

# Sprinkler Systems

## Project Description 2020

### 1. The Importance of Essential Skills for Careers in the Skilled Trades and Technology

SCC is currently working with Employment and Social Development Canada (ESDC) in order to bring awareness to the importance of Essential Skills that are absolutely crucial for success in the workforce. This is part of a new initiative that requires the integration and identification of Essential Skills in contest area descriptions and competition scopes. Essential skills are used in nearly every job and at different levels of complexity. They provide the foundation for learning all other skills and enable people to evolve with their jobs and adapt to workplace change. Good Essential Skills means you will understand and remember concepts introduced in technical training. The level of Essential Skills required for most trades is as high as or higher than it is for many office jobs.

The following 9 skills have been identified and validated as key essential skills for the workplace:

<sup>1</sup>Numeracy, <sup>2</sup>Oral Communication, <sup>3</sup>Working with Others, <sup>4</sup>Continuous Learning, <sup>5</sup>Reading Text, <sup>6</sup>Writing, <sup>7</sup>Thinking, <sup>8</sup>Document Use, <sup>9</sup>Digital

These essential skills have been identified in section 2.3 and/or 3.2 of your Contest Description.

### 2. CONTEST INTRODUCTION

#### 2.1 Purpose of the Challenge.

To assess the contestant's knowledge and skills in the planning, fabrication, and installation, of a fire sprinkler system and components with high regard to the aspects of quality of workmanship, proficiency of piping/system component installation and accuracy of work within a specified time frame.

#### 2.2 Duration of contest.

Time	Task
7:30 am – 8:00 am	Orientation
8:00 am – 9:30 am	Competition
9:30 am – 9:45 am	Break
9:45 am – 12:00 pm	Competition

12:00 pm – 12:30 pm	Lunch (provided)
12:30 pm – 2:30 pm	Competition
2:30 pm – 2:45 pm	Break
2:45 pm – 4:00 pm	Competition
4:00 pm	Competition ends / judging

### 2.3 Skills and Knowledge to be tested.

- Applying mathematical concepts involving planning, measuring, layout and installation of a piping system.
- Interpretation and application of blueprint specifications.
- Assembling and fabricating a piping system
  - Interpret drawings to determine measurements and calculations
  - measure, cut, and fabricate steel pipe and fittings
  - use tools & equipment to join pipe, fittings and system components
  - applying safe work practices and strong positive work ethic

**SAFETY AWARENESS/REQUIREMENTS WILL BE MAINTAINED TO MINIMUM INDUSTRY STANDARDS AT ALL TIMES!**

### 3. CONTEST DESCRIPTION

**3.1** List of documents produced and timeline for when competitors have access to the documents.

DOCUMENT	DATE OF DISTRIBUTION VIA WEBSITE
Project	

**3.2** Tasks that may be performed during the contest:

- Interpreting and applying the blueprint specifications<sup>8</sup>
- Calculations for pipe lengths and 45° offsets<sup>1</sup>
- Assembly of various pipe and fittings
- Carbon steel grooved pipe. Apply safe work practices All dimensions will be taken from the designated centerline or benchmarks unless directed otherwise

- Pipe fabrication
- Planning installation method<sup>7</sup>
- Each Competitor will have (7 Hours) on the project to perform the above listed tasks.
- Tool inspection prior to event or the evening before competition
- There will not be any onsite pipe joinery technique instruction
- Proper insertion for all pipe joint is mandatory
- It is to be understood that throughout the competition, safety and project judging will be ongoing
- No project specific aids, tools allowed
- Dimensions may be modified before competition

*Essential Skills – <sup>1</sup>Numeracy, <sup>8</sup>Document Use*

#### **4. EQUIPMENT, MATERIAL, CLOTHING**

##### **4.1** Equipment and material provided by Skills Canada-NS

- Pencil/paper/calculator
- Power cords (GFI)
- Power Threader
- Drill
- Hole saw kit
- Screwdriver multi-tip
- Sockets
- 18" pipe wrench
- 24" Pipe wrench
- Tape measure
- Bastard half round file
- 10" crescent wrench
- Benches, vices and/or tables
- Torpedo level
- Paint markers

##### **4.2** Equipment and materials provided by the competitor

- 8" Pipe wrench is permitted

#### 4.3 Required clothing (Provided by competitor)

- Coveralls / overalls allowed if sleeves used
- No jewellery
- Long hair must be tied back and concealed
- No cell phones or electronic devices allowed

### 5. SAFETY REQUIREMENTS

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

- CSA approved safety shoes

### 6. ASSESSMENT

#### 6.1 Point breakdown

POINT BREAKDOWN	/100
Piping Fabrication and Installation	70
Pneumatic pressure test	20
General Safety	10
<b>Point deduction:</b> Point deduction for incorrect calculations Full points for dimensions within 1/16" Half points for dimension within 1/8" Points deduction for wasted material 5 Points deduction for safety infractions 5 Points deduction for failure during testing 10	

### 7. ADDITIONAL INFORMATION

#### 7.1 Consecutive translation

If consecutive translation is required on site, 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 might not be guaranteed.

#### 7.2 Tie (No ties are allowed)

In the event of a tie, the competitor with the lowest amount of deductions will be declared the winner.

### 7.3 Competition rules

Please refer to the competition rules of the Skills Canada- Nova Scotia Competition.

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#### Outline View of 2019 Sprinkler Project

