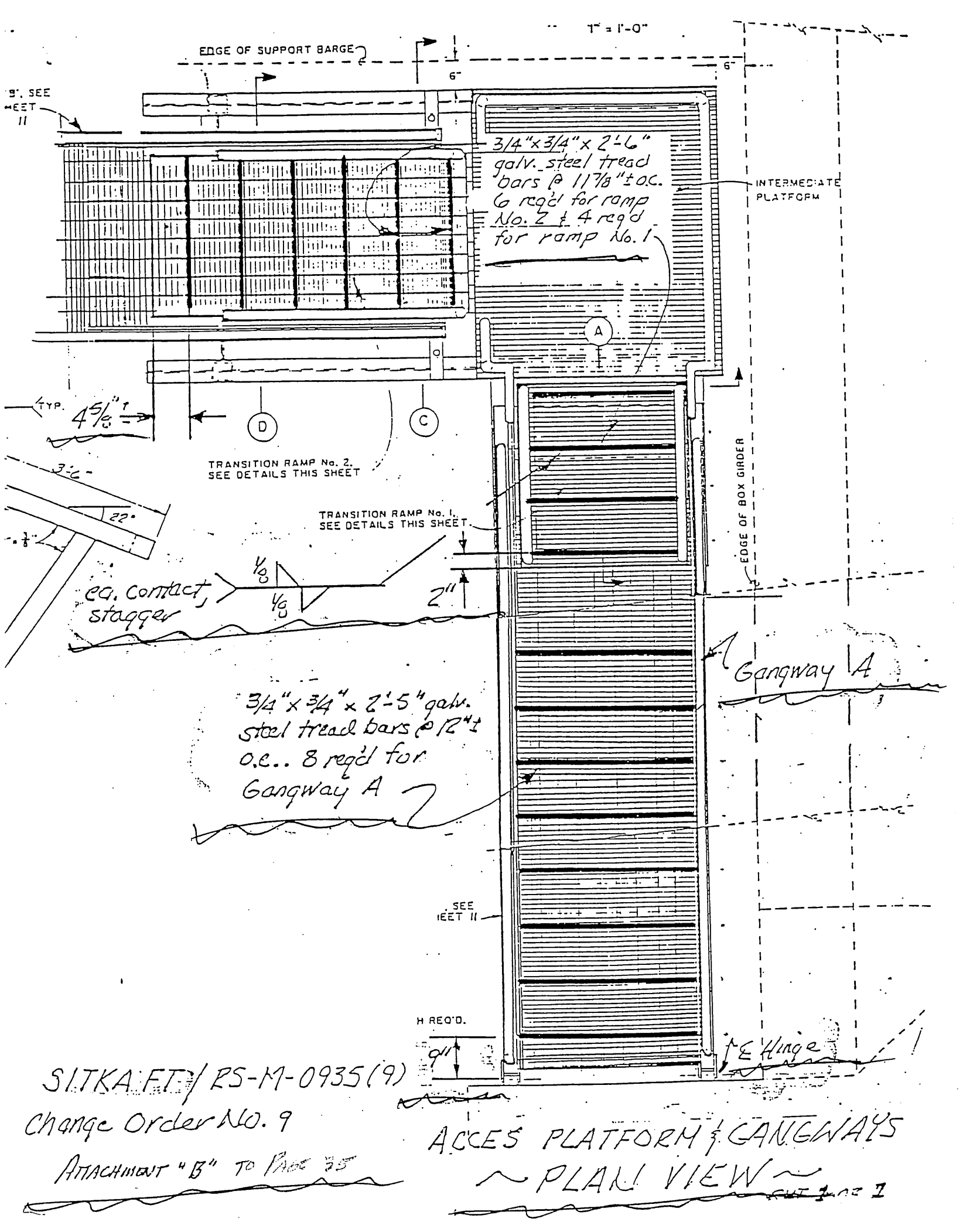


SITKA FT/ RS-M-0935(9)

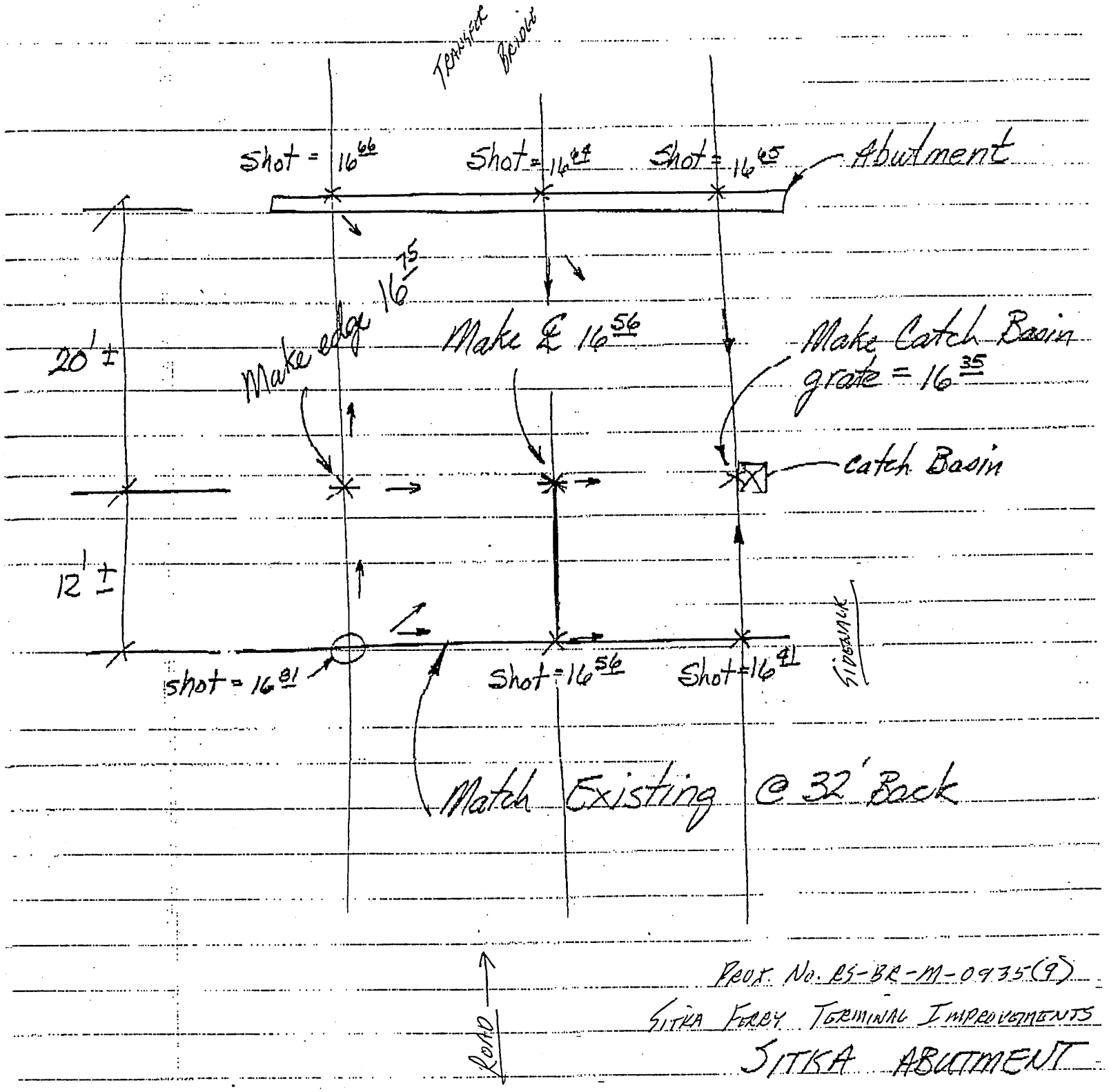
Change Order No. 9

ATTACHMENT "B" TO PAGE 35

ACCES PLATFORM & GANGWAYS

~ PLAN VIEW ~

SHT 1 OF 2



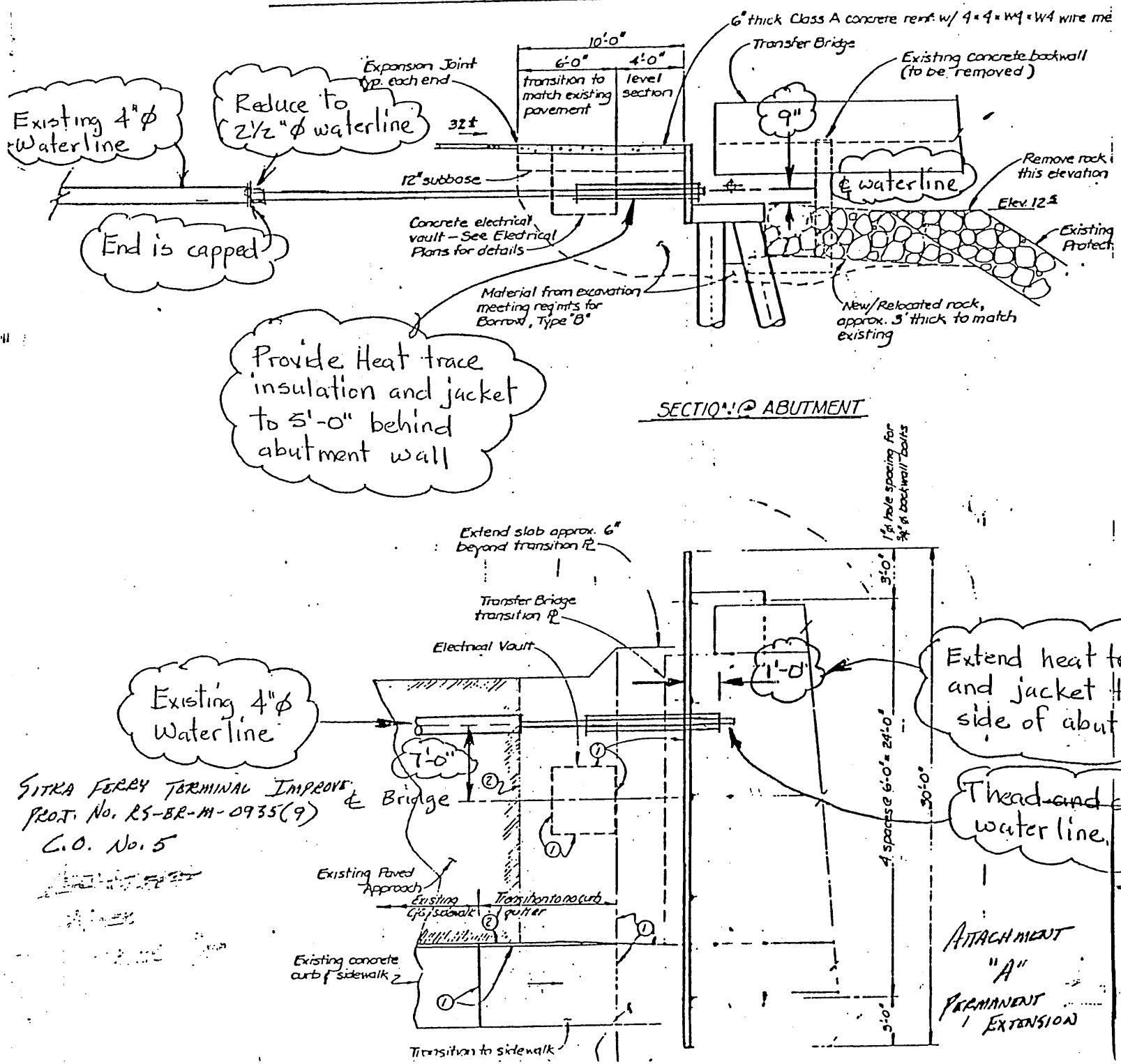
Proj. No. ES-BR-M-0935(9)

Sitka Ferry Terminal Improvements

Sitka Abutment & Approach Grades

10/14/88

From Office



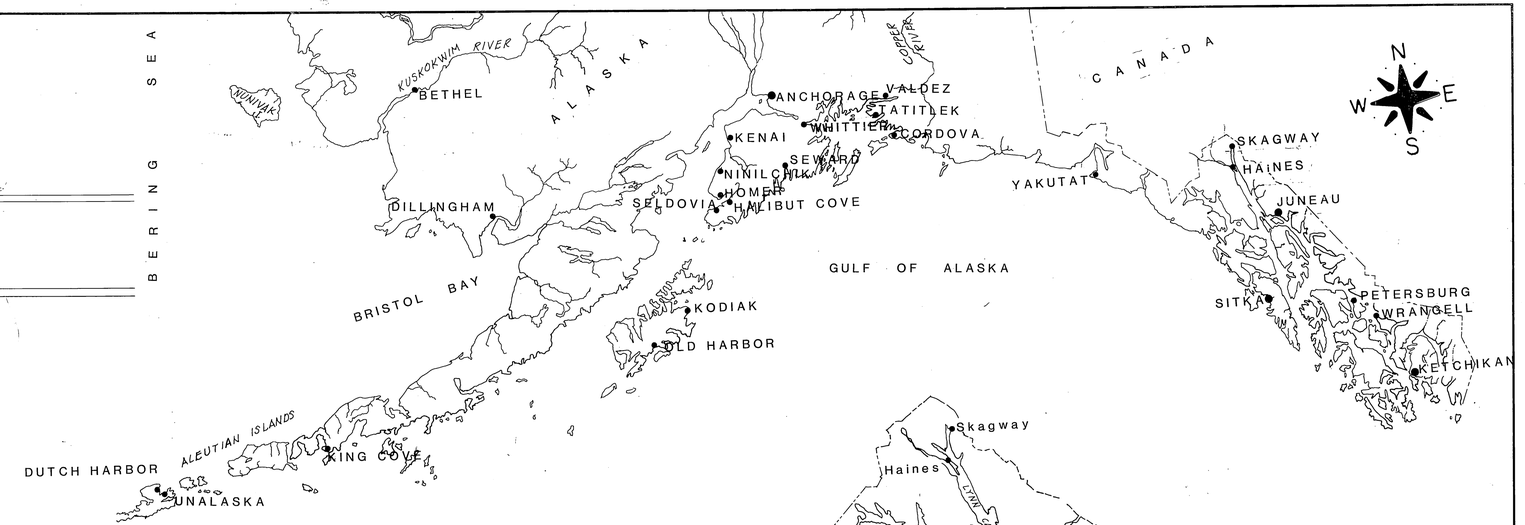
SITKA FERRY TERMINAL IMPROVE & Bridge
PROJ. No. RS-BR-M-0935(9)
C.O. No. 5

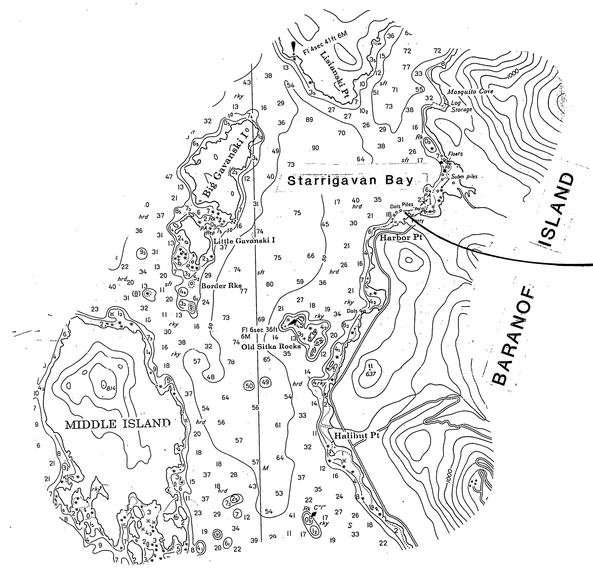
ATTACHMENT "A"
PERMANENT EXTENSION

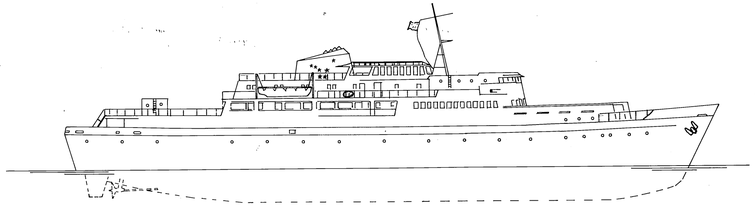
State of Alaska
AMHS/MFE
Waterline Extension
Sheet 1 of 1

SITKA FERRY TERMINAL IMPROVEMENTS

PROJECT NO. RS-BR-M-0935(9)







SOUTHEASTERN ALASKA

Enlarged

PROJECT LOCATION

UNITED STATES

ALASKA - SOUTHEAST COAST

SITKA SOUND TO SALISBURY SOUND

INSIDE PASSAGE

Mercator Projection
Scale 1:40,000 at Lat. 57°12'
North American 1927 Datum
SOUNDINGS IN FATHOMS
(FATHOMS AND FEET TO ELEVEN FATHOMS)
AT MEAN LOWER LOW WATER

AS BUILT

START: OCTOBER 3, 1988

STOP: NOVEMBER 17, 1988

CONTRACTOR: MANSON CONSTRUCTION & ENGINEERING CO., INC.

PROJECT ENGINEER: MARK HALVORSEN

DATE: JANUARY 18, 1989

INDEX TO SHEETS

1.	Title Sheet		
2.	Quantities & General Notes		
3.	Existing Layout		
4.	Seaward General Layout		
5.	Uplands Site Plan		
6.	Bridge Overall Plan		
7.	Abutment		
8.	Transfer Bridge Abutment Bearings		
9-21	Transfer Bridge		
22.	Barge Restraint Structure		
23-33	Barge		
34.	Support Platform Details		
35.	Barge Access Platforms & Walkway Details		
36.	Gangways		
37.	Gangway Details		
38.	Generator Building		
39-41.	Electrical		

STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES

MARINE FACILITIES

APPROVED

SHORE FACILITIES ENGINEER

Recommend For Approval Group Design Chief

Sheet 1 of 41

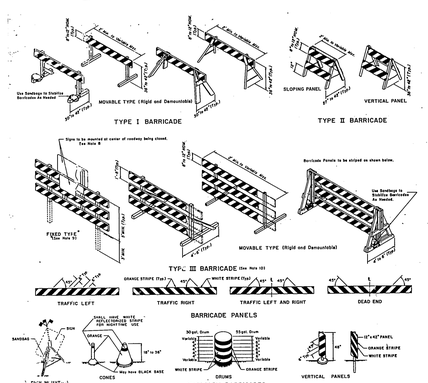
97238

ESTIMATE OF QUANTITIES

ITEM NO.	ITEM	PAY UNIT	ESTIMATED QUANTITIES	UNIT	TOTAL
109	DBE & WBE Adjustment	C.S.	All Req'd	C.S.	All Reqd
110	Mobilization	L.S.	All Req'd	L.S.	All Req'd
111	Temp. Erosion & Pollution Control	C.S.	All Req'd	C.S.	All Req'd
115	Traffic Maintenance	L.S.	All Req'd	L.S.	All Req'd
116	Furn. & Maint. Field Office	L.S.	All Req'd	L.S.	All Req'd
201	Removal of Structures and Obstructions <1>	L.S.	All Req'd	L.S.	All Req'd
301 (1)	18"dia. x 1/2"wall Pipe Piles, Furnished	L.F.	754	L.F.	754
301 (2)	24"dia. x 1/2"wall Pipe Piles, Furnished	L.F.	430	L.F.	430
301 (3)	18"dia. x 1/2"wall Pipe Piles, Driven	EA.	10	EA.	10
301 (4)	24"dia. x 1/2"wall Pipe Piles, Driven	EA.	4	EA.	4
302 (1)	Transfer Bridge <2>	L.S.	253,000	lbs.	253,000
302 (2)	Steel Gangways, Catwalks and Platforms	L.S.	143,000	lbs.	143,000
302 (3)	Steel Barge and Restraint Structure Caps	L.S.	120,000	lbs.	120,000
501	Electrical and Illumination	L.S.	All Req'd	L.S.	All Req'd

<1> Includes approx. 5cy of Class A concrete for sidewalk/apron reconstruction work.

<2> Includes approx. 3cy of Class A-A concrete for transfer bridge deck walkway.



1. Construction barricades and construction signs shall be made of wood, metal, or other suitable weather resistant material.
2. Barricades shall be fabricated structurally sound and sufficiently rigid to maintain the purpose and intent of a barricade facility and not be a hazard to motorists.
3. Barricades and traffic control devices shall be maintained in a neat and orderly fashion prior to and during construction and maintenance operations. They shall remain in place only as needed.
4. Barricades shall be subject to the approval of the engineer.
5. Orange and white stripes shall be reflectorized.
6. Type I and Type II barricades shall be striped on both sides, and stripes shall slope down toward the traffic side of barricade.
7. Weights of concrete, stone, or brick shall not be allowed, and weights other than sandbags used to stabilize barricades shall be rigidly attached to the barricade so as not to create a hazard when struck by a vehicle.
8. Construction signs shall be reflectorized or illuminated and per Alaska Sign Design Specifications (ASDS) and as per the MUTCD Alaska Supplement.

GENERAL NOTES

SPECIFICATIONS:

Construction: Per Contract Documents for Project No. RS-M-0935(9)

Design: Transfer Ramp.
AASHTO 1983 with latest interim specifications.
Barge and Restraint Dolphins: Marine Facilities Standards

DESIGN LOADS:

Bridge: LL - HS20-44 and 60 psf pedestrian
DL - no allowance for future wearing surfaces

Support Barge: DL+LL Bridge floating with ballast / suspended without ballast
Hull: 7ft. immersion

Catwalks and Gangways: DL+LL (60psf)

Restraint Structure: Vertical - Barge (no ballast) + Bridge (LL+DL)
Horizontal - Barge with 6 Kt current

DESIGN UNIT STRESSES:

Steel:	A36	Fs = 20.00 ksi
	A252 Gr. 2	Fs = 19.25 ksi
	A500 Gr. B	Fs = 25.00 ksi
	A572	Fs = 27.00 ksi
	A108	Fs = 29.00 ksi
	A608 Gr. D	Fs = 30.00 ksi

Concrete: Min. 28 day strength; Class A-A = 5.0ksi, Class A = 4.0ksi

Reinforcing Steel: Fy = 60.00 ksi

Glu-Lam Timber: Doug Fir, Comb 2, Wet Use, Fb = 1.40 ksi

MATERIALS:

Steel:	Tube Sections	A500 Gr. B
	Pile	A252 Gr. 2 A501 A53 Gr. B type E or S
	Pipe	A53 Gr. B type E or S

All other shall be A36 or A572 as noted. Charpy Group 2 impact requirements shall apply

PROTECTIVE COATINGS:

Barge - System 1&5(Sect. 303). Platforms galv. after fabrication
Transfer Bridge - System 2,3 or 4(Sect. 303). Apron galv. after fabrication.
Gangways - Galvanize subsequent to fabrication
Reinforcing Steel - Epoxy coated
Glu-Lam - Creosote 12 pcf subsequent to fabrication
Weldments - Galvanize subsequent to fabrication
Piling - Galvanized
Hardware - Galvanized subsequent to fabrication

PILING:

Size - 18"and 24" dia. x 0.5" wall
Tips - APF 0-14000 drive shoes or equal

OILS / LUBRICATION:

Contractor shall provide all oils and lubricants to fill reservoirs and grease all bearings, cables and sliding surfaces. Hydraulic oil shall be per Sec. 302, cable dressing shall be Certified CCX-77, bearing/bushing lube shall be Certified Perma-Lube and lube for sliding surfaces shall be Chevron Pinion Grease MS.

Traffic Control Plan

1. The Contractor shall designate one of his employees the responsibility of installing and maintaining all required traffic control elements. All traffic control elements shall be maintained 24 hr/day. Refer to Section 115 of the specifications.
2. All construction signing shall remain in place until the condition they delineate no longer exists.
3. Once the Contractor begins work, the following traffic controls will remain in force until the project is completed:
   - A. The Contractor shall conduct his operations so as not to interfere with normal scheduled ferry service or vehicular traffic to and from the existing ferry facilities, except for the closure provided for in the Specifications. Refer to Sections 114, 115 and 201 of the Specifications.
   - B. Ferry traffic shall have priority over construction activities and it shall be the Contractor's responsibility to coordinate his activities with ferry arrivals and departures.
   - C. Terminal personnel will dock, linehandle, stage traffic, and operate the transfer equipment.
   - D. Contractor shall provide safe access and lighting for terminal personnel to tie up points as required throughout the contract.
   - E. Once traffic has been switched to the new structures, terminal personnel will operate the new structures with assistance and instruction from the Contractor.
4. The Contractor shall not stockpile any materials in the existing staging area without the approval of the Engineer.

PILING DATA

LOCATION / ORIENTATION	DIAMETER (inches)	CAPACITY IN TONS BEARING	CAPACITY IN TONS UPLIFT	TIP ELEVATIONS MIN.	TIP ELEVATIONS EST.	CUTOFF ELEV
RESTRAINT DOLPHIN						
Vertical	24	100		-50	-95	+12.40
Batter	18	50		-50	-90	+15.90
SUPPORT PLATFORM						+22.98 1 - ~~+23.28~~ 2 - ~~+22.78~~ +23.03
Vertical	18	10		-35	-35	
ABUTMENT						
Vertical	18	50		-20	-35	+11.88
Batter	18	50		-20	-35	+11.88

AS BUILT
Mark Halvorsen 1/18/89

STAMP

STATE OF ALASKA
JAMES A. LOWELL
#CE-5597
REGISTERED PROFESSIONAL ENGINEER
9/15/87

DO NOT SCALE THIS DRAWING — USE DIMENSIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

SITKA ALASKA

QUANTITIES AND GENERAL NOTES

DESIGNED Staff	CHECKED Staff	DRAWN Staff	DATE 9/87
PROJECT NUMBER RS-M-0935(9)		SHEET 2 OF 41	

Malaspina / Matanuska
Leconte
147'-0"
83'-0"
83'-0"
147'-0"
N 86° 00' E — 578.69'
N 85° 49' 55" E
Face of existing Fender
Apron*
20'x 100' concrete and steel dock (to remain)
Lift* tower
Lift* tower
20'x 100' concrete and steel dock (to remain)
steel pile dolphin (to remain)
Timber catwalk (to remain)
steel catwalk (to remain)
steel pile dolphin (to remain)
* to be removed
N 4° 06' 15" W Existing Bridge ℄
Existing timber truss bridge 20'x 140', to be removed
N 44° 18' 50" W — 451.25'
316.93'
approx. location gang pile fender (existing)
A.T.S. No. 130
U.S.S. 3670
State of Alaska, Marine Hwys.
Slope protection to be modified
See Detail A this sheet
Abutment & Headwall to be removed
Pole to be relocated
Portion of curb, gutter, sidewalk and handrail to be modified
Portion of asphalt to be removed
Portion of guardrail to be removed and modified.
S 32° 07' 20" W — 299.30'
A.T.S. No. 35
U.S.S. 3670
Alaska Lumber and Pulp / Samson T & B.
A.T.S. No. 1047
U.S.S. 3670
Allen Marine Ways
Existing Concrete sidewalk w/ curb and gutter
Pipe Handrail
Conc. Retaining Wall
3' Thick loose Riprap to be modified.
Bridge Pier
18'±
20'±
SECTION A-A
18'
20'
Transfer Bridge
Bridge
Top Riprap El. = 12.5'
Conc. Retaining Wall
Utility Pole & Anchor
Concrete Sidewalk
Top Riprap
Top Riprap
Handrail
C & Gutter
Guardrail
PLAN
DETAIL "A"
Steel Closure plate
Asphaltic pavement
12"
Conc. Retaining wall
9'±
Elev. = 12.5'±
4'-0"
8'-0"
3' Thick loose Riprap to be modified
Timber Bridge Pier
SECTION B-B
1" = 5'-0"
As Built
STAMP
STATE OF ALASKA
James A. Lowell
#CE-5597
DO NOT SCALE THIS DRAWING
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
Sitka
Alaska
EXISTING LAYOUT
DESIGNED
CHECKED
DRAWN
PROJECT NUMBER RS-M-0935(9)
SHEET 3
41

97238

Malaspina / Matanuska

Leconte

55'-0" ±

147'-0" ±

83'-0" ±

83'-0" ±

147'-0" ±

N 86° 00' E — 578.69'

Face of existing Fender Line

NE 85°49'55"

existing steel pile dolphin

ex. ~~timber~~ steel catwalk

existing dock

New Restraint Structure See details sheet 22

ex. steel catwalk

ex. steel pile dolphin

existing 20'x100' concrete and steel dock

New Platform See Sheet 34

New support barge, catwalks, see details shts. 23 thru 37

New transfer bridge, see details shts. 6 thru 21

Concrete Filled Grate Sidewalk, East Side Only.

A.T.S. No. 130
U.S.S. 3670
State of Alaska, Marine Hwys.

N 4°06'15" W New Bridge ℄

161'-9 1/8"

See detail "A" this sheet

Seaward face of existing conc. headwall

New Abutment

Begin Br. @ Bk. Bkwall

C.B.

Note: ELECTRICAL & ILLUMINATION not shown, See Sheets 39-41

MATCH LINE

SEE SHEET

Ah. Marine Hwy. Mooring Dolphin

N 86° 27' W — 350.

N 44° 18' 50" W — 451.25'

approx. location of gang pile fenders (existing)

A.T.S. No. 1047
U.S.S. 3670
Allen Marine Ways

S 32° 07' 20" W — 219.30'

314.93'

Basis of Bearing

Centerline of existing bridge = Centerline of new bridge @ N 09° 06' 15" W

Basis of Distance

Seaward face existing abutment to Back (Shoreward face) of new abutment backwall = 8.818'

A.T.S. No. 35
U.S.S. 3670
Alaska Lumber and Pulp Co. / Samson Tug & Barge Co.

Vertical Control
(see Sheet 5)

Tidal Data

EHW = +14.0
MHHW = 9.9
MLLW = 0.0
ELW = -4.0

As Built
Almost ½ plate

Existing Transfer Bridge & New transfer bridge

Remove and dispose existing conc. sidewalk and handrail and reconstruct, See Sheet 7

Remove and dispose exist. headwall

Seaward Face existing 12" concrete headwall

Remove and dispose of existing asphalt pavement to back of new backwall. Reconstruct as shown shown on Sheet 7

Top of existing riprap

Relocate existing utility pole and anchor. Location as directed by the engineer, See also Elec. Plans. (Removed upon Completion)

Shoreward Face of new abutment
Back of new glu-lam backwall, see details sheet 7.
NE 85°53' 45"

Relocate exist. guardrail

Top of existing riprap

4'-0" ±

Level @ pavement grade

Ramp up to meet existing

Modify sidewalk as shown to accomodate handicap. Reconstruct existing sidewalk and handrail as required, See Details Sheet 7.

N 4°06'15" W

DETAIL "A"

STAMP

STATE OF ALASKA
10TH
James A. Lowell
#CE-5597
REGISTERED PROFESSIONAL ENGINEER
9/15/87

DO NOT SCALE THIS DRAWING — USE DIMENSIONS

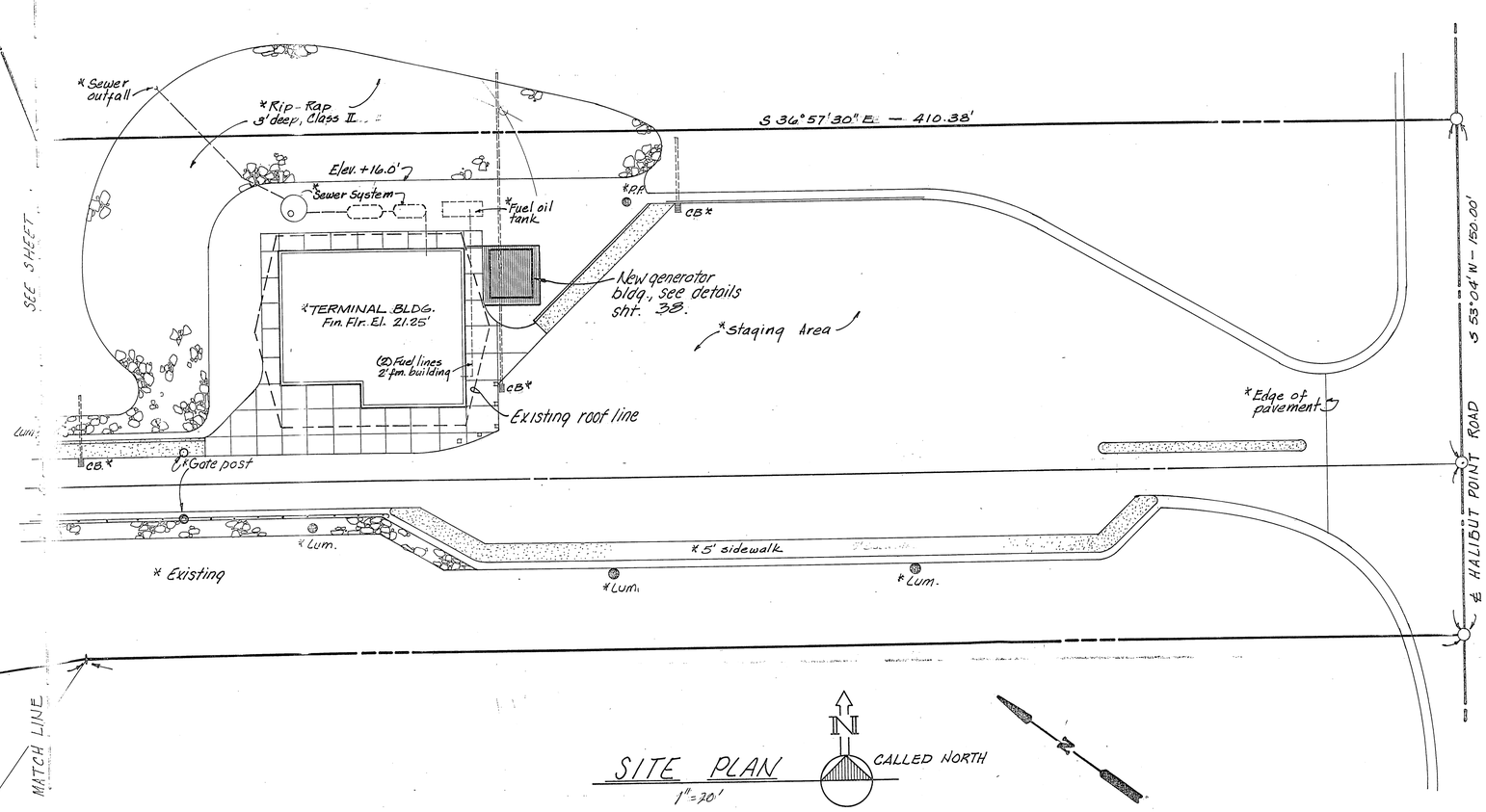
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

Sitka Alaska

SEAWARD GENERAL LAYOUT

DESIGNED JS	CHECKED JAL	DRAWN [illegible]	DATE 3-87
PROJECT NUMBER RS-M-0935(9)		SHEET 4	41

97238

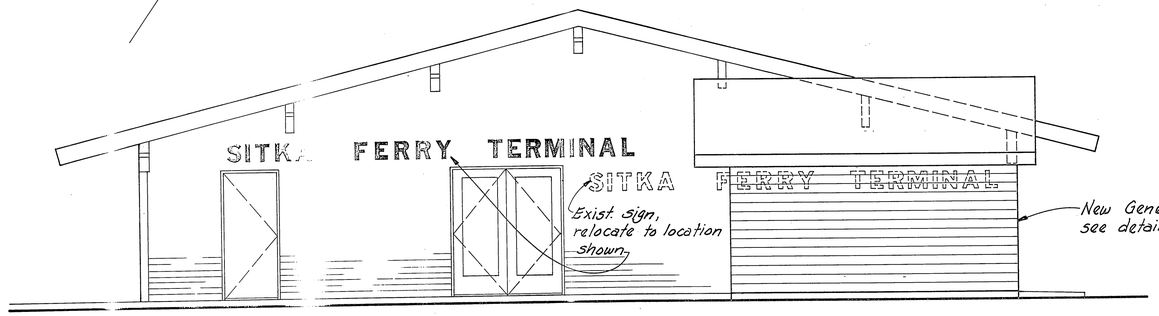


Basis of Vertical control:
A 30d nail 2' up on a power pole across the highway from the ferry terminal with a given elevation of 27.69'.

For Basis of Bearing and Distance, See Sheet 4

SITE PLAN
1" = 20'

CALLED NORTH



EAST ELEVATION

Note:
Adjust letters and spaces to accomodate existing outside fixtures.

As Built
Name & Date

STAMP

STATE OF ALASKA
49TH
James A. Lowell
#CE-5597
REGISTERED PROFESSIONAL ENGINEER
9/15/87

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
Sitka Alaska

UPLANDS SITE PLAN

DESIGNED JS	CHECKED JAL	DRAWN GB	DATE 8/87
PROJECT NUMBER ES-M-0935(9)		SHEET 5	OF 41

97238

168'-7 1/8" OVERALL LENGTH

119'-6" ℄ of Bearing to ℄ Hinge

Transfer Bridge

9 spaces @ 6'-0" = 114'-0"

31'-0" ℄ Hinge ℄ Hinge

Intermediate Ramp

16'-0 ℄ Hinge ℄ Hinge

Apron

2'-0 7/

Fingers

1'-0 1/4"

End of Girder

℄ of Bearing

2'-0"

Handrail Dimensions

2"

2'-0"

4 3/4"

℄ of Lift

5'-6"

Access Hatch, See Details on Sheet 10

1 1/2" Std. Pipe Railing, galv.

1 1/4ϕ

Railing, See Details on Sheet 21

4'-3"

Face Beam

Transfer Bridge Deck line

1'-9 3/16"

5 3/16"

ELEVATION

7'-8"

Apron Lift Beam, center line

Abutment Hinge See Sheet 8

Seaward Bridge Bearing, See Sheet 12

4'-5 3/4"

Seaward End of Girder

1'-0 1/4"

End of Girder

137'-0" C to C of Bearings

150'-2 1/4" End of Girder to Face of Ramp

Platform Extension, See Sheet 18

Face of HingeTube

5'-8"

17'-8 7/8"

Gangway, See Sheet 36

Face of Floor Beam/Hinge Tube

119'-1 1/2" Face to Face of Floor Beams

30'-4"

Intermed. Ramp

15'-7 3/16"

2'-0"

3/4"

8"

NOTE: Concrete filled grate Sidewalk shown opposite hand from this project

8"

1 11/16"

1'-0"

117'-1 1/2" (Grate Panels)

APRON LIFT TOWER Details on Sheet 18

Grating on apron shown opposite hand from this project

Bridge Girder

Open Metal Grating, see Sheet 11.

29'-0" (Grate Panels)

APRON Plan and Details on Sheet 21

23'-4 3/4"

17'-7 1/4"

15'-11 5/8"

BRIDGE Plan and Details on Sheets 9-13

INTERMEDIATE RAMP Plan and Details on Sheets 14-17

1 1/2" Std. Pipe Railing

Apron Lift Beam

Operator Platform

4"

Face of Hinge Tube

8'-0"

Bridge Girder

NOTE: TRANSITION PLATES NOT SHOWN THIS SHEET FOR CLARITY, SEE SHEET 11

Face of Beam 4"

℄ of Hinge

22'-11 3/4"

5'-2"

5'-2"

NOTE: OPERATOR PLATFORM RAILS AND CONTROLS ARE NOT SHOWN. SEE SHEET 19

142'-6" Out to Out, Girder

Gangway, See Sheet 36

Platform Extension, See Sheet 18

2'-6 1/4"

5'-6"

℄ Lift

℄ Hinge

PLAN

23'-4 3/4"

℄ of Girder

70'-6"

16'-0" Roadway

2"

Handrail

15'-11" [illegible] metal grate

Girder

1/2" gap

Curb

℄ Roadway

Concrete fill[illegible] grate sidewalk

Stringer

3'-6"

4'-3"

Conduit hanger

2'-10 3/4"

TYPICAL SECTION

Looking Ahead

*Note: Sidewalk on East Side only, shown correctly here and on Sht. 4.

NOTES:

1. Approx. Total Wt. of Transfer Bridge w/ deck and rails = 253,000 lbs. (78,000 lbs. A572; 55,000 lbs. A500; 120,000 lbs. A36)
2. Transfer Bridge to be painted (see General Notes.) except grating, rails and apron which shall be galvanized after fabrication.
3. For Utility and Bridge Illumination system details, See Sheets 39-41

See Attachment: Modifications made to enable picking the Transfer Bridge w/ a Crane.
Page 6A

As Built

Name & Date

STAMP

STATE OF ALASKA 49TH

Registered

John T. Scott, II CE 4755

REGISTERED PROFESSIONAL ENGINEER

9-15-87

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STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

SITKA

AL

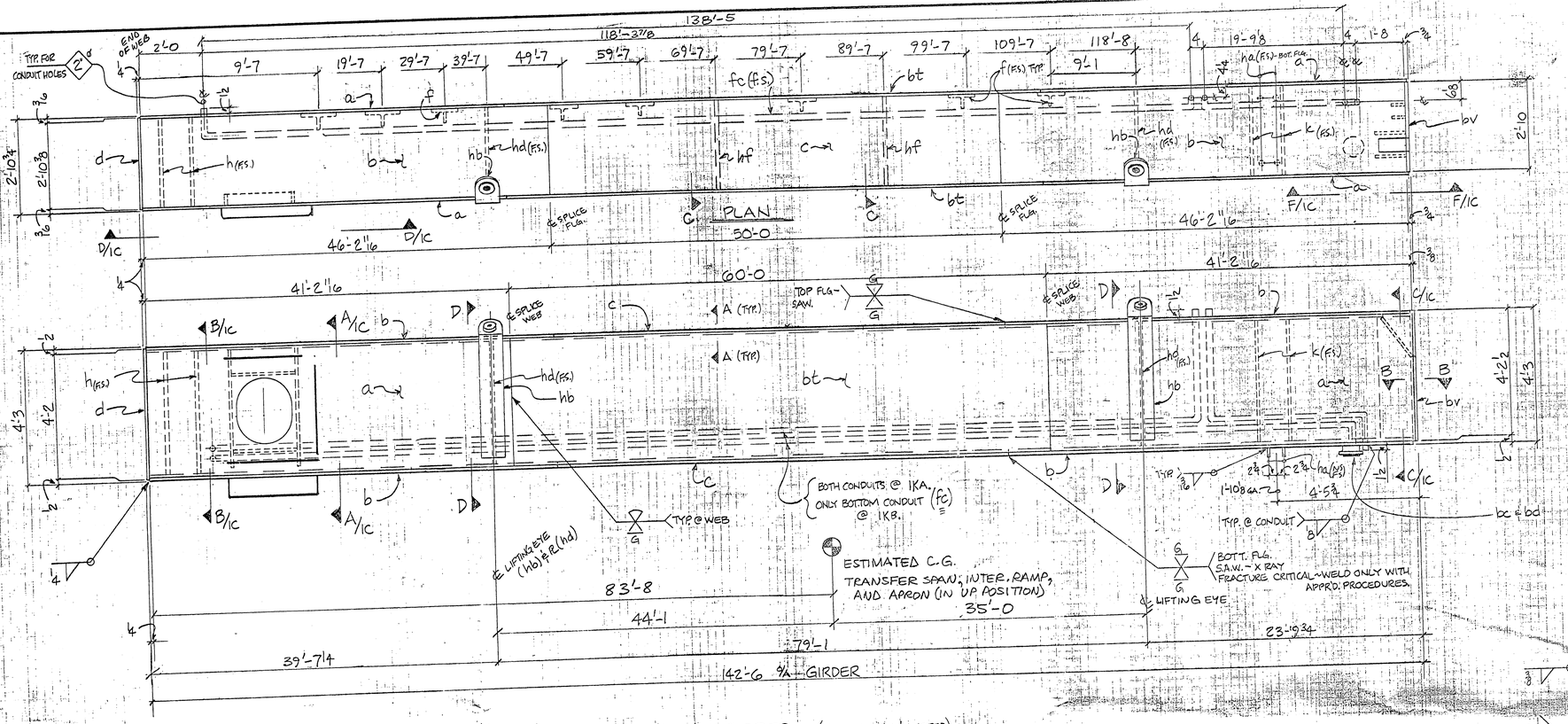
BRIDGE

OVERALL PLAN and ELEVATION

DESIGNED JS	CHECKED JL	DRAWN Geoal	DATE 7AUG
PROJECT NUMBER RS-M-0935(9)		SHEET 6	OF 41

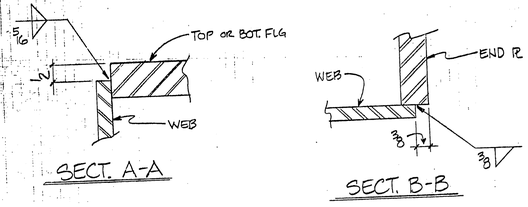
Bill of Material

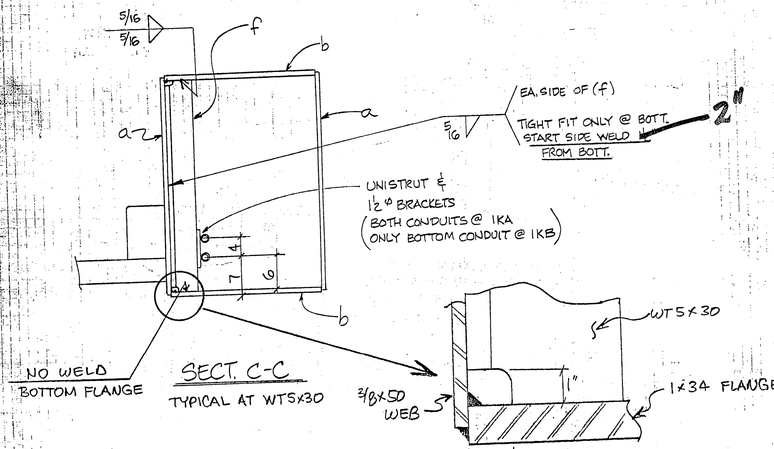
NO. TO SHIP	SHIPPING MARK	MATL	NO. PCS.	PIECE MARK	SECTION	LENGTH FEET	LENGTH INS	REMARKS	ASS'T. SHT. # L	ASS'T. STA. NO.	WEIGHT
			8	ha	7/8ϕ THD STUDS	0	2	4Y NEW			
		A36	4	hb	PL 3/4 x 9	4	11/8	BEND			
		L	8	hc	PL 3/4 x 8.5ϕ			ⓐ			
		L	4	hd	PL 3/4 x 3/4	1	1				
		A36	4	hf	PL 12 x 3/4	4	1				
		L	16	hh	PL 12 x 4	0	5				

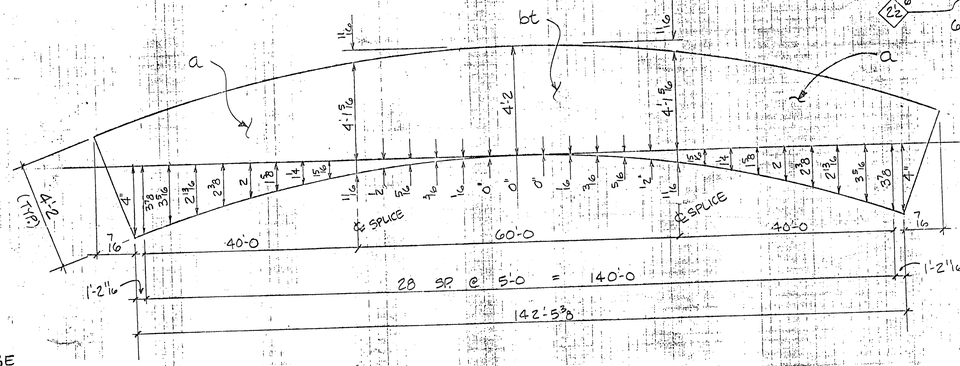


ONE ~ 1K-A ~ GIRDER (AS SHOWN & NOTED)

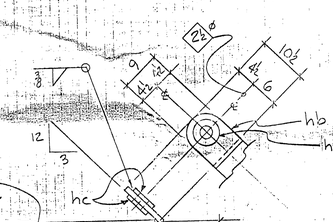
ONE ~ 1K-B ~ GIRDER (OPP. HAND & NOTED)







GIRDER WEB LAYOUT & CAMBER DIAGRAM



Temp Erection Lift brace by others

NO WELD TO BOTTOM FLANGE!

tight fit at bottom start weld 2" up

AS BUILT

ATTACHMENT PAGE 6

Mike Thompson 1/18/89

State of Alaska
Dept. of Transportation and Public Facilities
Marine Facilities Engineering

CONTRACTOR SUBMITTAL REVIEW

Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Contractor is responsible for dimensions to be confirmed and correlated at the job site for information that pertains solely to the fabrication process or to techniques of construction and for coordination of the work of all trades.

ACCEPTED
ACCEPTED AS NOTED
RESUBMIT FOR CORRECTION

Date 5-16-88 Project Engineer

NO.	REVISIONS	BY	DATE
1	GENERAL REVISION		

CERT. WELDERS AWS D1.1 INSPECTION AASHTO
OPEN HOLES EXCEPT AS NOTED
PAINT SEE DWG. 1A (SPRAY APPLIED PER MFG. RECOMMENDATION)

JESSE ENGINEERING CO.
MFG. FABRICATION
5225 7TH STREET EAST / TACOMA, WASHINGTON 98424 / (206) 922-7433

JOB SITKA FERRY TERMINAL PROJ. NO. RS-BR-M-0935(9)
KETCHIKAN FERRY TERMINAL PROJECT NO. F-BR-095-2(14)

TITLE GIRDER LAYOUT & CAMBER DIAGRAM

FOR MANSON CONSTRUCTION CO.

	NAME	DATE
DRN	CDW	
CHK'D	BJ	
APP'D	-	
SCALE		

JOB NO. 88005

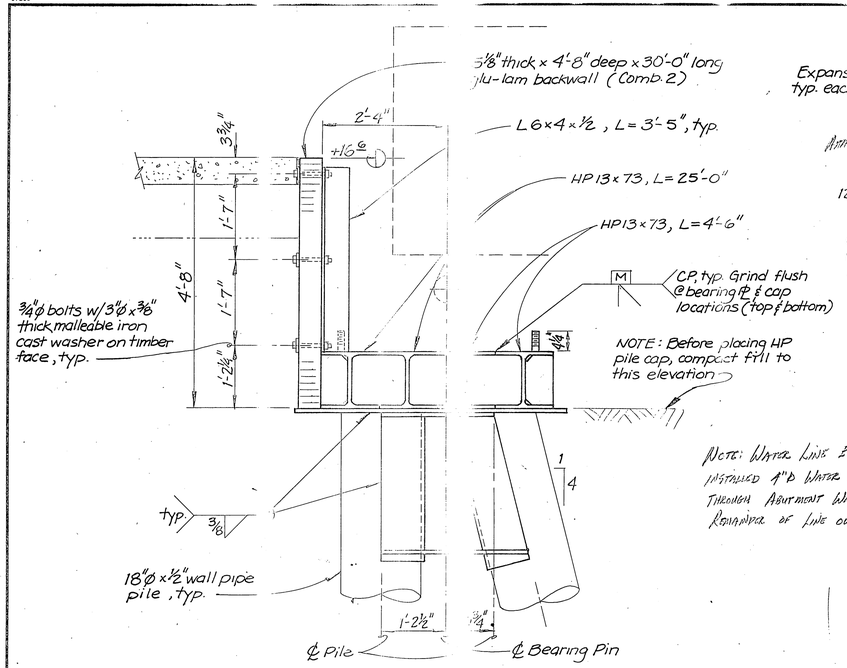
DWG NO. 1K-1, PAGE 6A

REVISIONS 1

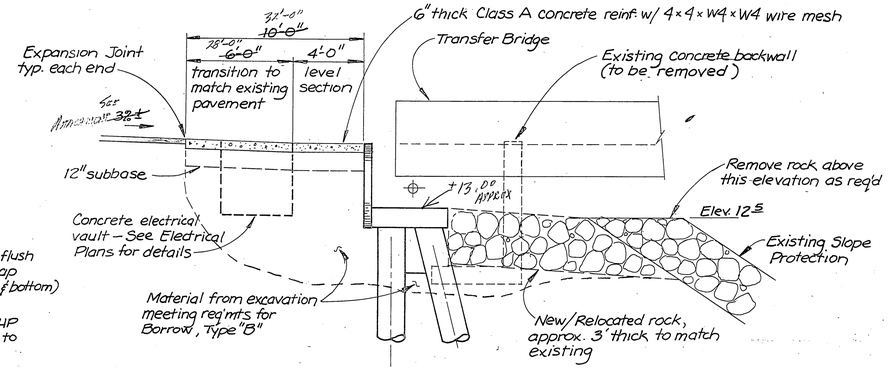
DATE	PRINTS ISSUED

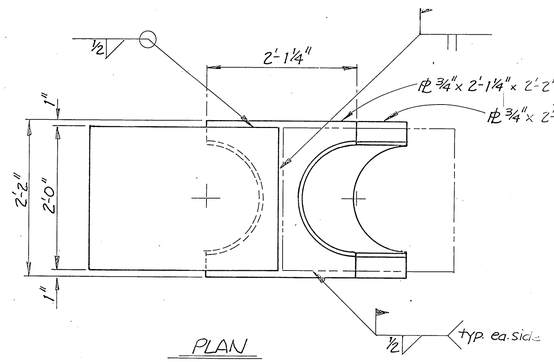
97238

11.93
1:12
12.00°



ABUTMENT END ELEVATION

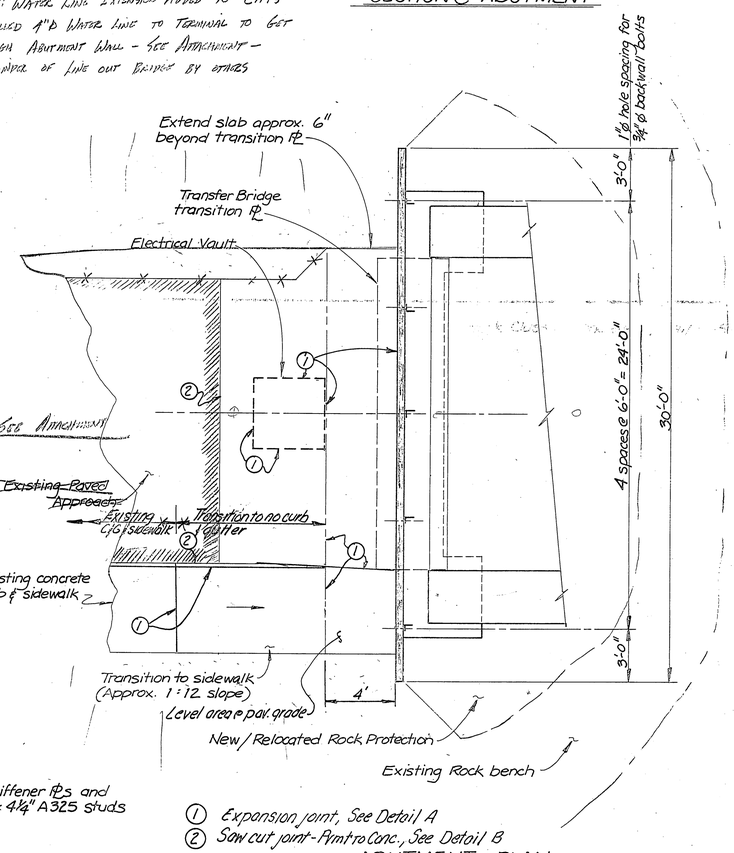




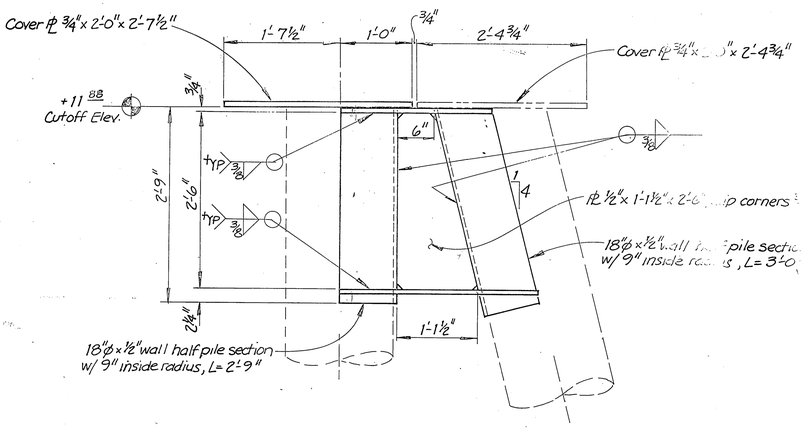
PLAN

NOTE: WATER LINE EXTENSION ADDED TO CIRI'S INSTALLED 4" ϕ WATER LINE TO TERMINAL TO GET THROUGH ABUTMENT WALL - SEE ATTACHMENT - REMAINDER OF LINE OUT BRIDGE BY OTHERS

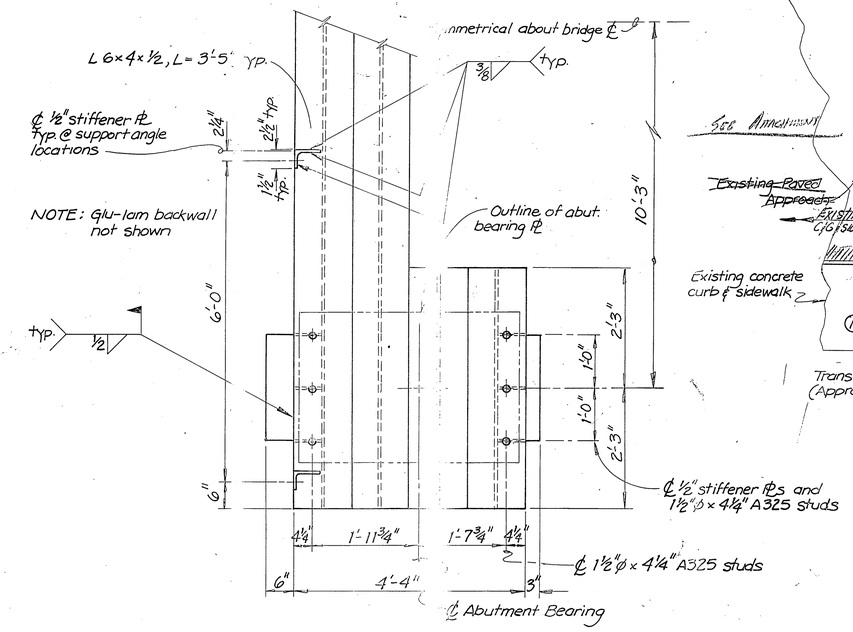
SECTION @ ABUTMENT



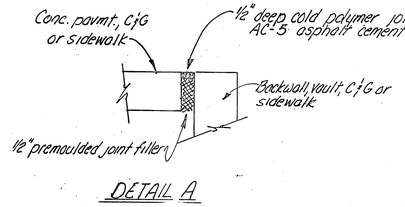
ABUTMENT PLAN



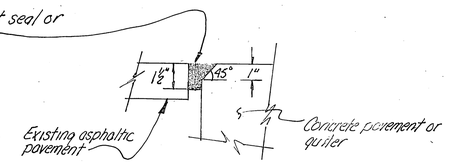
PILE CONNECTION DETAIL



ABUTMENT END PLAN



DETAIL A



DETAIL B

NOTE: Handrail and guardrail not shown, see sheet 4.
New curb and gutter to match existing type and section.

Approx. Steel weight = 7400 lbs.

As Built

Name & Date

STAMP

STATE OF ALASKA 49TH STATE
Bern A. Savikko CE-6468
REGISTERED PROFESSIONAL ENGINEER
9-15-87

DO NOT SCALE THIS DRAWING — USE DIMENSIONS

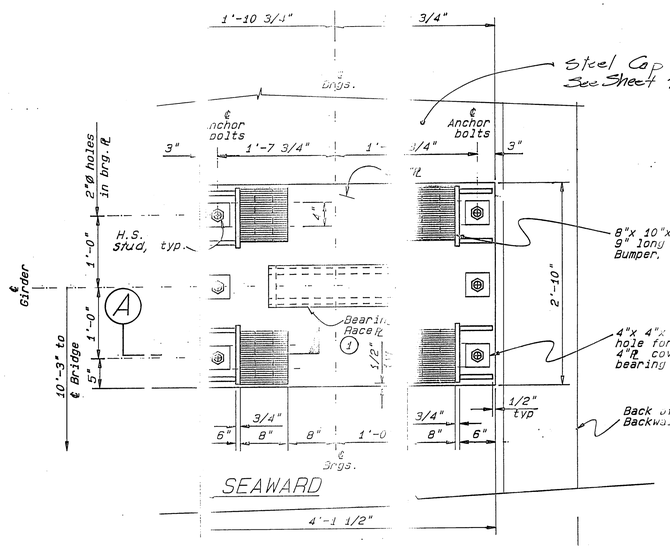
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

Sitka Alaska

ABUTMENT

DESIGNED BS	CHECKED JS	DRAWN BS	DATE 9-87
PROJECT NUMBER RS-M-0935(9)		SHEET 7	OF 41

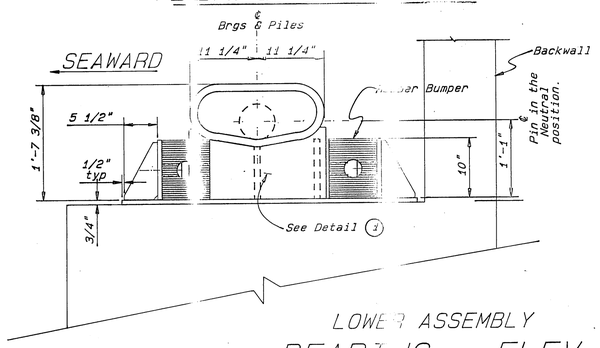
97238



SEAWARD

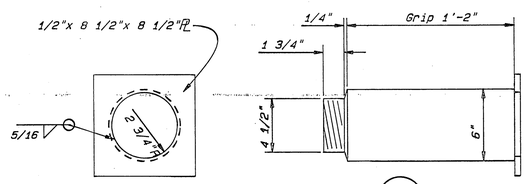
LOWER ASSEMBLY

BEARING - PLAN

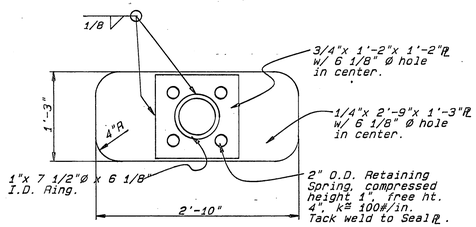


LOWER ASSEMBLY

BEARING - ELEV.

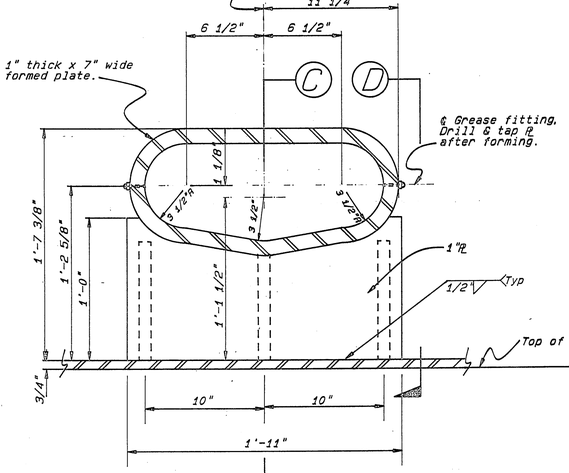


PIN DETAIL (2)



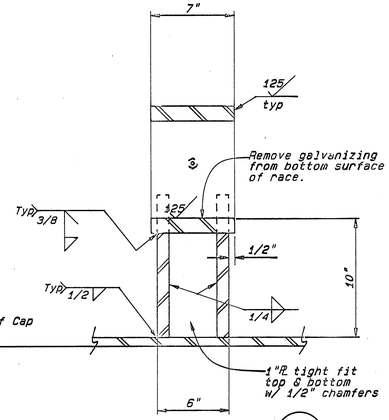
SEAL PLATE DETAIL (3)

2 Req'd. per Bearing

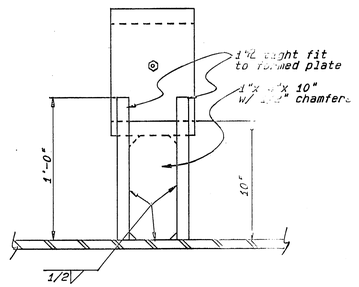


Lower Assembly

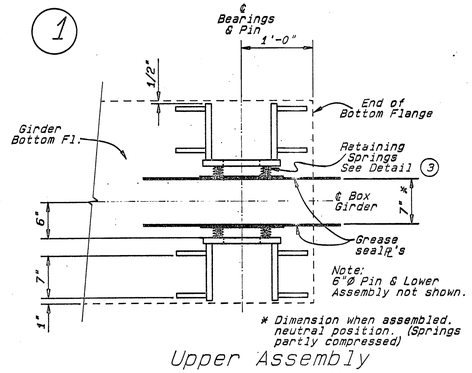
BEARING - DETAIL (1)



SECTION (C)

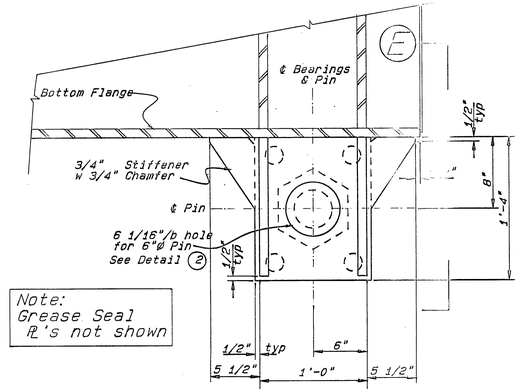


VIEW (D)



Upper Assembly

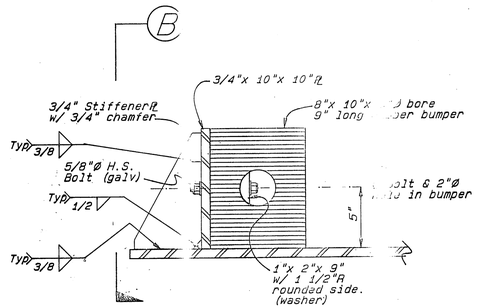
BEARING PLAN



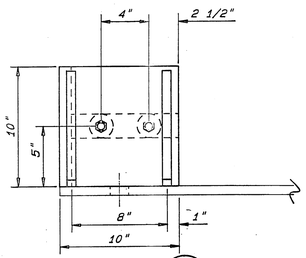
Note: Grease Seal ℄'s not shown

Upper Assembly

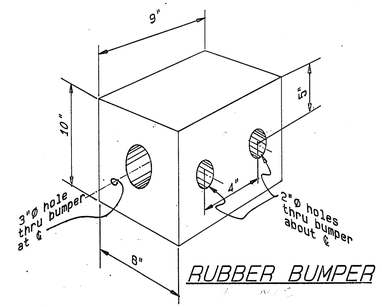
BEARING - ELEVATION



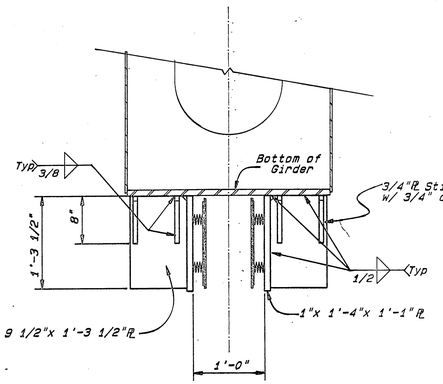
SECTION (A)



VIEW (B)



RUBBER BUMPER



VIEW (E)

As Built

Name & Date

STAMP	DO NOT SCALE THIS DRAWING – USE DIMENSIONS
STATE OF ALASKA 49TH John T. Scott, II CE 4755 REGISTERED PROFESSIONAL ENGINEER 9-15-87	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES SITKA ALA. TRANSFER BRIDGE ABUTMENT BEARINGS DESIGNED JS CHECKED LJB DRAWN GeoAl DATE 7AUG. PROJECT NUMBER RS-M-0935(9) SHEET 8 OF 41

97238

142'-6" Out to Out of Girder

119'-6 1/4"

22'-11 3/4"

End of girder

6 3/4"

9'-0 1/2"

10 Spaces @ 10'-0" = 100'-0"

Floor Beams and WT Stiffeners

9'-1"

℄ of End Floor Beam

℄ floor beams & WT stiffener @ interior web

10" ℄ of Hinge

End of bridge girder

1'-0 1/4"

℄ of Abutment Bearing

Concrete fill grate for sidewalk this side only.

NOTE: Sidewalk Shown OPPOSITE HAND this project

Bridge Girder

Handrail not shown

3/4"

'-0"

Bent plate curb

2'-6" typ

3'-6" typ

5'-0"

B

FOR HINGES AND TRANSITION PLATE SEE SHEET 11

4"

FOR INTERMEDIATE RAMP PLAN AND DETAILS SEE SHEETS 14-17

℄ of Transfer Bridge

FOR APRON PLAN AND DETAILS SEE SHEET 21

23'-4 3/4"

17'-7 1/4"

TS 20 x 12x0.5 end floor beam 17'-7 1/4" long

TS 14x10x.375 x17'-7 1/4"

Open metal grate See sheet 11 for details.

RAMP HYDRAULICS AND HOUSING SEE SHEET 14

TS 10x3x.3125 continuous stringers, typ. 119'-0 1/2" long

End Floor Beam TS 20x12x0.5x17'-7 1/4"

1/4" end plate, seal weld, typ.

1/4" end plate seal weld, typ

℄ of Bearing Seaward end.

Handrail not shown

WT 5x30 Stiffeners shown solid for clarity, see Note 1 below.

See Attachment P.6 for Modifications

FOR GIRDER DETAILS ABUTMENT END, SEE SHEET 10

PLAN

A

Bridge Girder

FOR GIRDER DETAILS SEAWARD END, SEE SHEET 12

23'-4 3/4"

Handrail Details, See Sheet 6

20'-6"

℄ of Girder

16'-0" Roadway

15'-11" Open metal grate

WT 5 x 30 transverse stiffener Note 1.

1/2" gap

1 1/2"dia. std. pipe rail & post

℄ Roadway

typ 1/4

typ 1/4

Detail 7 this sht.

Top flange plate 1"x 34" (A572) x142'-5"

Continuous bent plate curb 1/4"x24" @ 5 5/8"

Concrete filled grate sidewalk

Continuous Stringer TS 10 x 3 x.3125 (typ) Note 2.

Web plate 3/8"x 142'-5 3/8"x 50"

(2) 1 1/2"dia. Electrical conduits, upper = Electro-Hydraulic System lower = Spare

1/2"

4'-3"

4'-2" WEB

1/2"

Bottom flange plate 1"x 142'-5"x 34" (A572) Note 2.

1 1/2"dia. Telephone & Computer cable conduit

5/16 typ

1/4 typ

Floor Beam TS 14 x 10 x .375" typ. Note 2.

2'-10" Flange

3'-6"

3'-6"

6'-0" Typ.

2'-10 3/4" O to O

10'-3"

All dimensions given are typical about ℄

24" conduit support chan. Typical

TYPICAL SECTION (A)

Looking Seaward

TS 20x12x0.5 End floor beam

3/4"

3/4"

4 7/16"

Open grate deck

5 3/16"

1/4

TS 14"x 10" Floor Beam

1'-9 3/16"

End of girder

TS 3x10 Stringer

7/16"

2"

Bottom of Girder

SECTION (B)

Top or Bot flange, typ.

1"

5/16

1/2"

Web plate

3/8"

DETAIL (1)

4sp.@ 35'-6"=142'-0"

3"

4"

3"

DEAD LOAD CAMBER DIAGRAM

NOTES:

1. Fillet weld (5/16") each side of Transverse stiffener and all contact surfaces except bottom flange, tight fit only. Start weld 1 1/2" from bot of stiffener.
2. Main members subjected to tensile stress.

As Built

Name & Date

STAMP

STATE OF ALASKA 49TH STATE John T. Scott, II CE 4755 REGISTERED PROFESSIONAL ENGINEER

9-15-87

DO NOT SCALE THIS DRAWING — USE DIMENSIONS

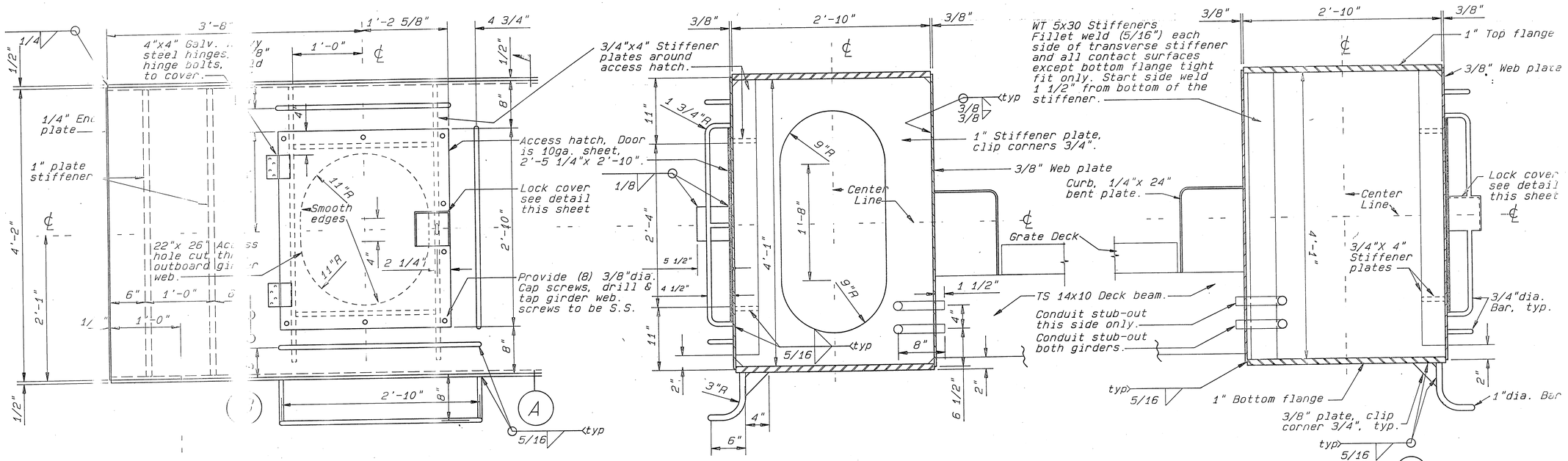
STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

SITKA ALAS.

TRANSFER BRIDGE
Plan and Typical Section

DESIGNED JL	CHECKED JS	DRAWN Geoal	DATE 7AUG
PROJECT NUMBER RS-M-0935(9)		SHEET 9	OF 41

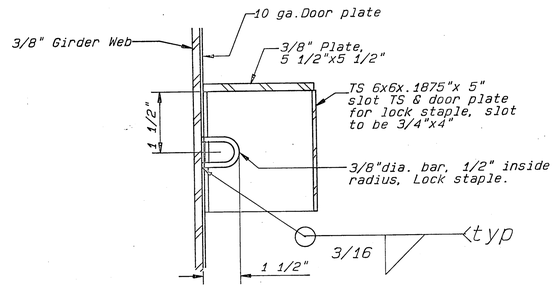


SECTION (A)
looking upland

SECTION (B)
looking seaward

ABUTMENT END, Elevation

ABUTMENT BEARING, SEE SHEET 8



LOCK COVER DETAIL

As Built

Name & Date

STAMP

STATE OF ALASKA
49TH
John T. Scott, II
CE 4755
REGISTERED PROFESSIONAL ENGINEER
9-15-87

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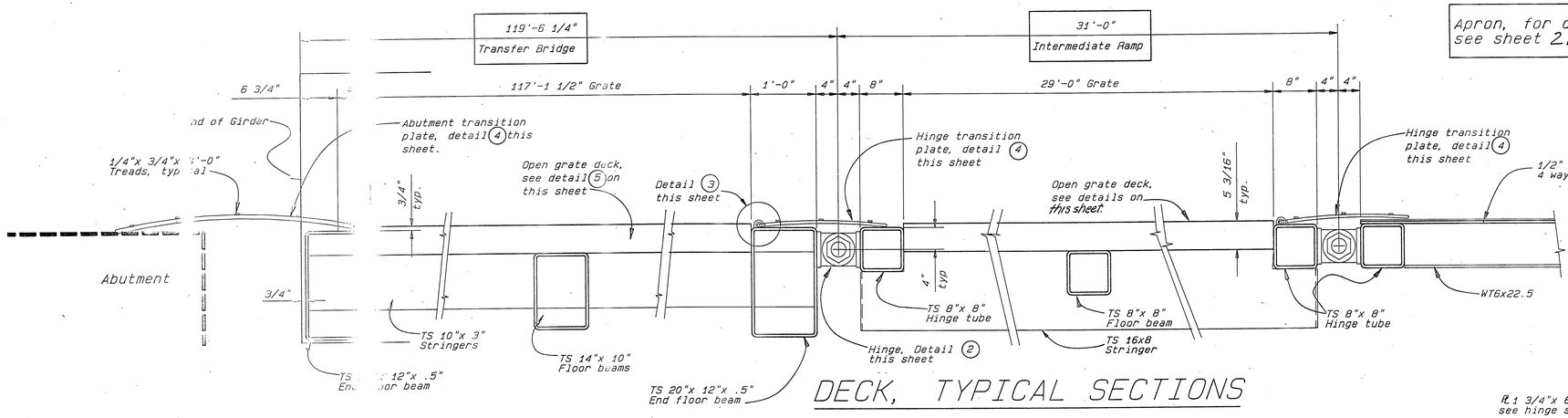
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

SITKA ALAS

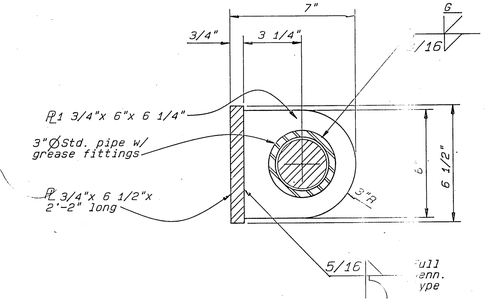
BRIDGE GIRDER DETAILS ABUTMENT END

DESIGNED	CHECKED	DRAWN	DATE
JS	JS	Geoal	

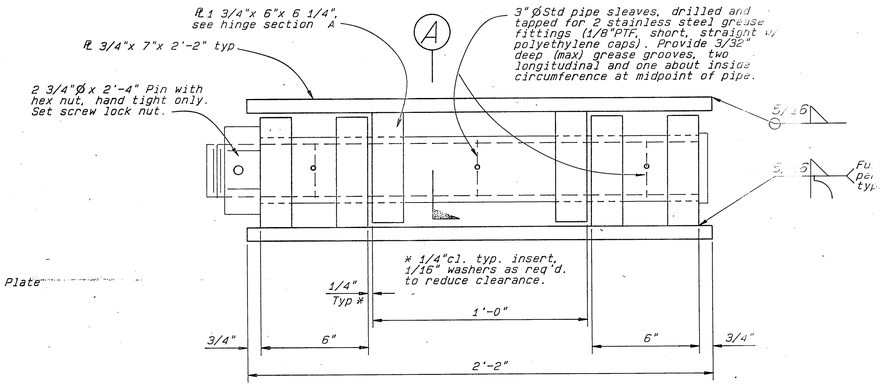
PROJECT NUMBER RS-M-0935 (9) SHEET 10 OF 41



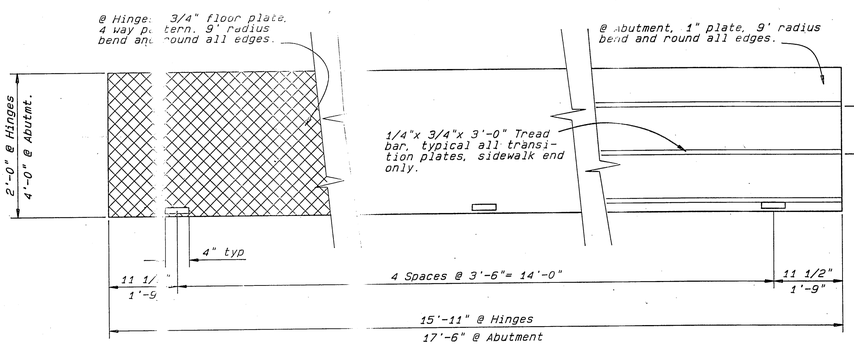
DECK, TYPICAL SECTIONS



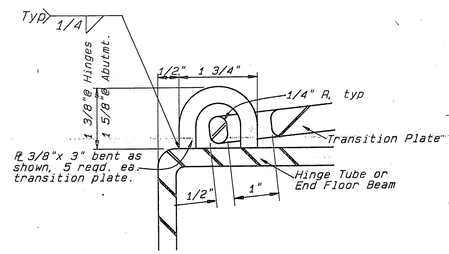
HINGE SECTION (A)



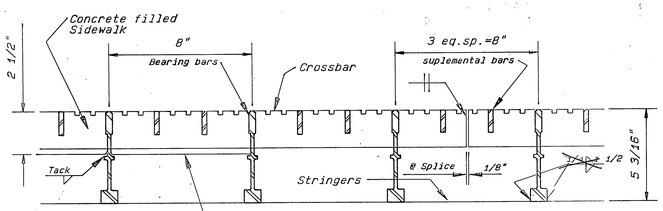
HINGE ASSEMBLY (2)



TRANSITION PLATE (4) (GALVANIZED)



DETAIL (3)



OPEN METAL GRATING (5)

GRATING NOT WELDED DOWN - FASTENED W/ CLIPS - SEE ATTACHMENT

As Built

Name & Date

STAMP

STATE OF ALASKA
49TH
John Y. Scott, II
CE 4755
REGISTERED PROFESSIONAL ENGINEER
9-15-87

DO NOT SCALE THIS DRAWING — USE DIMENSIONS

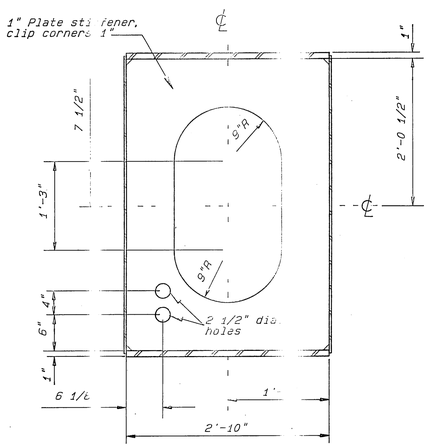
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

SITKA ALASKA

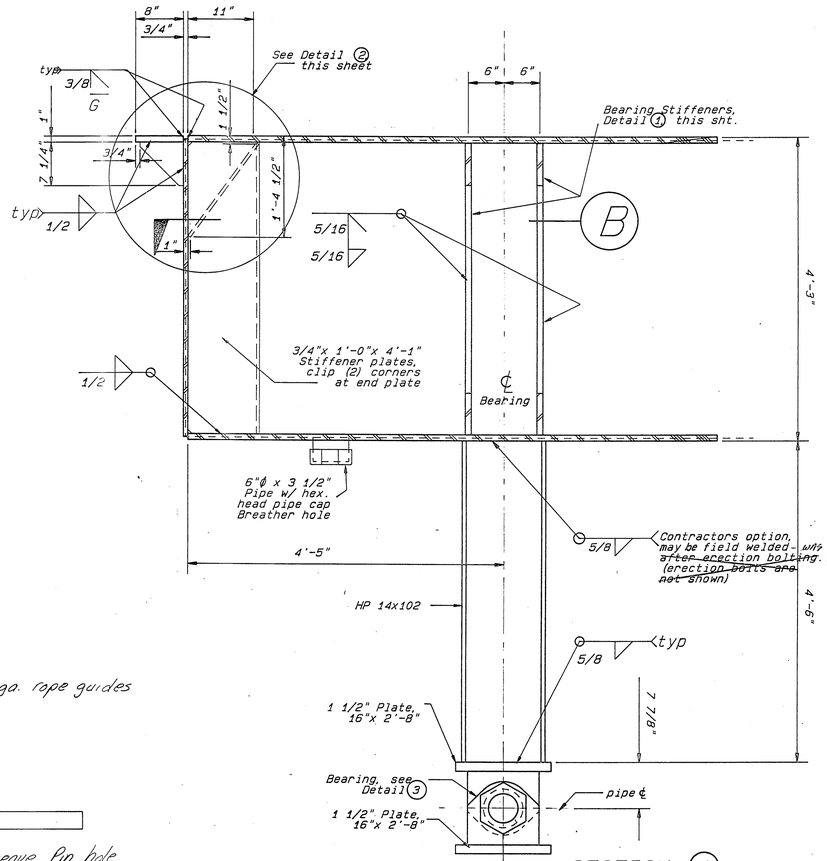
DECK HINGE and MISC. DETAILS

DESIGNED JS	CHECKED JL	DRAWN Geoal	DATE 7AUG87
PROJECT NUMBER RS-M-0935(9)		SHEET 11 OF 41	

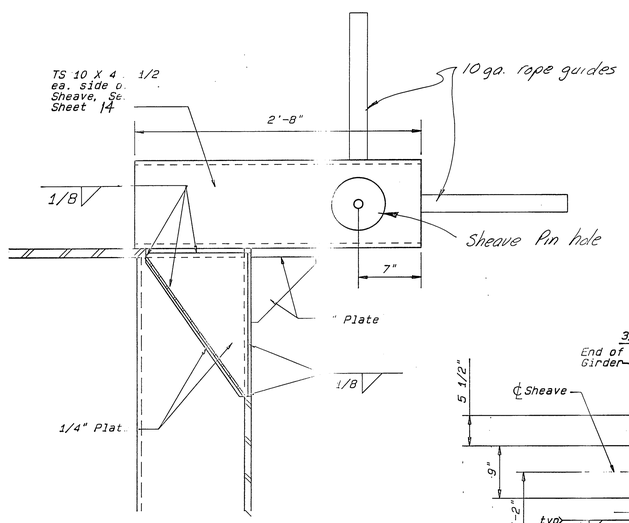
97330



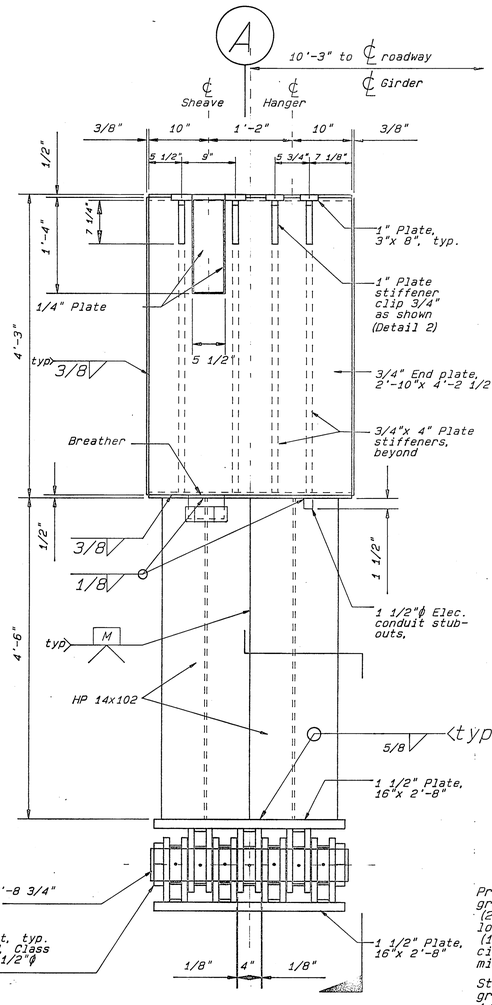
BEARING STIFFENER DETAIL (1)



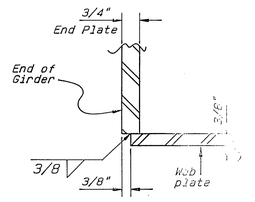
SECTION (A)



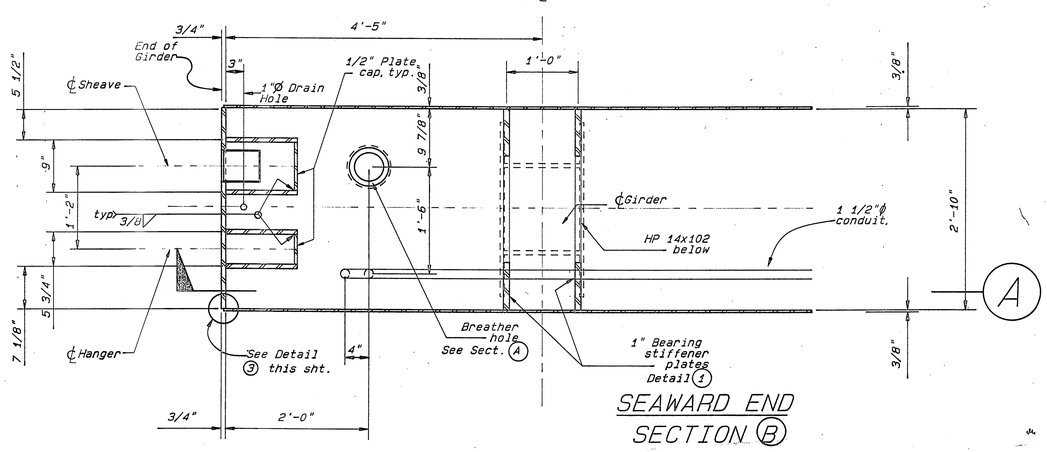
SHEAVE SLOT DETAIL (2)



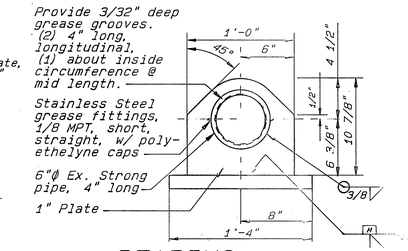
SEAWARD END ELEVATION



GIRDER END DETAIL (4)
(Web to Plate)



SEAWARD END SECTION (B)



BEARING DETAIL (3)

As Built
Date & Init

STAMP

STATE OF ALASKA
JOHN T. SCOTT, JR.
No. 4751
REGISTERED PROFESSIONAL ENGINEER
John T. Scott, Jr.
CE 4751
9-15-87

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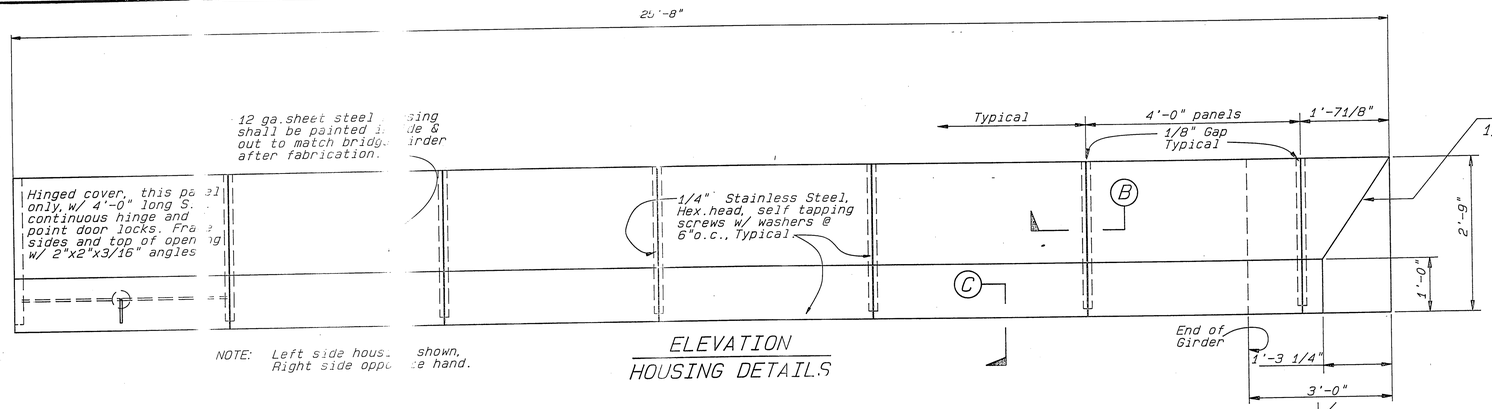
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

SITKA

BRIDGE GIRDER DETAIL SEAWARD END

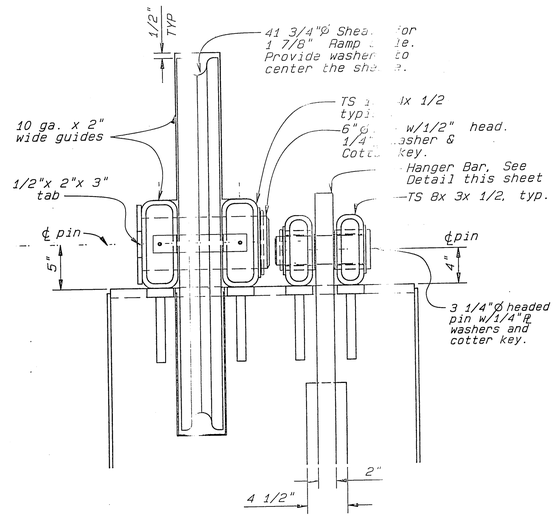
DESIGNED JS	CHECKED JL	DRAWN Geoal	DATE 7A1
PROJECT NUMBER RS-M-0935(9)		SHEET 12	OF 41

97238

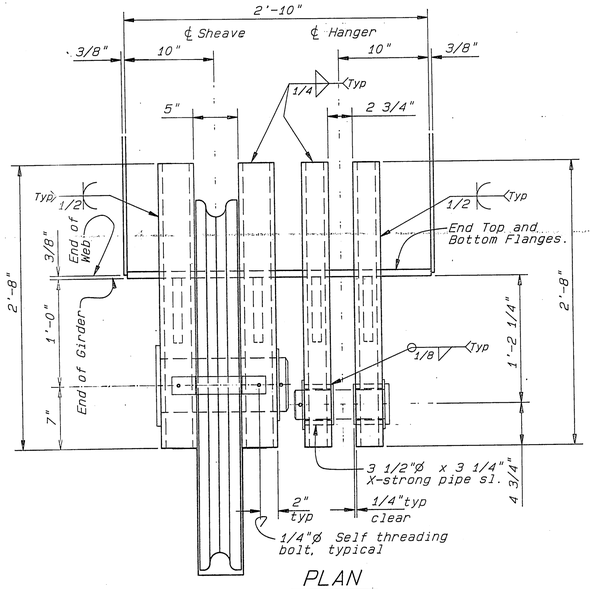


NOTE: Left side hous... shown, Right side oppo... e hand.

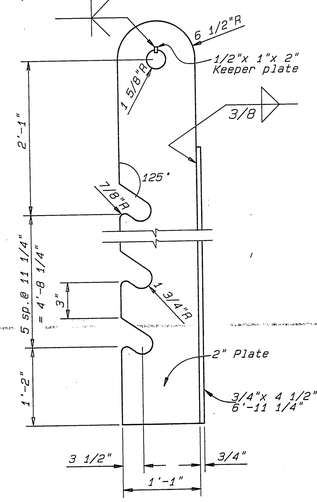
ELEVATION
HOUSING DETAILS



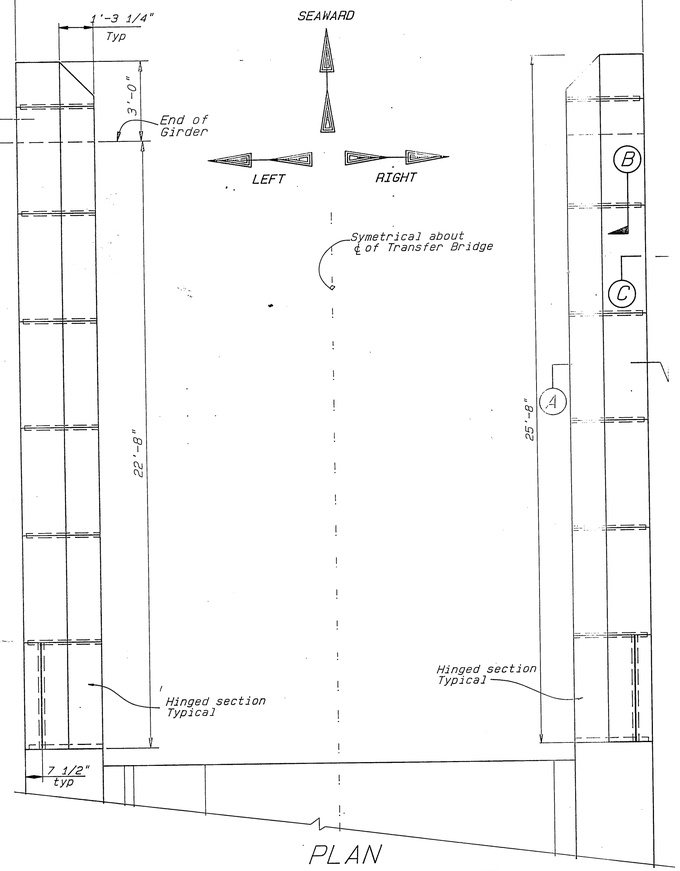
ELEVATION



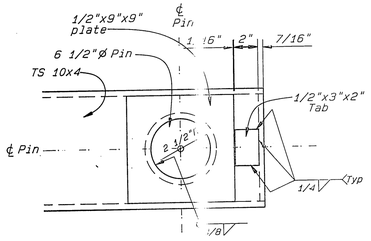
PLAN



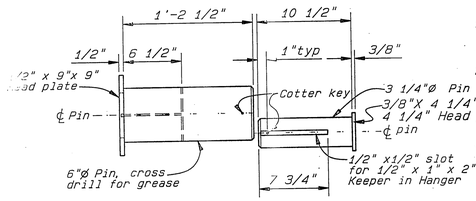
HANGER BAR



PLAN
HOUSING DETAILS



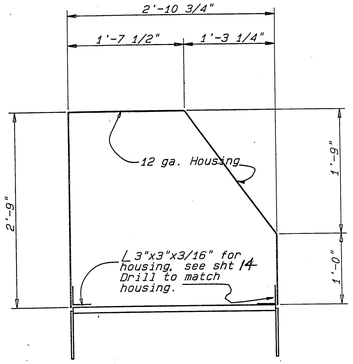
END OF SHEAVE PIN



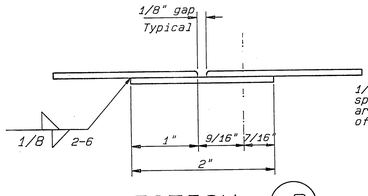
PLAN VIEW

PIN DETAILS

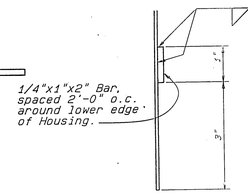
1. Cable shall be 1 7/8"Ø x6 x 25, Right regular lay, Extra High Strength IWRC (minimum breaking strength of 170 tons) Galvanized and greased.
2. The sheave shall be; Bronze bushed
   41 3/4" O.D.
   37 7/8" Tread
   4 1/2" Hub thk.
   6"Ø Shaft
3. Provide 6"ø sheave pins cross drilled for grease, w/ 1/8" MPT, short, straight, stainless steel grease fitting and polyethylene cap.
4. Close all open ended tube ends w/ 1/4" plate and seal weld.



SECTION A



SECTION B



SECTION C

As Built

NAME & DATE

STAMP

STATE OF ALASKA
49TH
John T. Scott, II
CE 4755
REGISTERED PROFESSIONAL ENGINEER
9-15-87

DO NOT SCALE THIS DRAWING — USE DIMENSIONS

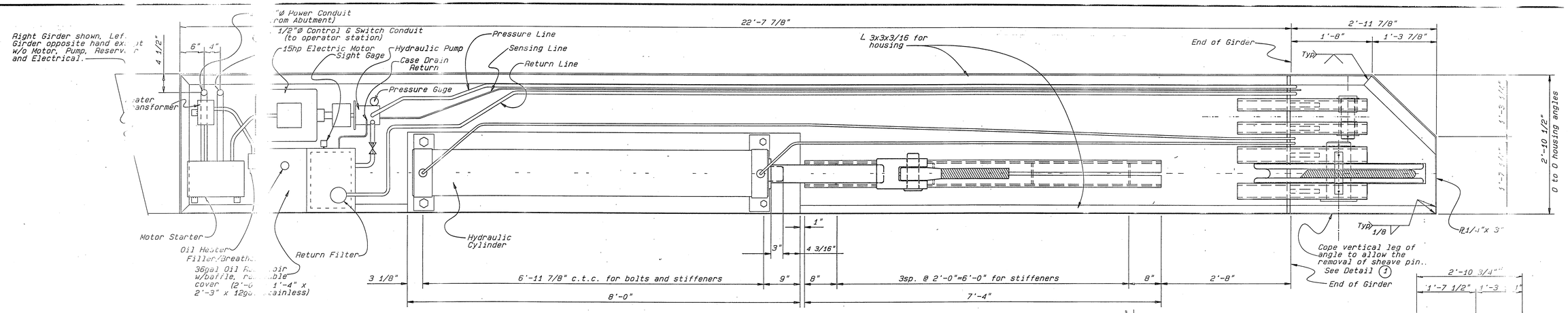
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

SITKA ALASKA

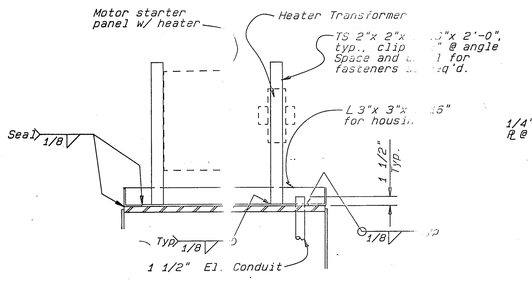
Girder Details, Seaward End

DESIGNED JS	CHECKED JL	DRAWN Geoal	DATE 7AUG
PROJECT NUMBER RS-M-0935 (9)	SHEET 13	OF 41

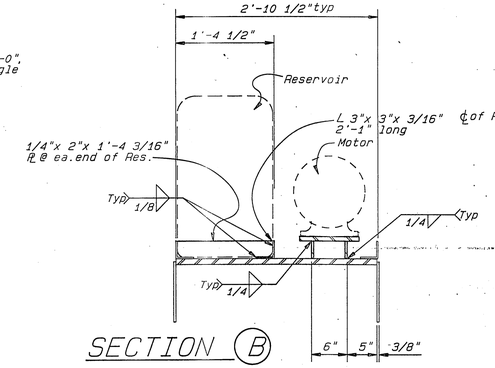
97238



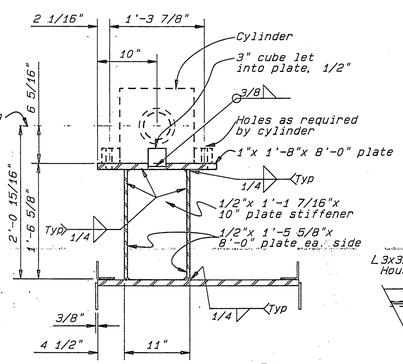
PLAN VIEW



SECTION (A)



SECTION (B)



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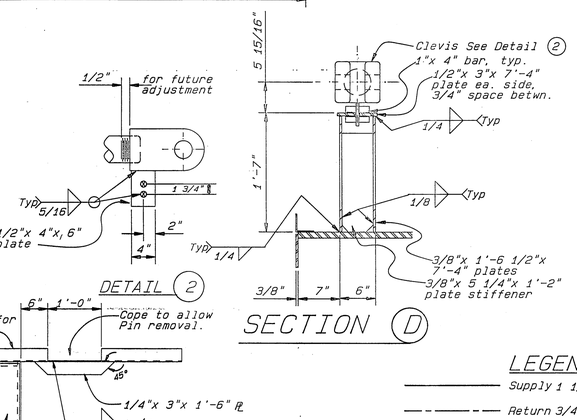
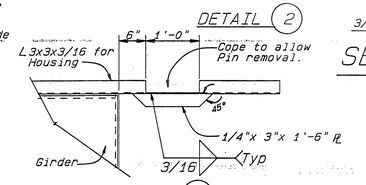
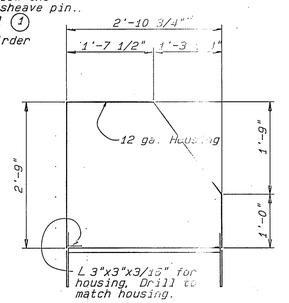


DETAIL (2)

SECTION (D)



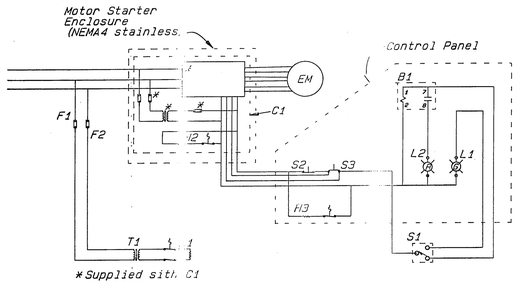
DETAIL (1)



* O to O housing and gir...

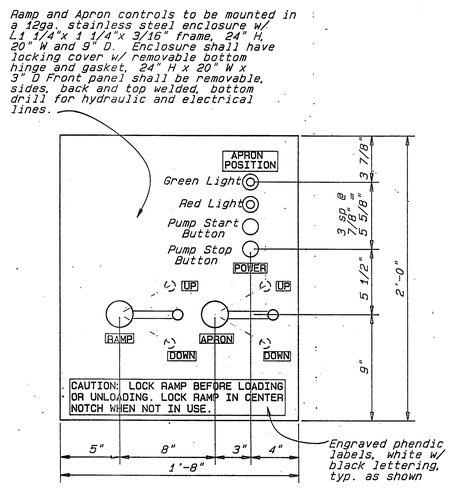
TYPICAL HOUSING SECTION

See Sheet 13 for Housing Details

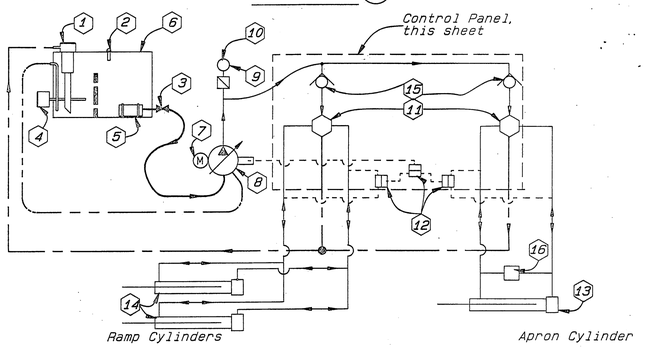


B1 Flash... Relay, SSAC Type FS590
C1 Comb... tion Starter Square D ...DW-11-581 Form ...T-11 w/Nema 4 S.S. e... losure 480V prim... y with 480 to 120 XF...2.
EM Electric Motor 15hp., 1800 rpm, ...0v, 3ph, 60hz.
F1 & F2 ...ises, 2amp, 600v.
H1 Heate... 500 watt Chromalox No. ...D-500 E2.
H2 & H3 ...aters, 25 watt, 120v w/ ... voltage thermostats.
L1 & L2 ...ights, R = red, G = green.
S1 Limit ...witch, S.P.D.T. located o... (13), 10 x ... Hyd. Cyl.
S2 Stop ...witch, S.P.D.T. normally c...sed, push button.
S3 Start ...witch, S.P.D.T. normally o...n, push button.
T1 Transf...mer, 480v/120v, 750 V.A.

ELECTRICAL SCHEMATIC



CONTROL PANEL



HYDRAULIC SYSTEM SCHEMATIC

NOTE:

Design and Dimensions based on components listed. Contractor shall adjust as necessary to accomodate models used and shall provide all drawings and details required. See Section 302-2.01.

All Hydraulic lines to be stainless steel tubing w/ stainless JIC flare fittings, except long flexible loop, girder to control, ramp to girder, and ramp to control.

LEGEND

Supply 1 1/2"ø
Return 3/4"ø
Sensing 1/4"ø
Pressure 3/4"ø
Case Drain 1/2"ø

1. CMPF 33-10 X 10 MICRON RETURN FILTER ELEMENT F33-10
2. CF1A-4080-C80 FILTER BREATHER
3. 2" GATE VALVE
4. ARTMO-500E2 500 WATT IMMERSION HEATER
5. P50-2-100 100 MESH STRAINER WITH MAGNETIC STRAPS
6. 36 GALLON SPECIAL RESERVOIR
7. 15HP TEFC, 1800 RPM, 460 VAC, 3PH, 60HZ ELECTRIC MOTOR
8. PFC232-LDB VARIABLE VOLUME, FLOW REGULATED, PRESSURE COMPENSATED, PISTON PUMP, 2.32 C.I.D., 1300 PSI.
9. KLN250B NEEDLE VALVE
10. CFIP-210S PRESSURE DAGE, 0-3000 PSI
11. B14A51HC3-MC 4-WAY, 3 POSITION, CLOSED CENTER, SPRING RETURN, DIRECTONAL CONTROL VALVE
12. 15652 SHUTTLE VALVE
13. 8012 10 X 66 CYLINDER WITH 4 1/2"ø S.S. ROD, CUSHIONS AND LIMIT SWITCH, SEE SHEET 20 , AIR BLEEDERS EA. END
14. 8011 10 X 75 CYLINDER WITH 4 1/2"ø ROD, FULLY RETRACTED, THE ROD SHALL EXTEND 6". AIR BLEEDERS EA. END
15. PNEU-TROL EDC 35SS CHECK VALVES
16. COUNTER BALANCE VALVE, SUN CBEA-LAN-HBA, FIELD ADJUST.

As Built Name & Date

STAMP

STATE OF ALASKA
49TH
John T. Scott, II
CE 4755
PROFESSIONAL ENGINEER
9-15-87

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

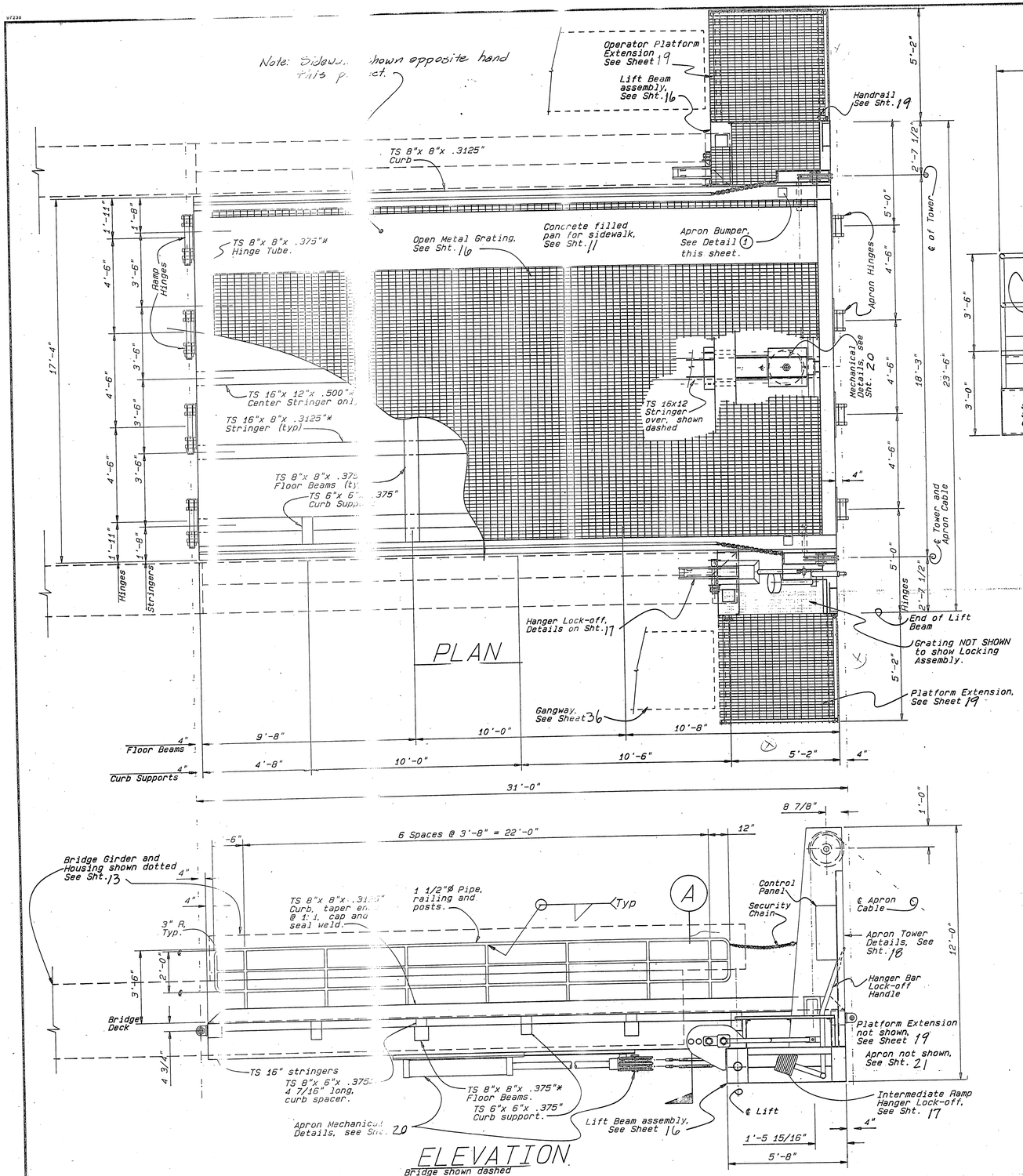
SITKA AL.

INTERMEDIATE RAMP MECHANICAL DETAILS

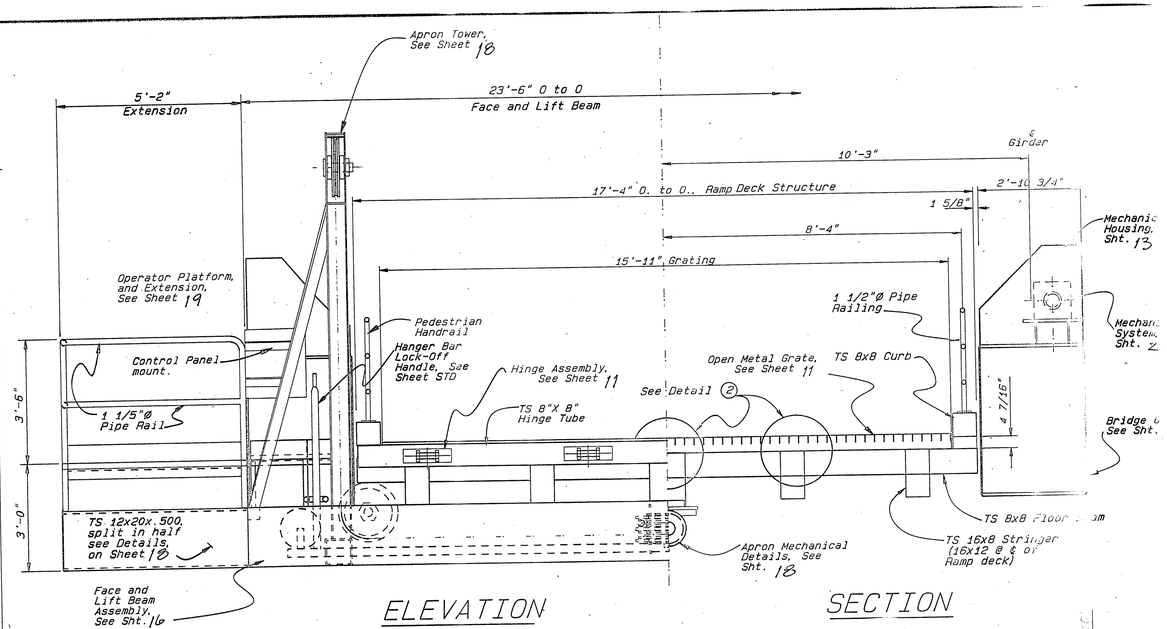
DESIGNED	JS	CHECKED	JL	DRAWN	Geopal	DATE	7/1
PROJECT NUMBER	RS-M-0935(9)			SHEET	14	OF	41

w7230

Note: Sidewa... shown opposite hand this p... ct.



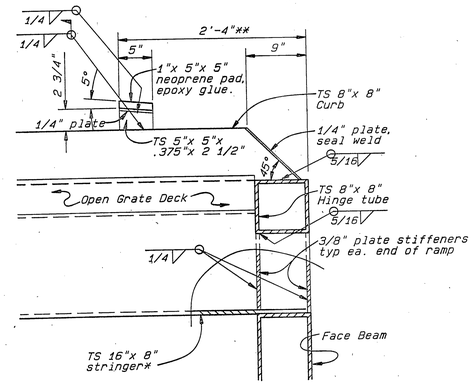
PLAN



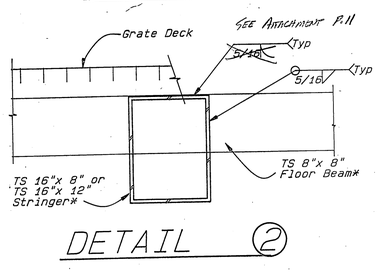
ELEVATION

SECTION

NOTES:
1. (*) Main members subject to tensile stress.
2. Close all open ended pipe or tubing with 1/4" plate and seal weld.
3. (**) Field locate.



DETAIL (1)



DETAIL (2)

SECTION (A)

ELEVATION
Bridge shown dashed

As Built

Name & Date

STAMP

9-15-87

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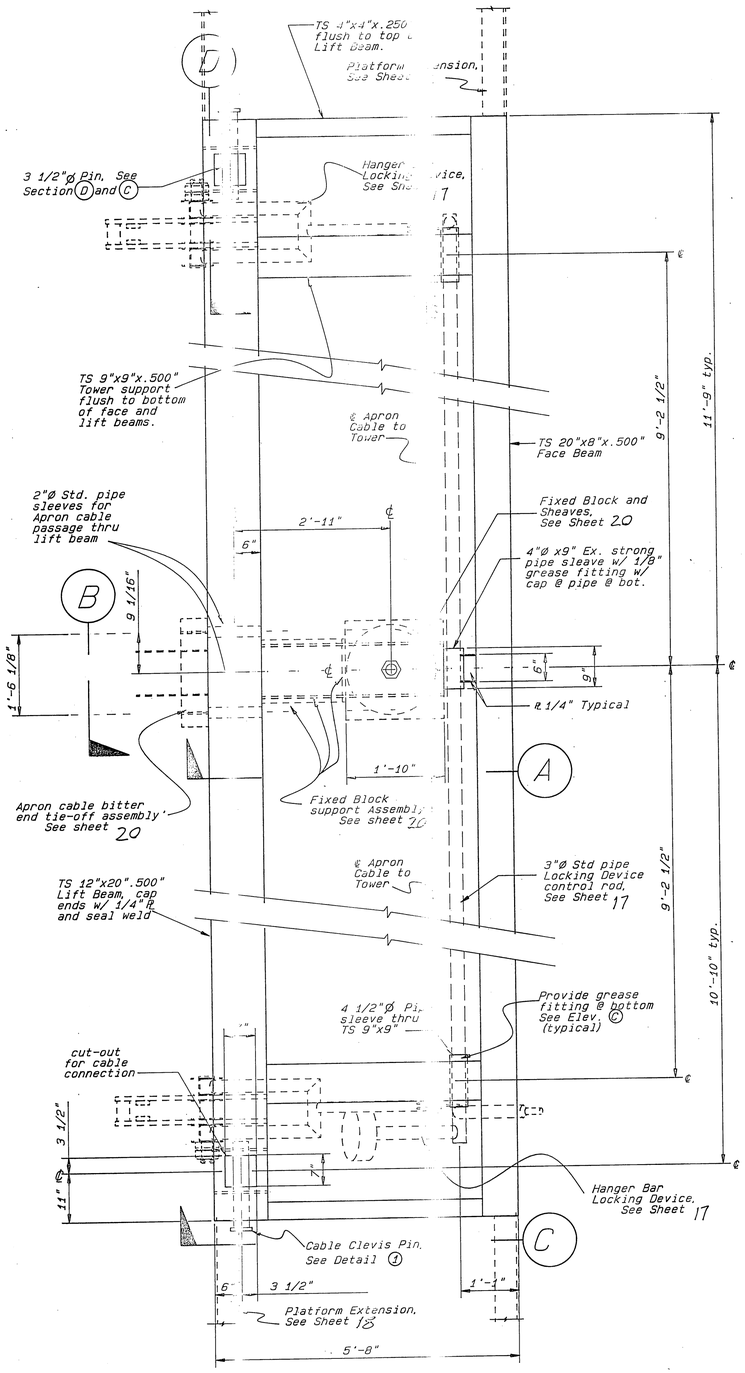
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

SITKA ALAS...

INTERMEDIATE RAMP FRAMING DETAILS

DESIGNED JL	CHECKED JS	DRAWN Geoal	DATE 7AUG.
PROJECT NUMBER RS-M-0935(9)		SHEET 15 OF 41	

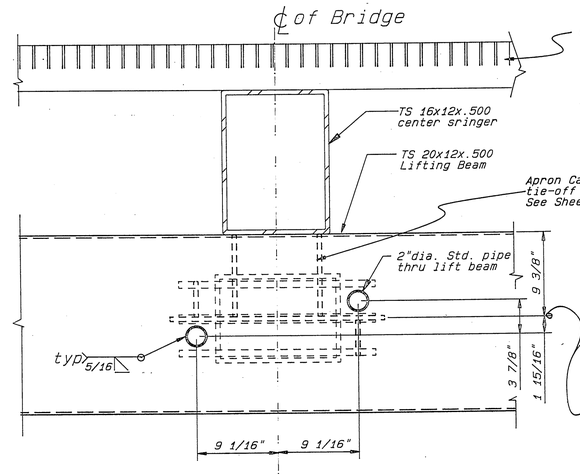
97238



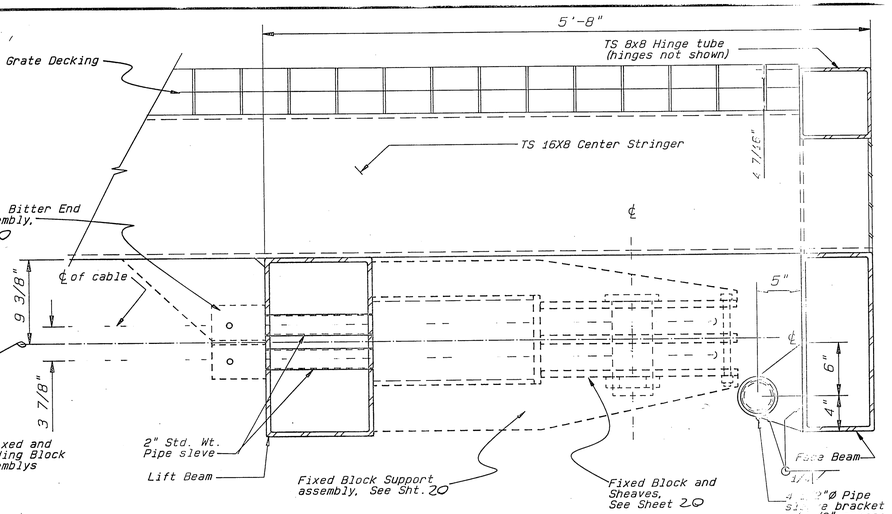
PLAN

Lift Beam Assembly

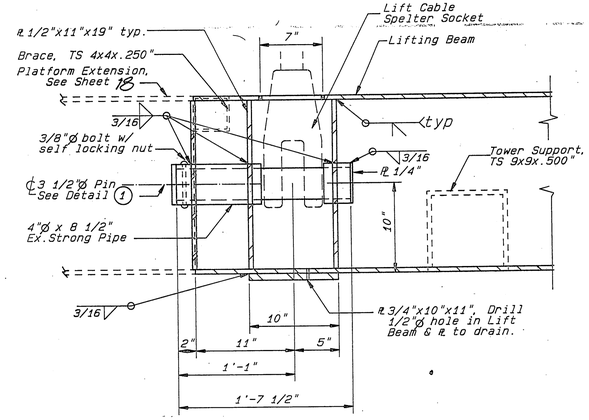
Stringers, Curb and Deck not shown



SECTION B

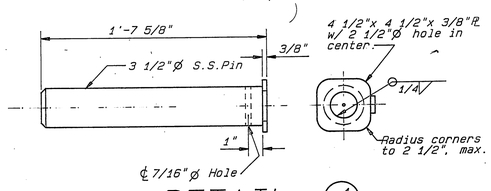


SECTION A



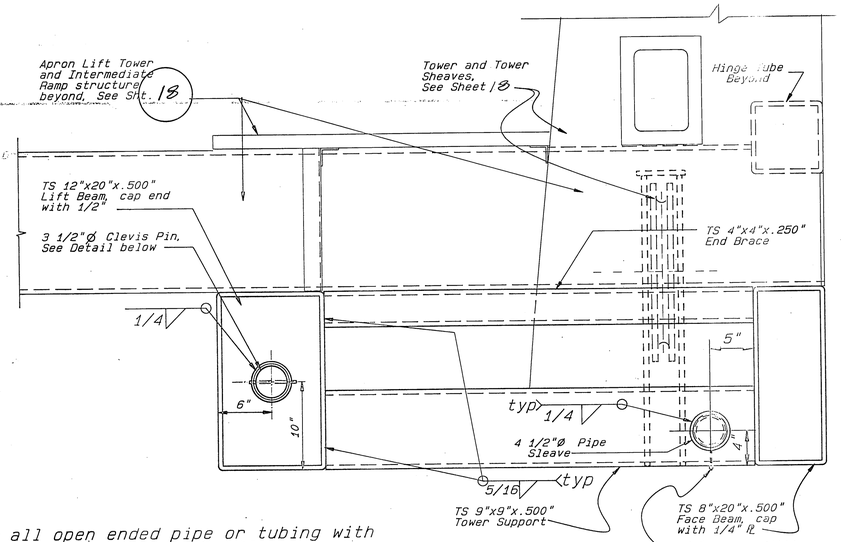
SECTION D

NOTE:
Close all open ended pipe or tubing with 1/4" plate and seal weld, all around, Except Lift Beam, See Detail 1 Sht.19



DETAIL 1

Cable Clevis Pin



ELEVATION C

As Built

Name & Date

STAMP

STATE OF ALASKA
49TH
John T. Scott, II
CE 4755
REGISTERED PROFESSIONAL ENGINEER
9-15-87

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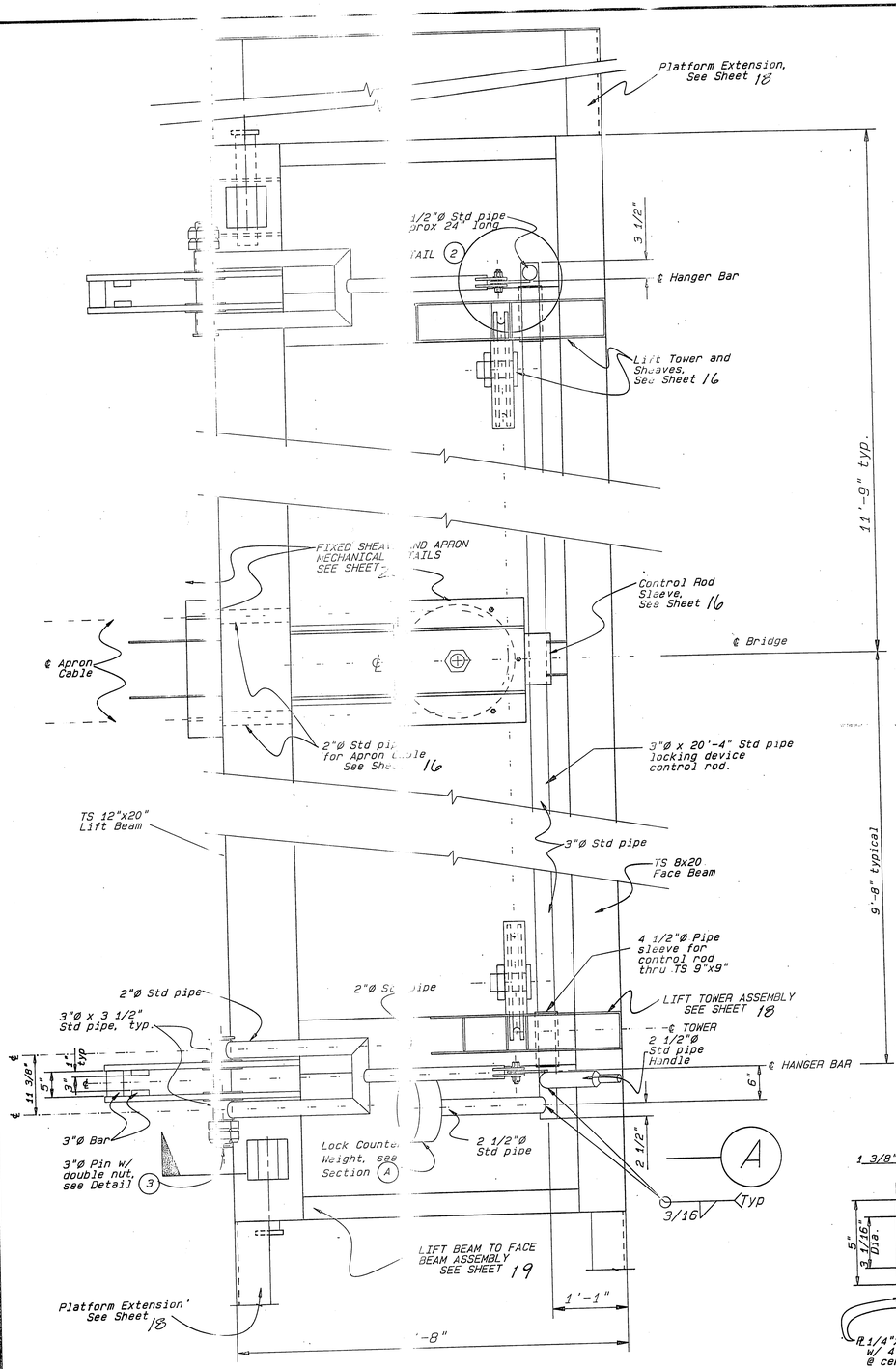
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

SITKA AL.

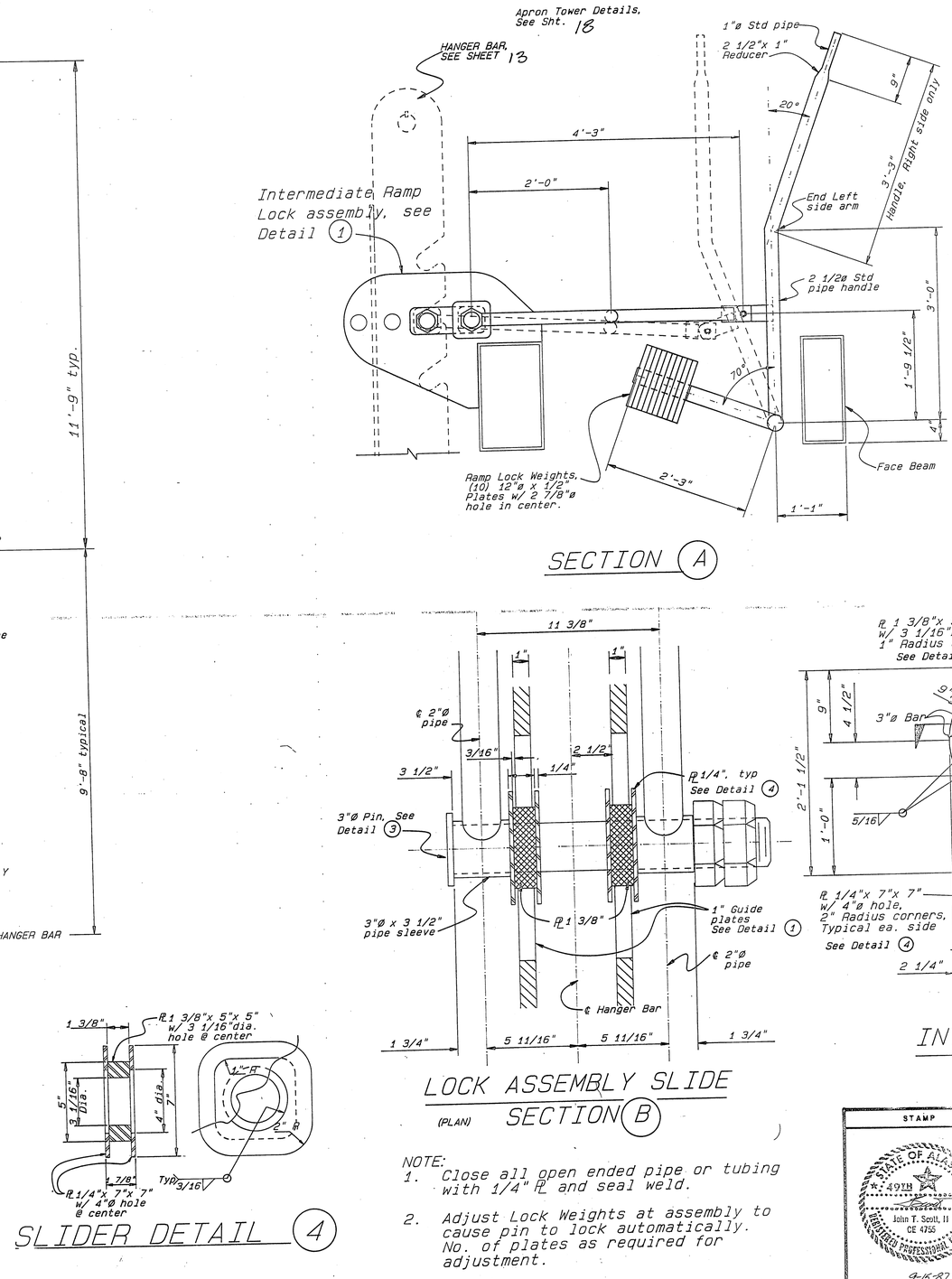
INTERMEDIATE RAMP LIFTING BEAM ASSEMBLY

DESIGNED JS	CHECKED JL	DRAWN Geopl	DATE 7AU
PROJECT NUMBER RS-M-0935(9)		SHEET 16	OF 41

97230

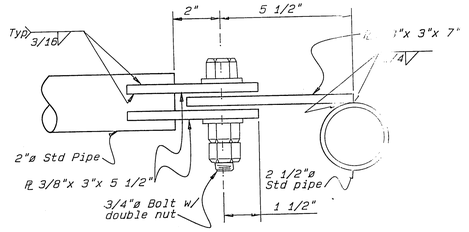


LIFTING BEAM PLAN

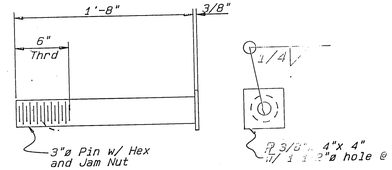


SECTION A

LOCK ASSEMBLY SLIDE (PLAN) SECTION B



HANDLE CONNECTION DETAIL 2



LOCK ASSEMBLY PI DETAIL 3

SLIDER DETAIL 4

NOTE:
1. Close all open ended pipe or tubing with 1/4" R and seal weld.
2. Adjust Lock Weights at assembly to cause pin to lock automatically. No. of plates as required for adjustment.

As Built

Name & Date

INTERMEDIATE RAMP LOCK DETAIL 1 2"ø pipe fork and pin not shown

STAMP

STATE OF ALASKA 49TH
John T. Scott, II CE 4755
REGISTERED PROFESSIONAL ENGINEER
9-15-87

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DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

SITKA

INTERMEDIATE RAMP
LIFT BEAM LOCKING ASSEMBLY

DESIGNED	JS	CHECKED	JL	DRAWN	Geoal	DATE	
PROJECT NUMBER	RS-M-0935(9)			SHEET	17	OF	4

97238

Provide 3/8" hot galv. coil chain to secure apron in raised position, operator side only. (Length = 3'-0"±)

1'-8"

8 7/8"

1'-0"

1'-0"

1 1/8"

3/4"Ø hole

3"

℄ Apron Cable

12'-0"

1/4

5/16

1/4

Typ 3/16

Typ 1/4

5/16 Typ

L 3"x 3"x 3/8", drill as required to mount control panel and enclosure.

3" inside Radius

Locking Hardware not shown, See Sheet 17

1 1/2"Ø Pipe Railing, two sides, Typ.

1'-9"

1'-0"

3'-0"

Platform

PL 1/4"x 6 1/2" Kick plate

PL 1/4"x 5'-8" Kick plate this side

4'-6"

L 3"x 3"x 3/8" Seaward side of Platform Exten.

3/16

PL 1/4"x 8"x 5'-8"

TS 20x12x.500, cut in half for Extension frame

1/4 Typ

16'-0" Roadway

TS 16"x 8"x .3125" Stringer, see sht. 16

3/16

Typ 1/4

3/16 Typ

1'-9"

1'-11"

5'-0"

9'-3"

1/4" Kick plate this side

3"x 3"x 3/8" Seaward side of Platform Exten.

TS 20x12x.500, cut in half for Extension frame. See Sheet 17.

5'-2"

1/4"x 1'-8"x 5'-8" @ end.

3/4"Ø bolt, cable guide

1/2" PL, ea. side

L2"x 2"x 3/8" platform support

2'-8" typ.

℄ of 7/8"Ø Cables

3 13/16"

1'-9 3/8"

2'-7 1/2"

℄ of Tower

1'-5 13/16"

Lift Beam

SECTION (4) this sheet

Fixed Block and Sheaves, See sheet 20 for details.

2'-7 1/2"

11'-9"

11'-9"

23'-6"

Tower (1) (A) APRON TOWER ELEVATIONS (Looking Shoreward) Tower (2)

FACE BEAM & HINGE TUBE NOT SHOWN FOR CLARITY.

3"typ

Cable Guide, PL 1/4"x 6"

1"

10 1/4"

PL 1/2"x 6"x 1'-3" Tower 1

PL 1/2"x 6"x 1'-0" Tower 2

10 1/4"

UPPER SHEAVE

Bent PL 1/4"x 6" Cable Guide

Provide washers to center sheave in lift tower.

℄ sheave

PL 1 1/2"x 8"x 8" ea. side of sheave, drill for 4 1/2" sheave pin.

PL 1/2"x 6"x 1'-0"

PL 5/8"x 6", A572 front, top, back

PL 5/16"

L4"x 3"x 3/8"

9"

6"

9"

3'-0"

Typ 5/16

TS 20"x 8"x .500" Face Beam

4"Ø Std pipe sleave for locking hardware, See Sheet 16

2 7/8"

1'-5 15/16"

℄ Cable

2'-9"

SECTION (A)

Tower 1 shown

Locking Hardware not shown

3/16

1/4

Open structural grate platform, see detail this sheet

L2"x 2"x 3/8" Platform Support

Typ 3/16

1'-4"

3'-0"

TS 4"x 4"x .250" Brace beyond

Typ 5/16

TS 20"x 12"x .500" Lift Beam

TS 9"x 9"x .500" Tower Support

2'-0 1/2"

1'-6 1/8"

Cable Guide, PL 1/4"x 2 13/16"

10 1/4"

Typ 1/4

2'-8"

Clip corner 1" to drain Apron Tower.

45°

9"

6 5/16"

Tower 2

Tower 1

10 5/8"

1'-9 5/8"

1'-5 13/16"

1

1

Drill for 3/4"Ø bolt, cable guide

LOWER SHEAVE

Sheave

PL1/2"x 6"x 6"

1/8" grease fitting

4 1/2"Ø Sheave Pin, 3 1/2"-6UN-2A thread, length varies. Cross drill for grease.

5/16

Keeper Bar, 1/2"x 1/2"x 2"

5/16

1/8" MPT, Short, straight, stainless steel grease fitting and polyethylene cap.

TYPICAL SHEAVE PIN

NOTE: Platform and Platform Extension Details are shown on Sheet 19

As Built

Name & Date

Notes:

1. All sheaves this sheet; 20" O.D. 17" Tread bronze bushed 2 3/4" Hub thk 4 1/2" Shaft
2. Cable shall be 7/8" -6x30 flattened strand, long lay, 1WRC (min. Breaking strength of 38 tons). Galv. and Grease.
3. Provide 4 1/2" sheave pins, cross drilled for grease, w/ 1/8" MPT, short straight, stainless steel grease fitting and polyethylene cap.

STAMP

STATE OF ALASKA REGISTERED JOHN T. SCOTT II CE 4755 PROFESSIONAL ENGINEER

9-15-87

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STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

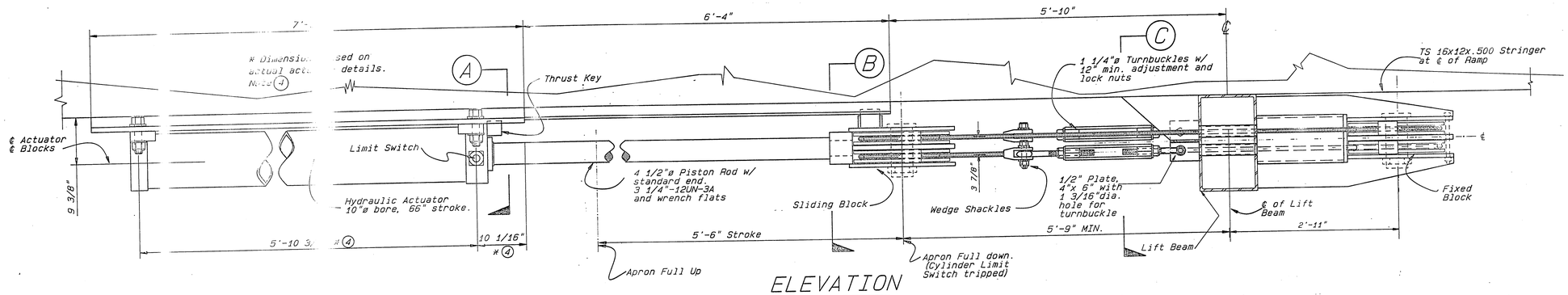
SITKA ALASKA

APRON TOWER DETAILS

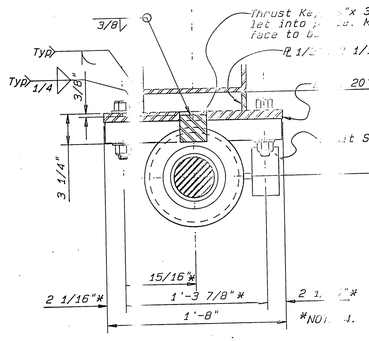
DESIGNED	JL	CHECKED	JS	DRAWN	Geoal	DATE	7/A
PROJECT NUMBER	RS-M-0935(9)			SHEET	18	OF	41

As Built Name & Date

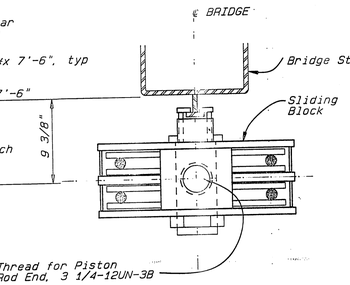
STAMP	DO NOT SCALE THIS DRAWING — USE DIMENSIONS
STATE OF ALASKA · 49TH · John T. Scott, II · CE 4755 · REGISTERED PROFESSIONAL ENGINEER · 9-15-87	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES SITKA ALASKA OPERATOR PLATFORMS
	DESIGNED JS · CHECKED JS · DRAWN Geo87 · DATE 7AUG87
	PROJECT NUMBER RS-M-0935 (9) · SHEET 19 OF 41



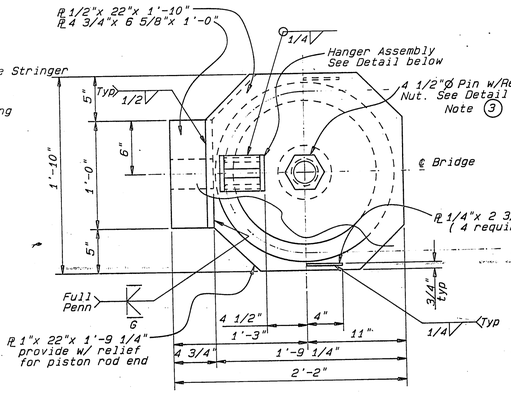
ELEVATION



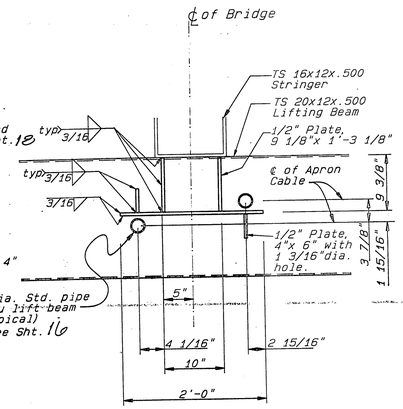
SECTION (A)



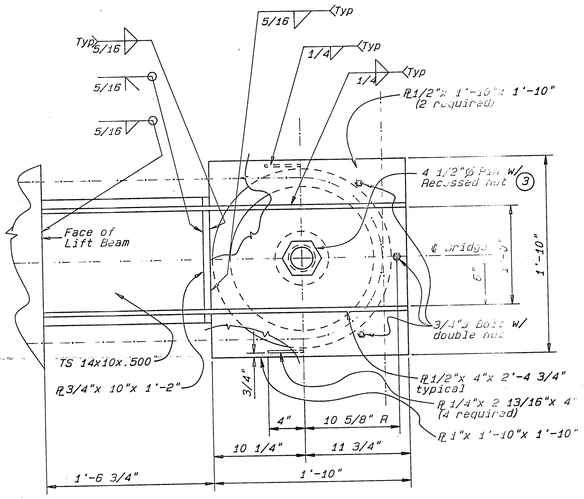
SECTION (B)



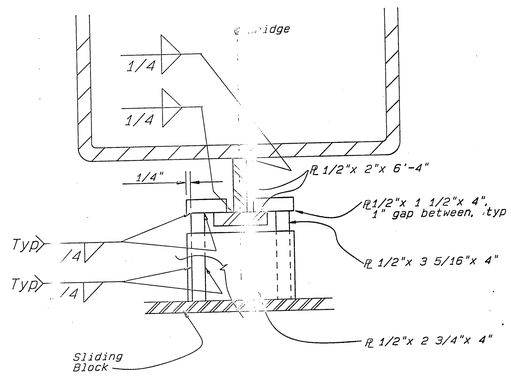
SLIDING BLOCK DETAIL (2)



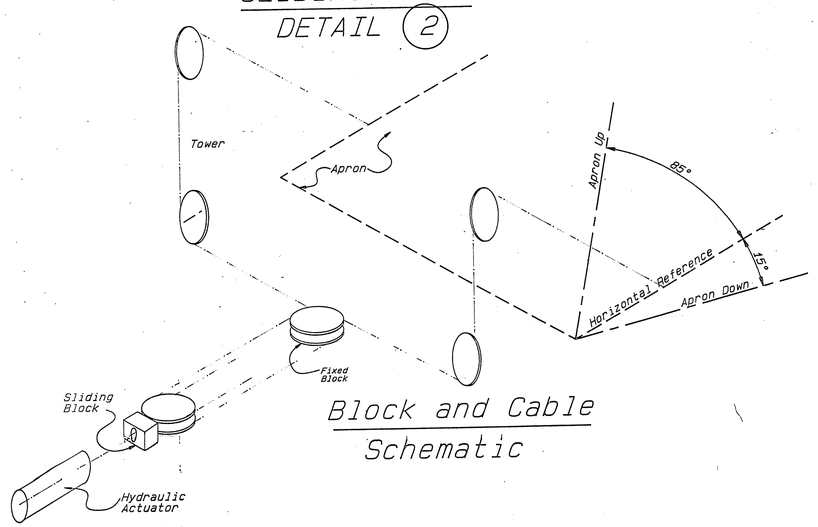
SECTION (C)



FIXED BLOCK DETAIL (1)



HANGER ASSEMBLY
(Grease Sliding Surfaces)



Block and Cable Schematic

NOTES:
1. All sheaves this sheet, Bronze bushed;
   20" O.D.
   17" Tread
   2 3/4" Hub thickness
   4 1/2"ø Shaft
2. Cable shall be 7/8"ø"6x30 flattened strand, lang lay IWRC core. (breaking strength 35.4 tons) galvanized and greased.
3. Provide 4 1/2"ø sheave pins cross drilled ea. end for grease, w/ 1/8" MPT, short, straight, stainless steel grease fitting and polyethylene cap each end. See pin Detail on Sht. 13.
4. See Sht. 14

As Built Name & Date

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

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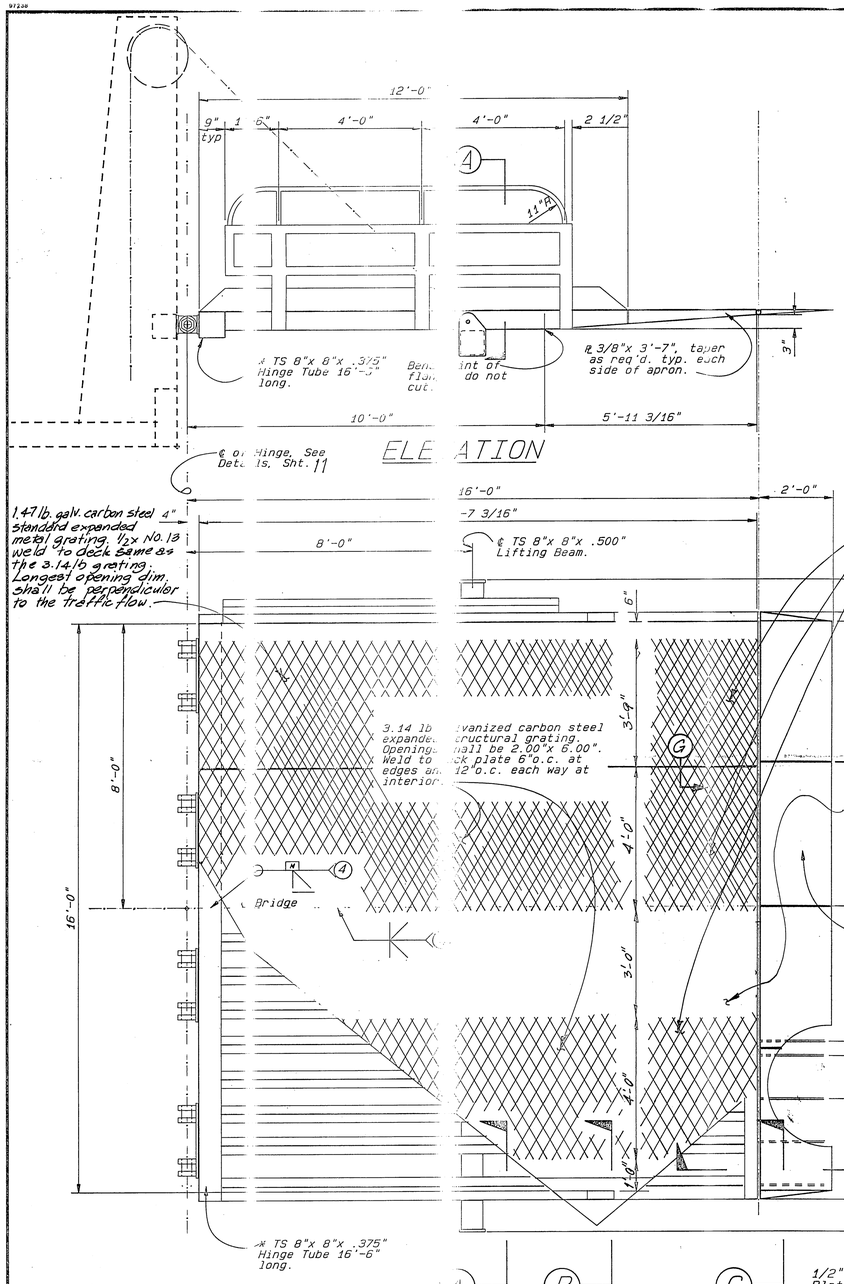
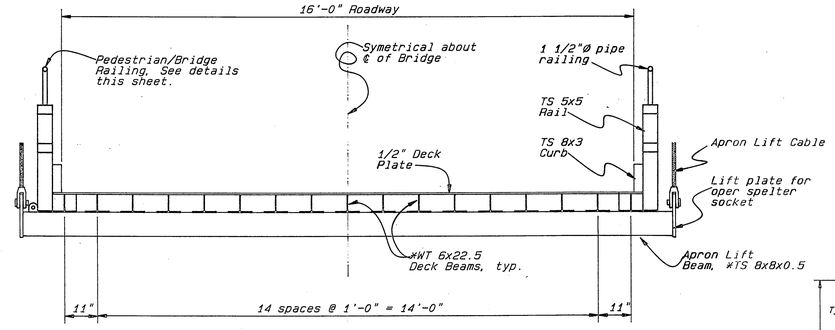
APRON MECHANICAL DETAIL

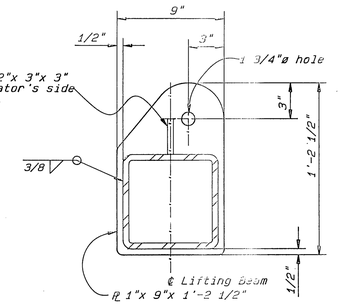
DESIGNED JJ	CHECKED LJH	DRAWN	DATE 7/1
PROJECT NUMBER RS-M-0935(9)		SHEET 20	OF 41

97239

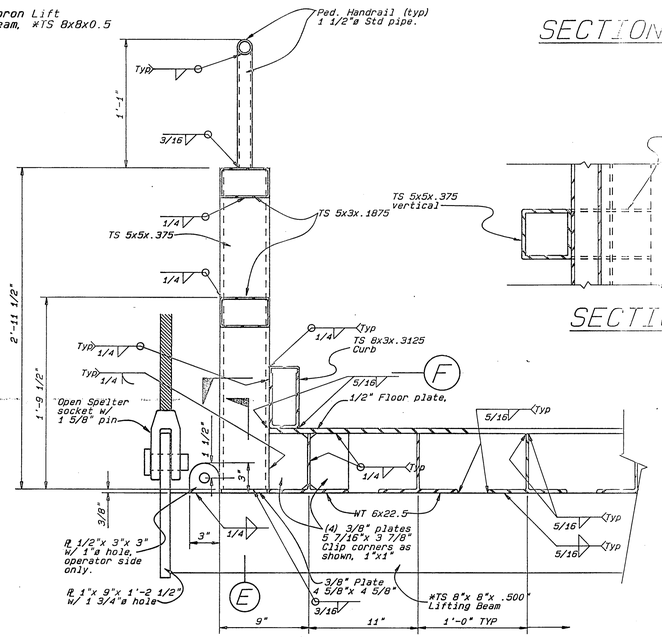




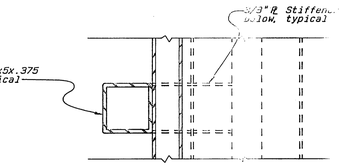
TYPICAL SECTION



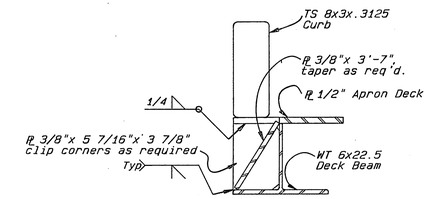
SECTION (E)



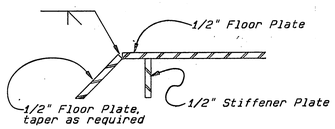
SECTION (A)



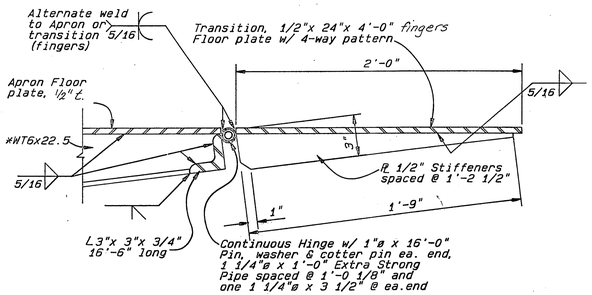
SECTION (F)



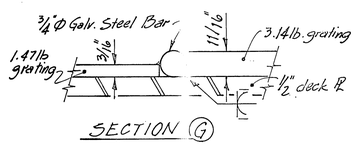
SECTION (B)



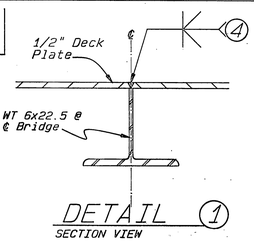
SECTION (C)



SECTION (D)



SECTION (G)



DETAIL (1)
SECTION VIEW

NOTES:
1. *Main members subject to tensile stress.
2. Galvanize after fabrication.
3. Close all open ended pipe or tubing with 1/4"R and seal weld.
4. Permissable welds for splice to allow galvanizing, See Detail (1).

As Built — Name & Date

STAMP

STATE OF ALASKA
JOHN T. SCOTT, II
9715
REGISTERED PROFESSIONAL ENGINEER
9-15-87

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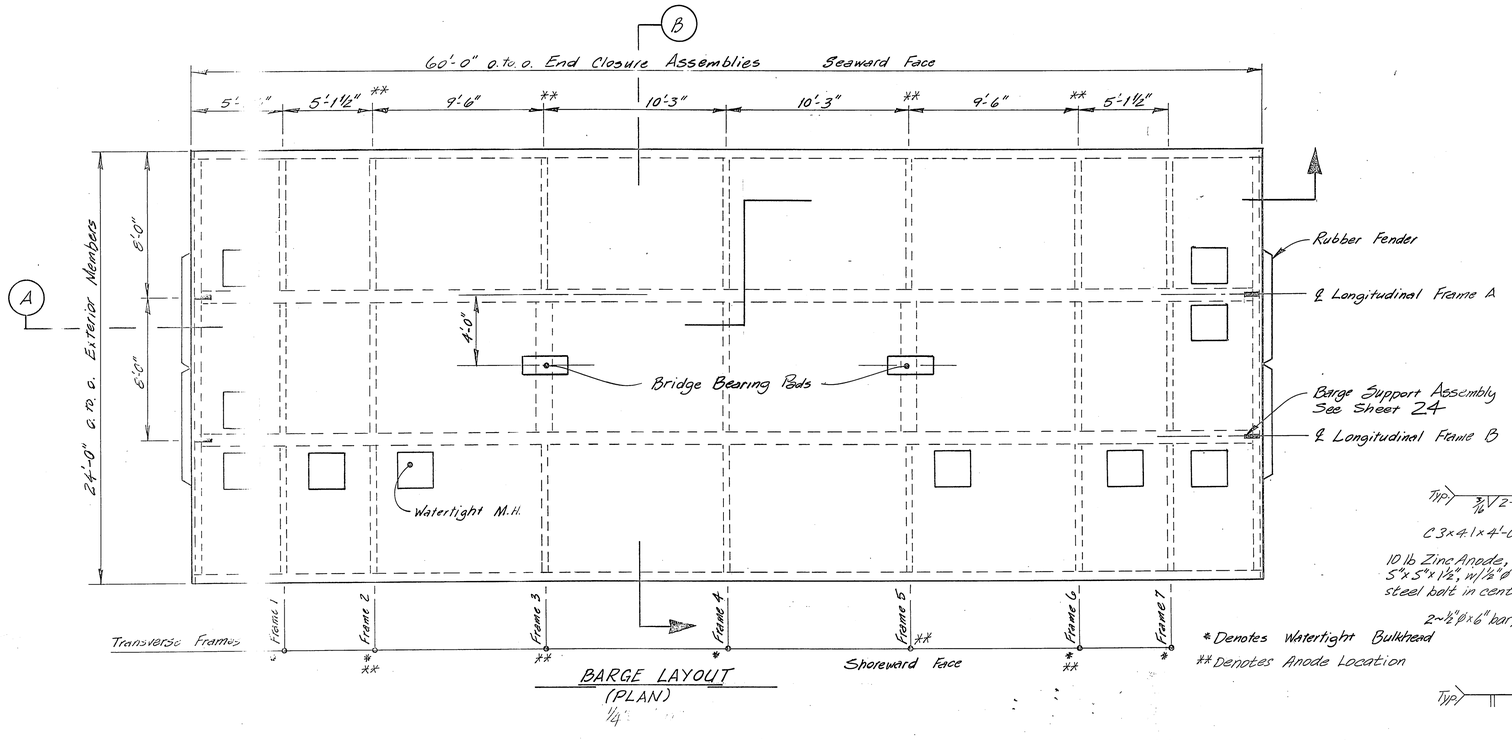
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

SITKA AL...

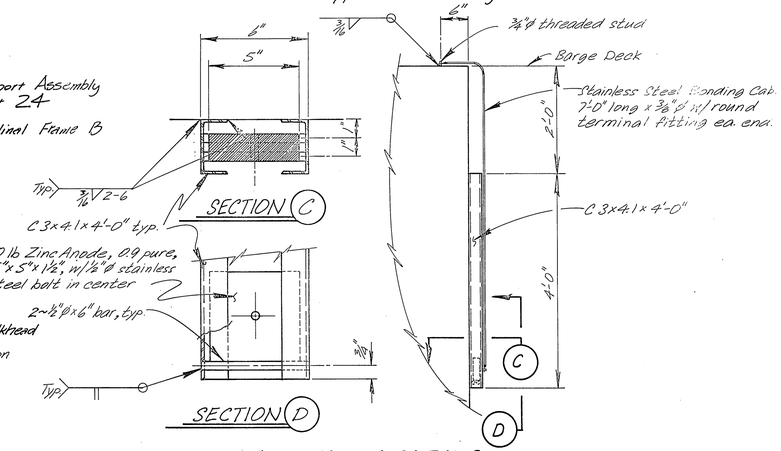
APRON DETAILS

DESIGNED	JL	CHECKED	JS	DRAWN	Geoal
PROJECT NUMBER	25-M-0935(9)			SHEET	21 OF 41

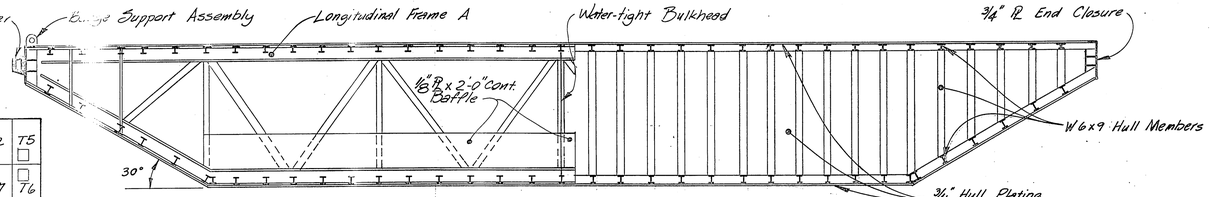
Bottom ℙ 1/2" x 2'-3"
Top ℙ 1/2" x 2'-0 1/2" x 2'
24"φ x 1/2"
ℙ 3/8" x 2'-3" x 2'-7 7/8", cut as shown
W24x55
VIEW B
Note: Existing concrete docks shown dashed.
24"φ x 1/2" Vertical, typ.
18"φ x 1/2" Batter, typ.
Bridge Apron
Transfer Bridge
1:3 Batter (typ.)
LAYOUT
Barge shown at tide stage where bridge deck is level.
El. +22 4
El. +16 4
El. +12 4
24"φ x 1/2" wall Vertical Piles Drive to 100 tons bearing
1/2" ℙ, typ. all Gussets
ELEVATION
Approx. weight = 5100 lbs. each.
3 1/2" R. for 1" Cheek ℙ
4" R. for 1 1/2" ℙ
Cheek ℙ 1" x 7" x 7 1/2", typ. ea. side
2 7/8"φ Hole
Hanger ℙ 1 1/2" x 2'-0" x 3'-5 1/2" cut as shown.
6'-0" piece of 24"φ x 1/2" wall Pipe
ℙ 3/4" x 1'-8" diameter
El. +15 9
18"φ x 1/2" batter Pile Drive to 50T bearing
3'-0" piece of 24"φ x 1/2" wall Pipe
Tapered stab/backup ℙ dimensions optional, typ.
Half pipe Section: L = 4'-6", inside radius = 18"
SECTION C
Hanger ℙ, see detail
2 7/8"φ hole for lockoff Chain storage
Double shackle setup instead of single
1 1/2" Die Lock Anchor Chain
1 1/2" Bitter End Joining Link, typ.
2 1/2" Shackle to match Chain, typ.
Approx. Deck El. = 12 3
CHAIN DETAIL
As Built
Name & Date
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND
Sitka
BARGE RESTRAINT STRUCTURES
DESIGNED BAS
CHECKED JS
9-15-87

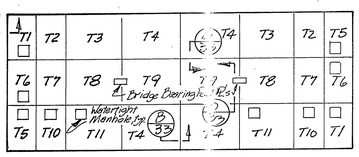


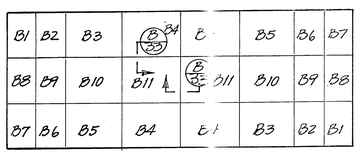
Notes:
1. Barge Design Freeboard = 2'-6" (w/ballast)
2. Ballast compartments with fresh potable water and 10% ethylene glycol mixture.
3. Barge deck to be level both ways, longitudinally and laterally, with full dead load, ie; bridge, barge with ballast, platforms, gangways and incidentals.
4. Fill trapezoid ballast tanks ea. side of barge before putting ballast in main tank. Put ballast equally into ea. baffled section of ea. tank.
5. Prior to protective coating, ea. compartment shall be tested for water tightness by smoke and pneumatic or hydraulic methods to 7 ft. equivalent head. Test methods and details shall be subject to approval of the engineer.

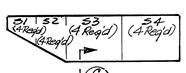


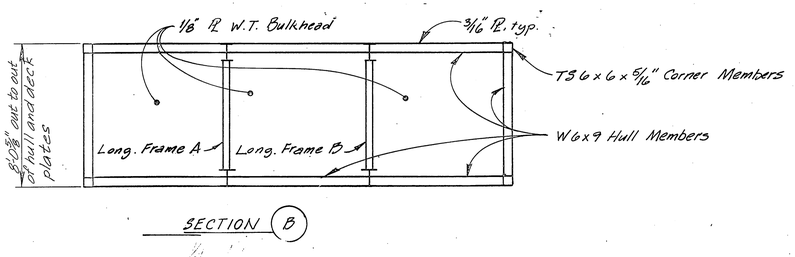
ZINC ANODE DETAILS











BARGE SHEETS - REFERENCE INDEX	
Sheet No.	Description
23	Barge Layout & Typical Sections
24	Longitudinal Frames A & B
25	Transverse Frames 1-7
26	Details Frames 1-7
27	Details Frames 2,4 & 6
28	Details Frames 3 & 5
29	Watertight Bulkheads & Bridge Bearing Details
30	Panels T1-T11 & Manhole Details
31	Panels B1-B11 & S1-S4
32	End Closure Assembly & Fender Details
33	Panel Connection & Misc. Details

Note: Approximate total weight of Barge ≅ 110,000 lbs.

See Attachment

As Built

Name & Date

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STATE OF ALASKA
4TH
James A. Lowell
#CE-5597
REGISTERED PROFESSIONAL ENGINEER
2/25/85

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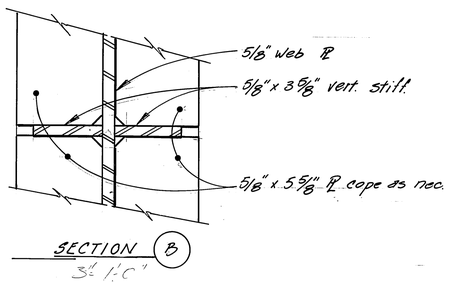
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

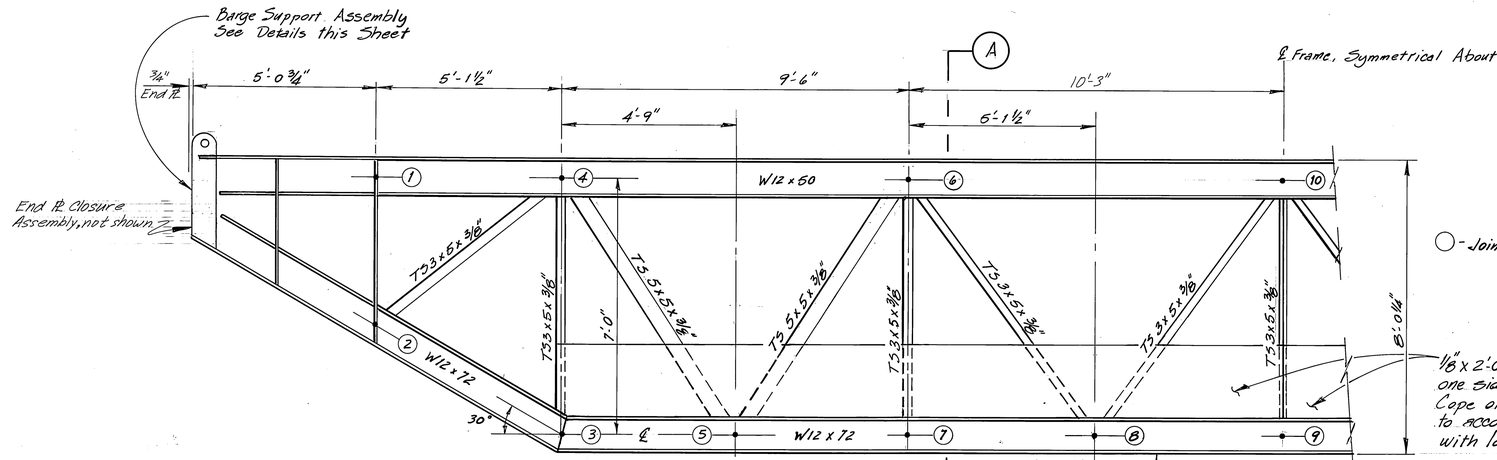
Sitka Alaska

BARGE LAYOUT & TYPICAL SECTIONS

DESIGNED JAL	CHECKED JS	DRAWN JAL	DATE 3-84
PROJECT NUMBER RS-M-935(9)		SHEET 23	OF 41

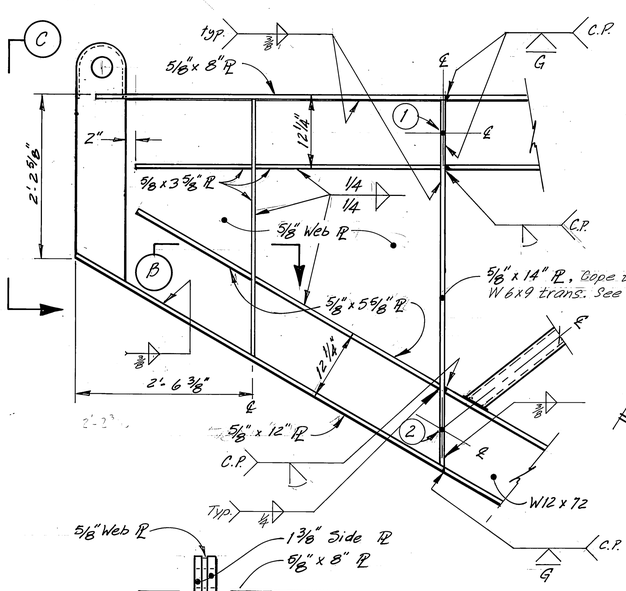


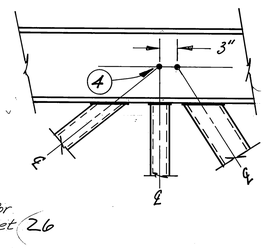
SECTION (B)
3" = 1'-0"

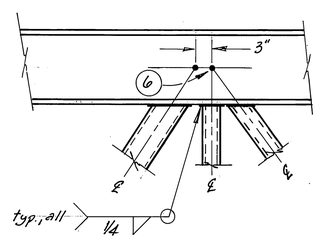


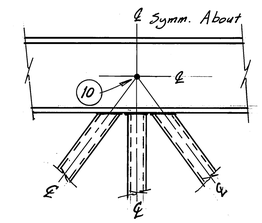
LONG. FRAMES A & B - ELEVATION
1/2" = 1'-0"

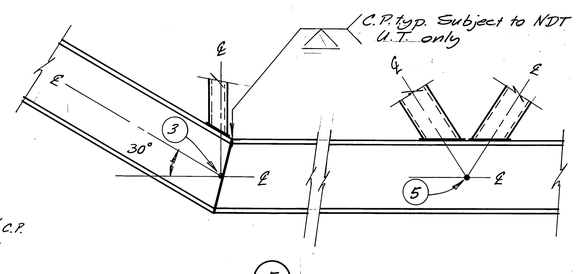
Main Member Subject to tensile stress



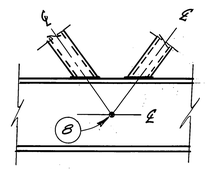


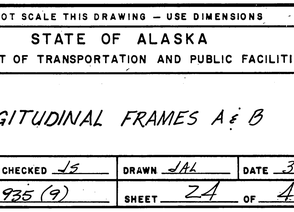




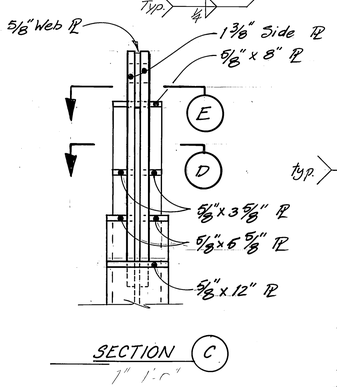


Note: Baffle not shown for sake of clarity

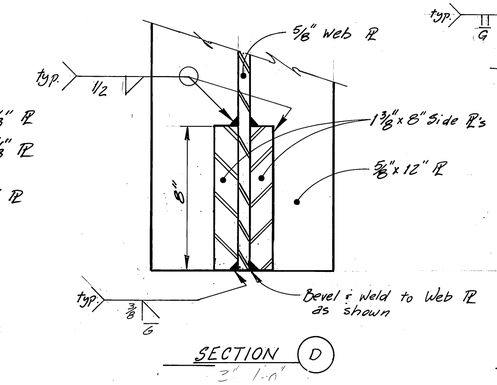




SECTION (A)
1" = 1'-0"



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



SECTION (D)
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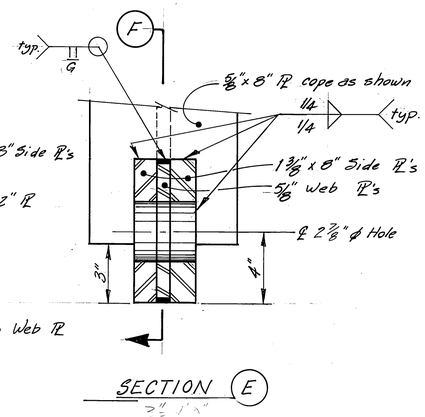

SECTION (E)
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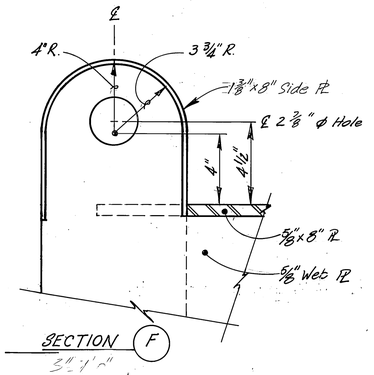

SECTION (F)
3" = 1'-0"

Notes:
1. Unless otherwise noted, all main chord members shall be full length.

See Attachment

AS BUILT

Mark Halvorsen 1/24/89

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STATE OF ALASKA 49TH
James A. Lowell #CE-5597
REGISTERED PROFESSIONAL ENGINEER
2/25/85

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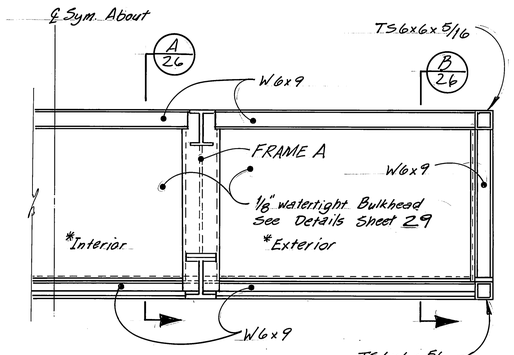
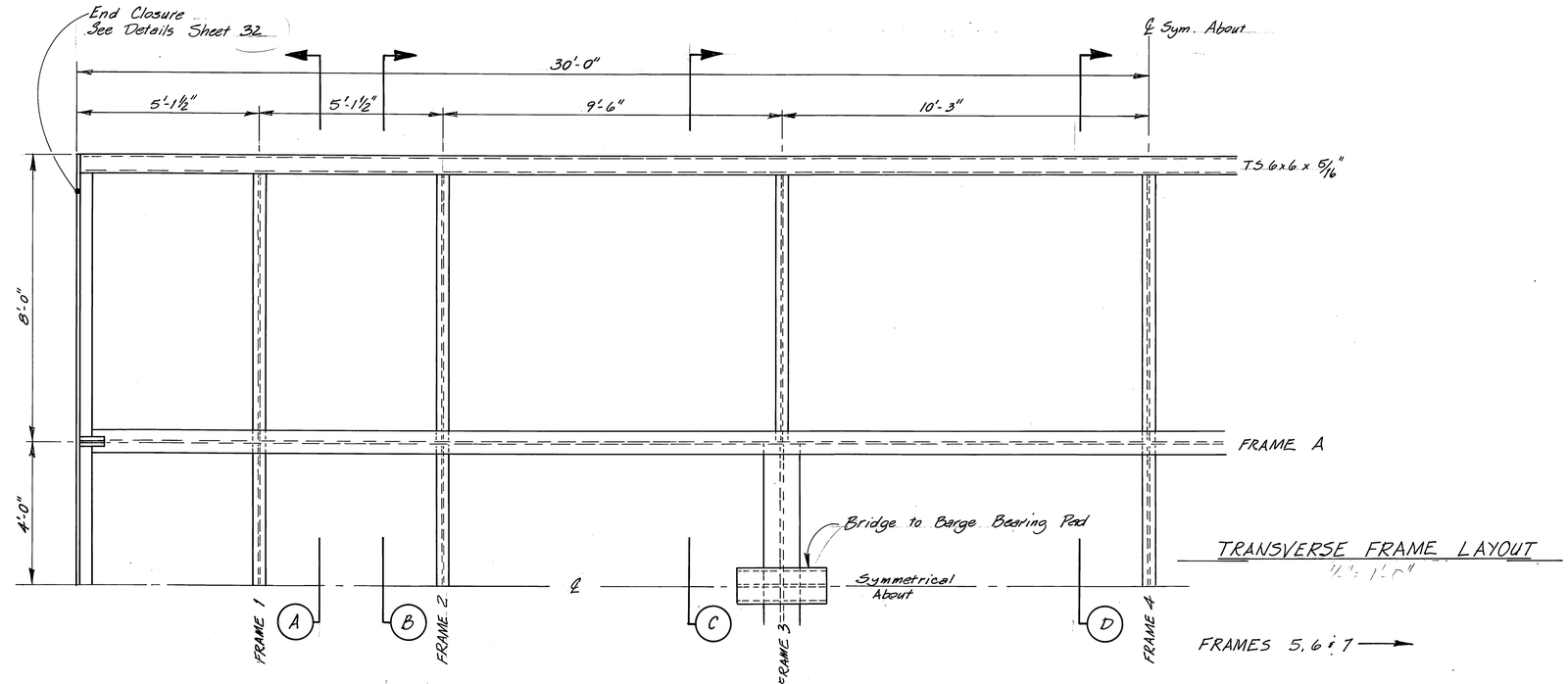
LONGITUDINAL FRAMES A & B

DESIGNED JAL	CHECKED JS	DRAWN JAL	DATE 3-84
PROJECT NUMBER RS-M-935(9)		SHEET 24	OF 41

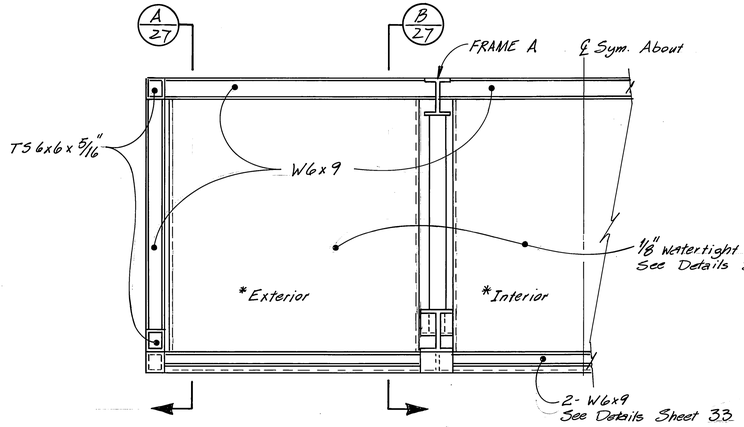


SECTION (A)
(FRAMES 1 & 7)
1/2" = 1'-0"

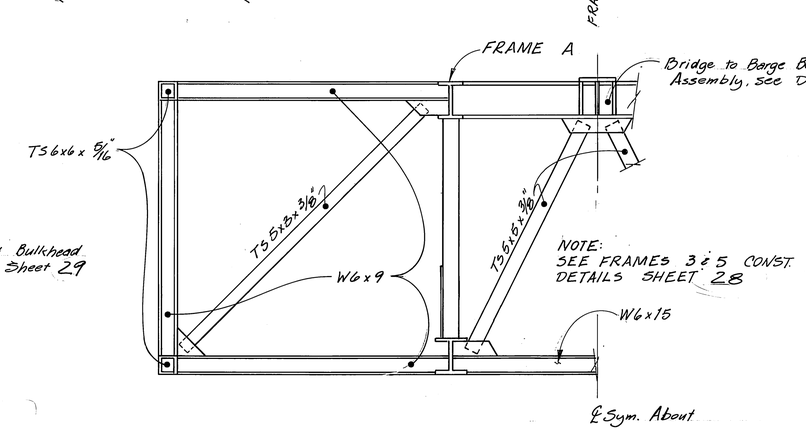


TRANSVERSE FRAME LAYOUT
1/4" = 1'-0"

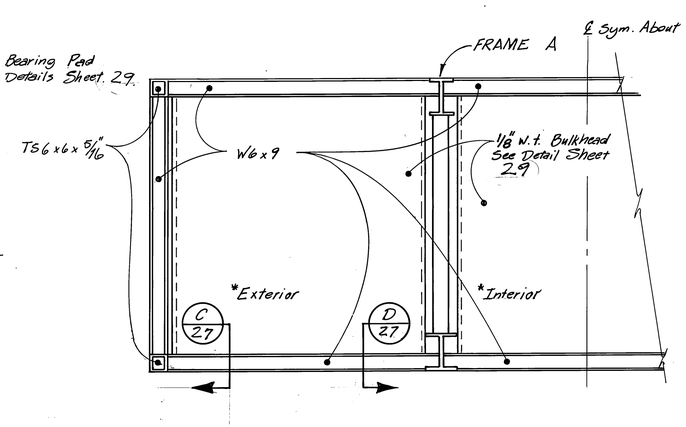
FRAMES 5, 6 & 7 →



SECTION (B)
(FRAMES 2 & 6)
1/2" = 1'-0"



SECTION (C)
(FRAMES 3 & 5)
1/2" = 1'-0"



SECTION (D)
(FRAME 4)

AS BUILT
Mark Halvorsen 11/24/89

*Bulkhead type reference

See Attachment P.23

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STATE OF ALASKA
James A. Lowell
#CE-5597
REGISTERED PROFESSIONAL ENGINEER
2/23/85

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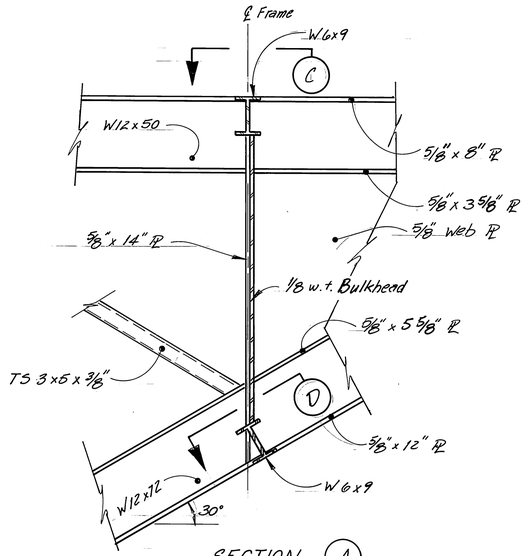
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

Sitka Alaska

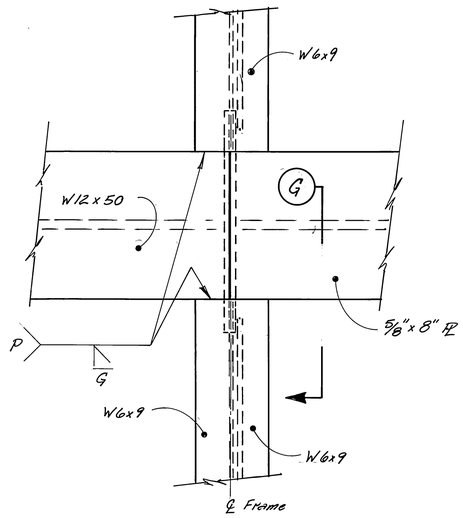
TRANSVERSE FRAMES 1-7

DESIGNED JAL	CHECKED JS	DRAWN JAL	DATE 3-84
PROJECT NUMBER RS-M-935 (9)		SHEET 25 OF 41	

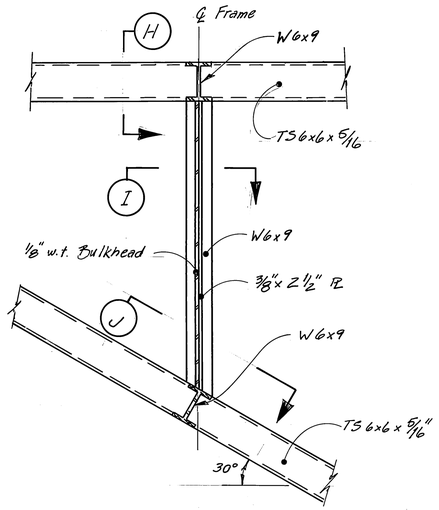


SECTION A

(From Sheet 25)

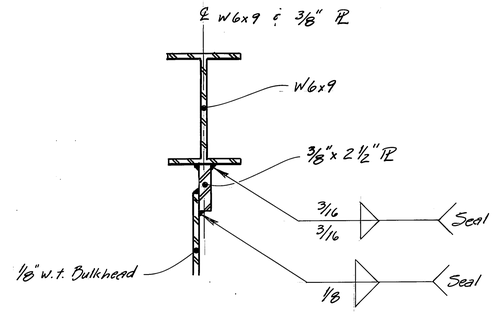


SECTION C

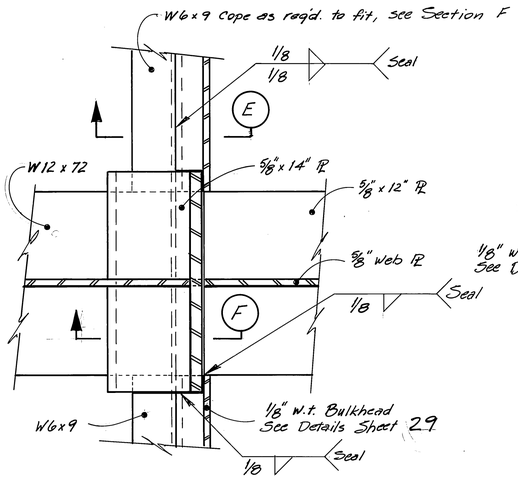


SECTION B

(From Sheet 25)

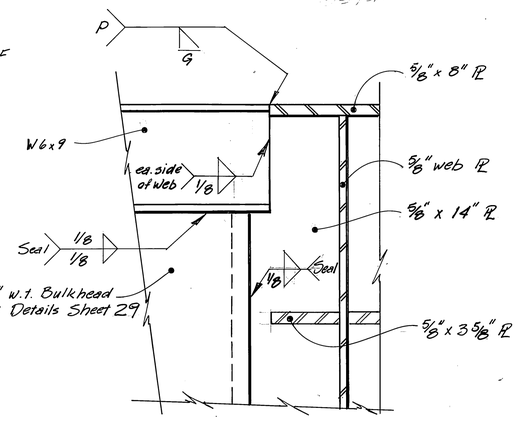


SECTION I



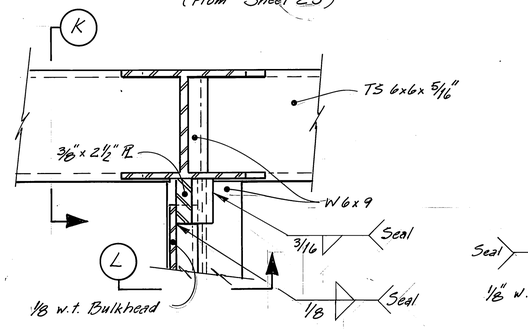
SECTION D

3" = 1'-0"



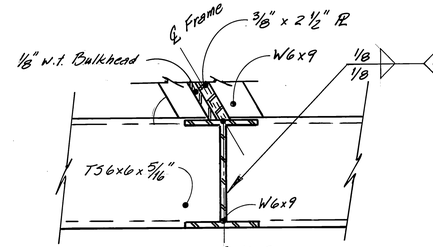
SECTION G

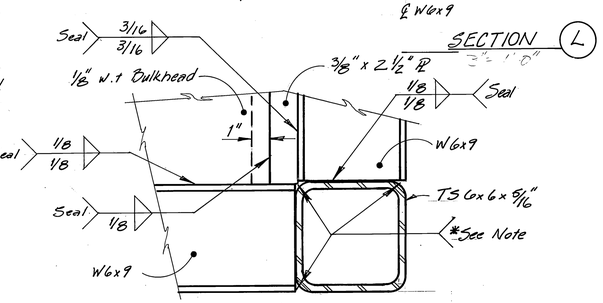
3" = 1'-0"



SECTION J

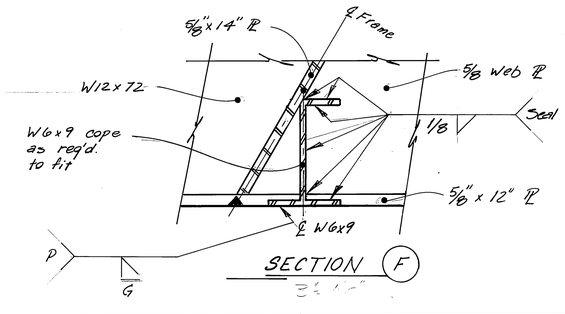
3" = 1'-0"





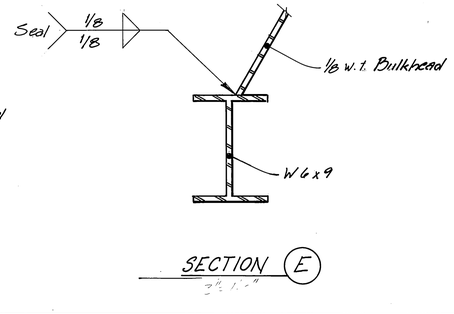
3" = 1'-0"

* Note: Size and type of weld to accomodate seal. On exterior, grind flush to insure proper fit up of hull panels and still maintain watertightness.



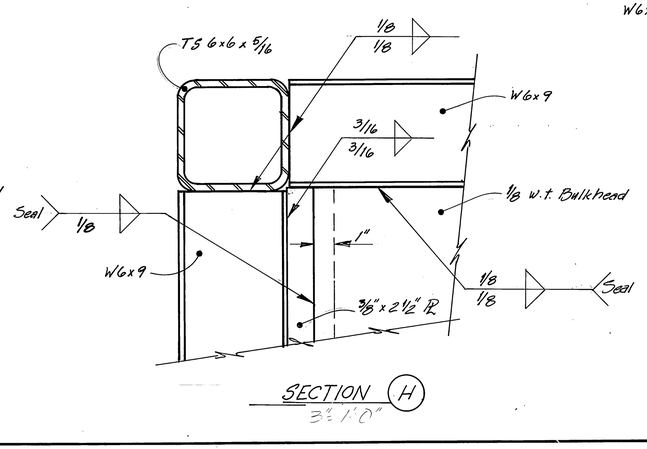
SECTION F

3" = 1'-0"



SECTION E

3" = 1'-0"



SECTION H

3" = 1'-0"

AS BUILT

Mark Salvesen 1/24/89

See Attachment P.23

STAMP

STATE OF ALASKA
4TH
James A. Lowell
#CE-5597
REGISTERED PROFESSIONAL ENGINEER
2/25/85

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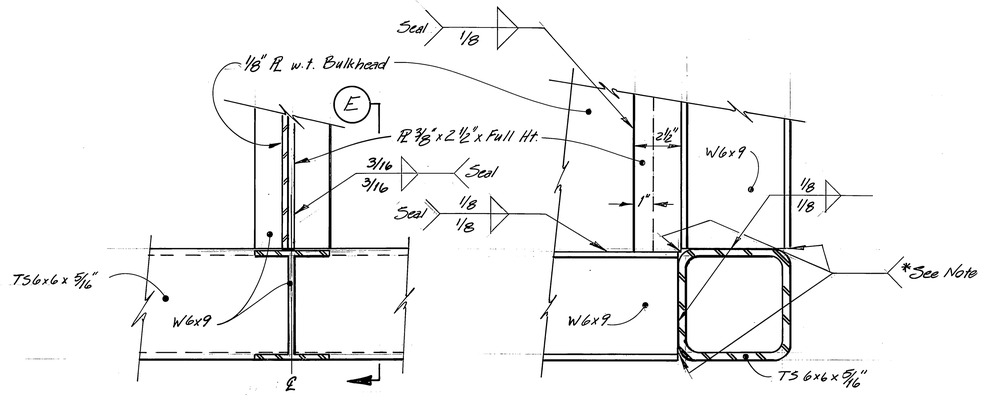
STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

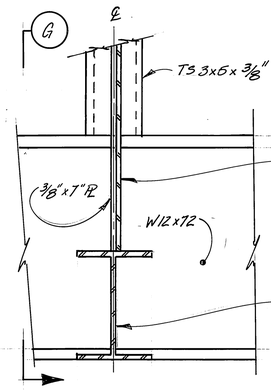
Sitka Alaska

DETAILS FRAMES 1 & 7

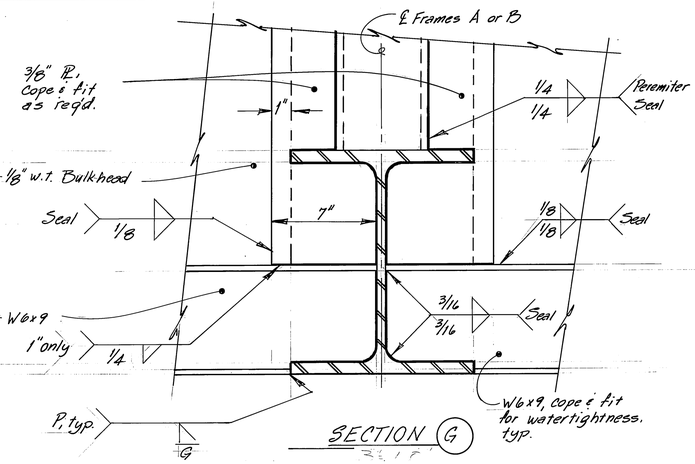
DESIGNED JAL	CHECKED JS	DRAWN JAL	DATE 3-84
PROJECT NUMBER RS-M-935 (9)		SHEET 26 OF 41	



SECTION C
(From Sheet 25)

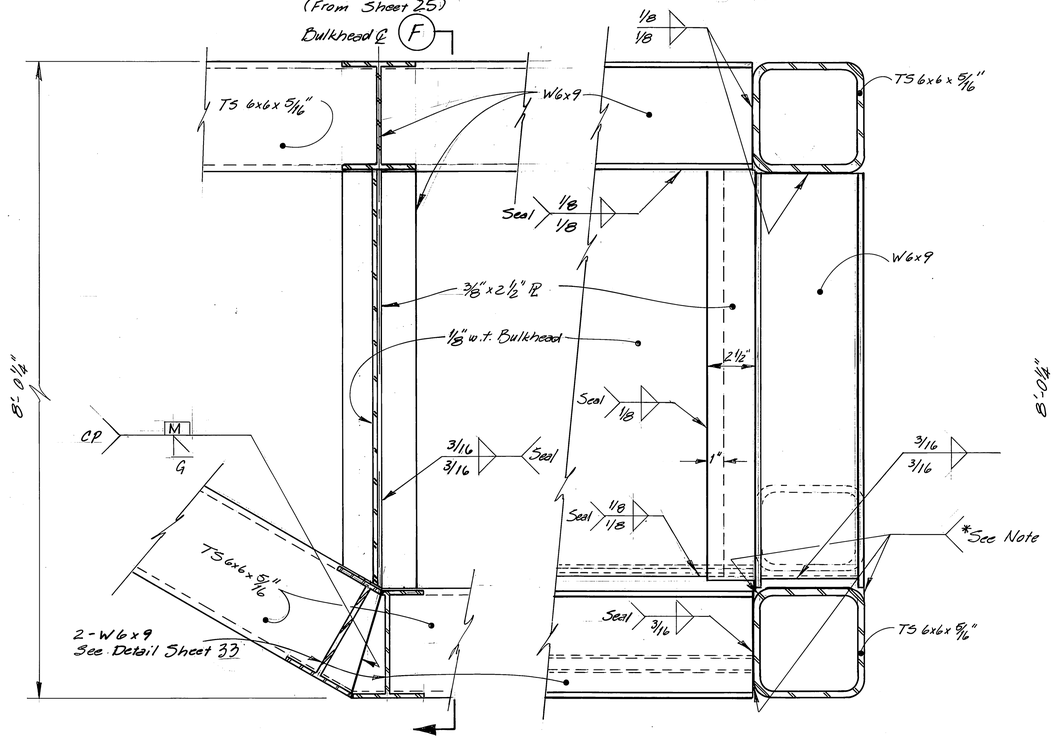


SECTION D
(From Sheet 25)



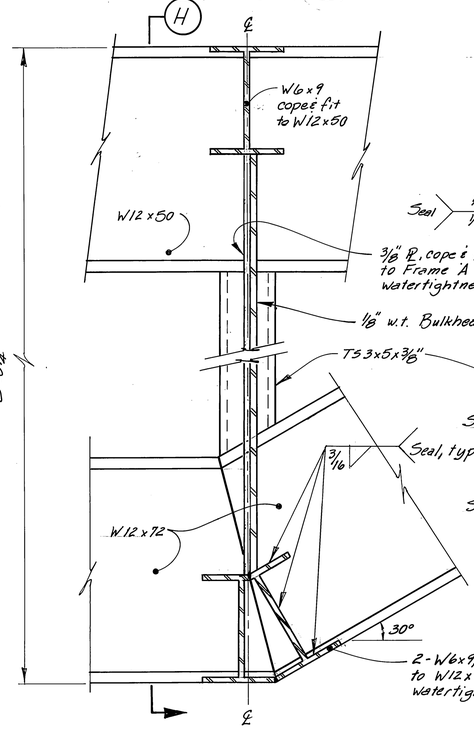
SECTION G

SECTION E

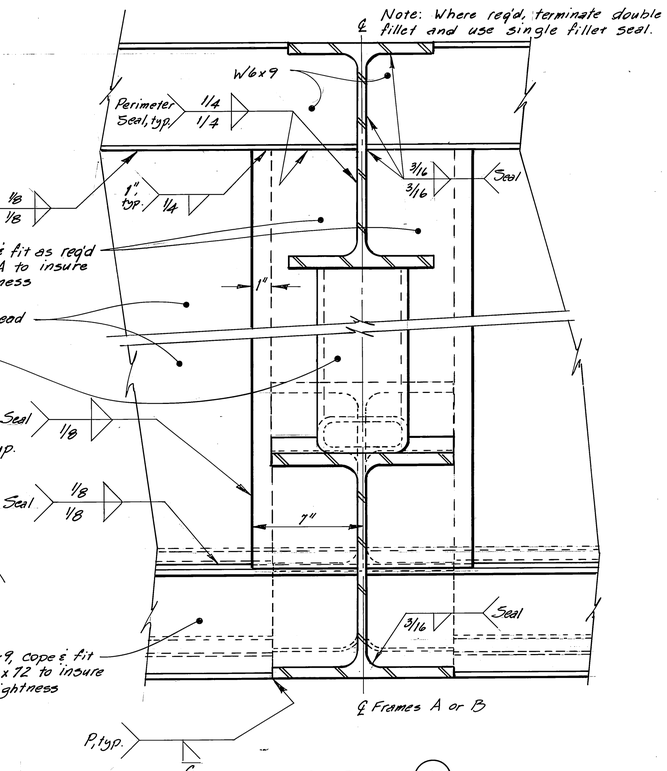


SECTION A
(From Sheet 25)

SECTION F



SECTION B
(From Sheet 25)



SECTION H

* Note: Size and type of weld to accomodate seal. On exterior, grind flush to insure proper fit up of hull panels and still maintain watertightness.

See Attachment P.23

AS BUILT
Mark Halvorsen 1/24/89

STAMP

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

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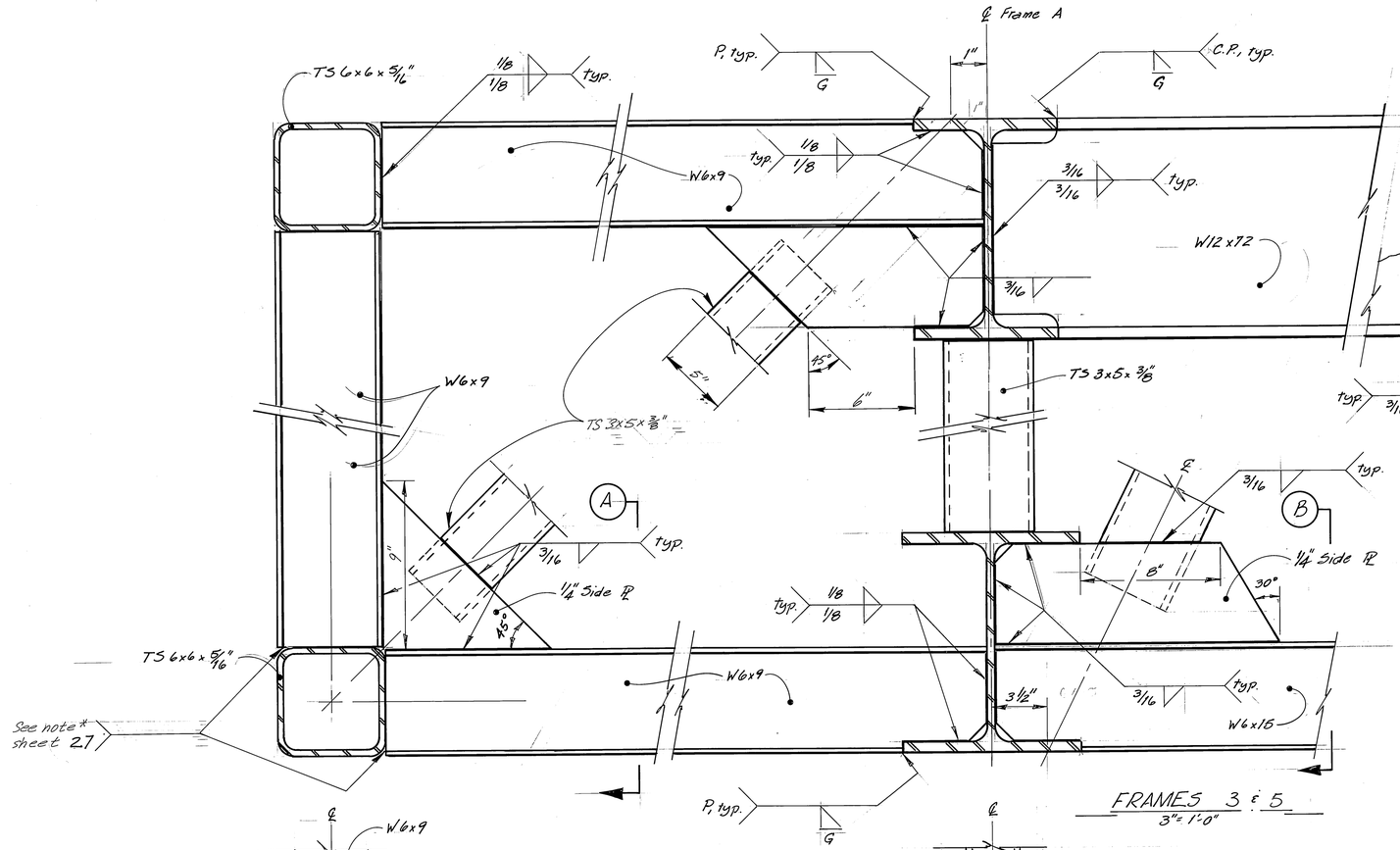
Sitka Alaska

DETAILS FRAMES 2, 4 & 6

DESIGNED JAL	CHECKED JS	DRAWN JAL	DATE 3-84
PROJECT NUMBER RS-M-935(9)		SHEET 27	OF 41

James A. Lowell #OE-5997
REGISTERED PROFESSIONAL ENGINEER
2/25/85



AS BUILT Mark Halvorsen 11/25/89

STAMP

STATE OF ALASKA
4TH
James A. Lowell
#CE-5597
REGISTERED PROFESSIONAL ENGINEER
2/25/85

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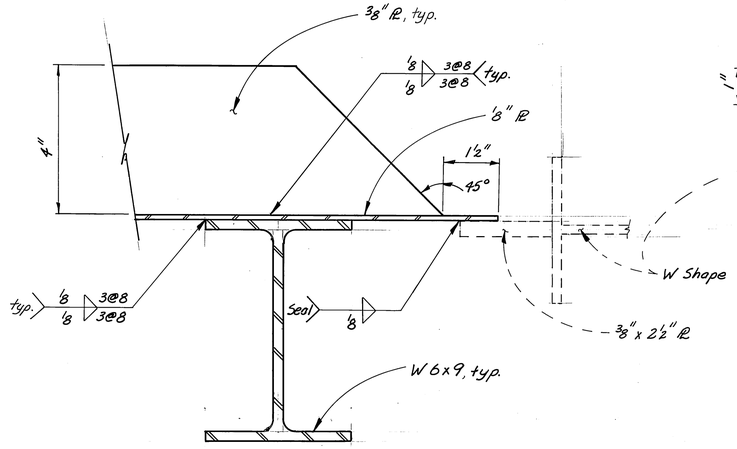
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

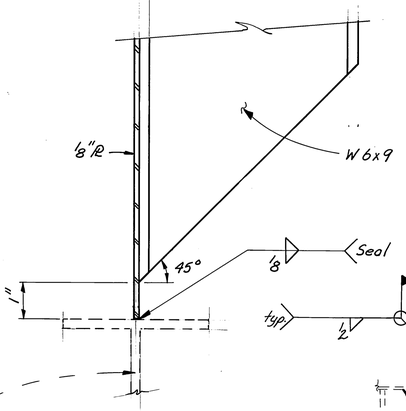
Sitka Alaska

DETAILS FRAMES 3 & 5

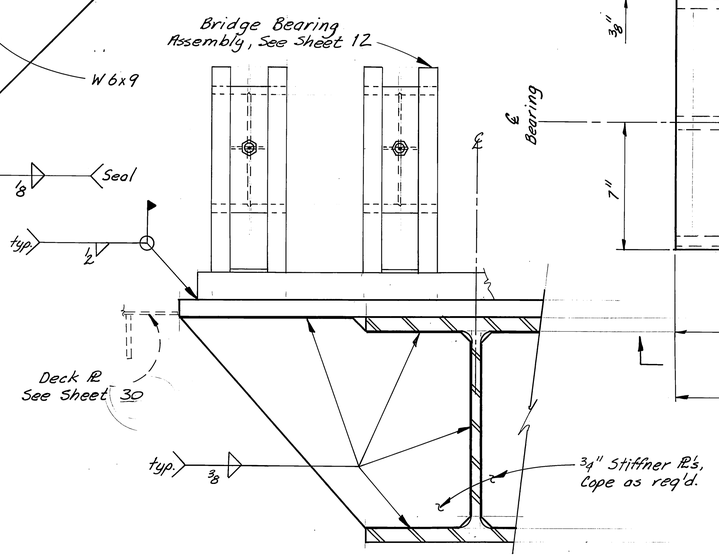
DESIGNED JAL	CHECKED JS	DRAWN JAL	DATE 3-84
PROJECT NUMBER RS-M-935(9)		SHEET 28	OF 41



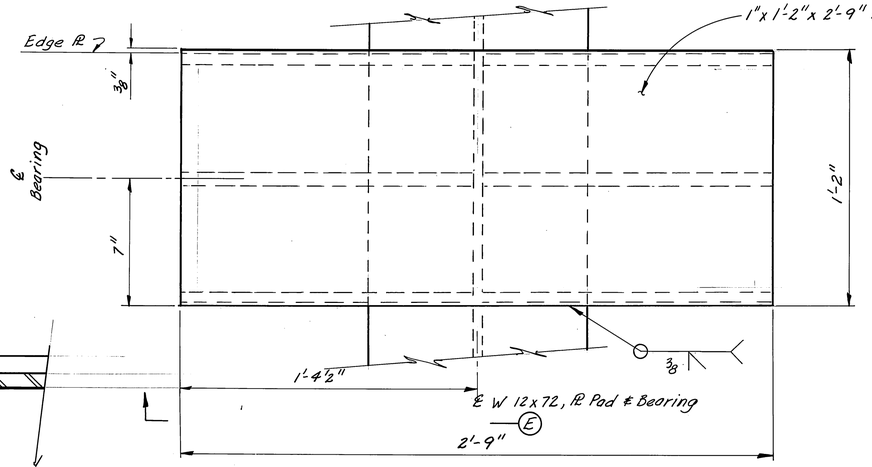
SECTION C



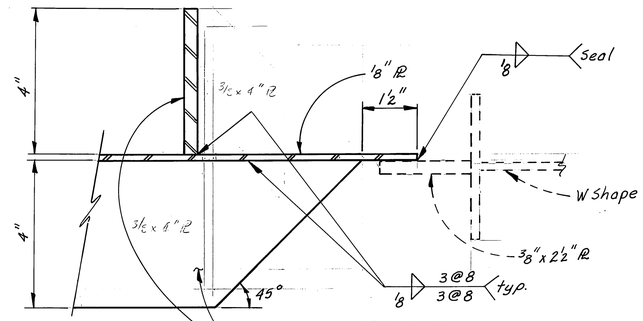
SECTION D



SECTION E

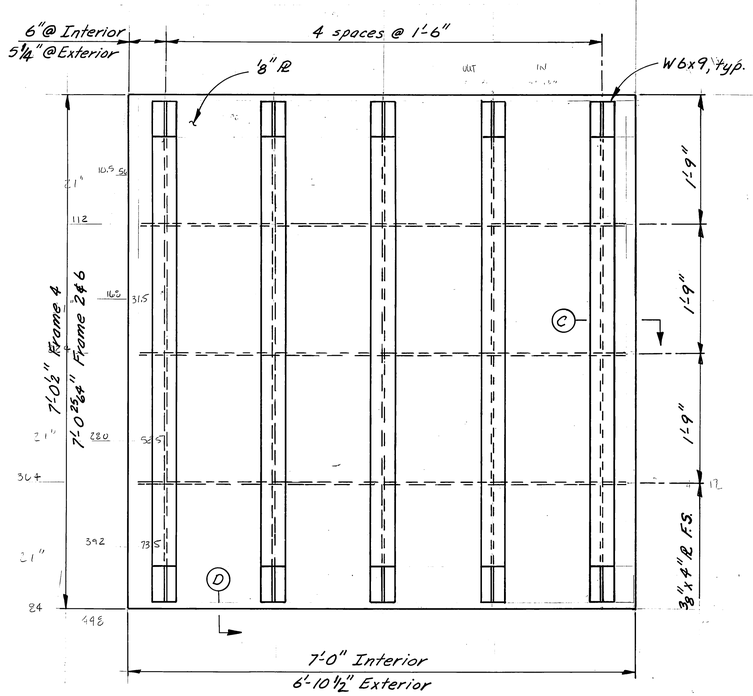


BRIDGE TO BARGE BEARING PAD
(PLAN VIEW)

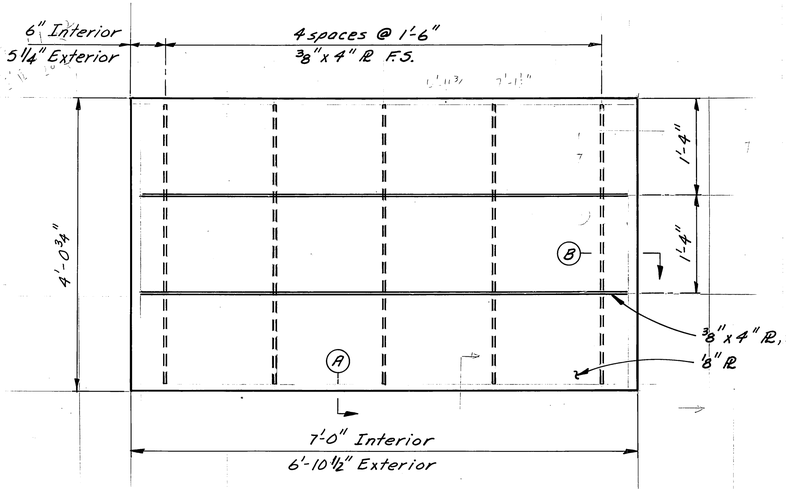


SECTION B

SECTION A



BULKHEADS - FRAMES 2, 4 & 6



BULKHEADS - FRAMES 1 & 7

AS BUILT
Mark Anderson 11/25/89

See Attachment P. 23

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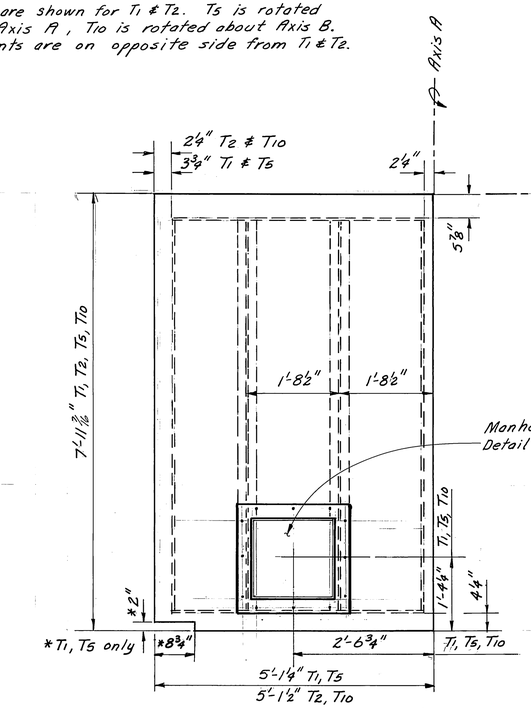
WATERTIGHT BULKHEADS & BRIDGE BEARING DETAILS

DESIGNED	CHECKED	DRAWN	DATE
JAL	JS	JS	3-84

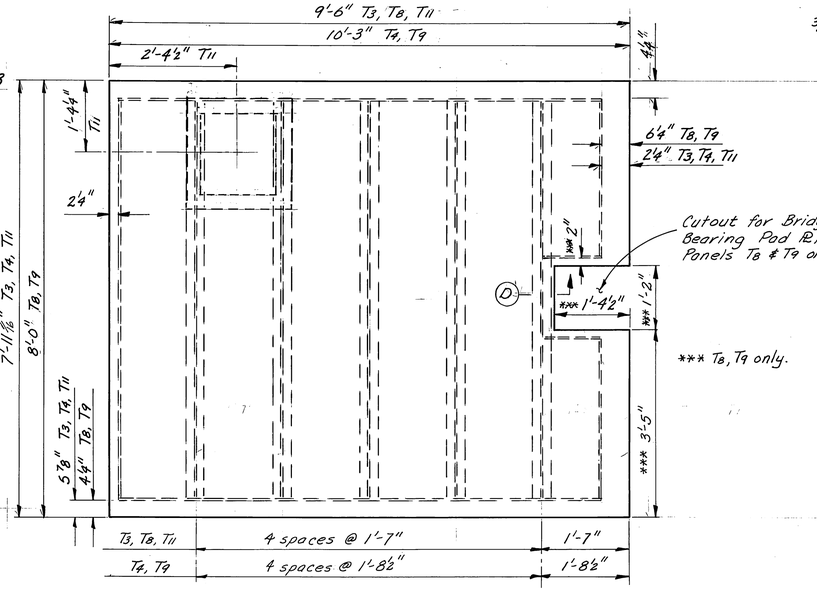
PROJECT NUMBER RS-M-935(9)

SHEET 29 OF 41

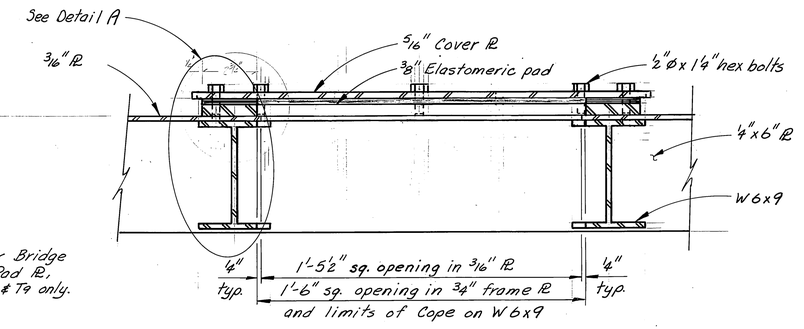
Note: Details are shown for T1 & T2. T5 is rotated about Axis A, T10 is rotated about Axis B. Weldments are on opposite side from T1 & T2.



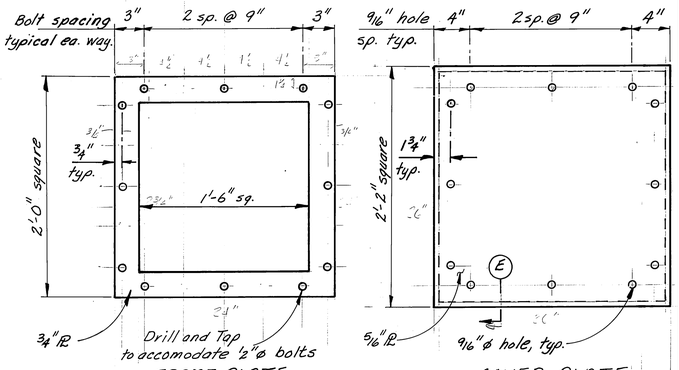
PANELS T1, T2, T5, T10



PANELS T3, T4, T8, T9, T11

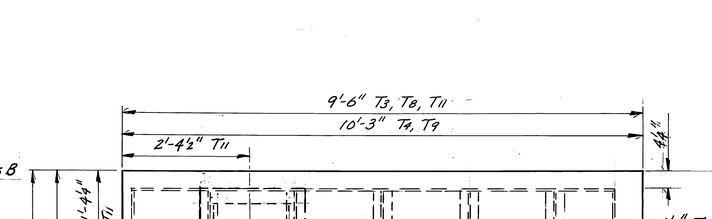


SECTION B

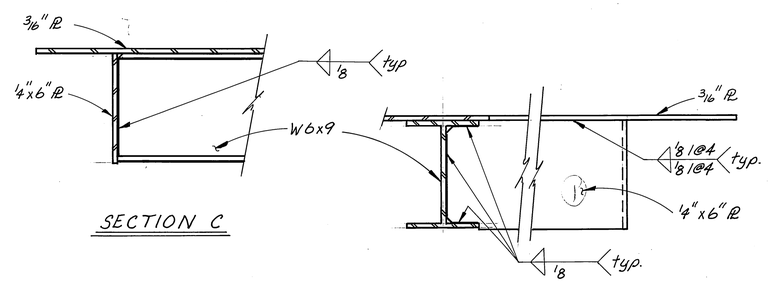


FRAME PLATE

COVER PLATE

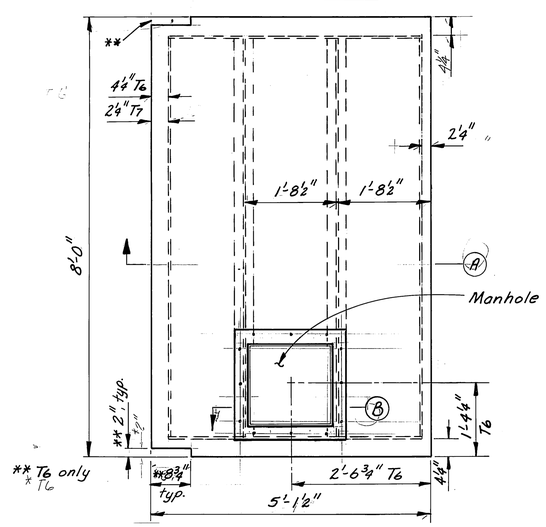


SECTION A

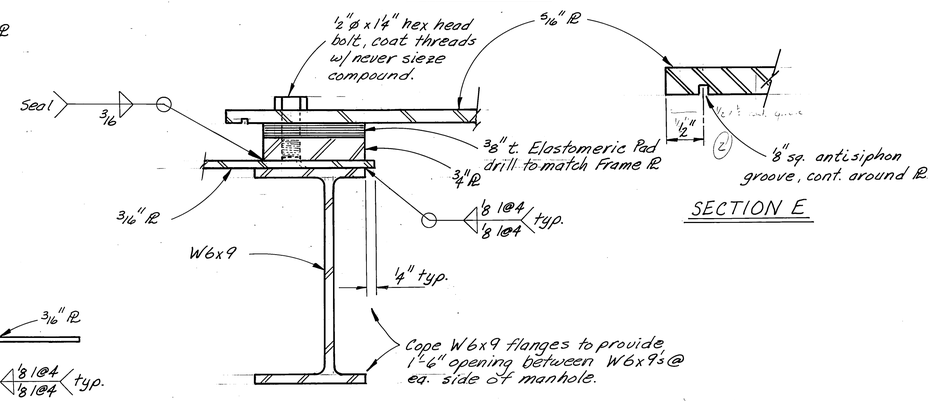


SECTION C

SECTION D



PANELS T6 & T7



DETAIL A

SECTION E

AS BUILT Mark Jacobsen 1/25/89

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STATE OF ALASKA
49TH
James A. Lowell
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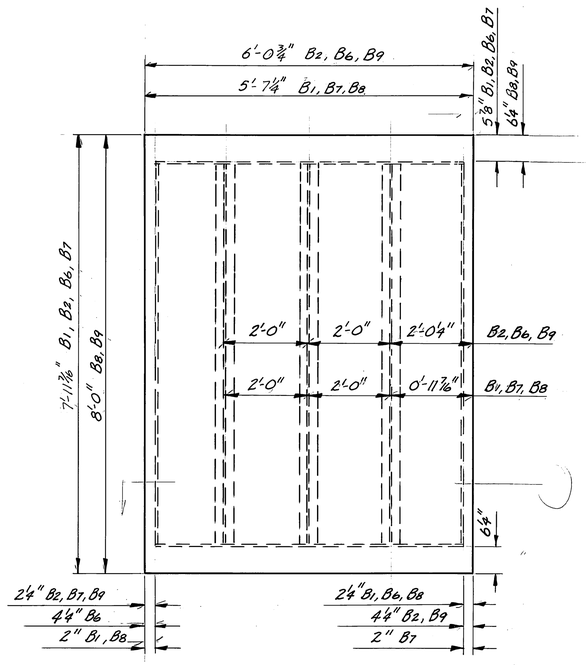
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

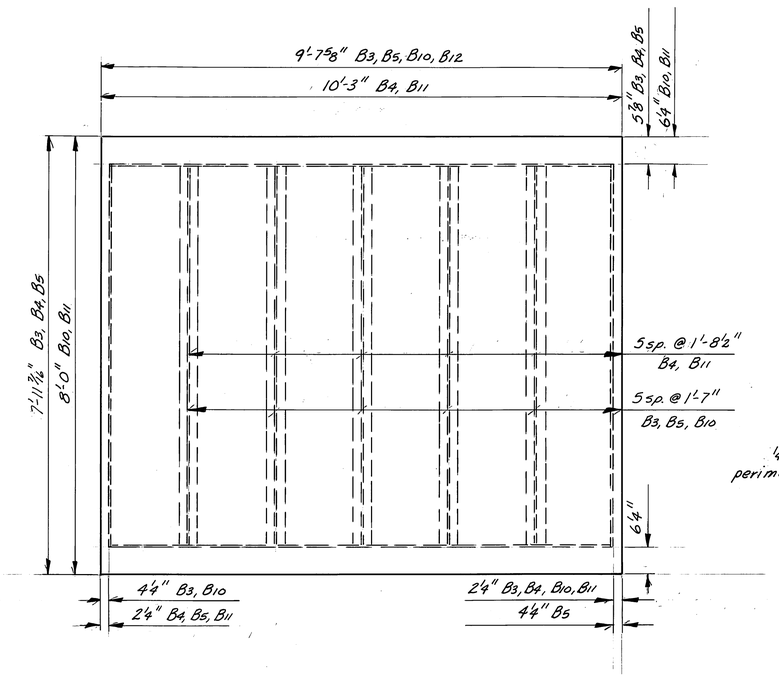
Sitka Alaska

PANELS T1 - T11
AND MANHOLE DETAILS

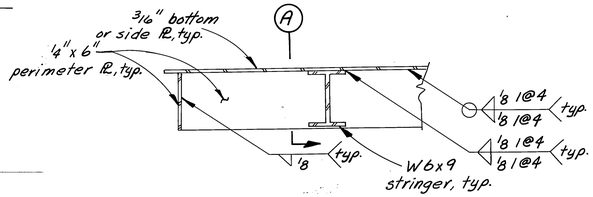
DESIGNED JAL	CHECKED JS	DRAWN JAL/LG	DATE 3-84
PROJECT NUMBER RS-M-935(9)		SHEET 30	OF 41



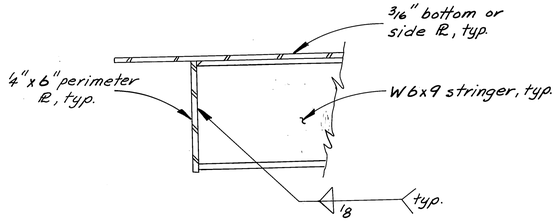
PANELS B1, B2, B6, B7, B8, B9



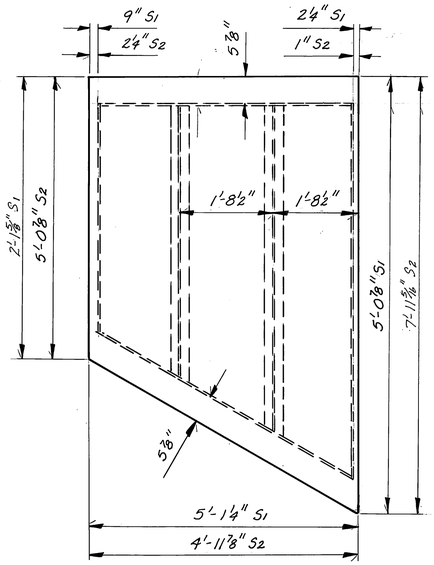
PANELS B3, B4, B5, B10, B11



TYPICAL PARTIAL SECTION

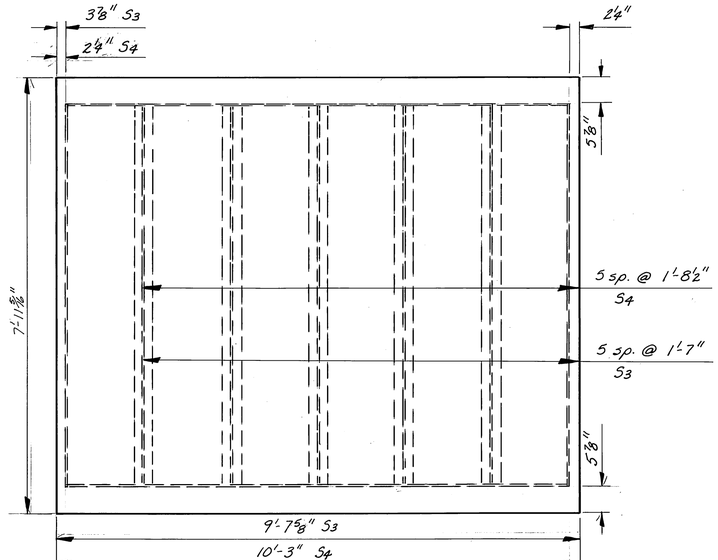


SECTION A



PANELS S1, S2

Note: S1 & S2, 2 req'd. ea. type as shown, 2 req'd ea. type w/ weldments on near side.



PANELS S3, S4

Note: S3 & S4, 2 req'd. ea. type as shown, 2 req'd. ea. type w/ weldments on near side.

See Attachment P.23

AS BUILT Mark Halvorsen 11/25/89

STAMP

STATE OF ALASKA 49TH James A. Lowell #CE-5597 REGISTERED PROFESSIONAL ENGINEER

2/25/85

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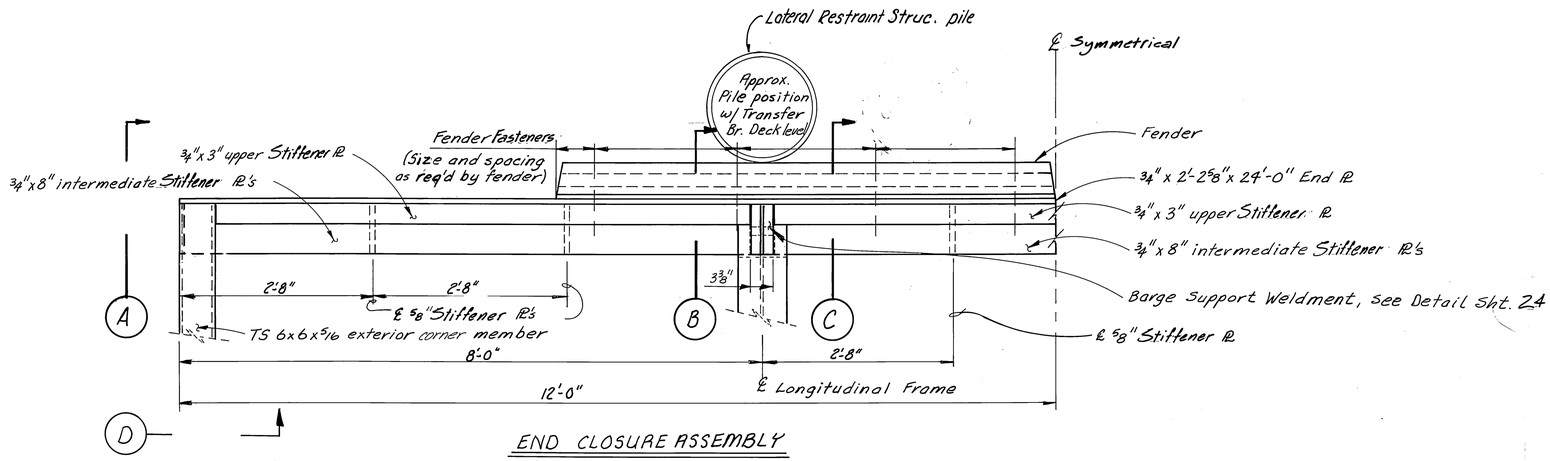
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

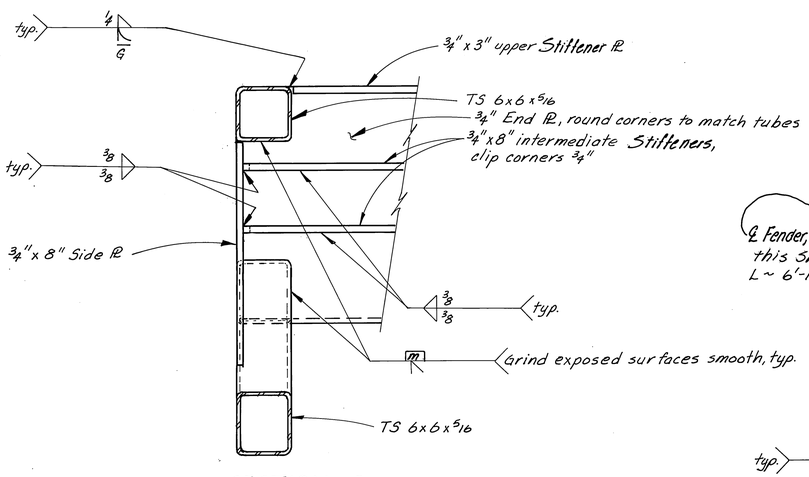
Sitka Alaska

PANELS B1 - B11 & S1 - S4

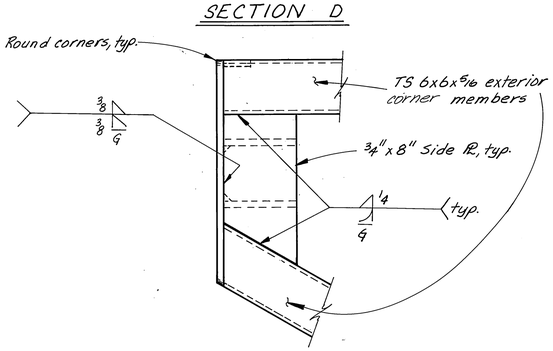
DESIGNED JAL	CHECKED JS	DRAWN JAL-JS	DATE 3-84
PROJECT NUMBER RS-M-935(9)		SHEET 31 OF 41	



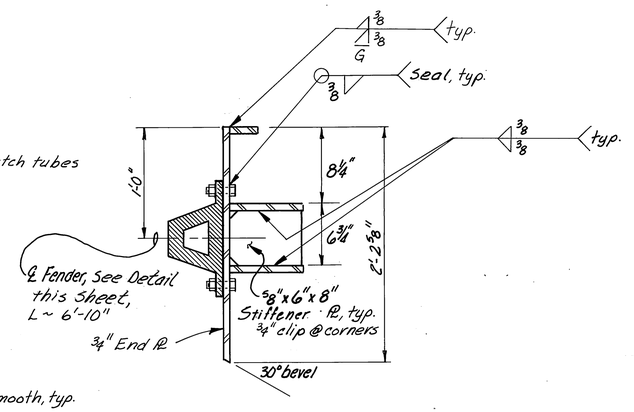
END CLOSURE ASSEMBLY



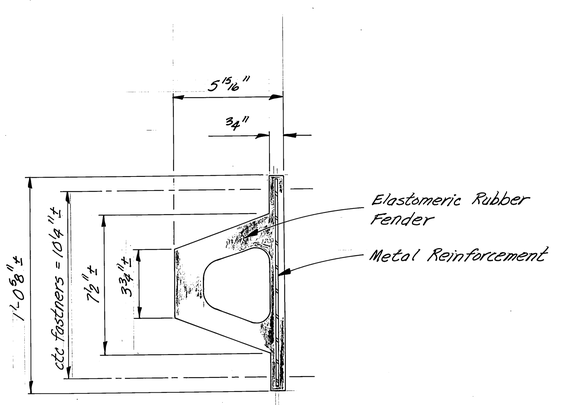
SECTION D



SECTION A

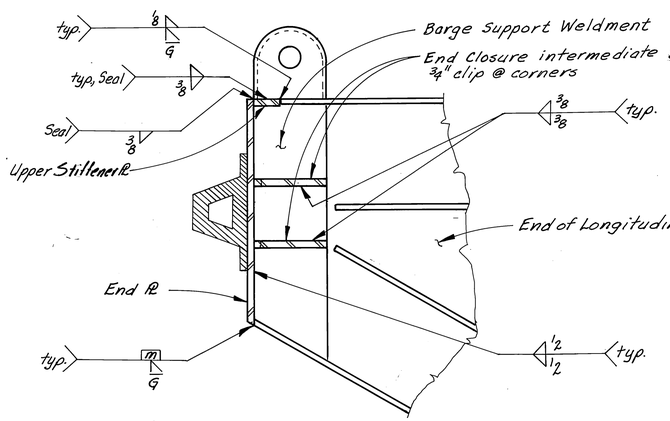


SECTION C



Note: Approx. 8ᵏ @ 45% deflection per ft. of length reqd.

FENDER DETAIL



SECTION B

AS BUILT Mark Halvorsen 1/25/89

Note: Deck, side and bottom panels not shown for clarity.

STAMP

STATE OF ALASKA
REGISTERED PROFESSIONAL ENGINEER
James A. Lowell
#CE-5597
2/25/85

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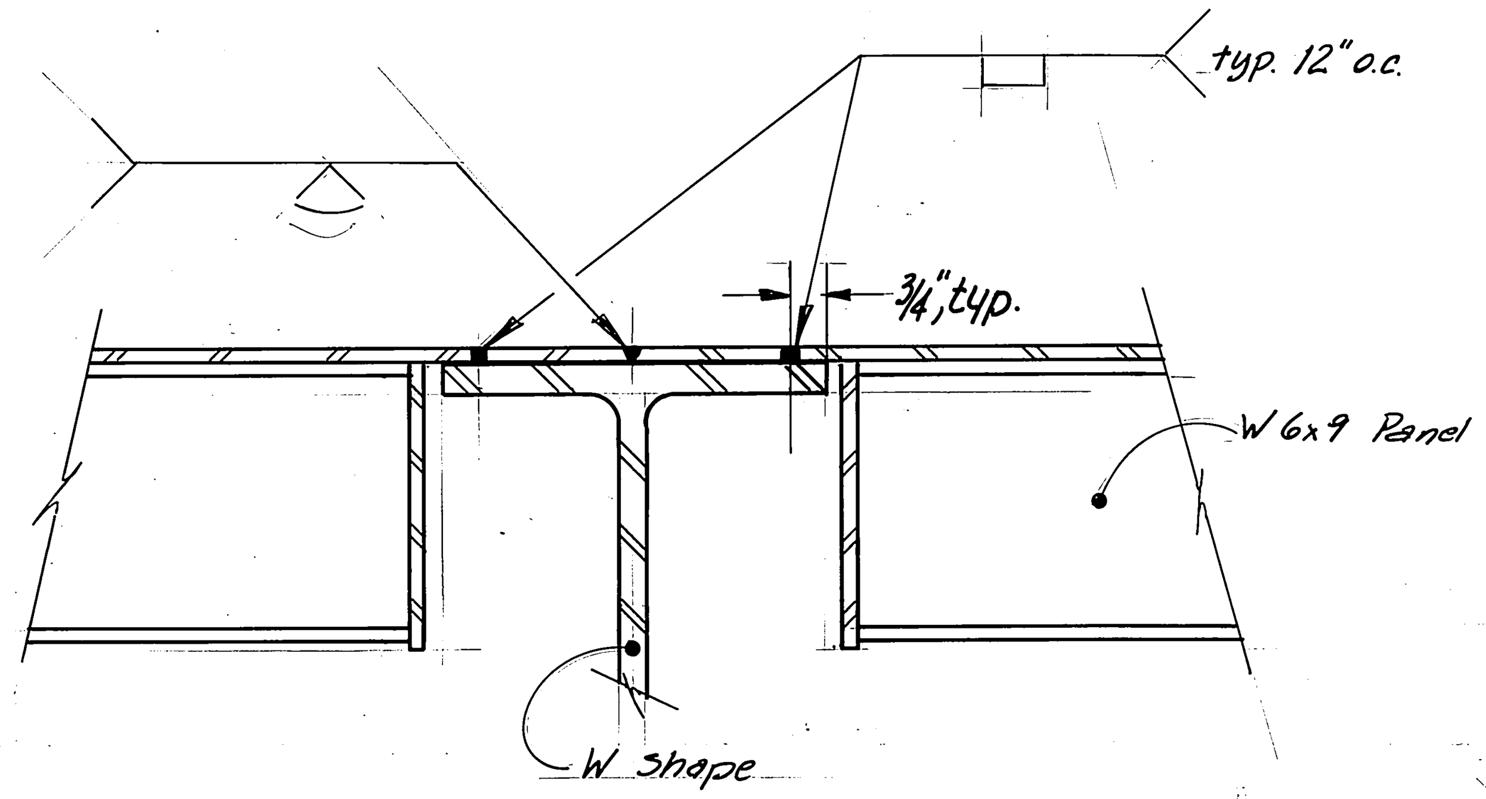
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

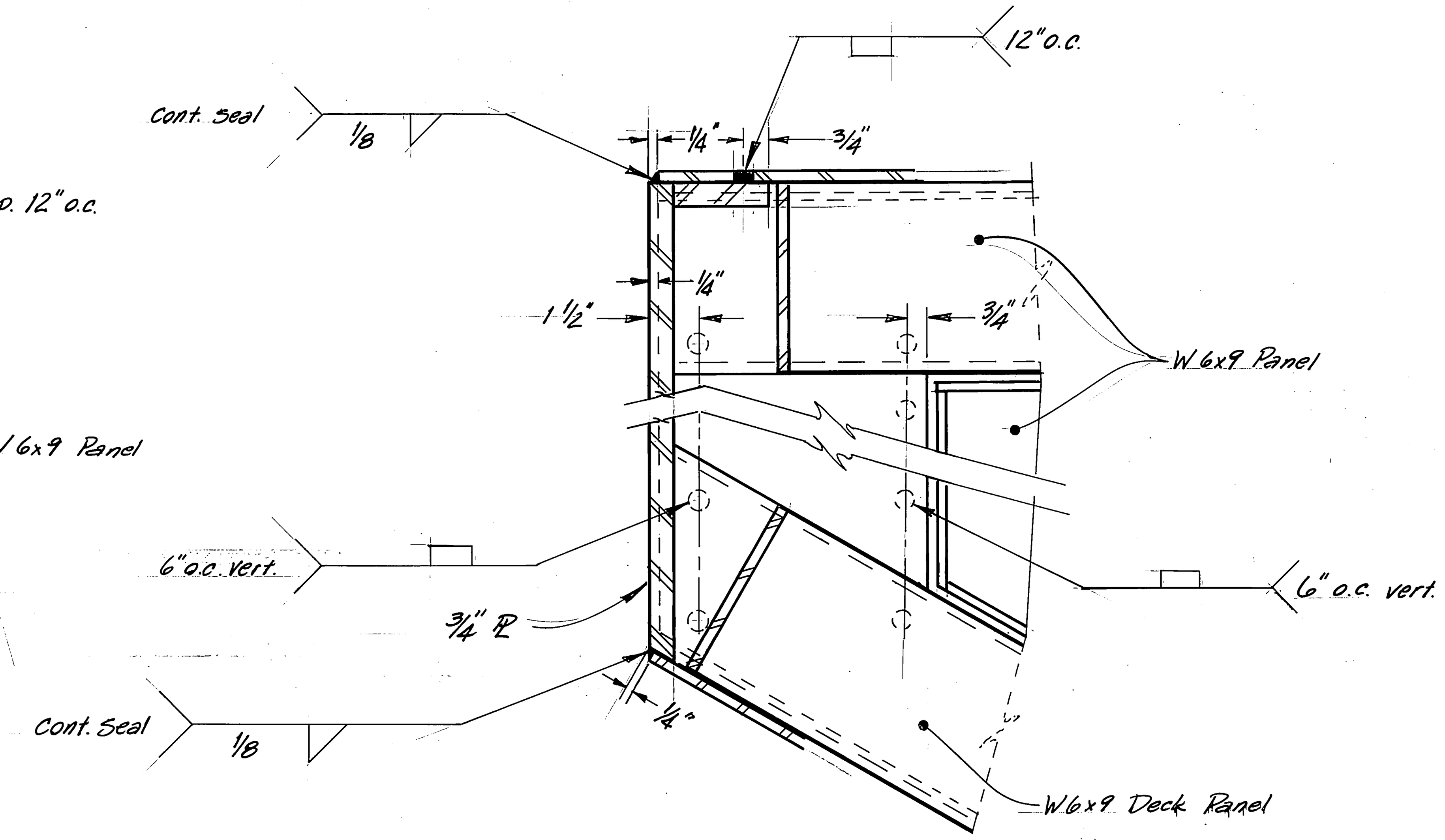
Sitka Alaska

END CLOSURE ASSEMBLY AND FENDER DETAILS

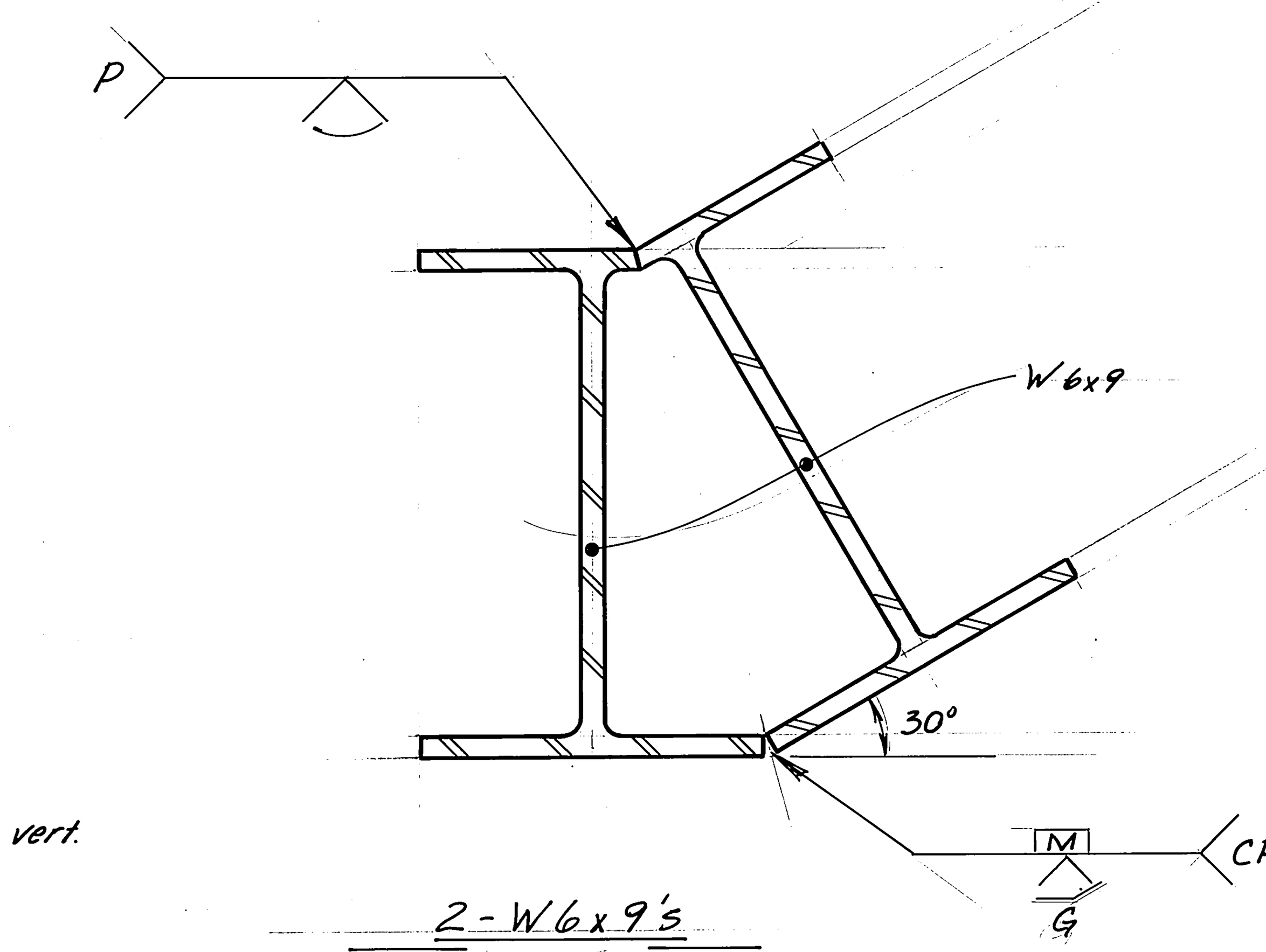
DESIGNED ABL	CHECKED LS	DRAWN ABL/LS	DATE 3-84
PROJECT NUMBER RS-M-935 (9)		SHEET 32	OF 41



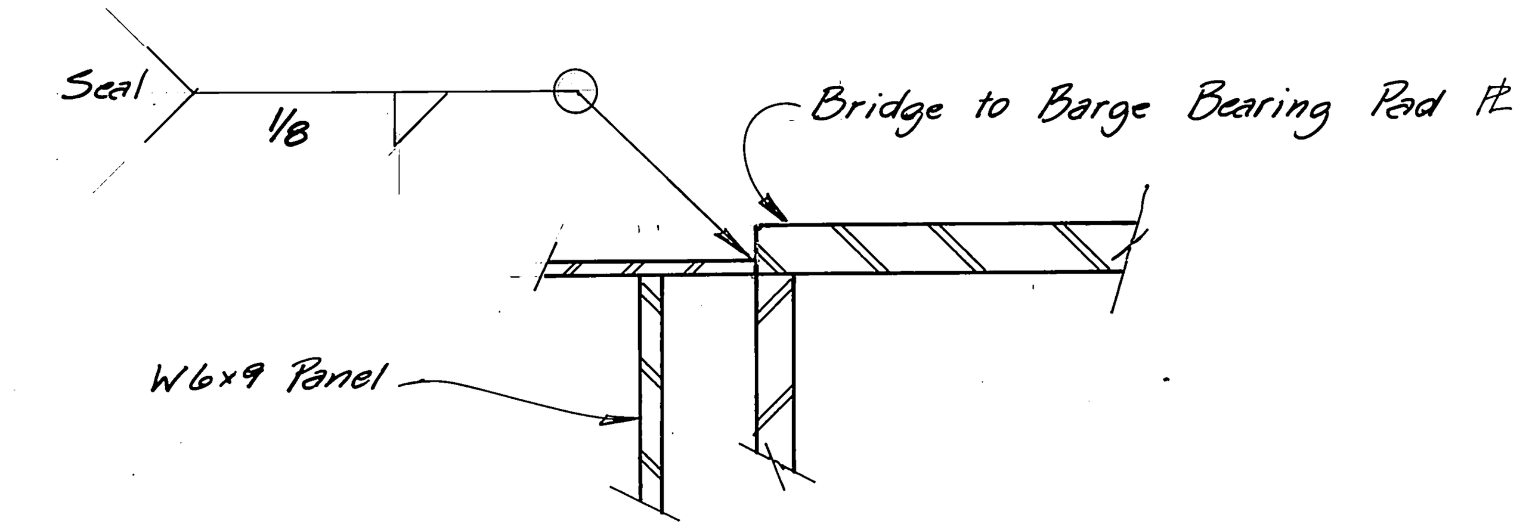
SECTION (B)
3"=1'-0"



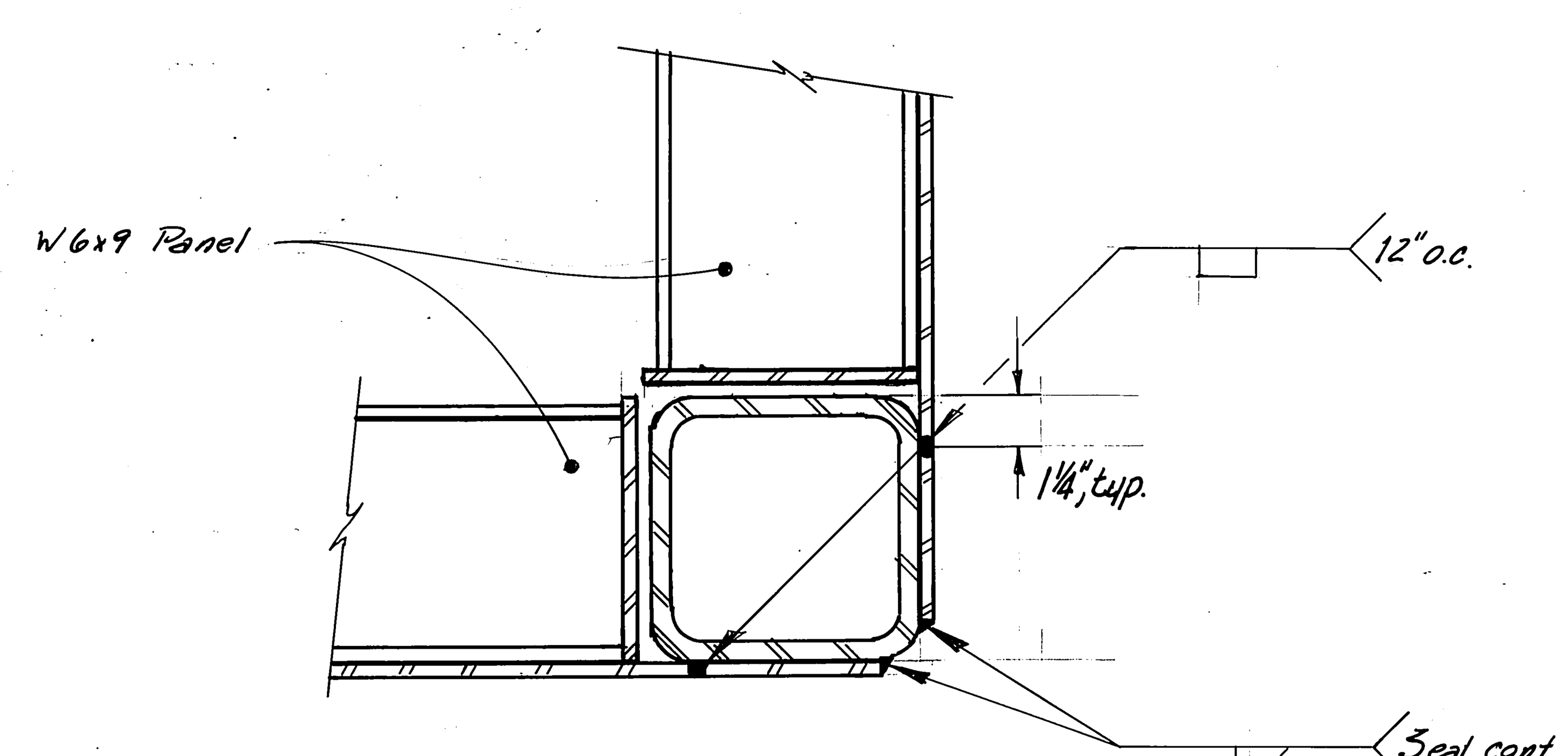
SECTION (A)
3"=1'-0"



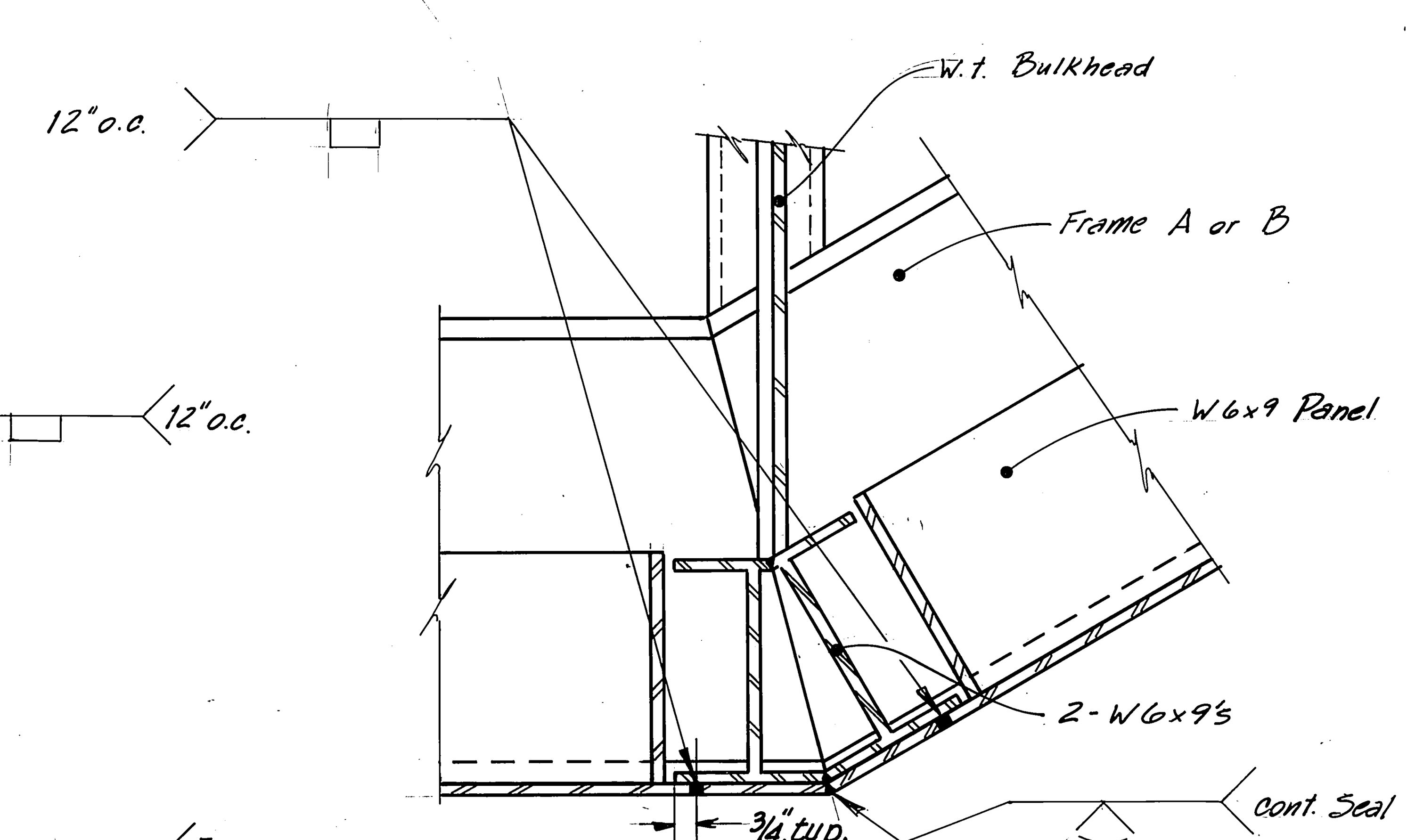
2-W6x9's
Half Size



SECTION (D)
3"=1'-0"



SECTION (C)
3"=1'-0"

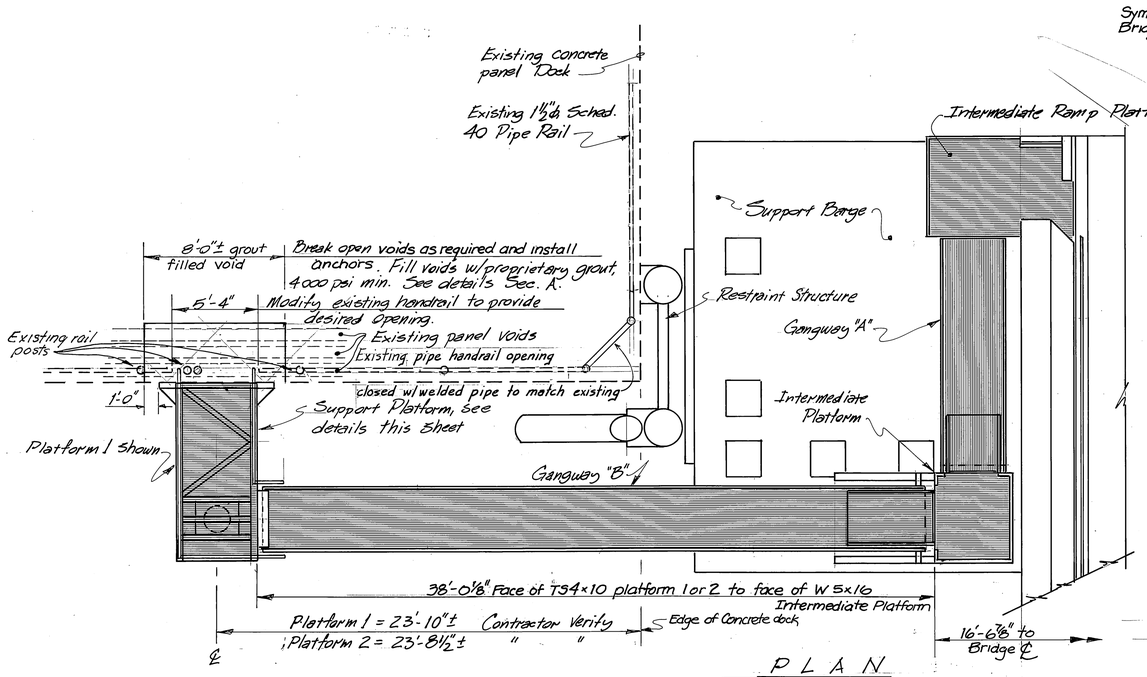


ELEVATION
BOTTOM PANEL CONN. @ MAIN FRAME A OR B
3"=1'-0"

AS BUILT Mark Halvorsen 1/25/89

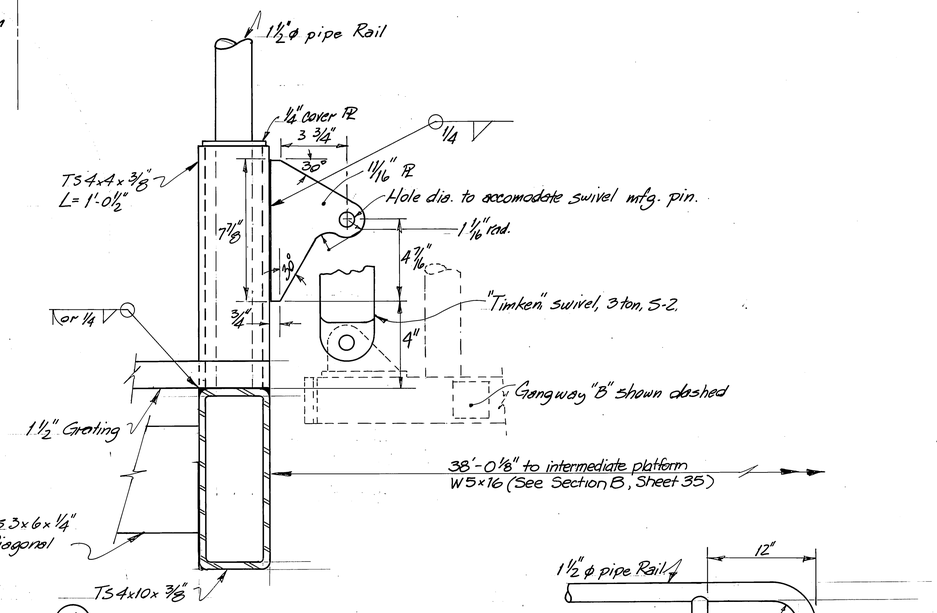
STAMP	DO NOT SCALE THIS DRAWING — USE DIMENSIONS
James A. Lowell #CE-5597 2/25/85	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES Sitka Alaska PANEL CONNECTION & MISC. DETAILS
	DESIGNED JAL · CHECKED JS · DRAWN JAL · DATE 3-84
	PROJECT NUMBER RS-M-935 (9) · SHEET 33 OF 41

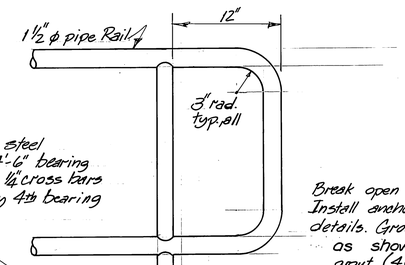
97238



PLAN

½"= 1'-0"

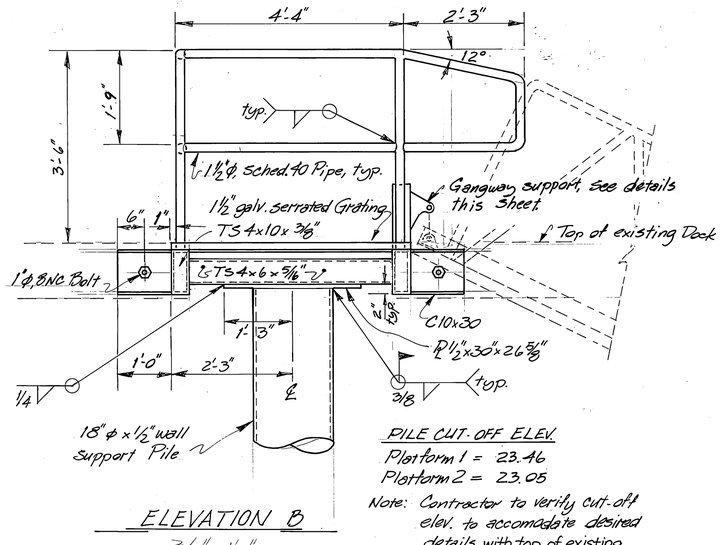




Note: All open tube ends require ¼" cover plates. Seal weld.

Note: Install 1"ϕ drain holes in bottom of panel voids to insure non-entrapment of water in voids each side of new 8' filled section of voids.

*Details shown using "DAYTON" components. Contractor may submit alternate for approval



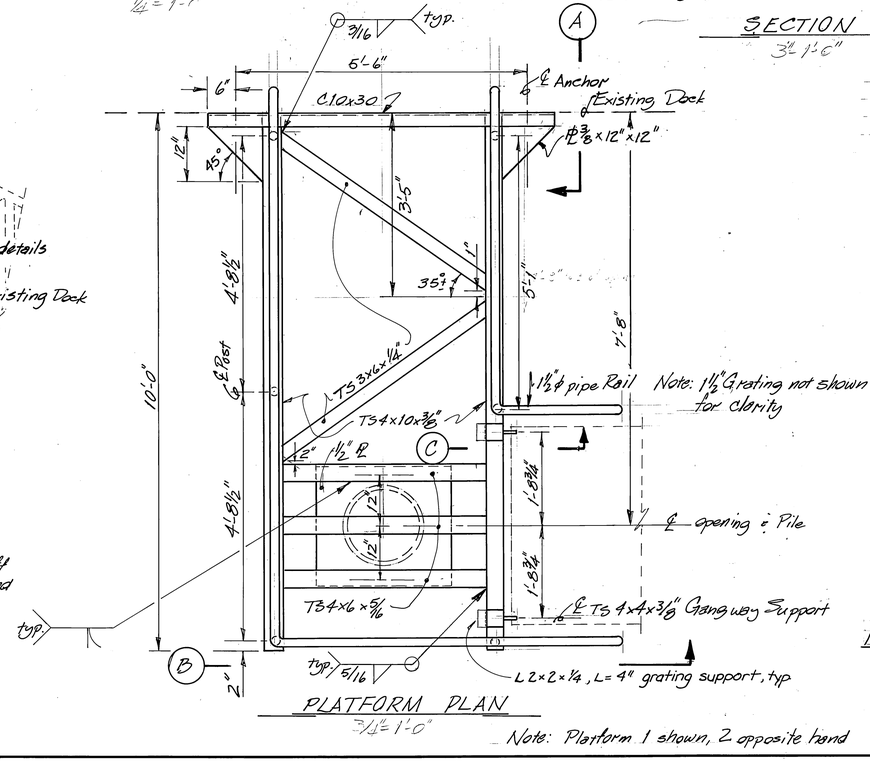
ELEVATION B

¾"= 1'-0"

PILE CUT-OFF ELEV.
Platform 1 = 23.46
Platform 2 = 23.05

Note: Contractor to verify cut-off elev. to accomodate desired details with top of existing dock to be top of grate on platform.

Approx. total weight per Platform = 2100 lbs.



PLATFORM PLAN

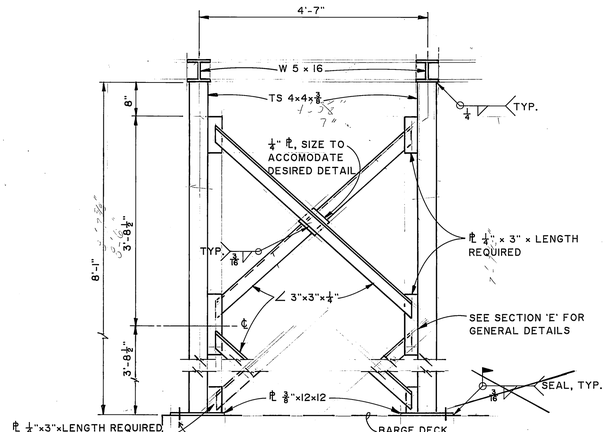
¾"= 1'-0"

Note: Platform 1 shown, 2 opposite hand

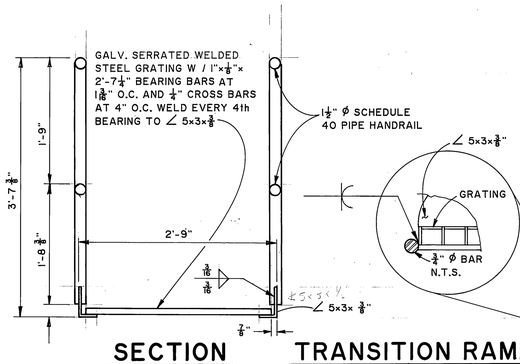
AS BUILT
Mark Salvesen
11/25/89

STAMP	DO NOT SCALE THIS DRAWING – USE DIMENSIONS
STATE OF ALASKA · James A. Lowell · No. 5997 · REGISTERED PROFESSIONAL ENGINEER · 9/15/89	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES Sitka Alaska DOCK ACCESS PLAN & SUPPORT PLATFORM 1 & 2 DETAILS
DESIGNED JAL CHECKED JS DRAWN JAL/DRB DATE 9-87	
PROJECT NUMBER RDS-M-0935 (9) SHEET 34 OF 41	

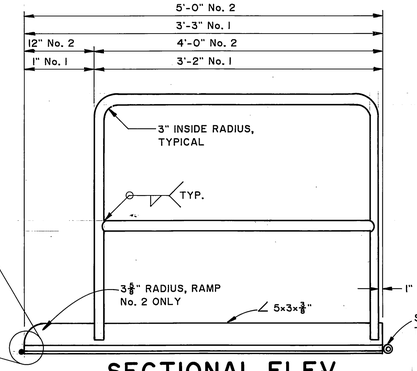
97238



SECTION D

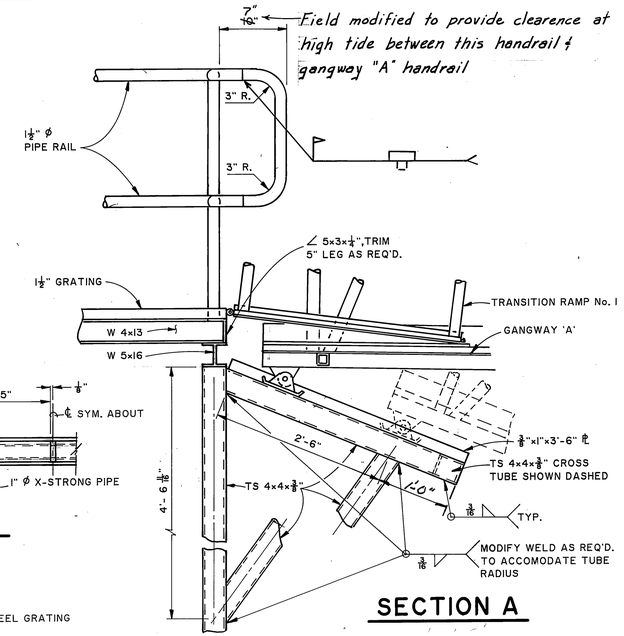


SECTION

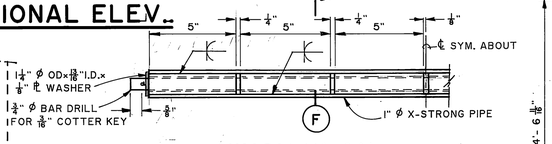


SECTIONAL ELEV.

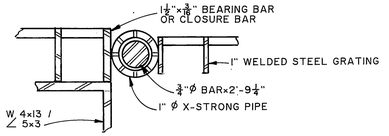
TRANSITION RAMPS 1 & 2



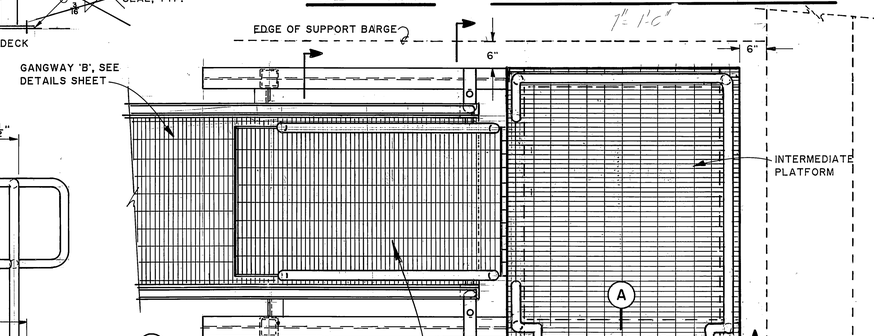
SECTION A



HINGE PLAN



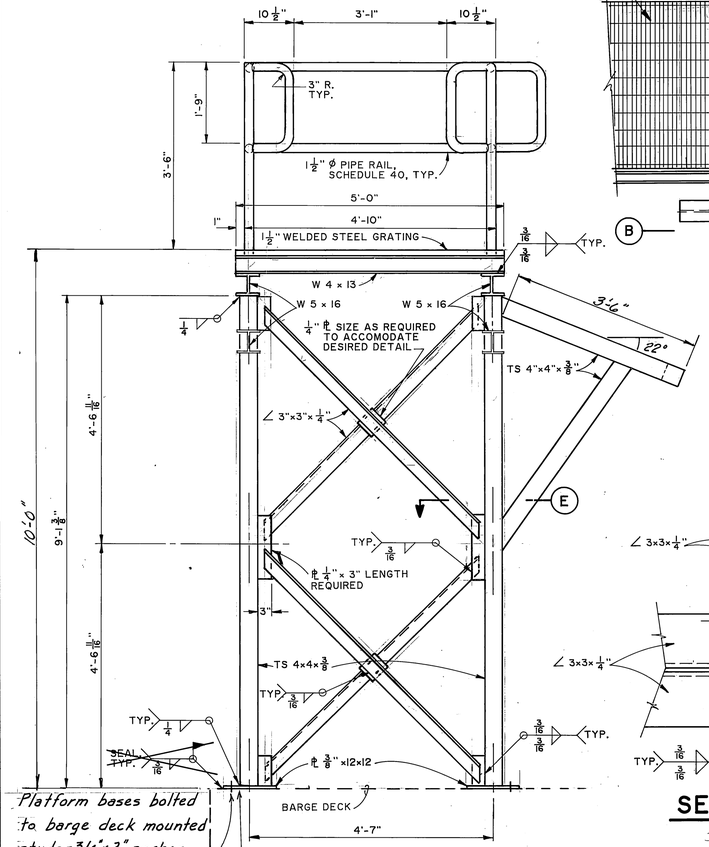
SECTION F



PLAN

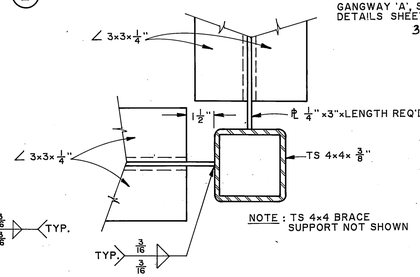
BARGE ACCESS PLATFORM & WALKWAY DETAILS

3/4"= 1'-0"



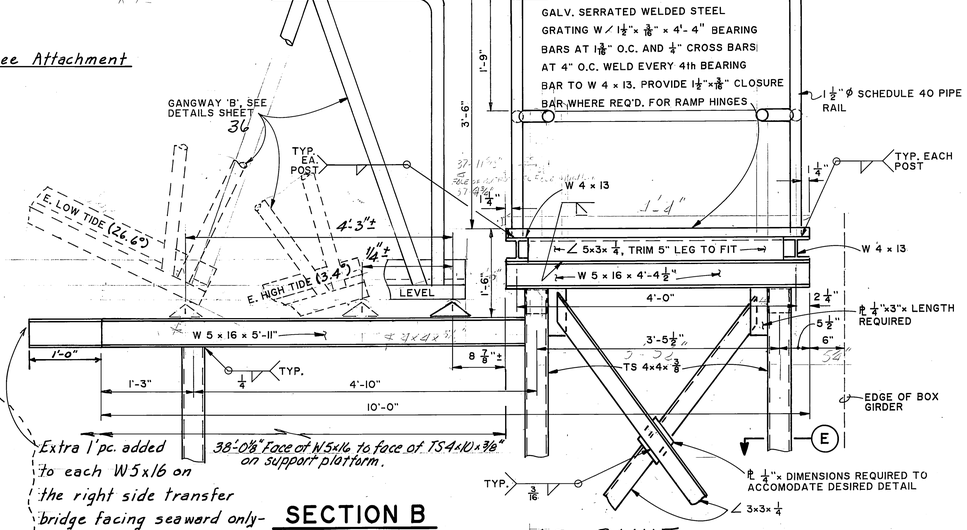
SECTION C

3/4"= 1'-0"



SECTION E

3"= 1'-0"



SECTION B

1"= 1'-0"

AS BUILT Mark Halvorsen 1/26/89

Approx. Platform Weight (incl. Transition Ramps) = 3200 lbs. each.

STAMP

STATE OF ALASKA 49TH JAMES A. LOWELL #CE-5597 REGISTERED PROFESSIONAL ENGINEER

9/15/87

DO NOT SCALE THIS DRAWING – USE DIMENSIONS

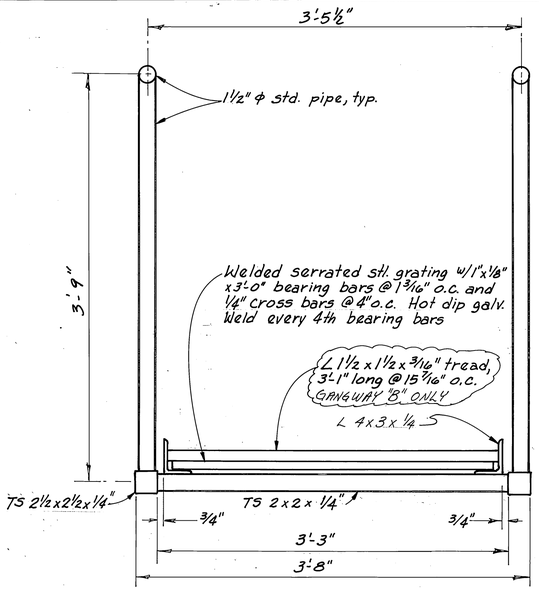
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

SITKA ALASKA

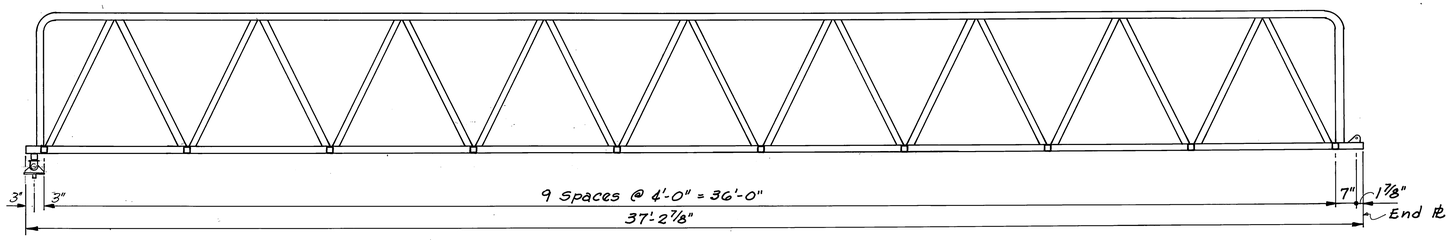
BARGE ACCESS PLATFORMS & WALKWAY DETAILS

DESIGNED	JAL	CHECKED	BAS	DRAWN	JAL / BB	DATE	8 / 87
PROJECT NUMBER	RS-M-0935 (9)			SHEET	35	OF	41

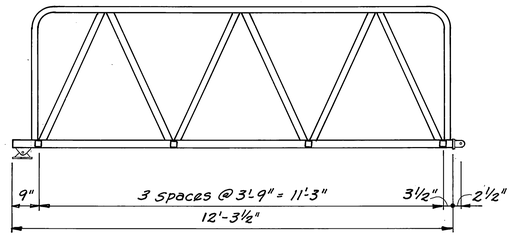
97238



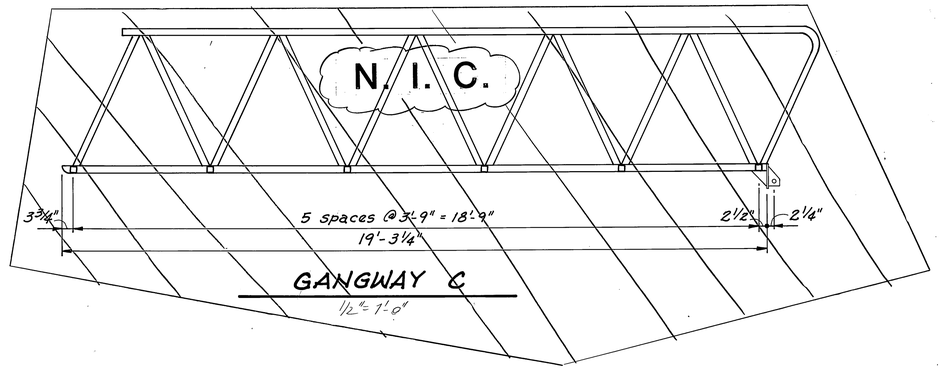
SECTION A
1½" = 1'-0"
TYPICAL ALL GANGWAYS



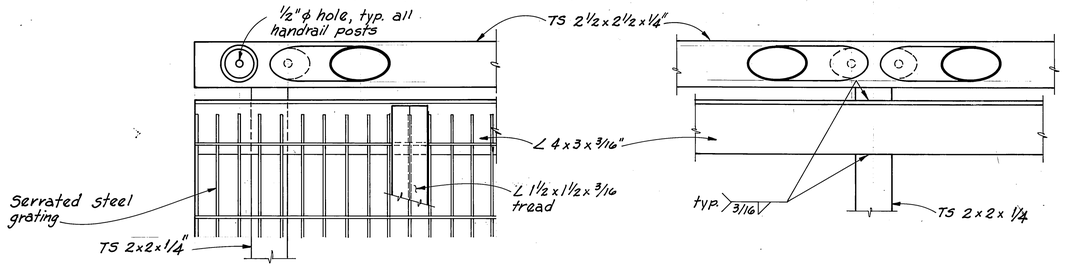
GANGWAY B
½" = 1'-0"



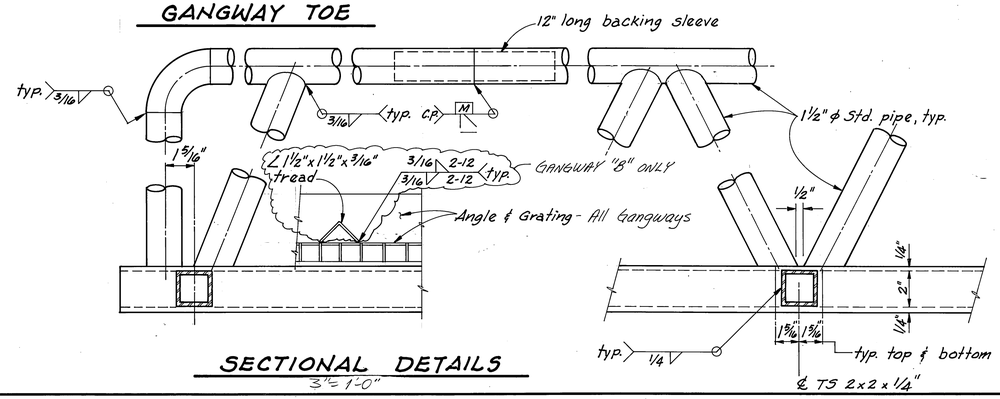
GANGWAY A
½" = 1'-0"



GANGWAY C
½" = 1'-0"



GANGWAY TOE



SECTIONAL DETAILS
3" = 1'-0"

AS BUILT Mark Schoonen 1/26/89

STAMP

STATE OF ALASKA * 49TH
Bern A. Savikko CE-6468
REGISTERED PROFESSIONAL ENGINEER
9-15-87

DO NOT SCALE THIS DRAWING — USE DIMENSIONS

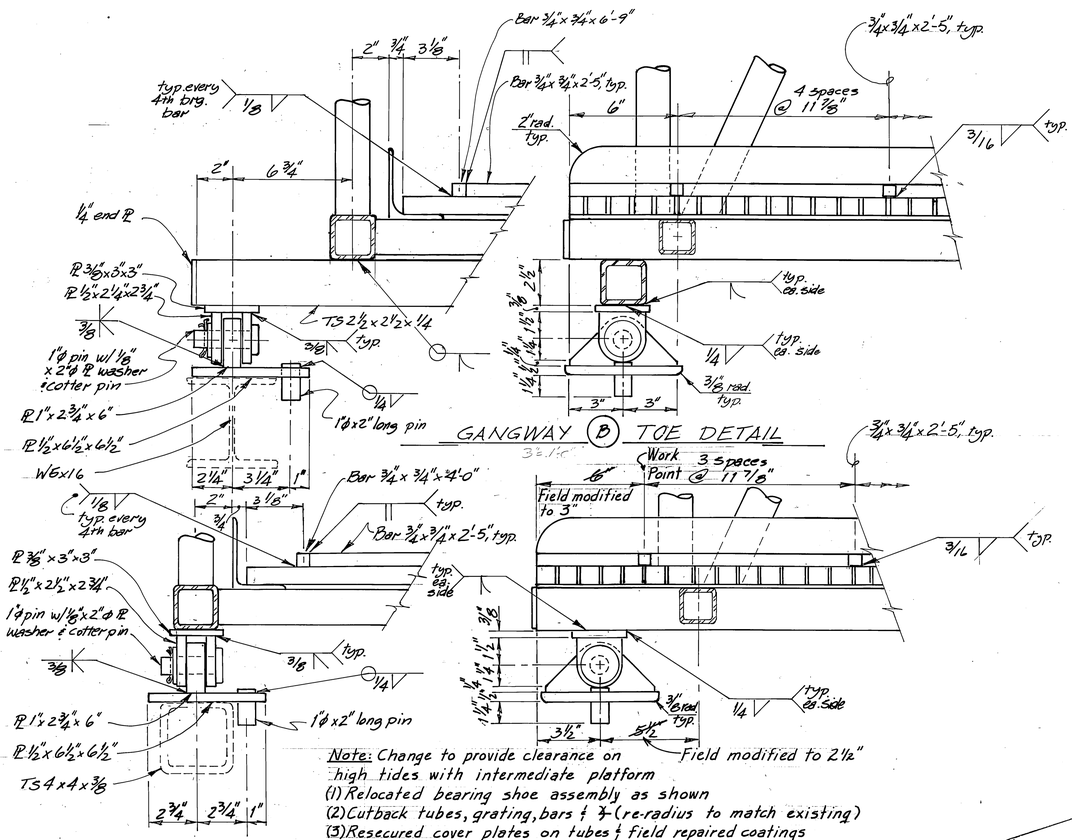
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

SITKA ALASKA

GANGWAYS

DESIGNED BAS	CHECKED JAL	DRAWN BB	DATE 8-87
PROJECT NUMBER RS-M-0935 (9)		SHEET 36	OF 41

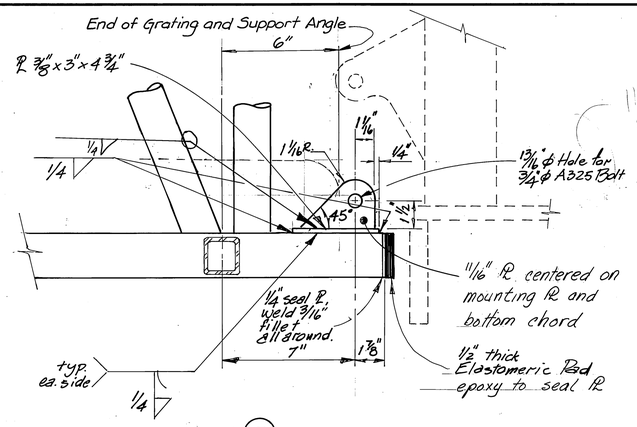
97338



GANGWAY (B) TOE DETAIL

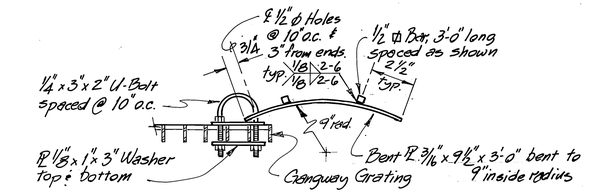
3/4" = 1'-0"

Note: Change to provide clearance on high tides with intermediate platform
(1) Relocated bearing shoe assembly as shown
(2) Cutback tubes, grating, bars & ~~7~~ (re-radius to match existing)
(3) Resecured cover plates on tubes & field repaired coatings



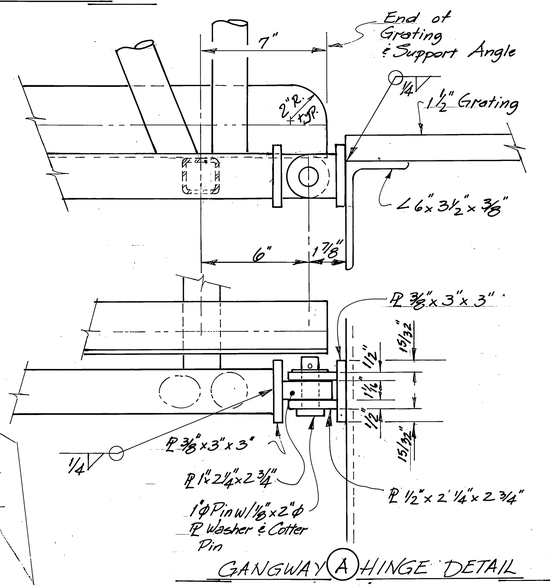
GANGWAY (B) HEAD DETAIL

3/4" = 1'-0"



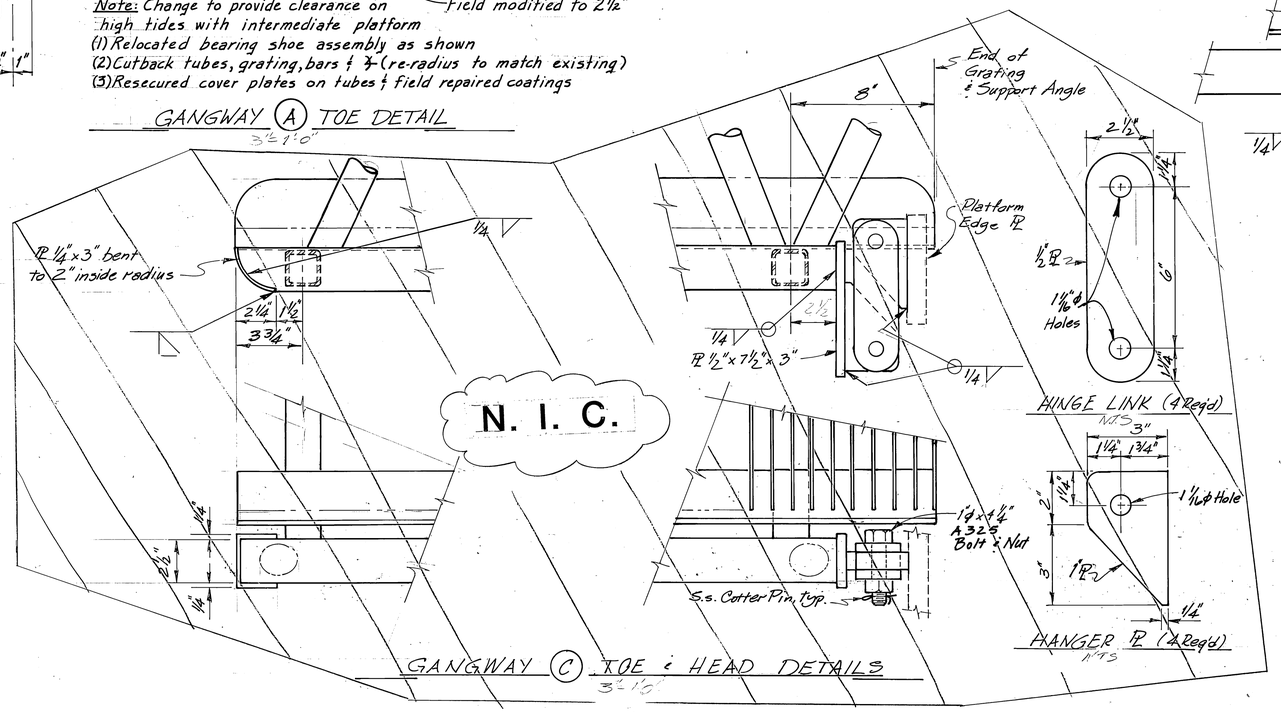
GANGWAY (B) TRANSITION PL

3/4" = 1'-0"



GANGWAY (A) HINGE DETAIL

3" = 1'-0"



GANGWAY (C) TOE & HEAD DETAILS

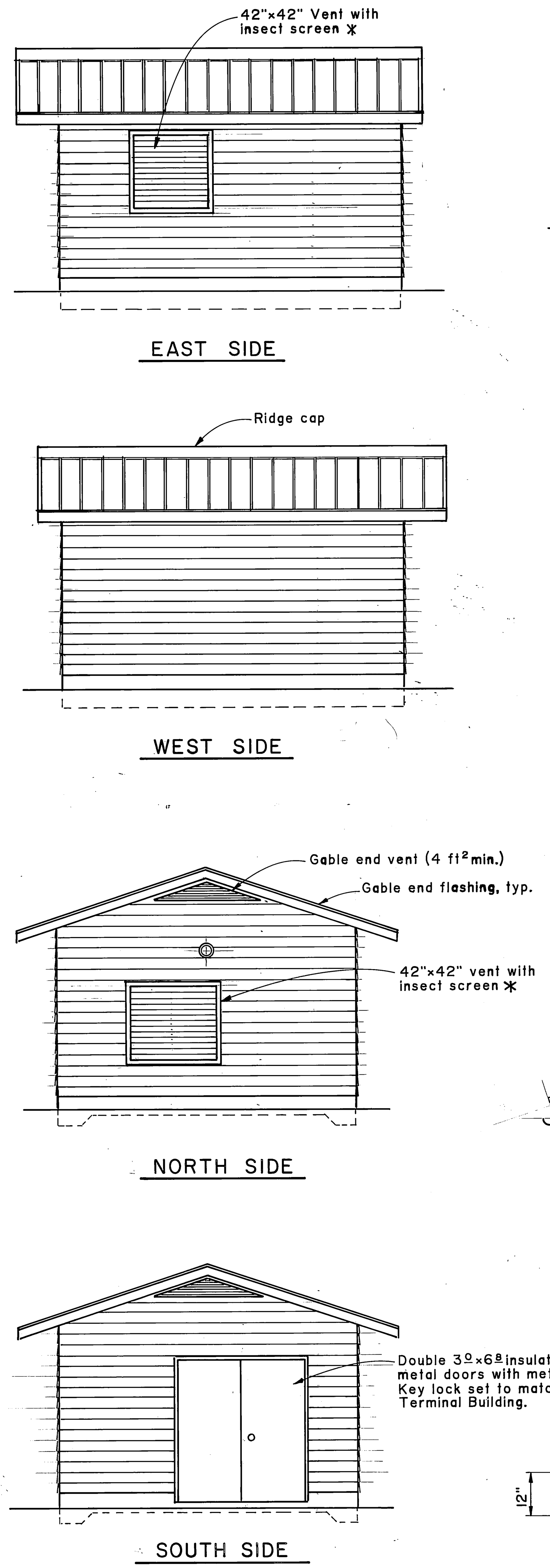
3" = 1'-0"

Gangway A weight ≅ 850 lbs.
Gangway B weight ≅ 4200 lbs.
camber = +1/4" @ ℄

AS BUILT Mark Anderson 1/26/89

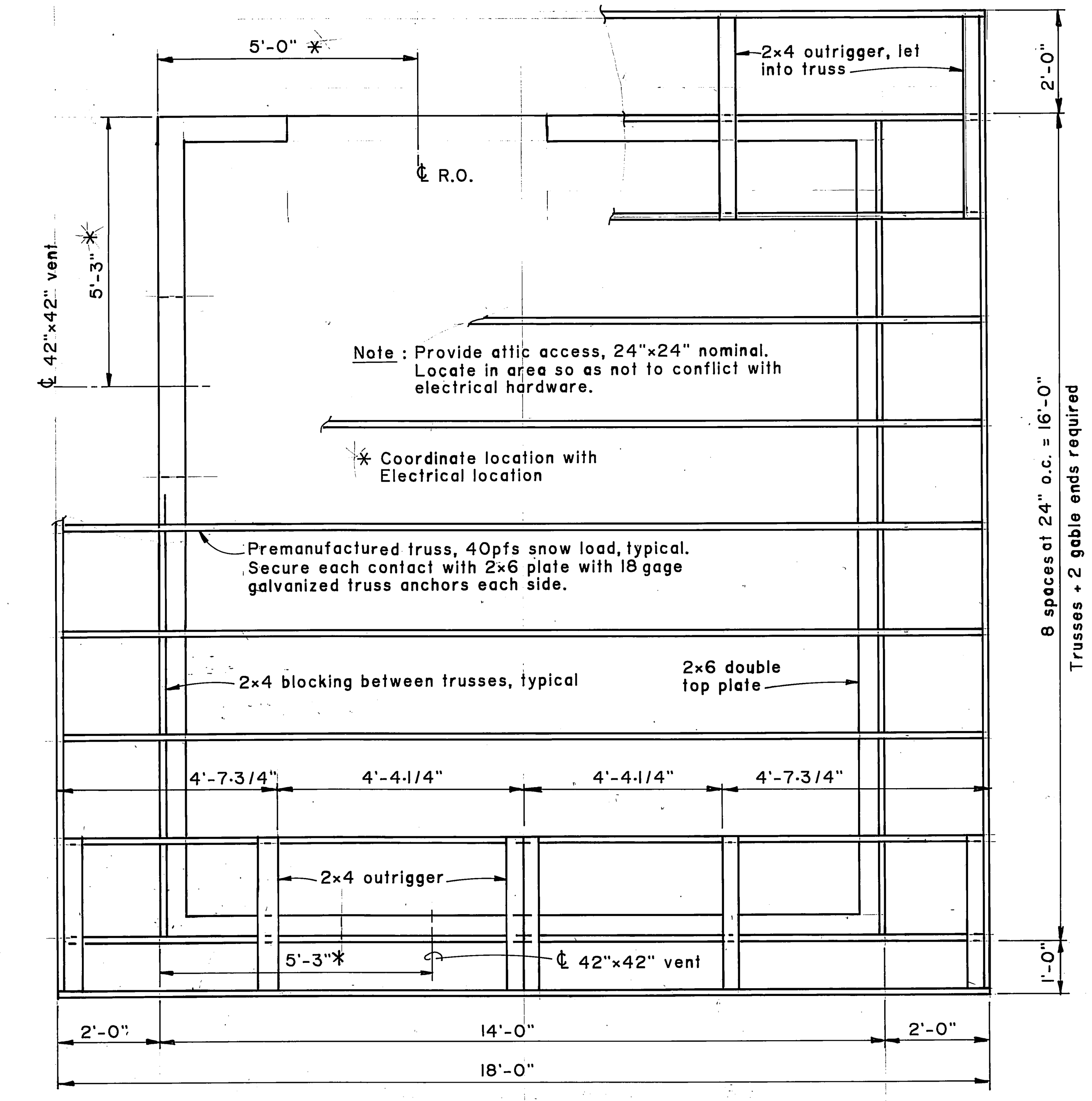
STAMP	DO NOT SCALE THIS DRAWING – USE DIMENSIONS
STATE OF ALASKA * 49TH * Bern A. Savikko CE-6468 REGISTERED PROFESSIONAL ENGINEER 9-15-87	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES Sitka Alaska GANGWAY DETAILS
	DESIGNED BAS CHECKED WMN DRAWN DB DATE 8-87 PROJECT NUMBER RS-M-0935(9) SHEET 37 OF 41

97238



ELEVATIONS

1/4" = 1'-0"



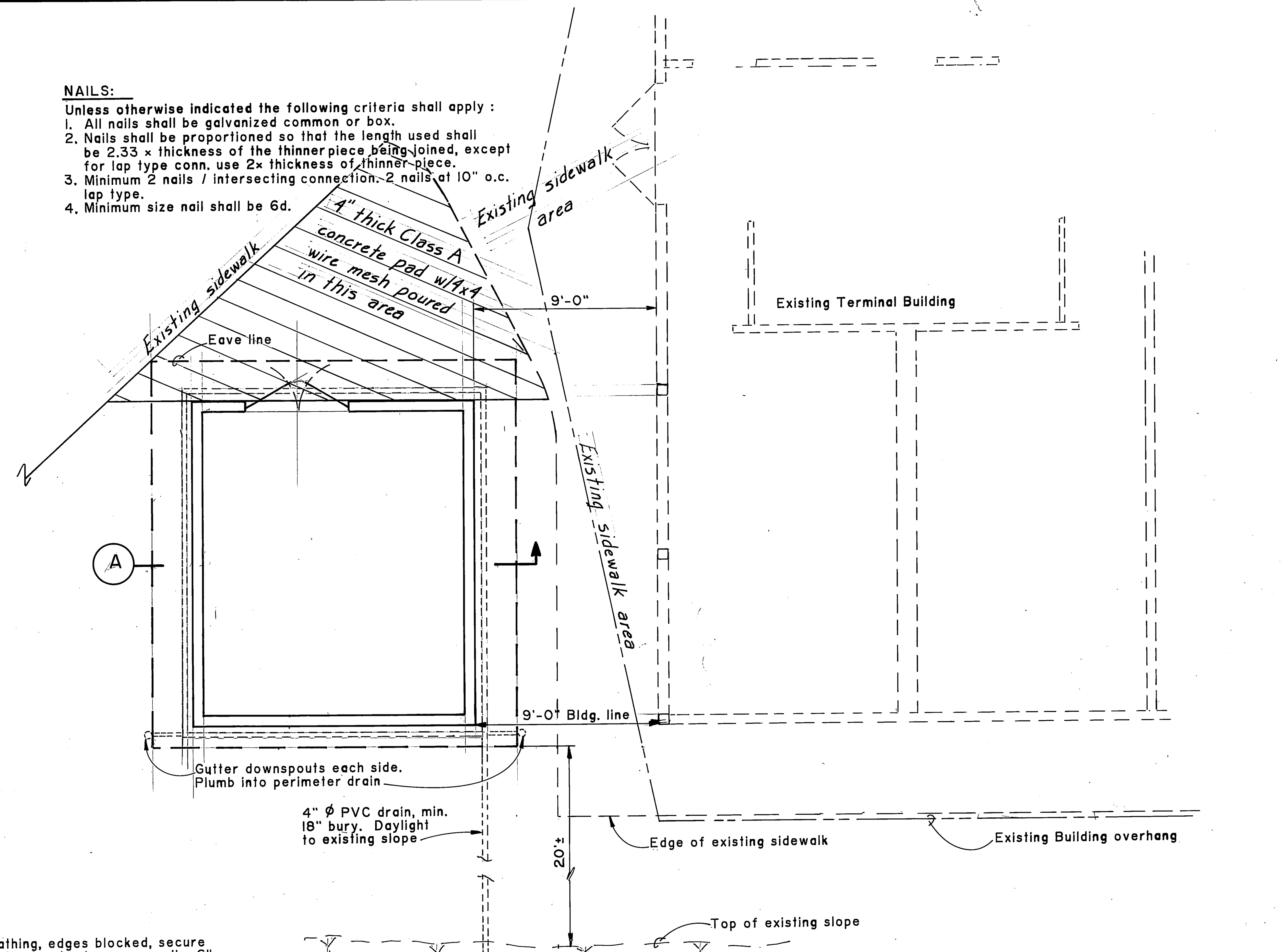
FLOOR PLAN & ROOF FRAMING DETAILS

1/4" = 1'-0"

NAILS:

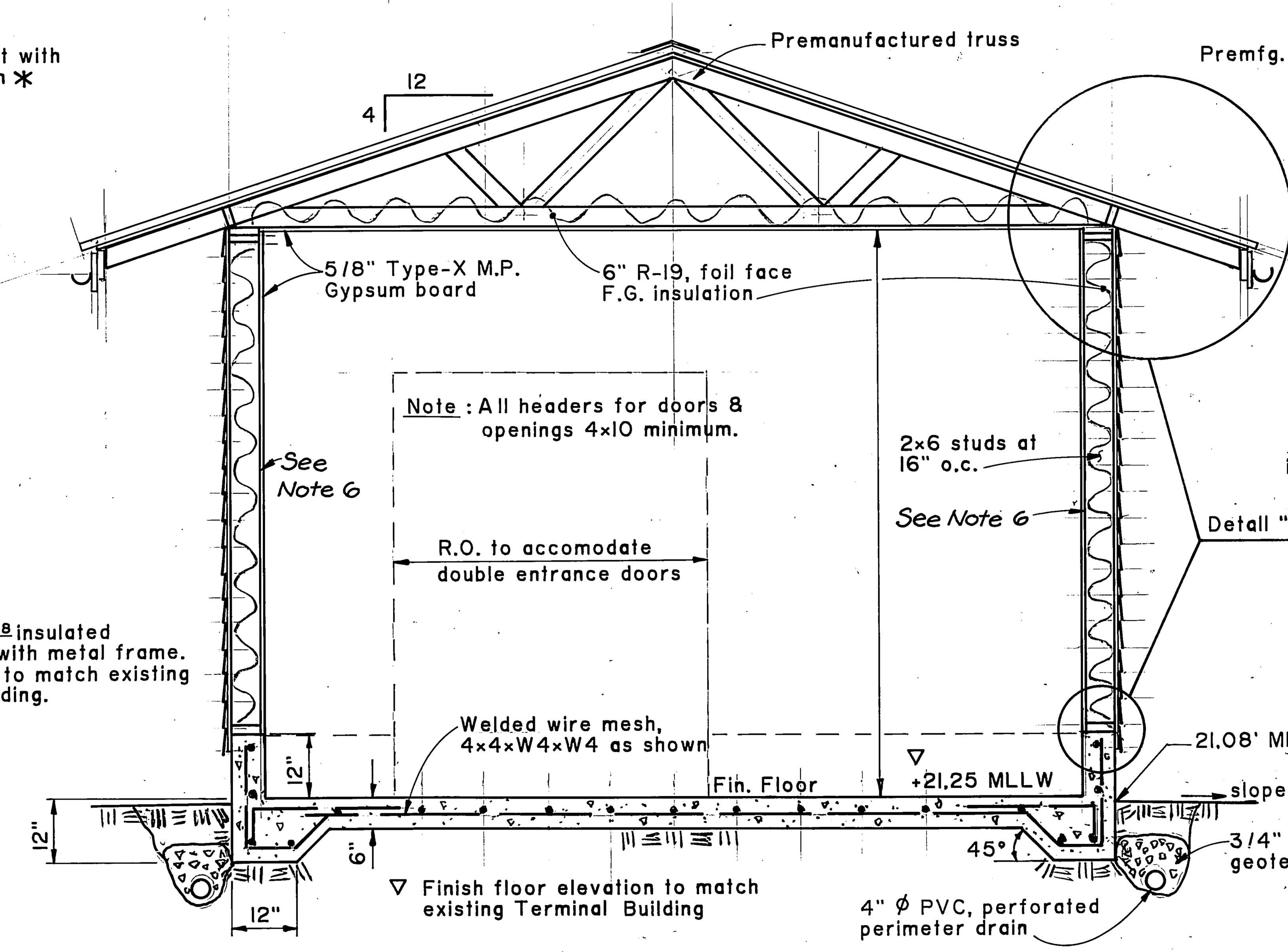
Unless otherwise indicated the following criteria shall apply :

1. All nails shall be galvanized common or box.
2. Nails shall be proportioned so that the length used shall be 2.33 x thickness of the thinner piece being joined, except for lap type conn. use 2x thickness of thinner piece.
3. Minimum 2 nails / intersecting connection. 2 nails at 10" o.c. lap type.
4. Minimum size nail shall be 6d.



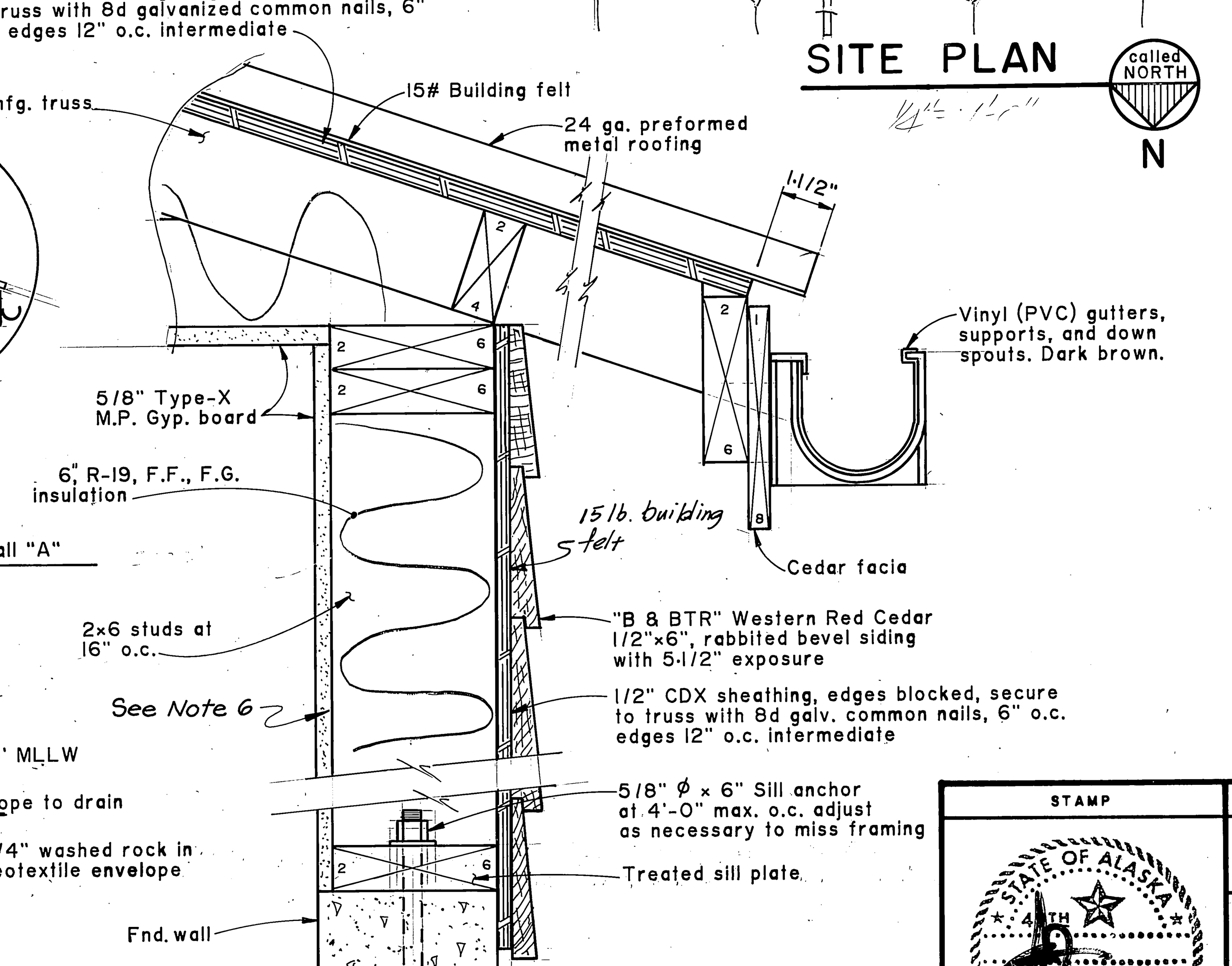
SITE PLAN

1/4" = 1'-0"



SECTION A

1/4" = 1'-0"



DETAIL "A"

3" = 1'-0"

GENERAL NOTES:

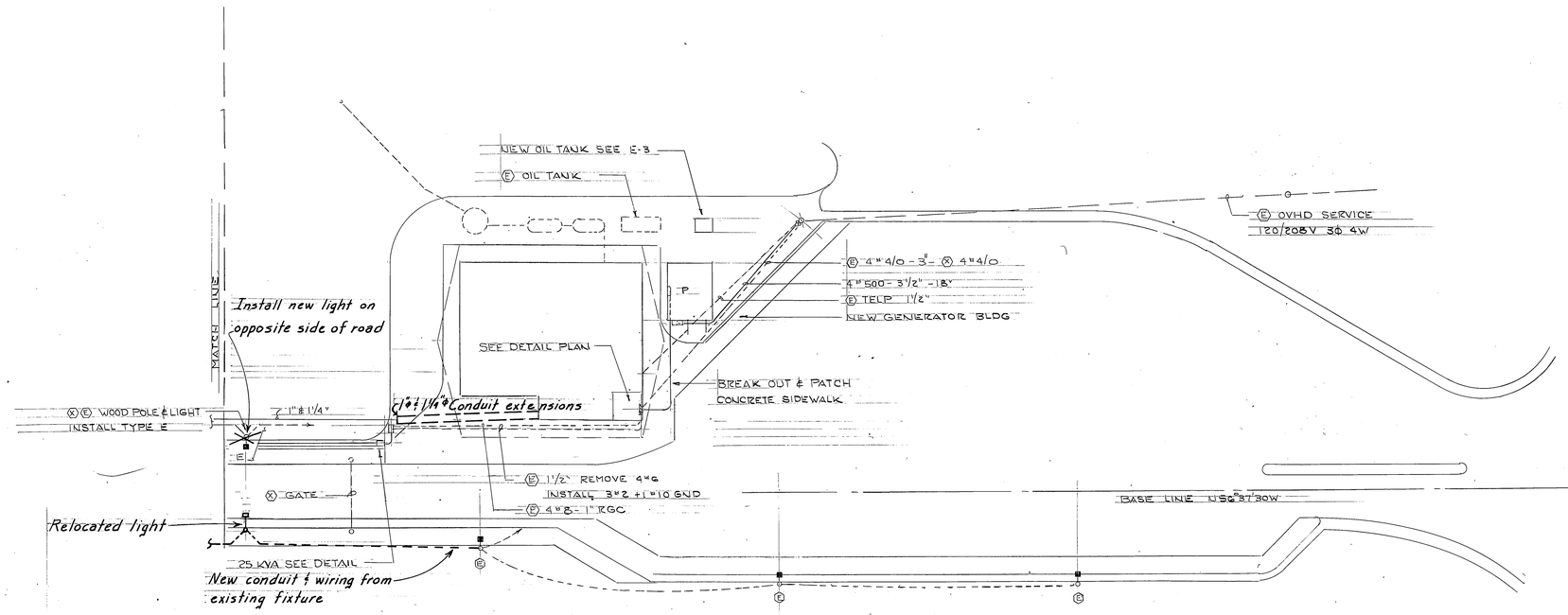
1. Color schedule selected for exterior shall be coordinated to match existing Terminal Building. Contractor to verify existing schedule.
2. Doors and hardware shall be selected to reasonably match existing.
3. Preformed metal roofing profile, style and color shall be selected to reasonably match existing.
4. Exterior openings shall be trimmed with 1x3 cedar, mitered corners.
5. Louvered vents shall be selected to be compatible with mechanical operated vents specified by electrical.
6. *Contractor may utilize 3/4" AC Ply sheathing on interior face of equipment wall under the Gyp. board to ease panel mounting.*

Trim is 1"x4" cedar instead of 1"x3"

AS BUILT Mark [signature] 1/26/89

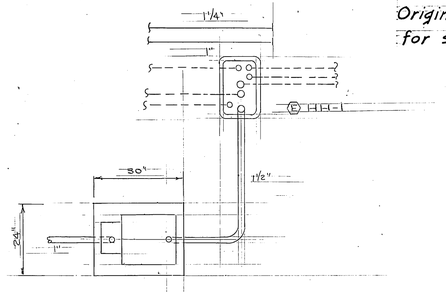
STAMP	DO NOT SCALE THIS DRAWING – USE DIMENSIONS			
STATE OF ALASKA 49TH James A. Lowell #CE-5597 REGISTERED PROFESSIONAL ENGINEER 9/23/87	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
	SITKA — ALASKA GENERATOR BUILDING			
	DESIGNED JAL	CHECKED JS	DRAWN JAL/88	DATE 9/87
	PROJECT NUMBER RS-M-0935 (9)		SHEET 38 OF 41	

97238

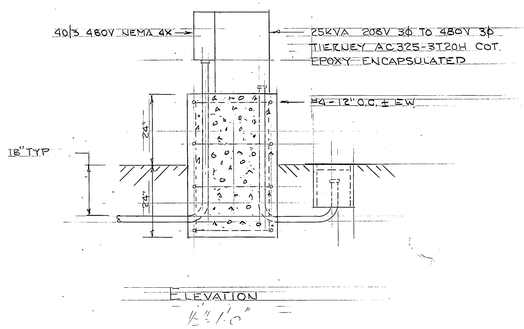


Note: Installed ship's temporary telephone line in 1"Ø G.R.C. extension & original planned 1"Ø G.R.C. out to transfer bridge from inside terminal building Original overhead temporary telephone line for ships deleted

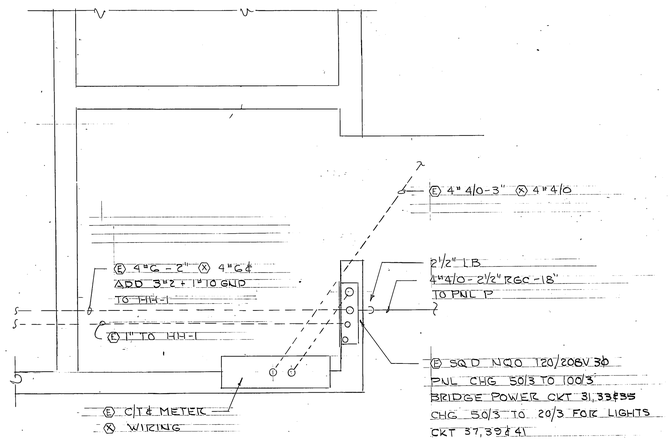
SITE PLAN
1" = 20'



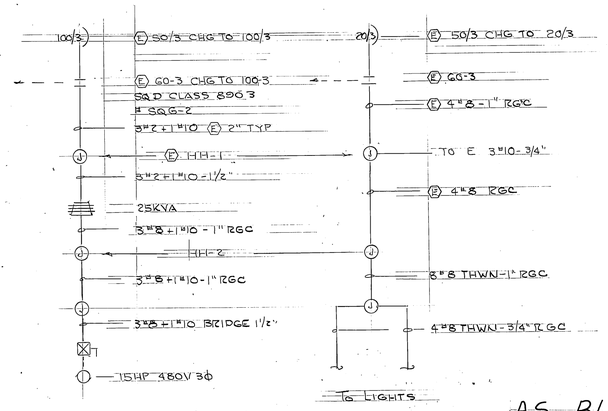
DETAIL PLAN
1/2" = 1'-0"



1/2" = 1'-0"



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



PANEL A DIAGRAM
NO SCALE

AS BUILT Mark Halvorsen 1/27/89

E-1

See electrical subcontractor's As Builts (submitted) for additional changes

STAMP

STATE OF ALASKA 49TH
Leonard P. Lowell
No. 553-E
REGISTERED PROFESSIONAL ENGINEER

DO NOT SCALE THIS DRAWING — USE DIMENSIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

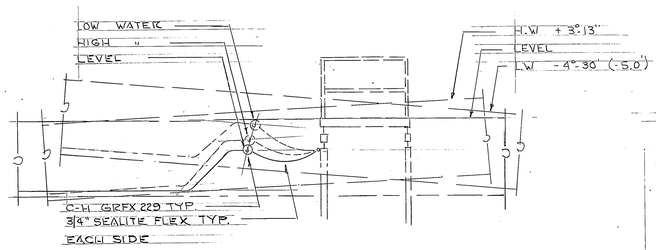
Sitka Alaska

ELECTRICAL

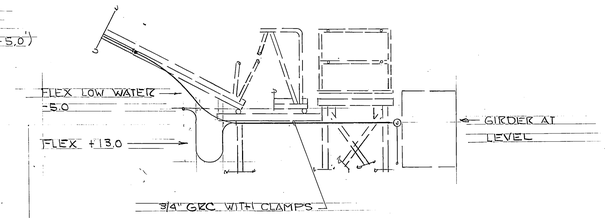
DESIGNED LPL	CHECKED LPL	DRAWN LPL	DATE 9-3-87
PROJECT NUMBER RS-M-0935(9)		SHEET 39 OF 41	

SITKA FERRY TERMINAL

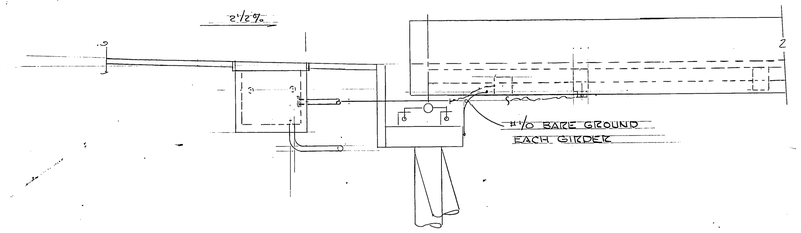
97238



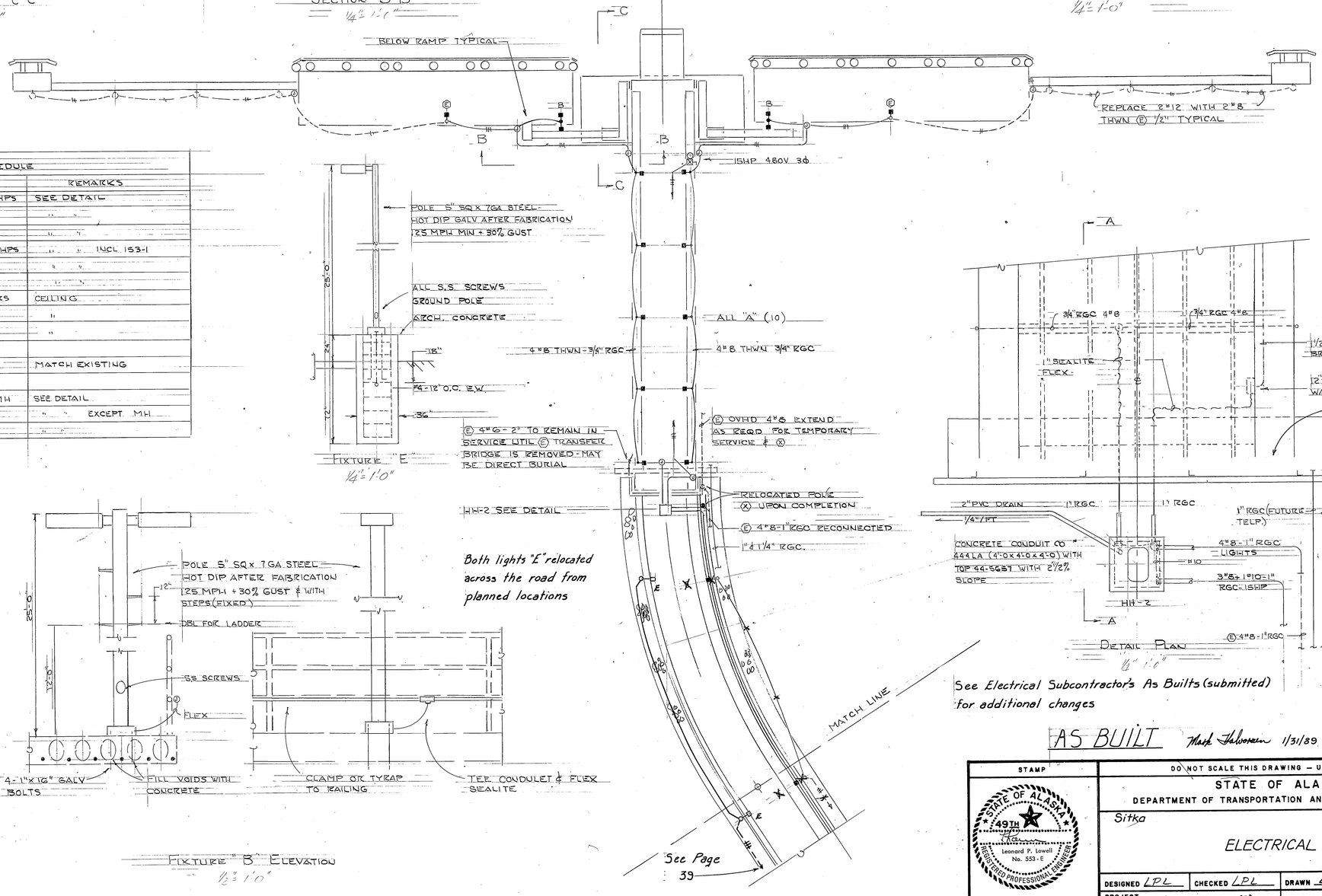
SECTION C-C
1/2" = 1'-0"



SECTION B-B
1/4" = 1'-0"

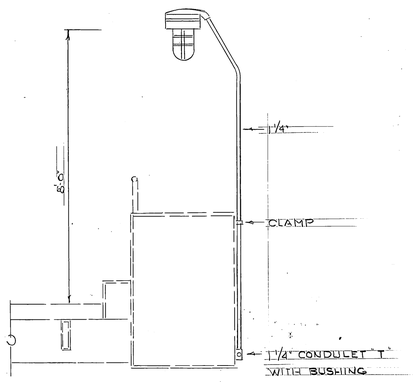


SECTION A-A
1/4" = 1'-0"



FIXTURE SCHEDULE

TYPE	MFG		W	REMARKS
A	R&S	SG-212-S4G	100 HPS	SEE DETAIL
	C-H	VMVCJ100GP	"	"
	APPLETON	LPSL10125G-120	"	"
	DEVINE	PCR1522B-250HPS-DB-120	2-250HPS	" " 1ACL 153-1
B	ITT	154-H133-AJH-DB-120 (2)	"	" "
	MCPHILBEN	1SB 7G7-2D-DB-120	"	" "
	BENJAMIN	FL1024-4U & FL17S	2-40RS	CEILING
C	LITHONIA	AR10-240 & WG-3	"	"
	MILLER	ET 2101-04 & ET 100221	"	"
D	McPHILBEN	3W-2G-BX P5G23		MATCH EXISTING
E	DEVINE	PCR 1522A-250MH DB120	250 MH	SEE DETAIL
	ITT	154-H133-AJH-DB-120	" "	EXCEPT MH
	McPHILBEN	1SB-7S7-1D-DB-120	"	"



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

FIXTURE "B" ELEVATION
1/2" = 1'-0"

Both lights "E" relocated across the road from planned locations

See Electrical Subcontractor's As Builts (submitted) for additional changes

AS BUILT Mark Halvorsen 1/31/89

E-2

STAMP

STATE OF ALASKA 49TH
Leonard P. Lowell
No. 553-E
REGISTERED PROFESSIONAL ENGINEER

DO NOT SCALE THIS DRAWING — USE DIMENSIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

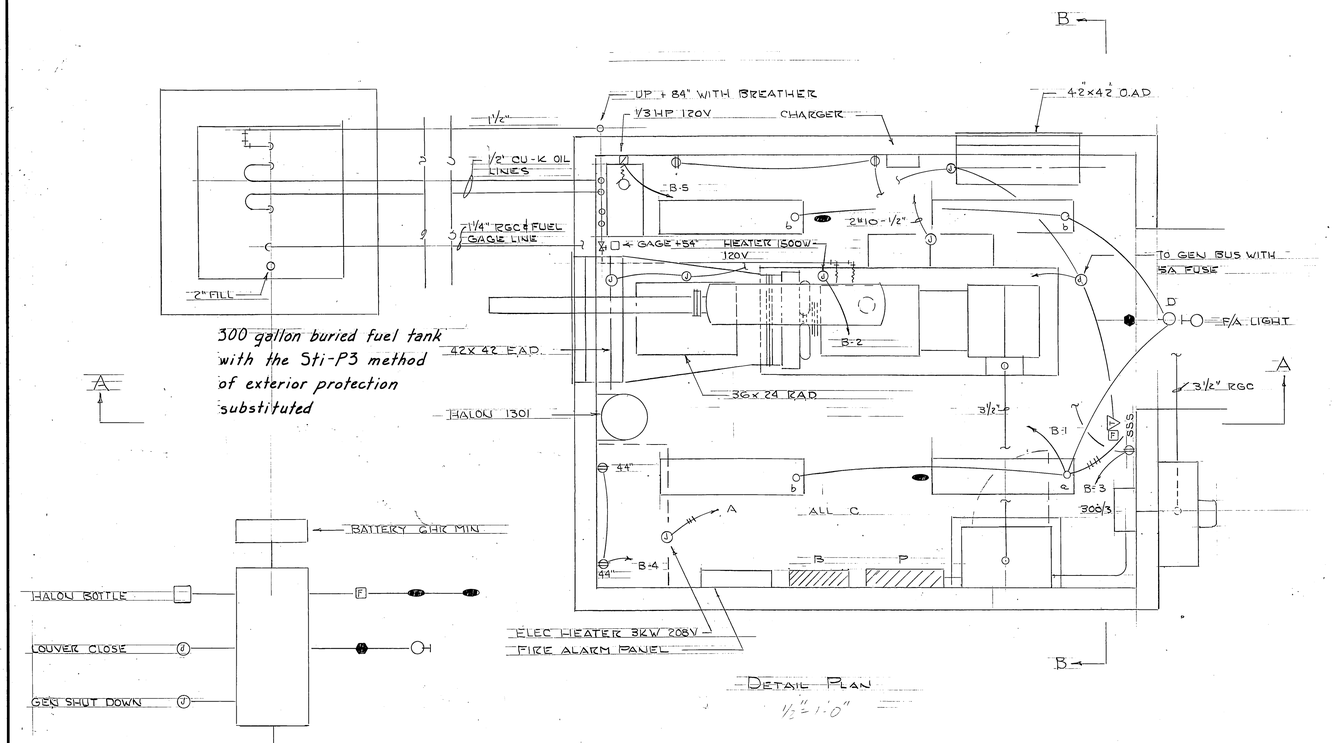
Sitka Alaska

ELECTRICAL

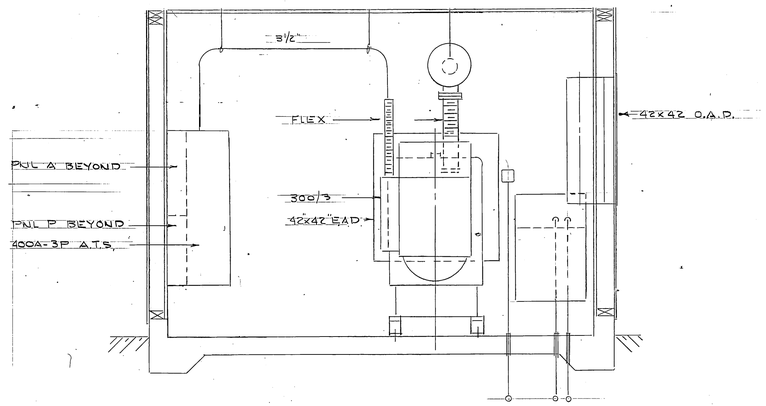
DESIGNED LPL	CHECKED LPL	DRAWN LPL	DATE 9-2-87
PROJECT NUMBER RS-M-0935(9)		SHEET 40 OF 41	

SITKA FERRY TERMINAL

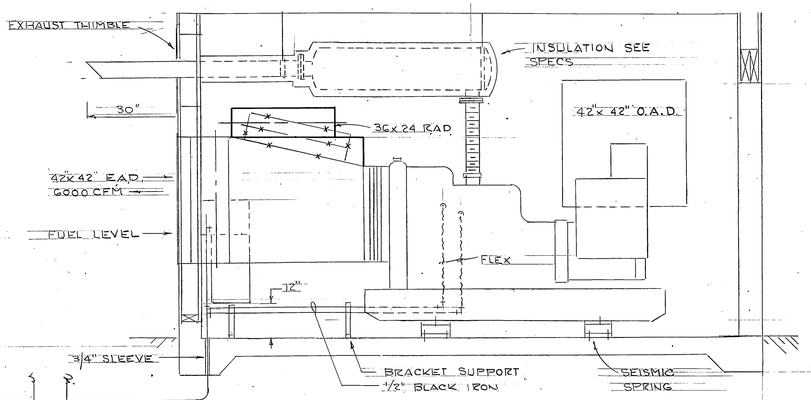
97338



300 gallon buried fuel tank with the Sti-P3 method of exterior protection substituted



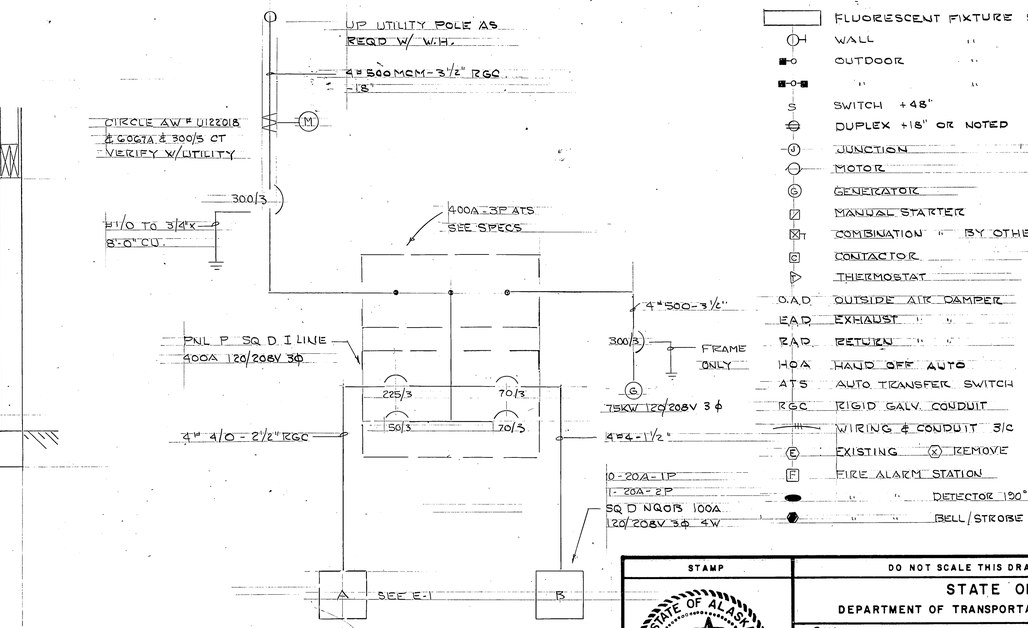
FIRE ALARM DIAGRAM
NO SCALE



NOTE PROVIDE 4 LAYERS 30# ASPHALT PAPER BETWEEN CONCRETE & TANK

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

300 gallon buried fuel tank with the Sti-P3 method of exterior protection substituted - 6" select fill between concrete pad & bottom of tank also



LEGEND

- FLUORESCENT FIXTURE SEE SCHEDULE
- WALL " " "
- OUTDOOR " " " SINGLE
- " " " " DOUBLE
- S SWITCH +48"
- DUPLEX +18" OR NOTED
- J JUNCTION
- M MOTOR
- G GENERATOR
- MANUAL STARTER
- CT COMBINATION " BY OTHERS CONN BY ELEC.
- C CONTACTOR
- T THERMOSTAT
- O.A.D OUTSIDE AIR DAMPER
- E.A.D EXHAUST " "
- R.A.D RETURN " "
- H.O.A HAND OFF AUTO
- A.T.S AUTO TRANSFER SWITCH
- RGC RIGID GALV. CONDUIT
- WIRING & CONDUIT 3/C
- E EXISTING X REMOVE
- F FIRE ALARM STATION
- " " DETECTOR 190° NO R/R
- " " BELL/STROBE

See Electrical Subcontractor's submitted AS BUILTS for additional changes

AS BUILT
Mark Lieberman 2/1/89

E-3

STAMP

STATE OF ALASKA 49TH
Leonard P. Lowell No. 553-E
REGISTERED PROFESSIONAL ENGINEER

DO NOT SCALE THIS DRAWING — USE DIMENSIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

Sitka Alaska

ELECTRICAL

DESIGNED LPL	CHECKED LPL	DRAWN LPL	DATE 9-2-87
PROJECT NUMBER RS-M-0935(9)		SHEET 41	OF 41

SITKA FERRY TERMINAL