BF 01694 Local Road Over Blindman River
Hydrotechnical Summary

Channel Capacity :

S = 0.0006
B = 20 m, h = 4.5m, T_h = 38 m
Use AT equation

At Bank Height : Y = 4.5 m, V = 1.6 m/s, Q = 215 cms
At Channel Capacity : Y = 5.5 m, V = 2.0 m/s, Q = 330 cms

Historical Highwater Data :

HW has been recorded at this site in July 1990 (0.8m below curb, EL. 920' on dwg. 4884-P, Y = 6.2m) and July 1982 (EL. 919', Y = 5.8m). Water was over the road to the north and south in 1990, and some scour resulted at the SW headslope. A structure washed out at this site in 1915, and the 1956 and 1962 bridge reports noted HWM with Y = 4.7 – 5.0m.

WSC gauge 05CC008 (DA = 352km^2, 1965 – Now) reports Q = 330cms in July 1990, with other large events in July of 1981, 1982, and 1986 (190 – 230cms). The rating curve shows a stage rise of just under 5m for the July 1990 event, with Q based on extrapolation (highest gauged event Q = 114cms, Y = 2.5m) and may be in the 260 – 300cms range. Gauge 05CC001 (DA = 1790km^2, 1916 – 1922, 1962 - Now) reports Q = 395cms in July 1990. The largest storm in the database for this area is July 1990 with 120mm of rainfall (centred over upper basin), followed by July 1982 and 1986 with about 110mm.

Basin Runoff Potential :

d = 60 mm, T_p = 20 hrs, q = 0.83 cms/km^2.
Gross DA = 850 km^2.
Q_p = 705 cms.

Conclusion :

The channel capacity estimate is slightly below historic observations and is within the basin runoff potential.

Recommended parameters : Y = 6.0 m, V = 2.1 m/s, Q = 390 cms.