

COLORADO DEPARTMENT OF TRANSPORTATION STAFF BRIDGE BRIDGE DETAIL MANUAL	Chapter: 8 Effective: May 25, 2000 Supersedes: September 18, 1981
BRIDGE HYDRAULIC INFORMATION	

8.1 PURPOSE

This drawing or set of drawings, is to indicate all pertinent hydraulic information necessary in the design of a structure or structures at a given location.

8.2 RESPONSIBILITY

This drawing is prepared by the Hydraulic Section or a Hydraulics Consultant. The responsibility for the accuracy of the hydraulic information presented on this drawing rests with the Hydraulics Engineer.

8.3 CHECK ITEMS

Listed below are items to be checked in reviewing this drawing.

1. Net and excavated channel width and elevation.
2. Riprap limits, size, thickness, and upper and lower riprap elevations.
3. Design year and 500 year scour lines.
4. Pertinent water surface elevations.
5. Centerline of channel and direction of flow.
6. Project number in proper box.
7. Check title block for information indicated in section 8.4.

8.4 TITLE BLOCK

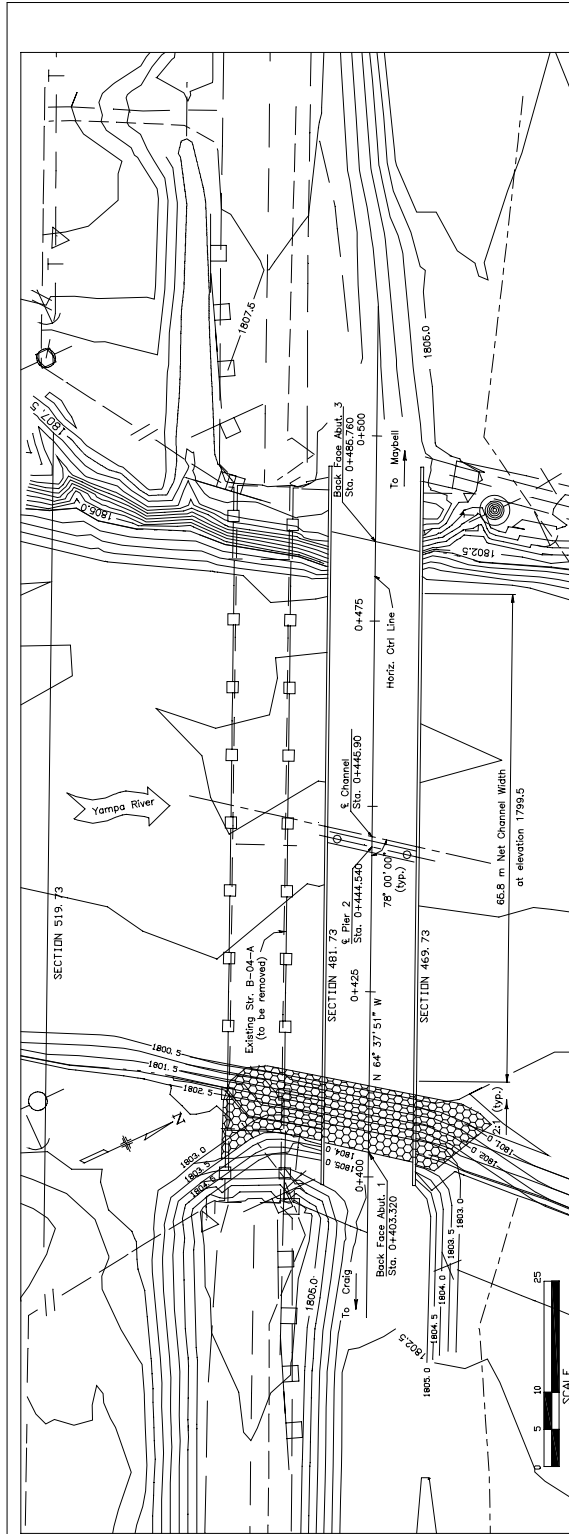
This drawing is titled "BRIDGE HYDRAULIC INFORMATION", and shall be so indicated in the title block. In addition to the above, the following information shall be placed in the proper locations of the title block:

Heading text box height is 0.58" for three lines of text, and 0.26" for one line, in order to center text vertically.

1. Name of stream or creek.
2. Initials of, or first initial and last name of the Designer and Detailer preparing the drawing.
3. Structure Number or Numbers.
4. Bridge drawing number.

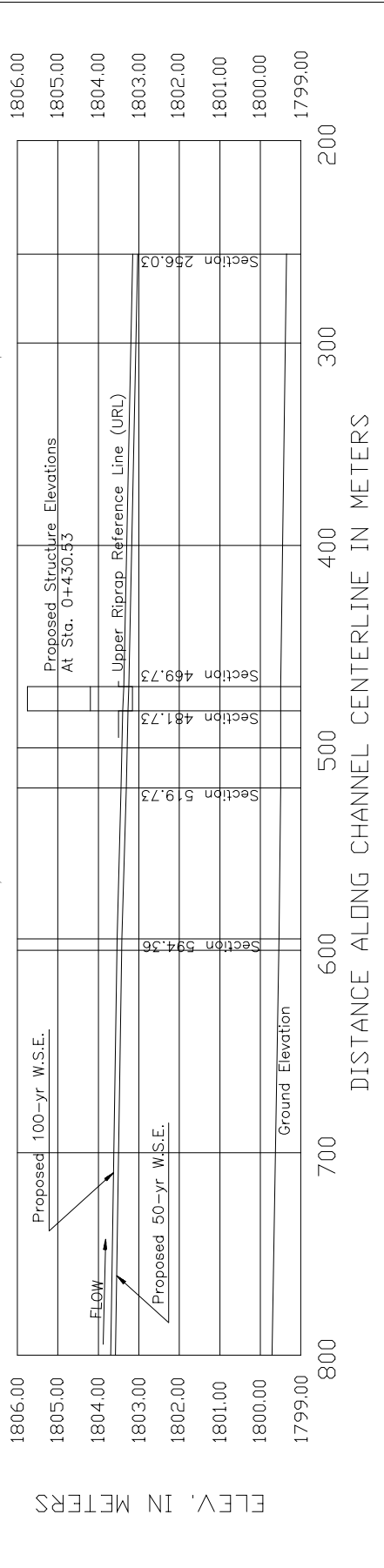
8.5 ADDITIONAL DETAILS

There may be instances when additional details are required, such as bank protection, channel changes, etc. If possible, these details should be shown on this drawing; however, if additional drawings are required, they should directly follow the "BRIDGE HYDRAULIC INFORMATION" drawing.



NOTE:
THE PLAN DRAWING IS
ROTATED 90° FROM THE PROFILE
OF WATER SURFACE AND RIPRAP
REFERENCE LINES.

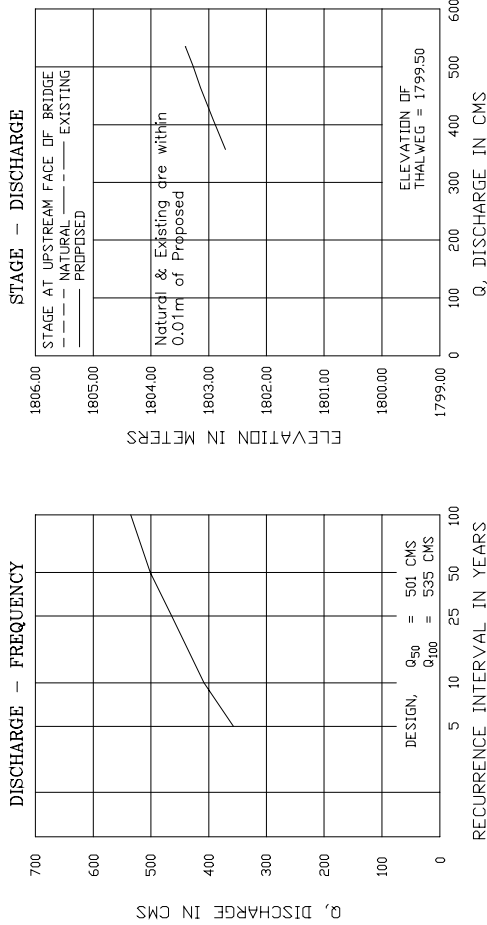
PROFILE OF WATER SURFACE AND RIPRAP REFERENCE LINES



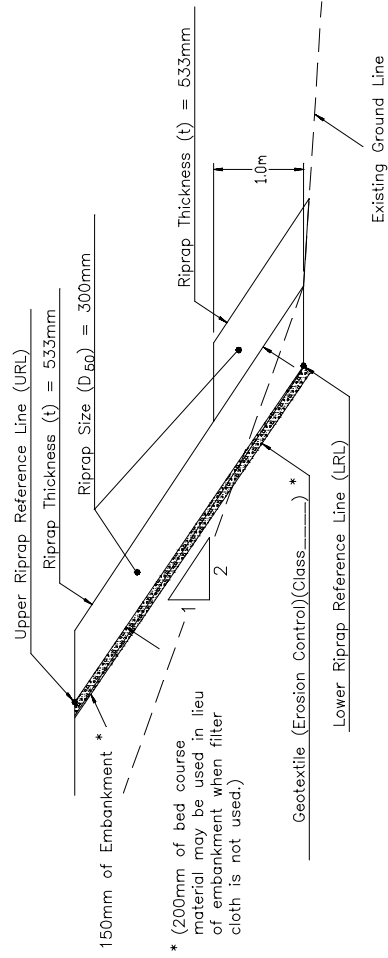
Computer File Information		Sheet Revisions		As Constructed		BRIDGE HYDRAULIC INFORMATION		Project No./Code	
Creation Date:	02\01\96	Initials:	ESS	No Revisions:		Designer:	SBL Structures	BR 0401-013	
Last Modification Date:	02\01\96	Initials:	ESS	Revised:		Dealer:	XXXXXXX Numbers	B-04-F	
Full Path:	T:\KEITH\B04F	Region Number or Staff		Void:		Sheet Subsets:	Access Yampa River	11393	
Drawing File Name:	B04-HYD1.DWG	Initials							
Acad Ver:	RT3	Scale:	X:XXXX	Units:	Metric			Sheet Number	
								BB of 32	

Figure 8-1

Figure 8-2



TYPICAL RIPRAP DETAIL



Drainage Area = 8,832 square kilometers

CHANNEL DESCRIPTION

- Bottom Material - Cohesive Non Cohesive Gravel
- Bottom Material Size - Clay Silt Sand
- Cobbles Other
- Stream Form - Straight Meandering Braided
- Mannings "n" for Design - Channel = 0.033, Overbank = 0.050
- Debris - Brush Trees/Logs Ice Other

COMPARISON OF HYDRAULICS Δ

	Velocity	Freeboard	Max. Backwater
Natural	1.99 mps	N/A	N/A
Existing	1.96 mps	1.68 m	N/A
Proposed	1.94 mps	1.72 m	N/A

Δ AT PROPOSED BRIDGE LOCATION DURING DESIGN DISCHARGE

COMMENTS

Computer File Information		Colorado Department of Transportation		As Constructed		BRIDGE HYDRAULIC INFORMATION		Project No./Code	
Creation Date:	02/01/96	Initials:	ESS	No Revisions:		SBL Structure		BR 0401-013	
Last Modification Date:	02/01/96	Initials:	ESS	Revised:		Design: XXXXXXXX		B-04-F	
Full Path:	T:\KEITH\B04F			Void:		Detailer: XXXXXXXX		Across Yampa River	
Drawing File Name:	B04-HYD2.DWG					Sheet Subst: BRIDGE		Sheet Number	
Acad Ver:	R13	Scale:	X:XXX	Region Number or Staff		Initials		Sheet Subst: B7 of 32	