BF 07256 Hwy 879 Over South Saskatchewan River
Hydrotechnical Summary

Channel Capacity :

S = 0.00045
B = 200 m, h = 9 m, T_h = 270 m
Use AT equation

At Bank Height : Y = 9 m, V = 2.5 m/s, Q = 5400 cms
At Channel Capacity : Y = 10 m, V = 2.8 m/s, Q = 6600 cms

Historical Highwater Data :

HW has been noted at this site in 1902 (Y ~ 9m), 1908 (Y ~ 8.5m), 1953 (Y ~ 8m), and 1995 (Y ~ 8.5m) and 2005.

WSC Gauge 05AJ001 (DA ~ 56400km^2, 1911 – Now) reports Q ~ 5100cms (1995, stage rise ~ 8m, gauged at Q = 4100cms), Q ~ 4300cms (1953), Q ~ 4100cms (1995), and Q > 3000cms in 1929, 1975, and 2005. WSC Gauge 05AK001 (DA ~ 66000km^2, 1966 – 1993) reports Q ~ 3000cms in 1975. Major tributaries are Oldman River (Q ~ 5000cms) and Bow River (Q ~ 2500cms) but coincident peaks unlikely due to storm location and timing. The ungauged flood in 1902 is known to be significant in both basins.

Basin Runoff Potential :

Gross DA = 55250 km^2, runoff potential is not applicable

Conclusion :

Historic observations govern. Recommended parameters :

Y = 9.5 m, V = 2.7 m/s, Q = 6000 cms.
HW EL 699.0m (Dwg. 4547)