Sierra Slope bridge abutments for temporary bridge detour saves owner money

LOCATION:
Port Alberni, British Columbia

PRODUCT:
Sierra Slope®

PROJECT PARTNERS:
Owner
BC Ministry of Transportation and Infrastructure

Consultant
BF Binnie & Associates
Herold Engineering
Braun Geotechnical

Contractor
Neelco Builders Ltd.

Completion Date
May, 2014

Rogers Creek flows under Highway 4A through a culvert that is undersized for the amount and size of debris that often travels down the creek. British Columbia Ministry of Transportation and Infrastructure is replacing the road and culvert with a new 44-meter long single span steel girder bridge. While replacing the old bridge a temporary bridge was required alongside it to detour traffic while the old bridge was being demolished and rebuilt. The temporary bridge will then be kept as a pedestrian bridge and bicycle pass.

Challenge
The temporary bridge required a system to support the loads of the bridge span. The road was also required to stay open 24 hours a day, in order to maintain service to the nearby local hospital, as it is 15 minutes quicker than the nearest alternative route.

Originally, a Lock Block system was specified for this project. Nilex was able to demonstrate its system was not only just as reliable as Lock Block, but also more cost effective and more environmentally friendly.

Solution
Nilex recommended the Sierra Slope Retention System, a fully integrated mechanically stabilized
earth (MSE) solution that incorporates natural vegetation and geogrid technology to create a reinforced soil mass. This system is more cost effective than the owner’s original spec, Lock Blocks.

**Results**

By using a Sierra Slope wall, fewer trucks were required to travel to and from site, reducing the carbon footprint of the project. This green wall system also reduced costs significantly by eliminating the need for costly concrete blocks and heavy machinery.

**Installation**

The Sierra Slope system was installed using labour to place the facing unit, therefore less machine time was required. For a temporary bridge abutment such as this, Sierra Slope is ideal as it is quick and easy to install and dismantle.

**The Nilex Advantage**

Nilex is committed to unearthing better results. Whether it’s for a civil, resource or environmental project, we offer the latest engineered and technically superior materials and techniques to save our customers time and money, and minimize the need to move or remove earth, and reduce the need for granular materials.

With over 35 years experience, a long-standing commitment to the environment and highly qualified staff, Nilex delivers the products and technologies that give clients an economic advantage with environmental benefit.