BF 77272 Hwy 743 Over Whitemud River Tributary
Hydrotechnical Summary

Channel Capacity :

S = 0.045
B = 2 m, h = 1.0 m, T_h = 4 m.
Use n = 0.06

At Bank Height : Y = 1.0 m, V = 2.6 m/s, Q = 8 cms
At Channel Capacity : Y = 1.5 m, V = 3.8 m/s, Q = 20 cms

Historical Highwater Data :

Uplift failure was noted in 1972, prior to completion of construction. Ponding was noted in 1990 with Y = 3.5m u/s and Y = 1.0m d/s. Ponding was noted in spring 1992 with water flowing down the highway ditch to the Whitemud River. Photos from 2003 show drift blockage of the inlet.

There are no gauges on this stream. Gauges in the area suggest large runoff events in June 1990 and April 1997. The largest storm in the storm database is 120mm in August 1982.

Basin Runoff Potential :

d = 40mm, T_p = 20hrs, q = 0.55 cms/km^2.
Gross DA = 72 km^2.
Q_p = 40 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 = 3.8 m/s, Q = 20 cms.