BF 07492 Hwy 54 Over Clearwater River
Hydrotechnical Summary

Channel Capacity :

S = 0.005
B = 40 m, h = 3.0 m, T_h = 90 m
Use AT Equation

At Bank Height : Y = 3.0 m, V = 2.8 m/s, Q = 550 cms
At Channel Capacity : Y = 4.0 m, V = 3.6 m/s, Q = 1000 cms

Historical Highwater Data :

HW was observed in 1986 (Y ~ 1.7m), and 1990 (Y ~ 2.5m). The 1971 design was based on Y ~ 3.3m (Q ~ 830cms).

WSC Gauge 05DB006 (DA = 2230km^2, 1975 – Now) reports Q ~ 950cms (June 2005, gauged at Q ~ 820cms, stage rise ~ 4m), and Q ~ 340cms (June, 1990). WSC Gauge 05DB003 (DA = 1340km^2, 1959 – 1992) reports Q ~ 500cms (June 1965) and Q ~ 270cms (June 1990). WSC Gauge 05DB001 (DA = 3220km^2, 1914 – 1931, 1944 – 1975) reports Q ~ 1350cms (June 1915, gauging data unknown), and Q ~ 520cms (June 1965).

Basin Runoff Potential :

Gross DA = 2050 km^2 (beyond range of technique)

Conclusion :

The channel capacity estimate is consistent with historic observations. Recommended parameters :

Y = 4.0 m, V = 3.6 m/s, Q = 1000 cms.
EL 1080.5 m (5871-P)