

EAGLE MOUNTAIN, UTAH

Stabilization and construction of a new arterial roadway in Eagle Mountain, Utah



Industry: Transportation
Sub-industry: Roads and highways
Location: Eagle Mountain, Utah
Product: MIRAFL® RS580i

The project engineer needed to stabilize the fine-grained subgrade soils, which exhibited collapse potential as per laboratory tests, and minimize the base aggregate

Overview

The City of Eagle Mountain, Utah experienced significant population growth from 2010 to 2021 leading the City to develop a comprehensive transportation plan to combat potential congestion. Part of this plan included a new roadway running adjacent to a new middle and high school. This roadway would be used to carry heavy loads during the construction of the new schools and serve as an arterial roadway for the Eagle Mountain community.

The contractor pointed out that the installation of the single layer of material was much easier and quicker than a double layer system that had been used previously in similar applications and under similar conditions.

CASE STUDY

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requirement for the roadway. The goal was to optimize the base layer for a heavily trafficked roadway leading to Eagle Mountain City and the upcoming middle and high schools along this route.

Challenge

Using Solmax's design software, the project engineer designed the roadway cross-section with **MIRAFI RS580i**. This allowed for the elimination of 5 in (12.7 cm) of granular borrow, offering a cost-effective solution.

For this new roadway, the contractor initially cleared the area to subgrade level. The top 12 in (30.5 cm) of fine-grained subgrade soils were reworked by scarifying and recompacting

them to a minimum dry density of 95 percent according to ASTM D 1557 (modified proctor) standards, with moisture near optimum. Following this, **MIRAFI RS580i** was installed, and the new pavement section was built. The installation process was smooth and exceeded expectations.

Solution

The roadway outperformed expectations. Both the contractor and the City were satisfied with the installation and the performance of the materials used. The engineer was equally pleased with the installation process and the material's performance so far, as well as the simplicity of the design process.



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