

Arch 464
ECS
Spring 2013

Name _____

Quiz #1

"Art in a Glass House"

For this problem you are the daylighting consultant to the architect/owner of House Rocés. The house was praised in *Architectural Record*. Use the information from *AR* to help inform your advice. The architect desires that no more apertures are carved into the long wooden wall that defines the NE facade of the house. Your advice is sought to help develop an appropriately daylighted space for the owners' recent art acquisitions—two impressionist paintings and one sculpture.

Context. Bruges is at 51° NL with the English Channel to the northwest.

READ THE ENTIRE QUIZ BEFORE YOU BEGIN!



BRUGES MAY be best known for its centuries-old stepped-gable structures edging cobblestoned streets and narrow canals, and for its urban squares enclosed by idiosyncratic Gothic and Flemish Renaissance buildings. Nonetheless, the small Belgian port has produced at least one architecture firm that leans not to the earthy romanticism of the medieval picturesque, but to the transcendent romanticism of the Modern Movement.

Benny Govaert and his partner, Damiaan Vanhoutte, who founded a practice in Bruges in 1989, have adhered to the crisp geometries of modern pioneers such as Mies van der Rohe and Le Corbusier since their architectural studies at the Higher Architecture Institute in Ghent. "We also love Richard Neutra's and Rudolf Schindler's California houses in the Hollywood era," adds Vanhoutte. In recent years the two architects have attracted attention for their poured-concrete, low-rise, rectilinear volumes found in the D-Hotel in nearby Marke (2009), and the award-winning visitors center for the World War I Tyne Cot Cemetery (2008), near Ypres.

Govaert longed to live in a house of his own design, and fortunately his wife, Martine Neirinck, was sympathetic: as a photographer and the architects' office manager she was at home with Govaert & Vanhoutte's unswerving allegiance to minimal and austere geometries. Govaert found a narrow 230-by-99-foot slice of land in a sylvan residential area on the outskirts of the historic city for which he would design a

2,874-square-foot house for his family, including a young son and daughter. Responding to the grassy, tree-studded property, the architect opted for the ineffable transparency and translucency of glass that would make the house dissolve into its natural setting. “As a starting point I placed the long [168 feet] and narrow [23 feet] glass box against a wood back wall at the northeast edge of the property,” he says. The living areas face south and west onto the tree-shaded lawn through an expansive, floor-to-ceiling wall of glass.

In his desire to keep the rectangular form intact, Govaert carved into the overall volume in three places: First he cut a large notch for the driveway to the underground garage; then

he took a slice out of the northwest corner to create a lap pool that skims past the bedroom wing; and finally he made a small incision between the bedroom wing and the rear wood wall for a back entrance.

The architect wanted to retain the flat, horizontal roof plane at a 14-foot height above-ground for the full length of the steel-frame house. In order to fit bedrooms and a family room into the single volume, he created two levels, with a lower one (containing the master bedroom and the family room) sunk a half-level below grade. Since this bedroom wing jogs 6 feet back to accommodate the lap pool, not only does the lower level receive light, but it has an intriguing view overlooking the water’s edge.

As you enter the house views unfold: From the street you see only a glass end bay of the kitchen, a driveway, and the narrow profile of the whitened African teak back wall. The “front door”—actually a floor-to-ceiling narrow panel in the wood wall—opens into a glazed vestibule bridging the driveway. Stepping into the kitchen/dining area, you are drawn visually to the smooth, flat lawn through 9-by-13½-foot glass panels attached to bladelike steel columns.

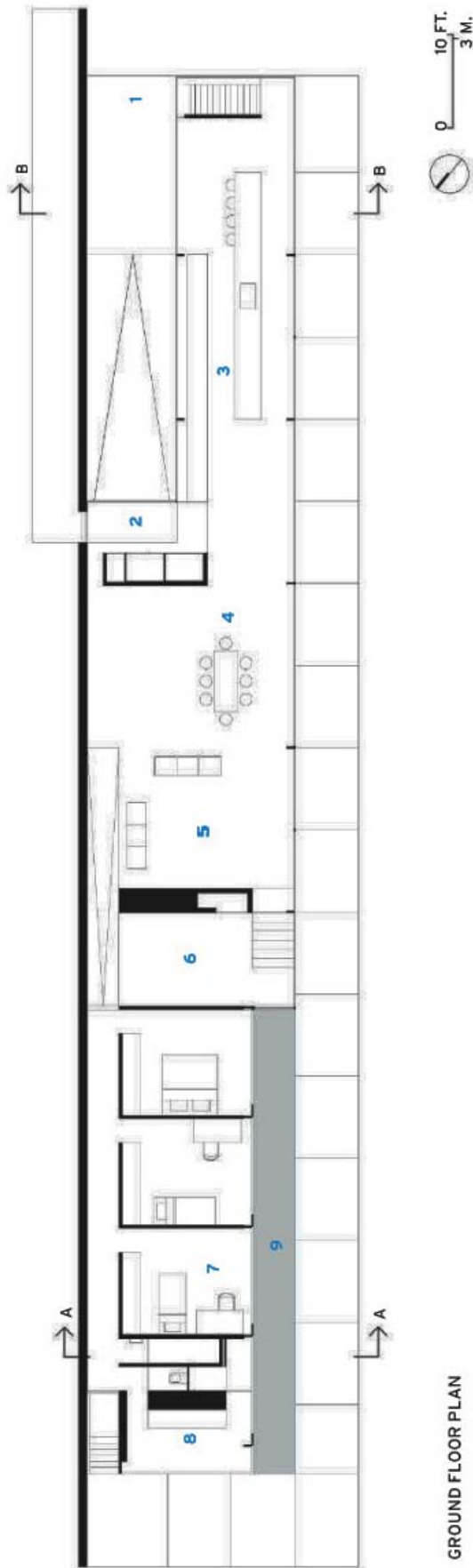
The legendary Modernist compulsion to align all joints according to severely meticulous arithmetic measurements is much in evidence: You may notice the generous basalt floor pavers (3 by 4½ feet) line up precisely with the butt-jointed glass walls; the length of the dining table (12 feet) echoes the width of the kitchen’s service block. We could go on.

From the dining area, you are pulled into the living room, where a concrete chimney wall floats above the fireplace hearth. (A steel beam perpendicular to the suspended wall carries the load to the poured-concrete substructure of the family room a half-level down.) Descending a stair’s metal treads cantilevered from the perimeter wall, you find yourself in a family room that soars to a 21-foot height. “I wanted to emphasize extreme

horizontal and vertical spaces in the house,” Govaert says. The master bedroom behind the family room is smaller and more secluded. It, too, overlooks the lap pool.

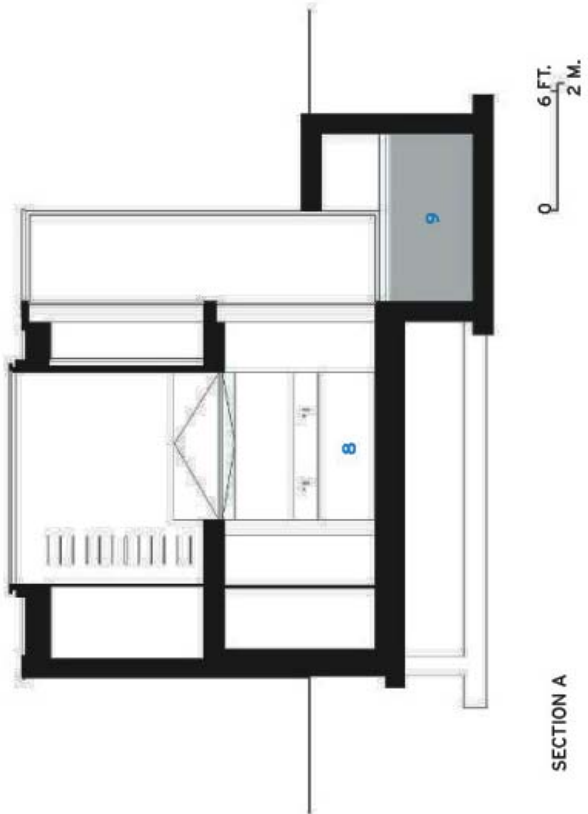
By ascending a ramp from the living room, you can find the bedrooms of the son and daughter each individually decorated—and awash in colorful art and personal objects. While Govaert intended the rear wall to be solid for the full length of the house, with the glass bar extruded from it, he cut out a large glazed opening in this taut wood plane on the east side of the ramp. “Actually, I didn’t want to puncture the wall with an opening,” says the architect. “But Martine insisted, and she’s right. It brings more light and view to the family room.”

Back in Bruges, bridges replace modern ramps; cobblestones substitute for basalt pavers, and stone and brick abound, rather than glass. There is much to marvel at in the city’s rich architectural stew of spires, scrolls, serpentine contours, and craggy textures. Yet the memory of Benny Govaert’s glass pavilion surrounded by grass and trees lingers as a soothing tonic: ethereal, elegant, and transporting. ■



GROUND FLOOR PLAN

- 1 DRIVEWAY
- 2 ENTRANCE VESTIBULE
- 3 KITCHEN
- 4 DINING AREA
- 5 LIVING AREA
- 6 FAMILY ROOM
- 7 BEDROOM
- 8 BATH
- 9 POOL

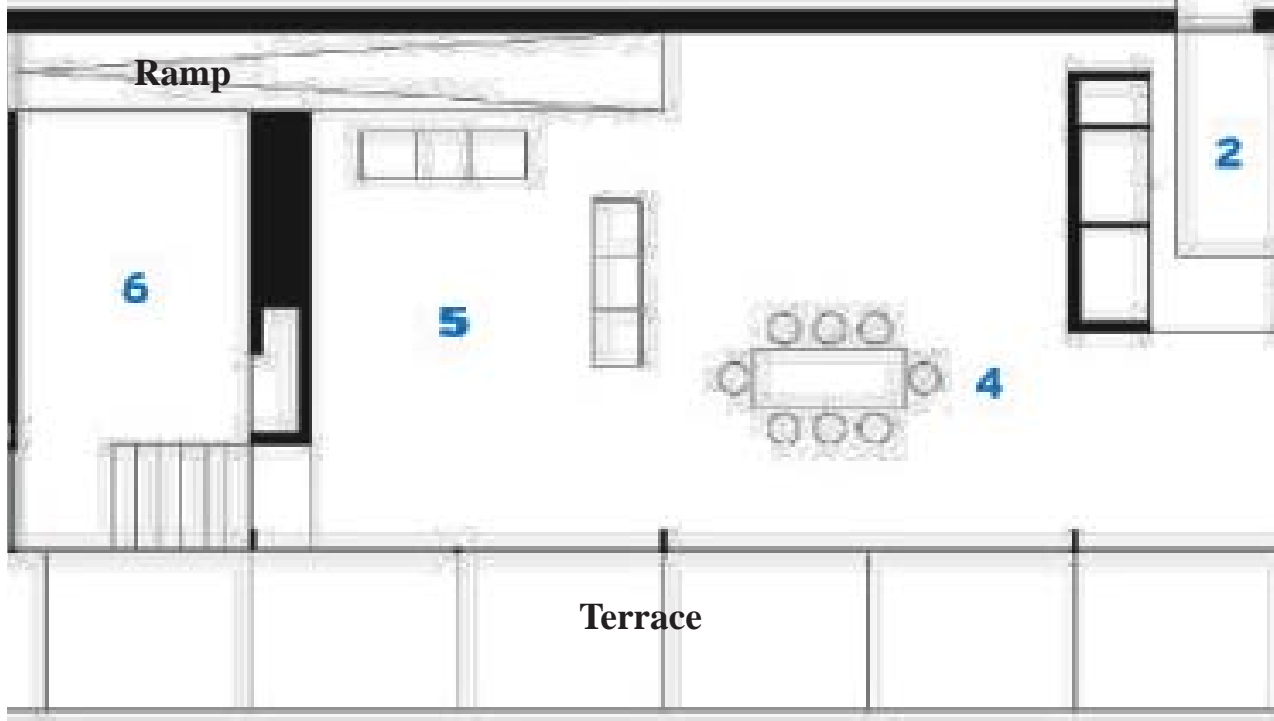


SECTION A

- 3 pts. 1. **Analyze** the existing daylighting quality in the house's living area (pictured below). Describe two problems and one advantage of the space, keeping in mind its intended use as a place to display paintings and sculpture.



- 4 pts. 2. You may add a skylight and/or external shading devices to the room, **Show** your recommendations for remodeling and their locations and **sketch** their effect on light distribution in the space on the plan below. **Sketch** sections through your intervention(s) to demonstrate how they affect the light entering the space.



2. Vestibule, 4. Dining area, 5. Living area, 6. Family room

- 3 pts. 3. The architect/owner wants to place the art in the living area, which has two walls available (seen in the photo on page 4) for hanging the small Monet and the large Caillebotte, shown below. He also wants to paint one of the walls a non-white shade to enhance the display of the art works. **Show** where you think they should be hung and placed in the living space view on page 4 and **explain why. Recommend** a color for the accent wall, indicating which wall and **explain** your recommendation. **Indicate** where to place the sculpture and **explain why.**



Claude Monet, *Impression, Soleil Levant*, 1872. (Size 19 x 25 in.—color sunrise orange and river blues and greens)



Gustave Caillebotte, *Rue de Paris, temps de pluie*, 1877. (Size 83.5 x 108.7 in.—muted tones, basically grays)



Edgar Degas, *Cheval à l'Areuvoir*, ~1875. (Size 32" h x 40" l x 20" w—Color gray)

Images: Wikipedia, public domain.