

1.5.4 Hydrology Data Sheet for Bridges

MEMORANDUM TO:		Submittal Date: _____
		Supersedes Submittal Date: _____
RPG ROAD DESIGN TEAM LEADER: _____		
RPG STRUCTURAL ENGINEER: _____		
From:	Hydraulic Design Squad / Engineer _____	
Subject:	Hydrology Data for Bridge over _____	
County:	_____	Rd/Rte: _____
Structure No:	_____	Const. Pin: _____
Bridge Data:		
Bridge Length:	_____ ft.	Bridge Width: _____ ft.
Beg. Station:	_____	Ending Station: _____
Pier/Pile Type:	_____	Pier/Pipe Width: _____ ft.
Skew Angle:	_____ °	
Bridge Span Configuration:	_____	
Bridge Span Type:	_____	
Min. F.G. Elev.:	_____ ft.	Min. Low Steel Elev. _____ ft.
Min. Bottom Interior Bent Cap Elev. (For Tidal Bridges Only)	_____ ft.	
Br. End Fill Slope:	_____ Riprap Req'd: Yes <input type="checkbox"/> No <input type="checkbox"/>	To Elevation: _____ ft.
Comments:	_____ _____ _____ _____	
Historic High Water Information:		
Elevation of High Water:	_____ ft.	Discharge: (if available) _____ ft.
Date of occurrence:	_____	Source of Data: _____

Design High Water and Backwater Information: (Show high water elevations including backwater on plans)	
If 'Secondary Road' provide 25-yr high water elevation including backwater:	_____ ft.
If 'Primary Road' provide 50-yr high water elevation including backwater:	_____ ft.
For all roads provide 100-yr high water elevation including backwater:	_____ ft.
Hydrology Data for Tidal Bridges: (Only complete this section if tidal flow is the dominant flow) (show on plans)	
Mean Higher high tide elevation	= _____ ft.
Mean Lower low tide elevation	= _____ ft.
10-year tidal surge height	= _____ ft. (includes wave height)
100-year stillwater height	= _____ ft.
500-year stillwater height	= _____ ft.
Maximum vel. within bridge	= 100-yr. tidal surge velocity: _____ fps 500-yr. tidal surge velocity: _____ fps
Hydrology Data for Riverine Bridges: (Only complete this section if riverine flow is the dominant flow) (show on plans)	
D.A. = _____	sq. mi. (or acres)
Q _{Design} = _____	cfs
Vel. Design = _____	ft./sec.
Design Headwater Elevation = _____	ft.
Including _____	ft. backwater
Q ₁₀₀ = _____	cfs
Vel ₁₀₀ = _____	ft/sec
100 Year Headwater Elev. = _____	ft.
Including _____	ft. backwater
Overtopping Flood:	
Q = _____ cfs	Probability of "?" _____ %
cc: Environmental Engineer _____	
<small>Note: Probability may be determined by plotting the 2-, 10-, 25-, 50-, 100-, and 500-year discharges on Gumble paper and reading the probability corresponding to the overtopping discharge. For discharges greater than 500-year, the probability should be stated as less than (<) 0.002. Profiles of the computed scour for the 100-year and 500-year floods should be shown on the bridge plan and profile sheet. The shape of these profiles should be based on the methods described in the HEC-18. A plot of the 100- and 500-year scour lines on a bridge plan and profile sheet must be provided.</small>	