



**Skilled
Trades**
Ontario

**Métiers
spécialisés**
Ontario

Apprenticeship
Training Standard
Logbook

Steamfitter

307A

1999

Apprenticeship Training Standard

The Apprenticeship Training Standard or herein after referred to as “Logbook” is a document issued to Apprentices who sign a Registered Training Agreement in the Province of Ontario as an official record of training. It is to be used by the Apprentice and Sponsor/trainer to guide the process of skills development in a particular trade.

Training As An Apprentice

- ✓ Ensure you, your sponsor, and your witness sign a Training Agreement with the Ministry of Labour, Immigration, Training and Skills Development. Once it is registered, you will receive a copy of the registered Training Agreement for your records.
- ✓ Notify the local Service Delivery Office **immediately** if any changes to contact information or training agreement, especially if you change sponsors.
- ✓ Review the Logbook regularly with your trainer and sponsor to discuss your progress, ask questions, seek feedback and have the trainer **sign-off on competencies**
- ✓ Keep an accurate record of the hours you work.
- ✓ Attend classroom training when it is offered.
- ✓ Apply for the financial incentives for which you are eligible.



Completing Your Logbook

- ✓ **Complete the Sponsor Record Form** – A form must be completed for each Sponsor/Trainer used during your apprenticeship.
- ✓ **Confirm Skill Sign-off is Complete**
 - **You and your trainer** sign-off each required skill to confirm that you have demonstrated competency in that skill.
 - Shaded boxes in your Logbook mean the skills are optional and do not have to be confirmed by your trainer or sponsor. However, you are encouraged to complete them as part of your training.
- ✓ **Confirm Skill Set Sign-off is Complete**
 - After you and your trainer have signed-off all the required skills in a skill set, your sponsor signs the signature box on the form in **Appendix C – “Skill Set Completion for Sponsors”** to confirm your completion of all competencies within each skill set.

This document is the property of the apprentice named inside and represents the official record of your training. For information about completing your apprenticeship, see inside of back cover.



Apprentice Name: _____

Address: _____

Phone Number: _____

Email Address: _____

Trade: _____

Training Agreement # (for Compulsory and Non-Compulsory trades):

STO Account No. (for Compulsory trades only):

This document is the property of the Apprentice named herein and represents the official record of their training.

If you have questions about the use of this Logbook or about your Apprenticeship program, contact your local Service Delivery Office (see Appendix D in this book) or the Employment Ontario hotline at: 1-800-387-5656.

Apprenticeship Pathway to a Certificate of Qualification

Phase 1: Registration

Submit Application for Apprenticeship Training through the on-line portal or to local Service Delivery Office

For on-line portal, please follow instructions for registration. You will need to create a *My Ontario* account to access online services.

Training agreement signed and registered by both apprentice and sponsor

Access your Apprenticeship Training Standard Logbook**
skilledtradesontario.ca/about-trades/trades-information

** This is the official record of your training progress. You are responsible for keeping it up-to-date.

Complete on-the-job training

Demonstrate and receive sign-off on the competencies/skills in your Apprenticeship Training Standard Logbook

Complete in-school training

Attend and complete the in-class training set out in the Curriculum Training Standard

Apprentices eligible to apply for apprenticeship incentive grants (Red Seal trades) and loans.

Review and finalize your logbook with your sponsor

Submit proof of apprenticeship completion via email, in-person or digital portal

Your Apprenticeship Training Standard Logbook details completion requirements. Submit the following:

- completed Apprenticeship Training Standard Logbook with signatures
- proof of hours

Certificate of Apprenticeship is issued

Trades without examination

CofA is the final step of the program

Trades with examination (compulsory and non-compulsory trades)*

Provisional Certificate of Qualification issued for a 12 month term

To prepare for the CofQ examination download the Provincial and/or Red Seal Exam preparation guides.

Make payment for your Certificate of Qualification examination

Call to make a payment (647-847-3000 or 1-855-299-0028)

Schedule a date to write your Examination

To schedule your examination, contact your local Service Delivery Office.

Pass Certificate of Qualification examination

Apprentices eligible to apply for Apprenticeship Completion Grant (Red Seal trades) or Apprentice Completion Bonus (non-Red Seal)

Certificate of Qualification is issued

Upon completion, Sponsors may be eligible for Apprenticeship grants, incentives, bonuses or tax credits

Phase 2: Apprenticeship

Phase 3: Certification

* For a list of trades subject to a certification examination, visit: skilledtradesontario.ca

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Please Note: This Standard has been revised to reflect the visual identity of Skilled Trades Ontario (STO) which replaced the Ontario College of Trades on January 1, 2022. The content of this Standard may refer to the former organization; however, all trade specific information or content remains relevant and accurate based on the original date of publishing.

Please refer to STO's website: skilledtradesontario.ca for the most accurate and up to date information. For information about BOSTA and its regulations, please visit [Building Opportunities in the Skilled Trades Act, 2021 \(BOSTA\)](#).

Any updates to this publication are available on-line; to download this document in PDF format, please follow the link: Skilled Trades Ontario.ca.

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Foreword: Purpose, Terms and Conditions of the registered Training Agreement

Purpose:

- Prior to starting official apprenticeship activities, the apprentice, sponsor and a witness are required to sign a Training Agreement.
- The Training Agreement that you have signed is an important legal document that outlines your responsibilities as an apprentice and the responsibilities of your sponsor.
- Once registered, this training agreement (or contract) marks the start of your formal agreement between the apprentice, the sponsor and the Ministry.
- For compulsory trades, the apprenticeship registration document must be accessible when working.

The Apprentice agrees:

- **To inform the local Service Delivery Office of any change to your contact information or change in sponsor within 7 days;**
- To follow the Sponsor's and Trainer's lawful instructions and make every effort to acquire the skills identified in the Logbook for the Trade which is part of the apprenticeship program established by Skilled Trades Ontario for the trade;
- To obtain written verification from the Sponsor and the Trainer(s) that the requirements in the Logbook for the trade have been met.
- When you receive an "Offer of Classroom Training", confirm your attendance by following the instructions in the offer. Failure to do so may result in losing your opportunity to attend school which delays the completion of your apprenticeship.

The Sponsor agrees:

- To ensure that the Apprentice is provided with the training required as part of the apprenticeship program established by Skilled Trades Ontario for this trade;
- To review the progress of training with the Apprentice, and with the Trainer(s) where the Sponsor and the Trainer are not the same party.
- Release your apprentice from work to attend in-school training without penalty to the apprentice.
- To maintain the journeyman/apprentice ratio for your trade, if applicable.
- To monitor their apprentice(s) progress
- To ensure that the Trainer(s) verifies, in writing, when each skill identified in the Logbook for the trade has been successfully completed by the Apprentice;
- To contact the Ministry should any changes in your capacity to train, your contact information, or your apprentice's status in the program change.

Trade Specific Resources and Links

Trade Specific Resource	Link
Red Seal Program	red-seal.ca
Apprenticeship in Ontario	ontario.ca/page/apprenticeship-ontario
Employment Ontario	employmentontario.ca
Service Canada	servicecanada.gc.ca
<i>Building Opportunities in the Skilled Trades Act, 2021</i>	Building Opportunities in the Skilled Trades Act, 2021, S.O. 2021, c. 28 - Bill 288 (ontario.ca)
Ministry of Labour, Immigration, Training and Skills Development	Ministry of Labour, Immigration, Training and Skills Development ontario.ca
Exam Preparation Guide	Exam Resources – Skilled Trades Ontario
Skills Zone (Ontario Skills Passport)	http://www.skillszone.ca/

**Please note, all website addresses are current at time of printing*

Methodology-Standard Development

A standard is developed with a broad group of trade representatives who form the initial working group. This includes subject matter experts/ tradespeople/ instructors and employers from a cross section of the sector/industry, with varying years of work experience in the field. The working group reviews, develops and recommends revision to the content of the standard. Their role also involves harmonizing and updating other supporting content for the product.

An essential part of the standard development is the validation process. This is the opportunity to have a broader representation of the sector and provide feedback on the content of draft standard. This process is conducted in various ways and may include sending out a survey or the draft document (or both) directly to the sector. The comments received are reviewed by the working group and revisions are made as required based on a consensus model.

Introduction to the Logbook

This “on-the job” Logbook is the training standard for Steamfitter 307A and was developed by Skilled Trades Ontario in consultation with representatives from industry. It identifies all the skills associated with and required to learn the trade.

The Logbook is divided into skill sets, which are further divided into skills. These skill sets and skills are written in statements that describe what the Apprentice must perform and to what standard, in order to be considered competent in that skill.

The successful performance of these skills is tracked in the Logbook. Once achieved, this skills’ sign-off, along with the completion of in-school program requirements or equivalent, is how the apprenticeship program is completed and apprentices receive a Certificate of Apprenticeship.

The Sponsor/trainer and Apprentice are required to sign-off and date each skill after the Apprentice has demonstrated proficiency in these skills. However, if a skill is shaded, it is optional and does not need to be signed-off, though it has been defined as a part of the scope of practice for the trade.

All practices described in this standard must be performed by the apprentice according to the specific criteria identified. In general, the standard of performance for this trade is to be performed according to all applicable jurisdictional codes and standards and all health and safety standards must be respected and observed.

All skills within the Apprenticeship Training Standard are to be performed, as applicable, according to and in compliance with the following:

- Occupational Health and Safety Legislation and Regulations;
- Other applicable legislation, regulation, codes and standards;
- Industry best practices;
- Company policies and procedures.

The information presented in this standard is, to the best of our knowledge, current at time of printing and is intended for general application. Please refer to the Skilled Trades Ontario website for the most accurate and up-to-date information: skilledtradesontario.ca

Roles and Responsibilities

Under the [Building Opportunities in the Skilled Trades Act, 2021 \(BOSTA\)](#)

Skilled Trades Ontario (STO) is responsible for:

- Establishing and maintaining qualifications;
- Establishing Apprenticeship Programs and other training programs including training Standards, curriculum standards and certifying examinations;
- Issuing certificates for the purposes of this Act such as Certificates of Qualification;
- Maintaining a Public Registry for compulsory trades skilledtradesontario.ca/public-register/;
- Determining whether the experience and qualifications obtained by applicants for a certificate of qualification who do not complete an apprenticeship are equivalent to those received through completing an apprenticeship (Trade Equivalency Assessments)
- Promoting the skilled trades and conducting research.
- Conducting research and evaluate whether a trade should be prescribed as a trade for the purposes of this Act and to make recommendations on these matters to the Minister.

Ministry of Labour, Immigration, Training and Skills Development (MLITSD)

is responsible for:

- Classifying trades as compulsory trades;
- Prescribing scopes of practice for trades;
- Approving which persons may provide in-class training for apprenticeship programs (TDAs);
- Registering Training Agreements;
- Providing those who successfully complete an apprenticeship program with a certificate of apprenticeship (CofA);
- Administering examinations, including certifying examinations;
- Promoting the skilled trades and conducting research;
- Exercising such other powers and perform such other duties and functions as are provided for in this Act or the regulations.

For any matter related to your registered Training Agreement or completing your apprenticeship, you must contact your local Service Delivery Office.

Roles and Responsibilities of the Apprentice

An Apprentice is an individual who has entered into a registered Training Agreement (refer to Foreword: *“Purpose, Terms and Conditions of TA” page 1*) with a Sponsor to receive training in a trade as part of an apprenticeship program established by Skilled Trades Ontario. As an Apprentice, you have certain roles and responsibilities to follow throughout your apprenticeship training:

1. As an Apprentice, you signed the Training Agreement and have entered into a contract with the Ministry of Labour, Immigration, Training and Skills Development and your Sponsor.
2. If you are registered as an Apprentice in a compulsory trade, your name will automatically appear in the Skilled Trades Ontario Public Register.
3. You are responsible for informing the staff at your local Service Delivery Office regarding changes to the following:
 - Your Sponsor’s address;
 - Your name and address; and/or,
 - Your Sponsor, including starting employment with a new Sponsor
4. As an Apprentice, you are responsible for completing skills or skill sets in this Logbook (as detailed in the *“Eligibility for Apprenticeship Program Completion”* section of this document) and ensuring that they are dated and signed by both you and your Trainer.
5. Once you have demonstrated competency in all the mandatory skills and received a sign off on each skill by your sponsor/trainer, you must have the Skill Set Completion Form completed and signed by your current Sponsor.
6. Submit your Logbook to your local Service Delivery Office.
7. Present your Apprentice Completion Form (Please refer to Appendix B), along with your authorized Logbook to your local Service Delivery Office.

Roles and Responsibilities of Sponsors and Trainers

Sponsors are responsible for ensuring all terms are met as per the registered Training Agreement. They are named on the registered Training Agreement as the entity responsible for ensuring Apprentices receive the training required as part of an apprenticeship program. As a signatory to this agreement, they are designated as the 'Signing Authority' for the Apprentice's Skill Set Completion Form and are required to attest to successful achievement by signing the appropriate box at the completion of each skill set. Some sponsors may also act as the Trainer.

A **Trainer** is an individual who oversees the performance of a task and sets the workplace expectations and practices for the Apprentice.

In compulsory trades, a Trainer must hold a valid Certificate of Qualification and be registered with Skilled Trades Ontario.

In non-compulsory trades, a Trainer is an individual who holds one of the following:

- A Certificate of Qualification;
- A Certificate of Apprenticeship in the trade; or,
- Has completed both the workplace-based training (competencies and/or hours as applicable) and classroom training components of the trade's apprenticeship program; or,
- Has workplace experience equivalent to the apprenticeship program) and has the skills outlined in the Logbook.

Competency means being able to perform to the required standard (please refer to "*Introduction to the Logbook*"). Trainers/Sponsors and Apprentices are required to sign-off and date the skills in the Logbook following each successful acquisition. The Logbook forms a record of this achievement.

The Trainer must provide their signature based on their assessment and professional judgment that the apprentice is competent in the skills described above. The Trainer's signature is not a general warranty or guarantee of the apprentice's future conduct.

Sponsors participating in this training program will be designated as the Signing Authority and are required to attest to successful achievement by signing the appropriate box included at the end of each skill set.

Health and Safety

Safe working procedures and conditions, accident prevention and the preservation of health are of primary importance for apprenticeship programs in Ontario. These responsibilities are shared and require the joint efforts of government, sponsors, employers, supervisors, workers, apprentices and the public to achieve the goal of making Ontario's workplaces safe and healthy.

The [Occupational Health and Safety Act](#) (OHSA) provides us with the legal framework and the tools to do this. It sets out the rights and duties of all parties in the workplace, placing ultimate responsibility on the employer for the health and safety of workers (in this case apprentices) by ensuring procedures, controls, and training are established for dealing with workplace hazards. Therefore, it is imperative that all parties become aware of circumstances that may lead to injury, illness or harm. Safe learning experiences and environments can be created by controlling the variables and behaviours that may contribute to or cause an accident, injury or illness.

A sponsor who is not the employer is reminded that the employer has legal responsibilities respecting health and safety over the apprentice who is their worker. The sponsor should encourage safe work habits and adherence to the employer's occupational health and safety requirements for the workplace.

It is generally recognized that a positive attitude about safety in partnership with health and safety competency contributes to an accident-free environment. Everyone will benefit as a result of a healthy attitude towards the prevention of accidents.

Workers and apprentices can be exposed to a multitude of hazards and, therefore, should be familiar with the Occupational Health and Safety Act and regulations.

The Internal Responsibility System:

One of the primary purposes of the Occupational Health and Safety Act (OHSA) is to facilitate a strong Internal Responsibility System (IRS) in the workplace. To this end, the OHSA lays out the duties of employers, supervisors, workers, apprentices, constructors and workplace owners.

Workplace parties' compliance with their respective statutory duties is essential to the establishment of a strong IRS in the workplace.

Simply put, the IRS means that everyone in the workplace has a role to play in keeping workplaces safe and healthy. Workers and apprentices in the workplace who see a health and safety problem such as a hazard or contravention of the OHSA in the workplace have a statutory duty to report the situation to the employer or a supervisor. Employers and supervisors are, in turn, required to address those situations and acquaint workers with any hazard in the work that they do.

The IRS helps support a safe and healthy workplace. In addition to the workplace parties' compliance with their legal duties, the IRS is further supported by well-defined health and safety policies and programs, including the design, control, monitoring and supervision of the work being performed.

Roles and Responsibilities under the Occupational Health and Safety Act

Employer's Responsibilities include but are not limited to the following:

- Instruct, inform and supervise workers and apprentices to protect their health and safety.
- Appoint competent persons as supervisors.
- Inform a worker, apprentice, or a person in authority, about any hazard in the workplace and train them in the handling, storage, use, disposal and transport of any equipment, substances, tools, material, etc.
- Take every precaution reasonable in the circumstances for the protection of a worker/apprentice.
- In workplaces in which more than five workers are regularly employed, prepare and post a written occupational health and safety policy and set up and maintain a program to implement it.
- Prepare and post policies with respect to workplace violence and workplace harassment and develop programs supporting workplace harassment and workplace violence policies.
- Ensure knowledge of applicable legislative, regulatory, codes and standards so requirements to be followed are clear to all workers/apprentices.

Trainer/Supervisor Responsibilities include but are not limited to the following:

- Ensure that a worker or apprentice works in compliance with the Act and regulations.
- Ensure that any equipment, protective device or clothing required by the employer is used or worn by the worker or apprentice.
- Advise a worker/apprentice of any potential or actual health or safety dangers known by the supervisor.
- Take every precaution reasonable in the circumstances for the protection of workers.

Worker/Apprentice Responsibilities include but are not limited to the following:

- Work in compliance with the Act and regulations.
- Use or wear any equipment, protective devices or clothing required by the employer.
- Report to the employer or supervisor any known missing or defective equipment or protective device that may endanger the worker or another worker.
- Report any hazard or contravention of the Act or regulations to the employer or supervisor.
- Not remove or make ineffective any protective device required by the employer or by the regulations.
- Not use or operate any equipment or work in a way that may endanger any worker.

The Three Rights of Workers/Apprentices

The OHSA gives workers and apprentices three important rights:

1. The right to know about hazards in their work and get information, supervision and instruction to protect their health and safety on the job.
2. The right to participate in identifying and solving workplace health and safety problems either through a health and safety representative or a worker member of a joint health and safety committee.
3. The right to refuse work that they believe is dangerous to their health and safety or that of any other worker in the workplace.

For construction projects applying to construction trades a Constructor is also identified

On all projects, either the owner or someone hired by the owner is the constructor.

The intent of the Occupational Health and Safety Act is to have one person with overall authority for health and safety matters on a project. This person is the constructor of the project.

The constructor is the party with the greatest degree of control over health and safety at the entire project and is ultimately responsible for the health and safety of all workers and apprentices. The constructor must ensure that all the employers, apprentices and workers on the project comply with the Act and its regulations.

Constructor's duties include the following:

- To ensure that the measures and procedures in the Act and regulations are carried out.
- To ensure that every employer, apprentice and worker on the project complies with the Act and regulations.
- To ensure that the health and safety of workers/apprentices on the project are protected.

Ministry of Labour, Immigration, Training and Skills Development

The Ministry of Labour, Immigration, Training and Skills Development conducts periodic inspections of workplaces to ensure that safety acts and regulations are being followed. Please direct any questions to the Occupational Health and Safety Contact Centre at 1-877-202-0008.

Apprenticeship Program Summary/Guidelines

Scope of Practice

The Scope of Practice for the trade of Steamfitter is set out in section 130 of Ontario Regulation 875/21 under BOSTA and reads as follows:

(1) The scope of practice for the trade of steamfitter includes the following:

1. Laying out, assembling, installing, maintaining or repairing any heating system, cooling system, process system or industrial system.
2. Installing or connecting piping in any building or structure.
3. Installing the piping for any process, including a process that conveys gas, or the tubing for any pneumatic or air handling system.
4. Reading and interpreting design drawings, manufacturers' literature and installation diagrams for any system referred to in paragraph 1.

(2) The scope of practice for the trade of steamfitter does not include the manufacturing of equipment or the assembly of a unit, prior to delivery to a building, structure or site.

*While the Logbook draws on the scope of practice regulation (Section 130 of Ontario Regulation 875/21 under BOSTA). The Logbook does not purport to add to or modify the scope of practice as provided in regulation. *

Program Guidelines

On-the-Job Training Duration

Industry has identified 8280 hours as the benchmark necessary for any Apprentice to become competent in the skills required. There may be circumstances in which the duration varies from this guideline.

In-Class Training Duration

Industry has identified 720 hours of in-school training as the duration necessary for an Apprentice to complete the in-school curriculum for this program.

Total Training Hours

9000 hours

Journeyman to Apprentice Ratio

Ratios in Regulation:

If a trade has been prescribed as being subject to an apprentice to journeyman ratio, the number of apprentices who may be sponsored or employed by a person in the trade in relation to the number of journeymen employed or otherwise engaged by the person in the trade **shall not exceed one apprentice for each journeyman**; Further information can be found in the Apprenticeship section of the Government of Ontario website at ontario.ca/page/hire-apprentice

Program Requirements

Compulsory and Non-compulsory Classification

Regulations under the *Building Opportunities in the Skilled Trades Act, 2021*, classify each trade as either “compulsory” or non-compulsory.” This trade is compulsory.

It is the responsibility of an Apprentice to maintain a training record in the form of a Logbook. The Sponsor and Trainer are required to sign-off when competencies in the trade are achieved.

Skills for Success Summary

Skills for Success are needed in a quickly changing world for work, learning and life. They are foundational for building other skills and important for effective social interaction. Everyone benefits from having these skills as they help individuals get a job, progress at their current job and change jobs. They also help individuals become active members of their community and succeed in learning.

Through extensive research and consultations, the Government of Canada launched the new Skills for Success model renewing the previous Essential Skills framework to better reflect the needs of the current and future labour market.

The occupational specific Essential Skills profiles are available online. These will be updated over time to align with the new Skills for Success model found here: [Skills for Success model](#)

Standard of Performance

In general, the standard of performance for this trade are to be performed, as applicable, according to and in compliance with the following:

Industry Safety Standards which are based upon:

- Occupational Health and Safety Legislation and Regulations;
- Jurisdictional legislation and regulations, codes and standards (municipal bylaws etc.)
- Company policies and procedures
- All applicable manufacturers specifications and engineering specifications

Other Suggested or Required Certification(s) and Training

While an apprentice receives health, safety and occupational specific training and/or certification in a variety of fields during their apprenticeship, it is important to be aware that other occupational health and safety training and certification renewal or updating may also be required during their career before performing new types of work.

Training the Apprentice - Tips for Apprentices, Sponsors and Trainers

Tips for Apprentices

Remember, it takes time to learn. The following is a list of additional tips and tools to help make the most of your apprenticeship training:

- Practice safe work procedures early to create good habits;
- Use your Logbook as a journal to keep track of the skills you have achieved;
- Review your training plan with your Training Consultant, Trainer, or Sponsor;
- Discuss your training needs with your Trainer and/or Sponsor;
- Listen to the suggestions of your Trainer;
- Ask your Trainer questions if you are unsure of any skill you need to perform or any tools or equipment you need to use to perform your duties;
- Show enthusiasm and develop good work habits; and,
- Upon demonstration of competency, ensure that you and your Trainer sign-off the individual skills.

To get the most from this mentoring experience, request exposure to the full scope of the trade; meet regularly with your Sponsor/Trainer to discuss your progress, ask questions and seek feedback.

Tips for Sponsors

- Select Trainers with good communication skills and who work well with others;
- Ensure that the Apprentice always works under the direction of or has access to a qualified Trainer;
- Encourage Trainers to take upgrading courses (e.g. Train the Trainer, Mentor, Coach, etc.);
- Set out clear expectations and involve both the Apprentice and Trainer in developing the training plan
- Encourage safe work habits;
- Allow time for the Trainer to train and demonstrate skills to the Apprentice;
- Provide opportunities and time for the Apprentice to learn the trade;
- Ensure that the Apprentice receives the varied on-the-job trade training experience outlined in this document;
- Recognize good performance;
- Observe frequently;
- Provide constructive feedback and conduct regular performance reviews involving the Apprentice and Trainer;
- Use the Logbook as a monitoring tool and a part of regular performance evaluations; and,
- Complete the Skill Set Completion Form once the Apprentice has demonstrated competency in the skills.

- The detailed content listed for each skill is not intended to represent an inclusive list; rather, it is included to illustrate the intended direction for the skill acquisition.

Tips for Trainers

Trainers are responsible for ensuring the Apprentice is developing the skills outlined in this document. Here is a list of tips and tools to help Trainers in their supervision of Apprentices:

- Demonstrate model safe work habits;
- Provide opportunities and time for the Apprentice to learn the trade;
- Treat Apprentices fairly and with respect;
- Review the Logbook with the Apprentice and develop a training plan;
- Set out clear expectations and recognize good performance;
- Expose Apprentices to the full scope of the trade by providing training on the skills outlined in this document;
- Encourage and respond to all questions;
- Be patient;
- Explain, show and demonstrate the skill;
- **Meet regularly with the Apprentice to discuss the apprentice's progress**
- Provide continuous feedback;
- Sign-off skills when your Apprentice demonstrates competency, and,
- Use the Logbook as a guide to evaluate competence in each skill area. By using the Logbook, Trainers will be able to guide the process to and assist Apprentices to develop skills outlined in this document.

The best mentoring experience is when an Apprentice is given as much training/exposure to the full scope of the trade as possible. If this is not possible, help them to determine other ways this may be possible.

Notice of Collection of Personal Information

1. At any time during your apprenticeship training, you may be required to show this Logbook to the local Service Delivery Office. You will be required to submit the signed Apprenticeship Completion form to the Service Delivery Office in order to complete your program. The Service Delivery Office will use your personal information to administer and finance Ontario's apprenticeship training system, including confirming your completion and issuing your Certificate of Apprenticeship.
2. The Service Delivery Office will disclose information about your program completion and your Certificate of Apprenticeship to Skilled Trades Ontario, as it is necessary for Skilled Trades Ontario to carry out its responsibilities.
3. Your personal information is collected, used and disclosed by the Ministry of Labour, Immigration, Training and Skills Development under the authority of the *Building Opportunities in the Skilled Trades Act, 2021 (BOSTA)*.
4. Questions about the collection, use and disclosure of your personal information by the Ministry may be addressed to the:

Manager, Employment Ontario Contact Centre
Ministry of Labour, Immigration, Training and Skills Development
33 Bloor St. E, 2nd floor, Toronto, Ontario M7A 2S3
Toll-free: 1-800-387-5656; Toronto: 416-326-5656
TTY: 1-866-533-6339 or 416-325-4084

5470.0 Protect Self and Others**General Performance Objective**

Protect self and others by: identifying, interpreting and applying acts, codes, regulations and directives; selecting, wearing, adjusting, using and maintaining personal protective equipment and apparel; recognizing and assessing hazards and hazardous conditions; controlling hazards; assembling, erecting, using and dismantling platforms and scaffolds; performing lock out and tagging procedures; selecting, operating and maintaining tools and equipment; and, performing housekeeping duties.

Skills

5470.01 Identify, interpret and apply applicable acts, codes, regulations and directives including WHMIS (Workplace Hazardous Materials Information System), OHS Act (Occupational Health and Safety Act), CSAO (Construction Safety Association of Ontario), OBC (Ontario Building Code), WSIB (Workers Safety Insurance Board), EPA (Environmental Protection Act), ASME (American Society of Mechanical Engineers), TSSA (Technical Standards and Safety Authority), DGT A (Dangerous Goods Transportation Act), OFC (Ontario Fire Code), NFPA (National Fire Protection Association), CEC (Canadian Electrical Code), CSA (Canadian Standards Association), ANSI (American National Standards Institute), UL (Underwriters Laboratories), municipal requirements and company policies.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

*** For a compulsory trade, a Trainer must hold a certificate of Qualification in that trade as per section 10(1) of BOSTA and be registered with Skilled Trades Ontario.**

5470.02

Select, wear, adjust, use and maintain personal protective equipment and apparel including safety footwear, hard hats, gloves, glasses, goggles, masks, face shields, coveralls, safety harnesses, respirators, ear protectors/plugs, harnesses, breathing apparatus, ropes, reflector vests, air samplers, gas detectors and radiation badges, so that all equipment and apparel is correctly fitting and used, to ensure the safety of self and others in accordance with company/customer procedures, CSAO and OHSO requirements and manufacturers' instructions.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5470.03

Recognize and assess hazards and hazardous conditions including heights, scaffolds and lifts, work site conditions, welding operations, material handling, transportation and storage, heavy equipment operations, crane operations, hoisting and lifting operations, trenching, audio and visual alarms, ensuring that actions and responses comply with customer/company procedures, OHSO, WHMIS, and applicable codes or regulations.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5470.04 **Control hazards by containing, eliminating and reporting hazards,** so that appropriate steps are taken to protect self and others in accordance with company/customer policies, OHSA, WHMIS, and applicable codes or regulations.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5470.05 **Assemble, erect, use and dismantle platforms and scaffolds** including lifting devices, swing stages and bosun's chairs, ensuring that platforms and scaffolds are assembled and dismantled in accordance with engineering drawings, manufacturers' recommendations, company/customer policies and OHSA.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5470.06 **Perform lock out and tagging procedures** by: advising appropriate authorities; installing lock out devices (retaining key); attaching tags; repairing problem(s) where required; and, removing lock out devices; so that hazardous or defective equipment is isolated and identified in accordance with OHSA, manufacturers' instructions, CEC, and company/customer policies.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5470.07 **Select operate and maintain tools and equipment** including wrenches, spanners, electric hand tools, torches, pipe cutters, fastening tools, measuring tools, cutting tools, joining tools, leveling tools, grinding tools, drilling tools, rigging tools, A- frame, and fork lift, ensuring that the tools and equipment selected are the correct ones for the application, and no harm or damage is done to either the person or machine, in accordance with manufacturers' recommendations, WHMIS, OHSA, and company/customer policies.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5470.08 **Perform housekeeping duties** by: removing and disposing of excess or unwanted materials; storing and positioning equipment and materials; identifying the location of first aid equipment and supplies; maintaining heat, light and ventilation; and, erecting protective barriers; to ensure a safe working environment and clean work site, in accordance with company/customer policies, WHMIS, EPA, TSSA, OHSA, and other regulations.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5471.0**Communicate****General Performance Objective**

Communicate by: demonstrating effective interpersonal relations; receiving and reacting to instructions; giving instructions to others; reading and interpreting documents and specifications; writing job-related documents; and, practicing personal hygiene.

Skills**5471.01**

Demonstrate effective interpersonal relations by: listening to customers and co-workers; using verbal and non-verbal signals to convey messages; using language and terminology acceptable in the work place; recognizing the chain of command on a work site; explaining problems and procedures; leaving a copy of the warranty; and, explaining operation, maintenance and warranties to clients; ensuring that human rights and equality are recognized, and that all information communicated is clear, polite and complete, in accordance with company policies and standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

*** For a compulsory trade, a Trainer must hold a certificate of Qualification in that trade as per section 10(1) of BOSTA and be registered with Skilled Trades Ontario**

5471.02 **Receive and react to instructions** by: assessing the instructions; developing a plan for following the instructions; gathering required materials and tools; and communicating with others; to ensure that the task is completed in a timely and efficient manner, in accordance with company/customer standards, applicable job specifications and codes.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5471.03 **Give instructions to others** by: clearly identifying steps to be followed; setting out conditions under which instructions are to be completed; and, clearly explaining the task to be carried out, ensuring that the recipient can complete the assigned task in a timely and efficient manner, in accordance with job specifications and codes.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5471.04 **Read and interpret documents and/or job specifications** including codes, acts, regulations, specifications, work orders, change orders, shop drawings, trade related publications, manufacturers' instructions, and office memos to: identify information needed to complete tasks, gather information, installation specifications, and, pertinent codes and policies; to ensure compliance with job instructions, applicable policies and legislation.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5471.05 **Write job-related documents** including tool, equipment and material lists, work orders, change orders, office memos, letters, accident reports and forms, so that all job-related information is communicated with co-workers and others clearly, coherently and completely, in accordance with job specifications and company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5471.06

Practice personal hygiene by: identifying appropriate apparel and wearing and maintaining clean clothing, so that personal cleanliness and hygiene standards conform with company standards, clients' requirements, and pertinent safety regulations.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5472.0 Read, Interpret and Maintain Drawings and Specifications**General Performance Objective**

Read, interpret and maintain drawings and specifications by: identifying required drawings and specifications; identifying and interpreting industry symbols and abbreviations; identifying and selecting drawing equipment; creating drawings and sketches; identifying the drawing approval process; and, maintaining documentation.

Skills

5472.01 Identify required drawings and specifications by: reading the drawing title block and/or title page; determining the logical sequence of drawings including site, architectural, mechanical, electrical, structural, schematic and shop drawings; and, verifying that the set is complete and current to contribute to the efficient completion of the project.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

*** For a compulsory trade, a Trainer must hold a certificate of Qualification in that trade as per section 10(1) of BOSTA and be registered with Skilled Trades Ontario**

5472.02 Identify and interpret industry symbols and abbreviations by reading drawings, charts, guides, schedules and job procedures, to ensure accuracy in interpretation of the drawings and specifications.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5472.03 Identify and select drawing equipment including T -squares, triangles, right angles, scale rulers, compasses, computer-assisted drawing (CAD) programs, and output devices, ensuring that the equipment selected are the correct ones to produce drawings and/or sketches to the company/client standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5472.04 Create drawings and sketches including heating plans, flow sheets, elevations, sleeving drawings, schematics, isometric, interference, spool sheets and "as-built drawings," by using required tools and available technology, so that drawings and sketches are accurately completed to facilitate completion of the job, ensuring that each drawing set is completed to specifications and customer/company requirements.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5472.05 Identify the drawing approval process for municipalities, engineers, architects, owners and company/clients by complying with the appropriate standards, regulations and legislation, ensuring that drawings are ready and approval process is followed.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5472.06 Maintain documentation by: entering changes on "as-built" drawings; revising, modifying and updating drawings; creating a tag system, and a maintenance or equipment directory; and, using tools and technology, ensuring that documents are updated and complete, in accordance with the requirements of approving authorities and company/customer standards. Date Completed Supervisor's Signature
Apprentice's Signature.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5473.0 Analyze and Design The System**General Performance Objective**

Analyze and design the system by: identifying the type of system to be installed; performing job related calculations; determining system installation requirements; identifying system equipment and devices; selecting the equipment; selecting the devices; laying out and illustrating the piping system; and, submitting design documentation.

Skills

5473.01 Identify the type of system to be installed including potable water, fire protection, hydronic heating and cooling, high temperature hot water, vacuum, glycol, low pressure steam, high pressure steam, chilled water, solar system, heat pumps, radiant heat, process steam, hydraulic, pneumatic, refrigerant piping, environmental system, process water, waste disposal, private waste disposal, water treatment, chemical treatment, water purification, gases and combustible fuels, material transport, medical gas system, and clean room environmental system by reading and interpreting drawings and job specifications, ensuring that the system identified conforms with applicable codes, acts, regulations, job specifications, drawings and customer and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

*** For a compulsory trade, a Trainer must hold a certificate of Qualification in that trade as per section 10(1) of BOSTA and be registered with Skilled Trades Ontario**

5473.02 Perform job-related calculations including: heat loss/gain calculation; gallons per minute (GPM) calculations; flow rates; and, flow capacities, to determine the types of material and equipment for process systems, steam piping systems, and hydronic heating/cooling systems, ensuring that the installation complies with drawings, specifications, codes, acts and regulations.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5473.03 Determine system installation requirements including size and types of openings, fire stopping, types of materials, size of pipe supports and hangers, size of pipe, type of joining method(s), location of piping, type of equipment, and devices by: reading, interpreting and applying codes, acts, regulations, by-laws, job specifications, drawings and manufacturers' catalogues, to ensure that the installation method selected matches the requirement of the system.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5473.04 Identify system equipment and devices including boilers, condensers, chillers, cooling towers, pumps, blow down tanks, cushion tanks, heat exchangers, converters, baseboards, unit heaters, radiators, convectors and heat transfer units by reading, interpreting and applying codes, acts, regulations, by-laws, job specifications, drawings and manufacturers' catalogues, ensuring that the equipment and devices selected are the correct ones for the system and match the job requirements.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5473.05 Select the equipment to be installed including boilers, condensers, chillers, cooling towers, pumps, blow down tanks, cushion tanks, heat exchangers, converters, baseboards, unit heaters, radiators, convectors and heat transfer units by reading, interpreting and applying codes, acts, regulations, by-laws, job specifications, drawings and manufacturers' catalogues, ensuring the equipment selected is compatible to the job requirements.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5473.06

Select the devices to be installed including steam traps, pressure reducing valves, pressure and temperature relief valves, backflow prevention devices, safety valves, control valves, metering valves, water meters, balancing valves, tempering valves, aquastats, low water cut-off, and safety, pressure and temperature sensing devices by reading, interpreting and applying codes, acts, regulations, by-laws, job specifications, drawings, and manufacturers' catalogues, ensuring the device selected matches the job requirements.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5473.07

Layout and illustrate the piping system(s) by creating riser diagrams, schematics, flow sheets, spool sheets, isometric drawings and other specifications so that the layout conforms to the requirements of the customer and/or company, codes, acts, regulations, by-laws, specifications and other governing bodies.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5473.08

Submit design documentation for approval including drawings, sketches, specifications and all related information, ensuring that all designs have been approved and documented prior to proceeding, as specified by governing authorities, engineers and customer or client representative.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5474.0**Plan and Prepare For The Project****General Performance Objective**

Plan and prepare for the project by: preparing material and labour take-off lists; completing all required applications and documentation; determining required installation equipment and tools; expediting the job; establishing a job schedule; verifying delivered orders; and, storing material, tools and equipment.

Skills**5474.01**

Prepare material and labour take-off lists by: reading and interpreting project documents; identifying supplies and material(s), labour and equipment requirements; and, determining the availability and delivery dates of supplies and material(s), to ensure that the project complies with drawings and specifications.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

*** For a compulsory trade, a Trainer must hold a certificate of Qualification in that trade as per section 10(1) of BOSTA and be registered with Skilled Trades Ontario**

- 5474.02** **Complete all required applications and documentation** for the installation of high and low pressure piping including steam systems, hydronic heating and cooling, process piping, medical gas, combustible fuels systems, chilled water and condenser piping, fire protection, potable water systems, instrumentation piping and fibre optics, ensuring that applications and documents are prepared in accordance with municipal and provincial requirements.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

- 5474.03** **Determine required installation tools and equipment** including elevating devices, hoisting/rigging equipment, power and hand tools, testing, welding and safety equipment, using project documents, so that all materials needed to complete the project are confirmed ready and available to complete the project and ensure an efficient and smooth workflow.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

- 5474.04 Expedite job by: ordering supplies, material, equipment and tools;** referencing job specifications, catalogues and approved shop drawings; determining the availability and delivery of material; and, confirming with suppliers, to ensure that material arrives on time to fit with the project schedule.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

- 5474.05 Establish a job schedule** by: preparing flow charts; identifying labour requirements; arranging for specialty equipment; coordinating with other trades; and, allowing for adverse weather and working/site conditions, to ensure efficient handling, storage and installation in compliance with the project schedule.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5474.06 **Verify orders** by: checking delivered material, equipment and tools; confirming order to purchase; and, contacting supplier(s) as required, to determine that material and equipment match those ordered, in compliance with company policies.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5474.07 **Store material, equipment and tools** so that they are available for installation by: complying with any special requirements: ensuring that materials and equipment are safe, secure, protected and handled in accordance with manufacturers' recommendations, company and site policies, OHS/A and other applicable safety regulations.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5475.0 Layout and Install Pipe, Fittings, Valves and Supports

General Performance Objective

Layout and install pipe, fittings, valves and supports by: field checking and verifying site drawings; identifying and selecting required piping materials; identifying and selecting various pipe fittings; identifying and selecting various control valves; identifying and selecting various joining methods; identifying and selecting various pipe supports and hangers; creating a series of structural openings; fabricating all required pipe supports, hangers, sleeves, guides and anchors; installing pipe supports, fabricated components and hangers; performing various cutting procedures; joining material; performing tube and pipe bending operations; preparing pipe and fittings; and, installing and joining the pipe and fittings.

Skills

5475.01 Field check and verify site drawings to enable systems to be fabricated and installed in conformance with applicable codes, acts, regulations, job specifications, drawings, and client and/or company standards. Date Completed Supervisor's Signature Apprentice's Signature

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

*** For a compulsory trade, a Trainer must hold a certificate of Qualification in that trade as per section 10(1) of BOSTA and be registered with Skilled Trades Ontario**

5475.02 **Identify and select required piping materials** including cast iron, steel, copper, plastics, stainless steel, glass aluminum, lead and composite materials listed, ensuring that the selected piping materials conform with applicable codes, acts, regulations, job specifications, drawings, and client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5475.03 **Identify and select various pipe fittings** including elbows, branched fittings, cross fittings, flanges, couplings, eccentric and concentric reducing couplings, reducing bushings, adapters, expansion joints and fittings, ensuring that pipe fittings selected conform with applicable codes, acts, regulations, job and manufacturer specifications, drawings, and client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

- 5475.04** **Identify and select various control valves** including gate, globe, needle, ball, check, multi-port, cage, butterfly, reducing and pressure regulating valves, ensuring that valves selected conform with applicable job specifications, codes, acts, regulations, drawings, and client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

- 5475.05** **Identify and select various joining methods** used in the installation of piping systems including caulked, mechanical joints, flanged, threaded, soldered, brazed, welded, bonded, compression, grooved, swaged and flared methods, ensuring that method selected conforms with applicable codes, acts, regulations, job specifications, drawings, and client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5475.06

Identify and select various pipe supports and hangers used for the installation of piping systems including clevis, ring, roller, spring and trapeze hangers, pipe and riser clamps, concrete inserts, threaded rod, and strut systems, ensuring that supports and hangers are the correct ones to conform with applicable codes, acts, regulations, job specifications, drawings, and client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5475.07

Create a series of structural openings by: sleeving and drilling to allow for the installation of various piping systems; taking into consideration the installation of fire stopping and pipe insulation; and, monitoring the concrete pour and patch, in conformance with applicable codes, acts, regulations, job specifications, drawings, and client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5475.08 **Fabricate all required pipe supports, hangers, sleeves, guides, and anchors** by: reading and interpreting job specifications, threading, cutting, bending and welding selected materials, ensuring that fabrication components conform with applicable codes, acts, regulations, job specifications, drawings, and client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5475.09 **Install pipe supports, fabricated components and hangers** including clevis, ring and roller, concrete inserts and metal struts by: reading and interpreting job specifications; welding, bolting, threading, cementing/glueing, and, using power actuated inserts, ensuring that the installation conforms with applicable codes, acts, regulations, job specifications, drawings, and client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5475.10

Perform various cutting procedures including oxy-fuel, plasma-arc and carbon-arc, hack saws, chop saws, portable band saws, grinders, chippers, roll/tube cutters, hammer, chisel, pipe shears, and soil pipe cutters, using drawings and job specifications, ensuring that material is cut to conform with applicable codes, acts, regulations, job specifications, drawings, and client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5475.11

Join material by: reading and interpreting drawings and job specifications; identifying and performing various welding and soldering methods; and, using oxy-fuel, shield metal arc, gas metal arc, tungsten arc hard/soft soldering, and plastic fusion, ensuring that material is joined in conformance with applicable codes, acts, regulations, job specifications, drawings, and client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5475.12 Perform tube and pipe bending operations by: selecting required tools, materials and equipment including scissors, electric and hydraulic equipment, hand/ratchet benders, and applying heat bending, so that tubes and pipes are bent and prepared, in accordance with manufacturers' instructions, recommendations, applicable codes, acts, regulations, job specifications, drawings, and client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5475.13 Prepare pipe and fittings, including cast iron, steel, copper, plastics, stainless steel, glass, aluminum and composite materials, by measuring, marking, cutting pipe and fittings and, using appropriate methods, so that pipe and fittings are prepared in conformance with applicable job specifications, manufacturers' recommendations, and client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5475.14 **Install and join pipe and fittings** using caulked, mechanical joints, flanged, threaded, soldered, brazed, welded, bonded, compression, grooved, swaged, and flared joining methods, ensuring that pipe and fittings are correctly installed and joined, in conformance with applicable codes, acts, regulations, job specifications, drawings, client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5476.0

Assemble and Install Process Piping Systems**General Performance Objective**

Assemble and install process piping systems by: identifying and selecting the process piping systems to be installed; verifying pipe and fittings characteristics; identifying and verifying the installation location; installing the piping systems; labeling and tagging installed piping systems; and, installing fire stopping measures.

Skills

5476.01

Identify and select the process piping systems to be installed including potable water, fire protection, hydronic heating and cooling, high temperature hot water, vacuum, glycol, low pressure steam, high pressure steam, chilled water, solar systems, heat pumps, radiant heat, process steam, hydraulics, pneumatics, refrigerant piping, environmental systems, process water, waste disposal, private waste disposal, water treatment, chemical treatment, water purification, gases and combustible fuels, material transport, medical gas systems, and clean room environmental systems by reading and interpreting drawings, schematics and job specifications, ensuring that the system selected for installation conforms with applicable codes, acts, regulations, and client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

*** For a compulsory trade, a Trainer must hold a certificate of Qualification in that trade as per section 10(1) of BOSTA and be registered with Skilled Trades Ontario**

- 5476.02** **Verify pipe and fittings characteristics** by: checking manufacturer, type of material, size, schedule, heat numbers, and joining methods), to ensure that pipe and fittings are in conformance with applicable codes, acts, regulations, job specification and drawings, and client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

- 5476.03** **Identify and verify the installation location of the piping systems** by: reading and interpreting drawings, schematics, and job specifications and checking types of systems, ensuring that the equipment selected for the location conforms with applicable codes, acts, regulations, specifications, drawings, client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5476.04 **Install piping systems** by : reading and interpreting drawings, schematics and job specifications; using applicable tools, equipment and procedures, so that the piping system is correctly installed, in accordance with applicable codes, acts, regulations, job specifications, and client and/or company standards

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5476.05 **Label and tag installed piping systems** by: identifying and verifying system and pipe contents; using colours and lettering designation; indicating flow direction; and, attaching labels, so that the system is identified and labeled in accordance with job specifications, ANSI, and client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5476.06

Install fire stopping measures by: identifying the sections of the piping systems which require installation; selecting fire stopping devices and material; and, installing fire stopping; ensuring that installation is completed in accordance with manufacturers' recommendations, job specifications, and applicable codes including OFC, OBC. and by-laws.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5477.0 Install and Maintain Instrumentation Control Systems

General Performance Objective

Install and maintain instrumentation controls systems by: identifying the piping systems; identifying the types and functions of the instruments; determining the system instrumentation requirements; selecting the instrumentation; and, installing, calibrating and maintaining the instrumentation.

Skills

5477.01 Identify and select the piping systems requiring a control system, including potable water, chilled water, process water, water treatment, water purification, fire protection, hydronic heating and cooling, high temperature hot water, low pressure steam, high pressure steam, radiant heat, process steam, vacuum, glycol, hydraulic, pneumatic, refrigerant piping, waste disposal, private waste disposal, chemical treatment, heat pumps, solar systems, environmental systems, gases and combustible fuels, material transport, medical gas systems, and clean room environmental systems by: reading and interpreting drawings, schematics and job specifications, ensuring the piping system is controlled and operates in accordance with the job specifications and client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

*** For a compulsory trade, a Trainer must hold a certificate of Qualification in that trade as per section 10(1) of BOSTA and be registered with Skilled Trades Ontario**

5477.02 Identify the types and functions of piping system instrumentation controls including flow, temperature, pressure, level, alarm and other parameters by: reading and interpreting manufacturers' instructions and recommendations, specifications and drawings, and, checking that the controls conform to applicable codes, acts, and client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5477.03 Determine the control system installation requirements by: identifying flow, temperature, pressure, level, and alarm parameters; identifying electrical requirements; checking for required approvals; and, reading, interpreting and applying codes, acts, regulations, by-laws, job specifications, drawings and manufacturers' catalogues.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

- 5477.04 Identify and select the control systems to be installed** including programmable logic controllers (PLCs), pneumatic, hydraulic, low voltage, electronic and fibre optic systems by: reading, interpreting and applying codes, acts, regulations, by-laws, job specifications, drawings and manufacturers' catalogues.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

- 5477.05 Install, calibrate and maintain control system(s)** by: reading and interpreting instructions contained in manufacturers' instructions and recommendations: and, using appropriate tools and equipment including PLCs, pneumatic, hydraulic, low voltage, electronic and fibre optic systems, verifying that the controls are calibrated, functioning and operational, so that control system(s) are installed in accordance with applicable codes, acts, regulations, job specifications, drawings, manufacturers' directions, and client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5478.0 Install Equipment

General Performance Objective

Install equipment by: identifying the equipment; verifying the equipment characteristic; selecting the equipment to be installed; assembling the equipment; identifying the installation locations; installing the supports and hangers; and, installing and connecting the equipment to various piping systems.

Skills

5478.01 Identify the equipment to be installed including boilers, condensers, chillers, cooling towers, pumps, blow down tanks, cushion tanks, heat exchangers, converters, baseboards, unit heaters, radiators, convectors, other heat transfer units and specialty equipment by: referring to manufacturers' catalogues, job specifications, drawings, acts, codes, regulations, and client and/or company standards. Date Completed
 Supervisor's Signature Apprentice's Signature

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

*** For a compulsory trade, a Trainer must hold a certificate of Qualification in that trade as per section 10(1) of BOSTA and be registered with Skilled Trades Ontario**

5478.02 **Verify the equipment characteristics** by: checking manufacturers, type of material, size, weight, capacity, performance, electrical requirements, approvals, colour, finish, type and location of connections, ensuring that characteristics of equipment conforms to the specific requirements by reference to manufacturers' catalogues, job specifications, drawings, client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5478.03 **Select the equipment to be installed** by: reading, interpreting and comparing the specifications required to those available for items including size, weight, approved capacity, output and availability, ensuring that equipment selected conforms to job specifications, drawings, acts, codes, regulations, client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5478.04 Assemble the equipment by: reading and interpreting drawings, schematics, manufacturers' instructions and recommendations, and job specifications; using tools and equipment including clamps, bending machine, chisels, drills, flange spreader, grinders, hacksaws, hammers, levels, lifts, pipe cutters, pipe threaders, shear, swaging tool, welding equipment and wrenches, to measure, cut, bend and fasten items, ensuring that assembled equipment conforms with applicable codes, acts, regulations and client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5478.05 Identify the installation locations of the equipment by: reading and interpreting drawings, schematics and job specifications; checking the equipment will fit the indicated position in accordance with manufacturers' instructions and recommendations, applicable codes, acts, regulations, job specifications, drawings, client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5478.06 Install equipment supports and hangers including house keeping isolating pads, spring hangers, job-built hangers, mounting brackets and supports, flexible connectors and expansion fittings by: reading and interpreting drawings, schematics, specifications and manufacturers' recommendations; using appropriate fastening methods and techniques, and ensuring the installation conforms with applicable codes, acts, regulations, job specification, drawings, client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5478.07 Install and connect the equipment to various piping systems by: reading and interpreting drawings, schematics, job specifications and manufacturers' instructions and recommendations; identifying locations of connection points; and, identifying and using appropriate connection methods, so that the equipment is installed in accordance with applicable codes, acts, regulations, specifications, drawings, client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5479.0 Install Devices**General Performance Objective**

Install devices by: identifying the devices; verifying the device characteristics; selecting the devices; assembling the devices; identifying the installation locations; installing the device supports and hangers; and, installing and connecting the devices to the various equipment and piping systems.

Skills

5479.01 Identify the devices including pressure reducing valves, pressure/temperature relief valves, backflow prevention devices, safety valves, control valves, metering valves, balancing valves, tempering valves, water meters, aquastats, thermostats, economisers, circulation pumps, flow switches, PLCs, hi-limit and low-limit controls, low water cut-off, and other safety, temperature and pressure devices by: reading and interpreting drawings, schematics, manufacturers' catalogues and job specifications, ensuring that the devices identified are the correct ones for the system, in conformance with acts, codes, regulations, and client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

*** For a compulsory trade, a Trainer must hold a certificate of Qualification in that trade as per section 10(1) of BOSTA and be registered with Skilled Trades Ontario**

5479.02 **Verify the device characteristics** by: checking manufacturer catalogues, type of material, size, weight, capacity, performance, electrical requirements, approvals, colour, finish, and type and location of connections, ensuring that the devices are correct for the system requirements and conform to applicable codes, acts, regulations, specifications, drawings, and client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5479.03 **Select the devices used for the system** by: reading and interpreting drawings, manufacturers' recommendations, and job specifications, ensuring that the devices selected are correct for the required application and conform with acts, codes, regulations, job specifications, and client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5479.04 Assemble the devices by: reading and interpreting drawings, schematics, job specifications, and manufacturers' instructions and recommendations: using applicable tools and equipment to fasten and attach devices, ensuring that assembled devices conform with applicable codes, acts, regulations, and client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5479.05 Identify the installation locations by: reading and interpreting drawings, schematics and job specifications; checking the device will fit the indicated position; and, ensuring the devices conform with applicable codes, acts, regulations, job specifications, drawings, and client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5479.06 Install device supports and hangers including housekeeping/isolation pads, spring hangers, job-built hangers, mounting brackets and supports, flexible connectors and expansion fittings by: reading and interpreting drawings, schematics, manufacturers' instructions and recommendations; and, using appropriate fastening methods and techniques, ensuring that the installation of the devices conforms with applicable codes, acts, regulations, job specifications, drawings, and client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5479.07 Install and connect the devices to various equipment and piping systems by: reading and interpreting drawings, schematics, job specifications and manufacturers' instructions and recommendations; identifying locations of connection points; and, identifying and using appropriate collection methods, so that the devices are installed in accordance with applicable codes, acts, regulations, job specifications, drawings, and client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5480.0 Test Systems**General Performance Objective**

Test systems by: identifying and selecting the required tests; determining the type, duration, pressures and set-up requirements for the system tests; performing and/or arranging destructive and non-destructive testing on various systems; performing visual inspection; performing stress relieving on trade related materials; arranging for a test or testing schedule; performing piping system testing; performing water treatment testing; and, receiving and documenting test reports and results.

Skills

5480.01 Identify and select the required tests for systems including potable water, fire protection, hydronic heating and cooling, high temperature hot water, vacuum, glycol, low pressure steam, high pressure steam, chilled water, solar systems, heat pumps, radiant heat, process steam, hydraulic, pneumatic, refrigerant piping, environmental systems, process water, waste disposal, private waste disposal, water treatment, water purification, gases and combustible fuels, material transport, medical gas systems and clean room environmental systems by: reading and interpreting drawings, schematics and job specifications in accordance with manufacturers' instructions and recommendations, applicable codes, acts, regulations, specifications and drawings, client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

*** For a compulsory trade, a Trainer must hold a certificate of Qualification in that trade as per section 10(1) of BOSTA and be registered with Skilled Trades Ontario**

5480.02 Determine the type, duration, pressures and set up requirements for system tests including water, air, and inert gases tests by: reading and interpreting drawings, schematics and specifications, ensuring that the tests selected are correct for the system, set up and ready in accordance with manufacturers' instructions and recommendations, applicable codes, acts, regulations, job specifications, drawings, client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5480.03 Perform and/or arrange destructive and non-destructive testing on various systems by methods including: radiography (X-ray), pressure test, purity and graph test, in accordance with manufacturers' instructions and recommendations, applicable codes, acts, regulations, job specifications, drawings, client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

- 5480.04 Perform visual inspection of various piping systems to check for items** including completion of joining procedures, leaks, and systems identification markings, ensuring compliance with manufacturers' instructions and recommendations, applicable codes, acts, regulations, job specifications, drawings, client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

- 5480.05 Perform stress relieving on trade related materials** following methods and procedures and using controlled applications of heat by open flame, ovens and electric resistance, in accordance with manufacturer's instructions and recommendations, applicable codes, acts, regulations, job specifications, drawings, client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5480.06 Arrange for test or a testing schedule for piping systems by: contacting governing authorities; scheduling test; and, checking equipment is ready and prepared for tests, in accordance with manufacturer's instructions and recommendations, applicable codes, acts, regulations, job specifications, drawings, client requirements, and company standards

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5480.07 Perform piping system testing procedures by: testing the systems and replacing any defective components, devices, fixtures or equipment, ensuring that the system is tested and verified to comply with applicable codes, acts, regulations, job specifications and drawings, client requirements and company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5480.08 Perform water treatment testing by: drawing the required water samples and applying tests including pH and chemical or mineral analysis, ensuring that the water treatment tests are conducted in a safe and efficient manner to comply with applicable codes, acts, regulations, job specifications, drawings, client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5480.09 Receive and document test reports and results including boiler water analysis, radiography (weld X-ray results), purity tests, and other tests, to verify the testing was successfully completed to comply with applicable codes, acts, regulations, job specifications, drawings, client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5481.0 Commission/Activate Systems

General Performance Objective

Commission or activate systems by: identifying the piping systems that require commissioning and/or activating; determining and performing the required tests for final inspections on completed piping systems; flushing and chemically treating systems; verifying the calibration and operation of equipment and controls; instructing the end users; and, checking the systems are in full operational condition.

Skills

5481.01 Identify the piping systems that require commissioning and/or activation including potable water, fire protection, hydronic heating and cooling, high temperature hot water, vacuum, glycol. Low pressure steam, chilled water, solar systems, heat pumps, radiant heat, process steam, hydraulic, pneumatic, refrigerant piping, environmental systems, process water, waste disposal, private waste disposal, water treatment, chemical treatment, water purification, gases and combustible fuels, material transport, medical gas systems and clean room environmental systems in accordance with manufacturers' instructions and recommendations, applicable codes, act5s, regulations, job specifications, drawings, client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

*** For a compulsory trade, a Trainer must hold a certificate of Qualification in that trade as per section 10(1) of BOSTA and be registered with Skilled Trades Ontario**

5481.02 Determine and person the tests required for final inspections on completed piping systems by: installing appropriate test fittings; completing required tests; correcting any deficiencies; removing test apparatus; and, receiving inspection reports, so that tests are completed in accordance with job specifications, applicable codes, municipal by-laws, and company/customer standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5481.03 Flush and chemically treat systems by: selecting appropriate tools and equipment; completing required procedures; and, filling the system with appropriate chemicals or solutions and mediums, so that systems are treated in accordance with applicable codes, acts, regulations, job specifications, drawings, client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5481.04 **Verify the calibration and operation of equipment and controls** by: selecting appropriate tools and instruments; and, completing required procedures in accordance with manufacturers' instructions and recommendations, applicable codes, acts, regulations, job specifications, drawings, client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5481.05 **Instruct end users** by: explaining/demonstrating how to use and operate the system; describing maintenance requirements of equipment and devices; and, delivering and presenting on-site equipment documentation, user manuals, operating procedures, manufacturer's instructions, recommendations and warranties, ensuring that all instructions are clear, concise and accurate, so that the client's or user's questions are answered.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5481.06 **Check that the systems are commissioned/activated** by ensuring they are operating in accordance with manufacturer's instructions and recommendations, applicable codes, acts, regulations, job specifications, drawings, client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5482.0 Perform Rigging and Hoisting

General Performance Objective

Perform rigging and hoisting operations by: reading and interpreting specifications and shop drawings; inspecting the job site; determining the equipment required; scheduling the operation; inspecting the equipment; connecting the equipment to the load; securing the hoisting area; performing the lifting/moving operation; positioning and securing the load in the designated area; disconnecting the load; communicating throughout the operation; removing, checking and storing rigging equipment; and, operating power lifting and hoisting equipment.

Skills

5482.01 Read and interpret specifications and shop drawings to determine the weight, size and any special rigging requirements of the material or equipment to be hoisted/moved in compliance with OHSA, Highway Traffic Act, manufacturers' recommendations and client/company procedures. Date Completed Supervisor's Signature Apprentice's Signature

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

*** For a compulsory trade, a Trainer must hold a certificate of Qualification in that trade as per section 10(1) of BOSTA and be registered with Skilled Trades Ontario**

5482.02 **Inspect the job site** to; ensure safe rigging and hoisting operations may be carried out; identify potential hazards such as proximity to hydro lines; and, check ground conditions for outrigger and accessibility of equipment, in compliance with OHSA, the HEA (Hoisting Engineers Act), and client/company safety procedures.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5482.03 **Determine the hoisting/rigging equipment** required by; calculating the weights to be lifted; calculating distance and height requirements to the placement area; and, checking site and ground conditions, in compliance with OHSA, HEA and client/company safety procedures.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5482.04 Schedule the hoisting/rigging operation by; consulting the job schedule; checking material delivery schedule and hoisting equipment availability; coordinating the hoisting crew, rigging/hoisting supervisor, client representative and other trades; and, organizing any special requirements such as road closures, in compliance with OHSA, MOT, HEA, power utility companies, and client/company safety procedures.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5482.05 Inspect the rigging and hoisting equipment to ensure that the equipment is in safe working order and has sufficient capacity for the material and equipment to be hoisted, in compliance with ORSA, REA, and client/company safety procedures.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5482.06 **Connect the rigging equipment** to the load to perform hoisting/moving operations, using shackles, slings, chains, hooks, ropes and other equipment in compliance with ORSA, REA, and client/company safety procedures.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5482.07 **Secure the hoisting area** by use of barrier tape, barricades or other suitable means to prevent unauthorized personnel from entering the area when rigging and hoisting operations are being performed, in compliance with ORSA, REA, and client/company safety procedures.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5482.08 **Perform the lift/move operation**, ensuring that pathway is clear of obstacles and unauthorized personnel, in compliance with OHSA, HEA, and client/company safety procedures.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5482.09 Position and secure the load in the designated area so that personnel are not at risk from the load shifting or falling in compliance with OHSA, HEA, and client/company safety procedures.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5482.10 Disconnect the load from the rigging devices including shackles, turnbuckles, hooks and other equipment, in compliance with OHSA, HEA, and client/company safety procedures.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5482.11 Remove and store rigging equipment in a designated area by: checking for worn or frayed items including chain links, wire and ropes; tagging and separating items for repair; and, applying preservation coatings as appropriate, in compliance with OHSA, HEA, and client/company safety procedures.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5482.12 Communicate throughout the hoisting operation using international hand signals or approved voice communication methods in compliance with OHSA, client and company safety procedures.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5482.13 Operate power lifting and hoisting equipment including boom trucks, fork lifts, personnel lifts, scissor lifts, overhead cranes, tuggers and manual lift/moving devices in compliance with OHSA, and client/company safety procedures.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5483.0 Perform Preventative Maintenance**General Performance Objective**

Perform preventative maintenance by: preparing the equipment for inspection; determining the mechanical system components requiring scheduled maintenance; preparing service schedules for the client; obtaining approvals to proceed with schedule; performing the required maintenance; verifying the maintenance performed; re-commissioning the system; verifying full operational status; cleaning up the job site; and, submitting relevant documentation.

Skills

5483.01 Prepare the equipment for inspection by: washing, flushing, blowing down, and dumping using chemical solutions, pot feeder or bleaching system, in accordance with OHSA, EPA, WHMIS, manufacturers' recommendations, and client and/or company procedures.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

*** For a compulsory trade, a Trainer must hold a certificate of Qualification in that trade as per section 10(1) of BOSTA and be registered with Skilled Trades Ontario**

5483.02 Determine the mechanical system components which require scheduled maintenance by: reading drawings; and, following clients' operating and/or maintenance directories, manufacturers' specifications and/or maintenance recommendations.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5483.03 Prepare service schedules for the client by outlining the recommended maintenance procedures in compliance with manufacturers' specifications, maintenance directories, client/company procedures, applicable codes and municipal by-laws.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5483.04 Liaise with the client or client's representative in order to receive approval for the preventative/routine maintenance schedule, in accordance with company policies and procedures.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5483.05 **Obtain approvals to proceed with the maintenance schedule** from the client or client's representative, utilities, fire departments, monitoring companies, end users, and any other parties that may be affected, in accordance with company and/or client policy and procedures or other authorities.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5483.06 **Perform the required maintenance in a professional manner** by ensuring that all tools, equipment, materials and qualified personnel are on site, and the work is performed in accordance with manufacturers' recommendations and to client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5483.07 **Verify the maintenance performed** by: inspecting and testing for items including fluid/chemical qualities, lubrication, temperatures, pressures, equipment functions and the combustion efficiencies, ensuring that maintenance procedures comply with the client's and/or company standards, applicable codes, municipal by-laws and manufacturers' recommendations.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5483.08 **Re-commission the system after the maintenance/repairs are complete, tested and verified**, by reactivating equipment/system(s) in accordance with client and/or company procedures and manufacturers' recommendations.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5483.09 **Verify the full operational status of the system** by checking that the calibration and balance conforms with the client's and/or company standards and manufacturers' recommendations.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5483.10 **Clean up the job site** by removing excess debris, tools and equipment in accordance with OHSA, and client and/or company policies or standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5483.11 **Submit relevant documentation** including service reports and invoicing, upon completion of the maintenance performed, to conform with the client's and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5484.0 Troubleshoot and Repair Mechanical Systems**General Performance Objective**

Troubleshoot and repair mechanical systems by: diagnosing and assessing system problems; preparing a service proposal for the client; liaising with the client; arrange for maintenance; preparing systems for repairs; performing the required service; operating the systems on completion of repairs; verifying calibration of the system and/or components; re-commissioning the system; cleaning up the job site; and, submitting relevant documentation.

Skills

5484.01 Diagnose and assess system problem(s) by: communicating with the client/operator; verifying the operation of the systems; and, reading drawings, client's directories and manufacturers' specifications, in accordance with industry and company standards and procedures.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

*** For a compulsory trade, a Trainer must hold a certificate of Qualification in that trade as per section 10(1) of BOSTA and be registered with Skilled Trades Ontario**

5484.02 Prepare a service proposal for the client by: outlining the problem; recommending a course of action; recommending a schedule for the repair(s); and, giving written or verbal communications, in compliance with client and/or company procedures, applicable codes and municipal by-laws.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5484.03 Liaise with the client or client's representative in order to outline the costing and to receive approval for the service, in compliance with client and/or company procedures and standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5484.04 Arrange for maintenance by: obtaining approvals from the client and notifying utilities, fire departments, monitoring companies, end users and any other . parties that may be affected by the proposed service, in accordance with companies and/or client procedures.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

- 5484.05 Prepare the systems for the approved repairs** by verifying that fuel, power, hydraulics, pneumatic systems, and operating control systems are isolated, de-energized, and locked-out as required, in accordance with OHSA, client and/or company procedures, manufacturers' specifications and recommendations.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

- 5484.06 Perform the required service in a professional manner**, ensuring that all tools, equipment, materials and qualified personnel are on site, and that the work is carried out in accordance with the client and/or company procedures and manufacturers' recommendations.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5484.07 Operate the system after all the repairs are complete, tested, and verified, ensuring that the repairs conform with the client and/or company standards and manufacturers' recommendations.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5484.08 Verify the calibration of the system and/or system components by operating the system and ensuring that the system operates in conformance with the client's and/or company standards and manufacturers' recommendations.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5484.09 Re-commission the system by notifying the end users, customers, utilities and enforcing authorities of the system status, ensuring that all locking/isolation devices are removed and the system and its components are operational, in accordance with the client's and/or company standards and manufacturers' recommendations

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5484.10 **Clean up the job site** by removing excess debris, tools and equipment in accordance with OHSA, and client and/or company policies and standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

5484.11 **Submit relevant documentation** including service reports and invoicing upon completion of the maintenance performed, to conform with client and/or company standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

Definitions

Apprentice

- An individual who, pursuant to a registered Training Agreement, is receiving or is to receive training in a trade that is required as part of an apprenticeship program
- Holds a Training Agreement in either a compulsory or non-compulsory trade;
- Are subject to any ratios that have been set out in regulation and or recommended by industry for their trade(s);
- Remain as an Apprentice until they receive their Certificate of Apprenticeship

BOSTA

Building Opportunities in the Skilled Trades Act, 2021 (BOSTA)

Certificate of Apprenticeship (C of A)

A certificate issued to individuals who have demonstrated that they have completed an apprenticeship program in Ontario.

Certificate of Qualification (C of Q)

A certificate issued to an individual who has completed an apprenticeship or equivalent AND passed the Certificate of Qualification examination.

Competence

The ability of an individual to perform a skill, consistently without assistance, in the workplace as set out in the Logbook.

Competency Analysis Profile (CAP Chart)

A chart that identifies the training needs of an individual trade and details the skills/skill sets that must be demonstrated during an apprenticeship program.

Journey person

Journey person means an individual who holds a certificate of qualification (in a compulsory or non-compulsory trade) and/or an individual who practices as a journey person in a non-compulsory trade who does not hold a certificate of qualification and has equivalent experience in that trade.

Mandatory Skill

Status assigned to unshaded individual skills, skill sets or general performance objectives which must be signed-off for the Apprentice to complete their program.

Optional Skill

Status assigned to shaded individual skills, skills sets or general performance objectives for which sign-off is not required for the Apprentice to complete the program.

Provisional Certificates of Qualification

- A Provisional Certificate of Qualification is issued to an individual who has obtained a Certificate of Apprenticeship (in both compulsory and non-compulsory trades) in a program that has a Certificate of Qualification examination, to which the individual has not yet passed the Certificate of Qualification examination.
- A Provisional Certificate of Qualification shall have the prescribed term or, if no term is prescribed, a term of one year.
- In a compulsory trade, the Provisional Certificate of Qualification allows a person to continue working legally in the trade for up to 12 months while they work to pass the certifying exam.
- Individuals with a Provisional Certificate of Qualification are subject to any ratios that have been set out for their trade(s).

Ratios

For the purpose of an Apprenticeship program, a ratio is the maximum number of Journeypersons to Apprentices. The purpose of ratios is to provide consistent supervision, training and continuity of work.

Red Seal Program)

The Interprovincial Standards Red Seal Program (also known as the Red Seal Program) was established more than 50 years ago to provide greater mobility across Canada for skilled workers and represents a standard of excellence for industry. Through the program, individuals are able to obtain a Red Seal endorsement on their provincial/territorial certificates by achieving 70% or higher on an interprovincial Red Seal examination.

The Interprovincial Standards Red Seal Program acknowledges their competence and ensures recognition of their certification throughout Canada without further examination. There are currently over 50 Red Seal designated trades. **The Red Seal Program is recognized as the interprovincial *standard of excellence* in the skilled trades.** The Interprovincial Standards Red Seal Program is a partnership between the Government of Canada, the Provinces, the Territories and various stakeholders.

Sign-off

Signature of the Sponsor of record, or an individual to whom that Sponsor has delegated signing authority, (e.g. Trainer) indicating an Apprentice's demonstration of competence.

Skill

Individual competency/task described in the Logbook.

Skill Sets

Group or selection of individual skills found in the Logbook.

Skill Set Completion for Sponsors

Listing for all skill sets and includes space for sign-off by Sponsor of record.

Sponsor

Means a person that has entered into a registered Training Agreement under which the person is required to ensure that an individual is provided with workplace-based training in a trade as part of an apprenticeship program.

Sponsor of Record

Refers to the Sponsor documented as being signatory to the registered Training Agreement or Contract of Apprenticeship. In order for a Sponsor to be considered for the training of Apprentices, they must identify that the workplace has qualified persons or the equivalent on site, and can identify that the workplace has the tools, equipment, materials, and processes which have been identified by the Industry representatives for the trade.

Trainer

An individual who oversees the performance of a task and sets the workplace expectations and practices for the Apprentice. For a compulsory trade, a qualified Trainer is an individual who holds a Certificate of Qualification. In a non-compulsory trade, a Trainer is an individual who either holds a CofQ, CofA, or is considered equivalent.

Ready to Write Your Exam?

Many of the skilled trades in Ontario have a final certification examination that you must pass to become certified in your trade. Passing the examination gives you the right to hold yourself out as a Journey person and receive a Certificate of Qualification in your trade.

There are two types of trade certification examinations in Ontario:

1. Provincial (Ontario) examinations - which lead to a Certificate of Qualification.
2. Red Seal examinations – which lead to a Certificate of Qualification with an Interprovincial Red Seal endorsement.

If a trade is designated as Red Seal in Ontario, you will be writing the Red Seal examination. To access the Red Seal preparation guide please visit: red-seal.ca

Ontario's Exam Preparation Guide

[Exam Resources – Skilled Trades Ontario](#)

Basic Examination Details for You to Know

- You will have **up to four hours to write your examination.**
- Accommodations must be requested and approved prior to scheduling your examination.
- You can leave the examination centre if you complete the examination in less than four hours.
- Exam questions are multiple choice with four options from which you must choose the correct answer. Your examination may have between 90 and 150 multiple choice questions.
- You need a mark of 70% to pass.

Scheduling Your Examination

The examination scheduling process is currently outlined in detail on the Skilled Trades Ontario website: [Exam Scheduling – Skilled Trades Ontario](#)

Remember these 3 basic steps:

1. Confirm your eligibility to write the examination with Skilled Trades Ontario.
2. Contact Client Services at Skilled Trades Ontario to pay your examination fee.
3. Contact the local Service Delivery Office to schedule your examination in their examination centre: <https://www.ontario.ca/page/employment-ontario-apprenticeship-offices>

Instructions for Recording a Change in Sponsor

1. Record your first sponsor's information in Sponsor Record #1 – this would be the sponsor who has signed your initial apprenticeship Training Agreement for this trade.
2. If you do change sponsors prior to completing this apprenticeship, please contact your local Service Delivery Office immediately to update your sponsor record.
3. Please make sure you record all the information regarding any additional sponsors of record towards your apprenticeship using the Sponsor Records on the following pages (if applicable).

You must fill out a Change of Sponsor Record each time you change your sponsor.

Sponsor Record #1

Sponsor Information		
Apprentice Name		
Training Agreement #		Date (mm/dd/yy)
Sponsor Name		
Address		
Telephone		
E-mail Address		

Summary of Training	
Employment Start Date	
Employment End Date	
Total hours of training & instruction between dates of employment.	
Skill Sets Completed	

As the Sponsor, I hereby confirm that the above information is true and accurate to the best of my knowledge.

Signature: _____ Date: (mm/dd/yy) _____

The Sponsor is required to sign-off and date the skills after the Apprentice has proven competence in those skills. However, if a skill is shaded, it is optional and does not need to be signed-off.

***If you need additional copies of the Sponsor Record, visit SkilledTradesOntario.ca and search Sponsor Record Form.**

Change of Sponsor Record #2

Sponsor Information		
Apprentice Name		
Training Agreement #		Date (mm/dd/yy)
Sponsor Name		
Address		
Telephone		
E-mail Address		

Summary of Training	
Employment Start Date	
Employment End Date	
Total hours of training & instruction between dates of employment.	
Skill Sets Completed	

As the Sponsor, I hereby confirm that the above information is true and accurate to the best of my knowledge.

Signature: _____ Date: (mm/dd/yy) _____

The Sponsor is required to sign-off and date the skills after the Apprentice has proven competence in those skills. However, if a skill is shaded, it is optional and does not need to be signed-off.

***If you need additional copies of the Sponsor Record, visit SkilledTradesOntario.ca and search Sponsor Record Form.**

Change of Sponsor Record #3

Sponsor Information		
Apprentice Name		
Training Agreement #		Date (mm/dd/yy)
Sponsor Name		
Address		
Telephone		
E-mail Address		

Summary of Training	
Employment Start Date	
Employment End Date	
Total hours of training & instruction between dates of employment.	
Skill Sets Completed	

As the Sponsor, I hereby confirm that the above information is true and accurate to the best of my knowledge.

Signature: _____ Date: (mm/dd/yy) _____

The Sponsor is required to sign-off and date the skills after the Apprentice has proven competence in those skills. However, if a skill is shaded, it is optional and does not need to be signed-off.

***If you need additional copies of the Sponsor Record, visit SkilledTradesOntario.ca and search Sponsor Record Form.**

Change of Sponsor Record #4

Sponsor Information		
Apprentice Name		
Training Agreement #		Date (mm/dd/yy)
Sponsor Name		
Address		
Telephone		
E-mail Address		

Summary of Training	
Employment Start Date	
Employment End Date	
Total hours of training & instruction between dates of employment.	
Skill Sets Completed	

As the Sponsor, I hereby confirm that the above information is true and accurate to the best of my knowledge.

Signature: _____ Date: (mm/dd/yy) _____

The Sponsor is required to sign-off and date the skills after the Apprentice has proven competence in those skills. However, if a skill is shaded, it is optional and does not need to be signed-off.

***If you need additional copies of the Sponsor Record, visit SkilledTradesOntario.ca and search Sponsor Record Form.**

Appendix A — Instructions for Apprenticeship Program Completion

Once an Apprentice has completed all the classroom training and benchmark on-the-job hours specified for the trade and has acquired all the mandatory skills included in this Logbook.

The Apprentice and the Sponsor complete the Apprentice Completion Form and the Skill Set Completion for Sponsors Form located on the following pages.

1. They sign the forms and submit them to their local Service Delivery Office. To find the closest office, check the contact information at ontario.ca/page/employment-ontario-apprenticeship-offices or call the Employment Ontario toll free number at (1-800-387-5656).
2. For All Trades: All mandatory skills (or the combination indicated in the completion requirements for the trade) in the Logbook must be signed-off. The recommended hours are a benchmark. If the Sponsor is completing the Apprentice before the industry recommended training hours are done, staff may request further information regarding the Apprentice's on-the-job training. An example of a request would be a letter from the Sponsor confirming the Apprentice worked for some time in the trade before the initial Training Agreement was registered, thereby acquiring some skills beforehand.

If Apprentices are submitting the completion request form and supporting documentation to their local Service Delivery Office by mail, fax, or email (as a scanned document), they should not include their Logbook; if they are presenting this form in person at the local Service Delivery Office, they should bring their Logbook with them.

After staff verifies all the information in the completion request, they may contact either the Apprentice or the Sponsor for further information or documentation. Once the completion has been confirmed, the local Service Delivery Office will issue a Certificate of Apprenticeship to the Apprentice.

Skilled Trades Ontario will receive notification of this completion.

- If the Apprentice has completed a program in a **compulsory trade**, Skilled Trades Ontario will automatically register the Apprentice for a Provisional Certificate of Qualification to continue to work legally for one year while preparing for the certification examination.
- If an Apprentice completes their apprenticeship in a **non-compulsory trade** and there is a Certificate of Qualification exam, they must write and pass the exam to receive a Certificate of Qualification from Skilled Trades Ontario.

For permission to schedule an exam once completion is confirmed, the individual must first contact the Skilled Trades Ontario Client Services Department at 647-847-3000 or toll free at 1-855-299-0028 to pay the certification examination fee. Once you have paid your exam fee with Skilled Trades Ontario, book your exam by contacting your nearest Employment Ontario local Service Delivery Office.

Appendix B — Apprentice Completion Form

Please fill out both sides of this form, including the Skill Set Completion for Sponsors (see back of form). Once both sides are completed, submit the form to your local Service Delivery Office (find contact information at ontario.ca/page/employment-ontario-apprenticeship-offices or by calling Employment Ontario at (1-800-387-5656).

Apprentice Information	
Name (print)	
Client ID # Issued by Ministry	
Telephone Number(s)	

Sponsor Information	
Legal Name	
Address	
Telephone Number(s)	
Sponsor's Signing Authority <i>(print name)</i>	
E-mail Address	

Program Information	
Trade Name	
Number of hours required as per Training Agreement <i>(hours-based trades only)</i>	
Hours completed? <i>(documentation attached)</i>	Yes () No () Not applicable ()
Classroom training completed or exempt?	Yes () No () Not applicable ()

I hereby confirm that the information submitted on both sides of this form is true and accurate.

X _____
Apprentice's Signature Date

X _____
Signature of Sponsor's Signing Authority Date

Appendix D — Local Service Delivery Offices in Ontario

For current office listings visit: ontario.ca/page/employment-Ontario-apprenticeship-offices

Location	Contact	Location	Contact
Barrie 705-737-1431	55 Cedar Pointe Dr Unit 609, Barrie, ON L4N 5R7	Marathon 807-346-1550	52 Peninsula Road, Suite 103 Marathon, Ontario, P0T 2E0
Belleville 613-968-5558 1-800-953-6885	135 North Front St, Belleville, ON K8P 3B5	Markham 905-513-2695	140 Allstate Parkway, Suite 505, Markham, Ontario L3R 5Y8
Brantford 519-756-5197	505 Park Rd North Suite 201, Brantford, ON N3R 7K8	North Bay 705-495-8515 1-800-236-0744	200 First Ave West, North Bay, ON P1B 3B9
Chatham 519-354-2766 1-800-214-8284	870 Richmond St West 1st Floor, Chatham, ON N7M 5J5	Ottawa 613-731-7100 1-877-221-1220	Preston Square, 347 Preston Street, Suite 310, Ottawa, ON K1S 3H8
Cornwall 613-938-9702 1-877-668-6604	132 Second St East Ste 202, Cornwall, ON K6H 1Y4	Owen Sound 519-376-5790 1-800-838-9468	1450 1st Ave West, Suite 100, Owen Sound, ON N4K 6W2
Dryden 807-456-2665 1-800-734-9572	Provincial Government Building, 479 Government St, Dryden, ON P8N 3K9	Peel 905-279-7333 1-800-736-5520	The Emerald Centre, 10 Kingsbridge Garden Circle, Suite 404, Mississauga, ON L5R 3K6
Durham 905-433-0595 1-800-461-4608	78 Richmond Street West, Oshawa, ON L1G 1E1	Pembroke 613-735-3911 1-800-807-0227	615 Pembroke St East, Pembroke, ON K8A 3L7
Elliot Lake 1-800-236-8817	50 Hillside Dr North, Elliot Lake, ON P5A 1X4	Peterborough 705-745-1918 1-877-433-6555	901 Lansdowne St West, Peterborough, ON K9J 1Z5
Fort Frances 807-274-8634	922 Scott St 2nd Flr, Fort Frances, ON P9A 1J4	Sarnia 519-542-7705 1-800-363-8453	Bayside Mall, 150 Christina St North, Sarnia, ON N7T 7W5
Geraldton 807-854-1966	208 Beamish Avenue West Geraldton, Ontario P0T 1M0	Sault Ste. Marie 705-945-6815 1-800-236-8817	477 Queen St East 4th Flr, Sault Ste Marie, ON P6A 1Z5
Halton 905-842-5105 1-844-901-5105	700 Dorval Dr., Suite 201, Oakville, ON L6K 3V3	St Catharines 905-704-2991 1-800-263-4475	Garden City Tower, 301 St Paul St East, 10th Flr, St Catharines, ON L2R 7R4
Hamilton 905-521-7764 1-800-668-4479	Ellen Fairclough Bldg, 119 King St West 8th Flr, Hamilton, ON L8P 4Y7	Sudbury 705-564-3030 1-800-603-5999	159 Cedar St Ste 506, Sudbury, ON P3E 6A5
Kapuskasing 705-465-5785 705-235-1950	Ontario Government Complex, 122 Government Rd West, Kapuskasing, ON P5N 2X8	Thunder Bay 807-346-1550 1-800-439-5493	189 Red River Rd Suite 103, Thunder Bay, ON P7B 1A2
Kenora 807-468-2879 1-800-734-9572	227 1/2 Second St South, Kenora, ON P9N 1G4	Timmins 705-235-1950 1-877-275-5139	Ontario Government Complex, 5520 Highway 101 East Wing B, South Porcupine, ON P0N 1H0
Kingston 613-548-1151 1-866-973-4043	Alliance Business Centre, 299 Concession St Ste 201, Kingston, ON K7K 2B9	Toronto Centre 416-927-7366 1-800-387-5656	2 St Clair West, 11 th floor Toronto, ON M4A 1L5
Kitchener 519-653-5758 1-866-877-0099	4275 King St East, Kitchener, ON N2P 2E9	Toronto South 416-326-5800	625 Church St 1st Fl, Toronto, ON M7A 2B5
London 519-675-7788 1-800-265-1050	1200 Commissioners Rd E, Unit 72, London, ON N5Z 4R3	Windsor 519-973-1441	Roundhouse Centre, 3155 Howard Ave 2nd Fl, Suite 200, Windsor, ON N8X 4Y8

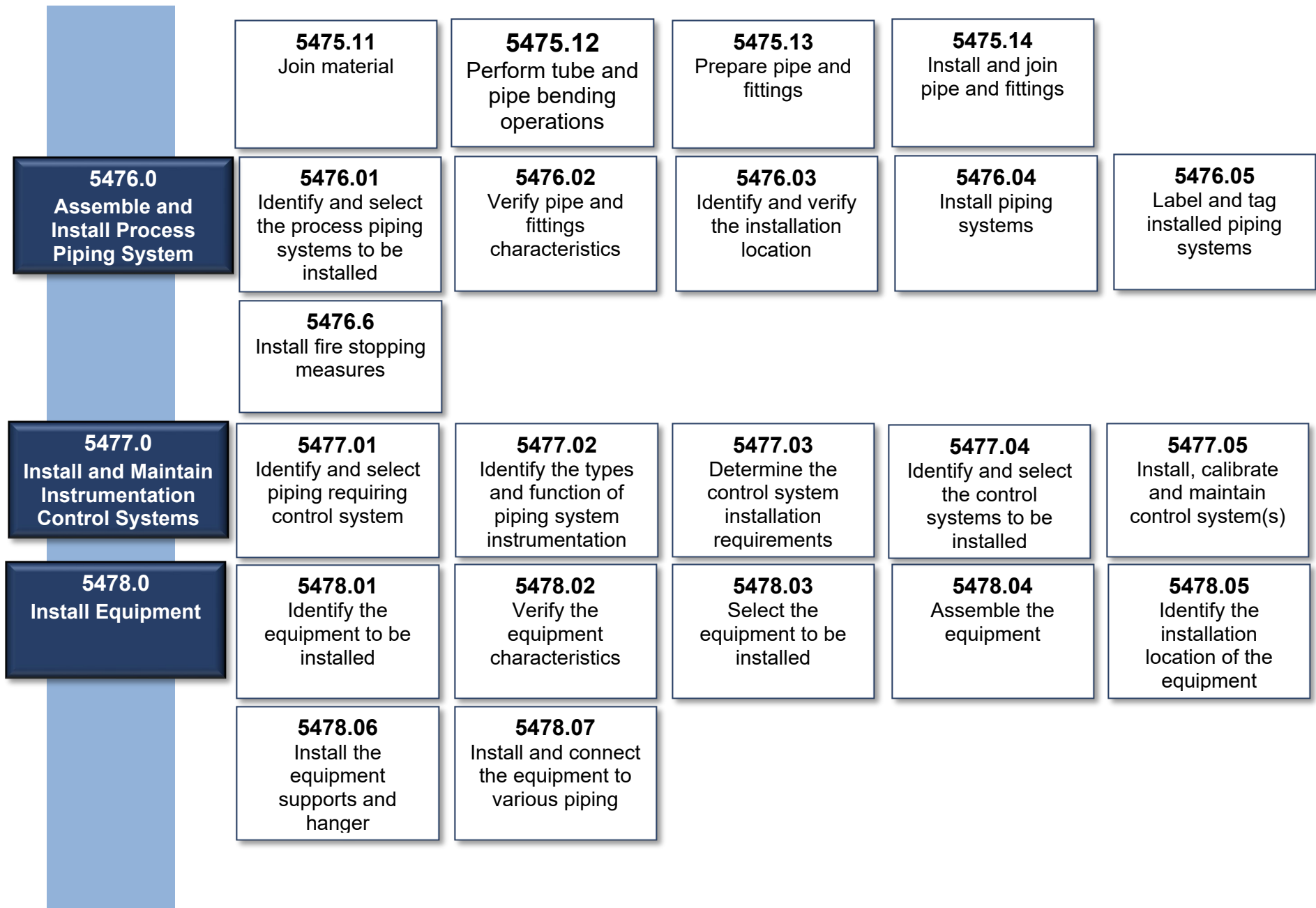
Competency Analysis Profile (CAP) Chart

5470.0 Protect Self and Others	5470.01 Identify, interpret and apply applicable Acts, Codes and regulations	5470.02 Select, wear adjust, use and maintain personal protective equipment	5470.03 Recognize and assess hazards and hazardous conditions	5470.04 Control Hazards	5470.05 Assemble, erect use and dismantle elevated platforms and scaffolds
	5470.06 Perform lock out and tagging procedures	5470.07 Select, operate and maintain tools and equipment	5470.08 Perform housekeeping duties		
5471.0 Communicate	5471.01 Demonstrate effective interpersonal relations	5471.02 Receive and react to instructions	5471.03 Give instructions	5471.04 Read and interpret documents and/or job specifications	5471.05 Write job-related documents
	5471.06 Practice personal hygiene				
5472.0 Read, Interpret, and Maintain Drawings and Specifications	5472.01 Identify required drawings and specifications	5472.02 Identify and interpret industry symbols and abbreviations	5472.03 Identify and select drawing equipment	5472.04 Create drawings and sketches	5472.05 Identify the drawing approval process
	5472.06 Maintain documentation				

Competency Analysis Profile: Steamfitter and 307A (all unshaded skill sets must be completed)

5473.0 Analyse and Design Systems	5473.01 Identify types of system	5473.02 Perform job-related calculations	5473.03 Determine system installation requirements	5473.04 Identify system equipment and devices to be installed	5473.05 Select the equipment to be installed.
	5473.06 Select the devices to be installed	5473.07 Layout and illustrate the piping system(s)	5473.08 Submit design documents for approval(s)		
5474.0 Plan and Prepare for the Project	5474.01 Prepare material and labour take off lists	5474.02 Complete all required applications and documentation	5474.03 Determine required installation tools and equipment	5474.04 Expedite job	5474.05 Establish a job schedule
	5474.06 Verify orders	5474.07 Store material, equipment and tools			
5475.0 Layout and Install Pipe Fittings Valves and Supports	5475.01 Field check and verify site drawings	5475.02 Identify and select required piping materials	5475.03 Identify and select various pipe fittings	5475.04 Identify and select various control valves	5475.05 Identify and select various joining methods
	5475.06 Identify and select various pipe supports and hangers	5475.07 Create a series of structural openings	5475.08 Fabricate all required pipe supports, hangers sleeves, guides and anchors	5475.09 Install pipe supports, fabricated components and hangers	5475.10 Perform various cutting procedures

Competency Analysis Profile: Steamfitter and 307A (all unshaded skill sets must be completed)



Competency Analysis Profile: Steamfitter and 307A (all unshaded skill sets must be completed)

5479.0 Install Devices	5479.01 Install the devices	5479.02 Verify the device characteristics	5479.03 Select the devices used for the system	5479.04 Assemble the devices	5479.05 Identify the installation locations of the devices
	5479.06 Install device supports and hangers	5479.07 Install and connect the device to various equipment and piping systems			
5480.0 Test Systems	5480.01 Identify and select the required tests for systems	5480.02 Determines the type, duration, pressures and set up requirements for test	5480.03 Perform and/or arrange destructive and non-destructive testing	5480.04 Perform visual inspection of various piping systems	5480.05 Perform stress relieving on trade related materials
	5480.06 Arrange for test or a testing schedule	5480.07 Perform piping system testing procedures	5480.08 Perform water treatment testing	5480.09 Receive and document test reports and results	
	5481.01 Identify the piping systems that require commissioning and/or activation	5481.02 Determine and perform the tests required for final inspections	5481.03 Flush and chemically treat systems	5481.04 Verify the calibration and operation of equipment and controls	5481.05 Instruct the end users
5481.06 Check that the systems are commissioned/activated					

Competency Analysis Profile: Steamfitter and 307A (all unshaded skill sets must be completed)

5482.0 Perform Rigging and Hoisting	5482.01 Read and interpret specifications and shop drawings	5482.02 Inspect the job site	5482.3 Determine the rigging and hoisting equipment required	5482.04 Schedule the rigging and hoisting operation	5482.05 Inspect the rigging and hoisting equipment
	5482.06 Connect the rigging equipment to the load	5482.07 Secure the hoisting area	5482.08 Perform the lift and moving operation	5482.09 Position and secure the load	5482.10 Skill description
	5482.11 Remove and store the rigging equipment	5482.12 Communicate throughout the hoisting operation	5482.13 Operate power lifting and hoisting equipment		
5483.0 Perform Preventive Maintenance	5483.01 Prepare the equipment for inspection	5483.02 Determine mechanical system components which require scheduled maintenance	5483.03 Prepare service schedules for the client	5483.04 Liaise with the client	5483.05 Obtain approvals to proceed with maintenance schedule
	5483.06 Perform the required maintenance	5483.07 Verify the maintenance performed	5483.08 Re- commission the system after maintenance/	5483.09 Verify the full operational status of the system	5483.10 Clean up the job-site
	5483.11 Submit relevant documentation				

5484.0
Troubleshoot and Repair Mechanical Systems

5484.01
Diagnose and assess system problem(s)

5484.02
Prepare a service proposal

5484.03
Liaise with the client

5484.04
Arrange for maintenance

5484.05
Prepare the systems for the approved repairs

5484.06
Perform the required service

5484.07
Operate the system after all repairs are completed

5484.08
Verify the calibration of the system and/or components

5484.09
Re-commission the system

5484.10
Clean-up the job Site

5484.11
Submit the relevant documentation

Completing Your Apprenticeship Program

Once your sponsor agrees you are competent in the required skills, your hours are complete and you have completed all the levels of classroom training required for your trade:

- ✓ Follow the completion instructions on the Completion Form (Appendix A) in the Logbook.
- ✓ Answer any questions that MLITSD staff may have and provide any additional completion documentation that may be required.
- ✓ Once completion is confirmed, MLITSD will issue you a Certificate of Apprenticeship and notify Skilled Trades Ontario.

After Your Apprenticeship

If you are in a trade with a certification exam, Skilled Trades Ontario will receive notice of your completion.

For compulsory trades, you will be issued a Provisional Certificate of Qualification which will allow you to work legally for up to 12 months until you write and pass your examination.

For a non-compulsory trade, once you pass your examination, you will be issued a Certificate of Qualification for your trade.

Preparing For Your Exam

- **To pay for a Certificate of Qualification examination, contact Skilled Trades Ontario** Client Services Department at: 647-847-3000 or toll free at 1-855-299-0028
- **To schedule your exam:** Once you have paid, contact your local Service Delivery Office to book your exam.
- **Download Skilled Trades Ontario exam preparation guide at:** [Exam Resources – Skilled Trades Ontario](#) and/or view the exam preparation guide for Red Seal trades at: red-seal.ca



[SkilledTradesOntario.ca](https://www.skilledtradesontario.ca)



Steamfitter/Pipefitter