CAN-BEST
Testing Laboratory

Canadian Building Envelope Science and Technology
38 Regan Road, Unit 4, Brampton, Ontario, Canada, L7A 1C6

CAN-BEST Established 1985

ENERGY STAR PARTICIPANT

CAN-BEST
The name says it all!

Established in 1985, CAN-BEST (Canadian Building Envelope Science and Technology) is an independent, wholly Canadian owned research, consulting and testing company engaged in providing the following services:

We offer:

- ✓ **Certification & Conformity testing**
- ✓ **Construction research and testing**
- ✓ **Building systems research and development**
- ✓ **Test methods and standards preparation**
- ✓ **Technology transfer, licensing, education and training**
- ✓ **Building envelope design and specifications reviews**
- ✓ **Failure analysis and field investigations**
- ✓ **Retrofit solutions, innovative and functional detailing**
- ✓ **Performance monitoring**
- ✓ **Advanced instrumentation and equipment for research, testing, monitoring and control**

State of the art Laboratory

To sustain its highly technical activities, CAN-BEST operates its own SCC (Standards Council of Canada) accredited laboratory for Building Envelope research and testing. Occupying over 2,000 m^2 (over 20,000 ft^2) of floor area, CAN-BEST's laboratory is the first Canadian facility to be accredited by SCC for thermal performance testing, and by AAMA (American Architectural Manufacturers Association) for certification testing of windows, doors and curtain walls.

For technical assistance or for a speedy quotation, please contact the lab at:

Tel.: (905) 840-2014 ● Fax.: (905) 840-2847 ● E-mail: lab@can-best.com

Your partner in successful fenestration research, testing and investigation!

Standards Council of Canada — Conseil canadien des normes — **First in Thermal**

CCMC Canadian Construction Materials Centre — ISO/IEC 17025

IGMA — AAMA — WDMA — **First in Canada**

CAN-BEST

Testing Laboratory

Canadian Building Envelope Science and Technology

38 Regan Road, Unit 4, Brampton, Ontario, Canada, L7A 1C6

ENERGY STAR PARTICIPANT

ISO/IEC 17025

Window/Door Testing

for AAMA, CSA, CCMC & Others

The 5% Price Guarantee

- CSA-A440
- AAMA 101
- NAFS
- CGSB 82.1
- CGSB 82.5
- ISO, BSI, JIS & Others

Our fees are simply 5% less than those of our competitors.

CAN-BEST's state-of-the-art fenestration testing laboratory GUARANTEES you the lowest cost of window and IGU testing ever to be offered in North America.

The savings are yours to keep!!

We offer:

- ✓ *Laboratory testing*
- ✓ *Field testing*
- ✓ *Computer simulation*
- ✓ *Certification reporting*
- ✓ *Energy Star Reporting*
- ✓ *Standards Development*
- ✓ *Test Method Development*
- ✓ *Educational & training seminars*
- ✓ *Technical assistance*
- ✓ *Test equipment*
- ✓ *Hurricane impact testing*
- ✓ *Air and water tightness*
- ✓ *Forced entry resistance testing*
- ✓ *Mechanical testing*
- ✓ *Condensation resistance testing*
- ✓ *Thermal resistance testing*
- ✓ *Installation in test buck*

For technical assistance or for a speedy quotation, please contact:

***Mr. Jim Scott**, P.Eng. **or Mr. Elie Alkhoury**, P.Eng.*

Tel.: (905) 840-2014 ● Fax.: (905) 840-2847 ● E-mail: lab@can-best.com

Your partner in successful fenestration research, testing and investigation!

Standards Council of Canada / Conseil canadien des normes — First in Thermal

CCMC Canadian Construction Materials Centre — ISO/IEC 17025

IGMA AAMA WDMA — First in Canada

CAN-BEST
Testing Laboratory

Canadian Building Envelope Science and Technology
38 Regan Road, Unit 4, Brampton, Ontario, Canada, L7A 1C6

CAN-BEST Established 1985

ENERGY STAR PARTICIPANT





IGU Testing
for IGMA Certification
The 5% Price Guarantee

- CGSB 12.8
- ASTM E2188
- ASTM E2189
- ASTM E773
- ASTM E774

CAN-BEST urges its clients to participate in the IGMA Certification Program.

As an added incentive, CAN-BEST has extended its cost saving guarantee to all certification participants. It's our *5% Price Guarantee*.

CAN-BEST's state-of-the-art fenestration testing laboratory GUARANTEES you the lowest cost of window and IGU testing ever to be offered in North America.

Our fees are simply 5% less than those of our competitors.

The savings are yours to keep!!






For technical assistance or for a speedy quotation, please contact:

***Ms. Victoria Gemael or Mr. Elie Alkhoury**, P.Eng.*

Tel.: (905) 840-2014 ● Fax.: (905) 840-2847 ● E-mail: lab@can-best.com

Your partner in successful fenestration research, testing and investigation!

Standards Council of Canada | Conseil canadien des normes

CCMC Canadian Construction Materials Centre

IGMA | AAMA | WDMA

First in Thermal

ISO/IEC 17025

First in Canada

CAN-BEST

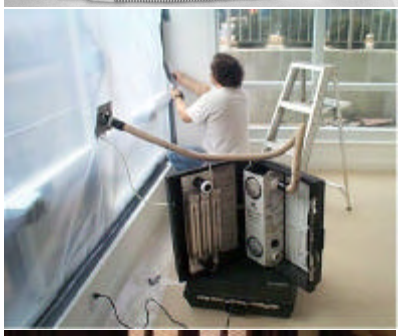
Testing Laboratory

Canadian Building Envelope Science and Technology

38 Regan Road, Unit 4, Brampton, Ontario, Canada, L7A 1C6

CAN-BEST
Established 1985

ENERGY STAR PARTICIPANT



Mini-Lab
for Window Testing
Air and Water Infiltration

Standard Features:

- Easy to use by anyone with minimum training,
- Portable for field investigations and quality control,
- Ideal for in-house testing and production quality control,
- Air Infiltration and Exfiltration measurement modes,
- Rugged construction with off-the-shelf components for ease of maintenance,
- Precision controlled, variable speed blower,
- High quality air pressure and flow monitoring instruments,
- Heavy-duty carrying case with double-wall construction for added protection,
- Calibrated water spray rack for 8'x8' coverage.

Computerized testing systems are available

For technical assistance or for a speedy quotation, please contact:

Mr. Jim Scott, P.Eng. or Mr. Elie Alkhoury, P.Eng.

Tel.: (905) 840-2014 ● Fax.: (905) 840-2847 ● E-mail: lab@can-best.com

Your partner in successful fenestration research, testing and investigation!

Standards Council of Canada | Conseil canadien des normes — **First in Thermal**

CCMC Canadian Construction Materials Centre

ISO/IEC 17025

IGMA | AAMA | WDMA — **First in Canada**

Canadian Building Envelope Science and Technology
38 Regan Road, Unit 4, Brampton, Ontario, Canada, L7A 1C6

Tel: (905) 840-2014 • *Fax: (905) 840-2847*

ISO/IEC 17025

Introducing CAN-BEST

Company Profile

Established in 1985 by Mr. Elie Alkhoury, CAN-BEST (Canadian Building Envelope Science and Technology) is an independent, wholly Canadian owned research, consulting and testing company engaged in providing the following services:

- Certification testing (fenestration and insulating glass units)
- Construction research and testing
- Building systems research and development
- Test methods and standards preparation
- Technology transfer, licensing, education and training
- Quality management services – ISO 9000 Quality Systems implementation
- Building envelope design and specifications reviews
- Failure analysis and field investigations
- Retrofit solutions, innovative and functional detailing
- Performance monitoring
- Advanced instrumentation and equipment for research, testing, monitoring and control

Recognition & Accreditation

The quality of services provided by CAN-BEST is widely recognized among its clients at the forefront in the technology of building envelope evaluation, both on site and in the laboratory. The following is a partial list of bodies recognizing and attesting to CAN-BEST's high standards of quality services:

- SCC *Standards Council of Canada, accredited*
- AAMA *American Architectural Manufacturers Association, accredited*
- CCMC *Canadian Construction Materials Centre, approved*
- CMHC *Canadian Mortgage and Housing Corporation, recognized*
- CSA *Canadian Standards Association, approved*
- IGMA *Insulating Glass Manufacturers Alliance, approved*
- IGMAC *Insulating Glass Manufacturers Association Canada, approved*
- IGCC *Insulating Glass Certification Council (pending)*
- ALI *Associated Laboratories, Inc. , recognized*
- KCI *Keystone Certifications, Inc. , recognized*
- QAI *Quality Auditing Institute, recognized*
- CWDMA *Canadian Window and Door Manufacturers Association, approved*
- WDMA *National Wood Window and Door Association (American), recognized*
- PEO *Professional Engineers of Ontario, licensed*

Introducing CAN-BEST (Cont'd.)

State of the art Laboratory

To sustain its highly technical activities, CAN-BEST operates its own SCC (Standards Council of Canada) accredited laboratory for Building Envelope research and testing. Occupying over 2,000 m^2 (over 20,000 ft^2) of floor area, CAN-BEST's laboratory is the first Canadian facility to be accredited by SCC for thermal performance testing, and by AAMA (American Architectural Manufacturers Association) for certification testing of windows, doors and curtain walls.

CAN-BEST's competence in performing standard tests and providing formal reports is acknowledged by Nationally recognized users in the building industry.

Independence & Confidentiality

CAN-BEST is divest of any direct interest in product marketing. Total independence and confidentiality is demonstrated and assured through its commitment to maintain accreditation by SCC and AAMA.

Quality Services - ISO 9000

CAN-BEST is well advanced in its pursuit of providing quality services in the context of Nationally and Internationally recognized quality systems, specifically, the ISO 9000. CAN-BEST's state of the art laboratory is accredited by the SCC to meeting the ISO 9002 model and ISO/IEC Guide 17025 requirements.

CAN-BEST's implementation of its own ISO 9002 Quality Management System establishes a level of International conformity sought by many of our clients who are (or would be) actively engaged in international trade.

Research and Test Equipment

CAN-BEST is well advanced in the design and construction of instrumentation and computer-controlled testing and research equipment. In addition to professional and technical services, CAN-BEST supplies instrumentation and equipment for research and for quality control testing. Such equipment is widely used by manufacturers, consultants, universities and other research and testing laboratories.

For technical assistance or for a speedy quotation, please contact:

- Insulating Glass: Ms. Victoria Gemael
- Windows and Doors: Mr. Jim Scott, *P.Eng.*
- Construction Research: Mr. Elie Alkhoury, *P.Eng. M.Eng. (Building Science)*

Tel.: (905) 840-2014 ● Fax.: (905) 840-2847 ● E-mail: lab@can-best.com

RESUME

Elie ALkhoury, P.Eng., M.Eng. (Building Science)
Director of Research and Testing, and Founder of CAN-BEST

EDUCATION

- Master of Engineering (Building Science),1980, Centre for Building Studies, Concordia University, Montreal, Quebec.
- Bachelor of Engineering (Civil-Structural), 1978, McGill University, Montreal, Quebec.

AREAS OF EXPERTISE

Air and moisture movements in building envelope
Performance evaluation of building envelope
Rainscreen evaluation of building enclosures
Hygrothermal durability evaluation
Mock-up evaluation: windows, curtain walls and skylights
Thermal analysis and computer simulation
Building envelope failure investigation
Structural Analysis and Design
Project Management

Professional Affiliations

CSA Technical Committee A440 on Windows
AAMA (American Architectural Manufacturers Association) Technical committee on Accredited Laboratories
ASTM Committee E06 "Performance of Building Constructions"
Association of Professional Engineers of Ontario, P.Eng.
Ontario Building Envelope Council (OBEC)
Order of Engineers of Quebec, Ing.

Relevant Publications

- **Window Rainscreen Evaluation**; *Fifth Conference on Building Science and Technology, March 1990, Toronto, Ontario*
- **Window Delivery System**: A system for Window Selection and Quality Control; *Construction Canada, September/October 1989*
- **Effective Air Barriers**; *Construction Canada, November/December 1989*

RESUME

JAMES R. SCOTT, *B.Sc., P.Eng.*
Laboratory Manager

Joined CAN-BEST in September 1999.

RESPONSIBLITIES

- Performing CSA, CGSB, AAMA, and NAFS laboratory tests,
- Preparing laboratory test reports per standard requirements,
- Conducting thermal simulations per standard requirements,
- Working with product manufacturers to modify and improve performance,
- Identifying system failures,
- Performing on-site field tests.

EDUCATION

- Bachelor of Science (Mechanical Engineering), 1990
  Queen's University, Kingston, Ontario

AREAS OF EXPERTISE

- Architectural product design and validation
- Structural glazing systems
- Architectural hardware and sealing technologies
- Sputter-coated and hard-coated reflective glass
- Insulated Glass Unit (IGU) performance criteria and technical comparisons
- Window/door/curtain wall system performance
- CSA, CGSB, AAMA, NAFS procedures and applications
- Production and planning
- Preventative maintenance manual preparation
- Machinery design, set-up and capability studies
- Total Quality Management (TQM)
- ISO 9000 procedure and application

AAMA Hereby Grants to:

CANADIAN BUILDING ENVELOPE SCIENCE AND TECHNOLOGY

38 Regan Road, Unit 4
Brampton, Ontario
Canada L7A 1C6

Accreditation in accordance with the rules and procedures described in the "AAMA Laboratory Accreditation Program Operations Manual" for the following test methods:

AAMA 103 (Section 5)	ASTM E 773
AAMA 902	ASTM E 783
ASTM E 283	ASTM E 987
ASTM E 330	ASTM E 1105
ASTM E 331	ASTM E 2068
ASTM E 546	ASTM F 588
ASTM E 547	ASTM F 842

Maintenance of this accreditation is subject to the conditions and regulations contained in the Laboratory Accreditation Program Operations Manual.

Dean Lewis
Manager, Product Certification

Accreditation for 2005
Date of Accreditation: 1/7/05

AAMA Technical Information Center...1827 Walden Office Square, Suite 550...Schaumburg, IL 60173...PH: 847/303-5664...FAX: 847/303-5774

CERTIFICATE OF ACCREDITATION

Standards Council of Canada
Conseil canadien des normes

CERTIFICAT D'ACCRÉDITATION

Canadian Building Envelope Science and Technology
CAN-BEST TESTING LABORATORY

38 Regan Road, Unit 4, Brampton, Ontario

having been assessed under the authority of the *Standards Council of Canada Act* and found to conform with the requirements of ISO/IEC 17025 and the conditions established by the SCC is hereby recognized as an

ACCREDITED TESTING LABORATORY

for specific tests or types of tests listed in the scope of accreditation approved by the Standards Council of Canada.

ayant été soumis à une évaluation selon la *Loi sur le Conseil canadien des normes* et ayant été trouvé conforme aux prescriptions d'ISO/CEI 17025 et aux conditions établies par le CCN est de fait reconnu comme étant un

LABORATOIRE D'ESSAIS ACCRÉDITÉ

pour les essais ou types d'essais déterminés inscrits dans la portée d'accréditation approuvée par le Conseil canadien des normes.

STANDARDS COUNCIL OF CANADA ESTABLISHED 1970 CONSEIL CANADIEN DES NORMES CRÉÉ EN 1970

Accredited Laboratory No.: / Numéro de laboratoire accrédité : 222

Accreditation date: / Date d'accréditation : 1995-11-27

Issued on: / Délivré le : 2005-08-09

Expiry date: / Date d'expiration : 2009-11-27

Chairman (SCC) / Président (CCN)

Assessment are performed according to ISO/IEC 17025 and the conditions of the SCC PALCAN Handbook. Laboratories that comply with the requirements of ISO/IEC 17025 operate a quality management system for testing and calibration activities listed on the scope of accreditation, that also meet the general principles of ISO 9001. The controlled version of the scope of accreditation is maintained on the SCC website at www.scc.ca.

Les évaluations sont menées conformément à la norme ISO/CEI 17025 et aux conditions énoncées dans le Guide du PALCAN du CCN. Les laboratoires qui respectent les exigences d'ISO/CEI 17025 ont, dans les essais et étalonnages énumérés dans leur portée d'accréditation, recours à un système de management de la qualité conforme aux principes d'ISO 9001. La version contrôlée de la portée d'accréditation figure dans le site Web du CCN à www.ccn.ca.

Canada

Standards Council of Canada
Conseil canadien des normes
200-270, rue Albert St.
Ottawa, ON (Canada)
K1P 6N7
Canada
Tel.: +1 613 238 3222
Fax.: +1 613 569 7808
E-mail/Courriel : info@scc.ca
Internet: http://www.scc.ca

SCOPE OF ACCREDITATION

Canadian Building Envelope Science and Technology
CAN−BEST TESTING LABORATORY
38 Regan Road, Unit 4
Brampton, ON
L7A 1C6

Accredited Laboratory No. 222
(Conforms with requirements of CAN−P−4D (ISO/IEC 17025))

CONTACT: Mr. Elie Alkhoury
TEL: (905) 840−2014
FAX: (905) 840−2847
EMAIL: lab@can−best.com

CLIENTS SERVED: All interested parties

FIELDS OF TESTING: Mechanical/Physical, Thermal & Fire Resistance

ISSUED ON: 2005−10−25

VALID TO: 2009−11−27

CONSTRUCTION

Building Constructions and Prefabricated Buildings

ASTM C 1201	Structural Performance of Exterior Dimension Stone Cladding Systems by Uniform Static Air Pressure Difference
ASTM C 236	Steady State Thermal Performance of Building Assemblies by Means of a Guarded Hot Box
ASTM E 1155	Floor, Determining FF Floor Flatness and FL Floor Levelness Numbers
ASTM E 1186	Air Leakage Site Detection in Building Envelopes
ASTM E 1514	Structural Standing Seam Steel Roof Panel Systems
ASTM E 1554	Determining External Air Leakage of Air Distribution Systems by Fan Depressurization
ASTM E 1592	Structural Performance of Sheet Metal Roof and Siding

	Systems by Uniform Static Air Pressure Difference
ASTM E 1646	Water Penetration of Exterior Metal Roof Panel Systems by Uniform Static Air Pressure Difference
ASTM E 1677	Air Retarder (AR) Material or System for Low−Rise Framed Building Walls
ASTM E 196	Gravity Load Testing of Floors and Flat Roofs
ASTM E 455	Static Load Testing of Floor or Roof Diaphragm Constructions for Buildings
ASTM E 529	Conducting Flexural Tests on Beams and Girders for Building Construction
ASTM E 564	Static Load Test for Shear Resistance of Framed Walls for Buildings
ASTM E 72	Strength Test of Panels for Building Construction
ASTM E 73	Static Load Testing of Truss Assemblies
ASTM E 779	Determining Air Leakage Rate by Fan Depressurization
ASTM E 894	Anchorage of Permanent Metal Railing Systems and Rails for Buildings
ASTM E 907	Field Testing Uplift Resistance of Adhered Membrane Roofing Systems
ASTM E 935	Performance of Permanent Metal Railing Systems and Rails for Buildings
ASTM E 936	Inspection of Roof Systems Assemblies Employing Steel Deck, Preformed Roof Insulation, and Bituminous Built−up Roofing
ASTM E2178	Standard Test Method for Air Permeance of Building Materials
CAN BEST TM N104	Prefabricated Masonry Panels Performance Evaluation, Masterformat Section 04840
CAN BEST TM N105	Manufactured Steel Building Performance Evaluation, Masterformat Section 05401
CAN BEST TM N106	Prefabricated Insulated Steel Panel System Performance Evaluation, Masterformat Section 05405
CAN BEST TM N107	Open Web steel Frame Housing and Small Building Performance Evaluation, Masterformat Section 05403
CAN BEST TM N108	Structural Panels Performance Evaluation, Masterformat Section 06120
CAN BEST TM N109	Prefabricated Structural Wood Performance Evaluation, Masterformat Section 06170
CAN BEST TM N110	Wall Panel System Performance Evaluation, Masterformat Section 06300
CAN BEST TM N111	Exterior Insulation and Finish Panels EIFS (Thin Rendering) Performance Evaluation, Masterformat Section 07240
CAN BEST TM N112	Exterior Insulation and Finish Panels EIFS (Other Finishes) Performance Evaluation, Masterformat Section 07250
CAN BEST TM N113	Exterior Cement Board and Finish System Performance Evaluation, Masterformat Section 07255
CAN BEST TM N114	

	Vapour Retarders Performance Evaluation, Masterformat Section 07260
CAN BEST TM N115	Air Barriers Performance Evaluation, Masterformat Section 07270
CAN BEST TM N116	Metal Roof and Wall Panels Performance Evaluation, Masterformat Section 07410
CAN BEST TM N117	Plastic Roof and Wall Panels Performance Evaluation, Masterformat Section 07420
CAN BEST TM N118	Asphalt Corrugated Roof Panels Performance Evaluation, Masterformat Section 07425
CAN BEST TM N119	Composite Panels Performance Evaluation, Masterformat Section 07430
CAN BEST TM N120	Exterior Wall Assemblies Performance Evaluation, Masterformat Section 07430
CAN−BEST TM N101	Pressure Equalization Performance of Wall Assemblies Under Natural or Simulated Wind Conditions, Field and Laboratory Evaluation
CAN−BEST TM N102	Field Evaluation of Pressure Equalization Performance of Wall Assemblies Under Natural Wind Conditons
CAN−BEST TM N103	Field Evaluation of Pressure Equalization Performance of Wall Assemblies Subjected to Applied Pressure Differential
CAN−BEST TM N121	Method for Rating Water Vapour Transmission (Double Cup and Modified Inverted Cup Methods)
CAN−BEST TM N122	Method for Field Evaluation of Air Leakage in Building Envelope

Construction Materials

(Excluding Textile Products)

(Windows, Doors and Curtain Walls)

ANSI Z97.1	Safety Performance Specifications and Methods of Test for Safety Glazing Materials used in Buildings
ASTM C 1048	Standard Specification for Heat−Treated Flat Glass—Kind HS, Kind FT Coated and Uncoated Glass
ASTM C 1199	Thermal Transmittance of Fenestration Systems Using Hot Box Methods
ASTM C 1382	Test Method for Determining Tensile Adhesion Properties of Sealants When Used in Exterior Insulation and Finish Systems (EIFS)
ASTM D 2105	Standard Test Method for Longitudinal Tensile Properties of Fiberglass (Glass−Fiber−Reinforced Thermosetting−Resin) Pipe and Tube
ASTM D 2565	Standard Practice for Xenon Arc Exposure of Plastics Intended for Outdoor Applications
ASTM D 4073	Standard Test Method for Tensile−Tear Strength of Bituminous Roofing Membranes

ASTM D 4099	Windows, Poly[Vinyl Chloride] (PVC) Prime Windows/Sliding Glass Doors
ASTM D 4798	Standard Test Method for Accelerated Weathering Test Conditions and Procedures for Bituminous Materials (Xenon−Arc Method)
ASTM D 638	Standard Test Method for Tensile Properties of Plastics
ASTM D 897	Standard Test Method for Tensile Properties of Adhesive Bonds
ASTM E 1017	Generic Performance Requirements for Exterior Residential Window Assemblies
ASTM E 1105	Field Determination of Water Penetration of Installed Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference
ASTM E 1233	Structural Performance of Exterior Doors by Cyclic Static Air Pressure Differential
ASTM E 1423	Steady State Thermal Transmittance of Fenestration Systems
ASTM E 1424	Air Leakage Resistance at a Specified Air Pressure and Temperature Differential
ASTM E 1886	Performance of Exterior Windows, Curtain Walls, Doors and Storm Shutters Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials
ASTM E 283	Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen
ASTM E 330	Structural Performance of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference
ASTM E 331	Water Penetration of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference
ASTM E 547	Water Penetration Resistance of Exterior Doors by Cyclic Static Air Pressure Differential
ASTM E 576	Frost Point of Sealed Insulating Glass Units
ASTM E 773	Accelerated Weathering of Sealed Insulating Glass Units
ASTM E 783	Field Measurement of Air Leakage Through Installed Exterior Windows and Doors
ASTM E 96	Standard Test Methods for Water Vapour Transmission of Materials
ASTM E 987	Standard Test Methods for Deglazing Force of Fenestration Products
ASTM E 997	Structural Performance of Glass in Exterior Windows, Curtain Walls and Doors Under the Influence of Uniform Static Loads by Destructive Methods
ASTM E 998	Structural Performance of Glass in Exterior Windows, Curtain Walls and Doors Under the Influence of Uniform Static Loads by Nondestructive Methods
ASTM E2188	Standard Test Method for Insulating Glass Unit Performance
ASTM E2189	Standard Test Method for Testing Resistance to Fogging in Insulating Glass Units

ASTM E2190	Standard Specification for Insulating Glass Unit Performance and Evaluation
ASTM E2273	Standard Test Method for Determining the Drainage Efficiency of Exterior Insulation and Finish Systems (EIFS) Clad Wall Assemblies
ASTM F 1233	Resistance to Forced Entry of Security Glazing Systems, Non Ballistic Testing Only
ASTM F 476	Resistance to Forced Entry of Swinging Door Assemblies
ASTM F 588	Resistance to Forced Entry of Window Assemblies
ASTM F 842	Resistance to Forced Entry of Horizontal Sliding Door Assemblies
ASTM G 155	Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non−Metallic Materials
CAN/CGSB−63.14	Skylights, Plastic
CAN/CGSB−82.1	Doors, Sliding
CAN/CGSB−82.5	Doors, Insulated Steel
CGSB 82−GP−3M	Door, Aluminum, Combination Storm and Screen
CGSB 82−GP−4M	Door, Steel, Combination Storm and Screen
CGSB CAN2−12.1	Glass, Safety, Tempered or Laminated
CGSB CAN2−12.2	Glass, Sheet, Flat, Clear
CGSB CAN2−12.8	Insulating Glass Units Paragraph 3.6.3 "Argon Gas Concentration − GC Method"
CGSB CAN2−12.9	Glass, Spandrel
CSA A−440	Windows
CSA A−440.2	Energy Performance Evaluation of Windows and Sliding Glass Doors 5.3 Determination of U−Value by Calculation (Simulation)

Notes:

CAN−P−4D (ISO/IEC 17025): General Requirements for the Competence of Testing and Calibration Laboratories (ISO/IEC 17025−1999)

P. Paladino, P. Eng., Director, Conformity Assessment

Date: 2005−10−25

Number of Scope Listings: 92
SCC 1003−15/226
Partner File #0
Partner: None

CSA INTERNATIONAL

Certificate of Qualification

This is to certify that

CAN-BEST

(Canadian Building Envelope Science and Technology)
Brampton, Ontario, Canada

has been authorized by CSA International to test and to computer simulate products to the following standards:

CSA A440-00 Windows
CAN/CGSB 82.1-89 Sliding Doors

Certificate No: WnD-2002-005

CSA INTERNATIONAL

Issue Date: *October 2002*

Brian MacEwen: Brian MacEwen
Director, Engineering Quality Assurance

CSA INTERNATIONAL

January 3, 2006

Mr. E. Alkhoury,
Can-Best,
38 Regan Road, Unit 4,
Brampton, Ontario
L7A 1C6

Subject: CSA Qualified Physical Test Laboratory and Computer Simulation Laboratory Agreement

Dear Mr. Alkhoury:

Please find enclosed the Schedule 2 Computer Simulation Laboratory; Scope of Services. This schedule accompanies your CSA Qualified Physical Test Laboratory and Computer Simulation Laboratory Agreement. Please retain for your records.

Thank you,

Karen Dunn

Karen Dunn
Operations
(416)747-4081

178 Rexdale Boulevard, Toronto, ON, Canada M9W 1R3
Telephone: 416.747.4000 1.800.463.6727 Fax: 416.747.4149 www.csa-international.org

SCHEDULE 2 – COMPUTER SIMULATION LABORATORY; SCOPE OF SERVICES

The contractor will provide computer simulation services in the area outlined below:

- Computer Simulation services for prototype products in the following product categories.
- Preparation of, and handling of computer simulation reports.

Product Category	Reference Standard
Performance of Windows and other Fenestration Systems	A440.2 *
Energy Performance	
Evaluation of Swinging Doors	A453 *

* effective edition of the reference standard

SCHEDULE 1 - PHYSICAL LABORATORY; SCOPE OF SERVICES

The Contractor will provide testing related services in the areas outlined below:

- Pre-evaluation and testing of prototype products in the following product categories.
- Preparation of test reports.

Product Category	Reference Standard
Windows	CSA Standard A440 *
Sliding Doors	CGSB Standard 82.1 *
Insulated Steel Doors	CGSB Standard 82.5 *

*effective edition of the reference standard

CAN-BEST Testing Laboratory **email: lab@can-best.com**
38 Regan Road, Unit 4, Brampton, Ontario, L7A 1C6 *Tel: (905) 840-2014 * Fax: (905) 840-2847*