

13TH PROVINCIAL SKILLS COMPETITION

2010 SKILLS CANADA NEWFOUNDLAND AND LABRADOR



ARCHITECTURAL TECHNOLOGY AND DESIGN

Scope Document

Post-Secondary Level

Friday, March 26, 2010 – St. John's

Note: Each school may send 3 competitors

PURPOSE OF THE CHALLENGE and DURATION

To assess the contestant's skills in performing technical design and drawing tasks.

6 Hours -1 day

SKILLS AND KNOWLEDGE TO BE TESTED

The contestant will be tested on interpreting instructions, reading and developing a commercial or residential building project with emphasis on the use and understanding of the National Building Code, design and detailing practices, as well as their skills in Computer Aided Design Drafting (CADD) and sketching techniques.

RATIONALE

To assess the competitors' abilities to apply the key themes of:

Architecture - envelope design, space planning, materials selection, and National Building Code research

Engineering - structural determination (e.g. spans); building mechanical and electrical systems accommodation.

Construction - regulatory standards, assembly, maintainability, environmental sustainability

PRE-REQUISITES

CADD experience – (A working understanding of Paper Space Layouts, Xrefs, etc., will be an asset);

Detailing and sketching skills;

Planning concepts, space relationships;

Basic building M&E systems and their integration into the building;

Presentation skills - sheet layout, use of scale and symbols;

Code interpretation - National Building Code of Canada only;

- Parts 1,2, 9, and some of NBC Part 3,
- 600 square meters or less in size
- commercial or residential in nature to include concrete, masonry, metals, and/or heavy timber construction types

EQUIPMENT, TOOLS, SUPPLIES, CLOTHING

The organizing committee will provide the following:

Windows compatible hardware loaded with AutoDesk AUTOCAD R2009 and Architectural Desktop 2009 software. Should other software packages or platforms be desired, the contestant and their mentors are responsible for providing system support (e.g. printing or networking) to complete the project as specified. Alternate software will require prior approval of the committee to allow adequate preparation time.

No software reference manuals, textbooks or electronic data (e.g. CD or diskette) will be permitted for the duration of the competition. However, the National Building Code & CMHC Wood Frame Construction Handbook will be permitted.

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The installation use of user profiles will be permitted with prior approval of the committee.

Only diskettes submitted to the contestant during the contest will be authorized for use.

There will be a printer supplied on site for use by contestants and for judging purposes.

The competitor will provide the following:

National Building Code, CMHC Wood Frame Construction Handbook, scales (metric and imperial), calculator, pencil and paper.

POINT BREAKDOWN (1000 total)

PRESENTATION

Lineweights & Linetypes usage
Layout
Use of color, hatching, or tones
Text arrangements

ACCURACY of DRAWING

Technical working drawing content:

- Use of Architectural conventions
- Dimensioning
- Annotation
- Line Types
- Hatching symbols
- Scale selection

COMPLIANCE TO STANDARDS

Structural determination
Electrical and mechanical accommodation.
National Building Code
Energy Efficiency
Relevant Standards

SOLUTION

“Best fit to problem”

TIES

In the event of a tie in scoring, the tie will be broken by the judges re-evaluation of the relevant documents of the tied competitors. If necessary, the electronic file(s) will be evaluated for the level of mastery of the software.

Provincial Technical Committee:

Mike Foley, Chair - mikewfoley@hotmail.com

Carolyn Hickey

Dawn Greening

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Jeff Head

Note: The project will not be distributed prior to the competition.