Focus of This Issue: Box Culverts and Three-Sided Bridges – Fast Erection, Simple Construction

Three-Sided Span Unit in Town Of Clarkson

Lakelands Concrete Products provided Keeler Construction with the precast span units, invert slabs, toewalls, and wingwalls for the state project D261895 in Monroe County for Route 18 over Moorman Creek. There were 7 span units with 36'-0” span by 10'-4” rise on a 30 degree skew and 5 invert slabs sections at 41'-7” Length. Following the PCCM Manual by NYSDOT the span units and inverts needed to be 7500 PSI which Lakelands was able to achieve before the required 28 days. Keeler was able to erect the invert slabs and span units in one day. Then a couple days later they were able to erect the 8 wingwalls sections in one day, some almost 19'-0” tall. Thanks to Nick Mann, Lakelands Concrete, for this information.

Setting precast invert slabs

Setting 3-sided bridge units

Setting precast wingwall sections

Finished structure in operation
Three-Sided Span Unit on Hill Road Over Brockport Creek

The Town of Parma needed a new precast concrete span unit over Brockport Creek on Hill Road. Lakelands Concrete Products worked with Barton & Loguidice, PC, and Windsun Construction and provided them with 6 precast span units, each with a 38'-0" span by 8'-6" rise with a 10 degree skew. Each unit weighed over 31 tons because Lakelands wanted to limit the erection time for Windsun and have the units installed in one day; especially since Windsun cast-in-place the wingwalls before the arrival of the span units. The design followed PCCM regulations and Windsun was very pleased with the units. Our thanks to Todd Clarke at Lakelands for this information.

Study seeks to extend life of concrete structures using bacteria

A study led by the University of Ghent in Belgium and sponsored by the European Union is developing new technology that combines "limestone-producing bacteria" with concrete. The intent is to combat the effects of water and chemicals on concrete and thus extend the life of structures. "As the water seeps into the concrete, the bacteria will activate and start producing limestone, which will mend the cracks before they become a threat to the structure," said Carola Edvardsen, a concrete expert for engineering consulting firm Cowi. TheConstructionIndex.co.uk (U.K.) (1/21)

Correction:

Two of last month’s projects were attributed to David Wan, but failed to attribute them as from Oldcastle Building systems.
Flooding Wiped Out a 50’ Stretch of Struble Road in the Town of Union

Town of Union Supervisor John Bernardo said the situation on Struble Road — where raging currents washed away both the roadway and a chunk of land above a concrete drainage pipe — is “far more complicated than it appears.” Town officials worked with engineers to put together a design that would assure the town won’t have to revisit the problem and so that reconstruction can proceed rapidly. Kevin Balachick, Binghamton Precast & Supply, writes they expedited manufacture and installation of the precast three-sided bridge structures to enable the town and local residents to enjoy a speedy recovery.

Pedestrian Crossing over Route 9 serving Marist College, Poughkeepsie, NY

Several years ago, a Route 9 Land Use and Transportation Study was released, which was described by Dutchess County Executive and Chairman of the Poughkeepsie-Dutchess County Transportation Council as “a truly great example of what can be achieved when we bring together public and private stakeholders to develop mutually beneficial solutions for our community.” The study area focuses on a segment of Route 9 which is home to over 6,000 people and covers approximately 1,200 acres. On a typical day, this 1.5 mile segment of Route 9 sees well over 30,000 vehicles and approximately 4,000 pedestrian crossings. This area is home to several significant public and private uses including Marist College, St. Francis Hospital, Quiet Cove Riverfront Park, Mid-Hudson Plaza, the Violet Avenue Elementary School, and the former Hudson River Psychiatric Center. One of the key focus areas of the study was pedestrian safety, particularly with regard to Marist students crossing Route 9. As a result of the Study, an agreement was reached by NYSDOT and...
Pedestrian Crossing (continued from page 3)

Marist College to jointly design and construct a pedestrian overpass that would link the College's east and west campuses.

In 2011 NYSDOT installed a prefabricated arch bridge with a 28’ long span at the crossing location to carry Route 9. J.P. Carrara & Sons fabricated 38 architectural precast panels which were installed adjacent to the pedestrian crossing corridor. The precast was clad with granite and with a pattern of terra cotta tiles which are the same type used in Grand Central Station in New York. In the interest of schedule, all work was installed on a weekend to ensure project completion before the fall semester. The project demonstrates the versatility and aesthetics of using precast, plus the schedule advantage it affords. The new pedestrian crossing provides an important and very safe physical link between the east campus and the main campus at Marist College. Credits: Owner- Architect- Robert A.M. Stern Architects; Engineering- Thornton Tomasetti; Precast Panels- J.P. Carrara & Sons, Middlebury, VT. Thanks to Mike Weigand at J.P. Carrara for submitting this story.

NPCCA Quality Award of Excellence

The Quality Award of Excellence is presented to the top three scoring plants in the NPCA Plant Certification Program, based on inspections held in 2012. With more than 360 plants in the program, this represents the top 1% of all certified plants. Because of ties in scoring, five awards were presented. Congratulations to co-winner The Fort Miller Company, Greenwich, N.Y. In addition, Quality Awards of Merit were given to the top 25 plants in the program, which included PCANY Members Binghampton Precast and Supply, The Fort Miller Co., and Oldcastle Precast Inc., Middle Island, NY.