

ON THE WORLD OF PREPAKT



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FABRIFORM® PAVES THE WAY FOR FLOOD CONTROL PROJECT

While the rain in Spain falls mainly in the plain, there's no catchy rhyme to describe the rain in East Cleveland, most of which ends up in Euclid Creek. Urbanization was the downfall of what was once a meandering country stream. As surrounding high-ground suburbs flourished on Cleveland, Ohio's northeast side, Euclid Creek's drainage capacity worsened and finally became overwhelmed by runoff whenever heavy rains occurred. The result was a continuing pattern of periodic flooding in many built-up areas along the creek.

Local governmental agencies pondered the flooding problem for years, unable to come up with a workable, affordable solution. Finally, in 1984,

Downstream view of the Fabriform-lined section of Euclid Creek in the final stages of completion.

federal aid made it possible to get under way with a comprehensive flood control program, the project to be directed by the U. S. Corps of Engineers.

In general terms, the Euclid Creek Flood Control project would consist of building levees, placing some 19,000 tons of heavy riprap as needed, straightening and dredging a 1.3 mile section of the stream and installing a bank-to-bank concrete liner in an especially troublesome stretch of the realigned portion. Being familiar with the flexibility and cost effectiveness of fabric-formed concrete revetments, the Corps approved Fabriform® for the lined section of the creek and Intrusion-Prepakt was awarded the contract for installing it.

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FABRIFORM® PAVES THE WAY, continued

The general contractor was responsible for earth moving and grading on the quarter-mile-long section to be paved with Fabriform. Following closely behind final grading operations, Prepakt crews positioned large preassembled panels of 8" Unimat™ style Fabriform, a double-walled fabric woven of heavy polypropylene fiber. In prescribed order, the Fabriform panels were injected with high-strength, fine aggregate concrete which hardens to produce a tough, continuous slab approximately 8 inches thick, sandwiched between top and bottom fabric forms.

As installation progressed, additional panels of Fabriform were field-sewn to already positioned panels so that when pumped with concrete, the protective revetment would be continuous and of consistent thickness. When in place and injected with concrete, Unimat™ style Fabriform exhibits a closely-spaced cobbled appearance on its surface. This is the result of a pattern of internal spacer cords which tie together the top and bottom layers of forming fabric and so control the thickness of the completed revetment. For the Euclid Creek project, relief from hydrostatic uplift was required. This was accomplished when form panels were assembled at the factory by the insertion of 7/8" diameter plastic tubes through the fabric on approximate 8-foot centers.

The flat creek bed in the Fabriform-paved section was about 30 feet wide. On each side, the 2-1/2:1 embankment slopes averaged about 47 feet, top-to-bottom. The completed Fabriform lining extended along 1350 lineal feet of the realigned stream. A total of 172,819 sq. ft. of Fabriform was required for the project along with about 4500 cu. yds. of fine-grain, transit mix, injection concrete.

The Euclid Creek Flood Control project was under the direction of the Buffalo District Corps of Engineers. Independence Excavating Co. of Independence, Ohio, was the general contractor. Fabriform installation was performed by personnel from Intrusion-Prepakt's Cleveland District Office.

"Fabriform" is a registered trademark of Intrusion-Prepakt, Inc., Cleveland, Ohio.

"Unimat" is a trademark of Intrusion-Prepakt, Inc., Cleveland, Ohio



During the period of Fabriform placement, heavy rains often posed problems. Here, a temporary diversion ditch was overtaxed to the point of nearly undermining a newly-installed section of Fabriform.

Final Fabriform work underway at the upstream end of the project.



Realigned, Fabriform®-paved Euclid Creek, looking upstream. Truck on right bank is delivering fill for finish grading berms.