Bergmann Associates, Architects/Engineers/Planners, Rochester, NY, provided preliminary and final design services for the replacement of the 1937 jack-arch bridges over the Round Pond Creek and tributary to Round Pond Creek. The jack-arch bridge over Round Pond Creek was replaced with a 36’ span, 8.5’ rise, 3-sided precast concrete bridge with precast wingwall/footing units founded on spread footings on rock. This 46’-4” wide bridge is on a 30 degree skew and carries two lanes of traffic and a sidewalk on each side. The second jack-arch bridge was replaced with a 38” x 60” elliptical concrete pipe. Bergmann Associates provided preliminary through final design services for this project. Their work included survey and mapping, ROW mapping, environmental permitting, waterline design, wetlands evaluation, SHPO coordination, hydraulic analysis and development of the Design Approval Document. Waterline and gas lines were also replaced as part of this project. A key consideration in choosing the replacement system was not to raise the profile of the finished bridge higher than the old bridge, in view of strong neighborhood preferences.

(continued on page 2)
Kirk Road Bridge Replacement  (continued from page 1)

The exterior units were cast with a vertical ribbed finish, as were the four Precast Cantilever Wing Walls. After all pieces were in place, a waterproofing membrane was placed over the entire deck, and an asphalt wearing surface was placed. Our thanks to Mark Horschel, PE, Bergmann Associates for providing these facts and photos, and to Mike Kistner, Kistner Concrete Products Inc., supplier of the precast units, for also providing facts and photos. The Contractor was Crane-Hogan.

Congratulations to Associate Member – Spillman Company

For the last 65 years, Spillman Company has been a leader in the development of molds, plastic spacers, magnetic products and equipment for the manufactured concrete products industry. Now, as they celebrate their 65th anniversary, they continue to introduce new and beneficial products to the precast and prestressed concrete and concrete pipe industry.

Stone Strong Bridge

The Town of Barrington called Lakelands Concrete Products Inc., Lima, NY, looking for an 8'-0" clear x 16'-0" span x 24'-0" long box culvert with wingwalls. Lakelands Concrete presented a new option utilizing the Stone Strong Retaining Wall System as a “Stay-In-Place” form filled with concrete for the abutments, to be built on a cast in place footer, and then use precast deck slabs for the bridge. These materials alone were half the cost of the box culvert, and the fact that the entire bridge could be built using the town’s own forces was a great advantage.

(continued on page 3)
Stone Strong Bridge (continued from page 2)

Lakelands Concrete provided the stamped engineered design for the CIP footer, abutments and the precast deck. The Town of Barrington had the existing bridge demolished, footers poured, Stone Strong system set and poured, and the bridge deck placed in just over 3 weeks, averaging only 3 guys on the project. The Town of Barrington was so impressed with the ease of constructing the system that they have budgeted two more for 2014. Thanks to Chad Bond, Lakelands Concrete Products, for this article and the photos.

South Maple Street Bridge, Enfield, CT

The South Maple Street Bridge over the Scantic River replaces a 66 ft single-span structure with an 82 x 45 ft single span bridge that carries traffic and bicycle lanes and sidewalks. The town used accelerated bridge construction to minimize closure time for the street. The new bridge was assembled from 71 precast concrete sections, of which 46 required special detailing. The erection of precast components of the structure was completed in just 17 days.

(continued on page 4)
South Maple Street Bridge (continued from page 3)

Project credits include: Town of Enfield, CT, Owner; Hoyle, Tanner & Associates, Inc., Engineer; Arborio Corporation, Contractor; and William E. Dailey

Precast, LLC, Concrete Supplier and Precaster. This article taken from the December 2012 issue of Concrete International.

Guidelines for Accelerated Bridge Construction Using Precast/Prestressed Concrete Components

This very extensive, detailed, and illustrated document (PCINDER-06-ABC) can be downloaded from the Precast/Prestressed Concrete Institute Northeast’s website, at http://www.pcine.org

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