BF 01097 Hwy 811 Over Oldman River
Hydrotechnical Summary

Channel Capacity :

S = 0.0017
B = 100 m, h = 5 m, T_h = 140 m
Use AT equation

At Bank Height : Y = 5 m, V = 2.9 m/s, Q = 1700 cms
At Channel Capacity : Y = 6 m, V = 3.3 m/s, Q = 2500 cms

Historical Highwater Data :

HW has been noted at this site in 1902, 1953, 1964, 1972 (Ice), 1975, 1995 (Y ~ 6m, over road to north), and 2005. The 1909 design was based on Y ~ 6m (likely 1908 event). Estimated 1995 total peak inflow into dam was estimated to be Q ~ 3500cms (DA ~ 4400km^2), with peak outflow routed to Q ~ 2700cms.

Gauge 05AA024 (DA = 4400km^2, 1966 – Now, 1995 peak missing) reports Q ~ 1600cms in 1975 and Q ~ 1100cms in 2005. Gauge 05AB007 (DA = 5760km^2, 1910 – 1948) reports Q ~ 2500cms in 1923 and Q ~ 1150cms in 1942 and 1948.

Basin Runoff Potential :

Gross DA = 5800 km^2, runoff potential is not applicable

Conclusion :

Historic observations govern. Recommended parameters :

Y = 6.5 m, V = 3.5 m/s, Q = 3000 cms.
HW EL 940.0m (Dwg. DD1387)