

Apprenticeship Training Standard Logbook

Powerline Technician

434A

Apprenticeship Training Standard

The Apprenticeship Training Standard or herein after referred to as "Logbook" is a document issued to Apprentices who sign a 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 Sponsor" 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):
310 Account No. (101 Compuisory 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.

Table of	Contents	Page
Foreword	: Purpose, Terms and Conditions of the registered Training Agreement	1
Trade Spe	cific Resources and Links	2
Methodol	ogy – Standard Development	2
Introducti	on to the Logbook	3
	Roles and Responsibilities	4
	Roles and Responsibilities- Skilled Trades Ontario (STO) and	
	Ministry of Labour, Immigration, Training and Skills Development (M	LITSD)4
	Roles and Responsibilities of the Apprentice	5
	Roles and Responsibilities of Sponsors and Trainers	6
Health and	d Safety	
Apprentic	eship Program Summary/Guidelines	10
	Scope of Practice	10
	Program Guidelines	10
	Program Requirements	11
	Compulsory and Non-compulsory Classification	
	Eligibility for Apprenticeship Program Completion	
	Skills for Success Summary	
	Standard of Performance	
	Other Required Certifications	
Training th	ne Apprentice - Tips for Apprentices, Sponsors and Trainers	13
	Collection of Personal Information	
	on Requirement Chart	
Completio	ni kequirement chart	10
List of Trai	iners	17
Skill Sets		
9128	Perform Safe Work Practices	
9129 9130	Use and Maintain Tools and Equipment Organize Work	
9131	Access Work Area	
9132	Use Live-line methods	
9133	Demonstrate Communication Skills	_
9134	Install Power System Poles and Steel Lattice Structures	45
9135	Install Conductor Systems	52
9136	Install Underground and Underwater Power Systems	
9137	Install Voltage Control Equipment	
9138	Install System Protection Equipment	67

Powerline Technician

9139	Install Metering Equipment	70
9140	Install Communication Devices	72
9141	Install and Maintain Street Lighting Systems	74
9142	Operate Distribution and Transmission Systems	76
9143	Maintain and Repair Transmission Systems	
9144	Maintain and Repair Distribution Systems	89
List of Acr	ronyms	98
Definition	ns	99
Ready to	Write Your Exam?	102
Instructio	ns for Recording a Change in Sponsor	103
Change of	f Sponsor Records	104
Apprentic	ce's Appendices	
	Appendix A — Instructions for Apprenticeship Program Con	npletion(Appendix A)
	Appendix B — Apprentice Completion Form	(Appendix B)
	Appendix C — Skill Set Completion for Sponsors	(Appendix C)
	Appendix D — Local Service Delivery Offices in Ontario	(Appendix D)
Compete	ncy Analysis Profile (CAP Chart)	i
Any upda	ites to this publication are available on-line; to download this doc	cument in PDF format,

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

© 2022, Skilled Trades Ontario. All rights reserved. No part of this publication may be reproduced in any form whatsoever without the prior permission from Skilled Trades Ontario.

Revised 2022 (V300)

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 Resource	Link
Red Seal Program	red-seal.ca
Apprenticeship in Ontario	https://www.ontario.ca/page/apprenticeship- ontario
Employment Ontario	employmentontario.ca
Service Canada	servicecanada.gc.ca
Building Opportunities in the Skilled Trades Act, 2021	Building Opportunities in the Skilled Trades Act, 2021, S.O. 2021, c. 28 - Bill 288 (ontario.ca)
Ministry of Labour, Immigration, Training and Skills Development	https://www.ontario.ca/page/ministry-labour- immigration-training-skills-development
Exam Preparation Guide	Exam Resources – Skilled Trades Ontario
Skills Zone (Ontario Skills Passport)	http://www.skillszone.ca/
Ontario Regional Common Ground Alliance	https://orcga.com/
Canadian Standards Association	http://www.csagroup.org
Infrastructure Health and Safety Association	http://www.ihsa.ca
Technical Standards and Safety Authority	https://www.tssa.org
Electrical Safety Authority	https://www.esasafe.com
O. Reg. 22/04: ELECTRICAL DISTRIBUTION SAFETY	https://www.ontario.ca/laws/regulation/040022
O Reg. 213/91 S. 188	https://www.ontario.ca/laws/regulation/910213

^{*}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 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 **Powerline Technician 434A** 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 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 the trade of **Powerline Technician 434A** are to be performed according to all applicable jurisdictional codes and standards, all health and safety standards must be respected and observed and all hazards associated with the specific task identified prior to performing the work. These include the following:

- Industry Safety Standards which are based upon:
 - Occupational Health and Safety Legislation and Regulations;
 - Working at Heights Awareness and Training Regulation (Ontario Regulation 297/13)
- All applicable jurisdictional legislation and regulations, codes and standards (municipal bylaws etc.) For example:
 - O. Reg. 22/04: ELECTRICAL DISTRIBUTION SAFETY
 - The Utility Work Protection Code (UWPC)
 - Electrical Utility Safety Rules
- Company policies and procedures
- All applicable manufacturers specifications and engineering specifications

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

Roles and Responsibilities

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

Skilled Trades Ontario (STO) is responsible for:

- Establishing and maintaining qualifications;
- Establishing Apprenticeship Programs and other training programs including training
 Standards, curriculum standards and certifying examinations;
- Issuing certificates for the purposes of this Act such as Certificates of Qualification;
- Maintaining a Public Registry for compulsory trades <u>skilledtradesontario.ca/public-register/</u>;
- 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 Forward: "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. A classroom instructor is not permitted to sign-off the skills contained within this Logbook

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.
- The right to participate in identifying and solving workplace health and safety problems either through a health and safety representative or a worker member of a joint health and safety committee.
- 3. The right to refuse work that they believe is dangerous to their health and safety or that of any other worker in the workplace.

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

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

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

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

Constructor's duties include the following:

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

Ministry of Labour, Immigration, Training and Skills Development

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

Apprenticeship Program Summary/Guidelines

Scope of Practice

The Scope of Practice for the trade of Powerline Technician is set out in section 105 of Ontario Regulation 875/21 under BOSTA and reads as follows:

Powerline technician

105. The scope of practice for the trade of powerline technician includes the following:

- 1. Operating, maintaining and servicing power lines used to conduct electricity from generating plants to consumers.
- 2. Constructing or assembling a system of power lines used to conduct electricity from generating plants to consumers.

*While the Logbook draws on the scope of practice regulation (Section 105 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 7680 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 320 hours of in-school training as the duration necessary for an Apprentice to complete the in-school curriculum for this program.

Total Training Hours

8000 hours

Journeyperson to Apprentice Ratio

Ratios in Regulation:

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

Program Requirements

Wage Rates

There are no wage rates in regulation for Powerline Technician.

Compulsory and Non-compulsory Classification

Regulations *Building Opportunities in the Skilled Trades Act, 2021* and the classification of each trade as either "compulsory" or non-compulsory." The trade of Powerline Technician is non-compulsory.

Eligibility for Apprenticeship Program Completion

The Apprentice must:

- Achieve competency in all mandatory (unshaded) skills as identified in the Logbookapproximately 80% of the competencies. Refer to the Completion Requirements Chart on page 16 for details.
- Complete the in-school training as outlined in the Curriculum Standard

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 the trade of Powerline Technician 434A 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;
 - O. Reg. 22/04: ELECTRICAL DISTRIBUTION SAFETY;
 - The Utility Work Protection Code (UWPC);
 - O Reg. 213/91 S. 188
 - ESA-Electrical Safety Authority (ESA) Legislation;
 - Technical Standards and Safety Authority (TSSA) Safety Legislation;
 - Infrastructure Health and Safety Association (IHSA) Electrical Utility Safety Rules;
- Building Codes
- Environmental Assessments
- 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. Other certifications maybe required by employer for example:

- CPR and First Aid, and training on Automated External Defibrillator (AED
- Boat and or driver's license
- Heavy equipment operator

The Occupational Health and Safety Awareness and Training Regulation (Ontario Regulation 297/13) under the Occupational Health and Safety Act (OHSA) sets out the mandatory working at heights training requirements. The working at heights training is valid for three years from the date the worker completes an approved training program delivered by an approved training provider.

*Please note that for all mobile cranes, similar hoisting devices or RBD equipment with a maximum rated hoisting capacity of over 8-ton, Certification as a Hoisting Engineer Mobile Crane Operator is required to set-up, test, operate and maintain.

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 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

Powerline Technician - Completion Requirements Chart

To support foundational competency development and acquisition, Skilled Trades Ontario Powerline Technician Industry Experts have established the following minimum Logbook sign-off requirements for all apprentices for the purpose of apprenticeship program completion:

Skill Set Number	Title of Skill Set	Total Number of Skills in Skill Set	Minimum Sign-off Requirements
9128	Perform Safe Work Practices	10	10
9129	Use and Maintain Tools and Equipment	5	5
9130	Organize Work	5	5
9131	Access Work Area	7	6
9132	Use Live-Line Methods	5	4
9133	Demonstrate Communication Skills	3	3
9134	Install Power System Poles and Steel Lattice Structures	8	5
9135	Install Conductor Systems	4	4
9136	Install Underground and Underwater Power Systems	9	5
9137	Install Voltage Control Equipment	5	5
9138	Install System Protection Equipment	4	4
9139	Install Metering Equipment	2	1
9140	Install Communication Devices	2	0
9141	Install and Maintain Street Lighting Systems	2	2
9142	Operate Distribution and Transmission Systems	3	1
9143	Maintain and Repair Transmission Systems	11	9
9144	Maintain and Repair Distribution Systems	9	7

16

List of Trainers

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

9128 Perform Safe Work Practices

Skill Set Descriptor

Powerline Technicians work with energized or de-energized systems and are responsible for establishing and maintaining a safe electrical environment. Occupational hazards in this trade are working with high voltage equipment, working in confined spaces, working at heights and in extreme weather and environmental conditions. It is critical that Powerline Technicians be aware of their surroundings and hazards they may encounter which maybe be electrical, gravitational, mechanical, vehicular, environmental, or chemical.

Skills

9128.01 Comply with applicable Acts, regulations, codes and directives and by-laws with application to workplace practices by:

- identifying the act, regulation, code or directive as relevant;
- reading and interpreting the act, regulation, code or directive as it relates to the circumstances at hand;
- staying up to date with changes; and
- applying requirements to job functions

according to legislation, regulation, codes, standards, manufacturers' specifications and company standards and policies.

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

^{*} A Trainer may be a Supervisor or competent employee designated by the Apprentice's Sponsor

9128.02 Use personal protective equipment (PPE) and safety equipment based on specific job task by:

- identifying the potential workplace hazards (personal, environmental) that require the use of PPE and safety equipment;
- using the PPE required for specific tasks such as hard hats, rubber gloves (rubber and outer protective gloves), safety boots, safety glasses, face shields, hearing protection, flame retardant clothing (FRC), arc flash clothing high-visibility clothing and breathing protection (mask), respirators
- using safety equipment (fire extinguishers, first aid kits, rescue equipment, automated external defibrillator (AED), burn kits as required for specific tasks;
- inspecting PPE for any damages, deficiencies;
- adjusting the fit of PPE as required;
- identifying defective safety equipment;
- tagging defective PPE and safety equipment and removing from use;
- replacing defective safety equipment;
- reporting all damaged or expired PPE and safety equipment to supervisor; and
- storing PPE and safety equipment as required

according to manufacturers specifications, company policies and procedures, industry safety standards and jurisdictional legislation and regulations.

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

9128.03 Use fall protection equipment such as fall arrest and travel restraint when working at heights and not protected by guard rail systems, warning barriers and signs by:

- selecting fall protection system, such as travel restraint, fall restrict or fall arrest as required to the task;
- inspecting fall protection system components, for example lanyards, attachment points, anchorage, belts and harnesses for any damages or deficiencies;
- reviewing fall protection procedures;
- adjusting the fit of equipment as required;
- tagging, removing from use and replacing defective equipment;
- reporting all damaged or expired equipment to supervisor; and
- storing as required

according to manufacturers' specifications, company policies and procedures, industry safety standards and jurisdictional legislation and regulations.

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

9128.04 Use work positioning, safe lifting and carrying methods to prevent injury by:

- donning PPE as required for job task;
- removing hazards from the worksite;
- lifting with feet apart, bent knees;
- holding object close to body, pivoting feet, and pushing rather than pulling;
 and
- transporting heavy loads and relocating light, heavy or awkward loads using mechanical devices such as lifts and cranes

according to manufacturers' specifications, company policies and procedures, ergonomic principles, industry safety standards and jurisdictional legislation and regulations.

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

9128.05 Handle workplace hazardous materials to or control and protect individuals from injury and the environment from contamination by:

- identifying type of hazardous materials;
- accessing and reading Material Safety Data Sheets (MSDS);
- donning PPE as required;
- using all materials solely for their intended purpose;
- using specified handling and storage equipment;
- labelling materials and containers;
- preventing unauthorized release of hazardous waste to the environment;
- storing hazardous waste into a designated-labelled container;
- sealing container;
- · cleaning up spills immediately; and
- disposing of the hazardous waste when the container based on required timelines

according to manufacturers' specifications, company policies and procedures, jurisdictional legislation and regulations.

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

9128.06 Control hazards and hazard causing conditions by:

- identifying the hazard or hazardous condition (electrical, backfeed, chemical, fire, pressure, gravitational, auditory, air quality, explosive, toxic substances and environmental);
- removing materials and obstructions;
- organizing materials and equipment;
- applying corrective measures including worksite /traffic control, barriers and rubber protective equipment;
- communicating and signalling as required;
- · following fire safety procedures;
- following confined space procedures as required; and
- maintaining a clean and organized work site

according to manufacturers' specifications, company standards and policies, Occupational Health and Safety Act (OHSA), Workplace Hazardous Materials Information System (WHMIS) and jurisdictional legislation and regulations.

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

9128.07

Control environmental hazards such as oil spills, gas spills, fire conditions, radiation and protecting the area when working in environmentally sensitive and wildlife protection areas by:

- identifying potential environmental hazards;
- using spill kits to clean and contain environmental hazards;
- installing protective barriers (silt screens, sandbags, dyke) to minimize hazard;
- reporting location of spill to emergency services; and
- adjusting work procedures based on potential environmental hazard

according to company policies and procedures, industry safety standards and environmental regulations.

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

9128.08 C

Control powerline hazards such as overhead work hazards (foreign debris, broken poles, insulators, tie wires, crossarms) and underground and underwater work hazards (gases, fumes, flooding, cave-ins) by:

- identifying type of hazard;
- maintaining safe limits of approach;
- identifying and managing second points of contact (step and touch potential);
- installing protective barriers such as cover-up, rubber gloves, fibreglass reinforced plastic (FRP) tools (hot sticks) based on limits of approach and liveline procedures;
- using signage and protective barriers based on limits of approach and live-line procedures;
- ventilating confined and restricted spaces (confined and restricted spaces such as tunnels, trenches, vaults);
- using rescue and monitoring equipment for confined spaces; and
- communicating overhead, underground and underwater hazard information to stakeholders

according to company policies and procedures, industry safety practices and jurisdictional legislation and regulations.

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

9128.09

Respond to job-site emergencies such as sudden illness or minor injuries, burns, cuts, abrasions, falls, sprains, chemical inhalations, electrical contact injuries and contaminants in eyes, to minimize injuries to self and others and restore safe working conditions by:

- assessing the situation;
- stabilizing and preparing the victim;
- identifying the location of first aid supplies and equipment;
- applying first aid (a-airway-breathing control, c- circulation;
- calling 911 if required;
- cooperating with emergency responders;
- · reporting incident to supervisor; and
- documenting as required

according to rescue plan, company policies and procedures, industry safety standards and jurisdictional legislation and regulations.

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

9128.10 Perform evacuation and rescue procedures by:

- assessing the situation/performing scene survey to determine if rescue or evacuation is necessary;
- identifying proximity to other workers/equipment or electrical apparatus;
- assessing contributing factors (electrical conductors/contact, struck by limbs, tree sections, lightning, is victim pinned, medical conditions (bug/animal bites, heat exhaustion, etc.);
- assessing the victim's condition;
- determining feasibility/appropriateness of aerial rescue;
- determining need for EMS to perform rescue,
- performing a pole top/tower rescue or contacting EMS; and
- documenting incident as required

according to rescue plan, company policies and emergency protocols and industry safety standard.

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

9129 Use and Maintain Tools and Equipment

Skill Set Descriptor

Powerline technicians select and use tools and equipment including hand, power, explosive actuated tools, electrical measuring and testing equipment, and rigging, hoisting and lifting equipment based on work requirements and work environments.

Skills

9129.01 Use hand, power and explosive actuated tools by:

- selecting based on job requirements;
- inspecting to identify defects, unsafe conditions or deficiencies;
- testing, noting their safety features;
- operating;
- tagging worn, damaged and defective tool;
- replaced or repairing;
- cleaning, lubricating;
- maintaining, adjusting; and
- storing, in safe operating condition

according to manufacturers' specifications, company policies procedures and industry safety practices.

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

^{*} A Trainer may be a Supervisor or competent employee designated by the Apprentice's Sponsor

Use electrical measuring and testing equipment such as voltmeter, phasing sticks, rotation meter, ammeter, insulation tester, electrical measuring and testing equipment components (batteries, leads) by:

- selecting the applicable device that matches the application;
- identifying worn, damaged, expired and defective electrical measuring and testing equipment and removing from service;
- calibrating the device as required;
- confirming meter operation against a known source before and after testing;
- confirming the device matches the application;
- following all recommended test procedures;
- operating and monitoring equipment function and performance;
- replacing electrical measuring and testing equipment components; and
- storing

according to manufacturers' specifications and company policies and procedures.

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

9129.03 Prepare rigging, hoisting and lifting equipment such as slings, wire/conductor grips, shackles, ropes, cables, chain hoists, rope blocks, cable winches, capstan hoists, web hoist, levers by:

- identifying the type of lift to be made (standard or critical) based on worksite hazards and limitations;
- selecting rigging, hoisting and lifting equipment to job requirements;
- conducting pre-operational inspections to identify load bearing status, structural defects, test dates, deficiencies, stress cracks, fractures or misalignment of parts;
- · documenting and reporting identified defective equipment;
- calculating weight of load to be lifted using a dynamometer to measure weight of load and sag conductors;
- referencing load charts; and
- establishing a travel path considering surrounding people, load characteristics, weather conditions and operator sight line

according to manufacturers' specifications, company policies and procedures, industry safety standards and jurisdictional legislation and regulations.

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

9129.04 Use lifting and rigging equipment to move load by:

- hoisting and repositioning equipment prior to movement;
- connecting the load, splicing ropes and tying knots ropes;
- checking rigging arrangement to confirm load is secure;
- raising load using tag lines as the guide;
- responding to the directions of the signal person; and
- relocating and lowering load;

according to manufacturers' specifications, company policies and procedures, industry safety practices and jurisdictional legislation (HTA).

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

9129.05 Maintain hoisting, lifting and rigging equipment by:

- conducting regularly scheduled inspections;
- tagging and removing damaged, worn and unsafe rigging, hoisting and lifting equipment;
- cleaning, lubricating and adjusting;
- documenting maintenance information in logbook; and
- storing

according to manufacturers' specifications and company policies and procedures.

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

9130 Organize Work

Skill Set Descriptor

Powerline technicians organize their work for safety and productivity through preparation and planning. They interpret plans, drawings and specifications, prepare the worksite, plan daily tasks before starting a job, prepare Utility Work Protection Code documents and perform lock out, tagging and hold-off procedures.

Skills

9130.01 Interpret plans, drawings, specifications and work orders to identify worksite planning considerations and guide job planning activities by:

- locating information in specifications (single line diagrams), standards, amendments and demarcation points;
- identifying scale, symbols, property lines, grades and elevations;
- identifying infrastructure and utilities (underground plants, overhead utilities and railway systems;
- determining materials and equipment required for job;
- identifying site hazards/obstructions; and
- determining work site safety requirements, such as barriers and traffic control

according to company policies, procedures documents, industry safety standards and O. Reg. 22/04: Electrical Distribution Safety.

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

^{*} A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor

9130.02 Prepare Worksite by

- verifying location of overhead and underground services such as gas, communication, electrical, water, sewer;
- identifying and communicating discrepancies between plans and site conditions;
- removing or managing obstacles and hazards such as snow, ice, trees, boulders, traffic, public, workplace (biohazards), fire, heights, chemicals, gas, radiation, asbestos, environmental (discharge/spills);
- selecting and organizing materials, supplies and equipment; and
- identifying and implementing traffic control measures and safety barriers

according to company policies and procedures, project plan and specifications, industry safety standards, and jurisdictional legislation and regulations.

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

9130.03 Plan job tasks and procedures by:

- identifying requirements for outages and interruptions and impact to customers/public;
- identifying feeder status;
- conducting a risk assessment and identifying site hazards and requirements for safety barriers;
- determining sequence of work, work method and worker responsibilities;
- estimating time to complete tasks time to establish daily goals, taking into consideration the need for other trades/workers and their level of experience;
- identifying requirements for adapting work to weather conditions following safety parameters;
- obtaining permits and authorizations;
- arranging for materials and supplies required;
- participating in the preparation of an emergency plan/rescue plan; and
- documenting the job plan

according to company policies and procedures and project plan and specifications.

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

Perform utility work protection procedures to isolate and control sources of hazardous energy by:

- advising controlling authorities of required work;
- communicating with other trades and affected individuals/parties;
- identifying power sources, parameters of the safe work area; group members and guaranteed devices;
- identifying isolation points for lock-out and tag-out using information such as operating maps, drawings, single-line diagrams, cable and equipment tags;
- isolating equipment (elbows, isolation points, switches);
- confirming the position of guaranteed devices are not altered and attaching required tag;
- obtaining required work permit;
- testing system to verify isolation of electrical apparatus using voltage-rated equipment such as voltmeters, high voltage testers, potential indicators;
- performing temporary grounding and bonding procedures to de-energize equipment;
- communicating boundaries of safe work area to all crew members;
- reporting and documenting lock-out and tag-out procedure; and
- · following hold off procedures as required

according to Utility Work Protection Code, manufacturers' specifications, site procedures and company policies and procedures, industry safety standards and jurisdictional legislation and regulations.

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

9130.05

Maintain documentation such as service reports, work orders, time sheets, outage reports, injury reports, log sheets, vehicle inspections, tailboard reports, Utility Work Protection Code information, maintenance records, construction design standards and mapping by:

- identifying records that need to be documented;
- following established procedures;
- documenting/recording, updating or revising information as required;
- matching records to schedules;
- organizing records (folders or electronic);
- protecting records; and
- maintaining confidentiality

according to company policies and procedures and jurisdictional legislation and regulations.

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

9131 Access Work Area

Skill Set Descriptor

Powerline technicians access work areas by climbing poles and steel lattice structures, using access equipment that includes ladders, aerial work platforms and off-road equipment. They may use helicopters to access structures in remote areas.

Skills

9131.01 Climb structures such as poles and steel lattice structures to access work area by:

- inspecting climbing gear and equipment such as belts, spurs, fall protection and fall restrict equipment;
- inspecting structure including visual checks and integrity tests to verify stability;
- donning climbing gear,
- positioning and adjusting based on type and size of pole or steel lattice structure and individual fit; and
- using methods for ascending and descending structures based on working conditions; and
- maintaining tie-off at all times to an anchor point when changing anchor points

according to Working at Heights protocols, manufacturers' specifications, company policies and procedures, industry safety standards and other jurisdictional legislation and regulations.

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

^{*} A Trainer may be a Supervisor or competent employee designated by the Apprentice's Sponsor

9131.02 Use ladders by:

- conducting a risk assessment to determine alternatives to ladder;
- determining type of ladder (permanent /portable) based on task, site location and condition and work access height;
- using non-conductive ladders when in proximity to electrically energized systems;
- selecting and using personal protective equipment and safety equipment including rescue systems and confined space monitoring equipment as required;
- inspecting equipment prior to use, including rungs, rails, outriggers, wheels, cleats and pins, planking, platforms, braces and motorized lifts;
- taking corrective action if required to report or replace unsafe, worn or defective components; and
- installing based on requirements for specified ladder (extension, step) including erecting, levelling and securing to maintain 3-point contact

according to job specifications, manufacturers' specifications company policies and procedures, industry safety standards and jurisdictional legislation and regulations.

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

9131.03 Use elevating platforms and scaffolding by:

- determining the type of equipment required for job or task;
- verifying suitability to site location, operation and condition;
- conducting a risk assessment;
- selecting and using personal protective equipment and safety equipment including fall protection, rescue systems and confined space monitoring equipment as required;
- inspecting equipment prior to use, including rails, outriggers, booms, wheels, cleats and pins, planking, platforms, braces and motorized lifts;
- taking corrective action if required to report or replace unsafe, worn or defective components; and
- installing based on requirements

according to job specifications, manufacturers' specifications, company policies and procedures, industry safety standards and jurisdictional legislation and regulations.

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

9131.04 Maintain access equipment by:

- verifying the access equipment is in specified working order;
- verifying that the access equipment is in a secured position;
- inspecting for defects and problems;
- documenting and/or tagging defects/problems;
- reporting defects or problems as required; and
- taking equipment out of service or replacing components as required

according to manufacturers' specifications, job specifications and site procedures, company policies and procedures, industry safety standards and jurisdictional legislation and regulations.

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

9131.05 Use vehicles and auxiliary equipment such as all-terrain vehicles, boats, snowmobiles, bucket trucks (material handling, personnel lift), off-road track machines, hydro-vacuum excavators by:

- completing training, certification and licensing as required;
- selecting type based on job requirements;
- carrying out pre-operational checks and inspections;
- checking fluid levels and detecting leaks;
- securing for transporting as required;
- levelling on-and off-road equipment;
- operating equipment following jurisdictional requirements;
- performing scheduled inspections, inspecting for damage and wear
- cleaning and lubricating; and
- completing required documentation

according to company policies and procedures, manufacturers' specifications and jurisdictional legislation and regulations.

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

Set up mobile equipment such as radial boom derrick (RBD), aerial devices and conductor stringing equipment to stabilize by:

- determining registered gross vehicle weight including load;
- selecting site;
- assessing site to verify surface slope/terrain/ worksite conditions will support equipment;
- identifying overhead obstructions and electrical system configuration;
- interpreting load charts;
- performing stability inspections;
- setting up barriers for traffic or pedestrian control; and
- using vehicle warning lights

according to manufacturers' specifications, company policies and procedures, industry safety standards and jurisdictional legislation and regulations.

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

9131.07 Use mobile equipment such as radial boom derrick (RBD) aerial devices and conductor stringing equipment by:

- preparing equipment for task;
- conducting current leakage tests and holding valve (drift) tests;
- performing pre-operational hydraulic and mechanical inspections;
- grounding or bonding vehicle and equipment as required;
- responding to the directions of the signal person; and
- operating equipment

according to manufacturers' specifications, company policies and procedures, industry safety standards and jurisdictional legislation and regulations.

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

9132 Use Live line Methods

Skill Set Descriptor

Live-line methods are performed by powerline technicians so that electrical service is not interrupted. Speciality tools such as fiberglass reinforced plastic (FRP) tools (hot sticks) and methods such as cover ups, barriers and specialized personal protective equipment (PPE) are used to maintain safety when powerline technicians are working around energized apparatus. The use of live-line bare-hand work procedures is a specialized area of powerline.

Skills

9132.01 Use cover-ups and barriers such as line hose, solid blanket, split blanket, insulator hood, hard covers, cross arm guards and pole guards maintaining positive control and safe limits of approach to eliminate any hazards associated

- selecting class and type of cover-up based on job specifications, circuit status and voltage;
- using tools and equipment to install cover-up;
- verifying cover-up has valid test date or expiration date;
- inspecting for defects;
- installing cover-up to prevent second point of contact;
- maintaining Safe limits of approach from second point of contact;
- removing cover-up; and
- maintaining, cleaning and storing

with the second points of contact by:

according to manufacturers' specifications and company policies and procedures, industry safety standards and jurisdictional legislation and regulations.

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

^{*} A Trainer may be a Supervisor or competent employee designated by the Apprentice's Sponsor

9132.02 Use rubber gloves by:

- selecting class of rubber based on voltage;
- verifying glove covers for class of rubber gloves;
- verifying that rubber gloves have valid test date or expiration date;
- inspecting rubber gloves and glove covers for cuts and abrasions before each use;
- performing air and roll tests;
- positioning body and access equipment for safety and ease of task based on limits of proximity:
- verifying insulated aerial device has valid test date or expiration date; and
- · cleaning insulated aerial device; and
- performing current leakage test

according to manufacturers' specifications, company policies and procedures, safety standards and jurisdictional legislation and regulations.

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

9132.03 Use fibreglass reinforced plastic (FRP) tools (hot sticks) by:

- identifying hazards;
- calculating weights and tensions to determine FRP tool requirement;
- selecting FRP tools such as hot sticks, universal sticks, switch sticks, hot line cutters, holding and lifting tongs with associated equipment, telescopic sticks, link sticks
- verifying FRP tools (hot sticks) have valid test or expiration dates;
- selecting FRP tool (hot stick) attachments such as tie cutters, rotary blades, rotary prongs, cotter key installers;
- cleaning and visually inspecting for defects such as cracks, loose fittings, scratches before use;
- positioning body and access equipment for safety and ease of use; and
- storing

according to manufacturers' specifications, company policies and procedures, safety standards and jurisdictional legislation and regulations.

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

9132.04 Maintain live-line tools and equipment such as tie sticks, lever lifts, cutters, link sticks, saddles, grip-all, wire tongs and material handling aerial devices by:

- selecting equipment required for task;
- inspecting for defects and deficiencies including cracks, stress markings, impact damage, missing or broken parts;
- identifying electrical test expiry dates;
- tagging and removing expired or damaged equipment from use
- operating;
- maintaining cleanliness by wiping with cleaner; and
- storing in a facility free of contaminants, dirt, moisture, and ultra-violet light

according to manufacturers' specifications, company policies and procedures, industry safety practices and jurisdictional legislation and regulations.

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

9132.05 Use bare-hand methods by:

- cleaning insulated aerial device;
- performing current leakage test;
- using tools and equipment tools such as insulated aerial device, metal grids, current leakage meter-required for bare-hand work;
- follow bare-hand methods; and
- continuously observing current leakage meter

according to company policies and procedures, industry safety standards and jurisdictional legislation and regulations.

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

9133 Demonstrate Communication Skills

Skill Descriptor

Effective communication skills are required in this trade for writing job documents and communicating in verbal and written modes with colleagues and customers. With experience, Powerline Technicians may be expected to pass along workplace skills through coaching and mentoring apprentices or colleagues.

Skills

9133.01

Communicate with co-workers such as supervisors, office, planning and engineering staff, other work groups, control room staff, stores personnel and joint health and safety committees to relate work processes, reports, and documentation by:

- using verbal, written, electronic and visual methods to respond in a timely manner;
- using verbal communication techniques such as active listening, questioning, paraphrasing;
- receiving and responding to feedback to confirm that information is understood;
- identifying report requirements / parameters for written communication;
 and
- drafting content for intended audience and purpose that is accurate, clear, concise and comprehensive

according to best practices, company policies and procedures.

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

^{*} A Trainer may be a Supervisor or competent employee designated by the Apprentice's Sponsor

9133.02 Communicate with customers and external organizations such as the general public, contractors, commercial and institutional groups to respond to outages, work process enquiries, complaints, or requests by:

- using verbal, written, electronic and visual method to respond in a timely and professional manner; and
- drafting content for intended audience and purpose that is accurate, clear and concise

according to best practices, company policies and procedures.

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

9133.03 Coach and mentor apprentices or colleagues to support their learning by:

- identifying and communicating learning objective(s);
- relating theoretical information/lesson to the job tasks;
- demonstrating performance of a skill;
- setting up conditions to enable the mentee to practice the skill;
- assessing apprentice or colleague's ability to perform tasks with increasing independence;
- providing feedback; and
- assisting apprentices/colleague in pursuing technical training opportunities

according to best practices.

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

9134 Install Power System Poles and Steel Lattice Structures

Skill Set Descriptor

Powerline Technicians install power system poles and steel lattice structures used to support overhead distribution and transmission power systems. This work is performed in de-energized and energized environments. Pole structures include single-pole, multi-pole, tangent, angle, dead-end, take-off (or tap), joint use construction and self-supporting poles made of wood, steel, fibreglass, concrete and composite. Steel lattice structures are installed to support overhead power systems. These structures are preferred to accommodate increased clearances required by high operating voltage, weight of conductors and longer distances between the structures.

Skills

9134.01 Frame pole structures by:

- identifying pole requirements referring to work orders, written or verbal instructions, technical documentation, drawings, staking data material and easement;
- identifying underground plant locates;
- checking pole stamp information such as length, class, treatment type, pole type, date, manufacturer to verify pole meets engineering standards;
- selecting tools and equipment such as RBD, crane, backhoe, block and tackle based on requirements;
- inspecting poles for defects and structural integrity;
- installing ground wire on pole structures to provide a path to ground when required;
- measuring distances for placement of hardware and equipment;
- · drilling holes at required spacing; and
- verify holes are straight and level

according to manufacturers' specifications, engineering standards, company policy and procedures, industry safety standards, O. Reg. 22/04: Electrical Distribution Safety and other jurisdictional legislation and regulations.

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

^{*} A Trainer may be a Supervisor or competent employee designated by the Apprentice's Sponsor

9134.02 Set pole structures by:

- identifying pole requirements referring to work orders, written or verbal instructions, technical documentation, drawings, staking data material and easement;
- obtaining locates;
- donning PPE;
- using tools and equipment tools such as radial boom derrick (RBD), Cant hook and insulated pole tongs based on job requirements and following procedures for their operation;
- excavating hole(s) to required depth using RBD Auger or hydrovac methods;
- installing pole structure supporting devices as required with consideration to soil condition;
- placing pole in hole;
- plumbing and securing pole structure pole
- backfilling using tamper; and
- disposing of excess material

according to manufacturers' specifications, company policies and procedures, industry safety standards and jurisdictional legislation and regulations.

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

9134.03 Install pole structure guys and anchors by:

- obtaining locates;
- donning PPE;
- installing guards and barriers guards;
- calculating required tensions;
- selecting and using tools and equipment such as chain hoists, RBD, slings, grips;
- installing anchors (helix, rock, cross plates, expansion, log), based on job requirements and soil conditions;
- installing attachments (preforms, anchor eye nuts, three-bolt clamps);
- guy strain insulators and guys attachments (down, span, sidewalk (struts), push brace); and
- securing and tensioning

according to manufacturers' specifications, company policies and procedures, industry safety standards jurisdictional legislation and regulations.

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

9134.04 Install steel, wood, composite or concrete poles in an energized environment by:

- identifying pole requirements referring to work orders, written or verbal instructions, technical documentation, drawings, staking data material and easement;
- identifying underground plant locates;
- confirming type, class, size, position and site location;
- applying PPE such as rubber gloves and Arc Rated clothing as required by situation;
- using protective cover-up such as pole guard, line hose, fibre protective guards to eliminate Second Point of Contact hazard;
- selecting and inspecting equipment such as use of insulated tools and aerial device RBD, crane, backhoe, block and tackle as required for the task;
- grounding and bonding vehicles as required;
- responding to the directions of the signal person / dedicated observer;
- preparing hole based on requirements;
- backfilling; and
- disposing of excess material

according to company policies and procedure, safe limits of approach, utility protection code, manufacturers' specifications and industry safety standards.

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

9134.05 Assemble steel lattice structures (dead-end, corner and tangent) by:

- donning PPE;
- laying out and verifying steel lattice structure components;
- using tools and equipment tools torque wrench, impact drill; and
- assembling components and hardware using lifting equipment

according to construction and manufacturers' specifications, company policies and procedures, industry safety standards and jurisdictional legislation and regulations

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

9134.06 Erect steel lattice structures by:

- donning PPE
- using use tools and equipment tools and equipment such as slings, cranes and helicopters;
- placing and securing base or entire structure is placed on footing and secured;
- connecting remaining steel lattice structure sections aloft and in sequence;
- using temporary guy wires depending on type of structure to ensure stability during erection; and
- torquing bolts

according to manufacturers' specifications company policies and procedures industry safety standards and jurisdictional legislation and regulations.

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

9134.07 Install steel lattice structure guys and anchors by:

- obtaining locates;
- donning PPE;
- using tools and equipment such as chain hoists, RBD, grips and dynamometer;
- selecting anchor type (helix, rock, cross plates, expansion) based on job requirements and soil conditions;
- selecting guy wire size and guy attachments;
- positioning and installing anchors for structures;
- assembling, securing and tensioning guy wires; and
- verifying structure is plumb

according to manufacturers' specifications company policies and procedures industry safety standards and jurisdictional legislation and regulations.

		*Trainer Signature
mm/dd/yy	Trainer Print Name	
, αα, γ γ	Trainer Time Name	
mm/dd/yy	Apprentice Name	Apprentice Signature

9134.08 Install power system structure components such as insulators, down grounds, crossarms, bracing, nomenclature plates and associated hardware by:

- donning PPE;
- determining type and length of insulator and other components depending on the line voltage;
- using tools and equipment such as rubber gloves, live-line tools, hand tools, rigging tools and equipment based on work method;
- hoisting and rigging to place components;
- connecting and securing components;
- verifying that components are functioning;
- adding circuit designation and structure number to nomenclature plates; and
- adding warning signs to the structure

according to manufacturers' specifications, company policies and procedures industry safety standards and jurisdictional legislation and regulations.

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

9135 Install Conductor Systems

Skill Set Descriptor

Powerline technicians install overhead conductors and cables that are primarily used to deliver electricity (transmission, distribution) from the generating facilities (wind, solar, coal, hydro) but may also install various communication cables such as fibre optic cable. There are various types and sizes of overhead conductors such as primary and secondary, some are bare and others are covered.

Skills

9135.01 String overhead conductors and cables by:

- identifying hazards;
- determining procedure to use (conventional stringing, or tension stringing) based on task;
- using tools and equipment tools such as pulling equipment, tension stringing equipment, grounding equipment, break-a-ways, cover-ups as required for the task;
- installing travellers on pole or steel lattice structures;
- running conductor or rope through travellers temporarily to reduce friction when sagging;
- attaching pulling equipment to conductor or rope; and
- setting up and operating stringing equipment to install overhead conductors and cables

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

^{*} A Trainer may be a Supervisor or competent employee designated by the Apprentice's Sponsor

9135.02 Sag overhead conductors and cables by:

- selecting tools and equipment tools such as jacks, slings, hoists, grips, sag boards, scopes, transits, dynamometer;
- adjusting conductor and cable tension conductor based on sag charts, temperature, conductor type, weights and tensions; and
- securing conductor and cable conductor to dead-end fixtures depending on type and size of conductor jacks, slings, chains, grips, sag boards, scopes, transits and dynamometer

according to manufacturers' specifications, company policies and procedures and jurisdictional legislation.

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

9135.03 Tie-in overhead conductors and cables by:

- using tools and equipment such as lineman pliers, ratchets, wrenches, cordless impact driver based on job requirements;
- transferring conductor and cables conductor from travellers to insulators;
- securing conductor and cables conductor and cables using clamps or ties;
- installing components (dampers, spacers, aerial markers, armour rods); and
- removing travellers

according to manufacturers' specifications, company policies and procedures and jurisdictional legislation.

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

9135.04 Install splices and connections to overhead conductors by:

- using tools and equipment tools and equipment such as wire brushes, conductor cutters, presses, jacks and powder-actuated tools;
- selecting sleeves (automatic, mechanical, compression, implosive) based on job requirements;
- applying sleeve on ends of overhead conductors and cables to be spliced;
- applying connectors (powder-actuated, mechanical, compression, implosive)
 on ends of overhead conductors; and
- · performing splicing techniques

according to manufacturers' specifications, engineering standards and company policies and procedures.

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

9136 Install Underground and Underwater Power Systems

Skill Set Descriptor

Powerline technicians install underground and underwater cable for aesthetic, clearance, geographic and safety reasons. These types of installations require special care when installing. If improperly installed, repair is more costly and time consuming.

Skills

9136.01 Install concrete or fiberglass foundations for equipment including switching kiosks, padmount transformers and submersible vaults by:

- reviewing design specifications, lot plans, survey information to identify designated area for installation;
- confirming that prior locate information has been acquired;
- excavating for foundation placement using tools such as excavators, backhoe or hydrovac;
- installing construction material as required and levelling and compacting supporting ground;
- use rigging and hoisting equipment to position prefabricated foundation;
- connecting conduit to foundation;
- backfilling trenches using materials (sand, clean fill, native soil); and
- tamping soil using compacting equipment; and
- disposing of excess material

according to manufacturers' recommendations, company policies and procedures, industry standards and jurisdictional legislation and regulations.

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

^{*} A Trainer may be a Supervisor or competent employee designated by the Apprentice's Sponsor

9136.02 Install conduit and underground cable by:

- using tools and equipment tools and equipment such as trenchers, vibratory plow, directional drill, backhoe, tamper, shovel, tugger, winch, swivel, and cable pulling sock;
- excavating trenches for conduit and cable placement based on design specifications, lot plans and survey information;
- placing conduits in trench or waterway;
- installing pulling ropes or tape pulling ropes are installed to facilitate future cable installation;
- backfilling trenches using materials (sand, clean fill, native soil)
- tamping soil using compacting equipment;
- preparing conduit for cable installation by cleaning and clearing conduit;
- applying cable lubricant to reduce friction when running cable through conduit;
- attaching pulling connections (swivels, cable pulling sock) to pulling rope;
- pulling cable through conduit; and
- labelling cable

according to company policies and procedures, industry standards and jurisdictional legislation and regulations.

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

9136.03 Place direct buried cable by:

- excavating trenches using tools such as trenchers, vibratory plow, directional drill, backhoe, tamper, shovel, swivel and cable pulling sock;
- laying direct buried underground and underwater cable in trench or waterway;
- labelling cable to identify circuit and phasing;
- backfilling trenches using materials (sand, clean fill, native soil);
- tamping soil; and
- disposing of excess material

according to design specifications, lot plans and survey information, company policies and procedures, industry standards and jurisdictional legislation and regulations.

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

9136.04 Splice underground cable by:

- donning PPE as required;
- using tools and equipment tools such as wire brushes, cable cutters, cable strippers, presses, tape measure, ratchets, hacksaws, lineman pliers, hack knife to splice underground and underwater cable;
- preparing cable (concentric neutral, non-shielded, shielded);
- applying compression sleeves as required onto ends of cables to be spliced;
- installing compression connection;
- completing splice; and
- labelling to identify circuit and phasing

according to company policies and procedures, industry standards and jurisdictional legislation and regulations.

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

9136.05 Install underground junction boxes and switching cubicles such as submersibles and padmount equipment and secondary service pedestals by:

- identifying requirements based on design specifications, lot plans and survey information;
- using rigging and hoisting equipment to place the equipment on the foundation; and
- securing or bolting down equipment

according to manufacturers' specifications, company policy and procedures, and industry standards and jurisdictional legislation and regulations.

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

9136.06 Terminate underground cable by:

- identifying and isolating the cable, using identification equipment and applicable techniques and procedures;
- using tools and equipment tools and equipment such as wire brushes, cable cutters, cable strippers, presses, tape measure, ratchets, hacksaws, lineman pliers, hatchet, and heat gun required to terminate underground and underwater cable;
- preparing underground and underwater cable for termination;
- · applying fittings onto end of underground equipment; and
- installing terminations (tapes, heat shrinks, cold shrinks, conductor connectors, elbows, stress cones, termination kits, t-body)
- testing to confirm underground and underwater cable integrity using ultra low frequency (ULF), very low frequency (VLF), resistance test, high potential test methods as relevant to task;
- labelling underground cable to identify circuit and phasing; and
- connecting terminated cables to equipment

according to manufacturers' specifications, engineering standards, company policies and procedures, industry safety standards and jurisdictional legislation and regulations.

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

9136.07 Install submarine cable by:

- excavating trenches using tools such as trenchers, vibratory plow, directional drill, backhoe, tamper, shovel, swivel and cable pulling sock;
- using marine equipment to access location and lay direct buried underwater cable in trench or waterway;
- installing concrete around cable at the shoreline to prevent ice damage;
- labelling cable to identify circuit and phasing;
- backfilling trenches using materials (sand, clean fill, native soil);
- tamping soil; and
- disposing of soil

according to design specifications, lot plans and survey information, company policies and procedures, industry standards and jurisdictional legislation and regulations.

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

9136.08 Splice submarine cable by:

- using test equipment to confirm cable isolation;
- using marine equipment to raise cable;
- using tools and equipment such as wire brushes, cable cutters, cable strippers, presses, tape measure, ratchet cutters, hacksaws, lineman pliers, knife to splice underwater cable;
- preparing cable (concentric neutral, non-shielded, shielded);
- applying compression sleeves as required onto ends of cables to be spliced;
- installing mechanical or compression connection;
- completing splice; and
- labelling to identify circuit and phasing

according to company policies and procedures, industry standards and jurisdictional legislation and regulations.

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

9136.09 Terminate submarine cable

- identifying and isolating the cable, using identification equipment and applicable techniques and procedures;
- using tools and equipment such as wire brushes, cable cutters, cable strippers, presses, tape measure, ratchets, hacksaws, lineman pliers, hatchet, and heat gun required to terminate underground and underwater cable;
- preparing underground and underwater cable for termination;
- applying fittings onto end of underground; and
- installing terminations (elbows, stress cones, t-body)
- testing to confirm underground and underwater cable integrity using ultra low frequency (ULF), very low frequency (VLF), resistance test, high potential test methods as relevant to task;
- labelling underwater cable to identify circuit and phasing; and
- connecting terminated cables to equipment

according to manufacturers' specifications, engineering standards, company policies and procedures, industry safety standards and jurisdictional legislation and regulations.

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

9137 Install Voltage Control Equipment

Skill Set Descriptor

Powerline technicians install transformers, capacitors, regulators, switches and reactors to control or modify voltage and to maintain the correct power factor.

Skills

9137.01 Install overhead system transformers such as pole-mounted, platform, self-contained three-phase transformers and transformer banks by:

- interpreting installation requirements based on schematics or design specifications;
- reviewing site for any physical restrictions;
- selecting transformer required for application pole mounted or pad mounted by verifying name plate information;
- selecting transformer components such as core, windings, oil, bushings, gaskets, tank, cover, taps and tap changer, mounting brackets, switches, arrestors, fuses and fault indicators;
- using tools and equipment such as drills, aerial work platforms, FRP tools (hot sticks), multi-meter, phase rotation meter, transformer tester;
- checking and changing internal connections (two-winding, autotransformer, tertiary) based on required voltage;
- drilling holes or hanging the transformer brackets;
- hoisting and hanging the transformer;
- fastening aerial transformer to structure and attaching associated hardware;
- positioning and securing pad-mounted transformer on pad;
- making wiring connections such as primary, secondary, grounding, parallel, delta-delta, wye-wye, delta-wye, wye-delta, open wye-open delta, open delta-open delta
- performing pre/in-service requirements/procedure;
- energizing transformer and checking voltage, phase rotation and amperages;
- installing identification labelling on pad-mounted transformers; and
- conducting operational checks and connecting secondary leads

according to manufacturers' specifications, company policies and procedures, industry safety standards and jurisdictional legislation and regulations.

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

^{*} A Trainer may be a Supervisor or competent employee designated by the Apprentice's Sponsor

9137.02 Install underground system transformers by:

- using PPE and equipment as required for the task;
- installing concrete or fiberglass foundations if required;
- confirming cable isolation;
- selecting transformer required for application pole mounted or pad mounted by verifying name plate information;
- using hoisting and rigging equipment;
- positioning and securing pad-mounted transformer on pad;
- terminating primary connections;
- connecting secondary leads;
- performing pre/in-service operational checks;
- energizing transformer and checking voltage, phase rotation and amperages;
 and
- installing identification labelling on pad-mounted transformers

according to design specifications, manufacturers' specifications, company policies and procedures, industry standards and jurisdictional legislation and regulations

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

9137.03 Install submersible transformers

- using PPE and equipment such as rotation and voltage meters, as required for the task;
- confirming cable isolation;
- using pumps to remove excess water in vault;
- using boats, barges and marine equipment to access underwater location if required;
- using rigging equipment lowering, positioning and securing transformer;
- terminating primary connections;
- performing pre/in-service operational checks; and
- energizing transformer and checking voltage, phase rotation and amperages connecting secondary leads

according to design specifications, manufacturers' specifications, company policies and procedures, industry standards and jurisdictional legislation and regulations.

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

9137.04 Install capacitors by:

- using tools and equipment such as drills, aerial work platform (AWP), FRP tools (hot sticks), multi-meters based on job requirements
- selecting capacitor (shunt connection, series connection, series-parallel) based on job requirements;
- verifying selection of capacitors based on company and engineering standards;
- eliminating capacitive charge hazard when installing and removing capacitors;
- mounting and connecting capacitors on structure;
- performing test procedures (visual and electrical), on capacitors, components and accessories (di-electric insulation, plates, case, bushings); and
- energizing and de-energizing capacitors

according to manufacturers' specifications, company policies and procedures, industry safety standards and jurisdictional legislation and regulations.

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

9137.05 Install voltage regulators by:

- using tools and equipment such as AWP, drills, compression tools, FRP tools (hot sticks), multi-meter and neutral detector based on job requirements;
- verifying selection of voltage regulation and control devices selection of voltage regulation based on to engineering standards;
- hoisting voltage regulators using RBD;
- installing voltage regulation and control devices such as reactor, tap changers (on-load, off-load), voltage regulators and auto boosters;
- placing and securing voltage regulation and control devices;
- connecting voltage regulation and control devices;
- switching voltage regulation and control devices in and out of service; and
- operating voltage regulation and control devices to test functionality

according to manufacturers' specifications, company policies and procedures, industry safety standards and jurisdictional legislation and regulations.

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

9137.06 Install switches by:

- using tools and equipment such as drills, compression tools, FRP tools (hot sticks), powder-actuated tools based on job requirements;
- placing in specified location and securing using procedures based on type of switch;
- making connections to make switch operational;
- adjusting switch as necessary; and
- verifying that switch are operational in conjunction with each other where required;
- confirming with controlling authority, switches normal operating position (normally open, normally closed)

according to manufacturers' specifications, company policies and procedures, industry safety standards and jurisdictional legislation and regulations.

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

9138 Install System Protection Equipment

Skill Set Descriptor

Powerline technicians install reclosers, sectionalizers and fuses to electronic switching devices to protect line-equipment. Lightning arrestors are installed to dissipate over-voltage.

Skills

9138.01

Install reclosers and components (manual and electronic) such as sight glass, tank, reclosing coil, contacts, control panels, switches, bushings and open/close indicators by:

- selecting recloser (oil, solid di-electric) based on engineering standards;
- using tools and equipment such as drills, AWP, FRP tools (hot sticks), powderactuated tools based on job requirements;
- placing and securing recloser on to structure;
- connecting recloser;
- performing switching to energize recloser to avoid customer outage or placing recloser in parallel with bypass switches; and
- performing operational tests to verify function and compatibility with electrical system or SCADA system

according to manufacturers' specifications, company, industry safety standards and jurisdictional legislation and regulations.

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

^{*} A Trainer may be a Supervisor or competent employee designated by the Apprentice's Sponsor

9138.02 Install sectionalizers by:

- selecting sectionalizer based on engineering standards;
- using tools and equipment such as drills, AWP, FRP tools (hot sticks), powderactuated tools, based on job requirements;
- placing and securing sectionalizer;
- connecting sectionalizer;
- energizing sectionalizer; and
- performing operational tests to verify function and compatibility with electrical system

according to manufacturers' specifications, company and industry safety standards and jurisdictional legislation and regulations.

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

9138.03 Install fuses such as expulsion, bayonet and current limiting by:

- identifying and selecting fuse based on equipment, company and engineering standard;
- inspecting switch for defects such as cracks, component misalignment, chips, broken;
- using tools and equipment such as wrenches, pliers, multi-meters, FRP tools (hot sticks), based on job requirements;
- placing fuse into holder;
- placing fuse holder into switch and energizing; and
- visually inspecting or conducting a multi-meter continuity test to identify defective fuses

according to manufacturers' specifications, company and industry safety standards and jurisdictional legislation and regulations.

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

9138.04 Install lightning arrestors by:

- identifying hazards pertaining to lightning arrestors;
- donning PPE;
- selecting arrestors based on engineering standards;
- confirming arrestor selection is applicable to voltage selection;
- using tools and equipment such as wrenches, pliers, FRP tools (hot sticks) based on job requirements;
- inspecting lightning arrestors for defects such as damaged components, cracks, broken, torn; and
- mounting and connecting lightning arrestors following procedures

according to manufacturers' specifications, company policies and procedures and industry safety standards and jurisdictional legislation and regulations.

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

9139 Install Metering Equipment

Skill Set Descriptor

Powerline technicians install primary and secondary metering equipment that is used to measure electrical consumption at all levels of voltages.

Skills

9139.01 Install primary metering equipment such as tanks, cabinets and metering units by:

- selecting primary metering equipment and components such as current transformers and potential transformers, test blocks, meter base based on requirement and engineering standards;
- using tools and equipment such as drills, Aerial Work Platform, FRP tools (hot sticks) as per task;
- · mounting metering cabinet on structure; and
- connecting to metering tank

according to manufacturers' specifications, company policies and procedures and industry safety standards and jurisdictional legislation and regulations.

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

^{*} A Trainer may be a Supervisor or competent employee designated by the Apprentice's Sponsor

9139.02 Install secondary metering equipment such as self-contained, transformer rated bases, smart metering equipment (collectors, repeaters) by:

- selecting secondary metering equipment and components such as current transformers, potential transformers, test blocks based on job requirement and engineering standards;
- using tools and equipment such as pliers, screw drivers, multi-meters, hex keys, meter puller;
- performing meter base safety checks to identify damaged panel, broken porcelain or loose connections;
- installing conductor and making connections;
- performing meter base tests such as voltage check, load check, continuity check;
- placing and securing into base and installing meter ring and seal; and
- recording meter reading

according to manufacturers' specifications, company policies and procedures and industry safety standards and jurisdictional legislation and regulations.

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

9140 Install Communication Devices

Skill Descriptor

Powerline technicians install and transfer cellular antennas and communication lines between structures, due to the work being preformed in close proximity to high voltage distribution and transmission lines. As such, Powerline Technicians need to conduct a risk assessment to identify the hazards associated with installation of communication equipment.

Skills

9140.01 Install cellular antennas by:

- using tools and equipment such as drills, wrenches, rigging equipment based on job requirements;
- maintaining safe limits of approach; mounting cellular antennas;
- securing; and
- running fibre and power cable from the antenna to the ground and attached to the structure

according to manufacturers' specifications, company policies and procedures, industry standards and jurisdictional legislation and regulations.

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

^{*} A Trainer may be a Supervisor or competent employee designated by the Apprentice's Sponsor

9140.02 Install communication lines such as fibre, coaxial and telephone by:

- identifying and managing hazards associated with communication lines and nearby electrical apparatus;
- using tools and equipment such as drills, wrenches, rigging equipment based on job requirements to transfer communication lines
- unbolting clamps from structure;
- transferring communication lines to new structure;
- repositioning and securing lashing wire; and
- reattaching clamps to secure communication line

according to manufacturers' specifications, company policies and procedures, industry standards and jurisdictional legislation and regulations.

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

9141 Install and Maintain Street Lighting Systems

Skill Set Descriptor

Powerline Technicians assemble, install and maintain street lighting systems

Skills

9141.01 Install street lighting systems by:

- using information, schematics/wiring diagrams
- · maintaining safe limits of approach;
- identify company standards and procedures for voltage, wattage, type required, and location;
- using tools and equipment such as drills, AWP, compression tools, multi-meters as required for task;
- selecting street light components and wiring;
- assembling fixture and mounting arm;
- fastening mounting arm to structure then attach fixture;
- positioning fixture and directing light to intended area;
- connecting fixture wiring and power supply either through an individual photovoltaic control system or a pilot wire system; and
- using test meters to confirm operation of streetlights

according to manufacturers' specifications, Utility Work Protection Code (UWPC), company policies and procedures, safety standards and jurisdictional legislation and regulations.

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

^{*} A Trainer may be a Supervisor or competent employee designated by the Apprentice's Sponsor

9141.02 Maintain street lighting systems and components such as lamps, bird stops, photocells, starters, ballasts, fuses, relays, bulbs and capacitors by:

- inspecting streetlights to identify and troubleshoot problems;
- checking source voltage;
- using tools such as AWP and compression tools;
- checking components for defects such as loose connections, burnt wires, broken photocells and burnt-out bulbs;
- testing components using multi-meters to determine malfunctions;
- cleaning, removing and/or eliminating debris buildup in streetlight head;
- repairing or replacing and disposing of damaged components; and
- testing operation of streetlight

according to manufacturers' specifications, company policies and procedures, industry safety standards and jurisdictional legislation and regulations.

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

9142 Operate Distribution and Transmission Systems

Skill Descriptor

Powerline technicians operate a system by changing its configuration to isolate sections, transfer loads and to allow for repairs, installation or upgrades. Routine inspection and maintenance are performed on distribution and transmission systems to detect and prevent deficiencies before they affect system reliability.

Skills

Operate distribution systems such as underground (radial, loop, network), overhead and underwater (radial, loop) by:

- verifying that work is being performed at correct location based on maps, nomenclature plates, work orders, engineered drawings;
- using tools and equipment such as rubber gloves, load break tools, FRP tools (hot sticks), temporary grounding system, voltage indicators based on job requirements;
- verifying circuits and equipment to prevent switching errors;
- operating system equipment system such as switches (tie-points), risers, reclosers, elbows, capacitors, regulators and sectionalizers;
- changing circuit status based on order from controlling authority;
- testing, commissioning and energizing new distribution systems;
- confirming completion of operation; and
- verifying visually and testing completion of operation steps

according to engineering standards, company policies and procedures, industry standards and jurisdictional legislation and regulations.

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

^{*} A Trainer may be a Supervisor or competent employee designated by the Apprentice's Sponsor

9142.02 Operate transmission systems by:

- using tools and equipment such as load break tools, FRP tools (hot sticks), temporary grounding system, voltage indicators to operate overhead, underground and underwater transmission systems;
- identifying circuits and equipment to prevent switching errors and verify that work is being performed at correct location and device;
- communicating with controlling authority to verify order of operation;
- operating system equipment switches, breakers, insulators to change circuit status based on order from controlling authority;
- testing, commissioning and energizing new transmission;
- confirming completion based on order from controlling authority; and
- verifying and testing completion of operation steps

according to engineering standards, company policies and procedures, industry standards and jurisdictional legislation and regulations.

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

9142.03 Perform station switching by:

- donning PPE;
- identifying circuits to prevent switching errors and confirm that work is being performed on correct switching apparatus;
- using tools and equipment such as rubber gloves, load break tools, FRP tools (hot sticks), temporary grounding system, voltage indicators based on job requirements;
- changing circuit status based on order from controlling authority;
- · performing switching, lock-out and tag-out; and
- visually verifying and testing to confirm completion of operation steps

according to Utility Work Protection Code, company work procedures, industry safety standards and jurisdictional legislation and regulations.

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

9143 Maintain and Repair Transmission Systems

Skill Set Descriptor

Powerline technicians maintain, troubleshoot and repair transmission systems to restore power and maintain system reliability. Repairs on transmission systems can be performed on either energized or de-energized lines.

Skills

9143.01 Assess transmission system and components to determine if corrective action is required before effecting system reliability by:

- reading schematics, maps and design drawings to determine structure location;
- selecting tools and equipment as required for the task such as climbing equipment;
- inspecting components such as, structures, footings, insulators, conductors, disconnects and associated hardware to evaluate condition and reliability;
- using test equipment such as infrared equipment, thermal equipment, core samplers to identify deficiencies; and
- documenting findings of inspection and reporting to prioritize repair

according to design specifications, manufacturers' specifications, company policies and procedures, industry standards and jurisdictional legislation and regulations.

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

^{*} A Trainer may be a Supervisor or competent employee designated by the Apprentice's Sponsor

9143.02 Maintain pole structures such as single-pole, multi-pole, tangent, angle, dead-end, take-off (or tap), joint use construction, self-supporting poles (wood, steel, fibreglass, concrete, laminate) to stabilize and extend life by:

- inspecting to identify deficiencies as rotten, infested, fallen, damaged poles;
- calculating forces and tensions to check for elevated levels of stress or compressive forces acting on the pole;
- drilling core samples in wood; and sonic (hammer) testing;
- documenting deficiencies and determining course of action;
- performing remediation inserting or replacing top extensions or replacing for clearance or repair purposes (such as topping, capping and treating) as required
- replacing pole, grounds and mouldings
- straightening pole with RBD, backhoe, block and tackle and pike poles,
- installing, repositioning, removing and attaching temporary or permanent guying systems depending upon conditions;
- backfilling and compacting materials using equipment such as hydraulic or mechanical tamper; and disposal of materials;
- confirming integrity of structure; and
- documenting completed maintenance work

according to manufacturers' specifications, company policies and procedures, industry standards and jurisdictional legislation and regulations

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

9143.03 Maintain steel lattice structures by:

- selecting climbing equipment and other equipment as required;
- inspecting and assessing structural components such as steel lattice, structural bolts, guying hardware and footings to identify corrosion, defects, deteriorated or broken attachments and missing or loose bracing;
- determining priorities and documenting required maintenance;
- using tools and equipment such as torque, spud wrenches, drift pins, AWP to secure steel lattice and bracing components;
- installing, removing or replacing defective equipment as required; and
- installing or repositioning anchor points;
- securing and tensioning guy wires;
- repairing concrete and wrap footings;
- painting the structure to preserve life span; and
- documenting completed work

according to company policies and procedures, manufacturers' specifications and jurisdictional.

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

- **9143.04 Maintain transmission system components** such as insulators, down grounds and crossarms non-insulated jumpers, conductor sleeves, armor rods, repair rods and associated items by:
 - checking and assessing equipment and components to identify defects, deteriorated or broken attachments;
 - using tools and equipment such as test equipment, live-line tools, hand tools, rigging tools and equipment based on work method;
 - replacing or repairing components based on inspection reports
 - removing contaminants from contacts of disconnect switches and insulators;
 - manually operating equipment and apparatus to comply with design specifications; and
 - documenting completed maintenance work

according to company policies and procedures, manufacturers' specifications and jurisdictional requirements.

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

Perform line clearing and tree removal of incompatible vegetation causing damage or interruption to power around energized electrical systems and restore power.

- conducting a risk assessment to identify hazards such as overhead and underground hardware, proximity of conductor to worksite, environmental, ground and tree/vegetation hazards;
- determining removal method;
- using tools and equipment such as chainsaws, hand saws, hydraulic saws, rigging, pruning saws and aerial device;
- following cutting procedures for safe felling or sectional removal of a tree; and
- documenting completed maintenance work

according to company policies and procedures, manufacturers' specifications and jurisdictional and environmental regulations.

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

9143.06 Troubleshoot overhead transmission systems to assess requirements for repair by:

- patrolling circuit to identify issues such as damage caused by fallen trees, damaged structures, downed lines and defective equipment and components;
- using testing equipment (potential indicators, fault indicators, phasing sticks)
 to diagnose overhead transmission systems;
- using devices (switches, circuit breakers, jumpers) to isolate section of transmission lines based on orders from controlling authority;
- documenting switching procedures; and
- reporting trouble, required actions (repair, replace, troubleshoot, switching)
 and estimated repair time

according to company policies and procedures, manufacturers' specifications, engineering standards, industry safety standards and jurisdictional legislation.

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

9143.07 Repair overhead transmission systems by:

- using tools and equipment such as aerial device, ladders, chainsaws, temporary grounding system, gin poles, live-line tools, rigging tools and equipment, platform boards based on job task;
- following work procedures such as grounding, bonding and live-line methods as required;
- removing obstructions (trees, wildlife) in order to access structure and components;
- replacing components and accessories (crossarms (timbers), conductors, poles, insulators)
- relocating energized conductor using live line methods for unclamping and clamping while maintaining positive control and safe limits of approach;
- repairing or splicing conductor and cable conductor as required;
- restoring system to normal operation; and
- reporting completed repairs or replacement

according to company policies and procedures, manufacturers' specifications, operating diagrams, engineering standards, industry safety standards and jurisdictional legislation.

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

9143.08 Troubleshoot underground transmission systems by:

- using testing equipment such as potential indicators, hi-pot testers, high voltage test units based on job requirements to locate fault;
- isolating circuit based on switching order from controlling authority and work procedures;
- inspecting to identify damage, hazards and defective components and accessories such as cables (armoured, shielded), cable protection, system grounds, duct systems, direct-buried systems, terminations, splices;
- documenting results of inspection; and
- reporting trouble, required actions (repair, replace, troubleshoot) and estimating repair time

according to company policies and procedures, operating diagrams, controlling authority, manufacturers' specifications, industry safety standards and jurisdictional legislation.

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

9143.09 Repair underground transmission systems by:

- using tools and equipment such as live-line tools, temporary grounding systems, potential indicators, rigging tools based on job requirements;
- following work procedures as required such as grounding, bonding and testing cable;
- exposing faulted cables using mechanical digging, manual digging, hydrovacuums as needed;
- repairing or replacing components such as cables (armoured, shielded), cable
 protection, system grounds, duct systems, direct-buried systems, terminations,
 and splices based on requirements;
- using testing equipment such as potential indicators, hi-pot testers, high voltage test units to verify integrity of the fault repair;
- performing switching procedures to restore system to normal operating status and
- reporting completion of repairs and restoration of system

according to company policies and procedures, controlling authority, operating diagrams, manufacturers' specifications, industry safety standards and jurisdictional legislation.

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

9143.10 Troubleshoot underwater transmission systems by:

- using marine equipment to access location;
- using testing equipment such as potential indicators, hi-pot testers, high voltage test units based on job requirements to locate fault;
- isolating fault, damage and hazards based on switching order from controlling authority and work procedures;
- inspecting to identify defective components and accessories such as cables (armoured, shielded), cable protection, system grounds, duct systems, directburied systems, terminations and splices;
- documenting results of inspection; and
- reporting trouble, required actions (repair, replace, troubleshoot) and estimating repair time

according to company policies and procedures, controlling authority, manufacturers' specifications, industry safety standards and jurisdictional legislation.

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

9143.11 Repair underwater transmission systems by:

- using marine equipment to access location;
- using tools and equipment such as live-line tools, temporary grounding systems, potential indicators, rigging tools based on job requirements;
- following work procedures such as grounding, bonding and testing cable
- exposing faulted cables using mechanical digging, manual digging, hydrovacuums to repair or replace cable;
- repairing or replacing components such as cables (armoured, shielded), cable
 protection, system grounds, duct systems, direct-buried systems, terminations,
 splices based on requirements;
- using testing equipment (potential indicators, hi-pot testers, high voltage test units) to verify integrity of the fault repair;
- using switching procedures to restore system to normal operating status; and
- reporting completion of repairs or replacement of components and restoration of system

according to company policies and procedures, controlling authority, manufacturers' specifications, industry safety standards and jurisdictional legislation.

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

9144 Maintain and Repair Distribution Systems

Skill Set Descriptor

Powerline technicians maintain, troubleshoot and repair distribution systems to restore power and maintain system reliability. Repairs on distribution systems can be performed on either energized or de-energized lines. Depending on the status of the equipment, the repair procedures and accompanying considerations will vary.

Skills

9144.01 Assess distribution system and components to determine if corrective action is required before effecting system reliability by:

- inspecting components such as poles, insulators, conductors, guys and anchors, disconnects and associated hardware to evaluate condition and reliability;
- using test equipment such as infrared equipment and thermal equipment to identify deficiencies; and
- documenting findings of inspection and reporting to prioritize repair

according to design specifications, manufacturers' specifications, company policies and procedures, industry standards and jurisdictional legislation and regulations.

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

^{*} A Trainer may be a Supervisor or competent employee designated by the Apprentice's Sponsor

9144.02 Assess power distribution station operation to determine if corrective action is required by:

- listening to determine if power is impacted or interrupted;
- inspecting to identify any visible obstructions, deficiencies, open devices, faulted lightening arrestors or insulators;
- inspecting components such as fuses, taps, reclosers, metering devices, station service equipment, grounding devices, power system quality improvement devices, switches, bus connections, fault indicators, cable termination points, security and fire systems, Supervisory Controlled and Data Acquisition (SCADA) equipment and other apparatus to determine condition such as damaged or if not operational; and
- documenting findings of inspection and reporting to supervisor

according to design specifications, manufacturers' specifications, company policies and procedures, industry standards and jurisdictional legislation and regulations.

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

9144.03

Maintain distribution system and components such as transformers and cables, single-phase metering (A-base and S-base) three-phase metering, voltage regulation and control devices, line protective devices, line capacitors, switching stations, switching devices (gang operated, loadbreak and non-loadbreak, gas filled, oil filled solid di-electric), in-line switches and line openers and terminals current transformers, primary voltage metering devices, self-contained instrument meters by:

- assessing potential hazards;
- placing barriers to protect public from work area;
- inspecting components such as structures, footings, insulators, conductors, disconnects and associated hardware to evaluate condition and reliability;
- using tools and equipment such as rubber gloves, test equipment, live-line tools, hand tools, rigging tools and equipment based on job requirements;
- checking for tracking and loose or deteriorating connections;
- cleaning, lubricating, tightening and re-aligning components such as connections, elbow terminator pins, bushing inserts, standoff brackets, feed thru inserts, dry well, or submersed bayonet fuses;
- checking for oil leaks and taking oil samples;
- testing for backfeed;
- testing resistivity of grounding network;
- replacing components based on inspection report and completing out preinstallation checks;
- removing contaminants from contacts of disconnect switches and insulators;
- manually operating equipment and verifying apparatus complies with design specifications; and
- documenting completed maintenance work

according to company policies and procedures, manufacturers' specifications and jurisdictional requirements.

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

9144.04 Troubleshoot overhead distribution systems to determine issues by:

- referencing system maps, trouble reports, controlling authority information, previous system issues and corrective actions, customer data and other external sources to identify affected area and infrastructure;
- patrolling circuit to detect visible damage such as fallen trees, damaged poles, downed lines
- confirming normal open points, feeder identification and equipment nomenclature based on system information;
- verifying status of apparatus using test equipment such as potential indicators, fault indicators and voltmeters;
- assessing the operating condition of components such as fuses, taps, reclosers, arrestors, metering devices, station service equipment, grounding devices, power system quality improvement devices, switches, bus connections, fault indicators, cable termination points, security and fire systems, Supervisory Controlled, Data Acquisition (SCADA) equipment and other apparatus;
- checking for voltage irregularities, abnormal current levels, transformer failure, condition of switches, loose or corroded connections, defective surge arresters, current limiting devices, bushings, substandard grounding and oil leaks;
- verifying phase rotation;
- performing switching to sectionalize circuit to determine location of fault;
 and
- reporting trouble, required actions (repair or replacement) and estimating repair time to controlling authority and impact to customer(s)

according to Utility Work Protection Code, operating diagrams, feeder prints and switching orders, company policies and procedures, industry standards and jurisdictional requirements.

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

9144.05 Repair overhead distribution systems by:

- assessing damage and identify potential hazards;
- removing objects or obstructions in order to access structures;
- isolating from primary and secondary sources of electrical energy;
- documenting switching procedures;
- using tools and equipment such as live-line tools, temporary grounding system, potential indicators, rigging tools and equipment, rubber gloves based on job requirement;
- following UWPC work procedures such as grounding, bonding, lock-out, tag-out;
- replacing components and accessories such as transformers, reclosers, capacitors, conductors, system grounds, voltage regulators, disconnects, poles and insulators:
- repairing or replacing conductor;
- restoring system to normal operating status; and
- reporting completion of repairs or replacement of components and restoration of system

according to Utility Work Protection Code, manufacturers' specifications company policies and procedures, industry standards and jurisdictional legislation and regulations.

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

9144.06 Troubleshoot underground distribution systems by:

- using system maps, SCADA systems and operating diagrams to identify the location of the disruption;
- patrolling circuit to identify obvious damage (damaged poles, transformers, switching kiosks, cables);
- using equipment such as as live line sticks, rubber gloves, phasing meters/sticks, potential indicators, fault indicators, voltmeters, VLF tester, hi-pot testers and service conductor tester as required;
- performing switching to sectionalize circuit, switching and isolating to determine location of faulted cable or equipment;
- isolating fault and performing grounding and bonding to de-energize underground equipment;
- identifying defective components and accessories, damage or hazard;
- documenting switching; and
- reporting issue, required actions and estimated repair time to controlling authority

according to Utility Work Protection Code, manufacturers' specifications, company policies and procedures, industry standard and jurisdictional legislation and regulations.

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

9144.07 Repair underground distribution systems by

- using tools and equipment such as live-line tools, temporary grounding systems, and rigging tools and equipment as required for the job;
- testing cable and connections using test equipment such as potential
 indicators, voltmeters, VLF tester, insulation tester, hi-pot testers, voltage
 stresses, time domain reflectometry (TDR), thermal imaging equipment, cable
 thumper and cable fault locator as required to detect weaknesses or variations
 in uniformity and verify fault location;
- following temporary grounding, bonding, switching procedures as required;
- exposing faulted cables using mechanical digging, manual digging or hydrovacuums methods as relevant;
- repairing, splicing, replacing and terminating cable;
- replacing components and accessories such as cables (concentric neutral, nonshielded, shielded), cable protection, system grounds, duct systems, directburied systems, pad-mounted transformers, switching equipment and riser pole equipment;
- verifying the integrity of fault repair using required test equipment;
- using switching procedures to restore system to normal operating status; and
- documenting repairs, replacement of components and accessories and system status

according to Utility Work Protection Code, manufacturers' specifications, operating diagrams, engineering standards, company policies and procedures, industry safety standards and jurisdictional legislation and regulations.

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

9144.08 Troubleshoot underwater distribution systems by:

- patrolling circuit to identify obvious damage and faulted switches;
- performing switching to sectionalize circuit and determine faulted cable using tools and equipment as required;
- using test equipment such as potential indicators, voltmeters, VLF tester, insulation tester, hi-pot testers, voltage stresses, time domain reflectometry (TDR), thermal imaging equipment, cable thumper and cable fault locator to verify fault location;
- identifying defective components and accessories;
- isolating fault and applying grounding and bonding to de-energize underwater equipment; and`
- documenting switching and reporting issue, required actions and estimated repair time to controlling authority and customer(s) as required

according to manufacturers' specifications, operating diagrams, company policies and procedures, industry standard and jurisdictional legislation and regulations.

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

9144.09 Repair underwater distribution systems by:

- using tools and equipment such as live-line tools, potential indicators, temporary grounding systems and rigging tools and equipment as required for the job;
- following work procedures such as temporary grounding, bonding, testing cable and switching at terminal cable point;
- using boats, barges and marine equipment to access underwater cable location;
- using rigging tools and equipment to secure and raise cable;
- repairing, splicing, replacing and terminating cable;
- replacing components and accessories such as cables (concentric neutral, non-shielded, shielded), cable protection, system grounds, shoreline protection systems, pad-mounted transformers, switching equipment;
- using test equipment (potential indicators, fault indicators, voltmeters, VLF tester, insulation tester, hi-pot testers) to verify integrity of fault repair;
- preforming switching procedures to restore system to normal operating status; and
- completing reports documenting repairs, replacement of components and accessories and restoration of system

according to manufacturers' specifications, engineering standards, company policies and procedures, industry safety standards and jurisdictional legislation and regulations.

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

Acronyms	
AED	Automated external defibrillator
ARC	Arc rated clothing
AWP	Aerial work platform
EUSR	Electrical Utility Safety Rules
FRC	Flame retardant clothing
FRP	Fibreglass reinforced plastic
НТА	Highways Traffic Act
PPE	Personal protective equipment
RBD	Radial boom derricks
SCADA	Supervisory controlled data acquisition
TDR	Time domain reflectometry (insulation tester)
UWPC	Utility Work Protection Code
VLF	Very low frequency

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 Registered Training Agreements with the Ministry of Labour, Immigration, Training and Skills Development in either compulsory or non-compulsory trades;
- Are subject to any ratios or wage rates 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 and/or wage rates 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

Ontario's Exam Preparation Guide

Exam Resources - Skilled Trades Ontario

Basic Examination Details for You to Know

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

Scheduling Your Examination

The examination scheduling process is currently outlined in detail on the Skilled Trades Ontario website: Exam Scheduling – Skilled Trades Ontario

Remember these 3 basic steps:

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

Instructions for Recording a Change in Sponsor

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

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

Sponsor Record #1

Sponsor Information		
Apprentice Name		
Registered Training Agreement #		Date (mm/dd/yy)
Sponsor Name		
Address		
Telephone		
E-mail Address		
Summary of Training		
Employment Start Date		
Employment End Date		
Total hours of training & instruction between dates of employment.		
Skill Sets Completed		
As the Sponsor, I hereby confirm that the above information is true and accurate to the best of my knowledge.		
Signature:	Date: (mm/dd/y	y)

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 <u>SkilledTradesOntario.ca</u> and search Sponsor Record Form.

Change of Sponsor Record #2

Sponsor Information		
Apprentice Name		
Registered Training Agreement #		Date (mm/dd/yy)
Sponsor Name		
Address		
Telephone		
E-mail Address		
Summary of Training		
Employment Start Date		
Employment End Date		
Total hours of training & instruction between dates of employment.		
Skill Sets Completed		
As the Sponsor, I hereby confirm that the above information is true and accurate to the best of my knowledge.		
Signature:	Date: (mm/dd/y	y)

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 <u>SkilledTradesOntario.ca</u> and search Sponsor Record Form.

Change of Sponsor Record #3

Sponsor Information		
Apprentice Name		
Registered Training Agreement #		Date (mm/dd/yy)
Sponsor Name		
Address		
Telephone		
E-mail Address		
Summary of Training		
Employment Start Date		
Employment End Date		
Total hours of training & instruction between dates of employment.		
Skill Sets Completed		
As the Sponsor, I hereby confirm that the above information is true and accurate to the best of my knowledge.		
Signature:	Date: (mm/dd/y	y)

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

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

Appendix A — Instructions for Apprenticeship Program Completion

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

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

- 1. They sign the forms and submit them to their local Service Delivery Office. To find the closest office, check the contact information at ontario.ca/page/employment-ontario-apprenticeship-offices or call the Employment Ontario toll free number at (1-800-387-5656).
- 2. For All Trades: All mandatory skills (or the combination indicated in the completion requirements for the trade) in the Logbook must be signed-off. The recommended hours are a benchmark. If the Sponsor is completing the Apprentice before the industry recommended training hours are done, staff may request further information regarding the Apprentice's onthe-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 certificates of qualification to continue to work legally for one year while preparing for the certification examination.
- If an Apprentice completes their apprenticeship in a **non-compulsory trade** and there is a Certificate of Qualification exam, they must write and pass the exam to receive a Certificate of Qualification from Skilled Trades Ontario.

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

Appendix B — **Apprentice Completion Form**

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

Apprentice Information			
Name (print)			
Client ID # Issued by Ministry			
Telephone Number(s)			
Sponsor Information			
Legal Name			
Address			
Telephone Number(s)			
Sponsor's Signing Authority (print name)			
E-mail Address			
Dunaman Information			
Program Information			
Trade Name			
Number of hours required as per Training Agreement (for hours-based trades only)			
Hours completed? (documentation attached)	Yes ()	No ()	Not applicable ()
Classroom training completed or exempt?	Yes ()	No ()	Not applicable ()
hereby confirm that the information submitted on both sides of this form is true and accurate.			
<u> </u>			
Apprentice's Signature Date Sig	nature of S	ponsor's Signing	g 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
9128	Perform Safe Work Practices	
9129	Use and Maintain Tools and Equipment	
9130	Organize Work	
9131	Access Work Area	
9132	Use Live-line Methods	
9133	Demonstrate Communication Skills	
9134	Install Power System Poles and Steel Lattice Structures	
9135	Install Conductor Systems	
9136	Install Underground and Underwater Power Systems	
9137	Install Voltage Control Equipment	
9138	Install System Protection Equipment	
9139	Install Metering Equipment	
9140	Install Communication Devices	
9141	Install and Maintain Street Lighting Systems	
9142	Operate Distribution and Transmission Systems	
9143	Maintain and Repair Transmission Systems	
9144	Maintain and Repair Distribution Systems	

Ministry of Labour, Immigration, Training and Skills Development use only:			
Sponsor verified as most recent sponsor of record: Documentation to support completion of hours attached: Completion of classroom training verified:		Yes () Yes () Yes ()	No () No () No ()
Staff Name	Signature		Date

${\bf Appendix\ D-Local\ Service\ Delivery\ Offices\ in\ Ontario}$

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

Location	Contact	Location	Contact
Barrie 705-737-1431	55 Cedar Pointe Dr Unit 609, Barrie, ON L4N 5R7	Marathon 807-346-1550	52 Peninsula Road, Suite 103 Marathon, Ontario, POT 2E0
Belleville 613-968-5558	135 North Front St, Belleville, ON K8P 3B5	Markham 905-513-2695	140 Allstate Parkway, Suite 505, Markham, Ontario L3R 5Y8
Brantford 519-756-5197	505 Park Rd North Suite 201, Brantford, ON N3R 7K8	North Bay 705-495-8515	200 First Ave West, North Bay, ON P1B 3B9
Chatham 519-354-2766	870 Richmond St West 1st Floor, Chatham, ON N7M 5J5	Ottawa 613-731-7100	Preston Square, 347 Preston Street, Suite 310, Ottawa, ON K1S 3H8
Cornwall 613-938-9702	132 Second St East Ste 202, Cornwall, ON K6H 1Y4	Owen Sound 519-376-5790	1450 1st Ave West, Suite 100, Owen Sound, ON N4K 6W2
Dryden 807-456-2665	Provincial Government Building, 479 Government St, Dryden, ON P8N 3K9	Peel 905-279-7333	The Emerald Centre, 10 Kingsbridge Garden Circle, Suite 404, Mississauga, ON L5R 3K6
Durham 1-800-461-4608	78 Richmond Street West, Oshawa, ON L1G 1E1	Pembroke 613-735-3911	615 Pembroke St East, Pembroke, ON K8A 3L7
Elliot Lake 705-848-4661	50 Hillside Dr North, Elliot Lake, ON P5A 1X4	Peterborough 705-745-1918	901 Lansdowne St West, Peterborough, ON K9J 1Z5
Fort Frances 807-274-8634	922 Scott St 2nd Flr, Fort Frances, ON P9A 1J4	Sarnia 519-542-7705	Bayside Mall, 150 Christina St North, Sarnia, ON N7T 7W5
Geraldton 807-854-1966	208 Beamish Avenue West Geraldton, Ontario POT 1M0	Sault Ste. Marie 705-945-6815	477 Queen St East 4th Flr, Sault Ste Marie, ON P6A 1Z5
Halton 905-842-5105	700 Dorval Dr., Suite 201, Oakville, ON L6K 3V3	St Catharines 905-704-2991	Garden City Tower, 301 St Paul St East, 10th Flr, St Catharines, ON L2R 7R4
Hamilton 905-521-7764	Ellen Fairclough Bldg., 119 King St West 8th Flr., Hamilton, ON L8P 4Y7	Sudbury 705-564-3030	159 Cedar St Ste 506, Sudbury, ON P3E 6A5
Kapuskasing 705-465-5785	Ontario Government Complex, 122 Government Rd West, Kapuskasing, ON P5N 2X8	Thunder Bay 807-346-1550	189 Red River Rd Suite 103, Thunder Bay, ON P7B 1A2
Kenora 807-468-2879	227 1/2 Second St South, Kenora, ON P9N 1G4	Timmins 705-235-1950	Ontario Government Complex, 5520 Highway 101 East Wing B, South Porcupine, ON PON 1H0
Kingston 613-548-1151	Alliance Business Centre, 299 Concession St Ste 201, Kingston, ON K7K 2B9	Toronto Centre 416-927-7366	2 St Clair West, 11 th floor Toronto, ON M4A 1L5
Kitchener 519-653-5758	4275 King St East, Kitchener, ON N2P 2E9	Toronto South 416-326-5800	625 Church St 1st Fl, Toronto, ON M7A 2B5
London 519-675-7788	1200 Commissioners Rd E, Unit 72, London, ON N5Z 4R3	Windsor 519-973-1441	Roundhouse Centre, 3155 Howard Ave 2nd Fl, Suite 200, Windsor, ON N8X 4Y8

9128
Perform Safe
Work Practices

9128.01

Comply applicable Acts, regulations, codes and directives

9128.02

Use personal protective equipment (PPE) and safety equipment

9128.03

Use fall protection equipment

9128.04

Use work positioning, safe lifting and carrying methods

9128.05

Handle workplace hazardous materials

9128.06

Control hazards and hazard causing conditions

9128.07

Control environmental hazards

9128.08

Control powerline hazards

9128.09

Respond to jobsite emergencies 9128.10

Perform evacuation and rescue procedures

9129 Use and Maintain Tools and Equipment

9129.01

Use hand, power and explosive actuated tools

9129.02

Use electrical measuring and testing equipment

9129.03

Prepare rigging, hoisting and lifting equipment

9129.04

Use lifting and rigging equipment

9129.05

Maintain hoisting, lifting and rigging equipment

9130 Organize Work

9130.01

Interpret plans, drawings, specifications, and work orders

9130.02

Prepare Worksite

9130.03

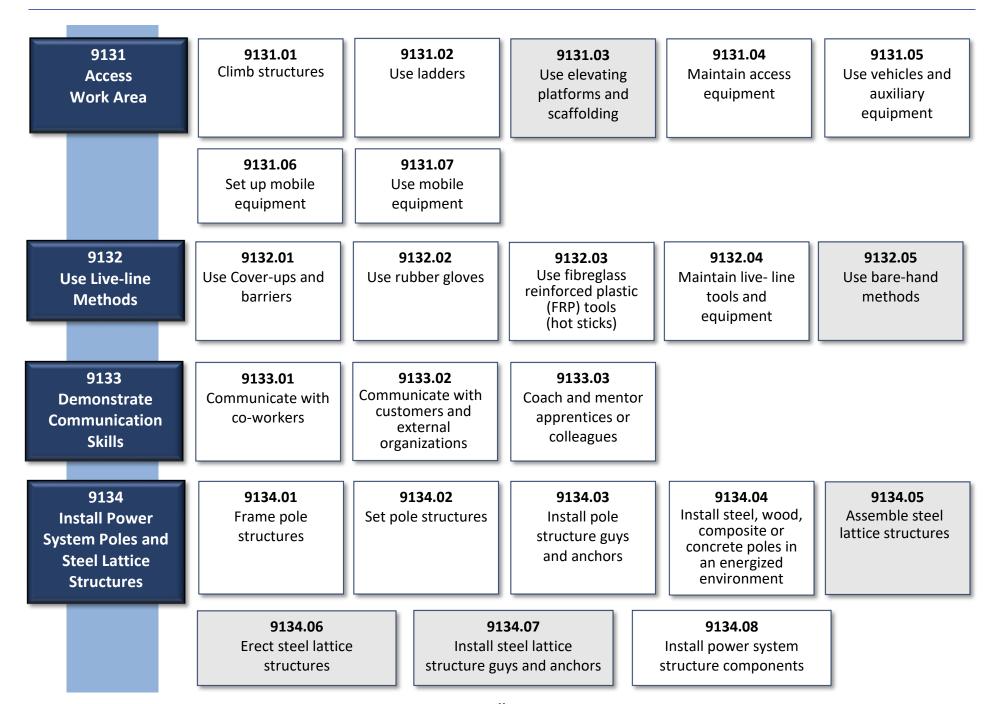
Plan job tasks and procedures

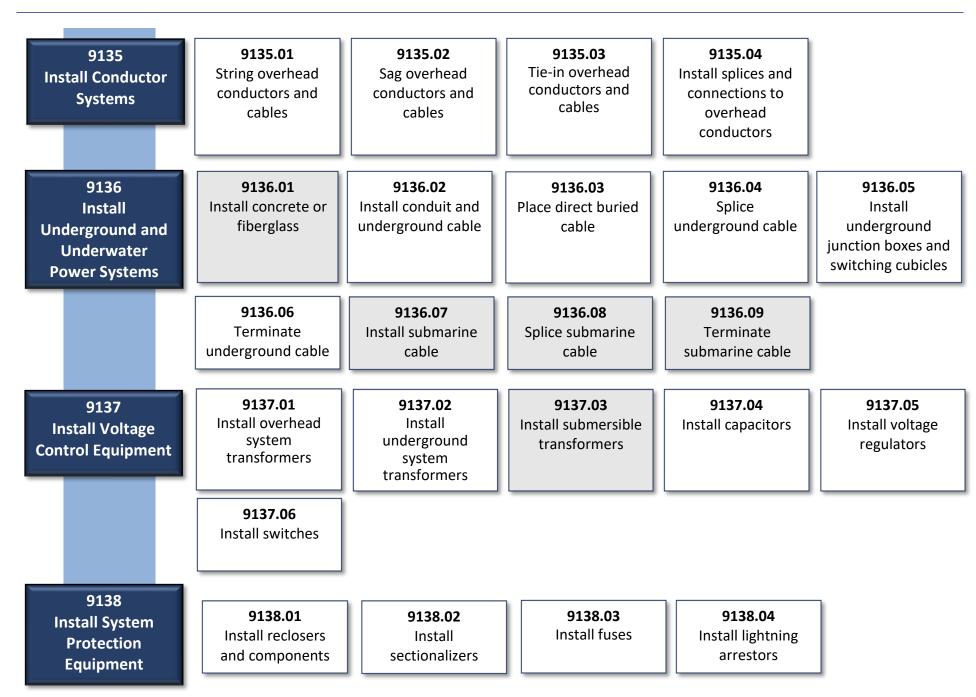
9130.04

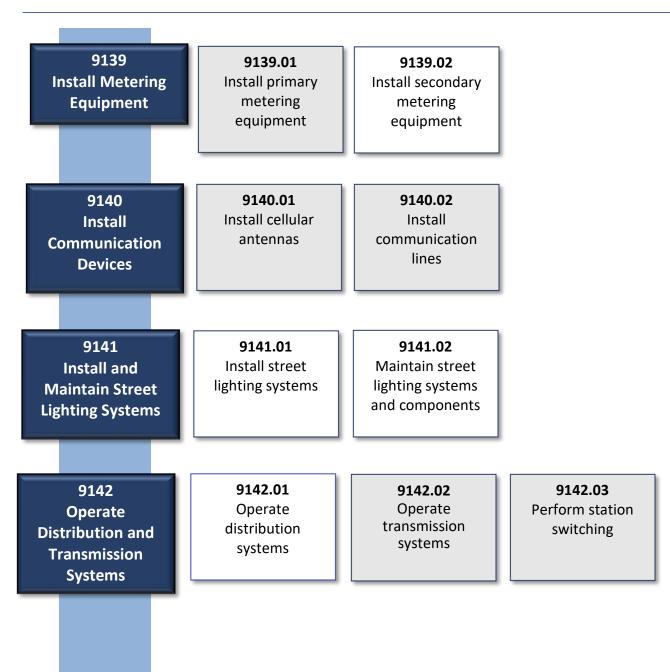
Perform utility work protection procedures

9130.05

Maintain documentation







9143
Maintain and
Repair
Transmission
Systems

9143.01

Assess transmission system and components

9143.02

Maintain pole structures

9143.03

Maintain steel lattice structures

9143.04

Maintain transmission system components

9143.05

Perform line clearing and tree removal

9143.06

Troubleshoot overhead transmission systems

9143.07

Repair overhead transmission systems

9143.08

Troubleshoot underground transmission systems

9143.09

Repair underground transmission systems

9143.10

Troubleshoot underwater transmission systems

9143.11

Repair underwater transmission systems

9144

Maintain and Repair Distribution Systems

9144.01

Assess distribution system and components

9144.02

Assess power distribution station operation

9144.03

Maintain distribution system and components

9144.04

Troubleshoot overhead distribution systems

9144.05

Repair overhead distribution systems

9144.06

Troubleshoot underground distribution systems

9144.07

Repair underground distribution systems

9144.08

Troubleshoot underwater distribution systems

9144.09

Repair underwater distribution systems

Notes	

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:
 <u>Exam Resources Skilled Trades Ontario</u> and/or view the exam preparation guide for Red Seal trades at: red-seal.ca



SkilledTradesOntario.ca



Powerline Technician

