

Project information

 October, 2016

 CC8

 125 sq m CC8

 Channel lining

 Pemberton, BC

 4 Persons

 Used for terminating two water diversion ditches into culverts



In August of 2016, 125 sq. m of Concrete Canvas (CC) GCCM 8mm was installed by the BC Ministry of Transportation (BC MOT) on the Duffy Lake Road north of Pemberton, BC, as a ditch lining for terminating two water diversion ditches into culverts. Each ditch measuring 9m long, 5m wide, 1.2m deep.

Large water flow velocities of 4.2m/sec caused by rain runoff and snow melt was causing water to seep into the bedding around the culverts resulting in erosion control problems and undermining the nearby roadway.

Shotcrete was originally considered but CC was chosen due to ease and speed of installation and the ability to keep the road open during the installation. Success for this project was lining the ditch, waterproofing the headwall, and directing flow into the culverts.

For site preparation, the contractor used an excavator to re-grade the ditch profile and remove any large rocks from the sub surface. The CC was then installed transversely across the width of the ditch and shingled in the direction of water flow using 1" stainless steel screws and SikaFlex 1A sealant.

Ardox spikes were used every meter along the outer edges to pin the CC into the soil. The headwall around the culverts were also lined and the CC was fastened to the culvert using stainless steel self-tapping screws.

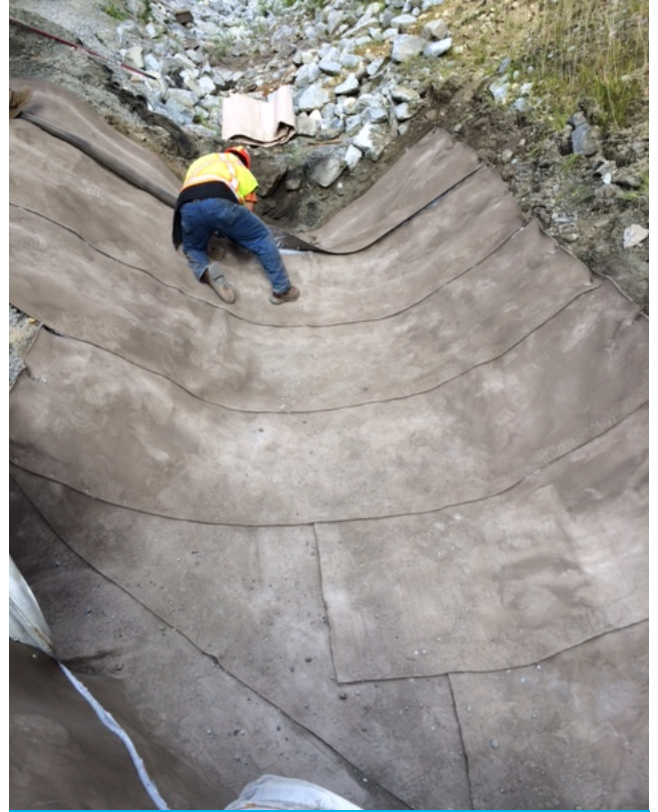
Hydration was done using a water truck and 2" adjustable nozzle. Since CC cannot be over-hydrated, an excess of water was used to ensure the CC was fully saturated.

The installation took 2 days to complete, 8 hours per day worked with 4 men including the machine operator. After the CC installation was completed, the contractor placed large rocks on top of the CC to dissipate some of the water velocity.

The client was very happy with the end results and will visit the site in the spring to see how the product held up over the freezing winter months and the expected heavy snow loads.



Site prep included regrading of the ditch profile



Installation of CC



Fastening CC to inside of culvert



Completed CC installation