BF 75465 Local Road Over North Saskatchewan River Tributary Hydrotechnical Summary

Channel Capacity :

S = 0.05
B = 1 m, h = 0.5 m, T_h = 3 m
Use n = 0.06

At Bank Height : Y = 0.5 m, V = 1.7 m/s, Q = 2 cms
At Channel Capacity : Y = 1.0 m, V = 3.2 m/s, Q = 7 cms

Historical Highwater Data :

A 1961 report notes a HWM with Y = 1.5m, but likely due to backwater from the North Saskatchewan River. A 1979 report notes a HWM over the deck, but due to spring runoff while bridge opening is still blocked by icing. A 2005 photo shows apparent degradation with slumping banks and exposed piles.

There are no WSC Gauges on this stream. Gauges in the area suggest HW events in April 1979 and April 1997. The largest storms in the storm database are 105mm of rainfall in June 1973, and about 95mm in July 1937, June 1944, and June 1962.

Basin Runoff Potential :

d = 40 mm, T_p = 20 hrs, q = 0.55 cms/km^2.
Gross DA = 8 km^2.
Q_p = 4 cms.

Conclusion :

Basin runoff potential governs.

Recommended parameters : Y = 0.8 m, V = 2.7 m/s, Q = 4 cms.