AESTHETICS COMMENTARY

by Frederick Gottemoeller

Normally, an even number of spans is not the best solution for a major bridge. This bridge is a great exception, because an island in the middle of the river provides an obvious and practical location for a center pier. The pier lands in the center of the river and the side piers land on the bank, out of sight in the trees. There is very little impact on the water itself. The arches frame its entire flow, through the rapids and into the distance, leaving just a peek of the far horizon.

And it is easy to see all of this through the bridge. All of the structural members appear to be as thin as calculations will allow and the joints are simple intersections, without thickening or fillets. The edge of the deck is barely thicker than the deck itself, and the railing is easy to see through in both directions. There is no extraneous material here.

"Keep it simple _____" is usually the best rule. Let me count the ways this bridge does that:

- Two arch ribs
- Deck girder and arch rib the same width and shape
- No bracing in the plane of the ribs
- Floor beams regularly spaced with no diagonal bracing
- Spandrel columns all of the same shape
- Spandrel columns at expansion joints simply doubled standard columns
- Approach girder overhang and depth the same as arch deck girder overhang and depth
- Approach piers same shape as arch spandrel columns

The curvilinear shapes of the center pier bases, one for each rib, are just enough of a departure from the ruling simplicity to draw the eye and make clear their function to divide and direct the river's flow. They make the bridge look like it's riding the river, supported by the waves.

Historic arch bridges made an impact by imposing mass and elaborate shapes on a site, with much-added ornament, often borrowed from traditional architectural styles. This bridge makes its impact by imposing very little on its site. It creates a memorable visual effect by contrasting its precise geometry and extreme transparency with its natural surroundings, and by inserting only those few physical elements required to do its job. It is a wonderful expression of what we now can do with the high-performance materials and advanced analytical techniques of the twenty-first century. Let's hope it becomes a frequently imitated model in the future.