



Erection of the haunched girder segments. Photo: Knife River Prestress.

An extensive type, size, and location study was performed in conjunction with the community engagement process. Several structure types were considered. A haunched, precast concrete bridge option provided the form and function needed for the crossing and was ultimately chosen as the solution. Additionally, other creative precast concrete components—including decorative panels for the faux pier walls, end caps, and column medallions—were used in the project. The cast-in-place (CIP) concrete piers comprise a two-column structure with decorative precast concrete infill panels, precast in the field by the contractor, that give the illusion of a single-column pier. Aesthetic treatments on these surfaces consist

of standardized items from the NSC aesthetic theme, such as the sunburst pattern, nature themes near the Spokane River, and other custom concrete finishes developed through community engagement by a local artist.

Superstructure

The project features two 1211-ft-long precast, prestressed spliced concrete girder vehicular bridges, with one carrying northbound traffic and the other carrying southbound traffic. The precast, prestressed concrete girders are a combination of pretensioned and post-tensioned elements. Each bridge consists of eight spans of concrete girders. Spans 1, 2, 3, 7, and 8 consist of seven lines of precast, pretensioned

concrete wide-flange bulb-tee girders (WF83Gs). These girders are 83 in. deep and weigh up to 163,000 lb, with spans ranging from 113 ft 4 in. to 148 ft 4 in. Spans 4, 5, and 6 consist of seven lines of girder segments, with each line composed of five precast, post-tensioned concrete girder segments (WF83PTGs): two end segments, two haunched concrete girder segments, and one center drop-in segment. Spans 4, 5, and 6 comprise 540 ft of the total bridge length, with end spans 4 and 6 measuring 155 ft each and center span 5 measuring 230 ft.

The overall bridge width for each bridge is 55 ft 9 in., with a roadway width of 50 ft. The superstructure includes three



AESTHETICS COMMENTARY

by Frederick Gottemoeller

The designers of the U.S. Route 395 North Spokane Corridor Spokane River Crossing were wise enough to recognize that they already had in hand a rare asset, a tradition of community stewardship for the river. That tradition meant that the community had already decided how to treat public structures that affect the river. So, the designers set up a dialogue with the community to work out exactly how that tradition would affect the new Spokane River Bridge.

Other designers worry that these kinds of efforts could increase costs. In fact, such efforts usually decrease costs. They head off community con-

troversies and the resulting delays. If a project is delayed, especially a large project such as the Spokane River Bridge, the inflationary cost increase of even a few months' delay can eat up the supposed savings gained by a more conventional solution.

One decision that resulted from the community-outreach effort was to respect the adjacent historic Greene Street Bridge. That prompted the selection of longer-than-usual main spans that open views to the Greene Street Bridge and the river itself. Then, for structural reasons, the use of long spans prompted the designers to deepen the continuous girders using variable-depth, haunched

girder segments over the piers. That creates visual evidence of where the forces are concentrated and how the structure is responding. Most observers appreciate that understanding. Finally, putting the soffits of the girders and haunched girder segments on continuous parabolic curves gives the bridge graceful, curved lines that complement the arches of the Greene Street Bridge.

But the designers didn't stop there. They also took advantage of the community's tradition in the design of the details, such as the pier wall panels, end caps, and column medallions. That gives the structure a consistent aesthetic theme that matches the aesthetic theme of the rest of the corridor. It also creates additional visual interest, which nearby observers will certainly enjoy. With the Spokane River Crossing, the designers and builders have created a civic asset that Spokane will long appreciate.