BF 76351 Hwy 734 Over Ram River
Hydrotechnical Summary

Channel Capacity :

S = 0.008
B = 25 m, h = 1.8 m, T_h = 40 m
Use AT equation

At Bank Height : Y = 1.8 m, V = 2.6 m/s, Q = 150 cms
At Channel Capacity : Y = 2.7 m, V = 3.6 m/s, Q = 340 cms

Historical Highwater Data :

HW is noted on DD445 in 1965 to Y = 2.7m. HW was noted in July 1986 to 8.1m below deck near midspan, with V = 3m/s, and in July 1999 to 8.7m below curb near the left edge.

WSC Gauge 05DC006 (DA = 1860km^2, 1967 – Now) is located d/s and reports HW events in June 1972 (Q = 470cms), July 1999 (Q = 416cms), July 1981 (Q = 342cms), June 1970 (Q = 303cms), and May 1990 (Q = 292cms). The largest gauged flow is Q = 303cms in July 1999 (Y = 1.8m, T = 65m, A = 100m^2). The rating curve notes Y = 2.2m for Q = 340cms. The largest storms in the database for this area are June 1970 with 120mm of rainfall, and June 1928 and July 1965 with 105mm.

Basin Runoff Potential :

d = 80 mm, T_p = 20 hrs, q = 1.1 cms/km^2
Gross DA = 630 km^2.
Q_p = 630 cms.

Conclusion :

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

Recommended parameters : Y = 2.7 m, V = 3.6 m/s, Q = 340 cms.