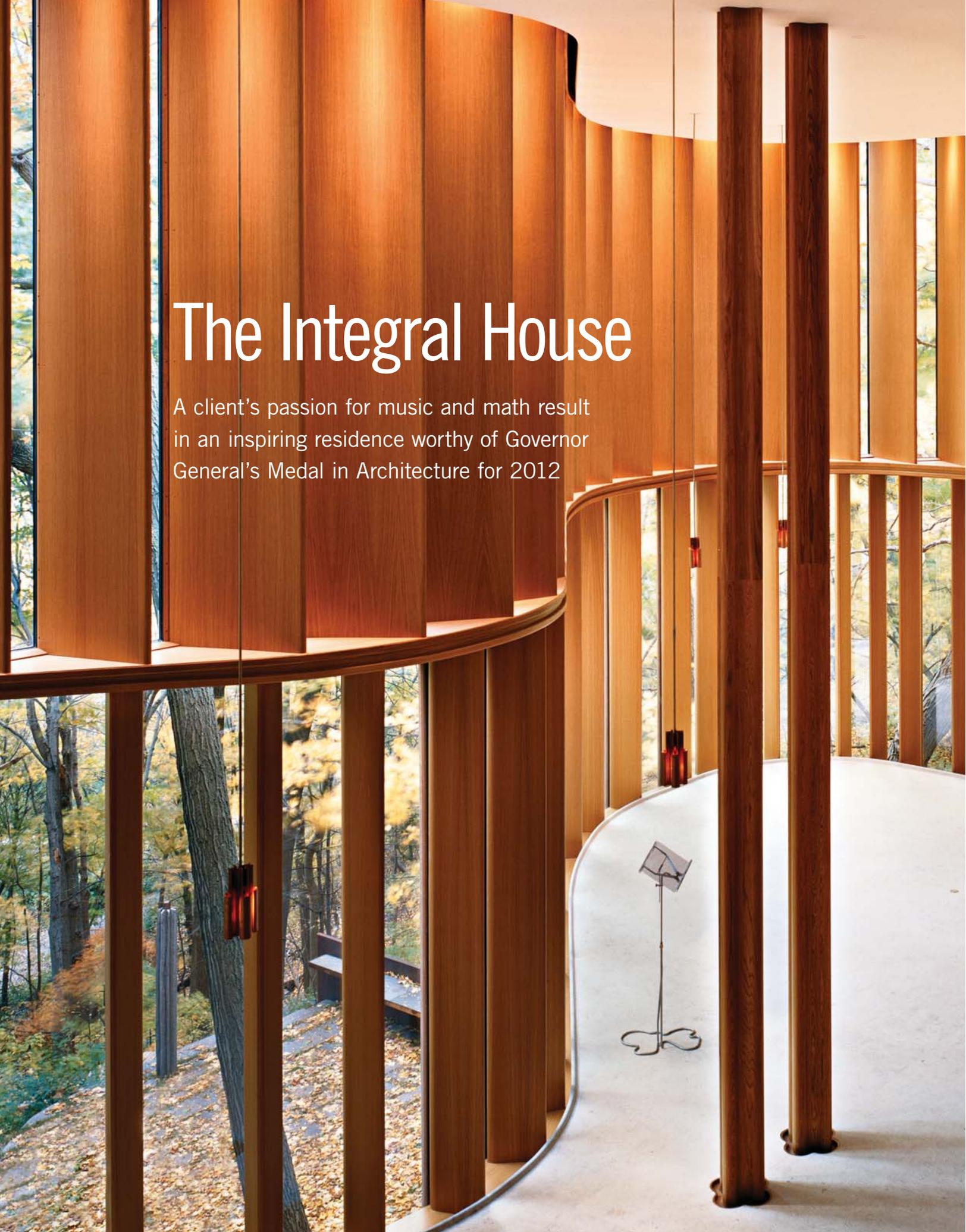
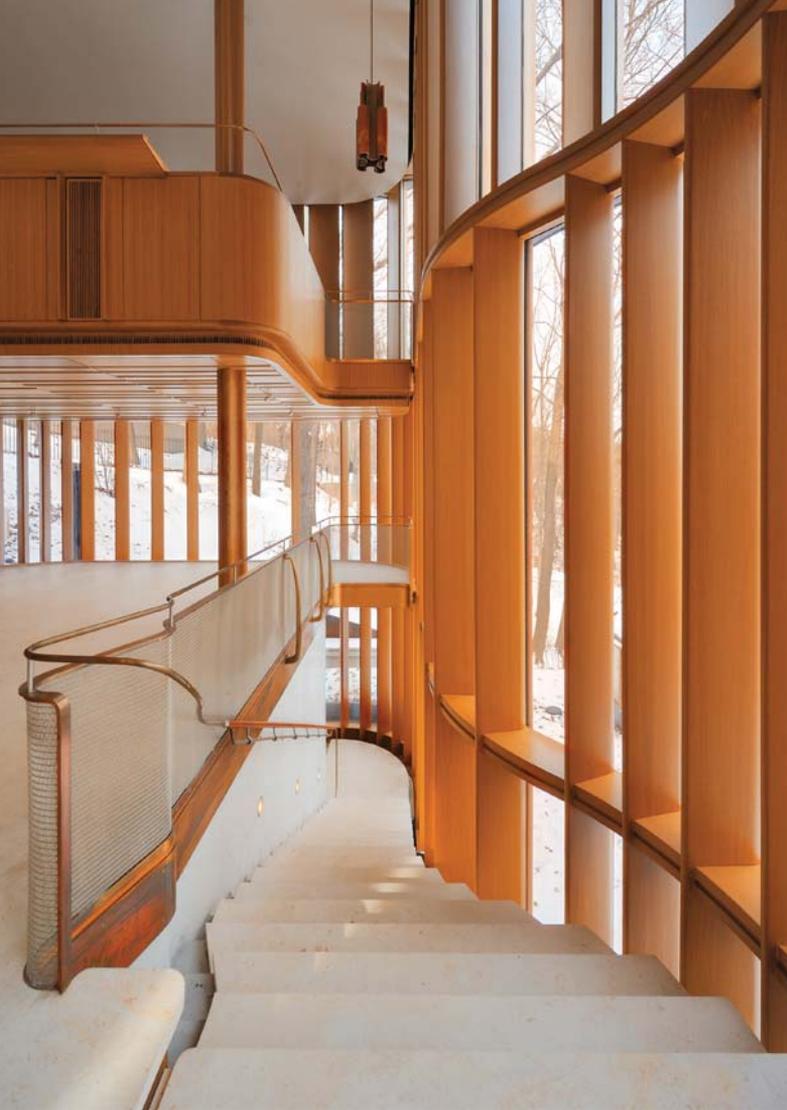


# The Integral House

A client's passion for music and math result in an inspiring residence worthy of Governor General's Medal in Architecture for 2012





*The Integral House is a place for architecture, music, and performance located at the edge of a verdant Toronto ravine. From the street, one reads a two-story building with a translucent, gently shaped etched-glass skin sitting on top of a grounded wood base. The base is composed of solid walls clad in oak that dissolve into oak-clad fins.*

The client is a mathematician, whose passion for curves also provided a starting point for this project. Curvilinear volumes inspired by calculus require double integrals and result in complex curving shapes that permeate this project. The serpentine walls, made of vertical glass separated by projecting oak fins, form the perimeter to the house, echoing the undulating contour lines of the river valley and the winding pathways in the native forest of oaks, maples and beeches.

The client's passion for music is realized in a performance space that is surrounded by the ever-changing ravine landscape. Private concerts take place in the main living space with upper level spaces doubling as balconies during performances. The section of the house parallels the experience of descending the ravine slope as well as ascending into the treetops.

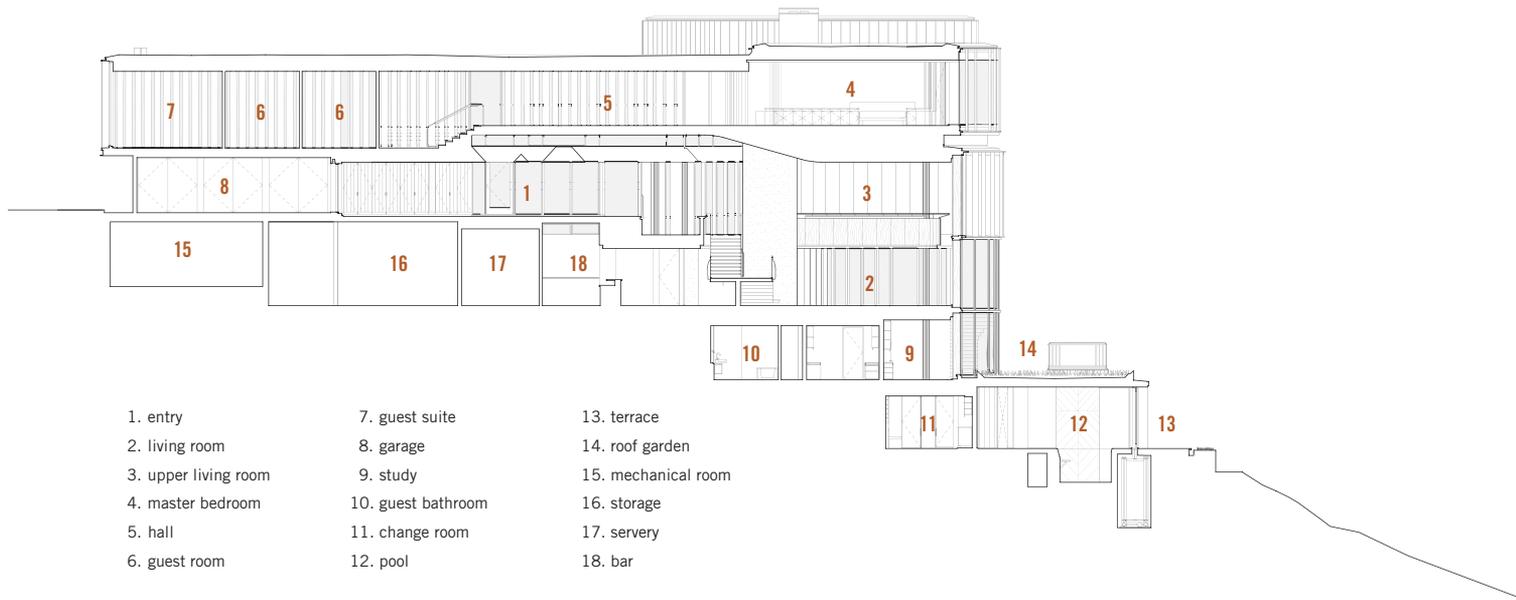
Each level of the building has a different relationship to the ravine landscape. At the lower floors, the experience of the forest floor is primary. As one ascends through the house, both the palette and spatial experiences lighten until one reaches the airy forest canopy.

No mere collection of "green" features, sustainability is integrated into all aspects of the project. The demands of an assembly space for larger events and gatherings



necessitated an approach that is simultaneously energy efficient and also extremely quiet both inside and outside given its prime location in the heart of a large urban metropolis and along a ravine edge. Beneath the entry driveway, 23 geothermal pipes provide heating and cooling for the main performance space and the residence. The project's extensive green roof reduces the heat island effect and serves as a visual feature that can be viewed from many parts of the project.

Materials were selected for their esthetics and durability based on lifecycle costing calculations. While the use of white oak cladding on the vertical fins, columns, and balcony fronts is a crucial element in visually connecting the inside and outside, the fins also provide sun



FLOOR PLAN

shading during the summer months and acoustical mixing and sound absorption in the large performance space. Since its opening, numerous concerts and performances have taken place in The Integral House with gifted performers such as Phillip Glass, Steve Reich, Adrienne Pieczonka, star players from the Simon Bolivar Youth Orchestra, and Isabel Bayrakdarian. Musicians who have performed in this space comment on its similarity to an instrument with its fine-tuning of sound that results from its warm wood interior and the resonance from its vertical fins. 

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