



**Skilled  
Trades**  
Ontario

**Métiers  
spécialisés**  
Ontario

Apprenticeship  
Training Standard  
Logbook

**Sprinkler and Fire  
Protection Installer**

427A

2010

# 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

Draft version: 2022-03-16

### Table of Contents

Foreword: Purpose, Terms and Conditions of the registered Training Agreement.....	1
Trade Specific Resources and Links .....	2
Methodology-Standard Development .....	2
Introduction to the Logbook.....	3
Roles and Responsibilities .....	4
Roles and Responsibilities of the Apprentice .....	5
Roles and Responsibilities of Sponsors and Trainers .....	6
Health and Safety.....	7
Apprenticeship Program Summary/Guidelines.....	10
Scope of Practice .....	10
Program Guidelines .....	10
Program Requirements .....	12
Compulsory and Non-compulsory Classification .....	12
Skills for Success Summary .....	12
Standard of Performance .....	13
Other Suggested or Required Certification(s) and Training.....	13
Training the Apprentice - Tips for Apprentices, Sponsors and Trainers .....	14
Notice of Collection of Personal Information .....	16
List of Trainers .....	17
5440.0    Protect Self and Others.....	18
5441.0    Communicate in The Workplace .....	26
5442.0    Rig, Hoist, Lift, And Handle Materials.....	31
5443.0    Plan and Prepare For Installations .....	38
5444.0    Design Systems .....	42
5445.0    Utilize Tools And Equipment .....	44
5446.0    Install Water Supply .....	49
5447.0    Fabricate Fire Protection Systems .....	55
5448.0    Install Headers, Valves, And Trim.....	58
5449.0    Install Fire Protection Systems.....	62
5450.0    Commission Fire Protection Systems .....	71
5451.0    Install Pumps, Drivers, And Controllers.....	84

5452.0	Install and Maintain Portable Fire Extinguishers .....	89
5453.0	Inspect Fire Protection Systems.....	92
5454.0	Test Fire Protection Systems .....	106
5455.0	Maintain Fire Protection Systems.....	121
	Definitions .....	133
	Ready to Write Your Exam? .....	136
	Instructions for Recording a Change in Sponsor .....	137
	Appendix A — Instructions for Apprenticeship Program Completion .....	142
	Appendix B — Apprentice Completion Form.....	143
	Appendix C — Skill Set Completion for Sponsors.....	144
	Appendix D — Local Service Delivery Offices in Ontario .....	145
	Competency Analysis Profile (CAP).....	i

**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](https://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](https://skilledtradesontario.ca).

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*Maintained with transfer to Skilled Trades Ontario 2010 (V100)*

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

*\*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 **Sprinkler and Fire Protection Installer 427A** 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. These include the following:

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](https://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/](https://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.

### **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 Sprinkler and Fire System Installer 427A is set out in section 129 of Ontario Regulation 875/21 under BOSTA and reads as follows:

**129.** (1) The scope of practice for the trade of sprinkler and fire protection installer includes the following:

1. Planning proposed installations from blueprints, sketches, specifications, standards and codes.
2. Laying out, assembling, installing, testing and maintaining high and low pressure pipeline systems for supplying water, air, foam, carbon dioxide or other materials to or for fire protection purposes.
3. Measuring, cutting, reaming, threading, soldering, bolting, screwing, welding or joining all types of piping, fittings or equipment for fire protection of a building or structure.
4. Installing clamps, brackets and hangers to support piping, fittings and equipment used in fire protection systems.
5. Testing, adjusting and maintaining pipe lines and all other equipment used in sprinkler and fire protection systems.
6. Operating and utilizing necessary tools and equipment for the installation of sprinkler and fire protection systems.

(2) The scope of practice for the trade of sprinkler and fire protection installer does not include the following:

1. The manufacture of equipment or the assembly of a unit prior to delivery to a building or site.
2. The installation of electrical equipment, devices and wiring not integral or attached to fire protection systems.

\*While the Logbook draws on the scope of practice regulation (Section 129 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 6480 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**

7200 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](http://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.” The trade of Sprinkler and Fire Protection Installer 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

**List of Trainers**

<b>Trainer's Name (Please Print)</b>	<b>Trainer's Signature</b>	<b>Date of start with Trainer (day/month/year)</b>

### 5440.0      **Protect Self and Others**

#### **General Performance Objectives**

Protect self and others by: complying with acts, regulations, codes, standards, and directives; utilizing personal protective equipment; maintaining personal protective equipment; maintaining safe workplace; controlling hazards and hazardous conditions, equipment, and materials; manually moving equipment supplies, and components; employing simple first aid relating to illness and occupational injury; reporting injuries to supervisor and first-aid personnel; responding to audio-visual alarms; following company and worksite fire procedures; handling hazardous/toxic materials; assessing worksite conditions; applying confined space entry and exit procedures; performing lockout, tagging, and hold-off procedures; and managing personal health; according to the written content of documents and verbal direction of regulatory authorities, regulatory requirements, codes, safety requirements, site conditions, site procedures, recommended standards and guidelines, victims condition, manufacturers' recommendations and specifications, and company policies and procedures.

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#### **Skills**

**5440.01      Comply with acts, regulations, codes, standards, and directives** including Occupational Health and Safety Act (OHSA), Environmental Protection Act (EPA), Dangerous Goods Transportation Act (DGTA), Workplace Safety Insurance Act (WSIA), Trades Qualification and Apprenticeship Act (TQAA), Building Code Act (BCA), Ontario Building Code (OBC), Ontario Fire Code (OFC), National Fire Code (NFC), National Building Code (NBC), and Workplace Hazardous Materials Information System (WHMIS); the Construction Safety Association of Ontario (CSAO), Canadian Standards Association (CSA) Canadian Radio-television and Telecommunications Commission (CRTC), Technical Standards and Safety Authority (TSSA), National Fire Protection Association (NFPA) standards, municipal requirements, and company policies, by reading, interpreting, and following direction; according to the written content of documents and verbal direction of regulatory authorities.



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.**

**5440.02**      **Utilize personal protective equipment** including hard hats, gloves, glasses, goggles, masks, face shields, ear protectors/plugs, coveralls, reflector vests, safety footwear, fall-protection equipment, respirators, harnesses, breathing apparatus, air samplers, gas detectors, barrier creams, and radiation badges; by inspecting, selecting, wearing, and adjusting equipment to ensure the safety of self and others; according to regulatory requirements, safety requirements site conditions, manufacturers' recommendations and specifications, and. company policies and procedures.

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

- 5440.03**      **Maintain personal protective equipment** including hard hats, gloves, glasses, goggles, masks, face shields, ear protectors/plugs, coveralls, reflector vests, safety footwear, fall-protection equipment, respirators, harnesses, breathing apparatus, air samplers, gas detectors, and radiation badges; by checking for wear, breaks, tears, cracks, leakage, and loose and defective components, inspecting and analysing performance and function, and by storing or noting/tagging deficiencies and removing devices and components from service to ensure the safety of self and others; according to regulatory requirements, safety requirements, manufacturers' recommendations and specifications, and company policies and procedures.

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

- 5440.04**      **Maintain safe workplace** by removing, and disposing of excess or unwanted materials, recycling and reusing materials, positioning equipment, identifying the location of first-aid supplies and equipment, erecting protective barriers and signs, and ensuring work area is free of obstructions to ensure the safety of self and others; according to regulatory requirements, codes, safety requirements job requirements, site procedures, and company policies and procedures.

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

- 5440.05**      **Control hazards and hazardous conditions, equipment, and materials** including worksite conditions, heavy equipment operations, hoisting and lifting operations, overhead operations, material handling, and storage; by visually inspecting and analysing performance and function, checking for obstructions, and taking remedial action to ensure the safety of self and others and to protect the environment; according to regulatory requirements, codes, safety requirements, site conditions, manufacturers' recommendations and specifications, and company policies and procedures.

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

- 5440.06**      **Manually move equipment, supplies, and components** by utilizing safe lifting, lowering, carrying, pushing, climbing and pulling techniques to protect self and others against injury; according to weight and size to be moved, regulatory requirements, codes, safety requirements, job requirements, site procedures, and company policies and procedures.

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

- 5440.07**      **Employ simple first aid relating to illness and occupational injury** including sudden illness, burns, cuts, sprains, chemical and smoke inhalations, and contaminants in eyes, so that the condition of the victim is stabilized and prepared for further first-aid treatment, and by obtaining emergency medical assistance as required; according to the victim's condition, regulatory requirements, safety requirements, manufacturers' recommendations and specifications, and company policies and procedures.

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

- 5440.08**      **Report injuries to supervisor and first-aid personnel promptly and clearly,** ensuring that the injured person is attended to and by describing precisely how the incident occurred; according to regulatory requirements, safety requirements, site procedures, and company policies and procedures.

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

- 5440.09**      **Respond to audio-visual alarms** including warning signs, danger notices, alarm bells, whistles, and buzzers, by recognizing the sign/alarm and taking action; according to regulatory requirements, company environmental safety procedures, and site conditions.

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

- 5440.10**      **Follow company and worksite fire emergency procedures** by assessing the type and severity of the fire, activating the alarm system, taking action to suppress a minor fire, reporting the fire, and following evacuation procedures; using communication skills, extinguishers, hoses, and fire blankets to protect self and others; according to regulatory requirements, codes, site procedures, manufacturers' recommendations and specifications, safety requirements, and company policies and procedures.

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

- 5440.11**      **Handle hazardous/toxic materials** including gases, acids, solvents, and cleaners; by identifying, selecting, transporting, and storing them to protect self and others, property and the environment; according to regulatory requirements, codes, site conditions, manufacturers' recommendations and specifications, safety requirements, and company policies and procedures.

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

- 5440.12**      **Assess worksite conditions** by inspecting lighting and ventilation, confined space entry, height clearances, floor/base conditions, environmental conditions, presence of hazardous conditions, and unsafe equipment and materials and by reporting unsafe conditions to designated supervisory personnel to minimize injury to self, bystanders or co-workers and no damage to equipment; according to regulatory requirements, codes, safety requirements, manufacturers' recommendations and specifications, and company policies and procedures.

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

- 5440.13**      **Apply confined space entry and exit procedures** by assessing site conditions, checking for ventilation, chemical hazards, electrical hazards, warning signs, space constraints and proximity to operating machinery to minimize the danger to the safety of self and others; using air monitors, safety lines, breathing apparatus, lighting equipment, communication skills and devices and personal protective equipment; according to regulatory requirements, codes, safety requirements, site conditions, manufacturers' recommendations and specifications, and company policies and procedures.

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

- 5440.14**      **Perform lockout, tagging, and hold-off procedures** by isolating hazardous or defective equipment, advising site authority or designate, installing a lockout device and retaining the key, attaching tags, performing the repairs, and removing the lockout device on completion of work; using hand tools, tags, locks, keys, log books, communication skills and personal protective equipment, so that self and others are safe from electrical shock and other dangers; according to regulatory requirements, codes, safety requirements, manufacturers' recommendations and specifications, and company policies and procedures.

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

- 5440.15**      **Manage personal health** by adopting strategies to recognize the signs of fatigue and taking effective measures, maintaining physical and mental fitness, alertness, and a healthy diet, managing stress and time and ensuring adequate rest, and accessing assistance as required to ensure the well being of self and the safety of others; according to safety requirements, recommended standards/guidelines, company policies and procedures, and working conditions.

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

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### 5441.0 Communicate in The Workplace

#### General Performance Objective

Communicate in the workplace by communicating orally, in writing, by graphics, computers, mechanical and electronic devices, and hand signals; building and maintaining interpersonal relationships; practising customer relations (internal and external); presenting a professional image; and mentoring co-workers; according to regulatory requirements, codes, safety requirements, job requirements, site conditions, international hand signal standards, manufacturers' recommendations and specifications, business etiquette, netiquette, workplace standards, and company policies and procedures.

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#### Skills

**5441.01**      **Communicate orally** by speaking clearly, concisely and tactfully, listening attentively, seeking validation of the conversation to ensure understanding, conveying and summarizing information, and engaging in constructive feedback; according to business etiquette, workplace standards, 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.**



- 5441.02**      **Communicate in writing** clearly, concisely, tactfully, and in a timely manner; interpreting and verifying details, editing and verifying for language usage, completeness, and accuracy, and ensuring that correspondence/documentation requiring signature has been completed; using correspondence, memoranda, work and change orders, project and environmental reports, check-off forms/sheets, proposals, estimates, test certificates, deficiency reports, and accident forms; according to regulatory requirements, job requirements, business etiquette, and company policies and procedures.

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

- 5441.03**      **Communicate graphically** by preparing and interpreting installation, isometric and as-built drawings, verifying thoroughness, accuracy and presenting a clear and concise understanding of the work to be performed; using sketches, construction drawings, and three-dimensional models; according to job requirements, and company policies and procedures.

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

- 5441.04**      **Communicate by computer** including software and peripheral equipment; using keyboards, touch screens, internet, e-mail, scanners, and printers, accessing files, materials and parts, and verifying that instructions and procedures are conveyed accurately and efficiently; according to job requirements, manufacturers' recommendations and specifications, netiquette, and company policies and procedures.

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

- 5441.05**      **Communicate by mechanical and electronic devices** ensuring that clear, concise, and accurate instructions and procedures are conveyed safely and efficiently; using public address systems, telephones, pagers, radios, and wireless devices; according to regulatory requirements, codes, job requirements, safety requirements, site conditions, manufacturers' recommendations and specifications, and company policies and procedures.

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

- 5441.06**      **Communicate by hand signals** ensuring that information is given and received in full view and on a timely basis, and responding to the message, so that self and others are protected; according to regulatory requirements, codes, safety requirements, job requirements, international hand signal standards, site conditions, and company policies and procedures.

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

- 5441.07**      **Build and maintain interpersonal relationships** by networking, maintaining confidentiality, respecting others, collaborating, consulting, participating at meetings, demonstrating availability, applying conflict resolution and problem-solving skills and methodologies, identifying and recommending alternative solutions, and listening effectively; using verbal and non-verbal methods to convey messages/meaning, using acceptable language in the workplace, recognizing and respecting the chain of authority on the job site, explaining problems and procedures, and obtaining approvals from clients; according to business etiquette, workplace standards, and company policies.

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

- 5441.08**      **Practice customer relations (internal and external)** by demonstrating professionalism with customers, other trade personnel, and the general public, following site protocol, handling enquiries, confirming delivery and installation of fire protection systems and components, sharing information about customer requirements with company staff, advising of delays, reporting general concerns, and keeping customer and business information confidential; using oral and written communication skills, and communication devices; according to business etiquette, workplace standards, and company policies.

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

- 5441.09**      **Present a professional image** by communicating appropriately, wearing clothing and equipment according to location/event, maintaining clean clothing, and following a hygiene regimen so that personal communication, appearance and hygiene are not offensive to clients or co-workers; according to safety requirements, business etiquette, workplace standards, and company policies and procedures.

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

- 5441.10**      **Mentor co-workers** by demonstrating and explaining workplace practices, procedures, and requirements, promoting company policies and procedures, assessing workplace performance and progress, and ensuring timely feedback is provided, to enable a positive learning process and achievement of learning objectives; using communication skills and physical demonstration; according to business etiquette, adult learning principles, workplace standards, and company policies and procedures.

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

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## 5442.0      **Rig, Hoist, Lift, And Handle Materials**

### **General Performance Objective**

Rig, hoist, and handle materials by: planning rig layout; selecting rigging equipment and components; utilizing rigging equipment and components; maintaining rigging equipment and components; disassembling rigging equipment and components; selecting hoisting and lifting equipment and components; utilizing hoisting and lifting equipment and components; maintaining hoisting and lifting equipment and components; disassembling hoisting and lifting equipment and components; calculating the weight of the load to be lifted; and coordinating loading and off-loading operations; according to regulatory requirements, safety requirements, job requirements, site conditions, Safe Working Load (SWL) charts, manufacturers' recommendations and specifications, and company policies and procedures.

### **Skills**

**5442.01      Plan rig layout** including pipes, ladders, cables, ropes, slings, pads, shackles, clamps, block and tackle, motorized chain hoists, suspension equipment, and fasteners; by visually inspecting site and/or interpreting written documentation, sketches, and working drawings, assessing the type of equipment, load characteristics, and the load distribution of equipment, performing calculations, and documenting and/or sketching rig layout; according to regulatory requirements, safety requirements, job requirements, site conditions, Safe Working Load (SWL) charts, manufacturers' recommendations and specifications, and company policies 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.**

- 5442.02**      **Select rigging equipment and components** including pipes, cables, ropes, slings, pads, shackles, clamps, block and tackle, motorized chain hoists, suspension equipment, and fasteners; by checking for wear, crimps, fraying, fit, fractures, cracks, corrosion, alignment, lubrication, and loose and defective components; inspecting and assessing performance and function and exchanging and/or identifying equipment and components for servicing; using measuring and testing devices and personal protective equipment; according to regulatory requirements, safety requirements, job requirements, site conditions, Safe Working Load (SWL) charts, manufacturers' recommendations and specifications, and company policies and procedures.

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

- 5442.03**      **Utilize rigging equipment and components** including pipes, cables, ropes, slings, pads, shackles, clamps, block and tackle, motorized chain hoists, suspension equipment, and fasteners; by positioning, moving, and adjusting the equipment, and placing or attaching the rigging to the load according to the weight, balance, and size of the equipment to be moved or lifted; checking for capacity, stability, and alignment, and inspecting and testing and analysing performance and function; using hand and power tools, personal protective equipment; measuring, levelling, and fastening devices, and voice, electronic, and communication devices; according to regulatory requirements, safety requirements, job requirements, site conditions, Safe Working Load (SWL) charts, manufacturers' recommendations and specifications, and company policies and procedures.

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

- 5442.04**      **Maintain rigging equipment and components** including pipes, cables, ropes, slings, pads, shackles, clamps, block and tackle, motorized chain hoists, suspension equipment, and fasteners; by checking for wear, crimps, fraying, fit, fractures, cracks, corrosion, alignment, lubrication, and loose and defective components; inspecting, testing, and assessing performance and function, exchanging, aligning, lubricating, storing, or removing/tagging defective equipment and components from service, and ensuring equipment performs efficiently; using hand and power tools, fastening devices, personal protective equipment, cleaners, abrasives, and lubricants; according to regulatory requirements, safety requirements, job requirements, Safe Working Load (SWL) charts, manufacturers' recommendations and specifications, and company policies and procedures.

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

- 5442.05**      **Disassemble rigging equipment and components** including pipes, cables, ropes, slings, pads, shackles, clamps, block and tackle, motorized chain hoists, suspension equipment, and fasteners; by checking for wear, crimps, fraying, fit, fractures, cracks, corrosion, alignment, lubrication, and loose components; inspecting, testing, and assessing performance and function, exchanging, aligning, lubricating, storing, or tagging/removing defective equipment and components for servicing, and ensuring equipment is stored securely and ready for use on the next job; using hand and power tools, fastening devices, personal protective equipment, cleaners, abrasives, and lubricants; according to regulatory requirements, safety requirements site conditions, manufacturers' recommendations and specifications, and company policies and procedures.

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

**5442.06**

**Select hoisting and lifting equipment and components** including cranes, personnel and equipment lifts, chain hoists, hooks and cables, jacks, slings, trolleys, ropes, block and tackle, lift trucks; by checking for wear, crimps, fraying, fractures, cracks, corrosion, alignment, lubrication, stability, noise, and loose and defective components; inspecting and assessing performance and function, and exchanging and/or identifying equipment and components for servicing; using personal protective equipment and measuring devices; according to regulatory requirements, job requirements, safety requirements, site conditions, Safe Working Load (SWL) charts, manufacturers' recommendations and specifications, and company policies and procedures.

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

**5442.07**

**Secure hoisting and lifting equipment and components** including cranes, personnel and equipment lifts, chain hoists, hooks and cables, jacks, slings, trolleys, ropes, block and tackle, lift trucks; by checking for fit, wear, crimps, fraying, fractures, cracks, corrosion, alignment, lubrication, stability, noise, and loose and defective components, and inspecting and assessing performance and function, and exchanging, tagging/removing defective equipment; using hand and power tools, personal protective equipment; according to regulatory requirements, safety requirements, site conditions, manufacturers' recommendations and specifications, and company policies and procedures.

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



- 5442.08 Utilize hoisting and lifting equipment and components** including cranes, personnel and equipment lifts, chain hoists, hooks and cables, jacks, slings, trolleys, ropes, block and tackle, lift trucks; by positioning, moving and adjusting the equipment, and placing or attaching the material to the equipment, according to the weight, balance, and size of the equipment to be moved or lifted; by checking for capacity, wear, crimps, fraying, fractures, cracks, corrosion, alignment, lubrication, stability, noise, and loose and defective components; inspecting and assessing performance and function, and exchanging or identifying equipment and components for servicing; using hand and power tools, personal protective equipment, measuring, levelling, and fastening devices, and voice, electronic, and hand communication; according to regulatory requirements, safety requirements, job requirements, site conditions, Safe Working Load (SWL) charts, manufacturers' recommendations and specifications, and company policies and procedures.

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

- 5442.09 Maintain hoisting and lifting equipment and components** including cranes, personnel and equipment lifts, chain hoists, hooks and cables, jacks, slings, trolleys, ropes, block and tackle, lift trucks; by checking for wear, crimps, fraying, fractures, cracks, corrosion, alignment, lubrication, stability, noise, and loose and defective components; inspecting and assessing performance and function, aligning, lubricating, exchanging, storing, or removing equipment and components from service, and ensuring equipment performs efficiently; using hand and power tools, personal protective equipment, cleaners, abrasives, and lubricants; according to regulatory requirements, safety requirements, job requirements, Safe Working Load (SWL) charts, manufacturers' recommendations and specifications, and company policies and procedures.

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

**5442.10**

**Disassemble hoisting and lifting equipment and components**

including cranes, personnel and equipment lifts, chain hoists, hooks and cables, jacks, slings, trolleys, ropes, block and tackle, lift trucks; by checking for wear, crimps, fraying, fractures, cracks, corrosion, lubrication, leaks, stability, noise, and loose and defective components; inspecting and assessing performance and function, lubricating, and exchanging, tagging/removing defective equipment, and ensuring equipment is stored securely and ready for use on the next job; using hand and power tools, elevated work platforms, ladders, personal protective equipment, cleaners, abrasives, and lubricants; according to regulatory requirements, safety requirements, site conditions, manufacturers' recommendations and specifications, and company policies and procedures.

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

**5442.11**

**Calculate the weight of the load to be lifted** by inspecting material to be hoisted, referring to load charts and manufacturers' charts and specifications when performing calculations to ensure that rigging and hoisting is performed safely and efficiently within the equipment capabilities and limitations; according to regulatory requirements, safety requirements, job requirements, site conditions, Safe Working Load (SWL) charts, manufacturers' recommendations and specifications, and company policies and procedures.

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

**5442.12**

**Coordinate loading and off-loading operations** by inspecting and conveying clear and concise directions to co-workers and equipment operators, and verifying directions are received as intended, assessing performance and ensuring that rigging and hoisting operations are performed safely to protect self and others; using hand signals and/or voice communication, and communication devices; according to regulatory requirements, safety requirements, job requirements, site conditions, manufacturers' recommendations and specifications, and company policies and procedures.

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

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### 5443.0 Plan and Prepare For Installations

#### General Performance Objective

Plan and prepare for installations by: obtaining project drawings; reviewing project drawings; correlating information from drawings; assessing job site conditions; estimating material, labour and equipment for projects; scheduling projects; and preparing as-built drawings; according to regulatory requirements, codes, NFPA, safety requirements, job requirements, site conditions, and company policies and procedures.

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#### Skills

**5443.01 Obtain project drawings**, including architectural, mechanical, electrical, structural and project specifications; by reading the title block and/or page, and cross-checking drawings and schematics to verify that the correct set has been obtained and is complete to enable the preparation for an efficient start-up and completion of the project; according to customer requirements, and company policies 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.**

- 5443.02**      **Review project drawings** including architectural, mechanical, electrical, structural and project specifications; by interpreting charts, guides, and schedules, reading and assessing architectural and piping symbols, ensuring adherence to design specifications, and noting and reporting errors/omissions; according to regulatory requirements, NFPA, job requirements, site conditions, and company policies and procedures.

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

- 5443.03**      **Correlate information from drawings** including architectural, mechanical, electrical, structural and project specifications; by cross-checking for compatibility between drawings and relevance to the job specifications, and developing a checklist of requirements, limitations, questions and a preliminary list of equipment and material requirements, so that issues and requirements are noted and available for a pre-job meeting; using lists, recording devices, and communication skills; according to regulatory requirements, codes, safety requirements, job requirements, site conditions, and company policies procedures.

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

- 5443.04**      **Assess job site conditions** by visually inspecting site and verifying accessibility for people and equipment; by checking for conformance to drawings and other information received, referring to checklists of questions, measuring equipment parameters, and checking for obstructions; using observation, communication skills, and measuring devices; according to regulatory requirements, codes, safety requirements, job requirements, site conditions, and company policies and procedures.

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

- 5443.05**      **Estimate material, labour and equipment for projects** including piping, pumps, hangers, fittings, valves, sprinkler heads and auxiliary devices, lifting, hoisting and rigging devices, tools, manpower and skill requirements and the job hours required; using lists and other calculation methods, drawings, installation manuals, and estimating sheets to ensure adherence to the design specifications, so that the material and personnel will be scheduled for the job; according to regulatory requirements, codes, safety requirements, NFPA, job requirements, site conditions, and company policies and procedures.

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

- 5443.06**      **Schedule projects** by preparing work plans and flow charts, coordinating work with other trades, participating in job-site meetings, and verifying material and personnel requirements and delivery dates of material; ensuring efficient handling, storage, and installation of equipment, and detailing time-lines; using oral and written communication skills, and electronic and mechanical devices; according to regulatory requirements, codes, safety requirements, job requirements, site conditions, and company policies and procedures.

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

- 5443.07**      **Prepare as-built drawings** by identifying and recording revisions and sketching or drawing graphics of the modifications to the actual site installation of the fire protection system and creating a labeling system and maintenance/equipment directory; using communication skills, and submitting as-built drawings to supervisor/management in a timely manner; according to regulatory requirements, codes, NFPA, job requirements, site conditions, and company policies and procedures.

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

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**5444.0                      Design Systems**

**General Performance Objective**

Design systems by: verifying occupancy classification and design criteria; verifying water supply source; verifying system drawings; calculating system hydraulic demand; and obtaining approval of working plans and documentation; according to regulatory requirements, codes, NFPA, job specifications, accepted methods of calculation, site conditions, company policies and procedures.

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**Skills**

- 5444.01                      Verify occupancy classification and design criteria** by determining the building use, building structural materials, structure dimensions, and commodity classification, so that the design criteria will meet requirements; according to regulatory requirements, codes, NFPA, job specifications, and site conditions.

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.**

- 5444.02                      Verify water supply source** including public/private, gravity tank, and reservoir; by interpreting reference materials and data; using plans, architectural drawings, city maps, and water flow test data, ensuring that the source is adequate, and meets design criteria; according to regulatory requirements, NFPA, job requirements, and site conditions.

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



- 5444.03**      **Verify system drawings** including plan, elevation, isometric, schematics, using basic drawing equipment and Computer-Assisted Design (CAD) printouts to validate that they meet design criteria; according to regulatory requirements, codes, NFPA, job requirements, and company standards.

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

- 5444.04**      **Calculate system hydraulic demand** by determining friction loss and pipe sizing needed to meet the water flow requirements of the design criteria; using formulas, calculation devices, computers and software; according to NFPA, codes and accepted methods of calculation.

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

- 5444.05**      **Obtain approval of working plans and documentation** including shop drawings, sketches, and fire protection system drawings, verifying that they are complete and submitting them for approval in a timely manner for approval; according to regulatory requirements, codes, NFPA, job requirements, and company policies and procedures.

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

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### 5445.0 Utilize Tools And Equipment

#### General Performance Objective

Utilize tools and equipment by: selecting, using, maintaining, storing or identifying for servicing, hand and power tools and accessories; testing devices; selecting, assembling, maintaining and dismantling scaffolds and accessories; and utilizing step and extension ladders; according to regulatory requirements, NFPA, safety requirements, Safe Working Load (SWL) charts, job requirements, site conditions, manufacturers' recommendations and specifications, and company policies and procedures.

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#### Skills

**5445.01 Utilize hand tools and accessories** including pipe wrenches, fastening devices, cutting tools, grinding tools, levelling tools, and measuring devices; by checking for wear, fit, alignment, and broken tools and accessories; selecting, inspecting, testing, and analysing performance and function, and by using, exchanging, aligning, cleaning, lubricating, reconditioning, so that the tools and accessories will function as intended, and storing or removing tools and accessories from service; according to safety requirements, job requirements, manufacturers' recommendations and specifications, and company policies and procedures.

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

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- 5445.02**      **Utilize power tools and accessories** including threading, grooving and drilling machines, cutting and welding devices, and tool accessories (bits, blades, etc.); by checking for wear, fit, alignment, lubrication, and damaged components or parts, including cords and plugs, housings, and control devices; selecting, inspecting, testing, and analysing performance and function, and by operating, exchanging, aligning, cleaning, lubricating, reconditioning, so that the tools and accessories will function as intended, and storing or removing tools and accessories from service; according to job requirements, manufacturers' recommendations and specifications, company policies and procedures, and safety requirements.

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

- 5445.03**      **Utilize testing devices** including distance measuring devices, voltmeters, refractometers, callipers, backflow test kits, gauges, pitot tube, flowmeters, checking for pressure, leaks, water flow, specific gravity, electrical current; by inspecting, operating, testing, analysing performance and function, making adjustments, so that the equipment will function as intended, and storing or identifying devices for servicing, so that they will perform efficiently; according to regulatory requirements, NFPA, safety requirements, job requirements, manufacturers' recommendations and specifications, and company policies and procedures.

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

- 5445.04**      **Select scaffolds and accessories** including rolling towers, suspended platforms and swing stages, frames, pipes, braces, platform materials, and fastening devices; by checking for wear, fit, cracks, alignment, stability, and missing or damaged components and parts, and by inspecting, testing, and analysing performance and function, exchanging, reconditioning, aligning, or removing equipment and components from service; using personal protective equipment; according to regulatory requirements, safety requirements, manufacturers' recommendations and specifications, site conditions, and company policies and procedures.

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

- 5445.05**      **Assemble scaffolds and accessories** including rolling towers, suspended platforms and swing stages, frames, pipes, braces, platform materials, and fastening devices; by checking for wear, fit, vibration, cracks, alignment, stability, lubrication, and missing or damaged components and parts so that self and others will be safe during use and by inspecting and analysing performance and function; using hand, power, and/or specialized tools, levelling and fastening devices, personal protective equipment, rigging and hoisting devices, and personnel and equipment lifts; according to regulatory requirements, Safe Working Load (SWL) charts, safety requirements, job requirements, manufacturers' recommendations and specifications, site conditions, and company policies and procedures.

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

### 5445.06

**Maintain scaffolds and accessories** including rolling towers, suspended platforms and swing stages, frames, pipes, braces, platform materials, and fastening devices; by checking for wear, fit, vibration, cracks, alignment, stability, lubrication, and missing or damaged components and parts; inspecting and testing and analysing performance and function, and by exchanging, adjusting, tightening, reconditioning, aligning, or removing equipment and components from service, so that self and others will be safe during use; using hand, power, and/or specialized tools; levelling and fastening devices, personal protective equipment, rigging and hoisting devices, and personnel and equipment lifts; according to regulatory requirements, safety requirements, Safe Working Load (SWL) charts, job requirements, manufacturers' recommendations and specifications, site conditions, and company policies and procedures.

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

### 5445.07

**Dismantle scaffolds** including frames, pipes, braces, platform materials, and fastening devices; by checking for wear, cracks, alignment, lubrication, and missing or damaged components and parts, and by storing or identifying defective equipment and components and removing equipment and components from future service, ensuring safe components are accessible for future use; using hand, power, and/or specialized tools, personal protective equipment, rigging and hoisting devices, and personnel and equipment lifts; according to regulatory requirements, safety requirements, job requirements, manufacturers' recommendations and specifications, site conditions, and company policies and procedures.

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

- 5445.08**      **Utilize step and extension ladders** by checking for wear, fit, stability, lubrication, positioning, clearances, and missing or damaged components and parts; by inspecting and testing and analysing performance and function, and by exchanging, adjusting, tightening, aligning, or removing equipment and components from service, ensuring that they are secure so that self and others are safe; using hand, power, and/or specialized tools, levelling and fastening devices, and personal protective equipment; according to regulatory requirements, safety requirements, job requirements, manufacturers' recommendations and specifications, site conditions, and company policies and procedures.

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

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## 5446.0 Install Water Supply

### General Performance Objective

Install water supply by: determining site excavation location: preparing site for excavation; supervising excavation; installing private water supply; connecting to the water supply; installing underground piping and components; connecting to the water supply; installing underground piping and components; installing thrust blocks and restraining devices; installing hydrants and control valves; completing installation of water supply; and monitoring backfill operations; according to regulatory requirements, codes, NFPA, TSSA, safety requirements, manufacturers' specifications and recommendations, site plans, site conditions, and company policies and procedures.

### Skills

**5446.01 Determine site excavation location** by verifying the location of other utility positions, supply connections, and building water supply entry; by interpreting site plans, as-built record drawings, liaising with and verifying location with utility department personnel, minimizing environmental impact, verifying soil composition, and ensuring permits are obtained; according to regulatory requirements, codes, NFPA, safety requirements, reports, and site conditions.

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

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- 5446.02**      **Prepare site for excavation** including identifying and marking location of existing utilities, overhead hazards, and marking excavation routing; using spray paint, stakes, flags, caution tape, safety barricades, communication skills and communication devices and personal protective equipment, while ensuring adequate lighting, that pumps are available for the removal of water, that drainage meets requirements and that access is available for excavation machinery, so that equipment, self and others are safe, and that an adverse impact on the environment is minimized; according to regulatory requirements, codes, safety requirements, site conditions, and company policies and procedures.

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

- 5446.03**      **Monitor excavation** by inspecting, checking that the trench is shored, determined grade is followed, that access and exit is safe, and barriers are in place so that self and others are safe and that work may proceed efficiently; using measuring devices, oral communication skills and communication devices, and personal protective equipment; according to regulatory requirements, codes, NFPA, safety requirements, site plans, site conditions, and company policies and procedures.

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



- 5446.04**      **Install private water supply** including storage tanks, pressure tanks, reservoir, ponds, and wells; by assembling, and checking for damage, leaks, pressure, drainage, soil conditions, environmental conditions, erosion, water table, and stability; using hand and power tools, measuring devices, rigging, lifting and hoisting devices, and personal protective equipment, according to regulatory requirements, codes, NFPA, TSSA, manufacturers' specifications and recommendations, company policies and procedures, and safety requirements.

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

- 5446.05**      **Connect to the water supply** including private and public sources, ensuring prior notification to authorities and affected water supply users, by isolating pipe to be connected to, removing pressure, cutting or tapping into existing main, removing excess water from the trench, installing fittings and valves, chlorinating and flushing water, and restoring water supply in order to perform connection; by inspecting and analysing performance and function, checking for fit, alignment, support and leaks; using hand and power tools, measuring devices, rigging, hoisting and lifting equipment, personal protective equipment, and communication skills; according to regulatory requirements, codes, NFPA, safety requirements, job requirements, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

- 5446.06**      **Install underground piping and components** including ductile iron, galvanized steel, copper, and plastic piping, mechanical and flanged fittings, control valves, post indicator valves (PIV's), cathodic protection, and tracer wire, by preparing and compacting the trench bed, ensuring pipe is supported, and fitted, sleeving and piping protected , chlorinating and flushing, and restoring water supply; inspecting, checking for leaks, pressure, drainage, soil conditions, environmental conditions, erosion, water table, and stability, verifying depth of bury, so that the water supply will be provided and will operate efficiently; using hand and power tools, measuring devices, lifting, rigging and hoisting equipment, adhesives, testing devices, disinfecting solutions, and personal protective equipments; according to regulatory requirements, codes, NFPA, safety requirements, site conditions, manufacturers' specifications and recommendations, and company policy and procedures.

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

- 5446.07**      **Install thrust blocks and restraining devices** including rodding and clamps by identifying items for grade and soil conditions, constructing formwork, fabricating, assembling, and installing thrust blocks, bracing, and/or restraining devices, so that pipe will not move when pressurized; using hand and power tools, rigging, hoisting and lifting equipment, and personal protective equipment; according to regulatory requirements, codes, NFPA, safety requirements, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

- 5446.08**      **Install hydrants and control valves** including yard and wall hydrants, rodding and clamps, by identifying spacing requirements; checking for fire department access, finished grade, drainage, environmental conditions; constructing formwork; fabricating, assembling, and installing thrust blocks, bracing, and/or restraining devices, chlorinating and flushing water so that hydrant will provide water efficiently when pressurized; using hand and power tools, disinfecting solutions, rigging, hoisting and lifting equipment, and personal protective equipment; according to regulatory requirements, codes, NFPA, safety requirements, site drawings and site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

- 5446.09**      **Complete installation of water supply** including private water supplies, water supply main, underground piping and components, hydrants, and control valves, by connecting all lines, checking for leaks, pressure, stability and movement; submitting water samples for evaluation, and completing test certificates; inspecting, flushing, testing and analysing performance; using hand and power tools, disinfecting solutions, testing devices, communication skills and devices and personal protective equipment; according to regulatory requirements, codes, NFPA, safety requirements, site conditions, job requirements, manufacturers' specifications and recommendations, and company policies and procedures.

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

**5446.10**

**Supervise backfill operations** by ensuring that filling material is compacted and leveled, site restoration is complete, and safety barriers removed upon completion, so that self and others are protected and impact to the environment minimized; using observation, communication skills and devices, and personal protective equipment; according to regulatory requirements, codes, NFPA, safety requirements, site plan, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

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**5447.0      Fabricate Fire Protection Systems****General Performance Objective**

Fabricate fire protection systems by: identifying fabrication area; organizing material for fabrication; preparing piping and fittings for site installation; and fabricating hangers, brackets, and supports; according to regulatory requirements, codes, NFPA, safety requirements, site plan, site conditions, job specifications, manufacturers' specifications and recommendations, and company policies and procedures.

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**Skills**

- 5447.01      Identify fabrication area** by referencing site plan, inspecting site, determining material and equipment accessibility, traffic flow, material, and equipment storage and lighting and electrical requirements, and establishing in coordination with other tradespersons at site meetings the location of the fabrication area, ensuring that the site location has minimal adverse impact on the environment, location is secure and the work may proceed efficiently; according to regulatory requirements, codes, safety requirements, site plan, site conditions, job specifications, manufacturers' specifications and recommendations, and company policies and procedures.

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

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- 5447.02**      **Organize material for fabrication** including pipes, valves, hangers, fittings, and auxiliary devices, using shop drawings, take-off and cut sheets, delivery schedules, lifting, rigging and hoisting devices, communication skills and devices, and personal protective equipment so that fabrication process proceeds efficiently; according to regulatory requirements, codes, NFPA, safety requirements, site plan, site conditions, job specifications, manufacturers' specifications and recommendations, and company policies and procedures.

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

- 5447.03**      **Prepare piping and fittings for site installation** by measuring, cutting, threading, grooving, benching, and welding pipe, so that piping is prepared and ready for installation with minimal wastage; using hand and power tools, measuring devices, cutting equipment, threaders, groovers, drills, adhesives, solvents, soldering and welding equipment, lifting rigging and hoisting equipment and personal protective equipment; according to regulatory requirements, codes, NFPA, safety requirements, site plan, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

**5447.04**      **Fabricate hangers, brackets, and supports** including angle irons, trapeze hangers, seismic/sway bracing, threaded rods, rings, fastening devices, and braces, ensuring that wastage is minimized and hangers will support the installation of the piping system components; using hand and power tools, bending devices, welding and cutting equipment rigging, lifting and hoisting devices, and personal protective equipment; according to regulatory requirements, codes, NFPA, safety requirements, site plan, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

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## 5448.0 Install Headers, Valves, And Trim

### General Performance Objective

Install headers, valves, and trim by: verifying the underground water supply; isolating water supply; performing system bleed-off; installing check, control and drain valves; installing support and brace headers; and testing fire protection headers and components; according to regulatory requirements, codes, NFPA, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

### Skills

**5448.01** **Verify the underground water supply** by obtaining all completed test results and flushing certificates and if not available perform a flushing and test of underground water supply to establish the suitability of the water supply; inspecting, checking for and recording issues and bringing them to the attention of a supervisor; using report results, pitot tubes, discharge lines, gauges, communication skills and devices, and personal protective equipment; according to regulatory requirements, codes, NFPA, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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mm/dd/yy	Apprentice Print Name	Apprentice Signature

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- 5448.02**      **Isolate water supply** by closing and securing control valves underground curb valves, PIV's, outside stem and yoke (OS&Y), verifying the full closure of the water supply isolation valve, and following safety and lockout procedures, so that the supply piping can be drained; using hand tools and personal protective equipment; according to regulatory requirements, codes, NFPA, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

- 5448.03**      **Perform system bleed-off** by verifying that the water supply isolation valve is closed, opening drain valve on the testing flange, checking for absence of pressure and water flow, so that pressure is relieved from the supply or spigot, for safe removal of the testing flange; using hand tools, and personal protective equipment; according to safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

- 5448.04**      **Install check, control and drain valves** including outside stem and yoke (OS&Y), butterfly, wallpost indicators, indicating and non-indicating drain valves, ensuring that valves are securely installed and accessible; using hand, power and cutting tools, rigging, lifting and hoisting devices, ladders, personnel lifts, and personal protective equipment, so that the flow of the water is distributed according to plan and specifications and the integrity of the water supply is protected; according to regulatory requirements, codes, NFPA, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

- 5448.05**      **Install support and brace headers** including piping, flanges, couplings, riser clamps, specialty fittings with bracing and pipe supports; inspecting and checking for fit, stability, and alignment, so that the installation is supported and can be completed; using hand, power and cutting tools, fasteners, rigging, lifting and hoisting devices, ladders, personnel lifts, and personal protective equipment,; according to regulatory requirements, codes, NFPA, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

**5448.06**      **Test fire protection headers and components** including check valves, control valves, detector check valves, by restoring the water supply, bleeding off the air; inspecting, checking for leaks, pressure and full flow; testing and analysing performance and recording results, so that test report will be accepted by the regulatory authority; using gauges and specialized testing equipment, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, codes, NFPA, safety requirements, job specifications, site conditions, manufacturer s' specifications and recommendations, and company policies and procedures.

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

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## 5449.0 Install Fire Protection Systems

### General Performance Objective

Install fire protection systems including: clean agent fire suppression systems; high and low-pressure carbon dioxide systems; dry and wet chemical systems; standpipe and hose rack systems; wet systems; anti-freeze systems; dry systems; combination dry pipe and pre-action systems; pre-action systems; deluge systems; foam systems; water mist systems; and detection systems; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

### Skills

**5449.01 Install clean agent fire suppression systems** including hangers, fasteners, bracing, piping, nozzles, inert gas storage cylinders, pull stations, abort stations, solenoid valves, warning signals, detection equipment, building system shutdown equipment, ensuring that components are securely installed; using hand, power and cutting tools, specialized tools, measuring devices, rigging, lifting and hoisting devices, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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- 5449.02**      **Install high and low-pressure carbon dioxide systems** including hangers, fasteners, bracing, piping, nozzles, carbon dioxide gas storage cylinders, slave cylinders, low pressure storage tanks, reserve cylinder bank, pull stations, abort stations, solenoid valves, warning signals, detection equipment, applicable building system shutdown equipment; checking for fit and ensuring that components are securely installed; using hand, power and cutting tools, measuring devices, rigging, lifting and hoisting devices, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

- 5449.03**      **Install dry and wet chemical systems** including hangers, fasteners, bracing, piping, nozzles, agent storage cylinders, pull stations, abort stations, solenoid valves, warning signals, detection equipment, and building system shutdown equipment; checking for fit and ensuring that components are securely installed; using hand, power and cutting tools, measuring devices, rigging, lifting and hoisting devices, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

- 5449.04**      **Install standpipe and hose rack systems** including fire pumps, test headers, fire department connections, flow switches, sleeves, hangers, fasteners, bracing, piping, riser clamps, fire stopping, drain risers, fire hose cabinets, riser control valves, fire hose valves, pressure regulating valves, pressure reducing valves, pressure relief valves, check valves, dry pipe valves, fire extinguishers, hose spanners, water stops, hose racks and reels, security cabinets, and institutional cabinets; checking for fit and alignment and ensuring that components are securely installed; using hand, power and cutting tools, measuring devices, gauges, rigging, lifting and hoisting devices, ladders, personnel lifts, lift trucks, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

- 5449.05**      **Install wet systems** including test headers, alarm valves, check valves, flow switches, pressure switches, pressure relief valves, water motor alarms, inspector's test connections, fire department connections, sleeves, hangers, fasteners, seismic bracing, sprinkler heads, piping, riser clamps, fire stopping, zone control valves, drain risers, pressure reducing valves, floor control assemblies and cabinets; checking for fit and stability and ensuring that components are securely installed; using hand, power and cutting tools, rigging, lifting and hoisting devices, ladders, personnel lifts, lift trucks, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

### 5449.06

**Install anti-freeze systems** including fire department connections, inspector's test connection, expansion tanks, check valves, control valves, drain valves, filling valves, flow switches, pressure switches, solution test connections, anti-freeze solutions, sleeves, hangers, fasteners, seismic bracing, sprinkler heads, piping, riser clamps, fire stopping, and gauges; checking for fit and stability and ensuring that components are securely installed; using hand, power and cutting tools, rigging, lifting and hoisting devices, ladders, personnel lifts, lift trucks, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

### 5449.07

**Install dry systems** including test headers, dry pipe valves, check valves, air compressors, shop air supply, air maintenance devices, accelerators, exhausters, pressure switches, water motor alarms, inspector's test connections, fire department connections, drum drips, sleeves, hangers, fasteners, seismic bracing, sprinkler heads, piping, riser clamps, fire stopping, drain risers, pressure relief valves, and pre-trimmed cabinets; checking for fit and stability and ensuring that components are securely installed; using hand, power and cutting tools, rigging, lifting and hoisting devices, ladders, personnel lifts, lift trucks, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

**5449.08**

**Install combination dry pipe and pre-action systems** including test headers, dry pipe valves, check valves, fire detection tubing, fire detection wiring, tripping devices, supplemental chambers, air compressors, shop air supply, air maintenance devices, accelerators, exhausters, pressure switches, pressure relief valves, water motor alarms, inspector's test connections, fire department connections, drum drips, sleeves, hangers, fasteners, seismic bracing, sprinkler heads, piping, riser clamps, fire stopping, drain risers, and gauges; checking for fit and stability and ensuring that components are securely installed; using hand, power and cutting tools, rigging, lifting and hoisting devices, ladders, personnel lifts, lift trucks, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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



### 5449.09

**Install pre-action systems** including non-interlock, single interlock and double interlock arrangements, test headers, pre-trimmed cabinets, pre-action valves, isolation test valves, check valves, solenoid valves, fire detection wiring, air sampling activating devices, manual pull stations, air compressors, shop air supply, air maintenance devices, accelerators, exhausters, pressure switches, pressure relief valves, water motor alarms, inspector's test connections, fire department connections, drum drips, electrical detection systems, dry and wet pilot lines, sleeves, hangers, fasteners, seismic bracing, sprinkler heads, drum drips, piping, riser clamps, fire stopping, drain risers, and pressure gauges; checking for fit and stability and ensuring that components are securely installed; using hand, power and cutting tools, rigging, lifting and hoisting devices, ladders, personnel lifts, lift trucks, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

**5449.10**      **Install deluge systems** including test headers, fire line strainers, deluge valves, pre-trimmed cabinets, isolation test valves, check valves, fire detection wiring, manual pull stations, solenoid valves, air compressors, shop air supply, air maintenance devices, pressure switches, water motor alarms, inspector's test connections, fire department connections, electrical detection systems, dry and wet pilot lines, sleeves, hangers, fasteners, seismic bracing, sprinkler heads, open sprinklers, spray nozzles, water monitors, piping, riser clamps, fire stopping, drain risers, and pressure gauges; checking for fit and stability and ensuring that components are securely installed; using hand, power and cutting tools, rigging, lifting and hoisting devices, ladders, personnel lifts, lift trucks, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

**5449.11**

**Install foam systems** including fire pumps, pump test headers, deluge valves, alarm valves, foam proportioners, foam solutions, foam tanks, foam makers, foam pumps, foam monitors, pre-trimmed cabinets, isolation test valves, check valves, hose hand lines, fire detection wiring, manual pull stations, abort stations, solenoid valves, air compressors, shop air supply, air maintenance devices, pressure switches, pressure relief valves, water motor alarms, inspector's test connections, fire department connections, electrical detection systems, dry and wet pilot lines, sleeves, hangers, fasteners, seismic bracing, sprinkler heads, open sprinklers, spray nozzles, piping, riser clamps, fire stopping, drain risers, pressure gauges; checking for fit and stability and ensuring that components are securely installed; using hand, power and cutting tools, rigging, lifting and hoisting devices, ladders, personnel lifts, lift trucks, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

- 5449.12**      **Install water mist systems** including fire pumps, pump test headers, hangers, fasteners, bracing, piping, nozzles, strainers, inert gas storage cylinders, water storage tanks, pull stations, abort stations, isolation valves, drain valves, check valves, test valves, solenoid valves, pressure reducing valves, pressure switches, pressure regulators, gauges, warning signals, detection equipment, building system shutdown equipment, and solenoids; checking for fit and stability and ensuring that components are securely installed; using hand, power and cutting tools, specialized tools, measuring devices, rigging, lifting and hoisting devices, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

- 5449.13**      **Install detection systems** including rate of rise systems, fixed temperature systems, air sampling/air aspiration systems, detection wire systems, fasteners, hangers, brackets, piping, control panels, and test connections; checking for fit and stability and ensuring that components are securely installed; using hand, power and cutting tools, specialized tools, measuring devices, rigging, lifting and hoisting devices, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

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## 5450.0 Commission Fire Protection Systems

### General Performance Objective

Commission fire protection systems including: clean agent fire suppression systems; high and low-pressure carbon dioxide systems; dry and wet chemical systems; standpipe and hose rack systems; wet systems, anti-freeze systems; dry systems; combination dry pipe and pre-action systems; pre-action systems; deluge systems; foam systems; water mist systems; and detection systems; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

### Skills

**5450.01 Commission clean agent fire suppression systems** including piping, pull stations, abort stations, solenoid valves, detection equipment, warning signal equipment, building system shutdown equipment; by checking for wear, leaks, obstructions, paint, damaged, loose and missing components, corrosion, fractures, alignment, flow, fit, stability, temperature rating, temperature of the room spacing, age, approval stamps, fluid levels, drainage, clearance, and code compliance; performing acceptance tests on equipment, verifying room integrity, inspecting, testing and analysing performance and function, recording results, and issuing a test certificate; using hand tools, specialized service tools, testing devices, communication skills, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies 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.**

### 5450.02

#### **Commission high and low-pressure carbon dioxide systems**

including piping, pull stations, abort stations, solenoid valves, detection equipment, warning signal equipment, slave cylinders, and building system shutdown equipment; by checking for wear, leaks, obstructions, paint, damaged, loose and missing components, corrosion, fractures, alignment, flow, fit, stability, temperature rating, temperature of the room, spacing, age, approval stamps, gas levels, clearance, and code compliance; performing acceptance tests on equipment, verifying room integrity, inspecting, testing and analysing performance and function, recording results, and issuing a test certificate; using hand tools, specialized tools, testing devices, communication skills, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

### 5450.03

**Commission dry and wet chemical systems** including piping, pull stations, abort stations, solenoid valves, warning signals, detection equipment, building system shutdown equipment; by checking for wear, leaks, obstructions, paint, damaged, loose and missing components, corrosion, fractures, alignment, flow, fit, stability, temperature rating, temperature of the room, spacing, age, approval stamps, pressure, drainage, clearance, and code compliance; by performing acceptance tests on equipment, verifying room integrity, inspecting, testing and analysing performance and function, recording results, and issuing a test certificate; using hand tools, specialized tools, and testing devices, communication skills, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

### 5450.04

**Commission standpipe and hose rack systems** including fire pumps, test headers, fire department connections, flow switches, piping, riser control valves, fire hose cabinets, fire hose valves, check valves, dry pipe valves, pressure regulating valves, pressure reducing valves, and pressure relief valves; by checking for wear, leaks, obstructions, paint, damaged, loose and missing components, corrosion, fractures, alignment, flow, fit, stability, temperature rating, temperature of the room, spacing, age, approval stamps, fluid levels, pressure, drainage, clearance, and code compliance; by performing acceptance tests on equipment, inspecting, testing and analysing performance and function, recording results, and issuing a test certificate; using hand tools, specialized tools, testing devices, communication skills, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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



### 5450.05

**Commission wet systems** including test headers, alarm valves, check valves, flow switches, pressure switches, pressure relief valves, water motor alarms, inspector's test connections, fire department connections, sprinkler heads, piping, zone control valves, drain risers, pressure reducing valves, floor control assemblies and cabinets; by checking for wear, leaks, obstructions, paint, damaged, loose and missing components, corrosion, fractures, alignment, flow, fit, stability, temperature rating, temperature of the room, spacing, age, approval stamps, fluid levels, pressure, drainage, clearance, and code compliance; by performing acceptance tests on equipment, inspecting, testing and analysing performance and function, recording results, and issuing a test certificate; using hand tools, specialized tools, testing devices, communication skills, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

### 5450.06

**Commission anti-freeze systems** including test headers, fire department connections, inspector's test connection, expansion tanks, check valves, control valves, drain valves, filling valves, flow switches, pressure switches, anti-freeze solutions, piping, sprinkler heads, and gauges; by checking for wear, leaks, obstructions, paint, damaged, loose and missing components, corrosion, fractures, alignment, flow, fit, stability, temperature rating, temperature of the room, spacing, age, approval stamps, fluid levels, pressure, drainage, clearance, and code compliance; by performing acceptance tests on equipment, inspecting, testing and analysing performance and function, recording results, and issuing a test certificate; using hand tools, specialized tools, testing devices, communication skills, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

### 5450.07

**Commission dry systems** including test headers, dry pipe valves, check valves, accelerators, exhausters, air maintenance devices, air compressors, shop air supply, pressure switches, sprinkler heads, water motor alarms, inspector's test connections, fire department connections, drum drips, and piping; by checking for wear, leaks, obstructions, paint, damaged, loose and missing components, corrosion, fractures, alignment, flow, fit, stability, temperature rating, temperature of the room, spacing, age, approval stamps, fluid levels, pressure, drainage, clearance, and code compliance; by performing acceptance tests on equipment, inspecting, testing and analysing performance and function, recording results, and issuing a test certificate; using hand tools, specialized tools, testing devices, communication skills, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

**5450.08**

**Commission combination dry pipe and pre-action systems** including test headers, dry pipe valves, check valves, fire detection tubing, fire detection wiring, tripping devices, supplemental chamber, air compressors, shop air supply, air maintenance devices, exhausters, accelerators, pressure switches, pressure relief valves, water motor alarms, inspector's test connections, fire department connections, drum drips, sprinkler heads, gauges, piping, and drain risers; by checking for wear, leaks, obstructions, paint, damaged, loose and missing components, corrosion, fractures, alignment, flow, fit, stability, temperature rating, temperature of the room, spacing, age, approval stamps, fluid levels, pressure, drainage, clearance, and code compliance; by performing acceptance tests on equipment, inspecting, testing and analysing performance and function, recording results, and issuing a test certificate; using hand tools, specialized tools, testing devices, communication skills, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

**5450.09**

**Commission pre-action systems** including non-interlock, single interlock and double interlock arrangements, test headers, pre-trimmed cabinets, pre-action valves, isolation test valves, check valves, solenoid valves, fire detection wiring, air sampling activating devices, manual pull stations, air compressors, shop air supply, air maintenance devices, accelerators, exhausters, pressure switches, pressure relief valves, water motor alarms, inspector's test connections, fire department connections, drum drips, electrical detection systems, dry and wet pilot lines, sleeves, hangers, seismic bracing, sprinkler heads, drum drips, piping, riser clamps, fire stopping, drain risers, and pressure gauges; by checking for wear, leaks, obstructions, paint, damaged, loose and missing components, corrosion, fractures, alignment, flow, fit, stability, temperature rating, temperature of the room, spacing, age, approval stamps, fluid levels, pressure, drainage, clearance, and code compliance; by performing acceptance tests on equipment, inspecting, testing and analysing performance and function, recording results, and issuing a test certificate; using hand tools, specialized tools, testing devices, communication skills, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations and, company policies and procedures.

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

### 5450.10

**Commission deluge systems** including test headers, fire line strainers, deluge valves, pre-trimmed cabinets, isolation test valves, check valves, fire detection wiring, manual pull stations, solenoid valves, air compressors, shop air supply, air maintenance devices, pressure switches, water motor alarms, inspector's test connections, fire department connections, electrical detection systems, dry and wet pilot lines, sleeves, hangers, seismic bracing, sprinkler heads, open sprinklers, spray nozzles, water monitors, piping, riser clamps, fire stopping, drain risers, and pressure gauges; by checking for wear, leaks, obstructions, paint, damaged, loose and missing components, corrosion, fractures, alignment, flow, fit, stability, temperature rating, temperature of the room, spacing, age, approval stamps, fluid levels, pressure, drainage, clearance, and code compliance; by performing acceptance tests on equipment, inspecting, testing and analysing performance and function, recording results, and issuing a test certificate; using hand tools, specialized tools, testing devices, communication skills, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

**5450.11**

**Commission foam systems** including fire pumps, pump test headers, deluge valves, pre-trimmed cabinets, foam concentrations, deluge valves, alarm valves, foam proportioners, foam solutions, foam tanks, foam makers, foam pumps, foam monitors, hose hand lines, isolation test valves, check valves, fire detection wiring, air sampling activating devices, manual pull stations, abort stations, solenoid valves, air compressors, shop air supply, air maintenance devices, pressure switches, pressure relief valves, water motor alarms, inspector's test connections, fire department connections, electrical detection systems, dry and wet pilot lines, sprinkler heads, open sprinklers, spray nozzles, piping, pressure gauges; by checking for wear, leaks, obstructions, paint, damaged, loose and missing components, corrosion, fractures, alignment, flow, fit, stability, temperature rating, temperature of the room, spacing, age, approval stamps, fluid levels, pressure, drainage, clearance, and code compliance; by performing acceptance tests on equipment, inspecting, testing and analysing performance and function, recording results, and issuing a test certificate; using hand tools, specialized tools, testing devices, communication skills, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

**5450.12**

**Commission water mist systems** including fire pumps, pump test headers, piping, nozzles, strainers, inert gas storage cylinders, water storage tanks, pull stations, abort stations, isolation valves, drain valves, check valves, test valves, solenoid valves, pressure reducing valves, pressure switches, pressure regulators, warning signals, detection equipment, building system shutdown equipment, and solenoids; by checking for wear, leaks, obstructions, paint, damaged, loose and missing components, corrosion, fractures, alignment, flow, fit, stability, temperature rating, temperature of the room, spacing, age, approval stamps, fluid levels, pressure, drainage, clearance, and code compliance; by inspecting, testing and analysing performance and function, recording results, and issuing a test certificate; using hand tools, specialized service tools, testing devices, communication skills, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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



**5450.13**

**Commission detection systems** including rate of rise systems, fixed temperature systems, air sampling/air aspiration systems, detection wire systems, fasteners, hangers, brackets, piping, control panels, and test connections, ensuring that components are securely installed; by checking for wear, leaks, obstructions, paint, damaged, loose and missing components, corrosion, fractures, alignment, flow, fit, stability, temperature rating, temperature of the room, spacing, age, approval stamps, pressure, clearance, and code compliance; by inspecting, testing and analysing performance and function, recording results, and issuing a test certificate; using hand, power and cutting tools, specialized tools, testing devices, communication skills, rigging, lifting and hoisting devices, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

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## 5451.0 Install Pumps, Drivers, And Controllers

### General Performance Objective

Install pumps, drivers, and controllers by: verifying the water supply; selecting the fire pump assembly; identifying the location of the fire pump installation; preparing the site location for installation of the fire pump assembly; installing fire pump assembly; installing controllers and auxiliary devices; installing fuel system for diesel drivers; installing jockey pumps; and commissioning fire pump assembly and auxiliary components; according to regulatory requirements, codes, NFPA, TSSA, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

### Skills

**5451.01 Verify the water supply** including wells, ponds, pits, reservoirs, storage tanks, and underground piping, by obtaining all completed test results and certificates, and assessing data, checking and recording data pertaining to depth, volume of water, water pressure, and water conditions, to ensure that the that water supply is adequate for the application; using report results, pitot tubes, discharge lines, gauges, communication skills, and personal protective equipment; according to regulatory requirements, codes, NFPA, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

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- 5451.02**      **Select fire pump assembly** including horizontal split case, in-line, vertical turbine, centrifugal pumps with electric or diesel drivers, positive displacement pumps, transfer switches, controllers, pump test headers, bypass, relief valves, check valves, drains, gauges, and sensing lines; by checking for fit, and capacity, ensuring that the fire pump assembly will meet system demands; using plans, specifications, hydraulic calculations and personal protective equipment; according to regulatory requirements, codes, NFPA, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

- 5451.03**      **Identify the location of the fire pump installation** by ensuring the positioning of pump assembly in relation to water supply and discharge connections, inspecting, checking for accessibility, clearances, power supply, fuel supply, ventilation, engine exhaust routing, and environmental conditions; by inspecting, and assessing potential locations; using measuring devices, site plans, personal protective equipment, and by coordinating with other tradespersons; according to regulatory requirements, codes, NFPA, safety requirements, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

- 5451.04**      **Prepare site location for installation of the fire pump assembly** by reading and interpreting job specifications, and site plans; selecting and organizing tools and equipment, installing fire pump assembly pads, test headers, and exhaust; coordinating sub-trades to construct and install floor drains, fuel and electrical supplies, man holes, ventilation, lighting, heating; using hand and power tools, measuring devices, communication devices, site plans, and personal protective equipment; according to regulatory requirements, codes, NFPA, safety requirements, site conditions, job specifications, manufacturers' specifications and recommendations, and company policies and procedures.

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

- 5451.05**      **Install fire pump assembly** including horizontal split case, vertical in-line and vertical turbine centrifugal pumps with electric or diesel drivers, positive displacement pumps jockey pumps, pump test headers, flowmeter, bypass, relief valves, check valves, drains, gauges, sensing lines, piping, fittings, valves, switches, bracketing, bracing, and exhaust piping; by inspecting, checking for fit, stability, and alignment so that the assembly will meet systems demands; using hand and power tools, measuring devices, rigging, lifting and hoisting devices, lift trucks, communication devices, site plans, and personal protective equipment; according to regulatory requirements, codes, NFPA, safety requirements, site conditions, job specifications, manufacturers' specifications and recommendations, and company policies and procedures.

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

- 5451.06**      **Install controllers and auxiliary devices** including electric and electronic controllers, internal block heaters, batteries, pressure switches, flow switches, sensing lines, and gauges; using hand and power tools, measuring devices, rigging, lifting and hoisting devices, lift trucks, communication devices, site plans, and personal protective equipment, so that the fire pump will immediately activate when requested; according to regulatory requirements, codes, safety requirements, NFPA, site conditions, job specifications, manufacturers' specifications and recommendations, and company policies and procedures.

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

- 5451.07**      **Install fuel system for diesel drivers** including fuel storage tanks, piping, ventilation components, fill piping, pressure switches, gauges, valves, supports, and spill containment; by inspecting, checking for fit, alignment, and stability; using hand and power tools, measuring devices, rigging, lifting and hoisting devices, lift trucks, communication devices, site plans, and personal protective equipment, so that the fuel supply will meet diesel driver requirements and adverse impact on the environment is minimized; according to regulatory requirements, codes, NFPA, TSSA, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

- 5451.08**      **Install jockey pumps** including controllers, sensing lines, piping, fittings, valves and switches, hangers, bracing, ensuring the sizing needed to facilitate the main fire pump sequencing; by inspecting, checking for fit, alignment, and stability; using hand and power tools, measuring devices, rigging, lifting and hoisting devices, lift trucks, communication devices, site plans, and personal protective equipment, so that the pump will operate; according to regulatory requirements, codes, NFPA, safety requirements site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

- 5451.09**      **Commission fire pump assembly and auxiliary components** including electric and diesel drivers, fire pumps, jockey pumps, controllers, transfer switches, power supply, fuel supply, water supply, batteries, sensing lines, gauges, pipes, bracing, relief valves, and check valves; checking alignment, fluid levels, charge, rotation, leaks, lubrication, noise, vibration, flow, discharge pressures, cavitation, temperature, ventilation, and wiring; by inspecting, testing and analysing performance, calibrating and sequencing pump assemblies, verifying operation of switches, alarms, sensing devices and pump performance, recording results, and issuing a test certificate; using hand and power tools, specialized tools, testing devices, measuring devices, communication skills, electrolyte, lubricants, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, TSSA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

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## 5452.0 Install and Maintain Portable Fire Extinguishers

### General Performance Objective

Install and maintain portable fire extinguishers by: selecting portable extinguishers; installing portable extinguishers; performing scheduled inspections of extinguishers and components; and maintaining extinguishers and components; according to regulatory requirements, codes, NFPA, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

### Skills

**5452.01** **Select portable extinguishers** including carbon dioxide, water, wet and dry chemical, and clean agent extinguishers, identifying the number required, type, size, and spacing, inspecting and verifying that the extinguisher is fully charged and ready for application, and meets all requirements; according to regulatory requirements, codes, NFPA, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

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- 5452.02**      **Install portable extinguishers** including carbon dioxide, water, wet and dry chemical, and clean agent extinguishers with fasteners, hangers, and brackets; using hand and power tools, measuring devices, and fastening devices; ensuring extinguishers are secure, visible, accessible, rated for the application and ready for use; according to regulatory requirements, codes, NFPA, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

- 5452.03**      **Perform scheduled inspections of extinguishers and components** including hoses, cylinders, nozzles, gauges, pins and seals; checking for charge, leaks, wear, missing, loose and damaged components, location, type and size, ensuring that extinguisher is secure, recording on extinguisher tags the date of inspection and recording inspection data in the property maintenance log and ensuring that the that extinguishers are in place, accessible, and ready for use; using personal protective equipment, hand and power tools, testing devices, communication skills, and recording/marketing devices; according to regulatory requirements, codes, NFPA, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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



**5452.04**

**Maintain extinguishers and components** including hoses, cylinders, nozzles, gauges, pins, seals, fasteners, brackets, and hangers; by servicing and/or replacing extinguishers or defective components, inspecting, testing and verifying pressure and weight, and that extinguishers are reinstalled securely; using hand and power tools, recharging equipment, testing devices, fastening devices, and personal protective equipment, ensuring that the extinguishers are ready for use and accessible; according to regulatory requirements, codes, NFPA, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

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## 5453.0 Inspect Fire Protection Systems

### General Performance Objective

Inspect fire protection systems by: notifying clients/representatives prior to inspection; and inspecting fire alarm control and releasing panels, clean agent fire suppression systems, high and low-pressure carbon dioxide systems, dry and wet chemical systems, standpipe and hose rack systems, wet systems, anti-freeze systems, dry systems, combination dry pipe and pre-action systems, pre-action systems, deluge systems, foam systems, water mist systems; fire pump assembly and auxiliary components; and water supplies and auxiliary components; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

### Skills

**5453.01** **Notify client/representative prior to inspection** using oral and written communication skills and communication devices; according to regulatory requirements, codes, NFPA, safety requirements, job specifications, site conditions, and company policies 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.**

- 5453.02**      **Inspect fire alarm control and releasing panels** in order to facilitate test of fire protection systems; checking for malfunctioning lights, damage, and wear; according to manufacturers' specifications and recommendations, regulatory requirements, codes, NFPA, safety requirements, job specifications, site conditions, and company policies and procedures.

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

- 5453.03**      **Inspect clean agent fire suppression systems** including vessels, piping, pull stations, abort stations, solenoid valves, detection equipment, warning signal equipment, building system shutdown equipment, hangers, brackets and supports; by checking for wear, leaks, obstructions, paint, damaged, loose and missing components, corrosion, fractures, alignment, fit, stability, temperature rating, room temperature and integrity, spacing, age, approval stamps, fluid levels, pressure, clearance, and code compliance, verifying building occupancy, noting discrepancies and deficiencies with the client, arranging for repairs, recording results, and issuing an inspection report; using observation and communication skills, hand tools, specialized service tools, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

- 5453.04**      **Inspect high and low-pressure carbon dioxide systems** including vessels, piping, pull stations, abort stations, solenoid valves, detection equipment, warning signal equipment, slave cylinders, and building system shutdown equipment; by checking for wear, leaks, obstructions, paint, damaged, loose and/or missing components, corrosion, fractures, alignment, fit, stability, temperature rating, room temperature and integrity, spacing, age, approval stamps, fluid levels, pressure, clearance, and code compliance, recording results, verifying building occupancy, noting discrepancies and deficiencies with the client, arranging for servicing, and issuing an inspection report; using observation and communication skills hand tools, specialized tools, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

- 5453.05**      **Inspect dry and wet chemical systems** including vessels, piping, pull stations, abort stations, solenoid valves, warning signals, detection equipment, and building system shutdown equipment; by checking for wear, leaks, obstructions, paint, damaged, loose and missing components, corrosion, fractures, alignment, fit, stability, temperature rating, room temperature, spacing, age, approval stamps, fluid levels, drainage, clearance, and code compliance, verifying building occupancy, noting discrepancies and deficiencies with the client, recording results, arranging for servicing, and issuing an inspection report; using observation and communication skills hand tools, specialized tools, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

### 5453.06

**Inspect standpipe and hose rack systems** including fire pumps, test headers, fire department connections, flow switches, piping, riser control valves, fire hose cabinets, fire hose, fire hose valves, check valves, dry pipe valves, pressure regulating valves, and pressure reducing valves; by checking for wear, leaks, obstructions, paint, damaged, loose and missing components, corrosion, fractures, alignment, fit, stability, temperature rating, room temperature, spacing, age, approval stamps, fluid levels, pressure, drainage, clearance, and code compliance, verifying building occupancy, noting discrepancies and deficiencies with the client, recording results, and arranging for servicing; using observation and communication skills, documentation, hand tools, specialized tools, testing devices, ladders, personnel lifts, and personal protective equipment, according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

### 5453.07

**Inspect wet systems** including test headers, alarm valves, check valves, flow switches, pressure switches, pressure relief valves, water motor alarms, inspector's test connections, fire department connections, sprinkler heads, piping, zone control valves, drain risers, pressure reducing valves, floor control assemblies and cabinets; by checking for wear, leaks, obstructions, paint, damaged, loose and missing components, corrosion, fractures, alignment, fit, stability, temperature rating, room temperature, spacing, age, approval stamps, fluid levels, pressure, drainage, clearance, and code compliance, verifying building occupancy, noting discrepancies and deficiencies with the client, recording results, arranging for servicing, and issuing an inspection report; using observation and communication skills, documentation, tools, specialized tools, ladders, personnel lifts, and personal protective equipment, according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

### 5453.08

**Inspect anti-freeze systems** including test headers, fire department connections, inspector's test connection, expansion tanks, check valves, control valves, drain valves, filling valves, flow switches, pressure switches, anti-freeze solutions, piping, sprinkler heads, and gauges; by checking for wear, leaks, obstructions, paint, damaged, loose and missing components, corrosion, fractures, alignment, fit, stability, temperature rating, room temperature, spacing, age, approval stamps, fluid levels, pressure, drainage, clearance, and code compliance, verifying building occupancy, noting discrepancies and deficiencies with the client, recording results, arranging for servicing, and issuing an inspection report; using observation and communication skills, documentation, hand tools, specialized tools, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

### 5453.09

**Inspect dry systems** including test headers, dry pipe valves, check valves, accelerators, exhausters, air maintenance devices, air compressors, shop air supply, pressure switches, pressure relief valves, sprinkler heads, water motor alarms, inspector's test connections, fire department connections, drum drips, and piping; checking for wear, leaks, obstructions, paint, damaged, loose and missing components, corrosion, fractures, alignment, fit, stability, temperature rating, room temperature, spacing, age, approval stamps, fluid levels, pressure, drainage, clearance, and code compliance, verifying building occupancy, noting discrepancies and deficiencies with the client, recording results, arranging for servicing, and issuing an inspection report; using observation and communication skills, documentation, hand tools, specialized tools, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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



**5453.10**

**Inspect combination dry pipe and pre-action systems** including test headers, dry pipe valves, check valves, fire detection tubing, fire detection wiring, tripping devices, supplemental chamber, air compressors, shop air supply, air maintenance devices, exhausters, accelerators, pressure switches, pressure relief valves, water motor alarms, inspector's test connections, fire department connections, drum drips, sprinkler heads, gauges, piping, and drain risers; by checking for wear, leaks, obstructions, paint, damaged, loose and missing components, corrosion, fractures, alignment, fit, stability, temperature rating, room temperature, spacing, age, approval stamps, fluid levels, pressure, drainage, clearance, and code compliance, verifying building occupancy, noting discrepancies and deficiencies with the client, recording results, arranging for servicing, and issuing an inspection report; using observation and communication skills, hand tools, specialized tools, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

### 5453.11

**Inspect pre-action systems** including non-interlock, single interlock and double interlock arrangements, test headers, pre-trimmed cabinets, pre-action valves, isolation test valves, check valves, solenoid valves, fire detection wiring, air sampling activating devices, manual pull stations, air compressors, shop air supply, air maintenance devices, accelerators, exhausters, pressure switches, pressure relief valves, water motor alarms, inspector's test connections, fire department connections, electrical detection systems, dry and wet pilot lines, sprinkler heads, drum drips, piping, drain risers, and pressure gauges; by checking for wear, leaks, obstructions, paint, damaged, loose and missing components, corrosion, fractures, alignment, fit, stability, temperature rating, room temperature, spacing, age, approval stamps, fluid levels, pressure, drainage, clearance, and code compliance, verifying building occupancy, noting discrepancies and deficiencies with the client, recording results, arranging for servicing, and issuing an inspection report; using observation and communication skills, documentation, hand tools, specialized tools, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

### 5453.12

**Inspect deluge systems** including test headers, fire line strainers, deluge valves, pre-trimmed cabinets, isolation test valves, check valves, fire detection wiring, manual pull stations, solenoid valves, air compressors, shop air supply, air maintenance devices, pressure switches, water motor alarms, inspector's test connections, fire department connections, electrical detection systems, dry and wet pilot lines, sprinkler heads, open sprinklers, spray nozzles, water monitors, piping, drain risers, and pressure gauges; by checking for wear, leaks, obstructions, paint, damaged, loose and/or missing components, corrosion, fractures, alignment, fit, stability, temperature rating, room temperature, spacing, age, approval stamps, fluid levels, pressure, drainage, clearance, and code compliance, verifying building occupancy, noting discrepancies and deficiencies with the client, recording results, arranging for servicing, and issuing an inspection report; using observation and communication skills, documentation, hand tools, specialized tools, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

**5453.13**

**Inspect foam systems** including fire pumps, pump test headers, pre-trimmed cabinets, foam concentrations, deluge valves, alarm valves, foam proportioners, foam solutions, foam tanks, foam makers, foam pumps, foam monitors, hose hand lines, isolation test valves, check valves, fire detection wiring, air sampling activating devices, manual pull stations, abort stations, solenoid valves, air compressors, shop air supply, air maintenance devices, pressure switches, pressure relief valves, water motor alarms, inspector's test connections, fire department connections, electrical detection systems, dry and wet pilot lines, sprinkler heads, open sprinklers, spray nozzles, piping, pressure gauges; by checking for wear, leaks, obstructions, paint, damaged, loose and missing components, corrosion, fractures, alignment, fit, stability, temperature rating, room temperature, spacing, age, approval stamps, fluid levels, pressure, drainage, clearance, and code compliance, verifying building occupancy, noting discrepancies and deficiencies with the client, recording results, arranging for servicing, and issuing an inspection report; using observation and communication skills, documentation, hand tools, specialized tools, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

**5453.14**

**Inspect water mist systems** including fire pumps, pump test headers, piping, nozzles, strainers, inert gas storage cylinders, water storage tanks, pull stations, abort stations, isolation valves, drain valves, check valves, test valves, solenoid valves, pressure reducing valves, pressure switches, pressure regulators, gauges, warning signals, detection equipment, building system shutdown equipment, and solenoids; by checking for wear, leaks, obstructions, paint, damaged, loose and missing components, corrosion, fractures, alignment, fit, stability, temperature rating, room temperature, spacing, age, approval stamps, fluid levels, pressure, drainage, clearance, and code compliance, verifying building occupancy, noting discrepancies and deficiencies with the client, recording results, arranging for servicing, and issuing an inspection report; using observation and communication skills, documentation, hand tools, specialized service tools, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

**5453.15**

**Inspect fire pump assembly and auxiliary components** including electric and diesel drivers, fire pumps, fire pump test headers, jockey pumps, controllers, transfer switches, power supply, fuel supply, water supply, batteries, sensing lines, gauges, piping, bracing, relief valves, and check valves; by checking for wear, leaks, charge, obstructions, damaged, loose and missing components, corrosion, fractures, alignment, fit, stability, room temperature, spacing, age, approval stamps, fluid levels, pressure, drainage, rotation, lubrication, clearance, ventilation, wiring and code compliance; noting discrepancies and deficiencies with the client, recording results arranging for servicing, and issuing an inspection report; using observation and communication skills, documentation, hand and power tools, specialized tools, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

**5453.16**

**Inspect water supplies and auxiliary components** including gauges, piping, bracing, relief valves, check valves, hangers, hydrants, post indicator valves, sectional control valves, water monitors, drainage, reservoirs, water level, water level alarms, pressure tanks, wells, trash screens, and wiring; by checking for leaks, wear, leaks, obstructions, damaged, loose and missing components, corrosion, fractures, fit, stability, room temperature, spacing, age, approval stamps, pressure, drainage, clearance, and code compliance,; noting discrepancies and deficiencies with the client, recording results arranging for servicing, and issuing an inspection report; using observation and communication skills, documentation, hand and power tools, specialized tools, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, TSSA, codes, safety requirements job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

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## 5454.0 Test Fire Protection Systems

### General Performance Objective

Test fire protection systems by: coordinating notification of authorities; disabling and enabling fire alarm control and releasing panels; and testing clean agent fire suppression systems, high and low-pressure carbon dioxide systems, dry and wet chemical systems, standpipe and hose rack systems, wet systems, anti-freeze systems, dry systems, combination dry pipe and pre-action systems, pre-action systems, deluge systems, foam systems, water mist systems, fire pump assembly and auxiliary components, and water supplies and auxiliary components; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

### Skills

**5454.01** **Coordinate notification of authorities** including monitoring companies, local fire department, insurance organizations, and the client or client representatives prior to inspecting, testing, or scheduled impairment of fire protection installations; using oral and written communication skills and communication devices; according to regulatory requirements, codes, NFPA, safety requirements, job specifications, site conditions, and company policies and procedures.

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

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- 5454.02**      **Disable and enable fire alarm control and releasing panels** for testing of fire protection systems; according to manufacturers' specifications and recommendations, regulatory requirements, codes, NFPA, safety requirements, job specifications, site conditions, and company policies and procedures.

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

- 5454.03**      **Test clean agent fire suppression systems** including vessels, piping, pull stations, abort stations, solenoid valves, detection equipment, warning signal equipment, and building system shutdown equipment; by checking for leaks, obstructions, damaged and loose components, corrosion, fractures, discharge, vibration, stability, room integrity, pressure, code compliance, ensuring that all components operate effectively and efficiently; by testing and analysing performance and function, recording results, noting discrepancies and deficiencies with the client, arranging for repairs, and issuing a testing report; using observation and communication skills, documentation, hand tools, specialized service tools, testing equipment, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

### 5454.04

**Test high and low-pressure carbon dioxide systems** including vessels, piping, pull stations, abort stations, solenoid valves, detection equipment, warning signal equipment, slave cylinders, building system shutdown equipment; by checking for leaks, obstructions, damaged and loose components, fractures, alignment, discharge, fit, stability, vibration, room integrity, pressure, and code compliance, ensuring that all components operate effectively and efficiently; by testing system and analysing performance and function, verifying building occupancy, noting discrepancies and deficiencies with the client, recording results, arranging for servicing, and issuing an test report; using observation and communication skills hand tools, specialized tools, testing devices, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

### 5454.05

**Test dry and wet chemical systems** including vessels, piping, pull stations, abort stations, solenoid valves, warning signals, detection equipment, building system shutdown equipment; by checking for leaks, obstructions, damaged and loose components, corrosion, fractures, alignment, discharge, fit, stability, vibration, pressure, drainage, clearance, and code compliance, ensuring that all components operate effectively and efficiently; by testing and analysing performance and function, verifying building occupancy, noting discrepancies and deficiencies with the client, recording results, arranging for servicing, and issuing a test report; using observation and communication skills hand tools, specialized tools, testing devices, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

### 5454.06

**Test standpipe and hose rack systems** including fire pumps, test headers, fire department connections, flow switches, piping, riser control valves, fire hose cabinets, fire hoses, fire hose valves, check valves, dry pipe valves, pressure regulating valves, and pressure reducing valves; by checking for wear, leaks, obstructions, damaged and loose components, corrosion, fractures, alignment, flow, fit, stability, pressure, drainage, and code compliance, ensuring that all components operate effectively and efficiently; by testing and analysing performance and function, recording results, verifying building occupancy, noting discrepancies and deficiencies with the client, arranging for servicing, and issuing an test report; using observation and communication skills, hand tools, specialized tools, testing devices, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

### 5454.07

**Test wet systems** including test headers, alarm valves, check valves, flow switches, pressure switches, pressure relief valves, water motor alarms, inspector's test connections, fire department connections, sprinkler heads, piping, zone control valves, drain risers, pressure reducing valves, floor control assemblies and cabinets; by checking for wear, leaks, obstructions, damaged and loose components, corrosion, fractures, alignment, flow, fit, stability, pressure, drainage, and code compliance, ensuring that all components operate effectively and efficiently; by testing and analysing performance and function, verifying building occupancy, noting discrepancies and deficiencies with the client, recording results, arranging for servicing, and issuing a test report; using observation and communication skills, documentation, hand tools, specialized tools, testing devices, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

### 5454.08

**Test anti-freeze systems** including test headers, fire department connections, inspector's test connections, expansion tanks, check valves, control valves, drain valves, filling valves, flow switches, pressure switches, anti-freeze solutions, piping, sprinkler heads, and gauges; by checking for wear, leaks, obstructions, damaged and loose components, corrosion, fractures, alignment, flow, fit, stability, pressure, drainage, and code compliance, ensuring that all components operate effectively and efficiently; by testing and analysing performance and function, verifying building occupancy, noting discrepancies and deficiencies with the client, recording results, arranging for servicing, and issuing a test report; using observation and communication skills, hand tools, specialized tools, testing devices, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

### 5454.09

**Test dry systems** including test headers, dry pipe valves, check valves, accelerators, exhausters, air maintenance devices, air compressors, shop air supply, pressure switches, pressure relief valves, sprinkler heads, water motor alarms, inspector's test connections, fire department connections, drum drips, and piping; by checking for wear, leaks, obstructions, damaged and loose components, corrosion, fractures, alignment, flow, fit, stability, pressure, drainage, and code compliance, ensuring that all components operate effectively and efficiently; by testing and analysing performance and function, verifying building occupancy, noting discrepancies and deficiencies with the client, recording results, arranging for servicing, and issuing a test report; using observation and communication skills, documentation, hand tools, specialized tools, testing devices, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

### 5454.10

**Test combination dry pipe and pre-action systems** including test headers, dry pipe valves, check valves, fire detection tubing, fire detection wiring, tripping devices, supplemental chamber, air compressors, shop air supply, air maintenance devices, exhausters, accelerators, pressure switches, pressure relief valves, water motor alarms, inspector's test connections, fire department connections, drum drips, sprinkler heads, gauges, piping, and drain risers; by checking for wear, leaks, obstructions, damaged and loose components, corrosion, fractures, alignment, flow, fit, stability, pressure, drainage, and code compliance, ensuring that all components operate effectively and efficiently; by testing and analysing performance and function, verifying building occupancy, noting discrepancies and deficiencies with the client, recording results, arranging for servicing, and issuing a test report; using observation and communication skills, documentation, hand tools, specialized tools, testing devices, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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



**5454.11**

**Test pre-action systems** including non-interlock, single interlock and double interlock arrangements, test headers, pre-trimmed cabinets, pre-action valves, isolation test valves, check valves, solenoid valves, fire detection wiring, air sampling activating devices, manual pull stations, air compressors, shop air supply, air maintenance devices, accelerators, exhausters, pressure switches, pressure relief valves, water motor alarms, inspector's test connections, fire department connections, electrical detection systems, dry and wet pilot lines, sprinkler heads, drum drips, piping, drain risers, and pressure gauges; by checking for wear, leaks, obstructions, damaged and loose components, corrosion, fractures, alignment, flow, fit, stability, pressure, drainage, and code compliance, ensuring that all components operate effectively and efficiently; by testing and analysing performance and function, verifying building occupancy, noting discrepancies and deficiencies with the client, recording results, arranging for servicing, and issuing a test report; using observation and communication skills, documentation, hand tools, specialized tools, testing devices, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

### 5454.12

**Test deluge systems** including test headers, fire line strainers, deluge valves, pre-trimmed cabinets, isolation test valves, check valves, fire detection wiring, manual pull stations, solenoid valves, air compressors, shop air supply, air maintenance devices, pressure switches, water motor alarms, inspector's test connections, fire department connections, electrical detection systems, dry and wet pilot lines, sprinkler heads, open sprinklers, spray nozzles, water monitors, piping, drain risers, and pressure gauges; by checking for wear, leaks, obstructions, damaged and loose components, corrosion, fractures, alignment, flow, fit, stability, pressure, drainage, and code compliance, ensuring that all components operate effectively and efficiently; by testing and analysing performance and function, verifying building occupancy, noting discrepancies and deficiencies with the client, recording results, arranging for servicing, and issuing a test report; using observation and communication skills, documentation, hand tools, specialized tools, testing devices, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

**5454.13**

**Test foam systems** including fire pumps, pump test headers, deluge valves, pre- trimmed cabinets, foam concentrations, deluge valves, alarm valves, foam proportioners, foam solutions, foam tanks, foam makers, foam pumps, foam monitors, hose hand lines, isolation test valves, check valves, fire detection wiring, air sampling activating devices, manual pull stations, abort stations, solenoid valves, air compressors, shop air supply, air maintenance devices, pressure switches, pressure relief valves, water motor alarms, inspector's test connections, fire department connections, electrical detection systems, dry and wet pilot lines, sprinkler heads, open sprinklers, spray nozzles, piping, and pressure gauges; by checking for wear, leaks, obstructions, damaged and loose components, corrosion, fractures, alignment, flow, fit, stability, pressure, drainage, and code compliance, ensuring that all components operate effectively and efficiently; by testing and analysing performance and function, verifying building occupancy, noting discrepancies and deficiencies with the client, recording results, arranging for servicing, and issuing a test report; using observation and communication skills, documentation, hand tools, specialized tools, testing devices, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

**5454.14 Test water mist systems** including fire pumps, pump test headers, piping, nozzles, strainers, inert gas storage cylinders, water storage tanks, pull stations, abort stations, isolation valves, drain valves, check valves, test valves, solenoid valves, pressure reducing valves, pressure switches, pressure regulators, gauges, warning signals, detection equipment, building system shutdown equipment, and solenoids; by checking for wear, leaks, obstructions, damaged and loose components, corrosion, fractures, alignment, flow, fit, stability, pressure, drainage, and code compliance, ensuring that all components operate effectively and efficiently; by testing and analysing performance and function, verifying building occupancy, noting discrepancies and deficiencies with the client, recording results, arranging for servicing, and issuing a test report; using observation and communication skills, documentation, hand tools, specialized tools, testing devices, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

- 5454.15 Test fire pump assembly and auxiliary components** including electric and diesel drivers, fire pumps, fire pump test headers, jockey pumps, controllers, transfer switches, power supply, fuel supply, water supply, batteries, sensing lines, gauges, piping, bracing, relief valves, check valves, and lubrication; by checking for charge, rotation, wear, leaks, obstructions, damaged and loose components, corrosion, fractures, flow, fit, stability, noise, vibration, cavitation, temperature, ventilation, pressure, drainage, and code compliance, ensuring that all components operate effectively and efficiently; by testing and analysing performance and function, coordinating engine servicing with engine mechanic, calibrating and sequencing pump assemblies, verifying operation of switches, alarms, sensing devices and pump performance verifying building occupancy, noting discrepancies and deficiencies with the client, recording results, arranging for servicing, and issuing a test report; using observation and communication skills, documentation, hand tools, specialized tools, testing devices, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, TSSA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

**5454.16**

**Test water supplies and auxiliary components**, including: gauges, piping, bracing, relief valves, check valves, hangers, hydrants, post indicator valves, sectional control valves, water monitors, drainage, reservoirs, water level, water level alarms, pressure tanks, wells, trash screens, and wiring; by checking for wear, leaks, obstructions, damaged and loose components, corrosion, fractures, alignment, flow, fit, stability, pressure, drainage, and code compliance, ensuring that all components operate effectively and efficiently; by testing and analysing performance and function, verifying building occupancy, noting discrepancies and deficiencies with the client, recording results, arranging for servicing, and issuing a test report; using observation and communication skills, documentation, hand tools, specialized tools, testing devices, ladders, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, TSSA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

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**5455.0 Maintain Fire Protection Systems**

**General Performance Objective**

Maintain fire protection systems including: clean agent fire suppression systems, high and low-pressure carbon dioxide systems, dry and wet chemical systems, standpipe and hose rack systems, wet systems, anti-freeze systems, dry systems, combination dry pipe and pre-action systems, pre-action systems, deluge systems, foam systems, water mist systems, and fire pump assembly and auxiliary components; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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**Skills**

**5455.01 Maintain clean agent fire suppression system** including vessels, piping, pull stations, abort stations, solenoid valves, detection equipment, warning signal equipment, building system shutdown equipment, hangers, brackets and supports; by testing and analysing performance and function, decommissioning, isolating, disassembling, replacing devices, parts and components, reassembling, restoring and retesting, so that the system operates to its capabilities; recording service work performed, labour, materials and date left in service; using hand tools, specialized service tools, testing devices, communication skills, ladders, rigging, hoisting and lifting devices, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

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- 5455.02**      **Maintain high and low-pressure carbon dioxide systems** including vessels, piping, pull stations, abort stations, solenoid valves, detection equipment, warning signal equipment, slave cylinders, and building system shutdown equipment, ensuring that all components operate; by testing and analysing performance and function, draining, decommissioning, isolating, disassembling, replacing devices, parts and components, reassembling, filling, restoring and retesting, so that the system operates to its capabilities; recording service work performed, labour, materials used, and date left in service; using hand tools, specialized service tools, testing devices, communication skills, gas, ladders, rigging, hoisting and lifting devices, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

- 5455.03**      **Maintain dry and wet chemical systems** including vessels, piping, pull stations, abort stations, solenoid valves, warning signals, detection equipment, and building system shutdown equipment; by testing and analysing performance and function, decommissioning, isolating, disassembling, replacing devices, parts and components , reassembling, restoring and testing; recording service work performed, labour, materials used, and date left in service; using hand tools, specialized tools, testing devices, communication skills, ladders, rigging, hoisting and lifting devices, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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



### 5455.04

**Maintain standpipe and hose rack systems** including fire pumps, test headers, fire department connections, flow switches, piping, riser control valves, fire hose cabinets, fire hose, fire hose valves, check valves, dry pipe valves, pressure regulating valves, and pressure reducing valves; by testing and analysing performance and function, draining, decommissioning, isolating, disassembling, replacing devices, parts and components, reassembling, filling, restoring and retesting, so that the system operates to its capabilities; recording service work performed, labour, materials used, and date left in service; using hand tools, specialized tools, testing devices, communication skills, ladders, lifting, rigging and hoisting devices, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

### 5455.05

**Maintain wet systems** including test headers, alarm valves, check valves, flow switches, pressure switches, pressure relief valves, water motor alarms, inspector's test connections, fire department connections, sprinkler heads, piping, zone control valves, drain risers, pressure reducing valves, and floor control assemblies and cabinets; by testing and analysing performance and function, draining, decommissioning, isolating, disassembling, replacing devices, parts and components, reassembling, filling, restoring and retesting, so that the system operates to its capabilities; recording service work performed, labour, materials used and date left in service; using hand tools, specialized tools, testing devices, communication skills, ladders, lifting, rigging and hoisting devices, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

### 5455.06

**Maintain anti-freeze systems** including test headers, fire department connections, inspector's test connection, expansion tanks, check valves, control valves, drain valves, filling valves, flow switches, pressure switches, anti-freeze solutions, piping, sprinkler heads, and gauges; by testing and analysing performance and function, draining, decommissioning, isolating, disassembling, replacing devices, parts and components, reassembling, filling, restoring and retesting, so that the system operates to its capabilities; recording service work performed, labour, materials used, and date left in service; using hand tools, specialized tools, testing devices, communication skills, anti-freeze, ladders, lifting, rigging and hoisting devices, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

- 5455.07**      **Maintain dry systems** including test headers, dry pipe valves, check valves, accelerators, exhausters, air maintenance devices, air compressors, shop air supply, pressure switches, pressure relief valves, sprinkler heads, water motor alarms, inspector's test connections, fire department connections, drum drips, and piping; by testing and analysing performance and function, draining, decommissioning, isolating, disassembling, replacing devices, parts and components, reassembling, filling, restoring and retesting, so that the system operates to its capabilities; recording service work performed, labour, materials used, and date left in service; using hand tools, specialized tools, testing devices, communication skills, ladders, lifting, rigging and hoisting devices, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

**5455.08**      **Maintain combination dry pipe and pre-action systems** including test headers, dry pipe valves, check valves, fire detection tubing, fire detection wiring, tripping devices, supplemental chamber, air compressors, shop air supply, air maintenance devices, exhausters, accelerators, pressure switches, pressure relief valves, water motor alarms, inspector's test connections, fire department connections, drum drips, sprinkler heads, gauges, piping, and drain risers; by testing and analysing performance and function, draining, decommissioning, isolating, disassembling, replacing devices, parts and components, reassembling, filling, restoring and retesting, so that the system operates to its capabilities; recording service work performed, labour, materials used, and date left in service; using hand tools, specialized tools, testing devices, communication skills, ladders, lifting, rigging and hoisting devices, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

### 5455.09

**Maintain pre-action systems** including non-interlock, single interlock and double interlock arrangements, test headers, pre-trimmed cabinets, pre-action valves, isolation test valves, check valves, solenoid valves, fire detection wiring, air sampling activating devices, manual pull stations, air compressors, shop air supply, air maintenance devices, accelerators, exhausters, pressure switches, pressure relief valves, water motor alarms, inspector's test connections, fire department connections, electrical detection systems, dry and wet pilot lines, sprinkler heads, drum drips, piping, drain risers, and pressure gauges; by testing and analysing performance and function, draining, decommissioning, isolating, disassembling, replacing devices, parts and components, reassembling, filling, restoring and retesting, so that the system operates to its capabilities; recording service work performed, labour, materials used, and date left in service; using hand tools, specialized tools, testing devices, communication skills, ladders, lifting, rigging and hoisting devices, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

### 5455.10

**Maintain deluge systems** including test headers, fire line strainers, deluge valves, pre-trimmed cabinets, isolation test valves, check valves, fire detection wiring, manual pull stations, solenoid valves, air compressors, shop air supply, air maintenance devices, pressure switches, water motor alarms, inspector's test connections, fire department connections, electrical detection systems, dry and wet pilot lines, sprinkler heads, open sprinklers, spray nozzles, water monitors, piping, drain risers, and pressure gauges; by testing and analysing performance and function, draining, decommissioning, isolating, disassembling, replacing devices, parts and components, reassembling, filling, restoring and retesting, so that the system operates to its capabilities; recording service work performed, labour, materials used, and date left in service; using hand tools, specialized tools, testing devices, communication skills, ladders, lifting, rigging and hoisting devices, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

**5455.11**

**Maintain foam systems** including fire pumps, test headers, deluge valves, pre- trimmed cabinets, foam concentrations, deluge valves, alarm valves, foam proportioners, foam solutions, foam tanks, foam makers, foam pumps, foam monitors, hose hand lines, isolation test valves, check valves, fire detection wiring, air sampling activating devices, manual pull stations, abort stations, solenoid valves, air compressors, shop air supply, air maintenance devices, pressure switches, pressure relief valves, water motor alarms, inspector's test connections, fire department connections, electrical detection systems, dry and wet pilot lines, sprinkler heads, open sprinklers, spray nozzles, piping, and pressure gauges; by testing and analysing performance and function, draining, decommissioning, isolating, disassembling, replacing devices, parts and components, reassembling, filling, restoring and retesting, so that the system operates to its capabilities; recording service work performed, labour, materials used, and date left in service; using hand tools, specialized tools, testing devices, communication skills, foam solutions, ladders, lifting, rigging and hoisting devices, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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



**5455.12**

**Maintain water mist systems** including fire pumps, pump test headers piping, nozzles, strainers, inert gas storage cylinders, water storage tanks, pull stations, abort stations, isolation valves, drain valves, check valves, test valves, solenoid valves, pressure reducing valves, pressure switches, pressure regulators, gauges, warning signals, detection equipment, building system shutdown equipment, and solenoids; by testing and analysing performance and function, draining, decommissioning, isolating, disassembling, replacing devices, parts and components, reassembling, filling, restoring and retesting, so that the system operates to its capabilities; recording service work performed, labour, materials used, and date left in service; using hand tools, specialized tools, testing devices, communication skills, ladders, lifting, rigging and hoisting devices, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

- 5455.13**      **Maintain fire pump assembly and auxiliary components** including electric and diesel drivers, fire pumps, test headers, jockey pumps, controllers, transfer switches, power supply, fuel supply, water supply, batteries, sensing lines, gauges, piping, bracing, relief valves, and check valves; by testing and analysing performance and function, draining, decommissioning, isolating, disassembling, replacing devices, parts and components, reassembling, filling, restoring and retesting, so that the system operates to its capabilities; recording service work performed, labour, materials used, and date left in service; using hand tools, specialized tools, testing devices, communication skills, ladders, lifting, rigging and hoisting devices, personnel lifts, and personal protective equipment; according to regulatory requirements, NFPA, TSSA, codes, safety requirements, job specifications, site conditions, manufacturers' specifications and recommendations, and company policies and procedures.

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

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### 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.

#### Journeyperson

Journeyperson means an individual who holds a certificate of qualification (in a compulsory or non-compulsory trade) and/or an individual who practices as a journeyperson 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 Journeyperson 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](https://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 Records #1**

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

<b>Summary of Training</b>	
<b>Employment Start Date</b>	
<b>Employment End Date</b>	
<b>Total hours of training &amp; instruction between dates of employment.</b>	
<b>Skill Sets Completed</b>	

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](http://SkilledTradesOntario.ca) and search Sponsor Record Form.**



## **Change of Sponsor Record #2**

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

<b>Summary of Training</b>	
<b>Employment Start Date</b>	
<b>Employment End Date</b>	
<b>Total hours of training &amp; instruction between dates of employment.</b>	
<b>Skill Sets Completed</b>	

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](http://SkilledTradesOntario.ca) and search Sponsor Record Form.**

### **Change of Sponsor Record #3**

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

<b>Summary of Training</b>	
<b>Employment Start Date</b>	
<b>Employment End Date</b>	
<b>Total hours of training &amp; instruction between dates of employment.</b>	
<b>Skill Sets Completed</b>	

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](http://SkilledTradesOntario.ca) and search Sponsor Record Form.**

### **Change of Sponsor Record #4**

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

<b>Summary of Training</b>	
<b>Employment Start Date</b>	
<b>Employment End Date</b>	
<b>Total hours of training &amp; instruction between dates of employment.</b>	
<b>Skill Sets Completed</b>	

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](http://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](http://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](http://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 C — Skill Set Completion for Sponsors

You will find the skill set numbers and titles in the Logbook's Table of Contents. By signing off each skill set in the table below, you are providing final confirmation, as the Apprentice's Sponsor, that the Apprentice has demonstrated competency in all the mandatory skills included in the skill set.

Skill Set #	Skill Set Title	Signing Authority Signature
<b>5440.0</b>	Protect Self And Others	
<b>5441.0</b>	Communicate In The Workplace	
<b>5442.0</b>	Rig, Hoist, Lift And Handle Materials	
<b>5443.0</b>	Plan And Prepare For Installations	
<b>5444.0</b>	Design Systems	
<b>5445.0</b>	Utilize Tools And Equipment	
<b>5446.0</b>	Install Water Supply	
<b>5447.0</b>	Fabricate Fire Protection Systems	
<b>5448.0</b>	Install Headers, Valves, And Trim	
<b>5449.0</b>	Install Fire Protection Systems	
<b>5450.0</b>	Commission Fire Protection Systems	
<b>5451.0</b>	Install Pumps, Drivers, And Controllers	
<b>5452.0</b>	Install And Maintain Portable Fire Extinguishers	
<b>5453.0</b>	Inspect Fire Protection Systems	
<b>5454.0</b>	Test Fire Protection Systems	
<b>5455.0</b>	Maintain Fire Protection Systems	

### Ministry of Labour, Immigration, Training and Skills Development use only:

Sponsor verified as most recent sponsor of record: Yes ( ) No ( )

Documentation to support completion of hours attached: Yes ( ) No ( )

Completion of classroom training verified: Yes ( ) No ( )

Staff Name \_\_\_\_\_ Signature \_\_\_\_\_

Date \_\_\_\_\_

## Appendix D — Local Service Delivery Offices in Ontario

For current office listings visit: [ontario.ca/page/employment-Ontario-apprenticeship-offices](http://ontario.ca/page/employment-Ontario-apprenticeship-offices)

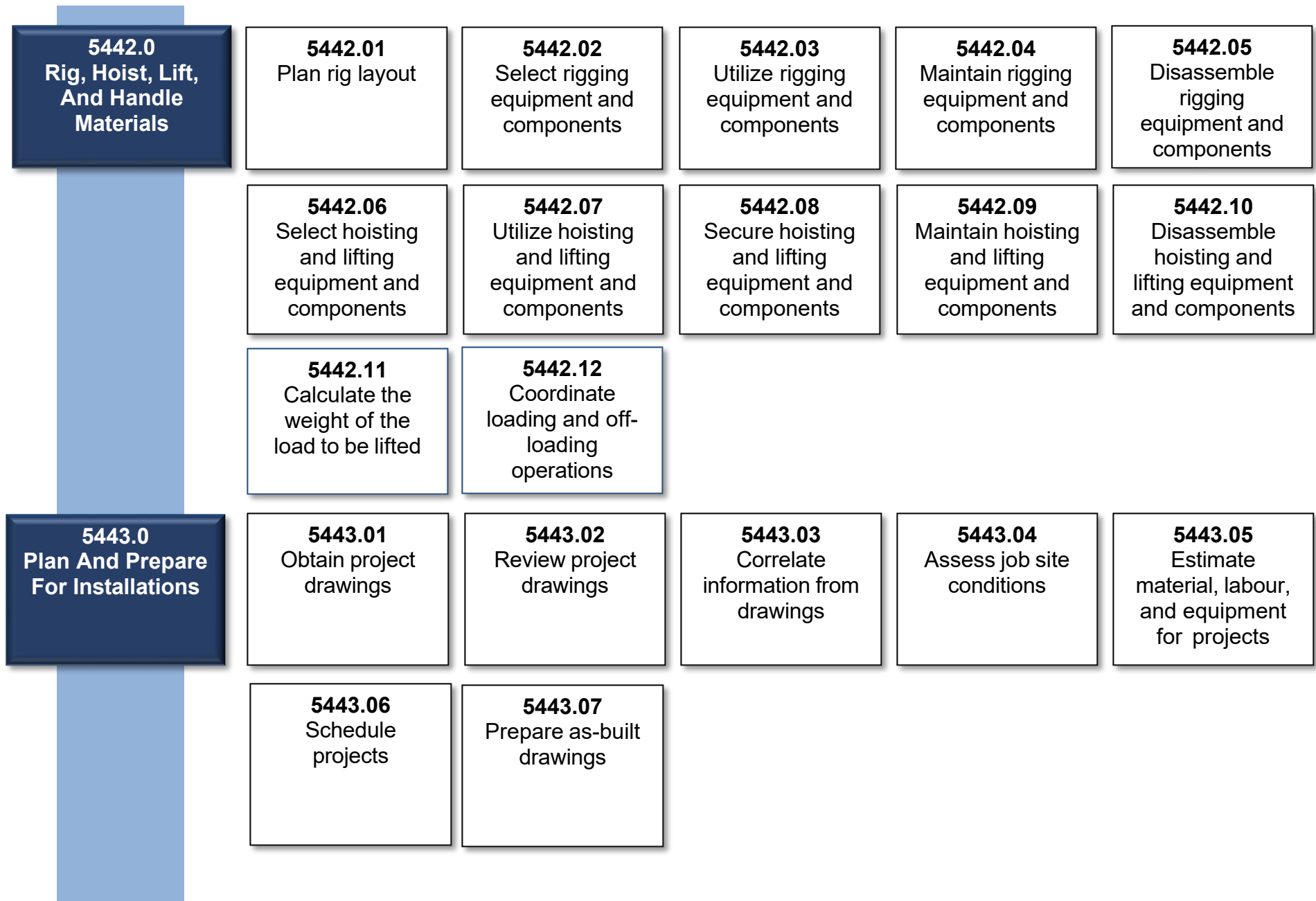
Location	Contact	Location	Contact
<b>Barrie</b> 705-737-1431	55 Cedar Pointe Dr Unit 609, Barrie, ON L4N 5R7	<b>Marathon</b> 807-346-1550	52 Peninsula Road, Suite 103 Marathon, Ontario, P0T 2E0
<b>Belleville</b> 613-968-5558 1-800-953-6885	135 North Front St, Belleville, ON K8P 3B5	<b>Markham</b> 905-513-2695	140 Allstate Parkway, Suite 505, Markham, Ontario L3R 5Y8
<b>Brantford</b> 519-756-5197	505 Park Rd North Suite 201, Brantford, ON N3R 7K8	<b>North Bay</b> 705-495-8515 1-800-236-0744	200 First Ave West, North Bay, ON P1B 3B9
<b>Chatham</b> 519-354-2766 1-800-214-8284	870 Richmond St West 1st Floor, Chatham, ON N7M 5J5	<b>Ottawa</b> 613-731-7100 1-877-221-1220	Preston Square, 347 Preston Street, Suite 310, Ottawa, ON K1S 3H8
<b>Cornwall</b> 613-938-9702 1-877-668-6604	132 Second St East Ste 202, Cornwall, ON K6H 1Y4	<b>Owen Sound</b> 519-376-5790 1-800-838-9468	1450 1st Ave West, Suite 100, Owen Sound, ON N4K 6W2
<b>Dryden</b> 807-456-2665 1-800-734-9572	Provincial Government Building, 479 Government St, Dryden, ON P8N 3K9	<b>Peel</b> 905-279-7333 1-800-736-5520	The Emerald Centre, 10 Kingsbridge Garden Circle, Suite 404, Mississauga, ON L5R 3K6
<b>Durham</b> 905-433-0595 1-800-461-4608	78 Richmond Street West, Oshawa, ON L1G 1E1	<b>Pembroke</b> 613-735-3911 1-800-807-0227	615 Pembroke St East, Pembroke, ON K8A 3L7
<b>Elliot Lake</b> 1-800-236-8817	50 Hillside Dr North, Elliot Lake, ON P5A 1X4	<b>Peterborough</b> 705-745-1918 1-877-433-6555	901 Lansdowne St West, Peterborough, ON K9J 1Z5
<b>Fort Frances</b> 807-274-8634	922 Scott St 2nd Flr, Fort Frances, ON P9A 1J4	<b>Sarnia</b> 519-542-7705 1-800-363-8453	162 Lochiel Street, Suite 101, Sarnia, ON N7T 7W5
<b>Geraldton</b> 807-854-1966	208 Beamish Avenue West Geraldton, Ontario P0T 1M0	<b>Sault Ste. Marie</b> 705-945-6815 1-800-236-8817	477 Queen St East 4th Flr, Sault Ste Marie, ON P6A 1Z5
<b>Halton</b> 905-842-5105 1-844-901-5105	700 Dorval Dr., Suite 201, Oakville, ON L6K 3V3	<b>St Catharines</b> 905-704-2991 1-800-263-4475	Garden City Tower, 301 St Paul St East, 10th Flr, St Catharines, ON L2R 7R4
<b>Hamilton</b> 905-521-7764 1-800-668-4479	Ellen Fairclough Bldg, 119 King St West 8th Flr, Hamilton, ON L8P 4Y7	<b>Sudbury</b> 705-564-3030 1-800-603-5999	159 Cedar St Ste 506, Sudbury, ON P3E 6A5
<b>Kapuskasing</b> 705-465-5785 705-235-1950	Ontario Government Complex, 122 Government Rd West, Kapuskasing, ON P5N 2X8	<b>Thunder Bay</b> 807-346-1550 1-800-439-5493	189 Red River Rd Suite 103, Thunder Bay, ON P7B 1A2
<b>Kenora</b> 807-468-2879 1-800-734-9572	227 1/2 Second St South, Kenora, ON P9N 1G4	<b>Timmins</b> 705-235-1950 1-877-275-5139	Ontario Government Complex, 5520 Highway 101 East Wing B, South Porcupine, ON P0N 1H0
<b>Kingston</b> 613-548-1151 1-866-973-4043	Alliance Business Centre, 299 Concession St Ste 201, Kingston, ON K7K 2B9	<b>Toronto Centre</b> 416-927-7366 1-800-387-5656	2 St Clair West, 11 <sup>th</sup> floor Toronto, ON M4A 1L5
<b>Kitchener</b> 519-653-5758 1-866-877-0099	4275 King St East, Kitchener, ON N2P 2E9	<b>Toronto South</b> 416-326-5800	625 Church St 1st Fl, Toronto, ON M7A 2B5
<b>London</b> 519-675-7788 1-800-265-1050	1200 Commissioners Rd E, Unit 72, London, ON N5Z 4R3	<b>Windsor</b> 519-973-1441	Roundhouse Centre, 3155 Howard Ave 2nd Fl, Suite 200, Windsor, ON N8X 4Y8

## Competency Analysis Profile (CAP)

<b>5440.0</b> <b>Protect Self And Others</b>	<b>5440.01</b> Comply with acts, regulations, codes, standards, and directives	<b>5440.02</b> Utilize personal protective equipment	<b>5440.03</b> Maintain personal protective equipment	<b>5440.04</b> Maintain safe workplace	<b>5440.05</b> Control hazards and hazardous conditions, equipment and materials
	<b>5440.06</b> Manually move equipment, supplies, and components	<b>5440.07</b> Employ simple first aid relating to illness and occupational injury	<b>5440.08</b> Report injuries to supervisor and first-aid personnel	<b>5440.09</b> Respond to audio and visual alarms	<b>5440.10</b> Follow company and worksite fire emergency procedures
	<b>5440.11</b> Handle hazardous/toxic materials	<b>5440.12</b> Assess worksite conditions	<b>5440.13</b> Apply confined space and exit procedures	<b>5440.14</b> Perform lockout, tagging and hold-off procedures	<b>5440.15</b> Manage personal health
	<b>5441.01</b> Communicate orally	<b>5441.02</b> Communicate in writing	<b>5441.03</b> Communicate graphically	<b>5441.04</b> Communicate by computer	<b>5441.05</b> Communicate by mechanical and electronic devices
	<b>5441.06</b> Communicate by hand signals	<b>5441.07</b> Build and maintain interpersonal relationships	<b>5441.08</b> Practice customer relations (internal and external)	<b>5441.09</b> Present a professional image	<b>5441.10</b> Mentor co-workers



**Competency Analysis Profile: Sprinkler and Fire System Installer 427A (all unshaded skill sets must be completed)**



**Competency Analysis Profile: Sprinkler and Fire System Installer 427A (all unshaded skill sets must be completed)**

<b>5444.0 Design Systems</b>	<b>5444.01</b> Verify occupancy classification and design criteria	<b>5444.02</b> Verify water supply source	<b>5444.03</b> Verify system drawings	<b>5444.04</b> Calculate system hydraulic demand	<b>5444.05</b> Obtain approval of working plans and documentation
<b>5445.0 Utilize Tools And Equipment</b>	<b>5445.01</b> Utilize hand tools and accessories	<b>5445.02</b> Utilize power tools and accessories	<b>5445.03</b> Utilize testing devices	<b>5445.04</b> Select scaffolds and accessories	<b>5445.05</b> Assemble scaffolds and accessories
	<b>5445.06</b> Maintain scaffolds and accessories	<b>5445.07</b> Dismantle scaffolds and accessories	<b>5445.08</b> Utilize step and extension ladders		
<b>5446.0 Install Water Supply</b>	<b>5446.01</b> Determine site excavation location	<b>5446.02</b> Prepare site for excavation	<b>5446.03</b> Monitor excavation	<b>5446.04</b> Install private water supply	<b>5446.05</b> Connect to the water supply
	<b>5446.06</b> Install underground piping and components	<b>5446.07</b> Install thrust blocks and restraining devices	<b>5446.08</b> Install hydrants and control valves	<b>5446.09</b> Complete installation of water supply	<b>5446.10</b> Supervise backfill operations

**Competency Analysis Profile: Sprinkler and Fire System Installer 427A (all unshaded skill sets must be completed)**

<b>5447.0</b> <b>Fabricate Fire Protection Systems</b>	<b>5447.01</b> Identify fabrication area	<b>5447.02</b> Organize material for fabrication	<b>5447.03</b> Prepare piping and fittings for site installation	<b>5447.04</b> Fabricate hangers, brackets, and supports	
	<b>5448.01</b> Verify the underground water supply	<b>5448.02</b> Isolate water supply	<b>5448.03</b> Perform system bleed-off	<b>5448.04</b> Install check, control and drain valves	<b>5448.05</b> Install support and brace headers
	<b>5448.06</b> Test fire protection headers and components				
	<b>5449.01</b> Install clean agent fire suppression system	<b>5449.02</b> Install high and low-pressure carbon dioxide systems	<b>5449.03</b> Install dry and wet chemical systems	<b>5449.04</b> Install standpipe and hose rack systems	<b>5449.05</b> Install wet systems
<b>5449.0</b> <b>Install Fire Protection Systems</b>	<b>5449.06</b> Install anti-freeze systems	<b>5449.07</b> Install dry systems	<b>5449.08</b> Install combination dry pipe and pre-action systems	<b>5449.09</b> Install pre-action systems	<b>5449.10</b> Install deluge systems
	<b>5449.11</b> Install foam systems	<b>5449.12</b> Install water mist systems	<b>5449.13</b> Install detection systems		

**Competency Analysis Profile: Sprinkler and Fire System Installer 427A (all unshaded skill sets must be completed)**

<b>5450.0</b> <b>Commission Fire Protection Systems</b>	<b>5450.01</b> Commission clean agent fire suppression systems	<b>5450.02</b> Commission high and low-pressure carbon dioxide systems	<b>5450.03</b> Commission dry and wet chemical systems	<b>5450.04</b> Commission standpipe and hose rack systems	<b>5450.05</b> Commission wet systems
	<b>5450.06</b> Commission anti-freeze systems	<b>5450.07</b> Commission dry systems	<b>5450.08</b> Commission combination dry pipe and pre-action systems	<b>5450.09</b> Commission pre-action systems	<b>5450.10</b> Commission deluge systems
	<b>5450.11</b> Commission foam systems	<b>5450.12</b> Commission water mist systems	<b>5450.13</b> Commission detection systems		
<b>5451.0</b> <b>Install Pumps, Drivers, And Controllers</b>	<b>5451.01</b> Verify the water supply	<b>5451.02</b> Select fire pump assembly	<b>5451.03</b> Identify the location of the fire pump installation	<b>5451.04</b> Prepare site location for installation of the fire pump assembly	<b>5451.05</b> Install fire pump assembly
	<b>5451.06</b> Install controllers and auxiliary devices	<b>5451.07</b> Install fuel system for diesel drivers	<b>5451.08</b> Install jockey pumps	<b>5451.09</b> Commission fire pump assembly and auxiliary components	

**Competency Analysis Profile: Sprinkler and Fire System Installer 427A (all unshaded skill sets must be completed)**

<b>5452.0</b> Install And Maintain Portable Fire Extinguishers	<b>5452.01</b> Select portable extinguishers	<b>5452.02</b> Install portable extinguishers	<b>5452.03</b> Perform scheduled inspections of extinguishers and components	<b>5452.04</b> Maintain extinguishers and components	
<b>5453.0</b> Inspect Fire Protection Systems	<b>5453.01</b> Coordinate notification of authorities	<b>5453.02</b> Arm and disarm control panels on fire protection systems	<b>5453.03</b> Inspect clean agent fire suppression systems	<b>5453.04</b> Inspect high and low-pressure carbon dioxide systems	<b>5453.05</b> Inspect dry and wet chemical systems
	<b>5453.06</b> Inspect standpipe and hose rack systems	<b>5453.07</b> Inspect wet systems	<b>5453.08</b> Inspect anti- freeze systems	<b>5453.09</b> Inspect dry systems	<b>5453.10</b> Inspect combination dry pipe and pre- action systems
	<b>5453.11</b> Inspect pre- action systems	<b>5453.12</b> Inspect deluge systems	<b>5453.13</b> Inspect foam systems	<b>5453.14</b> Inspect water mist systems	<b>5453.15</b> Inspect fire pump assembly and auxiliary components
	<b>5453.16</b> Inspect water supplies and auxiliary components				

**5454.0**  
**Test Fire**  
**Protection**  
**Systems**

**5454.01**  
Coordinate  
notification of  
authorities

**5454.02**  
Disable and  
enable fire alarm  
control and  
releasing panels

**5454.03**  
Test clean agent  
fire suppression  
systems

**5454.04**  
Test high and  
low- pressure  
carbon dioxide  
systems

**5454.05**  
Test dry and wet  
chemical systems

**5454.06**  
Test standpipe  
and  
hose rack  
systems

**5454.07**  
Test wet systems

**5454.08**  
Test anti-freeze  
systems

**5454.09**  
Test dry systems

**5454.10**  
Test combination  
dry pipe and pre-  
action systems

**5454.11**  
Test pre-action  
systems

**5454.12**  
Test deluge  
systems

**5454.13**  
Test foam  
systems

**5454.14**  
Test water mist  
systems

**5454.15**  
Test fire pump  
assembly and  
auxiliary  
components

**5454.16**  
Test water  
supplies and  
auxiliary  
components

<b>5455.0</b> Maintain Fire Protection Systems	<b>5455.01</b> Maintain clean agent fire suppression systems	<b>5455.02</b> Maintain high and low-pressure carbon dioxide systems	<b>5455.03</b> Maintain dry and wet chemical systems	<b>5455.04</b> Maintain standpipe and hose rack systems	<b>5455.05</b> Maintain wet systems
	<b>5455.06</b> Maintain anti-freeze systems	<b>5455.07</b> Maintain dry systems	<b>5455.08</b> Maintain combination dry pipe and pre-action systems	<b>5455.09</b> Maintain pre-action systems	<b>5455.10</b> Maintain deluge systems
	<b>5455.11</b> Maintain foam systems	<b>5455.12</b> Maintain mist systems	<b>5455.13</b> Maintain fire pump assembly and auxiliary components		

**Notes**

[illegible]



# 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](http://red-seal.ca)



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



Sprinkler Fitter