



NFRC Certified Simulator Training Workshop

May 25-28, 2010

Eagan, MN

Supporting Document

Successful completion of this workshop will garner the attendee the status of "NFRC Certified Simulator." Note this is mandatory to become an NFRC Accredited Simulation Laboratory. The NFRC has accredited simulation and accredited physical testing laboratories:

- **Simulation** laboratory (computer modeling) which performs testing procedures in accordance with the NFRC 100 (U-factor), NFRC 200 (SHGC), and NFRC 500 (CR).
- **Physical** testing laboratory which can perform either or all of the following procedures: NFRC 102 (U-factor), NFRC 201 (SHGC), NFRC 400 (Air Leakage), and NFRC 500 (CR).

Highlights of the Workshop:

- The workshop will be held at the Holiday Day Inn Express, 1950 Rahncliff Court, Eagan, MN; toll-free call 800-681-5290. Hotel Accommodations at the Holiday Inn Express include a light continental breakfast. A block of rooms have been reserved and if you choose to stay the Holiday Inn Express, please mention "NFRC" for the negotiated rate. Lunch will be provided by NFRC for all registrants for the four days of the workshop. *If you would like an alternative hotel additional accommodation choices are listed below.*
- ***Making travel arrangements: Please be sure to schedule hotel and any outgoing transportation with the following in mind.***

Training schedule begins at 8:00 a.m. each morning and will end at 5:00 p.m. on Tuesday through Thursday. On Friday, a quick review of the week begins at 8:00 a.m. and the in-class exam will be administered shortly thereafter. Once you've finished the exam and have been given the okay that you have successfully completed the in-class exam, you are free to leave.

- Please be sure to **bring a laptop**, as one will not be provided for the training.
- If you have any problems loading the software prior to the training, please do not hesitate to contact NFRC staff.
- The workshop is a 3 day compilation of intense training, having a working knowledge of all programs is **highly recommended**. Please see below for recommended resources for review prior to the workshop.
- It will also be helpful, but not necessary, to have an understanding of the NFRC technical documents. These documents will only be reviewed briefly, particularly the NFRC 100 & NFRC 200. See links below to download these documents.

Important Resources for your use/information:

Please download any document pertaining to the particular laboratory accreditation that interests your company. It will be my pleasure to answer any questions when you have had the time to review our program and technical documents.

Home page to all documents and resources: <http://www.nfrc.org/resources.aspx>, except for CMA – see the CMA link.

Home page to all program documents: <http://www.nfrc.org/programdocs2.aspx>

- Testing Laboratory information is located within the **LAP section***
- Inspection Agency information is located within the CAP section
- Product certification information is located within the PCP section

- Fees for membership and participants are located under **Fee Schedule****
 - For Research projects refer to the Research Documents
- * The NFRC LAP contains all the required information to become an NFRC Accredited Laboratory
 ** The fee schedule contains the initial and yearly costs for NFRC Accredited Laboratories

Home page to technical documents: <http://www.nfrc.org/technicaldocs.aspx>

The 2010 procedures are the most current technical documents.

- NFRC 100 – U-Factor (*Simulation*) – Procedure for Determining Fenestration Product U-Factors
- NFRC 101– Material library – Procedure for Determining Thermo-Physical Properties of Materials for Use in NFRC-Approved Software Programs
- NFRC 102 – U-Factor (*Physical Thermal Testing*) – Procedure for Measuring the Steady-State Thermal Transmittance of Fenestration Systems
- NFRC 200 – SHGC (*Simulation*) – Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence
- NFRC 201 – SHGC (*Physical Testing*) – Procedure for Interim Standard Test Method for Measuring the Solar Heat Gain Coefficient of Fenestration Systems Using Calorimetry Hot Box Methods
- NFRC 500 – Condensation Resistance (*Simulation / Physical Testing*) – Procedure for Determining Fenestration Product Condensation Resistance Values
- NFRC 303 – Procedure to create a laminate in Optics for NFRC Certification
- NFRC 304 – Creating an Applied Film in Optics for NFRC Certification

Home page to Simulation Software Programs: <http://www.nfrc.org/software.aspx>

- There are four main software programs used to simulate products in accordance with NFRC 100, 200, and 500.

The approved software programs can be downloaded at the following links:

- LBNL: <http://windows.lbl.gov/software/>
- Therm: <http://windows.lbl.gov/software/therm/therm.html>
- Window: <http://windows.lbl.gov/software/window/window.html>
- Optics: <http://windows.lbl.gov/materials/optics5/default.htm>
- CMAST: <http://cmast.nfrc.org/> Note: You will need to register at this site first before you can download the software so please do this prior to attending the class.
 You can also get more info about CMA by going to: <http://www.nfrc.org/CMAprogram.aspx>

Hotel Accommodations – Details*:

- The Holiday Inn Express has rooms available which can be reserved by calling 800-681-5290 or online at the hotel's website: [Holiday Inn Express & Suites](#). Remember to get ask for the "NFRC" block for \$79/night.
- Other nearby options for accommodations include:
 - Staybridge Suites: 4675 Rahncliff Road, Eagan, MN ph: 800-496-7630
 - Hilton Garden Inn: 1975 Rahncliff Court, Eagan, MN ph: 651-686-4605

I look forward to meeting you and pleased that you are interested in becoming an NFRC Certified Simulator.

Please contact me at your convenience so I can assist you with any of your accreditation needs.

Dennis Anderson,
 Laboratory Accreditation Program Manager
 National Fenestration Rating Council
 6305 Ivy Lane, Suite 140
 Greenbelt, MD 20770
danderson@nfrc.org
 PH: 240-821-9514
 HQ: 301-589-1776 ext. 214
 FX: 301-576-5510

