BF 72027 Highway 544 over Little Sandhill Creek
Hydrotechnical Summary

Channel Capacity :

S = 0.001
B = 2 m, h = 1.0 m, T = 6 m
Use n = 0.05

At Bank Height : Y = 1.0 m, V = 0.5 m/s, Q = 2 cms
At Channel Capacity : Y = 1.5 m, V = 0.7 m/s, Q = 5 cms

Historical Highwater Data :

A 1969 report notes flow over the road (Y~5.6m, likely partial blockage) and a 1995 BIM report notes a HWM of Y~0.6m.

There are no WSC Gauges on this stream. A nearby gauge on the Red Deer River reports major events in July 2005 and July 1923. The largest storm in the area reported in the storm database is 60mm of rainfall in 2002.

Basin Runoff Potential :

d = 35mm, T_p = 40hrs, q = 0.24 cms/km^2.
Gross DA = 75 km^2 (likely reduced due to drainage canal)
Q_p = 18 cms.

Conclusion :

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

Recommended parameters : Y = 1.5 m, V = 0.7 m/s, Q = 5 cms.