WEBSITE VERSION ONLY

Health and Safety Policy and Procedures

Last Revision: September 15, 2015

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RND Construction

Health and Safety Policy Statement

RND Construction Ltd. Is committed to a safe and healthy work environment for all employees, subcontractors, clients, and the public at large.

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, and will strive to eliminate any foreseeable hazards which may result in property damage, accidents, or personal injury/illness.

Supervisors will be responsible for the health and safety of workers under their supervision. Supervisors are also responsible to ensure that machinery and equipment required for use by each worker are safe and that each worker works in compliance with established safe work practices and procedures for each piece of equipment. Workers must receive adequate training in their specific work tasks to protect their health and safety.

All supervisors, employees, and subcontractors must protect their own and their fellow workers' health and safety by working in compliance with the *Occupational Health and Safety Act (current edition)* and all applicable regulations and safe work practices and procedures established by our company.

We recognize that a safe work environment can be established and sustained only through a united effort by all employees and subcontractors, and that the assistance of each person is required. Your attitude and cooperation in promoting accident prevention will assist in achieving our goal: "no one gets hurt", and make our company the best place to work, one where employees share in corporate growth and success.

Everyone, from the President to new workers, has the responsibility to ensure a safe and healthy workplace. Let's all work together to prevent incidents from creating unwanted losses and personal injuries or illnesses.

K. Roy Nandram, President and Project Manager

SEPT 2/21

Date

**The safety information in this policy does not take precedence over the Occupational Health and Safety legislation. All employees should be familiar with the Occupational Health and Safety Act (current edition) and the Regulations for Construction Projects (current edition). **

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Health and Safety Program Responsibilities

President / Senior Management:

1. Provide a safe and healthy workplace.
2. Establish and maintain a health and safety program.
3. Ensure that workers are properly trained.
4. Report accidents and injuries to authorities as required by law.
5. Provide medical/first aid facilities.
6. Provide workers with health and safety information.
7. Inspect projects and meet regularly with supervisors to monitor the program and take corrective action.
8. Provide the motivation and resources necessary to make the program work.
9. Ensure that operations comply with both the law and the program.
10. Demonstrate commitment to accident prevention.
11. Consider accident prevention and safety performance when evaluating employees, especially supervisors.

Site Project Manager:

1. Implement, support, and enforce the safety program at the project level.
2. Communicate with senior management on notices respecting projects and notices of accidents and injuries, etc.
3. Oversee site planning and approve a site plan that takes into account access, traffic control, materials handling, storage, and sanitation.
4. Review site fire protection and emergency response plans.
5. Review site training plans for health and safety and ensure that adequate resources are available.
6. Review safe work procedures for the site.
7. Direct accident investigations on site. Review and forward reports to senior management.

Site Project Superintendent:

1. Assist the Project Manager in his or her responsibilities or take over these responsibilities if there is no project manager on the site.
2. Review the site health and safety program with supervisors and subcontractors before they start work, identify responsibilities and emphasize cooperation among all parties.
3. Prepare and implement fire protection and emergency response plans.
4. Ensure that site security and public way protection are provided.
5. Provide adequate facilities (e.g., lunch area, wash-up area and toilets, tool storage, and first aid) for employees and subcontractors.

6. Identify special site hazards and outline appropriate safe work procedures and training requirements.
7. Establish an on-site health and safety documentation system for injury reports, Ministry of Labour orders, WHMIS, inspection reports, and other documents.
8. Coordinate health and safety functions (e.g., safe work procedures and accident investigations) involving owner/client, subcontractors, and direct-hire personnel.
9. Perform site inspections at least weekly.

Supervisor / Foreman:

1. Provide orientation for new crew members.
2. Implement, support, and enforce the safety program at crew level.
3. Conduct weekly safety tasks.
4. Inspect safety equipment weekly.
5. Review safety aspects of each task with crew.
6. Assist in accident investigations.
7. Report safety problems to superintendent and correct hazards immediately, if possible.
8. Inspect tools and equipment at least weekly and ensure that they are properly maintained.
9. Ensure housekeeping is done at least daily.
10. Review Material Safety Data Sheets (MSDS) with crew before using hazardous materials.
11. Review minutes of safety meetings, Ministry of Labour orders, and safety directives with crew.

Health and Safety Representative:

A Health and Safety Representative is required when there are between 6 and 19 workers regularly employed in the workplace.

1. Inspect the work areas weekly to identify hazards.
2. Report hazards and make written recommendations to supervisor or superintendent.
3. Attend and participate in health and safety meetings on site.
4. Assist in the review of the health and safety program for the project.
5. Help to implement the health and safety program.
6. Assist in accident investigations.
   ➢ See “A Guide for Joint Health and Safety Committees and Health and Safety Representative” in *References*.

Workers:

1. Work safely in accordance with the company’s health and safety policy and

program, and with the project health and safety program (including the *Occupational Health and Safety Act and Regulations for Construction Projects)*.
2. Report hazards or unsafe conditions to the supervisor after taking appropriate immediate action.
3. Report all accidents, injuries, and near-misses to the supervisor.
4. Initiate emergency response plans, when necessary.
5. Clean up your own work area at least daily.
6. Inspect personal protective equipment (PPE) before use and report defects or damage to supervisor.

Subcontractors:

1. Before commencing work, ensure compliance with project health and safety policy and program, and make it clear to employees that failure to do so could result in termination of contract.
2. Provide training in the requirements of the site safety policy and program.
3. Coordinate all work activities through the site supervisor or superintendent.
4. Provide, inspect, and maintain personal protective equipment (PPE) as required for direct-hire employees.
5. Monitor site conditions daily and record all injuries, accidents, or near-misses.
6. Conduct clean-up of work areas at least daily.
7. Conduct regular safety talks for employees and provide site-specific training as required.
8. Provide compensation and time necessary to employees who participate on safety committees.
9. Notify site supervisor or superintendent of any lost-time injuries, medical aid cases, and reportable occurrences on the project.
10. Cooperate in accident investigations.

Visitors:

RND Construction Ltd knows and understands the excitement that comes with building a new home and/or undertaking renovations. We appreciate that you want to take it in and see the development of each step where your vision is becoming a reality.

1. Although RND Construction Ltd. is committed to the health and safety of all visitors to each and every construction site, we are not responsible for any injuries or accidents which could occur during your visit. We take every precaution to ensure each visit leaves you with a lasting experience.
2. In addition, RND Construction Ltd. strictly prohibits all unsupervised visits. We require that all visits have scheduled appointments made with the on-site supervisor prior to the visit to ensure the construction site is safe to receive visitors.
3. Approved hard hat, safety glasses, and CSA approved work boots are the minimum safety equipment required by the Ministry of Labour until the occupancy

permit has been issued. If exterior work is being completed, please note the above still applies. Should you not have the required safety equipment listed above; RND can provide them for the duration of the project.

4. Occupied Home under Renovation: Safety equipment is still required while work Is being performed. Please use proper judgement and caution when moving between renovated areas.

References:

- *Occupational Health and Safety Act and Regulations for Construction Projects.*
- *Relevant sections of CSAO's DS030: A Guide to Developing Health and Safety Policies and Programs in Construction*
- *CSAO Safety Talks (V005) and Safety Tips (TP series)*
- *MSDS binder*

Provincial Legislation

Occupational Health and Safety Act:

The legislation governing workplaces in Ontario is known as the *Occupational Health and Safety Act*. The Act is the law and is common to all workplaces regardless of the type of work being done. Construction has a specific set of regulations known as the *Regulations for Construction Projects*. Both of these documents are available in our office or can be downloaded from the Construction Safety Association of Ontario website "www.csao.org".

The following Job Site Document Checklist includes the minimum required documents or items to be posted or available on job sites.

Bill 119: Mandatory Coverage in the Construction Industry:

Effective January 1, 2013, the Ministry of Labour's Office of the Employer Adviser (OEA) passed a bill requiring mandatory registration of all groups (namely adding independent operators (IO's), sole proprietors, partners and executive officers (EO's) to the existing coverage) in the construction industry with the Workplace Safety Insurance Board (WSIB). Attached is a summary of Bill 119: Mandatory Coverage in the Construction Industry; however, further information is available online at http://www.wsib.on.ca/en/community/WSIB/ArticleDetail?vgnextoid=cbbee35c819d7210VgnVCM100000449c710aRCRD .

Worker Health and Safety Awareness in 4 Steps Training:

In November 2013, the Ontario Ministry of Labour introduced the free Worker Health and Safety Awareness in 4 Steps Training Program. Occupational health and safety awareness training provides a basic understanding of the Occupational Health and Safety Act (OHSA), and does not replace any sector specific, hazard specific, or competency specific training.

This training introduces workers to the Occupational Health and Safety Act. It focuses on the health and safety rights and responsibilities of workers, supervisors and employers. It also serves as a general introduction to workplace health and safety.

Workers can use this free training program as one way to meet the minimum training required by the Occupational Health and Safety Awareness and Training regulation.

The program can be completed using the workbook or the eLearning module at "http://www.labour.gov.on.ca/english/hs/training/workers.php". This online learning module takes 45 - 60 minutes to complete. The module is unable to keep track of your progress, so it must be completed in one sitting.

You will receive a "Proof of Completion" certificate once you complete the training. You must save and/or print the certificate before exiting the module. The Ministry of Labour will not store your certificate, or keep a record of training.

RND Construction Ltd. will keep a copy of each worker's certificate in their personnel file.

Working at Heights Training Program:

As of April 1, 2015, employers must ensure that certain workers complete a working at heights training program that has been approved by the Chief Prevention Officer and delivered by an approved training provider before they can work at heights.

The training requirement is for workers on construction projects who use any of the following methods of fall protection:

- travel restraint systems
- fall restricting systems
- fall arrest systems
- safety nets
- work belts or safety belts.

There is a two-year transition period for workers who, prior to April 1, 2015, met the fall protection training requirements set out in subsection 26.2(1) of the Construction Projects Regulation. These workers will have until April 1, 2017 to complete an approved working at heights training program.

This training requirement is in the Occupational Health and Safety Awareness and Training Regulation, and is in addition to training requirements under the Construction Regulation.

WHMIS with GHS or "WHMIS 2015":

The Workplace Hazardous Materials Information System (WHMIS) is changing. Since 1988, WHMIS has been Canada's hazard communication system for workplace chemicals. It is a national system implemented through interlocking federal, provincial and territorial legislation and regulations.

WHMIS is changing to adopt new international standards for classifying hazardous chemicals and providing information on labels and safety data sheets. These new international standards are part of the Globally Harmonized System for the Classification and Labelling of Chemicals (GHS) and are being phased in across Canada between February 2015 and December 2018. The GHS standards have been endorsed by the United Nations. They are also being implemented in many other countries including the United States, Australia, New Zealand, China, Japan and members of the European Union.

The following link “http://www.labour.gov.on.ca/english/hs/faqs/whmis2015.php” provides general information on the changes to WHMIS. For clarity, the old requirements are referred to as “WHMIS 1988” and the new requirements are referred to as “WHMIS 2015”.

References:

- *Occupational Health and Safety Act and Regulations for Construction Projects.*
- *Relevant sections of CSAO’s DS030: A Guide to Developing Health and Safety Policies and Programs in Construction*
- *In Case of Injury Poster*
- *It’s the Law Information Bulletin*
- *WHMIS Symbols Poster*

JOB SITE DOCUMENT CHECKLIST

Inspected by	Project	Date

The following documents must be POSTED on job sites or available in the workplace.

Section #	Occupational Health and Safety Act	Yes	No	N/A
25(2)(i)	Occupational Health and Safety Act, Construction Regulations, and any extracts (posted)			
57(10)	Copy of MOL Inspector's orders, inspection reports (posted)			
25(2)(k)	Employer occupational health and safety policy (posted)			
38(1)(a)	WHMIS material safety data sheets (MSDS) (available)			
Section #	**Construction Regulation 213/91**	**Yes**	**No**	**N/A**
6(6)	MOL approved notification form for the project (posted)			
13(1)	Constructor's name and head office information (posted)			
13(1)(c)	Address, telephone number of nearest MOL office (posted)			
44	DANGER signs in hazardous areas (posted)			
13(2)	Name, trade and employer of health & safety rep. (posted)			
29(10)	Location of toilet facilities (posted)			
5(2)(b)	MOL approved registration forms for all employers (available)			
Section #	**Emergency Planning**	**Yes**	**No**	**N/A**
17(3)	Emergency procedures (posted)			
26.1(4)	Fall arrest rescue procedures (available)			
N/A	Location of nearest hospital (map)			
Section #	**First Aid Requirements (WSIB Reg. 1101)**	**Yes**	**No**	**N/A**
1(1)(b)(i)	WSIB's poster (Form 82) (posted on notice board)			
(ii)	Valid certificate of first aider on duty (posted on notice board)			
(iii)	Inspection card for first-aid box (available)			
5	Employer records of first aid treatment given (available)			
Emergency Phone Numbers		**Yes**	**No**	**N/A**
Fire Department				
Police Department				
Ambulance				
Poison Information Centre				
Hospitals and Walk-in Clinics				
Hydro				
Bell Telephone				
Enbridge Gas				
Water Department				
Head Office				
Other				

Company Health and Safety Rules

It is the policy of RND Construction Ltd. to insist that all subcontractors, their employees, and our direct workforce, understand and strictly adhere to the provisions of the *Occupational Health and Safety Act* and all applicable regulations.

The duties and responsibilities of the supervisor, worker and employer, legislated in the *Occupational Health and Safety Act*, are of paramount importance. Below, are some of the most fundamental Safety Rules; **"know them and adhere to them"**. Your foreman or site superintendent will inform you of any additional safety rules and procedures as the need arises.

Personal Health and Safety Rules:

1. Head Protection:

   C.S.A.-approved class "B" hardhats must be worn at all times while you are on the project.

2. Foot Protection:

   C.S.A.-approved footwear ("Green Patch") with toe and sole protection must be worn at all times while you are on the project.

3. Skin Protection:

   Appropriate work clothing must be worn when handling and using tools and materials which may cause injuries to your skin.

4. Eye Protection:

   Face shields, goggles or glasses must be worn by workers and must be of a design to afford suitable eye and face protection when:
   - welding, burning or cutting with torches
   - using abrasive wheels, portable grinders or files
   - chipping concrete, stone or metal
   - working with materials
   - drilling or working under dusty conditions
   - sand or water blasting
   - waterproofing
   - working on energized switchboards
   - using explosive actuated fastenings or nailing tools

- working with compressed air or other gases
- when working near any of the operations listed above.

5. Clothing:

For your protection on the job, DO NOT WEAR:
- loose clothing or cuffs
- greasy or oily clothing, gloves or boots
- torn or ragged clothing
- finger rings, bracelets or neck chains.

6. Other Personal Protective Equipment:

Other equipment, such as safety belts, full-body harnesses, respirators, reflective vests, floatation vests, ear protection devices, etc., must be worn when required by the *Act* or *Regulations* and your site superintendent.

7. Non-Prescription Drugs or Alcohol:

Non-prescription drugs or alcohol will not be allowed on the job. Any employee found to be in possession of, or under the influence of, drugs or alcohol will not be allowed to work and is liable to be severely disciplined or terminated from employment.

8. Reporting Injuries and Accidents/Incidents:

All injuries and accidents/incidents, no matter how minor, must be reported immediately to your supervisor. The supervisor will conduct his/her investigation and report it to the site superintendent or management.

9. Reporting Unsafe Practices and Conditions:

If you should notice any unsafe practice or condition on the job, you are obligated by law and by RND Construction Ltd. to report the situation immediately to your supervisor so that corrective action can be taken.

10. Placement of Tools and Materials:

Never place tools or materials near edges to openings or levels, as these items may fall onto someone below. Keep all tools and materials at least six feet back from edges and openings.

11. Heavy Lifting:

Always seek assistance or use mechanical lifting devices when attempting to lift heavy material. Avoid awkward positions and always lift with the legs, not your back. Your back is very susceptible to injury in a bent position.

12. Jumping:

No person shall jump from one level to another and anyone discovered jumping will be reprimanded and subject to immediate termination from employment. Use proper means for access and egress.

13. Horseplay:

Do not engage in any prank, contest, feat of strength, unnecessary running or boisterous conduct.

14. Guardrails or Coverings:

Do not remove guardrails or coverings.

Cell Phone Policy:

The purpose of this policy is to protect your safety by banning you from using cell phones and other wireless devices when driving which may cause distractions that prevent you from concentrating 100% on the safe operation of the vehicle, and may lead to accidents.

1. Rules for Drivers:

a. Ban on Wireless Communication Devices:

When you are on duty and driving, you may not use a wireless communication device of any type. This includes not only cell phones, but also mobile phones, text pagers, two-way radios and other wireless devices.

b. Scope:

The ban on the use of wireless communication devices above applies:

- to all vehicles operated by workers while on duty, whether owned by the company or the individual worker

- to all wireless devices, whether owned by the company or by the worker
- to all conversations, whether personal or business-related.

c. Hands-Free Devices:

The ban on using cell phones and other devices while driving applies to all devices, including the use of cell phones with hands-free headsets. Although some cell phone laws might allow for this, the scientific literature provides evidence that use of a hands-free device does not result in any significant improvement in driving performance. A total ban on all cell phones is therefore the superior safety policy this company endorses.

d. Handling Calls While Driving:

- Incoming Calls: Make sure your phone has caller ID and/or voice mail. If the phone rings, don't answer it unless and until you pull over in a safe spot (or let a passenger or voice mail answer the call). If it's urgent, you may accept or return the call, provided that you remain parked off the roadway. You may not resume driving until your conversation ends.

- Outgoing Calls: You may not make outgoing calls while driving. If you want to place a call, pull over in a safe spot first.

2. Rules for Site Workers:

a. Ban on Calling Workers Who Are Driving:

If you know that a worker is driving, do not call him or her on the cell phone or other wireless device.

b. Procedures for Calling Workers Who Might Be Driving:

If you do not know if the worker is driving and the matter is urgent, you may place the call at the worker's cell phone but must immediately ask the person if he or she is driving. If the worker is in fact driving, hang up after telling the worker to call you back when he/she pulls over or gets out of the vehicle.

c. Procedures for Receiving Calls from Workers Who May Be Driving:

If you receive a call from workers who are on 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.

3. Rules for All Workers:

Effect of Policy: Violations of the foregoing rules will be considered a serious offence and may result in the imposition of discipline up to and including termination.

Reminder: 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.

Violence and Harassment Policy:

The management of RND Construction Ltd. is committed to the prevention of workplace violence and is ultimately responsible for worker health and safety. We will take whatever steps are reasonable to protect our workers from workplace violence from all sources.

The OHSA defines workplace violence as:

The exercise of physical force by a person against a worker, in a workplace, that causes or could cause physical injury to the worker;

- An attempt to exercise physical force against a worker, in a workplace, that could cause physical injury to a worker, or;
- A statement or behaviour that it is reasonable for a worker to interpret as a threat to exercise physical force against the worker, in a workplace, that could cause physical injury to the worker.

Some of the types of violence that workers could experience in the workplace include hitting, pushing, physical assault, sexual assault, stalking, criminal harassment, robbery, or threats of violence.

Violent behaviour in the workplace is unacceptable from anyone. This policy applies to workers, visitors, clients, delivery persons, volunteers. Everyone is expected to uphold this policy and to work together to prevent workplace violence.

There is a workplace violence program that implements this policy. It includes measures and procedures to protect workers from workplace violence, a means of summoning immediate assistance and a process for workers to report incidents, or raise concerns. See *References* section for more information on this Workplace Violence Program.

RND Construction Ltd. as the employer will ensure that this policy and the supporting program are implemented and maintained and that all workers and supervisors have the appropriate information and instruction to protect them from violence in the workplace.

Supervisors will adhere to this policy and the supporting program. Supervisors are

responsible for ensuring that measures and procedures are followed by workers and that workers have the information and instruction to protect themselves.

Every worker must work in compliance with this policy and the supporting program. All workers are encouraged to raise any concerns about workplace violence and to report any violent incidents or threats. For information on how to report an incident please refer to the Workplace Violence Program in the *References* section. RND Construction Ltd. would like to emphasize that there will be no negative consequences for reports made in good faith.

Management pledges to investigate and deal with all incidents and complaints of workplace violence in a timely and fair manner, respecting the privacy of all concerned as much as possible.

Discipline Policy:

Addressing disciplinary issues can be a very sensitive and stressful process for most managers, supervisors and employees. However, if disciplinary issues are avoided or handled poorly, it can lead to serious consequences such as injury, property damage or fatality.

RND Construction Ltd. does not view discipline as a form of punishment but as a rule or system of rules governing conduct or activity in order to eliminate unsafe circumstances.

RND Construction Ltd. further believes that education is the key to establishing proper disciplinary procedures and holding all employees accountable to its company's health and safety policy and procedures, as well as to applicable regulatory requirements.

1. <u>Disciplinary Program</u>:

    - The main objective of our disciplinary program is to ensure that RND Construction Ltd.’s rules and safe work practices are taken seriously by all employees and are followed.

    - Where disciplinary action is deemed to be appropriate, it shall be conducted in a timely manner.

    - Trying to correct unsafe behaviour by waiting only allows the behaviour or habit to become more ingrained.

    - Discipline shall be kept as positive as possible and not used in a punitive or negative way. Remember that the goal is to correct the problem, action,

or behaviour of the person. The type of discipline shall fit the severity of the misconduct and shall be conducted in private.

2. Disciplinary Program Process:

In order to ensure effectiveness and fairness of the program, all of the following five steps must be addressed with equal importance by supervisors and management:

a) Review of disciplinary policies and procedures
b) Investigation of accusations and infractions
c) Determining and reviewing disciplinary action
d) Documenting disciplinary action and program enforcement
e) Conducting the disciplinary meetings and promoting safe work practices and compliance to regulatory requirements.

3. Disciplinary Measures:

WARNING TO SUBCONTRACTORS:
RND Construction Ltd. requires all personnel to comply with the *Occupational Health and Safety Act* and all applicable regulations. Subcontractors are also required as part of the sub-contractual agreement to comply with RND Construction Ltd.'s Health and Safety Policy and Procedures.

Any health and safety contravention observed at the work site is to be dealt with immediately through a documented verbal and/or written warning.

Such written warnings shall include:
- Project name and number
- Trade subcontractor and/or vendor responsible
- Identity of subcontractor's site superintendent or foreman in charge of the work, and his signature of acknowledgement
- Names of individual violators, if any
- An explanation of the health and safety violation observed
- Date and time as to when the infraction is to be rectified
- The signature of the site superintendent and/or health and safety representative.

In the event that a subcontractor refuses or neglects to rectify a hazardous condition, practice or any violation, RND Construction Ltd. shall exercise the right to take immediate steps to correct the unsafe condition at the expense of the responsible parties. RND Construction Ltd. may also remove from the work site any individual who continues to cause the unsafe condition to remain, or performs in a manner not consistent with the guidelines of the *Act*, its *Regulations* or our Health and Safety Policy and Procedures.

4. Accountability:

Distribution of safety directives shall be as follows:

- Copy to the Supervisor in charge of the subcontract work
- Copy to the Site Superintendent
- Copy to the Subcontractor's Head Office
- Copy to RND Construction Ltd. management

Employees of construction, including subcontractor employees, working on sites will be held accountable for their actions and any violations of this safety policy.

NOTICE

Violations to the following safety concerns represent a serious level of neglect and RND Construction Ltd.'s site superintendent and/or his competent replacement have the right to exercise a "ZERO TOLERANCE" policy and have the violator(s) dismissed from the project.
No further warnings are required or will be given.

FALL PROTECTION VIOLATIONS

ELECTRICAL OR MECHANICAL LOCK-OUT VIOLATIONS

FIRE PREVENTION VIOLATIONS

TRENCHING VIOLATIONS

a) Construction Employees:

1st violation - a recorded verbal warning
2nd violation (same offence) - written notice & one day loss of work & pay
3rd violation (same offence) - permanent dismissal from employment.

b) Subcontractor Employees:

1st violation - a recorded verbal warning
2nd violation (same offence) - written notice to employee and employer and temporary removal from site
3rd violation (same offence) - permanent removal from site.

NOTE: Architects, owners, suppliers, sales personnel and public visitors must abide by the personal protective equipment rulings and other rulings that may be associated with their work. Failure to do so may cause the site superintendent to take action.

These notices and penalties shall be enforced as written on all projects.

Dismissal of an employee shall be reviewed with a party of three (e.g. site superintendent, management and health & safety representative).

Enforcement Policy:

This policy is applicable to all workers at sites. All workers are required to comply with the *Occupational Health and Safety Act* and all applicable regulations. Failure to comply with the *OHSA* and *Regulations* will result in the following action:

1. 1st Offence: Worker will be given a verbal warning. The details will be documented and may be forwarded to the applicable employer for corrective action.

2. 2nd Offence: Worker will be given a written warning. A copy of the warning will be forwarded to the applicable employer for corrective action.

3. 3rd Offence: Worker will be given a suspension or permanent dismissal from the site. The details will be documented and forwarded to the applicable employer for corrective action.

4. Violations that could result in a fatality or serious injury are grounds for immediate suspension or dismissal.

NOTE: Warnings are intended to give workers the opportunity to correct their actions. Serious offences or flagrant violations of the safety program or the *Occupational Health and Safety Act* and *Regulations* are grounds for immediate suspension or dismissal.

Employee Warning Report

Employee's Name
Date of Warning
Project
Issued By
Type of Violation Safety ☐ Other ☐ *Specify:*
Company Statement (Supervisor's Report)
Site Supervisor Signature:
Employee Statement (check the appropriate statement)
☐ I agree with the Company's statement
☐ I disagree with the Company's statement for the following reasons *(state below)*
I have entered my statement of the above matter.
Employee Signature: Date:
Witness Name: Signature:
☐ I would like to receive a copy of this statement for my records.
Please be aware that this report will be kept in the personnel file.

Training, Orientation and Communication

Safety Training Policy:

The purpose of this policy is to provide for general and specialized safety and related training throughout all levels of the organization.

RND Construction Ltd. will provide all safety and related training that is necessary to minimize losses of human and physical resources of the company. All employees will participate in this training, which includes but is not limited to the following:

- Safety orientation
- New hire safety orientations
- Safety training for workers, supervisors and management
- Task and trade-specific training and certification
- Workplace Hazardous Materials Information System (WHMIS) orientation
- Fall Protection training
- Safe work practices and job procedures, as applicable
- The proper fitting, safe use, cleaning and maintenance of respiratory protective equipment, as applicable.

In addition, safety meetings involving workers will be held on a weekly basis or as determined by site requirement.

NOTE: The safety information in this policy does not take precedence over the Occupational Health and Safety legislation. All employees should be familiar with the *Occupational Health and Safety Act* and the *Regulations for Construction Projects* (current edition). Please refer to the CSAO Training Requirements Chart to see which kind of training applies to the kind of work at specific job sites (see Appendix 1).

1. Employee Training:

RND Construction Ltd. is responsible for ensuring that all employees and supervisors are properly trained, and is committed to providing adequate time and resources to train all personnel to perform their duties in an efficient and safe manner.

Management is responsible for ensuring records of all completed training courses are maintained. A review of all training should take place at the regular management/supervisor meetings, at least annually.

2. Management Training:

In addition to participating in RND Construction Ltd.'s supervisory training requirements, operations management will be given the opportunity to attend advanced training in maintaining safety in the workplace.

3. Supervision Training:

All construction supervision must attend the following safety competency courses:

- Supervisor competency via an accredited organization (e.g. CSAO)
- First aid and CPR
- Fall protection train the trainer
- RND Construction Ltd.'s health and safety program training
- Specialized tool and equipment instruction as required.

4. Worker Training:

Workers will be instructed by a competent person to ensure that safety is maintained in the workplace. Formal training must be provided for the following:

- Fall protection
- Personal Protective Equipment (respirator, hazmat if required)
- WHMIS
- Tools and equipment (new or specialized)
- Emergency response.

An evaluation must be completed to ensure that workers are familiar with the program content and the activities for which they will be responsible.

5. Visitors:

Any RND Construction Ltd. employee authorizing a site visit assumes responsibility that visitors are aware of all safety requirements and have in their possession all safety equipment required for the site.

6. Training Records:

The following forms are to be used by supervisors and management to record the proper training at all company levels.

Health and Safety Training Matrix

Title:	**Date of Issue:**
Approved by:	**Review/Revise Date:**
Location:	

	Define the Training Requirements	Timeframes for Training Completion	Assigning Responsibility for Training Delivery	Evaluate the Training	Record of Training
Employee Orientation					
Promotion/ Transfer Orientation					
Initial Job Instruction					
Employer Certifications					
Health and Safety Inspections					
Injury/Incident Investigations					
Health and Safety Rep.					
Emergency Preparedness					
Personal Protective Equipment					
Materials Handling					
WHMIS					
Other					

Approval Signature:	
Document to be Posted: ☐ Yes ☐ No	**Distributed to:**

Record of Training

Title of Training:			
Date of Training:	**Certificate Issued:** ☐ Yes ☐ No		
Instructor's Name:			
Location of Training:			

Print Name	Signature	Successfully Completed	
		Yes	No

Original copy of the training record will be kept with the Health and Safety Representative in the Master Training File.

Records of training will be kept for 3 years or as required by legislation.

Master copies of any in-house program training will be kept with the Health and Safety Representative and will be reviewed on an annual basis or anytime there is a legislative change.

Employee Training Record

Employee Name:

Trade/Occupation:	**Date of Hire:**

Course #	Name of Course	Date Completed	Date of Expiry

Original copy of this Employee Training Record will be kept with the Health and Safety Representative in the Master Training File and will be reviewed on an annual basis or anytime there is a legislative change.

A copy will be kept in the personnel files.

Orientation Policy:

All new employees of RND Construction Ltd. will read and review the company's Health and Safety Policy with the supervisor and/or safety representative. The Site Supervisor will complete the Subcontractor / Worker Orientation Checklist with the employee before they start working at the site. After completion, the worker will sign this checklist acknowledging acceptance and understanding of his/her obligations and responsibilities. The completed checklist will be submitted to the Safety Representative to be kept on file at the head office.

The Site Supervisor will complete the Supervisor Site Orientation Checklist before job start up. Upon completion the copy will remain on site and the Supervisor shall review the checklist items with all employees.

Subcontractor orientation will require the completion of a Subcontractor / Worker Orientation Checklist for each trade prior to the start of work. The Site Supervisor will review and accept or modify the proposed checklist as required.

The Subcontractor will then review the contents of this checklist with their workers, with a final copy signed off and kept on site.

At least once per year, each Site Supervisor will review the orientation policy and procedures with the Safety Representative.

References:

- *Occupational Health and Safety Act and Regulations for Construction Projects.*
- *Relevant sections of CSAO's DS030: A Guide to Developing Health and Safety Policies and Programs in Construction*
- *CSAO's Safety Talks © 2007 (Revised May 2008)*
- *In Case of Injury Poster*
- *It's the Law Information Bulletin*
- *WHMIS Symbols Poster*

Subcontractor / Worker Orientation Checklist

Project or Job Site Name:

Location:

Leadership & Organization		Control Activities	
☐	Responsibilities for contractor, worker, supervisor, management, H & S Rep.		*Emergency Procedures*
☐	H & S Program: leadership, organization, hazard recognition and controls	☐	First Aid Station/First Aid Kit, First Aid Attendants (names/trades)
☐	Discipline policy	☐	Procedures for First Aid/Major Accident, Loss of Power, Fire Response, Severe Weather, Evacuation Plan, Fall Rescue
☐	Substance Abuse policy	☐	Emergency procedures coordinator(s) .....
☐	Authority of Company policy, OHSA and construction regulations	☐	Meeting place for evacuation
	Project Orientation	☐	Location of phone and emergency numbers or additional procedures
☐	Lunch, coffee breaks - duration, time and location	☐	Location of fire extinguishers
☐	Location of washrooms, clean-up facilities and drinking water	☐	Emergency access route
☐	Tool and equipment damage procedures	☐	Ladders, scaffolds, power tools, electrical hazards, access, egress
☐	Physical tour of project including: relevant personnel, hazards and areas of note (parking, entry route, access points)		*Safe Work Procedures*
☐	Right to know (about all hazards) Right to participate (in health & safety) Right to refuse (work that is hazardous)	☐	Confined spaces, fall hazards, traffic control, trenching, moving equipment
	Hazard Recognition & Assessment	☐	Compressed gases, MSDS, contractor requirements, guarding, PPE
☐	Injury and incident reporting procedures	☐	Housekeeping/daily clean-up
☐	Accidents, accident investigation procedures	☐	Return to Work procedures
☐	Property damage reporting procedures		*Training*
☐	Project inspection procedures	☐	Certificates available, WHMIS, Fall Protection, First Aid/CPR and other relevant training

☐	Specific project hazards:	☐	Other: .....
☐	Specific project hazards:	☐	Other: .....

....

Subcontractor's / Worker's Signature Supervisor's Signature

....

Date Date

Supervisor Site Orientation Checklist

Project / Job Site Name:

Location:

No.	Item	Supervisor Initials
1.	Notice of Project	
2.	Emergency Response Plan	
3.	“In Case of Injury” Poster (WSIB Form 82)	
4.	Company Health and Safety Policy and Procedures	
5.	*Occupational Health and Safety Act* and *Regulations for Construction Projects*	
6.	First Aid Equipment & Certificate, Injury Treatment Form	
7.	Fire Protection	
8.	Washroom Facilities	
9.	Tools and Equipment Storage	
10.	Materials Storage and Laydown Areas	
11.	WHMIS and MSDS Binder	
12.	Health and Safety Representative	
13.	Subcontractor/Worker Orientation Checklist	
14.	Subcontractor/Supplier Contacts	
15.	Personal Protective Equipment	
16.	Other:	
17.	Other:	
18.	Other:	

Workplace / Job Site Inspections

Policy:

Workplace inspections will be conducted to identify and correct potential safety and health hazards. A standard inspection checklist (see following form) will be used to conduct these inspections.

Responsibilities:

1. Management:

   - Conduct formal inspections monthly using the Job Site / Workplace Inspection Checklist. Ensure corrective action is taken to address hazards identified.
   - Review site supervisor's weekly inspections. Ensure appropriate corrective actions are taken. Initialize and date the inspection report and daily site reports, and keep these in job file.
   - Review and comment on quality of supervisor's weekly inspection reports and daily site reports.

2. Site Supervisor:

   - Conduct formal inspections weekly using the Job Site / Workplace Inspection Checklist. Ensure corrective action is taken to address hazards identified. Provide a copy of your inspection to management at the end of the week.
   - Conduct daily visual inspections using the Daily Site Report form. Provide a copy to management or keep in job file.

3. All Workplace / Job Site Parties:

   - All workplace/job site parties must conduct daily informal inspections of their workplace and taken action to correct hazards.
   - All identified hazardous conditions should be eliminated or controlled immediately. When this is not possible:
     a) interim control measures should be implemented immediately;
     b) warning signs should be posted at the location of the hazard;
     c) all affected employees should be informed of the location of the hazard and the required interim controls;
     d) permanent control measures should be implemented as soon as possible.

Communication:

1. Inspection procedures will be communicated to all new employees during orientation.

2. Any and all changes to the inspection procedure will be communicated to staff via memo.

3. The job site inspection procedure is located in the Health & Safety Policy and Procedure binder.

Training:

1. Management will ensure site supervisor is properly trained on how to conduct inspections prior to first inspection.

2. Site supervisor will ensure all job site parties are properly trained on how to conduct daily informal inspections prior to starting job.

3. All parties to notify supervisor or management if they feel further training is required.

Assessment:

- Management, site supervisors and employees will review inspection procedure for possible enhancements at least once per year.

2. All workers are responsible for ensuring inspection procedure is being followed.

3. Management to review common trends and create action plan for curbing this.

Forms:

Please see following documents.

Job Site / Workplace Inspection Checklist

Inspected by:			
Project/Job Site:			
No. of Employees: _____		**Copies to:** _____	
Date of Inspection:			
1. Site Access:	**OK**	**Not OK**	**Action Taken**
Clean, level ground	☐	☐	.....
Adequate ramps	☐	☐	.....
Adequate stairs	☐	☐	.....
Adequate ladders	☐	☐	
2. Personal Protective Equipment:	**OK**	**Not OK**	**Action Taken**
Hard hats worn	☐	☐	.....
Fall protection worn	☐	☐	.....
Skin protection: worn	☐	☐	.....
available	☐	☐	.....
Eye & face protection: worn	☐	☐	.....
available	☐	☐	.....
Hearing protection: worn	☐	☐	.....
available	☐	☐	.....
Respiratory protection: worn	☐	☐	.....
available	☐	☐	.....
3. Guardrails, Barricades:	**OK**	**Not OK**	**Action Taken**
Located where required	☐	☐	.....
Properly constructed	☐	☐	.....
Adequately secured	☐	☐	
4. Ladders:	**OK**	**Not OK**	**Action Taken**
Secured	☐	☐	.....
Proper angle (extension ladders)	☐	☐	.....
Proper size and type	☐	☐	.....
Safe, usable condition	☐	☐	.....
Properly used	☐	☐	.....
Proper handrail and landings	☐	☐	.....
Non-slip bases	☐	☐	
5. Fire Protection:	**OK**	**Not OK**	**Action Taken**
Extinguishers where required	☐	☐	.....
Fully charged	☐	☐	.....
Adequately identified	☐	☐	.....
Master emergency plan	☐	☐	
6. Public Way Protection:	**OK**	**Not OK**	**Action Taken**
Properly located (withing 4.5 m)	☐	☐	.....
Covered where required	☐	☐	.....
Min. height, width requirement	☐	☐	.....
Proper rail on street side	☐	☐	.....
Proper lighting, where required	☐	☐	
7. Housekeeping:	**OK**	**Not OK**	**Action Taken**
Clear walkways	☐	☐	.....
Clear work areas	☐	☐	.....
Clear access and landing	☐	☐	

8. **Fall Protection:**	OK	Not OK	Action Taken
CSA approved	☐	☐	.....
Properly worn	☐	☐	.....
Safe, usable condition	☐	☐	.....
Unprotected openings and edges	☐	☐	.....
Working from: ladders	☐	☐	.....
scaffolds	☐	☐	.....
swingstages	☐	☐	.....

9. **Stairwells & Ramps:**	OK	Not OK	Action Taken
Proper filler blocks in metal stairs	☐	☐	.....
Proper cleats on ramps	☐	☐	.....
Adequate lighting in stairwells	☐	☐	.....
Proper handrails or guardrails	☐	☐	.....

10. **Scaffolds:**	OK	Not OK	Action Taken
Properly erected (all parts used)	☐	☐	.....
Properly secured	☐	☐	.....
Properly planked	☐	☐	.....
Proper guardrails, toeboards	☐	☐	.....
Proper access to platform	☐	☐	.....
Acceptable loading	☐	☐	.....

11. **Power Tools, Equipment:**	OK	Not OK	Action Taken
General condition	☐	☐	.....
Proper guards, cords, PPE	☐	☐	.....
Tagging as DEFECTIVE	☐	☐	

12. **Extension Cords:**	OK	Not OK	Action Taken
Outdoor-type, rated over 300 volts	☐	☐	.....
Condition of casing, ends, connections	☐	☐	

13. **Gas Cylinders:**	OK	Not OK	Action Taken
Properly located	☐	☐	.....
Properly secured	☐	☐	.....
Properly moved or lifted	☐	☐	.....
Properly hooked up	☐	☐	

14. **Worker Education:**	OK	Not OK	Action Taken
WHMIS training	☐	☐	.....
Company safety policy & program	☐	☐	.....
Injury reporting	☐	☐	.....
Hazard reporting	☐	☐	.....
OH&S Act and Regulations	☐	☐	.....
Personal H&S responsibilities	☐	☐	

15. **First Aid Requirements:**	OK	Not OK	Action Taken
Adequate qualified first aiders on site	☐	☐	.....
First aid kits: adequate number	☐	☐	.....
adequate contents	☐	☐	

16. **Cranes, Hoists, Etc.**	OK	Not OK	Action Taken
Safe setup of equipment	☐	☐	.....
Maintenance log available	☐	☐	.....
Competent operator	☐	☐	.....
Condition of slings, hardware	☐	☐	.....
Safety catches on all hooks	☐	☐	.....
Proper use of tag lines	☐	☐	.....
Proper lifting containers	☐	☐	.....
Competent signaller	☐	☐	

17. **Traffic Control:**	OK	Not OK	Action Taken
Trained traffic controllers	☐	☐	.....
Properly located	☐	☐	.....
Clean, regulation sign	☐	☐	.....
Properly dressed (including vest)	☐	☐	

18. **Welding:**	OK	Not OK	Action Taken
Rods & cylinders properly labeled	☐	☐	.....
MSDS readily available	☐	☐	.....
Properly secured ground cables	☐	☐	.....
Proper eye protection worn	☐	☐	.....
Proper screens and exhaust	☐	☐	.....
Gas cylinders upright and secured	☐	☐	.....
Fire extinguisher readily available	☐	☐	

19. **Elevating Work Platform:**	OK	Not OK	Action Taken
Worker training	☐	☐	.....
Properly used	☐	☐	.....
Safe, usable condition	☐	☐	.....
Acceptable loading	☐	☐	.....
Manufacturer's operating manual	☐	☐	

20. **Temporary Power Supply:**	OK	Not OK	Action Taken
Properly identified	☐	☐	.....
Overhead lines flagged & secured	☐	☐	.....
Surface cables buried or protected	☐	☐	

21. **Signs & Print Material:**	OK	Not OK	Action Taken
Company H&S Policy & Procedures	☐	☐	.....
OH&S Act and Regulations	☐	☐	.....
WSIB Form 82 Poster	☐	☐	.....
MSDS	☐	☐	.....
Warning signs	☐	☐	.....
Emergency phone list	☐	☐	.....
Report forms	☐	☐	

22. **Materials Storage:**	OK	Not OK	Action Taken
Properly located	☐	☐	.....
Safely piled, stacked, bundled	☐	☐	.....
Properly moved or lifted	☐	☐	.....
Properly labeled (WHMIS)	☐	☐	

23. **Trenches & Excavations:**	OK	Not OK	Action Taken
Properly sloped, where required	☐	☐	.....
Excavated soil properly placed	☐	☐	.....
Appropriate shoring used	☐	☐	.....
Proper access to trench	☐	☐	.....
Proper storage of materials in and above trench	☐	☐	

24. **Confined Spaces:**	OK	Not OK	Action Taken
Proper access	☐	☐	.....
Air testing before entry	☐	☐	.....
Rescue equipment readily available	☐	☐	.....
Safety harness, lifeline properly anchored & used	☐	☐	.....
Second person for rescue	☐	☐	.....
Outgoing air monitored	☐	☐	.....
Entry permit where required	☐	☐	

25. Suspended Scaffolds:	**OK**	**Not OK**	**Action Taken**
Properly attached & capable of at least 4 times maximum load	☐	☐	.....
Outrigger beam tied to fixed support with adequate counterweight	☐	☐	.....
All mechanical / electrical devices in good working condition	☐	☐	.....
Independent lifelines for each worker (extend to ground)	☐	☐	.....
Engineer's drawing on site if required	☐	☐	
26. Formwork:	**OK**	**Not OK**	**Action Taken**
Guardrails and fall-arrest system	☐	☐	.....
Design drawings kept on project	☐	☐	.....
Inspection statement by engineer or competent worker	☐	☐	
27. Hygiene:	**OK**	**Not OK**	**Action Taken**
Cleanliness of facilities	☐	☐	.....
28. Other:	**OK** ☐	**Not OK** ☐	**Action Taken** .....
29. Other:	**OK** ☐	**Not OK** ☐	**Action Taken** .....
30. Other:	**OK** ☐	**Not OK** ☐	**Action Taken** .....

NOTES:

Weekly Inspection Report

Completed by:		Site:		
Accompanied by:		Date:		Last insp.:
Item	**Comment**	**Area**	**Contractor**	**Action Taken**
1. Housekeeping				
2. Storage				
3. PPE				
4. Ladders				
5. Guardrails				
6. Scaffolds				
7. Other work platforms				
8. Fire protection				
9. Electrical				
10. Gas cylinders				
11. Stairs				
12. Public protection				
13. Lighting				
14. Machine guards				
15. Material handling				
16. Ventilation				
17. Traffic control				
18. Elevators				
19. Floor/roof openings				
20				
21				
22				
Copies provided to:				
Notes:				

DAILY SITE REPORT

RND's Forces	#	Project:			Job No.:	Date:
Superintendents		Address:				
Safety Representatives		Weather Conditions				Winds
Carpenters		☐ Sunny	☐ Humid	☐ Cloudy	☐ Drizzle ☐ Thunder	○ L ○ M ○ H
Labourers		☐ Clear	☐ Foggy	☐ Overcast	☐ Rain ☐ Snow	Temp.: °C
Visitors	**#**	**Safety: ☐ Daily Superintendent's Safety Walk**				**Time:**
Architects		Unusual Developments: (Problems, Shortages, Delays, Deliveries, etc...)				
Engineers						
Other Consultants						
Office Staff						
TOTAL						
Subcontractors	**#**	**Work Area & Progress Today**				
Excavation						
Formwork						
Rebar Installation						
Concrete Finishing						
Masonry						
Structural Steel						
Misc. Metals						
Dampproof/Waterproof						
Roofing						
Siding						
Caulking						
Doors/Windows						
Overhead Door						
Insulation/Vapor Barrier						
Drywall/Taping						
Plumbing		**Understandings with Owners, Architects, Engineers, Inspectors & Subcontractors**				
H.V.A.C.						
Electrical						
Floor Covering						
Ceramics						
Framing/Carpentry						
Cabinets/Millwork		**Safety Infractions & Accidents**				
Interior Trim						
Stairs/Railings						
Painting						
Home Automation						
Landscaping		**Other Pertinent Information**				
Sprinklers						
Others:						
TOTAL						

Superintendent Name: **Signature:**

Hazard Assessment, Analysis and Control

A valuable part of a health and safety program is an effective method or system of identifying and controlling hazards in the workplace. A workplace hazard can be any activity, condition or substance that has the potential to harm a worker. Hazards are generally divided into two categories: safety hazards and health hazards.

Tasks that expose workers to a high degree of personal risk require special planning. For these tasks, the management, Health and Safety Representative and affected workers, as applicable, should complete a Hazard Analysis Program. The analysis and precautions to control or reduce the hazard must be communicated to workers prior to performing the tasks.

Many different hazards may be encountered or created by construction activity. Typical major risks that should be addressed include, but are not limited to, the following:

- Falls
- Reversing vehicles and equipment
- Working around mobile equipment
- Overhead powerline contact
- Trench collapse
- Electrical hazards
- Working in confined spaces
- Working with toxic materials (e.g., asbestos, lead)
- Manual material handling
- Housekeeping
- Use of power tools.

A. Hazard Reporting System

Policy:

RND Construction Ltd. is committed to identifying and removing or controlling hazards in a timely manner in order to ensure a safe and healthy workplace. The hazard reporting system is a worker-oriented process. Workers are in the best position to identify the hazards in the workplace because they are the ones who perform the work. Workers act as a second set of eyes for supervisors. We therefore encourage communication between workers, supervisors and management on a daily basis to ensure an effective Hazard Reporting System.

Procedures:

1. Worker Responsibilities:

    - Report any perceived hazard verbally to the site supervisor or superintendent.
    - Provide recommendations to the supervisor on how to eliminate or control the hazard.
    - If the supervisor does not respond to your concern, you are to inform management.

2. Supervisor Responsibilities:

    - Discuss the hazard and controls with the worker and complete the Hazard Identification Form.
    - Respond to the worker's concern by the next shift.
    - Ensure that the form details the action or non-action which will be taken.
    - Provide a copy of the completed Hazard Identification Form to management.

3. Management Responsibilities:

    - Ensure action is taken to address the hazard identified.
    - Initialize and date the Hazard Identification Form.

Hazard Identification Form

Identified Hazard or Unsafe Work Activity	Potential Risk Assessment				Controls Required (Eliminate, Contain, Revise Procedure, Reduce Exposure)
	Fatality	Injury	Medical Aid	Damage	

B. Job Hazard Analysis and Control

Purpose:

The purpose of our Job Hazard Analysis and Control is to identify, control or eliminate potential or actual dangers in a job or task.

Factors to be considered in assigning a priority for analysis of jobs include:

- Accident frequency and severity: jobs where accidents occur frequently or where they occur infrequently but result in disabling injuries;
- Potential for severe injuries or illnesses: the consequences of an accident, hazardous condition, or exposure to harmful substances are potentially severe;
- Newly established jobs: due to lack of experience in these jobs, hazards may not be evident or anticipated;
- Modified jobs: new hazards may be associated with changes in job procedures;
- Infrequently performed jobs: workers may be at greater risk when undertaking non-routine jobs, and a Job Hazard Analysis and Control provides means of reviewing hazards.

RND Construction Ltd. management and supervision is responsible for ensuring all work is safely planned; the Job Hazard Analysis and Control will assist in determining firstly, what are the steps in the job; secondly, what are the potential hazards in the job; and finally, what are the protective measures for the safety of our workers assigned to do the non-routine work.

Procedures:

1. Breakdown of Job Steps:

   - Job or task identified for analysis by supervisor;
   - Supervisor overseeing the job breaks job into steps (with assistance from crew members, health and safety representative, etc.);
   - A job step is defined as a segment of the operation necessary to advance the work;
   - Keep the steps in the correct sequence.

2. Identify Actual or Potential Hazards (refer to checklist):

   Once the basic steps have been recorded, potential hazards must be identified at each step. This is based on observation of the job, knowledge of accident and injury causes, and personal experience. To identify potential hazards, the supervisor may use questions such as these:

a) Can any body part get caught in or between objects?
b) Do tools, machines or equipment present any hazards?
c) Can the worker make harmful contact with objects?
d) Can the worker slip, trip or fall?
e) Can the worker suffer strain from lifting, pushing or pulling?
f) Is the worker exposed to extreme heat or cold?
g) Is excessive noise or vibration a problem?
h) Is there a danger from falling objects?
i) Is lighting a problem?
j) Can weather conditions affect safety?
k) Is harmful radiation a possibility?
l) Can contact be made with hot, toxic or caustic substances?
m) Are there dusts, fumes, mists or vapors in the air?

3. Preventative Measures / Controls:

The final stage in a Job Hazard Analysis and Control is to determine ways to eliminate or control the hazards identified.

4. Eliminate the Hazard:

This is the most effective measure; some examples are:
- Choose a different process;
- Modify an existing process;
- Substitute with less hazardous substance;
- Improve environment (ventilation);
- Modify or change equipment or tools.

5. Contain the Hazard:

If the hazard cannot be eliminated, contact might be prevented by using enclosures, machine guards, worker booths or similar devices.

6. Revised Work Procedure:

Consideration might be given to modifying steps that are hazardous, changing the sequences of steps or adding additional steps (such as locking out energy sources).

7. Reduce the Exposure:

These measures are the least effective and should only be used if no other solutions are possible. One way to minimizing exposure is to reduce the number of times the hazard is encountered.

8. Communication of Job Hazard Analysis and Control to Workers:

When the Job Hazard Analysis and Control is completed, the results must be communicated to all workers who are, or who will be, performing the job. The

Job Hazard Analysis and Control must be discussed by the employees performing the job to ensure that all the basic steps have been noted, are in the correct order, have suitable controls and have been documented and signed by the worker(s) and supervisor(s). Supervisors will ensure that workers are following the appropriate control procedures.

Accident Investigations & Reporting and Return to Work

Policy:

RND Construction Ltd. requires all employees to immediately report to their supervisor all accidents and incidents that result in injury or property damage, and all near misses with the potential for serious injury or property damage. Supervisors will report the accident promptly to management to ensure timely submission to WSIB. Each incident will be analyzed to determine causes and contributing factors and the analysis will be used to reduce or eliminate the risk of further incident.

Definitions:

An **Accident** is defined as an unplanned event that causes harm to people or damage to property. Accidents are categorized as one of the following:

- **Lost Time Injury** (LTI) refers to any injury that prevents a worker from coming to work on the day following the day of the injury.
- **Medical Aid** refers to any injury not severe enough to warrant more than the day of injury off, but where medical treatment by a doctor is given.
- **First Aid** refers only to injuries that can be treated on the job without any days lost.
- An **Incident** is defined as property damage but with no injury to workers.
- A **Near Miss** is a situation in which no injury or damage occurred but might have if conditions had been slightly different.
- **Occupational Illness** is defined as a condition resulting from a worker's exposure to chemical, biological or physical agents in the workplace to the extent that the health of the worker is impaired.
- **Critical Injury** is defined as an injury of a 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 to an eye.

Role of Supervisor in an Accident Investigation:

The Supervisor and the Site Health and Safety Representative (if applicable) must investigate all accidents and incidents that involve workers. This includes completing the Accident Investigation Report, taking statements from witnesses and collecting any other pertinent information and ensuring the injured worker has received the necessary medical assistance.

The Supervisor is responsible for ensuring that all accident reports are transmitted to management as described below. If a worker sustaining a First Aid later seeks Medical Aid, the Supervisor must advise management and have the treating practitioner complete a Functional Abilities Form.

If we are not the Constructor, report the accident to the Constructor through their Safety Coordinator or Project Manager.

The Supervisor should contact the injured worker as frequently as the injury deems, or at least once a week. If you require assistance, contact management.

Responsibilities:

1. All employees shall report all incidents/accidents to their immediate supervisor.

2. Supervisors shall conduct initial investigations and submit their reports using the Accident Investigation Form promptly to management.

3. If we are not the Contractor, report the incident/accident to the Contractor through their Safety Coordinator or Project Manager.

4. Superintendents shall determine the need for and, if necessary, carry out detailed investigations. They shall also determine the causes, recommend corrective action, and report to management.

5. Management shall review all superintendents' reports, determine corrective action to be taken, and ensure that such action is implemented.

Procedures:

1. The employee reports a work related accident.

2. Administer first aid as required.

3. Arrange for transportation for injured employee to medical treatment if required.

4. Ensure Return to Work package accompanies worker.

5. Eliminate the hazard if possible or guard the accident scene if worker is critically injured.

6. Investigate the cause of the accident and report findings in the Accident/Incident Report form. Ensure all areas of the form are completed.

7. Send copy of the form to Health and Safety Department.

8. Report all accidents/incidents as follows:
   - Lost Time Injuries
   - Medical Aid
   - First Aid
   - Incidents and Near Misses.

Incident / Accident Report

Injured Worker's Last Name:	First Name and Initial(s):	Occupation:
Location Where Injury/Accident Occurred:		First Aid Provider:
Hospital or Clinic Attended for Medical Aid:		Treating Physician's Name:
Nature of Injury:		Project/Job Site:
Person(s) Who Transported Employee:		

Will This Be a Lost-time Injury?	☐ No ☐ Yes	Is Injury Work-related?	☐ No ☐ Yes
Were Any Subcontractors Involved?	☐ No ☐ Yes	Was the MOL Called?	☐ No ☐ Yes

Injury Details

Date & Hour of Injury:						Date & Hour Reported to Employer:				
Day	Month	Year	Time			Day	Month	Year	Time	
				a.m. p.m.						a.m. p.m.

Date & Hour Last Worked:						Normal Working Hours:			
Day	Month	Year	Time			from		to	
				a.m. p.m.			a.m. p.m.		a.m. p.m.

Who was the injury reported to?

What caused the injury? Describe the injury, the body part involved and specify left or right side (use back of sheet if necessary).

Describe the worker's activities at the time of the injury. Include details of equipment or materials used (use back of sheet if necessary).

Did anyone else witness the accident or know more about the injury?

NOTES: In the following cases, the MOL must be called: fatality, critical injuries (defined as an injury of a serious nature that: places life in jeopardy, produces unconsciousness, results in substantial loss of blood, involves the fracture of a leg or arm, involves the amputation of a leg, arm, hand or foot, consists of burns to a major portion of the body, causes the loss of sight in an eye), fire, explosion or hazardous material release, lost time injuries or accident requiring medical treatment, occupational illnesses, any worker who has had their fall arrested, any 'prescribed incident', or property damage >$500.

Incident / Accident Investigation Report

Date of investigation:	**Investigator:**
Date of incident/accident:	**Injured worker:**
Injured worker's address:	
M.O.L. notified? ☐ No ☐ Yes	**Health & Safety Representative:**
Nature of injury reported (injured body part):	
Factors that led up to accident:	
Comments:	
Names & addresses of witnesses and their comments (please use back of sheet for additional comments):	
Recommendations for corrective measures:	
Corrective measures taken? ☐ N/A ☐ Yes ☐ To follow up on (date):	
Investigator Signature:	**President Signature:**

Corrective Action Form

Date of Incident/Accident:	Incident/Accident Number:
Date of Corrective Action Taken:	
Corrective Action Taken (as indicated on the Incident/Accident Investigation Form):	
Recommendations:	
Date assigned:	
Responsibility assigned to:	
Details of what has to be done:	
Who has completed it?	
When was it completed?	

Incident / Accident Witness Statement Form

Date of Incident/Accident:	**Incident/Accident Number:**
Name of Witness:	
Date of Witness Statement:	
Name of Interviewer:	
Details of Interview:	
Signature of Witness:	**Signature of Interviewer:**

Return to Work

Policy:

The management of RND Construction Ltd. is committed to cooperating with all of its employees who have been injured on the job site and will do everything they can for an early and safe return to work. At RND Construction Ltd., we will provide a modified work program to any of our injured employees until he/she is able to return to their pre-accident job, wherever possible.

Responsibilities:

1. The Employer will:
   - Contact injured worker ASAP and stay in regular contact. Cooperate in providing suitable work.
   - Give WSIB information as required.
   - Provide workers with Functional Abilities Form to take to the treating practitioner for completion.
   - Educate workers about the return to work program.
   - Set specific time frames for the return to work.
   - Review worker's progress regularly.
   - Pay full wages and benefits for the day or shift on which the injury occurred.
   - Make certain that workers understand their obligations to cooperate.
   - Set clear procedures to follow in reporting injuries.

2. The Worker will:
   - Contact supervisor immediately of any injury. If not available, phone office and contact employer.
   - Stay in regular contact.
   - Help identify and cooperate in suitable work arrangements.
   - Give WSIB information as required.
   - Return to work within 24 hours with the completed form to develop with the employer an early and safe return to work.
   - Choose a doctor or qualified practitioner. (Note: A change in doctor cannot be made without permission of WSIB.)

Goals:

RND Construction Ltd. will:

- Assess each individual's situation according to any practitioner's report and recommendations and will provide some kind of modified work to suit the degree of injury, wherever possible.

- Assist in the employee's active recovery and encourage the worker to return to work to their pre-accident job, wherever possible.

- Identify jobs that are suitable for accommodating injured workers on a temporary basis in order to facilitate the early and safe return to work program and limit any loss of their earnings, wherever possible.

Accommodations:

Wherever possible, RND Construction Ltd. will provide a change or modification to the job or workplace so that the work is within the injured or ill person's functional capabilities and the risk of injury is reduced, such as:

- reduce hours
- graduate Return to Work hours
- re-assign duties
- restructure the job
- more frequent rest breaks
- work platform vs. ladders
- ladders for climbing scaffolds
- mini stretch breaks (10-15 minutes)
- chair with back support vs. picnic table
- anti-vibration tools (e.g. anti-vibration jackhammer)
- make heavy tools available at waist height
- light shop work, general clean-up
- painting trailers, containers (light work with brush)
- washing trucks
- pickup or delivery of plans
- training in their selected field, where possible
- computer training in safety prevention, if available
- increasing of awareness.

Emergency Preparedness

Policy:

RND Construction Ltd. is committed to having an emergency plan in place for each workplace to assist workers and the public to respond to any emergency situation.

Emergency Plan:

All workplaces require:

a) A method for reporting the emergency;
b) A list of workers responsible in emergency situations and how to contact them;
c) A plan for incident investigation and correction of the hazard;
d) A list of phone numbers for emergency and support services (should be posted by telephones).

Workplaces may also require:

a) A method for sounding the alarm;
b) A description of potential emergencies;
c) A map of the workplace that shows evacuation routes and head count location, as well as the location of emergency equipment, first aid station and fire extinguishers;
d) An evacuation, head count and rescue plan.

Plan Testing:

At the discretion of the supervisor, emergency plan rehearsals may be held. A rehearsal shall require:

a) Notification of emergency services, all supervision and possibly prior notification of workers;
b) A pre-determined all clear signal to allow rapid return to work;
c) An evaluation system to determine the effectiveness of the emergency plan (this is usually only a stopwatch timing to determine evacuation time).

Planning the Emergency Program:

If the project is located within a plant which has an existing emergency and evacuation plan, the supervisor must learn it and establish only those procedures necessary to complement the plant system and ensure a complete Emergency Plan for the project site.

Guidelines for Preparing an Emergency Plan:

All projects require an emergency plan. The magnitude and complexity of the plan depends on the size of the project/workplace. Required elements are:

1. A method for reporting the emergency. Generally, telephone is the most effective; however, an alternative should exist if the emergency disables the site phones.

2. A list of workers responsible in emergency situations and how to contact them. This should be plainly posted.

3. A plan for incident investigation and correction of hazard.

4. A list of phone numbers for emergency and support services. This should be posted by the telephone.

5. A method for sounding an alarm, such as an air horn or warning bell.

6. A description of potential emergencies. This is extremely important from an educational standpoint. Emergency preparedness is essentially based on anticipating all possible situations.

7. A map of the workplace that shows evacuation routes, head count location, as well as location of emergency equipment, first aid station, fire extinguishers. This should be designed at the start of the job and posted where visible.

8. The manager's routine for shutdown of the job. This should be established to ensure that if a shutdown occurs, no potential hazard may be left. For example, ensuring that the power has been shutdown before attempting an electrical contact rescue.

9. A system for communication, both internal and external. Two-way radios, telephones or alarms should be available.

10. An evacuation, head count and rescue plan. Rescues should only be attempted by trained persons and only if they do not risk injury to themselves. Each supervisor should have a roll call system in place to ensure that all workers have been evacuated from the hazard area.

Emergency Procedures:

Emergency procedures should be established for collapses of structures, fire, explosions, critical injury, and toxic spill or release.

Slow response, lack of resources, or absence of trained personnel can lead to chaos in an emergency. To minimize losses, especially fatalities and injuries, personnel must know their responsibilities, know the procedures to follow, and be able to communicate in an emergency.

Follow these steps in developing the plan for emergency procedures.

1. List possible areas where emergencies such as fire, explosion, structural collapse, or chemical spills might occur.

2. For each type of hazard, identify the possible results - fatalities, injuries, structural or environmental damage.

3. Determine the required response, such as rescue, fire fighting, or evacuation. The response plan must include step-by-step procedures and control measures for each type of emergency.

4. Determine what resources, including rescue equipment and medical supplies, should be on hand to deal with specific emergencies.

5. Determine the training required for effective response to emergencies.

First Aid and Medical Services:

First aid and medical services must meet the minimum requirements under the applicable regulations.

Employees must know

- Where to find first aid stations;
- How to identify qualified first aiders;
- The procedures for transporting injured workers;
- Who will provide first aid training and who has a valid first aid certificate;
- How to record injuries and illness.

Procedures for Rescue of a Worker Suspended in a Safety Harness:

The rescue of a worker who has fallen and is being suspended in his/her safety harness needs to be undertaken as quickly as possible for several reasons:

1. The worker may have suffered injuries during the fall and may need medical attention.

2. Workers suspended in their safety harness for long periods may suffer from blood pooling in the lower body and this can result in "suspension trauma." (See

Appendix 2 for further information on treating suspension trauma - have this available on site to provide to First Aid team and to external emergency crews.)

3. The suspended worker may panic if he/she is not rescued quickly.

4. The event that led to the fall may create additional risks that need to be addressed.

General Rescue Procedures:

A. <u>If Elevating Work Platform (EWP) is available on site</u>:

- Bring it to the site and use it to reach the suspended worker;
- Ensure that rescue workers are protected against falling;
- Ensure that the EWP has the load capacity for both the rescuer(s) and the victim;
- If the victim is not conscious, 2 rescuers will probably be needed to safely handle the weight of the victim;
- Position the EWP platform below the worker and disconnect his lanyard when it is safe to do so;
- Treat the victim for Suspension Trauma and any other injuries;
- Arrange for transport to nearest hospital.

B. <u>If no Elevating Work Platform is available</u>:

- Where possible, use ladder(s) to reach the victim;
- Rig separate lifelines for rescuers to use while carrying out the rescue from the ladder(s);
- If worker is not conscious or cannot reliably help with his/her own rescue, at least 2 rescuers may be needed;
- If worker is suspended from a lifeline, where possible, move the suspended victim to an area that can be safely reached by the ladder(s);
- If victim is suspended directly from his/her lanyard or from a lifeline, securely attach a separate lowering line to the victim's harness;
- Other rescuers should lower the victim while he/she is being guided by the rescuer on the ladder;
- Once the victim has been brought to a safe location, administer First Aid and treat the person for Suspension Trauma and any other injuries;
- Arrange for transport to nearest hospital.

C. <u>If the injured person is suspended near the work area and can be safely reached from the floor below or the area they fell from</u>:

- Ensure that rescuers are protected against falling;

- If possible, securely attach a second line to the workers' harnesses to assist in pulling them to a safe area (Note: at least 2 strong workers will be needed to pull someone up);
- Ensure that any slack in the retrieving lines is taken up to avoid slippage;
- Once the victim has been brought to a safe location, administer First Aid and treat the person for Suspension Trauma and any other injuries and arrange for transport to the nearest hospital.

D. If a person has fallen and is suspended in an inaccessible area (e.g., a tower, against a building or structure that has no openings):

- Specialized rescue techniques are needed for this type of situation. It may involve a rescuer rappelling or being lowered down to the victim, it may involve using the lifeline to retrieve the fallen worker, or the use of high-reach emergency equipment;
- Due to the inherent risk to the rescuers and/or the victim, this type of rescue should not be undertaken by people without specialized training and experience.

Emergency Numbers

Date:	**Site Location:**
Ambulance:	
Poison Control:	
Police:	
Fire Department:	
Municipal Water Dept.:	
Municipal Electrical Dept.:	
Municipal Gas Dept.:	
Occupational Health & Safety:	
Other:	
Emergency Response Team	
Company Head Office:	
Coordinator:	
Communication:	
Gate:	
First Aiders:	
Site Location Owner:	
Other:	
General Contractor:	
Office Phone:	
Home Phone:	
Subcontractor:	
Office Phone:	
Home Phone:	

First Aid

Policy and Procedures:

RND Construction Ltd. is committed to providing the proper First Aid and CPR training to all its employees. As well, management will ensure compliance with all applicable Health and Safety legislation and WSIB requirements regarding first aid in all work places or job sites. The following procedures are to be observed at each job site:

1. Provide resources and set up medical/first aid facilities to comply with Workplace Safety and Insurance Act (WSIA) and First Aid Regulations.

2. Ensure that the designated employees have completed first aid training and possess current certificates and that their names are known and posted in the Site Superintendent's office and first aid station.

3. Should an injury occur, the first trained person on location will administer first aid immediately. This trained person will then have someone notify the site superintendent, the supervisor and the health and safety representative.

4. Assess the severity of the injury and ensure that protection has been provided against continuing or further hazards.

5. If serious injury, a person trained in first aid will stay with the injured person until help arrives, and will inform medical personnel of first aid treatment given.

6. The first aider will ensure that an injury treatment record has been completed.

7. Transportation of an injured worker to a hospital, doctor's office or worker's home will be provided by a supervisor when necessary or if emergency vehicle transportation is not available.

Requirements:

As an employer, under the WSIA, we are required to have:

- Posted first aid certificates;
- At a minimum 1 first aider per shift must be available and a first aid trained designated backup;
- First aid equipment has to be available and accessible;
- A posted First Aid Regulation 1101 brochure;
- A posted Form 82 - In Case of Injury poster;
- MSDS binder.

The following table provides a summary of the first aid requirements as stated in the WSIB Regulation 1101 brochure:

# of Workers on Site	General Contractor Responsibilities	First Aid Kit Requirements	
1 - 5	Provide and maintain a first aid station with a first aid box. Ensure that the first aid station is at all times in the charge of a worker who: ● has a valid emergency first aid certificate and ● works in the immediate vicinity of the station.	● A current first aid manual ● 1 card of safety pins ● 12 adhesive dressings individually wrapped ● 4 sterile 3" square gauze pads ● 2 rolls of 2" gauze bandage ● 2 field dressings, 4" square or 2" x 4" ● 1 triangular bandage	☐ ☐ ☐ ☐ ☐ ☐ ☐
5 - 15	Provide and maintain a first aid station with a first aid box. Ensure that the first aid station is at all times in the charge of a worker who: ● has a valid emergency first aid certificate and ● works in the immediate vicinity of the station.	● A current first aid manual ● 1 card of safety pins ● 24 adhesive dressings individually wrapped ● 12 sterile 3" square gauze pads ● 4 rolls of 2" gauze bandage ● 4 rolls of 4" gauze bandage ● 4 sterile surgical pads suitable for pressure dressings ● 6 triangular bandages ● 2 rolls of splint padding ● 1 roll-up splint	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
15 - 200	Provide and maintain a first aid station with a first aid box, 1 stretcher and 2 blankets. Ensure that the first aid station is at all times in the charge of a worker who: ● has a valid emergency first aid certificate and ● works in the immediate vicinity of the station.	● A current first aid manual ● 24 safety pins ● 1 basin, preferably stainless steel ● 48 adhesive dressings individually wrapped ● 2 rolls of 1" adhesive tape ● 12 rolls of 1" gauze bandage ● 48 sterile 3" square gauze pads ● 8 rolls of 2" gauze bandage ● 8 rolls of 4" gauze bandage ● 6 sterile surgical pads suitable for pressure dressings ● 12 triangular bandages ● Splints of assorted sizes ● 2 rolls of splint padding	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Please note that the contents of the first aid kits listed above are the bare minimum requirements by law; however, each workplace or job site will have a first aid kit stocked with the necessary first aid supplies to treat every type of injury that may arise on site.

First Aid Treatment and Accident Record

Date of Accident	Time of Accident	Date & Time Reported	Name of Injured	Occupation of Injured	Description of Accident	Nature of Injury	Treatment Given	First-Aider Initials

WHMIS and Occupational Health

Policy:

All RND Construction Ltd. employees will receive WHMIS and Occupational Health training as required under the current legislation. A record of this training will be maintained and employees will be issued a pocket card upon completion of their WHMIS training. See upcoming revisions under the new “WHMIS with GHS” legislation or “WHMIS 2015".

Responsibilities:

1. Management:

    a) Review in conjunction with the supervisor all company-supplied material and obtain all Material Safety Data Sheets (MSDSs) that are required.

    b) Obtain from the owner any MSDSs which are required for owner-supplied material.

    c) Obtain from subcontractors any MSDSs which are required for material supplied by subcontractors.

    d) Cooperate with the owner/general contractor in setting up a general MSDS binder for the project.

    e) Ensure site supervisor has set up an updated MSDS binder on site.

    f) Request from suppliers any labels that may be required.

2. Site Superintendents, Supervisors and/or Project Managers:

    a) Ensure that there is an MSDS for controlled products used on the site and in the site file which is accessible to all workers.

    b) Review all company-supplied material and obtain all MSDS required.

    c) Make available "upon request" MSDS to all company employees.

    d) Ensure that proper personal protective equipment is available on site.

Safe Work Practices and Job Procedures

Policy:

RND Construction Ltd. is committed in training all its employees to adopt safe work practices and job procedures in all its workplaces in order to minimize risk to people, equipment, materials, environment and processes.

The following safe practices and/or procedures have been summarized to address specific hazards in the workplace. For more complete information, we urge our employees to refer to the current CSAO *Occupational Health and Safety Act* and *Regulations for Construction Projects*.

Safe Practices / Procedures:

A. Equipment:

Forklifts

Properly operated forklifts make material handling effortless. However, when the forklift or operator limitations are exceeded they can be very dangerous.

Adhering to the following general operating rules can greatly reduce the risk of personal injury and property damage:

1. Operate only if you have been trained.
2. Know the manufacturer's manual. Never exceed manufacturer's load rating.
3. Inspect all components prior to use.
4. Keep forks and speed low at all times.
5. When parked, always place forks flat on the ground.
6. Drive in reverse when moving bulky items to avoid blind spots.
7. Ensure forks are fully seated and square when lifting pallets.
8. Do not move damaged or improperly loaded pallets.
9. Do not carry passengers.

10. Never leave a machine unattended with an elevated load.

11. The use of a seat belt is recommended.

Ladders

1. All portable ladders must be equipped with non-slip bases.

2. Ladders must be set up on a firm level surface. If the base is to rest on soft, uncompacted or rough soil, a mud sill shall be used.

3. Straight ladders will be tied off or otherwise secured to prevent movement. If this is not possible, one worker will hold the base of the ladder while it is being used.

4. When a task must be done while standing on an extension ladder, the length of the ladder must be such that the worker stands on a rung no higher than the fourth from the top.

5. When climbing up or down, workers must always face the ladder.

6. Unless suitable barricades have been erected, or other adequate protection provided, ladders must not be set up in passageways, doorways, driveways or other locations where they can be struck or bumped by persons or vehicles.

7. Ladders must not be erected on boxes, carts, tables, scaffold platforms, elevating work platforms or on vehicles.

8. Straight ladders must be set up at an angle such that the horizontal distance between the top support and the base is not less than one-quarter or greater than one third of the vertical distance between these points.

9. Metal ladders or ladders with wire reinforcing must not be used in the proximity of energized electrical conductors.

10. Wooden ladders must be unpainted or finished with a clear non-conductive wood preservative.

11. All ladders erected between levels must be securely fastened, extend 90 centimetres (3 feet) above the top landing and afford clear access at top and bottom.

12. Ladders with weakened, broken, bent or missing steps, broken or bent side rails, broken, damaged or missing non-slip bases, or otherwise defective must not be used and must be tagged and removed from the worksite.

13. Ladders must not be used horizontally as substitutes for scaffold planks, runways or any other service for which they have not been designed.

14. Workers on a ladder must not straddle the space between the ladder and another object.

15. Three points of contact must always be maintained when climbing up or down a ladder (two feet and one hand or one foot and two hands).

Lifting (Hoisting)

Evaluating the Load:

Determine the weight of the object or load prior to a lift to ensure the lifting equipment operates within its capabilities.

Balance Loads:

Estimate the center of gravity or point of balance. The lifting device should be positioned immediately above the determined center of gravity.

Landing the Load:

Prepare a place to land the load. Lower the load gently and make sure it is stable before slackening the sling or chain.

1. Select only appropriate slings for the task and NEVER exceed the working load limits.

2. Make sure the hoist or crane is directly over the load.

3. Use slings of proper reach. Never shorten a line by twisting or knotting.

4. With chain slings, never use bolts or nuts.

5. Never permit anyone to ride the lifting hook or the load.

6. Make sure all personnel stand clear from the load being lifted.

7. Never work under a suspended load, unless the load is properly supported.

8. Never leave a load suspended when the hoist or crane is unattended.

9. Inspect all slings thoroughly at specified intervals and maintain them in good condition.

10. Inspect each chain or sling for cuts, nicks, bent links, bent hooks, etc., before each use. If in doubt, don't use it.

11. Ensure that safety latches on hooks are in good working condition.

12. Ensure that the signaller is properly identified and understands techniques of proper signalling.

13. Make sure a tagline is used to control the load.

Mount/Dismount Heavy Equipment

1. Ensure that the machine is equipped with side grab rails and steps.

2. Clean mud off boots before climbing onto the machine.

3. Face the machine and step onto the first step.

4. Maintain 3-point contact at all times. (2 hands and 1 foot or 2 feet and 1 hand.)

5. Climb into cab or other areas provided with non-slip surfaces.

6. To get off the machine, make sure the machine is parked and further movement prevented. Shut off the machine if necessary.

7. Step out of the cab onto the ladder and while facing the machine descend using 3-point-method.

Portable Arc Welders

A Portable arc welder is a piece of equipment that has to be treated like a vehicle. Do not operate it indoors.

1. Be sure the machine is firmly attached to the transporting unit.

2. Check all fluid levels (water, oil and fuel) to be sure they are at acceptable operating levels.

3. When fueling, DO NOT "top off" the fuel tank. Gasoline expands as the outside temperature rises. This may result in seepage and could start a fire.

4. Do not fuel the machine while it is running.

5. Be sure the radiator and fuel caps are in proper working order and are securely attached.

6. Do a "walk around" to check for damage and obvious leaks.

7. Any repairs should be done by qualified mechanics or technicians.

8. Make sure all cables are wound securely when transporting.

9. Ensure the side covers are kept closed to protect the machine from damage from external objects and/or weather, as well as to protect the operator and others from the moving parts of the machine.

Portable Ladders

Before using any ladder, make sure that it is in good condition and is right for the job to be done.

1. When setting up a ladder, secure the base and "walk" the ladder into place.

2. The ladder should be set at the proper angle of one foot out at the base for every four feet of height.

3. Before using a ladder, make sure it is secured in place.

4. When in position, the ladder should protrude one meter above the intended landing point.

5. Workers shall not work from the top two rungs of a ladder.

6. Don't overreach while on a ladder. It is easier and safer to climb down and move the ladder over a few feet to a new position.

7. Always face the ladder when using it. Grip it firmly and use the three-point contact method when moving up or down.

8. The minimum overlap on an extension ladder should be one metre unless the manufacturer specifies the overlap.

9. Keep both metal and wood ladders, away from electrical sources.

Rigging

Rigging looks like an easy operation that requires no particular skill or experience. However, many workers have lost fingers, hands or suffered more serious injuries because they thought, "anybody can do that".

Here are some “do’s” and “don'ts” to remember:

1. Workers will ensure that the maximum load rating of rigging components as recommended by the manufacturer are not exceeded.

2. All rigging, hooks and components will be checked for excessive wear and damage prior to use.

3. One member of the crew will act as the designated signalperson and will wear the appropriate distinctive vest, armlets, etc.

4. The signal-person will review the signals to be used with the crane operator.

5. The signal-person is the only one to signal for a lift and must be careful not to order a move until he has received the "all ready" signal from each member of the crew.

6. Be sure you are in the clear before you give an "all ready" to the signal-person.

7. Be sure your hand is clear of pinch points.

8. Watch out for the roll or swing of the load. Anticipate the direction of the swing or roll and work away from it.

9. Never place yourself between material, equipment or any stationary object and the load swing.

10. Stay away from stacked material that may be knocked over by a swinging load.

11. Never stand under the load, and keep from under the boom as much as possible.

12. Look over the location where the load is to be set. Remove unnecessary blocks or other objects that might fly up if struck by the load.

13. When lowering or setting the load, be sure your feet and all other parts of your body are out from under the load.

14. Set the load down easily and slowly so that if it rolls on the blocking, it will be a slow shift that you can get away from.

15. Use tag lines to control the loads.

16. Damaged rigging must be clearly tagged "Out of Service", removed from the work area and either repaired or replaced.

Scaffolding

1. The erection and dismantling of scaffolds must be carried out under the supervision of a competent worker who is knowledgeable and experienced in such operations.

2. Workers erecting and dismantling a scaffold more that 2.4 metres (8 feet) high must be tied off with a full body harness and lanyard equipped with a shock absorber.

3. Scaffolds must be erected with all braces, pins, screw jacks, base plates, and other fittings installed, as required by the manufacturer.

4. Scaffolds must be adequately braced horizontally and vertically.

5. Scaffolds must be equipped with guardrails consisting of a top rail, mid-rail and toe-board.

6. Scaffold platforms must be at least 46 centimetres (18 inches) wide and if they are over 2.4 metres (8 feet) high they must be planked across their full width.

7. Scaffolds must be tied in to a building at vertical intervals not exceeding three times the least lateral dimension, including the dimension of any outrigger stabilizing devices.

8. Where scaffolds cannot be tied in to a building, guy lines adequately secured should be used to provide stability.

9. Scaffold frames must be properly pinned together where scaffolds are two frames or more in height or where they are used as rolling scaffold towers.

10. Scaffolds must be erected, used and maintained in a reasonably plumb condition.

11. Scaffold planks must be securely fastened to prevent them from sliding.

12. Scaffold planks must be installed so that they overhang by at least 15 centimetres (6 inches) but no more that 30 centimetres (12 inches).

13. Scaffold planks must be:
    - of good quality,
    - free of defects, such as loose knots, splits or rot,
    - rough sawn, measuring 48mm X 248mm (1 7/8 " X 9-3/4") in cross-section, and
    - № 1 spruce or better.

14. Scaffolds must be equipped with a proper ladder for access. Vertical ladders must be equipped with 15 centimetre (6 inch) stand-off brackets and a ladder climbing fall protection device or safety cage when they are more than 3 metres (10 feet) high.

15. Frame scaffolds over 15 metres (50 feet) high and tube-and-clamp scaffolds over 10 metres (30 feet) high must be designed by a professional engineer and constructed in accordance with the design.

16. Remove ice, snow, oil, grease and other slippery material from the platform, and apply sand to the surface.

17. Wheels or casters on rolling scaffolds must be equipped with braking devices and securely pinned to the scaffold frame.

Step Ladder

As with all ladders, make sure that the step ladder is in good condition, and is right for the job to be done. Step ladders are to be used only on clean and even surfaces.

1. No work is to be done from the top two rungs of a step ladder, counting the top platform as a rung.

2. The step ladder is only to be used in the fully opened position with the spreader bars locked.

3. Tops of step ladders are not to be used as support for scaffolds.

4. Don't over-reach while on the ladder. Climb down and move the ladder over to a new position.

5. Only CSA-approved ladders will be used.

Company Vehicles

All employees who operate RND Construction’s vehicles must hold a valid driver's license applicable to the type of vehicle being operated as a condition of employment.

Do:

1. Check vehicle fluid levels, running gear and electrical components prior to use.

2. Operate at or below posted speed limits and at a speed that is appropriate for road conditions.

3. Back into your parking space at ALL times.

4. Walk around the vehicle prior to reversing.

5. Ensure that all loads are covered and properly secured.

6. Ensure that the vehicle is kept clean.

7. Treat the public in a courteous manner at all times.

8. Always wear your seat-belt when the unit is in motion.

Do Not:

1. Use company vehicles for personal business at any time.

2. Operate a defective vehicle. Report any problems to a mechanic and have it repaired prior to use.

3. Offer rides to anyone other than RND Construction employees.

4. Allow passengers to ride in the back of a pick-up or any unit that is not equipped with approved seats and restraining devices.

5. Leave the vehicle running and unattended.

Serious violations of the Highway Traffic Act, such as careless driving, may result in termination of employment. Operators are responsible for any fines that are levied by a peace officer.

Wood Scaffolds

The construction of wood scaffolds is closely regulated by legislation. Materials and material dimensions are specified in detail in the Regulations for Construction Projects.

Construction of scaffolds can vary greatly as to use, shape, location and the type of job to be done. Consequently, they sometimes are built in a haphazard manner. To avoid this, the following safe work practices are a minimum requirement.

1. The construction, alteration, design and removal of wood scaffolds are to be done by competent workers.

2. The material used to construct these scaffolds should be sound, close grained and finished on all four sides.

3. The scaffold must be capable of supporting four (4) times the load that might be imposed on it.

4. All component parts should be tight together and properly fixed to each other.

5. Proper guardrail must be set in place (top rail, intermediate rail, toe board).

6. The scaffold work platforms shall extend for the full width of the scaffolding.

7. When used as a scaffold work platform, planks shall be secured from movement by the use of cleats or by being wired in place.

8. Safe access and egress is to be provided to all work platforms by the use of ladders.

9. Scaffold work platforms shall not span more than 2.1 metres.

B. Fall Protection:

Fall Protection

Working from Scaffolds:

1. Scaffold platforms must be fully planked.

2. Guardrails consisting of a top rail, mid-rail and toeboard are required whenever the working platform is 2.4 metres (8 feet) or more above floor level.

3. Wheels and casters must be locked when personnel are working on the scaffold.

4. If the scaffold is more than 2.4 metres (8 feet) high, it must not be moved with personnel on it unless:
   a) they wear full body harness with lanyard and shock absorber tied off to an independent fixed support, and
   b) the floor is firm and level.

Working from Ladders:

1. A worker must wear a full body harness with lanyard and shock absorber tied off to either an independent fixed support or a lifeline whenever the worker is:
   a) 3 metres (10 feet) or more above the floor, or

b) above operating machinery, or
c) above hazardous substances or objects.

Working from Swing Stages:

1. A worker must wear a full body harness with lanyard and shock absorber tied off to:
   a) an independent lifeline, if the swing stage has only two independent suspension lines, or
   b) the swing stage, if it has four independent suspension lines (two at each end).

Working Beside Unprotected Openings and Edges:

1. A worker must wear a full body harness with lanyard and shock absorber tied off to an independent fixed support whenever the worker is more than 3 metres (10 feet) above the next level or whenever the worker is above operating machinery, hazardous substances or objects regardless of the possible fall height.

Full Body Harnesses, Lanyards, and Shock Absorbers:

1. All full body harnesses, lanyards, and shock absorbers must be CSA-certified. Look for the CSA label.

2. Full body harnesses must be snug-fitting and worn with all hardware and straps intact and properly fastened.

3. Lanyards must be 16 millimetre (5/8") diameter nylon or equivalent.

4. Lanyards must be equipped with a shock absorber.

Lifelines:

1. All lifelines must be:
   - 16 millimetre (5/8") diameter polypropylene or equivalent;
   - used by only one worker at a time;
   - free from any danger of chafing;
   - free of cuts, abrasions and other defects;
   - long enough to reach the ground or knotted at the end to prevent the lanyard from running off the lifeline; and
   - secured to a solid object

Rope Grabbing Devices:

1. To attach the lanyard of a full body harness to a lifeline, use a mechanical rope grab that has been CSA-certified. Look for the CSA label.

Fall Protection - Equipment

Fall Arrest Protection consists of a lanyard or lifeline/lanyard set-up where the wearer is allowed some movement at an exposed edge to perform his/her work and if he should trip or loose his/her balance he could possible fall over the edge.

This fall protection system must be adjusted so as to limit the wearer's fall to within 1.5 metres from where he stands or sits and only full body safety harnesses should be allowed for his/her protection.

Equipment Standards and Set-Up:

1. All safety belts, full body harnesses and lanyards must be CSA-certified and carry a CSA label.

2. Safety harnesses and belts are to be snug-fitting and worn with all hardware and straps intact and properly fastened.

3. Lanyards are to be 5/8" diameter nylon or equivalent.

4. The D-rings on the safety belts should be centred on the person's back.

5. The lanyard or lifeline and lanyard combination must be secured to a rigid support capable of resisting the peak arrest forces of 1800 lbs minimum for fall arrest protection purposes and its length should be adjusted so that the wearer will be prevented from falling no greater that 1.5 metres from where he stands.

6. When the lifeline consists of wire rope, or the connecting lanyard consists of nylon webbing, a shock-absorbing lanyard shall be used.

Lifelines and their Set-Up:

All lifelines shall be:

- 16 millimetres (5/8") diameter polypropylene or equivalent;
- used only by one worker at a time;
- free of any cuts, abrasions, other defects and protected against chaffing;
- long enough to reach the ground or be knotted at the end;
- connected at right angles to the worker's position;
- provided with a rope grab (cam lever) device for lanyard attachment.

WARNING!

No worker shall be exposed to heights greater than three metres when near an unguarded edge to a floor, roof, platform, opening or on a ladder without first providing travel restraint, fall arrest or guardrail protection.

Any person found doing so shall be subjected to disciplinary action.

Fall protection is also required if a worker may fall into operating machinery, into water or other liquids, into or onto hazardous substances or objects regardless of the minimum three-metre ruling.

Guardrails

Falls from heights are a leading cause of injury and death on construction sites. You don't have to fall far to be injured or killed. If a worker can fall 3 metres or more or where a fall from a lesser height involves an unusual risk of injury, fall protection must be put in place. Guardrails are often the best and most convenient means of fall protection.

1. Workers installing or removing guardrails above 3 metres will be tied off to prevent falls.

2. Install guardrails no more than 30 cm from an open edge.

3. Ensure guardrail material is free of damage and defect.

4. Support posts should be no more than 2.4 metres (8 ft) apart and securely anchored.

5. All guardrails must be complete:
   - top rail 1 metre above platform;
   - mid rail halfway between top rail and toeboard; and
   - toe-board 100 mm high and secured to inner side of posts.

6. Posts and rails must be capable of withstanding a force of at least 900 N (200 lbs) applied at any point.

7. No work begins in the area until guardrails have been inspected by crew foreman.

Temporary Removal of Guardrails at the Perimeter of a Building

1. Travel restraint system must be used prior to removing the guardrails, during the receiving of material, and until the guardrails are replaced and secure.

2. Cordon off the area where guardrails will be removed using rope, chain or yellow caution tape.

3. Attach rope, chain or tape to the top of the perimeter guardrails, approximately 6 ft. from where guardrails will be removed. Then attach to the first section of columns inside the building. The cordoned off area must extend a minimum of 8 ft. from the edge. If there are no columns, use 4 ft.-high rubber cones.

4. Set-up danger/warning signs outside the cordoned area.

5. Verbally warn workers in the vicinity about the upcoming work.

6. Workers inside the cordoned area must wear and use travel restraint system at all times. (Workers must be trained on set-up and use of travel restraint system.)

7. Anchor points must be pre-selected by a competent person.

8. Remove guardrails at the perimeter.

9. Move hoisted material into the building.

10. Replace guardrails.

11. Remove rope, chain or tape and the danger/warning sign.

C. Hazards:

Access and Egress

1. Areas of access and egress must be adequately lit.

2. If material may fall on a worker, overhead protection shall be provided.

3. Access to and egress from a work area located above or below ground level shall be by stairs, runway, ramp or ladder.

4. Areas of access and egress shall be kept clear of obstructions.

5. Areas of access and egress shall be kept clear of snow, ice, or other slippery material.

6. Areas of access and egress shall be treated with sand or similar material when necessary to ensure a firm footing.

7. Every shaft shall have a means of access and egress by stairway, ladder, or ladderway for its full depth during construction and when it is completed.

8. A cage or car on a hoist used for transporting workers in a shaft,
   - shall be at least 1.8 metres high;
   - shall be solidly enclosed, except for openings for access and egress;
   - shall have a maximum of two openings for access and egress;
   - shall have a gate at each opening for access and egress; and
   - shall have a protective cover suitable to protect passengers from falling objects.

Electrical Safety

Accidental contact with electrical components can have deadly consequences. Always refer to the manufacturer's recommended operating practices prior to using new electrical appliances, tools and equipment. Use the following guidelines to reduce the risk of personal injury.

1. All electrical tools and appliances will be double insulated or have a three prong plug-in.

2. Only qualified and authorized electricians are allowed to service and repair electrical appliances, tools and equipment.

3. Prior to operating electrical powered tools and equipment, ensure that you are working on a dry surface.

4. Tools with damaged cords, grounds and housing units are to be tagged "Out of Service" and sent for repair.

5. Missing or damaged ground plugs of any appliance, tool or piece of equipment are to be repaired prior to use.

6. Damaged extension cords shall be tagged "Out of Service", repaired or replaced as warranted.

7. Always stand to the side of a service box when resetting a breaker.

8. All electrical tools must be CSA-approved.

9. Disconnect power tools from power source before making adjustments. Defective equipment needs to be tagged "Out of Service" and removed.

10. Tools with electrical arcing brushes should be removed when you feel any tingling during use.

Fire and Fire Extinguishers

Good housekeeping is essential in the prevention of fires. Fires can start anywhere and at any time. This is why it is important to know the type of fire extinguisher to use and how to use it.

Always keep fire extinguishers visible with easy access. Fire extinguishers have to be properly maintained. Where temperature is a factor, ensure that care is taken in selecting the right extinguisher.

Workers must receive training before using fire extinguishing equipment.

Types of Fires:

1. Class A: Wood, paper, rags, rubbish and other ordinary combustible materials.
   - Recommended Extinguishers: Water from a hose, pump type water can, pressurized extinguisher, or soda acid.
   - Fighting the Fire: Soak the fire completely - even the smoking embers.

2. Class B: Flammable liquids, oil and grease.
   - Recommended Extinguishers: ABC units, dry chemical, foam and carbon dioxide.
   - Fighting the Fire: Start at the base of the fire and use a swinging motion from side to side, always keeping the fire in front of you.

3. Class C: Electrical equipment.
   - Recommended Extinguishers: Carbon dioxide and dry chemical (ABC units).
   - Fighting the Fire: Use short bursts on the fire. When the electrical current is shut off on a Class C fire, it can become a Class A fire if materials around the electrical fire are ignited.

Fire Protection

Fire prevention requires special attention.

1. Keep all entrances and exits clear of obstructions such as vehicles, equipment and general clutter at all times.

2. Correct poor housekeeping practices.

3. Use appropriate shielding of flammable surfaces when performing hot work.

4. Remember that grinders are capable of throwing red hot particles approximately 30 feet.

5. Keep your work area free of unnecessary combustible materials.

6. Use proper degreasing agents. Never use gasoline or other "flammable liquids" for degreasing or cleaning.

7. All fire doors are to be kept closed when the shop is vacant.

Fire Fighting Equipment:

1. All workers should know the location of the fire fighting equipment in their area.

2. Fire extinguishers are to be checked monthly.

3. Never return an empty extinguisher to its fire station. Clearly mark it "MT" with chalk and exchange it for a charged unit.

4. All fire extinguishers will be inspected on an annual basis by a certified company.

5. All workers must receive training before using fire extinguishing equipment.

Housekeeping

A clean workplace is a safer workplace. All employees, contractors and subcontractors are required to:

1. Keep the work area clean, free of oil, grease, mud, unnecessary tools and/or equipment, scrap metal and other materials.

2. Clean-up spills promptly with proper absorbing materials and agents.

3. Place all garbage and waste materials in appropriate containers.

4. Store all oily rags in appropriate fire-approved steel containers.

5. Keep exterior walkways and stairways free of snow, ice and obstacles.

6. Keep interior hallways, stairwells and other traffic areas clear.

7. Watch for hazards such as nails, pieces of scrap metal, grease and oil.

Trenching/Excavation

Soil conditions and stability can vary greatly from one area to another. Factors that can affect soil stability include, but are not limited to: previously disturbed soil, drying of walls and sub-surface weeping.

Hard Compact:

Hard compact is defined as:

- hard to hand excavate,
- an excavating bucket can leave well defined teeth marks in the soil,
- the soil has been verified as hard compact by a Professional Engineer,
- a soil testing kit indicates that it is hard compact.

Soils Other than Hard Compact:

1. Require a 45 degree or greater cutback from the vertical side wall in all soil conditions above 1.2 metres in height.

2. Require the use of shoring, or

3. Require the use of an engineered trench box.

Frozen Soils:

Frozen soils cannot be considered hard compact due to the risk of wall failure below the frost line.

Set-Backs:

Trenches in or near roadways and construction sites are subject to wall movement from vibration. Vehicles and equipment must be kept back from the trench a distance equal to the depth of the trench.

Spoil Piles:

1. They must be set back a minimum of 1.0 m from the trench/excavation edge.

2. If placed too close to the trench or excavation edge, they can exert excess downward pressure causing wall failure.

3. Excavated loose material should be scaled back away from the edge of the trench.

Welding, Cutting and Burning

Work involving welding, cutting and burning can create fires and breathing hazards for workers on any job. The following should be considered prior to the start of work.

1. Always ensure that adequate ventilation is supplied since hazardous fumes can be created during welding, cutting or burning.

2. Where other workers may also be exposed to the hazards created by welding, cutting and burning, they must be alerted to these hazards and protected by the use of "screens".

3. Never start work without proper authorization.

4. Always have fire fighting equipment on hand before starting.

5. Check the work area for combustible material and possible flammable vapours.

6. A welder should never work alone. A fire or sparks watch should be maintained.

7. Protect cables and hoses from slag or sparks.

8. Never weld or cut lines, drums, tanks, etc. that have been in service without making sure that all have been purged or other necessary precautions are in place.

9. Never enter, weld or cut in a confined space without proper air quality testing and a qualified safety lookout in place.

10. When working overhead, use fire resistant materials (blankets, tarps) to control or contain slag and sparks.

11. Cutting and welding must not be performed where sparks and cutting slag will fall on cylinders. Move all cylinders away to one side.

12. Open all cylinder valves slowly. The wrench used for opening the cylinder valves should remain on the valve spindle.

D. Occupational Health:

Asbestos

As part of the ongoing commitment to provide a safe work environment, the following procedure has been established to address the existence of asbestos on job sites.

What is Asbestos?

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. However when asbestos is inhaled, it can be harmful and lead to the following diseases:

- asbestosis
- lung cancer
- mesothelioma (cancer of the lining of the chest and/or abdomen).

Where can it be found?

- Sprayed-On Fireproofing
- Pipe and Boiler Insulation
- Loose Fill Insulation
- Asbestos Cement Products
- Acoustical Plaster
- Acoustical Tiles
- Vinyl Asbestos
- Gaskets
- Roofing Felts
- Asphalt/Asbestos Limpet Spray
- Drywall Joint-Filling Compound
- Coatings and Mastics.

Prior to Commencing Work:

Supervisors:

1. Prior to commencing work in any area, request a copy of the owner's Asbestos Report.

2. If there is asbestos in the work area and it needs to be removed to perform the work, request that the owner to remove it.

3. Do not commence work until you have received a notice from the owner in writing that the asbestos has been removed and it is safe to commence or return to work.

4. If there is asbestos in the work area and its presence does not impact the work, advise workers of location and what not to disturb.

Workers:

1. In all projects, bear in mind the possible presence of asbestos.

2. If you are working in an area known to contain asbestos, contact your supervisor to determine whether or not asbestos is present in the work area or adjacent areas in which you may be working.

3. If there is any doubt about pipe or duct insulation, textured ceilings, vinyl asbestos floor tile, flooring sheet goods, wall cladding or underground piping, especially in older facilities, do not commence work and notify your supervisor.

Note: To remove Asbestos, a worker requires knowledge of the type of asbestos, knowledge of the proper choice and use of PPE and Respirators, understanding of containment procedures and knowledge of proper handling, storage and waste removal procedures. For type 3 removals, training is a legal requirement.

DO NOT REMOVE OR DISTURB ASBESTOS CONTAINING MATERIAL. IF YOU ARE INSTRUCTED TO DO SO, STOP WORK AND CONTACT YOUR SUPERVISOR.

Dust

What are the hazards?

There are two kinds of hazardous dust common in construction. These include:

a) fibrous dust from insulation materials (such as asbestos, mineral wool, and glass fibre); and

b) non-fibrous silica dust from sandblasting, concrete cutting, or rock drilling.

Where does construction dust come from?

Dusts are particles which are usually many times larger than fume particles. Dusts are generated by crushing, grinding, sanding, or cutting and by work such as demolition.

Preventative Measures:

1. Ventilation:

    - Natural dilution ventilation - Welding outside in a light breeze or inside with doors and windows open provides large volumes of fresh air which should disperse airborne contaminants sufficiently in most cases. However, it is important for the welder to stay to one side of the plume.

    - Mechanical dilution ventilation - Fans such as roof exhaust fans and wall fans force outside air into and out of the building. General mechanical ventilation in most cases will deflect the plume out of the welder's breathing zone.

    - Local exhaust ventilation - Consists of an exhaust fan, air cleaner, and ducted system dedicated to removing airborne contaminants at the source and exhausting them outdoors. Local exhaust ventilation is preferred over dilution ventilation because it is better able to prevent airborne contaminants from entering the welder's breathing zone.

2. Respiratory Protection:

    - See the Respirator Selection Guide in CSAO's Construction Health and Safety Manual (M029) for activities that create dust.

    - If you are in doubt about choosing the correct Respiratory protection or if you are not sure to the source of the dust stop work and advise your supervisor.

Gas Cylinders

1. Gas cylinders, when not in use, must be stored outdoors and in locked designated area(s).

2. Different gases should be stored separately and isolated from other flammables, such as gasoline, solvents, oil and lumber.

3. Keep full cylinders separate from empty cylinders.

4. Gas cylinders are to be stored in an upright position, valve capped and secured in position.

5. A crane or hoist must not be used to transport gas cylinders.

6. A gas cylinder must be adequately secured when taken to a work area.

7. Always use proper fitting wrenches when making connections. Do not use vise grips or pipe wrenches.

8. Check valves for leaks using a soapy liquid around the valve connection.

9. No one shall use compressed air or gas to blow dust from their clothes and no one shall blow compressed air or gas at any other worker.

Hazardous Materials

Transporting Flammable Liquids:

1. Gasoline and other highly flammable liquids must not be carried in the passenger compartment of a vehicle.

2. Gasoline and other highly flammable liquids must be transported and stored in approved containers bearing the CSA or ULC label.

3. Ensure that the containers are not damaged and that caps or fittings are properly secured after filling.

4. Flammable liquids must be transported in an upright position, braced or otherwise secured to prevent over-turning.

5. When transporting gasoline or other flammable liquids in a van, place the containers in the rear of the van with adequate ventilation. Remove the containers from the van immediately upon arrival at the destination.

6. Provide a 5BC fire extinguisher in the driver's compartment when gasoline or other flammable liquids are transported in a van.

7. Do not use gasoline as a cleaner.

8. Gasoline engines should be shut off and allowed to cool before refuelling.

Propane:

1. Unless designed for horizontal use, propane cylinders must be kept in an upright position.

2. Propane cylinders must be stored in a well-ventilated area away from heat sources, outdoors and above grade.

3. Only approved hoses and fittings must be used to connect a cylinder to tools and equipment.

4. When not in use, propane cylinders and hose-connected devices must not be left in trenches or other low-lying areas. Propane is heavier than air and can settle in dangerous concentrations at the bottom of trenches, manholes, vaults, basements, sumps and other below-grade areas.

5. Never look for leaks in a propane cylinder or hose with a flame. Use soapy water.

Oxygen & Acetylene:

1. Leather gauntlet gloves and goggles with № 4 or 5 lens shade must be worn by workers using an oxyacetylene cutting torch. № 4 or 5 lenses do not remove arc-welding rays.

2. Oxygen and acetylene cylinders must be secured in an upright position at all times during storage, use and transportation.

3. Cylinders should be stored in a well-ventilated area, outside with overhead protection from the weather.

4. Protective caps must be in place when the cylinders are not in use or when they are being moved.

5. Type BC fire extinguishers must be available whenever oxyacetylene cutting is being done.

6. Cylinders must not be placed where they may become part of an electric circuit or be inadvertently struck by a welding rod.

7. Cylinders must be hoisted in properly rigged racks or baskets to keep them secure and upright.

8. Workers using oxyacetylene must not carry butane lighters.

9. Oxygen or acetylene torches must not be used to blow dust from work surfaces, clothing or skin.

10. Do not move cylinders without first closing the valves.

11. Do not use regulators, hoses or torches unless they are working properly.

12. Use only a spark lighter to ignite torches. Never use matches or a cigarette lighter.

13. A leaking gas cylinder must be shut off and removed to an outdoor location away from ignition sources and marked to be readily identifiable. The supplier should be notified about the defective cylinder.

14. Keep acetylene cylinders away from heat source. The surrounding temperature must be kept below 54 C (130 F).

15. Empty cylinders must be stored separately from full cylinders. Store acetylene cylinders separately from oxygen cylinders.

16. Cylinders must not be placed where materials or equipment can strike, fall on or knock them over.

17. Supply hoses must be protected from traffic.

Hearing Protection

Hearing Loss:

- Any reduction in the normal ability to hear is referred to as a loss of hearing. A hearing loss can be either temporary or permanent.

- With a temporary hearing loss, normal hearing will usually return after a rest period away from all sources of intense or loud noise. The recovery period may be minutes, hours, a day or perhaps even longer. Temporary hearing loss occurs when hair cells in the inner ear have been bent by vibrations and need time to bounce back.

- Permanent hearing loss is the result of hair cell or nerve destruction within the inner ear. Once these important parts of the hearing process are destroyed, they can never be restored or regenerated. The resulting permanent hearing loss, also referred to as permanent threshold shift (PTS), can range from slight impairment to nearly total deafness.

Hearing Loss Factors:

Type of noise:	Continuous, intermittent, impact, high or low frequency.
Intensity of noise:	Level of loudness.
Duration of exposure:	Length of time worker subjected to noise - for example, during day, on specific shifts.
Employment duration:	Years worker subjected to noise.
Type of noise environment:	Character of surroundings - for example, enclosed, open, reflective surfaces.

Source distance(s):	Distance of worker from noise source.
Worker's position:	Position of worker relative to noise source.
Worker's age:	For instance, a 20-year-old apprentice versus a 50-year-old journey-person.
Individual susceptibility:	Sensitivity difference, physical impairments.
Worker's present health:	Whether a worker has any detectable losses or ear diseases.
Home and leisure activities:	Exposures to noise other than occupational, such as hunting, skeet shooting, earphone music, snowmobiling, etc.

Training:

All workers who wear Hearing Protection Devices (HPDs) must be trained to fit, use, and maintain the protectors properly. Workers must be instructed in the proper fitting of HPDs as recommended by the manufacturer. Training should include a demonstration. Workers should then practice using the HPDs under close supervision. Checks are needed to ensure the best possible protection.

Workers should understand the following:

- that there is risk of hearing loss increases if HPDs are not worn in noisy environments (eight-hour exposure of 85 dBA);
- that wearing HPDs is required in all situations where noise exposure may damage hearing;
- that to be effective an HPD must not be removed even for short periods;
- that various HPDs are available to accommodate differences in ear canal size, jaw size, head size and shape, comfort level, compatibility with other forms of PPE, etc.;
- that proper fit is essential to achieve maximum protection.

Choosing the Correct Hearing Protection:

CSA Standard Z94.2, Hearing Protectors, identifies classes of hearing protectors as A, B, and C. Class A protectors offer the highest ability to attenuate, followed by B and C.

Use the following table to identify proper hearing protectors based on noise:

Maximum Noise Level (dBA)	Recommended Class of Hearing Protector
Less than 85	No protection required
Up to 89	Class C
Up to 95	Class B
Up to 105	Class A
Up to 110	Class A plug + Class A or Class B muff
More than 110	Class A plug + Class A or Class B muff and limited exposure

Use the following table to compare typical construction noise levels with the work you are performing. Note: If more than one activity is being performed near the same location, the noise levels will increase. Choose your protection based on the highest noise levels.

Equipment*	Noise Level (dBA) at Operator's Position
Cranes	78 - 103
Backhoes	85 - 104
Loaders	77 - 106
Dozers	86 - 106
Scrapers	97 - 112
Trenchers	95 - 99
Pile Drivers**	119 - 125
Compactors	90 - 112
Explosive-actuated Tools**	120 - 140
Grinders	106 - 110
Chain Saws	100 - 115
Concrete Saws	97 - 103
Sand Blasting Nozzle	111 - 117
Jackhammers	100 - 115
Compressors	85 - 104

* Generally, newer equipment is quieter than older equipment. (For noise levels of specific equipment, contact the Construction Safety Association of Ontario.)
** Pile drivers and explosive-actuated tools generate intermittent or "impulse" sound.

Manual Lifting

1. Size up the load. If you think you need help, ask for it.

2. Get a good footing.

3. Bend your knees and get a good grip on the object to be lifted.

4. Keep your back straight, lift with your legs, and keep the object being lifted close to your body.

5. Keep your balance and do not twist or turn as you lift.

6. To put the object down again, do not bend from the waist. Keep your back straight and bend your knees, keeping the object close to your body until it is placed in a secure position.

Propane

Since propane is heavier than air and invisible, it is of special concern when it is used on the job site. All installations and use of this product must comply with the legislation set out for its safe use.

1. Suppliers delivering the product or setting up the equipment must be trained in the safe handling of the material.

2. Nylon slings must be used in a "choker" fashion when loading, off-loading or lifting propane tanks.

3. "Lifting lugs" provided on tanks are not to be used. Slings are to be wrapped around the shell of the tank.

4. Tank valves and regulators are to be removed from the tank prior to moving.

5. Crane hooks shall be equipped with a "safety latch".

6. All trucks, cranes or equipment used to handle propane tanks must be equipped with a fire extinguisher appropriate for the size and type of tank.

7. Except in an emergency, any movement or repositioning of tanks shall be performed by a competent worker.

8. Tanks are not to be heated to increase flow.

9. When in use, propane bottles are to be securely held in an upright position.

10. Tanks are not to be hooked up and used without proper regulators.

Propane and Temporary Heat

Reg. 211/01 for Propane Storage and Handling states that, "no person shall handle propane unless the person is the holder of a certificate or ROT (record of training) for that purpose".

When installing and using propane (natural gas) cylinders, the following rules must be followed:

1. The cylinders are to be installed and secured in an upright position to prevent from falling.

2. Use only the proper tools for connecting any hoses or appliances to the cylinders.

3. Only workers certified in the use of propane shall be permitted to install the equipment. This includes the changing of cylinders.

4. Cylinders are to be transported in an upright position. They are to be secured from falling and/or lifted only if secured in a proper lifting cage that is designed for this purpose.

5. Adequate fire protection equipment that is suitable for use on propane fires shall be available in the vicinity of the equipment being used, and all workers shall be trained in the use of this equipment.

6. All connections are to be checked on a daily basis for leaks and proper installation ("Soap Test"). Any repairs to equipment shall be completed only by qualified people.

7. Where this equipment is installed and/or used in an enclosed area, provision is to be made for proper and adequate ventilation.

8. Safety devices, such as pressure release valves and regulators are not to be disabled or modified, unless a qualified technician carries out this work.

9. Personal protective equipment shall be used when handling propane (safety glasses, gloves and long sleeved shirts). Propane under pressure is extremely cold and can cause frostbite.

10. Do not use or store cylinders of propane in low areas, such as trenches, manholes or basements. Propane is heavier than air and will collect in low areas.

Solvents and Flammable Liquids

Cleaning solvents are used in day-to-day construction work to clean tools and equipment. Special care must be taken to protect the worker from hazards which may be created from the use of these liquids. Wherever possible, solvents should be nonflammable and nontoxic.

The foreman must be aware of all solvents/flammables that are used on the job, and be sure that all workers who use these materials have been instructed in their proper use and any hazard they pose. The following practices will apply when solvents/flammables are used:

1. Use nonflammable solvents for general cleaning.

2. When flammable liquids are used, make sure that no hot work is permitted in the area.

3. Store flammables and solvents in special storage areas.

4. Check toxic hazards of all solvents before use (MSDS).

5. Provide adequate ventilation where all solvents and flammables are being used.

6. Use goggles or face shields to protect the face and eyes from splashes or sprays.

7. Use rubber gloves to protect the hands.

8. Wear protective clothing to prevent contamination of worker's clothes.

9. When breathing hazards exist, use the appropriate respiratory protection.

10. Never leave solvents in open tubs or vats. Return them to storage drums or tanks.

11. Ensure that proper containers are used for transportation, storage and the field use of solvents/flammables.

12. Where solvents are controlled products, ensure that all employees using or in the vicinity of use or storage are trained in the Workplace Hazardous Materials Information System (WHMIS).

13. Ensure all WHMIS requirements are being met.

Welding Fumes (Vapours and Gases)

What are the hazards?

The most common hazards are air borne contaminants generated by welding.

These include:

a) Fumes - Beryllium, Cadmium, Chromium, Lead, Nickel and Zinc

b) Vapour/Gases - Hydrogen fluoride, Nitrogen oxide, Ozone, Phosgene, Phosphine, and Asphyxiants

How does welding create these hazards?

Fumes:

1. Some of the metal melted at high temperatures during welding vaporizes. The metal vapour then oxidizes to form a metal oxide. When this vapour cools, suspended solid particles called fume particles are produced. Welding fumes consist primarily of suspended metal particles invisible to the naked eye.

2. Fume particles may reach deep into the lungs and cause damage to lung tissue or enter the bloodstream and travel to other parts of the body.

Vapour/Gases:

1. A gas is a low-density chemical compound that normally fills the space in which it is released. It has no physical shape or form. Vapour is a gas produced by evaporation.

2. Several hazardous vapours and gases may be produced by welding. Ultraviolet radiation, surface coatings, shielding gases, and rod coatings are primary sources of vapours and gases.

3. Overexposure may produce one or more of the following respiratory effects:
   - inflammation of the lungs
   - pulmonary edema (fluid accumulation in the lungs)
   - emphysema (loss of elasticity in lung tissue)
   - chronic bronchitis
   - asphyxiation.

Preventative Measures:

Ventilation:

a) Natural dilution ventilation - Welding outside in a light breeze or inside with doors and windows open provides large volumes of fresh air which should disperse airborne contaminants sufficiently in most cases. However, it is important for the welder to stay to one side of the plume.

b) Mechanical dilution ventilation - Fans such as roof exhaust fans and wall fans force outside air into and out of the building. General mechanical ventilation in most cases will deflect the plume out of the welder's breathing zone.

c) Local exhaust ventilation - Consists of an exhaust fan, air cleaner, and ducted system dedicated to removing airborne contaminants at the source and exhausting them outdoors. Local exhaust ventilation is preferred over dilution ventilation because it is better able to prevent airborne contaminants from entering the welder's breathing zone.

Respiratory Protection:

Respiratory protection will not be required for most welding operations if proper ventilation is provided. However, when ventilation or other measures are not adequate, or when the welding process creates toxic fumes (as with stainless steel and beryllium), respiratory protection must be worn.

See the Respirator Selection Guide in CSAO's Construction Health and Safety Manual (M029) for Welding and Flame Cutting activities.

E. Traffic Control:

Excavate Right-of-Ways

1. Obtain necessary excavation permit from the jurisdictional authority.

2. Ensure Traffic Plan is in place.

3. Examine the nature of the traffic at the work site to fully understand the consequences of the proposed interruption.

4. Review time restrictions for closing or diverting traffic.

5. Taking into consideration weather conditions and hours of work, place appropriate signs, cones, flashers, and barricades. (See handbook for details.)

6. Review the set-up to ensure a safe movement of vehicular traffic and pedestrians.

7. Assign flag-persons to their duties.

8. Bring in equipment and manpower as necessary.

Mobile Equipment

Field workers must always be aware of mobile equipment operating in the area. Use the following guidelines to reduce the risk of personal injury.

Do:

1. Wear a florescent traffic vest at all times.

2. Ensure that the operator sees you.

Do Not:

1. Walk beside, in front, or behind mobile equipment that is operating.

2. Position yourself between the swing radius of articulating machinery and other stationary objects.

3. Assume an operator can always see you.

4. Use the bucket as work platform or as a means of personnel transport.

Moving Vehicles and Equipment

This practice is intended to ensure the safe movement and use of vehicles, machines and equipment in accordance with the Regulations for Construction Projects.

1. The Site Superintendent shall ensure that all workers, contractors and subcontractors will be informed of this procedure before moving or using vehicles, machines and equipment.

2. All workers, contractors and subcontractors will use this procedure when moving or using vehicles, machines and equipment.

3. When using vehicles, machines or equipment near energized overhead electrical conductors, no part shall be brought closer than minimum distance listed in the following table:

Nominal phase-to-phase voltage rating	Minimum distance
750 or more volts, but no more than 150,000 volts	3 metres
more than 150,000 volts, but no more than 250,000 volts	4.5 metres
more than 250,000 volts	6 metres

4. Operators of vehicles, machines and equipment shall be assisted by signallers if the operator's view of the intended path of travel is obstructed and/or a person could be endangered by the vehicle, machine or equipment and its load.

5. A competent worker shall be designated as a signaller. Both the operator and signaller shall jointly establish the procedures by which the signaller assists the operator and both will follow those procedures. A loud signalling device, such as a whistle should be used to indicate either "STOP" or "GO".

6. The signaller should be walking with the vehicle, machine, or equipment in a manner that gives the signaller an unobstructed view of the intended path of travel and in full view of the operator.

7. The signaller shall station themselves in such a position that they have a clear view of the equipment and the electrical conductor and be in full view of the operator. The signaller shall warn the operator by the agreed method if any part of the equipment or its load may approach the minimum distance as listed in the above table in item 3.

8. If it is possible that a part of the equipment or its load may encroach upon the minimum distance listed in the above table in item 3, a legible sign that is visible to the operator and warns of the potential electrical hazard shall be posted at the operator's station.

Traffic Control

Temporary Signage:

Working on road construction projects, safety precautions must be in place to protect workers and the general public. In order to install temporary traffic control devices, workers should follow this safe work practice.

1. Complete or review the project hazard assessment and communicate the findings to co-workers.

2. Ensure the vehicle is equipped with directional control signage.

3. Ensure the vehicle is inspected prior to use.

4. Ensure signs, poles, and other traffic control devices are secure before proceeding to the work site.

5. Ensure appropriate personal protective equipment is available, in good condition and used (vest, hardhat, foot protection, etc.).

6. Do not ride in the back of the vehicle.

7. Use approved lifting devices and proper lifting techniques.

8. Be aware of pinch points.

9. Always attempt to work facing traffic flow.

Traffic Control Procedures:

1. Stop the first lane of traffic (closest to the curb) as per previous procedure.

2. Walk to a point where you can be seen by traffic in the second lane but not directly into the path of oncoming traffic.

3. Display the "Stop" sign and your raised free hand while maintaining eye contact.

4. When the first vehicle is stopped, walk to a position where you can be seen by traffic coming up behind the stopped vehicles.

5. Keep the "Stop" sign held high, maintain eve contact and keep your free hand raised with the palm facing traffic.

6. Allow construction activity to proceed after it is safe to do so while maintaining a safe distance from the equipment.

7. When it is safe for traffic to proceed, walk in a straight line back to the side of the road.

8. If there is more than one lane stopped, release one lane at a time as you move toward the curb.

9. Turn the paddle to display the "Slow" sign to the stationary vehicles and with your free arm wave the traffic through.

10. Do not wave the stop/slow paddle.

11. For complete information, refer to your flagperson handbook.

F. Tools:

Chain Saws

Chain saws are used for many jobs in construction. Since this tool was primarily meant for use in the logging industry, it can be an unfamiliar tool to some workers.

Workers must be trained in its safe use. This training must include a minimum of the following elements:

1. Proper personal protective equipment to be worn as set out by the manufacturer and the Occupational Health & Safety Legislation.

2. Fuelling of the saw must be done in a well-ventilated area and not while running or hot.

3. An approved safety container with approved spout or funnel must be used to refuel the saw.

4. The correct methods of starting, holding, carrying, storage and use of the saw as directed by the manufacturer must be used.

5. Ensure that the chain brake is functioning properly and adequate to stop the chain.

6. The chain must be sharp, have the correct tension, and be adequately lubricated.

7. When carrying/transporting a chain saw, the bar guard must be in place, the chain bar must be toward the back and the motor must be shut off.

8. The chain saw must not be used for cutting above shoulder height.

9. Chain saws must comply with CSA Standards Z62.1-03.

Hand-Held Power Circular Saws

This type of power hand tool is one of the most commonly used in construction. Because of its widespread use, there are numerous accidents due to thoughtless acts.

The following are the minimum accepted practices to be used with this saw.

1. Approved safety equipment, such as safety glasses or a face shield, is to be worn.

2. Where harmful vapours or dust is created, approved respiratory protection is to be used.

3. The proper blade, one designed for the work to be done, must be selected and used.

4. The power supply must be disconnected before making any adjustments to the saw or changing the blade.

5. Before the saw is set down, ensure the retracting guard has fully returned to its down position.

6. Both hands must be used to hold the saw while sawing.

7. Maintenance is to be done according to manufacturer's specifications.

8. Ensure all cords are clear of the cutting area before starting to cut.

9. Before cutting, check for foreign objects or any other obstruction which could cause the saw to "kick back".

10. When ripping, make sure the stock is held securely in place. Use a wedge to keep the stock from closing and causing the saw to bind.

Compressed Air

Air powered tools in construction range from stapling guns to jack hammers. If not treated with respect, these tools can become a detriment rather than a benefit.

1. Compressed air must not be used to blow debris or to clear dirt from any worker's clothes.

2. Ensure that the air pressure has been turned off and the line pressure relieved before disconnecting the hose or changing tools.

3. All hose connectors must be of the quick disconnect pressure release type with a "safety chain/cable".

4. Wear personal protective equipment such as eye protection and face shields. Restrict access to the area or ensure other workers in the area are aware of

hazards.

5. Hoses must be checked on a regular basis for cuts, bulges, or other damage. Ensure that defective hoses are repaired or replaced.

6. A proper pressure regulator and relief device must be in the system to ensure that correct pressures are maintained.

7. The proper air supply hoses must be used for the tool/equipment being used.

8. The equipment must be properly maintained according to the manufacturer's requirements.

Defective Tools

Detective tools can cause serious and painful injuries. If a tool is defective in some way, **DO NOT USE IT**.

Be aware of problems like:

- chisels and wedges with mushroomed heads;
- split or cracked handles;
- chipped or broken drill bits;
- wrenches with worn out jaws; and
- tools which are not complete, such as files without handles.

To ensure safe use of hand tools, remember:

1. never use a defective tool;
2. double check all tools prior to use; and
3. ensure defective tools are repaired.

Air, gasoline or electric power tools, require skill and the operators' complete attention, even when they are in good condition. Don't use power tools when they are defective in any way.

Watch for problems like:

- broken or inoperative guards;
- insufficient or improper grounding due to damage on double insulated tools;
- no ground wire (on plug) or cords of standard tools;
- the on/off switch not in good working order;
- tool blade is cracked; and
- the wrong grinder wheel is being used, or the guard has been wedged back on a power saw.

Remove all defective tools from the work area and mark on it: **"DEFECTIVE - DO NOT USE"**.

Explosive/Powder Actuated Fastening Tools

There are a number of tools that utilize an explosive charge in use throughout the construction industry. The manufacturers of these devices provide detailed instructions regarding their use and maintenance. These instructions, along with specific legislation shall be closely adhered to at all times.

The following general recommendations apply to all explosive/powder actuated tools.

1. Only properly trained and qualified personnel are to use this type of tool.

2. The tool must be CSA-approved for "Explosive Actuated Fastening Tools".

3. The tool should be loaded just prior to use with the correct charge for the job anticipated. Tools should never be loaded and left alone or moved to an alternate work site after being loaded.

4. The tool should never be pointed at anyone, whether loaded or unloaded. Hands should be kept clear of the muzzle at all times.

5. Explosive/powder actuated tools should always be stored in their proper lock boxes.

6. Explosive/powder actuated tools must never be used in an explosive atmosphere.

7. When used, the tool must be held firmly and at right angles to the surface being driven into.

8. Eye protection must be worn by the operator.

9. Where there is a danger of spalling, full face protection must be worn.

10. Appropriate hearing protection is to be worn.

11. To prevent free-flying studs, ensure that the material being driven into will not allow the stud to pass through it (glass block, hollow tile etc.).

12. Manufacturer's recommendations should be consulted and followed whenever there is a doubt about the material being driven into, maintenance procedures, or determining the charge to be used.

13. Always be aware of other workers. Where a hazard to other workers is created by this operation, properly sign and barricade the area.

Extension Cords

1. All portable extension cords must be of the outdoor type, rated for 300 volts, and have an insulated grounding conductor.

2. All extension cords will be CSA-approved and inspected before use.

3. Defective cords must not be used. They must either be destroyed or be tagged and removed from the job site until repaired.

4. Extension cords must be protected during use to prevent damage from sharp edges, movement of materials, and flame cutting.

Grinding

Severe injury may occur if proper personal protective equipment is not used and maintained.

1. Check the tool rest for the correct distance from the abrasive wheel, maximum 1/8" or 3 mm.

2. Replace the grindstone when adjustment of the rest cannot provide 1/8" or 3 mm clearance.

3. If the wheel has been abused and ground to an angle or grooved, reface the wheel with the appropriate surfacing tool or replace the wheel.

4. Protect your eyes with goggles or a face shield at all times when grinding.

5. Each time a grinding wheel is replaced, check the maximum approved speed (stamped on the wheel bladder) against the shaft rotation speed of the machine to ensure the safe speed is not exceeded.

6. A grinding wheel must not be operated at speeds exceeding the manufacturer's recommendation.

7. The flanges supporting the grinding wheel should be a maximum of 1/3 the diameter of the wheel, and must fit the shaft rotating speed according to the manufacturer's recommendation.

8. Bench grinders are designed for peripheral grinding. Do not grind on the side of the wheel.

9. Do not stand directly in front of the grinding wheel when it is first started.

10. Wear CSA-approved hearing protection.

Portable Grinders

Abrasive wheels can cause severe injury. Proper storage, use and maintenance of wheels must be observed.

1. Familiarize yourself with the grinder operation before commencing work.

2. Ensure proper guards are in place.

3. Never exceed the maximum wheel speed RPM (every wheel is marked).

4. Check the speed marked on the wheel and compare it to the speed on the grinder.

5. When installing the wheel, check for cracks and defects. Ensure mounting flanges are clean and the mounting blotters are used. Do not over tighten the mounting nut.

6. Before grinding, run the newly mounted wheel at operating speed, checking for vibration.

7. Do not use grinders near flammable materials.

8. Never use the grinder for jobs it is not designed for, such as cutting.

9. Wear CSA-approved personal protective equipment including eye, face, hand, foot, and hearing protection.

Power Tools

1. Read the manual carefully to learn your power tool's applications, limitations and any potential hazards.

2. Ground your tool unless it is double insulated.

3. Do not use power tool in rain, damp or wet locations or in the presence of explosive atmospheres (gaseous fumes, dust or flammable materials).

4. Remove materials or debris that may be ignited by sparks.

5. Keep work area clean and well lit.

6. Do not wear loose clothing or jewelry.

7. Wear a protective hair covering to contain long hair, which might get caught in moving parts.

8. Wear rubber gloves and insulated non-skid footwear outdoors.

9. Keep hands and gloves away from moving parts.

10. Wear safety goggles or glasses with side shields that comply with current safety standards.

11. Hearing protection is a must during extended use of a power tool.

12. Wear a dust mask for dusty operations.

13. Wear other personal protective equipment as required.

14. Keep a fire extinguisher nearby.

15. All bystanders must be kept at a safe distance from the work area to protect themselves and the operator.

16. Provide barriers or shields as necessary to protect others in the work area from sparks and debris.

17. Secure work with a clamp, vise or other practical means of holding work secure. Use both hands to control tool.

18. Do not use a tool or attachment to do a job for which it is not recommended. Do not alter a tool.

19. Non-recommended accessories may be hazardous and shall not be used. Install and maintain accessories as per tool instructions.

20. Do not defeat a guard or other safety device when installing an accessory or attachment.

21. Inspect guards and other parts before use. Check for misalignment, binding of moving parts, improper mounting, broken parts and any other condition that my affect operation.

22. If abnormal noise or vibration occurs the tool must be turned off immediately and the problem corrected before further use of the tool.

23. Check that all adjusting keys and wrenches are removed from the tool before the power is turned on.

24. Prevent body contact with grounded surfaces, such as pipes, radiators, ranges and refrigerators.

25. When making blind or plunge cuts, always check the work area for hidden wires or pipes.

26. Hold your tool by insulated non-metal grasping surfaces.

27. Use a Ground Fault Circuit Interceptor (GFCI) to reduce shock hazards.

28. Do not force a tool to perform at a rate other than for what it was designed. Excessive force causes operator fatigue, increased wear and reduced control.

29. Keep hands away from all cutting edges and moving parts.

30. Never carry tool by its cord or unplug it by yanking cord from the outlet. Pull plug rather than cord to reduce the risk of damage.

31. Keep the cord away from heat, oil, sharp objects, cutting edges and moving parts.

32. Do not overreach. Maintain proper footing and balance at all times. Use extra care when using tool on ladders, roofs, scaffolds, etc.

33. Do not use a tool when you are tired, distracted or under the influence of drugs, alcohol or any medication which decreases control.

34. Unplug tool when it is not in use, before changing accessories or performing recommended maintenance.

35. Maintain tools. Keep handles dry, clean and free from oil and grease. Keep cutting edges sharp and clean. Follow instructions for lubricating and changing accessories.

36. Periodically inspect tool cords and extension cords for damage.

37. When power tools are not in use, store them in the proper storage cases. If equipment does not have a proper storage case, store in an on-site job box with lock, or return to storage crib at the shop.

38. Report any damaged tools immediately so a replacement or repair can take place. Tag the damaged tools with "DO NOT USE".

39. Maintain labels and nameplates.

40. Watch what you are doing and use common sense.

Propane Torch Use

A flame from a propane torch can reach temperatures of over 1093?c. Roofers applying torch on products can receive serious burns from both the torch flame and the hot modified bitumen sheets they are applying.

1. When using a torch, workers must wear additional protective clothing (gloves, eye protection).

2. Prior to use, ensure that torching equipment is in good working order and the cylinder valves are clean. Check that fittings, hoses and heads are secure.

3. DO NOT USE defective equipment.

4. Use soapy water to check connections for leaks.

5. Only use a spark lighter or electronic starter to light torch.

6. Protect the propane hose from damage by:
   - keeping torch flame away from hose;
   - keeping hose free of kinks;
   - not running over hose with equipment;
   - not using the hose to lift the cylinder.

7. A torch flame is difficult to see in daylight, be aware of and keep away from the flame.

8. NEVER LEAVE AN OPERATING TORCH UNATTENDED.

9. Other than the operator, all workers should stay at least 1 metre away from the torch.

10. Set torch units into support leg position when not in use.

11. To shut off torch, close cylinder valve first, let gas burn out, close torch valve.

12. At the end of the day, disconnect hoses and store properly.

Personal Protective Equipment

Personal protective equipment (PPE) is the last means of protecting workers from injury. PPE is only employed when administrative and engineering controls are ineffective or insufficient. Hazards should be minimized by ensuring that all jobs are well planned, workers are properly trained, and safe work practices and safe job procedures are followed. PPE provides an additional degree of protection from injury.

Policy and Procedures:

RND Construction Ltd. requires all employees, subcontractors and visitors to wear the proper PPE on each job site. The following procedures shall be observed at each workplace or job site:

a) Site Supervisors shall ensure that all workers on site wear:
- CSA Grade 1 safety footwear,
- CSA Class G or E hard hats,
- CSA-approved safety glasses (in circumstances where there is a risk of injury to the eyes).

b) Other PPE (harnesses, respirators, hearing protection, etc.) is available and is used when needed.

c) Workers are trained in the use and care of the PPE they are using.

d) Records of training are available on site.

e) PPE is inspected regularly for defects/damage and any defective equipment is removed from service.

f) PPE requirements are communicated to all new hires and to all subcontractors/visitors on site.

g) Workers use the PPE required for the task(s) they are performing.

Types of Personal Protective Equipment (PPE):

PPE in our safety program generally falls into two categories.

A. Basic: The PPE that should be worn at all times by all personnel in the work place. This includes hard hats, safety glasses, safety footwear, and appropriate clothing.

1. Eye and Face Protection

This PPE is designed to protect the worker from such hazards as:
- flying objects and particles;
- molten metals;
- splashing liquids;
- ultraviolet, infrared, and visible radiation (welding).

There are two types of eye and face protection:

a) Basic Eye Protection includes:
   - eye cup goggles;
   - monoframe goggles and spectacles with side shields.

b) Face Protection includes:
   - metal mesh face shields for radiant heat or hot and humid conditions;
   - chemical and impact resistant (plastic) face shields;
   - welders' shields or helmets with specified cover;
   - filter plates and lenses.

Hardened glass prescription lens and sport glasses are not an acceptable substitute for proper, required industrial safety eye protection.

Comfort and fit are very important in the selection of safety eye wear. Lens coatings, venting or fittings may be needed to prevent fogging.

Contact lenses should NOT be worn at the work site. Contact lenses may trap or absorb particles or gases causing eye irritation or blindness. Hard contact lenses may injure the eye when hit.

Basic eye protection should be worn with face shields. Face shields alone often are not enough to fully protect the eyes from work hazards. When eye and face protection is required, advice from special specialists, information on Material Safety Data Sheets (MSDS) for various chemicals, or your supplier will help you select such protection.

Do

✓ Ensure your eye protection fits properly (close to the face);
✓ Clean safety glasses daily, or more often if needed;
✓ Store safety glasses in a safe, clean, dry place when not in use;
✓ Replace pitted, scratched, bent and poorly fitted PPE. (Damages to face/eye protection interferes with vision and will not provide the protection it is designed to deliver.)

Do Not

✗ Modify eye/face protection;
✗ Use eye/face protection which does not have a proper certification. (Various markings or the safety stamp for safety glasses are usually on the frame inside the temple near the hinges of the glasses.)

For more information, refer to:
- *Occupational Health and Safety Act and Regulations for Construction Projects*
- *CSA Standard CAN/CSA-Z94.3-92: Industrial Eye and Face Protectors.*

2. Foot Protection:

Safety footwear is designed to protect against foot hazards in the workplace. Safety footwear protects against compression, puncture injuries, and impact.

Safety footwear is divided into three grades, which are indicated by colored tags and symbols:
- the tag color tells the amount of resistance the toe will supply to different weights dropped from different heights;
- the symbol indicates the strength of the sole (for example, a triangle means a puncture resistant sole able to withstand 135 kg (300 ft. lbs) of pressure without being punctured by a 5cm (2 inch) nail).

In construction, it is recommended that only the green triangle grade of footwear be used, which also gives ankle support.

Your choice of protective footwear should always over-protect, not under-protect.

Do

✓ Choose footwear according to the job hazard and approved standards;
✓ Lace up boot and tie laces securely (boots do not protect if they are a tripping hazard or fall off);
✓ Use a protective boot dressing to help the boot last longer and provide greater water resistance (wet boots conduct current);
✓ Choose a high-cut boot to provide ankle support (fewer injuries).

Do Not

✗ Wear defective safety footwear (i.e., exposed steel toe caps);
✗ Under protect your feet;
✗ Modify safety footwear.

For more information, refer to:
- *Occupational Health and Safety Act and Regulations for Construction Projects*
- *CSA Standard CAN/CSA-Z195-M.92: Protective Footwear .*

3. Head Protection:

Safety headwear is designed to protect the head from impact from falling objects, bumps, splashes from chemicals or harmful substances, and contact with energized objects and equipment.

In construction, the recommended type of protective headwear is a hard hat which has the required "dielectric strength". There are many designs, but they all must meet CSA requirements for Class G (General Usage) and Class E (Electrical trades).

Most head protection is made up of two parts:
a) the shell (light and rigid to deflect blows);
b) the suspension (to absorb and distribute the energy of the blow).

Both parts of the headwear must be compatible and maintained according to manufacturer's instructions. If attachments are used with headwear, they must be designed specifically for use with the specific headwear used. Bump caps or laceration hats are not considered safety helmets.

Inspection and maintenance:
Proper care is required for headgear to perform efficiently. Its service life is affected by many factors, including temperature, chemicals, sunlight, and ultraviolet radiation (welding). The usual maintenance for headgear is simply washing with a mild detergent and rinsing thoroughly.

Do

✓ Replace headgear that is pitted, holed, cracked or brittle;
✓ Replace headgear that has been subjected to a blow even though damage cannot be seen;
✓ Remove from service any headgear if its serviceability is in doubt;
✓ Replace headgear and components according to manufacturer's instruction;
✓ Consult regulations or your supplier for information on headgear.

Do Not

- ✗ Drill, remove peaks, alter the shell or suspension in any way;
- ✗ Use solvents or paints on the shell (makes the shell breakdown);
- ✗ Put chin straps over the brims of certain classes of headgear;
- ✗ Use any liner that contains metal or conductive material;
- ✗ Carry anything in the hard hat while wearing the hard hat.

B. Specialized: Covers PPE which is used only for specific jobs or for protection from specific hazards. This includes gloves, welder's goggles, respiratory protective equipment, fall arresting equipment and special clothing.

1. Eye Protection for Welders:

Welders and welders' helpers should wear eye protection adequate for the job they are doing. Anyone else working in the area should also wear eye protection where there is a chance they could be exposed to a flash.

2. Respiratory Protection:

A wide variety of equipment can be used to protect workers from respiratory hazards. Devices range from simple, inexpensive dust masks to sophisticated self-contained breathing apparatus. Choosing the proper respiratory protection is key to protecting yourself from hazardous gases, vapours, fumes, mists and dusts.

Respiratory protective equipment can prevent illness, disease, and death from breathing hazards. However, the equipment must be properly selected, fitted, worn, and maintained to ensure maximum protection.

Respirator Selection:
In order to select the proper respirator for a particular job, it is necessary to know and understand:

- the characteristics of the contaminant(s),
- the anticipated exposure conditions,
- the performance limitations of the equipment,
- any legislation that applies.

Refer to the Material Safety Data Sheet (MSDS) or Sheets if more than one product is being used. The MSDS will identify any respiratory protection required and should specify the type of respirator to be worn.

It is also important to realize that facial hair and deep facial scars can interfere with the seal between the respirator and face. Respirators should only be selected by someone who understands all of these factors.

Refer to "Respirator Selection Guide for Common Construction Activities" from CSAO's Construction Health and Safety Manual (M029).

If there is any doubt about the correct type of protection for a specific material and operation, consult the manufacturer of the product, a supplier or manufacturer of respirators, or the CSAO.

Fit Testing:
Before each use, you must perform a Positive and Negative pressure test. This applies to respirators only. If the required protection is a filtering half face piece (dust mask) then follow manufacturer's instructions.

- Negative Pressure Test:
  The wearer puts on the respirator and adjusts it so that it feels relatively comfortable. Then the air inlets are blocked off with the hands or a plastic cover, and the wearer inhales gently. If the respirator is properly fitted, it should collapse slightly and not permit any air into the facepiece. If leakage is detected, the mask should be readjusted and the test repeated until the fit is satisfactory.

- Positive Pressure Test:
  The wearer puts on the respirator and adjusts it so that it feels relatively comfortable. Then the exhaust port of the respirator is covered and the wearer tries to exhale gently. The face piece should puff away from the wearer, but no leakage should occur.

General Instructions:
- Filters should be changed as follows:
  - Dust/mist/fume filters should be changed when there is noticeable resistance to normal breathing.
  - Chemical cartridge respirators should be changed when the gas or vapour can be tasted or smelled.
  - Any filter should be changed at the interval specified by the manufacturer or when damaged in any way.
- Inhalation and exhalation valves should be checked before the respirator is used.
- Damaged face piece, straps, filters, valves, or other parts should be replaced with "original equipment" parts.
- Face pieces should be washed with mild soapy water as often as necessary to keep them clean and wearable.
- Respirators should be assigned to the exclusive use of individual workers.
- Where a respirator must be assigned to more than one worker, it should be disinfected after each use. (Check with the manufacturer regarding acceptable sanitizers/disinfectants.)
- Check all supply hoses, valves, and regulators on supplied-air respirators as specified by the manufacturer.

- SCBA units and high-pressure cylinders of compressed breathing air should be used and maintained in accordance with current Canadian Standards Association Z180.1 Compressed Breathing Air and Systems, and Z94.4 Selection, Care and Use of Respirators.
- Compressors and filtration systems used with supplied-air respirators must be maintained in accordance with the manufacturers' recommendations.
- Consult the manufacturer for information on respirator cartridge change-out.

3. Fall Protection:

The Management of RND 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, RND Construction Ltd. will provide each employee with his or her own personal CSA-approved and up-to-date fall arrest equipment. This is to include safety harness, lifeline, and lanyard and rope grab.

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 the 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. Training will include the Basics of Fall Protection program issued by CSAO, which has been approved for use by the Ministry of Labour of Ontario.

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:
- falling more than 3 metres;
- falling more than 1.2 metres, if the work area is used as a path for a wheelbarrow or similar equipment;
- falling into operating machinery;
- falling into water or another liquid;
- falling into or onto a hazardous substance or object;
- 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:

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

Fall Arrest Protection consists of a lanyard or lifeline/lanyard set-up where the wearer is allowed some movement at an exposed edge to perform his/her work and if he should trip or lose his/her balance he could possibly fall over the edge.

This fall protection system must be adjusted so as to limit the wearer's fall to within 1.5 metres from where he stands or sits and only full body safety harnesses should be allowed for his/her protection.

<u>Equipment Standards and Set-Up</u>:

- All safety belts, full body harnesses and lanyards must be CSA certified and carry a CSA label.
- Safety harnesses and belts are to be snug-fitting and worn with all hardware and straps intact and properly fastened.
- Lanyards will comply with CSA standards.
- The D-rings on the safety belts should be centered on the person's back.
- The lanyard or lifeline and lanyard combination must be secured to a rigid support capable of resisting the peak arrest forces of 1800 lbs minimum for fall arrest protection purposes and its length should be adjusted so that the wearer will be prevented from falling no greater that 1.5 metres from where he stands.
- When the lifeline consists of wire rope, or the connecting lanyard consists of nylon webbing, a shock-absorbing lanyard shall be used.

Lifelines and their Set-Up:
All lifelines shall:

- comply with CSA standards;
- be used only by one worker at a time;
- be free of any cuts, abrasions, other defects and protected against chaffing;
- be long enough to reach the ground or be knotted at the end;
- be connected at right angles to the worker's position;
- be provided with a rope grab (cam lever) device for lanyard attachment.

WARNING!

No worker shall be exposed to heights greater than three metres when near an unguarded edge to a floor, roof, platform, opening or on a ladder without first providing travel restraint, fall arrest or guardrail protection.

Any person found doing so shall be subjected to disciplinary action.

Fall protection is also required if a worker may fall into operating machinery, into water or other liquids, into or onto hazardous substances or objects regardless of the minimum three-metre ruling.

Safety Harness Checklist

Name _____

Supervisor _____ Date _____

In every case where a worker is required to wear a safety harness as required by law for his/her protection, you must check the following:

Checklist	Yes	No
1. Has the worker inspected his/her CSA approved body harness and lanyard before use as per enclosed inspection & maintenance procedure?		
2. Is the worker wearing the harness properly?		
3. Has the worker been assigned a shock-absorbing lanyard for his own use?		
4. Has the worker been assigned an approved travel restraint or life line rope for his own use?		
5. Does the worker have his own rope grab?		
6. Does the worker have his own life line/travel restraint anchored to a solid and approved anchor'?		
7. Does the worker have his rope grab attached to the rope and positioned in the right direction?		
8. Does the worker have his lanyard properly attached to the rope grab and to the center D-Ring on the back of the harness?		
9. Does the worker have the rope grab positioned to restrict him/her from being within 300mm from any edge, and/or is the rope grab positioned on the vertical life line above the worker to restrict the length of the fall to 0.6 metres as required by the Construction Regulations?		

Note: If all the answers to all these questions are not Yes, "STOP" until they are.

Health and Safety is Everyone's Business

Tools and Equipment Maintenance

It is our policy to ensure that all tools, equipment and vehicles are well maintained in order to reduce the risk of accidents or injuries.

1. Only properly trained workers are to use tools, equipment and vehicles.

2. Inspect all tools, equipment and vehicles before using.

3. For vehicles, inspection will consist of doing a circle check.

4. If applicable, maintenance schedules for all tools, equipment and vehicles are to be respected.

5. Each site supervisor is to conduct a bi-weekly inspection of all tools, equipment and vehicles on the site. This inspection is recorded bi-weekly using an Inspection Checklist.

6. If at any time a worker judges that a tool, equipment or vehicle is unsafe for use, they are to properly tag the item and inform the supervisor immediately.

7. Tools, equipment or vehicles that are tagged unsafe shall be either repaired or replaced.

REMINDER!

Always use Hand and Power Tools Safely!

1. Select the right tool for the job.
2. Keep tools in good condition.
3. Use tools the correct way.
4. Keep tools in a safe place.

Maintenance Service Log

Date	Equipment	Service Performed	Performed By