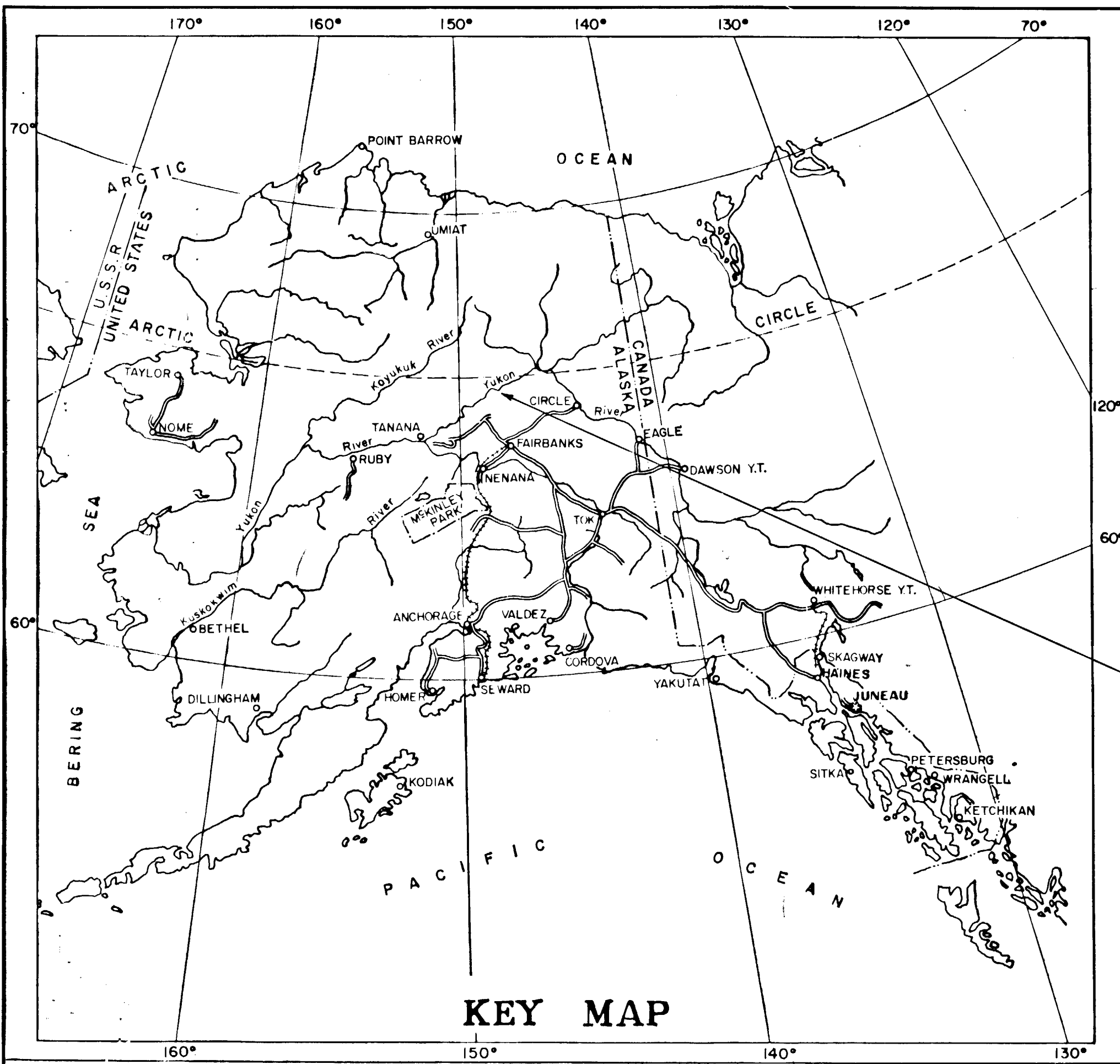




STATE OF ALASKA DEPARTMENT OF HIGHWAYS

PLAN AND PROFILE PROPOSED HIGHWAY PROJECT RS-0681(3) YUKON RIVER BRIDGE

Project RS-0681(3)

CONTRACTOR: MANSON-OSBERG-GHEMM J/V

PROJECT ENGINEER: ROD PLATZKE

DATE STARTED: MARCH 6, 1974

DATE COMPLETED: JUNE 24, 1976

AS-BUILT

STATE	PROJECT	SHEET NO.	TOTAL SHEETS
ALASKA	RS-0681(3)	1	30

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2-30	BRIDGE NO. 271

THE FOLLOWING STANDARD DRAWINGS APPLY TO THIS PROJECT: G-04.00, G-04.11, G-10.00, G-30.00, G-30.10, M-13.00, C-00.00, C-10.00, C-11.00

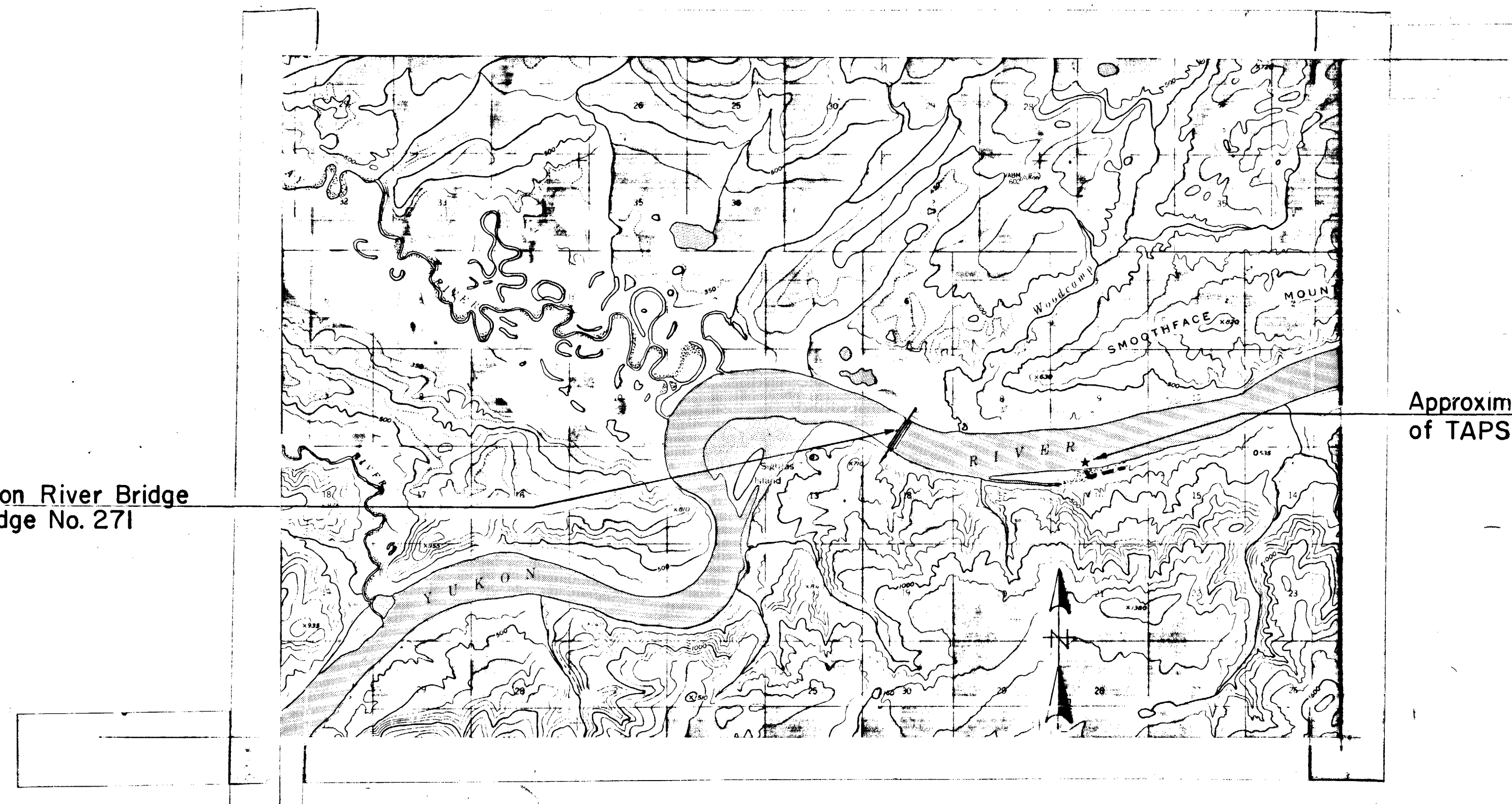
DESIGN DESIGNATION

ADT (1972) = 130
(92) = 390
DHV = 80
D = 30-70%
T = 30%
V = 60

CONVENTIONAL SIGNS

PROPOSED CONSTRUCTION CENTERLINE	
PRELIMINARY SURVEY LINE	
TOWNSHIP LINE	
SECTION LINE	
PROPERTY LINE	
RIGHT-OF-WAY LINE	
EASEMENT LINE	
CORPORATED OR CITY LIMITS	
POWER LINE	
TELEPHONE OR TELEGRAPH LINE	
POLE ANCHOR	
LIGHT POLE	
WATER LINE	
SANITARY SEWER LINE	
STORM DRAIN	
VALVE BOX	
DROP INLET & CATCH BASIN	
MANHOLE	
CULVERT PROPOSED	
CULVERT EXISTING	
FIRE HYDRANT	
TRAVELED WAY	
SWAMP	
FENCE	
CURB CUT	
LAND MONUMENT	
RIGHT-OF-WAY MONUMENT	
LIMIT OF CUT SLOPE	
LIMIT OF FILL SLOPE	

Yukon River Bridge
Bridge No. 271



Approximate terminus
of TAPS Road

AS BUILT PLANS

Rod Platzke Date 3-6-77
Project Engineer
CORRECTIONS TRANSFERRED
Tracings Kris Klemmerson Date 2-19-77
Checked H.O. LESLIE Date 3-17-77

APPROVED

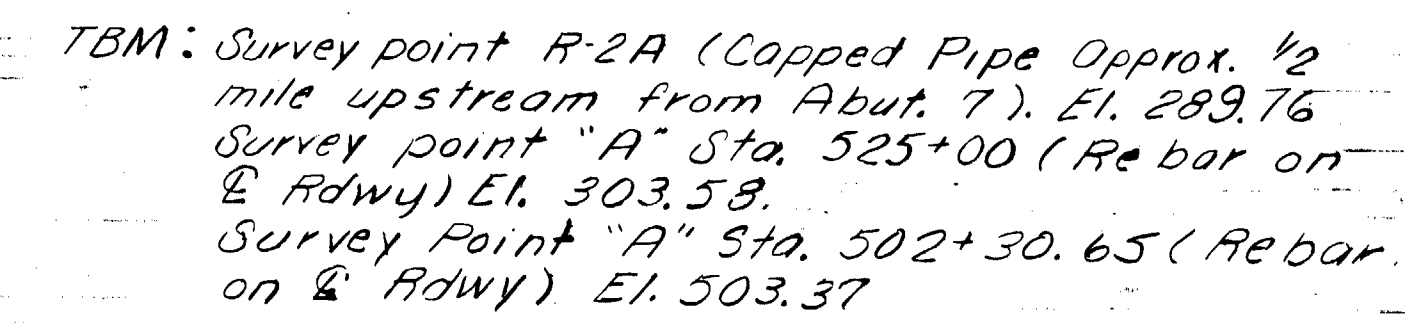
BRIDGE ENGINEER

APPROVED

COMMISSIONER OF HIGHWAYS

DATE 12/7/78

DATE 12-6-78



BOX GIRDERS NO. 2	2534
BOX GIRDERS NO. 3	2535
SPLICE DETAILS NO. 1	2536
SPLICE DETAILS NO. 2	2537
DIAPHRAGM DETAILS	2538
PIPELINE SUPPORT	2539
PIPELINE SUPPORT DETAILS NO. 1	2540
PIPELINE SUPPORT DETAILS NO. 2	2541
PIPELINE SUPPORT DETAILS NO. 3	2542
MISCELLANEOUS DETAILS	2543
EXPANSION DEVICE	2544
BRIDGE RAILING	2545
LOG OF TEST BORINGS	2546
LOG OF TEST BORINGS	2547 & 48

Red Plate Date 7-6-74 6:24-76
Project Engineer
CORRECTIONS TRANSFERRED
Tracings K. Klammetson Date 2-14-77
Checked HO LESLIE Date 3-1-77

Date 12/7/73
Approved Karl

BRIDGE NO. 271
DWNG. NO. 2520

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS 0681(3)	1973	3	30

GENERAL NOTESSpecifications:

Design: AASHTO Standard Specifications for Highway Bridges, 1959 Edition with latest interim specifications modified as follows:

Ice Loading - 2600 kips on Pier nose acting with 1300 Kips on side or 2600 Kips on side acting alone, all at elev. 270.0'.

Earthquake Loading - As per Newmark Standard Response Spectra for Alyeska Pipeline Service Company by Dames and Moore.

Orthotropic Design - Selected references used to supplement AASHTO.

Construction: State of Alaska standard Specifications for Highway Construction, 1972 and special provisions.

Live Load: HS 20-44. Final deck surfacing allowance = 30 lbs/sq. Ft.

Unit stresses:

Reinforced Concrete: $f_c = 1200 \text{ psi}$; $f_s = 20000 \text{ psi}$; $n = 10$

Structural steel: Bending stress in extreme fibre.

Type of steel	Thickness	Allowable Stress
A-36	All	20,000 psi
A-537 Grade A	1 1/2" and under	27,000 psi
A-514	All	50,000 psi

Concrete: All concrete shall be Class "A".

Reinforcing steel: All reinforcing steel shall conform to ASTM A615 Grade 40.

Structural steel: Unless otherwise shown on the plans or noted in the Specifications, the structural steel shall be A537 Grade "A".

Piles: Type 1 HP 12x74 (ABUTMENTS ONLY)
Design Load: 75 Tons

Design Footing Pressure: 12 Tons/sq. Ft.

Erection: Proposed erection methods and erection stress computations must be submitted for approval.

Detail Changes: Proposed changes in connections or other details must be submitted for approval.

Steel Orthotropic Box Girder
Superstructure - Continuous

Pipeline
Location

Pipeline Support

Steel Frame

Concrete Pier

Rock Line

Concrete Footing

Prestressed Rock
Anchors

TYPICAL SECTION

10 0 20
Feet

* ALSO SEE MODIFIED
PIER 4 FOOTING

Curve Data
 $\Delta = 6^\circ 40' \text{ LT}$
 $D = 0^\circ 30'$
 $T = 667.42'$
 $R = 11,495.16'$

P.T. Sta. 500+87.27

RIVER

YUKON

0 200 400

ESTIMATE OF QUANTITIES

ITEM	UNIT	TOTAL
Furnish & Maintain Engineering Facilities	L.S.	All Req'd
Meals	11,562 Each	13,140
Lodging	4,388 Each	4,388
Mobilization	L.S.	All Req'd
Temporary Erosion & Pollution Control	C.S.	All Req'd
Training Programs	C.S.	All Req'd

ESTIMATE OF QUANTITIES

ITEM	UNIT	SUB	SUPER	TOTAL	PIER 4* CHANGES
Abutment Site Work	Each	2	—	2	0
Steel "H" Piles, furnished & driven	L.F.	1562.4 16.2	—	362.4 16.2	2237.3
Class A Concrete	C.Y.	3338.4 6.720	—	5338.4 6.720	2024.4
Reinforcing steel	Lb.	902,610 4,669,000	—	902,610 4,669,000	364,117
Preparation of Pier Foundations	Each	5	—	5	1
Structural steel, furnished fabricated & erected,	Lb.	966,300 4,750,000	8,709,400	* 966,300 9,675,700	0
Prestressed Rock Anchors	L.F.	3720 4080	—	3720 4080	0
Metal Bridge Railing	L.F.	—	466L	466L	0
Beam Type Guardrail	L.F.	—	250	250	0
Pipeline Support walkway	S.F.	—	52,100	52,100	0
Interim Timber Deck	S.F.	—	70,800	70,800	0
DRILL & CASE	L.F.	0	0	0	2047.1

* Includes Approx. 306,400
315,100 lbs. A36, 93,500 lbs. A588, 8,739,200 lbs. A537, and 536,600 lbs. A514
& A242

HYDRAULIC SUMMARY

Drainage Area	199,400 sq. mi.
Design Frequency	50 year
Design Discharge	1,018,000 cfs
Design High Water Elev.	305'
Standard Project Discharge	1,600,000 cfs
High Water Elevation	321'
Frequency	500 year (approx.)

Contours approximate only.
Contours as of May 1969.

AS BUILT PLANS

Rod Platzke Date 3-6-74-6-24-76
Project Engineer

CORRECTIONS TRANSFERRED

Tracings Kris Klemmetsen Date 2-17-77

Checked: H.O. LESLIE Date 3-1-77

YUKON RIVER BRIDGE

ROUTE S-681

FOUNDATION PLAN

State of Alaska
DEPARTMENT OF HIGHWAYS
Juneau, Alaska

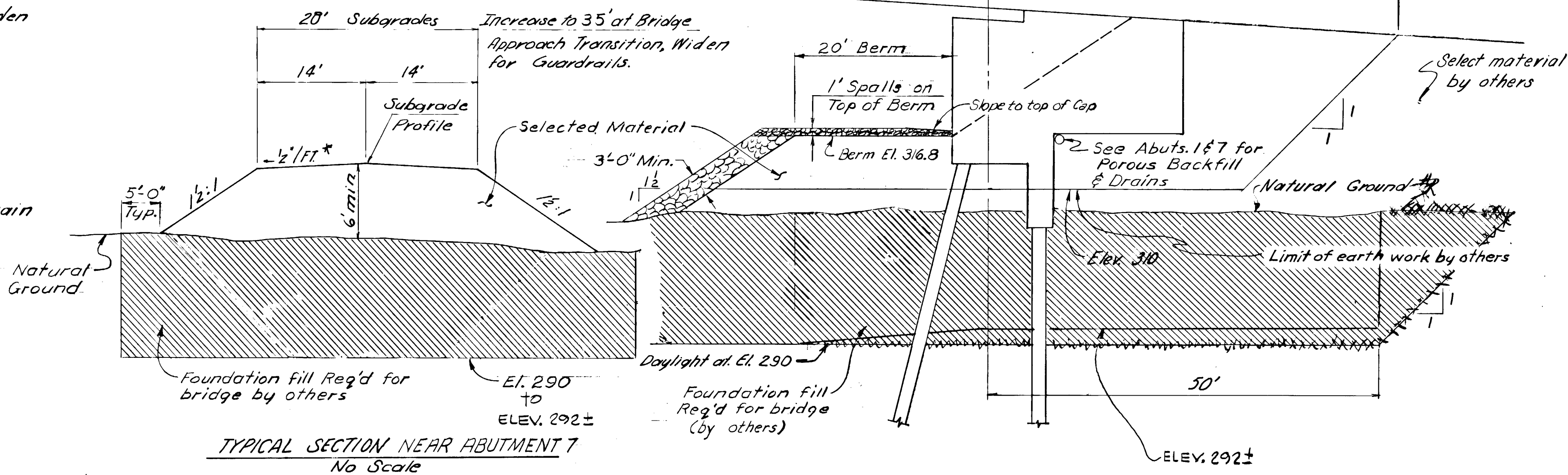
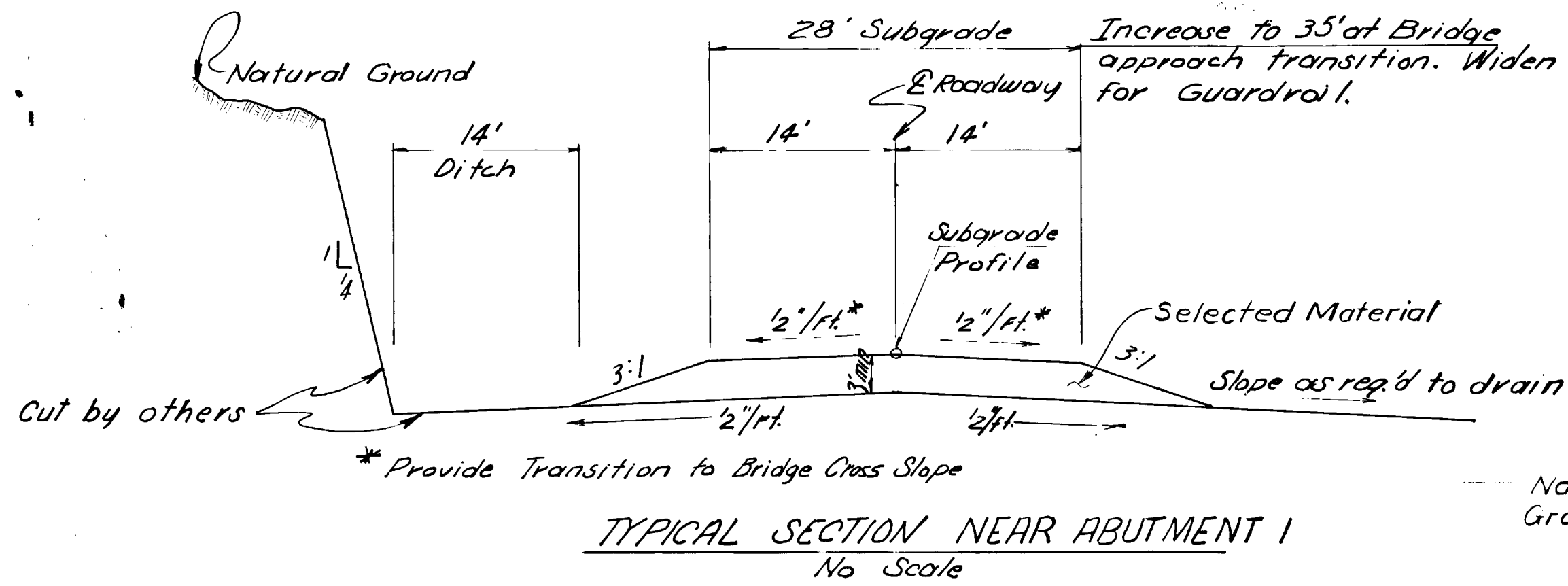
Date 12/7/73

Approved K. H. 77 Klemmetsen

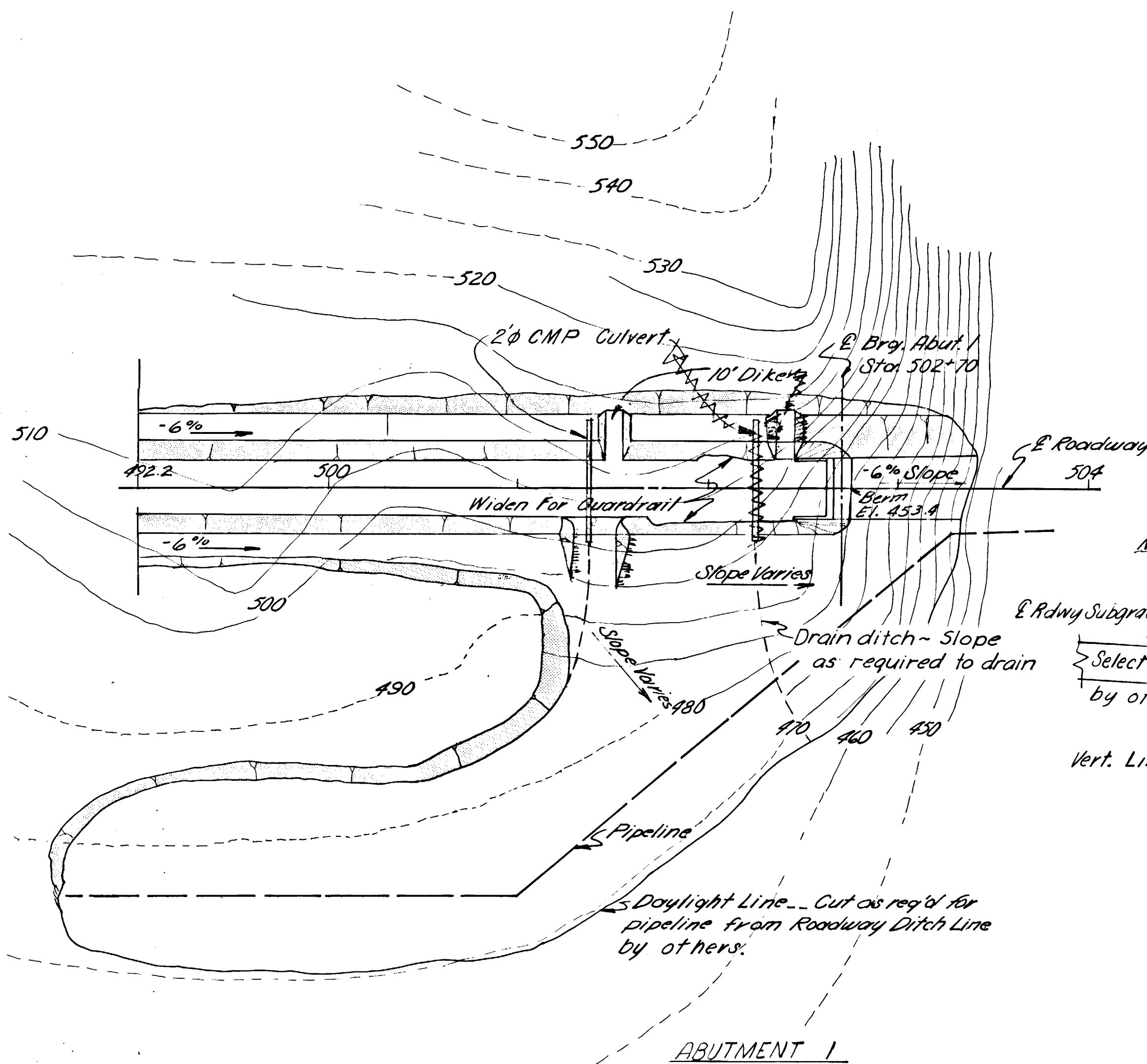
BRIDGE NO. 271

DWNG. NO. 2521

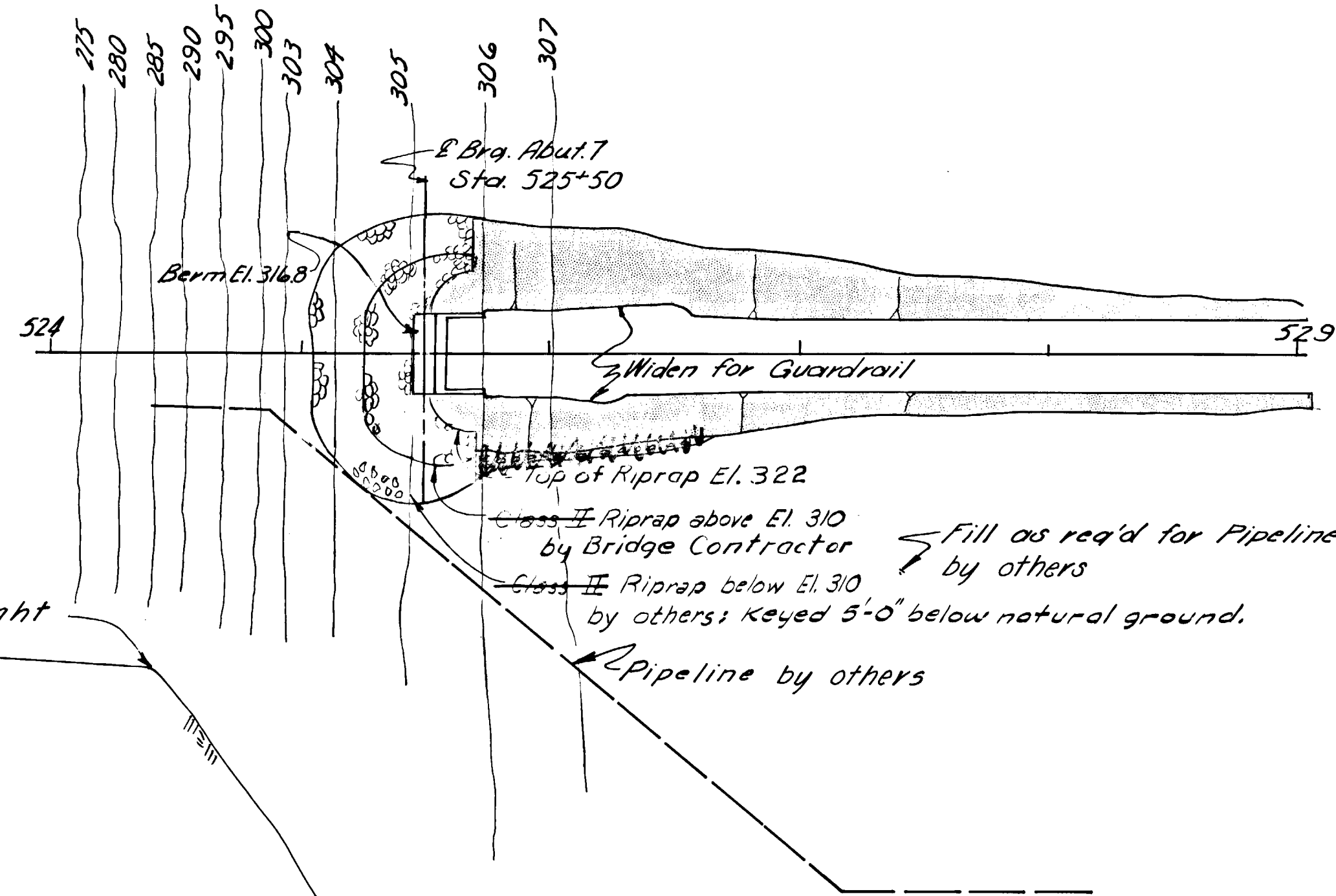
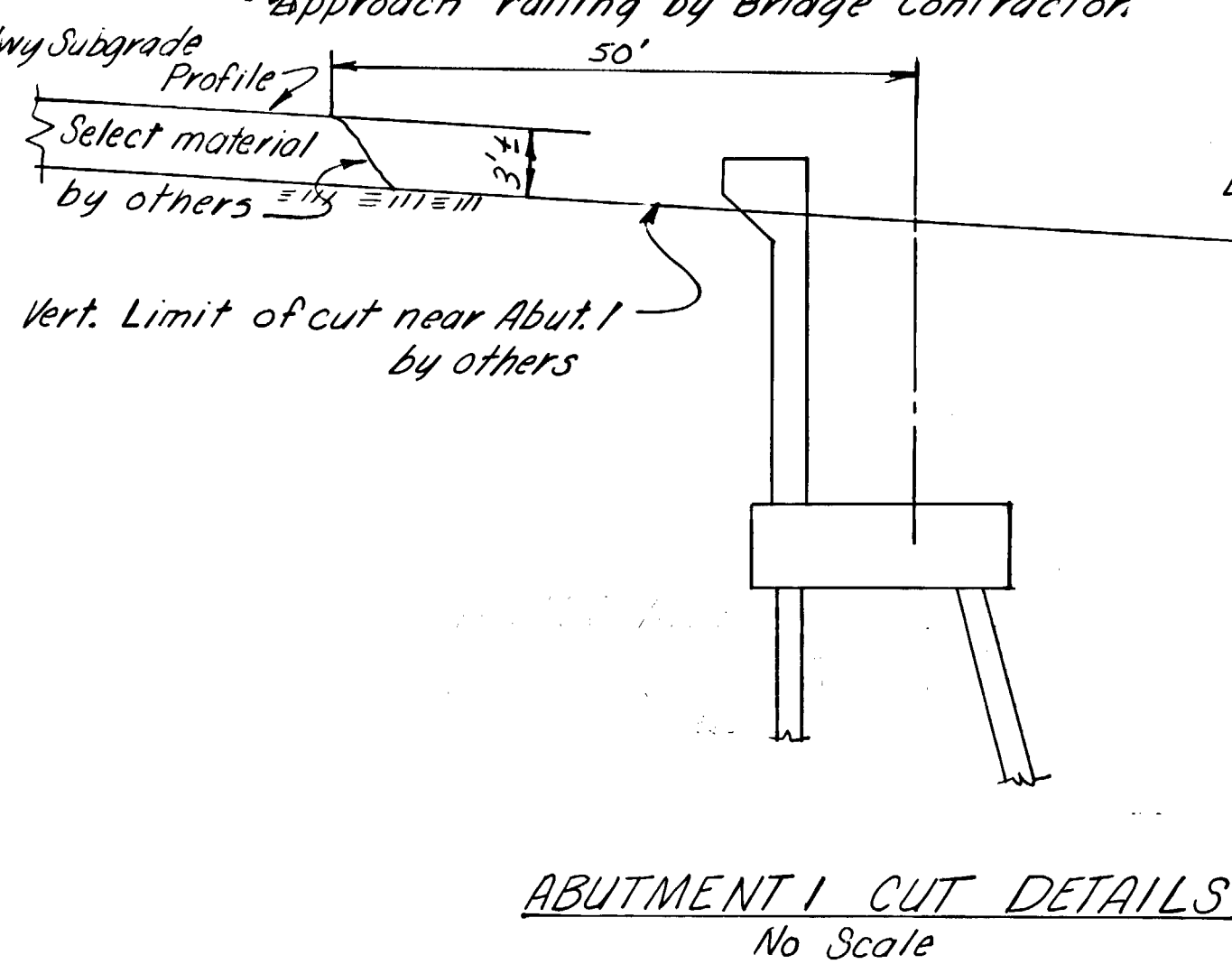
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS 0681(3)	1973	4	30



ABUTMENT 7 FOUNDATION DETAILS
No Scale



NOTE: Use Standard Roadway Transition at Bridge ends with Standard Approach Guardrail. Approach railing by Bridge Contractor.



ABUTMENT 1
Contours Aug. 1971
--- Estimated Contours from Aerial Maps

ABUTMENT 7
Contours April, 1971

APPROACH DETAILS

AS BUILT PLANS
Red Platzke Date 3-6-74 / 6-24-74
Project Engineer
CORRECTIONS TRANSFERRED
Tracings Kris Klemm Date 2-17-77
Checked H.O. LESLIE Date 3-1-77

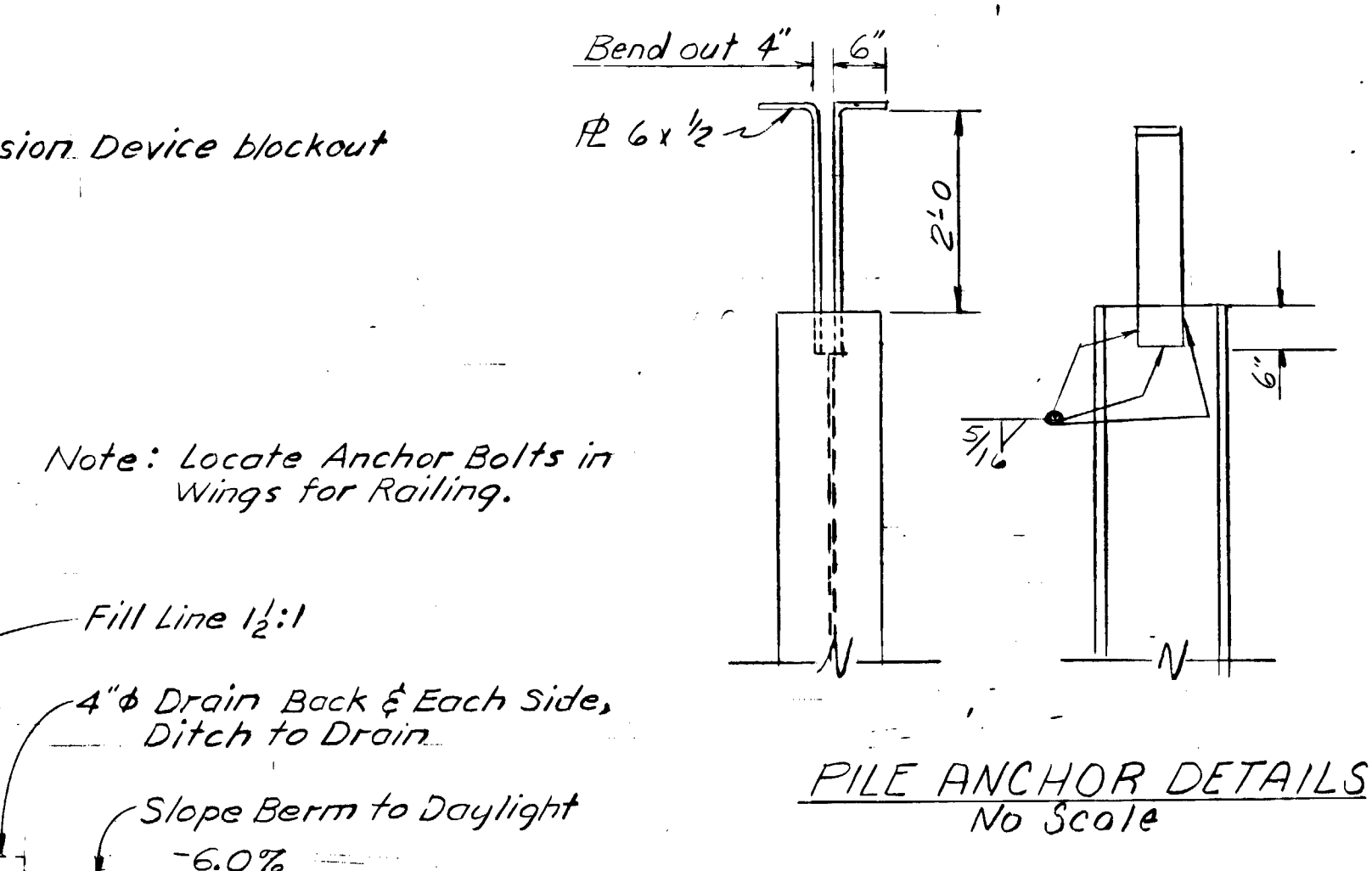
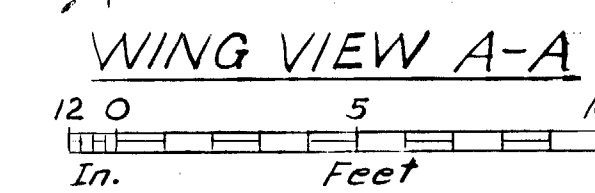
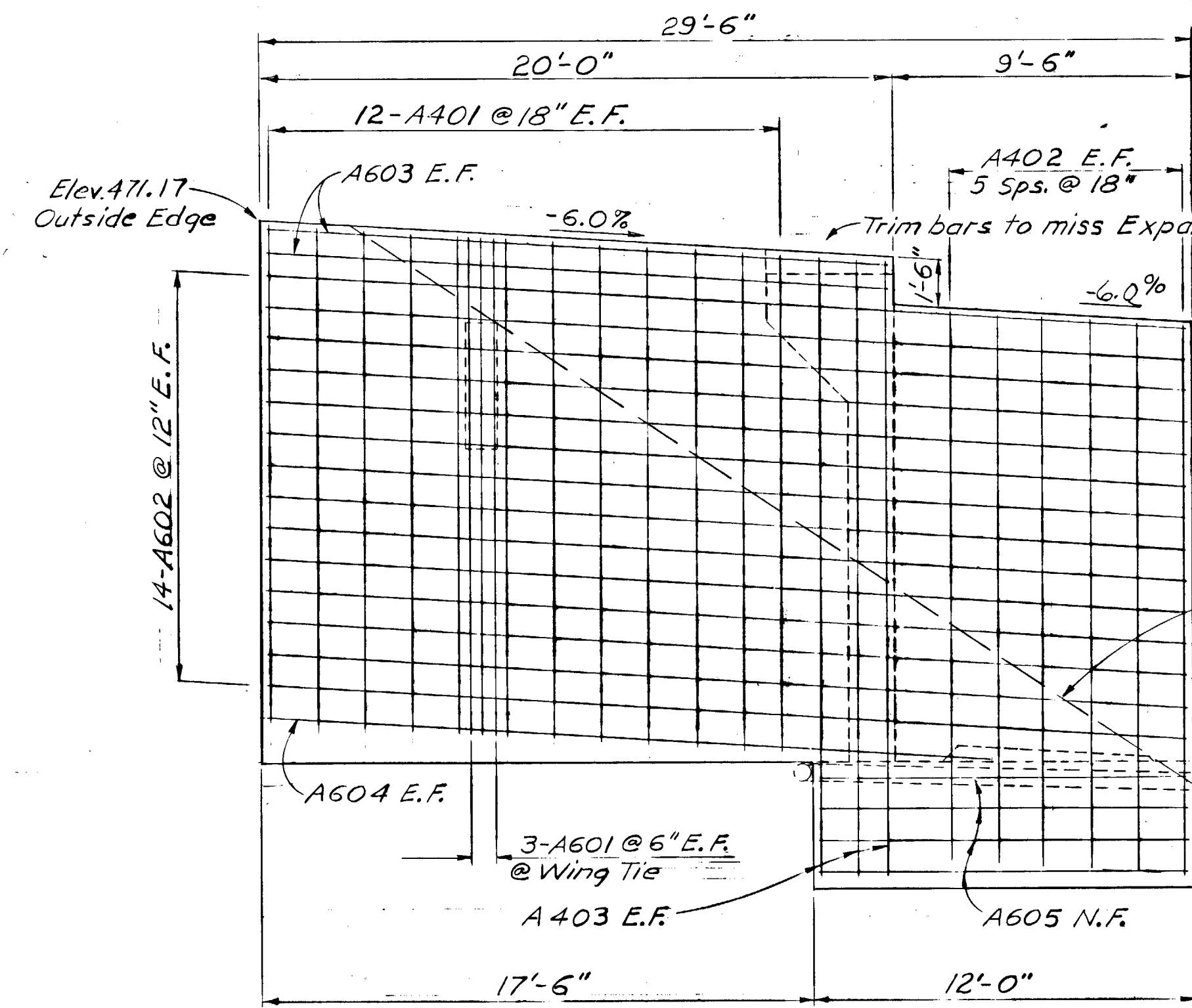
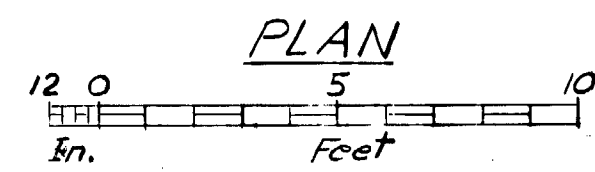
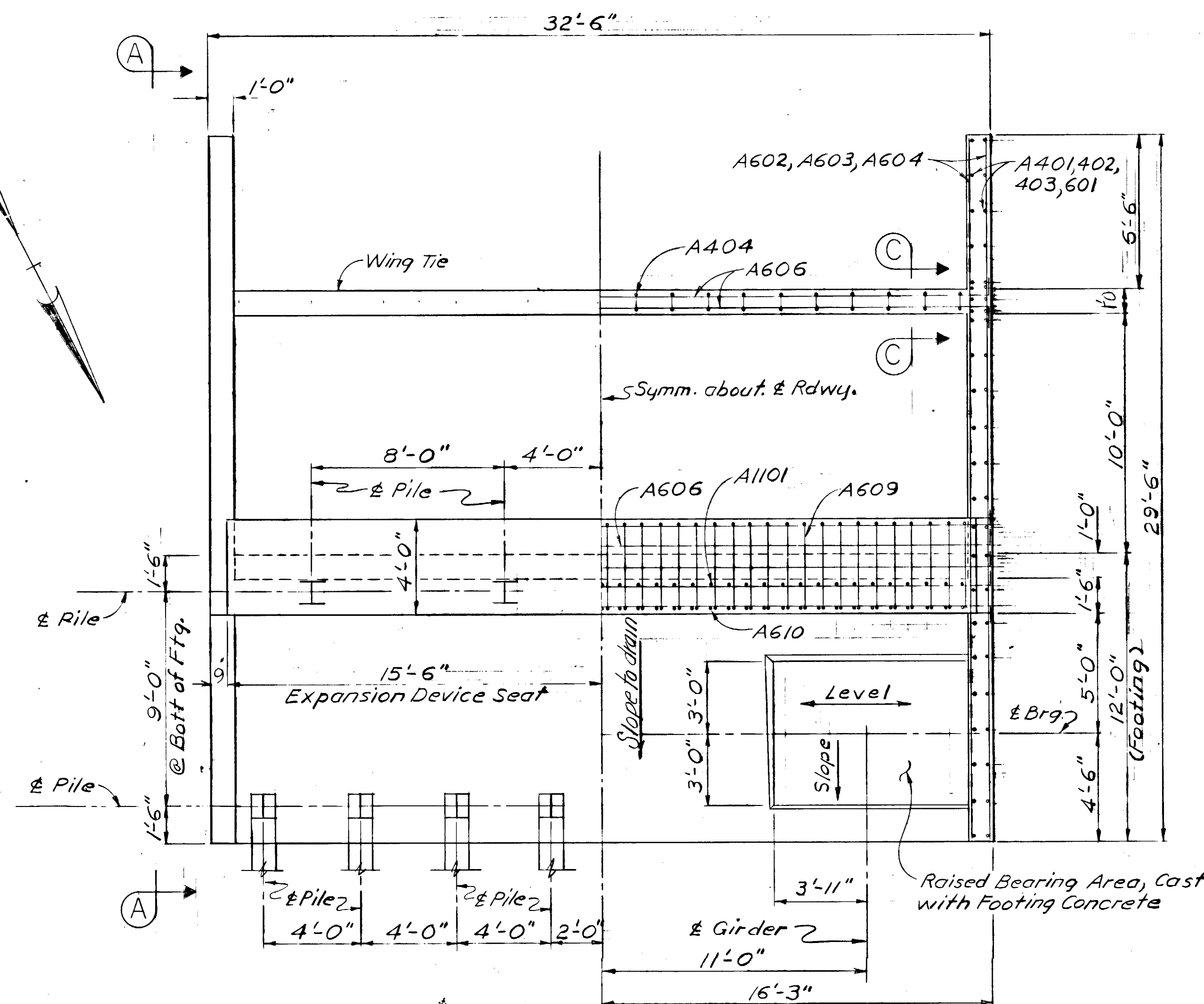
YUKON RIVER BRIDGE
ROUTE NO. S-681
APPROACH DETAILS

State of Alaska
DEPARTMENT OF HIGHWAYS
Juneau, Alaska

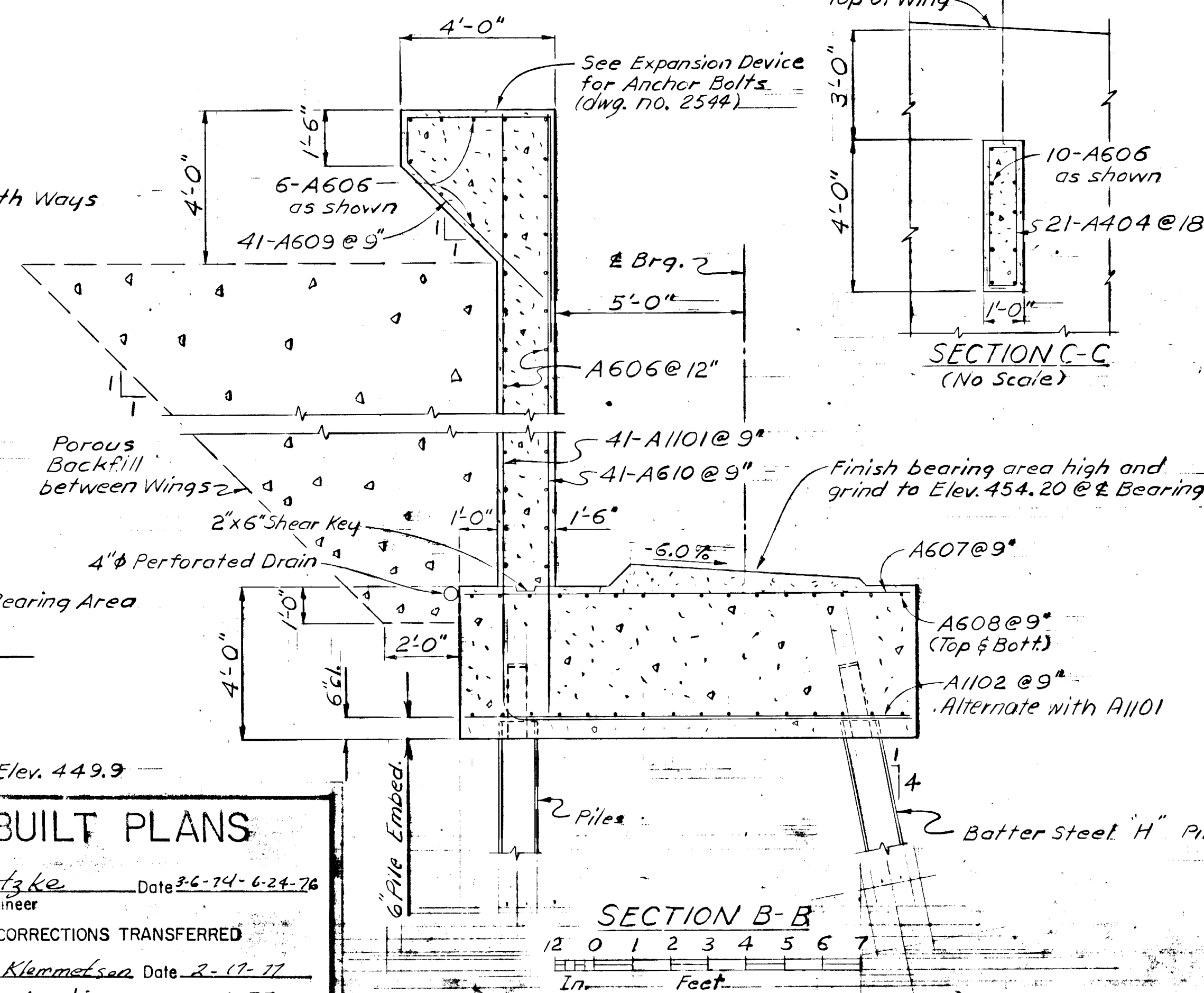
Date 12/7/73
Approved Karl N. Nicks

BRIDGE NO. 271
DWG. NO. 2522

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS 0681(3)	1973	5	30



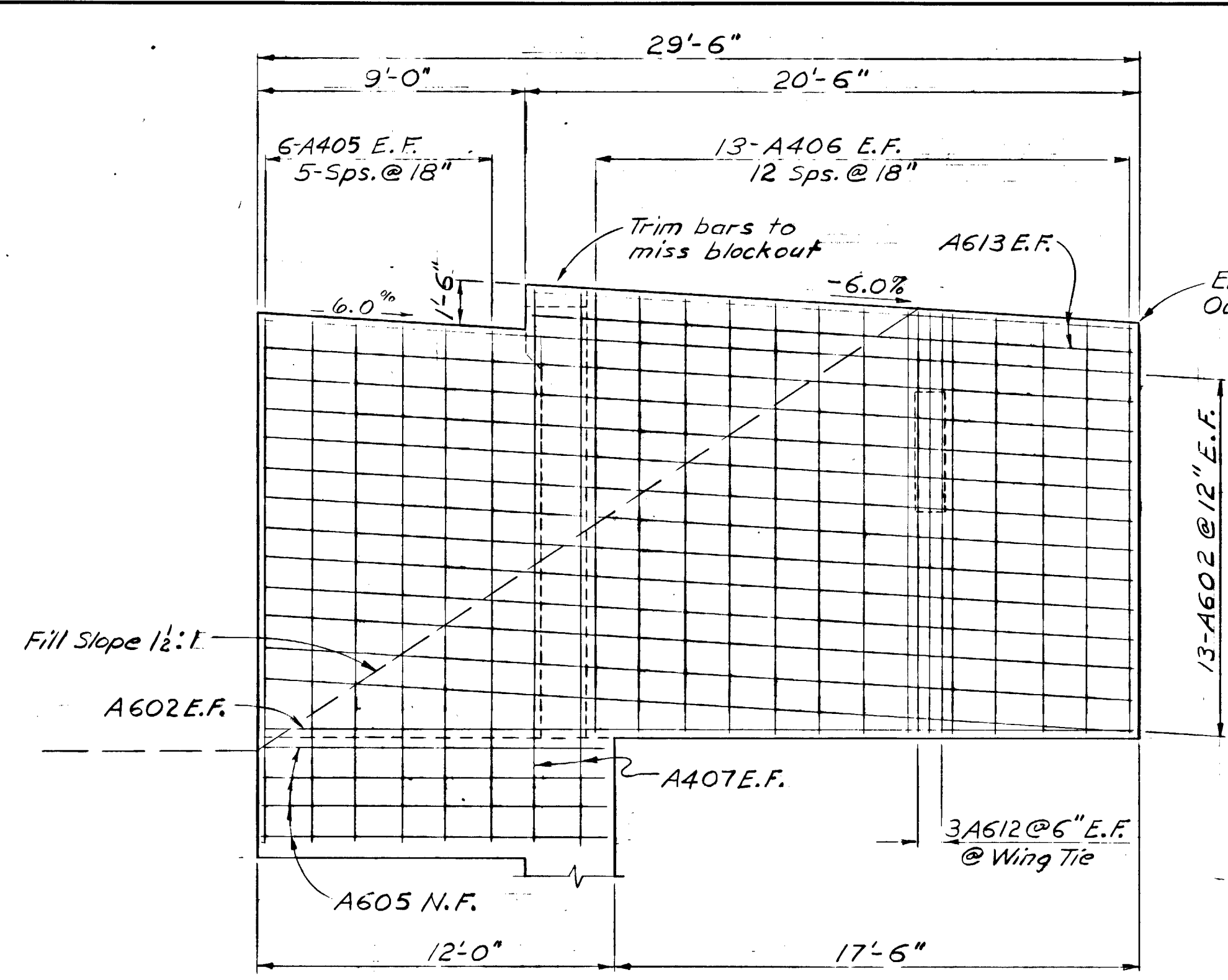
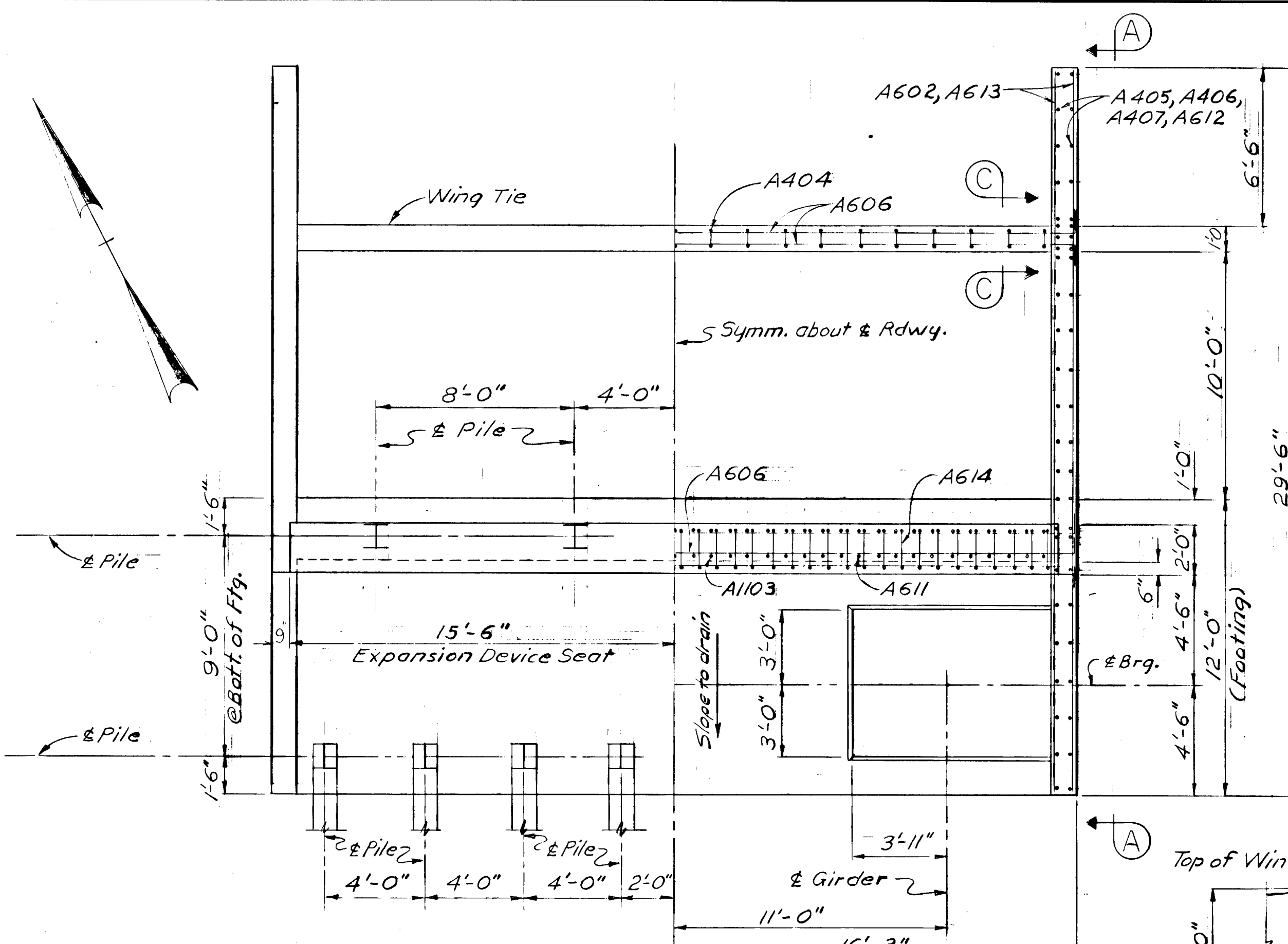
REINFORCING STEEL					BENDING DIAGRAMS	
MARK	NO.	SIZE	LENGTH	TYPE		
A401	48	4	15'-8"			
A402	24	4	17'-6"			
A403	12	4	19'-4"			
A404	21	4	9'-5"	Bent		
A601	12	6	15'-8"			
A602	56		29'-2"			
A603	8		19'-8"			
A604	4		23'-0"			
A605	8		11'-8"			
A606	48		34'-2"	Bent		
A607	41		11'-6"			
A608	32		32'-0"			
A609	41		15'-11"	Bent		
A610	41	6	18'-6"			
A1101	41	11	29'-2"	Bent		
A1102	42	11	11'-6"			



AS BUILT PLANS
 Rod Platze Project Engineer Date 2-6-74-6-24-76
 CORRECTIONS TRANSFERRED
 Tracings Kris Klemmerson Date 2-1-77
 Checked H.O. Leslie Date 3-1-77

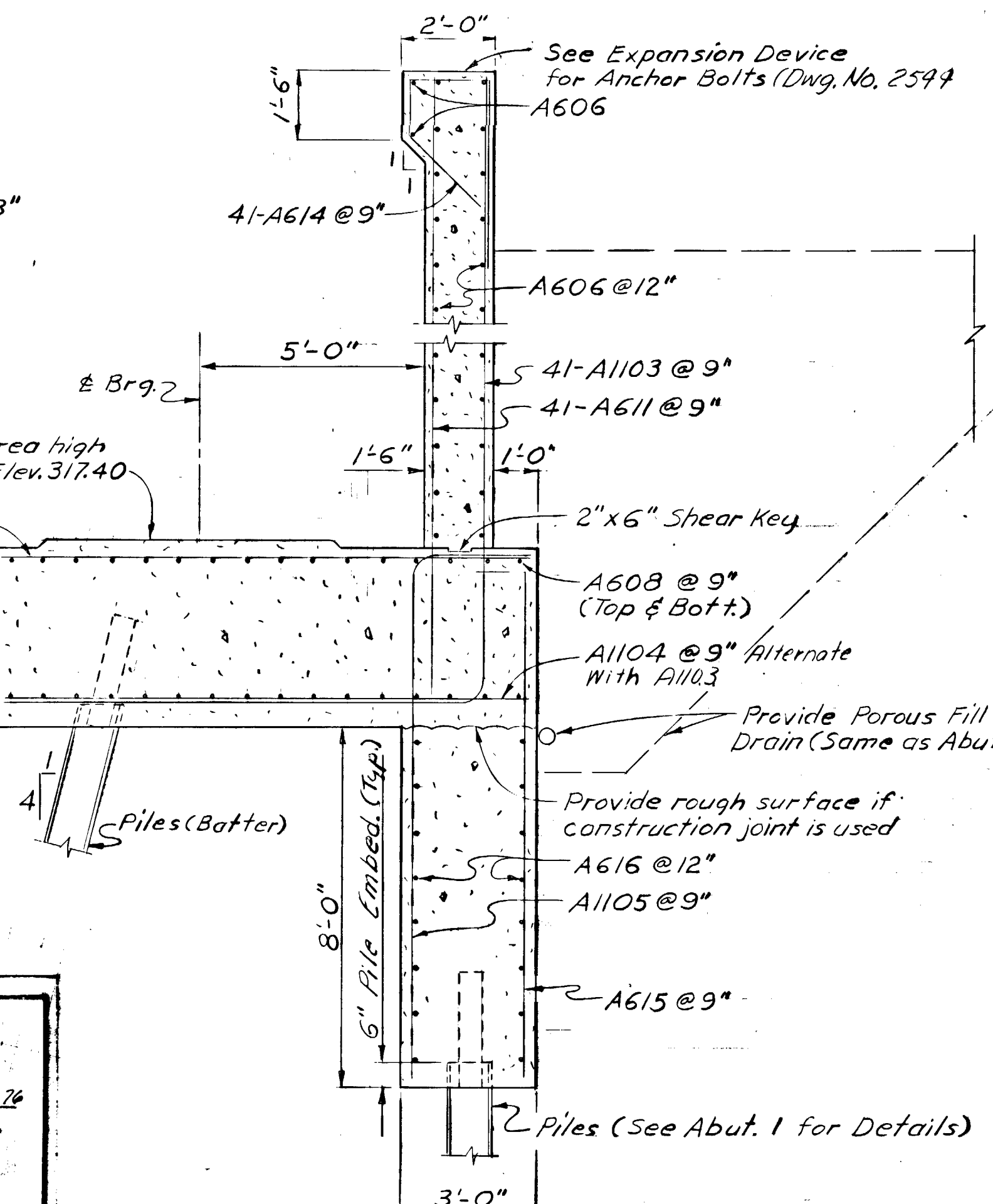
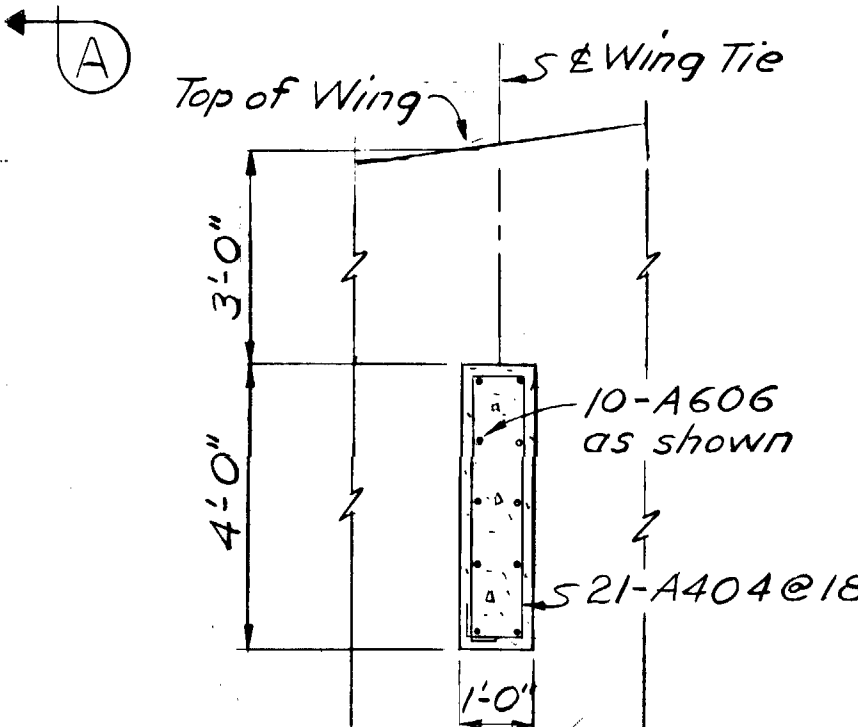
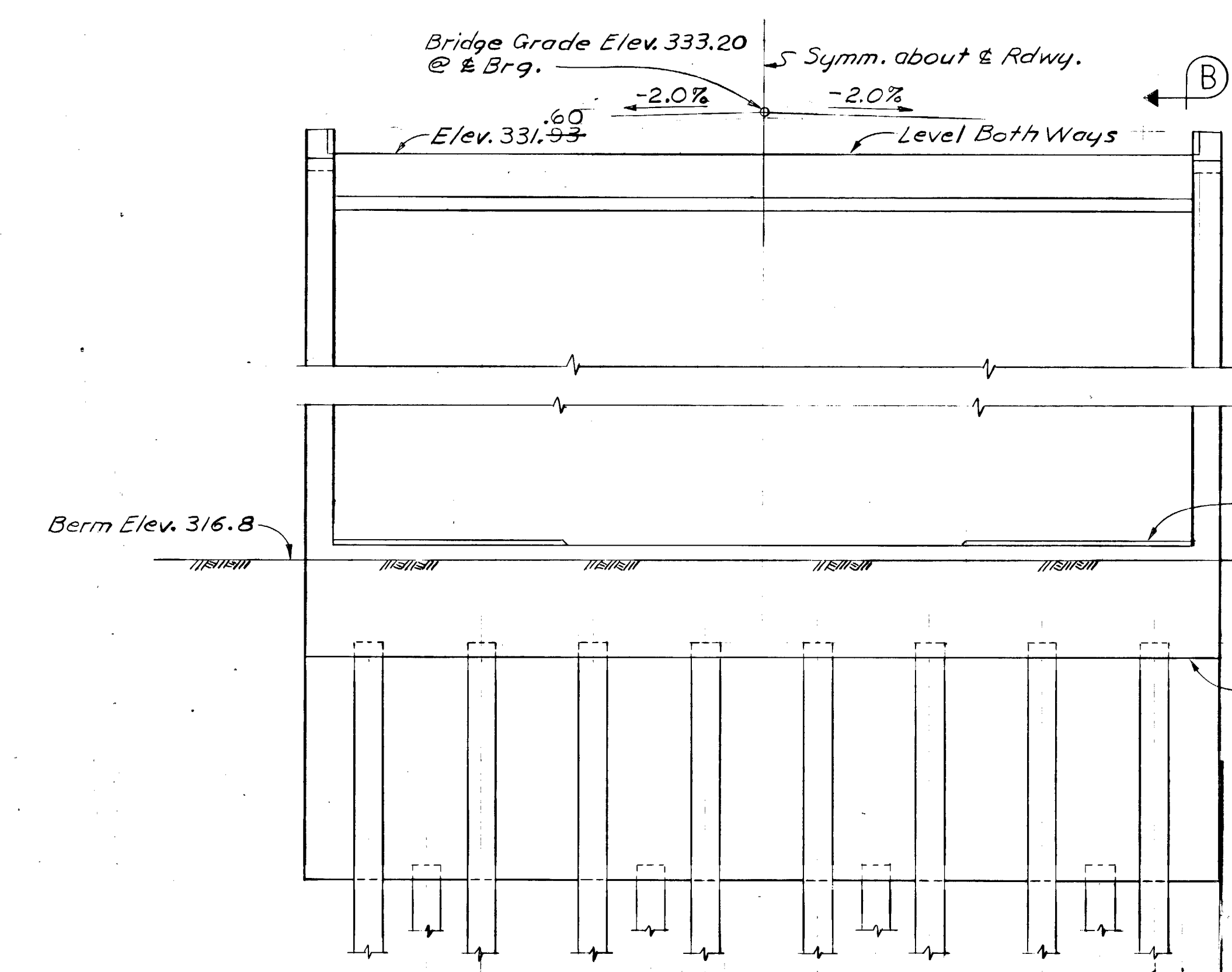
YUKON RIVER BRIDGE
 ROUTE NO. S-681
 ABUTMENT I.
 State of Alaska
DEPARTMENT OF HIGHWAYS
 Juneau, Alaska
 Date 12/7/73
 Approved 1/10/74
 BRIDGE NO. 271
 DWNG. NO. 2523

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS 0681 (3)	1973	6	30



Note: Locate Anchor Bolts in Wings for Railing.

REINFORCING STEEL					BENDING DIAGRAMS	
MARK	NO.	SIZE	LENGTH	TYPE		
A404	21	4	9'-5"	Bent		
A405	24	4	17'-6"			
A406	26	4	28'-5"			
A407	8	4	18'-9"			
A602	56	6	29'-2"			
A605	8		11'-8"			
A606	42		34'-2"	Bent		
A607	41		11'-6"			
A608	32		32'-0"			
A611	41		18'-0"			
A612	12		14'-0"			
A613	8		20'-2"			
A614	41		9'-2"	Bent		
A615	41		12'-5"	Bent		
A616	16	6	32'-0"			
A1103	41	11	28'-8"	Bent		
A1104	42	11	11'-6"			
A1105	41	11	14'-3"	Bent		



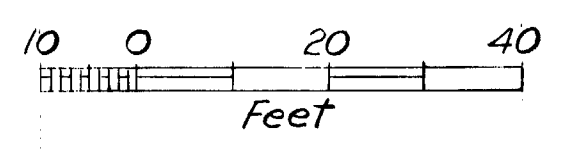
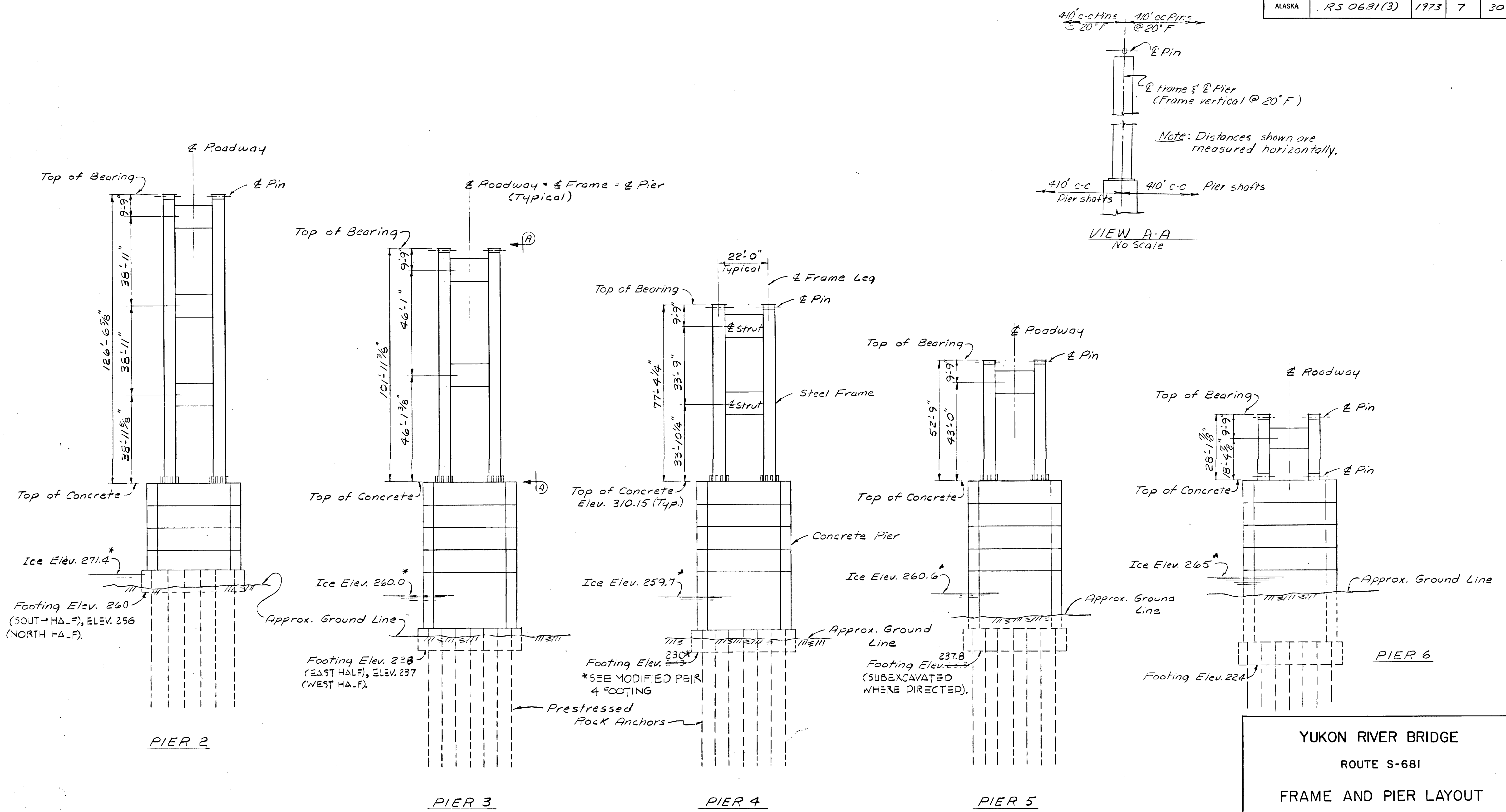
AS BUILT PLANS
 Rod Platzke Project Engineer Date 3-6-74 / 6-24-76
 CORRECTIONS TRANSFERRED
 Tracings Kris Klemm Date 2-17-77
 Checked H.O. Leslie Date 3-1-77

YUKON RIVER BRIDGE
 ROUTE NO. S-681
 ABUTMENT 7

State of Alaska
DEPARTMENT OF HIGHWAYS
 Juneau, Alaska

Date 12/7/73
 Approved Karl J. [Signature]
 BRIDGE NO. 271
 DWNG. NO. 2524

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS 0681(3)	1973	7	30



AS BUILT PLANS

Rod Platzke Date 3-6-74 / 6-22-76
Project Engineer

CORRECTIONS TRANSFERRED

Tracings Kris Klemmerton Date 2-17-77

Checked H.O. Leslie Date 3-1-77

* Elevation on top of ice on 4/13/71.

YUKON RIVER BRIDGE

ROUTE S-681

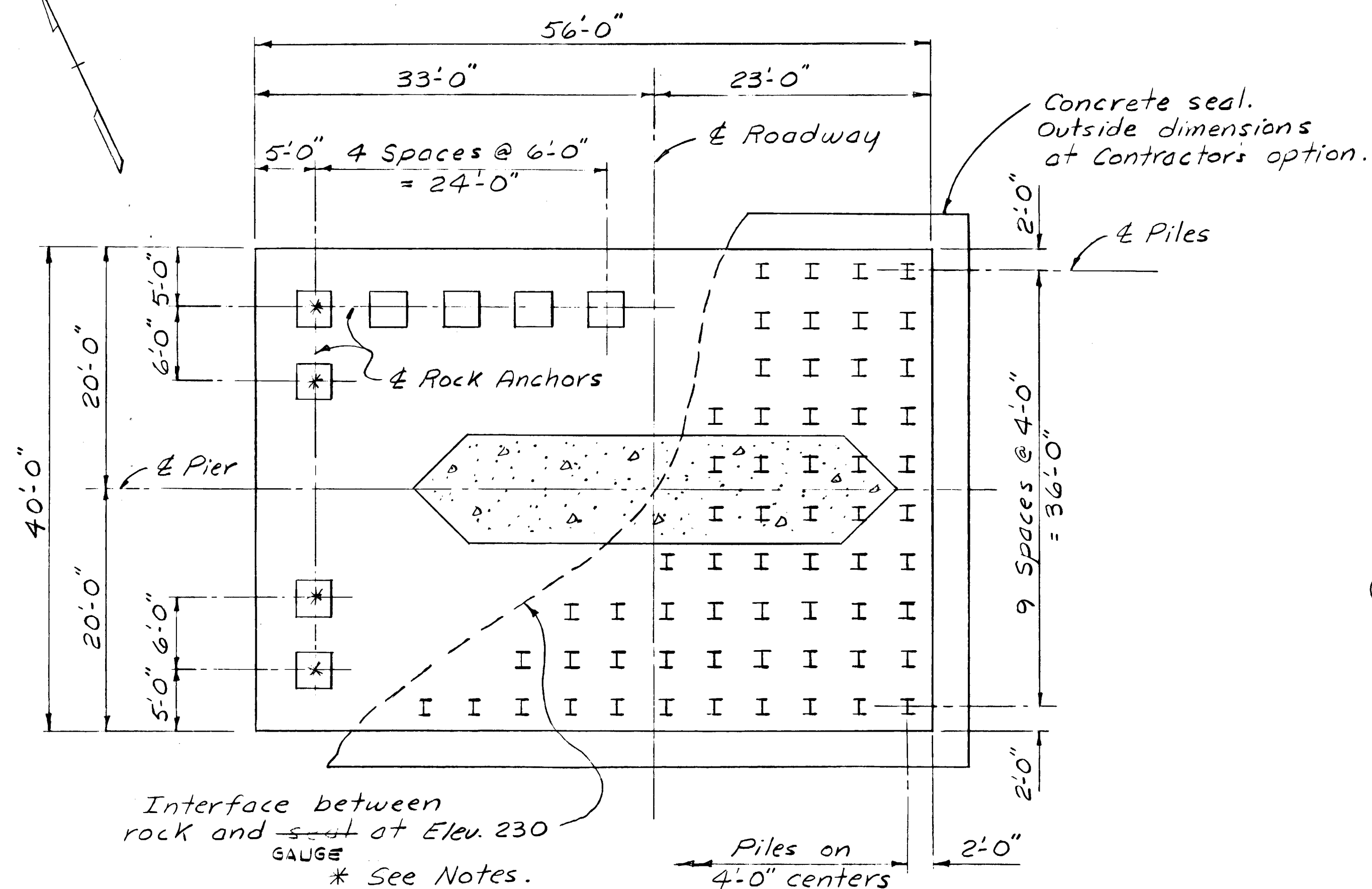
FRAME AND PIER LAYOUT

State of Alaska
DEPARTMENT OF HIGHWAYS
Juneau, Alaska

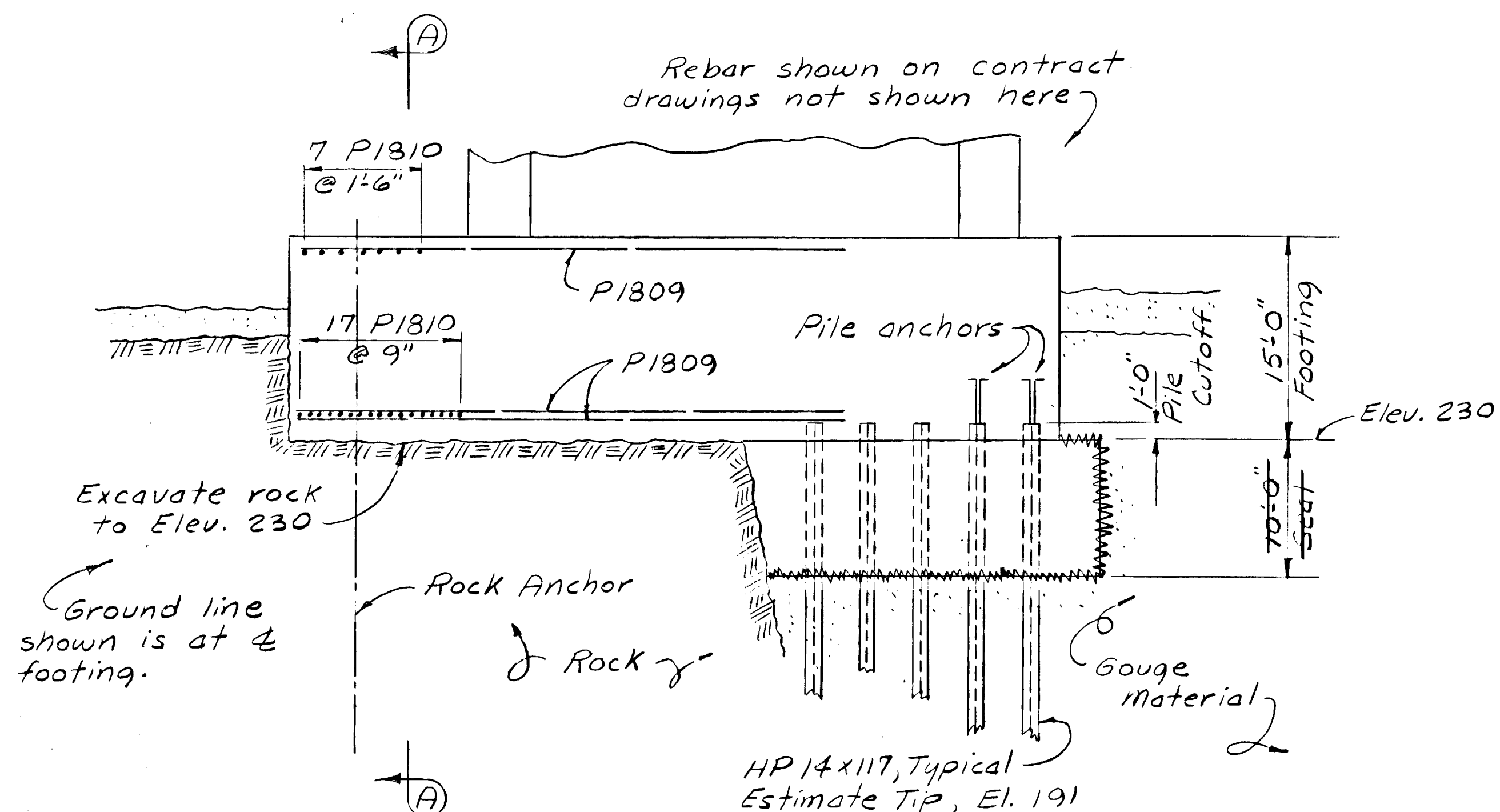
Date 12/7/23
Approved Karl Meier

BRIDGE NO. 271
DWNG. NO. 2525

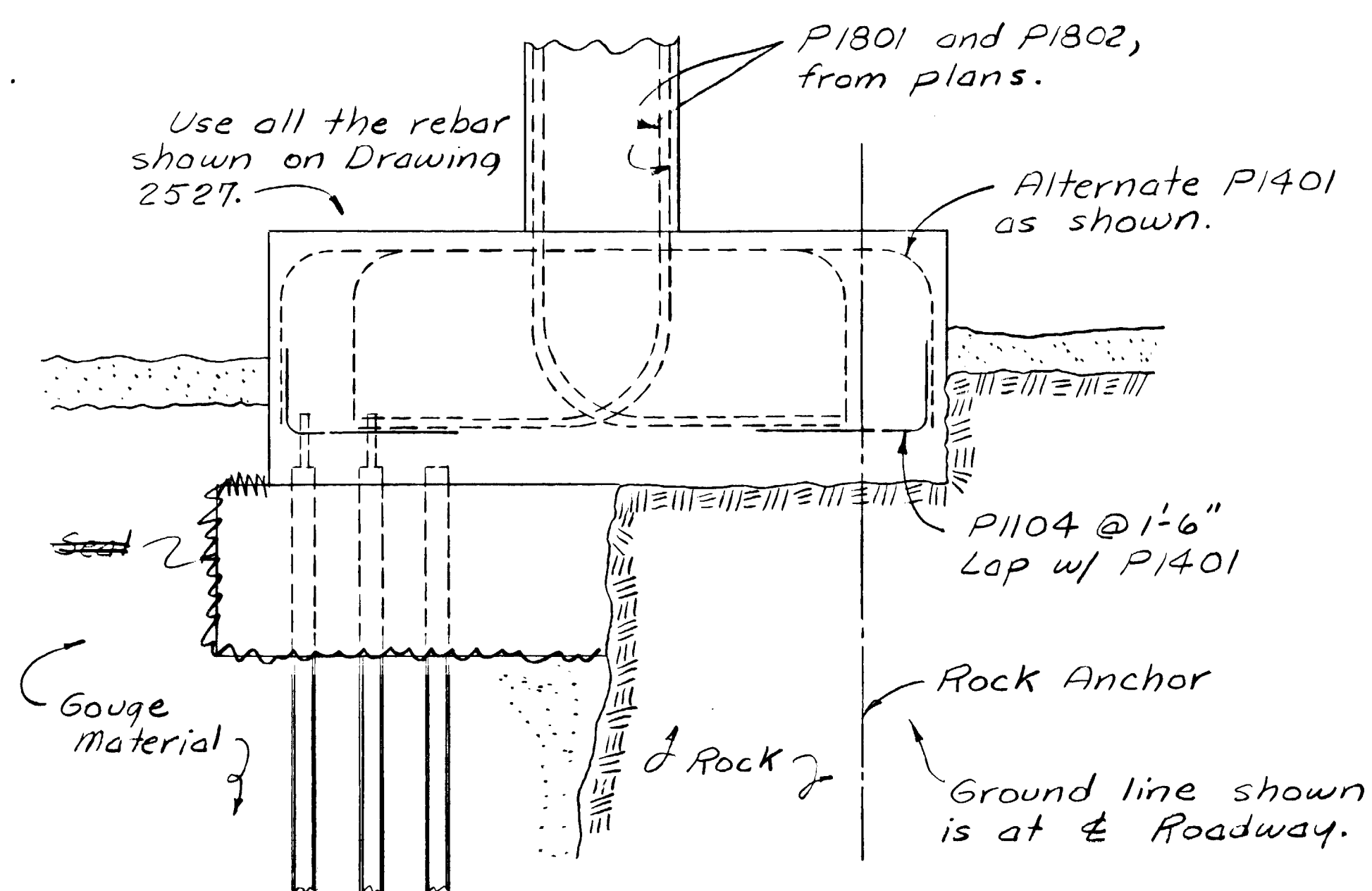
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS 0681(3)			



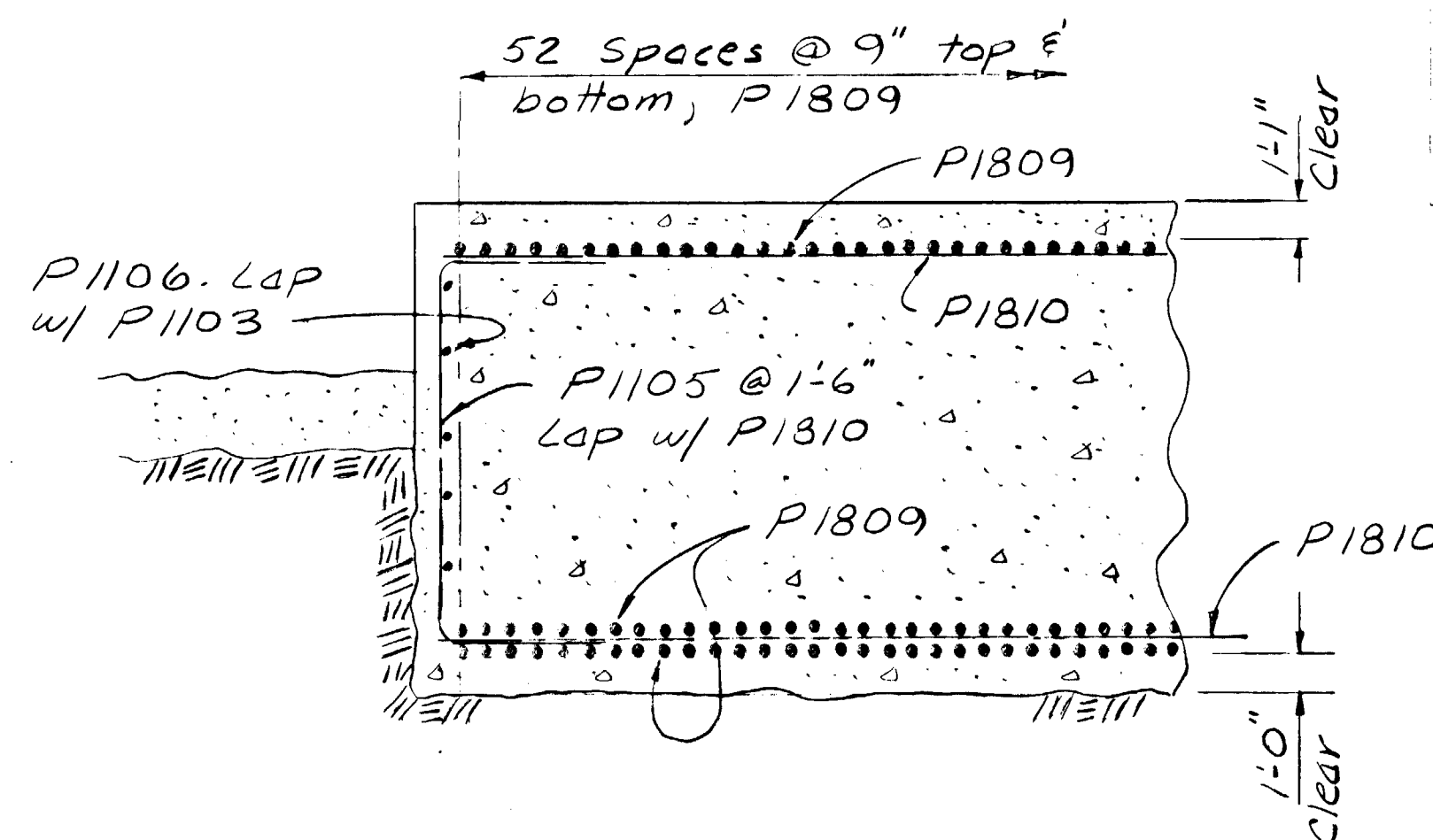
PLAN
1/8" = 1'-0"



ELEVATION
1/8" = 1'-0"



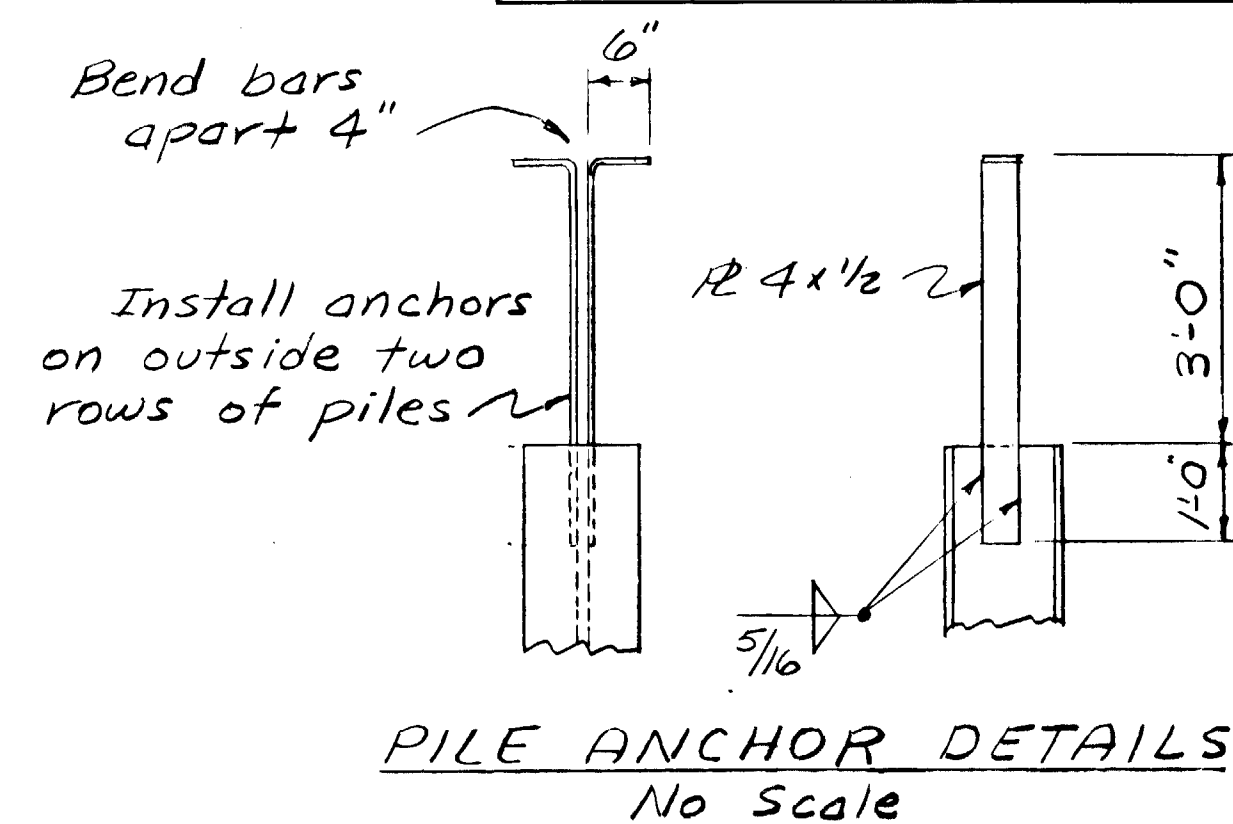
ELEVATION
1/8" = 1'-0"



PART SECTION A-A
No Scale

ESTIMATE OF QUANTITIES *			
	Item	Unit	Quantity
Add	Steel "H" Piles, Furn. & Driven	L.F.	2,449 2,237.3
Add	Class "S" Concrete	C.Y.	550 5
Add	Class "A" Concrete	C.Y.	631±
Add	Reinforcing Steel	Lb.	106,739.27
Add	Pile Anchors	Ea.	40
Subtra	Rock Anchors	L.F.	360

*Quantities are changes from plan quantities.



* Quantity is in addition to rebars shown on Drawing 2527.

REINFORCING STEEL *				
Mark	No.	Size	Length	Type
P1104	61	11	15'-0"	Bent
P1105	14	11	22'-7"	Bent
P1106	10	11	15'-0"	
P1809	159	18	40'-0"	
P1810	24	18	39'-6"	

AS BUILT PLANS

Red Platze Date 3-6-79-6-34-76
Project Engineer
CORRECTIONS TRANSFERRED
Tracings Kris Klemm Date 2-17-77
Checked H.O. Leslie Date 3-1-77

NOTES

Pile Layout: The number of rock anchors and piles may be increased or decreased in the pattern shown as directed by the Engineer if the interface between rock and gouge material differs from that shown.

Pile Driving: Piles shall be driven in 18" round holes drilled to elev. 196, unless otherwise directed by the Engineer, and shall penetrate at least to that elev. Drive piles to practical refusal.

Rock Anchors: The rock anchors shall be installed as per the contract, except the four marked * shall be jacked to 800 kips and then anchored with 400 kips tension remaining. The others shall be jacked to 800 kips and then anchored with 50 kips tension remaining.

Pile Loads: Design 105 Tons, Normal 40 Tons, No tension assumed in design.

Footing Pressure: Design 8 Tons/Ft², Normal 2 1/2 Tons/Ft².

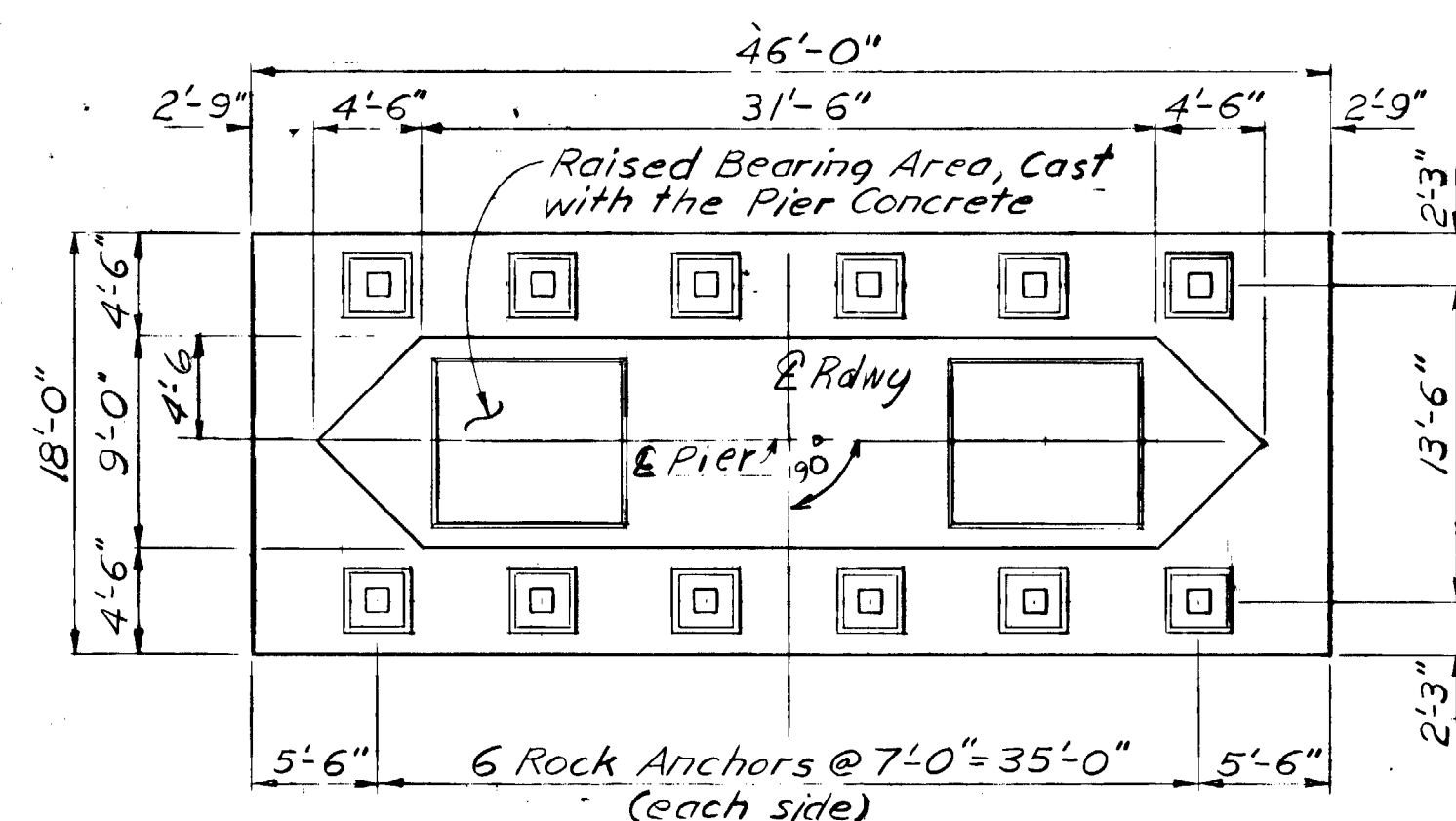
YUKON RIVER BRIDGE
Route No. S-681
MODIFIED FOOTING
PIER 4

State of Alaska
DEPARTMENT OF HIGHWAYS
Juneau, Alaska

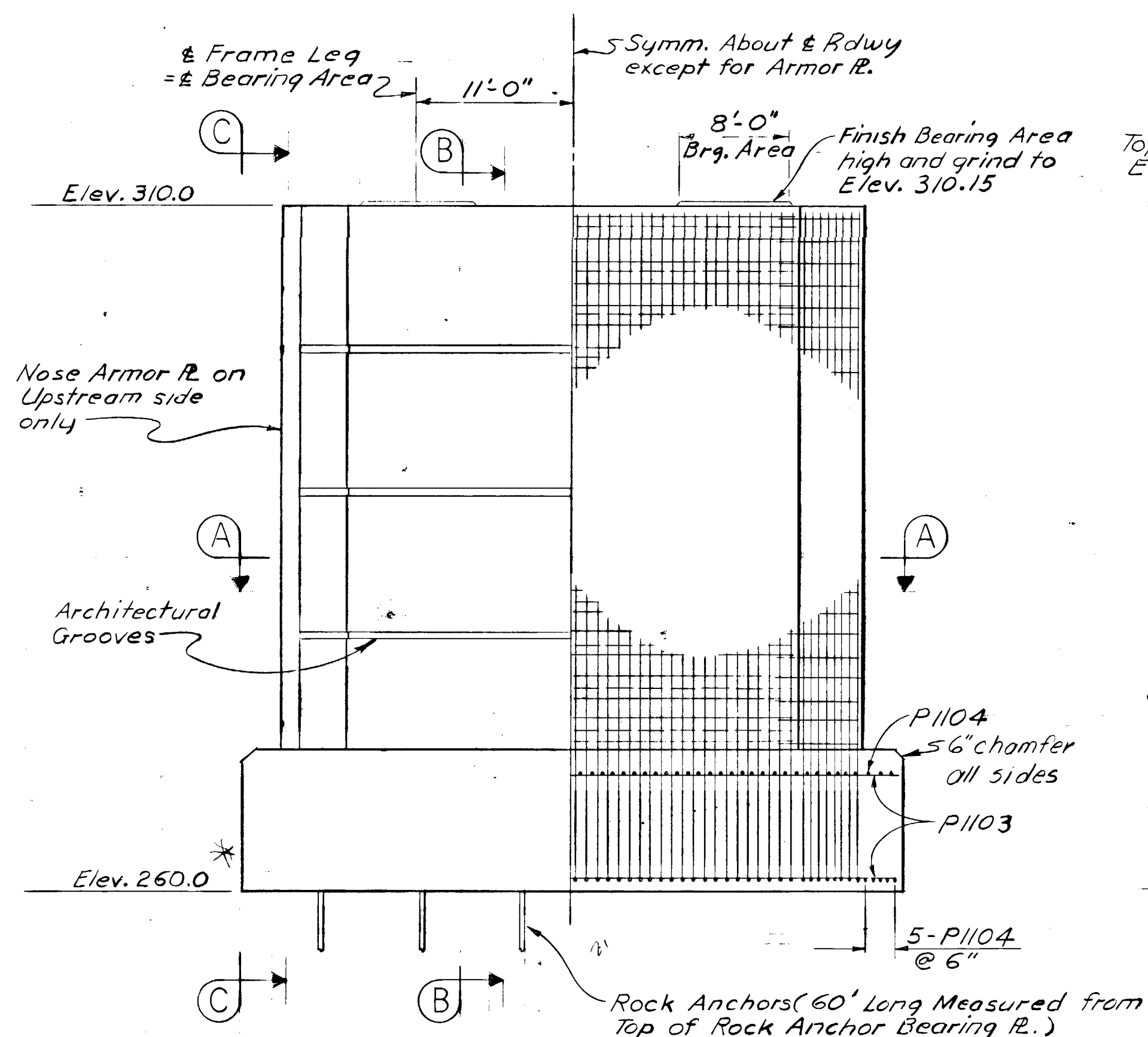
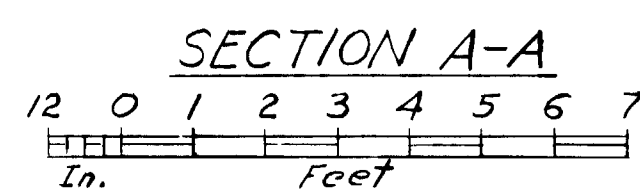
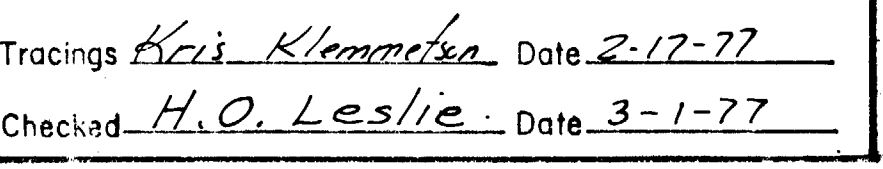
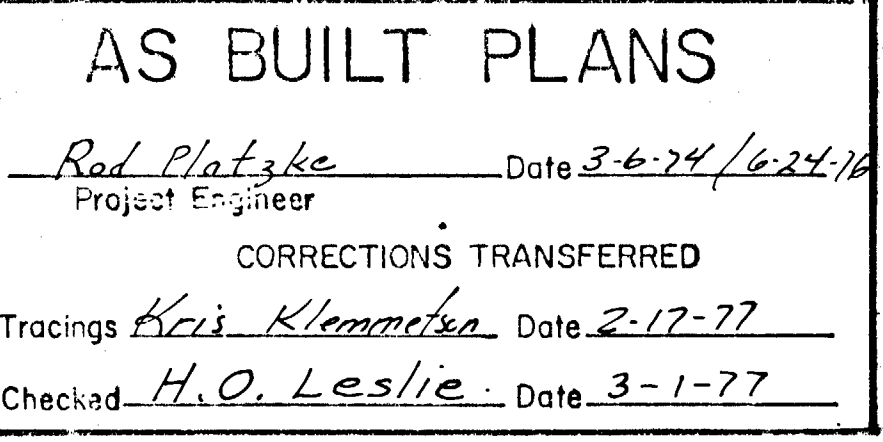
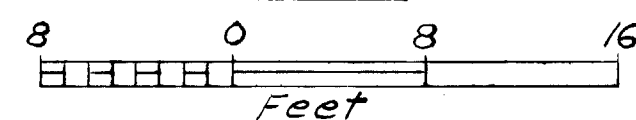
Date 4-11-75
Approved [Signature]

BRIDGE NO. 271
DWNG. NO.

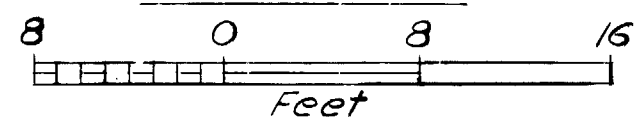
CLASS 3 CONCRETE MAY BE DELETED IF NOT NEEDED FOR CONSTRUCTION.



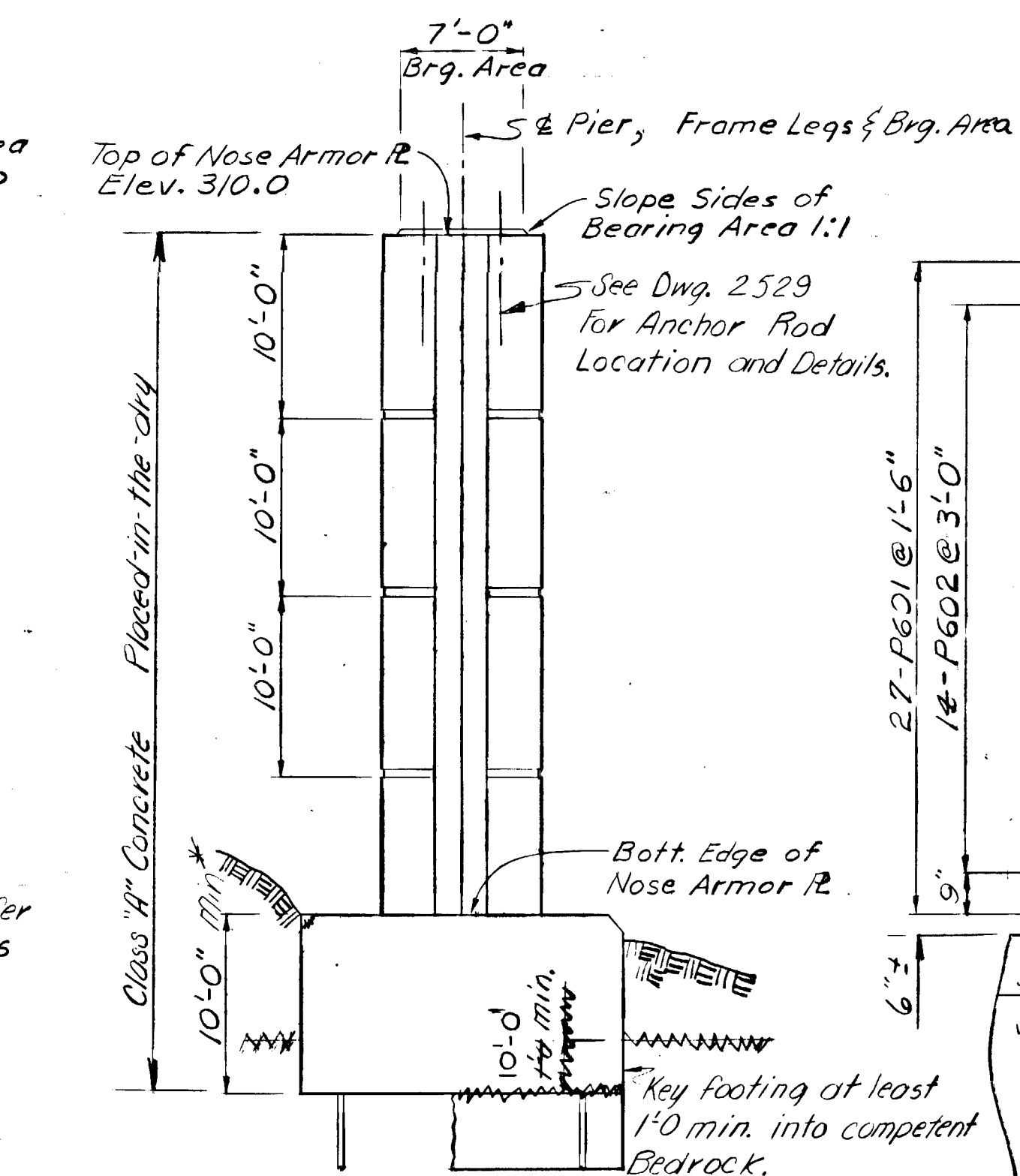
PLAN



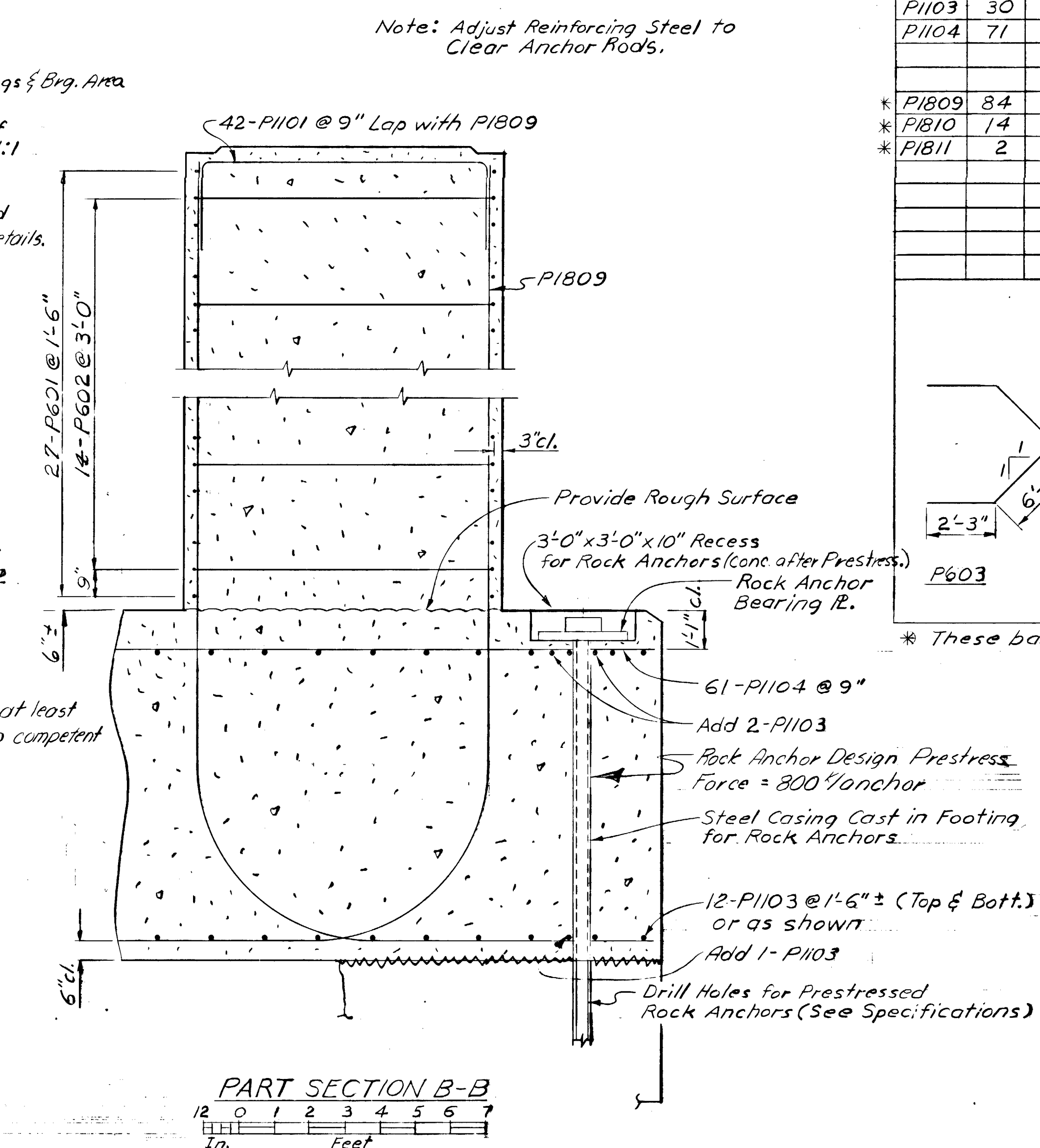
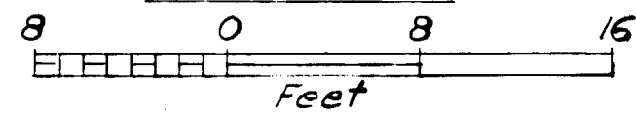
ELEVATION



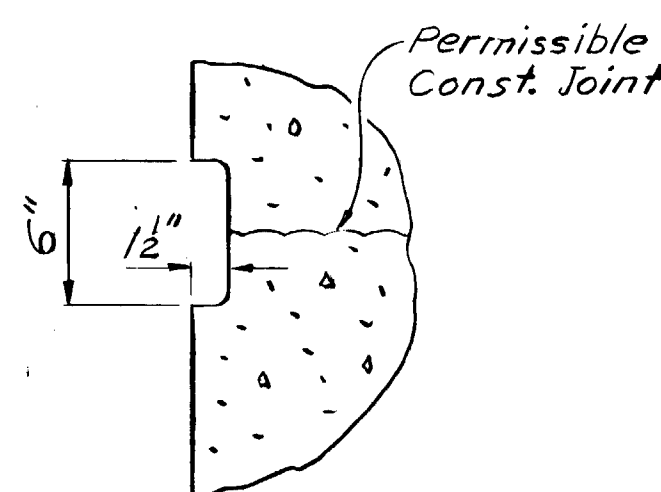
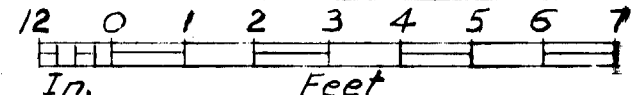
Note: Increase footing thickness if a lower footing elevation is required to reach competent bedrock. Reinforcing to remain in position shown.



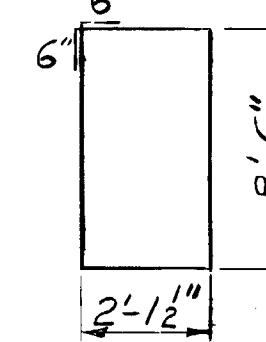
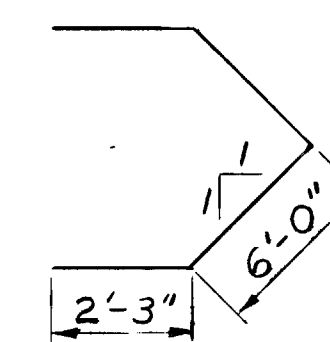
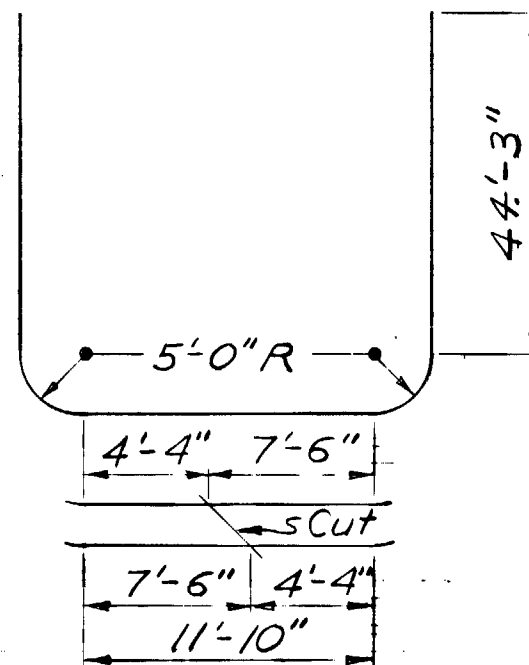
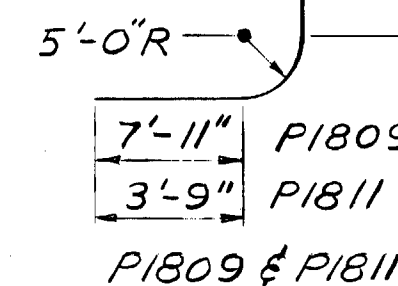
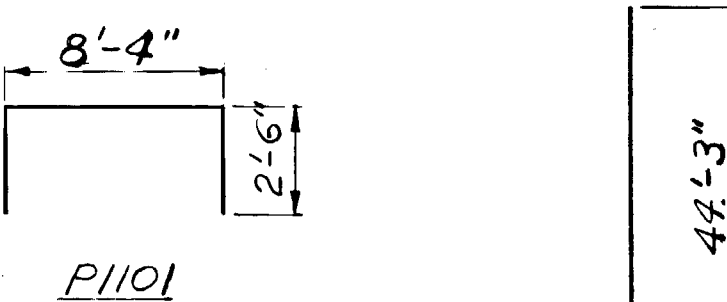
VIEW C-C



PART SECTION B-B



ARCHITECTURAL GROOVE
(No Scale)

[illegible]

* These bars may be spliced as per Special Provisions.

YUKON RIVER BRIDGE
ROUTE NO. S-681
PIER 2

State of Alaska
DEPARTMENT OF HIGHWAYS
Juneau, Alaska

Date 12/7/73
Approved KSO

BRIDGE NO. 271
DWNG. NO. 2526

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS 0681(3)	1973	9	30

AS BUILT PLANS

Rad. Platze
Project Engineer
Date 2-6-74 6-24-76
CORRECTIONS TRANSFERRED
Tracings Kris Klemm Date 2-17-77
Checked H.O. Leslie Date 3-1-77

ALSO SEE MODIFIED
PIER 4 FOOTING

REINFORCING STEEL (PIERS 3, 4, 5 & 6)

MARK NO. SIZE LENGTH TYPE

BENDING DIAGRAMS

Piers 3, 4 & 5 (Each Pier)

P601	88	6	31'-5"	—
P602	308	6	22'-3"	Bent
P603	88	6	16'-6"	Bent

P1101	42	11	13'-4"	Bent
P1102	30	11	29'-6"	—
P1103	54	11	45'-6"	—
P1401	61	14	47'-11"	Bent

* P1801	84	18	92'-8"	Bent
* P1802	84	18	47'-11"	Bent
* P1803	14	18	182'-0"	Bent
* P1804	2	18	88'-10"	Bent

Pier 6

P601	100	6	31'-5"	—
P602	350	6	22'-3"	Bent
P603	100	6	16'-6"	Bent

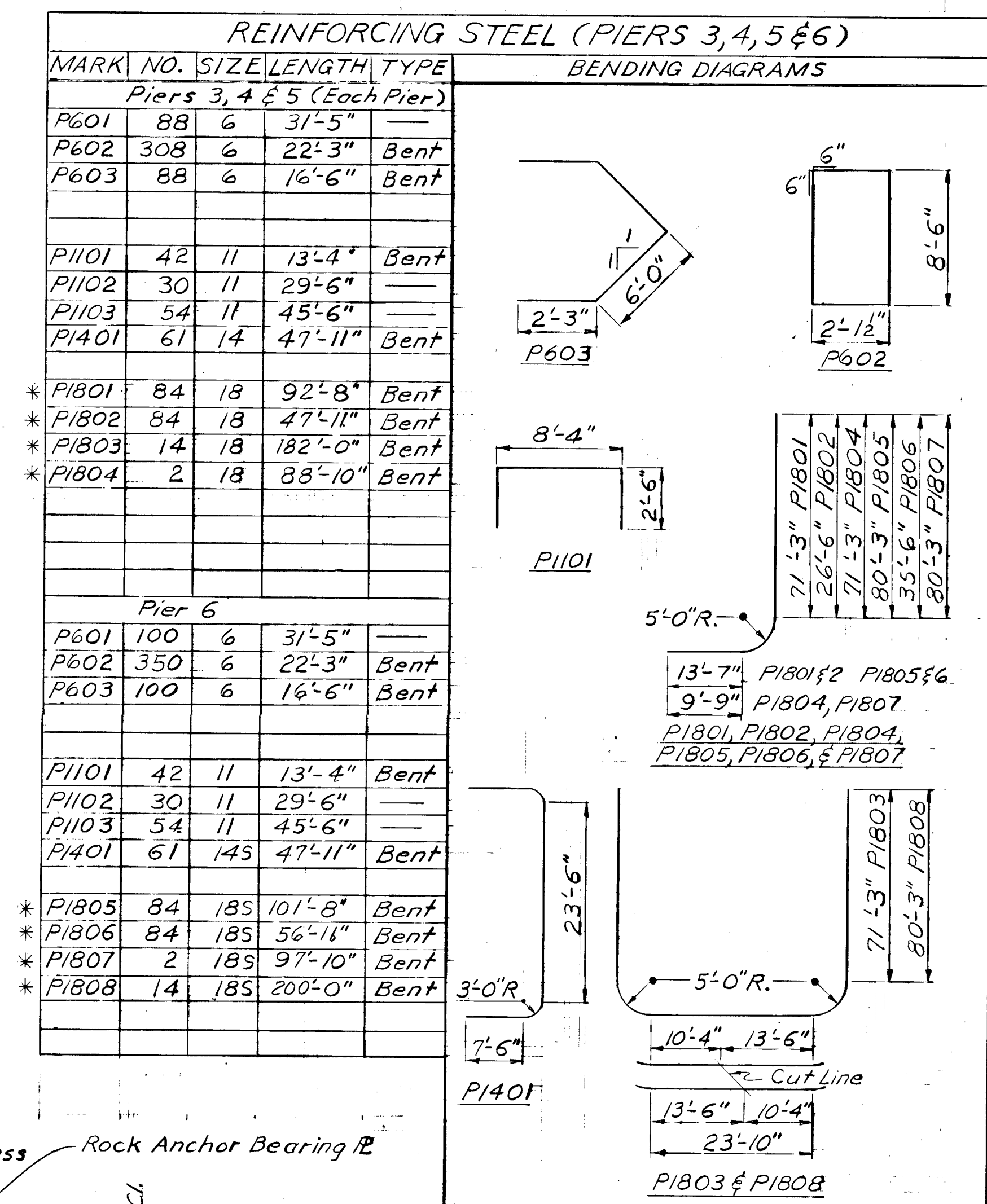
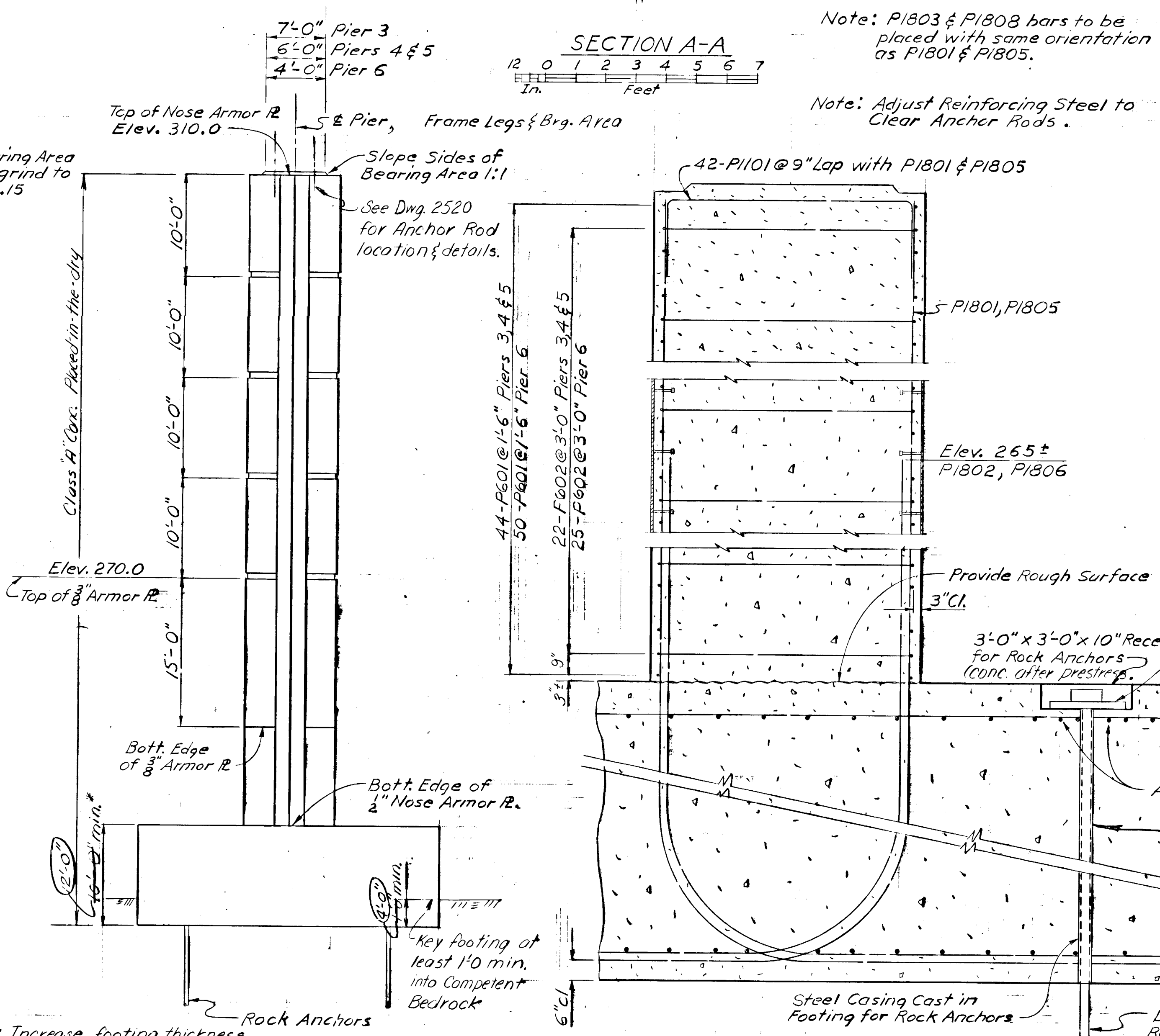
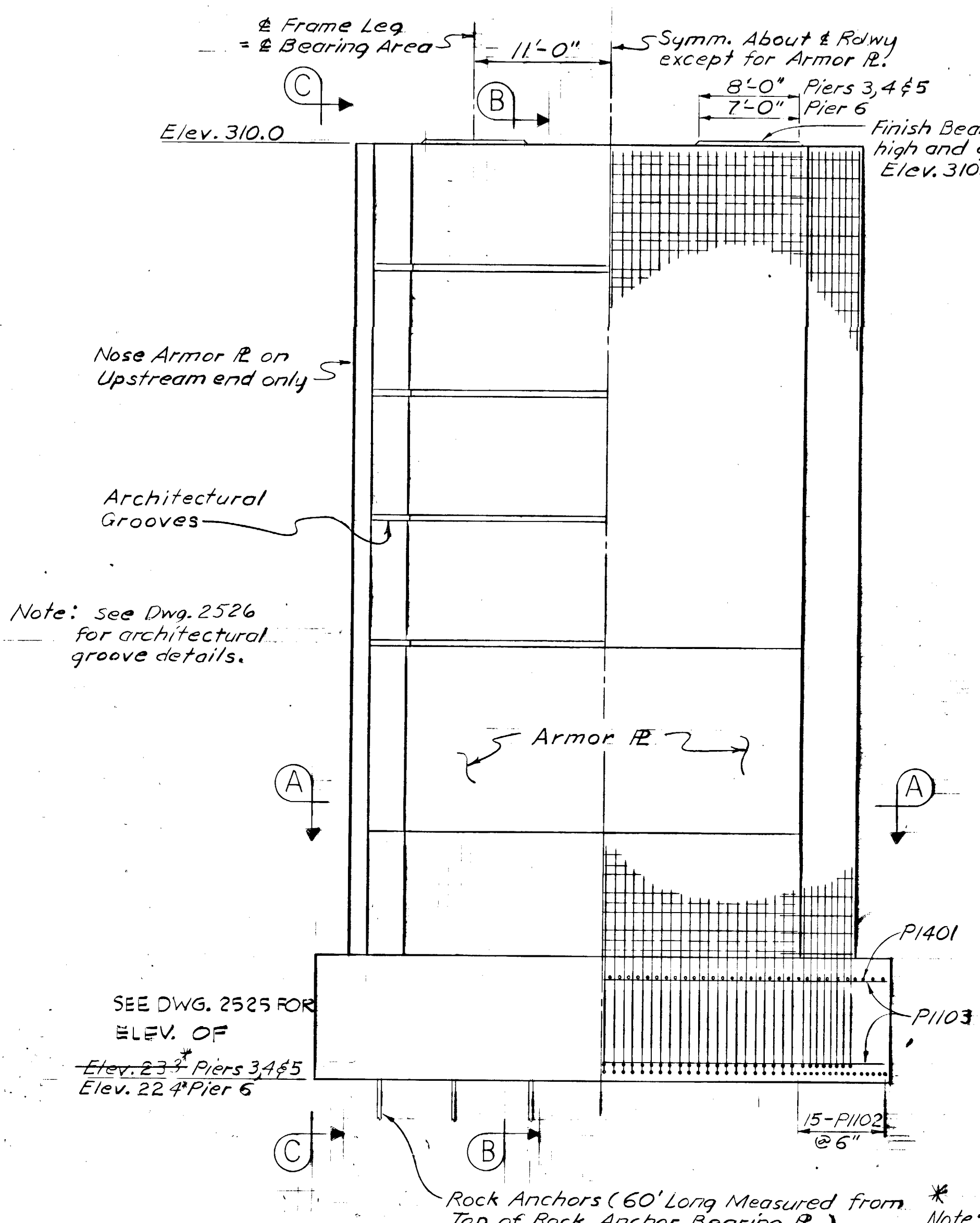
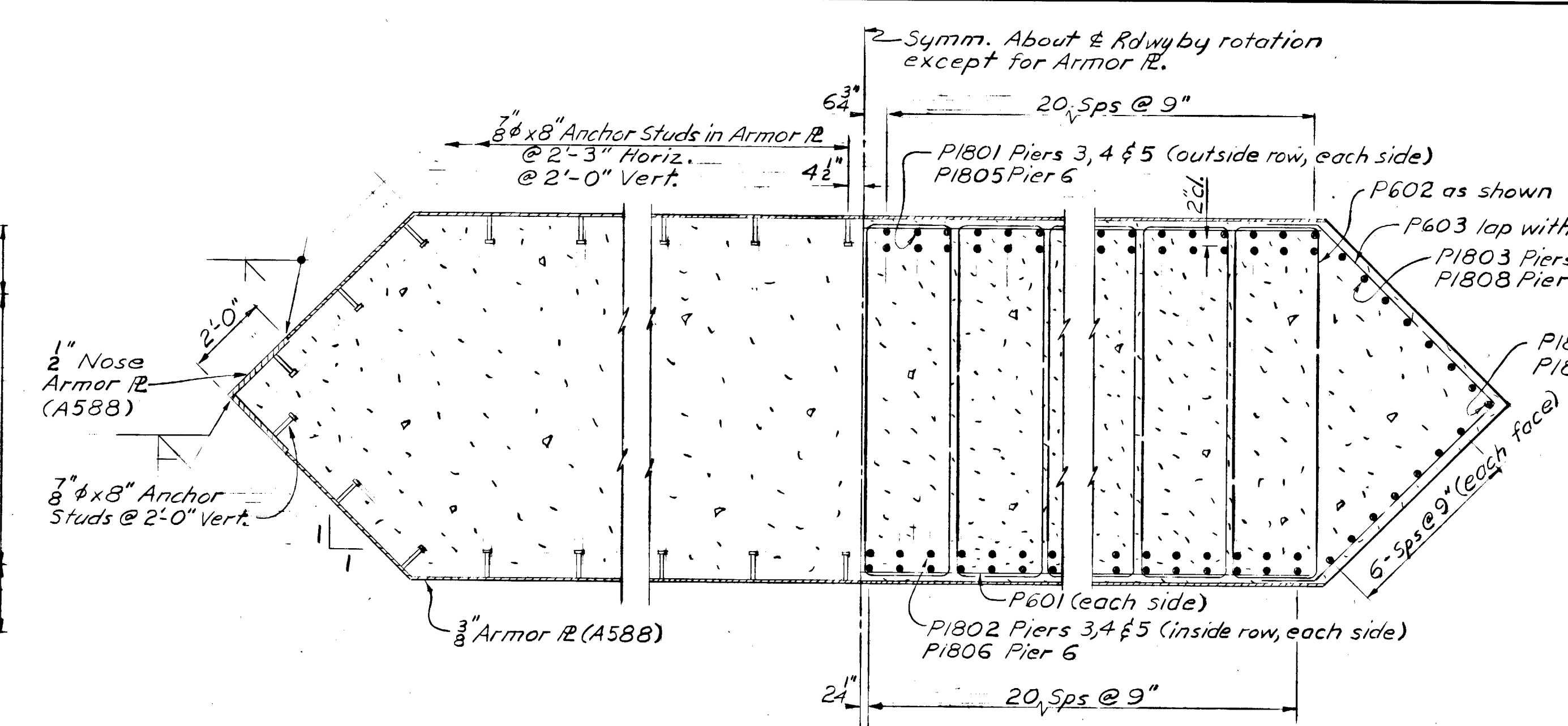
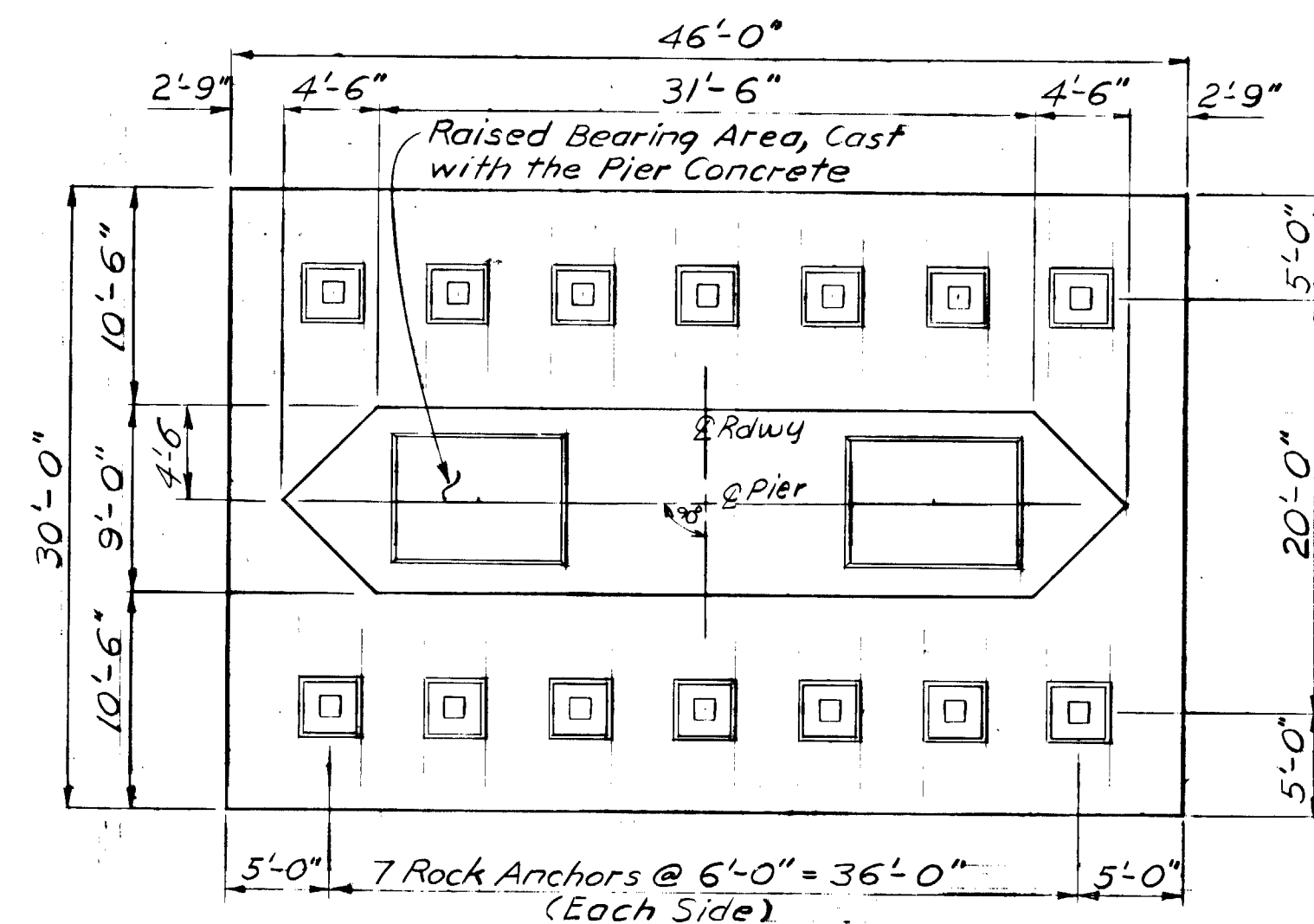
P1101	42	11	13'-4"	Bent
P1102	30	11	29'-6"	—
P1103	54	11	45'-6"	—
P1401	61	14	47'-11"	Bent

* P1805	84	18	101'-8"	Bent
* P1806	84	18	56'-11"	Bent
* P1807	2	18	97'-10"	Bent
* P1808	14	18	200'-0"	Bent

5'-0" R.

Rock Anchor Bearing R

P1803 & P1808



Note: Piers 3, 4 & 5 shown, Pier 6 similar except for depth.

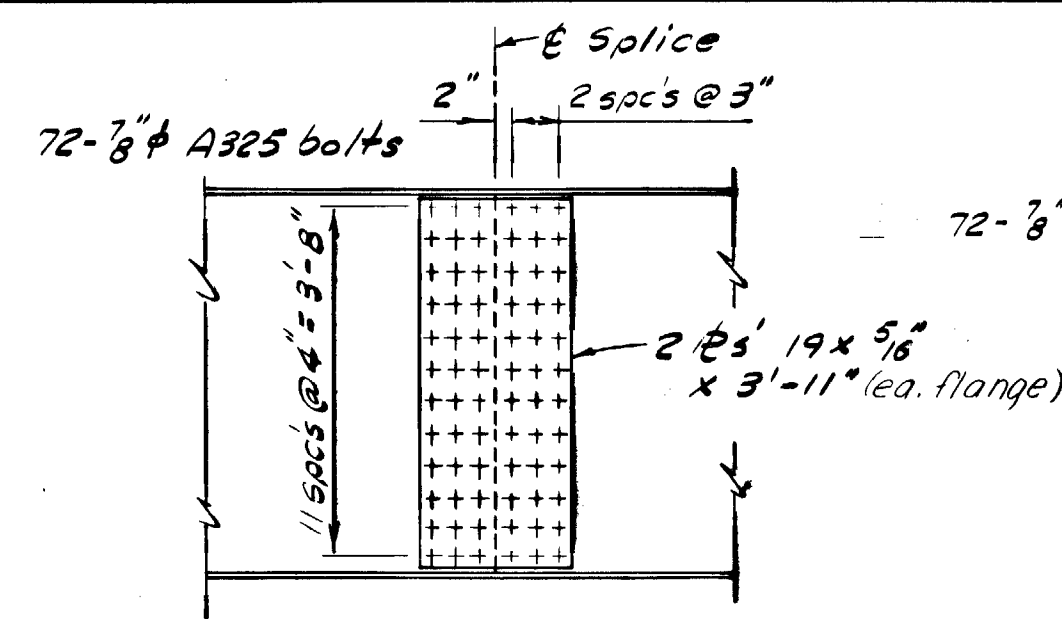
Note: Increase footing thickness if a lower footing elevation is required to reach competent bedrock. Reinforcing to remain in position shown.

* These bars may be spliced as per Special Provisions.

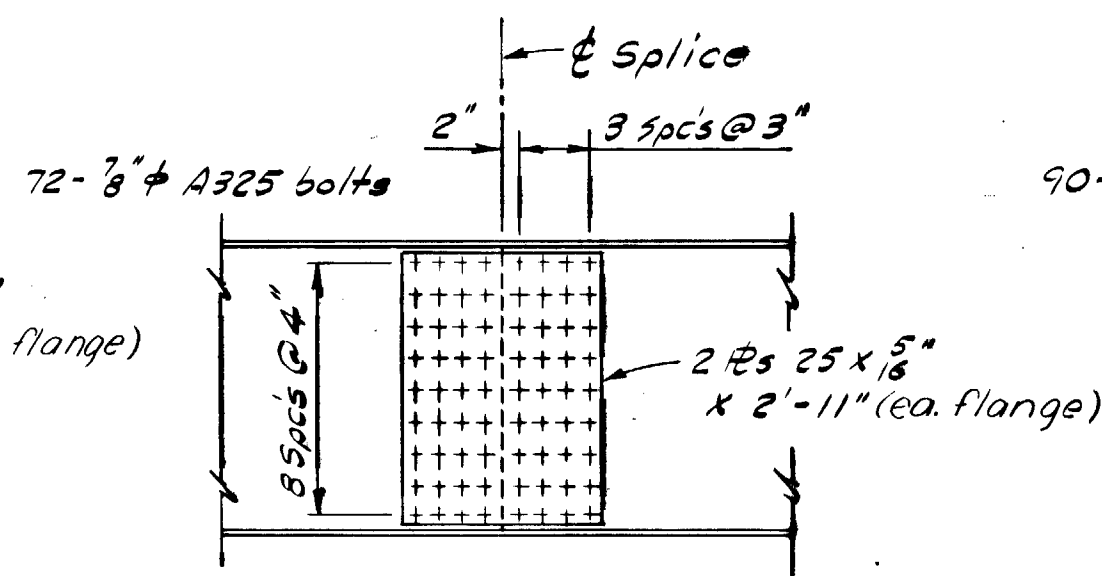
YUKON RIVER BRIDGE ROUTE NO. S-681 PIERS 3, 4, 5 & 6

State of Alaska
DEPARTMENT OF HIGHWAYS
Juneau, Alaska
Date 12/7/73
Approved Karl N. Jick
BRIDGE NO. 271
DWNG. NO. 2527

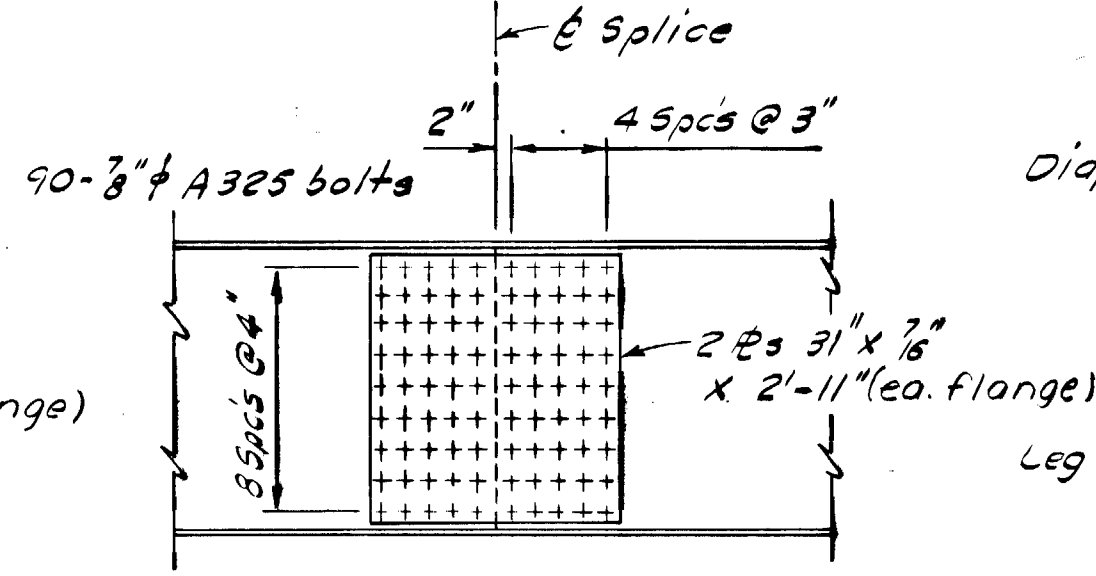
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS 0681(3)	1973	10	30



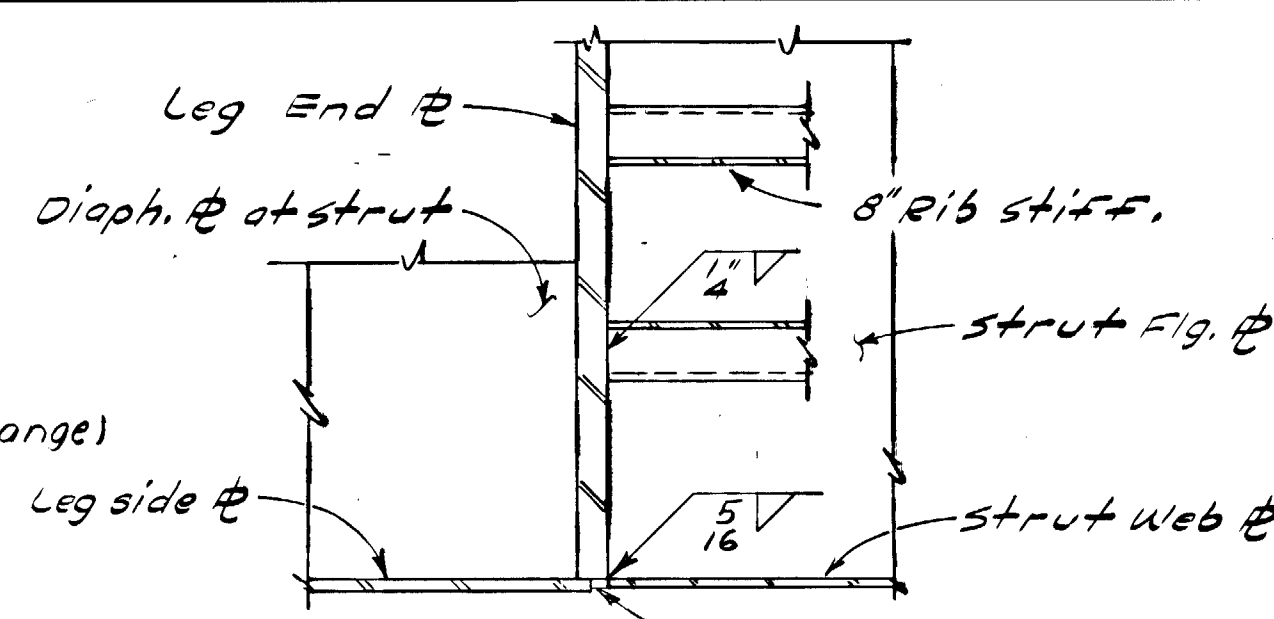
B-B AT PIERS 2 & 3



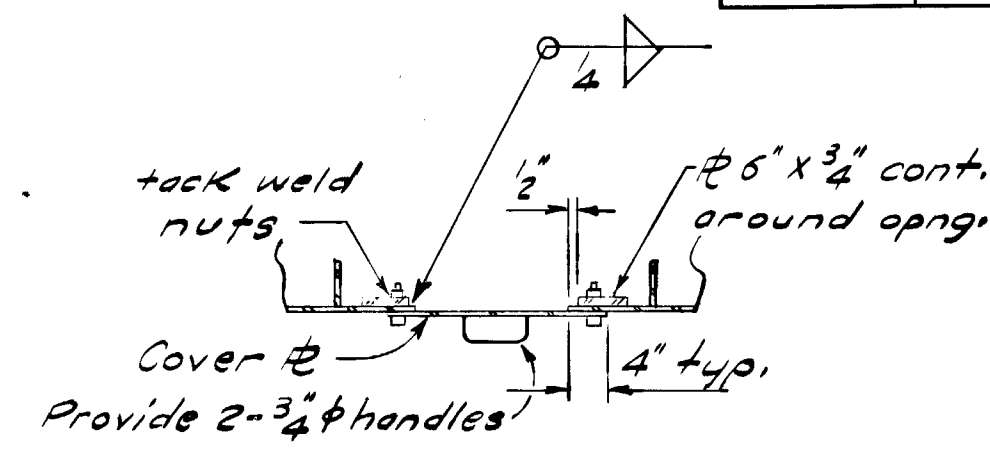
B-B AT PIERS 4 & 5



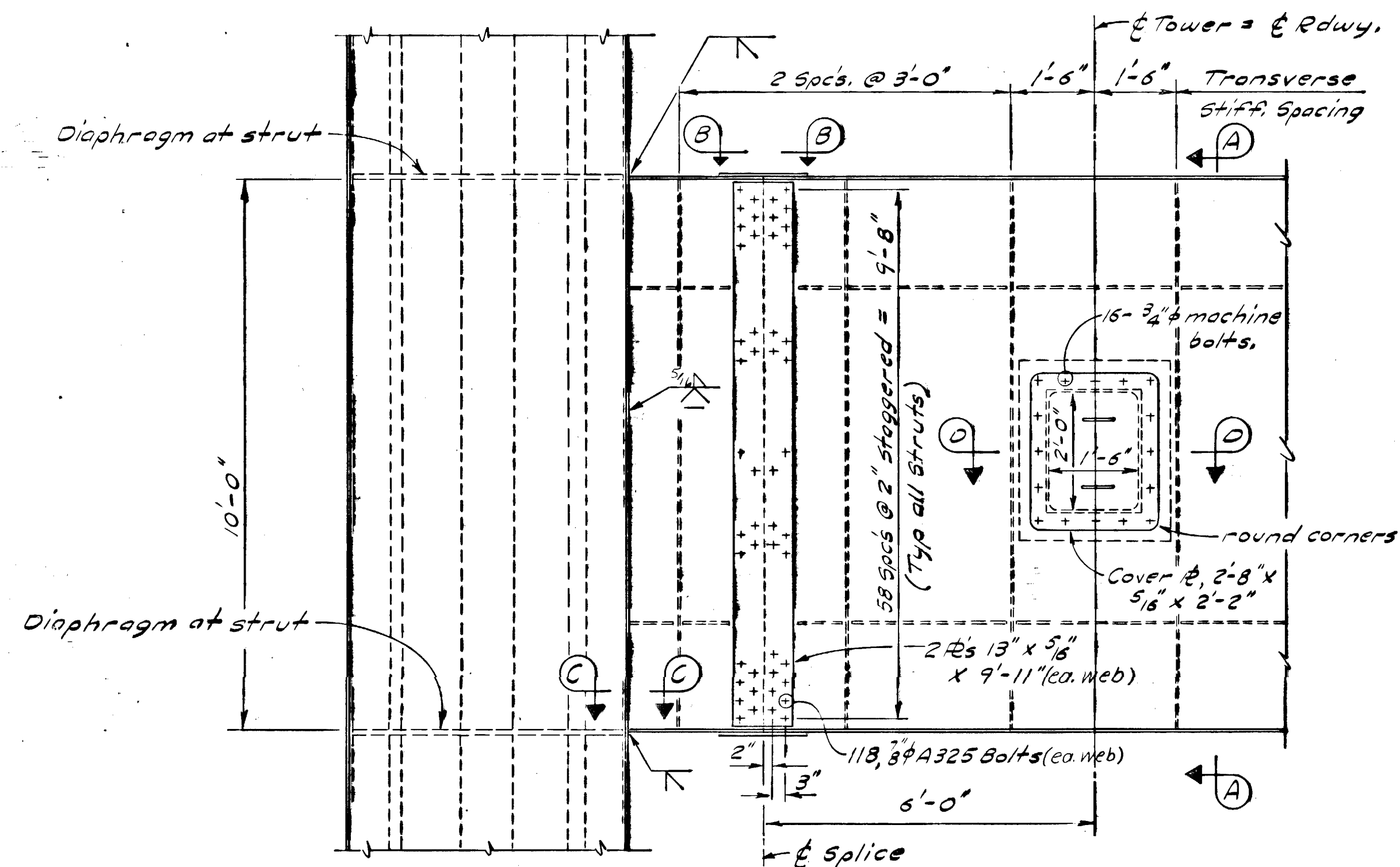
B-B AT PIER 6



SECTION C-C

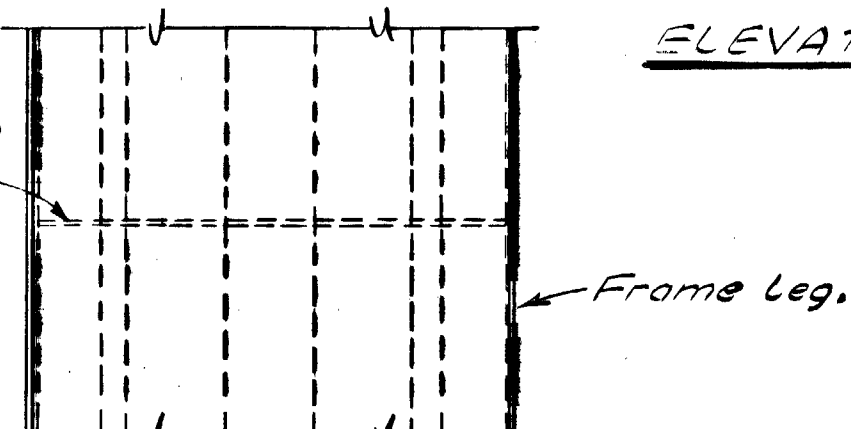


SECTION D-D
No Scale



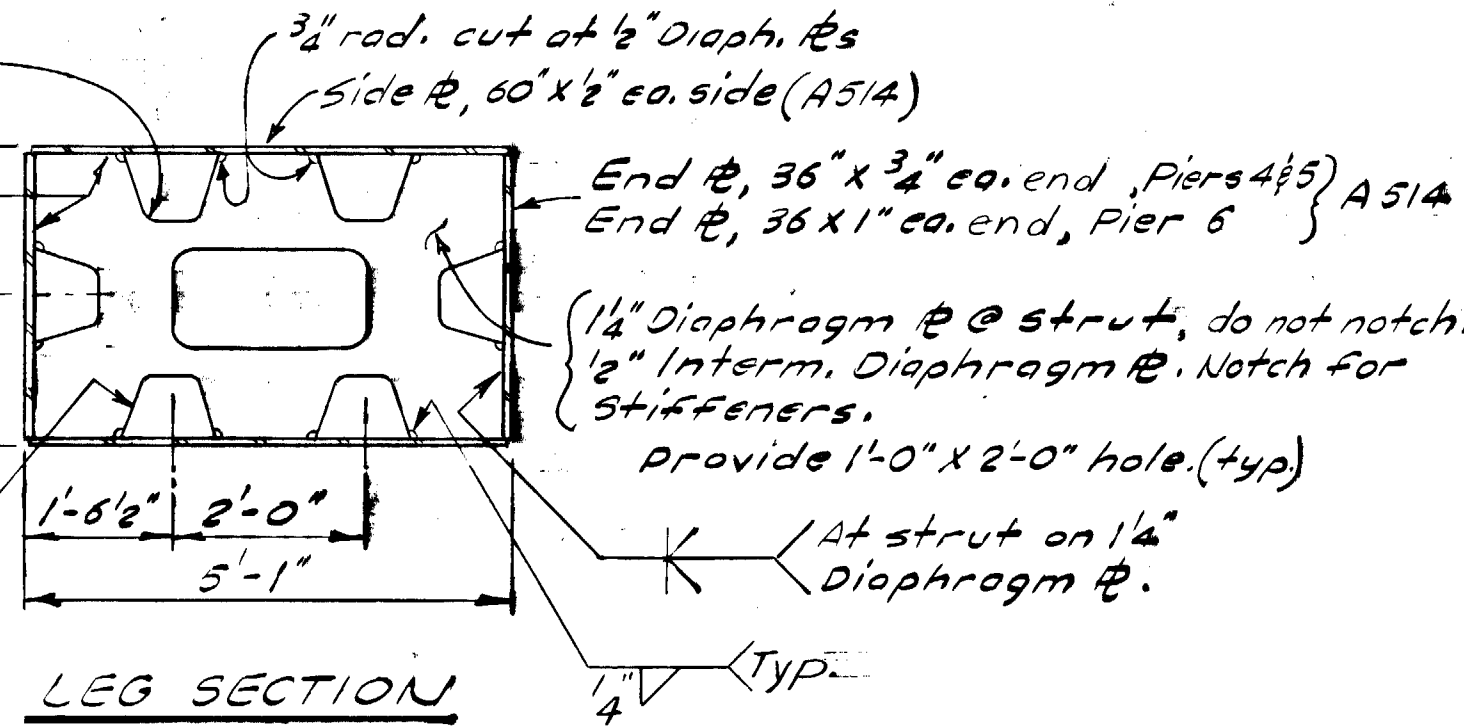
ELEVATION OF FRAME AT STRUT

Intermediate Diaphragm @ 8'-0" max. spacing

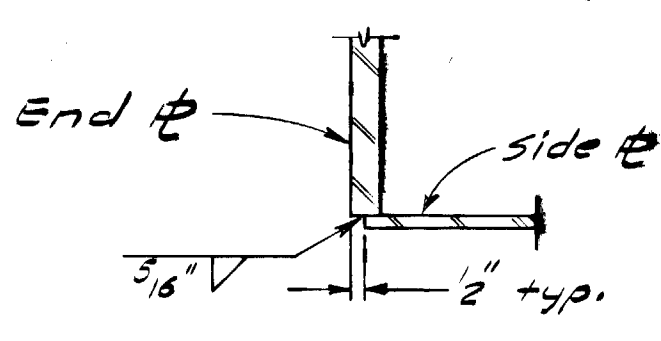


Note: See Dwg. 2529 for details of tops and bottoms of frame legs.

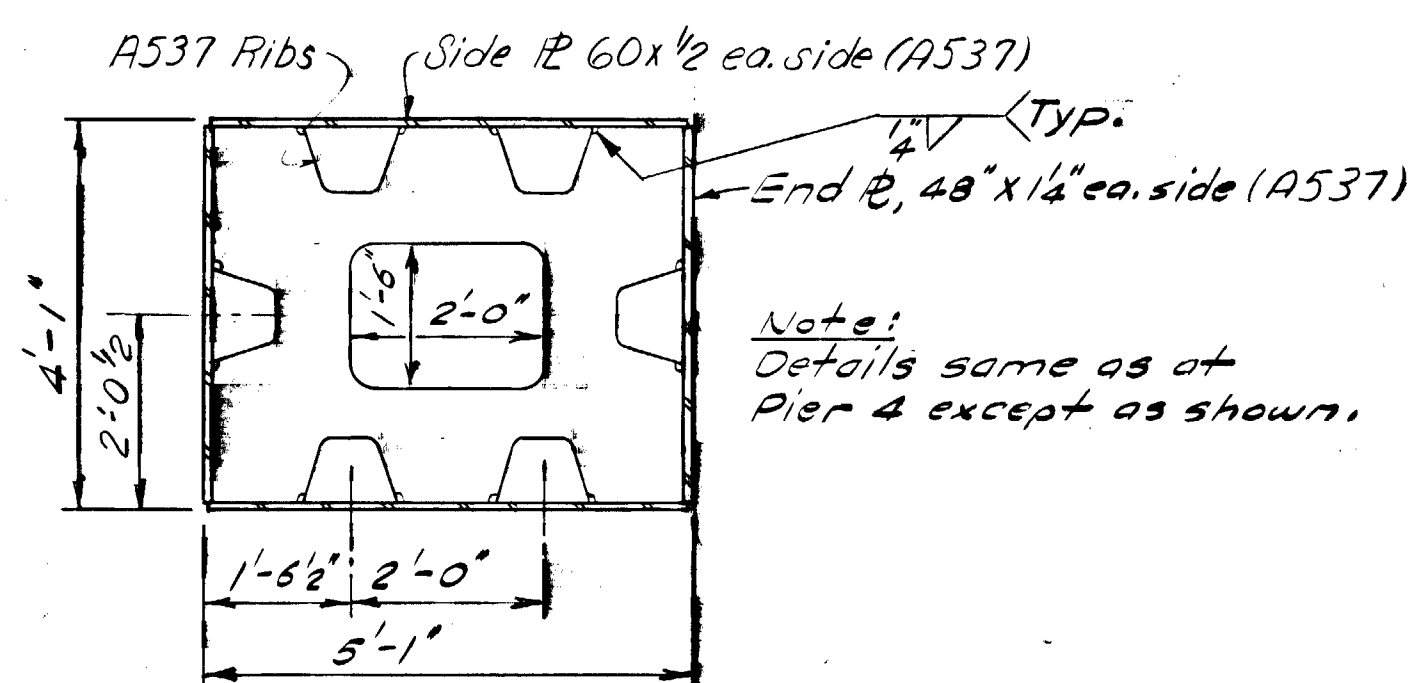
8" rib stiffener, full length except at strut. (A514) (See detail-Dwg. 2531)



LEG SECTION
AT PIERS 4, 5 & 6

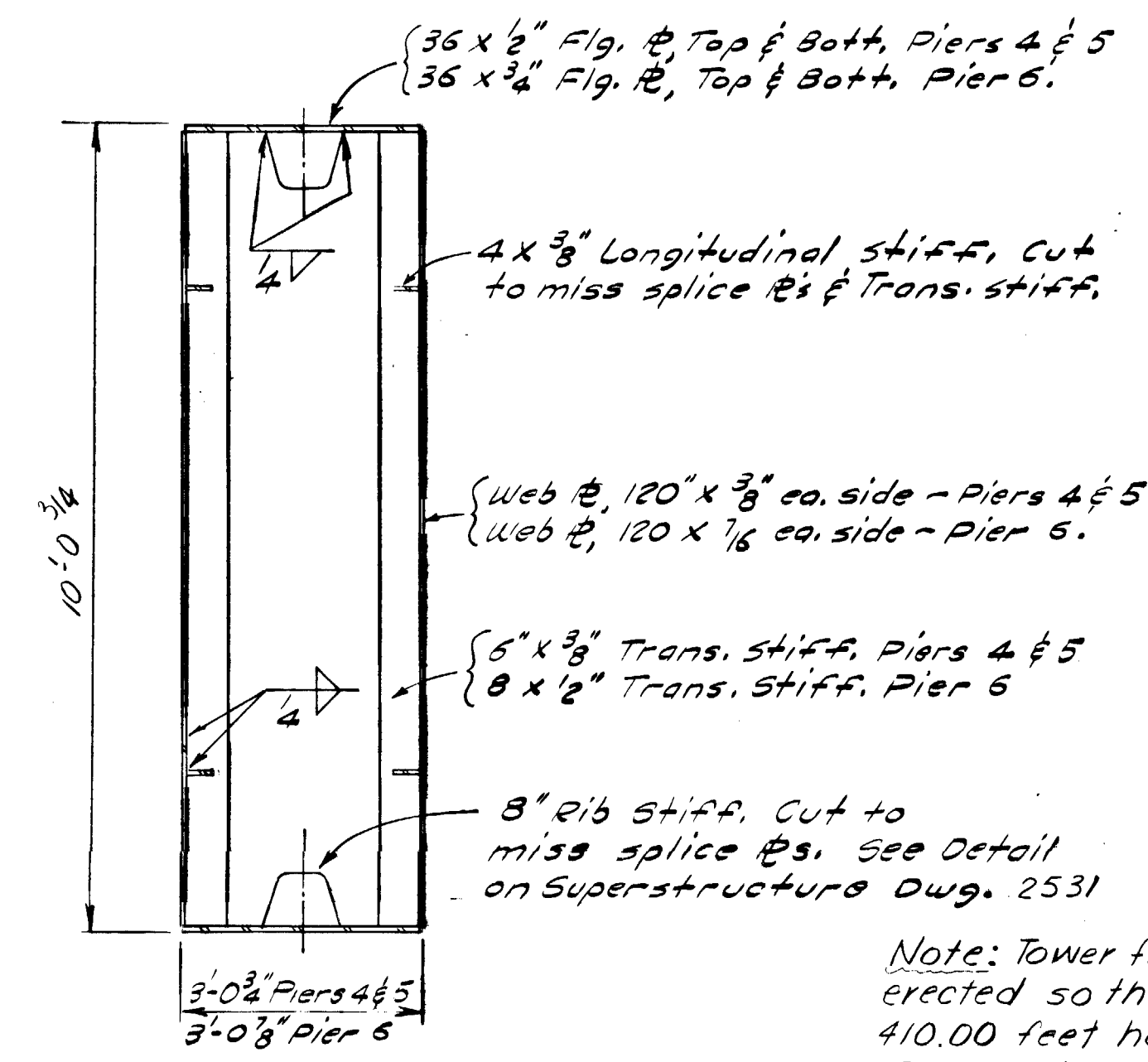


LEG CORNER DETAIL
No Scale



LEG SECTION
AT PIERS 2 & 3

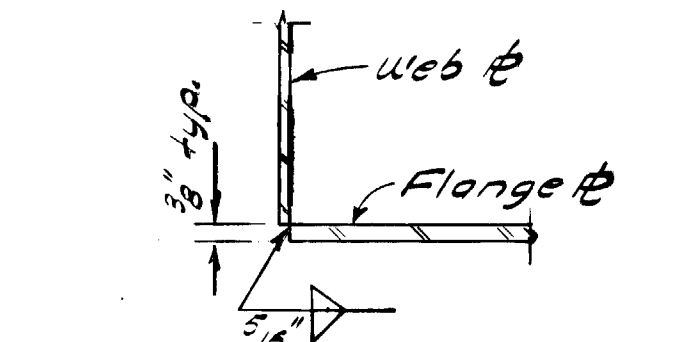
Note: Details same as at Pier 4 except as shown.



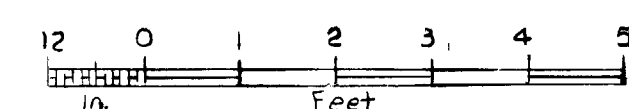
SECTION A-A @ PIERS 4, 5 & 6

Note: Tower frames for Piers 2, 3, 4, 5 & 6 shall be erected so that they are vertical and measure 410.00 feet horizontally center to center of Pins at 20°F.

Note: All portions of the Frames are considered tension members for the purpose of Charpy Impact Tests (See Special Provisions)



STRUT CORNER DETAIL
No Scale



YUKON RIVER BRIDGE
ROUTE S-681
FRAMES

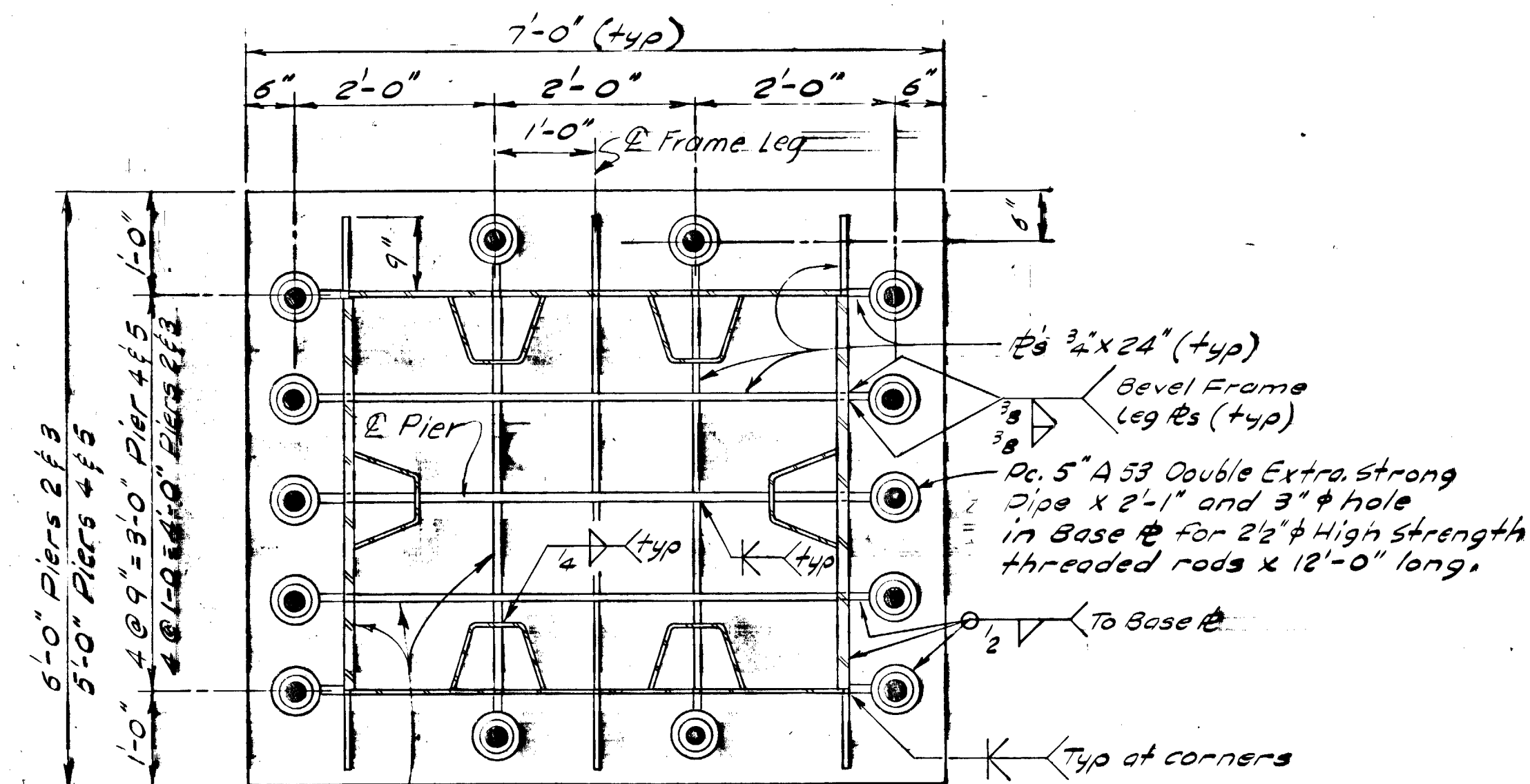
AS BUILT PLANS	
Red Platzke	Date 3-6-74 6-24-76
Project Engineer	
CORRECTIONS TRANSFERRED	
Tracings Kris Klemm	Date 3-17-77
Checked H.O. Leslie	Date 3-1-77

State of Alaska
DEPARTMENT OF HIGHWAYS
Juneau, Alaska

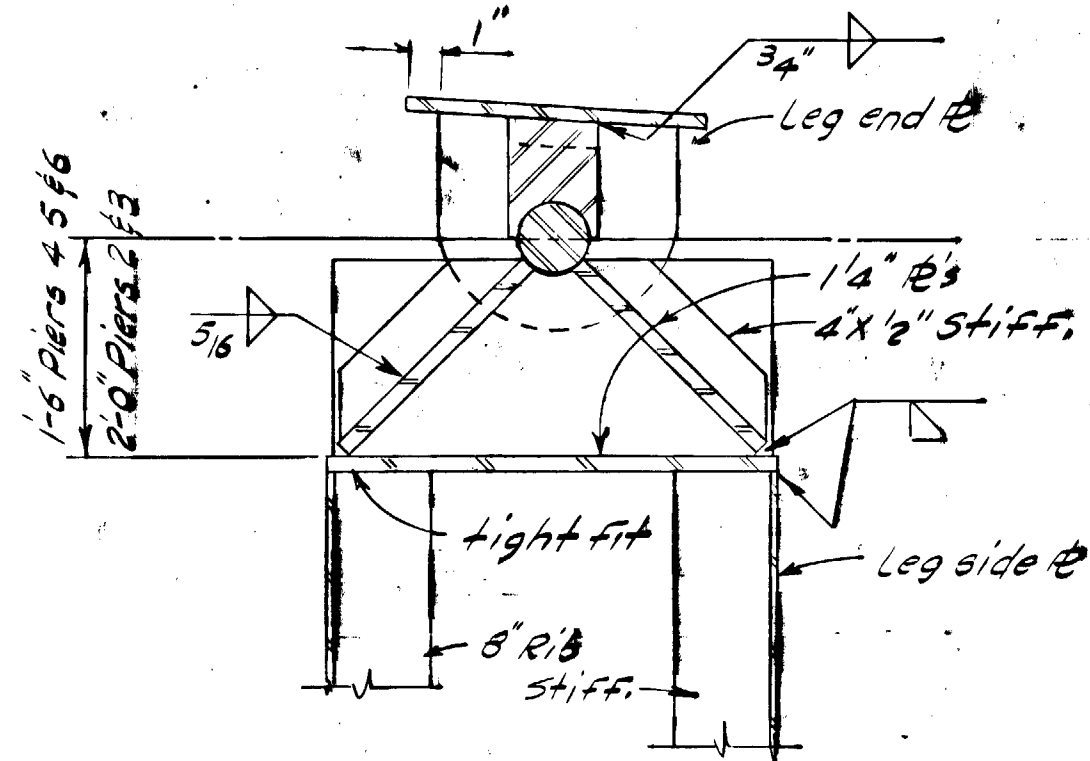
Date 12/7/73
Approved [Signature]

BRIDGE NO. 271
DWNG. NO. 2528

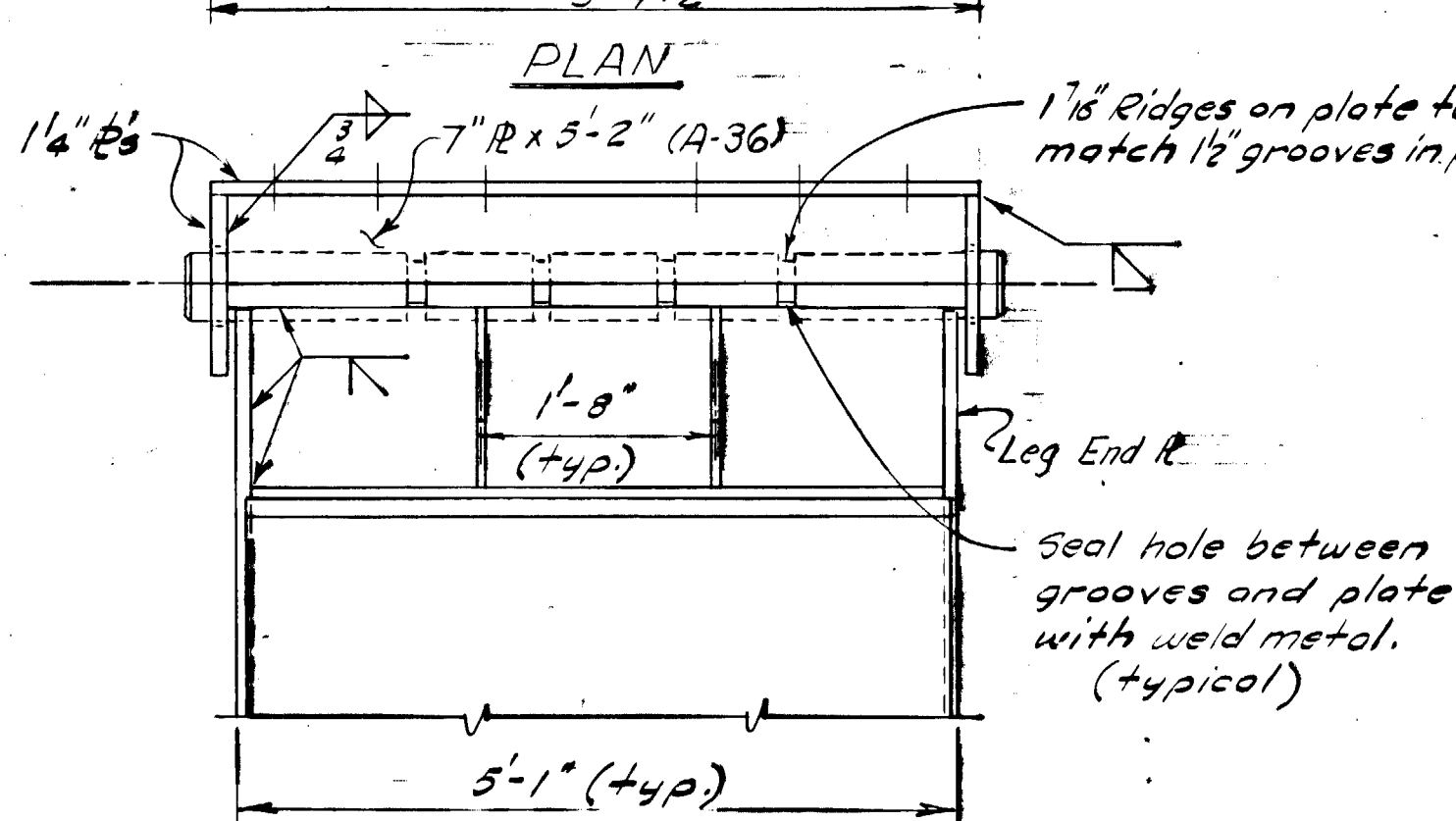
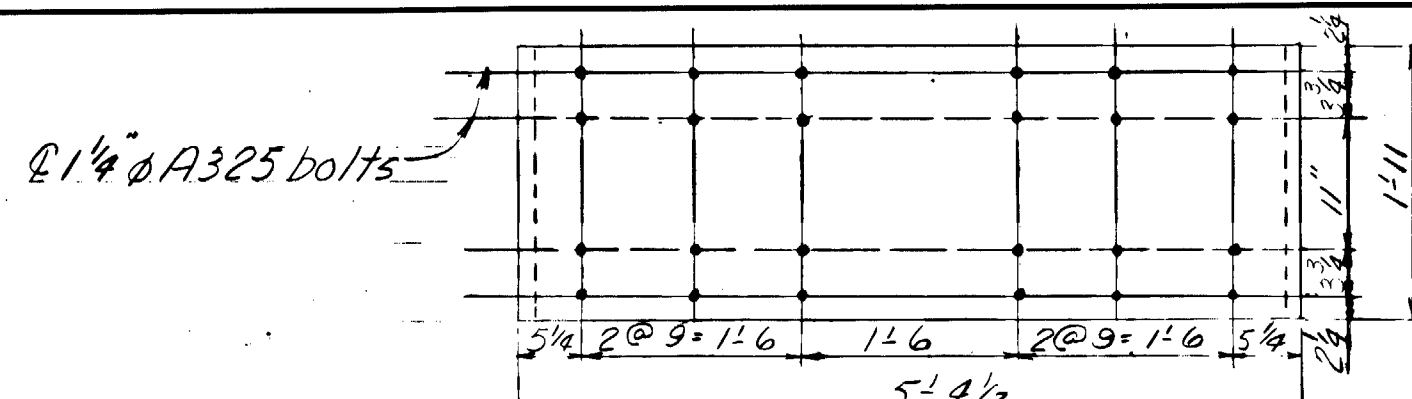
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS 0681(3)	1973	11	30



PLAN

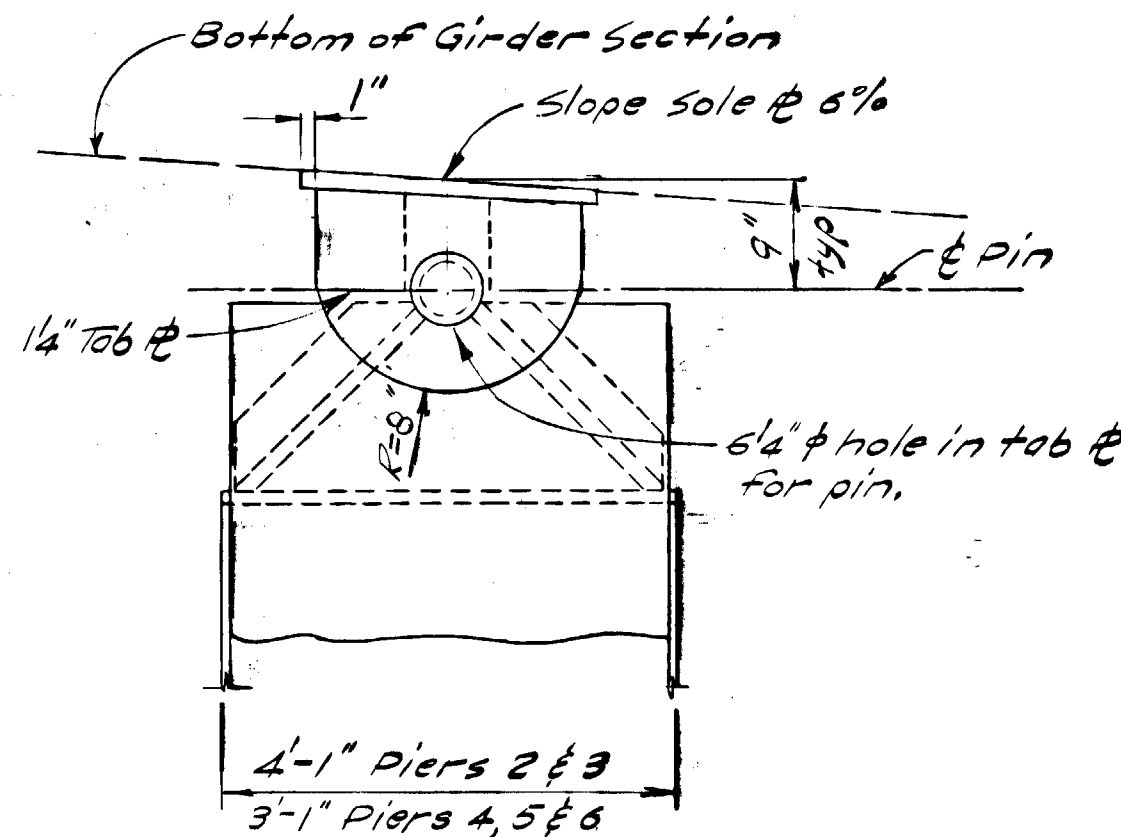


SECTION

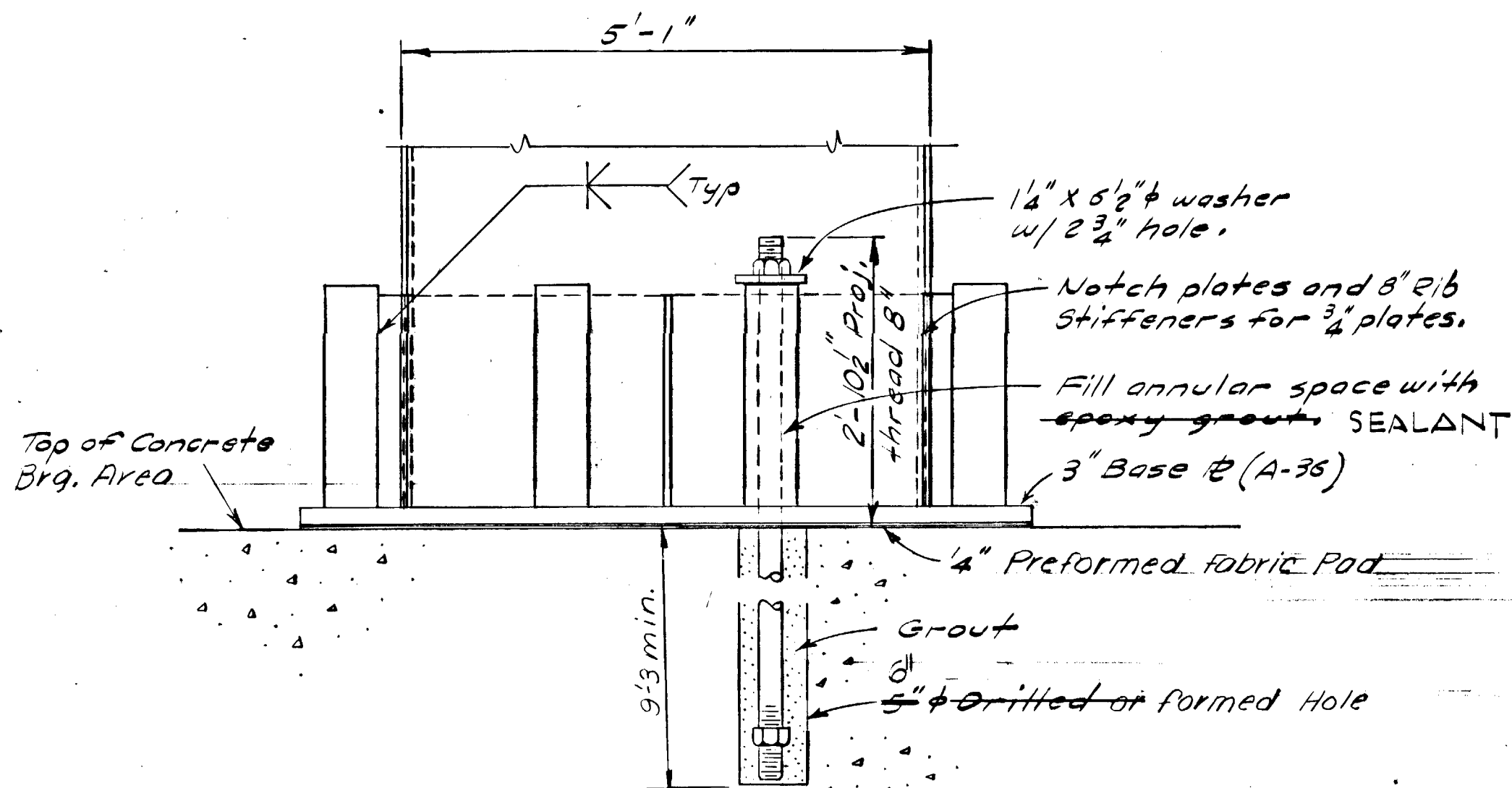


ELEVATION

TOP OF FRAMES

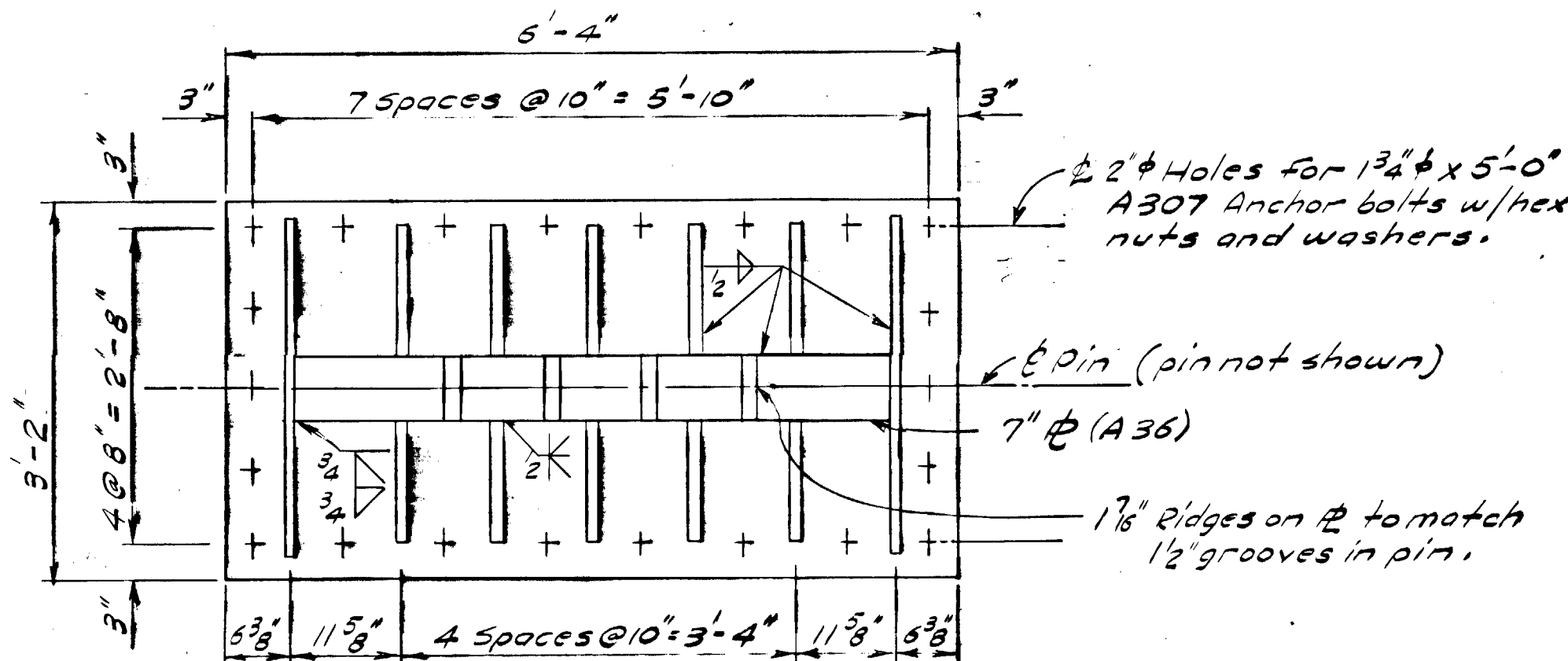
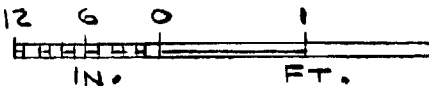


END VIEW

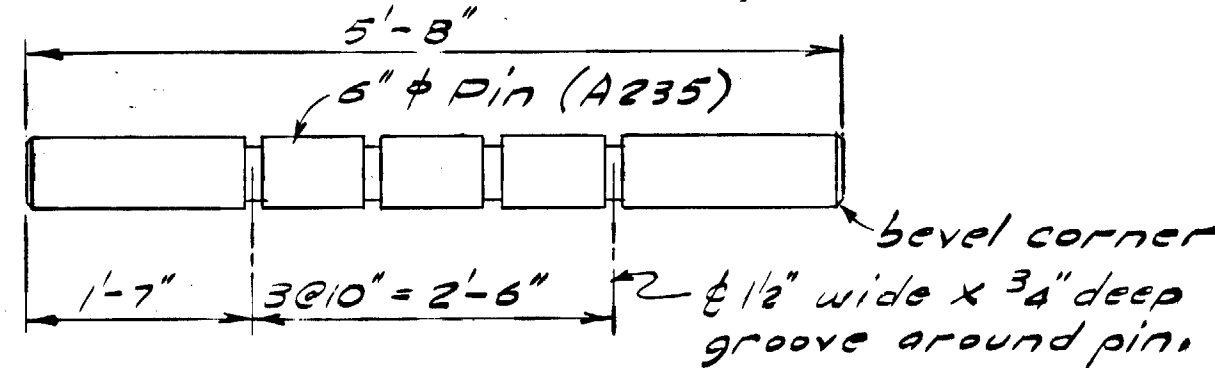


ELEVATION

BOTTOM OF PIER FRAMES 2, 3, 4 & 5

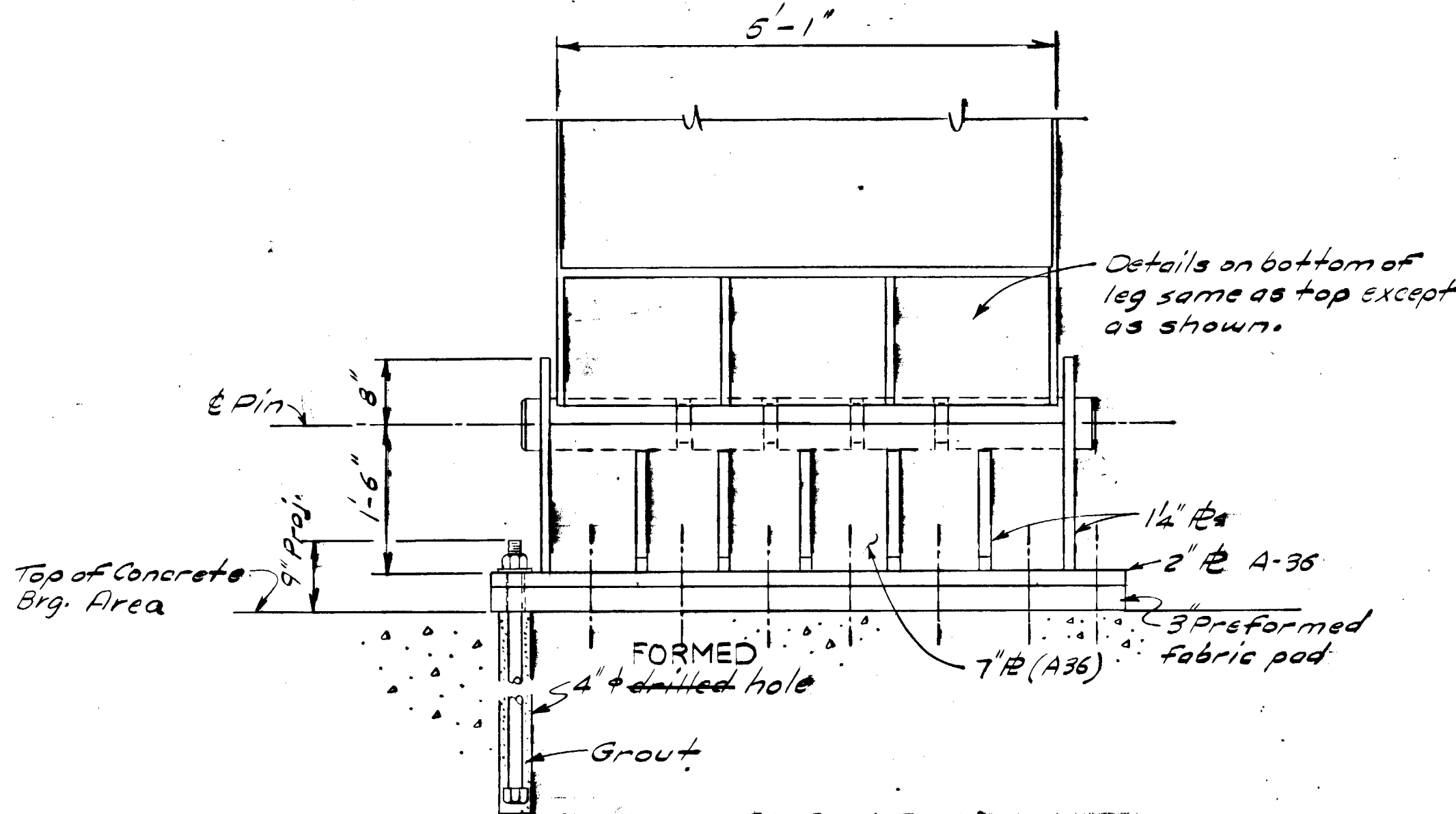


PLAN



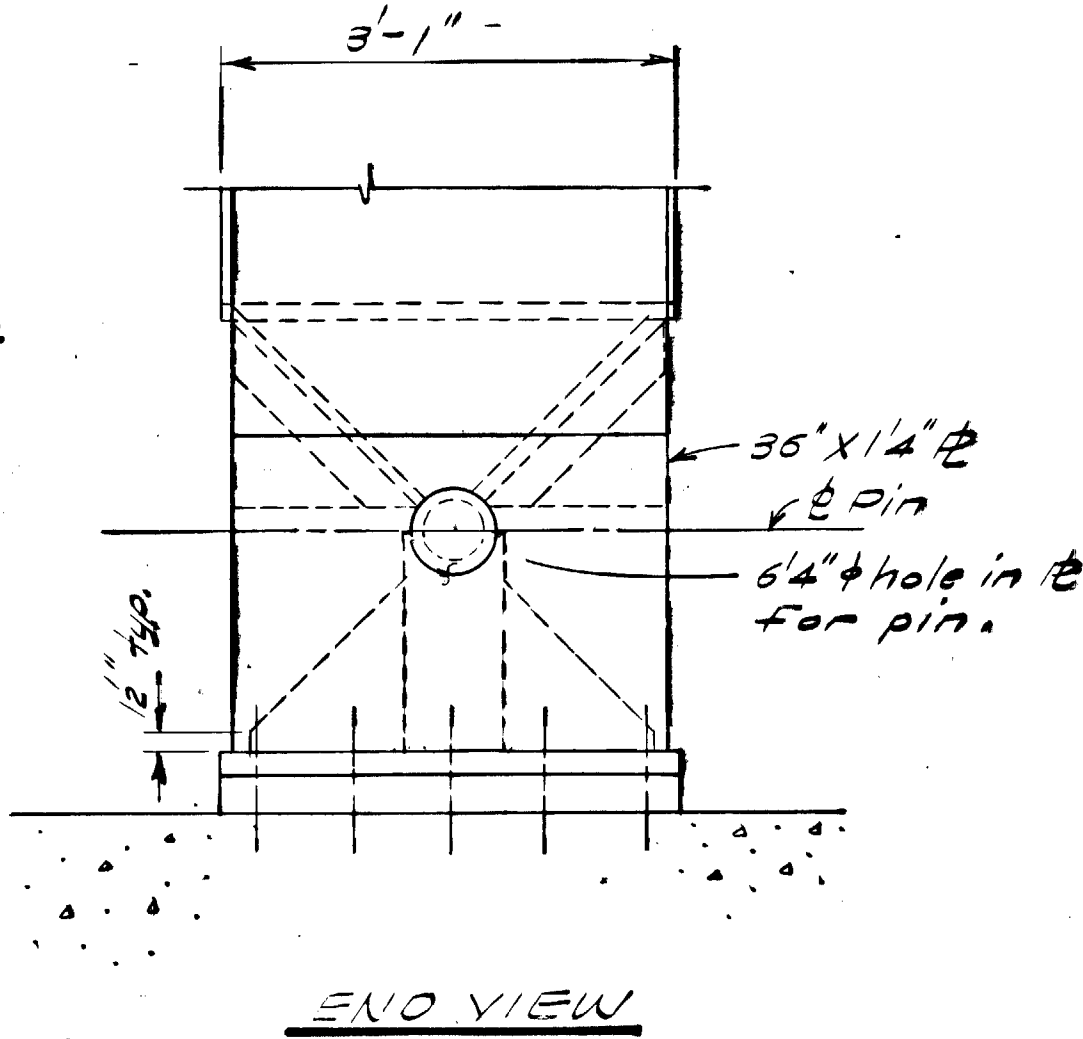
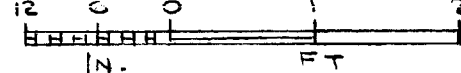
TYPICAL PIN

No scale



ELEVATION

BOTTOM OF PIER FRAME 6



END VIEW

AS BUILT PLANS

Rod Platyske Date 3-6-79-6-24-76
Project Engineer
CORRECTIONS TRANSFERRED
Tracings Kris Klemmetson Date 2-17-77
Checked H.O. Leslie Date 3-1-77

YUKON RIVER BRIDGE
ROUTE S-681
FRAME BEARINGS

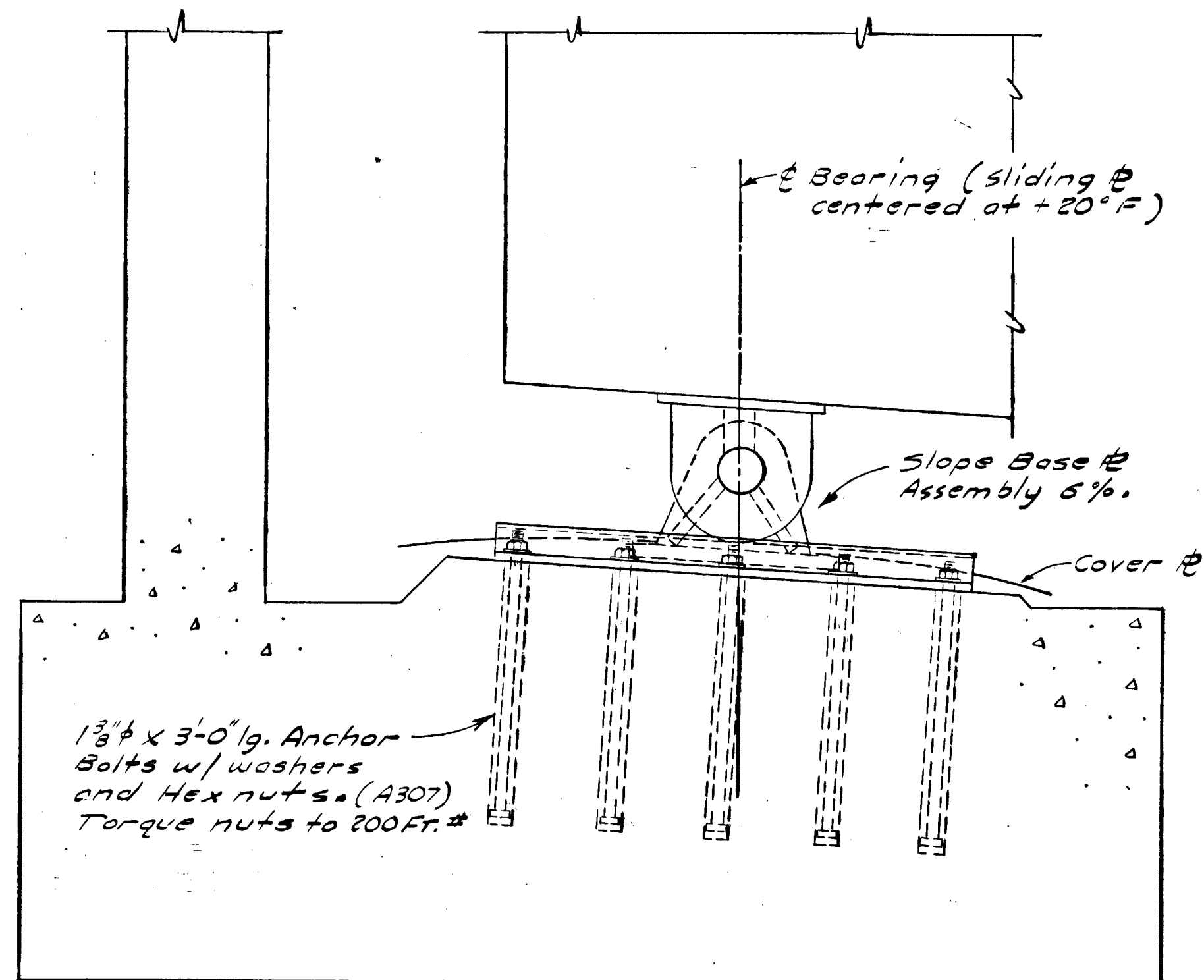
State of Alaska
DEPARTMENT OF HIGHWAYS
Juneau, Alaska

Date 12/17/73
Approved [Signature]

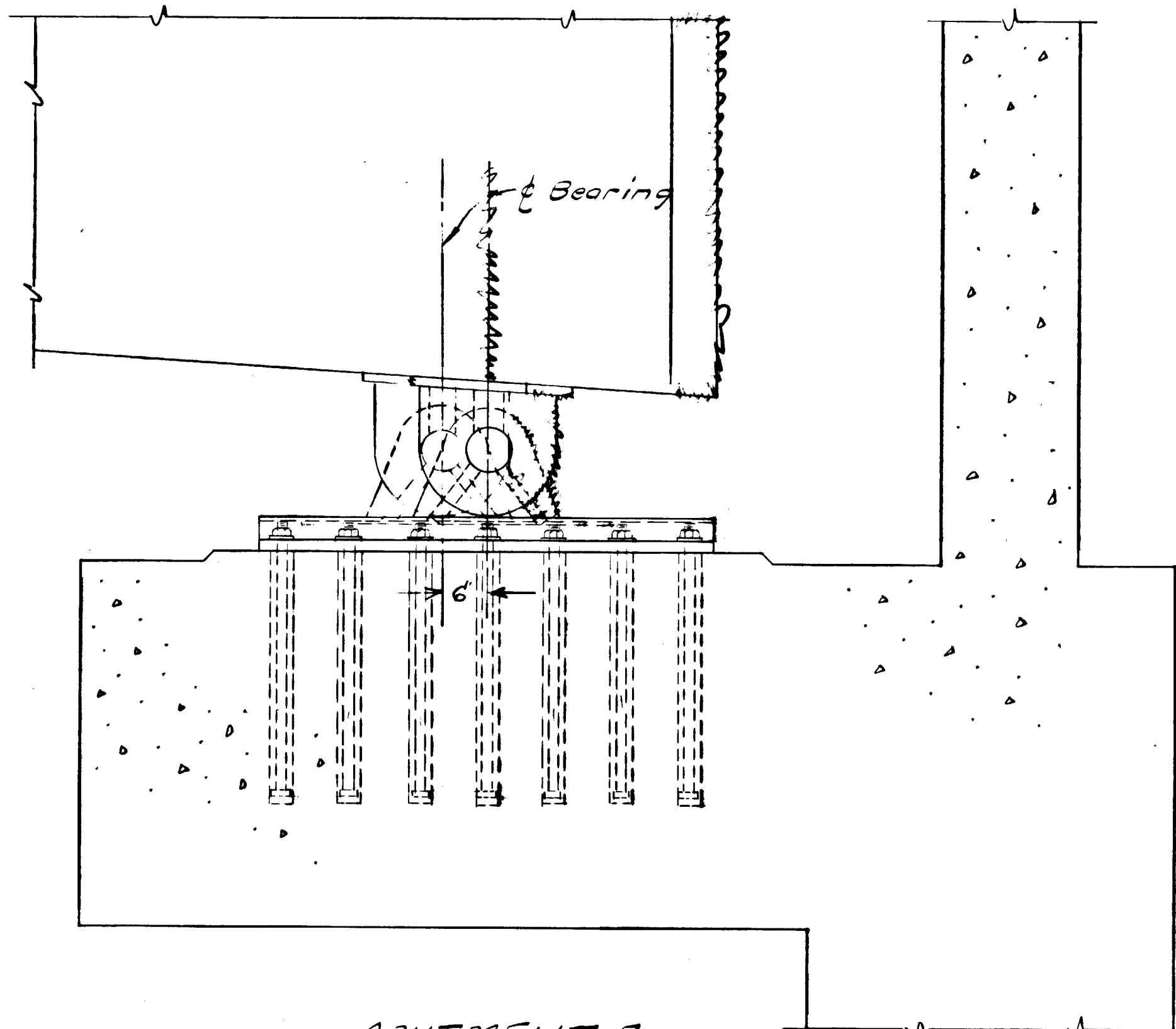


BRIDGE NO. 271
DWNG. NO. 2529

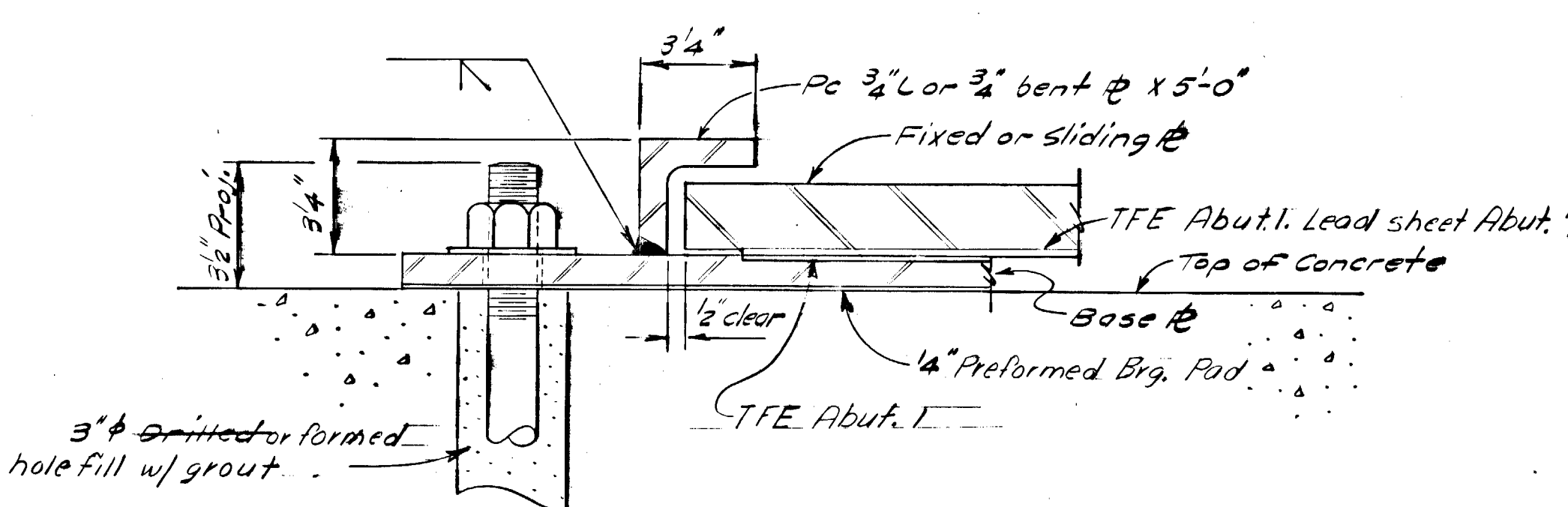
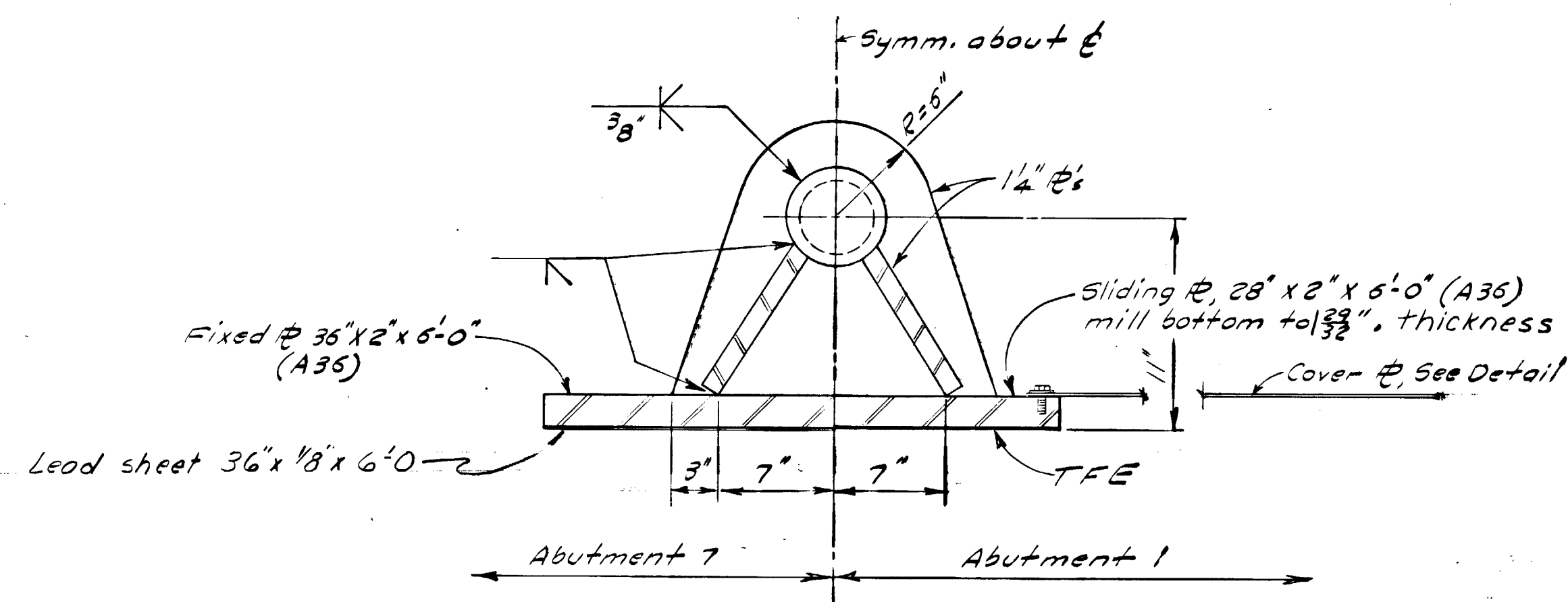
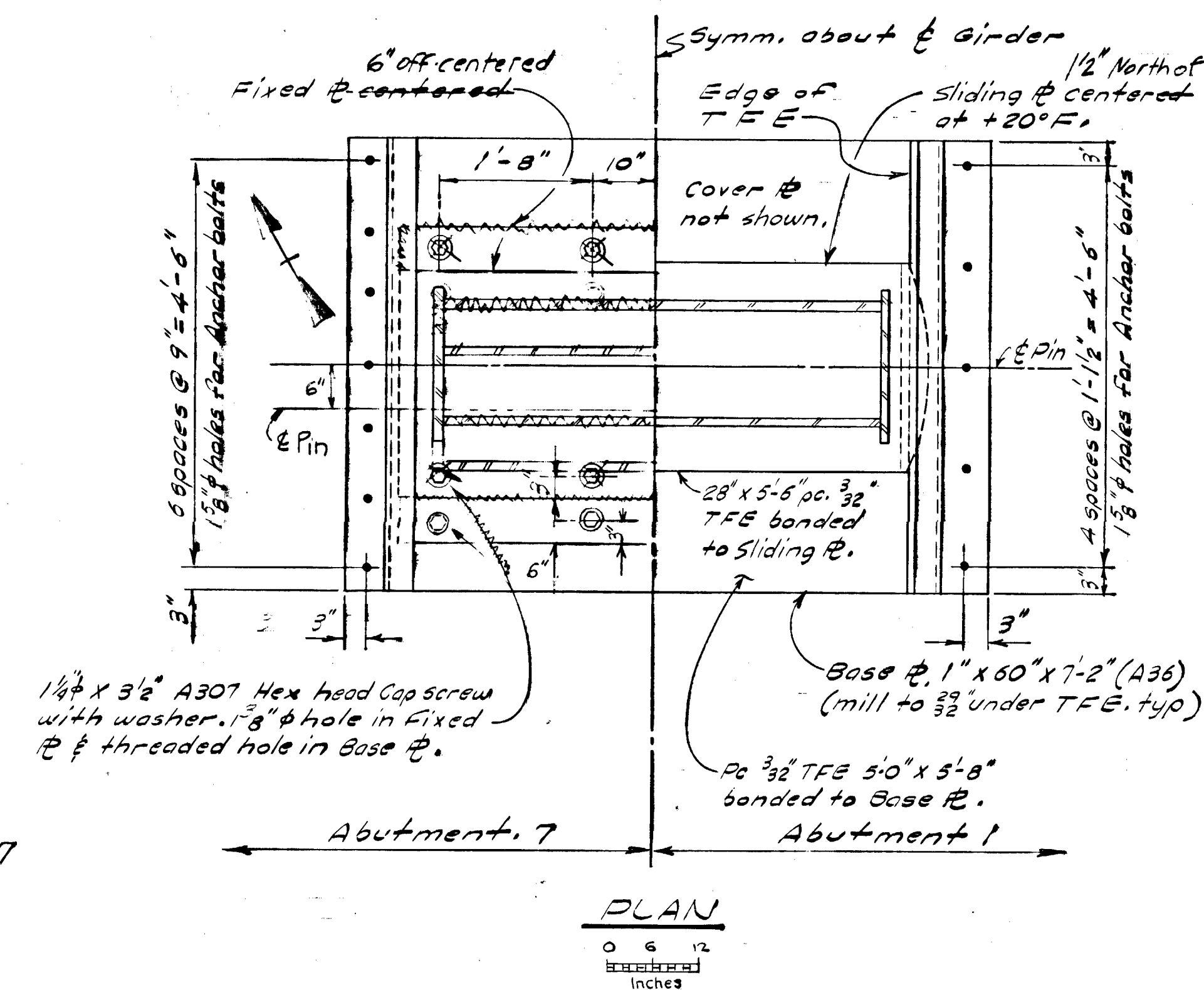
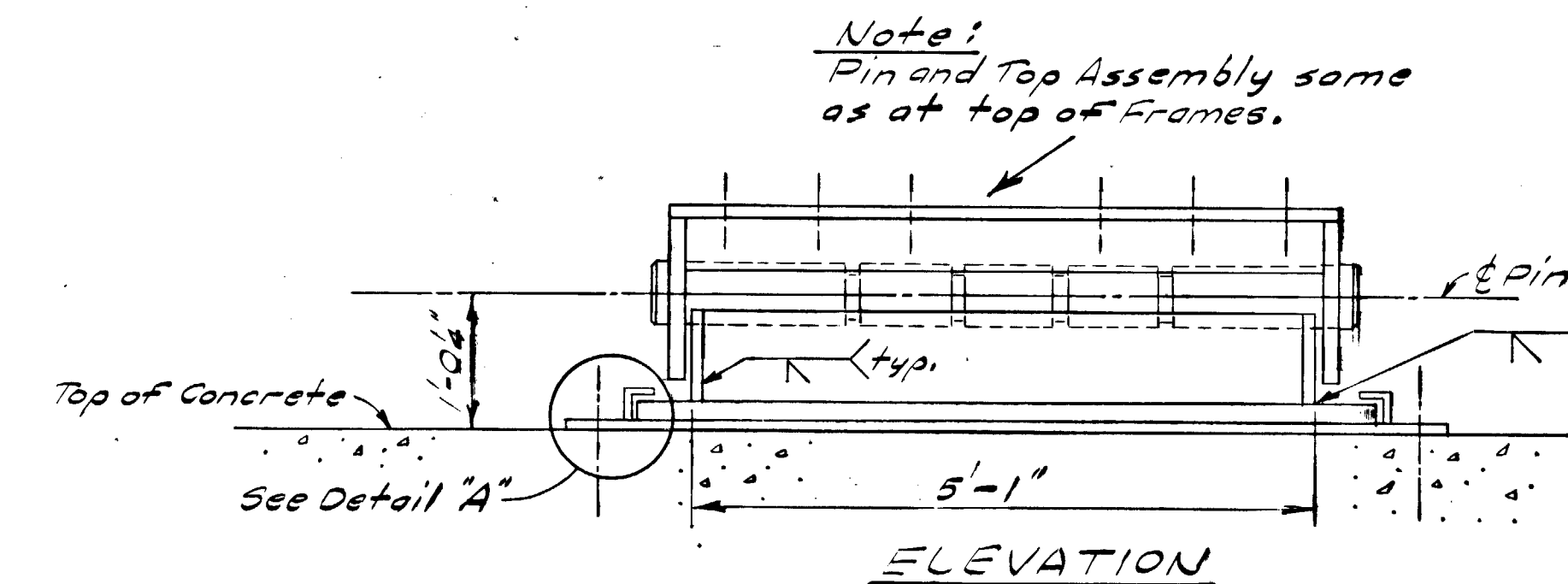
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS 0681(3)	1973	12	30



ABUTMENT 1

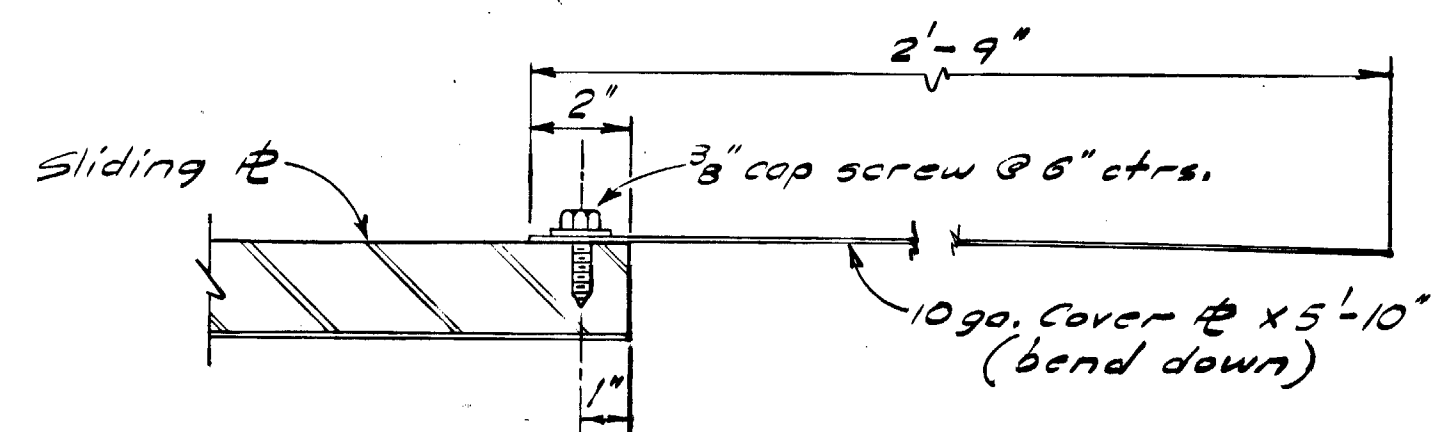


ABUTMENT 7



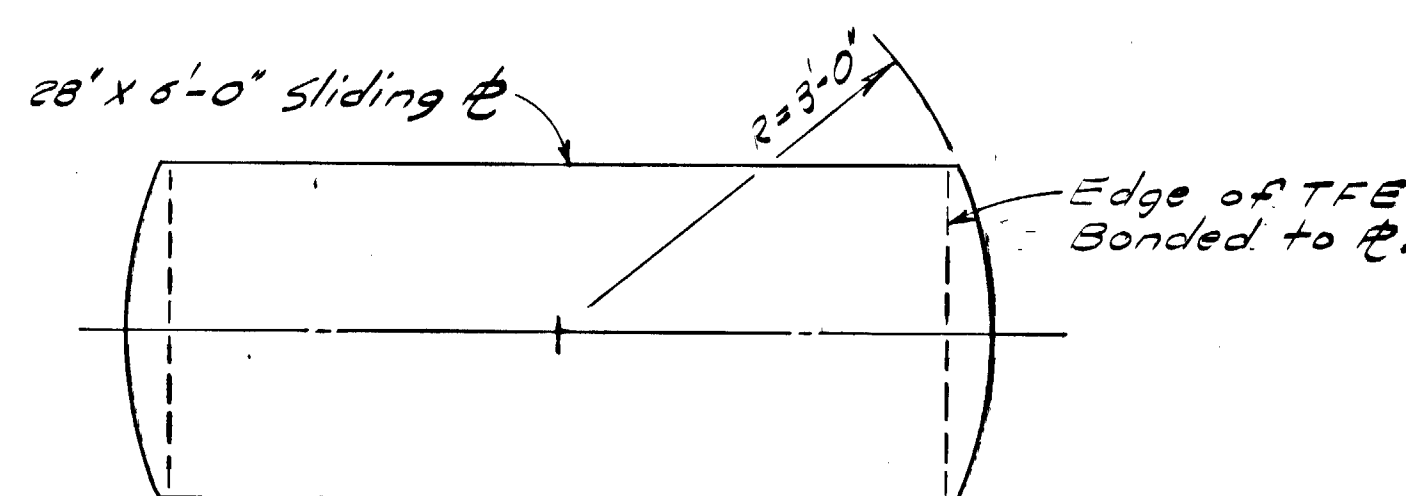
DETAIL "A"

No Scale



COVER ϕ DETAIL

No Scale



SLIDING ϕ DETAIL

No Scale

AS BUILT PLANS

Red Platzke Date 3-6-78 6-24-78
Project Engineer

CORRECTIONS TRANSFERRED

Tracings Kris Klemmson Date 2-17-77

Checked H.O. Leslie Date 3-1-77

YUKON RIVER BRIDGE
ROUTE S-681

ABUTMENT BEARINGS

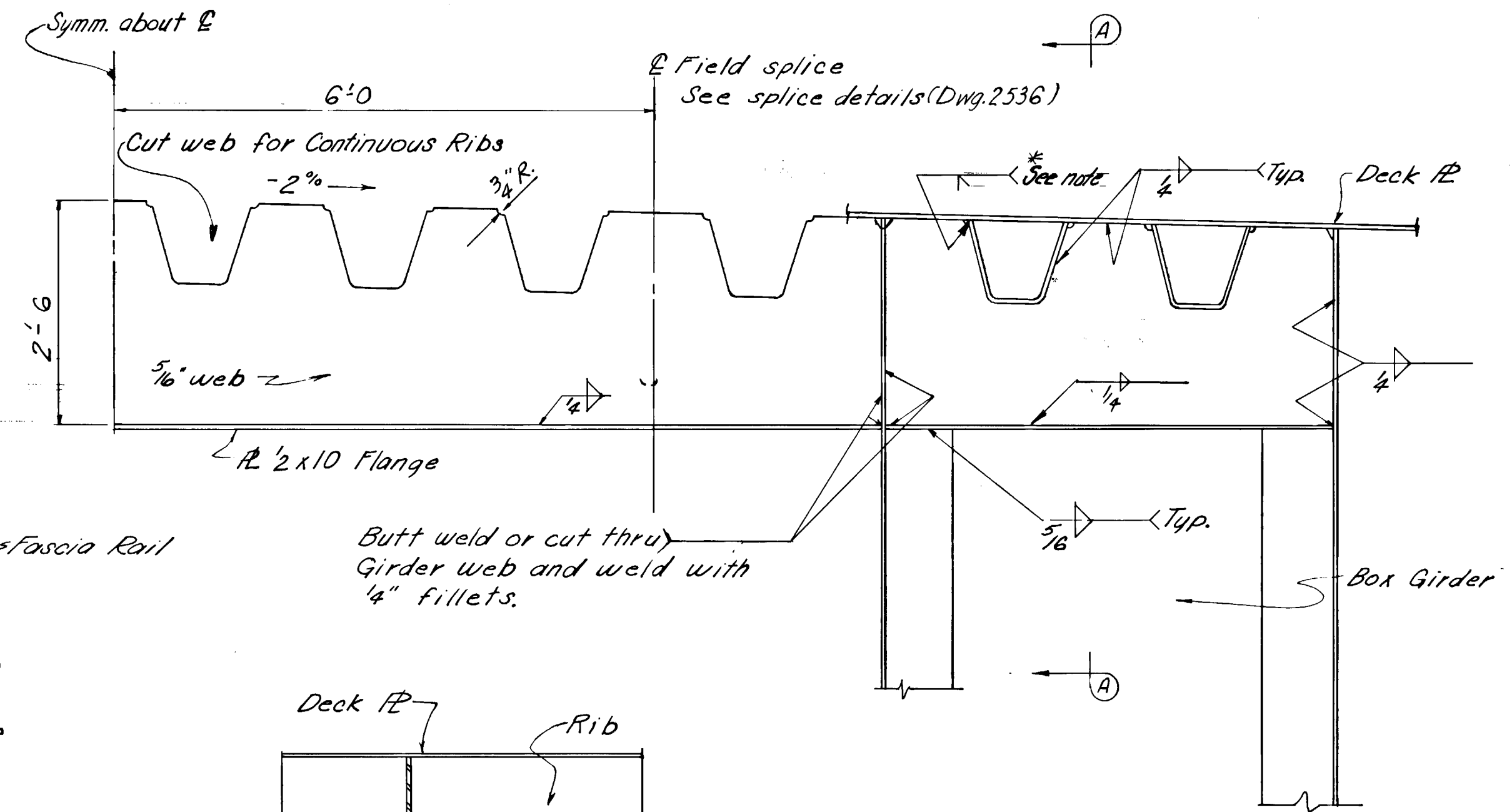
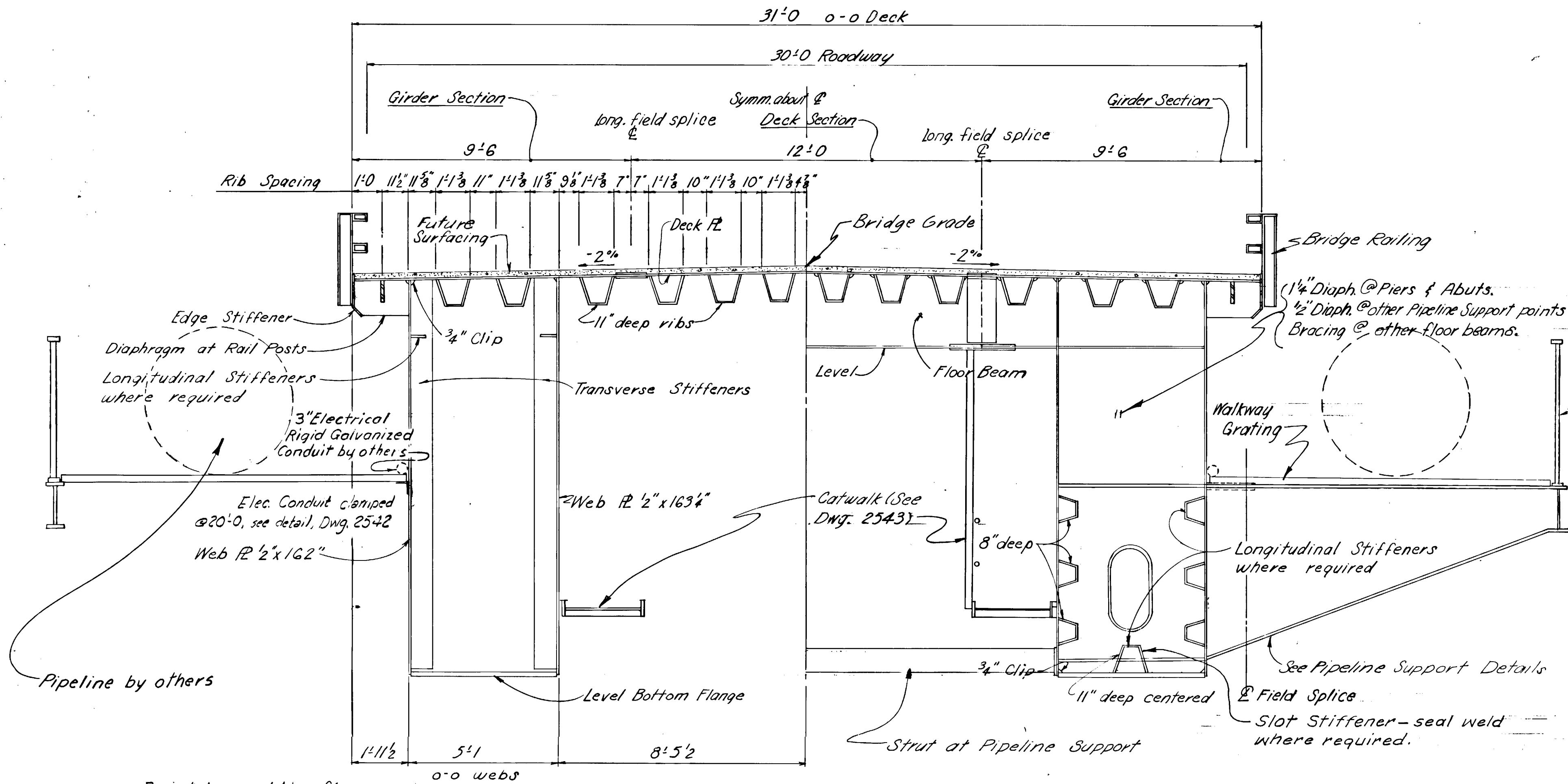
State of Alaska
DEPARTMENT OF HIGHWAYS
Juneau, Alaska

Date 12/7/73
Approved Karl Meier



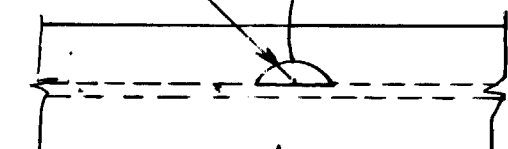
BRIDGE NO. 271
DWNG. NO. 2530

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS 0681(3)	1973	13	30



*Note: 1/4" Fillet may be substituted for Bevel Weld at Contractor's option.

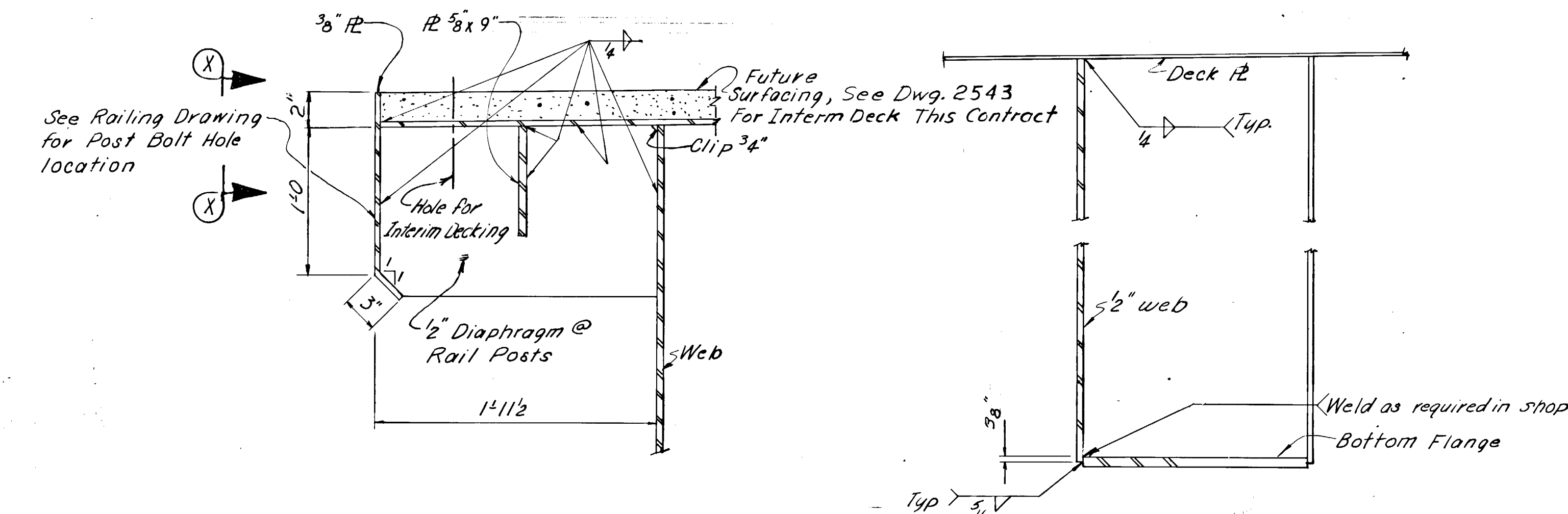
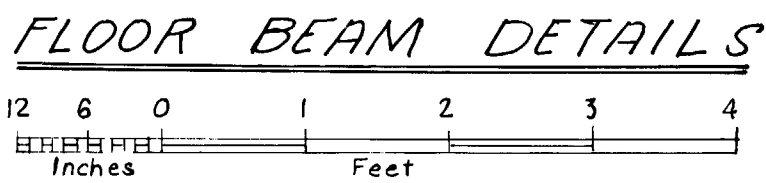
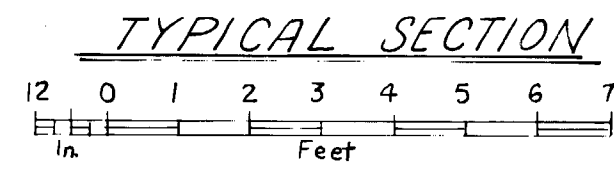
Drain holes spaced b/w floor beams @ 10' or 15' c-c each side of Rdwy



VIEW X-X
No Scale

SECTION BETWEEN FLOOR BEAMS

SECTION NEAR FLOOR BEAMS

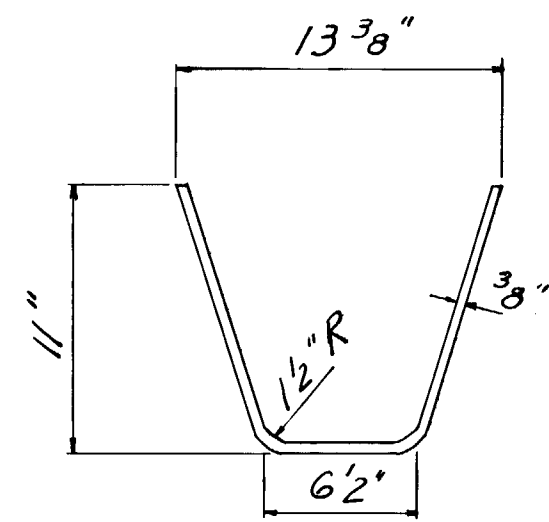


DECK OVERHANG SECTION

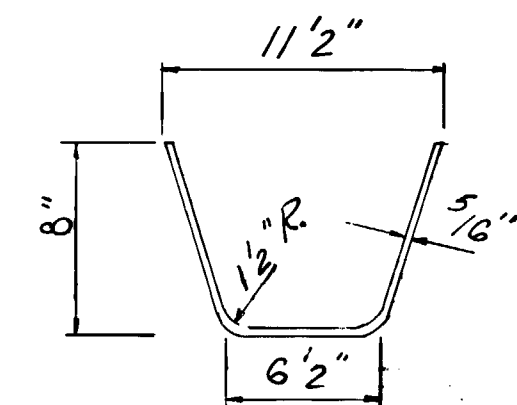


BOX CORNER WELDS

No Scale



11" DEEP RIB DETAIL



8" DEEP RIB STIFFENER DETAIL

RIB AND STIFFENER DETAILS



AS BUILT PLANS	
Project Engineer	Date 3-6-77 - 6-29-77
CORRECTIONS TRANSFERRED	
Tracings	Kris Klemmetan Date 2-17-77
Checked	H.O. Leslie Date 3-1-77

Note: Ribs may be fabricated by welding RPS to approximate basic shape as shown for Bent RPS. Details shall be submitted for approval.

YUKON RIVER BRIDGE
ROUTE NO. S-681

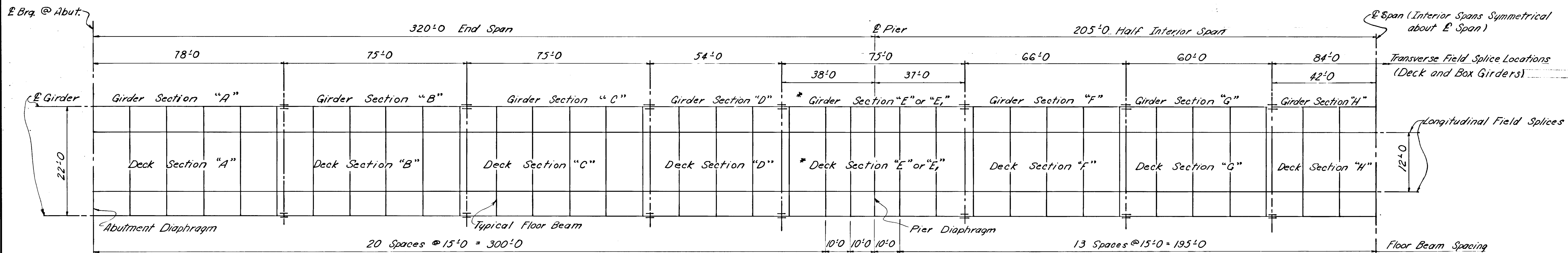
SUPERSTRUCTURE

State of Alaska
DEPARTMENT OF HIGHWAYS
Juneau, Alaska

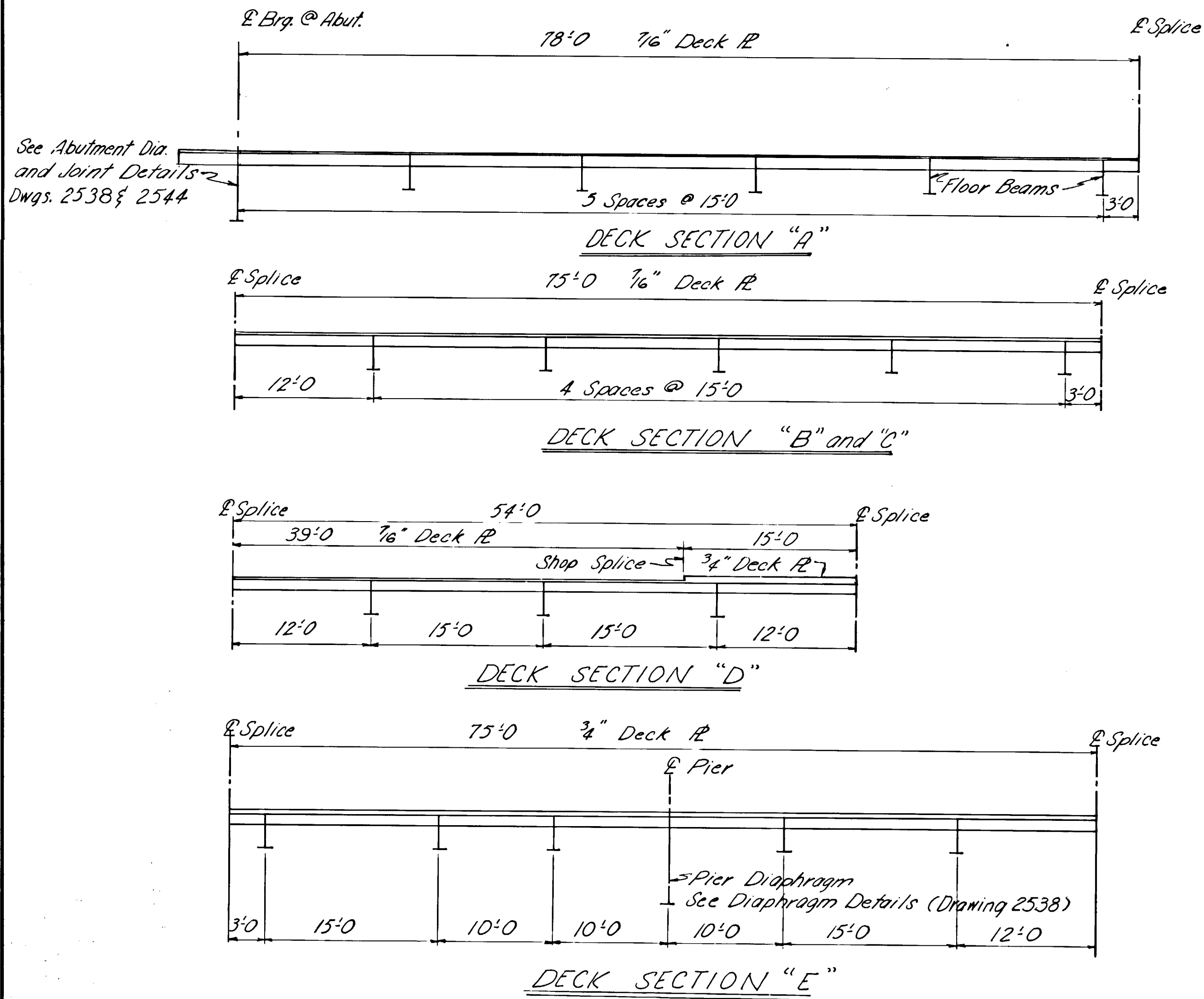
Date 12/7/73
Approved [Signature]

BRIDGE NO. 271
DWNG. NO. 2531

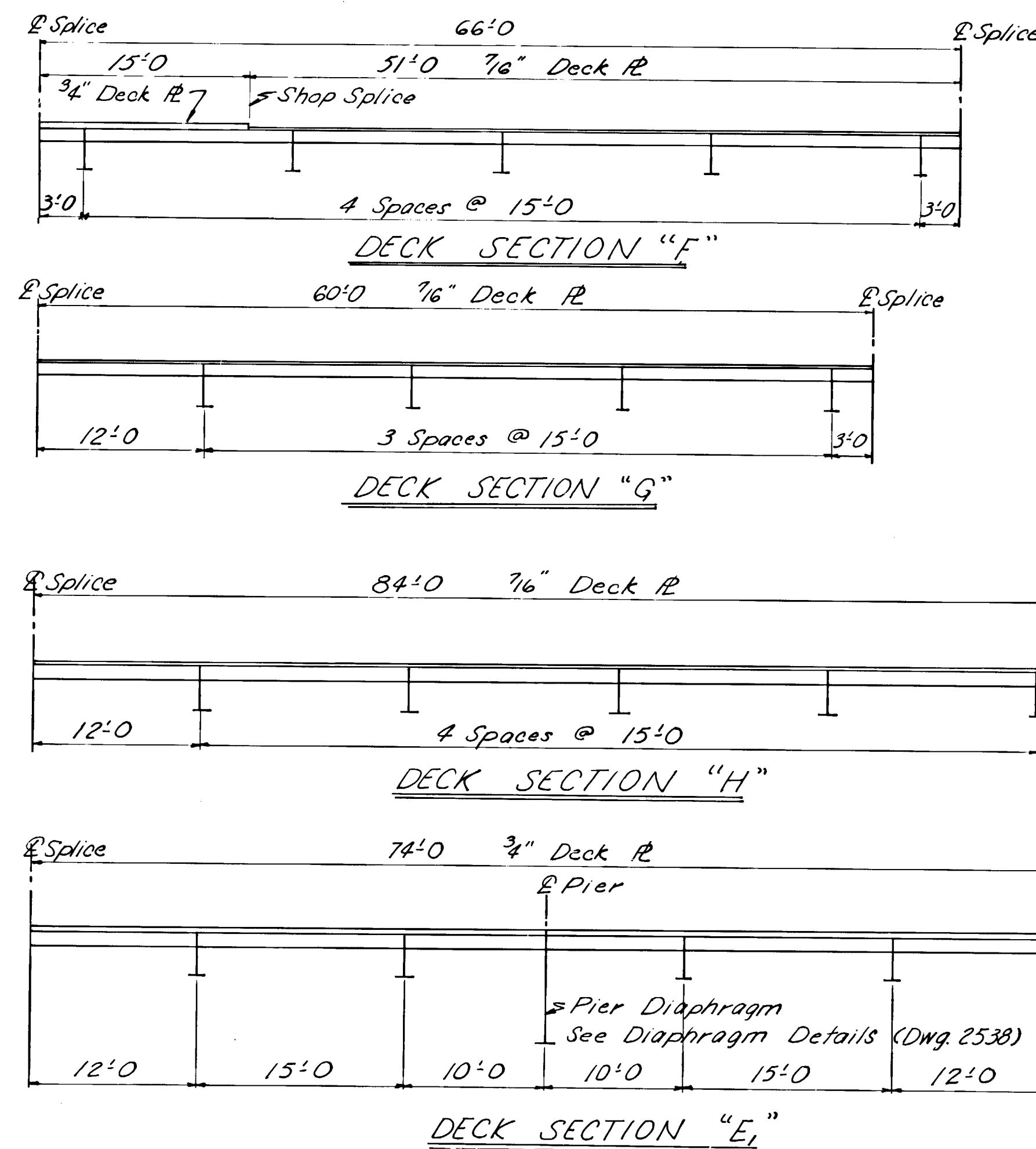
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS 0681(3)	1973	14	30



FRAMING PLAN (Pipe Details Not Shown)



DECK SECTIONS



Note: Girder Sections for Structural Details only, Camber may vary.

Note: Alternative Splice Locations may be submitted by the Contractor for approval.

*Note: Girder Sections "E" and Deck Sections "E" at Piers No. 2 and No. 6, Girder Sections "E" and Deck Sections "E" at Piers No. 3, No. 4 and No. 5.

Note: Dimensions shown are measured horizontally. Adjustments must be made for Grade and Camber.

Note: All diaphragms & stiffeners shall be placed normal to grade.

Note: Chamfer all box girder stiffeners and diaphragms 3/4" on Soffit end if required to provide drainage. Drill 1" hole thru bottom flange near each pier and Abut. for drainage.

AS BUILT PLANS

Red Platze Date 3-6-74 - 6-24-76
Project Engineer
CORRECTIONS TRANSFERRED
Tracings Kris Klemm Date 2-17-77
Checked H.O. Leslie Date 3-1-77

YUKON RIVER BRIDGE
ROUTE NO. S-681
FRAMING PLAN AND
DECK SECTIONS

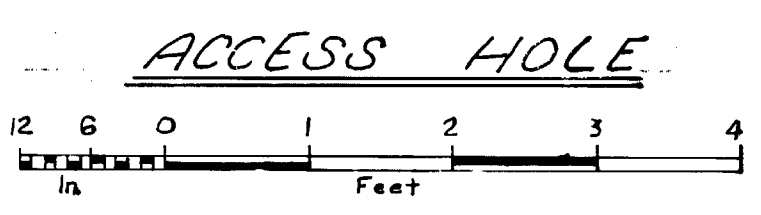
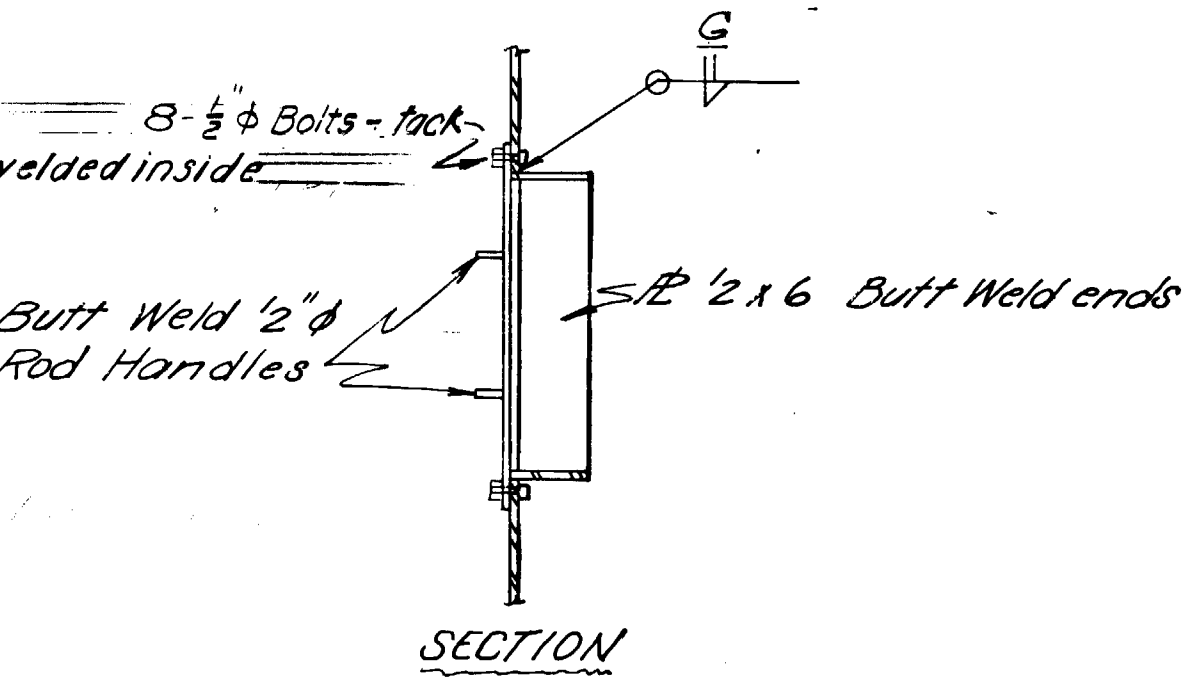
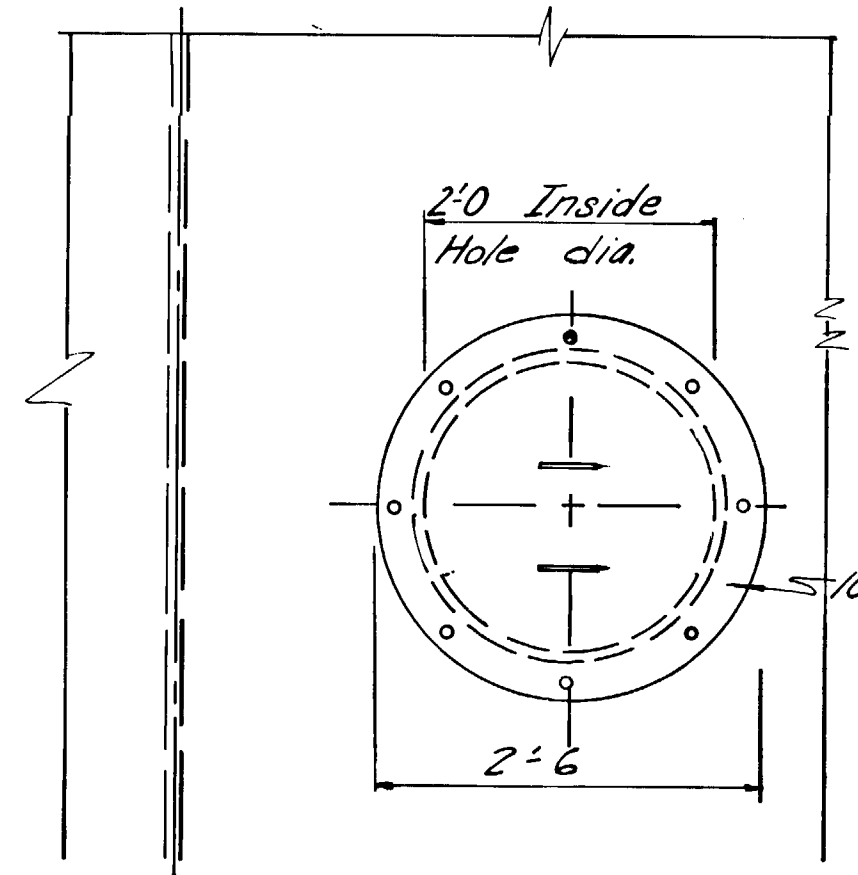
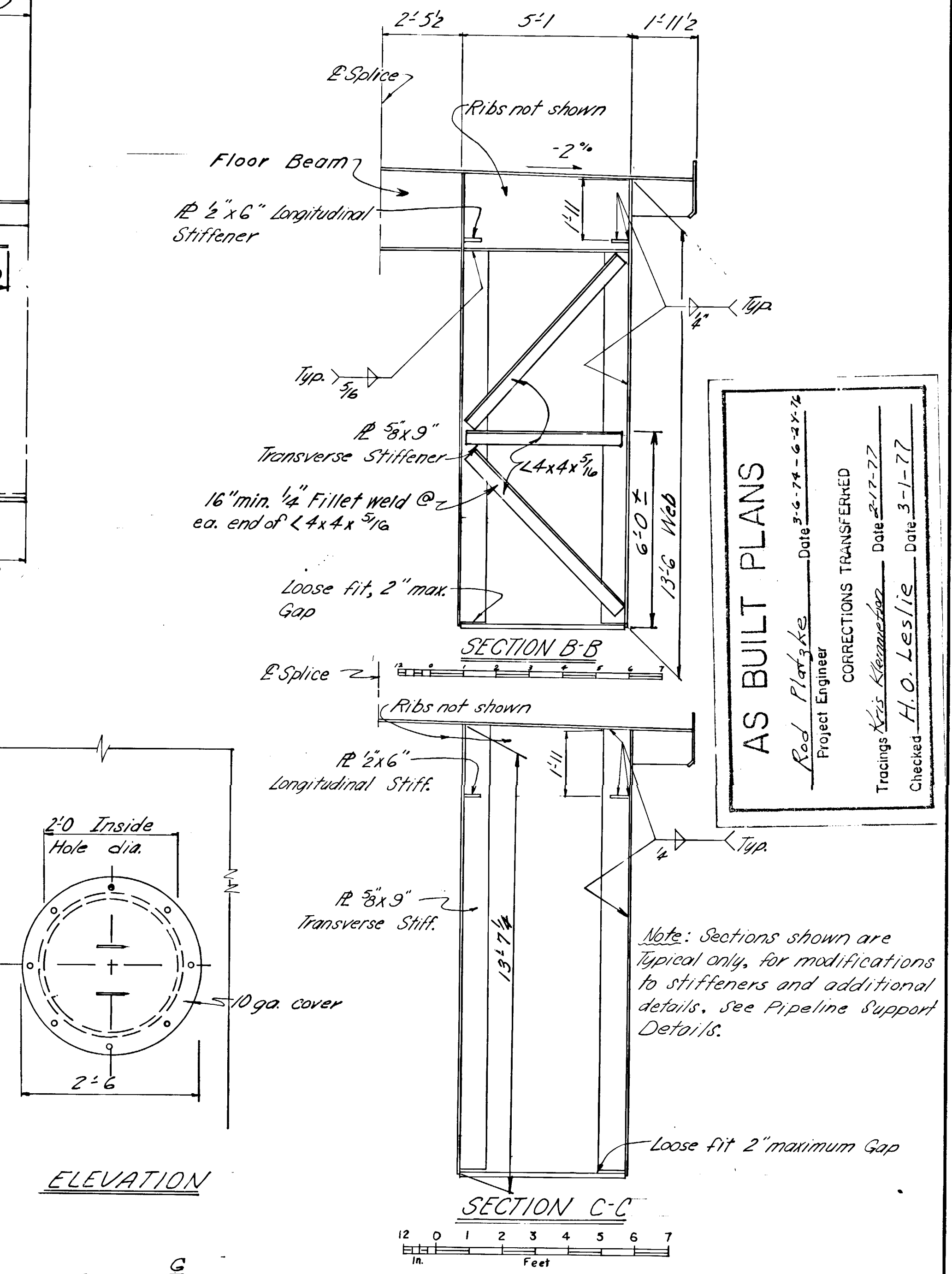
No Scale

State of Alaska
DEPARTMENT OF HIGHWAYS
Juneau, Alaska

Date 12/7/73
Approved Karl N. [Signature]

BRIDGE NO. 271
DWG. NO. 2532

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS 0681(3)	1973	15	30



YUKON RIVER BRIDGE
ROUTE NO. S-681

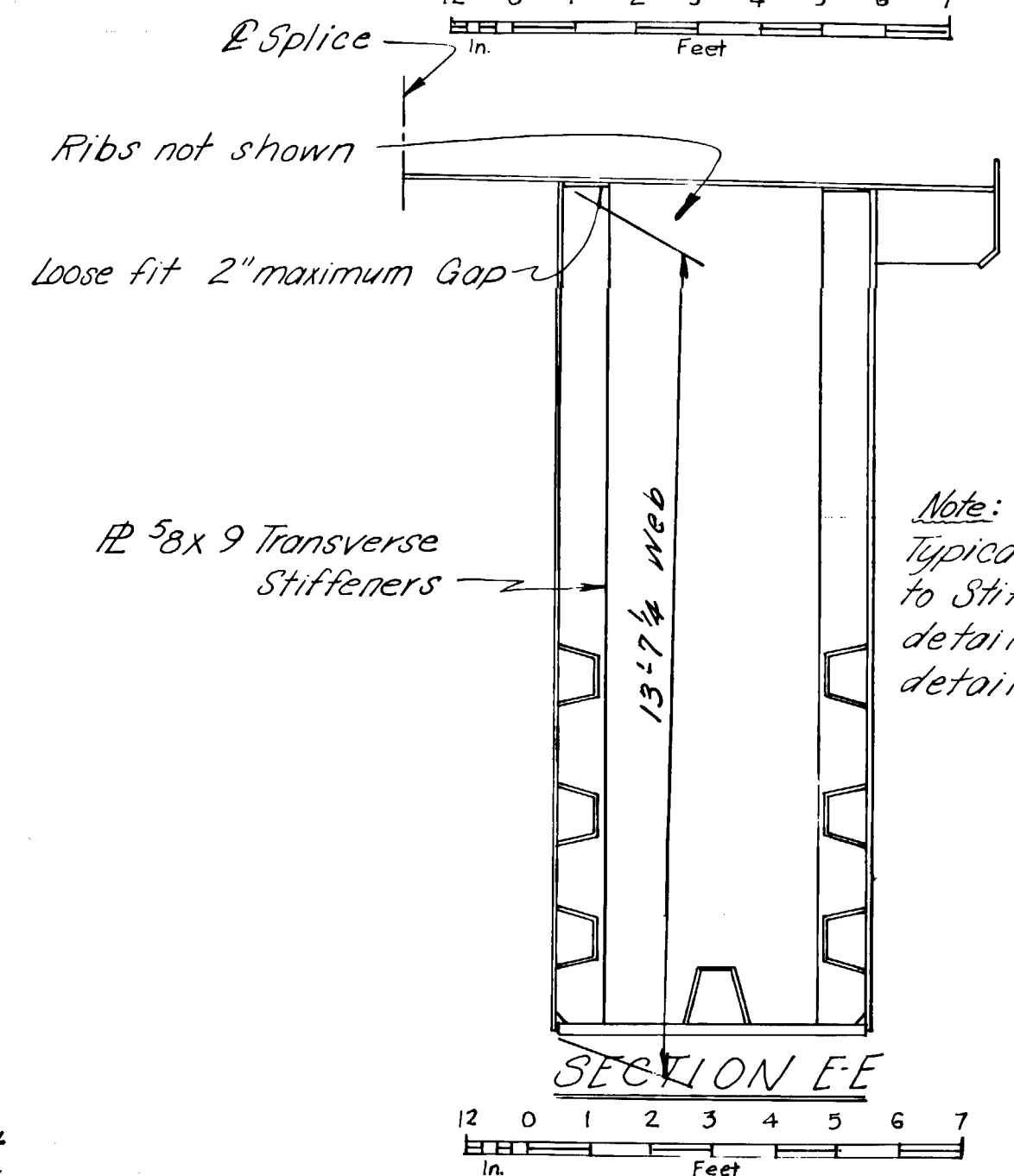
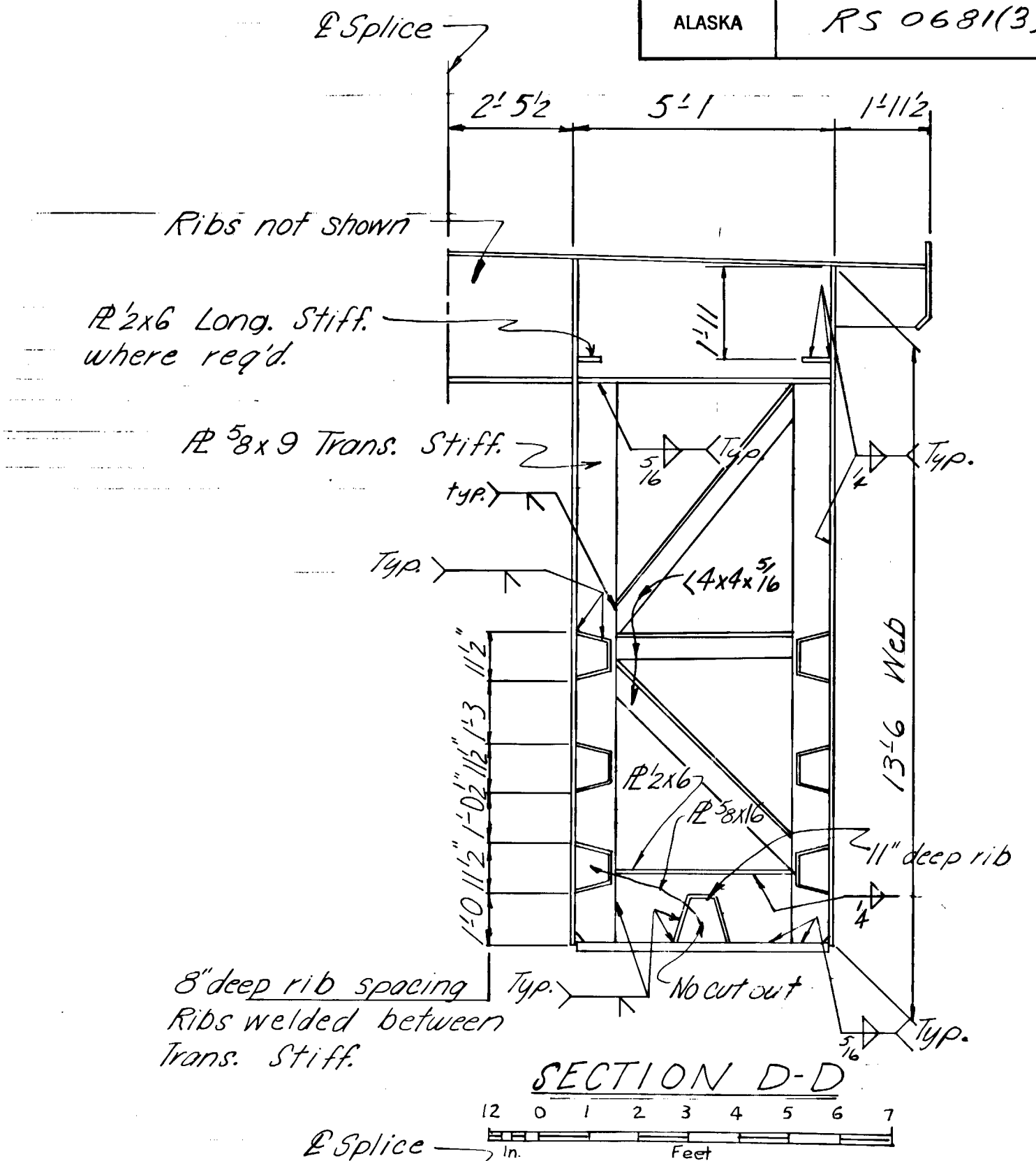
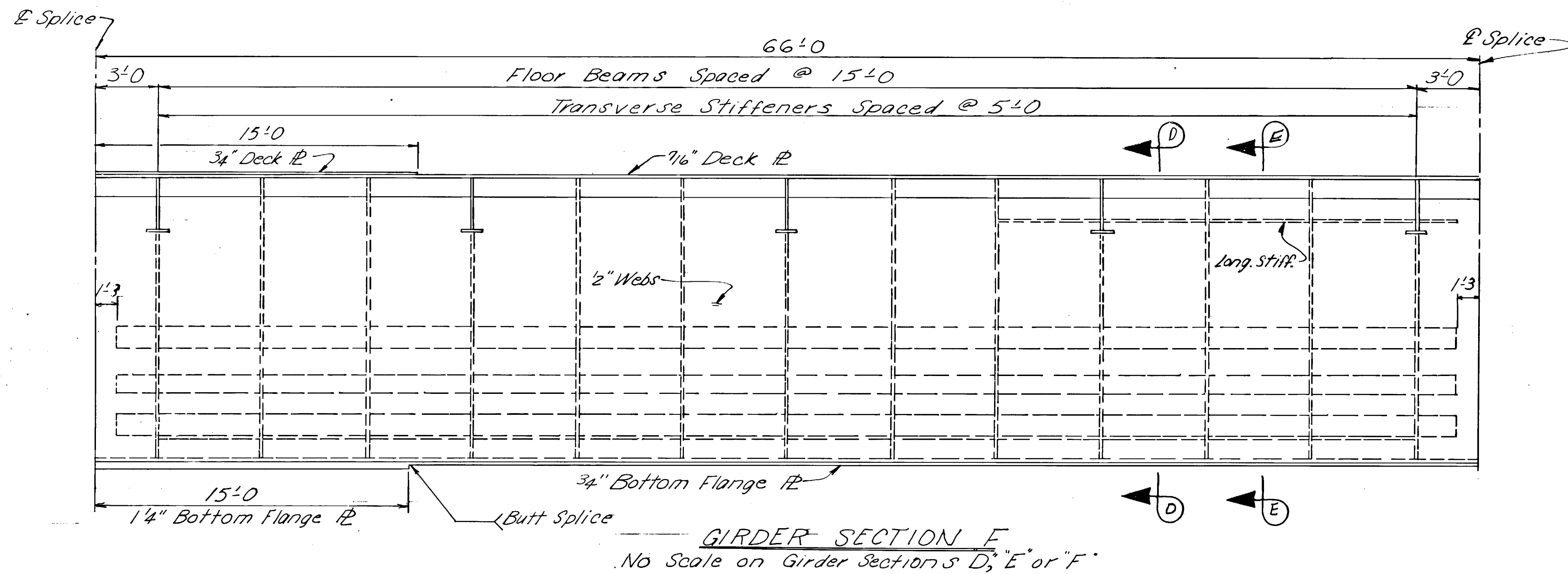
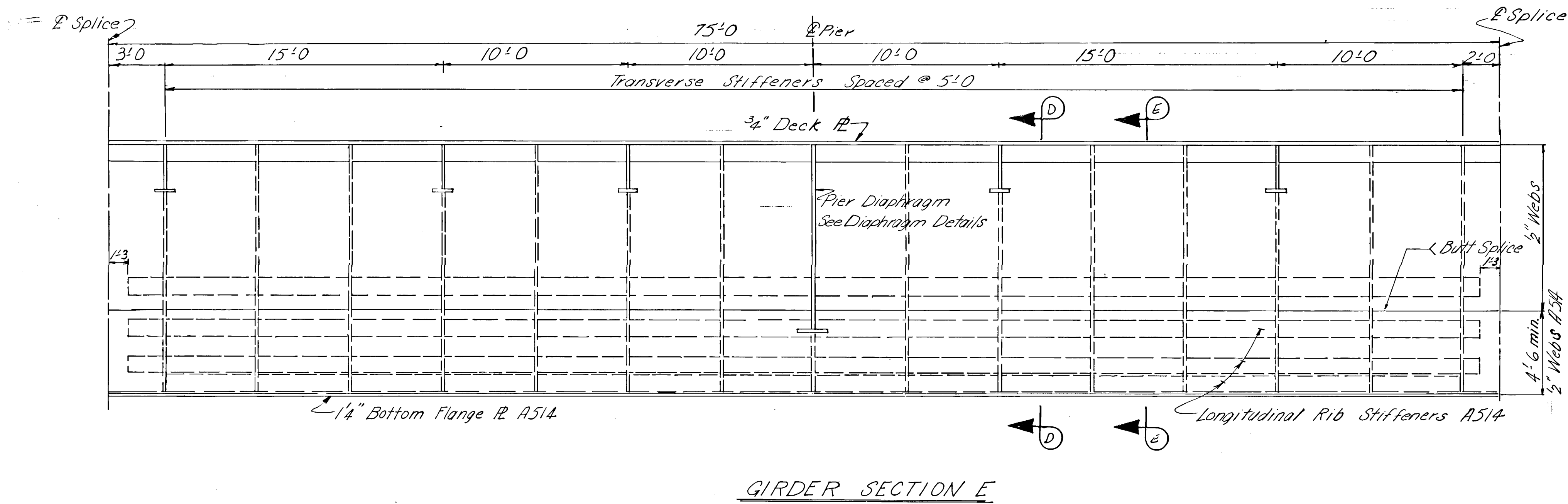
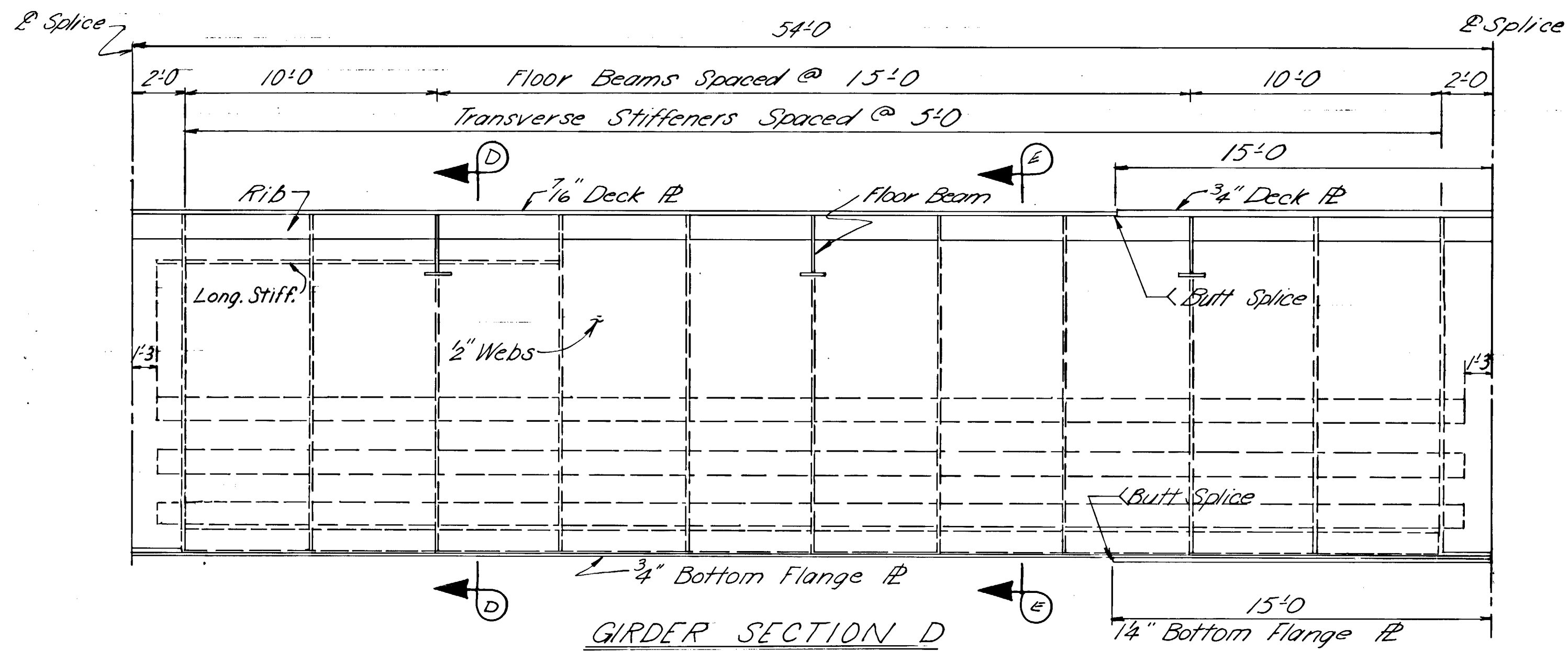
BOX GIRDERS NO.1

State of Alaska
DEPARTMENT OF HIGHWAYS
Juneau, Alaska

Date 12/7/73
Approved [Signature]

BRIDGE NO. 271
DWNG. NO. 2533

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS 0681(3)	1973	16	30



Note: All A514 steel on this sheet is considered as compression members for the purpose of Charpy Impact Tests. (See Special Provisions)

AS BUILT PLANS	
Project Engineer	Date 3-6-79-6-24-76
CORRECTIONS TRANSFERRED	
Tracings	Date 2-17-77
Checked	Date 3-1-77

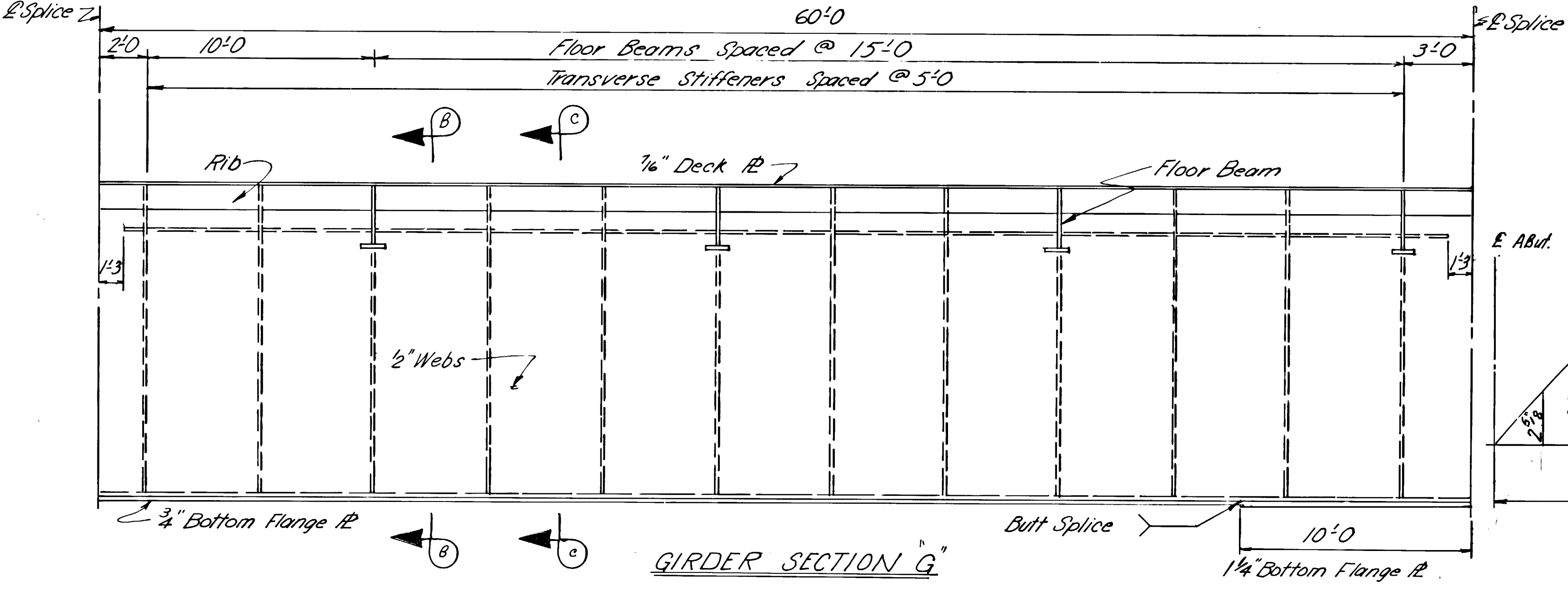
YUKON RIVER BRIDGE
ROUTE NO. S-681
BOX GIRDERS NO.2

State of Alaska
DEPARTMENT OF HIGHWAYS
Juneau, Alaska

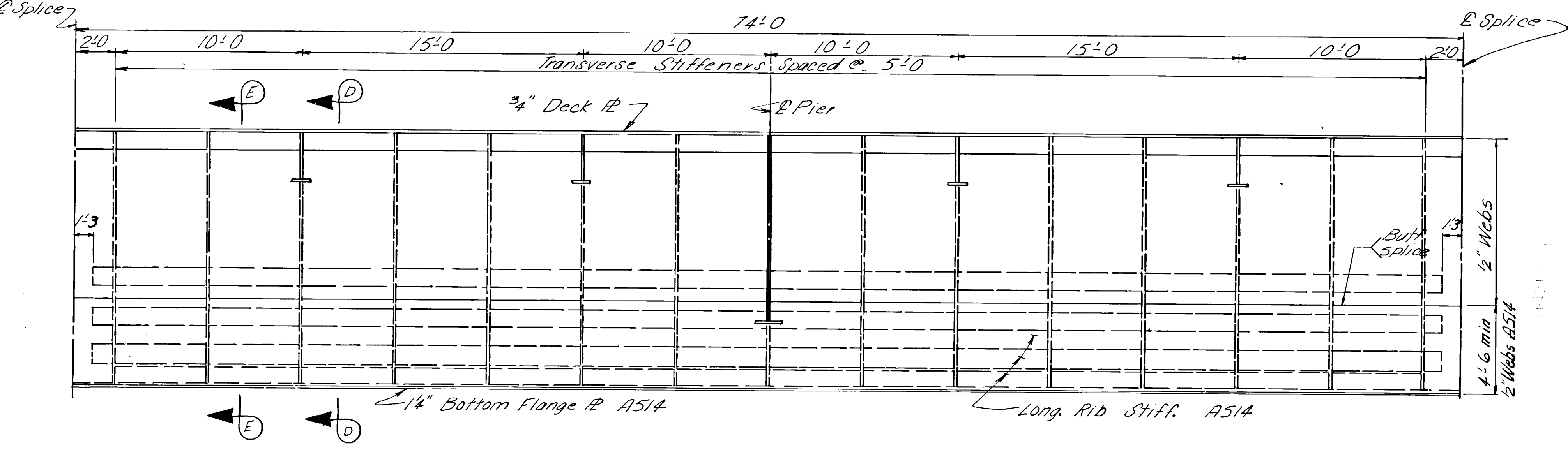
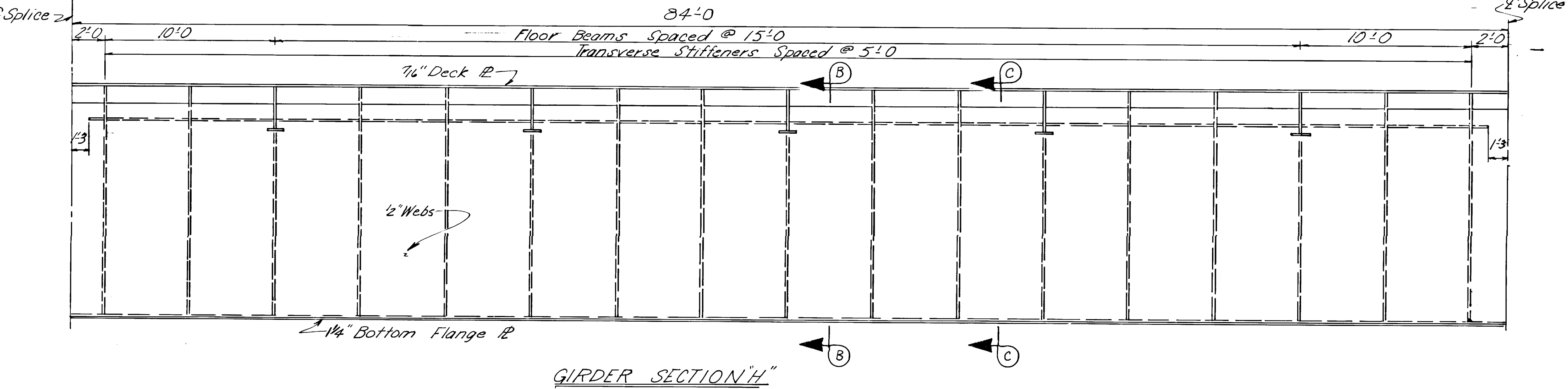
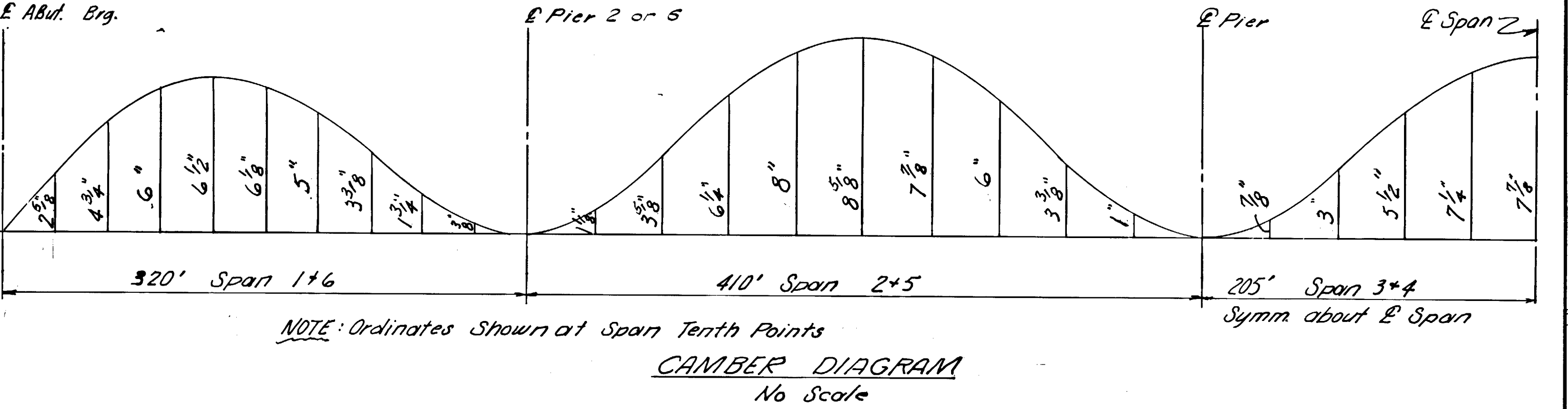
Date 12/7/73
Approved

BRIDGE NO. 271
DWNG. NO. 2534

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	AS 0681(3)	1973	17	30



Note: For Cross Sections and Views,
See Box Girder Drawings No. 1 and No. 2



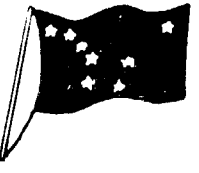
Note: All A514 Steel on this sheet is
considered as compression members
for the purpose of Charpy Impact Tests.
(See Special Provisions)

AS BUILT PLANS	
Red Platke Project Engineer	Date 3-6-74 - 6-24-76
CORRECTIONS TRANSFERRED	
Tracings Kris Klemm	Date 2-17-77
Checked H.O. Leslie	Date 3-1-77

YUKON RIVER BRIDGE
ROUTE NO. S-681
BOX GIRDERS NO.3

State of Alaska
DEPARTMENT OF HIGHWAYS
Juneau, Alaska

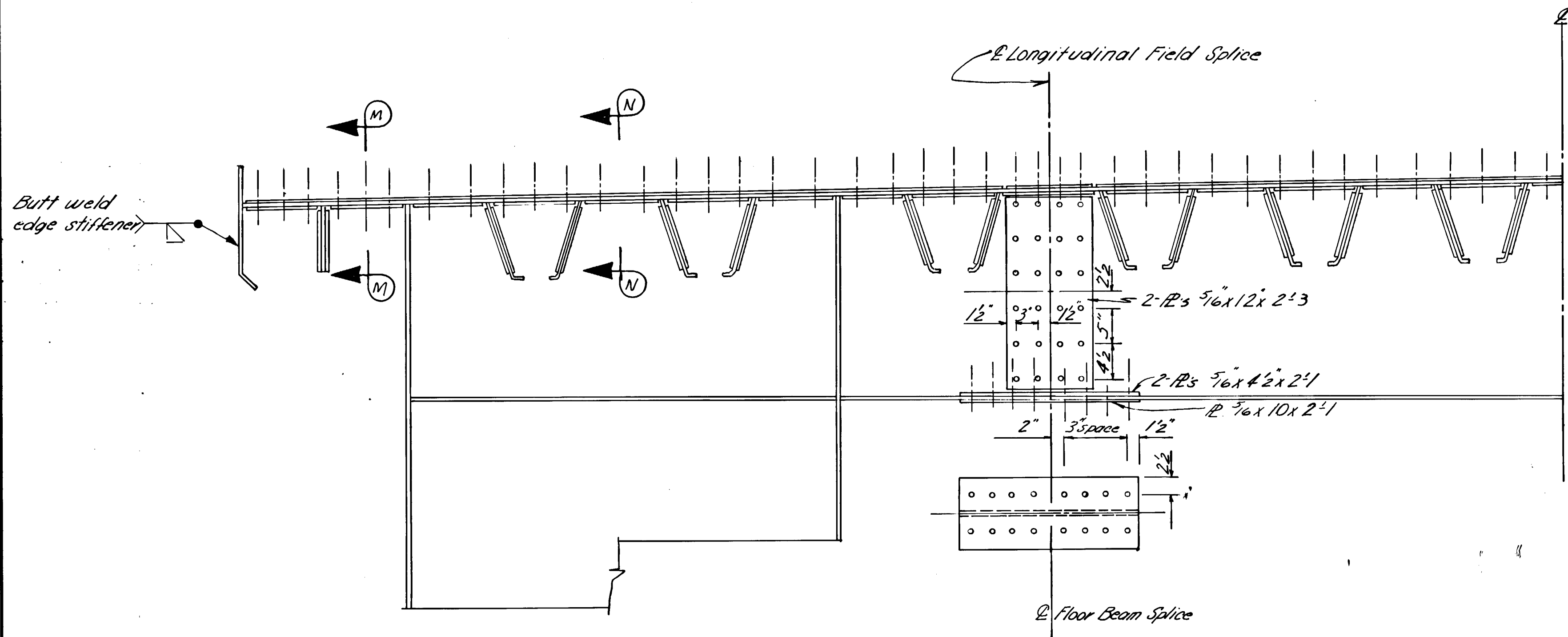
Date 12/2/75
Approved [Signature]



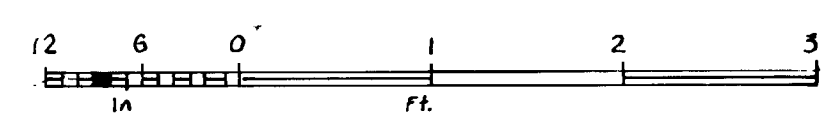
BRIDGE NO. 271
DWNG. NO. 2535

(No Scale on Sections G, H, and E.)

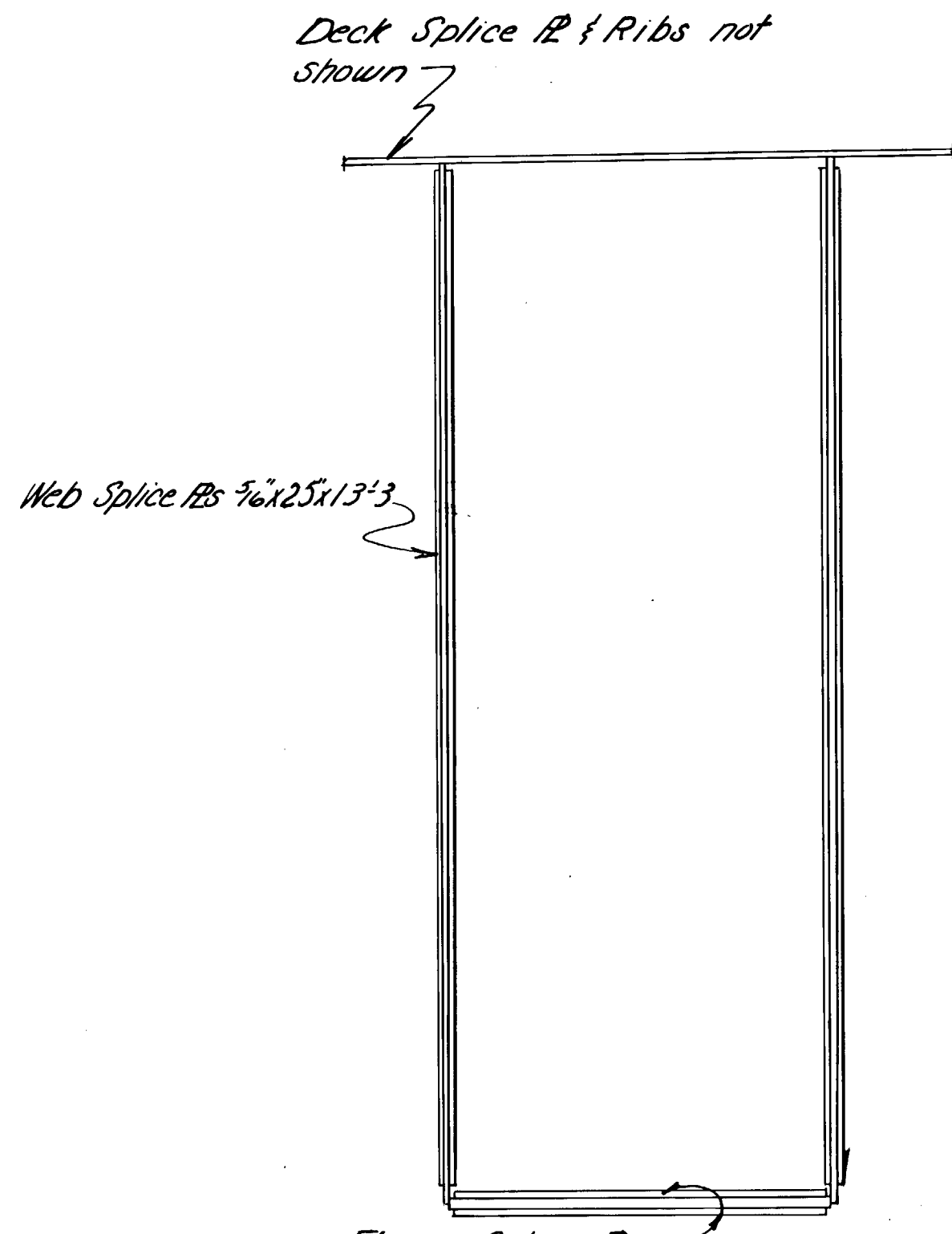
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	25-0681(3)	1973	18	30



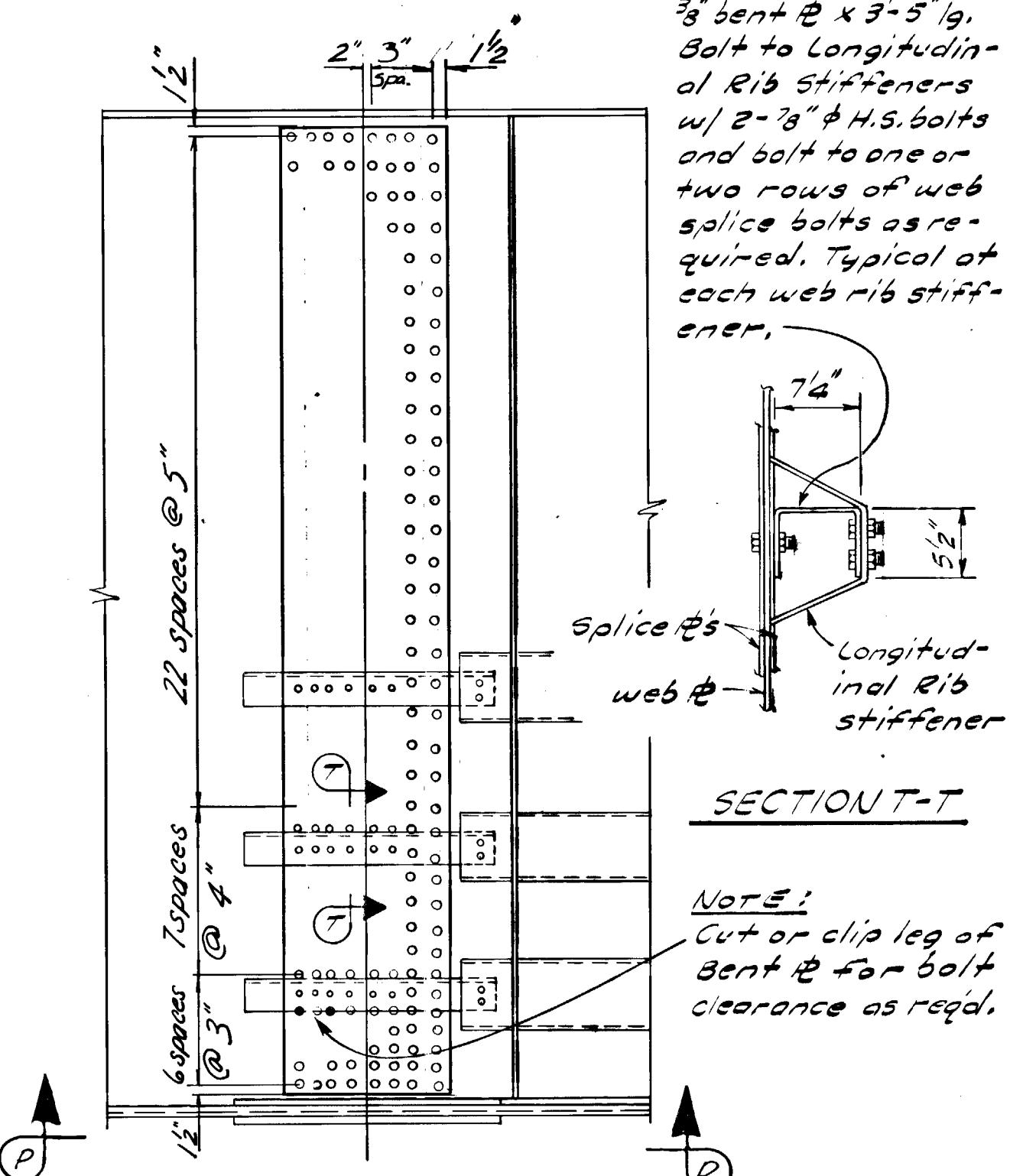
SECTION @ SPLICES



2 Roadway
(Sym m. About)



SECTION @ BOX GIRDER SPLICE

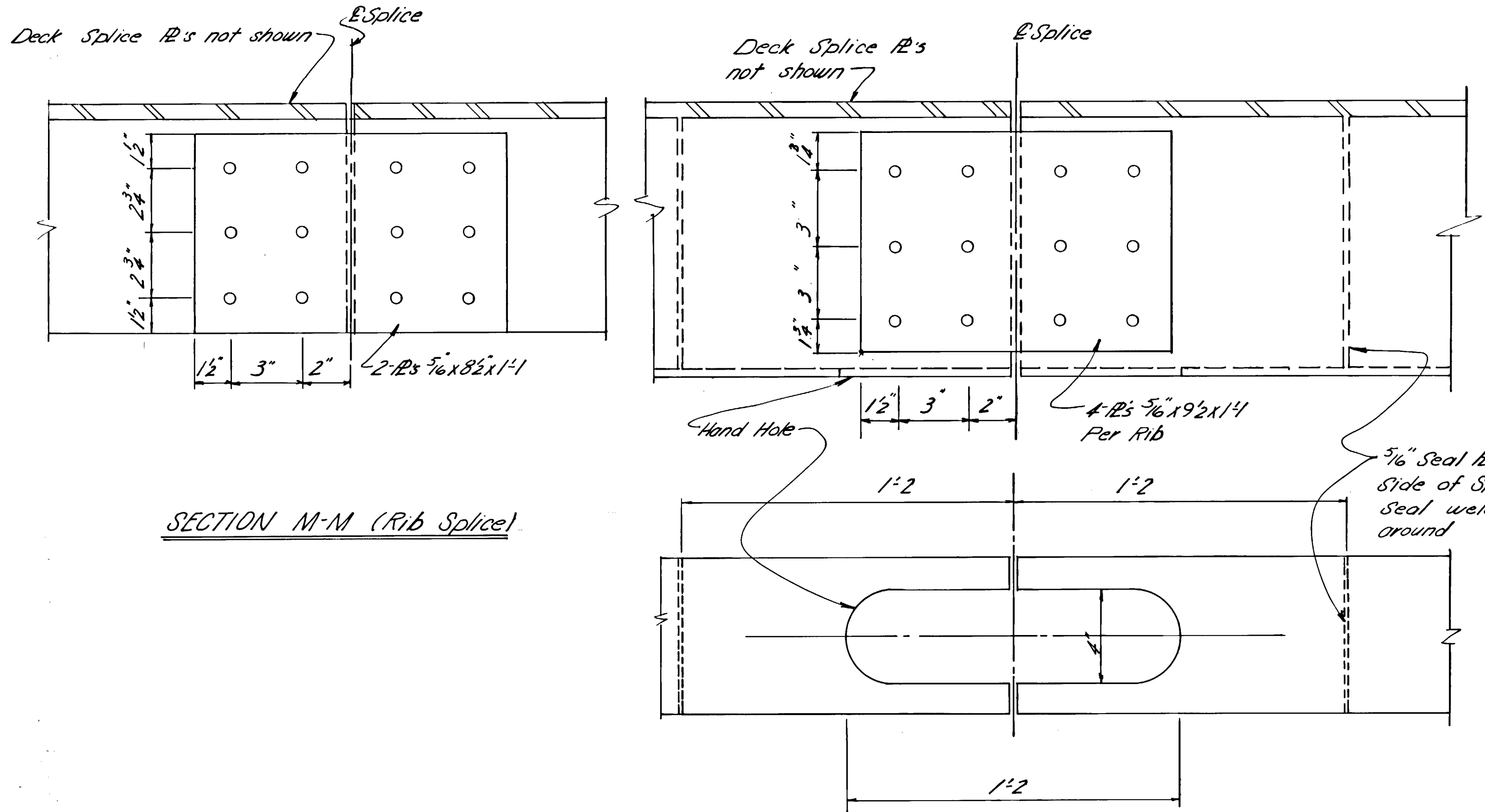


BOX GIRDER WEB SPLICE

3/8" bent @ x 3'-5" lg.
Bolt to Longitudinal Rib stiffeners w/ 2-3/8" H.S. bolts and bolt to one or two rows of web splice bolts as required. Typical at each web rib stiffener.

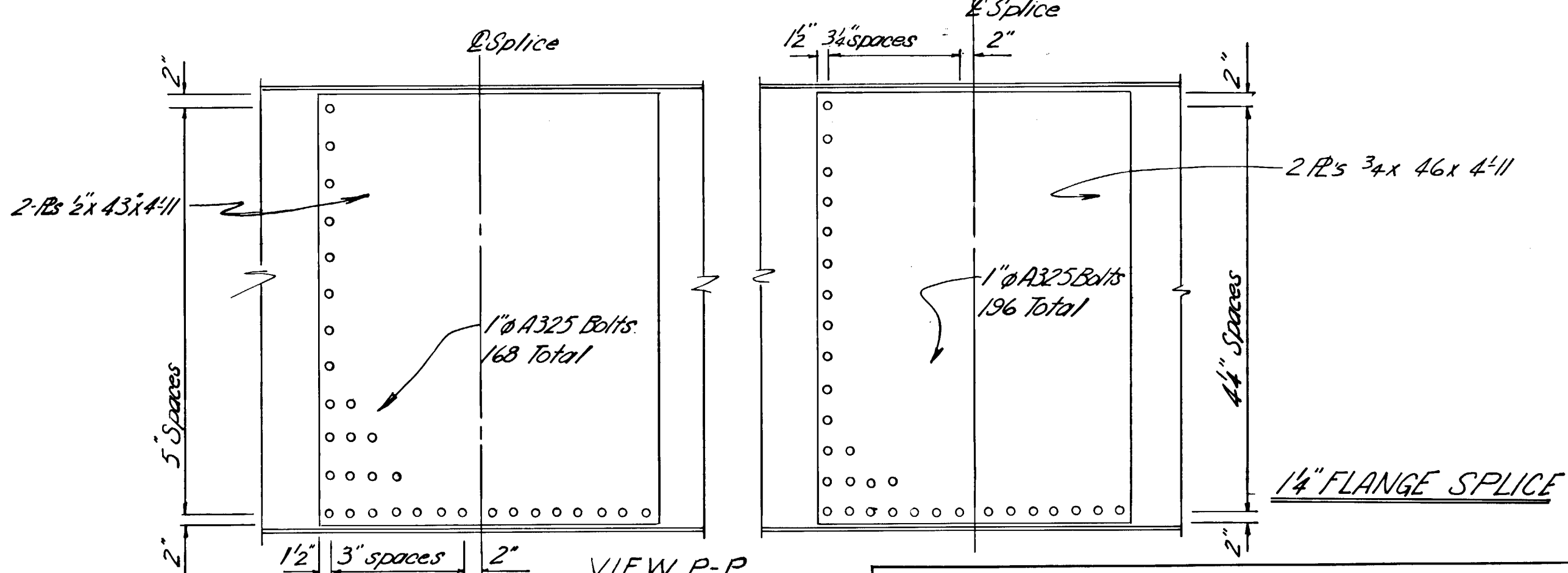
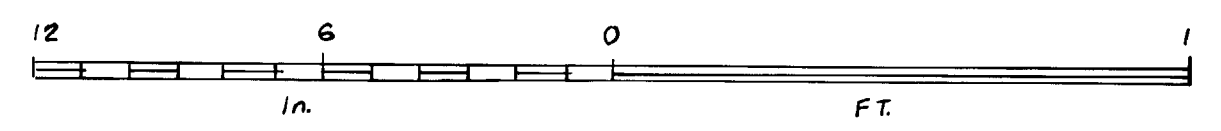
SECTION T-T

NOTE:
Cut or clip leg of bent @ for bolt clearance as reqd.



SECTION M-M (Rib Splice)

SECTION N-N (Rib Splice)



3/4" FLANGE SPLICE

BOX GIRDER SPLICE DETAILS

Note: Gap tolerance between sections at splices -0" to +1/4".

Note: All bolts 3/8" A325 except as noted.

YUKON RIVER BRIDGE
ROUTE NO. S-681

SPLICE DETAILS NO. 1

State of Alaska
DEPARTMENT OF HIGHWAYS
Juneau, Alaska

Date 12/1/73

Approved Karl Mierke

BRIDGE NO. 271
DWNG. NO. 2536

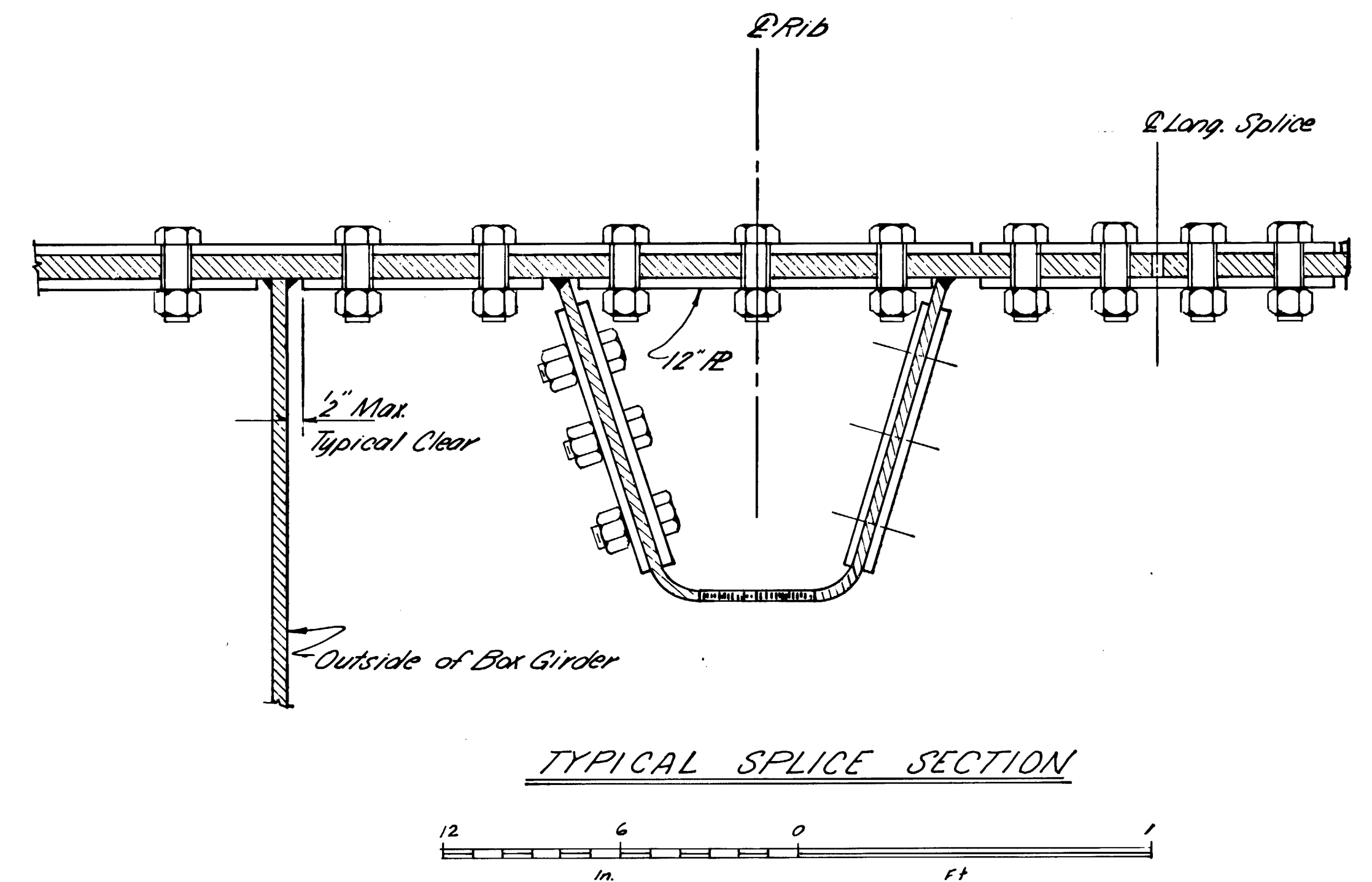
AS BUILT PLANS

Rod Platzke
Project Engineer
Date 3-6-74-6-24-76

CORRECTIONS TRANSFERRED

Tracings Kris Klemm Date 2-17-77

Checked H.O. Leslie Date 3-1-77



NOTE: Gap tolerance between Sections or Splice $\bar{R}_3$ at Splices -0 to +4". All bolts $\bar{B} \phi A325$. All bolts in $\bar{R}_3$ on deck $\bar{R}_3$ Heads Up.

AS BUILT PLANS

Rod Platzke Date 3-6-74 - 6-24-76
Project Engineer

CORRECTIONS TRANSFERRED

Tracings Kris Klemmetsen Date 2-17-77

Checked H.O. Leslie Date 3-1-77

YUKON RIVER BRIDGE
ROUTE NO. S-681

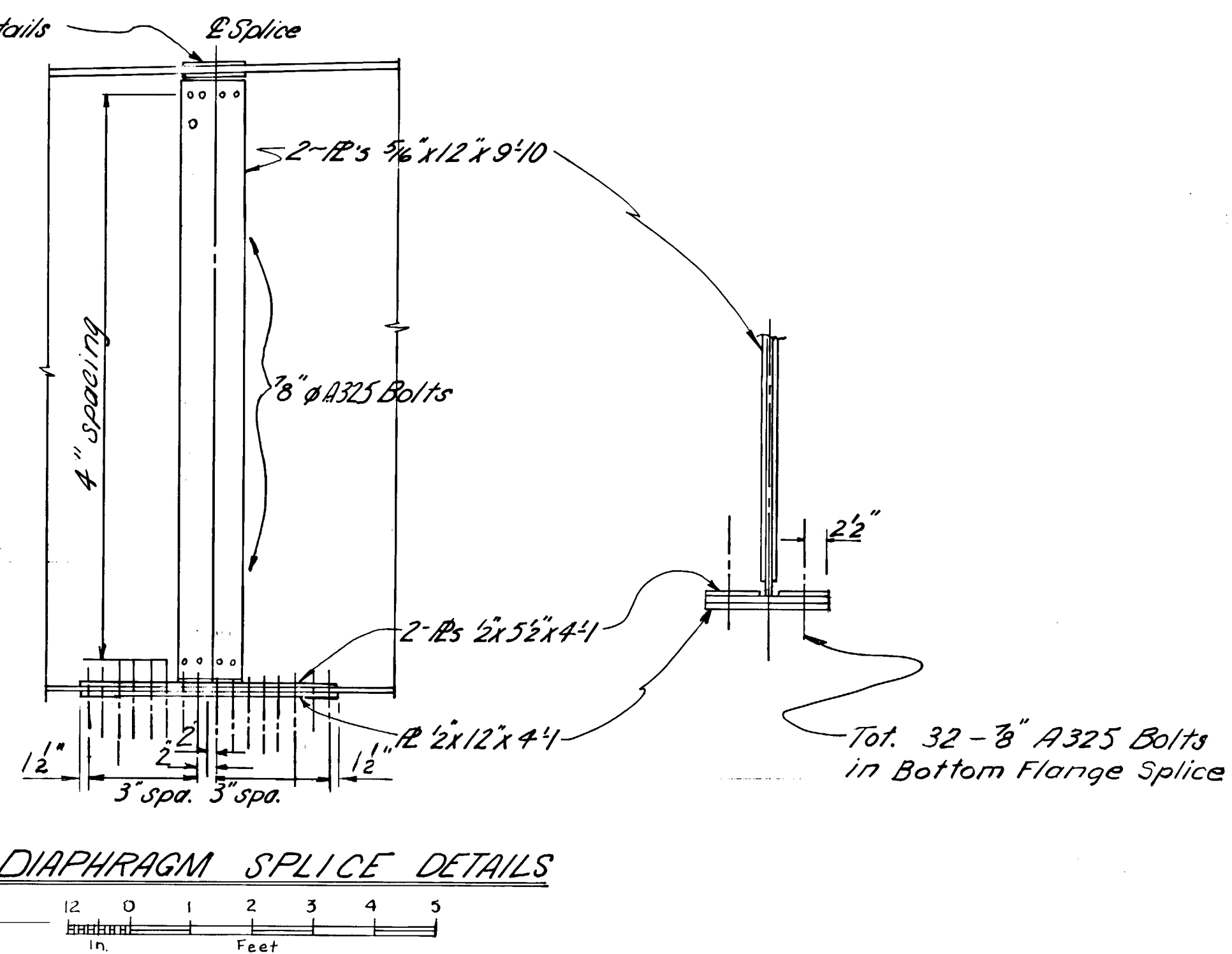
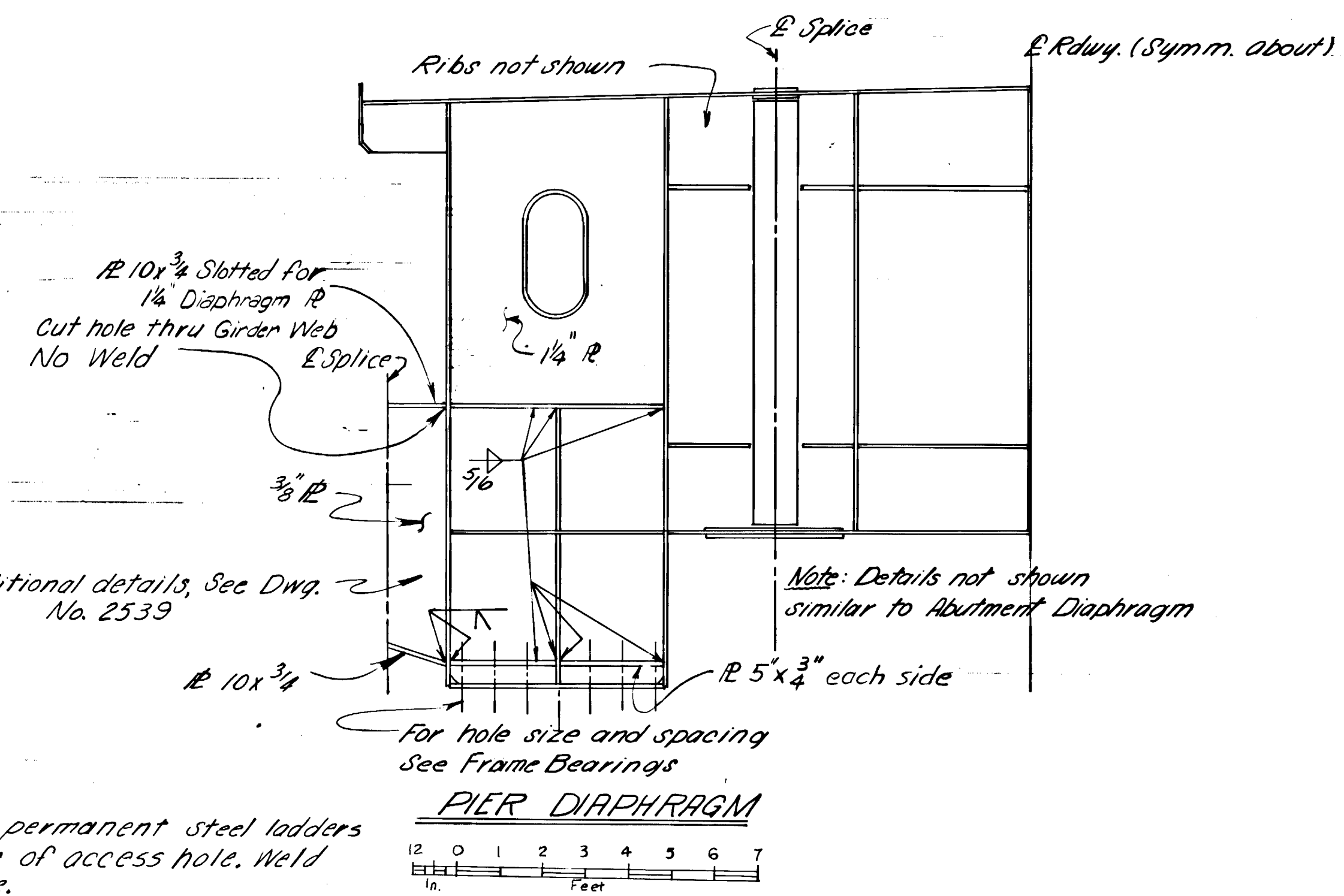
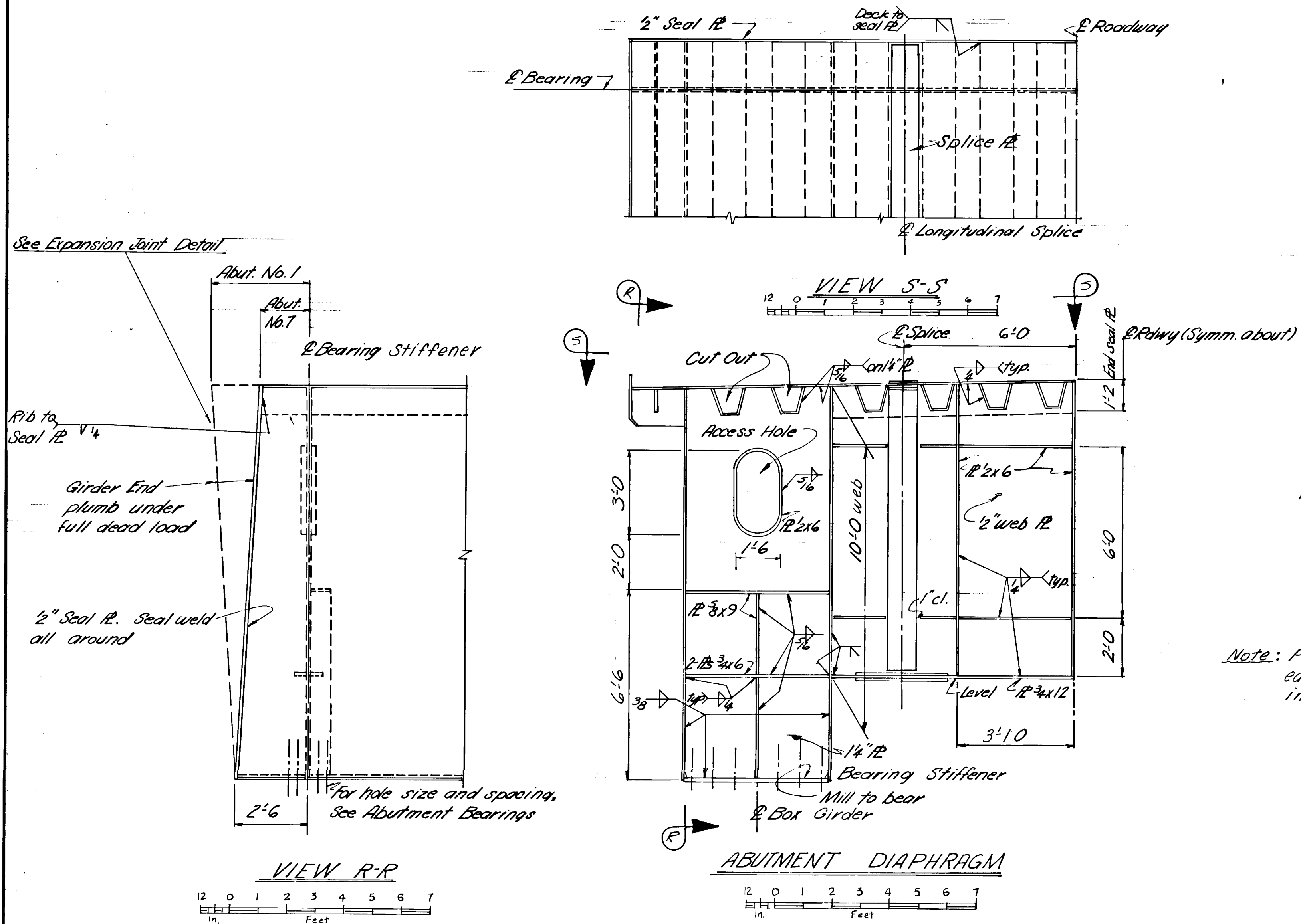
SPLICE DETAILS NO.2

State of Alaska
DEPARTMENT OF HIGHWAYS
Juneau, Alaska

Date 12/7/23
Approved Karl

BRIDGE NO. 271
DWNG. NO. 2537

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	R5-0681(3)	1973	20	30



AS BUILT PLANS

Project Engineer Rod Platzke Date 2-6-74-6-24-77

CORRECTIONS TRANSFERRED

Tracings Kris Klemm Date 2-17-77

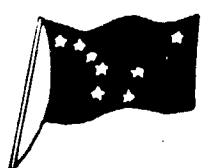
Checked H.O. Leslie Date 3-1-77

YUKON RIVER BRIDGE
ROUTE NO. S-681

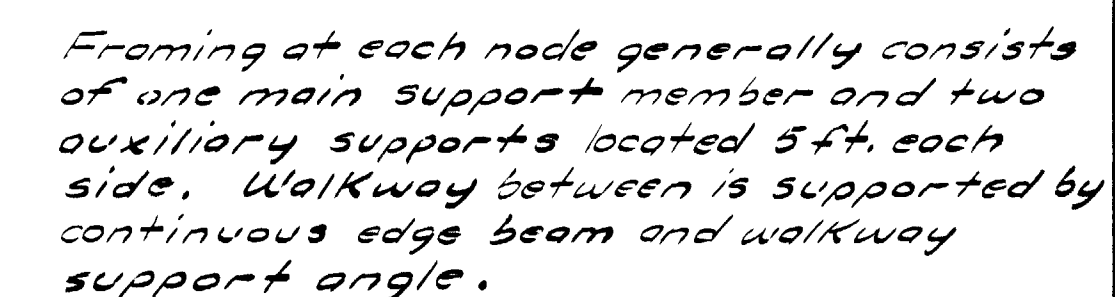
DIAPHRAGM DETAILS

State of Alaska
DEPARTMENT OF HIGHWAYS
Juneau, Alaska

Date 4/1/73
Approved Karl Platzke



BRIDGE NO. 271
DWNG. NO. 2538



Technical drawing of a diaphragm wall section. The drawing shows a vertical wall with a horizontal diaphragm. Key features and dimensions include:

- Diaphragm:** A horizontal section labeled "Diaphragm" with a thickness of $\frac{1}{2}$ " and is "Normal to Grade".
- Reinforcement:** Two reinforcement bars are shown, labeled "2 R's $\frac{3}{4}$ " x 5" (lea. side of diaphragm)".
- Dimensions:**
 - Overall height: 8'-8"
 - Overall width: 3'-0"
 - Diaphragm thickness: $\frac{1}{2}$ "
 - Reinforcement bar diameter: $\frac{3}{4}$ "
 - Reinforcement bar length: 5"
- Access Hole:** An oval-shaped access hole is shown, labeled "Access Hole. Same as Section A-A".
- Notes:**
 - "Cut thru Diaphragm for ribs. Weld same as floor beams."
 - "4-16" ϕ holes @ 4" ctrs. for $\frac{3}{8}$ " ϕ H.S. Bolts for Pipeline Seismic Stop Bumpers"
 - "strut. Omit at Piers and Abutments"
 - "2'-6" TYP."

Note: All Details not shown.

See Detail "A"
Dwg. No. 2541

L4x4x5/16

Transverse Stiffeners
Normal to Grade

Typical

W10x39

6'-6 3/4" to top

Note: All Details not shown.

Cut thru Diaphragm for ribs weld same as at floor beams.

1/2" Diaphragm Normal to Grade

*1/2" x 8" Slot for Diaphragm
Cut hole thru web
no weld*

W10x39

6'-6 3/4" to top

*See Detail "B"
Dwg. No. 2541*

Butt weld to Dia.

Slot Stiffener, Seal weld

Access Hole. Same as Sec. A-A

2R-1/2 x 4

SECTION C-C (Dwg. No. 2540)
Typical 5'0" each side of Node 48

AS BUILT PLANS

Rod. Platzeke Date 2-6-74 - 6-24-
Project Engineer

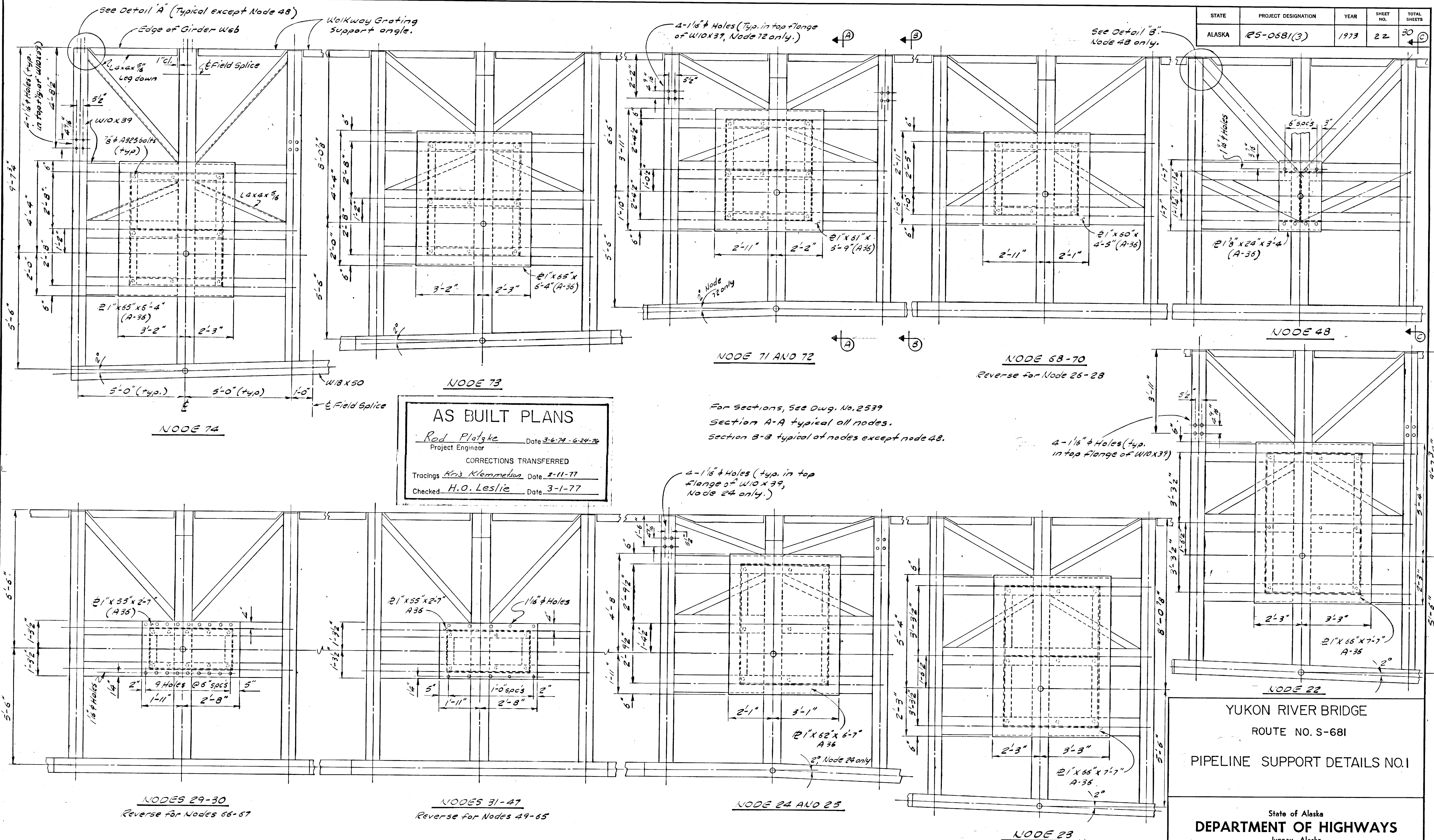
CORRECTIONS TRANSFERRED

Tracings Kris Klemmeflan Date 2-17-77
Checked H. O. Leslie Date 3-1-77

State of Alaska
DEPARTMENT OF HIGHWAYS
Juneau, Alaska

Date 12/7/73
Approved Karl T. [Signature]

BRIDGE NO. 271
DWNG. NO. 2539



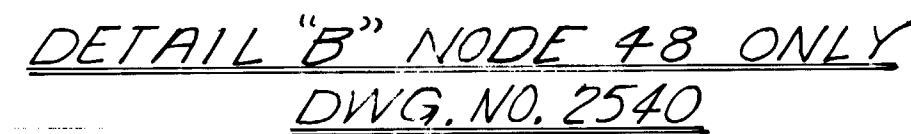
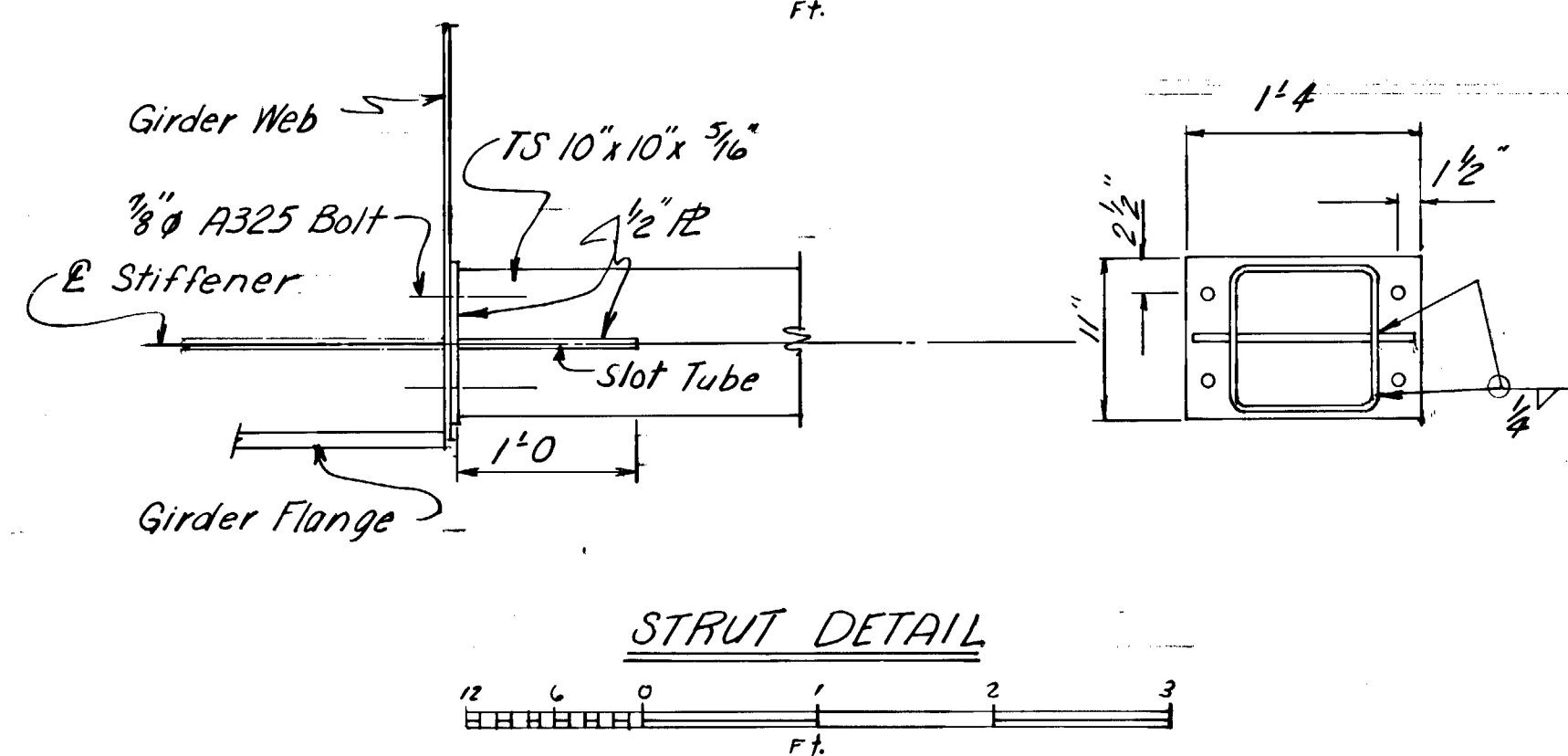
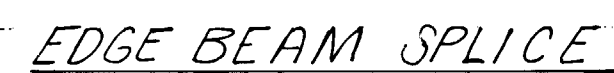
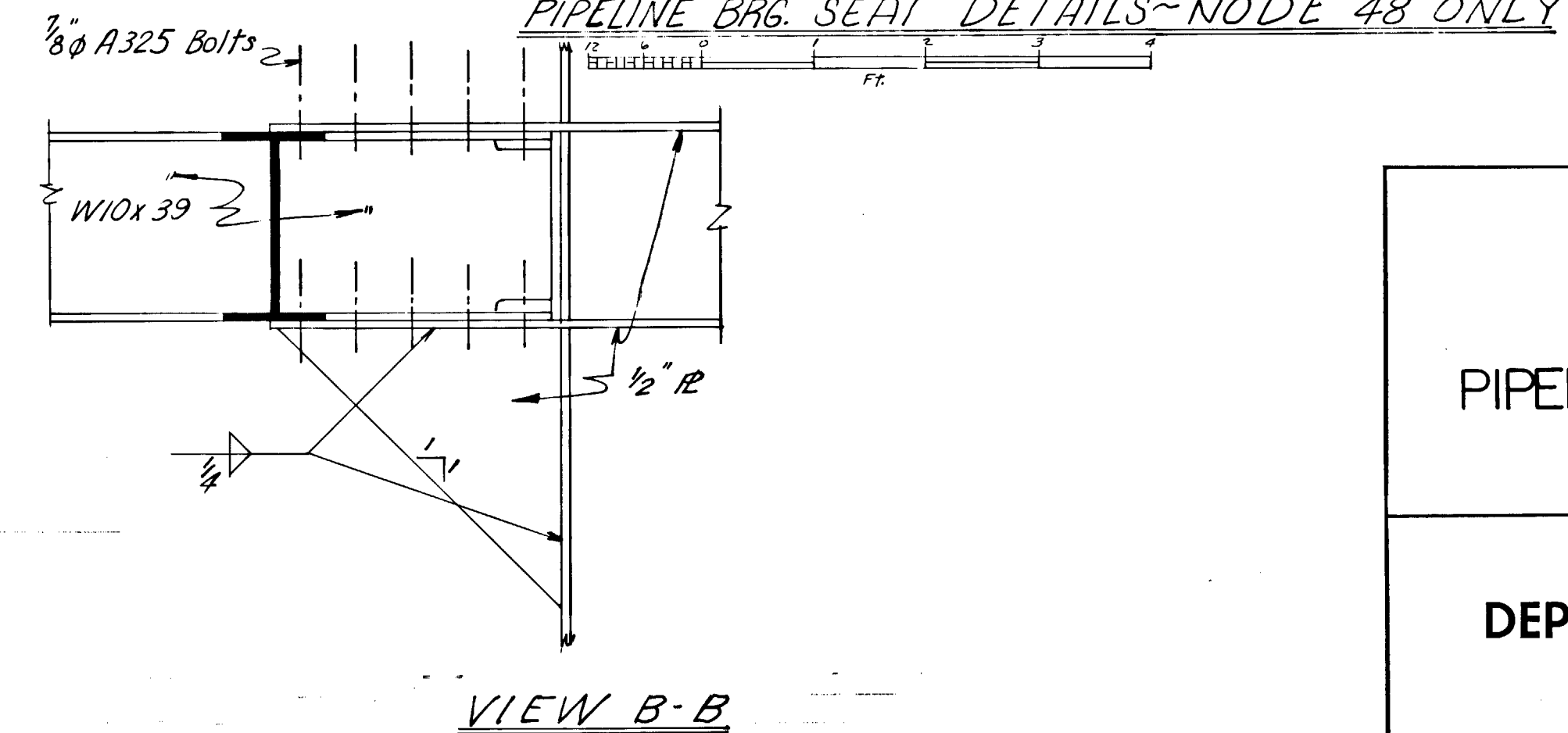
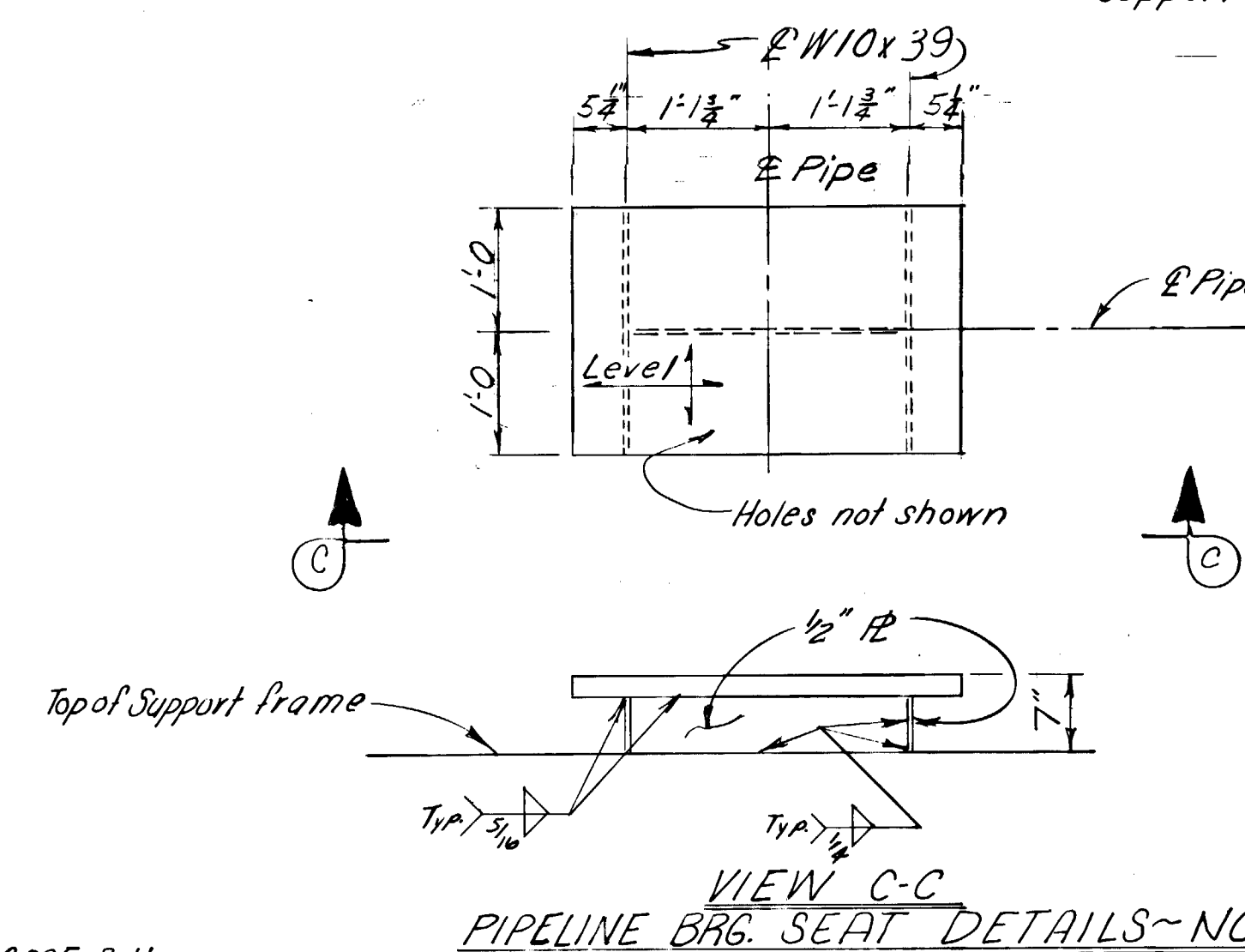
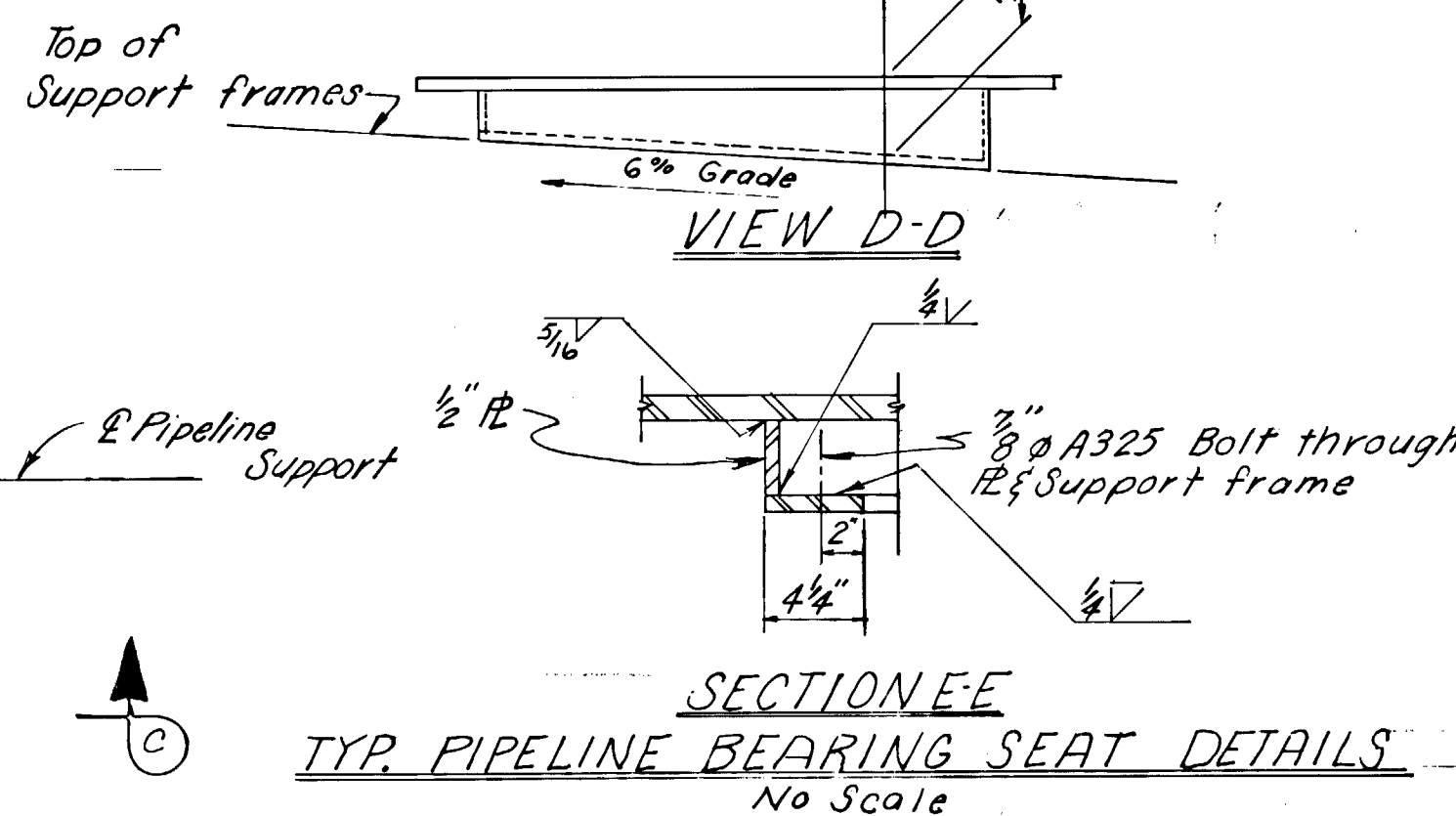
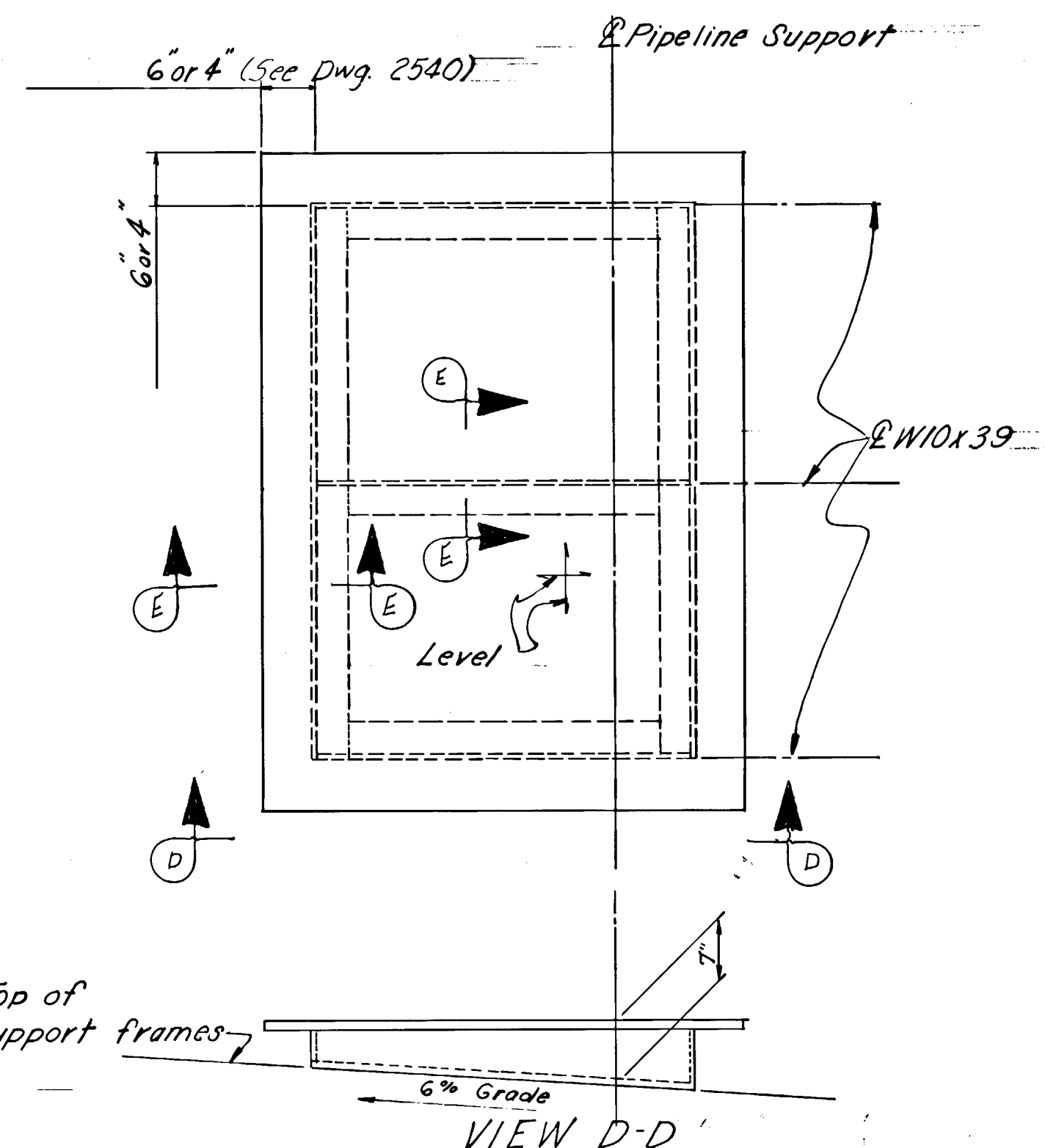
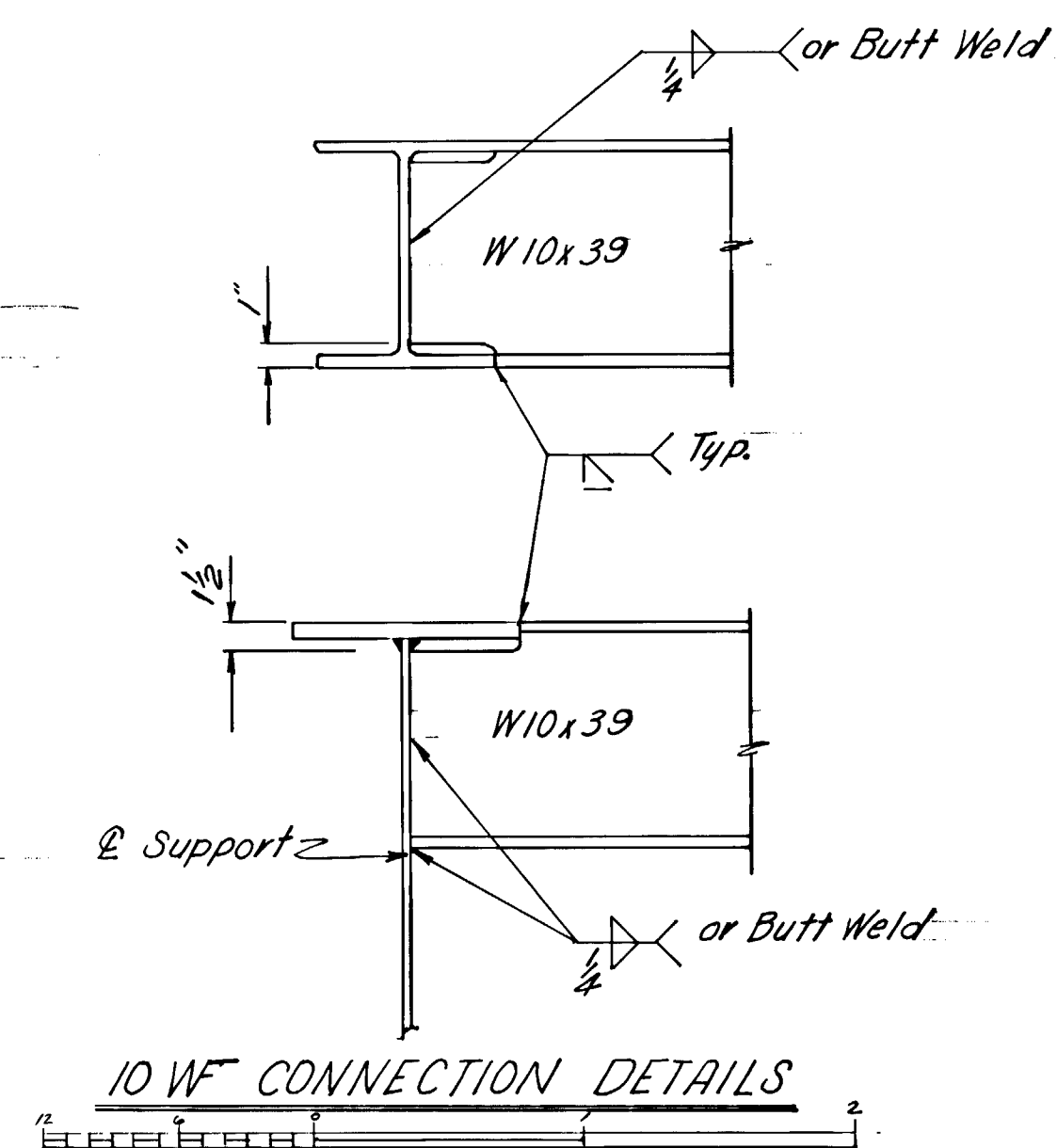
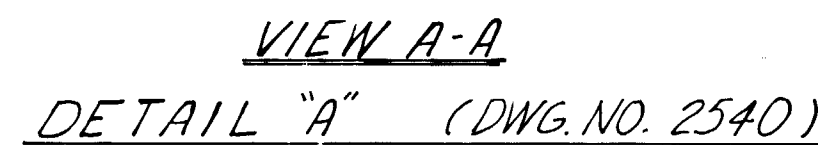
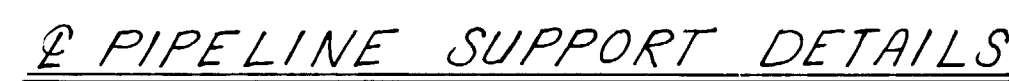
Note: Right side Roadway Support shown.
Reverse for left side.

YUKON RIVER BRIDGE
ROUTE NO. S-681
PIPELINE SUPPORT DETAILS NO.1

State of Alaska
DEPARTMENT OF HIGHWAYS
Juneau, Alaska

Date 12/7/73
Approved Karl N. Melick

BRIDGE NO. 271
DWNG. NO. 2540



AS BUILT PLANS

Rod Plotzke Date 8-6-77 - 6-24-78
Project Engineer

CORRECTIONS TRANSFERED

Tracings Kris Klemmeyer Date 2-17-77
Checked H. O. Leslie Date 3-1-77

YUKON RIVER BRIDGE
ROUTE NO. S-681

PIPELINE SUPPORT DETAILS NO. 2

State of Alaska
DEPARTMENT OF HIGHWAYS
Juneau, Alaska

Date 12/7/73
Approved Karl Nielsen

BRIDGE NO. 271
DWNG. NO. 2541

50- $3/8 \times 2 1/2 @ 13/8$ c-c
spacing, except 80- $3/8 \times 2 1/2$
@ $13/8$ c/c spacing where span
exceeds 12'-0".

Walkway grating, Galvanize after fabrication

3 Elec. Rigid Galv. Conduit - clamped @ 20'-0" w/ Reco #2059 (Galv.) Clamps or equal (by others)

1'-0"

3/8"

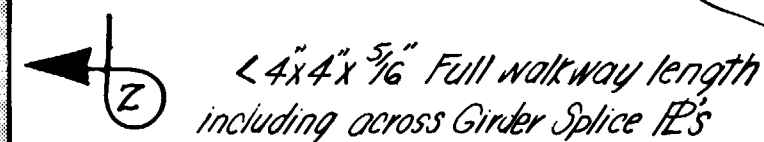
3 welds per panel width (Typical each end
and near Bearing Seats)

Girder Web

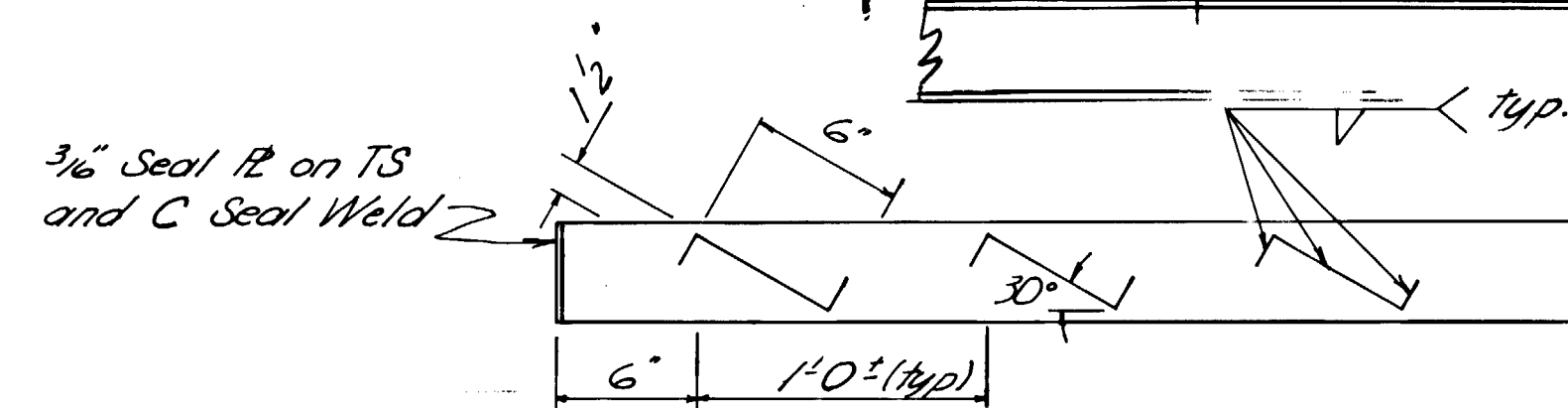
4" MAXIMUM SPACING

Bar $3/16 \times 1/2$

(2)



SECTION Z-Z

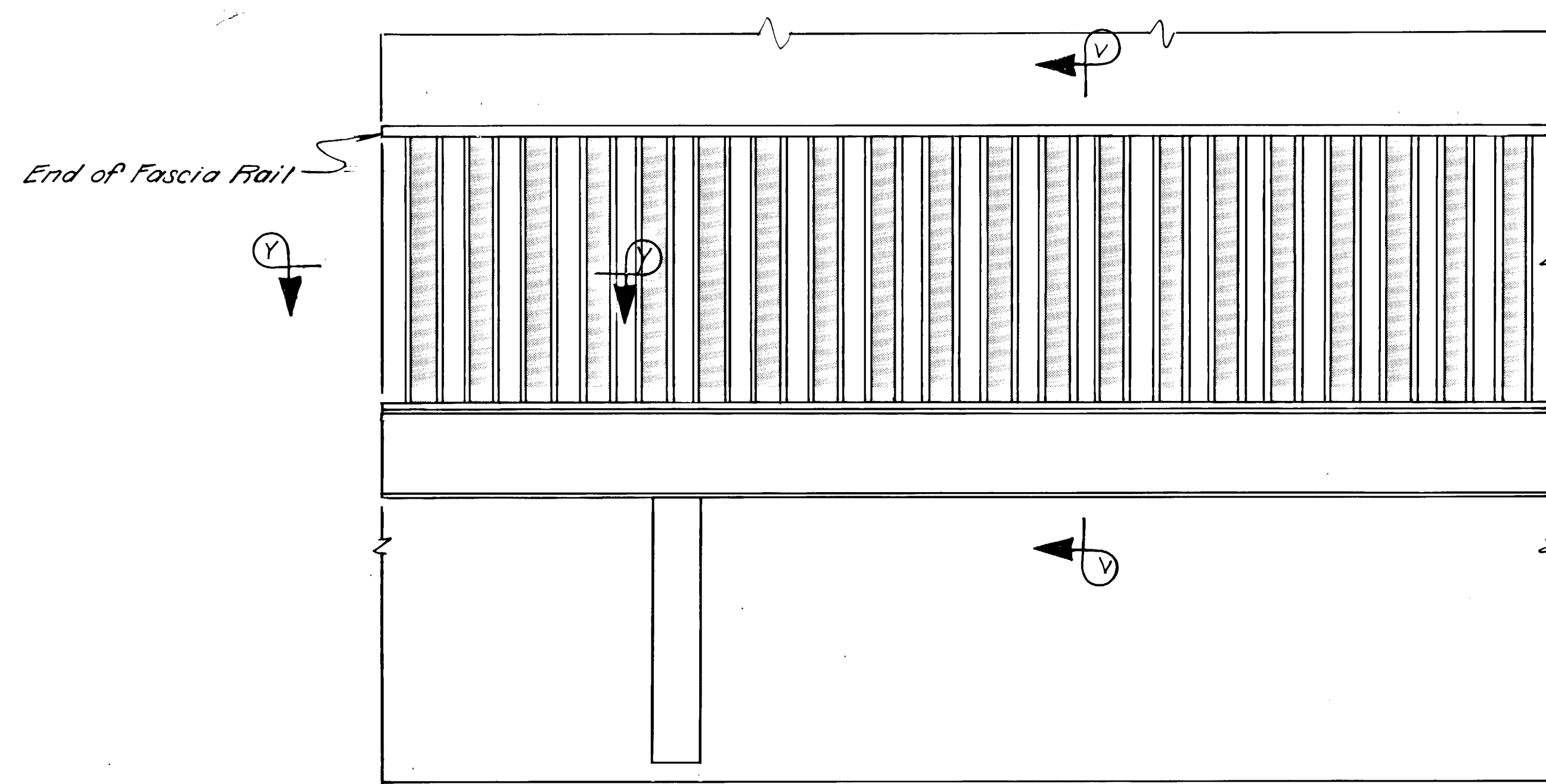


SECTION Y-Y

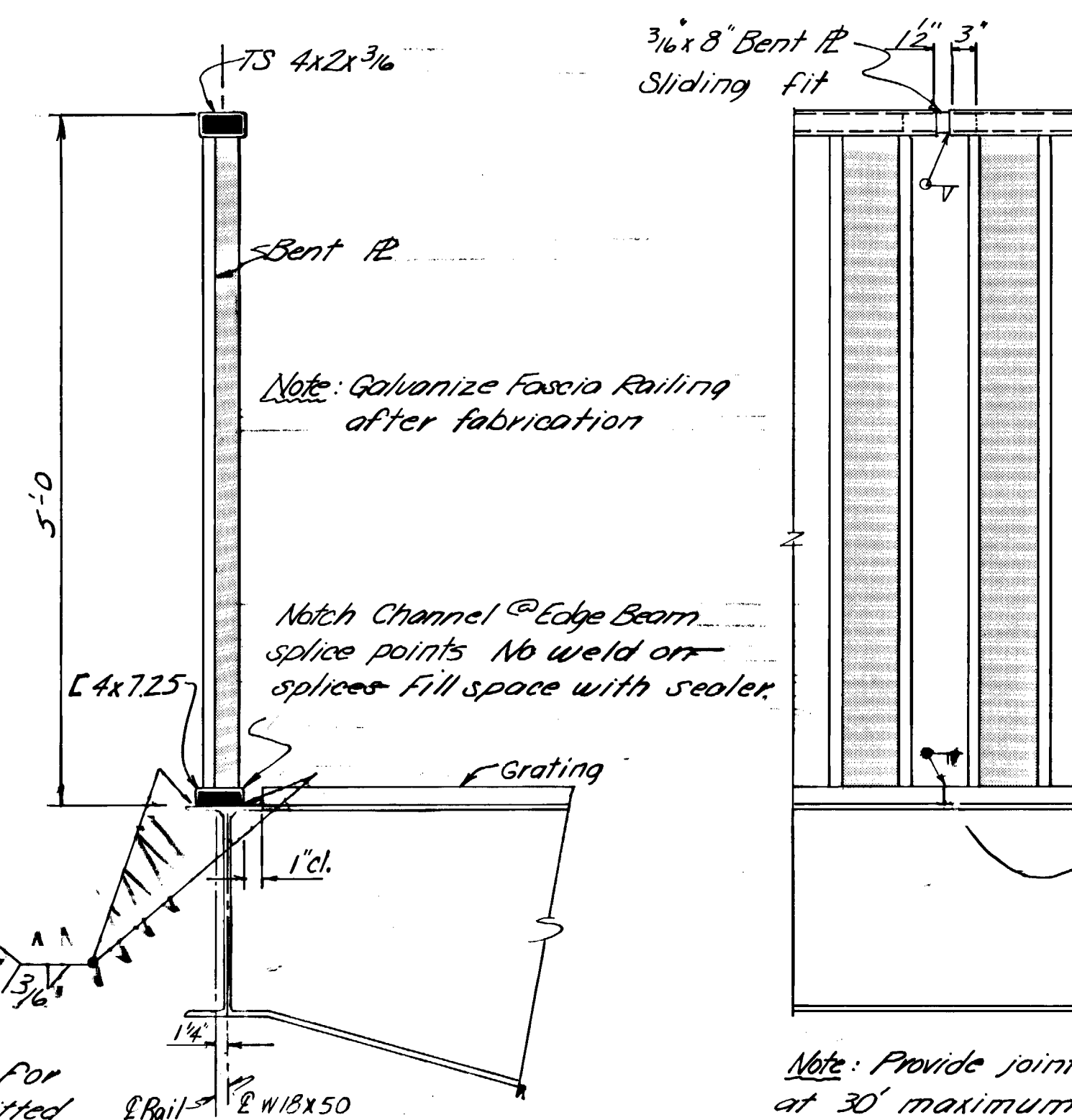
FASCIA RAIL BOLT CONNECTION

Note: Position 10 ga. R's so that view of pipe as seen from abutments is obscured. Change direction at E Pier No 4

7-7-75



FASCIA RAILING ELEVATION



SECTION V-

$3/16 \times 8$ " Bent π Sliding fit $1/2"$ $3/4"$

NOTE: Sealer shall be Resilient Exterior caulk, capable of bonding to steel.

AS BUILT PLANS

Rod Plotzke Date 3-6-74 - 6-24-76
Project Engineer

CORRECTIONS TRANSFERED

Tracings Kris Klemmetsen Date 2-17-77

Checked H.O. Leslie Date 3-1-77

No Scale

YUKON RIVER BRIDGE

ROUTE NO. S-681

PIPELINE SUPPORT DETAILS NO.3

State of Alaska
DEPARTMENT OF HIGHWAYS
Juneau, Alaska

Date 12/7/13
Approved Karl T

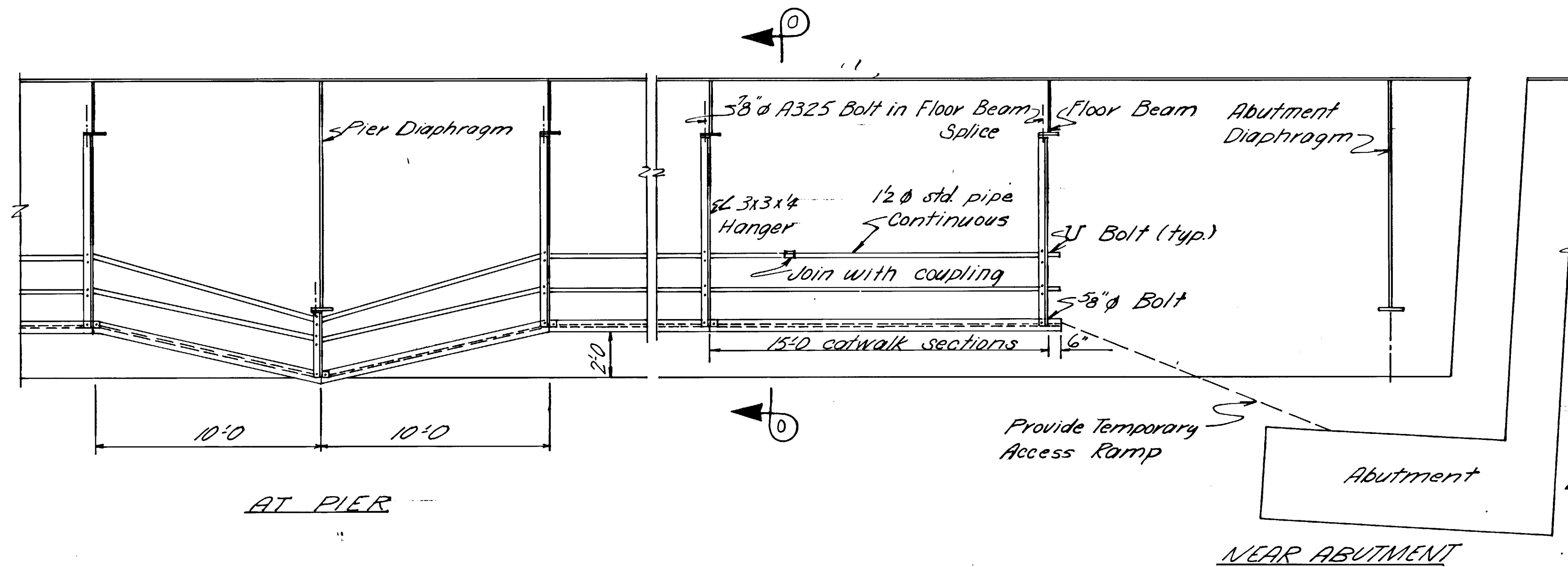
BRIDGE NO. 271
DOWNG. NO. 2542

NOTE: ~~Alternative Weld or Bolt Details For~~
Rail/Field Connection may be submitted
for approval. SEALER APPLIED AT LIPS OF ____
CHANNEL.

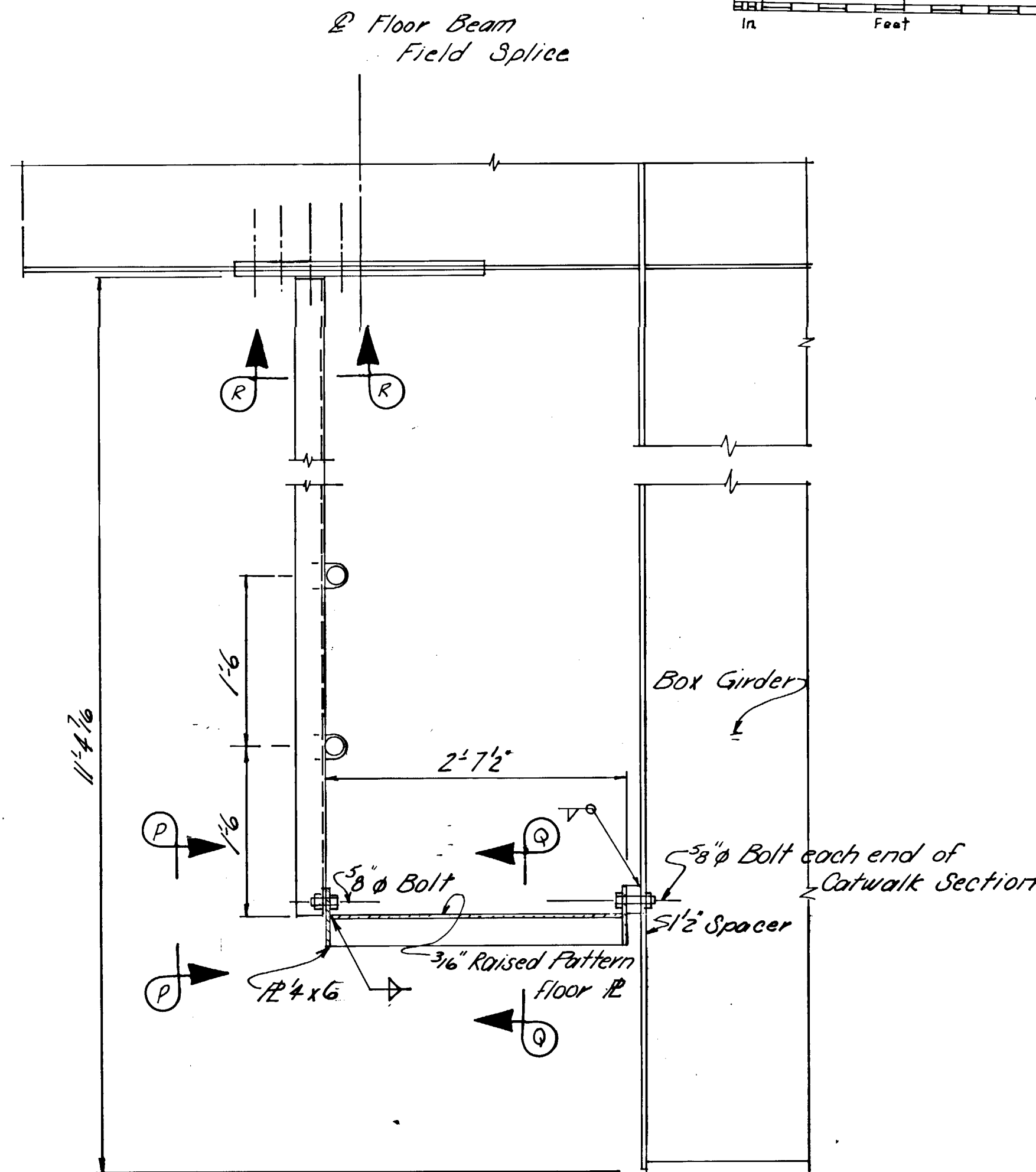
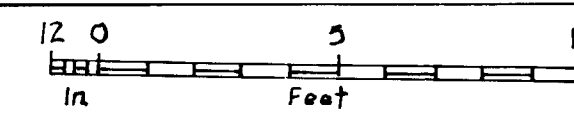
Note: Provide joint in Fascia Railing
at 30' maximum spacing

RAILING JOINT DETAIL

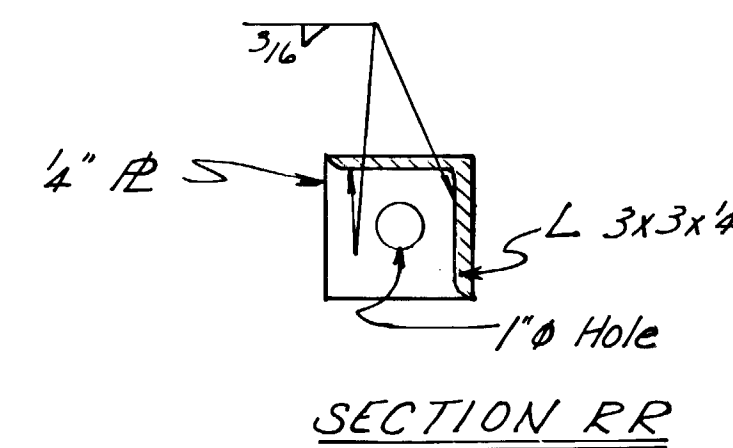
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	R3-0681(3)	1973	25	30



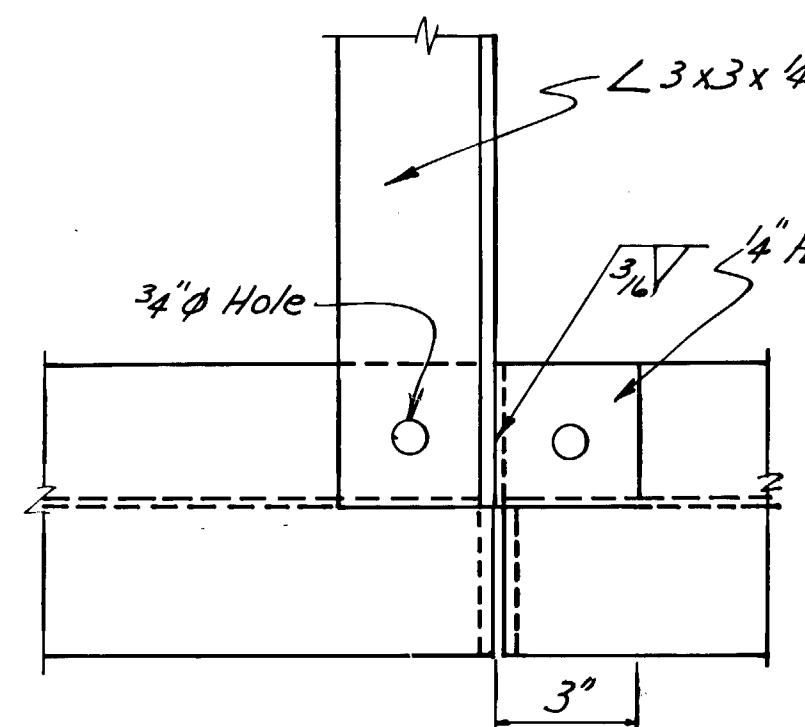
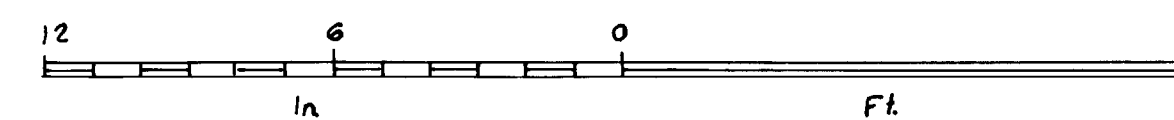
CATWALK ELEVATION



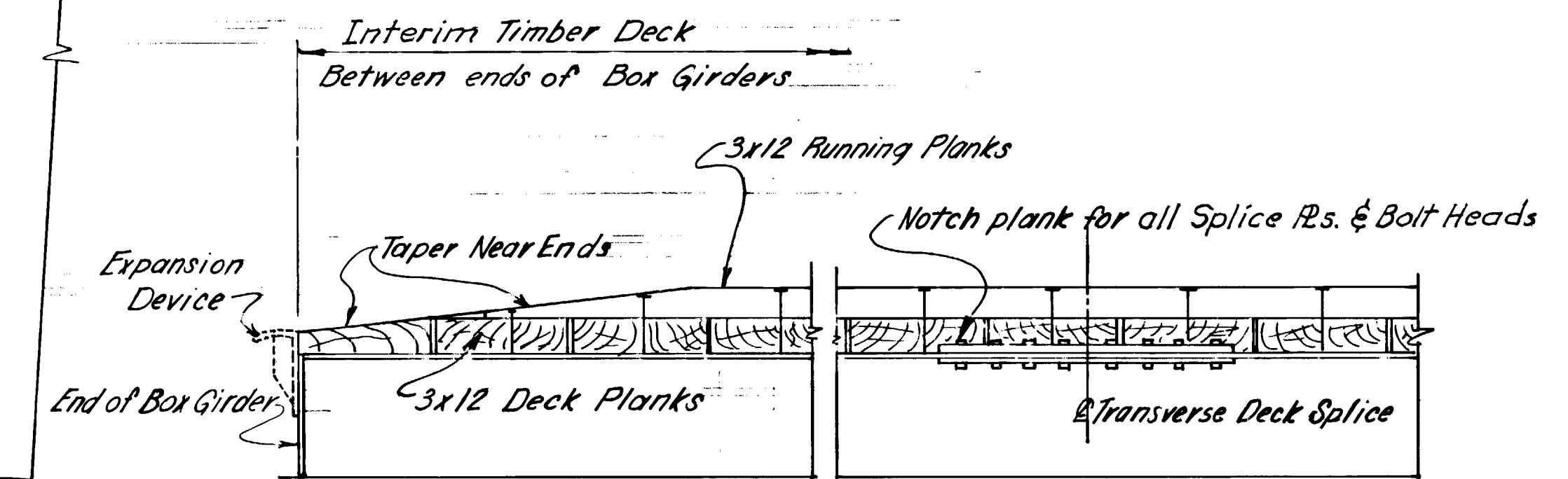
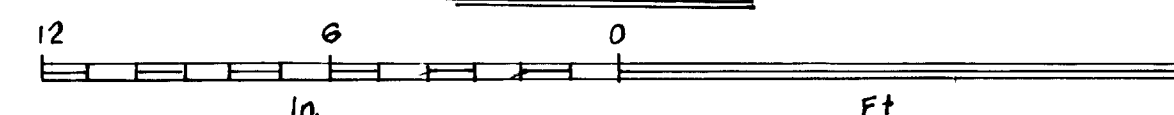
SECTION O-O



SECTION R-R

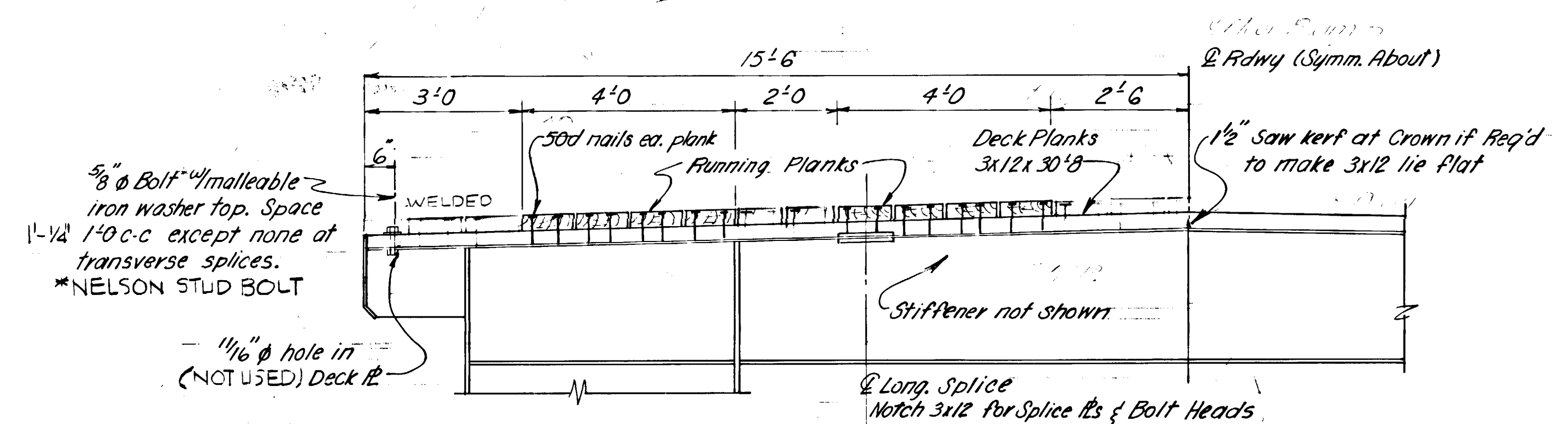


VIEW P-P



DECK

NOTE: 3x12 PLANKS ARE SIS (SURFACED 1 SIDE)
ACTUAL MEASUREMENTS ARE 2 1/2" x 12"



TRANSVERSE DECK SECTION

INTERIM TIMBER DECK DETAILS

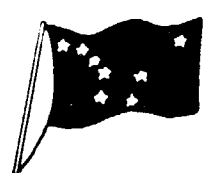
NO SCALE

YUKON RIVER BRIDGE
ROUTE NO. S-681

MISCELLANEOUS DETAILS

State of Alaska
DEPARTMENT OF HIGHWAYS
Juneau, Alaska

Date 12/7/73
Approved Karl 71



BRIDGE NO. 271
DWNG. NO. 2543

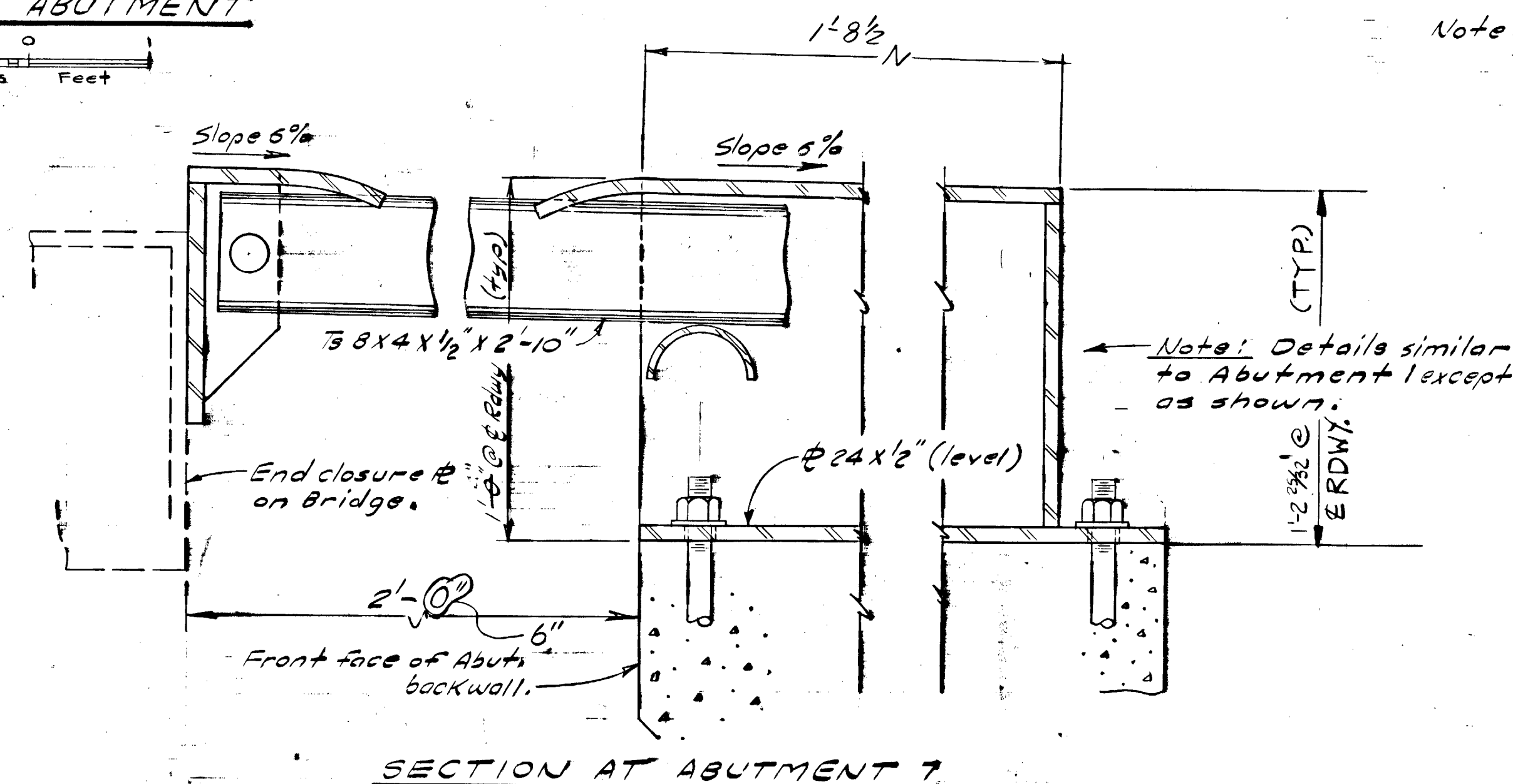
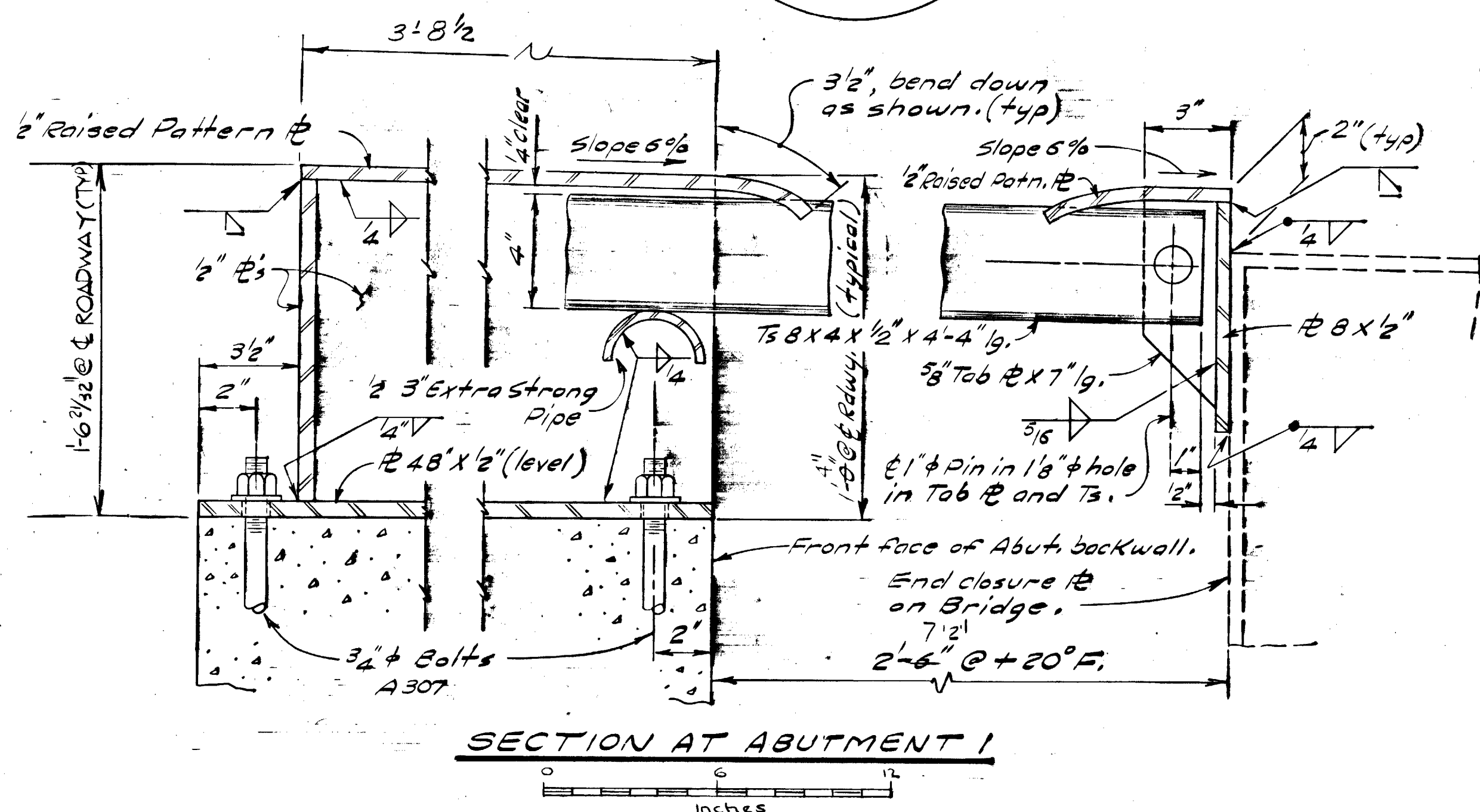
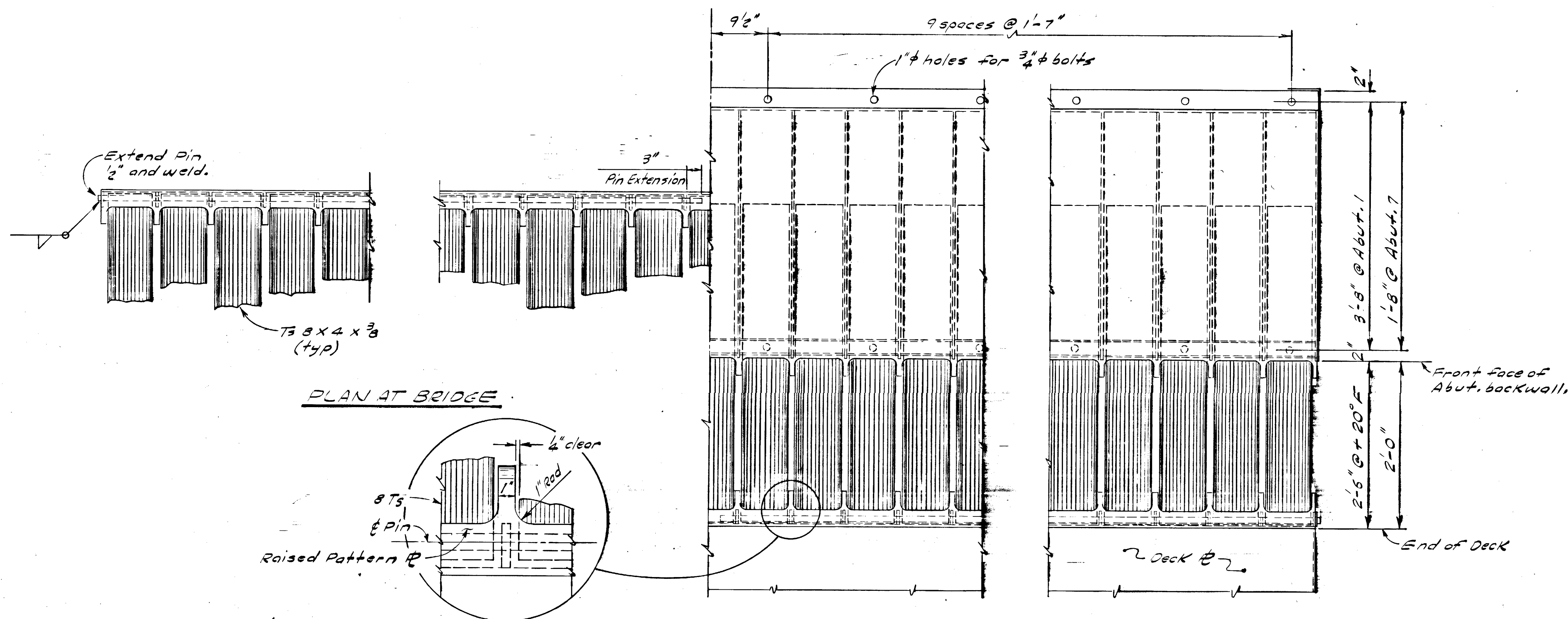
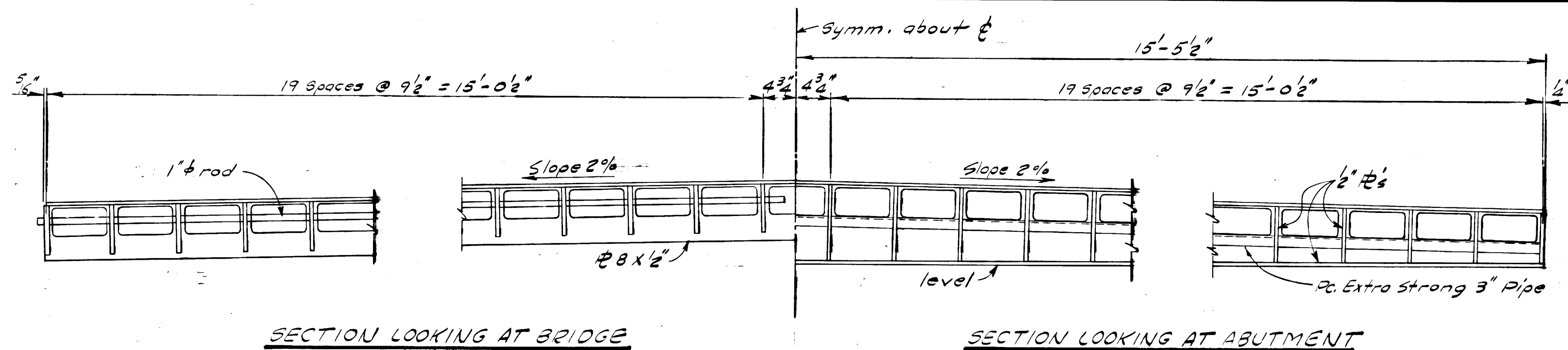
AS BUILT PLANS

Red Plotzke Date 3-6-74 - 6-22-76
Project Engineer

CORRECTIONS TRANSFERRED

Tracings Kris Klemme Date 2-17-77

Checked H.O. Leslie Date 3-1-77



AS BUILT PLANS

Red Platzke Date 3-6-74-6-24-76
Project Engineer

CORRECTIONS TRANSFERED

Tracings Kris Klemmerson Date 2-18-77
Checked H.O. Leslie Date 3-1-77

Note: All structural steel this Drawing
to be A-36 or equal.
Galvanize after fabrication.

← Note: Details similar to Abutment except as shown:

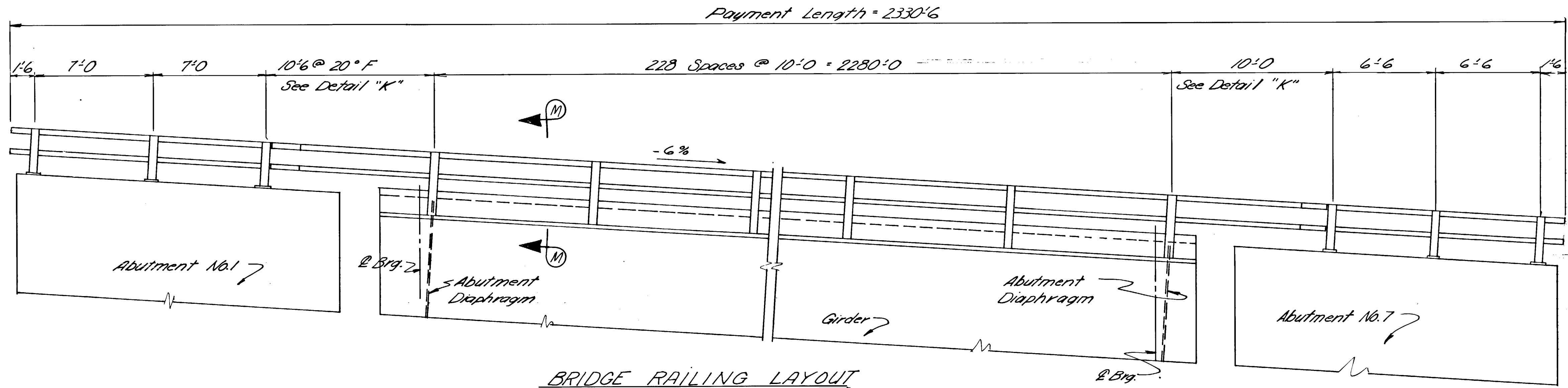
YUKON RIVER BRIDGE
ROUTE S-681
EXPANSION DEVICE

State of Alaska
DEPARTMENT OF HIGHWAYS
Juneau, Alaska

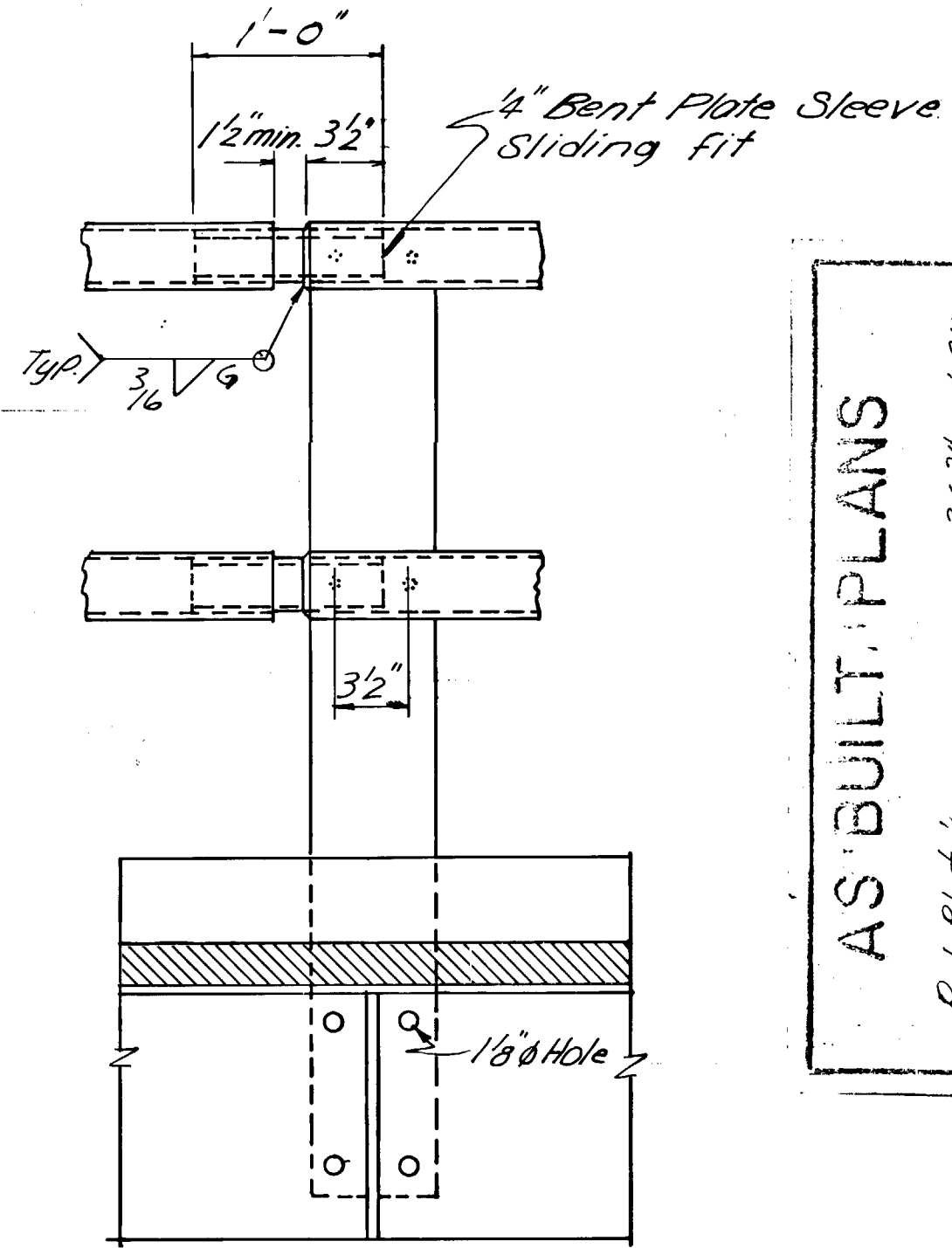
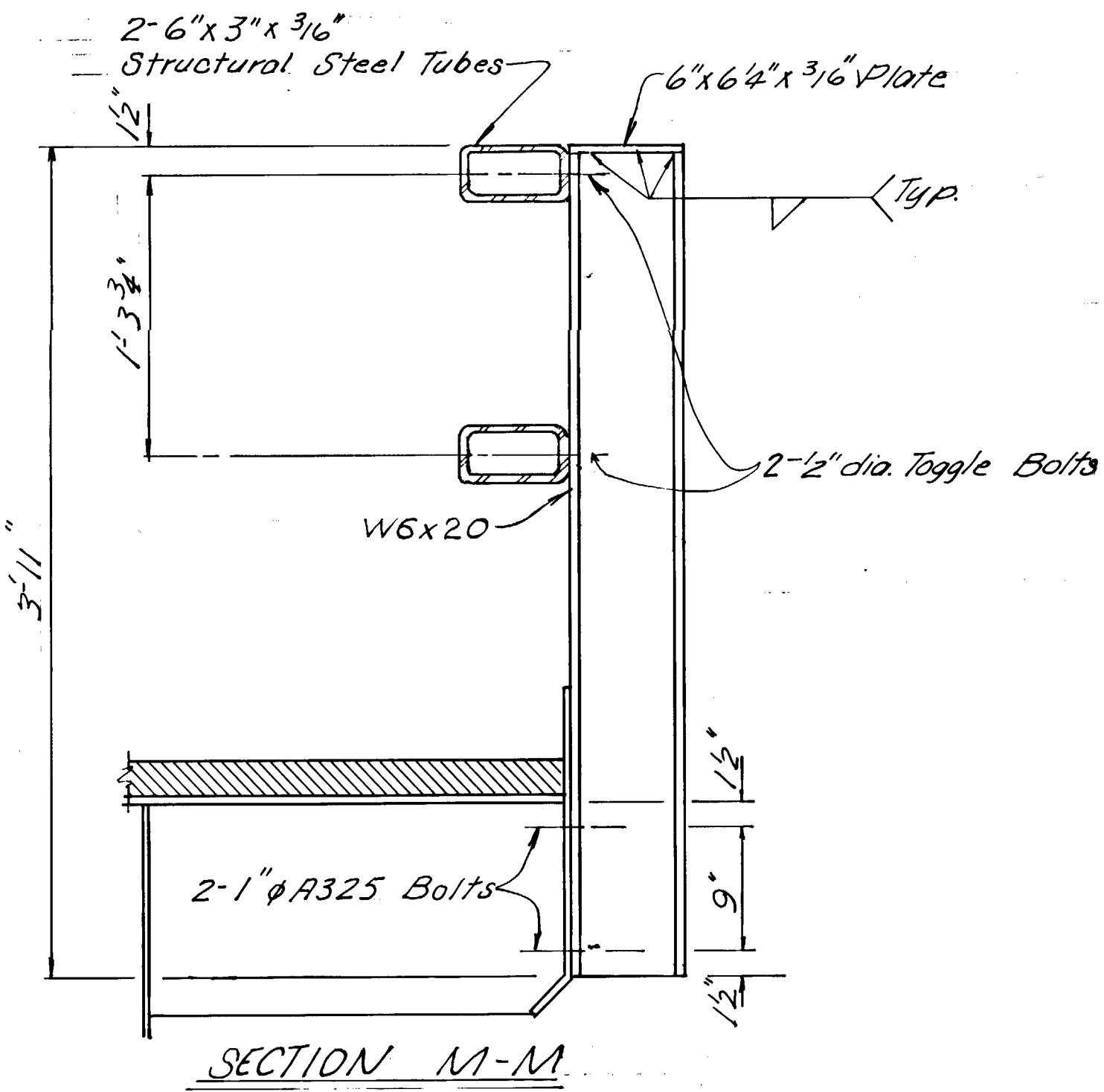
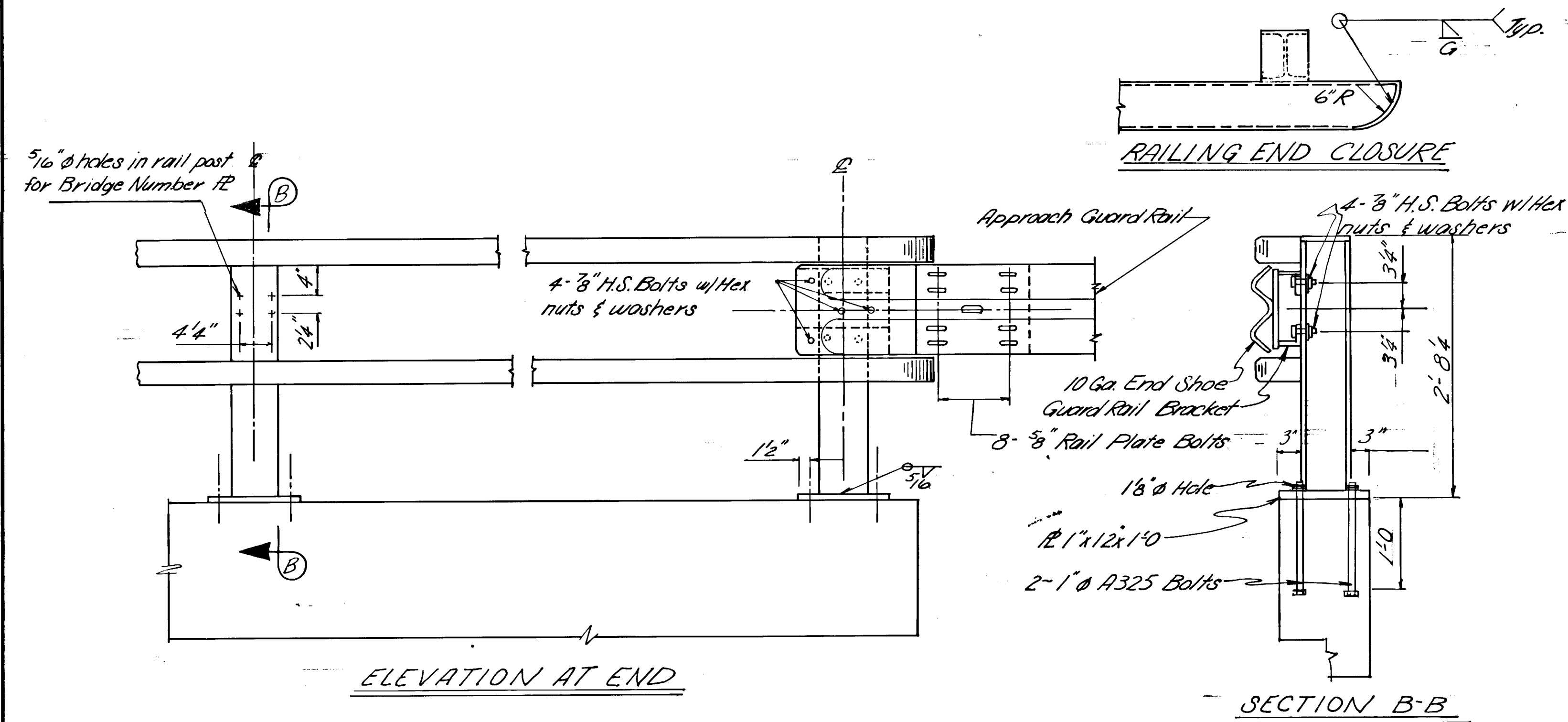
Date 12/7/73
Approved Karl Mielke

BRIDGE NO. 271
DWNG. NO. 2544

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS-0681(3)	1973	27	30



- Notes
1. All railing, posts, anchor assemblies and other steel components shall be galvanized after fabrication. Galvanized steel shims shall be furnished by the contractor as required.
 2. Locate bridge number plate on right side of roadway at each end of bridge as shown.
 3. Bridge number plate to be furnished by the State
 4. Increase gap in railing expansion joint to match deck joint opening. (See Detail "K")
 5. All bolts shall have locking nuts or lock washers.
 6. Railing Expansion Joints must be provided at 30' maximum intervals throughout the Railing.
 7. Railing Expansion Joints shall be adjacent to a Rail Post.



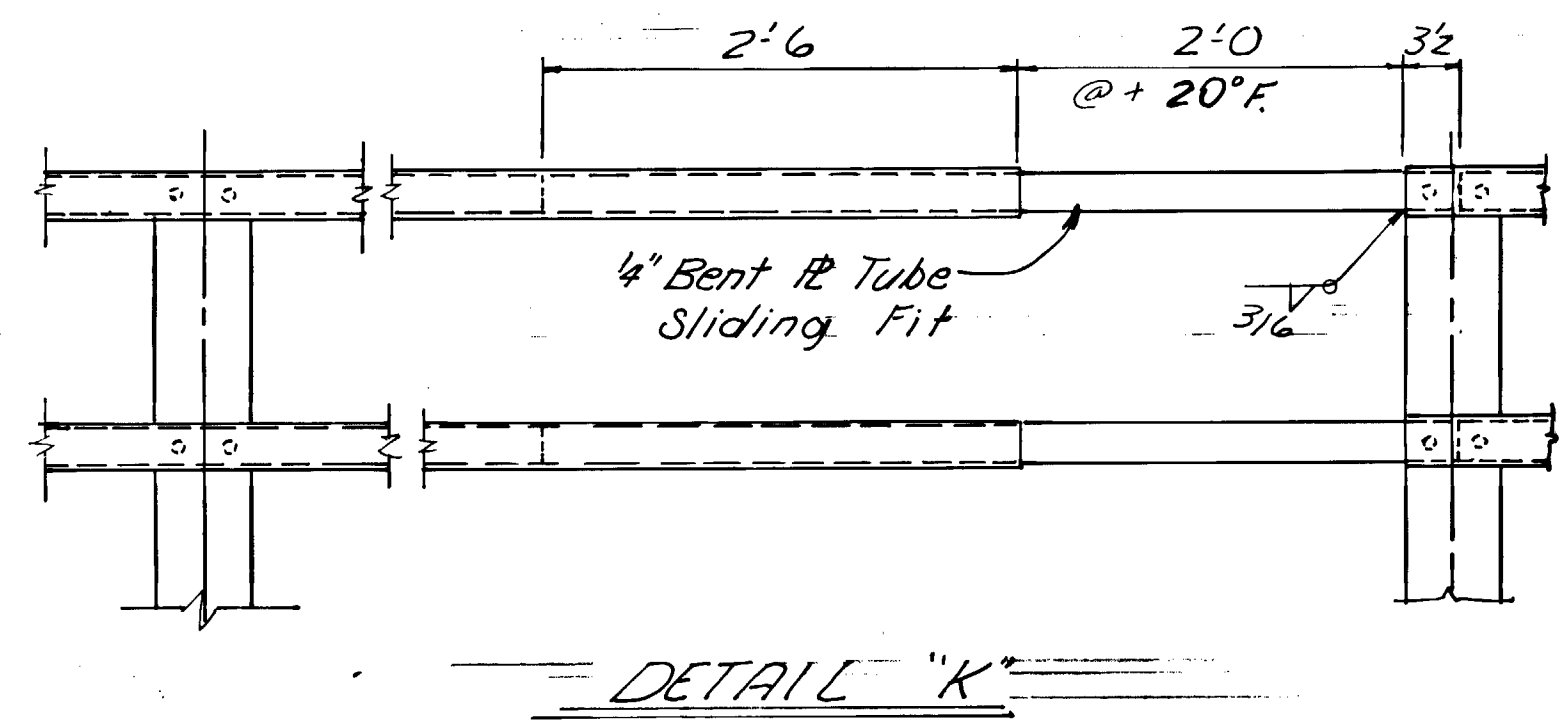
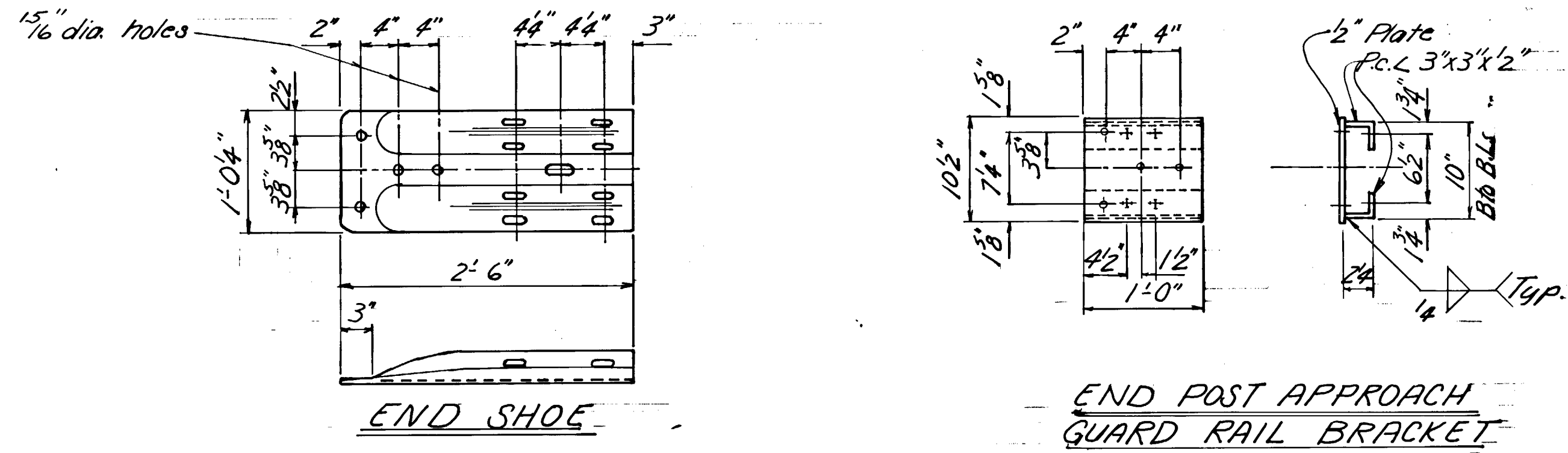
AS BUILT PLANS

Red Platyk Project Engineer Date 3-6-74 - 6-24-77

CORRECTIONS TRANSFERRED

Tracings Miss Klemme Date 2-18-77

Checked H.O. Leslie Date 3-1-77



YUKON RIVER BRIDGE

ROUTE NO. S-681

BRIDGE RAILING

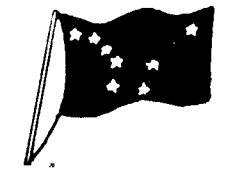
State of Alaska

DEPARTMENT OF HIGHWAYS

Juneau, Alaska

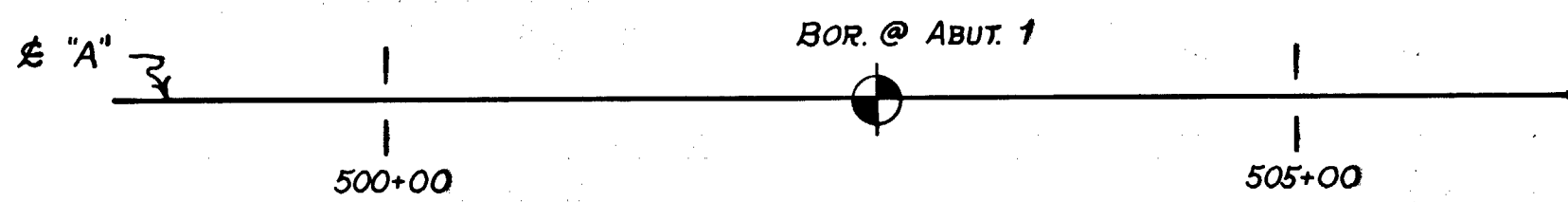
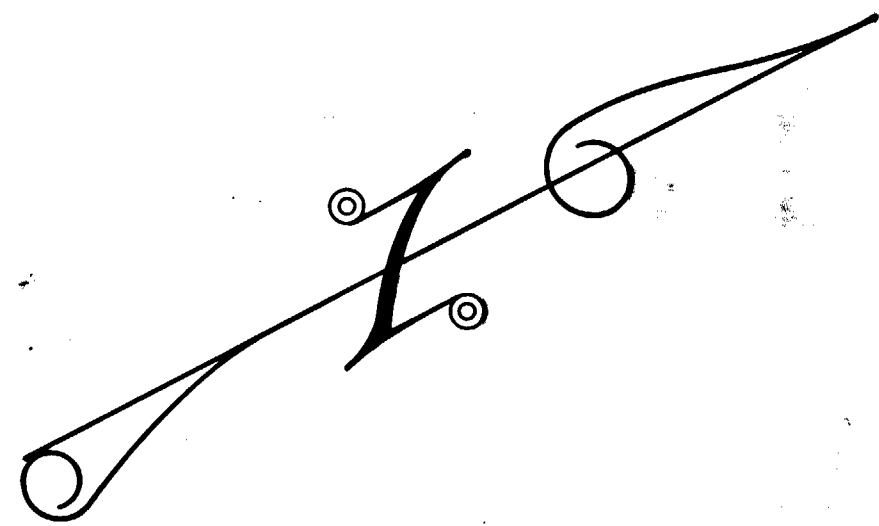
Date 12/3/73

Approved [Signature]



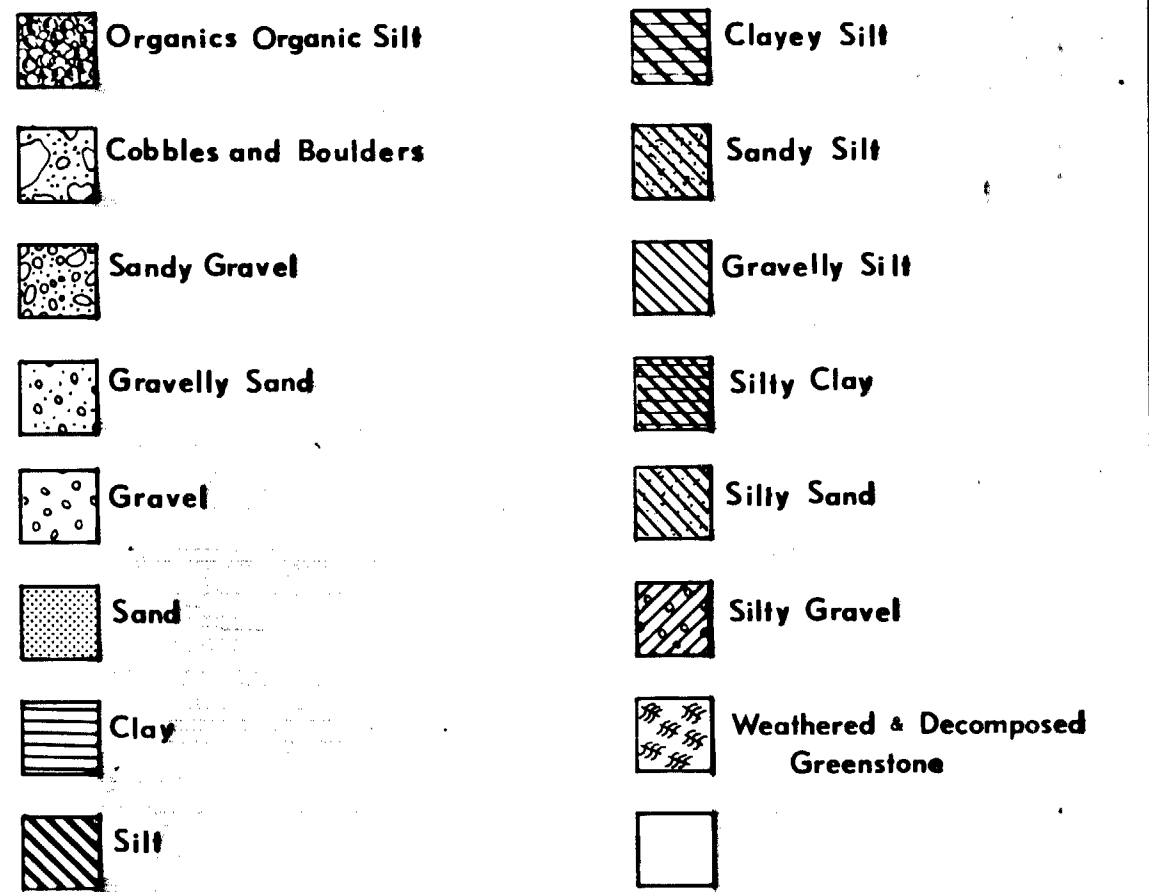
BRIDGE NO. 271

DWG. NO. 2545

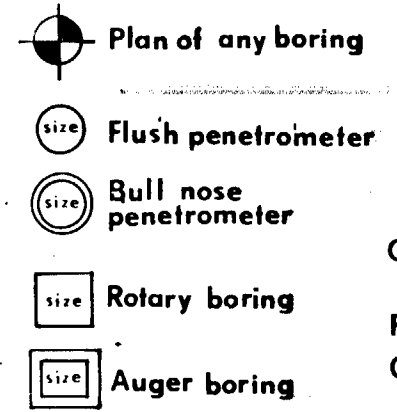


FLOW

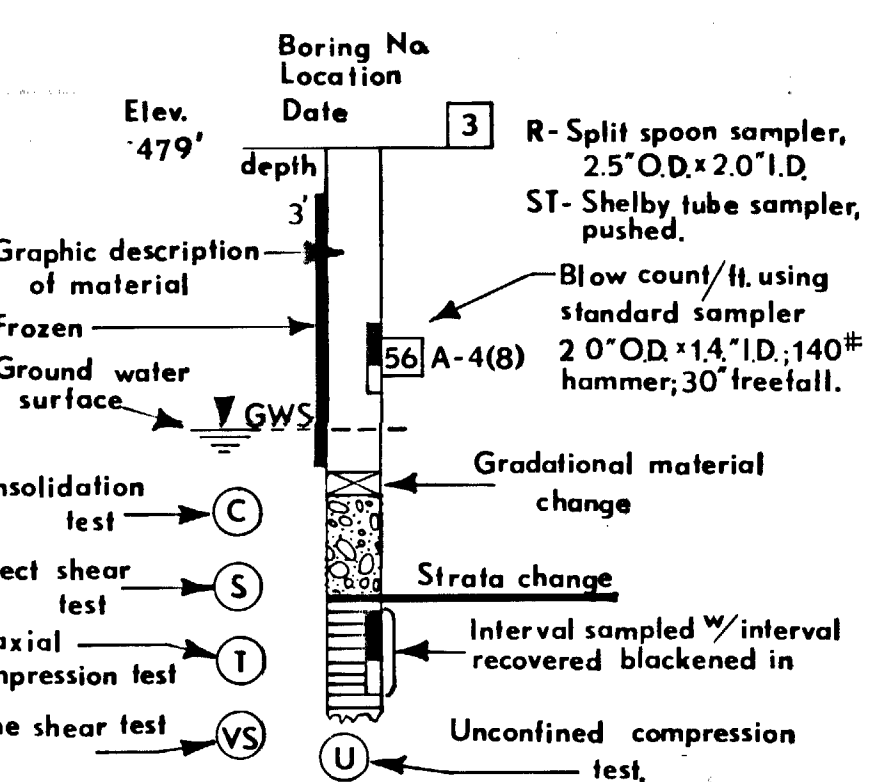
MATERIAL SYMBOLS



BORING SYMBOLS



ROTARY BORING



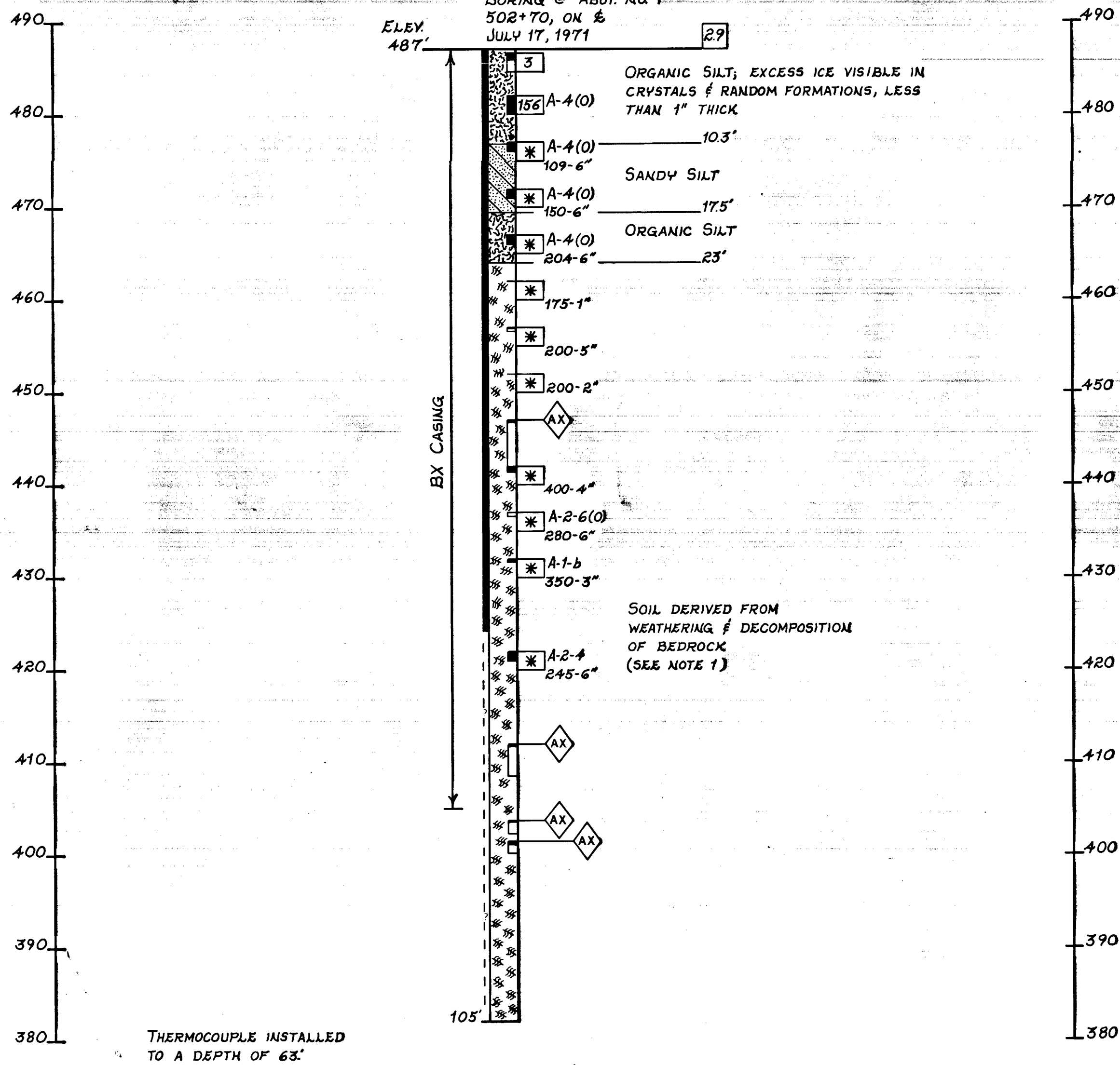
NOTES

NOTE 1

DRILLING, SAMPLING AND VISUAL EXAMINATION OF THE MATERIAL SHOW THAT IT IS A HIGHLY WEATHERED AND DECOMPOSED RESIDUAL SOIL TO A DEPTH OF 75' TO 80', WHEREUPON IT BECOMES LESS WEATHERED AND DECOMPOSED TO THE MAXIMUM DEPTH PENETRATED OF 105'. THE PARENT ROCK IS TENTATIVELY CLASSIFIED AS GREENSTONE. THE RESIDUAL SOIL IS COMPOSED OF MATERIAL RANGING IN PARTICLE SIZE DOWN TO CLAY, AND IN A.A.S.H.O. CLASSIFICATION FROM A-1-b TO A-2-G. IT IS GENERALLY WEAK MATERIAL BUT CONTAINS THIN ZONES OR LAYERS OF RELATIVELY HARDER AND RELATIVELY SOFTER MATERIAL. DRILLING AND CORING REACTION INDICATE THAT WEATHERING AND DECOMPOSITION ARE SOMEWHAT LESS SEVERE BELOW 75' TO 80' IN DEPTH.

NOTE 2

BORING AT ABUTMENT NO. 1 WAS TERMINATED AT 105' DEPTH DUE TO EXTENSIVE SLUFFING FROM WALLS OF BORING AT SOME ELEVATION (S) BELOW THE CASING (81.8'). THE LIGHT DRILLING RIG UTILIZED WAS INCREASINGLY INEFFECTIVE AT THESE DEPTHS, THREATENING LOSS OF TOOLS IN HOLE.



AS BUILT PLANS

Project Engineer

Date 3-6-74 - 6-24-77

CORRECTIONS TRANSFERRED

Tracings Kris Klemmensen Date 2-18-77

Checked H.O. Leslie Date 3-1-77

LOG OF TEST BORINGS

YUKON RIVER

State of Alaska

DEPARTMENT OF HIGHWAYS

Juneau, Alaska

Date Feb. 1972

Approved R.A.M.

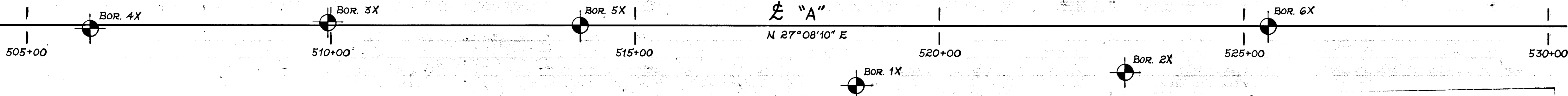
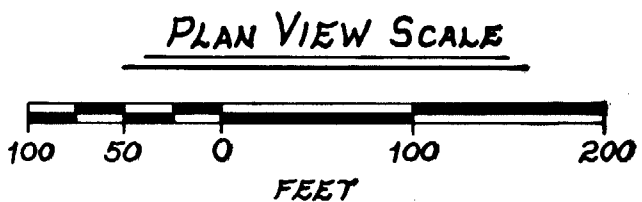
Bridge no. 271

Drawing no. 2546

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS-0681(3)	1973	29	30



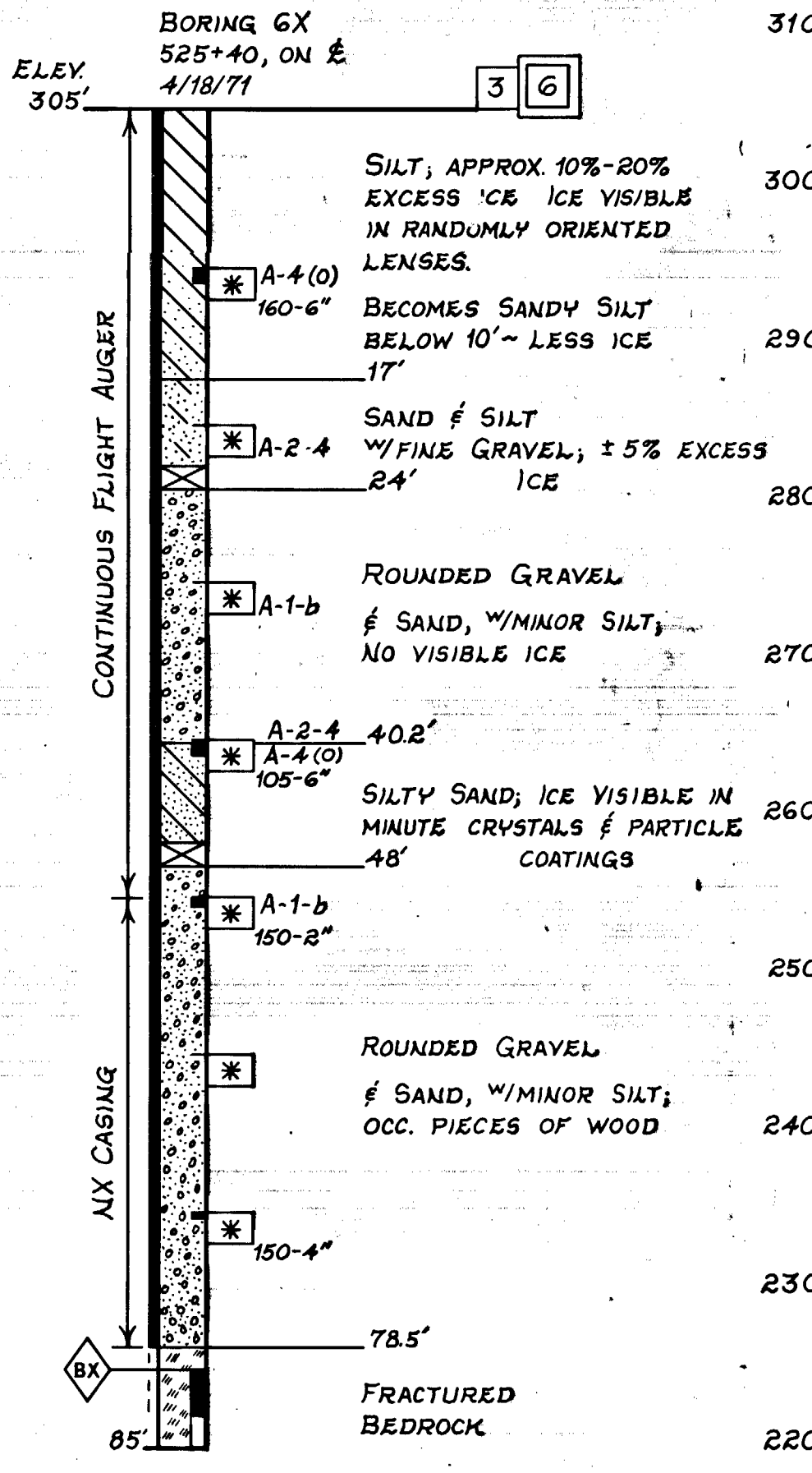
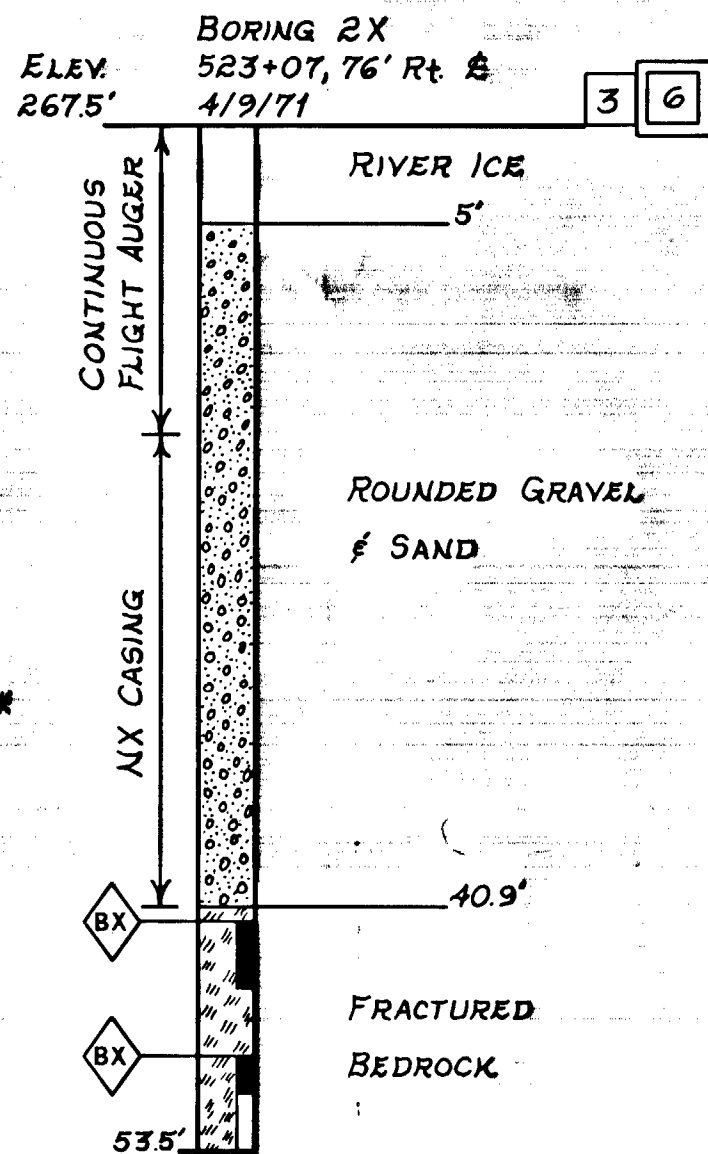
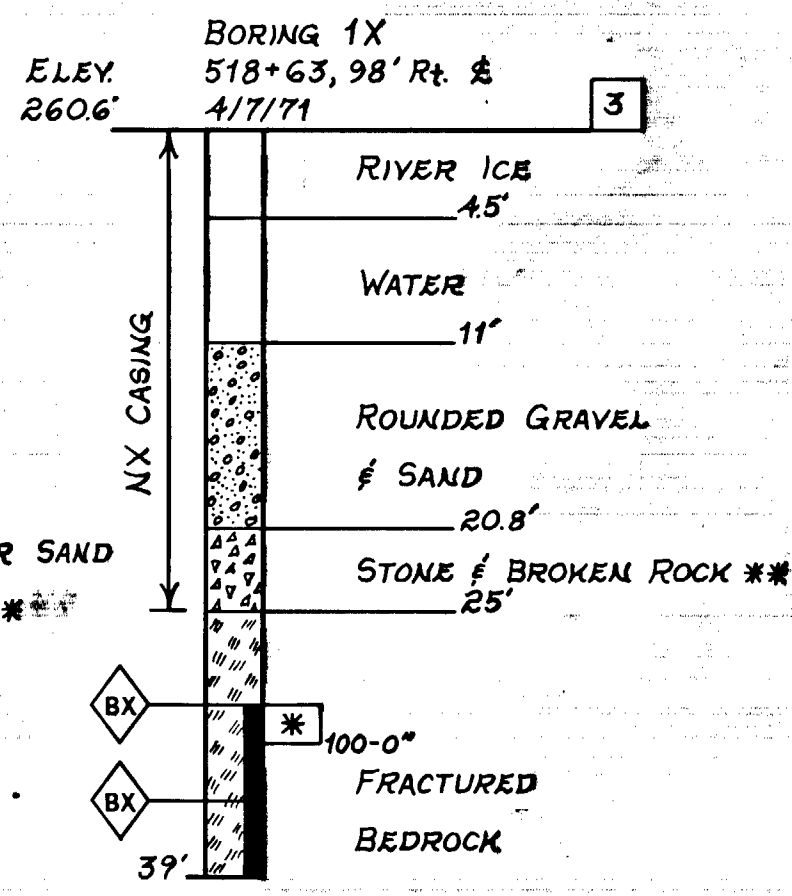
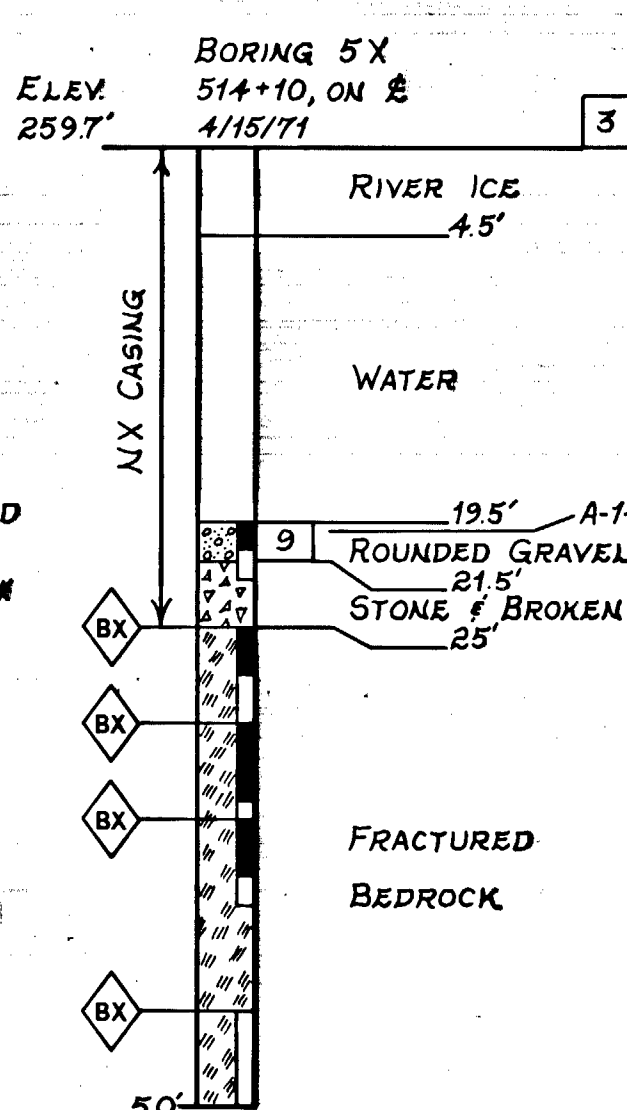
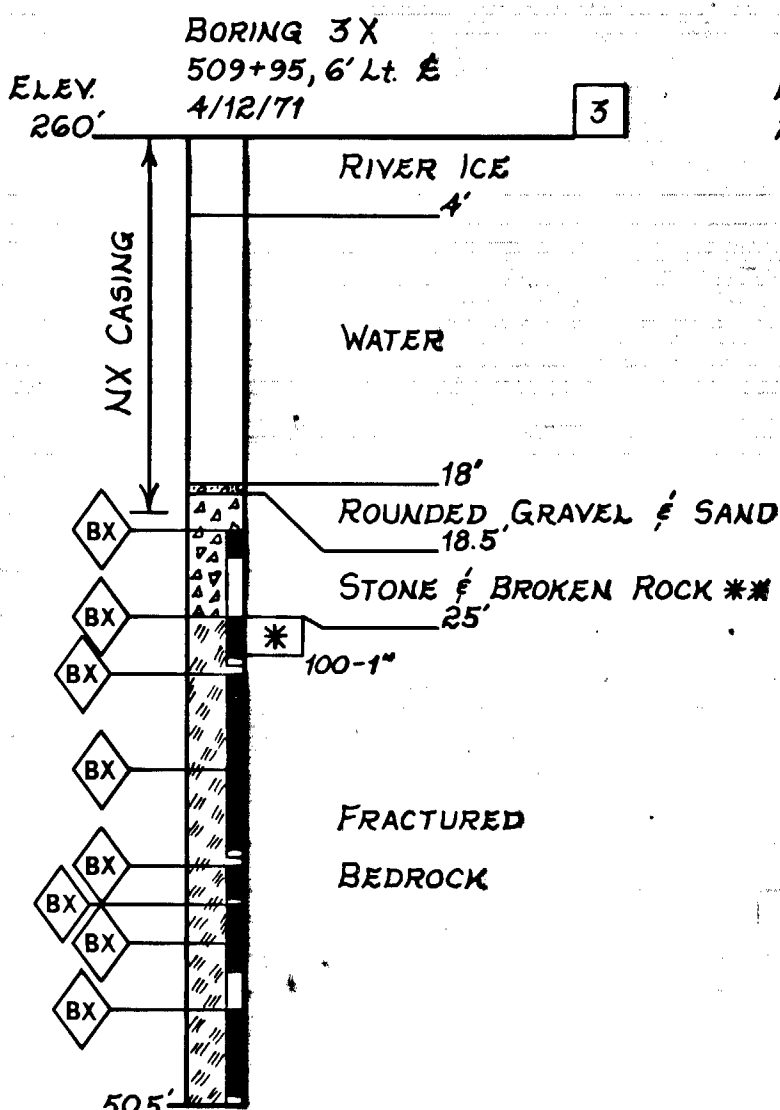
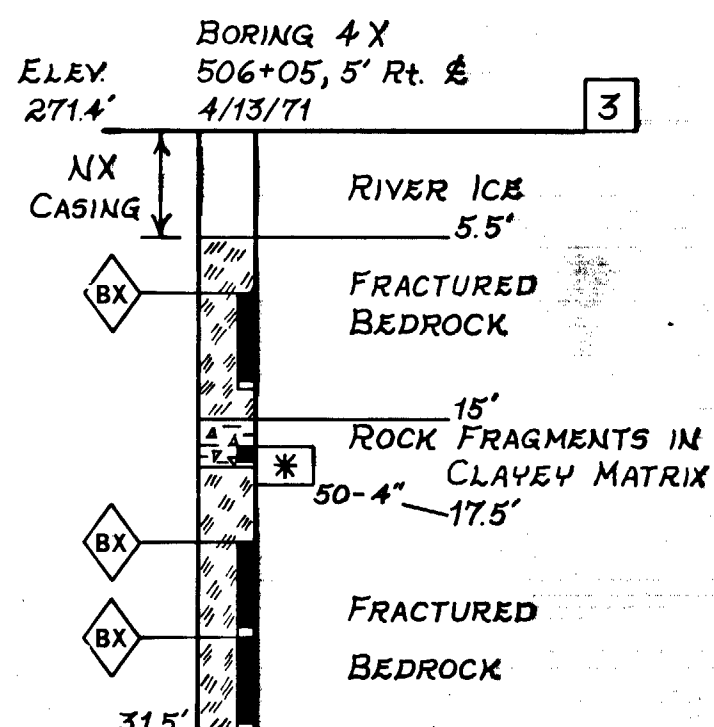
FLOW



AS BUILT PLANS
Rod Platke Date 3-6-74 - 6-24-76
Project Engineer
CORRECTIONS TRANSFERRED
Tracings Kris Klemm Date 2-18-77
Checked H.O. Leslie Date 3-1-77

GENERAL BEDROCK DESCRIPTION

BEDROCK ENCOUNTERED IN ALL BORINGS WAS ESSENTIALLY AS FOLLOWS: GREEN TO GREEN-GRAY, NON-FOLIATED ALTERED BASIC ROCK, TENTATIVELY CLASSIFIED AS GREENSTONE. THE ROCK IS HARD AND COMPETENT, BUT IS MODERATELY TO HIGHLY FRACTURED THROUGHOUT. A FEW OF THE CORES RECOVERED WERE AS LONG AS 6"-8"±, BUT MOST WERE 2"-3" IN MAXIMUM LENGTH. THE CORE COMMONLY CONSISTED ALMOST ENTIRELY OF 0.5"-1.5" PIECES.



NOTE: BORING 6X; ICE CONDITIONS BELOW 50' NOT DESCRIBED AS DRILLING WATER WAS USED BELOW THIS DEPTH.
BORING 6X; SAMPLES TAKEN AT 20' & 30' DEPTHS ARE GRAB SAMPLES TAKEN FROM AUGER FLIGHTS.

MATERIAL SYMBOLS

Organics, Organic Silt	Clayey Silt
Cobbles and Boulders	Sandy Silt
Sandy Gravel	Gravelly Silt
Gravelly Sand	Silty Clay
Gravel	Silty Sand
Sand	Silty Gravel
Clay	Greenstone
Silt	

BORING SYMBOLS

- Plan of any boring
- Flush penetrometer
- Bull nose penetrometer
- Rotary boring
- Auger boring
- Diamond core boring
- Test pit
- Probe

ROTARY BORING

Boring No. Location Date

Graphic description of material

Frozen

Ground water surface

Consolidation test

Direct shear test

Triaxial compression test

Vane shear test

R-Split spoon sampler, 2.5" O.D. x 20" I.D.

ST-S Shelby tube sampler, pushed.

Blow count/ft. using standard sampler

2.0" O.D. x 1.4" I.D.; 140# hammer; 30" freefall.

Gradational material change

Strata change

Interval sampled w/ interval recovered blackened in

Unconfined compression test

PENETROMETER TEST

Number Location Date

Elev. 479'

depth

Graphic representation of driving rate

Blows/foot Penetrometer

Hammer, 30" drop

RELATIVE DENSITY AND CONSISTENCY CLASSIFICATION

According to Standard Penetration Test

GRANULAR		COHESIVE	
Blows/ft.	Rel. Density	Blows/ft.	Consistency
0 - 4	very loose	0 - 1	very soft
5 - 10	loose	2 - 4	soft
11 - 20	firm	5 - 8	firm
21 - 30	very firm	9 - 15	stiff
31 - 50	dense	15 - 30	very stiff
Over 50	very dense	Over 30	hard

LOG OF TEST BORINGS
YUKON RIVER

State of Alaska
DEPARTMENT OF HIGHWAYS
Juneau, Alaska

Date Feb. 1972
Approved R.J.M.
Bridge no. 271
Drawing no. 2547

STATE	PROJECT DESIGNATION	YEAR	SHEET NO	TOTAL SHEETS
ALASKA	RS-0681(3)	1973	30	30

MATERIAL SYMBOLS

Organics, Organic Silt

Cobbles and Boulders

Sandy Gravel

Gravelly Sand

Gravel

Sand

Clay

Silt

Clayey Silt

Sandy Silt

Gravelly Silt

Silty Clay

Silty Sand

Silty Gravel

Greenstone

BORING SYMBOLS

Plan of any boring

Flush penetrometer

Bull nose penetrometer

Rotary boring

Auger boring

Diamond core boring

Test pit

Probe

ROTARY BORING

Boring No. Location Date

Elev. 479'

depth

3'

56 A-4(8)

2.0" OD x 14" ID; 140# hammer; 30" freefall.

* Indicates refusal

Gradational material change

Strata change

Interval sampled w/ interval recovered blackened in

Unconfined compression test

PENETROMETER TEST

Number Location Date

Elev. 479'

depth

5'

18'

Blows/ft. 100 200

Blows/foot 2.5" Penetrometer w/ 342# Hammer, 30" drop

Graphic representation of driving rate

RELATIVE DENSITY AND CONSISTENCY CLASSIFICATION

According to Standard Penetration test

GRANULAR

Blows/ft. Ref. Density

0 - 4 very loose

5 - 10 loose

11 - 20 firm

21 - 30 very firm

31 - 50 dense

Over 50 very dense

COHESIVE

Blows/ft. Consistency

0 - 1 very soft

2 - 4 soft

5 - 8 firm

9 - 15 stiff

15 - 30 very stiff

Over 30 hard

AS BUILT PLANS

Rod Plotzke

Project Engineer

DATE 5-24-73

CORRECTIONS TRANSFERRED

Tracings

DATE 5-24-77

Checked

H.O. Leslie

DATE 7-1-77

LOG OF TEST BORINGS

YUKON RIVER

State of Alaska

DEPARTMENT OF HIGHWAYS

Juneau, Alaska

DATE April, 1972

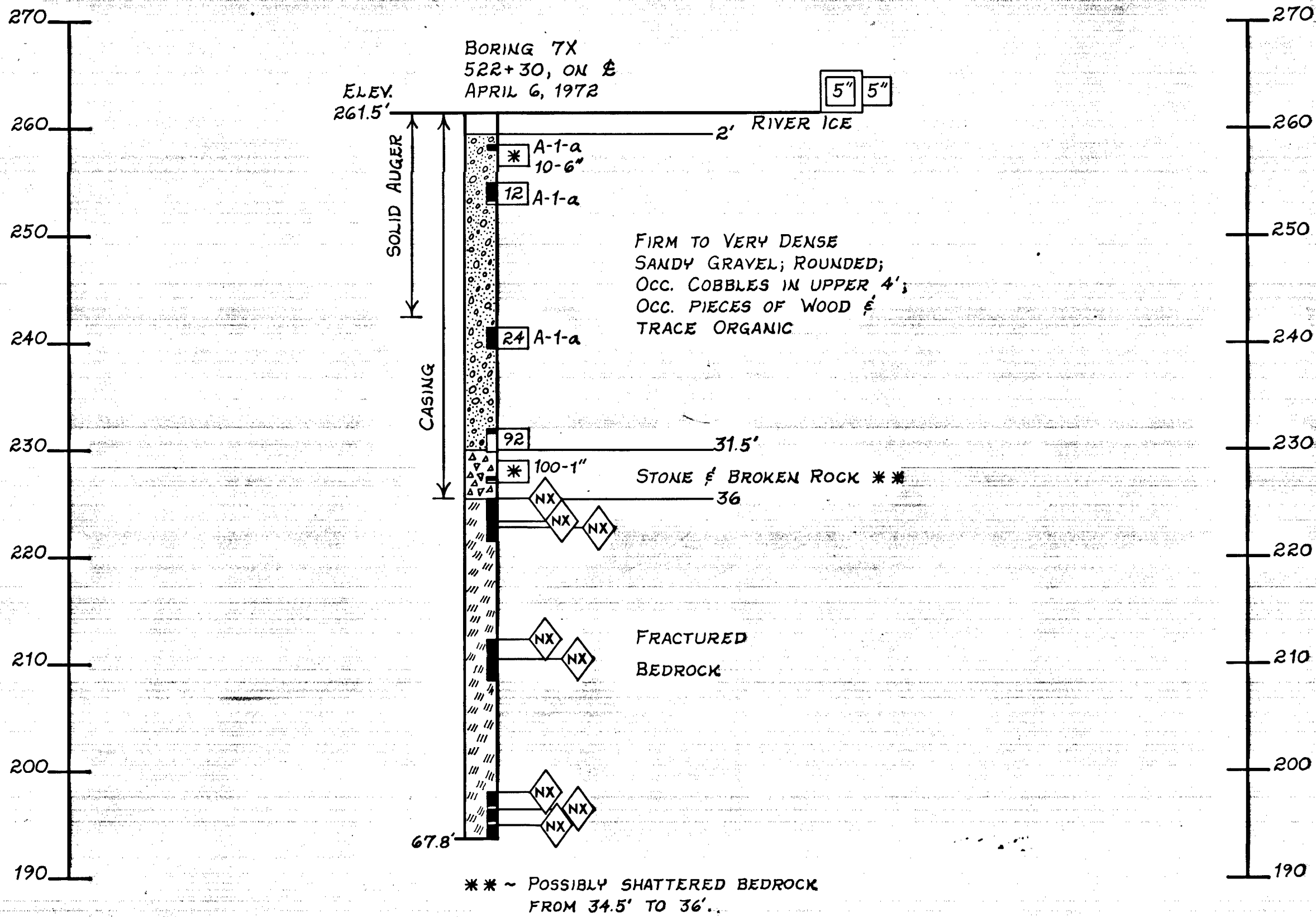
APPROVED R.J.M.

BRIDGE NO. 271

DRAWING NO. 2548

GENERAL BEDROCK DESCRIPTION

BEDROCK ENCOUNTERED IN BORING 7X WAS ESSENTIALLY AS FOLLOWS: GREEN TO GREEN-GRAY, NON-FOLIATED, ALTERED BASIC ROCK, TENTATIVELY CLASSIFIED AS GREENSTONE. THE ROCK IS HARD AND COMPETENT, BUT IS MODERATELY TO HIGHLY FRACTURED THROUGHOUT.



Checked By _____ Date _____
Traced By _____ Date _____

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS-0681	1975	1	5

BASIC MATERIALS SYMBOLS

	Organic; Organic Silt		Silt
	Cobbles; Boulders		Gravel
	Gravel		Sand
	Sand		

TYPICAL TEST HOLE SYMBOLS

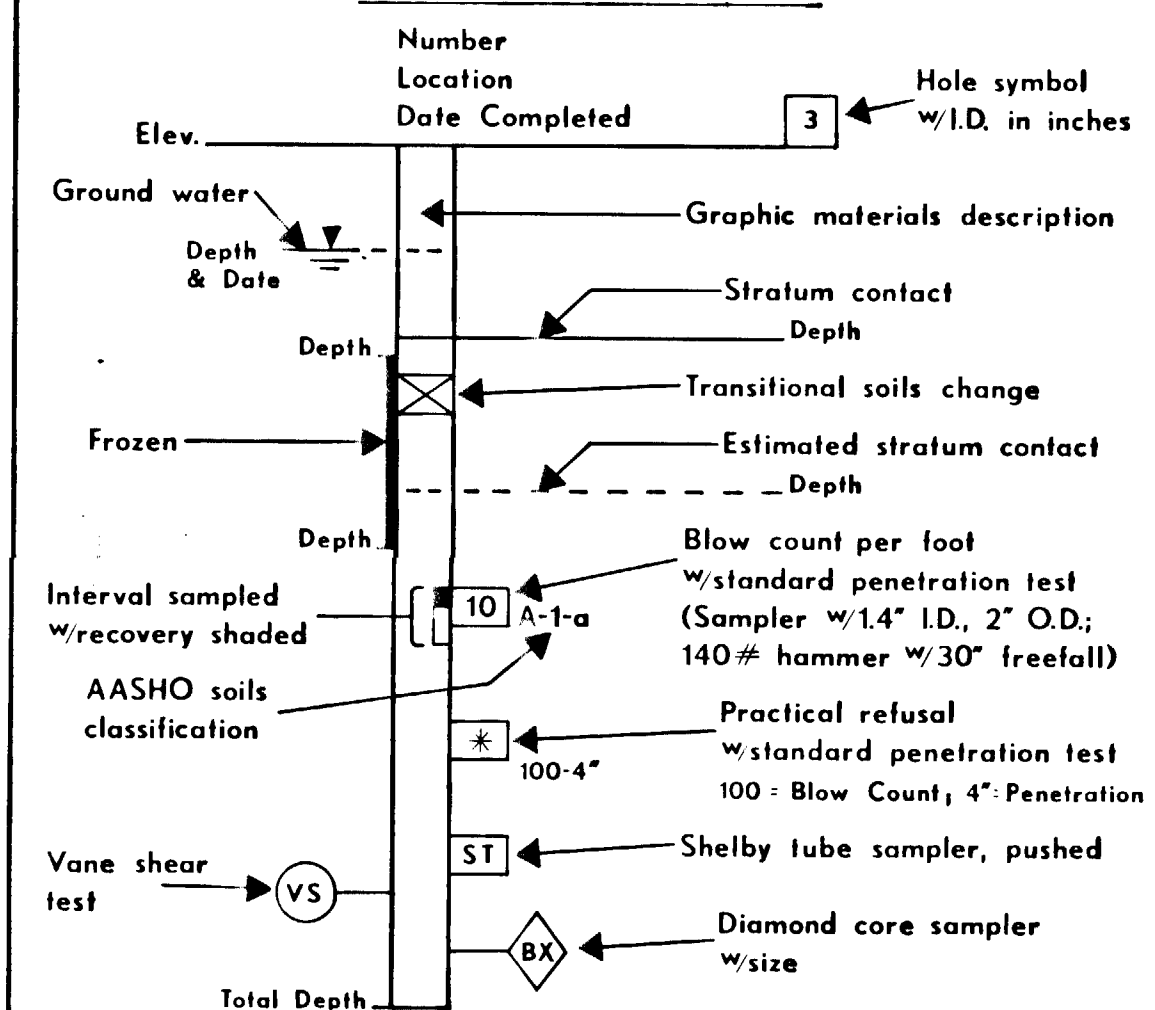
Plan	Location of any hole
	Rotary
	Auger
	Diamond Core
	Penetrometer

RELATIVE DENSITY AND CONSISTENCY CLASSIFICATION

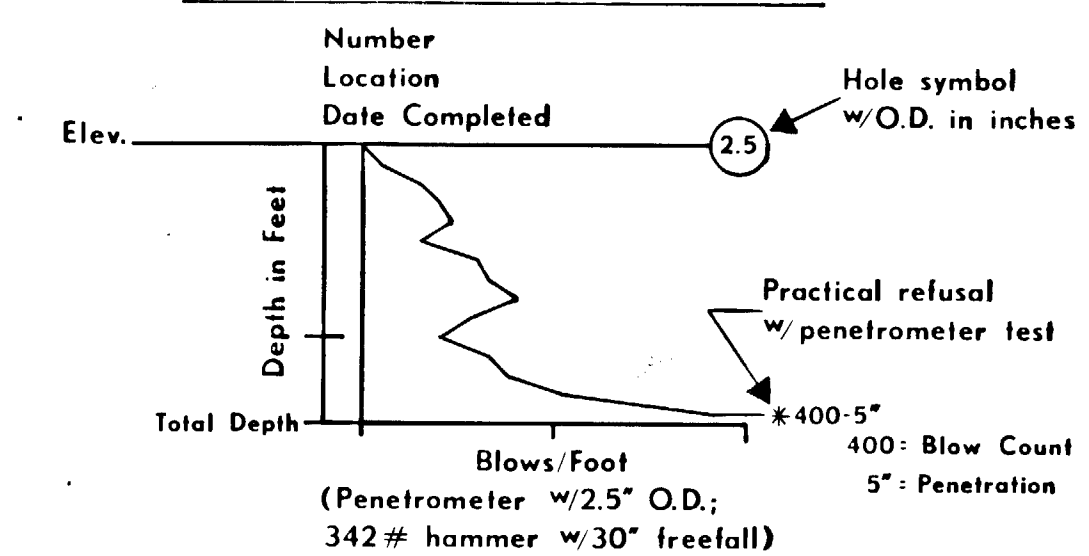
Based on Standard Penetration Test

GRANULAR		COHESIVE	
Blows/ft.	Rel. Density	Blows/ft.	Consistency
0 - 4	Very Loose	0 - 1	Very Soft
5 - 10	Loose	2 - 4	Soft
11 - 20	Firm	5 - 8	Medium
21 - 30	Very Firm	9 - 15	Stiff
31 - 50	Dense	16 - 30	Very Stiff
>50	Very Dense	>30	Hard

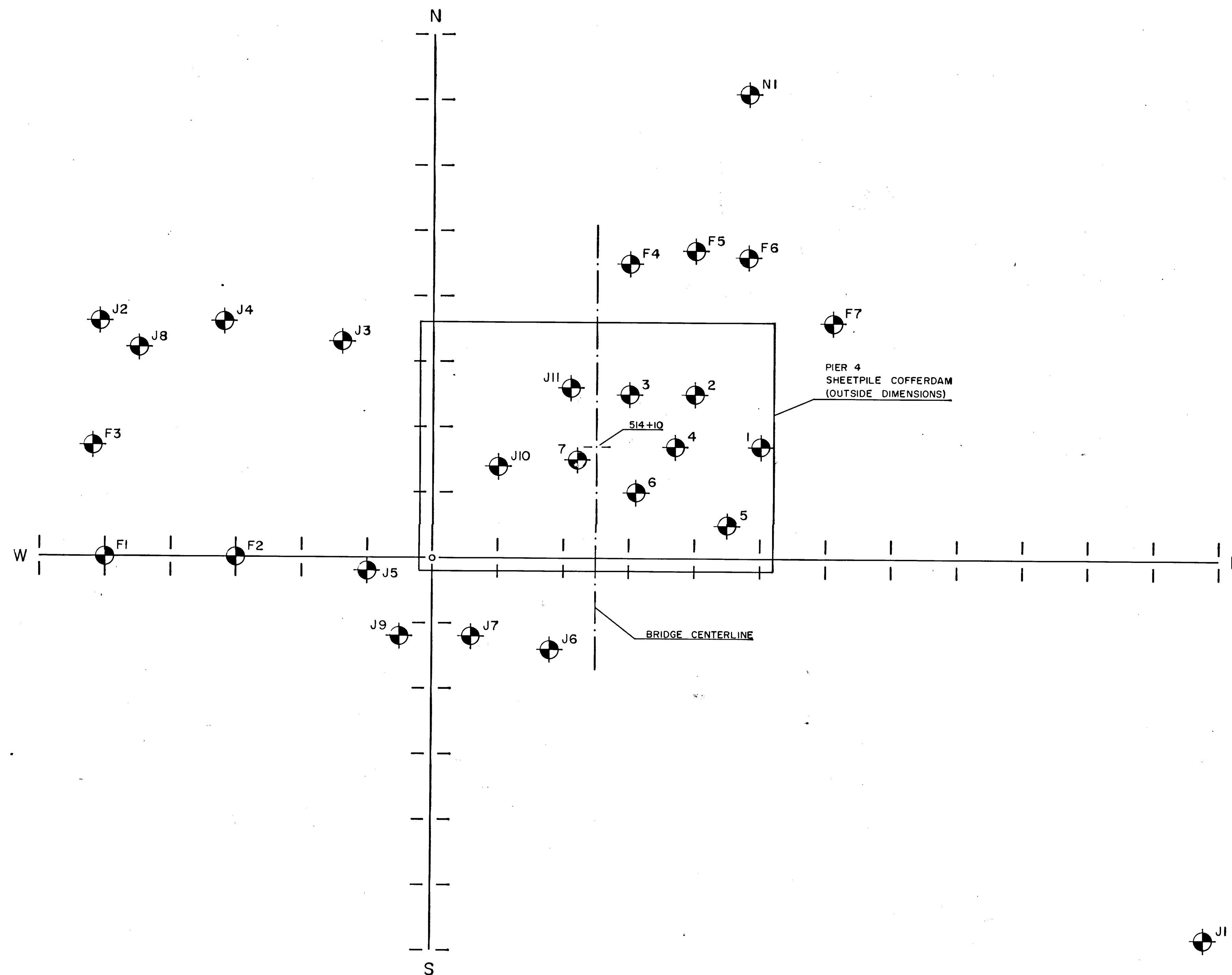
TYPICAL TEST HOLE LOG



TYPICAL PENETROMETER TEST LOG



PLAN OF TEST HOLES

YUKON RIVER BRIDGE
PIER 4State of Alaska
DEPARTMENT OF HIGHWAYS
Juneau, AlaskaDate Feb., 1975
Approved R.J.M.BRIDGE NO. 271
DWNG. NO.NOT PART OF CONTRACT
BUT VALUABLE INFO. - SAVE
RM, LHM, RD
12/75

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS-0681	1975	2	5

BASIC MATERIALS SYMBOLS

TYPICAL TEST HOLE SYMBOLS

Plan	Section

RELATIVE DENSITY AND CONSISTENCY CLASSIFICATION

Based on Standard Penetration Test			
GRANULAR		COHESIVE	
Blows/ft.	Rel. Density	Blows/ft.	Consistency
0 - 4	Very Loose	0 - 1	Very Soft
5 - 10	Loose	2 - 4	Soft
11 - 20	Firm	5 - 8	Medium
21 - 30	Very Firm	9 - 15	Stiff
31 - 50	Dense	16 - 30	Very Stiff
>50	Very Dense	>30	Hard

TYPICAL TEST HOLE LOG

Elev.	Number Location Date Completed	Hole symbol w/I.D. in inches
Ground water	Graphic materials description	
Depth & Date	Stratum contact	
Depth	Transitional soils change	
Frozen	Estimated stratum contact	
Depth	Blow count per foot w/standard penetration test (Sampler w/1.4" I.D., 2" O.D.; 140# hammer w/30" freefall)	
Interval sampled w/recovery shaded	Practical refusal w/standard penetration test 100 - Blow Count; 4" Penetration	
AASHO soils classification	Shelby tube sampler, pushed	
Vane shear test	Diamond core sampler w/size	
Total Depth		

TYPICAL PENETROMETER TEST LOG

Elev.	Number Location Date Completed	Hole symbol w/O.D. in inches
Depth in Feet	Practical refusal w/penetrometer test	
Total Depth	Blows/Foot (Penetrometer w/2.5" O.D.; 342# hammer w/30" freefall)	
	400 - Blow Count 5" Penetration	

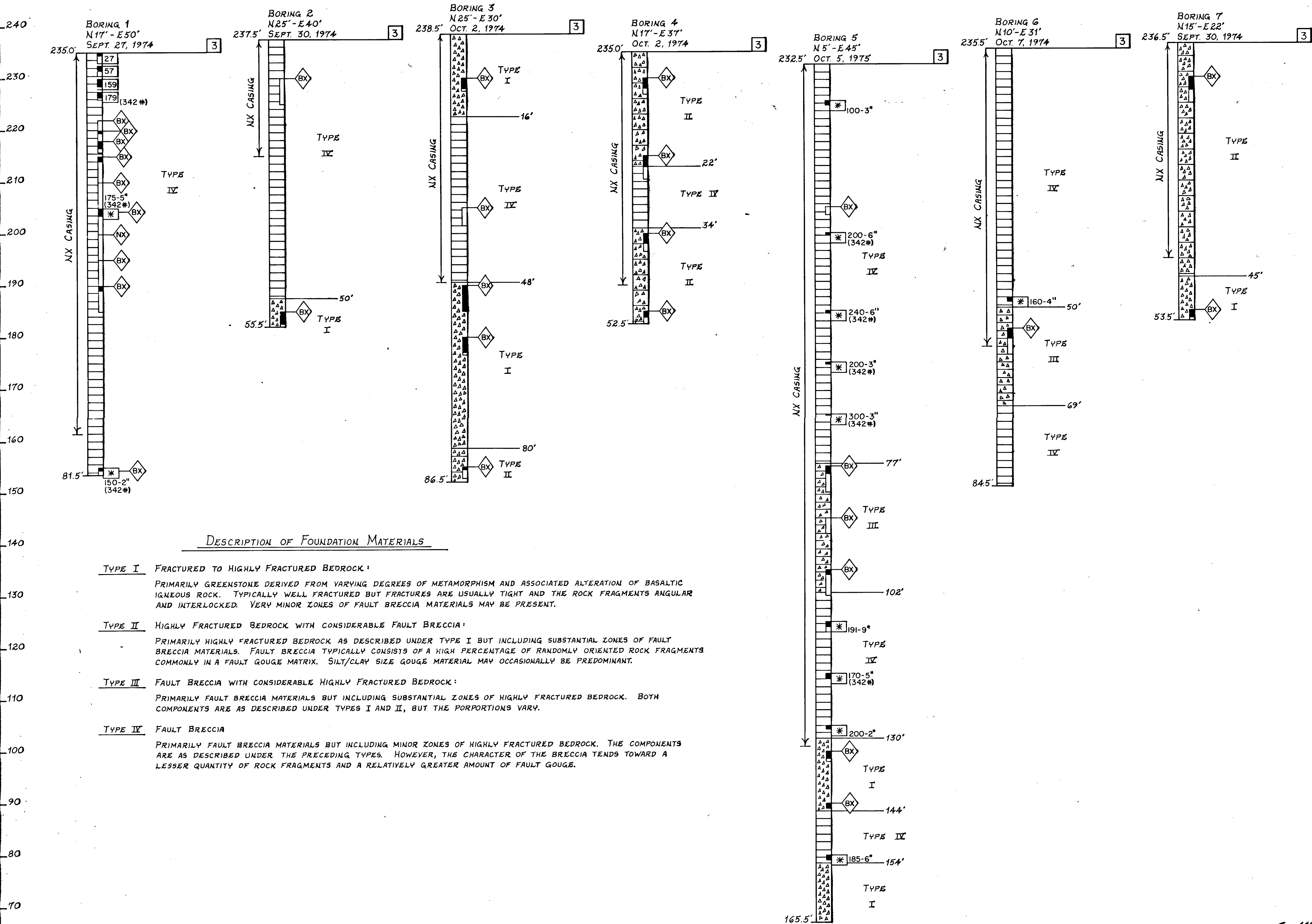
LOG OF TEST HOLES

YUKON RIVER BRIDGE
PIER 4

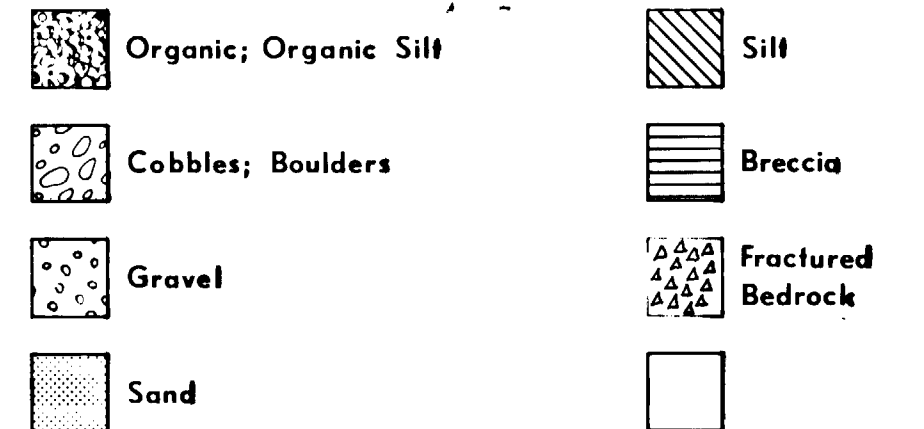
State of Alaska
DEPARTMENT OF HIGHWAYS
Juneau, Alaska

Date Feb. 1975
Approved R.J.M.

BRIDGE NO. 271
DWNG. NO.



NOT PART OF CONTRACT
BUT VALUABLE INFO - SAVE
R.M., L.A.C., R.A.
12/75



RELATIVE DENSITY AND CONSISTENCY CLASSIFICATION

Based on Standard Penetration Test

GRANULAR		COHESIVE	
Depth (ft)	Rel. Density	Plasticity (ft)	Consistency

4	Very Loose	0 - 1	Very Soft
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10	Loose	2 - 4	Soft
20	Firm	5 - 8	Medium

30	Very Firm	9 - 15	Stiff
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0	Very Dense	>30	Hard
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TEST HOLE LOG

Number

[illegible]

← Graphic materials description

---	---	
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Stratum contact
Depth

th. 

Transitional zone change

Estimated stratum contact

Blow count per foot
w/standard penetration test

10 A-1-a (Sampler w/1.4" I.D., 2" O.D.;

140# hammer w/30' (freefall)

Practical refusal

100-4" w/standard penetration test

St. H. ...

Shelby tube sampler, pushed

 Diamond core sampler

	BA	w/size
--	----	--------

Number

Location _____ Hole symbol _____
Date Completed _____ W/O.D. in inches _____

2.5

test

Practical refusal	
W/parental consent	

Def $\frac{1}{2}$ penetration test

Total Depth * 400.5"

Blows/Foot 400= Blow Count

(Penetrometer w/2.5" O.D.; 5" Penetration)

PIER 4

Date Feb. 1975

Approved *P A M*

BRIDGE NO. 271

DWNG. NO.

NOT PART OF CONTRACT
BUT VALUABLE INFO-SAVE
Rhm, & AC, RP
12/75

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS-0681	1975	4	5

BASIC MATERIALS SYMBOLS

	Organic; Organic Silt		Silt
	Cobbles; Boulders		Breccia
	Gravel		Fractured Bedrock
	Sand		

TYPICAL TEST HOLE SYMBOLS

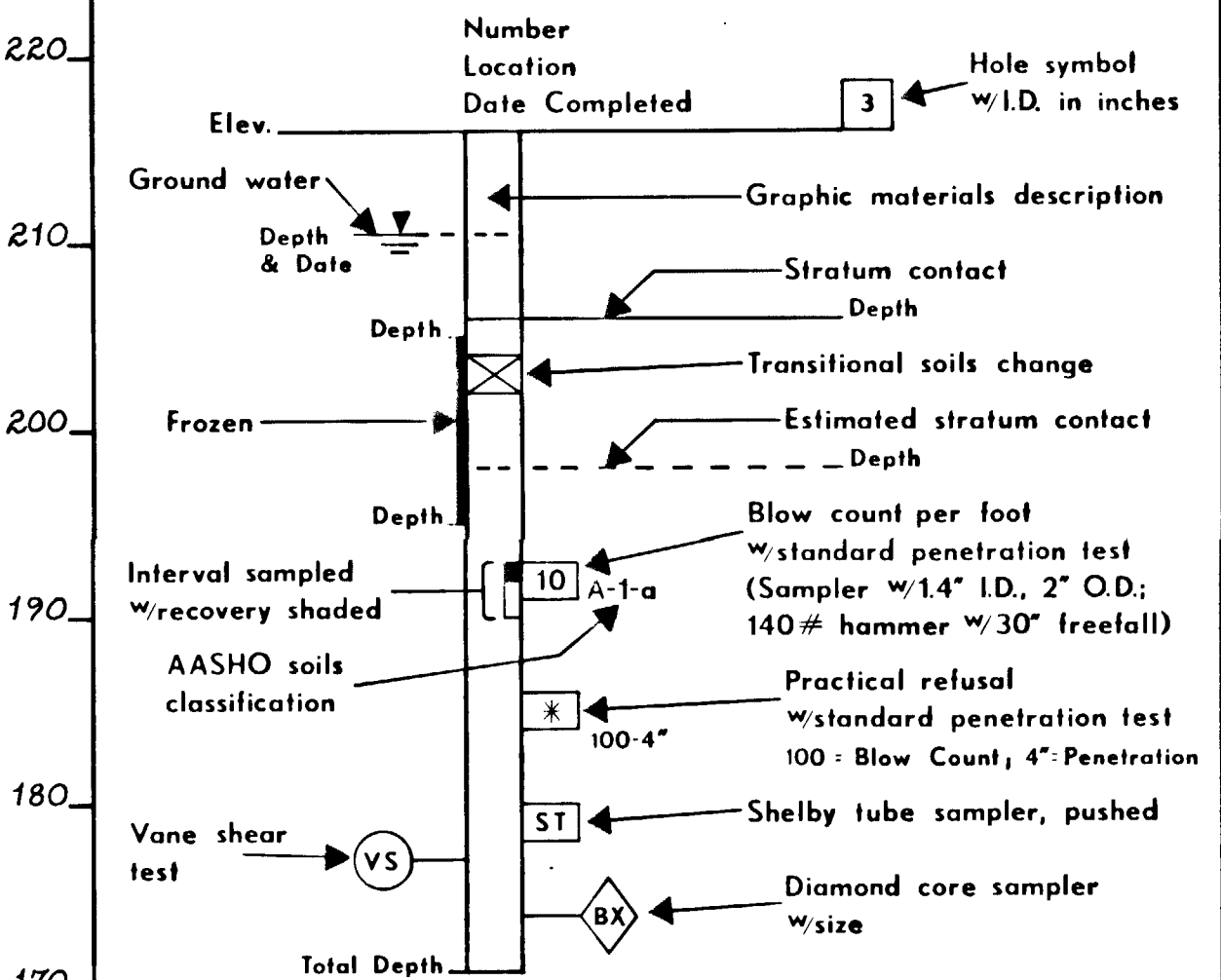
Plan	Section

RELATIVE DENSITY AND CONSISTENCY CLASSIFICATION

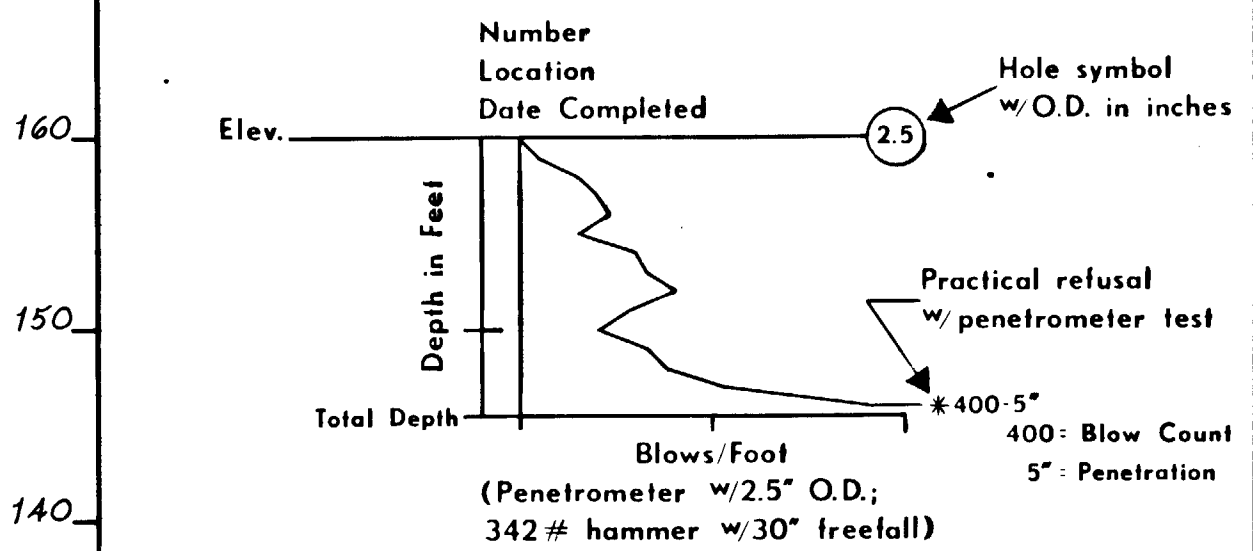
Based on Standard Penetration Test

GRANULAR		COHESIVE	
Blows/ft.	Rel. Density	Blows/ft.	Consistency
0 - 4	Very Loose	0 - 1	Very Soft
5 - 10	Loose	2 - 4	Soft
11 - 20	Firm	5 - 8	Medium
21 - 30	Very Firm	9 - 15	Stiff
31 - 50	Dense	16 - 30	Very Stiff
> 50	Very Dense	> 30	Hard

TYPICAL TEST HOLE LOG



TYPICAL PENETROMETER TEST LOG



LOG OF TEST HOLES

YUKON RIVER BRIDGE
PIER 4

State of Alaska
DEPARTMENT OF HIGHWAYS
Juneau, Alaska

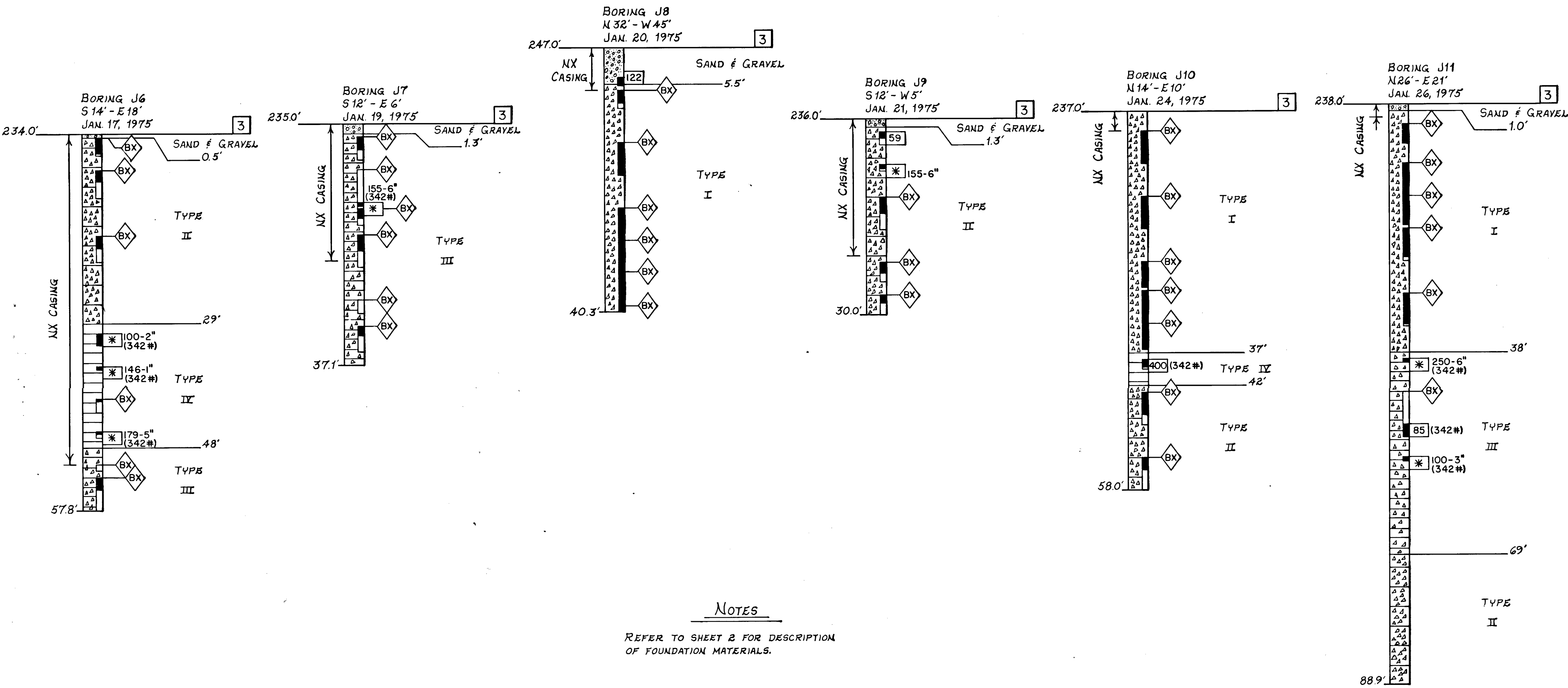
Date Feb., 1975
Approved R. J. M.

BRIDGE NO. 271
DWNG. NO.

NOTES

REFER TO SHEET 2 FOR DESCRIPTION
OF FOUNDATION MATERIALS.

NOT PART OF CONTRACT
BUT LABORER INFO-SAVE
R.M., 12/75



STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS-0681	1975	5	5

BASIC MATERIALS SYMBOLS

	Organic; Organic Silt		Silt
	Cobbles; Boulders		Breccia
	Gravel		Fractured Bedrock
	Sand		

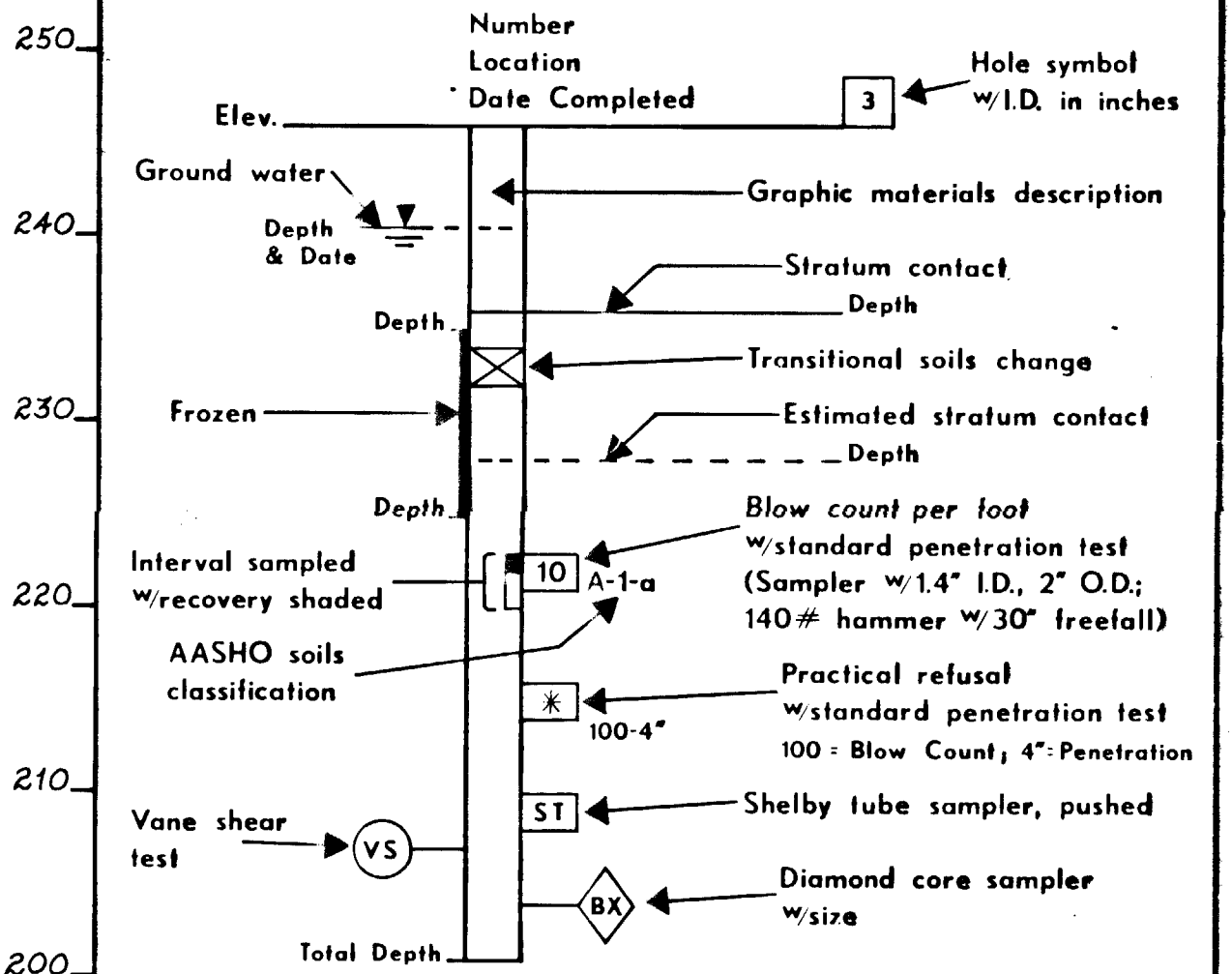
TYPICAL TEST HOLE SYMBOLS

Plan	Location of any hole
	Location of any hole
Section	
	Rotary
	Auger
	Diamond Core
	Penetrometer

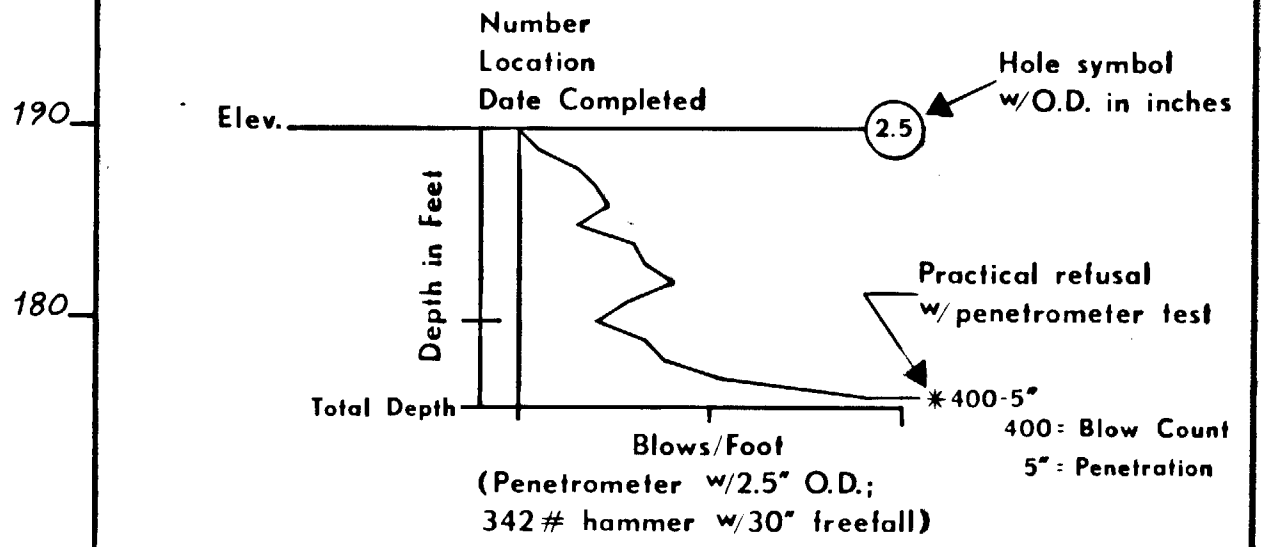
RELATIVE DENSITY AND CONSISTENCY CLASSIFICATION

Based on Standard Penetration Test			
GRANULAR		COHESIVE	
Blows/ft.	Rel. Density	Blows/ft.	Consistency
0 - 4	Very Loose	0 - 1	Very Soft
5 - 10	Loose	2 - 4	Soft
11 - 20	Firm	5 - 8	Medium
21 - 30	Very Firm	9 - 15	Stiff
31 - 50	Dense	16 - 30	Very Stiff
>50	Very Dense	>30	Hard

TYPICAL TEST HOLE LOG



TYPICAL PENETROMETER TEST LOG



LOG OF TEST HOLES

YUKON RIVER BRIDGE
PIER 4

State of Alaska
DEPARTMENT OF HIGHWAYS
Juneau, Alaska

Date Feb., 1975
Approved R. J. M.

BRIDGE NO. 271
DWNG. NO.

NOTES

REFER TO SHEET 2 FOR DESCRIPTION OF FOUNDATION MATERIALS.

* - INDICATES SECTION OF BORING IN WHICH CORE BARREL EXPERIENCED MECHANICAL MALFUNCTION.

NOT PART OF CONTRACT
BUT UNLESS INFO. SAVED
KRM, LAC, RJP
12/75

