

JEFFERSON CITY, WISCONSIN

Roadway reconstruction on STH-106 with MIRAFI



Product:	MIRAFI [®] H ₂ R <i>i</i>
Location:	Wisconsin
Sub-industry:	Roads and highways
Industry:	Transportation

Overview

The Wisconsin Highway 106 (STH-106) underwent reconstruction over a marsh area but soon faced problems with uneven settling. The Jefferson County Highway Department sought a quick reconstruction method that would limit the need to remove large volumes of wet, organic soil while ensuring a stable base for the flexible pavement road. The solution needed to be sturdy enough to prevent uneven settling along the road, maintaining a smooth and rideable surface.

Challenge

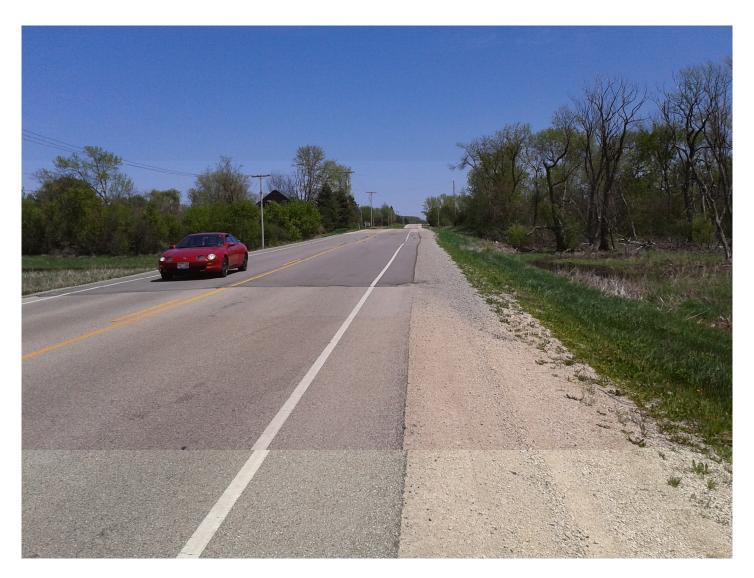
The main challenge was dealing with wet, saturated silt and peat deposits, extending over 30 ft (9.14 m) beneath the existing pavement. The solution involved a robust construction approach using a single layer of **MIRAFI** H_2Ri geosynthetic material placed directly on the subgrade. This was followed by a 15 in (38 cm) layer of crushed stone, a layer of **MIRAFI** BXG110 biaxial geogrid, and another 15 in (38 cm)

The main challenge was dealing with wet, saturated silt and peat deposits, extending over 30 ft (9.14 m) beneath the existing pavement. layer of crushed stone. The **MIRAFI** H_2Ri reinforcement and moisture management created a "raft"-like platform for the road, improving drainage, particularly during spring thaws and heavy rains.

Solution

The Jefferson County Highway Department was satisfied with the installation process. The multi-layer geosynthetic reinforcement provided a strong, stable base, allowing for smooth paving operations. This robust system reduced the need for subgrade removal to just 30 in (76 cm), significantly less than the 5-8 ft (1.52–2.44 m or more) that might have been necessary given the soil conditions. The **MIRAFI** H_2Ri not only saved costs but also allowed for quicker installation.





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