

HARD-CO CONSTRUCTION LTD.

POLICIES

PROCEDURES

SAFETY GUIDELINES

The management of Hard-Co Construction Ltd. is committed to providing a healthy and safe working environment. It is the policy of our company to perform work safely at all times and provide assistance to all employees to work in the safest manner possible to comply with all legislative requirements. Commitment to health and safety must form an integral part of this organization at all levels. Our goal is to minimize the hazards, which cause accidents and injuries. We trust that with your help and commitment, we shall be accident free.

HARD-CO CONSTRUCTION LTD.

Barry Harding – President

Larry Harding – Vice President

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Mission

The management of Hard-Co Construction Ltd. is committed to providing a healthy and safe working environment. It is the policy of our company to perform work safely at all times and provide assistance to all employees to work in the safest manner possible to comply with all legislative requirements. Commitment to health and safety must form an integral part of this organization at all levels. Our goal is to minimize the hazards, which cause accidents and injuries. We trust that with your help and commitment, we shall be accident free.

Within a safety focused work environment based on mutual respect, Hard-Co will exceed its customers' expectations through progressive technologies and innovative methods.

Vision

Hard-Co will create a safe and considerate working environment.

Hard-Co will encourage originality, innovation and promote enthusiasm in meeting the requirements of our customers.

Hard-Co will endeavour to cultivate profit growth through efficient production methods and procedures.

Hard-Co will create a distinctive and progressive corporate culture.

Hard-Co will make positive contributions to the community in which we operate and strive to become a model corporate citizen.

Principals

COMMUNICATION – The most effective communication begins with listening. Leadership needs to set the example with active listening, especially when the information may be negative. An open environment encouraging discussion enhances involvement; feedback encourages improvement.

TEAMWORK – Teamwork is a necessity. Do not be limited by your job description but rather, act according to the situation. Draw on the skills and expertise of the team to achieve results.

RESPONSIBILITY – Each employee must understand his/her responsibilities clearly and execute them accordingly. Each manager and supervisor is responsible to assign and communicate those responsibilities.

HANDS ON APPROACH – Be available to contribute where required, visualize the situation, take the necessary action.

Health and Safety Policy Statement

Hard-Co Construction Ltd. is committed to preventing occupational illness and injuries in the workplace by ensuring a safe working environment.

In fulfilling this commitment to protect both people and property, management will provide and maintain a safe and healthy work environment, in accordance with industry standards and in compliance with legislative requirements. We will strive to eliminate any foreseeable hazards, which may result in property damage, accidents or personal injury and/or illness.

We recognize that the responsibility for health and safety are shared. All employees will be equally responsible for minimizing accidents within our facilities and on our work sites.

Accidental loss can be controlled through good management in combination with active employee involvement. Safety is the responsibility of all managers, supervisors, employees and contractors.

In the case of an injury or illness, Hard-Co Construction Ltd. will make every reasonable effort to provide an opportunity for work if the employee is unable to perform their regular duties.

Supervisors will be responsible for the health and safety of workers under their supervision, which also includes contractors and visitors. Supervisors are responsible to ensure that the equipment required for use by each worker is safe and that each worker works in compliance with established safe work practices and procedures for each task.

Workers will receive adequate training associated with their specific work tasks to protect their health and safety. This will enable all employees to work safely and be responsible for minimizing accidents within our company and on our work sites.

Safe work practices and procedure will be clearly defined in the company's Policies, Procedures and Safety Guidelines for all employees to follow. We will review our Policies, Procedures and Safety Guidelines on an annual basis.

Hard-Co Construction Ltd.

Barry Harding
President

Larry Harding
Vice President

Safety Responsibilities

It is the policy of Hard-Co Construction Ltd. to perform work in a safe and healthy manner under the Occupational Health and Safety Act (OSHA) and Regulations for all construction projects. It is our belief that a safe working environment is beneficial to all employees and that all reasonable precautions should be taken to provide safe and healthy working conditions. Our goal is to minimize and/or eliminate the hazards that cause accidents and injuries.

Management Responsibilities:

- Providing leadership and guidance with foreman and/or superintendent to ensure that company policies, procedures and regulations are understood and followed to minimize and/or eliminate accidents and injuries.
- Perform workplace inspections.
- Conduct information sessions (staff meetings) and employee training.
- Correct substandard acts and/or conditions as necessary.
- Conduct incident investigations.

Management Responsibilities as found in sections 25 and 26 of the OHSA:

25. (1) An employer shall ensure that,
- (a) the equipment, materials and protective devices are provided as prescribed;
 - (b) the equipment, materials and protective devices provided by the employer are maintained in good condition;
 - (c) the measures and procedures prescribed are carried out in the workplace;
 - (d) the equipment, materials and protective devices provided by the employer are used as prescribed; and
 - (e) a floor, roof, wall, pillar, support or other part of a workplace is capable of supporting all loads to which it may be subjected without causing the materials therein to be stressed beyond the allowable unit stresses established under the Building Code Act.
25. (2) Without limiting the strict duty imposed by subsection (1), an employer shall,
- (a) provide information, instruction and supervision to a worker to protect the health or safety of the worker;
 - (b) in a medical emergency for the purpose of diagnosis or treatment, provide, upon request, information in the possession of the employer, including confidential business information, to a legally qualified medical practitioner and to such other persons as may be prescribed;
 - (c) when appointing a supervisor, appoint a competent person;
 - (d) acquaint a worker or a person in authority over a worker with any hazard in the work and in the handling, storage, use, disposal and transport of any article, device, equipment or a biological, chemical or physical agent;
 - (e) afford assistance and co-operation to a committee and a health and safety representative in the carrying out by the committee and the health and safety representative of any of their functions;

- (f) only employ in or about a workplace a person over such age as may be prescribed;
- (g) not knowingly permit a person who is under such age as may be prescribed to be in or about a workplace;
- (h) take every precaution reasonable in the circumstances for the protection of a worker;
- (i) post, in the workplace, a copy of this Act and any explanatory material prepared by the Ministry, both in English and the majority language of the workplace, outlining the rights, responsibilities and duties of workers;
- (j) prepare and review at least annually a written occupational health and safety policy and develop and maintain a program to implement that policy;
- (k) post at a conspicuous location in the workplace a copy of the occupational health and safety policy;
- (l) provide to the committee or to a health and safety representative the results of a report respecting occupational health and safety that is in the employer's possession and, if that report is in writing, a copy of the portions of the report that concern occupational health and safety; and
- (m) advise workers of the results of a report referred to in clause (1) and, if the report is in writing, make available to them on request copies of the portions of the report that concern occupational health and safety.

25. (3) For the purposes of clause (2) (c), an employer may appoint himself or herself as a supervisor where the employer is a competent person.

25. (4) Clause (2) (j) does not apply with respect to a workplace at which five or fewer employees are regularly employed. R.S.O.1990, c. O.1, s. 25.

Additional duties of employers:

26. (1) In addition to the duties imposed by section 25, an employer shall,
- (a) establish an occupational health service for workers as prescribed;
 - (b) where an occupational health service is established as prescribed, maintain the same according to the standards prescribed;
 - (c) keep and maintain accurate records of the handling, storage, use and disposal of biological, chemical or physical agents as prescribed;
 - (d) accurately keep and maintain and make available to the worker affected such records of the exposure of a worker to biological, chemical or physical agents as may be prescribed;
 - (e) notify a Director of the use or introduction into a workplace of such biological, chemical or physical agents as may be prescribed;
 - (f) monitor at such time or times or at such interval or intervals the levels of biological, chemical or physical agents in a workplace and keep and post accurate records thereof as prescribed;
 - (g) comply with a standard limiting the exposure of a worker to biological, chemical or physical agents as prescribed;

- (h) establish a medical surveillance program for the benefit of workers as prescribed;
- (i) provide for safety-related medical examinations and tests for workers as prescribed;
- (j) where so prescribed, only permit a worker to work or be in a workplace who has undergone such medical examinations, tests or x-rays as prescribed and who is found to be physically fit to do the work in the workplace; where so prescribed, provide a worker with written instructions as to the measures and procedures to be taken for the protection of a worker; and
- (k) carry out such training programs for workers, supervisors and committee members as may be prescribed.

26. (2) For the purposes of clause (1) (a), a group of employers, with the approval of a Director, may act as an employer. R.S.O. 1990, c. O.1, s. 26 (1, 2).

26. (3) If a worker participates in a prescribed medical surveillance program or undergoes prescribed medical examinations or tests, his or her employer shall pay,

- (a) the worker's costs for medical examinations or tests required by the medical surveillance program or required by regulation;
- (b) the worker's reasonable travel costs respecting the examinations or tests; and
- (c) the time the worker spends to undergo the examinations or tests, including travel time,
- (d) which shall be deemed to be work time for which the worker shall be paid at his or her
- (e) regular or premium rate as may be proper. R.S.O. 1990, c. O.1, s. 26 (3); 1994, c. 27, s. 120 (3).

Management responsibilities will be reviewed on an annual basis to ensure your understanding and its implementation. This will also measure compliance of each health and safety responsibility.

Supervisor Responsibilities:

- Encourage working safely at all times.
- Perform workplace inspections.
- Conduct weekly tailgate meetings, discussing appropriate topics (specific to job site), recording all concerns and comments, forwarding them to management.
- Correct substandard acts and/or conditions as necessary.
- Conduct incident investigations.
- Understanding, following and implementing policies, procedures and regulations.
- Wearing all appropriate personal protective equipment.

Supervisor Duties as found in section 27 of the OHSA:

27. (1) A supervisor shall ensure that a worker,
- (a) works in the manner and with the protective devices, measures and procedures required by this Act and the regulations; and
 - (b) uses or wears the equipment, protective devices or clothing that the worker's employer requires to be used or worn.

Additional duties of supervisor:

27. (2) Without limiting the duty imposed by subsection (1), a supervisor shall,
- (a) advise a worker of the existence of any potential or actual danger to the health or safety of the worker of which the supervisor is aware;
 - (b) where so prescribed, provide a worker with written instructions as to the measures and procedures to be taken for protection of the worker; and
 - (c) take every precaution reasonable in the circumstances for the protection of a worker. R.S.O. 1990, c.O.1, s. 27.

Supervisor responsibilities will be reviewed on an annual basis to ensure your understanding and its implementation. This will also measure compliance of each health and safety responsibility.

Supervisors are required to attend Hard-Co Construction Ltd.'s annual spring training.

Worker Responsibilities:

- Report any accidents, injuries and/or illness to the supervisor immediately. Even if you think that it is not worth reporting, tell your supervisor anyway.
- Work safely at all times.
- Participate during tailgate meetings.
- Understand and follow all policies, procedures and regulations.
- Wear all appropriate personal protective equipment.

Worker Requirements as found in section 28 of the OHSA:

28. (1) A worker shall,
- (a) work in compliance with the provisions of this Act and the regulations;
 - (b) use or wear the equipment, protective devices or clothing that the worker's employer requires to be used or worn;
 - (c) report to his or her employer or supervisor the absence of or defect in any equipment or protective device of which the worker is aware and which may endanger himself, herself or another worker; and
 - (d) report to his or her employer or supervisor any contravention of this Act or the regulations or the existence of any hazard of which he or she knows.

28. (2) No worker shall,
- (a) remove or make ineffective any protective device required by the regulations or by his or her employer, without providing an adequate temporary protective device and when the need for removing or making ineffective the protective device has ceased, the protective device shall be replaced immediately;
 - (b) use or operate any equipment, machine, device or thing or work in a manner that may endanger himself, herself or any other worker; or
 - (c) engage in any prank, contest, feat of strength, unnecessary running or rough and boisterous conduct.

28. (3) A worker is not required to participate in a prescribed medical surveillance program unless the worker consents to do so.

Worker responsibilities will be reviewed on an annual basis to ensure your understanding and its implementation.

Workers are required to attend Hard-Co Construction Ltd.'s annual spring training.

Subcontractor Responsibilities:

- All contractors and employees of contractors are responsible for complying with the requirements of the Ontario OHSA and its Regulations for all construction projects.
- Ensure health and safety of workers.
- Only provide qualified workers for all Hard-Co projects.
- Wear all appropriate personal protective equipment as applicable.
- Remain within designated areas and/or with a Hard-Co representative.
- Report any injury and/or illness suffered during your visit.

Please refer to our subcontractor policy for further requirements and responsibilities.

Visitor Responsibilities:

- Wear all appropriate personal protective equipment as applicable.
- Remain within designated areas and/or with a Hard-Co representative.
- Report any injury and/or illness suffered during your visit.

Note: Delivery persons are not required to endorse Hard-Co's Policies, Procedures and Safety Guidelines. They shall not perform any services, other than delivery or receiving while on company property (including job sites).

Safety Co-ordinator Responsibilities:

- Develop and implement health and safe standards and procedures.
- Be the management co-chair of the Joint Health and Safety Committee.
- Ensure that the Joint Health and Safety Committee minutes are documented, distributed and posted accordingly.
- Ensure that a competent employee performs workplace inspections.
- Conduct annual audits of the company's health and safety program.
- Review/revise the health and safety program annually in conjunction with senior management.
- Assist management to ensure that the appropriate documentation is being correctly filled out and any issues addressed in a timely fashion.
- Assist management with any Ministry of Labour inspections.
- Encourage working safely at all times.

Bill C-45

Hard-Co will comply with all Federal and Provincially mandated workplace compliance regulations and legislation, and will ensure that our management staff have been made aware of their obligations under the law. This policy is designed to outline the legal obligation of management staff to ensure the ongoing health and safety of all employees under their direction.

As found in section 217 of the Canadian Criminal Code:

217. (1) Every one who undertakes, or has the authority, to direct how another person does work or performs a task is under a legal duty to take reasonable steps to prevent bodily harm to that person, or any other person, arising from that work or task.

The bill established new legal duties for workplace health and safety, and imposes serious penalties for violations that result in injuries or death. It also establishes rules for attributing criminal liability to organizations, including corporations, for the acts of their representatives and also creates a legal duty for all persons directing work to take “reasonable steps” to ensure the safety of workers and the public.

This duty is broad enough to include officers, managers and any other employee who functions in a supervisory capacity. Failure to meet the duty can form the basis of criminal negligence charges, which can attract lengthy prison sentences.

This bill:

- Creates rules for establishing criminal liability to organizations for the acts of their representatives.
- Establishes a legal duty for all persons “directing the work of others” to take reasonable steps to ensure the safety of workers and the public.
- Sets out the factors that courts must consider when sentencing an organization.
- Provides optional conditions of probation that a court may impose on an organization.

The most significant amendments to the Criminal Code are:

- Company representatives acting in any supervisory capacity whatsoever are now subject to a strict duty of care.
- Corporations and other organizations are exposed to broader liability, not only for the actions or omissions of their “directing minds” (i.e., executives and management), but also for the actions or omissions of lower level employees, as well as agents and contractors.

It is important to note that these amendments are of great significance to employers and to individual supervisors who are now subject to meaningful criminal sanctions in the sphere of occupational health and safety.

Management Responsibilities:

- Establish and maintain a joint health and safety committee.
- Take every reasonable precaution to ensure the workplace is safe
- Train employees about any potential hazards and in how to safely use, handle, store and dispose of hazardous substances and how to handle emergencies.
- Supply personal protective equipment (excluding work boots) and ensure workers know how to use the equipment safely and properly.
- Immediately report all critical injuries to the appropriate government department.
- Appoint a competent supervisor who sets the standards for performance and ensures safe working conditions are always observed.

Supervisor Responsibilities:

- Must ensure that workers are prescribed and use the correct protective equipment devices for performing the task at hand safely.
- Must advise workers of potential and actual hazards.
- Must take every reasonable precaution in the circumstances for the protection of workers.

Note: Managers and supervisors act on behalf of the employer and have the responsibility to meet the duties of the employer as specified in the Act.

Worker Responsibilities:

- Work in compliance with the Ontario Health and Safety Act and Regulations for construction projects.
- Use and wear personal protective equipment and clothing as directed.
- Report all workplace hazards and dangers.
- Work in a manner as required by the employer and use the prescribed safety equipment.

Every worker has:

- *The right to know* – about the existing and potential hazards they may encounter in the course of their work.
- *The right to participate* – in their own health and safety (in construction, every employer, on every jobsite, must designate a Worker Safety Rep).
- *The right to refuse* – dangerous or unsafe work.

Workplace Violence and Harassment

Hard-Co is committed to building and preserving a safe working environment for its employees. In pursuit of this goal, Hard-Co does not condone and will not tolerate acts of harassment and/or violence against or by any employee. As such, this policy prohibits physical or verbal threats (with or without the use of weapons), intimidation or violence in the workplace to minimize risk of injury or harm resulting from violence to employees.

It is also a violation of Hard-Co's workplace violence and harassment policy for anyone to knowingly make a false complaint of harassment or violence, or to provide false information about a complaint. Individuals who violate this policy are subject to disciplinary and/or corrective action, up to and including termination of employment.

- *Harassment* – Defined as any interaction between individuals that can be characterized as unwelcome, intimidation, bullying, violence or misconduct. Hard-Co rejects and entirely disapproves of all harassment based on the grounds of: race (i.e. color, ethnicity, origin, nationality, descent), sex, marital status, age, sexual orientation, gender history, religious beliefs, political convictions, disability or medical condition. Such acts include:
 - Inappropriate physical conduct;
 - Creating an intimidating or offensive working environment; or
 - Creating a degrading, humiliating or hostile work environment.

- *Violence* – Violence is defined as any interaction or act of aggression or hostility between individuals that involves: causing physical injury to another person; the utterance of threatening remarks; creation of a reasonable fear of injury; subjecting another individual to emotional distress; damaging employer or employee property; the possession of a firearm or dangerous weapon while on Hard-Co property or while conducting Hard-Co business; harassing surveillance (such as stalking); bringing weapons into the workplace; displaying extreme stress or resentment; displaying irrational behaviour.

- *Threats* – Threats of violence or harassment are considered serious and will be treated accordingly. Threatening behaviour includes, but is not limited to: throwing objects at another person; saying that one is going to harm another individual or property; making threatening or menacing gestures; obsessive behaviour (i.e. unprofessional and/or excessive romantic interest); any such behaviour indicating that the individual is irrational or mentally ill and poses a danger to others; escalation of personal circumstances within the workplace (i.e. impending divorce, custody battles, etc.).

Employees are prohibited from engaging in any violent or harassing behaviour towards others. Any physical, verbal or visual act – with or without a weapon, as defined above – that threatens, intimidates, creates fear or has the purpose of interfering with an employee's job duties, or similarly creates an intimidating, hostile or offensive work environment – is forbidden.

Senior managers, supervisors or the human resources department will take immediate action to resolve any situation that involves harassment or violent behaviour. This includes, but is not limited to, calling for immediate police assistance (911 in most areas of Ontario). Incidents that constitute criminal acts (whether felony or misdemeanour) will be referred to the local police department or other policing agency.

Hard-Co is committed to providing a safe, healthy workplace that promotes a high level of job satisfaction and a respectful, collegial atmosphere. We believe that it is a shared responsibility of all employees to work towards the constant improvement of our workplace. To assist the company in maintaining an exemplary work environment, we require that all employees conduct themselves in an ethical and professional manner, at all times.

To preserve the core values and business principles that Hard-Co is founded upon, we have compiled a list of unacceptable behavioural actions that have been classified as either: (1) hazardous to employee safety, (2) criminal, (3) a negative influence on workplace morale or (4) detrimental to the success of our business. Hard-Co reserves the right to discipline and in certain cases, terminate the employment of any employee that engages in conduct unbecoming of Hard-Co standards and policies.

This policy encourages employees to freely express – in a responsible and orderly fashion – their thoughts, opinions and feelings regarding harassment or violence complaints. In no case shall any employee who reports threats or acts of violence be retaliated against through disciplinary action. Acts of retaliation include (but are not limited to) interference, coercion, threats, physical restraint, workload reassignments, denial of promotion or any other manner of retribution. Any acts of retaliation must be reported immediately.

All employees are expected to perform their job duties in a manner conducive to a safe workplace, following all practices, policies and procedures.

Spring Start-Up Orientation

Safety is everyone's responsibility. The goal of *Spring Start-Up Orientation* is to encourage a safe working season. Training will be done annually to ensure that everyone is aware of workplace hazards and their rights & responsibilities.

The Ontario Health & Safety Act (OHSA) requires that the health and safety of workers is protected and that they receive adequate safety training. It is the responsibility of the company to ensure that each worker has job specific training.

Spring Start-Up Orientation will be used to review safety skill sets and cover new material as required. The following elements will be used as a guideline (training will vary slightly from year to year):

- Overview of hazards
- Emergency procedures
- Personal protective equipment
- Confined Space
- Worker rights & responsibilities
- Accident history & trends
- Training requirements
- Changes in legislation
- Safety goals for the year

It is important to familiarize yourself with machines and equipment when returning to work and ensure proper physical warm up.

It is our goal that the *Spring Start-Up Orientation* policy will enable all Hard-Co employees to work safely.

Management/Supervisor Responsibilities:

- Ensuring required training is provided.
- Encouraging employees to work safely at all times.
- Understanding and following OHSA and Hard-Co policies.
- Documenting training information correctly.
- Maintaining safety equipment.
- Being aware of changes in legislation.
- Acknowledging successes.

Worker Responsibilities:

- Attending the training sessions.
- Working safely at all times.
- Understanding and following OHSA and Hard-Co policies.
- Alerting a supervisor or management if workplace safety is being compromised.

New Hire Safety Orientation

It is the policy of Hard-Co Construction Ltd. to perform work in a safe and healthy manner under the Occupational Health and Safety Act and Regulations for all construction projects. It is our belief that a safe working environment is beneficial to all employees and that all reasonable precautions should be taken to provide safe and healthy working conditions. Our goal is to minimize and/or eliminate the hazards that cause accidents and injuries.

Generally inexperienced workers are involved in more accidents. As a result, it is important to understand the hazards that may be experienced in the field. Although experience increases safety awareness, health and safety education, along with job skill training should improve the safety of new workers.

New Hire Safety Orientation shall include:

- Explanation and review of Hard-Co's policies, procedures and safety guidelines.
- Sign and return the form acknowledging that you have reviewed with your supervisor and understand Hard-Co's policies, procedures and safety guidelines.
- Provide Hard-Co any previous training records, if applicable.
- Training will be based on a case-by-case basis. This ensures that employees receive adequate training based on their position within the company.
- Inform employee of qualified first aid personal, safety co-ordinator and worker health and safety representative.
- Inform employee the locations of first aid kits, phone(s) and fire extinguishers (will vary from site to site).
- Discuss emergency procedures.
- Discuss procedures in the event of an injury and/or accident.
- Explain how to report a hazard to your supervisor.
- Discuss applicable safety rules and regulations, confined space entry, Workplace Hazardous Materials Information Systems (WHMIS) and the correct use of personal protective equipment (PPE).
- Explain Hard-Co's progressive discipline policy.
- Explain Hard-Co's zero tolerance drug and alcohol policy.
- Discuss Hard-Co's early and safe return to work policy.
- Explain that the worker has:
 - *The right to know* – about the existing and potential hazards they may encounter in the course of their work.
 - *The right to participate* – in their own health and safety (in construction, every employer, on every jobsite, must designate a Worker Safety Rep).
 - *The right to refuse* – dangerous or unsafe work.

It is important to ask for assistance when unfamiliar with a task.

Each new employee will receive a safety bag that contains:

- Hard Hat
- Safety Vest
- Safety Glasses
- Gloves
- Ear Plugs
- Dust Mask
- Emergency Blanket
- Band-Aids
- Sun Screen

For replacement for any of the above, employees are required to provide the damaged/broken/worn item to their supervisor.

Employees are required to have their own safety boots, Grade 1 CSA approved.

Always think of the safest way to perform all tasks. If you have a concern about safety on the job site, please bring it to the attention of your supervisor immediately.

Tailgate Meeting

Job site safety is critical for construction. The goal of the tailgate meeting is to create an awareness of site conditions and surroundings to enable employees to work safely.

All supervisors are responsible to conduct tailgate meetings for all Hard-Co jobs. This is to be completed at the commencement of each new job (no matter the crew size) and completed weekly thereafter. For example, ensure that a tailgate meeting take place every Monday. Note: If the scope of work changes drastically mid-week, another tailgate meeting may be needed to note additional hazards on the job site.

It is imperative that the tailgate meeting forms be submitted to the office with the weekly time sheets so that problems and/or concerns can be addressed promptly.

Topics discussed must be job specific. Tailgate meetings should be used as a tool for safety hazard recognition and awareness of the current job site conditions.

Management Responsibilities:

- Encouraging employees to work safely at all times.
- Ensuring that the supervisor's conduct the meetings.
- Follow up with safety concerns/issues that are documented. These must be handled in order of priority.

Supervisor Responsibilities:

- Encouraging working safely at all times.
- Conducting the weekly meetings.
- Discussing appropriate topics (specific to job site). Focus on job site hazards.
- Recording all concerns and comments from meeting.
- Submitting forms with weekly time sheets to head office.

Worker Responsibilities:

- Working safely at all times.
- Participating during safety meetings.
- Acknowledging the safety hazards on-site by initialling beside their name under the attendance section of the form.

Supervisors will be provided with a book of applicable safety topics to assist in the tailgate meeting discussions.

Always think of the safest way to perform all tasks. If you have a concern about safety on the job site, please bring it to the attention of your supervisor immediately.

Think Safety First!

Personal Protective Equipment

General Personal Protection

All employees must wear a hard hat, safety vest and safety boots at all times, on all work sites. This includes drivers when they leave their vehicles, subcontractors and visitors to the jobsite.

Personal protective equipment as found in section 21 of the Ontario Health and Safety Act (OHSA) and Regulations for construction projects (O.Reg. 213/91):

21. (1) A worker shall wear such protective clothing and use such personal protective equipment or devices as are necessary to protect the worker against the hazards to which the worker may be exposed.

21. (2) A worker's employer shall require the worker to comply with subsection (1).

21. (3) A worker required to wear protective clothing or use personal protective equipment or devices shall be adequately instructed and trained in the care and use of the clothing, equipment or device before wearing or using it.

Proper job specific protective clothing must be worn (i.e., a reflective-fluorescent vest when controlling traffic or working near traffic, safety goggles when grinding or hammering, gloves when handling sharp or abrasive material or hearing protection when operating noisy tools or equipment).

For your personal protection on the job, do not wear loose clothing or cuffs; greasy or oily clothing, gloves or boots; torn or ragged clothing; finger rings or neck chains or any object that may become caught.

Head Protection

Workers must wear a CSA certified hard hat. (Hard hats must not be altered and must be immediately replaced if damaged).

Protective headwear as found in section 22 of the OHSA and O.Reg. 213/91:

22. (1) Every worker shall wear protective headwear at all times when on a project.

22. (2) Protective headwear shall be a safety hat that,

- (a) consists of a shell and suspension that is adequate to protect a person's head against impact and against flying or falling small objects; and
- (b) has a shell which can withstand a dielectric strength test at 20,000 volts phase to ground.

Foot Protection

Workers must wear CSA certified Grade 1 footwear or CSA certified footwear with heavy-duty toe and sole protection.

Grade 1 footwear bears a green triangular patch stamped with the registered trademark of the Canadian Standards Association on the outside and a rectangular green label on the inside.

Work boots should be fully laced and tied. Badly worn or deteriorated work boots must be replaced.

Protective footwear as found in section 23 of the OHS Act and O.Reg. 213/91:

23. (1) Every worker shall wear protective footwear at all times when on a project.
23. (2) Protective footwear shall be a safety shoe or safety boot,
 - (a) with a box toe that is adequate to protect the wearer's toes against injury due to impact and is capable of resisting at least 125 joules impact; and
 - (b) with a sole or insole that is adequate to protect the wearer's feet against injury due to puncture and is capable of resisting a penetration load of 1.2 kilonewtons when tested with a DIN standard pin.

Eye Protection

Employees must wear safety glasses where the possibility of eye injury is present.

This includes hammering, grinding, using a chain saw, concrete breaker, shotcreting or grouting, and working in areas where material may fall or blow into your eyes or where dust particles are whipped up by the wind.

Eye protection as found in section 24 of the OHS Act and O.Reg. 213/91:

24. A worker shall use protection appropriate in the circumstances when there is a risk of eye injury to the worker.

Respiratory Protection

Respiratory protection (such as a dust mask) must be worn when there is danger to health or safety through inhalation of particles, vapour, mist or gas.

Rescue respirators and training for emergency rescue are provided. Equipment defects must be reported to your supervisor immediately.

Hearing Protection

Each worker will have hearing protection (ear plugs) available for use. Exposure to excess noise may lead to hearing loss.

In addition to mandatory hard hats, safety vests and safety boots, other personal protective equipment such as eye protection, hearing protection and fall-arrest devices must be worn when required. There may also be a requirement for gloves, respirators or specially designed protective clothing under certain hazardous conditions.

Prior to use, all personal protective equipment must be inspected to ensure that it is in proper working condition. After use, all personal protective equipment must be cleaned and stored in designated areas.

Proper use of all personal protective equipment to be in accordance with instructions given at Hard-Co Construction's annual *Spring Start-Up Orientation* and subsequent follow-ups by safety consultants.

Hazard Reporting

When you notice a hazardous condition or practice in the workplace you must report it immediately to your supervisor as required by health and safety legislation. This procedure allows for prompt reporting and subsequent corrective action without waiting for regular safety inspections.

The following six step process should be used to evaluate hazards in the workplace:

1. **Identify the Hazard** – examine the work area or consider the task and identify any hazards or potential threats to worker health and safety.
2. **Identify the Risk** – risk is the potential consequence of the hazard; correlate the possibility of injury, illness, damage or loss; identify factors that may contribute to the risk.
3. **Assess the Risk** – evaluate the likelihood of an injury occurring, along with its probable consequences; identify the likely severity or impact of any injury or illness resulting from the hazard and the probability or likelihood that the injury or illness will actually occur.

Risk Classification

Class A (Major)	High Risk – immediate danger to life and health
Class B (Moderate)	Medium Risk – medium term potential for non-life threatening injury/illness
Class C (Low)	Low Risk – long term potential for slight injury/illness

4. **Control the Risk** – control of any given risk generally involves a number of measures drawn from the various options (except where elimination is chosen).

Controls

Elimination – stop what is creating the hazard
Substitution – replace with something that is less likely to cause harm/damage
Isolation – separate what can be harmed/damaged from the hazard
Engineering – change the way of doing what is creating the hazard
Administrative – reduce exposure to the hazard

5. **Document the Process** – this will help ensure that identified risk control measures are implemented in the way that they were intended; will also assist in managing other hazards and risks that may be in some way similar to those already identified and dealt with.
6. **Monitor and Review** – continue to review and monitor the risk management process to identify new hazards and continually review the effectiveness of the controls.

Reported hazards can be documented on the Hazard Risk Assessment and Control Form.

Management Responsibilities:

- Encourage employees to work safely at all times.
- Follow up with documented reported hazard. These must be handled in order of priority.

Supervisor Responsibilities:

- Encourage working safely at all times.
- Complete Hazard Risk Assessment form with the assistance of the employee reporting the hazard.
- Rate the hazard as major, moderate or minor.
- Ensure any hazardous conditions are followed up on a timely basis.
- Submit Hazard Risk Assessment form to the Safety Co-ordinator.

Worker Responsibilities:

- Work safely at all times.
- Understand and follow all policies, procedures and regulations.
- Report to a supervisor the absence of/or defect in any equipment or protective device – if you know there is a problem or hazard associated with the work you're assigned and/or if you notice something wrong that could hurt someone else, you have a legal responsibility to tell your supervisor.
- Assist supervisor with completing Hazard Risk Assessment form.

Safety Co-ordinator Responsibilities:

- Encourage working safely at all times.
- Follow-up with employee, supervisor and management to ensure actions to handle hazard have been completed.
- Review completed Hazard Risk Assessment forms to identify any other improvements, corrective action or proactive initiatives.
- Act as a resource for identifying hazards and assist in implementation controls.
- Submit Hazard Risk Assessment form to the Joint Health and Safety Committee.

Trenching and Excavation

Construction sites are full of safety hazards. Trenching and excavation need to be correctly done in order to ensure everyone's safety. A trench or excavation must be properly sloped or a trench system (i.e. trench box) must be used if individuals are required to enter. It is important to keep all excavated material away from the edge of the trench.

Trench/Excavation Stability

Ground conditions can change very quickly, it is important to always be aware of your surroundings and recognize different soil types. The four soil classifications as found in section 226 of the Ontario Health and Safety Act (OHSA) and Regulations for construction projects (O.Reg. 213/91) are:

226. (1) For the purposes of this Part, soil shall be classified as Type 1, 2, 3 or 4 in accordance with the descriptions set out in this section.

226. (2) Type 1 soil,

- (a) is hard, very dense and only able to be penetrated with difficulty by a small sharp object;
- (b) has a low natural moisture content and a high degree of internal strength;
- (c) has no signs of water seepage; and
- (d) can be excavated only by mechanical equipment.

226. (3) Type 2 soil,

- (a) is very stiff, dense and can be penetrated with moderate difficulty by a small sharp object;
- (b) has a low to medium natural moisture content and a medium degree of internal strength; and
- (c) has a damp appearance after it is excavated.

226. (4) Type 3 soil,

- (a) is stiff to firm and compact to loose in consistency or is previously excavated soil;
- (b) exhibits signs of surface cracking;
- (c) exhibits signs of water seepage;
- (d) if it is dry, may run easily into a well-defined conical pile; and
- (e) has a low degree of internal strength.

226. (5) Type 4 soil,

- (a) is soft to very soft and very loose in consistency, very sensitive and upon disturbance is significantly reduced in natural strength;
- (b) runs easily or flows, unless it is completely supported before excavating procedures;
- (c) has almost no internal strength;
- (d) is wet or muddy; and

- (e) exerts substantial fluid pressure on its supporting system.

Additional information pertaining to soil types:

227. (1) The type of soil in which an excavation is made shall be determined by visual and physical examination of the soil,

- (a) at the walls of the excavation; and
- (b) within a horizontal distance from each wall equal to the depth of the excavation measured away from the excavation.

227. (2) The soil in which an excavation is made shall be classified as the type described in section 226 that the soil most closely resembles.

227. (3) If an excavation contains more than one type of soil, the soil shall be classified as the type with the highest number as described in section 226 among the types present.

Trenching/Excavation Hazards

Trenching is a high risk activity. In order to work safely, you need to be able to identify and understand the following hazards:

- Cave ins
- Material falling into the trench
- Slips and falls
- Conflict with underground utilities
- Crushed by equipment
- Drowning

Always watch for cracks that may develop. Inform individuals in the trench immediately should any cracks become visible. If working in a trench box, always remain in the trench box. If required, take the time to establish a working sump to control ground water. Avoid working in deep mud or water.

Should you encounter a rising water table, gasoline saturated soil or damage and/or expose any underground utility – stop all operations, evacuate the excavation and notify a supervisor immediately.

Trenching/Excavation Safety

When working in or around an open trench, the following safety tips should be remembered:

- Never enter a trench if it is more than four feet deep unless it is correctly sloped or a trench box is in place.
- At the top of the trench, at least a one metre setback must be clear of debris and tools at all times.
- Always have an individual as a “look-out” at the top of the trench to assist in an emergency situation.
- Always have a ladder in the trench for an accessible exit and know where the ladder is at all times (should be one (1) metre above grade).

- Always announce before lowering anything, all items are to be carefully lowered in a bucket (never dropped), large items must be securely tied and carefully lowered. Always look up while something is being lowered, stand to one side and reach above to grasp and guide the lowered item.
- If the trench/excavation atmospheric conditions change, it then becomes a confined space and at least one employee in the trench will be equipped with a gas detection monitor.
- Wear your hard hat, safety vest and safety boots at all times.

Hand and Power Tools

Hand and power tools should be used with safety foremost in your mind. Using tools improperly or ignoring standard safety practices may lead to permanent injury or death. If you are uncomfortable with a task to be performed make sure to ask for assistance and clarification from a co-worker or a supervisor.

Hazard Recognition

Tools are such a common part of our lives that it is difficult to remember that they may pose hazards. All tools are manufactured with safety in mind but, tragically, a serious accident often occurs before steps are taken to search out and avoid or eliminate tool-related hazards.

In the process of removing or avoiding the hazards, workers must learn to recognize the hazards associated with the different types of tools and the safety precautions necessary to prevent those hazards.

Hand Tools

Hand tools are non-powered. They include anything from axes to wrenches. The greatest hazards posed by hand tools result from misuse and/or improper maintenance.

Examples of improper uses:

- Using a screwdriver as a chisel may cause the tip of the screwdriver to break and fly, hitting the user or other employees.
- If a wooden handle on a tool such as a hammer or an axe is loose, splintered or cracked, the head of the tool may fly off and strike the user or another worker.
- A wrench must not be used if its jaws are sprung, because it might slip.
- Impact tools such as chisels, wedges or drift pins are unsafe if they have mushroomed heads. The heads might shatter on impact, sending sharp fragments flying.
- The employer is responsible for the safe condition of tools and equipment used by employees but the employees have the responsibility for properly using and maintaining tools.

Employers should caution employees that saw blades, knives or other tools be directed away from aisle areas and other employees working in close proximity. Knives and scissors must be sharp. Remember that dull tools can be more hazardous than sharp ones.

Work areas need to be kept as clean and as dry as possible to prevent accidental slips with or around dangerous hand tools.

Around flammable substances, sparks produced by iron and steel hand tools can be a dangerous ignition source. Where this hazard exists, spark-resistant tools made from brass, plastic, aluminum or wood will provide for safety.

Power Tool Precautions

Power tools can be hazardous when improperly used. There are several types of power tools, based on the power source they use: electric, pneumatic, liquid fuel, hydraulic and powder-actuated.

As found in section 61 of the Ontario Health and Safety Act and Regulation 851:

61. Gasoline engines on mobile or portable equipment shall be refuelled:

- (a) outdoors;
- (b) with the engine on the equipment stopped;
- (c) with no source of ignition, within three meters of the dispensing point; and
- (d) with an allowance made for expansion of the fuel should the equipment be exposed to a higher ambient temperature.

Employees should understand the potential hazards as well as the safety precautions to prevent those hazards from occurring.

When using power tools, the following general precautions should be observed:

- Never carry a tool by the cord or hose.
- Never yank the cord or the hose to disconnect it from the receptacle.
- Keep cords and hoses away from heat, oil and sharp edges.
- All extension cords are to be inspected for cracks, cuts or any other visible damage.
- Extension cords should be kept on dry, firm ground where possible, away from moisture or water.
- Ensure power tool does not come in contact with moisture or water.
- Disconnect tools when not in use, before servicing and when changing accessories such as blades, bits and cutters.
- All observers should be kept at a safe distance away from the work area.
- Secure work with clamps or a vise, freeing both hands to operate the tool.
- Avoid accidental starting. The worker should not hold a finger on the switch button while carrying a plugged-in tool.
- Tools should be maintained with care. They should be kept sharp and clean for the best performance. Follow instructions in the user's manual for lubricating and changing accessories.
- Be sure to keep good footing and maintain good balance.
- The proper apparel should be worn. Loose clothing, ties or jewellery should not be worn as they can become caught in moving parts.
- All portable electric tools that are damaged shall be removed from use and tagged, "Do Not Use."

Guards

Hazardous moving parts of a power tool need to be safeguarded. For example, belts, gears, shafts, pulleys, sprockets, spindles, drums, fly wheels, chains or other reciprocating, rotating or moving parts of equipment must be guarded if such parts are exposed to contact by employees.

Guards, as necessary, should be provided to protect employees from the following:

- point of operation,
- in-running nip points,
- rotating parts and
- flying chips and sparks.

Safety Switches

The following hand-held powered tools must be equipped with a momentary contact "on-off" control switch: drills, tappers, fastener drivers, horizontal, vertical and angle grinders with wheels larger than two (2) inches in diameter, disc and belt sanders, reciprocating saws, saber saws and other similar tools. These tools also may be equipped with a lock-on control provided that turnoff can be accomplished by a single motion of the same finger or fingers that turn it on.

The following hand-held powered tools may be equipped with only a positive "on-off" control switch: platen sanders, disc sanders with discs two (2) inches or less in diameter; grinders with wheels two (2) inches or less in diameter; routers, planers, laminate trimmers, nibblers, shears, scroll saws and jigsaws with blade shanks inch wide or less.

Other hand-held powered tools such as circular saws having a blade diameter greater than two (2) inches, chain saws and percussion tools without positive accessory holding means must be equipped with a constant pressure switch that will shut off the power when the pressure is released.

Electric Tools

Employees using electric tools must be aware of several dangers; the most serious is the possibility of electrocution.

Among the principal hazards of electric-powered tools are burns and slight shocks, which can lead to injuries or even heart failure. Under certain conditions, even a small amount of current can result in fibrillation of the heart and eventual death. A shock also can cause the user to fall off a ladder or other elevated work surface.

To protect the user from shock, tools must either have a three-wire cord with ground and be grounded, be double insulated or be powered by a low-voltage isolation transformer. Three-wire cords contain two current-carrying conductors and a grounding conductor. One end of the grounding conductor connects to the tool's metal housing. The other end is grounded through a prong on the plug. Anytime an adapter is used to accommodate a

two-hole receptacle, the adapter wire must be attached to a known ground. The third prong should never be removed from the plug. Double insulation is more convenient. The user and the tools are protected in two ways: by normal insulation on the wires inside, and by a housing that cannot conduct electricity to the operator in the event of a malfunction.

These general practices should be followed when using electric tools:

- Electric tools should be operated within their design limitations.
- Gloves and safety footwear are recommended during use of electric tools.
- When not in use, tools should be stored in a dry place.
- Electric tools should not be used in damp or wet locations.
- Work areas should be well lighted.

Powered Abrasive Wheel Tools

Powered abrasive grinding, cutting, polishing and wire buffing wheels create special safety problems because they may throw off flying fragments.

Before an abrasive wheel is mounted, it should be inspected closely and sound or ring tested to be sure that it is free from cracks or defects. To test, wheels should be tapped gently with a light non-metallic instrument. If they sound cracked or dead, they could fly apart in operation and so must not be used. A sound and undamaged wheel will give a clear metallic tone or "ring."

To prevent the wheel from cracking, the user should be sure it fits freely on the spindle. The spindle nut must be tightened enough to hold the wheel in place, without distorting the flange. Follow the manufacturer's recommendations. Care must be taken to assure that the spindle wheel will not exceed the abrasive wheel specifications.

Due to the possibility of a wheel disintegrating (exploding) during start-up, the employee should never stand directly in front of the wheel as it accelerates to full operating speed.

Portable grinding tools need to be equipped with safety guards to protect workers not only from the moving wheel surface, but also from flying fragments in case of breakage.

In addition, when using a powered grinder:

- Always use eye protection.
- Turn off the power when not in use.
- Never clamp a hand-held grinder in a vise.

Pneumatic Tools

Pneumatic tools are powered by compressed air and include chippers, drills, hammers and sanders.

There are several dangers encountered in the use of pneumatic tools. The main one is the danger of getting hit by one of the tool's attachments or by some kind of fastener the worker is using with the tool.

Eye protection is required and face protection is recommended for employees working with pneumatic tools.

Noise is another hazard. Working with noisy tools such as jackhammers requires proper, effective use of hearing protection.

When using pneumatic tools, employees must check to see that they are fastened securely to the hose to prevent them from becoming disconnected. A short wire or positive locking device attaching the air hose to the tool will serve as an added safeguard.

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

Screens must be set up to protect nearby workers from being struck by flying fragments around chippers, riveting guns, staplers or air drills.

Compressed air guns should never be pointed toward anyone. Users should never "dead-end" it against themselves or anyone else.

Powder-Actuated Tools

Powder-actuated tools operate like a loaded gun and should be treated with the same respect and precautions. In fact, they are so dangerous that they must be operated only by specially trained employees.

Safety precautions to remember include the following:

- These tools should not be used in an explosive or flammable atmosphere.
- Before using the tool, the worker should inspect it to determine that it is clean, that all moving parts operate freely and that the barrel is free from obstructions.
- The tool should never be pointed at anybody.
- The tool should not be loaded unless it is to be used immediately. A loaded tool should not be left unattended, especially where it would be available to unauthorized persons.
- Hands should be kept clear of the barrel end. To prevent the tool from firing accidentally, two separate motions are required for firing: one to bring the tool into position and another to pull the trigger. The tools must not be able to operate until they are pressed against the work surface with a force of at least 5 pounds greater than the total weight of the tool.

- If a powder-actuated tool misfires, the employee should wait at least 30 seconds, then try firing it again. If it still will not fire, the user should wait another 30 seconds so that the faulty cartridge is less likely to explode, than carefully remove the load. The bad cartridge should be put in water.

Suitable eye and face protection are essential when using a powder-actuated tool.

The muzzle end of the tool must have a protective shield or guard centered perpendicularly on the barrel to confine any flying fragments or particles that might otherwise create a hazard when the tool is fired. The tool must be designed so that it will not fire unless it has this kind of safety device.

All powder-actuated tools must be designed for varying powder charges so that the user can select a powder level necessary to do the work without excessive force.

If the tool develops a defect during use it should be tagged and taken out of service immediately until it is properly repaired.

Fasteners

When using powder-actuated tools to apply fasteners, there are some precautions to consider. Fasteners must not be fired into material that would let them pass through to the other side. The fastener must not be driven into materials like brick or concrete any closer than three (3) inches to an edge or corner. In steel, the fastener must not come any closer than one-half inch from a corner or edge. Fasteners must not be driven into very hard or brittle materials, which might chip or splatter or make the fastener ricochet.

An alignment guide must be used when shooting a fastener into an existing hole. A fastener must not be driven into a spalled area caused by an unsatisfactory fastening.

Hydraulic Power Tools

The fluid used in hydraulic power tools must be an approved fire-resistant fluid and must retain its operating characteristics at the most extreme temperatures to which it will be exposed.

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

Jacks

All jacks - lever and ratchet jacks, screw jacks and hydraulic jacks - must have a device that stops them from jacking up too high. Also, the manufacturer's load limit must be permanently marked in a prominent place on the jack and should not be exceeded.

A jack should never be used to support a lifted load. Once the load has been lifted, it must immediately be blocked up.

Use wooden blocking under the base if necessary to make the jack level and secure. If the lift surface is metal, place a one (1) inch thick hardwood block or equivalent between it and the metal jack head to reduce the danger of slippage.

To set up a jack, make certain of the following:

- The base rests on a firm level surface,
- The jack is correctly centered,
- The jack head bears against a level surface and
- The lift force is applied evenly.
- Proper maintenance of jacks is essential for safety. All jacks must be inspected before each use and lubricated regularly. If a jack is subjected to an abnormal load or shock, it should be thoroughly examined to make sure it has not been damaged.

Hydraulic jacks exposed to freezing temperatures must be filled with an adequate antifreeze liquid.

General Safety Precautions

Employees who use hand and power tools and who are exposed to the hazards of falling, flying, abrasive and splashing objects or exposed to harmful dusts, fumes, mists, vapours or gases must be provided with the particular personal equipment necessary to protect them from the hazard.

All hazards involved in the use of power tools can be prevented by following five basic safety rules:

1. Keep all tools in good condition with regular maintenance.
2. Use the right tool for the job.
3. Examine each tool for damage before use.
4. Operate according to the manufacturer's instructions.
5. Provide and use the proper protective equipment.

When using hand and/or power tools, the following safety tips should be remembered:

- Always use the correct size wrench for the task at hand and wherever possible, use a box end rather than an open end for a more secure grip. Remember not to use a “cheater bar” on a wrench.
- Always wear eye protection when operating a hand held power drill, ensure that work is firmly clamped or in place when using the drill. It is important not to force a power drill (if too much pressure is applied, the bit may break and fragments may launch into the air). Be sure not to wear any loose clothing while operating the drill as the clothing may become caught in the revolving bit or chuck. Make sure the power has been cut to the drill before adjusting, changing bits or placing key in chuck. DO NOT operate a power drill in an area that may contain flammable vapours or liquids as sparks can cause a fire or explosion.
- Eye protection and keeping the shield in place is important when grinding. Make sure that the grinding wheel does not have any chips and/or cracks. It is important to apply the wheel gradually against the work so that it has time to warm up. NEVER attempt to adjust the wheel when it is in motion.
- It is important to maintain all hand and power tools and to replace any that are damaged or broken. Note: Power tools may include battery operated drills and saws.

Always use and wear the appropriate personal protective equipment for the task you are performing. If you are unsure, ask your supervisor for guidance.

Employees and employers have a responsibility to work together to establish safe working procedures. If a hazardous situation is encountered, it should be brought to the attention of the proper individual immediately.

Overhead Electrical Power Lines

Contact with electrical power lines can seriously injure or kill you. The goal of the Overhead Electrical Power Lines policy is to be aware of overhead wires at all times and understand how to work near them safely.

As found in section 188 of the Ontario Health and Safety Act (OHSA) and Regulations for construction projects (O.Reg. 213/91):

188. (8) A competent worker, designated as a signaller, shall be stationed so that he or she is in full view of the operator and has a clear view of the electrical conductor and of the vehicle or equipment, and shall warn the operator each time any part of the vehicle or equipment or its load may approach the minimum distance. O. Reg. 627/05, s. 7.

A signal person is required when working near overhead power lines. This person is to be appointed and is responsible for communicating with all operators in their work area to ensure that clear instructions are given when approaching overhead power lines. It is critical that the operator and signaller discuss the appropriate hand signals that will be used to guide the operator when working near overhead power lines.

As found in section 188 in the OHSA and Regulations for construction projects (O.Reg. 213/91):

188. (2) No object shall be brought closer to an energized overhead electrical conductor with a nominal phase-to-phase voltage rating set out in Column 1 of the Table to this subsection than the distance specified opposite to it in Column 2.

The following chart shall be used as minimum operator distance when working near overhead electrical power lines:

Normal Phase-to-Phase Voltage Rating	Minimum Distance
750 – 150,000 volts	3 metres
150,001 – 250,000 volts	4.5 metres
Over 250,001 volts	6 metres

It is critical that correct signage is used to indicate the hazard and that they be clearly visible to the operator at all times. An adequate number of warning signs must be made visible and be posted within the vicinity of the hazard. For example, on the sign below, it would be necessary to write clearly in the white space provided *Overhead Wires* or *Overhead Power Lines*.



Some safe work practices for working around overhead electrical power lines are:

- Operate the equipment at a slower-than-normal rate in the vicinity of power lines.
- Exercise caution near long spans of overhead power lines, since wind can cause the power lines to sway laterally and reduce the clearance between the equipment and the power line.
- Mark safe routes where equipment must repeatedly travel beneath power lines.
- Exercise caution when travelling over uneven ground that could cause the crane to weave or bob into power lines.
- Keep all personnel well away from the equipment whenever it is close to power lines.
- Prohibit persons from touching the equipment or its load until a signal person indicates that it is safe to do so.
- Wear rubber gloves at all times when propping overhead wires up.

It is important to discuss the limitations of proximity warning devices, hook insulators, insulating boom guards, swing limit stops, nonconductive taglines, ground rods and similar devices for protection against electrical hazards.

If contact occurs with overhead wires, in order to protect against electrical shock injury:

- The operator should remain inside the cab.
- All other personnel should keep away from the equipment ropes, and load, since the ground around the machine might be energized.
- The operator should try to remove the equipment from contact by moving it in the reverse direction from that which caused the contact.
- If the equipment cannot be moved away from contact, the operator should remain inside cab until the lines have been de-energized.
- Beware of time relays and trip breakers may try to restore power automatically.
- Report damage to owner of utility.

Management Responsibilities:

- Ensuring that supervisors discuss hazards, such as overhead electrical power lines with operators and signallers.
- Providing signs as requested.

Supervisor Responsibilities:

- Discussing site hazards, pointing out locations of overhead wires during tailgate meetings.
- Ensuring that signs are placed at visible locations and are moved as needed when the crew moves locations on a job.
- Knowing the voltage of the wires in the surrounding working area.
- Complete the overhead electrical power line protection checklist.

Worker Responsibilities:

- Ensuring that the signs move as needed when the crew moves locations on a job.
- Being aware of overhead wires at all times.

Confined Space

Working safely is important. The goal of the confined space policy is to create awareness and understanding of the risks involved each time you enter a confined space.

A confined space is a fully or partially enclosed space that is both:

- Not designed and constructed for continuous human occupancy.
- A place where atmospheric hazards may occur due to its construction, location, contents, or created by the work that is being done in it.

Maintenance holes are confined spaces. A trench becomes a confined space if atmospheric conditions change (i.e. a result of extra equipment working in or around the opening of the trench).

Prior to each entry into a confined space, it is imperative that a competent worker fill in a confined space entry permit documenting existing conditions. This permit must be given to your supervisor so that it is returned to the office.

A confined space entry plan has been developed to protect all employees from hazards that are present or are likely to be present in a confined space. A copy of this plan is kept on-site wherever entry into a confined space will occur.

Management Responsibilities:

- Encouraging employees to work safely at all times.
- Ensuring that the employees receive adequate annual training for confined space entry and rescue procedures.
- Providing all necessary protective equipment required to perform a job safely.

Supervisor Responsibilities:

- Encouraging working safely at all times.
- Ensuring that protective equipment is being used and proper entry procedures are being followed.
- Submitting entry forms with weekly time sheets.

Worker Responsibilities:

- Working safely at all times.
- Following procedures correctly to ensure that worker safety is maintained.
- Reporting equipment not working properly.

Confined Space Entry Plan

Purpose

The purpose of this procedure is to:

- Assure that the *Occupational Health and Safety Act, Industrial Regulations 67, 68, 69, 70 and 71*, and *Regulations for Construction Projects 60, 61 and 63* are adhered to (located in site trailers, offices and shops, and foremen vehicles);
- Assure that company personnel are trained and certified to enter a confined space;
- Assure employees are protected from hazards that are or are likely to be present in a confined space; and
- Institute a rescue program in the event that such may be required.

Application

This safety procedure applies to all our employees having to enter a confined space, perform work in a confined space or required to be an attendant for a confined space. Prior to each entry into a confined space, it is imperative that a competent worker fill in a confined space entry permit documenting existing conditions. This permit must be given to the foreman and/or superintendent so that it is returned to the office. **Only a competent person shall be permitted to administer and supervise confined space work.**

Definitions

Confined Space:

A confined space is a fully or partially enclosed space that is both:

- Not designed and constructed for continuous human occupancy; and
- A place where atmospheric hazards may occur due to its construction, location, contents, or created by the work that is being done in it.

Maintenance holes are confined spaces. A trench becomes a confined space if atmospheric conditions change (i.e. a result of extra equipment working in or around the opening of the trench).

Competent Person:

A competent person for our company purposes is defined as an individual who has been authorized through successful completion of the confined space entry training course. This individual must have received training in standard first aid and artificial respiration. The supervisor (foreman, superintendent, lead hand) on-site deems this individual to be competent.

A competent person is responsible to ensure work procedures and practices are followed and that the necessary safety equipment is available, in good working order and worn or used as required.

Responsibilities

Management Responsibilities:

- Encouraging employees to work safely at all times;
- Ensuring that the employees receive adequate annual training for confined space entry and rescue procedures; and
- Providing all necessary protective equipment required to perform a job safely.

Supervisor Responsibilities:

- Encouraging safe work practices at all times;
- Determine what space is classified as “confined” on the job site.
- Ensuring that protective equipment is being used and proper entry procedures are being followed;
- Ensuring the entrant and attendant(s) of a confined space are both deemed competent; and
- Submitting entry forms with weekly time sheets.

Worker Responsibilities:

- Working safely at all times;
- Following procedures correctly to ensure that worker safety is maintained; and
- Reporting equipment that is not working properly.

Our company training course of instructions shall include:

- Entering Procedure;
- Inspection and Operation of Equipment;
- Artificial Respiration;
- Traffic Control (Equipment, Signs and Cones);
- Gas Detection Equipment;
- Rescue Procedure;
- Communication; and
- Fall Protection.

Entry Requirements and Procedures

Equipment

The following equipment is the basic equipment required by our company for confined space entry:

- Hard-Co Construction’s *Confined Space Entry Permit*;
- Gas Detector (indicating the presence of an oxygen deficiency, combustible gases, and a toxic environment);
- Mobile Radio/Telephone (attendant to have phone);
- Confined Space Entry and Rescue System;
- Fall Arrest System; and
- Personal Protection Equipment (protective clothing, hard hat, safety footwear, safety goggles/glasses, safety vest, gloves, overalls).

All equipment shall be **tested and checked daily** by a competent person in accordance with the manufacturer's instructions (available for reference).

The purpose for using approved equipment is to:

- Prevent or stop the fall when entering or exiting a confined space;
- Remove an individual from the confined space should they require assistance; and
- Prevent an individual from being carried away by fast flows.

Preparation to Enter

- Ensure proper traffic control has been put in place;
- No one is permitted to smoke or have an open flame in the vicinity of a confined space;
- The atmosphere must be tested and recorded by a competent person. This can be done using a rope that is tied to the gas detector and lowered into the confined space prior to entry.

Initial Test:

- O₂ (%)
- CO₂ (ppm)
- Toxics (ppm)
- LEL (%)
- Care must be taken not to immerse the detector/sampling probe into the sewer flow;
- After removing the cover, test the atmosphere at various depths. Ensure all pertinent safety and work equipment is readily accessible but away from the edge of the maintenance hole or is secured no more than 3 metres away from the confined space;
- Record all atmospheric conditions on the *Confined Space Entry Permit* provided;
- Ensure all necessary safety equipment is correctly on the individual entering the confined space (see "Lifeline Set-Up"); and
- Ensure the gas detector is left on to monitor conditions within the confined space.

Hazardous Conditions

If reading is unacceptable, **DO NOT ENTER**. Ventilate the area and re-check atmospheric readings. If the readings are still unacceptable, contact a supervisor.

UNDER NO CIRCUMSTANCES IS ENTRY TO BE MADE INTO A CONFINED SPACE WHERE TESTS INDICATE THAT HAZARDOUS CONDITIONS EXIST.

Lifeline Set-Up

- The anchored end of the lifeline is attached to the tripod above the confined space
- The lifeline is fed through the dorsal D ring on the back of the body harness on the entrant;
- The T-handle grab shall be available so it can be used quickly to pull on the lifeline should an emergency ascent be necessary; finally,
- The lifeline is to be checked frequently by running the thumb and forefinger down the body of the lifeline, applying pressure to note any dead spots.

Descending the Maintenance Hole

Attendant:

- Two crew members are required if entrant cannot be seen or heard from the top;
- Monitor the confined space air and signing the entry permit;
- Keep entrant in sight at all times;
- Constantly communicate with the entrant in the confined space;
- Be ready to assist and remove the entrant in an emergency;
- Hold the lifeline at all times;
- Feed the lifeline smoothly and with moderate speed. It is important not to jerk or hold the lifeline taut;
- Be prepared for a sudden fall;
- Be alert for the gas detector alarm;
- Ensure the lifelines do not become entangled; and
- Provide any assistance to entrant in the confined space (all tools must be lowered and raised using a bucket and a rope).

Entrant:

- Remain in communication with attendant;
- Remain attached to the systems;
- Confirm all gas detection test results recorded;
- Do not hold any tools in hands while climbing;
- Wear gloves;
- Sit on the surface, face the rungs and slowly test the top rung;
- If the rungs are corroded, be sure the attendant is alerted to a potential fall; and
- Put the weight of your feet on the sides of the rungs. The weakest section of the rungs is the centre.

Do Not Descend if:

- The gas detector alarms; or
- The entrant below cannot be seen or heard from the top.

While a Confined Space is Occupied

The Attendant Must:

- Keep the lifeline from getting in the entrant's way. This means keeping an eye on the entrant's movements at all times;
- Keep attention focused on the entrant. **If anyone approaches the maintenance hole to talk to the attendant, politely instruct him or her to leave until the entrant is clear of the confined space;** and
- Be attentive for signs of abnormal or strange behaviour by the entrant.
- Must remain outside of the confined space at all times while the entrant is in the confined space working.

Lowering Equipment:

- Always announce to entrant before lowering anything into the confined space;
- Never drop anything down into the confined space;
- All items are to be carefully lowered in a bucket;
- Large items must be securely tied and carefully lowered;
- The entrant below should look up while something is being lowered and should stand to one side, then reach above to grasp in the lowered item; and
- If the area is too small, the entrant in the confined space must exit prior to the equipment being lowered.

Remove Entrant from a Confined Space if:

- Gas detector alarms;
- Entrant requires assistance; or
- Entrant slips into flow.

Ascending the Maintenance Hole

Normal Ascent Procedure:

- Remove any ropes other than the lifeline;
- Raise the buckets before the entrant climbs out;
- Attendant must stand with feet apart when the entrant is climbing out;
- Use the T-handle grab to grip the lifeline, not your bare hands; and
- **Disconnect the lifeline only when the entrant's feet are out of the maintenance hole.**

Emergency Ascent Procedure:

- Shout down to the entrant to get out of the maintenance hole;
- If the entrant does not respond, communicate to them (by shouting) that you are going to pull them out;
- Steadily pull the entrant out of the confined space;
- Follow basic emergency response procedure;
- Release the entrant's harness and, if required, provide artificial respiration until assistance arrives or arrival at the nearest hospital;

- An employee must be taken immediately to the nearest hospital if loss of consciousness or serious injury occur; and
- An ambulance is the appropriate means of transportation. However, circumstances may dictate that another form of transportation must be utilized.

NO EMPLOYEE IS PERMITTED TO ENTER A CONFINED SPACE TO RESCUE SOMEONE UNLESS ANOTHER COMPETENT PERSON IS OUTSIDE THE CONFINED SPACE AND THE APPROPRIATE SELF-CONTAINED BREATHING APPARATUS (SCBA) EQUIPMENT IS AVAILABLE.

*****CHECK AND CLEAN ALL EQUIPMENT PRIOR TO STORAGE*****

Emergency Communication

Regular Hours:

- Advise supervisor of the situation immediately;
- Contact home base;
- Wait for acknowledgement of the call;
- Dial 911; and
- Wait for the ambulance, fire department and police.

Provide the following information clearly:

- Location;
- Nature of the emergency;
- Emergency response unit needed (ambulance, fire department, police);
- Special equipment required; and
- Indicate the emergency involves a confined space.

Home Base Shall:

- Acknowledge the call and confirm the location;
- Immediately contact 911 advising of a confined space emergency, requesting that the fire department and ambulance be dispatched; and
- Advise the appropriate supervisor and the operations manager.

After Hours:

- Dial 911;
- Follow procedure as above; and
- Advise the appropriate supervisor immediately.

Traffic Control

Prior to beginning any work on a public road allowance, the traffic control shall conform to the “Ministry of Transportation Book #7 Temporary Conditions Field Edition March 2001” and sections 67 to 69 (incl.) of Regulation 213/91 of the Ontario Health and Safety Act to provide a safe work zone for all workers.

Fall Arrest Procedures

If the fall potential is greater than three metres (does not include getting to or from the height you will be working at), or if an individual may fall more than one and a half metres into a confined space, they must be properly trained, follow procedure and use protective gear.

Set Up:

- Connect the drop line to the anchor point sling (same connection as with the entry system); and
- Place the drop line into the confined space and let it fall to the bottom.

Connection:

- Immediately prior to entry, connect the automatic rope grab with the shock absorber and Lanyard to the drop line shoulder D;
- The automatic rope grab will move up and down the drop line automatically; and
- The rope grab has a parking lever feature that, when activated, allows the rope grab to be manually slid up the drop line to remove weight from the shoulder D ring (to be used once the entrant has reached the work area).

Disconnection:

- The automatic rope grab is not to be removed from the drop line until the entrant is clear of the confined space; and
- The automatic rope grab and drop line are to be cleaned if necessary and returned to the carry bag (so that it is ready for the next time it is required).

A few reminders:

- All employees (exposed to fall hazards) will be trained by a competent person. Training is valid for a period no longer than 36 months. Should a situation arise, fall arrest training may be updated or refreshed at any time.
- Fall arrest equipment will be properly worn by all employees exposed to falls greater than three metres or one and a half metres into a confined space.
- The worker will inspect the harnesses, lanyards and shock absorbers for safety compliance prior to every use.
- A competent person will inspect the fall arrest equipment at least every six months.
- Every worker has the right to refuse dangerous work. It is important to ask for assistance when unfamiliar with a task.

It is critical that all fall arrest equipment must be maintained in good working order. This is the responsibility of all employees and supervisors.

Hazardous Locations

Hazardous locations may include, but are not limited to:

- Abandoned sewers or chambers;
- Trunk sewers in industrial/commercial areas;
- Sewers located near gas mains or gasoline storage;
- Sewers on flat grades;
- Sewers with maintenance holes over 90 metres apart;
- All sewers and maintenance holes over 3 metres in depth;
- Any tightly covered maintenance holes or chambers; and
- Excavation in industrial/commercial areas.

Confined Space Hazards

Several potential and actual hazards may be encountered while working in a confined space. Lack of awareness of these hazards can result in physical injury, illness, property damage and even death.

In a confined space work environment, there is an ever-present danger of asphyxiation (suffocation due to oxygen deficiency), explosion (combustible gases) and poisoning (bacteria agents or toxic gases). To protect against these hazards, workers must maintain a high standard of safety awareness and always utilize the appropriate protective clothing, equipment and devices when working in or around confined spaces.

*****NEVER TRUST YOUR SENSES – TEST THE CONFINED SPACE*****

Oxygen Deficiency/Enrichment

An oxygen deficient atmosphere is one in which less than 18% oxygen is present. An oxygen enriched atmosphere has a concentration of oxygen greater than 23%. Fresh air in a normal environment contains 20.9% oxygen.

Oxygen deficiency is the most common atmospheric hazard in a confined space. It occurs when the level of oxygen in the space has reduced below the necessary limit to support life. Some common causes of oxygen deficiency are oxidation of metal (rust), bacterial agents (fungus growth), combustion (natural gas and methane) and displacement by other gases.

Rust is most prevalent in steel tanks or vaults. Bacterial agents are found in sewer lines, sanitary landfills and sewage treatment plants. Combustion of gases will cause rapid depletion of oxygen. Several other gases such as nitrogen produce no effect on the body, but when they exist in sufficient volume, they displace the oxygen supply.

Combustible Gases/Vapours

Many flammable gases and vapours are heavier than air. If they flow into a confined space, they will present a serious fire or explosion hazard. Unauthorized disposal of flammable liquids into sewers presents a danger for confined space workers. Gasoline, cleaning fluids and natural gas may occasionally be found in sewers.

Toxic Gases/Vapours

Toxic gases and vapours are commonly found in the industry and are generated by manufacturing processes. Toxins include all gases and vapours that are known to produce disease, discomfort, bodily injury, or death. Toxins may be categorized as asphyxiates or irritants. Chemical asphyxiates render the body incapable of utilizing adequate oxygen supplies (i.e. carbon monoxide). Irritants in very low concentrations are mildly irritating to the respiratory and nervous system. At higher levels they often cause death (i.e. hydrogen, sulfide and chlorine).

Gasoline powered equipment such as pumps, compressors and motor vehicles in the vicinity of a confined space can create a carbon monoxide condition. Therefore gasoline-powered equipment must only be used if necessary, and the confined space needs to be carefully monitored and correctly ventilated prior to entry and during use.

Fires and Explosions

Fires in confined spaces are especially dangerous because the space can be instantly engulfed in flames and the exit becomes restricted. Fire and explosion, are among the more common hazards of confined space work. They can occur when there is an arc or spark from tools, lights, welding, cutting operations or static electricity. A flammable atmosphere may evolve from sludge when disturbed if hydrogen is released by acid contacting metal. Explosions may occur where dusty atmospheric conditions exist. The combustible gas detector **WILL NOT INDICATE THIS HAZARD.**

Entry and Exit Hazards

Openings that are small, narrow and difficult to negotiate can be a serious hazard. This can make exiting difficult during critical emergency situations, especially when rescuing unconscious workers.

Procedures prior to actual entry can also pose a hazard. For example, maintenance hole covers with no vent points require special, in some cases, non-sparking leverage tools. Once loosened, care must be exercised in lifting and sliding the cover out of the way so the entrance is unobstructed.

Contents of Confined Spaces

The contents of a confined space often create a life-threatening situation. For example, workers could be smothered by material, drown in the flow or suffer chemical burns.

Walking and Working Surfaces

Surfaces may be considered hazardous if they are irregular in shape, slippery or obstructed. Such conditions present a slip and fall hazard.

Poor Visibility

Inadequate lighting in a confined space can result in serious injuries due to falls and bumps.

Noise

Noise levels can intensify within a confined space. Noise may make it difficult to communicate with the attendant or to hear an alarm.

Psychological Factors

Some people are not suited for confined space work. Factors such as fear of enclosure or heights may cause a person to panic.

Other Hazards

It is important to be aware of other hazards that may exist within a confined space. Such hazards may include, but are not limited to, infection, temperature extremes, drowning and insects/vermin.

Confined Space Plan Form

Confined Space Permit

Hoisting and Rigging

Many hazards associated with the operation of hoisting and rigging operations. This policy has been developed to establish guidelines to eliminate injuries from those operations.

Hoisting and rigging refers to the lifting and moving of loads using mechanical devices. The objective of the hoisting and rigging policy is to protect employees from injury, the environment from harm and equipment and property from damage. Specifically help to protect load operators and others in the work area, their surrounding environment and the hoisting and rigging equipment itself. Hoisting and rigging is a complicated topic and can have significant safety consequences if not performed correctly.

Lifting device – Includes a broad range of equipment used in hoisting and rigging activities.

Sling – Wire rope, chain, synthetic web and metal mesh made into forms, with or without fittings for handling loads

Rigging Hardware or Accessories – Such items as shackles, eyebolts, rings, links, swivel hoist rings, turnbuckles, wire rope clips and load-indicating devices.

Operator – Person who operates excavators, hoists and miscellaneous lifting devices.

Blocking – Is a term used for a single unit height of timber or other structurally solid material to secure a load after it is raised to height or positioned as needed.

Cribbing – Is a term used for the stacking of timber or block units to build a structure of greater than single unit height to secure a load as it is raised.

Hoisting/Rigging Guidelines

- The single most important precaution in hoisting and rigging is to determine the weight of the load before attempting to lift it.
- Determine the available capacity of the equipment being used.
- Rig the load so that it is stable (unless the centre of gravity of the load is directly below the hook, the load will shift).
- Make allowances for any unknown factors.

In addition, riggers must be aware of hazards, factors that reduce capacity, the inspection and use of slings and safe practices in rigging, lifting and landing loads.

Hoisting/Rigging Hazards

- Working Load Limit (WLL) not known. Know the working load limits of the equipment and tackle being used. Never exceed these limits.
- Defective components – Examine all hardware, equipment, tackle and slings before use. Destroy any defective components. Equipment merely discarded may be picked up and used by someone unaware of its defects.
- Unsafe equipment – Do not use any equipment that is suspected to be unsafe or unsuitable until it has been verified by a competent person.
- Hazardous wind conditions – Never carry out any hoisting or rigging operation when winds create hazards for workers, the general public, or property. Assess load size and shape to determine whether high winds may cause problems. Avoid handling loads that present large wind-catching surfaces. Even though the weight of the load is within the normal capacity of the equipment, high or gusting winds may prevent proper control during the lift. Wind-loading can be critical to how the load is rigged, lifted and landed with consequences for the safety of everyone involved. When winds reach 25-30 mph, consider limiting hoisting operations.
- Hazardous weather conditions – When the visibility of riggers or hoist crew is impaired by snow, fog, rain, darkness or dust, strict supervision must be exercised and, if necessary, the lift should be suspended. At sub-freezing temperatures, supervision must ensure that no part of the hoisting device or tackle is shock-loaded or impacted, since brittle fracture of the steel may result.
- Electrical contact – One of the most frequent killers of riggers is electrocution caused by an electrical arc or contact between the hoist, load line or load and a live overhead power line. When an excavator is operating near power lines and the load, hoist lines or any other part of the hoisting operation could encroach on the minimum permitted distance (refer to the Overhead Electrical Power Lines policy).

Lifting a Load

- Check the weight of the load.
- Check the capacity of the hoist.
- Check the capacity of the chain or straps.
- Check that the straps are not cut or damaged.
- Check chain inspection tag to be sure inspection is up to date.
- Ensure the chain is not damaged.
- Check the type of chain hooks. If you are unsure which to use, ask before setting the hooks.
- Check the angle of the chains when tight and compare with the load limit chart.
- Check that hooks are positioned properly.
- Ensure the position of the hoist over the load is centered.
- Ensure that there are no twists in the chains.
- Protect the item being moved from the chain.
- Protect the chain or strap from sharp edges.
- Ensure all clamps are removed.
- Ensure that links are not caught in the tee slots of machine tools.

- Determine the center of gravity of the material being moved.

Moving a Load

- Ensure that the load is centered properly.
- Check how far the hoist coasts in each direction.
- Ensure that all personnel are clear of the part before lifting.
- Do not move a part over an employee.
- Do not lift the load with an employee on it.
- Only lift the load as high as necessary until ready to place.
- Do not stand in areas where you could be trapped.
- Move slowly and carefully with the hoisted load.
- Never leave a load suspended on the crane.
- Before moving a load be sure the path is clear of people and equipment.
- Ensure the load is attached properly before lifting.
- Report any and all malfunctions immediately.
- Never exceed the capacity of the crane, chain, strap or clamp.
- Avoid moving the load if excessive swing occurs. Stabilize the load before moving. Lower to the ground if necessary.
- Never walk under a suspended load.
- Remove all lifting devices and place in proper storage area when not in use.
- Position the equipment directly over the load before lifting.
- Stand clear of a load being raised or lowered.
- If uncertain of the safe operation of the equipment get help.

Hoisting/Rigging Reminders

- Employees shall make a visual inspection daily for any safety hazard.
- Before moving a load be sure the path is clear, as well as the area to which the load is going.
- If there is ever a question regarding the safe hoisting of a load it is the operator's responsibility to ask before attempting to hoist the load.
- All hoisted loads, regardless of weight, may pose a hazard.
- Never stand under hoisted objects.
- Position the load under the hoist and bring the hook down to the load. Do not try to position the load and manoeuvre the hoist at the same time. Serious back strains may result.
- Do not allow the control pendant to strike other equipment.
- Never raise the load more than two (2) feet when in transit. Raise only (if required) when it is ready to be placed.
- Avoid moving the load if excessive swing occurs. Stabilize the load before moving. Lower to the ground if necessary.
- Personnel required to use cribbing or blocking must be physically capable of handling heavy timbers or blocking units.
- When selecting blocking units or timbers for cribbing, ensure the units are sound and large enough for the load intended.

Cribbing/Blocking

Blocking and cribbing are techniques used in lifting operations, usually in conjunction with jacks, hoists, etc., for securing building structures, heavy equipment, vehicles or any heavy load which requires stability for safety.







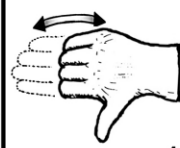





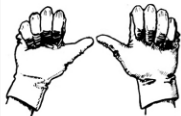
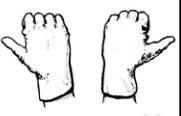




Cribbing is used as a stable platform to securely support a load after the jacks, used to initially raise the load, are released or lowered. Cribbing and blocking are also safety measures performed as the load is raised to prevent the load from dropping if the jacks or lifting device fail.

Cribbing/Blocking Guidelines

- Blocking and cribbing material must be free of oil or grease and dry to prevent slippage.
- Cribbing and blocking material must be placed on a level and firm base or foundation.
- If the base or foundation where cribbing or blocking is needed is soft or wet, plates sufficient to bear the load must be used to disperse the weight and provide a firm base.
- The bottom-cribbing unit must contact the base as evenly and firmly as possible to sufficiently disperse the weight of the load.
- Place successive units squarely at right angles to the unit below as the cribbing is built.
- Ensure that the base of the cribbing is wider than, or as wide as the top. Do not place higher units outside of a vertical line drawn from the base unit up.
- When cribbing is stacked to where the top is narrower than the base, place alternating timbers which lie in the same direction, bearing at least three quarters ($\frac{3}{4}$) of their width directly above the unit two (2) levels down.
- Build up the cribbing to bear on the load as the load is raised to ensure safety in the event the lifting device(s) fails.
- Raise loads evenly and crib as level as possible.
- If necessary ensure the lateral stability of the load with bracing as the load is raised.
- If shims or wedges are used to tighten or adjust cribbing to height, wedge from both sides of the load. This will prevent application of force to only one side of the load causing lateral instability.
- If a narrow surface or point of the load is bearing on the cribbing timber or block, or to increase the surface area of a jack base, use a steel plate to disperse the weight of the load.
- Lower the load slowly until the full weight of the load is resting on the cribbing or block; do not drop the load.
- Pay attention to the effect of the load on the cribbing. Watch for cracking or settling.
- Inspect cribbing and blocking regularly for settling, cracking, slipping or crushing of timbers.

Employers must ensure that personnel using cribbing or blocking procedures are trained to perform the task safely and are competent to construct a cribbing structure sufficient to support the required load.

Hoisting Hand Signals

Load Up  1	Load Down  2	Load Up Slowly  3	Load Down Slowly  4	Boom Up  5	Boom Down  6
Boom Up Slowly  7	Boom Down Slowly  8	Boom Up Load Down  9	Boom Down Load Up  10	Everything Slowly  11	Use Whip Line  12
Use Main Line  13	Travel Forward  14	Turn Right  15	Turn Left  16	Shorten Hydraulic Boom  17	Extend Hydraulic Boom  18
Swing Load  19	Stop  20	Close Clam  21	Open Clam  22	Dog Everything  23	NO RESPONSE SHOULD BE MADE TO UNCLEAR SIGNALS 24

Management Responsibilities:

- Shall ensure resources and funds are made available so work will be carried out in accordance with legislative requirements.
- Ensure that safe and suitable equipment is provided to meet the requirements of the job.
- Provide training to employees.
- Ensure that an equipment maintenance and inspection program is in operation (including logbooks and other required documentation).
- Ensure all cables are tested and rated.

Supervisor Responsibilities:

- Ensure that the equipment is operated safely and by qualified personnel.
- If the equipment is found to be unsafe or requires restrictive use that it is properly tagged.
- Ensure that the cables/slings can handle the weight being lifted.
- Ensure the safety of the rigging crew and other personnel affected by the hoist.
- Keep the public and all non-essential personnel clear of the work zone.
- Ensure all required precautions when the lift is near power lines.

Worker Responsibilities:

- Understand and perform pre-use inspection, operation and routine maintenance of hoisting/rigging equipment.
- Perform pre-use inspections prior to start of work for respective equipment.
- Report any pre-use inspection deficiencies with equipment to your supervisor for maintenance or further action prior to operation of the equipment.
- Always wear the appropriate personal protective equipment.
- Never stand under a load being hoisted.

Operator Responsibilities:

- Keeping the equipment under control at all times.
- Alteration or modification of equipment is not permitted without prior written consent from your supervisor or senior management.
- All equipment rated capacities shall not be exceeded.
- Perform a pre-use inspection on all equipment.
- Any deficiencies found in the pre-use inspections shall be reported and the equipment taken out of service until repairs are made and equipment is safe to operate.

Hot Work

Hot work is any process that may generate an uncontrolled spark or flame that could be a danger to a workplace. This applies to any temporary operation involving open flame producing heat and/or sparks. Includes, but is not limited to brazing, cutting, grinding, soldering, thawing pipe and welding.

All workers that are involved in hot work must be trained. This applies to welders, mechanics, labourers, operators and supervisors.

Training will include:

- Hazard identification.
- Safe welding, cutting and brazing procedures.
- Fire and safety precautions.
- Control methods.
- Proper maintenance and use of the equipment.
- Proper maintenance and use of the appropriate personal protective equipment.
- Proper use of the hot work permit.

A hot work permit is only required when welding, cutting, burning, etc. is performed in an area where it is not normally done. For example, a hot work permit is not required in a permanent welding shop. Before hot work is to begin, the employee must verify that the location has been examined and that precautions taken to prevent a fire have been implemented. Once the hot work is completed, a “30-minute fire watch” must occur. After the 30 minutes, the hot work permit must be signed off and filed.

Personal Protective Equipment

It is important to wear and maintain your personal protective equipment. The following are required when performing any hot work:

- Leather Gloves
- Welding Helmet and Shield
- Fire Proof Clothing
- Hearing Protection
- Welding Screens

Physical Hazards

- Radiation
- Noise
- Infra-radiation
- Visible light
- X-rays and gamma rays
- Extreme temperatures
- Electrical energy
- Stray currents

Chemical Hazards

- Fumes
- Vapours
- Gases
- Dusts

Biological Hazards

- Bacteria
- Viruses
- Fungi

Fire and/or Explosion

There is always a threat of a fire or explosion occurring when performing hot work. This results from either chemicals reacting with one another to form explosive or flammable mixtures or sparks from cutting and grinding.

Protective Measures

- Clear the area of all combustibles.
- Never allow grease or oil to come into contact with oxygen or oxy-acetylene hose.
- Protect cylinders, hoses legs and feet when flame welding.
- Wear all PPE required.
- Proper housekeeping measures.

It is important to know where all nearby fire extinguishers are located and emergency phone numbers encase of an emergency.

Heat / Cold Stress

Weather directly impacts daily construction activities. The goal of heat/cold stress is to understand climate conditions from season to season in order to work outside safely. Temperature and precipitation are two important factors when working outside. It is important to be prepared for and understand the effects of prolonged exposure to hot or cold temperatures in both wet & dry conditions. Temperature, precipitation, humidity or wind-chill, and air movement will be taken into consideration for job site shut down.

Everyone reacts differently to climate conditions. It is extremely important to speak up if you are feeling ill or need some assistance. Keeping yourself hydrated with water or juices, especially in summer months when you sweat heavily, is important to working outside safely. Try to wear light coloured, loose fitting clothing for maximum sun protection. In the winter it is recommended that you layer clothing to ensure warmth and protection from the elements.

Examples of Heat Stress Hazards

- Sunburn – a result of too much sun exposure; skin is often red, painful to touch, may blister and/or peel.
- Heat Cramps – a result of a loss of electrolytes in blood & muscle tissue due to salt lost while sweating; often painful cramps in the legs, arms or stomach.
- Heat Exhaustion – symptoms vary from nausea, dizziness, headache, blurred vision, fatigue, excess sweating (extreme symptoms include cold/wet grayish skin, unconsciousness, coma & death).
- Heat Stroke – a result of the body no longer sweating; symptoms vary from chills, restlessness, irritability, red face & skin, disorientation (extreme symptoms include hot/dry skin, collapse, unconsciousness, convulsions & death).

Examples of Cold Stress Hazards

- Frostbite – a result of the formation of ice crystals in exposed body parts due to extended exposure to cold; often occurs on the hands, feet, ears and nose.
- Hypothermia – a result of overcooling of the body due to excessive loss of body heat; symptoms vary from nausea, dizziness, irritability, fatigue and severe shivering.

Management Responsibilities:

- Ensuring that there is communication regarding climate conditions between management, foreman and/or superintendent, and with crews.
- Ensuring that crews work safely during excessive temperatures, and stop work if conditions become unsafe and/or uncomfortable.

Supervisor Responsibilities:

- Informing management if conditions reach extremes where the job site may need to be shut down.
- Communicating with the crew to ensure that climate conditions (temperature, precipitation, humidity or wind-chill and air movement) are safe and/or comfortable.
- Ensuring that the timing of breaks during the day is directly related to climate conditions.

Worker Responsibilities:

- Dressing appropriately for the weather conditions.
- Communicating with the foreman and/or superintendent if, in the worker's opinion, climate conditions become unsafe and/or uncomfortable.

Traffic Control/Traffic Protection Plan

This policy along with its associated guidelines and training standard, are intended to provide direction for the development of effective divisional traffic control procedures to:

- Protect workers and the motoring public by regulating traffic flow.
- Stop traffic whenever required by the progress of work. Otherwise to keep traffic moving at reduced speeds to avoid tie-ups and delays.
- To allow the work to proceed safely and efficiently.
- Facilitate the safe movement of vehicles and equipment within the work zone.

Prior to beginning any work on a public road allowance, the traffic control shall conform to the “Ministry of Transportation Book #7 Temporary Conditions Field Edition March 2001” and sections 67 to 69 (incl.) of Regulation 213/91 of the Ontario Health and Safety Act to provide a safe work zone for all workers.

Traffic control work is to be performed in compliance with the provisions of:

- The Regulations for Construction Projects (sections 67-69)
- The Ontario Traffic Manual for Temporary Conditions (Book 7 & Field Edition)
- The Handbook for Construction Traffic Control Persons

Before starting work, make sure that you know:

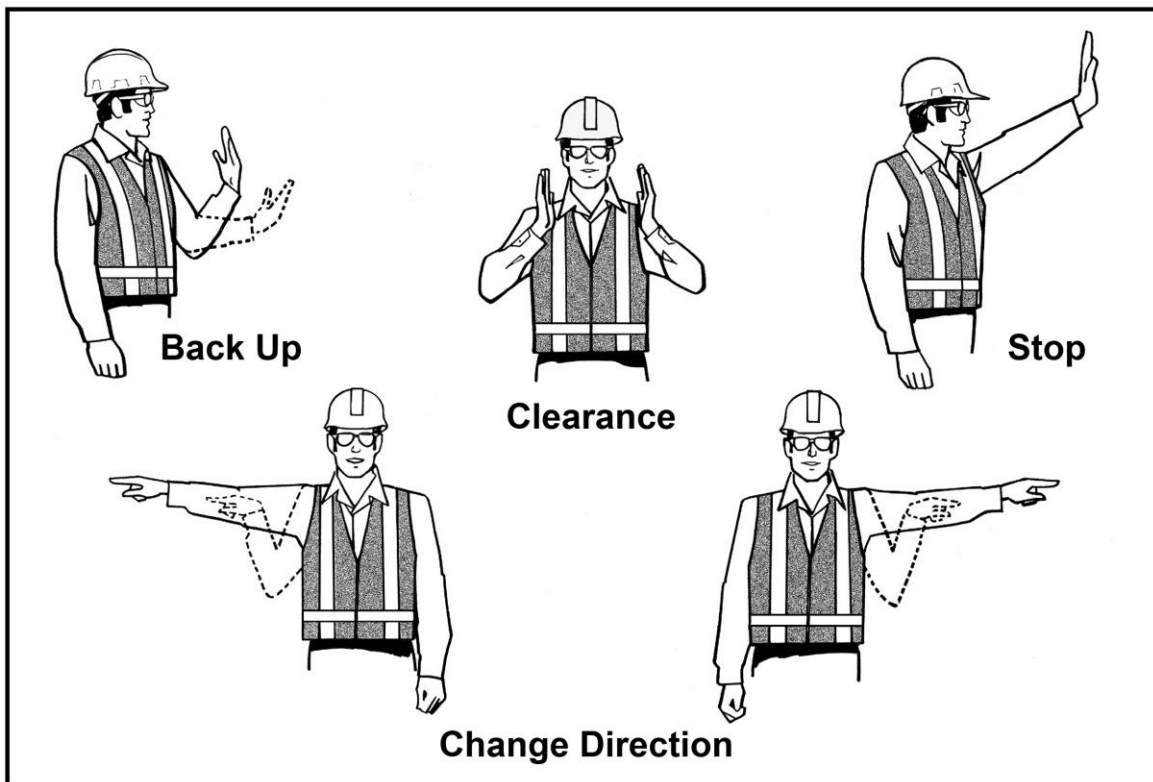
- The type of construction you will be involved with – paving, installing pipe, grading, cut and fill, etc.
- The type of equipment to be used, such as scrapers, trucks, compactors and graders.
- How the equipment will be operating – for instance, crossing the road, along the shoulder, in culverts or on a bridge.
- Whether you will have to protect workers settling up components of the traffic control system such as signs, delineators, cones and barriers.
- Any special conditions of the contract governing road use (for instance, many contracts forbid work during urban rush hours).
- How public traffic will flow – for example, along a two-lane highway, around curves or hills, by detour or on a road narrowed to a single lane. This last is a very common situation and requires two traffic control persons to ensure that vehicles do not move in opposing directions at the same time. In some cases, where the two cannot see one another, a third is necessary to keep both in view and relay instructions.

Remember:

- Always face traffic.
- Plan an escape route.
- Wear personal protective clothing.
- Maintain proper communication with other traffic control persons.
- Stay alert at all times.
- Be courteous.

Traffic control is a demanding job and often a thankless job, but always an important job. How well you succeed will depend largely on your attitude.

Traffic Control Hand Signals



Management Responsibilities:

- Senior management shall ensure resources and funds are made available to ensure work can be carried out in accordance with legislative requirements, corporate policy and divisional safe work procedures
- Appropriate Traffic Protection Plans and work procedures are used.
- Appropriate machinery, equipment and protective devices (including clothing) needed to carry out work in accordance with legislative requirements and written safe working procedures are provided and maintained.
- Training provided to all workers involved in work that requires traffic control procedures to be used.
- An annual review of traffic control procedures.

Supervisor Responsibilities:

- Identify hazards related to the specific “road work” conditions, and implement effective traffic control measures for the protection of workers.
- Ensure a traffic control protection plan is completed for all necessary work; that a copy of the plan remains on the project and that all workers are familiar with the requirements of the plan.
- Ensure that all employees under their supervision have the knowledge, skills and experience to do the assigned work and are provided both oral and written instructions (in a language they understand) prior to being assigned traffic control duties.
- Ensure that all workers use and/or wear required personal protective equipment and/or devices.
- In conjunction with senior management and the safety co-ordinator maintain training records.
- Monitor workers to ensure procedures are followed and when violations occur, take appropriate action.

Worker Responsibilities:

- Work in accordance with safe work procedures and specific traffic control plans.
- Understand the importance of traffic control and the role of a traffic control person.
- Use and/or wear all equipment required to safely perform workplace specific activities.
- Understand how to handle the STOP-SLOW sign and the associated hand signals for safely directing traffic through the work zone.
- Report any violations, hazards or deficiencies in equipment to your supervisor immediately.
- Follow established procedures in the event of an injury, accident or emergency.

Cell Phone Use

Cell phones should not be used when driving a motor vehicle. The Government of Ontario has passed Bill 118, which amends the Highway traffic in Ontario.

As found in section 78 and 78.1 of the Highway Traffic Act:

Display screen visible to driver prohibited

78. (1) No person shall drive a motor vehicle on a highway if the display screen of a television, computer or other device in the motor vehicle is visible to the driver.

Exceptions

78. (2) Subsection (1) does not apply in respect of the display screen of,

- (a) a global positioning system navigation device while being used to provide navigation information;
- (b) a hand-held wireless communication device or a device that is prescribed for the purpose of subsection 78.1 (1);
- (c) a logistical transportation tracking system device used for commercial purposes to track vehicle location, driver status or the delivery of packages or other goods;
- (d) a collision avoidance system device that has no other function than to deliver a collision avoidance system; or
- (e) an instrument, gauge or system that is used to provide information to the driver regarding the status of various systems of the motor vehicle.

78. (3) Subsection (1) does not apply to the driver of an ambulance, fire department vehicle or police department vehicle. 2009, c. 4, s. 1.

Hand-held devices prohibited / Wireless communication devices

78.1 (1) No person shall drive a motor vehicle on a highway while holding or using a hand-held wireless communication device or other prescribed device that is capable of receiving or transmitting telephone communications, electronic data, mail or text messages. 2009, c. 4, s. 2.

Entertainment devices

78.1 (2) No person shall drive a motor vehicle on a highway while holding or using a hand-held electronic entertainment device or other prescribed device the primary use of which is unrelated to the safe operation of the motor vehicle. 2009, c. 4, s. 2.

Hands-free mode allowed

78.1 (3) Despite subsections (1) and (2), a person may drive a motor vehicle on a highway while using a device described in those subsections in hands-free mode. 2009, c. 4, s. 2.

Exceptions

78.1 (4) Subsection (1) does not apply to,

- (a) the driver of an ambulance, fire department vehicle or police department vehicle;
- (b) any other prescribed person or class of persons;
- (c) a person holding or using a device prescribed for the purpose of this subsection; or
- (d) a person engaged in a prescribed activity or in prescribed conditions or circumstances. 2009, c. 4, s. 2.

78.1 (5) Subsection (1) does not apply in respect of the use of a device to contact ambulance, police or fire department emergency services. 2009, c. 4, s. 2.

78.1 (6) Subsections (1) and (2) do not apply if all of the following conditions are met:

1. The motor vehicle is off the roadway or is lawfully parked on the roadway.
2. The motor vehicle is not in motion.
3. The motor vehicle is not impeding traffic. 2009, c. 4, s. 2.

Drivers may also be charged under existing careless and dangerous driving laws if other drivers are placed at risk.

Limited use of mobile devices is the only way to operate a vehicle safely. Any mobile device may cause distraction and prevent you from concentrating on the safe operation of a vehicle, which may lead to accidents.

The ban will include cell phones, blackberries, iPods', MP3 players and any other personal entertainment and communication devices while driving. This ban does not affect hands free devices (Bluetooth, headsets), GPS and portable media systems if they are plugged into or connected to the vehicles sound system.

Rules for Drivers

When you are on duty and driving, you may not use a cell phone unless it is hands free.

The ban on the use of cell phones applies to:

- All vehicles operated by workers while on duty, whether owned by the company or the individual worker.
- All conversations, whether personal or business-related.

As an exception to this policy, workers may use cell phones to conduct conversations when they drive as long as they use headsets and other hands-free devices. However, workers are strongly encouraged to keep calls as brief as possible.

Rules for Site Workers

Cell phones and mobile devices are not permitted for use while operating heavy equipment, working in a trench, confined space or directly within the limits of active construction.

You may use your cell phone and other mobile devices during scheduled breaks.

Guideline for cell phone use when on-site:

- **Ban on Calling Workers Who Are Driving** - If you know that an employee is driving, do not call him or her on the cell phone or other wireless device.
- **Procedures for Calling Workers Who Might Be Driving** – If you do not know if the employee is driving and the matter is urgent, you may place the call, but must immediately ask the person if they are driving. If the worker is in fact driving, hang up after telling the worker to call you back when they pull over or gets out of the vehicle.
- **Procedures for Receiving Calls from Workers Who May Be Driving** – If you receive a call from an employee that is calling from their cell phone or other wireless device, ask them if they are driving. If they are, tell them to pull over and call you back. Hang up the phone as quickly as possible.

Violations of the foregoing rules will be considered a serious offence and may result in the imposition of Hard-Co's Progressive Discipline Policy.

The use of cell phones and other wireless devices while driving leads to distractions that can result in traffic accidents. So, while we cannot force you to adhere to these rules when you are not on duty, we strongly urge you to do so for your own safety and well-being and that of family, friends and third parties on the roadways.

Accessibility Standards for Customer Service

Providing Goods and Services to People with Disabilities

Hard-Co is committed to excellence in serving all customers including people with disabilities.

Assistive devices

Hard-Co will ensure that staff are trained and familiar with various assistive devices that may be used by customers with disabilities while accessing our goods or services.

Communication

We will communicate with people with disabilities in ways that take into account their disability.

Service animals

We welcome people with disabilities and their service animals. Service animals are allowed on the parts of our premises that are open to the public.

Support persons

A person with a disability who is accompanied by a support person will be allowed to have that person accompany them on our premises.

Notice of temporary disruption

In the event of a planned or unexpected disruption to services or facilities for customers with disabilities Hard-Co will notify customers promptly. This clearly posted notice will include information about the reason for the disruption, its anticipated length of time, and a description of alternative facilities or services, if available.

The notice will be placed at entrances of the building.

Training for staff

Hard-Co will provide training to employees in the following positions will be trained:

- Sales Associate
- Dispatcher
- Sales Manager
- Loader Operator
- Foreman
- Construction Employee

- Truck Driver

This training will be provided to all new and existing staff that works in contact with the public.

Training will include:

- An overview of the Accessibility for Ontarians with Disabilities Act, 2005 and the requirements of the customer service standard
- Hard-Co's accessible customer service plan.
- How to interact and communicate with people with various types of disabilities
- How to interact with people with disabilities who use an assistive device or require the assistance of a service animal or a support person
- What to do if a person with a disability is having difficulty in accessing Hard-Co's goods and services

Staff will also be trained when changes are made to our accessible customer service plan.

Feedback process

Those who wish to provide feedback on the way Hard-Co provides goods and services to people with disabilities can email Hard-Co's safety co-ordinator Emily Marsh at emily@hard-co.com. Individuals can expect to hear back in five business days. Complaints will be addressed according to Hard-Co's regular complaint management procedures.

Modifications to this or other policies

Any policy of Hard-Co that does not respect and promote the dignity and independence of people with disabilities will be modified or removed.

Vehicle and Machine Inspection

Everyone who operates any vehicle or machine is responsible for ensuring there are no safety deficiencies and everything is in good working order. It is important to ensure all vehicles and machines are kept in safe working condition. With the assistance of employees, Hard-Co can repair and or replace items as needed. The best way to make sure that all vehicles and machines are in working order is to perform an inspection daily (or prior to use).

The operator that is going to be running that piece of equipment will perform the inspection. Inspections on all equipment will be done prior to the initial use each day.

All operators are to use Hard-Co's inspection forms. Any hazardous conditions must be brought to the site supervisor's attention immediately and that piece of equipment must not be used until corrective actions have taken place.

Once the repairs have been done, the mechanic will issue an "All Clear" form to the supervisor stating that the piece of equipment is safe to operate. The head mechanic and operations manager will review all forms and communicate with supervisors as needed to ensure the system is working efficiently.

Management Responsibilities:

- Ensure that supervisors are promoting the importance of vehicle and machine inspections and that they are documented correctly.
- Ensure that supervisors communicate effectively with mechanics to ensure that workers are safe.

Supervisor Responsibilities:

- Encourage operators and workers to report any problem that may endanger the safety of themselves or others.
- Communicate with mechanics to quickly and efficiently address and correct any mechanically problems.

Operator/Worker Responsibilities:

- Inform supervisor if any vehicle and/or machine requires repair.
- Inform supervisor of any hazardous condition that may endanger safely of operating the vehicle and/or machine.

Equipment Lockout Procedure

A “lockout” procedure is used when a machine is taken out of service.

This procedure is for a typical lockout, and all aspects of each piece of equipment must be carefully identified before starting any work.

1. Identify all sources of energy – electrical, kinetic, pneumatic, hydraulic, potential, stored, thermal, radiation, etc.
2. Ensure all energy sources are turned off/locked out and/or blocked.
3. Ensure that all energy sources been shut down by qualified personnel.
4. Install your lock and personal tag with name, date and reason.
5. Release, disconnect or wait for stored energy to dissipate.
6. Verify a *zero energy* state (using extreme caution). Attempt to turn on the equipment with the start button, ensure blocking (if required) and additional safeguards are securely in place.
7. If *zero energy* state is not achieved, then arrange the shut-off by qualified personnel.
8. When *zero energy* state is verified the person performing the maintenance/repair work can proceed.
9. When all work is complete, remove the lock(s) and tag(s).
10. Ensure all personnel are clear before removal of blocking and/or additional safeguards.
11. Task is now complete and equipment can be started safely.

Workplace Hazardous Materials Information System

Hard-Co values the safety and well-being of our employees, and will work with them to provide every reasonable safety measure possible. In pursuit of our high-safety standards, and in compliance with Federal and Provincial compliance regulations, the Company will provide Workplace Hazardous Materials Information System WHMIS training for employees.

WHMIS is a Canada-wide system designed to give employers and workers information about hazardous materials used in the workplace. WHMIS is a very useful safety system for materials that are or may be hazardous to your health if not used correctly. All hazardous materials in the workplace **MUST** be identified in accordance with the Occupational Health and Safety Act. Under WHMIS, there are three (3) ways in which information on hazardous materials is to be provided:

1. Labels on the containers of hazardous materials, labels on temporary containers of hazardous materials;
2. Material safety data sheets to supplement the label with detailed hazard and precautionary information;
3. Worker education programs.

Material safety data sheets (MSDS) need to be provided and maintained in each site office trailer, in the shop(s), the foremen vehicles and the office for reference. This is to be utilized by all employees to assist in how to handle, store and dispose of the list materials.

WHMIS training is required for:

- Any “exposed worker” that stores, handles, uses or disposes of a controlled product, or who supervises another worker performing these activities.
- Any worker “likely to be exposed” to the storage, handling, use or disposal of a controlled product, or maintenance operations.

Management/Supervisor Responsibilities:

- An employer in charge of a worksite where controlled products are used has three (3) duties:
 1. Ensure that controlled products are labelled or identified;
 2. Obtain material safety data sheets for controlled products;
 3. Educate workers.
- The employer must ensure that every container of a controlled product received from a supplier has a supplier label.
- Proper WHMIS labels must also be used for containers used for temporary use.
- The employer must also ensure that until the supplier container is empty, the supplier label is not deliberately removed, destroyed or changed.

Supplier Responsibilities:

- The supplier of the hazardous material provides the labels and Material Safety Data Sheets (MSDS) to the employer. The employer passes the information on to the worker, provides access to this information on an ongoing basis and provides education programs.

Worker Responsibilities:

- Must participate in WHMIS training and education and employees must report any violation of the Act or regulations to their immediate supervisor.
- Shall inform their immediate supervisor in the event that they do not have the proper information on a controlled product, e.g. the MSDS is missing, damaged or illegible.
- Working safely around and/or with dangerous at all times.

The following WHMIS symbols below are for you information and protection. Please read them carefully and make sure that you understand each symbol.



CLASS A
Compressed Gas



CLASS D, DIVISION 2
Poisonous & Infectious Material:
Other Toxic Effects



CLASS B
Combustible & Flammable Material



CLASS D, DIVISION 3
Poisonous & Infectious Material:
Biohazardous Infectious Material



CLASS C
Oxidizing Material



CLASS E
Corrosive Material



CLASS D, DIVISION 1
Poisonous & Infectious Material:
Immediate & Serious Toxic Effects



CLASS F
Dangerously Reactive Material

Exposure Control Plan for Cutting and Crushing Concrete

Cutting and crushing concrete without proper dust controls can generate high levels of silica-containing dust. Breathing in this fine dust can cause a serious lung disease called silicosis, which is characterized by scarring and thickening of the lungs, and can result in death.

Hard-Co's main objective is to protect workers when cutting concrete. Some health hazards from silica exposure are:

- Long-term exposure to airborne crystalline silica (i.e. quartz) can cause a disabling, sometimes fatal lung disease called silicosis.
- Exposure to crystalline silica has been linked to lung cancer.
- When the dust is inhaled deep into the lungs, microscopic particles of silica can cause scar tissue to form in the lung tissue, which restricts the lungs' ability to extract oxygen from the air. This damage is permanent, but symptoms of the disease may not appear for many years.
- The disease initially causes fatigue and shortness of breath. If exposure continues, it can lead to chest pain, heart problems (difficulty breathing can strain the heart) and respiratory failure.
- Exposure to crystalline silica has also been linked to other diseases, including bronchitis and tuberculosis.

Hard-Co has a duty to protect our workers from silica exposure during concrete cutting and crushing. Studies show that concrete cutting and crushing generates airborne silica levels well in excess of safe levels. Effective controls are available to protect workers from harmful exposure. A combination of control measures will be required to achieve this objective. We commit to being diligent in our efforts to select the most effective control technologies available and to ensure that the best practices, as described in this exposure control plan (ECP) are followed on our job sites. The work procedures we establish for cutting and crushing concrete will protect not only our workers, but also any other workers on-site who are not involved in these operations.

Management Responsibilities:

- Ensure that the materials (i.e. tools, equipment and personal protective equipment [PPE]) and other resources (i.e. worker training) required to fully implement and maintain this ECP are readily available.
- Ensure that supervisors and workers are educated in the hazards of silica exposure and trained to work safely with silica.
- Maintain written records of training (i.e. proper use of respirators), fit-test results, crew talks and inspections (equipment, PPE, work methods and practices).
- Conduct an annual review (or more often if conditions change) of the effectiveness of the ECP. This includes a review of available dust control technologies to ensure these are selected and used when practical.
- Coordinate work with the supervisors, employees and subcontractors to ensure a safe work environment.

Supervisor Responsibilities:

- Provide adequate instruction to workers on the hazards of silica associated with concrete cutting and crushing.
- Select and implement the appropriate control measures.
- Ensure that workers are using the appropriate personal protective equipment, such as respirators (as required) when exposure to silica is present. If water is not available to keep the dust down, a respirator is required. Remember that appropriate respirators should only be used if no other method of control is available to protect workers.
- Ensure that work is conducted in a manner that minimizes and adequately controls the risk to workers and others. This includes ensuring that workers use appropriate engineering controls and wear the necessary PPE.

Worker Responsibilities:

- Use the assigned protective equipment in an effective and safe manner.
- Follow established work procedures as directed by the supervisor.
- Report any unsafe conditions or acts to the supervisor.
- Report to management any exposure incidents or any signs or symptoms of silica illness.

Risk Identification and Assessment

Concrete can contain a high percentage of silica. Cutting and crushing concrete without the use of proper dust controls and PPE can expose workers to levels of airborne respirable crystalline silica that are above the exposure limit listed in the R.R.O. 1990, Regulation 845.

Exposure limit

The occupational exposure limit (OEL) for respirable crystalline silica (including quartz) is 0.025 milligrams per cubic metre (mg/m³). Because crystalline silica is linked to lung cancer, workplace exposures must be reduced to levels that are As Low As Reasonably Achievable (ALARA) below the OEL.

Silica Dust Control

- The Regulation requires employers to select silica dust controls based on the following hierarchy:
 - (a) Engineering (i.e. local exhaust ventilation or water attachments).
 - (b) Administrative Controls (i.e. cutting and/or crushing when other workers are not in the area).
 - (c) Personal Protective Equipment (i.e. respirators and eye protection).
- Use water whenever possible to control dust.
- Use of respirators as a primary control is not acceptable when other methods are available and practical.

Respirators will be used in conjunction with other controls such as local exhaust ventilation (LEV) or water attachments to reduce worker exposure to silica, unless air-monitoring information suggests otherwise.

- LEV and wet cutting are the preferred engineering methods and will be used when practicable.

Acceptable Control Methods for Cutting Concrete

- The work methods in the following table are acceptable, provided that the respirator selection, dust suppression and other controls are adhered to.
- The following control options will be used to eliminate or reduce the risk to workers from the hazards of silica dust exposure, unless air monitoring information suggests otherwise:

Work activity	Dust Suppression	Other controls	Respirator type
Cutting or splitting pavers or blocks with a hand-powered splitter	None	Barriers (for example, a tape barrier) to restrict access to the work area	N95 single-use respirator
Small cut of 2–3 metres using a saw	HEPA vacuum extraction or continuous water spray	Barriers (for example, a tape barrier) to restrict access to the work area	Half-face respirator with 100 series (N, P, or R) filters
Large cuts or multiple cuts in one area	HEPA vacuum extraction or continuous water spray	Barriers (for example, a tape barrier) to restrict access to the work area	Full-face respirator with 100 series (P or R) filters
Using a saw in a small unventilated area	HEPA vacuum extraction or continuous water spray	Full enclosure systems (with negative air) are required to restrict access to and contain the work area	Full-face powered air-purifying respirator (PAPR) with 100 series (P or R) filters

Safe Work Planning

- Select one or more of the methods described in the table above.
- Inspect all dust control equipment and tools to make sure they are in good working order.
- Use and maintain all tools and equipment as specified by the manufacturer.
- Ensure that workers inspect their respirators before start-up.
- Visually monitor dust release from equipment during use. When tools and equipment are working properly, very little dust should be visible in the air. Stop work if excessive dust is observed.

Respiratory Protective Equipment

- If a worker is required to wear a respirator that requires an effective seal with the face for proper functioning, the worker must be clean-shaven where the respirator seals with the face.
- When the worker notices a notable resistance to breathing, the respirator filters must be replaced.
- Respirators will be used, cleaned and stored in accordance with the respiratory protection program.

Other Personal Protective Equipment and Hygiene

- Workers will wear approved safety goggles and hearing protection when cutting or crushing concrete. This equipment will not interfere with the fit of the worker's respirator.
- Workers who launder clothing contaminated with silica should be informed of the hazards of silica and the precautions required for handling the clothing.

Housekeeping Procedures

- Dry sweeping and the use of compressed air are prohibited for removing dust and debris containing silica.
- Wet cleanup may also be used to remove dust.
- Any slurry generated by wet control methods should be cleaned up when the work is completed to avoid secondary dust exposure hazard.
- Waste material will be placed in a dumpster, and will be removed at least weekly. The location and method used to store waste will not allow silica-containing dust to re-enter the workplace.
- Supervisors are responsible for ensuring that work areas are free from dust at the end of each shift.

Training for Silica Dust Exposure

Training will be performed by the employer or the employer's designate. All records of attendance, dates of training and training material will be documented and retained. Additional training or reference material on silica dust exposure will be made available to supervisors and employees upon request.

Training Topics

- Health hazards of silica dust exposure (including signs and symptoms of silicosis).
- Operations and materials that can produce silica dust exposures.
- Engineering controls and safe work practices used to protect workers.
- The importance of proper equipment control and maintenance.
- Housekeeping procedures.
- Proper use of respirators and the respirator program.
- Personal hygiene procedures to reduce exposures.
- The details of the exposure control program for silica dust.

Asbestos Awareness

Asbestos is a naturally occurring material once used widely in the construction industry. Its strength, ability to withstand high temperatures and resistance to many chemicals made it useful in hundreds of applications. The early widespread use of asbestos has left a potentially dangerous legacy. The improper handling of asbestos-containing products can release harmful amounts of fibre.

Types of Asbestos

There are two general categories of asbestos *serpentine* (long and flexible fibres) and *amphibole* (brittle and sharp fibres). There are six types of asbestos generally recognized:

- Chrysotile (serpentine) – long wavy fibres, white or off-white
- Crocidolite (amphibole) – long straight fibres, blue
- Amosite (amphibole) – straight, short & sharp fibres, brown
- Actinolite (amphibole)
- Anthophyllite (amphibole)
- Tremolite (amphibole)

The most common type of asbestos in Ontario is chrysotile. Two other types of asbestos that have been commercially used are amosite and crocidolite.

Health Effects of Asbestos

It is important to understand how asbestos becomes a health hazard. A solid piece of pipe, for example, should not cause any major health problems. The asbestos becomes an issue when the fibres are released and become airborne.

Asbestos fibres do not break in half across their diameter (width), but rather split into thinner and thinner needle-like fibres along their length. An asbestos fibre can remain airborne for a long time and can easily become airborne again after it has settled if there is any air movement.

Once you inhale asbestos fibres, they may remain in the lungs for many years, possibly even decades. Inhaling asbestos fibres has been shown to cause the following:

- *Mesothelioma* – a rare & fatal cancer of the lining of the chest and/or abdomen.
- *Lung cancer* – appears quite frequently in people exposed to asbestos dust. It is important to note that smoking cigarette's (another cause of lung cancer) increases the risk. Cigarette smoking and asbestos combine to produce a synergistic effect, meaning they work together to compound the effects, which in turn increases the odds of lung cancer.
- *Asbestosis* – is a disease of the lungs caused by scar tissue forming around very small asbestos fibres deposited deep in the lungs.

- *Various other illnesses* – some evidence of an increased risk of gastrointestinal tract & larynx cancers. However, it is important to note that the link between asbestos exposure & the development of these illnesses is not clear as with lung cancer or mesothelioma.

Often asbestos related diseases are fatal. Significant exposure to asbestos puts you at risk for developing pleural plaques (scarring of the lining of the lung).

Locations of Asbestos

There are two classes of asbestos products widely used 1) *Friable*, materials easily crumbled or loose in composition (such as spray fireproofing) and 2) *Non-Friable*, materials that are much more durable because they are held together by a binder (such as cement, vinyl or asphalt).

The type of material associated with sewer and watermain products contain non-friable asbestos materials. The most common are asbestos cement products. This type of material contains cement to bind the asbestos fibres together, found in some sewers and water pipe. Asbestos can also be found in asphalt.

Should asbestos material be found on-site, it is to be collected and bagged by trained staff and a qualified disposal company shall be hired to dispose of the waste at an approved dumpsite.

Personal Protective Equipment

The following are required when performing any asbestos removal:

- Protective Suit
- Gloves
- Eye Protection
- Foot Protection
- Mask and/or Respirator (if necessary)

Training

Training will be performed by the employer or the employer's designate. All records of attendance, dates of training and training material will be documented and retained. Additional training or reference material on asbestos exposure will be made available to supervisors and employees upon request.

Subcontractor Policy

Safety is everyone's responsibility. Hard-Co Construction is committed to safe working conditions for all employees and all sub trades working on Hard-Co sites.

In addition to subcontractor responsibilities found under Safety Responsibilities, all subcontractors are required to apply our health and safety standards, as well as their own health and safety standards, specific to the work being performed on our sites. All subcontractors will be provided with a copy of our Policies, Procedures and Safety Guidelines to read, understand, agree and adhere to. Our Subcontractor Health and Safety Responsibility Agreement must be signed and returned prior to mobilization.

Subcontractors are required to meet all of the items listed on the document checklist to be eligible to work on any Hard-Co site. Should the ability to meet these standards not be met or maintained for the duration of the project, the subcontractor will be removed from the site.

Enforcement

In order to achieve compliance and to ensure that due diligence is attained Hard-Co has adopted a *zero tolerance* procedure. A first time infraction will be given a verbal warning, a second infraction will be given a written warning, and should a third infraction occur, the subcontractor will be dismissed. Once a subcontractor has been removed from a Hard-Co site, they will not be allowed back on any Hard-Co site until further notice. The extent of disciplinary action will depend upon the severity of the infraction(s).

Subcontractor Document Checklist

- Registration of Constructors and Employers Engaged in Construction (Form 1000)
- Proof of Enrolment in WSIB (Clearance Certificate)
- Proof of Insurance
- Copy of their Safety Policies and Programs
- Emergency Contact Numbers
- Signed Subcontractor Health and Safety Responsibility Agreement

Potential Fines

Schedule 67.1 Ontario Regulation 213/91 for Construction Projects

ITEM	OFFENCE	SECTION	SET FINE
1.	Worker failing to wear protective headwear	22	\$195.00
2.	Worker failing to wear protective footwear	23	\$195.00
3.	Worker failing to wear eye protection	24	\$195.00
4.	Worker failing to use provided protective respiratory equipment	46 (2)	\$195.00
5.	Worker who may be endangered by vehicular traffic failing to wear prescribed garment	69.1	\$195.00
6.	Operator leaving the controls of machine unattended	102	\$195.00
7.	Signaller failing to wear prescribed garment	106 (1.1) – (1.4)	\$195.00
8.	Worker failing to wear adequate personal protective equipment while using fastening tool	117 (3) (a)	\$195.00
9.	Worker failing to wear adequate eye protection while using fastening tool	117 (3) (b)	\$195.00
10.	Worker failing to wear full body harness connected to fall arrest system while on suspended equipment	141 (1)	\$295.00

Hard-Co Progressive Discipline Policy

The purpose of this policy is to state the position of Hard-Co Construction, on administering equitable and consistent discipline of unsatisfactory conduct on the jobsite. This policy ensures fair treatment of all employees in making certain that disciplinary actions are prompt, uniform and impartial. The primary purpose of any disciplinary plan is to correct the problem, prevent recurrence and prepare the employee for satisfactory service in the future.

We recognize that employees on the whole, normally govern their activities while at work in the same high standards of conduct that they use for their personal affairs. We recognize that errors in judgment may occur and when they do we wish to address them in a fair, impartial and consistent manner. By using progressive discipline, it is our hope that most employee problems can be corrected in the early stages, thus benefiting both the employee and Hard-Co. Open and clear communication between the employee and the supervisor promotes understanding, and is the key to preclude the need for any disciplinary action.

Our standard order of progression will be as follows: verbal warning, written warning, temporary suspension from work (one day), temporary suspension from work (three days), and dismissal. However, depending on the severity of the problem disciplinary action may call for any four of the steps.

Substance Use and Abuse

Substance use and abuse, while at work or otherwise, seriously endangers the safety of employees and the general public. It often creates a variety of workplace problems including increased injuries on the job, increased absenteeism, increased health care and benefit costs, increased theft, decreased morale, decreased productivity and a decline in the quality of services provided.

Hard-Co Construction will not tolerate the possession, use, or distribution of drugs, alcohol and/or other intoxicants while at work or on company property (including parking lots and in vehicles – company or personal).

Hard-Co will provide assistance to an employee who may be abusing drugs, alcohol and/or other intoxicants. It is imperative that the employee seeks assistance from the company prior to the abuse of drugs, alcohol and/or other intoxicants leading to disciplinary action. Violation of this policy will result in disciplinary action up to, and including, termination of employment.

Non-Routine Work

Non-routine work is a task or activity that you are not familiar with. You must tell your supervisor prior to proceeding with any work that you are uncomfortable with.

Supervisors will discuss and review non-routine work with workers during tailgate meetings. Employees must be trained and/or experienced in carrying-out the task/activity. If not, the following procedure must be followed:

1. Worker informs the supervisor that they are not familiar with the task/activity.
2. Supervisor or a designated competent worker conducts the task/activity orientation (pre-work meeting) with the worker.
3. A review of the task is conducted among the worker and the supervisor or competent worker.
4. Potential hazards associated with the non-routine task/activity are identified.
5. The hazards identified are rated (refer to Hazard Reporting).
6. All necessary controls are put in place.
7. Safe operating procedures are established and then explained to the worker.
8. All of the necessary safety equipment required to complete the task/activity safely are outlined and their proper use demonstrated for the worker.
9. The worker is required to demonstrate their ability to complete the task/activity to the supervisor or competent worker.
10. If any training is provided to complete the non-routine task, the supervisor or competent worker will document such training. A record of the training will be kept in the worker's file.

Management Responsibilities:

- Supply all necessary safety training, materials and equipment.

Supervisor Responsibilities:

- Ensure that the work tasks/activities are assigned to the appropriate worker(s).
- Conduct a pre-work meeting with the worker(s) if they are not familiar with the task/activity.
- Complete a step by step review of the task/activity with the worker(s) and identify all potential hazards.
- Implement controls.
- Make available required safety equipment.
- Review the safe operating procedures and proper use of the safety equipment.

Worker Responsibilities:

- Inform the supervisor if they are not familiar with the task/activity.
- Perform the review of the task/activity with the supervisor to identify the hazards involved.

Safety Co-ordinator Responsibilities:

- Provide additional information if requested.
- Keep a record of training in worker(s) file.

Work Refusal

Everyone has the right to refuse dangerous or unsafe work or the use of defective equipment or devices.

All workers have a responsibility to ensure they do not perform work in an unsafe manner. A worker must identify and report:

- Any unsafe conditions and/or work practices.
- Defects in any equipment of which they are aware.
- The existence of any hazard they notice.

A worker may exercise their right to refuse if they have reason to believe that:

- Any equipment, machine, device or thing the worker is to use or operate is likely to endanger themselves or another worker.
- The physical condition of the workplace or the part thereof in which they work or are to work is likely to endanger the worker.
- Workplace violence is likely to endanger the worker.
- Any equipment, machine, device or thing they are to use or operate or the physical condition of the workplace or the part thereof in which they work are to work is in contravention of the Ontario Health and Safety Act or any of its regulations and such contravention is likely to endanger them or another worker.

When exercising their right to refuse, the worker shall:

- Immediately report to their supervisor the safety hazard that is likely to endanger them.
- When possible, adequately secure the equipment and/or hazardous work site with your supervisor in order to prevent other workers from unnecessary exposure to the hazard.
- Work with a supervisor and a certified Joint Health and Safety Committee (JHSC) worker representative to reach a resolution and implement corrective actions.
- Remain in a safe place near their workplace until the investigation is completed.

The following two stage process should be used for work refusals:

Stage 1

1. When exercising their right to refuse, workers shall:
 - (a) Stop work and immediately report the situation to their supervisor and explain why they are exercising their right to refuse.
 - (b) Remain in a safe place near the work location pending the outcome of the investigation.
2. The supervisor will discuss with the worker to determine if the worker is identifying a safety hazard or exercising their right to refuse.

3. During the work refusal process, the supervisor will not use intimidation, coercion or any threats of discipline.
4. Pending resolution of the work refusal, the supervisor shall:
 - (a) Ensure the work site or equipment associated with the work refusal is secured in order to prevent other workers from unnecessary exposure to the hazard.
 - (b) Instruct the worker to remain in a safe place near the work location.
 - (c) Ensure that work is not assigned to another worker.
 - (d) Take immediate action, where possible, to either resolve the issue or initiate a request to help resolve it.
 - (e) Immediately investigate in the presence of the worker and a certified JHSC worker representative.
 - (f) Ensure that the Health and Safety Co-ordinator has been notified in order to document the work refusal.
 - (g) Ensure management is notified of the work refusal.
 - (h) Ensure work associated with the identified hazard does not resume until the work refusal is resolved.

Stage 1 work refusal is resolved when immediate corrective actions have been implemented or will be implemented and the worker and supervisor agree that the issue is resolved.

Stage 2

1. When worker has reasonable grounds to believe that the identified hazard is still likely to endanger, the worker may continue to exercise their right to refuse.
2. The employer, worker or certified JHSC Committee representative shall notify the Ministry of Labour (MOL).
3. Pending the MOL investigation, the worker shall remain at a safe place near the work location during normal working hours, unless the supervisor assigns the worker reasonable alternative work during such hours; or, where an assignment of reasonable alternative work is not practicable, the supervisor provides other direction to the worker.
4. No other worker shall be assigned to the work or work site associated with the investigation unless the worker has been advised of the work refusal and the reasons for the refusal in the presence of a certified JHSC worker representative.
5. Assigning another worker the work shall only be considered after consultation with the MOL.
6. The MOL investigation of the work refusal shall be conducted in consultation with the worker, employer and certified JHSC worker representative.
7. Following the investigation, the MOL inspector will issue a decision of “Likely/Not Likely to Endanger”, which may result in MOL Order(s) to Comply.

8. When the decision and/or Order to Comply are issued from the MOL Inspector, the employer shall ensure:
 - (a) That the decision and/or Order to Comply is communicated to all affected parties.
 - (b) That the MOL Order of Compliance Form (if applicable) is completed and returned to the MOL.
9. All parties shall comply with the Decision and/or Order to Comply, unless a Stay of Order is granted.
10. The employer, workers and certified JHSC representatives have the right to appeal an MOL decision and/or Order to Comply as described in the OHSA.

The documentation for a work refusal will include the following information:

1. Name of the worker refusing the work.
2. Date and time of work refusal notification.
3. Supervisor's name.
4. Workers reason for work refusal.
5. Investigation notes from supervisor and result.
6. Date and time a Ministry of Labour Inspector was contacted and the date and time the Inspector arrived and departed (if applicable).
7. Results of any decision made by a Ministry of Labour Inspector (if applicable).
8. Signature of all affected parties.

Scope Specific Policies

Hard-Co Construction takes the health and safety of all employees seriously. Hard-Co has created numerous policies for both management and workers to follow when working on any Hard-Co Construction site. All employees have been made aware of these policies and relevant training programs have been provided and are maintained annually (as applicable).

Hard-Co Construction takes pride in its safety record and will continue to take every reasonable precaution to ensure safe working conditions for the protection of employees. To ensure due diligence is not only achieved, but maintained, on all projects, management will continually assess jobsites to make sure employees are aware of any actual or potential hazards. This will also be done through third party auditing and inspections.

Hard-Co Construction recognizes that our policies have been created on a generic basis and are designed for *everyday hazards* that may exist. When required by the tender, or by the direction of the health and safety officer of a company, Hard-Co will develop scope specific policies. Once provided with a detailed scope of work and safety requirements of the job, specific policies will be created.

Policy and Procedure Evaluation

Hard-Co Construction has an extensive health and safety program to ensure that all employees are aware, educated and protected from hazards that cause accidents and injuries. These policies, procedures and safety guidelines have been created with worker safety in mind. It is critical that all employees understand their right to discuss any and all health and safety concerns. Employee participation through the joint health and safety program and individually is an integral part of our safety program.

All Hard-Co Policies, Procedures and Safety guidelines are created to ensure compliance with the Occupational Health and Safety Act of Ontario and Regulations for construction projects. It is the commitment of management to annually review and update the policies, procedures and safety guidelines.

Hard-Co Construction's Joint Health and Safety Committee meets on a quarterly basis to discuss health and safety issues within the company.

Accident Prevention (A Few Reminders)

Ladders

Ladders should be set up on a firm level surface. If the base is to rest on soft un-compacted or rough soil, a mudsill should be used.

When a task must be done while standing on an extension ladder, the length of the ladder should be such that the worker stands on a rung no higher than the second from the top. A second worker must be at the bottom of the ladder to stop it from slipping out.

When climbing up or down, workers should always face the ladder. Metal ladders, or ladders with wire reinforcing, must not be used near energized electrical conductors.

Signaller

Around heavy trucks and equipment a signaller is required when the operator's view is obstructed or when the equipment is driven where the operator or another person may be endangered. A hard hat, safety vest and safety boots shall be worn at all times. It is critical that the signaller be aware of overhead wires.

Equipment

- Position trucks as close to the unloading area as possible.
- Equipment should be positioned on terrain as level as possible.
- Keep equipment away from overhead power lines.
- Climb up and down facing the equipment, maintaining 3-point contact at all times (two hands and one foot or two feet and one hand).
- If steps and handrails are provided use them. Stepping on tires or hubs does not provide good footing.
- It is the responsibility of all operators to fill out daily start up check lists to ensure that their equipment is in working order. Report all problems immediately to your supervisor.
- All operators are responsible for circling their vehicle or equipment before starting any moment to ensure that the immediate vicinity is clear of obstructions and workers.

Winter Precautions (For outdoor work)

Cold weather construction is quite common and requires extra care in accident and injury prevention. Snow and ice produce slippery conditions, which pose dangers in:

- a) Mounting/dismounting machinery.
- b) Handling material and tools.
- c) Moving around the jobsite. This includes on foot, machines and vehicles.

General Service Procedures

- Disengage power and stop engines before servicing. Attach a **DO NOT OPERATE** tag to the controls.
- Never take the chance of being crushed by equipment attachments or parts. Lower all equipment attachments to the ground and engage safety locks.
- Provide adequate ventilation for exhaust fumes in enclosed areas. Protect yourself from sharp edges and protruding parts with gloves, tape, rags or guards.
- Clean up spilled oil, grease, fuel or other slipping hazards.
- Use jacks and joists to move and handle heavy components. Inspect chains, cables or straps before use.
- Secure hoods and doors from falling or closing.
- Do not use tools or equipment without proper instruction.

Housekeeping – Storage – Tool Maintenance

- Materials and equipment should be stored, moved, piled and transported in a manner that will not endanger workers.
- Material and debris should not be stored near emergency exits.
- Maintain a clean work environment.
- Clean up any and all spills.
- Make sure cords are kept tidy to avoid tripping hazards.

Company Vehicles and Equipment

- All employees must wear seat belts, where available, when driving or riding in a company vehicle.
- All employees who drive or operate company vehicles or equipment must have the appropriate licenses.

Emergency Response Plan

The emergency response plan must be followed in case of an emergency situation that occurs within the workplace. The key objective of this plan is to act efficiently in a situation where a worker's health and/or life may be in danger.

In case of an emergency, with no exceptions, all employees must understand and follow the emergency response plan at all times. It is the responsibility of all workers to understand and comply with the emergency response plan.

1. Stop work immediately.
2. Assess the situation calmly and take command.
3. Protect the accident scene from further hazards, such as fire, live wires, traffic, machinery, etc.
4. Provide emergency first aid to the injured worker.
5. Arrange for immediate medical help:
 - Call the ambulance at 911 or the nearest hospital.
 - Call the police at 911 or the nearest police station.
 - Call the fire department at 911 or the nearest fire hall.
6. Assign a worker from site to direct emergency services upon arrival.
7. Secure the accident scene for appropriate investigation.
8. Inform supervisor of the emergency situation or accident.
9. Obtain the name of the hospital where the worker(s) will be treated and arrange for someone to be there to meet them.
10. Contact head office and inform them of the situation and the worker(s) involved.
11. Keep track of all witnesses and individuals who provided assistance in the accident.
12. Fill in the appropriate accident report forms.
13. Notify the safety representative or safety committee.
14. Co-operate fully with all emergency services and Ministry of Labour personnel.

Workplace Injuries

Immediately report any accidents or injuries to your supervisor. Even if you think that the accident or injury is not worth reporting, inform your supervisor anyway. It must be understood that Hard-Co is responsible to report to the Workplace Safety & Insurance Board (WSIB), any visit to a doctor or the hospital relating to a work injury, otherwise penalties will be incurred.

Hard-Co values the safety, health and well being of all our employees. After all, our future success and productivity depend upon them. Our policy has always been and will continue to be to provide safe and healthy working conditions and to comply with all laws and regulations regarding employee health and safety.

If you are injured at work follow these three (3) simple guidelines:

- You **MUST** immediately inform your supervisor.
- You **MUST** contact the main office. A senior manager and/or administrator will complete and forward the appropriate documentation to the WSIB within seventy-two (72) hours.
- Senior management or a supervisor will accompany an employee/worker to a clinic or hospital.

Note: If for any reason after your shift you visit a doctor concerning a workplace injury/illness that you did not report to your supervisor; you **MUST** inform your supervisor and the main office first thing the next day.

Supervisor Guidelines for the Transportation of an Injured Employee

Upon notification of an employee injury or illness the most appropriate form of transportation should be determined. These forms of transportation may be, but are not limited to, an ambulance, transportation by supervisor or transportation by self. A senior manager or a supervisor will provide or arrange transportation to a hospital, clinic or the worker's home.

1. Upon becoming aware of a worker's illness or injury the supervisor shall investigate the matter as promptly as possible.
2. Where it is determined that the worker cannot continue to work and needs immediate medical attention, the worker will be provided with the appropriate transportation to a hospital, clinic or doctor's office. If the injury is life threatening or extremely serious, an ambulance will be called and will transport the worker to the hospital.

3. Where it is determined that no immediate medical attention is necessary, but the worker cannot continue to perform his or her normal functions, they shall be provided with appropriate transportation home if unable to use their normal means of transportation.
4. Where the worker disagrees with the assessment of the supervisor that they are unable to continue working, senior management, another supervisor or a health and safety representative will be called upon to review the matter and to make an assessment of fitness to resume work.
5. Where medical care is not immediately required but is requested, appropriate transportation to a doctor will be arranged.

In the event of an illness or injury on the work place, use the following list to help direct the injured employee/worker to the correct facility. These lists are not exhaustive, but used in conjunction with St John's Ambulance/Link-To-Life First Aid:

To the Nearest Health Care Provider

- Minor burns (smaller than 4cm).
- Minor cuts requiring stitches.
- Minor head injuries where no loss of consciousness is involved.
- Small scrapes and cuts.
- Injured limbs with bruising and/or swelling.
- Dust and other small particles in the eye.
- Illness that one would normally treat in a doctor's office.
- Back injuries that result from heavy lifting and twisting where the employee/worker can walk and sit.

To the Hospital

- Difficulty breathing.
- Severe chest pain.
- Severe crush injuries of the body or limbs.
- Head injuries that rendered the employee unconscious (even if the episode of unconsciousness was short).
- Partial or complete amputations.
- Penetrating eye wounds.
- Deep stab-like wounds.
- Broken bone injuries that cause the limbs to be deformed looking or where the bone pieces are visible through the skin.
- Large wounds that are spurting bright red blood in a pulsation manner
- Persons who are very faint, pale and sweaty.
- Severe back injuries (i.e. where employee/worker has difficulty moving limbs or has had a loss of sensation in limbs).
- Burns (larger than 4cm).
- Any employee/worker who requests to be sent to the hospital instead of a clinic.

Senior Management/Administrator Responsibilities:

- Ensure that the worker has been treated appropriately (based on the injury).
- Will provide transportation to the hospital, a hospital, clinic or the worker's home if necessary.
- Make sure that the required documents have been completed and submitted to the WSIB.
- Make sure that any additional documents have been completed and filled in the workers employee file.

Supervisor Responsibilities:

- Ensure that the worker has been treated appropriately (based on the injury).
- Will provide transportation to the hospital, a hospital, clinic or the worker's home if necessary.
- Make sure that senior management and/or an administrator at the main office has been notified.

Worker Responsibilities:

- Notify your supervisor of your injury immediately.
- Notify the main office of your injury, so that the appropriate documentation can be filled out. If you are unable to do so, your supervisor will notify senior management and/or and administrator.
- You will be required to fill out some documentation regarding your injury. This can be done at the main office with the assistance of senior management and/or an administrator.

Accident/Incident Reporting

Immediately report any accidents or injuries to your supervisor. Even if you think that the accident or injury is not worth reporting, inform your supervisor anyway. It must be understood that Hard-Co is responsible to report to the WSIB, any visit to a doctor or the hospital relating to a work injury, otherwise penalties will be incurred.

The purpose of this procedure is to identify the duties, roles and responsibilities of workplace parties so that an effective and immediate accident/incident investigation and reporting process is in place. This will include identifying all contributing factors of the accident/incidents and hazardous situations and making the necessary recommendations to prevent the accident/incident from recurring.

The Joint Health and Safety committee, in conjunction with senior management will review accidents/incidents, as noted below, on a quarterly basis:

- *First Aid* - When an employee, as a result of an accident in the workplace receives on-site first aid assistance. Includes cleaning minor cuts, scrapes or scratches; treating a minor burn, applying bandages and/or dressings, cold compress, cold pack, ice bag, and splints.
- *Health Care* – An injury that results in attention received from a recognized health care provider but that does not result in time away from scheduled work or a wage loss.
- *Near Miss* – An event that under different circumstances could have resulted in physical harm to an individual or damage to the environment, equipment, property and/or material.

The following categories of accident/incidents require an immediate investigation as they may produce a loss to people, equipment, material and environment:

- *Fatality* – An injury that results in loss of life.
- *Critical Injury* – As defined in the Ontario Regulation 834/90:

1. For the purpose of this Act and the Regulations, “**critically injured**” means an injury of serious nature that,

- (a) places life in jeopardy;
- (b) produces unconsciousness;
- (c) results in substantial loss of blood;
- (d) involves the fracture of a leg, or arm but not a finger or toe;
- (e) involves the amputation of a leg, arm, hand, or foot but not a finger or toe;
- (f) consists of burns to a major portion of the body; or
- (g) causes the loss of sight in an eye.

- *Lost Time* – A work related injury that results in the injured employee missing scheduled time from work resulting in a wage loss.
- *Property Damage* - When there is significant property damage, a value of \$250 is suggested as a general guideline to be used by a supervisor, although other factors could impact on the need and level of investigation and reporting.
- *Occupational Illness* – A condition that results from exposure in a workplace to a physical, chemical or biological agent that normal physiological mechanisms are affected and the health of the worker is impaired.
- *Environmental Release* – An accidental discharge of a physical, biological or chemical substance into the workplace and/or community.
- *Fire/Explosion* – An event where undesired combustion occurs.

It is imperative the any accidents/incidents be correctly communicated and documented.

Internal Communication

- Senior Management
- Human Resources – when an accident causes injury that results in health care or lost time. Note: An Employees Report of Accidental Injury or Industrial Disease (Form 7) must/will be sent to the Workplace Safety and Insurance Board within 3 days of the accident or upon first becoming aware by Human Resources.
- Safety Co-ordinator
- Joint Health and Safety Committee (JHSC)

The results and corrective action taken for the accidents/incidents will be communicated to the employees through postings on the health and safety boards (example: documented within the minutes from the Joint Health and Safety Committee meetings) and during weekly tailgate meeting discussions on-site between the supervisor and employees.

External Communication

- Ministry of Labour – must be notified immediately by phone of any fatalities or critical injuries, with this to be followed by a written investigation report within forty-eight (48) hours.
- Ministry of Labour - Fire and Explosion – immediately if it results in an injury.
- Ministry of Environment – Chemical releases – immediately.
- Federal - Dangerous goods (spills) – immediately.
- Workplace Safety & Insurance Board – within 3 days or upon first becoming aware of, any accident that causes injury, which results in health care or lost time.

Management Responsibilities:

- Investigates the accident/incident and completes the appropriate forms.
- If there is a personal injury, the supervisor will ensure that the injured employee receives proper medical attention.
- Ensure that a representative from the JHSC will be contacted to assist with investigation.
- Ensure that if necessary, the appropriate external authority is contacted.
- Review all investigation reports and identify the causes or contributing factors.
- Ensure all corrective actions have been taken to prevent recurrence and have communicated with all employees involved.
- Signs and ensures that reports are completed and delivered to the Safety Coordinator.
- Assists and works with the JHSC as needed to correct or address any identified matters of health and safety.

Supervisor Responsibilities:

- Investigates the accident/incident and completes the appropriate forms.
- If there is a personal injury, the supervisor will ensure that the injured employee receives proper medical attention immediately.
- Ensure that a representative from the JHSC will be contacted to assist with investigation.
- Ensure that if necessary the appropriate external authority is contacted.

Worker Responsibilities:

- Report any work related injury and/or illness to your supervisor immediately. This includes an accident/incident such as cuts, punctures wounds, sprains and burns as well as those that are of a gradual onset (back pain).
- Report any “near miss” events and/or unsafe work situations and provide necessary details to the supervisor.

Joint Health and Safety Worker Representative Responsibilities:

- Should be involved in the investigation of all injuries/incidents.
- Must be involved in the investigation of a fatality or critical injury.
- Work with the supervisor to assist in conducting the investigation.
- Must sign the accident/incident report upon completion.
- Ensure that if necessary the appropriate external authority is contacted.

Investigator Responsibilities:Interviews

- Interview all workers involved.
- Interview any witnesses that have knowledge of the injury/incident.
- Interview outside experts as needed (suppliers, equipment designers, etc.).
- Interviews must be documented and should be conducted as soon as possible, in a quiet surrounding so one on one contact is available.

Assessment of the scene

- Inspection of the site, equipment and material that were involved in the accident/incident.
- The site must be secured especially in the case of critical injury.
- Use of photographs, sketches and drawings of the scene indicating sizes, distances and weights of objects as appropriate.

Identifying the contributing factors

Be sure to include what each role each factor played.

- People
- Equipment
- Material
- Environment
- Process

Write the report

- Record all the findings of the accident/incident investigation on the investigation reporting form ensuring that all requirements of the written investigation procedure have been met.
- Cover all of the requirements for the investigation procedure. In the case that additional documentation is needed be sure to provide details of such information.
- Copies of the completed investigation forms are sent to the Safety Coordinator and Co-Chairs of the JHSC.

Make recommendations for corrective action

- Responsibilities must be assigned (investigators, management, supervisors, etc.) for completion of the action plan.
- Recommendations should focus on the corrective action to all the contributing factors identified.
- Recommendations should specify what, why, and how the corrective actions will be completed.

Ensure recommendations are acted upon

- Assign responsibility for the follow-up of the corrective action.
- Detail what has been done, who has completed the actions and when the actions were completed.

Early & Safe Return to Work

If an employee is injured on the job, it is important to make sure they return to work (RTW) as soon as possible. This may require modified duties while the individual recuperates. Hard-Co will make every reasonable effort to provide suitable RTW opportunities for every employee who is unable to perform his or her regular duties following a work related injury or illness.

Modified duties are modifications to an individual's normal duties (work hardening or transitional work) that allows for the employee to carry out the work assigned within the employee's capabilities. The Workplace Safety Insurance Board (WSIB) of Ontario encourages and supports early rehabilitation programs in the workplace. It is important to note that modified duties by no means affects an individual's right to compensation benefits or future benefits should they require them. The company will endeavour to accommodate any employee who can return to work with little or no lost time.

Modified duties will be discussed with the worker and if needed, their physician, to ensure required measures are taken not to place the worker under any undue stress. All required forms must be correctly completed.

It is the expectation of Hard-Co that all employees will participate in the RTW Program. This program will assist in promoting a timely RTW for work related injuries/illnesses.

All efforts will be made to encourage an early and safe RTW.

The employee will work with senior management & WSIB staff to ensure the program's success. Senior management will be responsible for creating, implementing and organizing the program and communicating to all employees'.

No employee will be forced to return to work against the advice of the Functional Abilities Form (FAF) of the attending healthcare provider. The employee will perform meaningful work that they agree to and that will not aggravate an existing condition.

No injured employee will return to full duties unless authorized by the attending health care provider.

What to do if you experience injury/illness at work:

- Notify your supervisor of the injury immediately.
- If you are unable to do so, your supervisor will notify senior management and/or an administrator immediately.
- First aid person to apply first aid, if possible.
- Supervisor takes RTW package from vehicle and accompanies employee/worker to the clinic or hospital.
- Employee/worker to call senior management when they are ready to be picked up.
- At no time should the injured employee/worker attempt to drive/operate a vehicle themselves after an injury.

- Arrangement will be made to transport the injured employee/worker to work the next day if the employee/worker is unable to drive.
- RTW package contains:
 - (a) Letter to the employee/worker
 - (b) Functional Abilities Form (FAF)
 - (c) Letter to the Health Care Provider
 - (d) Form 6 (Workers Report Of Injury)
 - (e) RTW Agreement

The following forms are to be signed and returned to Hard-Co:

- Functional Abilities Form
- Worker Claim Consent Form
- Modified Job Description
- Letter to the Worker

Note: An employee CANNOT come to work without a completed FAF. Failure to comply with this will result in disciplinary action.

Prior to starting the accommodation, the length of time for the RTW plan will be determined by:

- Senior management and the employee/worker will sign an agreement with respect to the hours of work, reporting requirements and the nature of the modified position (WSIB Functional Abilities Form-FAF).
- Employee's health care provider's statement (FAF) and employer requirements will be reviewed for suitable modified duties.
- Employee will be required to schedule medical appointments and therapy at a reasonable time so not to conflict with the employers' timetable.
- Employee is required to supply medical progress report to WSIB every two weeks or as required.

Once the RTW program starts, the employee will:

- Receive on-site job orientation where the limitations and/or changes to their job will be discussed.
- The RTW plan will be reviewed again at this time.
- Supervisor will observe the employee to ensure that they are able to complete the modified duties as discussed.
- Do not perform any duties other than those indicated on the RTW plan - employee/worker who do not follow the RTW plan by doing more than indicated will receive disciplinary action.
- The supervisor will discuss the modified duties at the beginning and at the end of each day so that:
 - (a) Further modifications can take place, if required.
 - (b) Documentation of the modified duties can be recorded.
 - (c) Employee/worker can provide input.

Injury employee/worker duties:

Day One

- Report to the supervisor at the beginning and end of day.
- Report to the supervisor during each break to report on their progress with modified duties (this can be done via phone calls).
- Supervisor will record the comments on the RTW plan form.
- If you feel your pain is too severe and that you cannot come into work, we request that you still arrive to work and contact your medical practitioner for an appointment that day, from Hard-Co Construction Ltd.'s main office.

Each Day

- Report to supervisor at the beginning and the end of your day.
- Report discomfort or challenges with modified duties.

Each Week

- Complete the section of the RTW plan requiring comments.
- Meet with senior management and/or supervisor to discuss next level of modified duties once a new complete FAF has been received.
- Senior management and the supervisor will discuss progress/decline of RTW plan and make changes, where necessary, to protect/enhanced employee/worker's RTW.
- Supervisor will discuss changes with the employee/worker prior to employee/worker commencing new duties.

Note: An employee/worker must not return to full duties unless a FAF indicates that they are able to do so.

Once the RTW plan is finished (the employee/worker has returned to full duties). Senior management, the supervisor, and a Joint Health & Safety Representative will discuss the suitability of the program and make recommendations for change, if necessary.

Senior Management/Administrator Responsibilities:

- Will maintain consistent and regular contact with the injured employee/worker.
- Will maintain contact with WSIB.
- Complete WSIB Form 7.
- File all forms and reports.
- Will work with the supervisor and injured employee/worker to develop an appropriate modified duty plan.
- RTW plan should include:
 - (a) Goal
 - (b) Time Frames
 - (c) Wages
 - (d) Hours
 - (e) Location
 - (f) Area for comments

- Will provide/arrange training if new skills are required for modified duties.
- Will document all levels of RTW plan and progress report.
- Will ensure that the privacy of confidential information is protected.
- Provide a fair and consistent rehabilitation policy for insured employee/worker's on or off the job or disabled due to illness or injury.
- Provide meaningful employment for temporarily disable employee/worker's and promote modified duties.
- Facilitate in modification of workplace, if desired.
- Explain the objectives and requirements to all employee/worker's.
- Assist and support the injured employee/worker in their endeavour to return to full duties via a modified duty program.
- Advise employee/worker that modified duties are available and provide the required forms.
- Assist in the evaluation of success of the program.
- Must report changes in the following directly and immediately to WSIB within 10 days:
 - (a) Wages changes
 - (b) Changes in duties/duration of program
 - (c) Failure to cooperate
 - (d) End program
- Provide information, as required to WSIB to facilitate the safe return to the work of the injured employee/worker.
- Ensure that all documentation is kept in a secure location so that the privacy of the information is protected.
- Will work with senior management and injured employee/worker to develop an appropriate RTW plan.
- Complete the RTW agreement.
- Complete the RTW plan and progress report.
- Maintain communication and monitor the progress and effectiveness of the program with employee/worker.
- Determine, in consultation with senior management, if the injured employee/worker's position can be modified.
- Monitor progress of employee/worker's modified duty via regularly scheduled meetings with employee/worker and immediate supervisor.
- Scheduled meetings with employee and ensure scheduled medical follow-up is completed.
- Liaise and consult with health care provider or other agencies (if required) and employee/worker to develop a suitable modify duty program.
- Documentation will be kept in employee/worker file.
- Complete an investigation form so that this event can be prevented from recurring.
- Meet with employee/worker and establish written goals and objectives to be agreed upon by all levels involved in process.
- Determine and maintain medical monitoring and treatment with the use of the FAF.

- The frequency of monitoring is to be determined on a ‘case-by-case’ basis.
- Assist in the evaluation of the success of the program.
- Provide a translator if translation to another language is required (another employee versed in the language to translate).
- Communication, assist and evaluate the program’s effectiveness via regularly scheduled meeting with the injured employee/worker in a Log once a week or more, if necessary.
- Schedule bi-weekly or more frequent meetings with injured employee/worker.
- Assist in the evaluation of the success of the program.
- Sign the RTW agreement.
- Sign RTW plan, if required.

Employee/Worker Responsibilities:

- Will work with senior management and supervisor to develop an appropriate RTW plan.
- Participate in modified duty program.
- Maintain regular contact with the designated person(s).
- Take an active role in developing the modified duty program.
- Communicate any concerns or problems to their supervisor and senior management immediately.
- Obtain necessary forms from health care provider (FAF)
- Participate in all rehabilitative programs (physiotherapy) so that a recurrence is avoided.
- Ensure that other scheduled rehabilitation activities (physiotherapy, specialist appointments) are continued while on RTW program. Appointments should be scheduled during non-work hours, if possible.
- Cooperate with all requests for documentation as required by WSIB and the employer.
- Complete the RTW agreement.
- Complete the RTW plan and progress report.
- Other employee/worker’s are asked to assist and support the injured employee/worker in their endeavours to return full duties.
- Injured employee/worker must not perform duties outside the actions indicated on the FAF.
- Complete a WSIB Form 6 and provides a copy of the completed Form 6 to employer as soon as possible.
- Report any changes to employment (pay increase, benefits) to WSIB within ten (10) days.
- Cannot return to full or increased activities unless the FAF indicates that this is possible.
- Inform a supervisor if you are unable to perform the duties in the RTW program.
- Do not exceed the limitations listed in the FAF.
- Sign the RTW agreement as agreement to commit to RTW plan.
- Sign RTW plan.

Health Care Provider Responsibilities:

- Provide current medical information.
- Fill in forms as requested.
- Providing the workplace parties and WSIB with functional abilities information.
- Providing the employee and WSIB with clinical information.
- Identify appropriate method of treatment for the injury.
- Ensure employee receives timely treatment.
- Ensuring the possibility of a RTW is discussed throughout recovery.

WSIB Responsibilities:

- Process claims on a timely basis.
- Adhere to the Workplace Safety Insurance Act (WSIA).
- Act as a mediator if disputes occur between any parties involved.

Pipe Laying Policy

Laying pipe is an important task and must be approached with care and caution. Ensuring that every precaution necessary is taken to eliminate any hazards is an essential role when pipe laying.

Unloading Pipe

1. Operators to conduct the mandatory pre-start inspection of their machinery.
2. Ensure all loads are secure while unloading material from delivery truck.
3. Remove restraints from the top unit loads. These may be straps, ropes, or chains with padding.
4. Remove any boards on the top or sides of the load that are not part of the pipe packaging.
5. Inspect all material for defects.
6. Do not unload by hand.
7. Using a loader with thin forks remove the top units one at a time from the truck.
8. Cables may be used only if they are cushioned to prevent damage to the pipe.
9. During the removal and handling, ensure that the units do not come in contact with overhead wires.
10. Place pipe package units on level ground.
11. Do not handle units with individual chains.
12. Do not attach lifting cables to unit frames or bands.
13. Do not stack package units more than eight feet high.
14. Protect units with packing materials the same way they were protected while on the truck.
15. To unload lower units, repeat steps 6-13.
16. Store the material in a safe and secure manner.

WARNING: DO NOT STAND OR CLIMB ON CRATES OR CONTAINERS.

Prior to Excavating

1. Ensure all utilities within the work have been properly located. Maintain locates for the duration of the project, renewing locates within 30 calendar days. Keep a copy of the most recent locates in each excavator, with the foreman and verify the entire crew has reviewed all locates prior to excavation.
2. If a utility may pose a hazard, the service shall be shut off and disconnected O. Reg. 443/09, s.6. If a utility poses a hazard and it cannot be shut off or disconnected, the owner of the service shall be requested to supervise the uncovering of the service during the excavation. O. Reg. 443/09, s. 6.
3. Follow the “Trenching and Excavation and Overhead Electrical Power Line” sections in the Hard-Co Policies Procedures Safety Guidelines.

4. Determine what soil conditions are present to ensure proper slope is attained. Refer to Soil Types on page 28 of Hard-Co Policies and Procedures Safety Guidelines Trench/Excavation Stability.
 - **Type 1 and 2 soil** (good soil) Cut trench walls back at an angle of 1 to 1 (45 degrees). This would equal 1 meter back for each meter up. Walls should be sloped to within 1.2 meters of the bottom of the trench.
 - **Type 3 soil**(fairly good soil) Cut walls back at a gradient of 1 to 1 from the trench bottom.
 - **Type 4 soil**(bad soil) Slope the walls at 1 to 3. This would equal 3 meters back for every 1 meter up from the bottom of the trench.
5. Conduits, pipes, cables for gas, electrical and other utilities in an excavation shall be supported to prevent their failure or breakage. O.Reg. 443/09, s.6.

Installing Underground Pipe

1. Once excavation has begun and proper depth has been attained, place bedding material at the bottom of the trench. To establish line and grade and to provide firm but not hard pipe support.
2. While lowering pipe into the trench ensure all guidelines of Hard-Co policies and procedures Hoisting and Rigging Guidelines are followed (page 54). Under no circumstances shall piping materials be dropped, dumped, or slid into the trench.
3. Pipe should be layed with bells upstream. A bar and a block of wood (to protect the bell end) may be used to provide leverage action while pushing the pipe together. Avoid sudden thrusts of force that can damage the pipe. At laterals, catch basins, and manholes, special attention is required to properly fit and align pipe.
4. Once pipe has been installed properly, detach straps/cables from pipe. The pipelayer is to then ensure that the operator is aware the straps/cables are detached from the pipe.
5. Place ¾" crushed limestone on the sides of the pipe. Compact the ¾" crushed limestone with a jumping jack. Do not come in contact with the pipe when using the jumping jack.
 - PVC pipe:*** The ¾" crushed limestone will be placed to the top of pipe.
 - Concrete pipe:*** The ¾" crushed limestone will be placed half way up the pipe.
6. Add 0.3 meters of sand on top of the pipe. Compact the sand with a plate tamper (this is to protect the pipe during backfill).
7. Repeat this process until all of the required pipe has been installed.

8. When the installation of pipe has been interrupted plywood should be placed at the end of the pipe to prevent the introduction of dirt, animals, and other foreign matter.
9. Any excess water in trench must be removed by pumping.

Backfilling Underground Pipe

1. Using an excavator ensure there are no large boulders within the first 1.2 meters of fill. This first lift should be sufficient enough to prevent damage to the pipe.
2. Pack the first 1.2 meter lift with proper equipment such as hoe pack or padfoot roller.
3. Continue backfilling with either an excavator or bulldozer at 0.5 meter lifts until final grade has been established.
4. Ensure to compact sufficiently between each level to obtain acceptable compaction test results.
5. Minimize groundwater that can flow into the trench during backfilling operations.

Electrical Crew Safety

Cranes and Radial Boom Derricks RBD's :

Cranes and Radial Boom Derricks, (RBD's or Auger Trucks) shall only be operated by workers who have received training E&USA or are certified Crane Operators.

Hoisting shall be done in accordance with the best trade practices, and E&USA's guidelines. Communications between crane operators and the ground crew shall be clear and concise. The proper hand signals must be used as seen on page 58.

Work on Electrical Systems:

The following policies and the related procedures have been produced to meet requirements of The Occupational Health & Safety Act and relevant Regulations for Ontario and the Electrical Utility Safety Associate Rule Book 2004, as well as any related safe practice guides and best practices.

Legislation

The legislation for work on Electrical Systems, under the Occupational Health and Safety Act for Ontario and the Construction Regulations for Ontario as of April 1, 2006, regarding Electrical Hazards, require that;

- 181 (1) Except where otherwise required by the Regulation, electrical work performed on or near electrical transmission or distribution systems shall be performed in accordance with the document entitled "Electrical Utility Safety Rules" Published by the Electrical and Utilities Safety Association of Ontario Incorporated and dated August, 2004.O.Reg 627/05, s.4. (this work is done according to the E&USA Rule book)
- 181 (2) Sections 182,187,188,189,190,191 and 193 do not apply to electrical work that is performed on or near electrical transmission or distribution systems if the work is performed in accordance with the document referred to in the subsection (1). O. Reg. 627/05, s.4.
- 182 No worker shall connect, maintain, or modify electrical equipment or installations unless, (a) the worker is an electrician certified under the Trades Qualifications and Apprenticeship Act, or (b) the worker is otherwise permitted to connect, maintain or modify electrical or installations under the Trades Qualifications Act, the Apprenticeship and Certification Act, 1998 or the Technical Standards and Safety Act, 2000.
- 183 Every reasonable precaution shall be taken to prevent hazards to workers from energized electrical equipment, installations and conductors. O. Reg.627/05, s. 6. 190(9)(b)(i) "the power supply is less than 300 volts, the equipment or installation was not manufactured with provision for a locking device for the circuit breakers or fuses, and a written procedure has been implemented that is adequate to ensure that the circuit is not inadvertently energized" The Electrical Utility Safety Rules, August 2004, rule 114 requires that: No work shall be done on electrical, dynamic

or potential energy, unless safe conditions for work are provided by one or more of the following methods,

- The apparatus is isolated and de-energized in accordance with the utility work protection code; worker protection is provided by an Approved isolation Procedures as defined in the utility work protection code;
- Worker protection is provided by an approved practice (e.g., live line work), and the work is performed by a competent worker;
- The apparatus is physically removed from the immediate vicinity of any source of electrical , dynamic or potential energy, has no ready mean of connection, and has all stored energy discharged

From the E&USA rule book.

Application

Hard-Co Construction is a multi-trade employer, where dependant of the work, The Industrial of Construction Regulations under the Occupational Health and Safety Act and including the Electrical Utility Safety Rules can apply.

Procedure

In accordance with the requirements under the Occupational Health and Safety Act and the Construction Regulations 182(1)(a), (b) , and section 183 above it is the Policy of Hard-Co Construction that on Construction projects, only qualified electricians, lineworkers, and there apprentices, will perform connections modifications, or maintenance on electrical systems. Hard-Co Construction will ensure that all reasonable precaution will be taken to minimize the hazards to ensure that the worker is protected from the energized electrical equipment, with the adherence to this policy and procedures for Work on Electrical Systems.

Work on existing systems require following the Hard-Co Construction Ltd. policy and procedure for “Disconnect, Testing, Tagging and Locking Out” of the electrical systems to work be worked on, or the working live procedures.

After disconnection the circuit form the source of supply, locking out and tagging the disconnect or prevented by other reasonable means to prevent accidental energizing of the electrical system being worked on is dead by use of an approved, operational voltage tester, or multi-meter to confirm that there is no potential to ground on that system.

The test equipment above should be verified on a known voltage source to confirm that the test equipment is operational prior to testing the equipment being worked on.

Where there is no means or provision for locking a disconnect, or switch and the operating voltage is less than 300V to ground, it is permissible under the Act, to tag the circuit off and use other reasonable means to ensure that the circuit is not accidentally energized, in addition where possible, disconnect the wiring from the switch, panel or splitter or remove fuses from fuse holder making accidental energizing of the apparatus less likely.

New Installations

In addition to the conditions set out in the act, section 190(9)(b)(i), were disconnect, lock out, tag out and testing is not required; new systems under installation that are not

connected to a breaker, switch fuse or panel that can supply an electrical current and only when the work is not in close proximity to expose life parts.

This work shall be laid out and installed in a process that does not expose workers to electrical hazards. Samples of this are new installations where there is not yet an electrical service or the wiring is being installed, and not yet connected to a source of supply.

Live Work

If the system to be worked on has no means of disconnect, or it is impractical to de-energize for troubleshooting purposes, the following the guidelines for Live Work shall be followed to perform the work up to and including 600V.

Above 600V, a utility will disconnect with and “Order to Operate Form” that both parties must sign. The utility will not energize until the form is signed off by the worker and given back to the utility.

Legislation

191(1)(a) if it is not reasonably possible to disconnect the equipment, installation or conductor from the power supply before working on or near the energized exposed parts; (b) the equipment, installation or conductor is rated at a nominal voltage of 600 volts or less, and disconnecting the equipment, installation or conductor would create a greater hazard to a worker than proceeding without disconnecting it; or (c) the work consists only of diagnostic testing of the equipment, installation or conductor.

Live work on exposed apparatus, conductors or equipment is permitted only by competent workers using the appropriate protective equipment under the following guidelines;

In cases where work is performed on or in proximity to exposed live electrical equipment, or for the purposes of trouble shooting, at a minimum the use of rubber gloves and because of the possibility of an arc flash, workers shall wear eye protection to ensure that the worker is protected from these electrical hazards. In addition to approved rubber gloves and safety glasses, other insulated equipment may be required to protect the worker.

Workers using rubber gloves and safety glasses, other insulated equipment may be required to protect the worker.

Workers using rubber gloves, safety glasses and other insulated devices shall receive instruction on the proper use, care and correct voltage rating of these devices and they shall be used in accordance with the live work policy.

Rubber gloves and other insulating devices shall be inspected before use for defects, cuts, tears or visible signs of damage, then air-tested for leaks. Any glove or insulated device with visible damage or that fail air testing shall be removed from service immediately.

Rubber gloves and insulated protective equipment shall be used until the hazard of exposed live electrical conductors or apparatus are either turned off, or the service covers are re-installed.

Extreme care shall be taken to ensure that the bare live components or conductors are not able to make contact with grounded equipment, or that they contact undergrounded apparatus creating further hazards.

Special Cases/Examples

Where There is No Means of Disconnect

On some systems, such as the “Dusk to Dawn” lighting, traffic signal heads, and some street lighting, luminaires, these devices have been constructed without a means of disconnect switch, fuse or receptacle. And because of the design of the system, or the threat to public safety, the only means to disconnect the device is by cutting live lines, or opening splices to de-energize the fixture or equipment.

Only qualified competent workers and only when using the appropriate protective devices will disconnect any device by cutting wires or splices. Once the feeders have been isolated from the source of supply, they shall be tagged in a manner that ensures that they will not be inadvertently energized. Each worker who will be working on that system shall test and verify that there is no voltage present on that system prior to beginning work.

Roadway Luminaries

When working on street lighting luminaries have a fuse kit on the riser wire, unless the luminaire is being re-lamped, or tested, the fuse kit shall be opened, and then at the luminaire, the lines tested for voltage, prior to work beginning. Once the voltage has been isolated, and verified to be off, the use of rubber insulated gloves and other protective devices are not required.

Re-lamping

Replacement of lamps because of their construction does not require the use of rubber gloves as there are no exposed live parts, and the glass of the lamp isolates the live parts inside.

Traffic Cabinet

When working in traffic control cabinets, it is not required to wear insulated rubber gloves when checking or inputting timing through a keyboard, adjusting loop detector settings or removing components that have an intrinsically safe socket. It is required to wear rubber gloves when working on or in proximity to exposed live apparatus.

These examples may not cover all situations, if doubt exists, contact your supervisor.

Line Work

As required in section 181 of the Regulations for Construction, work governed by the Electrical Utility Safety Rules when workers are involved in but not necessarily limited to the following types of work:

- Work on systems operating about 750 V
- Work on hydro electric distribution equipment, poles, etc.
- High Voltage or hydro cable chambers
- Transformer stations

Only Power Line Workers, their apprentices, or qualified electricians with proper training, and equipment may work in proximity to conductors operating above 750 V. When workers are going to be in proximity to conductors on hydro distribution poles that are at or above 750V, “going above the neutral conductor” shall only be permitted by the owner or local hydro utility.

Those workers must wear the appropriate protective equipment, and use tested and approved rubber gloves of a class equal to the highest voltage that they may come into contact with. Bare hand work shall not be permitted by Hard-Co Construction personnel. Rubber gloves shall be worn from ground to ground as per the E&USA rule book. Rubber gloves for line work shall meet the following requirements of E&USA rule book. From the E&USA rule book, #113

1. Only rubber gloves that have received initial acceptance tests in accordance with CSA specifications shall be utilized.
2. Rubber gloves shall be:
 - maintained in the best possible conditions at all times
 - Never worn inside out or without leather protectors
 - Laboratory re-tested at least every 60 days of service use and test period shall exceed five months combined in service and shelf life
 - Exchanged any time they become damaged or the employee who they are assigned has reason to doubt their condition
 - Air tested and the rubber gloves and leather protectors inspected immediately prior to use

The following table indicates the allowable maximum working voltage related to the glove classification as related to line work.

Classification	Maximum working Voltage	Test Interval combined in Service and Shelf Life
Class 0	1000V	90 days of use, to a maximum of 5 months
Class 1 120/240/440/347/600/208	7500V 2300V/4160V	90 days of use, to a maximum of 5 months
Class 2	17500V 8100V/13800V	90 days of use, to a maximum of 5 months
Class 3	26500V 15800V/27600V	90 days of use, to a maximum of 5 months
Class 4	36500V 44000V	90 days of use, to a maximum of 5 months

Underground Utilities

Electrical staff is responsible for providing locate coordinator with approximate commencement date for the project. Trenching or excavating shall not be performed without utility locates on site. The locate coordinator prior to commencing any work will contact appropriate locators. Locate coordinator must ensure all required documentation is received prior to the commencement of work. The supervisor of site must ensure that the locates are on site before any excavation commences. Field staff must provide locate coordinator 14 days notice if there is any change to the work area. It is also the field staffs responsibility to let the locate coordinator know once the project is finished.

Disconnect, Testing and Lock-Out

The supervisor is responsible to ensure that company policy and other related policies and legislature are adhered to. The workers are responsible to ensure that the policies referred to are not subject to contravention. All employees are required to report anomalies with the policy and these procedures as they arise. The management responsibilities are to ensure that the training and support are available to ensure that policies are enacted. Refer to this written procedure as applicable for work to be performed.

Always notify supervisor of lockouts in their areas.

It is the right of workers to require the local utility to isolate and guard any voltages over 750V, as anything 750V or higher is considered high voltage. Hard-Co Ltd. has on staff qualified licenced people who will answer all questions that arise on job sites pertaining to the electrical field. Electrical crew employees should be aware that almost all industrial and commercial lighting (parking lots) are 600 volts, and should NEVER BE TOUCHED WITHOUT PROTECTIVE EQUIPMENT. If at any time wires are cut, Hard-Co Constructions electrical crew can repair these damages safely.

Mandatory Check In System for Employees Who Work Alone

To ensure that employees are leaving safely at the end of each day, after working alone, Hard-Co has implemented an employee check in system. Before you leave the pit at night please text or call Emily Marsh (905)261-8719.

Fall Protection

The Management of Hard-Co Construction Ltd. is committed to the health and safety of its employees. The protection of employees from any fall hazard is a major continuing objective.

If the task requires fall protection, Hard-Co Construction Ltd. will provide any crews working at heights with their own CSA approved and up-to-date fall arrest equipment. This is to include safety harness, lifeline, and lanyard.

The fall arrest system must be inspected and maintained after each and every use to make sure there are no cuts or frayed areas in this equipment. You will find these maintenance instructions included with your equipment. If a fall occurs, all components of the fall arrest system should be removed from service.

A competent instructor will provide training in the proper use of each piece of their fall arrest equipment. Spring training will included fall arrest training

Mandatory Fall Protection

All supervisors and workers must make themselves familiar with Section 26 of the *Regulations for Construction Projects* which outlines the circumstances where fall protection is required.

Fall protection application applies where a worker is exposed to any of the following hazards:

1. Falling more than 3 metres.
2. Falling more than 1.2 metres, if the work area is used as a path for a wheelbarrow or similar equipment.
3. Falling into operating machinery.
4. Falling into water or another liquid.
5. Falling into or onto a hazardous substance or object.
6. Falling through an opening on a work surface.

Section 26.1 (1) and (2) of the Construction Regulations states that:

26.1 (1) A worker shall be adequately protected by a guardrail system that meets the requirements of subsections 26.3 (2) to (8).

(2) Despite subsection (1) if it is not reasonably possible to install a guardrail system as that subsection requires, a worker shall be adequately protected by at least one of the following methods of fall protection:

1. A travel restraint system that meets the requirements of section 26.4
2. A fall restricting system that meets the requirements of section 26.5

3. A fall arrest system, other than a fall restricting system designed for use in wood pole climbing, that meets the requirements of section 26.6
4. A safety net that meets the requirements of section 26.8

Always remember that if you are not certain of what type of fall protection is required for a particular situation, ask your supervisor for direction.

Rescue After a Fall

According to the Regulation for Construction Projects (ss 26.1(4)) written rescue procedures must be in place before a fall arrest system or a safety net is used. In addition, a rescue plan should be in place whenever a fall protection system is used. The plan should be posted in a conspicuous place and communicated with workers.

A rescue plan must include:

1. The designated trained person(s) in charge of rescue.
2. Qualified on-site first aid personnel (with contact numbers) and equipment (as per the [Regulation for First Aid Requirements \(Reg. 1101\)](#) under the [Workplace Safety and Insurance Act, 1997](#)).
3. Names and contact phone numbers of Emergency Medical Services (EMS) or fire services resources in the jurisdiction.
4. Emergency access to worksite.
5. A back-up system of communications.
6. All rescue or emergency control procedures for any mechanical hoisting systems or elevating devices being used in the workplace.
7. Annual review and rehearsal of rescue procedures.
8. Procedures to lock-out and secure activated safety devices and unsafe work areas.

Equipment Inspection, Maintenance and Storage

1. The Regulation for Construction Projects requires that a competent worker shall inspect a fall arrest system before each use ("s. 26.6(6)).
2. Follow the manufacturer's instructions and recommendations for equipment, including documentation, inspection schedule, maintenance, and storage. It is the duty of the owner and/or employer to ensure all equipment is inspected and maintained by a competent person. Follow the manufacturer's warnings about retirement schedules. Replace items, even if unused, according to the manufacturer's recommended retirement scheduling.
3. If the integrity of any fall protection equipment is in doubt, it shall be retired from service permanently or repaired and re-certified by the manufacturer.

4. Check with the manufacturer's instructions before using any cleansers, markers, paint, stickers on synthetic materials or hardware.
5. Store fall protection equipment to avoid moisture, abrasion, dirt, ultraviolet light, extreme temperatures and other hazards. Use appropriate containers to store equipment.

Acknowledgement

Safety is the responsibility of the company as well as every employee.

HARD-CO CONSTRUCTION LTD.

I acknowledge that I have received a copy of the *Hard-Co Construction's Company Policies, Procedures and Safety Guidelines*. I understand that any violation of these policies, procedures and safety guidelines is just cause for disciplinary action.

Employee Name (Please Print)

Signature

Date