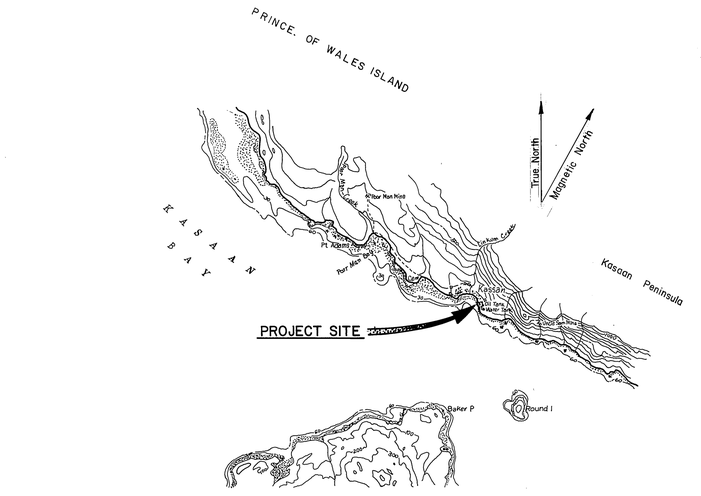
KASAAN BREAKWATER FLOATS

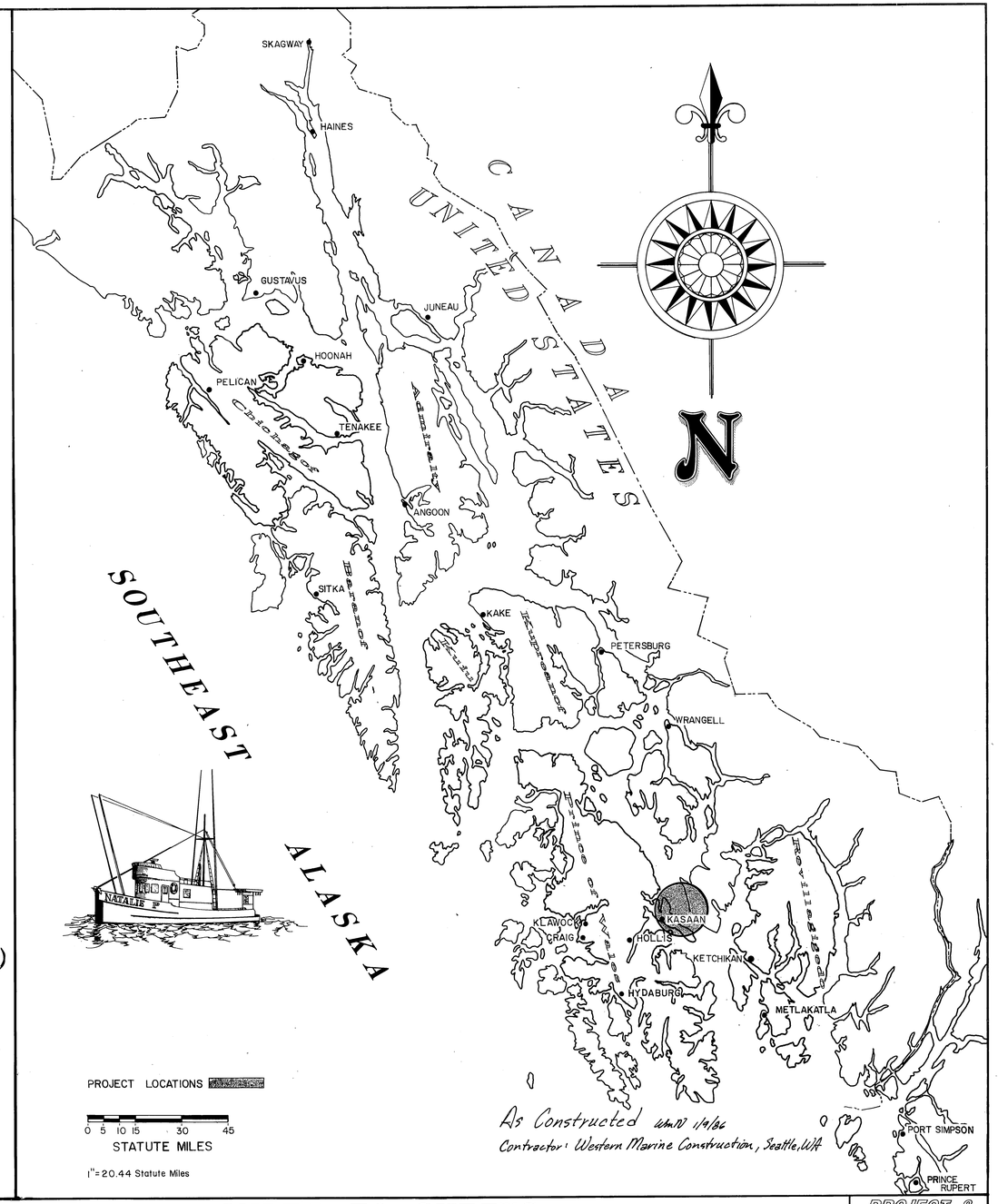
PROJECT NO. K-31111



WORK SUMMARY

MAJOR ITEMS of WORK for THIS PROJECT INCLUDE the FOLLOWING:

1. Furnish and drive 3 timber float piles
2. Furnish and drive 4, 12¾"ø x ⅜" wall steel piles (2 installed, 2 stowed)
3. Furnish and drive 12, 24⅝" x ½" wall steel piles (12 stowed)
4. Construct and install 3330 sq.ft. of post tensioned concrete breakwater floats.
5. Construct and install 1250 sq.ft. of timber main floats.
6. Alter and relocate existing seaplane float.
7. Remove and dispose of 4 existing timber piles and a 6'x 62'-6" Existing timber float.
8. Supplemental work to include construction and installation of 4, 2'-4½" x 23'-0" timber stall floats; if funding permits.



As Constructed WDM 11/9/86

Contractor: Western Marine Construction, Seattle, WA

STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES

S.E. REGION DESIGN & CONSTRUCTION

APPROVED

Director S.E. D.&C. — 4-8-85 Date

Recommend for Approval

Group Design Chief — 4-8-85 Date

SHEET 1 of 14

INDEX TO SHEETS

1.	Title Sheet	9.	P.T.B.F., Typical Section & INT. Pile Collar
2.	Project Layout	10.	P.T.B.F., End Wale & Interior Connections
3	10' Main Timber Float Details	11.	P.T.B.F., Tiedown, Wale, & Fender Connection Details
4.	Supplemental A, Timber Stall Float Details	12.	P.T.B.F., Tiedown Rail, & Wale Layout, Transition Pl.
5.	Seaplane Float Details	13.	P.T.B.F., Tendon End Anchorages & Bearing Pads.
6.	Timber Float Pile Collar & Hinge Connection Detail	14.	Rebar Schedule
7.	Float Layout		
X	Post Tensioned Breakwater Floats (P.T.B.F.)		
8.	P.T.B.F., Framing, Slab Plan, & Long. Section.		

PROJECT & FILE NO. KASAAN BREAKWATER FLOATS; Project NO.K-31111

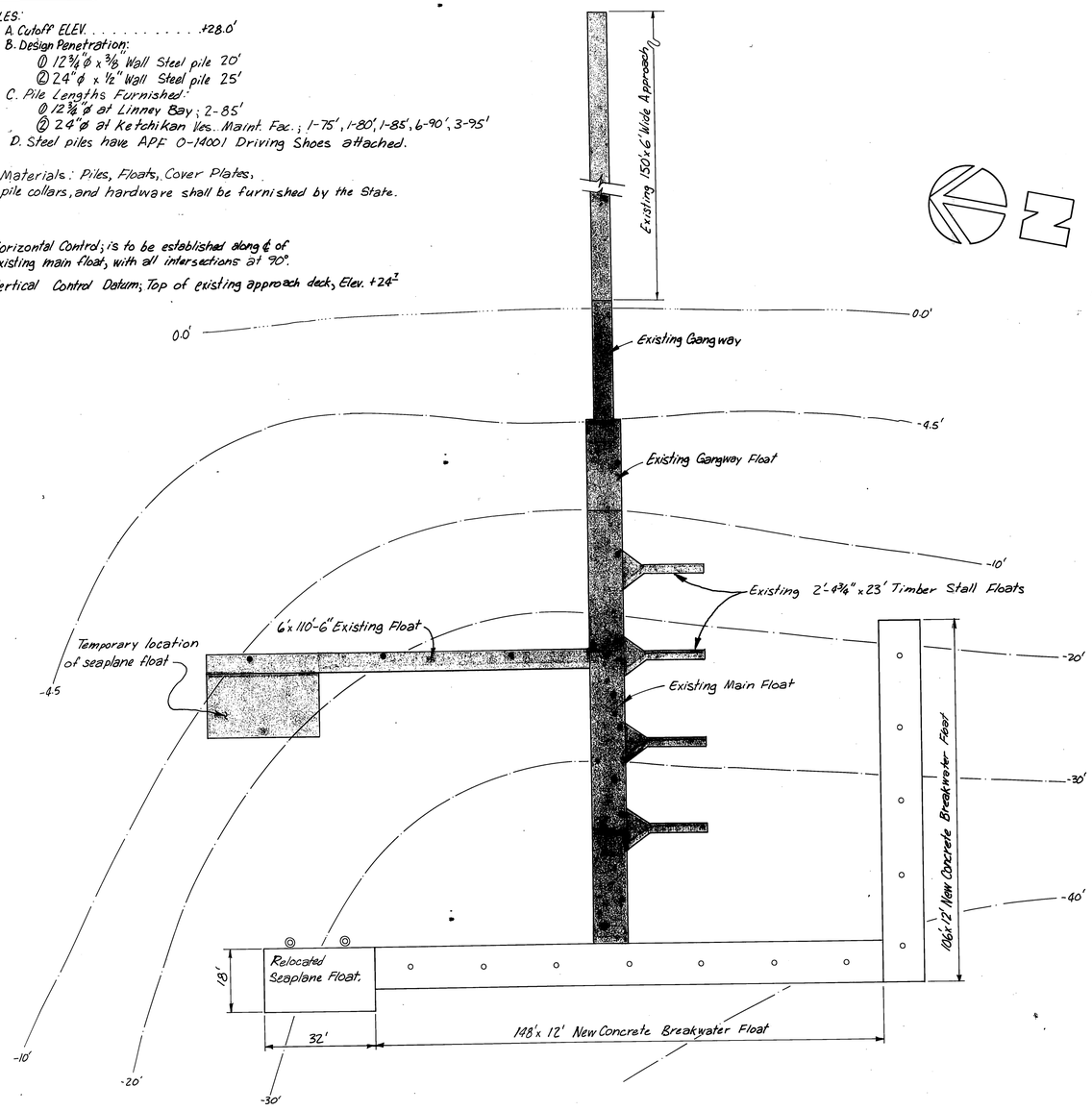
GENERAL NOTES:

1. PILES:
   A. Cutoff ELEV. . . . . +28.0'
   B. Design Penetration:
      ① 12¾"ø x ⅜" Wall Steel pile 20'
      ② 24"ø x ½" Wall Steel pile 25'
   C. Pile Lengths Furnished:
      ① 12¾"ø at Linney Bay; 2-85'
      ② 24"ø at Ketchikan Ves. Maint. Fac.; 1-75', 1-80', 1-85', 6-90', 3-95'
   D. Steel piles have APF 0-14001 Driving Shoes attached.

2. Materials: Piles, Floats, Cover Plates, pile collars, and hardware shall be furnished by the State.

3. Horizontal Control is to be established along ℄ of existing main float, with all intersections at 90°.

4. Vertical Control Datum; Top of existing approach deck, Elev. +24.7

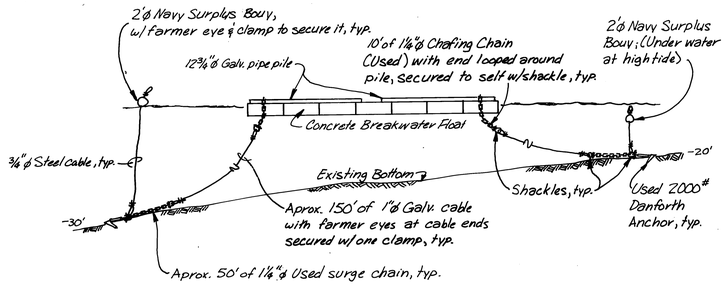


PLAN VIEW
1"=20'-0"

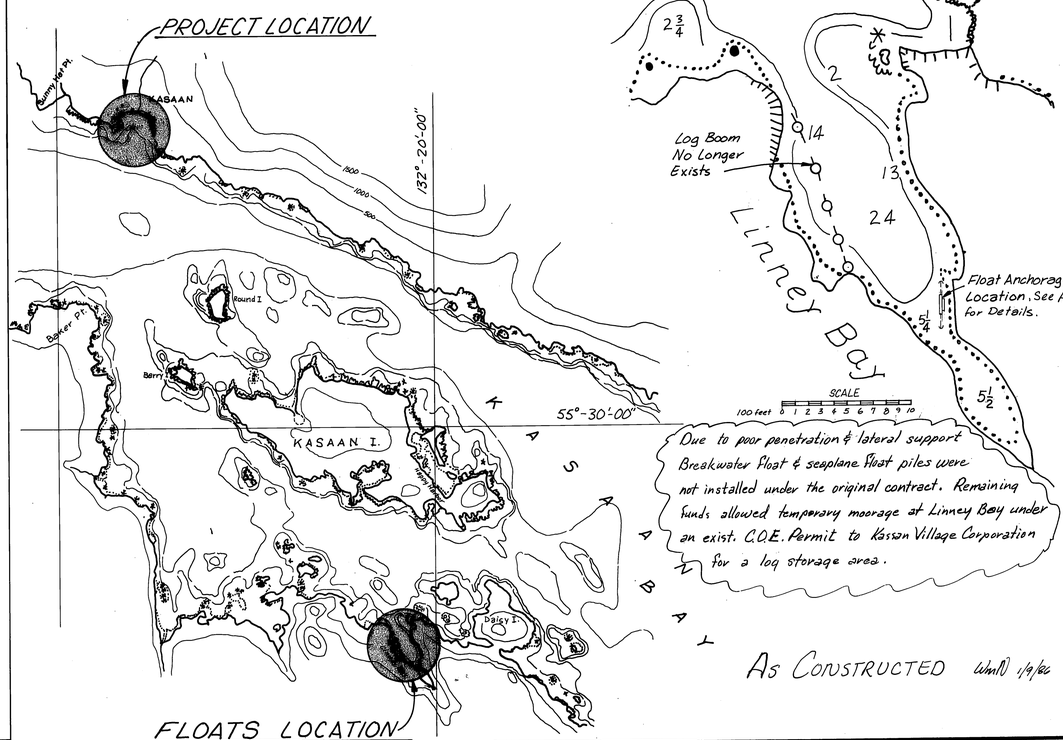
NEW HARBOR FACILITY

KEY TO PILE AND FLOAT SYMBOLS

•	Existing Piles to remain (9)
◎	New 12¾"ø x ⅜" wall steel piles to be Installed (2)
○	New 24"ø x ½" wall steel piles to be Installed (12)
	Floats to be Installed
	Existing Structures



TEMPORARY MOORING PROFILE
N.T.S.



Due to poor penetration & lateral support Breakwater Float & seaplane float piles were not installed under the original contract. Remaining funds allowed temporary moorage at Linney Bay under an exist. C.O.E. Permit to Kasaan Village Corporation for a log storage area.

AS CONSTRUCTED WMN 1/9/86

FLOATS LOCATION
(See Details Above Right)

Taken From NOAA chart #17426
"KA^SAN BAY PRINCE of WALES ISLAND"

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STATE OF ALASKA ★ 49th ★ Jack Daniel Beedle CE - 5309 REGISTERED PROFESSIONAL ENGINEER
11/26/85

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

KASSAN ALASKA

PROJECT LOCATION & SITE PLAN FROM REBID DRAWINGS SHOWING FLOATS STORED & WORK REMAINING

DESIGNED JD	CHECKED JDB	DRAWN DJM	DATE 10-85
PROJECT NUMBER 67639		SHEET 1A OF 14	

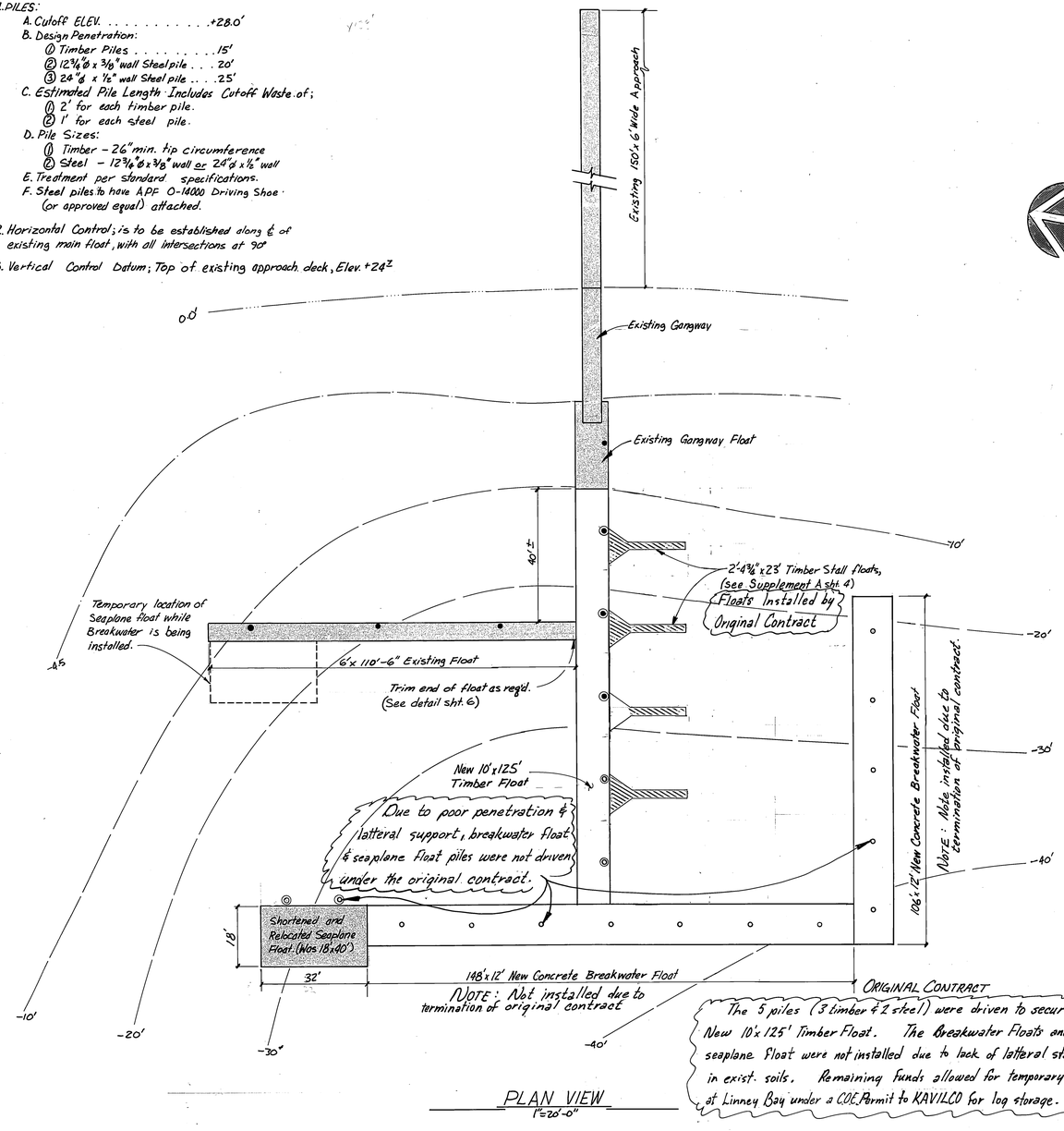
64863

GENERAL NOTES:

1. PILES:
   - A. Cutoff ELEV. . . . . +28.0'
   - B. Design Penetration:
     - ① Timber Piles . . . . . 15'
     - ② 12¾"ø x ⅜" wall Steel pile . . . 20'
     - ③ 24"ø x ½" wall Steel pile . . . 25'
   - C. Estimated Pile Length Includes Cutoff Waste of;
     - ① 2' for each timber pile.
     - ② 1' for each steel pile.
   - D. Pile Sizes:
     - ① Timber – 26" min. tip circumference
     - ② Steel – 12¾"ø x ⅜" wall or 24"d x ½" wall
   - E. Treatment per standard specifications.
   - F. Steel piles to have APF O-14000 Driving Shoe (or approved equal) attached.

2. Horizontal Control; is to be established along ℄ of existing main float, with all intersections at 90°

3. Vertical Control Datum; Top of existing approach deck, Elev. +24'



PLAN VIEW
1"=20'-0"

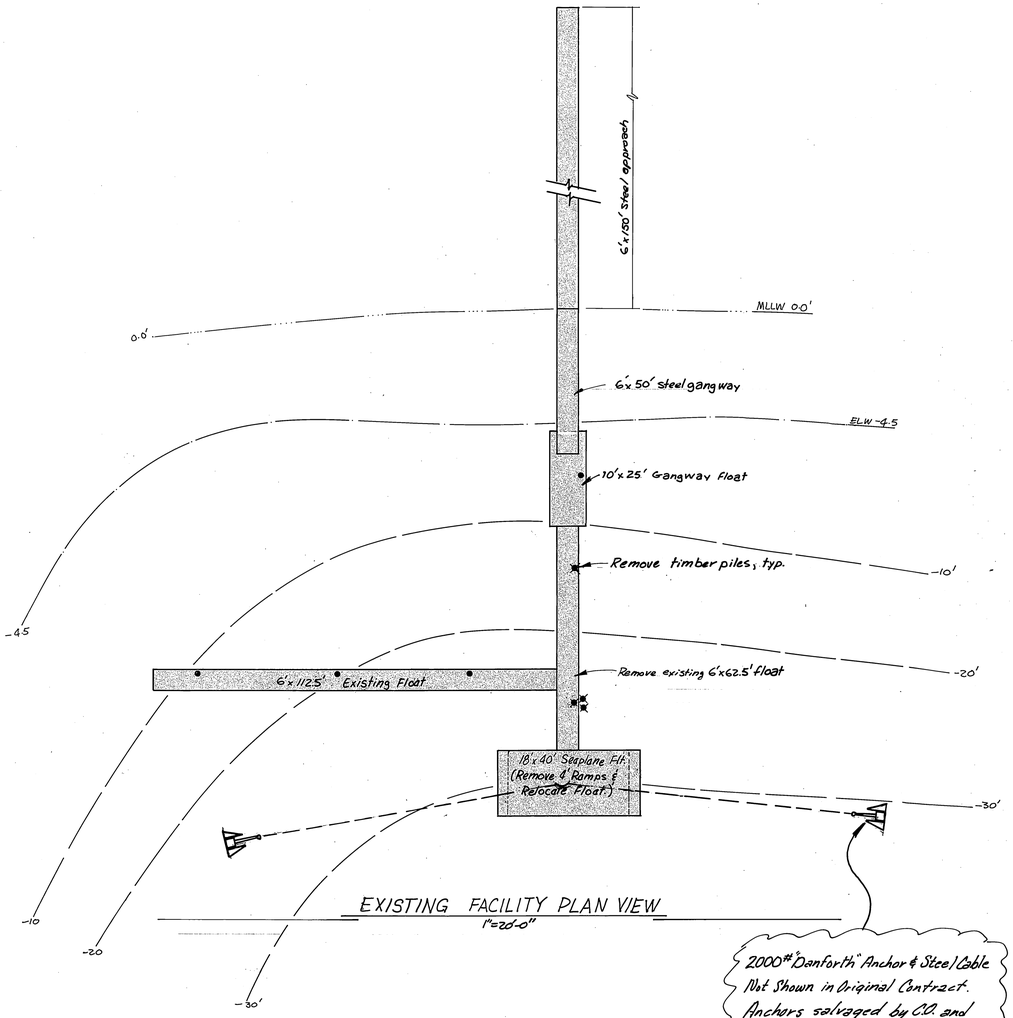
ORIGINAL CONTRACT

The 5 piles (3 timber & 2 steel) were driven to secure the New 10'x 125' Timber Float. The Breakwater Floats and the seaplane Float were not installed due to lack of lateral stability in exist. soils. Remaining funds allowed for temporary moorage at Linney Bay under a COE Permit to KAVILCO for log storage.

NEW HARBOR FACILITY

KEY TO PILE AND FLOAT SYMBOLS

✱	Existing Timber Pile to be Removed (4)
◉	New Timber Pile to be Installed (3)
●	Existing Piles to Remain (4)
◎	New 12¾"ø x ⅜" wall Steel Piles to be Installed (4)
○	New 24"ø x ½" Steel pile, to be Installed (12)
▭	New Timber and Concrete floats
▨	Supplemental Stall Floats
▭	Existing Structures



EXISTING FACILITY PLAN VIEW
1"=20'-0"

2000# "Danforth" Anchor & Steel Cable Not Shown in Original Contract. Anchors salvaged by CO. and used for temporary moorage of concrete Floats

As Constructed WMD 1/9/86

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Jack Daniel Beedle
CE - 5309
REGISTERED PROFESSIONAL ENGINEER
4/8/85

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DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

KASAAN ALASKA

KASAAN BREAKWATER FLOATS
PROJECT LAYOUT

DESIGNED JDB	CHECKED JDB	DRAWN DJM	DATE OCT 1986
PROJECT NUMBER K-31111		SHEET 2 OF 14	

52371

Note: exist. TOR was 6x6 timber not 8x8 as shown, but all other timbers matched up well.

Notch existing ramp float tiedown rails and exterior stringers to accomodate dap splice. Removal of some existing decking may be required.

℄ of splice

8x8 Tiedown rail to be Dap Jointed at 25' intervals.

6'-3" typ.

6'-3"

4x8x1'-0" blocking, typ.

4 x 8 x 3'-0" blocking at splice, typ.

6'-3"

6'-3"

6'-3"

6'-3"

3¼" x 7½" x 12" Dap

12" typ. spacing

12"

2" typ.

Exist. 2x10 Siding

foam

2¾" x 7½" x 12" Dap

1½" x 10⅛" x 10'-0" All surfaced size siding

2x8 continuous bumper Secured w/20d box nails to exterior stringer

Existing Gangway Float...

SIDE VIEW
1½" = 1'-0"

Approx. Location of 5' wide opening in Tiedown Rail.

8"x8" Tiedown Rail, typ.

¾"ϕ Bolt w/nut typ. at each end of opening.

2x8 Bumper, typ.

4"x8"x1'-0" Blocking under tiedown rail at each end of opening.

6x6 Sills, typ.

4"x6" Interior Stringer to be lapp Jointed in 26' Lengths. Secure to each 6x6 sill with ⅝"ϕ x 10" drifts.

2x10 Milled Decking, Spaced ½" apart, Secure with 2-20d nails at each stringer. See detail this sheet.

4x6 interior stringer typ.

Polystyrene 19" x 10" x 9'-0"

6"x8" x 7'-0" pile collar stringer, typ.

⅞"ϕ Econ. Hd. Bolt typ.

Polystyrene Foam 10" x 20" x 9'-0"

Billet typ.

1'-0¾" typ.

2'-9", typ.

Trim existing stringers as directed by the engineer.

(1) 10"x10"x7'-0" "Half Plank" foam billet to be added at end of float connecting to Breakwater float. Shift other billets to accommodate half plank with equal spacing.

⅜"ϕ x 9" spike, typ. at each end of 6x6 sills - predrill.

For internal pile collar details, see sht. 6. Cut decking to clear pile collar sides & front; decking reqd. behind pile collar to support scupper block. ⅝"ϕ A325 bolts, w/nuts, to be used at all pile collar corners; typ.

3x6 sill secured to exterior stringer w/ ⅜"ϕ x 7" spike - predrill, typ.

3'-1½"

6'-3"

6'-3"

6'-3"

2'-9", typ.

3'-1½"

℄ of splice

PLAN VIEW of 10'x125' TIMBER FLOAT
½" = 1'-0" (1250 SQ. FT.)

Rough Surface

2"x10" Size Decking

3", typ.

MILLED DECKING
3" = 1'-0"

10'-0"

2'-10½"

2'-10½"

½"ϕ x 10" drift, typ.

8x8 Tie down rail

4x8 Blocking

2x10 milled decking (see detail)

2x8 bumper

6"x8" Exterior Stringer

4"x6" Interior Stringer

6x6 and 3x6 sills

1½"x10⅛" Surfaced Size Siding; may be cut from S4S 2x12

3x6 sill

¾"ϕ Bolts w/nut

⅜"ϕ x 9" spike

40d nail predrill

½"ϕ Bolts w/nut

6"

2'-6"

12"

9'-0"

Note; All timber material to be S4S except siding and milled decking (see detail for decking).

TYPICAL TIMBER FLOAT SECTION
½" = 1'-0"

Approx. location of Tiedown Rail opening, Field cut tiedown rail at the existing 6' float as shown on sht. 6.

Butt end

Tie down rail & Exterior Stringer Splices

25'-0" ℄ Dap 25'-0" ℄ Dap 25'-0" ℄ Dap 25'-0" ℄ Dap 25'-0" ℄ Dap

28'-7½"

26'-0"

26'-0"

26'-0"

26'-0"

Pile collar Spacing

25'-0" 25'-0" 25'-0" 25'-0" 12'-6"

Existing Gangway Float

TIMBER FLOAT STRINGER & PILE LAYOUT
1" = 10'-0"

NOTE

Bolt holes to be drilled 1/16" oversize, except sill holes for flotation plank ⅛" oversize. All bolt heads facing decking shall be countersunk ⅜" prior to treatment. Field drill all drift and spike holes.

As Constructed W.M.N. 1/9/86

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STATE OF ALASKA 49th Jack Daniel Beedle CE - 5309 REGISTERED PROFESSIONAL ENGINEER

4/8/85

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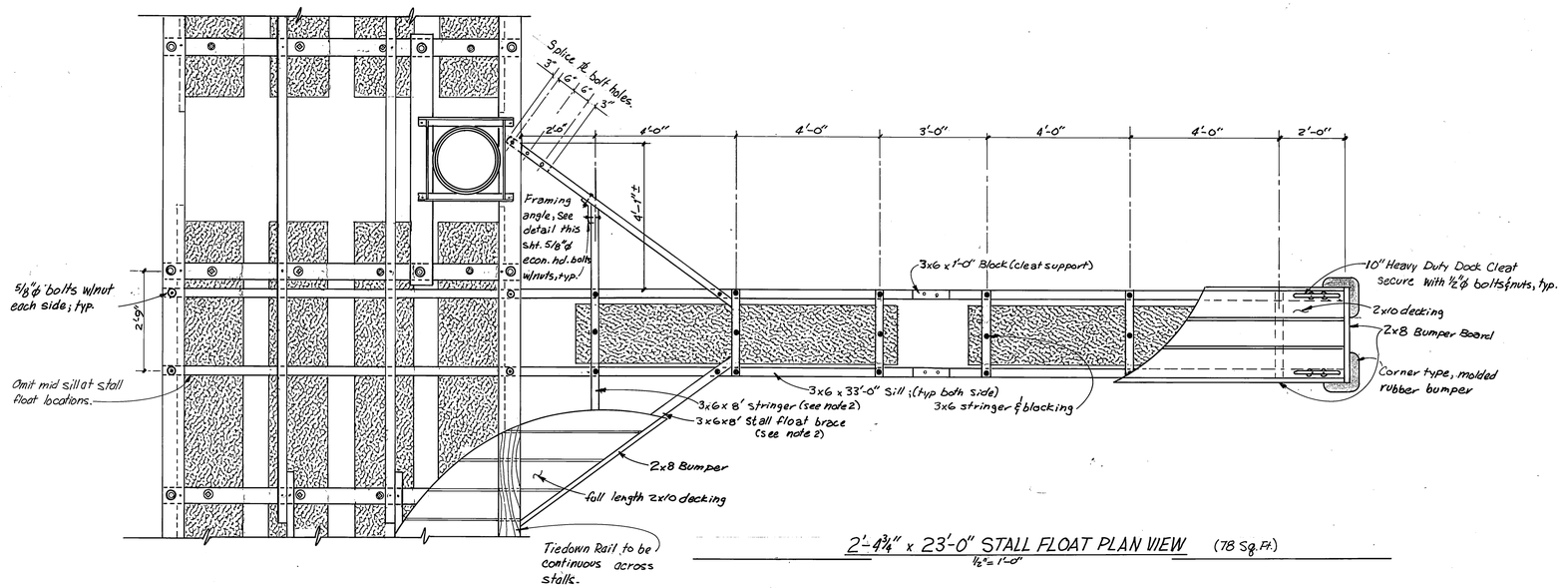
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

KASAAN ALASKA

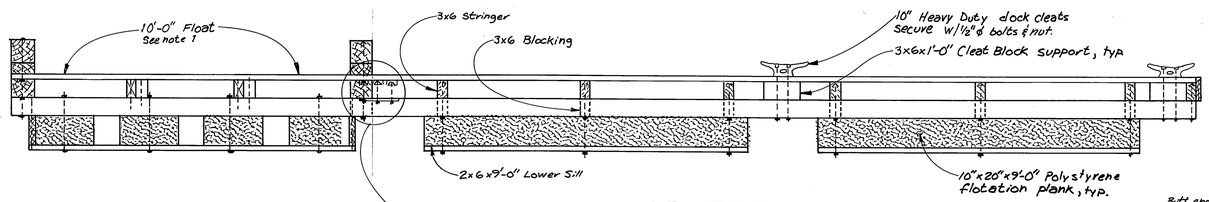
TIMBER FLOAT, 10'-0" x 125'-0" DETAILS

DESIGNED D	CHECKED JDB	DRAWN DJM	DATE 11-2-84
PROJECT NUMBER K 31111		SHEET 3 OF 12	



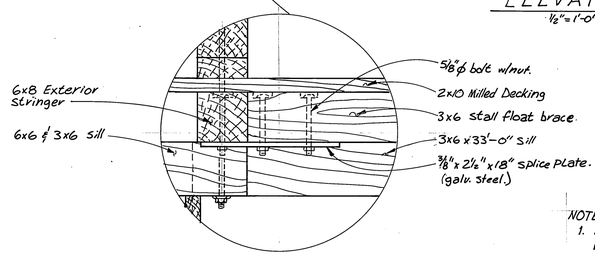
2'-4 3/4" x 23'-0" STALL FLOAT PLAN VIEW (78 Sq. Ft.)

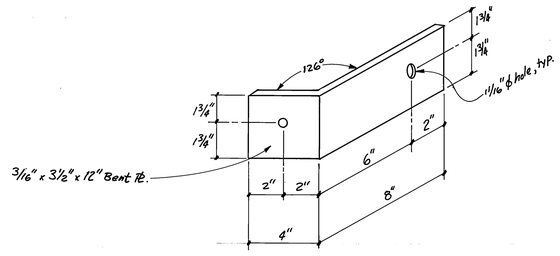
1/2" = 1'-0"



ELEVATION

1/2" = 1'-0"



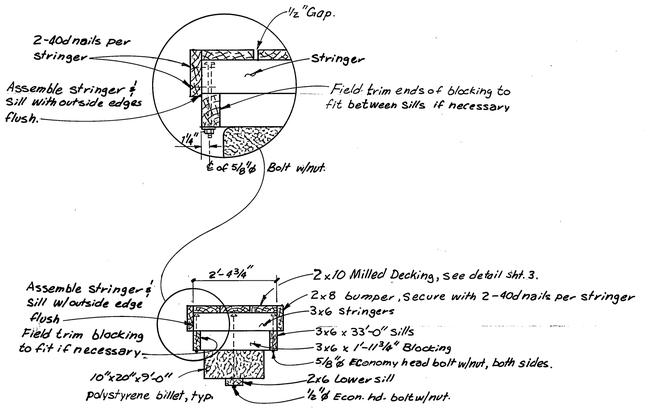


FRAMING ANGLE

3" = 1'-0"

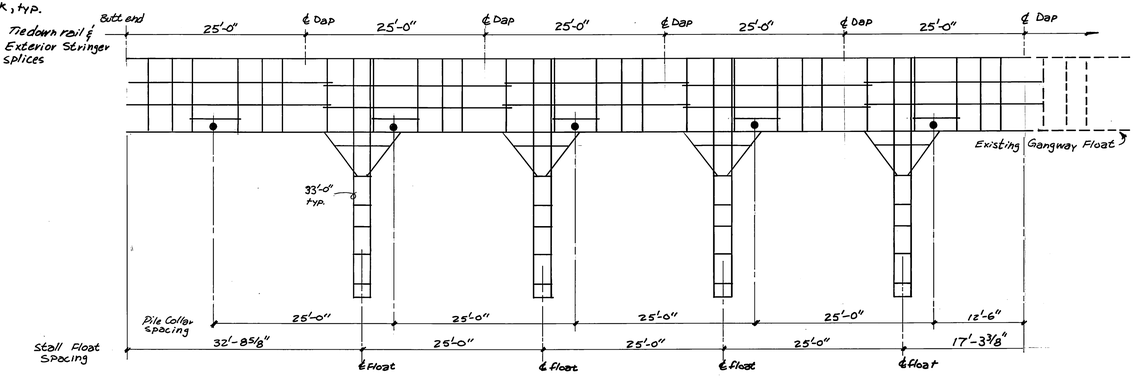
NOTES:

1. 10' Float same as sheet 3 except 3x6 midsills are replaced with stall float sills as shown.
2. Cut in field to allow placement of 5 full widths of decking in each "wing" area and 3 full widths of Decking on the Stall float walkway.
3. Bolt holes to be drilled 1/16" oversize except for stringer bolt holes for flotation planks to be 1/8" oversize. All bolt heads facing decking shall be countersunk 3/8" prior to treatment.
4. Framing angles shall be centered on stringers.
5. 2x10 Milled Decking spaced 1/2" apart. Stagger splices in decking over stringers except second stringer out from main float. Minimum allowable decking length is 8'-0". Decking to be full length in area of stall float "wings."



STALL FLOAT SECTION

1/2" = 1'-0"



TIMBER FLOAT STRINGER, STALL FLOAT, & PILE COLLAR LAYOUT

1"=10'-0"

As Constructed WMN 1/9/86

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Jack Daniel Beedle
Jack Daniel Beedle
CE - 5309
REGISTERED PROFESSIONAL ENGINEER
4/18/85

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

KASAAN ALASKA

SUPPLEMENTAL A
23'-0" STALL FLOATS

DESIGNED	CHECKED JDB	DRAWN DJM	DATE NOV 84
PROJECT NUMBER K31111		SHEET 4 OF 14	

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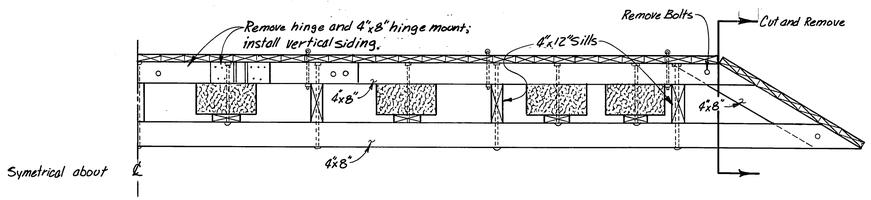
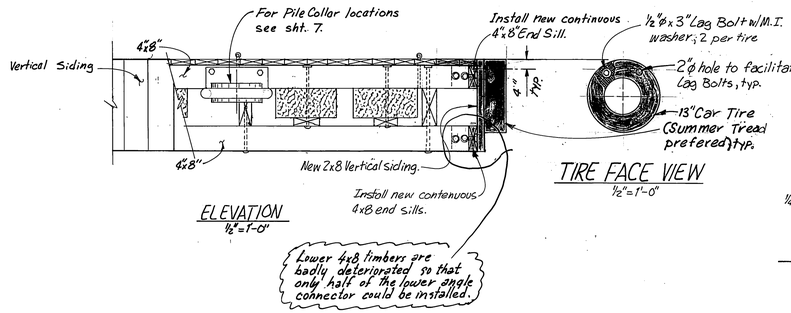
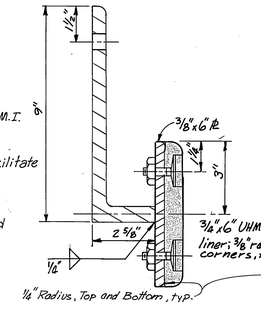


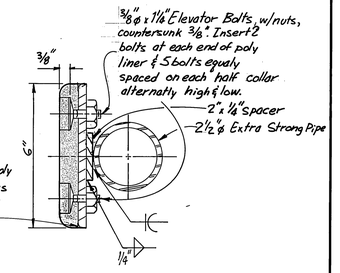
ELEVATION
1/2"=1'-0"



ELEVATION
1/2"=1'-0"



SECTION B
N.T.S.



SECTION A
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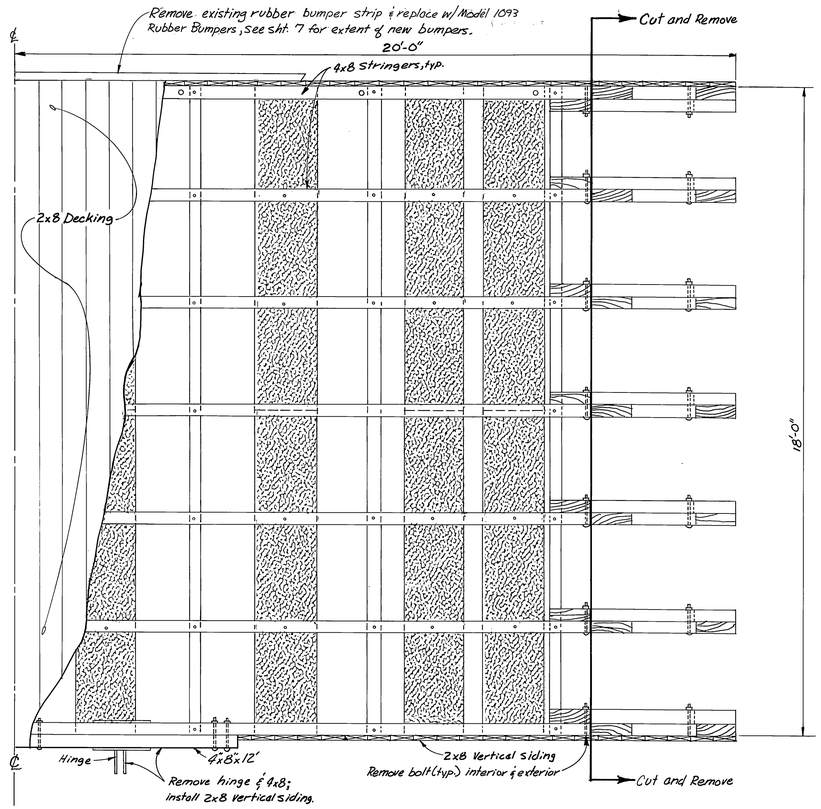
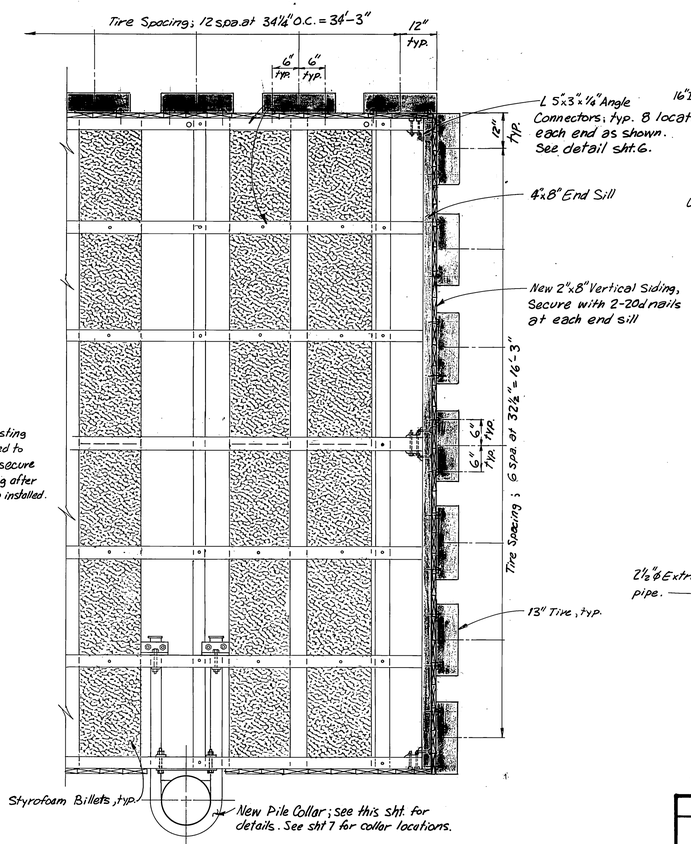


PLAN VIEW
1/2"=1'-0"

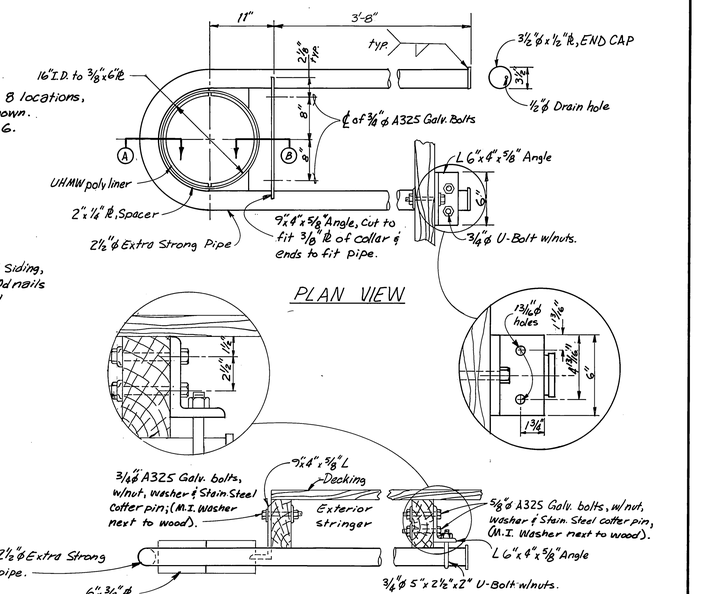
EXISTING FLOAT



PLAN VIEW
1/2"=1'-0"

REVISED FLOAT
(All Revisions typ. Both Ends)

As Constructed WmN 1/9/86



EXTERIOR PILE COLLAR
1"=1'-0"

NOTES:
1. All steel to be hot dip galvanized after fabrication.
2. Fabricator is to pre-assemble all components to assure proper fit.
3. Bolt holes to be drilled 1/16" over bolt size. All bolt heads facing decking or siding to be countersunk 3/8".
4. External pile collar UHMW poly liners, as shown, to be hot molded to the proper radius, and attached with 9 bolts and nuts per half collar.

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STATE OF ALASKA
49th
Jack Daniel Beedle
CE - 5309
REGISTERED PROFESSIONAL ENGINEER
9/8/85

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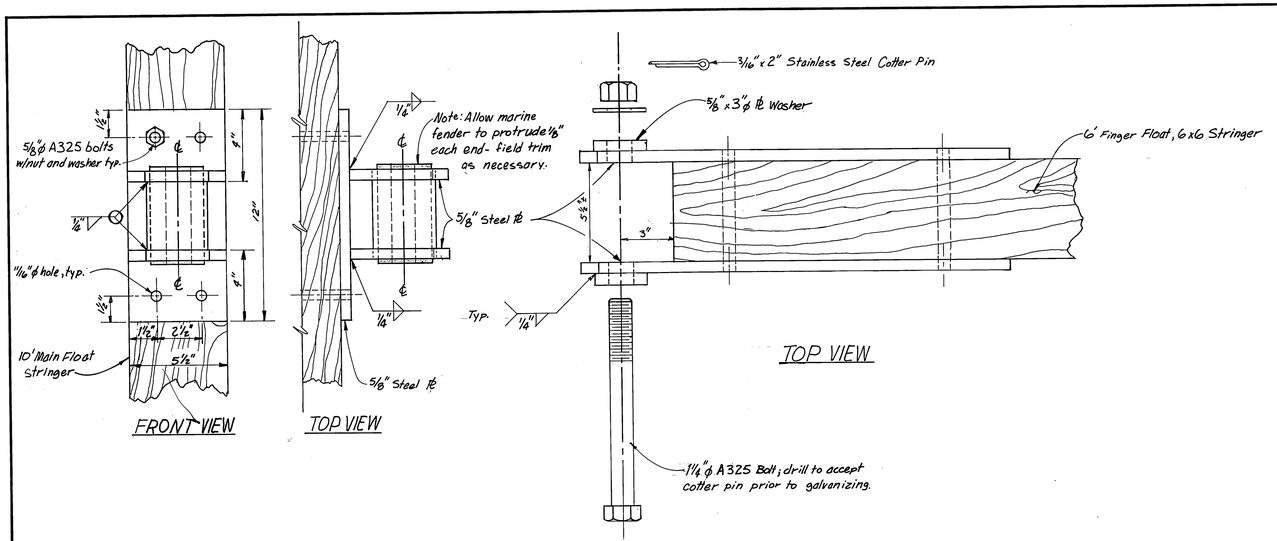
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

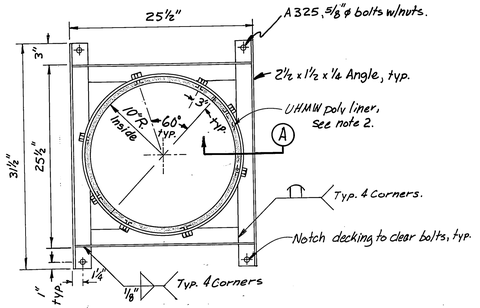
KASAAN ALASKA

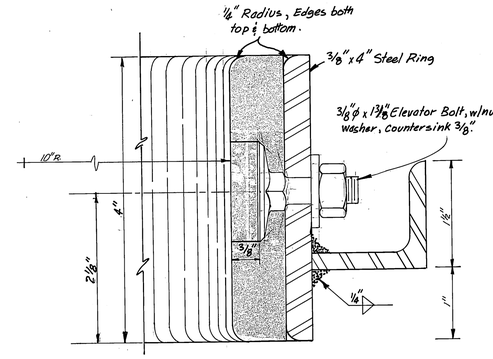
SEAPLANE FLOAT DETAILS

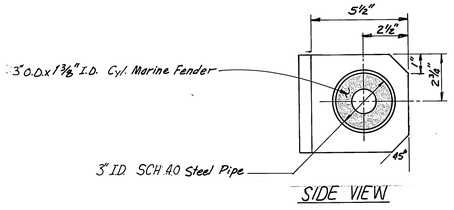
DESIGNED JDB	CHECKED JDB	DRAWN DJM	DATE FEB '85
PROJECT NUMBER K-31111		SHEET 5	OF 14

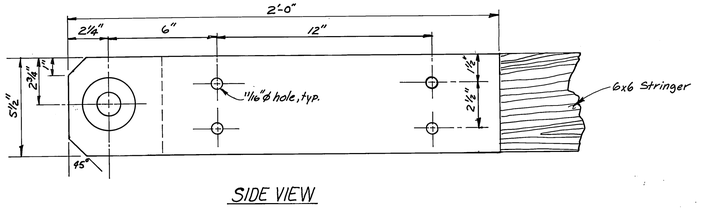
68842







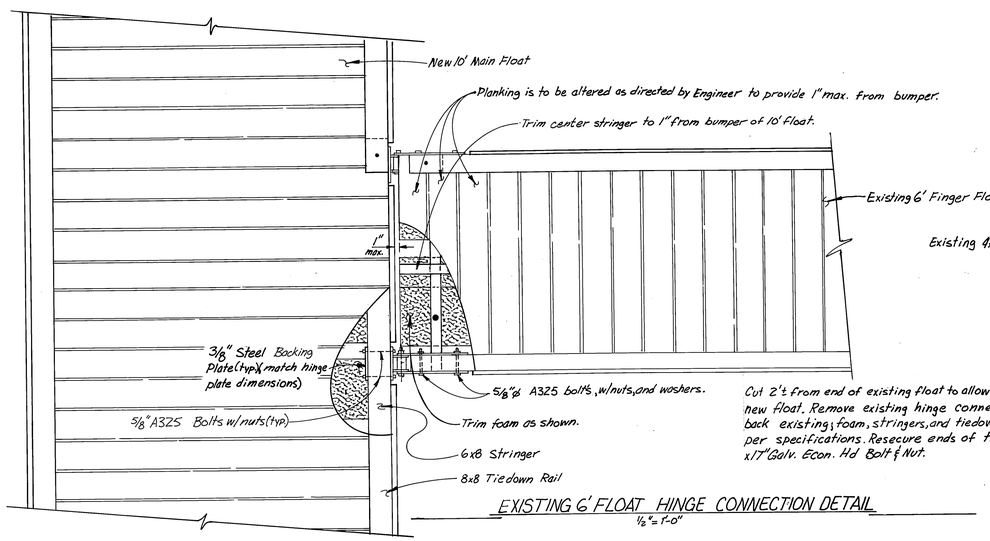




WELDMENT "A"
3"=1'-0"

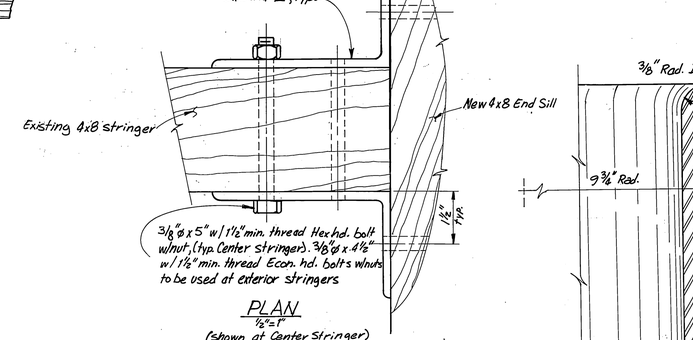
WELDMENT "B"
3"=1'-0"

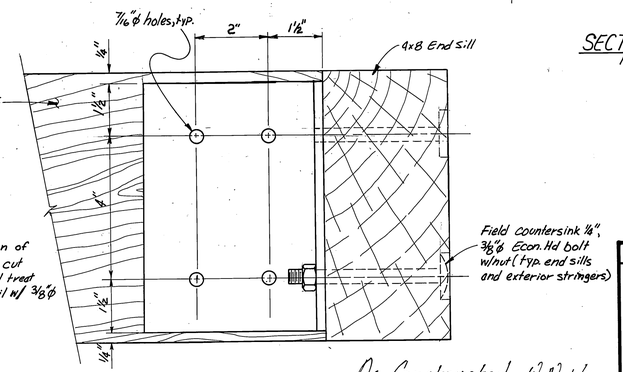
HINGE CONNECTION DETAILS



Cut 2' t from end of existing float to allow installation of new float. Remove existing hinge connection and cut back existing; foam, stringers, and tiedown rail, and treat per specifications. Resecure ends of tiedown rail w/ 3/8" ø x 17" Galv. Econ. Hd Bolt & Nut.

EXISTING 6' FLOAT HINGE CONNECTION DETAIL
1/2"=1'-0"



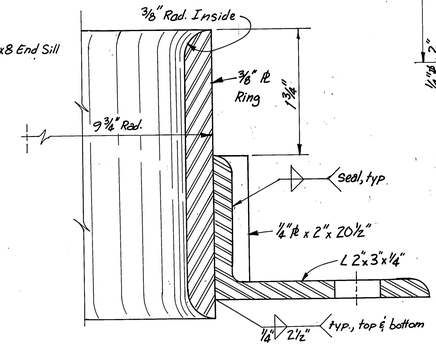


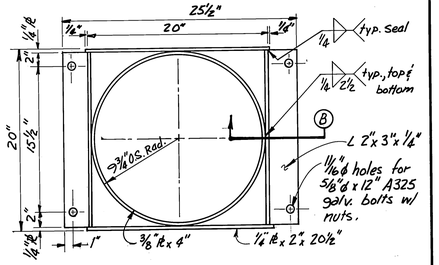
As Constructed WMW 1/9/96

SEAPLANE FLOAT END SILL ANGLE CONNECTION

INTERNAL PILE COLLAR for 10' FLOAT

(Main Timber Float's Required)





NOTE: Material Required at Each Replacement Pile Collar Location

QNT.	Discription
1 —	Replacement Pile Collar
2 —	4"x6"x'9 1/2" S4S Creosote treated
4 —	5/8" ø x 12" A325 Galv. bolts, w/nuts.

REPLACEMENT PILE COLLAR, 6' FLOAT

NOTES:
1. All welds inside pile collar rings are to be ground smooth.
2. Internal Pile Collar: 3/4 x 4" UHMW poly liner, as shown, is to be hot molded to the proper radius and attached w/ ø bolts w/nuts per half collar
3. All steel is to be hot dip galvanized after fabrication.
4. Fabricator is to pre-assemble all components to assure proper fit.
5. Bolt holes to be drilled 1/16" over bolt size. All bolt heads facing decking or Siding to be countersunk 3/8".

STAMP

STATE OF ALASKA 49th
Jack Daniel Beedle
Jack Daniel Beedle
CE-5309
REGISTERED PROFESSIONAL ENGINEER
4/8/95

DO NOT SCALE THIS DRAWING — USE DIMENSIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

KASAAN ALASKA

TIMBER FLOAT PILE COLLAR AND HINGE CONNECTION DETAIL

DESIGNED	CHECKED JDB	DRAWN DJM	DATE JAN 95
PROJECT NUMBER K 31111		SHEET 6	OF 14

64842

Existing Gangway Float

See sht. 3 for connection of Existing Gangway Float to new main timber float

See sht. 2 for pile type and size.

Existing 6'x110'-6" Timber Float.

Install new pile collars. See sht. 6 for pile collar details.

Provide new connection, See conn. detail, sht. 6.

Shorten Existing Float as necessary to make connection. See connection details sht. 6.

New 10'x125' Main Timber Float

SEE SHT. 2 and 4 FOR SUPPLEMENTAL A, STALL FLOATS.

See Sht. 6 for pile collar details

C/11 B/11 D/11 A/11

5-UNITS at 21'-2" = 105'-0"

2 Bearing Pads req'd. at each joint. See sht. 13 for details.

New 12'x106' Breakwater Float

Not installed because the piling would not take lateral load. Funds allowed temporary moorage at Linney Bay

8'x6' Transition Plate see sht. 12

24"ϕ x ½" wall steel pile, typ. for concrete breakwater float.

C/9

Exterior pile collars to be located as directed by Engineer in field. See Sht. 5 for pile collar details.

11'-6"±

℄

6'-10±

8'x6' Transition Plate

6"

2'-6"

8'-6"-6" Transition Plate See sht. 12.

3" typ.

Install new rubber bumpers, as shown. See Sht. 5 for details

3" typ.

See float/transition detail on sht. 12.

Smooth Alum. Transition Pl. Pad. See sht. 12.

See Sht. 12 for the connection of the tran. pl to the float detail.

Smooth Alum. Trans. Pl. Pad. See Sht. 12.

RELOCATED SEAPLANE FLOAT

Not installed because the piling would not take lateral load. Float was left at the temporary location.

Smooth Alum. Trans. Pl. Pad. See sht. 12.

2'-6"

2'-6"

7-UNITS at 21'-2" = 148'-2"

NEW 12'x148' Breakwater Float

Not installed because piling would not take lateral load. Funds allowed temporary moorage at Linney Bay.

FLOAT AND BREAKWATER LAYOUT

1/4" = 1'-0"

As Constructed WmN 1/9/86

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Jack Daniel Beedle
CE - 5309
REGISTERED PROFESSIONAL ENGINEER
4/8/85

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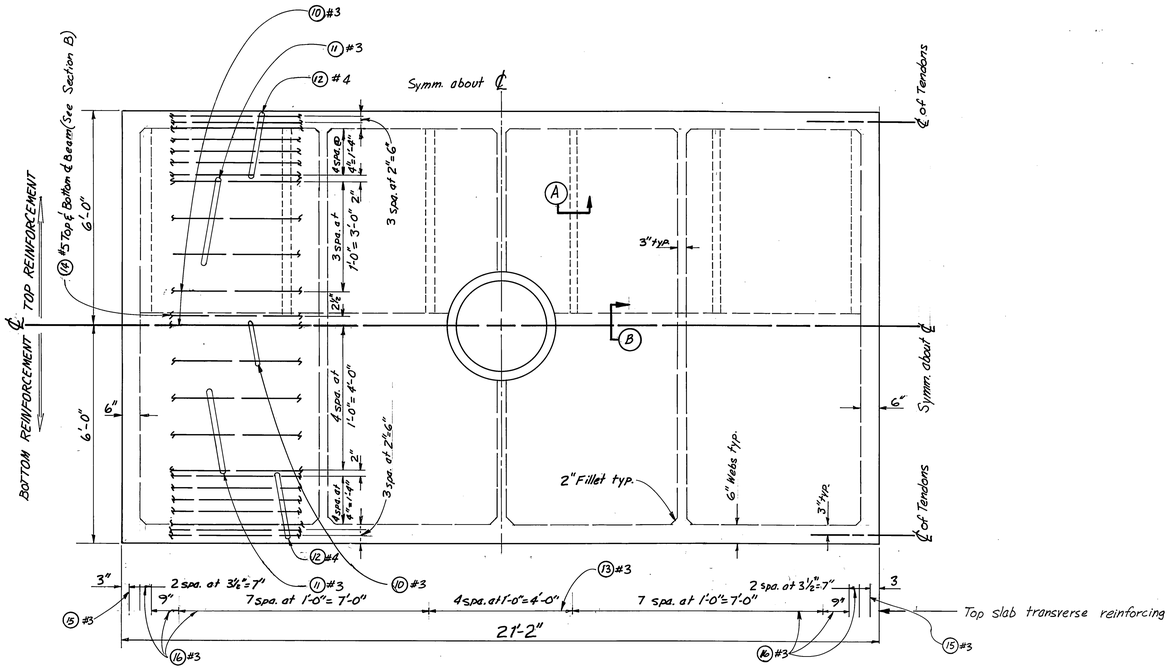
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

KASAAN ALASKA

FLOAT LAYOUT

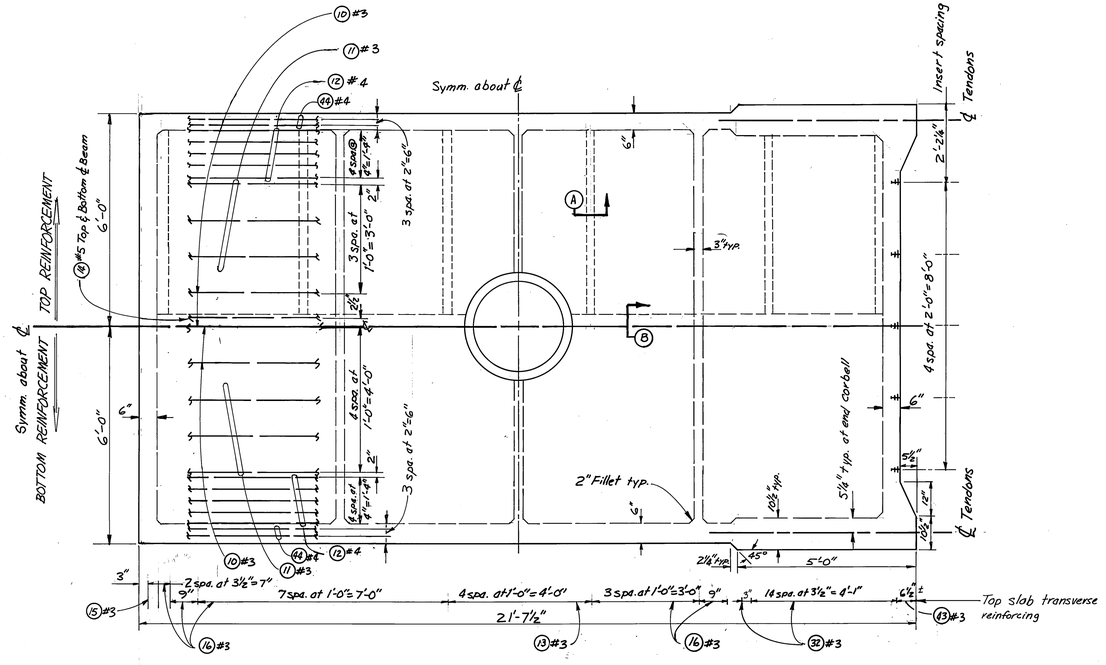
DESIGNED		CHECKED JDB	DRAWN DJM	DATE JAN 85	
PROJECT NUMBER	K 31111		SHEET 7	OF 14	

64842



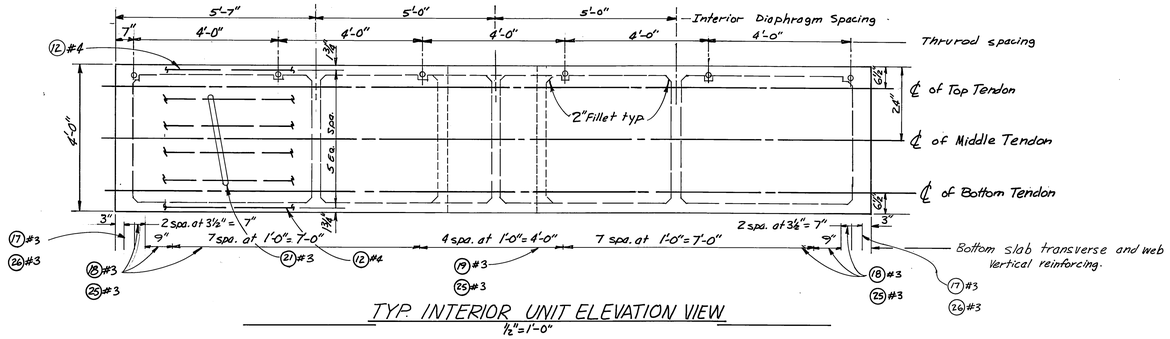
TYP. INTERIOR UNIT SLAB & FRAMING PLAN

½"= 1'-0"



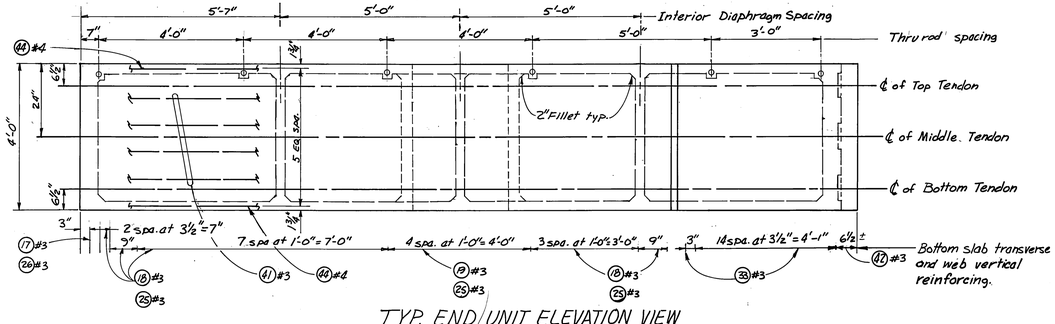
TYP. END UNIT SLAB & FRAMING PLAN

½"= 1'-0"



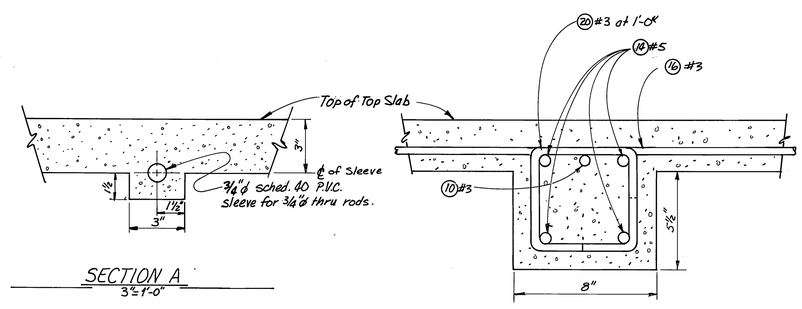
TYP. INTERIOR UNIT ELEVATION VIEW

½"= 1'-0"



TYP. END UNIT ELEVATION VIEW

½"= 1'-0"



SECTION A

3"= 1'-0"

SECTION B

3"= 1'-0"

As Constructed WmN 1/9/86

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STATE OF ALASKA 49th
Jack Daniel Beedle
CE - 5309
REGISTERED PROFESSIONAL ENGINEER
7/8/85

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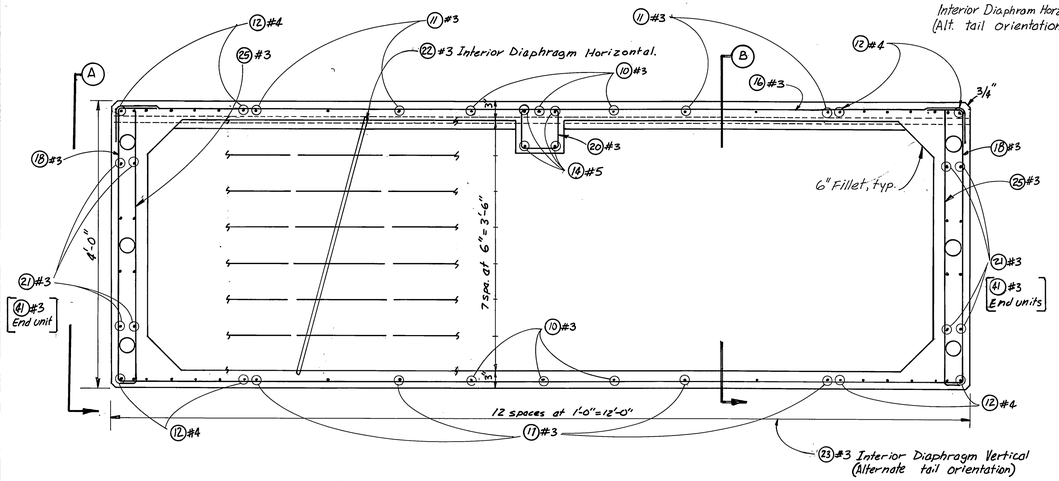
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

KASAAN ALASKA

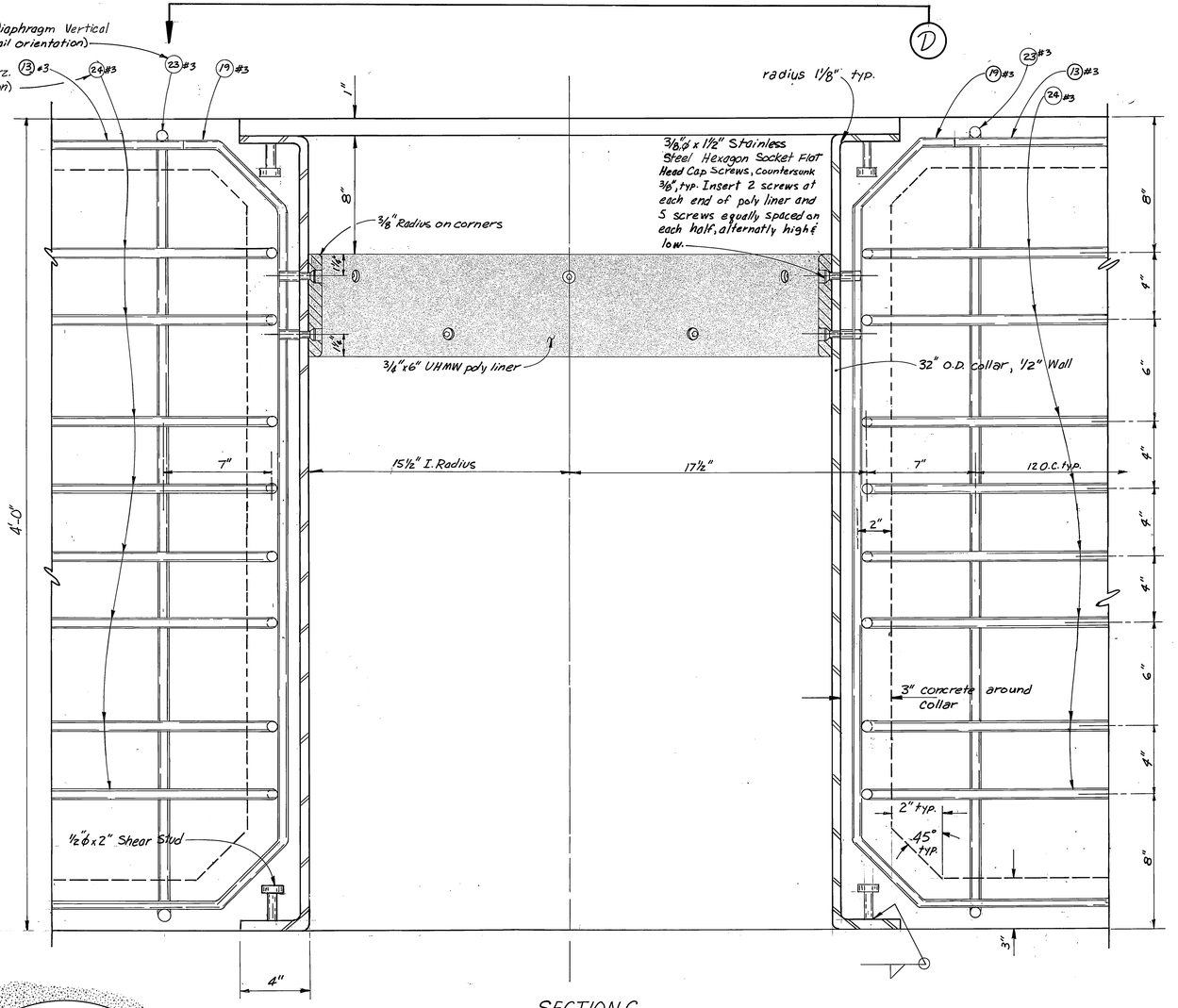
POST TENSIONED BREAKWATER FLOATS
FRAMING, SLAB PLAN & LONG. SECTION

DESIGNED LD	CHECKED JDB	DRAWN DJM	DATE JAN 85
PROJECT NUMBER K31111		SHEET 8 OF 12	

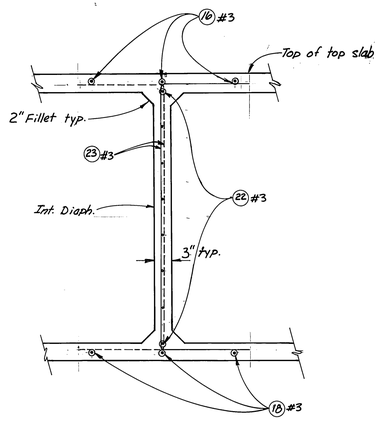
25842



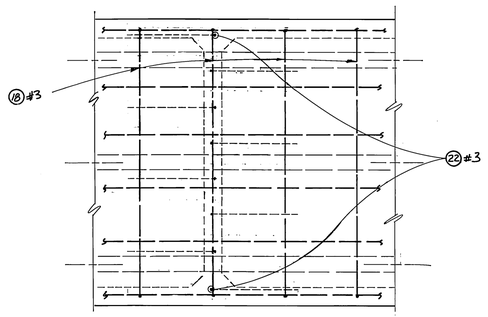
TYPICAL SECTION of INTERIOR DIAPHRAGM STEEL
1" = 1'-0"
(see this sht. for Int. Diaph. at Pile Collar)



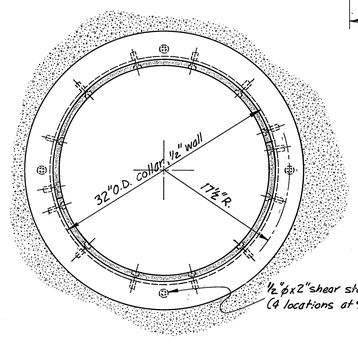
SECTION C
3" = 1'-0"



SECTION B
1" = 1'-0"



SECTION A
1" = 1'-0"



PLAN VIEW-D
N.T.S.

NOTES:
1. The pile collar UHMW poly liner, as shown, is to be heated and molded to the proper radius, then attached with 9 screws and ferrules per half collar.
2. All welds inside collar to be ground smooth
3. All steel is to be hot dip galvanized after fabrication
4. Fabricator is to assemble all components to assure proper fit.

As Constructed WMD 1/4/86

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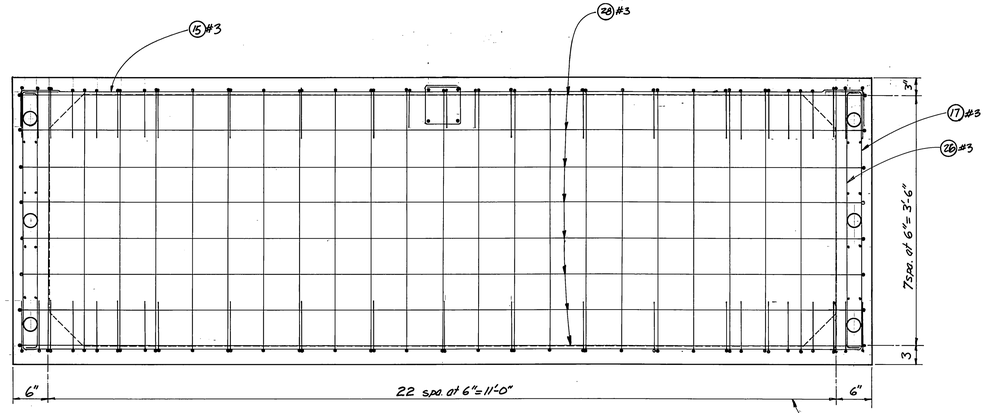
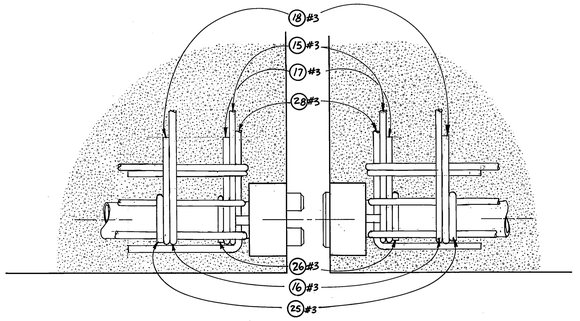
STATE OF ALASKA 49th — Jack Daniel Beedle CE - 5309 REGISTERED PROFESSIONAL ENGINEER — 4/18/85	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES KASAAN, ALASKA POST TENSIONED BREAKWATER FLOATS TYPICAL SECTION AND INT. PILE COLLAR
	DESIGNED AD · CHECKED JDB · DRAWN DJM · DATE JAN 85 PROJECT NUMBER K 37111 · SHEET 9 OF 14

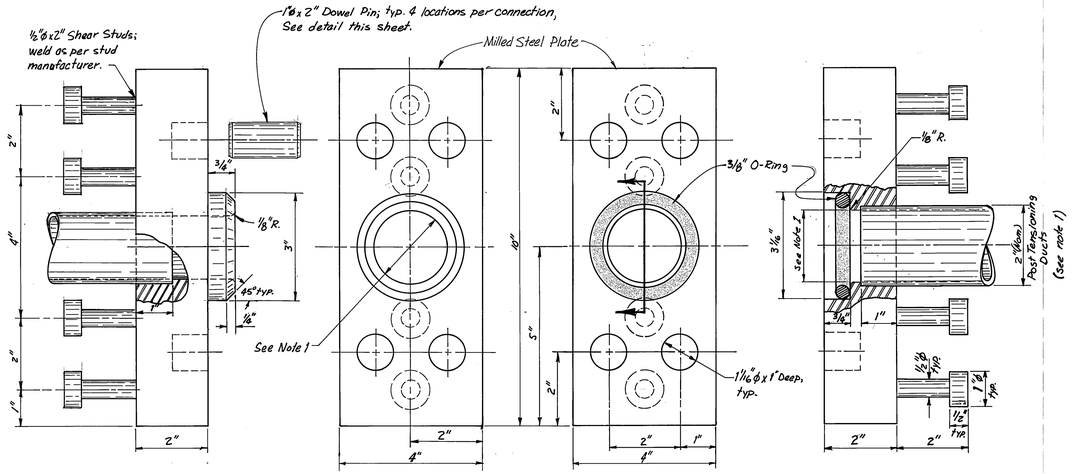
68542



TYPICAL INTERIOR UNIT & INTERIOR END UNIT END DIAPHRAGM
1"=1'-0"



CONNECTION DETAIL
1½"=1"

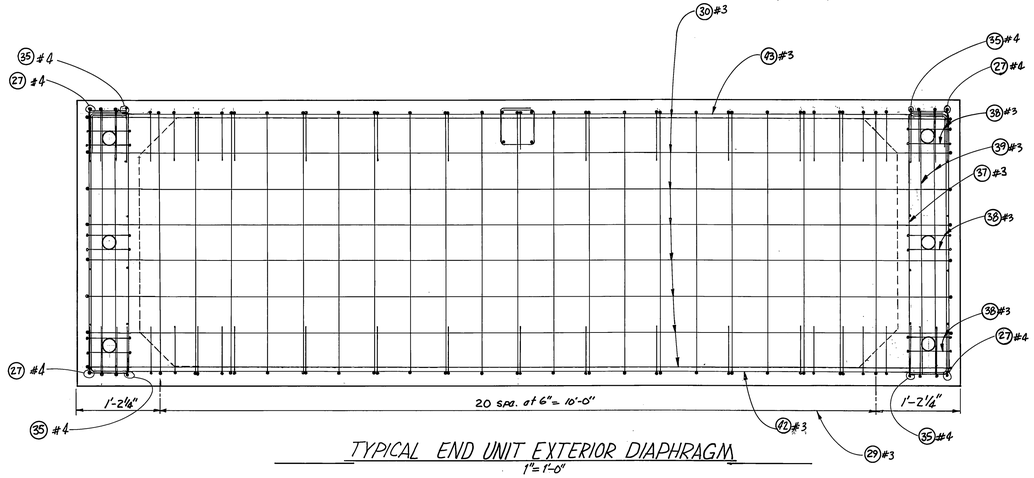


SIDE VIEW MILLED MALE CONNECTION PLATE — FRONT VIEW

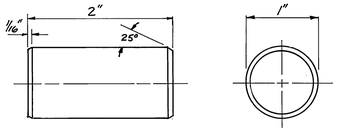
FRONT VIEW MILLED FEMALE CONNECTION PLATE — SIDE VIEW

½"=1"

NOTES:
1. Dimensions to be compatable with particular tensioning system used. Provide dimension on shop drawings.



TYPICAL END UNIT EXTERIOR DIAPHRAGM
1"=1'-0"



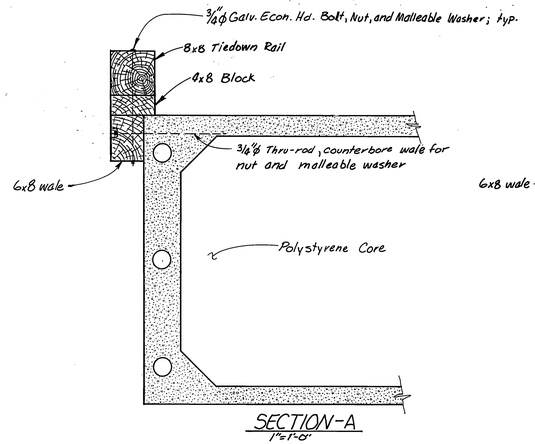
DOWEL PIN
12"=1'-0"

According to Pittsburg Testing Labs' inspector 6 of the milled connectors were misalligned by ¼". The 1/16"ø holes (4 each connector) were plugged and welded. The 1½"ø holes were redrilled to line up ends with the two gasket seat rings at an offset of ½". The change was directed by Cons. Tech. Corporation and later approved by Alaska DOT&PF staff.

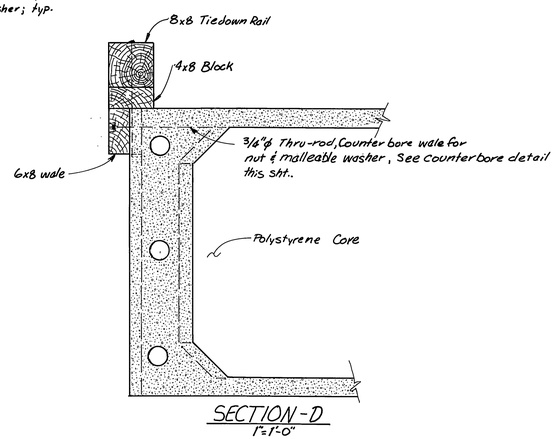
As Constructed W.A.N. 1/9/86

STAMP	DO NOT SCALE THIS DRAWING – USE DIMENSIONS
STATE OF ALASKA 49th Jack Daniel Beedle CE - 5309 REGISTERED PROFESSIONAL ENGINEER 4/8/85	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES KASAAN, ALASKA POST TENSIONED BREAKWATER FLOATS END WALE AND INTERIOR CONNECTIONS
	DESIGNED AD · CHECKED JDB · DRAWN DJM · DATE FEB '85 PROJECT NUMBER K-31111 · SHEET 10 OF 14

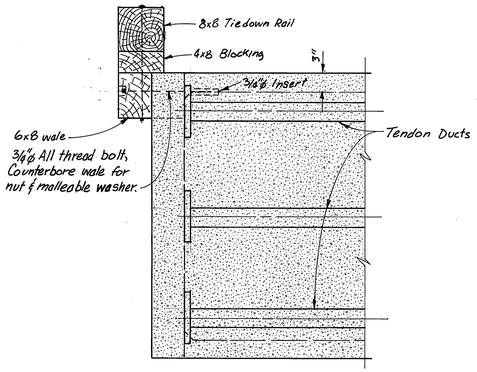
64852



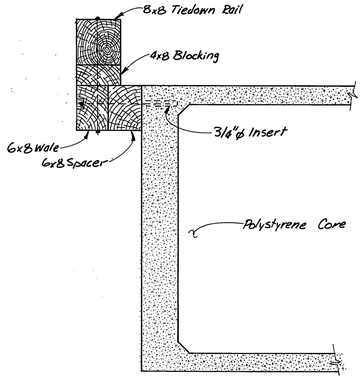
SECTION-A
1"=1'-0"



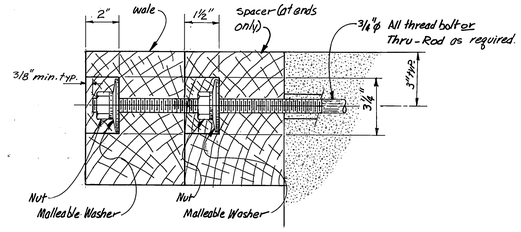
SECTION-D
1"=1'-0"



SECTION-B
1"=1'-0"



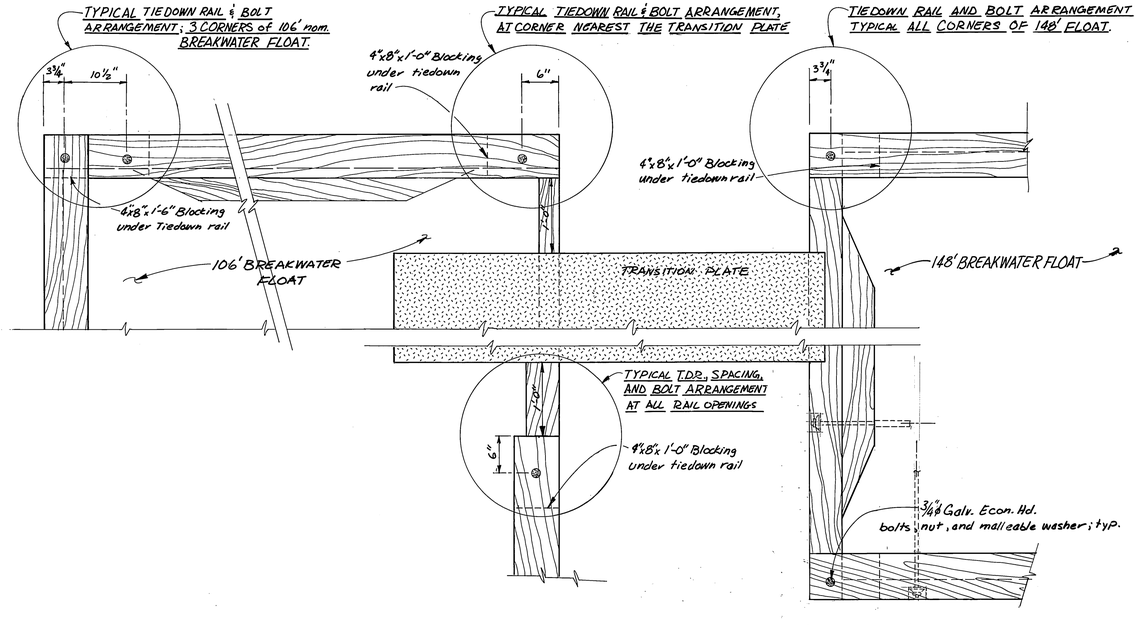
SECTION-C
1"=1'-0"



COUNTERBORE DETAILS
3"=1'-0"

NOTE

1. Details of Counterbore as shown is applicable to all wale connections on concrete floats, including areas where spacer is not used.



BREAKWATER FLOATS INTERSECTION
1"=1'-0"

As Constructed WmN 1/9/86

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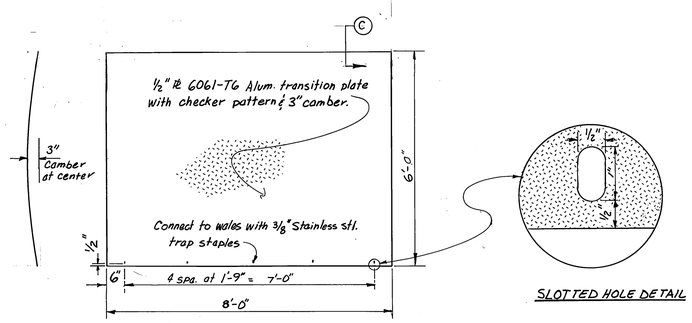
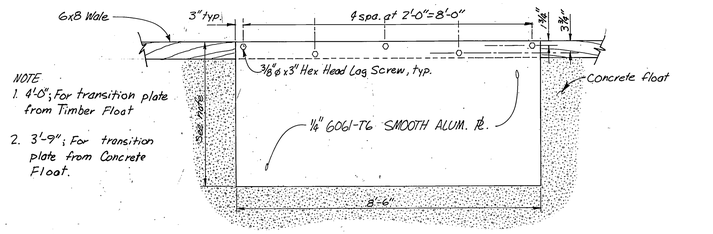
STATE OF ALASKA 1911 Jack Daniel Beedle CE - 5309 REGISTERED PROFESSIONAL ENGINEER 9/8/85	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES KASAAN ALASKA POST-TENSIONED BREAKWATER FLOATS TIE-DOWN, WALE, AND FENDER CONNECTION DETAILS
DESIGNED AJ CHECKED JDB DRAWN DJM DATE FEB85 PROJECT NUMBER K-3111 SHEET 11 OF 14	

64862

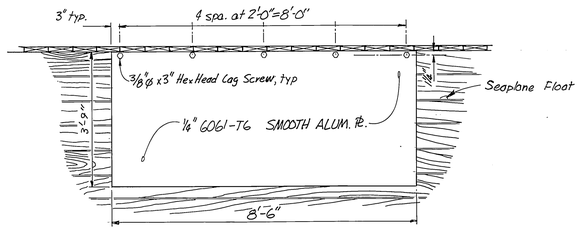


SLOTTED HOLE DETAIL

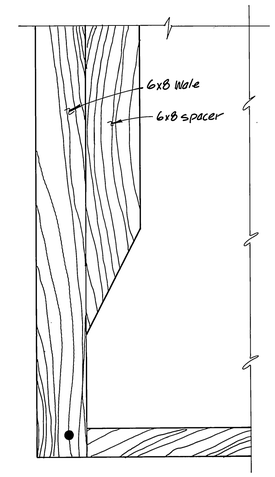
TRANSITION PLATE FROM CONCRETE FLOAT
½"=1'-0"



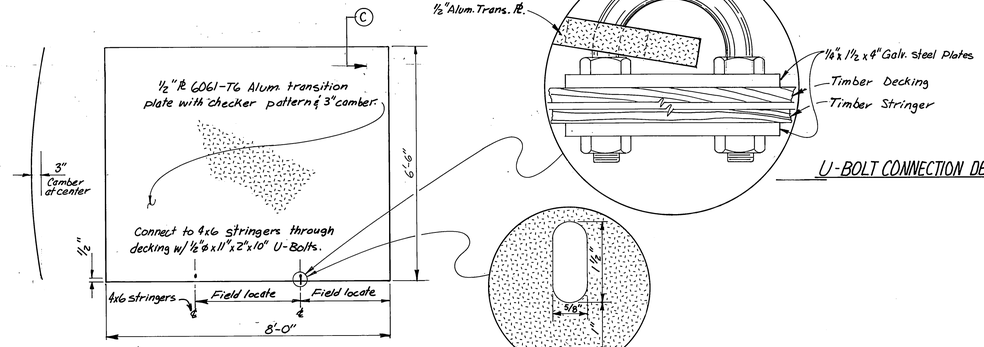
TRANSITION PLATE PAD ON CONCRETE FLOATS
½"=1'-0"

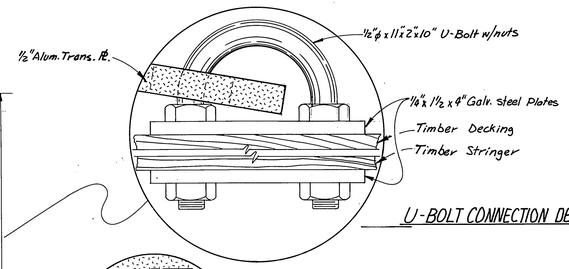


TRANSITION PLATE PAD ON SEAPLANE FLOAT
½"=1'-0"

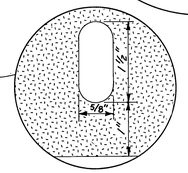


SECTION A
3"=1'-0"



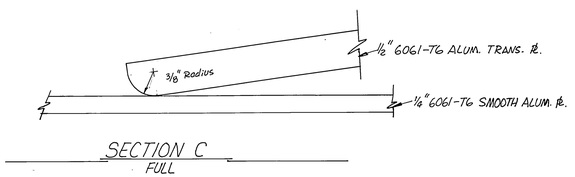


U-BOLT CONNECTION DETAIL

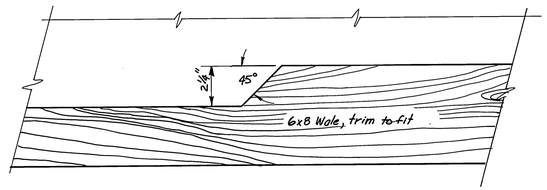


SLOTTED HOLE DETAIL

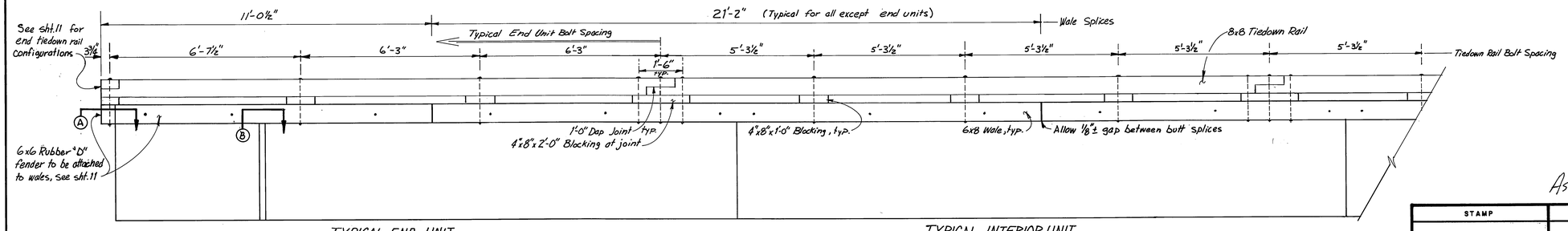
TRANSITION PLATE FROM TIMBER FLOAT
½"=1'-0"



SECTION C
FULL



SECTION B
3"=1'-0"



TYPICAL END UNIT

TYPICAL INTERIOR UNIT

CONCRETE FLOAT, WALE & TIEDOWN RAIL LAYOUT
½"=1'-0"

As Constructed WmN 1/9/86

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STATE OF ALASKA 49th
Jack Daniel Beedle
CE - 5309
REGISTERED PROFESSIONAL ENGINEER
4/8/85

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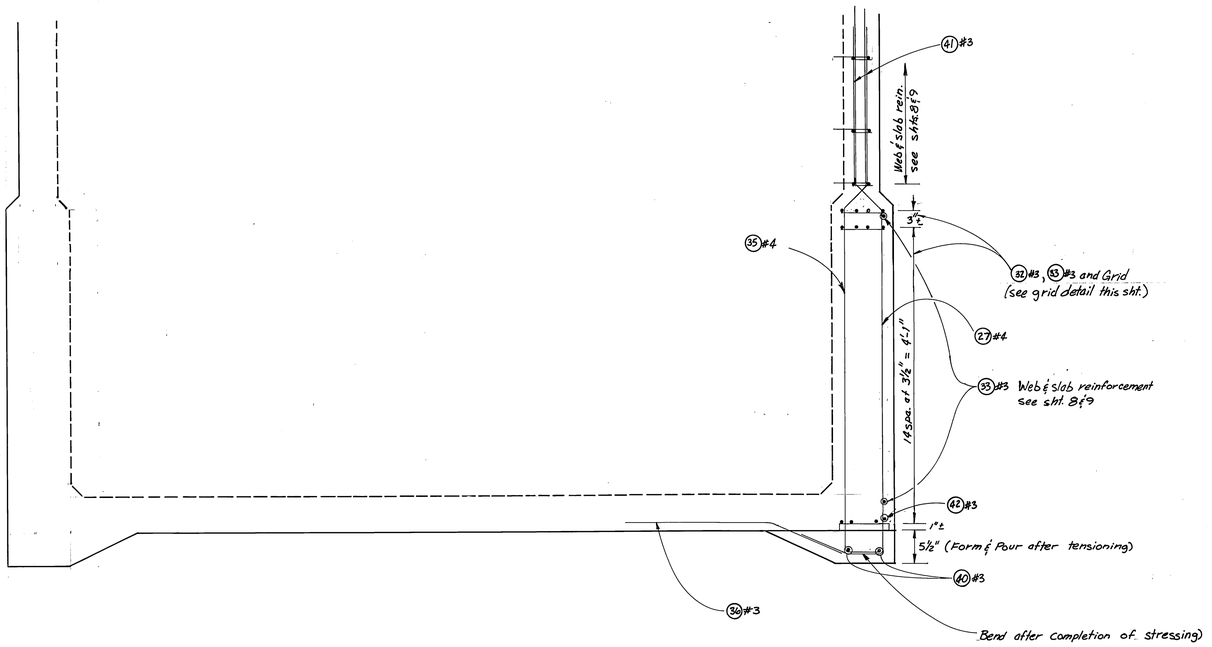
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

KASAAN ALASKA

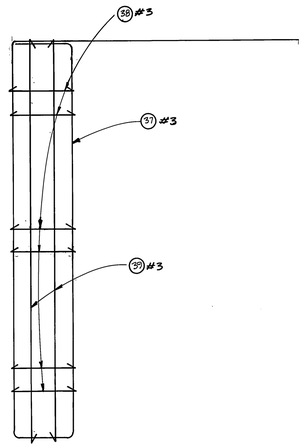
POST TENSIONED BREAKWATER FLOATS
TIEDOWN RAIL & WALE LAYOUT, TRANSITION PLATE DETAIL

DESIGNED	AO	CHECKED	JDB	DRAWN	DJM	DATE	JAN 85
PROJECT NUMBER	K-31111			SHEET	12	OF	14

64842



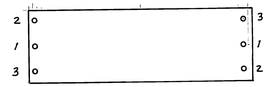
PLAN
1"=1'-0"



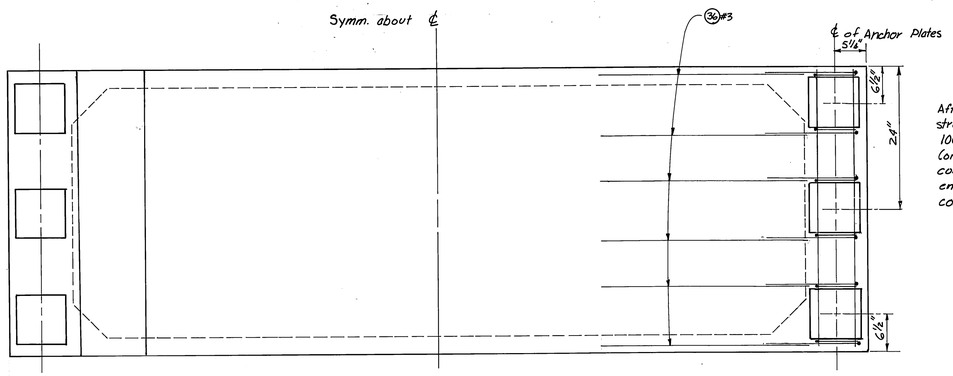
JACKING CORBEL GRID
1½"=1'-0"

POST - TENSION NOTES

1. The minimum compresive strength of concrete at time of post tensioning shall be 5,000 psi.
2. The maximum outer diameter of duct shall be 2½".
3. Duct area shall be at least twice the net area of the prestressing steel.
4. Design is based on 0.5"(nom.) 5-strand tendons top and bottom and 0.5"(nom.), 6-strand tendons at center.
5. The prestressing tendons shall be tensioned by jacking at each end of each tendon. Tendons shall be jacked in the sequence shown below. Like numbered tendons shall be jacked simultaneously.



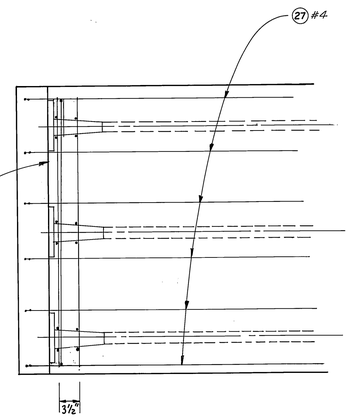
6. a) Top and bottom tendons shall be jacked to a load of 144 Kips and anchored with an anchor set of 5/8".
   b) Center tendons shall be jacked to a load of 173 Kips and anchored with an anchor set of 5/8"
7. The minimum elongation shall be 8½" for the first end jacked on the 106'(nom.) float and 11⅞" for the 148'(nom.) float. Jacking at the second end is a check of lift-off only and no measurable elongation is anticipated. Elongations are based on a modulus of elasticity for prestressing steel of 28,000,000 psi and a tendon length of 105.94' for the 106'(nom.), float and 148.31' for the 148'(nom.), float.



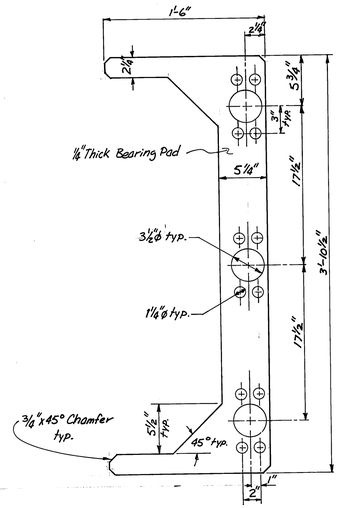
END ELEVATION
1"=1'-0"

TYP. END UNIT

After completion of stressing, apply Concresive 1001-LPL epoxy resin, (or approved equal), to concrete surfaces and encase anchorage with concrete.



SIDE ELEVATION
1"=1'-0"



BEARING PAD
1½"=1'-0"
(TWO Required per Joint)

As Constructed WMN 1/9/86

STAMP

STATE OF ALASKA 49th
Jack Daniel Beedle
CE - 5309
REGISTERED PROFESSIONAL ENGINEER
4/8/85

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

KASAAN ALASKA

POST TENSIONED CONCRETE FLOATS
TENDON END ANCHORAGES & BEARING PADS

DESIGNED [illegible]	CHECKED JDB	DRAWN DJM	DATE JAN 85
PROJECT NUMBER K 31111		SHEET 13	OF 14

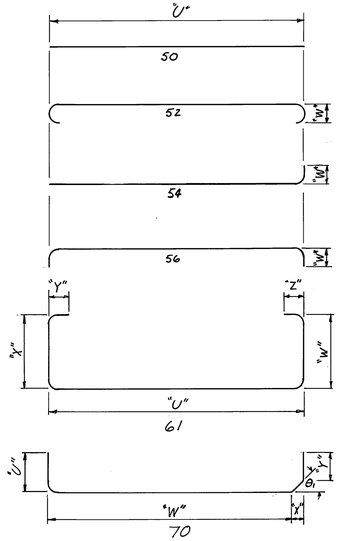
E4842

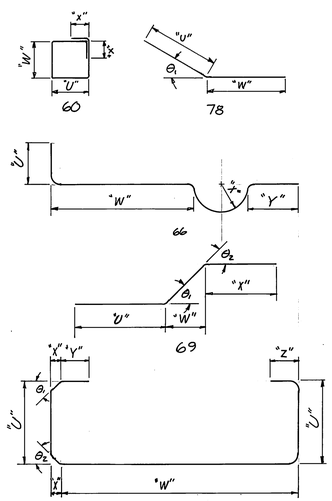
V = Bar dimensions vary between dimensions shown on this line and the following line.

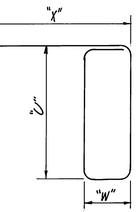
MARK NO.	LOCATION	SIZE	NO REQ'D.	Bend Type	Varies	NO. Each	DIMENSIONS (out to out) U Ft.	U In.	W Ft.	W In.	X Ft.	X In.	Y Ft.	Y In.	Z Ft.	Z In.	θ_1 Deg.	θ_2 Deg.	LENGTH Ft.	LENGTH In.	Approx. Weight LBS.
10	Top & Bottom Slab	3	144	70	V	48		6.0	8	7.6		4.2		8.0			45°		10	3.0	185
						96		6.0	9	0.3		4.2		8.0			45		10	7.7	384
11	Top & Bottom Slab	3	144	56		20	9.6		7.8										21	11.6	1189
12	Top & Bottom Slab	4	304	56		20	9.6		7.8										21	11.6	4461
13	Top Slab	3	72	70	V	24		6.0	4	1.2		4.2		8.0			45		5	3.9	48
						48		6.0	4	5.9		4.2		8.0			45		5	8.7	103
14	℄ BEAM	5	96	70				6.0	8	8.8		3.3		8.4			45		10	0.3	1004
15	END DIAPHRAGM	3	20	56			11	6.2		6.0									12	5.2	93
16	TOP SLAB	3	220	56			11	8.9		6.0									12	7.8	1086
17	INTERIOR END DIAPH.	3	20	61			11	6.2	3	7.5	3	7.5		6.0		6.0			19	8.0	148
18	Bottom Slab & Webs	3	220	61			11	8.9	3	9.8	3	9.8		6.0		6.0			20	2.4	1676
19	Bottom Slab & Web	3	72	74	V	24	3	9.8	4	1.8		3.9		6.0		6.0	45	45	12	6.9	113
						48	3	9.8	4	6.6		3.9		6.0		6.0	45	45	12	11.7	234
20	℄ BEAM	3	240	60				6.0		6.0		3.0							2	4.0	210
21	WEB	3	128	56			20	9.1		6.0									21	7.5	1081
22	INTERIOR DIAPHRAGM	3	192	56			11	9.6	1	2.0									14	0.9	1016
23	INTERIOR DIAPHRAGM	3	360	56			3	8.6	1	2.5									6	0.5	818
24	INTERIOR DIAPHRAGM	3	192	66			1	2.0	4	5.3	1	5.5	1	0					11	0.6	798
25	WEB	3	512	56			3	9.4		3.0									4	2.2	806

V = Bar dimensions vary between dimensions shown on this line and the following line.

MARK NO.	LOCATION	SIZE	NO REQ'D.	Bend Type	Varies	NO. Each	DIMENSIONS (out to out) U Ft.	U In.	W Ft.	W In.	X Ft.	X In.	Y Ft.	Y In.	Z Ft.	Z In.	θ_1 Deg.	θ_2 Deg.	LENGTH Ft.	LENGTH In.	Approx. Weight LBS.
26	INTERIOR END DIAPHRAGM WEB	3	40	56			3	7.2		3.0									4	0	60
27	WEB & CORBEL	4	48	69			6	5.4		4.2	4	0					45	45	10	11.3	351
28	END DIAPHRAGM	3	160	56			11	8.1		6.0									12	7.0	757
29	END DIAPHRAGM	3	544	56			3	8.6		6.0									4	7.5	946
30	END UNIT END DIAPHRAGM	3	32	56			12	0.6		6.0									12	11.5	156
32	END UNIT TOP SLAB	3	60	50			10	10.2											10	10.2	245
33	END UNIT BOTTOM SLAB	3	60	56			12	1.4		10.0									13	8.2	309
35	WEB & CORBEL	4	48	69			5	9.4		4.2	4	0					45	45	10	3.3	329
36	ANCHOR PLATE CAP	3	48	78			1	6.0	3	0.0							24.62		4	6.0	81
37	CORBEL	3	128	80			3	9.4		7.4	2	8.0							11	3.9	545
38	CORBEL	3	768	52				8.1		1.9									1	2.9	358
39	CORBEL	3	256	52			3	10.1		1.9									4	4.9	424
40	ANCHOR PLATE VERTICAL	3	16	50			3	9.0											3	9.0	23
41	END UNIT WEB	3	64	54			16	2.8		6.0									16	8.2	402
42	END UNIT END DIAPHRAGM	3	4	61			11	11.6	3	7.5	3	7.5		6.0		6.0			20	1.6	30
43	END UNIT END DIAPHRAGM	3	4	56			11	11.6		6.0									12	10.8	19
44	END UNIT TOP & BOTTOM SLAB	4	32	54			16	2.8		6.0									16	8.2	357







Dimensions given to the intersection of the tangents.

Approx 20,770 # of steel to be provided.

As Constructed WMN 1/9/86

STAMP

STATE OF ALASKA 4911 Jack Daniel Beedle CE - 5309 REGISTERED PROFESSIONAL ENGINEER 9/8/85

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

KASAAN ALASKA

REBAR SCHEDULE

DESIGNED AD	CHECKED JDB	DRAWN DJM	DATE FEB '85
PROJECT NUMBER K-31111		SHEET 14 OF 14	

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