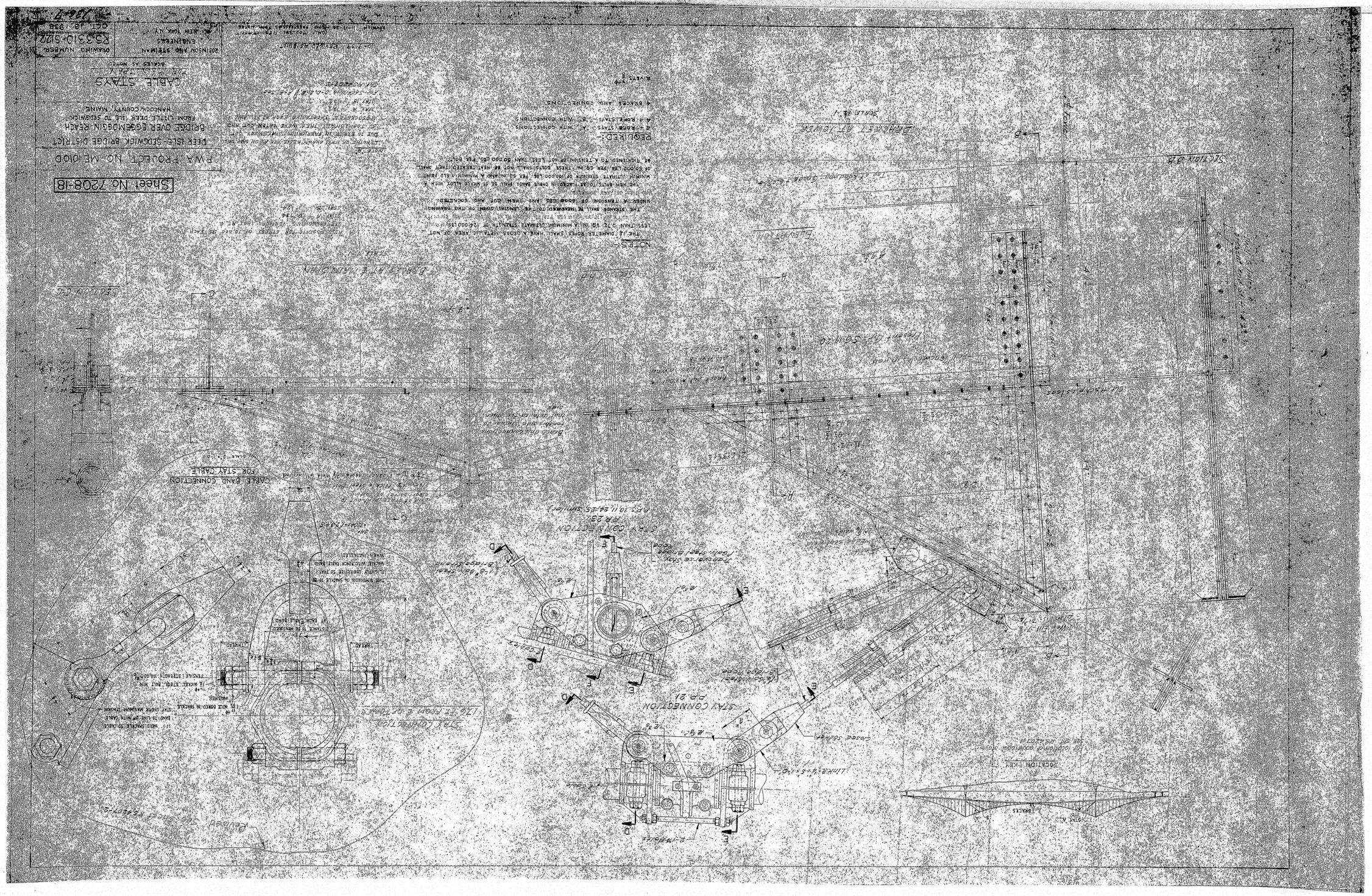
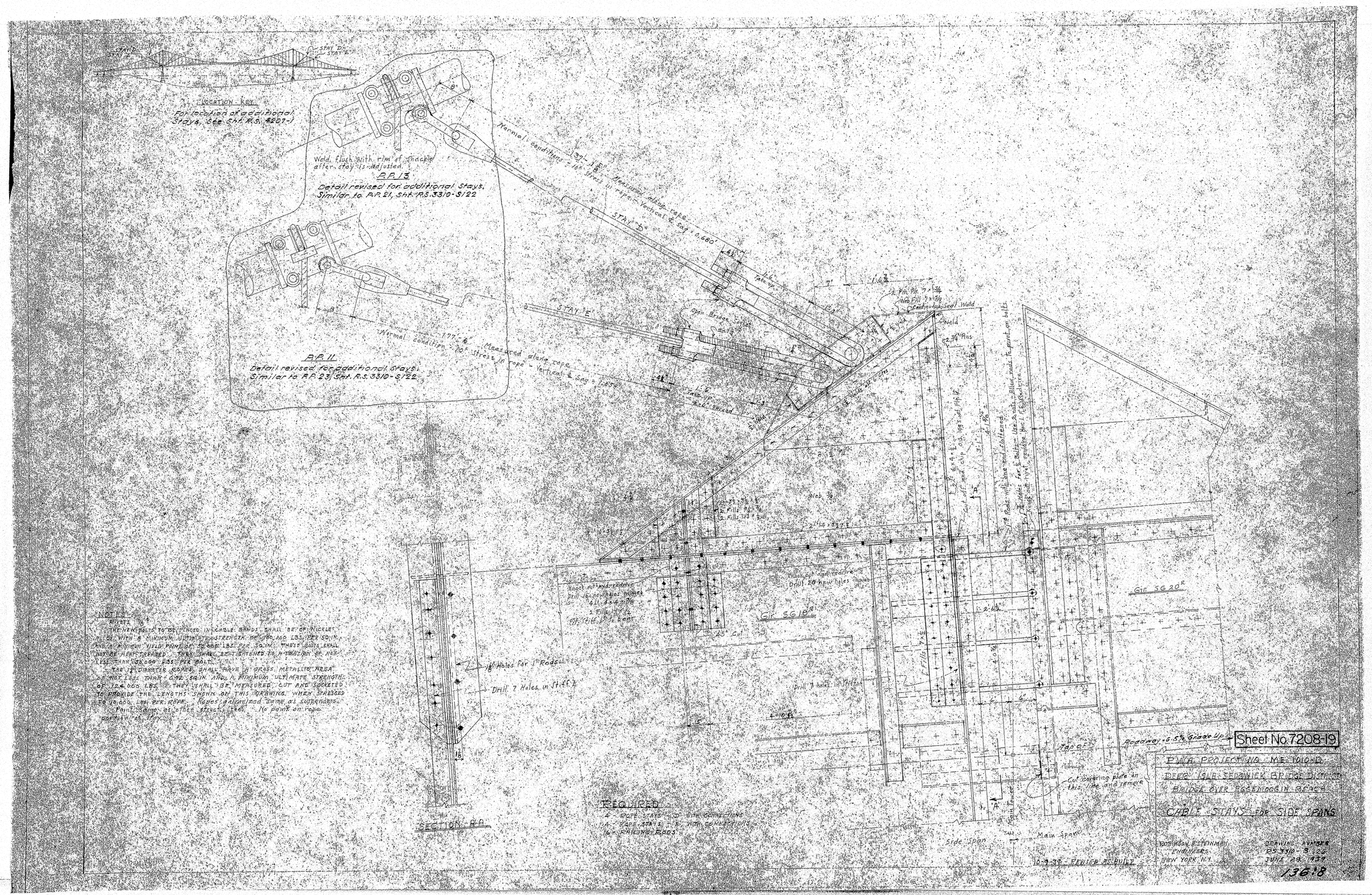
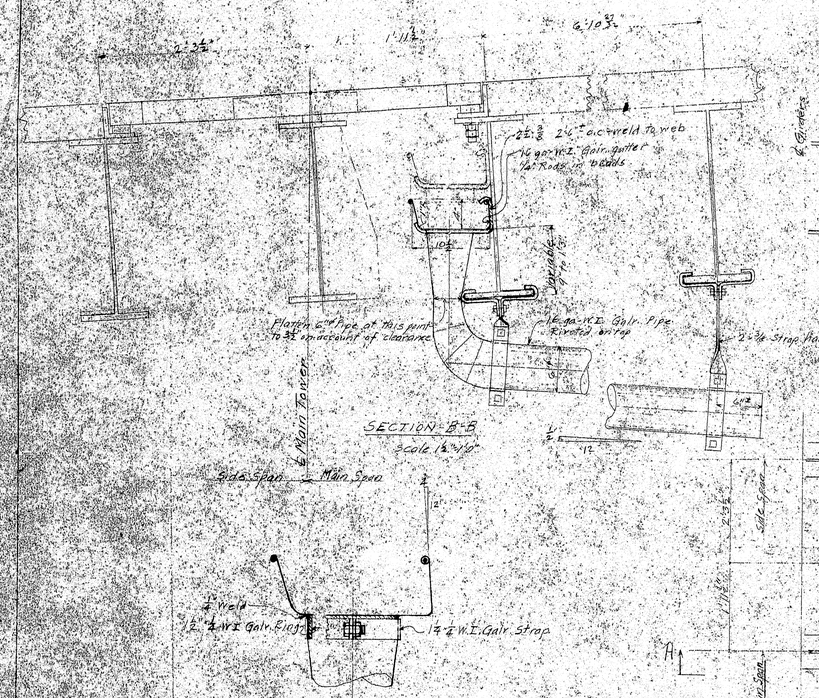
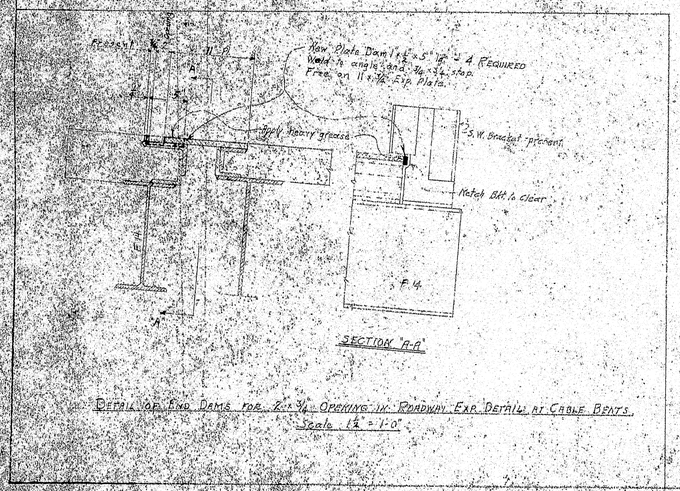

Sheet No 208-18
PWA PROJECT No. ME 1010D
PEER ISLE-SEDGWICK BRIDGE DISTRICT
BRIDGE OVER EGGEMOGGIN REACH
FROM LITTLE DEER ISLE TO SEDGWICK
HANCOCK COUNTY, MAINE
CABLE STAYS
DRAWING NUMBER
PS 3310-5120
ROBINSON AND STEINMAN
ENGINEERS
NEW YORK N.Y.
STAY CONNECTION
PP.21
STAY CONNECTION
M.P.23
CABLE BAND CONNECTION
FOR STAY CABLE
NOTES:-
REQUIRED:-
DETAILS AT TOWER
SECTION A-A
SECTION B-B
SECTION C-C
SECTION D-D
SECTION E-E
SECTION F-F
SECTION G-G
SECTION H-H
SECTION K-K
SECTION L-L
SECTION M-M
SECTION N-N
SECTION P-P
SECTION Q-Q
SECTION R-R
SECTION S-S
SECTION T-T
SECTION U-U
SECTION V-V
SECTION W-W
SECTION X-X
SECTION Y-Y
SECTION Z-Z
SECTION A'-A'
SECTION B'-B'
SECTION C'-C'
SECTION D'-D'
SECTION E'-E'
SECTION F'-F'
SECTION G'-G'
SECTION H'-H'
SECTION K'-K'
SECTION L'-L'
SECTION M'-M'
SECTION N'-N'
SECTION P'-P'
SECTION Q'-Q'
SECTION R'-R'
SECTION S'-S'
SECTION T'-T'
SECTION U'-U'
SECTION V'-V'
SECTION W'-W'
SECTION X'-X'
SECTION Y'-Y'
SECTION Z'-Z'
STAY CONNECTION
176'-7" FROM E PIER
DISTANCE TO BE MEASURED
BY FACTORY STAMP
THE DIMENSION A SHALL BE
SUCH THAT THE CABLE
WILL NOT BINDER
WASHER
FOR STAY CABLE
BAND TO LINE OF MAIN CABLE
STAY UNDER MAXIMUM TENSION
FOR ACTUAL SIZE OF STAY
CABLE SEE SHEET 17
SCALE AS NOTED
DATE 18/1938
Sheet 7 of 7

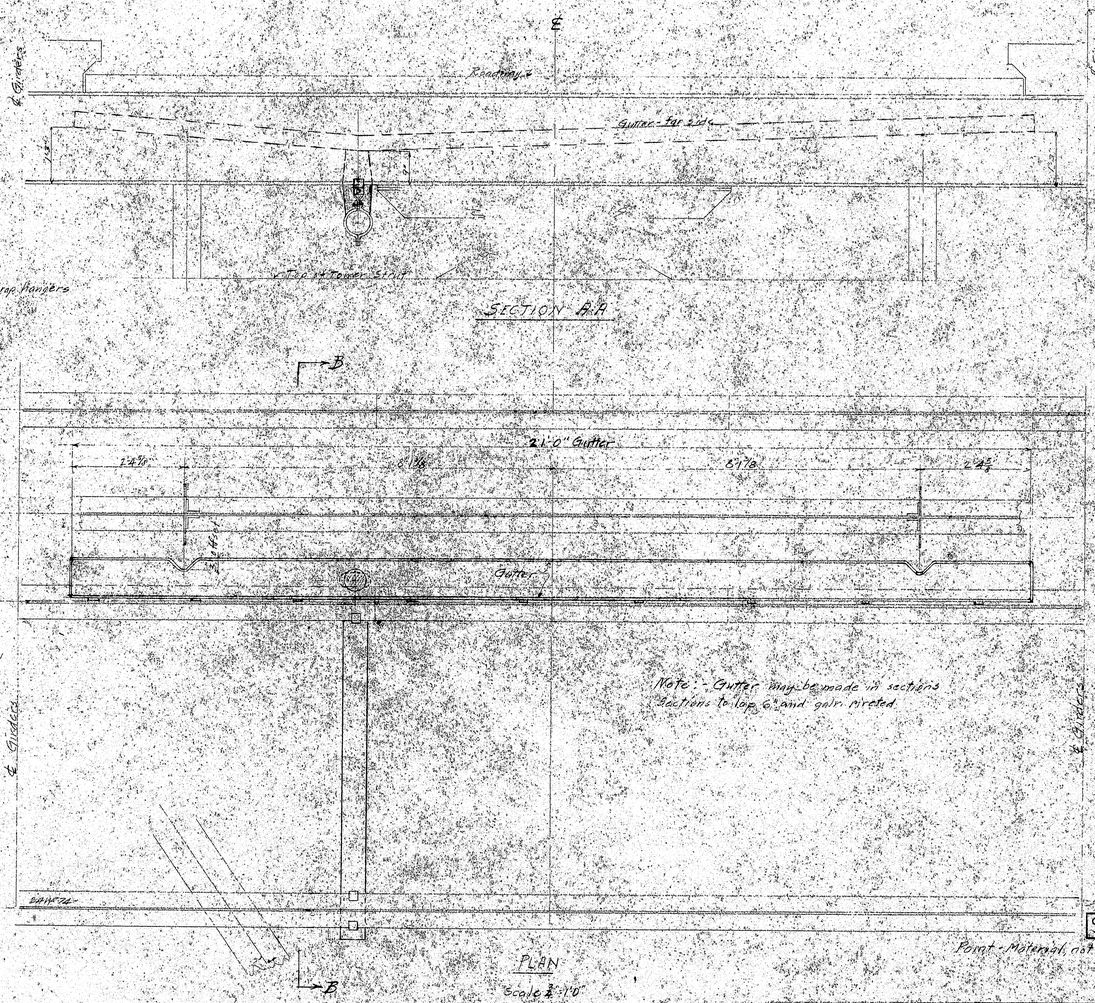

LOCATION KEY
For location of additional Stays, See Sht. R.S. 4207-1
Weld flush with rim of shackle after stay is adjusted.
P.P. 13
Detail revised for additional Stays. Similar to P.P. 21, Sht. R.S. 3310-S122
Normal conditions = 10° Stress in rope - Vertical & Sag = 0.680'
Measured along rope
STAY "D"
STAY "E"
Open Bridge Socket
Take up Threaded
Normal condition = 70°F Stress in rope - Vertical & Sag = 1.83'
P.P. 11
Detail revised for additional Stays. Similar to P.P. 23, Sht. R.S. 3310-S122
Continuous Seal Weld
Web Fill 7 x 3/8
Web Plate 7 x 3/4
Weld
Gir SG 18"
Gir SG 20"
Drill 7 Holes in Stiff'r
Drill 7 holes in Stiffner
Drill 20 new holes through
Roadway - 6 Sq. Grade Up
Tap 6"
Cut covering plate on this line and remove
Side Span
Main Span
SECTION A-A
REQUIRED
4 ROPE STAYS "D" WITH CONNECTIONS
4 ROPE STAYS "E" WITH CONNECTIONS
16 SPRING RODS
NOTES
RIVETS 7/8"
THE NEW BOLTS TO BE PLACED IN CABLE BANDS SHALL BE OF NICKLE STEEL WITH A MINIMUM ULTIMATE STRENGTH OF 180,000 LBS. PER SQ. IN. AND A MINIMUM YIELD POINT OF 90,000 LBS. PER SQ. IN. THESE BOLTS SHALL NOT BE HEAT TREATED. THEY SHALL BE TIGHTENED TO A TENSION OF NOT LESS THAN 150,000 LBS. PER BOLT.
THE 1" DIAMETER RODS SHALL HAVE A GROSS METALLIC AREA OF NOT LESS THAN 0.842 SQ. IN. AND A MINIMUM ULTIMATE STRENGTH OF 124,000 LBS. THEY SHALL BE MEASURED, CUT AND SOCKETED TO PROVIDE THE LENGTHS SHOWN ON THIS DRAWING, WHEN STRESSED TO 10,000 LBS. PER ROPE. RODS galvanized same as SUSPENDERS.
Paint same as other structural steel. No paint on rope.
Sheet No. 7208-19
P.W.A. PROJECT NO. ME 1010-D
DEER ISLE-SEDGWICK BRIDGE DISTRICT
BRIDGE OVER BOGENDOGS INLET
CABLE STAYS FOR SIDE SPANS
TOMPKINS & STEINMAN ENGINEERS NEW YORK N.Y.
DRAWING NUMBER R.S. 3310 - S 122
JUNE 29, 1937
10-9-38 REVISED TO BUILT
136.8

RS3310-S127





DETAIL OF END DAMS FOR 2" x 3/4" OPENING IN ROADWAY EXP. DETAILS AT CABLE BENTS.
Scale 1 1/2" = 1'-0"



REQUIRED

Gutter, run off pipe, and fittings as required for expansion joint at each of two Main Towers.

Revised 7-5-39. - Added detail of new end dams for roadway expansion at Cable Bents.
10-9-39. - Revised as built.

Sheet No. 7208-20

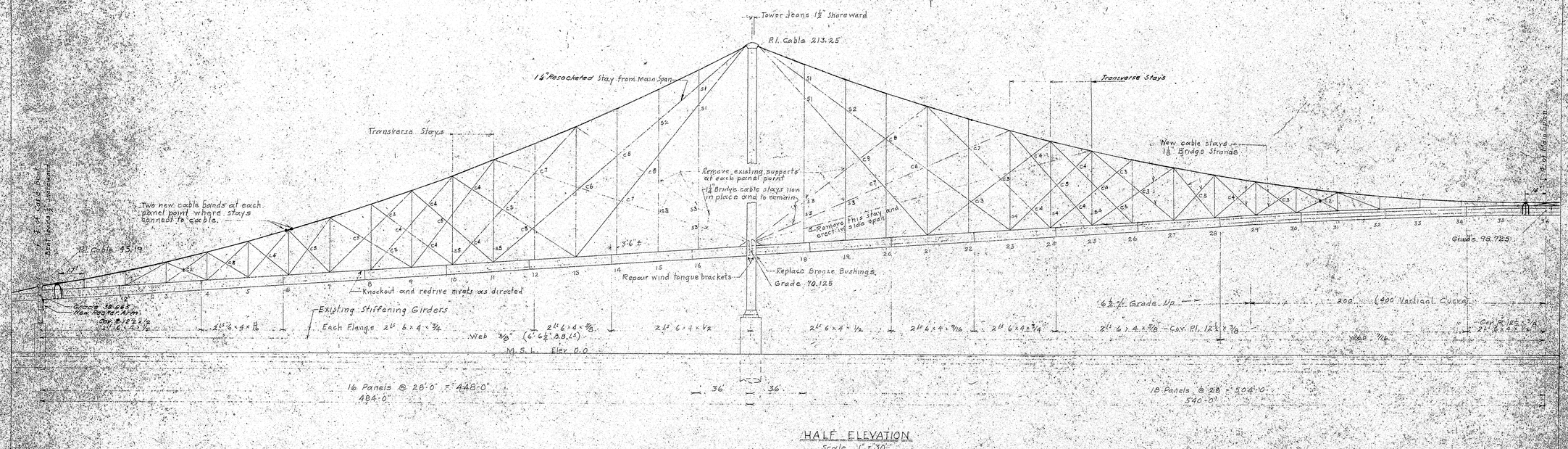
Paint - Material not galvanized, same as Bridge

P.W.A. PROJECT NO. ME 1010 D
DEER ISLE-SEDGWICK BRIDGE DISTRICT
BRIDGE OVER EGGEMOGGIN REACH

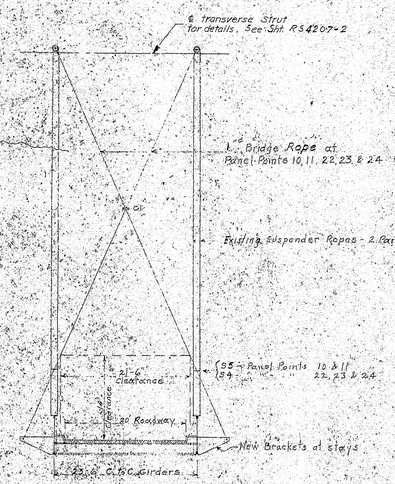
DRAINAGE DETAILS AT MAIN TOWERS

ROBINSON AND STEINMAN
ENGINEERS
NEW YORK CITY

SCALES AS NOTED
DRAWING NUMBER
RS3310-S127



HALF ELEVATION
Scale 1" = 30'



SECTION SHOWING TRANSVERSE STAYS
Scale 1" = 10'

SPECIFIED ORIGINAL ELEVATIONS

PANEL POINT	ELEVATION ℄ MAIN CABLE	ELEVATION SUSP. SOCKET PIN
1	50.381	44.890
2	56.098	46.910
3	62.366	48.530
4	69.180	50.330
5	76.535	52.170
6	84.488	53.990
7	92.990	55.810
8	102.054	57.630
9	111.691	59.450
10	121.892	61.270
11	132.666	63.090
12	144.001	64.910
13	155.918	66.730
14	168.390	68.550
15	181.426	70.370
16	195.019	72.190
18	199.353	76.870
19	189.223	78.690
20	179.657	80.510
21	170.662	82.330
22	162.236	84.150
23	154.385	85.970
24	147.106	87.790
25	140.412	89.610
26	134.298	91.430
27	128.771	93.250
28	123.820	95.070
29	119.457	96.887
30	115.675	98.541
31	112.483	99.940
32	109.870	101.085
33	107.846	101.976
34	106.401	102.612
35	105.540	102.994
36	105.250	103.121

NOTES:-
Existing stays are 1¼" Bridge Cable
New longitudinal stays are to be 1⅛" Strand
New transverse stays are to be 1¼" Bridge Cable
Estimated average dead load of existing bridge is 1200 lbs per linear foot per cable

Sheet No. 7208-21

STATE OF MAINE
STATE HIGHWAY COMMISSION

DEER ISLE-SEDGWICK BRIDGE

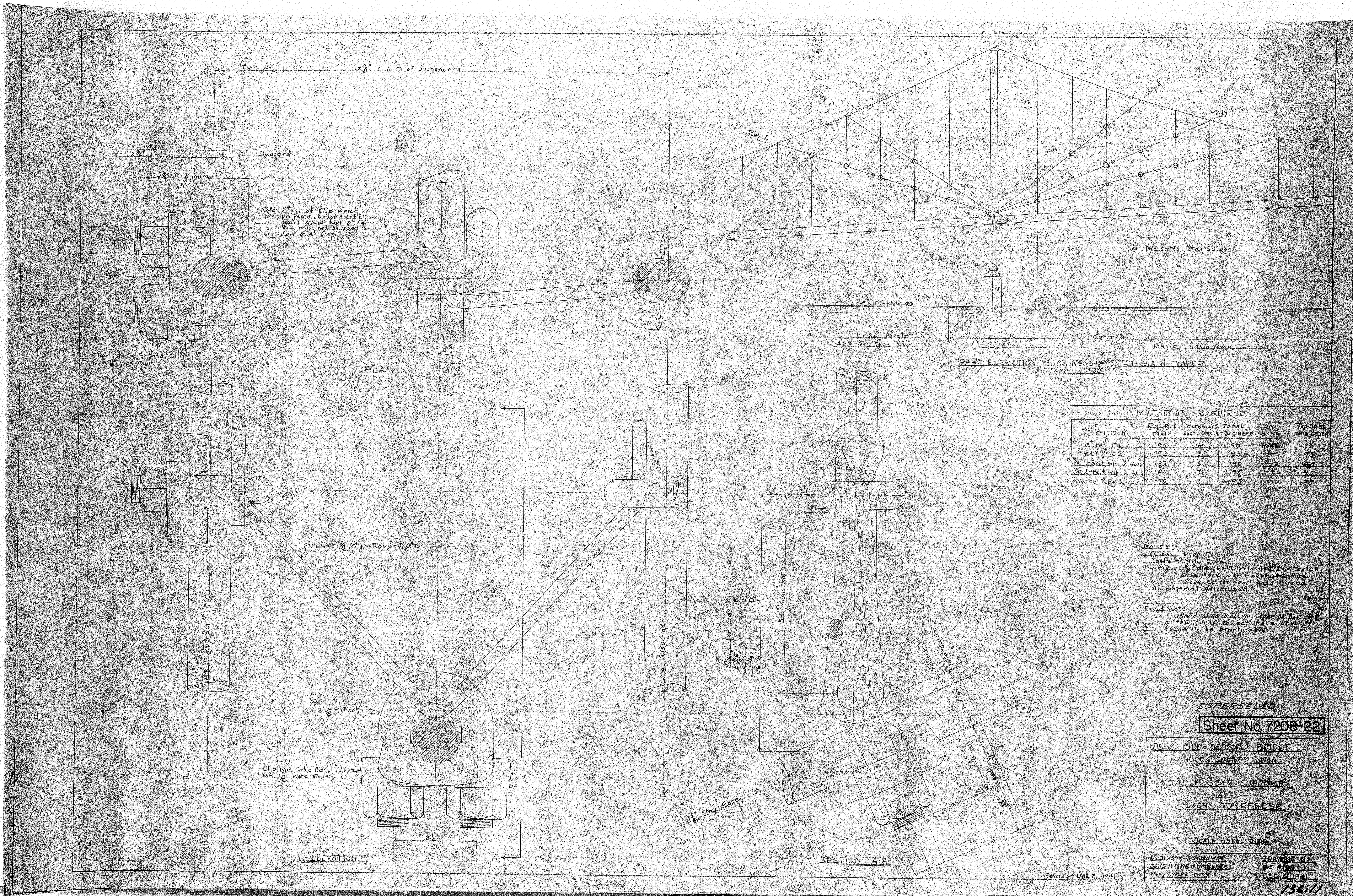
REINFORCEMENT WITH CABLE STAYS

GENERAL PLAN

ROBINSON & STEINMAN
CONSULTING ENGINEERS
NEW YORK, N.Y.

DRAWING NUMBER
RS 4207-1
FEBRUARY 26, 1942

136:10



MATERIAL REQUIRED					
Description	Required Net	Extra for Loss & Surplus	Total Required	On Hand	Required This Order
Clip C1	184	6	190	none	190
Clip C2	92	3	95	—	95
3/4 U-Bolt with 2 Nuts	184	6	190	—	190
7/8 U-Bolt with 2 Nuts	92	3	95	—	95
Wire Rope Slings	92	3	95	—	95

Notes:-
Clips - Drop Forgings
Bolts - Mild Steel
Sling - 3/8" dia. 6x19 Preformed Blue Center Wire Rope with independent Wire Rope Center, both ends served.
All material galvanized.

Field Note:-
Wind sling around upper U-Bolt for a few turns to act as a snub, if found to be practicable.

SUPERSEDED

Sheet No. 7208-22

DEER ISLE - SEDGWICK BRIDGE
HANCOCK COUNTY MAINE

CABLE STAY SUPPORTS
AT
EACH SUSPENDER

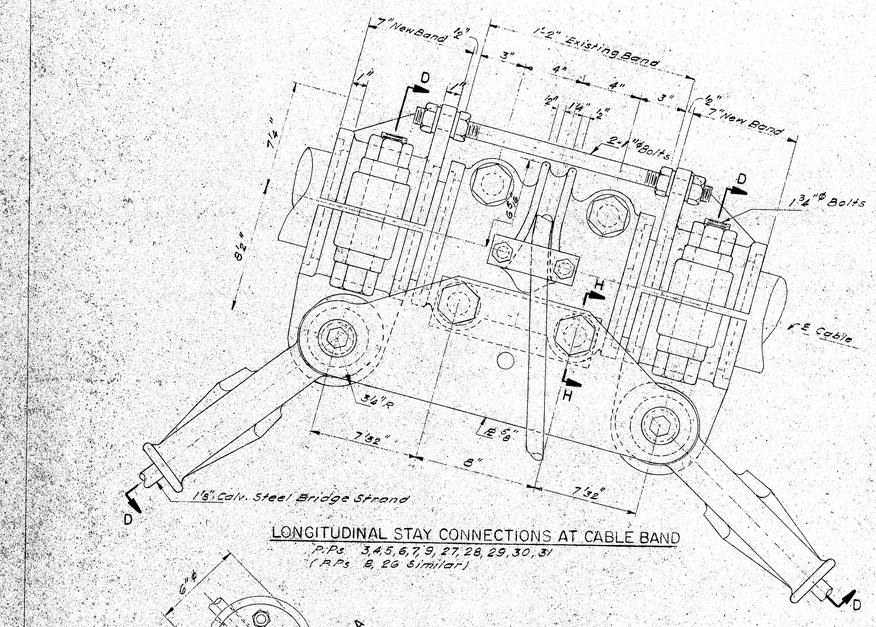
SCALE - FULL SIZE

ROBINSON & STEINMAN
CONSULTING ENGINEERS
NEW YORK CITY

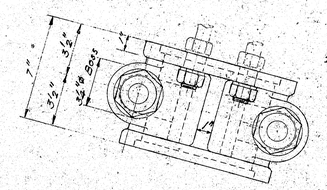
DRAWING NO.
RS 4169-1
DEC. 6, 1941

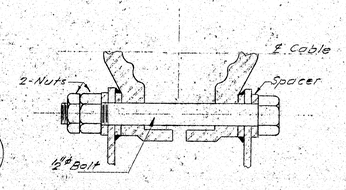
Revised Dec. 31, 1941

136.11

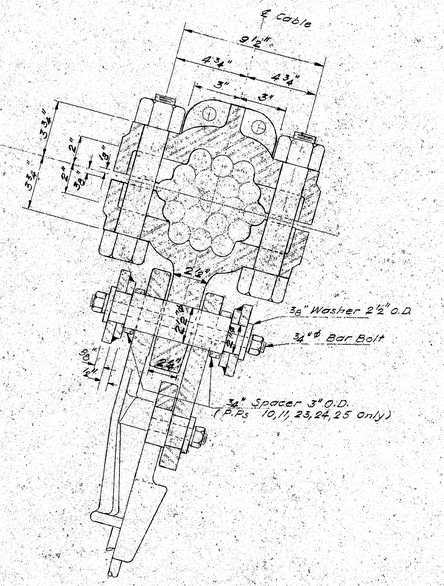


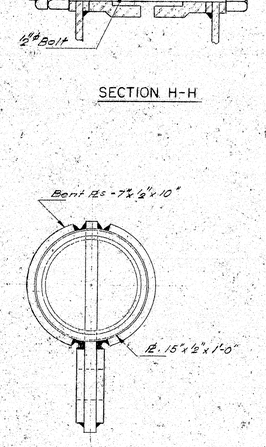
LONGITUDINAL STAY CONNECTIONS AT CABLE BAND
P.Ps. 3,4,5,6,7,9,27,28,29,30,31
(P.Ps 8, 26 Similar)



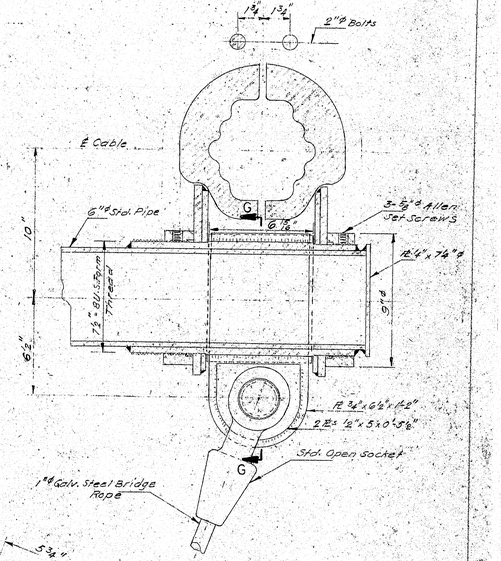


SECTION H-H

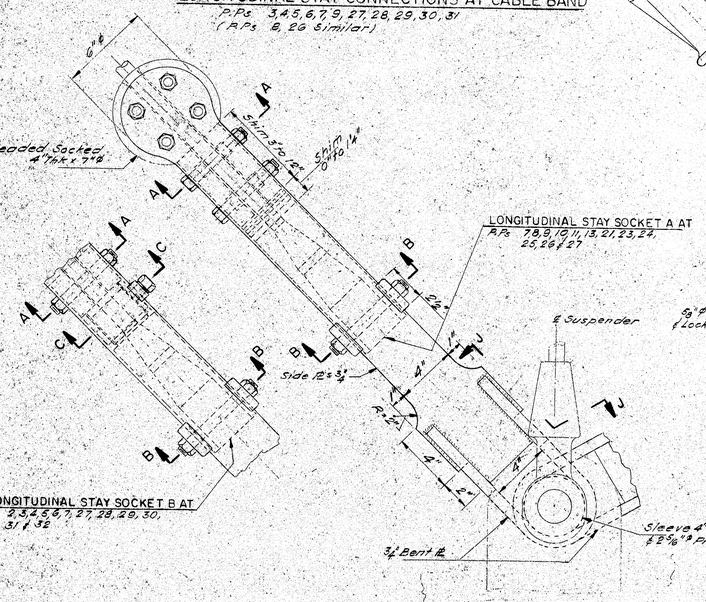




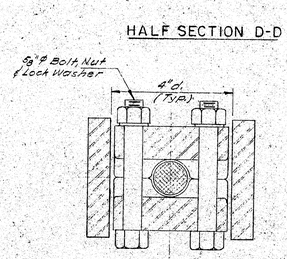
SECTION G-G



SECTION F-F
TRANSVERSE STAY CONNECTION

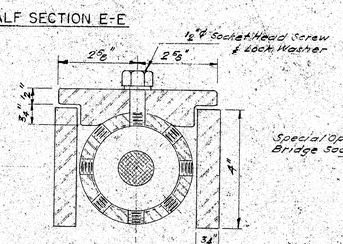


LONGITUDINAL STAY CONNECTIONS AT GIRDER
For Socket details, See Sht RS 4207-3
For Additional Keeper Plate details, see Sht 7204-2



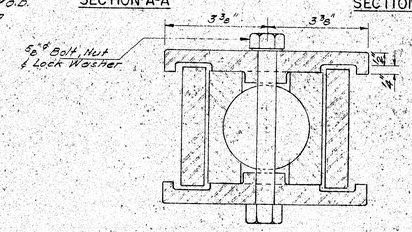
HALF SECTION D-D

SECTION A-A

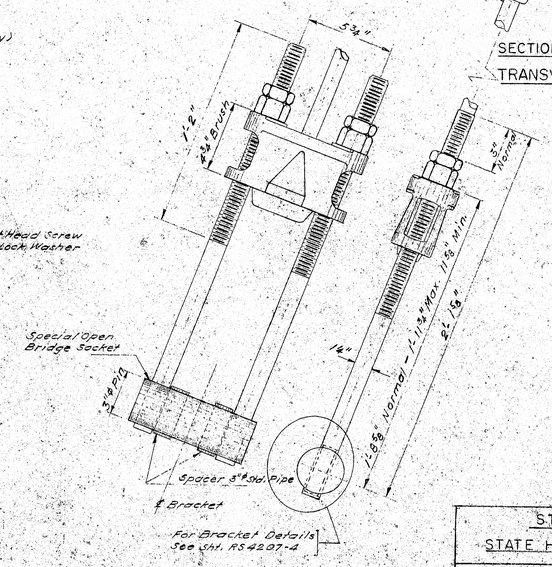


HALF SECTION E-E

SECTION C-C



SECTION B-B
Scale 6" = 1'-0"



For Section J-J see Sheet RS 4207-3
For location of Sections E-E & F-F, See Sheet RS 3510-5122
For Socket details, See Sht. RS 4207-3

Sheet No. 7208-23

STATE OF MAINE
STATE HIGHWAY COMMISSION

DEER ISLE-SEDGWICK BRIDGE
REINFORCEMENT WITH CABLE STAYS

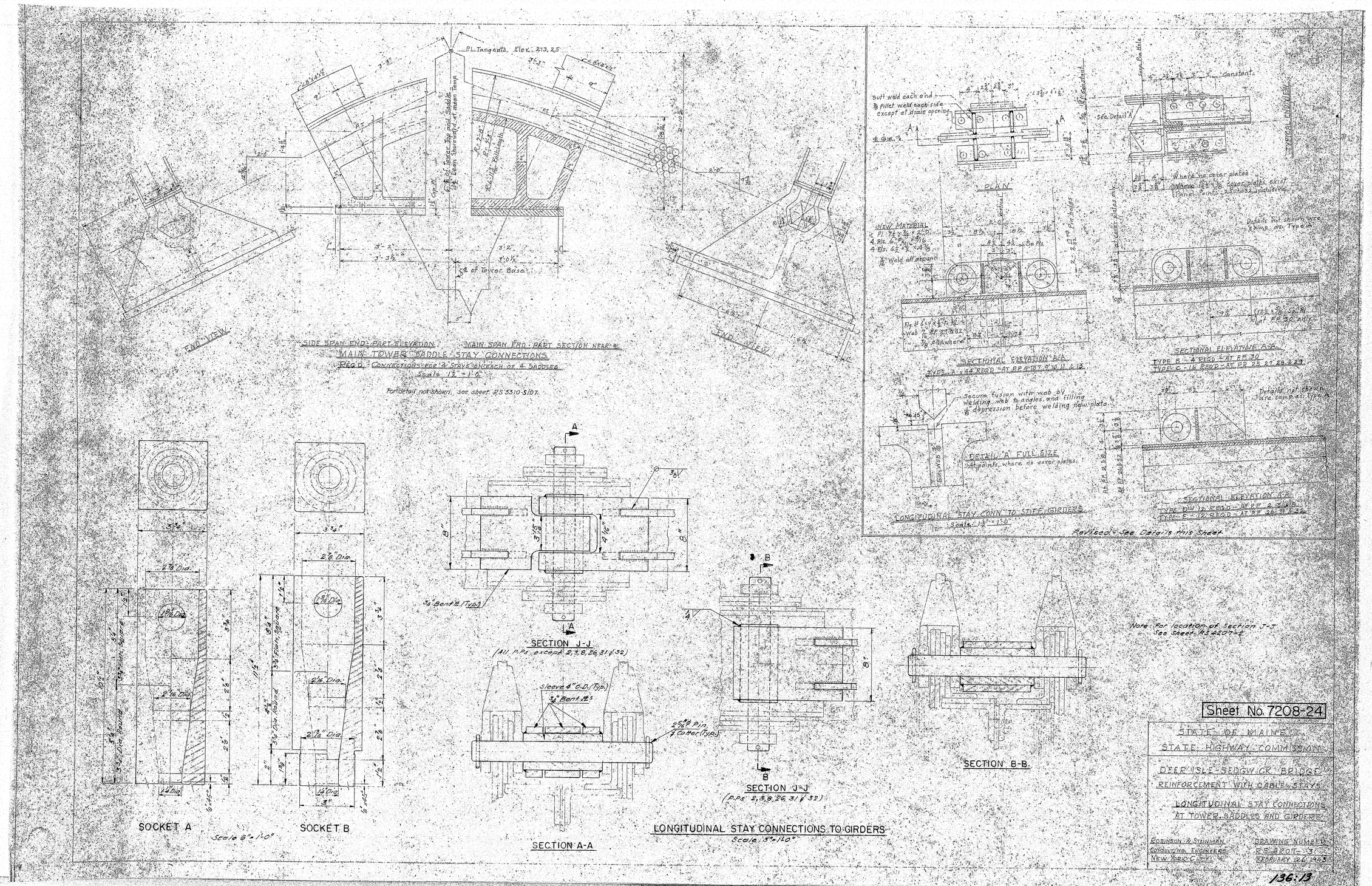
LONGITUDINAL AND TRANSVERSE STAYS
SOCKETS AND CONN. TO MAIN CABLES

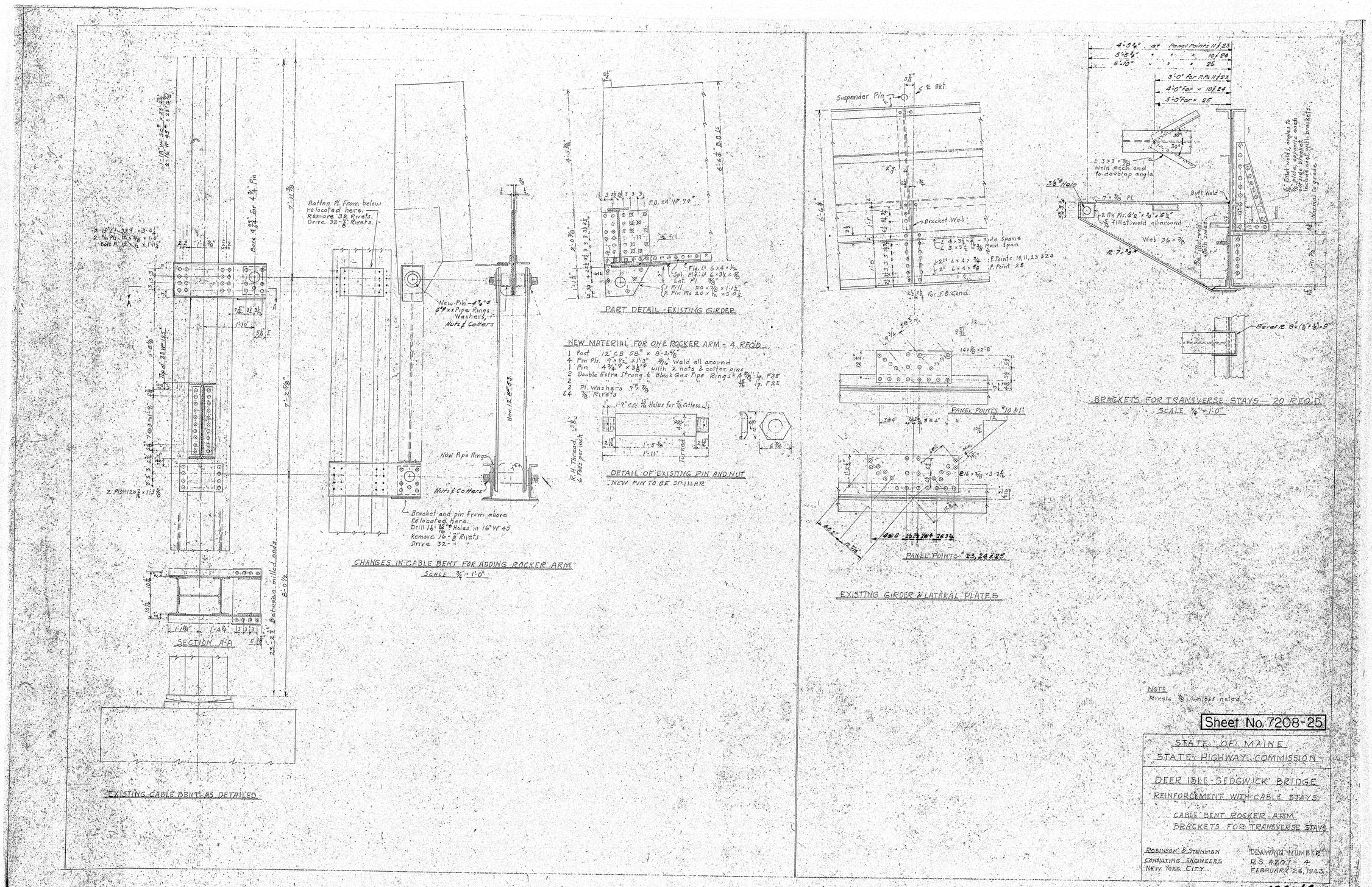
SCALE 3" = 1'-0" & 6" = 1'-0"

STEINMAN, BOYNTON, GRONQUIST & LONDON
CONSULTING ENGINEERS
NEW YORK, N.Y.

DRAWING NUMBER
RS 4207-2
DECEMBER 11, 1972

136:12


SIDE SPAN END: PART ELEVATION
MAIN SPAN END: PART SECTION NEAR ℄
MAIN TOWER SADDLE STAY CONNECTIONS
REQ'D. CONNECTIONS FOR 4 STAYS AT EACH OF 4 SADDLES
Scale 1/2" = 1'-0"
For detail not shown, see sheet RS 5310-S107.
END VIEW
Pl. Tangents Elev. 213.25
℄ of Tower Top and Saddle
℄ Earth Shore Level at mean Temp.
℄ of Tower Base
SECTION J-J
(All P.Ps except 2,3,8,26,31 & 32)
SECTION A-A
SECTION J-J
(P.Ps 2,3,8,26,31 & 32)
LONGITUDINAL STAY CONNECTIONS TO GIRDERS
Scale 3/4" = 1'-0"
SOCKET A
SOCKET B
Scale 3/8" = 1'-0"
SECTION B-B.
Note: For location of Section J-J See Sheet RS 4207-2
PLAN
Butt weld each end
3/8 fillet weld each side except at drain opening
NEW MATERIAL
Weld all around
SECTIONAL ELEVATION A-A
TYPE A - 44 REQ'D - AT RP 4-7-7, 9, 10, 11 & 13
Secure fusion with web by welding web to angles, and filling depression before welding new plate.
DETAIL "A" FULL SIZE
at points where no cover plates
LONGITUDINAL STAY CONN. TO STIFF. GIRDERS
Scale 1/2" = 1'-0"
See Detail "A"
Where no cover plates
Where 1/2 x 3/8 cover plates exist
Paint points 23 thru 28 inclusive
Details not shown are same as Type A
SECTIONAL ELEVATION A-A
TYPE B - 4 REQ'D - AT RP 30
TYPE C - 16 REQ'D - AT RP 25, 27, 28 & 29
Details not shown are same as Type A
SECTIONAL ELEVATION A-A
TYPE D - 12 REQ'D - AT RP 2, 3 & 8
TYPE E - 12 REQ'D - AT RP 26, 31 & 32
Reviewed - See Details this Sheet
Sheet No. 7208-24
STATE OF MAINE
STATE HIGHWAY COMMISSION
DEER ISLE-SEDGWICK BRIDGE
REINFORCEMENT WITH CABLE STAYS
LONGITUDINAL STAY CONNECTIONS AT TOWER, SADDLES AND GIRDERS
ROBINSON & STANMAN
CONSULTING ENGINEERS
NEW YORK CITY
DRAWING NUMBER
RS 4207-3
FEBRUARY 26, 1943
136:13



NOTE
Rivets 7/8" unless noted.

Sheet No. 7208-25

STATE OF MAINE
STATE HIGHWAY COMMISSION

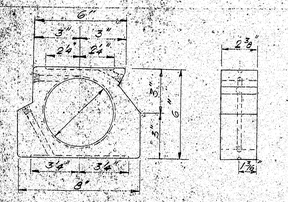
DEER ISLE-SEDGWICK BRIDGE
REINFORCEMENT WITH CABLE STAYS

CABLE BENT ROCKER ARM
BRACKETS FOR TRANSVERSE STAYS

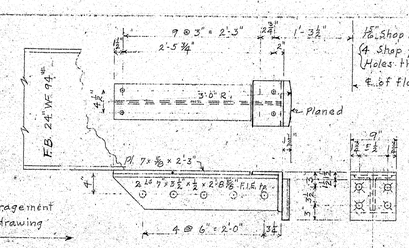
ROBINSON & STEINMAN
CONSULTING ENGINEERS
NEW YORK CITY

DRAWING NUMBER
RS 4207 - 4
FEBRUARY 26, 1943

136:14



PHOSPHOR BRONZE BUSHINGS - 8 Req'd.
FOR MAIN SPAN GIRDER EXPANSION BEARINGS.
Scale 3" = 1'-0"

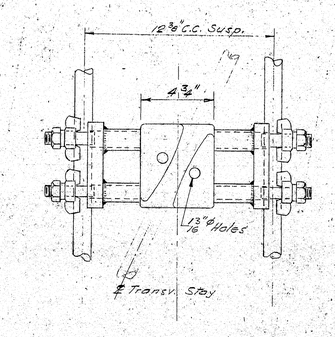


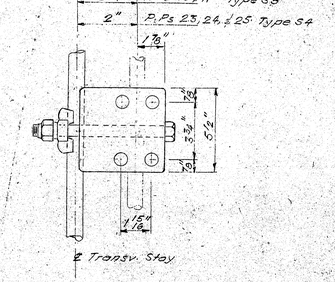
For location and general arrangement at expansion joints, see old drawing No. RS 3310-S106.

1⅝" Shop Holes in floor beam Original Detail
(4 Shop 1⅝" Holes in Bracket - " " "
Holes then drilled 1⅝" to fit floorbeam in field.
℄ of floor beam and 24" C.B. 74" tongue.

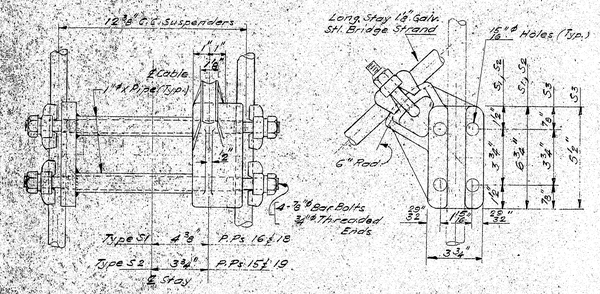
New material for One Bracket
One L 8×6×5/16×0'-9"
One Plate 8×1½×0'-9"
4 Rivets
Knock out 4 rivets, remove existing angle and plate, adjust new angle and plate for .01' clearance on tongue, with bridge centered transversely, drill 4 holes in new angle, drive 4 rivets and weld new angle to old 7×3½×½ angle to develop full bearing.

ANGLE AND PLATE REPLACEMENT AT WIND TONGUE ON MAIN TOWERS
FOR MAIN AND SIDE SPANS - 8 REQ'D.
Scale 1" = 1'-0"

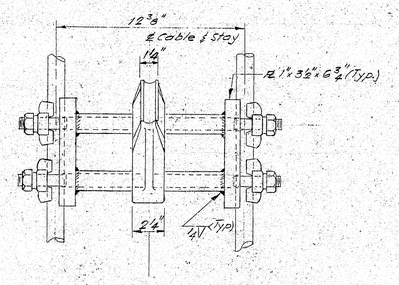




SUPPORTS FOR TRANSVERSE STAYS
Required - 8 Supports - Type S5
12 " " Type S4

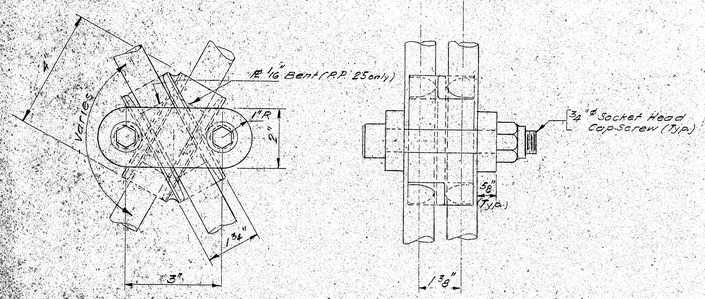


SUPPORTS FOR TOWER STAYS - PANEL POINTS 15, 16, 18 & 19.
Req'd - 16 SUPPORTS - TYPE S1
8 " " S2
NOTE: Wire Rope Clips removed from existing stay supports, shall be used for these supports.

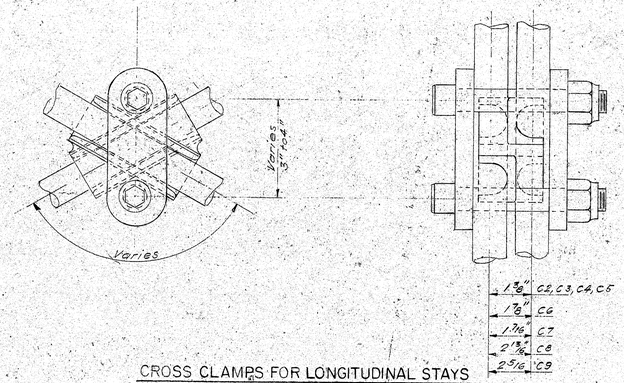


SUPPORTS FOR TOWER STAYS-PPs 15, 16, 18 & 19
Required - 24 Supports - Type S3

Scale 3" = 1'-0"



CROSS CLAMPS FOR TRANSVERSE STAYS
Required - 10 Type C1



CROSS CLAMPS FOR LONGITUDINAL STAYS
Required - 160 Type C2 thru C9.

Scale: 6" = 1'-0"

NOTE:
Supports S1, S2, S3, S4 and S5, and clamps C1 to C9 inclusive shall be galvanized and not painted.

Sheet No. 7208-26

STATE OF MAINE
STATE HIGHWAY COMMISSION

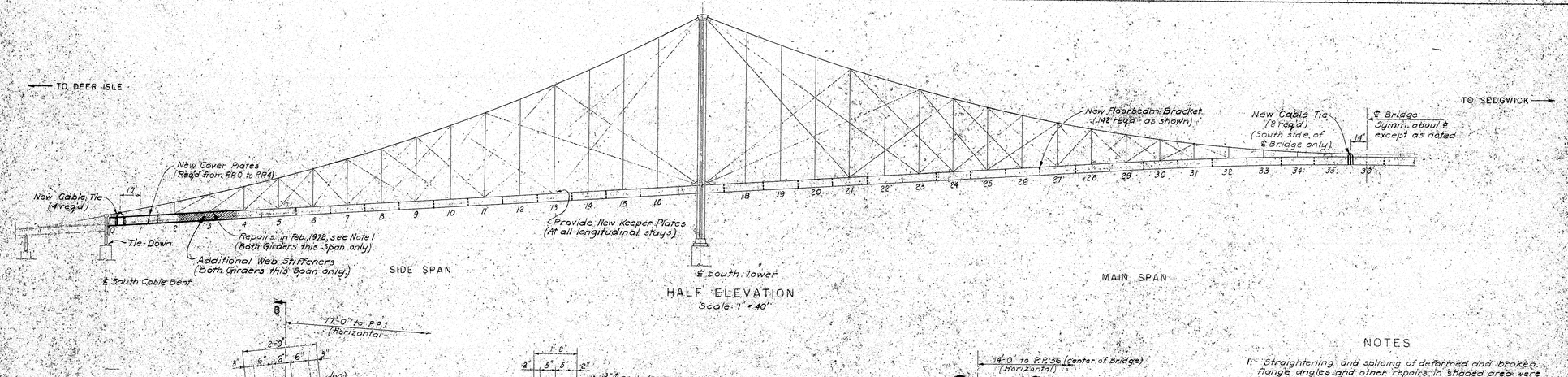
DEER ISLE-SEDGWICK BRIDGE
REINFORCEMENT WITH CABLE STAYS

DETAILS

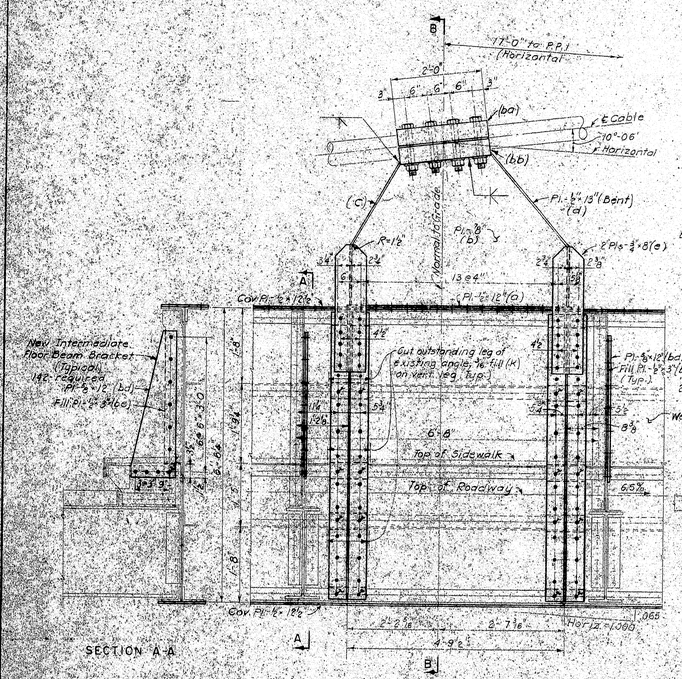
ROBINSON & STEINMAN
CONSULTING ENGINEERS
NEW YORK CITY

DRAWING NUMBER
RS 4207-5
FEBRUARY 26, 1943

136:15

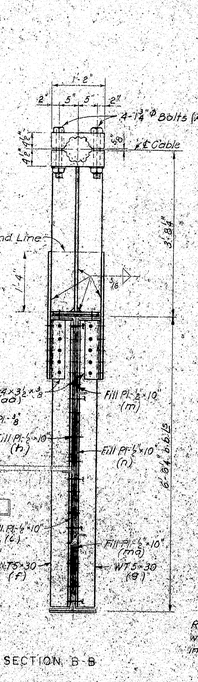


HALF ELEVATION
Scale: 1" = 40'

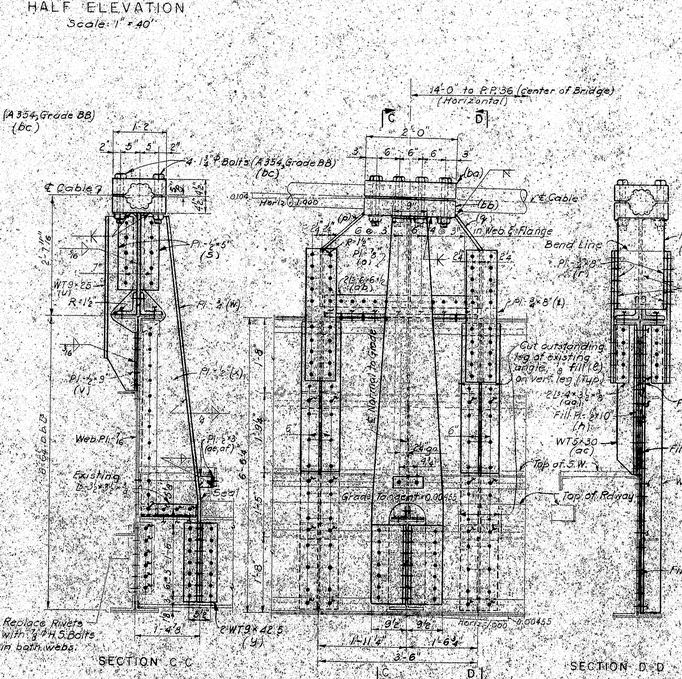


SECTION A-A

ELEVATION
SIDE SPAN CABLE TIE
Scale: ¾" = 1'-0"



SECTION B-B



SECTION C-C

ELEVATION
MAIN SPAN CABLE TIE
Scale: ¾" = 1'-0"

SECTION D-D

NOTES

1. Straightening and splicing of deformed and broken flange angles and other repairs in shaded area were done in February, 1972.
2. All new material shall be A36 steel unless otherwise noted.
3. Use A325 - ⅞" Φ bolts in 15/16" Φ holes except as noted.
4. Use low-hydrogen E7018 electrodes for all welds.
5. Prepare and weld material in the shop as far as practicable. Drill bolt holes shown ✦ (full size).
6. In the field, remove rivets where shown ✦; place new material and drill through ✦ and ✦ holes; complete bolting.
7. Do not weld when temperature is less than 20° F.
8. Finish cable clamp flutes to roughness rating between 500 and 400 micro-inches. Cut parallel and at right angles to cable axis.
9. All dimensions shall be checked in the field as necessary before fabrication of new steel.
10. ✦ Indicates new holes.
11. ✦ Indicates existing holes.

PRIORITIES OF REPAIRS AND IMPROVEMENTS

1 - Install new web stiffeners to reinforce and straighten the web plates.
2 - Install 68 new floor beam brackets in side spans.
3 - Install 16 new top cover plates on stiffening girders from PP0 to PP4 in side spans.
4 - Install new cable bent tie-down at each cable bent column.
5 - Install 4 new cable ties in side spans.
6 - Install 74 new floor beam brackets in main span.
7 - Install 2 new cable ties in main span.
8 - Provide keeper plates for longer shims of diagonal stays.
9 - Install 12 new bottom cover plates on stiffening girders from PP0 to PP4 in side spans.
10 - For details and bill of material see Sheet 4.

Sheet No. 7208-27

STATE HIGHWAY COMMISSION
BRIDGE DIVISION AUGUSTA, MAINE

DEER ISLE - SEDGWICK BRIDGE
OVER
EGGEMOGGIN REACH
FROM LITTLE DEER ISLE TO SEDGWICK

REPAIRS AND IMPROVEMENTS OF SUSPENDED SPANS

ELEVATION AND CABLE TIES

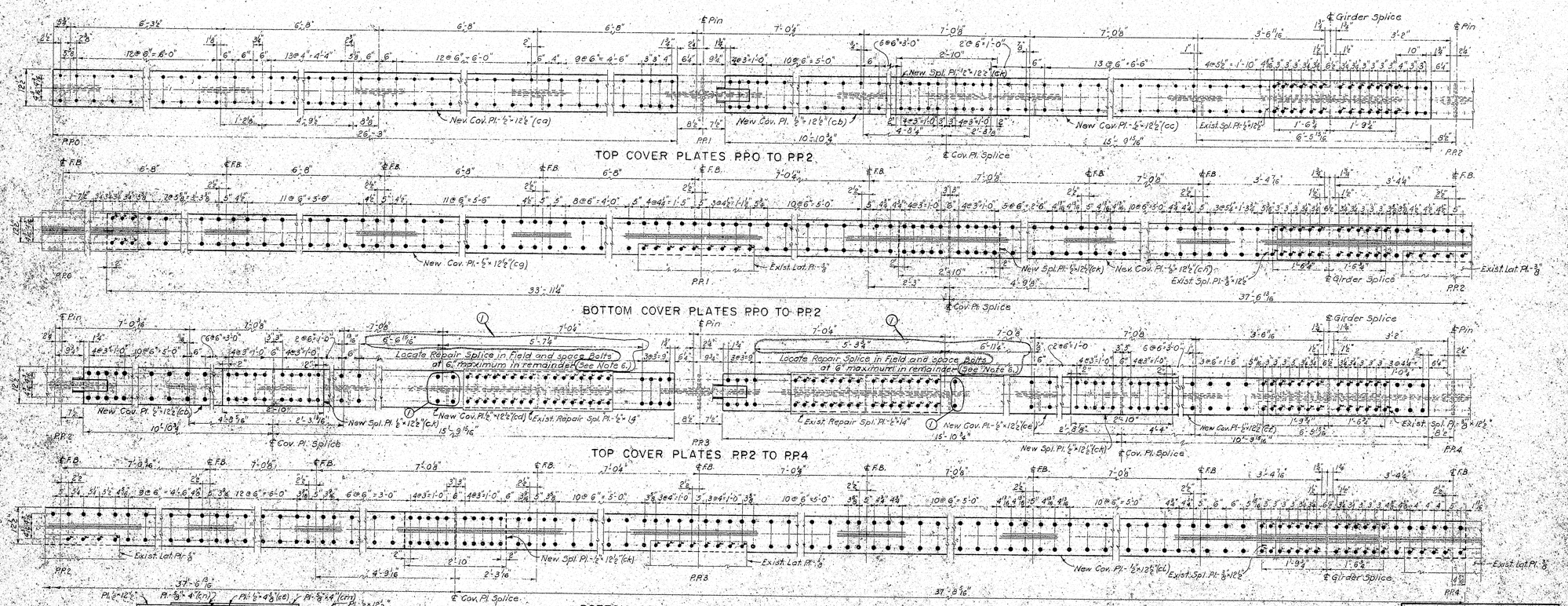
STEINMAN, BOYNTON, GRONQUIST & LONDON
CONSULTING ENGINEERS
NEW YORK, N.Y.

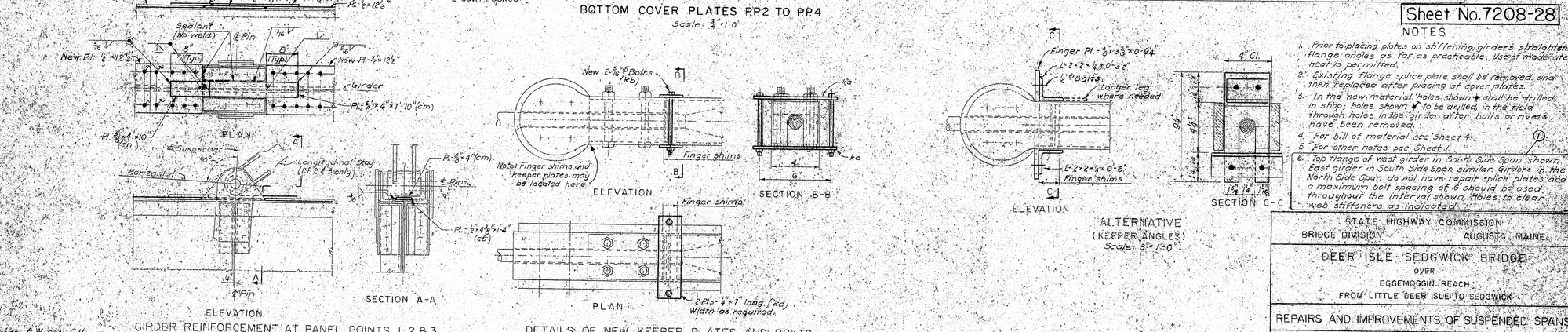
SCALE: As noted
DATE: May 19, 1972
SHEET: 7208A

Design: G.V. Ckd: A.M.
Drawn: R.T. G.V.
Engineer in Charge

136.16

touraine paints ★ TRUFLEX ★ SILKY ★ TRIPLE WHITE ★ DYPLEX





Sheet No. 7208-28

NOTES

1. Prior to placing plates on stiffening girders straighten flange angles as far as practicable. Use of moderate heat is permitted.
2. Existing flange splice plate shall be removed, and then replaced after placing of cover plates.
3. In the new material, holes shown ✚ shall be drilled in shop; holes shown ▼ to be drilled in the field through holes in the girder after bolts or rivets have been removed.
4. For bill of material see Sheet 4.
5. For other notes see Sheet 1.
6. Top flange of west girder in South Side Span shown. East girder in South Side Span similar. Girders in the North Side Span do not have repair splice plates and a maximum bolt spacing of 6" should be used throughout the interval shown. Holes to clear web stiffeners as indicated.

Revision	By	Ckd	Date
1	G.U.	G.A.	3-22-72

Design: A.W. Ckd: G.U.
Drawn: R.T. S.S.
H. Arango
Engineer in Charge

STATE HIGHWAY COMMISSION
BRIDGE DIVISION AUGUSTA, MAINE

DEER ISLE - SEDGWICK BRIDGE
OVER
EGGEMOGGIN REACH
FROM LITTLE DEER ISLE TO SEDGWICK

REPAIRS AND IMPROVEMENTS OF SUSPENDED SPANS

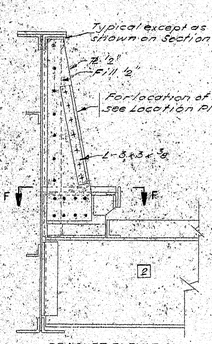
STIFFENING GIRDER COVER PLATES

STEINMAN, BOYNTON, GRONQUIST & LONDON
CONSULTING ENGINEERS
NEW YORK, N.Y.

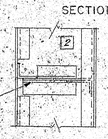
SCALE: As noted
DATE: May 19, 1972
SHEET: 7208-2

736-77

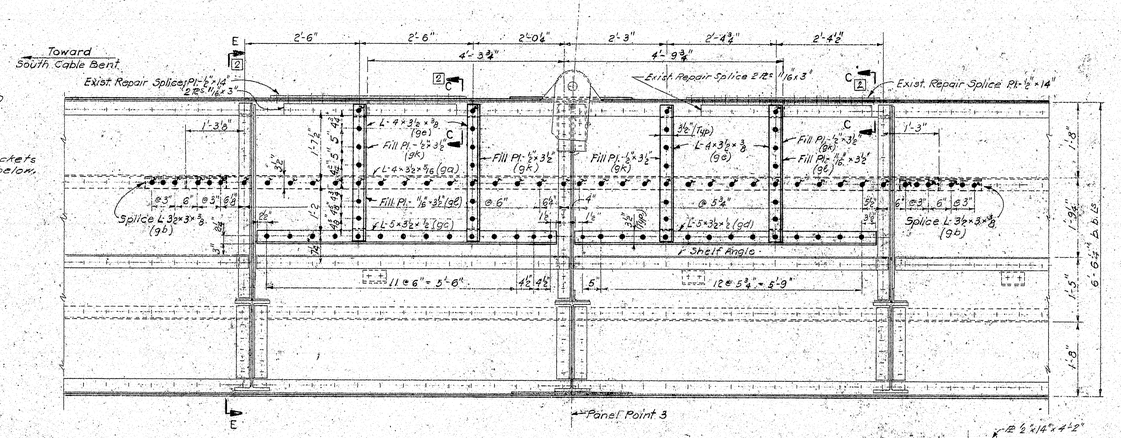
touraine paints TRUFLEY ★ SILKY ★ TRIPLE WHITE ★ RYDLEY



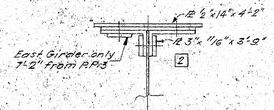
BRACKET ELEVATION
SECTION E-E



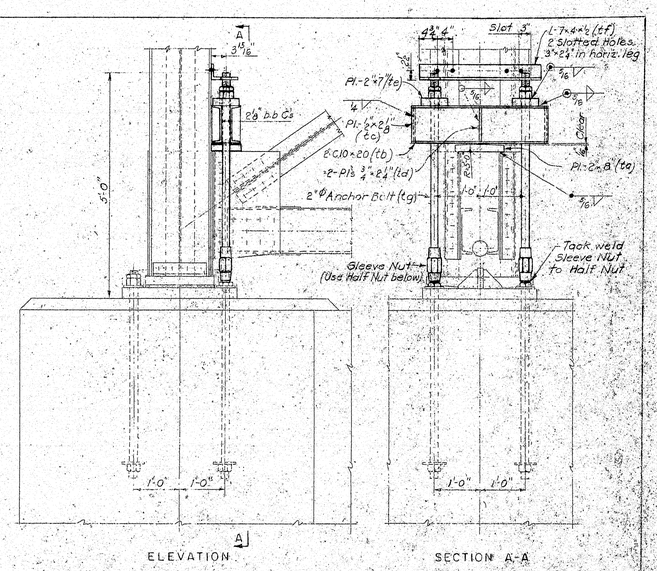
SECTION F-F
Scale ¾" = 1'-0"



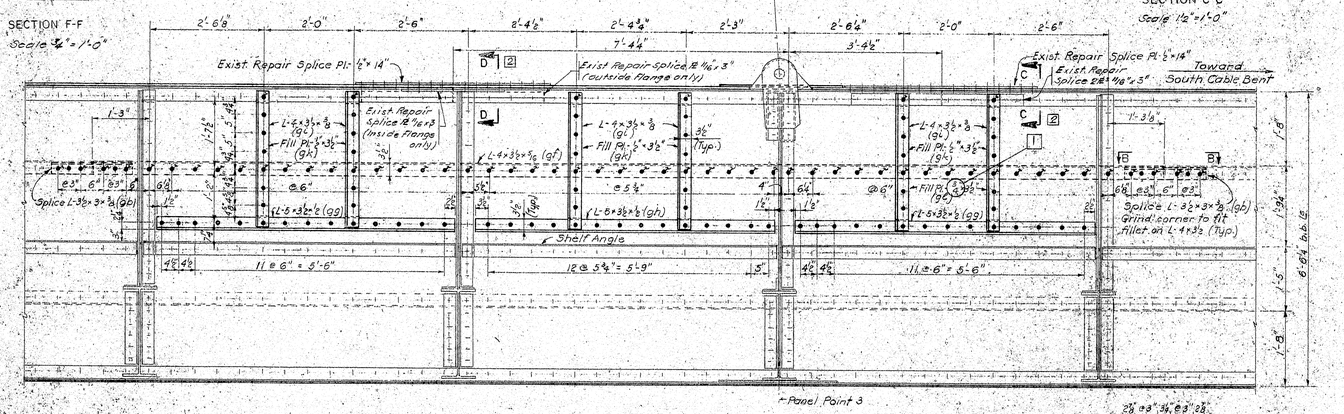
WEST STIFFENING GIRDER
Scale: ¾" = 1'-0"



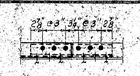
SECTION C-C
Scale 1/2" = 1'-0"



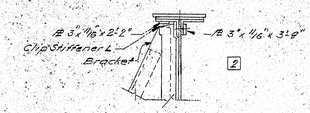
CABLE BENT TIE-DOWN
Scale ¾" = 1'-0"



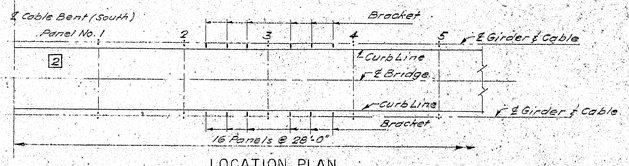
EAST STIFFENING GIRDER
Scale: ¾" = 1'-0"



SECTION B-B
(Typical)



SECTION D-D
Not to scale



LOCATION PLAN
Scale 1" = 20'

NOTES:

1. In the new material holes shown ✦ shall be drilled in shop; holes shown ✱ to be drilled in the field through holes in the girder after rivets have been removed.
2. Holes in girder shown ✦ shall be drilled using holes in the new material as a template.
3. For other notes see Sheet 1.
4. Straighten shelf angle in place or remove and straighten if necessary.
5. For bill of material see Sheet 4.

Sheet No. 7208-29

Revision	By	Ckd	Date
2	A.C.	S.G.	12-14-72
1	R.T.	G.A.	6-20-72

STATE HIGHWAY COMMISSION
BRIDGE DIVISION — AUGUSTA, MAINE

DEER ISLE - SEDGWICK BRIDGE
OVER
EGGEMOGGIN REACH
FROM LITTLE DEER ISLE TO SEDGWICK

REPAIRS AND IMPROVEMENTS OF SUSPENDED SPANS

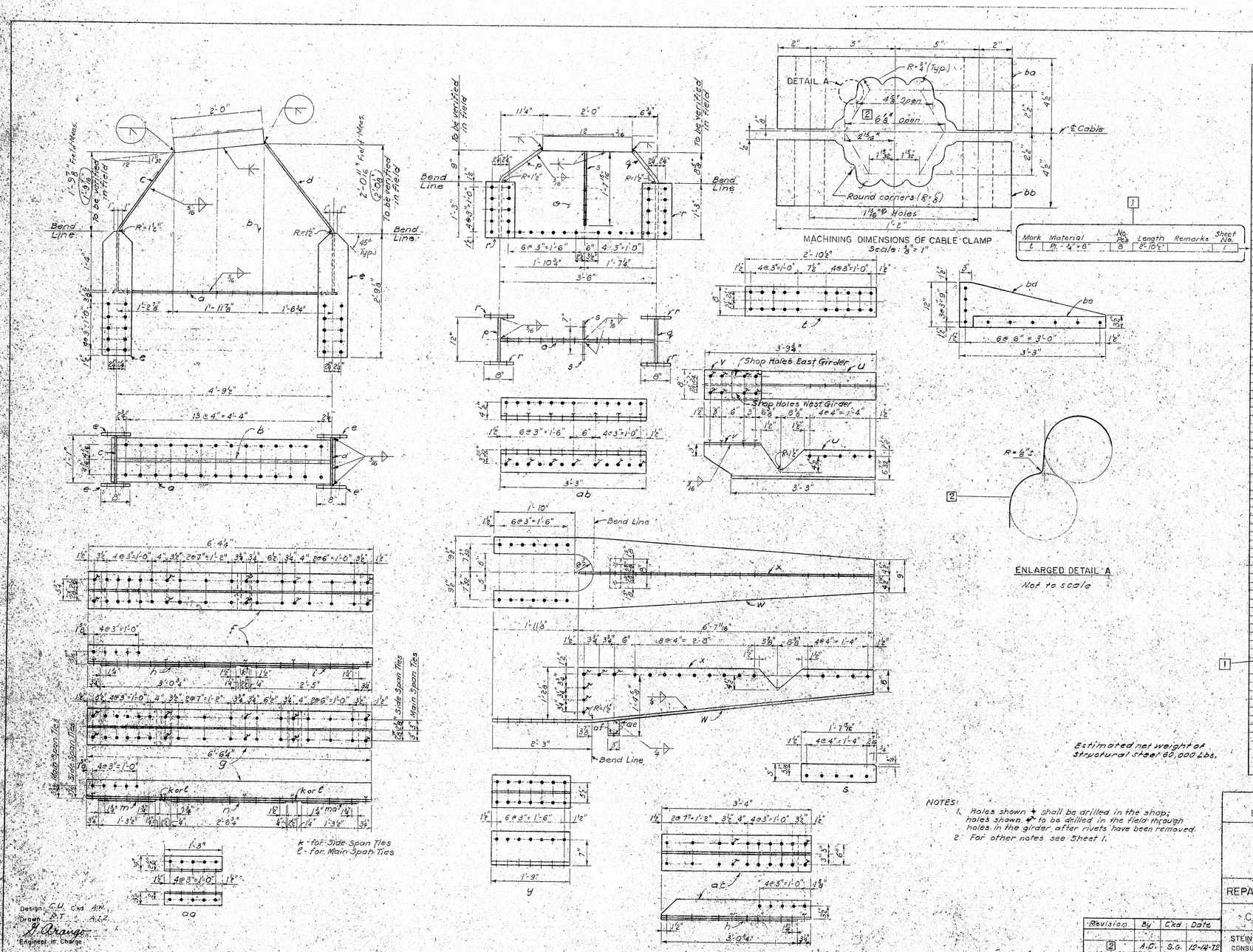
REINFORCEMENT OF STIFFENING GIRDERS
CABLE BENT TIE-DOWN

STEINMAN, BOYNTON, GRONQUIST & LONDON
CONSULTING ENGINEERS
NEW YORK, N.Y.

SCALE: As noted
DATE: May 9, 1972
SHEET: 7204-3

Design C.U. Chd A.T.Z.
Drawn R.T. C.U.
J. Arango
Engineer in Charge

136.18



Estimated net weight of structural steel 60,000 Lbs.

NOTES:

1. Holes shown ✦ shall be drilled in the shop; holes shown ✦ to be drilled in the field through holes in the girder after rivets have been removed.
2. For other notes see Sheet 1.

BILL OF MATERIAL

Mark	Material	No. Pcs	Length	Remarks	Sheet No.
a	Pl.-1/2" × 18"	4	5'-0"		1
b	Pl.-7/8" × 40 1/8"	4	4'-9"	Dim. to be verified in field	1
c	Pl.-1/2" × 13" (Bent)	4	3'-6"		1
d	Pl.-1/2" × 13" (Bent)	4	3'-11"		1
e	Pl.-3/4" × 8"	16	2'-2 1/2"		1
f	WT 5 × 30	8	6'-4 1/2"		1
h	Fill Pl. 1/2" × 10"	8	3'-0 3/4"		1
i	" Pl. 1/2" × 10"	8	2'-5"		1
g	WT 5 × 30	8	6'-4 1/2"		1
m	Fill Pl.-1/2" × 10"	8	1'-3 1/2"		1
n	" Pl.-1/2" × 10"	8	2'-5 1/2"		1
ma	" Pl.-1/2" × 10"	8	1'-3 1/2"		1
k	" Pl.-3/8" × 2 1/2"	24	0'-10"		1
aa	L-4 × 3 1/2 × 3/8	32	1'-3"		1
o	Pl.-1/2" × 21 1/8	2	3'-5 1/8"	Dim. to be verified in field	1
p	Pl.-3/4" × 12" (Bent)	2	2'-5"		1
q	Pl.-3/4" × 12" (Bent)	2	2'-2"		1
r	Pl.-3/4" × 8"	8	1'-3"		1
s	Pl.-1/2" × 5"	4	1'-7 15/16"		1
ab	L-6 × 6 × 1/2	4	3'-3"		1
u	WT 9 × 25	2	3'-9 1/2"		1
v	Pl.-1/2" × 8"	2	1'-3"		1
w	Pl.-3/4" × 19" (Bent)	2	8'-7"		1
x	Pl.-1/2" × 14 1/2"	2	6'-7 11/16"		1
ae	Pl.-1/2" × 3"	2	0'-3 11/16"	(cut to fit)	1
af	Pl.-1/2" × 3"	2	0'-3"		1
y	WT 9 × 42.5	4	1'-9"		1
ac	WT 5 × 30	4	3'-4"		1
h	Fill Pl.-1/2" × 10"	4	3'-0 3/4"		1
g	WT 5 × 30	4	6'-4 1/2"		1
m	Fill Pl.-3/8" × 10"	4	1'-3 1/2"		1
n	" Pl.-1/2" × 10"	4	2'-6 3/4"		1
ma	" Pl.-1/2" × 10"	4	1'-3 1/2"		1
ℓ	" Pl.-1/2" × 2 1/2"	8	0'-10"		1
aa	L-4 × 3 1/2 × 3/8	16	1'-3"		1
ba	Pl. 4 3/8" × 14"	6	2'-0"		1
bb	Pl. 4" × 14"	6	2'-0"		1
bc	1 3/8" Ø Bolt	48	1'-0"	A354, Grade BD	1
bd	Pl. 5/8" × 12"	142	3'-3"	Cut to fit	1
be	Fill Pl. 1/2" × 3"	142	2'-11 5/8"		1
ca	Pl.-1/2" × 12 1/2"	4	26'-3"		2
cb	" "	4	10'-10 3/8"		2
cc	" "	4	15'-9 7/8"		2
cd	" "	4	18'-9 9/16"		2
ce	" "	4	18'-10 3/8"		2
cf	" "	4	18'-9 9/16"		2
cg	" "	4	33'-1 1/8"		2
ch	" "	4	37'-8 3/16"		2
ci	" "	4	37'-8 3/16"		2
cj	Spl. Pl. 1/2" × 12 1/2"	20	24'-10"		2
ck	Pl. 1/2" × 4 1/2"	12	1'-4"		2
cm	Pl. 3/4" × 4"	12	1'-10"		2
cn	Pl. 3/4" × 4"	12	0'-10"		2
ga	L-4 × 3 1/2 × 5/16	1	16'-6 3/4"		3
gb	Spl. L-3 1/2 × 3 × 3/8	4	1'-9"		1
gc	L-3 × 3 1/2 × 1/2	1	6'-7"		1
gd	L-3 × 3 1/2 × 1/2	1	6'-7"		1
ge	L-4 × 3 1/2 × 3/8	4	3'-0 3/4"		1
gf	L-4 × 3 1/2 × 5/16	1	23'-6 1/2"		1
gg	L-5 × 3 1/2 × 1/2	2	6'-7"		1
gh	L-5 × 3 1/2 × 1/2	1	6'-7"		1
gi	L-4 × 3 1/2 × 3/8	6	3'-0 3/4"		1
gk	Fill Pl.-3/8 × 3 1/2"	10	2'-6 1/4"		1
gl	Fill Pl. 3/8 × 3 1/2"	4	2'-9 1/4"		3
ta	Pl.-2" × 8"	14	11'-1"		3
tb	C10 × 20	8	3'-0"		3
tc	Pl. 1/2" × 2 1/2"	8	0'-10"		3
td	Pl. 3/8" × 2 1/2"	8	0'-9 1/2"	Cut to fit	3
te	Pl.-2" × 7"	8	0'-7"		3
tf	L-3 × 4 × 1/2	4	2'-8"		3
tg	2" Anchor Bolt	8	4'-4 1/2"	With hexagon nut, half nut and sleeve nut	3
ka	Pl.-1/4" × 2"	3	0'-7"	Width of Plate and No. of Rivets to be determined in field. A325	2
ka	Pl.-1/4" × 3"	3	0'-7"		2
ka	Pl.-1/4" × 4"	3	0'-7"		2
ka	5/16" Ø Bolt	30	0'-3 1/2"		2
ka	3/4" H.S. Bolts	1000			2

Sheet No. 7208-30

Revision	By	Ckd	Date
2	A.G.	S.G.	12-14-72
1	K.T.	G.A.	6-20-72

STATE HIGHWAY COMMISSION
BRIDGE DIVISION AUGUSTA, MAINE

DEER ISLE - SEDGWICK BRIDGE
OVER
EGGEMOGGIN REACH
FROM LITTLE DEER ISLE TO SEDGWICK

REPAIRS AND IMPROVEMENTS OF SUSPENDED SPANS

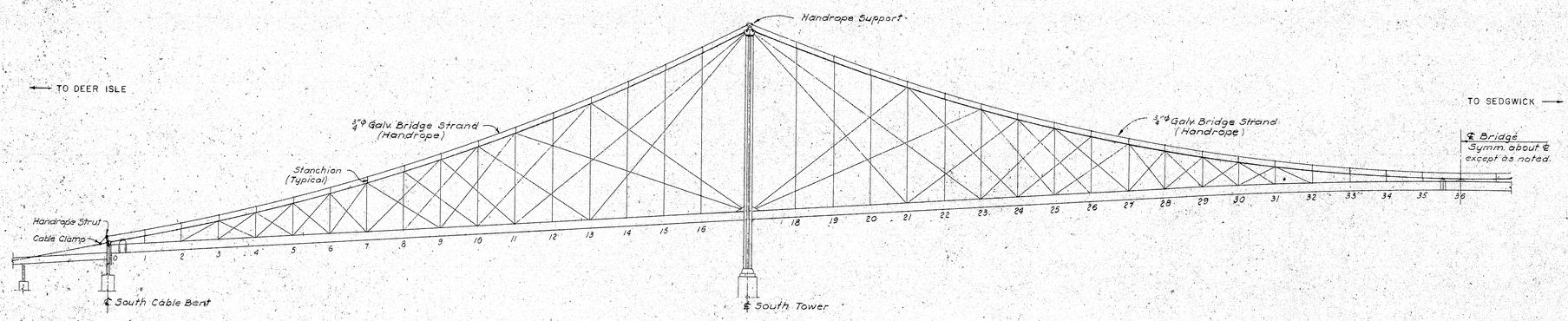
CABLE TIE DETAILS & BILL OF MATERIAL

STEINMAN, BOYNTON, GRONQUIST & LONDON
CONSULTING ENGINEERS
NEW YORK, N.Y.

SCALE: 1/10 & 1/2" = 1'-0"
DATE: May 19, 1972
SHEET: 7204-4

Design: G.H. Ckd: A.W.
Drawn: E.T. A.L.Z.
J. Orange
Engineer in Charge

136-19



HALF ELEVATION
Scale: 1" = 40'

Design ..... C'k'd .....
Drawn R.T. " S.G.
L. Arango
Engineer in Charge

Sheet No. 7208-31

STATE HIGHWAY COMMISSION
BRIDGE DIVISION AUGUSTA, MAINE

DEER ISLE - SEDGWICK BRIDGE
OVER
EGGEMOGGIN REACH
FROM LITTLE DEER ISLE TO SEDGWICK

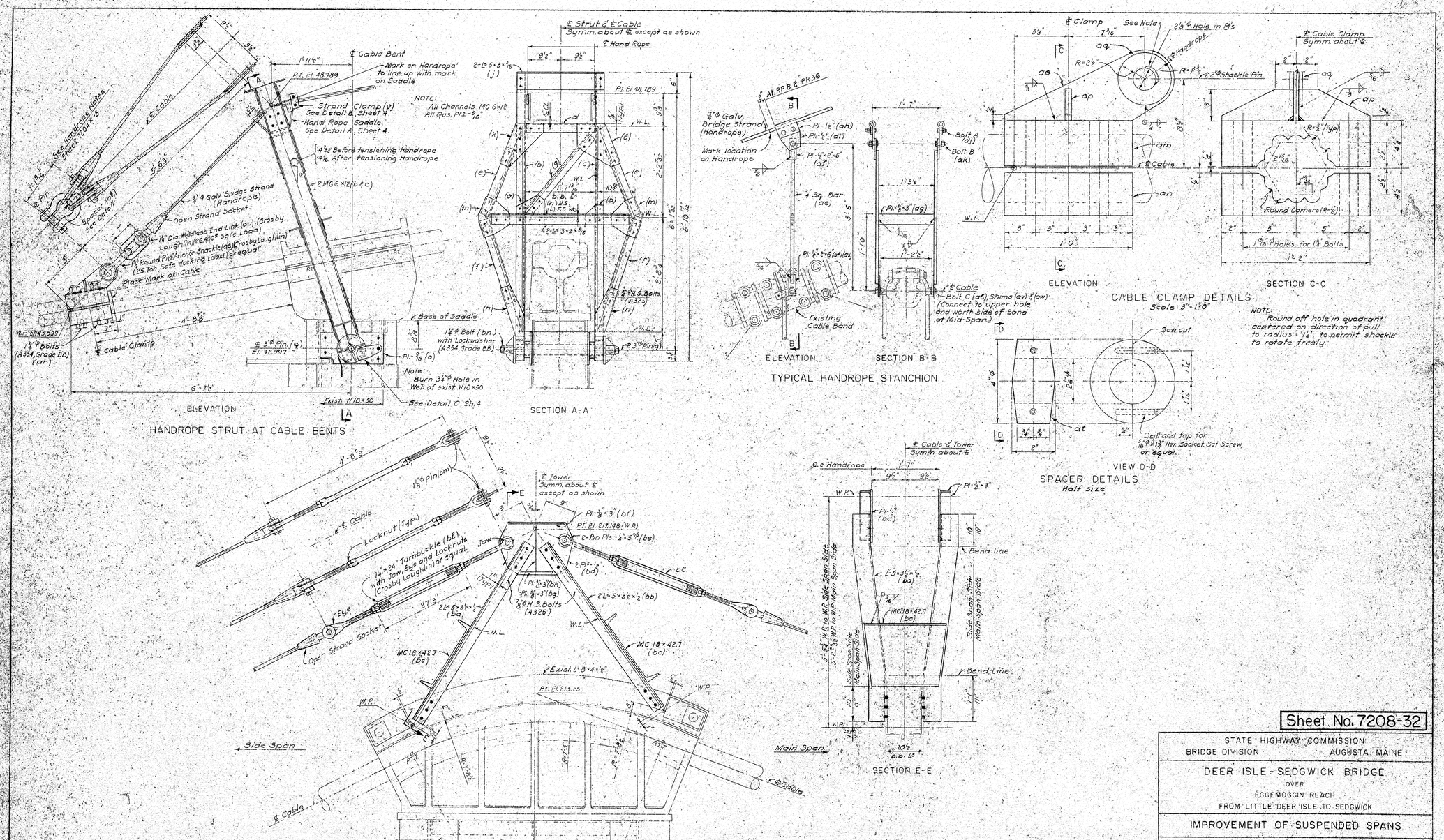
IMPROVEMENT OF SUSPENDED SPANS

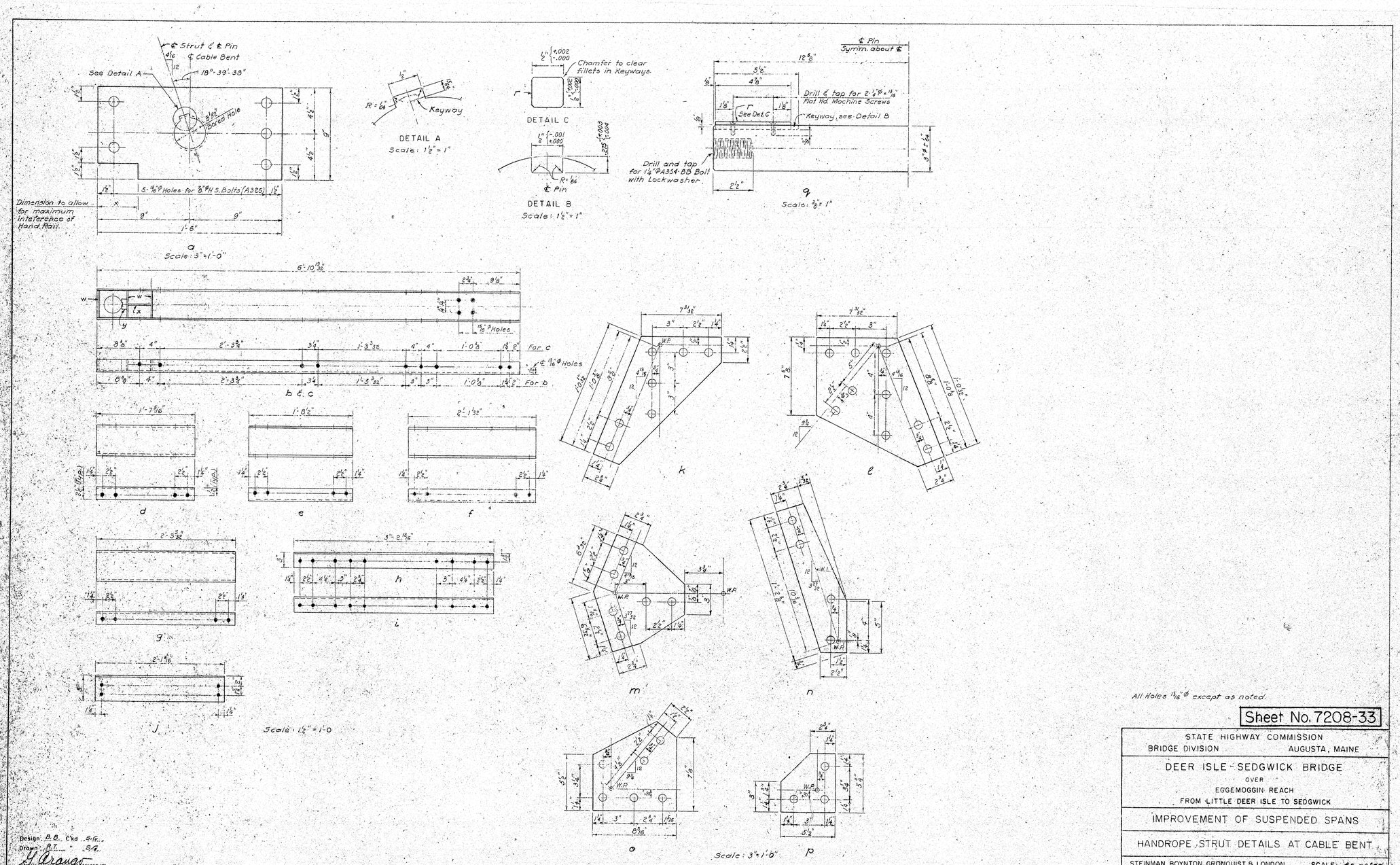
ELEVATION – HANDROPES

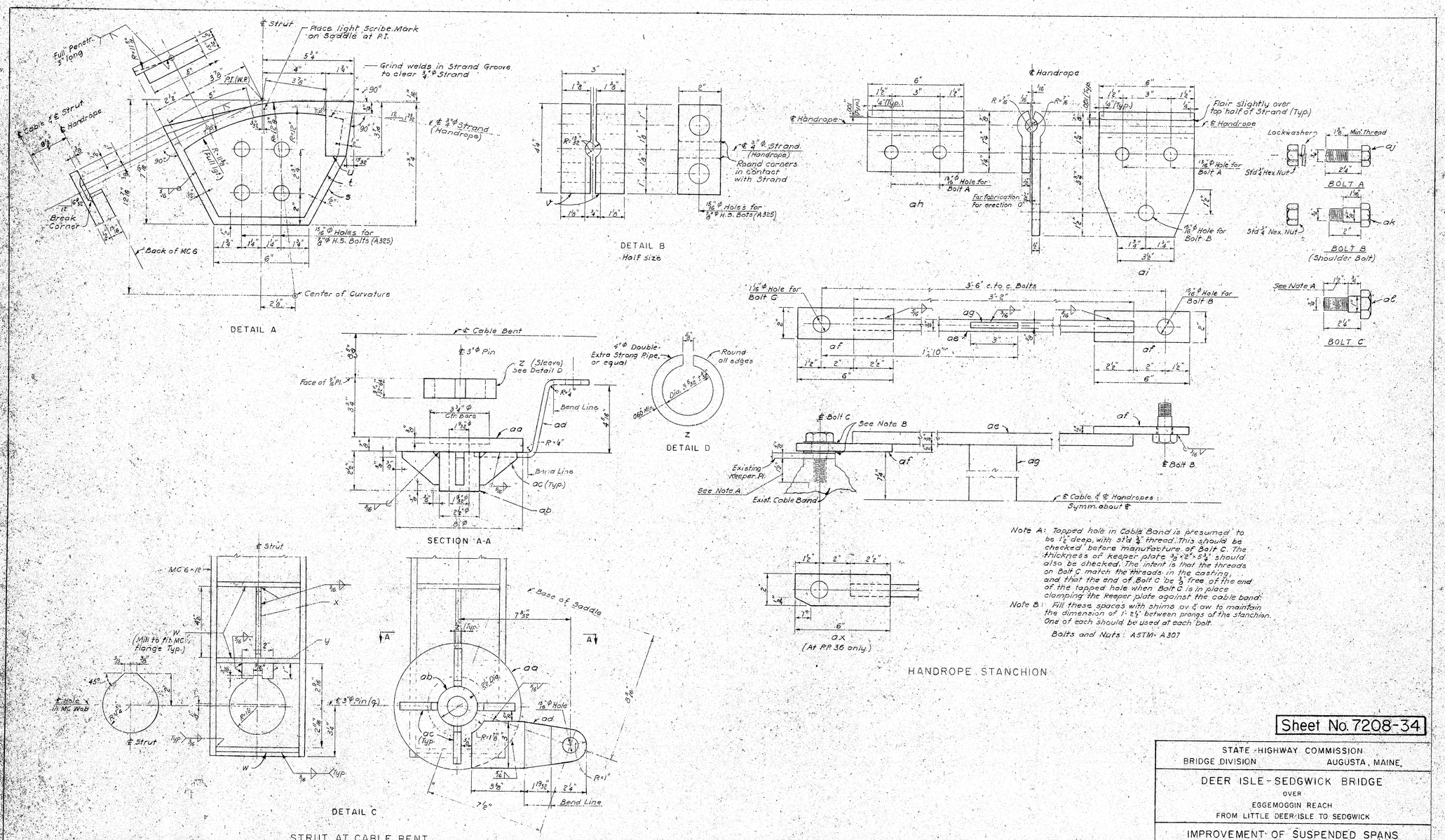
STEINMAN, BOYNTON, GRONQUIST & LONDON
CONSULTING ENGINEERS
NEW YORK, N.Y.

SCALE: As noted
DATE: Oct. 20, 1912
SHEET: 7204X-1

136:20


HANDROPE STRUT AT CABLE BENTS
ELEVATION
SECTION A-A
TYPICAL HANDROPE STANCHION
ELEVATION
SECTION B-B
CABLE CLAMP DETAILS
Scale: 3" = 1'-0"
ELEVATION
SECTION C-C
SPACER DETAILS
Half size
VIEW D-D
SECTION E-E
HANDROPE SUPPORT AT TOWERS
Side Span
Main Span
Sheet No. 7208-32
STATE HIGHWAY COMMISSION
BRIDGE DIVISION
AUGUSTA, MAINE
DEER ISLE - SEDGWICK BRIDGE
OVER
EGGEMOGGIN REACH
FROM LITTLE DEER ISLE TO SEDGWICK
IMPROVEMENT OF SUSPENDED SPANS
HANDROPE SUPPORTS
STEINMAN, BOYNTON, GRONQUIST & LONDON
CONSULTING ENGINEERS
NEW YORK, N.Y.
SCALE: 1/4" = 1'-0" & As noted
DATE: Oct. 20, 1922
SHEET: 7204 X - 2
136:21


℄ Strut & ℄ Pin
℄ Cable Bent
See Detail A
18°-39'-38"
3 5/8" Bored Hole
5-9/16"Φ Holes for 5/8"Φ H.S. Bolts (A325)
Dimension to allow for maximum interference of Hand Rail.
a
Scale: 3"=1'-0"
DETAIL A
Scale: 1 1/2"=1"
Keyway
Chamfer to clear fillets in Keyways.
DETAIL C
DETAIL B
Scale: 1 1/2"=1"
℄ Pin
Symm. about ℄
Drill & tap for 2-1/4"Φ×1 3/8" Flat Hd. Machine Screws
Keyway, see Detail B
See Det. C
Drill and tap for 1 1/4"ΦA354-BB Bolt with Lockwasher
q
Scale: 3"=1"
b & c
For c
For b
d
e
f
g
h
i
j
Scale: 1 1/2"=1'-0
k
l
m
n
o
p
Scale: 3"=1'-0"
All Holes 13/16"Φ except as noted.
Sheet No. 7208-33
STATE HIGHWAY COMMISSION
BRIDGE DIVISION
AUGUSTA, MAINE
DEER ISLE-SEDGWICK BRIDGE
OVER
EGGEMOGGIN REACH
FROM LITTLE DEER ISLE TO SEDGWICK
IMPROVEMENT OF SUSPENDED SPANS
HANDROPE, STRUT DETAILS AT CABLE BENT
STEINMAN, BOYNTON, GRONQUIST & LONDON
CONSULTING ENGINEERS
NEW YORK, N.Y.
SCALE: As noted
DATE: Oct. 20, 1972
SHEET: 7204X-3
Design: B.B. C'ked: B.G.
Drawn: B.T. B.G.
G. Arango
Engineer in Charge
136:22



Sheet No. 7208-34

STATE HIGHWAY COMMISSION
BRIDGE DIVISION AUGUSTA, MAINE

DEER ISLE-SEDGWICK BRIDGE
OVER
EGGEMOGGIN REACH
FROM LITTLE DEER ISLE TO SEDGWICK

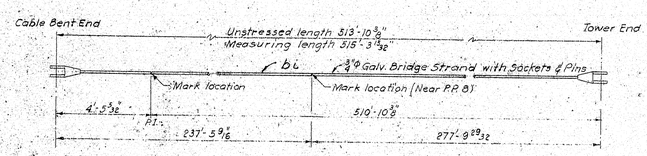
IMPROVEMENT OF SUSPENDED SPANS

HANDROPE STRUT & STANCHION DETAILS

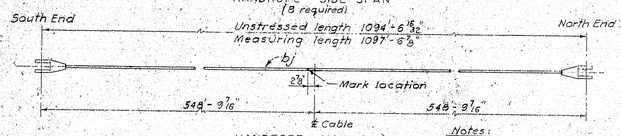
STEINMAN, BOYNTON, GRONQUIST & LONDON
CONSULTING ENGINEERS
NEW YORK, N.Y.

SCALE: ¾" = 1"
DATE: Oct. 20, 1972
SHEET: 7204X-4

136-23



HANDROPE - SIDE SPAN
(8 required)



HANDROPE - MAIN SPAN
(4-required)
Not to Scale

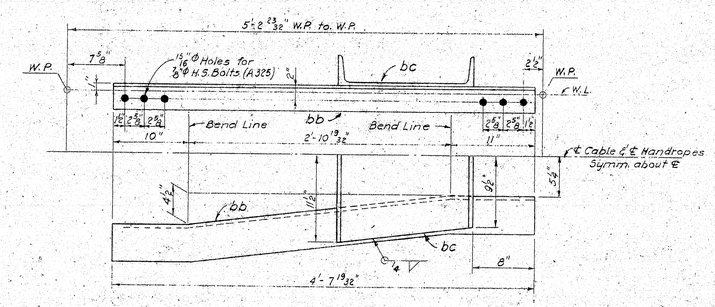
Notes:

Measuring Tension in shop = 21,365 lbs.

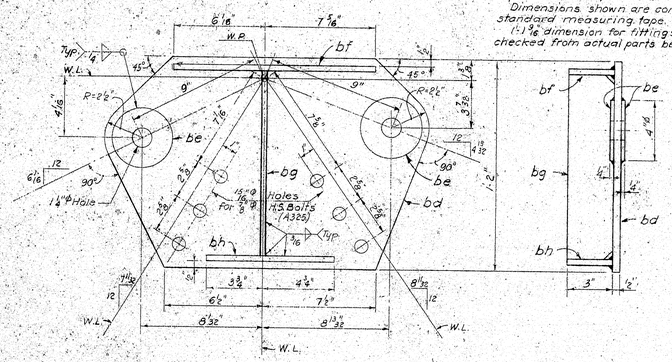
Marks on Handrope to be placed on measured length. Mark with light scribe on zinc coating and cover with tape. Paint 1" stripe each side of scribe mark.

Dimensions shown are corrected for 68°F standard measuring tape.

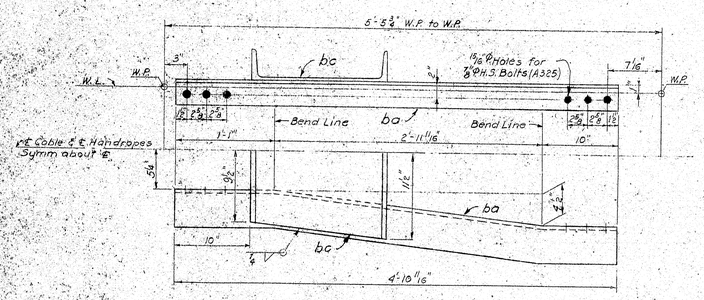
(-) 9/16" dimension for fittings at Cable Clamp to be checked from actual parts before cutting Strands.



Scale: 1 1/2" = 1'-0"



Scale: 3" = 1'-0"



Scale: 1 1/2" = 1'-0"

Design B.B. Ck'd S.G.
Drawn R.T. S.G.
G. Arango
Engineer in Charge

BILL OF MATERIAL

Mark	Material	No. Pc's	Length	Remarks	Sheet No.
a	Pl. - 9/16" × 9"	8	1'-6"		3
b	MC 6 × 12	4	6'-10 15/32"		
c	"	4	6'-10 15/32"		
d	"	4	1'-7 5/16"		
e	"	8	1'-8 1/16"		
f	"	8	2'-1 1/32"		
g	"	4	2'-3 31/32"		
h	L - 3 × 3 × 5/16	4	3'-5 7/16"		
i	L - 3 × 3 × 5/16	4	3'-3 0 1/16"		
j	L - 5 × 3 × 3/16	8	2'-1 5/16"		
k	Pl. - 3/16" × 8 1/2"	8	1'-3"		
l	Pl. - 3/16" × 10 1/4"	8	1'-3"		
m	Pl. - 3/16" × 9 1/16"	16	0'-10 3/8"		
n	Pl. - 3/16" × 3 15/16"	16	1'-3 1/4"		
o	Pl. - 3/16" × 8 5/16"	8	0'-9 11/16"		
p	Pl. - 3/16" × 5 1/4"	8	0'-5 3/4"		
q	Bar 3" Φ	4	2'-1 1/4"	Pin	1
r	Bar 1/2" × 1 1/2"	4	0'-4 1/2"	Key	3
s	Pl. - 1/2" × 7 1/2"	8	1'-0 1/16"		4
t	Pl. - 11/16" × 6 1/2"	8	0'-10 1/16"		
u	Pl. - 1/2" × 1 1/4"	8	0'-3 7/16"		
v	Pl. - 1/2" × 2"	16	0'-4 1/4"		
w	Pl. - 3/16" × 2 3/16"	24	0'-5 1/16"	Cut to fit	
x	Pl. - 3/16" × 2 3/16"	8	0'-4 5/8"		
y	Pl. - 1" × 2"	8	0'-2 3/16"	Trunnion Block	
z	4" Φ Pipe	8	0'-1 5/16"±	Double Extra Strong Sleeve	
aa	Pl. - 1/2" × 8	8	0'-8"		
ab	Bar 2 1/2" Φ	8	0'-2 5/8"		
ac	Pl. - 1/2" × 2 1/2"	32	0'-2 3/8"		
ad	Pl. - 3/16" × 3"	8	0'-10 3/8"	Bend	
ae	Bar 3/4" □	276	3'-2"	Hot-dip galv.	
af	Pl. - 1/2" × 2"	548	0'-6"	"	
ag	Pl. - 3/8" × 3"	138	1'-3 3/8"	"	
ah	Pl. - 1/2" × 3 7/8"	276	0'-6"	"	
ai	Pl. 1/2" × 7 1/2"	276	0'-6"	"	
aj	3/4"Φ Bolt	552	0'-2 1/4"	With Hex. Hd. Nut & Lwasher H.D.G.	
ak	7/8"Φ Shoulder Bolt	276	0'-2"	With Hex. Hd. Nut H.D.G.	1
al	1"Φ " "	276	0'-2 1/4"	" " H.D.G.	4
am	Pl. - 4 1/2" × 12"	4	1'-2"	Cable Clamp	2
an	Pl. - 4" × 12"	4	1'-2"	"	1
ao	Pl. - 1/2" × 6"	4	1'-4 1/4"	"	
ap	Pl. - 1/2" × 3"	8	0'-6 1/4"	"	
aq	Pl. - 3/8" × 5"	8	0'-5"	"	
ar	1 1/4"Φ Bolt (Hex. Hd.)	16	1'-1 0"	A354, Grade BB	
as	1 1/4" Round Pin				
	Anchor Shackle	4			
at	Bar 4"Φ	4	0'-2"	Spacer	1
au	1 1/4" Dia. End Link	8			2
av	Shim 1/4" × 2"Φ or 2" × 2"	216			4
aw	Shim 1/8" × 2"Φ or 2" × 2"	216			4
ax	Pl. 1/2" × 8"	4	0'-6"	At P.P. 36 Hot-dip galv.	4
ba	L - 5 - 3 1/2 × 1/4	8	4'-11"		5
bb	L - 5 - 3 1/2 × 1/2	8	4'-7 1/16"		
bc	MC 18 × 42.7	8	1'-11"		
bd	Pl. - 1/2" × 14"	8	1'-9 1/2"		
be	Pl. - 1/4" × 4"	32	0'-4"		
bf	Pl. - 3/8" × 3"	8	1'-1 1/2"		
bg	Pl. - 1/2" × 3	8	1'-0 3/4"		
bh	Pl. - 1/2" × 3"	8	0'-8 1/4"		
bi	3/4"Φ Bridge Strand	8	See Detail	With sockets & Pins (Side Span)	
bj	3/4"Φ Bridge Strand	4	See Detail	" " (Main Span)	5
bk	1 1/4" - 24" Turnbuckle	18		With Eye, Jaw & Locknuts	2
bm	1 1/4"Φ Pin	18			2
bn	1 1/4"Φ Bolt & Locknut	8	0'-6 1/2"	A354, Grade BB	2
	7/16"Φ Hex. Socket Set Screws	16	0'-1 3/4"		2
	3/4"Φ Flat Hd. Mach. Screws	16	0'-3 1/4"		2
	3/4"Φ H.S. Bolts	395	0'-2"	A325	
	7/8" " "	100	0'-2 1/4"	"	
	" " "	95	0'-2 1/4"		
	" " "	10	0'-2"		
	" " "	35	0'-3 1/4"		
	" " "	20	0'-4 1/2"		

Estimated Net Weight of Structural Steel - 14,200 Lbs.
(Not included 3/4" Strands, Sockets & Pins)

Sheet No. 7208-35

STATE HIGHWAY COMMISSION
BRIDGE DIVISION AUGUSTA, MAINE

DEER ISLE - SEDGWICK BRIDGE
OVER
EGGEMOGGIN REACH
FROM LITTLE DEER ISLE TO SEDGWICK

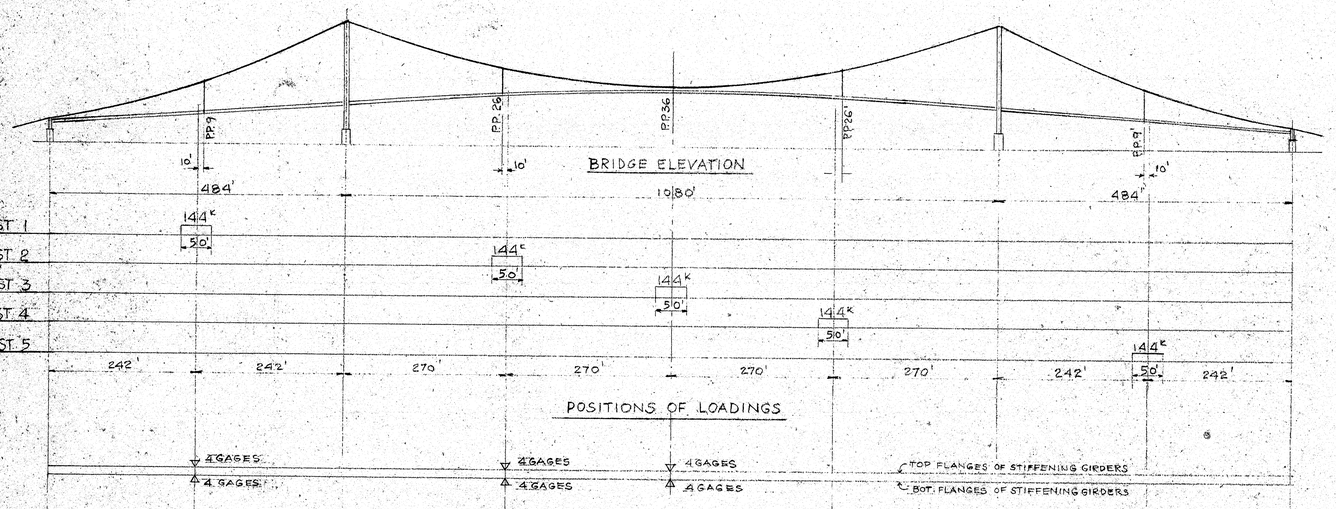
IMPROVEMENT OF SUSPENDED SPANS

HANDROPE SUPPORT DETAILS AT TOWER AND BILL OF MATERIAL

STEINMAN, BOYNTON, GRONQUIST & LONDON
CONSULTING ENGINEERS
NEW YORK, N.Y.

SCALE: As noted
DATE: Oct. 20, 1972
SHEET 7204X-5

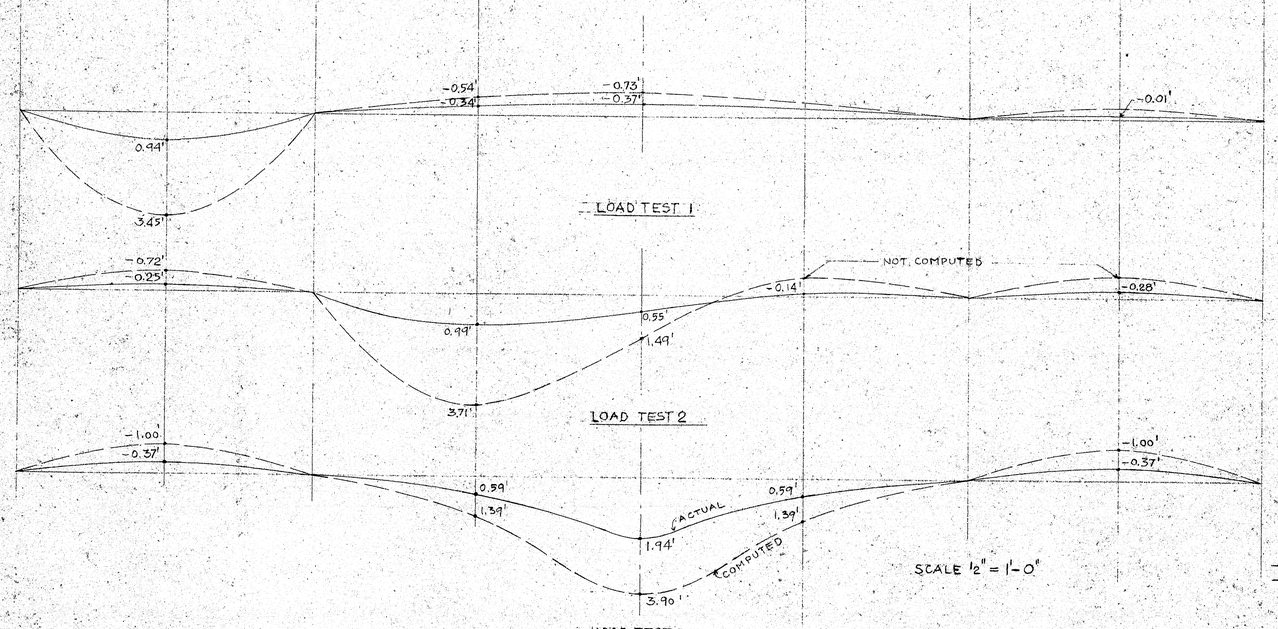
136-24



BRIDGE ELEVATION

POSITIONS OF LOADINGS

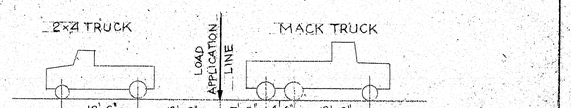
STRAIN GAGE LOCATIONS



DEFLECTION CURVES

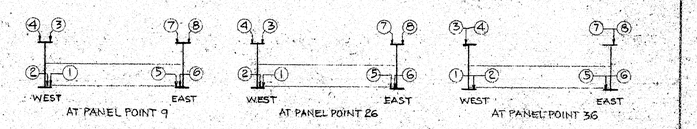
SCALE 1/2" = 1'-0"

Design A.W. Chd. S.G.
Drawn A.N. " S.G.
Engineer in Charge



WEST LANE	8000	11350	19300	19900	12850	=	71,400 LBS
EAST LANE	7550	13250	19250	18850	13800	=	72,700 LBS
TOTAL	15550	24600	38550	38750	26650	=	144,100 LBS

TEST LOAD



STRAIN GAGE LOCATIONS

STRESS TABLE

	GAGE		AT PANEL POINT 9		AT PANEL POINT 26		AT PANEL POINT 36		REMARKS
	GIRDER		WEST	EAST	WEST	EAST	WEST	EAST	
TEST 1	TOP f_T	psi	-2,436	+3,161	+1,726	+116			
	BOT f_B	psi	+3,947	+3,530	+1,535	+116			
	$\frac{1}{2}(f_T+f_B)$	psi	+3,192	+3,346	+96	0			
	AXIAL f_a	psi	+755	+184	+1,631	+116			SEE NOTE 2
	MOMENT f_M	psi	+384	+403	-13	0			
	AXIAL FORCE	K	+46.4	-11.3	+111.2	+7.9			
	COMPUTED f_T	psi	-19,700	-19,700	-400	-400	-500	-500	SEE NOTE 3
TEST 2	TOP f_T	psi	+334	+145	-3,422	+4,031			
	BOT f_B	psi	-150	-280	+5,581	+4,604			
	$\frac{1}{2}(f_T+f_B)$	psi	+242	+213	+4,501	+4,318			
	AXIAL f_a	psi	+92	-67	-1,080	+286			SEE NOTE 2
	MOMENT f_M	psi	+29	-26	+621	+596			
	AXIAL FORCE	K	+1.8	-4.1	+73.6	+19.5			
	COMPUTED f_T	psi	-2,200	-2,200	-16,500	-16,500	-1,800	-1,800	SEE NOTE 3
TEST 3	TOP f_T	psi	+346	+377	+870	+957	-12,982	-13,935	
	BOT f_B	psi	-501	-355	-1,039	-1,070	+15,452	+14,643	
	$\frac{1}{2}(f_T+f_B)$	psi	+422	+366	+955	+1,013	-14,179	+14,289	
	AXIAL f_a	psi	-76	+11	-84	-57	+1,273	+354	
	MOMENT f_M	psi	-51	-44	-132	-139	+1,839	+1,853	
	AXIAL FORCE	K	-4.7	+0.7	-5.7	-3.9	+87.3	+24.3	
	COMPUTED f_T	psi	-3,200	-3,200	-2,600	-2,600	-16,500	-16,500	SEE NOTE 3
TEST 4	TOP f_T	psi	+290	+145	+669	+669	-58	-44	
	BOT f_B	psi	-120	-104	-448	-566	+1,234	+1,042	
	$\frac{1}{2}(f_T+f_B)$	psi	+205	+125	+529	+587	+645	+543	
	AXIAL	psi	+85	+21	+81	+21	+587	+499	
	MOMENT	f_M	-25	-15	-73	-81	+84	+70	
	AXIAL FORCE	K	+5.2	+1.3	+5.5	+1.4	+40.3	+34.2	
	COMPUTED f_T	psi							NOT COMPUTED
TEST 5	TOP f_T	psi	+116	+116	-145	-39	+638	+783	
	BOT f_B	psi	-1	-1	-28	0	-1,063	-816	
	$\frac{1}{2}(f_T+f_B)$	psi	+59	+59	+59	+15	+850	+799	
	AXIAL	psi	+58	+58	-87	-15	-213	-17	
	MOMENT	f_M	-7	-7	+18	+2	-110	-104	
	AXIAL FORCE	K	+3.6	+3.6	-5.9	-1.0	-146	-1.2	
	COMPUTED f_T	psi							NOT COMPUTED

NOTES

1. LOAD TESTS WERE CARRIED OUT ON AUGUST 18, 1972.
2. NO RELIABLE STRAIN GAGE READINGS WERE OBTAINED FOR TESTS 1 AND 2 AT P.P. 36.
3. ALL COMPUTED STRESSES AND DEFORMATIONS ARE FOR SUSPENSION BRIDGE WITHOUT DIAGONAL STAYS.
4. THE STRAIN GAGES USED ARE OF THE SR4 TYPE.
5. DETAILS OF THE TESTS ARE CONTAINED IN THE COMPUTATIONS RECORDS.

Sheet No. 7208-36

STATE HIGHWAY COMMISSION
BRIDGE DIVISION AUGUSTA, MAINE

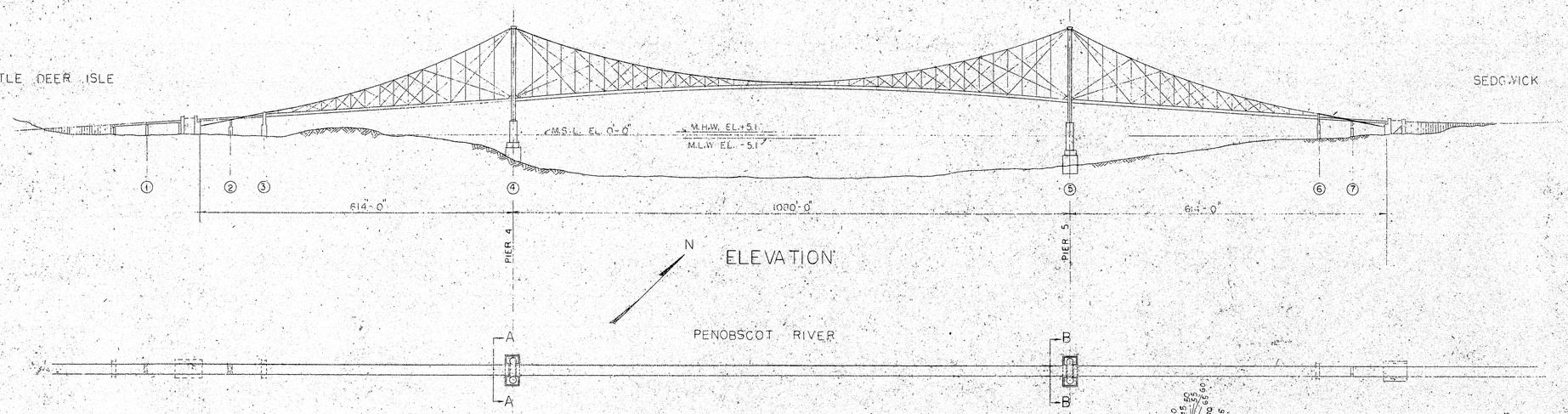
DEER ISLE-SEDGWICK BRIDGE
OVER
EGGEMOGGIN REACH
FROM LITTLE DEER ISLE TO SEDGWICK

LOAD TEST RECORDS

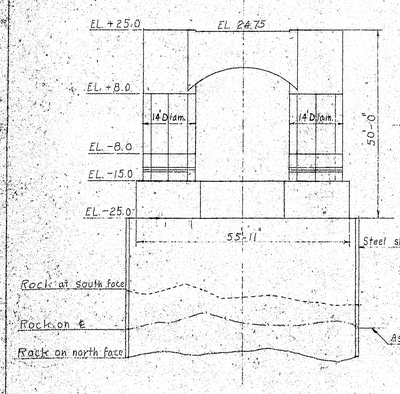
STEINMAN, BOYNTON, GRONQUIST & LONDON
CONSULTING ENGINEERS
NEW YORK, N.Y.

SCALE: As Noted
DATE: Feb. 2, 1973
SHEET: 1

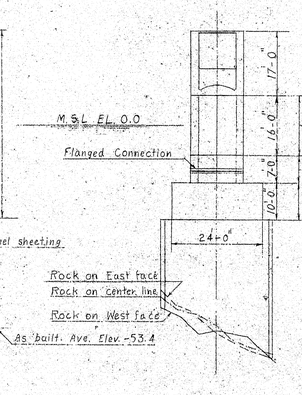
136:25



PLAN
SCALE 1"=100'-0"

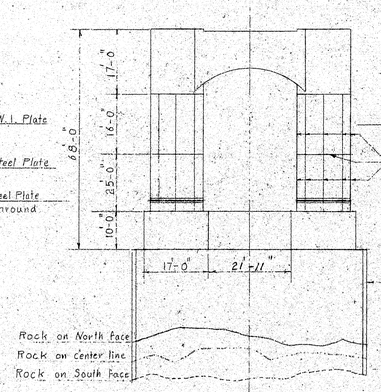


ELEVATION A-A

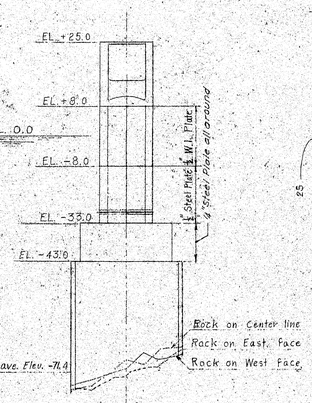


ELEV.

PIER NO. 4
SCALE 1/16"=1'-0"
(AS BUILT CONDITION)

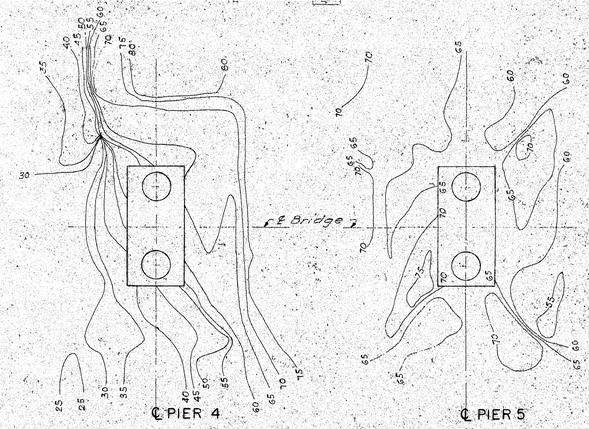


ELEVATION B-B



ELEV.

PIER NO. 5
SCALE 1/16"=1'-0"
(AS BUILT CONDITION)



SOUNDINGS BELOW M.S.L. El. 0.0
July, 25, 1972
Scale: 1"=30'

Sheet No. 7208-37

STATE HIGHWAY COMMISSION
BRIDGE DIVISION AUGUSTA, MAINE

DEER ISLE-SEDGWICK BRIDGE
OVER
EGGEMOGGIN REACH
FROM LITTLE DEER ISLE TO SEDGWICK

UNDER WATER INSPECTION

PIERS NO. 4 & 5

STEINMAN, BOYNTON, GRONQUIST & LONDON
CONSULTING ENGINEERS
NEW YORK, N.Y.

SCALE AS NOTED
DATE JULY 13 1972
SHEET 1

Design A.N. Ckd S.G.
Drawn A.N. " S.G.
H. Grange
Engineer in Charge

136:26