BF 76026 Hwy 743 Over Whitemud River
Hydrotechnical Summary

Channel Capacity :

S = 0.0045
B = 30 m, h = 2 m, T_h = 40 m
Use AT equation

At Bank Height : Y = 2.0 m, V = 2.3 m/s, Q = 165 cms
At Channel Capacity : Y = 3.0 m, V = 3.2 m/s, Q = 350 cms

Historical Highwater Data :

HW was noted at this site in June 1990 with Y ~ 1.5m and V = 1.4m/s, and in May 1972 (erosion at south headslope). The 1971 design was based on Y = 3.0m and Q = 250cms.

WSC gauge 07HA005 (DA = 2010km^2, 1972 – Now) reports Q = 120cms in May 1974 and May 1978 (gauged at Q = 115cms, stage rise = 3.8m). The largest storms in the database are August 1982 (120mm) and July 1963 (110mm).

Basin Runoff Potential :

d = 40 mm, T_p = 20 hrs, q = 0.55 cms/km^2.
Gross DA = 3270 km^2, exceeds range of runoff depth application

Conclusion :

The channel capacity estimate is consistent with historic observations.

Recommended parameters : Y = 3.0 m, V = 3.2 m/s, Q = 350 cms.