

SINGAPORE \$8 MALAYSIA RM 18 HONGKONG HKD90 AUSTRALIA AUS\$14.95 OTHERS US\$12



DESIGN AND ARCHITECTURE

/ WWW.DESIGNANDARCHITECTURE.COM /

/ ISSUE 112. 2019 · S\$8 /

**MUKU NURSERY**  
TEZUKA ARCHITECTS

**MALAYSIA**  
**INTERNATIONAL TRADE**  
**AND EXHIBITION CENTRE**  
RSP ARCHITECTS

**TEMASEK SHOPHOUSE**  
SURBANA JURONG CONSULTANTS

**LOVELY LIBRARIES**  
HOMES FOR BOOKS  
WITH UNCONVENTIONAL  
DESIGN FEATURES



WORDS MICHELE KOH MOROLLO

# LANDSCAPE LENSES

A Japanese architect designs a home for his mother and siblings with extruded windows that draw inspiring ridgeline views.





**H**itoshi Saruta, founder of Japanese practice CUBO Design Architect, designed a home for his mother and two siblings that capture stunning views of a castle and beautiful mountain ridgeline on the horizon.

Located in Nagano's Matsumo City, the project was initially conceived as a retirement residence for Saruta's mother, who wanted a practical home that would also allow her to enjoy the scenic landscape outdoors.

As the project progressed however, Saruta's mother decided to extend her residence so her two single children

(Saruta's sister who is a teacher, and his brother who is a pianist) could be close to her.

To fulfil her wishes, Hitoshi designed a home where his mother can live comfortably, but included additional bedrooms and a piano studio so his siblings can live harmoniously with her, while still enjoying plenty of privacy.

In capturing the panoramic views, the building was designed with an elongated shape that conforms to the site.

A small balcony on the second floor and an open deck on the garden create strong connections to the outdoors.

**/ BELOW**

To maintain privacy, no windows were used along the west, road-facing façade.





1

**/ 1**  
The main roadside approach to the house with its interesting composition of oblique angles.

**PROTUBERANT FENESTRATIONS**

To ensure privacy, no windows were used for the road-facing façade. Instead, large bay windows were added along the wall opposite of the road-facing façade.

These windows were oriented towards the mountains and castle.

“Natural light therefore comes exclusively from one direction, which increases contrasts in the lighting and creates a strongly shadowed, spatial structure,” says Saruta.

The sizes and shapes of the windows were dictated by the scale of the interior spaces.

Although they appear randomly placed at first, they were in fact carefully designed with varied sizes, depths, heights, finishes and shapes to present a diverse sequence of scenes for the user when they are sitting or standing inside the house.

“Even though some of the windows



2



3

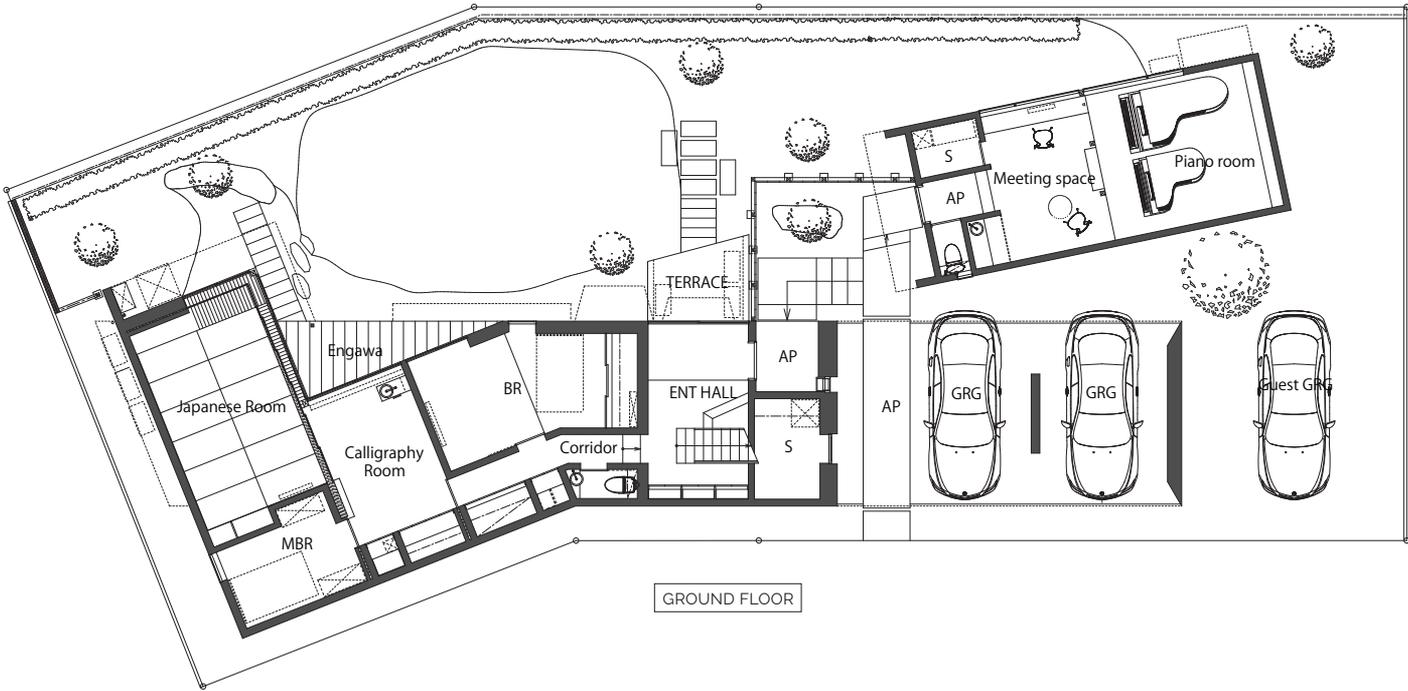
frame the same scenes outdoors, by changing the cut of the windows, these scenes appear fresh each time, in spring, summer, autumn and winter, day or night,” says Saruta.

Designed like protuberant barnacles, the windows help to deepen the shadows that are cast within the house when the sun shines through them.

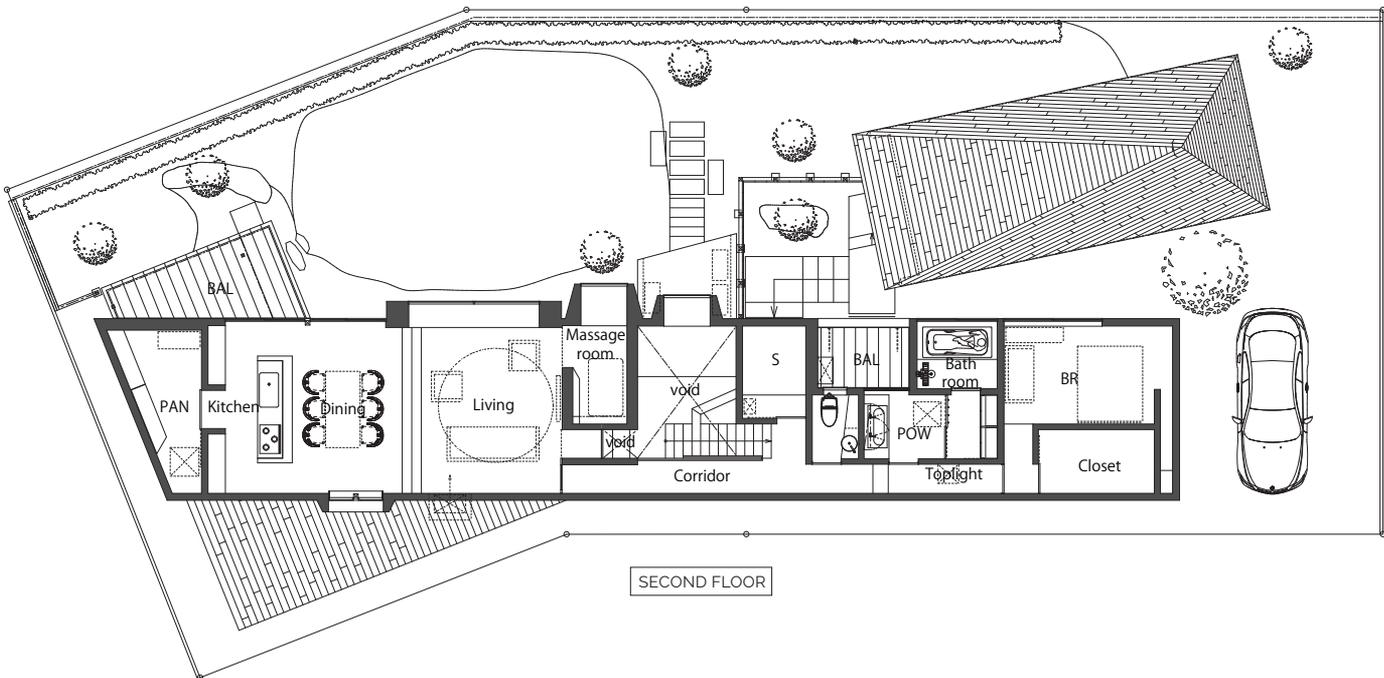
“Because the structure follows the V-shape of the property, the broad

**/ 2-3**  
Although they appear randomly placed at first, the windows were designed with varied dimensions, finishes and shapes to frame a diverse sequence of scenes from inside the house.

FLOOR PLANS



GROUND FLOOR



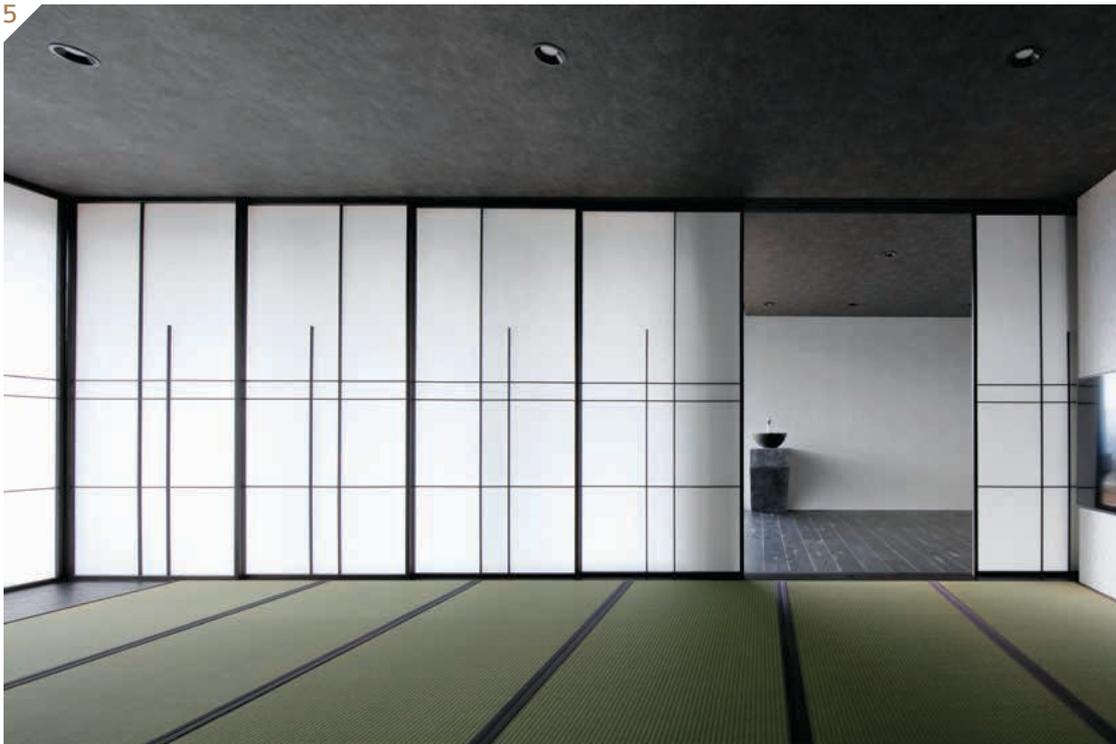
SECOND FLOOR



4

**M4**

LOCATION / NAGANO, JAPAN  
 COMPLETION / 2017  
 SITE AREA / 469.92M<sup>2</sup>  
 BUILDING AREA / 156.74M<sup>2</sup>  
 GROSS FLOOR AREA / 248.04M<sup>2</sup>  
 ARCHITECT / CUBO DESIGN ARCHITECT  
 LEAD ARCHITECT / HITOSHI SARUTA  
 CONTRACTOR / TAKIZAWA KOUMUTEN CO., LTD  
 QUANTITY SURVEYOR / TAKIZAWA KOUMUTEN CO., LTD  
 LANDSCAPE / SAKUTEISHA MIYAMAEN CO.  
 AWARD / THE PLAN AWARD 2019, NAGANO  
 PREFECTURE ARCHITECTURAL AWARD 2018



5

/ 4  
 The corridor leading to the living room on the second floor.

/ 5  
 The Japanese-style room with *tatami* floors and traditional *shoji* screens that open up towards the views.

plain occupied by Matsumoto and its neighbouring cities is visible from anywhere within the house," says Saruta.

**PROTECTION FROM NATURAL DISASTERS**

In Nagano, there is always the potential for strong winds and earthquakes.

Because the house has an elongated and narrow shape, and a wooden structural frame, creating large apertures along one wall could comprise the building's ability to withstand wind pressure and earthquake tremors.

Saruta worked around this problem by constructing walls of mortar and



Hitoshi Saruta, Founder of Japanese Practice CUBO Design Architect



6

galvanised steel sheets that were twice the thickness of standard walls, and reinforcing them with braces of appropriate spans.

The roof was constructed entirely from small pieces of wood, and assembled together within a 1300mm pitch to create good horizontal rigidity for the roof.

“In addition to the reinforced wall structural system, we constructed a hybrid ceiling structure. This structure is composed of wood strips and pieces that are randomly placed within 1300 mm, and that goes directly with the strip to prevent twisting.

“We set the different sizes of such pieces to create an innovative architectural aesthetic,” says Saruta.

The programme includes a high-ceilinged entrance hall, a traditional



7

Japanese living room with a low ceiling height that steps down to a dining room, a calligraphy room, three bedrooms, a massage room, and a bathroom.

A separate volume contains Saruta’s brother’s piano studio.

Within both volumes, the interiors are minimalistic with exposed wood frames and beams radiating from the central angles of the roof to achieve a bold design and streamlined aesthetics.

According to Saruta, the biggest challenges with this project were finding the right placement for the structural wall that supports the different sized windows, and finding a way to wind and earthquake-proof an elongated and narrow wooden structure within budget.

But he’s happy with the result and so are his mother and siblings.

“The house frames its sweeping views in a way that constantly reveals fresh discoveries in the changing colour of the sky, the movement of the clouds, the mood of the mountains, and the shifting seasons,” says Saruta.



8

/ 6

The piano room where the architect’s pianist brother practices with its exposed wood frames and beams radiating from the central angles of the roof.

/ 7-8

Panoramic windows in the second floor living room frame beautiful mountain views. The roof was constructed entirely from small pieces of wood, and assembled together within a 1300mm pitch.

