

PROJECT NAME: CHARTIER'S RUN



Photo: Chartiers Run Bridge Site

Location: 119 West Pike St. Houston, PA, USA 15342
Client: Pennsylvania Department of Transportation
Product: ceEntek ce200SF-G™

Product Volume: 3.5 m³ (4.55 cy)
Panel Dimension: 8" x 8" x 20'
Completion Date: August 2021

PROJECT SITE



Photo: ceEntek's Model 30 Mixer Pair set up on Chartiers Run

This bridge is located over a creek in a small town in South-western Pennsylvania, and it connects a large residential area to the town center. As the area is heavily trafficked by the community, a foot bridge was erected alongside the site to ensure a safe passage for pedestrians.

The detour to avoid the bridge is long, so an Accelerated Bridge Construction (ABC) was very beneficial to the surrounding community.

PROJECT PROFILE

PROJECT DESCRIPTION

The West Pike Street bridge over Chartier's creek required major repairs to all portions of the bridge. Almost every part of the bridge was getting an upgrade. This meant that any delays on site would be costly, and the contractor required high early UHPC strength to complete the project on schedule.

The ceEntek team planned on a quick one-day pour that would allow construction to persist immediately after the casting of the UHPC. Casting consisted of seven (7) batches of ce200SF-G in a pair of ceEntek's Model 30 mixers. This was enough to fill the three longitudinal closure pours between four (4) precast deck panels.

This style of bridge construction is highly effective. It proves that combining UHPC with precast deck panels can help accelerate the bridge building process. ceEntek's Next Generation UHPC 2.0™ can be used effectively on both small and large bridge projects.



Photo: Preparation of longitudinal connections on bridge deck

PROJECT EXECUTION

The ceEntek team was able to make seven (7) batches of ce200SF-G in two (2) Model 30 mixers. The mixers have a capacity of 0.5 m³ (0.65 cy).

This was the contractor's first time working with UHPC. They were able to mix and place the UHPC at a steady pace, and the formwork could be stripped the next morning to continue the Accelerated Bridge Construction.



Photo: Completed connections on Chartiers Run bridge