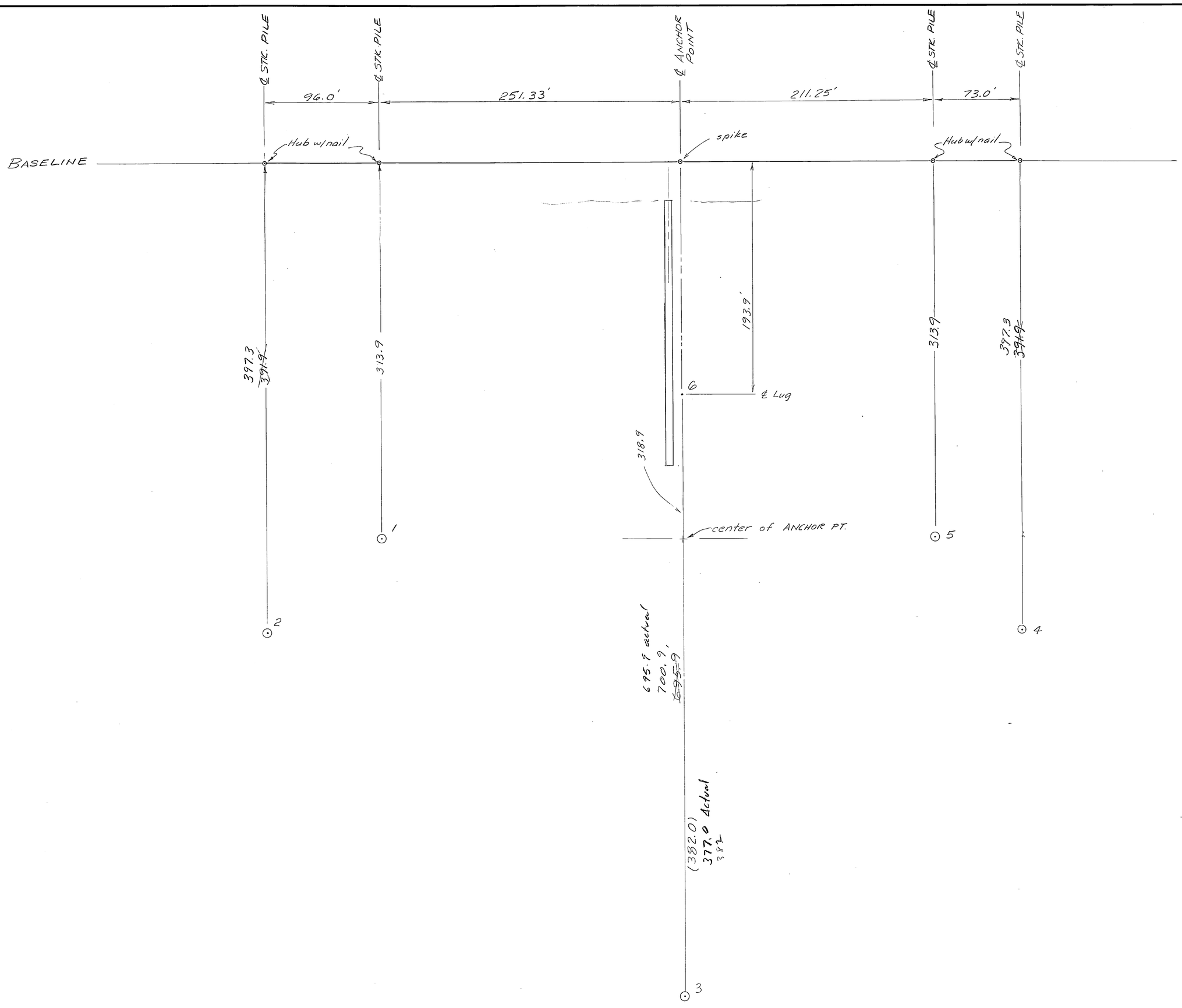
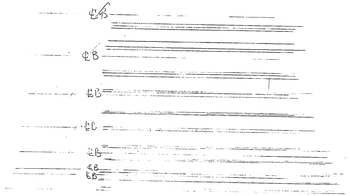
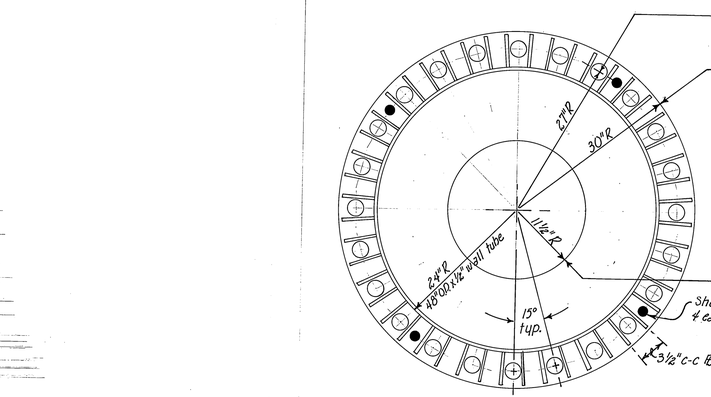
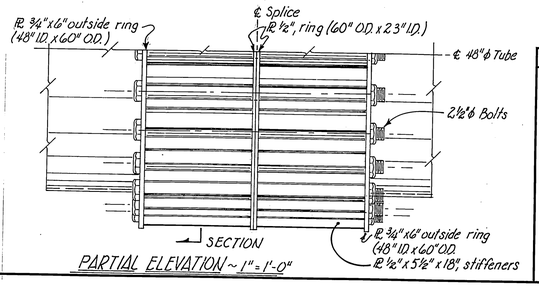


STAMP	DO NOT SCALE THIS DRAWING – USE DIMENSIONS
	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES DIVISION OF HARBOR DESIGN AND CONSTRUCTION
	LETNIKOF COVE STAKE PILE LAYOUT
	SCALE 1" = 50' · SURVEYED DW/RD · APPROVED DESIGNED · DRAWN DW CHECKED · DATE 4-16-80 DIRECTOR
	PROJECT NUMBER K39189 · SHEET 1 OF 1



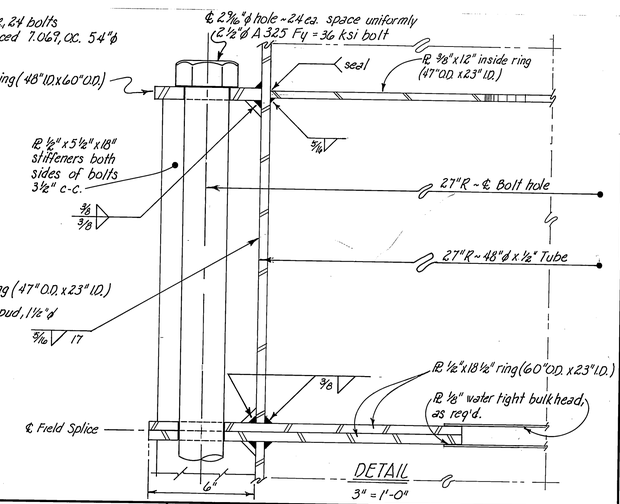


SECTION
1" = 1'-0"



SECTION

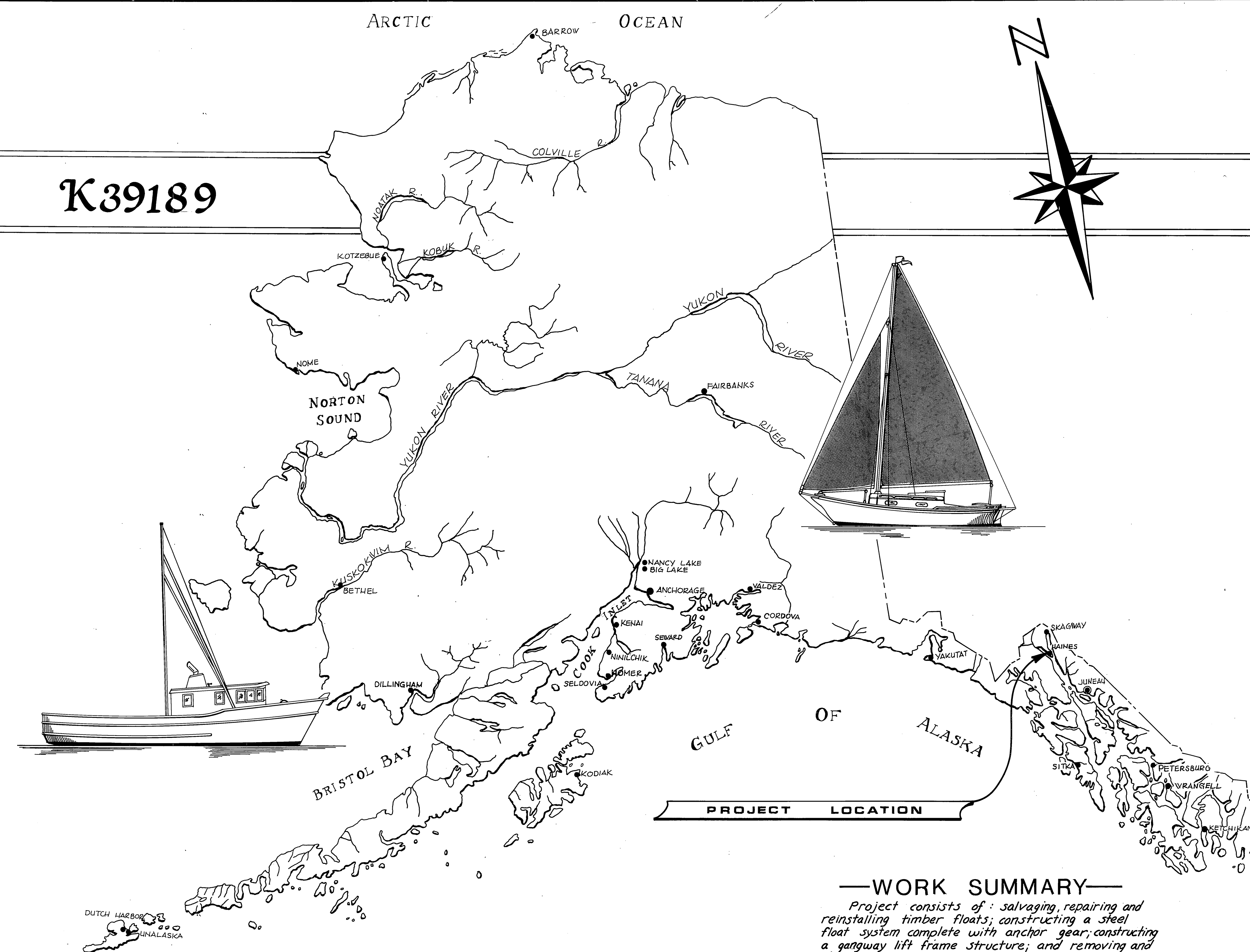
PARTIAL ELEVATION ~ 1" = 1'-0"



DETAIL
3" = 1'-0"

STAMP	DO NOT SCALE THIS DRAWING – USE DIMENSIONS
	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES DIVISION OF HARBOR DESIGN AND CONSTRUCTION
	LETNIKOF COVE
	ALTERNATE FLANGE JOINT DETAIL NOT USED
SCALE As Noted DESIGNED HM CHECKED	SURVEYED DRAWN GRF DATE 11-79
	APPROVED Robert P. Beck DIRECTOR
PROJECT NUMBER K39189	SHEET 1 OF 1

LETNIKOF COVE FLOAT K39189



WORK SUMMARY

Project consists of: salvaging, repairing and reinstalling timber floats; constructing a steel float system complete with anchor gear; constructing a gangway lift frame structure; and removing and disposing of timber piles and floats, all at Letnikof Cove, Haines, Alaska.

As Built – 6-81 DCW

INDEX TO SHEETS		
1	Title Sheet	
2	Project Layout	
3	Main Float Layout & Typical Details	
4	Pipe Intersection & Rigid Frame Details	
5	Float Connections & Misc. Details	
6	Anchor Details	
7	Gangway Support Bent	

STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES

DIVISION OF HARBOR DESIGN & CONSTRUCTION

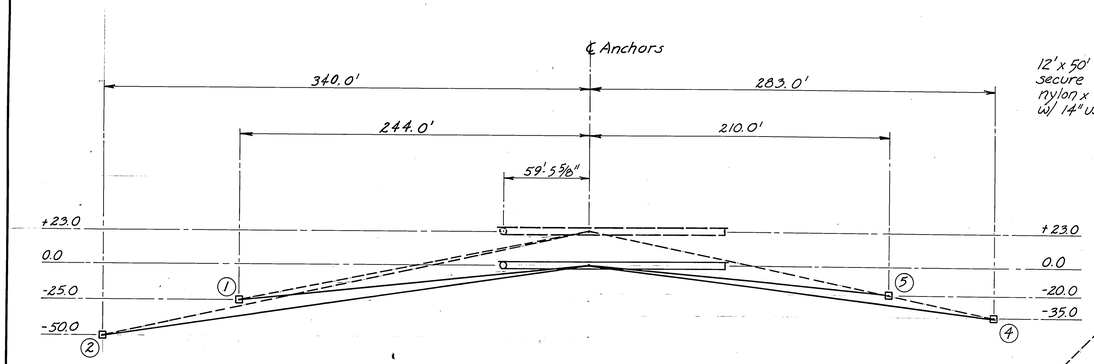
APPROVED

[signature] for Don Statter, Director

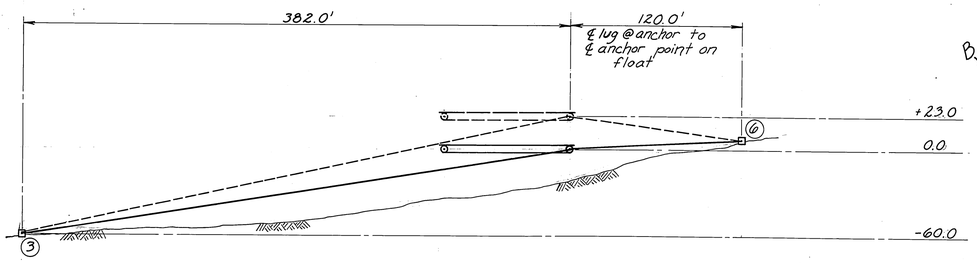
DATE Sept 28, 1979

SHEET 1 OF

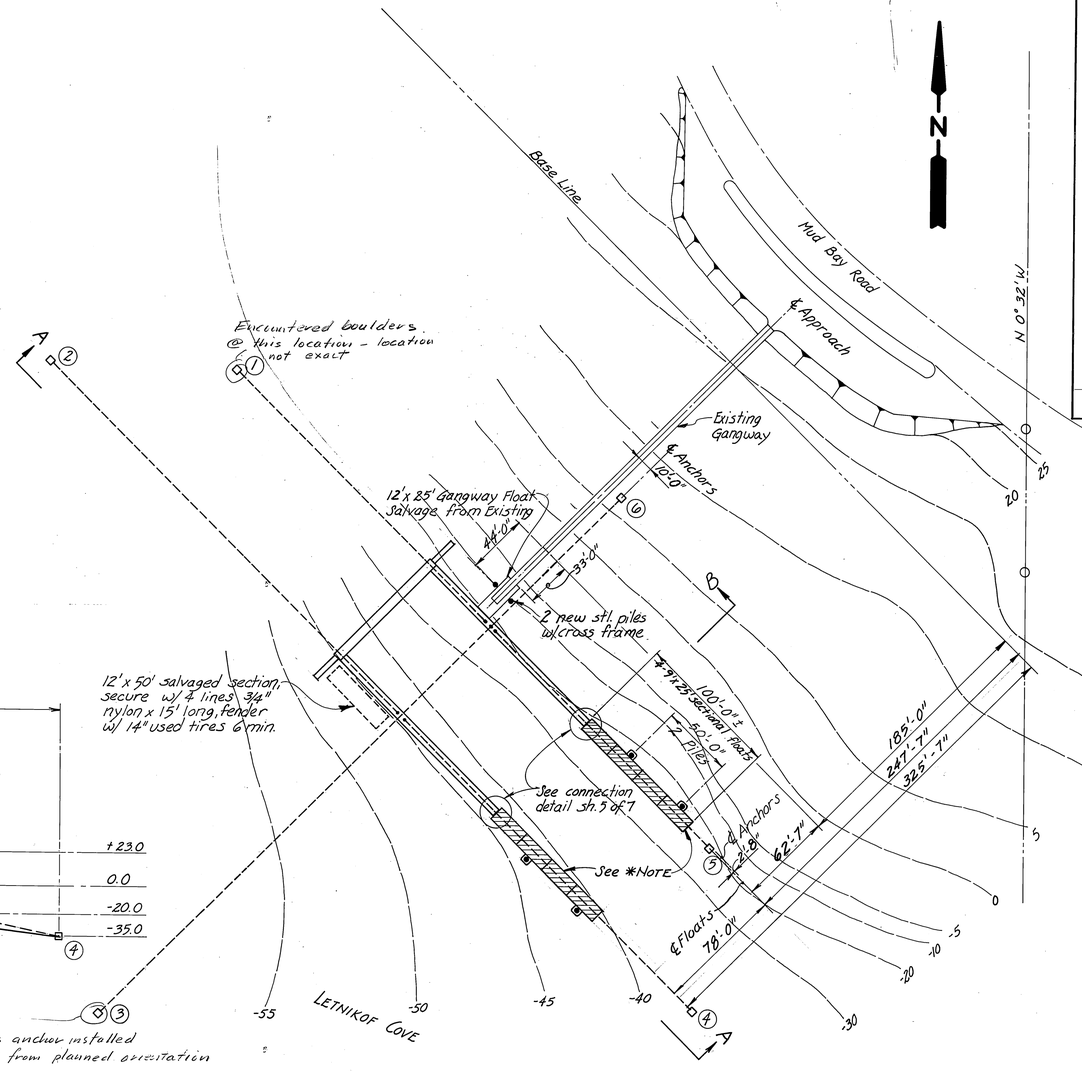
K&E 10 1153 3-78 MC 7738•



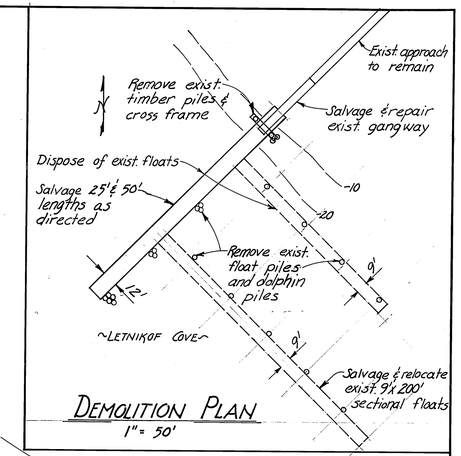
ELEVATION A-A
1" = 50'



ELEVATION B-B
1" = 50'



PLAN
1" = 50'



DEMOLITION PLAN
1" = 50'

Tide Data:

Max. Est. Tide =	23.0'
MHHW =	16.3'
MHW =	15.3'
MLLW =	0.0'
ELW =	-6.0'

Pile Cutoff = 32.0'

*NOTE: Existing floats to be relocated as shown. Drive 4 timber piles, 15' penetration req'd. on seaward piles, 20' penetration req'd. on shoreward piles. Use salvaged piles.

NOTE: Elevations at anchors are only approximate. Actual depth to be measured. Adjust chain length accordingly by the following table where D_H = actual depth below MLLW +22.0':

Anchor No.	*Type	Chain Length = L estimated	Chain Size	Strength (Proof)	Chain Length L computed
1	CB/SP	$\sqrt{245^2 + D_H^2}$ = 255'	1 1/4"	130,000	
2	CB/SP	$\sqrt{341^2 + D_H^2}$ = 355'	1 1/4"	130,000	
3	SP	$\sqrt{383^2 + D_H^2}$ = 396'	1 1/8"	106,000	
4	SP	$\sqrt{284^2 + D_H^2}$ = 296'	1 1/4"	130,000	
5	SP	$\sqrt{211^2 + D_H^2}$ = 221'	1 1/4"	130,000	
6	RA	$\sqrt{121^2 + D_H^2}$ = 125'	1 1/8"	106,000	

Minimum proof req'd
Minimum size req'd

*LEGEND:
CB = Concrete Block 37.5 Ton HP 14x73
SP = Stake Pile
RA = Rock Anchor

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
DIVISION OF HARBOR DESIGN AND CONSTRUCTION

LETNIKOF COVE ALASKA

PROJECT LAYOUT

SCALE As Noted	SURVEYED	APPROVED	
DESIGNED HM	DRAWN SJS		Chief of Design
CHECKED RB	DATE Sept. 1979		
PROJECT NUMBER K 39189		SHEET 2 OF 7	

K&E 19 1153 3-78 MC 7738●

℄ Exist 12'x25' Salvaged Gangway Float

℄ Anchors

10'-0"

10'-0"

Existing 10' Float units, Relocated

8 cleats @ 20'-0" O.C. ea. side (omit cleat @ Gangway)

5'-4½"

Symmetrical about ℄

84'-0" out to out

78'-0"

10'-0"

4 cleats @ 10'-0" O.C.

10'-0"

7 spaces @ 10'-0" = 70'-0"

Watertight Bulkheads 4 places @ 20'-0"

A

4'-0" typ.

3'-0" typ.

3'-0"

4'-0"

C

15 Spaces @ 10'-0" = 150'-0"

59'-5⅝"

℄ Anchors

48" Ø x .375 wall pipe

℄ 5/16 x 49" Ø

PLAN
3/16" = 1'-0"

6'-0"

3/16 3/16 3/4 Typ. every 4 bars

3/16 3/16 3/4 typ. every 8 bars

15" Bullnose dock cleat, cast iron, galvanized, (49 req'd)

L 3x3x½" x 9'-2⅞"

3/16 3/16

3/16

Galv. steel structural grating, serrated edge, bearing bars 1¼ x 3/16 @ 1-3/16" O.C., Cross bars ¼" round, hex or twisted square bar @ 4" O.C.

4x10 bumper board

½" deep x 3½" Ø counter bore

⅝" Ø x 5" economy head bolt, typ.

6" Ø pipe w/cap

R 2 3/16" Water tight bulkhead

C7 x 9.8

WT 12 x 34 x 5'-10⅝"

cold tar epoxy coat

48" Ø x .500 wall pipe (note: fy & thickness varies, see layout on sheet 4 of 7)

3/16

Seal

SECTION A
1" = 1'-0"

2'-1" freeboard

2'-4¼"

Design WL

2'-3¾" draft

TS 6x6x.5 9'-2" Center on float

See hinge Pl details, Sheet 5 of 7

7½"

1'-0"

Pl 3/8" x 49" Ø

END ELEVATION
1" = 1'-0"

C7x9.8x11'-1⅞"

4x10 wale

C7x9.8x10'-11¾"

Complete penetration See Specs

L3x3

C7x9.8x5'-11¾"

3'-0"

Decking not shown for clarity

FRAMING DETAILS
3/4" = 1'-0"

3/16 3/16

C7x9.8

Trim flange &Wale as req'd

SECTION B
1½" = 1'-0"

B

⅝" Ø bolt

1½"

⅛"

DETAIL
3" = 1'-0"

2¼"

1 1/16" Ø

3"

L 3½x3½x½"x5"

CORNER CLIP ANGLE
3" = 1'-0"

4x10x6'-0" nail across end

2x10x9'-0" decking (4 pieces)

4x12 Ramp stringer 3 places over exist. float stringers, bolt thru stringers w/½" Ø bolts

2x4 bevel cut toe piece

Exist. 9' float

See connection detail sh 5 of 7

3/16

Pl 3/8"

FLOAT END SIDE ELEVATION
1"=1'-0"

Trim C7x9.8 as shown

7"

20"

24½"

Pl 3/8"

SECTION C
3/4" = 1'-0"

Water tight Bulkheads 7 places @ 20'-0" (typical ea. leg)

6" Ø inspection port, one per watertight compartment

4½"

Ballast area, perforated bulkheads

STAMP

STATE OF ALASKA
491H
Harold R. Moeser
No. 4373-E
REGISTERED PROFESSIONAL ENGINEER

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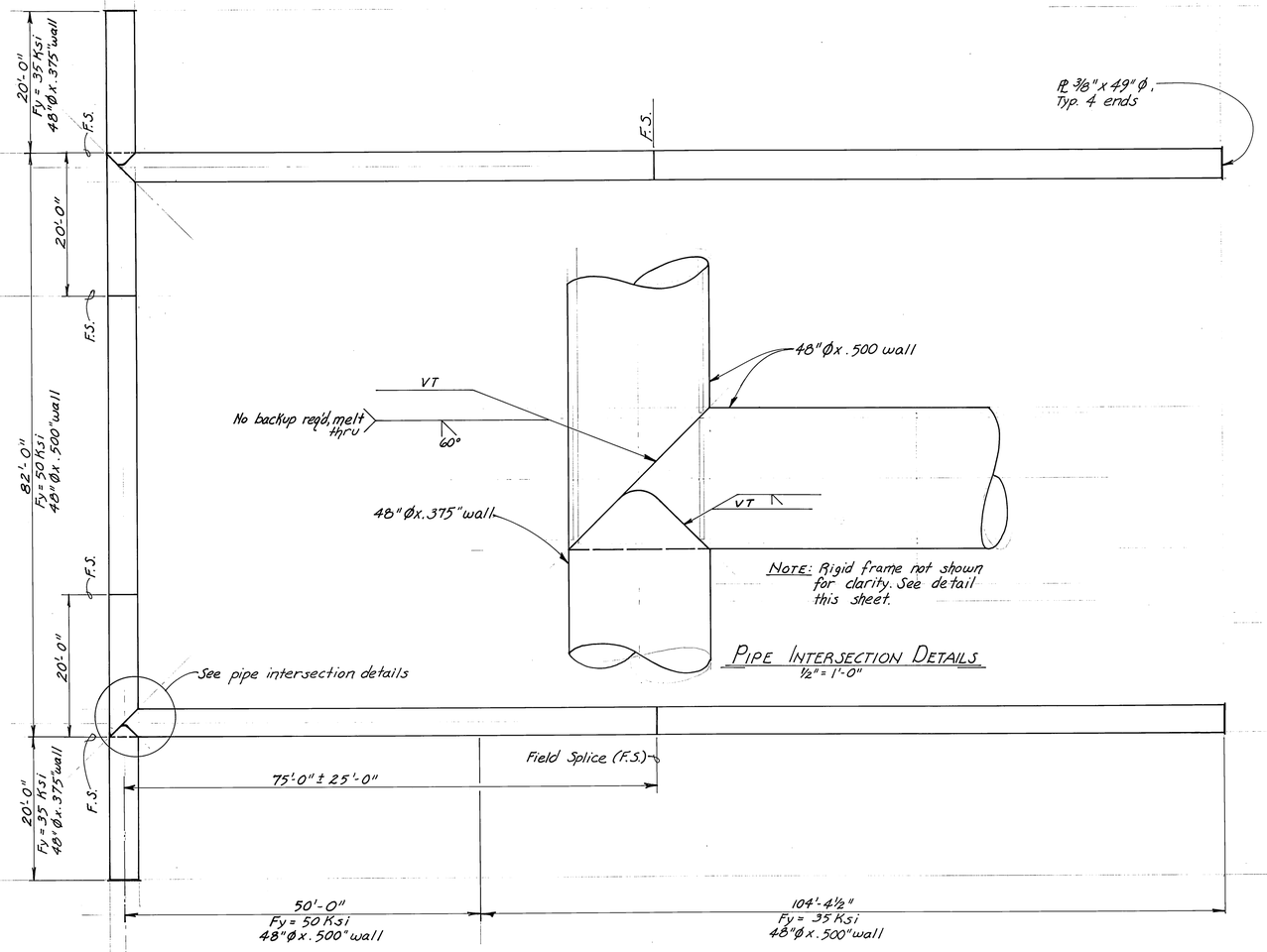
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
DIVISION OF HARBOR DESIGN AND CONSTRUCTION

LETNIKOF COVE ALASKA

MAIN FLOAT LAYOUT & TYPICAL DETAILS

SCALE As Noted	SURVEYED	APPROVED	
DESIGNED HM	DRAWN SJS		Chief of Design
CHECKED BB	DATE Sept. 1979		
PROJECT NUMBER K39189		SHEET 3 OF 7	

K&E 19 1153 3-78 MC 7738•



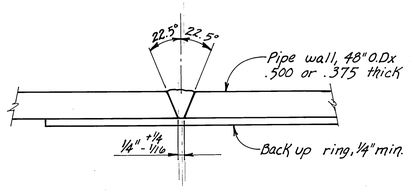
NOTE: Rigid frame not shown for clarity. See detail this sheet.

PIPE INTERSECTION DETAILS
½" = 1'-0"

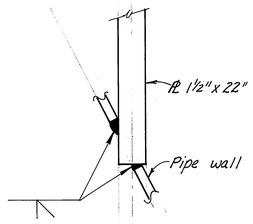
NOTE:
1. Minimum yeild strength material specified, substitutions of greater Fy are acceptable.
2. Field splices shown are preferred locations, contractor may eliminate as many field splices as his equipment will allow.
3. Shop welds will be subject to inspection noted on weld symbol.
4. All fillet welds will be subject to visual inspection.

PLAN
1" = 10'-0"

WELD DETAIL 1

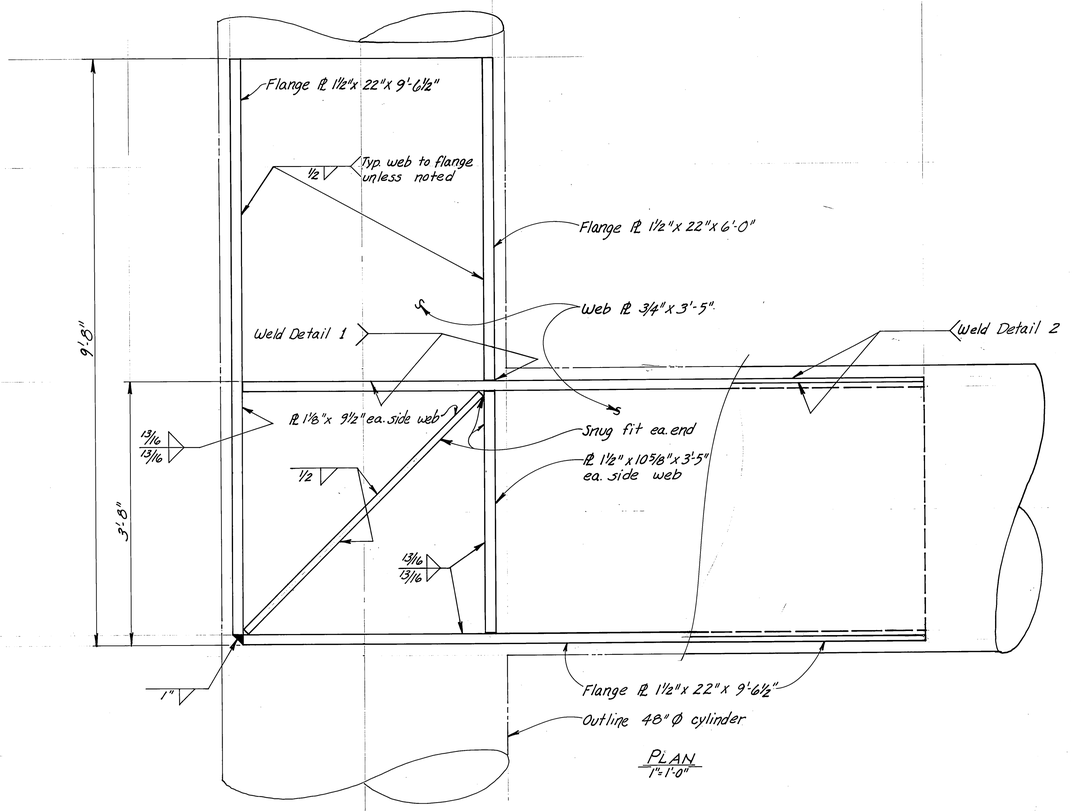


TYPICAL FIELD SPLICE DETAIL

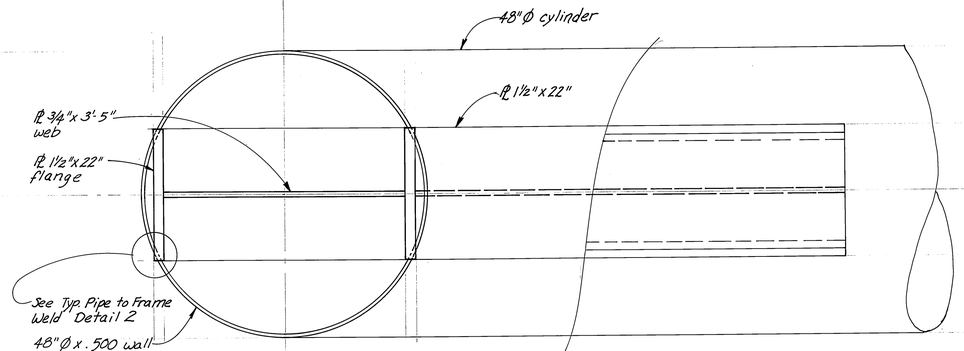


WELD DETAIL 2

WELD DETAILS
(No Scale)



PLAN
1" = 1'-0"



SECTION
1" = 1'-0"

RIGID FRAME DETAILS

STAMP

STATE OF ALASKA · 49th · Harold R. Mooser No. 4373-E · REGISTERED PROFESSIONAL ENGINEER

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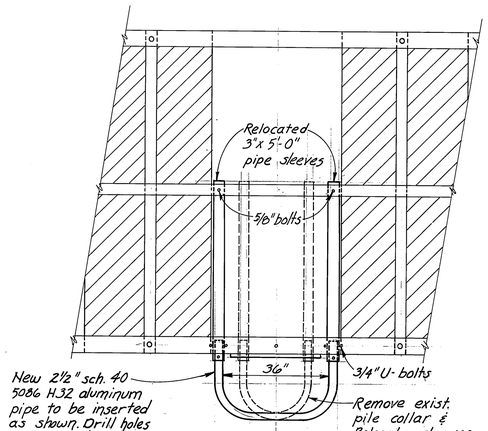
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
DIVISION OF HARBOR DESIGN AND CONSTRUCTION

LETNIKOF COVE ALASKA

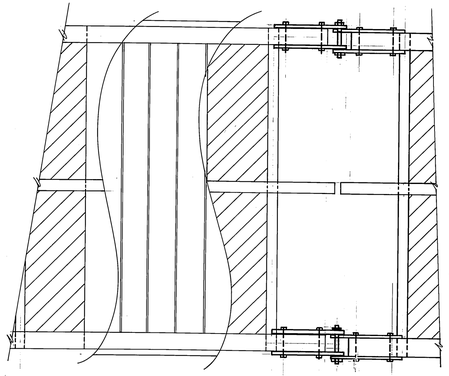
PIPE INTERSECTION & RIGID FRAME DETAILS

SCALE NOTED	SURVEYED	APPROVED	
DESIGNED AM	DRAWN SJS		Chief of Design
CHECKED RB	DATE Sept 1979		
PROJECT NUMBER K39189		SHEET 4 OF 7	

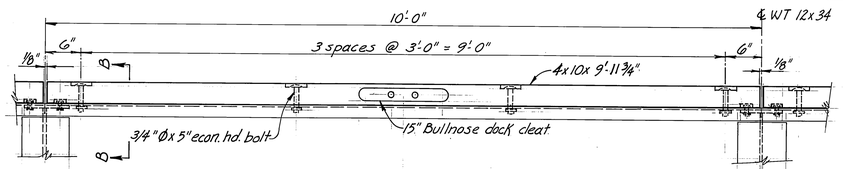
K&E 19 1153 3-78 MC 7738*



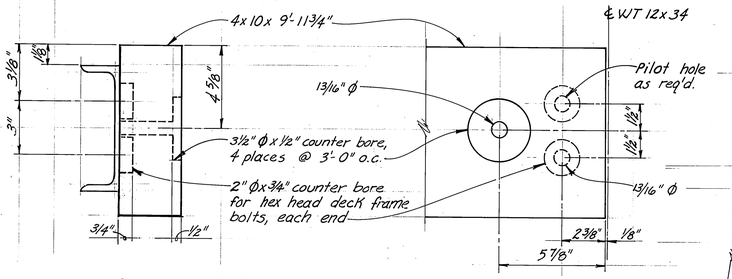
PLAN
½"= 1'-0"



TYPICAL 9' to 9' FLOAT CONNECTION

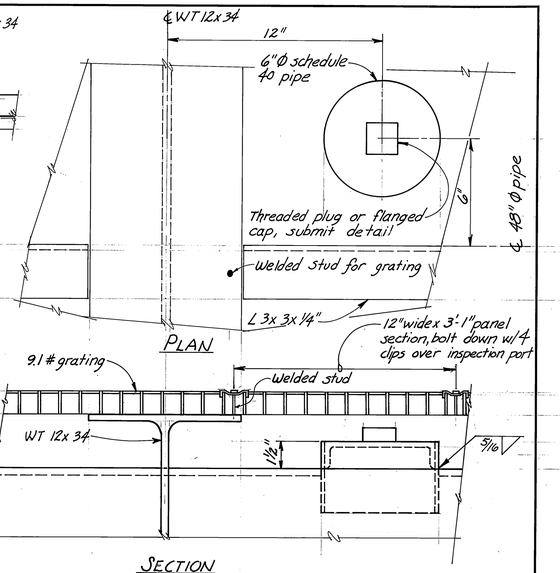


TYPICAL WALE ASSEMBLY
1"= 1'-0"

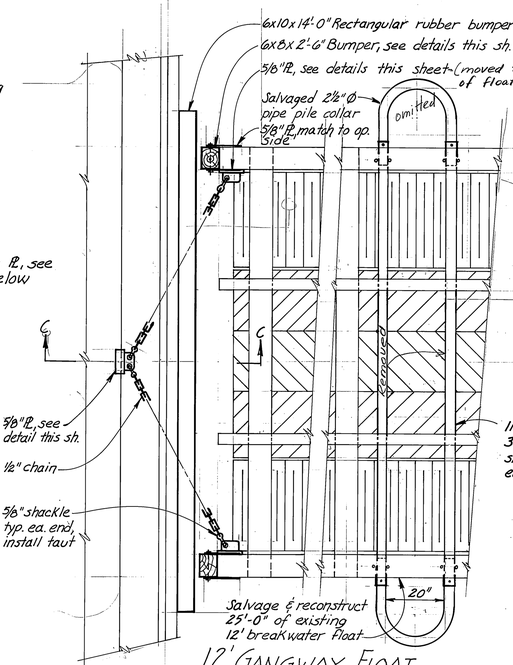


SECTION B-B
3"= 1'-0"

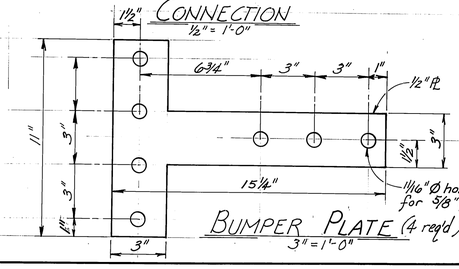
END DETAIL
3"= 1'-0"



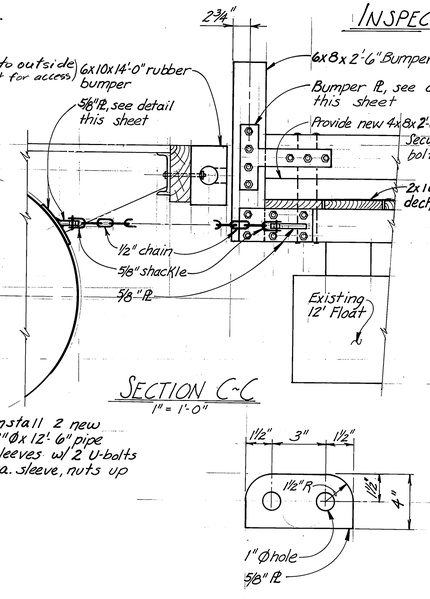
WALE DETAILS



12' GANGWAY FLOAT CONNECTION
½"= 1'-0"

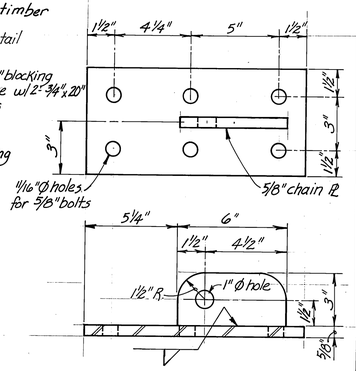


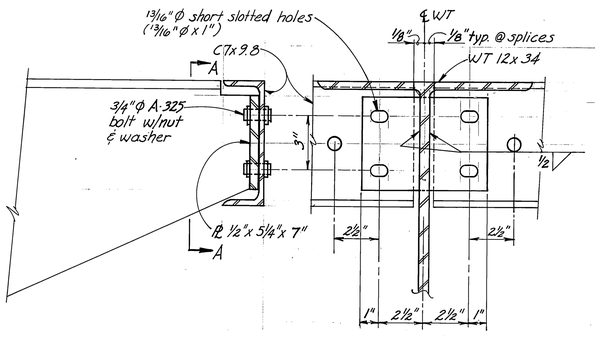
BUMPER PLATE (4 req'd)
3"= 1'-0"



SECTION C-C
1"= 1'-0"

INSPECTION PORT DETAILS
3"= 1'-0"

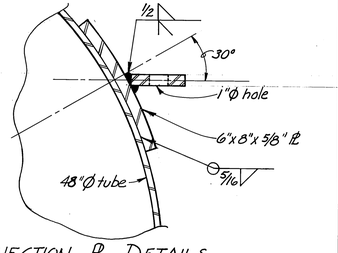




SECTION A-A

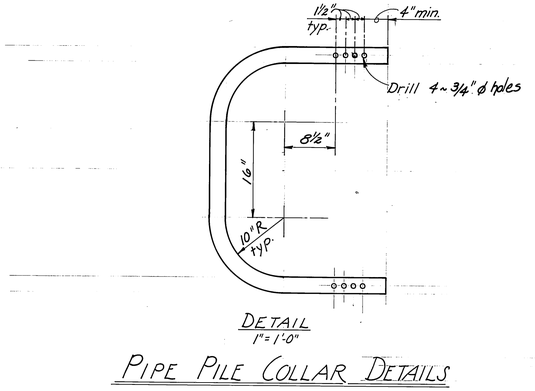
CHANNEL CONNECTION DETAILS
3"= 1'-0"

HINGE PLATE DETAILS
3"= 1'-0"



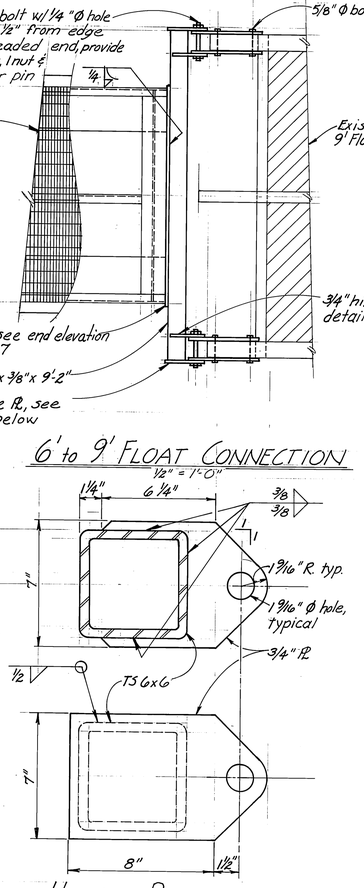
CHAIN CONNECTION PL DETAILS
3"= 1'-0"

PIPE PILE COLLAR DETAILS



DETAIL
1"= 1'-0"

6' to 9' FLOAT CONNECTION
½"= 1'-0"



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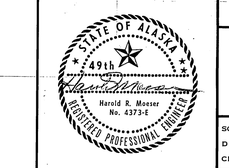

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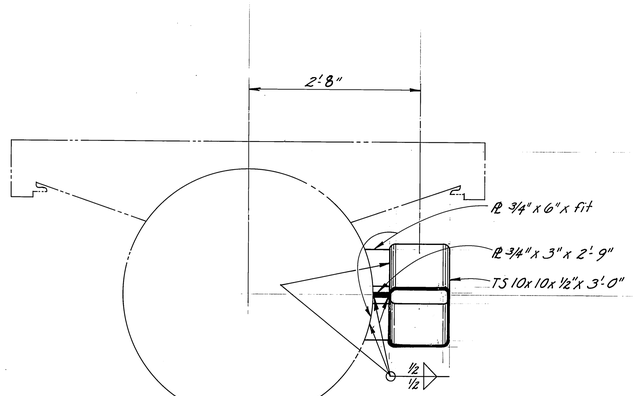
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
DIVISION OF HARBOR DESIGN AND CONSTRUCTION

LETNIKOF COVE ALASKA

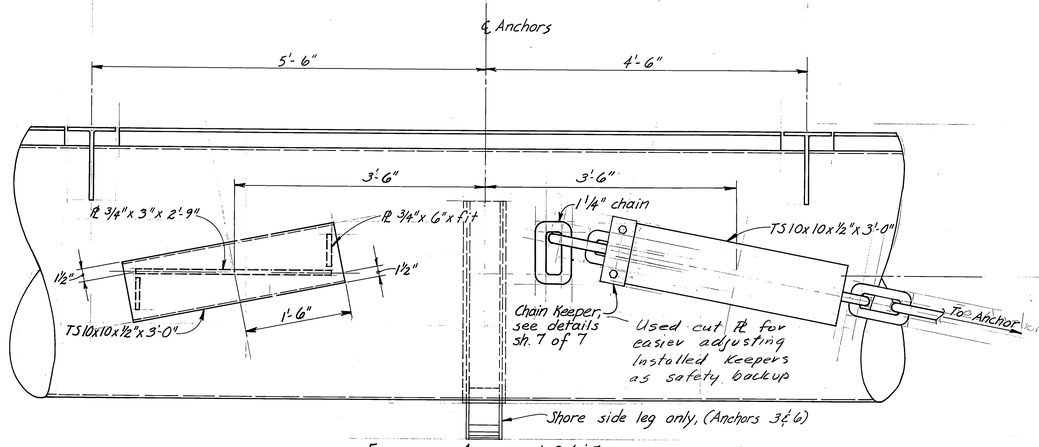
FLOAT CONNECTIONS & MISCELLANEOUS DETAILS

SCALE As Noted	SURVEYED	APPROVED	
DESIGNED HM	DRAWN JJS		Chief of Design
CHECKED RB	DATE Sept. 1979		
PROJECT NUMBER K39189		SHEET 5 OF 7	

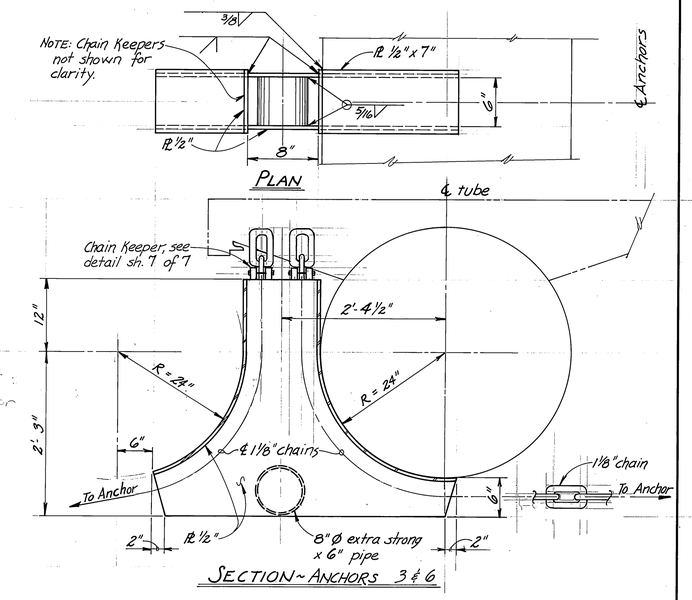
K&E 19 1153 3-78 MC 7738●



SECTION - ANCHORS 1, 2, 4 & 5



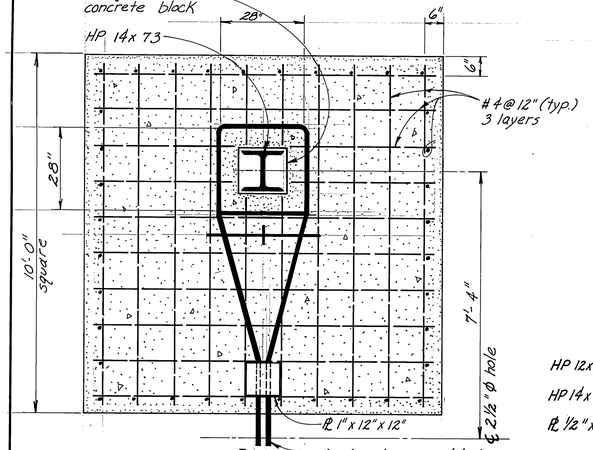
ELEVATION - ANCHORS 1, 2, 4 & 5



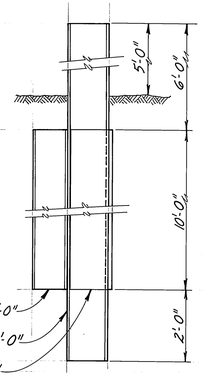
SECTION - ANCHORS 3 & 6

HAWSER PIPE DETAILS

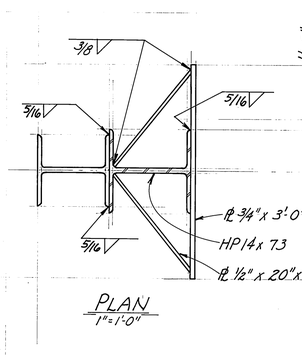
1" = 1'-0"



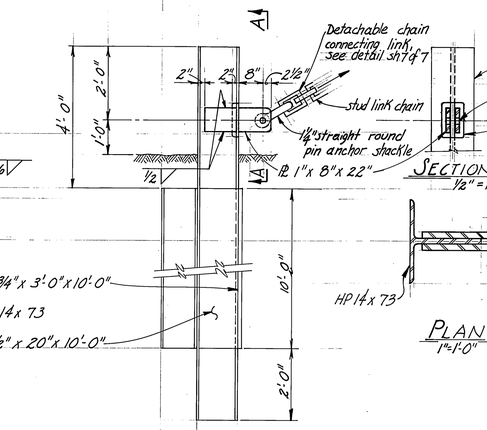
PLAN



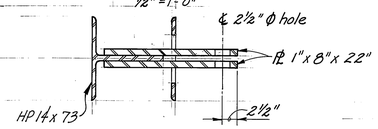
ELEVATION (@ Anchors 1 & 2)
1/2" = 1'-0"



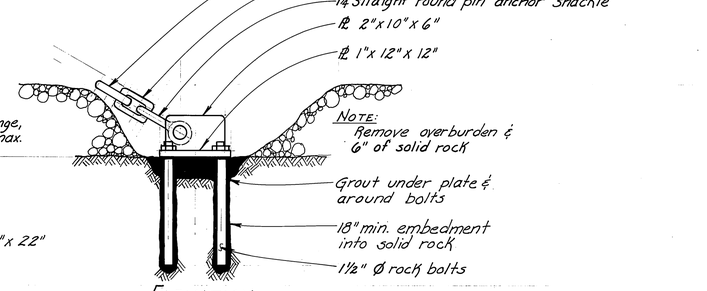
PLAN
1" = 1'-0"



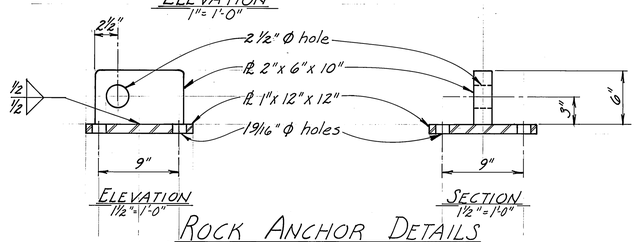
SECTION A-A
1/2" = 1'-0"



PLAN
1" = 1'-0"



ELEVATION
1" = 1'-0"



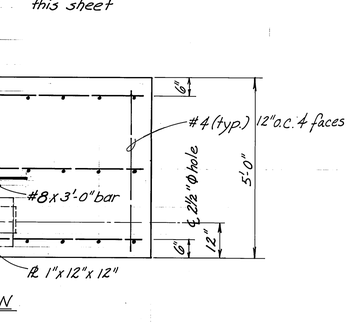
ELEVATION
1/2" = 1'-0"

SECTION
1/2" = 1'-0"

ROCK ANCHOR DETAILS

(@ Anchor 6)

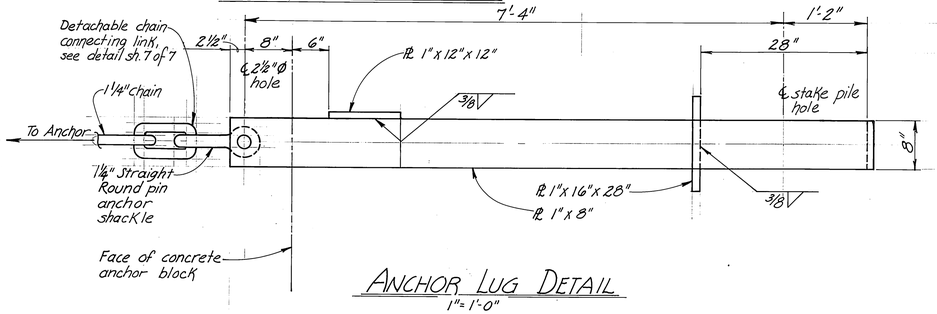
NOTE: Galvanize all steel



ELEVATION
1/2" = 1'-0"

CONCRETE ANCHOR BLOCK (@ Anchors 1 & 2)

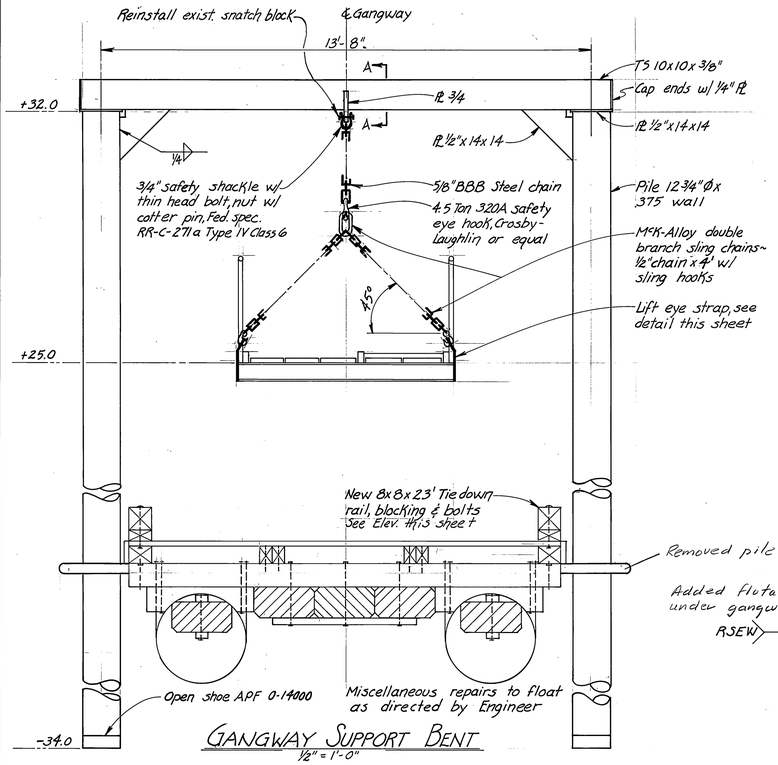
STAKE PILE DETAILS



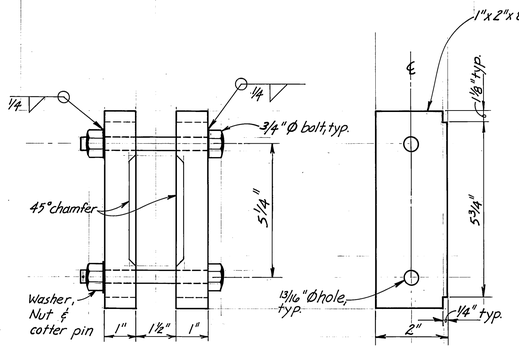
ANCHOR LUG DETAIL
1" = 1'-0"

STAMP	DO NOT SCALE THIS DRAWING -- USE DIMENSIONS
STATE OF ALASKA 49th Harold R. Moeser No. 4373-E REGISTERED PROFESSIONAL ENGINEER	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES DIVISION OF HARBOR DESIGN AND CONSTRUCTION
	LETNIKOF COVE — ALASKA
	ANCHOR DETAILS
SCALE As Noted DESIGNED HM CHECKED RB	SURVEYED DRAWN SJS DATE Sept. 1979
	APPROVED Robert R. Bush Chief of Design
PROJECT NUMBER K39189	SHEET 6 OF 7

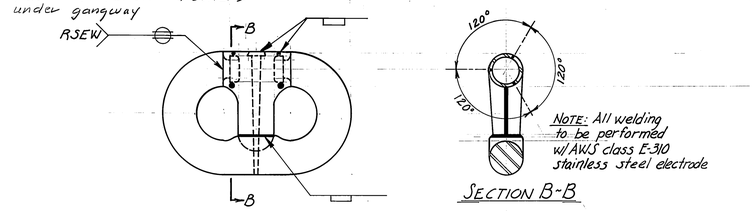
K&E 19 1153 3-78 MC 7738



GANGWAY SUPPORT BENT
1/2" = 1'-0"

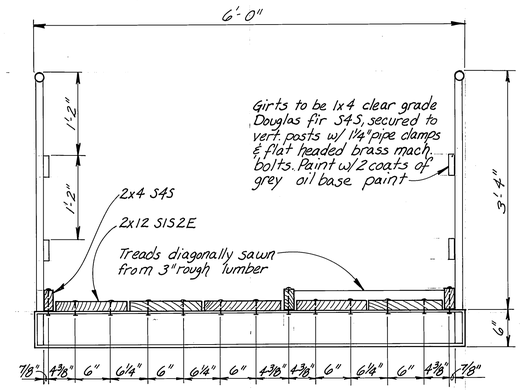


CHAIN KEEPER DETAILS
3" = 1'-0"

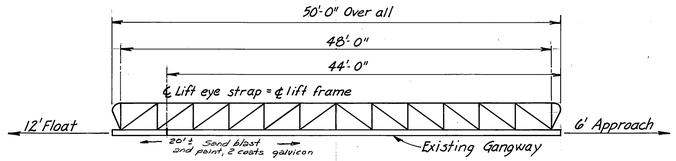


SECTION B-B

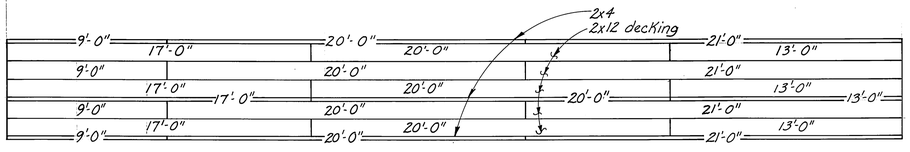
DETACHABLE CHAIN CONNECTING LINK
3" = 1'-0"



GANGWAY SECTION
1" = 1'-0"

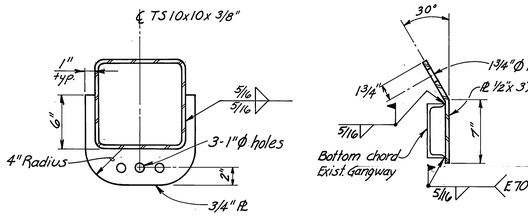


LIFT EYE STRAP PLACEMENT
1/8" = 1'-0"

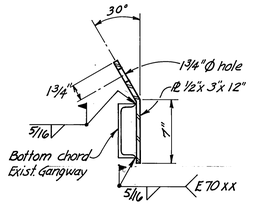


Provide 39 - 3/8" Øx 5" mushroom headed steel bolts for 2x4's
& 105 - 3/8" Øx 3" mushroom headed steel bolts for 2x12 decking

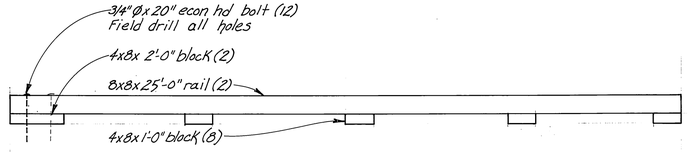
GANGWAY DECKING SPLICE LAYOUT
1/4" = 1'-0"



SECTION A-A
1 1/2" = 1'-0"



LIFT EYE STRAP
1 1/2" = 1'-0"



TIEDOWN RAIL ELEVATION
3/8" = 1'-0"

STAMP

STATE OF ALASKA 49th
Harold R. Moeser No. 4373-E
REGISTERED PROFESSIONAL ENGINEER

DO NOT SCALE THIS DRAWING – USE DIMENSIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
DIVISION OF HARBOR DESIGN AND CONSTRUCTION

LETNIKOF COVE ALASKA

GANGWAY SUPPORT BENT & MISCELLANEOUS DETAILS

SCALE As Noted	SURVEYED	APPROVED
DESIGNED HM	DRAWN SJS	Chief of Design
CHECKED RB	DATE Sept. 1979	
PROJECT NUMBER K39189		SHEET 7 OF 7