Provincial Scope Document
ARCHITECTURAL CAD (Secondary) 2011

Contest Length: 3 1/2 hrs ***Check in time: 12:30***
Contest Start: 13:00

Contest Sponsor: Autodesk Inc.

Purpose of the Challenge:

To evaluate students knowledge and skill in interpreting instructions, reading and developing plans, and reading and interpreting architectural and construction specifications for a residential building.

Skills & Knowledge to be Tested:

Problem Solving:

- Students may be required to solve open ended problems and interpret misleading or erroneous data. Such decision making will obviously affect the completion of the project.

CAD Techniques:

- Use of fundamental CAD techniques and commands to produce a drawing to International Drafting Standards.
- Ability to produce a CAD drawing to a defined scale using Templates and Borders.
- Knowledge of CAD Standards for setting limits, line types and scales, layers, dimension variables, and units.
- Knowledge of file management and maintenance (saving plot files, saving to directories)

Architectural Principles:

- Demonstrate the understanding of appropriate Architectural symbols and terminology.
- Use of appropriate materials and sizes for typical Western Frame Construction.
- Demonstrate the ability to produce freehand sketches for design and planning purposes.
- Demonstrate the ability to create a feasible solution to a design problem showing understanding of typical Design and Ergonomic standards in Canada. (CMHC Handbook)
- Application of basic math skills as related to drafting.

Specific Requirements:

All software packages will be original versions. No add-on applications will be allowed.

- Contestants will be given drawing specifications for title block, sheet size and plot scale.
- Contestants may be required to sketch a solution to a design and ergonomic problem and/or be required to sketch information from a drawing or part thereof.
- Contestants may be required to complete, in whole or in part, a Construction Plan for a given Design Drawing - Residential in nature.

Equipment / Tools / Materials

Hardware:

- Compatible Pentium type microcomputers (IBM compatible) fitted with SUPER VGA monitors and a three-button mouse (if available).

Software:
No software shall be used that automates the design process. Such packages are those that generate elevation from floor plans.

AutoCAD or equivalent. Should other software packages or platforms be required, the contestant and their coach are responsible to provide systems support in order to complete the project as specified. The alternate software will require prior approval of the committee to allow adequate preparation time.

No software reference manuals, textbooks or electronic data (eg. CD or diskette) will be permitted for the duration of the competition. However, the National Building Code and the CMHC Wood-Frame Construction handbook will be permitted.

Only diskettes provided to the contestant during the contest will be authorized for use. The installation use of user profiles will be permitted with prior approval of the committee.

Supplied by Contestant:

- Calculator
- Scale
- Notepad
- Pen / Pencil
- **Residential CMHC Handbook**
- **BCBC Handbook**

Judging / Distribution of Marks

Skills Canada BC
Architectural CAD Drafting Contest

Competitor Number						
PRESENTATION (100 pts))						
Layout	0	4	8	12	16	20
Plotted to scale	0	8	16	24	32	40
Balanced presentation (white space)	0	4	8	12	16	20
Appropriate Layers & Linetype (colors)	0	3	6	9	12	15
Title block & Attribute information	0	1	2	3	4	5
REVISED PLAN(380 pts)						
Construction Dimensions	0	20	40	60	80	100
Door & Window Notations	0	8	16	24	32	40
Linetype/Layer conventions	0	4	8	12	16	20
Legibility of numbers and text	0	20	40	60	80	100
Hatching for "new construction"	0	4	8	12	16	20
Accuracy of Construction Plan	0	20	40	60	80	100
DRAFTING CONVENTIONS (200PTS)	0	15	30	45	60	75
LT Scaling	0	10	20	30	40	50
Structural Notations	0	5	10	15	20	25

REVISED ELEVATIONS (150 PTS)						
Drawing accuracy	0	4	8	12	16	20
Alignment and accuracy of views	0	6	12	18	24	30
layout and presentation	0	6	12	18	24	30
Completeness of views	0	6	12	18	24	30
Inclusion of roof pitch notation	0	4	8	12	16	20
No apparent superimposition of lines	0	2	4	6	8	10
Hatching selection & inclusion	0	2	4	6	8	10
DIMENSIONING (150 PTS)						
All construction measurements present	0	10	20	30	40	50
Positioning of measurements	0	8	16	24	32	40
Dimension Properties (arch ticks, fractions)	0	4	8	12	16	20
Dimensioning conventions (mid of int walls, out of ext)	0	4	8	12	16	20
Presence of required annotations	0	4	8	12	16	20
TIMELINE FOR COMPLETION						
<1.5H=60, <2H=40, <2,5H=20, <3H=0						
PLOTTING						
Plotted Drawing to scale	0			40		

Technical Committee:

Jim Christiansen Technical Chair jim.c.christiansen@gmail.com

Skills Canada BC reserves the right to make changes to the scope document. Please check the website for updates.