

| | | | | |
|--------|---------------------|------|-----------|--------------|
| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
| ALASKA | 71361/STP-0922(3) | 1994 | B-1 | 9 |

GENERAL NOTES

SPECIFICATIONS:

Design: AASHTO Standard Specifications for Highway Bridges, 1992 edition with latest Interim Specifications.
Construction: State of Alaska Standard Specifications for Highway Construction 1988, with Standard Modifications and Special Provisions.

DESIGN UNIT STRESSES:

Structural Steel:
A36: $F_y = 36,000$ psi
 $F_s = 20,000$ psi
A500: $F_y = 46,000$ psi
 $F_s = 25,000$ psi
A572: $F_y = 50,000$ psi
 $F_s = 27,000$ psi

STRUCTURAL MATERIALS:

Structural Steel: All structural steel tube sections shall be A500, Grade B. All other structural steel shall be A36 except as noted. Group 2 Charpy V-notch Impact Requirements shall apply to all fracture-critical and main members subject to tension as noted on the plans. Steel plates and bars installed inside existing box girders shall be prefabrication primed with zinc rich primer from 0.5 to 1.5 mils thickness. All other steel components shall be hot-dip galvanized after fabrication. Girder web bolts shall be galvanized A325 high strength bolts.

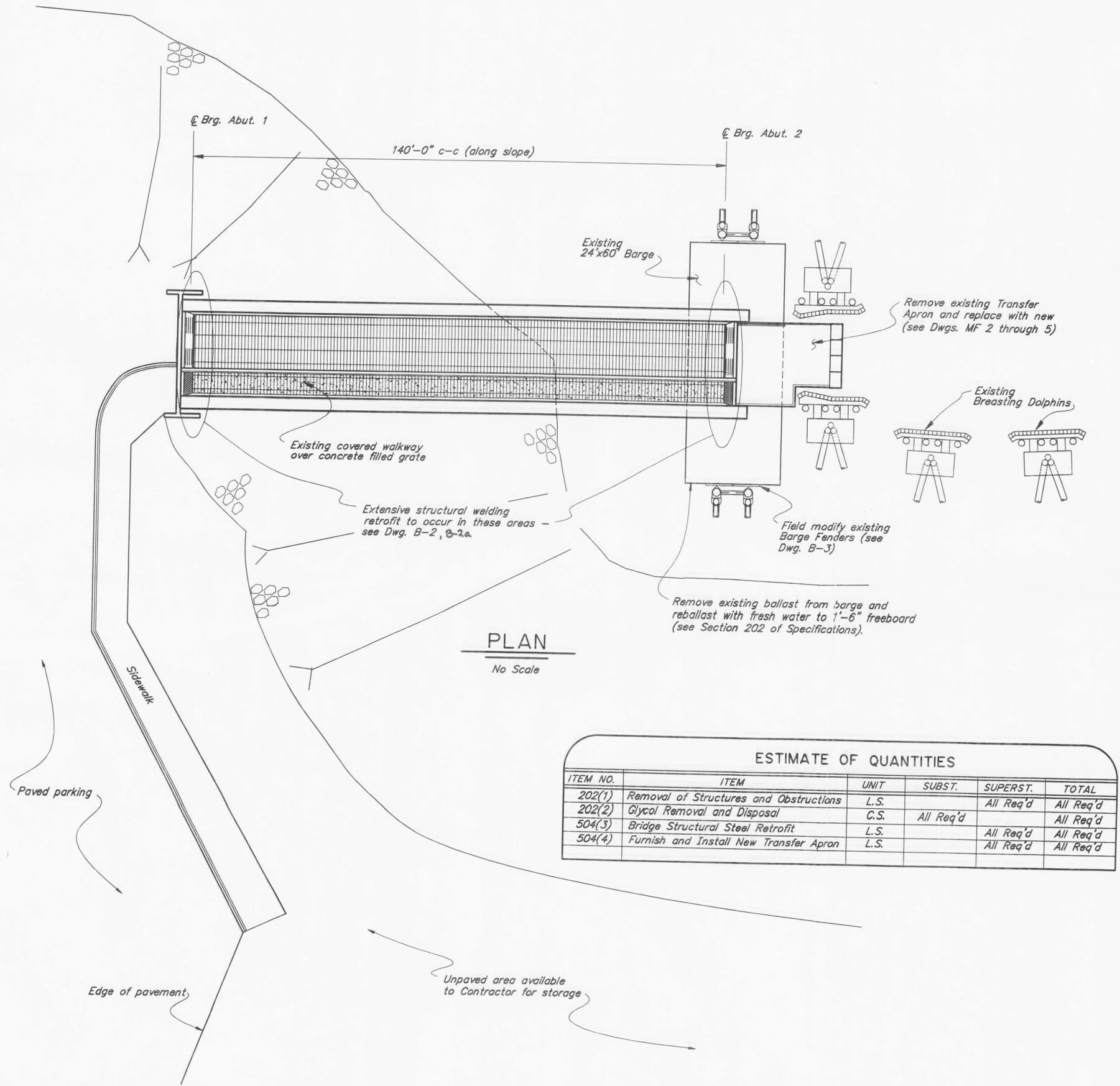
GENERAL:

Existing dimensions included in these plans are derived from existing as-built and shop drawings and are for bidding purposes only. Actual field-dimensions may vary from those indicated. It is the responsibility of the Contractor to physically verify all existing dimensions prior to undertaking any work under this contract. Fabrication and fitup of new materials with existing is solely the responsibility of the Contractor.

Existing shop drawings are available for examination by the Contractor or by prospective bidders at 3132 Channel Drive, Room 100, Juneau, Alaska, 99801 or by calling the Bridge Design Section at (907) 465-2975. Design drawings for the existing covered walkway structure are also available for examination.

Existing items which are required to complete and install the apron system and are not indicated on the plans as requiring replacement shall be used with the new apron. Removal and reinstallation of existing items for completing the new apron installation shall be incidental to Item 504(4).

Existing barge contains an estimated 25,000 gallons of ethylene glycol/water mixture - see Section 202-2.01 of the Special Provisions.



PLAN
No Scale

ESTIMATE OF QUANTITIES

| ITEM NO. | ITEM | UNIT | SUBST. | SUPERST. | TOTAL |
|----------|--|------|-----------|-----------|-----------|
| 202(1) | Removal of Structures and Obstructions | L.S. | | All Req'd | All Req'd |
| 202(2) | Glycol Removal and Disposal | C.S. | All Req'd | | All Req'd |
| 504(3) | Bridge Structural Steel Retrofit | L.S. | | All Req'd | All Req'd |
| 504(4) | Furnish and Install New Transfer Apron | L.S. | | All Req'd | All Req'd |



**KETCHIKAN AIRPORT SHUTTLE
FERRY TRANSFER
BRIDGE REHABILITATION**

GENERAL LAYOUT

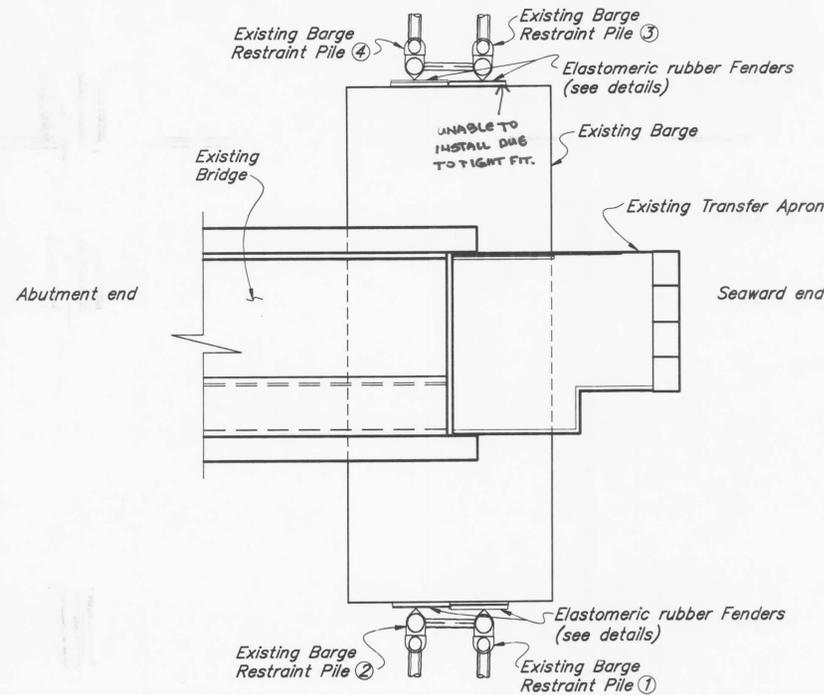
STATE OF ALASKA
DEPARTMENT of TRANSPORTATION
and PUBLIC FACILITIES
JUNEAU, ALASKA



BRIDGE NO. 1819
DWG. NO. B-1

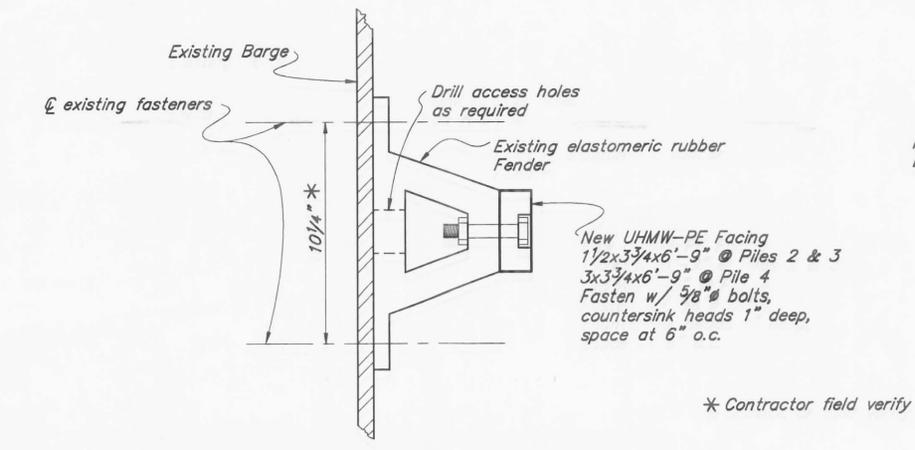
P:\1819\1819-1
7-25-1994 13:13
Plot Scale = 20:00
Drawn or Revised By: CMF

| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|--------|---------------------|------|-----------|--------------|
| ALASKA | 71361/STP-0922(3) | 1994 | B-3 | 9 |



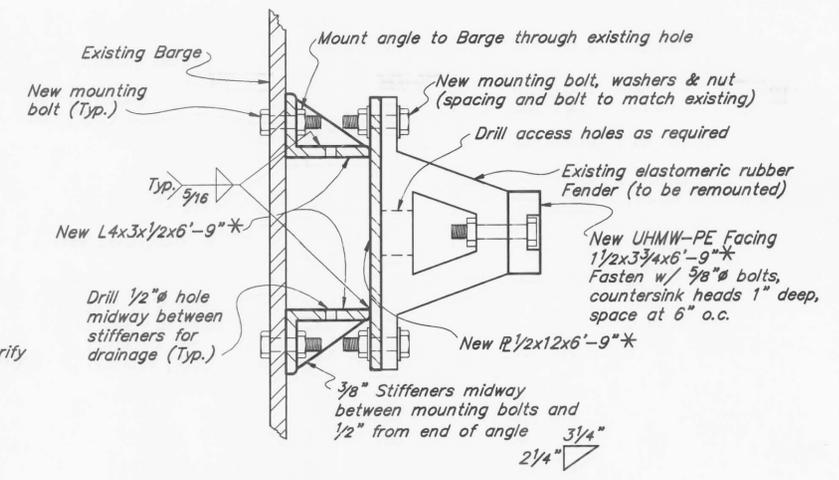
BARGE PLAN

10 5 0 10 20
Feet



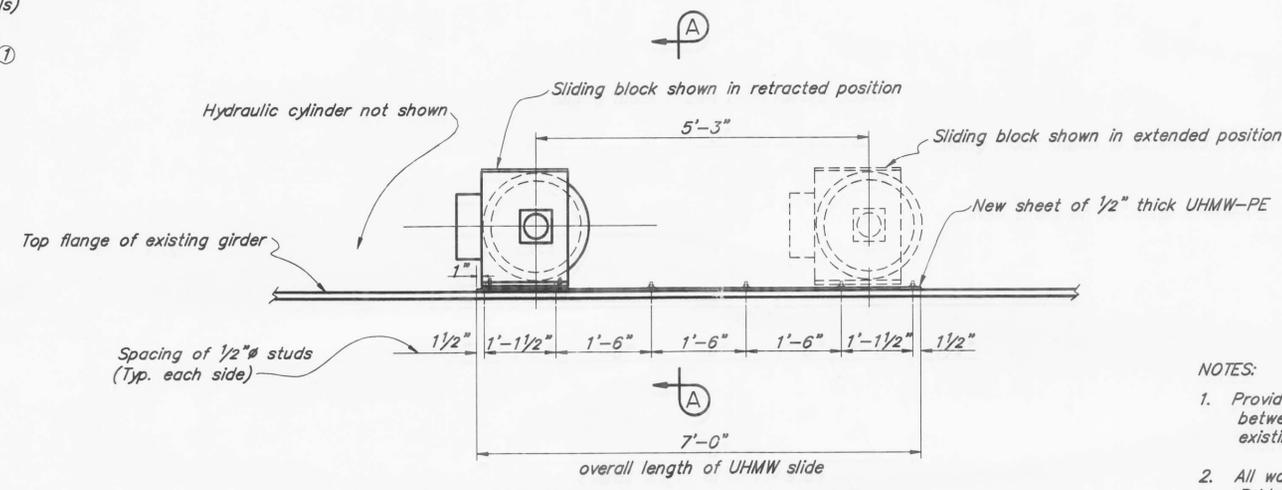
BARGE FENDER RETROFIT DETAIL @ PILES 2, 3, & 4

6 3 0 1
In. Feet



BARGE FENDER RETROFIT DETAIL @ PILE 1

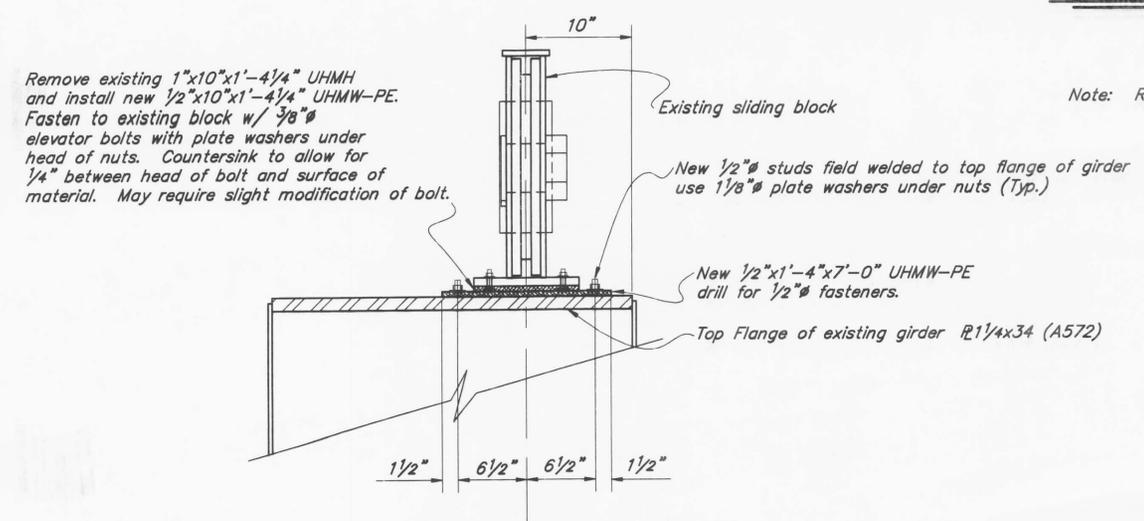
6 3 0 1
In. Feet



SLIDING BLOCK PLASTIC RETROFIT

(Typical each girder)
No Scale

Note: Refer to sheet MF-5 for existing details



SECTION A-A

No Scale

Remove existing 1"x10"x1'-4 1/4" UHMW and install new 1/2"x10"x1'-4 1/4" UHMW-PE. Fasten to existing block w/ 3/8" elevator bolts with plate washers under head of nuts. Countersink to allow for 1/4" between head of bolt and surface of material. May require slight modification of bolt.

- NOTES:
1. Provide temporary fendering as required to prevent direct contact between barge and pile during removal and reinstallation of existing fender.
 2. All work described on this sheet shall be paid under Item 504(3) Bridge Structural Steel Retrofit.
 3. Whenever removing existing bolts from fender system, replace with new galvanized A325 bolts.



KETCHIKAN AIRPORT SHUTTLE FERRY TRANSFER BRIDGE REHABILITATION FENDER & SLIDING BLOCK RETROFIT

STATE OF ALASKA
DEPARTMENT of TRANSPORTATION and PUBLIC FACILITIES
JUNEAU, ALASKA



BRIDGE NO. 1819
DWG. NO. B-3

1819/1819-3
7/28/1994 14:57
Plot Scale = 0.33
Drawn or Revised By: CMF

SPECIFICATIONS

16010 GENERAL

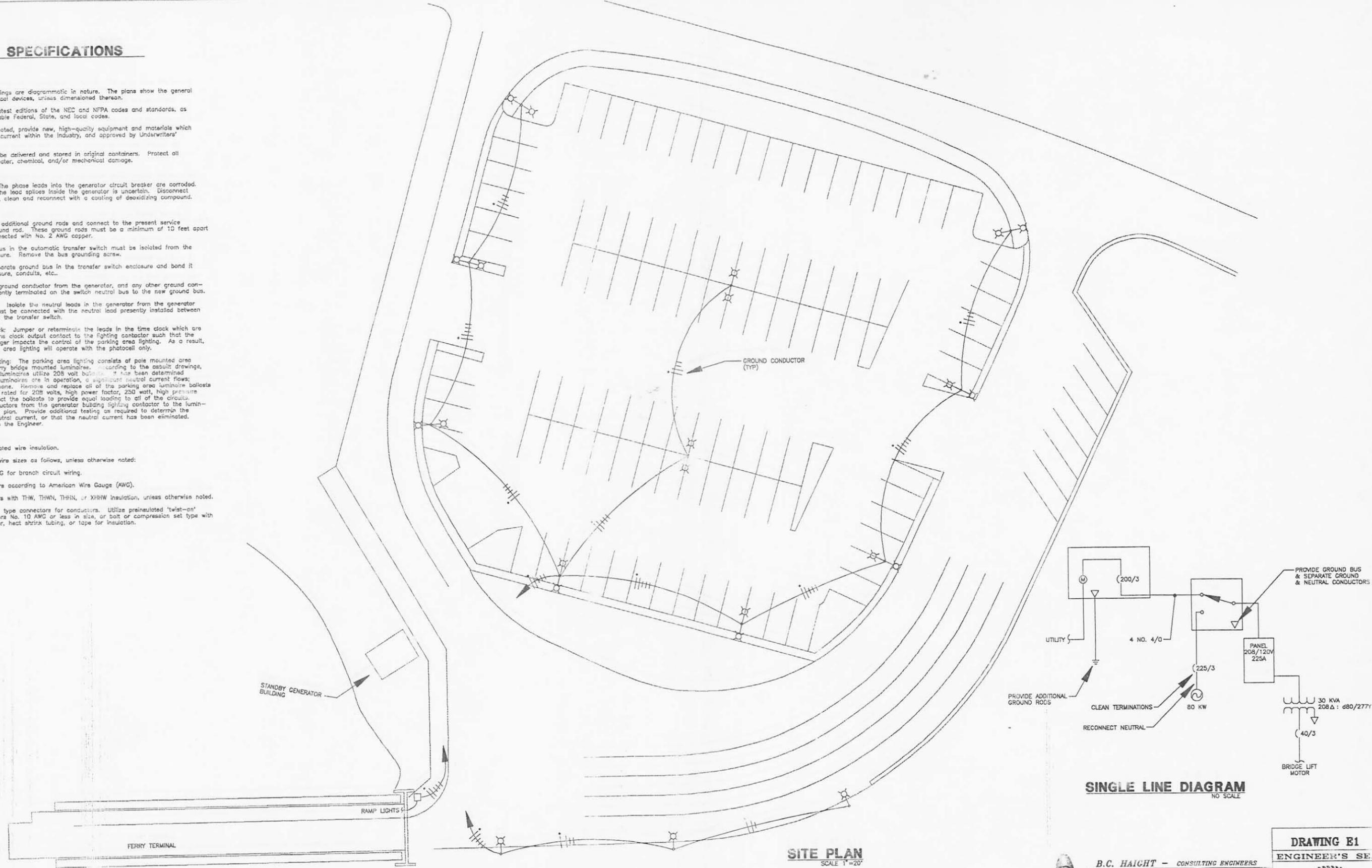
- A. The electrical drawings are diagrammatic in nature. The plans show the general locations of electrical devices, unless dimensioned thereon.
- B. Comply with the latest editions of the NEC and NFPA codes and standards, as well as the applicable Federal, State, and local codes.
- C. Unless otherwise noted, provide new, high-quality equipment and materials which are standard and current within the industry, and approved by Underwriters' Laboratory.
- D. All products shall be delivered and stored in original containers. Protect all items from dirt, water, chemical, and/or mechanical damage.

16020 SCOPE OF WORK

- A. Generator Leads: The phase leads into the generator circuit breaker are corroded. The condition of the lead splices inside the generator is uncertain. Disconnect all of these leads, clean and reconnect with a coating of deoxidizing compound.
- B. Grounding system:
 1. Provide three additional ground rods and connect to the present service entrance ground rod. These ground rods must be a minimum of 10 feet apart and interconnected with No. 2 AWG copper.
 2. The neutral bus in the automatic transfer switch must be isolated from the switch enclosure. Remove the bus grounding screw.
 3. Provide a separate ground bus in the transfer switch enclosure and bond it to the enclosure, conduits, etc.
 4. Transfer the ground conductor from the generator, and any other ground conductors presently terminated on the switch neutral bus to the new ground bus.
- C. Generator Neutral: Isolate the neutral leads in the generator from the generator frame. These must be connected with the neutral lead presently installed between the generator and the transfer switch.
- D. Lighting Time Clock: Jumper or reterminate the leads in the time clock which are connected from the clock output contact to the lighting contactor such that the time clock no longer impacts the control of the parking area lighting. As a result, all of the parking area lighting will operate with the photocell only.
- E. Parking Area Lighting: The parking area lighting consists of pole mounted area luminaires and ferry bridge mounted luminaires. According to the as-built drawings, the parking area luminaires utilize 208 volt ballasts. It has been determined that when these luminaires are in operation, a significant neutral current flows; there should be none. Remove and replace all of the parking area luminaire ballasts with new ballasts rated for 208 volts, high power factor, 250 watt, high pressure sodium. Reconnect the ballasts to provide equal loading to all of the circuits. Provide new conductors from the generator building lighting contactor to the luminaires per the site plan. Provide additional testing as required to determine the source of the neutral current, or that the neutral current has been eliminated. Report findings to the Engineer.

16120 WIRE AND CABLE

- A. Utilize 600 volt rated wire insulation.
- B. Utilize minimum wire sizes as follows, unless otherwise noted:
 1. No. 12 AWG for branch circuit wiring.
- C. Size all conductors according to American Wire Gauge (AWG).
- D. Provide conductors with THW, THWN, THHN, or XHHW insulation, unless otherwise noted.
- E. Provide solderless type connectors for conductors. Utilize preinsulated 'twist-on' type for conductors No. 10 AWG or less in size, or bolt or compression set type with a preformed cover, heat shrink tubing, or tape for insulation.



SINGLE LINE DIAGRAM
NO SCALE

SITE PLAN
SCALE 1"=20'

B.C. HAIGHT - CONSULTING ENGINEERS
418 Harris Street, Juneau, Alaska 99801 (907) 586-9768

DRAWING E1
ENGINEER'S SEAL

| PATH: | DATE: | DESCRIPTION OF CHANGE: |
|-------|-------|------------------------|
| | | |
| | | |
| | | |

RECORD OF REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

KETCHIKAN

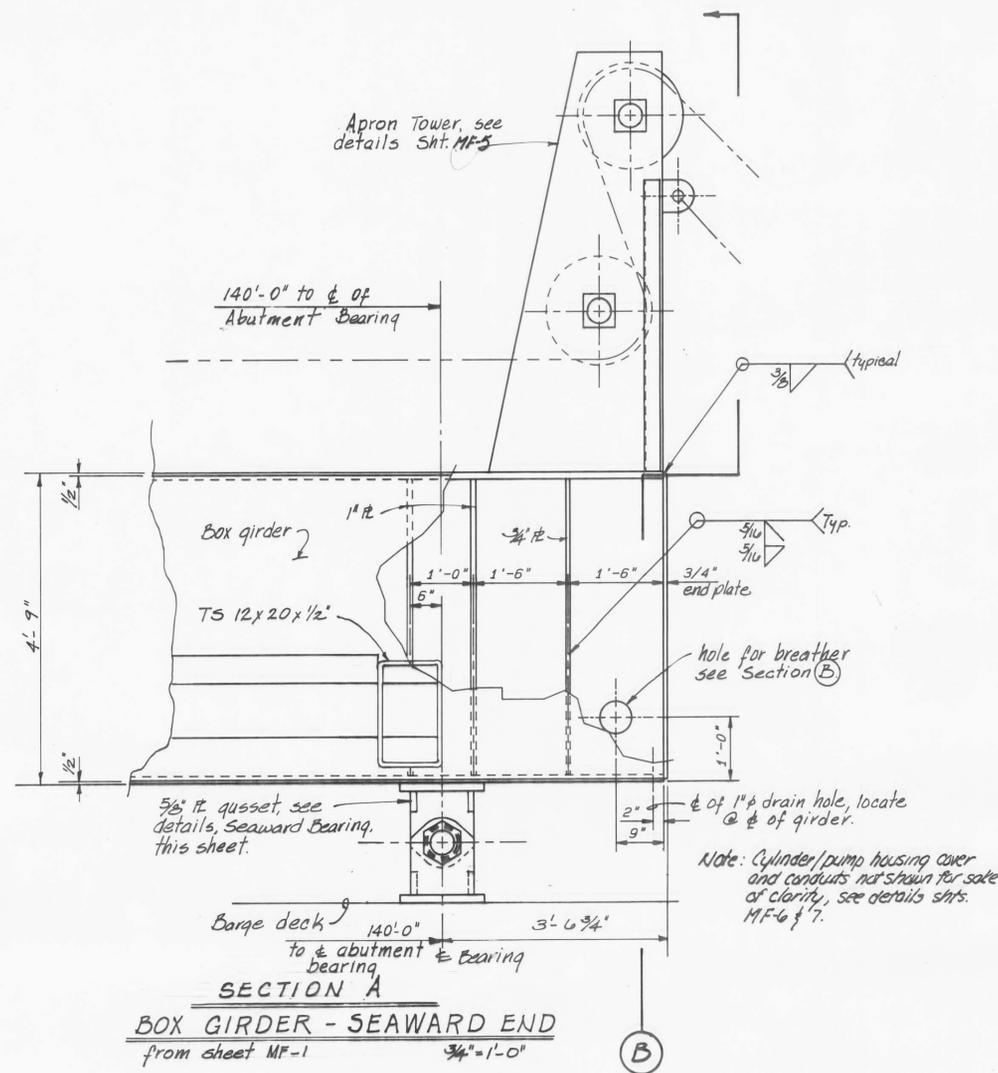
AIRPORT FERRY TERMINAL SHUTTLE
STP-0922 (3)
ELECTRICAL LAYOUT

ALASKA

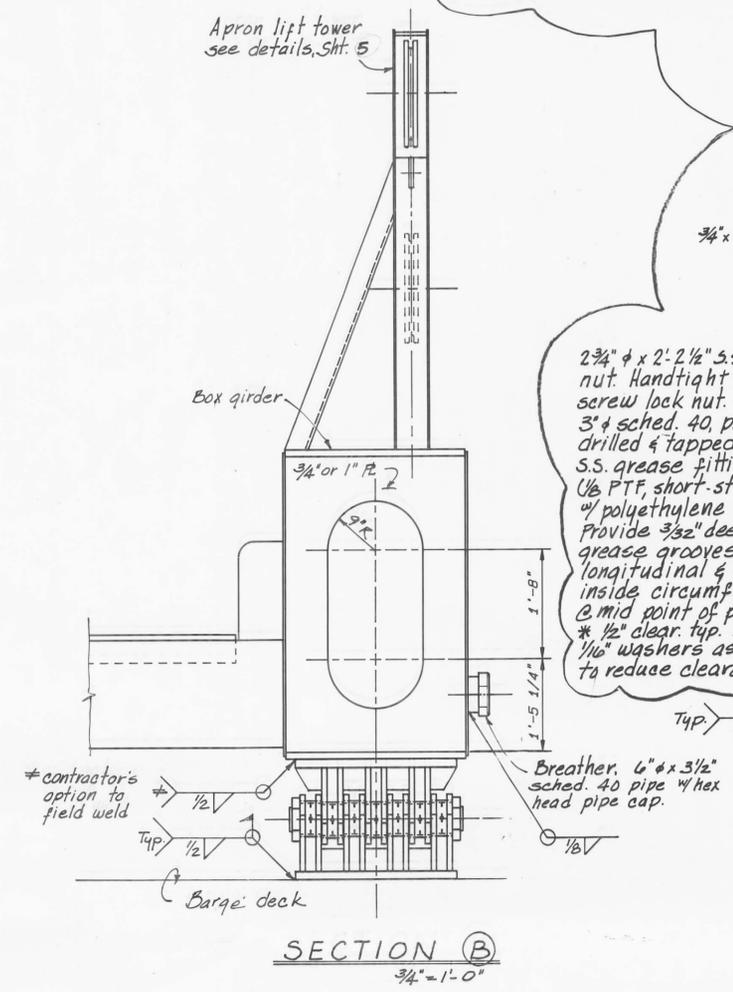
DESIGNED BY: **BCH**
DRAWN BY: **JLC**
CHECKED BY: **BCH**

PROJECT NO. **71361**
DATE: **7-94**
SHEET **E-1 OF 9**

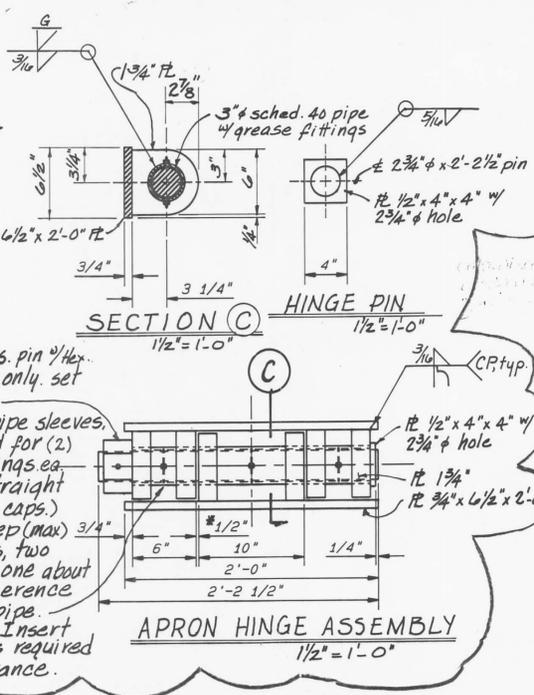
CONSTRUCT UNDER ITEM 504(4) NOTE: Contractor to fabricate new hinge assemblies with pins. The hinge assembly is to be shop welded to the apron and field welded to the existing bridge end. Alternatively, the Contractor may fabricate apron-side hinge assemblies and reuse existing bridge-side hinge assemblies and pins. This method requires field confirmation of apron hinge locations to accurately match apron-side fabricated hinge with existing bridge-side hinge.



SECTION A
BOX GIRDER - SEAWARD END
from sheet MF-1

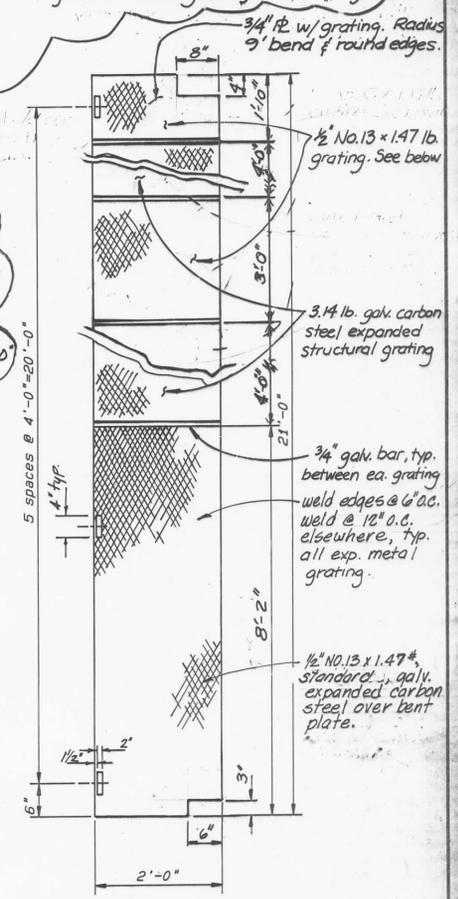


SECTION B
APRON HINGE ASSEMBLY
3/4\" = 1'-0"

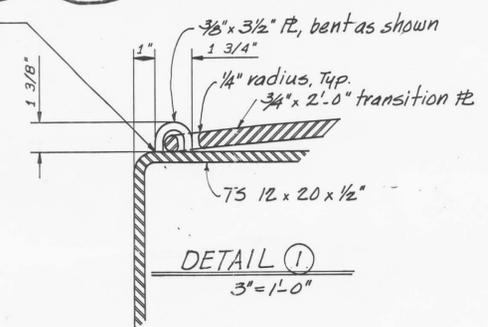


SECTION C
HINGE PIN
1/2\" = 1'-0"

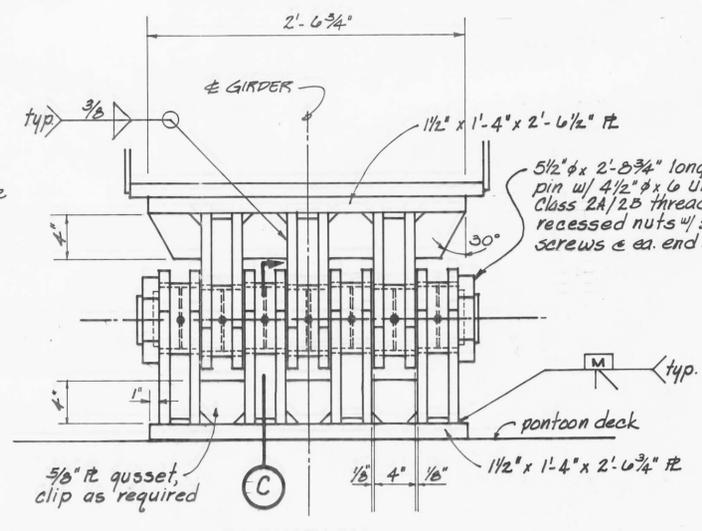
2 3/4\" x 2'-2 1/2\" S.S. pin w/ Hex. nut. Handtight only set screw lock nut.
3\" x 3/4\" sched. 40 pipe sleeves drilled & tapped for (2) S.S. grease fittings ea. (1/8\" PTF, short-straight w/ polyethylene caps.) Provide 3/32\" deep (max) grease grooves, two longitudinal & one about inside circumference @ mid point of pipe. * 1/2\" clear. typ. Insert 1/16\" washers as required to reduce clearance.



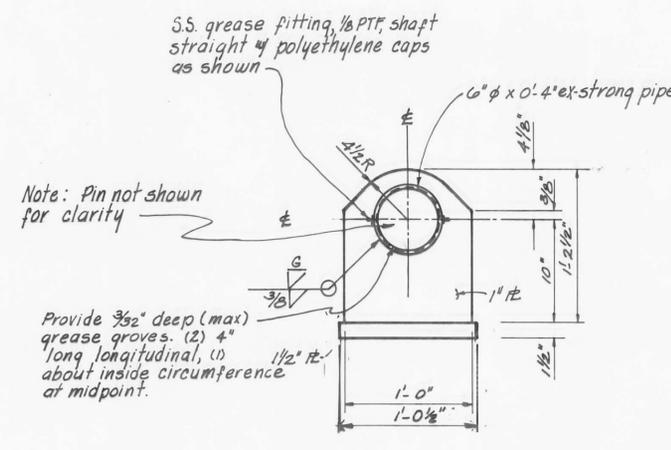
TRANSITION PLATE
3/4\" = 1'-0"



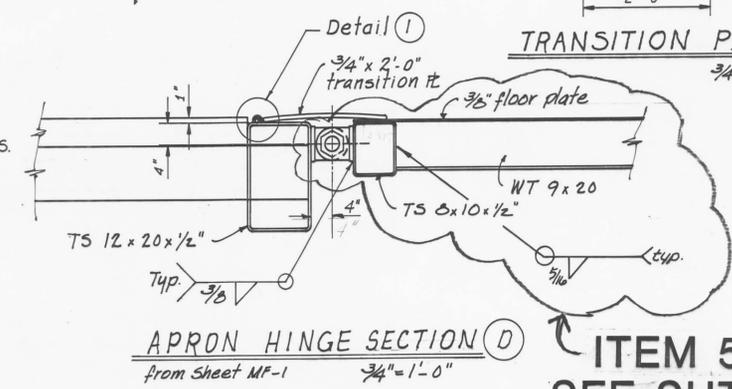
DETAIL 1
3\" = 1'-0"



ELEVATION SEAWARD BEARING
1/2\" = 1'-0"



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



APRON HINGE SECTION D
from Sheet MF-1

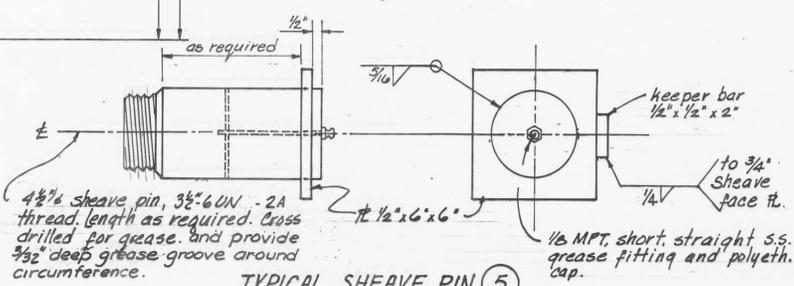
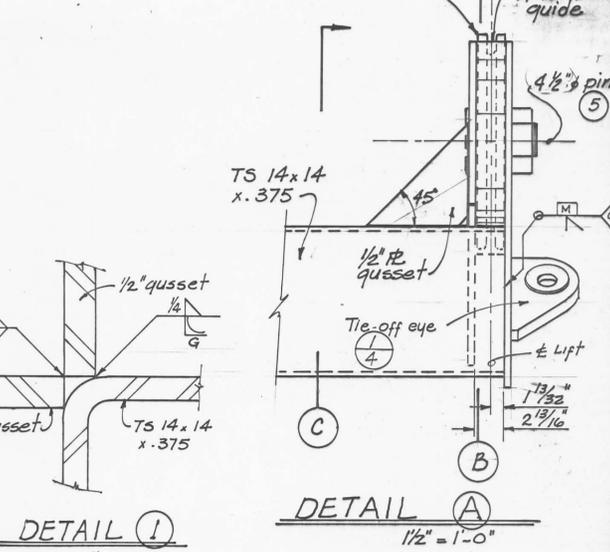
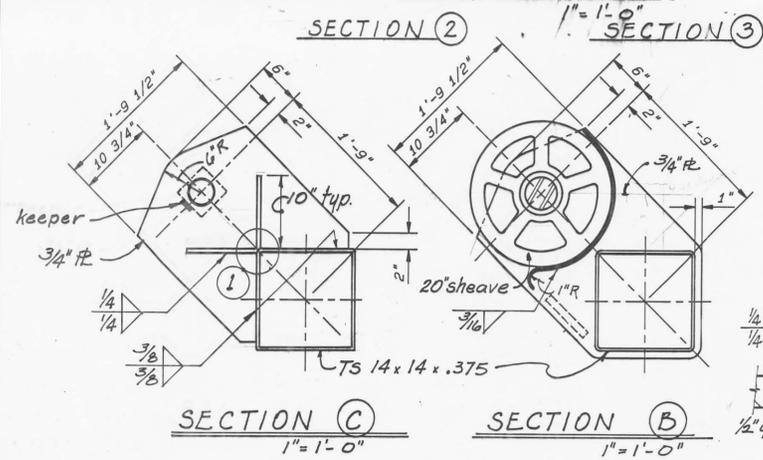
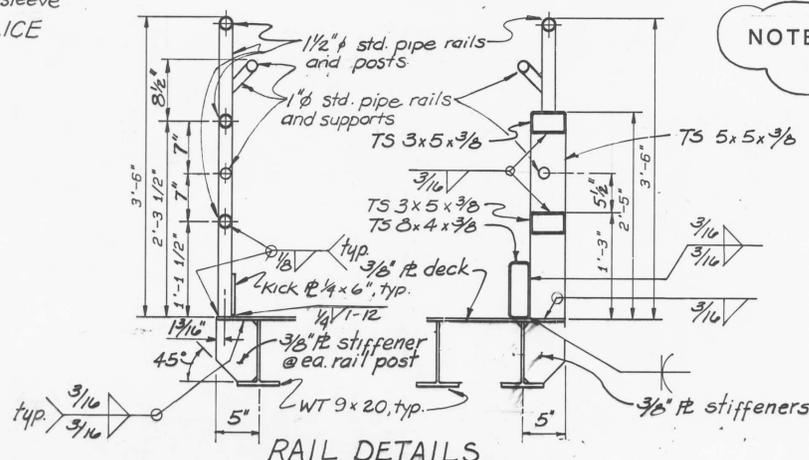
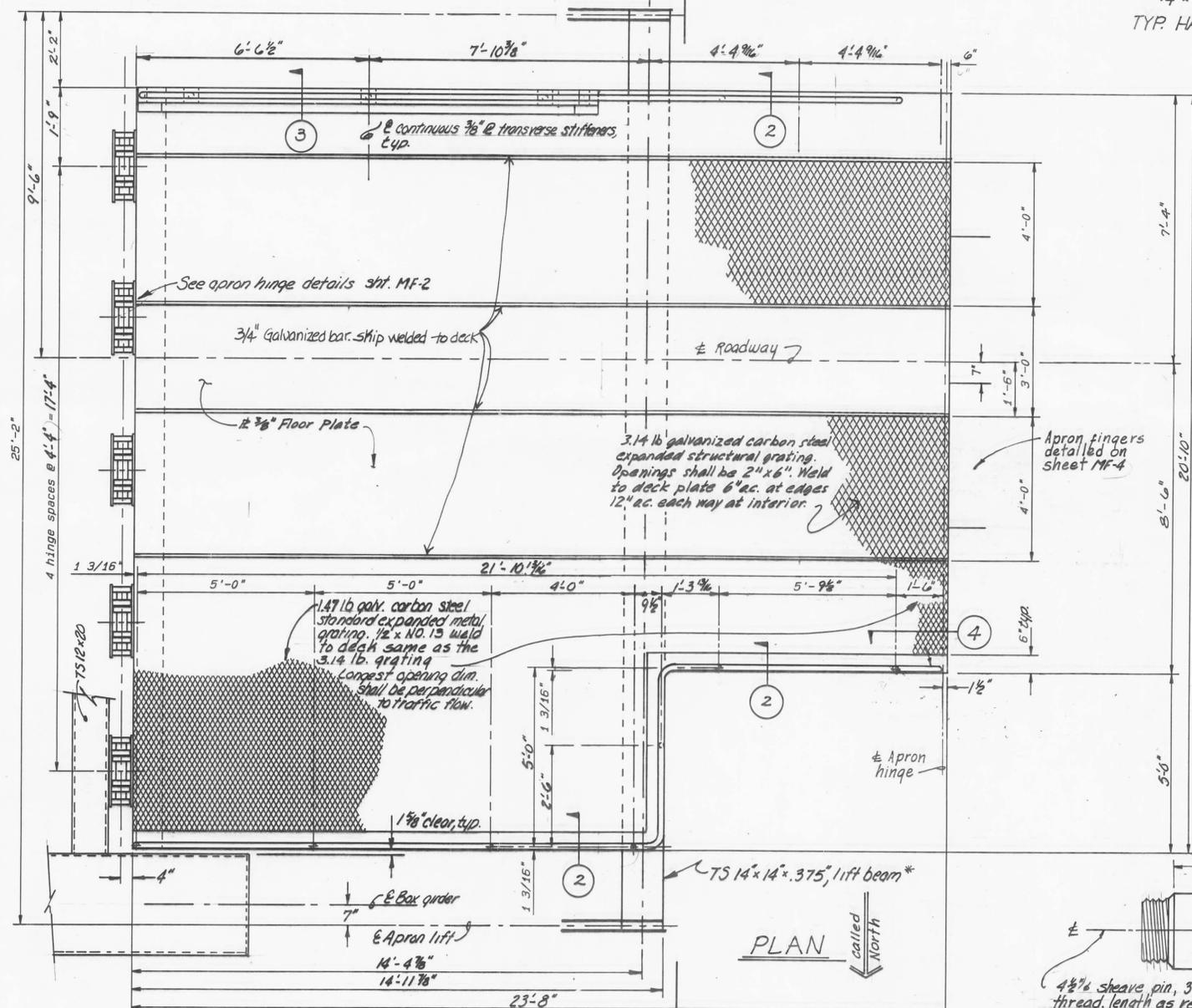
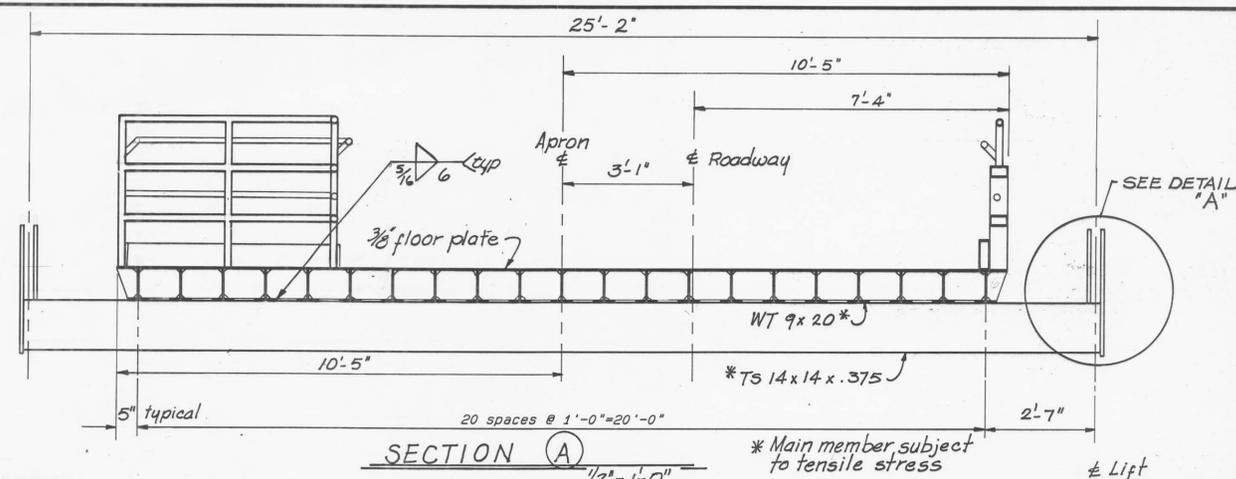
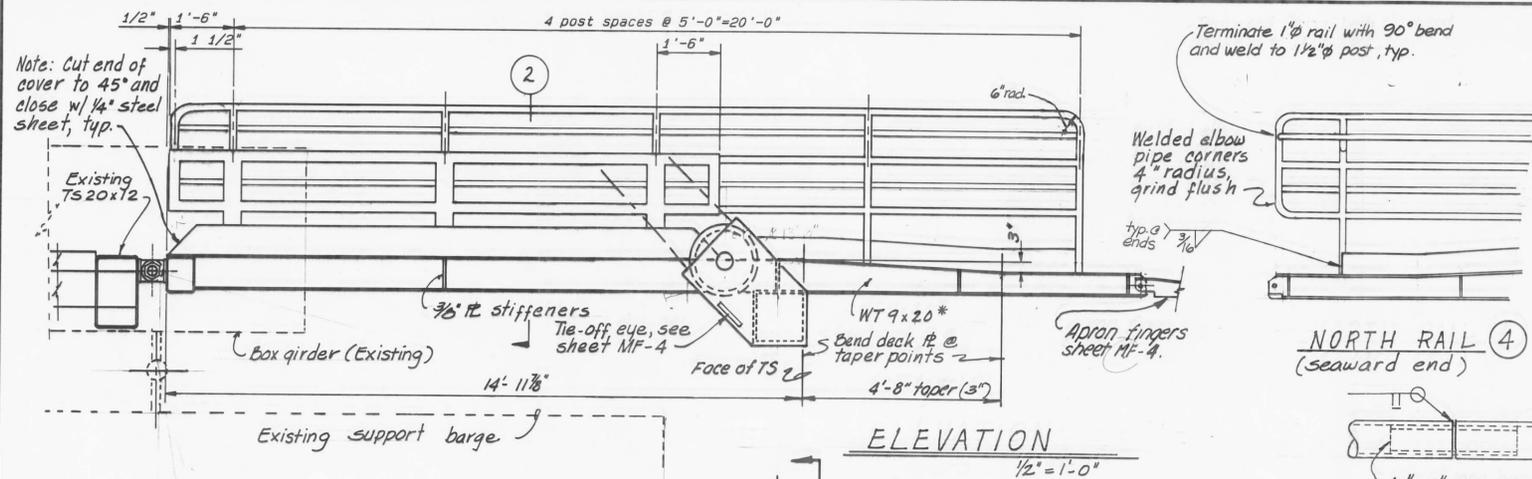
ITEM 504(4)
SEE SHT. MF-3

NOTE: Close all open ended pipe or tubing w/ 1/4\"/>

AS-BUILT & ITEM 504(4)

© Rev. 5-27-94 for Proj. 71361
① Rev. 5-1-87 Misc. corrections

| | | | | |
|---|--|--------------------|------------------|--|
| | DO NOT SCALE THIS DRAWING - USE DIMENSIONS | | | |
| | STATE OF ALASKA | | | |
| | DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES | | | |
| | Ketchikan | EXISTING | Alaska | |
| GIRDER DETAILS SEAWARD END | | | | |
| DESIGNED <u>JAL</u> | CHECKED <u>JS</u> | DRAWN <u>lrcal</u> | DATE <u>2-87</u> | |
| PROJECT NUMBER <u>71361 / STP-0922(3)</u> | SHEET <u>MF-2</u> OF <u>9</u> | | | |

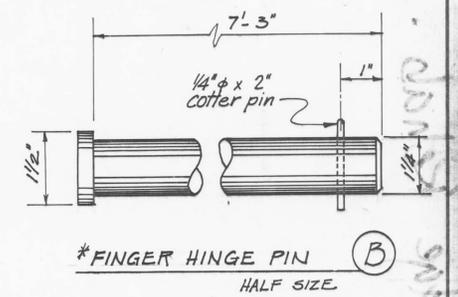
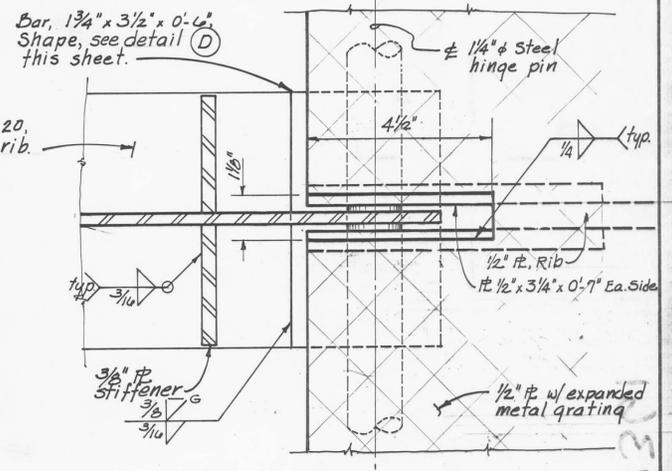
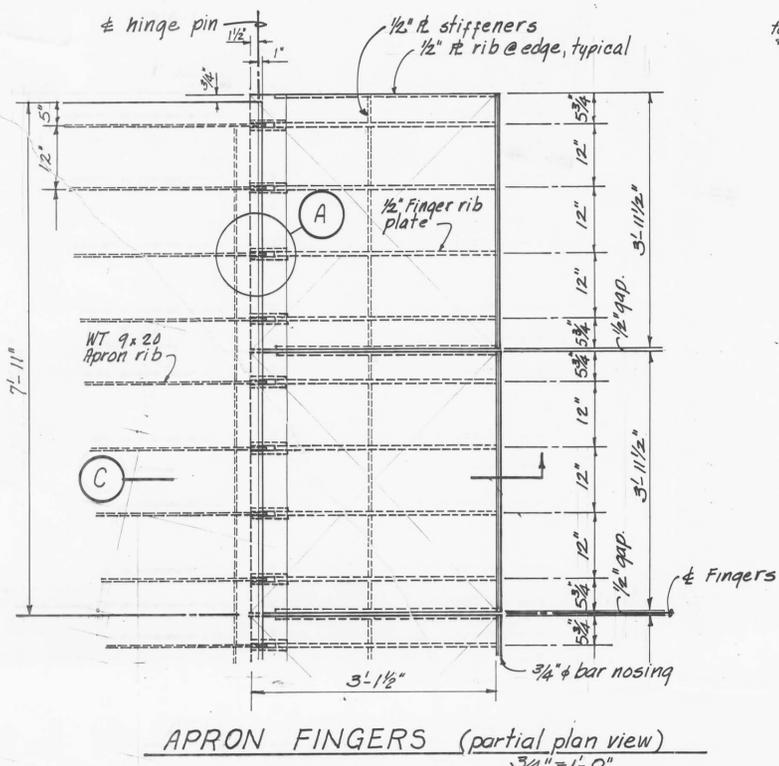
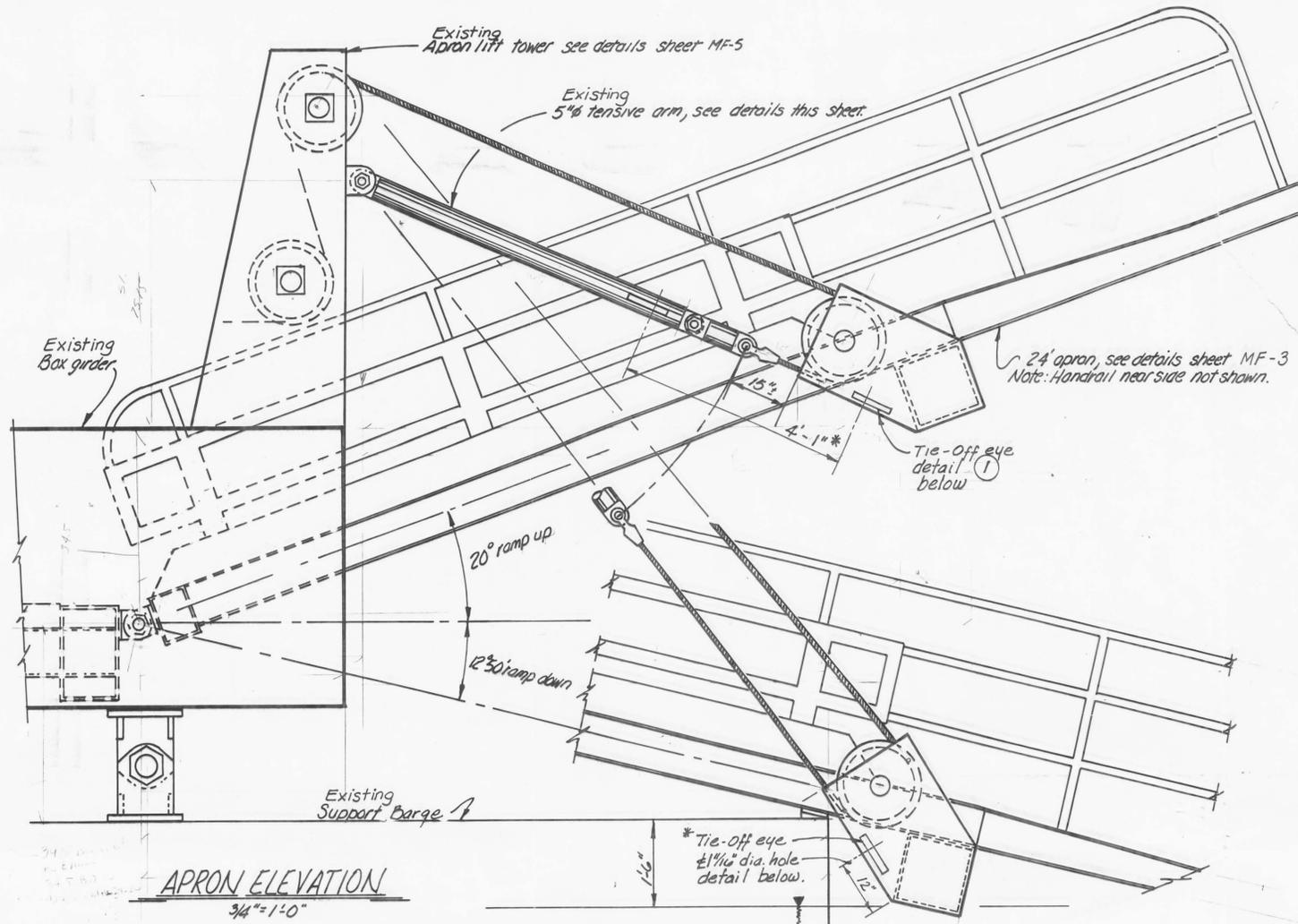


NOTE: All work described on this sheet shall be constructed under Item 504(4) unless designated as existing

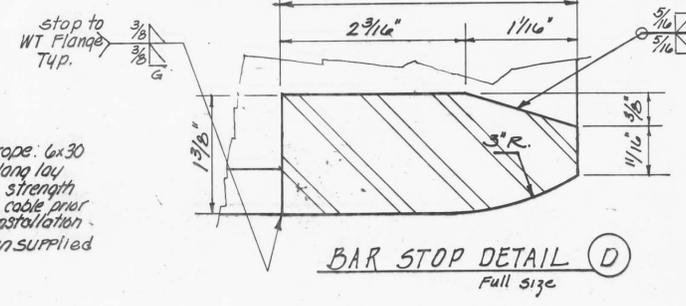
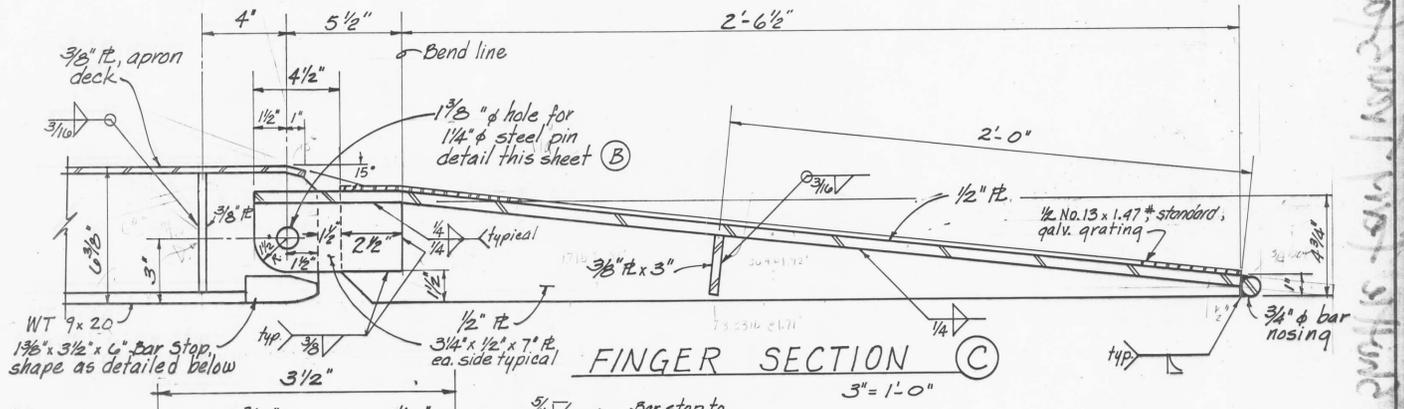
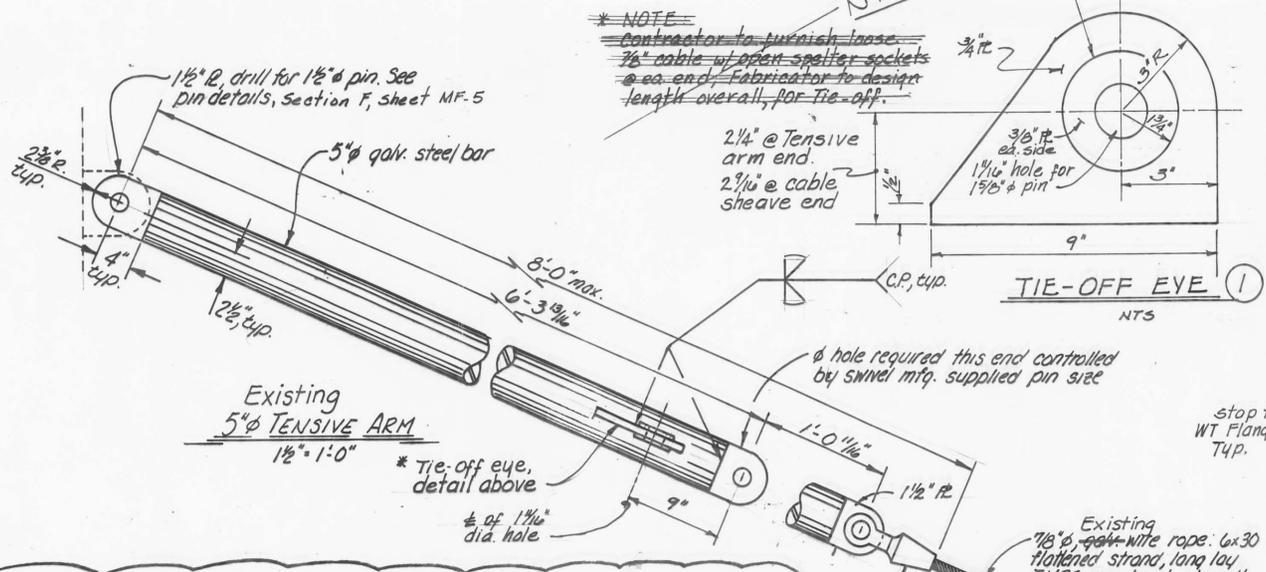
NOTE: Close all open end pipe and tubing w/ 1/4" R and seal weld.

| | | | |
|--|------------|--|-----------|
| STAMP | | DO NOT SCALE THIS DRAWING - USE DIMENSIONS | |
| STATE OF ALASKA | | | |
| DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES | | | |
| Ketchikan | | NEW Alaska | |
| APRON DETAILS | | | |
| DESIGNED JAL | CHECKED JS | DRAWN JAL | DATE 2-87 |
| PROJECT NUMBER 71361/STP-0922(3) | SHEET MF-3 | | OF 9 |

ITEM 504(4)
2/5/87



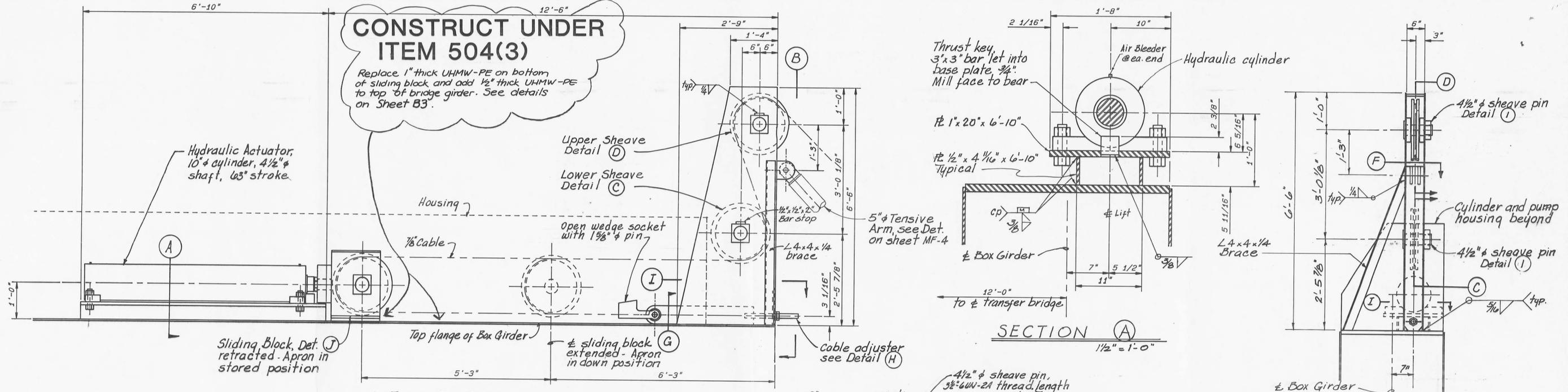
* Note: All pins detailed this sheet shall be stainless steel.



NOTE: All work described on this sheet shall be constructed under Item 504(4) unless designated as existing

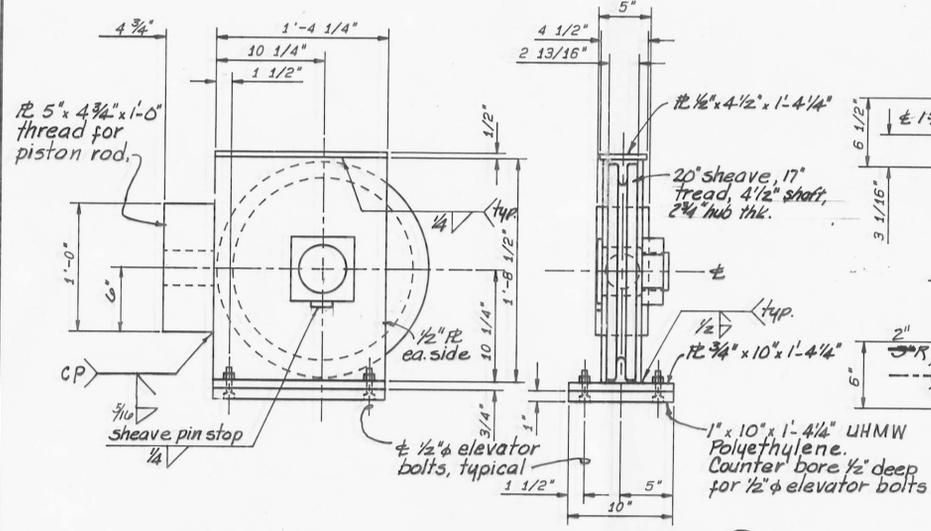
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| STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES | | | |
| Ketchikan | | NEW APRON DETAILS | |
| Alaska | | | |
| DESIGNED JAL | CHECKED JS | DRAWN L. J. J. | DATE 2-87 |
| PROJECT NUMBER 71361-1 STP-0922(3) | SHEET MF-4 | | OF 9 |

CONSTRUCT UNDER ITEM 504(3)
 Replace 1" thick UHMW-PE on bottom of sliding block and add 1/2" thick UHMW-PE to top of bridge girder. See details on Sheet B3.

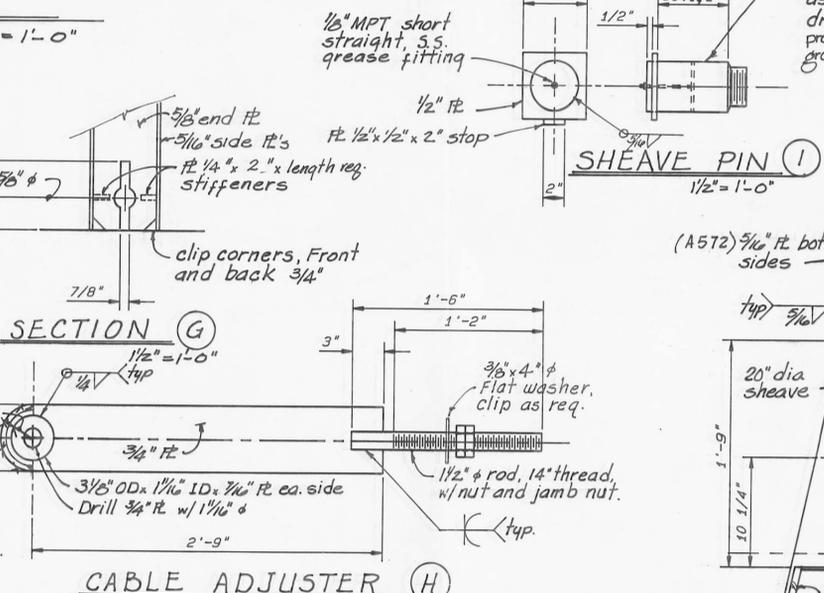


ELEVATION
 3/4" = 1'-0"

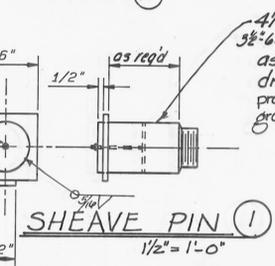
END ELEVATION (B)
 3/4" = 1'-0"



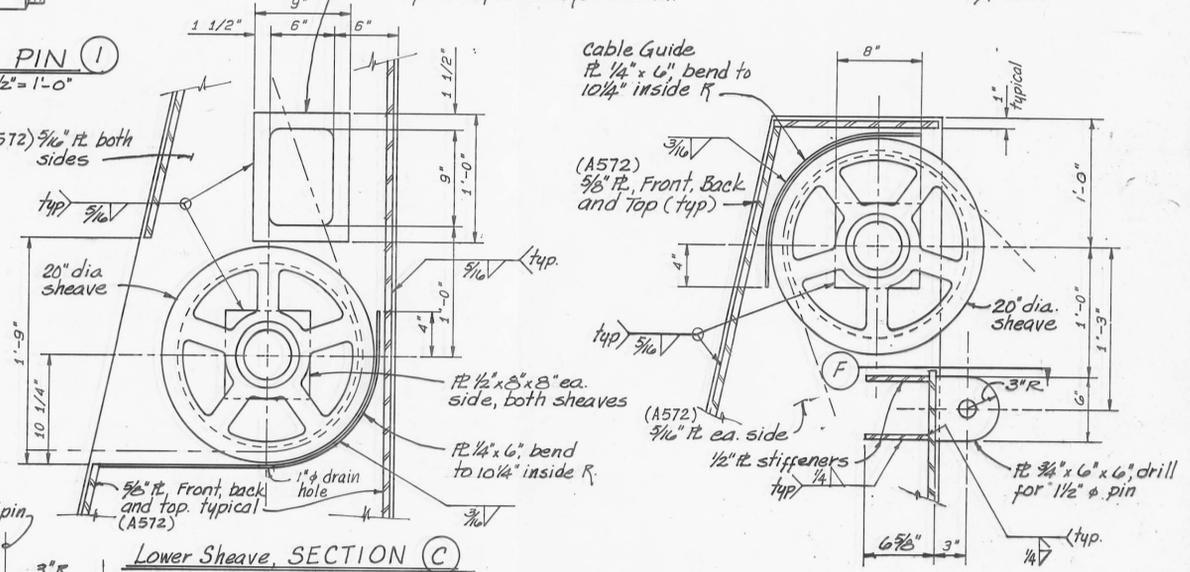
SLIDING BLOCK DETAILS (J)
 1/2" = 1'-0"



CABLE ADJUSTER (H)
 1/2" = 1'-0"

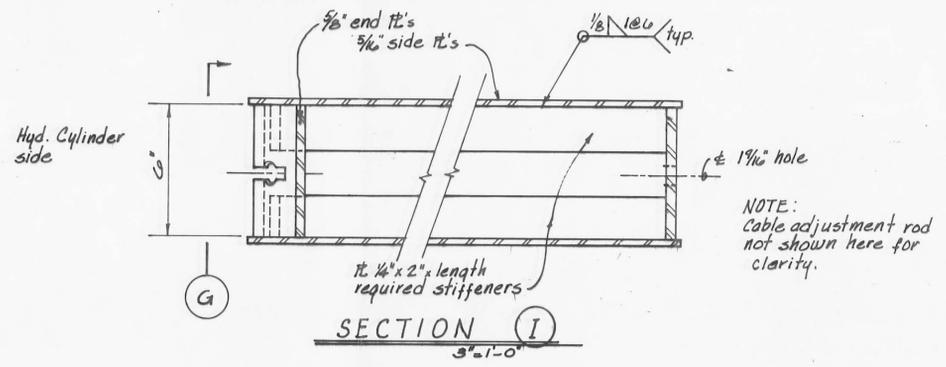


SHEAVE PIN (I)
 1/2" = 1'-0"

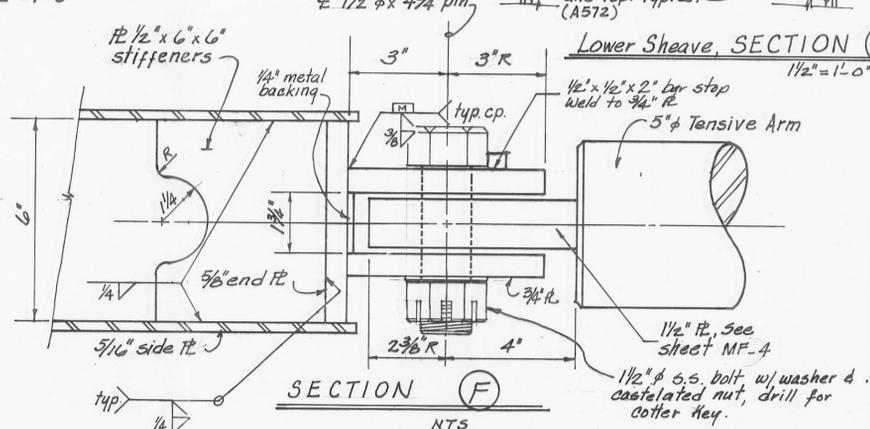


Lower Sheave, SECTION (C)
 1/2" = 1'-0"

Upper Sheave, SECTION (D)
 1/2" = 1'-0"



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



SECTION (F)
 NTS

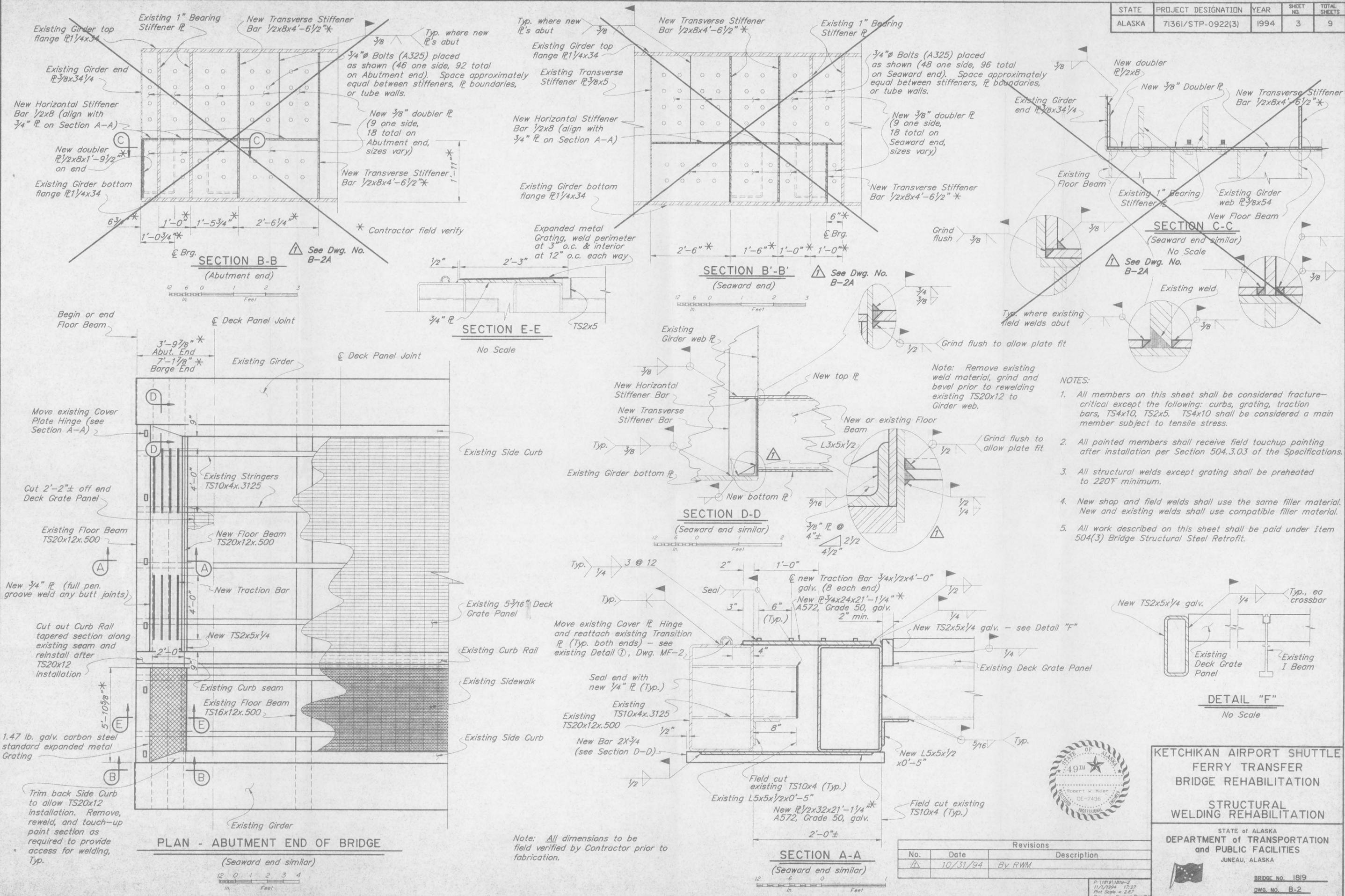
AS-BUILT & ITEM 504(3)

Rev 5-1-87 Misc changes

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| DO NOT SCALE THIS DRAWING - USE DIMENSIONS | | | |
| STATE OF ALASKA | | | |
| DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES | | | |
| Ketchikan | | Alaska | |
| APRON LIFT TOWER DETAILS | | | |
| DESIGNED <i>JAL</i> | CHECKED <i>JS</i> | DRAWN <i>lrcal</i> | DATE <i>2-87</i> |
| PROJECT NUMBER <i>71361/STP-0922(3)</i> | SHEET <i>MF-5</i> OF <i>9</i> | | |



| | | | | |
|--------|---------------------|------|-----------|--------------|
| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
| ALASKA | 71361/STP-0922(3) | 1994 | 3 | 9 |



- NOTES:
- All members on this sheet shall be considered fracture-critical except the following: curbs, grating, traction bars, TS4x10, TS2x5. TS4x10 shall be considered a main member subject to tensile stress.
 - All painted members shall receive field touchup painting after installation per Section 504.3.03 of the Specifications.
 - All structural welds except grating shall be preheated to 220F minimum.
 - New shop and field welds shall use the same filler material. New and existing welds shall use compatible filler material.
 - All work described on this sheet shall be paid under Item 504(3) Bridge Structural Steel Retrofit.

| Revisions | | |
|-----------|----------|-------------|
| No. | Date | Description |
| 1 | 10/31/94 | By RWM |

KETCHIKAN AIRPORT SHUTTLE FERRY TRANSFER BRIDGE REHABILITATION

STRUCTURAL WELDING REHABILITATION

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION and PUBLIC FACILITIES
JUNEAU, ALASKA

BRIDGE NO. 1819
DWG. NO. B-2



Note: All dimensions to be field verified by Contractor prior to fabrication.

Begin or end Floor Beam

3'-9 7/8" Abut. End
7'-1 1/8" Barge End

Existing Girder

Existing Side Curb

Existing Stringers TS10x4x.3125

Existing Floor Beam TS20x12x.500

New Floor Beam TS20x12x.500

New Traction Bar

New TS2x5x1/4

Existing Curb seam

Existing Floor Beam TS16x12x.500

Existing Girder

Trim back Side Curb to allow TS20x12 installation. Remove, reweld, and touch-up paint section as required to provide access for welding, Typ.

PLAN - ABUTMENT END OF BRIDGE
(Seaward end similar)

SECTION E-E
No Scale

SECTION D-D
(Seaward end similar)

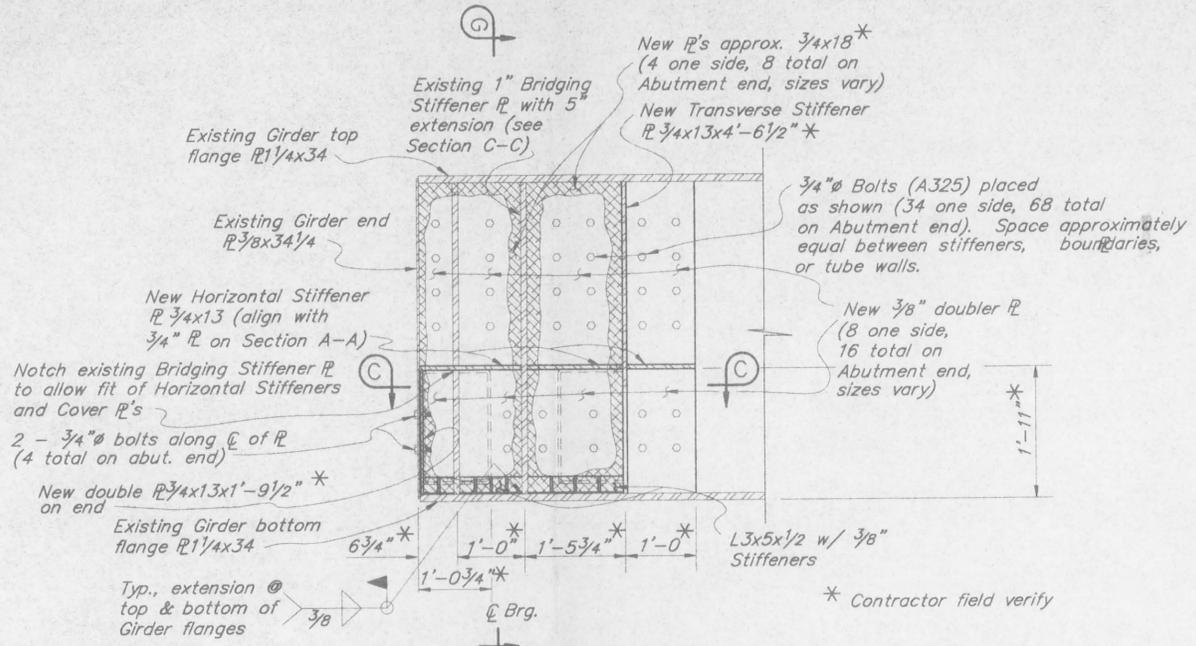
SECTION A-A
(Seaward end similar)

SECTION B-B
(Abutment end)

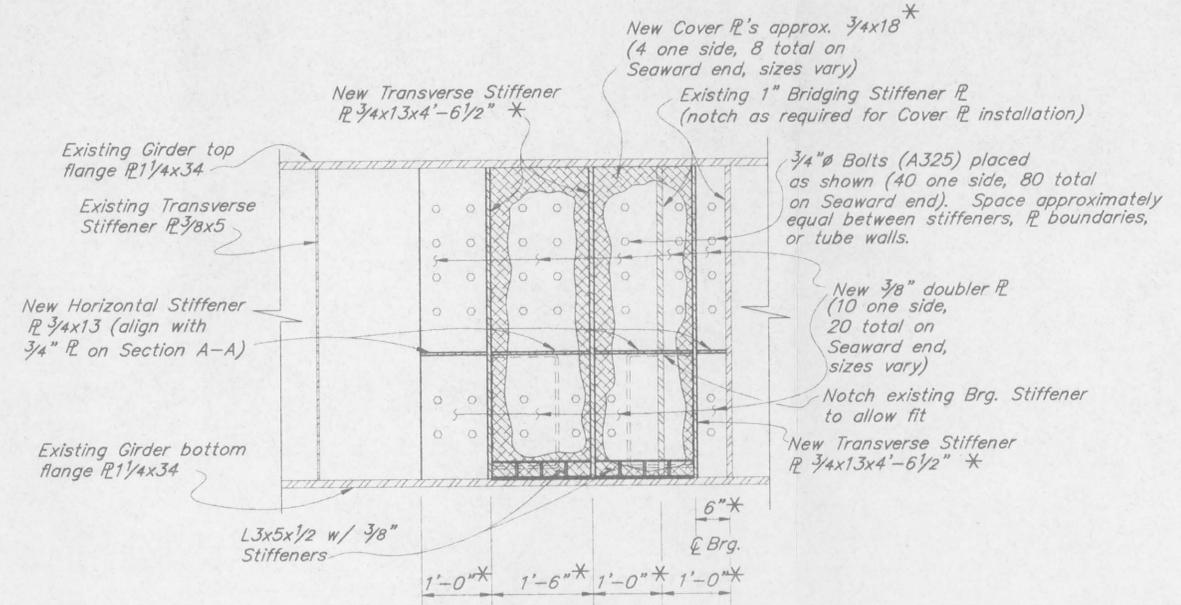
SECTION B-B'
(Seaward end)

SECTION C-C
(Seaward end similar)

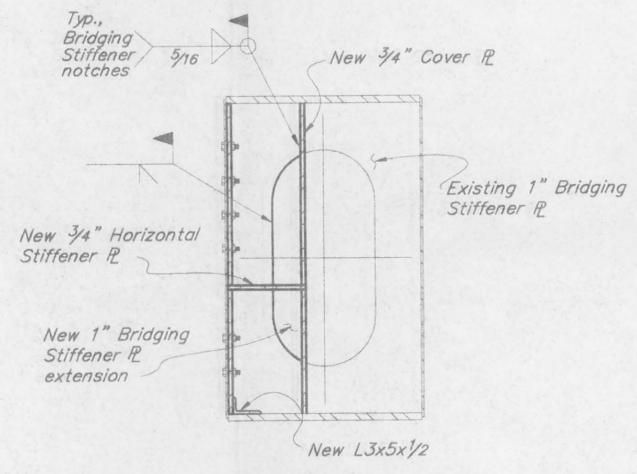
DETAIL "F"
No Scale



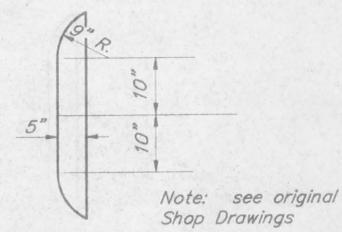
SECTION B-B
(Abutment end)



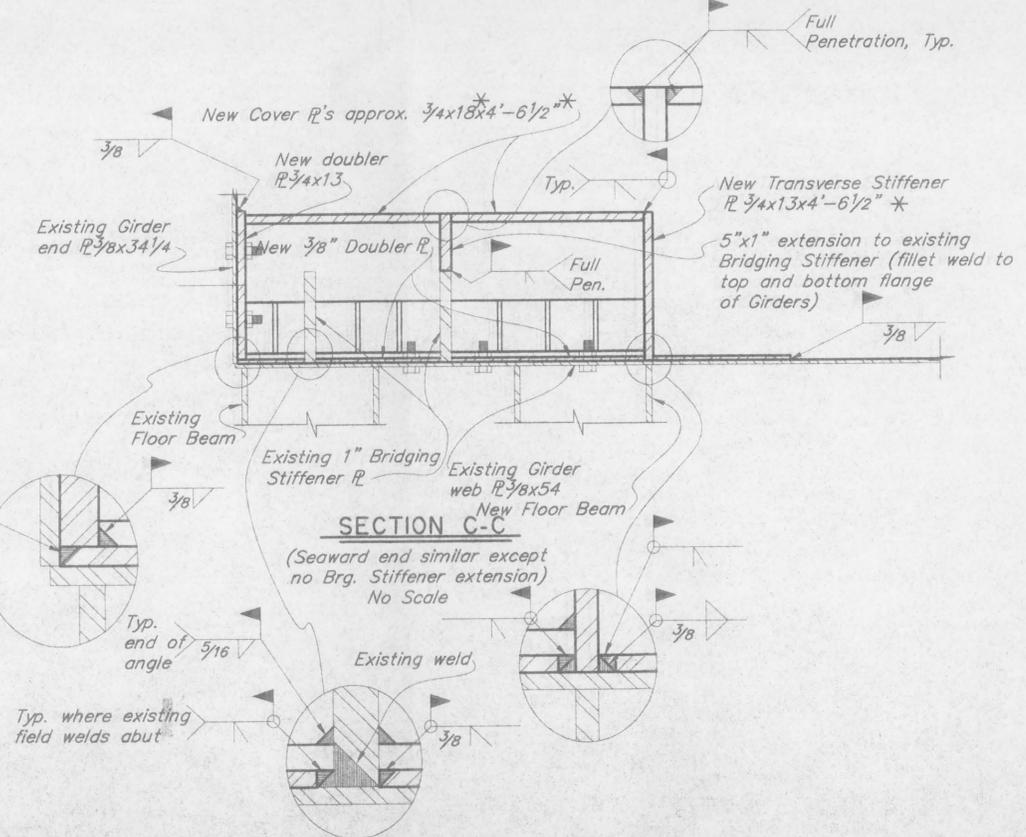
SECTION B'-B'
(Seaward end)



SECTION G-G



BRIDGING STIFFENER R EXTENSION



SECTION C-C
(Seaward end similar except no Brg. Stiffener extension)
No Scale

Notes:
These details replace corresponding details on Dwg. No. B-2. Other notes and details remain unchanged.
Nip corners of stiffeners as required to avoid existing welds.

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STRUCTURAL WELDING REHABILITATION CHANGES
STATE OF ALASKA
DEPARTMENT of TRANSPORTATION and PUBLIC FACILITIES
JUNEAU, ALASKA