BF 76876 Local Road Over Athabasca River
Hydrotechnical Summary

Channel Capacity:

S = 0.0012
B = 120 m, h = 3.5 m, T_h = 150 m
Use AT equation

At Bank Height: Y = 3.5 m, V = 2.0 m/s, Q = 970 cms
At Channel Capacity: Y = 4.5 m, V = 2.5 m/s, Q = 1550 cms

Historical Highwater Data:

The 1968 design was based on Y ~ 4.3m.

WSC gauge 07AD001 (DA = 9530km^2, 1915 – 1939, 1955 – 1961) and gauge 07AD002 (DA = 9780km^2, 1961 – Now) report peak flows just below Q = 1300cms in June 1936 and June 1972, with many other events exceeding Q = 1000cms.

Flow was gauged at 07AD002 at Q = 1270cms with a stage rise of about 4.3m on June 13, 1972.

Flow was gauged at 07AD002 at Q = 1510cms on June 7, 2007. Stage unknown.

Flow was gauged at 07AD002 at Q = 1330cms on June 8, 2012. Stage unknown.

Flow was gauged at 07AD002 at Q = 1260cms on June 22, 2013. Stage unknown.

Basin Runoff Potential:

Gross DA = 10670km^2, exceeds range of application of runoff depth method.

Conclusion:

The highest recorded flow in 2007 reached the channel capacity flow. Recommended parameters:

Y = 4.5 m, V = 2.5 m/s, Q = 1550 cms.
HW EL 913.7 m (converted to the elevation datum in 2018)