BF 81897 Hwy 524 Over Bow River
Hydrotechnical Summary

Channel Capacity:

S = 0.0004
B = 150 m, h = 8 m, T_h = 240 m
Use AT equation

At Bank Height: Y = 8 m, V = 2.1 m/s, Q = 3400 cms
At Channel Capacity: Y = 9 m, V = 2.4 m/s, Q = 4300 cms

Historical Highwater Data:

The 1991 design was based on Y ~ 8.5m (Q ~ 4500cms). HW was observed in 1995 (Y ~ 6m). 2013 HWM (3 m below top of curb).

WSC Gauge 05BM004 (DA ~ 20300 km^2, 1910 – 1933, 1964 – Now)
1923, reported Q ~ 2180 cms, gauged near peak, Y ~ 5.5 m
1929, reported Q ~ 2540 cms
1932, reported Q ~ 2310 cms
2005, reported Q ~ 2040 cms
2013, reported Q ~ 3380 cms

WSC Gauge 05BN012 (DA ~ 25300 km^2, 1964 – Now)
1967, reported Q ~ 1300 cms
1995 and 2005, reports Q ~ 1600 cms with Y ~ 5.5 m
2013, reported Q ~ 3450 cms

Basin Runoff Potential:

Gross DA = 26115 km^2, runoff potential is not applicable.

Conclusion:

Historic observations govern. Recommended parameters:

Y = 8.0 m, V = 2.1 m/s, Q = 3400 cms
EL 708.5m (14745-P)