



Apprenticeship
Training Standard
Logbook

Ironworker — Generalist

420B

2013

Apprenticeship Training Standard

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

Training As An Apprentice

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



Completing Your Logbook

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

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



Apprentice Name: _____

Address: _____

Phone Number: _____

Email Address: _____

Trade: _____

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

STO Account No. (for Compulsory trades only):

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

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

Apprenticeship Pathway to a Certificate of Qualification

Phase 1: Registration

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

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

Training agreement signed and registered by both apprentice and sponsor

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

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

Complete on-the-job training

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

Complete in-school training

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

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

Review and finalize your logbook with your sponsor

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

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

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

Certificate of Apprenticeship is issued

Trades without examination

CofA is the final step of the program

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

Provisional Certificate of Qualification issued for a 12 month term

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

Make payment for your Certificate of Qualification examination

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

Schedule a date to write your Examination

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

Pass Certificate of Qualification examination

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

Certificate of Qualification is issued

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

Phase 2: Apprenticeship

Phase 3: Certification

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

Table of Contents

Foreword: Purpose, Terms and Conditions of the registered Training Agreement.....	1
Trade Specific Resources and Links	2
Methodology-Standard Development	2
Introduction to the Logbook	3
Roles and Responsibilities	4
Roles and Responsibilities of the Apprentice	5
Roles and Responsibilities of Sponsors and Trainers	6
Health and Safety.....	7
Apprenticeship Program Summary/Guidelines.....	10
Scope of Practice	10
Program Guidelines	11
Program Requirements	12
Compulsory and Non-compulsory Classification	12
Skills for Success Summary	12
Standard of Performance	13
Training the Apprentice - Tips for Apprentices, Sponsors and Trainers	14
Notice of Collection of Personal Information	16
List of Trainers	17
Skill Sets	18
0891.0 Protect Self and Others	18
0892.0 Plan, Prepare and Set Up for Job	22
0893.0 Operate and Maintain Hand and Power Tools	25
0894.0 Operate and Maintain Oxy-Fuel Equipment.....	32
0895.0 Weld Ferrous and Non-Ferrous Materials.....	36
0896.0 Rig and Hoist Equipment and Components	42
0897.0 Erect Structural Members	47
0898.0 Install Fasteners	53
0899.0 Fabricate and Install Ornamental Ferrous and Non-Ferrous Components	57
0900.0 Install, Move and Maintain Machinery and Equipment.....	61
0901.0 Install and Fasten Curtain Wall and Glass Systems	65

0902.0	Install, Move and Maintain Material Handling and Robotic Equipment	70
0903.0	Erect and Dismantle Cranes	75
0904.0	Place Reinforcing Materials	78
0905.0	Place Post-Tensioning and Bar Tendons	84
0906.0	Stress and Grout Post-Tensioning and Bar Tendons	87
Definitions		91
Apprentice		91
Ready to Write Your Exam?		94
Instructions for Recording a Change in Sponsor		95
Sponsor Record #1		96
Change of Sponsor Record #2		97
Change of Sponsor Record #3		98
Change of Sponsor Record #4		99
Appendix A — Instructions for Apprenticeship Program Completion		100
Appendix B — Apprentice Completion Form		101
Appendix C — Skill Set Completion for Sponsors		102
Appendix D — Local Service Delivery Offices in Ontario		103
Competency Analysis Profile (CAP) Chart		i

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

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

Any updates to this publication are available on-line; to download this document in PDF format, please follow the link: [Skilled Trades Ontario.ca](https://skilledtradesontario.ca).

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

Maintained with transfer to Skilled Trades Ontario 2013 (V100)

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

Purpose:

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

The Apprentice agrees:

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

The Sponsor agrees:

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

Trade Specific Resources and Links

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

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

Methodology-Standard Development

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

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

Introduction to the Logbook

This “on-the job” Logbook is the training standard for Ironworker — Generalist 420B and was developed by Skilled Trades Ontario in consultation with representatives from industry. It identifies all the skills associated with and required to learn the trade.

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

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

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

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

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

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

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

Roles and Responsibilities

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

Skilled Trades Ontario (STO) is responsible for:

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

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

is responsible for:

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

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

Roles and Responsibilities of the Apprentice

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

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

Roles and Responsibilities of Sponsors and Trainers

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

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

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

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

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

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

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

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

Health and Safety

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

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

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

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

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

The Internal Responsibility System:

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

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

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

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

Roles and Responsibilities under the Occupational Health and Safety Act

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

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

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

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

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

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

The Three Rights of Workers/Apprentices

The OHSA gives workers and apprentices three important rights:

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

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

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

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

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

Constructor's duties include the following:

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

Ministry of Labour, Immigration, Training and Skills Development

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

Apprenticeship Program Summary/Guidelines

Scope of Practice

The Scope of Practice for the trade of Ironworker — Generalist is set out in section 81 of Ontario Regulation 875/21 under BOSTA and reads as follows:

81. (1) The scope of practice for the trade of ironworker — generalist includes the following:

1. Fabricating, assembling, installing, hoisting, erecting, dismantling, reconditioning, adjusting, altering, repairing or servicing,
 - i. all structural ironwork,
 - ii. precast and pretensioned concrete, and
 - iii. ferrous and non-ferrous materials in curtain walls, ornamental and miscellaneous metal work.
2. Applying sealants to the material referred to in paragraph 1.
3. Moving and placing machinery and heavy equipment that is required in order to perform work described in paragraph 1.
4. Fabricating, handling, sorting, cutting, bending, rigging, placing, burning, welding, stressing, grouting and tying of all material used to reinforce concrete constructions, including reinforcing bars, welded wire mesh and post tensioning systems.
5. Installing mechanical splices for reinforcing steel bars and performing cad and thermite welding for the splicing of reinforcing steel bars.
6. Reading and interpreting all shop and field drawings, including those taken from original architectural and engineering drawings, that are related to the work described in paragraphs 1, 2 and 3.
7. Reading and interpreting all structural and placing drawings and bar lists that are related to the work described in paragraphs 4 and 5.

(2) The scope of practice for the trade of ironworker — generalist does not include work performed as part of fabricating or assembling materials in an industrial plant.

*While the Logbook draws on the scope of practice regulation (Section 81 of Ontario Regulation 875/21 under BOSTA). The Logbook does not purport to add to or modify the scope of practice as provided in regulation. *

Program Guidelines

On-the-Job Training Duration

Industry has identified 7280 hours as the benchmark necessary for any Apprentice to become competent in the skills required. There may be circumstances in which the duration varies from this guideline.

In-Class Training Duration

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

Total Training Hours

8000 hours

Journeyperson to Apprentice Ratio

Ratios in Regulation:

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

Program Requirements

Compulsory and Non-compulsory Classification

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

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

Skills for Success Summary

Skills for Success are needed in a quickly changing world for work, learning and life. They are foundational for building other skills and important for effective social interaction.

Everyone benefits from having these skills as they help individuals get a job, progress at their current job and change jobs. They also help individuals become active members of their community and succeed in learning.

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

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

Standard of Performance

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

Industry Safety Standards which are based upon:

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

Other Suggested or Required Certification(s) and Training

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

Training the Apprentice - Tips for Apprentices, Sponsors and Trainers

Tips for Apprentices

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

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

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

Tips for Sponsors

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

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

Tips for Trainers

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

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

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

Notice of Collection of Personal Information

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

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

List of Trainers

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

0891.0 Protect Self and Others**General Performance Objective**

Protect self and others by: wearing personal protective equipment (PPE; lifting equipment and materials; applying housekeeping rules; interpreting warning signs, labels and symbols; reporting hazards to supervisory and safety personnel; maintaining safety devices and equipment; responding to emergency situations; operating construction equipment; inspecting platforms and working surfaces; installing and securing platforms, ladders and working surfaces; preventing fires; and communicating with co-workers in the workplace

Performance Objectives**Skills**

- 0891.01 Wear personal protective equipment (PPE)**, including safety vests, head, ear, eye, hand, foot and respiratory protection, inspecting, adjusting and maintaining regularly, according to the *Occupational Health and Safety Act (OHSA)* and company policies, in order to ensure fit and optimum protection of self and others.

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

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

- 0891.02 Lift equipment and materials**, manually, using posture and lifting techniques, in order to move material and equipment in a safe and efficient manner and to prevent personal injury.

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

0891.03 **Apply housekeeping rules**, by removing all obstacles and impediments, in order to maintain a safe work area.

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

0891.04 **Interpret warning signs, labels and symbols**, by inspecting the work area regularly, according to the *Workplace Hazardous Materials Information System (WHIMS)* and company policies, in order to ensure fit and optimum protection to self and others.

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

0891.05 **Report hazards to supervisory and safety personnel**, promptly and correctly, in order to prevent injury to self and others.

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

0891.06 Maintain safety devices and equipment, by inspecting, adjusting and maintaining regularly and providing care, according to manufacturer's specifications, in order to ensure safe and efficient operation and to protect self and others from injury.

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

0891.07 Respond to emergency situations, by identifying the danger, notifying others and taking initial corrective action, according to the *OHS*A and company procedures, in order to prevent injury to self and others.

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

0891.08 Operate construction equipment, by inspecting and maintaining regularly, according to the *OHS*A, manufacturer's instructions and established industry practices, in order to protect self and others from injury.

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

0891.09 **Inspect platforms, ladders and working surfaces**, regularly, according to the *OHS*A and manufacturer's specifications, in order ensure safe work area and to prevent injury to self and others.

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

0891.10 **Install and secure platforms, ladders and working surfaces**, ensuring that power elevated working platforms are certified for use and operators are certified, inspecting and maintaining regularly, according to the *OHS*A and manufacturer's specifications, in order to protect self and others from injury.

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

0891.11 **Prevent fires**, by inspecting the work area, identifying hazards, obtaining required permits and fire extinguishing equipment and using barriers, blankets and a fire watch assistant, in order to prevent injury to self and others.

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

0891.12 **Communicate with co-workers in the workplace**, at all times, warning co-workers of hazards or potential hazards, in order to ensure safe workplace and to prevent injury to self and others.

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

0892.0 Plan, Prepare and Set Up for Job

General Performance Objective

Plan, prepare and set up for job by: reading and interpreting drawings and specifications; planning tasks; determining installation procedures and sequences; installing and removing falsework; setting up equipment; unloading, sorting/shaking out and staging inventory materials; and preparing materials for installation.

Performance Objectives

Skills

0892.01 **Read and interpret drawings and specifications**, including structural, mechanical, architectural, ornamental, fabrication, placing, bar list, tendon profile and welding blueprints, diagrams, sections, details and specific procedures, before commencing task operations, in order to identify tasks to be performed and to determine required assembly, installation and erection materials and sequence.

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

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

0892.02 Plan tasks, by preparing and scheduling tasks and determining required personnel, materials and equipment, according to drawings and specifications, to ensure safe and efficient performance of the tasks.

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

0892.03 Determine installation procedures and sequences, by conducting pre-installation task analyses to confirm anchorage orientation and projection, alignment, benchmarks, availability of materials for installation, site conditions and access, available personnel and equipment, in order to ensure safe and efficient installation.

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

0892.04 Install and remove falsework, by using erection procedures and sequences, according to drawings and specifications, in order to complete installation and removal in a safe and efficient manner.

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

0892.05 **Set up equipment**, using space, materials and personnel, in order to ensure timely commencement of task performance.

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

0892.06 **Unload, sort/shake out and stage inventory materials**, as required, in order to prepare for timely, safe and efficient assembly, installation and erection.

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

0892.07 **Prepare materials for installation**, by cleaning, straightening, welding, cutting, drilling, grinding, positioning, painting, match-marking and attaching sub- assemblies, according to drawings and specifications, in order to ensure safe and efficient installation.

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

0893.0 Operate and Maintain Hand and Power Tools**General Performance Objective**

Operate and maintain hand and power tools by: identifying hand tools; selecting hand tools; using hand tools; maintaining hand tools; identifying power tools; selecting power tools; operating power tools; maintaining power tools; identifying powder actuated tools and accessories; selecting powder actuated tools and accessories; operating powder actuated tools and accessories; maintaining powder actuated tools and accessories; identifying alignment, levelling and measuring tools; selecting alignment, levelling and measuring tools; using alignment, levelling and measuring tools; and maintaining alignment, levelling and measuring tools

Performance Objectives**Skills**

0893.01 Identify hand tools, including bolt cutters, pliers, side cutters, wire reels, box cutters, measuring tapes, ratchets, erection wrenches, bull pins, hammers, sockets, pry bars, punches, marking tools, plumb-bobs, clamps, hacksaws, squares, levels, strikers, screwdrivers and chalk-lines, in order to ensure safe and efficient task performance.

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

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

0893.02 **Select hand tools**, including bolt cutters, pliers, side cutters, wire reels, box cutters, measuring tapes, ratchets, erection wrenches, bull pins, hammers, sockets, pry bars, punches, marking tools, plumb-bobs, clamps, hacksaws, squares, levels, strikers, screwdrivers and chalk-lines, according to manufacturer's drawings and specifications, in order to ensure safe and efficient task performance.

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

0893.03 **Use hand tools**, including bolt cutters, pliers, side cutters, wire reels, box cutters, measuring tapes, ratchets, erection wrenches, bull pins, hammers, sockets, pry bars, punches, marking tools, plumb-bobs, clamps, hacksaws, squares, levels, strikers, screwdrivers and chalk-lines, according to manufacturer's drawings and specifications, in order to ensure safe and efficient task performance.

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

- 0893.04** **Maintain hand tools**, including bolt cutters, pliers, side cutters, wire reels, box cutters, measuring tapes, ratchets, erection wrenches, bull pins, hammers, sockets, pry bars, punches, marking tools, plumb-bobs, clamps, hacksaws, squares, levels, strikers, screwdrivers and chalk-lines, according to manufacturer's drawings and specifications, in order to ensure safe and efficient task performance.

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

- 0893.05** **Identify power tools**, including shears, electric drills, hammer-drills, quick cut saws, electric or pneumatic impact wrenches, impacting tools, grinders, power saws, hydraulic jacks, compressors, hydraulic multiplying bolt tensioners, and air handling tools, in order to ensure safe and efficient task performance.

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

- 0893.06** **Select power tools**, including shears, electric drills, hammer-drills, quick cut saws, electric or pneumatic impact wrenches, impacting tools, grinders, power saws, hydraulic jacks, compressors, hydraulic multiplying bolt tensioners, and air handling tools, in order to ensure safe and efficient task performance.

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

0893.07 Operate power tools, including shears, electric drills, hammer-drills, quick cut saws, electric or pneumatic impact wrenches, impacting tools, grinders, power saws, hydraulic jacks, compressors, hydraulic multiplying bolt tensioners, and air handling tools, according to manufacturer's drawings and specifications, in order to ensure safe and efficient task performance.

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

0893.08 Maintain power tools, including shears, electric drills, hammer-drills, quick cut saws, electric or pneumatic impact wrenches, impacting tools, grinders, power saws, hydraulic jacks, compressors, hydraulic multiplying bolt tensioners, and air handling tools, according to manufacturer's drawings and specifications, in order to ensure safe and efficient task performance.

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

0893.09 Identify powder actuated tools and accessories, according to the *OHSA* and manufacturer's instructions, in order to ensure safe and efficient task performance.

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

0893.10 **Select powder actuated tools and accessories**, according to the *OHS*A and manufacturer's instructions, in order to ensure safe and efficient task performance.

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

0893.11 **Operate powder actuated tools and accessories**, according to the *OHS*A and manufacturer's instructions, in order to ensure safe and efficient task performance.

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

0893.12 **Maintain powder actuated tools and accessories**, according to the *OHS*A and manufacturer's instructions, in order to ensure safe and efficient task performance.

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

U0893.13 Identify alignment, levelling and measuring tools, including spirit levels, optical levels, transits, digital theodolites, total stations, lasers, micrometers, vernier callipers and feeler gauges, in order to complete installations and to achieve required fit, alignment and tolerances.

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

U893.14 Select alignment, levelling and measuring tools, including spirit levels, optical levels, transits, digital theodolites, total stations, lasers, micrometers, vernier callipers and feeler gauges, according to drawings and specifications, in order to complete installations and to achieve required fit, alignment and tolerances.

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

0893.15 Use alignment, levelling and measuring tools, including spirit levels, optical levels, transits, digital theodolites, total stations, lasers, micrometers, vernier callipers and feeler gauges, according to manufacturer's instructions, in order to complete installations and to achieve required fit, alignment and tolerances.

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

0893.16 **Maintain alignment, levelling and measuring tools**, including spirit levels, optical levels, transits, digital theodolites, total stations, lasers, micrometers, vernier callipers and feeler gauges, according to manufacturer instructions, in order to complete installations and to achieve required fit, alignment and tolerances.

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

0894.0 Operate and Maintain Oxy-Fuel Equipment**General Performance Objective**

Operate and maintain oxy-fuel equipment by: selecting fuel equipment; setting- up and testing fuel equipment; adjusting oxy-fuel equipment; performing accurate cuts; pre-heating materials; post heating materials ; bending materials; expanding materials; cleaning materials; and maintaining and storing oxy-fuel equipment.

Performance Objectives**Skills**

0894.01 Select oxy-fuel equipment, including tip type and size with matching fuel gas and assembly, according to manufacturer's instructions, in order to ensure safe operation of the oxy-fuel equipment.

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

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

0894.02 Set-up and test oxy-fuel equipment, including assembling, securing and testing components for leaks, according to manufacturer instructions, in order to ensure safe operation of the oxy-fuel equipment.

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

0894.03 **Adjust oxy-fuel equipment**, including the working pressure and torch valves to achieve neutral, oxidizing and carburizing flames, according to manufacturer instructions, in order to ensure safe and efficient operation.

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

0894.04 **Perform accurate cuts**, using oxy-fuel equipment, according to manufacturer instructions, in order to produce work pieces with a clean surface, free from excessive slag, to achieve proper fit.

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

0894.05 **Pre-heat materials**, using oxy-fuel equipment, according to drawings and specifications, conditioning them for welding, in order to relieve stresses and prevent cracking.

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

0894.06 Post heat materials, using oxy-fuel equipment, according to drawings and specifications, in order to relieve stresses and prevent cracking.

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

0894.07 Bend materials, using oxy-fuel equipment, according to manufacturer instructions, in order for the materials to conform to the fit and shape required by blueprints and fabrication details.

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

0894.08 Expand materials, using oxy-fuel equipment, according to manufacturer instructions, in order for the materials to conform to the fit and shape required by blueprints and fabrication details.

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

0894.09 **Clean materials**, using oxy-fuel equipment, according to manufacturer instructions, in order to prepare the materials for cutting, welding and fitting operations.

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

0894.10 **Maintain and store oxy-fuel equipment**, ensuring gas cylinders are secured upright during storage and transportation, fuel and oxidizing gasses are separated during storage, hoses, gauges and torch equipment are free of damage, according to the *OHSA* and manufacturer's specifications.

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

0895.0 Weld Ferrous and Non-Ferrous Materials**General Performance Objective**

Weld ferrous and non-ferrous materials by: identify welding procedures; selecting welding procedures; setting up oxy-fuel equipment; operating oxy-fuel equipment; setting up manual arc welding equipment; operating manual arc welding equipment; setting up semi-automatic arc welding equipment; operating semi-automatic arc welding equipment; setting up automatic arc welding equipment; operating automatic arc welding equipment; setting up and operating arc-air cutting and gouging equipment; operating arc-air cutting and gouging equipment; and fitting, tacking and bracing materials.

Performance Objectives**Skills**

0895.01 Identify welding procedures, including oxy-fuel welding (O.F.W.), shielded metal arc welding (S.M.A.W.), gas tungsten arc welding (G.T.A.W.), gas metal arc welding (G.M.A.W), flux core arc welding (F.C.A.W), submerged arc welding (S.A.W.), air carbon arc cutting (A.C.A.C.), plasma arc cutting (P.A.C.) and exothermic lance cutting (E.L.C.), to ensure appropriate task performance.

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

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

0895.02 Select welding procedures, according to Canadian Welding Bureau (C.W.B.) standards, in order to produce welds of sufficient quality and consistency to pass appropriate inspections.

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

0895.03 **Set up oxy-fuel equipment**, ensuring working pressures, tip size and type, filler rod, surface preparation and work angle, according to manufacturer's instructions, in order to weld ferrous and non-ferrous materials, and produce welds of sufficient quality and consistency to pass appropriate inspection.

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

0895.04 **Operate oxy-fuel equipment**, ensuring working pressures, tip size and type, filler rod, surface preparation and work angle, according to manufacturer's instructions, in order to weld ferrous and non-ferrous materials, and produce welds of sufficient quality and consistency to pass appropriate inspection.

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

0895.05 **Set up manual arc welding equipment**, using power source settings, polarity, electrode angle, type, electrode manipulation, filler rod composition, arc shielding gas and correct number and types of weld passes, according to manufacturer's instructions, in order to prepare, assemble and weld materials in the required position, and to produce welds of sufficient quality and consistency to pass appropriate inspection using the S.M.A.W. and G.T.A.W. procedures.

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

0895.06 Operate manual arc welding equipment, using power source settings, polarity, electrode angle, type, electrode manipulation, filler rod composition, arc shielding gas and correct number and types of weld passes, according to manufacturer's instructions, in order to prepare, assemble and weld materials in the required position, and to produce welds of sufficient quality and consistency to pass appropriate inspection using the S.M.A.W. and G.T.A.W. procedures.

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

0895.07 Set up semi-automatic arc welding equipment, using power source settings, electrode angle, electrode manipulation, wire type, size, shear stud size, arc shielding flux and gas, wire speed and correct number and types of weld passes, according to manufacturer's instructions, in order to prepare, assemble and weld materials in the required position, and to produce welds of sufficient quality and consistency to pass appropriate inspection using the F.C.A.W. and G.M.A.W. procedures.

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

0895.08 Operate semi-automatic arc welding equipment, using power source settings, electrode angle, electrode manipulation, wire type, size, shear stud size, arc shielding flux and gas, wire speed and correct number and types of weld passes, according to manufacturer's instructions, in order to prepare, assemble and weld materials in the required position, and to produce welds of sufficient quality and consistency to pass appropriate inspection using the F.C.A.W. and G.M.A.W. procedures.

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

0895.09 Set up automatic arc welding equipment, using the power source settings, electrode angle, wire type, size, arc shielding flux, wire speed, track speed and correct number and types of weld passes, according to manufacturer's instructions, in order to prepare, assemble and weld materials in the required position, and to produce welds of sufficient quality and consistency to pass visual inspection using the S.A.W. procedure.

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

- 0895.10 Operate automatic arc welding equipment**, using the power source settings, electrode angle, wire type, size, arc shielding flux, wire speed, track speed and correct number and types of weld passes, according to manufacturer's instructions, in order to prepare, assemble and weld materials in the required position, and to produce welds of sufficient quality and consistency to pass visual inspection using the S.A.W. procedure.

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

- 0895.11 Set up arc-air cutting and gouging equipment**, using power source settings, electrode type and size, air pressure, electrode manipulation, polarity, operating gas pressure, according to manufacturer's instructions, in order to cut and gouge materials as required in the preparation, welding and modification of components using A.C.A.C., P.A.C. and E.L.C. procedures.

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

- 0895.12 Operate arc-air cutting and gouging equipment**, using power source settings, electrode type and size, air pressure, electrode manipulation, polarity, operating gas pressure, according to manufacturer's instructions, in order to cut and gouge materials as required in the preparation, welding and modification of components using A.C.A.C., P.A.C and E.L.C. procedures.

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

0895.13 **Fit, tack and brace materials**, using manual welding equipment, in order to set and assemble components and to minimize distortion during welding operations.

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

0896.0 Rig and Hoist Equipment and Components**General Performance Objective**

Rig and hoist equipment and components by: planning lifts; selecting slings; assembling slings; inspecting and maintaining slings; selecting rigging hardware; assembling rigging hardware; inspecting and maintaining rigging hardware; selecting hoisting equipment; assembling hoisting equipment; inspecting and maintaining hoisting equipment; reeving or lacing blocks; tying and rendering knots, hitches and bends; splicing fibre rope; and establishing hand, voice and radio communications with co-workers and equipment operators..

Performance Objectives**Skills**

0896.01 Plan lifts, by determining the weight of load, equipment capacity, sling type and configuration, center of gravity, location of components and place of installation, in order to rig and hoist in a safe and efficient manner.

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

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

0896.02 Select slings, including the types and sizes, numbers and configurations of wire rope, natural and synthetic fibre and chain slings, according to the Rigging for Ironworkers manual, in order to prepare for safe and efficient lifting, moving and placing of load.

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

0896.03 Assemble slings, including the types and sizes, numbers and configurations of wire rope, natural and synthetic fibre and chain slings, according to the Rigging for Ironworkers manual, in order to prepare for safe and efficient lifting, moving and placing of load.

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

0896.04 Inspect and maintain slings, by checking operation of moving components, condition of fibre and wire ropes, chains and attachments, lubricating and replacing damaged parts, according to manufacturer instructions and the Rigging for Ironworkers manual, in order to ensure safe, efficient and productive rigging and hoisting.

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

0896.05 Select rigging hardware, including the types and sizes, numbers and configurations of shackles, spreader beams, cable clips, hooks, eyebolts, turnbuckles and blocks, according to the Rigging for Ironworkers manual, in order to prepare for safe and efficient lifting, moving and placing of load.

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

0896.06 Assemble rigging hardware, including the types and sizes, numbers and configurations of shackles, spreader beams, cable clips, hooks, eyebolts, turnbuckles and blocks, according to the Rigging for Ironworkers manual, in order to prepare for safe and efficient lifting, moving and placing of load.

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

0896.07 Inspect and maintain rigging hardware, by checking operation of moving components, condition of fibre and wire ropes, chains and attachments, lubricating and replacing damaged parts, according to manufacturer instructions and the Rigging for Ironworkers manual, in order to ensure safe, efficient and productive rigging and hoisting.

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

0896.08 Select hoisting equipment, including the types and sizes, numbers and configurations of chain falls, come-a-longs, tirsors and tuggers, according to the Rigging for Ironworkers manual, in order to prepare for safe and efficient lifting, moving and placing of load.

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

0896.09 Assemble hoisting equipment, including the types and sizes, numbers and configurations of chain falls, come-a-longs, tirsors and tuggers, according to the Rigging for Ironworkers manual, in order to prepare for safe and efficient lifting, moving and placing of load.

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

0896.10 Inspect and maintain hoisting equipment, by checking operation of moving components, condition of fibre and wire ropes, chains and attachments, lubricating and replacing damaged parts, according to manufacturer instructions and the Rigging for Ironworkers manual, in order to ensure safe, efficient and productive rigging and hoisting.

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

0896.11 Reeve or lace blocks, according to the Rigging for Ironworkers manual, in order to ensure safe and efficient rigging.

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

- 0896.12 Tie and render knots, hitches and bends**, using natural fibre and synthetic rope, according to the Rigging for Ironworkers manual, in order to tie off material, equipment and personnel in a safe and secured manner.

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

- 0896.13 Splice fibre rope**, according to the Rigging for Ironworkers manual, in order to ensure safe working capacity.

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

- 0896.14 Establish hand, voice and radio communications with co-workers and equipment operators**, including specific signals used for helicopter lifts, in order to convey instructions and information to facilitate assembly, erection and installation, and to protect self and others from injury.

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

0897.0 Erect Structural Members**General Performance Objective**

Erect structural members by: establishing benchmark; setting up and adjusting levelling instruments; checking anchor bolts and embedded parts; setting shims and base plates; erecting temporary members in sequence; plumbing and aligning structure; erecting miscellaneous iron; securing miscellaneous iron; correcting deficiencies in structural and members; installing temporary handrails, flooring and safety nets; hoisting decking; fitting decking; securing decking; erecting pre-engineered metal building systems; erecting wind turbines; erecting solar panel systems; fabricating platework for vessels and containers; and erecting platework for vessels and containers.

Performance Objectives**Skills**

0897.01 Establish benchmark, according to drawings and specifications, in order to determine work/reference points.

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

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

0897.02 Set up and adjust levelling instruments, according to manufacturer instructions, in order to determine work/reference points.

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

0897.03 **Check anchor bolts and embedded parts**, including cleaning, placement, orientation, projection and condition, in order to prepare for assembly

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

0897.04 **Set shims and base plates**, including bearing plates and levelling nuts, according to drawings and specifications, in order to ensure elevation and alignment.

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

0897.05 **Erect temporary members in sequence**, including columns, beams, trusses, joists and bracing, according to drawings and specifications, in order to comply with erection procedure established for the job.

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

0897.06 Plumb and align structure, using tools and equipment, according to drawings and specifications, in order to meet required tolerances.

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

0897.07 Erect miscellaneous iron, including trim angle, openings, canopies, crane rails, parapets and mezzanines, using tools, equipment and hardware, in order to meet drawings and specifications.

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

0897.08 Secure miscellaneous iron, including trim angle, openings, canopies, crane rails, parapets and mezzanines, using tools, equipment and hardware, in order to meet drawings and specifications.

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

0897.09 **Correct deficiencies in structural and miscellaneous members**, including shortening, extending, reinforcing and coping members, according to drawings and specifications, in order to accommodate omissions and revisions, and to complete installations.

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

0897.10 **Install temporary handrails, flooring and safety nets**, at required locations, according to the *OHSA*, in order to protect self and others from injury.

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

0897.11 **Hoist decking**, including accessories such as trim and pans, using tools and equipment, according to drawings and specifications, in order to provide a base for flooring and roofing materials.

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

0897.12 **Fit decking**, including accessories such as trim and pans, using tools and equipment, according to drawings and specifications, in order to provide a base for flooring and roofing materials.

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

0897.13 **Secure decking**, including accessories such as trim and pans, using tools and equipment, according to drawings and specifications, in order to provide a base for flooring and roofing materials.

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

0897.14 **Erect pre-engineered metal building systems**, using slings, rigging hardware, hoisting equipment and tools, according to drawings and specifications and the Ironworker Pre-Engineered Metal Building Systems Manual practices and procedures, in order to complete installations.

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

- 0897.15 Erect structural components of wind turbine systems**, including unloading, storage and erection of base sections, tower sections, rotor blades, nacelle and transformers, using slings, rigging hardware, hoisting equipment and tools, according to drawings and specifications, in order to complete installations.

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

- 0897.16 Erect structural components of solar panel systems**, including support framework, solar tracking actuators, associated fasteners and welding, using slings, rigging hardware, hoisting equipment and tools, according to drawings and specifications, in order to complete installations.

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

- 0897.17 Fabricate platework for vessels and containers**, including bins, hoppers, break walls, kilns, furnaces, chutes, slides and ductwork, using tools and equipment, according to drawings and specifications.

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

0897.18 Erect platework for vessels and containers, including bins, hoppers, break walls, kilns, furnaces, chutes, slides and ductwork, using tools and equipment, according to drawings and specifications.

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

0898.0 Install Fasteners

General Performance Objective

Install fasteners by: identifying fasteners; selecting and storing fasteners; aligning components; preparing surfaces; selecting chemical adhesives; preparing chemical adhesives; installing fasteners; tensioning fasteners; and performing fastener inspections.

Performance Objectives

Skills

0898.01 Identify fasteners, according to drawings and specifications and the American Standards of Testing Materials (A.S.T.M.) A325, A490 and F1852 specifications, in order to meet the required size, length and type of fasteners

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

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

0898.02 **Select and store fasteners**, according to drawings and specifications and the A.S.T.M. A325, A490 and F1852 specifications, in order to meet the required size, length and type of fasteners.

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

0898.03 **Align components**, using tools and equipment, in order to permit installation of fasteners.

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

0898.04 **Prepare surfaces**, including drilling and tapping concrete, steel and other non-ferrous materials, according to drawings and specifications, in order to receive fasteners.

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

0898.05 **Select chemical adhesives**, according to manufacturer's recommendations, in order to facilitate the tensile strength of the fastener.

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

0898.06 **Prepare chemical adhesives**, according to manufacturer's recommendations, in order to facilitate the tensile strength of the fastener.

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

0898.07 **Install fasteners**, using tools and equipment, according to drawings and specifications, in order to meet required tolerances.

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

0898.08 **Tension fasteners**, using required tools and equipment, through turn of nut method, direct tension indicating washer method, twist off tension control bolt tightening, calibrated wrench tightening, according to the Structural Steel Erection manual, in order to comply with drawings and specifications.

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

0898.09 **Perform fastener inspections**, according to drawings, manufacturer specifications and Structural Steel Erection Manual, in order to ensure that fasteners have been correctly installed.

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

0899.0 **Fabricate and Install Ornamental Ferrous and Non-Ferrous Components**

General Performance Objective

Fabricate and install ornamental ferrous and non-ferrous components by: fabricating stairs, rails, kick plates, ladders, platforms, sleeves and miscellaneous iron; installing stairs, rails, kick plates, ladders, platforms, sleeves and miscellaneous iron; fitting floor plate and grating; installing floor plate and grating; installing doors, frames, attachments and components; loading, unloading and storing finished materials; finishing materials; installing covers, cladding, fascia and related components; installing shelving and racks; installing extruded and expanded metals and composite materials; and installing fencing.

Performance Objectives

Skills

0899.01 Fabricate stairs, rails, kick plates, ladders, platforms, sleeves and miscellaneous iron, using tools, equipment and hardware, in order to meet the requirements of drawings and specifications.

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

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

0899.02 Install stairs, rails, kick plates, ladders, platforms, sleeves and miscellaneous iron, using tools, equipment and hardware, in order to meet the requirements of drawings and specifications.

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

0899.03 **Fit floor plate and grating**, using tools, equipment and hardware, according to drawings and specifications.

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

0899.04 **Install floor plate and grating**, using tools, equipment and hardware, in order to meet the requirements of drawings and specifications.

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

0899.05 **Install doors, frames, attachments and components**, including overhead doors, sectional doors, dock levellers, personnel doors, revolving doors and detention doors, using tools, equipment and hardware, in order to meet the requirements of drawings and specifications.

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

0899.06 **Load, unload, store and install finished materials**, without damaging surfaces, in order to meet the requirements of drawings and specifications.

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

0899.07 **Finish materials**, using chemicals, tools, equipment and hardware, in order to meet the requirements of drawings and specifications.

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

0899.08 **Install covers, cladding, fascia and related components**, using tools, equipment and hardware in order to meet the requirements of drawings and specifications.

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

0899.09 **Install shelving and racks**, using tools, equipment and hardware, according to drawings and specifications, in order to complete installation.

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

0899.10 **Install extruded and expanded metals and composite materials**, using tools, equipment and hardware, in order to meet the requirements of drawings and specifications.

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

0899.11 **Install fencing**, including safety, security or ornamental types, using tools, equipment and hardware, in order to meet the requirements of drawings and specifications.

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

0900.0 Install, Move and Maintain Machinery and Equipment**General Performance Objective**

Install, move and maintain machinery and equipment by: laying out and setting anchors; installing falsework and shoring; assembling machinery components; rigging machinery; staging machinery; transporting machinery; assembling and placing machinery; aligning and balancing machinery; adjusting machinery components; maintaining and troubleshooting machinery; and dismantling machinery.

Performance Objectives**Skills**

0900.01 Layout and set anchors, according to drawings and specifications, in order to receive bases or machinery and equipment.

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

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

0900.02 Install falsework and shoring, including floor plates, timbers, mats, grillage, stands, jacks, towers and bracing, using tools, equipment and hardware, in order to meet the requirements of drawings and specifications.

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

0900.03 Assemble machinery components, using tools, hardware and equipment, in order to meet the requirements of drawings and specifications.

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

0900.04 Rig machinery, including offloading from truck, barge or train, using tools, hardware and equipment, according to drawings and specifications, in order to prepare for installation.

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

0900.05 Stage machinery, using tools, hardware and equipment, according to drawings and specifications, in order to prepare for installation.

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

0900.06 **Transport machinery**, including loading and offloading, using tools, hardware and equipment, according to drawings and specifications, in order to prepare for installation.

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

0900.07 **Assemble and place machinery**, including transport to point of final installation, using tools, hardware and equipment and specialized power equipment such as skidding systems, strand jacking towers, gantry systems, hydraulic lifting trucks, bridge launchers, required, fork trucks and carry-deck cranes, in order to meet the requirements of drawings and specifications.

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

0900.08 **Align and balance machinery**, including aligning and balancing drive mechanisms, mating surfaces for stamping presses and guides, using precision measuring devices and tools, according to manufacturer's specifications, in order to achieve required tolerances and to ensure reliable and efficient operation.

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

0900.09 **Adjust machinery components**, including adjustment of counterweights, load compensators and cycle speeds, using tools and equipment, according to manufacturer's specifications, in order to ensure safe and efficient operation.

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

0900.10 **Maintain and troubleshoot machinery**, using tools and equipment, in order to meet manufacturer's service recommendations and specifications.

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

0900.11 **Dismantle machinery**, using tools and equipment, according to manufacturer's procedures and specifications for lock-out, tag-out and de-energizing of machinery, in order to ensure safe and efficient task performance.

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

0901.0 Install and Fasten Curtain Wall and Glass Systems**General Performance Objective**

Install and fasten curtain wall and glass systems by: loading, unloading and storing finished curtain wall and window wall materials; selecting rigging, hoisting and staging equipment; assembling rigging, hoisting and staging equipment; assembling curtain wall sections and components; levelling and aligning curtain wall, window wall sections and components; applying specified adhesives, sealants, gaskets, insulating materials, vapour barriers and air seals; installing glass and thermo-pane units; installing panel units; installing window- wall units; installing miscellaneous glass systems; installing precast systems; inspecting finished curtain wall, window wall and miscellaneous glass systems; and retrofitting curtain wall, window wall and miscellaneous glass systems.

Performance Objectives**Skills**

0901.01 Load, unload and store finished curtain wall and window wall materials, according to the Architectural and Ornamental Ironworking manual, in order to prepare for installation.

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

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

0901.02 Select rigging, hoisting and staging equipment, including glass cups, power cups, nylon slings, roustabouts and spreader bars, using tools and hardware, according to the Architectural and Ornamental Ironworking manual, in order to install curtain wall and window wall materials.

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

0901.03 Assemble rigging, hoisting and staging equipment, including glass cups, power cups, nylon slings, roustabouts and spreader bars, using tools and hardware, according to the Architectural and Ornamental Ironworking manual, in order to install curtain wall and window wall materials.

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

0901.04 Assemble curtain wall sections and components, including the layout of anchors and installation of assembled frames and stick walls, using tools, equipment and hardware, according to the, Architectural and Ornamental Ironworking manual in order to meet requirements of drawings and specifications.

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

0901.05 Level and align curtain wall, window wall sections and components, using lines and precision measuring instruments, according to manufacturer's specified tolerances, in order to ensure fit and installation .

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

0901.06 **Apply specified adhesives, sealants, gaskets, insulating materials, vapour barriers and air seals**, using prescribed tools, equipment and hardware, according to manufacturer's specifications, in order to ensure optimal seal of the system.

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

0901.07 **Install glass and thermo-pane units**, using tools, equipment and hardware, according to manufacturer's specifications, in order to achieve seal and fit.

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

0901.08 **Install panel units**, including stone, metal, composite and glass panels, using tools, equipment and hardware, according to manufacturer's specifications, in order to achieve seal and fit.

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

0901.09 **Install window-wall units**, including revolving door systems, skylights, atriums and domes, using tools, equipment and hardware, according to manufacturer's specifications, in order to achieve seal and fit.

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

0901.10 **Install miscellaneous glass systems**, including glass stairs, balustrades, smoke screens, shower enclosures, counters and partitions, using tools, equipment and hardware, according to manufacturer's specifications, in order to achieve seal and fit.

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

0901.11 **Install precast systems**, using tools, equipment and sealants, securing and aligning units by using tools, equipment and sealants, according to manufacturer's specifications, in order to achieve seal and fit.

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

0901.12 **Inspect finished curtain wall, window wall and miscellaneous glass systems**, upon completion of installation, in order to ensure that there are no defects in alignment, seal, and finish.

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

0901.13 **Retrofit curtain wall, window wall and miscellaneous glass systems**, using tools, equipment and hardware, in order to maintain the existing framework and change glass in units that are defective or require replacement.

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

0902.0 Install, Move and Maintain Material Handling and Robotic Equipment**General Performance Objective**

Install, move and maintain material handling equipment by: planning installation of material handling systems and equipment; identifying and selecting components; laying out anchorages; fabricating supports; installing supports; installing material handling systems and equipment; assembling components; rigging and installing assembled components; levelling and aligning components; fabricating guards, protective barriers and devices; installing guards, protective barriers and devices; starting up and troubleshoot material handling systems; maintaining material handling systems; decommissioning material handling systems; and disassembling material handling and robotic components.

Performance Objectives**Skills**

0902.01 Plan installation of material handling systems and equipment, including determining the sequence, personnel, equipment needs, site preparation, staging and handling of robotics, automated mechanical systems, precision conveyors, bulk handling conveyors, mills, kilns, furnaces, coolers, baghouses, precipitators, crushers, pulpers, air slides, driers, shredders, hoppers, bucket elevators, apron feeders, vibratory feeders, separators, cyclones, ductwork and skip hoists, according to type, use and application, in order to ensure safe and efficient task performance.

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

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

0902.02 **Select components**, for installation, according to drawings and specifications, in order to ensure safe and efficient installation of components in sequence.

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

0902.03 **Layout anchorages**, including truss clips, tail sections, drive sections, and primary header steel, according to drawings and specifications, in order to receive components of material handling systems.

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

0902.04 **Fabricate supports**, including header steel, support steel and related components, using tools, according to drawings and specifications, in order to receive material handling systems and equipment.

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

0902.05 **Install supports**, including header steel, support steel and related components, using hoisting and rigging equipment, tools and hardware, according to drawings and specifications, in order to receive material handling systems and equipment.

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

0902.06 **Install material handling systems and equipment** using tools and equipment in order to meet requirements of drawing specifications.

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

0902.07 **Assemble components**, including anti-runaways, anti-backups, limit switches, gates, valves, pneumatic and hydraulic accessories, pneumatic fittings, stops, locators and diverters, according to specific erection plan, in order to prepare for safe and efficient installation.

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

0902.08 **Level and align components**, using precision tools and measuring instruments, according to drawings and specifications, in order to achieve prescribed tolerances.

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

0902.09 **Fabricate guards, protective barriers and devices**, including basket guarding, bollards and bumpers, using tools, equipment, hardware and attachments, according to the *OHSA*, in order to meet the requirements of drawings and specifications.

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

0902.10 **Install guards, protective barriers and devices**, including basket guarding, bollards and bumpers, using tools, equipment, hardware and attachments, according to the *OHSA*, in order to protect self and others from injury.

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

0902.11 Start up and troubleshoot material handling systems, according to drawings, specifications, manufacturer recommendations and warranty, in order to identify deficiencies and adjust, rectify and test and to achieve optimal operational performance.

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

0902.12 Maintain material handling systems, using tools and equipment, in order to meet manufacturer's service recommendations and specifications.

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

0902.13 Decommission material handling systems, using tools and equipment, according to safe practices and site specific procedures for lock-out, tag-out and de-energizing of components under the *OHS*A, in order to ensure safe and efficient task performance.

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

0902.14 Disassemble material handling and robotic components, using tools, according to manufacturer's procedures and specifications, in order to protect self and others from injury.

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

0903.0 Erect and Dismantle Cranes

General Performance Objective

Erect and dismantle cranes by: assessing site hazards; selecting crane type; determining crane position; preparing bases of crane; erecting cranes; disassembling crane components; and preparing crane for transport.

Performance Objectives

Skills

0903.01 Assess site hazards, including overhead power lines, underground services, obstructions to swing radius, swing area (radius) of crane, crane radius, load charts, according to the Ironworker Cranes manual, in order to protect self and others from injury.

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

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

0903.02 **Select crane type**, according to heaviest load, radius of pick, required height, site conditions in order to ensure safety of all hoisting personnel.

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

0903.03 **Determine crane position**, according to crane types, capacity, radius, maximum weight of lifts, limitations due to inclement weather, weights of components, calculation of available headroom, selection of crane for required task, according to Ironworker Cranes manual, in order to ensure safe and efficient task performance

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

0903.04 **Prepare bases of crane**, taking into account gross weight of crane, composition of base (such as soil, concrete and steel), types of pads, selecting pads such as mats, dunnage and grillage, visually assessing ground conditions, and installing falsework, according to the Ironworker Cranes manual, in order to ensure crane is stable and level.

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

0903.05 Erect cranes, following the assembly and erection procedure specified by the manufacturer, in order to assure safe and efficient hoisting operations.

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

0903.06 Disassemble crane components, using methods, sequence, equipment and tools, according to manufacturer's specifications, in order to ensure safety of self and others.

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

0903.07 Prepare crane for transport, using prescribed tools, equipment and hardware, placing and securing components on transportation deck, according to manufacturer specifications, in order to assure safety of self and others and prevent damage to crane components.

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

0904.0 Place Reinforcing Materials**General Performance Objective**

Place reinforcing materials by: identifying reinforcing materials; selecting reinforcing materials; sorting reinforcing materials; placing and tying reinforcing materials; identifying bar supports; selecting bar supports; installing bar supports; installing reinforcing materials for beams, columns and walls; placing and tying reinforcing materials for slab installations; placing and tying reinforcing materials for footings; pre-assembling columns, beams, walls, cages and components; splicing reinforcing bars; hoisting reinforcing bar assemblies; placing reinforcing bar assemblies; positioning welded wire fabric; securing welded wire fabric; and performing final inspection of reinforcing installations..

Performance Objectives**Skills**

- 0904.01 Identify reinforcing materials**, including steel, stainless steel, epoxy and galvanized coated, fibreglass and other composite material by size, length and type, according to the bar lists, placing drawings and structural drawings, in order to meet requirements of drawings and specifications

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

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

- 0904.02 Select reinforcing materials**, including steel, stainless steel, epoxy and galvanized coated, fibreglass and other composite material by size, length and type, in order to meet requirements of drawings and specifications

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

0904.03 Sort reinforcing materials, including steel, stainless steel, epoxy and galvanized coated, fibreglass and other composite material by size, length and type, according to the bar lists, placing drawings and structural drawings, in order to ensure efficient and proper placement.

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

0904.04 Place and tie reinforcing materials, using tools and hardware, according to drawings and the Manual of Standard Practice of Reinforcing Steel Institute of Canada (RSIC), to ensure spacing, tolerances, ties, tie applications, tie sequences and concrete cover.

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

0904.05 Identify bar supports, including plastic, wire, concrete and rebar types, securing with ties, according to drawings and the RSIC Manual, to ensure proper installation of reinforcing materials and concrete cover.

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

0904.06 **Select bar supports**, including plastic, wire, concrete and rebar types, securing with ties, according drawings and the RSIC Manual, in order to ensure proper installation of reinforcing materials and concrete cover.

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

0904.07 **Install bar supports**, including plastic, wire, concrete and rebar types, securing with ties, according to drawings and the RSIC Manual, in order to ensure proper placement of reinforcing bars to meet requirements of drawings and specifications.

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

0904.08 **Install reinforcing materials for beams, columns and walls**, using tools and hardware, bar supports, ties and platforms following required installation sequence, according to drawings and the RSIC Manual, to ensure bar types, spacing, tolerances and concrete cover.

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

0904.09 Place and tie reinforcing materials for slab installations, including two-way, one-way, waffle and joist slabs using tools, hardware and bar supports, according to drawings and the RSIC Manual, to ensure bar types, spacing, tolerances and concrete cover.

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

0904.10 Place and tie reinforcing materials for footings, including field fabricated spacers, templates, concrete supports and welded supports, following a sequence, according to drawings and the RSIC Manual, to ensure bar types, spacing, tolerances and concrete cover.

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

0904.11 Pre-assemble reinforcing bar columns, beams, walls, cages and components, following a sequence, according drawings and the RSIC Manual, to ensure safe and efficient assembly.

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

0904.12 **Splice reinforcing bars**, including lap, mechanical or welded splices, according to the RSIC Manual, to ensure compliance with drawings and manufacturer specifications.

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

0904.13 **Hoist reinforcing bar assemblies**, using hoisting and rigging equipment, tools and hardware, according to drawings and required procedures, in order to complete installations.

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

0904.14 **Place reinforcing bar assemblies**, using hoisting and rigging equipment, tools and hardware, according to drawings and required procedures, in order to complete installations.

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

0904.15 **Position welded wire fabric**, using hand tools and components, according to drawings and the RSIC Manual, in order to ensure safe and efficient installation.

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

0904.16 **Secure welded wire fabric**, using hand tools and components, according to drawings and the RSIC Manual, to ensure safe and efficient installation.

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

0904.17 **Perform final inspection of reinforcing installations**, prior to a concrete pour, to comply with drawings.

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

0905.0 Place Post-Tensioning and Bar Tendons**General Performance Objective**

Place post-tensioning and bar tendons by: performing pre-installation procedure and layout; ordering work site materials and equipment for tendon placing operations; installing bearing plates and bursting steel; installing tendon and sheathing supports, chairs, sheathing and couplers; installing bonded post-tensioning cables in sheathing; installing unbonded post-tensioning cables on supports; assembling dead-end anchors; and performing final inspection of post-tensioning installations.

Performance Objectives**Skills**

0905.01 Perform pre-installation procedure and layout, by locating and marking bearing plates and ordinate locations, using drawings, tendon charts and specifications, to ensure required accuracy and tolerances.

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

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

0905.02 Order work site materials and equipment for tendon placing operations, according to using drawings, tendon charts and specifications, in order to ensure selection and quantity.

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

0905.03 **Install bearing plates and bursting steel**, using hand and power tools and attach grout hoses, according to the using drawings, tendon charts and specifications, in order to ensure tendon type, location and tolerances.

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

0905.04 **Install tendon and sheathing supports, chairs, sheathing and couplers**, using hand and power tools and duct tape, installing grout vents at high points, according to using drawings, tendon charts and specifications, in order to ensure spacing, ordinates, tolerances and concrete cover.

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

0905.05 **Install bonded post-tensioning cables in sheathing**, using equipment, hand and power tools, to ensure damage free installation of tendon type and the required cable projection for stressing operations.

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

0905.06 **Install unbonded post-tensioning cables on supports**, using hand tools and equipment, according to drawings and specifications, in order to ensure damage free installation and required cable projection for stressing operations, spacing, ordinates, tolerances and concrete cover.

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

0905.07 **Assemble dead-end anchors**, using hand and power tools, in order to meet requirements of drawings and specifications.

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

0905.08 **Perform final inspection of post-tensioning installations**, prior to a concrete pour, in order to meet requirements of drawings and specifications.

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

0906.0 Stress and Grout Post-Tensioning and Bar Tendons**General Performance Objective**

Stress and grout post-tensioning and bar tendons by: reading and interpreting engineering instructions for bar and cable stressing and cable stress sequence, ordering work site materials and equipment for tendon stressing and grouting operations; installing anchor head and wedges and stressing plates; positioning stressing jacks and hydraulic pumps; applying stress to post-tensioning tendons; cropping cables to specified strand projection length; performing pre-grouting operations; and performing final grouting operations.

Performance Objectives**Skills**

- 0906.01 Read and interpret engineering instructions for bar and cable stressing and cable stress sequence**, checking the calibration of stressing jacks and hydraulic gauges in preparation for stressing, in order to ensure compliance with drawings.

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

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

- 0906.02 Order work site materials and equipment for tendon stressing and grouting operations**, according to placing drawings and engineering instructions, in order to ensure selection and quantity.

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

0906.03 **Install anchor head, wedges and stressing plates**, according to engineering instructions, drawings and specifications, to ensure safe and efficient task performance.

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

0906.04 **Identify and select stressing jacks and hydraulic pumps**, according to manufacturer and engineering specifications to ensure safe and efficient task performance.

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

0906.05 **Position stressing jacks and hydraulic pumps**, using hoisting or lifting techniques, to ensure safe and efficient task performance.

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

- 0906.06 Apply stress to post-tensioning and bar tendons**, using a stressing jack connected to a hydraulic pump with pressure gauge, following required stress sequence, to achieve the jacking forces specified by engineering instructions and placing drawings, in order to prepare tendon stressing reports.

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

- 0906.07 Crop cables to specified strand projection length**, using cutting equipment, after approval of tendon stressing reports and installing grout hoses, in order to permit capping or pouring of anchor recess pockets.

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

- 0906.08 Perform pre-grouting operations**, using an air compressor to ensure all grout hoses, vents and sheathing are free from obstruction, according to drawings, in order to facilitate the pumping of grout.

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

0906.09 Perform final grouting operations, using a grout pump, by mixing specified grout materials with a high speed shear mixer and filling the sheathing with grout mixture, in order to meet requirements of drawings and specifications.

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

Definitions

Apprentice

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

BOSTA

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

Certificate of Apprenticeship (C of A)

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

Certificate of Qualification (C of Q)

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

Competence

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

Competency Analysis Profile (CAP Chart)

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

Journey person

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

Mandatory Skill

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

Optional Skill

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

Provisional Certificates of Qualification

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

Ratios

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

Red Seal Program

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

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

Sign-off

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

Skill

Individual competency/task described in the Logbook.

Skill Sets

Group or selection of individual skills found in the Logbook.

Skill Set Completion for Sponsors

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

Sponsor

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

Sponsor of Record

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

Trainer

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

Ready to Write Your Exam?

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

There are two types of trade certification examinations in Ontario:

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

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

Ontario's Exam Preparation Guide

[Exam Resources – Skilled Trades Ontario](#)

Basic Examination Details for You to Know

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

Scheduling Your Examination

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

Remember these 3 basic steps:

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

Instructions for Recording a Change in Sponsor

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

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

Sponsor Record #1

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

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

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

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

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

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

Change of Sponsor Record #2

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

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

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

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

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

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

Change of Sponsor Record #3

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

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

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

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

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

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

Change of Sponsor Record #4

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

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

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

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

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

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

Appendix A — Instructions for Apprenticeship Program Completion

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

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

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

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

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

Skilled Trades Ontario will receive notification of this completion.

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

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

Appendix B — Apprentice Completion Form

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

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

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

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

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

X _____
Apprentice's Signature Date

X _____
Signature of Sponsor's Signing Authority Date

Appendix C — Skill Set Completion for Sponsors

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

Skill Set #	Skill Set Title	Signing Authority Signature
0891.0	Protect Self and Others	
0892.0	Plan, Prepare and Set Up Job	
0893.0	Operate and Maintain Hand and Power Tools	
0894.0	Operate and Maintain Oxy-Fuel Equipment	
0895.0	Weld Ferrous and Non-Ferrous Materials	
0896.0	Rig and Hoist Equipment and Components	
0897.0	Erect Structural Members	
0898.0	Install Fasteners	
0899.0	Fabricate and Install Ornamental Ferrous and Non-Ferrous Components	
0900.0	Install, Move and Maintain Machinery and Equipment	
0901.0	Install and Fasten Curtain Wall and Glass Systems	
0902.0	Install, Move and Maintain Material Handling and Robotic Equipment	
0903.0	Erect and Dismantle Cranes	
0904.0	Place Reinforcing Materials	
0905.0	Place Post-Tensioning and Bar Tendons	
0906.0	Stress and Grout Post-Tensioning and Bar Tendons	

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

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

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

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

Staff Name _____ Signature _____

Date _____

Appendix D — Local Service Delivery Offices in Ontario

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

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

Competency Analysis Profile (CAP) Chart

0891.0 Protect Self and Others	0891.01 Wear personal protective equipment (PPE)	0891.02 Lift equipment and materials	0891.03 Apply housekeeping rules	0891.04 Interpret warning signs, labels and symbols	0891.05 Report hazards to supervisory and safety personnel
	0891.06 Maintain safety devices and equipment	0891.07 Respond to emergency situations	0891.08 Operate construction equipment	0891.09 Inspect platforms, ladders and working surfaces	0891.10 Install and secure platforms, ladders and working surfaces
	0891.11 Prevent fires	0891.12 Communicate with co-workers in the workplace			
	0892.01 Read and interpret drawings and specifications	0892.02 Plan tasks	0892.03 Determine installation procedures and sequences	0892.04 Install and remove falsework	0892.05 Set up equipment
	0892.06 Unload, sort/shake out and stage inventory materials	0892.07 Prepare materials for installation			

Competency Analysis Profile: Ironworker — Generalist 420B *(all unshaded skill sets must be completed)*

0893.0 Operate and Maintain Hand and Power Tools	0893.01 Identify hand tools	0893.02 Select hand tools	0893.03 Use hand tools	0893.04 Maintain hand tools	0893.05 Identify power tools
	0893.06 Select power tools	0893.07 Operate power tools	0893.08 Maintain power tools	0893.09 Identify powder actuated tools and accessories	0893.10 Select powder actuated tools and accessories
	0893.11 Operate powder actuated tools and accessories	0893.12 Maintain powder actuated tools and accessories	0893.13 Identify alignment, levelling and measuring tools	0893.14 Select alignment, levelling and measuring tools	0893.15 Use alignment, levelling and measuring tools
	0893.16 Maintain alignment, levelling and measuring tools				
0894.0 Operate and Maintain Oxy-Fuel Equipment	0894.01 Select oxy-fuel equipment	0894.02 Set-up and test oxy-fuel equipment	0894.03 Adjust oxy-fuel equipment	0894.04 Perform accurate cuts	0894.05 Pre-heat material
	0894.06 Post heat materials	0894.07 Bend materials	0894.08 Expand materials	0894.09 Clean materials	0894.10 Maintain and store oxy-fuel equipment

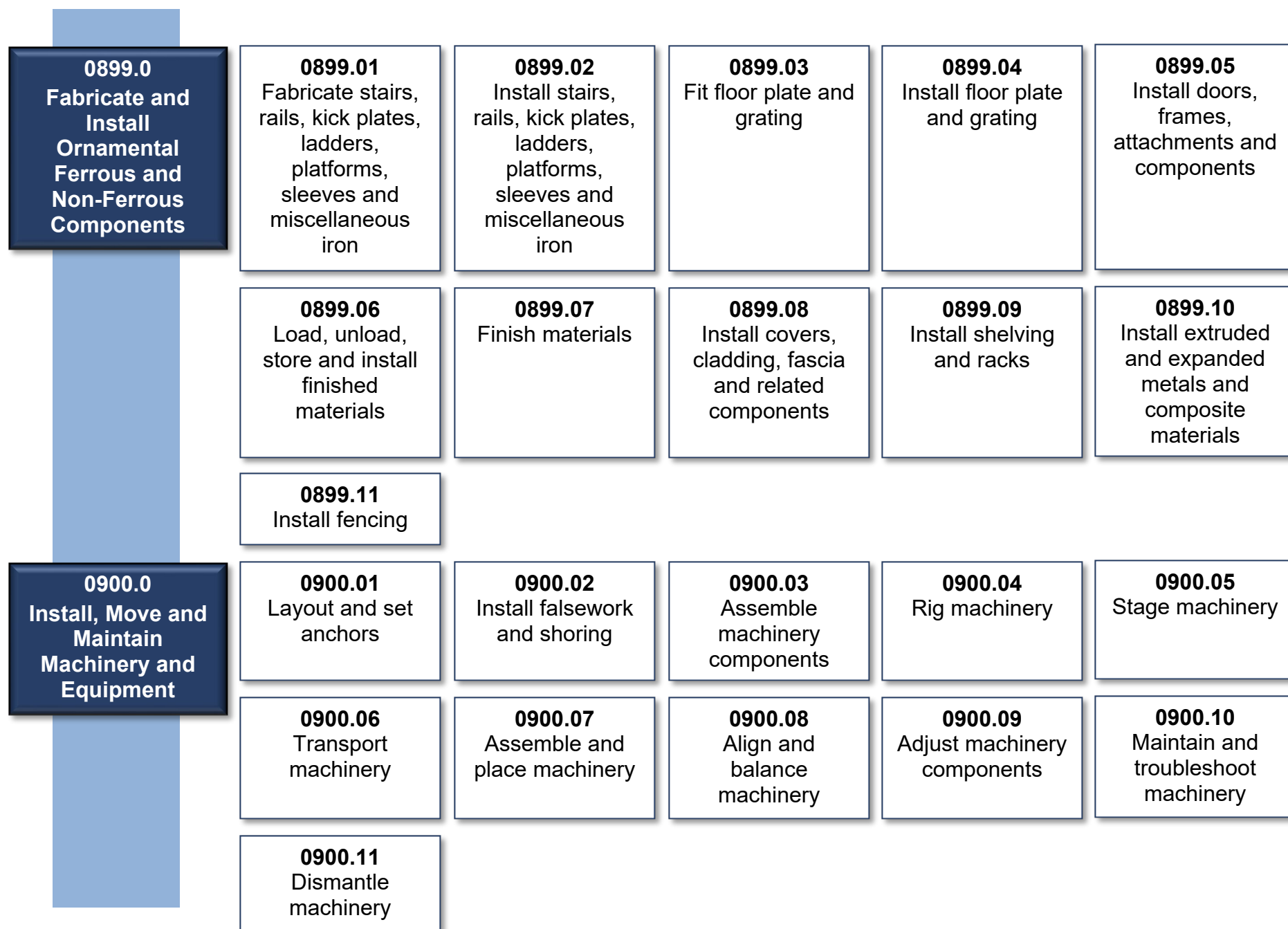
Competency Analysis Profile: Ironworker — Generalist 420B *(all unshaded skill sets must be completed)*

0895.0 Weld Ferrous and Non-Ferrous Materials	0895.01 Identify welding procedures	0895.02 Select welding procedures	0895.03 Set up oxy-fuel equipment	0895.04 Operate oxy-fuel equipment	0895.05 Set up manual arc welding equipment
	0895.06 Operate manual arc welding equipment	0895.07 Set up semi-automatic arc welding equipment	0895.08 Operate semi-automatic arc welding equipment	0895.09 Set up automatic arc welding equipment	0895.10 Operate automatic arc welding equipment
	0895.11 Set up arc-air cutting and gouging equipment	0895.12 Operate arc-air cutting and gouging equipment	0895.13 Fit, tack and brace materials		
0896.0 Rig and Hoist Equipment and Components	0896.01 Plan lifts	0896.02 Select slings	0896.03 Assemble slings	0896.04 Inspect and maintain slings	0896.05 Select rigging hardware
	0896.06 Assemble rigging hardware	0896.07 Inspect and maintain rigging hardware	U0896.08 Select hoisting equipment	U0896.09 Assemble hoisting equipment	U0896.10 Inspect and maintain hoisting equipment
	0896.11 Reeve or lace blocks	0896.12 Tie and render knots, hitches and bends	0896.13 Splice fibre rope	0896.14 Establish hand, voice and radio communications with co-workers and equipment operators	

Competency Analysis Profile: Ironworker — Generalist 420B *(all unshaded skill sets must be completed)*

<div>0897.0 Erect Structural Members</div>	0897.01 Establish benchmark	0897.02 Set up and adjust levelling instruments	0897.03 Check anchor bolts and embedded parts	0897.04 Set shims and base plates	0897.05 Erect members temporarily in sequence
	0897.06 Plumb and align structure	0897.07 Erect miscellaneous iron	0897.08 Secure miscellaneous iron	0897.09 Correct deficiencies in structural and miscellaneous	0897.10 Install temporary handrails, flooring and safety nets
	0897.11 Hoist decking	0897.12 Fit decking	0897.13 Secure decking	0897.14 Erect pre-engineered metal building systems	0897.15 Erect structural components of wind turbine systems
	0897.16 Erect structural components of solar panel systems	0897.17 Fabricate platework for vessels and containers	0897.18 Erect platework for vessels and containers		
	0898.01 Identify fasteners	0898.02 Select fasteners	0898.03 Align components	0898.04 Prepare surfaces	0898.05 Select chemical adhesives
	0898.06 Prepare chemical adhesives	0898.07 Install fasteners	0898.08 Tension fasteners	0898.09 Perform fastener inspections	

Competency Analysis Profile: Ironworker — Generalist 420B *(all unshaded skill sets must be completed)*



0901.0
Install and Fasten
Curtain Wall and
Glass Systems

0901.01
Load, unload and
store finished
curtain wall and
window wall
materials

0901.02
Select rigging,
hoisting and
staging
equipment

0901.03
Assemble
rigging, hoisting
and staging
equipment

0901.04
Assemble curtain
wall sections and
components

0901.05
Level and align
curtain wall,
window wall
sections and
components

0901.06
Apply specified
adhesives,
sealants, gaskets,
insulating
materials, vapour
barriers and air

0901.07
Install glass and
thermo-pane
units

0901.08
Install panel units

0901.09
Install
window-wall
units

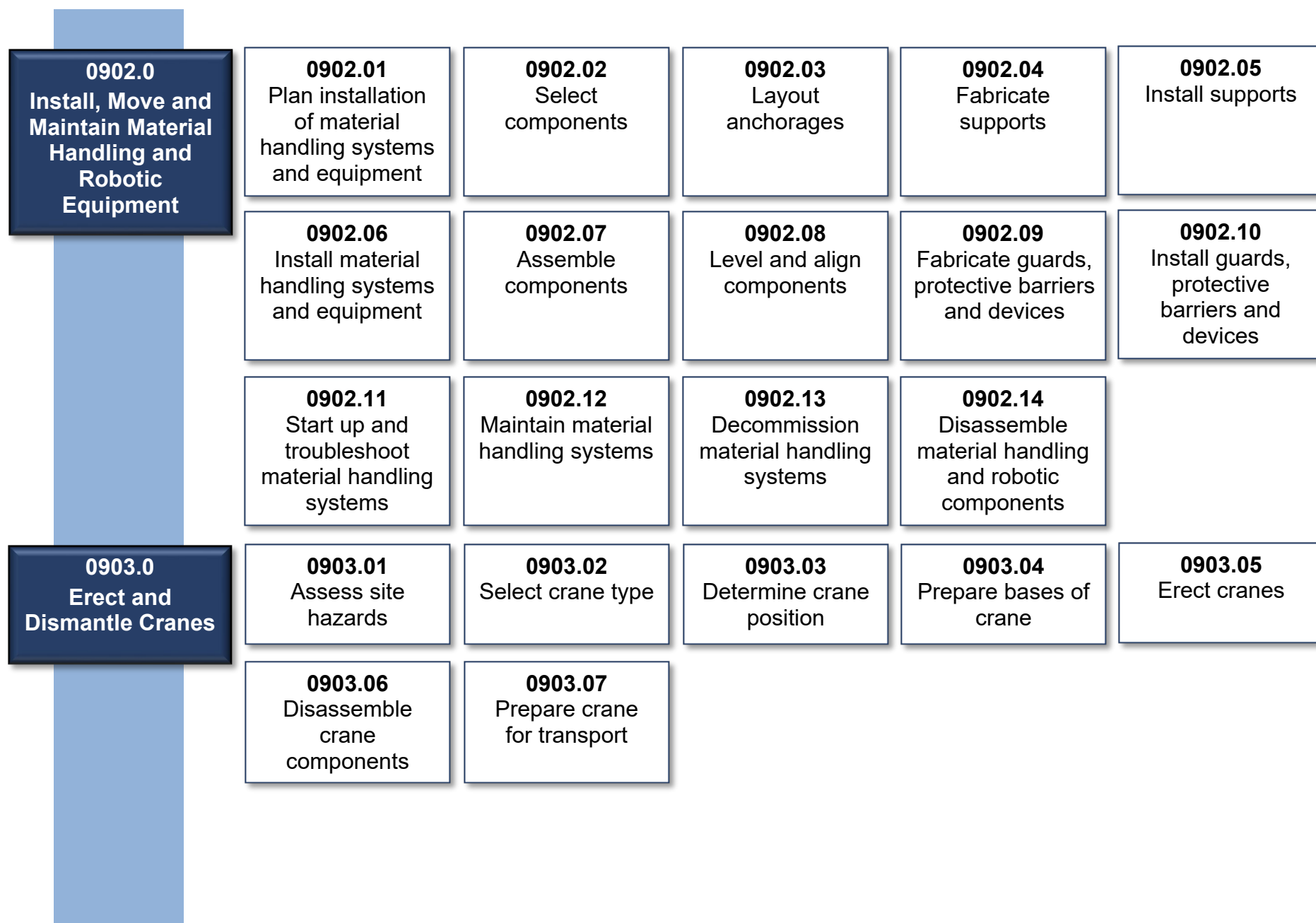
0901.10
Install
miscellaneous
glass systems

0901.11
Install precast
systems

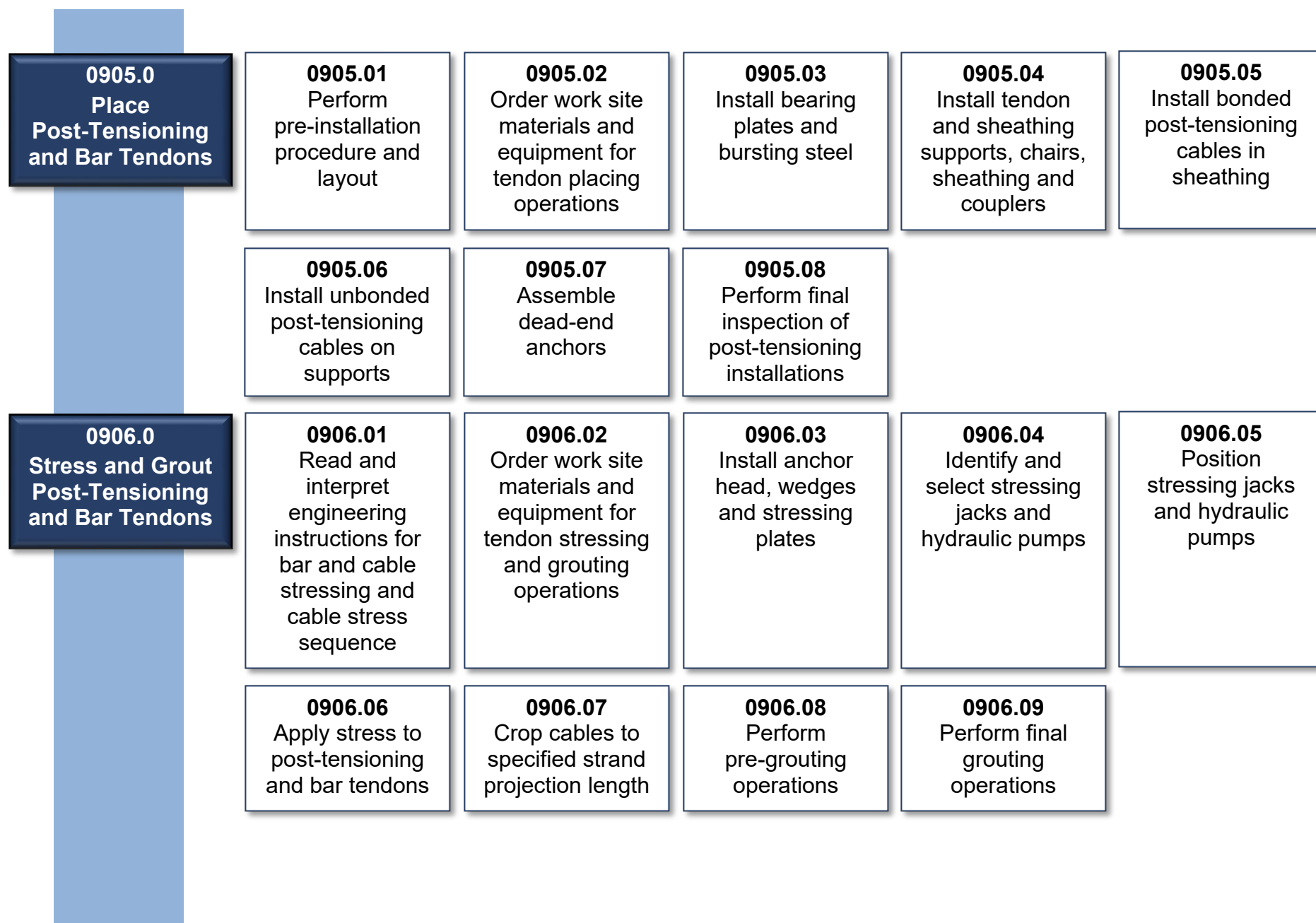
0901.12
Inspect finished
curtain wall,
window wall and
miscellaneous
glass systems

0901.13
Retrofit curtain
wall, window wall
and
miscellaneous
glass systems

Competency Analysis Profile: Ironworker — Generalist 420B *(all unshaded skill sets must be completed)*



0904.0 Place Reinforcing Materials	0904.01 Identify reinforcing materials	0904.02 Select reinforcing materials	0904.03 Sort reinforcing materials	0904.04 Place and tie reinforcing materials	0904.05 Identify bar supports
	0904.06 Select bar supports	0904.07 Install bar supports	0904.08 Install reinforcing materials for beams, columns and walls	0904.09 Place and tie reinforcing materials for slab installations	0904.10 Place and tie reinforcing materials for footings
	0904.11 Pre-assemble reinforcing bar columns, beams, walls, cages and components	0904.12 Splice reinforcing bars	0904.13 Hoist reinforcing bar assemblies	0904.14 Place reinforcing bar assemblies	0904.15 Position welded wire fabric
	0904.16 Secure welded wire fabric	0904.17 Perform final inspection of reinforcing installations			



[illegible]

Completing Your Apprenticeship Program

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

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

After Your Apprenticeship

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

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

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

Preparing For Your Exam

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



**Skilled
Trades**
Ontario

**Métiers
spécialisés**
Ontario

skilledtradesontario.ca



Ironworker (Generalist)