



Case Study

application | Segmental Walls and Pavers
location | Minneapolis, MN (SW Metro)
product | Miragrid® 5XT & Mirafi® 500X Keystone Standards

job owner | Private Development
engineer | Civil Solutions Group
contractor | Structures Hardscapes

TenCate develops and produces materials that function to increase performance, reduce costs and deliver measurable results by working with our customers to provide advanced solutions.

THE CHALLENGE

The backyard of an upscale private home had been built on an unusable slope, the lead to a fairway on a private golf course. Our challenge was to develop an outdoor living space and create a useable hardscape area for outdoor entertaining with the limited space available, while still maintaining a green buffer area from the fairway.

THE DESIGN

After the house was constructed, the local owner realized the backyard needed a design change. The owner wanted a structure to separate the yard from the fairway and a hardscape surface for entertaining. Keystone Block and Miragrid® Geogrids were designed and approved by the owner and the course association to separate the grade change from the 2 properties. After the retaining walls were constructed and a grade was established, Mirafi® 500X was used to separate the clay sub-base from the 3/4" minus limestone.

THE CONSTRUCTION

The base excavation for the modular block wall took place at the property line. The on-site material was a heavy clay so the contractor installed 500X over the clay sub-base and installed a 3/4" limestone material for the base footing. Keystone straight face standards were



Connecting block and geogrid together.



Installing geogrid for soil reinforcement.

installed and 3 courses were used as a footing. Mirafi® 5XT was used to reinforce the poor soils and also to create a staple foundation for the hardscape surface. 100% crushed limestone and 500X was used for all base work and a fine wash granular sand was used to set the hardscape surface.

THE PERFORMANCE

The owners of this private home are very pleased with the end result. The knowledge of the engineer and the contractor enabled them to create a very useable backyard for entertaining. By designing the landscaping structures using geosynthetics and concrete products, the owners were given a new and useable backyard where the property was an unusable steep slope previously. The project was constructed in 2001 and as of 2006, the end product is still performing like new.

References:

- Contractor Structures Hardscapes
- Engineer Civil Solutions Group
- Owner's private home



Above: Paver patio supported by reinforced block wall.
Below: Amphitheater with fire pit completed.



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