BF 06777 Hwy 61 Over Irrigation Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.0015
B = 5 m, h = 2.7 m, T_h = 13 m
Use n = 0.045

At Bank Height : Y = 2.7 m, V = 1.2 m/s, Q = 30 cms
At Channel Capacity : Y = 3.7 m, V = 1.7 m/s, Q = 60 cms

Historical Highwater Data :

A note from 1922 states that the 20' bridge at that time suffered frequent washouts because it was too short and too low. The bridge washed out in 1928 and was subsequently replaced with a 3 span bridge. The 1957 bridge report refers to HW having been over the bridge (reports deck height = 4.3m). The 1994 BIM report notes HWM with Y = 2.7m.

WSC gauge 05AF008 (DA = 202km^2, 1917 – 1930, 1936) is located d/s and reports the largest flows in March 1928 (Q = 11cms), and April 1922 (Q = 8cms). Gauges in the area suggest HW events in March 1943, April 1955, and March 1994. The largest storms in the database for this area are June 2002 with about 140mm of rainfall, and September 1986 and June 1998 with 100mm.

Basin Runoff Potential :

d = 35mm, T_p = 20hrs, use q = 0.35 cms/km^2 (Cypress Hills)
Gross DA = 113 km^2.
Q_p = 40 cms.

Conclusion :

Basin runoff potential governs for this site.

Recommended parameters : Y = 3.0 m, V = 1.3 m/s, Q = 40 cms.