or Gray & Becker Employees will not work. A minimum of 10-foot candles of light is required for electrical work. Employees working with electrical circuits or in Arc Flash Potential will ensure no exposed clothing or jewelry is conductive. All Exposed conductive items shall be wrapped, covered, and rendered non-conductive prior to work.

Workers will stand outside of the flash zone unless properly protected by appropriate PPE and aside of open conductors. Employees will erect and install insulated barriers and shields whenever feasible.

If ladders are used they must be electrically safe fiberglass ladders.

All Major Pieces of Equipment INSTALLED must have an individual LOTO Procedure Posted. Use the attached Template to develop individual procedures for Installed Equipment not powered by a simply single plug under constant control of the employee.

Cranes, Excavators and other vehicles must maintain a minimum clearance of twenty feet from any electrical conductor. If a closer proximity is required, shielding of the conductor must be done by the utility or qualified contractor.

Employees will not work in confined spaces with exposed electrical conductors unless fully protected against ARC Flash with PPE based upon the voltage potential present. All attempts to lockout energy sources will be made prior to resorting to an ARC Flash trained employee.

All employees, regardless of ARC Flash will not work with electrical panels unless all exposed conductive apparel and jewelry is covered with non-conductive covering or is removed.

Vehicles and Mechanical Equipment will maintain at least a 20 foot separation from all exposed electrical panels and lines.

Whenever it is necessary to work within distances outlined in 29-CFR-1910.333(c)(1)[C] Table S-5 employees will defer to a qualified electrical to neutralize and make safe by grounding any live electrical lines we need to approach. Gray & Becker Employees are not attempt this work.

Sample Posted Procedure Follows:

Lockout Tagout Procedure for this Machine

Despatch Dryer #1 (EXAMPLE TEMPLATE)

This Lockout Tagout Policy applies to servicing and maintenance of this equipment in which the unexpected startup or the release of stored energy could cause injury to people.

This equipment has 3 sources of energy

(Electrical- Natural Gas-Thermal)

To make this equipment safe from unexpected startup

FIRST: Notify all affected people that you are locking out this equipment.

SECOND: Locate all sources of energy and all control switches for the equipment and the energy sources.

THIRD: Shut down and lockout/Tagout all energy sources.

FOURTH: Operate the controls to verify you have locked out all sources of energy. If this is true move on to Step 5. If something unexpected happens return to Step 2.

FIFTH: Complete your work only after successfully completing Step 4.

SIXTH: When complete, notify everyone that you are preparing to start up the equipment. You must contact everyone you told in the first step.

SEVENTH: Remove all tools and equipment from points of operation and hazardous areas of the equipment and re-energize the energy sources by removing your locks and tags and switching on the energy.

EIGHTH: Operate the controls on the equipment. If everything works properly you are done; if not, return to Step 7.

The Energy Disconnect For This Equipment Is:

The ELECTRICAL DISCONNECT is mounted on the dryer at the control panel.

The GAS LINE VALVE is mounted near the ceiling above the dryer – between Dryer #1 and Dryer #2 near the middle of the dryers.

The only way to neutralize the THERMAL ENERGY is to cool the dryer with time or forced air. Keep in mind conveyor track will also retain thermal energy.

LOTO PROCEDURE SURVEY

EQUIPMENT NAME & ID_____

ENERGY SOURCES	NUMBER OF LOCATIONS FEEDING THIS EQUIPMENT
_____ ELECTRICAL	_____
_____ HYDRAULIC	_____
_____ PNEUMATIC	_____
_____ POTENTIAL	_____
_____ KINETIC	_____
_____ THERMAL	_____

ENERGY DISCONNECTS FOR EACH SOURCE ARE LOCATED AND IDENTIFIED AS FOLLOWS: (List detailed information as to location(s) including describing the actual switch, valve, breaker, etc. by details needed to readily identify it as the one needing locked out)

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Use Owners' Manual for Guidance

Machine Guarding Policy and Program

References: 29 CFR 1910 Subpart O; 29 CFR 1926

Policy:

In accordance with 29 CFR 1910 Subpart O regarding Machinery and Machine Guarding and 29 CFR 1926, as applicable, it is Gray & Becker policy that no equipment is to be operated without the proper guards in place.

In addition, proper training and information will be provided to our personnel before operating any machinery. This training and information will include the recognition of hazards while operating the machinery and proper guarding of the equipment.

Should any other types of equipment or machinery be used which has a specific standard relating to it, this will be incorporated before using the equipment. This includes woodworking machinery, cooperage machinery, abrasive wheel machinery, mills and calendars, mechanical power presses, forging machines, and/or any other machines where power transmission apparatus is in use.

Program:

Most all power tools and machines manufactured within the last two decades are equipped with the required safety switches and guards. However, we have a number of machines and tools which predate the requirement for Machine Guarding. The fact that they predate the rule does not relieve Gray & Becker of the requirement to have the guards and safety switches needed to protect our employees on this older equipment.

Also, not all countries comply with US Safety Standards with the products they export to the USA. For this reason, employees purchasing tools and equipment must evaluate their purchase for compliance with Gray & Becker and OSHA Safety Standards.

What needs guarded?

- All Points of Operation, saw blades, drill bits, sanding surfaces, grinding wheels, shear points,
- All Pinch Points
- All Energy Control Points
- All Energy Junction and Transfer Points
- All Start-Up Switches*
- All Flywheels
- All Power Transmission Points
- All Blades, regardless of machine's status.
- All General Lighting

START-UP SWITCHES

Wood working and Metal Working machinery in our shop should be equipped with Magnetic contact start-up switches which automatically disengage when power is lost. This will prevent the machine from starting up automatically when the power is restored.

Hand power tools should be equipped with positive pressure switches which will disengage when the grip is released. Many of these, such as power drills will be equipped with a hold open pin. Employees are discouraged from using the hold open pins on power tools. Although it may make operation less taxing, it defeats the purpose of the safety switch.

WOOD WORKING MACHINERY

In addition to Safety Switches and Point of Operation Guards, wood working machinery must have its blade and bit protected when not in use.

- Table Saws should have the blade lowered beneath the table
- Radial Arm Saws should retract back and be fully encased by the guard.
- Routers and Drills must have their bits removed.

BENCH GRINDERS

The tool rest must be adjusted to within 1/8 inch of the face of the grinding wheel.

The top guard must be adjusted to within ¼ inch of the grinding wheel.

The grinding wheel must be dressed to a flat surface with a dressing wheel. All troughs and gouges must be avoided or dressed immediately.

Prior to mounting a new wheel it must be ring tested.

BRAKES

Hydraulic Press Brakes must be guarded to prevent operator's hand from coming between the dies. This must be accomplished using hold backs or light curtains. Die Changes must be done only when the top ram is blocked in the open position.

GENERAL LIGHTING

All light bulbs must be protected from contact damage. They must be equipped with a guard to prevent the bulb from striking any object or any object striking

it. Gray & Becker does not recognize the Seven Foot rule, therefore All Lights, no matter what height, will be guarded.

ALL MACHINES

We focus on the operator station as the area needing guarded, but guards are often needed in many other places as well. Look behind the machine and along each side and on top and underneath the machine. If something can reach out and grab you or you can reach in and grab something dangerous – it needs guarded.

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MOTOR VEHICLES & MOTORIZED EQUIPMENT

References: 29 CFR 1926.600; 601; 602

Policy

During the course of employment, our employees may be required to operate motor vehicles or other motorized equipment. It is Gray & Becker's intent that employees operate only vehicles and equipment in which they are qualified and authorized to operate. They must wear approved seat belts, follow all safety rules and laws, and not operate hand held electronic devices while driving.

Policy Requirements

All vehicles in use shall be checked at the beginning of each shift to ensure that all parts, equipment, and accessories that affect safe operation are in proper operating condition and free from defects. All defects affecting operational safety shall be corrected before the vehicle is placed in service.

Our employees and/or contractors on job sites under our control will not use any motor vehicle, earthmoving, or compacting equipment having an obstructed view to the rear unless:

- The vehicle has a reverse signal alarm distinguishable from the surrounding noise level, or the vehicle is backed up only when an observer signals that it is safe to do so.

Heavy machinery, equipment, or parts thereof that are suspended or held aloft shall be substantially blocked to prevent falling or shifting before employees are permitted to work under or between them.

All motorized equipment, other than will be required to have the operator's manual available at the work site for use by operators and each operator must be properly trained and authorized before attempting to operate any vehicle.

Training will include classroom and practical exams and the employee must score at least 80% to be authorized to operate any vehicle including forklifts, lulls, excavators, dozers, aerial lifts, rollers, and compactors. Training will be conducted by employees already qualified and competent with the vehicles. This training will include vehicle loads, capacities, balancing, operational limitations, refueling, required keep back distances, obstructed views and inspection of operational areas. This training will be complete prior to first assignment in each type of vehicle and again after any evidence of a lack of knowledge, accident, unsafe act, or every three years.

Equipment and Vehicles will be refueled only with the ignition and engine in the off position.

Material handling vehicles and employees will not enter trucks and trailer cargo areas without the trucks wheels being blocked or the vehicle secured to the dock with a hold back clamp. Dock Bridge Plates or the equivalent must be used if entering from a dock level.

Commercial Motor Vehicles and any powered job site Vehicle, Material Handling or Earth Moving Equipment must have a documented daily inspection. This inspection shall be documented at the end of each workday for Commercial Vehicles and at the start of each work day for Material Handling/Earth Moving Equipment. Commercial Vehicle Operators will refer to the prior day's inspection sheet and verify all defects affecting safety have been repaired or corrected prior to beginning driving. Material Handling/Earth Moving Equipment will not be used until inspected and all safety related deficiencies have been corrected.

Employees are specifically prohibited from driving any vehicle or piece of equipment while talking, texting, or otherwise manually operating a hand-held electronic device. Construction vehicles are prohibited from using devices regardless if Bluetooth or other wireless devices permit hands-free operation, unless the communication is part of signaling required by OSHA Standards for Rigging and Signaling Safety.

Drivers of licensed motor vehicles are prohibited from holding hand-held devices for communications, GPS Guidance, or gaming while driving. Drivers may accept and/or make voice activated calls providing they can be made using voice control or one button control of a device not held in the driver's hand. This policy is law in many communities and national law for CDL Drivers. All drivers are encouraged to pull off the highway (Highway Shoulders are Not Acceptable), placing the vehicle in park, or in the case of a standard shift vehicle, shut off with the parking brake set or the vehicle left in low gear, before taking or making a call or inputting navigational commands, reading, sending or otherwise manually using a hand-held electronic device.

Drivers of CDL Commercial Motor Vehicles may NOT exit the cab while the engine is running. When the vehicle is parked, engine off, brakes set, standard transmission in low gear, the front wheels will be turned all the way toward the curb or area of safety, if the vehicle were to start rolling

Whenever a Recordable Crash occurs, the cell phone history of that driver or operator will be requested to verify compliance with this policy. Employees found in violation will be subject to disciplinary measures, including suspension and termination of employment.

Employees will also be held accountable for any traffic infractions related to the crash, regardless of who is at fault in the crash.

Included with this policy are:

- Material Handling Equipment Inspection Sheet
- Commercial Motor Vehicle Inspection Sheet
- Earth Moving Equipment Inspection Sheet

See Appendix for Inspection Forms

PERSONAL PROTECTIVE EQUIPMENT (PPE) PROGRAM

Reference: 29 CFR 1910 -Subpart I; 1926.52 & Subpart E

While OSHA's Personal Protective Equipment regulation, found at 29 CFR 1910 and 1926 do not explicitly require a written Personal Protective Equipment (PPE) Program, Gray & Becker has developed a written PPE program to document and specify all information relative to our PPE needs.

The Safety Director is the program coordinator who has overall responsibility for the program. Site Supervisors will assist in training employees and monitoring their use of PPE. The program will be reviewed and updated as necessary. This written program/ plan is kept in the corporate office and copies of the program may also be obtained there or at various job sites.

We believe it is our obligation to provide a hazard free environment to our employees as much as is practicable. Any employee encountering hazardous conditions must be protected against the potential hazards. The purpose of protective clothing and equipment is to shield or isolate individuals from chemical, physical, biological, or other hazards that are unable to be avoided by use of engineering or administrative controls in the workplace. (See separate documents for respiratory protection and hearing conservation programs)

Establishing an overall written PPE program detailing how employees use PPE makes it easier to ensure that they use PPE properly in the workplace and document our PPE efforts in the event of an OSHA inspection. This PPE program covers:

- Purpose
- Hazard Assessment
- PPE Selection
- Employee Training
- Cleaning and maintenance of PPE
- PPE specific information

PURPOSE

The purpose of this program is to conduct an in-depth evaluation of the equipment needed to protect against workplace hazards and document the hazard assessment, protective measures, and PPE in use at our worksites or customer facilities. PPE devices are not to be relied on as the only means to prove protection against hazards, but are used in conjunction with guards, engineering controls, and sound manufacturing practices. If possible, hazards will be abated first through engineering controls and then with PPE to provide protection against hazards which cannot reasonably be abated otherwise.

HAZARD ASSESSMENT

In order to assess the need for PPE, various steps may be taken.

Identification of job classifications where exposures occur or could occur is taken into consideration. In addition, the examination of the following records may be reviewed to identify and rank jobs according to exposure hazards:
Injury/Illness Records
First Aid logs
Also, a walk-through survey of workplace areas where hazards exist or may exist to identify sources of hazards to employee is completed and documented.

The basic hazard categories that are identified are:
Impact
Heat
Penetration
Harmful dust
Compression (roll-over)
Light (optical) radiation
Chemical

The following hazards along with PPE currently in use are observed and recorded:

Sources of motion (e.g., machinery or processes where any movement of tools, machine elements, or particles could exist, or movement of personnel that could result in collision with stationary objects)

Sources of high temperatures that could result in burns, eye injury, or ignition of protective equipment, etc.

Welding	Grinding,Welding – Stainless Especially Hazardous
Chemicals	Fuels
	Parts Cleaner
	Pipe Lube
Sources of Harmful Dust/ Fumes	Grinding
	Concrete Cutting
	Welding, Brazing, Torch Cutting
	Carbon Fuel Burning
UV/High Intensity Light	Welding, Plasma Cutting, High Wattage Lights, Sunlight

Sources of falling objects or potential for dropping objects:
- Material in motion could slip and fall or tools/equipment from above
- Sources of sharp objects which might pierce the feet or cut the hands

- sharp edges identified which could result in injury
- Sources of rolling or pinching objects which could crush the feet
- The possibility exists that a person working with materials could drop them on his/her feet or be exposed to roll over by equipment
- Following the survey, the data and information is organized for use in the assessment of hazards to analyze the hazards and enable proper selection of protective equipment.

Each of the basic hazards is reviewed and a determination is made as to the frequency, type, level of risk, and seriousness of potential injury from each of the hazards found. The existences of any situations where multiple exposures occur or could occur are considered.

The Safety Director or Project Superintendent documents the hazard assessment via a written certification that identifies the workplace evaluated, the person certifying that the evaluation has been performed, and the date(s) of the hazard assessment.
Selection Guidelines

- Once the hazard assessment has been completed, the general procedure for selecting protective equipment is as follows:
- Become familiar with the potential hazards and the type of protective equipment (PPE) that are available
- Compare types of equipment to the hazards associated with the environment
- Select PPE which ensures a level of protection greater than the minimum required to protect employees from hazards
- Fit the user with proper, comfortable, well-fitting protection, and instruct employees on care and use of the PPE. It is very important that the users are aware of all warning labels for and the limitations of their PPE. (See the Employee Training guidelines outlines in the next section of this program for a more detailed description of training procedures)

It is the responsibility of the Safety Director and the Project Superintendents to reassess workplace hazards, to identify and evaluate new equipment and processes, to review accident records, and to reevaluate the suitability of previously selected PPE. This reassessment will take place as needed. Elements which should be considered in the reassessment include:

- Adequacy of PPE Program
- Incidents and illness experience
- Levels of exposure (this implies appropriate exposure monitoring)
- Adequacy of equipment selection
- Number of person hours that workers wear various protective ensembles
- Adequacy of training/fitting of PPE
- Program costs
- The adequacy of program records
- Recommendation for program improvement and modification
- Coordination with overall safety and health program

EMPLOYEE TRAINING

The Safety Director or Project Superintendent provides training for each employee who is required to use personal protective equipment. Training includes:
When PPE is necessary
What PPE is necessary
How to wear assigned PPE
Limitations of PPE
The proper care, maintenance, useful life, and disposal of assigned PPE.

Employees must demonstrate an understanding of the training and the ability to use the PPE properly before they are allowed to perform work requiring the use of the equipment. Employees are prohibited from performing work without donning appropriate PPE to protect them from the hazards they will encounter in the course of that work.

If the Supervisor has reason to believe an employee does not have the understanding or skill required the employee must be retrained. Circumstances where retraining may be required include changes in the workplace or changes in the types of PPE to be used which would render previous training obsolete. Inadequacies in an affected employee's knowledge or use of the assigned PPE are indicators that the employee has not retained the necessary understanding or skills.
The Safety Director or Project Superintendent certifies in writing that the employee has received and understands the PPE training.

Because failure to comply with company policy concerning PPE can result employee injury, an employee who does not comply with this program will be disciplined for noncompliance according to the Company Disciplinary Policy.

Cleaning and Maintenance

It is important that all PPE be kept clean and properly maintained, particularly eye and face protection where dirty or fogged lenses may impair vision, by the employee to whom it is assigned. PPE is to be inspected, cleaned, and maintained by employees at regular intervals as part of their normal job duties so that the PPE provides the requisite protection. Supervisors are responsible for ensuring compliance with cleaning responsibilities by employees. If PPE is for general use, the Project Superintendent has the responsibility properly maintaining the equipment. It is the employee's responsibility to bring all PPE in need of repair or replacement to the immediate attention of his/her supervisor or the Project Superintendent. It is against work rules to use PPE that is in disrepair or not able to perform its intended function.
Contaminated PPE which cannot be decontaminated is disposed of in a manner that protects employees from exposure to hazards.

If an employee wishes to use their personally owned PPE, it must meet or exceed our requirements and will be held to the same rules of training, use, cleaning, and storage as is company owned PPE.

Construction Sites

At a minimum, all personnel at a construction site will wear hard hats and leather safety toe shoes covering the ankle. Gray & Becker will fine employees $50.00 for each offense when any employee is found working without their hard hat on. Progressive Dis-

cipline will also apply. Other PPE will be assigned on the job after a WISH List determines the need.

CLIENT FACILITIES
All employees will follow Gray & Becker rules and if a client documents the need for a more stringent or higher level of protection for the work we are doing or for the area in which we are working, we will comply with the client's direction.

OVER OR NEAR WATER
When working over or near water the hazard of drowning may exist. Employees will be provided with U.S. Coast Guard approved buoyant vests or life jackets.
In addition, while working over or immediately adjacent to navigable waters, a life boat, and skiff or dingy will be in the water on standby for rescue, if needed.

STANDARD PPE THAT WILL BE KEPT ON HAND AT ALL JOB SITES WILL INCLUDE:
Hard Hats
Safety Glasses, Clear and/or Tinted
Full Face Shields Clear and/or Tinted
Welding Tint (Hood and/or Goggles)
Various Work Gloves for Abrasion, Heat, BBP Protection.
Hearing Protection (For voluntary use until such time as a Hearing Conservation Program mandates its use)

Construction is inherently hazardous and for that reason the Mandate for Hard Hats and Steel Toed Safety Shoes will not require a JHA, WISH List. Specific tasks like using a drill, hammer, or saw where the likelihood of flying debris is present will also not require a WISH List simply to qualify a particular type of PPE for a standard everyday task. WISH List will be required when a non-routine task or new process is undertaken in which the proven results are unknown or when a blanket job-wide requirement is put into place above and beyond Hard Hats, Safety Glasses and Safety Shoes.

We will not share PPE which is designed to touch an employee's body. All damaged or worn out PPE will be removed from service and replaced as needed.

PPE training will be renewed as needed and at least annually thereafter.

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RESPIRATORY PROTECTION PROGRAM & POLICY

Reference: 29 CFR 1910.134; 1926.103

Policy

It is Gray & Becker policy that employees will be properly protected during the course of their employment from foreseeable safety, health, and environmental hazards.

It is with this intent that we have developed and enforce our Respiratory Protection Program. We will always attempt to control exposures with Engineering and Administrative Controls prior to assigning respiratory protection. The Safety Director will be the Program Administrator.

Job Assignment

Prior to work in a facility or at a job site, each job will be evaluated relative to potential exposure and respiratory system hazards. The task to be performed, the area in which we work, the chemicals/materials used by us or our clients, and the potential for accidental exposure will all be taken into account.

In the event employees are working at client facilities, all relative information will be retained.

Respirator Selection

Respiratory protection will be selected based on the potential contaminant. At minimum, a half-mask respirator with the proper filter attached will be utilized. All respiratory protection must be NIOSH approved. This selection will be documented. Gray & Becker will bear the cost of all respiratory equipment and supplies.

Change out schedule & End of Life indicator

Due to changes in job activities, a hazard assessment (see PPE Assessment) is performed for each job and, when appropriate, a respirator and proper cartridge will be assigned at that time. A change out schedule for each cartridge will be assigned at that time taking into account the type of cartridge, the material posing a respiratory hazard, and the length of exposure.

Employees experiencing difficulty breathing, break-through or respirator malfunction shall remove themselves from the affected area immediately. Anytime a filter change is required the respirator will be cleaned so that the inside is free of contamination.

Fit Testing & Training

All employees who may be required to wear respiratory protection will have a medical qualification done by a licensed health care practitioner, a fit test and instruction in the proper care, use, and limitations of their respirators.

A copy of the fit test record is attached to this policy for reference. A substitute fit test record may be used if provided by our Medical Provider or it the fit test is performed at a client facility.

Training will consist of but not be limited to:

Qualitative fit test such as isoamyl acetate or smoke to evaluate fit.

Procedure for care, storage, and use of the respirators. Employees issued Respirators are required to care and store the respirator and must be inspected prior to each donning.

Limitation of the respirator and signs of when filter change-out is required

Selection of various filtrations for specific and general contaminants.

Employees using half-face and full-face respirators which seal against their face must be clean shaven where the seal touches the skin. Employees wearing glasses may not wear normal glasses which break the full-face respirator seal. Employees required to wear full-face respirators and glasses must wear contacts or be provided with glasses designed for that brand and model of full-face respirator.

Medical surveillance procedures for employees in the respiratory protection program an overview of the human body, its respiratory system, and how various contaminants affect its functioning.

Specific procedures relating to various tasks which may be performed by employees

Respiratory training, fit testing and Medical Qualifications will be conducted prior to first use and at least annually thereafter for employees who are in the company's respiratory protection program.

Medical Surveillance

All employees required to wear respiratory protection in the performance of their duties shall be required to have a physical examination at least annually to ensure they are capable of wearing the assigned respiratory protection. That examination will include at least:

Medical history including past personal and occupational data

Smoking, drugs, and alcohol use history

Pulmonary history such as coughs, repetitive colds, bronchitis, etc.

Allergies and asthma history

The medical surveillance form will be provided by our Medical Provider and be in accordance with OSHA requirements. Physicals will be confidential, completed during work hours, with the employee able to discuss concerns and questions with the medical professional conducting the physical.

All medical records will be kept for 30 years beyond employment.

Client Facilities or Job Sites

In the event our employees are working at a client facility or on a job site where respiratory protection is required, site supervisors will compare the client program to our own. Based on the job at hand our company may choose to follow the client facilities respiratory protection program. Medical records, fit test records, and training records will be maintained by our company.

Gray & Becker Services, Inc. will not accept work where our employees must work in atmospheres which are Immediately Dangerous to Life and/or Health.

Respirator Qualitative Fit Test Record

Employee Name_____

Employee Job Function_____

Employee's Respirator_____

Respirator's NIOSH #_____

Date of Fit Test Procedure_____

Fit Test Technician: _____

1) **Employee Demonstrates Proper Donning of respirator Y or N**
2) **Have Employee wear any required Head or Face PPE and Don the Fit Test Hood.**
3) **Have the employee breath through mouth with tongue extended.**
4) **Technician to squeeze a minimum of 10 squeezes of Fit Test Solution into hood while employee continues to breathe normally through his/her mouth.**
5) **After 60 seconds, continue with another 10 squeezes (minimum) and have employee start deep breathing for 60 seconds.**
6) **Continue with squeezes and have employee turn his/her head from side to side for 60 seconds.**
7) **Continue with squeezes and have employee tilt head forward and backwards for 60 seconds.**
8) **Continue with squeezes and have employee read aloud the Rainbow Passage.**
9) **Continue with squeezes and have the employee bend over repeatedly at his /her waist for 60 seconds.**
10) **Finally complete fit test with squeezes and the employee breathing normally again.**
11) **To Complete have the employee demonstrate proper doffing of the respirator.**

This employee Passed Failed this Respirator Fit Test.

_____ _____

Signature of Fit Test Technician **Date**

Rainbow Passage (Needed for Fit Testing)

When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at the one end. People look, but no one ever finds it. When a man looks for something beyond reach, his friends say he is looking for the pot of gold at the end of the rainbow.

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Drug Free Workforce Policy

Subject: Policy on Drug and Alcohol and Our Drug Free Workforce

Policy: Drug use in the workplace is a danger to us all. It impairs the safety, health and welfare of all employees, promotes crime and lowers production and quality. Persons abusing drugs and alcohol cannot simply turn off and on their ability to control.

This Policy applies to all hourly and salaried employees, and is a condition of employment in accordance with Texas State Law and any labor and employment agreements. Sub-contractors must agree to abide by this policy unless they are governed by stricter policy. All employees and sub contractor must agree to these rules as set forth in Texas unless the state in which we are working has stricter protections for the company.

In compliance with the Texas Department of Insurance rules Gray & Becker Construction Services, LP's view on substance abuse is as follows:

Statement of Policy

Gray & Becker Construction Services, LP, (hereinafter referred to as the "Company" or "Gray & Becker") will not condone and will not tolerate any of the following workplace related behaviors by its employees:

A) The use of illegal drugs;
B) The use of alcohol;
C) The sale, purchase, manufacture, transfer, use or possession of any illicit drugs, or prescription drugs obtained without a valid prescription; or
D) The employee's presence at work under the influence of any drug (legal or illegal) or alcohol to the extent that job performance or safety may be affected.

The purpose of this Policy is to promote safety. All employees or applicants who are required testing for specific drugs and/or alcohol, based on established thresholds, as applicable under any law, regulation, or Policy; who violates this DFWP (hereinafter referred to as the "Policy") will be subject to sanctions up to and including termination of employment. The implementation of sanctions shall be at the sole discretion of the Company in compliance with applicable Policy or law.

The Company will appoint a Designated Employer Representative (DER) to administer this Policy. This individual may authorize other employees to receive drug and alcohol test results. All communications regarding the Policy must be done through the identified individual(s). Confidentiality will be maintained with no information be made available without a legitimate need to know.

Affected individuals (hereinafter referred to as "employee(s)", include all regular, full-time, part-time, and temporary workers; all officers, managers; all sub-contractors, while performing work for the Company, on or off Company properties; and individuals seeking employment, where applicable.

Gray & Becker Construction Services, LP recognizes alcohol is a legal substance which when abused is dangerous. Gray & Becker also recognizes times when alcohol may be present in the work environment. Such instances need to be properly sanctioned social functions and/or business meals with clients. If alcohol is approved for these events employees are still held to the standard of proper decorum. They may not operate a company vehicle or drive away from a social function if they are even slightly impaired. If supervisors or peers request them to stop and call for or accept a safe way home, they must fully comply or risk the consequences of violation of this policy.

Also, as Marijuana is becoming legal in some states, and may at some point become legal here in Texas and other states, Gray & Becker specifically prohibits employees from using Marijuana and then reporting for work under its influence. The presumptive level for Marijuana is significantly less than many other drugs and Marijuana may stay within someone's body for a much longer period of time compared to other drugs. If you test positive for Marijuana, please know that you have been warned, and it will carry the same consequences as any other drugs legal or illicit. Marijuana is still a scheduled narcotic by the United States Federal Drug Enforcement Agency and we will enforce the federal rule.

An employee's violation of this Policy will not ordinarily be reported to any law enforcement agency with the exception that all reasonable and necessary measures will be taken to assure the safety and security of all employees, the public and the Company. Law enforcement will be called on as required by any regulatory body or criminal statute, or in conjunction with a referral for criminal prosecution.

Testing Frequency and Patterns

General expectations of all drug and alcohol testing situations include: reporting at the designated testing location upon notification (within 2 hours if an off-site collection facility is used), providing the required specimen(s) within 2 hours, and full compliance with this Policy and the procedures used by the collection personnel and facilities. In all cases where employee safety may be an issue, the Company will provide transportation to and from the testing site.

Refusal to comply with the testing requirements, failure to provide the required valid specimen(s), adulteration, or substitution of a specimen will be considered a refusal to test. In the case of a lab reported dilution, a retest will be done and a second dilution will result in a refusal to test. Any such refusal shall be subject to immediate termination of employment or the cancellation of an offer of employment.

Gray & Becker will also not hire any person who has refused or failed another company's test without that person successfully completing a rehabilitation program compliant with Gray & Becker policy. During the employee's time with Gray & Becker Construction Services, LP, a employee may be required to submit to tests by their union or one of Gray & Becker clients in order to secure access to the job site or remain on said job site. All such tests are considered required by this policy and consequences remain the same for non-compliance.

Post-Offer, Pre-Employment or New Hire DFSP Testing

Effective immediately, upon implementation of this Policy, all applicants are subject to post-offer, pre-employment or new hire drug and alcohol testing conducted by a contractor selected by the Company. The Company will require a result of this testing prior to the employee performing any services for the Company. The Company will decline to extend an offer of regular employment to any applicant with a verified positive test result(s) to any tested substance, or any refusal to test and this applicant may not reapply for employment with the Company for a period of six months.

The applicant will be given a copy of the Company's Policy and the "Consent and Release Form." The interviewer will then give the applicant an opportunity to ask questions he/she may have concerning the Policy or the Consent, and obtain the applicant's signature on the Consent and Release Form.

Reasonable Suspicion Testing

Reasonable Suspicion Testing will be performed when a trained Company management official and/or supervisor determine that an employee may be under the influence of an unacceptable substance (i.e., drugs and/or alcohol). This testing may be ordered at any time after this Policy was originally put into effect, providing at least 30 days have passed since the original implementation date, not withstanding any subsequent revisions. The suspicions must be documented by a trained supervisor within 24 hours of the event and in no case later than the release of laboratory findings. These reasonable suspicions may be released to the Medical Review Officer (hereinafter referred to as "MRO") upon his/her request. The Reasonable Suspicions may be based upon:

Observable phenomena which may include, but are not limited to: direct observation of drug or alcohol use or possession; the physical symptoms of being under the influence of drugs and/or alcohol; the odor of alcoholic beverages or other prohibited substances.

An abnormal pattern of conduct or erratic behavior which may include deteriorating job performance, absenteeism, tardiness, recurrent accidents, flagrant or repeated violations of safety and/or other work rules, which cannot be attributed to other known factors.

Conviction of or plea (including no contest or *nolo contendre*) to a drug related offense, or the identification of an employee as the focus of a criminal investigation into illegal drug violations including use, possession, manufacturing or trafficking.

Newly discovered evidence that the employee has tampered with a previous drug or alcohol test.

Although reasonable suspicion testing does not require certainty, mere "hunches" are not sufficient to meet required standards. To address this, all supervisors will be trained in the recognition of drug and alcohol related signs and symptoms, and testing may only be requested by a supervisor which has been trained per this Policy. The trained supervisor may request the concurrence of a second person, preferably a second trained supervisor.

All employees are responsible for obtaining and providing a release to the Company, prior to performing their regular job duties, if they are placed on any medication that may impair their normal functioning. This release is known as a "Fit for Duty Slip" and must be signed by a licensed medical practitioner who has the employee under their care. The slip may not divulge the nature of the care or anything other than the employee is, or is not, "Fit for Duty" and any restrictions they must follow while working. The Company will attempt to find suitable assignments for the employee, but failing that, the employee will be placed on medical leave until such time as a suitable job becomes available or the employee is released for full-duty. The employee may use available permissive leave during this time, but otherwise will be on unpaid medical leave. All leaves will be recorded as "Family and Medical Leave Act" leaves, as applicable.

The first priority of the supervisor is to remove the suspected employee from the work environment. This shall be done to prevent the employee from causing injury to themselves or someone else.

A supervisor shall instruct the employee to accompany them to a private area away from coworkers and the public. If transportation is needed, the Company will provide transportation to and from whatever location is used. Should the employee attempt to drive or walk home after refusing a test or completing a reasonable suspicion test, the police will be called and given information regarding the employee's actions. When the employee is sent home he/she must call for a ride home. They may not drive, walk or be taken home by Company officials.

The employee will be paid for time off if test results come back negative. The employee will not be paid if any test is reported positive to the Company.

Post Accident Testing

An accident, for the purpose of this Policy, may include, but is not limited to: an unplanned, unexpected, or unintended negative event that occurs during the employee's workday and in relation to the Company's business. In addition to personnel, it may involve personal or business property/equipment or vehicles used in the performance of the employee's job.

Upon implementation of this Policy, post accident drug and alcohol testing is mandatory in all cases for all individuals who may have caused and contributed to an "on-the-job" accident, which meets any of the following criteria:

- A fatality;
- An Employee is involved in an employment related accident that causes bodily injury requiring off-site medical treatment of the employee or another person;
- An Employee is involved in an employment related accident that results in significant property damage, exceeding five hundred dollars; or
- An Employee is involved in an employment related vehicular accident that result in damage that exceeds one thousand dollars.
- An Employee involved in any of the above and is found to have violated company policy or published safety rule.

In accordance with the Texas Revised Code section known as the "Rebuttable Presumption" law, the Company will seek disallowance of a workers' compensation claim when an employee tests positive for alcohol at a level of .08% BAC, or above, or a controlled substance as specified in the Policy after a work related accident or injury. An employee may dispute or prove untrue the presumption (or belief) that alcohol or a controlled substance, not prescribed by the employee's physician, is the proximate cause (main reason) of the work related injury. The burden of proof is on the employee to prove that the presence of alcohol and or a controlled substance was not the proximate cause of the work related injury. An employee who tests positive or refuses to submit to a chemical test may be disqualified for compensation and benefits under the Workers' Compensation Act.

Any employee who is injured on the job and waits until some time later to seek off-site medical attention for that injury must secure from the medical provider a drug and alcohol test compliant with this Policy. It is the employee's responsibility to inform the provider of this Policy and to execute such forms as the provider may require and have the results of the test forwarded directly to the DER. It is the employee's responsibility to have these tests done and they should be done at the time of medical attention if at all possible. If the employee is refused a test by the medical provider they are to call 330-550-9205 for guidance.

In the event a hospital refuses or fails to provide an alcohol/drug test, the employee is to contact the employer if this occurs during hours of operation. If it occurs after hours of operation, the employee is to contact the lab at the phone number provided to them to arrange the test.

Specimen collection is to occur as soon as possible after a need has been determined, and any necessary medical attention has been rendered, in accordance with 1-4 above. Every reasonable effort shall be made to assure that the total elapsed time before a drug specimen has been collected does not exceed thirty-two (32) hours period. Alcohol testing will be performed within eight hours of the employee related incident to be applicable to the US DOT Protocols which all testing is to follow. Regardless of the time frames, alcohol and drug testing must be completed at

the initial medical treatment following an employment related injury, unless it involves a DOT regulated driver. DOT drivers are regulated by Part 382 of the Federal Motor Carrier Safety Regulations. (Although we do not have any DOT regulated vehicles or drivers, we will follow DOT Collection and Testing Protocols as they are considered the Gold Standard in the USA)

Any employee involved in the employment related accident expressly grants unto Company its officers and management, the right to request that attending medical personnel or collection personnel obtain appropriate specimens (breath/blood and or urine) for the purpose of conducting alcohol and or drug testing. All employees expressly grant unto the DER, access to all medical information that may be relevant in conducting a complete and thorough investigation of the employment related accident, to include but not limited to, a full medical report from the examining physician(s) or other health care providers.

The refusal of an employee to allow the collection of these specimens, any attempt to block the release of the results of any substance abuse tests taken, or failure to report a work related accident, will be considered and managed the same as a refusal to test.

Employees are specifically required to immediately file a First Report of Injury (FROI) with the Company for any injury related to their employment in compliance with our on-the-job injury Policy. All injuries must be reported immediately and no later than the date that they occurred. Immediately is defined as Notification within Minutes of being injured, not hours.

Employees are required to return to work following medical treatment unless reasonable suspicion exists from the Company on the employee's level of impairment or the medical practitioner fails to label them as "Fit for Duty."

Random Drug Testing

The Company has contracted with a collection contractor to perform the periodic selection of employees from the employment pool to be tested. This non-Company testing entity will ensure that all employees have an equal statistical likelihood of being selected for random testing if and when the company choses to do Random Testing. Random sampling levels for DOT regulated employees will comply with 49 CFR Part 40, as amended.

In order to implement mandatory random drug testing, the Company will provide employee identification information to the non-Company testing entity for use in the random selection database. The entity will, in turn, furnish the Company with a list of individuals to be tested for each selection period.

Follow Up Testing

Effective immediately, certain employees will be subject to follow-up testing prior to being permitted to return to work. Those employees who have previously tested positive for a prohibited substance(s) will be subject to no notice follow-up testing at any time for a period not to exceed two years from the date they returned to work. A minimum of four follow-up tests will be required within the first year of returning to work. A positive result on any follow-up test will result in the employee being immediately terminated from the Company for cause.

Other employees who may be subject to this testing are those individuals who have self reported a chemical or alcohol abuse problem, received substance abuse treatment and are released to return to work, and those who have been off work for more than thirty days. It may also be required for individuals who have been temporarily reassigned for safety reasons in order to return to their regular position.

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Drugs Tested / Cut-Off Levels

The testing procedures will seek to identify the presence of the following controlled substances that may be present: (a negative screening test, EMIT or other form of immunoassay is considered a negative test)

Drug Class	Screening Test Level	Confirmation Test Level	Confirmation Method
Amphetamines	500 ng/mL	250 ng/mL	GC/MS
Barbiturates	300 ng/mL	300 ng/mL	GC/MS
Benzodiazepines	300 ng/mL	300 ng/mL	GC/MS
Cocaine metabolites	150 ng/mL	100 ng/mL	GC/MS
Marijuana metabolites	50 ng/mL	15 ng/mL	GC/MS
Methadone	300 ng/mL	300 ng/mL	GC/MS
Opiates	2000 ng/mL	2000 ng/mL	GC/MS
Phencyclidine	25 ng/mL	25 ng/mL	GC/MS
Propoxyphene	300 ng/mL	300 ng/mL	GC/MS
MDMA/Ecstasy	500 ng/mL	250 ng/mL	GC/MS
6-Acetylmorphine	10 ng/mL	10 ng/mL	GC/MS
Methaqualone	300 ng/mL	200 ng/mL	GC/MS
Expanded Opiates/Synthetic Narcotics	300 ng/mL	300 ng/mL	GC/MS

These detection thresholds are consistent with available technology and have been established by the *Department of Health and Human Service* (DHHS) / the *Substance Abuse and Mental Health Services Administration* (SAMHSA) for each of the drug groups listed above. These detection thresholds will be used uniformly in the interpretation of all drug screen/drug confirmations, whether for post-offer, pre-employment or new hire examination; random examination; post-accident examination, reasonable suspicion examination; or follow-up examination. Only Department of Health and Human Services, DHHS/SAMHSA, certified laboratories will be utilized for drug confirmations. Screening and cut-off levels for DOT regulation employees will comply with 49 CFR Part 40, as amended.

Alcohol testing will be conducted by the contractor utilizing only certified equipment and/or testing methods and personnel. Alcohol concentrations exceeding 0.02% on the screening will require a breath alcohol confirmation test. A breath alcohol confirmation result equal to or greater than .04 grams per 210 liters of breath will be considered a verified positive result. In the event of an incident where an employee has a "whole blood" alcohol drawn at a medical treatment facility, a result equal to or greater than 0.04% shall be considered to be a verified positive result.

The Company also expressly reserves the right to add or delete substances on the list set forth in the "Drugs Tested / Cut-Off Levels" section of this Policy. These changes may be made if, in the Company's discretion, they become warranted by the changing nature of abused substances, or if mandated by changes in existing Federal, State or local regulations or legislation.

An individual that tests positive for drugs or self reports drug use:

- Within 7 days of the test result the employee must contact a Substance Abuse Professional and be scheduled for an evaluation. This appointment must be confirmed to the DER prior to the expiration of the 7 day period.
- Must comply with all treatments recommended by said Professional
- Must undergo a "return-to-work" drug test resulting in a negative test result prior to returning to the job and secure authorization to return to work from their SAP.
- Must receive a minimum of four (4) follow-up tests within the first year following the employee's return to work, with additional follow-up tests permitted for a period of up to two (2) years following the original positive test.
    - The initial one (1) year follow-up testing period has no statue of limitations and is based solely upon the date that the employee returns to work.
- DOT drivers are subject to provisions of Part 382 of the US DOT Federal Motor Carrier Safety Regulations

An individual that tests positive for alcohol or self reports suspected problems:

Test results for alcohol 0.02 Blood Alcohol Level or greater, but less than 0.04 BAL

- Shall not return to work until the employee's next scheduled duty period, but not less than 24 hours following the test. This may require more than one day off.
- Shall call for someone to take them home.
    - Discipline for this violation is discussed further into Policy.
    - DOT drivers are subject to provisions of Part 382 of the US DOT Federal Motor Carrier Safety Regulations

Test results for alcohol of 0.04 Blood Alcohol Level or higher:

- Within 7 days of the test result the employee must contact a Substance Abuse Professional and be scheduled for an evaluation. This appointment must be confirmed to the DER prior to the expiration of the 7 day period.
- Must comply with all recommendations of said Professional

- Must undergo a "Return-to-Duty" alcohol test resulting in a test level of less than 0.02% Blood Alcohol Content and secure authorization from SAP to Return to Work.
- Must be randomly tested as determined by the Company with no less than four (4) random tests for the first year after returning to work.
- DOT drivers are subject to provisions of Part 382 of the US DOT Federal Motor Carrier Safety Regulations

NOTE: Any employee using a prescribed medication which may impair the performance of job duties, either mental or motor physical functions, must have a "Fit for Duty" slip from their prescribing doctor showing that they are capable of performing assigned tasks. For the safety of all employees, the Company will consult with you and your physician to determine if a reassignment of duties is warranted. The Company will attempt to accommodate your needs by making an appropriate reassignment. However, if a reassignment is not possible, you will be placed on a temporary medical leave until released as "Fit for Duty" by the prescribing physician. The Company will not condone the inappropriate and/or misuse of legal prescriptions or over-the-counter drugs. It is also not the intent of this Policy for the Company to know what medical conditions and/or medication an employee is using. Physicians working with the Company to find suitable work for your limitation(s) will be encouraged to maintain Doctor/Patient confidentiality in regard to diagnosis and prescribed medications. Our intent is solely to ensure a safe work environment for you and your fellow employees.

Employees who are using marijuana with a valid prescription are <u>not</u> exempt from this policy in any way. The use of marijuana in any form, with or without a valid prescription, will be treated the same as the use of all other Schedule 1 controlled substances or illegal drugs. Employees using Schedule 1 controlled substances or illegal drugs, including marijuana with a valid prescription, are still subject to all provisions of this policy.

Specimen Collection Procedure

Drug and alcohol testing for the Company shall only be conducted by trained collection personnel who meet quality assurance and chain-of-custody standards for urine collection procedures, alcohol testing and strict confidentiality procedures for the certified lab. Breath testing instruments must be approved by DHHS and operators certified by the instrument manufacturer, or a certified training agency.

Any individual subject to testing under this Policy shall be permitted to provide urine specimens in private, but subject to controls designed to minimize invalidity in the testing process such as alteration or substitution of the specimen provided. In the event that the collector feels the collection process has been compromised, a witness void will be conducted utilizing a same gender witness, unless the witness is a licensed medical professional. Alcohol testing will likewise be done in an area that affords the individual privacy. In all cases, there will only be one individual tested at a time.

A. Employee's Rights Related to an Initial Positive Test Result:

In the event that an employee tests positive for any drugs or alcohol as prohibited in this Policy, the employee will be given an opportunity to explain the findings to the Medical Review Officer (MRO) prior to the issuance of a report of a positive test result to the Company.

Accordingly, upon receipt of a confirmed positive finding, the MRO shall contact, or attempt to contact, the employee by telephone or in person. If contact is made by the MRO, the MRO shall inform the employee of the positive findings and give the employee an opportunity to rebut or explain the findings.

The MRO can request information on recent medical history and on medication taken within the last thirty (30) days by the employee. In the event that the MRO finds support in the explanation offered by the employee, the employee may be asked to provide documentary evidence to support the employee's position (for example, the names of treating physicians, pharmacies where prescriptions have been filled, etc.). A failure on the part of the employee to provide such documentary evidence will result in the issuance of a positive test result report by the MRO with no attendant medical explanation. A medical disqualification of the employee will result.

If the employee fails to contact the MRO within three (3) days of having been instructed to do so, the MRO will issue a positive report to the Company. Since no contact with employee was possible, no medical explanation can be provided and the employee shall forego the right to offer a defense to the positive test result. A medical disqualification shall result, subject to re-test provisions set forth in the MRO's report.

B. Split Specimen

An employee wishing to request a re-test must do so within three (3) days of learning that the first test was positive. Employees will be required to pay for the costs of the re-test. The specimen will be shipped to a different DHHS/SAMHSA certified laboratory other than the one that analyzed the first specimen. Our MRO determines to which lab the split specimen will be sent and the request for split sample re-testing is made to this MRO when the employee is first contacted for an explanation. If the results come back negative, the Company will reimburse the employee for the costs of the test that the employee paid for prior to the test. The same paperwork and procedure protections used for the first test will be utilized for the split specimen. The collection agency that collects the initial screen is responsible to split the specimen. *A split specimen is not required for Pre-Employment testing*.

C. Report of Results

All positive lab test results will be reported to the MRO prior to the results being issued to the Company. The MRO will receive from the DHHS/SAMHSA testing laboratory a detailed report of the findings of the specimen. Each drug for which the individual was tested and alcohol will be listed along with the results of the testing. The Company will receive a sum-

mary report, and this report will indicate that the employee passed or failed the drug/alcohol test. Breath alcohol results will be made available immediately and not forwarded to the MRO unless requested by the MRO.

All of the above procedures are intended to be consistent with the most current guidelines for the Medical Review Officer that are published by the Federal Department of Health and Human Services.

D. Confidentiality

All parties to this Policy and program have only the interests of the employees in mind and therefore encourage any employee with a substance abuse problem to come forward and voluntarily accept our assistance program in dealing with this illness. An employee assistance program will provide guidance and direction for you during your recovery period. If you volunteer for help, the Company will make every reasonable effort to return you to work upon recovery. The Company will also take action to assure that your illness is handled in a confidential manner.

Any employee who self reports a problem with alcohol or drugs will be considered the same as a person who tests positive and will follow the same procedures as a person testing positive as set forth in this policy.

All actions taken under this Policy and program will be confidential and disclosed only to those with a 'Need to Know"; See page one.

The program will be in compliance with all federal, state and local laws and regulations. An employee's violation under the DFSP Policy shall not be reported to law enforcement officials unless required by a regulatory body or by criminal statute. Law enforcement authorities may be contacted and requested to come onto the Company's premises, when appropriate, in conjunction with a referral for criminal prosecution. This also includes employees attempting to drive after being asked for a chemical test without receiving a negative result and/or failing a chemical test.

When a test is required, the specimen will be identified by a code number – *Not By Name* – to insure confidentiality of the donor. Each specimen container will be properly labeled and made tamper proof. The donor must witness this procedure.

Unless an initial positive result is confirmed as positive, it shall be deemed negative and reported by the laboratory as such.

The handling and transportation of each specimen will be properly documented through strict chain-of-custody procedures.

The Company will bear the cost of all testing procedures with the exception of a positive retest. An employee that tests positive for any drug as prohibited herein has the right to have a retest done on the original split specimen. This retest may be authorized by the MRO only with the employee's request received within three (3) days of their notification of the positive result. The employee is responsible for the prepaid expense at the provider's current rate, and the testing will be preformed by a DHHS/SAMHSA certified laboratory of the MRO's choice. Retesting will not delay the report of the positive result to the Company and the result of the retest will also be released to the Company.

To protect the confidentiality of the employee, all records of drug and alcohol testing will be stored separate and apart from the employee's general personnel documents. Access to these records shall be limited to designated Company officials. The information contained in these files shall be utilized only to properly administer this Policy and to provide to auditing and certifying agencies for review as may be required. Those designated Company officials that shall have access to these records are charged with the responsibility of maintaining confidentiality of those records. Any breach of confidentiality with regard to said records will be a terminable offense. Any employee tested under this Policy has the right to review and/or receive a copy of their test results on file with the employer.

E. <u>Discipline</u>

1. Each employee will be required to sign a consent and chain of custody form, assuring proper documentation and accuracy. If an employee refuses to sign a consent form authorizing the test, employment by the Company will be terminated and the refusal will be treated the same as a refusal to test for Workers' Compensation issues.

2. No employee shall refuse to submit to a pre-employment, post-accident, reasonable suspicion, and/or follow-up test. Refusal will result in termination.

3. If the employee fails to comply with or complete the requirements of the rehabilitation program, or fails any post-rehabilitation or subsequent drug and alcohol test, the employee will be terminated.

4. Any employee attempting to manipulate the drug/alcohol testing process, such as trying to adulterate, modify or substitute a specimen will be terminated from employment. The use of masking agents is prohibited and is subject to termination. If dilution is inconclusive, a second test will be done. Two suspected dilutions resulting in invalid results will count as a refusal to test.

5. Any employee convicted of violating a criminal drug statute must inform the DER and Human Resource Manager of such conviction (including pleas of *no-contest or nolo-contendre*) within five (5) days of the conviction occurring. Fail-

ure to inform the Company subjects the employee to disciplinary action, up to and including, termination of employment.

6. An Employee that tests for alcohol between .02 and <.04% levels will:

    i. First Offense – Will be off work without pay for 24 hours.
        1. This may require more than one work day lost.
    ii. Second Offense – Will be suspended without pay for 3 days.
    iii. Third offense – Will be terminated from employment

    For the purpose of this #6 section, timeframes will be limited to a rolling one (1) year calendar.

    Contract employees, subcontractors, and any person not directly on the Company payroll will have their services terminated.

    Employees are subject to calling for a ride home should they test within this range.

7. Failure to report use of a mood altering prescribed medication that impairs the safety of the employee or others will be considered a positive test. They will be tested and regardless of outcome, the test is considered "positive".

8. Those employees, sub-contractors and others not directly on the Company payroll will have their services terminated for testing positive and may not reapply for readmission for a period of at least six months.

Rehabilitation

The Company will grant a one (1) time only unpaid leave of absence so that an employee can participate in a medically recognized rehabilitation program. Until such time as the Company is able to provide an in-house Employee Assistance Program (EAP), the Company will assist employees in obtaining information concerning providers of assistance services and will update this information as changes are brought to our attention. The Company will assist the employee in determining the coverage provided for these services by their insurance, as applicable. In those cases where an employee successfully completes a mandated rehabilitation program, the Company shall retain the right to perform no-notice follow-up drug and/or alcohol testing as recommended by the treating substance abuse professional and as agreed to in the employee's return-to-work agreement. Any refusal by the employee to undergo required follow-up drug or alcohol testing will result in their immediate termination for cause.

Providing employment levels mandate participation in Family Medical Leave Act; all leaves grants under the DFSP provisions will run concurrent with FMLA.

Termination Notices

Generally, any release of information related to drug and alcohol testing and the results of that testing require the informed consent of the individual. In those cases where drug and alcohol testing results in the termination of an employee, all termination notices will list "Misconduct" as the reason for termination. Termination shall be "For Cause", and may limit the individual's rights to unemployment or workers' compensation eligibility. However, suspensions, leaves of absences, or terminations based on violations of this Policy may require that this information be presented as evidence for the Company in actions related to benefit payments without being considered a violation of confidentiality.

Education

The Company recognizes the pervasive nature of substance abuse in today's society and desires to provide its employees with information pertaining to this problem. As such, all employees will be required to participate in the Company-sponsored education programs. These programs will be provided for all employees and attendance shall be mandatory.
All employees will take part in up to one (1) hour initial training, within eight (8) weeks of hire on the policy, covering the disease model for alcohol and drugs, signs and symptoms of substance use/abuse, and the effects of commonly used drugs in the workplace. Additionally, all employees will be required to attend annually up to one (1) hour of refresher training.

All supervisors will receive an initial two (2) hours of informational, problem recognition, policy administration and skill building training, and will also be included in up to one (1) hour of employee training. New supervisors will receive at least two (2) hours of initial training within eight (8) weeks of promotion or hire into the position and prior to being involved in testing responsibilities. All supervisors will then receive up to two (2) hours of supervisor refresher/update training and participate in up to one (1) hour of employee annual refresher training.

Administration

The Designated Employer Representative (DER) will administer this program. If records are stored in HR, they must be stored separately from any other employee records. All records are to be secured when not under direct supervision. Only the DER and other authorized individuals are permitted to receive test results. All trained supervisors are permitted to refer employees for reasonable suspicion testing and post-accident testing.

Exceptions

To the extent federal law and regulations and/or state law and regulations mandate more stringent requirements, including but not limited to drug and alcohol testing procedures, said federal and/or state law and regulations will apply and supersede the tests and procedures outlined in this

Policy above. To the extent the Policy sets forth a more stringent standard, then, the more stringent standard in the Policy shall apply.

EMPLOYEE AFFIRMATION

Gray & Becker's will provide a Drug Free Safety Program to its employees in compliance with standards set forth by the state of Texas and US DOT as applicable. In addition, employees will receive on-going education about the Company's DFSP and the dangers of drug and alcohol abuse. The Company will also provide supervisory training to assist in identifying and addressing illegal drug and alcohol use by employees.

By signing below, the undersigned certifies that they have:

1) Read and/or have had read to them this Policy and agree to abide by its full terms.
2) Read and/or have had read to them and understand the Consequences of :
   a. Being suspected to be under the influence of alcohol and/or drugs;
   b. Being asked to submit to a drug and/or alcohol test(s);
   c. Refusing or Failing to get the required test(s) following an injury requiring off-site medical attention or being asked to subject to the test(s) by a supervisor under reasonable suspicion circumstances;
   d. Failing to abide by rehabilitation program requirements and or failing a follow-up test.
3) Agreed to make a good faith effort to continue to maintain a drug and alcohol free workplace.
4) Been provided with a written copy of this Policy.
5) Understand the consequences of Rebuttable Presumption and the Texas Department of Insurance and Department of Job and Family Services.
6) Have had a full opportunity to ask questions and have received any needed answers.

_____
Name (PRINTED)

_____ _____
Signature Date Signed

_____ _____
Witness Signature Date Signed

CONSENT & RELEASE FORM FOR EMPLOYEES / APPLICANTS

I, _____(Applicant or Employee), as an employee/applicant of the Company, hereby acknowledge that the Company's Policy requires me to submit to urine drug testing and/or breath alcohol testing.

I further understand that the purpose of this analysis is to determine or rule out the presence of non-prescribed or prohibited dangerous controlled substances in my system.

I hereby freely and voluntarily consent to this request for a urine sample and/or breath alcohol test, and agree to participate in the testing program.

I hereby and herewith release the Company, its employees, agents and contractors from any and all liability whatsoever arising from this request for testing, from the actual testing procedures, and from decisions made concerning my application for employment, or continuation of employment based upon results from said testing.

I agree to cooperate in all aspects of the testing program.

I hereby authorize the release of my drug and/or alcohol test results to the contractor's Medical Review Officer (MRO), and/or to the Company's examining physician, as provided by the Company's Policy.

I understand that a positive test result may affect my ability to collect benefits associated with workers' compensation and unemployment insurance coverage.

I further acknowledge that the Company has provided an opportunity to ask questions related to its drug and alcohol program and that all my questions have been answered.

Employee/Applicant (PRINT NAME) _____

Employee/Applicant Signature_____

Witness (PRINT NAME) _____

Witness Signature_____

Date of Signatures_____

Scaffold Safety Policy

REF: 29-CFR-1926.450-.454

PURPOSE

The purpose of this safety policy and procedure is to establish guidelines for the protection of Gray & Becker Construction Services, LP employees who work on scaffold work surfaces.

Policy

Scaffolds shall be erected, moved, dismantled, or altered only under the supervision of a competent person and will have guardrails and toe boards installed. These measures will be implemented to minimize hazards and to ensure the safety of employees and the public.

RESPONSIBILITIES

It is the responsibility of each Estimator, Project Manager, Project Superintendent, and Foreman to ensure implementation of Gray & Becker Construction Services, LP's safety policy and procedure on Scaffolds. It is also the responsibility of each Gray & Becker employee to report immediately any unsafe act or condition to his or her supervisor.

PROCEDURE

This section provides applicable definitions, establishes general provisions, and identifies specific responsibilities required by Gray & Becker Construction Services, LP's safety policy and procedure on Scaffolds.

DEFINITIONS

1. **Adjustable suspension scaffold** means a suspension scaffold equipped with a hoist(s) that can be operated by an employee(s) on the scaffold.
2. **Bearer (putlog)** means a horizontal transverse scaffold member (which may be supported by ledgers or runners) upon which the scaffold platform rests and which joins scaffold uprights, posts, poles, and similar members.
3. **Boatswains' chair** means a single-point adjustable suspension scaffold consisting of a seat or sling designed to support one employee in a sitting position.
4. **Body belt (safety belt)** means a strap with means both for securing it about the waist and for attaching it to a lanyard, lifeline, or deceleration device.
5. **Body harness** means a design of straps which may be secured about the employee in a manner to distribute the fall arrest forces over at least the thighs,

pelvis, waist, chest and shoulders, with means for attaching it to other components of a personal fall arrest system.

6. **Brace** means a rigid connection that holds one scaffold member in a fixed position with respect to another member, or to a building or structure.

7. **Bricklayers' square scaffold** means a supported scaffold composed of framed squares which support a platform.

8. **Carpenters' bracket scaffold** means a supported scaffold consisting of a platform supported by brackets attached to building or structural walls.

9. **Catenary scaffold** means a suspension scaffold consisting of a platform supported by two essentially horizontal and parallel ropes attached to structural members of a building or other structure. Additional support may be provided by vertical pickups.

10. **Chimney hoist** means a multi-point adjustable suspension scaffold used to provide access to work inside chimneys. (See "Multi-point adjustable suspension scaffold".)

11. **Cleat** means a structural block used at the end of a platform to prevent the platform from slipping off its supports. Cleats are also used to provide footing on sloped surfaces such as crawling boards.

12. **Competent person** means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

13. **Continuous run scaffold (Run scaffold)** means a two-point or multi-point adjustable suspension scaffold constructed using a series of interconnected braced scaffold members or supporting structures erected to form a continuous scaffold.

14. **Coupler** means a device for locking together the tubes of a tube and coupler scaffold.

15. **Crawling board (chicken ladder)** means a supported scaffold consisting of a plank with cleats spaced and secured to provide footing, for use on sloped surfaces such as roofs.

16. **Deceleration device** means any mechanism, such as a rope grab, rip-stitch lanyard, specially-woven lanyard, tearing or deforming lanyard, or automatic self-retracting lifeline lanyard, which dissipates a substantial amount of energy during a fall arrest or limits the energy imposed on an employee during fall arrest.

17. **Double pole (independent pole) scaffold** means a supported scaffold consisting of a platform(s) resting on cross beams (bearers) supported by ledgers and a double row of uprights independent of support (except ties, guys, braces) from any structure.

18. **Equivalent** means alternative designs, materials or methods to protect against a hazard which the employer can demonstrate will provide an equal or greater degree of safety for employees than the methods, materials or designs specified in the standard.

19. **Exposed power lines** means electrical power lines which are accessible to employees and which are not shielded from contact. Such lines do not include extension cords or power tool cords.

20. **Eye or Eye splice** means a loop with or without a thimble at the end of a wire rope.

21. **Fabricated decking and planking** means manufactured platforms made of wood (including laminated wood, and solid sawn wood planks), metal or other materials.

22. **Fabricated frame scaffold (tubular welded frame scaffold)** means a scaffold consisting of a platform(s) supported on fabricated end frames with integral posts, horizontal bearers, and intermediate members.

23. **Failure** means load refusal, breakage, or separation of component parts. Load refusal is the point where the ultimate strength is exceeded.

24. **Float (ship) scaffold** means a suspension scaffold consisting of a braced platform resting on two parallel bearers and hung from overhead supports by ropes of fixed length.

25. **Form scaffold** means a supported scaffold consisting of a platform supported by brackets attached to formwork.

26. **Guardrail system** means a vertical barrier, consisting of, but not limited to, top rails, Mid-rails, and posts, erected to prevent employees from falling off a scaffold platform or walkway to lower levels.

27. **Hoist** means a manual or power-operated mechanical device to raise or lower a suspended scaffold.

28. **Horse scaffold** means a supported scaffold consisting of a platform supported by construction horses (saw horses). Horse scaffolds constructed of metal are sometimes known as trestle scaffolds.

29. **Independent pole scaffold (see "Double pole scaffold")**.

30. **Interior hung scaffold** means a suspension scaffold consisting of a platform suspended from the ceiling or roof structure by fixed length supports.

31. **Ladder jack scaffold** means a supported scaffold consisting of a platform resting on brackets attached to ladders.

32. **Ladder stand** means a mobile, fixed-size, self-supporting ladder consisting of a wide flat tread ladder in the form of stairs.

33. **Landing** means a platform at the end of a flight of stairs.

34. **Large area scaffold** means a pole scaffold, tube and coupler scaffold, systems scaffold, or fabricated frame scaffold erected over substantially the entire work area. For example: a scaffold erected over the entire floor area of a room.

35. **Lean-to scaffold** means a supported scaffold which is kept erect by tilting it toward and resting it against a building or structure.

36. **Lifeline** means a component consisting of a flexible line that connects to an anchorage at one end to hang vertically (vertical lifeline), or that connects to anchorages at both ends to stretch horizontally (horizontal lifeline), and which serves as a means for connecting other components of a personal fall arrest system to the anchorage.

37. **Lower levels** means areas below the level where the employee is located and to which an employee can fall. Such areas include, but are not limited to, ground levels, floors, roofs, ramps, runways, excavations, pits, tanks, materials, water, and equipment.

38. **Masons' adjustable supported scaffold (see "Self-contained adjustable scaffold").**

38. **Masons' multi-point adjustable suspension scaffold** means a continuous run suspension scaffold designed and used for masonry operations.

39. **Maximum intended load** means the total load of all persons, equipment, tools, materials, transmitted loads, and other loads reasonably anticipated to be applied to a scaffold or

40. Scaffold component at any one time.

41. **Mobile scaffold** means a powered or unpowered, portable, caster or wheel-mounted supported scaffold.

42. **Multi-level suspended scaffold** means a two-point or multi-point adjustable suspension scaffold with a series of platforms at various levels resting on common stirrups.

43. **Multi-point adjustable suspension scaffold** means a suspension scaffold consisting of a platform(s) which is suspended by more than two ropes from overhead supports and equipped with means to raise and lower the platform to desired work levels. Such scaffolds include chimney hoists.

44. **Needle beam scaffold** means a platform suspended from needle beams.

45. **Open sides and ends** means the edges of a platform that are more than 14 inches away horizontally from a sturdy, continuous, vertical surface (such as a building wall) or a sturdy, continuous horizontal surface (such as a floor), or a point of access. Exception: For plastering and lathing operations the horizontal threshold distance is 18 inches...

46. **Outrigger** means the structural member of a supported scaffold used to increase the base width of a scaffold in order to provide support for and increased stability of the scaffold.

47. **Outrigger beam (Thrustout)** means the structural member of a suspension scaffold or outrigger scaffold which provides support for the scaffold by extending the scaffold point of attachment to a point out and away from the structure or building.

48. **Outrigger scaffold** means a supported scaffold consisting of a platform resting on outrigger beams (thrustouts) projecting beyond the wall or face of the building or structure, the inboard ends of which are secured inside the building or structure.

49. **Overhand bricklaying** means the process of laying bricks and masonry units such that the surface of the wall to be jointed is on the opposite side of the wall from the mason, requiring the mason to lean over the wall to complete the work. It includes mason tending and electrical installation incorporated into the brick wall during the overhand bricklaying process.

50. **Personal fall arrest system** means a system used to arrest an employee's fall. It consists of an anchorage, connectors, a body belt or body harness and may include a lanyard, deceleration device, lifeline, or combinations of these.

51. **Platform** means a work surface elevated above lower levels. Platforms can be constructed using individual wood planks, fabricated planks, fabricated decks, and fabricated platforms.

52. **Pole scaffold** (see definitions for "Single-pole scaffold" and "Double (independent) pole scaffold").

53. **Power operated hoist** means a hoist which is powered by other than human energy.

54. **Pump jack scaffold** means a supported scaffold consisting of a platform supported by vertical poles and movable support brackets.

55. **Qualified** means one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his/her ability to solve or resolve problems related to the subject matter, the work, or the project.

56. **Rated load** means the manufacturer's specified maximum load to be lifted by a hoist or to be applied to a scaffold or scaffold component.

57. **Repair bracket scaffold** means a supported scaffold consisting of a platform supported by brackets which are secured in place around the circumference or perimeter of a chimney, stack, tank or other supporting structure by one or more wire ropes placed around the supporting structure.

58. **Roof bracket scaffold** means a rooftop supported scaffold consisting of a platform resting on angular-shaped supports.

59. **Runner (ledger or ribbon)** means the lengthwise horizontal spacing or bracing member which may support the bearers.

60. **Scaffold** means any temporary elevated platform (supported or suspended) and its supporting structure (including points of anchorage), used for supporting employees or materials or both.

61. **Self-contained adjustable scaffold** means a combination supported and suspension scaffold consisting of an adjustable platform(s) mounted on an independent supporting frame(s) not a part of the object being worked on, and which is equipped with a means to permit the raising and lowering of the platform(s). Such systems include rolling roof rigs, rolling outrigger systems, and some masons' adjustable supported scaffolds.

62. **Shore scaffold** means a supported scaffold which is placed against a building or structure and held in place with props.

63. **Single-point adjustable suspension scaffold** means a suspension scaffold consisting of a platform suspended by one rope from an overhead support and equipped with means to permit the movement of the platform to desired work levels.

64. **Single-pole scaffold** means a supported scaffold consisting of a platform(s) resting on bearers, the outside ends of which are supported on runners secured to a single row of posts or uprights, and the inner ends of which are supported on or in a structure or building wall.

65. **Stair tower (Scaffold stairway/tower)** means a tower comprised of scaffold components and which contains internal stairway units and rest platforms. These towers are used to provide access to scaffold platforms and other elevated points such as floors and roofs.

66. **Stall load** means the load at which the prime-mover of a power-operated hoist stalls or the power to the prime-mover is automatically disconnected.

67. **Step, platform, and trestle ladder scaffold** means a platform resting directly on the rungs of step ladders or trestle ladders.

68. **Stilts** means a pair of poles or similar supports with raised footrests, used to permit walking above the ground or working surface.

69. **Stone setters' multi-point adjustable suspension scaffold** means a continuous run suspension scaffold designed and used for stone setters' operations.

70. **Supported scaffold** means one or more platforms supported by outrigger beams, brackets, poles, legs, uprights, posts, frames, or similar rigid support.

71. **Suspension scaffold** means one or more platforms suspended by ropes or other non-rigid means from an overhead structure(s).

72. **System scaffold** means a scaffold consisting of posts with fixed connection points that accept runners, bearers, and diagonals that can be interconnected at predetermined levels.

73. **Tank builders' scaffold** means a supported scaffold consisting of a platform resting on brackets that are either directly attached to a cylindrical tank or attached to devices that are attached to such a tank.

74. **Top plate bracket scaffold** means a scaffold supported by brackets that hook over or are attached to the top of a wall. This type of scaffold is similar to carpenters' bracket scaffolds and form scaffolds and is used in residential construction for setting trusses.

75. **Tube and coupler scaffold** means a supported or suspended scaffold consisting of a platform(s) supported by tubing, erected with coupling devices connecting uprights, braces, bearers, and runners.

39. Tubular welded frame scaffold (see "Fabricated frame scaffold").

76. **Two-point suspension scaffold (swing stage)** means a suspension scaffold consisting of a platform supported by hangers (stirrups) suspended by two ropes from overhead supports and equipped with means to permit the raising and lowering of the platform to desired work levels.

77. **Unstable objects** means items whose strength, configuration, or lack of stability may allow them to become dislocated and shift and therefore may not properly support the loads imposed on them. Unstable objects do not constitute a safe base support for scaffolds, platforms, or employees. Examples include, but are not limited to, barrels, boxes, loose brick, and concrete blocks.

78. **Vertical pickup** means a rope used to support the horizontal rope in catenary scaffolds.

79. **Walkway** means a portion of a scaffold platform used only for access and not as a work level.

80. **Window jack scaffold** means a platform resting on a bracket or jack which projects through a window opening.

TRAINING

Affected employees will receive instruction on the particular types of scaffolds which they are to use. Training should focus on proper erection, handling, use, inspection, and care of the scaffolds. Training must also include the installation of fall protection, guardrails, and the proper use and care of fall arrest equipment.

This training should be done upon initial job assignment. Retraining shall be done when job conditions change. Periodic refresher training shall be done at the discretion of the Superintendent or Safety Director

Designated “Competent Persons” will receive additional training regarding the selection of scaffolds, recognition of site conditions, and recognition of scaffold hazards, protection of exposed personnel and public, repair and replacement options, and requirements of standards.

CAPACITY

Except as provided in the following four paragraphs and this Fall Protection section, each scaffold and scaffold component shall be capable of supporting, without failure, its own weight and at least 4 times the maximum intended load applied or transmitted to it.

Scaffolds shall be designed by a qualified person and shall be constructed and loaded in accordance with that design. Non-mandatory Appendix A to this policy contains examples of criteria that will enable us to comply with this section.

SCAFFOLD PLATFORM CONSTRUCTION

1. Each platform on all working levels of scaffolds shall be fully planked or decked between the front uprights and the guardrail supports as follows:

2. Each platform unit (e.g., scaffold plank, fabricated plank, fabricated deck, or fabricated platform) shall be installed so that the space between adjacent units and the space between the platform and the uprights is no more than 1 inch wide, except where the employer can demonstrate that a wider space is necessary (for example, to fit around uprights when side brackets are used to extend the width of the platform).
3. Where the employer makes the demonstration provided for in this section, the platform shall be planked or decked as fully as possible and the remaining open space between the platform and the uprights shall not exceed 9 1/2 inches.
4. Exception to above paragraph: The requirement in the above paragraph to provide full planking or decking does not apply to platforms used solely as walkways or solely by employees performing scaffold erection or dismantling. In these situations, only the planking that the employer establishes is necessary to provide safe working conditions is required.
5. Except as provided in paragraphs below in this section, each scaffold platform and walkway shall be at least 18 inches wide.
6. Each ladder jack scaffold, top plate bracket scaffold, roof bracket scaffold, and pump jack scaffold shall be at least 12 inches wide. There is no minimum width requirement for boatswains' chairs.
7. Note : Pursuant to an administrative stay effective November 29, 1996 and published in the Federal Register on November 25, 1996, the requirement that roof bracket scaffolds be at least 12 inches wide is stayed until November 25, 1997 or until rule making regarding the minimum width of roof bracket scaffolds has been completed, whichever is later. As of 04-01-2012 Still No Decision.
8. Where scaffolds must be used in areas that the employer can demonstrate are so narrow that platforms and walkways cannot be at least 18 inches wide, such platforms and walkways shall be as wide as feasible, and employees on those platforms and walkways shall be protected from fall hazards by the use of guardrails and/or personal fall arrest systems.
9. Except as provided in this section, the front edge of all platforms shall not be more than 14 inches from the face of the work, unless guardrail systems are erected along the front edge and/or personal fall arrest systems protect employees from falling.
10. The maximum distance from the face for outrigger scaffolds shall be 3 inches;
11. The maximum distance from the face for plastering and lathing operations shall be 18 inches.

12. Each end of a platform unless cleated or otherwise restrained by hooks or equivalent means, shall extend over the centerline of its support at least 6 inches.
13. Each end of a platform 10 feet or less in length shall not extend over its support more than 12 inches unless the platform is designed and installed so that the cantilevered portion of the platform is able to support employees and/or materials without tipping, or has guardrails which block employee access to the cantilevered end.
14. Each platform greater than 10 feet in length shall not extend over its support more than 18 inches, unless it is designed and installed so that the cantilevered portion of the platform is able to support employees without tipping, or has guardrails which block employee access to the cantilevered end.
15. On scaffolds where scaffold planks are abutted to create a long platform, each abutted end shall rest on a separate support surface. This provision does not preclude the use of common support members, such as "T" sections, to support abutting planks, or hook on platforms designed to rest on common supports.
16. On scaffolds where platforms are overlapped to create a long platform, the overlap shall occur only over supports, and shall not be less than 12 inches unless the platforms are nailed together or otherwise restrained to prevent movement.
17. At all points of a scaffold where the platform changes direction, such as turning a corner, any platform that rests on a bearer at an angle other than a right angle shall be laid first, and platforms which rest at right angles over the same bearer shall be laid second, on top of the first platform.
18. Wood platforms shall not be covered with opaque finishes, except that platform edges may be covered or marked for identification. Platforms may be coated periodically with wood preservatives, fire-retardant finishes, and slip-resistant finishes; however, the coating may not obscure the top or bottom wood surfaces.
19. Scaffold components manufactured by different manufacturers shall not be intermixed unless the components fit together without force and the scaffold's structural integrity is maintained by the user. Scaffold components manufactured by different manufacturers shall not be modified in order to intermix them unless a competent person determines the resulting scaffold is structurally sound.
20. Scaffold components made of dissimilar metals shall not be used together unless a competent person has determined that galvanic action will not

reduce the strength of any component to a level below that required by paragraph (a)(1) of this section.

Criteria for supported scaffolds

1. Supported scaffolds with a height to base width (including outrigger supports, if used) ratio of more than four to one (4:1) shall be restrained from tipping by guying, tying, bracing, or equivalent means, as follows:
2. Guys, ties, and braces shall be installed at locations where horizontal members support both inner and outer legs.
3. Guys, ties, and braces shall be installed according to the scaffold manufacturer's recommendations or at the closest horizontal member to the 4:1 height and be repeated vertically at locations of horizontal members every 20 feet or less thereafter for scaffolds 3 feet wide or less, and every 26 feet or less thereafter for scaffolds greater than 3 feet wide. The top guy, tie or brace of completed scaffolds shall be placed no further than the 4:1 height from the top. Such guys, ties and braces shall be installed at each end of the scaffold and at horizontal intervals not to exceed 30 feet (measured from one end [not both] towards the other).
4. Ties, guys, braces, or outriggers shall be used to prevent the tipping of supported scaffolds in all circumstances where an eccentric load, such as a cantilevered work platform, is applied or is transmitted to the scaffold.
5. Supported scaffold poles, legs, posts, frames, and uprights shall bear on base plates and mud sills or other adequate firm foundation.
6. Footings shall be level, sound, rigid, and capable of supporting the loaded scaffold without settling or displacement.
7. Unstable objects shall not be used to support scaffolds or platform units. This includes cinder blocks, boxes, barrels, and the like.
8. Unstable objects shall not be used as working platforms.
9. Front-end loaders and similar pieces of equipment shall not be used to support scaffold platforms unless they have been specifically designed by the manufacturer for such use.
10. Fork-lifts shall not be used to support scaffold platforms unless the entire platform is attached to the fork and the fork-lift is not moved horizontally while the platform is occupied.
11. Supported scaffold poles, legs, posts, frames, and uprights shall be plumb and braced to prevent swaying and displacement.

ACCESS

1. This paragraph applies to scaffold access for all employees. Access requirements for employees erecting or dismantling supported scaffolds are specifically addressed later in this section.
2. When scaffold platforms are more than 2 feet above or below a point of access, portable ladders, hook-on ladders, attachable ladders, stair towers (scaffold stairways/towers), stairway-type ladders (such as ladder stands), ramps, walkways, integral prefabricated scaffold access, or direct access from another scaffold, structure, personnel hoist, or similar surface shall be used. Cross braces shall not be used as a means of access.
3. Portable, hook-on, and attachable ladders (Additional requirements for the proper construction and use of portable ladders are contained in Stairways and Ladders policy:
4. Portable, hook-on, and attachable ladders shall be positioned so as not to tip the scaffold;
5. Hook-on and attachable ladders shall be positioned so that their bottom rung is not more than 24 inches above the scaffold supporting level;
6. When hook-on and attachable ladders are used on a supported scaffold more than 35 feet high, they shall have rest platforms at 35-foot maximum vertical intervals.
7. Hook-on and attachable ladders shall be specifically designed for use with the type of scaffold used;
8. Hook-on and attachable ladders shall have a minimum rung length of 11 1/2 inches; and
9. Hook-on and attachable ladders shall have uniformly spaced rungs with a maximum spacing between rungs of 16 3/4 inches.
10. Stairway-type ladders shall:
11. Be positioned such that their bottom step is not more than 24 inches above the scaffold supporting level;
12. Be provided with rest platforms at 12 foot maximum vertical intervals;
13. Have a minimum step width of 16 inches, except that mobile scaffold stairway-type ladders shall have a minimum step width of 11 1/2 inches; and
14. Have slip-resistant treads on all steps and landings.
15. Stair towers (scaffold stairway/towers) shall be positioned such that their bottom step is not more than 24 inches above the scaffold supporting level.

16. A stair rail consisting of a top rail and a mid rail shall be provided on each side of each scaffold stairway.
17. The top rail of each stair rail system shall also be capable of serving as a handrail, unless a separate handrail is provided.
18. Handrails, and top rails that serve as handrails, shall provide an adequate handhold for employees grasping them to avoid falling.
19. Stair rail systems and handrails shall be surfaced to prevent injury to employees from punctures or lacerations, and to prevent snagging of clothing.
20. The ends of stair rail systems and handrails shall be constructed so that they do not constitute a projection hazard.
21. Handrails, and top rails that are used as handrails, shall be at least 3 inches from other objects.
22. Stair rails shall be not less than 28 inches or more than 37 inches from the upper surface of the stair rail to the surface of the tread, in line with the face of the riser at the forward edge of the tread.
23. A landing platform at least 18 inches wide by at least 18 inches long shall be provided at each level.
24. Each scaffold stairway shall be at least 18 inches wide between stair rails.
25. Treads and landings shall have slip-resistant surfaces.
26. Stairways shall be installed between 40 degrees and 60 degrees from the horizontal.
27. Guardrails meeting the requirements of this section shall be provided on the open sides and ends of each landing.
28. Riser height shall be uniform, within 1/4 inch, for each flight of stairs. Greater variations in riser height are allowed for the top and bottom steps of the entire system, not for each flight of stairs.
29. Tread depth shall be uniform, within 1/4 inch, for each flight of stairs.
30. Ramps and walkways.
31. Ramps and walkways 6 feet or more above lower levels shall have guardrail systems which comply with Fall Protection Policy;
32. No ramp or walkway shall be inclined more than a slope of one (1) vertical to three (3) horizontal (20 degrees above the horizontal).
33. If the slope of a ramp or a walkway is steeper than one (1) vertical in eight (8) horizontal, the ramp or walkway shall have cleats not more than fourteen (14) inches apart which are securely fastened to the planks to provide footing.

34. Integral prefabricated scaffold access frames shall:
35. Be specifically designed and constructed for use as ladder rungs;
36. Have a rung length of at least 8 inches;
37. Not be used as work platforms when rungs are less than 11 1/2 inches in length, unless each affected employee uses fall protection, or a positioning device, which complies with Fall Protection rules.
38. Be uniformly spaced within each frame section;
39. Be provided with rest platforms at 35-foot maximum vertical intervals on all supported scaffolds more than 35 feet high; and
40. Have a maximum spacing between rungs of 16 3/4 inches. Non-uniform rung spacing caused by joining end frames together is allowed, provided the resulting spacing does not exceed 16 3/4 inches.
41. Steps and rungs of ladder and stairway type access shall line up vertically with each other between rest platforms.
42. Direct access to or from another surface shall be used only when the scaffold is not more than 14 inches horizontally and not more than 24 inches vertically from the other surface.
43. Effective September 2, 1997, access for employees erecting or dismantling supported scaffolds shall be in accordance with the following:
44. Gray & Becker shall provide safe means of access for each employee erecting or dismantling a scaffold where the provision of safe access is feasible and does not create a greater hazard. The Company shall have a competent person determine whether it is feasible or would pose a greater hazard to provide, and have employees use a safe means of access. This determination shall be based on site conditions and the type of scaffold being erected or dismantled.
45. Hook-on or attachable ladders shall be installed as soon as scaffold erection has progressed to a point that permits safe installation and use.
46. When erecting or dismantling tubular welded frame scaffolds, (end) frames, with horizontal members that are parallel, level and are not more than 22 inches apart vertically may be used as climbing devices for access, provided they are erected in a manner that creates a usable ladder and provides good hand hold and foot space.
47. Cross braces on tubular welded frame scaffolds shall not be used as a means of access or egress.

USE

1) Scaffolds and scaffold components shall not be loaded in excess of their maximum intended loads or rated capacities, whichever is less.
2) The use of shore or lean-to scaffolds is prohibited.
3) Scaffolds and scaffold components shall be inspected for visible defects by a competent person before each work shift, and after any occurrence which could affect a scaffold's structural integrity.
4) Any part of a scaffold damaged or weakened such that its strength is less than that required shall be immediately repaired or replaced, braced, or removed from service until repaired. If not immediately addressed or removed the scaffold shall be tagged as out of service and access devices such as ladders or stair shall be blocked or removed.
5) Scaffolds shall not be moved horizontally while employees are on them, unless they have been designed by a registered professional engineer specifically for such movement or, for mobile scaffolds.
6) The clearance between scaffolds and power lines shall be as follows: Scaffolds shall not be erected, used, dismantled, altered, or moved such that they or any conductive material handled on them might come closer to exposed and energized power lines than as follows:

*Insulated Lines

Voltage	Minimum distance	Alternatives
Less than 300 volts.	3 feet (0.9 m)	
300 volts to 50 kv.	10 feet (3.1 m)	
More than 50 kv.....	10 feet (3.1 m) plus 0.4 inches (1.0 cm) for each 1 kv over 50 kv.	2 times the length of the line insulator, but never less than 10 feet (3.1 m).

*Uninsulated lines

Voltage	Minimum distance	Alternatives
Less than 50 kv.....	10 feet (3.1 m).	
More than 50 kv.....	10 feet (3.1 m) plus 0.4 inches (1.0 cm) for each 1 kv over	2 times the length of the line insulator, but never less than

	50 kv.	10 feet (3.1 m).

7) Exception: Scaffolds and materials may be closer to power lines than specified above where such clearance is necessary for performance of work, and only after the utility company, or electrical system operator, has been notified of the need to work closer and the utility company, or electrical system operator, has deenergized the lines, relocated the lines, or installed protective coverings to prevent accidental contact with the lines.

8) Scaffolds shall be erected, moved, dismantled, or altered only under the supervision and direction of a competent person qualified in scaffold erection, moving, dismantling or alteration. Such activities shall be performed only by experienced and trained employees selected for such work by the competent person.

9) Employees shall be prohibited from working on scaffolds covered with snow, ice, or other slippery material except as necessary for removal of such materials.

10) Where swinging loads are being hoisted onto or near scaffolds such that the loads might contact the scaffold, tag lines or equivalent measures to control the loads shall be used.

11) Suspension ropes supporting adjustable suspension scaffolds shall be of a diameter large enough to provide sufficient surface area for the functioning of brake and hoist mechanisms.

12) Suspension ropes shall be shielded from heat-producing processes. When acids or other corrosive substances are used on a scaffold, the ropes shall be shielded, treated to protect against the corrosive substances, or shall be of a material that will not be damaged by the substance being used.

13) Work on or from scaffolds is prohibited during storms or high winds unless a competent person has determined that it is safe for employees to be on the scaffold and those employees are protected by a personal fall arrest system or wind screens. Wind screens shall not be used unless the scaffold is secured against the anticipated wind forces imposed.

14) Debris shall not be allowed to accumulate on platforms.

15) Makeshift devices, such as but not limited to boxes and barrels, shall not be used on top of scaffold platforms to increase the working level height of employees.

16) Ladders shall not be used on scaffolds to increase the working level height of employees, except on large area scaffolds where employers have satisfied the following criteria:

17) When the ladder is placed against a structure which is not a part of the scaffold, the scaffold shall be secured against the sideways thrust exerted by the ladder;

18) The platform units shall be secured to the scaffold to prevent their movement;

19) The ladder legs shall be on the same platform or other means shall be provided to stabilize the ladder against unequal platform deflection, and

20) The ladder legs shall be secured to prevent them from slipping or being pushed off the platform.

21) Platforms shall not deflect more than 1/60 of the span when loaded.

FALL PROTECTION

1) Each employee on a scaffold more than 10 feet above a lower level shall be protected from falling to that lower level.
2) Each employee on a walkway located within a scaffold shall be protected by a guardrail system (with minimum 200 pound top rail capacity) installed within 9 1/2 inches of and along at least one side of the walkway.
3) Each employee performing overhand bricklaying operations from a supported scaffold shall be protected from falling from all open sides and ends of the scaffold (except at the side next to the wall being laid) by the use of a personal fall arrest system or guardrail system (with minimum 200 pound top rail capacity).
4) For all scaffolds each employee shall be protected by the use of personal fall arrest systems or guardrail systems meeting the requirements of our Fall Protection Policy...
5) We shall have a competent person determine the feasibility and safety of providing fall protection for employees erecting or dismantling supported scaffolds. Employers are required to provide fall protection for employees erecting or dismantling supported scaffolds where the installation and use of such protection is feasible and does not create a greater hazard.
6) Personal fall arrest systems used on scaffolds shall be attached by lanyard to a vertical lifeline, horizontal lifeline, or scaffold structural member. Vertical lifelines shall not be used when overhead components, such as overhead protection or additional platform levels, are part of a single-point or two-point adjustable suspension scaffold.

7) When vertical lifelines are used, they shall be fastened to a fixed safe point of anchorage, shall be independent of the scaffold, and shall be protected from sharp edges and abrasion. Safe points of anchorage include structural members of buildings, but do not include standpipes, vents, other piping systems, electrical conduit, outrigger beams, or counterweights.
8) When horizontal lifelines are used, they shall be secured to two or more structural members of the scaffold, or they may be looped around both suspension and independent suspension lines (on scaffolds so equipped) above the hoist and brake attached to the end of the scaffold. Horizontal lifelines shall not be attached only to the suspension ropes.
9) When lanyards are connected to horizontal lifelines or structural members on a single-point or two-point adjustable suspension scaffold, the scaffold shall be equipped with additional independent support lines and automatic locking devices capable of stopping the fall of the scaffold in the event one or both of the suspension ropes fail. The independent support lines shall be equal in number and strength to the suspension ropes.
10) Vertical lifelines, independent support lines, and suspension ropes shall not be attached to each other, nor shall they be attached to or use the same point of anchorage, nor shall they be attached to the same point on the scaffold or personal fall arrest system.
11) Guardrail systems installed to meet the requirements of this section shall comply with the following provisions: Meet requirements of our Fall Protection Policy.
12) Guardrail systems shall be installed along all open sides and ends of platforms. Guardrail systems shall be installed before the scaffold is released for use by employees other than erection/dismantling crews.
13) The top edge height of top rails or equivalent member on supported scaffolds manufactured or placed in service after January 1, 2000 shall be installed between 38 inches and 45 inches above the platform surface. The top edge height on supported scaffolds manufactured and placed in service before January 1, 2000, and on all suspended scaffolds where both a guardrail and a personal fall arrest system are required shall be between 36 inches and 45 inches. When conditions warrant, the height of the top edge may exceed the 45-inch height, provided the guardrail system meets all other criteria of this section.
14) When Mid-rails, screens, mesh, intermediate vertical members, solid panels, or equivalent structural members are used, they shall be installed between the top edge of the guardrail system and the scaffold platform.

15) When Mid-rails are used, they shall be installed at a height approximately midway between the top edge of the guardrail system and the platform surface.

16) When screens and mesh are used, they shall extend from the top edge of the guardrail system to the scaffold platform, and along the entire opening between the supports.

17) When intermediate members (such as balusters or additional rails) are used, they shall not be more than 19 inches apart.

18) Each top rail or equivalent member of a guardrail system shall be capable of withstanding, without failure, a force applied in any downward or horizontal direction at any point along its top edge of at least 100 pounds for guardrail systems installed on single-point adjustable suspension scaffolds or two-point adjustable suspension scaffolds, and at least 200 pounds for guardrail systems installed on all other scaffolds.

19) When the loads specified in this section are applied in a downward direction, the top edge shall not drop below the height above the platform surface that is prescribed in this section.

20) Mid-rails, screens, mesh, intermediate vertical members, solid panels, and equivalent structural members of a guardrail system shall be capable of withstanding, without failure, a force applied in any downward or horizontal direction at any point along the Mid-rail or other member of at least 75 pounds for guardrail systems with a minimum 100 pound top rail capacity, and at least 150 pounds for guardrail systems with a minimum 200 pound top rail capacity.

21) Suspension scaffold hoists and non-walk-through stirrups may be used as end guardrails, if the space between the hoist or stirrup and the side guardrail or structure does not allow passage of an employee to the end of the scaffold.

22) Guardrails shall be surfaced to prevent injury to an employee from punctures or lacerations, and to prevent snagging of clothing.

23) The ends of all rails shall not overhang the terminal posts except when such overhang does not constitute a projection hazard to employees.

24) Steel or plastic banding shall not be used as a top rail or Mid-rail.

25) Manila or plastic (or other synthetic) rope being used for top rails or Mid-rails shall be inspected by a competent person as frequently as necessary to ensure that it continues to meet the strength requirements of this section.

26) Cross bracing is acceptable in place of a Mid-rail when the crossing point of two braces is between 20 inches and 30 inches above the work plat-

form or as a top rail when the crossing point of two braces is between 38 inches and 48 inches above the work platform. The end points at each upright shall be no more than 48 inches apart.

FALLING OBJECT PROTECTION

1) In addition to wearing hardhats each employee on a scaffold shall be provided with additional protection from falling hand tools, debris, and other small objects through the installation of Toe boards, screens, or guardrail systems, or through the erection of debris nets, catch platforms, or canopy structures that contain or deflect the falling objects. When the falling objects are too large, heavy or massive to be contained or deflected by any of the above-listed measures, the employer shall place such potential falling objects away from the edge of the surface from which they could fall and shall secure those materials as necessary to prevent their falling.
2) Where there is a danger of tools, materials, or equipment falling from a scaffold and striking employees below, the following provisions apply:
3) The area below the scaffold to which objects can fall shall be barricaded, and employees shall not be permitted to enter the hazard area; or
4) A toe board shall be erected along the edge of platforms more than 10 feet (3.1 m) above lower levels for a distance sufficient to protect employees below, except on float (ship) scaffolds where an edging of 3/4 x 1 1/2 inch (2 x 4 cm) wood or equivalent may be used in lieu of Toe boards;
5) Where tools, materials, or equipment are piled to a height higher than the top edge of the toe board, paneling or screening extending from the toe board or platform to the top of the guardrail shall be erected for a distance sufficient to protect employees below; or
6) A guardrail system shall be installed with openings small enough to prevent passage of potential falling objects; or
7) A canopy structure, debris net, or catch platform strong enough to withstand the impact forces of the potential falling objects shall be erected over the employees below.
8) Canopies, when used for falling object protection, shall comply with the following criteria:
9) Canopies shall be installed between the falling object hazard and the employees.
10) When canopies are used on suspension scaffolds for falling object protection, the scaffold shall be equipped with additional independent sup-

port lines equal in number to the number of points supported, and equivalent in strength to the strength of the suspension ropes.

11) Independent support lines and suspension ropes shall not be attached to the same points of anchorage.

12) Where used, Toe boards shall be:

13) Capable of withstanding, without failure, a force of at least 50 pounds applied in any downward or horizontal direction at any point along the toe board (Toe boards built in accordance with this policy will be deemed to meet this requirement); and

14) At least three and one-half inches high from the top edge of the toe board to the level of the walking/working surface. Toe boards shall be securely fastened in place at the outermost edge of the platform and have not more than 1/4 inch clearance above the walking/working surface. Toe boards shall be solid or with openings not over one inch in the greatest dimension.

15) In addition, the following requirements apply to the specific types of scaffolds indicated. Scaffolds not specifically addressed, such as but not limited to systems scaffolds, must meet the requirements all earlier statements.

TUBE AND COUPLER SCAFFOLDS

1) When platforms are being moved to the next level, the existing platform shall be left undisturbed until the new bearers have been set in place and braced prior to receiving the new platforms.

2) Transverse bracing forming an "X" across the width of the scaffold shall be installed at the scaffold ends and at least at every third set of posts horizontally (measured from only one end) and every fourth runner vertically. Bracing shall extend diagonally from the inner or outer posts or runners upward to the next outer or inner posts or runners. Building ties shall be installed at the bearer levels between the transverse bracing and shall conform to the requirements this policy.

3) On straight run scaffolds, longitudinal bracing across the inner and outer rows of posts shall be installed diagonally in both directions, and shall extend from the base of the end posts upward to the top of the scaffold at approximately a 45 degree angle. On scaffolds whose length is greater than their height, such bracing shall be repeated beginning at least at every fifth post. On scaffolds whose length is less than their height, such bracing shall be installed from the base of the end posts upward to the opposite end posts, and then in alternating directions until reaching the

top of the scaffold. Bracing shall be installed as close as possible to the intersection of the bearer and post or runner and post.

4) Where conditions preclude the attachment of bracing to posts, bracing shall be attached to the runners as close to the post as possible.
5) Bearers shall be installed transversely between posts, and when coupled to the posts, shall have the inboard coupler bear directly on the runner coupler. When the bearers are coupled to the runners, the couplers shall be as close to the posts as possible.
6) Bearers shall extend beyond the posts and runners, and shall provide full contact with the coupler.
7) Runners shall be installed along the length of the scaffold, located on both the inside and outside posts at level heights (when tube and coupler guardrails and Mid-rails are used on outside posts, they may be used in lieu of outside runners).
8) Runners shall be interlocked on straight runs to form continuous lengths, and shall be coupled to each post. The bottom runners and bearers shall be located as close to the base as possible.
9) Couplers shall be of a structural metal, such as drop-forged steel, malleable iron, or structural grade aluminum. The use of gray cast iron is prohibited.
10) Tube and coupler scaffolds over 125 feet in height shall be designed by a registered professional engineer, and shall be constructed and loaded in accordance with such design. Non-mandatory Appendix A to this subpart contains examples of criteria that will enable an employer to comply with design and loading requirements for tube and coupler scaffolds under 125 feet in height.

FABRICATED FRAME SCAFFOLDS (TUBULAR WELDED FRAME SCAFFOLDS)

1) When moving platforms to the next level, the existing platform shall be left undisturbed until the new end frames have been set in place and braced prior to receiving the new platforms.
2) Frames and panels shall be braced by cross, horizontal, or diagonal braces, or combination thereof, which secure vertical members together laterally. The cross braces shall be of such length as will automatically square and align vertical members so that the erected scaffold is always plumb, level, and square. All brace connections shall be secured.
3) Frames and panels shall be joined together vertically by coupling or stacking pins or equivalent means.

4) Where uplift can occur which would displace scaffold end frames or panels, the frames or panels shall be locked together vertically by pins or equivalent means.
5) Brackets used to support cantilevered loads shall:
6) Be seated with side-brackets parallel to the frames and end-brackets at 90 degrees to the frames;
7) Not be bent or twisted from these positions; and
8) Be used only to support personnel, unless the scaffold has been designed for other loads by a qualified engineer and built to withstand the tipping forces caused by those other loads being placed on the bracket-supported section of the scaffold.
9) Scaffolds over 125 feet (38.0 m) in height above their base plates shall be designed by a registered professional engineer, and shall be constructed and loaded in accordance with such design.

PLASTERERS, DECORATORS, AND LARGE AREA SCAFFOLDS

- Scaffolds shall be constructed in accordance with earlier paragraphs of this section, as appropriate.

BRICKLAYERS' SQUARE SCAFFOLDS (SQUARES)

1) Scaffolds made of wood shall be reinforced with gussets on both sides of each corner.
2) Diagonal braces shall be installed on all sides of each square.
3) Diagonal braces shall be installed between squares on the rear and front sides of the scaffold, and shall extend from the bottom of each square to the top of the next square.
4) Scaffolds shall not exceed three tiers in height, and shall be so constructed and arranged that one square rests directly above the other. The upper tiers shall stand on a continuous row of planks laid across the next lower tier, and shall be nailed down or otherwise secured to prevent displacement.

FORM SCAFFOLDS AND CARPENTERS' BRACKET SCAFFOLDS

1) Each bracket, except those for wooden bracket-form scaffolds, shall be attached to the supporting formwork or structure by means of one or more of the following: nails; a metal stud attachment device; welding; hooking over a secured structural supporting member, with the form

wales either bolted to the form or secured by snap ties or tie bolts extending through the form and securely anchored; or, for carpenters' bracket scaffolds only, by a bolt extending through to the opposite side of the structure's wall.

2) Wooden bracket-form scaffolds shall be an integral part of the form panel.
3) Folding type metal brackets, when extended for use, shall be either bolted or secured with a locking-type pin.

PUMP JACK SCAFFOLDS

1) Pump jack brackets, braces, and accessories shall be fabricated from metal plates and angles. Each pump jack bracket shall have two positive gripping mechanisms to prevent any failure or slippage.
2) Poles shall be secured to the structure by rigid triangular bracing or equivalent at the bottom, top, and other points as necessary. When the pump jack has to pass bracing already installed, an additional brace shall be installed approximately 4 feet (1.2 m) above the brace to be passed, and shall be left in place until the pump jack has been moved and the original brace reinstalled.
3) When guardrails are used for fall protection, a workbench may be used as the top rail only if it meets all the requirements listed in Fall Protection for this policy.
4) Work benches shall not be used as scaffold platforms.
5) When poles are made of wood, the pole lumber shall be straight-grained, free of shakes, large loose or dead knots, and other defects which might impair strength.
6) When wood poles are constructed of two continuous lengths, they shall be joined together with the seam parallel to the bracket.
7) When two by fours are spliced to make a pole, mending plates shall be installed at all splices to develop the full strength of the member.

LADDER JACK SCAFFOLDS

1) Platforms shall not exceed a height of 20 feet.
2) All ladders used to support ladder jack scaffolds shall meet the requirements Stairways and Ladders Policy, except that job-made ladders shall not be used to support ladder jack scaffolds.
3) The ladder jack shall be so designed and constructed that it will bear on the side rails and ladder rungs or on the ladder rungs alone. If bearing on

rungs only, the bearing area shall include a length of at least 10 inches on each rung.

4) Ladders used to support ladder jacks shall be placed, fastened, or equipped with devices to prevent slipping.
5) Scaffold platforms shall not be bridged one to another.

STEP, PLATFORM, AND TRESTLE LADDER SCAFFOLDS

1) Scaffold platforms shall not be placed any higher than the second highest rung or step of the ladder supporting the platform.
2) All ladders used in conjunction with step, platform and trestle ladder scaffolds shall meet the pertinent requirements Stairways and Ladders' Policy, except that job-made ladders shall not be used to support such scaffolds.
3) Ladders used to support step, platform, and trestle ladder scaffolds shall be placed, fastened, or equipped with devices to prevent slipping.
4) Scaffolds shall not be bridged one to another.

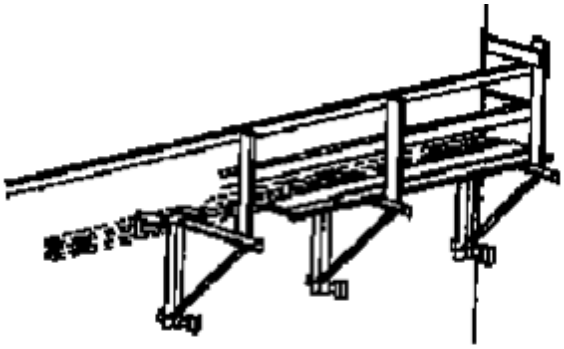
MOBILE SCAFFOLDS

1) Scaffolds shall be braced by cross, horizontal, or diagonal braces, or combination thereof, to prevent racking or collapse of the scaffold and to secure vertical members together laterally so as to automatically square and align the vertical members. Scaffolds shall be plumb, level, and squared. All brace connections shall be secured.
2) Scaffolds constructed of tube and coupler components shall also comply with the requirements of paragraph (b) of this section;
3) Scaffolds constructed of fabricated frame components shall also comply with the requirements of fabricated frame section.
4) Scaffold casters and wheels shall be locked with positive wheel and/or wheel and swivel locks, or equivalent means, to prevent movement of the scaffold while the scaffold is used in a stationary manner.
5) Manual force used to move the scaffold shall be applied as close to the base as practicable, but not more than 5 feet above the supporting surface.
6) Power systems used to propel mobile scaffolds shall be designed for such use. Forklifts, trucks, similar motor vehicles or add-on motors shall not be used to propel scaffolds unless the scaffold is designed for such propulsion systems.

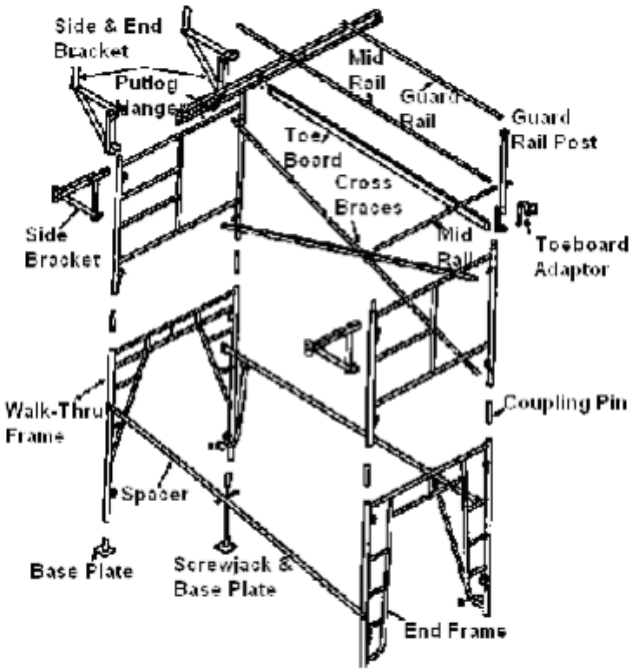
7) Scaffolds shall be stabilized to prevent tipping during movement.
8) Employees shall not be allowed to ride on scaffolds unless the following conditions exist:
9) The surface on which the scaffold is being moved is within 3 degrees of level, and free of pits, holes, and obstructions;
10) The height to base width ratio of the scaffold during movement is two to one or less, unless the scaffold is designed and constructed to meet or exceed nationally recognized stability test requirements.
11) Outrigger frames, when used, are installed on both sides of the scaffold;
12) When power systems are used, the propelling force is applied directly to the wheels, and does not produce a speed in excess of 1 foot per second; and
13) No employee is on any part of the scaffold which extends outward beyond the wheels, casters, or other supports.
14) Platforms shall not extend outward beyond the base supports of the scaffold unless outrigger frames or equivalent devices are used to ensure stability.
15) Where leveling of the scaffold is necessary, screw jacks or equivalent means shall be used.
16) Caster stems and wheel stems shall be pinned or otherwise secured in scaffold legs or adjustment screws.
17) Before a scaffold is moved, each employee on the scaffold shall be made aware of the move.

STILTS

1) Stilts, when used, shall be used in accordance with the following requirements:
2) An employee may wear stilts on a scaffold only if it is a large area scaffold.
3) When an employee is using stilts on a large area scaffold where a guardrail system is used to provide fall protection, the guardrail system shall be increased in height by an amount equal to the height of the stilts being used by the employee.
4) Surfaces on which stilts are used shall be flat and free of pits, holes and obstructions, such as debris, as well as other tripping and falling hazards.
5) Stilts shall be properly maintained. Any alteration of the original equipment shall be approved by the manufacturer.



Form Scaffold



Fabricated Frame Scaffold

Sub-Contractor Management

As a Full-Service General Contractor, Triton Services, Inc. Partners with a number of other companies in fulfilling our contracted responsibilities. Many of these companies have enjoyed a long standing relationship with Triton and many will be signing on for the very first time.

In order to assure the quality and safety associated with these sub-contractors the following monitoring will be done:

- ✳ All sub-contractors will submit updated safety programs, safety training documents, and safety statistics prior to being awarded a contract.
- ✳ All sub-contractors will submit copies of their OSHA 300A for the current year and past three years.
- ✳ All sub-contractors will submit evidence of workers' compensation coverage including Experience Modification Ratings for the last five years.
- ✳ All sub-contractors will submit evidence of current participation participation in Ohio's Contractor Drug Free Safety Program.
- ✳ Along with the OSHA 300A, sub-contractors will recap the following for submitted years:
  - ★ OSHA Incidence Rate
    (Recordables X 200,000 divided by Hours worked)
  - ★ OSHA (DART) Days Away/Restricted Duty Incidence Rate
    (Number of LT and RD Cases X 200,000 divided by Hours Worked)
  - ★ OSHA Fatality Information including details of any such fatality.
    - In most cases, a sub-contractor with a fatality within the last three years will not be considered for work with Triton Services, Inc.

Sub-contractors will be required to submit a Job Hazard Analysis for the job in which they are quoting to work. This JHA will be an overview of all anticipated activities for the job being bid. Once awarded, JHA's will be required for each day and each major assignment during the day.

Sub-contractors will participate in pre-job meetings, orientations, and Kick-off meetings, if the sub-contractor has already been assigned the work for that particular job.

All Sub-contractors will either participate with Triton or hold their own tailgate meetings. Meetings will cover topics relevant to the tasks associated with that particular job site. Tailgate meetings will be in addition to and not substituted

for a Daily Job Hazard Analysis nor will they be a substitute for Competency Training.

In addition to pre-qualification of sub-contractors regular review of their work and safety performance will be conducted by the project manager and safety department.

All Sub-contractors will be include in post job wrap-up reviews which will include pricing, quality of work, quality of materials used, submittals and safety.

Qualification of sub contractors will be based upon documents submitted and their numbers in the following areas:

Workers' Compensation Experience Modification Rate (EMR)
OSHA Incidence Rate
OSHA TRIR (Total Recordable Injury Rate)
OSHA DART (Days Away/Days Restricted Rate)
General Liability Limits and Endorsements as acceptable to Triton.

Qualified Sub Contractors are required to inform Triton Services, Inc. within 24 Hours of any government enforcement actions regardless of whether they occur on a common job site or not. Inspections, Citations, and Sanctions are all considered government enforcement actions.

Prior to the beginning of any work a Pre-construction meeting will be held with the sub-contractor. During the job, the sub-contractor will abide by all Triton Services, Inc. Safety and Environmental Policies and will participate in the daily and weekly pre-task, orientation, toolbox, and job coordination meetings.

Upon completion of each project, Triton Project Management along with senior staff will evaluate the performance, safety, and documentation of each sub contractor. The results will be used in auditing the job and for future consideration of the sub for future contracts.

COMPRESSED GAS CYLINDERS

Reference: 29 CFR 1910.101; 1926.350; CGA standards

A. PURPOSE

The purpose of this policy is to ensure Gray & Becker employees handle Compressed Gas Cylinders Safely and Properly.

B. BASIC REQUIREMENTS

Various agencies, including local, state and federal agencies and industry trade associations all play a part in and offer various rules on safe use, storage, handling and transportation of Compressed Gas Cylinders. The main regulator we will pay attention to is OSHA which incorporates the Compressed Gas Association rules in their standards.

1. Prior to ordering or shipping Compressed Gas Cylinders to a job site, Superintendents and Project Managers will ensure that a secure area is set up to store the cylinders once they arrive.
    a. Cylinders must be stored away from high traffic areas; in an area secured from unauthorized use; stored upright and secure from falling over; with Oxidizers stored separate from Fuels by at least 20 feet or separated by a 30 minute, 5 foot high fire wall.
    b. Cylinders must be protected from strong sunlight and protected from heat sources.
    c. Once a Cylinder is removed from bulk storage, it retains these same requirements. It must be transported in an upright position, with its cap in place, and apart from mixing fuels with oxidizers.
    d. Regulators, hoses, and torches will not be attached during transport.
    e. An ABC Fire Extinguisher of sufficient size, will be positioned within 50 feet, but not within 10 feet of any Compressed Gas Cylinder – regardless of contents.
    f. When working with Acetylene or other fuel torches, an ABC Fire Extinguisher will be within reach of the employee using the torch.

2. All gas cylinders must be clearly marked (stamped or stenciled) or labeled with the contents of the cylinder. No cylinders will be accepted from a supplier without the proper labeling.

3. When cylinder caps cannot be removed, they will be marked “Do Not Use” and returned to the proper storage area for return to the supplier. It will be returned A.S.A.P. to guard against employees forcing the cap.

4. Upon receipt and prior to use, all cylinders will be inspected to be sure they are in safe condition.

5. Prior to application and use, all regulators will be inspected to be sure they are the correct regulator, they are in good condition and they are, along with cylinder valves, free of grease, oil, dirt and solvents.

6. Some cylinders require special tools to open and close the valves. Only tools provided by the supplier will be used for this purpose.

7. All cylinders will be stored properly and secured at all times to prevent being knocked over or damaged. They are to be stored in upright (vertical) positions, not stored in public areas or walkways, segregated based on contents.

8. Cylinders must be capped when not in use.

9. Inside of buildings, cylinders will be stored in well protected, well ventilated, dry locations. Cylinders are never to be stored in unventilated locations such as lockers or cupboards.

10. Designated and marked storage areas have been set aside for full and empty cylinders. These areas are specifically assigned so they are away from stairs, gangways, elevators, etc.

11. Special materials handling equipment is available for the transport of cylinders. Regulators should be removed, the cylinders capped, and a cylinder basket or cart is to be used for transport. No cylinders shall be dropped or permitted to strike any other object or the floor violently.

12. Protective caps are never to be used to lift or otherwise move a cylinder.

13. Hoses and connections are inspected regularly for damage and stored in a cool dry place.

14. Leaking cylinders will be moved to an isolated well ventilated area and away from ignition sources. Soapy water will be used to detect and verify leaks. If the leak is at the junction of the cylinder and valve, the supplier will be contacted immediately for response instructions

15. Cylinders no longer needed are to be marked EMPTY or MT. Empty cylinders are to be handled as carefully as full cylinders.

16. Gases are never to be mixed in a cylinder and only trained professionals are permitted to refill cylinders.

17. On-Highway Transport on Gray & Becker vehicles is limited to not more than three 120lb. 5 foot high Compressed Gas Cylinders. This is regardless of full or empty, and the separation rules for oxidizers and fuels still apply as does the fire protection rules. Gray & Becker is restricted to less than 440lbs. of Hazardous Materials on any one vehicle at anytime. Gas and Diesel Cans count towards that threshold limit. Fuel Tanks mounted in the bed of pickup trucks are limited to less than 119 gallons and must be placarded per USDOT Standards.

18. Employees must be trained on the proper use, handling, and storage of compressed gas cylinders. This training will be documented with the trainer's name, date and name of the trainee.

END OF POLICY

Universal Waste Program

General

Universal wastes must be managed in a way that prevents releases of mercury or other hazardous substances to the environment during accumulation, storage, and transport. It is the Policy of Gray & Becker Construction Services, LP to properly collect, label, store and arrange for transport of universal hazardous waste for proper disposal.

Responsibilities

Management shall:

Provide employee training in support of the Universal Waste Program Develop procedures and facilities for collection, labeling and storage.

Audit the program to ensure compliance

Contract with an Authorized Transporter for removal and disposal of Universal Waste

Supervisors shall ensure all Universal Waste in their areas are properly segregated and collected.

Employees shall follow the requirements of this program including reporting of releases.

Training

All employees shall receive Universal Waste Program training which includes:

Definition and types of Universal Waste Hazards of Universal Waste Storage requirements Notification Procedures

Training will be completed by properly credentialed trainers with any employee required for clean up being qualified at the Operations Level of HazWoper regulations.

Training will be before first assignment and continue annually thereafter as long as the employee remains in an assignment requiring work with Universal Waste.

Labeling Requirements Inadvertent release actions

Label Requirements

Universal waste lamps or container holding waste lamps must be labeled with the words: "Waste Lamp(s)".

Containers holding universal waste batteries must be labeled with the words: "Waste Batteries."

Universal waste pesticides must be labeled with the words: "Waste - Pesticide."

Universal waste thermostats must be labeled with the words:

"Waste Mercury Thermostats"

Other Universal Waste not listed here shall be labeled to reflect the type of Material.

Storage

Universal wastes (lamps, batteries, thermostats, and pesticides) must be managed in a way that prevents releases to the environment. Universal waste lamps must be stored in containers or packages that are closed, structurally sound, adequate to prevent breakage, compatible with the contents, and lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. Incandescent light bulbs are not considered universal waste and should be placed in the trash.

Batteries must be managed in a way that prevents releases to the environment. Large size 12 volt automotive type batteries are not considered to be universal waste, as they are managed for recycling. These batteries will be stored on containment pallets at a location where recycling will be handled by the maintenance department. All other types of batteries, small lead acid, alkaline, Ni Cad, lithium will be co-mingled in plastic 5 gallon pails labeled for this type of collection. The collection point will be our shop.

Mercury containing thermostats and switches: As these items are removed from use, they will be stored in 1 gallon plastic pails in the shop.

Accumulation Time
Universal waste cannot be accumulated for more than one year. In order to demonstrate compliance with accumulation time, Triton Services, Inc has adopted the following method:
Label the container holding the universal waste with the date waste was first placed in the container. All universal waste containers collected from satellite locations will be stored in Shop where it will be held pending disposal.

Releases

Any releases of universal waste or universal waste residues must be immediately contained. Batteries, thermostats, pesticides, and lamps that show evidence of leakage, spillage, or damage must be stored in containers that are closed, structurally sound, adequate to prevent breakage, compatible with the contents, and lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. Any release not cleaned up could constitute illegal disposal and may be required to be reported under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) if reportable quantity thresholds are exceeded. In addition, universal waste handlers must determine whether any materials resulting from a

release is a hazardous waste and, if so, manage the hazardous waste in compliance with all applicable state and federal provisions.

Types of Universal Waste

A waste of any of the six types listed below that has at least one hazardous waste characteristic, must be managed as a universal waste if it is not managed as a hazardous waste.

Batteries - Any battery which is considered a hazardous waste must be managed as a universal waste. This includes discarded primary (non- rechargeable) and secondary (rechargeable) batteries that contain elements such as cadmium, lead, or mercury, which would render them federally or state-hazardous. Examples are nickel-cadmium (Ni-Cad), sealed lead-acid, mercury- oxide (button cell), or older alkaline (manufactured prior to 1993) batteries. However, waste lead-acid batteries (such as automotive batteries) not managed, or eligible for management are subject to the Universal Waste Rule requirements. Lead-acid batteries that are stored at facilities that reclaim them are subject to federal and state regulations. Many commonly generated waste batteries, such as dry cell zinc-carbon, silver oxide, and post-1993 alkaline (long-life) batteries, typically do not contain appreciable amounts of the hazardous elements of concern, and hence would not be required to be managed as universal waste. Consumer products such as those that contain difficult-to-remove rechargeable batteries may also be managed along with universal waste batteries. In the interest of diverting these items from less desirable disposal destinies such as incineration or disposal in solid waste landfills, the state encourages the disposal of all batteries as universal waste.

Pesticides that have been recalled or banned from use, are obsolete, have become damaged, or are no longer needed (due to changes in cropping patterns or other factors) are considered universal wastes. These have often been stored for long periods of time in sheds or barns.

Thermostats, which can contain as much as three grams of liquid mercury and are found in homes and commercial, industrial, and community buildings must be managed as universal waste.

Cathode Ray Tubes commonly known as "picture tubes" in televisions, computer monitors, oscilloscopes, and radar-receiving equipment are universal wastes. The tube itself and the entire display device containing the cathode ray tubes, are universal waste.

Mercury-Containing Devices include any electrical product or component which contains elemental mercury that is necessary for its operation and is housed within an outer metal, glass, or plastic casing. These devices include, but are not limited to, thermometers, barometers, electric switches, electric relays, thermocouples, manometers, and sphygmomanometers.

Mercury-Containing Lamps are lamps in which mercury is purposely introduced by the manufacturer for the operation of the lamp. They include, but are not limited to, fluorescent lamps, neon lamps, high intensity discharge (HID) lamps (including mercury vapor, metal halide and high pressure sodium lamps).

Handling Requirements for Universal Waste:

Generators and handlers of universal waste:
• must not dispose of a universal waste in the regular solid waste stream, • must not dilute or treat universal waste,

• must not intentionally break or crush universal waste, • must take steps to prevent releases to the environment,

• must label each universal waste item or each container of universal waste items with the words "Universal Waste" and the identity of the waste, e.g. "Waste Thermostats." (Note that with pesticides, affix the old product label to the container, or if not available, affix the appropriate US DOT Label found in 49 CFR 172.)

• must identify the accumulation start date on the container or the item itself, • must train employees on proper waste handling and emergency procedures,

• must respond to spills/breakage and manage the released material as hazardous waste if it has hazardous waste characteristics,

• must manage unintentional breakage of significant numbers of universal waste items as hazardous waste,

• must satisfy US DOT packaging, labeling, marking, placarding, and shipping paper requirements per 40 CFR 273.18 or 40 CFR 273.38 for any universal waste that is a US DOT hazardous material prior to off-site shipment,

• may accumulate universal wastes on-site for up to one year,

• may accumulate universal waste for more than one year for the sole purpose of facilitating proper recovery, treatment, or disposal,

• may self-transport universal wastes to other universal waste handlers or to an authorized destination facility provided that handler complies with universal waste transporter requirements.

Specific Required Actions

The handler may conduct the following activities with regard to the following waste items:

Batteries: A handler of universal waste must manage universal waste batteries in a way that prevents release of any universal waste or component of a universal waste to the environment. A handler must contain any waste battery that shows evidence of leakage, spillage or damage. However, a handler of universal waste may conduct the following activities as long as the casing of each individual battery cell is not breached and remains intact and closed (except that cells may be opened to remove electrolyte but must be immediately closed after removal):

• Sorting batteries by type;
• Mixing battery types in one container;

• Discharging batteries so as to remove the electric charge; • Regenerating used batteries;

• Disassembling batteries or battery packs into individual batteries or cells;

• Removing batteries from consumer products; or • Removing electrolyte from batteries.

Note that if the electrolyte is removed, the handler must determine whether or not it exhibits a characteristic of hazardous waste and must manage it as such if it does.

Pesticides: A handler of universal waste must manage universal waste pesticides in a way that prevents release of any universal waste or component of a universal waste to the environment. The universal waste pesticides must be contained in one or more of the following:

• A container that remains closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions; or

• A leaking or damaged container in an overpack container; or
• A tank which meets the requirements for a hazardous waste tank; or

• A transport vehicle or vessel that is closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

Thermostats: A handler of universal waste must manage universal waste thermostats in a way that prevents releases of universal waste or component of universal waste to the environment. A handler of universal waste must contain any universal waste thermostat that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a container. The container must be closed, structurally sound, compatible with the contents of the thermostat, and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. A handler of universal waste may remove mercury- containing ampoules from universal waste thermostats provided the handler:

• Removes the ampoules in a manner designed to prevent breakage of the ampoules;

• Removes ampoules only over or in a containment device (e.g., tray or pan sufficient to collect and contain any mercury released from an ampoule in case of breakage);

• Ensures that a mercury clean-up system is readily available to immediately transfer any mercury resulting from spills or leaks from broken ampoules from the containment device to a container that meets the requirements of 40 CFR 262.34;

• Immediately transfers any mercury resulting from spills or leaks from broken ampoules from the containment device to a container that meets the requirements of 40 CFR 262.34;

• Ensures that the area in which ampoules are removed is well ventilated and monitored to ensure compliance with applicable OSHA exposure levels for mercury;

• Ensures that employees removing ampoules are thoroughly familiar with proper waste mercury handling and emergency procedures, including transfer of mercury from containment devices to appropriate containers;

• Stores removed ampoules in closed, non-leaking containers that are in good condition;

• Packs removed ampoules in the container with packing materials adequate to prevent breakage during storage, handling, and transportation. Note that if the ampoule is removed, the handler must determine whether or not any spilled mercury, clean-up residues, or remaining solid waste exhibit a characteristic of hazardous waste and must manage it as such if it does.

Cathode Ray Tubes

A handler of universal waste must manage universal waste cathode ray tubes in a way that prevents releases of universal waste or component of universal waste to the environment. A handler must contain any universal waste cathode ray tube that shows evidence of breakage, leakage, spillage, or damage that could cause the release of glass particles under reasonable foreseeable conditions in a container. The container must be closed, structurally sound, compatible with the contents of the cathode ray tubes, and must lack evidence of breakage, leakage, spillage, or damage that could cause the release of glass particles under reasonably foreseeable conditions. A handler of universal waste must also contain unbroken cathode ray tubes in packaging that will minimize breakage during normal handling conditions and must contain cathode ray tubes in packaging that will minimize releases of tube fragments and residues. A handler of universal waste may conduct the following activities:

• Sort display devices/cathode ray tubes by type.
• Manage different types of display devices/cathode ray tubes in the same container.

• Test display devices/cathode ray tubes to determine if they are capable of being returned to service.

• Remove cathode ray tubes from display device casings.

Mercury Containing Devices

A handler of universal waste must manage universal waste mercury containing devices in a way that prevents releases of any universal waste or component of universal waste to the environment. A handler of universal waste must contain any universal waste mercury-containing device that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably

foreseeable conditions in a container. The container must be closed, structurally sound, compatible with the contents of the mercury-containing devices, and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

A handler of universal waste may:

• Mix different types of universal waste mercury-containing devices, or universal waste mercury-containing devices and universal waste thermostats in one container; or

• Remove mercury-containing ampoules from universal waste mercury- containing devices provided that the handler complies with the requirements listed in the "thermostats" section.

Mercury Containing Lamps

A handler of universal waste must manage universal waste mercury- containing lamps in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

• A handler of universal waste must contain any universal waste mercury-containing lamp that shows evidence of leakage, spillage, or damage that could cause leakage under reasonable foreseeable conditions in a container. The container must be closed, structurally sound, compatible with the contents of the mercury-containing lamps, and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

• A handler of universal waste must contain unbroken mercury- containing lamps in packaging that will minimize breakage during normal handling conditions.

• A handler of universal waste must contain mercury-containing lamps in packaging that will minimize releases of lamp fragments and residues.

Waste

Reference 29-CFR-1926.252

Gray & Becker Construction Services, LP prides itself on its waste management practices. Waste will be accounted for prior to beginning any task. Appropriate containment will be provided to keep waste that we generate under our control. As containment is filled it will be emptied or replaced with empty containers. All waste containers will be emptied at the end of the work day. Separate containers will be made available for oily rags and flammable materials; metals, combustible trash, and biohazard waste. Any building materials which are to be set aside for construction recycling should be properly staged, labeled and protected.

Employees will be trained in the proper disposal of the varying types of waste generated on site. Care will be taken to avoid placing any materials into the waste containers that may injure someone reaching into the container unless the container is designed for articles that are obviously not

intended to be handled without special PPE. Incompatible wastes will not be placed into the same container. Reactive wastes will be disposed of according to the hazard present. No materials may be dropped more than 20 feet without a chute. If dropped through a floor to a floor below, the landing area must be labeled & barricaded back at least six feet from the landing area. All solvent waste and oily rags will be contained in a self closing fire safe container. We will not burn construction waste.

All first aid materials and clean up articles will be secured in a leak proof container or bag and placed directly into a dumpster so as to minimize the need for human contact in emptying a trash container containing same.

All scrap metals or building materials of value will be returned to the shop, if not sent directly to the vendor or a recycler for credit to the company. Scrap from a job site will not be returned to the shop without written permission from the President or CEO.

Emergency Action Plan

This plan provides the actions and assignments for different types of possible emergencies. The plan is divided by category of emergency with a separate section for evacuation procedures. Specific actions are assigned by management/ supervisor title. This plan has been developed to meet the requirements of OSHA Standard 1910.38, Employee Emergency Plans and Fire Prevention Plans and the requirements of the Company Risk Management Programs.

Plant floor plans with evacuation routes have been posted throughout the facility. Additionally, all departments have been assigned specific areas of assembly if an evacuation is necessary. This plan is available to all employees for review.

Purpose

To provide an emergency action plan to serve as a guideline to protect personnel from injury and minimize damage to company property and assets in case of an emergency.

An emergency is any unwanted, unplanned event or occurrence which might result in serious injury or death or damage to or loss of company property, or impairment of company operation.

An Emergency Action Plan shall be developed prior to mobilization on any project. Plans will be made as to Damaging Incidents, Release of Regulated Materials, and Personal Injuries.

Project Personnel will be trained prior to assignment on each job site on the facets of each site's Emergency Action Plan. The Site Specific Plan will detail 1) Pre-emergency planning & coordination with outside parties. 2) Personnel roles, lines of authority, training & communications. 3) Emergency recognition & prevention. 4) Safe distances & places of refuge/rally points

The Site Superintendent will manage the Emergency Action Plan until relieved by a more senior company official.

General Instruction

Any emergency will rate priority over normal activities

All comments to the public, members of the news media, or state/county officials shall be made through Bob Ellis Only.

In the event of an emergency and after immediate steps ensuring the safety of personnel and equipment have been take, the following people are to be notified, and further instructions should come only from them.

George Barton 330-550-9205

Bob Ellis 512-917-9512

Any employee exposed to any toxic or hazardous materials will be sent to the appropriate medical facilities for post exposure evaluation and treatment. Medical surveillance is available for emergency response employees who exhibit signs or symptoms which may have resulted from exposure to hazardous substances during the course of an emergency This will be paid for by the company at no cost to the employee.

General Action Guidelines
As a guideline, the following steps shall be taken during any emergency

Call the Fire and/or Police Department by dialing 911 Job Superintendent shall inform employees where phone is located and

Post emergency phone numbers and location nearest Emergency Room.

Guidelines for calling emergency personnel The following information must be given

- Exact street address and phone number
- Location within the building
- Type of Emergency

The Superintendent will then direct employees to the Rally Point and ensure all employees are accounted for and safe.

- How it happened
- How many people are injured
- Name & title of person making the call What is presently being done
- Always let the person receiving the call hang up first
  Go to the gate to direct emergency vehicles to the accident location

Responsibilities

Safety Director

Provide training to all employees for their roles in all emergency plans Quarterly conduct necessary drills to exercise the emergency response plans Annually conduct emergency rescue from confined space drill

Conduct all other actions required in this planning guide to implement, develop and maintain an effective Emergency Response Plan which will be reviewed annually during Safety Training

Maintenance Manager

Ensure maintenance personnel are trained in the proper procedures for handling and storage procedures, potential ignition sources (such as boilers, gas fired equipment, welding, etc.) and their control procedures, and the type of fire protection equipment or systems installed to prevent or control ignitions or fires.

Ensure Emergency Response Team personnel are properly trained and equipped to carry out emergency plans.

Is assigned responsibility for maintenance of equipment and systems installed to prevent or control ignitions or fires, and

Maintains control of fuel source hazards.

References: The following references are considered part of this written plan

Gray & Becker Safety Manual
Spill Prevention Control & Countermeasures Plan

Contact Information: Employees may contact Personnel if they require any additional information pertaining to our safety plan or to their duties – 512-836-1545

Priorities

The following concerns for all emergency action are listed in order of priority. Managers and supervisors will :
Ensure that all actions to combat and control an emergency situation are addressed to these priorities:

- Protection of People - All employees will be accounted for or 9-1-1 will be notified.

- Prevention from increased scope of emergency – All employees will be located to a safe area. Specifically Trained Employees will attempt to contain emergency if possible.

- Protection of Environment

- Protection of Structures and Equipment
  Once an evacuation has occurred, Responsible Person(s) shall account for each employee/visitor assigned to them at the Designated Assembly Area. Each employee is responsible for reporting to the appropriate Responsible Person(s) so an accurate head count can be made. All employee counts shall then be reported to the Emergency Action Plan Manager as soon as possible.

Fire Prevention Plan (Elements required by OSHA Standard 1910.38)
Workplace Fire Hazards/Sources & Protection

Welding & Hot Work: the fire prevention plan welding and hot-work requirement are located in the Safety Manual, See tabs for location
Boilers: the fire prevention plan boiler operations and maintenance requirement are located in the Client Boiler Manual.
Smoking Policy: No Smoking is Permitted Inside a Structure and Employees will adhere to client outside smoking restrictions.
Protection and Alarm Systems
Sprinkler Systems: The entire facility is protected by an automatic water sprinkler system. Inspection and maintenance procedures are maintained by the Maintenance Manager.
Alarm Systems: The alarm systems are maintained by the Maintenance Department. Each Alarm is tested semi-annually. Plant Supervisors shall be notified before the test to alert their assigned Employees. This system will alert all employees in case of an emergency.
Housekeeping Requirements

The fire prevention plan housekeeping and material storage requirements are located in the Facility Manual.

Fire Prevention and Control

The Maintenance Manager is assigned responsibility for maintenance of equipment and systems installed to prevent or control ignitions or fires, and control of fuel source hazards. The written maintenance procedures are located in the Maintenance Office and are considered part of this written plan.

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Concrete & Masonry Policy

Reference: 29 CFR 1926.700~.706 Appendix A (included)

PURPOSE:

To ensure a safe work environment for Gray & Becker employees and clients while engaged in Concrete and Masonry Work.

REQUIREMENTS:

Taken directly from USDOL OSHA Standards 29-CFR-1926.700 through .706 Appendix A with additional Information regarding wet concrete and mortar.

SCOPE AND APPLICATION:

This policy sets forth requirements to protect all employees from the hazards associated with concrete and masonry construction operations performed in workplaces covered under 29 CFR Part 1926.

DEFINITIONS APPLICABLE TO THIS POLICY:

In addition to the definitions set forth in 1926.32, the following definitions apply to this policy:

1) "Bull float" means a tool used to spread out and smooth concrete
2) "Formwork" means the total system of support for freshly placed or partially cured concrete, including the mold or sheeting (form) that is in contact with the concrete as well as all supporting members including shores, re-shores, hardware, braces, and related hardware.
3) "Lift slab" means a method of concrete construction in which floor, and roof slabs are cast on or at ground level and, using jacks, lifted into position.
4) "Limited access zone" means an area alongside a masonry wall, which is under construction, and which is clearly demarcated to limit access by employees.
5) "Precast concrete" means concrete members (such as walls, panels, slabs, columns, and beams) which have been formed, cast, and cured prior to final placement in a structure.
6) "Re-shoring" means the construction operation in which shoring equipment (also called re-shores or re-shoring equipment) is placed, as the original forms and shores are removed, in order to support partially cured concrete and construction loads.
7) "Shore" means a supporting member that resists a compressive force imposed by a load.

8) "Vertical slip forms" means forms which are jacked vertically during the placement of concrete.
9) "Jacking operation" means the task of lifting a slab (or group of slabs vertically from one location to another (e.g., from the casting location to a temporary (parked) location, or to its final location in the structure), during the construction of a building/structure where the lift-slab process is being used.

GENERAL REQUIREMENTS:

CONSTRUCTION LOADS:

No construction loads shall be placed on a concrete structure or portion of a concrete structure unless the employer determines, based on information received from a person who is qualified in structural design, that the structure or portion of the structure is capable of supporting the loads.

REINFORCING STEEL:

1) All protruding reinforcing steel, onto and into which employees could fall, shall be guarded to eliminate the hazard of impalement.

POST-TENSIONING OPERATIONS:

2) No employee (except those essential to the post-tensioning operations) shall be permitted to be behind the jack during tensioning operations.
3) Signs and barriers shall be erected to limit employee access to the post-tensioning area during tensioning operations.)

RIDING CONCRETE BUCKETS:

No employee shall be permitted to ride concrete buckets or chutes.

WORKING UNDER LOADS:

No employee shall be permitted to work under concrete buckets while buckets are being elevated or lowered into position.

To the extent practical. elevated concrete buckets shall be routed so that no employee, or the fewest number of employees, are exposed to the hazards associated with falling concrete buckets.

The preceding section is almost word for word from OSHA 29-CFR-1926.700~705, App. A. If additional information is needed or information is unclear, consult 29-CFR-1926.700 through 29-CFR-1926.705.

WET CONCRETE

When working with wet concrete, either directly from a concrete truck or through a boom concrete pump truck or mixed in a bucket or wheel barrow, concrete has risks associated with its use.

Concrete is acidic, it is harmful to human skin, especially mucous membranes, eyes and non-intact skin. For this reason personal protective equipment required for working with this includes:

Hard Hat, Sturdy Work Boots, preferably tall rubber boots, rough contact style gloves, and safety glasses are required as is a means of emergency eye wash. The hard hat is required on any job, as is sturdy work boots; tall rubber boots will protect your work boots and lower pant legs from the concrete; rough contact gloves such as leather or jersey work gloves will keep your hands away from the caustic concrete and shield them from wear and tear while using concrete forming tools such as trowels, floats and the like; finally safety glasses are required due to concrete's likelihood of splashing. A means of Emergency Eye Wash is also required on the job site in case someone is splashed in the eye with wet concrete. (In most case the water on the cement truck will suffice if sterile eye wash is not available.

Ergonomic issues are also very prominent on Wet Concrete jobs. Wet Concrete is heavy and dense. Be mindful of your body position to avoid over-exertion particularly with your low back and shoulders. Support belts, if used, must be used with the understanding that they will not increase the amount or duration of your ability to lift, reach or pull. Gray & Becker Construction Services, LP will not provide back support belts for employees. Employees using them do so as a personal preference.

Whenever wet methods are used, care must be taken to avoid electric hazards, noise hazards, slip, trip and fall hazards, and flammable liquid hazards from fuel used to power the saw. Complete a W.I.S.H. checklist to ensure all possible hazards are addressed prior to beginning work.

DRY CONCRETE

Dry Concrete creates the problem of dust when saw cut. Unless, cut using water for dust suppression, dry cutting concrete can release high levels of silica dust which is Not Acceptable. For this reason we will only saw cut concrete when wet cutting methods can be used or point of operation HEPA dust collection is used to capture concrete dust.

Drilling into dry concrete must also take these considerations into mind. Use good judgment based upon the number and size of the holes and borings.