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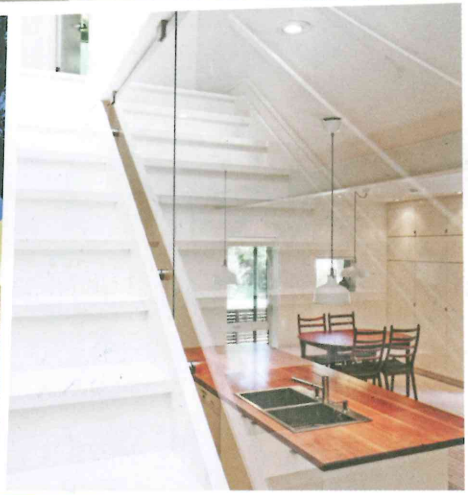
WINNING PROJECTS
CANADIAN GREEN BUILDING
AWARDS 2016
SPECIAL ISSUE








1

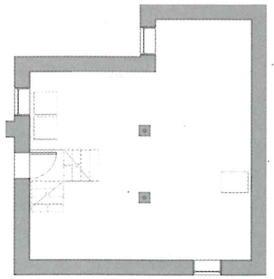
NATIONAL WINNER

OUR HOUSE TORONTO, ON

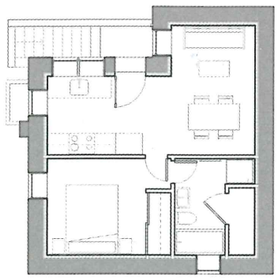
JURY COMMENTS: A simple, strategic and highly reproducible series of interventions have completely transformed this modest residence into an appealing family home. Working within the constraints of a 450ft² footprint, this project is notable for its compelling, well-proportioned spaces conjured out of an existing structure that was virtually unliveable. With close attention paid to airtightness, insulation levels and high-performance triple-glazed windows and skylights, energy performance has been improved by 90%.

VIEW OF RENOVATED HOUSE FROM THE STREET [1]. EXISTING HOUSE PRIOR TO RENOVATION [2].

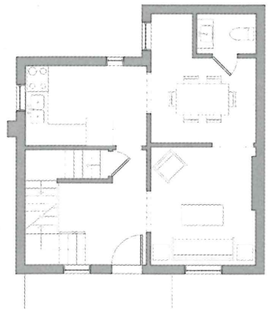
2



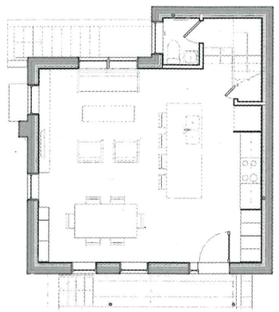
Floor plans - Existing level 0



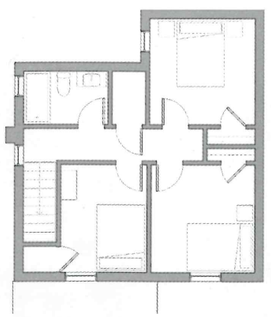
Floor plans - New level 0



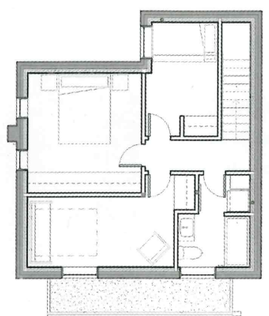
Existing level 1



New level 1



Existing level 2



New level 2

The renovation of this 84m^2 home in Toronto's Roncesvalles neighbourhood was completed in May 2014. The occupants, co-founding partners of a Toronto-based sustainable architecture firm, acted as both architects and general contractors, with their two young children in tow.

The property is small, with a front yard, detached garage, and proximity to schools, shops, and the owners' architecture office. Two main considerations were to maximize energy efficiency and the apparent space within the small 42m^2 footprint on each floor.

The occupants wanted to maintain the brick structure and traditional character of the building while retrofitting it with a high-performance envelope and energy efficient systems. The occupants also wanted ample outdoor space for the children to play.

The second floor includes a shared kids bedroom with bunk beds, a playroom/guest bedroom, a master bedroom and a bathroom with laundry facilities. The main floor living room acts as a family area, while the basement was underpinned and finished as a separate apartment unit for added income.

The large tree in the front yard was preserved and a green roof was installed over the front porch. The side terrace act as a second living area for the family in the warmer months.

With two air changes per hour at 50 Pa, the house is extremely airtight for a renovation project.

PROJECT PERFORMANCE

- **Energuide Rating [Original Building]** = 38
- **Energuide Rating [After Renovation]** = 83

PROJECT CREDITS

ARCHITECT Solares Architecture Inc.
GENERAL CONTRACTOR Tomislav Knezic
INTERIOR FINISHING CONTRACTOR Paul Drummond
LANDSCAPE ARCHITECT R Environs Inc.
MECHANICAL ENGINEER SGA Associates Inc. ,
STRUCTURAL ENGINEER Katakkar Engineering associates
COMMISSIONING AGENT Blue Green Consulting Group
PHOTOS Derek Monson

EXISTING HOUSE PRIOR TO RENOVATION [2]. DINING AREA IN THE GREAT ROOM [3]. THE GREAT ROOM IS EQUIPPED WITH LARGE STORAGE CUPBOARDS TO MINIMIZE CLUTTER [4]. THE MASTER BEDROOM ON THE COMPLETELY RECONFIGURED SECOND FLOOR [5]. THE WOOD PORCH, FASCIA AND RAILING CONTRAST WARMLY WITH THE PAINTED BRICK [6].

The ERV and boiler are both small, compact and efficient. All windows in the project are triple-glazed fiberglass units. An operable triple-glazed thermal skylight was installed over the staircase, allowing light to penetrate both levels of the home and promoting stack-effect passive ventilation in the summer months. A solar tube was installed in the upstairs hall, significantly brightening the otherwise dark space.

The open and naturally bright communal room creates a warm and inviting space for the family to spend time together. The large storage areas enable family clutter to be cleared away restoring a sense of serenity to the space.

The airtight envelope, continuous insulation and high-performance boiler, about the size of a backpack, make heating and cooling the home easy and efficient, with a 92% reduction in annual space heating over the original building. Fresh air and ventilation is provided by two Energy Recovery Ventilator units, one for each dwelling unit.

In the walls, 100mm of water-blown closed-cell 2-lb polyurethane foam, gives an an R-value of 27. Between the ceiling rafters, an open-cell 1/2-lb insulation spray-in foam was applied, followed by 150mm of polyisocyanurate board insulation above the sheathing. These measures create the well-insulated shell that minimizes the required size of the mechanical systems.

Though this house is just a starter home for the young family, the finished product is built to last for generations. Having introduced new innovative features to the already existing heavy brick structure, this house will perform optimally for generations down the road.