BF 01795 Local Road Over Ross Ck Tributary
Hydrotechnical Summary

Channel Capacity :

S = 0.01
B = 4 m, h = 1.2 m, T_h = 9 m
Use n = 0.05

At Bank Height : Y = 1.2 m, V = 1.7 m/s, Q = 14 cms
At Channel Capacity : Y = 1.8 m, V = 2.3 m/s, Q = 33 cms

Historical Highwater Data :

The 1986 design was based on Q = 23cms. A scour hole was noted d/s in the 1990 BIM inspection.

WSC gauge 05AH003 (1911 – Now, 647 km^2) located on Ross Ck d/s reports Q = 90cms in April 1955, and shows several high volume events in the 1950's and a low volume high peak response in spring 1994. Gauge 05AH037 (1944 – Now, 215 km^2) on Gros Ventre Ck reports Q = 36cms in April 1955 and also shows a high runoff event in June 2002. The largest storms in the database was in June 2002 with 180mm of rainfall and June 1998 with 140mm.

Basin Runoff Potential :

d = 35mm, T_p = 40hrs, use q = 0.35 cms/km^2 (Cypress Hills).
Gross DA = 57 km^2.
Q_p = 20 cms.

Conclusion :

Basin runoff potential governs for this site and is consistent with historical observations.

Recommended parameters : Y = 1.5 m, V = 2.0 m/s, Q = 20 cms.