Slide Name: **(GP 21) SH 719 Henderson Creek (BF 73982)**
Inspection Date: **June 22, 2004**
Inspection By: – **Alberta Transportation and EBA Staff listed on Page 1**

1.0 BACKGROUND (reiterated from 2002 report)

- Refer to 2003 and earlier reports for past investigation and remediation design.
  - An initial toe berming stabilization and slope reconstruction design was submitted in December 2001.
  - A temporary tie-back retaining wall design was submitted (summer 2003) as an alternate temporary remedial measure.
- AT deferred implementing the above initial design and alternate design submission.
  - AT Regional Bridge Engineer office prefers to replace the culvert and reconstruct the fill in 2009 or earlier. In the fall of 2003, AT's Regional Bridge Engineer office installed rip-rap protection comprising pre-cast concrete (used material in-stock) as temporary toe protection measure. Its performance will be monitored until the planned replacement of the culvert scheduled for 2009.

2.0 OBSERVATIONS

- The site has not deteriorated.
- AT has installed temporary erosion protection at the toe of slope by placing pre-cast concrete panels and connecting them with steel wire. The perimeter of the pre-cast panel layout was constructed with gabion baskets.
- At the headscarp and guardrail (shoulder) area at top of slope, a fillet of granular material was placed to infill the 1 to 2 m headscarp and provide a smooth slope at the top of the embankment slope.
- Minor amount of drift accumulation was observed at the drift catch rack located at the inlet.

3.0 RISK ASSESSMENT

PF (11) * CF (2) = 22

Risk rating has not changed since that assessed in 2002.

4.0 ACTION

- Visual monitoring of this site should be carried out regularly by maintenance staff.
- The temporary toe protection works (as constructed by AT Bridge Engineering) should be visually monitored for signs of future toe erosion and sliding because the buried organic material was not excavated at the slope toe area.

AIRPHOTO BASE: 83M, LN-1, AS5161B, #284, 01-06-19

Figure 1

2001 Aerial Photograph

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Photo 1

1) Looking north and upstream
2) Drift accumulation at culvert inlet was cleaned out; only minor drift accumulation remaining
3) Pre-cast concrete slab installed at toe area
4) Shoulder (previous headscarp drop area) infilled with a gravel fillet

Photo 2

Looking west at upstream slope (Slide)

1) Recent installation (winter 2003) of armour protection of toe area using precast concrete slabs tied together with wire
2) Gabion basket constructed along perimeter sides of the pre-cast concrete slabs

Note: Photos Taken in June. 2004

Photo 3
Close-up of toe armour installation of pre-cast concrete slab with gabion basket along its side edges.

Note: Photos Taken in June, 2004