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Trade Profile

Bricklayer

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RED SEAL TRADE PROFILE

BRICKLAYER

STRUCTURE OF THE TRADE PROFILE

This profile has two sections that provide a snapshot of the trade's description, and all trade activities as they are organized in the Red Seal Occupational Standard:

Description of the Bricklayer trade: an overview of the trade's duties, work environment, job requirements, similar occupations and career progression

Task Matrix: a chart which outlines graphically the major work activities, tasks and sub-tasks of this trade

Major Work Activity (MWA): the largest division within the standard that is comprised of a distinct set of trade activities

Task: distinct actions that describe the activities within a major work activity

Sub-task: distinct actions that describe the activities within a task

A complete version of the occupational standard, which provides additional detail for the trade activities, skills and knowledge can be found at www.red-seal.ca.

DESCRIPTION OF THE BRICKLAYER TRADE

“Bricklayer” is this trade’s official Red Seal occupational title approved by the CCDA. This standard covers tasks performed by bricklayers.

Bricklayers skills and abilities are in high demand across Canada. They build and repair walls, floors, arches, pavings, partitions, fireplaces, chimneys, smokestacks, furnaces, kilns and other structures. They work with materials such as brick, natural stone, manufactured stone, tiles, precast masonry panels, glass blocks, concrete blocks, light-weight insulated panels, other masonry units, insulation and membranes. They erect, install, maintain, repair and alter various masonry. The structures vary in complexity from a simple masonry walkway to an ornate exterior on a multi-level building.

Bricklayers use wheelbarrows and forklifts to transport materials. They use hand and power tools to cut and trim masonry units to required size. Trowels are used to spread mortar to bond layers of masonry units together. Measuring and layout tools such as a plumb line, level and laser level are used to ensure proper alignment.

Bricklayers work on industrial, commercial, institutional and residential buildings. They may specialize in stone work, restoration work or ornamental work. They may also specialize in installing refractories in high-temperature environments or installing corrosion resistant materials to line corrosive environments such as tanks and vessels.

Key attributes for people in this trade are manual dexterity, mechanical aptitude, the ability to problem solve and think sequentially, and the ability to work at heights. Bricklaying is physically demanding work and requires considerable effort in lifting heavy materials, climbing, bending, kneeling, working in confined spaces and working on scaffolding. Bricklayers have the advantage of developing their artistic abilities as they construct designs on different jobsites. They have an eye for detail in order to create accurate and aesthetically pleasing work.

Most of the work is performed outdoors exposing bricklayers to the elements. The winterization of jobsites allows the work to continue year round. Construction safety and accident prevention is a priority.

This standard recognizes similarities or overlaps with the work of other trades such as tilesetters, concrete finishers, carpenters, and drywall finishers and plasterers.

Experienced bricklayers may have opportunities to travel, advance to supervisory positions for masonry contractors or in other related fields such as construction management, estimating or building inspection. They may also become contractors.

TRENDS IN THE BRICKLAYER TRADE

In some jurisdictions, the use of reinforced masonry is increasing on commercial jobs, while in others it is decreasing. Masonry work is decreasing as a result of competing products, changing building codes and architectural design. Builders are continuing to value the selling strength of brick and block construction, depending on environmental conditions and location. The advantages of these include energy efficiency, reduced maintenance, fire resistance, sound resistance, structural soundness and longevity of masonry. In residential and commercial construction, thin veneers are being used more often due to consumer-driven interest and cost perceptions. These perceptions are not always accurate as thin veneers are not necessarily cheaper in some cases.

Work practices and equipment are being designed with the bricklayer in mind, with consideration given to ergonomics and efficiency. Mast scaffolding is designed to keep the bricklayer at a comfortable position to eliminate excessive bending and lifting.

New mechanical means including robotics and exoskeletons are emerging in the industry. The use of laser technology is being used for various tasks in masonry. In the restoration sector, lasers are being introduced to clean sensitive, historical and ornamental masonry units. The use of dustless cutting and drilling technologies continues to be a trend.

Specifications and documentation, owing to the new national energy code, and Leadership in Energy and Environmental Design (LEED), have become more complex. Energy efficiency and environmental awareness affect this trade as new regulations are imposed on building processes and materials. The masonry industry is a leader in compliance with LEED requirements. Bricklayers must keep up-to-date with these guidelines and requirements.

There are new materials being used in industry. Insulated concrete forms (ICF) are being used in place of traditional formed concrete and block walls. Cement board, plastic and stainless wire lath, are replacing galvanized lath for exterior surface bonded installations.

Emerging software, applications and technology are being introduced for masonry design, project management and documentation. They are being adopted in instances such as toolbox meetings, log books, timekeeping and communication of job-site information to clients, supervisors and other tradespersons. Software is being introduced to facilitate calculations for masonry design.

As artisans, bricklayers are passionate about displaying their talents, skills and abilities when constructing various projects. Residential and commercial demand for the construction and installation of products such as outdoor fireplaces, masonry heaters, wood burning stoves and wood-fired brick ovens are increasing work opportunities for bricklayers.

BRICKLAYER

TASK MATRIX

A – Performs common occupational skills — 12%

Task A-1 **Performs safety-related functions** **23%**	**A-1.01 Maintains safe work environment**	**A-1.02 Uses personal protective equipment (PPE) and safety equipment**	
Task A-2 **Uses and maintains tools and equipment** **24%**	**A-2.01 Maintains tools and equipment**	**A-2.02 Uses rigging, hoisting and lifting equipment**	**A-2.03 Uses access equipment**
Task A-3 **Uses scaffolding** **20%**	**A-3.01 Erects scaffolding**	**A-3.02 Dismantles scaffolding**	**A-3.03 Maintains scaffolding**
Task A-4 **Organizes work** **20%**	**A-4.01 Uses drawings and specifications**	**A-4.02 Plans daily tasks and activities**	**A-4.03 Prepares jobsite and materials**
	A-4.04 Protects surrounding areas		
Task A-5 **Uses communication and mentoring techniques** **13%**	**A-5.01 Uses communication techniques**	**A-5.02 Uses mentoring techniques**	

B – Performs general masonry practices — 19%

Task B-6 **Performs substrate preparation** **29%**	**B-6.01 Prepares vertical substrates and foundations**	**B-6.02 Applies parging**	**B-6.03 Installs anchoring/tie systems**
	B-6.04 Installs membrane and flashing	**B-6.05 Installs insulation**	
Task B-7 **Performs fundamental masonry tasks** **41%**	**B-7.01 Lays out wall and coursing**	**B-7.02 Finishes joints**	**B-7.03 Cleans new masonry surfaces**
	B-7.04 Seals masonry surfaces		
Task B-8 **Uses mortars, grouts and adhesives** **30%**	**B-8.01 Mixes mortar, concrete, grout and adhesives**	**B-8.02 Uses mortars**	**B-8.03 Uses concrete and grout**
	B-8.04 Uses adhesives		

C – Builds masonry systems — 22%

Task C-9 **Builds masonry walls** **43%**	**C-9.01 Builds non-load-bearing walls**	**C-9.02 Builds load-bearing walls**
Task C-10 **Builds horizontal masonry surfaces** **21%**	**C-10.01 Prepares horizontal substrate**	**C-10.02 Lays masonry units on horizontal surfaces**

Task C-11 **Builds and installs prefabricated masonry** **13%**	**C-11.01 Builds prefabricated masonry**	**C-11.02 Erects prefabricated masonry**
Task C-12 **Installs surface-bonded masonry units** **23%**	**C-12.01 Prepares substrate for surface-bonded masonry units**	**C-12.02 Applies surface-bonded masonry units**

D – Builds natural stone systems — 10%

Task D-13 **Builds natural stone walls** **55%**	**D-13.01 Prepares natural stone**	**D-13.02 Lays natural stone**	**D-13.03 Damp cures walls**
Task D-14 **Performs mechanically-fastened natural stone cladding procedures** **45%**	**D-14.01 Prepares substrate for cladding**	**D-14.02 Prepares natural stone for cladding**	**D-14.03 Installs natural stone cladding**

E – Builds chimneys and fireplaces — 10%

Task E-15 **Builds chimneys** **52%**	**E-15.01 Builds foundation supports for chimneys**	**E-15.02 Lays masonry units to build chimneys**	**E-15.03 Installs flue lining**
	E-15.04 Installs related flashings	**E-15.05 Installs caps**	
Task E-16 **Builds fireplaces** **48%**	**E-16.01 Builds foundation for hearth, firebox, backup material and veneer**	**E-16.02 Builds hearth, firebox and backup**	**E-16.03 Installs damper**
	E-16.04 Builds smoke chamber	**E-16.05 Prepares existing fireplace for insert**	**E-16.06 Faces fireplaces and inserts**

F – Installs refractories and corrosion resistant materials — 9%

Task F-17 **Installs and maintains refractories** **63%**	**F-17.01 Prepares for installation of refractories and accessories**	**F-17.02 Prepares mortar for refractories**	**F-17.03 Removes existing refractories**
	F-17.04 Installs refractories	**F-17.05 Repairs refractories**	
Task F-18 **Installs and maintains corrosion resistant materials** **37%**	**F-18.01 Prepares for installation of corrosion resistant materials and accessories**	**F-18.02 Prepares mortar for corrosion resistant materials**	**F-18.03 Removes existing corrosion resistant materials**
	F-18.04 Installs corrosion resistant materials	**F-18.05 Repairs corrosion resistant materials**	

G – Performs restoration — 11%

Task G-19 **Rebuilds masonry work** **57%**	**G-19.01 Disassembles unit masonry**	**G-19.02 Prepares restoration work area**	**G-19.03 Reinstalls masonry and accessories**
Task G-20 **Repairs and cleans existing masonry work** **43%**	**G-20.01 Removes deteriorated masonry units**	**G-20.02 Repoints joints**	**G-20.03 Repairs masonry units**
	G-20.04 Reinstalls masonry units and accessories	**G-20.05 Cleans existing masonry surfaces**	

H – Performs additional masonry

7%

Task H-21 **Installs glass blocks** **20%**	**H-21.01 Prepares work area for installation of glass blocks**	**H-21.02 Lays glass blocks**	
Task H-22 **Installs ornamental and sculpted masonry** **27%**	**H-22.01 Prepares for installation of ornamental and sculpted masonry units**	**H-22.02 Installs ornamental and sculpted masonry units**	
Task H-23 **Builds arches** **53%**	**H-23.01 Prepares location for installation of arch**	**H-23.02 Builds template**	**H-23.03 Places template**
	H-23.04 Installs arch masonry units	**H-23.05 Removes template**	