

Rails Steakhouse Wine Cave

By Frank Townsend

Jim Stathis is a thinker and doer in everything he touches. Stathis started working with his hands at a very young age as a craftsman, which enabled him to develop his eye for creativity and make his ideas reality. Rails Steakhouse, located in Towaco, NJ, on a NJ Transit rail stop, was designed and built by Stathis. He later had an idea to build an underground wine cave next to his “speakeasy.” Stathis brought in Tom Pirkle from Eastco Shotcrete to advise and help construct the job. Pirkle looked at this as a great opportunity for collaborative job between his company Eastco and Superior Gunite. Together, both companies would collaborate and provide a superior product for both Stathis and Rails Steakhouse.

The goal was to create a realistic wine cave. Stathis started with some color renditions and striations from pictures that caught his eye. This started as a large rectangular area 75 x 35 ft (23 x 11 m). His thought was to have a secret door that led into a small tunnel (Fig. 1) which then opened into a grand dining space with an adjacent bench seating area. The space was shaped by Stathis, as well as all the reinforcement which included bending, cutting, and welding. With the help of a few Eastco laborers, they installed all the form savers and paper backing. The thickness ran approximately 6 in. (150 mm) thick throughout the space with mostly overhead shooting. The next step was to place the protection for adjacent areas and cover over all the boxouts for future utilities.

What made this project challenging was shooting and finishing this 5000 ft² (460 m²) area of overhead cavernous space without impacting the restaurant. This meant the ideal

day to shoot would be on a Monday when the restaurant was closed. Stathis assembled a crew of Superior Gunite, Eastco, local help, and some local college kids. To maintain good airflow in the space, we first had to set up the HEPA filters. Laying out the movement of the nozzle, the line of the hose, and the rebound plan was key to making this happen in 1 day. As we shot, we carved out candle nooks and protected lights and other utility blockouts. Stathis added his artistic flare by carving some family history into the walls as well as making his own stamps of fossils and stamping them in. We started at 6:00 a.m. and finished carving by 7:00 p.m.

For the concrete, we used a 5000 psi (35 MPa) colored concrete mixture from Eastern Materials, a US Concrete Company. We used short loaded trucks for optimal freshness of concrete during placement and used a BASF rapid-set accelerator in key locations.

Curing was accomplished with a wet cure. The exposed shotcrete surfaces were misted and dampened three to four times a day for a week. The following Monday, certain sections of the cave were stained and highlighted (Fig. 2 and 3).

SIGNIFICANCE OF SHOTCRETE WORK TO PROJECT

Everyone involved took this project personally and the quality showed. The teamwork, from ownership to both shotcrete companies, could not have been better. Today, this is Rails Steakhouse’s private room where Stathis and his staff cater private parties.

Working in this small, rectangular basement would have been extremely expensive and time-consuming. Without



Fig. 1: Entrance way into cave behind hidden door



Fig. 2: In-process bench lounge room, being stained



Fig. 3: Dining room cleaned up after staining

shotcrete, this project would not have worked. Form-and-pour would not be possible to implement in this project from the space and time requirements, never mind the formwork and bracing that would have been required. The ability to free-form the concrete and carve it allowed Stathis to put his personal touch on the walls as we allowed the finishers to create and make the space look more realistic (Fig. 4 and 5).

The shotcrete application at this site was minimally invasive because it was completed in 1 day when the restaurant was closed. It was successful due to close coordination and communication, with teamwork being the key ingredient. If this was formed, just getting forms in would have taken days to setup for concrete. The shotcrete advantage offered the ease of a 2 in. (50 mm) line through the hallways. Concrete delivery and pumping to the shotcrete nozzle was done directly from the restaurant parking lot down a few stairways



Fig. 4: Dining room set for a party



Fig. 5: Dining room into lounge

and a long hallway. Space was at a premium as there were several finishers working, the nozzleman and tender, as well as rebound cleanup crew.

Owner Jim Stathis remarked, "I am ecstatic about the finished product, this space would not be the same if it was not for the expertise of Frank Townsend and Tommy Pirkle. I am indebted to you both! I would also like to thank Rob and Dean who worked by my side every day they were available—they are very creative, talented young men with bright futures...Cheers!"

2017 HONORABLE MENTION

Project Name
Rails Steakhouse Wine Cave

Project Location
Towaco, NJ

Shotcrete Contractor
Superior Gunite* and Eastco Shotcrete, LLC*

General Contractor
Rails Steakhouse

Architect/Engineer
Jim Stathis

Material Supplier/Manufacturer
Eastern Materials

Equipment Manufacturer
Western Shotcrete Equipment*

Project Owner
Jim Stathis

*Corporate Member of the American Shotcrete Association



Frank Townsend is the East Coast Region Manager for Superior Gunite. He received his degree in civil engineering from Worcester Polytechnic Institute, Worcester, MA, and his master's degree from the University of Missouri, Columbia, MO. Townsend comes from the U.S. Army Corps of Engineers and his diverse military background has led to him being deployed around the world. Townsend is an active member of ACI Committee 506, Shotcreting, and a former Board member of ASA. He has been Awarded the U.S. Army Corps of Engineers deFluery Medal and the Engineer News-Record New York's "Top 20 under 40" award for design and construction leaders in 2016.