## small town **BIG PLANS**

by Bill Finger and Dan Werner, Town of Middlebury, Vt.

ntil 2010, the Town of Middlebury, Vt., had only one narrow, late-1800s-era, stone-arch bridge across Otter Creek to connect the two sides of the town. The town had understood the necessity for another bridge since the 1950s, especially with the bridge deteriorating, but no funds were available. After years of planning, the town decided to build the bridge without state or federal financial assistance. The new Cross Street Bridge, which opened in October 2010, shows what can be accomplished with innovative local partnerships.

It created a true challenge to design and construct the \$16-million project, which features a 480-ft-long, three-span, precast, prestressed concrete bridge with a 240-ft-long center span, especially with no outside funding sources. But it was imperative that it be accomplished. The town's emergency services were located on one side of the creek, while the hospital and college were on the other side, creating potential for significant problems. Any closure of the stone arch bridge required a minimum additional 20-mile trip for emergency vehicles.

A bridge committee comprising town officials, staff, and citizens was formed to steer the project. Initial evaluations considered several alternatives: steel, cast-in-place concrete, precast concrete, cable-stayed, and other options. The cost estimate was significant: \$9 million for the bridge and another \$7 million for approaches including a roundabout intersection. But

MIDDLEBURY TOWN OFFICIALS JOIN WITH COLLEGE TO FUND AND BUILD \$16-MILLION, 480-FT-LONG BRIDGE

Vermont officials said that state and federal aid for the project was at least 15 years away!

To secure the needed funds, the bridge committee met with officials of Middlebury College, who agreed a new bridge was essential. The college pledged \$600,000 per year for 30 years to pay for the bridge construction, while the town adopted a Local Option Tax that included a 1% sales tax and a 1% tax on hotel rooms and restaurant meals to pay the rest. These funds will be used to amortize a 30-year, \$16-million bond.

## Design-Build Process Used

A design-build process, the first in the state, reduced overall design and construction costs. The team comprised town staff, local precast manufacturer J.P. Carrara & Sons, engineering firm VHB-Vanasse Hangen Brustlin Inc. in North Ferrisburgh, Vt., and general contractor Kubricky Construction Corp. in Glen Falls, N.Y.

The team confirmed the project's financial feasibility. The initial plan called for four equal spans with one pier in the middle of Otter Creek, but environmental regulators objected. Arguing the issue would add months or years to the schedule, so the three-span option was adopted.

The design-build format created such close communication among town officials, designers, contractors, and concrete fabricators, that it is estimated approximately 30 to 40% in cost was saved over more traditional methods.

Taking on this project was daunting. The work had to be completed in a small New England town's busy downtown district. The community strongly supported the project but dreaded the anticipated traffic delays and disruptions during the busy summer tourist season. However, many residents commented that it was the smoothest project they had ever seen. Business in fact increased for some stores, and few complaints were received.

Since the bridge opened in October 2010, it's been like uncorking a bottle. The new structure redistributed traffic, so there are virtually no traffic tie ups. The project's example of local cooperation and innovation can serve as an inspiration for other towns to consider projects they otherwise deem impossible.

Bill Finger is town manager and Dan Werner is director of operations for the Town of Middlebury, Vt.

**EDITOR'S NOTE** 

For more on this project, see the Winter 2011 issue of ASPIRE,  $^{TM}$  page 32.

