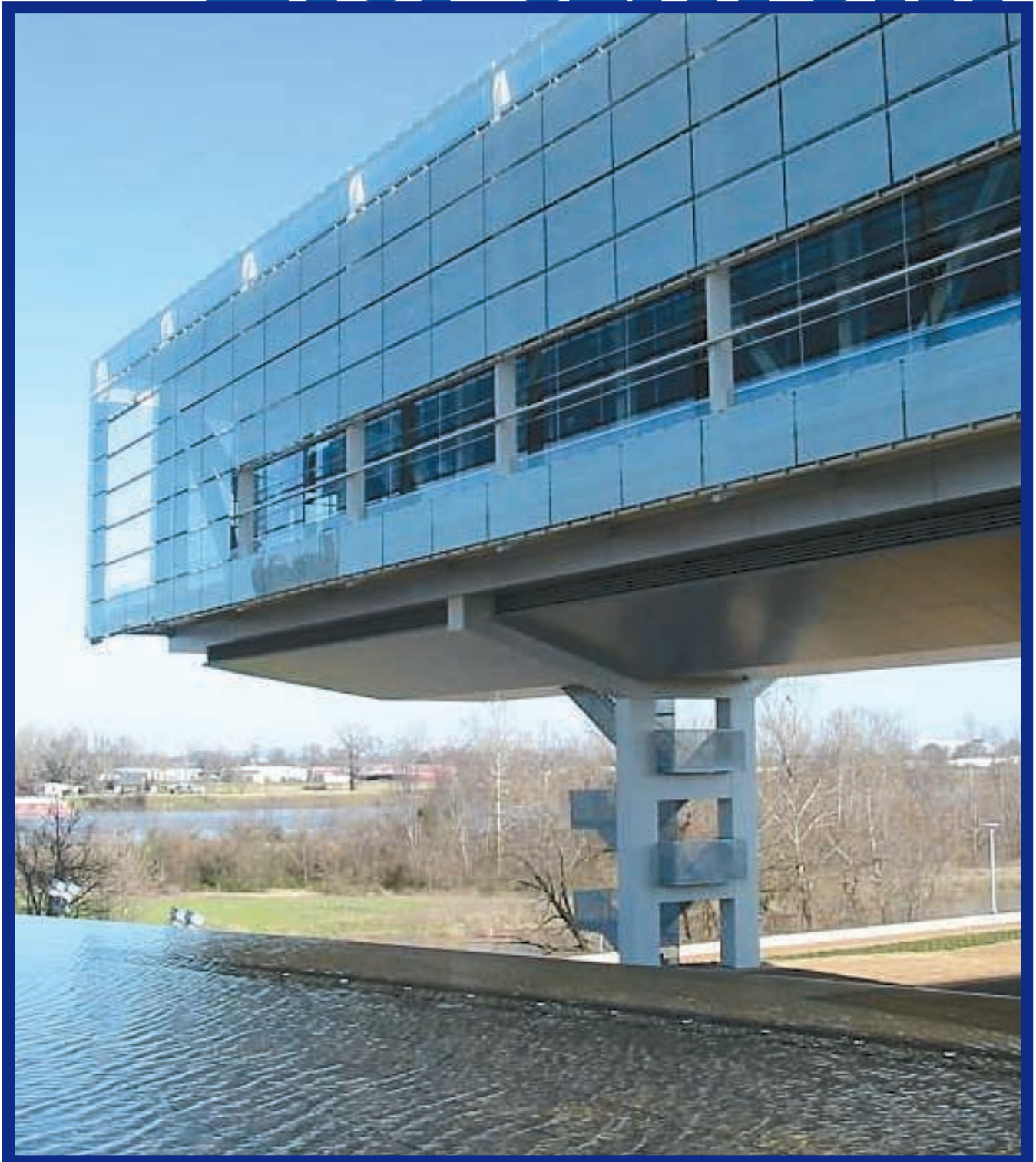


HSS: DESIGNS FOR THE 21st CENTURY



Clinton Presidential Center

CREATING AN "INHABITED TRUSS"

Bridges, both symbolic and actual, played a significant role in the design of the Clinton Presidential Center. The symbolic relationship involved the desire of the former president for the structure to reflect his motto, "a bridge to the 21st century." The location of the library, along the south bank of the Arkansas River, provided the physical example. The site sits parallel to a historic railroad bridge, one of Little Rock's distinctive "six bridges."

The design, created by Polshek Partnership Architects, is described as an "inhabited truss," which allows for open floor plans, a visual reference to the bridges and the transparency to



enable exterior light to flood into the library. Many of the truss elements were built from structural and plate steel. Structural steel tubing (HSS) was used strategically in areas where curtain wall accuracy was especially critical. In most cases, the HSS used in the primary structure was later clad to achieve the specific profile of the design.

An Example of How HSS Works in Unison with Other Materials

The Clinton Library is a dramatic example of how well steel plate, structural steel and HSS tubular sections work together in unison. This combination enabled Polshek Partnership Architects to meet the president's request that the structure meet LEEDS standards, reflect the design of the historic railroad bridge which parallels the structure and also relate to his "bridge to the 21st century" symbolism.

HSS was used to form the curtainwall for the museum section of the bridge building. The curtainwall, or D-wall, was hung from the box truss structure. The left façade of the bridge section of the building is comprised of an HSS curtainwall system and an E-wall screen system. The two work together to provide daytime lighting for the museum spaces while protecting the exhibits from solar gain or sun damage.

The horizontal supports of the curtainwall system are clad HSS steel tubing, which attaches directly to the main structure of the truss. Since it is hung from the steel structure, it had to accept movement from the structure. Brackets were used to attach the HSS to the steel structure with an anchor designed to a tolerance of 13-1/4 inches.

Square HSS was Used as a Structural Support

For the D-wall system, the glass wall had to be tied to the primary structure and incorporated stainless steel rods to



help carry dead loads. Square 10" HSS was used as the structural support.

The president's request that the construction meet LEEDS standards and fit into the city's green system, which runs along the banks of the river, encouraged the use of recycled materials and natural lighting in the building --- two areas in which HSS excels.

Historic preservation and accessibility were addressed by preserving the historic railroad bridge parallel to the

library. The bridge now provides a pedestrian crossing over the Arkansas River, connecting the Center to North Little Rock.

The Clinton Library is an excellent example of how HSS works in combination with other materials. The aesthetic appeal and strength of HSS provide a unique combination that architects, designers, structural engineers, fabricators and contractors find appealing in both design and construction phases.

