

**DAVCAL**

**SAFETY AND LOSS**

**CONTROL PROGRAM**

# Table of Contents

## **PART 1: SAFETY PLAN**

<b>Statement of Policy &amp; Goal</b>	4
<b>I. Program Objectives</b>	5
<b>II. Responsibilities</b>	5
A. Davcal Officials	5
B. Safety Officer	5
C. Supervisory Personnel (Superintendents and Foremen)	6
D. Group Leaders	7
E. Employees	7
<b>III. Field Emergency Procedures</b>	9
A. Major Injury to Employee or General Public	9
B. Property Damage to Utilities	9
C. Public Demonstrations	9
D. Bomb Threat	10
E. Fire	10
<b>IV. Safety</b>	10
A. Education & Training	10
B. General Safety Procedures	11
C. Records & Reporting	12
D. Periodic Job Inspections	13
E. Safety Committee Meetings	13
F. Employee Disciplinary Action Guidelines	13
<b>V. Specific Protection Plans</b>	15
A. Fire Prevention Program	15
B. Eye Protection Program	15
C. Fall Protection (Part 1)	15
D. Fall Protection (Part 2) Procedures	19
E. Ladders & Stairways	26
F. Respiratory Protection Program	32
G. Ground Fault Protection	35
H. Hearing Protection	37
I. OSHA Entry Policy	37
J. Heat Illness Prevention	38
K. Hazardous Communication Program	38
<b>VI. Health</b>	39
A. Industrial Medical Centers	39
B. Drug and Alcohol Abuse Policy	40
C. New Hire Training Program	43
D. Return to Work Program	45

### **PART 3: FORMS**

- Monthly Safety Inspection Report A
- Supervisor's Report of Accident Investigation B
- Employee Report of Accident Facts C
  
- **Employee Safety Orientation Record and Receipt** D
- **Employee Acknowledgement of Drug & Alcohol Policy** E

# PART 1: SAFETY PLAN

## Statement of Policy & Goal:

The safety of employees is of paramount importance. We endeavor to provide an accident free work environment. **OUR GOAL IS ZERO LOSS TIME INJURIES.** It is our policy to perform work in the safest manner possible consistent with good construction practices. To fulfill the requirements of this policy, an organized and effective safety program must be carried out wherever work is performed.

- A. Safety must be considered first. It is just as important as production, schedule, quality and profit. It cannot be compromised.
- B. Safety is a management responsibility and safety can be managed.
- C. A commitment to safety is a commitment to doing thing right-the first time. Ultimately, this results in elimination of injuries and optimization of all activities.
- D. All accidents and injuries are preventable. All accidents are the result of unsafe acts or unsafe conditions.
- E. Safety is an individual responsibility and a condition of employment for all employees.
- F. Every task must be performed with a concern for safety, for ourselves, our fellow employees, subcontractors, customers and the general public.

The key elements of the Safety and Loss Control Program are:

- A. The emphasis of our program is on prevention. We will look for unsafe acts and conditions that can cause accidents rather than waiting until they happen to react. When we are faced with accidents or incidents, we will work to analyze what happened and correct the problem to avoid future mishaps.
- B. We will maintain a safe and healthful working environment by assuring, at all times, that our projects and personnel are in compliance with the Davcal Safety Program as well as federal, state and local regulations. These regulations will be strictly enforced. Inspections will take place on a scheduled and unscheduled basis.
- C. We will minimize hazards through engineering controls, administrative controls and/or personal protective equipment.
- D. We will maintain an active and aggressive program to promote safety awareness among our employees.
- E. We will strive to provide the most advanced instruction, equipment, practices and training in order to enable our workers to perform their jobs correctly and safely.
- F. We will provide immediate and high quality first-aid, medical and rehabilitative treatment for work-related injuries and illnesses.
- G. It is the responsibility of all employees of this company, regardless of the capacity in which they function, to make safety and health a prime concern. All employees will be accountable for their safety performance.
- H. The promotion, implementation and enforcement of Davcal's Safety and Loss Control Program is the direct responsibility of all officers, staff and project management.
- I. Officers and managers shall implement and enforce this safety and health program with the goal of eliminating injuries and losses through systematic endorsement, enforcement and assignment of program responsibilities. While visiting a jobsite, management should routinely evaluate jobsite conditions and employee performance and report these findings to the supervisor in charge.
- J. The supervisor of each work area shall be held accountable for the safety and health of the employees under his or her direction and shall be held responsible for the timely reporting of any illness/injury or any potentially hazardous condition that may arise in the work area. It shall be the supervisor's responsibility to ensure that any jobsite hazard is effectively eliminated or responded to immediately.
- K. In addition, all supervisors will be responsible for thoroughly investigating all accidents, conducting monthly safety meetings, planning and coordinating work to avoid injury, establishing procedures to make the workplace safer, and uniform enforcement of all safety rules.
- L. The Safety Officer shall assist and support management and supervisors in establishing, maintaining and enforcing an effective safety program; however, it will be the manager or supervisor, not the Safety Officer, who will be held accountable for the safety record of his/her area of responsibility.
- M. All employees must use the safety equipment provided and are expected to know and follow the Davcal's program. As new employees join our workforce, management shall ensure that these employees participate in a

safety and health orientation as part of our introductory program. Supervisors shall ensure that new employees are given safety training and that they observe the safety and health program. Experience has shown that new employees have a disproportionately large percentage of the accidents on the job.

- N. Only by the joint cooperation of employees and management in the observance of this policy can we assure safe working conditions and obtain our goal of accident free performance.

## **I. Objectives**

The objectives of this Safety and Loss Control Program are as follows:

1. To safeguard the health and welfare of Davcal employees.
2. To provide a safety program consistent with good construction practices.
3. To create an attitude of safety awareness in management, field, shop and yard supervisory personnel.
4. To minimize accidents through pre-planning by means of identification of present and future hazardous conditions.
5. To prevent the loss of our resources - manpower, material, equipment and capital.
6. To assign specific responsibilities for effective enforcement and control of the safety program.
7. To provide a means for continuing development and updating of safety education and training.
8. To conform to local, state and federal regulations.
9. To involve subcontractors and suppliers in a continuing safety program.
10. To maintain a desirable insurability position.

## **II. Responsibilities**

Responsibility for the health and safety of our employees rests with all levels of management and with the employees themselves. The specific areas of responsibility are as follows:

### **A. Davcal Officials:**

Davcal officials shall promulgate an effective and efficient safety and health program structured to eliminate or reduce loss or harm to employees, materials and equipment through systematic endorsement, enforcement and assignment of program responsibilities.

### **B. Safety Officer**

- I. The Safety Officer shall assist and support management and field supervision in establishing, maintaining and enforcing an effective safety program through the following methods:
  - a. Recommend and assist in the development and initiation of both general and specific safety training programs.
  - b. Provide advice and counsel regarding compliance with applicable local, state and federal codes, regulations and standards to assure safe and acceptable operating practices.
  - c. Research and recommend specialized equipment, techniques or procedures designed to prevent or minimize hazard potential.
  - d. Recommend and coordinate the purchase of all required safety equipment, apparel and supplies.
  - e. Conduct project safety inspections and review violations and recommend corrective action with Project Superintendents and Managers.
  - f. Recommend disciplinary action for any employee who is observed violating, is a repeat violator of or who is unwilling to comply with, established or recommended safety/health policies and procedures.
  - g. Conduct special safety inspections with insurance company Safety Engineers.
  - h. Provide assistance and special safety information to Project Safety Committees, and monitor and report exceptional actions to management.
  - i. Prepare and coordinate required project "Tool Box" Talks.
  - j. Review, and assure that there are valid and current, equipment inspection reports.
  - k. Coordinate and provide projects with various safety posters, required employee notices and government regulations.

- l. Review Supervisors Accident Report Forms for causes of accidents and recommended preventive actions.
- m. Investigate all serious lost-time injuries and equipment damage through on-site inspections and interviews and provide a detailed report of cause and recommended preventive measures of management.
- n. Investigate alleged OSHA violations and file a report thereon.
- o. Accompany OSHA inspectors, whenever possible.
- p. Review and comment upon proposed management reviews of field supervision performance as to safety in regard to compensation and promotion.

### C. Supervisory Personnel

(Superintendents, Assistant Superintendents and Foremen)

The key to achieving results in the field rests with supervision. The success of a safety program is no different. The supervisory position automatically includes the responsibility to assure, at all times, that the project and its personnel are in compliance with the Davcal Safety Program as well as federal, state and local regulations.

1. The highest supervision on the project shall be responsible for the overall safety program on the project. The Project Superintendent shall be responsible for insuring that subcontractors and suppliers comply with the Davcal safety program.
2. Getting the safety program organized and in operation at the start of job is important. Many serious accidents can occur during mobilization and early weeks of construction, particularly among new hires.
3. Consider safety factors in all of your operational planning, provide for personal protective equipment, barricades, machine guards, warning signs, fire extinguisher, etc., ahead of need. Plan to minimize hazards, just as you plan your production efforts.
4. Spend some time with each person hired explaining company safety policies and the hazards of his or her particular work. See that the new hire orientation program is carried out by a qualified person, without exception, throughout the course of the project. See that group leaders follow up with indoctrinations of the specific hazards of individual work assignments, before the employee starts such assignment.
5. Hold, monthly or more frequent, supervisory meetings starting the first week of the project, even though there are only a few employees available to attend.
6. Establish a fixed time each week for "Tool Box" talks. See that each foreman or group leader holds them and continues them thereafter. It is important to get the habit started at the beginning of the project. Insure that good discussion of topic occurs at each session, and return signed minutes to the main office.
7. Put up your safety bulletin board. See that it is in good condition and includes applicable safety posters, and programs.
8. Make sure that a copy of Davcal's OSHA access policy is posted in the trailer.
9. Never allow workers to short-cut safety for expediency. Safe working conditions will always give you better costs in the long run.
10. Look for unsafe acts and conditions constantly. Correct them immediately.
11. Establish specific safety rules on matters of importance. Make sure they are known and understood by all concerned. Enforce them constantly. **Disciplinary Action must be taken against anyone who violates these rules,** for his or her own protection, and the protection of others.
12. Maintain appropriate safety reference materials, first aid supplies and personal protective equipment.
13. It is the worker's responsibility to provide his or her own drinking water. It is the Supervisor's responsibility to ensure that all workers have adequate drinking water. If a worker does not bring his or her own water and Davcal cannot provide adequate water from an approved local source, (to be dispensed from a labeled, insulated container) then the worker cannot work that day.
14. Set up a relationship with a nearby industrial medical center.
15. Provide for the protection of the general public throughout duration of the project.
16. Be responsible for orderliness and good housekeeping on the project.
17. Cooperate with the Insurance Carrier Engineers, Compliance Officers and the Safety Officer.
18. Participate in all company safety training programs.
19. Give a copy of Davcal access policy to any government official seeking permission to enter onto jobsite. (See OSHA entry policy.)

- Immediately notify the Safety Officer when an inspection is to take place. If he is not available at the Office, have word left that he be notified.
- If permission is granted to follow through with the inspection, accompany the government official (OSHA) throughout the jobsite inspection making a written record of any conditions or violations discussed.
  - a. Compliance Officers usually photograph each situation or violation they point out. The accompanying Davcal representative should likewise photograph each instance cited, by assuming, as near as possible, the angle and position of the Compliance Officer. These photos are to be preserved for Davcal records.
  - b. Photographic equipment, Polaroid camera and adequate film supply, shall be maintained at all times at each project location. (In instances where photographic equipment is not available, written record shall be made of each situation or violation photographed by the Compliance Officer.)

#### D. Group Leaders

The Group Leader's knowledge of and attention to the variety of safe job applications is of great importance to the success of the Davcal Safety Program. Your safety performance is an integral aspect of your overall duties and will be periodically reviewed and evaluated by your supervisor. Your responsibilities include:

1. Maintaining your work area to be free from any recognized hazards and to be in compliance with all OSHA and company regulations.
2. The safety of your crew. You may be expected to hold Safety "Tool Box" Meetings for your crew, and to make written reports of the items discussed for submittal to the Safety Office.
3. Training your crew in safe working practices. The employee should be shown where to work, what to do and how to do it safely. The employee should be instructed with regard to his/her responsibility for his/her own safety and the safety of fellow workers.
4. Leading your crew to do a good job safely in the minimum practical time. Plan your moves ahead of time to get tools and materials when needed. Clearly instruct each worker and follow through to see your instructions are carried out.
5. Seeing that materials, tools and equipment are used properly and protected from loss or damage.
6. Stopping your crew to correct hazards that present an immediate danger to themselves or the equipment.
7. Preparing accident reports as required, on the proper forms, for personal injury accidents and/or equipment damage.
8. Cooperating with the Safety Supervisor, Insurance Carrier Engineer and Compliance Officers during inspections.
9. Being responsive to employee concerns and request regarding conditions and equipment.
10. Participating in all company safety training programs.
11. Seeing that all members of your crew are provided with and use personal protective equipment when exposed to job or environmental hazards.

#### E. Employees

It is the duty of all employees to know the following Safety Rules and to do their work in compliance with these rules. It is also the duty of all employees to make full use of safeguards provided for their protection and to **IMMEDIATELY REPORT ANY UNSAFE CONDITION** to their supervisor. **EMPLOYEES ARE NOT TO WORK IN ANY UNSAFE WORK ENVIRONMENT OR WITH ANY UNSAFE TOOLS OR EQUIPMENT.**

General Safety Guidelines:

1. Safety hats will be worn by everyone.
2. Employees shall wear clothing suitable for the weather and the work.
3. Employees shall wear shirts. (A shirt is defined as a garment of single unit construction, with sleeves, capable of fully covering the upper body from the shoulder area to the waist.)
4. Employees shall wear sturdy, suitable work shoes in good repair. Sneakers and lightweight shoes are not acceptable.
5. Approved safety eye protection will be worn at all times. Certain operations require the use of added protection. An example, using a face shield over safety glass when grinding or cutting angle iron.

6. Safety body belts will be worn and tied off where there is exposure to falls. Otherwise, other safety measures will be taken.
7. Jewelry (rings, bracelets, neck chains, earrings, etc.) should not be worn.
8. Use gloves or other suitable hand protection when handling rough materials, chemicals, hot or cold objects. Replace if worn.
9. Wear proper protective mask or respirator when exposed to dust, spray painting, burning or other toxic hazards, etc.
10. Wear proper hearing protection, ear plugs or ear muffs, when exposed to noise hazards.
11. Employees shall not remove machinery safety guards, except for the purpose of adjusting, maintenance or repairing.
12. Employees shall not operate a machine unless a guard or method of guarding is in place and in working order.
13. Employees shall report any guard not accomplishing its intended function.
14. Employees shall stop machines before maintenance, fueling, or repairing.
15. **Immediately** report any malfunctioning equipment.
16. Keep table saw or cutting areas free of tripping hazards.
17. Safety life jackets will be worn where there is exposure to water hazards and/or as directed by your supervisor.
18. Remove or clinch nails in used or in old lumber.
19. Keep stairs, walkways and ramps free of loose materials. Do not block aisles, traffic lanes or fire exits.
20. Employees observed working in a manner which might cause injury to either themselves or others shall be warned of the danger and must correct their actions, immediately.
21. When the nature of work requires the use of signals, they must be thoroughly understood before a job is begun. Visual signals are preferred to those given orally. Signals shall be given by only one person at any one time. This person shall be designated by supervision. Such person must be in a position to have an unobstructed view of the area affected by his signals.
22. Employees shall not work underneath or over others without first notifying them, assuring that proper safe guards or precautions have been arranged.
23. Work areas shall be left in as safe condition as possible. Before leaving job, employees shall correct or arrange to give warning of conditions which might result in injury to a fellow worker unfamiliar with existing conditions.
24. Dangerous conditions and/or practices observed at any time shall be reported **immediately** to your supervisor.
25. Employees shall report all injuries, regardless of how slight, to proper authority or supervision, **immediately**.
26. Know the location of First Aid equipment, fire fighting equipment, and other emergency safety devices.
27. All employees must attend safety "Tool Box" meetings as scheduled. Ask your supervisor where and when they are held.
28. Know correct use of hand and power tools before using. Use the right tool for the job.
29. Observe and obey all posted signs of danger, caution and information.
30. Do not place electric cords, hoses, welding leads, etc. across roadways, stairs, ramps, aisles or in a position to be damaged by vehicle or personnel traffic or to create a tripping hazard.
31. Use ladders of proper length and construction as a means of reaching different heights or levels. Do not jump or climb objects to achieve quick level change. Ladders must be placed or erected securely.
32. Maintain good housekeeping and orderliness by using containers for **all** trash, garbage and used drinking cups. Also, safely stack, arrange or pile used or unused lumber and materials.
33. In order to perform certain employment functions, where applicable, employees will be required to be tested, licensed, certified and/or have physical exams.
34. Employees shall park only within parking areas designated as such by the Superintendent. Davcal will not be responsible for any damage it causes to vehicles parked outside of these areas.

### III. Field Emergency Procedures

The following procedures regarding emergencies shall be used at all Davcal Field or Project locations. (Superintendents are responsible for ascertaining the needed telephone numbers in each procedure. These shall be frequently reviewed with all project personnel.)

**A. Major Injury to Employee or General Public.**

1. The person in authority at the scene will take charge until the Superintendent or someone in authority arrives.
2. Notify the Davcal field office by any means available, notice should include location of the accident, the number of people injured and any apparent need of equipment to free victims. At this point, all communications systems will be limited to emergency use only.
3. Notify the ambulance service giving the number of people, cause of injury and the nearest street/road intersection.
4. The Superintendent and First Aid personnel will proceed immediately to the scene.
5. The person in authority at the scene will designate an individual(s) to meet the ambulance and direct them to the scene of the emergency.
6. Emergency first aid will be administered immediately. The injured person(s) is not to be moved, unless further injury is imminent. When the ambulance crew arrives, they will assist the rescue team in loading and removal of the injured from the area.
7. Foremen and group leaders are to keep all workers away from the emergency scene and to continue normal activities. They will remain alert for any requests of assistance.
8. Notify the Davcal Office and the Safety Officer.
9. In case of injury or alleged injury to the general public within the limits of the job, get names, addresses, and phone numbers and report the information to Safety Officer who will make the necessary insurance company reports.

**B. Property Damage to Utilities**

1. All utility companies must be notified prior to work being performed near, over or under their utilities by following call before you dig procedures or otherwise.
2. In the event of a utility being damaged, the Davcal field office will be notified by any means available, notice should include the exact location and type of utility.
3. The field office will call the appropriate utility.
4. The person in authority at the scene will take charge until the Superintendent or someone of authority arrives.
5. Keep all workers away from the emergency scene and continue normal activities.
6. The Safety Officer will be notified in all cases so that proper investigation and reports can be accomplished.

**C. Public Demonstration**

1. "Public demonstration" refers to any unusual group activity at or near the project site, including union picketing or violence.
2. Action checklist in event of a public demonstration:
  - a. Estimate the size of the crowd and try to identify its purpose, if not obvious.
  - b. Notify the field office, giving exact location of demonstration and telling them to notify home office, and the police if violence has occurred or seems likely.
  - c. Stop working in area of demonstration if safety of employees or demonstrators is jeopardized. Remove equipment to a secure location.
  - d. Take photos of the demonstration if you can do so safely.
  - e. Take daily notes of action, conversations, numbers of people, time, place, writings on picket signs (ex. name of union, local number etc.), license number, etc.
  - f. Do not harass or engage in argument with the demonstrators.
3. Office trailer checklist of necessary items:
  - a. Camera and film.
  - b. List of all office, emergency and subcontractors and suppliers phone numbers.
  - c. Fire extinguisher.
  - d. Hand held tape recorder.

- e. No Trespassing and No Parking signs.

**D. Bomb Threat**

1. The person receiving a call reporting a bomb threat will record the call, word for word, to avoid forgetting what was said. The Police will need this information. By the fastest method possible, remove all personnel from the alleged endangered area. This must be done in a calm but hurried manner. Call the Police.
2. The person receiving the call will contact the Superintendent informing him of the condition.
3. When the general location of the bomb is known **all** work shall be stopped and the area cleared.
4. Designate someone to direct the Police to the specific area.
5. Employees may re-enter the area only where the Police deem it safe to do so.
6. Notify Davcal and the Safety Officer.

**E. Fire**

1. The person in authority at the scene will take charge until the Superintendent or someone in authority arrives.
2. Notify the Davcal field office by any means available, with the exact location and type of fire. At this point, all communications systems will be limited to emergency use only.
3. Field office personnel will notify the Fire Department giving them the nature and nearest street intersection to the fire.
4. Designate individual(s) to meet the Fire Department and direct them to the scene.
5. Workers will safely fight the fire with the best means available until the Fire Department arrives. In case of heavy smoke or fumes, all will be evacuated. The Fire Department will take over when it arrives.
6. Do whatever can be done to put out the fire while it is small. In doing so, do not risk injury to yourself.
7. Notify the Davcal main office and the Safety Officer.

**IV. Safety**

**A. Education and Training**

1. An effective safety program will result only from adequate education and training of key personnel concerned with the program. The following general provisions are outlined to implement this part of the program:
  - a. Management and supervisor personnel shall meet on a regular basis for the purpose of reviewing program safety problems and methods of presentations to the general workforce.
  - b. Once each week, a five minute "Tool Box" Safety Meeting shall be held at each jobsite. These shall be conducted by the superintendent, foreman, group leader or engineer. Recent project problems and conditions to be expected in the coming week shall be discussed along with other general safety topics. A report of each meeting, including attendance, shall be forwarded to the Davcal Office. The pre Construction Hazard Assessment should be discussed at the first meeting.
  - c. All new employees shall complete the new hire safety orientation before they start work and will be given specific instructions as needed by their immediate supervisor relating to specific problems to be encountered on the project.
2. Employee Safety Orientation Program - Two Phase
  - a. The Safety Orientation is designed for:
    - 1). New Hires
    - 2). Re-hires
    - 3). Transfers
    - 4). Recalls from lay-off
  - b. Phase 1: General by Superintendent or Foreman discuss:
    - 1). His or her responsibility to know and comply with the Employee section of Davcal Safety and Loss Control Program.

- 2). General Safety Procedures of Davcal Safety Program.
  - 3). New Hire Packet and personal protective gear.
  - 4). Project layout and hazards.
  - 5). First aid and emergency equipment location.
- c. Phase 2: Specific by Group Leader (if Applicable):
- 1). Immediate work area hazards
  - 2). Understanding the Employee Section and general safety procedures of Davcal Safety Program
  - 3). Proper use of personal protective gear
  - 4). Reporting of all job related injuries and accidents
  - 5). First Aid and emergency equipment location
  - 6). Be alert to crew members signals and warnings
  - 7). Work safety to protect self and others around you
  - 8). Emergency procedures

3. All employees are encouraged to become First Aid trained or qualified in other emergency techniques. Those holding current Cards of Certification should notify supervision of that status.

## **B. General Safety Procedures**

1. The following items are outlined as general policy and are in addition to those requirements listed previously.
  - a. All employees working on or visiting the project shall be required to wear safety hats and safety glasses.
  - b. Some operations might require additional protective gear, such as goggles or shields, during operations such as concrete pouring or placing, chipping, grinding, pouring of hot materials, welding, etc. Appropriate protective clothing such as rubber boots, rain suits, appropriate respiratory and hearing protection such as mask, respirators and ear plugs or ear muffs shall be used where required by specific conditions of work. Operators of jack hammers and tamping equipment are required to wear toe guards.
  - c. Lists of emergency telephone numbers shall be posted by the telephone. First aid kits must be provided for each 25 persons employed.
  - d. Each accident shall be reported timely on the forms furnished, with copies to the appropriate personnel.
  - e. All persons employed throughout the course of the work shall be physically qualified for performing the duties to which they are assigned.
  - f. Alcoholic beverages, drugs or any form of intoxicant, not consumed for medical reasons, are prohibited on all projects and work areas before, during or after working hours. See Davcal's Drug and Alcohol Policy for specifics.
  - g. Scaffold, platforms or temporary floors shall be provided for all work that cannot be done safely from the ground or from other substantial footing or from ladders. Scaffolds shall be erected with suitable access, handrails and toe boards and kept free of unnecessary debris.
  - h. All power equipment shall be kept in safe operating condition and operators of equipment and power tools shall be properly instructed in the safe operation of such items. Power actuated tools shall be operated and serviced by authorized personnel only. Tool operators shall wear safety goggles or other approved face and eye protection devices. Malfunctioning or inoperable equipment or tools shall be red tagged for non-use and repair.
  - i. Ground-fault circuit interrupters shall be used on all temporary 120-volt, single phase, 15 and 20 ampere receptacle outlets, which are not a part of the permanent wiring of a building or structure.
  - j. Electric hand tools shall be grounded.
  - k. Protruding rebars shall be adequately covered or adequately shielded from employee exposure when working or walking over, in or alongside.
  - l. All flammable liquids shall be stored in a no-smoking area which will be separated 50' from other stored materials. Fuel tanks shall be diked and grounded and posted with no-smoking signs. Fire extinguishers shall be inspected, serviced and maintained in accordance with the manufacturer's instructions.
  - m. Good housekeeping is essential not only for safety but for obtaining an orderly and efficient construction operation. Each foreman and group leader shall be responsible for cleanup in his work area. Extra measures shall be taken to minimize the hazards of protruding nails. The project superintendent shall be responsible for enforcement of subcontractor's cleanup.

## **C. Records and Reporting**

1. Each project shall maintain an entry log (OSHA #200) of first aid administered on the site including the date, name of the injured person, description of the injury and treatment of the injury. All accidents, injuries, first aid and/or off-site treatment are to be reported on the appropriate forms provided to each project.
  - a. All accidents shall be reported to the Davcal Main Office. In addition the following events must also be reported to the Davcal Main Office:
    1. Those that have or are likely to receive news media coverage.
    2. Those involving collapse, cave-in or other failures of structure or equipment.
    3. Fires windstorms, earthquake, floods or other "acts of God," criminal acts such as vandalism, malicious mischief, burglaries, forgeries, etc. any of which involve a potential insurance claim or loss to Davcal.
    4. Any accident involving the equipment and/or employees of subcontractors or material suppliers at or off the jobsite, if the accident occurred while in performance of work or the delivery of materials was being executed for one of Davcal's projects.
  - b. The procedure for reporting the above referenced accidents shall be as follows:
    1. The project superintendent or highest ranking managing representative of Davcal closest to the accident shall call the Davcal Main Office.
    2. As soon as the extent and effect of the accident can reasonably be estimated and determined, a written report shall be submitted to the Davcal Main Office, setting forth all the particulars.
  - c. The following accident investigation procedure shall be implemented to the extent applicable:
    1. As soon as practicable, the superintendent or highest ranking Davcal representative at the scene of the accident shall take a statement from all possible witnesses to the accident, noting the names of the witnesses, their addresses, telephone numbers, employers, title or capacity and a brief summary of their statements and comments concerning the accident. Each witness should be asked to review his notes and sign them as being accurate.
    2. Photographs of the accidents, the surrounding areas and conditions in the immediate vicinity of the accident should be taken, if possible. When these photos are developed, a brief written statement should be made on the back of each photograph stating what the photo represents, the person who took the photograph, and the date and the time of day it was taken.
    3. A detailed investigation concerning the likely cause and effect of the accident should be made in a written report. This written report should be made as soon as possible after the accident. If a subcontractor or material supplier is involved in the accident, a determination should be made concerning the applicable subcontractor employer, the extent of that employer's liability, and any possible third party liability for the accident.
    4. In the event of serious motor vehicle accidents or serious work related accidents, involving injury, a preliminary report should be prepared by the Safety Officer and reviewed with an appropriate Davcal officer.
    5. Davcal's insurance company representative, depending on the nature of the accident, should be notified as soon as possible to investigate the accident. The investigation by our insurance adjuster should be with the assistance and cooperation of Davcal personnel.
    6. The time of the accident, the status of the weather and any other physical conditions existing at the scene of the accident should be observed and reported.
    7. As a final summary, the results of the above steps should be placed in a detailed accident report form and transmitted to the home office as soon as practicable with all backup information attached.
    8. Do not assume that any accident is unimportant. Make out the report anyway.
    9. Statements should not be made or released to news media except through the home office.

## **D. Periodic Job Inspection**

Periodically, the Safety Officer will inspect each operation, and will provide the Superintendent with suggested corrective measures to be taken.

The inspection report will identify all observed violations and noncompliance of the Safety Program. Cited violations, serious, not serious and non-compliance items, will be discussed with supervision to determine when corrective action will be taken, by date, to assure safety and healthful conditions.

#### **E. Safety Committee Meeting**

The Safety Committee shall consist of the Safety Office (Keith Hammonds), the President of Davcal (Brad Fisher) and the Vice President of Davcal (John Palazzo):

1. The scope of the Safety Committee's Activities will be to:
  - a. Gather and promote ideas and suggestions for improving safety on the job.
  - b. Influence others to work safely.
  - c. Provide information to management/employees on safe and healthful working practices.
  - d. Promote Davcal Safety and Health Program
  - e. Review all accident reports.
  - f. Review all periodic reports prepared by the Safety Officer.
2. Committee Members' Responsibilities:
  - 1) Report and discuss unsafe conditions.
  - 2) Attend all Safety Meetings.
  - 3) Review all accidents.
  - 4) Contribute ideas and suggestions for improvement of safety.
  - 5) Influence others to work safely.
3. Committee Meetings
  - a. The Committee should meet not less than once every month.

#### **F. Employee Disciplinary Action Guidelines**

The following guidelines give guidance when disciplinary action must be taken.

The Foreman is ultimately responsible for the safety of all employees, and as such, the Foreman has final authority regarding the discharge of an employee for unsafe conduct. The Foreman may, in his discretion, choose to give an employee a warning, depending upon the severity of the unsafe conduct.

##### **A. Verbal Warnings**

When an employee's attendance, conduct or work habits are unsatisfactory, the employee may be given a verbal warning. This should occur as soon after the infraction as is possible. The warning should, as applicable, include a statement of:

1. What specific Company rule of conduct has been violated.
2. What the employee is doing wrong.
3. What the employee must do to correct the situation.
4. How long the employee has to correct the situation.

The verbal warning should end with a positive note.

## **B. SUSPENSION**

Employees observed violating any of the provisions of the Safety Program, or otherwise working in an unsafe manner, may be told to immediately leave the job site, for the rest of the day. In such case, the employee will be paid for that day up to the time when he is told to leave the job. The employee will not be paid for the rest of the day.

## **C. DISCHARGE**

Discharge from employment is considered the most severe form of punishment by Davcal because of the far reaching negative effects on both personal and social well-being. Therefore, a discharge must be handled with extreme care. However, the Foreman has wide discretion in determining when Discharge is appropriate.

Guidelines: In the case of a serious infraction or a chronic offender who fails to respond in spite of repeated warnings and suspension(s), discharge is in order. Offenses such as stealing, fighting, use of alcohol or narcotics on the job or other serious violations of Company rules of conduct or other policies, warrant immediate discharge.

All discharges must be reported to the home office.

**Employees are reminded that the Foreman is ultimately responsible for the safety of all employees, and as such, the Foreman has final authority regarding the discipline of an employee for unsafe conduct.**

**Depending upon the severity of the unsafe conduct, the Foreman may thus, in his discretion, choose to:**

- (1) give an employee a verbal warning,**
- (2) tell the employee to leave the job for the rest of the day (without pay for the balance of the day),**
- or**
- (3) immediately discharge the employee.**

## V. SPECIFIC PROTECTION PLANS

### A. FIRE PREVENTION

1. Jobs will plan and set up their fire prevention program to minimize any possibility of fire. Special attention will be given to:
  - a. Location and type of fire extinguishers.
  - b. Trash stockpiling and removal.
  - c. Fuel storage.
  - d. Any open burning.
  - e. Heating devices.
  - f. Storage of flammable material.
  - g. Maintaining adequate fire lanes.
  - h. Use of oxygen acetylene equipment.
2. The telephone number of the fire department will be posted conspicuously near all job telephones.
3. Make sure all employees know how to report a fire and where the fire fighting equipment is located.
4. The suitability and effectiveness of the job fire prevention program will be inspected periodically to insure that all phases are current and working properly.

### B. EYE PROTECTION POLICY

Eye and face protection is required when there is an inherent risk of eye injury from flying particles, injurious chemicals, or harmful light rays. Specific attention needs to be paid as follows:

- When welding or cutting.
- When using grinding equipment.
- When sanding.
- When using chipping equipment.
- When using powder actuated tools.
- When using a nail gun.

Further, full Face Shields are to be used at all times when using a chop saw.

### C. FALL PROTECTION (PART 1)

#### Definitions

**Anchorage** means a secure point of attachment for lifelines, lanyards or deceleration devices.

**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.

**Body harness** means straps which may be secured about the employee in a manner that will 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.

**Buckle** means any device for holding the body belt or body harness closed around the employee's body.

**Connector** means a device that is used to couple (connect) parts of the personal fall arrest system and positioning device systems together. It may be an independent component of the system, such as a carabiner, or it may be an integral component of part of the system (such as a buckle or dee-ring sewn into a body belt or body harness, or a snap-hook spliced or sewn to a lanyard or self-retracting lanyard).

**Controlled access zone (CAZ)** means an area in which certain work (e.g., overhand bricklaying) may take place without the use of guardrail systems, personal fall arrest systems, or safety net systems and access to the zone is controlled.

**Dangerous equipment** means equipment (such as pickling or galvanizing tanks, degreasing units, machinery, electrical equipment, and other units) that, as a result of form or function, may be hazardous to employees who fall onto or into such equipment.

**Deceleration device** means any mechanism, such as a rope grab, rip-stitch lanyard, specially-woven lanyard, tearing or deforming lanyards, automatic self-retracting lifelines/lanyards, etc., which serves to dissipate a substantial amount of energy during a fall arrest, or otherwise limit the energy imposed on an employee during fall arrest.

**Deceleration distance** means the additional vertical distance a falling employee travels, excluding lifeline elongation and free fall distance, before stopping, from the point at which the deceleration device begins to operate. It is measured as the distance between the location of an employee's body belt or body harness attachment point at the moment of activation (at the onset of fall arrest forces) of the deceleration device during a fall, and the location of that attachment point after the employee comes to a full stop.

**Equivalent means** alternative designs, materials, or methods to protect against a hazard that 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.

**Failure** means load refusal, breakage, or separation of component parts. Load refusal is the point where the ultimate strength is exceeded.

**Free fall** means the act of falling before a personal fall arrest system begins to apply force to arrest the fall.

**Free fall distance** means the vertical displacement of the fall arrest attachment point on the employee's body belt or body harness between onset of the fall and just (OSHR Page 31:3352) before the system begins to apply force to arrest the fall. This distance excludes deceleration distance, and lifeline/lanyard elongation, but includes any deceleration device slide distance or self-retracting lifeline/lanyard extension before they operate and fall arrest forces occur.

**Guardrail system** means a barrier erected to prevent employees from falling to lower levels. (OSHR Page 31:3353)

**Hole** means a gap or void 2 inches (5.1 cm) or more in its least dimension, in a floor, roof, or other walking/working surface.

**Infeasible** means that it is impossible to perform the construction work using a conventional fall protection system (i.e., guardrail system, safety net system, or personal fall arrest system) or that it is technologically impossible to use any one of these systems to provide fall protection.

**Lanyard** means a flexible line of rope, wire rope, or strap that generally has a connector at each end for connecting the body belt or body harness to a deceleration device, lifeline, or anchorage.

**Leading edge** means the edge of a floor, roof, or formwork for a floor or other walking/working surface (such as the deck) that changes location as additional floor, roof, decking, or formwork sections are placed, formed, or constructed. A leading edge is considered to be an "unprotected side and edge" during periods when it is not actively and continuously under construction.

**Lifeline** means a component consisting of a flexible line for connection to an anchorage at one end to hang vertically (vertical lifeline), or for connection 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.

**Low-slope roof** means a roof having a slope less than or equal to 4 in 12 (vertical to horizontal).

**Lower levels** means those areas or surfaces to which an employee can fall. Such areas or surfaces include, but are not limited to, ground levels, floors, platforms, ramps, runways, excavations, pits, tanks, material, water, equipment, structures, or portions thereof.

**Mechanical equipment** means all motor or human propelled wheeled equipment used for roofing work, except wheelbarrows and mopcars.

**Opening** means a gap or void 30 inches (76 cm) or more high and 18 inches (48 cm) or more wide, in a wall or partition, through which employees can fall to a lower level.

**Overhand bricklaying and related work** 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. Related work includes mason tending and electrical installation incorporated into the brick wall during the overhand bricklaying process.

**Personal fall arrest system** means a system used to arrest an employee in a fall from a working level. It consists of an anchorage, connectors, a body belt or body harness and may include a lanyard, deceleration device, lifeline, or suitable combinations of these. As of January 1, 1998, the use of a body belt for fall arrest is prohibited.

**Positioning device system** means a body belt or body harness system rigged to allow an employee to be supported on an elevated vertical surface, such as a wall, and work with both hands free while leaning.

**Rope grab** means a deceleration device that travels on a lifeline and automatically, by friction, engages the lifeline and locks so as to arrest the fall of an employee. A rope grab usually employs the principle of inertial locking, cam/level locking, or both.

**Roof** means the exterior surface on the top of a building. This does not include floors or formwork that, because a building has not been completed, temporarily become the top surface of a building.

**Roofing work** means the hoisting, storage, application, and removal of roofing materials and equipment, including related insulation, sheet metal, and vapor barrier work, but not including the construction of the roof deck.

**Safety monitoring system** - means a safety system in which a competent person is responsible for recognizing and warning employees of fall hazards.

**Self-retracting lifeline/lanyard** means a deceleration device containing a drum-wound line that can be slowly extracted from, or retracted onto, the drum under slight tension during normal employee movement, and which, after onset of a fall, automatically locks the drum and arrests the fall.

**Snap hook** means a connector comprised of a hook-shaped member with a normally closed keeper, or similar arrangement, which may be opened to permit the hook to receive an object and, when released, automatically closes to retain the object. Snap hooks are generally one of two types:

- The locking type with a self-closing, self-locking keeper which remains closed and locked until unlocked and pressed open for connection or disconnection; or
- The non-locking type with a self-closing keeper that remains closed until pressed open for connection or disconnection. As of January 1, 1998, the use of a non-locking snap hook as part of personal fall arrest systems and positioning device systems is prohibited.

**Steep roof** means a roof having a slope greater than 4 in 12 (vertical to horizontal).

**Toe board** means a low protective barrier that will prevent the fall of materials and equipment to lower levels and provide protection from falls for personnel.

**Unprotected sides and edges** means any side or edge (except at entrances to points of access) of a walking/working surface, e.g., floor, roof, ramp, or runway where there is no wall or guardrail system at least 39 inches (1.0 m) high.

**Walking/working surface** means any surface, whether horizontal or vertical on which an employee walks or works, including, but not limited to, floors, roofs, ramps, bridges, runways, formwork and concrete reinforcing steel but not including ladders, vehicles, or trailers, on which employees must be located in order to perform their job duties.

**Warning line system** means a barrier erected on a roof to warn employees that they are approaching an unprotected roof side or edge, and which designates an area in which roofing work may take place without the use of guardrail, body belt, or safety net systems to protect employees in the area.

**Work area** means that portion of a walking/working surface where job duties are being performed.

## **Policy**

The employer shall determine if the walking/working surfaces on which its employees are to work have the strength and structural integrity to support employees safely. Employees shall be allowed to work on those surfaces only when the surfaces have the requisite strength and structural integrity.

### **Unprotected sides and edges.**

Each employee on a walking/working surface (horizontal and vertical surface) with an unprotected side or edge which is 6 feet (1.8 m) or more above a lower level shall be protected from falling by the use of guardrail systems, safety net systems, or personal fall arrest systems. Each employee who is constructing a leading edge 6 feet (1.8 m) or more above lower levels shall be protected from falling by guardrail systems, safety net systems, or personal fall arrest systems. Exception:

When the employer can demonstrate that it is infeasible or creates a greater hazard to use these systems, the employer shall develop and implement a fall protection plan that meets the requirements of paragraph (k) of § 1926.502.

Note: There is a presumption that it is feasible and will not create a greater hazard to implement at least one of the above-listed fall protection systems. Accordingly, the employer has the burden of (OSHR Page 31:3354) establishing that it is appropriate to implement a fall protection plan which complies with § 1926.502(k) for a particular workplace situation, in lieu of implementing any of those systems.

Each employee on a walking/working surface 6 feet (1.8 m) or more above a lower level where leading edges are under construction, but who is not engaged in the leading edge work, shall be protected from falling by a guardrail system, safety net system, or personal fall arrest system. If a guardrail system is chosen to provide the fall protection, and a controlled access zone has already been established for leading edge work, the control line may be used in lieu of a guardrail along the edge that parallels the leading edge.

The Supervisory Personnel, will provide and install all fall protection systems required by this subpart for an employee, and shall comply with all other pertinent requirements of this subpart before that employee begins the work that necessitates the fall protection.

### **Hoist areas**

Each employee in a hoist area shall be protected from falling 6 feet (1.8 m) or more to lower levels by guardrail systems or personal fall arrest systems. If guardrail systems, [or chain, gate, or guardrail] or portions thereof, are removed to facilitate the hoisting operation (e.g., during landing of materials), and an employee must lean through the access opening or out over the edge of the access opening (to receive or guide equipment and materials, for example), that employee shall be protected from fall hazards by a personal fall arrest system.

### **Holes**

Each employee on walking/working surfaces shall be protected from falling through holes (including skylights) more than 6 feet (1.8 m) above lower levels, by personal fall arrest systems, covers, or guardrail systems erected around such holes.

Each employee on a walking/working surface shall be protected from tripping in or stepping into or through holes (including skylights) by covers.

Each employee on a walking/working surface shall be protected from objects falling through holes (including skylights) by covers.

### **Ramps, runways, and other walkways**

Each employee on ramps, runways, and other walkways shall be protected from falling 6 feet (1.8 m) or more to lower levels by guardrail systems.

### **Excavations**

Each employee at the edge of an excavation 6 feet (1.8 m) or more in depth shall be protected from falling by guardrail systems, fences, or barricades when the excavations are not readily seen because of plant growth or other visual barrier;

Each employee at the edge of a well, pit, shaft, and similar excavation 6 feet (1.8 m) or more in depth shall be protected from falling by guardrail systems, fences, barricades, or covers.

### **Dangerous equipment**

Each employee less than 6 feet (1.8 m) above dangerous equipment shall be protected from falling into or onto the dangerous equipment by guardrail systems or by equipment guards.

Each employee 6 feet (1.8 m) or more above dangerous equipment shall be protected from fall hazards by guardrail systems, personal fall arrest systems, or safety net systems.

### **Steep roofs**

Each employee on a steep roof with unprotected sides and edges 6 feet (1.8 m) or more above lower levels shall be protected from falling by guardrail systems with toe boards, safety net systems, or personal fall arrest systems.

### **Residential construction**

Each employee engaged in residential construction activities 6 feet (1.8 m) or more above lower levels shall be protected by guardrail systems, safety net system, or personal fall arrest system unless another provision in paragraph (b) of this section provides for an alternative fall protection measure. Exception:

When the employer can demonstrate that it is infeasible or creates a greater hazard to use these systems, the employer shall develop and implement a fall protection plan that meets the requirements of paragraph (k) of §1926.502.

Note: There is a presumption that it is feasible and will not create a greater hazard to implement at least one of the above-listed fall protection systems. Accordingly, the employer has the burden of establishing that it is appropriate to implement a fall protection plan that complies with § 1926.502(k) for a particular workplace situation, in lieu of implementing any of those systems.

### **Wall openings**

Each employee working on, at, above, or near wall openings (including those with chutes attached) where the outside bottom edge of the wall opening is 6 feet (1.8 m) or more above lower levels and the inside bottom edge of the wall opening is less than 39 inches (1.0 m) above the walking/working surface, shall be protected from falling by the use of a guardrail system, a safety net system, or a personal fall arrest system.

#### **Walking/working surfaces not otherwise addressed**

Except as provided in, each employee on a walking/working surface 6 feet (1.8 m) or more above lower levels shall be protected from falling by a guardrail system, (OSHR Page 31:3355) safety net system, or personal fall arrest system.

#### **Protection from falling objects**

When an employee is exposed to falling objects, the employer shall have each employee wear a hard hat and shall implement one of the following measures:

- Erect toe boards, screens, or guardrail systems to prevent objects from falling from higher levels; or,
- Erect a canopy structure and keep potential fall objects far enough from the edge of the higher level so that those objects would not go over the edge if they were accidentally displaced; or,
- Barricade the area to which objects could fall, prohibit employees from entering the barricaded area, and keep objects that may fall far enough away from the edge of a higher level so that those objects would not go over the edge if they were accidentally displaced.

## **D. Fall Protection (Part 2) Procedures**

#### **Guardrail systems**

Guardrail systems and their use shall comply with the following provisions:

- Top edge height of top rails, or equivalent guardrail system members, shall be 42 inches (1.1 m) plus or minus 3 inches (8 cm) above the walking/working level. When conditions warrant, the height of the top edge may exceed the 45-inch height, provided the guardrail system meets all other criteria of this paragraph.
- Mid-rails, screens, mesh, intermediate vertical members, or equivalent intermediate structural members shall be installed between the top edge of the guardrail system and the walking/working surface when there is no wall or parapet wall at least 21 inches (53 cm) high.
- Mid-rails, when used, shall be installed at a height midway between the top edge of the guardrail system and the walking/working level.
- Screens and mesh, when used, shall extend from the top rail to the walking/working level and along the entire opening between top rail supports.
- Intermediate members (such as balusters), when used between posts, shall be not more than 19 inches (48 cm) apart.
- Other structural members (such as additional mid-rails and architectural panels) shall be installed such that there are no openings in the guardrail system that are more than 19 inches (.5 m) wide.
- Guardrail systems shall be capable of withstanding, without failure, a force of at least 200 pounds (890 N) applied within 2 inches (5.1 cm) of the top edge, in any outward or downward direction, at any point along the top edge.

- When the 200 pound (890 N) test load specified in this section is applied in a downward direction, the top edge of the guardrail shall not deflect to a height less than 39 inches (1.0 m) above the walking/working level. Guardrail system components selected and constructed in accordance with the Appendix B to subpart M (see the RSO) will be deemed to meet this requirement.
- Mid-rails, screens, mesh, intermediate vertical members, solid panels, and equivalent structural members shall be capable of withstanding, without failure, a force of at least 150 pounds (666 N) applied in any downward or outward direction at any point along the mid-rail or other member.
- Guardrail systems shall be so surfaced as to prevent injury to an employee from punctures or lacerations, and to prevent snagging of clothing.
- The ends of all top rails and mid-rails shall not overhang the terminal posts, except where such overhang does not constitute a projection hazard.
- Steel banding and plastic banding shall not be used as top rails or mid-rails.
- Top rails and mid-rails shall be at least one-quarter inch (0.6 cm) nominal diameter or thickness to prevent cuts and lacerations. If wire rope is used for top rails, it shall be flagged at not more than 6-foot intervals with high-visibility material.
- When guardrail systems are used at hoisting areas, a chain, gate or removable guardrail section shall be placed across the access opening between guardrail sections when hoisting operations are not taking place.
- When guardrail systems are used at holes, they shall be erected on all unprotected sides or edges of the hole.
- When guardrail systems are used around holes used for the passage of materials, the hole shall have not more than two sides provided with removable guardrail sections to allow the passage of materials. When the hole is not in use, it shall be closed over with a cover, or a guardrail system shall be provided along all unprotected sides or edges.
- When guardrail systems are used around holes that are used as points of access (such as ladder ways), they shall be provided with a gate, or be so offset that a person cannot walk directly into the hole.
- Guardrail systems used on ramps and runways shall be erected along each unprotected side or edge.
- Manila, plastic or synthetic rope being used for top rails or mid-rails shall be inspected as frequently as necessary to ensure that it continues to meet the strength requirements of this section.

### **Personal fall arrest systems**

Personal fall arrest systems and their use shall comply with the provisions set forth below. Effective January 1, 1998, body belts are not acceptable as part of a personal fall arrest system. Note: The use of a body belt in a positioning device system is acceptable and is regulated under of this section.

- Connectors shall be drop forged, pressed or formed steel, or made of equivalent materials.
- Connectors shall have a corrosion-resistant finish, and all surfaces and edges shall be smooth to prevent damage to interfacing parts of the system.
- Dee-rings and snap hooks shall have a minimum tensile strength of 5,000 pounds (22.2 kN).
- Dee-rings and snap hooks shall be proof-tested to a minimum tensile load of 3,600 pounds (16 kN) without cracking, breaking, or taking permanent deformation.

- Snap hooks shall be sized to be compatible with the member to which they are connected to prevent unintentional disengagement of the snap hook by depression of the snap hook keeper by the connected member, or shall be a locking type snap hook designed and used to prevent disengagement of the snap hook by the contact of the snap hook keeper by the connected member. Effective January 1, 1998, only locking type snap hooks shall be used.
- Unless the snap hook is a locking type and designed for the following connections, snap hooks shall not be engaged:
  - Directly to webbing, rope or wire rope;
  - To each other;
  - To a dee-ring to which another snap hook or other connector is attached;
  - To a horizontal lifeline; or
  - To any object which is incompatibly shaped or dimensioned in relation to the snap hook such that unintentional disengagement could occur by the connected object being able to depress the snap hook keeper and release itself.
- On suspended scaffolds or similar work platforms with horizontal lifelines that may become vertical lifelines, the devices used to connect to a horizontal lifeline shall be capable of locking in both directions on the lifeline.
- Horizontal lifelines shall be designed, installed, and used, under the supervision of a qualified person, as part of a complete personal fall arrest system, which maintains a safety factor of at least two.
- Lanyards and vertical lifelines shall have a minimum breaking strength of 5,000 pounds (22.2 kN).
- Except as provided in this section, when vertical lifelines are used, each employee shall be attached to a separate lifeline.
- During the construction of elevator shafts, two employees may be attached to the same lifeline in the hoist way, provided both employees are working atop a false car that is equipped with guardrails; the strength of the lifeline is 10,000 pounds [5,000 pounds per employee attached] (44.4 kN); and all other criteria specified in this paragraph for lifelines have been met.
- Lifelines shall be protected against being cut or abraded.
- Self-retracting lifelines and lanyards which automatically limit free fall distance to 2 feet (0.61 m) or less shall be capable of sustaining a minimum tensile load of 3,000 pounds (13.3 kN) applied to the device with the lifeline or lanyard in the fully extended position.
- Self-retracting lifelines and lanyards which do not limit free fall distance to 2 feet (0.61 m) or less, ripstitch lanyards, and tearing and deforming lanyards shall be capable of sustaining a minimum tensile load of 5,000 pounds (22.2 kN) applied to the device with the lifeline or lanyard in the fully extended position.
- Ropes and straps (webbing) used in lanyards, lifelines, and strength components of body belts and body harnesses shall be made from synthetic fibers.
- Anchorages used for attachment of personal fall arrest equipment shall be independent of any anchorage being used to support or suspend platforms and capable of supporting at least 5,000 pounds (22.2 kN) per employee attached, or shall be designed, installed, and used as follows:
  - As part of a complete personal fall arrest system which maintains a safety factor of at least two; and
  - Under the supervision of a qualified person.
- Personal fall arrest systems, when stopping a fall, shall:
  - Limit maximum arresting force on an employee to 900 pounds (4 kN) when used with a body belt;

- Limit maximum arresting force on an employee to 1,800 pounds (8 kN) when used with a body harness;
- Be rigged such that an employee can neither free fall more than 6 feet (1.8 m), nor contact any lower level;
- Bring an employee to a complete stop and limit maximum deceleration distance an employee travels to 3.5 feet (1.07 m); and,
- Have sufficient strength to withstand twice the potential impact energy of an employee free falling a distance of 6 feet (1.8 m), or the free fall distance permitted by the system, whichever is less.
- The attachment point of the body belt shall be located in the center of the wearer's back. The attachment point of the body harness shall be located in the center of the wearer's back near shoulder level, or above the wearer's head.
- Body belts, harnesses, and components shall be used only for employee protection (as part of a personal fall arrest system or positioning device system) and not to hoist materials.
- Personal fall arrest systems and components subjected to impact loading shall be immediately removed from service and shall not be used again for employee protection until inspected and determined by a competent person to be undamaged and suitable for reuse.
- The employer shall provide for prompt rescue of employees in the event of a fall or shall assure that employees are able to rescue themselves.
- Personal fall arrest systems shall be inspected prior to each use for wear, damage and other deterioration, and defective components shall be removed from service.
- Body belts shall be at least one and five-eighths (1 5/8 ) inches (4.1 cm) wide.
- Personal fall arrest systems shall not be attached to guardrail systems, nor shall they be attached to hoists except as specified in other subparts of this Part.
- When a personal fall arrest system is used at hoist areas, it shall be rigged to allow the movement of the employee only as far as the edge of the walking/working surface.

### **Positioning device systems**

Positioning device systems and their use shall conform to the following provisions:

- Positioning devices shall be rigged such that an employee cannot free fall more than 2 feet (.9 m).
- Positioning devices shall be secured to an anchorage capable of supporting at least twice the potential impact load of an employee's fall, or 3,000 pounds (13.3 kN), whichever is greater.
- Connectors shall be drop forged, pressed or formed steel, or made of equivalent materials. Connectors shall have a corrosion-resistant finish, and all surfaces and edges shall be smooth to prevent damage to interfacing parts of this system.
- Connecting assemblies shall have a minimum tensile strength of 5,000 pounds (22.2 kN)
- Dee-rings and snap hooks shall be proof-tested to a minimum tensile load of 3,600 pounds (16 kN) without cracking, breaking, or taking permanent deformation.
- Snap hooks shall be sized to be compatible with the member to which they are connected to prevent unintentional disengagement of the snap hook by depression of the snap hook keeper by the connected member, or shall be a

locking type snap hook designed and used to prevent disengagement of the snap hook by the contact of the snap hook keeper by the connected member. As of January 1, 1998, only locking type snap hooks shall be used.

- Unless the snap hook is a locking type and designed for the following connections, snap hooks shall not be engaged:
  - Directly to webbing, rope or wire rope;
  - To each other,
  - To a dee-ring to which another snap hook or other connector is attached;
  - To a horizontal lifeline; or
  - To any object that is incompatibly shaped or dimensioned in relation to the snap hook such that unintentional disengagement could occur by the connected object being able to depress the snap hook keeper and release itself.
- Positioning device systems shall be inspected prior to each use for wear, damage, and other deterioration, and defective components shall be removed from service.
- Body belts, harnesses, and components shall be used only for employee protection (as part of a personal fall arrest system or positioning device system) and not to hoist materials.

### **Warning line systems**

Warning line systems and their use shall comply with the following provisions:

- The warning line shall be erected around all sides of the roof work area.
- When mechanical equipment is not being used, the warning line shall be erected not less than 6 feet (1.8 m) from the roof edge.
- When mechanical equipment is being used, the warning line shall be erected not less than 6 feet (1.8 m) from the roof edge which is parallel to the direction of mechanical equipment operation, and not less than 10 feet (3.1 m) from the roof edge which is perpendicular to the direction of mechanical equipment operation.
- Points of access, materials handling areas, storage areas, and hoisting areas shall be connected to the work area by an access path formed by two warning lines.
- When the path to a point of access is not in use, a rope, wire, chain, or other barricade, equivalent in strength and height to the warning line, shall be placed across the path at the point where the path intersects the warning line erected around the work area, or the path shall be offset such that a person cannot walk directly into the work area.
- Warning lines shall consist of ropes, wires, or chains, and supporting stanchions erected as follows:
  - The rope, wire, or chain shall be flagged at not more than 6-foot (1.8 m) intervals with high-visibility material;
  - The rope, wire, or chain shall be rigged and supported in such a way that its lowest point (including sag) is no less than 34 inches (.9 m) from the walking/working surface and its highest point is no more than 39 inches (1.0 m) from the walking/working surface;
  - After being erected, with the rope, wire, or chain attached, stanchions shall be capable of resisting, without tipping over, a force of at least 16 pounds (71 N) applied horizontally against the stanchion, 30 inches (.8

m) above the walking/working surface, perpendicular to the warning line, and in the direction of the floor, roof, or platform edge;

- The rope, wire, or chain shall have a minimum tensile strength of 500 pounds (2.22 kN), and after being attached to the stanchions, shall be capable of supporting, without breaking, the loads applied to the stanchions as prescribed in this section; and
- The line shall be attached at each stanchion in such a way that pulling on one section of the line between stanchions will not result in slack being taken up in adjacent sections before the stanchion tips over.
- No employee shall be allowed in the area between a roof edge and a warning line unless the employee is performing roofing work in that area.
- Mechanical equipment on roofs shall be used or stored only in areas where employees are protected by a warning line system, guardrail system, or personal fall arrest system.

### **Safety monitoring systems**

Safety monitoring systems and their use shall comply with the following provisions:

- The employer shall designate a competent person to monitor the safety of other employees and the employer shall ensure that the safety monitor complies with the following requirements:
- The safety monitor shall be competent to recognize fall hazards;
- The safety monitor shall warn the employee when it appears that the employee is unaware of a fall hazard or is acting in an unsafe manner;
- The safety monitor shall be on the same walking/working surface and within visual sighting distance of the employee being monitored;
- The safety monitor shall be close enough to communicate orally with the employee; and
- The safety monitor shall not have other responsibilities that could take the monitor's attention from the monitoring function.
- No employee, other than an employee engaged in roofing work [on low-sloped roofs] or an employee covered by a fall protection plan, shall be allowed in an area where an employee is being protected by a safety monitoring system.
- Each employee working in a controlled access zone shall be directed to comply promptly with fall hazard warnings from safety monitors.

### **Covers**

Covers for holes in floors, roofs, and other walking/working surfaces shall meet the following requirements:

- Covers shall be capable of supporting, without failure, at least twice the weight of employees, equipment, and materials that may be imposed on the cover at any one time.
- All covers shall be secured when installed so as to prevent accidental displacement by the wind, equipment, or employees.
- All covers shall be color-coded or they shall be marked with the word "HOLE" or "COVER" to provide warning of the hazard.

## **Protection from falling objects**

Falling object protection shall comply with the following provisions:

- Toe boards, when used as falling object protection, shall be erected along the edge of the overhead walking/working surface for a distance sufficient to protect employees below.
- Toe boards shall be capable of withstanding, without failure, a force of at least 50 pounds (222 N) applied in any downward or outward direction at any point along the toe board.
- Toe boards shall be a minimum of 3 ½ inches (9 cm) in vertical height from their top edge to the level of the walking/working surface. They shall have not more than ¼ inch (0.6 cm) clearance above the walking/working surface. They shall be solid or have openings not over 1 inch (2.5 cm) in greatest dimension.
- Where tools, equipment, or materials are piled higher than the top edge of a toe board, paneling or screening shall be erected from the walking/working surface or toe board to the top of a guardrail system's top rail or mid-rail, for a distance sufficient to protect employees below.
- Guardrail systems, when used as falling object protection, shall have all openings small enough to prevent passage of potential falling objects.
- Canopies, when used as falling object protection, shall be strong enough to prevent collapse and to prevent penetration by any objects that may fall onto the canopy.
- The Responsible Safety Officer will advise, on request, regarding usage and procedures, and has all of the documentation referenced above to use for reference.
- It is the responsibility of the supervisor to plan the intended work sufficiently to ensure that job planning and proper precautions have been taken. The Responsible Safety Officer is available for consultation.

## **Personnel Platforms**

- Work may be performed from a crane-suspended platform where another procedure is not possible because of structure design or work site conditions.
- Personnel platforms must be designed by a qualified engineer and reviewed by the Responsible Safety Officer. The suspension system must minimize tipping. The platform must be designed with a minimum safety factor of 5 based on the ultimate strength of the members, and the design must conform to 29 CFR 1926.550(g).

Additionally, all of the above Fall Protection requirements must be met.

## **E. LADDERS & STAIRWAYS SAFETY PLAN**

### **Introduction**

Stairways and ladders are a major source of injuries and fatalities among construction workers. OSHA estimates that there are 24,882 injuries and as many as 36 fatalities per year due to falls from stairways and ladders used in construction. Nearly half of these injuries are serious enough to require time off the job: 11,570 lost workday injuries and 13,312 non-lost workday injuries occur annually due to falls from stairways and ladders used in construction. As these data demonstrate, work on and around ladders and stairways is hazardous.

### **Scope and application**

The OSHA rules apply to all stairways and ladders used in construction, alteration, repair (including painting and decorating), and demolition of worksites covered by OSHA'S construction safety and health standards. They also specify when stairways and ladders must be provided. They do not apply to ladders that are specifically

manufactured for scaffold access and egress, but do apply to job-made and manufactured portable ladders intended for general purpose use and which are then used for scaffold access and egress. Rules for ladders used on or with scaffolds are addressed in Subpart L--*Scaffolds*

### **General Requirements**

- A stairway or ladder must be provided at all worker points of access where there is a break in elevation of 19 inches (48 cm) or more and no ramp, runway, embankment, or personnel hoist is provided.
- When there is only one point of access between levels, it must be kept clear to permit free passage by workers. If free passage becomes restricted, a second point of access must be provided and used.
- Where there are more than two points of access between levels, at least one point of access must be kept clear.
- All stairway and ladder fall protection systems required by these rules must be installed and all duties required by the stairway and ladder rules must be performed before employees begin work that requires them to use stairways or ladders and their respective fall protection systems.

### **Stairways**

The following general requirements apply to all stairways used during the process of construction, as indicated:

- Stairways that will not be a permanent part of the structure on which construction work is performed must have landings at least 30 inches deep and 22 inches wide (76 x 56 cm) at every 12 feet (3.7 m) or less of vertical rise.
- Stairways must be installed at least 30 degrees--and no more than 50 degrees--from the horizontal.
- Variations in riser height or stair tread depth must not exceed 1/4 inch in any stairway system, including any foundation structure used as one or more treads of the stairs.
- Where doors or gates open directly onto a stairway, a platform must be provided that extends at least 20 inches (51 cm) beyond the swing of the door.
- Metal pan landings and metal pan treads must be secured in place before filling.
- All stairway parts must be free of dangerous projections such as protruding nails.
- Slippery conditions on stairways must be corrected.
- Workers may not use spiral stairways that will not be a permanent part of the structure.

The following requirements apply to stairs in temporary service during construction:

- Except during construction of the actual stairway, stairways with metal pan landings and treads must not be used where the treads and/or landings have not been filled in with concrete or other materials, unless the pans of the stairs and/or landings are temporarily filled in with wood or other materials. All treads and landings must be replaced when worn below the top edge of the pan.
- Except during construction of the actual stairway, skeleton metal frame structures and steps must not be used (where treads and/or landings will be installed later) unless the stairs are fitted with secured temporary treads and landings.
- Temporary treads must be made of wood or other solid material and installed the full width and depth of the stair.

### **Stair Rails and Handrails**

The following general requirements apply to all stair rails and handrails:

- Stairways having four or more risers, or rising more than 30 inches (76 cm) in height--whichever is less--must have at least one handrail. A stair rail also must be installed along each unprotected side or edge. When the top edge of a stair rail system also serves as a handrail, the height of the top edge must be no more than 37 inches (94 cm) nor less than 36 inches (91.5 cm) from the upper surface of the stair rail to the surface of the tread.
- Winding or spiral stairways must have a handrail to prevent using areas where the tread width is less than 6 inches (15 cm).
- Stair rails installed after March 15, 1991, must be not less than 36 inches (91.5 cm) in height.
- Mid-rails, screens, mesh, intermediate vertical members, or equivalent intermediate structural members must be provided between the top rail and stairway steps to the stair rail system.
- Mid-rails, when used, must be located midway between the top of the stair rail system and the stairway steps.

- Screens or mesh, when used, must extend from the top rail to the stairway step and along the opening between top rail supports.
- Intermediate vertical members, such as balusters, when used, must not be more than 19 inches (48 cm) apart.
- Other intermediate structural members, when used, must be installed so that there are no openings of more than 19 inches (48 cm) wide.
- Handrails and the top rails of the stair rail systems must be able to withstand, without failure, at least 200 pounds (890 n) of weight applied within 2 inches (5 cm) of the top edge in any downward or outward direction, at any point along the top edge.
- The height of handrails must not be more than 37 inches (94 cm) nor less than 30 inches (76 cm) from the upper surface of the handrail to the surface of the tread.
- The height of the top edge of a stair rail system used as a handrail must not be more than 37 inches (94 cm) nor less than 36 inches (91.5 cm) from the upper surface of the stair rail system to the surface of the tread.
- Stair rail systems and handrails must be surfaced to prevent injuries such as punctures or lacerations and to keep clothing from snagging.
- Handrails must provide an adequate handhold for employees to grasp to prevent falls.
- The ends of stair rail systems and handrails must be built to prevent dangerous projections, such as rails protruding beyond the end posts of the system.
- Temporary handrails must have a minimum clearance of 3 inches (8 cm) between the handrail and walls, stair rail systems, and other objects. Unprotected sides and edges of stairway landings must be provided with standard 42-inch (1.1 m) guardrail systems.

## **Ladders**

The following general requirements apply to all ladders, including job-made ladders:

- A double-cleated ladder or two or more ladders must be provided when ladders are the only way to enter or exit a work area having 25 or more employees, **or** when a ladder serves simultaneous two-way traffic.
- Ladder rungs, cleats, and steps must be parallel, level, and uniformly spaced when the ladder is in position for use.
- Rungs, cleats, and steps of portable and fixed ladders (except as provided below) must not be spaced less than 10 inches (25 cm) apart, nor more than 14 inches (36 cm) apart, along the ladder's side rails.
- Rungs, cleats, and steps of step stools must not be less than 8 inches (20 cm) apart, nor more than 12 inches (31 cm) apart, between center lines of the rungs, cleats, and steps.
- Rungs, cleats, and steps at the base section of extension trestle ladders must not be less than 8 inches (20 cm) nor more than 18 inches (46 cm) apart, between center lines of the rungs, cleats, and steps. The rung spacing on the extension section must not be less than 6 inches (15 cm) nor more than 12 inches (31 cm).
- Ladders must not be tied or fastened together to create longer sections unless they are specifically designed for such use.
- A metal spreader or locking device must be provided on each stepladder to hold the front and back sections in an open position when the ladder is being used.
- When splicing side rails, the resulting side rail must be equivalent in strength to a one-piece side rail made of the same material.
- Two or more separate ladders used to reach an elevated work area must be offset with a platform or landing between the ladders, except when portable ladders are used to gain access to fixed ladders.
- Ladder components must be surfaced to prevent injury from punctures or lacerations. and prevent snagging of clothing.
- Wood ladders must not be coated with any opaque covering, except for identification or warning labels which may be placed only on one face of a side rail.

## **Portable Ladders**

- Non-self-supporting and self-supporting portable ladders must support at least four times the maximum intended load; extra heavy-duty type 1A metal or plastic ladders must sustain 3.3 times the maximum intended load. The ability of a self-supporting ladder to sustain loads must be determined by applying the load to the ladder in a downward vertical direction. The ability of a non-self-supporting ladder to sustain loads must be determined by applying the load in a downward vertical direction when the ladder is placed at a horizontal angle of 75.5 degrees.

- The minimum clear distance between side rails for all portable ladders must be 11.5 inches (29 cm).
- The rungs and steps of portable metal ladders must be corrugated, knurled, dimpled, coated with skid-resistant material, or treated to minimize slipping.

### **Fixed Ladders**

- A fixed ladder must be able to support at least two loads of 250 pounds (114 kg) each, concentrated between any two consecutive attachments. Fixed ladders also must support added anticipated loads caused by ice buildup, winds, rigging, and impact loads resulting from using ladder safety devices.
- Individual rung/step ladders must extend at least 42 inches (1.1 m) above an access level or landing platform either by the continuation of the rung spacings as horizontal grab bars or by providing vertical grab bars that must have the same lateral spacing as the vertical legs of the ladder rails.
- Each step or rung of a fixed ladder must be able to support a load of at least 250 pounds (114 kg) applied in the middle of the step or rung.
- The minimum clear distance between the sides of individual rung/step ladders and between the side rails of other fixed ladders must be 16 inches (41 cm).
- The rungs of individual rung/step ladders must be shaped to prevent slipping off the end of the rungs.
- The rungs and steps of fixed metal ladders manufactured after March 15, 1991, must be corrugated, knurled, dimpled, coated with skid-resistant material, or treated to minimize slipping.
- The minimum perpendicular clearance between fixed ladder rungs, cleats, and steps and any obstruction behind the ladder must be 7 inches (18 cm), except that the clearance for an elevator pit ladder must be 4.5 inches (11 cm).
- The minimum perpendicular clearance between the centerline of fixed ladder rungs, cleats, and steps, and any obstruction on the climbing side of the ladder must be 30 inches (76 cm). If obstructions are unavoidable, clearance may be reduced to 24 inches (61 cm), provided a deflection device is installed to guide workers around the obstruction.
- The step-across distance between the center of the rungs of fixed ladders and the nearest edge of a landing area must be no less than 7 inches (18 cm) and no more than 12 inches (30 cm). A landing platform must be provided if the step-across distance exceeds 12 inches (30 cm).
- Fixed ladders without cages or wells must have at least a 15-inch (38 cm) clear width to the nearest permanent object on each side of the centerline of the ladder.
- Fixed ladders must be provided with cages, wells, ladder safety devices, or self-retracting lifelines where the length of climb is less than 24 feet (7.3 m) but the top of the ladder is at a distance greater than 24 feet (7.3 m) above lower levels.
- If the total length of the climb on a fixed ladder equals or exceeds 24 feet (7.3 m), the following requirements must be met: fixed ladders must be equipped with either (a) ladder safety devices; (b) self-retracting lifelines and rest platforms at intervals not to exceed 150 feet (45.7 m); or (c) a cage or well, and multiple ladder sections, each ladder section not to exceed 50 feet (15.2 m) in length. These ladder sections must be offset from adjacent sections, and landing platforms must be provided at maximum intervals of 50 feet (15.2 m).
- The side rails of through or side-step fixed ladders must extend 42 inches (1.1 m) above the top level or landing platform served by the ladder. Parapet ladders must have an access level at the roof if the parapet is cut to permit passage through it; if the parapet is continuous, the access level is the top of the parapet.
- Steps or rungs for through-fixed-ladder extensions must be omitted from the extension; and the extension of side rails must be flared to provide between 24 inches (61 cm) and 30 inches (76 cm) clearance between side rails.
- When safety devices are provided, the maximum clearance distance between side rail extensions must not exceed 36 inches (91 cm).

### **Cages for Fixed Ladders**

- Horizontal bands must be fastened to the side rails of rail ladders or directly to the structure, building, or equipment for individual-rung ladders.
- Vertical bars must be on the inside of the horizontal bands and must be fastened to them.
- Cages must not extend less than 27 inches (68 cm), or more than 30 inches (76 cm) from the centerline of the step or rung, and must not be less than 27 inches (68 cm) wide.
- The inside of the cage must be clear of projections.

- Horizontal bands must be spaced at intervals not more than 4 feet (1.2 m) apart measured from centerline to centerline.
- Vertical bars must be spaced at intervals not more than 9.5 inches (24 cm), measured centerline to centerline.
- The bottom of the cage must be between 7 feet (2.1 m) and 8 feet (2.4 m) above the point of access to the bottom of the ladder. The bottom of the cage must be flared not less than 4 inches (10 cm) between the bottom horizontal band and the next higher band.
- The top of the cage must be a minimum of 42 inches (1.1 m) above the top of the platform or the point of access at the top of the ladder. Provisions must be made for access to the platform or other point of access.

### **Wells for Fixed Ladders**

- Wells must completely encircle the ladder.
- Wells must be free of projections.
- The inside face of the well on the climbing side of the ladder must extend between 27 inches (68 cm) and 30 inches (76 cm) from the centerline of the step or rung.
- The inside width of the well must be at least 30 inches (76 cm).
- The bottom of the well above the point of access to the bottom of the ladder must be between 7 feet (2.1 m) and 8 feet (2.4 m).

### **Ladder Safety Devices and Related Support Systems for Fixed Ladders**

- All safety devices must be able to withstand, without failure, a drop test consisting of a 500-pound weight (226 kg) dropping 18 inches (41 cm).
- All safety devices must permit the worker to ascend or descend without continually having to hold, push, or pull any part of the device, leaving both hands free for climbing.
- All safety devices must be activated within 2 feet (.61 m) after a fall occurs, and limit the descending velocity of an employee to 7 feet/second (2.1 m/sec) or less.
- The connection between the carrier or lifeline and the point of attachment to the body belt or harness must not exceed 9 inches (23 cm) in length.

### **Mounting Ladder Safety Devices for Fixed Ladders**

- Mountings for rigid carriers must be attached at each end of the carrier, with intermediate mountings, spaced along the entire length of the carrier, to provide the necessary strength to stop workers' falls.
- Mountings for flexible carriers must be attached at each end of the carrier. Cable guides for flexible carriers must be installed with a space of between 25 feet (7.6 m) and 40 feet (12.2 m) along the entire length of the carrier, to prevent wind damage to the system.
- The design and installation of mountings and cable guides must not reduce the strength of the ladder.
- Side rails and steps or rungs for side-step fixed ladders must be continuous in extension.

### **Use of All Ladders**

- When portable ladders are used for access to an upper landing surface, the side rails must extend at least 3 feet (.9 m) above the upper landing surface. When such an extension is not possible, the ladder must be secured, and a grasping device such as a grab rail must be provided to assist workers in mounting and dismounting the ladder. A ladder extension must not deflect under a load that would cause the ladder to slip off its supports.
- Ladders must be maintained free of oil, grease, and other slipping hazards.
- Ladders must not be loaded beyond the maximum intended load for which they were built, nor beyond their manufacturer's rated capacity.
- Ladders must be used only for the purpose for which they were designed.
- Non-self-supporting ladders must be used at an angle where the horizontal distance from the top support to the foot of the ladder is approximately one-quarter of the working length of the ladder. Wood job-made ladders with spliced side rails must be used at an angle where the horizontal distance is one-eighth the working length of the ladder.
- Fixed ladders must be used at a pitch no greater than 90 degrees from the horizontal, measured from the back side of the ladder.

- Ladders must be used only on stable and level surfaces unless secured to prevent accidental movement.
- Ladders must not be used on slippery surfaces unless secured or provided with slip-resistant feet to prevent accidental movement. Slip-resistant feet must not be used as a substitute for the care in placing, lashing, or holding a ladder upon slippery surfaces.
- Ladders placed in areas such as passageways, doorways, or driveways, or where they can be displaced by workplace activities or traffic must be secured to prevent accidental movement or a barricade must be used to keep traffic or activities away from the ladder.
- The area around the top and bottom of the ladders must be kept clear.
- The top of a non-self-supporting ladder must be placed with two rails supported equally unless it is equipped with a single support attachment.
- Ladders must not be moved, shifted, or extended while in use.
- Ladders must have nonconductive side rails if they are used where the worker or the ladder could contact exposed energized electrical equipment.
- The top or top step of a stepladder must not be used as a step.
- Cross bracing on the rear section of stepladders must not be used for climbing unless the ladders are designed and provided with steps for climbing on both front and rear sections.
- Ladders must be inspected by a competent person for visible defects on a periodic basis and after any incident that could affect their safe use.
- Single-rail ladders must not be used.
- When ascending or descending a ladder, the worker must face the ladder.
- Each worker must use at least one hand to grasp the ladder when climbing.
- A worker on a ladder must not carry any object or load that could cause him/her to lose balance and fall.

### **Structural Defects**

- Portable ladders with structural defects--such as broken or missing rungs, cleats, or steps, broken or split rails, corroded components, or other faulty or defective components--must immediately be marked defective, or tagged with "Do Not Use" or similar language and withdrawn from service until repaired.
- Fixed ladders with structural defects--such as broken or missing rungs, cleats, or steps, broken or split rails, or corroded components--must be withdrawn from service until repaired.
- Defective fixed ladders are considered withdrawn from use when they are (a) immediately tagged with "Do Not Use" or similar language; (b) marked in a manner that identifies them as defective; or (c) blocked--such as with a plywood attachment that spans several rungs.
- Ladder repairs must restore the ladder to a condition meeting its original design criteria before the ladder is returned to use.

### **Training Requirements**

Under the provisions of the standard, employers must provide a training program for each employee using ladders and stairways. The program must enable each employee to recognize hazards related to ladders and stairways and to use proper procedures to minimize these hazards. For example, employers must ensure that each employee is trained by a competent person in the following areas, as applicable:

- the nature of fall hazards in the work area;
  - the correct procedures for erecting, maintaining, and disassembling the fall protection systems to be used;
  - the proper construction, use, placement, and care in handling of all stairways and ladders; and
  - the maximum intended load-carrying capacities of ladders used.
- In addition, employers must retrain each employee as necessary to maintain the understanding and knowledge acquired through compliance with the standard.

### **Glossary**

**Cleat** - A ladder crosspiece of rectangular cross section placed on edge upon which a person may step while ascending or descending a ladder.

**Double-Cleat Ladder** - A ladder with a center rail to allow simultaneous two-way traffic for employees ascending or descending.

**Failure** - Load refusal, breakage, or separation of components.

**Fixed Ladder** - A ladder that cannot be readily moved or carried because it is an integral part of a building or structure.

**Handrail** - A rail used to provide employees with a handhold for support.

**Job-Made Ladder** - A ladder that is fabricated by employees, typically at the construction site; non-commercially manufactured.

**Load Refusal** - The point where the structural members lose their ability to carry the load.

**Point of Access** - All areas used by employees for work-related passage from one area or level to another.

**Portable Ladder** - A ladder that can be readily moved or carried.

**Riser Height** - The vertical distance from the top of a tread or platform/landing to the top of the next higher tread or platform/landing.

**Side-Step Fixed Ladder** - A fixed ladder that requires a person to get off at the top to step to the side of the ladder side rails to reach the landing.

**Single-Cleat Ladder** - A ladder consisting of a pair of side rails connected together by cleats, rungs, or steps.

**Stair Rail System** - A vertical barrier erected along the unprotected sides and edges of a stairway to prevent employees from falling to lower levels.

**Temporary Service Stairway** - A stairway where permanent treads and/or landings are to be filled in at a later date.

**Through Fixed Ladder** - A fixed ladder that requires a person getting off at the top to step between the side rails of the ladder to reach the landing.

**Tread Depth** - The horizontal distance from front to back of a tread, excluding nosing, if any.

## **F. RESPIRATORY PROTECTION PROGRAM**

### **I. Introduction**

While most air is safe to breathe, there are some processes that necessitate the use of respiratory protection. The Occupational Safety and Health Standards for General Industry (29 CFR Part 19C, Subpart I, Subsection 1910.134) establish permissible practices and requirements for a minimal acceptable program.

The "CMR Respiratory Protection Program" is designed to set forth accepted practices for respirator use, as well as to provide information for training and guidance on the proper selection, use and care of respirators.

### **II. Employer and Employee Responsibility**

#### **A. Employer Responsibility**

1. Respirators shall be provided by Davcal when they are necessary to protect the health of the employee.
2. Davcal shall provide the respirator that is applicable and suitable for the intended purpose.
3. Davcal shall be responsible for the establishment and maintenance of written respiratory protection program, which includes selection of the correct respirator for the hazard(s) involved.

## **B. Employee Responsibility**

1. The employee shall use the respiratory protection in accordance with instructions and training received.
2. The employee shall guard against damage to the respirator.
3. The employee shall report any trouble or malfunction of the respirator to his supervisor.

## **III. Maintenance and Care of Respirators**

### **A. Inspection**

1. All respirators shall be inspected routinely before and after each use.
2. Respirator inspection shall include:
  - a. Check of the tightness of connections and the condition of the face piece.
  - b. Check of the headbands
  - c. Check of the valves
  - d. Check of the connecting tube and canisters
  - e. Rubber or elastomer parts shall be checked for pliability and deterioration

### **B. Cleaning and Disinfection**

1. Respirators shall be cleaned after each use.
2. Cleaning Procedure
  - a. Remove any filters, cartridges, headbands
  - b. Wash all respirator parts (except cartridges and elastic headbands) in a cleaner-disinfectant solution at not more than 120 F. Use a hand brush to remove dirt, if necessary.
  - c. Rinse completely in clean, warm water.
  - d. Air dry in a clean area
  - e. Inspect all parts; if defective, bring respirator to supervisor for replacement or repair.
  - f. Reassemble the respirator and insert new filters or cartridges, if required. Make sure the seal is tight.
  - g. Disinfect all facial contact areas.
  - h. Place the respirator in a new plastic bag and seal it for storage.

### **C. Repair of Respirators**

1. Repair or replacement shall be done only by experienced persons with parts designed for the respirators, and provided by the manufacture of that particular respirator.
2. No attempt shall be made to replace components or to make adjustment or repair beyond the manufacturer's recommendation.

### **D. Storage of Respirators**

1. After inspection, cleaning, and necessary repairs, respirators shall be stored to protect against dust, sunlight, heat, extreme cold, excessive moisture or damaging chemicals.
2. Routinely used respirators, such as dust respirators, must be placed in plastic bags during periods of nonuse.
3. Respirators shall not be placed in such places as tool boxes, unless they are in plastic bags.
4. Respirators shall be packed or stored so the face piece is not distorted, and according to the manufacturer's instructions.

## **IV. Medical Limitations:**

- A. Persons will not be assigned tasks requiring the use of respirators unless they are physically able to perform the work and use the equipment.
- B. The respirator user's medical status will be reviewed annually by Davcal Safety/Loss Control Director.

## **V. Selection, Issuance, and Training Practices**

## **A. Selection of Respirators:**

1. Respirator type and make will be selected by the Safety/Loss Control Director
2. Only respirators approved by the National Institute of Occupational Safety and Health may be used.
3. The proper type of respirator for the specific hazard involved will be selected in accordance with the manufacturer's instructions.

## **B. Issuance of Respirators**

1. Management will determine if a respirator is needed.
2. Air sampling data will be taken and shall be the determining factor in the case of a disagreement between employer and employee on whether a respirator is needed.
3. Employees will be required to wear breathing zone sampling apparatus for periods of time when air sampling studies are being carried out. These studies will be done from time to time to assert that a respirator is or is not necessary.

## **C. Training Practices:**

1. Instruction in the nature of the hazard, and an honest appraisal of what may result if the respirator is not used.
2. An explanation of why engineering controls are not immediately possible, and that effort is being made to eliminate the need for respirators.
3. An explanation of why this is the proper type of respirator for the particular hazard.
4. An explanation of the care and cleaning program.
5. A discussion of the respirator's capabilities and limitations.
6. Instruction and training in actual use, and close and frequent supervision to assure proper use.
7. Any other emergency or special instructions.

## **VI. Operating Procedures for Respirators**

- A. Davcal will provide for the proper storage and cleaning of respirators. They will clean, repair or replace new units.
- B. Respirators must be stored in the proper area when not being used.
- C. Whenever respirators are not in use during the shift, they must be stored in the clean plastic bag in which they were issued.
- D. Respirators may not be worn when conditions prevent a good face seal (such as a growth of beard, mustache or missing dentures).
- E. Before and after using a respirator, the employee or immediate supervisor must make an inspection of tightness of connections and the condition of the face piece, headbands, valves, filter holders and filters. If any questionable items are found, they must be corrected immediately.
- F. To assure proper protection, the face piece fit must be checked by the wearer before each entry into a contaminated atmosphere.

### **1. Positive pressure test:**

Close off the exhalation valve with your hand. Breathe air lightly into the mask. The face fit is satisfactory if some pressure can be built inside the mask without any air leaking out between the mask and the face of the wearer.

### **2. Negative pressure test:**

Close off the inlet openings of cartridge with the palm of your hand. Some masks may require that the filter holder be removed to seal off the intake valve. Inhale gently so that a vacuum occurs within the face piece. Hold your breath for 10 seconds. If the vacuum remains, and no inward leakage is detected, the respirator is properly fit. Note: care must be taken not to push the facepiece onto the face, as this may give a better seal during the test than can be obtained in normal use.

## **VII. Toxic Atmospheres:**

- A. During normal operations where toxic atmosphere are present, established work procedures must be followed.

B. Atmospheres immediately dangerous to life or health (IDLH). In emergency situations where an atmosphere exists in which the wearer of the respirator could be overcome by a toxic or oxygen-deficient atmosphere, the following procedure shall be followed:

1. Never enter a dangerous atmosphere without first obtaining the proper protective equipment and permission to enter from the Safety/Loss Control Director program, or a supervisor.
2. Never enter a dangerous atmosphere without at least one additional man present. He must remain in the safe atmosphere.
3. Never wear air-purifying (cartridge or canister) respirators in IDLH atmospheres.
4. Communications (voice, visual, or signal line) must be maintained between both individuals or all present.
5. The persons remaining in the safe atmosphere must have the proper rescue equipment to enable them to aid the person in the dangerous atmosphere if problems are encountered.

### **VIII. Control and evaluation of Respirator Program:**

In order to maintain an effective respiratory protection program, control and feedback on how the program is functioning is necessary. In this manner, improvements can be made and deficiencies eliminated.

#### **A. Wearer Acceptance**

1. Comfort
2. Ability to breathe without objectionable effort.
3. Adequate visibility under all conditions.
4. Provisions for wearing prescription glasses.
5. Ability to perform all tasks without undue interference.
6. Confidence in the face piece fit.

#### **B. Examination of Respirators in Use**

1. Even though a respirator is worn conscientiously, the protection provided is no better than the respirator in use.
2. Frequent random inspections shall be conducted by the Safety/Loss Control Director to assure that respirators are properly selected, used, cleaned, and maintained.

### **G. GROUND FAULT PROTECTION PLAN**

#### **Introduction**

Insulation and grounding are two recognized means of preventing injury during electrical equipment operation. Conductor insulation may be provided by placing nonconductive material such as plastic around the conductor. Grounding may be achieved through the use of a direct connection to a known ground such as a metal cold water pipe.

Consider, for example, the metal housing or enclosure around a motor or the metal box in which electrical switches, circuit breakers, and controls are placed. Such enclosures protect the equipment from dirt and moisture and prevent accidental contact with exposed wiring. However, there is a hazard associated with housings and enclosures. A malfunction within the equipment — such as deteriorated insulation — may create an electrical shock hazard. Many metal enclosures are connected to a ground to eliminate the hazard. If a "hot" wire contacts a grounded enclosure, a ground fault results which normally will trip a circuit breaker or blow a fuse. Metal enclosures and containers are usually grounded by connecting them with a wire going to the ground. This wire is called an equipment grounding conductor. Most portable electric tools and appliances are grounded by this means. There is one disadvantage to grounding: a break in the grounding system may occur without the user's knowledge.

Insulation may be damaged by hard usage on the job or simply by aging. If this damage causes the conductors to become exposed, the hazards of shocks, burns, and fire will exist. Double insulation may be used as additional

protection on the live parts of a tool, but double insulation does not provide protection against defective cords and plugs or against heavy moisture conditions.

The use of a ground-fault circuit interrupter (GFCI) is another method used to overcome grounding and insulation deficiencies. The ground-fault circuit interrupter is a fast-acting circuit breaker which senses small imbalances in the circuit caused by current leakage to ground and, in a fraction of a second, shuts off the electricity. The GFCI continually matches the amount of current going to an electrical device against the amount of current returning from the device along the electrical path. Whenever the amount "going" differs from the amount "returning" by approximately 5 milliamps, the GFCI interrupts the electric power within as little as 1/40 of a second.

However, the GFCI will not protect the employee from line-to-line contact hazards (such as a person holding two "hot" wires or a hot and a neutral wire in each hand). It does provide protection against the most common form of electrical shock hazard—the ground fault. It also provides protection against fires, overheating, and destruction of insulation on wiring.

### **Identifying The Hazards**

With the wide use of portable tools on construction sites, the use of flexible cords often becomes necessary. Hazards are created when cords, cord connectors, receptacles, and cord- and plug-connected equipment are improperly used and maintained.

Generally, flexible cords are more vulnerable to damage than is fixed wiring. Flexible cords must be connected to devices and to fittings so as to prevent tension at joints and terminal screws. Because a cord is exposed, flexible, and unsecured, joints and terminals become more vulnerable. Flexible cord conductors are finely stranded for flexibility, but the strands of one conductor may loosen from under terminal screws and touch another conductor, especially if the cord is subjected to stress or strain.

A flexible cord may be damaged by activities on the job, by door or window edges, by staples or fastenings, by abrasion from adjacent materials, or simply by aging. If the electrical conductors become exposed, there is danger of shocks, burns, or fire. A frequent hazard on a construction site is a cord assembly with improperly connected terminals.

When a cord connector is wet, hazardous leakage can occur to the equipment grounding conductor and to humans who pick up that connector if they also provide a path to the ground. Such leakage is not limited to the face of the connector but also develops at any wetted portion of it.

When the leakage current of tools is below 1 ampere, and the grounding conductor has a low resistance, no shock should be perceived. However, should the resistance of the equipment grounding conductor increase, the current through the body also will increase. Thus, if the resistance of the equipment grounding conductor is significantly greater than 1 ohm, tools with even small leakages become hazardous.

### **Preventing & Eliminating Hazards**

GFCIs can be used successfully to reduce electrical hazards on construction sites. Tripping of GFCIs—interruption of current flow—is sometimes caused by wet connectors and tools. It is good practice to limit exposure of connectors and tools to excessive moisture by using watertight or sealable connectors. Providing more GFCIs or shorter circuits can prevent tripping caused by the cumulative leakage from several tools or by leakages from extremely long circuits.

Housekeeping and proper tool storage are key considerations in preventing damage to tools and cords. Cords should be kept 7' off the floor wherever possible. Also, be sure to store equipment neatly and *gently* to help prevent nicks or tears to insulating jackets, and cracks or breaks in motor and switch housings, or prongs. Tools kept in gang boxes should never be stacked on top of cords.

### **Our Program – What Contractor Does**

In accordance with OSHA requirements, and with Davcal's policy and philosophy, we have developed this Assured Equipment Grounding Conductor Program. It is our intention to provide a safe and healthful workplace in every manner possible, and this includes protection from hazards associated with damaged or faulty electrical

equipment. It will be the responsibility of every employee to inspect tools daily and before each use to ensure that no damaged tools or equipment are used. Any damaged tools or equipment should be immediately removed from service, and if they cannot be repaired immediately, tagged out against possible use. Tags should be made of some sturdy material, firmly affixed (tied or taped) to the tool or equipment at the "point of operation" – i.e. the switch or male plug end, and legibly marked "DO NOT USE". Tools requiring extensive or off-site repairs should be returned to the office immediately.

GFCI outlets will be provided on every jobsite, either by the use of electrician-supplied temporary power, or by temporary pigtail outlet boxes. These outlets will be used at all times whenever a tool is not plugged DIRECTLY into existing house power. (Any use of extension cords requires GFCI protection).

In addition to visual inspections, superintendents shall have the additional responsibility of testing GFCI circuits for proper function.

All cords and electrical tools will follow a similar testing program in addition to visual inspections. Tests conducted will be continuity and polarity, with appropriate documentation.

As with outlets, tools and cords will not be returned to service after repairs until all testing is complete.

Repairs may be made by any superintendent comfortable and knowledgeable about the work, but only using UL listed repair equipment suitable for the application. Repaired cords should not have any protruding screws or fasteners, and tools should be repaired using manufacturer-supplied cords wherever possible. Field repairs to tools may be made pending receipt of "original equipment", but all procedures must be followed.

## **H. HEARING PROTECTION POLICY**

Hearing protection is required in all Field, Shop and Yard operations whenever an employee is working around loud noises. Ear plugs will be supplied by Davcal. Specific activities which require the use of hearing protection are the use of chop saws, sawzalls, jack hammers, chipping hammers, and powder actuated tools.

## **I. OSHA ENTRY PROGRAM**

### **STATEMENT OF POLICY**

It is the policy of Davcal to cooperate with any government agency seeking to enforce applicable federal, state or local laws. Davcal also seeks to contemporaneously preserve the Constitutional rights of itself and its employees, and to maintain control of access to its projects for safety and operational reasons. Therefore, Davcal has adopted a policy of not permitting any governmental agency representative to enter onto its project sites on private property for the purpose of conducting a safety related inspection or for any other purpose without the prior consent of Davcal's Safety/Loss Control Director, or an officer of Davcal. In the event that permission is not obtained, for whatever reasons, it is the policy of Davcal not to permit any government agency representative to enter onto and inspect its project sites without a valid inspection warrant.

In any proceeding involving a warrant application, it is the policy of Davcal to request that it be given notice and an opportunity to be heard prior to the issuance of any warrant. Further, if any attempt is made to enter onto any of Davcal's project sites on private property without a warrant, this Statement of Policy is to be provided to the official seeking entry.

Davcal's Safety Officer or its counsel is to represent Davcal in any discussions with the agency representatives wishing to conduct an inspection and shall participate on behalf of Davcal in any pre-inspection conference, walkaround, or post-inspection conference. If the Safety/Loss Control Director consents to such inspection, or if a warrant has been obtained but the Safety Loss Control Director is not available for the on-site inspection, Davcal requests that the agency representative report on his or her closing conference to the Safety/Loss Control Director via telephone at the end of the inspection or as soon as possible thereafter.

## J. HEAT ILLNESS PREVENTION

In accordance with GISO 3395, the emergency "Heat Illness Prevention" OSHA proposed state standard, approved temporarily from August 12, 2005 through December 31, 2005 with possible future permanent implementation, the following policy has been adopted.

In the event working conditions are such that a heat related illness could occur, most likely during the late spring and through the summer months, due to extreme air temperature, high humidity, sun exposure, workload and personal protection worn by employees, the following procedures shall be followed:

1. **Training:** All supervisors and employees will be provided safety training stipulated by the training requirements listed in GISO 3395. Please refer to the company's Heat Illness Prevention safety training tailgate training topic.
2. **Potable Drinking Water:** Davcal will ensure that potable drinking water and disposable cups are accessible to all employees on the job. This will consist of either a supervisor's water jug, access to the General Contractors water supply, or other company provided water source.
3. **Access to Shade and Recovery Period:** Davcal will provide or arrange for shade to be available on the job. This will consist of either a "Easy Up" or pop up tent system, roof covered building that is cool or air conditioned, or other employer arranged shade area. The Recovery Period for someone exposed to Heat Illness shall be no less than 5 minutes but may be as long as necessary for complete recovery. Heat Illness exposed victims will not be left alone to recover but will be monitored by supervision or another employee to ensure safe recovery.

All Heat Illness related cases will be immediately reported to the office and affected employees will be evaluated for possible medical treatment by supervision following the training guidelines in the Heat Illness Prevention tail gate training topic.

## K. Hazard Communication Program

### Statement of Policy:

As a company we intend to provide information about chemical hazards and other hazardous substances, and the control of hazards via our comprehensive Hazard Communication Program that includes container labeling, Material Safety Data Sheets (MSDS) and training.

### Container Labeling:

It is the policy of this company that no container of hazardous substances will be released for use until the following label information is verified:

- Containers are clearly labeled as to the contents
- Appropriate Hazard warning are noted
- The name and address of the manufacturer are listed

This responsibility has been assigned to the Safety Officer to further ensure that employees are aware of the hazards of material used in their work areas. It is our policy to label all secondary containers.

Supervisors will ensure that all secondary containers are labeled with either an extra copy of the original manufacturer's label or with generic labels that have a block for identity and blocks for the hazard warning.

### Material Safety Data Sheets (MSDS)

Copies of MSDS for all hazardous substances to which employees of this company may be exposed are kept in the office and on the job site. The superintendent and all foremen will be responsible for maintaining these MSDS's.

Lee Gardner will review incoming data sheets for new and significant health/safety information. He will see that any new information is passed on to the affected employees.

MSDS will be reviewed for completeness by Lee Gardner. If an MSDS is missing or obviously incomplete, a new MSDS will be requested from the manufacturer. Cal/OSHA will be notified if a complete MSDS is not received.

MSDS are available to all employees in their work area for review during each work shift. If MSDS are not available or new hazardous substances(s) in use to not have MSDS, please contact Keith Hammonds immediately.

### **Employee Information and Training**

Employees are to attend a health and safety orientation set up by the project superintendent or foreman, prior to or just after starting work for information and training on the following:

- An overview of the requirements contained in the Hazard Communication Regulation, including their rights under the Regulation.
- Inform employees of any operations in their work area where hazardous substances are present.
- Location and availability of the written hazard communication program.
- Physical and health effects of the hazardous substances.
- Methods and observation techniques used to determine the presence or release of hazardous substances in the work area.
- How to lessen or prevent exposure to these hazardous substances through usage of control, work practices and personal protective equipment.
- Steps the company has taken to lessen or prevent exposure to these substances.
- Emergency and first aid procedures to follow if employees are exposed to hazardous substances.
- How to read labels and review MSDS to obtain appropriate hazard information.

NOTE: It is critically important that all of our employees understand the training. If you have any additional questions, please contact your foreman, superintendent or the Safety Officer.

When new hazardous substances are introduced, the Safety Officer will review the above items as they are related to the new material in your work area safety meeting.

### **List of Hazardous Substances**

The list of all known hazardous substances used by this company is included in the MSDS binder which can be found at the office, as well as on all job sites. Specific information on each noted hazardous substance can be obtained by reviewing the Material Safety Data Sheets.

### **Hazardous Non-Routine Tasks**

Very rarely, employees may be required to perform hazardous non-routine tasks. In this event, prior to starting work on such projects, each affected employee will be given information by their supervisor about hazards to which they may be exposed during such an activity.

This information will include:

- Specific hazards
- Protective/safety measures which must be utilized
- Measures the company has taken to lessen the hazards including ventilation, respirators, presence of another employee and emergency procedures.

## **VI. Health**

### **A. Industrial Medical Centers**

It is the policy of Davcal to establish a designated company medical center for all major projects. The medical center should be able to supply a medical panel list of at least five physicians as licensed practitioners of the healing arts who are appropriate for the types of injuries or illnesses to expect in a construction work force. The medical centers should be used for the following:

- Emergency medical care
- Post employment impaired conduct screening
- Miscellaneous medical care

#### **1. Requirements for Medical Facility**

- a. Travel time from jobsite should not exceed 10-15 minutes
- b. Located near major traffic routes, easy to locate
- c. Operating hours must correspond to work hours of job.
- d. Facility must be equipped with x-ray equipment
- e. Facility must be capable of performing all minor emergency treatment.
  - i. Broken bones
  - ii. Strains, pulls, sprains
  - iii. Tetanus shots
  - iv. Lacerations, abrasions
  - v. Minor illness

#### **2. Locate Facility**

- a. Contact our Insurance Carrier for assistance.
- b. Check local telephone book
  - i. List all facilities that meet geographic requirements
- c. Drive to each facility
  - i. Record time of travel
  - ii. Record travel route
- d. Visit facility and obtain literature on capabilities and the name and phone number of business agent.

#### **3. Contact Facility**

- a. Determine which facilities meet our requirements
- b. Arrange a meeting with facility's business agent.

#### **4. Meet with Facility**

- a. Tour and inspect facility.
- b. Discuss requirements to meet our needs.
- c. Inform facility of length of job.
- d. Post facility into in project trailer and inform all project supervision.

#### **5. Agree on Requirements and Designate Facility as Company Medical Facility**

#### **6. Procedure for Emergency Medical Care**

- a. Injured employee will be brought to the medical center by another Company employee or "First Aider."
- b. The top half of the Medical Facility Trip Report will be filled out by Davcal "First Aider."
- c. The bottom half of the Medical Facility Trip Report will be filled out by the examining physician who will give a recommendation as to the ability of the injured employee to return to work, possibly on a light duty assignment.

### **B. Drug & Alcohol Abuse Policy**

#### **Need for the Policy**

Federal experts estimate that 10% to 23% of all employees in the United States use drugs and/or alcohol on the job. 50% of all employees tested after industrial accidents show the presence of drugs or alcohol in their systems. An estimated 20% of construction industry employees have an alcohol and/or drug problem.

Employees who abuse drugs and alcohol are: 3 to 5 times more likely to have an accident endangering themselves or others; 65% as productive as employees who do not abuse drugs or alcohol; absent 10 to 16 times the normal absenteeism rate; and more prone to theft to support their drug habit.

Contractors on federal government projects are required to have drug and alcohol abuse programs and many private owners of construction projects also insist that their contractors, and their subcontractors, have and enforce drug and alcohol abuse policies as a condition of being awarded a contract.

## **Statement of Policy**

Davcal has a vital interest in maintaining safe, healthful, and productive working conditions for its employees. Any employee under the influence of a drug or alcohol on the job can be a serious risk to himself, to other employees and in some instances, the general public. The possession, use, or sale of an illegal drug or alcohol in the workplace is prohibited. Accordingly, Davcal has established this policy with regards to use, possession or sale of alcohol while at work or on Davcal property or on Davcal business.

- A. Alcohol: Possession, use, or being under the influence of alcohol by an employee while at work or on Davcal property or on Davcal business is prohibited.
- B. Illegal Drugs: Possession, use, sale, purchase or being under the influence of an illegal drug by an employee while at work or on Davcal property or on Davcal business is prohibited.
- C. Legal Drugs: An employee's use of a legal drug can pose a significant risk to the safety of the employee or others. The use of, or being under the influence of any legally obtained drug by an employee while at work or on Davcal property or on Davcal business is prohibited if such influence may affect the safety of the employee, his or her coworkers, or members of the public. An employee who has reason to believe that the use of a legal drug may present a safety risk to himself or others must report such drug use to Davcal to determine job-related consequences. Davcal may require the employee to take a leave of absence or comply with other appropriate remedies determined by management.

Employees who are found to be violating this policy may not remain on duty or perform in any position until management determines that the employee may perform in such position.

All field employees must, as a condition of employment, abide by the terms of the following policy.

### **I. Drug and Alcohol Testing**

- A. Coverage: All field employees of Davcal Inc. are covered by this policy.
- B. When Testing is Required: Covered individuals are subject to drug and alcohol testing under any of the following circumstances:
  - 1. On any job or at any time Davcal is required to administer drug and alcohol testing to its field employees under the terms of its sub-contract agreement or as required under the terms of a Project Labor Agreement.
  - 2. Post Accident Testing: By accepting employment covered individuals must consent to controlled substance and alcohol testing after an accident.

3. Return To Duty Follow-Up Testing: Employees who are returning to work from treatment of alcohol or substance abuse are subject to testing and certification requirements and may be subjected to unscheduled follow-up testing.

C. Consequences of Failing Drug or Alcohol Testing:

1. On a first failure, the employee may be immediately involuntarily terminated. At the discretion of management, the employee may instead be immediately suspended from his or her duties. In such event, the employee will be required to seek evaluation and treatment from a licensed substance abuse professional in order to continue in employment. Payment for treatment will be the employee's responsibility.
  - a. The period of suspension will be without pay.
  - b. The employee must provide a status report regarding his or her continued treatment from his or her substance abuse professional to his or her supervisor, not less frequently than every two calendar weeks.
  - c. Upon being released from treatment and prior to being allowed to return to work, the employee must consent to and successfully pass a Return to Work drug or alcohol test.
  - d. The employee will be subject to unannounced Follow-Up Testing.
2. A second instance of failing a drug or alcohol test will result in the employee being involuntarily terminated from his or her employment.

D. Refusal to test or provide an adequate sample for testing:

1. Refusal to test when requested to do so under any of the two circumstances when testing may be required (see I B. above), shall constitute insubordination and will result in termination of employment effective at the time of the refusal to test.
2. Failure to provide the required amount of urine required for a specimen shall constitute insubordination and will result in termination of employment effective at the time of the refusal to test.
3. Failure to provide adequate breath for testing without a valid medical reason, shall constitute insubordination and will result in termination of employment effective at the time of the refusal to test.

E. Special Post-Accident Provisions:

1. Essential medical treatment following an accident should never be delayed in order to implement drug or alcohol testing. However, such testing should occur as soon as practical.
2. Davcal makes arrangements with industrial Medical Clinics near each job site for emergency care in the event of an injury. (In the event of a serious injury, the employee will be taken directly to a hospital emergency room.) These Clinics and Hospitals have been instructed to perform drug and alcohol testing on all Davcal employees who report to them with a job related injury.
3. Any post-accident test that results in a positive finding of drugs or alcohol shall expose the employee to disciplinary action as set forth above.

## **C. New Hire Training Program**

It is the desire of Davcal to provide each employee with a safe work area, free from hazards. Although Davcal strives to plan safety into the job and to provide you with safe working conditions and equipment, it is ultimately your responsibility to work safely so that you do not endanger yourself or your fellow workers.

A study of the accidents that have occurred at Davcal revealed that most of all accidents involved employees that have worked for Davcal for six months or less. This is a very high percentage, and it is therefore the intent of this New Hire Training Program to reduce the number of accidents to new employees and to serve as a reminder for older employees.

The following guidelines, are general in nature. They are intended to supplement the Specific Safety Plans set forth above, and do not replace those Specific Plans. In the event of a conflict between any of the Specific Safety Plans and these general guidelines, the more stringent shall apply.

### **Personal Protective Equipment**

- All employees are required to wear a hard hat which is supplied by Davcal. (New Hires will wear a green hard hat for the first six to twelve months of employment.)
- Use gloves when handling hot and cold objects, rough materials and/or chemicals.
- In areas where noise levels are high, appropriate hearing protection devices must be worn (such as ear muffs or plugs).
- All employees are required to wear safety glasses which are approved by Davcal.
- Respiratory protective devices must be worn in dusty conditions or harmful atmospheres, such as lead burning and welding, or sandblasting. Make sure it is the proper type for the exposure.
- An employee that is required to wear a respiration must be clean shaven.
- Personal protective equipment must be kept clean and serviceable.
- Employees must wear shirts which fully cover the upper body from the shoulder area to the waist.
- Tank tops are not permitted.
- The wearing of a personal flotation device is required when the danger of drowning exists.
- Work boots/shoes are required on all jobsites.
- Toe guards or steel toed boots are required when using a jack hammer.
- Goggles must be worn over or in place of safety glasses during grinding operations.

### **Fall Protection**

- EMPLOYEES EXPOSED TO FALL HAZARDS MUST BE TIED OFF AT ALL TIMES.
- All employees exposed to a fall hazard must wear a safety belt attached to a lanyard or retracting lifeline.
- The maximum lanyard length shall be 6 feet (double lanyards are prohibited).
- Safety belts must be worn snugly around the waist.
- Lanyards must be connected to a D-ring which is positioned in the center of the back.
- If you wear a lifeline, be sure it is secured to a permanent structure.

### **Power Tools**

- Always inspect tools prior to use. Never use unsafe tools.
- Be certain an electric tool is either double insulated or properly grounded.
- Make sure all electrical connections are properly grounded. All extension cords and temporary wiring must be three pronged. Ground fault circuit interrupters shall be used.
- If an electric tool sparks or gives a "tingle" take it out of service immediately and tag it for repair.
- NEVER REMOVE SAFETY DEVICES

- Always disconnect tools from power source before making adjustments, attachment changes, oiling, fueling or repairing.
- Don't use electrical tools with frayed cords.
- Lockout procedures should be followed as protection from accidental contact with an energized circuit or unintended start-up of equipment.
- Protect all cords from damage caused by traffic, sharp corners and pinching.
- All air powered equipment must have whip checks.

### **Fire Protection and Prevention**

- Know the locations of fire extinguishers and learn how to use them.
- Report defective fire fighting equipment to superintendent or group leader.
- Do no smoke when refueling or pouring fuels or oils.
- Obey all "No Smoking" signs.
- Use only approved containers for flammable liquids.
- Secure all gas cylinders in upright position.
- Do not store flammable liquids near heat or in high traffic areas.
- At no time shall the use of burning barrels be permitted.

### **Material Handling**

- Always stack materials in a manner to prevent sliding, falling or collapse.
- Never use knots to secure wire rope.
- Poles, pipes, bar stock and other cylindrical materials must be blocked or secured to prevent rolling.
- All cable splices must be made in accordance with appropriate regulations.
- When lifting, test the load first to determine if it is too heavy for one person. GET HELP IF YOU NEED IT.
- Lifting can be done safely by following these basic steps:
  1. Feet parted - one alongside, one behind object
  2. Keep back straight, nearly vertical.
  3. Grip the object with the whole hand.
  4. Keep body weight directly over feet.
  5. Bend knees, lift with legs.
- Tag lines shall be used when guiding a load.

### **Ladders**

- Ladders with cracked, split or damaged rungs or siderails should be tagged and removed from service immediately.
- Ladders placed in congested or walkway areas must be barricaded or guarded.
- Do not use metal ladders when there is danger of electrical contact.
- Ladders used to reach a walking surface or roof must extend at least 36" above the landing.
- Never stand on the top three rungs of a straight ladder.
- Portable ladders shall be placed on a 4 to 1 pitch.
- Position the ladder so that it has a firm footing. The feet must be level and properly placed.
- Only one person should be on a ladder at a time unless it is designed for additional weight.
- Carry small tools or other work materials in your clothing or attached to a belt. Keep both hands free to climb the ladder.
- Do not carry large objects up or down, use hand lines instead.
- Never overextend your body on a ladder. Move the ladder if necessary.
- You must be tied off when working from a ladder.

### **Scaffolding**

- Scaffolds should be erected on sound, rigid footing capable of carrying the maximum intended load.

- Employees working on a swinging scaffold must be secured to a lifeline.
- Provide yourself with a safe means of access to the scaffold.
- Be sure all nails in scaffolding are completely driven.
- All scaffolding must be inspected daily.
- Scaffold components that have been damaged or weakened should be repaired or replaced immediately.

### Concrete Forms

- Employees shall not be permitted to work above vertically protruding reinforcing steel, unless it has been protected to eliminate the hazard of impalement.

### General Safety Practices

- Don't work in areas with poor ventilation
- Use face mask or dust mask when appropriate.
- Be aware of the safety of others.
- Keep your work area free of clutter, including lumber scraps and oily rags.
- Do not use hand tools that have loose connections, split handles or mushroomed heads.
- Remove or clinch nails in used or old lumber.
- When working underneath or over others, notify them assuring that proper safeguards or precautions have been arranged.
- Employees shall park only within parking areas designated as such by the Superintendent.
- Alcoholic beverages, drugs or any forms of intoxicant, not consumed for medical reasons, are prohibited on all projects and work areas before, during or after working hours.
- Never clean yourself off with compressed air.

## D. ReturnTo Work Program

### Goals, Objectives and Benefits

#### A. GOALS

The primary goal of a return-to-work program is to assist employees who sustain an injury or illness to safely return to work at the earliest medically practical time in a temporary (modified or alternate duty) assignment. By allowing an employee to perform modified duties, the employee is allowed to remain a productive member of the workforce while he or she recuperates. Other important goals of an effective return-to-work program are as follows:

#### B. OBJECTIVES

- **Maintain** company objectives and productivity.
- **Encourage** safety and prevention of injury.
- **Provide reasonable work opportunities** when possible to enable injured workers to return to a work level as close as possible to their pre injury productivity and earnings.
- **Avoid re-injury** through appropriate work assignments and effective monitoring.
- Demonstrate Davcal's **concern** for the injured worker and fulfill an employer's obligations to its employees.
- **Assist** the employee to return to their normal work environment in an expedient manner.

#### C. BENEFITS

- Employees remain active and mobile when returned to the productive workforce, and recovery time is shortened.
- Full or partial wages are earned bringing the injured worker's income to pre-injury wages (as compared with workers' compensation temporary income benefits alone).
- Maintain or restore self esteem, morale and personal security through gainful employment and a productive life style.
- Reduce or eliminate stress, boredom, and depression from the injury/illness and being out of work.

- Maintain physical conditioning through a work life discipline.
- Improve the chances of returning the employee to work permanently.

## **Statement of Responsibilities**

### **1. Supervisor is responsible for:**

- Accompanying injured worker to medical provider, if at all possible, and tell the doctor about your company's return-to-work process.
- Training employees on the proper reporting of incidents and injuries and return-to-work procedures.
- Developing alternative assignments that will meet the doctor's restrictions, that are meaningful, and ensuring that the injured employee follows these restrictions.
- Ensuring prompt medical attention for the injured worker
- Providing information to your company's return-to-work coordinator.

### **2. Claims coordinator is responsible for:**

- Ensuring or acting as the return-to-work coordinator who will take a **proactive** approach in the return-to-work program. Person will plan, lead, control, and monitor the return-to-work activities.
- Providing injured employee's job description to treating doctor.
- Communicating regularly with the injured employee and the doctor after each follow up visit if off work.
- Provide information to doctors to help them understand the employee's regular job, the employer's return-to-work program, and available work alternatives.
- Sending Bona Offer letter certified to employee offering light duty assignment if doctor indicates modified duty.
- Act as the employer's representative.
- Maintain contact with the health care provider, the insurance company, the employee, and the employee's supervisor.
- Develop and maintain record keeping and reporting systems for incidents and injuries.

### **3. Employee is responsible for:**

- Understanding your company's procedures for reporting injuries, and reporting any injury immediately to supervisor.
- Informing treating doctor of alternative work availability and the return-to-work process.
- If restricted for any type of work, notifying supervisor immediately, and if off work, at least once a week to let them know how you are doing.
- If a doctor releases you to work, return to work on the next scheduled shift.
- If a doctor gives you medical restrictions for an alternative productive work assignment, follow the doctor's orders.

### **4. Health Care provider is responsible for:**

- Providing immediate, appropriate, and effective treatment that facilitates recovery and expedited return to work.
- Assessing the abilities of the injured employee, and provide the employee with physical restrictions to follow when performing job functions.
- Providing information about the employee's work capabilities to the employer and return-to-work coordinator.
- Becoming familiar with operations at the employee's workplace.

### **What are alternative work assignments and job modifications?**

(A) When possible, job tasks should be assessed and a possible list of work assignments should be created before they are actually needed. These assignments may include full or part time work and should have time limits. These alternative work assignments must be meaningful and productive. Demeaning or "make work" assignments will defeat the purpose as this could be seen as punishment.

### **What are some keys to making a light duty program successful?**

(A) The key to success is involving everyone and making light duty a team effort. Follow up is also an important key to making the program a success. Stay in contact with the employee every day and make certain that the restrictions under which an employee is operating are communicated to the supervisor. It should be emphasized to the supervisor the importance of making sure the employee does not violate the restrictions. This can just make the injury get worse. Part of the program is an insistence that employees on restrictive duty visit the doctor every few weeks to monitor their progress.

**Why is it so important to get back to work?**

A) The Menninger Foundation, a medical research center in Topeka, Kansas has data that clearly shows the longer a worker stays away from the workplace, the greater chance he or she will never return. The study shows that there is a 60 day window for workers to return to work. After that a significant number never return. Over time workers can develop "disability dependence- a mindset of being sick." A quick return-to-work, even with modified duty, is much better for the employee. The employee recovers more quickly, is less apt to get out of shape, is able to maintain wage stability, and stays connected to the workplace.

**Our goal is to assist you to return to work as soon as medically possible (in a safe and productive manner) following an injury, and to assist you in performing essential job functions.**