Wind-Roof Calculator on the Internet (Wind-RCI)

Objectives
To create a design tool to calculate the design loads for wind uplift of roof covers.

Background
Wind damage is a common cause of roofing failures, but wind effects on roofs are also complex and difficult to calculate. In particular the design load for wind uplift of a roof is a function of several variables including roof structure, slope, wind speed, building height, roof areas, building terrain, building type and building openings. A design tool to perform this calculation would reduce the cost of design and minimize error.

Statement of Work
A previously published six-step procedure for calculating the design wind uplift loads on roof coverings will be used to develop an Internet-based automated calculator.

Expected Outcome
A software tool, Wind-RCI. The user of this tool will input location, dimensions, exposure and type of a roof, and the tool will then display the wind load diagram for the field, perimeter and corner zones of the roof assembly.

Partners
Roof Consultants Institute Foundation and the Roofing Contractors Association of British Columbia

Start/Expected Completion Dates
This project began in 2006 and will be completed in 2009.

Project Manager
Dr. Bas A. Baskaran: 613-990-3616; Bas.Baskaran@nrc-cnrc.gc.ca

For more information, see http://irc.nrc-cnrc.gc.ca/bes/prsi/rci_e.html

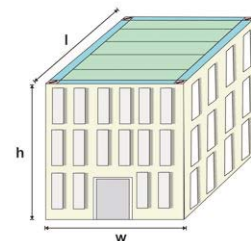*Factsheet 84, July 2007*

Wind Load Calculation for Roof Covering

Building Dimensions

Height, h: 30 ft

Width, w: _____ ft

Please enter the width greater or equal to the height

Length, l: _____ ft

Next

*Not to Scale