HWY 630 MOKAPU SADDLE ROAD
Kaneohe, Hawaii

Application: Simple and Pinned Drapery
Product: ROCKMESH® 30100

The addition of a tunnel in Honolulu disturbed a steep, weathered, road cut. To ensure the safety of the public, the Maccaferri RockMesh® 30100 was used as a rockfall drapery system, PVC coated to provide greater service in wet, humid, vegetative environments like Hawaii.

Problem
The purpose of this project was to mitigate rockfall hazards impacting Mokapu Saddle Road in order to complete an upcoming roadway addition and increase public safety. To provide assurances and protection to the public highway, a pinned drapery system was specified.

Solution
The project began with clearing, rock scaling, and the removal of numerous dangerous boulders that created a hazard on the roadway below. The rockfall mitigation system designed for the project also included 7,000 sq. ft. of pinned drapery and 38,000 sq.ft. of simple drapery to provide stability to the hillside and protect the road below from hazardous rockfall.

Maccaferri worked closely with the designer and contractor to establish the most suitable product for the application. The Maccaferri RockMesh® 30100, a patented high strength composite steel wire mesh combining the proven benefits of cable nets with hexagonal double twist, was deemed to be the most appropriate material because of its exceptionally high longitudinal and transverse tensile strength of over 12,000 lbs/ft and 5500 lbs/ft, respectively, at only 6% elongation, and its in-isolation punch strength of more than 11,000 lbs-force with less than 10 in. of displacement. The Maccaferri RockMesh® 30100 is specifically designed for the most extreme rockfall drapery and soil nailing applications.

The PVC coated RockMesh® 30100 also provides much greater longevity compared to other types of drapery systems, when in contact with soil and vegetation, especially in tropical, wet, and humid environments such as Hawaii. Black PVC coating was chosen to blend in best with the black volcanic rock most notable in Hawaii.

Post installation, vegetation has already begun to grow

Client:
CITY & COUNTY OF HONOLULU

Main Contractor:
PROMETHEUS CONSTRUCTION

Designer:
C&C OF HONOLULU WASTEWATER DIVISION

Products used:
ROCKMESH™ 30100

Date of Construction:
OCTOBER 2016-DECEMBER 2016

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