

## HRAI Technical Commentary

The Heating, Refrigerating and Air Conditioning Institute of Canada (HRAI) is a not-for-profit national trade association serving the HVACR industry and the public interest. HRAI provides a wide range of informational and educational opportunities for building officials. Just as contractors, building owners, and building managers need to keep up to date in our ever-changing HVACR industry, building officials also need to know the "facts" and need to keep current. HRAI continues to work closely with OBOA and salutes the various municipalities across Canada who have joined the association as associate members. HRAI, through its national network of chapters, provides a means for building officials, contractors, wholesalers, manufacturers and consultants to work together.

OBOA members should note that HRAI offers a wide range of HVACR technical manuals, design manuals, and software for applications such as heat loss/gain, duct design and air handling, commercial and residential courses, brochures (CFC's/HCFC's, ventilation, and tips for choosing a contractor), as well as posters and videos.

HRAI's training program includes courses in Residential Mechanical Ventilation, Installation and Design. Together, the material which forms the basis of these courses is referred to as the "HRAI Ventilation Manual". This material covers the National Building Code Ventilation requirements as they apply to single-family housing as well as ventilation design according to the CAN/CSA F326 Standard and the R-2000 Ventilation Guidelines. Ventilation courses are run throughout the year in Ontario and across Canada on a scheduled as well as a "demand" basis for all interested industry personnel, including building officials. HRAI will also conduct special courses arranged and designed just for building officials. For more information on materials and courses call HRAI at 905-602-4700 (fax 602-1197).

HRAI is pleased to provide the support for the timely and ongoing information in this column for OBOA members.

### HRAI and OBOA Programs Concerning New OBC Ventilation Rules

**The Residential ventilation-requirements of the Ontario Building Code have been substantially upgraded. OBOA and HRAI are jointly developing programs to assist Building Officials and the Building Industry in applying the new requirements.**

As most practitioners have realized by now, the new residential ventilation requirements are significantly more detailed and comprehensive than in the previous version of the OBC. While we all realize that the new requirements will require effort from Building Officials in order to monitor compliance to the new requirements, OBOA and HRAI have begun a series of co-operative projects to minimize the effort required in implementing the new requirements, both from a practical and administrative point of view.

**Building Official Training:** With assistance from HRAI, OBOA will soon be offering 2-day workshops on ventilation expressly for Building Officials. (*The OBOA training committee is scheduling courses beginning in December and January*). This 1/2-credit course focuses on the administrative as well as the technical aspects of introducing the new ventilation requirements into a municipal compliance process. In addition to detailed examination of the language of the code and the physical reality of equipment and ductwork installations, there are many sample forms, flow-charts and checklists for permit application, plan review, inspection and performance certification. The course demonstrates the use of the same forms as are supplied to Ventilation Installers and Designers under the HRAI Training and Updating Programmes.

A successful pilot session of this workshop was held in September of this year and the comments and suggestions of the OBOA volunteer reviewers and contributors are being incorporated into the final course material.

**Trades Updating:** There are currently 1,089 individuals in Ontario who hold a Ventilation Installer certification issued by HRAI. All currently certified individuals have received a re-certification package, and when the individual re-certifies, he/she will receive a package which includes a complete explanation of the OBC revisions with respect to Ventilation. The package includes the How to Comply with the Ventilation Requirements of the OBC 1993 book, as well as copies of the Ventilation Design Summary form, the Ventilation Record form, the Depressurization Test form and a copy of the current HVI catalogue.

The HRAI Training courses in Ventilation Installation and Ventilation Design now include modules which deal specifically with the requirements of the Ontario Building Code with respect to ventilation. The course material includes all of the books and forms included in the re-certification package noted above, in addition to the HRAI Ventilation Manual, which sets out good ventilation practice requirements. Although Building Officials sometimes attend these courses, they are geared towards the needs of the installing tradesman and system designer.

Persons who have passed a Ventilation Installation course may become registered as Certified Ventilation installers. HRAI issues a registration number to certified individuals and a list of currently certified individuals is available on request from HRAI. This list is available alphabetically by individual, as well as by location. In the new year, the list will contain only persons who have received or who have been trained in the Ontario Building Code Ventilation requirements. HRAI Ventilation Certification is backed by a complaint arbitration/de-certification mechanism.

**Compliance System:** All of these activities by OBOA and HRAI are resulting in a model compliance system that is available for adoption in whole or in part by a municipality, and which will reduce the effort required to put the new requirements in place. The compliance system is designed to accommodate both Part 9 (non-professional

design) as well as Part 6 (professional design) systems, and to clearly distinguish between the two for the benefit of ventilation installers, builders and building officials. For Part 6 systems, HRAI provides a certification system which allows identification of knowledgeable ventilation professionals and an ongoing means of updating those professionals as to the changing requirements in this area.

The *Ventilation Design Summary* form provides a means of implementing the new requirements in a uniform way, as well as a means of effectively communicating to permit applicants the information and decisions which are required in order to meet the ventilation requirements. The Ventilation Record provides a means of uniformly recording the critical information for Part 6 Ventilation Designs. It also doubles as a "Performance Certificate". The *Depressurization Test Form* provides detailed instructions as to the correct method of carrying out the excessive depressurization test specified in CSA F326, as well as a method of recording and certifying the results. The HVI catalogue provides a single source listing of certified rating data for fans (CFM and sones) as well as HRVs.

All this could not have been possible without the foresight and efforts of OBOA and HRAI, volunteers, staff and consultants. It is my hope that this will be one of many other areas of co-operation.

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