

Zippel Bay Project

Alternate A

DATE
PAGE NO.
CHECK NO.

DATE	DESCRIPTION	DEBIT	CREDIT	BALANCE
9/30/82	#590 - Coony - 17 1/2 hrs @ 7.55 Ducklin - 33 hrs @ 7.96 Carbon - 12 1/2 hrs @ 7.66	130.24 252.78 95.75		478.77
9/16/82	#589 Ducklin - 17 1/2 hrs @ 7.55	134.05		612.82
October	Clayton Ladness - 18 hrs. Cat @ \$50	925.00		1537.82
-1983	Balance Forward			1537.82
March 26	#607. Bunkin - 11 hrs @ 7.55	107.21		1645.03
	John - 17 1/2 hrs @ 7.55	130.39		1775.35
-May	U#32 - 20 hrs @ \$12	240.00		
	U#33 - 13 hrs @ \$18	234.00		
	U#34 - 125 hrs @ \$18	2375		2273.10
6/9/83	#608 - Carbon - 8 1/2 hrs @ 7.55	67.03		
	-Crompton - 8 1/2 hrs @ 6.97	57.50		2397.63
June	Wan Crompton - 7 hrs @ \$30 Cat @ \$36	270.00		
	Longer Ladness - 2 hrs @ 7.55 @ 8.75	12.50		
	Spitt Const. - 13 hrs @ \$30 @ \$23.50	435.50		3195.13
Sept. 15	Trstr. from Revenue - DNR Benidji		1030.00	5135.13
	1983 Balance Forward			2165.13

SHEET NO. _____

ACCOUNT NO. _____

TERMS _____

NAME

Lippel Bay Project
"Alternative C"

RATING _____

ADDRESS _____

CREDIT LIMIT _____

Boorum & Pease
1-5109

	DATE	ITEMS	FOL.	DEBITS	CREDITS	BALANCE
	19 <u>83</u>					
May	12	#606- thinned - 2 1/2 hrs.		27 50		27 50
	26	#607- Crompton - 12 hrs. @ 6.97		83 64		111 14
		Hanson - 11 1/2 hrs @ 7.55		86 83		197 97
		thinned - 4 1/2 hrs @ 15.35		61 88		259 85
		Sindelir - 12 hrs @ 7.55		91 92		351 77
June	9	#608- Crompton - 2 hrs @ 6.97		51 69		
		5 hrs @ 7.55				
		Jadness - 2 hrs @ 7.55		15 10		
		Hanson - 14 3/4 hrs @ 7.55		111 36		
		Hines - 11 1/2 hrs @ 13.75		158 13		
		Sindelir - 7 hrs @ 7.66		53 62		741 67
June	23	#609- thinned - 3 1/2 hrs @ 13.75		48 13		789 80
July		Equip. Rental - U#34 - 47 mi @ 19¢		8 93		798 73
Aug	4	#612- Sindelir - 6 hrs @ 7.55		47 46		846 19
	18	#613- Sindelir - 3 1/2 hrs @ 7.55		27 69		873 88
		Equip. Rental - U#34 - 44 mi @ 19¢		8 36		882 24
		24' - 12" CMP		103 92		986 16
Sept.	15	#615- Sindelir - 1 1/2 hrs @ 9.00		13 50		999 66
		Trans. to Inventory - 24' - 12" CMP			10 392	895 74
		1983 Balance Forward				895 74
1984						
Mar.	15	Bay #628- Crompton - 6 1/2 hrs @ 7.80		50 70		946 44
		- Hanson - 6 hrs @ 7.80		46 80		993 24

w/ Overheads:
\$ 1,387.08

Gary

Supplemental Estimate

Dredge from sta. 25+00 to 27+50 (250')

18 In. @ \$135.⁰⁰ = \$ 2430.⁻

less:

278 cy. @ \$1,9365
(previously allowed) -538.³⁵

Net certified work. \$ 1,891.⁶⁵

less: 5% retainage 94.⁶⁵

Balance Due \$ 1,797.⁰⁰

15 Nov. 1983

Robert J. [Signature]

Contractor's statement attached.

ELWOOD EHRENSTROM CO.

Contractor

Dewey Avenue North
Thief River Falls, Minnesota 56701

STEEL ERECTION
EXCAVATING
PILE DRIVING
DRAINAGE
DOZING
CRANWORK

DEAR SIRS:

IN ORDER TO COMPLETE CHANNEL EXCAVATION AT ZIPPEL BAY AS PLANNED, ADDITIONAL DREDGING WAS REQUIRED THROUGH THE BEACH AREA. ALTHOUGH THIS AREA WAS PREVIOUSLY EXCAVATED, WE FOUND ABOUT TWO FEET OF MATERIAL PLUS MANY LARGE ROCK THAT LAY WITHIN THE CHANNEL AREA WHICH HAD TO BE BURIED.

THIS EXTRA WORK ENABLED US TO EXCAVATE THE ENTIRE CHANNEL TO FINISHED GRADE.

A TOTAL OF THIRTY SIX HOURS WERE REQUIRED TO COMPLETE THIS EXTRA WORK, HOWEVER, SINCE THIS WAS A NONE BUDGET ITEM WE WILL REDUCE THE TOTAL HOURS TO EIGHTEEN. WE FEEL THIS IS A FAIR ADJUSTMENT.

SINCERELY,
Elwood Ehrenstrom

STATEMENT

Thief River Falls, Minn. Nov. 1, 1983

M L. O. W. County

IN ACCOUNT WITH

ELWOOD EHRENSTROM CO.
Contractor

Dewey Avenue North

Est. # 2 C.P. 83-03

Item #

1.	Mobilization		
2	Dogged	4 1/2 hr. @ 30 ⁰⁰	135. ⁰⁰
4.	Channel Exc.		
5.	Dredge (EXTRA)	18 hr. @ 135. ⁰⁰	2430. ⁰⁰

E. Ehrenstrom


FINAL PAYMENT ESTIMATE

C.P. 83-03
Zippel Bay Channel Excavation

Ehrenstrom Construction Company
Thief River Falls, MN

<u>Item No.</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit Price</u>	<u>Amount</u>
1 2021.501	Mobilization	Lump Sum	\$2,500.00	\$ 2,500.00
3 2123.509	Dozer	4½ Hours	30.00	135.00
4 0105.511	Unclassified Channel Excavation	5,352 C.Y.	1.9365	10,364.15
5	Dredge	18 Hours	135.00	<u>2,430.00</u>
				\$15,429.15
	Less Previous Payments:			<u>(14,657.71)</u>
	Final Payment (No Retainage)			\$ 771.44

I hereby certify that the items of work above have been actually furnished in accordance with the plans and specifications and that the work is 100% complete.


 Patrick J. Hines
 County Highway Engineer

ZIPPEL BAY
RECREATION
AREA

LAKE
OF
THE
WOODS

ZIPPEL
BAY

DISCHARGE

MN DNR
HARBOR

MN DNR
SWIMMING BEACH

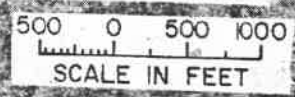
RIVER

ZIPPEL BAY
STATE RECREATION
AREA

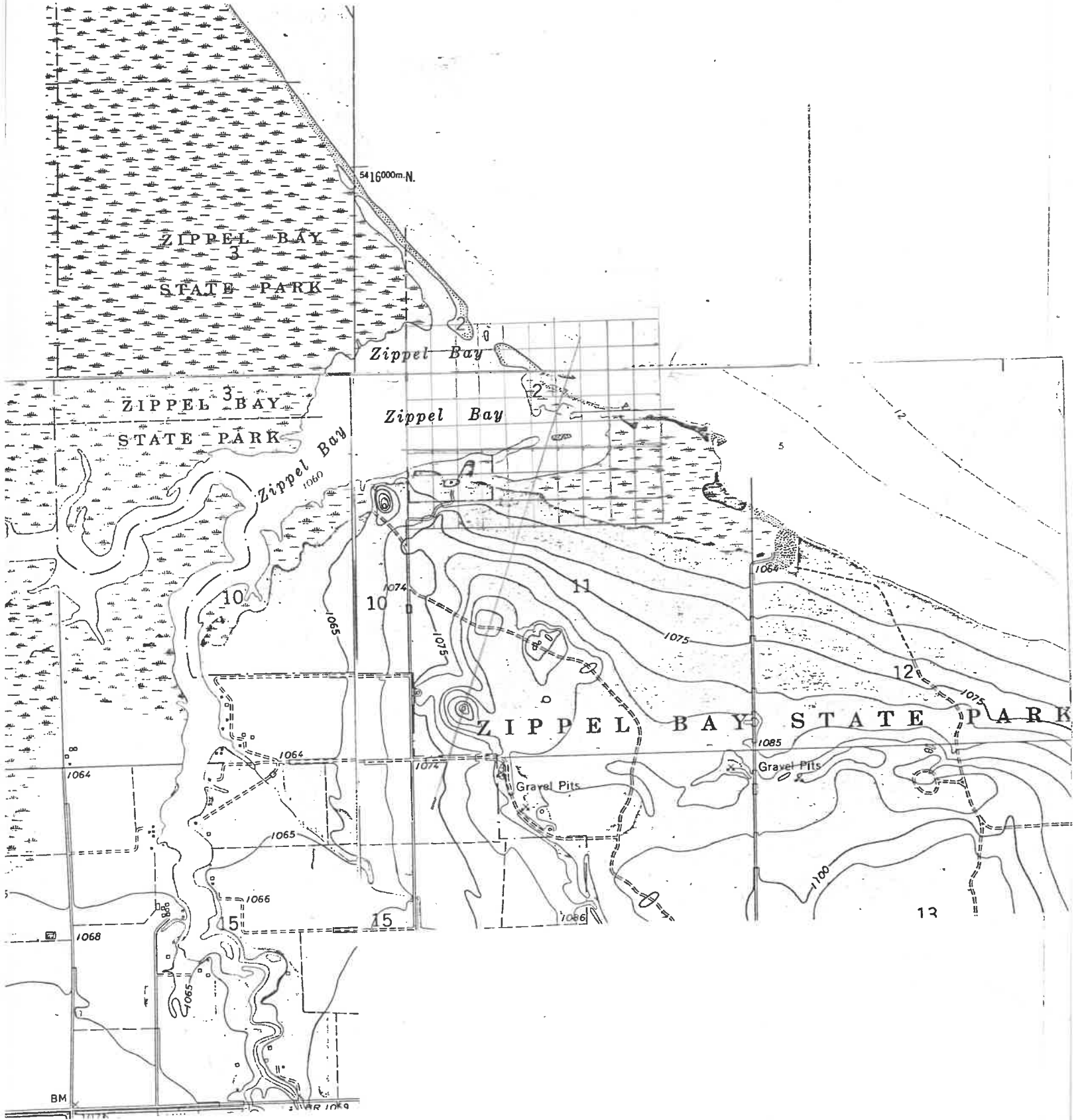
ZIPPEL
SOUTH BRANCH

SECTION 107 DETAILED PROJECT REPORT

ZIPPEL BAY CHANNEL PROJECT
STUDY AREA

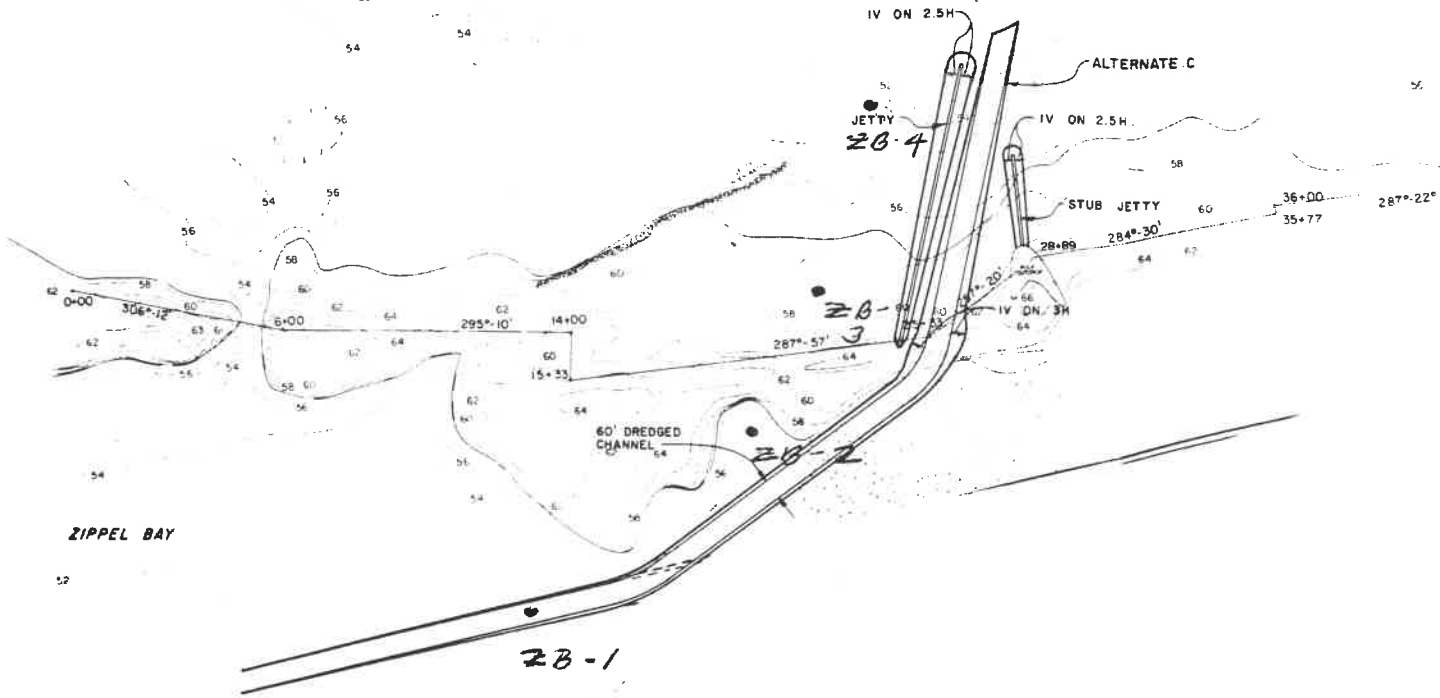


NOVEMBER 1981



ENCLOSURE

LAKE OF THE WOODS



ZIPPEL BAY



June 6, 1983

ENGINEER'S ESTIMATE

C.P. 83-03

Zippel Bay at Lake of the Woods

<u>Item No.</u>	<u>Item Description</u>	<u>Quantity</u>	<u>Unit Price</u>	<u>Extended Price</u>
2021.501	Mobilization	Lump Sum	\$1,000.00	\$ 1,000.00
2105.501	Common Excavation	5,245 c.y.	1.00	5,245.00
2123.509	Dozer	60 Hr.	49.00	2,940.00
0105.511.	Unclassified Channel Excavation	4,432 c.y.	2.50	<u>11,080.00</u>
		Total Construction Cost		\$20,265.00
		Engineering (±5%)		<u>1,015.00</u>
		Total Project Cost		<u>\$21,280.00</u>

Design Summary
Zippel Bay Channel Excavation

I. Excavation Volumes

Perform as much Common Excavation as possible with overland machinery and deposit material above elevation 1061.25 at least 150' distant from channel centerline.

Perform Unclassified Channel Excavation (remaining excavation) with hydraulic dredge and deposit spoil material in a retention pond westerly of the channel.

Common Excavation (Est. Sta. 23+50 to 29+00)	5,245 c.y.
Unclassified Channel Excavation (Est. Sta. 18+00 to 23+50 and 29+00 to 32+40)	<u>4,432</u> c.y.
Total Excavation	9,677 c.y.

II. Spoil Volume

Assume dredge spoil will be 50% water.

$$4,432 \text{ c.y.} \times 27 \times 2.0 = 239,300 \text{ cu.ft.}$$

Approximate dredging time (based upon 2000 gpm, 30% efficiency)

$$\frac{(239,300 \text{ cu.ft.})(7.48 \text{ gal./cu.ft.})}{(.30)(2000 \text{ gpm})(60 \text{ min./hr.})} = 49.7 \text{ hr.}$$

Use: 55 hrs.

III. Detention Pond

Build a detention pond approximately 340' x 200' (out-to-out) top elevation 1068 with 2' of freeboard. Provide 6' top, 2:1 outslopes, 3:1 inslopes. Construct berms from material within the detention area, (average of 1-3/4 ft. of excavation over detention area).

Naturally occurring detention area within berms: 149,500 cu.ft.

Excavation volume for berm (3120 c.y.): 84,200 cu.ft.

Total detention volume (not incl. freeboard) 233,700 cu.ft.

$$\text{Dozer time} = \frac{3120 \text{ c.y.}}{60 \text{ c.y./hr.}} = 52 \text{ hr.}$$

Use: 60 hrs.

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

Palmer J. Hines
Date 1 June '83 Reg. No. 12086

24 Feb. 83
ATF

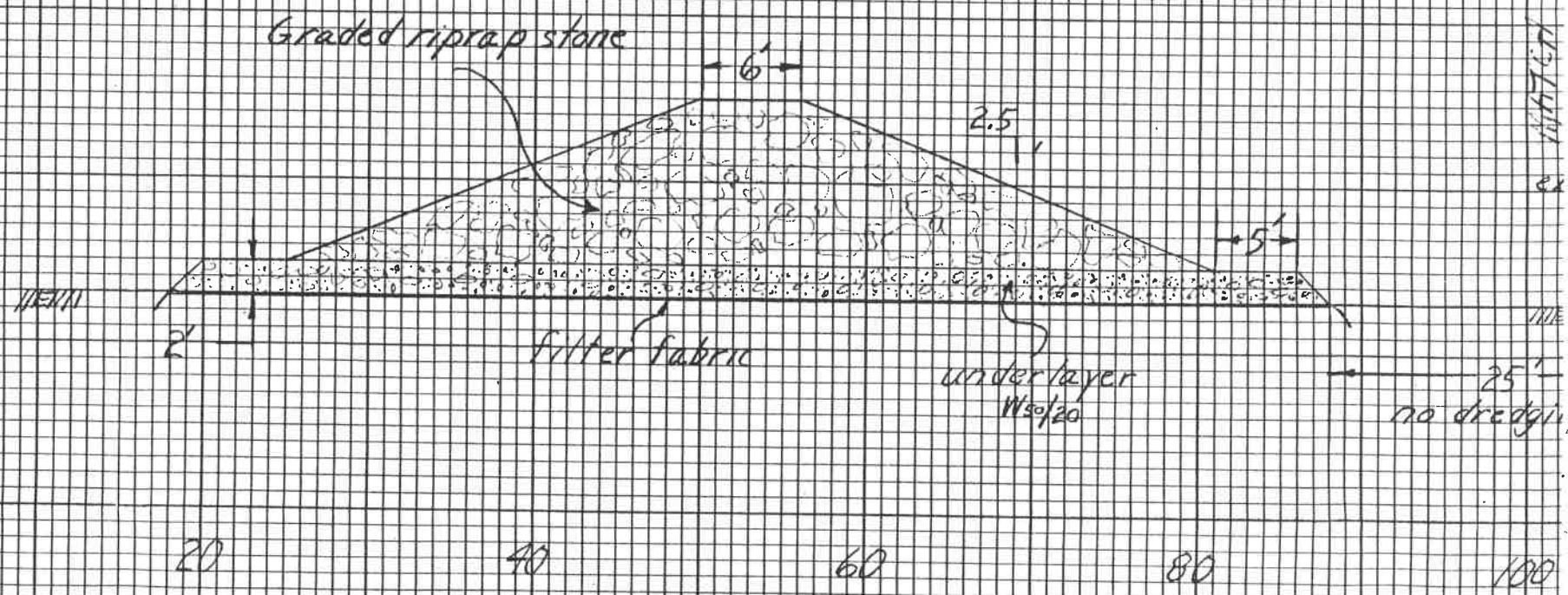
ZIPPEL BAY SEC 107 CHANNEL PROJECT

			A	A	B	B	C	C
	Unit	Unit Price	Qty	Cost	Qty	Cost	Qty	Cost
Dredging (Hydraulic)	Cy	3.50	13,000	45,500	32,700	114,450	39,500	138,250
Stone Underlayer	Cy	18.00	8,500	153,000	5,900	106,200	4,800	86,400
Filter Fabric	Sy	3.50	16,950	59,325	13,575	47,513	10,695	37,433
Riprap (Graded)	Cy	25.00	19,600	490,000	12,400	310,000	10,100	252,500
Contingencies (15%)				112,200		86,700		77,200
Total EST. Direct Costs				869,025		664,863		591,783
Engineering & Design (7%)				60,000		47,000		41,000
Supervision & Administration								
Inspection (4.5% Const)				38,700		29,900		26,600
Overhead (25% of E&D)				15,000		12,000		10,000
Overhead (25% of Insp)				9,700		7,500		7,000
Total EST. Indirect Costs				63,400		49,400		43,600
TOTAL COST				932,425		714,263		635,383
				use 923,000		use 719,000		use 635,000

PRELIMINARY

1070
1060
1050
1040

WATER LINE

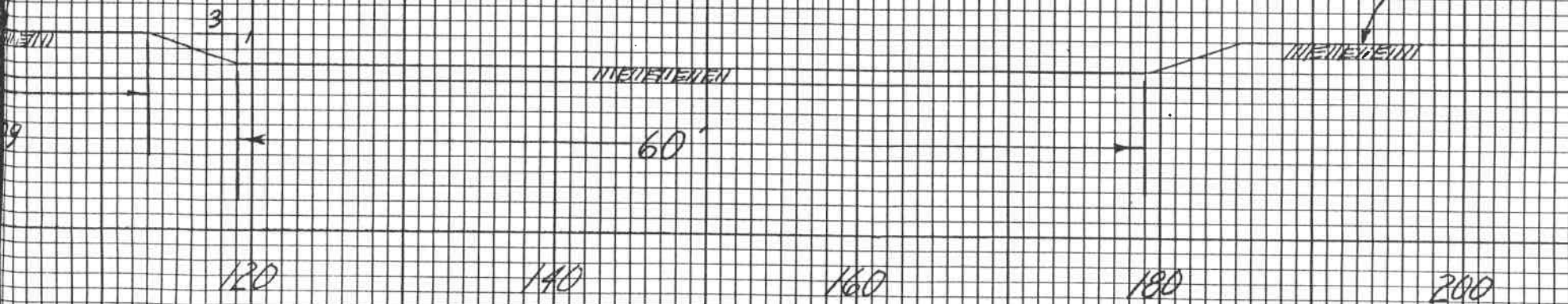


11/17/1964

existing ground

W.L. 1060

existing ground



ST. PAUL DISTRICT COMPUTATION SHEET	DATE Jan 83	COMPUTATION Typical Section	FILE NUMBER
NAME OF OFFICE Geotechnical Design		SOURCE DATA Co E Shore Protection Manual	
SUBJECT Zippel Bay Small Boat Channel	CHECKED BY	APPROVED BY	
COMPUTED BY P.D.M.			

STUB JETTY TYPICAL SECTION

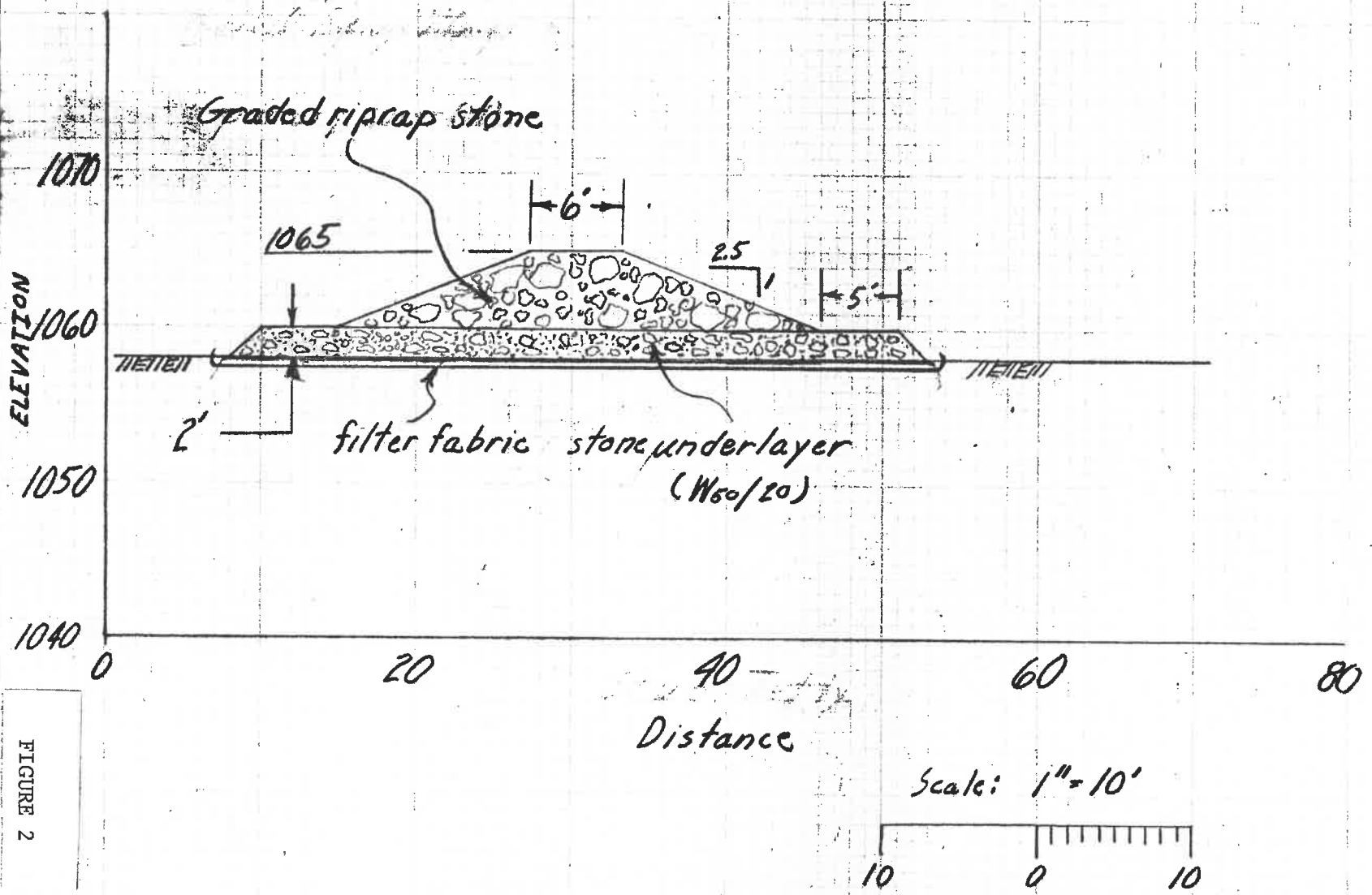


FIGURE 2



Lake of The Woods County Highway Department

BAUDETTE, MINNESOTA 56623 • (218) 634-1767

May 30, 1984

Charles Gosen
County Auditor
Courthouse
Baudette, MN 56623

Re: CP 83-03
Zippel Bay Channel Excavation

Dear Chuck:

Enclosed are two (2) copies of the final payment estimate for Ehrenstrom Construction Company in the amount of \$771.44. This estimate basically releases retainage now that all work has been completed and trimmed. Mr. Ehrenstrom has done an excellent job, and all work is to specified lines and grades.

There remains the matter of the work the County Highway Department has performed, both on "Alternate A", excavating the old channel, and "Alternate C", engineering on the new channel. Itemizations are enclosed. These funds must come from elsewhere as they are not Road and Bridge work.

Originally, I intended Alternate C engineering to be reimbursed out of our present \$25,000 project with Alternate A expenses held until the main Corps of Engineers project is accomplished. At that time we would recover Alternate A expenses through our assessment or special taxation procedures. But, Gary recently informed me that said Alternate C engineering expenses (not construction) could apply towards our share of the Corps of Engineers project.

Therefore, I propose a reverse of the above described plan. The Highway Department can hold Alternate C engineering expenses as an accounts receivable, to be dealt with when the Corps project proceeds. Alternate A expenses should be reimbursed and we can clear our books on that item.

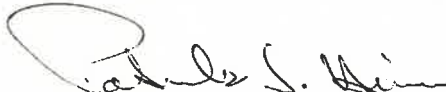
After payment of these expenses, you should present a final tabulation to the Minnesota Department of Natural Resources and request their agreed-upon participation.

This has been a most interesting project. I'm glad to see the outstanding cooperation shown not only among Department Heads, but between the County and the Mn/DNR. I hope this serves as a model for future projects whereby the

Charles Gosen
CP 83-03
Page Two

fullest extent of all available resources are brought to bear cooperatively.

Sincerely,


Patrick J. Hines
County Highway Engineer

PJH:mm

cc: Gary Lockner,
Project Manager