



CONTEST DESCRIPTION

## **Bricklaying**

POST-SECONDARY

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

In response to the evolving labour market and changing skill needs, the Government of Canada has launched the new Skills for Success (*former Essential Skills*) model defining nine key skills needed by Canadians to participate in work, in education and training, and in modern society more broadly. SCC is currently working with Employment and Social Development Canada (ESDC) to bring awareness of the importance of these skills that are absolutely crucial for success in Trade and Technology careers. Part of this ongoing initiative requires the integration and identification of the Skills for Success in contest descriptions, projects, and project documents. The next phase and very important aspect of our Skills for Success (SfS) initiative is to provide a *Skills Report Card* to each competitor at the Skills Canada National Competition. The purpose of the report card is to inform the competitor about their current level of nine identified Skills for Success based on their competition scores. With this knowledge, the competitor will be made aware which skill may require improvement. Full implementation is expected in the next Skills Canada National Competition.

The following 9 skills have been identified and validated as key skills for success for the workplace in the legend below:

<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>Problem 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 of your Contest Description and if applicable, 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/](https://www.skillscompetencescanada.com/en/skill_area/bricklaying/)

### 2.2 Purpose of the Challenge

Bricklaying covers the construction of buildings and parts of buildings, brick, and/or block, artificial and natural stone walls.

### 2.3 Duration of contest

12 hours

### 2.4 Skills and Knowledge to be tested.

The test project consists of practical work including bricks, glass block, block and/or stone laying by respecting the indications on the plan/design (for cutting and detail). The theoretical knowledge is limited to that which is necessary to carry out the practical work. Knowledge on rules, regulations and standards is not tested. The

test project includes the construction of brick and block walls, or surfaces of with brick facing. For example, 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.

### 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	January 2022

#### 3.2 Tasks that may be performed during the contest

- Practical work
  - Only the metric system will be used
  - The competition may be designed from the following
    - 80 to 85% brickwork (clay brick and/or concrete brick)
    - 10 to 25% block, stonework and /or glass block
    - 15 to 30% Arch set out other detail
- The appropriate 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 aesthetics 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>
  - Cleaning
- 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>
  - Bounding 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
- Brick cutting not including 90 degrees to be limited do a maximum of 25% of the total numbers of bricks.<sup>1</sup>
- Technical assessment. This may include:
  - Problem solving<sup>7</sup>
  - Knowledge of bonding<sup>7</sup>
  - 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**

- Each competitor will have a working area of least 9 m<sup>2</sup>. The floor surface will be even ( $\pm 5$  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 2 m
- Static electric brick cutting machines (one machine for 2 competitors, if necessary)
- Wood for template if necessary
- 4 table saws with 14" diamond blades
- 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
- Steel jointers
- Trowel
- Slicker
- Hammer
- Square
- Chalk line
- Measuring tapes
- Brush
- cleaning tools (Carpet, sponge, foam)
- Line
- Joint raker
- Bond paper
- Gaging tools
- Angle finders

##### 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

## 5 HEALTH AND SAFETY

### 5.1 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.

### 5.1.1 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.

### 5.1.2 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.

### 5.2 COVID-19 Protocol

The COVID-19 guidelines will be shared as soon as they are available. The COVID-19 guidelines will be subject to change based on the BC COVID-19 guidelines in place at the time of the competition.

### 5.3 List of required personal protective equipment (PPE) provided by Skills/Compétences Canada

- N/A

### 5.4 List of required personal protective equipment (PPE) provided by the competitor

- Safety Glasses
- Hard Hat
- 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

## 6 ASSESSMENT

### 6.1 Point breakdown

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

TASKS	/100
<b>Measurement</b>	
Dimensions	20
Levelling	12
Plumb	16

Alignment	15
Angles	05
Detail	14
<b>Judgement</b>	
Health and safety	05
Joint uniformity and finishing	08
Overall appearance and cleanliness	05

## 7 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 be receiving their final test project during competitor orientation. Project drawings will stay on site for the duration of the competition.

## 8 ADDITIONAL INFORMATION

### 8.1 Interpreter

If a competitor requires the help of an interpreter once 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.

### 8.2 Ties

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

### 8.3 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.



#### 8.4 Competition rules

Refer to the competition rules of the Skills Canada National Competition which can be found on our website.

### 9 NATIONAL TECHNICAL COMMITTEE MEMBERS

MEMBER ORGANIZATION	NAME
New Brunswick	Ashley Ritchie
Quebec	Pierre Bédard
Ontario	Rene Letoile – Chair
Saskatchewan	Brandon Lemon – Co-Chair
Alberta	Derek Kowalchuk
British Columbia	Geoff Higginson

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