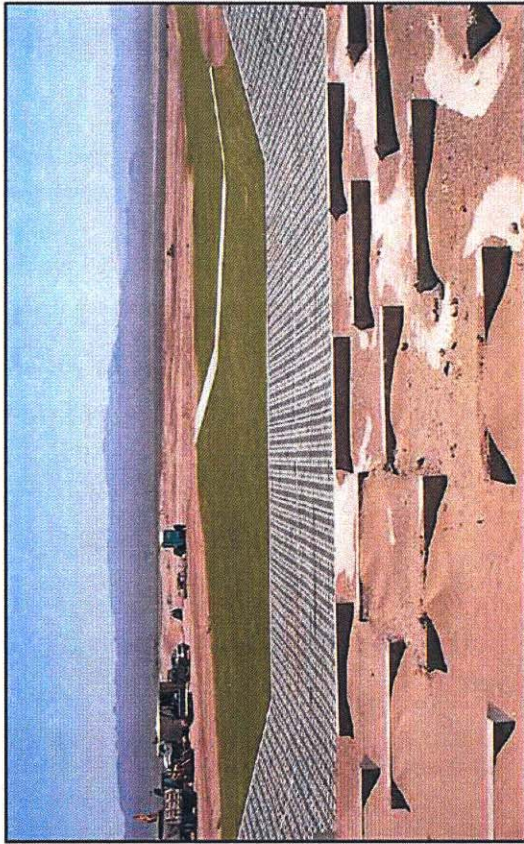
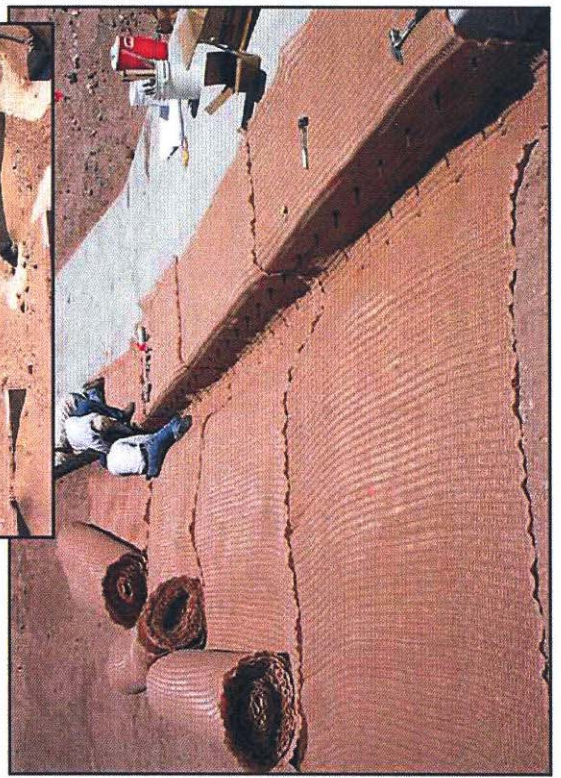


Turf Reinforced Composite Channel Design Saves Boulder City's Environment and Budget



Tight budget constraints, high velocity flows exceeding 14 feet per second, and the aesthetic demands of Las Vegas Valley golf enthusiasts were just a few of the challenges faced when designing the Boulder City Golf Course. To solve their problems, Boulder City Public Works and VTN Nevada looked to SI Geosolutions. The result was an innovative composite design that best utilized the performance characteristics and economic advantages of three proven erosion control technologies: an articulating concrete block revetment system, Pyramat® high performance turf reinforcement mat (HPTRM), and Landlok® turf reinforcement mat (TRM) 450.

Designed for the most demanding slope and storm water channel applications, Pyramat HPTRM from SI® Geosolutions has a patented three-dimensional woven geotextile construction that provides long-term strength, dimensional stability, durability, and functional longevity not available in other permanent or degradable erosion control solutions. Pyramat is also safer and more aesthetically pleasing than alternatives such as riprap. Landlok TRM 450 enhances the natural ability of plants to protect soil from erosion and improve water quality. It provides a permanent erosion control solution on slopes and in channels where desired performance exceeds the limits of natural vegetation.



The block system was installed at the channel inlet and outlet to aid in energy dissipation and protect the channel in its most challenging flow environments. Pyramat HPTRM was then used in the main channel section to reinforce golf course vegetation that will be exposed to heavy flow events. Finally, Landlok TRM 450 was installed in the freeboard area to further reduce construction costs and provide channel protection in areas exposed to lighter flows.

PROJECT FILE

Project	Boulder City Golf Course
Location	Boulder City, Nevada
Product	Landlok TRM 450 and Pyramat
Application	Flood Control Channel
Owner	Boulder City Public Works
Engineer	VTN Nevada
Contractor	GB&E Contractors
Date	May 2002



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The innovative channel lining system created for the Boulder City Golf Course is a hydraulically sound, aesthetically pleasing site solution that saved Boulder City's budget and protected its environment.