



2012 Provincial Skills Canada Competition

Scope Document

Edmonton Expo Centre, Edmonton

May 10 & 11, 2012

EVENT: Electrical Wiring	LEVEL: Post-Secondary
COMPETITION START TIMES: May 10: ORIENTATION: 8:00 am COMPETITION: 8:30 am May 11: ORIENTATION: 8:00 am COMPETITION: 8:30 am	LOCATION: Hall A, Edmonton Expo Centre, Edmonton
DURATION: 12 Hours (Two 2 days)	
WORLDSKILLS TRADE #: 18	

GENERAL DESCRIPTION

Purpose of the Challenge:

- Interpreting and using basic electrical design & diagrams of a physical facility
- Wall mounting a panel and service equipment
- Wiring of a panel and devices using standard trade practices, complying with relevant sections of the current Canadian Electrical Code (CEC)
- Determining adequate protection for equipment and components
- Demonstrate troubleshooting skills

Skills and Knowledge to be Tested:

Competitors are expected to perform competently in all aspects of electrical wiring.

Troubleshooting Test:

Competitors will have to demonstrate knowledge of an electrical circuit, working with wiring schematics and meters to identify problems in an existing circuit.

The troubleshooting portion of the test will account for 10% of the total marks.

SKILLS20

Practical Test:

Given a supply of electrical equipment, Competitors will build a complete electrical system according to supplied drawing and specifications incorporating a variety of wiring types and methods that may include nonmetallic-sheathed cable (NMS), armored cable (AC90 or BX), EMT, PVC and structured cabling (data). Competitors will demonstrate their ability to do work in accordance with drawings and specifications, while showing general understanding of basic electrical circuits and knowledge of the current CEC. **This portion will account for 90% of the total marks.**

EQUIPMENT & MATERIALS

Equipment and Materials Competitors Must Supply:

- CSA Approved Hard hat
- CSA Approved Steel toed work boots
- CSA Approved Safety glasses or goggles
- Gloves
- Pencil
- Long nose pliers
- Hacksaw and blades
- Claw hammer
- Wire strippers
- Tapping tools
- Measuring tape (metric)
- Flat screwdrivers
- Linesman pliers
- Robertson screwdriver (black/red/green)
- Electricians' knife (no snap off blades)
- Calculator (no pocket computer)
- Side cutters
- Water pump pliers
- Crescent wrench
- Philips screwdriver
- 1/2" knockout cutters
- 3/4" wood chisel
- Magnetic torpedo level
- 5/8" auger bit
- Half round or round file
- Canadian Electrical Code – current edition
- Drywall saw

SKILLS20

Equipment and Materials Supplied by the Committee:

Cordless Drills
Ladders
Conduit benders
Heat gun – for PVC conduit bending
Data punch down tools

Clothing Requirement

Appropriate work clothing must be worn to compete. All clothing must be neat and clean and free of rips and tears. Casual wear such as shorts will not be permitted. No loose fitting clothes or jewelry.

SAFETY

The health, safety and welfare of all individuals involved with Skills Canada Alberta are of vital importance. Safety is a condition of participation with Skills Canada Alberta and shall not be sacrificed for the sake of expediency. At the discretion of the judges and technical committees, any competitor can be denied the right to participate should they not have the required proper safety equipment and/or act in an unsafe manner that can cause harm to themselves or others.

JUDGING CRITERIA

- Observance of Occupational Health and Safety rules
- Judging may occur at any point during the competition
- Observance of Canadian Electrical Code regulations
- Interpretations of diagrams, plans and estimates
- Installation techniques
- Planning and organization of work
- Choice and economical use of materials
- Installation techniques: location of devices and conduit
- Verification of function
- Identification of circuit breakers
- Connection of conductors
- Housekeeping

TIE BREAKING PROCESS

- Compare overall time used by competitors to complete the project

RELEVANT RESOURCES

- Electrical Code Simplified – P.S Knight.
- Electricity for Trades – Frank Petruzella.
- Electricity and Electronics - Gerrish, Dugger, Roberts.



ADDITIONAL INFORMATION

- All tools may be inspected before the competition.
- Electrical outlets will be made available for each competition site.

Lunch

Lunch for accredited competitors only will be provided by Skills Canada Alberta.

Parking & Venue Maps

<http://www.edmontonexpocentre.com/attend/parking/>

Awards Ceremony

The awards ceremony will take place on Friday May 11, 2012 at 5:30pm in Hall D of the Edmonton Expo Center. Admission is free and everyone is welcome to attend. The awards ceremony will be shown live at www.skillsalberta.com.

Team Alberta Information

Team Alberta will be selected at the Provincial Skills Canada Competition (PSCC) on May 10-11, 2012. Then two days later the gold medalists from PSCC will compete at the Skills Canada National Competition (SCNC) in Edmonton, Alberta. It is recommended that competitors review the SCNC scope documents to be familiar with the national scope and project. <http://www.skillsalberta.com>.

During the PSCC Awards Ceremony on May 11 all students who earn a medal will be escorted backstage after we photograph their onstage moments of success. Gold medalists will be given their Team Alberta information package and will confirm their participation in the SCNC.

COMMITTEE MEMBERS

Ron Yanew	AIT
John Sumner	NAIT
Ronald Stocks	RDC
Leigh Smithson	Red Deer Catholic Schools
Jim Ruller	Lakeland College
David Bates	Lakeland College
Ian Kossey	Lakeland College
David Myers	SAIT