

Maxcrete Mixes Foam Concrete in Tight Confines of New York Tunnel

Dragados/Judlau JV

East Side Access

Job Report

PROJECT OVERVIEW: The East Side Access Project required a unique solution to redirecting the hard rock TBM at a critical intersection linking the Long Island Railroad Commuter Train Line tunnel to the tunnel leading to Grand Central Station. The Joint Venture of Dragados/Judlau turned to Maxon for a solution to mix and place foamed concrete on-site / below ground to temporarily fill the end of a previously bored tunnel so that the TBM could be relaunched in a new heading.



Redi-mix concrete was delivered to the corner of 52nd Street and Park Avenue, the most expensive real-estate in the world, by Ferrara Bros. Building Materials Corp. in 10 yard transit mixers. The concrete was then chuted below ground approximately 140 feet to the Maxcrete positioned on the subway rail siding. With the Maxon Maxcrete surge hopper continuously mixing and feeding the concrete pump below ground, the redi-mix trucks could discharge their entire load without delay.



At the same time the concrete was chuted into the Maxcrete, the white foaming agent supplied by Cellular Concrete LLC, was simultaneously injected. (Photo above left, depicts the foaming agent as it was placed into the Maxon Maxcrete with the concrete. Photo above right depicts the homogenous mixture moments later.) The foaming agent increased the volume of the concrete by 30%, which reduced the number of transit mixers loads needed, and provided a low density concrete that after being placed could be easily broken out later on.



The electrically powered Maxon Maxcrete was supplied with an operator's platform with controls for both the Maxcrete and the pump. From this position a single operator could view both the inside of the Maxcrete and the pump hopper while operating the controls, which reduced the number of operators required on the job.

The Maxcrete was positioned to feed directly into the Putzmeister 14000 trailer pump hopper. The hydraulic gate of the Maxcrete allowed the operator to match the discharge speed of the foam concrete to the pump rate. The multi-speed, reversible agitator within the Maxcrete allowed the operator to continue to mix the foam concrete even while discharging.



The foam concrete was then pumped 1000 feet to an end section of the previously TBM bored tunnel. Two bulkheads were installed and this end section was filled with the foam concrete. Once the section was backfilled, the JV relaunched the TBM on its new heading. The cured foam concrete allowed the TBM to grip the sides of the cured foam concrete section while allowing the TBM to proceed on its new heading. Once the TBM was clear of the intersecting tunnels, the remaining low density foam concrete was easily cleaned up with a road header.

Upon completing the foam concrete production, the JV continued to utilize the versatile Maxcrete surge hopper in numerous applications including feeding shotcrete and trailer pumps (placing in situ concrete tunnel lining).

To learn more about the Maxon Maxcrete and our full line of concrete transportation and placing equipment visit our website at www.maxon.com.

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