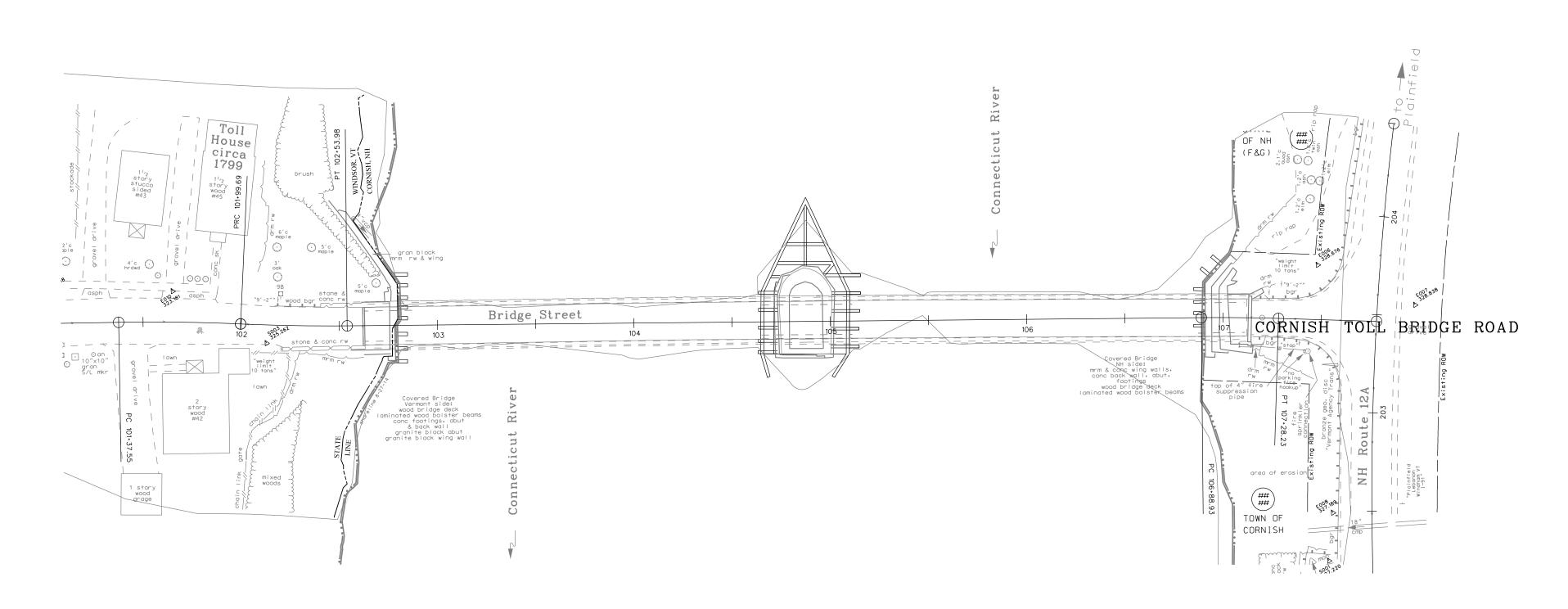
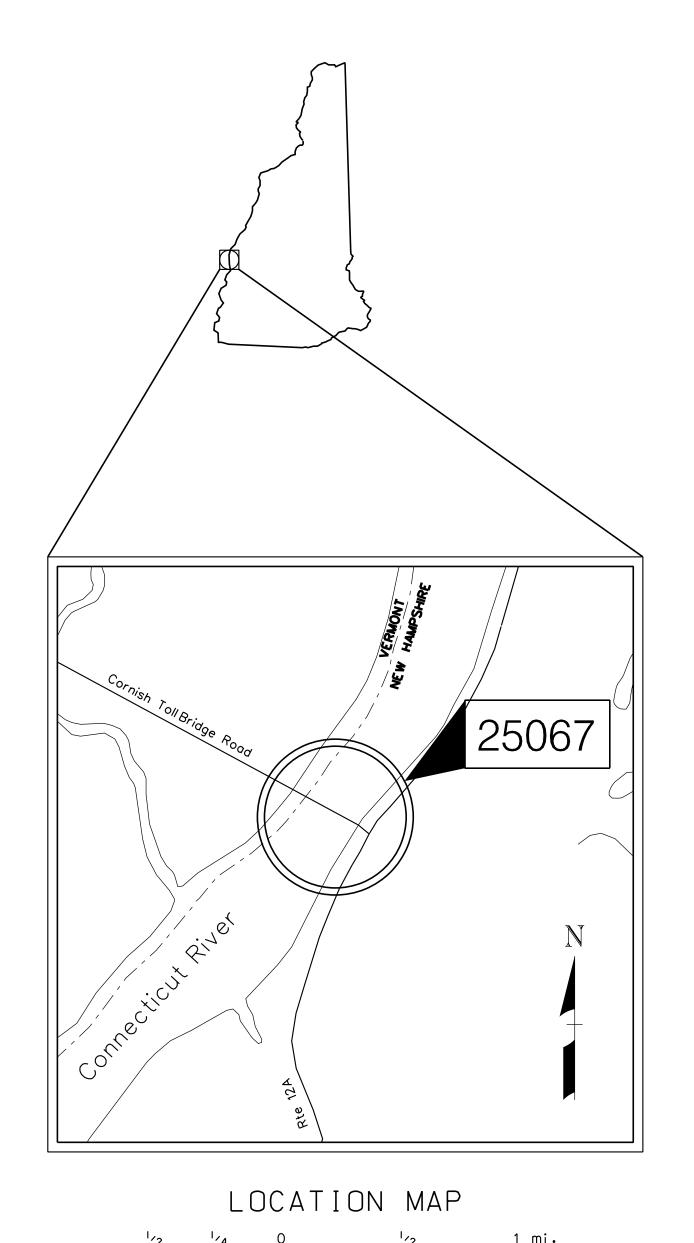
### CONSTRUCTION PLANS FEDERAL AID PROJECT

A0003(035)
N. H. PROJECT NO. 25067
CORNISH TOLL BRIDGE ROAD OVER CONNECTICUT RIVER



DESCRIPTION OF WORK: INSTALLATION OF SCOUR COUNTERMEASURES AROUND THE PIER AND ALONG BOTH ABUTMENTS.



PLANS PREPARED BY

11 King Court • Keene, NH 03431-4648

Main: (603) 357-2445 • www.chacompanies.com

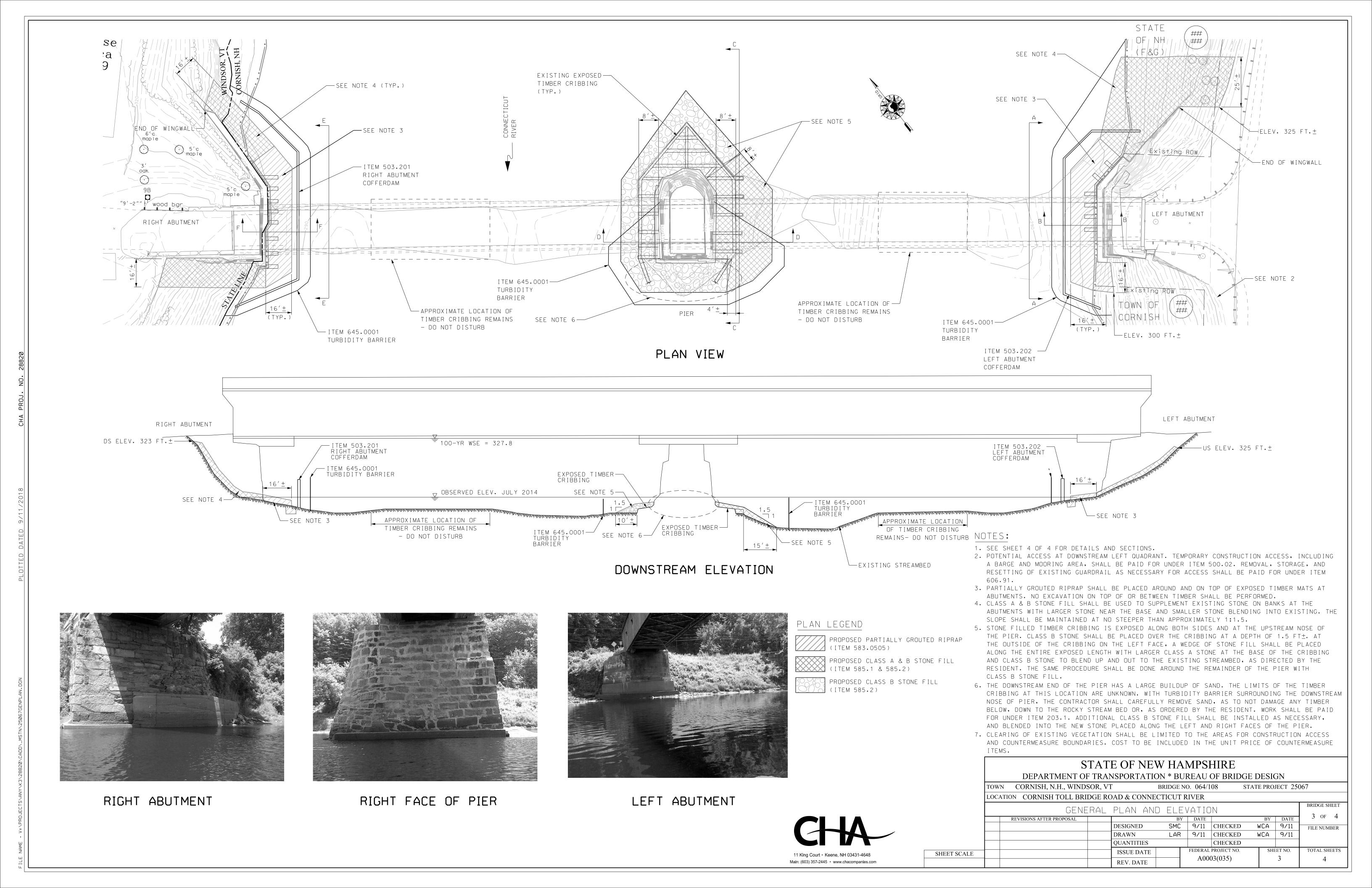
GRAPHIC SCALE

TOWN OF CORNISH, NH - WINDSOR, VT SULLIVAN COUNTY- WINDSOR COUNTY

SCALE: 1'' = 40'

PRELIMINARY
PLANS
SUBJECT TO CHANGE
DATE 9/11/2018

MH		NEW HA	TATE OF AMPSHIRE IMENT OF ORTATION			
RECOMMENDED FOR A	PPROVAL:					
DIRECTOR (	OF PROJECT DEVELOPMENT		DATE			
APPROVED:						
ASSISTANT COMMISSIONER AND CHIEF ENGINEER DATE						
U. S. DEPARTMENT OF TRANSPORTATION						
FEDERAL	HIGHWAY ADM	INISTRAT	ΓΙΟΝ			
APPROVED:						
DIVISION ADMINISTRATOR DATE						
FILE NUMBER	STATE PROJECT NO.	SHEET NO.	TOTAL SHEET			
	25067	1	4			



- (3) WATER LEVELS WITHIN THE VICINITY OF THE BRIDGE MAY BE MONITORED USING USGS GAGE 01144500.
- (4) WILDER DAM IS LOCATED APPROXIMATELY 16 MILES UPSTREAM OF THE BRIDGE, AND IS OPERATED BY TRANSCANADA. CURRENT AND FORECASTED FLOWS FOR THIS POWER GENERATION DAM MAY BE FOUND HERE: http://www.h2oline.com/default.aspx?pg=si&op=505121

### ACCESS FOR BRIDGE CONSTRUCTION

(1) ITEM 500.02, ACCESS FOR BRIDGE CONSTRUCTION, SHALL CONSIST OF THE DESIGN, CONSTRUCTION, MAINTENANCE, AND REMOVAL OF ALL TEMPORARY ACCESS NEEDED BY THE CONTRACTOR.

### COFFERDAMS

- (1) ALL ITEMS COVERED UNDER SECTION 503 OF THE SPECIFICATIONS SHALL BE PREPARED BY A PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF N.H. THE CONTRACTOR SHALL SUBMIT STAMPED AND SIGNED WORKING DRAWINGS AND CALCULATIONS FOR REVIEW AND DOCUMENTATION IN ACCORDANCE WITH SECTION 105.02.
- (2) COFFERDAMS ARE REQUIRED AT EACH ABUTMENT LOCATION TO CONTROL THE STREAM INFLOW AND ADEQUATELY DEWATER THE COUNTERMEASURE INSTALLATION, SUMP PUMPING AREAS AROUND THE ENTIRE PERIMETER MAY BE REQUIRED TO ADEQUATELY CONTROL THE INFLOW OF WATER WITHIN THE AREA, DEPENDING ON THE AVERAGE RIVER LEVEL CONDITIONS AT THE TIME OF CONSTRUCTION AND THE CONTRACTOR'S METHOD OF DEWATERING, ALL COSTS FOR MATERIALS, INSTALLATION, DEWATERING, MAINTENANCE AND REMOVAL SHALL BE INCLUDED IN THE COFFERDAMS ITEMS.
- (3) CONTROL OF WATER WITHIN THE COFFERDAMS SHALL BE CONDUCTED IN SUCH A MANNER AS TO PREVENT DISTURBANCE OF THE BEARING SOIL. PUMPING AREAS SHALL BE LOCATED OUTSIDE THE COUNTERMEASURE LIMITS, WITHIN THE COFFERDAMS, AND PROPERLY FILTERED TO PREVENT THE PUMPING OF FINES.
- (4) THE CONTRACTOR SHALL BE REQUIRED TO GROUT IN THE DRY.
- (5) IT SHOULD BE NOTED THAT IN SOME LOCATIONS PRE-EXCAVATION OF COBBLES AND BOULDERS MAY BE REQUIRED PRIOR TO PLACING COFFERDAMS AND TURBIDITY BARRIERS. DURING EXCAVATION THE CONTRACTOR SHALL DISTURB THE AREA AS LITTLE AS POSSIBLE AND USE NECESSARY PRECAUTIONS TO MINIMIZE THE IMPACTS TO THE RIVER. ALL COSTS INCLUDED IN THE COFFERDAM ITEMS.

	SUMMARY OF BRIDGE QUANTITIES	
ITEM NUMBER	DESCTIPTION	UNIT
203.1	COMMON EXCAVATION	CY
304.6	CRUSHED STONE (VERY COARSE)	CY
500.02	ACCESS FOR BRIDGE CONSTRUCTION	U
503.201	COFFERDAMS	U
503.202	COFFERDAMS	U
583.0505	PARTIALLY GROUTED RIPRAP	CY
585.1	STONE FILL, CLASS A	CY
585.2	STONE FILL, CLASS B	CY
606.91	RESETTING OR SETTING GUARDRAIL	LF
645.0001	EROSION CONTROL TURBIDITY BARRIER	LF



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#### STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION \* BUREAU OF BRIDGE DESIGN TOWN CORNISH, N.H., WINDSOR, VT BRIDGE NO. 064/108 STATE PROJECT 25067 LOCATION CORNISH TOLL BRIDGE ROAD & CONNECTICUT RIVER BRIDGE SHEET GENERAL NOTES AND ESTIMATE 2 of 4 REVISIONS AFTER PROPOSAL DESIGNED SMC 9/11 CHECKED WCA 9/11 LAR 9/11 CHECKED WCA 9/11 DRAWN CHECKED QUANTITIES FEDERAL PROJECT NO. TOTAL SHEETS **ISSUE DATE** SHEET NO.

REV. DATE

SHEET SCALE A0003(035) DREISSED AND ROUGH CUT MORTARED STONE BLOCK PIER WALL GRAVEL FILLED

SEE NOTE 5 —

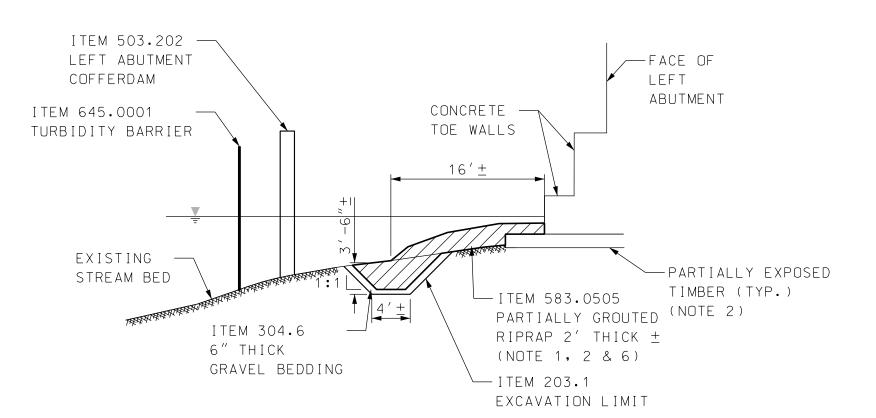
EXPOSED TIMBER (TYP.) —

ITEM 645.0001—

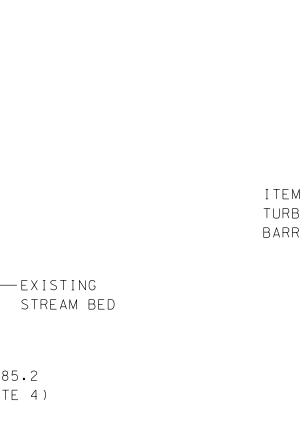
(NOTE 4)

TURBIDITY

BARRIER



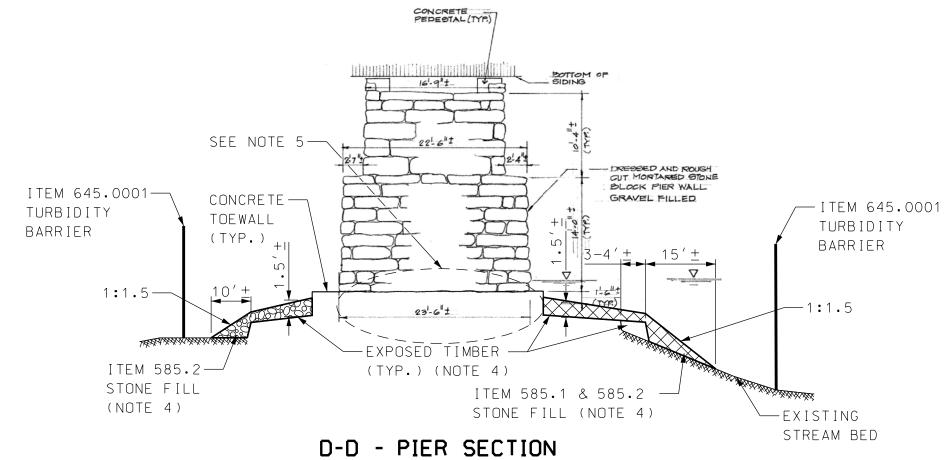
B-B - LEFT ABUTMENT SECTION

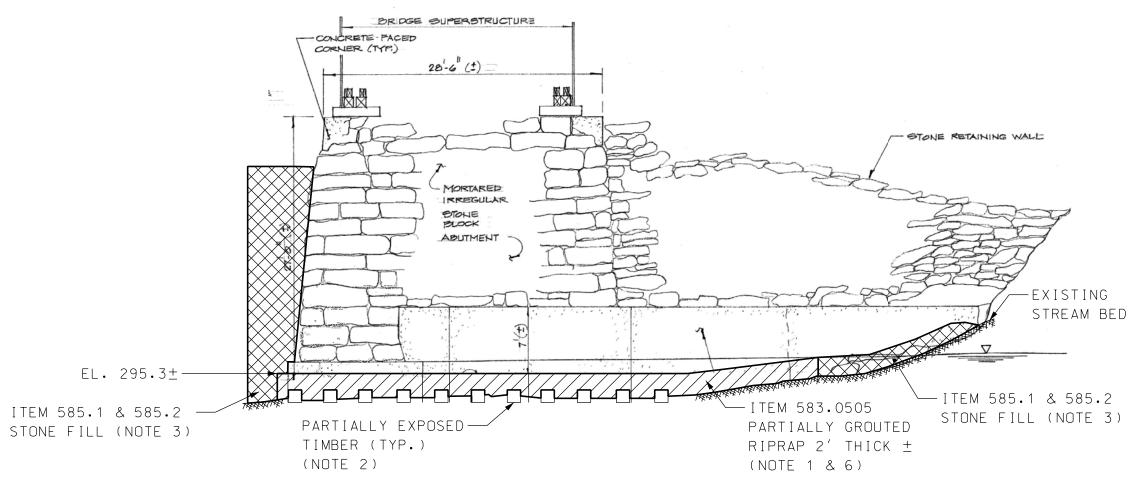


-ITEM 585.1 & 585.2

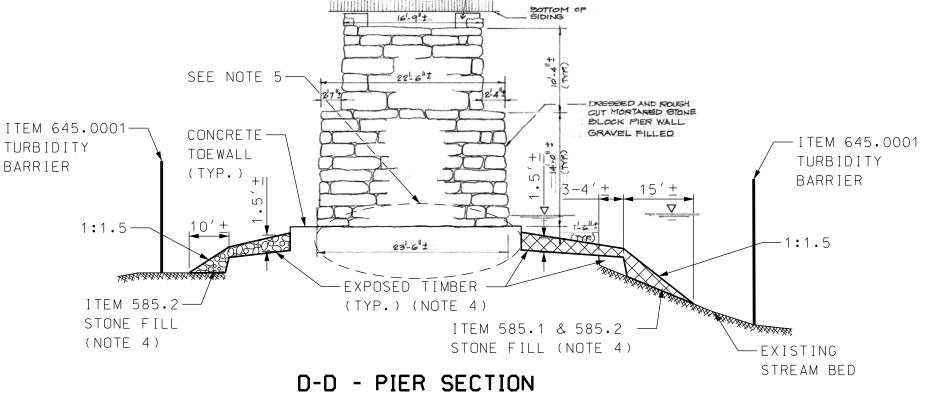
STONE FILL (NOTE 4)

C-C - LEFT FACE OF PIER





E-E - RIGHT ABUTMENT ELEVATION



### PLAN LEGEND:



PROPOSED PARTIALLY GROUTED RIPRAP (ITEM 583.0505)

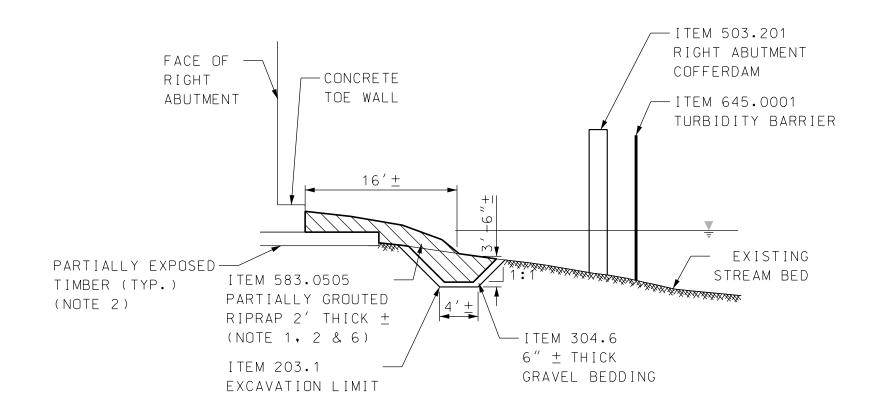


PROPOSED CLASS A & B STONE FILL (ITEM 585.1 & 585.2)



PROPOSED CLASS B STONE FILL (ITEM 585.2)





F-F - RIGHT ABUTMENT SECTION

### NOTES:

- 1. PARTIALLY GROUTED RIPRAP (PGR) AT ABUTMENTS SHALL BE PLACED UNDER DRY CONDITIONS UTILIZING COFFERDAMS, CONDITIONS SHALL REMAIN DRY FOR APPROXIMATELY 4 HOURS AFTER GROUT APPLICATION HAS BEEN COMPLETED. THE COFFERDAMS SHALL REMAIN IN PLACE FOR 24 HOURS FOLLOWING COMPLETION OF THE PGR INSTALLATION, AFTER WHICH THEY SHALL BE COMPLETELY REMOVED. WATER DOWNSTREAM OF GROUTING OPERATION SHALL BE MONITORED FOR PH INCREASES UNTIL INSTALLATION IS COMPLETE.
- 2. PARTIALLY GROUTED RIPRAP SHALL BE PLACED AROUND AND ON TOP OF EXPOSED TIMBER MATS AT ABUTMENTS. NO EXCAVATION ON TOP OF OR BETWEEN TIMBERS SHALL BE PERFORMED.
- 3. CLASS A & B STONE FILL SHALL BE USED TO SUPPLEMENT EXISTING STONE ON BANKS AT ABUTMENTS WITH LARGER STONE NEAR THE BASE AND SMALLER STONE BLENDING INTO EXISTING. THE SLOPE SHALL BE MAINTAINED AT NO STEEPER THAN APPROXIMATELY 1:1.5.
- 4. STONE FILLED TIMBER CRIBBING IS EXPOSED ALONG BOTH SIDES AND AT THE UPSTREAM NOSE OF THE PIER, CLASS B STONE SHALL BE PLACED OVER THE CRIBBING AT A DEPTH OF 1.5 FT  $\pm$ . AT THE OUTSIDE OF THE CRIBBING ON THE LEFT FACE, A WEDGE OF STONE FILL SHALL BE PLACED ALONG THE ENTIRE EXPOSED LENGTH WITH LARGER CLASS A STONE AT THE BASE OF THE CRIBBING AND CLASS B STONE TO BLEND UP AND OUT TO THE EXISTING STREAMBED, AS DIRECTED BY THE RESIDENT. THE SAME PROCEDURE SHALL BE DONE AROUND REMAINDER OF THE PIER WITH CLASS B STONE FILL.
- 5. THE DOWNSTREAM END OF THE PIER HAS A LARGE BUILD UP OF SAND. THE LIMITS OF THE TIMBER CRIBBING AT THIS LOCATION ARE UNKNOWN, WITH TURBIDITY BARRIER SURROUNDING THE DOWNSTREAM NOSE OF THE PIER, THE CONTRACTOR SHALL CAREFULLY REMOVE SAND, AS TO NOT DAMAGE ANY TIMBER BELOW, DOWN TO THE ROCKY STREAM BED, OR AS ORDERED BY THE RESIDENT, WORK SHALL BE PAID FOR UNDER ITEM 203.1. ADDITIONAL CLASS B STONE FILL SHALL BE INSTALLED AS NECESSARY, AND BLENDED INTO THE NEW STONE PLACED ALONG THE LEFT AND RIGHT FACES OF THE PIER.
- 6. AS ORDERED BY RESIDENT, EXISTING STONE AROUND ABUTMENTS MAY BE INCORPORATED INTO THE NEW PARTIALLY GROUTED RIPRAP.

STATE OF NEW HAMPSHIRE									
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN									
WN CORNISH, N.H., WINDSOR, VT BRIDGE NO. 064/108 STATE PROJECT 2506							067		
CATION CORNISH TOLL BRIDGE ROAD & CONNECTICUT RIVER									
COUNTERMEASURE DETAILS									BRIDGE SHEET
	REVISIONS AFTER PROPOSAL			В	Y DATE		BY	DATE	4 of 4
			DESIGNED	SMC	9/11	CHECKED	WCA	9/11	FILE NUMBER
			DRAWN	LAR	9/11	CHECKED	WCA	9/11	
			QUANTITIES			CHECKED			
			ICCLIE DATE		FEDERAL	PROJECT NO.	SHEET NO.		TOTAL SHEETS

SHEET SCALE ISSUE DATE A0003(035) REV. DATE



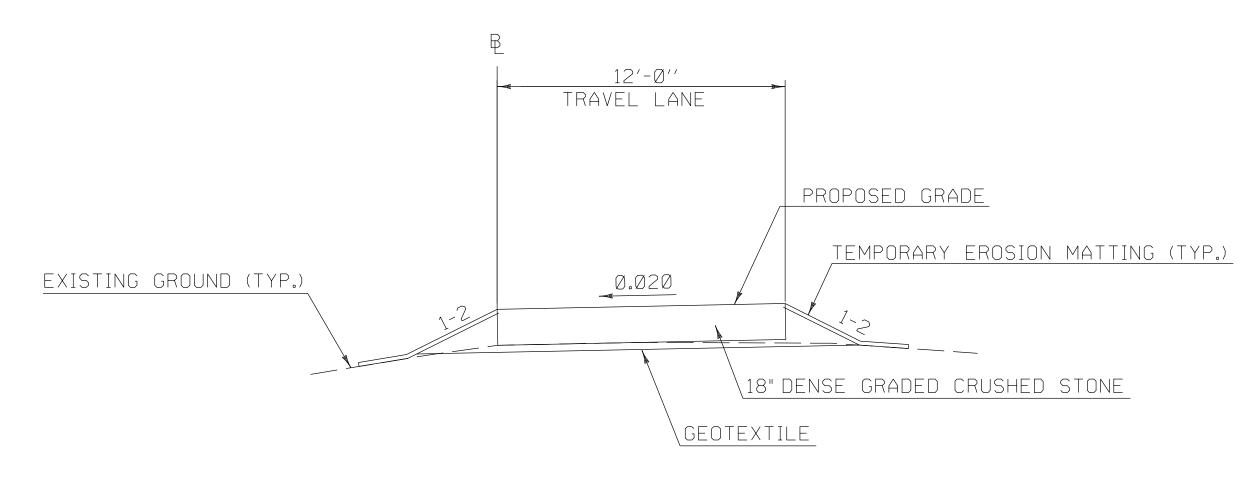
FILE NAME = V;\Projects\ANY\K3\28820\CADD\\_MSTN\2506` Date/time = 6/19/2018

## PROFILE - CONSTRUCTION ACCESS

SCALE: HORIZONTAL 1" = 20' VERTICAL 1" = 10'

# TYPICAL SECTION ACCESS ROUTE

18" DENSE GRADED CRUSHED STONE

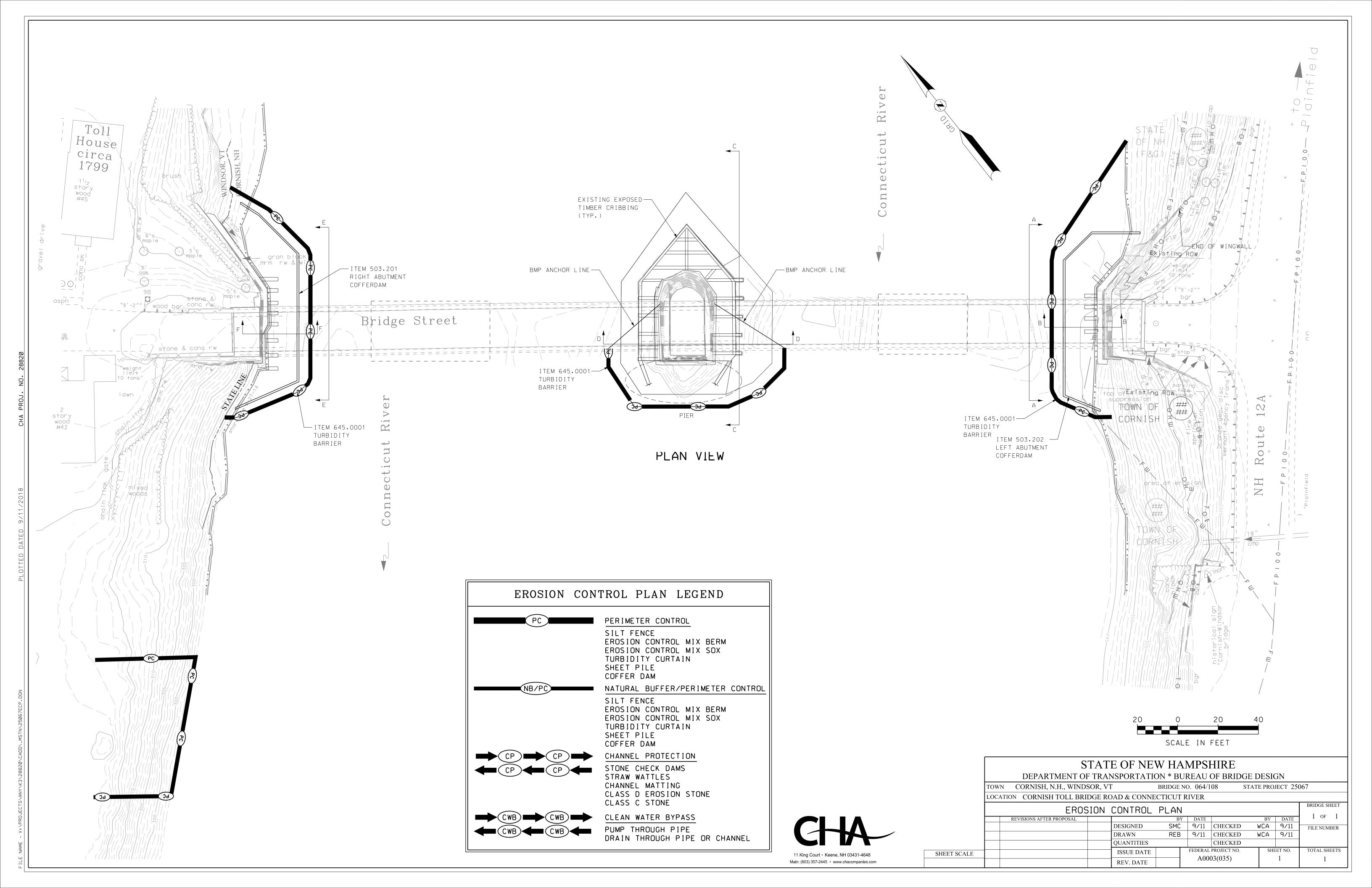


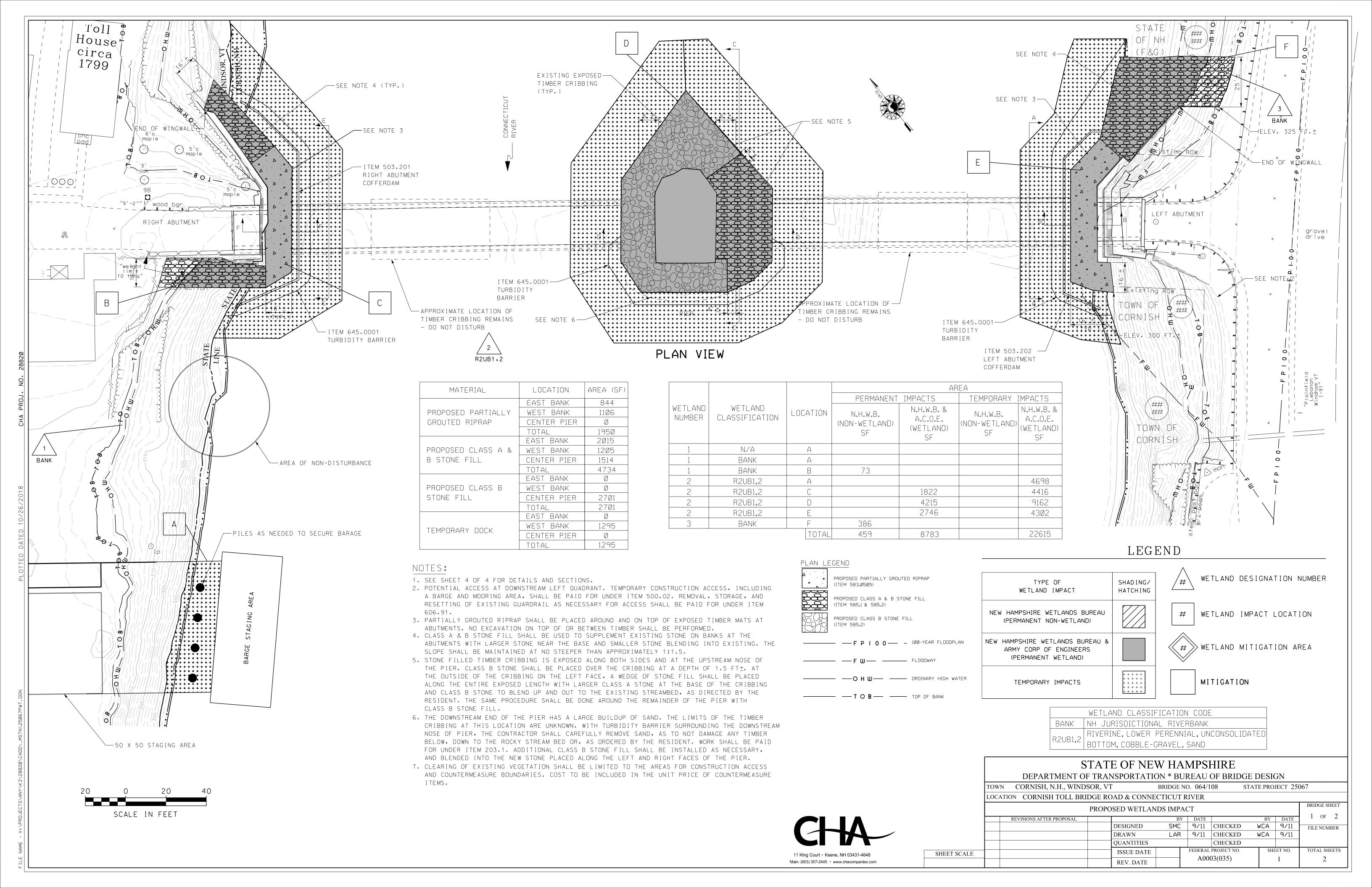
NORMAL SECTION SCALE:  $\frac{1}{4}$ " = 1'-0"

PROJECT NAME: WINDSOR-CORNISH BRIDGE CONSTRUCTION ACCESS

PROJECT NUMBER: NH 25067

FILE NAME: 25067DET.dgn PROJECT LEADER: DESIGNED BY: PLOT DATE: 06/07/2018 DRAWN BY: REB CHECKED BY: WCA SHEET 2 OF 2





### PLAN LEGEND



PROPOSED PARTIALLY GROUTED RIPRAP
(ITEM 583.0505)

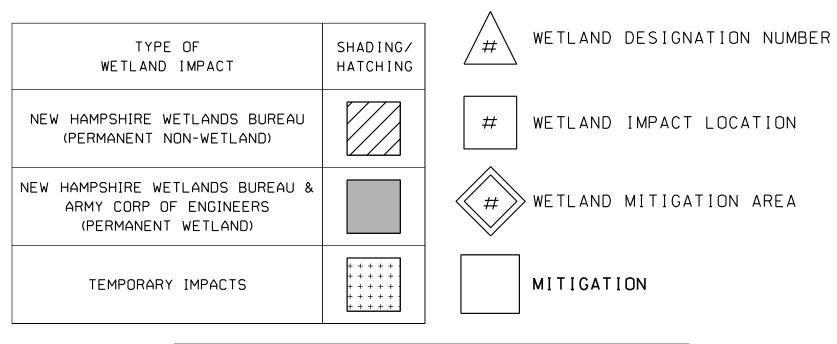
PROPOSED CLASS A & B STONE FILL (ITEM 585.1 & 585.2)

PROPOSED CLASS B STONE FILL (ITEM 585.2)

### NOTES:

- 1. SEE SHEET 4 OF 4 FOR DETAILS AND SECTIONS.
- 2. POTENTIAL ACCESS AT DOWNSTREAM LEFT QUADRANT. TEMPORARY CONSTRUCTION ACCESS, INCLUDING A BARGE AND MOORING AREA, SHALL BE PAID FOR UNDER ITEM 500.02. REMOVAL, STORAGE, AND RESETTING OF EXISTING GUARDRAIL AS NECESSARY FOR ACCESS SHALL BE PAID FOR UNDER ITEM 606.91.
- 3. PARTIALLY GROUTED RIPRAP SHALL BE PLACED AROUND AND ON TOP OF EXPOSED TIMBER MATS AT ABUTMENTS, NO EXCAVATION ON TOP OF OR BETWEEN TIMBER SHALL BE PERFORMED.
- 4. CLASS A & B STONE FILL SHALL BE USED TO SUPPLEMENT EXISTING STONE ON BANKS AT THE ABUTMENTS WITH LARGER STONE NEAR THE BASE AND SMALLER STONE BLENDING INTO EXISTING. THE SLOPE SHALL BE MAINTAINED AT NO STEEPER THAN APPROXIMATELY 1:1.5.
- 5. STONE FILLED TIMBER CRIBBING IS EXPOSED ALONG BOTH SIDES AND AT THE UPSTREAM NOSE OF THE PIER. CLASS B STONE SHALL BE PLACED OVER THE CRIBBING AT A DEPTH OF 1.5 FT±. AT THE OUTSIDE OF THE CRIBBING ON THE LEFT FACE, A WEDGE OF STONE FILL SHALL BE PLACED ALONG THE ENTIRE EXPOSED LENGTH WITH LARGER CLASS A STONE AT THE BASE OF THE CRIBBING AND CLASS B STONE TO BLEND UP AND OUT TO THE EXISTING STREAMBED, AS DIRECTED BY THE RESIDENT. THE SAME PROCEDURE SHALL BE DONE AROUND THE REMAINDER OF THE PIER WITH CLASS B STONE FILL.
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- 7. CLEARING OF EXISTING VEGETATION SHALL BE LIMITED TO THE AREAS FOR CONSTRUCTION ACCESS AND COUNTERMEASURE BOUNDARIES, COST TO BE INCLUDED IN THE UNIT PRICE OF COUNTERMEASURE ITEMS.

### LEGEND



		WETLAND CLASSIFICATION CODE
		NH JURISDICTIONAL RIVERBANK
	R2UB1,2	RIVERINE, LOWER PERENNIAL, UNCONSOLIDATED BOTTOM, COBBLE-GRAVEL, SAND
		BOTTOM, COBBLE-GRAVEL, SAND

### STATE OF NEW HAMPSHIRE

DEPARTMENT OF TRANSPORTATION \* BUREAU OF BRIDGE DESIGN

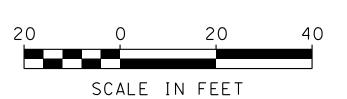
TOWN CORNISH, N.H., WINDSOR, VT BRIDGE NO. 064/108 STATE PROJECT 25067

LOCATION CORNISH TOLL BRIDGE ROAD & CONNECTICUT RIVER

PROPOSED WETLANDS IMPACT

BRIDGE S

	PROPOSED WETLANDS IMPACT							BRIDGE SHEET	
						I	DIV	D. L. TER	2 of 2
		REVISIONS AFTER PROPOSAL		BY	DATE		BY	DATE	
			DESIGNED	SMC	9/11	CHECKED	WCA	9/11	FILE NUMBER
			DRAWN	LAR	9/11	CHECKED	WCA	9/11	
			QUANTITIES			CHECKED			
SHEET SCALE			ISSUE DATE		FEDERAL PROJECT NO. SHI $A0003(035)$		SH	EET NO.	TOTAL SHEETS
			REV. DATE				2	2	





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