DATE:			ENGINEER:			
	HY	DROLOGIC &	HYDRAULIC AN	NALYSIS OUT	LINE	
ROUTE:		PROJ. #:				
CITY/CC	MINTY.	STREAM NAM	ЛЕ·			
DRAIN.		STATION:	LAT:		LONG:	
EX #			REFERENCI	E DATA		
	MAPS:					
	PHOTOS:					
	1110105.					
	OTHER:					
	APPI ICABI E	FLOOD PLAIN	MANAGEMENT:			
	ATTEICABLE	I LOOD I LAIN				
	STUDIES BY I	EXTERNAL AG	ENCIES:			
	STUDIES BV I	NTERNAL SOU	RCES.			
	STODIES DT	INTERIVAL SOC	RCL5.			
	GAGING DAT	A AVAILABLE:				
		SURVEY DATA:				
		JORVET DATA				
	TECH. AIDES	& FILE NAMES	:			
	OTHER DATA	•				
	OTHER DATA					

#### **REMARKS:**

Add any relevant comments concerning the data obtained and its quality (particularly if it is questionable).

HYDROLOGY
METHODS USED FOR DISCHARGES:
REASONS FOR FINAL SELECTION OF DISCHARGE VALUES:
INFLUENCE AND CONTROL OF SITE:
HIGH WATER ELEV: DATE & SOURCE:**
** See documentation data at the end of form for approximate discharge and frequency of event:
REMARKS:

	STREAM STABILITY – LEVEL 1: QUALITATIVE ANALYSIS PER HEC-20
	BRIDGE CHARACTERISTICS:
	STREAM CHARACTERISTICS:
	LAND USE CHANGES:
	OVERALL STABILITY:
	LATERIAL STABILITY:
	VERTICAL STABILITY:
	STREAM RESPONSE:
	JPON THE ABOVE ANALYSIS, IS A MORE DETAILED ANALYSIS NECESSARY: YES:
NO: IF YES, V	WHAT LEVEL: SEE EXHIBIT #:

#### **REMARKS:**

Please complete with general comments based on observations of the conditions at the site.

EX #		HY	DRAULI	C ANALYSI	S OF E	XISTING STRUC	TURE
	Computer M	[odel:			FILE		Plan:
		iouei.	DESCR	IPTION OF		ING STRUCTURI	
	SPAN LEN	GTH:	DESCR			PETS:	
	ABUTMEN						TO FLOOD FLOWS:
	NO. OF PIE	RS & TYI	PE:				
	PIER WIDT					L PIER AREA:	
	ABUTMEN					H GRADE ELEV:	
	ABUTMEN		<b>A</b> :			H GRADE ELEV:	
	ELLC ELEV		TION		ELLC	FOR PRESSURE	FLOW:
	STREAM B			OF STRUCT		LEFT.	DICUT
	EXPANSIO			OF STRUCT		LEFT: TRACTION COEF:	RIGHT:
	EXPANSIO ENERGY S			VALUES:	CONT	KACTION COEF.	
	BRIDGE M						
	REASON F						
	HIGH FLOV						
	REASON F	OR SELEC	CTION:				
				WSP ELE COMM		WSP ELEV. AT UPSTREAM	VEL. AT DWNSTREAM
DIS	CHARGE	EST.	EXC	UPSTRE		FACE OF	FACE OF
		201.	LATC.	SECTIO		BRIDGE	STRUCTURE
				SECNO		SECNO #:	SECNO #:
	(cfs)	(%	Ď)	(ft)		(ft)	(fps)
		5					
		2					
		10					
		4					
		2					
		1- 1-F					
		0.					
		OH					
		H.W. E					
EX.#	EVEN	JT	STAC	GE ELEV.	D	DISCHARGE	EXC. PROB. (%)
	H.W Fl						
	Base Fl						
	Overtoppin	g Flood					
				REMA	KKS:		
Commer	nt on the mode	ling annro	ach and a	orrection or a	heervot	ions relative to the	original analysis
Commen		appic			JUSCI Val.		Jinginai analysis.

#### DOCUMENTATION OF STEPS TAKEN TO CALIBRATE MODEL

If there is difficulty in calibrating the model to a historical event contact VDOT to see if there is additional information available regarding that particular event.

## Chapter 12 – Bridge & Structure Hydraulics

EX #		HYD	RAULIC AN			POSED STRUC	CTURE
		1.6 1.1		SCHEM			DI
	Computer		DECOIDTI		FILE:	DETDUCTUD	Plan:
	SPAN LE		DESCRIPTI	ION OF F	PARAPE	D STRUCTUR	E:
		ENT TYPE:			SKEW T		TO FLOOD FLOWS:
		PIERS & TYP	E		SKEW I	0 CL	IO FLOOD FLOWS.
	PIER WI		E.		TOTAL	PIER AREA:	
		ENT "A" STA	•			GRADE ELEV:	
		ENT "B" STA				GRADE ELEV:	
	ELLC EL					OR PRESSURE I	FI OW:
		1 BED ELEVA	ATION		LLLCIC	JRTRESSORE I	ILOW.
		LEV. ON EAC		STRUCT	URE: I	LEFT:	RIGHT:
		SION COEF:		bineer		ACTION COEF:	
	ENERGY		"n" VA	LUES:	contra		
		MODELING					
	REASON	FOR SELEC	TION:				
		OW METHO					
	RESAON	FOR SELEC	TION:				
				WSP E	LEV. AT	WSP ELEV. A	T VEL. AT
DIGG	ULDOE	EST. EXC.	Diff. At		IMON	UPSTREAM	
DISC	HARGE	(%)	Common		REAM	FACE OF	FACE OF
		× ,	SECNO	SEC	TION	BRIDGE	STRUCTURE
				SEC	NO #:	SECNO #:	SECNO #:
(	cfs)	(%)	(ft)	(	ft)	(ft)	(fps)
		50					
		20					
		10					
		4					
		2					
		1-N					
		1-FW					
		0.2					
		OHW					
		H.W.					
		EVENT					
EX.#	EV	ENT	STAGE	ELEV.	DIS	SCHARGE	EXC. PROB. (%)
		n Flood					
	Overtop	oing Flood					
	Base	Flood					
				REMA	RKS:		

#### DOCUMENTATION OF STEPS TAKEN FOR PROPOSED MODEL - SCHEME #:

Comment on modification to existing conditions model to develop the proposed model

## Chapter 12 – Bridge & Structure Hydraulics

EX #		HYD	RAULIC A			POSED STRU	CTU	RE
				SCHEM				DI
	Compute		DECODIDE		FILE:	DOTDUCTU		Plan:
	CDANLL		DESCRIPT	ION OF F		D STRUCTUR	KE:	
	SPAN L				PARAPE		TOT	
	-	ENT TYPE:	T.		SKEW T	0 CL:	IOF	FLOOD FLOWS:
	-	PIERS & TYP	'E:		TOTALI			
	PIER WI	ENT "A" STA				PIER AREA:		
		ENT A STA				GRADE ELEV:		
	ELLC EI		1.			GRADE ELEV: OR PRESSURE		W7.
	-	LEV: A BED ELEVA	ATION		ELLC FC	DR PRESSURE	FLU	W.
		LEV. ON EAC		STRUCT	UDE. I	EFT:	DIC	GHT:
		SION COEF:	H SIDE OF	SIRUCI		ACTION COEF		
	ENERGY		"n" VA	LIEC.	CONTRA	ACTION COEF	•	
		MODELING						
		V FOR SELEC		11.				
	KEA501	TOR SELEC	/110IN.					
	HIGH FI	LOW METHO	D:					
		N FOR SELEC						
		1		ILICE EI			4.775	
		FOT EVO	D'00 A		LEV. AT	WSP ELEV.		VEL. AT
DISC	HARGE	EST. EXC.	Diff. At		IMON	UPSTREAN		DWNSTREAM
		(%)	Common SECNO		REAM TION	FACE OF BRIDGE		FACE OF STRUCTURE
			SECINO		NO #:	SECNO #:		SECNO #:
	(cfs)	(%)	(ft)		ft)	(ft)		(fps)
	(13)	50	(11)	(		(11)		(193)
		20						
		10						
		4						
		2						
		1-N						
		1-FW						
		0.2						
		OHW						
		H.W.						
		EVENT						
	1							
EX.#		VENT	STAGE	ELEV.	DIS	SCHARGE	F	EXC. PROB. (%)
		gn Flood						
		ping Flood e Flood						
	Dast	2 1 100u		REMA	₹KS•			
				1312191731	XIXU+			

#### **DOCUMENTATION OF STEPS TAKEN FOR PROPOSED MODEL - SCHEME #:**

Comment on modification to existing conditions model to develop the proposed model

COUR POTENTIAL: SEE EX. #       FOR COMPUTATIONS AND PLOT         SUMMARY OF RESULTS:       FOR COMPUTATIONS AND PLOT         SUPRAP RECOMMENDATIONS: IF DESIRED, CLASS , D= , OVER FILTER CLOTH BEDDING         VILL BE SATISFACTORY.         HISTORICAL RETURN PERIOD         Imate frequency of the event that caused the highwater at the existing structure is theYear or the         c. Event.
RIPRAP RECOMMENDATIONS: IF DESIRED, CLASS , D= , OVER FILTER CLOTH BEDDING VILL BE SATISFACTORY. HISTORICAL RETURN PERIOD imate frequency of the event that caused the highwater at the existing structure is theYear or the
VILL BE SATISFACTORY.  HISTORICAL RETURN PERIOD  imate frequency of the event that caused the highwater at the existing structure is theYear or the
HISTORICAL RETURN PERIOD imate frequency of the event that caused the highwater at the existing structure is theYear or the
imate frequency of the event that caused the highwater at the existing structure is theYear or the
imate frequency of the event that caused the highwater at the existing structure is theYear or the
a Examt
c. Event.
CAUSEWAY ANALYSIS RESULTS causeways for temporary construction access was not considered in this analysis. If it is subsequently found
construction access causeways for this project should be composed of: ring will/will not be required on either side y highwater will be increased byft. we profiles will not be affected. ay will not affect the water surface profile. um causeway elevation isft. the stationto station tent B stationto station ill be in place at a time.
SUMMARY