



ACEGrid® a Hilly Road Repair Project in Thailand

Location : Ranong Province, Thailand

Application : Road Repair

Problem :

This hilly road repair case was located at Km.8 Ranong-Pato Road, Ranong Province, Thailand. During heavy rainy season, roadway was inundated easily owing to the blockage of drains. A great deal of rainwater converged and flowed downwards to the slope of roadway, the slope surface was eroded by rainwater steadily as a result of lacking in drainage system. Simultaneously, plenty of water infiltrated into soil layer, leading to the loss of shear strength of deep soil layer and causing circular sliding. Eventually, the roadway upon the collapse, resulting in only single lane was passable subsequently.



Solution :

To restore the convenience of transportation, the designer, Department of Highways, adopted reinforced structure with the height of 8 meters, the slope of less than 70 degrees ($V : H = 1 : 0.5$). Two-stage, each is 4 meters in height and RC slab was constructed to protect the toe of structure. According to stability analysis, ACEGrid® GG100-I was proposed as the reinforced material. In order to make the appearance of the reinforced structure go well with the green surrounding, facing system by piled soil bags to be the plant growing medium. Moreover, to prevent the structure from the damage caused by erosion problem due to the lack of drainage system, the designer configured transverse intercepting ditches and vertical gutters respectively as drainage system at the boundary between reinforced structure, RC slab and the surface of original slope.