ALASKA LEGISLATURE COMMITTEE FILES 1981-1982 8672

2112 HT HB 209 - HB 277

2112

Alaska State Legislature

TRANSPORTATION COMMITTEE HEARINGS

DATE: 3-3-81
LOCATION: Juno
SUBJECT: HB 209

NAME	REPRESENTING	ADDRESS	PHONE	HERE TO TESTIFY	HERE TO OBSERVE
Gail Nordberg	Rep. Ken Fanning	P.O. Box 197 Auke Bay Ak	789-7371		✓

COMMITTEE REPORT

HOUSE

2/23/81 FURTHER: FINANCE

(7)

Date: ____________________

Mr. Speaker:

The Committee on TRANSPORTATION has had HB 209

"An Act making a special appropriation to the Department of Transportation and Public Facilities for dock facilities at Aleknagik; and providing for an effective date."

under consideration and (a majority of the committee) (the committee) reports it back with the following recommendations:

[x] do pass [ ] do not pass

[ ] do pass with attached amendments(s)

[x] replace with CS for HB 209 [ ] same title [x] new title

and recommends ____________________

[ ] AND attaches a "Letter of Intent" [ ] New Fiscal Note

[ ] reports it back without recommendation

[ ] referred to the ____________________ Committee

MEMBERS SIGNING
DO PASS

[signatures]

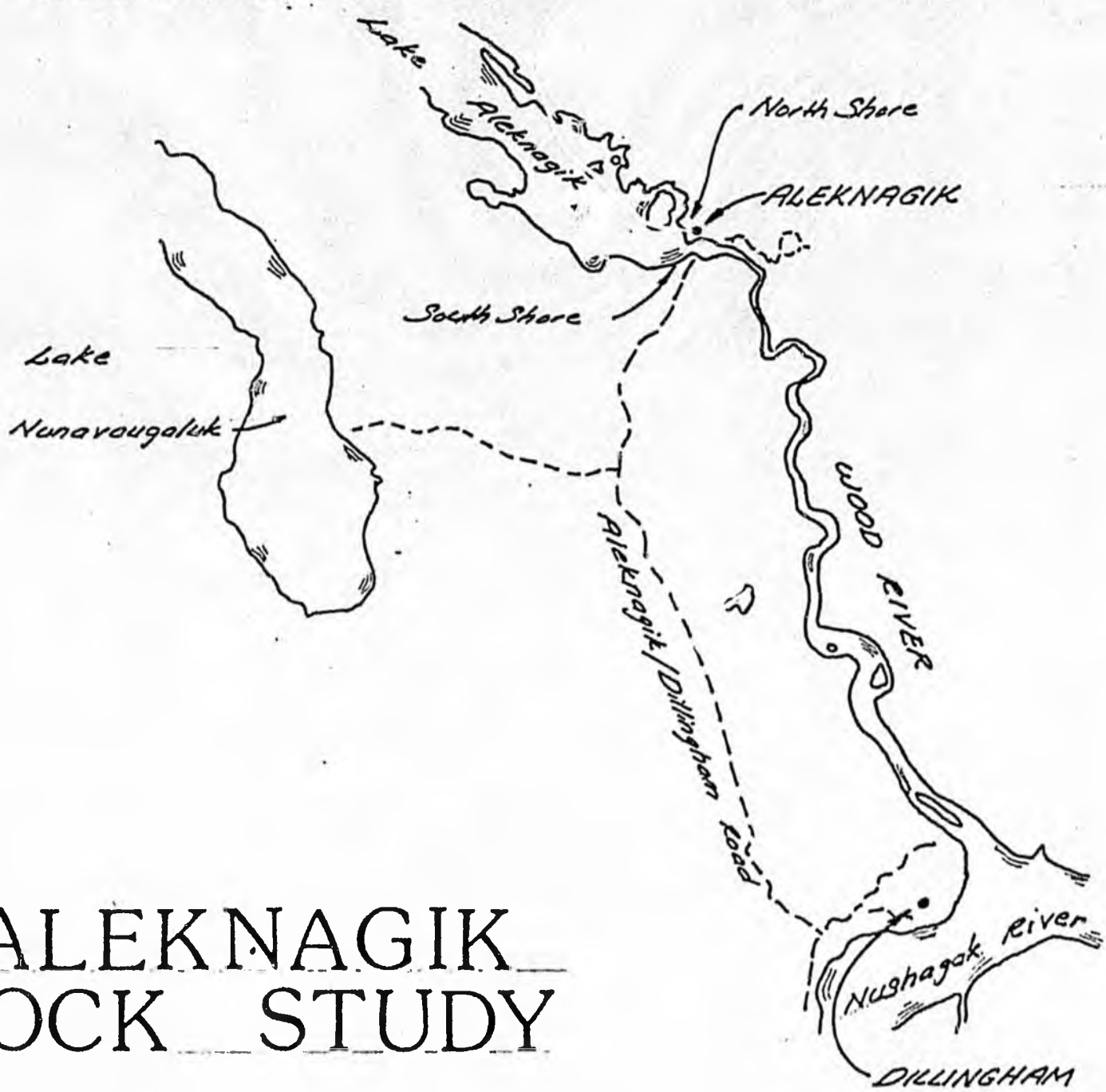
MEMBERS HAVING
OTHER RECOMMENDATIONS:

KEN FANNING - NO RECOMMENDATION

____
CHAIRMAN

H 60 (Rev. 12/78)

Engineering
(907) 586-1164
P.O. Box 208, Douglas, Alaska



ALEKNAGIK DOCK STUDY

STATE of ALASKA, DOTPF
Div. of Harbor Design & Const.

January 1981

ALEKNAGIK DOCK STUDY

PREPARED FOR:

STATE OF ALASKA

JAY HAMMOND, GOVERNOR

DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES

ROBERT W. WARD, COMMISSIONER

DIVISION OF HARBOR DESIGN AND CONSTRUCTION

DON STATER, DIRECTOR

JANUARY 1981

BY:

LIUM ENGINEERING

TABLE OF CONTENTS

ALEKNAGIK DOCK STUDY

INTRODUCTION

A professional services contract between Lium Engineering and the State of Alaska, DOTPF, Division of Harbor Design and Construction became effective on October 9, 1980. The purpose of the contract (DOTPF project K31401) was to study the feasibility of developing docks at Aleknagik, Alaska.

The study was proposed in the spring of 1980 by Representative Nels A. Anderson, Jr. and was funded by the 1980 legislature under FCCSHB 60, section 227 (page 30). Section 227 as amended by Governor Jay Hammond reads: "The sum of $25,000 is appropriated from the General Fund to DOTPF, Division of Harbor Design and Construction for a feasibility study of a dock facility at Aleknagik."

The study, reported herein, defines the needs for docks at Aleknagik and describes feasible alternatives to satisfy these needs.

Mr. Pat Kohler, Aleknagik Administrator, explained the village's needs for docks during an inspection of the proposed sites by Lium Engineering on November 7, 1980.

ALEKNAGIK

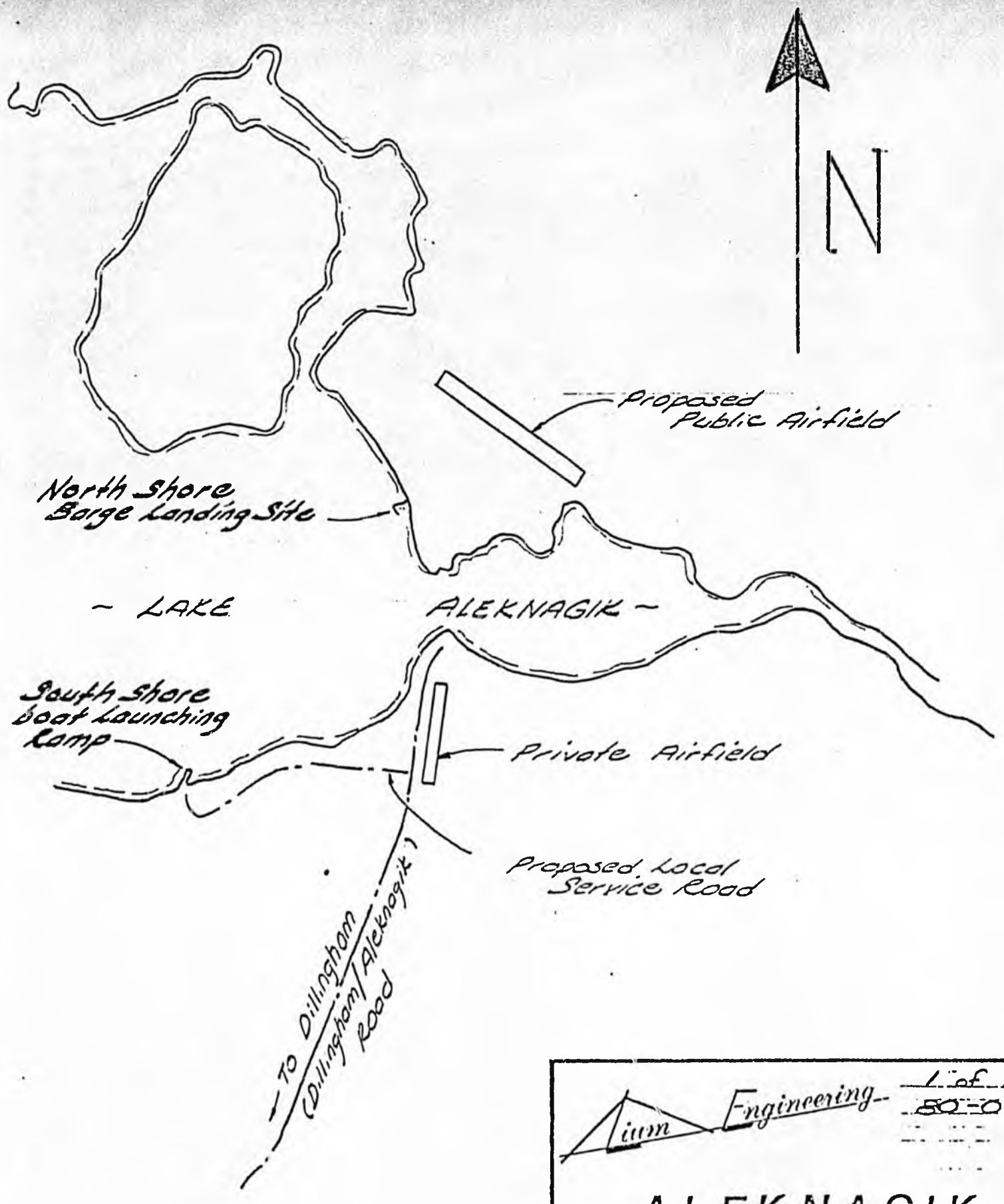
Aleknagik is located in the Bristol Bay region of Southwestern Alaska. The outlet of Lake Aleknagik into Wood River splits the village into two settlements called North Shore and South Shore.

South Shore, at the end of a 20 mile gravel road from Dillingham, contains the school, post office, several residences and a private airport. Approximately 30 persons live at South Shore. A boat launching ramp is needed here to accommodate the pleasure boats of Dillingham residents.

Approximately 100 persons reside at North Shore. In addition to the residents, North Shore contains the village offices and a street system developed by DOTPF Local Service Roads Section in 1977. A public airport for light planes is now being developed here. A barge landing, haul-out ramp for fishing boats, and temporary protection for skiffs are the needs at North Shore.

Skiffs with outboards provide access from North Shore to South Shore except when the lake is frozen over. The natural sandy gravel beaches on both shores provide satisfactory beaching for the skiffs during calm weather. Protected beaches for temporary mooring during windy weather are needed.

Two local barge services transport fuel and dry goods up the Wood River from Dillingham to Aleknagik.



Engineering

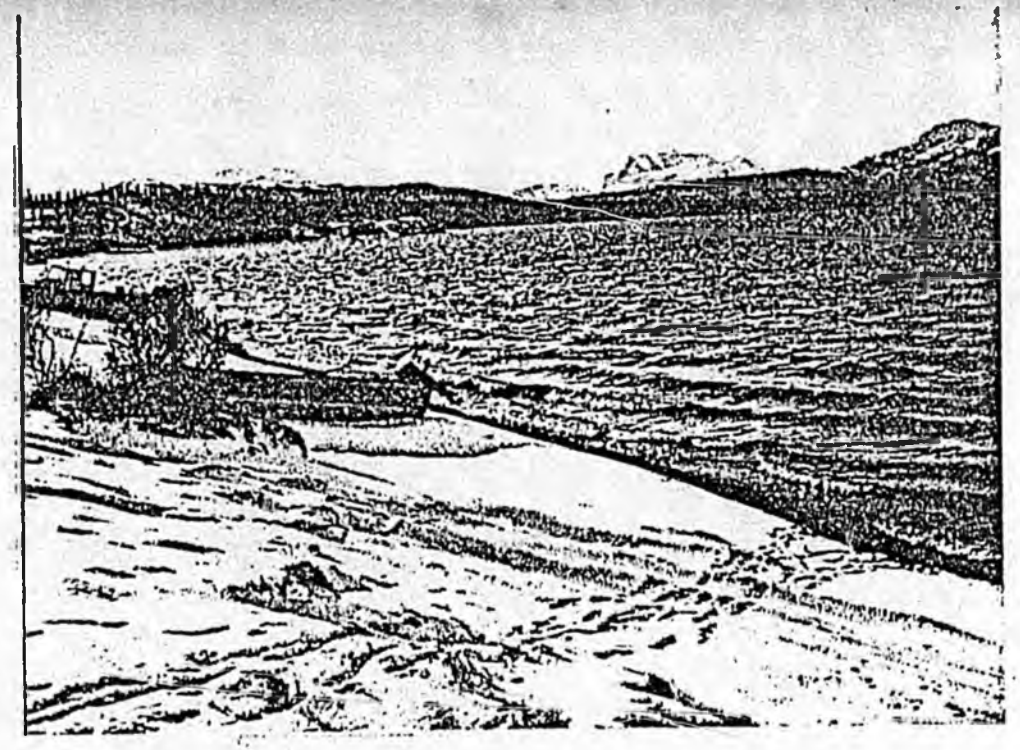
1 of 1

50-079

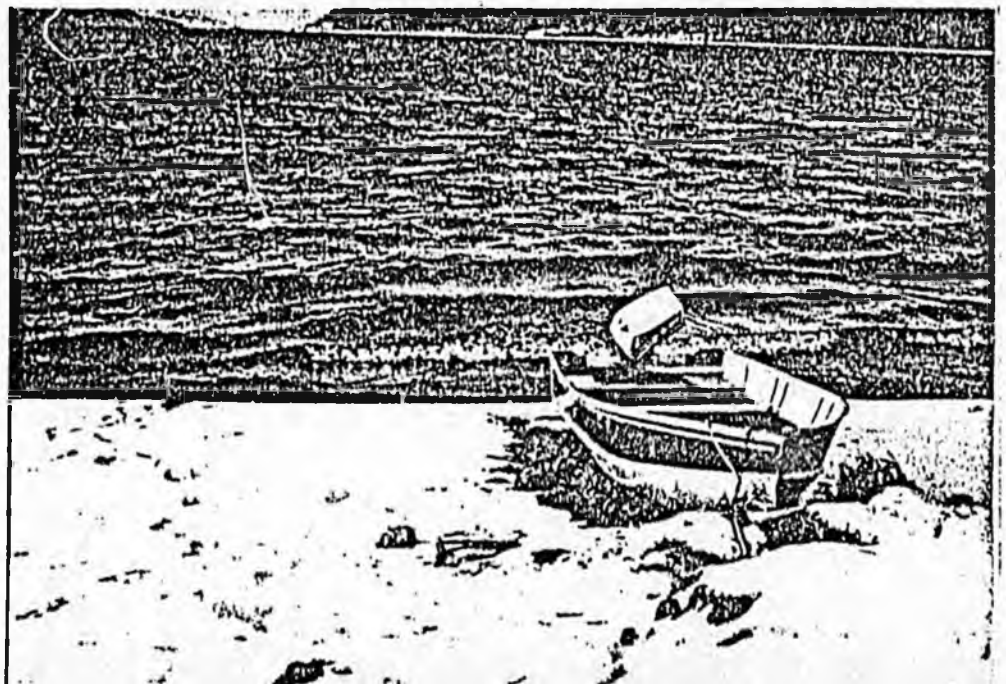
ALEKNAGIK DOCK STUDY

SITE MAP

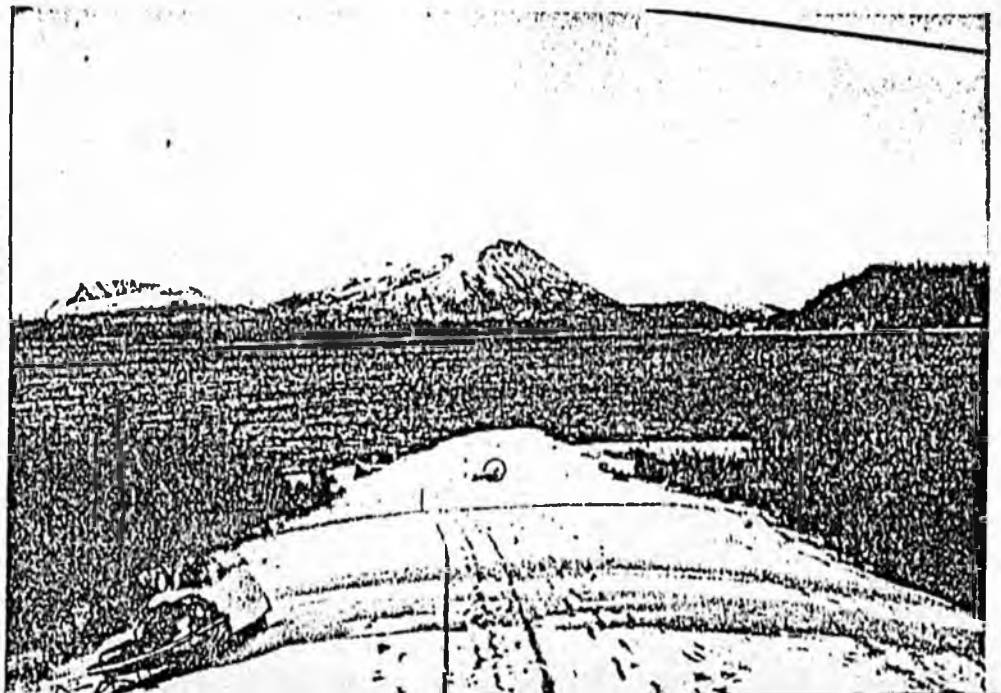
LAKE ALEXANAGIK OUTLET INTO WOOD RIVER
(From North Shore)



TYPICAL SKIFF
(at North Shore)



FISH STREET AT NORTH SHORE



NORTH SHORE ALTERNATIVES

The needs at North Shore are a barge landing, haul-out ramp for fishing boats, and protected beach for skiffs.

The proposed site at the end of Fish Street is sheltered from south, southeast, and east winds, is adjacent to public property available for boat or freight storage, and is conveniently located for ready access through the newly developed street system to the entire community. Currently there is no barge landing adjacent to the street system. Goods, therefore must be transported by hand.

Sketches of Alternative B show a feasible dock and ramp for North Shore. The dock is a steel pile, steel beam structure supporting precast concrete deck panels. It is sized for a barge 32 ft. wide and 80 ft. long with draft not greater than 4 feet. Because barges do not operate during the extremely low water of winter months, a bottom elevatior three feet below lowest water level will be satisfactory at face of dock.

Adjacent to the dock is a sixteen foot wide boat launching ramp with surface of precast concrete planks. Details for this ramp are typical of the latest ramps developed by Alaska's Division of Harbor Design and Construction. The sides of the launching ramp embankment slope 5 units horizontal to 1 unit vertical. During design development the actual fill slope that will accom-

modate wave action will be determined. Conversely, steep slopes with slope protection or a bulkhead retained fill may replace the slopes shown.

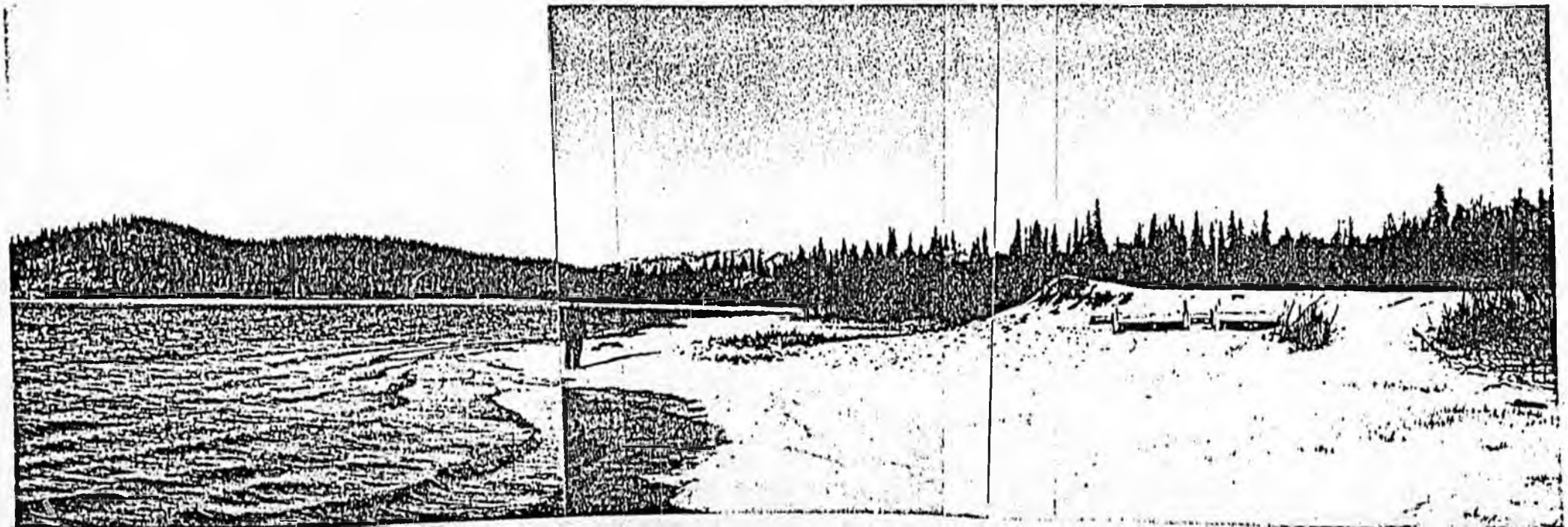
Alternative B will present the least obstruction to any parallel-with-shore currents that may be present, but are not evident, along this shore. The alternative has one serious fault, however: it does not provide any protection from north, northwest, or west winds for skiff beaching. The estimate for Alternative B indicates a total cost of $810,000.

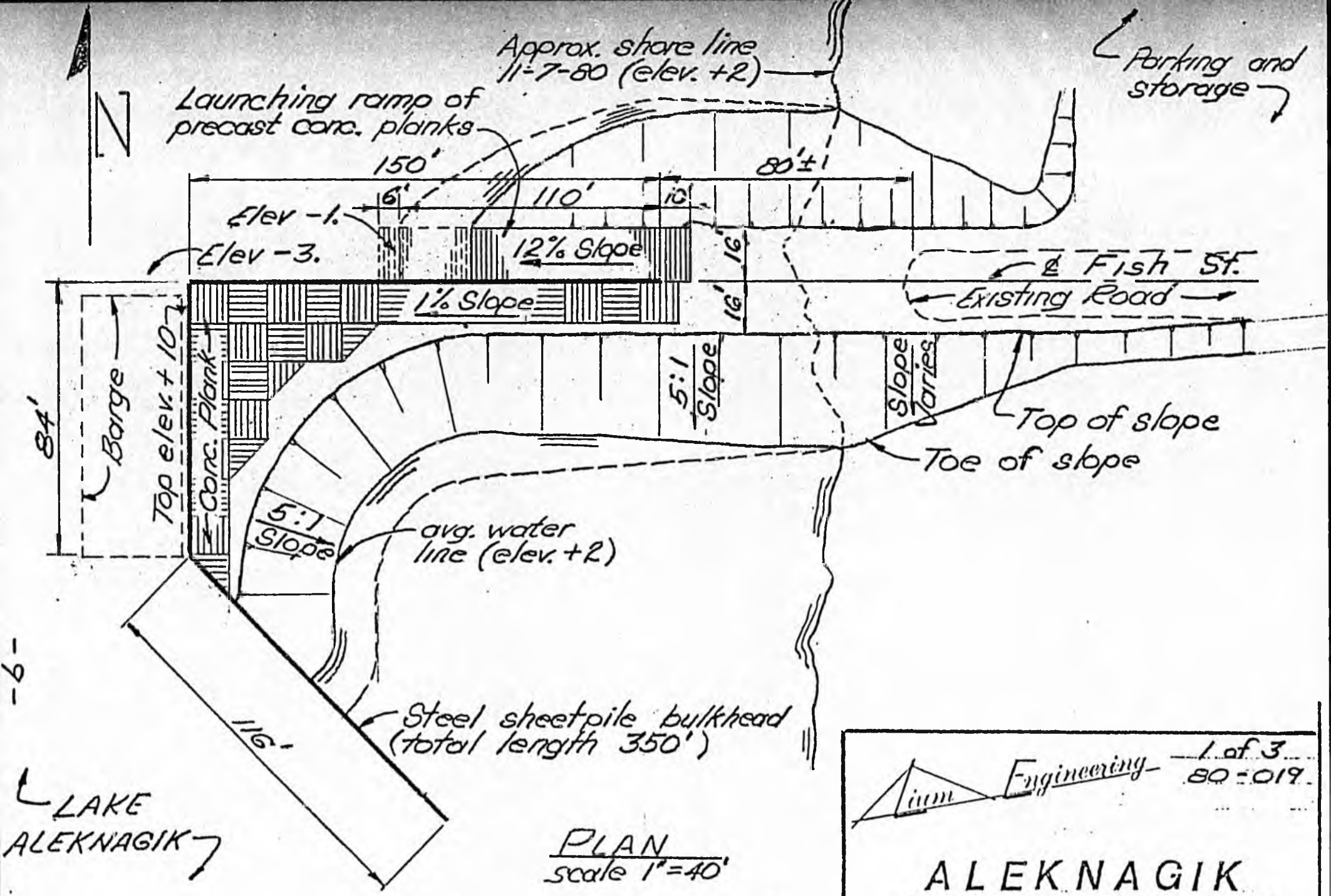
Alternative A substitutes a steel sheetpile bulkhead and gravel fill topped with precast concrete planks for the steel frame dock. Otherwise it is very similar to Alternative B. The sheetpile bulkhead extends south far enough to provide excellent protection for the 5 to 1 side slope of gravel fill and any skiffs that are beached on this slope. The only expected detrimental effect of obstructing the (possible) along-shore current by selecting Alternative A would be a slow accumulation of soil at the entrance to the skiff beaching area. Because the entrance now conceived will go dry during extreme low water it will be easy to maintain with a small backhoe, front end loader or dozer. Alternative A costs $60,000 less than Alternative B. At this early stage of project development the estimated difference of cost cannot be considered significant.

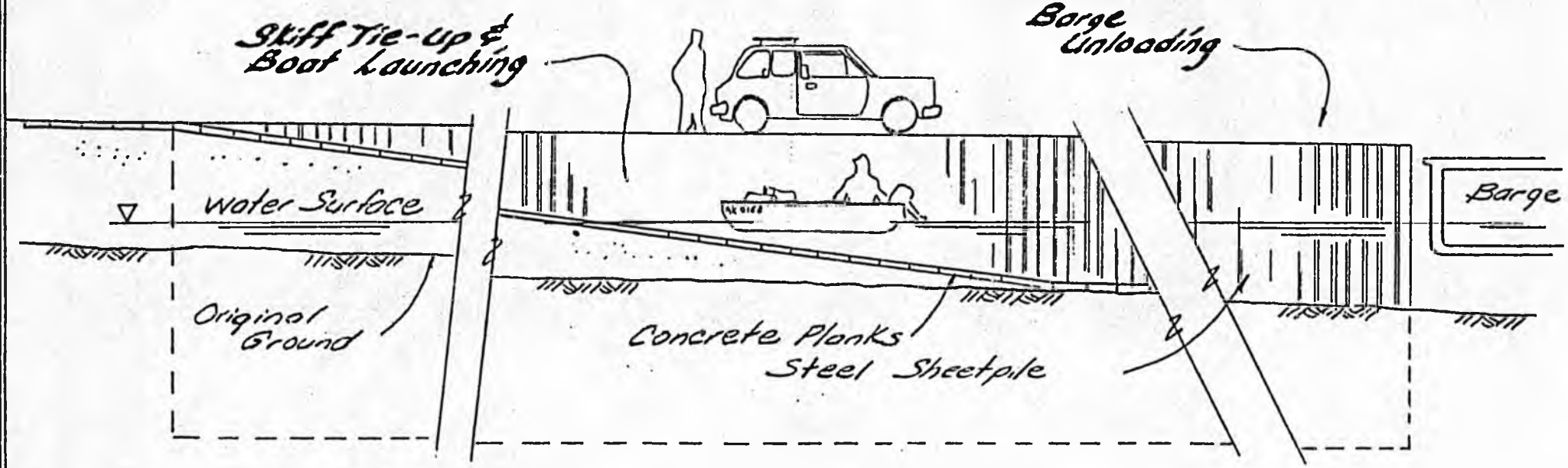
Alternative A is superior to B because of the skiff protection provided and should, with the similar estimated costs, be selected unless there are environmentally valid objections to placing the bulkhead contained fill into the lake.

BORROW PT. at NORTH SHORE
(1/4 mile from dock site)

NORTH SHORE DOCK SITE AT END OF FISH STREET




N
Approx. shore line 11-7-80 (elev. +2)
Parking and storage
Launching ramp of precast conc. planks
150'
80'±
6'
110'
10'
Elev -1.
Elev -3.
12% Slope
16'
16'
℄ Fish St.
Existing Road
1% Slope
5:1 Slope
Slope Varies
Top of slope
Toe of slope
84'
Barge
Top elev. +10
Conc. Plank
5:1 Slope
avg. water line (elev. +2)
116'
Steel sheetpile bulkhead (total length 350')
LAKE ALEKNAGIK
PLAN
scale 1"=40'
NOTE: Elevations are based on low lake water surface elev. 0.0
Tlingit Engineering
1 of 3
80-019
ALEKNAGIK DOCK STUDY
NORTH SHORE
ALTERNATIVE A



RAMP ELEVATION

1" = 10'

-10-

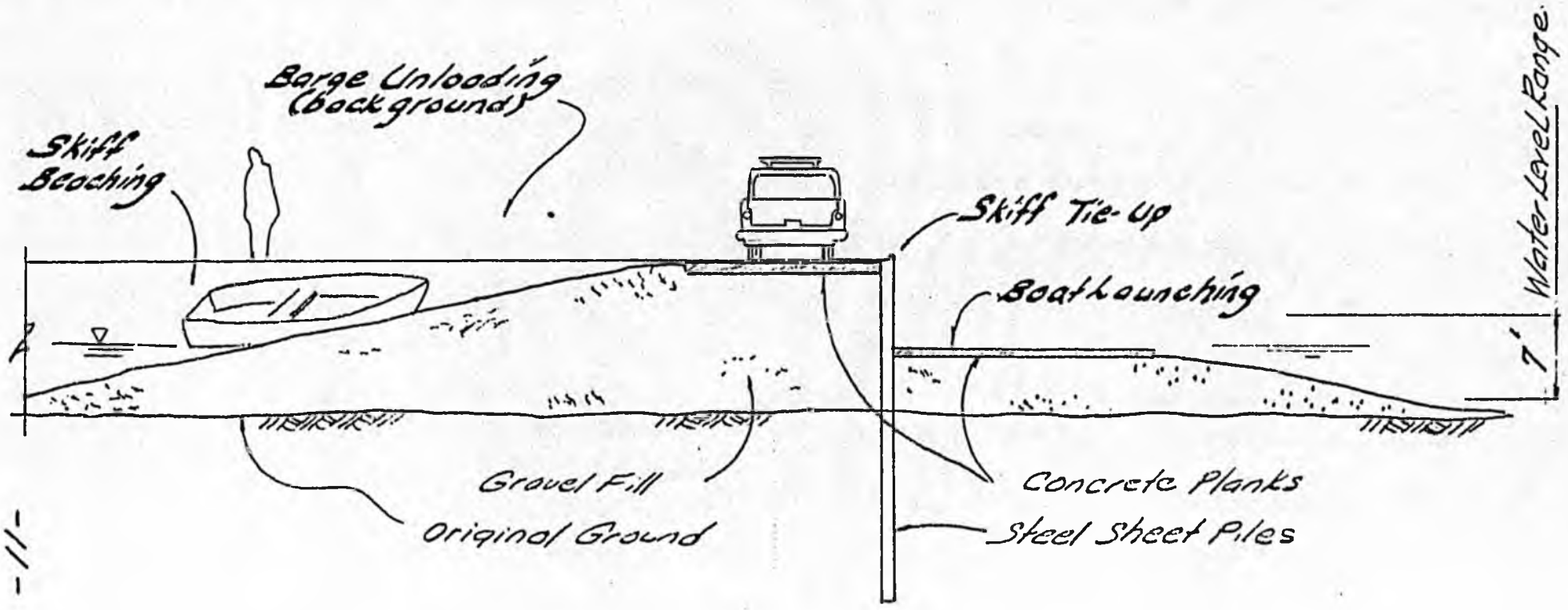
Engineering

2 of 3.

80-019

ALEKNAGIK DOCK STUDY

NORTH SHORE
ALTERNATIVE A



TRANSVERSE SECTION

1"=10'

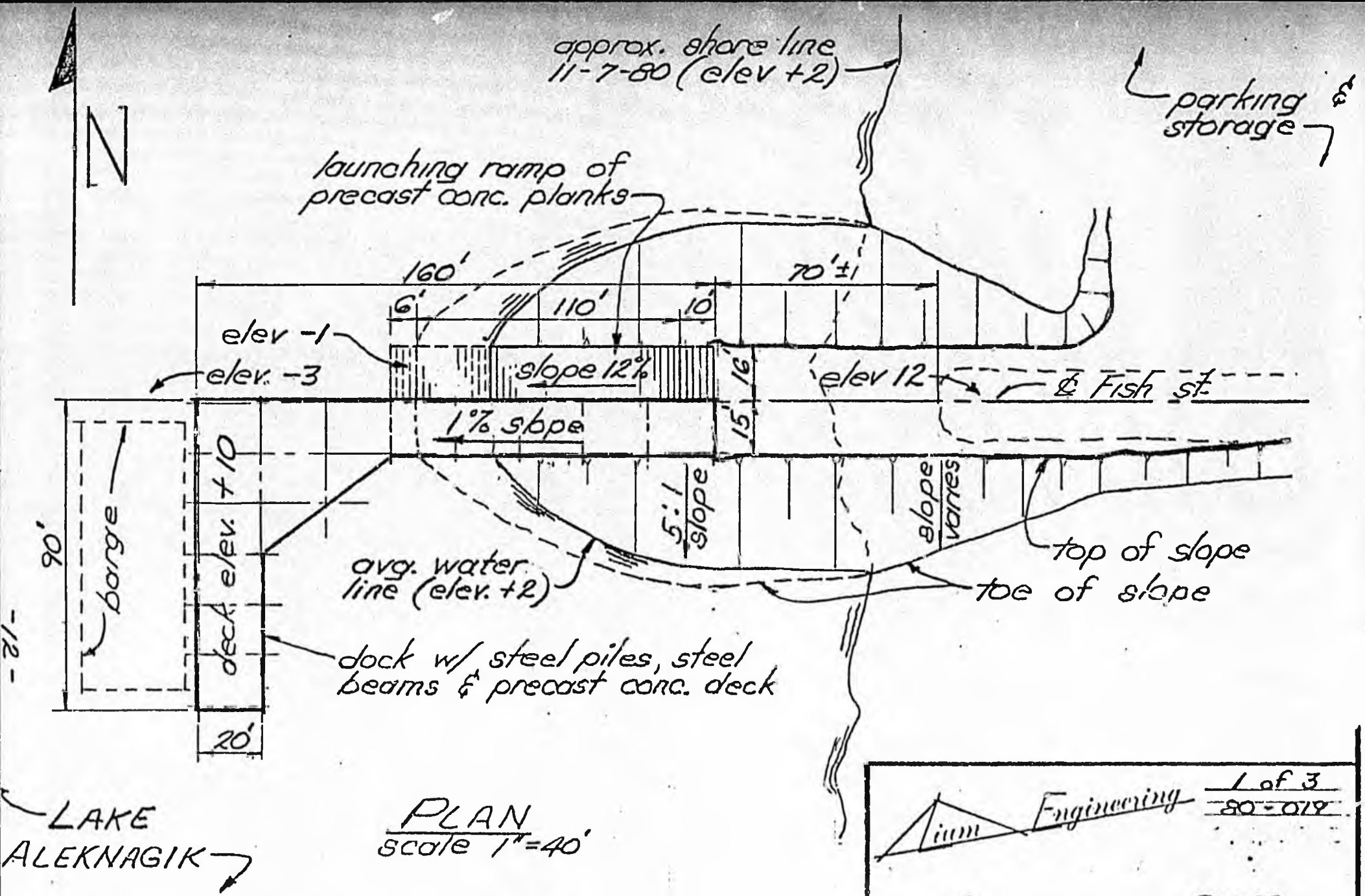
Tiium Engineering

3 of 3

80-019

ALEKNAGIK DOCK STUDY

NORTH SHORE
ALTERNATIVE A



PLAN
scale 1"=40'

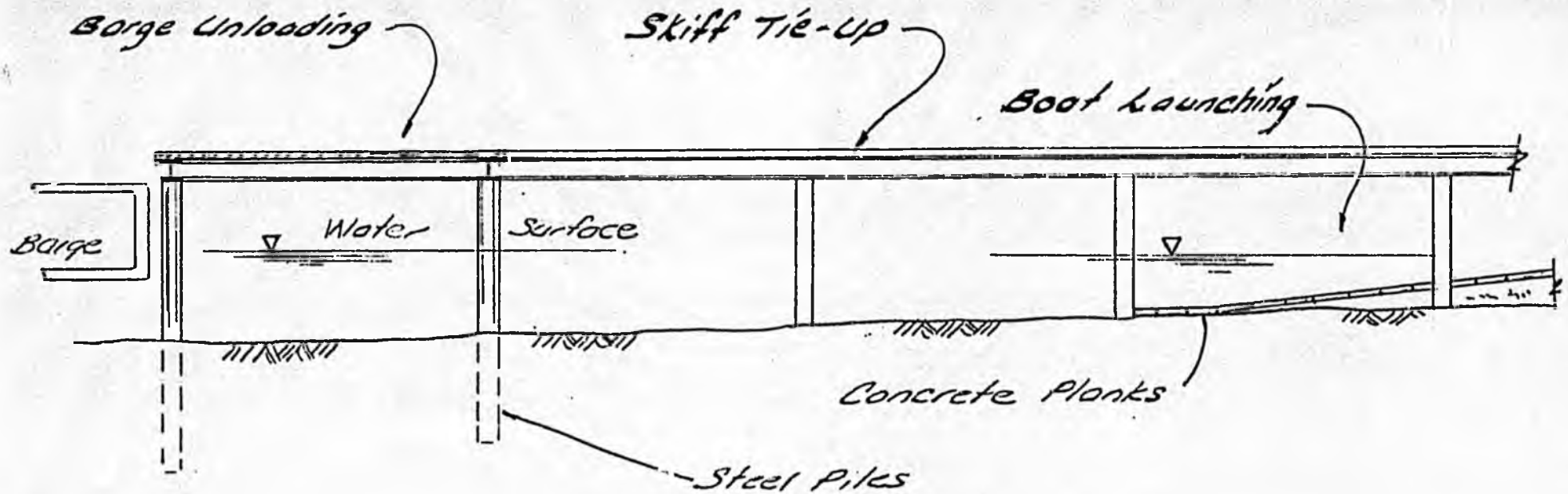
NOTE: Elevations are based on low lake water surface elev. 0.0

Engineering

1 of 3
80-019

ALEKNAGIK DOCK STUDY

NORTH SHORE
ALTERNATIVE B



ELEVATION

1"=10'

-13-

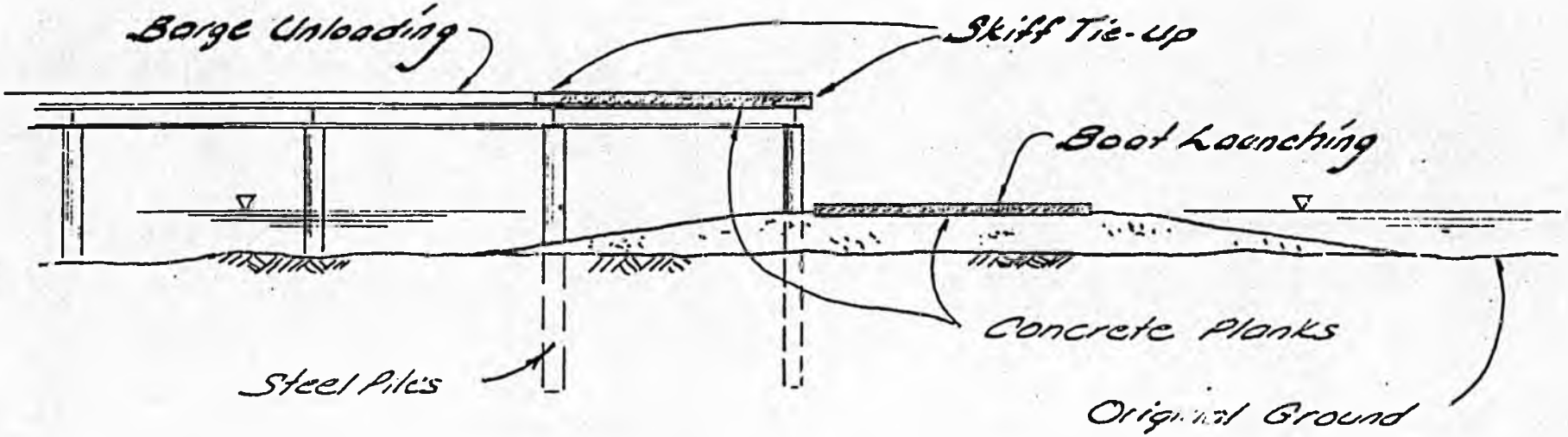
Engineering — 2 of 3

80-019

ALEKNAGIK DOCK STUDY

NORTH SHORE

ALTERNATIVE B



TRANSVERSE SECTION
1"=10'

- 14 -

Engineering

3 of 3
80-018

ALEKNAGIK DOCK STUDY

NORTH SHORE
ALTERNATIVE B

SOUTH SHORE ALTERNATIVES

The needs at South Shore are a launching ramp for recreational boats and protected beach for skiffs.

Currently, Dillingham residents lauch their boats at the beach adjacent to the end of the Aleknagik/Dillingham Road. This beach property belongs tc Mr. Sherburne Smith. The beach does not provide satisfactory boat launching for several reasons: the beach slope is too shallow; access from road to beach is rough; beach surface of sandy gravel provides unstable traction; the private property could be blocked off at any time.

Several alternatives were considered for a launching ramp at South Shore. They included a ramp extending perpendicular to shore into lake and a hammerhead at end of causeway with ramp either paralleling the shore or angling out into lake. The only alternative proposed is a further development, or outgrowth, of these alternatives. It illustrates satisfactorily the most feasible direction for further development. It is simply a 16 foot (surfaced width) ramp that angles into lake so as to provide a beach with protection from north and west winds. A turnaround area on shore and parking space for 20 pickups with trailers are included.

The steep slope covered with riprap on lakeward side of ramp presumes development of a rock source prior to construction.

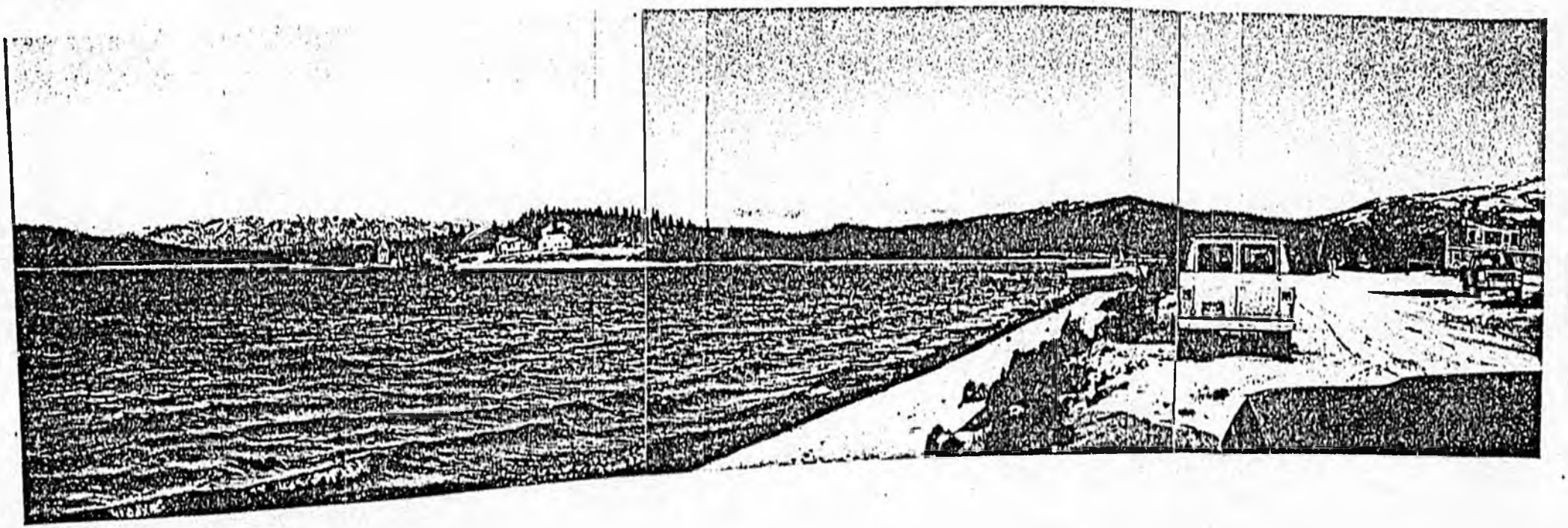
(Dillingham Construction Company tentatively plans to open a rock pit between Dillingham and Aleknagik during the summer of 1981) If, for some reason, rock is not available, concrete mattress or sacked concrete slope protection will substitute for the riprap.

Because ice builds up on the South Shore almost every spring a moorage float included with the ramp is not practical. The float would have to be dragged to the parking area each fall and re-anchored each spring. The gently sloping gravel fill on shoreward side of ramp combined with stable water level will satisfactorily substitute for a float at this site and provide the short term mooring necessary immediately after launching a boat.

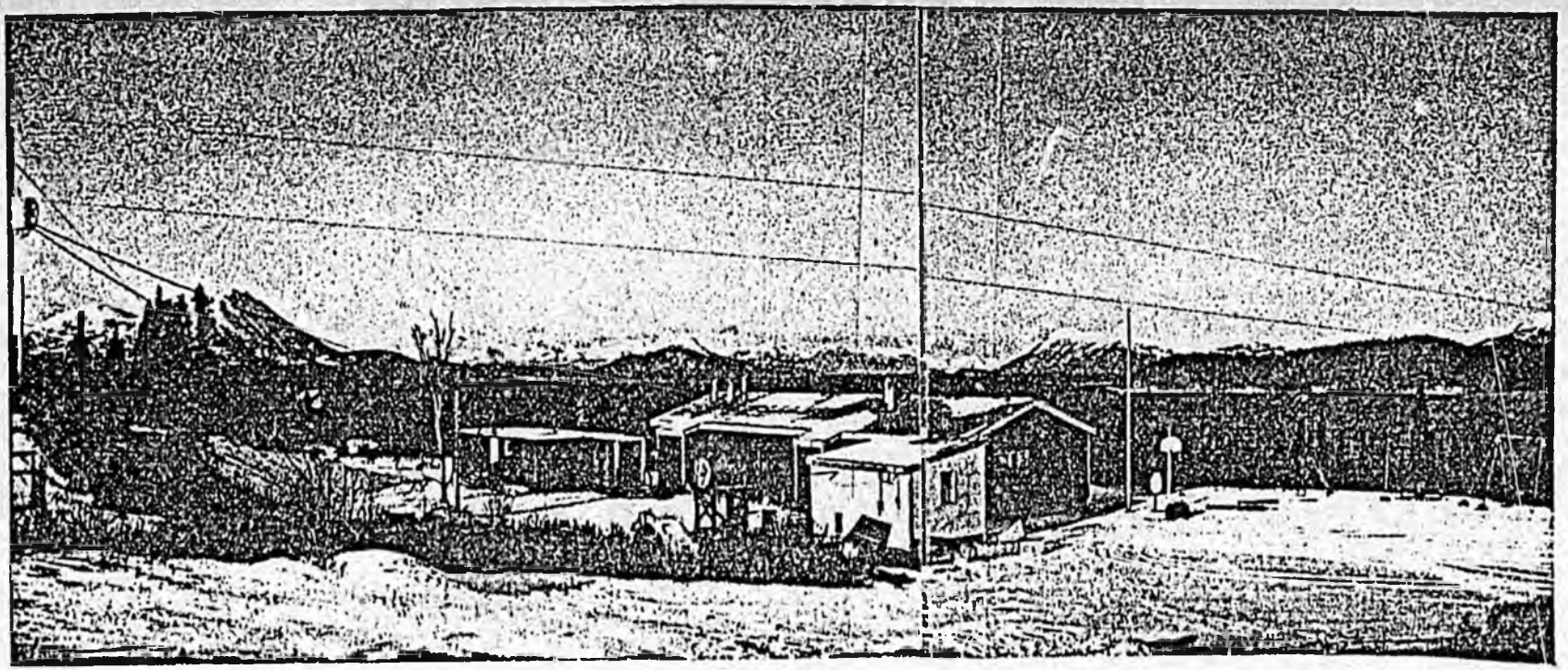
A proposed local service road (DOTPF project G10131) leads from the existing Aleknagik/Dillingham Road to the boat launching site that is on public property. The construction contract for the local service road will be advertised this (1980-1981) winter. Development of the launching ramp is contingent upon construction of the road.

The estimate for South Shore lauching ramp indicates a total cost of $260,000.

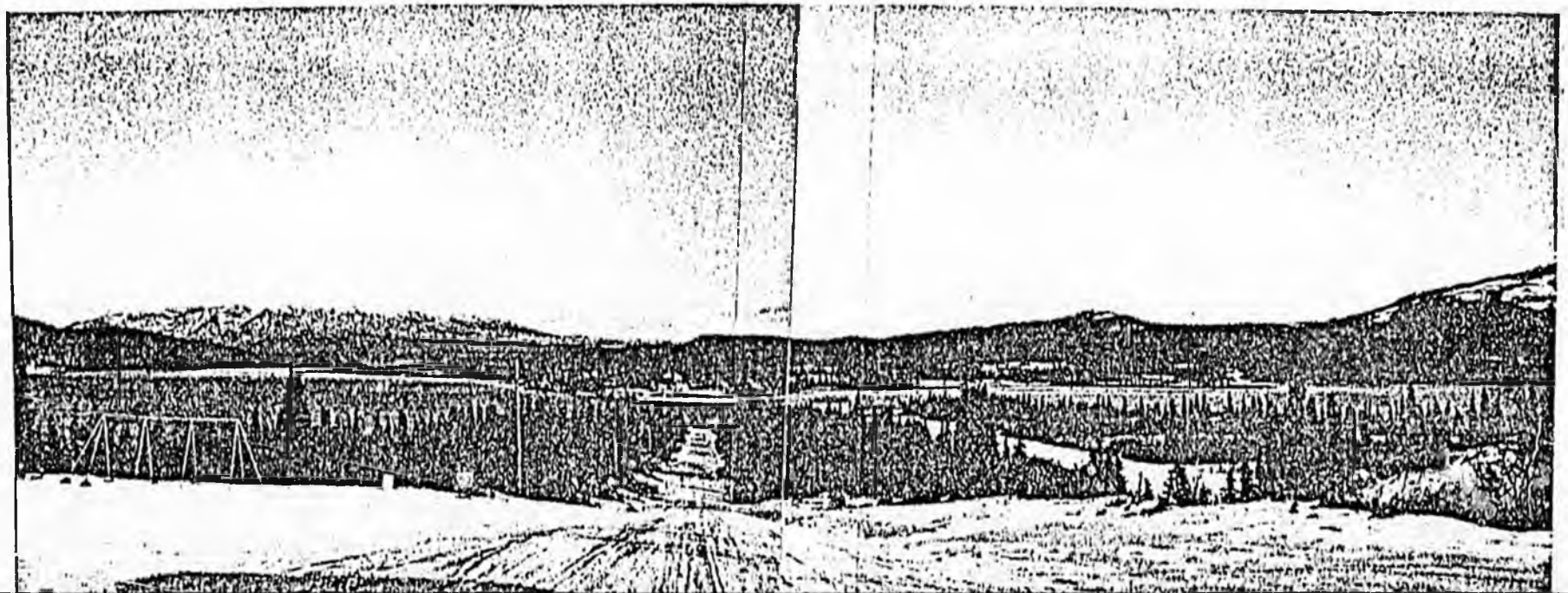
PRESENT BOAT LAUNCHING BEACH - NORTH SHORE IN BACKGROUND

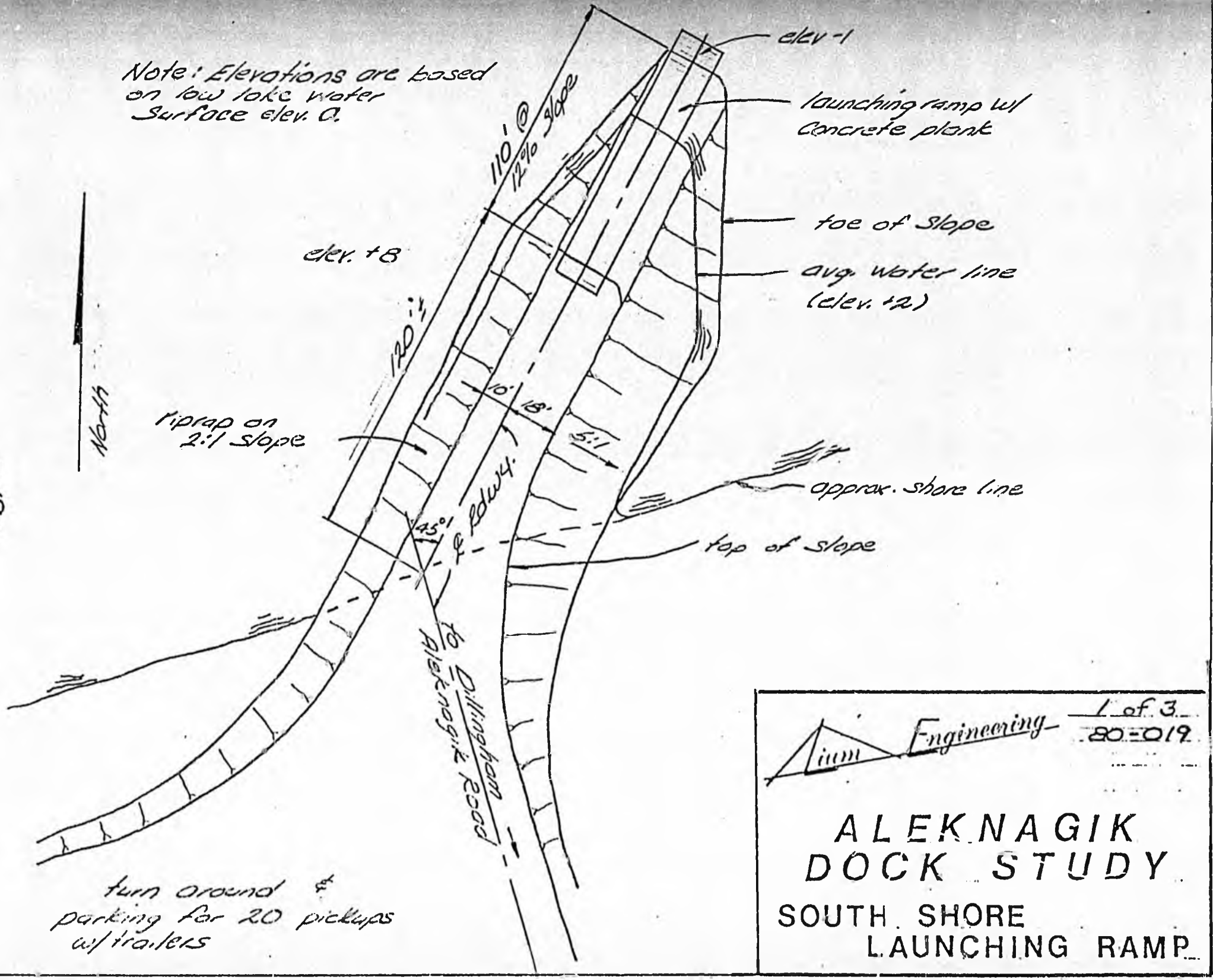


SCHOOL AT SOUTH SHORE



END OF ROAD - NORTH SHORE IN BACKGROUND - AIRPORT AT RIGHT



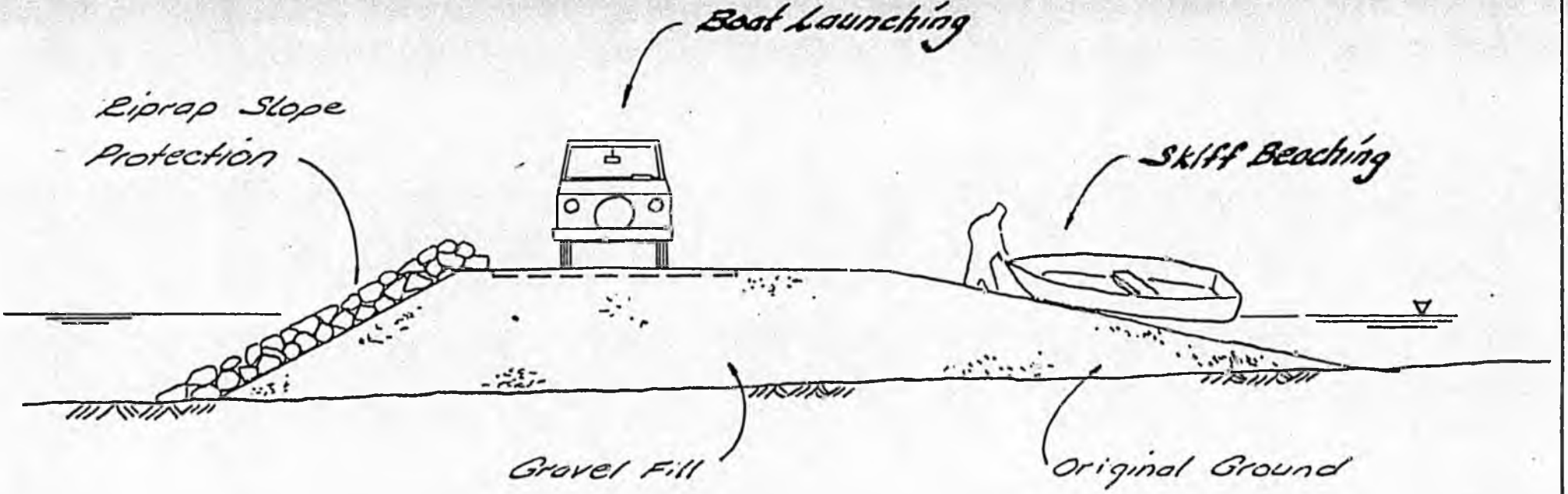


-61-

Engineering 1 of 3
80-019

ALEKNAGIK DOCK STUDY

SOUTH SHORE LAUNCHING RAMP



TRANSVERSE SECTION
1"=10'

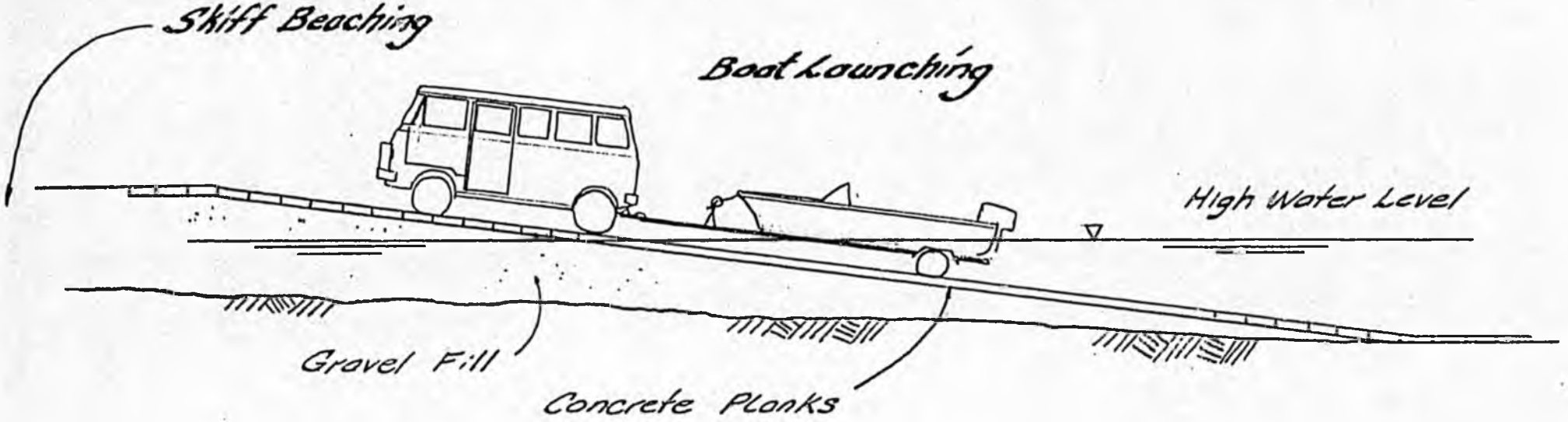
-20-

Alaska Engineering

2 of 3
80-019

ALEKNAGIK DOCK STUDY

SOUTH SHORE LAUNCHING RAMP



ELEVATION

1" = 10'

Tiim Engineering

3 of 3

80-018

ALEKNAGIK DOCK STUDY

SOUTH SHORE LAUNCHING RAMP

CONCLUSIONS AND RECOMMENDATIONS

Mathematical benefits and benefit/cost ratios for this project have not been computed. Construction of both North Shore dock and South Shore ramp are feasible. Construction will cost $750,000 for the North Shore sheetpile dock and $260,000 for the South Shore ramp.

Benefits of the North Shore dock are:

1. direct transportation of supplies to North Shore residents from currently operating barge systems, over the proposed dock, to newly constructed street system;
2. dry land storage of fishing boats over proposed launching ramp to adjacent storage area, and
3. protected beach for temporary mooring of skiffs.

Benefits of the South Shore ramp are:

1. convenient access for Dillingham residents to Lake Aleknagik and other areas of the Wood - Tikchik State Park by use of the existing Aleknagik/Dillingham Road, the proposed boat launching ramp, and
2. protected beach for temporary mooring of Aleknagik residents' skiffs.

Because of these benefits and the relatively low costs, both the North Shore dock and South Shore ramp should be fully developed as soon as possible.

APPENDIX

NORTH SHORE ALTERNATIVE A

ESTIMATED COSTS

Sheetpiles 10,500 sq. ft.	$210,000
Embankment 5,000 cu. yd.	75,000
Concrete Planks 5500 sq. ft.	130,000
Subtotal	$415,000
Misc. (15% ± for items not yet defined)	65,000
One-half year's inflation	50,000
July 81 Contract Amount	$530,000
DOT/PF project development charges (40% ±)	220,000
TOTAL PROJECT COSTS	$750,000

NORTH SHORE ALTERNATIVE B

ESTIMATED COSTS

Embankment	2600 cu. yd.	$ 39,000
Steel Piles	1000 lin. ft.	70,000
Structural Steel	80,000 lbs.	160,000
Concrete Deck	4800 sq. ft.	144,000
Concrete Planks	2000 sq. ft.	40,000
	Subtotal	$453,000
Misc. (15% for items not yet defined)		67,000
One-half year's inflation		60,000
	July 1980 Contract Amount	$580,000
DOT/PF Project Developmen Costs (40% +)		230,000
	TOTAL PROJECT COST	$810,000

SOUTH SHORE

ESTIMATED COSTS

Concrete Planks	2000 sq. ft.	$ 40,000
Embankment	3000 cu. yd.	45,000
Slope Protection	500 sq. yd.	25,000
Parking Area	2000 sq. yd.	30,000
	Subtotal	$140,000
Misc. (20% for items not yet defined)		28,000
One-half year's inflation		20,000
	July 1981 Contract Amount	$188,000
DOT/PF project development charges (40% ±)		72,000
	TOTAL PROJECT COSTS	$260,000

HB

2604

COMMITTEE REPORT

HOUSE

3/5/81

(7)

FURTHER: FINANCE

Date: April 1, 1981

Mr. Speaker:

The Committee on TRANSPORTATION has had HB 264

"An Act making a special appropriation to the Department of Community and Regional Affairs for design and construction of a dock in Iliamna; and providing for an effective date."

under consideration and reports it back as follows:

[ ] do pass [ ] do not pass

[ ] do pass with attached amendments(s)

[x] replace with CS for HB 264 [ ] same title [X] new title

and recommends do pass

[ ] AND attaches a "Letter of Intent" [ ] New Fiscal Note

[ ] reports it back without recommendation

[ ] referred to the ______ Committee

MEMBERS SIGNING DO PASS

MEMBERS HAVING OTHER RECOMMENDATIONS:

No Recommendation

CHAIRMAN

H 60 (Rev. 3/81)

Amendments by Chuckwuk:

Funding Information
General Fund $175,000
Other Funds -0-
~~$175,000~~ amend to $50,000

Introduced: 3/5/81
Referred: Transportation and Finance

IN THE HOUSE BY CHUCKWUK

HOUSE BILL NO. 264

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWELFTH LEGISLATURE - FIRST SESSION

A BILL

For an Act entitled: "An Act making a special appropriation to the Department of Community and Regional Affairs for design and construction of a dock in Iliamna; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. The sum of ~~$175,000~~ 50,000 is appropriated from the general fund to the Department of Community and Regional Affairs for payment as a grant to the village of Iliamna for [~~design and~~] Re construction of a dock.

* Sec. 2. The appropriation made by this Act shall be disbursed in accordance with AS 37.05.315.

* Sec. 3. This Act takes effect immediately in accordance with AS 01.10.-070(c).

Inc
decking nails, spikes, gas
$10,000 freight

SUMMARY OF HOUSE BILL 264

At the Summer peak there are anywhere from 75 to 150 boats using the docking facilities on their way to or from the fishing grounds.

The barge service from Naknek loads and off loads on regular basis and the local traffic consist of 40 to 60 boats.

The 1980 storm was unusual in its severity, and the dock was destroyed.

The dock had been built as a village project, with donated equipment.

Inflation has increased the cost of a replacment dock, but with salvaging 25% of the existing dock and using logs obtained from the area, costs are at a bare minimun. The decking, nails and spikes must be brought in from Anchorage,

Materials	25,000
Equipment Costs	5,000
Labor & Assorted Fees	10,000
Freight (C-130)	10,000
Total	50,000

THE LEGISLATURE OF THE STATE OF ALASKA
TWELFTH LEGISLATURE

FISCAL NOTE

I. REQUEST
Bill/Resolution No. HB NO. 264
Title A special appropriation to DC&RA for design & construction of dock in Iliamna.
Requested by House Transportation Committee Date March 31, 1981

II. FISCAL DETAIL
Agency Affected Department of Community and Regional Affairs
Program Category Affected Development
BRU, Program, or Subprogram(s) Affected Local Government Assistance
(Note: If more than one budget component is affected, separate line-item amounts and funding for each component in the analysis section.)

EXPENDITURES (Thousands of Dollars)

	FY 81	FY 82	FY 83	FY 84	FY 85	FY 86
100 PERSONAL SERVICES		-0-				
200 TRAVEL		-0-				
300 CONTRACTUAL		-0-				
400 COMMODITIES		-0-				
500 EQUIPMENT		-0-				
600 LAND & STRUCTURES		-0-				
700 GRANTS, CLAIMS, ETC.		-0-				
TOTAL		-0-				

FUNDING (Thousands of Dollars)

GENERAL FUND		-0-				
FEDERAL FUNDS		-0-				
OTHER (Specify Fund Source)		-0-				

POSITIONS

FULL TIME		-0-				
PART TIME						
TEMPORARY						

III. ANALYSIS (See Fiscal Note Preparation Instructions, Section III)

No administrative costs assuming that existing Department of Community and Regional Affairs Legislative Grant administrative positions remain in the Governor's FY 82 budget.

IV. DATE March 31, 1981 PREPARED BY McKie Campbell
AGENCY Department of Community & Regional Affairs
PHONE 465-4735

Original: Legislative Finance
cc: Budget and Management

HB

2777

COMMITTEE REPORT

HOUSE

3/5/81

(7)

FURTHER: FINANCE

Date: March 25, 1981

Mr. Speaker:

The Committee on TRANSPORTATION has had HB 277

"An Act making special appropriations to the Department of Transportation and Public Facilities and the Department of Community and Regional Affairs for erosion control and assessment projects; and providing for an effective date."

under consideration and reports it back as follows:

[ ] do pass [ ] do not pass

[ ] do pass with attached amendments(s)

[X] replace with CS for HB 277 (Trnsp) [ ] same title [X] new title

and recommends

[ ] AND attaches a "Letter of Intent" [ ] New Fiscal Note

[ ] reports it back without recommendation

[ ] referred to the Committee

MEMBERS SIGNING DO PASS

[signatures]

MEMBERS HAVING OTHER RECOMMENDATIONS:

[signature] DO NOT PASS

[signature]
CHAIRMAN

H 60 (Rev. 3/81)

Proposed Amendment Changes to House Bill 277

Section 1. The sum of $850,000 ($750,000) is appropriated to the Department of Transportation and Public Facilities for erosion assessment. This figure is based on a cost of $50,000 per community assessment in the 17 communities listed on the following page.

Delete the communities of ~~Naknek and~~ Chevak. [M.S.]

Add the communities of Kipnuk, Kongiganak, Kwigillingak and Tuntatuliak. Quinhagak

This brings the total communities to 17 (15).

3/24/83

H.S. Trasp

~~HB 277~~

17 Fuller - $50,000 for 17 communities
back-up or villages
if try to do on fed basis, looking @ 15-20 yrs
propose am
51 sec 1 850,000 replaces $750,000
deleted 2 communities
added Kipnik, 2) 3)

04 Hayes
sec 2: accurate figures?
Fuller - reason for constr - Corps of Eng proj
ready to go proj
83 Hayes - how was $50,000 per comm. fig derived?
private consultants
97 Fuller - A.V. Ak dredging - dredge in Bethel
area - need monies to utilize
111 Chuckwuck (rep Dist 16 - Bristol Bay)
Tim
schools in danger -
Make-shift dikes or shoreline - eroded / washed away
Pt Heiden - moving houses
150 Hayes - schools in danger - how old are schools -
new or old? No idea - gauge erosion
170 Zharoff - Ck't always forces Mother Nature - Aniak Bay
emergency situation
192 Hayes - erosion is predictable

3/24/81

HB Transp

HB 377

307 Chuckwuch - lobbying for Eek - his Comm chk other factors - probe of relocating
Dankworth - bill to allocate funds for Eek
315 Fuller - confined area when bldg schools etc - put up where space available
327 Fry - Dillingham - why not in Sec 2 rather than one - don't want erosion, want help
360 Chuckwuch - Dillingham -
375 Fry - need addt'l $50,000 or time to do something
383 Chuckwuch - update rather than study
389 Fry - doesn't understand updated study
394 Zharoff - studies in '80 - prep of reconnaissance report
381 Fry - City of Dillingham in agreement w/ conditions?
Chuckwuch - don't know - no further update
333 Bates - last 3 yrs, DOT involved in erosion control than Corps of Engineers - COE - cost-benefit ratio
Comm wouldn't get cost ratio less < 1
structures i.e. bridges, some road work
2 people in dept does this only - Fibbs
HB 377 - erosion control work different, costly
didn't intend $50,000 to be in concrete; some villages more or less monies
river inspection, P/E, dredging - report back to legis next yr on what can be done - hopefully all 17.
386 Thelma - Exec / amend -

3/24/81

HB 277

Ho Transp

Bates of frozen, difficult assessment, as many as possible

406 Hayes - done by consultant?

Bates - majority yes - money to d o c - one gentleman in dept - probl he play magic for contracts

431 Hayes - new schools in danger - how cited

Bates - not aware of new schools - cited by engineers utility systems det where school goes

444 Hurlbert - Chevak - mayor in town - wants to put in own erosion control - seed bags w/ wire - wants to go thru DOT, let study out

457 Bates - if wanna; short-term solution - if M-G.

465 Fog - CRSA

470 Bates - letter of Intent, M-G.
transp of resp agreement

480 Fog -
Marie Malsano - CRA - continuation of Ft Hayden
Chevak incorp? 3rd class city - M-G.
Nelcelfe - comm. goal to implement erosion control

500 Bates - no way to assess - most exper w/ CSR+T

513 Thelma - hire outside eng firms knowing nothing about Arctic eng.

519 Bates - 90% of work RFP done w/in State - if expertise found w/in states - if can't meet req, don't get job - vast maj done w/ Ak consultants

530 Thelma - new school in 5 yrs ago. Sinking
built gymn 5' OB leg size - close to river
Why do we let these kind of probl w/ COE, DOT

3/24/81

Hs Trans

HB 377

Helena - frustrated -

543 Bates - in most cases, jobs that go sour
thermal piles - trade-off
eds - if insulate, smoother; 2/3 mi you built

559 Bates - Sec 2
Shesnaref - monies req suffic for D&C - sand cement in bags SW Ak regional dredging - Sec
M-G acct to Bethel
Unalakeet - $800,000 suffice w/Gabeion
Mgr casting add another 1/mile
Class 3 riff raff

581 Fry - Sec 1 villages - can some of them beyond pl of study - prepared for action

590 Bates - not aware - most cases no study done
if allowed to do eng work, then can make more accurate sec

599 Fuller - in assembling bill, contacted every Rep - info is what came in.

607 Bette - Tatitlek - tremendous erosion - need assessment for breakwater

611 Fry - agrees w/ need of villages
size of + addt'l comm - Chuckwuck

620 Chuckwuck - @ least 500 in a village

623 Thelma - all villages ready to go - local hiring - frustrated if do job, > local here

637 Bates - if local hire, don't approp to DOT - State req to contract w/own forces; eliminates work w/ local villages

3/24/81

Hs Transp

HB 277

645 Hurlbert - appreciate comments - people are frustrated
Chevak - no economy - complete subsistence
wants labor intensive job

665 Metcalfe - dev opinion to go to CRA
info on what villages capable to do themselves

667 Fuller - hill eroding
no obj to Chevak M.G.
see am made at pass-out
talking about homes, schools, boats!

706 Hayes - not to move w/ am by Fuller
#1 am delete Chevak to Sec 1, place in Sec 2
300,000 to M.G.

730 Thelma - am-am: rec by DOT headlist seawall
#2 1.8 mil rather than 800,000 - Fuller disagrees
800,000
#3 recog am MG to Bethel - approve - prop by Fuller

738 Bette -
Zharoff new sec 4 - 2.3 mil from GF to MG crossing
Bethel, S.W Ak Prodg Chevak (300,000)
Bette - Hayes - am $830,000 Sec 1
Thelma - am 1 @ time

760 Zharoff - consider am $850 - 900,000 to include
Village of Aniakchak - move am
Bette - obj by Frog
all but Mete + Frog - passed
$900,000 + add Aniakchak
~~Bette~~ Thelma - dredging in Bethel

Bette - move bill w/ am $900,000
900 Hayes - adopt am before comm w/am
no obj, so moved - adopted
817 Hurlbert - am sec 4 $300,000 DOA - m.g. erosion control
in Chevak - unan consent asked - w/drawn
Bette - Mg obj for clarification
Thelma - new sec 4 - (2) 300,000 for Chevak - (1) Bethel needs 2.3 mil
Zharoff - as delete line 22 & renumber accordingly

860 Mg line 28 - 010 rather than 020 - if not used, lapse yr - yr
am to am
Thelma - sec 1 lapsing prov - for DOT/PF
Zharoff - draft of m.g. - safeguards incl to lapse unutilized monies
~~Bette~~ Zharoff
Marie Malcens - once contract signed, monies encumbered
Bette - Mg am - failed
963 Bette - am by Thelma - prev stated
unan passed
Hayes - move bill as CS
Bette - moved out Hurl, Hayes, Cato, Metc, & Zharoff

Alaska State Legislature

TRANSPORTATION COMMITTEE HEARINGS

DATE: 3/24/81
LOCATION: CAP 11A
SUBJECT: HB 347

NAME	REPRESENTING	ADDRESS	PHONE	HERE TO TESTIFY	HERE TO OBSERVE
REP. JACK FULLER	HOUSE			✓	
JOHN BATES	DOT/PF			✓	
Joe Chmielewski				✓	
Marie Matsumoto					✓

Funding Information
General Fund $6,030,000
Other Funds -0-
$6,030,000

Introduced: 3/5/81
Referred: Transportation and Finance

IN THE HOUSE

BY FULLER, ADAMS, CATO, CHUCKWUK, HURLBERT AND VASKA

HOUSE BILL NO. 277

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWELFTH LEGISLATURE - FIRST SESSION

A BILL

For an Act entitled: "An Act making special appropriations to the Department of Transportation and Public Facilities and the Department of Community and Regional Affairs for erosion control and assessment projects; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. The sum of $750,000 is appropriated from the general fund to the Department of Transportation and Public Facilities for erosion control assessments in Ambler, Chevak, Clarks Point, Dillingham, Karluk, Kivalina, Kotlik, Kwethluk, Naknek, Nunapitchuk, Napakiak, Tatitlek, Teller, Togiak, and Wainwright.

* Sec. 2. The sum of $5,200,000 is appropriated from the general fund to the Department of Transportation and Public Facilities for erosion control and seawall construction projects to be allocated as follows:

Deering seawall construction	$ 1,200,000
Shishmaref erosion control	1,200,000
Southwest Alaska region dredging - City of Bethel	2,000,000
Unalakleet seawall construction	800,000

* Sec. 3. The sum of $80,000 is appropriated from the general fund to the Department of Community and Regional Affairs for completion of the Port Heiden erosion project.

* Sec. 4. The appropriations made by this Act are for capital projects and are subject to AS 37.25.020.

* Sec. 5. This Act takes effect immediately in accordance with AS 01.10.-

070(c).

Proposed Amendment Changes to House Bill 277

Section 1. The sum of $850,000 ($750,000) is appropriated to the Department of Transportation and Public Facilities for erosion assessment. This figure is based on a cost of $50,000 per community assessment in the 17 communities listed on the following page.

Delete the communities of Naknek and Chevak.

Add the communities of Kipnuk, Kongiganak, Kwigillingak and Tuntatuliak.

This brings the total communities to 17 (15).

CITY OF PORT HEIDEN
PORT HEIDEN, ALASKA 99549

November 6, 1980

Dave Gray,

Senator George Hohman
P.O. Box 289
Bethel, Alaska 99559

Dear Senator Hohman,

This is to acquaint you with a serious situation which has been developing here in Port Heiden.

As you may already know, we are experiencing a severe beach front erosion problem. Large tides and storms claim anywhere from 10 to 20 feet of beach each year. This has forced some residents into moving their entire houses away from the beach. In just one storm this year, we lost 15 feet of beach, a house was destroyed, and several other homes are in danger of being damaged.

For the past two years we have been working with the Department of Community and Regional Affairs putting together a realistic program for relocating our city. Unfortunately, due to escalating prices and the high cost of transporting materials, the money we have received wasn't enough.

In order for any site to be suitable grounds for a home electricity must be available. With the money we have received to date we have done that. We have extended our utility service 3 1/2 miles along the main road. Several homes have been relocated along this road. However, due to lack of funds we cannot complete this project.

Working with the Department of Community and Regional Affairs we tried to get funding from the legislature. This was denied. But, with or without funds the danger to homes and to the people here still exist.

CITY OF PORT HEIDEN
PORT HEIDEN, ALASKA 99549

We have learned recently that you may be able to help us secure the necessary funds from the Governor's Contingency Fund. We need $80,000.00 to complete this most necessary project. We feel the $80,000.00 necessary to complete this project is a small price to pay to insure the continued existence of this community. The loss of one home this year, and the danger to others, is directly related to the lack of funds available to finish this project.

Time is of the essence. With winter approaching we must get the funds at the earliest possible date as the frozen ground also makes house moving easier. This being a fishing community the only time available to us for such a project is winter.

We will be sincerely grateful for any help you can give us in alleviating this dangerous and unnecessary situation.

Sincerely,
City Council of Port Heiden

Virginia Graham
Annie Christensen
Carol Carlson
Bert Carlson
Lorraine Christensen
Dan Ole E. Lund (Mayor)

CC:
Dave Gray

DKW/cw

PROPOSED AMENDMENT CHANGES TO HOUSE BILL 277

"An Act making special appropriations to the Department of Transportation and Public Facilities and the Department of Community and Regional Affairs for erosion control and assessment projects; and providing for an effective date."

Section 1. The sum of $900,000 ($750,000) is appropriated to the Department of Transportation and Public Facilities for erosion assessment. This figure is based on a cost of $50,000 per community assessment in the following 18 communities:

Ambler: Spring flooding near the shoreline occurs yearly when the ice begins to move. A bigger problem is erosion in the bluff areas as a result of spring runoff. Running water is eroding and removing soil free vegetation. New homes in Ambler are located above the dangerous flood areas, but boat moorings, storage areas and some of the older structures are vulnerable to the high waters.

Chevak: River bank erosion, particularly in the area where barges are loaded and unloaded, is placing several properties in danger and is severely wearing away the land. U.S. Army Corps of Engineers has inspected the site and would be willing to help plan a control project, however, they do not have the funds for either an in-depth study or the project itself.

Clarks Point: A breakwater is needed to protect the homes, fish camp sites, the airport and road against erosion caused by wave action and high tides. The village has had to move to a new, higher location already because of this problem.

Dillingham: In 1972 the U.S. Army Corps of Engineers completed a study of shore front erosion control, but the City of Dillingham was unable to come up with the required match monies and the project was never begun. Storms and high seas have caused continuing damage to the shore. An update on the Corps' original study is needed before a final project can be approved.

Karluk: The continued disintegration of the Karluk Spit was initially calused by the 1978 storm and has increased the size of the break in the spit to 350 feet, and has allowed a sufficient current of water to increase the erosion rate. The erosion is prohibiting the development of a bulk fuel storage facility, expansion of the children's playground and skiff moorage.

Kivalina: This village lies on a flat sand and gravel spit eleven feet above sea level at the airport. Severe storms and wind driven waves cause coastal flooding which affects 20/30 percent of the village. The continued removal of sand and gravel, which stabilize shoreline, has contributed to the beach erosion problem.

Kipnuk: Bank erosion is occurring as a result of wind driven waves and river scour action. The problems are compounded and costs grossly increased due to remoteness, permafrost and total lack of locally available constrution materials.

Kongiganak: Disturbance of the tundra and disruption of its underlying permafrost is creating soil slumps and gullies leading to the river. River bank scour is limited in extent but extreme in effect where it is occurring.

Kotlik: A seawall needs to be constructed along the banks of the Kotlik Slough. Each year the bank caves in about three feet; many of the village's homes and the school building are in danger and may need to be moved if preventive measures are not taken.

Kwigillingak: Bank erosion is occurring as a result of river scour and permafrost subsidence along a broad river front with several loading sites being affected. Evidence from numerous earth slumps indicates the permafrost in this area possesses a high ice to solids ratio.

Kwethluk: The City of Kwethluk is located along the Kuskokuak Slough. Because of erosion, many of the village homes are in danger and may need to be moved if preventive measures are not taken.

Napakiak: The City of Napakiak is located along the Napakiak Slough and the Kuskokwim River. Erosion of the banks of the Kuskokwim River. and Napakiak Slough is quite serious and many village homes are in danger.

Nunapitchuk: The City of Nunapitchuk requires dredging of the un-named lake between Nunapitchuk and the mouth of the Johnson River. Barges often runs aground in this area. Also the erosion of the banks of the Johnson River is quite serious and many of the village homes are in danger.

Tatitlek: The village has requested a breakwater since the earthquake of 1964. It has been discussed at the state and national level for years. However, to date nothing has been done. The need has grown and the problem has worsened. Erosion has caused the harbor to silt badly. See attached reports.

Teller: The Village of Teller is located on a spit between Port Clarence and Grantley Harbor. The village is exposed to flooding and erosion caused by storm surges and storm-driven waves from the Bering Sea and Port Clarence. Storm winds from the west and southwest have the greastest potential for causing damage. Erosion control assessment project is badly needed for the village.

Togiak: Storm-caused high winds and waves have taken out portions of the bank on the bay side. Continued erosion will affect homes and the school.

Tuntatuliak: The Village of Tuntatuliak has the same problems as the Village of Kwigillingok. Please see the discription for Kwigillingok.

Wainwright: Severe storms and wind driven waves cause coastal flooding which affects 20/30 percent of the village. The continued removal of sand and gravel, which stabilize shoreline, has contributed to the beach erosion problem.

HB 277 Erosion Control Assessment

Section 2. This section appropriates $5,200,000 to the Department of Transportation and Public Facilities for four erosion control and seawall construction projects for the following communities:

Deering Seawall Construction

For many years Deering has needed a seawall to contain bank erosion. This appropriation would provide for a 10' wide bank along the front of the village.

Shishmaref Erosion Control

In 1978 the U. S. Army Corps of Engineers completed a study with three erosion control alternatives. The village is on a small island with little room for expansion or growth, and there is no other suitable building land nearby. Erosion is Shishmaref's most serious problem, and affects every other anticipated project in the village.

Southwest Alaska Region Dredging

The anticipated appropriation would fund a series of dredging projects on the Kuskokwim and Johnson Rivers using the dredge purchased for the City of Bethel in 1980.

(There is a possibility that this portion of the bill would be amended to put community's request in the municipal grants account through the Department of Administration.)

Unalakleet Seawall Construction

The anticipated appropriation of $800,000 would build a seawall which would protect the city itself against beach erosion; DOT/PF recommends $1.8 million to complete the job; which would extend the seawall around the western side of the airport runway.

Section 3. The sum of $80,000 is appropriated to the general fund to the Department of Community and Regional Affairs for completion of the Port Heiden erosion project.

Port Heiden is experiencing severe beach front erosion problems. Large tides and storms claim anywhere from 10 to 20 feet of beach each year. This has forced some residents into moving their entire homes away from the beach.

For the past two years the City of Port Heiden has been working with the Department of Community and Regional Affairs on putting together a realistic program for relocating the city. Unfortunately due to escalating prices and the high cost of transportating material, the funds received have not been enough.

According to the U.S. Army Corps of Engineers it would be more cost efficient to move the homes rather than try and control the erosion problem. The City of Port Heiden has relocated 5 homes and 20 more buildings need to relocated. In order for any site to be suitable grounds for a home, electricity must be available. The City of Port Heiden has extended their utility service 3-1/2 miles along the main road. However, due to lack of funds, the City cannot complete the project.

TOGIAK CITY COUNCIL
P. O. BOX 99
TOGIAK, ALASKA 99678

July 3, 1980

The Honorable George H. Hohman
Alaska State Legislature
Pouch V (MS 3100)
Juneau, Alaska 99811

Dear Senator Hohman:

Within the past fall, the area of Bristol Bay and other areas have been hard hit by high winds and high water.

The City of Togiak would like to request assistance for erosion control both from the State and the Federal Government.

Last fall of 1979 the highwinds and tides took some of the bay side bank out to the beach. The people fear that if the similar situation happens it will effect the residential homes along the beach as will as the school. We would like to request from your office and your colleages all the assistance that we can get.

If there are other agencys that we can contact by writing a letter please let us know.

Sincerely,

TOGIAK CITY COUNCIL

David B. Nanalook

David B. Nanalook
Mayor

DBN/nb

cc; Rep. Nels A. Anderson, Jr.
Senator Ted Stevens
Senator Mike Gravel
Congressman Don Young
Governor Jay S. Hammond

CITY OF DILLINGHAM

P.O. BOX 191 DILLINGHAM, ALASKA 99576

TELEPHONE (907) 842-5211 or 842-5212

November 26, 1980

Joe Chuckwuk
Dillingham,
Ak 99576

Dear Joe:

The City Council of Dillingham would like to request your assistance with erosion control of our shore front. It maybe that this would at least partially be eligible under some type of Industrial Park Development related to ferry service and fishery development.

Following is a brief recap of the problem including past and current action by the city itself.

June 1965 - A resolution was passed by the United States Sentate Committee of Public Works directing a survey of the shores of Dillingham in the interest of erosion control and related purposes.

August 1967 - Council meeting which was attended by Corp of Engineers representatives seeking in writing assurance of cooperation by the city for the erosion study process. This was voted on and City Manager was instructed assurance of full cooperation to the full extent in the program for control of beach erosion.

July 1971 - Findings of study were presented to the city and comments were solicited. Determination was "benefits were insufficient to make the protection economically justified".

Nov. 1971 - Corp of Engineers had not received any response acknowledging the presentation.

Nov. 1971 - Letter to Corp stating city does not have a copy of report and details regarding new construction starting which will include a 1 1/2 million dollar cold storage and wharf as well as road and staging area. Also states water/sewer improvements are intended in water front area.

At this time the city once again asked for re-evaluation of situtation.

Jan. 1972 - Almost 7 years since Senate directed study

Letter from Corp of Engineers describing meeting held in Anchorage at which Corp of Engineers, City Manager and City Engineer discussed Corp of Engineer Study and new cold storage/wharf facility. Conclusion: "Although located in the erosion area, the soon to be constructed cold storage facility, as designed, incorporates a heavy rock embankment as protection for earthen fill area. The purpose of the rock is for erosion protection and will be adequate to protect the fill". No additional justification for the study.

The study was called complete 1 January 1972.

September 1975 - New City Manager, Joe McGill, applied for a permit from the Corp of Engineers and Div. of Lands, State of Alaska for construction of a 1250 ft. breakwall to protect the cold storage, dock and city river bank.

This permit was issued in January 1976.

March 1978 - The Corp of Engineers offered a Shoreline Erosion Control Demonstration Project to the city requesting a local contribution of $25 - 50,000.

I can find no consideration by council and have been told by past City Clerk the Acting City Manager never took it to council. Neither can I find any letter to Corp of Engineers but it must have been turned down by the Acting City Manager.

I became City Manager in August of 1978 and in Mar. 1979 asked the Corp of Engineers if these erosion demonstration projects were still available. They stated no.

The Corp of Engineers permit and land use permit expired in 1979 due to no construction and upon seeking extension I was informed I would have to reapply and go through entire process again. Due to not having a design and construction funds unknown, I did not reapply.

Sept. 1979 - The council requested erosion control assistance from the Corp of Engineers.

Nov. 1979 - The Corp of Engineers reconfirmed "That after a review of the 1972 study the Corp of Engineer involvement in an erosion control project is not warranted at this time". If the city decides to undertake an erosion control project, Corp staff will be available for technical assistance such as reviewing proposed plans.

Dec. 1979 - High seas caused serious erosion in cold storage area and an engineer was called to review for possible structural damage to city dock.

Aug. 17, 1980 - The worst storm on record hit Bristol Bay area. Appraisal of damage to city owned cold storage/wharf $48,000, severe loss of bank due to erosion with many private concern hard hit and loss of 5 32 ft. commercial boats at Peter Pan dock.

Aug. 21, 1980 - Declared disaster area by City Council.

Sept. 2, 1980 - Declared disaster area by Gov. Hammond.

Nov. 6, 1980 - City Council directed Mayor Carlson to write a letter to all agencies concerned regarding assistance with erosion control and or Industrial Park on the shoreline of Dillingham. This covers that request.

Current situation

Water/Sewer - Expansion to the east of downtown Dillingham in so called Snag Point area has required main water/sewer line installation only 15 - 20 feet from eroding bank in places. Our sewer system is gravity feed and lift stations are costly.

Our main sewer discharge pipe has had gravel and beach cover badly eroded away and has had to have repair work 2 times this year.

Cold Storage/Wharf - The city currently has some $3,025,000 invested in the cold storage, wharf staging area and plans $4 million in dock expansion and staging area during 1980 - 1981. Part of this newly funded project will be solid fill to protect some additional 300 - 350 feet of shoreline east of dock.

The city lost all of its erosion control under the city dock cold storage area in 1979 and 1980 storms. Some $23,000 in repairs to dock were required and erosion control for protection to understructure of cold storage has not yet been reconstructed. In 1972 a rock embankment was discussed. However, the actual construction was of solid bags of concrete with natural clay - earth fill behind to protect the cold storage understructure. We have also lost some 20 feet on east side of cold storage completely exposing grinder pit area.

Government owned versus private property ownership was discussed in the 1965 - 1972 erosion study. This picture has changed some what.

1. Industrial use versus private with construction of Icicle warehouse staging area just east of city dock.

2. The city has now acquired some additional 6 shore lots and very likely can acquire additional if erosion control is to be reason.

3. Each year our unbuilt city street rights-of-way become closer and closer to the bank. These unbuilt street rights-of-way contain our water/sewer for a rapidly expanding city.

4. A greatly increased money valuation of the city owned cold storage/ wharf area.

5. Engineering input that no one small section being given erosion control can succeed without entire bank being considered.

6. Expanding fisheries dependent on the one public dock must be considered a benefit.

7. Freight distribution for all of the area villages must also be considered as a benefit. Without an upland staging area and adequate dock north bound cargo barges are rendered helpless.

8. Boat harbor. The Corp of Engineers are seriously concerned over the lack of erosion control on west side of entrance to harbor. This badly eroded in August 1980. Last summer this harbor had 539 users.

A recap or summary of our problem would be that regardless of whether you term it Industrial Park, Erosion Control or a worthwhile State of Alaska Public Works Project, "we need help".

Thank you for your consideration.

Sincerely,

David B. Carlson

David B. Carlson
Mayor

CITY OF DILLINGHAM

P.O. BOX 191 DILLINGHAM, ALASKA 99576

TELEPHONE (907) 842-5211 or 842-5212

December 17, 1980

Colonel Lee R. Nunn
District Engineer
Alaska District, Corps of Engineers
P.O. Box 7002
Anchorage, Alaska 99510

Dear Colonel Nunn:

The City Council of the City of Dillingham, at its meeting of December 18, 1980 has directed me to write you advising you of the following:

The City of Dillingham hereby requests preparation of a Reconnaissance Report covering small shore and beach restoration and protection under authority of Section 103 of the 1962 River and Harbor Act, for the area of Dillingham.

The City of Dillingham, as a public agency fully authorized under State laws to give such assurances and financially capable of fulfilling such measures, hereby agrees to all items of local cooperation including:

a. Contribute in cash the local share of project construction costs, determined in accordance with existing policies for regularly authorized projects, in view of recreational benefits, land enhancement benefits or other special or local benefits expected to accrue.

b. Provide without cost to the United States all necessary lands, easements, rights-of-way, and relocations required for construction of the project, including that required for periodic nourishment.

c. Hold and save the United States free from claims for damages which may result from construction and subsequent maintenance of the project, except damages due to the fault or negligence of the Unites States or its contractors.

d. Assure continued conditions of public ownership and use of the shore upon which the amount of Federal participation is based during the economic life of the project.

e. Assure maintenance and repair, and local share of periodic beach nourishment where applicable, during the useful life of the works as required to serve the project's intended purpose.

f. Provide and maintain necessary access roads, parking areas and other public use facilities open and available to all on equal terms.

g. Specific cases may also warrant assigning other additional local responsibilities, such as providing appurtenant facilities required for realization of recreational benefits.

h. Assume full responsibility for all project costs in excess of the Federal cost limitation of $1,000,000.

Yours truly,

David B. Carlson

David B. Carlson
Mayor

BRISTOL BAY AREA HEALTH CORPORATION

FULL BOARD OF DIRECTORS

- Resolution 81-07 -

CONSTRUCTION OF A BREAKWATER AT CLARKS POINT

WHEREAS: The village of Clarks Point has a serious erosion problem due to wave action and high tides, and

WHEREAS: this erosion problem if not corrected will destroy the spit area where the present homes, fish camp sites and set net site locations reside, and

WHEREAS: if unattended, the road and airport will also be in jeopardy allowing no access or exit during high tides to airport from the new relocated village site on the hill, thus posing a clear threat to life and safety,

NOW THEREFORE BE IT RESOLVED that the Bristol Bay Area Health Corporation Full Board of Directors, duly assembled this 3rd Day of December, 1980, in Dillingham, Alaska urge the U.S. Army Corps of Engineers, State of Alaska Department of Transportation and the Economic Development Administration cooperate to construct a breakwater to control any further erosion and damage to the village of Clarks Point.

Certification:

Marlene Johnson,
President

Maryann Johnson,
Secretary/Treasurer

BRISTOL BAY AREA HEALTH CORPORATION
P.O. BOX 10235
DILLINGHAM, ALASKA 99576

PHONE: (907) 842-5266
(907) 842-5267

December 23, 1980

State of Alaska
Department of Commerce and Economic Development
State Office Building
Pouch D
Juneau, Alaska 99811

Dear Sirs:

On behalf of the village of Clarks Point, my Board of Directors, representative of the 32 villages in the Bristol Bay area, we would like you to cooperate with the following, to construct a breakwater to control any further erosion and damage to the village of Clarks Point as per Resolution 81-07.

Agencies we feel who can help:

1. U.S. Corp. of Engineers
2. Alaska State Department of Transportation
3. Economic Development Administration

It is our hope that a high labor intensive project using local labor will be utilized this coming construction season due to the imminent threat of losing the Spit and property due to high tide and wind action now that most of the Spit has eroded away.

If you have any questions, please write or call us or the village of Clarks Point.

Sincerely,

Robert J. Clark
Executive Director

cc: Village of Clarks Point
Bristol Bay Native Association
Representative Joe Chuckwuk
Senator George Hohman

attachment: Resolution 81-07

Carter

THE LEGISLATURE OF THE STATE OF ALASKA
TWELFTH LEGISLATURE

FISCAL NOTE

I. REQUEST
Bill/Resolution No. HB NO. 277
Title A special appropriation to DOT/PF and DC & RA for erosion control projects.
Requested by House Transportation Committee Date March 23, 1981

II. FISCAL DETAIL
Agency Affected Department of Community and Regional Affairs
Program Category Affected Development
BRU, Program, or Subprogram(s) Affected Local Government Assistance
(Note: If more than one budget component is affected, separate line-item amounts and funding for each component in the analysis section.)

EXPENDITURES (Thousands of Dollars)

	FY 81	FY 82	FY 83	FY 84	FY 85	FY 86
100 PERSONAL SERVICES		-0-				
200 TRAVEL		-0-				
300 CONTRACTUAL		-0-				
400 COMMODITIES		-0-				
500 EQUIPMENT		-0-				
600 LAND & STRUCTURES		-0-				
700 GRANTS, CLAIMS, ETC.		-0-				
		-0-				
TOTAL		-0-				

FUNDING (Thousands of Dollars)

GENERAL FUND		-0-				
FEDERAL FUNDS		-0-				
OTHER (Specify Fund Source)		-0-				

POSITIONS

FULL TIME		-0-				
PART TIME		-0-				
TEMPORARY		-0-				

III. ANALYSIS (See Fiscal Note Preparation Instructions, Section III)

Section 3 only
Erosion has forced the relocation of the city of Port Heiden. Legislative Grants totalling $75,000 for FY 79 and FY 80 were used to provide electricity to a new town site and move five homes. Approximately 20 buildings would be moved with this $80,000 appropriation, which would complete the project. This appropriation is in response to a formal request from city council.

No additional costs providing Department of Community & Regional Affairs Legislative Grants administrative positions remain in Governor's FY 82 budget.

IV. DATE March 23, 1981 PREPARED BY McKie Campbell
AGENCY Department of Community & Regional Affairs
PHONE 465-4735

Original: Legislative Finance

LOWER KUSKOKWIM COAST CORPORATION

GENERAL DELIVERY
KIPNUK, ALASKA 99614

December 9,1980

Alaska State Senator George Hohman
Pouch V
Juneau, Alaska 99811

Dear Senator G. Hohman,

As it had been requested and now had been surveyed by DOT and am including the copies of the reports, I am here therefore again asking for you to look more into our problems here in our four corporated villages of Lower Kuskokwim Coast.

On before election, you had ernestly seek for our support in wanting to be in your seat as you are sitting in now. You promised us that you will do whatever you have to do if you win the election; Now, being re-elected by us, we in return want you to do what you pocessed to do more fervently. As you may had known already of our major problems here at our Coastal villages of Lower Kuskokwim of river erosions of our rivers being eroded away at the top 15' annually and you may know that it takes force to move out barrels of oil by manpower. The houses, the school at Tuntutuliak, if not being worked out soon, next on your trip you will see no school where it is sitting now from your last seen from Sept. 12&13th, 1980 during L.K.C.C. meeting

With our state (Alaska) being so rich and almost don't know what to do with its money, why not use the monies for it's own use as our problems here.

I hope you working Senators, Congressman and Represantative of our State will take stand on this strongly.

Sincerely,

David K. Carl
L.K.C.C. Project Director

cc:Honorable Ted Stevens U.S.Senator
Joseph Chuckwalk District 16 Representative
Honorable Don Young U.S.Congressman
Frank Murkowski U.S.Senator

MEMORANDUM State of Alaska

TO: John Tolley, Planner
Planning & Programming
Central Region
DOT/PF

DATE: October 14, 1980

FILE NO: 230H

TELEPHONE NO. 586-2195

FROM: R.P. Beck, P.E.
Chief of Design
Division of Harbors
DOT/PF

SUBJECT: Lower Kuskokwim
Erosion Control
Projects

Because of the variety of conditions and problems at the four visited sites, I will treat each as a separate problem rather than to attempt to draw any common conclusions based on similar factors. This memo could easily become a mini treatise on Arctic engineering if I attempted to detail, define and amplify the basic processes that are occurring either singly or in combination at the four sites. Suffice to say, I feel we are seeing three very basic physical actions as causative agents:

1. River and stream erosion; bank scour and degradation of unprotected and unstable banks (deterioration along a vertical plane).

2. Wind and wave erosion; same effect as above (deterioration along a vertical plane).

3. Subsidence, sluffing, and slumping; permafrost when mechanically disturbed, its insulating cover removed and its stable temperature balance disrupted will tend to a cyclical freeze/thaw state either seasonally or tidally influenced with warm water inflows and outflows. The net result is loss of solids within the earth mass (mineral particulates, or ice content material). In other words "the bottom drops out". (deterioration along a horizontal plane).

With the foregoing in mind, discussion of the four sites follows:

Kipnuk: is sited along an oxbow bend in the river where water runs deepest and the bank is highest. Physically, the location meets local needs for adequate water depth at all stream stages and conveniently high ground for offloading of materials. Bank erosion is occurring as a result of wind driven waves and river scour action. Slumping of disturbed permafrost does not appear to be a contributing factor at this site. Remedial proposals are:

1. A continuous seawall front.
2. Groins to re-direct current action.
3. A combination dock and groin structure.

The problems are compounded and costs grossly increased due to remoteness, permafrost and total lack of locally available construction materials (local knowledge says sand and gravel are barged up from Seattle). Option #3 has the most merit both economically as a substitute loading and dock area and as a stream deflector and wave barrier. Additional study and feasibility work must be done to define and analyze the permafrost limits and makeup, determine best and most effective design, determine best choice of materials and construction technique, and finally, provide cost effectiveness information to determine if such a project is feasible.

Kwigillingok: similar to Kipnuk except that wind generated wave exposure is nil. Bank erosion is occurring as a result of river scour and permafrost subsidence along a broad river front with several loading sites being affected. Evidence from numerous earth slumps indicates the permafrost in this area possesses a high ice to solids ratio. Becuase of the broad front exposed to river scour a seawall appears totally unfeasible at this site. Recommendations are therefore limited to:

1. Protective groins.
2. A combination dock and groin structure.

As at Kipnuk, additional study, definition, analysis and competent engineering design must be accomplished prior to letting of a construction contract or negotiating a grant in aid to the village.

Kongiganak: is sited similar to Kipnuk and Kwigillingak within an oxbow bend in the river. At this site the river bank is in excess of 25 feet high rather than 6 to 8 feet. Disturbance of the tundra and disruption of its underlying permafrost is creating soil slumps and gullies leading to the river. River bank scour is limited in extent but extreme in effect where it is occurring. The bank makeup appears to be of a high water, solids ratio permafrost. Wind and wave exposure is nil, with scour as a result of river flow alon . Possible remedies applicable to this site are similar to the three envisioned for Kipnuk. My Kipnuk conclusions and recommendations are germain to Kongiganak.

Tuntatuliak: is similar in all cases to Kwillingok, my conculsions and recommendations are therefore the same.

In summary, John, I must interject a great degree of caution as foremost in my recommendations noting specifically that we must have detailed site studies and competent engineering workups before undergoing any comprehensive public works projects.

MEMORANDUM State of Alaska

TO Maurice L. Wilson, Manager
Central Division Transportation
Planning

DATE: October 28, 1980

FILE NO 300C

TELEPHONE NO: 266-1616

FROM John Tolley, Transportation Planner
Central Division Planning
& Programming

SUBJECT: Lower Kuskokwim
Erosion Control
Projects

On September 30, 1980, Bob Beck (Chief of Design with the Division of Harbors), Carol Sacheck and myself traveled to the villages of Kipnuk, Kwigillingok, Kongiganak and Tuntutuliak to examine local riverbank erosion problems. The primary objective was to obtain information from village residents and assess the magnitude of the erosion problems.

KIPNUK

We arrived in Kipnuk at 10:00 A.M. and met with Mr. David Karl who serves as Manager for the Lower Kuskokwim Coast Corporation. This Corporation serves as the non-profit native Village Corporation for Kipnuk, Kwigillingok, Kongiganak and Tuntutuliak (each village maintaining a 25% share). Mr. Karl showed us the primary erosion problem areas at Kipnuk. These areas consist of three seperate sites located along an oxbow bend of the Kugkaktlik River. The riverbank in this location is less than five feet high and the three major erosion areas total approximately 900' in length. The banks are subsiding at a rate of approximately three to four feet annually. The problem is most severe when high tides occur simultaneously with strong north winds. Mr. Karl then accompanied us to the other three villages to facilitate introductions to the appropriate local officials. He also proved to be of great assistance acting as an interpreter due to our inability to communicate in Yupik.

KWILLINGOK

We arrived in Kwigillingok at 11:30 A.M. and met with James Atti and his father Peter Atti. James is the Village Council President. There are three major sites of riverbank erosion along the Kwigillingok River totaling approximately 600' in length. The heights of the riverbanks range from approximately 10' to upwards of 25' at the unloading and staging area near the new high school. The bank has been subsiding at a rate of approximately 10' to 20' annually varying among the three separate locations with disparate tidal and wind conditions. An additional problem for the community is the formation of new sloughs in the permafrost. We inspected two sloughs that have developed within the past year. These sloughs are causing minor disruption along the pathways that connect the villages residences and activity centers.

KONGIGANAK

We arrived in Kongiganak at 1:30 P.M. and met with James Lewis and Ivan Azean. Mr. Lewis was the most recent Village Council President. The erosion problem along the Kongiganak River is confined to one large area. The site is approximately 1000' in length with the bank height in excess of 20'. The riverbank is currently subsiding at a rate of approximately 10' annually. The problem of new slough formation also occurs at Kongiganak. As the permafrost melts, graben formations develop due to subsidence below the ground surface. The Village residents have been filling these depressions with refuse and this could pose a potential health and safety hazard.

TUNTUTULIAK

We arrived at Tuntutuliak at 3:00 P.M. and met with Paul Andrew and James Charles. The major erosion areas along the Kinak River include approximately 2500' of total length. The magnitude of the problem and specific erosion rates vary by location but in general the bank is subsiding at a rate of approximately 10' to 15' annually. The most severe problem occurs along a 1200' length of riverbank adjacent to the BIA school and village water well. The school itself is approximately 50' from the existing riverbank.

SUMMARY

There is obviously a significant erosion problem at these four villages. However, these conditions are not unique to the subject villages but rather occur at numerous riverfront communities throughout Alaska. An attached memorandum from Mr. Beck addresses some of the specific engineering characteristics and explains the basic geomorphic and hydrologic processes interacting along the riverbanks at the subject villages. I concur with his recommendations that detailed location studies, reliable engineering data, soils reports and alternative solutions to the erosion problems need to be prepared before proceeding with any actual construction work.

JT/lm

Attachment

cc: Jim Edwards
Maurice Wilson

Alaska State Legislature

Senate

OFFICIAL BUSINESS

POUCH V
CAPITOL BUILDING
JUNEAU, ALASKA 99811

MEMORANDUM

TO: Representative Tony Vaska

RE: HB277; $2,000,000 Southwest Alaska Region Dredging

You have asked for specific information on projects to be undertaken persuant to the above referenced house bill. Following is the information:

1. CHEFORNAK.....$200,000
2. DEACONS LANDING.....$500,000
3. LISKEYS CROSSING.....$280,000
4. AKIACHAK.....$120,000
5. JOHNSON RIVER.....$330,000
6. NAPAKIAK.....$120,000
7. NAPASKIAK.....$120,000
8. QUINHAGAK.....$210,000
9. ATMAUTLAUK.....$120,000

The funding for these specific projects should be considered allocations and not exact figures for the projects. If economies are realized on certain projects, the balances should be transferred to over-runs on the other projects.

From: Kotlik City Council
c/o Kotlik City Office
Kotlik, Alaska 99620

JAN 30 1981

To: John G. Fuller
Alaska State Representative
Pouch V
Juneau, Alaska

Date: January. 26, 1981

Dear Alaska State Representative,

We are sending a list of the Priorities, which are listed below. We would appreciate it if you took them into consideration. The priorities that the Village of Kotlik have Dire needs of. They are as follows:

1. Television is one of our priority for the reason.
   a. There are some Educational Series that will be helpful to the Children, and also to the Adults.
   b. For entertainment
   c. Also it gives out information on news that are not broadcasted over Radio Station.
   d. Some Video Programs are also beneficial for the young students that are still in school.
2. Village Gymnasium with Bleachers
   a. The Villagers need more entertainment centers. Their main sport is Basketball and it is not big enough to hold up a tournament because of not enough space.
   b. The people need a place of their own Gym where it is big enough to hold up to 350 people. Besides playing basketball they also can have different sports going on.
   c. The High School Gym is much to small, and it has signs of weak spots after four to five weeks of occasional use by the High School Students and the Village Leagues.
   d. The High School Gym is not well constructed and does not have good equipment or bleachers.
3. Roads for the Village
   a. It is swampy behind the village, so we need it to be drained. And put a gravel to have a road to walk on.

4. Lights for Airport

a. Since we do have an emergency yearly here at the Village of Kotlik. We would like to have some lights for the safe landing of the Pilots. It is needed badly for the safety of the People and the Pilots.

b. Planes will be able to land if there should be lights.

c. Also a beacon can be installed at the airport for the benefit of the airplanes.

5. Extra Generator

a. We have only one Generator to light up the whole Village of Kotlik. So in any case the Generator should happen to break we or the Village of Kotlik would need badly a Standby Generator to take the place of the broken Generator.

6. River Bank Erosion

a. The Village of Kotlik river banks are eroding year by year and the bank is getting very close to some houses.

b. We need a seawall to prevent the Erosion of the bank of some thing, that can cut the River Bank from further carving in of the Banks of the Kotlik River.

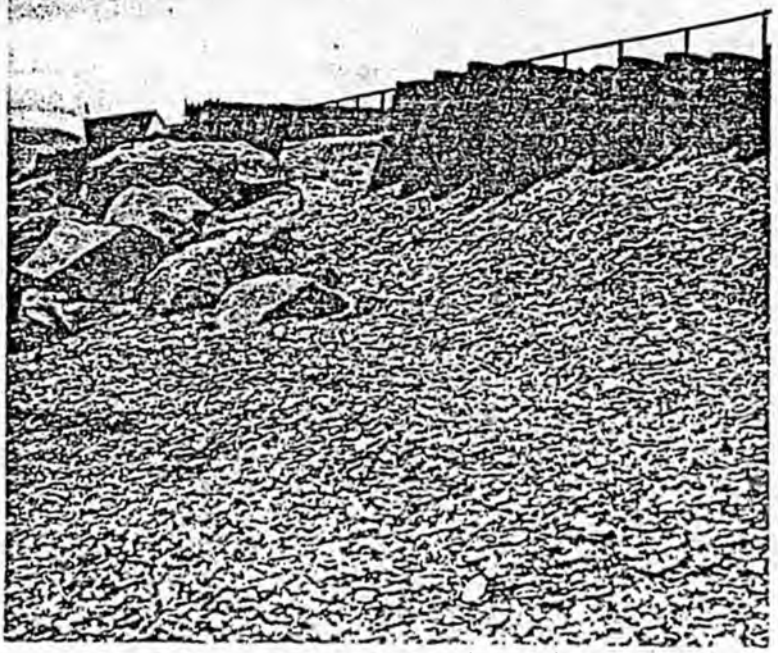
I do hope that you will stress all, or some of the priorities that are needed badly here at the Village of Kotlik.

Enclosed you will find a letter to Lower Yukon School District concerning the High School Gymnasium.

Sincerely,

Joseph B. Mike (Mayor)

Joseph B. Mike, Mayor
Kotlik City Council



This seawall was constructed behind the school sewage lagoon in an attempt to slow erosion during storms.

Topography and Soils

Teller is located on a spit between Port Clarence and Grantley Harbor. The Kuzitrin River, which has its source about 125 miles west of Teller, empties into Grantley Harbor. The opening between the two spits separating the harbor from Port Clarence is about a quarter mile wide and over 60 feet deep.

Soils in the area range from well-drained to poorly-drained. Hilly areas and ridges supporting low shrubs and alpine tundra are generally well-drained and very gravelly. They have moderate erosion potential. The steeper slopes on the bordering mountains are poorly drained and support sedges and mosses.

Permafrost--Permafrost ranges from shallow to deep and is discontinuous around Teller. Most of the townsite is ice-free, but on-site examinations for permafrost should be conducted prior to construction. In regions of permafrost,

REPRESENTATIVE ALBERT P. ADAMS

Alaska House of Representatives

HOME
P.O. BOX 271
KOTZEBUE, ALASKA
99752
(907) 442-3320

WHILE IN JUNEAU
POUCH V
JUNEAU, ALASKA
99811

(907) 465-3724
(907) 465-3877

MEMBER
FINANCE COMMITTEE
BUDGET AND
AUDIT COMMITTEE
BUSH CAUCUS

DISTRICT 21
AMBLER
ANAKTUVUK PASS
ATQASUK
BARROW
KAKTOVIK
KIANA
KIVALINA
KOBUK
KOTZEBUE
NOATAK
NOORVIK
NUIQSUT
POINT HOPE
POINT LAY
SHUNGNAK
WAINWRIGHT

March 19, 1981

TO: REP. JACK FULLER

FROM: REP. AL ADAMS APA

RE: NEED FOR AN EROSION ASSESSMENT FOR KIVALINA AND AMBLER

Kivalina is a coastal village which lies on a flat sand and gravel spit eleven feet above sea level at the airport. Severe storms and wind driven waves cause coastal flooding which affects 20-30% of the village. The removal of sand and gravel, which stabilize the shoreline, has contributed to the beach erosion problem.

Ambler is built on a gently sloping terrace of dry, frozen silty sand adjacent to a steep river bluff. It is also on the active floodplain of the Kobuk River. New homes in Ambler are located above the dangerous flood areas, but boat moorings, storage areas and some of the older structures are vulnerable to the high waters. Spring flooding near the shoreline occurs yearly when the ice begins to move. A bigger problem is erosion in the bluff areas as a result of spring runoff. Running water is eroding and removing soil free of vegetation. Locally this type of erosion is severe and demands stabilization.

CITY

This report was prepared in response to a letter from the City of Shishmaref dated 17 July 1979 (Inclosure 1) which requested a Section 103 Reconnaissance Study for protection of their shoreline.

Authority for preparation of reconnaissance reports is contained in ER 1105-2-50, and must conform to provisions of Section 103 of the 1962 River and Harbor Act, as amended.

The Office of the Chief of Engineers, Washington, D.C., was notified by a District letter dated 7 August 1979 of the initiation of the reconnaissance report. State Clearinghouse requirements (A 95) have been satisfied (Inclosure 2).

DESCRIPTION OF STUDY AREA

Shishmaref is located on Sarichef Island in the Chukchi Sea, on the north side of Seward Peninsula (Inclosures 3 and 4). The village is incorporated as a second class city and lies within the Bering Straits Native Corporation Region. The Bureau of Land Management expects to convey the island to the Corporation by July 1980. The population as of July 1978 was 364.

Economy: Subsistence hunting and fishing are the principal economic activities. A commercial herring fishery is being considered for the area by Community Enterprise Development Corporation of Alaska, but its establishment is uncertain.

The village is serviced by the Bureau of Indian Affairs' vessel, North Star III. There are no dock facilities so delivery is accomplished "over the beach". Open water season lasts from July through September.

Air service is provided by Muntz onto the existing 2,000-foot runway. The Alaska Department of Transportation and Public Facilities, in coordination with the Federal Aviation Administration, is studying the feasibility of relocating and expanding the runway so that it can accommodate Hercules class aircraft. The results of that study are uncertain at this time.

Physical Environment: The Shishmaref Expansion and Relocation Study prepared by DOWL Engineers describes the physical environment:

> "Sarichef Island is a barrier island formed by northeast trending currents carrying silts and sands, which comprise the soils of the island. The island is underlain by permafrost reported to vary from 20 to 50 feet in depth. Vegetation is sparse, consisting of grasses and sedges in the sandy areas and low mat vegetation on the lagoon side and in areas of ponded water. It is subject

to mild summers and cold snowy winters. It is prone to flooding from both the north and the south during fall on-shore storms. Also, wind driven beach ice from the north in the winters encroach on the area. Erosion is occurring all along the north coast due to wave and wind action, aggravated by loss of vegetation and permafrost degradation. Along the beach north of town, erosion is proceeding more rapidly than deposition. Further east of the town and runway, depositional trend is dominant."

The erosion rate is approximately 6 feet/year, but can be substantially greater during a major storm. The fall 1973 and 1974 storms caused spot erosion of approximately 15 feet. The community's description of these storms indicate that they were 100-year storms or greater.

Biological Environment: Vegetation on Sarichef Island is classified as wet tundra consisting of various grasses and sedges in the sandy areas and low mat vegetation on the lagoon side and in areas of ponded water.

Small furbearing mammals inhabiting the island include hares, shrews, lemmings, voles and arctic fox. Larger furbearing species typical of the northwest region are not present on the island.

Migrating waterfowl populations consist of Common, Yellow-billed and Arctic loons, Canadian and White-fronted geese, and Pintails.

The presence of intertidal organisms in the project area is unknown.

Freshwater fish found in the island's lakes and ponds may include Dolly Varden and Arctic Char. Various species of fish are also present in the marine environment.

Significant archaeological sites have been designated on the island and are located near Shishmaref airport.

Government and Community Facilities: The village has a regional school, the runway, power plant, community hall, clinic, National Guard armory, Post Office and church. Water must be hand-carried from the water reservoir since there is no distribution system (pipe or truck). There is a sewage lagoon for the school, but no village sewage system for domestic wastes.

Construction Materials and Capabilities: A D-8 cat and backhoe loader are available locally. Gravel is not available within a 15 mile radius. One (1) inch gravel is available 15 miles west of the city and large rock is available 25 miles south, both on the mainland. There are four possible borrow sites for sand on the island: southwest, northeast, bottom of inlet south, and small islands located south of northeast end. These sites have not been studied, but it is assumed they could provide sufficient sand for any project.

L ING CORPS OF ENGINE PROJECTS

None

PRIOR STUDIES

1953: The Corps of Engineers was asked to consider the erosion problem. At that time, the villagers were advised that relocation would be cheaper than building a wall.

1973: In May, the village resolved to relocate. As a result of the major storm on 9 and 10 November, the village initiated the relocation action. A series of meetings were held with the village, Corps of Engineers, Alaska Department of Community and Regional Affairs, the Governor's Office, Soils Conservation Service, Division of Aviation, Public Health Service, and the National Guard. A relocation site across the lagoon on the mainland was selected and studied.

1974: The Department of Community and Regional Affairs, Division of Community Planning (DCRA), completed a Survey of Population and Structures. Field studies of the proposed relocation site at Nunatak showed it to be an undesirable location, so the village decided not to relocate pending the completion of a feasibility and cost study. The village sought advice on a temporary protection measure and the Corps of Engineers provided four alternative plans. A sandbag seawall was constructed which did provide some protection during the major storm in November.

1975: The Shishmaref Erosion Protection, Alternatives, Feasibility and Cost Study was completed by DOWL Engineers for DCRA. The study reviewed the causes of the erosion, suggested possible corrective measures, and developed preliminary estimates of the cost of the alternatives.

1976: The Corps of Engineers prepared a Special Flood Hazard Report for the village.

1978: The Shishmaref Expansion and Relocation Study was completed by DOWL Engineers for DCRA. The study was intended to be an element in the development of a community plan by identifying expansion and relocation possibilities.

PROBLEMS AND NEEDS

Sarichef Island is a barrier island and is therefore subject to accretion and erosion along its seaward side. Over a prolonged period of time, the island tends to migrate eastward, that is, erode on the west end and accrete on the east end. Additionally, onshore winds can and have built low bluffs out of the island sand. These bluffs are highly susceptible to erosion during high storm surge and waves.

Shishmaref is laterally located in the middle of the island and is therefore well situated, in the long term, against erosion due to the migration action. It is the village's location relative to the bluffs that is the problem. The western portion of the village is located on top of the bluff, and is in danger of being lost to the sea. The eastern portion of the village is located well back from the sea and is not as vulnerable since surge and waves tend to dissipate over the long, shallow sloping shore. The buildings were located far from the sea in the eastern portion because of the obvious need to protect them against wave action. The apparent safety of bluff tops encouraged building too close to the sea.

The erosion of the bluffs occurs relatively slowly unless a major storm occurs such as those of 1973 and 1974. Aerial photography taken in 1957 through 1979 was used to determine the average erosion rate of 6 feet/year. Since several major storms occurred during the 1957-1979 time period, the typical annual erosion rate might be less than 6 feet/year. The storm rate is probably around 15 feet/day. Due to the uncertainty of major storms, the 6 feet/year rate is used in depicting the estimated shoreline on Inclosure 5.

LOCAL DESIRES

The people of Shishmaref would like to have a structure built along the western portion of the village to halt the erosion. They are limited in space for expansion and do not want to lose any more of the land that has already been developed. They are generally opposed to the non-structural measures of relocating since no acceptable site is within a reasonable distance of their present location.

POSSIBLE SOLUTIONS

Alternatives available for protection of the village can be classified as structural and non-structural measures. Non-structural measures were addressed in the DOWL Engineers' studies. Three structural alternatives were also considered, each with an estimated 25-year design life.

The first alternative considered was developed as System 1 by DOWL Engineers in their 1975 report. The structure consists of gabion enclosed sand bags frozen in place and is shown in Inclosure 6. This alternative makes use of the readily available sand and requires relatively few technical skills for construction. Whereas sand bags afford protection, this alternative improves structural stability by inclosing many sand bags in one gabion, thus limiting the movement that can take place under strong wave action. Additionally, this alternative further strengthens the bluff against erosion by freezing.

The second alternative is a cement-sand stabilization of the bluff and is shown in Inclosure 7. This alternative also makes use

of the readily available sand and involves mixing the sand and cement in place. Such construction requires thorough mixing and proper proportions of materials, therefore, supervision and construction technique are emphasized in this alternative.

The final alternative is a structure consisting of gabions lined with filter fabric inclosing sand and is shown in Inclosure 8. This alternative is similar to the demonstration program design that is being studied at Kotzebue. That structure, using filter fabric instead of sandbags, is functioning well. The structure has the previous advantages of usability and simplicity of construction. Additionally, it is the least expensive of the three alternatives.

PRELIMINARY ESTIMATE OF ANNUAL BENEFITS

The structures and property that will be threatened by erosion are considered the potential benefit source. Inclosure 5 shows the structures threatened during a 50-year period. The local citizens evaluated the existing structures and provided current values found in the tables. A present value for each structure, based on the estimated date of structure loss, was then calculated by using a discount rate of 7 1/8 percent. All the present values were then spread over a 50-year project life at 7 1/8 percent to establish the annual benefits to be earned from erosion protection. All property and structures are privately owned except for the school and armory. Eroded land is divided into 10-year segments to simplify the annual benefit calculation.

Item	Critical Year	Current Value	P.W. Factor	Present Value	Annual Benefit Value
10 houses	7	200,000	.62	124,000	9,126
land	10	18,300	.50	9,150	673
land	20	18,300	.25	4,575	337
10 houses	22	200,000	.22	44,000	3,238
BIA school	22	250,000	.22	55,000	4,048
land	30	18,300	.13	2,379	175
store	30	200,000	.13	25,400	1,870
armory	32	200,000	.11	22,100	1,630
land	40	18,300	.06	1,098	81
school buildings	45	4,750,000	.045	213,750	15,732
land	50	18,300	.03	549	40
				Total	$36,950
				Round to	$37,000