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## *Evaluating the Effectiveness of Window/Wall Interface Details to Manage Rainwater*

### *Objectives*

This laboratory project evaluates specific window/wall interface construction details to determine how effectively they manage rainwater intrusion into a wall assembly.

### *Background*

Inadequate detailing and installation of windows cause a significant number of building envelopes to fail prematurely. To reduce the number of failures, new construction details have been developed to better manage water intrusion at the window/wall interface. There is a need to evaluate the effectiveness of these details.

### *Progress to Date*

We have developed a procedure to assess how well construction details mitigate the penetration of rainwater into a wall assembly. We are now assessing the water-management capabilities of specific construction details for selected combinations of window types and wall-cladding systems (e.g. vinyl, and hardboard), either installed according to standard methods or using variations of best practice. We have completed Phase I of this work, which focuses on evaluating window/wall details commonly used in Canadian practice.

### *Work Remaining*

Phase II, which evaluates other details in general use in North America, is now underway. Phase III, concentrating on wall/window details for commercial buildings, is currently being initiated.

### *Expected Outcomes*

This study will verify the effectiveness of the window/wall interface. Results on the performance of each wall assembly will be used by Canada Mortgage and Housing Corporation to develop a best-practice guide for window installation.

### *Partners*

Canada Mortgage and Housing Corporation, Public Works and Government Services Canada, DuPont Tyvek, and Building Diagnostics Technologies Inc.

### *Start/Expected Completion Dates*

This project began in May 2003 and will be completed in 2008.

### *Project Manager*

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For more information, see [http://irc.nrc-cnrc.gc.ca/bes/hmpe/rainwater\\_e.html](http://irc.nrc-cnrc.gc.ca/bes/hmpe/rainwater_e.html)

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*Dynamic Wall Testing Facility*