

Park Life

BY JEFFREY S. LEE, FAIA

An outdoor performance venue doubles as a modern, visual focal point in a revitalized city park.



IN SPITE OF LIMITED VENUES, the performing arts have long been embraced by the citizens of Fayetteville, N.C. Based on this love of the arts—and the subsequent need for more entertainment options—the city conducted a Performing Arts Needs Assessment in 2004. The findings indicated substantial community demand for an outdoor, multi-use performance space, and a plan was hatched to build such a venue.

The result is the Performance Pavilion at Fayetteville's new Festival Park; it is the major architectural element in the overall plan of the park. The park itself is near downtown on a decontaminated brown field, a site that had been used by a coal de-gasification operation in the 1930s. (From the 1940s until the late 1960s, the site housed a USO facility; it has been vacant since the 1970s.)

Multiple Materials

The structure is a layered composition of materials including concrete masonry units (CMUs), wood, concrete, cement board, and exposed structural steel. It consists of two components: a covered elevated stage and an enclosed rectangular volume housing back-of-house functions such as dressing rooms, restrooms, electrical and sound equipment rooms, and loading/storage. The back-of-house building is actually over to one side—stage left—allowing open views through the performance area to the backdrop of existing trees. Opaque panels on overhead tracks can be retracted from behind a wood scrim wall to serve as a backdrop and crossover when performances are taking place.

The use of structural steel was critical to meeting our design objectives. It was important

that sightlines to the stage be completely unobstructed and that the architecture of the pavilion expresses a sense of excitement; columns could not be used to support the stage canopy. The solution to these two objectives in the end became mutually dependent—i.e., one informing and directly impacting the other. Keeping the front of the stage completely open to sight lines was achieved by suspending the butterfly-formed stage canopy with a system of steel masts and high-strength steel cables. The canopy itself was fabricated from tapered wide-flange sections and steel tube purlins and was designed to complement the lightness and translucency of the canopy roof, which is made from extruded polycarbonate. The high-strength steel cables connect to each end of the bent beam butterfly roof and terminate at steel brackets embedded in large



Photos: James West/JWest Productions

concrete footings beneath the stage. To resist uplift and high winds due to the threat of occasional hurricanes, the thin profile of the leading edge of the canopy is actually a steel plate. The plate is 2 1/2 in. thick by 5 ft wide by 15 ft long and spans between the tapered bent beam assemblies. A total of 45,000 lb of plate load resists uplift. Water is channeled off the roof by a welded, galvanized steel gutter discharging into a receptacle at stage right.

Hollow structural sections were used primarily to provide diagonal bracing. The steel assembly tolerances, craftsmanship, and finish meet AISC criteria for architecturally exposed structural steel.

Maximum Exposure

Great attention was given to the detailing and fabrication of this project due to the



The Performance Pavillion project filled in an outdoor performance space gap in Fayetteville, N.C. The open-air venue, with exposed materials, sits in front of a backdrop of trees, connecting audiences with the natural beauty of Festival Park.





The canopy was fabricated from tapered wide-flange sections and steel tube purlins.

high percentage of exposed structural materials. Working collaboratively with the structural engineer, we were able to achieve a fairly delicate and refined structural assembly. For example, the bent roof beams are tapered toward their ends in response to loading conditions. Whenever possible, lighting and sound equipment conduit runs were coordinated and concealed within the structure; performance, work, and

architectural lighting were thoughtfully incorporated within the steel structure. Architectural uplighting accents the underside of the canopy roof, while tightly focused spotlights on steel outriggers highlight the tops of the steel masts. Plates for making connections were water-jet cut. Bolt heads and nuts are oriented in uniform directions. Welds are continuous. And painted finishes were carefully specified for

longevity and appearance (the paint used is a high-performance industrial enamel).

The result is a venue that has been widely accepted by the community, and requests for its use have exceeded the expectations noted in the earlier needs assessment. The project has also been noticed by the design community, having received local and state level awards from the American Institute of Architects. On top of all this, the unique steel structure of the stage canopy has become the defining, iconic image of Festival Park. **MSC**

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Owner

City of Fayetteville, N.C.

Architect

Pearce Brinkley Cease + Lee
Architecture, Raleigh, N.C.
SFL+A architects, Fayetteville

Structural Engineer

Fleming and Associates, Fayetteville

Steel Fabricator and Detailer

North State Steel, Greenville, N.C.
(AISC Member)

General Contractor

Ellis Walker Construction Co.
Fayetteville