



SIERRA CONSTRUCTION HSE MANUAL

ISO 9001 Managed



ISO 14001 Certified



2023

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Health & Safety Management System

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Health & Safety Management System

SECTION I

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POLICIES



Health & Safety Policy

Sierra Construction Group and its subsidiary companies believe that our greatest asset by far is our employees. Senior management recognizes a workers right to work in a safe and healthy work environment, and accept our responsibility to educate, train, and inform employees about known hazards in the workplace.

Therefore, senior management will take all reasonable steps to ensure we provide this for our employees, our customers and the general public for the prevention of injuries and illnesses. We must develop, maintain and update effective safe work practices, safe operating procedures and proper hazard assessments.

We are committed to work in the spirit of consultation and co-operation with our workers, and to ensure compliance with all applicable Ontario legislation and any other regulatory bodies. All workers will ensure to report any unsafe acts or conditions to their supervisor immediately.

Safety in the workplace is everyone's responsibility. This includes the president of the company, senior management, supervisors, workers, subcontractors and even visitors to the jobsite.

Together we can eliminate all incidents and injuries in our workplace.

**“Health & Safety in the Workplace
Is Everyone's Responsibility”**

A handwritten signature in black ink, appearing to read 'BZ.' with a stylized flourish.

Brent Zaluski
President
January 4, 2023



Hazard Assessment Policy

Sierra Construction and its subsidiary companies recognize that hazard assessments are fundamental to their health & safety management system. Therefore, we will take the necessary steps to conduct hazard assessments for all operations, including routine, non-routine and human factors, where work is performed.

We will utilize tools like Job Hazard Assessments (JHA), Project Hazard Assessments (PHA), Workplace Violence & Harassment Assessments (WVHA), Hot Work Permits (HWP), Confined Space Permits (CSP), Fall Protection Permits (FPP) and even hazard assessments completed at the field level, the Job Assessment Review (JAR).

These hazard assessments will be conducted before the start of any task, and will be revisited/reviewed to ensure if there are any changes, they can be taken assessed as well.

Any new hazards, or potential for hazards, that are found must be brought to the supervisor's attention and reported immediately, so they can ensure the proper controls have been put in place.

**“The first step in controlling any hazard
is to first recognize it”**

A handwritten signature in black ink, appearing to read 'BZ.', written in a cursive style.

Brent Zaluski
President
January 4, 2023

Hazard Control Policy

Sierra Construction and all of its subsidiary companies recognize that once a hazard is assessed and identified, it is necessary to develop formal controls for workplace parties to follow to ensure their safety. But rather than just simply controlling the hazards, we will ensure to use proper controls.

We will develop control methods to follow a proper hierarchy, to ensure the most effective controls are put in place.

Both management and workers will be included in the development and review of the control methods, and document on the appropriate hazard assessment. The methods will be communicated to all workplace parties, through the different hazard assessment processes, orientations and toolbox talk meetings.

**“Proper Control Methods Can
Eliminate Incidents and Injuries”**

A handwritten signature in black ink, appearing to read 'BZ.', written in a cursive style.

Brent Zaluski
President
January 4, 2023



Procurement & Contractor Management Policy

Sierra Construction and all of its subsidiary companies understand that contractors, vendors and suppliers are an integral part of its every day operation.

And, with their involvement on our jobsites, they become exposed to the hazards on those sites and even create their own.

This means that we must ensure we are hiring contractors, vendors and providers that are competent and able to assess, analyze and control those hazards they may be exposed to, just like Sierra Construction workers do.

Sierra will ensure to use the criteria in this policy for the selection, monitoring and evaluation of its contractors, vendors and suppliers.

We will also lead the coordination and integration of relevant portions of our health & safety management system

**“Health & Safety
Involves Everybody”**

A handwritten signature in blue ink, appearing to read 'BZ.', positioned above the printed name.

Brent Zaluski
President
January 4, 2023



Company Rules & Disciplinary Policy

Sierra Construction and its subsidiary companies are professionals in their industry, and will hold themselves to the highest standard.

It is their objective to ensure that all workers, subcontractors and visitors conduct themselves in a professional manor.

To achieve this, Sierra Construction has set forth a list of company rules that must be followed by everyone, and make them available in a non-discreet location.

In order to ensure everyone is following the rules, anyone in violation of the company rules will be subject to the progressive disciplinary action procedure, as detailed in this policy.

**“Everyone Must Hold Themselves
To the Highest Standard”**

A handwritten signature in black ink, appearing to read 'BZ.' with a flourish.

Brent Zaluski
President
January 4, 2023



Personal Protective Equipment Policy

Sierra Construction and its subsidiary companies regularly use Personal Protective Equipment (PPE) as a common control method for many hazards.

Personal Protective Equipment is considered the “Last Line of Defense”, because while it will not always completely eliminate the actual or potential hazard, it can reduce the possible injury/illness if there is an exposure. Therefore, Personal Protective Equipment will not be the sole control method.

Because it can only work if it is used properly, we will ensure that training is given on the fit, care, maintenance and use of the regular and specialized training of personal protective equipment.

**“PPE is out Last
Line of Defense”**

A handwritten signature in black ink, appearing to read 'BZ.', written over a light blue horizontal line.

Brent Zaluski
President
January 4, 2023



Preventative Maintenance Policy

It is the objective of Sierra Construction and its subsidiary companies to ensure that machines, equipment, tools, vehicles and facilities are kept in a safe working order.

Preventative maintenance is one of the first lines of defense to keeping that so.

An inventory of all machines, equipment, tools and vehicles will be established.

This inventory will help us follow preventative maintenance schedules dictated by manufacturer, legislation and company requirements.

Records of the maintenance will be documented and kept for reference.

**“Health & Safety
Involves Everybody”**

A handwritten signature in black ink, appearing to read 'BZ.' with a stylized flourish.

Brent Zaluski
President
January 4, 2023



Training & Communication Policy

Training and communication are fundamental parts to ensure that workplace parties understand their roles and responsibilities, in order to properly implement our Health & Safety Management System.

Training aids in the development and maintenance of job specific knowledge and skills needed to work safely and efficiently.

Like training, good communication allows all workplace parties to stay current with the Health & Safety Management System.

It is the objective of Sierra Construction and its subsidiary companies to ensure proper training and communication is maintained company wide.

**“Growing Together
The Right Way”**

A handwritten signature in black ink, appearing to read 'BZ.', written over a light blue horizontal line.

Brent Zaluski
President
January 4, 2023



Workplace Inspections Policy

Sierra Construction and all of its subsidiary companies know that when conducted properly, an inspection can be an excellent tool to prevent workplace incidents and injuries. They can help equipment continue to run safely.

They can help identify any deficiencies or hazards that are present, and help identify action required before we continue to move forward.

We conduct workplace inspections to ensure we have safe working conditions at our workplace, and that we are in compliance with Ontario legislation.

Equipment and tool inspections are conducted regularly to ensure the safe usage of the equipment, long lasting life of the tool/equipment and that maintenance is being conducted as required.

Personal Protective Equipment inspections are also conducted regularly to ensure it is in the proper condition, which in turn protects a worker's safety.

**“Inspections Are Our
Proactive Approach”**

A handwritten signature in black ink, appearing to read 'BZ' with a flourish.

Brent Zaluski
President
January 4, 2023



Incident Investigation Policy

Sierra Construction and its subsidiary companies believe that all incidents & injuries are preventable. Through investigating those incidents, we can discover controls to reduce and/or even eliminate risks causing those incidents.

Whether the incident involves (or has the potential to involve) injury, illness, environmental impact, equipment/property damage, violence or harassment, Sierra Construction will investigate to find causation.

All Sierra Construction employees, sub-contractors and even visitors are required to report all incidents to the site supervisor immediately. Supervisors will then report the incident promptly to management to ensure timely reporting and submission to the appropriate authorities (MOL, WSIB) according to their requirements.

Incident reports are prepared by a supervisor with the assistance of their management and the Health & Safety department.

Findings & action items from an incident report will be communicated to the workers and Joint Health & Safety Committee. The action items will be tracked for completion and followed-up.

**“All Incidents & Injuries are
Preventable”**

A handwritten signature in black ink, appearing to read 'BZ.', written over a light blue horizontal line.

Brent Zaluski
President
January 4, 2023



Emergency Preparedness

Sierra Construction, and all of its subsidiary companies, believe that you should expect the very best, but prepare for the worst.

Therefore, we will have plans, processes and procedures in place for the possibility of any anticipated emergency.

Sierra will utilize hazard assessments to identify any possible emergency situation, and develop documented emergency response plans for each of its jobsites.

These plans will document relevant roles, responsibilities, resources and communication devices required for the anticipated emergencies.

To ensure the efficiency of our plan, we will test them periodically. We will document the results, and develop correction actions to increase their effectiveness.

This will require the involvement of senior management to support the development, testing, revision and updating of the plan. Supervision for ensuring the awareness and testing of the plan. And, the workers to have the knowledge and ability to execute the plan.

Sierra Construction will ensure to communicate relevant information to all required personnel - including workers, visitors, contractors, emergency response services, government authorities and the community

But we will also not forget, that prevention is one of the key elements of emergency preparedness.

**“Expect the Best,
Prepare for the Worst”**

A handwritten signature in black ink, appearing to read 'BZ.' with a stylized flourish.

Brent Zaluski
President
January 4, 2023



Statistics & Records Policy

Sierra Construction and its subsidiary companies understands that in order to improve its future performance, it must first look at its past performance.

This is why statistics and records must be collected and reviewed to get a clear picture of our Health & Safety Management System's performance.

Through quantitative and qualitative revision of our performance, we can identify leading & lagging indicators for our Health & Safety Management System.

**“To prepare for the future,
We must study the past”**

A handwritten signature in black ink, appearing to read 'BZ.' with a flourish.

Brent Zaluski
President
January 4, 2023



Legislation Policy

Sierra Construction and its subsidiary companies will ensure that they are familiar with all applicable Ontario legislation, regulations, standards and any other requirements that are applicable to their operations.

Through the development of our Health & Safety Program, Processes, Practices, Procedures and Hazards Assessments we will ensure our activities meet these requirements

We will also take the necessary steps to confirm our compliance, through inspections and regular revisions of our Health & Safety Program.

**“The Law is the Minimum,
But we aim for the Maximum”**

A handwritten signature in black ink, appearing to read 'BZ.', positioned above the printed name.

Brent Zaluski
President
January 4, 2023



Management Review & Change Management Policy

Sierra Construction and its subsidiary companies believe that things are continuously improving, with new and better ways all the time. The same can be said with their Health & Safety Program.

In order to ensure we are continuing to improve, is by senior management reviewing the Health & Safety Program at regularly planned intervals, and at least annually.

This review will help senior management identify Occupational Health & Safety Objectives and Goals. It will also aid in the development of action plans for the continual improvement of our Health & Safety Program.

When changes are made to our Health & Safety Program, our Management of Change process will ensure hazards are reassessed and addressed.

**“PLAN, DO
CHECK & ACT”**

A handwritten signature in black ink, appearing to read 'BZ.', written over a light blue horizontal line.

Brent Zaluski
President
January 4, 2023



Environmental Protection Policy

Sierra Construction and its subsidiary companies believe that we have been given the land and waters in which we live. Therefore, the protection of these gifts is considered to be of paramount importance. The management team is committed to an effective environmental management system based on the ISO 14001 standard, complying with applicable legal requirements, pollution prevention and will strive to preserve the land, waters and the fauna and flora that habitat within these niches whenever possible and practical.

We believe in working closely with the client, applicable government agencies and the general public to ensure all environmental issues and concerns are addressed and subsequently protected throughout each phase of a project. We will review our environmental performance annually to assess our objectives, targets and to identify opportunities for continuous improvement.

Management and supervisors recognize and accept their responsibilities to educate, train and inform employees about the known environmental risks in the general workplace and any specific risks identified in a project. From the start to the completion of a project we must take the necessary precautions to mitigate possible environmental threats.

Managers and supervisors will be held accountable to ensure we follow our environmental practices and procedures. Employees and subcontractors will also be held accountable for their environmental practices and are to report any environmental threats to their supervisor immediately.

While managers and supervisors are responsible for the implementation and enforcement of our environmental protection policy we expect all employees, sub contract employees and client's to work and conduct themselves in a manner that reflects our commitment to protect our environment and to support natural resource conservation in the community. Don't abuse – Recycle, Reduce, Re-Use.

**“Protecting the Environment is
Everyone’s Responsibility”**

A handwritten signature in black ink, appearing to read 'BZ.', written over a light blue horizontal line.

Brent Zaluski
President
January 4, 2023



Workplace Violence & Harassment Policy

Sierra Construction Woodstock Inc. and its subsidiary companies believes that employees have an absolute right to be treated with dignity and respect and to work within an environment that is free from any form of violence or harassment. Sierra Construction maintains a zero tolerance policy towards violence or harassment in the workplace.

Sierra Construction has adopted this policy, which prohibits violence and threats of violence, and encourages employees to take affirmative steps to identify potentially violent situations. Although some incidents or situations involving workplace violence may be the result of larger societal problems outside of our control, we firmly believe that by working together with our employees, the risk of workplace violence or harassment can be minimized.

The following policy applies to all employees of the Company and all workers on Sierra Construction jobsites and is intended to reinforce the Company's commitment to prevent inappropriate behaviour in the workplace.

**“No Form of Abusive Behaviour, Harassment
Or Violence Will Be Tolerated”**

A handwritten signature in black ink, appearing to read 'BZ.', positioned above the printed name.

Brent Zaluski
President
January 4, 2023



Health & Safety Representative & Committee Policy

Sierra Construction and all of its subsidiary companies believe that the involvement of its workers in the health & safety management system is crucial to its success.

Therefore they will initiate the designation of a Health & Safety Representative on all applicable jobsites. From there, a Joint Health & Safety Committee and Worker Trade Committee will be formed as required or needed.

Together with the supervision/management, these representatives and committee(s) will help to identify concerns on the jobsite, and help to correct them to make it a safety place to work.

This is how we will exercise 2 of the 3 fundamental rights of every worker, the right to know & the right to participate.

**“Together we can make our jobsite
A safe place to work”**

A handwritten signature in black ink, appearing to read 'BZ.' with a flourish underneath.

Brent Zaluski
President
January 4, 2023



Return to Work Policy

It is the belief of Sierra Construction, and all of its subsidiary companies that the health, safety and well being of its employees is first and foremost.

Our Health & Safety Policy states – “Sierra Construction realizes its greatest asset by far is our employees”.

It has been proven that when an employee that was injured on the job returns to work, if they are given “Meaningful Work”, it increases the chances of them returning to full duties faster, and they are more likely to remain working after they return.

Therefore, we will issue a “Return to Work” plan with the employee. Taking into effect any limitations or modifications given by their medical professional.

**“Healthy Workers drive
Healthy Organizations”**

A handwritten signature in black ink, appearing to read 'BZ'.

Brent Zaluski
President
January 4, 2023



Company Vehicle Policy

As an authorized driver of Sierra Construction, or any of its subsidiary companies, the driver/operator have been given certain privileges with the usage of company vehicles.

They assume the duty of obeying all motor vehicle laws, maintaining the vehicle properly at all times and following the policies and procedures outlined in the following policy.

**“Excellence in All of
Our Operations”**

A handwritten signature in black ink, appearing to read 'BZ.', written over a light blue horizontal line.

Brent Zaluski
President
January 4, 2023



Mobile Devices & Cellphone Policy

Sierra Construction and its subsidiary companies understands that the nature of its business is continually advancing.

One of the ways of this advancement, is the utilization of technology. This includes mobile devices, cell phones and software.

But with the usage of this new technology comes an introduction of new hazards.

We must establish proper standards associated with these devices, to ensure we are working with them as safely as possible.

**“Growing with the World,
As Safely as Possible”**

A handwritten signature in black ink, appearing to read 'BZ.', written in a cursive style.

Brent Zaluski
President
January 4, 2023



Fit for Duty Policy

Sierra Construction and its subsidiary companies recognize that impairment at work can be a “Recipe for Disaster”.

Whether a substance is legal, illegal, prescribed or recreational, if a worker is present on a jobsite they are expected to be “Fit for Duty”.

Sierra Construction also prohibits the possession of any illegal substances from all of its properties & jobsites.

Any workers that are prescribed medications by a licensed doctor, that may cause impairment, must discuss with their supervisor and the Health, Safety & Environmental (HSE) Department

The following policy applies to all employees of Sierra Construction, its subsidiary companies, subcontractors and visitors.

This policy is intended to reinforce the Company’s ongoing commitment to prevent injury and incident.

**“Everyone must be
Fit for Duty”**

A handwritten signature in black ink, appearing to read 'BZ.', written in a cursive style.

Brent Zaluski
President
January 4, 2023

Smoking & Vaping

PURPOSE

The purpose of this policy is to set the standard and expectations that Sierra Construction and all of its subsidiaries expect when it comes to smoking & vaping in the workplace.

DEFINITIONS

“Cannabis”

Includes:

- Any part of a cannabis plant, including the phytocannabinoids produced by, or found in, such a plant, regardless of whether that part has been processed or not, other than a part of the plant referred to in Schedule 2 of the “Cannabis Act (*Canada*)”.
- Any substance or mixture of substances that contains or has on it any part of such a plant, or;
- Any substance that is identical to any phytocannabinoid produced by, or found in, such a plant, regardless of how the substance was obtained

It does not include:

- A non-viable seed of a cannabis plant
- A mature stalk, without any leaf, flower, seed or branch, of such a plant
- Fibre derived from a stalk, or;
- The root or any part of the root of such a plant

“Electronic Cigarette”

A vaporizer or inhalant-type device, whether called an electronic cigarette or any other name, that contains a power source and heating element designed to heat a substance and produce a vapour intended to be inhaled by the user of the device directly through the mouth, whether or not the vapour contains nicotine.

“Enclosed Public Place”

Is a place that is;

- a) the inside of any place, building or structure or vehicle or conveyance, or a part of any of them:
 - i. that is covered by a roof, and
 - ii. to which the public is ordinarily invited or permitted access, either expressly or by implication, whether or not a fee is charged for entry, or
- b) a prescribed place (*by the Ontario Regulations*)

Smoking & Vaping

“Enclosed Workplace”

A place that is;

- a) the inside of any place, building or structure or vehicle or conveyance, or a part of any of them,
 - i. that is covered by a roof,
 - ii. that employees work in or frequent during the course of their employment whether or not they are acting in the course of their employment at the time, and
 - iii. that is not primarily a private dwelling, or
- b) a prescribed place (by the Ontario Regulations);

“e-Substance”

A substance that is manufactured or sold to be used in an electronic cigarette.

“Flavoured Tobacco Product”

A tobacco product that is represented as being flavoured, that contains a flavouring agent or that is presented by its packaging, by advertisement or otherwise as being flavoured.

“Tobacco Product”

Any product that contains tobacco, and includes the package in which tobacco is sold.

“Tobacco Product Accessory”

A product that may be used in the consumption of a tobacco product, including a humidor, pipe, cigarette holder, cigar clip, lighter and matches.

“Use (*electronic cigarettes*)”

“Use”, with respect to electronic cigarettes, includes any of the following:

- Inhaling vapour from an electronic cigarette.
- Exhaling vapour from an electronic cigarette.
- Holding an activated electronic cigarette.

“Vapour Product”

An electronic cigarette, an e-substance, or any component of an electronic cigarette and includes the package in which the electronic cigarette, e-substance or component is sold.

Smoking & Vaping

REFERENCE

Smoke-Free Ontario Act, 2017

PROHIBITIONS

Prohibited Acts

No person shall do any of the following in prohibited places:

- 1) Smoke or hold lighted tobacco.
- 2) Smoke or hold lighted cannabis.
- 3) Use an electronic cigarette.
- 4) Consume a prescribed product or substance

Prohibited Places

The following are the places where the prohibited acts are not allowed:

- 1) An enclosed public place.
- 2) An enclosed workplace.
- 3) A school within the meaning of the *Education Act*.
- 4) A building or the grounds surrounding the building of a private school within the meaning of the *Education Act*, where the private school is the only occupant of the premises, or the grounds annexed to a private school, where the private school is not the only occupant of the premises.
- 5) Any indoor common area in a condominium, apartment building or university or college residence, including, without being limited to, elevators, hallways, parking garages, party or entertainment rooms, laundry facilities, lobbies and exercise areas.
- 6) A child care centre within the meaning of the *Child Care and Early Years Act, 2014*.
- 7) A place where home child care is provided within the meaning of the *Child Care and Early Years Act, 2014*, whether or not children are present.
- 8) A place where an early years program or service is provided within the meaning of the *Child Care and Early Years Act, 2014*.
- 9) The reserved seating area of a sports arena or entertainment venue, or;
- 10) A prescribed place or area, or a place or area that belongs to a prescribed class as per Ontario Regulations.



Smoking & Vaping

RESPONSIBILITIES

Employer

Implement the “Smoking & Vaping” policy.

Ensure compliance with the “Smoking & Vaping” policy.

Provide information and assistance that may be required for the purpose of this policy

Supervisors/Managers

Review of the “Smoking & Vaping” policy.

Ensure compliance with the “Smoking & Vaping” policy.

Follow the “Smoking & Vaping” policy.

Workers

Review of the “Smoking & Vaping” policy.

Follow the “Smoking & Vaping” policy.

Sub-Contractors

Review of the “Smoking & Vaping” policy.

Follow the “Smoking & Vaping” policy.

DISCIPLINARY ACTION:

An employee who is found to have violated this policy will be subject to disciplinary action.

Idling Policy

Sierra Construction and its subsidiary companies understand the importance of doing their part to minimize the carbon footprint. One of the ways we can do that is by eliminating un-necessary idling of equipment, vehicles and machinery.

Idling gets you nowhere, and it also costs money. It wastes energy and adds more contaminants to our environment.

Even though idling may be required in some situations, there are many others where we can reduce idling time which will save on cost, benefit our health and the environment by releasing less air emissions.

This policy applies to all employees of Sierra Construction, and its subsidiary companies, and those subcontractors who perform work at a Sierra Construction jobsite.

This policy supports the Company's ongoing commitment to be health and environmentally conscious, by being prudent stewards in the use of our resources.

**"Idling Gets
You Nowhere"**

A handwritten signature in black ink, appearing to read 'BZ.', written in a cursive style.

Brent Zaluski
President
January 4, 2023

Quality Policy

Sierra Construction and all of its subsidiary companies are committed to provide a high level of quality and reliability of service to our customers.

Employees are encouraged to continually improve through training and recognize the importance of providing quality services and products.

Our objective and guarantee is to ensure that we are sensitive to the needs and expectations of our clients as well as our employees.

We pledge to deliver a well-constructed product, which will result in our client's complete satisfaction.

**“Pride in Workmanship is
The Basis of our Success”**

A handwritten signature in black ink, appearing to read 'BZ.', written in a cursive style.

Brent Zaluski
President
January 4, 2023

Accessibility

PURPOSE

This policy is intended to meet the requirements of the Accessibility Standards for Customer Service, O. Reg 429/07 under the “*Accessibility for Ontarians with Disabilities Act, 2005*” and applies to the provision of goods and services to the public or other third parties, not to the goods themselves.

All goods and services provided by Sierra Construction Woodstock Inc. and its subsidiary companies (*Sierra Bridge, Sierra General Contracting and Sierra Infrastructure*), shall follow the principles of dignity, independence, integration and equal opportunity.

SCOPE

- This policy applies to the provision of goods and services at the premises owned and operated by Sierra Construction Woodstock Inc. and its subsidiary companies.
- This policy applies to employees, agents, who deal with the public or other third parties that act on behalf of Sierra Construction, including when the provision of goods or services occurs off the premises of Sierra Construction such as in: a construction project, project meeting, business meeting.
- This policy does not apply to active construction projects, however measures will be considered to accommodate those with disabilities as required.
- The section of this policy that addresses the use of guide dogs, service animals and service dogs only applies to the provision of goods and services that take place at premises owned and operated by Sierra Construction.
- This policy shall also apply to all persons who participate in the development of the Sierra Construction’s policies, practices and procedures governing the provision of goods and services to members of the public or third parties.

Accessibility

DEFINITIONS

“Assistive Device”

A technical aid, communication device or other instrument that is used to maintain or improve the functional abilities of people with disabilities. Personal assistive devices are typically devices that guests bring with them such as a wheelchair, walker or a personal oxygen tank that might assist in hearing, seeing, communicating, moving, breathing, remembering and/or reading.

“Barrier”

The term barrier as defined by the Accessibility for Ontarians with Disabilities Act, 2005, and the Ontario Human Rights Code, means anything that prevents a person with a disability from fully participating in all aspects of society because of his or her disability, including a physical barrier, an architectural barrier, an information or communications barrier, an attitudinal barrier, a technological barrier, a policy, procedure, or a practice.

***** Sierra Construction’s companies have construction jobsites that will have barriers.**

Those having any physical limitations will be accommodated by:

- Providing the service or goods in another manner or at another location
- Taking pictures or video and sharing
- Bringing the goods or service directly to them

“Disability”

The term disability as defined by the Accessibility for Ontarians with Disabilities Act, 2005, and the Ontario Human Rights Code, refers to:

- any degree of physical disability, infirmity, malformation or disfigurement that is caused by bodily injury, birth defect or illness and, without limiting the generality of the foregoing, includes diabetes mellitus, epilepsy, a brain injury, any degree of paralysis, amputation,
- lack of physical co-ordination, blindness or visual impediment, deafness or hearing impediment, muteness or speech impediment, or physical reliance on a guide dog or other animal or on a wheelchair or other remedial appliance or device;
- a condition of mental impairment or a developmental disability;
- a learning disability, or dysfunction in one or more of the processes involved in understanding or using symbols or spoken language;
- A mental disorder; or
- An injury or disability for which benefits were claimed or received under the insurance plan established under the Workplace Safety and Insurance Act, 1997.

Accessibility

“Guest”

Used throughout this policy and means; employee, visitor, contractor, client, delivery person, or other business personnel

“Guide Dog”

A highly-trained working dog that has been trained at one of the facilities listed in Ontario Regulation 58 under the Blind Persons’ Rights Act, to provide mobility, safety and increased independence for people who are blind.

“Service Animal”

As reflected in Ontario Regulation 429/07, an animal is a service animal for a person with a disability if:

- it is readily apparent that the animal is used by the person for reasons relating to his or her disability; or
- The person provides a letter from a physician or nurse confirming that the person requires the animal for reasons relating to the disability.

“Service Dog”

As reflected in Health Protection and Promotion Act, Ontario Regulation 562 a dog other than a guide dog for the blind is a service dog if:

- it is readily apparent to an average person that the dog functions as a service dog for a person with a medical disability; or
- The person who requires the dog can provide on request a letter from a physician or nurse confirming that the person requires a service dog.

“Support Person”

As reflected in Ontario Regulation 429/07, a support person means, in relation to a person with a disability, another person who accompanies him or her in order to help with communication, mobility, personal care, medical needs or access to goods and services.

Accessibility

GENERAL PRINCIPLES

In accordance with the Accessibility Standards for Customer Service, Ontario Regulation 429/07, this policy addresses the following:

- a) The Provision of Goods and Services to Persons with Disabilities
- b) The Use of Assistive Devices
- c) The Use of Guide Dogs, Service Animals and Service Dogs
- d) The Use of Support Persons
- e) Notice of Service Disruptions
- f) Customer Feedback
- g) Training
- h) Notice of Availability and Format of Required Documents

The Provision of Goods and Services to Persons with Disabilities

Sierra Construction will make every reasonable effort to ensure that its policies, practices and procedures are consistent with the principles of dignity, independence, integration and equal opportunity by:

- ensuring that all guests receive the same value and quality;
- allowing guests with disabilities to do things in their own ways, at their own pace when accessing goods and services as long as this does not present a safety risk;
- using alternative methods when possible to ensure that guests with disabilities have access to the same services, in the same place and in a similar manner;
- taking into account individual needs when providing goods and services; and
- Communicating in a manner that takes into account the guest's disability.

Assistive Devices

Guest's own assistive device(s):

Persons with disabilities may use their own assistive devices as required when accessing goods or services provided by Sierra Construction.

In cases where the assistive device presents a safety concern or where accessibility might be an issue other measures will be used to ensure the access of goods and services.

For example, where elevators are not present and where an individual requires assistive devices for the purposes of mobility, measures are taken to meet them or accommodate them in another manner or location.

Accessibility

Guide Dogs, Service Animals and Service Dogs

A guest with a disability that is accompanied by a guide dog or service dog will be allowed access to premises that are open to the public unless otherwise excluded by law.

Exclusion Guidelines

If a guide dog, service animal or service dog is excluded by law, Sierra Construction will offer alternative methods to enable the person with a disability to access goods and services, whenever possible (*for example, securing the animal in a safe location and offering the guidance of an employee*).

Applicable Law

The Health Protection and Promotion Act, Ontario Regulation 562 Section 60, normally does not allow animals in places where food is manufactured, prepared, processed, handled, served, displayed, stored, sold or offered for sale. It does allow guide dogs and service dogs to go into places where food is served, sold or offered for sale. However, other types of service animals are not included in this exception.

Dog Owners' Liability Act, Ontario: *"If there is a conflict between a provision of this Act or of a regulation under this or any other Act relating to banned breeds (such as pitbulls) and a provision of a by-law passed by a municipality relating to these breeds, the provision that is more restrictive in relation to controls or bans on these breeds prevails."*

Recognizing a Guide Dog and/or Service Dog

If it is not readily apparent that the dog is being used by the guest for reasons relating to his or her disability, Sierra Construction may request verification from the guest.

Verification may include:

- a letter from a physician or nurse confirming that the person requires the animal for reasons related to the disability;
- a valid identification card signed by the Attorney General of Ontario; or,
- a certificate of training from a recognized guide dog or service animal training school.

Care and Control of the Animal

The guest that is accompanied by a guide dog, service dog or service animal is responsible for maintaining care and control of the animal at all times.

Allergies

If a health and safety concern presents itself, for example in the form of a severe allergy to the animal, Sierra Construction will make all reasonable efforts to meet the needs of all individuals.

Accessibility

Support Persons

If a guest with a disability is accompanied by a support person, Sierra Construction will ensure that both persons are allowed to enter the premises together and that the guest is not prevented from having access to the support person.

In situations where confidential information might be discussed, consent will be obtained from the guest, prior to any conversation where confidential information might be discussed.

Admission Fees

Fees will not be charged for support persons for admission to Sierra Construction events.

Notice of Disruptions in Service

Service disruptions may occur due to reasons that may or may not be within the control or knowledge of Sierra Construction. In the event of any temporary disruptions to facilities or services that guests with disabilities rely on to access or use Sierra Construction's goods or services, reasonable efforts will be made to provide advance notice. In some circumstances such as in the situation of unplanned temporary disruptions, advance notice may not be possible.

Notifications will include

In the event that a notification needs to be posted, the following information will be included unless it is not readily available or known:

- goods or services that are disrupted or unavailable
- reason for the disruption
- anticipated duration
- a description of alternative services or options

Notification Options

When disruptions occur, Sierra Construction will provide notice by:

- posting notices in conspicuous places including at the point of disruption, at the main entrance and at the nearest accessible entrance to the service disruption and/or on the website;
- contacting clients, business personnel with appointments;
- verbally notification when they are contacting the office; or
- by any other method that may be reasonable under the circumstances.

Feedback Process

Sierra Construction shall provide guests with the opportunity to provide feedback on the service provided to guests with disabilities. Information about the feedback process will be readily available to all guests and notice of the process will be made available by posting of this policy. Feedback forms along with alternate methods of providing feedback such as, verbally (in person or by telephone) or written (hand written, deliver, website or email), will be available upon request.

Submitting Feedback:

Anyone who wishes to provide feedback verbally or by completing a suggestion form can do so with any Sierra Construction employee.

Accessibility

Anyone that provides formal feedback will receive acknowledgement of their feedback, and may receive information about any resulting actions that were taken based on the concerns or complaints that were submitted.

Mail:	PO. Box 20053, Woodstock, ON N4S 8X8
Phone:	(519) 421-7413
Fax:	(519) 421-2018
Email:	info@sierraconstruction.ca
Site:	www.sierraconstruction.ca

Training

Training will be provided to:

- a) all employees, agents who deal with the public or other third parties that act on behalf of Sierra Construction;
- b) those who are involved in the development and approval of customer service policies, practices and procedures.

Training Provisions

As reflected in Ontario Regulation 429/07, regardless of the format, training will cover the following:

- A review of the purpose of the Accessibility for Ontarians with Disabilities Act, 2005.
- A review of the requirements of the Accessibility Standards for Customer Service, Ontario Regulation 429/07.
- Instructions on how to interact, communicate with people with various disabilities.
- Instructions on how to interact with people with disabilities who:
 - use assistive devices;
 - require the assistance of a guide dog, service dog or other service animal; or
 - require the use of a support person (including the handling of admission fees).
- Instructions on what to do if a person with a disability is having difficulty accessing our services.
- Sierra Construction's policies, procedures and practices pertaining to providing accessible customer service to guests with disabilities.

Training Schedule

Sierra Construction will provide training as soon as practicable. Training will be provided to new employees, volunteers, agents that act on our behalf as part of the new employee orientation. Revised training will provided in the event of changes to legislation, procedures and / or practices.

Record of Training

Accessibility

Sierra Construction will keep a record of the date of training. (This is part of each new employee's training and documented on form 1201 Employee Orientation Training)

ADMINISTRATION

If you have any questions or concerns about this policy or its related procedures please contact:

Dianne McGinnes

Office Manager

1193 Dundas Street, PO. Box 20053, Woodstock, ON N4S 8X8

Phone: (519) 421-7413

Email: dianne@sierraconstruction.ca

REVISION

This policy and its related procedures will be reviewed as required in the event of legislative changes.

REFERENCED DOCUMENTS

Accessibility for Ontarians with Disabilities Act, 2005

Accessibility Standards for Customer Service, Ontario Regulation 429/07

Blind Person's Rights Act, 1990

Dog Owners' Liability Act, Ontario

Health Protection and Promotion Act, Ontario Regulation 562

Ontario Human Rights Code, 1990

Mission

MISSION

To partner with all stakeholders to build quality projects through a focus on safety, innovation and high ethical standards.

VISION

Building a legacy in the construction industry by becoming the contractor of choice.

VALUES

Since its inception, Sierra Construction has cultured an environment where “[Doing what is Right](#)” has been an integral part of our business and our success.

Some of our key values are honesty, integrity and adopting sustainable business practices taking into account our social, economic and environmental impacts, health & safety of all parties, responsible governance, principles of dignity, independence, integration and equal opportunity.

These are re-enforced through sustainability principals and workforce integrity throughout all business operations.

Co-operation and collaboration are expected norms within our management team, employees, and are to be exercised in our day to day business activities.

Recognition of the mastering of our values is honored by feedback and regular appraisals.

STRATEGIC DIRECTION

To become the best mid-sized construction company in Southern Ontario by being Better, Smarter, Greener and Faster.

To maintain our quality management system to the ISO 9001 Standard (Quality) and certifications to the ISO 14001 Standard (*Environmental*).

To achieve COR (*Certificate of Recognition*) with the Infrastructure Health & Safety Association (*IHSA*).

To be a leader in the construction business through innovation, knowledgeable and motivated workforce that embraces our values and vision.

By working together in the spirit of co-operation and collaboration achieve our goals, continually improving our processes to adapt to an ever changing business world

Mission

HISTORY

Sierra Construction (est. 1994) is an independently owned and managed general contracting firm providing Project and Construction Management, as well as integrated construction services in a variety of sectors through our design/build, heavy civil, and land development divisions for over 25 years.

Sierra has grown steadily, gaining recognition and experience through both site servicing and building construction for projects of all sizes in the Industrial, Commercial, and Institutional sectors.

Our commitment to excellence resulted in Sierra being named as one of the top 40 construction companies in Canada.

Today, the company provides a full range of services to a diverse customer base.

Co-operative teamwork, problem-solving, adherence to committed schedules and pride of workmanship, and insistence on quality are the basis of our success.

Sierra constantly strives to provide our employees with safe working conditions and our clients with environmentally responsible job sites and professional construction management.

Sierra General Contracting Inc., Sierra Infrastructure Inc. Sierra Bridge Inc. and Sierra Aggregates and Materials are divisions of Sierra Construction Woodstock Inc. often referred to as the Sierra Group of Companies.

Sierra Bridge is our newest division erecting new single and multi-span structures or the rehabilitation of existing structures.

Mission

SIERRA'S CORE VALUES

S

Safety

—

We make protecting people and the environment our first priority.

I

Integrity

—

We conduct our business honestly to consistent moral and ethical standards.

E

Empowerment

—

We provide the tools and support to make our team successful.

R

Relationships

—

We understand the importance of family and welcome everyone into ours.

R

Respect

—

We earn your respect through our core values and attention to quality.

A

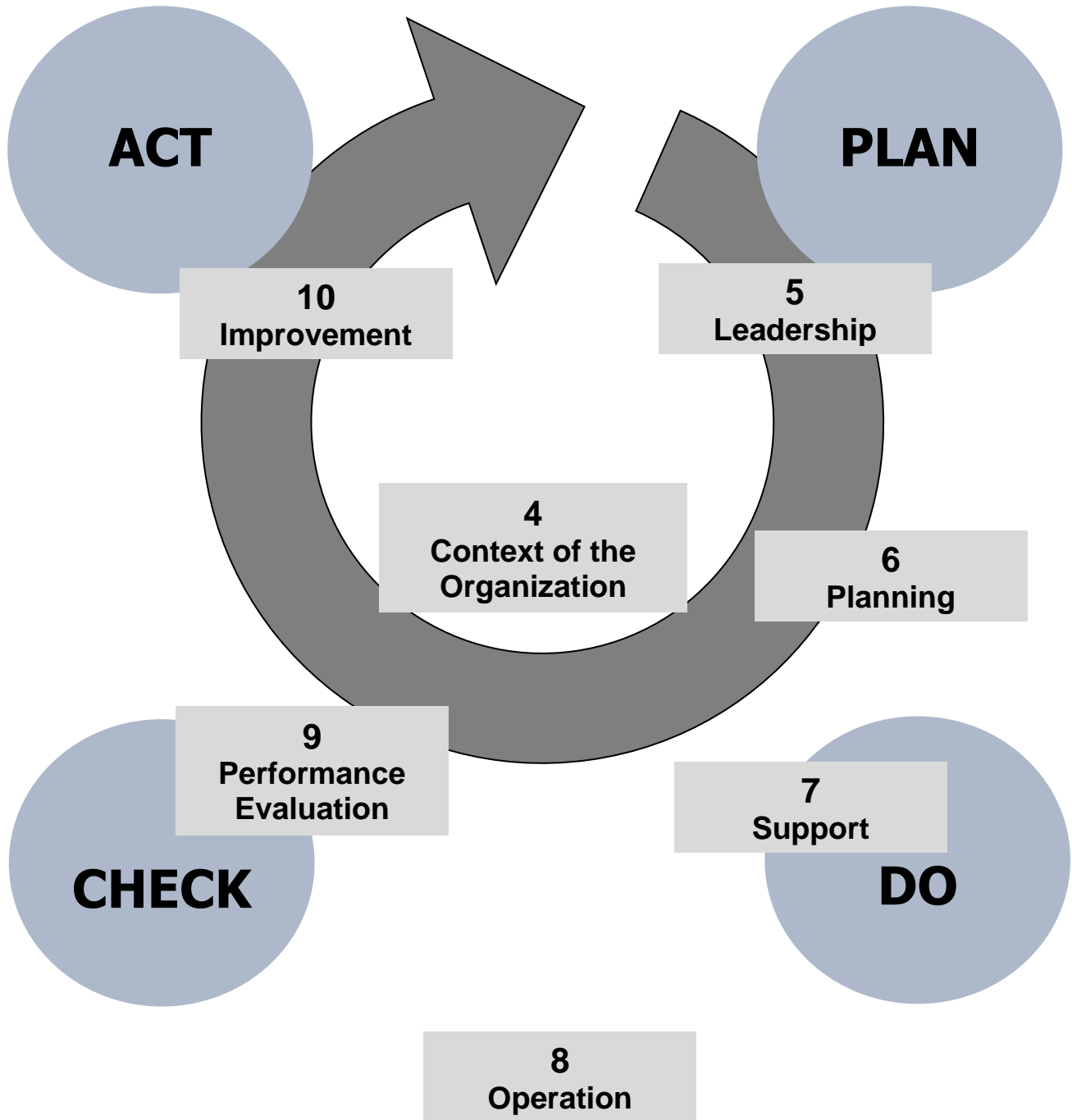
Adaptability

—

We embrace challenges to meet the changing needs of the future.

Mission

Process Plan, Do, Check, Act Cycle and ISO 14001





Health & Safety Management System

SECTION II

-

RESPONSIBILITIES

CONSTRUCTOR / EMPLOYER

The Constructor/Employer shall:

- Ensure the Health and Safety program meets or exceeds legislated requirements {Occupational Health and Safety Act, Bill 160, 208, WSIB, etc.}.
- Ensure the workplace meets building codes and local bylaws.
- Where so prescribed provide a Notice of Project to the MOL and post at jobsite.
- Establish Health and Safety performance objectives and priorities.
- Ensure that the working environment is maintained in a healthy and safe condition.
- Develop and demonstrate a positive "Health and Safety" attitude and working climate.
- Demonstrate interest in, involvement with and accountability for Health and Safety performance.
- Approve and administer rules and procedures.
- Ensure notification of all incidents or unplanned events as per legislation.
- Require design input and installation inspection before new/modified equipment or operations are put into service.
- Ensure Health and Safety concerns are addressed when establishing new methods and/or work procedures.
- Understand and abide by relevant legislation.
- Provide equipment, materials and protective devices as prescribed by the OHS and Sierra Construction.
- Ensure that any equipment, materials or protective devices are operated and maintained as prescribed.
- Ensure the measures and procedures prescribed are carried out in the work place.
- Provide information, education and supervision to the worker to protect the health and safety of the worker.
- Acquaint a worker, or a person with authority over a worker with any hazard in the workplace and in the handling, storage, use, disposal and transport of any material, device or piece of equipment.
- Offer assistance and co-operation to the Health and Safety committee or any of its representatives in the carrying out any of their functions.
- Ensure that every reasonable precaution is taken for the protection of a worker.
- Post, in the workplace, a copy of the Ontario Occupational Health and Safety Act, Bill 208, and any other required legislation as well as any explanatory material that will enhance the health and safety of the workers.
- Permit only workers who are physically fit to work in the workplace.
- Where so prescribed, to provide a worker with written instructions as to the measures and procedures to be taken for the protection of a worker.

SUPERVISOR / MANAGER

The Supervisor shall:

- Promote and maintain a good Health and Safety attitude.
- Provide and ensure that workers work in the manner and with the protective devices, measures and procedures required by the OSHA and Sierra Construction. Each new employee and each employee transferred to a new position will receive instruction and/or training required for their new position.
- Ensure that workers use or wear PPE when required.
- Ensure that the working environment is maintained in a healthy and safe condition that is free from violence and harassment.
- Ensure notification of all incidents or unplanned events.
- Ensure Health and Safety concerns are addressed when establishing new methods and/or work procedures. Understand and abide by relevant legislation.
- Ensure that any equipment, materials or protective devices are operated and maintained as prescribed.
- Offer assistance and co-operation to a Health and Safety committee or any of its representatives in the carrying out any of their functions.
- Ensure that every precaution reasonable in the circumstances is taken for the protection of a worker. Permit only workers who are physically fit to work in the workplace.
- Conduct an investigation into each incident, lost time incident, property damage or utility contact and implement preventive action as necessary. Advise workers of any potential or actual dangers to the health or safety of a worker and to provide a worker with written instruction and procedures to be followed and to take every precaution reasonable in the circumstances for the protection of a worker. Inspections will be done regularly and priority given for the correction of substandard items.

WORKER

The Worker shall:

- Promote and maintain a good Health and Safety attitude.
- Work in compliance with the provisions of the OSHA and the company's regulations.
- Use or wear the equipment, protective devices or clothing that are provided.
- Report to their employer or supervisor the absence of or defect in any equipment or protective device of which they are aware and which may endanger themselves or another worker.
- Report to management or supervisor any contravention of the OSHA or the regulations or the existence of any hazard.
- Where so prescribed, have, at the expense of the employer, such medical examinations, test or X- rays, at such time or times and at such place or places as prescribed in order to determine the physical fitness of the employee to do work in the workplace.
- Follow procedures for reporting injury/illness at all times when they occur.

No worker shall:

- Remove or make ineffective any protective device required by the regulations or by the employer.
- Use or operate any equipment, machine device or thing or work in a manner that may endanger themselves or any other worker.
- Engage in any prank, contest, feat of strength, unnecessary running or rough and boisterous conduct.

Health & Safety Representative

The Health & Safety Representative shall:

- Participate in the identification of workplace (worksite) hazards with the site supervisor at each worksite. Formal inspections will be documented and signed by both parties.
- Be consulted about any workplace testing ie: (air, water monitoring).
- Make recommendations in writing to improve the health and safety of the workplace.
- Participate in an incident investigation process and in the event of a serious injury complete an investigation.
- Request any information regarding health and safety from the company to protect the health and safety of a worker.
- Attend scheduled health and safety meetings.
- Review minutes from the joint health and safety committee.
- Participate in a Work Refusal where Health and Safety is in Danger.
- Attend any training that Sierra Construction requests to improve their knowledge of health and safety matters.
- Review incident investigations, injury data and WSIB information.
- Review the Health and Safety Program annually and make recommendations on training and prevention programs (ie: WHMIS, PPE, First Aid, Fall Protection, etc.).
- **Be an example in the workplace for health and safety.**

SUBCONTRACTOR

All Subcontractors shall:

- Ensure a competent person is in charge and oversees their work on the jobsite
- Provide their own safety equipment and any necessary protection to conduct the work in a safe and environmentally responsible manner.
- Be responsible to work in accordance with the OHSA and all applicable Regulations and Sierra Construction's policies & Procedures.
- Report to their supervisor any hazard or unsafe condition, defective equipment or absence of a protective device (*Guards, Guardrails, etc.*)
- Wear appropriate Personal Protective Equipment (PPE) at all times when required. At minimum all workers shall wear a CSA approved Hard Hat, Grade 1 safety boots, an MTO traffic vest (*or approved equivalent*).
- Inspect equipment and their Personal Protective Equipment (PPE) before use. Maintain a clean and orderly work area at all times.
- The possession, consumption or impairment from intoxicants is strictly forbidden at any time at the jobsite.
- Report to their supervisor any incident, injury or spill immediately and inform the Sierra Construction site supervisor any unsafe condition(s) that may affect the safety or health of other workers. Provide safety representatives, a First Aid attendant, WHMIS Safety Data Sheets for the workplace as needed



RESPONSIBILITIES

and complete Sierra Construction's daily field hazard assessment (JAR Card).

- When in doubt, as for more information from their supervisor and/or the Sierra Construction site supervisor.

VISITORS

Safety rules are designed for the protection of visitors to prevent incident and injuries. These rules are by no means complete nor intended to cover all situations. Think safety at all times and reference other rules and procedures when applicable.

It is mandatory that all visitors follow these rules

*All visitors must be accompanied by an authorized
Sierra Construction employee*

1. Safety glasses with side shields, or authorized equivalent shall be worn by all persons at all times when required.
2. CSA approved safety shoes/boots shall be worn by all persons working at a construction job site and while working in the Sierra Construction maintenance shop.
3. Traffic vests shall be worn by visitors on all civil job sites and when there is vehicular traffic on building job sites.
4. The possession, consumption or impairment from intoxicants is strictly forbidden at any time on Company property.
5. All incidents, injuries or sickness must be reported to the Human Resources Department immediately.



Health & Safety Management System

SECTION III

—

PROCESSES



**SIERRA CONSTRUCTION
PROCESS**

Document No: **PRO 001**

Process: **Confined Spaces**

Prepared By: Jonathan Rowe, Evan Marsh

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PURPOSE

The purpose of this program is to provide guidelines any Sierra Construction worker working in or around a Confined Space.

DEFINITIONS

“Atmospheric Sample”

A sampling of the air in a space that tells what is present, and at what quantity

“Confined Space”

A fully or partially enclosed space, that is:

- Both not designed or constructed for continuous human occupancy, and
- Has, or likely to have an atmospheric hazard

“Confined Space Attendant”

A person who remains at the entrance of the Confined Space (But does not enter the space). They maintain communication with the entrant(s) while they are in the Confined Space (Whether by voice, radio, phone, or any other effective form of communication)

“Continuous Monitoring”

By the use of an electronic monitoring device, we will continue to monitor the quality of the air. The device has a pre-determined set limit that will cause it to go into alarm if it reaches these levels. The pre-determined levels are set to go into alarm before the atmosphere reaches a dangerous level for the worker.

“Controlled Ascent/Decent Device”

A device used to raise or lower a worker into and out of a space if needed. This device can also be used as a means of rescue if the worker is not able to exit the space by themselves. Often referred to as a “winch”.

“Competent Person”

A person who is adequately qualified, trained and with sufficient knowledge and experience to organize and safely perform the work. A person who is also familiar with Sierra Bridge’s policies, QC manuals, Health & Safety Manuals and the provincial occupational health & safety act and regulations.

“Donning/Doffing”

To don something means to “put it on”. To doff something means to “take it off”

“Full Body Protection”

This is a form of PPE used to protect the workers skin/clothes from being exposed to any toxic/corrosive substance while in the space. Often referred to as a “Tyvek Suit”, because it is one of the most popular brand names.

“Hazardous Atmosphere”

Any atmosphere that can cause harm to a person. Hazardous atmospheres are typically found into 3 categories:

- Oxygen Enriched/Deficient
- Flammable
- Toxic/Biohazardous

“Hazardous Energy”

Any source of energy, that when it is released can cause harm to a person. Some examples are (but not limited to):

- Pressurized
- Gravitational
- Electrical
- Mechanical
- Heated/Cooled

“Hazardous Substance”

Any substance, at any state (solid/liquid/gas), which may cause harm to a person’s health. This can even include biohazardous substances.

“Isolation”

The act of isolating hazardous energy/substance away from the area a worker will be, in order to make sure the worker cannot be harmed by it. Essentially, you are keeping it away from you or “isolating it away” from you.

“Personal Monitoring”

By the use of an electronic device, the worker will wear the device to continuously monitor the quality of air around them. These devices will typically only test for 1 or 2 types of atmosphere. The pre-determined levels are set to go into alarm before the atmosphere reaches a dangerous level for the worker.

“Respiratory Protective Equipment (RPE)”

This is a form of PPE used to protect a worker from hazards entering their respiratory system. Examples of this can be:

- N95/KN95 Dust Mask – *3M 8210, etc.*
- Air Purifying Respirator (APR) – *3M 6000 Series, North 5500, etc.*
- Supplied Air System – *i.e. SCOTT 2.2 SCBA, SCOTT SKA-PAK, MSA G1 SCBA, etc.*



SIERRA CONSTRUCTION PROCESS

Document No: **PRO 001**

Process: **Confined Spaces**

Prepared By: Jonathan Rowe, Evan Marsh

RESPONSIBILITIES

Employer/Management

The employer and the construction management team has the responsibility to implement this process by:

- a) Directing all supervisors to assess the hazards of each confined space and to identify the employees this may effect.
- b) Providing all employees with information, training, and the equipment they need to protect themselves and others from the confined space hazards
- c) Ensuring that all necessary equipment is available to comply with this policy
- d) Enforce compliance with this process and ensure training for all employees

Supervisors

The supervisor(s) have the responsibility to:

- a) Identify and assess the hazards of each confined space.
- b) Ensure that all employees receive the appropriate training and equipment they need to protect themselves and others.
- c) Enforce compliance with this process.

Workers

The workers have the responsibility to:

- a) Understand their assigned task(s) relating to confined space safety.
- b) Apply the proper training and equipment to safely work in a confined space.
- c) Assist with the assessment and the identification of confined space hazards.
- d) Comply with the directives of this procedure.

Sub-Contractors/Visitors

The sub-contractor(s)/Visitor(s) have the responsibility to:

- e) Understand their assigned task(s) relating to confined space safety.
- f) Apply the proper training and equipment to safely work in a confined space.
- g) Assist with the assessment and the identification of confined space hazards.
- h) Comply with the directives of this procedure.

REFERENCE

- O. Reg 213/91 – Construction Projects
- O. Reg 632/05 – Confined Spaces

REQUIREMENTS

All tasks must be completed by a competent worker, or under the direct supervision of a competent worker.

Any specialized equipment (Including specialized PPE) must only be used by a worker that has received training on that equipment, and is deemed competent by the employer to use it.

PROGRAM

Worker Training

Sierra Construction will confirm that every worker that enters a confined space (or who performs related work) has been properly trained to perform the task. This includes specialized and specific training

Identification

The first step to working with confined spaces is to identify that a space actually IS a confined space.

The Ontario Regulations for Confined Spaces (*O. Reg 632/05*) defines what a confined space is (*Found in "Definitions" of this program*).

With that knowledge, when conducting a "FORM 0220 – Project Hazard Assessment", whether the need to conduct confined space work is assessed at that time.

But as things progress, things may change. The Job Assessment Review also takes into consideration the introduction of confined space work.

If that is the case, Project Hazard Assessment will need to be updated (*Which may now even include the need for a Designated Substance report*)

Hazard Recognition

Realistically, the hazards present inside a confined space can be similar to the hazard outside a confined space. The biggest problem inside the space, is getting away from the hazard.

Some of the common hazards associated with them, are things like:

- Falling through the opening
- Slipping/lose footing
- Engulfment
- Drowning
- Vehicle Traffic
- Hazardous Energy
- Hazardous/Designated Substances
- Toxic Substances/Atmosphere
- Flammable/Explosive hazards
- Oxygen Deficient Atmospheres

Prior to entering a confined space, the entry supervisor will gather the all workers involved with the particular space and review the plan/permit, general hazards and any specific hazards for the confined space, and their control methods.



SIERRA CONSTRUCTION PROCESS

Document No: **PRO 001**

Process: **Confined Spaces**

Prepared By: Jonathan Rowe, Evan Marsh

This information will be documented on “FORM 0200 – Confined Space Permit” along with a JAR card.

If other contractors/inspectors are involved with the entry of a confined space, then a co-ordination meeting will be held and documented on the “FORM 0201 – Confined Space Co-ordination Document”.

Entry Permits

All Sierra Construction confined spaces will require a “FORM 0200 – Confined Space Permit” prior to entry. This permit will ensure to list the following:

- a. Location of the confined space
- b. The type of work to be completed
- c. Hazards & control measures
- d. The attendant
- e. Every entrant’s entries & exits.
- f. The equipment used for entrance & rescue
- g. Inspection of the rescue equipment.
- h. Results of the atmospheric sample
- i. Whether Hot Work is being performed, and if a Hot Work Permit has been obtained
- j. Hot Work control measures (if required)

Atmospheric Testing

Prior to entering a confined space, one of the ways Sierra Construction will assess what hazards are present, is through atmospheric testing. The testing will take an atmospheric sample of the space (in multiple locations) to ensure the current state of the space is safe for entry or not. From this information, we can begin to implement control measures for that hazard and then test again as needed.

Reference Sierra Construction’s Procedure “SOP 002 – Atmospheric Testing”

Required Personal Protective Equipment

The PPE required inside the space is determined from the assessment of the space, the atmospheric testing, the Safety Data Sheets

Reference Sierra Construction’s Practice “SWP 002 – Respiratory Protective Equipment”

Ventilation & Purging

After the completion of the atmospheric testing, control measures would need to be put in place in order to make the space safe for entry. 2 methods that would be used to do this is ventilation & purging.

Reference Sierra Construction’s Procedure “SOP 003 – Ventilation & Purging”



SIERRA CONSTRUCTION PROCESS

Document No: **PRO 001**

Process: **Confined Spaces**

Prepared By: Jonathan Rowe, Evan Marsh

Isolation

Most often when we are getting into a confined space, it is also going to contain services that may contain hazardous energy/substance(s). While working with confined spaces, Sierra Construction must take every precaution necessary to make sure those services cannot release and expose the entrants.

So a form of energy Isolation must be set up to protect the entrant(s) from an exposure to hazardous substances, hazardous energy or any moving equipment or parts.

These isolations can include (But not limited to):

- Electrical Lock-Out/Tag-Out
- Valve Closing & Locking (Double Block & Bleed)
- Blank/Blind Installation
- Mechanical Blocking
- Or other methods approved by a professional engineer

Entering/Exiting the Space

No matter where the access point is for the space is located, the entrant must have safe access in and out of the space. One of the things considered when completing the assessment & co-ordination documents is how they are going to get in & get out.

The supervisor or Entry Supervisor will assemble the Confined Space Entry Team, which will include the Attendant, Entrant(s) and Entry Supervisor to review the plan/permit, general hazards and any specific hazards of the confined space.

Reference Sierra Construction's Procedure "SOP 001 – Confined Space Entry"

Attendant

While anyone is inside of the confined space, a designated person will be assigned to remain outside of the space to monitor the safety of the entrant(s).

If at any time the entrant is in distress, reports breathing issues, lung irritation or is non-responsive, the attendant is to summon emergency assistance.

Reference Sierra Construction's practice "SWP 001 - Confined Space Attendant".

Communication

One of the items that must be discussed is communication. Sometimes the inside of the confined space may prove tricky when using electronic communication.

So a communication plan must be discussed and an appropriate means of communication must be identified. It must also be documented on the "FORM 0200 – Confined Space Permit".

Confined Space Rescue

Every time a worker goes into a confined space, it needs to be set up as if that worker is going to need rescue. The set-up needs to include the question "In the case of an emergency, how can I get this worker out quickly and safely?" every time.



SIERRA CONSTRUCTION PROCESS

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Prepared By: Jonathan Rowe, Evan Marsh

The rescue method must be covered in the entry permit.

Reference Sierra Construction's Procedure "SOP 004 – Confined Space Rescue"

Records

Any documentation relating to confined space work, Sierra Construction will retain a copy for a minimum of 2 years past the finish date of the project. This will include:

- a. Co-Ordination Document (If used)
- b. Record of Training
- c. Entry Permit, which includes:
 - a. Confined Space Hazards/Controls, including:
 - i. Isolation
 - ii. Ventilation or Purging
 - b. Required PPE
 - c. Record of Entry method
 - d. Record of Rescue Plan
 - e. Communication Method
 - f. Record of Entry/Rescue Equipment Inspection
 - g. Record of Entrants and their enter/exit time.
 - h. The Attendant
 - i. Record of Atmospheric Sample(s)
 - j. Any Hot Work (With permit attached)



**SIERRA CONSTRUCTION
PROCESS**

Document No: **PRO 002**

Process: **Excavation & Trenching**

Prepared By: Jonathan Rowe, Evan Marsh

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SIERRA CONSTRUCTION PROCESS

Document No: **PRO 002**

Process: **Excavation & Trenching**

Prepared By: Jonathan Rowe, Evan Marsh

PURPOSE

To establish a uniform standard for worker/public safety, while conducting excavation and trenching operations

DEFINITIONS

“Abandoned Utility Lines”

A utility line(s) that have been identified by that utility in the locate documents as “Abandoned”.

“Aluminum Hydraulic Shoring”

A pre-engineered shoring system comprised of aluminum hydraulic cylinders (*cross braces*) used in conjunction with vertical rails (*uprights*) or horizontal rails (*wales*). Such system is designed specifically to support the sidewalls of an excavation and prevent cave-ins.

“Benching System”

A method of protecting employees from cave-ins by excavating the sides of an excavation to form one or a series of horizontal levels, or steps, usually with vertical or near vertical surfaces between levels.

“Blanket Locate”

(Sometimes referred to as an “Alternate Locate Agreement”) Permission to excavate, subject to the terms and conditions outlined by a written agreement between the Excavating Company and the utility

“Boundary Limits”

The volume of soil contained by vertical planes placed 1 metre (*3 feet*) on each side of the center line of the pipeline of the marked utility line or 1 metre (*3 Feet*) on either side of the marked limits of the underground structure.

“Cave-In”

The separation of a mass of soil/rock material from the side of an excavation, or the loss of soil from under a trench shield or support system, and its sudden movement into the excavation, either by falling or sliding, in sufficient quantity so that it could entrap, bury or otherwise injure and immobilize a person.

“Competent Person”

A person who is adequately qualified, trained and with sufficient knowledge and experience to organize and safely perform the work. A person who is also familiar with Sierra Construction’s policies, QC manuals, Health & Safety Manuals and the provincial occupational health & safety act and regulations.

“Distress”

When the soil is in a condition where a cave-in is imminent, or likely to occur. It is evidenced by such phenomena as the development of fissures in the face of *(or adjacent to)* an open excavation; the subsidence of the edge of an excavation; the slumping of material from the face, or bulging/heaving of material from the bottom of an excavation; and raveling/separating from the face of an excavation and trickling/rolling down the excavation.

“Excavation”

Any man-made cut, cavity, trench or depression in the earth’s surface formed by earth removal. Excavations produce unsupported soil conditions.

“Excavating Company”

The individual, partnership, corporation, public agency or other entity that digs, bores, trenches, grades, excavates or breaks ground with mechanical equipment or explosives.

“Face (Sides)”

The vertical or inclined earth surfaces formed as a result of excavation work.

“Hand Dig”

To excavate using a hand shovel with wooden or insulated handle *(does not include picks, bars, stakes or other earth piercing devices)*. *****Please note that Ontario Regulations still require locates for hand digging*****

“Hazardous Atmosphere”

An atmosphere which by reason of being explosive, flammable, poisonous, corrosive, oxidizing, irritating, oxygen deficient, toxic or otherwise harmful, may cause death, illness or injury.

“Hydrovac (Daylighting)”

The use of pressurized water or compressed air to loosen soil, then using a vacuum system to remove it.

“Live”

Means either:

- a) Electrically connected to a source of voltage difference or electrically charged so to have a voltage different from that of the earth, or;
- b) Connected to a source of fuel under the Technical Standards and Safety Act, 2000

“Utility Locates”

(Also known as “Locates”) The identification on the ground of the position of the utility line(s) based on records or electronic locating equipment and includes provision of necessary documentation such as a locate document.

“Mechanical Excavation”

Boring or open cut excavation by means of mechanical excavating equipment (*i.e. powdered excavator, earth mover, etc.*), earth piercing equipment (*i.e. hand held augers, picks, bars, stakes, etc.*) or any other device that may damage the utility line. *****Please note that Ontario Regulations still require locates for hand digging*****

“Protective System”

A method of protecting employees from cave-ins, from material that could fall or roll from an excavation face or into an excavation, or from the collapse of adjacent structures. Protective systems include support systems, sloping and benching systems, shield systems (*trench box*) and other systems that provide the necessary protection.

“Professional Engineer (Registered)”

A person who is a professional engineer within the meaning of the “Professional Engineers Act”

“Sloping System”

A method of protecting employees from cave-ins by excavating to form sides of an excavation that are inclined away from the excavation so as to prevent cave-ins.

“Trench”

A narrow excavation made below the surface of the ground in which the depth is greater than the width.

“Utility Means”

The individual, partnership, corporation, public agency or other entity that is licensed to operate an electronic distribution system under the Ontario Energy Board Act or a pipeline under the Technical Standards and Safety Act, 2000.

“Utility Line”

Those facilities operated by a utility through which gas or electric energy is conveyed (*i.e. pipe, cable, etc.*), components (*i.e. switches, valves, meters, etc.*) and supporting structures.

RESPONSIBILITIES

Employer/Management

The employer and the construction management team has the responsibility to implement this process by:

- a) Directing all supervisors to assess the hazards of each excavation and to identify the employees this may effect.
- b) Providing all employees with information, training, and the equipment they need to protect themselves and others from the excavation/trench hazards
- c) Ensuring that all necessary equipment is available to comply with this policy
- d) Enforce compliance with this process and ensure training for all employees

Supervisors

The supervisor(s) have the responsibility to:

- a) Identify and assess the hazards of each excavation area
- b) Ensure that all employees receive the appropriate training and equipment they need to protect themselves and others.
- c) Enforce compliance with this process.

Workers

The workers have the responsibility to:

- a) Understand their assigned task(s) relating to excavation safety.
- b) Apply the proper training and equipment to safely work in excavations and trenches.
- c) Assist with the assessment and the identification of excavation hazards.
- d) Comply with the directives of this procedure.

Sub-Contractors/Visitors

The sub-contractor(s)/Visitor(s) have the responsibility to:

- e) Understand their assigned task(s) relating to excavation safety.
- f) Apply the proper training and equipment to safely work in excavations and trenches.
- g) Assist with the assessment and the identification of excavation hazards.
- h) Comply with the directives of this procedure.

REFERENCE

O. Reg 213/91 – Construction Projects
O. Reg 210/01 – Oil & Gas Pipeline Systems
O. Reg 22/04 – Electrical Distribution Safety
IHSA – “Trenching Safety”
Ontario Energy Safety Board Act
Technical Standards and Safety Act, 2000

REQUIREMENTS

All tasks must be completed by a competent worker, or under the direct supervision of a competent worker

COMMON HAZARDS

HAZARD	CONTROLS
ACCESS/EGRESS	If an excavation is deeper than 1.2 metres (4 feet), then adequate means of entry/exit, such as ladders, steps, ramps or other safe means of entry/exit
CAVE-INS	Cave-ins are the most common excavation hazard. They occur when a mass of soil/rock material separates from the side of an excavation, or when soil is lost from under a trench shield or support system. The mass of soil/rock material then moves suddenly into the excavation either by falling or sliding. Cave-ins can entrap, bury or otherwise injure and immobilize a worker. Protective support systems should be used (i.e. – Sloping, Benching, Shielding and Shoring)
EQUIPMENT	Keep all equipment that might fall into an excavation at least 1 metre (3 feet) from the edge of the excavation. Keep excavated soil (spoils) at least 1 metre (3 feet) from the edge of the excavation
FALLS	Use warning systems, such as signage and barriers to warn people about the potential fall hazard. Don't let employees work on faces of sloped/benched excavations without proper fall protection systems in place.
HAZARDOUS ATMOSPHERES	In an excavation where oxygen deficiency or other hazardous atmospheres exist or could exist, the atmosphere must be checked by a competent person using proper electronic testing equipment. If a hazardous atmosphere does exist, the air must be continuously monitored and proper atmospheric controls must be put in place (i.e. Ventilation, Air Purifying Respirator, etc.)
WATER ACCUMULATION	Employees are not to work in excavation areas where water has accumulated, unless water removal equipment is being used. Diversion ditches, dikes, or other means can be used to prevent surface water from entering an excavation and to provide drainage.

Other hazards

The risk of a cave-in is not the only hazard in trenching. Injuries and deaths are also related to other major areas:

- personal protective equipment
- utilities underground – located
- overhead powerlines – identified
- materials handling
- housekeeping
- heavy equipment
- traffic control
- confined spaces

CONTROLS

Cave-In Controls

Most fatal cave-ins occur on small jobs of short duration (*such as service connections and excavations for drains and wells*). Too often, people think that these jobs are not hazardous enough to require safeguards against collapse. Unless the walls are solid rock, never enter a trench deeper than 1.2 metres (*4 feet*) if it is not properly protected against cave-ins.

There are 3 basic methods of protecting workers against trench cave-ins:

- Sloping
- Shoring
- Trench Boxes

Sloping

Where space and other requirements permit sloping, the angle of slope depends on soil conditions. For Type 1 and 2 soils, cut trench walls back at an angle of 1 to 1 (*45 degrees*). That's one metre back for each metre up. Walls should be sloped to within 1.2 meters (*4 feet*) of the trench bottom.

For Type 3 soil, cut walls back at a gradient of 1 to 1 from the trench bottom. For Type 4 soil, slope the walls at 1 to 3. That's 3 meters back for every 1 meter up from the trench bottom.

Although sloping can reduce the risk of a cave-in, the angle must be sufficient to prevent spoil not only from sliding back but also from exerting too much pressure on the trench wall. Sloping is commonly used with shoring or trench boxes to cut back any soil above the protected zone. It is also good practice to cut a bench at the top of the shoring or trench. If sloping is to be used above a trench box, the top portion of the cut should first be sloped 1 to 1 or 1 to 3 for Type 4 soil. Then the box should be lowered into the trench.

Shoring

Shoring is a system which “shores” up or supports trench walls to prevent movement of soil, underground utilities, roadways, and foundations. Shoring should not be confused with trench boxes. A trench box provides worker safety but gives little or no support to trench walls or existing structures such as foundations and manholes.

The two types of shoring most commonly used (*both consist of posts, wales, struts, and sheathing*):

- a) Timber
- b) Hydraulic

Most hydraulic systems are:		
light enough to be installed by one worker	Gauge-regulated to ensure even distribution of pressure along the trench line. Able to “pre-load” trench walls, thereby using the soil’s natural cohesion to prevent movement	Easily adapted to suit various trench depths and widths

Wherever possible, shoring should be installed as excavation proceeds. If there is a delay between digging and shoring, no one must be allowed to enter the unprotected trench. All shoring should be installed from the top down and removed from the bottom up.



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Trench boxes

Trench boxes are meant to protect workers in case of a cave-in, but not to shore up trench walls (*Design drawings and specifications for trench boxes must be signed and sealed by the professional engineer who designed the system and must be kept on site by the constructor*).

A properly designed trench box is capable of withstanding the maximum lateral load expected at a given depth in a particular soil condition. Trenches near utilities, streets, and buildings may require a shoring system. As long as workers are in the trench, they should remain inside the box. Workers must not be inside the trench or the box when the box is being moved. A ladder must be set up in the trench box at all times.

Excavation should be done so that the space between the trench box and the excavation is minimized. The two reasons for this are

- Allowing closer access to the top of the box
- Limiting soil movement in case of a cave-in.

Check the drawings and specifications for the trench box to see if the space between the box and the trench wall needs to be backfilled and the soil compacted.

PRE-PLANNING

Before beginning any excavation, identify and evaluate specific job hazards. These can include traffic, nearness of structures and their conditions, soil, surface and ground water, the water table, overhead and underground utilities, and weather.

Locates are reviewed and to be kept onsite identifying any buried utilities (*copy in the excavating equipment*).

UTILITY LOCATES

Request

Prior to excavation the person responsible for the work shall contact the local authority or the utility, and request a utility locate of the area where the excavation will be taking place. The excavating company must ensure the utility locates have been completed and documents received prior to commencing any excavation.

Subject to entering into an agreement with an excavating company, the utility may provide them with a blanket locate.

If removing asphalt, but not road base or underlying structure, a utility locate is not required.

*****Note: Locates are required for sidewalk removal*****

The excavating company, when requesting a locate, shall provide the utility with relevant information describing the location where the work will take place, the expected time when the work will begin, the scope of the work, the nature of the work, the expected duration, the name address and telephone number of the excavating company, and the name of their site's representative.



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Except in emergency situations, requests for stakeouts or locate information should be made as early as possible, and at least 5 working days in advance.

Except in cases of emergency, or where the response for the locate request has been agreed with the excavating company, the utility shall make every reasonable effort to respond to notification requests and provide locates within 4 working days of receiving the notification, and 5 working days during peak times.

In emergency situations, requests for locate information shall be provided by the utility as soon as possible.

Confirmation

The utility shall provide information using labeled stakes, flags, and/or highly visible paint marks continuously or at regular intervals on the surface of the ground. The markings should clearly indicate the centre line of the utility line and the limits of underground structures, where applicable, in the defined area of the proposed excavation.

The utility shall also provide a diagram describing the locate information to the person who requested the locates or when requested to the Contractor's site representative at the time of the locate. The diagram should indicate in clear legible terms the locate information including additional clarifications, dimensions from fixed objects, orientation, and any unusual depths, if known.

When requested by either party, the utility and the excavating company shall meet on site to confirm details of the excavation and the location of the utility line.

Where there are no utility lines in the defined area of the proposed excavation the utility may provide verbal confirmation to the excavating company. Written confirmation will be provided on request.

Boundaries and Accuracy

The excavating company shall not excavate outside the area covered by the locate request without first obtaining a further locate.

Locate accuracy shall be considered to be 1 metre (*3 feet*) on either side of the surface centre line locate or 1 metre (*3 feet*) on either side of the marked limits of the underground structure, unless the locate instructions specifically indicate other boundary limits.

Irrespective of the depth of the utility line, the excavating company must not use mechanical excavating equipment to dig within the boundary limits to expose the utility line.

Duration



The utility shall indicate the expiry date (*normally 30 days*) on the locate form or diagram and the utility contact phone number.

Stakes or markings may disappear or be displaced. Excavators shall not rely on expired locates. Where delays occur beyond the expiry period specified by the utility or where the locate markings become unclear, a new locate must be requested by the excavating company.

Where the utility has ascertained that no changes have taken place since releasing the locate information and the locate markings are still clear, the utility may provide a new expiry date in writing.

Colour Coding

Markings on stakes, streets and sidewalks must be “Safety Yellow” for gas lines and highly visible “Safety Red” paint for electric distribution lines

Underground Utility Colour Codes					
	Electric Power Lines, Conduit and cables.		Sewage and Drain Lines.		Temporary Survey Markings.
	Telecommunication, alarm or signal lines.		Drinking Water.		Proposed Excavation Limits or route.
	Gas, Oil, Steam, Petroleum, or other flammable material.		Reclaimed Water, Irrigation, and slurry lines.		

EXCAVATION

At no time should an excavating company use mechanical excavation within the boundary limits of the locate without first hand digging test holes to determine the exact centre line and depth of cover of the utility line.

Where the proposed excavation is to be parallel and within the boundary limits of a utility line, the Excavator shall expose the utility line by hand digging a series of test holes along the entire route at regular intervals. The separation between test holes shall not exceed 4.5 metres (*14.75 feet*).

Test holes may be excavated by one of the following methods:

- a) mechanical excavation may be used to dig test holes immediately outside of the boundary limits and then hand digging used laterally until the utility line is found; or
- b) A combination of hand digging and mechanical excavation as follows:
 - i. hand digging between the boundary limits of the locate in cuts of at least 0.3 metre (1 foot) in depth,
 - ii. mechanical excavation could then be used to widen the hand dug trench to within 0.3 metre (*1 foot*) of the depth of the hand digging,
 - iii. Repeat step (i) and (ii) until the utility line is located.
- c) Concrete saws, jackhammers, hand tools or other similar equipment may be used to break concrete or asphalt on a road or sidewalk surface.
- d) Mechanical excavating equipment should only be used to remove broken asphalt or concrete.
- e) Concrete below the road and sidewalk surface layers may have utility lines encased therein and should not be removed without consultation with the utility.

The excavating company shall dig additional test holes where the utility has identified changes in alignment or in elevation.

Where the utility line cannot be located following the procedures described above, the excavating company shall contact the utility for assistance with the locate.

Excavation (With Test Holes)

Where test holes in an area have been completed, and the utility line located, mechanical excavation may take place provided the following procedures are used:

- a) wherever possible, mechanical excavating equipment should be operated parallel to the direction of the utility line when the excavation is within 1 metre (*3 Feet*) of the utility line; and
- b) mechanical excavation must not be used closer than 0.3 metre (*1 foot*) in any direction to the utility line;
- c) excavation within 0.3 metre (*1 foot*) in any direction of the utility line must be carried out by hand digging;

Prior to initiating any blasting activities in proximity of utility lines Excavators must obtain specific guidelines from the utilities.



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Specific instructions for utility lines needing support must be obtained from the utilities. The Excavator will install temporary support acceptable to the utilities that is adequate to prevent any deflection or damage to the utility line.

Temporary support shall remain in place until the backfill material underneath the structure has cured or it has been compacted adequately to restore support.

Under no circumstances shall an Excavator attempt to move utility lines. Where such a need arises during excavation, the Excavator shall contact the utilities to make the necessary arrangements.

Excavation (Hydrovac)

With prior agreement of the utility, hydrovac may be used as an alternative to hand digging.

For detailed procedures for using hydrovac excavation in the vicinity of electric distribution lines see the E&USA Safe Practice Guide "Excavating with Hydrovacs in the Vicinity of Underground Electrical Plant

Backfilling Trenches

Where trenches are to be backfilled, the following requirements should be followed:

- a) backfilling should be performed in such a manner as to provide firm support under the utility lines; and
- b) the trench must be backfilled with clean fill or granular material free of material injurious to the utility lines
- c) Where flooding of gas utility trenches is done to consolidate the backfill, care must be exercised so that the gas line is not floated from its firm bearing on the ditch bottom.
- d) Backfilling should be performed without using tamping equipment directly on exposed utility lines and using extra caution around electric cable splices.

Unidentified/Abandoned Distribution Lines

Where a utility line is found during excavation that was not identified by the utility, but within the area covered by the locate, the excavating company shall never assume the line is an abandoned utility line. The excavating company shall immediately contact the utility as appropriate, to determine if the line is abandoned or live.

*****In circumstances where a locate shows an abandoned utility line the utility should clearly state on the locate form that the utility line is abandoned*****



OTHER CONSIDERATIONS

Access / Egress

Whether protected by sloping, boxes, or shoring, trenches must be provided with ladders so that workers can enter and exit safely.

Ladders must:

- be placed within the area protected by the shoring or trench box
- be securely tied off at the top
- extend above the shoring or box by at least 1 metre (*3 feet*)
- Be inspected regularly for damage.

Ladders should be placed as close as possible to the area where personnel are working and never more than 7.5 metres (*25 feet*) away. Anyone climbing up or down must always face the ladder and maintain three-point contact. This means that two hands and one foot or two feet and one hand must be on the ladder at all times.

Maintaining three-point contact also means that hands must be free for climbing. Tools and materials should not be carried up or down ladders. Pumps, small compactors, and other equipment should be lifted and lowered by methods that prevent injury from overexertion and falling objects.

Inspection

Inspection is every one's responsibility. Whatever the protective system, it should be inspected regularly. Check hydraulic shoring for leaks in hoses and cylinders, bent bases, broken or cracked nipples, and other damaged or defective parts.

Check timber shoring before installation. Discard damaged or defective lumber. After installation, inspect wales for signs of crushing. Crushing indicates structural inadequacy and calls for more struts.

Inspect trench boxes for structural damage, cracks in welds, and other defects.

During use, check the box regularly and often to make sure that it is not shifting or settling much more on one side than the other. If it is, leave the trench and ask the supervisor to check for stability. Check ground surface for tension cracks which may develop parallel to the trench at a distance one-half to three-quarters of the trench depth. If cracks are detected, alert the crew and check all protective systems carefully.

Check areas adjacent to shoring where water may have entered the trench. A combination of water flow and granular soils can lead to undermining of the trench wall. Such conditions have caused fatalities. Finally, make sure that tools, equipment, material, and spoil are kept at least 1 meter (*3 feet*) back from the edge of the trench to prevent falling objects from striking workers.

REFERENCE

Soil Types

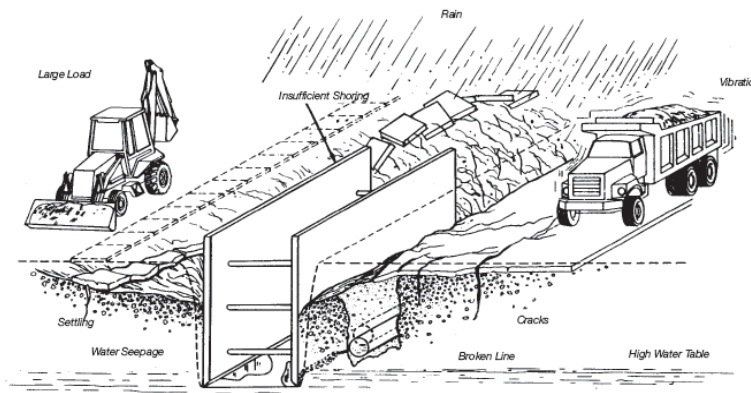
The Construction Regulation sets out four soil types. If you are unsure about the soil type, have the soil tested to confirm the type.

SOIL TYPES	
TYPE	DESCRIPTION
Type 1	Hard, very dense and only able to be penetrated with difficulty by a small sharp object; has a low natural moisture content and a high degree of internal strength; has no signs of water seepage; and can be excavated only by mechanical equipment. <i>O. Reg. 213/91, s. 226 (2).</i>
Type 2	Very stiff, dense and can be penetrated with moderate difficulty by a small sharp object; has a low to medium natural moisture content and a medium degree of internal strength; and has a damp appearance after it is excavated. <i>O. Reg. 213/91, s. 226 (3).</i>
Type 3	Previously excavated soil; or soil that is stiff to firm or compact to loose in consistency and has one or more of the following characteristics: <ul style="list-style-type: none"> i. It exhibits signs of surface cracking. ii. It exhibits signs of water seepage. iii. If it is dry, it may run easily into a well-defined conical pile. iv. It has a low degree of internal strength. <i>O. Reg. 345/15, s. 24.</i>
Type 4	Soft to very soft and very loose in consistency, very sensitive and upon disturbance is significantly reduced in natural strength; runs easily or flows, unless it is completely supported before excavating procedures; has almost no internal strength; is wet or muddy; and exerts substantial fluid pressure on its supporting system. <i>O. Reg. 213/91, s. 226 (5).</i>

CAUSE OF CAVE-INS

Soil properties often vary widely from the top to the bottom and along the length of a trench. Many factors such as cracks, water, vibration, weather, and previous excavation can affect trench stability (*Figure 2*). Time is also a critical factor. Some trenches will remain open for a long period, and then suddenly collapse for no apparent reason.

The Figure below shows the typical causes of cave-ins.



The main factors affecting trench stability are soil type, moisture, vibration, surcharge, previous excavation, existing foundations, and weather.



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Moisture content

The amount of moisture in the soil has a great effect on soil strength. Once a trench is dug, the sides of the open excavation are exposed to the air. Moisture content of the soil begins to change almost immediately and the strength of the walls may be affected. The longer an excavation is open to the air, the greater the risk of a cave-in. Trench open for extended duration may collapse without apparent reason. Equipment vibration affects stability. Backfill is less stable than undisturbed soil. Surcharge such as spoil pile puts more pressure on trench walls.

Vibration

Vibration from various sources can affect trench stability. Often trench walls are subject to vibration from vehicular traffic or from construction operations such as earth moving, compaction, pile driving, and blasting. These can all contribute to the collapse of trench walls.

Surcharge

A surcharge is an excessive load or weight that can affect trench stability.

For instance, excavated soil piled next to the trench can exert pressure on the walls. Placement of spoil piles is therefore important. Spoil should be kept as far as is practical from the edge of the trench. Mobile equipment and other material stored close to the trench also add a surcharge that will affect trench stability.

One metre from the edge to the toe of the spoil pile is the minimum distance requirement. The distance should be greater for deeper trenches.

Previous excavation

Old utility trenches either crossing or running parallel to the new trench can affect the strength and stability. Soil around and between these old excavations can be very unstable. At best it is considered Type 3 soil—loose, soft, and low in internal strength. In some unusual circumstances it may be Type 4—wet, muddy, and unable to support itself. This kind of soil will not stand up unless it is sloped or shored.

Existing foundations

Around most trenches and excavations, there is a failure zone where surcharges, changes in soil condition, or other disruptions can cause collapse. When the foundation of a building adjacent to the trench or excavation extends into this failure zone, the result can be a cave-in. Soil in this situation is usually considered Type 3.

Weather

Rain, melting snow, thawing earth, and overflow from adjacent streams, storm drains, and sewers all produce changes in soil conditions. In fact, water from any source can reduce soil cohesion. Frozen soil does not mean that you can have reduced shoring or that a heavier load can be supported. Frost extends to a limited depth only.



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DAMAGES

If damage to the utility line occurs, including damage to the coating, the excavating company shall leave the utility line exposed, barricade the area and contact the utility immediately. **(Coating repairs are free)**

If gas is escaping from a gas pipeline, shut off vehicles or equipment, remove or extinguish all ignition sources, barricade the area off, and keep public and workers away. Call 911 and the Gas utility immediately. No attempt should be made to control the escaping gas.

If there are any flames or sparks originating from the exposed electric distribution line or other works, barricade the area off, and keep public and workers away. Call 911 and the Local Electric Distribution utility immediately.

Note: In no case shall the excavating company attempt to control or make repairs to the damaged utility line or equipment.

BEST PRACTICES

- When asking for locate request an Onsite locate. This way we have someone present to better define the locate area (*use painted stakes, and or paint area*). They can also ask questions or request more details.
- Locate limits shall be reviewed with the locator before and after locating to ensure utilities are located within the limit of locate as per drawings or onsite observation.
- Hand dig whenever it is required.
- Use hydrovac services when practical or as required remembering that it is more expensive.
- Once a service has been located, mark it with an identified (*painted*) stake and note any special details on the stake and on the drawing.
- Remember if removing a sidewalk or pavement, etc. that has information about a service or grade to put it on a stake.
- Review share locate information with all employees involved and those new workers to the site that could damage the utilities. Document this on paper, record it as part of a tailgate safety talk.
- Excavate parallel to the service line do not scrape laterally across a line unless it has been located and always stay at least one foot away from it (*Remember some services have "T"s or stubs*).
- Disconnecting of services (gas, hydro) where there is a danger to workers or when utilities will be difficult to protect (*i.e. deep trenches*).
- Designate one person to identify / locate all utilities onsite
- Try to keep crews together so that they have more knowledge of the jobsite and locations of the utilities. This also reduces time by not having to review information with new operators / workers to the site.
- Check and replace damaged or missing locate devices.
- If unsure about a locate, contact the utility or locator for a relocate or more information.

APPENDIX 1 – OFFENCES

Technical Standards and Safety Act:

Section 37(1) – Every person, will be guilty of an offence, who;

- (a) Contravenes or fails to comply with any provision of this act, the regulations or a Minister’s order.
- (b) Knowingly makes a false statement or furnishes false information under this Act, the regulations or a Minister’s order.
- (c) Contravenes or fails to comply with a term or condition of an authorization.
- (d) Contravenes or fails to comply with an order or requirement of an inspector or obstructs an inspector;

On conviction is liable to:

- a fine of not more than \$50,000
- Imprisonment for a term of not more than 1 year
- both; or
- A fine of not more than \$1,000,000 *(If the person is a body corporate)*

Duty of Director or Officer

Section 37(2) – Every director or officer of a body corporate has a duty to take all reasonable care to prevent the body corporate from committing an offence under subsection (1). 2000, c. 16, s. 37(2)

Offence

Section 37(3) – Every director or officer of the body corporate who has a duty under subsection (2) and who fails to carry out that duty is guilty of an offence and on conviction is liable to a fine of not more than \$50,000 or to imprisonment for a term of not more than one year, or to both. 2000, c. 16, s. 37 (3).

Separate Offence

Section 37(4) – Where a person contravenes any of the provisions of this Act, the regulations, a Minister’s order or any notice or order made under them on more than one day, the continuance of the contravention on each day shall be deemed to constitute a separate offence. 2000, c. 16, s. 37 (4).

Administrative Penalty

Section 37(5) – A person against whom an administrative penalty has been levied by a designated administrative authority or, in the absence of such authority, by the Minister does not preclude a person from being charged with, and convicted of, an offence under this Act for the same matter. 2000, c. 16, s. 37 (5).

Time limit

Section 37(6) - No proceeding in respect of an alleged offence under this Act may be commenced after two years following the date on which the facts that gave rise to the alleged offence were discovered. 2000, c. 16, s. 37 (6).

Section 41 - Every contractor and employer shall take all reasonable precautions to ensure that they and their agents and employees comply with this Act, the regulations or a Minister’s order.

Oil and Gas Pipeline Systems Regulation

Ascertaining pipeline locations

Section 9(1) – No person shall dig, bore, trench, grade, excavate or break ground with mechanical equipment or explosives without first ascertaining from the license holder the location of any pipeline that may be interfered with.

Section 9(2) – The license holder shall provide as accurate information as possible on the location of any pipeline within a reasonable time in all the circumstances.

No interference with pipeline

Section 10 - No person shall interfere with or damage any pipeline without authority to do so.

APPENDIX II – Ontario Energy Board Act (Section V)

Requirement to Hold License

Section 57 – Neither the OPA, nor the Smart Metering Entity, shall exercise their powers or perform their duties under the Electricity Act, 1998 unless licensed to do so under this part. And, no other person shall, unless licensed to do so under this Part:

- (a) own or operate a distribution system;
- (b) own or operate a transmission system;
- (c) generate electricity or provide ancillary services for sale through the IESO-administered markets or directly to another person;
- (d) retail electricity;
- (e) purchase electricity or ancillary services in the IESO-administered markets or directly from a generator;
- (f) sell electricity or ancillary services through the IESO-administered markets or directly to another person, other than a consumer;
- (g) direct the operation of transmission systems in Ontario;
- (h) operate the market established by the market rules; or
- (i) Engage in an activity prescribed by the regulations that relates to electricity. 1998, c. 15, Sched. B, s. 57; 2002, c. 1, Sched. B, s. 6; 2004, c. 23, Sched. B, s. 10; 2006, c. 3, Sched. C, s. 4.

Emergency

Section 59(1) – Despite this Act, the Board may issue an interim license authorizing a person to undertake any of the activities described in section 57 if the Board considers it necessary to do so to ensure the reliable supply of electricity to consumers. 1998, c. 15, Sched. B, s. 59 (1).

APPENDIX III – Ontario Regulation 22/04 – Electrical Distribution Safety

Proximity to Distribution Lines

Section 10(1) – Despite section 4 of CSA Standard C22.3, No. 1-01 Overhead Systems, a person may place an object closer to an energized conductor forming part of a system of overhead distribution lines than the required minimum separations from energized conductors forming part of such a system if the person first obtains an authorization from the distributor responsible for the energized conductor. O. Reg. 22/04, s. 10 (1).

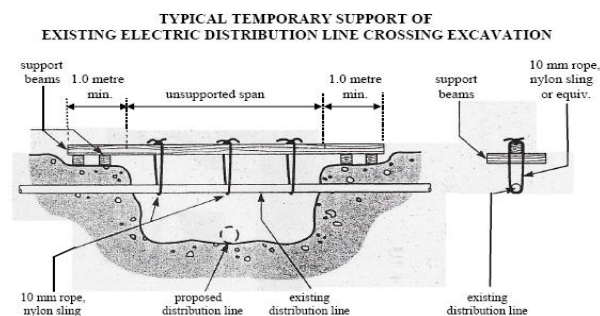
Section 10(2) – Despite sections 4 and 5 of CSA Standard C22.3, No. 7-94 Underground Systems (Reaffirmed 1999), a person may place an object closer to an energized conductor forming part of a system of distribution lines than the required minimum separations from energized conductors forming part of such system if the person first obtains an authorization from the distributor responsible for the energized conductor. O. Reg. 22/04, s. 10 (2).

Section 10(3) – Before digging, boring, trenching, grading, excavating or breaking ground with tools, mechanical equipment or explosives, a Excavator, owner or occupant of land, buildings or premises shall, in the interests of safety, ascertain from the distributor responsible for the distribution of electricity to the land, building or premises the location of any distribution line that may be interfered with in the course of such activities. O. Reg. 22/04, s. 10 (3).

Section 10(4) – The distributor shall provide reasonable information with respect to the location of its distribution lines and associated plant within a reasonable time. O. Reg. 22/04, s. 10 (4). Note: Section 10 came into force on November 11, 2004.

APPENDIX IV – Temporary Support of Electrical Distribution Lines across a trench

1. When trenching beneath underground conduit systems a temporary support may be required to prevent deflection and damage to the electric distribution line.
2. Prior to trenching beneath the electric distribution line the Excavator is to install a temporary support if the unsupported span of conduit in the trench exceeds 1.0 meter in length. However, a support with closer spacing intervals may be required as identified below.



From EUSA Handbook for Excavation near Electrical Cables

3. **Concrete Encased PVC, Transite, or Fibre Conduit** must not be underexposed without adequate support. When temporary support is required, support beams and posts shall be placed in a manner that will prevent damage to the conduit and eliminate sag. The maximum span that the conduit is permitted to be supported in this manner is 2.0 metres and the spacing between supports shall not exceed 1.0 metre. The Excavator is to contact the distributor for special instructions if the distribution line is to be underexposed by more than 2.0 metres or if the conduit cross-section dimensions exceed 1.5 metres by 1.5 metres.

4. **Concrete Encased Clay Tile Conduit** must be supported at short-spaced intervals. Since the conduit can be damaged very easily, exposed conduit should be inspected by the distributor’s representative when uncovered and again before backfilling. The maximum span that the conduit is permitted to be supported in this manner is 2.0 metres and the spacing between supports shall not exceed 0.6 metres. The Excavator is to contact the distributor for special instructions if the distribution line is to be underexposed by more than 2.0 metres or if the conduit cross-section dimensions exceed 1.5 metres by 1.5 metres.

5. **High Density Polyethylene (HDPE) and Direct Buried PVC Duct** are very flexible and must be continually supported with a set of pressure treated timbers consisting of 50 mm x 150 mm planks nailed together in a "V" formation. These timbers shall be placed under the cable and supported every 2.0 metres with vertical 100 mm x 100 mm timbers with a "V" notch at the top to hold the 50 mm x 150 mm planks in place. The conduit bundles must not be separated or displaced.

6. Support is required when a trench is parallel to a distribution line and soil rupture or lateral movement of the soil may undermine the distribution line.

7. Table #1 shows the maximum allowed horizontal distances from the edge of the trench to the distribution line affected by the excavation. Shoring may be already in place if workers are to enter a trench excavation that is deeper than 1.2 metres.

TABLE #1
Maximum Allowed Horizontal Distances from
Distribution Line to Edge of Unshored Excavation

Proposed Trench Depth (m)	Horizontal Distance Type 1 and 2 Soils Hard, Dry, Stiff (m)	Horizontal Distance Type 3 and 4 Soils Wet, Soft, Clay, or Sand (m)
Up to 1.2	0.6	0.6
Up to 2.4	1.0	1.0
Up to 3.6	1.0	2.0
Up to 4.5	1.5	3.0
Over 4.5	2.0	4.0

8. In case the distributor’s structure is closer than the maximum allowed distances given in Table 1, then the excavation shall be suitably shored to prevent movement of the conduit structure. The shoring shall remain in place until the backfill material has restored support. A sliding trench box does not provide adequate support.

9. Where the trench bottom is below the water table, the trench shall be suitably shored with close sheathing.

APPENDIX V – Hydro-Excavation Machines in the Vicinity of Pipelines

Procedures for using hydro-excavation machines to locate and expose pipelines as an alternative to hand digging. Please note that this applies to pipelines only. For hydrovac excavation in the vicinity of electric distribution lines see the E&USA Safe Practice Guide “Excavating with Hydrovacs in the Vicinity of Underground Electrical Plant” The following procedures shall be followed at all times when excavating with hydro-excavation technology within 1 m of gas plants.

1. Obtain locates prior to commencement of work. Only a competent, qualified worker shall operate hydro-excavation equipment.
2. The maximum water pressure to be used at any time with a straight tip nozzle¹ during excavation in public roads or easements shall be 17250 kPa (2500 psi). Below a depth of 45 cm (18”) the water pressure to be used at any time with a straight tip nozzle¹ during excavation shall be reduced to a maximum of 10350 kPa (1500 psi). All pressure measurements are to be taken at the hydro-excavation machine (truck, pump).
3. The maximum water pressure to be used at any time with a spinning tip nozzle² during excavation shall be 20684 kPa (3000 psi). When a spinning tip nozzle² is used, pressure measurements are to be permanently monitored using a calibrated device mounted on either the hydro-excavation machine (truck, pump) or the wand.
4. The wand shall never remain motionless during excavation. Aiming directly at the plant shall be avoided at all times.
5. A distance of 20 cm (8”) shall be maintained between the end of the pressure wand nozzle and the plant and / or subsoil. The nozzle shall never be inserted into the subsoil while excavating above the plant.
6. Only use hydro-excavation equipment and nozzles that have been specifically designed for use above buried gas lines or other reasonably expected underground gas plant.
7. A device capable of stopping the excavation on demand, such as a dead man trigger or valve, shall be installed on the wand.
8. If heated water is used during excavation, the temperature and pressure of the water shall never exceed 115°F (45°C) and 17250 kPa (2500 psi) respectively.
9. If damage to gas plant occurs while using hydro-excavation technology or any other method of excavation, the excavator shall contact the gas utility.



**SIERRA CONSTRUCTION
PROCESS**

Document No: **PRO 002**

Process: **Excavation & Trenching**

Prepared By: Jonathan Rowe, Evan Marsh

Notes

Straight Tip Nozzle

A straight tip nozzle is a single orifice fitting that can be inserted into the end of the wand used with a hydro-excavation machine such that there is a single concentrated jet of water exiting from the tip of the nozzle.

Spinning Tip Nozzles

A spinning tip nozzle consists of a conically shaped housing that contains a single exit port (to facilitate the flow of liquid) as well as a rotor insert. The rotor insert has a series of blades such that when liquid is flowing through the nozzle, the rotor is forced to spin around the longitudinal axis of the nozzle. The rotor insert also contains three or more channels that force liquid to flow in different pathways through the rotor insert to the tip of the rotor which, as a result of the high pressure liquid is forced into contact with the nozzle housing. The liquid flowing through the nozzle is dispersed through the tip of the nozzle housing in a conical shape, having an angle of not less than 20°.



Health & Safety Management System

SECTION IV

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PRACTICES



**Health & Safety
Management System**

SECTION V

—

PROCEDURES



**Health & Safety
Management System**

SECTION VI

—

COMPANY

RULES



Company Rules & Disciplinary Procedure

COMPANY RULES

- **All personnel present on Sierra Construction jobsites, and in the employ of Sierra Construction will comply with all of Sierra Construction's rules and requirements.**
- **All Incidents, injuries & close calls (Near Miss) must be reported to the site supervisor immediately** (*POL 1010 – Incident Investigations*).
- **Hazard assessments must be performed prior to the start of work** (*POL 1002 – Hazard Assessment*).
- **All workers must come to work “Fit-for-Duty”** (*POL 1021 – Drugs & Alcohol*).
- **No alcohol or illegal drugs are allowed on any jobsite or a company vehicle.** (If you have been prescribed medications that can cause drowsiness or impair judgement, your immediate supervisor must be notified to ensure you are not placed in a “Safety-Sensitive Situation”) (*POL 1021 – Drugs & Alcohol*).
- **All workers must respect Sierra Construction's Workplace Violence & Harassment Policy** (*POL 1016 – Workplace Violence & Harassment*).
- **No form of abusive behaviour, harassment or violence will be tolerated in the workplace** (*POL 1016 – Workplace Violence & Harassment*).
- **No use of vulgar and foul language.**
- **No “horseplay” of any kind.**
- **All workers will ensure they will not use equipment/tools, unless they have been properly trained on said equipment/tools** (Front-End Loader, Skid Steer, Telehandler, etc.) (*POL 1008 – Training & Communication*).
- **NO SMOKING in any enclosed workplace. This includes, but is not limited to, buildings, structures, enclosures or a company vehicle/equipment.** (*POL 1022 – Smoking*).
- **Any edge where someone could fall 3 metres (10 Feet) or more, must have a guardrail installed or some other form of Fall Protection installed** (“*SP 1001 – Slip Fall Protection Program*” & “*SP 1003 – Fall Arrest Rescue*”).
- **If a guardrail needs to be removed, a sufficient alternative fall protection method must be employed to protect any workers in the area** (“*SP 1001 – Slip Fall Protection Program*”).
- **A “FORM 1059 – Fall Protection Permit” must be completed for all Working at Heights work being completed** (“*SP 1001 – Slip Fall Protection Program*” & “*SP 1003 – Fall Arrest Rescue*”).
- **Keep your mind/eyes on the task you are performing.**



Company Rules & Disciplinary Procedure

- **Stay out of the “Line of Fire”** (The expected “Path of Travel” of any sudden energy release).
- **Inspections are required on commercial vehicles and equipment, daily before use** (*POL 1009 – Workplace Inspections*).
- **Ensure ladders and scaffolding are installed and used properly** (*SP 1001 – Slip Fall Protection Program*).
- **Anyone present on a jobsite or work location must follow the Personal Protective Equipment requirements** (*POL 1006 – Personal Protective Equipment*)
 - **FOOT PROTECTION:** Work boots on the site must have a minimum of a 6” ankle height and laces must be tied up (if equipped).
 - **EYE PROTECTION:** Proper eye protection is to be worn when there is risk of an eye injury and/or stated in procedure (whether safety glasses, goggles, face shields, etc.).
 - **HEARING PROTECTION:** Proper hearing protection is required at all times when the equipment your operating, or the area you are working in, has sound above 85 dB and/or is stated in procedure (i.e. watering for another worker using a quick cut or concrete saw).
 - **RESPIRATORY PROTECTION:** Proper respiratory protection is required any time there is a risk of injury/illness to the lungs and/or stated in procedure (i.e. – Dusty environment, toxic environment, oxygen deficient environment).
 - **SPECIALIZED:** All workers will ensure they will not use specialized PPE, unless they have been properly trained on the safe use, care & maintenance of said specialized PPE (Fall Protection equipment, Air Purifying Respirator, etc.).
 - **STANDARDS:** All Personal Protective Equipment used on the site must meet applicable standards (CSA, ANSI, MTO, etc.).
 - **PROPER USE:** All Personal Protective Equipment will be only used according to the manufacturer’s specifications, and will not be modified outside of those specifications.
- **Defective equipment/tools must be rendered to a state where it cannot be accidentally used by someone else before it can be repaired/replaced.** (*SP 1005 – Lock Out/Tag-Out and Defective Equipment Procedures*).
- **Anyone operating company vehicles or equipment must follow distracted driving laws. Your primary task when driving or operating is “driving or operating”** (*POL 1019 – Company Vehicles” & “POL 1020 – Mobile Devices & Cellphones”*).
- **The use of audio equipment that can hinder someone from hearing around them is prohibited on the jobsite** (i.e. - Headphones, Earphones, Ear Buds, Air Pods, Bluetooth Headsets, etc.)
- **“IDLING GETS YOU NOWHERE” If the equipment doesn’t need to be idling please turn it off! No idling for more than 60 seconds in company vehicles and equipment** (*POL 1023 – Idling*).
- **All refuse must be disposed of in its proper receptacle, DAILY** (Garbage, Recycle, Hazardous Waste, etc.) (*POL 1005 – Environmental Protection*).
- **Always maintain a minimum safe distance from overhead powerlines** (*SP 1008 – Electrical Safety Powerlines*).



Health & Safety Management System

SECTION V

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POSTERS

Employment Standards in Ontario

The *Employment Standards Act, 2000* (ESA) protects employees and sets minimum standards for most workplaces in Ontario. **Employers are prohibited from penalizing employees in any way for exercising their rights under the ESA.**

What you need to know

Public holidays

Ontario has a number of public holidays each year. Most employees are entitled to take these days off work and be paid public holiday pay. Visit [Ontario.ca/publicholidays](https://ontario.ca/publicholidays).

Hours of work and overtime

There are daily and weekly limits on hours of work. There are also rules around meal breaks, rest periods and overtime. Visit [Ontario.ca/hoursofwork](https://ontario.ca/hoursofwork) and [Ontario.ca/overtime](https://ontario.ca/overtime).

Termination notice and pay

In most cases when terminating employment, employers must give employees advance written notice of termination or termination pay instead of notice. Visit [Ontario.ca/terminationofemployment](https://ontario.ca/terminationofemployment).

Vacation time and pay

There are rules around the amount of vacation time and pay employees earn. Most employees can take vacation time after every 12 months of work. Visit [Ontario.ca/vacation](https://ontario.ca/vacation).

Leaves of absence

There are a number of job-protected leaves of absence in Ontario. Examples include sick leave, pregnancy leave, parental leave and family caregiver leave. Visit [Ontario.ca/ESAGuide](https://ontario.ca/ESAGuide).

Minimum wage

Most employees are entitled to be paid at least the minimum wage. For current rates visit [Ontario.ca/minimumwage](https://ontario.ca/minimumwage).

Other employment rights, exemptions and special rules

There are other rights, exemptions and special rules not listed on this poster, including rights to severance pay and special rules for assignment employees of temporary help agencies.

Subscribe to our newsletter and stay up to date on the latest news that can affect you and your workplace. Visit [Ontario.ca/labournews](https://ontario.ca/labournews).

Learn more about your rights at:

[Ontario.ca/employmentstandards](https://ontario.ca/employmentstandards)
1-800-531-5551 or TTY 1-866-567-8893

 @ONTatwork  @OntarioAtWork  @Ontarioatwork

Health & Safety at Work

➤ Prevention Starts Here

Ontario's Occupational Health and Safety Act gives workers rights. It sets out roles for employers, supervisors and workers so they can work together to make workplaces safer.

➤ Improve Health and Safety:

- **Find out** about your Joint Health and Safety Committee or Health and Safety Representative.
- **Talk** to your employer, supervisor, workers, joint health and safety committee or health and safety representative about health and safety concerns.

Call the Ministry of Labour, Training and Skills Development at 1-877-202-0008

Report critical injuries, fatalities, work refusals anytime.

Workplace health and safety information, weekdays 8:30am – 5:00pm.

Emergency? Always call 911 immediately.

Find out more:

ontario.ca/healthandsafetyatwork



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➤ Workers have the right to:

- **Know** about workplace hazards and what to do about them.
- **Participate** in solving workplace health and safety problems.
- **Refuse** work they believe is unsafe.

➤ Workers must:

- **Follow** the law and workplace health and safety policies and procedures.
- **Wear and use** the protective equipment required by their employer.
- **Work and act** in a way that won't hurt themselves or anyone else.
- **Report** any hazards or injuries to their supervisor.

Employers must NOT take action against workers for following the law and raising health and safety concerns.

➤ Employers must:

- **Make sure** workers know about hazards and dangers by providing information, instruction and supervision on how to work safely.
- **Make sure** supervisors know what is required to protect workers' health and safety on the job.
- **Create** workplace health and safety policies and procedures.
- **Make sure** everyone follows the law and the workplace health and safety policies and procedures.
- **Make sure** workers wear and use the right protective equipment.
- **Do everything** reasonable in the circumstances to protect workers from being hurt or getting a work-related illness.

➤ Supervisors must:

- **Tell** workers about hazards and dangers, and respond to their concerns.
- **Show** workers how to work safely, and make sure they follow the law and workplace health and safety policies and procedures.
- **Make sure** workers wear and use the right protective equipment.
- **Do everything** reasonable in the circumstances to protect workers from being hurt or getting a work-related illness.

IN CASE OF INJURY OR ILLNESS AT WORK



1

Get medical help

Your employer is responsible for providing first aid. Go to the doctor or hospital if you need treatment. Your employer pays for your transportation.



2

Document

Tell your employer about your injury or illness. They investigate and keep a record of what happened.



3

Report to the WSIB

Employers must tell us within three days if an injury or illness happens. You can report by submitting Worker's Report of Injury/Illness (form 6).



4

Work together

We work with you and your employer to help you recover and return to work safely and at the right time.

Questions? We're here to help.

Call us at: 1-800-387-0750 | TTY: 1-800-387-0050

For details visit wsib.on.ca/reporting

wsib
ONTARIO



WHMIS Pictograms

Workplace Hazardous Materials Information System

2015

Flame

- Flammable
- Self-Reactive
- Pyrophoric
- Self-Heating
- In Contact with Water, Emits Flammable Gases
- Organic Peroxide



Flame over Circle

- Oxidizer

Exploding Bomb

- Explosive*
- Self-Reactive (severe)
- Organic Peroxide (severe)

Skull and Crossbones

- Acute Toxicity (fatal or toxic)

Gas Cylinder

- Gas Under Pressure

Corrosion

- Serious Eye Damage
- Skin Corrosion
- Corrosive to Metals

Biohazardous

- Biohazardous Infectious Materials

Exclamation Mark

- Irritation (skin or eyes)
- Skin Sensitization
- Acute Toxicity (harmful)
- Specific Target Organ Toxicity (drowsiness or dizziness, or respiratory irritation)
- Hazardous to the Ozone Layer*

Health Hazard

- Carcinogenicity
- Respiratory Sensitization
- Reproductive Toxicity
- Specific Target Organ Toxicity
- Germ Cell Mutagenicity
- Aspiration Hazard

Environment

- Aquatic Toxicity*

A GHS pictogram appropriate for the hazard

- Physical Hazards Not Otherwise Classified
- Health Hazards Not Otherwise Classified

NOTE: No pictogram is assigned to some hazard classes e.g., Combustible Dusts and Simple Asphyxiants, and some less severe hazard categories.

*Not required by WHMIS, but may be used.