BF 07475 Hwy 20 Over Blindman River
Hydrotechnical Summary

Channel Capacity :

S = 0.0011
B = 9 m, h = 4.0 m, T_h = 19 m
Use n = 0.04

At Bank Height : Y = 4.0 m, V = 1.6 m/s, Q = 85 cms
At Channel Capacity : Y = 5.0 m, V = 1.9 m/s, Q = 145 cms

Historical Highwater Data :

HW was observed over the deck in July 1986 (Y = 5.2m) and July 1990 (Y = 5.5m), with significant headloss across the structure likely due to blockage from the superstructure and an apparently constrictive opening. HW was also observed above the bottom flange in 1965, 1971, 1974, 1982, and 2000.

WSC gauge 05CC008 (DA = 352km^2, 1965 – Now) is located d/s with a highest reported 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. The largest storm in the database for this area is July 1990 with 145mm of rainfall, followed by July 1986 with 125mm and July 1982 with 115mm.

Basin Runoff Potential :

d = 70mm, T_p = 20hrs, q = 1.0 cms/km^2.
Gross DA = 180 km^2.
Q_p = 180 cms.

Conclusion :

The channel capacity estimate is consistent with historic observations and is within the basin runoff potential.

Recommended parameters : Y = 5.0 m, V = 1.9 m/s, Q = 145 cms.