Photo S18-1 – June 2007 (upper left)
Facing northbound along Highway 40 towards the Galatea Creek Through-Cut. Note the unfavourable orientation of the bedrock structure (from a slope stability perspective) along the East Cut Slope on the east side of the highway (right hand side as viewed in this photo).

Photo S18-2 – June 2007 (upper right)
Facing northbound along the east side of Highway 40 at the south end of the East Cut Slope. Note the accumulated rockfall debris in the ditch. The ditch in this area is appropriately sized to capture the rockfall debris, however further northbound the height of the East Cut Slope increases and the ditch width and depth decrease below the recommended sizing criteria.

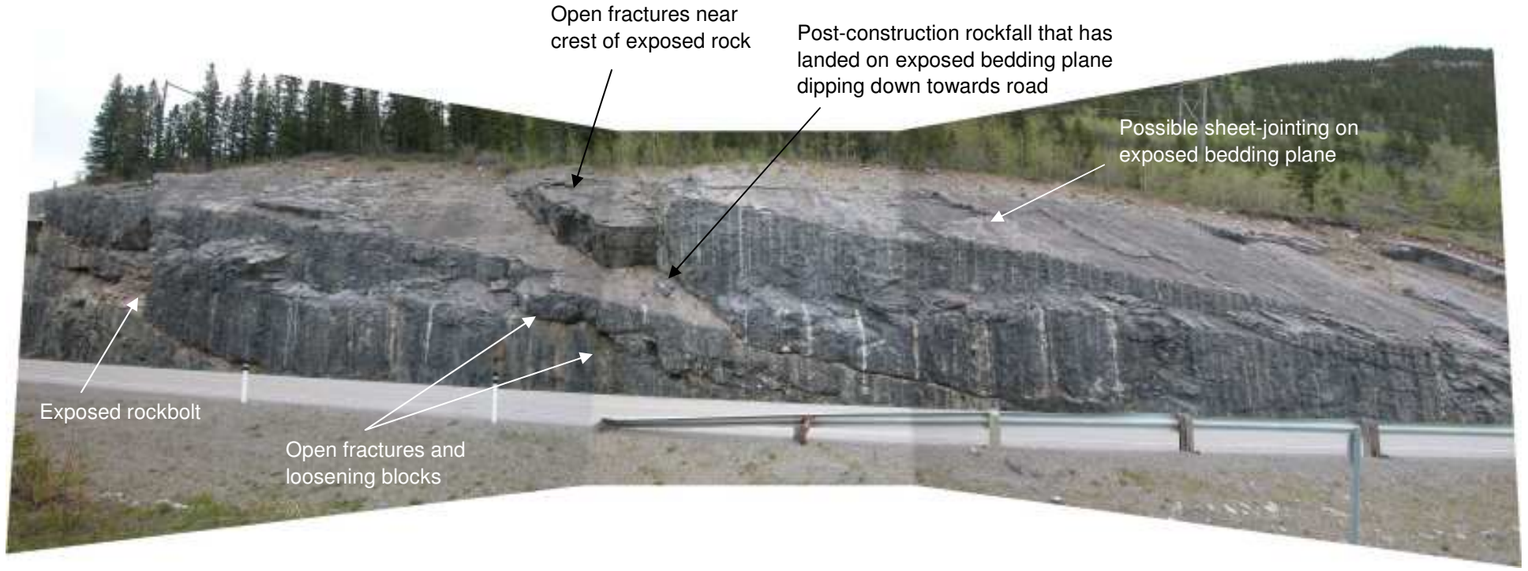

Photo S18-3 – June 2004 (bottom)
Overview of the central portion of the East Cut Slope, as seen during the June 2004 site inspection. The rockfall hazard at this site is due to weathering of the exposed rock and the orientation of the bedding relative to the cut slope face. These hazards are partially mitigated by the east ditch along the road and by numerous rockbolts installed across the cut slope. Rockfall debris has rolled into the northbound lane of the road in the past. Also, the faceplates of some of the rockbolts appear to no longer be in tight contact with the slope face.

Photo S18-4 – June 2007 (upper left)
Facing southbound along the east edge of Highway 40 in the southern/central portion of the East Cut Slope. Note the accumulation of rockfall debris in the ditch and the proximity of some of the rocks to the east edge of the pavement.

Photo S18-5 – June 2007 (upper right)
Facing southbound along the east edge of Highway 40 in the central/northern portion of the East Cut Slope. Note the relatively greater accumulation of rockfall debris in this area compared to the segment of the ditch further south (Photo S18-4). Some of the rocks have been deposited along the edge of the pavement. A few gravel-sized pieces of rock were noted on the pavement at the time of the inspection, and cobble-sized rocks were noted near the centerline of the road in the June 2004 inspection.

Photo S18-6 – 2005 (lower left)
This photo from a 2005 site recon during the highway corridor geohazard review illustrates one of several locations along the East Cut Slope where large rockfalls are developing due to weathering and freeze/thaw effects in open cracks. At this location, the large boulder in front of this open crack will break free in the future and fall outwards into the ditch. If this large piece of rock falls out as one piece, the resulting debris could encroach onto the road and/or cause subsequent debris to bounce and roll onto the road.

Photo S18-7 – June 2004 (lower right)
Boulder-sized rockfall debris in the ditch near the central portion of the East Cut Slope as seen during the June 2004 site inspection. The ditch in this area is typically 4 m or less in width and 0.5 to 0.75 m in depth, which does not meet the recommended ditch sizing criteria.

The East Cut is near its maximum height of approximately 16 m in this area, and the position of this debris shows that rockfall from this segment of the cut slope could land or roll onto the paved surface.

Photo S18-8 – June 2007 (upper left)
Typical view of the west ditch, facing southbound along West Cut Slope. Note the accumulated rockfall debris in the ditch. No rockfall debris from the west ditch has been observed on the road during any of the site inspections. This ditch meets the recommended ditch sizing criteria.