BF 08707 Hwy 53 Over Battle River
Hydrotechnical Summary

Channel Capacity :

S = 0.0003
B = 15 m, h = 4.0 m, T_h = 30 m
Use AT Equation

At Bank Height : Y = 4.0 m, V = 1.1 m/s, Q = 100 cms
At Channel Capacity : Y = 5.0 m, V = 1.4 m/s, Q = 165 cms

Historical Highwater Data :

HW was noted in April 1974 (just below bottom of girder, water over south approach, Y ~ 7.0m), and April 1982 (Y ~ 4.0m).

Gauge 05FC001 (DA = 7680km2, 1966 – Now) is located upstream and reports Q = 243cms in April 1974 (7m stage rise, gauges at Q = 160cms). The largest storms in the storm database are about 90 - 100mm of rainfall in June 1944, June 1970, June 1973, July 1982, and July 1990.

Basin Runoff Potential :

Gross DA = 7385 km^2 (beyond limit of applicability).

Conclusion :

Historic observations govern.

Recommended parameters : Y = 7.0 m, V = 1.8 m/s, Q = 325 cms.