

Construction of Active Rockfall Protection System in San Miguel, Leyte

San Miguel, Leyte



Completed Project



TYPE OF PROJECT

Surface Strengthening And Support



YEAR OF CONSTRUCTION

2023



CLIENT

EZJones Construction, Inc.



PROD. RELATED

MacArmour & SteelGrid (23 Rolls Steelgrid HR30 GL 8127 2.9x30) MacMat (36 Rolls Macmat Em 14.3 2x30)



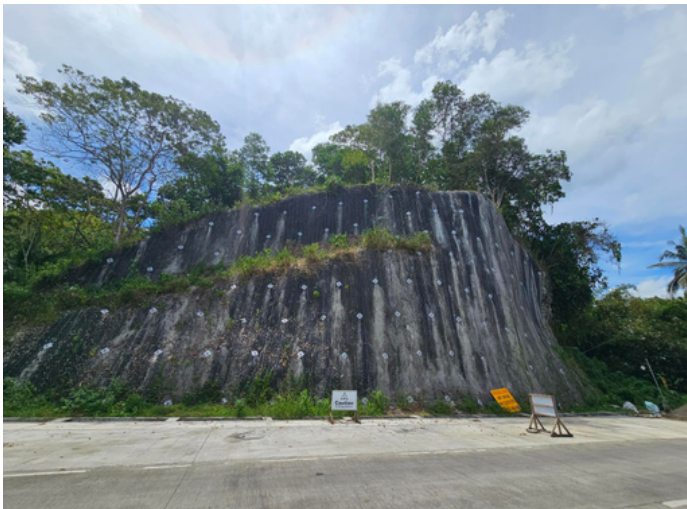
CONTRACTOR



DESIGNER

Challenge

The Municipality of San Miguel, located in the northern part of Leyte Island and bordered by the San Juanico Strait, is marked by its mountainous terrain. While this geography offers natural beauty, it has also created persistent challenges for infrastructure and road safety. Many of the municipality's roads were constructed along steep slopes and cut sections of mountains, leaving them exposed to instability. These conditions have resulted in frequent landslides, rockfalls, and slope collapses, especially during heavy rains and typhoons. Such events place motorists and nearby communities at constant risk, cause road closures, and disrupt the movement of goods and services. The recurring instability has also led to repeated maintenance and repair costs, diverting government resources that could otherwise be allocated to new development. Without an effective intervention, the problem will persist and worsen with the increasing frequency of extreme weather events. Ensuring slope stability and road safety became an urgent priority to protect lives, property, and economic activity in San Miguel.



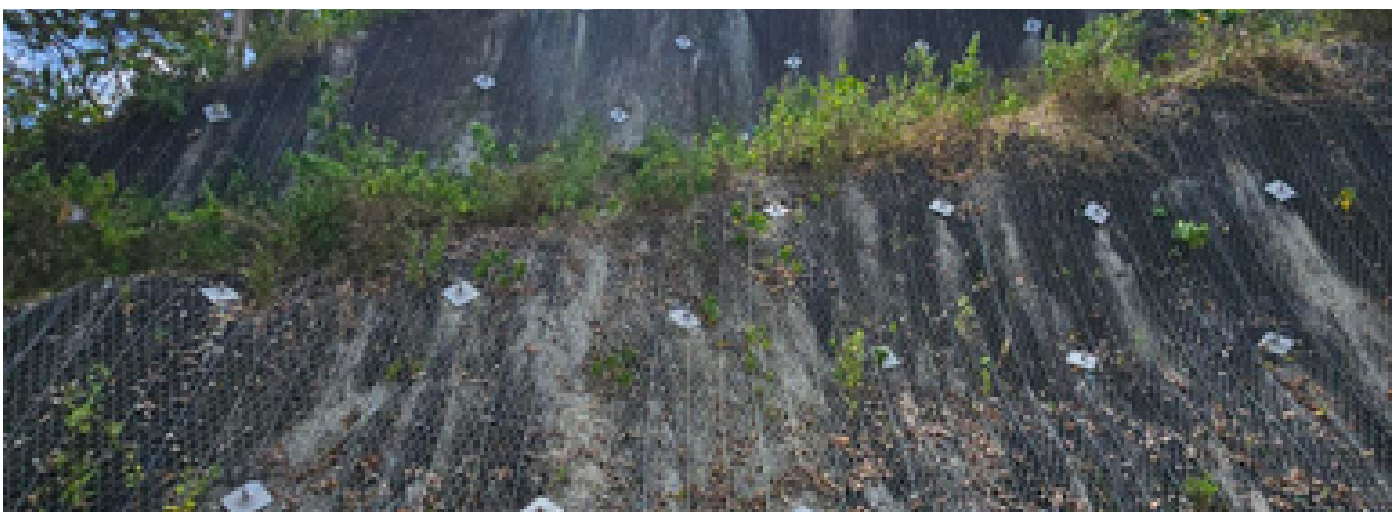
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Solution

To address these hazards, the **Department of Public Works and Highways (DPWH) Regional Office VIII** implemented an **Active Rockfall Protection System** designed to reinforce unstable slopes and safeguard road users. The system utilized **Steelgrid HR30**, a high-tensile steel wire mesh anchored securely to slope surfaces. This mesh prevents loose rocks and debris from detaching and falling onto the roadway, effectively stabilizing the slope. Complementing this was the installation of **MacMat**, an erosion control mat composed of synthetic filaments that form a porous and deformable layer. MacMat protects against surface erosion while supporting vegetation growth, providing additional long-term slope stability. Together, Steelgrid HR30 and MacMat created a comprehensive solution that minimized the risks of rockfall and soil displacement while promoting environmental rehabilitation. The adoption of this technology not only reduced the immediate dangers of slope failure but also lessened the frequency of costly maintenance and debris-clearing operations. By integrating modern geosynthetic materials, the project strengthened road safety, preserved infrastructure, and enhanced the resilience of San Miguel's transportation network for years to come.



Completed Project



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