

Louisiana State Museum and Sports Hall of Fame – Natchitoches, Louisiana, U.S.A.

Essay by Sarah Forthuber

The Louisiana State Museum and Sports Hall of Fame was designed by local Louisiana architecture firm, Trahan Architects, in 2013. The building sits like a box in the historical city of Natchitoches, Louisiana, right in the center of the town, set slightly back on the banks of Cane River Lake¹. The museum houses two seemingly unrelated galleries, regional history and a sports hall of fame, both being tied together by their strong relations to the location².

The museum assumes a modernistic design aesthetic, which involves 28,000 square feet, a \$12.6 million project funded by the state of Louisiana³. Inside, the museum holds three galleries, two on the lower level, with the third on the upper level². The interior is framed by uniquely curved stone panels, which are meant to resemble the neighboring river and its natural carvings and erosions². The seamlessness and smoothness of these sculpted stone walls, however, required incredibly involved engineering processes. These walls are a compilation of over 1,100 cast stone panels, which were each uniquely shaped and crafted to piece together the large volumes of organically curved masses¹. Some of these cast stone pieces reached up to being 5 inches thick in certain areas³.

The process of designing these exact puzzle-like cast-stone pieces, along with the structural design to support these heavily weighting panels, involved several overlapping computer design programs. Some of the major programs used in the design include Grasshopper, Karamba, Geometry Gym, and Robot for the structural analysis¹. Behind the cast-stone panels were their steel supports. The design team had developed a system of fastening a clip onto the cast-stone panels, which could then secure onto the supporting steel structure. As the team assembled the pieces, sliding each panel into its exact place, the weight of the panels would slightly deform the steel frame, which posed the risk of ending detrimentally³.

Integrating the building's maintenance and other systems throughout the organically curved structure also posed a challenge. The building being a museum, which require minimal exposure to integrated systems and distractions, as well as regulated temperature and light, the presentation is nearly seamless³. There are inset custom grilles that follow along the curved panels which incorporate additional lighting, a sprinkler system, and air diffusers. The second floor has an exposed HVAC duct system, which appears less distracting with the higher ceilings³.

The exterior of the building is a simple rectilinear scheme, involving pleated copper strip louvers wrapping around the white stucco walls. These louvers act to control the natural light within the building, along with the views and ventilation². The copper façade also acts as a barrier or protect to the terraces found on the back and front of the second floor. In addition to the practicality of the louvers blanketing the building, Trahan Architects also chose copper as the material in hopes that with time the copper would oxidize and erode in organic ways³.

Sources for this paper:

¹ <https://trahanarchitects.com/work/louisiana-state-museum/>

² <https://www.dezeen.com/2013/10/20/louisiana-state-museum-and-sports-hall-of-fame-by-trahan-architects/>

³ https://www.architectmagazine.com/design/buildings/louisiana-sports-hall-of-fame-and-northwest-louisiana-history-museum-designed-by-trahan-architects_o

