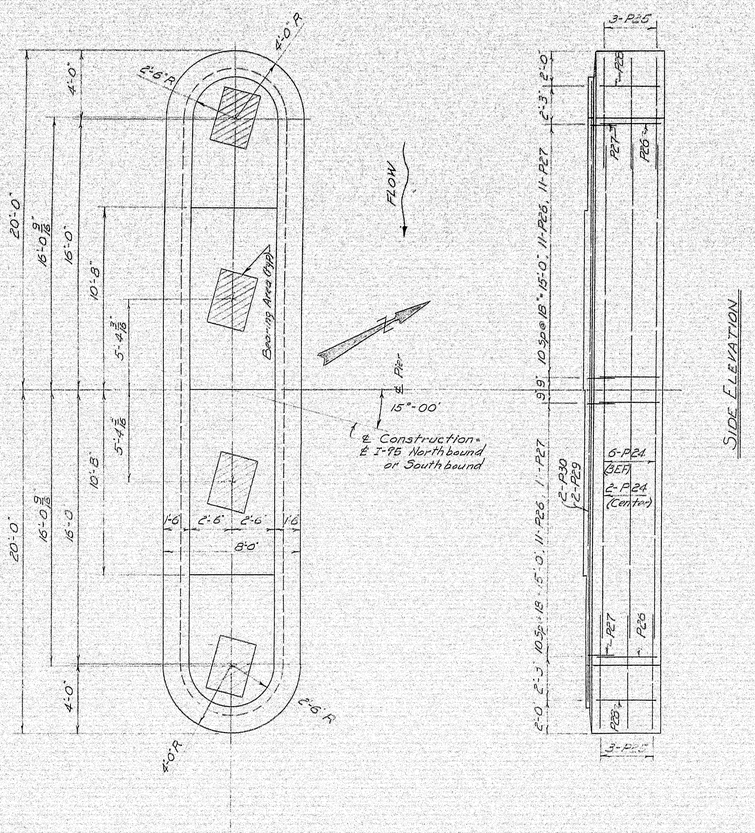
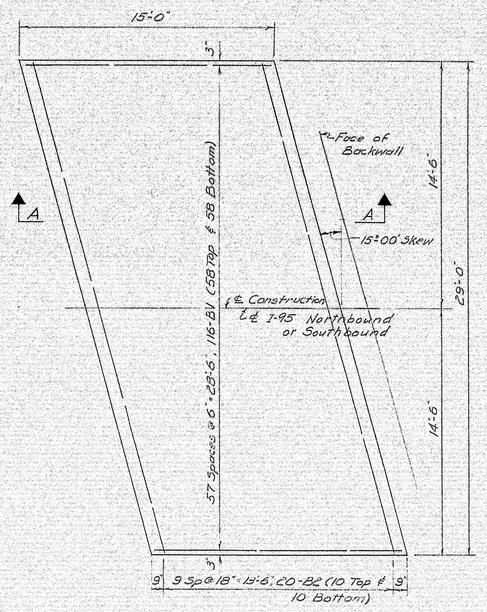
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-9(29)	76	93

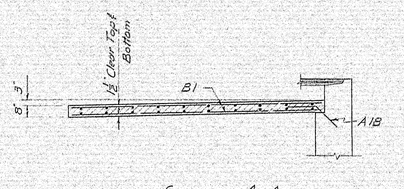


PLAN

SIDE ELEVATION



PLAN



SECTION A-A

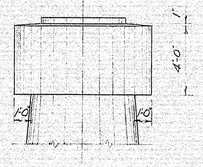
PIER NOTES

DESIGN CRITERIA

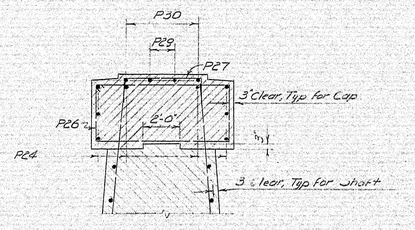
Buoyancy - Water level assumed at EL 240 and EL 250.
Stream Flow - Velocity of 10 ft per sec skewed at 15° to longitudinal center line of pier, and water level at EL 240 and EL 250.
Wind - 100 m.p.h.
Coefficient of Friction in Expansion Pedestals - 15 percent.
Ice - One foot thick skewed at 15° to longitudinal center line of pier, and water level at EL 240 and EL 250. (Ice pressure = 400 p.s.i)
Seal Depths - Seals may be unwatered when water level outside of cofferdam is not in excess of EL 243.
Maximum Pile Load - 9000 psi of point area.

GENERAL

Reinforcing cover 3" unless otherwise noted.
Place reinforcing steel in pier caps to clear anchor bolts.
Seal concrete dimensions are predicated on use of MP-116, DP-2, I-27, or equivalent steel sheet piling with appropriate standard rolled corners. Pay dimensions for seal concrete shall be neat lines plus 6 inches all around.
Seal concrete is intended to be placed under water and to be paid for under Item "701-36".
Payment for drilling and grouting dowels into concrete seal shall be incidental to Item "708-14".
Pile lengths are based on ledge elevations indicated by soils investigation. Piles to be driven to ledge or practical refusal.
Allowable load per pile = 118 Tons.
Piles marked thus ⊢→ shall be battered 2 inches per foot in the direction of arrow.
Abbreviations - EF = Each Face, DS = Down Stream, SB = Southbound, NB = Northbound.
Northbound & Southbound Piers are identical except for stationing.



END ELEVATION



CAP SECTION

PIER CAP DETAILS

APPROACH SLAB DETAILS

Abutment "1" shown. Rotate 180° for Abutment "2".
Approach Slab concrete to be paid for under Item "701-33 P.C.C., Abutments & Retaining Walls. Northbound & Southbound Approach Slabs are identical.

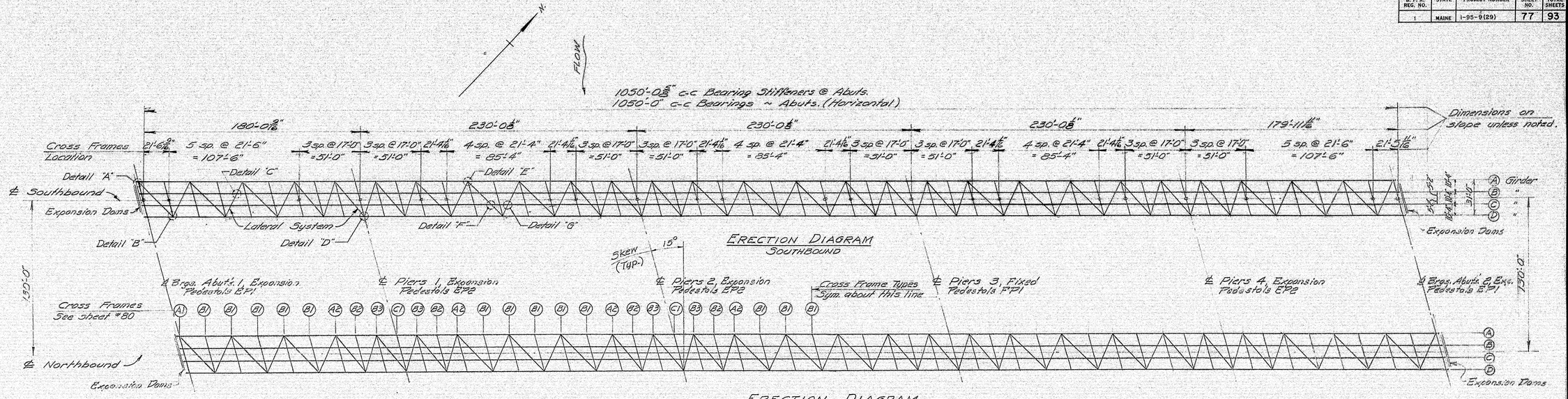
DESIGN - M. C. R.	BRIDGE NO.
TRACE - H. R. G.	SURVEY -
CHECK - A.H.H.	PLOT -

STATE HIGHWAY COMMISSION
BRIDGE DIVISION
INTERSTATE 95
OVER
PENOBSCOT RIVER
IN THE TOWN OF
MEDWAY
PENOBSCOT COUNTY
PIER CAPS & APPROACH SLABS
SHEET 76 OF 93 AUGUSTA, MAINE OCTOBER 1964

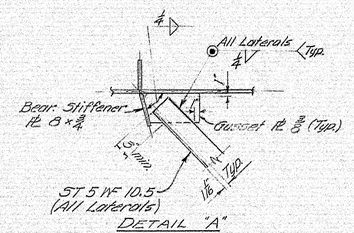
99-81



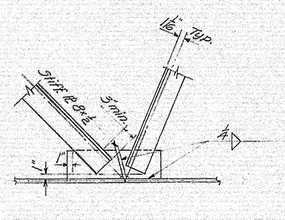
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-9(29)	77	93



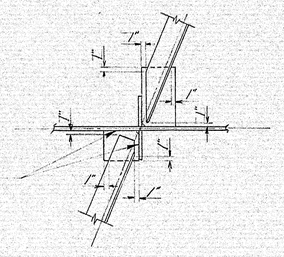
ERECTION DIAGRAM
NORTHBOUND
NOTE: Same as for Southbound



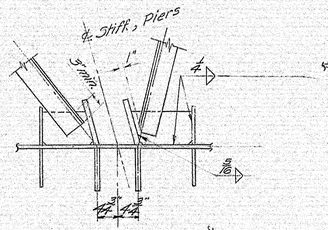
DETAIL "A"



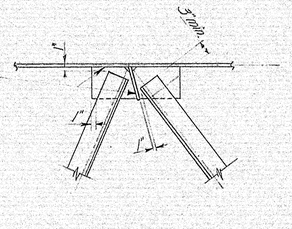
DETAIL "B"



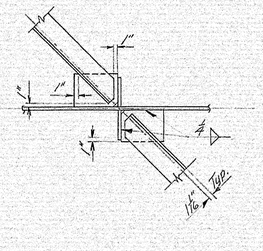
DETAIL "C"



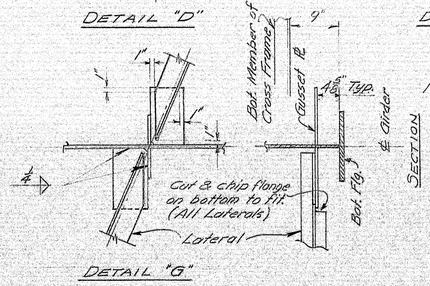
DETAIL "D"



DETAIL "E"



DETAIL "F"



DETAIL "G"

LATERAL SYSTEM DETAILS

NOTE: Cross Frames not shown.
Lateral connections not shown are similar to details as shown.
All Lateral System Members ST 5 WF 10.5
All Lateral System Gussets 3/8" PL
Connections to be detailed, to provide a minimum of 15" downhand field fillet weld.

GIRDER FABRICATION NOTES

The steel fabricator at his option may fabricate the web plates with butt welds with the following limitations:
A. A maximum of 2 transverse welds in the A36 sections per girder per span.
B. A maximum of 1 transverse weld each side of the ℄ of Bearings at a minimum distance of 10'-0" from the ℄ of Bearings and 1 longitudinal weld in the A441 sections per girder per flange.
If butt welds are used to fabricate the web plates, the locations and details shall be shown on the shop detail drawings.
Girders are to be cambered in accordance with the details shown.
Girders are to be fitted with Shear Connectors in accordance with the details shown.

STRUCTURAL STEEL NOTES

For Structural Steel Classification see General Plan and Elevation, sh. 65
For Details see sh's. 82, 83 and Standard Details BD 104-64.
For Expansion Dams see Standard Details BD 105-64 and as follows:
15°00' left skew typical
At Abutment 1 - Southbound & Northbound
3-Roadway Expansion Dams, Type D
4-Curb Expansion Dams, Type Y
At Abutment 2 - Southbound & Northbound
2-Roadway Expansion Dams, Type B
4-Curb Expansion Dams, Type W

DESIGN — M.C.R.	BRIDGE NO.
TRACE — G.W.C.	SURVEY —
CHECK — A.M.P.	PLOT —

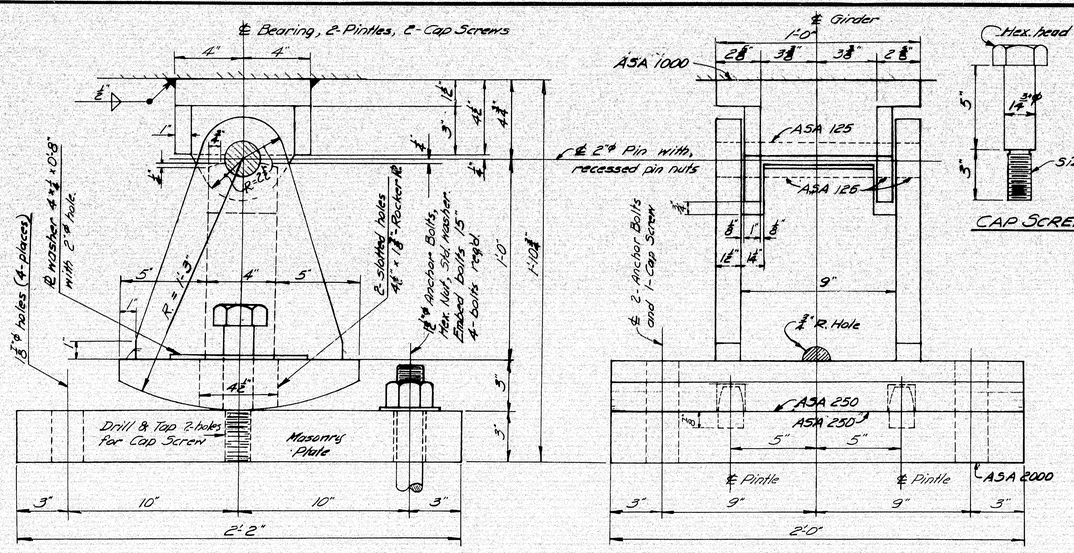
STATE HIGHWAY COMMISSION
BRIDGE DIVISION
INTERSTATE 95
OVER
PENOBSCOT RIVER
IN THE TOWN OF
MEDWAY
PENOBSCOT COUNTY
ERECTION DIAGRAM
SHEET 77 OF 93 AUGUSTA, MAINE OCTOBER 1964

99-82

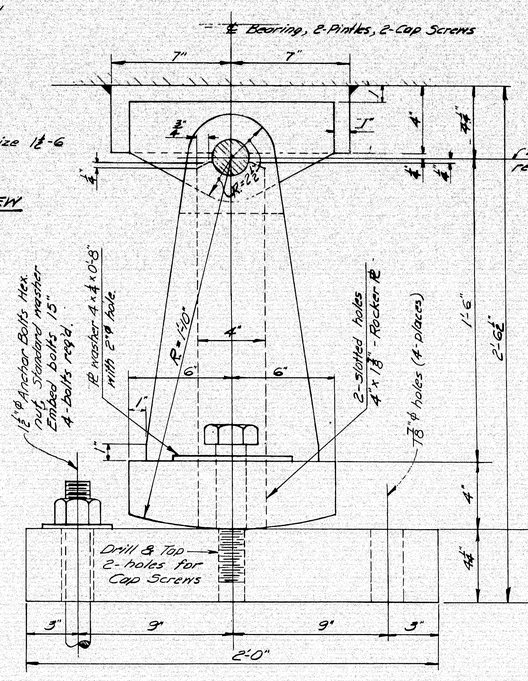
C. B. CO., NO. 44-131 38756

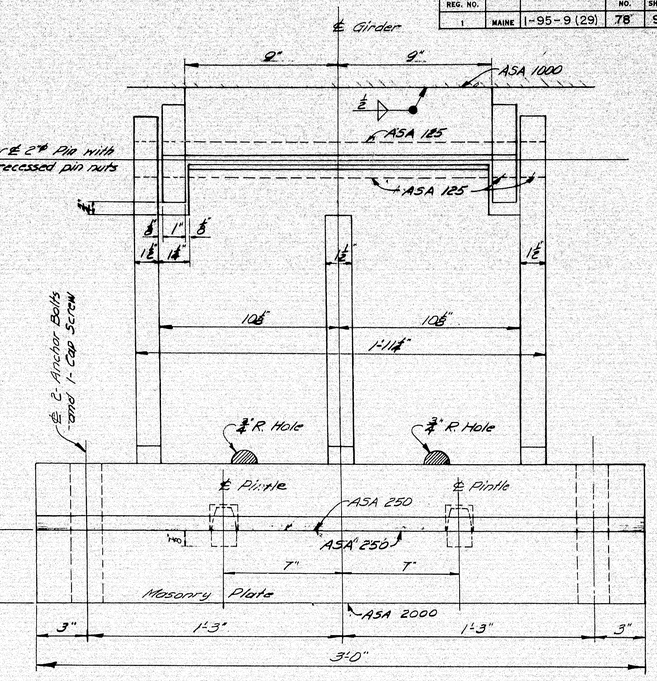


B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-9 (29)	78	93



CAP SCREW



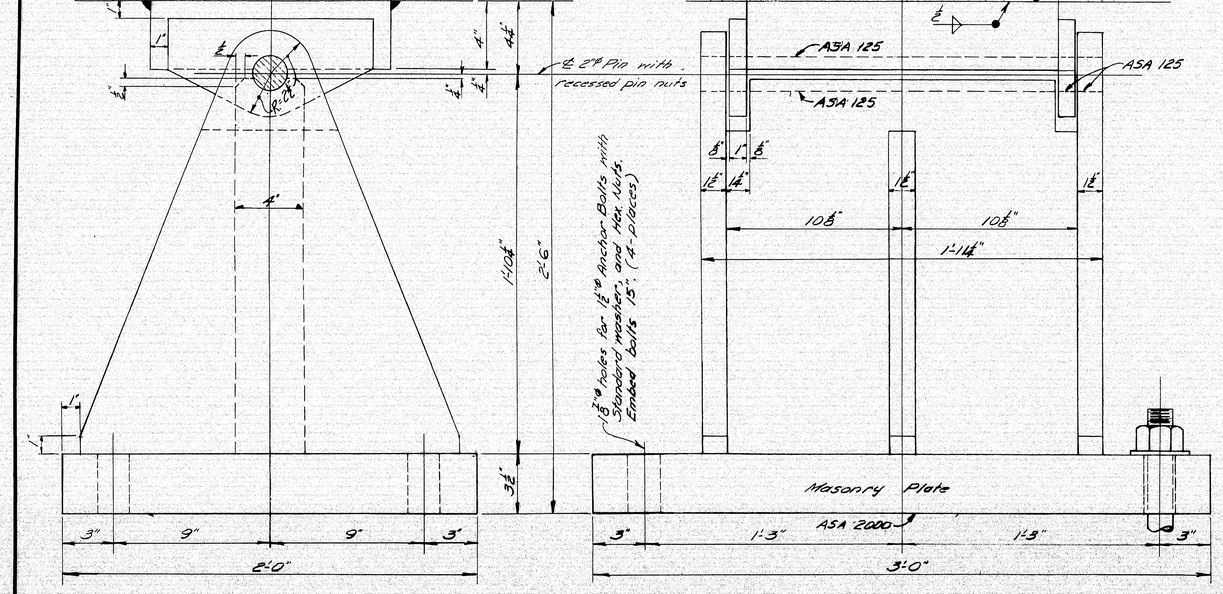


EXPANSION PEDESTAL EP1 - ABUTMENTS

8 Req'd. Southbound
8 Req'd. Northbound

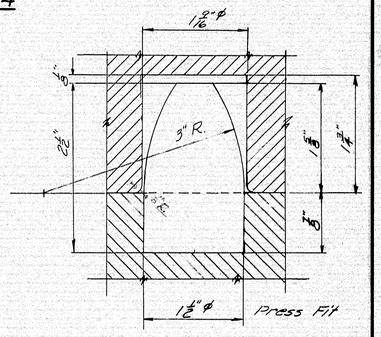
EXPANSION PEDESTAL EP2 - PIERS 1, 2 & 4

12 Req'd. Southbound
12 Req'd. Northbound



FIXED PEDESTAL FP1 - PIERS 3

4 Req'd. Southbound
4 Req'd. Northbound



PINTLE

GENERAL NOTES

Material for two structures, Northbound & Southbound

Fabricate pedestals with ⅜" fillet shop welds.

At the location of bearing pedestals the concrete bridge seats shall be dressed one inch larger all around than size of masonry plates and to exact elevations shown on the plans. If the dressed areas are below the surrounding bridge seat a small channel shall be cut to the edge of the bridge seat for drainage where required by the Engineer. Channels shall have a minimum width of 2" and a minimum slope of one half inch per foot. No separate payment for this work will be made as it shall be considered incidental to contract items.

DESIGN- J.T.S.
TRACE- S.H.C.
CHECK- M.H.

BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

INTERSTATE 95
OVER
PENOBSCOT RIVER
IN THE TOWN OF
MEDWAY
PENOBSCOT COUNTY

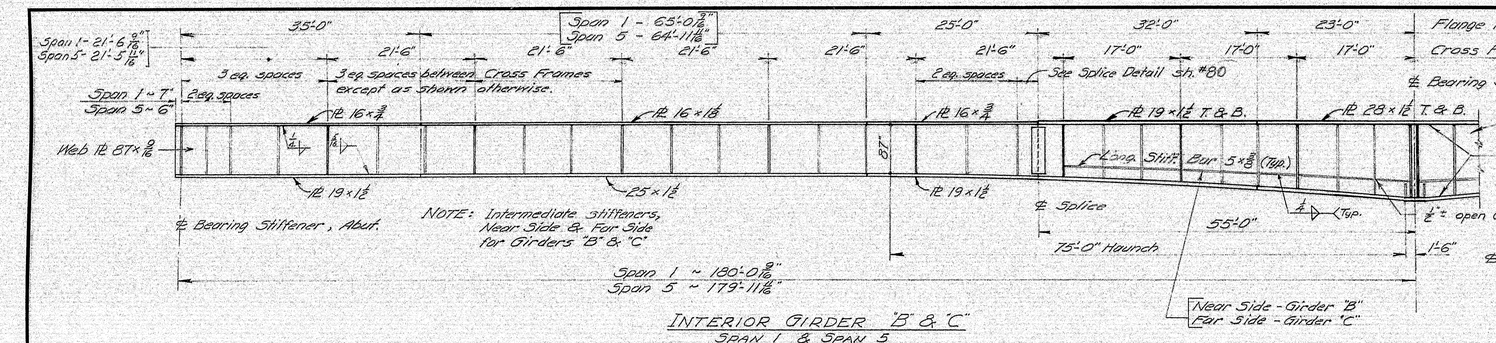
BEARING PEDESTALS

SHEET 78 OF 93 AUGUSTA, MAINE OCT. 1964

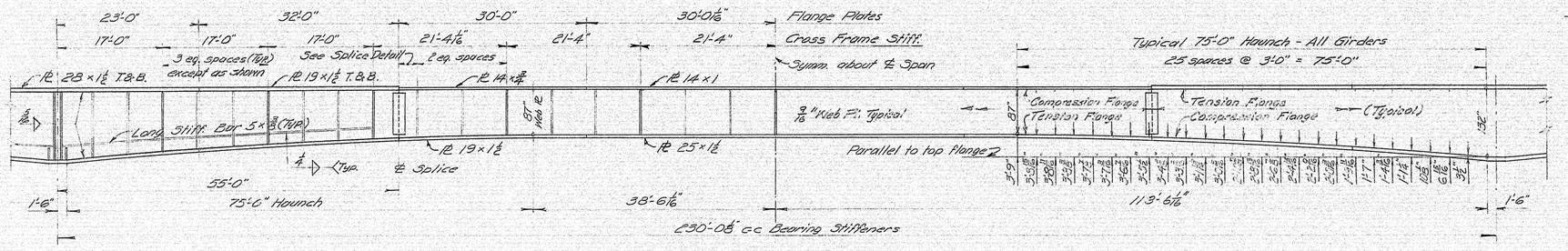
99-83

0 1 2 3 4 5 INCHES

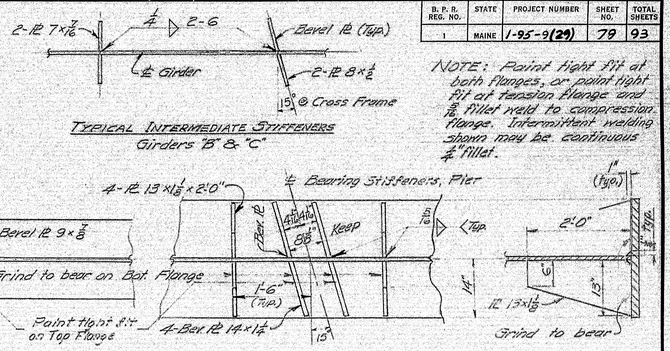
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-9(29)	79	93



INTERIOR GIRDER "B" & "C"
SPAN 1 & SPAN 5
Note: Rotate 180° for Span 5

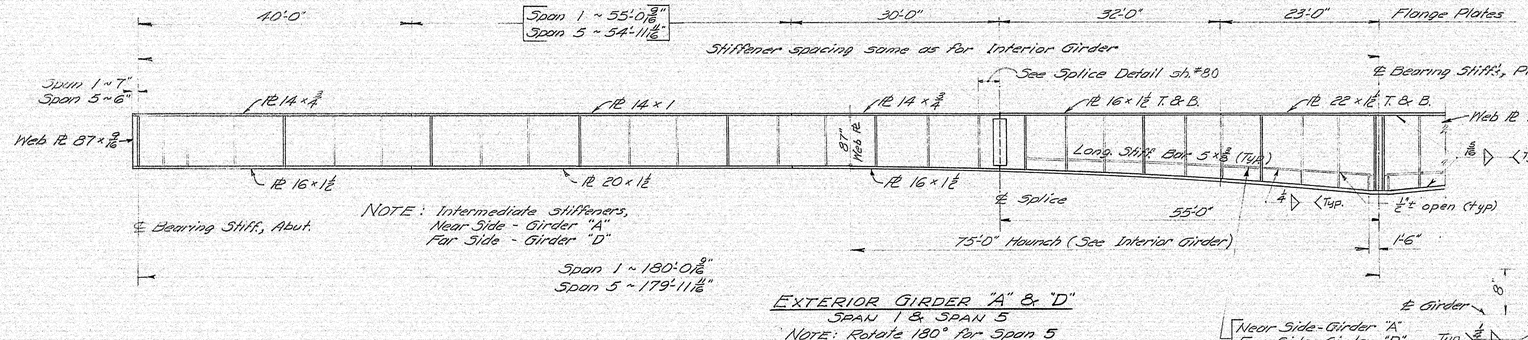


INTERIOR GIRDER "B" & "C"
SPANS 2, 3, & 4

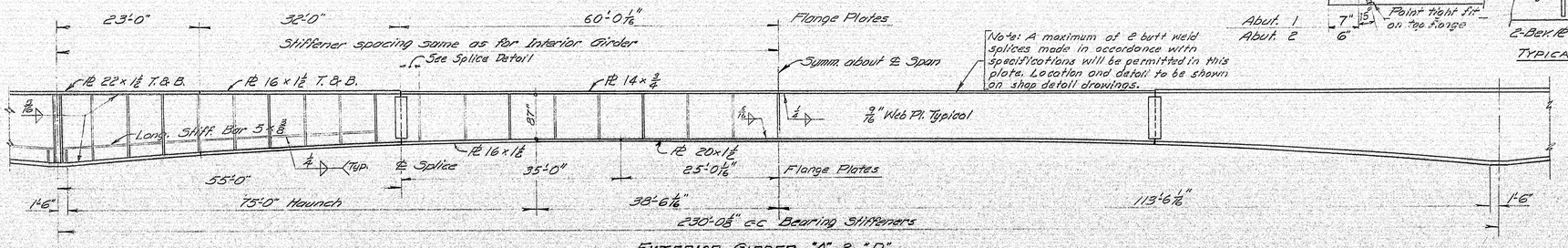


NOTE: Paint tight fit at both flanges, or paint tight fit at tension flange and 3/8" fillet weld to compression flange. Intermittent welding shown may be continuous 3/8" fillet.

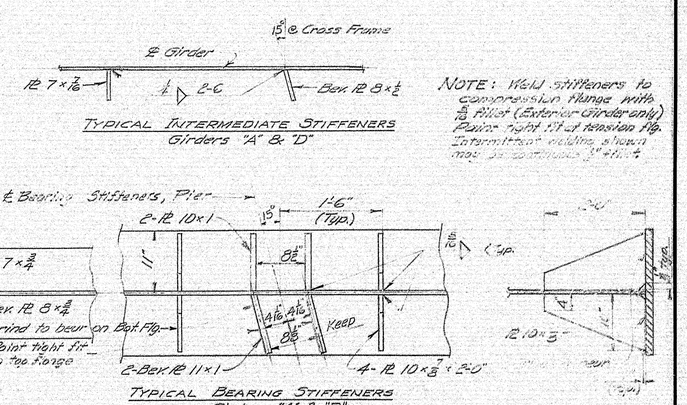
FLANGE to WEB FILLET WELDS
3/8" Flange Plates - 1/4" Shop Fillet Weld Near & Far Side Web
All Other Flange Plates - 5/16" Shop Fillet Weld Near & Far Side Web



EXTERIOR GIRDER "A" & "D"
SPAN 1 & SPAN 5
NOTE: Rotate 180° for Span 5



EXTERIOR GIRDER "A" & "D"
SPANS 2, 3, & 4
NOTE: Details not shown, same as Interior Girder



NOTE: Weld stiffeners to compression flange with 5/16" Fillet (Exterior Girder only) Paint tight fit at tension flg. Intermittent welding shown may be continuous 1/4" Fillet.

DESIGN - M.C.R.	BRIDGE NO.
TRACE - G.W.C.	SURVEY -
CHECK - A.H.R.	PLOT -

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

INTERSTATE 95
OVER
PENOBSCOT RIVER
IN THE TOWN OF
MEDWAY
PENOBSCOT COUNTY

GIRDERS A-B-C-D

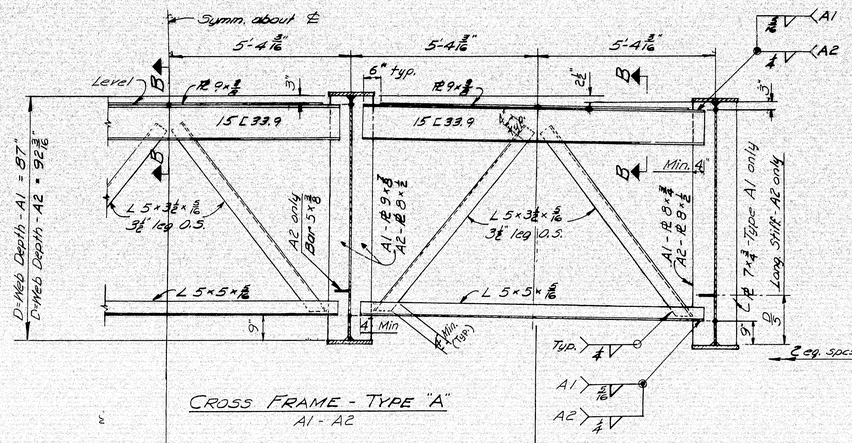
SHEET 79 OF 93 AUGUSTA, MAINE October 1964

C. B. CO., NO. 44-131 - 16755

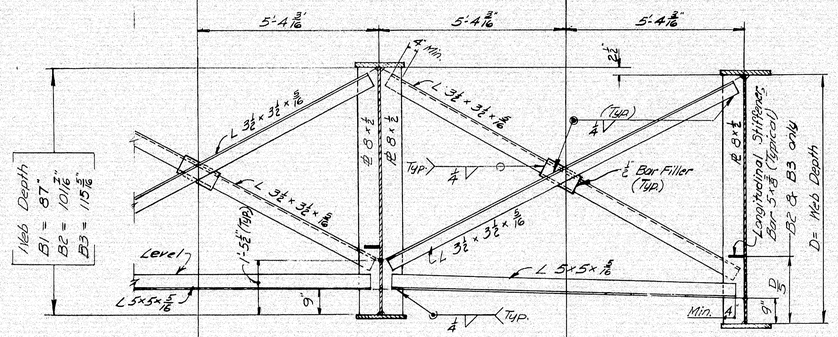
99-84



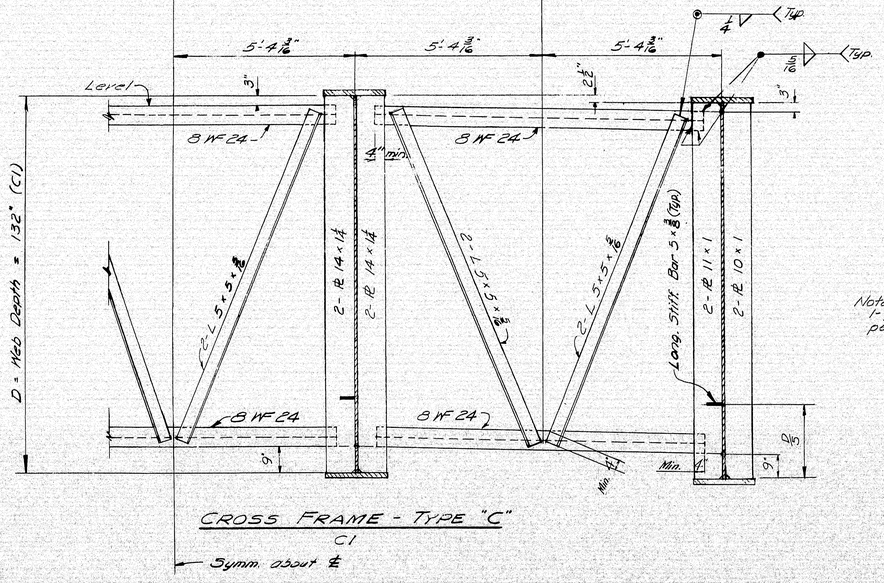
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-9(29)	80	93



CROSS FRAME - TYPE "A"
A1 - A2

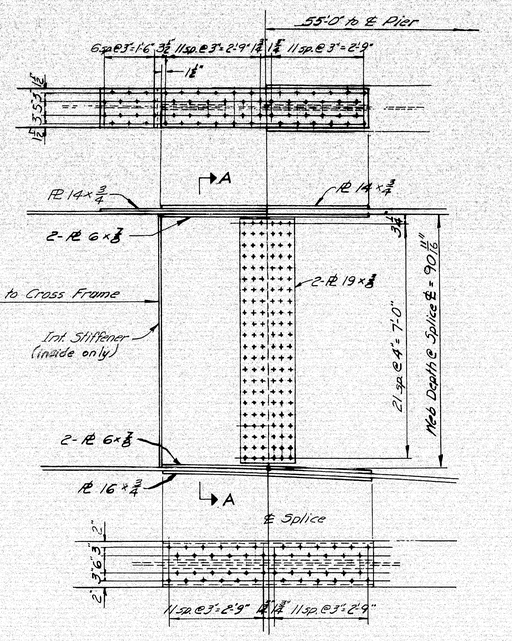


CROSS FRAME - TYPE "B"
B1 - B2 - B3

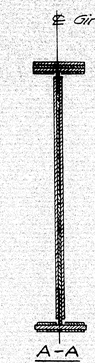


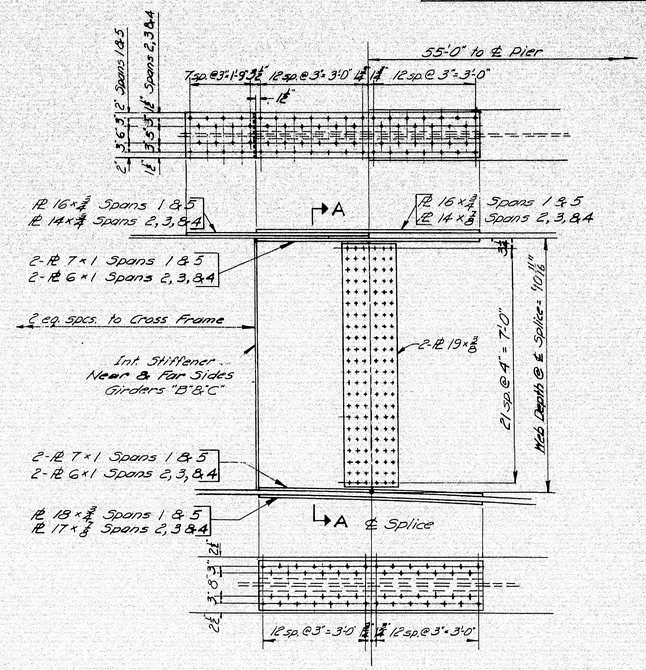
CROSS FRAME - TYPE "C"
C1

Symm. about ℄

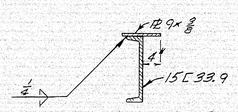


SPLICE DETAIL
Girders "A" & "D"
(Exterior)



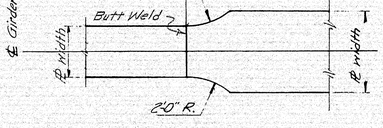


SPLICE DETAIL
Girders "B" & "C"
(Interior)

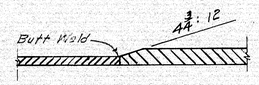


SECTION B-B

Note: For the convenience of the Contractor 1-1/8" ø hole for an erection bolt will be permitted at each cross frame connection.



TRANSITION OF WIDTH
(Typical)



UNEQUAL PL THICKNESS
(Typical)

BUTT JOINT - FLANGE PLATES

Note: Splice connections to be made with 7/8" ø High Tensile Strength Bolts. Holes to be 15/16" ø

DESIGN - M.C.R.	BRIDGE NO.
TRACE - G.W.C.	SURVEY -
CHECK - JMH	PLOT -

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

INTERSTATE 95
OVER
PENOBSCOT RIVER
IN THE TOWN OF
MEDWAY
PENOBSCOT COUNTY

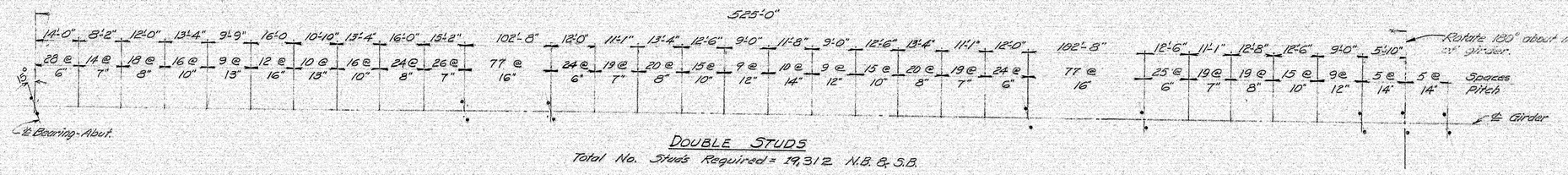
CROSS FRAMES & SPLICES

SHEET 80 OF 93 AUGUSTA, MAINE October 1964

99-85

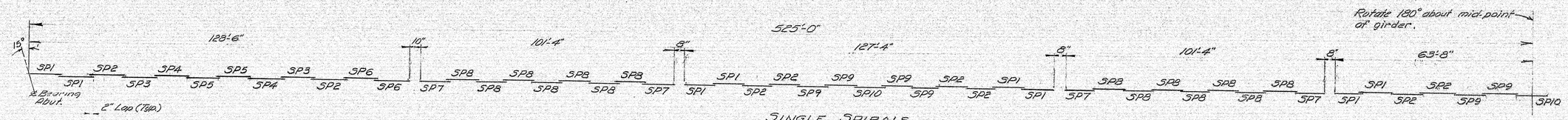


B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-9(29)	81	93



DOUBLE STUDS

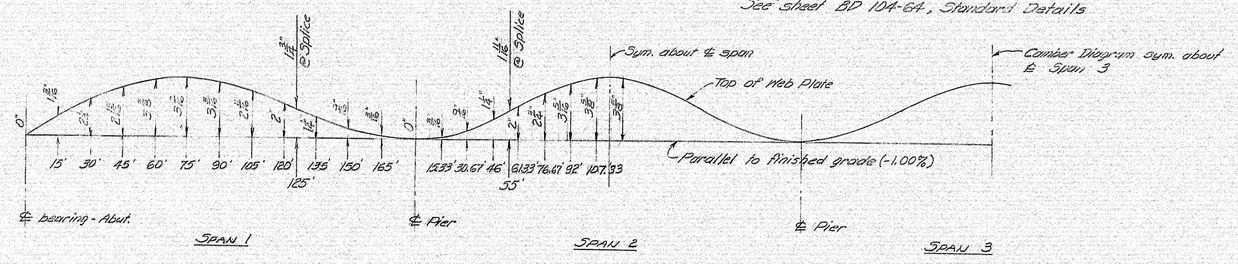
Total No. Studs Required = 19,312 N.B. & S.B.



SINGLE SPIRALS

SHEAR CONNECTORS

See sheet BD 104-64, Standard Details



CAMBER DIAGRAM

NOTE: For all Girders N.B and S.B. Structures
Camber for Span 5, Rotate Span 1 180°
Camber for Spans 2, 3, & 4 is identical and symmetrical about ℄ of each span.

SPIRAL TABLE

SPIRAL	* No.	SPACES	PITCH	LENGTH
SP1	128	29	4"	9'-8"
SP2	128	28	5"	11'-8"
SP3	32	26	6"	13'-0"
SP4	32	19	8"	12'-8"
SP5	32	11	10"	9'-2"
SP6	32	27	4"	9'-0"
SP7	64	7	16"	9'-4"
SP8	224	9	16"	12'-0"
SP9	96	15	7"	8'-9"
SP10	24	12	9"	9'-0"

* Total number required N.B. & S.B.

BOTTOM OF SLAB ELEVATIONS - NORTHBOUND & SOUTHBOUND

GIRDER	℄ BEAR. ABUT.	15'	30'	45'	60'	75'	90'	105'	120'	135'	150'	165'	℄ PIER 1	15.33'	30.67'	46'	61.33'	76.67'	92'	107.33'	122.67'	138'	153.33'	168.67'	184'	199.33'	214.67'	℄ PIER 2	15.33'	30.67'	46'	61.33'	76.67'	92'
A	283.76	283.69	283.61	283.51	283.38	283.24	283.07	282.89	282.69	282.49	282.30	282.12	281.96	281.82	281.69	281.58	281.47	281.37	281.25	281.12	280.97	280.79	280.60	280.40	280.20	280.00	279.83	279.66	279.52	279.40	279.28	279.18	279.08	278.96
B	283.95	283.88	283.80	283.69	283.57	283.43	283.26	283.08	282.88	282.68	282.49	282.31	282.15	282.01	281.88	281.77	281.66	281.56	281.44	281.31	281.15	280.98	280.79	280.59	280.39	280.19	280.01	279.85	279.71	279.58	279.47	279.37	279.27	279.15
C	283.92	283.85	283.77	283.67	283.54	283.40	283.23	283.05	282.85	282.65	282.46	282.28	282.12	281.98	281.85	281.74	281.63	281.53	281.41	281.28	281.13	280.95	280.76	280.56	280.36	280.16	279.99	279.82	279.68	279.56	279.44	279.34	279.24	279.12
D	283.68	283.61	283.53	283.42	283.30	283.16	282.99	282.81	282.61	282.41	282.22	282.04	281.88	281.74	281.61	281.49	281.39	281.29	281.17	281.04	280.88	280.71	280.52	280.32	280.12	279.92	279.74	279.58	279.44	279.31	279.20	279.10	279.00	278.88

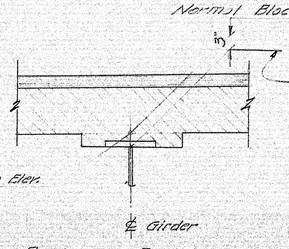
BOTTOM OF SLAB ELEVATIONS - CONT'D.

GIRDER	107.33'	122.67'	138'	153.33'	168.67'	184	199.33'	214.67'	℄ PIER 3	15.33'	30.67'	46'	61.33'	76.67'	92'	107.33'	122.67'	138'	153.33'	168.67	184	199.33'	214.67'
A	278.83	278.68	278.50	278.31	278.11	277.90	277.71	277.53	277.37	277.22	277.09	276.98	276.88	276.77	276.65	276.52	276.37	276.19	276.00	275.80	275.60	275.40	275.23
B	279.02	278.86	278.69	278.50	278.30	278.09	277.90	277.72	277.55	277.41	277.28	277.17	277.06	276.96	276.84	276.71	276.55	276.38	276.19	275.99	275.79	275.59	275.41
C	278.99	278.84	278.66	278.47	278.27	278.06	277.87	277.69	277.53	277.38	277.25	277.14	277.04	276.93	276.81	276.68	276.53	276.35	276.16	275.96	275.76	275.56	275.39
D	278.75	278.59	278.42	278.23	278.03	277.82	277.63	277.45	277.28	277.14	277.01	276.90	276.79	276.69	276.57	276.44	276.28	276.11	275.92	275.72	275.52	275.32	275.14

BOTTOM OF SLAB ELEVATIONS - CONT'D.

GIRDER	℄ PIER 4	15'	30'	45'	60'	75'	90'	105'	120'	135'	150'	165'	℄ BEAR. ABUT. 2
A	275.07	274.93	274.80	274.69	274.59	274.49	274.37	274.24	274.08	273.91	273.71	273.49	273.26
B	275.25	275.11	274.99	274.88	274.78	274.68	274.56	274.43	274.27	274.09	273.90	273.68	273.45
C	275.23	275.09	274.96	274.85	274.75	274.65	274.53	274.40	274.24	274.07	273.87	273.65	273.42
D	274.98	274.84	274.72	274.61	274.51	274.41	274.29	274.16	274.00	273.82	273.63	273.41	273.18

NOTE: To compensate for dead load deflections, as well as possible irregularities in girders, set the bottom of slab elevations at the points indicated before any of the slab forms are started. Shear connectors shall be welded to the top flange of the girder before setting bottom of slab elevations for blocking.



BLOCKING DETAIL

DESIGN— M. C. R.
TRACE+ DETAIL— G.W.C.
CHECK— AHP
BRIDGE NO.
SURVEY—
PLOT—

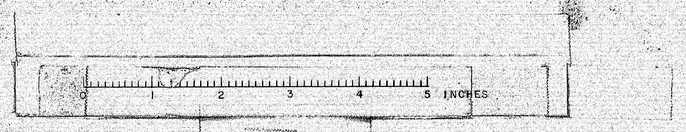
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

INTERSTATE 95
OVER
PENOBSCOT RIVER
IN THE TOWN OF
MEDWAY
PENOBSCOT COUNTY

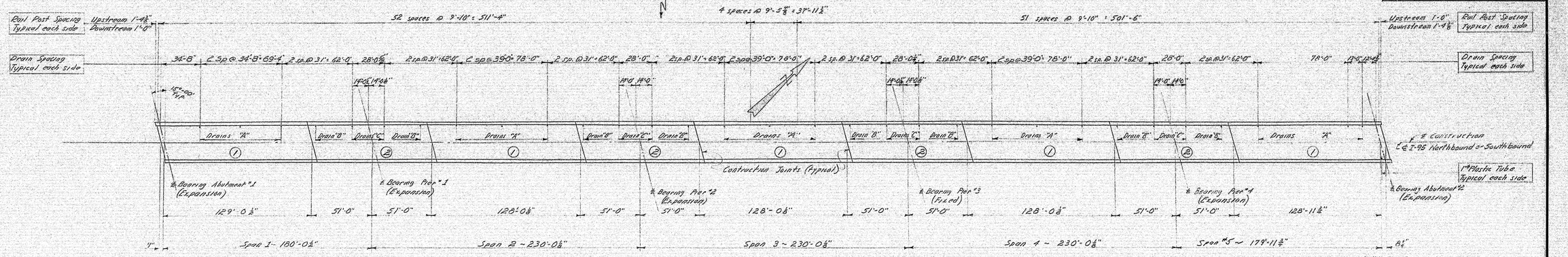
SHEAR CONNECTORS & SLAB ELEVATIONS

SHEET 81 OF 93 AUGUSTA, MAINE OCTOBER 1964

99-86



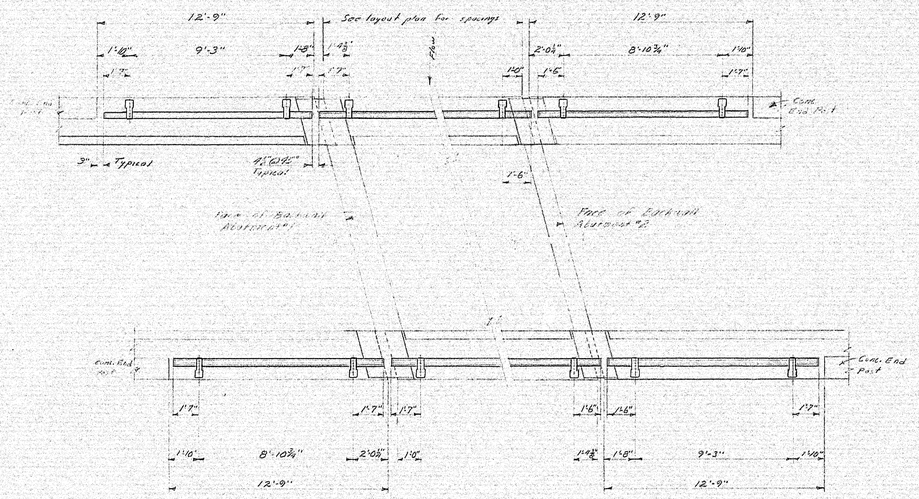
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-9(29)	82	93



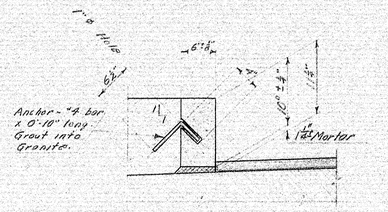
LAYOUT PLAN

Northbound & Southbound Identical.
Place all slabs marked (1) before placing slabs marked (2). After concrete has been placed in any slab no concrete shall be placed in an adjacent span until 24 hours has elapsed.
All dimensions are along structural steel.

1" Plastic drain tubes through slab and extend 2" below bottom of slab. Do not cover with membrane waterproofing. Payment to be incidental to item 701-10, Portland Cement Concrete Roadway and sidewalk slabs on Steel Bridges. Place in order for drip to clear Bridge Seat.

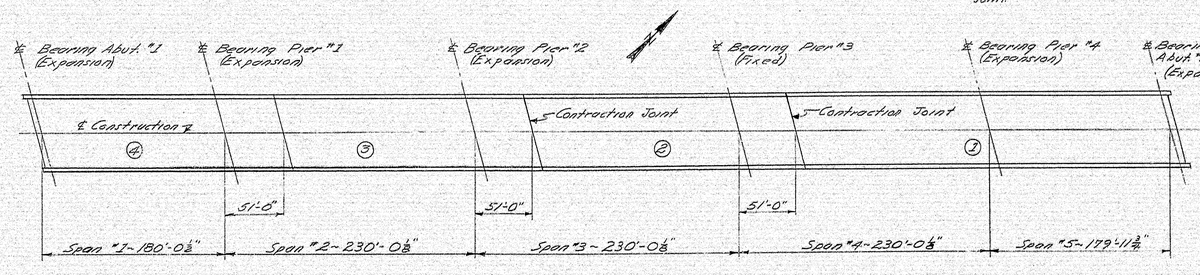


PLAN
RAIL DETAILS AT ABUTMENTS



DETAIL
VERTICAL BRIDGE CURB TYPE 1

Joints in Vertical Bridge Curb shall be located at every Concrete Curb Construction Joint.



ALTERNATE CONCRETE PLACING SEQUENCE

NOTES:

1. ——— North bound and South bound are identical.
2. ——— All dimensions are along structural steel.
3. ——— Place Concrete Panels in numerical sequence (1), (2), then (3).
4. ——— After concrete has been placed in any panel and has set at least 48 hours must elapse before placing the next panel.
5. ——— End stiffening of concrete slab may be omitted where Contraction Joints are eliminated. Longitudinal Reinforcing Steel must be continuous with 1'-0" minimum laps where Contraction Joints are eliminated.

Revised April 15, 1966
Concrete Placements changed from 3 to 4
Revised April 6, 1966
Alternate Concrete Placing Sequence - Added

DESIGN - M. C. R.
TRACE - DETAIL - B. T. A.
CHECK - AHF
BRIDGE NO.
SURVEY -
PLOT -

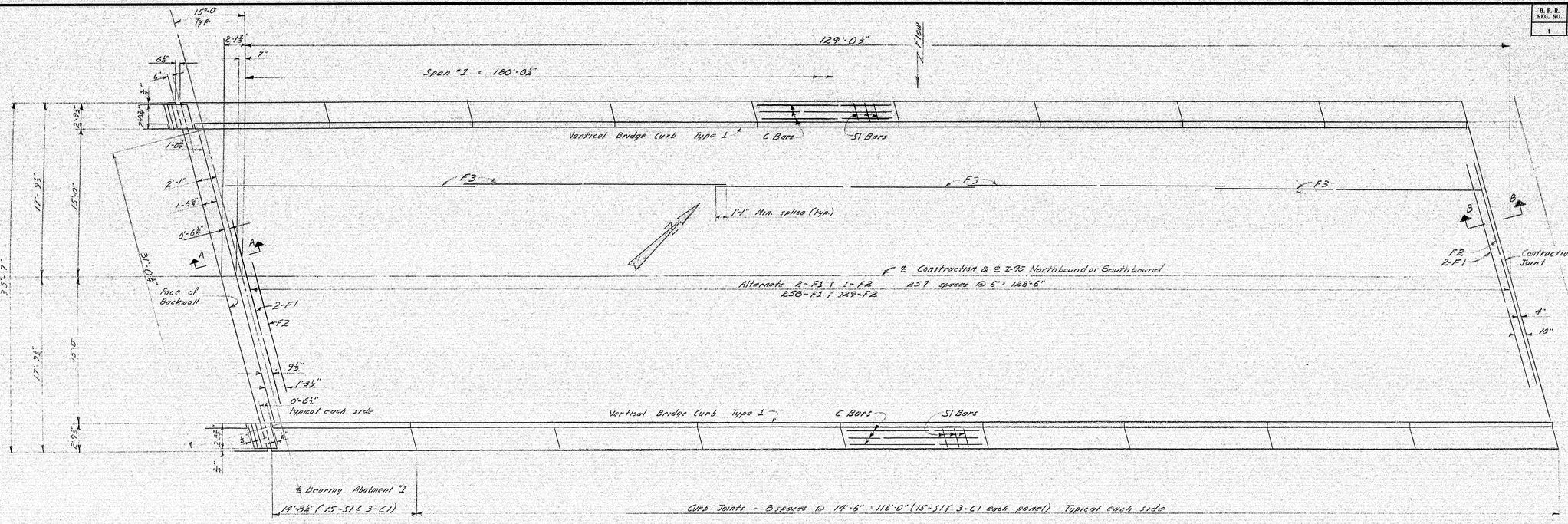
STATE HIGHWAY COMMISSION
BRIDGE DIVISION
INTERSTATE 95
OVER
PENOBSCOT RIVER
IN THE TOWN OF
MEDWAY
PENOBSCOT COUNTY
SLAB LAYOUT
SHEET 82 OF 93 AUGUSTA, MAINE OCTOBER 1964

C. B. CO., NO. 44-131 28788

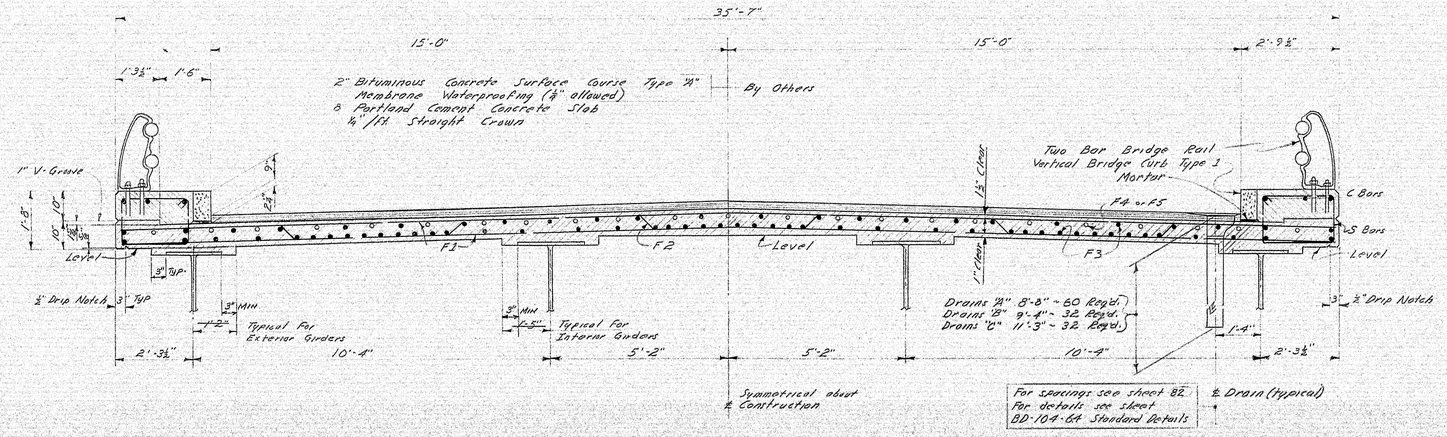
99-87



B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-9(29)	83	93



PLAN - 129' SECTION - SPAN "1



TYPICAL TRANSVERSE SECTION

GENERAL SUPERSTRUCTURE NOTES:

1. All dimensions are along structural steel.
2. Concrete for curbs shall not be placed until concrete in superstructure has been in place a minimum period of 7 days. During the 7 day period form work may be performed and concrete curb placed, but hand equipment only shall be permitted on the slab.
3. Curb Stirrups (C1) to be placed approximately 3" from end of cure sections. Intermediate stirrups may be secured to transverse slab steel.
4. At contraction joints over piers provide ¼" preformed expansion joint filler between contact surfaces of concrete curb and Vertical Bridge Curb. At all other contraction joints in concrete curb, break bond between the concrete surfaces by a coating of a suitable grade of asphalt paint.
5. Form a ¾" V-Groove on outside face of curb and slab at each contraction joint.
6. Provide a joint in the Vertical Bridge Curb at each contraction joint in the concrete curb.
7. Two Bar Bridge Rail details are shown on Standard Sheets BD-107-64 and BD-108-64.

See Sheet #84 for Sections A-A and B-B.

DESIGN- M.C.D.	BRIDGE NO.
TRACE- DETAIL - B.T.A.	SURVEY-
CHECK- M.M.F.	PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

INTERSTATE 95
OVER
PENOBSCOT RIVER
IN THE TOWN OF
MEDWAY
PENOBSCOT COUNTY

SLAB— SPAN 1

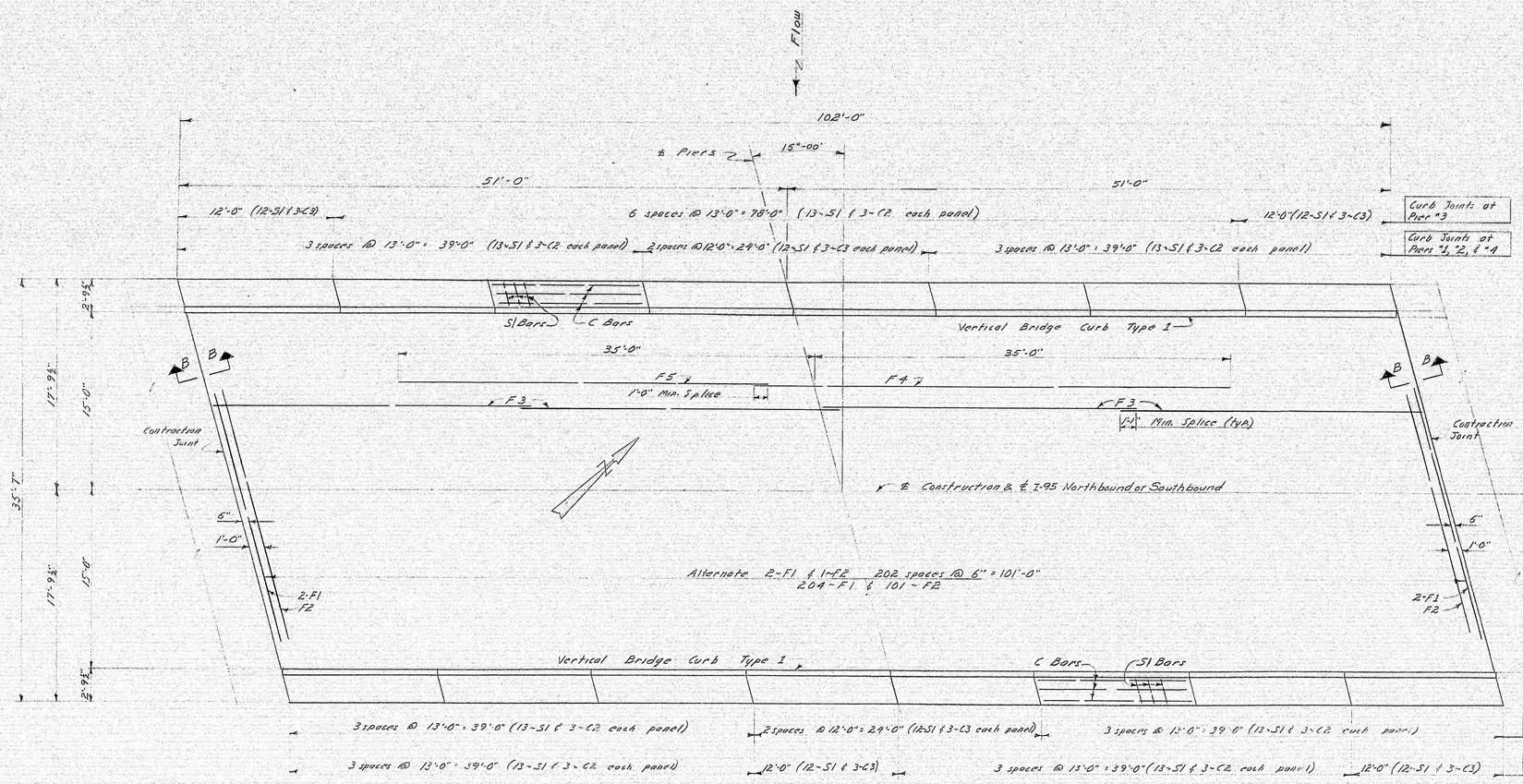
SHEET 83 OF 93 AUGUSTA, MAINE OCTOBER 1964

99-88

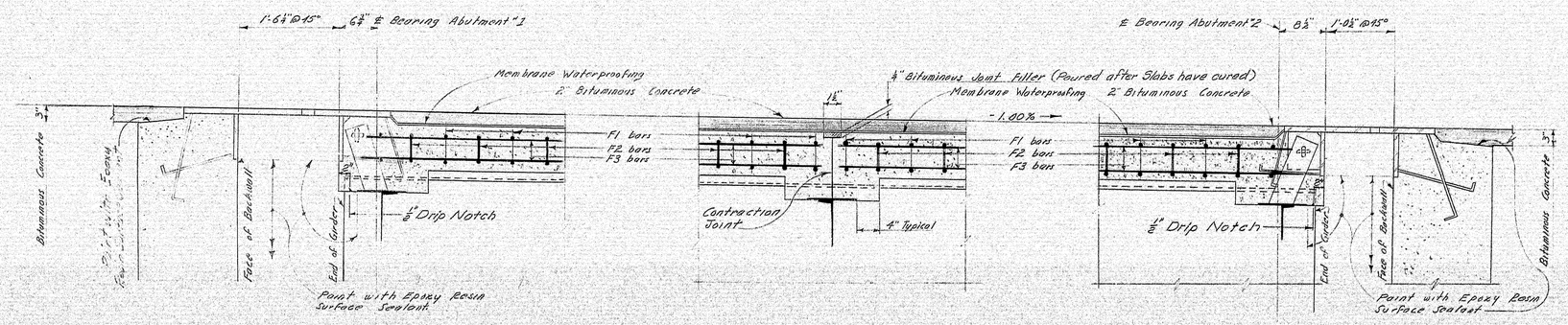
C. B. CO., NO. 44-131 24788



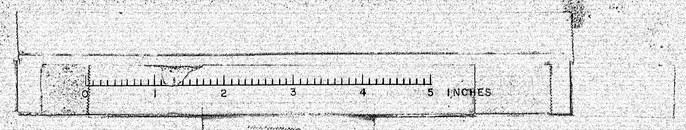
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-9(29)	84	93



PLAN - 102' SECTION at PIERS



NOTE:
Membrane Waterproofing and 2" Bituminous Concrete Surface Course by others.



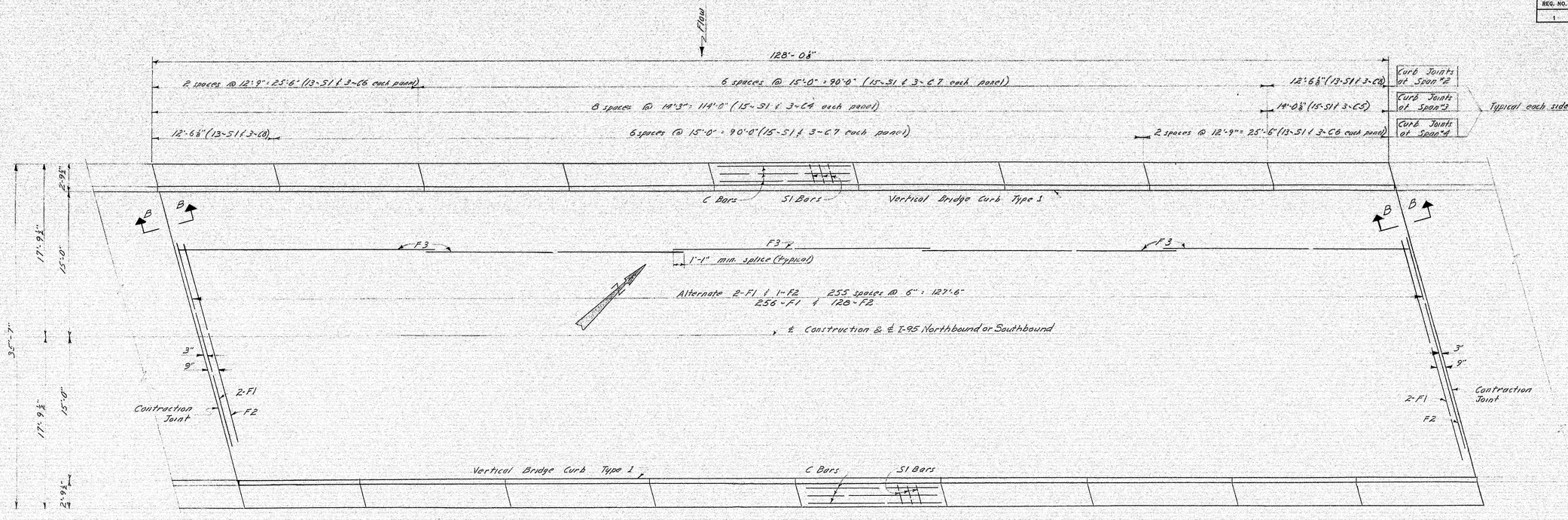
C. B. CO. NO. 44-131 44768

DESIGN- M.C.R.	BRIDGE NO.
TRACE- DET. - R.T.A.	SURVEY-
CHECK- A.H.H.	PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION
INTERSTATE 95
OVER
PENOBSCOT RIVER
IN THE TOWN OF
MEDWAY
PENOBSCOT COUNTY
SLAB — AT PIERS
SHEET 84 OF 93 AUGUSTA, MAINE OCTOBER 1964

99-89

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-9(29)	85	93



PLAN - 128' SECTION of SPANS #2, #3, & #4

See Sheet #84 for Section B-B

DESIGN- M.C.B. TRACE- DET.-B.T.A. CHECK- AHR	BRIDGE NO. SURVEY- PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

INTERSTATE 95
OVER
PENOBSCOT RIVER
IN THE TOWN OF
MEDWAY
PENOBSCOT COUNTY

SLAB- SPANS 2, 3 & 4

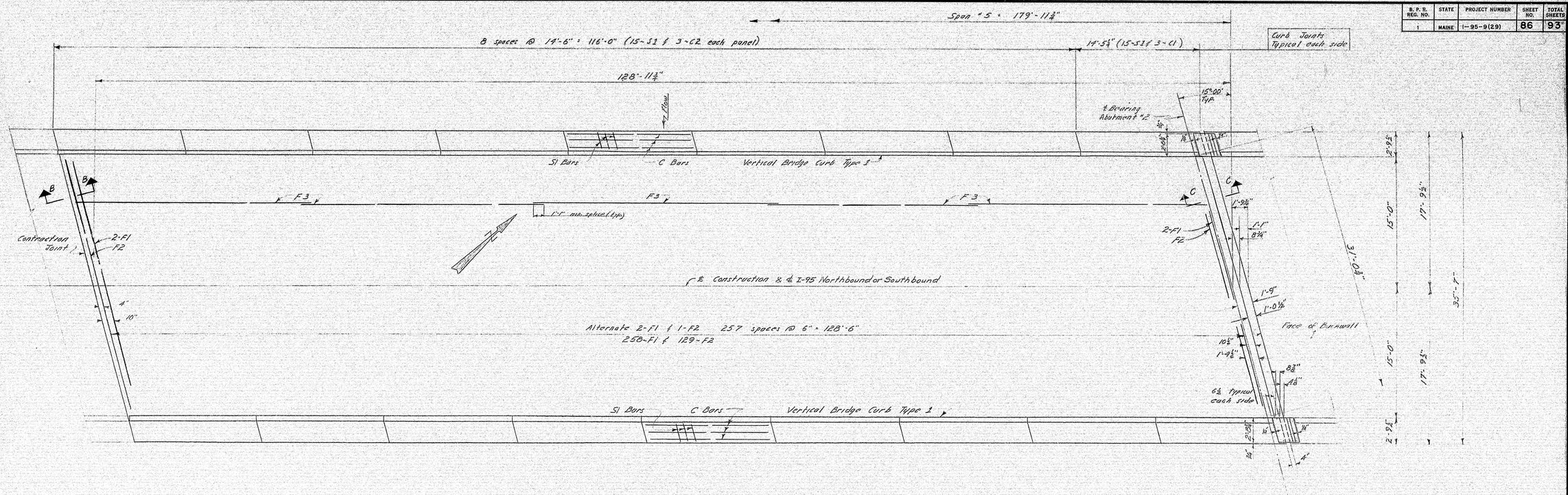
SHEET 85 OF 93 AUGUSTA, MAINE OCTOBER 1964

99-90

C. B. CO., NO. 44-131 39789



B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-9(29)	86	93



PLAN - 129' SECTION of SPAN "5

See Sheet #84 for Sections B-B and C-C

DESIGN— M.C.B. TRACE— D.T.T. - A.T.A. CHECK— A.H.K.	BRIDGE NO. SURVEY— PLOT—

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

INTERSTATE 95
OVER
PENOBSCOT RIVER
IN THE TOWN OF
MEDWAY
PENOBSCOT COUNTY

SLAB—SPAN 5

SHEET 86 OF 93 AUGUSTA, MAINE OCTOBER 1964

C. E. CO., NO. 44-131 24726

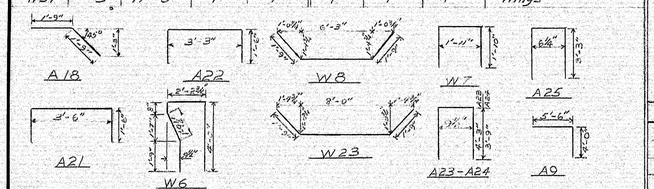
99-91



B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-9 (29)	87	93

ABUTMENTS

MARK	SIZE	LENGTH	NORTHBOUND ABUT 1 No.	NORTHBOUND ABUT 2 No.	SOUTHBOUND ABUT 1 No.	SOUTHBOUND ABUT 2 No.	TOTAL No.	LOCATION
A1	#6	22'-9"	16	16	16	16	64	Footings
A2	#6	17'-0"	16	16	16	16	64	"
A3	#6	7'-7"	64	64	64	64	256	"
A4	#6	16'-4"	4	4	4	4	16	"
A5	#6	16'-0"	4	4	4	4	16	"
A6	#6	15'-9"	4	4	4	4	16	"
A7	#6	15'-6"	4	4	4	4	16	"
A8	#6	2'-6"	23	23	23	23	92	"
A10	#6	18'-6"	7	7	7	7	28	Bridge Seat
A11	#6	20'-0"	7	7	7	7	28	" "
A12	#5	17'-8"	17	17	17	17	68	Br. Seat & Backwall
A13	#5	19'-8"	17	17	17	17	68	" "
A14	#6	10'-3"	21	21	21	21	84	Backwall
A15	#6	2'-9"	21	21	21	21	84	Bridge Seat
A16	#6	7'-6"	28	28	28	28	112	Footing
A17	#6	10'-1"	28	28	28	28	112	Backwall
A19	#7	8'-0"	20	20	20	20	80	Br. Seat & Backwall
A20	#6	3'-6"	36	36	36	36	144	Footing
A26	#5	1'-8"	4	4	4	4	16	End Post
A27	#5	3'-2"	4	4	4	4	16	" "
A28	#5	4'-8"	8	8	8	8	32	" "
W1	#6	5'-8"	6	6	6	6	24	Wings
W2	#6	9'-0"	6	6	6	6	24	"
W3	#6	7'-3"	70	70	70	70	280	"
W4	#6	5'-9"	8	8	8	8	32	"
W5	#6	4'-3"	8	8	8	8	32	"
W9	#5	14'-3"	4	4	4	4	16	"
W10	#5	15'-9"	1	1	1	1	4	"
W11	#5	17'-9"	1	1	1	1	4	"
W12	#5	19'-9"	1	1	1	1	4	"
W13	#5	21'-9"	6	6	6	6	24	"
W14	#6	9'-9"	6	6	6	6	24	"
W15	#6	10'-4"	1	1	1	1	4	"
W16	#6	11'-10"	1	1	1	1	4	"
W17	#6	13'-4"	1	1	1	1	4	"
W18	#6	14'-10"	1	1	1	1	4	"
W19	#6	16'-4"	1	1	1	1	4	Wings
W20	#6	17'-2"	12	12	12	12	48	"
W21	#5	17'-5"	2	2	2	2	8	"
W22	#5	16'-3"	1	1	1	1	4	"
W24	#5	13'-8"	4	4	4	4	16	"
W25	#5	15'-8"	1	1	1	1	4	"
W26	#5	17'-8"	1	1	1	1	4	"
W27	#5	19'-8"	1	1	1	1	4	"
W28	#5	22'-2"	6	6	6	6	24	"
W29	#6	9'-4"	6	6	6	6	24	"
W30	#6	11'-3"	1	1	1	1	4	"
W31	#6	12'-9"	1	1	1	1	4	"
W32	#6	14'-3"	1	1	1	1	4	"
W33	#6	15'-9"	1	1	1	1	4	"
W34	#6	17'-3"	1	1	1	1	4	"
W35	#6	17'-11"	12	12	12	12	48	"
W36	#5	17'-10"	2	2	2	2	8	"
W37	#5	17'-6"	1	1	1	1	4	Wings

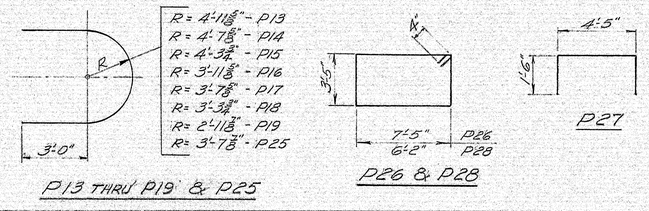


BENT BARS

MARK	SIZE	LENGTH	NORTHBOUND ABUT 1 No.	NORTHBOUND ABUT 2 No.	SOUTHBOUND ABUT 1 No.	SOUTHBOUND ABUT 2 No.	TOTAL No.	LOCATION
A9	#6	9'-6"	23	23	23	23	92	Bridge Seat
A18	#6	3'-6"	19	19	19	19	76	Backwall
A21	#5	6'-6"	8	8	8	8	32	Bridge Seat
A22	#5	6'-3"	8	8	8	8	32	" "
A23	#5	9'-4"	4	4	4	4	16	End Post
A24	#5	8'-4"	2	2	2	2	8	" "
A25	#5	7'-0"	2	2	2	2	8	" "
W6	#5	10'-5"	25	25	25	25	100	Wings
W7	#5	5'-7"	27	27	27	27	100	"
W8	#7	9'-9"	13	13	13	13	52	"
W23	#7	11'-6"	13	13	13	13	52	"

PIERS

MARK	SIZE	LENGTH	NORTHBOUND PIER 1 No.	NORTHBOUND PIER 2 No.	NORTHBOUND PIER 3 No.	NORTHBOUND PIER 4 No.	SOUTHBOUND PIER 1 No.	SOUTHBOUND PIER 2 No.	SOUTHBOUND PIER 3 No.	SOUTHBOUND PIER 4 No.	TOTAL No.	LOCATION
P1	#7	5'-6"	—	104	—	—	—	104	—	—	208	Seal - Dowel
P2	#6	20'-0"	30	30	30	30	30	30	30	30	240	Dist. Slab - Hor.
P3	#6	30'-0"	—	30	—	—	—	30	—	—	60	" " "
P4	#9	18'-0"	39	39	—	38	39	39	—	38	232	" " "
P5	#6	18'-0"	39	39	—	38	39	39	—	38	232	" " "
P6	#8	4'-0"	104	104	—	98	104	104	—	98	612	Dist. Slab - Dowel
P7		14'-0"	98	98	—	92	98	98	—	92	576	Shaft - Vert.
P8		3'-6"	2	2	—	2	2	2	—	2	12	" "
P9		7'-0"	2	2	—	2	2	2	—	2	12	" "
P10		11'-0"	2	2	—	2	2	2	—	2	12	" "
P11		19'-7"	—	46	—	—	—	46	—	—	92	" "
P12	#8	10'-0"	2	2	—	—	2	2	—	—	8	Shaft - Vert.
P20	#5	33'-0"	6	8	4	—	6	8	4	—	36	Shaft - Hor.
P21	#5	31'-8"	8	8	8	8	8	8	8	8	64	" "
P22	#5	30'-4"	8	8	8	8	8	8	8	8	64	" "
P23	#5	29'-0"	4	4	4	4	4	4	4	4	32	Shaft - Hor.
P24	#6	29'-0"	8	8	8	8	8	8	8	8	64	Cap - Hor.
P29	#6	35'-8"	2	2	2	2	2	2	2	2	16	Cap - Hor.
P30	#6	32'-6"	2	2	2	2	2	2	2	2	16	" "
P33	#8	5'-4"	—	—	110	—	—	—	110	—	220	Seal - Dowel
P34	#7	18'-0"	—	—	41	—	—	—	41	—	82	Dist. Slab - Hor.
P35	#10	18'-0"	—	—	41	—	—	—	41	—	82	" " "
P36	#6	29'-0"	—	—	32	—	—	—	32	—	64	" " "
P37	#10	4'-6"	—	—	100	—	—	—	100	—	200	" " "
P38		14'-0"	—	—	94	—	—	—	94	—	188	Shaft - Vert.
P39		16'-0"	—	—	46	—	—	—	46	—	92	" "
P40		11'-0"	—	—	2	—	—	—	2	—	4	" "
P41		7'-0"	—	—	2	—	—	—	2	—	4	" "
P42		4'-0"	—	—	2	—	—	—	2	—	4	" "
P43	#10	5'-0"	—	—	2	—	—	—	2	—	4	Shaft - Vert.
P48	#7	4'-9"	104	—	—	102	104	—	—	102	412	Seal - Dowel
P49	#6	29'-6"	30				30				60	Dist. Slab - Hor.
P50	#8	17'-7"	46	—	—	—	46	—	—	—	92	Shaft - Vert.
P55	#6	29'-0"	—	—	—	30	—	—	—	30	60	Dist. Slab - Hor.
P56	#8	11'-7"	—	—	—	46	—	—	—	46	92	Shaft - Vert.



P13 THRU P19 & P25

P26 & P28

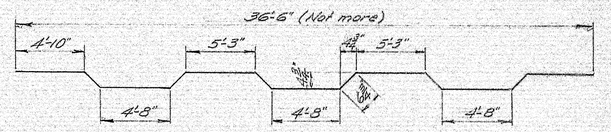
P27

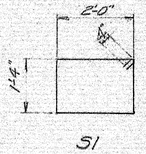
BENT BARS

MARK	SIZE	LENGTH	NORTHBOUND PIER 1 No.	NORTHBOUND PIER 2 No.	NORTHBOUND PIER 3 No.	NORTHBOUND PIER 4 No.	SOUTHBOUND PIER 1 No.	SOUTHBOUND PIER 2 No.	SOUTHBOUND PIER 3 No.	SOUTHBOUND PIER 4 No.	TOTAL No.	LOCATION
P13	#5	21'-8"	2	4	—	—	2	4	—	—	12	Shaft - Hor.
P14		20'-7"	4	4	4	—	4	4	4	—	24	
P15		19'-7"	4	4	4	4	4	4	4	4	32	
P16		18'-6"	4	4	4	4	4	4	4	4	32	
P17		17'-5"	4	4	4	4	4	4	4	4	32	
P18		16'-5"	4	4	4	4	4	4	4	4	32	
P19	#5	15'-4"	4	4	4	4	4	4	4	4	32	Shaft - Hor.
P25	#6	17'-6"	6	6	6	6	6	6	6	6	48	Cap - Hor.
P26	#6	22'-4"	22	22	22	22	22	22	22	22	176	Cap - Vert.
P27	#6	7'-5"	22	22	22	22	22	22	22	22	176	Cap - "
P28	#6	19'-10"	2	2	2	2	2	2	2	2	16	Cap - "

SUPERSTRUCTURE

MARK	SIZE	LENGTH	NORTHBOUND No.	SOUTHBOUND No.	TOTAL No.	LOCATION
F1	#6	36'-6"	2100	2100	4200	Slab - Main Steel
F3	#5	26'-9"	2870	2870	5740	Slab - Dist. Steel
F4	#5	40'-0"	92	92	184	" - " "
F5	#5	31'-0"	92	92	184	" - " "
C1	#5	14'-2"	60	60	120	Curb - Hor.
C2		12'-8"	192	192	384	" "
C3		11'-8"	48	48	96	" "
C4		13'-11"	48	48	96	" "
C5		13'-8	6	6	12	" "
C6		12'-5"	24	24	48	" "
C7		14'-8"	72	72	144	" "
C8	#5	12'-2"	12	12	24	Curb - Hor.





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BENT BARS

MARK	SIZE	LENGTH	NORTHBOUND No.	SOUTHBOUND No.	TOTAL No.	LOCATION
F2	#6	37'-6"	1046	1046	2092	Slab - Main Steel
51	#5	7'-4"	2124	2124	4248	Curb - Stirrups

APPROACH SLABS

MARK	SIZE	LENGTH	NORTHBOUND No.	SOUTHBOUND No.	TOTAL No.	LOCATION
B1	#6	14'-6"	232	232	464	Approach Slab
B2	#4	29'-8"	40	40	80	" "

Note: Dimensions to ℄ of Reinforcing Steel.
Reinforcing Steel to be Intermediate Grade.

DESIGN–
TRACE–
CHECK–AS NOTED

BRIDGE NO.
SURVEY–
PLOT–

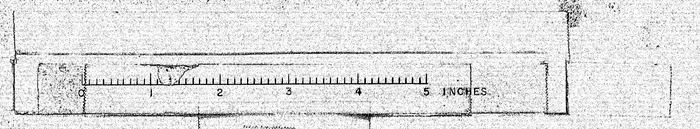
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

INTERSTATE 95
OVER
PENOBSCOT RIVER
IN THE TOWN OF
MEDWAY
PENOBSCOT COUNTY

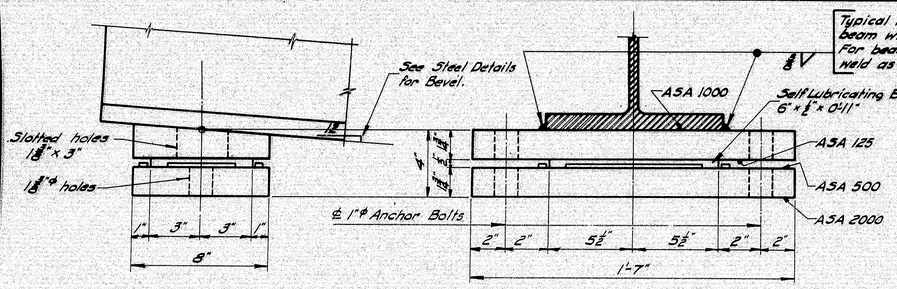
REINFORCING STEEL SCHEDULE

SHEET 87 OF 93 AUGUSTA, MAINE OCT. 1964

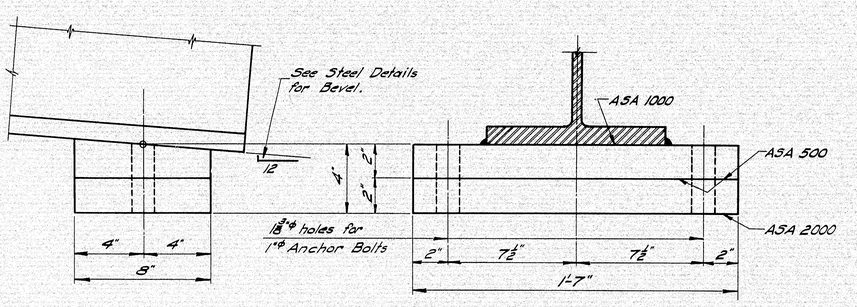
99-92



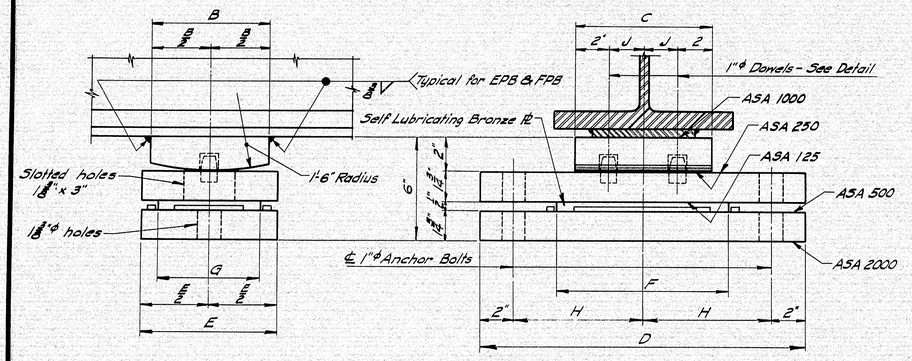
B.P.R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(62)	88	93



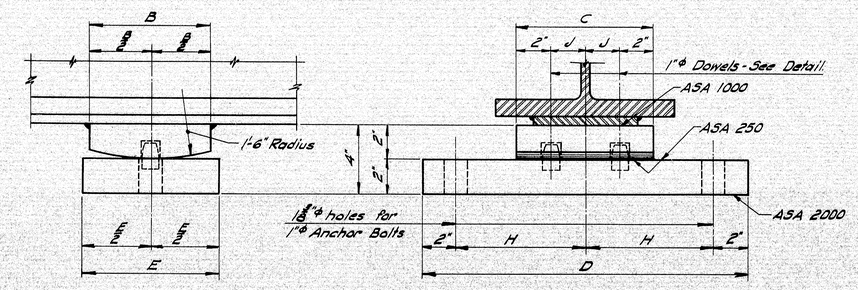
EXPANSION PEDESTAL – EPA



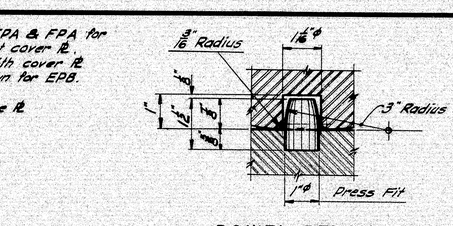
FIXED PEDESTAL – FPA



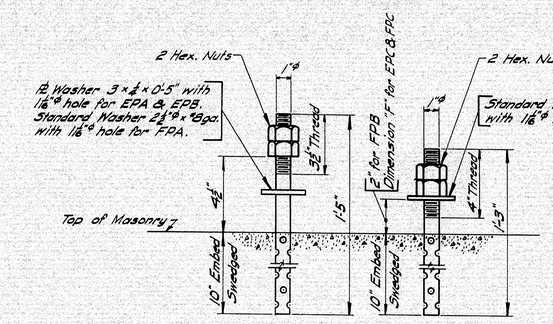
EXPANSION PEDESTAL – EPB



FIXED PEDESTAL – FPB



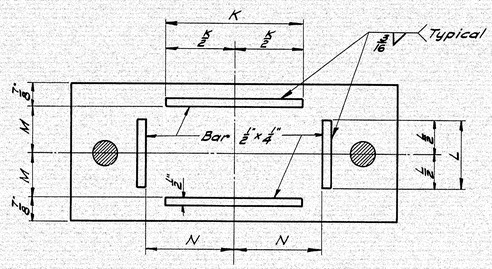
DOWEL DETAIL



For EPA - 2 req'd.
For FPA - 2 req'd.
For EPB - 2 req'd.

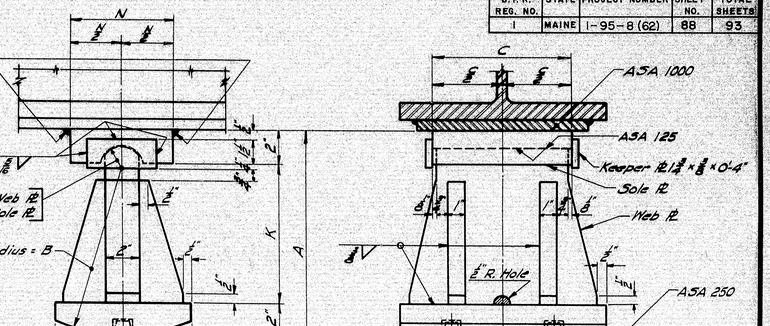
For FPB - 2 req'd.
For EPC - 2 req'd.
For FPC - 4 req'd.

ANCHOR BOLT DETAIL

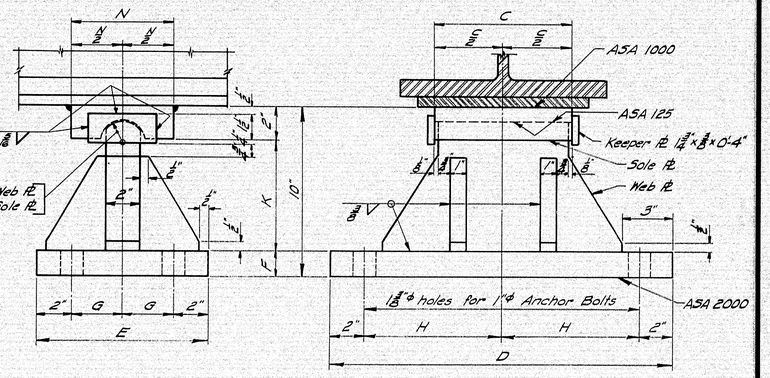


For EPA & EPB

MASONRY PLATE



EXPANSION PEDESTAL – EPC



FIXED PEDESTAL – FPC

PEDESTALS — ALLOWABLE LOADS & DIMENSIONS														
Pedestal	Load	A	B	C	D	E	F	G	H	J	K	L	M	N
EPA	132 K	–	–	–	–	–	–	–	–	–	8"	4"	3⅝"	5⅝"
FPA	130 K	–	–	–	–	–	–	–	–	–	–	–	–	–
EPB-1	120 K	–	6"	8"	1'-7"	8"	10"	6"	7⅝"	2"	8"	4"	3⅝"	5⅝"
EPB-2	165 K	–	7"	10"	1'-8"	9"	1'-0"	7"	8"	3"	10"	5"	3⅝"	6⅝"
EPB-3	224 K	–	8"	1'-1"	2'-0"	10"	1'-4"	7"	10"	4½"	1'-2"	5"	3⅝"	8⅝"
FPB-1	120 K	–	6"	8"	1'-7"	8"	–	–	7⅝"	2"	–	–	–	–
FPB-2	165 K	–	7"	10"	1'-8"	9"	–	–	8"	3"	–	–	–	–
FPB-3	224 K	–	8"	1'-2"	2'-0"	10"	–	–	10"	5"	–	–	–	–
EPC-1	70 K	9⅝"	6"	8"	1'-8"	8"	1½"	3½"	3"	3"	4½"	–	½"	6"
EPC-2	100 K	11⅝"	8"	8"	1'-8"	8"	1½"	3½"	3"	3"	6¼"	–	½"	6"
EPC-3	130 K	1'-2"	10"	8"	1'-8"	9"	1⅛"	4"	3"	3"	8¼"	–	½"	7"
EPC-4	160 K	1'-2"	10"	8"	1'-10"	9"	1⅛"	4"	4"	3"	8¼"	–	½"	7"
EPC-5	190 K	1'-2½"	10"	9"	2'-0"	10"	2"	4½"	5"	3"	8¼"	–	½"	8"
EPC-6	220 K	1'-4½"	1'-0"	10"	2'-0"	1'-0"	2½"	5"	5"	3"	10¼"	–	1"	8"
EPC-7	250 K	1'-4½"	1'-0"	1'-0"	2'-2"	1'-0"	2½"	5"	5"	4"	10¼"	–	1"	8"
FPC-1	100 K	–	–	8"	1'-8"	9"	1¼"	2½"	8"	–	6½"	–	–	6"
FPC-2	160 K	–	–	8"	1'-8"	10"	1½"	3"	8"	–	6½"	–	–	7"
FPC-3	190 K	–	–	9"	2'-0"	10"	1½"	3"	10"	–	6½"	–	–	8"
FPC-4	220 K	–	–	10"	2'-0"	1'-0"	1⅝"	4"	10"	–	6¼"	–	–	8"
FPC-5	250 K	–	–	1'-0"	2'-0"	1'-0"	2"	4"	10"	–	6"	–	–	8"

NOTE: At the location of bearing pedestals the concrete bridge seats shall be dressed one inch larger all around than size of masonry plates and to exact elevations shown on the plans. If dressed areas are below the surface of the surrounding bridge seat a small channel shall be cut to the edge of the bridge seat for drainage where required by the Engineer. Channels shall have a min. width of 2" and min. slope of ½ inch per foot. No separate payment for this work will be made as it shall be considered incidental to contract items.

DESIGN SPECIFICATIONS

A.A.S.H.O., Standard Specifications for Highway Bridges, 1961, with Interim Specifications, 1961 & 1962

A.S.T.M. STEEL CLASSIFICATION

Anchor Bolts - A7, A36, or A 307
All other - A36.

MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

STANDARD DETAILS

(BD 101 - 64)

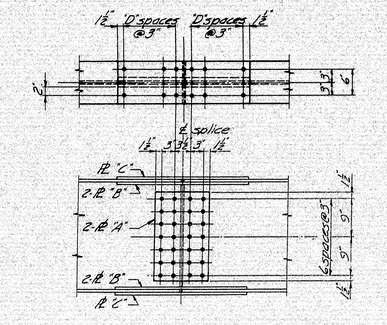
BEARING PEDESTALS

JANUARY 1964

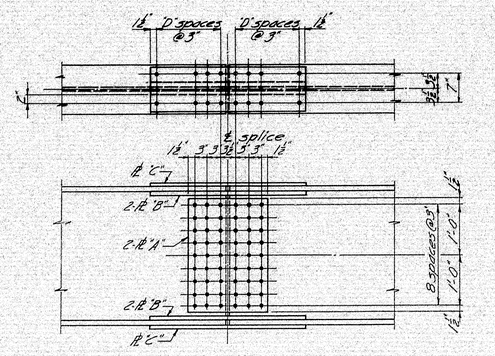
99-93



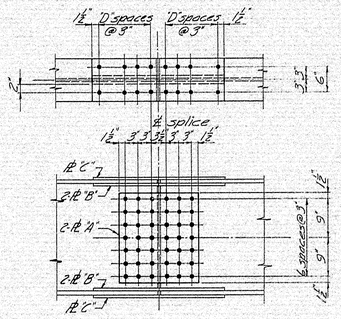
B.P.R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEET
1	MAINE	I-95-8(62)	89	93



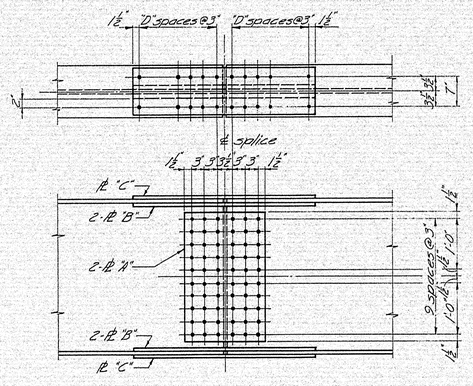
27 WF 84



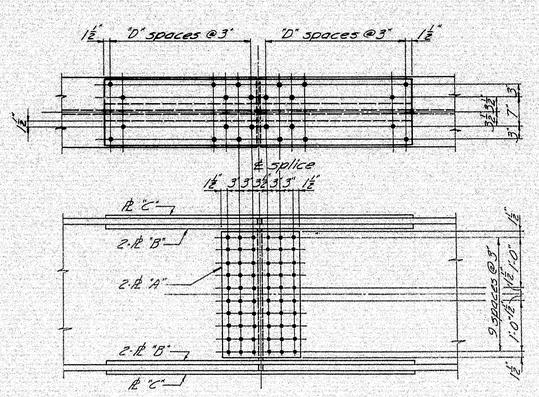
33 WF 118, 130, 141, 152



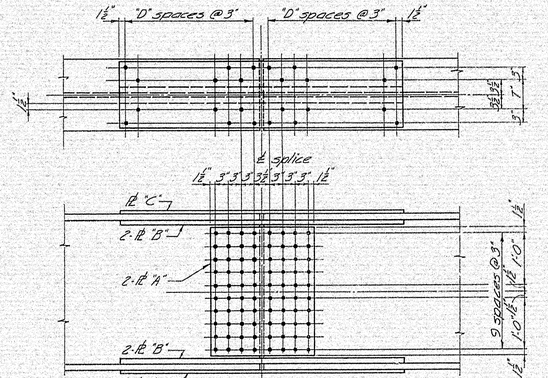
27 WF 94, 102, 114



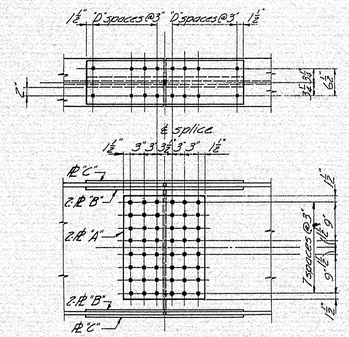
36 WF 135, 150, 160, 170, 182, 194



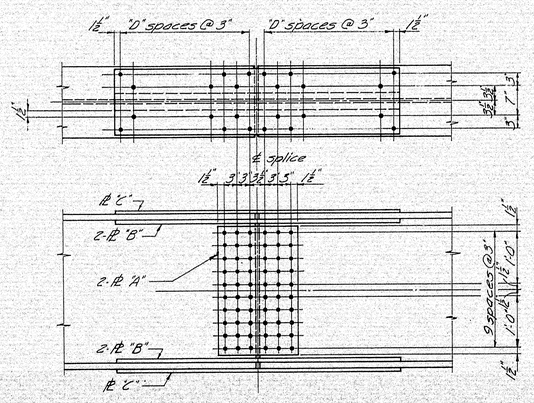
36 WF 245, 280



36 WF 300



30 WF 99, 108, 116, 124, 132



36 WF 230, 260

SPLICE DESIGN, PLATES AND FLANGE HOLES

BEAM	BEND. M.	SHEAR	PLATE "A"	PLATE "B"	PLATE "C"	"D"
27 WF 84	3070 K'	111 K	12½ x 7/16	4 x 7/16	10 x 7/16	3
27 WF 94	3520 K'	119 K	18½ x 7/16	4 x ½	10 x 7/16	3
27 WF 102	3862 K'	126 K	18½ x 7/16	4 x 7/16	10 x 7/16	4
27 WF 114	4341 K'	140 K	18½ x 9/16	4 x 9/16	10 x ½	4
30 WF 99	3921 K'	139 K	18½ x ½	4 x ½	10 x 9/16	3
30 WF 108	4360 K'	147 K	18½ x 7/16	4 x 7/16	10 x 7/16	4
30 WF 116	4780 K'	152 K	18½ x 9/16	4 x 9/16	10 x 7/16	4
30 WF 124	5170 K'	159 K	18½ x 7/16	4 x 7/16	10 x ½	4
30 WF 132	5539 K'	168 K	18½ x 9/16	4 x ½	10 x 7/16	5
33 WF 118	5287 K'	164 K	18½ x ½	4 x 7/16	11 x 7/16	4
33 WF 130	5978 K'	179 K	18½ x ½	4 x ½	11 x 7/16	5
33 WF 141	6604 K'	181 K	18½ x 7/16	4 x 7/16	11 x ½	5
33 WF 152	7193 K'	191 K	18½ x 7/16	4 x ½	11 x 7/16	6
36 WF 135	6473 K'	191 K	18½ x ½	4 x 11/16	11 x 7/16	4
36 WF 150	7436 K'	202 K	18½ x ½	4 x 13/16	11 x ½	5
36 WF 160	8005 K'	212 K	18½ x 9/16	4 x ⅝	11 x 7/16	6
36 WF 170	8574 K'	221 K	18½ x 7/16	4 x 13/16	11 x ⅝	6
36 WF 182	9204 K'	237 K	18½ x 7/16	4 x 13/16	11 x 7/16	7
36 WF 194	9838 K'	253 K	18½ x 9/16	4 x 1	11 x 1 1/16	8
36 WF 230	12574 K'	247 K	18½ x 7/16	6 x 1	16 x ⅝	10
36 WF 245	13441 K'	260 K	18½ x 7/16	6 x 1	16 x 7/16	11
36 WF 260	14930 K'	276 K	18½ x 9/16	6 x 1 1/16	16 x ⅝	12
36 WF 280	15551 K'	291 K	18½ x ⅝	6 x 1 1/16	16 x 9/16	13
36 WF 300	16676 K'	312 K	24½ x 7/16	6 x 1⅛	16 x ⅝	14

GENERAL NOTES

1. Splice connections to be made with ⅞" ϕ high tensile strength bolts. Holes to be 15/16" ϕ.

2. The design bending moment is 90% of the net resisting moment of the beam with an allowable stress of 20,000 p.s.i. The design shear is 75% of the shear strength of the gross section of the web with an allowable stress of 12,000 p.s.i.

3. If beams of different sizes are to be spliced, use splice details shown for the smaller of the beams being spliced unless otherwise directed by design details. See design details for filler thickness. Place fillers to limits of splice plates only, with no extensions.

4. See design details for slopes of beams in order to correctly fabricate bevels of the splices.

A.S.T.M. STEEL CLASSIFICATION

High Tensile Strength Bolts A-325
Splice Plates A-36

DESIGN SPECIFICATIONS

AASHO Standard Specifications for Highway Bridges, 1961 with Interim Specifications, 1961 & 1962

MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

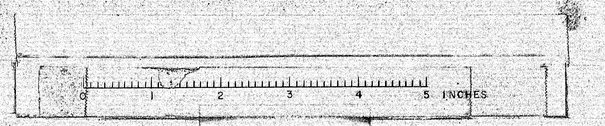
STANDARD DETAILS

(BD 103-64)

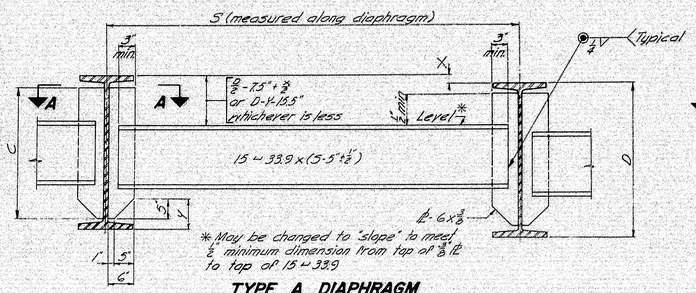
BEAM SPLICES

JANUARY 1964

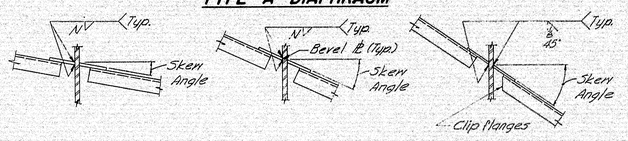
99-94



B.P.R. DIV. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(62) I-95-9(29)	90	93



TYPE A DIAPHRAGM

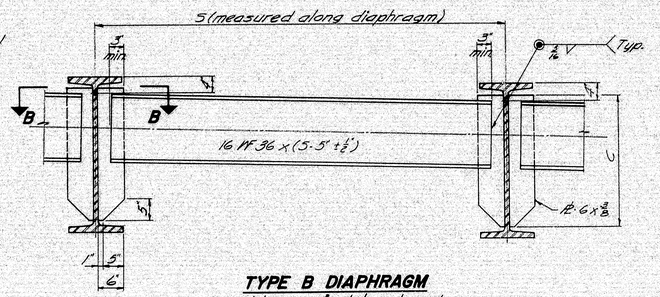


SECTION A-A
Skew Angle 0° to 18°-30'

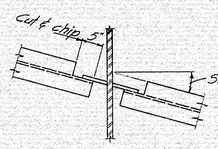
SECTION A-A
Skew Angle over 18°-30' to 30°-00'

SECTION A-A
Skew Angle over 30°-00'

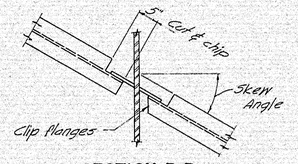
FILLET WELD SIZE "N" & DIMENSION "C" FOR DIAPHRAGM PLATES		
BEAM	C	N
27 WF 84 to 114 incl.	1'-11"	1/2"
30 WF 99 to 132 incl.	2'-2"	1/2"
33 WF 118 to 152 incl.	2'-5"	1/2"
36 WF 135 to 194 incl.	2'-7"	1/2"
36 WF 230 to 300 incl.	2'-6"	5/16"



TYPE B DIAPHRAGM
Welding 6 x 3/8 plates to web same as for Type A Diaphragm.



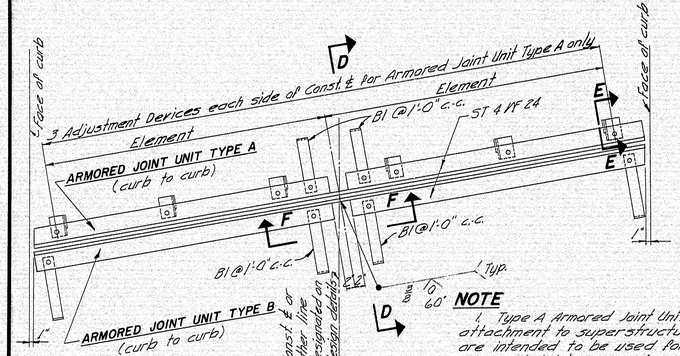
SECTION B-B
Skew Angle 0° to 25°-00'



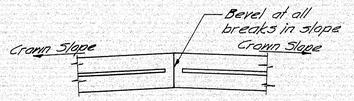
SECTION B-B
Skew Angle over 25°-00'

NOTE
See design details for diaphragm type, location and skew.

DIAPHRAGMS

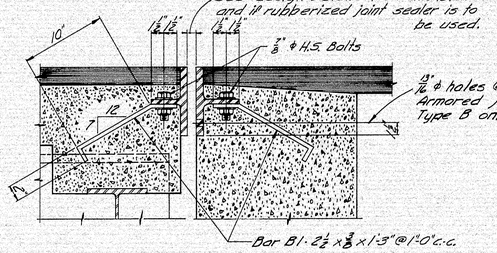


PLAN



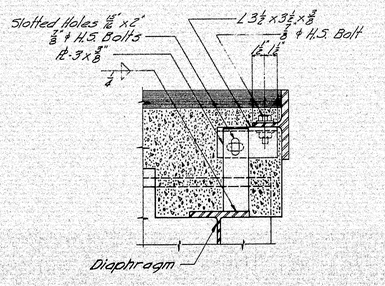
SECTION F-F
Note: See design details for Const. & to curb dimensions, skew, crown slope, slab thickness, other dimensions necessary to complete the fabrication details, and location.

NOTE
1. Type A Armored Joint Units are intended to be used for attachment to superstructures. Type B Armored Joint Units are intended to be used for attachment to abutments. At armored joints over piers, two Type A Armored Joint Units shall be used.
2. If rubberized joint sealer is called for on the design details the area to which it is to be bonded shall not be painted and it shall be supported on non-bituminous material. At the contractor's option the supporting material may be left in place or be removed. If the supporting material is left in place, it shall be compressible in accordance with specification AASHO M153-54. In either case bond between the supporting material and the rubberized joint sealer shall be prevented by a 1" minimum thickness of Poly-urethane foam.
3. If more elements than the two shown in the "Plan" are required by the design details, there shall be three adjustment devices for each element for Armored Joint Unit Type A and the elements of both units shall be field welded together in the same manner as shown in the "Plan".
4. Armored Joints to be paid for as Structural Steel.

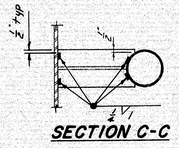


ARMORED JOINT UNIT TYPE A — ARMORED JOINT UNIT TYPE B

SECTION D-D



SECTION E-E
Showing Adjustment Device Armored Joint Unit Type A only - After Unit is in final position weld 3/8" to angle with 1/4" fillet



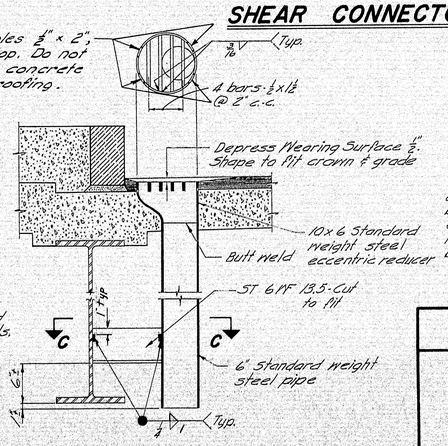
SECTION C-C

NOTE
1. Drain may be rotated 180°. See design details for location and number of drains and beam size to which it is connected.
2. Drains to be paid for as structural steel.

ARMORED JOINT

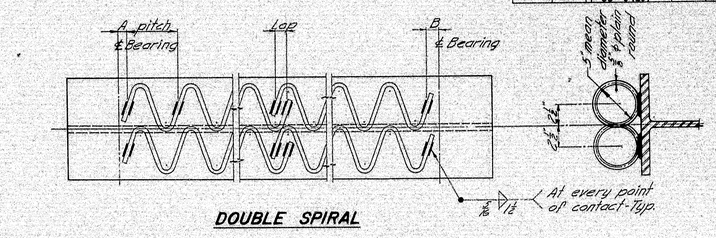
An armored joint consists of two armored joint units. See note 1.

SHEAR CONNECTORS

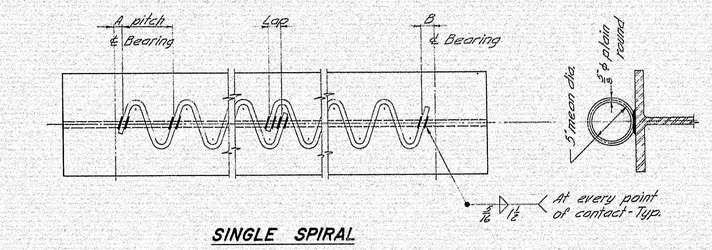


DRAIN

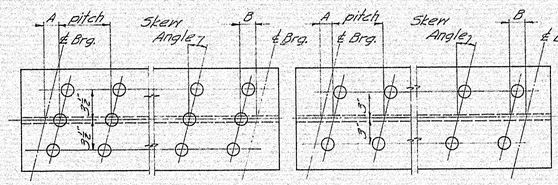
Revised Nov. 1964, Welding Drain Support



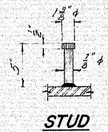
DOUBLE SPIRAL



SINGLE SPIRAL



TRIPLE STUDS **DOUBLE STUDS**



STUD DETAIL

NOTE
1. Spiral reinforcing or studs may be used at the option of the Contractor.
2. If studs are used they shall be granular or solid flux filled and automatically end welded to the top flange in the shop or field.
3. Studs are a patented product. If the Contractor elects to use them, he shall pay the royalty and payment to the contractor will be included in the lump sum price for Shear Connectors.
4. See the design details for Dimensions "A" and "B", spiral and stud pitch and Skew Angle for Studs.

GENERAL NOTE

Use only those items called for on design details. In case of conflict between these Standard Details and the design details, the requirements of the design details shall be followed.

MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

STANDARD DETAILS
(BD 104-64)
DIAPHRAGMS, ARMORED JOINT, SHEAR CONNECTORS, DRAIN

JANUARY 1964

99-95

