

PROJECT NAME: ROUTE 13 OVER MILE CREEK



Photo: Route 13 Bridge over Mile Creek

Location: Route 13 over 6 Mile Creek, Ithaca, NY
Client: New York State Department of Transportation
Product: ceEntek ce200SF-G™

Product Volume: 4 m³ (5 cy)
Panel Dimension: 25' x 1' x 7"
Completion Date: July 2021

PROJECT SITE



Photo: Precast Approach Slab Placement

This bridge project is located a mile away from Ithaca city center in Upstate New York. It is a major thoroughfare that connects the shopping district to the downtown area. Traffic remained open as work on the bridge was being done, splitting the project into two phases.

The bridge spans over 6 Mile Creek, which is a popular waterway that connects to Cayuga Lake. Kayakers were permitted to cross below the bridge as construction progressed.

PROJECT PROFILE

PROJECT DESCRIPTION

This was ceEntek's first project utilizing CAT MB250 mixers. Trial batches were completed in early June to ensure the viability of the mixers. The ceEntek team was able to provide an SOP and mix design for these mixers. These mixers, provided by the contractor, eliminated the need for power buggies or wheelbarrows due to their mobile design and hatch to allow easy casting.

The UHPC used in this project connected five precast approach slabs on each side of the bridge: a total of eight connections. Casting of UHPC was completed over two weekends, and crews worked overnight to expedite the bridge construction.

Deterioration of the bridge deck led to necessary repairs. UHPC was used to quickly provide strength for heavy traffic and prevent the necessity of future repairs.



Photo: CAT MB250 Mixer (L), Prepped Connection Between Precast Elements (R)

PROJECT EXECUTION

The ce200SF-G™ was batched on site with two CAT MB250 mixers (0.182 cy [0.14 m³] capacity) and supplied on pallets in 20 kg (44 lb) bags, with 0.008" x 0.5" (0.2 mm x 13 mm) steel fibers and ceEntek's CNF enhanced paste and accelerator. The CAT MB250 mixers allowed for quick placement of the ce200SF-G™.



Photo: Cast Approach Slab Connection (Open to Traffic)