

## **Bricklaying**

POST-SECONDARY



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### 1 THE SKILLS FOR SUCCESS FOR CAREERS IN THE SKILLED TRADES AND TECHNOLOGY

The Government of Canada has updated the previous Essential Skills framework to the new Skills for Success model in response to the evolving labour market and changing skill requirements. This model outlines nine fundamental skills Canadians need to thrive in work, education, training, and daily life.

Skills/Compétences Canada aims to highlight the importance of these skills, vital for success in trade and technology careers. Competitors can see how Skills for Success are integrated into contest descriptions, projects, and project documents. Recognizing these skills during the competition helps competitors match tasks with specific skills necessary for success and understand how these skills apply within their trade or technology programs and future careers.

The nine key Skills for Success, validated for workplace success, are: 
<sup>1</sup>Numeracy, <sup>2</sup>Communication, <sup>3</sup>Collaboration, <sup>4</sup>Adaptability, <sup>5</sup>Reading, <sup>6</sup>Writing, <sup>7</sup>Proble m Solving, <sup>8</sup>Creativity and Innovation, <sup>9</sup>Digital

These Skills for Success have been identified in section 2.4 and/or 3.2 (to be completed by SCC) of your Contest Description and, if relevant, in your Project and supporting documents.

#### 2 CONTEST INTRODUCTION

2.1 Description of the associated work role(s) or occupation(s) https://www.skillscompetencescanada.com/en/skill\_area/bricklaying/

#### **2.2** Purpose of the Challenge

To evaluate contestants' ability to accurately and safely build a project according to construction drawings specific to the bricklaying trade.

#### **2.3** Duration of contest

12 hours

#### **2.4** Skills and Knowledge to be tested

The test project consists of the practical installation of brick, glass block, block, stone and/or parging by respecting the indications on the plan/design (for cutting and details). Conformance to safety and industry standards will be evaluated (safe operation of tools and equipment). The test project includes the construction of brick and block walls, or surfaces of with brick facing. For example, parging, decorative brickwork with projections and recesses in all possible bonds, sections of



walls with segmental, semi-circular, triangular, flat, gothic arches, curved walls and cavity walls.<sup>1,5,7</sup>

Skills for Success - <sup>1</sup>Numeracy, <sup>5</sup>Reading, <sup>7</sup>Problem Solving

#### 3 CONTEST DESCRIPTION

**3.1** List of documents produced and timeline for when competitors have access to the documents on the Skills/Compétences Canada website.

DOCUMENT	DATE OF DISTRIBUTION
Project Plan	January 2025

- **3.2** Tasks that may be performed during the contest.
  - Measuring system:
    - The metric system will be used
  - Project materials:
    - 80 to 85% brickwork (clay brick and/or concrete brick)
    - 10 to 20% block, stonework and /or glass block
    - 15 to 30% Arch set or other detail.
    - 0 to 10% parging
  - Technical skills are:
    - Measuring lengths<sup>1</sup>
    - Calculating and marking of angles<sup>1</sup>
    - Determining the layout<sup>7</sup>
    - Determining the gauge<sup>7</sup>
    - Cutting brickwork
    - Levelling and plumbing
    - Making corners
    - Building walls with brick, block or stone in different bonds: using stretcher or header, brick on end, brick on edge, raking, corbels, decorative bond, practical and/or aesthetic details
    - Sloping or battering walls according to the drawing and using material indicated in 2.1<sup>5</sup>
    - Compliance with the plans<sup>5</sup>
    - Jointing pointing according to required profile<sup>5</sup>
    - Finish parging according to specifications<sup>5</sup>
    - Cleaning
    - Brick cutting not including 90 degrees to be limited to a maximum of 25% of the total numbers of bricks.<sup>1</sup>
  - Material:
    - Bricks, face bricks, backing bricks, uniformly baked or formed, dimensionally accurate and sharp-edge, blocks or stone maximum 15 kg (30 lbs.)<sup>1</sup>



- Bonding agent: lime and cement or masonry cement (Type N)
- Aggregate: sand grain size 0 to 3 mm max.
- Mortar additive may be used to make mortar softer (workable)
- The use of brick cleaning fluids or oil is not allowed
- Technical assessment may include:
  - o Problem solving<sup>7</sup>
  - Knowledge of bonding<sup>7</sup>
  - o Calculations<sup>1</sup>
  - Drawing interpretation<sup>5</sup>
  - General work health and safety

Skills for Success - <sup>1</sup>Numeracy, <sup>5</sup>Reading, <sup>7</sup>Problem Solving

#### 4 EQUIPMENT, MATERIAL, CLOTHING

- **4.1** Equipment and material provided by Skills/Compétences Canada (SCC):
  - Each competitor will have a working area of least 9 m<sup>2</sup>. The floor surface will be even (±5 mm and 2 m long), horizontal and have an adequate loading capacity. There will be sufficient space for delivery and storage of material.
  - There will be a space of 1 m between public barrier and the competitor materials.
  - Each workstation floor area will be covered by a material that is suitable to set out and construct masonry
  - Water supply
  - Electric power
  - Mortar board
  - Water bucket
  - Block (support for mortar board)
  - Straight edges (per required size)
  - Wood for template if necessary
  - 4 table saws with 14" diamond blades (one machine for 2 competitors, if necessary)
  - Metric Square 24"
  - Any power tools needed

# COMPETITORS WILL BE REQUIRED TO USE THE MATERIAL AND EQUIPMENT PROVIDED BY SCC. ALL OTHER MATERIAL AND EQUIPMENT WILL BE REMOVED FROM THE SKILL AREA.

- **4.2** Equipment and material provided by the competitor:
  - Line holders
  - Levels (digital version acceptable)
  - Steel jointers

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- Trowel
- Slicker
- Hammer
- Square
- Chalk line
- Measuring tapes
- Brush
- Cleaning tools (Carpet, sponge, foam)
- Line
- Joint raker
- Bond paper (must be free of any layout markings)
- Gauging tools
- Angle finders and profiles (digital version acceptable)

#### 4.2.1 Toolboxes Guidelines

One of the objectives of SCC is the sustainability of the Competition. As a result, the toolboxes brought by Competitors will be restricted to the following maximum specifications.

The Competitor toolbox must not exceed 1 meters<sup>3</sup> in volume. It can be multiple toolboxes, but the total of all toolboxes must not exceed the maximum volume indicated. There is no exception to this rule. If the Competitor toolbox is larger than what is indicated, the Competitor, with the guidance of the NTC, will need to remove items from the toolbox and those items will not be used during the competition. All tools must fit inside one or more toolboxes. Tools outside of a toolbox will not be permitted.

#### **4.3** Required clothing provided by the competitor:

- Appropriate clothing:
  - Shirts may be designated by provincial and territorial Skills Canada chapters.
  - Pants (no shorts)
- CSA approved footwear

#### **HEALTH AND SAFETY**

#### **4.4** Safety program

SCC has implemented a comprehensive safety program as health and safety is an integral part of our competitions. Our safety program includes guidelines and procedures to make the work environment in each skill area safer.



#### **4.4.1** Safety manual

As part of our program, a safety manual has been created to monitor and document health and safety within each skill area. It includes a definite plan of action designed to prevent accidents. The safety manual will be provided for every skill, and these instructions must be followed and respected by all participants and officials at the SCNC.

#### **4.4.2** Safety workshop

During orientation, Competitors will participate in a safety workshop, and they will be expected to work and maintain a safe working area during the competition. Any Competitor breaking any health, safety, and environmental rules, may be required to undertake a second safety workshop. This will not affect the Competitor's competition time.

- **4.5** List of required personal protective equipment (PPE) provided by Skills/Compétences Canada:
  - N/A
- **4.6** List of required personal protective equipment (PPE) provided by the competitor:
  - CSA approved Safety Glasses
  - Hearing Protection
  - CSA approved Safety Shoes

**Note**: Competitors who do not have the required protective equipment will not be allowed to participate in the competition.

#### 5 ASSESSMENT

#### **5.1** Point breakdown

**Note:** This list is subject to change.

TASKS	/100
Measurement	
Dimensions	20
Levelling	10
Plumb	20
Alignment	11
Angles	05
Detail	12
Judgement	
Health and safety	04
Joint uniformity and finishing	09



Overall appearance and cleanliness	09
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#### 6 CONTEST SPECIFIC RULES

Contest specific rules cannot contradict or take priority over the Competition Rules. They do provide specific details and clarity in areas that may vary from contest to contest. Any additional contest rules will be reviewed during the competitor orientation.

TOPIC/TASK	CONTEST SPECIFIC RULE
Tools / Infrastructure	No power tools to be supplied by competitors.
Project distribution	Competitors will receive their final test project during competitor orientation. Project drawings will stay on site for the duration of the competition day they impact.

#### 7 ADDITIONAL INFORMATION

#### **7.1** Interpreter

If a competitor will require the help of an interpreter when onsite during the competition, the Skills/Compétences Canada Provincial/Territorial offices must advise Skills/Compétences Canada National Secretariat a minimum of 1 month prior to the competition or this service may not be guaranteed.

#### **7.2** Ties

- **Tiebreaker #1:** In the event of a tie, the competitor with the highest score for the Plumb (vertical alignment) criterium will be declared the winner.
- **Tiebreaker #2:** If a second tie occurs, the competitor with the highest score in the Joint uniformity and finishing criterium will be declared the winner.
- **Tiebreaker #3:** If a third tie occurs the competitor with the highest score in the Detail criterium will be declared the winner.

#### **7.3** Test Project change at the Competition

Where the Test Project has been circulated to Competitors in advance, NTC shall change a maximum of 30% of the work content. Please refer to the Competition Rules.

#### 7.4 Competition Rules

Please refer to the competition rules of the Skills Canada National Competition which can be found on the SCC website:

https://www.skillscompetencescanada.com/en/event/scnc2025/



#### 8 NATIONAL TECHNICAL COMMITTEE MEMBERS

MEMBER ORGANIZATION	NAME
Nova Scotia	John Clark
New Brunswick	Ashley Ritchie
Quebec	Stéphane Landry
Ontario	Rene Letoile
Manitoba	Brian Gebhardt – Co-Chair
Saskatchewan	John Walker
Alberta	Derek Kowalchuk – Chair
British Columbia	Ira Maheu

Contact the Skills/Compétences Canada national secretariat for any questions or concerns: Nathalie Maisonneuve (nathaliem@skillscanada.com).