



ONTARIO COLLEGE OF TRADES

ORDRE DES MÉTIERS DE L'ONTARIO

Apprenticeship
Training Standard
Log Book

Network Cabling
Specialist

631A



ONTARIO COLLEGE OF TRADES
ORDRE DES MÉTIERS DE L'ONTARIO

Apprentice Name: _____

Address: _____

Phone Number: _____

Email Address: _____

Trade: _____

Ministry of Training, Colleges and Universities Registered Training Agreement #:

OCOT Membership #:

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

You must become a member of the College of Trades Apprentices Class and maintain your membership in good standing while you complete your training. For more information on membership, please visit the College of Trades website at: www.collegeoftrades.ca

TABLE OF CONTENTS

PAGE

Terms and Conditions of Registered Training Agreement and Resources Page	6
Introduction to the Apprenticeship Training Standard Log Book.....	7
Roles and Responsibilities	8
Roles and Responsibilities (College of Trades, Ministry Of Training, Colleges and Universities)	8
Roles and Responsibilities (Apprentice)	9
Roles and Responsibilities (Sponsors and Trainers)	10
Safety	11
Apprenticeship Program Summary/Guidelines	12
Scope of Practice	12
Program Guidelines	12
Program Requirements	12
Compulsory and Voluntary Classification	12
Essential Skills Summary	13
Training the Apprentice - Tips for Apprentices, Sponsors and Trainers.....	14-15
Notice of Collection of Personal Information	16
Competency Analysis Profile (CAP Chart)	17-19

SKILL SETS

U5651.0	Protect Self and Others	20-23
U5652.0	Plan and Prepare for Installations.....	24-27
U5653.0	Perform Cable Installations Inside and Outside Plant	28-34
U5654.0	Terminate and Splice Cables Inside and Outside Plant.....	35-41
U5655.0	Perform Labelling, Testing, and Documentation	42-45
U5656.0	Perform Networking Installation.....	46-47
U5657.0	Troubleshoot Cable System.....	48-50
U5658.0	Develop and Maintain Positive Client Relations	51-52

Network Cabling Specialist Training Standard Glossary 53-57

Definitions58

Ready to Write Your Exam?63

Instructions for Recording a Change in Sponsor 64-70

Ministry of Training, Colleges and Universities Apprentice’s Appendices

- Instructions for Apprenticeship Program Completion..... (Appendix A)
- Apprentice Completion Form..... (Appendix B)
- Skill Set Completion for Sponsors (Appendix C)
- Ministry of Training, Colleges and Universities Apprenticeship Offices (Appendix D)

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

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TERMS AND CONDITIONS AS PER REGISTERED TRAINING AGREEMENT

The Apprentice agrees:

- to inform the Ministry of Training, Colleges and Universities of any change to their 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 Apprentice Training Standard Log Book (Log Book) for the Trade which is part of the apprenticeship program established by the Ontario College of Trades for the trade;
- to obtain written verification from the Sponsor and the Trainer(s) that the requirements in the Log Book for the trade have been met.

The Sponsor agrees:

- to ensure that the Apprentice is provided with the training required as part of the apprenticeship program established by the College of Trades for this trade;
- to ensure that the Trainer(s) verifies, in writing, when each skill identified in the Log Book for the trade has been successfully completed by the Apprentice;
- 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.

RESOURCE	LINK
Red Seal Program	www.red-seal.ca
Ministry of Training, Colleges and Universities	www.tcu.gov.on.ca
Employment Ontario	www.tcu.gov.on.ca
Service Canada	www.servicecanada.gc.ca
Ontario College of Trades and Apprenticeship Act, 2009	<i>Ontario College of Trades and Apprenticeship Act, 2009</i>
Ontario Ministry of Labour – Health and Safety Partners	www.labour.gov.on.ca
College of Trades Appointments Counsel	www.cot-appointments.ca
Essential Skills Ontario	www.essentialskillsontario.ca
Exam Preparation Guide	www.collegeoftrades.ca

INTRODUCTION TO THE LOG BOOK

On April 8th, 2013, the Ontario College of Trades (College) became responsible for the development and maintenance of Log Books in the Province of Ontario.

Please refer to the College of Trades website for the most accurate and up-to-date information: www.collegeoftrades.ca

This Log Book is intended to be used by the Apprentice and Sponsor as an official record of training. The completion of this document is necessary to complete your apprenticeship and receive your Certification of Apprenticeship.

The Log Book identifies skills required for this trade and its related training program. It has been written in statements which describe how you, the Apprentice, must perform each skill in order to become competent in your trade.

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

This on-the-job Log Book is a document issued to Apprentices who sign a Registered Training Agreement in the Province of Ontario. It is designed to record an Apprentice's acquired skills and time worked for the trade to which they are registered. This Log Book is developed by the Ontario College of Trades and used by the Ministry of Training, Colleges and Universities.

This Apprenticeship Log Book for Cabling Specialist 631A was developed in consultation with representatives from industry and may include members from a related Trade Board/Working Committees.

The information presented in this standard is, to the best of our knowledge, current at time of printing and is intended for general application.

ROLES AND RESPONSIBILITIES

Ontario College of Trades

Under the [Ontario College of Trades and Apprenticeship Act, 2009 \(OCTAA\)](#), the College of Trades is responsible for:

- Establishing and maintaining qualifications for membership;
- Issuing Certificates of Qualification and Statements of Membership;
- Maintaining a [Public Register](#) of members;
- Receiving and investigating complaints, and determining disciplinary action;
- Establishing Apprenticeship Programs, Training Standards and Scopes of Practice for each trade;
- Conducting Trade Equivalency Assessments;
- Determining Journeyman-to-Apprentice ratios;
- Addressing compliance with legislation (OCTAA) and regulations; and,
- Promoting the skilled trades and conducting research.

For any matters related to your membership in the Apprentices class, you must contact the College of Trades directly at: (647) 847-3000 or toll free at: 1(855) 299-0028.

Ministry of Training, Colleges and Universities

Is responsible for:

- Registering Training Agreements;
- Approving which persons may provide apprenticeship training;
- Approving Training Delivery Agents;
- Issuing Certificates of Apprenticeship;
- Administering Certificate of Qualification examinations;
- Promoting skilled trades and apprenticeship;
- Conducting policy development, evaluation and research; and,
- Passing regulations.

For any matter related to your Registered Training Agreement or completing your apprenticeship, you must contact your Local Apprenticeship Office at the Ministry of Training, Colleges and Universities.

Roles and Responsibilities of the Apprentice

An Apprentice is an individual who has entered into an Registered Training Agreement with a Sponsor to receive training in a trade as part of an apprenticeship program established by the College of Trades.

As an Apprentice, you have certain roles and responsibilities to follow throughout your apprenticeship training:

Steps:

1. You must become a member of the College of Trades Apprentices Class and maintain your membership in good standing while you complete your training. For more information on membership, please visit the College of Trades website at: www.collegeoftrades.ca
2. As an Apprentice, you are responsible for completing skills or skill sets in this Log Book and ensuring that they are dated and signed by both you and your Trainer.
3. You must also ensure your Skill Set Completion Form is completed and signed by your current Sponsor once you have demonstrated competence in all the mandatory skills in this Log Book. Once this is done, we recommend you submit the Log Book to your local Ministry of Training, Colleges and Universities office.
4. You are responsible for informing the staff at your local Ministry of Training, Colleges and Universities 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.
5. You must present the Apprentice Completion Form (Please refer to Appendix B), once all unshaded skills and skill sets have been completed within this document, along with your authorized Log Book to your local Ministry of Training, Colleges and Universities office.

Roles and Responsibilities of Sponsors and Trainers

Log Books identify the on-the-job skills required for a trade and its related training program.

This Log Book has been written in concise statements which describe how well an Apprentice must perform each skill in order to become competent. Competence means being able to perform to the required standard.

By using this Log Book, Trainers will be able to ensure that the Apprentice is developing skills detailed for the trade.

Trainers and Apprentices are required to sign-off and date the skills following each successful acquisition.

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.

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

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

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, employees and the public. Therefore, it is imperative that all parties become aware of circumstances that may lead to injury or harm. Safe learning experiences and environments can be created by controlling the variables and behaviours that may contribute to or cause an accident or injury.

It is generally recognized that a safe attitude contributes to an accident free environment. Everyone will benefit as a result of a healthy attitude towards prevention of accidents.

A tradesperson is possibly exposed to more hazards than any other person in the work force and, therefore, should be familiar with and apply Occupational Health and Safety Act and Regulations dealing with personal safety and the personal safety rules applying to each task.

Legal and Administrative Aspects of Safety:

Accident prevention and the provisions of safe working conditions are the responsibilities of an employer and employee.

Employer's Responsibilities - The employer is responsible for:

- Providing and maintaining safety equipment and protective devices;
- Ensuring proper safe work clothing is worn;
- Enforcing safe working procedures;
- Providing safeguards for machinery, equipment and tools;
- Observing all accident prevention regulations; and,
- Training employees in the safe use and operation of equipment.

Employee's Responsibilities - The employee is responsible for:

- Working in accordance with the safety regulations pertaining to the job environment;
- Working in such a way as not to endanger themselves or fellow employees and the public.

Workplace Health and Safety's Responsibilities:

- Workplace Health and Safety (Ontario's Ministry of Labour) will conduct periodic inspections of the workplace to ensure that safety regulations for industry are being observed.

APPRENTICESHIP PROGRAM SUMMARY/GUIDELINES

The Scope of Practice for the trade of Network Cabling Specialist is set out in section 31 (1) and (2) of Ontario Regulation 278/11 under OCTAA and reads as follows:

The scope of practice for the trade of Network Cabling Specialist includes installing and maintaining low voltage communication distribution systems or other signal sources to the terminal or equipment at the end of the distribution systems. Ontario Regulation 278/11, section 31 (1).

The distribution systems referred to in subsection (1) comprise the physical architecture that supports voice, video and data transmissions within industrial, commercial, institutional and office complexes. Ontario Regulation 278/11, section 31 (2).

Program Guidelines

On-the-Job Training Duration

Industry has identified 4000 hours as the duration necessary for any Apprentice to become competent in the skills required. There may be circumstances in which the duration varies from this guideline.

In-School Training Duration

Industry has identified two 10-week sessions (20 weeks total) of in-school training as the duration necessary for an Apprentice to complete the in-school curriculum for this program.

Journeyman to Apprentice Ratio

There are no set regulations for Journeyman to Apprentice ratios in the Network Cabling Specialist trade.

Program Requirements

Wage Rates

There are no set regulations for wage rates in the Network Cabling Specialist trade.

Compulsory and Voluntary Classification

Regulations under OCTAA set out the regulated trades in Ontario and the classification of each trade as either “compulsory” or “voluntary.” The trade of Network Cabling Specialist is voluntary. Ontario Regulation 175/11 (3)

Essential Skills

Essential skills are needed for work, learning and life. They provide the foundation for learning all other skills and enable people to evolve with their jobs and adapt to workplace change. Through extensive research, the Government of Canada and other national and international agencies have identified and validated nine essential skills. These skills are used in nearly every occupation and throughout daily life in different ways.

The nine Essential Skills are:

- ▶ Reading
- ▶ Writing
- ▶ Document Use
- ▶ Numeracy
- ▶ Computer Use
- ▶ Thinking
- ▶ Oral Communication
- ▶ Working with Others
- ▶ Continuous Learning

A series of tools endorsed by the Canadian Council of Directors of Apprenticeship (CCDA) have been developed to support apprentices in their training and to be better prepared for a career in the trades. The tools can be used independently or with the assistance of a tradesperson, trainer, employer, teacher or mentor to:

- Understand how essential skills are used in the trades
- Learn about individual essential skills strengths and areas for improvement, and
- Improve essential skills and increase success in an apprenticeship program

A link to the complete essential skills profile for Red Seal trades can be found at www.red-seal.ca.

The tools are available online or for order at: www.esdc.gc.ca/eng/jobs/les/index.shtml

The application of these skills may be described throughout this document within the competency statements which support each subtask of the trade.

TRAINING THE APPRENTICE

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 Apprenticeship Log Book as a journal to keep track of the skills you have achieved;
- Listen to the suggestions of your Trainer;
- Discuss your training needs with your Sponsor;
- Review your training plan with your Training Consultant, Trainer, or Sponsor;
- 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. Once a 'set of skills' have been signed off, ensure your Sponsor signs off this area as well.

Sponsor

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.

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.);
- Encourage safe work habits;
- Provide time for the Trainer to 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;
- Set out clear expectations, and recognize good performance;
- Involve both the Apprentice and Trainer in developing the training plan and observe frequently;
- Provide constructive feedback and conduct regular performance reviews involving the Apprentice and Trainer;
- Use the Log Book 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.

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 a member of the College of Trades Journeypersons Class.

In voluntary trades, a Trainer is an individual who holds one of the following:

- A valid Certificate of Qualification and is a member of the College of Trades Journeypersons Class; or,
- Holds a Statement of Membership in the College of Trades Tradespersons Class; or,
- Holds a Certificate of Qualification previously issued by Ministry of Training, Colleges and Universities; or,
- Holds 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 (eligible to apply to College membership in the Journeypersons or Tradespersons Classes) or has the skills outlined in the Log Book.

A classroom instructor is not permitted to sign-off the skills contained within this Log Book.

In this trade a trainer must be competent in the skill, but it is not mandatory to be a member of the College of Trades or have a Certificate of Qualification (CofQ).

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 Log Book with the Apprentice and develop a training plan;
- Set out clear expectations and recognize good performance;
- Ensure that the Apprentice receives on-the-job trade training experience as outlined in this document;
- Encourage and respond to all questions;
- Be patient;
- Explain, show and demonstrate the skill;
- Provide continuous feedback;
- Sign-off skills when your Apprentice demonstrates competency, and,
- Use the Log Book as a guide to evaluate competence in each skill area. By using the Log Book, Trainers will be able to ensure that the Apprentice is developing skills outlined in this document.

NOTICE OF COLLECTION OF PERSONAL INFORMATION

1. At any time during your apprenticeship training, you may be required to show this Log Book to the Ministry of Training, Colleges and Universities. You will be required to disclose the signed Apprenticeship Completion form to the Ministry of Training, Colleges and Universities in order to complete your program. The Ministry of Training, Colleges and Universities 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 Ministry of Training, Colleges and Universities will disclose information about your program completion and your Certificate of Apprenticeship to the Ontario College of Trades, as it is necessary for the College of Trades to carry out its responsibilities.
3. Your personal information is collected, used and disclosed by the Ministry under the authority of the *Ontario College of Trades and Apprenticeship Act, 2009*.
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 Training, Colleges and Universities
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.

COMPETENCY ANALYSIS PROFILE

NETWORK CABLING SPECIALIST – 631A

(All unshaded skill sets must be demonstrated/completed)

SKILL SETS

SKILLS

PROTECT SELF AND OTHERS U5651.0	Identify health and safety hazards 5651.01	Wear, adjust and maintain personal protective equipment 5651.02	Practice safe work procedures 5651.03	Practice good housekeeping 5651.04	Inspect equipment 5651.05
	Handle hazardous substances 5651.06	Operate lifting and rigging equipment for material and personnel 5651.07	Follow first aid practices and emergency communications procedures 5651.08		
PLAN AND PREPARE FOR INSTALLATIONS U5652.0	Co-ordinate pre-installation activities 5652.01	Select and verify cable pathways and spaces 5652.02	Perform trade calculations 5652.03	Select hand tools 5652.04	Select power tools 5652.05
	Select testing equipment 5652.06				
PERFORM CABLE INSTALLATIONS INSIDE AND OUTSIDE PLANT U5653.0	Layout and create openings for cable pathways (inside plant) 5653.01	Layout and create openings for cable pathways (outside plant) 5653.02	Layout and install raceways, raceway supports and cable supports (inside plant) 5653.03	Layout and install raceways, raceway supports and cable supports (outside plant) 5653.04	Install pulling medium in cable pathway 5653.05
	Select cable for installation 5653.06	Prepare cable for installation 5653.07	Install optical fibre backbone cable (Cabling Subsystem 2 and Cabling Subsystem 3) (inside plant) 5653.08	Install copper backbone cable (inside plant) 5653.09	Install optical fibre horizontal cable (Cabling Subsystem 1) and copper horizontal cable (outside plant) 5653.10

COMPETENCY ANALYSIS PROFILE

NETWORK CABLING SPECIALIST – 631A

(All unshaded skill sets must be demonstrated/completed)

SKILL SETS

SKILLS

	Install horizontal cables 5653.11	Install firestop 5653.12	Dress cables 5653.13		
TERMINATE AND SPLICE CABLES INSIDE AND OUTSIDE PLANT U5654.0	Install mounting equipment (inside plant) 5654.01	Install mounting equipment (outside plant) 5654.02	Dress cables 5654.03	Terminate optical fibre cables (inside plant) 5654.04	Splice optical fibre cables (inside plant) 5654.05
	Terminate copper cables (inside plant) 5654.06	Splice copper cables (inside plant) 5654.07	Terminate optical fibre cables (outside plant) 5654.08	Splice optical fibre cables (outside plant) 5654.09	Terminate copper cables (outside plant) 5654.10
	Splice copper cables (outside plant) 5654.11	Solder copper connections 5654.12	Install electrical protection equipment 5654.13	Ground and bond splices, pathways, racks, cabinets, cables and electrical protection equipment 5654.14	Cross-connect and inter/connect cables or equipment 5654.15
PERFORM LABELLING, TESTING AND DOCUMENTATION U5655.0	Label cable system 5655.01	Test multipair copper cables 5655.02	Test coaxial cable system 5655.03	Test balanced twisted pair cable system 5655.04	Test optical fibre cable system 5655.05
	Test wireless System 5655.06	Perform final inspection 5655.07	Complete field documentation 5655.08		

COMPETENCY ANALYSIS PROFILE

NETWORK CABLING SPECIALIST – 631A
(All unshaded skill sets must be demonstrated/completed)

SKILL SETS

SKILLS

<p>PERFORM NETWORKING INSTALLATION</p> <p align="right">U5656.0</p>	<p>Identify and document the clients current network architecture and physical topology</p> <p align="right">5656.01</p>	<p>Identify, place or mount pre-determined networking equipment</p> <p align="right">5656.02</p>	<p>Connect networking equipment</p> <p align="right">5656.03</p>	<p>Configure and test networking hardware and components</p> <p align="right">5656.04</p>	
<p>TROUBLESHOOT CABLE SYSTEM</p> <p align="right">U5657.0</p>	<p>Identify and repair multipair copper cable system faults</p> <p align="right">5657.01</p>	<p>Identify and repair coaxial cable system faults</p> <p align="right">5657.02</p>	<p>Identify and repair equipment balanced twisted pair cable system faults</p> <p align="right">5657.03</p>	<p>Identify and repair optical fibre cable system faults</p> <p align="right">5657.04</p>	<p>Identify and repair wireless system faults</p> <p align="right">5657.05</p>
<p>DEVELOP AND MAINTAIN POSITIVE CLIENT RELATIONS</p> <p align="right">U5658.0</p>	<p>Communicate verbally with clients and co-workers</p> <p align="right">5658.01</p>	<p>Perform written communication skills</p> <p align="right">5658.02</p>	<p>Resolve conflicts</p> <p align="right">5658.03</p>		

SPECIAL INSTRUCTIONS

NOTE ON SHADED PERFORMANCE OBJECTIVES AND SKILLS:

Shaded performance objectives and skills are optional, that is, they do not have to be completed or signed off for the apprentice to complete his or her apprenticeship.

U5651.0 PROTECT SELF AND OTHERS

GENERAL PERFORMANCE OBJECTIVES

Protect self and others by identifying health and safety hazards; wearing, adjusting and maintaining personal protective clothing and equipment; practicing safe work procedures; practicing good housekeeping; inspecting equipment; handling hazardous substances; operating lifting and rigging equipment; and, following company and client site-specific first aid procedures.

SKILLS

5651.01 **Identify health and safety hazards** including all site specific hazards , lock-out/tag-out requirements, asbestos and confined work spaces, so that the potential for personal injury and damage to equipment, property or the environment is reduced, hazards are reported, and corrective action is taken, according to related legislation and company and client site-specific standards.

(mm/dd/yy)	Trainer Print Name	Trainer Signature	♦ College of Trades I.D./CofQ # or other qualification as applicable
(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

♦ **In this trade a trainer must be competent in the skill, but it is not mandatory to be a member of the College of Trades or have a Certificate of Qualification (CofQ).**

5651.02 **Wear, adjust and maintain personal protective equipment** including eye, ear, body, head, hand and foot protectors, to ensure correct fit and optimum protection for the wearer and task being performed, according to company and client site-specific procedures and related legislation.

(mm/dd/yy)	Trainer Print Name	Trainer Signature	♦ College of Trades I.D./CofQ # or other qualification as applicable
(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

U5651.0 PROTECT SELF AND OTHERS - Cont`d

5651.03 **Practice safe work procedures** by setting up guards and barricades; adhering to fall protection requirements, wearing close-fitting and un-torn clothing; confining long hair; and removing jewelry, according to company and client site-specific standards and related legislation.

(mm/dd/yy)	Trainer Print Name	Trainer Signature	◇ College of Trades I.D./CofQ # or other qualification as applicable
(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

5651.04 **Practice good housekeeping** by cleaning up spills; keeping work area clean and clear of obstructions; handling and disposing of materials; and, storing tools or equipment; so that the potential for accident or injury is reduced and tools and equipment are in place, according to company and client site-specific standards and related legislation.

(mm/dd/yy)	Trainer Print Name	Trainer Signature	◇ College of Trades I.D./CofQ # or other qualification as applicable
(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

5651.05 **Inspect equipment** to ensure that all hand and power tools, equipment and safety devices are in safe working condition, according to company and client site-specific standards, manufacturer specifications or recommendations and related legislation.

(mm/dd/yy)	Trainer Print Name	Trainer Signature	◇ College of Trades I.D./CofQ # or other qualification as applicable
(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

U5651.0 PROTECT SELF AND OTHERS - Cont`d

5651.06 **Handle hazardous substances** including optical fibre, so that personnel are protected from injury and health hazards, that the site and surrounding environment is protected from contamination or damage, and procedures are followed according to Workplace Hazardous Materials Information System (WHMIS), Material Safety Data Sheets (MSDS) and related legislation.

(mm/dd/yy)			
(mm/dd/yy)	Trainer Print Name	Trainer Signature	◊ College of Trades I.D./CofQ # or other qualification as applicable
(mm/dd/yy)			
(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

5651.07 **Operate lifting and rigging equipment for material and personnel** including hoists, lifting devices, chain falls, lift pins, eye bolts, slings, cables and chains, to remove, install, transport and store materials, parts and equipment, according to company and client site-specific standards and related legislation.

(mm/dd/yy)			
(mm/dd/yy)	Trainer Print Name	Trainer Signature	◊ College of Trades I.D./CofQ # or other qualification as applicable
(mm/dd/yy)			
(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

U5651.0 PROTECT SELF AND OTHERS - Cont`d

5651.08 **Follow first aid practices and emergency communications procedures** by identifying location of emergency information, personnel and protocols; notifying related personnel; and, following first aid procedures; according to company or client site-specific standards and related legislation.

(mm/dd/yy)	Trainer Print Name	Trainer Signature	◊ College of Trades I.D./CofQ # or other qualification as applicable
(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

SPONSOR SIGN-OFF FOR U5651: PROTECT SELF AND OTHERS

Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature
----------------------------------	-----------------------------	--------------------------

U5652.0 PLAN AND PREPARE FOR INSTALLATIONS

GENERAL PERFORMANCE OBJECTIVE

Plan and prepare for installations by co-ordinating pre-installation activities; selecting and verifying cable pathways and spaces; performing trade calculations; selecting hand tools; selecting power tools; and, selecting testing equipment.

SKILLS

5652.01 **Coordinate pre-installation activities** by reviewing and verifying drawings, specifications, scope of work, labeling schemes, job schedules, and personnel requirements; coordinating with other tradespeople or personnel; coordinating for job site access and waste disposal procedures; confirming material and tool storage area on site; locating or determining telecommunication room and equipment rooms; confirming job documentation, equipment requirements, site readiness and identifying discrepancies; verifying abandoned telecommunications cabling within existing or new client premises, utilizing copper and fibre test equipment, confirming infrastructure is free of active communication circuits; and removal of abandoned cabling; according to the Ontario Fire Code (OFC), the National Fire Code of Canada (NFCC), job and manufacturers’ specifications, and company or client site-specific standards.

(mm/dd/yy)	Trainer Print Name	Trainer Signature	♦ College of Trades I.D./CofQ # or other qualification as applicable
(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

U5652.0 PLAN AND PREPARE FOR INSTALLATIONS - Cont'd

5652.02 **Select and verify cable pathways and spaces** by verifying drawings and specifications; calculating conduit and box fill allowances; identifying routes, including raceways, aerial, underground, buried, and free air; and identifying plenum or non-plenum spaces; identifying Underwriters Laboratories of Canada (ULC) rated firestop systems, identifying building construction types including x-raying, scanning, and coring requirements; and, laying out and routing pathways; according to drawings and specifications, Canadian Electrical Code (CEC), Ontario Electrical Safety Code (OESC), Telecommunications Industry Association/Electronic Industry Alliance (TIA-EIA) standards, TIA-569-C, national and provincial building codes, OFC, job and manufacturers' specifications and company or client site-specific standards.

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(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

5652.03 **Perform trade calculations** including optical fibre link loss budget, length, scaling of drawings, attenuation and metric or imperial conversion, according to Canadian Electrical Installation Standards (CEIS)-568, TIA-568-C standards, job and manufacturers' specifications and company or client site-specific standards.

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U5652.0 PLAN AND PREPARE FOR INSTALLATIONS - Cont'd

5652.04 **Select hand tools** including punchdown, measuring tools, crimpers, fasteners, screwdrivers, pliers, cutters, cable strippers, hole punch sets, fish tapes, cable grips, saws, conduit benders, and hole punches, optical fibre termination kits, lock-out/tag-out kits, by reading and interpreting drawings and specifications, and job requirements, ensuring that hand tool selected is the correct one for the application in accordance with manufacturers' specifications and company or client site-specific standards.

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5652.05 **Select power tools** including optical fibre fusion splicer, drills, powder-actuated fastening tools, power saws, cutting tools and cable pulling devices, by reading and interpreting drawings and specifications, and job requirements; ensuring that power tool selected is the correct one for the application, is operational and ready for the job, according to manufacturers' specifications and company or client site-specific standards.

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U5652.0 PLAN AND PREPARE FOR INSTALLATIONS - Cont'd

5652.06 **Select testing equipment** including copper and optical fibre, multi-meters, wireless and network certification testers, continuity and wire map testers, butt sets, tone generators and cable tracers, using information from job and manufacturers' specifications, to ensure that the testing equipment selected is the correct one for the application, is certified and is calibrated within manufacturers' specifications, is operational and ready for the job.

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(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

SPONSOR SIGN-OFF FOR U5652: PLAN AND PREPARE FOR INSTALLATIONS		
Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature

U5653.0 PERFORM CABLE INSTALLATIONS INSIDE AND OUTSIDE PLANT

GENERAL PERFORMANCE OBJECTIVE

Perform cable installations inside and outside plant by laying out and creating openings for cable pathways; laying out and installing raceways, raceway supports and cable supports; installing pulling medium in cable pathway; selecting, inspecting, and preparing cable for installation; installing optical fibre backbone cable (Cabling Subsystem 2 and Cabling Subsystem 3); installing copper backbone cable; installing optical fibre horizontal cable (Cabling Subsystem 1) and copper horizontal cable; installing firestop; and, dressing and labelling cables.

SKILLS

5653.01 **Layout and create openings for cable pathways (inside plant)** by reading and interpreting drawings and specifications; visually inspecting work area; setting up tools and equipment; laying out, drilling, coring and cutting; selecting and using hand or powered mechanical, electrical, and electronic tools or equipment; and, working with clients, co-workers and other tradespeople; so that the completed layout conforms to drawings and specifications, OESC, CEC, TIA-569-C , national and provincial building codes, job and manufacturers' specifications, and company or client site-specific standards.

(mm/dd/yy)	Trainer Print Name	Trainer Signature	♦ College of Trades I.D./CofQ # or other qualification as applicable
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U5653.0 PERFORM CABLE INSTALLATIONS INSIDE AND OUTSIDE PLANT - Cont'd

5653.02 **Layout and create openings for cable pathways (outside plant)** by reading and interpreting drawings and specifications; identifying utility location information; visually inspecting work area; setting-up tools and equipment; laying out, drilling, coring, cutting, trenching, directional boring and auguring; selecting and using hand or powered mechanical, electrical, and electronic tools or equipment; and, working with clients, co-workers, and other tradespeople; so that openings conform to drawings and specifications, TIA-758-B, OESC, national and provincial building codes, municipal, provincial and federal legislation, job and manufacturers' specifications, and company or client site-specific standards.

(mm/dd/yy)	Trainer Print Name	Trainer Signature	◊ College of Trades I.D./CofQ # or other qualification as applicable
(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

5653.03 **Layout and install raceways, raceway supports and cable supports (inside plant)** including J-hooks, cable tray, conduit, seismic bracing, and duct by visually inspecting work area; climbing, hoisting and rigging; connecting, bolting, drilling, gluing, and boring: and, selecting and using hand tools and electrically or mechanically powered equipment; so that the installed cable supports conform to drawings and specifications, OESC, CEC, TIA-569-C, National and Provincial Building Codes, job and manufacturers' specifications, and company or client site-specific standards.

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U5653.0 PERFORM CABLE INSTALLATIONS INSIDE AND OUTSIDE PLANT - Cont'd

5653.04 **Layout and install raceways, raceway supports and cable supports (outside plant)** including cable tray, conduit, support strands, duct, poles and guy wires by visually inspecting work area; climbing, hoisting and rigging; connecting, bolting, drilling, gluing, and boring; and, selecting and using hand tools and electrically or mechanically powered equipment; so that the installed raceways conform to drawings and specifications, TIA-758-B, CSA-C22.3, OESC, CEC, national and provincial building codes, municipal, provincial and federal legislation, job and manufacturers' specifications, and company or client site-specific standards.

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5653.05 **Install pulling medium in cable pathway** including rope, string, fish rod and fish tape by: visually inspecting work space; fishing, pulling, pushing, vacuuming, and gas injecting tools; laying the pulling medium; and, selecting and using hand, electrical or mechanical tools; so that the medium is installed in cable pathway according to layout codes and standards, Occupational Health and Safety Act (OHSA), municipal, provincial and federal legislation, job and manufacturers' specifications and company or client site-specific standards.

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U5653.0 PERFORM CABLE INSTALLATIONS INSIDE AND OUTSIDE PLANTS - Cont'd

5653.06 **Select cable for installation** by determining media type including copper or optical fibre cable for type, size, length, fire rating and performance rating, ensuring that cable selected is the correct one for the application, in accordance with drawings and specifications, OESC, CEC, TIA-568-C, building codes, CSA, job and manufacturers' specifications and company or client site-specific standards.

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5653.07 **Prepare cable for installation** by visually inspecting work area and cables; performing tests using electronic equipment including copper and optical fibre testing equipment; cutting and stripping cable; tying, taping, labelling, gripping and bolting cable to pulling device; and, selecting and using hand tools so that cable is prepared for installation, according to related codes and industry standards, job and manufacturers' specifications, company or client site-specific standards.

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U5653.0 PERFORM CABLE INSTALLATIONS INSIDE AND OUTSIDE PLANTS - Cont'd

5653.08 **Install optical fibre backbone cable (Cabling Subsystem 2 and Cabling Subsystem 3) (inside plant)** by pushing and pulling; labelling cable according to selected pathways and cable supports; and, selecting and using cable stands, hand, electrical and mechanical tools, pulling lubricants, according to related codes and industry standards, job and manufacturers' specifications, and company or client site-specific standards.

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5653.09 **Install copper backbone cable (inside plant)** by pushing, pulling, tying and tugging cable; labelling cable according to selected pathway and cable supports; and, selecting and using cable stands, hand, electrical and mechanical tools and pulling lubricants, so that cable is installed, according to related codes and industry standards, job and manufacturers' specifications, and company or client site-specific standards.

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U5653.0 PERFORM CABLE INSTALLATIONS INSIDE AND OUTSIDE PLANTS - Cont'd

5653.10 **Install optical fibre horizontal cable (Cabling Subsystem 1) and copper horizontal cable (outside plant)** by pushing, pulling, tugging, ploughing and lashing cable, according to selected pathway and cable supports; and, selecting and using cable stands, hand, electrical and mechanical tools and pulling lubricants; so that cables are installed according to drawings and specifications, TIA-758-B, OESC, CEC, building codes, municipal, provincial and federal legislation, CSA-C22.3, job and manufacturers' specifications, and company or client site-specific standards.

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5653.11 **Install horizontal cables** by pushing, pulling; labelling cable; and, selecting and using cable stands, hand, electrical and mechanical tools and pulling lubricants; so that cables are installed and protected from physical damage; according to drawings and specifications, OESC, CEC, TIA-569-C & 606-B, building codes, job and manufacturers' specifications and company or client site-specific standards.

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U5653.0 PERFORM CABLE INSTALLATIONS INSIDE AND OUTSIDE PLANTS - Cont'd

5653.12 **Install firestop** including intumescent or ablative material or mechanical system by placing, pouring, spraying, injecting, bolting and compressing firestop material; documenting and labelling; selecting and using hand tools; canisters, containers and pump injectors; so that firestop is installed according to drawings and specifications, OESC, CEC, national and provincial building codes, ULC, municipal, provincial and federal legislation, CSA, job and manufacturers' specifications, and company or client site-specific standards.

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5653.13 **Dress cables** by combing, supporting and labelling cables; selecting and using hand, electrical and mechanical tools or equipment; according to manufacturers' and job specifications and industry codes and standards.

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(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

SPONSOR SIGN-OFF FOR U5653: PERFORM CABLE INSTALLATIONS INSIDE AND OUTSIDE PLANTS		
Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature

U5654.0 TERMINATE AND SPLICE CABLES INSIDE AND OUTSIDE PLANT

GENERAL PERFORMANCE OBJECTIVE

Terminate and splice inside and outside plant cables, by installing mounting equipment; dressing and labelling cables; terminating optic fibre cables; splicing optical fibre cables; terminating copper cables; splicing copper cables; soldering copper connections; installing electrical protection equipment; installing grounding and bonding system; and, cross-connecting and inter-connecting cables or equipment.

SKILLS

5654.01 Install mounting equipment (inside plant) including racks, wall mount brackets, consolidation points and cabinets by verifying clearance for size, location, openings, height and access; selecting and installing support structure; and, grounding and bonding; so that mounting equipment is installed according to drawings and specifications, TIA-569-C & 607-B, CEIS-568, NECA/BICSI-607, OESC, CEC, building and Fire Codes, job and manufacturers’ specifications and company or client site-specific standards.

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5654.02 Install mounting equipment (outside plant) including pole, mid-span and underground enclosures, cabinets and pedestals by verifying clearance for size, separation from power, location, openings, height, utility location information and access; verifying and installing support structure; attaching support hardware; and, grounding and bonding; so that mounting equipment is installed according to drawings and specifications, TIA-758-B, OESC, CEC, building codes, CSA-C22.3, job and manufacturers’ specifications, and company or client site-specific standards.

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U5654.0 TERMINATE AND SPLICE CABLES INSIDE AND OUTSIDE PLANT - Cont`d

5654.03 **Dress cables** by labelling, organizing, combing and securing cables; maintaining strain relief, bend radius and mounting equipment entry requirements; and, using fastening apparatuses including hook and loop, tie wraps, spiral wrap and banding labels; so that cables are labelled and dressed according to drawings and specifications, TIA-569-C & 606-B, job and manufacturers’ specifications and company or client site-specific standards.

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5654.04 **Terminate optical fibre cables (inside plant)** by verifying type of enclosure or termination hardware; stripping, cleaning and terminating using tools and methods according to drawing and specifications, TIA-568-C, CEIS-301, job and manufacturers’ specifications and company or client site-specific standards.

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5654.05 **Splice optical fibre cables (inside plant)** by verifying type of enclosure and splice trays; stripping, cleaning and cleaving cables; and, selecting and using crimpers, strippers, cleaners and fusion or mechanical splice systems, so that cables are spliced according to drawings and specifications, TIA-568-C, CEIS-301, job and manufacturers’ specifications and company or client site-specific standards.

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U5654.0 TERMINATE AND SPLICE CABLES INSIDE AND OUTSIDE PLANT - Cont`d

5654.06 **Terminate copper cables (inside plant)** by verifying type of termination hardware; stripping, cleaning and connecting cable to termination hardware; selecting and using ringing, sheath, crimp tools, scissors and cutters; selecting and using IDC tools; and, grounding and bonding cable; so that cables are prepared and terminated according to drawings and specifications, TIA-568-C, CEIS-568, job and manufacturers’ specifications and company or client site-specific standards.

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5654.07 **Splice copper cables (inside plant)** by verifying type of enclosure and splice modules; stripping, cleaning and connecting cable to splicing hardware; and, grounding and bonding cable; selecting and using ringing, sheath and crimp tools, scissors and cutters; and, selecting and using IDC tools; so that copper cables are spliced according to drawings and specifications, TIA-568-C, CEIS-568, job and manufacturers’ specifications and company or client site-specific standards.

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U5654.0 TERMINATE AND SPLICE CABLES INSIDE AND OUTSIDE PLANT - Cont`d

5654.08 **Terminate optical fibre cables (outside plant)** by verifying type of enclosure or termination hardware; stripping, cleaning and terminating using tools and methods, tents, heaters, gas sniffers and air exchangers; so that cables are terminated according to drawings and specifications, TIA-758-B, CSA-C22.3, job and manufacturers’ specifications and company or client site-specific standards.

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5654.09 **Splice optical fibre cables (outside plant)** by verifying type of enclosure or termination hardware; stripping, cleaning and terminating using tools and methods, fusion or mechanical splice systems, injection tools, tents, heaters, gas sniffers and air exchangers; so that cables are spliced according to drawings and specifications, TIA-758-B, CSA-C22.3, job and manufacturers’ specifications and company or client site-specific standards.

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U5654.0 TERMINATE AND SPLICE CABLES INSIDE AND OUTSIDE PLANT - Cont`d

5654.10 Terminate copper cables (outside plant) by verifying type of termination hardware; stripping, cleaning and connecting to termination hardware; encapsulating; grounding and bonding cables; and, selecting and using ringing, sheath and crimp tools, injection tools, scissors, cutters, IDC tools, tents, heaters, gas sniffers and air exchangers; so that cables are prepared and terminated according to drawings and specifications, TIA-758-B, CSA-C22.3, job and manufacturers' specifications and company or client site-specific standards.

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5654.11 Splice copper cables (outside plant) by verifying type of enclosure and splice modules; stripping, cleaning, and connecting to splicing hardware; encapsulating; grounding and bonding cables; and, selecting and using ringing, sheath and crimp tools, injection tools, scissors, cutters, IDC tools, tents, heaters, gas sniffers and air exchangers; so that cables are prepared and spliced according to drawings and specifications, TIA-758-B, CSA-C22.3, job and manufacturers' specifications and company or client site-specific standards.

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U5654.0 TERMINATE AND SPLICE CABLES INSIDE AND OUTSIDE PLANTS - Cont'd

5654.12 Solder copper connections by selecting the type of solder, insulation and connection type including T, butt and inline; cleaning and burning posts or connections; cleaning, stripping and tinning wire; maintaining bond to ground continuity; and, selecting and using heat shrink, tape, solder wire, wire wrap, soldering gun or iron, cleaners and heat gun, so that copper is prepared and soldered according to drawings and specifications, job and manufacturers' specifications and company or client site-specific standards.

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5654.13 Install electrical protection equipment by selecting and mounting primary and secondary protection equipment including gas tubes, solid state and carbon, using splicing or direct termination techniques; so that electrical protection equipment is installed according to drawings and specifications, NECA/BICSI 607, TIA-607-B, OESC, CEC, job and manufacturers' specifications and company or client site-specific standards.

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(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

U5654.0 TERMINATE AND SPLICE CABLES INSIDE AND OUTSIDE PLANTS - Cont'd

5654.14 **Ground and bond splices, pathways, racks, cabinets, cables and electrical protection equipment** to the nearest telecommunications grounding busbar or other approved grounding point; installing and connecting bonding conductors to equipment according to drawings and specifications, NECA/BICSI 607, TIA-607-B, OESC, CEC, job and manufacturers' specifications and company or client site-specific standards.

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5654.15 **Cross-connect and inter-connect cables or equipment** by identifying and selecting media, ports and termination fields; routing patch cables through cable management systems; terminating cross-connection wire and patch cords; and, maintaining bond to ground continuity; so that connection is completed according to drawings and specifications, codes, related legislation, TIA-568-C, job and manufacturers' specifications and company or client site-specific standards.

(mm/dd/yy)	Trainer Print Name	Trainer Signature	◊ College of Trades I.D./CofQ # or other qualification as applicable
(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

SPONSOR SIGN-OFF FOR U5654: TERMINATE AND SPLICE CABLES INSIDE AND OUTSIDE PLANT		
Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature

U5655.0 PERFORM LABELLING, TESTING AND DOCUMENTATION

GENERAL PERFORMANCE OBJECTIVE

Perform labelling, testing and documentation by labelling cabling system; testing multipair copper cable equipment; testing coaxial cable system; testing balanced twisted pair cable systems; testing optical fibre cable system; testing wireless system; performing final inspection; and, completing field documentation.

SKILLS

5655.01 **Label cable system** by placing mechanically printed labels on system components including mounting equipment, equipment outlet and distribution cable ends, termination hardware, inter-connect cables, raceways and pathways, so that cable system is labelled according to drawings and specifications, TIA-606-B, job and manufacturers’ specifications and company or client site-specific standards.

(mm/dd/yy)	Trainer Print Name	Trainer Signature	◊ College of Trades I.D./CofQ # or other qualification as applicable
(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

5655.02 **Test multipair copper cables** by connecting cables using test equipment including multimeters, continuity testers, breakout box testers and, cable scanners which are certified and are calibrated within manufacturers’ specifications; and interpreting, verifying and documenting test results; so that tests are completed and verified according to TIA-568-C, job and manufacturers’ specifications and company or client site-specific standards.

(mm/dd/yy)	Trainer Print Name	Trainer Signature	◊ College of Trades I.D./CofQ # or other qualification as applicable
(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

U5655.0 PERFORM LABELLING, TESTING, AND DOCUMENTATION - Cont`d

5655.03 **Test coaxial cable system** by selecting and using test equipment including cable scanners, TDRs and multimeters which are certified and are calibrated within manufacturers’ specifications; and interpreting, verifying and documenting test results to verify operation of cable system according to TIA-568-C, drawings and specifications, job and manufacturers’ specifications and company or client site-specific standards.

(mm/dd/yy)	Trainer Print Name	Trainer Signature	◊ College of Trades I.D./CofQ # or other qualification as applicable
(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

5655.04 **Test balanced twisted pair cable system** by selecting and using copper cable test equipment including wire map devices, cable scanners and TDRs which are certified and is calibrated within manufacturers’ specifications; interpreting, verifying and documenting test results, to verify operation of cable systems according to drawings and specifications, TIA-568-C, job and manufacturers’ specifications and company or client site-specific standards.

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(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

U5655.0 PERFORM LABELLING, TESTING, AND DOCUMENTATION - Cont`d

5655.05 **Test optical fibre cable system** by selecting and using optical fibre test equipment including optical power sources, optical power meters, fibre identifiers and OTDRs which are certified and are calibrated within manufacturers’ specifications and, interpreting, verifying and documenting test results, to verify operation of cable systems, according to drawings and specifications, TIA-526-7 & 526-14-B, job and manufacturers’ specifications and company or client site-specific standards.

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(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

5655.06 **Test wireless system** by selecting and using wireless test equipment including spectrum analysers, base station analysers, RF watt meters, RF cable and antenna test equipment which are certified and are calibrated within manufacturers’ specifications and, interpreting, verifying and documenting test results, to verify operation of wireless systems, according to drawings and specifications, Institute of Electrical and Electronics Engineers (IEEE), job and manufacturers’ specifications and company or client site-specific standards.

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U5655.0 PERFORM LABELLING, TESTING, AND DOCUMENTATION - Cont`d

5655.07 **Perform final inspection** by walking through the installation with supervisor or client authority; resolving deficiencies; and, verifying that systems are labelled, tested and documented; according to drawings and specifications, TIA-526-7, 526-14, 568-C, 569-C, 606-B, 607-B & 758-B, OESC, CEC, IEEE, CEIS-301, 568, NECA/BICSI 607, CSA, NFC, national and provincial building codes, job and manufacturers’ specifications and company or client site-specific standards.

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(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

5655.08 **Complete field documentation** including cable records, test documents, as-built information, work orders, change orders, equipment records, firestop records, inspection data and company-specific documents, ensuring that all data is recorded; according to drawings and specifications, TIA-606-B, job and manufacturers’ specifications and company or client site-specific standards.

(mm/dd/yy)	Trainer Print Name	Trainer Signature	◊ College of Trades I.D./CofQ # or other qualification as applicable
(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

SPONSOR SIGN-OFF FOR U5655: PERFORM LABELLING, TESTING AND DOCUMENTATION		
Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature

U5656.0 PERFORM NETWORKING INSTALLATION

GENERAL PERFORMANCE OBJECTIVE

Perform networking installation by identifying and documenting the client’s current network architecture and physical topology; identifying, placing or mounting pre-determined networking equipment; connecting networking equipment, and, identifying, selecting, installing, configuring and testing networking hardware and components.

SKILLS

5656.01 Identify the client’s current network architecture and physical topology for voice, data, video and wireless legacy, and current systems including star, bus, ring and wireless topology.

(mm/dd/yy)	Trainer Print Name	Trainer Signature	◊ College of Trades I.D./CofQ # or other qualification as applicable
(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

5656.02 Identify, place or mount pre-determined networking equipment including, routers, switches, servers, modems, media filters, baluns, Voice over Internet Protocol (VoIP) phone, Power over Ethernet (PoE), and other Internet Protocol (IP) devices, wireless components including Distributed Antenna System (DAS), Point to Point and Wireless Access Point (WAP), and Private Branch eXchange (PBX), by placing, bonding, fastening, support structure or equipment to ground according to drawings and specifications, OESC, CEC, TIA-569-C, Electronic Industry Alliance (EIA) CSA, IEEE, job and manufacturers’ specifications, and company or client site-specific standards.

(mm/dd/yy)	Trainer Print Name	Trainer Signature	◊ College of Trades I.D./CofQ # or other qualification as applicable
(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

U5656.0 PERFORM NETWORKING INSTALLATION - Cont`d

5656.03 **Connect networking equipment** including, routers, switches, servers, modems, media filters, baluns, Voice over Internet Protocol (VoIP) phone, Power over Ethernet (PoE), and other Internet Protocol (IP) devices, wireless components including Disturbed Antenna System (DAS), Point to Point and Wireless Access Point (WAP), and Private Branch eXchange (PBX), by cross-connecting, inter-connecting and patching; so that hardware and components are installed according to drawings and specifications, OESC, CEC, TIA-568-C, EIA, Canadian Standards Association (CSA), IEEE, job and manufacturers' specifications, and company or client site-specific standards.

(mm/dd/yy)	Trainer Print Name	Trainer Signature	◊ College of Trades I.D./CofQ # or other qualification as applicable
(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

5656.04 **Configure and test networking hardware and components** including voice, data, video and wireless systems, to ensure that the overall system is performing according to client requirements; job and manufactures' specifications and industry codes and standards.

(mm/dd/yy)	Trainer Print Name	Trainer Signature	◊ College of Trades I.D./CofQ # or other qualification as applicable
(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

SPONSOR SIGN-OFF FOR U5656: PERFORM NETWORKING INSTALLATION		
Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature

U5657.0 TROUBLESHOOT CABLE SYSTEM

GENERAL PERFORMANCE OBJECTIVE

Troubleshoot cable systems/hardware by identifying and repairing multipair copper cable system, coaxial cable system, balanced twisted pair system, optical fibre cable and wireless system faults.

SKILLS

5657.01 Identify and repair multipair copper cable system faults by identifying symptoms with client and visually inspecting system by selecting and using test equipment including multimeters, continuity testers, breakout box testers and cable scanners which are certified and are calibrated within manufacturers’ specifications; interpreting data; taking corrective actions including replacing, adjusting, or reconfiguring cabling system components; interpreting, verifying and documenting test results to verify operation of cable systems; and update documentation, according to drawings and specifications, TIA-568-C, CSA, job and manufacturers’ specifications and company or client site-specific standards.

(mm/dd/yy)	Trainer Print Name	Trainer Signature	♦ College of Trades I.D./CofQ # or other qualification as applicable
(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

5657.02 Identify and repair coaxial cable system faults by identifying symptoms with client and visually inspecting system; selecting and using test equipment including cable scanners, TDRs and multimeters which are certified and are calibrated within manufacturers’ specifications; interpreting data; taking corrective action including replacing, adjusting, or reconfiguring coaxial cabling system components; verifying and documenting test results to verify operation of cable system; and updating documentation according to, TIA-568-C, drawings and specifications, job and manufacturers’ specifications and company or client site-specific standards.

(mm/dd/yy)	Trainer Print Name	Trainer Signature	♦ College of Trades I.D./CofQ # or other qualification as applicable
(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

U5657.0 TROUBLESHOOT CABLE SYSTEM - Cont`d

5657.03 **Identify and repair balanced twisted pair cable system faults** by identifying symptoms with client and visually inspecting system by selecting and using copper cable test equipment including wire map devices, tone generators (toner) and inductive amplifiers, cable scanners and TDRs which are certified and are calibrated within manufacturers’ specifications; interpreting data; taking corrective action including replacing, adjusting, or reconfiguring balanced twisted pair cable system components; verifying and documenting test results to verify operation of cable systems; and updating documentation according to drawings and specifications, TIA-568-C, job and manufacturers’ specifications and company or client site-specific standards.

(mm/dd/yy)	Trainer Print Name	Trainer Signature	◊ College of Trades I.D./CofQ # or other qualification as applicable
(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

5657.04 **Identify and repair optical fibre cable system faults** by identifying symptoms with client and visually inspecting system selecting and using optical fibre test equipment including optical power sources, optical power meters, which are certified and are calibrated within manufacturers’ specifications; interpreting data; taking corrective action including replacing, adjusting, or reconfiguring optical fibre system components; verifying and documenting test results to verify operation of cable system; and updating documentation according to drawings and specifications, TIA-526-7, 526-14-B & 568-C, job and manufacturers’ specifications and company or client site-specific standards.

(mm/dd/yy)	Trainer Print Name	Trainer Signature	◊ College of Trades I.D./CofQ # or other qualification as applicable
(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

U5657.0 TROUBLESHOOT CABLE SYSTEM - Cont`d

5657.05 **Identify and repair wireless system faults** by identifying symptoms with client and visually inspecting system using wireless test equipment including spectrum analysers, base station analysers, RF watt meters, RF cable and antenna test equipment which are certified and are calibrated within manufacturers' specifications; interpreting data; taking corrective action including replacing, adjusting, or reconfiguring wireless system components; verifying and documenting test results to verify operation of wireless system and update documentation according to drawings and specifications, IEEE, job and manufacturers' specifications and company or client site-specific standards.

(mm/dd/yy)	Trainer Print Name	Trainer Signature	♦ College of Trades I.D./CofQ # or other qualification as applicable
(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

SPONSOR SIGN-OFF FOR U5657: TROUBLESHOOT CABLE SYSTEM		
Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature

U5658.0 DEVELOP AND MAINTAIN POSITIVE CLIENT RELATIONS

GENERAL PERFORMANCE OBJECTIVE

Develop and maintain positive client relations by communicating verbally and in writing with clients and co-workers; and, resolving conflicts.

SKILLS

5658.01 Communicate verbally with clients and co-workers by listening attentively; paraphrasing ideas and statements; asking open- and closed-ended questions; using common trade or plain language; explaining processes and ideas in a clear, concise and positive manner; and, referring clients to other trade professional services to meet client needs, in accordance with company and client site-specific standards.

(mm/dd/yy)	Trainer Print Name	Trainer Signature	◊ College of Trades I.D./CofQ # or other qualification as applicable
(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

5658.02 Perform written communication skills by writing legibly; paraphrasing ideas and statements; preparing documents; providing accurate details; using common trade or plain language; explaining processes and ideas; completing all required information on documents; and, referring clients to other trade professional services to meet client’s needs; ensuring that all written documents are clear, concise and legible, client confidentially is maintained and awareness of the sensitivity of electronic documents, including e-mail etiquette, according to company or client site-specific standards.

(mm/dd/yy)	Trainer Print Name	Trainer Signature	◊ College of Trades I.D./CofQ # or other qualification as applicable
(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

U5658.0 DEVELOP AND MAINTAIN POSITIVE CLIENT RELATIONS - Cont`d

5658.03 **Resolve conflicts** by recognizing an escalating situation; remaining calm; asking questions; restating concerns; focusing on resolving the problem; offering options to the client; and, preparing a written report for referral to management; so that conflict is clarified, solutions are recommended, and management is aware of problem, according to company standards.

(mm/dd/yy)	Trainer Print Name	Trainer Signature	♦ College of Trades I.D./CofQ # or other qualification as applicable
(mm/dd/yy)	Apprentice Print Name	Apprentice Signature	College of Trades ID

SPONSOR SIGN-OFF FOR U5658: DEVELOP AND MAINTAIN POSITIVE CLIENT RELATIONS		
Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature

NETWORK CABLING SPECIALIST TRAINING STANDARD GLOSSARY

ablative	The development of a hard char within a firestop system that resists the erosion of fire and flame.
as-built	A set of drawings reflection the work done on a project after completion.
attenuation	The decrease in magnitude of a signal as it travels through a medium, usually expressed at a specific frequency in decibels (dB).
augur	A corkscrew shaped device, available in varying sizes, used to bore into soil or aggregates.
backbone cable	A cable that provides interconnections between telecommunications rooms and equipment rooms within or exterior to buildings.
balanced	A cable system containing symmetrical cable elements.
balun	A circuit-coupling device used to convert from a balanced to and unbalanced transmission.
bend radius	The maximum that a cable may be bent without adversely affecting its electrical or optical characteristics of transmission properties.
BICSI®	Building Industry Consulting Services International - An international telecommunications association for cabling distribution designers, as well as commercial and residential installers.
Buffer Tube	A loose fitting cover over an optical fibre in loose tube fibre cable construction to provide protection and isolation.
cable grip	A device consisting of a fabric sock or weaved wire mesh tube that fits over the end of a cable or group of cables to facilitate pulling.
cable tie	A plastic tying device that encircles a cable or group of cables to securely fasten them together or to another object.
cable tray	A supporting raceway that is open on the top allowing electrical or communication cable to be placed inside.
carbon protection	(See Protector)
CEC	Canadian Electrical Code

certification tester	A cable-testing device that tests the performance of the combined cabling components within a cabling system according to predetermined specifications and standards.
coaxial cable	An unbalanced cable consisting of a centre conductor separated from an outer conductive sheath by an insulating material.
conduit	Plastic or metallic pipe used for protection and installation of electrical and telecommunication cable and wires.
confined workspace	a fully or partially enclosed space, (a) that is not designed and constructed for continuous human occupancy, and (b) in which atmospheric hazards may occur because of its construction, location or contents, or because of work that is done in it.
continuity tester	A tester that proves that an electrical conductor is continuous without a break.
combing	The process of separating and arranging a group of cables into a neat symmetrical bundle without tangles or twists.
coring	The process of drilling, especially through concrete, with a round hollow bit that removes a slug of material from the hole.
cleaving	The process of cutting a fibre optic strand.
crimper	A compression tool used for attaching connectors on various types of cable.
cross-connection	A connection method using jumpers and patching cords to connect different cable elements together.
CSA	Canadian Standards Association.
CEIS	Canadian Electrical Installation Standard.
DAS	Distributed Antenna System.
deficiencies	A list detailing the items that are required to be fixed or completed on a job.
directional boring	The process of drilling horizontally or vertically through soil to create a pathway for cables or conduits.

duct	An enclosed raceway or conduit usually encased in concrete or soil used as a pathway for telecommunication cables or electrical conductors.
EIA	Electronic Industry Alliance
encapsulant	A permanent or removable filling compound for a splice enclosure used to prevent water intrusion.
Ethernet	A LAN protocol using a logical bus structure and carrier sense multiple access with collision detection.
Fan-out	An assembly used to increase the effective outer diameter of strands within an optical fibre cable to enable connector termination.
firestop system	An approved group of components, that when combined, restore the fire protective nature of a building assembly, especially around cables or openings.
furcation tube	A flexible tube used to increase the effective outer diameter of coated optical fibre strands to enable connectorization and provide physical protection.
fusion splicing	The process of using a controlled electrical arc to melt together two strands of optical fibre into one homogeneous strand.
Gas sniffers	A device used to sample and analyse air quality.
gas tube protection	(See protector).
IDC	Insulation displacement connector - A type of wire termination in which the connector cuts through the conductor's insulation to make contact.
IEEE	Institute of Electrical and Electronics Engineers, Inc.
intumescent	A material that will enlarge or expand upon exposure to heat.
J-hook	A supporting device resembling a "J" that is used for the support of cables.
Lightsource	Using a calibrated light source at one end and a light metre at the other.
mechanical splicing	A method of connecting two optical fibre strands together, using a mechanism containing index-matching gel to insure optical continuity.

modem	Modulator-Demodulator. A device that converts between digital and analogue signals for transmission over various networks.
MSDS	Material Safety Data Sheet
Multi-meter	A measuring device that tests various electrical properties of a conductor.
NECA	National Electrical Contractors Association
NFCC	National Fire Code of Canada
OHSA	Occupational Health and Safety Association
OESC	Ontario Electrical Safety Code
optical fibre	A transmission medium composed of a strand of glass or plastic that carries pulses of light.
Optical Powermeter	Test equipment that measures the optical power loss in a system.
optical fibre link loss	The amount of light lost when transmitting over the entire length of medium, measured in dB.
OTDR	Optical Time Domain Reflectometer, an instrument that measures transmission characteristics of fibre by measuring backscatter and reflection of inserted light as a function of time.
PBX	Private Branch eXchange.
pedestal	An enclosure or cabinet used in outside environments.
plenum	A space used as part of an air distribution system within a building.
punch down tools	A specialised tool used for terminating wires in IDCs.
PoE	Power over Ethernet
powder-actuated fastening tools	A tool using explosive powder to drive pins of fasteners into a substrate.
primary protector	See protector.

protector	A device that limits overvoltage (primary) or overcurrent (secondary) on telecommunications conductors using fuse links, carbon blocks, gas tubes or solid-state devices.
raceway	Any enclosed channel approved for the installation of electrical or telecommunication cables or conductors.
router	A network device that connects networks having dissimilar communication protocols.
solid-state protector	See Protector.
splice tray	A tray used to support and protect spiced fibre optic strands.
splicing	The process of joining cables or wires to ensure electrical or optical continuity.
switch	A device that makes connections between numerous network devices simultaneously.
TDR	time domain reflectometer.
Telecommunications Room	An enclosed room used for the housing of telecommunications equipment, horizontal cable terminations, backbone cable terminations and cross connects.
termination field	An area or space that serves as the connection point for cables.
TIA	Telecommunications Industry Association.
tone generator	A testing device that transmits a tone over a cable. Used with an inductive amplifier for identification or tracing cables.
topology	The physical or logical layout of a communications connection path.
UCL	Underwriters Laboratories of Canada
VoIP	Voice over Internet Protocol
WAP	Wireless Access Point
WHMIS	Workplace Hazardous Materials Information System

DEFINITIONS

Apprentices Class

Individuals in this class:

- Hold one or more valid Registered Training Agreements with the Ministry of Training, Colleges and Universities in either compulsory or voluntary trades;
- Hold a valid statement of membership with the Ontario College of Trades in the Apprenticeship class;
- Are subject to any ratios or wage rates that have been set out in regulation for their trade(s);
- Can remain in this class until they receive their Certificate of Apprenticeship;
- Can hold themselves out as Apprentices.

Certificate of Apprenticeship (C of A)

A certificate issued by the Minister of Training, Colleges and Universities to individuals who have demonstrated that they have completed an apprenticeship program in Ontario.

Certificate of Qualification (C of Q)

A certificate issued by the Registrar on behalf of the College of Trades to a Journeyperson. A Certificate of Qualification will serve as proof of having met any testing/program requirements and membership in the College's Journeypersons Class.

Competence

The ability of an individual to perform a skill repeatedly and without assistance in the workplace as set out in the Log Book.

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.

Competent Person

A competent person is defined by the *Occupational Health and Safety Act* as being a person who:

- Is qualified because of their knowledge, training and experience to organize the work and its performance;
- Is familiar with the *Occupational Health and Safety Act* and its regulations that apply to the work; and has knowledge of any potential or actual danger to health or safety in the workplace.

Competent Worker

A competent worker is defined by the *Occupational Health and Safety Act* as being a person who:

- Is qualified because of knowledge, training and experience to perform the work;
- Is familiar with the *Occupational Health and Safety Act* and with the provisions of the regulations that apply to the work; and
- Has knowledge of all potential or actual danger to health or safety in the work.

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 approved established by the College of Trades.

Sponsor of Record

Refers to the Sponsor documented as being signatory to the current training agreement or contract. In order for a Sponsor to be considered for the training of Apprentices, they must identify that the workplace has qualified Journeypersons 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.

Incompetence

According to the *Ontario College of Trades and Apprenticeship Act, 2009*, a member of the College of Trades may be found to be incompetent by the College Of Trades Discipline Committee if the Committee feels that the member has displayed a lack of knowledge, skill or disregard for another person's welfare while practising their trade. If this happens, the individual may be found unfit to practise their trade and their Statement of Membership/Certificate of Qualification may be revoked, suspended, or be subject to terms, conditions or limitations.

Journeyperson

Compulsory Trades Journeyperson:

- Someone who holds a valid Certificate of Qualification in the trade and who is a member in good standing of the College of Trades Journeypersons Class for the same trade; or
- Someone who holds a valid Provisional Certificate of Qualification in the trade and who is a member in good standing of the College of Trades Journeypersons Class for the same trade.

Voluntary Trades Journeyperson:

- Someone who holds a valid Certificate of Qualification in the trade and who is a member in good standing of the College of Trades Journeypersons Class for the same trade; or
- Someone who holds a Certificate of Qualification in the trade that was issued by the Ministry of Training, Colleges and Universities prior to April 8, 2013 (membership in the College of Trades is not required in this scenario).

Journeyperson Candidates Class

An individual who has completed an Ontario apprenticeship program (Certificate of Apprenticeship) in a voluntary or compulsory trade that has a Certificate of Qualification examination, but has not passed the Certificate of Qualification examination for their trade. There is a maximum time limit of one year to remain in the Journeyperson Candidates Class.

Are subject to any ratios and/or wage rates that have been set out for their trade(s), if they practise a compulsory trade.

Can continue to work legally in their trade if they are in a compulsory trade, as they prepare to write their examination (individuals in voluntary trades do not have to be members of the College of Trades to work legally); and can hold themselves out as Journeyperson Candidates (they are neither Apprentices nor Journeypersons).

Can remain in this class for a maximum of one year or until they pass the Certificate of Qualification exam and become members of the Journeypersons class. However, they can only remain in this class for a maximum of one year. After one year they can move into the Tradespersons Class if they are in a voluntary trade. If they are in a compulsory trade and have been in the Journeyperson Candidates Class for one year, they can no longer work legally in that trade until they pass the Certificate of Qualification examination.

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.

OCTAA

Ontario College of Trades and Apprenticeship Act, 2009

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.

Ratios

For up to date information regarding Journeyperson to Apprentice ratios, please visit: www.collegeoftrades.ca

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 successfully completing 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 skill described in the Log Book (note: does not mean the larger skill groups referred to in the Log Book as Skill Sets, Training Units, or General Performance Objectives, but the individual skills that make up those groups).

Skill Sets

Group of individual skills found in the Log Book (may also be called Training Unit or General Performance Objective).

Skill Set Completion for Sponsors

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

Supervisor

An individual who oversees the performance of a task and oversees the actions or work of others.

Trade Board

Under the *Ontario College of Trades and Apprenticeship Act, 2009*, the [College of Trades Appointments Council](#) (COTAC) may appoint a Trade Board for each designated trade, composed of Employee and Employer representatives from the industry. Trade Boards are responsible for advising and making recommendations to the College of Trades Divisional Boards on issues relating to their trade. When there is no appointed trade board for a trade, the respective sector Divisional Board will act as the default Trade Board for the trade.

Tradespersons Class

A Class of Membership for individuals who practise in a voluntary trade which may or may not have a Certificate of Qualification examination.

Individuals in this class:

Have been members of the Journeyperson Candidates Class or are not eligible for Journeyperson Candidates Class and have been assessed to have experience and/or qualifications that are equivalent to a Certificate of Apprenticeship in that trade

- Are preparing to write/have no plans to write/have not passed the available Certificate of Qualification exam for their trade(s);
- Can remain in this class indefinitely or until they pass the available Certificate of Qualification exam for their trade(s); and
- Can hold themselves out as tradespersons (they are neither apprentices nor journeypersons).

Note: Individuals in the Tradespersons Class are considered Journeypersons for the purpose of determining ratios for that trade.

Trainer

A qualified Trainer in a compulsory trade is a Journeyperson with a Certificate of Qualification. In a voluntary trade, a Trainer is an individual who is considered equivalent to a Journeyperson with a Certificate of Qualification.

In this trade a trainer must be competent in the skill, but it is not mandatory to be a member of the College of Trades or have a Certificate of Qualification (CofQ).

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 join the Journeypersons' class of members at the Ontario College of Trades 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: www.red-seal.ca

You will write an Ontario-only examination when your trade is not designated as Red Seal trade in Ontario.

Ontario's Exam Preparation Guide

www.collegeoftrades.ca

Basic Examination Details for You to Know

You will have **up to four hours to write your examination**. If you need more time, you must ask for it when you schedule the examination, not on the day of your examination. You can leave the examination centre if you complete the examination in less than four hours.

You need a mark of 70% to pass.

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.

Scheduling Your Examination

The examination scheduling process is currently outlined in detail on the College of Trades website: www.collegeoftrades.ca

Remember these 3 basic steps:

1. Confirm your eligibility to write the examination with the College of Trades.
2. Contact Client Services at the College of Trades to pay your examination fee.
3. Contact the local Ministry apprenticeship office to schedule your examination in their examination centre: <http://services.findhelp.ca/eo/tcu/appoff>

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 Ministry of Training, Colleges and Universities Apprenticeship Office immediately to update your sponsor record.
3. Please make sure you do record all of 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 #	
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.	

RECORD OF SKILL ATTAINMENT

SKILL I.D. # (e.g. UXXXX)	SPONSOR NAME	SPONSOR SIGNATURE	DATE: (mm/dd/yy)

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

****If you need additional copies of the Sponsor Record, please photocopy as needed or visit www.collegeoftrades.ca and search Sponsor Record Form.***

SPONSOR RECORD #1 CONTINUED

SKILL I.D. # (e.g. UXXXX)	SPONSOR NAME	SPONSOR SIGNATURE	DATE: (mm/dd/yy)

CHANGE OF SPONSOR RECORD #2

SPONSOR INFORMATION	
Apprentice Name	
Registered Training Agreement #	
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.	

RECORD OF SKILL ATTAINMENT

SKILL I.D. # (e.g. UXXXX)	SPONSOR NAME	SPONSOR SIGNATURE	DATE: (mm/dd/yy)

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

****If you need additional copies of the Sponsor Record, please photocopy as needed or visit www.collegeoftrades.ca and search Sponsor Record Form.***

CHANGE OF SPONSOR RECORD #3

SPONSOR INFORMATION	
Apprentice Name	
Registered Training Agreement #	
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.	

RECORD OF SKILL ATTAINMENT

SKILL I.D. # (e.g. UXXXX)	SPONSOR NAME	SPONSOR SIGNATURE	DATE: (mm/dd/yy)

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

****If you need additional copies of the Sponsor Record, please photocopy as needed or visit www.collegeoftrades.ca and search Sponsor Record Form.***

CHANGE OF SPONSOR RECORD #4

SPONSOR INFORMATION	
Apprentice Name	
Registered Training Agreement #	
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.	

RECORD OF SKILL ATTAINMENT

SKILL I.D. # (e.g. UXXXX)	SPONSOR NAME	SPONSOR SIGNATURE	DATE: (mm/dd/yy)

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

****If you need additional copies of the Sponsor Record, please photocopy as needed or visit www.collegeoftrades.ca and search Sponsor Record Form.***

CHANGE OF SPONSOR RECORD #5

SPONSOR INFORMATION	
Apprentice Name	
Registered Training Agreement #	
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.	

RECORD OF SKILL ATTAINMENT

SKILL I.D. # (e.g. UXXXX)	SPONSOR NAME	SPONSOR SIGNATURE	DATE: (mm/dd/yy)

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

****If you need additional copies of the Sponsor Record, please photocopy as needed or visit www.collegeoftrades.ca and search Sponsor Record Form.***

INSTRUCTIONS FOR APPRENTICESHIP PROGRAM COMPLETION (Appendix A)

Once an Apprentice has completed all the classroom training and hours specified for the trade, and have acquired all the mandatory skills included in this Log Book:

1. The Apprentice and the Sponsor complete the Apprentice Completion Form and the Skill Set Completion for Sponsors Form located on the following pages.
2. They sign the forms and submit them to their local Ministry of Training, Colleges and Universities apprenticeship office. (To find the closest office, check the contact information at <http://services.findhelp.ca/eo/tcu/appoff> or call the Employment Ontario toll free number at (1-800-387-5656).
3. Since this trade is competency based, all mandatory skills in the training standard must be signed off. If the Sponsor is completing the Apprentice before the industry recommended training hours are done, Ministry staff may request further information regarding the Apprentice's on-the-job training. An example of a request would be a letter from the Sponsor confirming the Apprentice worked for some time in the trade before the initial Training Agreement was registered, thereby acquiring some skills beforehand.

If Apprentices are submitting the completion request form and supporting documentation to their local Ministry of Training, Colleges and Universities apprenticeship office by mail, fax, or email (as a scanned document), they should not include their training standard; if they are presenting this form in person at the local apprenticeship office, they should bring their training standard with them.

After Ministry 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 Ministry will issue a Certificate of Apprenticeship to the Apprentice.

The Ontario College of Trades will receive notification of this completion, and complete the individual's membership in the Apprentices class for the trade. If the Apprentice has completed a program in a compulsory trade, the College of Trades will automatically register the Apprentice as a member of the Journeyperson Candidates class so the Apprentice can continue to work legally for one year while preparing for the certification examination. If an apprentice completes their apprenticeship in a voluntary trade **and** there is no Certificate of Qualification exam, they can apply for membership in the Journeypersons Class at the Ontario College of Trades. If there is a Certificate of Qualification exam, they must write and pass the exam in order to enter the Journeypersons Class at the Ontario College of Trades.

For permission to schedule an exam once completion is confirmed by the Ministry, the individual must first contact the College's Client Services Department at 647-847-3000 or toll free at 1-855-299-0028 to pay the certification examination fee.

APPRENTICE COMPLETION FORM (Appendix B)

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 Ministry of Training, Colleges and Universities apprenticeship office (find contact information at <http://services.findhelp.ca/eo/tcu/appoff> or by calling Employment Ontario at 1-800-387-5656).

APPRENTICE INFORMATION	
Name (print)	
Client ID # Issued by Ministry	
Telephone Number(s)	

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

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

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

X _____
Apprentice's signature Date

X _____
Signature of Sponsor's Signing Authority Date

SKILL SET COMPLETION FOR SPONSORS (Appendix C)

You will find the skill set numbers and titles in the Training Standard'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
U5651.0	Protect Self and Others	
U5652.0	Plan and Prepare for Installations	
U5653.0	Perform Cable Installations Inside and Outside Plant	
U5654.0	Terminate and Splice Cables Inside and Outside Plant	
U5655.0	Perform Labelling, Testing, and Documentation	
U5656.0	Perform Networking Installation	
U5657.0	Troubleshoot Cable System	
U5658.0	Develop and Maintain Positive Client Relations	

MINISTRY OF TRAINING, COLLEGES AND UNIVERSITIES USE ONLY:

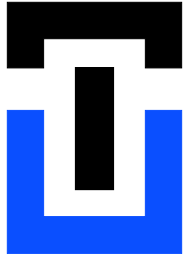
Sponsor verified as most recent sponsor of record: Yes () No ()
 Documentation to support completion of hours attached: Yes () No ()
 Completion of classroom training verified: Yes () No ()

Staff Name _____ Signature _____ Date _____

**MINISTRY OF TRAINING, COLLEGES AND UNIVERSITIES
APPRENTICESHIP OFFICES IN ONTARIO (Appendix D)**

Location	Contact	Location	Contact
Barrie 705-737-1431	55 Cedar Pointe Dr Unit 609, Barrie, ON L4N 5R7	North Bay 705-495-8515	200 First Ave West, North Bay, ON P1B 3B9
Belleville 613-968-5558	135 North Front St, Belleville, ON K8P 3B5	Ottawa 613-731-7100	Preston Square, 347 Preston St 3rd Flr, Ottawa, ON K1S 3H8
Brantford 519-756-5197	505 Park Rd North Suite 201, Brantford, ON N3R 7K8	Owen Sound 519-376-5790	1450 1st Ave West Suite 100, Owen Sound, ON N4K 6W2
Chatham 519-354-2766	870 Richmond St West 1st Floor, Chatham, ON N7M 5J5	Pembroke 613-735-3911	615 Pembroke St East, Pembroke, ON K8A 3L7
Cornwall 613-938-9702	132 Second St East Ste 202, Cornwall, ON K6H 1Y4	Peterborough 705-745-1918	901 Lansdowne St West, Peterborough, ON K9J 1Z5
Dryden 807-223-4632	Provincial Government Building, 479 Government St, Dryden, ON P8N 3K9	Pickering (City of) 905-837-7721	1420 Bayly St Unit 1, Pickering, ON L1W 3R4
Elliot Lake 705-848-4661	50 Hillside Dr North, Elliot Lake, ON P5A 1X4	Sarnia 519-542-7705	Bayside Mall, 150 Christina St North, Sarnia, ON N7T 7W5
Fort Frances 807-274-8634	922 Scott St 2nd Flr, Fort Frances, ON P9A 1J4	Sault Ste. Marie 705-945-6815	477 Queen St East 4th Flr, Sault Ste Marie, ON P6A 1Z5
Hamilton Central 905-521-7764	Ellen Fairclough Bldg, 119 King St West 8th Flr, Hamilton, ON L8P 4Y7	St Catharines 905-704-2991	Garden City Tower, 301 St Paul St 10th Flr, St Catharines, ON L2R 7R4
Kapuskasing 705-337-4381	Ontario Government Complex, 122 Government Rd West, Kapuskasing, ON P5N 2X8	Sudbury 705-564-3030	159 Cedar St Ste 506, Sudbury, ON P3E 6A5
Kenora 807-468-2879	227 1/2 Second St South, Kenora, ON P9N 1G4	Thunder Bay 807-346-1550	189 Red River Rd Suite 103, Thunder Bay, ON P7B 1A2
Kingston 613-548-1151	Cornell Corporate Centre, 299 Concession St Ste 201, Kingston, ON K7K 2B9	Timmins 705-235-1950	Ontario Government Complex, 5520 Highway 101 East Wing B, South Porcupine, ON P0N 1H0
Kitchener 519- 653-5758	4275 King St East Ste 200, Kitchener, ON N2P 2E9	Toronto Central 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 Central 519-973-1441	Roundhouse Centre, 3155 Howard Ave 2nd Fl, Ste 200, Windsor, ON N8X 4Y8
Mississauga (City of) 905-279-7333	The Emerald Centre, 10 Kingsbridge Garden Cir Ste 404, Mississauga, ON L5R 3K6		

For current office listings, please visit: <http://services.findhelp.ca/eo/tcu/appoff>



ONTARIO COLLEGE OF TRADES

ORDRE DES MÉTIERS DE L'ONTARIO

collegeoftrades.ca

earnwhileyoulearn.ca



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