



## Case Study

**application** | Base Reinforcement  
**location** | I-76 and 96th Avenue, CO  
**product** | Mirafi® RS580i

**job owner** | Colorado Dept Of Transportation (CDOT)  
**engineer** | Don Lopez  
**contractor** | Castle Rock Construction Co. (CRCC)

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

Castle Rock Construction Co. (CRCC) is the contractor for this \$4 million safety improvement project at the interchange of I-76 and 96th Avenue. This project realigns northbound and southbound 96th Avenue onto the new roundabouts at I-76th. The contractor was allowed to shut down the project from January 1, 2010 until the middle of April 2010, when the temperatures were more acceptable for paving. During the winter shut down, a large snow drift amassed at the location of the new realigned eastern frontage road. As CRCC started to grade this area, the sub grade soils were pumping due to the high moisture content from the melted snow pack.

### THE DESIGN

Castle Rock Construction Co. recommended to the owner, CDOT, that the area should be over excavated and a geotextile and road base should be used to reinforce the soft subgrade areas

### THE CONSTRUCTION

The owner agreed on the recommendations from CRCC. CRCC over excavated and removed the wet soils, installed Mirafi® RS580i woven geotextiles, and placed the road base to the subgrade elevation for paving.

### THE PERFORMANCE

The stability of the subgrade area in concern met CDOT's specification after Mirafi® RS580i woven geotextiles and road base were placed. The contractor was able to pave the roadway on schedule.



Installation of Mirafi® RS580i.



Placement of base material on Mirafi® RS580i.



Base material being end-dumped on to Mirafi® RS580i.



Completed installation looking West.



Placement of Mirafi® RS580i looking East .



Completed installation of finished pavement on Mirafi® RS580i.



Completed installation of finished pavement on Mirafi® RS580i.

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