

Case Study

application | SRW Wall Reinforcement
location | Roanoke, VA
product | Miragrid® 3XT, 5XT & 8XT

job owner | Falson Enterprises
engineer | Circeo Geotech
contractor | Sampson Construction

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 owner of a shopping center in Roanoke, VA needed to have the required parking for the new Home Depot®, Chick-fil-A® and other future occupants while maintaining an existing road servicing the area above the site. There were also significant grade issues that required special construction practices to minimize over excavation in the cut sections behind the wall.

THE DESIGN

To minimize excavation, the team decided to use a soil nail design in the most significant cut areas. This design consisted of soil nails drilled into the slope and the required geogrid attached to a header beam. In the balance of the site where they had fills or minimal excavation in cuts, standard SRW geogrid design was used. The wall behind Home Depot® is a Century Wall by Keystone with multi-colors in it and the wall at Chick-fil-A® is the Compac 2 style.

THE CONSTRUCTION

Holes were drilled into the existing grade using a drill attachment on a small track-hoe. Mechanical soil nails were inserted into the holes. A header-pipe was then connected to the series of nails and the proper strength Miragrid® geogrid was wrapped around the pipe and attached to the wall face as normal. Once the soil nail section of the wall was built, the balance of the SRW walls on both sides of the roadway in the fill area were brought up simultaneously.



ABOVE: Anchor drilling into the side of the cut slope.

BELOW: Galvanized header-pipe being attached to the anchors.



THE PERFORMANCE

The design allowed the developer to maximize the usable foot print on the site while maintaining traffic to the existing locations. The developer was also able to vary the style of the block used, providing different textures throughout the project.



Finished wall at Chik-fil-A® location in shopping center.



Finished wall at Home Depot® location in shopping center

BELOW: Overall finished site.



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