BF 01135 Local Road Over Oldman River
Hydrotechnical Summary

Channel Capacity:

S = 0.0025
B = 70 m, h = 5 m, T_h = 110 m
Use AT Equation

At Bank Height: Y = 5.0 m, V = 3.3 m/s, Q = 1500 cms
At Channel Capacity: Y = 6.0 m, V = 3.8 m/s, Q = 2100 cms

Historical Highwater Data:

HW has been observed in 1995 (2.4m freeboard, Y ~ 5m relative to pre-dam bed, degradation or scour possible, 60m of approach road washed out), and 2005.

The 1986 design was based on Y ~ 4.5m and Q ~ 2000cms.

Gauge 05AA024 (DA = 4400km^2, 1966 – Now, 1995 peak missing – est. dam outflow Q ~ 2700 cms by AENV) reports
Q ~ 1560 cms in 1975
Q missing record in 1995. As per AT flood data inventory, the measured high water level at the bridge on June 7, 1995 was approx. 2.4 m (freeboard) below the bottom chord
Q ~ 1110 cms in 2005
Q ~ 1330 cms in 2013

Gauge 05AB007 (DA = 5760km^2, 1910 – 1948) reports
Q ~ 1990 cms in 1923
Q ~ 1060cms in 1942
Q ~ 1100 in 1948

Basin Runoff Potential:

Gross DA = 4370 km^2, runoff potential is not applicable.

Conclusion:

Historic observations and Oldman Dam operations govern. Recommended parameters:

Y = 6.5 m, V = 4.0 m/s, Q = 2700 cms.
HW EL 1050.5m (Dwg. 14856-C)