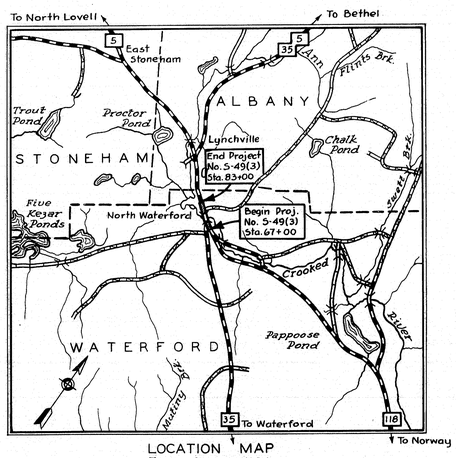
P.R.A. DIV. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	S-49(3)	1	11

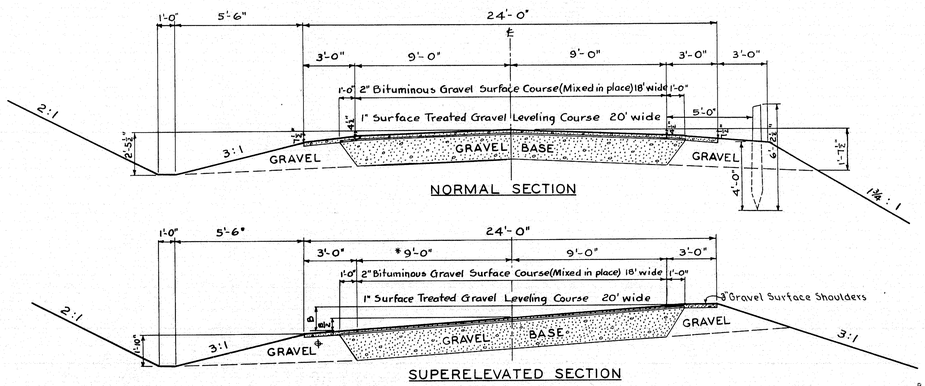
STATE OF MAINE
STATE HIGHWAY COMMISSION

HORRS BRIDGE
OVER THE
CROOKED RIVER
IN THE TOWN OF
WATERFORD
OXFORD COUNTY
FEDERAL AID SECONDARY PROJECT
NO. S-49(3)
TOTAL LENGTH 0.~~303~~ 348 MILES

34.32' Equation



LOCATION MAP
Traced from S.W.H.P.S.
Scale 1" = 2,500'



NORMAL SECTION

SUPERELEVATED SECTION

*Curves of 6° or more shall be widened. The Extra Width expressed in feet is given by the formula $\frac{D}{10} + 2'$

Curves of one degree or more shall be superelevated. "D" equals degree of curve x 3 with a minimum of 9" superelevation. Maximum superelevation equals 1" per foot of pavement width. All curves to have full superelevation at approximately 50' onto curve from the P.C. and P.T. with a run-off of 150' unless otherwise specified.

+Gravel Shoulders shall conform to the Specifications for, and will be Paid for as, Gravel Base.

TYPICAL APPROACH SECTIONS

Loading - H 15-44

-Concrete Classifications-

Abutments -	Class B
Floor Slab -	Class A
Wearing Surface -	Class A-A
Concrete Rail -	Class Y
Drop Inlets -	Class A

INDEX OF SHEETS

1	TITLE SHEET
2-3	SPECIAL DETAILS
4-5	SURVEY PLAN
6-8	CROSS SECTIONS
9	ABUTMENTS
10	SUPERSTRUCTURE
11	STRUCTURAL STEEL

APPROVED:
MAINE STATE HIGHWAY COMMISSION
Lloyd B. Morton CHAIRMAN
C. J. Russell
Harlan D. Welch
Lucius D. Barrows CHIEF ENGINEER

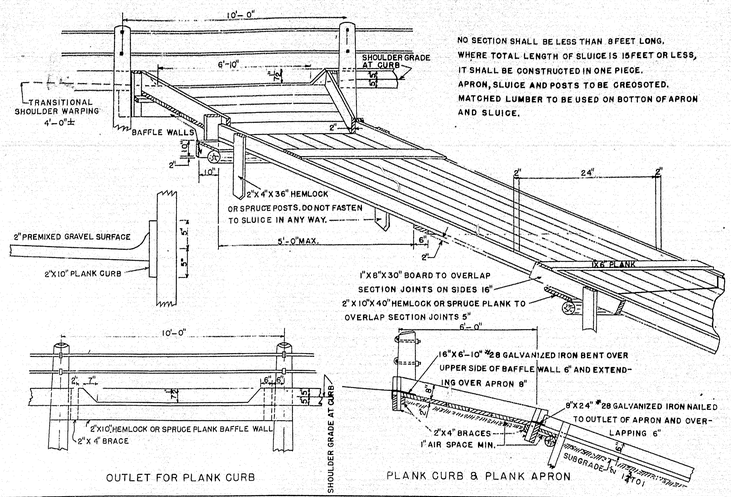
RECOMMENDED FOR APPROVAL DATE
DISTRICT ENGINEER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

APPROVED DATE
DIVISION ENGINEER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

49-118

P.R.A. DIV. NO.	STATE	F.A.S.) PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	S-49(3)	2	11

PLANK APRON & PLANK SLUICE

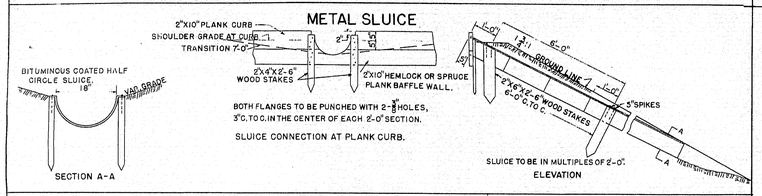


NO SECTION SHALL BE LESS THAN 8 FEET LONG.
WHERE TOTAL LENGTH OF SLUICE IS 15 FEET OR LESS, IT SHALL BE CONSTRUCTED IN ONE PIECE.
APRON, SLUICE AND POSTS TO BE CREOSOTED.
MATCHED LUMBER TO BE USED ON BOTTON OF APRON AND SLUICE.

OUTLET FOR PLANK CURB

PLANK CURB & PLANK APRON

METAL SLUICE



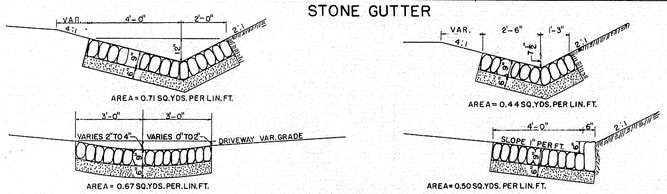
BOTH FLANGES TO BE PUNCHED WITH 2-$\frac{3}{4}$" HOLES, 3" C. TO C. IN THE CENTER OF EACH 2'-0" SECTION.

SLUICE CONNECTION AT PLANK CURB.

SECTION A-A

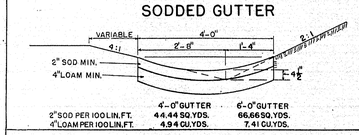
SLUICE TO BE IN MULTIPLES OF 2'-0".
ELEVATION

STONE GUTTER



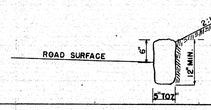
GRAVEL BED FOR GROUTED STONE GUTTER ONLY.

SODDED GUTTER



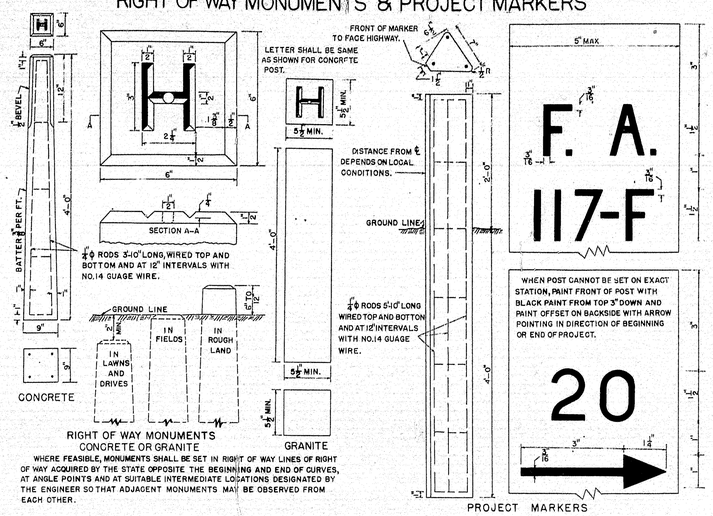
	4'-0" GUTTER	6'-0" GUTTER
2" SOD PER 100 LIN.FT.	44.44 SQ.YDS.	66.66 SQ.YDS.
4" LOAM PER 100 LIN.FT.	4.94 CU.YDS.	7.41 CU.YDS.

FIELD STONE CURB



FIELD STONE 6" MIN. WIDTH OF FACE.

RIGHT OF WAY MONUMENTS & PROJECT MARKERS



$\frac{5}{8}$" ℄ RODS 3'-10" LONG, WIRED TOP AND BOTTOM AND AT 12" INTERVALS WITH NO. 14 GUAGE WIRE.

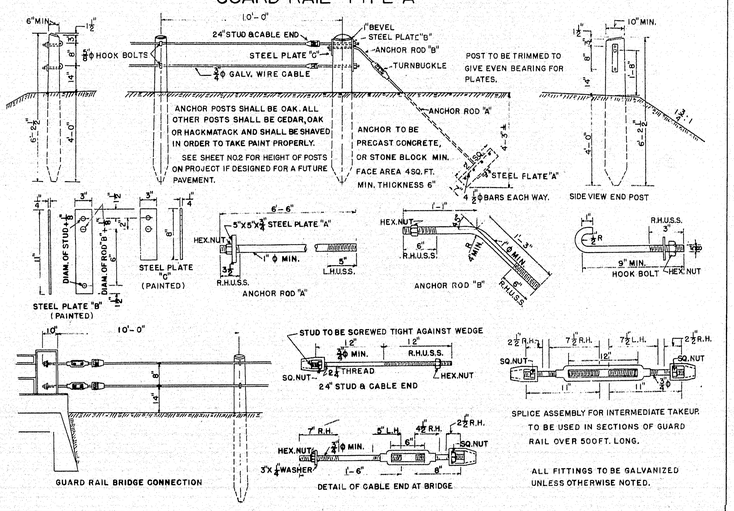
$\frac{5}{8}$" ℄ RODS 5'-10" LONG WIRED TOP AND BOTTON AND AT 12" INTERVALS WITH NO. 14 GUAGE WIRE.

RIGHT OF WAY MONUMENTS
CONCRETE OR GRANITE

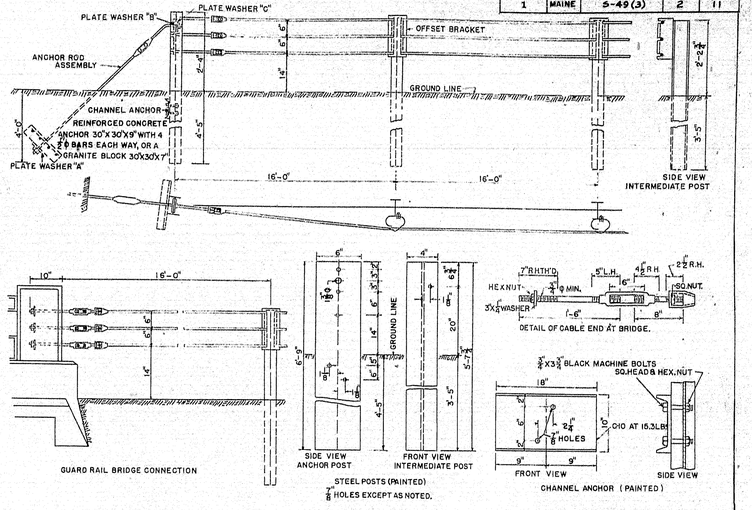
WHERE FEASIBLE, MONUMENTS SHALL BE SET IN RIGHT OF WAY LINES OF RIGHT OF WAY ACQUIRED BY THE STATE OPPOSITE THE BEGINNING AND END OF CURVES, AT ANGLE POINTS AND AT SUITABLE INTERMEDIATE LOCATIONS DESIGNATED BY THE ENGINEER SO THAT ADJACENT MONUMENTS MAY BE OBSERVED FROM EACH OTHER.

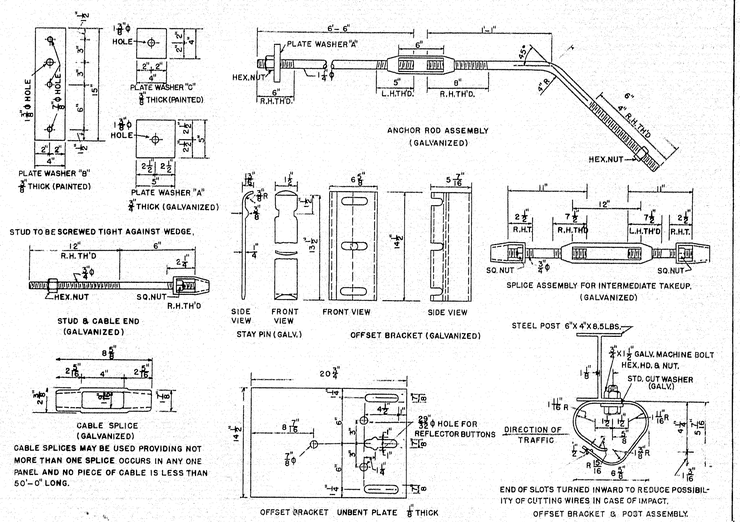
WHEN POST CANNOT BE SET ON EXACT STATION, PAINT FRONT OF POST WITH BLACK PAINT FROM TOP 3" DOWN AND PAINT OFFSET ON BACKSIDE WITH ARROW POINTING IN DIRECTION OF BEGINNING OR END OF PROJECT.

GUARD RAIL TYPE "A"



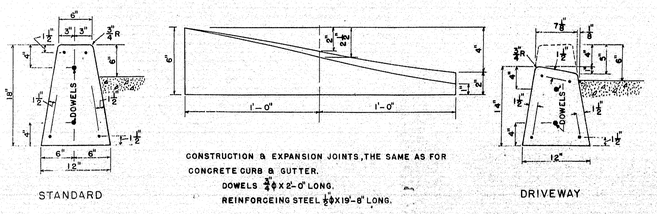
GUARD RAIL TYPE "B"





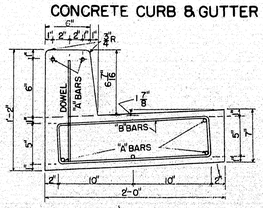
CONCRETE CURB

TRANSITION FOR DRIVEWAY APPROACH FOR 6" CURB



CONSTRUCTION & EXPANSION JOINTS, THE SAME AS FOR CONCRETE CURB & GUTTER.
DOWELS ⅝" ℄ X 2'-0" LONG.
REINFORCEING STEEL ½" ℄ X 19'-8" LONG.

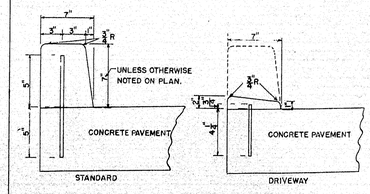
CONCRETE CURB & GUTTER



TO BE CONSTRUCTED IN 20' SECTIONS. CONSTRUCTION JOINTS TO BE PAINTED WITH BITUMINOUS MATERIAL. EXPANSION JOINTS EVERY 40' ½" THICK PREMOLDED MATERIAL SHALL BE PLACED IN EACH EXPANSION JOINT.
"A" BARS ⅝" ℄ X 19'-8" LONG. "B" BARS ⅝" ℄ X 4'-6" LONG. PLACE A "B" BAR 1'-3" FROM EACH END OF THE SECTION AND THEN SPACE THEM 3'-6" C. TO C. THE REST OF THE SECTION.
DOWELS ⅝" ℄ X 1'-0" LONG, SPACED 1'-0" C. TO C.

CLASS "A" CONCRETE	5.49 CU.YDS. PER 100 LIN.FT.
STEEL	339.33 LBS. PER 100 LIN.FT.

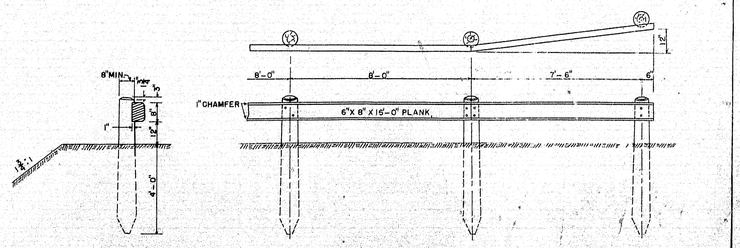
INTEGRAL CONCRETE CURB



EXPANSION & DUMMY JOINTS IN CURB SHALL BE CONSTRUCTED AT SAME LOCATION AS EXPANSION & DUMMY JOINTS IN CONCRETE PAVEMENT.
DOWELS ⅝" ℄ SPACED 1'-0" C. TO C. FIRST DOWEL TO BE PLACED 6" FROM END OF JOINT.

CONCRETE (STANDARD)	1.17 CU.YDS. PER 100 LIN.FT.
STEEL (STANDARD)	55.5 LBS. PER 100 LIN.FT.

WOOD GUARD RAIL



Chief Engineer

1945

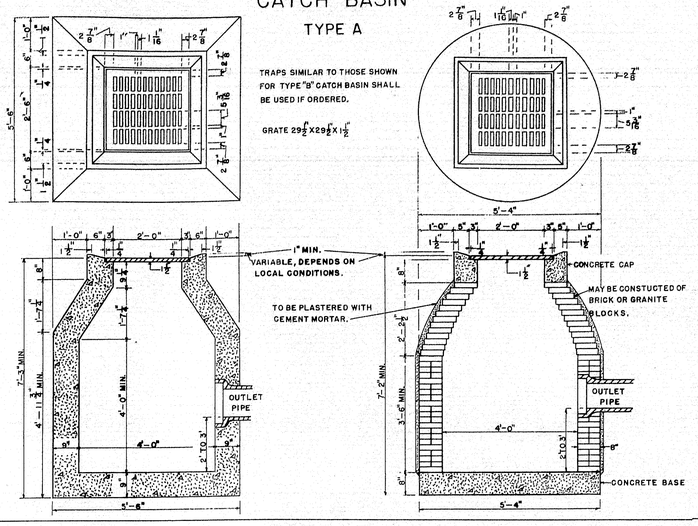
49-119 Bridge Division

P.R.A. DIV. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	S-49(3)	3	11

CATCH BASIN
TYPE A

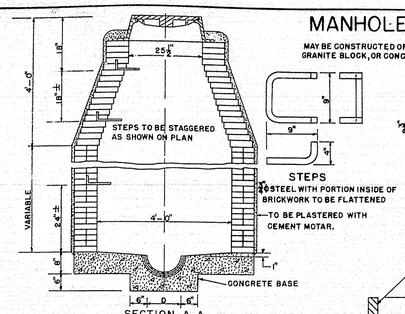
TRAPS SIMILAR TO THOSE SHOWN FOR TYPE "B" CATCH BASIN SHALL BE USED IF ORDERED.

GRATE 29½"X29½"X1½"

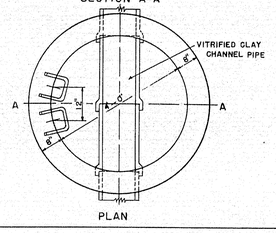


MANHOLE

MAY BE CONSTRUCTED OF BRICK, GRANITE BLOCK, OR CONCRETE



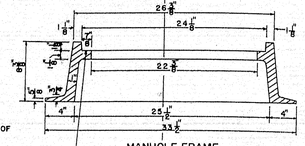
SECTION A-A



PLAN

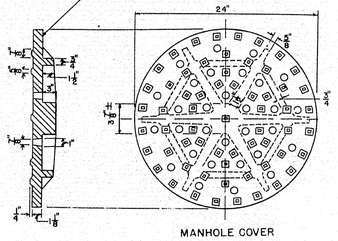
STEPS

¾" ϕ STEEL WITH PORTION INSIDE OF BRICKWORK TO BE FLATTENED TO BE PLASTERED WITH CEMENT MOTAR.



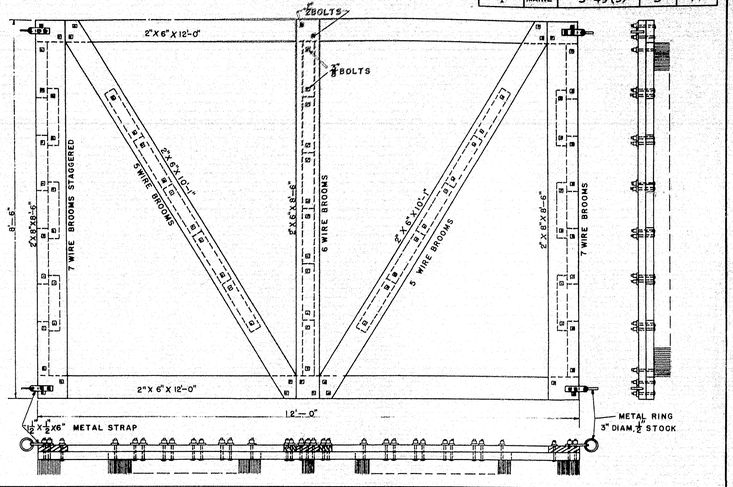
MANHOLE FRAME

MANHOLE FRAME AND COVER TO BE MACHINED TO A SMOOTH FITTING



MANHOLE COVER

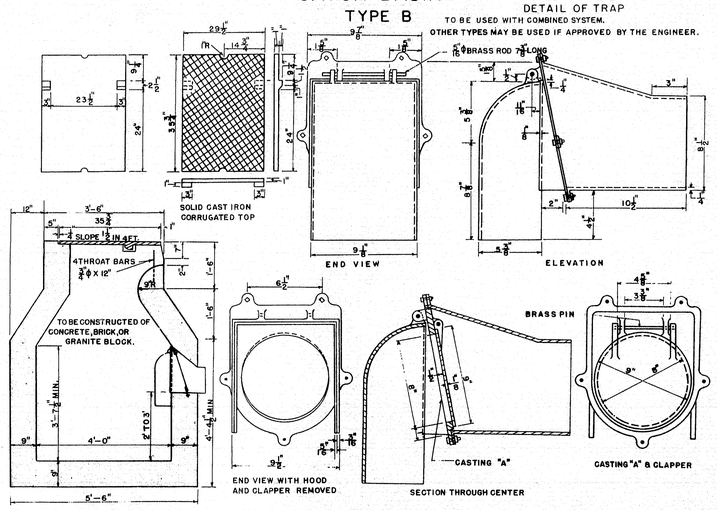
BROOM DRAG



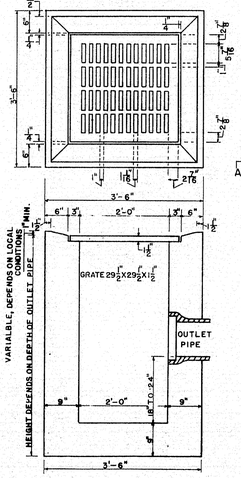
CATCH BASIN
TYPE B

DETAIL OF TRAP

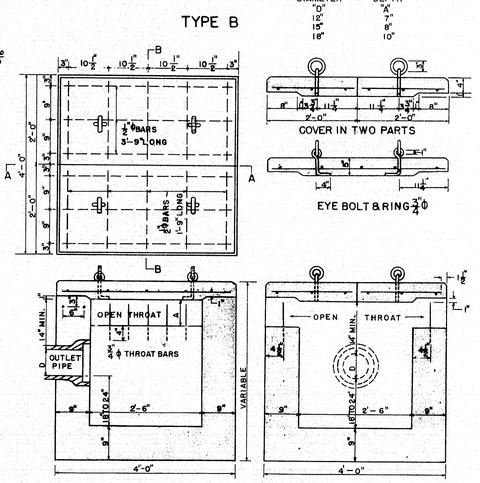
TO BE USED WITH COMBINED SYSTEM. OTHER TYPES MAY BE USED IF APPROVED BY THE ENGINEER.



DROP INLET
TYPE A



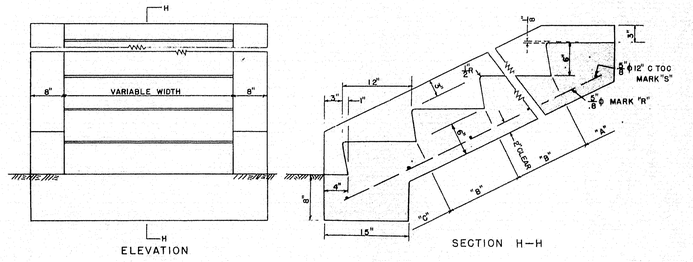
TYPE B



SECT. A-A SECT. B-B

DIAMETER "D"	DEPTH "A"
15"	7"
18"	10"

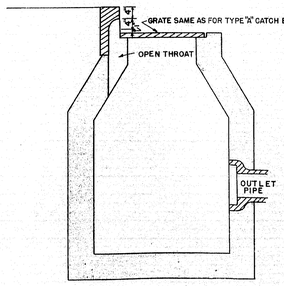
CONCRETE STEPS

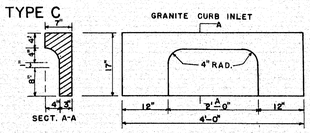


CONCRETE CLASS "A"		
SECTION	STEPS PER FT. OF WIDTH	PARAPET EACH WALL
"A" HEADER	.026 CU. YDS.	.022 CU. YDS.
"B" EA. INTER. ST.	.030 CU. YDS.	.034 CU. YDS.
"C" FOOTER	.050 CU. YDS.	.051 CU. YDS.

REINFORCING STEEL			
MARK	SIZE	NUMBER	LENGTH (EACH)
R	⅝" ϕ 1.043 LBS. PER FT.	1 EACH PARAPET 1 EACH FT. OF WIDTH	8" FOR "A" +1'-3" FOR EACH "B" +1'-6" FOR "C"
S	⅝" ϕ 1.043 LBS. PER FT.	1 FOR "A" 1 FOR EACH "B" 2 FOR "C"	6" EACH PARAPET +12" PER FT. OF WIDTH

CATCH BASIN
TYPE C

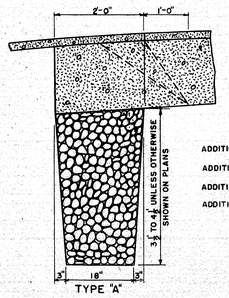




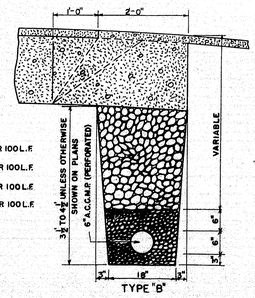
CATCH BASIN MAY BE CONSTRUCTED OF CONCRETE, BRICK, OR GRANITE BLOCKS AND SHALL CONFORM TO THE DIMENSIONS OF TYPE "A" CATCH BASIN.

TRAPS SIMILAR TO THOSE SHOWN FOR TYPE "B" CATCH BASIN SHALL BE USED IF ORDERED.

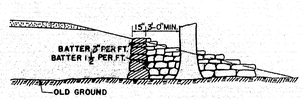
UNDERDRAIN

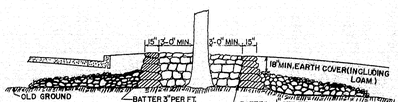


ADDITIONAL 15" GRAVEL BASE COURSE	CU. YDS. PER 100 L.F.
ADDITIONAL 18" GRAVEL BASE COURSE	CU. YDS. PER 100 L.F.
ADDITIONAL 24" GRAVEL BASE COURSE	CU. YDS. PER 100 L.F.
ADDITIONAL 30" GRAVEL BASE COURSE	CU. YDS. PER 100 L.F.

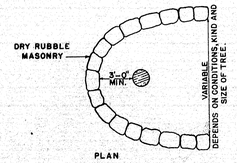


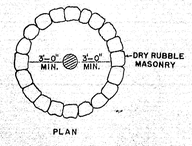
TREE WELLS





WHERE NECESSARY, SELECTED LEDGE EXCAVATION SHALL BE USED TO FILL AROUND THE OLD GROUND AREA OF THE TREE, FROM THE TREE WELL TO THE PERIMETER OF THE BRANCHES. IF DRAINAGE AWAY FROM THE TREE WELL IS NECESSARY, VITRIFIED CLAY PIPE SHALL BE USED.





49-120 Bridge Division

0 1 2 3 4 5 INCHES

P.R.A. DIV. NO.	STATE	F.A. & S.D. PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	S-499	4	11

67+00 END

MAINE FEDERAL AID SECONDARY PROJECT S-49(2)

BEGIN MAINE FEDERAL AID SECONDARY PROJECT S-49(3)

Mahlon Grover

Carl I. Button

Gard Backer

Sunoco Sta.

Equation = 70+10.4 = 69+86.08 -24.32

P.I. STA. 62+22.18
Δ 31°-15½'
D 5°-30'
T 291.40'
L 568.22

PC 64+68.00

Field

Spike in Sign Post

Spring

8 M#9 - Tie Spike in 20" Maple. Elev. 158.22

20" Maple

Sta. 64+69

18" x 45' A.C.C.M.P.

Iron Pin

15" x 30' C.M.P.

Construction ℄

Field

Earl Libby

No. Waterford Spool Co.

MILL POND

Donald Brown

PC 67+74.36

PC 68+13.6

Garage

Carl I. Button

Earl Libby

Sta. 68+79.18
Δ 21°-14½' Rt.
D 10°-00'
T 107.43'
L 212.36'

PT 69+84.11

PT 69+84.11

INSTALL 18" x 250' R.C.M.P.

B.M.#10 - 15" Ash Elev. 148.61 Woods

Earl Libby

CROOKED RIVER

Remove Existing Abut. to EL 143.0±. Grade to a 1½:1 slope. This work to be paid for as Earth Excavation, Roadway and Drainage.

PC 73+53.2

Slab Yard

Sta. 75+27.0
Δ 17°-15' Lt.
D 5°
T 173.8'
L 345.0'
R 1146.28'

Const. Data
D = 5°
T = 173.8'
L = 345.0'
R = 1146.28'

PT 76+98.2

Const ℄

24" Elm
12" Elm Stump

Spike in Fence Post 22.70

15" x 30' C.M.P. Ram

House

Barn

Field

Install
18"
Install
12"
Sta. Install
12"

CONSTR. ℄

NOTES

SUPERSTRUCTURE: Light weight four panel, steel pony truss in poor condition. Three inch transverse and 3" longitudinal plank in fair condition. Built in 1911.
SUBSTRUCTURE: Both abutments of split granite laid in mortar and in good condition. Backwalls laid dry. Some stone fill at corners in lieu of wings.
FOUNDATION: See borings.
STREAM: Slow current. Extreme high water in flood of 1936 reported Elev 148.61.
APPROACHES: Surface treated gravel in good condition.

Sta. 73+0± to 78+0± ~ Remove Slabs and Waste Lumber from Right-of-Way. This work will be paid for as Earth Excavation, Roadway and Drainage. This work is beyond and below the limits shown on the accompanying cross-sections.

INSTALL:
Type "B" UNDERDRAIN STA. ~~67+00 to 68+50~~ 67+25 68+25 LEFT.
Type "B" DROP INLET STA. 68+50 Lt. & STA. 69+00± Rt.
18" A.C.C.M.P. x 68' BETWEEN DROP INLETS.
18" A.C.C.M.P. x 250'± STORM SEWER STA. 69+00± to STA. 71+50± Rt.
15" x 50' C.M.P. STA. 68+00± Rt.

18" Gravel Base 63+25 to 65+75
24" Gravel Base 65+75 to 67+0
24" Gravel Base 67+0 to 71+75
18" Gravel Base 71+75 to 77+75

Wire Cable Guard Rail
Sta 57+70 to 65+10 Rt - 780 L.F. - 2 Anchorages

Wire Cable Guard Rail
Sta. 72+00 to 72+30 Lt = 30 L.F - 2 Anchorages
Sta. 72+00 to 72+30 Lt = 30 L.F - 2 Anchorages
Sta. 73+00 to 76+90 Lt = 390 L.F - 2 Anchorages
Sta. 73+00 to 73+40 Rt = 40 L.F - 2 Anchorages
Sta 74+10 to 76+90 Rt = 280 L.F - 2 Anchorages

67+0 END
MAINE FEDERAL AID SECONDARY PROJECT S-49(2)
BEGIN
MAINE FEDERAL AID SECONDARY PROJECT S-49(3)
-0.64%
200' V.C.
Ex = 0.16'
V.C. 250
Ex = 0.45'
V.C. 450'
Ex = 1.94'
Level

	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78
	157.81	158.57	157.92	158.19	157.85	157.87	157.45	157.23	157.11	157.04	156.85	156.53	156.21	156.05	155.89	155.57	155.25	154.93	154.61	154.25	154.25	154.00	153.79	153.77	153.66	153.61	153.61	153.61	153.61	153.63	153.61	153.77	153.61	154.06	153.61	154.49	154.77	155.01	155.77	156.49	157.21

SURVEY STATE AID DIVISION	BRIDGE 5192

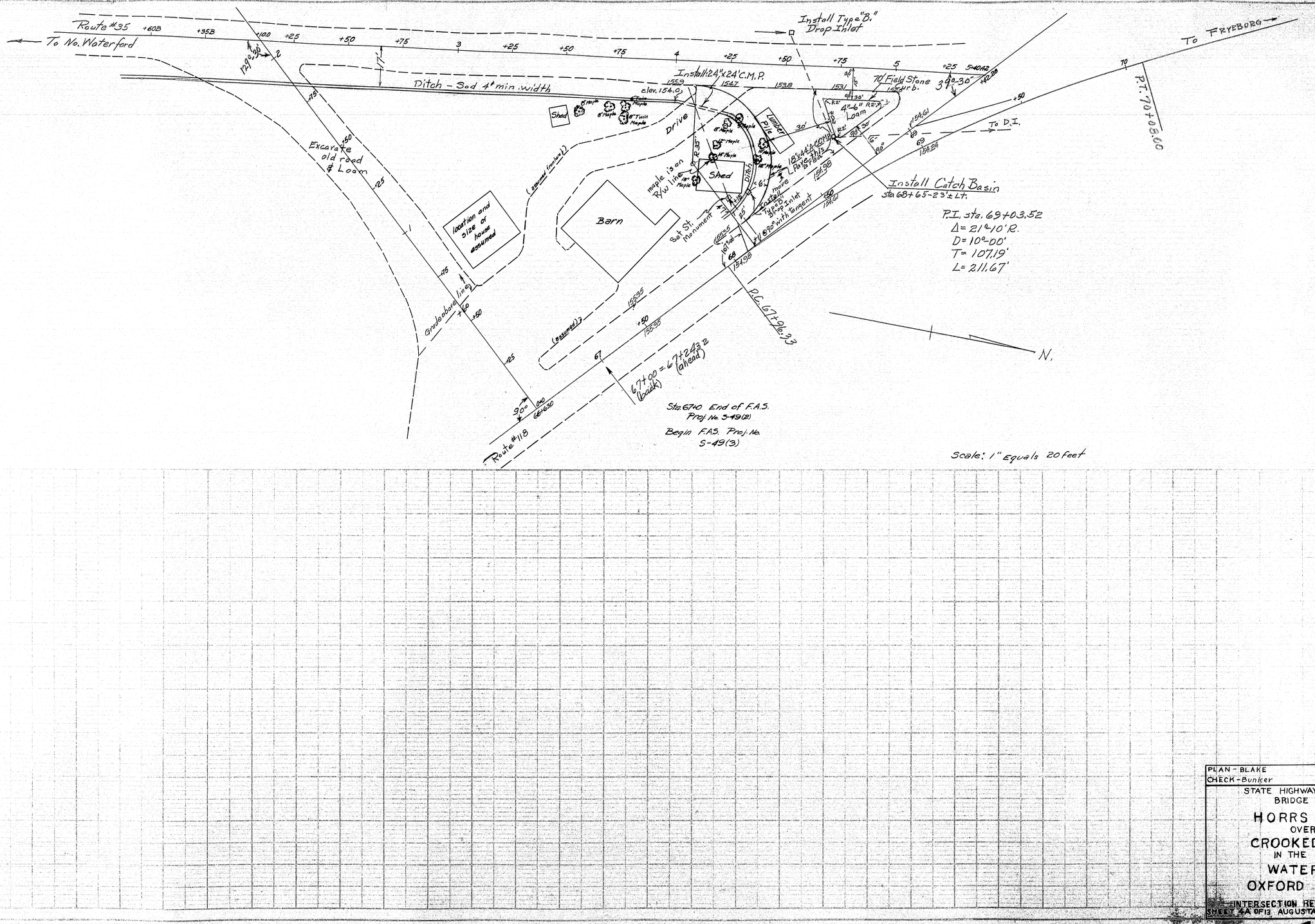
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

HORRS BRIDGE
OVER THE
CROOKED RIVER
IN THE TOWN OF
WATERFORD
OXFORD COUNTY

SURVEY
SHEET 4 OF 11 AUGUSTA, ME. DEC. 1947

49-121

0 1 2 3 4 5 INCHES



PROFILE

PLAN - BLAKE	
CHECK - Bunker	BRIDGE 5192

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

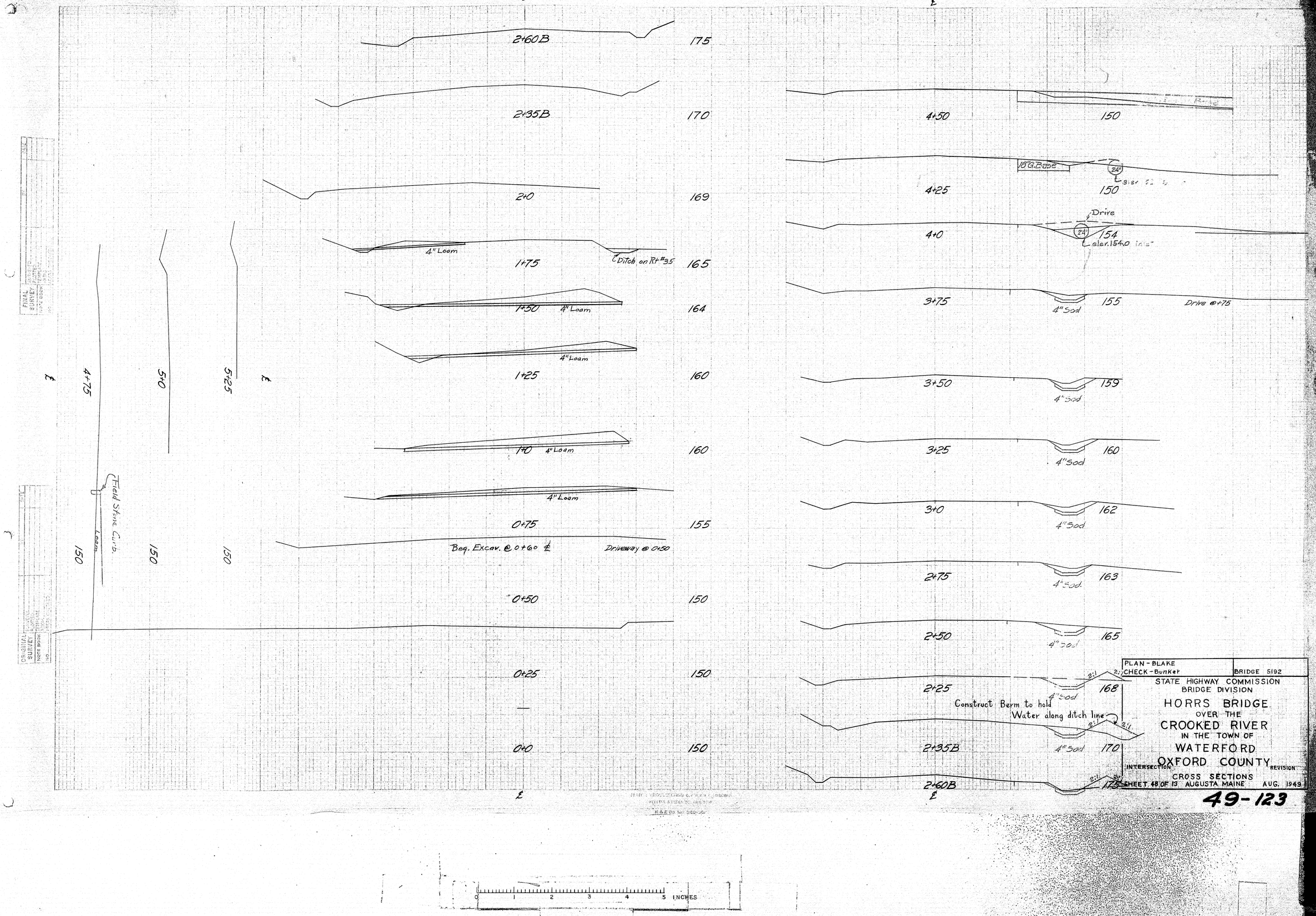
HORRS BRIDGE
OVER THE
CROOKED RIVER
IN THE TOWN OF
WATERFORD
OXFORD COUNTY

INTERSECTION REVISION — PLAN
SHEET 4A OF 13 AUGUSTA, MAINE AUG. 1949

49-122

PLATE 1 - PLAN-PROFILE - P.R.L. & R.C. MANNING
KEUFFEL & ESSER CO., NEW YORK

0 1 2 3 4 5 INCHES


℄
2+60B
175
2+35B
170
2+0
169
4" Loam
1+75
Ditch on Rt #35
165
1+50
4" Loam
164
4" Loam
1+25
160
1+0
4" Loam
160
4" Loam
0+75
155
Beg. Excav. @ 0+60 ℄
Driveway @ 0+50
0+50
150
0+25
150
0+0
150
℄
4+75
5+0
5+25
150
150
150
Field Stone Curb
Loam
4+50
150
18" C.M. Base
24"
Elev. 152.5
4+25
150
Drive
24"
154
Elev. 154.0 invt.
4+0
3+75
155
4" Sod
Drive @ 4+75
3+50
159
4" Sod
3+25
160
4" Sod
3+0
162
4" Sod
2+75
163
4" Sod
2+50
165
4" Sod
2:1
2+25
168
4" Sod
Construct Berm to hold
Water along ditch line
2:1
2:1
2:1
2+35B
4" Sod
170
2:1
2+60B
175
℄
ORIGINAL SURVEY
FINAL SURVEY
NOTE BOOK
PLAN - BLAKE
CHECK - Bunker
BRIDGE 5192
STATE HIGHWAY COMMISSION
BRIDGE DIVISION
HORRS BRIDGE
OVER THE
CROOKED RIVER
IN THE TOWN OF
WATERFORD
OXFORD COUNTY
INTERSECTION
REVISION
CROSS SECTIONS
SHEET 48 OF 13 AUGUSTA MAINE AUG. 1949
49-123
0 1 2 3 4 5 INCHES

F.A.S. DIV. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	S-49(3)	5	11

W.H. Brown Lumber Co

Gard Backer

Sta. 75+27.0
D 17°-15' Lt
Δ 21°-30'
T 217.8
L 431.3
R 1432.69

Const Data
D=5°
T=173.8'
L=345.0'
R=1146.28'

Slab Yard

Storage

Office

Shed

Lumber Yard

Sta. 81+90 Lt Install
12" x 24' C.M.P

83+0 END
MAINE FEDERAL AID SECONDARY
PROJECT S-49(3)

Borings 1, 2, 3, 4

Boring 6

Boring 5

Rip-Rap

P.C. 72+82.0

P.C. 73+73.2

P.T. 76+98.2

P.T. 77+44.1
Sta. 77+44.1

Const ℄

24" Elm
12" Elm Stump

N 43°-17' W

8 - 15" Elms

Spike in Fence Post 22.70' Rt

Remove

15" x 30' C.M.P

House

Barn

P.C. 78+72.6
P.C. 78+72.7

Field

Sta. 75+85± Install
18" x 72' ACCMP
Sta. 77+60± Rt. Install
12" x 24' CMP
Sta. 78+40± Rt. Install
12" x 24' CMP

Sta. 73+0± to 78+0± Remove slabs & waste lumber from Right-of-way

W.H. Brown Lumber Co.

8/+27.5
Sta. ~~8/+26.8~~
Δ 10°-10' Rt
D 2°
T 254.8'
L 508.3'
R 2864.93'

Lumber Yard

N 33°-07' W

B.M. "11"-tie nail in P.Pole
Elev 158.31

P.T. 83+81.3
P.T. 83+81.0

THIS PROJECT FIGURED TO INCLUDE 100' APPROACH TO EXISTING ROAD

Crooked River

Town Road

18" Gravel Base
71+75± to 77+75

24" Gravel Base
77+75 to 84+0

Wire Cable Guard Rail
See Sheet No. 4

8370 END
MAINE FEDERAL AID SECONDARY
PROJECT S-49(3)

V.C. 250'
Ex=0.45'

+1.44%

-1.12%

Future Improvement

V.C. 400'
Ex=1.28'

Level

153.61

THIS PROJECT FIGURED TO INCLUDE 100' APPROACH TO EXISTING ROAD

160
150
140

STRATOGRAPHIC PROFILE
Adapted from Plan by
H. Gray, Soils Engineer

Borings 1, 2, 3, 4
Coarse gravel
Light gray silty sand & gravel, Compact
Rip-Rap
Boring 5
Light gray silty sand & gravel Compact
Boring 6
Fine brown Sand
Coarse gray-brown sand & gravel
Ledge, grey silty sand

Sta.	72	74	75	76	77	78	79	80	81	82	83	84	85
	153.61	153.61	153.63	153.61	153.61	154.33	155.05	155.77	156.49	157.21	157.93	158.65	159.37
			153.63	153.77	153.61	154.06	154.49	155.07	156.49	157.83	158.65	159.37	160.09

P.R.A. DIV. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	S-49(3)	6	11

PLAN - BLAKE
CHECK - Bunker

BRIDGE 5192

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

HORRS BRIDGE
OVER THE
CROOKED RIVER
IN THE TOWN OF
WATERFORD
OXFORD COUNTY

CROSS SECTIONS
SHEET 6 OF 11 AUGUSTA MAINE MARCH 1949

49-125

Begin Project S-49(3)

C 112 s.f.
G.B. 64.8 s.f.

Type B Underdrain

24" Gravel Base

67+0 153 — 15589

-4½" +4½"

C 100 s.f.
G.B. 64.8 s.f.

Type B Underdrain

67+50 152 — 15557

-6"

C 90 s.f.
G.B. 64.8 s.f.

Type B Underdrain

Gravel Base 17 s.f.

68+0 152 — 15525

+4½" -7½" ℄ D.W.

Type "B" Underdrain

Install Drop Inlet Type "B"

C 80 s.f.
n 4 s.f.
G.B. 10.8 s.f.

Install 15" x 50' CMP
STA. 68+00 ±

68+50 151 — 15493

+9" -9" W3'

18" x 68' CMP

C 55 s.f.
G.B. 70.8 s.f.

Drop Inlet Type B

69+0 150 — 15461

Gravel Base (ahead) 12 s.f.

Gravel Base 20 s.f. +9" -9" W3'

C 30 s.f.
G.B. 10.8 s.f.

69+50 150 — 15429

Slope 1½:1

Gravel Base 22 s.f. +9" -9" W3'

18'+ 250' C.M.P.

C 35 s.f.
G.B. 64.8 s.f.

70+0 150 — 15400

Still Sunoco Sta.

Gravel Base 13 s.f. +4½" -7½"

C 25 s.f.
G.B. 64.8 s.f.

70+50 150 — 15371

Gravel Base 16 s.f. 0" -6"

C 18 s.f.
F 18 s.f.
C.B. 64.8 s.f.

71+0 149 — 15342

-4½" +4½"

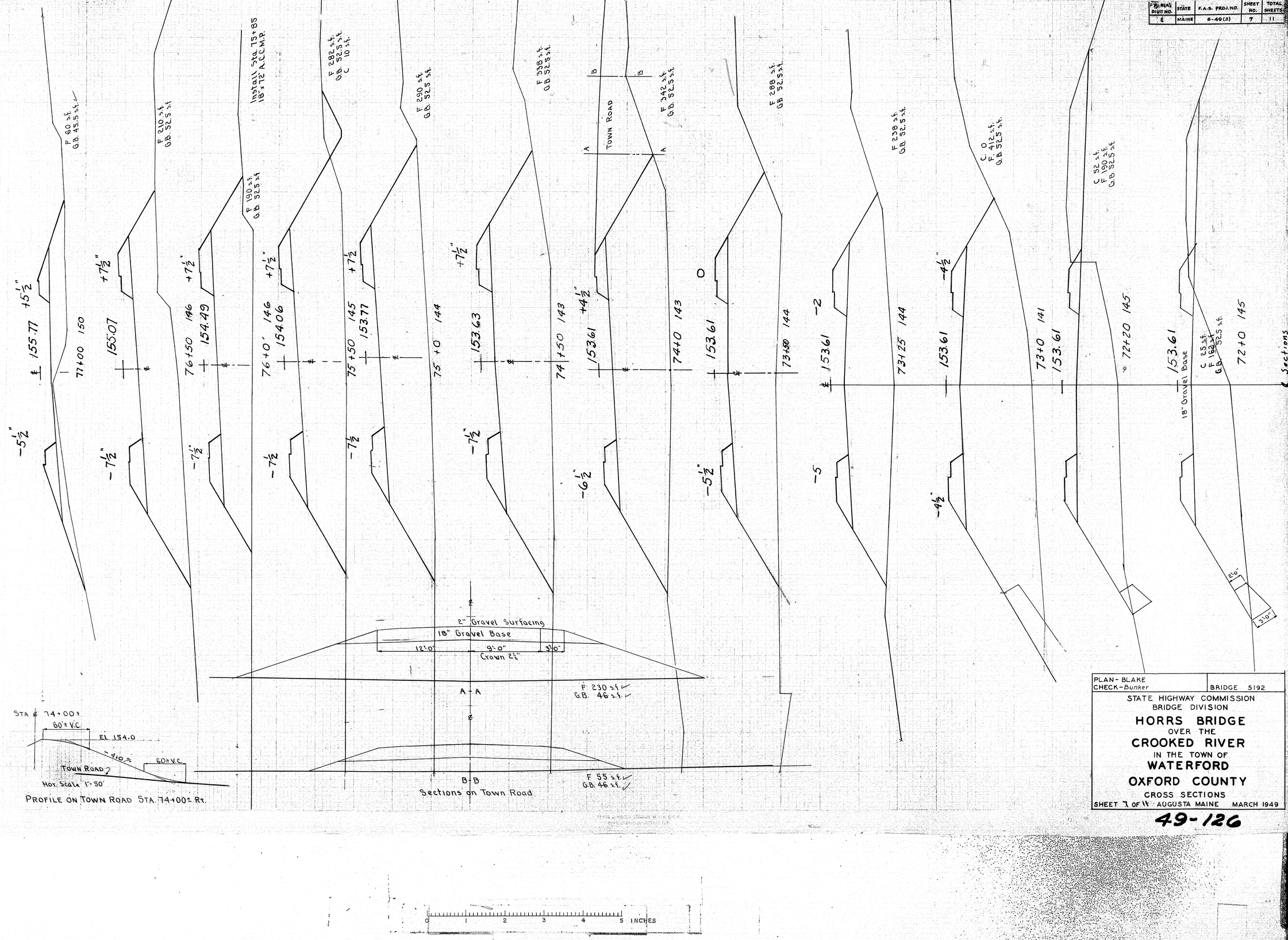
C 26 s.f.
F 22 s.f.
G.B. 64.8 s.f.

71+50 148 — 15301

℄

ORIGINAL SURVEY

FEDERAL DIST. NO.	STATE	F.A.I.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	S-49(3)	7	11



PLAN - BLAKE
CHECK - *Bunker*
BRIDGE 5192

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

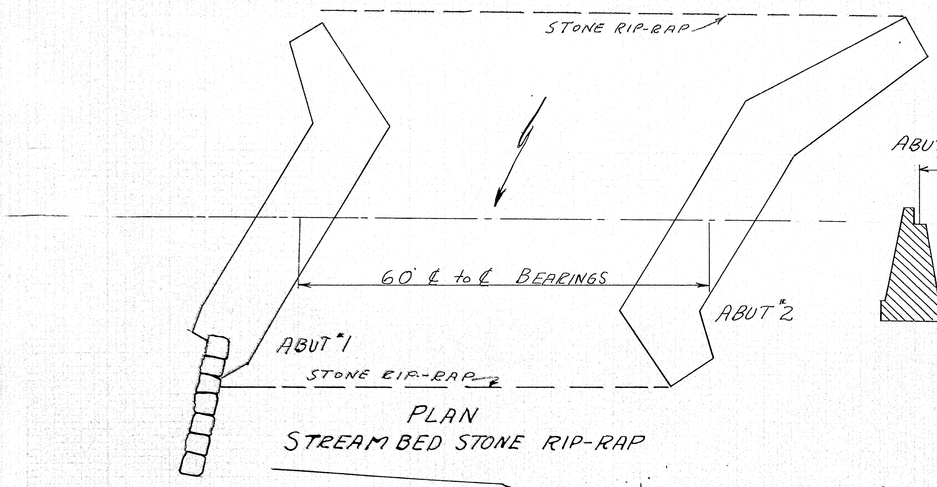
HORRS BRIDGE
OVER THE
CROOKED RIVER
IN THE TOWN OF
WATERFORD
OXFORD COUNTY

CROSS SECTIONS

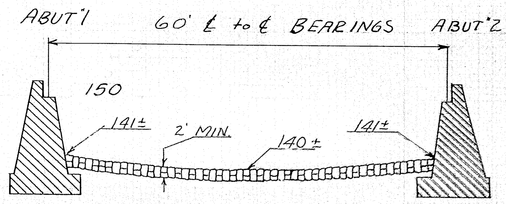
SHEET 7 OF 11 AUGUSTA MAINE MARCH 1949

49-126

0 1 2 3 4 5 INCHES



PLAN
STREAM BED STONE RIP-RAP



SECTION ℄
STREAM BED STONE RIP-RAP
Pitch Pavement about −1% Downstream.

Excavation in Stream Bed as required for Rip-rap will be Paid for as Earth Excavation, Abutments.

PLAN - BLAKE
CHECK - BUNKER
BRIDGE 5192

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

HORRS BRIDGE
OVER THE
CROOKED RIVER
IN THE TOWN OF
WATERFORD
OXFORD COUNTY

CROSS SECTIONS

SHEET 8 OF 11 AUGUSTA MAINE MARCH 1949

49-127

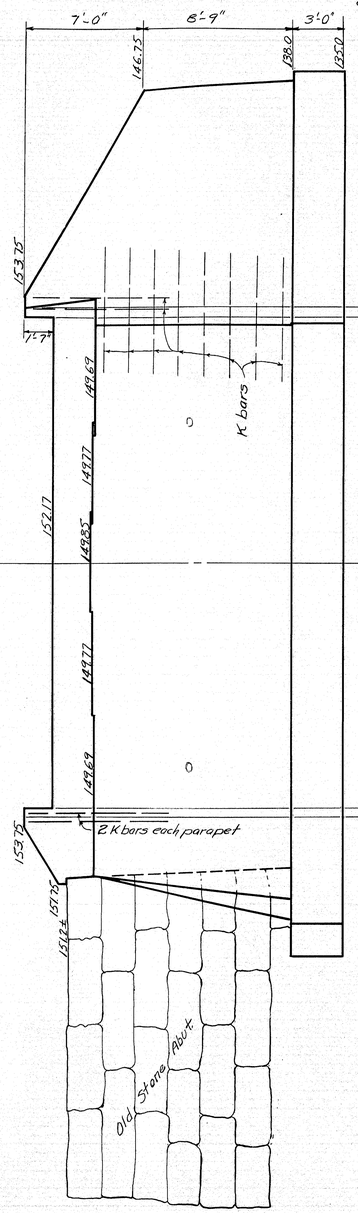
F.A.P. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
	MAINE	S-49 (3)	8	11

F.A.P. DIV. NO.	STATE	F.A.P. PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	S-49(3)	9	11

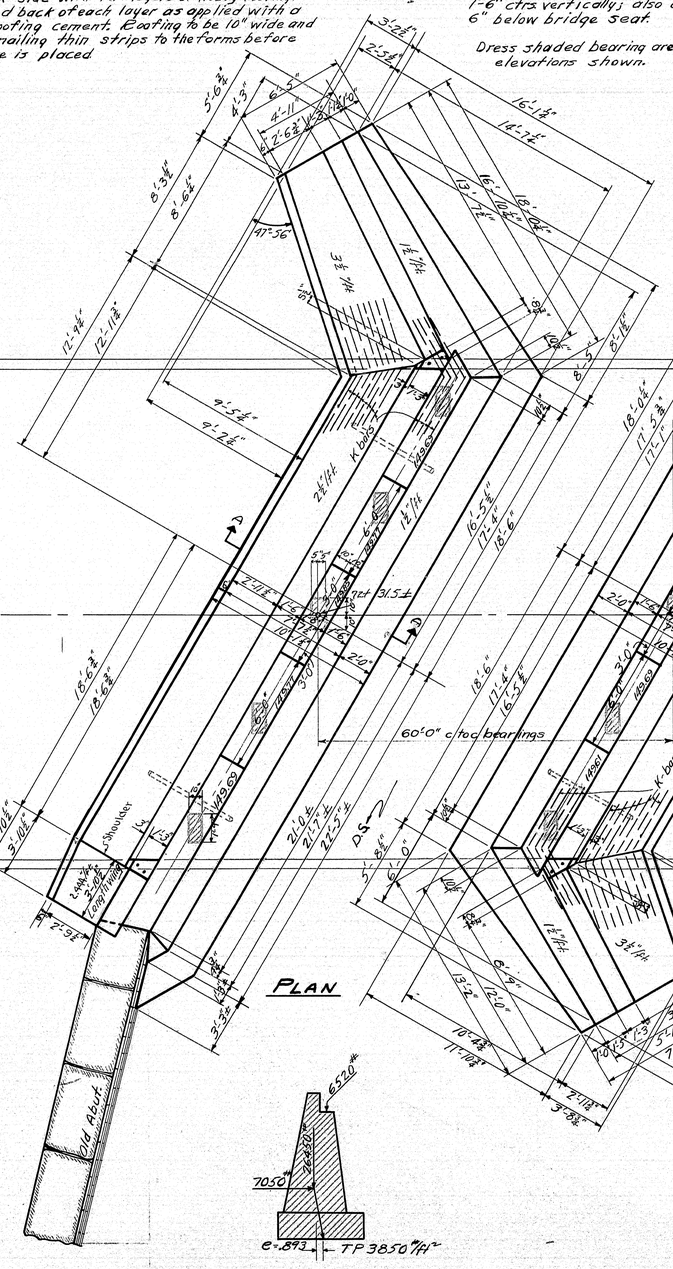
NOTE:
Cover the ½" slots between the Superstructure and parapets on the back side with two layers of heavy roofing. Coat the concrete and back of each layer as applied with a suitable grade of roofing cement. Roofing to be 10" wide and to be recessed ½" by nailing thin strips to the forms before concrete is placed

NOTE:
Place K-bars at junction of wings and breast walls 6" from back forms spaced at 1'-6" ctrs. vertically; also at 4" ctrs. horizontally 6" below bridge seat.

Dress shaded bearing areas, to exact elevations shown.

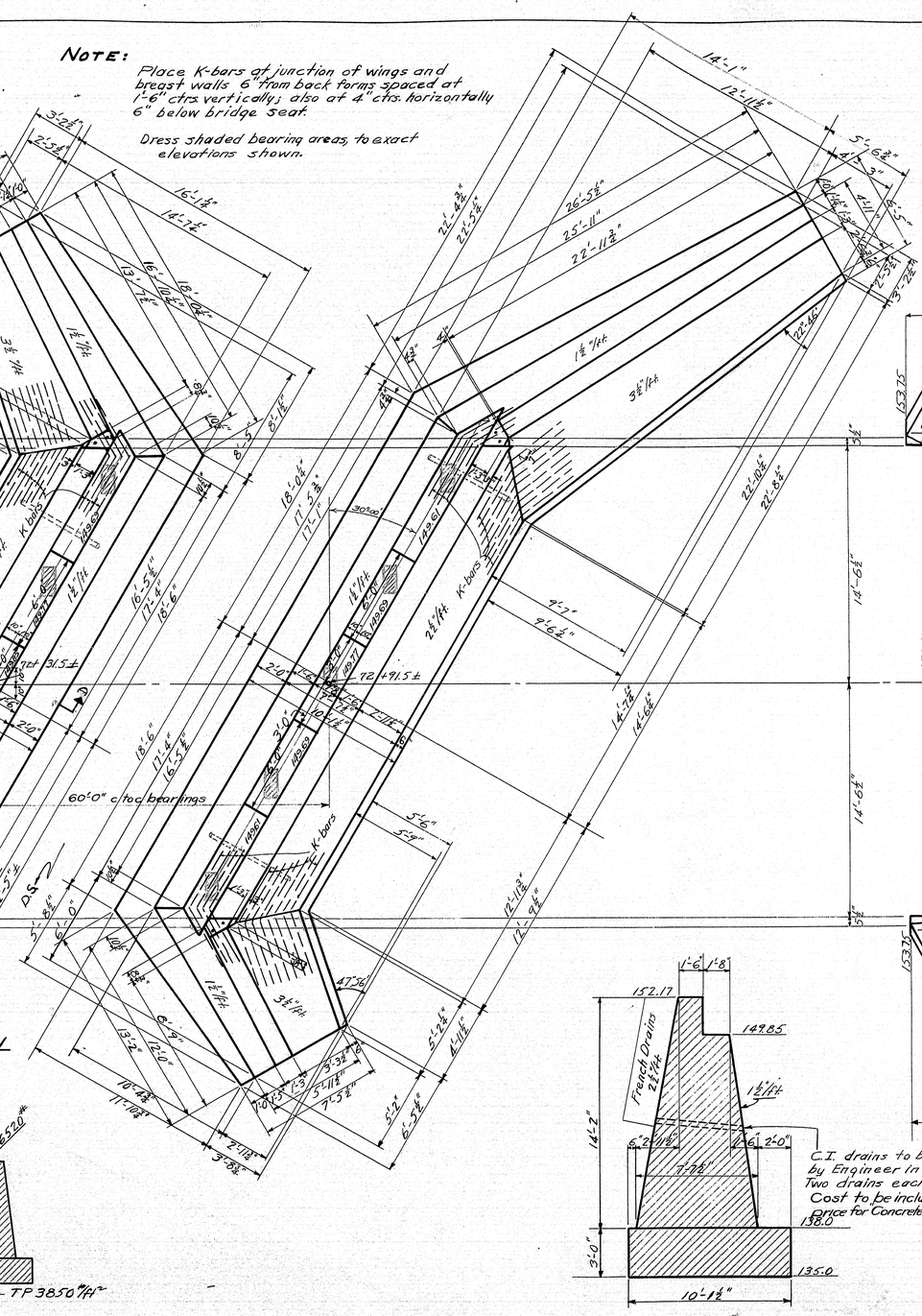


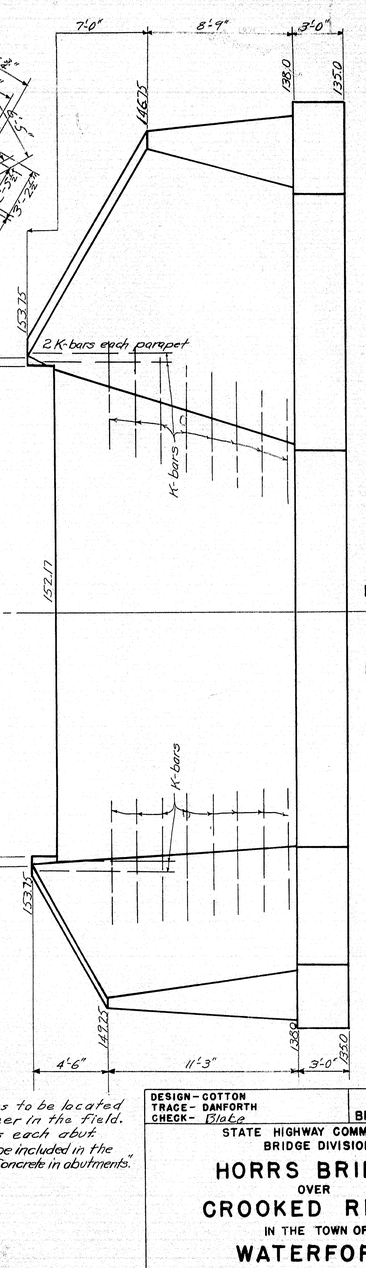
FRONT ELEVATION



PLAN

Abut. Analysis





ELEVATION

C.I. drains to be located by Engineer in the Field. Two drains each abut. Cost to be included in the Price for Concrete in abutments."

Section A-A

DESIGN - COTTON
TRACE - DANFORTH
CHECK - Blake

BRIDGE - 5192

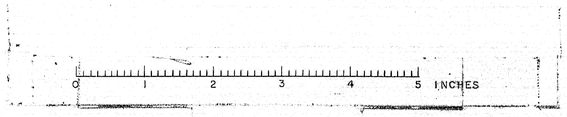
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

HORRS BRIDGE
OVER
CROOKED RIVER
IN THE TOWN OF
WATERFORD
OXFORD COUNTY

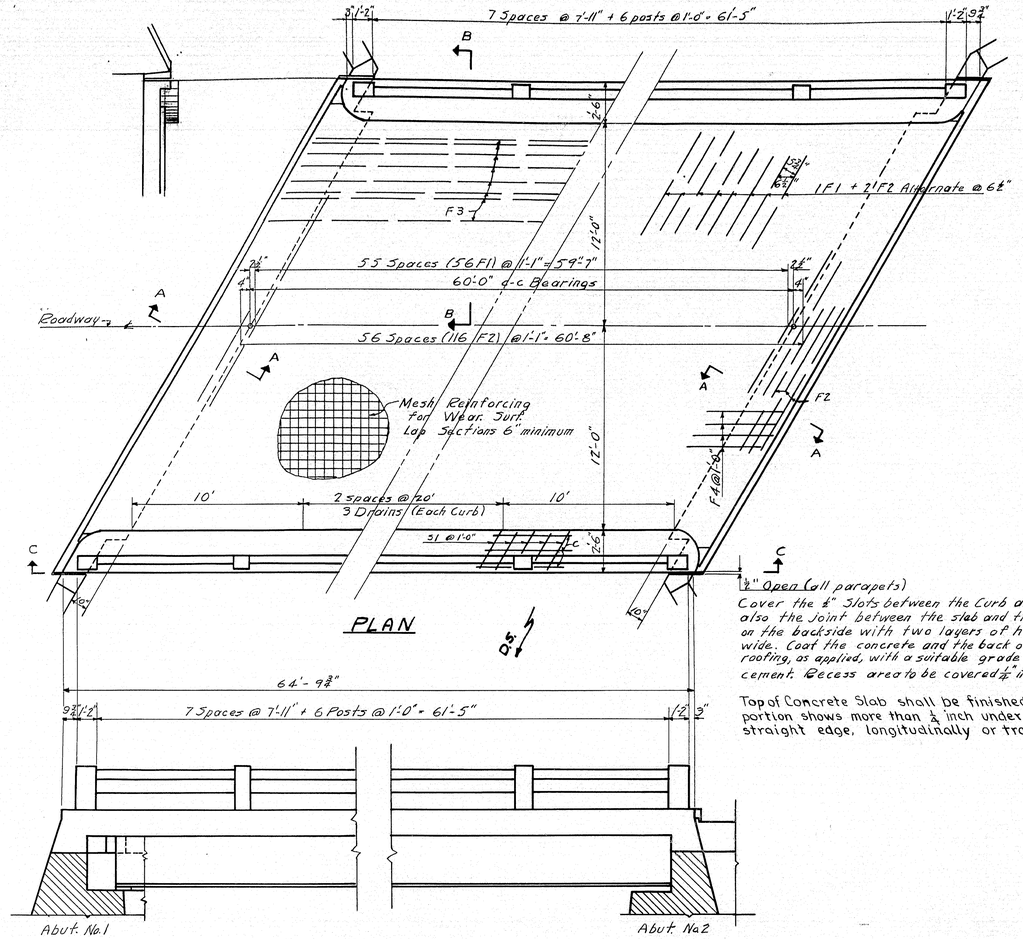
ABUTMENTS

SHEET 9 OF 11 AUGUSTA, MAINE, FEB. 1949

49-128



P. R. A. DIV. NO.	STATE	F. A. P. PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	S-49(3)	10	11

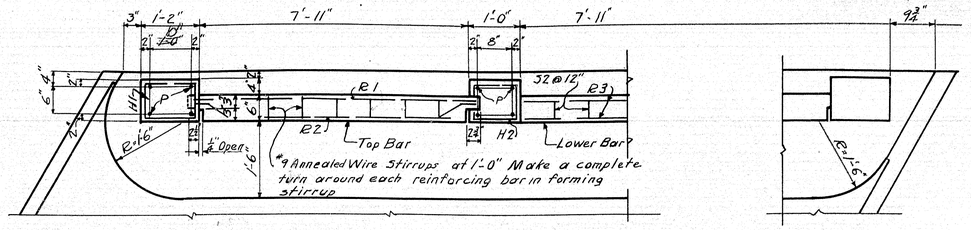


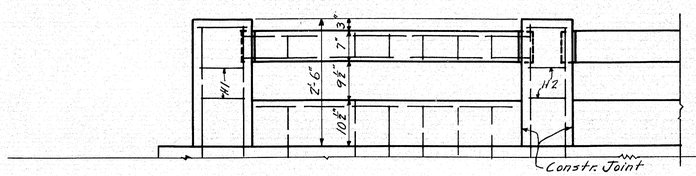
PLAN

VIEW C-C

½" Open (all parapets)
Cover the ½" Slots between the Curb and Parapet, also the Joint between the slab and the Abut Backwall, on the backside with two layers of heavy roofing 10" wide. Coat the concrete and the back of each layer of roofing, as applied, with a suitable grade of roofing cement. Recess area to be covered ½" into the concrete.

Top of Concrete Slab shall be finished so that no portion shows more than ¼ inch under a ten foot straight edge, longitudinally or transversely.

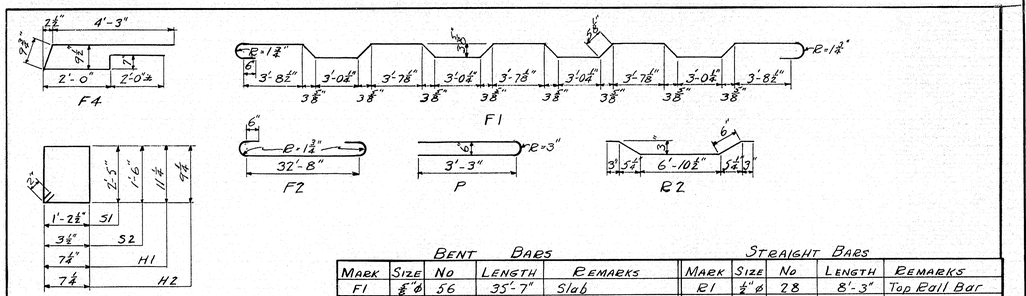


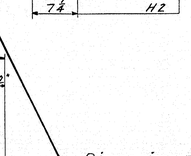


Curb to be cast with with slab. Steel for posts and Lower Bar to be in place before Curb is cast. Lower Bar to be cast in place. Top Bar to be Precast and set in position so that ends project into Post forms 2½". Wrap the tongue ends with two Layers of heavy roofing.

Chamfer curbs and top of Posts ¾". All other exposed edges of concrete, ½".

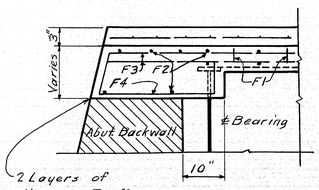
CURB AND RAIL DETAIL



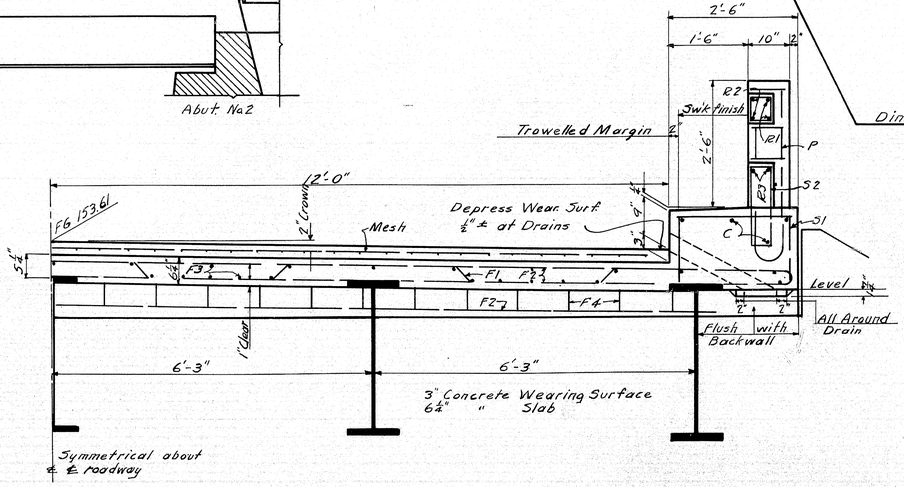


BENT BARS					STRAIGHT BARS				
MARK	SIZE	NO	LENGTH	REMARKS	MARK	SIZE	NO	LENGTH	REMARKS
F1	⅝"ø	56	35'-7"	Slab	R1	¾"ø	28	8'-3"	Top Rail Bar
F2	⅝"ø	126	34'-7"	"	R3	¾"ø	28	7'-5"	lower " "
F4	½"ø	50	9'-8"	"	C	¾"ø	16	34'-0"	Curbs, spliced
R2	¾"ø	28	8'-4½"	Top Rail Bar	F3	½"ø	82	34'-0"	Slab, spliced
S1	⅜"ø	130	7'-7"	Curbs	K	⅝"ø	44	8'-0"	Abutments
S2	⅜"ø	98	3'-11"	Lower Rail Bar					
H1	⅜"ø	12	3'-5"	End " Post					
H2	⅜"ø	36	3'-1"	Int. " Post					
P	½"ø	32	7'-3"	All " Posts					

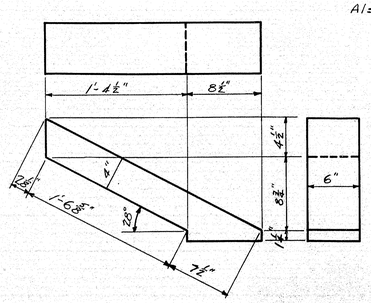
Dimensions to ℄ Bars



SECTION A-A



SECTION B-B



DRAIN DETAIL
24 gage Galv. Metal
6 drains Req'd.

Also 6"x6" Mesh #6 wire = .42 "/ft tl Reinf. for Wear. Surf.

REINFORCING STEEL

Loading H15-44
fs = 18,000 : fc = 1000 : n = 10

DESIGN - BROOKS
TRACE - DANFORTH
CHECK - Blake

BRIDGE - 5192

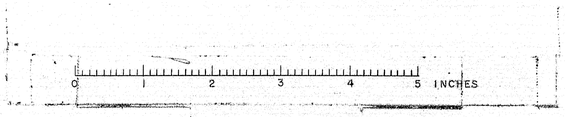
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

HORRS BRIDGE
OVER
CROOKED RIVER
IN THE TOWN OF
WATERFORD
OXFORD COUNTY

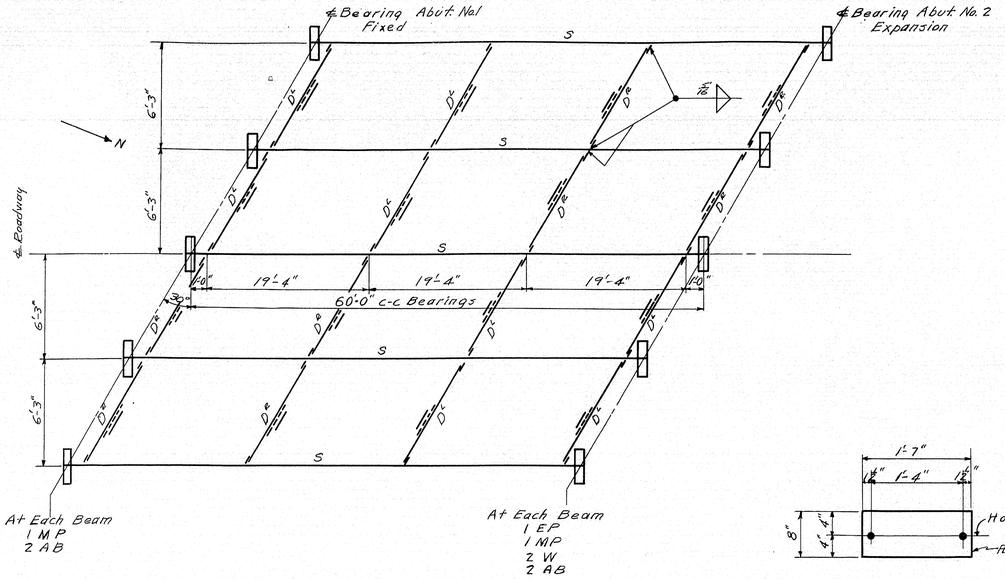
SUPERSTRUCTURE

SHEET 10 OF 11 AUGUSTA, MAINE. FEB. 1949

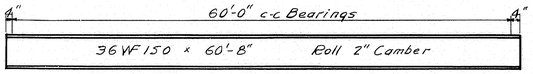
49-129



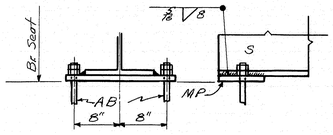
F.A. DIV. NO.	STATE	F.A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	S-49	11	11



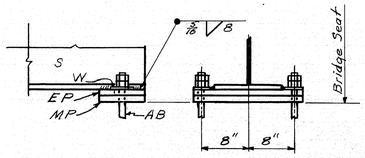
ERECTION DIAGRAM



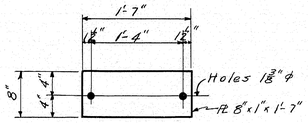
S
5 Req'd



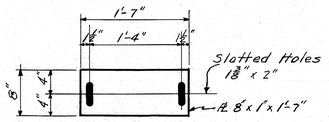
FIXED BEARING



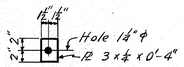
EXPANSION BEARING



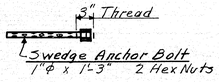
MP
10 Req'd



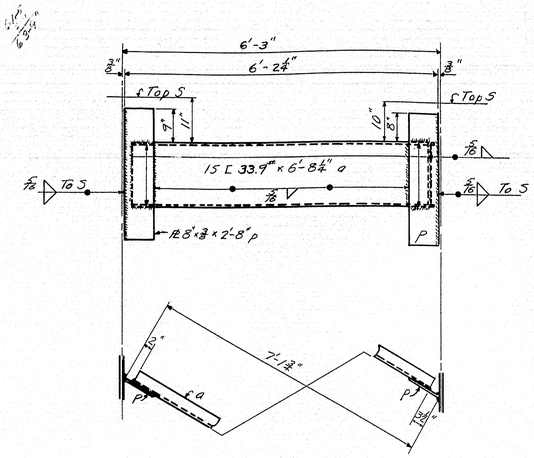
EP
5 Req'd



W
10 Req'd



AB
20 Req'd



DIAPHRAGM ASSEMBLY

D" Shown
D' Opp Hand

Req'd: 16 - 15 L 33.9# × 6'-8¼"
32 - Pls 8"×8" × 2'-8"

SPECIFICATIONS

State of Maine, State Highway Commission
Bridge Division, Steel Highway Bridges, Nov. 1945.

DESIGN - BROOKS
TRACE - DANFORTH
CHECK - Blake

BRIDGE - 5192

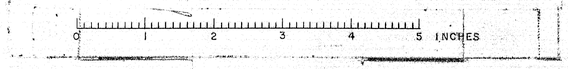
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

HORRS BRIDGE
OVER
CROOKED RIVER
IN THE TOWN OF
WATERFORD
OXFORD COUNTY

STRUCTURAL STEEL

SHEET 11 OF 11 AUGUSTA, MAINE. FEB. 1949

49-130



B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			

APPROXIMATE LOCATION WATER SUPPLY PIPELINE TO PINELAND HOSPITAL

Refer to plan of Wright and Pierce "Water Main Relocation at Pineland Hospital" which is included in this set of plans.

Traced from approx. location as furnished by W.C. Bailey Sta. 1+62

Vert. spike in fence post

P.I. Sta. 4+63.35

Vert. spike in fence post

Pasture

Post Wire Fence

Approx. Toe of Slope. To be placed by State Aid prior to Bridge Construction.

℄ Bearing Abutment #1 Station 8+32.40

Skew 20°

85'-0" Chord

P.I. Sta. = 9+10.26
Δ = 57°-03' Lt.
D = 7°
T = 449.91'
L = 815.00

Royal River

℄ Bearing Abutment #2 Station 9+17.52

Post Wire Fence to W.C.&G. Bldg.

W.C.&G.

Approx. Toe of Rip-Rap

Drainage ditch

3'x3' Stone culvert

Switch

Spring

P.I. Sta. 12+80.55

"Oak" 16"

N 82°-15'E

Temple Street

Bushes

Signal Box

Automatic Signal

C.M.P. 135

C.M.P. 134

W.C.&G.

Channel Diversion

Payment for removing stones from the existing abutments shall be made under Item 204-17, Structural Rock Excavation, Channel

B.M. Elev. 50.00 Upstream Corner Abut. #2

24" Elm

18" Elm

Automatic Signal

Stone Ret. Wall El. 38.0

℄ Construction ℄ Roadway

Place stones from Existing Abutments as shown in Section A-A. Payment to be incidental to Item 204-17, Structural Rock Excavation

SOUNDING ~ STA. 8+85 ℄

Rod penetrated through blue clay very easily 25' below water and gradually slower to 47.0 below water to very firm material. No refusal. 1/8" per blow at Elev. -15.2

PLAN

Scale 1" = 50'

Type " " Guard Rail

18'-0" | 16'-0"

2'-0" 4'-0" Variable dimensions adjacent to bridge 4'-0" 2'-0"

12'-0"± 10'-0"±

¾"/ft. Bank

Fin. Grade

18" Gravel Base

6" Loam & seeded

1½ : 1

℄ Construction, Roadway

TYPICAL APPROACH SECTION

Note: Surface Treatment, Gravel Surface Course, Type "B" Guard Rail and Loam - Not part of this Contract.

℄ Stream

Original ground

1½ : 1

El. 28.00 ±

10'-0"

CHANNEL DIVERSION

Existing West Abutment

℄ Stream

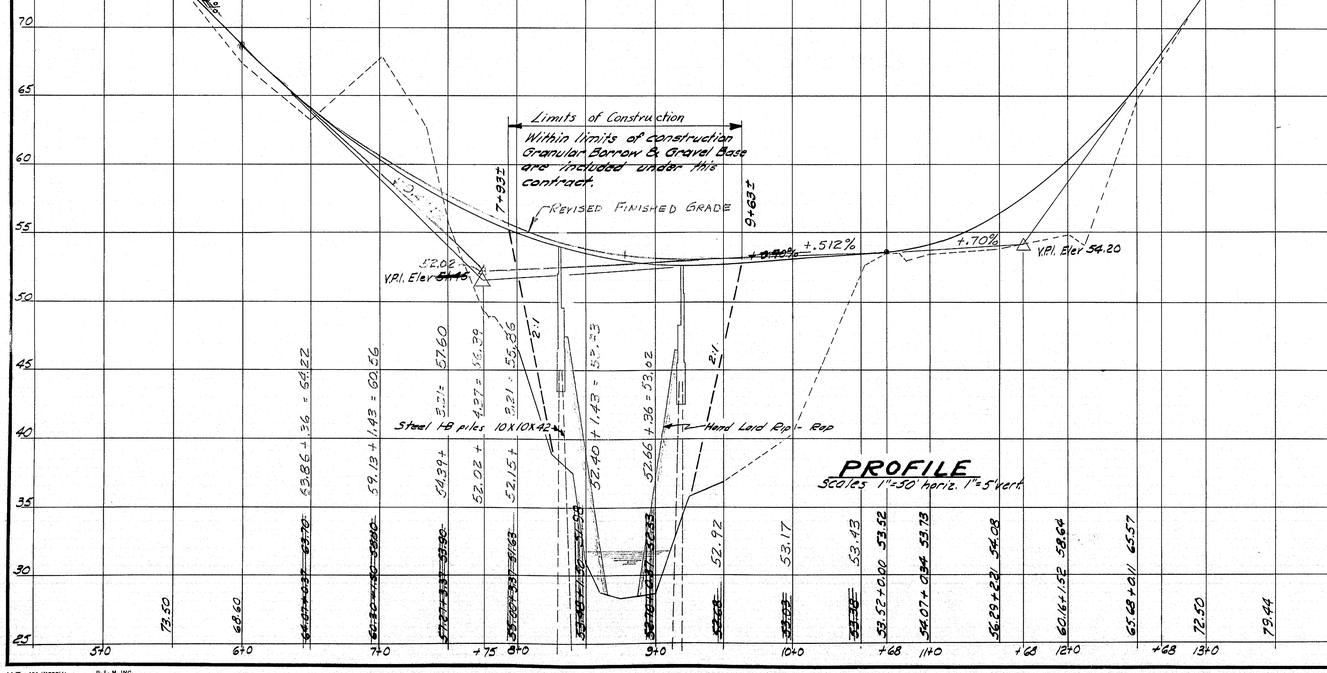
½ : 1

El. 38.00 ±

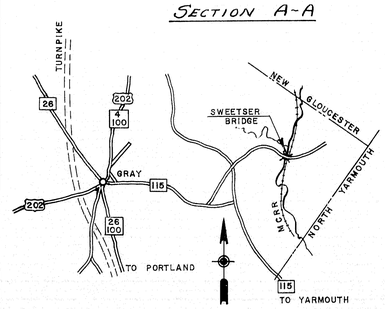
El. 28.00 ±

CHANNEL DIVERSION

Existing East Abutment



SECTION A-A



LOCATION MAP

Approx. Scale: 1" = 1 Mile

SURVEY NOTES

1. Exist. Superstructure ~ Narrow steel pony truss. 4" transverse plank on 8" steel & wood stringers.
2. Exist. Substructure ~ Large well split granite wall, laid in mortar. No signs of settlement.
3. Stream ~ Moderate Current, extreme high water never up to bridge. Present water El. 31.8.
4. Public Utilities ~ Central Maine Power Co. Pine Tree Tel. & Tel. Co., Maine Central Railroad Co., Western Union Telegraph Co.

All utility plant to be adjusted as necessary by the respective utilities, unless otherwise noted.

Rev.
Rev.

DESIGN~
TRACE~ F.H. Barnes
CHECK~ H.S.

BRIDGE NO. 5781
SURVEY~
PLOT~ F.H. Barnes

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

SWEETSER BRIDGE
OVER
ROYAL RIVER
IN THE TOWN OF
GRAY
CUMBERLAND COUNTY

SURVEY

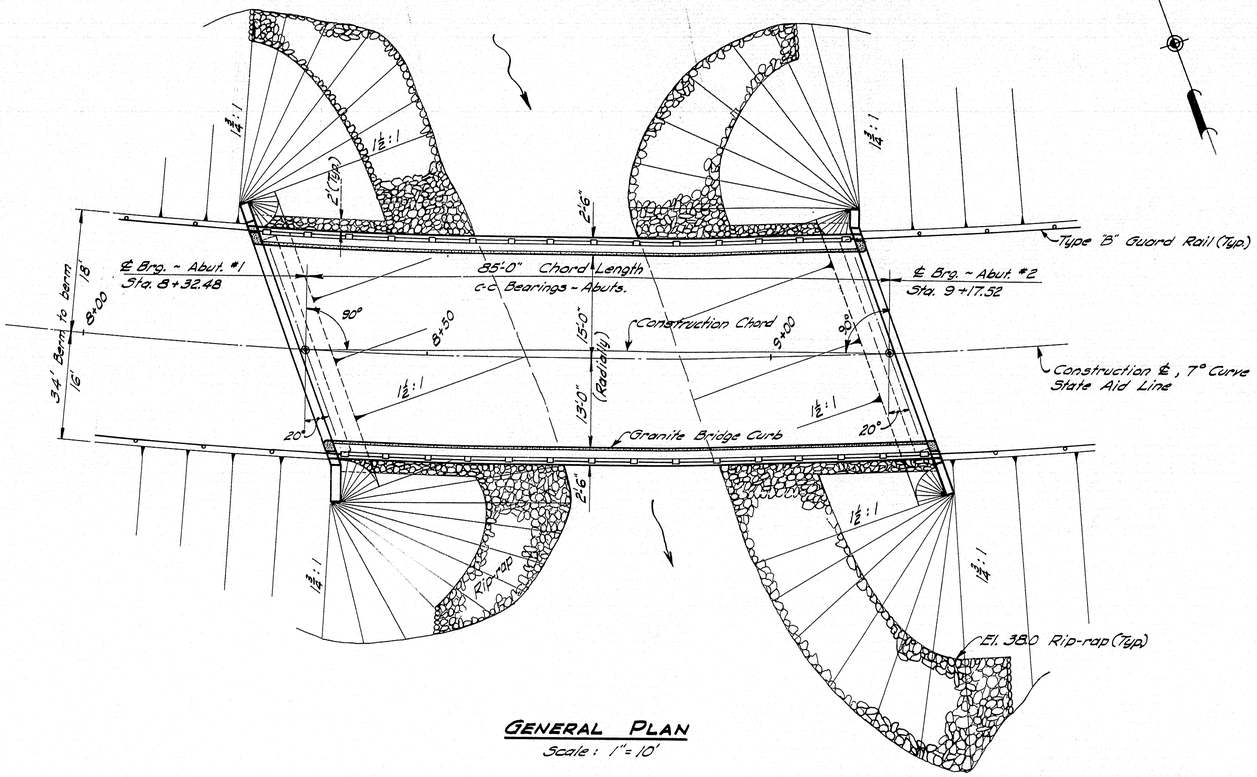
SHEET 1 OF 9 AUGUSTA, MAINE FEB. 1962

27-16

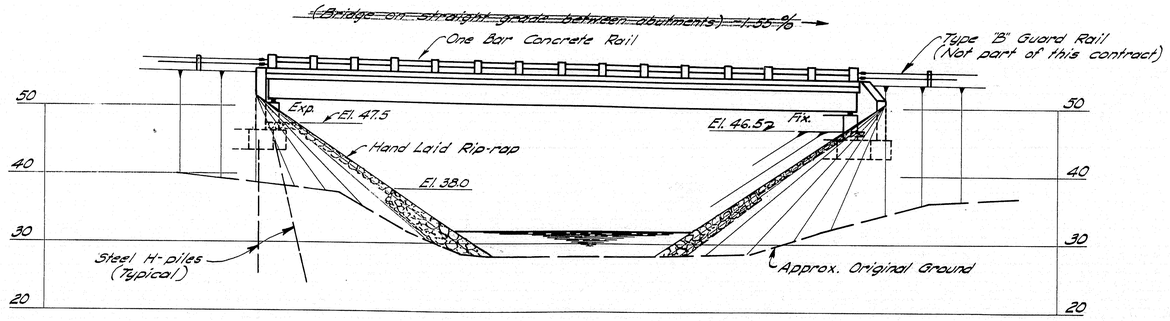
K&E 100 IMPERIAL TRACING CLOTH 11 IN. D. L. M. INC. 67871

0 1 2 3 4 5 INCHES

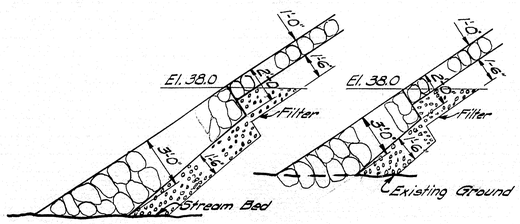
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			



GENERAL PLAN
Scale: 1"=10'



DOWN STREAM ELEVATION
Scale: Vert. & Hor., 1"=10'



TYPICAL SECTION ~ RIP-RAP
Plain Riprap below Elev. 32.0 & Hand Laid Riprap above Elev. 32.0

SPECIFICATIONS

Design: A.A.S.H.O. Standard Specifications for Highway Bridges 1961.

LOADING H20-44

f_s = 18,000 p.s.i. ~ A7, 20,000 p.s.i. ~ A36 } Structural Steel
f_s = 20,000 p.s.i.
f_c = 1200 p.s.i. } Reinforced Concrete
n = 10

CONTRACT:
State of Maine, State Highway Commission Standard Specifications Highways and Bridges Revision of January 1956.

CONCRETE CLASSIFICATION

Concrete Rail _____ Class "Y"
All other concrete _____ Class "A"

Revised 3/4/63

DESIGN- ARS
TRACE- G.M.C.
CHECK- E.I.N
BRIDGE NO. 5781
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

SWEETSER BRIDGE
OVER
ROYAL RIVER
IN THE TOWN OF
GRAY
CUMBERLAND COUNTY

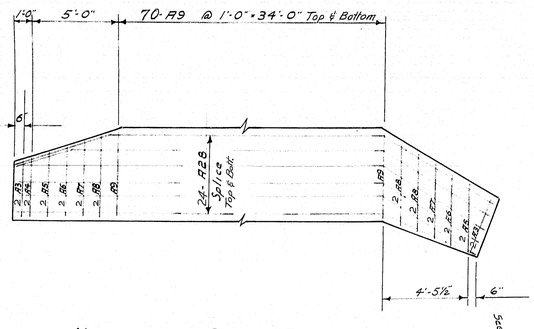
GENERAL PLAN & ELEVATION

SHEET 2 OF 9 AUGUSTA, MAINE MAR. 1962

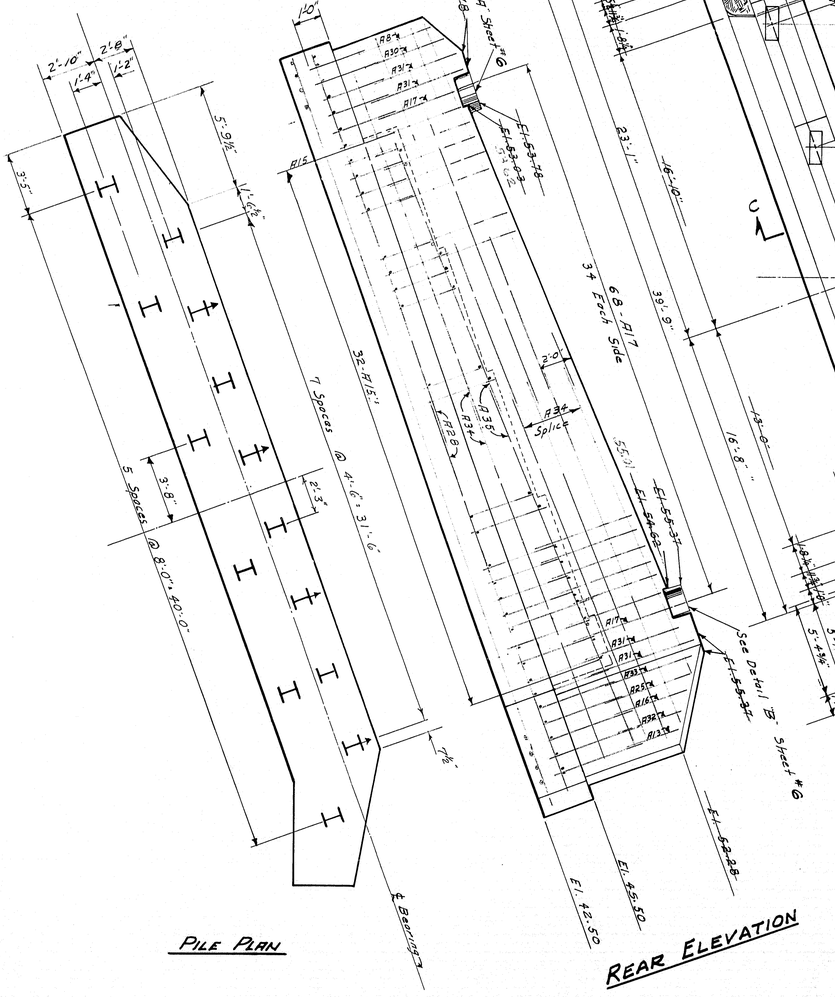
K+E 186 IMPERIAL D. L. M. INC. 67871

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			

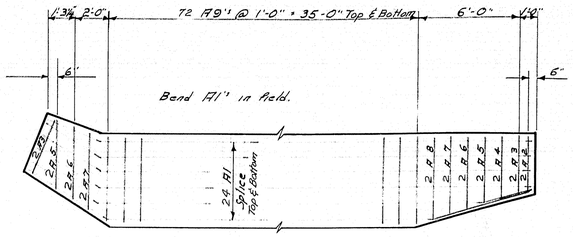


HORIZONTAL STEEL (FOOTING)



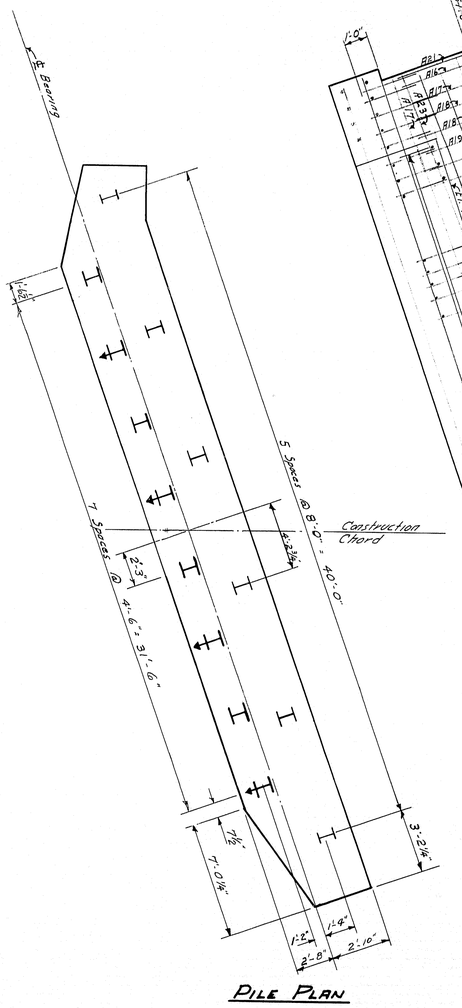
10"
A28
A31
A31
A17
A15
A34 Splice
A34
A28
A31
A31
A31
A25
A16
A32
A13
A9
A31
A31
A31

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			

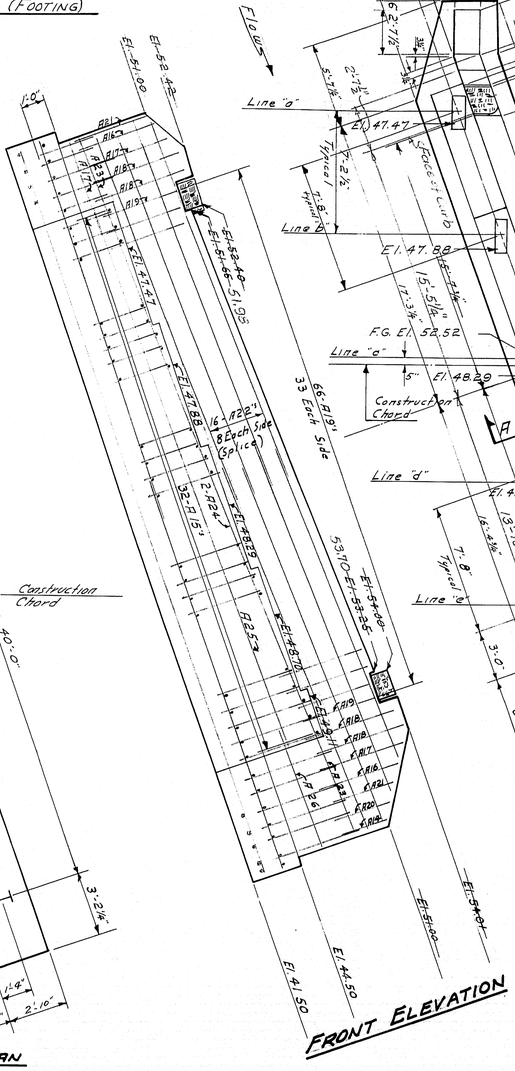


HORIZONTAL STEEL (FOOTING)

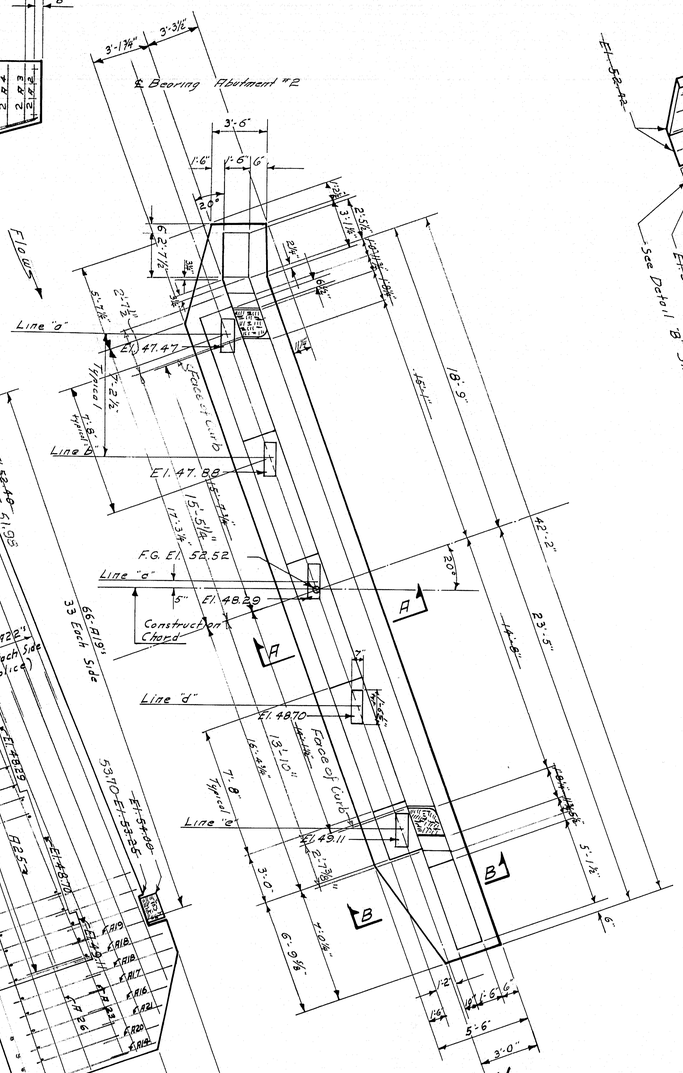
Reinforcing steel to be bent in the field whenever necessary.



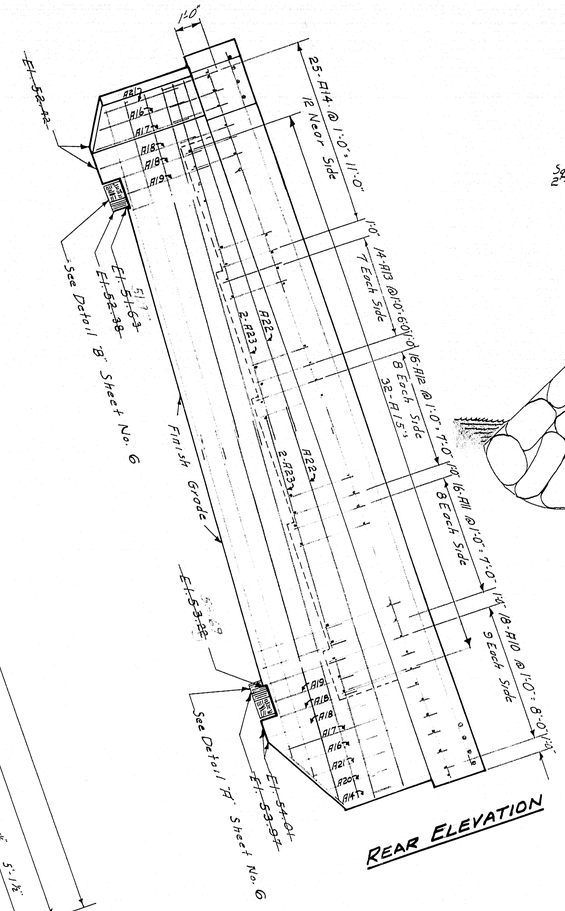
PILE PLAN



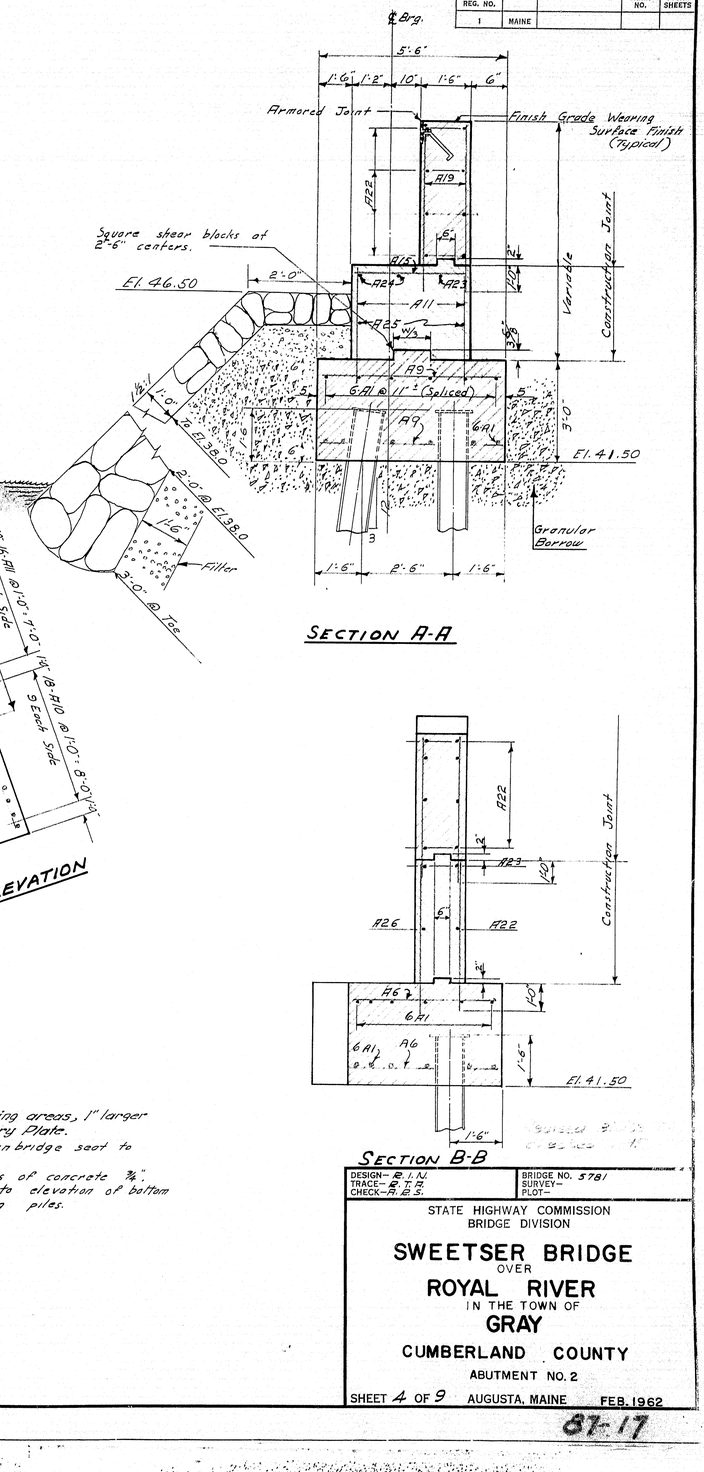
FRONT ELEVATION



PLAN



REAR ELEVATION



SECTION A-A

SECTION B-B

PILE NOTES:-

14 - Steel Piles Req'd. 10 BP 42
Piles to be driven to ledge or practical refusal (Typ.)
Allowable load: 37 Tons.
Piles shown thus, ⊢⊢, to be battered 3" / ft. in direction of arrow.
Estimated length = 50 ft.
See Sh. #7 for Pile Cap Detail.

NOTES:-

Dress shaded bearing areas, 1" larger all around than Masonry Plate.
Place reinforcing steel in bridge seat to clear anchor bolts.
Chamfer all exposed edges of concrete ¾".
Place granular borrow to elevation of bottom of footing before driving piles.

DESIGN- E. I. N.
TRACE- E. T. R.
CHECK- A. E. S.

BRIDGE NO. 5781
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

SWEETSER BRIDGE
OVER
ROYAL RIVER
IN THE TOWN OF
GRAY
CUMBERLAND COUNTY
ABUTMENT NO. 2

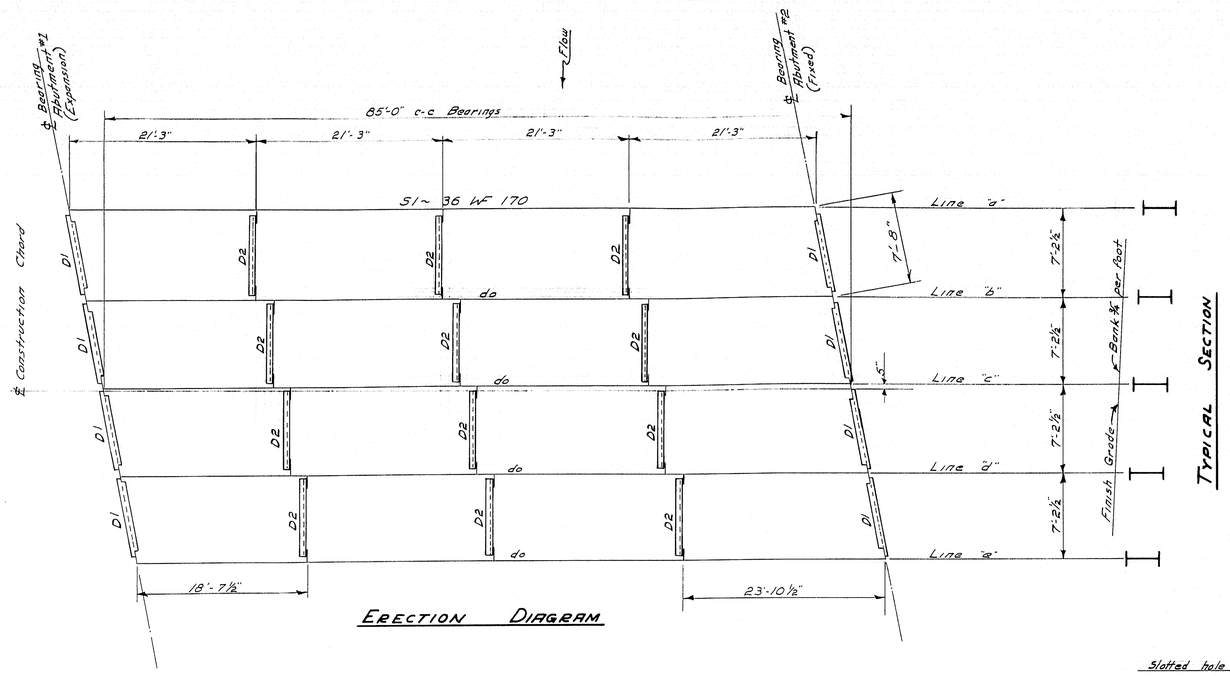
SHEET 4 OF 9 AUGUSTA, MAINE FEB. 1962

87-17

K+E 166 IMPERIAL D. L. M. INC. 89931

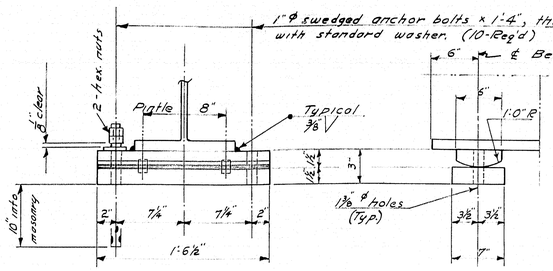
0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			

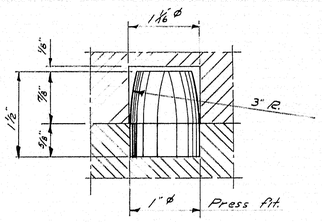


ERECTION DIAGRAM

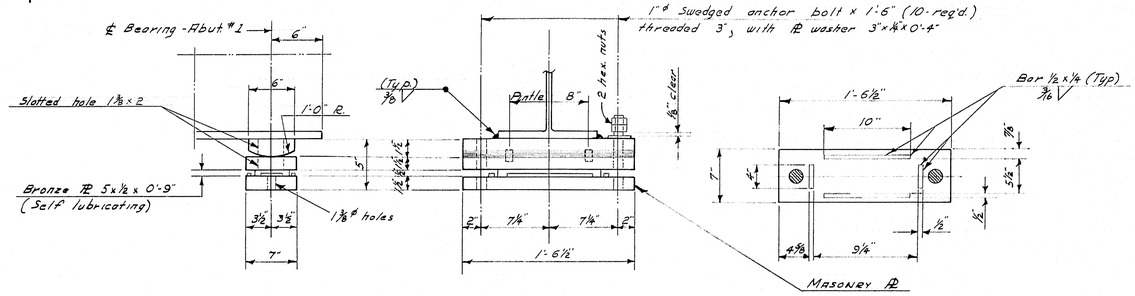
TYPICAL SECTION



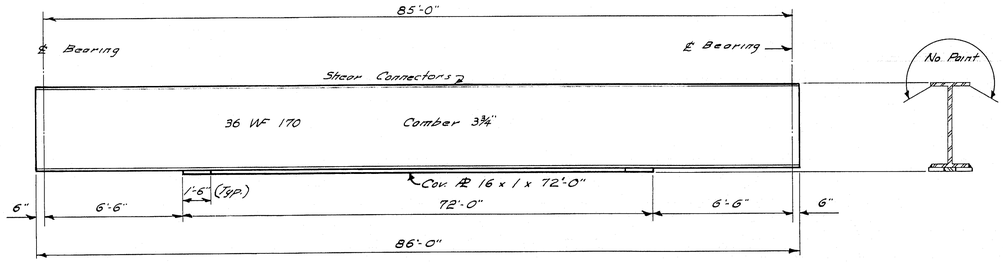
FIXED BEARING
5-Required @ Abutment #2



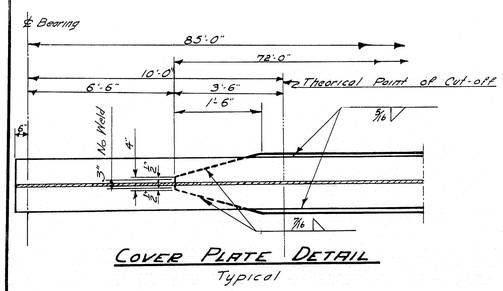
PINTLE DETAIL



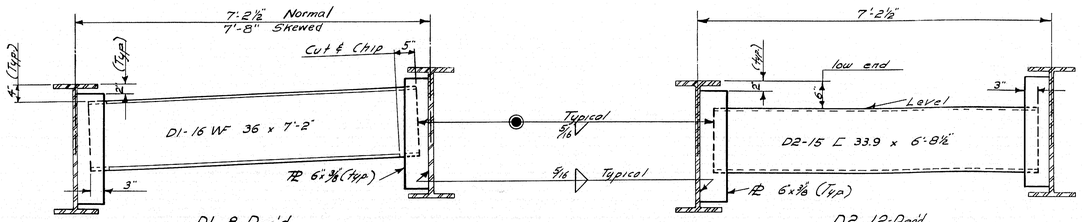
EXPANSION BEARING
5-Required @ Abutment #1



STRINGER - S1



COVER PLATE DETAIL
Typical



D1, 8-Req'd

D2, 12-Req'd

DIAPHRAGMS D1-D2

~SPECIFICATIONS~

FABRICATION & ERECTION ~ State of Maine, Standard Specifications Highways & Bridges, Revision of January 1956.

DESIGN & DETAIL ~ A.A.S.H.O. 1961.

MATERIALS ~ Stringers and Cover plates shall conform to A.S.T.M. Designation A36. Other structural steel may be the some or A.S.T.M. Designation A7.

DESIGN STRESS ~ A36 = 20,000 p.s.i.
A7 = 18,000 p.s.i.

DESIGN- A. B. S.
TRACE- D. T. R.
CHECK- R.I.W.

BRIDGE NO. 5781
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

SWEETSER BRIDGE
OVER
ROYAL RIVER
IN THE TOWN OF
GRAY
CUMBERLAND COUNTY

STRUCTURAL STEEL

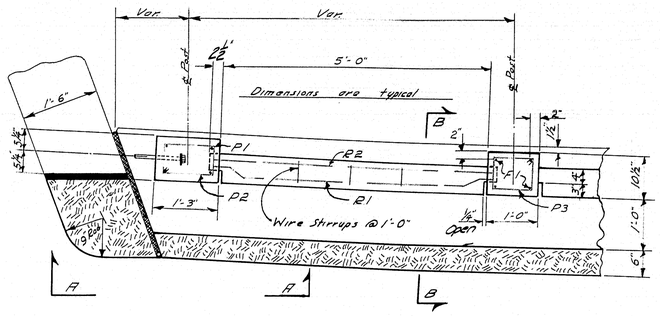
SHEET 5 OF 9 AUGUSTA, MAINE FEB. 1962

81-18

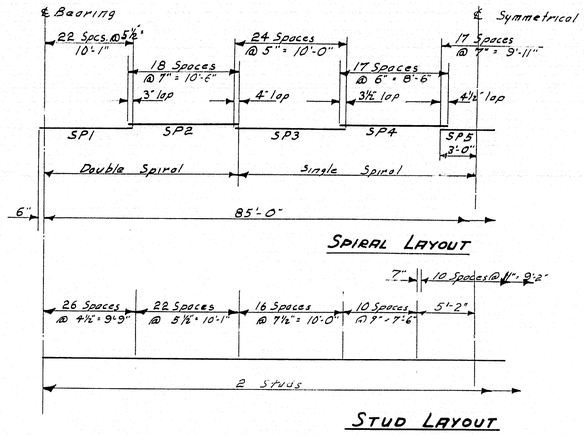
K+E 186 IMPERIAL D. L. M. INC.

0 1 2 3 4 5 INCHES

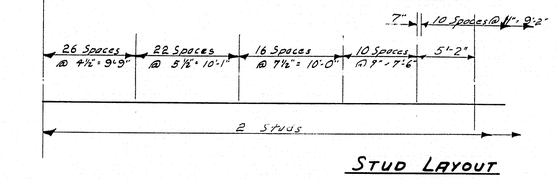
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			



CONCRETE RAIL PLAN

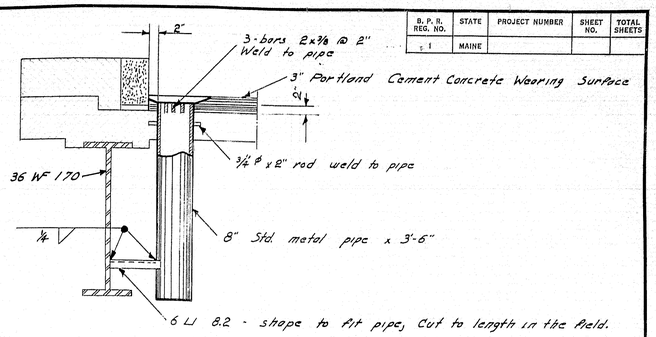


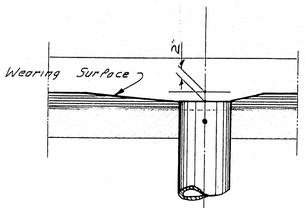
SPIRAL LAYOUT

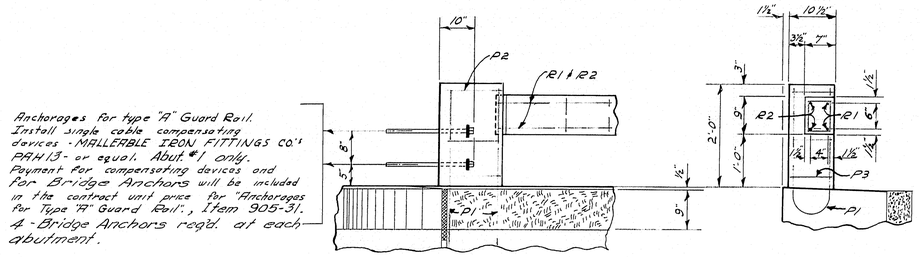


STUD LAYOUT

Stud shear connectors are patented. If the contractor elects to use studs he shall pay royalty. Payment to the contractor for the cost of royalty will be included in the lump sum price for Item 705-17 "Shear Connectors".

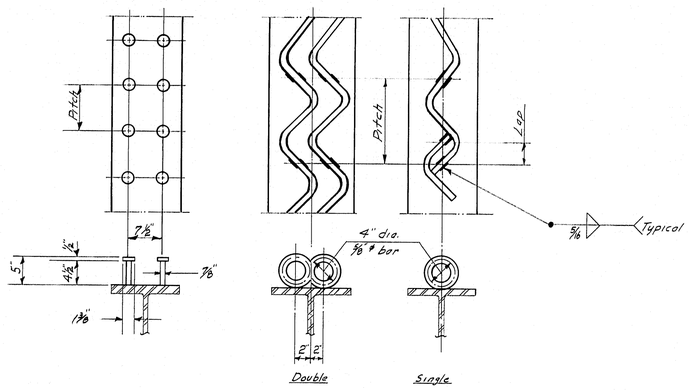






SECTION A-A

SECTION B-B



STUDS
1,610 Req'd

SPIRALS

SHEAR CONNECTORS

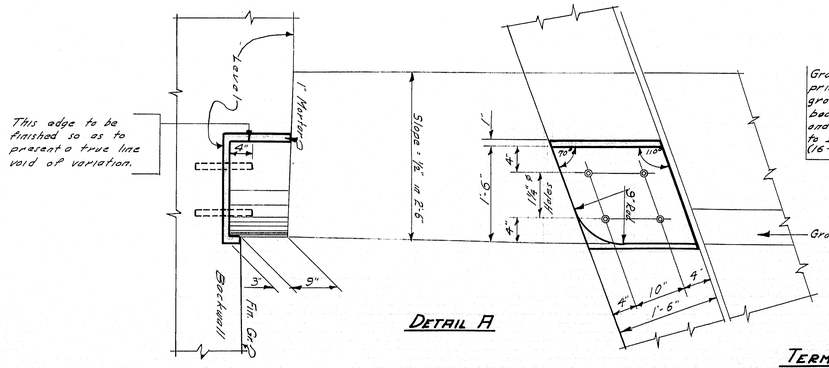
The use of studs or spirals shown to be optional to the contractor. Studs to be Granular or Flux filled, automatically and welded in shop or field.

NOTE- Furnishing and erection of 8" Std. metal pipe drains to be paid for as Structural Steel under Items 702-103 & 702-104. Adjust reinforcing steel to clear drains. For drain location see sheet #9

METAL PIPE DRAIN
3 Req'd.

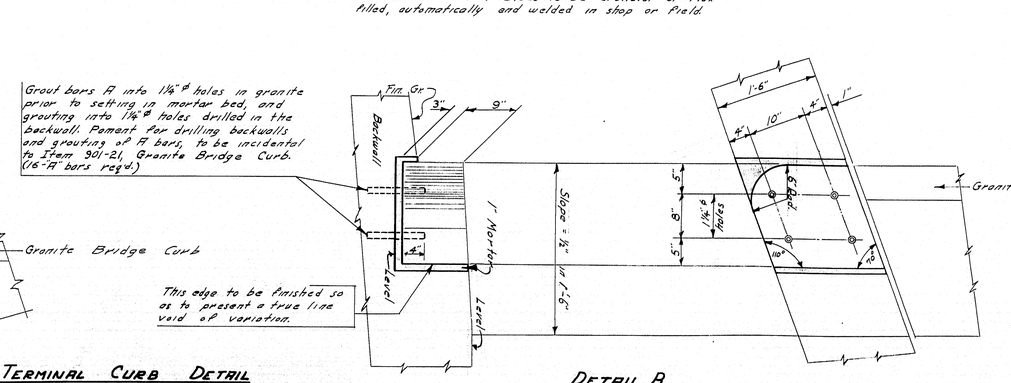
NOTE-

Rail posts are to be constructed plumb with tops level. All exposed edges of concrete on rails and posts are to be chamfered ½". Wrap tongues, which extends 8½" into posts, with two layers of heavy roofing. Construct wire stirrups for rails in the field from a single strand of #9 annealed wire making a complete turn around each "R" bar.



DETAIL A

TERMINAL CURB DETAIL
For location see sheets #3 & #4



DETAIL B

DESIGN- E. L. N. TRACE- E. T. R. CHECK- H. E. S.	BRIDGE NO. 5781 SURVEY- PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

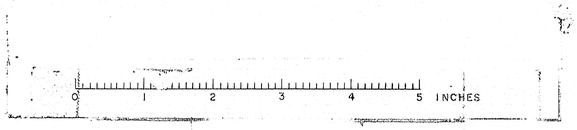
SWEETSER BRIDGE
OVER
ROYAL RIVER
IN THE TOWN OF
GRAY
CUMBERLAND COUNTY

DRAIN PIPE, CONCRETE RAIL, SHEAR CONNECTORS, & CURB

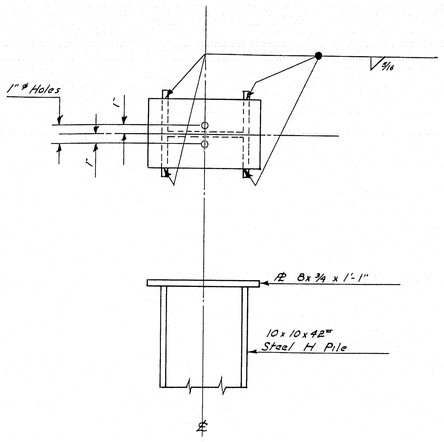
SHEET 6 OF 9 AUGUSTA, MAINE MARCH 1962

87-19

K-E 186 IMPERIAL MADE IN U.S.A. D. L. M. INC. 07973



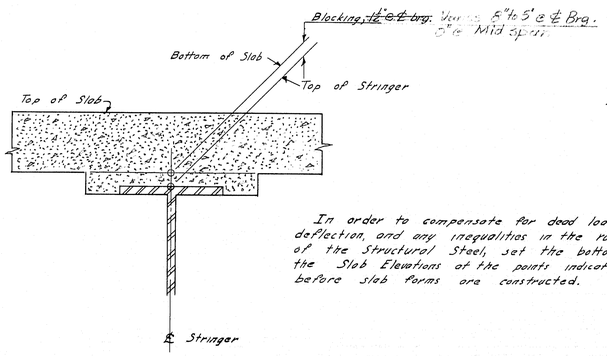
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			



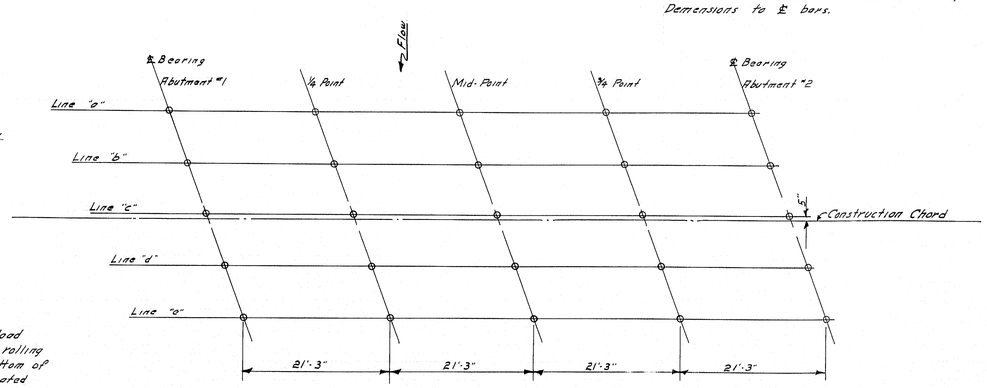
PILE CAP DETAIL

BOTTOM OF SLAB ELEVATIONS

Beam	Abut. #1 ℄ Bearing	Quarter Pt.	Mid-Point	Quarter Pt.	Abut. #2 ℄ Bearing
"a"	52.17	52.02	51.72	51.36	50.85
"b"	52.38	52.43	52.13	51.77	51.26
"c"	52.99	52.84	52.54	52.18	51.67
"d"	53.40	53.25	52.95	52.59	52.08
"e"	53.81	53.66	53.36	53.00	52.49
"n"	52.12	52.23	51.82	51.44	51.15
"f"	52.05	52.00	52.20	51.80	51.59
"g"	52.43	52.99	52.61	52.20	52.04
"h"	52.79	52.97	52.60	52.21	52.49
"i"	53.16	53.7	53.40	53.01	52.94



In order to compensate for dead load deflection, and any inequalities in the rolling of the Structural Steel, set the bottom of the Slab Elevations at the points indicated before slab forms are constructed.



BLOCKING DETAILS

REINFORCING STEEL SCHEDULE

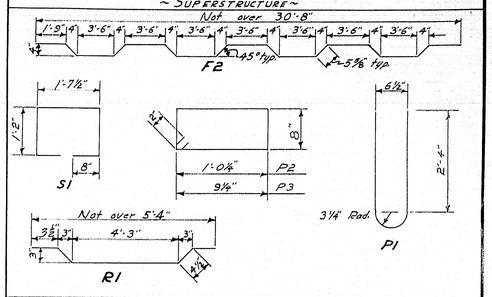
~ ABUTMENTS ~

~ STRAIGHT BARS ~

Mark	Size	No.	Length	Location
A1	#6	24	23'-8"	Footing
A2		2	3'-2"	"
A3		8	3'-4"	"
A4		4	3'-7"	"
A5		8	3'-11"	"
A6		8	4'-2"	"
A7		8	4'-6"	"
A8	†	10	4'-9"	Footing & Wing
A9	#6	142	5'-2"	"
A10	#5	32	5'-8"	Footing & Wing
A11		32	5'-3"	Footing
A12		32	4'-10"	Footing
A13		42	4'-4"	Footing & Wing
A14		27	4'-0"	" "
A15		68	3'-0"	Bridge Seat
A16		6	4'-7"	Wing
A17		72	5'-2"	Wing & Backwall
A18		8	5'-9"	Wing
A19		66	5'-4"	Backwall
A20		2	3'-4"	Wing
A21	†	4	3'-11"	"
A22	#5	18	22'-0"	Backwall & Bridge Seat
A23	#6	4	22'-0"	Bridge Seat & Wing
A24	#6	4	33'-4"	Bridge Seat ~ Top
A25	#5	2	33'-4"	Bridge Seat ~ Bottom
A26	#5	2	7'-6"	Wing
A28	#6	24	24'-4"	Footing
A29	#5	21	5'-8"	Footing & Wing
A30		2	5'-4"	Wing
A31		8	5'-11"	"
A32		2	3'-9"	"
A33	†	2	5'-6"	"
A34	#5	18	23'-6"	Wing & Bridge Seat
A35	#6	4	23'-6"	" " "
A36	#5	1	6'-10"	Wing

All bars are to be Intermediate Grade, F= 20,000 p.s.i.
Dimensions to ℄ bars.

~ SUPERSTRUCTURE ~



~ BENT BARS ~

Mark	Size	No.	Length	Location
F2	#5	96	31'-8"	Roadway Slab
S1	#4	175	5'-4"	Curb
P1	#6	60	5'-6"	Rail Post
P2	#4	12	3'-8"	" "
P3	#4	78	3'-2"	" "
R1	#4	56	5'-7"	Rail Bar

~ STRAIGHT BARS ~

Mark	Size	No.	Length	Location
F1	#5	194	20'-0"	Roadway Slab
F3	#5	194	16'-5"	" " , Splice with F1
F4	#4	264	44'-3"	" "
F5	#5	52	4'-0"	Rail Slab To Roadway Slab
F6	#5	45	3'-6"	" " " "
F7	#5	58	3'-0"	" " " "
F8	#5	37	2'-6"	" " " "
C1	#4	15	17'-0"	Curb
C3	#4	15	16'-0"	"
T1	#3	87	29'-5"	Wearing Surface
T2	#3	58	43'-9"	" "
R2	#4	56	5'-4"	Rail Bar

DESIGN- R.P.S.
TRACE- D.T.H.
CHECK- R.N.G.A.R.S.

BRIDGE NO. 5781
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

SWEETSER BRIDGE
OVER
ROYAL RIVER
IN THE TOWN OF
GRAY
CUMBERLAND COUNTY

BLOCKING, & REINFORCING STEEL

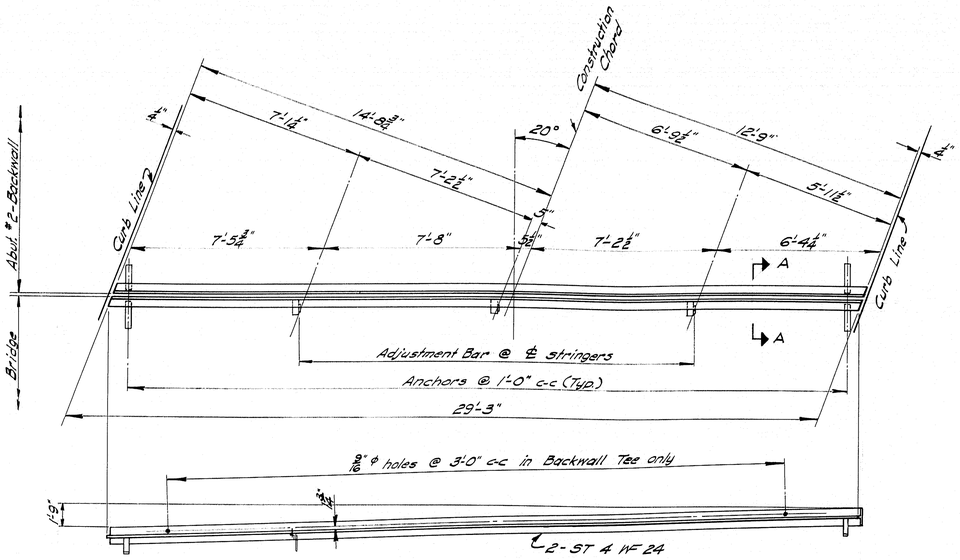
SHEET 7 OF 9 AUGUSTA, MAINE MARCH 1962

87-20

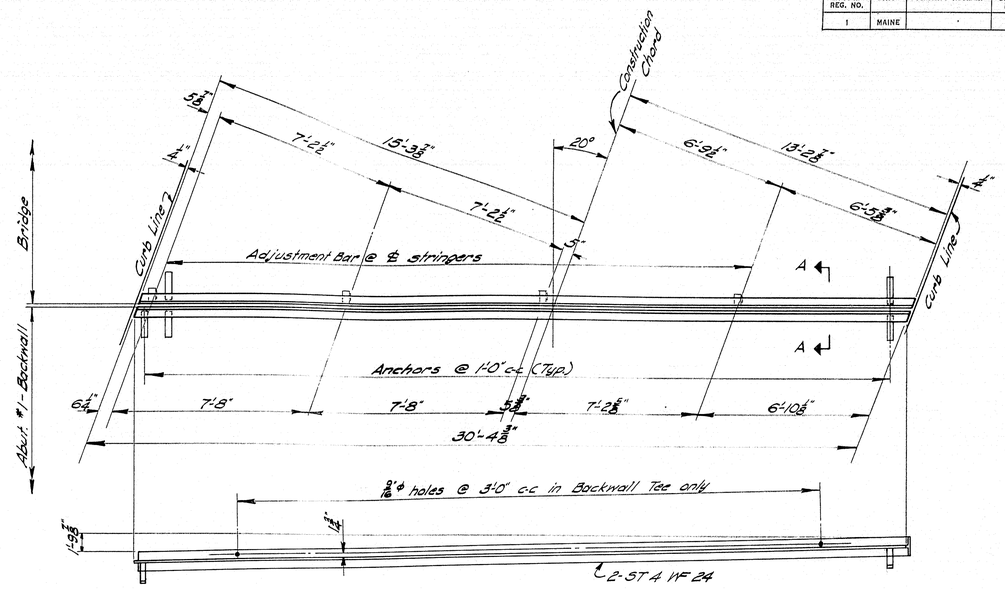
K&E 166 IMPERIAL TRACING CLOTH 9 in. D. L. M., INC. 67671

0 1 2 3 4 5 INCHES

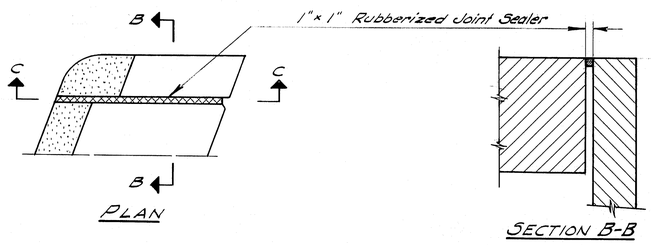
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			



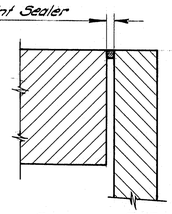
ARMORED JOINT
Abutment #2



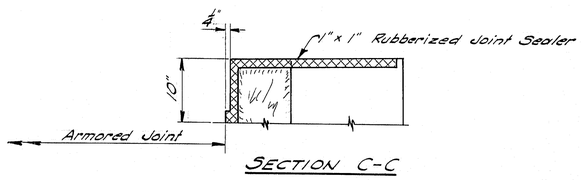
ARMORED JOINT
Abutment #1



PLAN



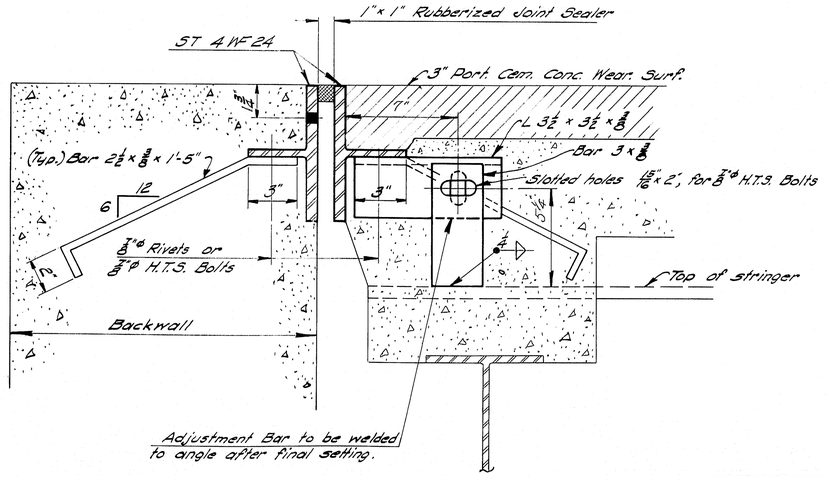
SECTION B-B



SECTION C-C

NOTE:
Rubberized Joint Sealer shall be supported on non-bituminous material. At the Contractor's option, the supporting material may be left in place or removed.
If the supporting material is left in place it shall be compressible in accordance with A.A.S.H.O. specification, M 153-54.
If the supporting material is removed, bonding with the Rubberized Joint Sealer shall be prevented by a method satisfactory to the Engineer (layer of fine sand, wax paper, etc.)

SAFETY CURB EXPANSION JOINT



SECTION A-A

DESIGN– R.I.N.
TRACE– G.W.C.
CHECK– A.R.S.

BRIDGE NO.
SURVEY–
PLOT–

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

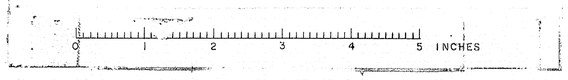
SWEETSER BRIDGE
OVER
ROYAL RIVER
IN THE TOWN OF
GRAY
CUMBERLAND COUNTY

ARMORED JOINT & EXPANSION JOINT DETAILS

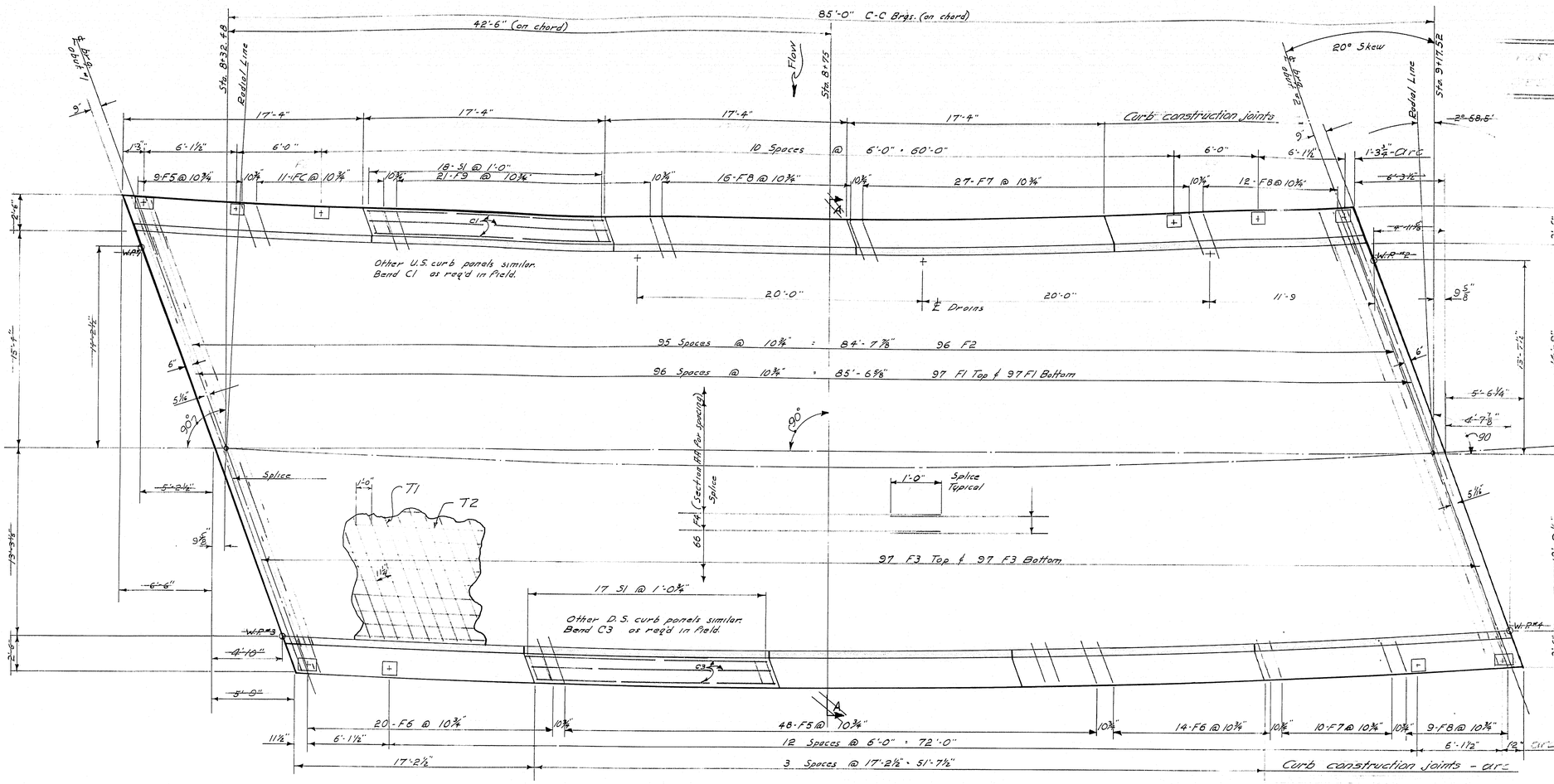
SHEET 8 OF 9 AUGUSTA, MAINE MAR. 1962

87-21

K-E 188 IMPERIAL TRACING CLOTH L.A. D. L. M. INC. 67971

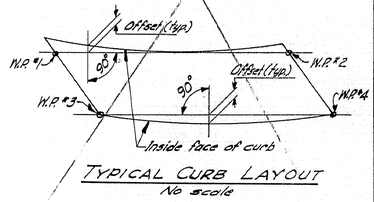


B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			

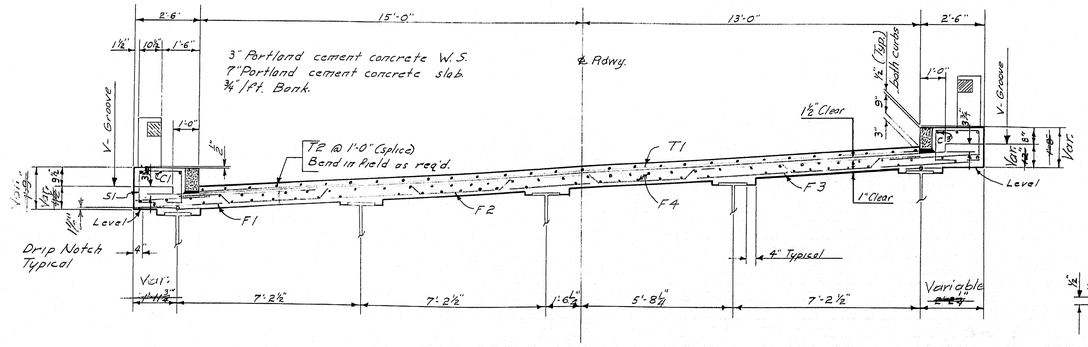


CURB LOCATION

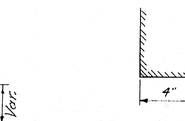
Chord Connecting W.P.#1 & W.P.#2		Chord Connecting W.P.#3 & W.P.#4	
Distance	Offset (Ft)	Distance	Offset (Ft)
W.P.#1	1.129	W.P.#3	0
9.320	0.743	9.251	0.387
17.842	0.421	17.704	0.688
26.364	0.191	26.157	0.902
34.886	0.051	34.610	1.031
43.408	0.001	43.063	1.074
51.930	0.041	51.516	1.031
60.452	0.172	59.969	0.902
68.974	0.393	68.422	0.688
77.496	0.705	76.875	0.387
86.018	1.107	85.328	0



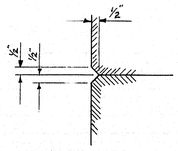
TYPICAL CURB LAYOUT
No scale



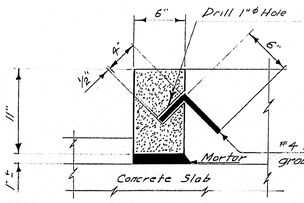
RADIAL SECTION ~~H-H~~
~~Taken radially at Sta. 8+75~~



DRIP NOTCH DETAIL



V-GROOVE DETAIL



NOTE: There shall be a construction joint in the granite bridge curb at all construction joints in the concrete curb. Lengths of individual stones for curb shall not be greater than six (6) feet.

GRANITE BRIDGE CURB DETAIL

-GENERAL NOTES-

1. Concrete for curbs will not be placed until concrete in superstructure slab has been in place for a minimum of seven days. During the seven day period granite curb may be placed but hand equipment only will be allowed on slab.
2. Break bond at curb construction joints by painting concrete with suitable grade of asphalt paint.
3. Form V-Groove on outside face of curb and slab at each vert. curb joint. Granite curb need not be broken at these construction joints.
4. Reinf. bars to be set on curve by lanes of chords.
5. Stringers to be set parallel to ℄ chord.

DESIGN- R.I.N.
TRACE- R.P.B.
CHECK- H.R.S.

BRIDGE NO. 5781
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

SWEETSER BRIDGE
OVER
ROYAL RIVER
IN THE TOWN OF
GRAY
CUMBERLAND COUNTY

SUPERSTRUCTURE

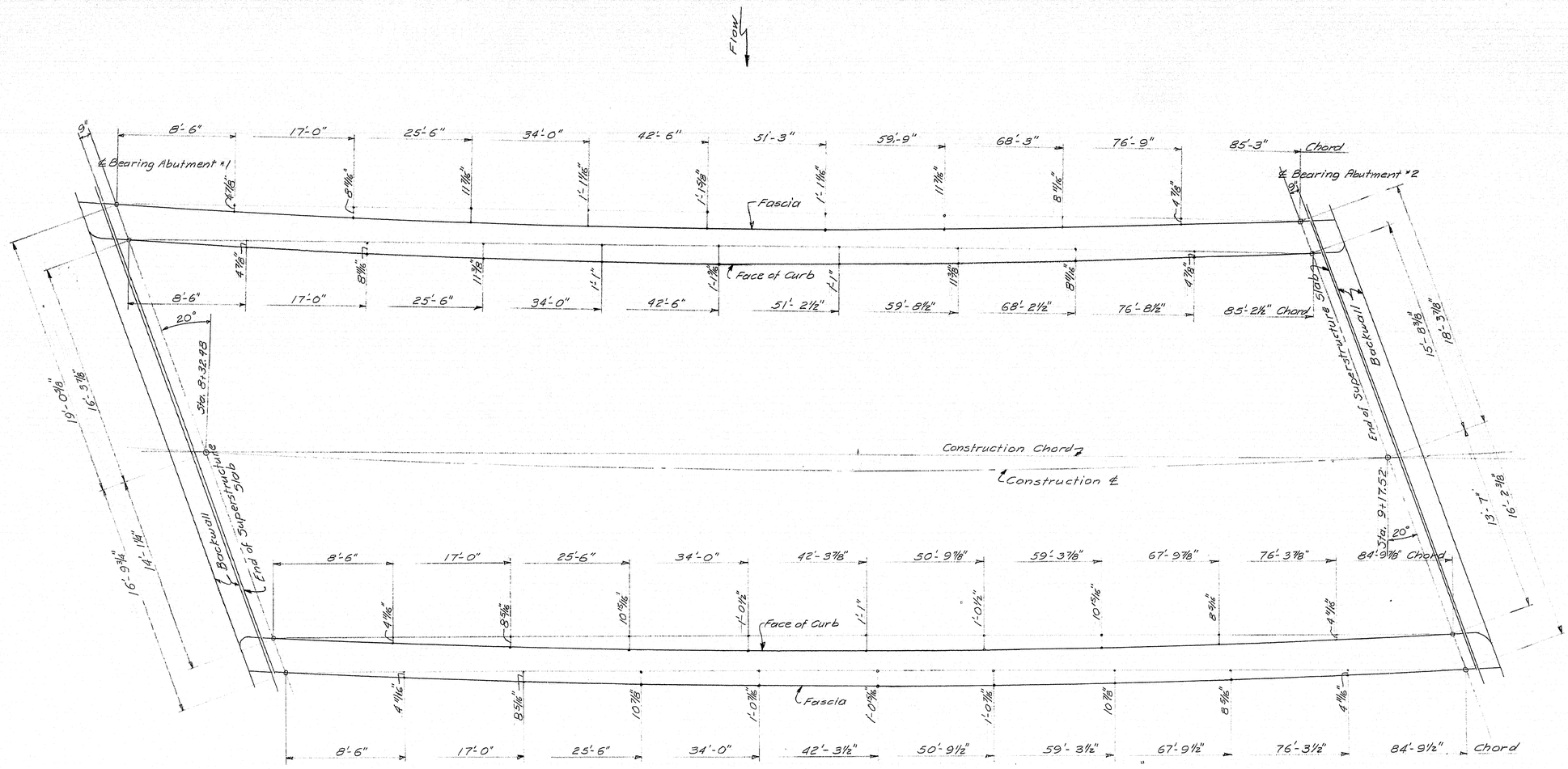
SHEET 9 OF 9 AUGUSTA, MAINE FEB. 1962

97-22

K+E 138 IMPERIAL DRAWING PAPER U.S.A. D. L. M. INC. 49021

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			



SUPERSTRUCTURE SLAB LAYOUT

DESIGN– T. H. K. TRACE– CHECK– AHP	BRIDGE NO. SURVEY– PLOT–

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

SWEETSER BRIDGE
OVER
ROYAL RIVER
IN THE TOWN OF
GRAY
CUMBERLAND COUNTY

REVISED SUPERSTRUCTURE LAYOUT

SHEET 9A OF 10 AUGUSTA, MAINE AUG. 1963

87-23

C. P. CO., NO. 44-302 55516

0 1 2 3 4 5 INCHES

NOTE

1. PRESENT WATER MAIN IS 8" B&S PIPE
   NEW WATER MAIN TO BE 8" M.J. PIPE - CLASS 150
2. FITTINGS AT BENDS IN THE PIPE LINE SHALL BE FIRMLY WEDGED BY MEANS OF CONCRETE THRUST BLOCKS AGAINST THE SIDES OF THE TRENCH
3. NEW PIPE SHALL HAVE 12" MINIMUM COVER IN STREAM BED.
4. ACTUAL CONNECTIONS WITH PRESENT MAIN SHALL BE DONE ONLY AFTER ALL INTERMEDIATE PIPE WORK HAS BEEN COMPLETED.
5. MINIMUM COVER ON NEW PIPE OUTSIDE EMBANKMENT AREAS SHALL BE 5 FEET.
6. ALL CONCRETE SHALL CONFORM TO M.S.H.C. SPECIFICATIONS - CLASS "B"
7. REINFORCING STEEL SHALL BE DEFORMED, INTERMEDIATE GRADE. METAL SHALL BE CLEAN AND FREE FROM RUST AND SCALE.

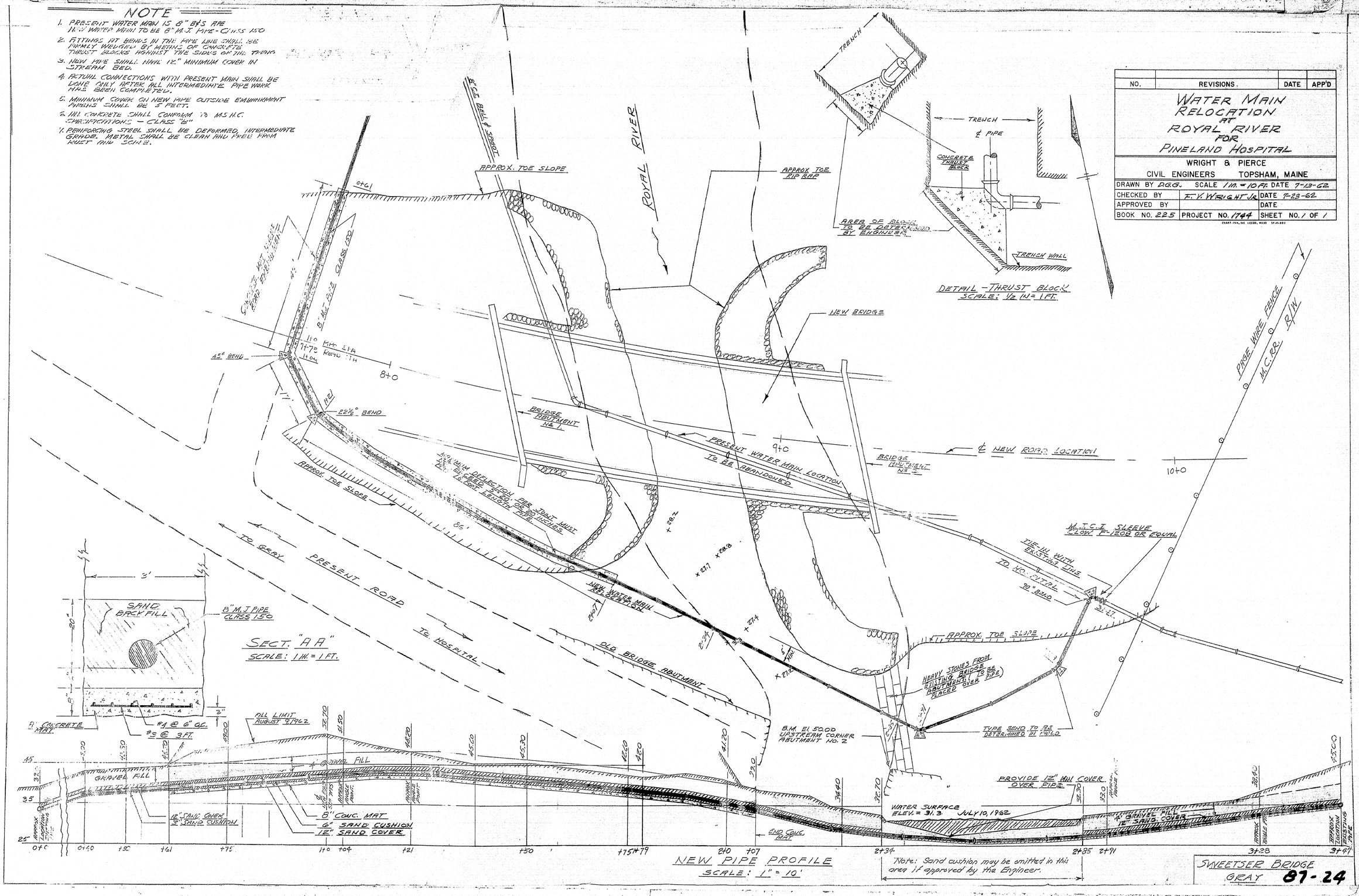
NO.	REVISIONS.	DATE	APP'D

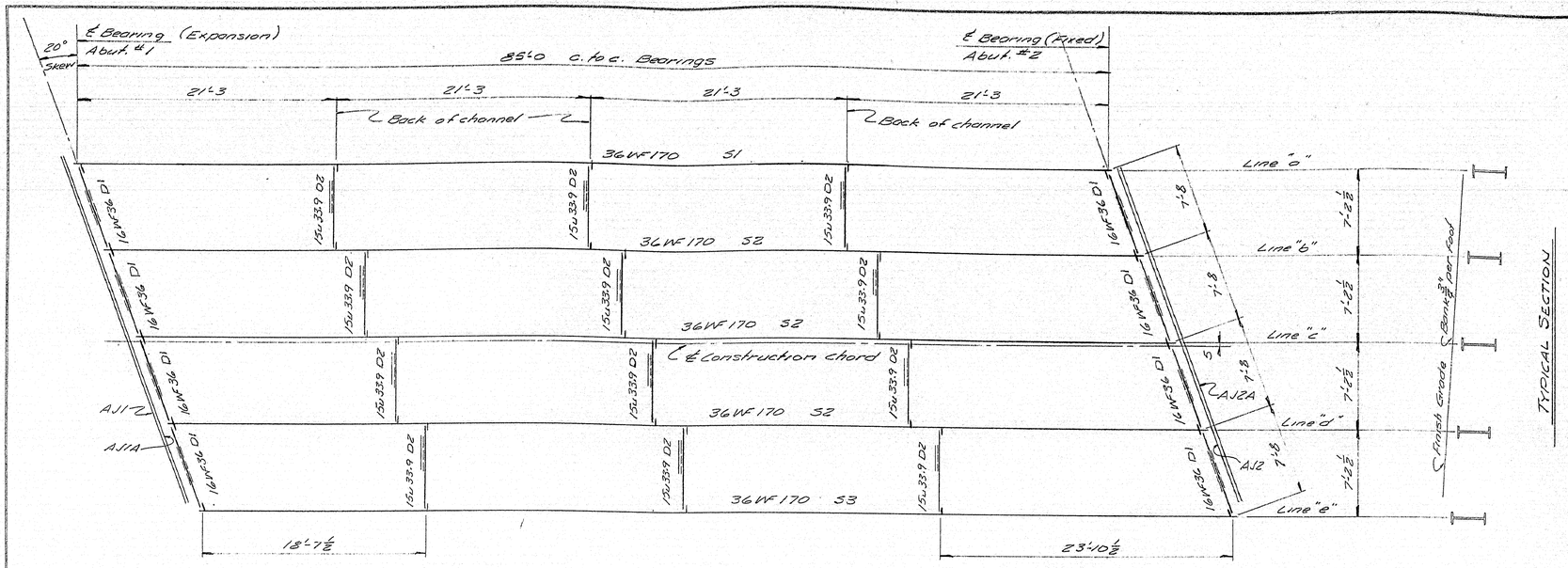
WATER MAIN RELOCATION AT ROYAL RIVER FOR PINELAND HOSPITAL

WRIGHT & PIERCE
CIVIL ENGINEERS TOPSHAM, MAINE

DRAWN BY D.G.G.	SCALE 1 IN. = 10 FT.	DATE 7-13-62
CHECKED BY	F. V. WRIGHT JR	DATE 7-23-62
APPROVED BY		DATE
BOOK NO. 225	PROJECT NO. 1744	SHEET NO. 1 OF 1

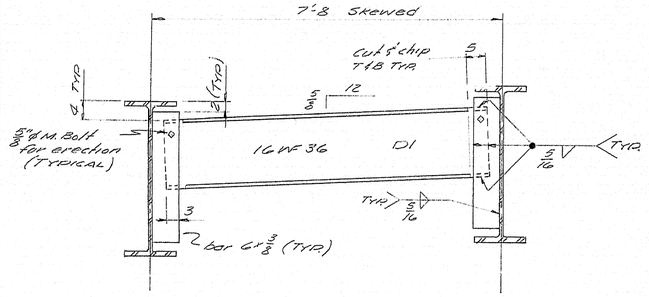
CHART-PAK, INC. LEEDS, MASS. TP-24-60



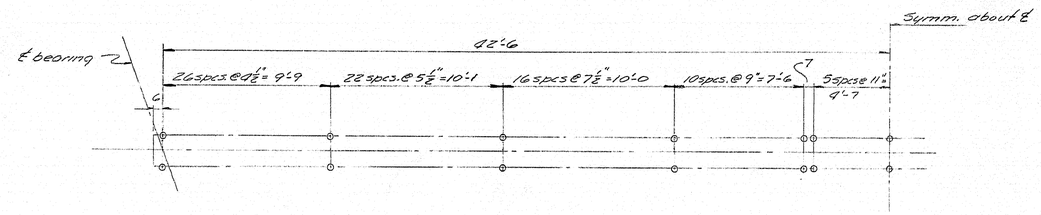


TYPICAL SECTION

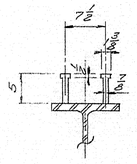
ERECTION DIAGRAM



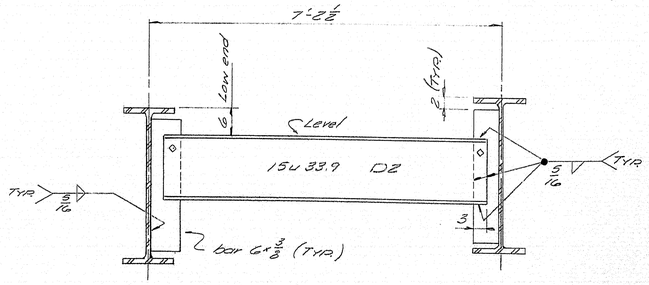
DIAPHRAGM D1



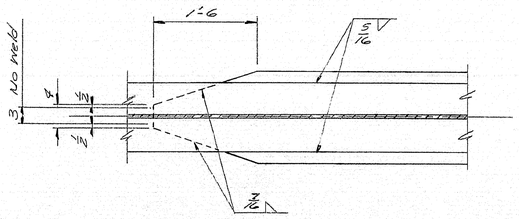
STUD LAYOUT
S1, S2 & S3



STUDS
1610 Req'd.



DIAPHRAGM D2



COVER PLATE DETAIL
TYPICAL

NOTES:
SHOP CONN: Welded
FIELD CONN: Diaphragms ⅝" ø M. Bolt for erection. Welded.
PAINT: State of Maine Specs.
Steel for stringers and cover plates shall be A.S.T.M. designation A36. Other steel members may be the same or A.S.T.M. -A7.

BRIDGE # 5781

ERECTION DIAGRAM
STUD LAYOUT ~ COVER PLATE DETAIL

Bancroft & Morton Rolling Mills Company
South Portland 7, Maine

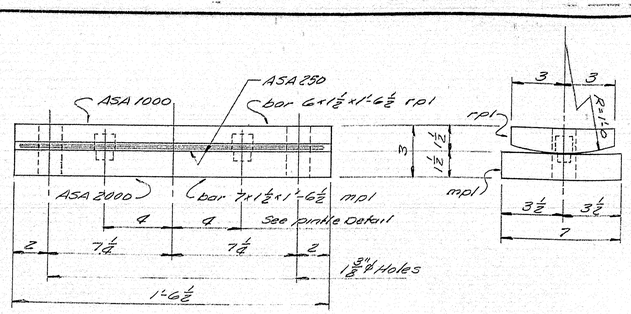
SWEETSER BRIDGE.
GRAY, MAINE.

Approved 11-6-62

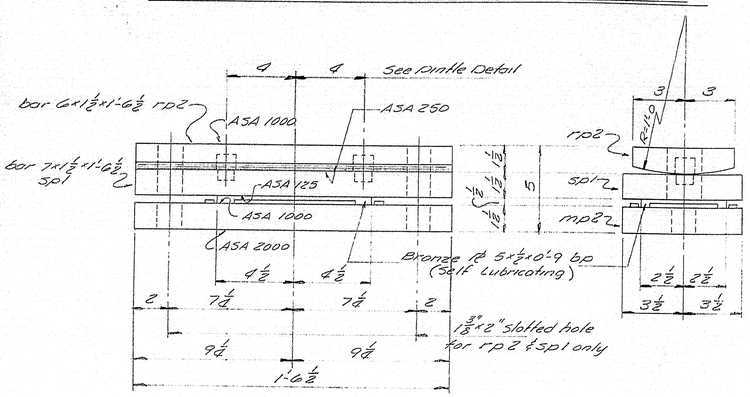
DRAWN	10-18-62	H.L.
REVISION		
REVISION		
REVISION		

CUSTOMER C.H. GOODRICH
DESIGNER M.S.H.C. BRIDGE DIV.
ORDER NO. Verbal
DWG. NO. 62-329-E1

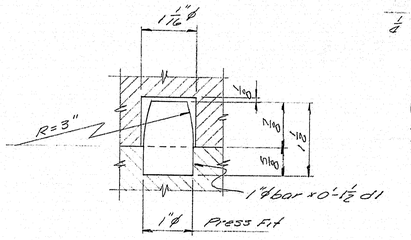
MODERN BLUE PRINT CO.



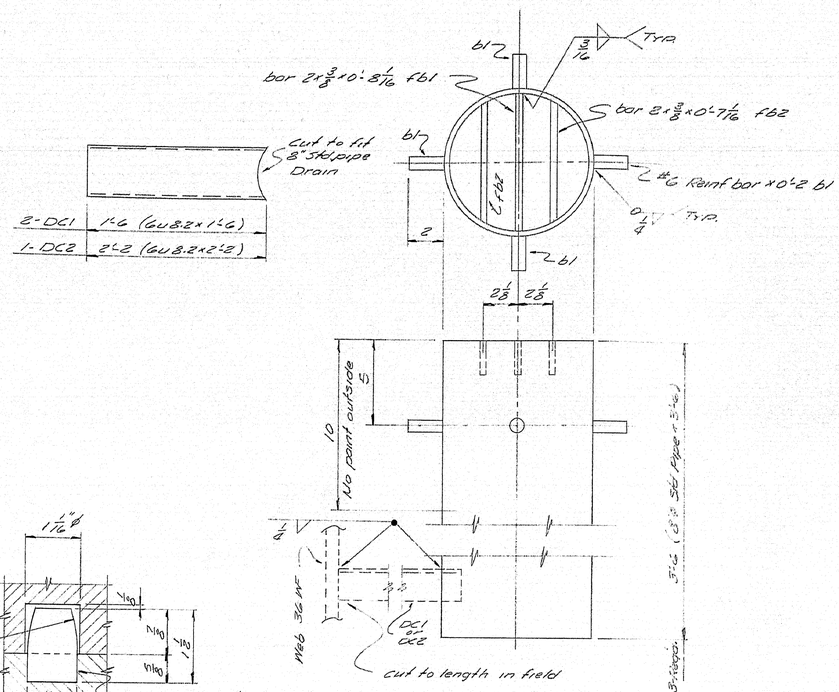
FIXED BEARING FB1 5 Req'd



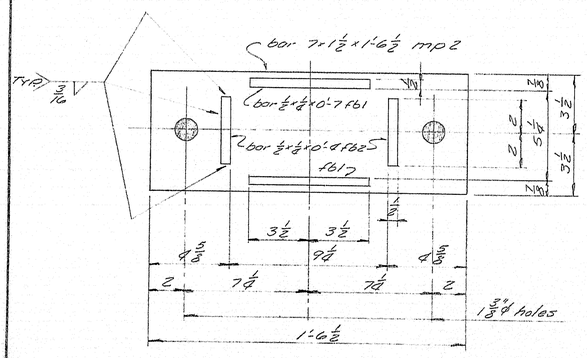
EXPANSION BEARINGS EB1 5 Req'd.



PINTLE DETAIL



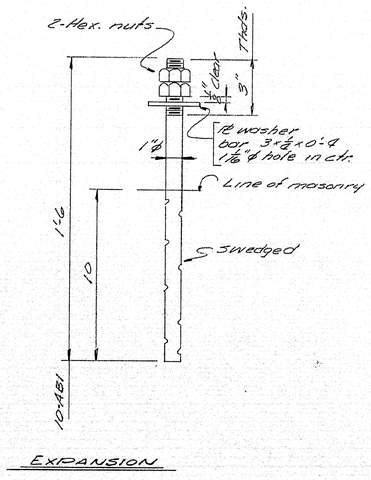
DRAIN DETAIL



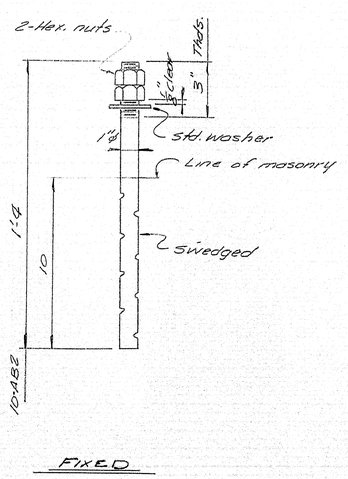
DETAIL mp2

PAINT NOTE:

. Surface with finish ASA250 to be coated with hot mixture of white lead and follow.
No paint on anchor bolts, oil threads.
No paint on top and ½" down from top edges of rp1 and rp2.
No paint on lubrite bronze or areas in contact with lubrite bronze.



EXPANSION



FIXED

ANCHOR BOLTS

SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
FB1	5		FIXED BEARING —			
	5	mpl	bar 7x1½	1 6½		
	5	rpl	bar 6x1½	1 6½		
	10	d1	1"ø bar	0 1½		
EB1	5		EXPANSION BEARING			
	5	rp2	bar 6x1½	1 6½		
	5	sp1	bar 7x1½	1 6½		
	5	mp2	do	1 6½		
	10	fb1	bar ⅜x⅞	0 7		
	10	fb2	do	0 8		
	10	d1	1"ø bar	0 1½		
	5	bp	PL 5x½	0 9		Bronze PLATE-Self Lubricating. Rep.# G180
AB1	10		1"ø Rod	1 6		Swedged
AB2	10		do	1 4		do
	40	Shop	1"ø Nut			Hex. nut
	10	Shop	1" Washer			Std.
	10	Washer	bar 3x½	0 4		Pipe washer-1 7/16"ø hole in center
	Note: Allowance to be made for machining when cutting above plates.					
DRAIN	3		SHOP ASSY.		—	
	3	Shop	8"ø Std. Pipe	3 6		Std. steel pipe
	3	fb1	bar 2x⅜	0 8 1/16		
	6	fb2	do	0 7 1/16		
	12	b1	#6 Reinf. bar	0 2		
DC1	2		6u8.2	1 6		
DC2	1		do	2 2		

SCALE WEIGH BEARINGS

SHOP CONNECTIONS: Welded
FIELD CONNECTIONS: Bolted, welded
HOLES: As Noted
PAINT: Red lead per M.S.H.C. Specs, except as noted.

BRIDGE # 5781

BEARINGS - DRAIN DETAIL

Bancroft & Martin Inc.
South Portland 7, Maine

SWEETSER BRIDGE.
GRAY, MAINE.

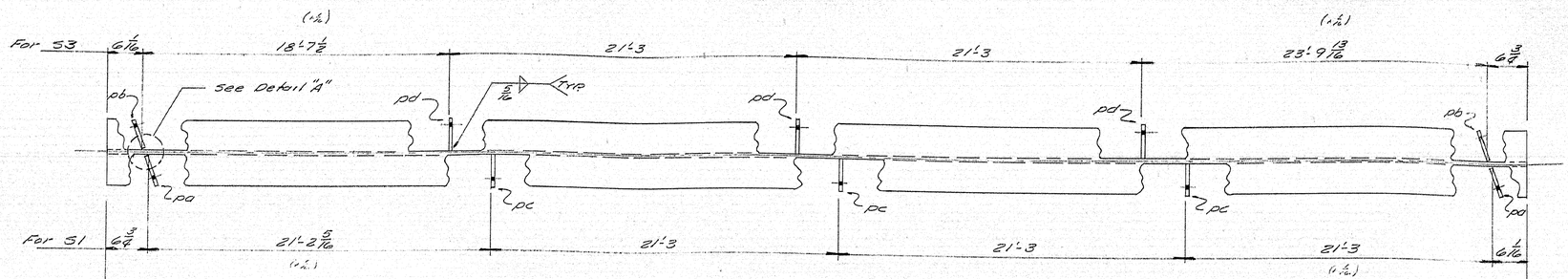
Approved 11-6-62

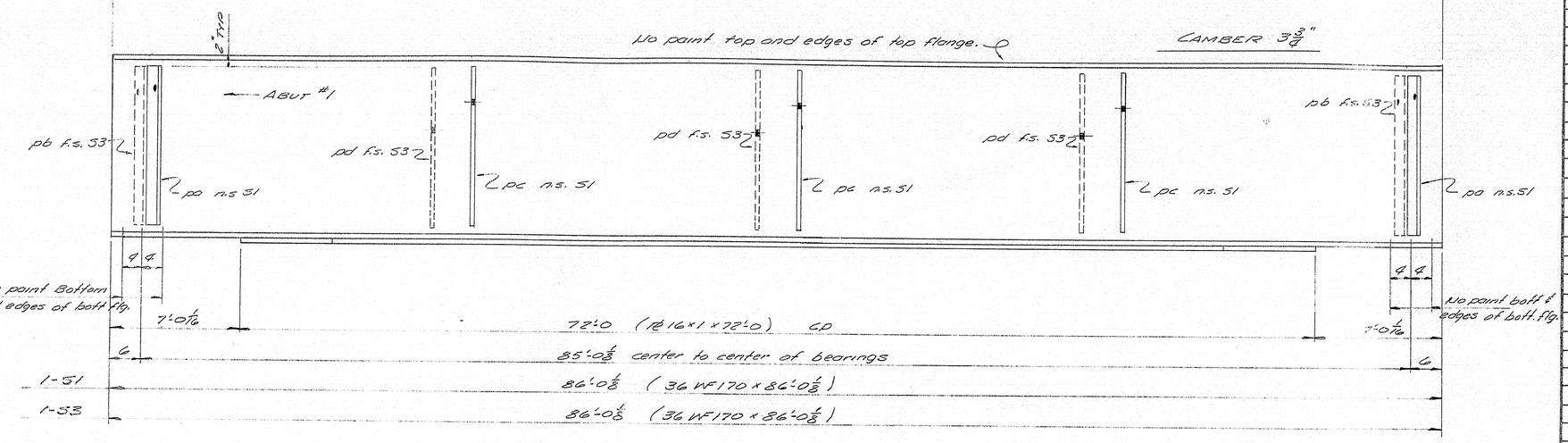
DRAWN	10-17-62	H.C.
REVISION		
REVISION		
REVISION		

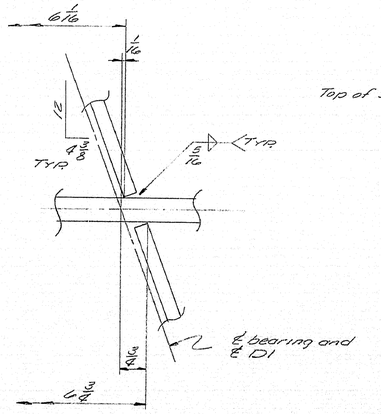
CUSTOMER C.H. GOODRICH
DESIGNER M.S.H.C. BRIDGE DIV.
ORDER NO. Verbal
DWG. NO. 62-329-51

87-240

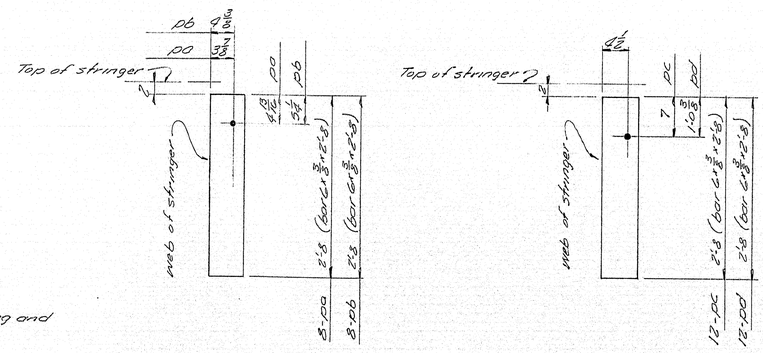
PRINTED AT BLUELINE-O-RAPH CO., NEWTON, MASS.







DETAIL "A"



Paint Note:
No paint on web plates pa, pb, pc and pd.

Note:
For cover plate and stud details see Dwg. #62-329-E1
Work this Dwg. with Dwg. #62-329-33

SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
						Weight out / Weight Adjd
51	1		36WF170	86 0 1/8		ASTM A36 / Comply 3/4"
53	1		do	86 0 1/8		do / do
	8	pa	bar Gr 3"	2 8		
	8	pb	do	2 8		
	12	pc	do	2 8		
	12	pd	do	2 8		
	5	cp	PL 16x1	72 0		306 / 337 / ASTM A36 / 41.752
	1610	Shop	7/8" Stud Shear Conn	0 5		Lump Sum (Item 705-17)
	1	Shop	5/16" Weld		152	702.0 Lin Ft @ .150 CA/Ft (cover PL) 219.3 " " " (web flgs)
	1	Shop	7/16" Weld		7	21.7 Lin. Ft. @ .3255 #/Ft (cover PL)

SHOP CONNECTIONS: Welded
FIELD CONNECTIONS: Welded, Bolted
HOLES: 13/16" ø
PAINT: Red lead per M.S.H.C. spec. unless noted.

BRIDGE # 5781

STRINGER DETAIL

Bancroft V. Martin Inc.
South Portland 7, Maine

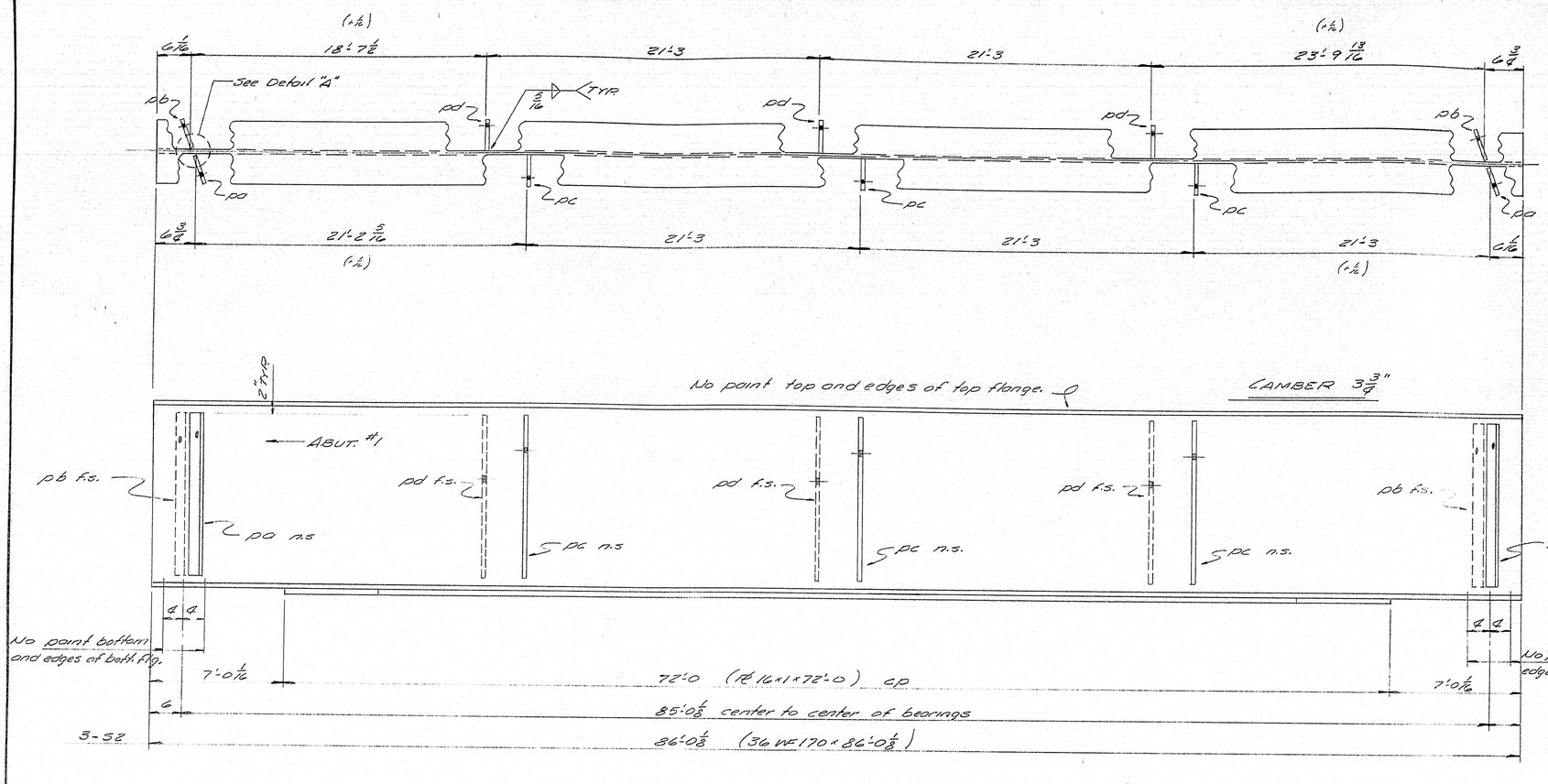
SWEETSER BRIDGE
GRAY, MAINE.

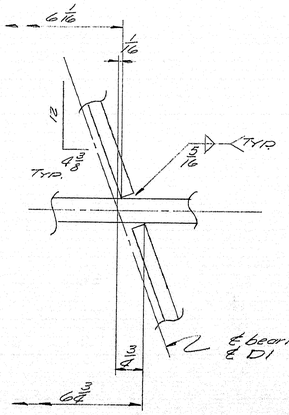
Approved 11-6-62

DRAWN	10-26-62	M.L.
REVISION		
REVISION		
REVISION		

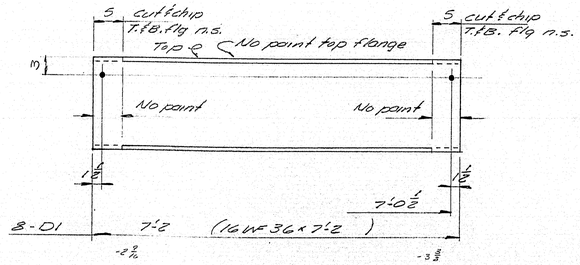
CUSTOMER C.H. GOODRICH
DESIGNER M.S.H.C. BRIDGE DIV.
ORDER NO. Verbal
DWG. NO. 62-329-S2

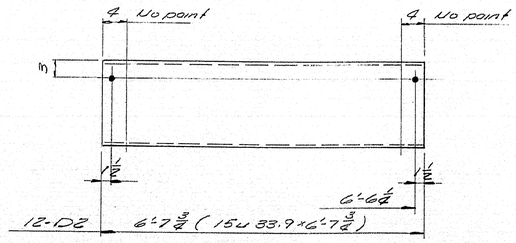
87-24 C





DETAIL "A"





NOTE:
For cover plate and stud details
See Dwg. #62-329-E1
Work this Dwg. with Dwg. #62-329-S2

SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS: Weight Out	REMARKS: Weight Added		
S2	3		36WF170	86 0 1/8				ASTM A36	Camber 3 3/4
D1	8		16WF36	7 2		C7			
D2	12		15U 33.9	6 7 3/4					
Field	18		3/4" d H.T. Bolt	0 1 1/2	—	for D1 erection			1C
do	26		do	0 1 3/4	—	for D2 erection			2C

SHOP CONNECTIONS: Welded
FIELD CONNECTIONS: Welded, Bolted
HOLES: 13/16 ϕ
PAINT: Red lead per M.S.H.C. spec. unless noted.
BRIDGE #5781

Approved 11-6-62

STRINGER DETAIL

Bancroft & Martin Inc.
South Portland 7, Maine

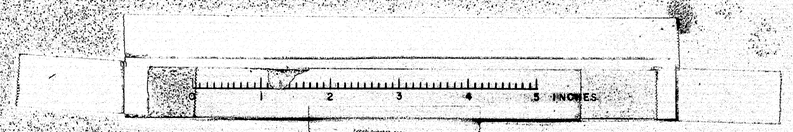
SWEETSER BRIDGE.
GRAY, MAINE.

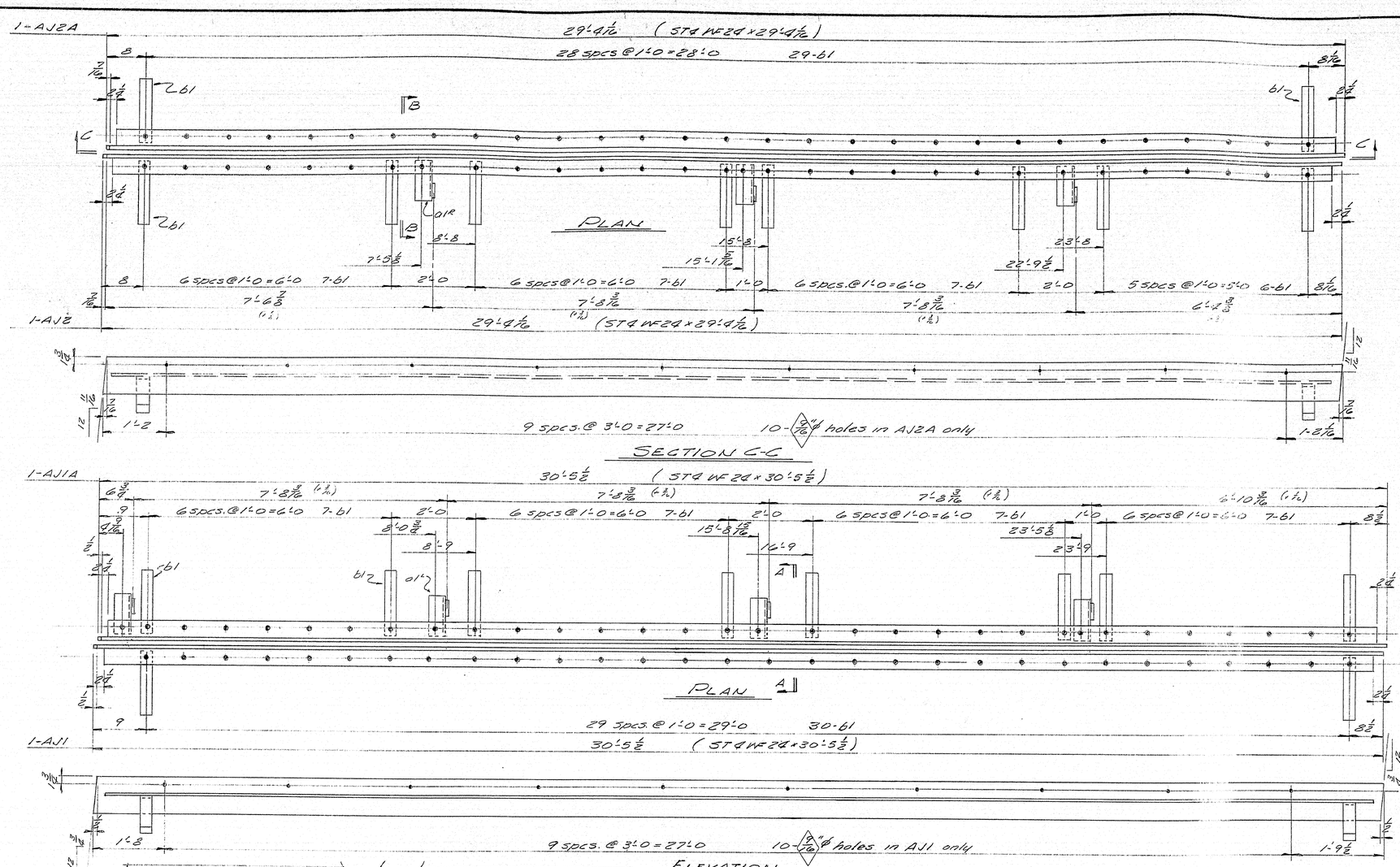
CUSTOMER C.H. GOODRICH
DESIGNER M.S.H.C. BRIDGE DIV.

ORDER NO. Verbal | DWG. NO. 62-329-S3

DRAWN	10-22-62	H.L.
REVISION		
REVISION		
REVISION		

67-24D





SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
AJ1	1		STD WF24	30 5 1/2		
AJ1A	1		do	30 5 1/2		
AJ2	1		do	29 4 7/16		
AJ2A	1		do	29 4 7/16		
	114	b1	bar 2 1/2 x 3/8	1 5		bend bar
	7	a1 9/16	L 3 1/2 x 3 1/2 x 3/8	0 8 1/2		
	7	fb1	bar 3 x 3/8	0 7 1/2		
	121	shop	7/8" ø H.T.S. bolts	0 2 1/2	44	High strength
	242	shop	7/8" washer		—	Hard washers

SHOP CONNECTIONS: Bolted
FIELD CONNECTIONS: Bolted, welded
HOLES: 13/16" ø, unless noted
PAINT: Red lead per M.S.H.C. spec. unless noted.

BRIDGE #5781

ARMORED JOINT DETAIL

Bancroft & Martin Inc.
South Portland 7, Maine

SWEETSER BRIDGE
GRAY, MAINE.

CUSTOMER C.H. GOODRICH
DESIGNER M.S.H.C. BRIDGE DIV.

ORDER NO. Verbal | DWG. NO. 62-329-S4

DRAWN	10-26-62	H.C.
REVISION		
REVISION		
REVISION		

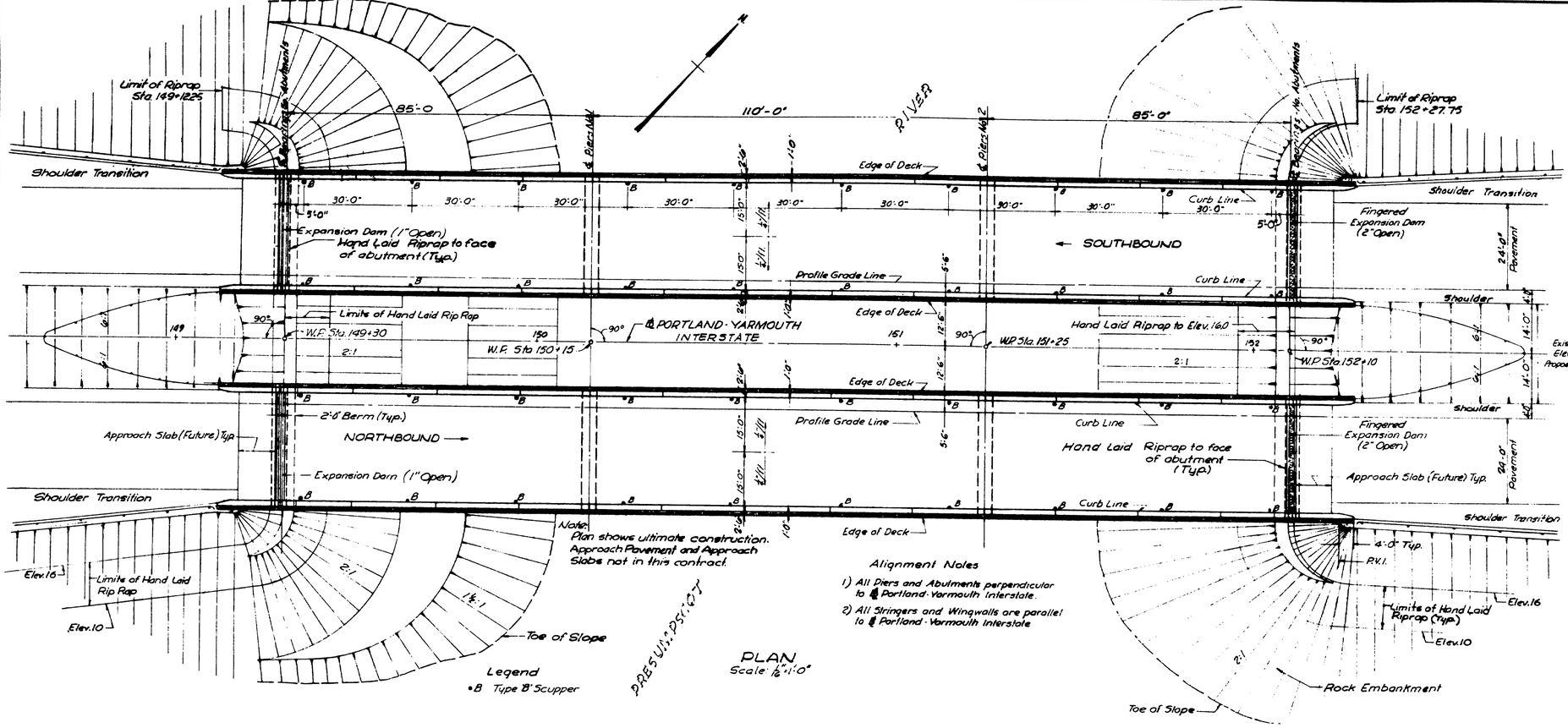
Approved 11-6-62

87-145

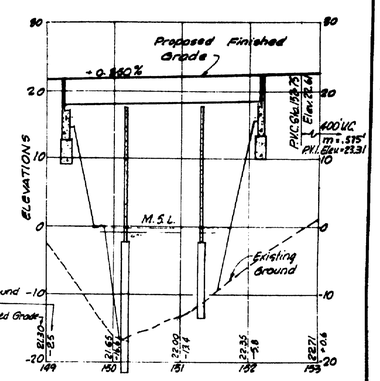
PRINTED BY SPRINGFIELD PAPER CO., SPRINGFIELD, MASS.

B.P.R. REG. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	I-295-3(3)	21	88

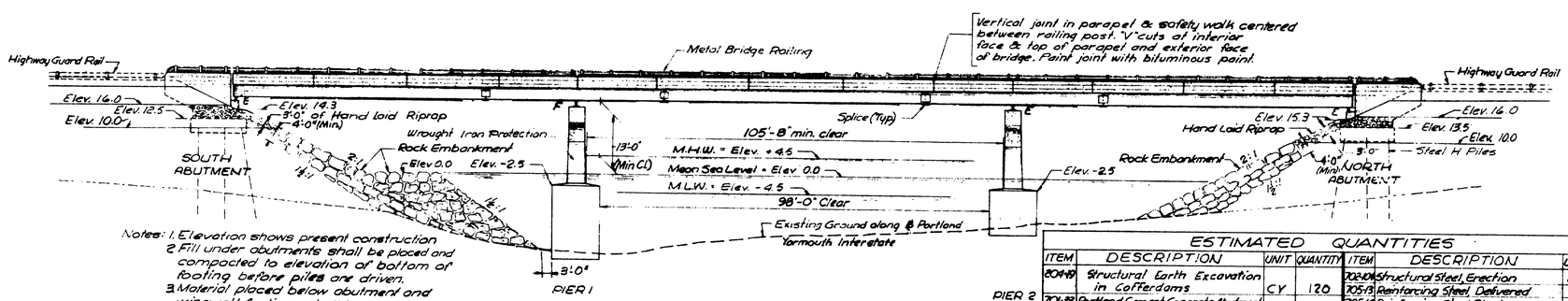
FALMOUTH



PLAN
Scale: 1/16"=1'-0"



PROFILE - INTERSTATE
Scales: Hor. 1"=100'
Vert. 1"=10'



Notes: 1. Elevation shows present construction
2. Fill under abutments shall be placed and compacted to elevation of bottom of footing before piles are driven.
3. Material placed below abutment and wingwall footings shall be rock free from existing ground to bottom of footings as stated in the specifications. The rock free portion of the embankment shall be of sufficient extent to allow all vertical and batter piles to be driven within its bounds
4. No piles shall be driven for the south abutments until the south approach embankment has been in place to elevation +10.00 (+9.00 in areas of the abutments) for a period of time sufficient to insure a stable embankment (estimated time two to three weeks).
5. No work shall be done on the northbound and southbound number one piers until after the south abutment piles have been driven and sufficient time has elapsed to verify the embankment stability (estimated time two to three weeks).
6. Fill may be placed around cofferdams during construction but all such fill on the channel side and that above Elev. -16 on the shore side shall be removed by the contractor.

ELEVATION
Scale: 1/16"=1'-0"

GENERAL NOTES

1. SPECIFICATIONS:
A.A.S.H.O. 1953
Maine State Highway Commission Standard Specifications and Special Provisions
2. LIVE LOAD:
H20-S16-44 (Modified)
3. FOUNDATIONS:
Abutments — Steel H Piles driven to firm end bearing. Design Capacity of Piles - 35 Tons
Piers — Footing on rock. Design Pressure - 5 Tons per sq. ft.
4. ALLOWABLE STRESSES
Structural Steel: 18,000 p.s.i.
Reinforcing Steel: 18,000 p.s.i.
Concrete: 1,200 p.s.i.
5. CONCRETE:
Class 'A': Abutment Footings, Abutments, Bents, Piers (Except Concrete placed under water) and Deck.
Class 'S' Concrete placed under water (see specifications for grouted aggregate concrete).
6. ELEVATIONS:
Elevations are based on Elev. 0.00 at Mean Sea Level

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITY	ITEM	DESCRIPTION	UNIT	QUANTITY
204-B	Structural Earth Excavation in Cofferdams	C.Y.	120	702-04	Structural Steel, Erection	Lb.	794,000
701-53	Portland Cement Concrete, Abutments and Retaining Walls	C.Y.	410	705-13	Reinforcing Steel, Delivered	Lb.	219,000
701-57	Portland Cement Concrete, Substructure columns, Column bases, Bents, Collision Walls, Girders, Struts, etc.	C.Y.	145	705-14	Reinforcing Steel, Placing	Lb.	219,000
701-40	Portland Cement Concrete, Roadway and Sidewalk Slabs on Steel Bridges	C.Y.	605	705-17	Shear Connectors	L.S.	Lump Sum
701-44	Portland Cement Concrete, Wearing Surface on Bridges	C.Y.	210	708-16	Steel H-beam Piles 42 Lbs./Ft.	L.F.	* 7,900
701-47	Portland Cement	Bbl.	3,307	710-6	Waterproofing Joints	L.F.	65
701-50	Wrought Iron Scuppers	Each	40	712-6	Wrought Iron Column Protection	L.S.	Lump Sum
702-103	Structural Steel, Fabricated and Delivered	Lb.	794,000	803-7	Cofferdams	L.S.	Lump Sum
				804-6	French Drains	C.Y.	125
				806-7	Aluminum Rail Delivered and Erected	L.F.	1760
				701-35	Portland Cement Concrete, Piers	C.Y.	65
				701-36	Portland Cement Concrete Piers (placed under water)	C.Y.	710

* Includes 264 L.F. Allowance For Pile Caps and no Allowance for Splices.

AS BUILT - NO REVISION

STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

PORTLAND-YARMOUTH INTERSTATE

INTERSTATE OVER PRESUMPSCOT RIVER

GENERAL PLAN AND ELEVATION

SHEET NO. 21 OF 88 | SCALE: AS NOTED

M-1318

FAY, SPOFFORD & THORNDIKE, INC. ENGINEERS BOSTON, MASS.

Qm-14
45

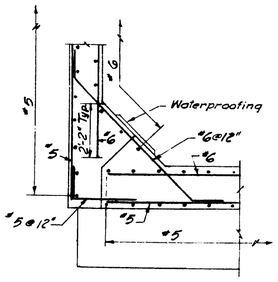
DES.	E.S.T.	RWB
DR.	L.A.L.	RMH
TR.		
CHK.	G.C.B.	
APP'D.		

Boston Blue Print-200-4-57

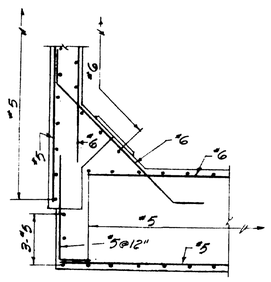
E. P. R. REG. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	I-295-3(37)	22	88

FALMOUTH

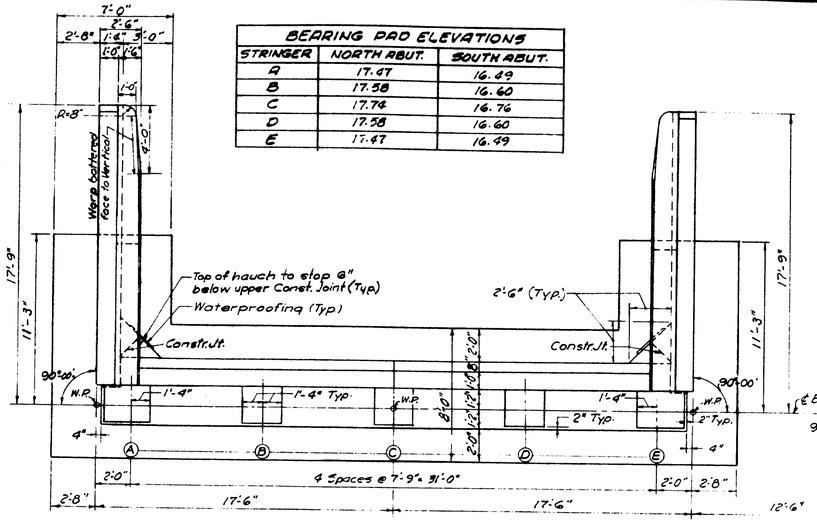
BEARING PAD ELEVATIONS		
STRINGER	NORTH ABUT.	SOUTH ABUT.
A	17.47	16.49
B	17.58	16.60
C	17.76	16.76
D	17.58	16.60
E	17.47	16.49



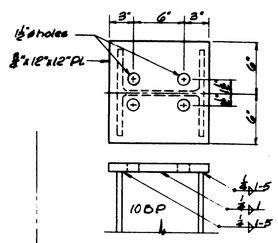
SECTION C-C
Scale: 3/8"=1'-0"



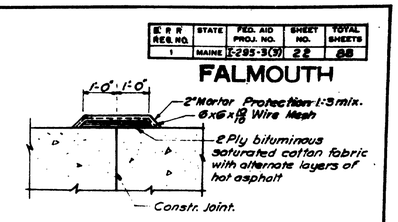
SECTION D-D
Scale: 3/8"=1'-0"



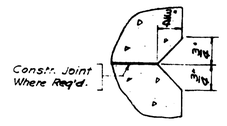
PLAN-NORTH & SOUTH ABUTMENTS
Scale: 1/4"=1'-0"



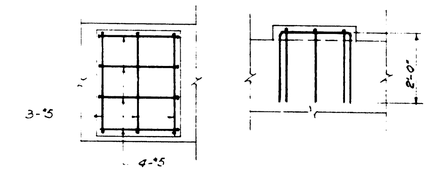
PILE BEARING PLATE
Scale: 1 1/2"=1'-0"



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



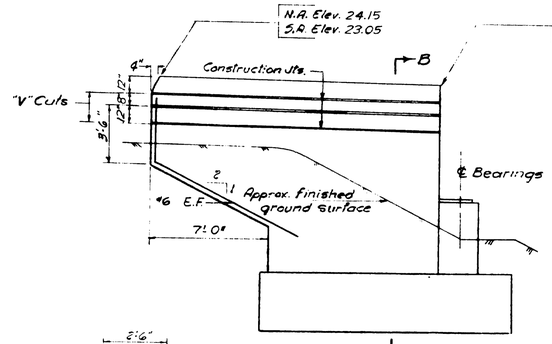
TYPICAL V-CUT DETAIL
Half Size

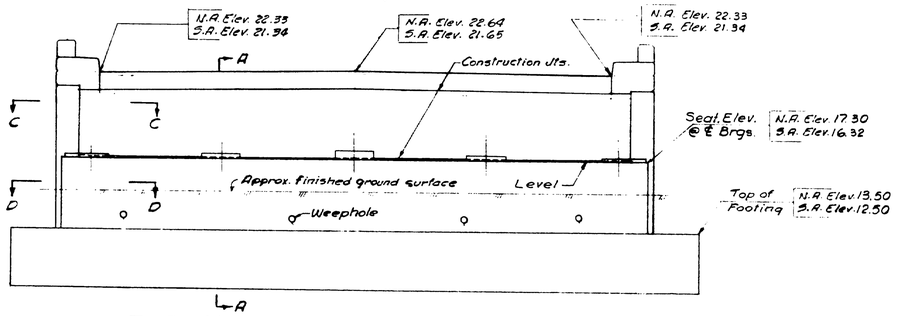


PLAN ELEVATION

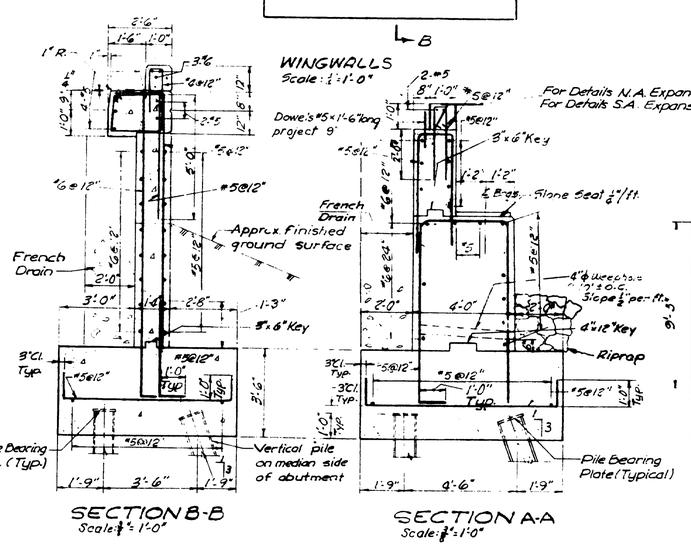
BEARING PAD DISTRIBUTION STEEL
TO BE USED WHERE TOP OF PAD IS 4" OR MORE ABOVE ABUTMENT BRIDGE SEAT OR PIER CAP.
Scale: 1 1/2"=1'-0"

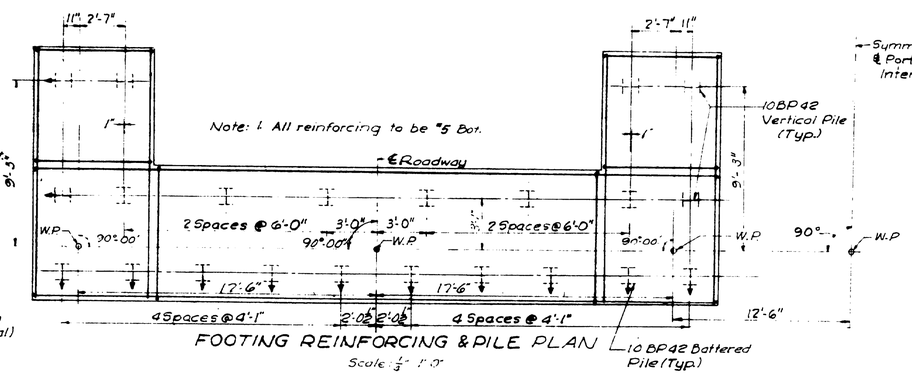
TYPICAL DETAILS
Scales as noted





ELEVATION-NORTH & SOUTH ABUTMENTS
Scale: 1/4"=1'-0"





LEGEND
N.A. - North Abutments
S.A. - South Abutments
E.F. - Each Face

For Construction Notes See Sheet No. 23

AS BUILT: NO REVISION

STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

PORTLAND-YARMOUTH INTERSTATE

INTERSTATE OVER PRESUMPSCOT RIVER

ABUTMENT DETAILS

SHEET NO. 22 OF 88 | SCALE: AS NOTED

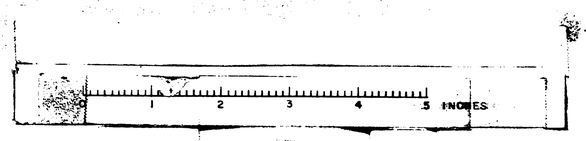
DES.	VJK & RW
DR.	R.B.
TR.	
CK.	RW & NR
APPD.	

Dietzgen Blue Print-300-4-67

M-1319

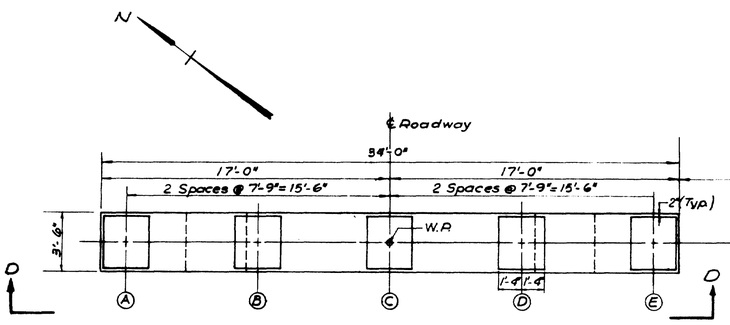
FAY, SPOFFORD & THORNDIKE, INC. ENGINEERS BOSTON, MASS.

Qm-14
46

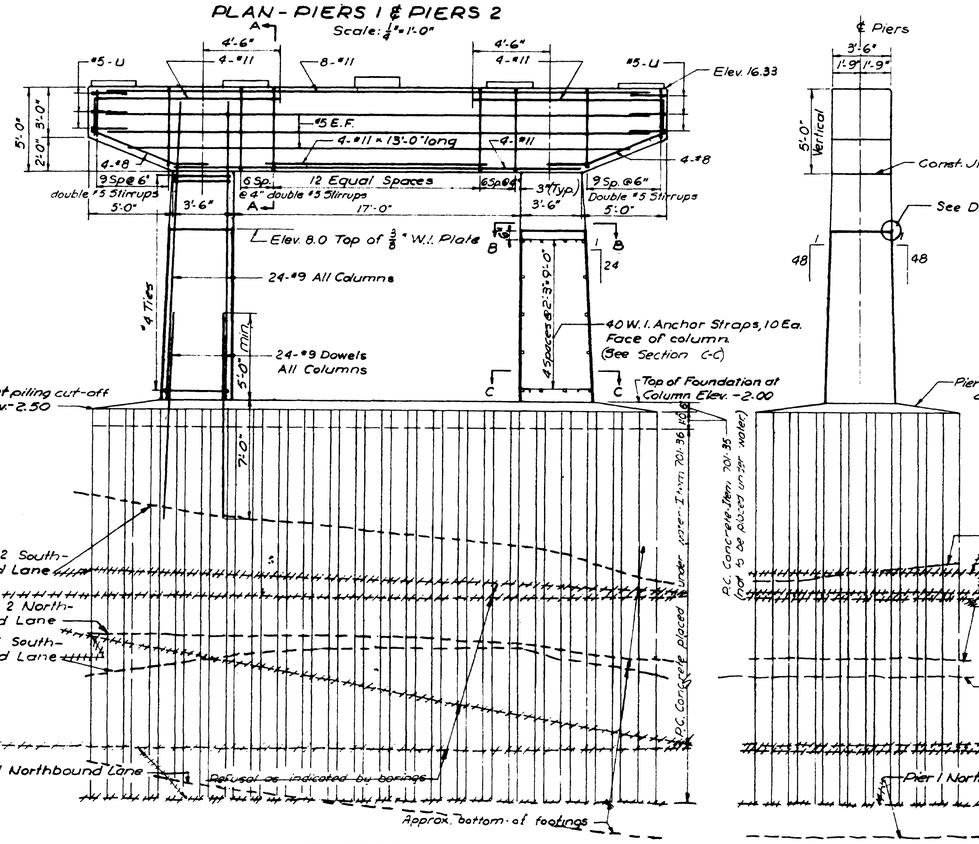


B.P.R. REG. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	I-295-3(3)	23	88

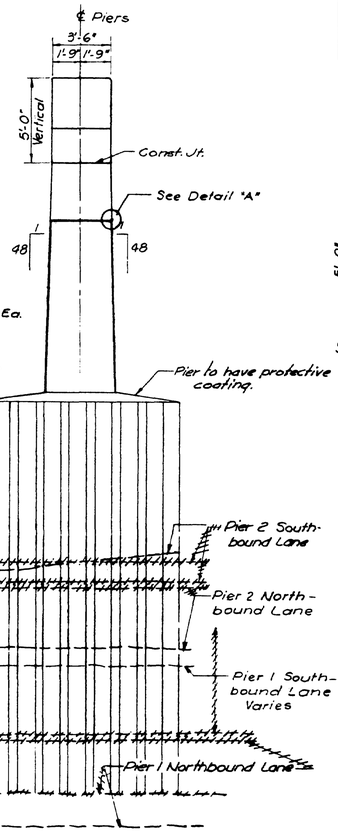
FALMOUTH



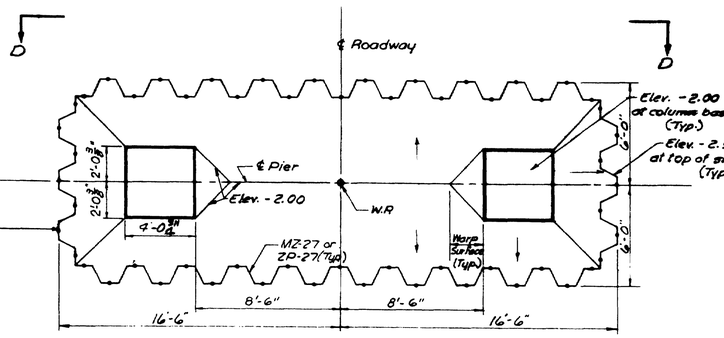
PLAN - PIERS 1 & PIERS 2
Scale: $\frac{1}{4}$"=1'-0"



ELEVATION D-D
Scale: $\frac{1}{4}$"=1'-0"

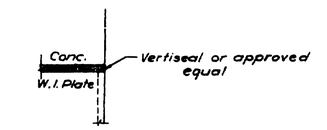


END ELEVATION
Scale: $\frac{1}{4}$"=1'-0"

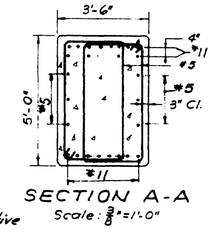


TYPICAL PLAN OF COFFERDAM

NOTE:
Sheet piling to be driven to refusal.



DETAIL "A"



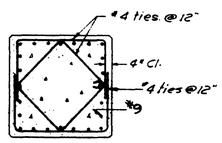
SECTION A-A
Scale: $\frac{3}{8}$"=1'-0"

BEARING PAD ELEVATIONS

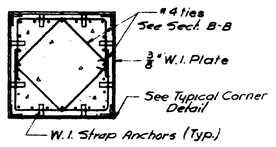
		PIERS 1	PIERS 2
STRINGER	A	16.61	16.50
	B	16.76	16.65
	C	16.92	16.81
	D	16.76	16.65
	E	16.61	16.50

CONSTRUCTION NOTES

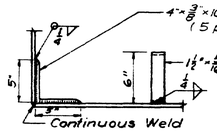
1. Reinforcing steel to have 2" min. concrete cover unless otherwise noted.
2. All bar splices to lap 20 diameters (12" min.), unless otherwise noted.
3. All bar embedments to be 35 diameters unless otherwise noted.
4. Bearing pads to be of sufficient height to permit bush hammering to the proper elevation.
5. All bearing pads to be placed integrally with the piers and abutments.
6. All exposed corners except on bearing pads to have a ¾" chamfer. Bearing pads to have tooled edges.
7. Reinforcing steel in or beneath bearing pads to be positioned to clear swedge anchor bolts. For swedge anchor bolts see bearing types on Sh. No. 27



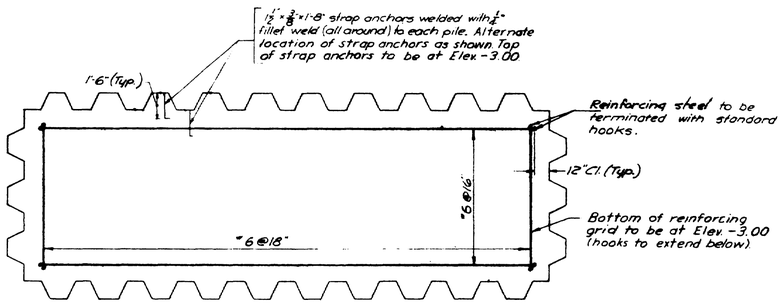
SECTION B-B
Scale: $\frac{3}{8}$"=1'-0"



SECTION C-C
Scale: $\frac{3}{8}$"=1'-0"



TYPICAL CORNER DETAIL
GENUINE W.I. PLATE PROTECTION
Scale: 1½"=1'-0"



PLAN OF FOOTING REINFORCING
Scale: $\frac{1}{4}$"=1'-0"

Note: For detail of distribution steel for bearing pads, see Sh. No. 22. For additional data on sheet pile cofferdams, see specifications. Pier concrete placed under water to the depth indicated on this sheet and used as a foundation seal will permit dewatering of the cofferdam provided that the water outside the cofferdam does not rise above Elev. +7.5.

DES.	G.C.B.	B.D.Z.
DR.	C.A.K.	
TR.		
CHK.	W.G.	
APP'D.		

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REVISED AS BUILT

STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

PORTLAND-YARMOUTH INTERSTATE

INTERSTATE OVER PRESUMPSCOT RIVER

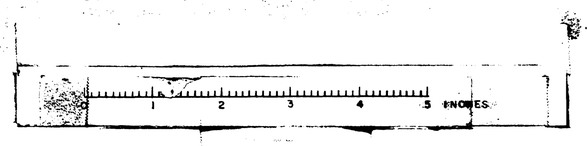
PIER DETAILS

SHEET NO. 23 OF 88 | SCALE: AS NOTED

M-1320

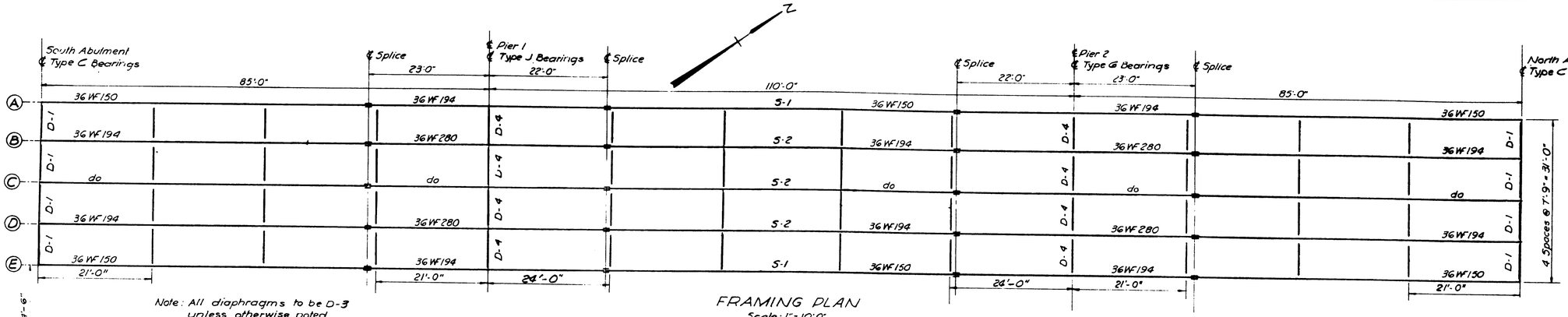
FAY, SPOFFORD & THORNDIKE, INC. ENGINEERS BOSTON, MASS.

Qm-14
47



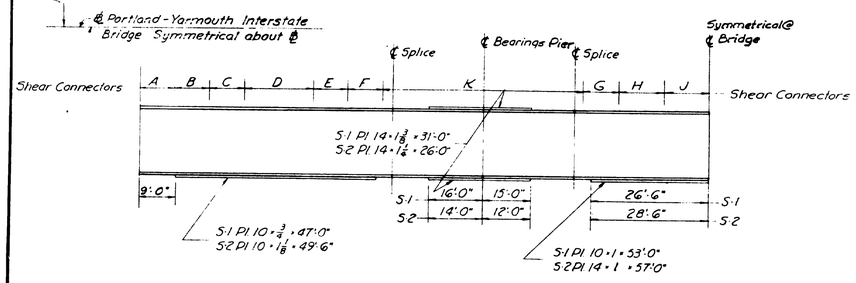
B. P. R. REG. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	I-295-3(5)	24	88

FALMOUTH

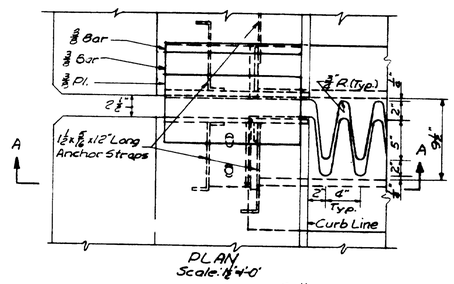


FRAMING PLAN
Scale: 1" = 10'-0"

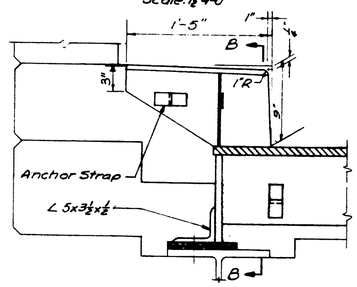
Note: All diaphragms to be D-3 unless otherwise noted.



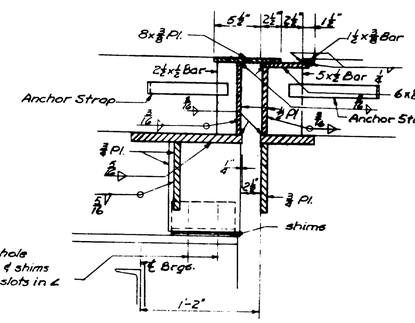
STRINGER ELEVATION
No Scale



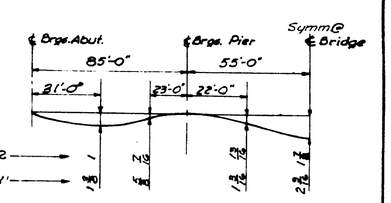
PLAN
Scale: 1" = 4'-0"



SECTION A-A
Scale: 1½" = 1'-0"



SECTION B-B
Scale: 1½" = 1'-0"

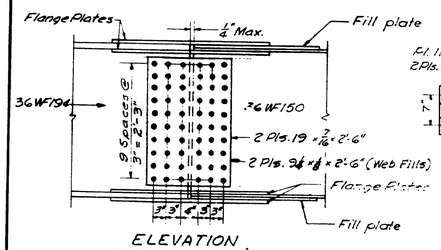


DEAD LOAD DEFLECTION DIAGRAM
No Scale

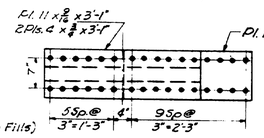
SHEAR CONNECTORS																					
SPIRAL SHEAR CONNECTORS																					
Strg	A		B		C		D		E		F		G		H		J		K		
	Lgth	Pitch	Lgth	Pitch	Lgth	Pitch	Lgth	Pitch	Lgth	Pitch	Lgth	Pitch	Lgth	Pitch	Lgth	Pitch	Lgth	Pitch	Lgth	Pitch	
S-1	8'-6"	16@4½"	8'-6"	16@5½"	8'-6"	16@8"	17'-0"	16@10½"	8'-6"	16@7½"	8'-6"	16@5½"	8'-6"	16@4½"	11'-0"	18@7"	11'-0"	18@10½"	Remain	1@9"	
S-2	8'-6"	26@4"	8'-6"	26@5"	8'-6"	26@7"	17'-0"	26@9"	8'-6"	26@7"	8'-6"	26@5"	8'-6"	26@4"	11'-0"	26@7"	11'-0"	26@9"	Remain	1@6"	

STUD SHEAR CONNECTORS																					
S-1	8'-6"	6½	8'-6"	8	8'-6"	11½"	17'-0"	15½"	8'-6"	11"	8'-6"	7½	8'-6"	7"	11'-0"	10"	11'-0"	15"	Remain	12"	
S-2	8'-6"	4"	8'-6"	5"	8'-6"	7"	17'-0"	9"	8'-6"	7"	8'-6"	5	8'-6"	5"	11'-0"	6"	11'-0"	8"	Remain	8"	

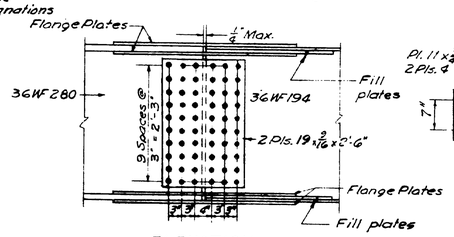
Note: Stud pitch: Stud shear connector pitch is given for 3-¾" ℄ Studs.
Spiral pitch: 26@X"-denotes a ⅞" ℄ double spiral @ X" pitch. All other designations refer to a ¾" ℄ single spiral.



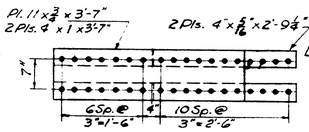
ELEVATION
36 WF 194 to 36 WF 150



FLANGE PLATES
36 WF 194 to 36 WF 150



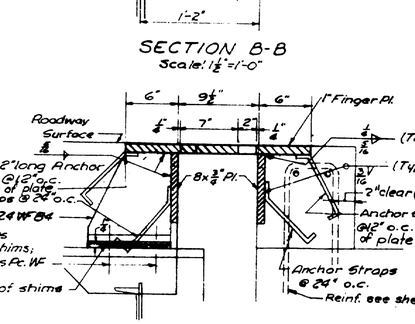
ELEVATION
36 WF 280 to 36 WF 194



FLANGE PLATES
36 WF 280 to 36 WF 194

Splices to be made with ⅞" ℄ rivets or high strength bolts in 15/16" ℄ holes.

STRINGER SPLICE DETAILS
Scale: ¾" = 1'-0"



SECTION AT INTERIOR STRINGER
Scale: 1½" = 1'-0"

FINGERED EXPANSION DAM DETAILS
FOR NORTH ABUTMENT ONLY
DIMENSIONS SHOW POSITION OF DAM AT 68°F

Note: For South Abutment Expansion Dam Details see Sheet No. 25

FRAMING NOTES

1. For diaphragm, bearing, and shear connector details see Sheet No. 27
2. All dimensions on Framing Plan are horizontal.
3. Sections of stringer over piers shall have minimum permanent camber downward. All other sections of stringer not to be cambered but shall be erected with natural bow up.

Note: The steel for all stringers and cover plates shall conform to ASTM A-373. All other structural steel shall conform to ASTM A-7 or A-373 unless specified otherwise.

AS BUILT - NO REVISION

STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

PORTLAND-YARMOUTH INTERSTATE

INTERSTATE OVER PRESUMPSCOT RIVER

FRAMING PLAN AND DETAILS

SHEET NO. 24 OF 88	SCALE: AS NOTED	

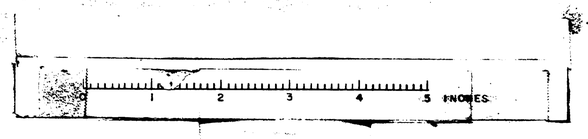
M-1321

FAY, SPOFFORD & THORNDIKE, INC. ENGINEERS BOSTON, MASS.

Qm-14
48

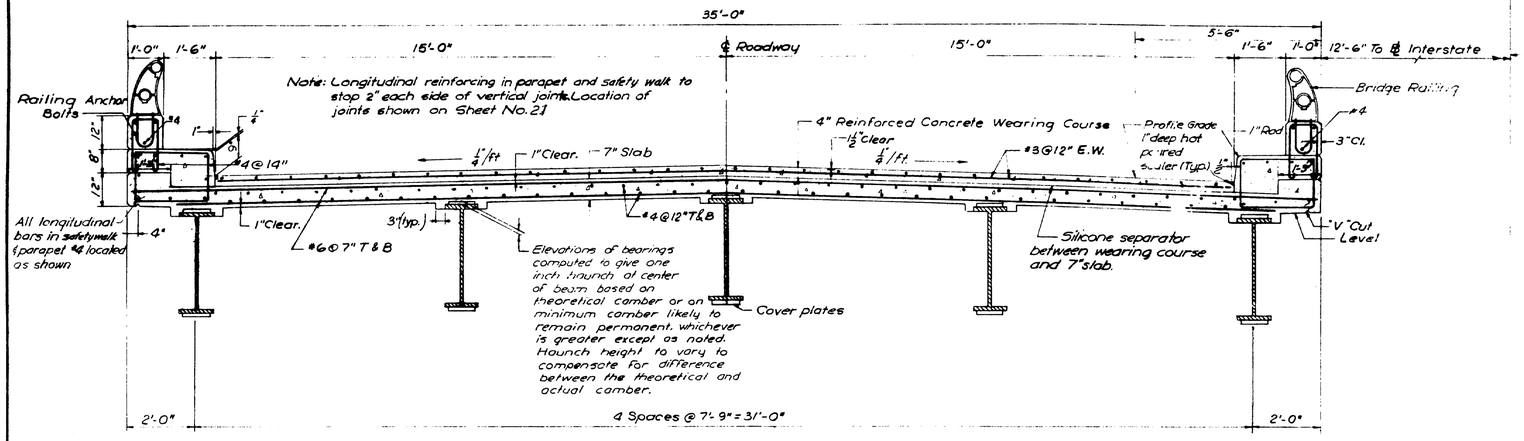
DES.	BDZ
DR.	MBW
TR.	
CHK.	GCB
APP'D.	

Boston Blue Print-300-4-57

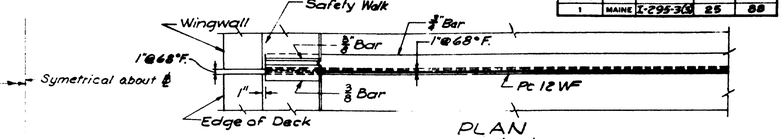


FALMOUTH

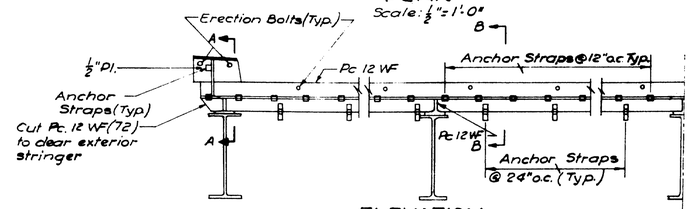
B.P.R. REG. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	I-295-3(3)	25	88



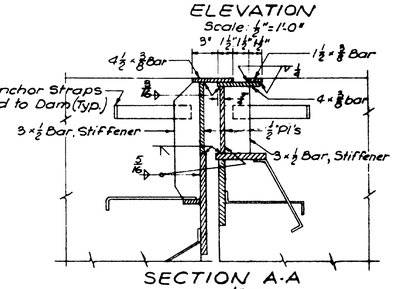
TYPICAL CROSS SECTION OF DECK
Scale: ½" = 1'-0"



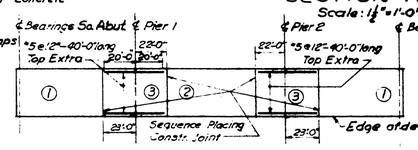
PLAN
Scale: ½" = 1'-0"



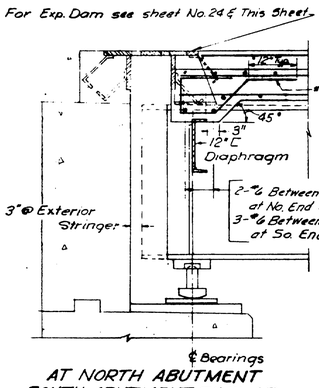
ELEVATION
Scale: ½" = 1'-0"



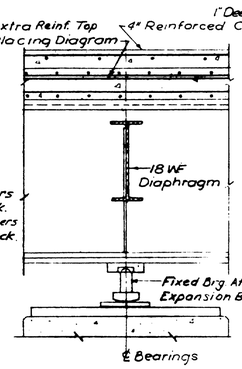
SECTION A-A
Scale: 1½" = 1'-0"



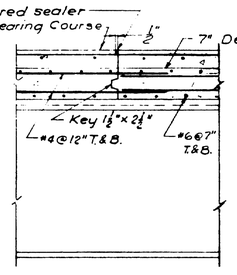
SEQUENCE PLACING DIAGRAM
Scale: 1" = 50'-0"



AT NORTH ABUTMENT
SOUTH ABUTMENT SIMILAR



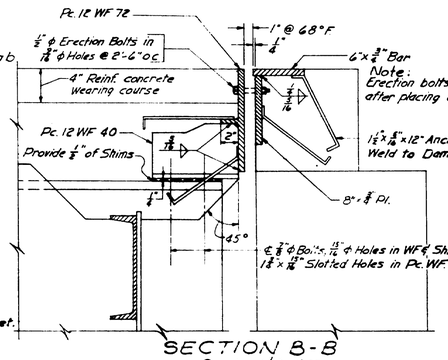
AT PIER



SEQUENCE JOINT

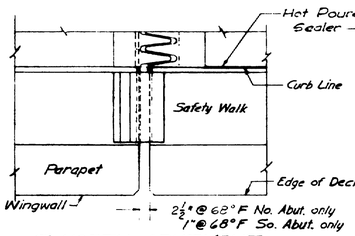
Note: For Sequence Joint location See Placing Diagram this Sheet.

LONGITUDINAL SECTIONS
Scale: ¾" = 1'-0"

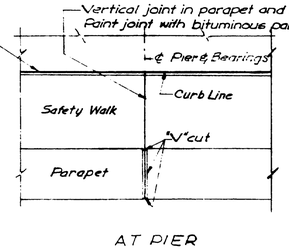


SECTION B-B
Scale: 1½" = 1'-0"

EXPANSION DAM DETAILS
SOUTH ABUTMENTS

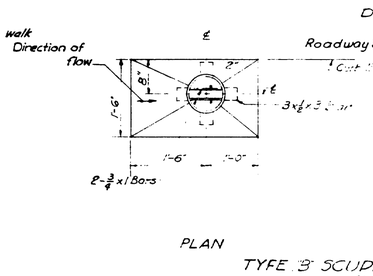


AT NORTH ABUTMENT
SOUTH ABUTMENT SIMILAR



AT PIER

PART PLAN OF DECK
Scale: ¾" = 1'-0"



PLAN

SECTION THRU SCUPPER

TYPE 'B' SCUPPER DETAILS
Scale: ¾" = 1'-0"

SEQUENCE PLACING DIAGRAM
Scale: 1" = 50'-0"

NOTES FOR PLACING

Slabs shall be placed in sequence starting with those marked ①. Slabs of the same number may be placed simultaneously or in sequence. Slabs may be placed starting from either end. Once the placing of a slab has been started it shall be completed without interruption.

SCREED SETTING

After structural steel has been erected, levels are to be run on top flanges of stringers. Screeds for slab are to be set on the basis of these levels corrected for ¾ of the dead load deflection shown on sheet No. 24. After the structural slab has been placed, levels are to be run on the concrete surface. Screeds for the wearing course are to be set on the basis of these levels corrected for 15 percent of the dead load deflection shown on sheet No. 24.

Changes in screed elevations will not be allowed in continuous spans after any portion of the slab (structural or wearing course) has been placed.

For construction notes see sheet No. 23
For details of "V" cuts see sheet No. 22

AS BUILT - NO REVISION

DES.	R.H.W.
DR.	C.A.K.
TR.	
CHK.	G.L.B.
ASST'S	

STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

PORTLAND-YARMOUTH INTERSTATE

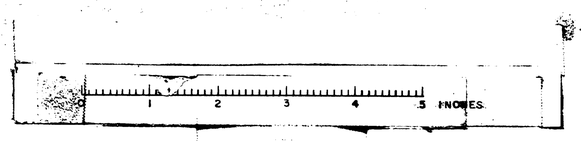
INTERSTATE OVER PRESUMPSCOT RIVER

CROSS SECTION AND DETAILS

SHEET NO. 25 OF 88	SCALE: AS NOTED	

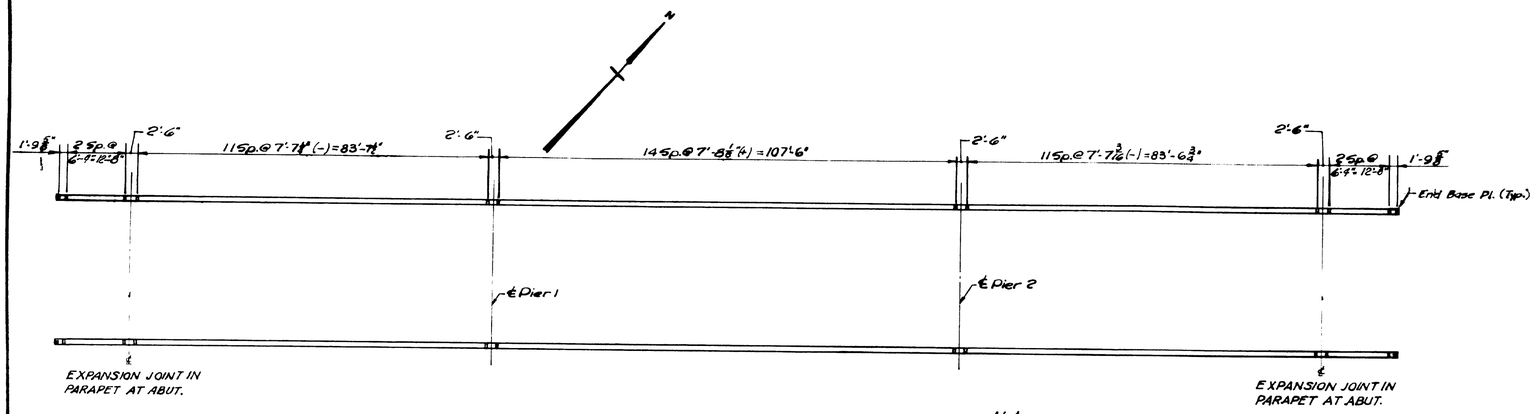
M-1322 FAY, SPOFFORD & THORNDIKE, INC. ENGINEERS BOSTON, MASS. Qm-14 49

Boston Blue Print-300-4-57



B.R.R. REG. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	I-295-3(3)	26	88

FALMOUTH

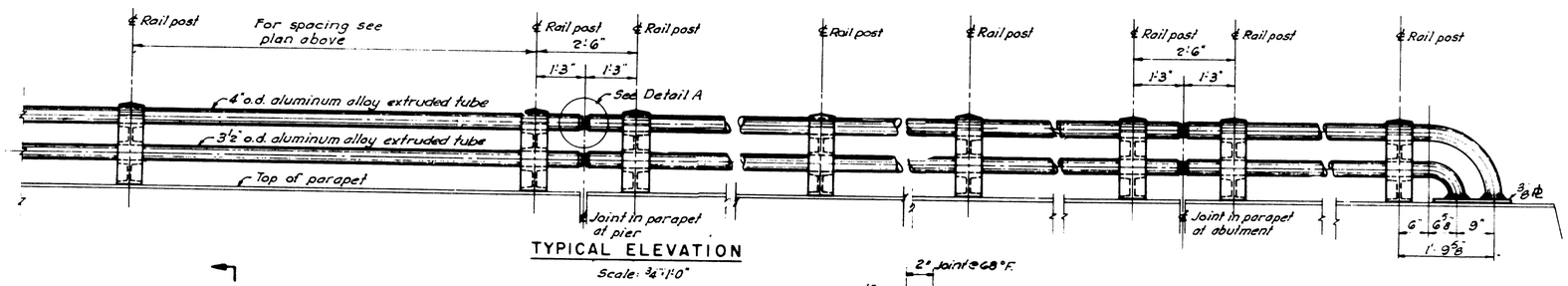


Note:
All dimensions shown in plan are horizontal.

PLAN OF RAILING

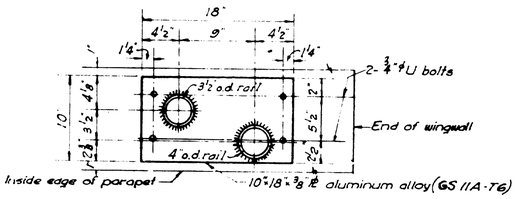
ONE ROADWAY SHOWN

Scale: 1/16" = 1'-0"



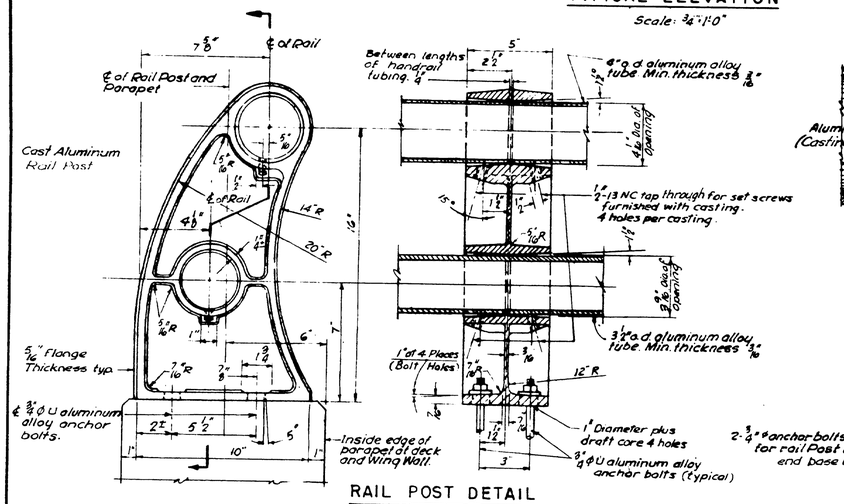
TYPICAL ELEVATION

Scale: 3/16" = 1'-0"



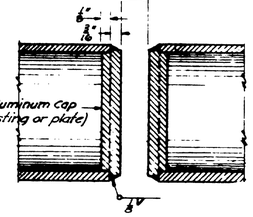
DETAIL OF END BASE PLATE

Scale: 1½" = 1'-0"



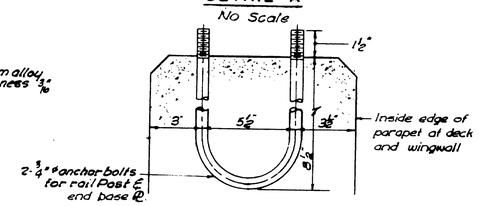
RAIL POST DETAIL

Scale: 3" = 1'-0"



DETAIL A

No Scale



DETAIL OF U BOLT FOR RAIL POST

Scale: 3" = 1'-0"

NOTES:
1. The bottom of each railing post shall be thoroughly coated with an aluminum impregnated caulking compound before installation.
2. Railing post to be set normal to parapet.

DES.	
DR.	
TR	C.R.K.
CHK.	G.C.S.
APPR.	

Boston Blue Print 305-4-57

AS BUILT - NO REVISION

STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

PORTLAND-YARMOUTH INTERSTATE

INTERSTATE OVER PRESUMPSCOT RIVER

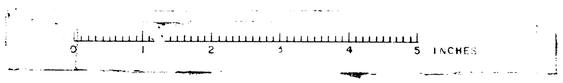
RAILING DETAILS

SHEET NO 26 OF 88	SCALE: AS NOTED	

M-1323

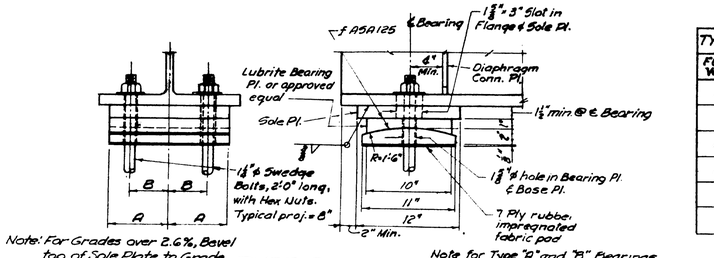
FAY, SPOFFORD & THORNDIKE, INC. ENGINEERS BOSTON, MASS.

Qm-14
50



B.P.R. REG. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	I-295-3(3)	27	88

FALMOUTH

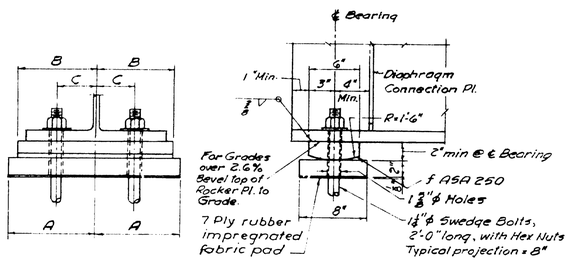


Note: For Grades over 2.6%, Bevel top of Sole Plate to Grade

Note for Type "A" and "B" Bearings
All nuts to be drawn up finger tight, then backed off one turn and the threads of the bolts burred off of the face of the nuts with a pointed tool.

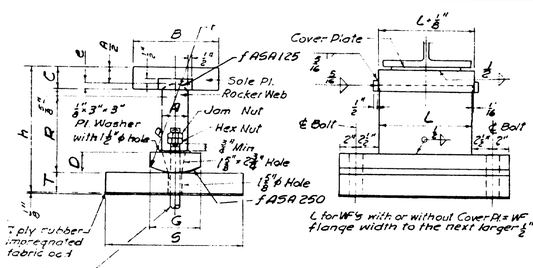
TYPE A (EXPANSION)		
FLANGE WIDTH	A	B
16½"	7"	4½"
12"	5"	2⅜"
11½"	5"	2⅜"
10½"	4½"	2⅜"
10"	4½"	2⅜"
9"	4"	2¼"

TYPE A
(EXPANSION BEARING)
Scale: 1½"=1'-0"



TYPE B (FIXED)			
FLANGE WIDTH	A	B	C
16½"	10"	9"	6½"
12"	8"	7"	2⅜"
11½"	8"	7"	2⅜"
10½"	7"	6"	2¾"
10"	7"	6"	2¾"
9"	7"	6"	2⅜"

TYPE B
(FIXED BEARING)
Scale: 1½"=1'-0"

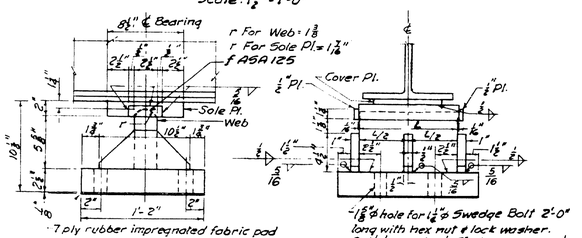


DIMENSIONS										
BEARING TYPE	A	B	C	D	e	G	h	R	S	T
C	2½"	8½"	2"	2½"	8"	6"	10⅛"	6"	12"	1½"
D	2½"	8½"	2"	2½"	8"	6"	11⅜"	7"	14"	1⅜"
E	3"	10"	2½"	2½"	1"	6"	12⅝"	8"	14"	2"
F	3"	10"	2½"	2½"	1"	6"	14⅜"	9"	16"	2½"
G	3½"	10"	3"	2½"	1½"	7"	16⅛"	10"	16"	2½"
H	3½"	10"	3"	2½"	1¾"	7"	17⅞"	11"	18"	2¾"

r for Sole Plate = ⅜ - 1/16"
r for Rocker Web = ⅜ - ⅛"

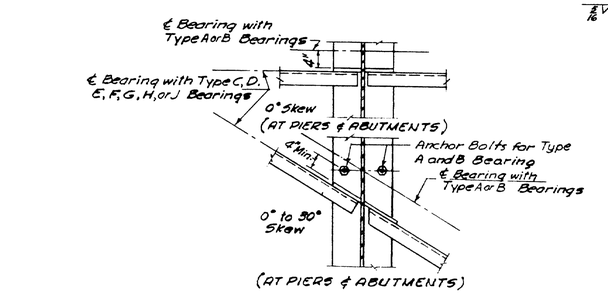
* R is Rocker radius and is concentric with r for Rocker Web.

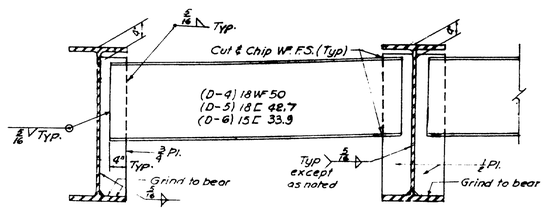
TYPE C, D, E, F, G, H
(EXPANSION BEARING)
Scale: 1½"=1'-0"

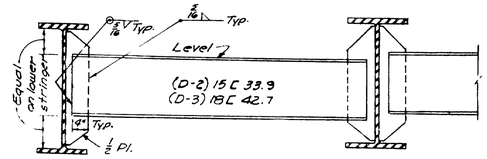


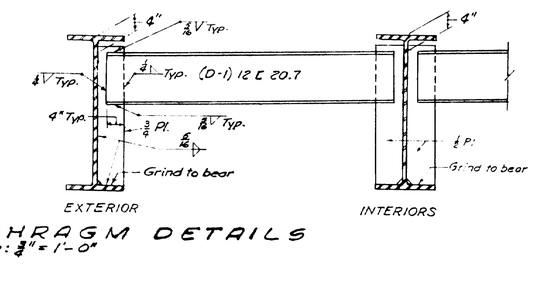
L for WF's with or without Cover Pl.= WF flange width to the next larger ½"

TYPE J
(FIXED BEARING)
Scale: 1½"=1'-0"



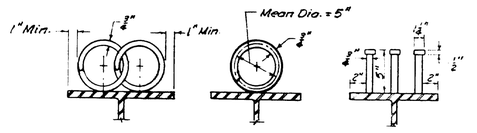






EXTERIOR INTERIORS

TYPICAL DIAPHRAGM DETAILS
Scale: ¾"=1'-0"



SHEAR CONNECTOR DETAILS
Scale: 1½"=1'-0"

Spiral Notes
1. All spirals to be fabricated with ⅝" ϕ plain bars and to have a mean diameter of 5 inches.
2. Spirals to be welded to stringer flange with two ⅜" fillet welds, 2½" long at each point of contact.
3. Spiral lengths given on framing plan are net lengths and do not include any allowance for laps.
4. Where spiral sections are joined, they shall be lapped for a distance of one-half the smaller pitch.

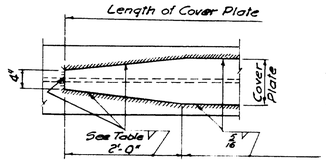


Plate Thickness	Fillet Weld
⅜" to ¾"	7/16"
⅞" to 1"	7/16"
1⅛" to 1¼"	½"

COVER PLATE NARROWER THAN FLANGE

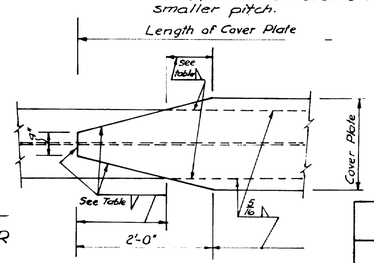


Plate Thickness	Fillet Weld
½" to ¾"	7/16"
⅞" to 1"	9/16"
1⅛" to 1¼"	11/16"

COVER PLATE WIDER THAN FLANGE

TYPICAL COVER PLATE DETAILS

AS BUILT - NO REVISION

STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

PORTLAND-YARMOUTH INTERSTATE

INTERSTATE OVER PRESUMPSCOT RIVER

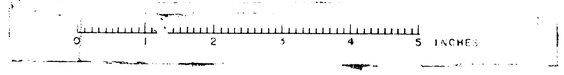
STANDARD FRAMING DETAILS

SHEET NO 27 OF 88 | SCALE: AS NOTED

M-1324 FAY, SPOFFORD & THORNDIKE, INC. ENGINEERS BOSTON, MASS. Qm-14 52

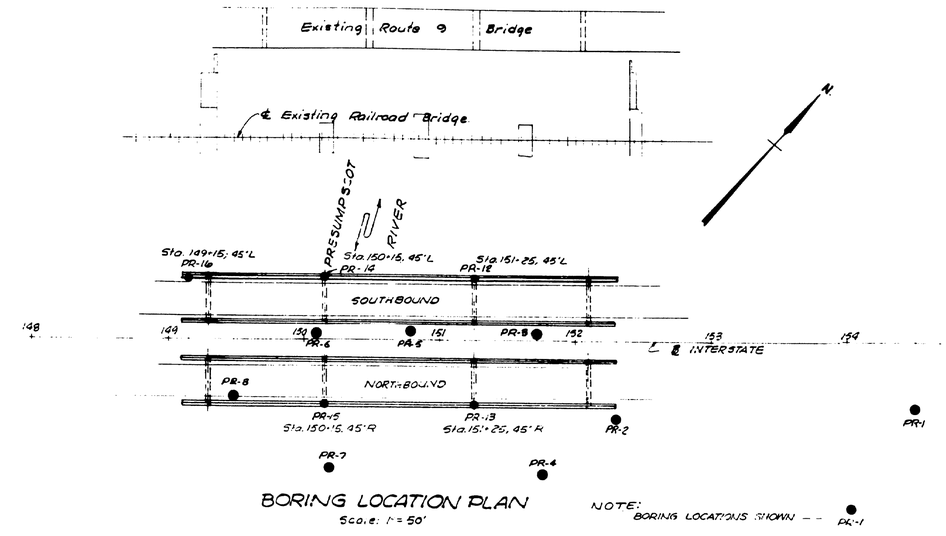
DES	RWC&DJZ
DR	RB
TR	
CHK	R.K.
APP'D	

Boston Blue Print 300-4-51



B. P. R. REG. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	I-295-3(9)	28	88

FALMOUTH



BORING LOCATION PLAN

Scale: 1" = 50'

NOTE: BORING LOCATIONS SHOWN - - PL-1

BORING PR-11 [STA. 149+25, 46'R] · BORING PR-10 [STA. 149+16, 85'R] · BORING PR-9 [STA. 147+93, 57'R] · BORING PR-16 [STA. 149+15 45'L] · BORING PR-8 [STA. 149+48, 42'R] · BORING PR-6 [STA. 150+09, 5'L] · BORING PR-14 [STA 150+15, 45'L] · BORING PR-15 [STA 150+15 45'R] · BORING PR-7 [STA. 150+19, 95'R] · BORING PR-5 [STA. 150+76, 6'L] · BORING PR-12 [STA 151+25 45'L] · BORING PR-13 [STA 151+25, 45'R] · BORING PR-3 [STA. 151+71, 5'L] · BORING PR-4 [STA. 151+76, 99'R] · BORING PR-2 [STA. 152+30, 57'R] · BORING PR-1 [STA. 154+51, 49'R]

BORING LOGS

Scale: Vert. 1"=5'

LEGEND

AR = CASING WAS DRIVEN WASHING AHEAD OF CASING.
BCH
J = SAMPLER DRIVEN BY STATIC LOAD NOT EXCEEDING ½ TON.
H = WT. OF HAMMER IN POUNDS.
D = DROP ON CASING
DS = DROP ON SAMPLER
‡ = WEIGHT OF CASING
P = PISTON
* = WEIGHT OF HAMMER

GENERAL NOTES

1. BORINGS WERE MADE BY THE MAINE STATE HIGHWAY COMMISSION, MAY, JUNE, AND JULY, 1957.
2. FIGURES IN COLUMN ① BLOWS PER FOOT ON CASING. FIGURES IN COLUMN ② BLOWS PER FOOT ON SAMPLER ROD.
3. ELEVATIONS ARE REFERRED TO MEAN SEA LEVEL.
4. BORINGS PR-1, 2, 3, 8, 9, 10, 11, & 16 WERE MADE USING A 4" SINGLE ST. CASING. BORINGS PR-4, 5, 6, 7, 12, 13, 14 & 15 WERE MADE USING A 5" EXTRA HEAVY CASING. ALL BORINGS WERE MADE USING A 356 lb. HAMMER WITH A FALL OF 14" ON THE CASING AND 12" ON THE SAMPLER ROD EXCEPT AS NOTED.
5. STATIONS AND OFFSETS SHOWN THUS [STA. 154+00 50'R] WERE MEASURED FROM AN APPROX. ℄.
6. ADDITIONAL SOIL INFORMATION OBTAINED FROM LABORATORY TESTS, IS AVAILABLE FROM THE MAINE STATE HIGHWAY COMMISSION.

DES	—
DR	E.L.A.
TR	—
CHK	R.F.C.
ASST	

STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

PORTLAND-YARMOUTH INTERSTATE

INTERSTATE OVER PRESUMPSCOT RIVER

BORING DATA

SHEET NO. 28 OF 88 | SCALE: AS NOTED

FAY, SPOFFORD & THORNDIKE, INC. ENGINEERS BOSTON, MASS.

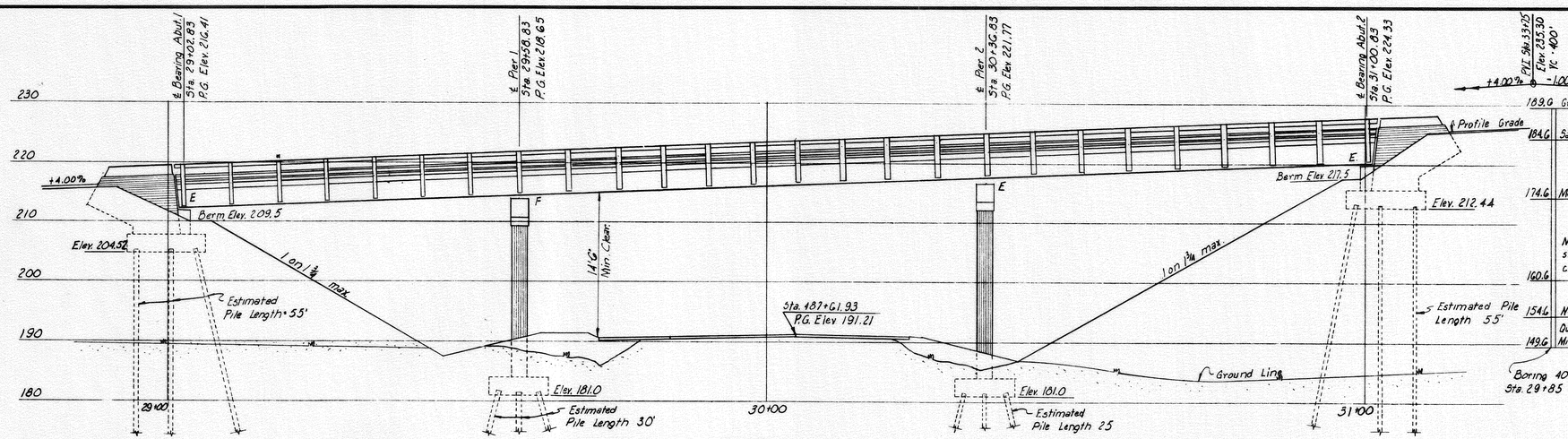
Qm-14
51

Boston Blue Print-300-4-57

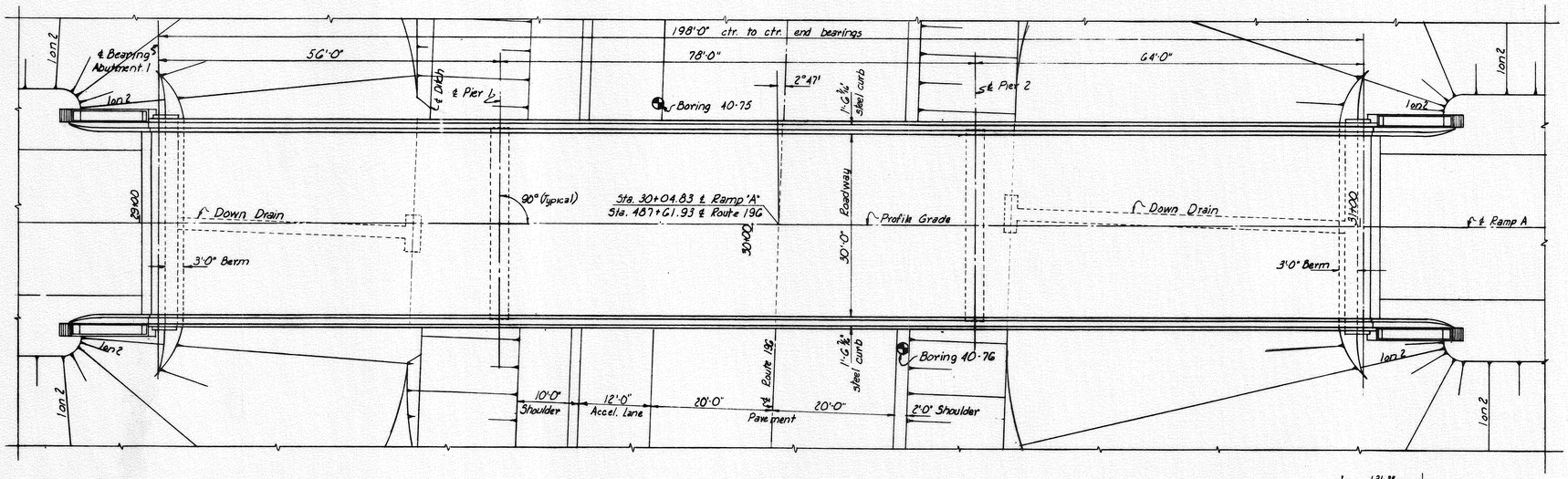
M-1325

0 1 2 3 4 5 INCHES

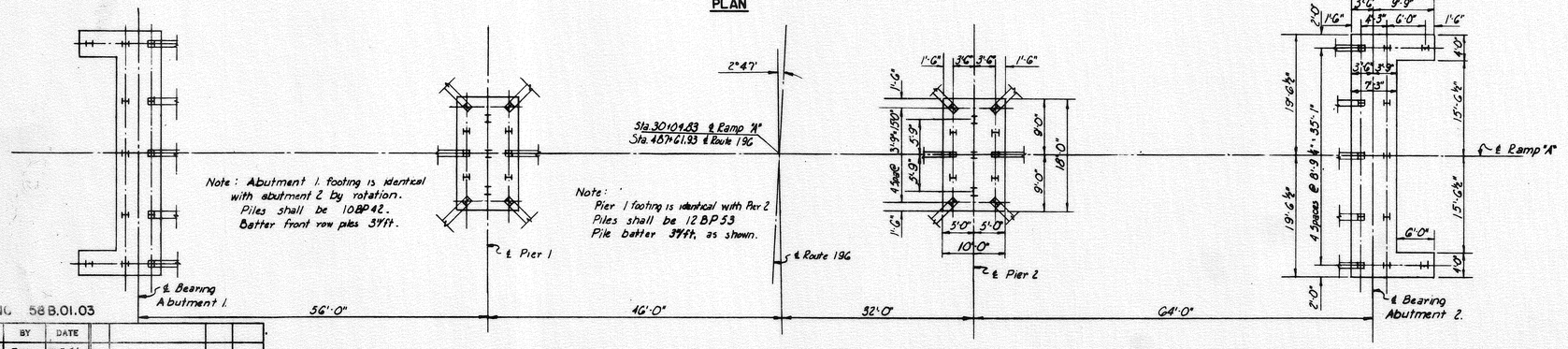
58B.01.03



ELEVATION



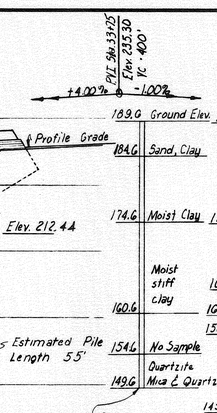
PLAN



FOOTING PLAN

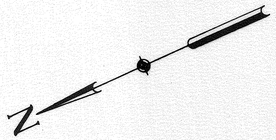
GENERAL NOTES

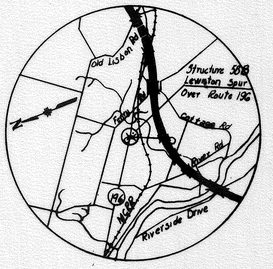
Design Specifications : AASHO (1953) with minor modifications
Design Live Load : H-20 S-16
Maximum Pile Load :
Abutments - 33.2 Ton/pile
Piers - 58.8 Ton/pile



REFERENCES

Dwg No.	Title	Substructure Contractor	Superstructure: Steel Fabricator	Superstructure: Steel Erector	Superstructure: Floor Contractor
S.D.1A	Standard Abutment Details	✓	✓	✓	✓
S.D.2	Standard Pier Details	✓	✓	✓	
S.D.3	Standard Abutment Drainage Details	✓			
S.D.4	Standard Pile Details	✓			
S.D.5	Standard Handrail, Bearing Devices and Miscellaneous Details	✓	✓	✓	✓
S.D.10	Standard Type "A" Splice for 36WF Beams		✓	✓	✓
S.D.11A	Type "Y" Expansion Joint	✓	✓	✓	✓
S.D.12A	Type "Z" Expansion Joint	✓	✓	✓	✓
S.D.20	Standard Bridge Floor Cross Section, Steel Curb, Handrail, & Diaphragms 30'-0" Roadway	✓	✓	✓	✓





VICINITY MAP
Scale 1" = 1 Mile

DRAWING 58B.01.03

	BY	DATE
MADE	B.K.	5-7-54
TRACED		
CHECKED	H.&G.	5-20-54
IN CHARGE OF	IDSK	

No.	REVISION	BY	DATE
1	As-Built	HBH	2-7-56

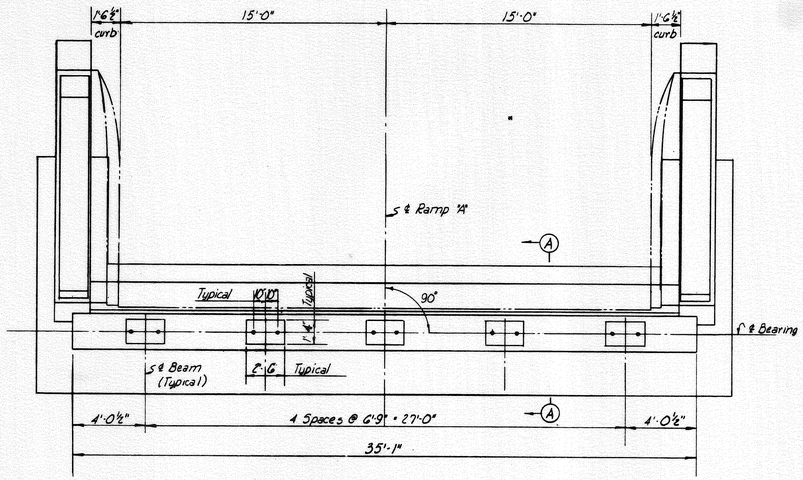
MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE
SECTION 2 - PORTLAND TO AUGUSTA

STRUCTURE NO. 588 LEWISTON SPUR OVER
ROUTE 196
STA. 487 + 61.93
GENERAL PLAN AND ELEVATION

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK KANSAS CITY

SCALE: 3/32" = 1'0"
CONTRACT NO. _____
SHEET NO. 272 OF 382

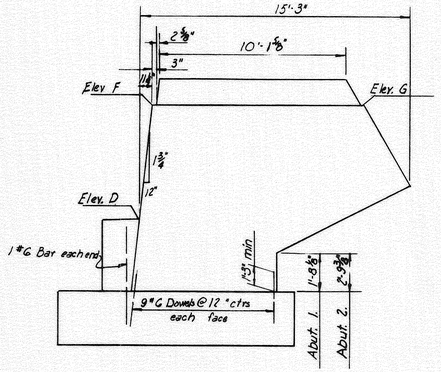
588.02.03



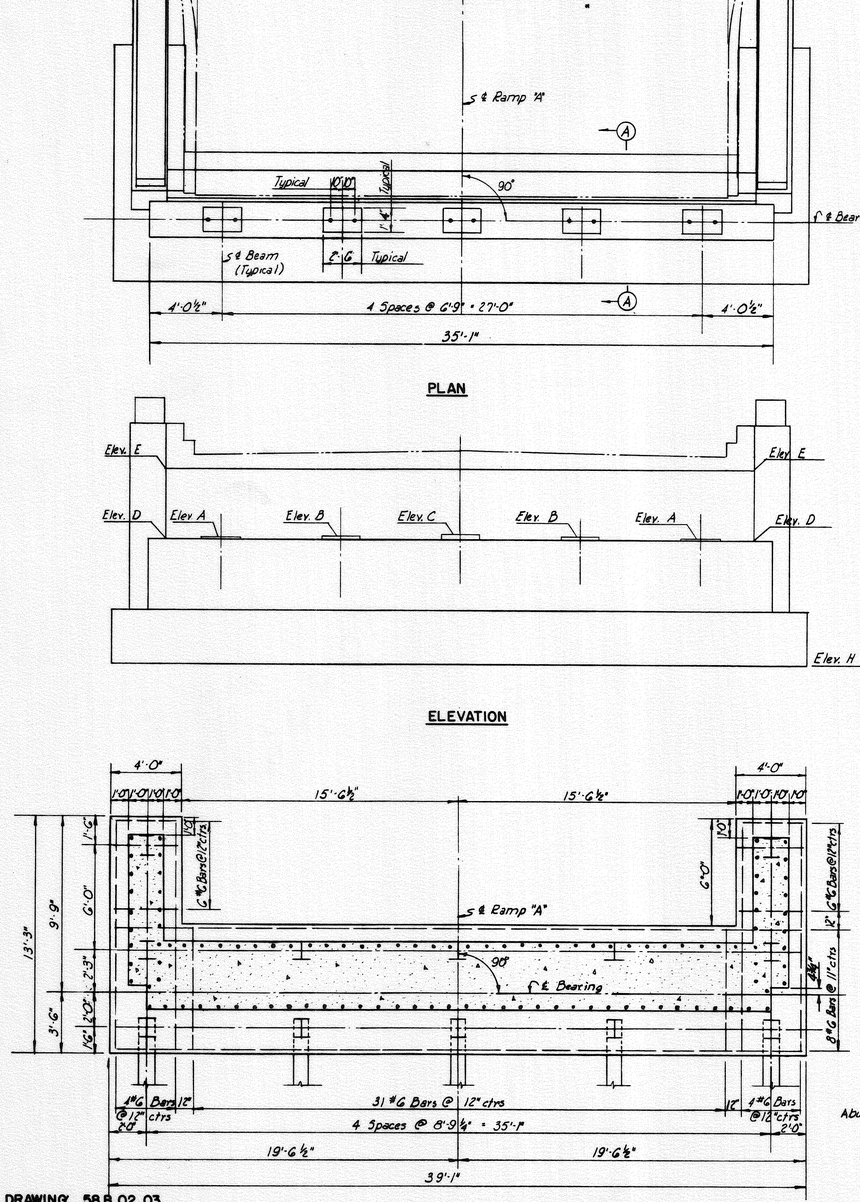
PLAN

ELEVATION

ELEVATIONS		
	Abut. 1	Abut. 2
A	211.69	219.61
B	211.76	219.64
C	211.83	219.71
D	211.61	219.53
E	215.43	223.50
F	217.93	226.00
G	217.45	226.47
H	204.52	212.44



END ELEVATION



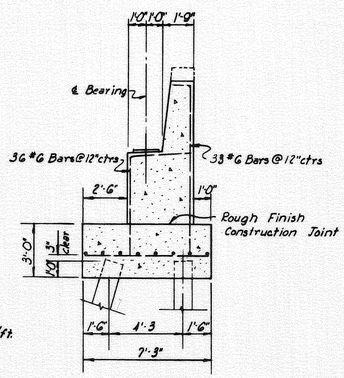
DRAWING 588.02.03

	BY	DATE				
MADE	B.K.	5-11-54				
TRACED						
CHECKED	H.J.G	5-20-54	1	As-Built	HBH	2-7-56
IN CHARGE OF	IDSK		No.	REVISION	BY	DATE

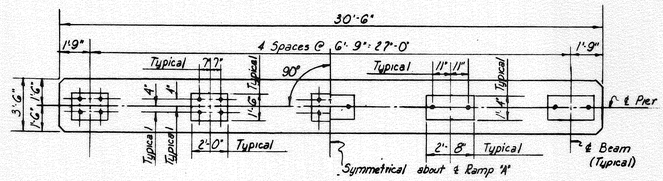
FOOTING PLAN

ABUTMENTS

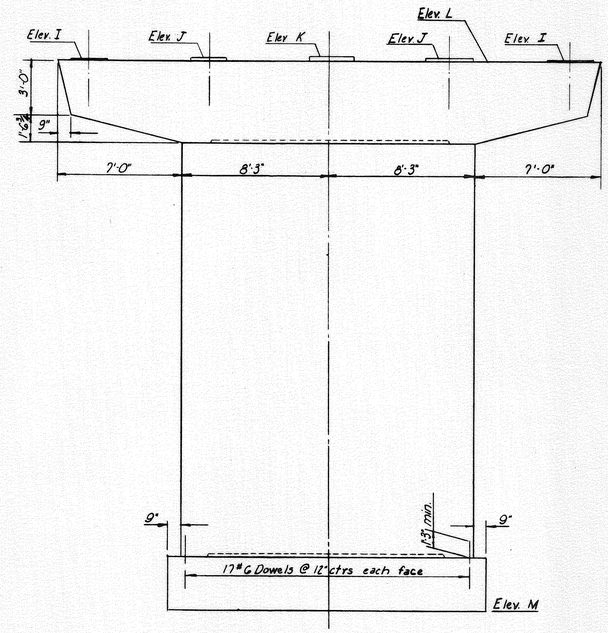
Note:
Abutment Piles shall be 10 BP 42
Batter front row piles 3"/ft.



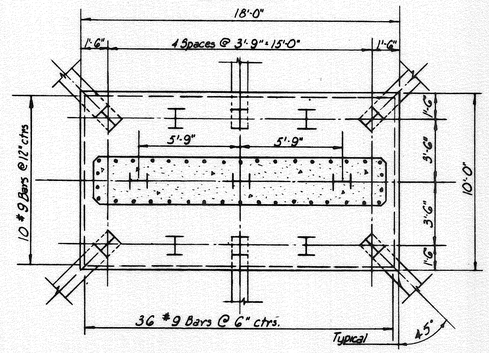
SECTION A-A



HALF PLAN PIER 1 HALF PLAN PIER 2

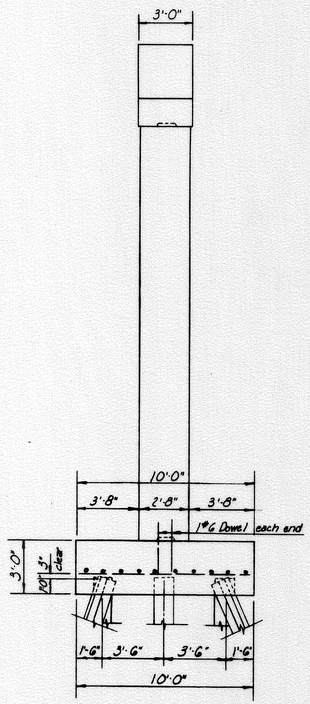


ELEVATION



FOOTING PLAN

PIERS



END ELEVATION

ELEVATIONS		
	Pier 1.	Pier 2.
I	213.89	216.72
J	213.96	216.74
K	214.03	216.81
L	213.87	216.70
M.	181.0	181.0

Note:
Pier Piles shall be 12 BP 53
Battered piles shown are
battered 3"/ft.

MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE

SECTION 2 — PORTLAND TO AUGUSTA

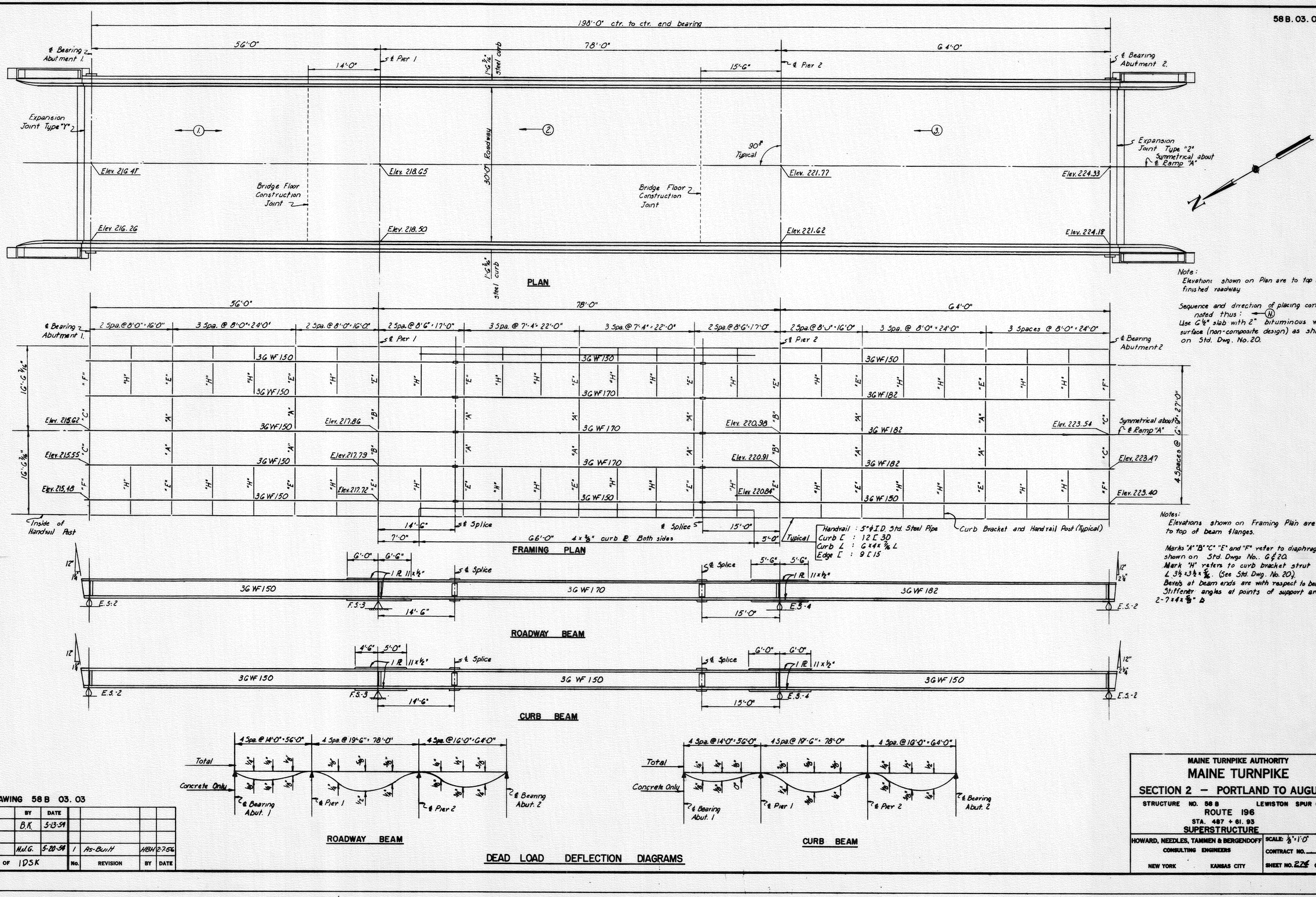
STRUCTURE NO. 58 B LEWISTON SPUR OVER
ROUTE 196
STA. 487 + 61.93

ABUTMENTS AND PIERS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK KANSAS CITY

SCALE: ¼" = 1'-0"
CONTRACT NO.
SHEET NO. 272 OF 382

58 B. 03. 03



Note:
Elevations shown on Plan are to top of finished roadway

Sequence and direction of placing concrete noted thus: ← (N)

Use 6 1/2" slab with 2" bituminous wearing surface (non-composite design) as shown on Std. Dwg. No. 20.

Notes:
Elevations shown on Framing Plan are to top of beam flanges.

Marks "A" "B" "C" "E" and "F" refer to diaphragms shown on Std. Dwgs No.. G ℄ 20.

Mark "H" refers to curb bracket strut L 3 1/2 x 3 1/2 x 5/16. (See Std. Dwg. No. 20.)

Bevels at beam ends are with respect to beam axis.

Stiffener angles at points of support are 2-7 x 4 x 5/8" ▲

DRAWING 58 B 03. 03

	BY	DATE				
MADE	B.K.	5-13-59				
TRACED						
CHECKED	H.J.G.	5-20-59	1	As-Built	HBH	2-7-64
IN CHARGE OF	IDSK		No.	REVISION	BY	DATE

MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE
SECTION 2 — PORTLAND TO AUGUSTA

STRUCTURE NO. 58 B LEWISTON SPUR OVER ROUTE 196
STA. 487 + 61. 93
SUPERSTRUCTURE

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK KANSAS CITY

SCALE: 1/8" = 1'-0"
CONTRACT NO.
SHEET NO. 274 OF 302

NOTE:
All borings on this sheet taken on ℄ unless otherwise noted.

NOTE:
None of the data shown on this drawing is guaranteed to be correct and is furnished for the Contractors' information only and such use as he may care to make of it.

					BY	DATE
MADE					P.B.W.	4/64
TRACED						
CHECKED						
IN CHARGE OF			No.	REVISION	BY	DATE

MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE

SECTION 2 - PORTLAND TO AUGUSTA

LEWISTON INTERCHANGE

INTERCHANGE BRIDGE over RTE. 196

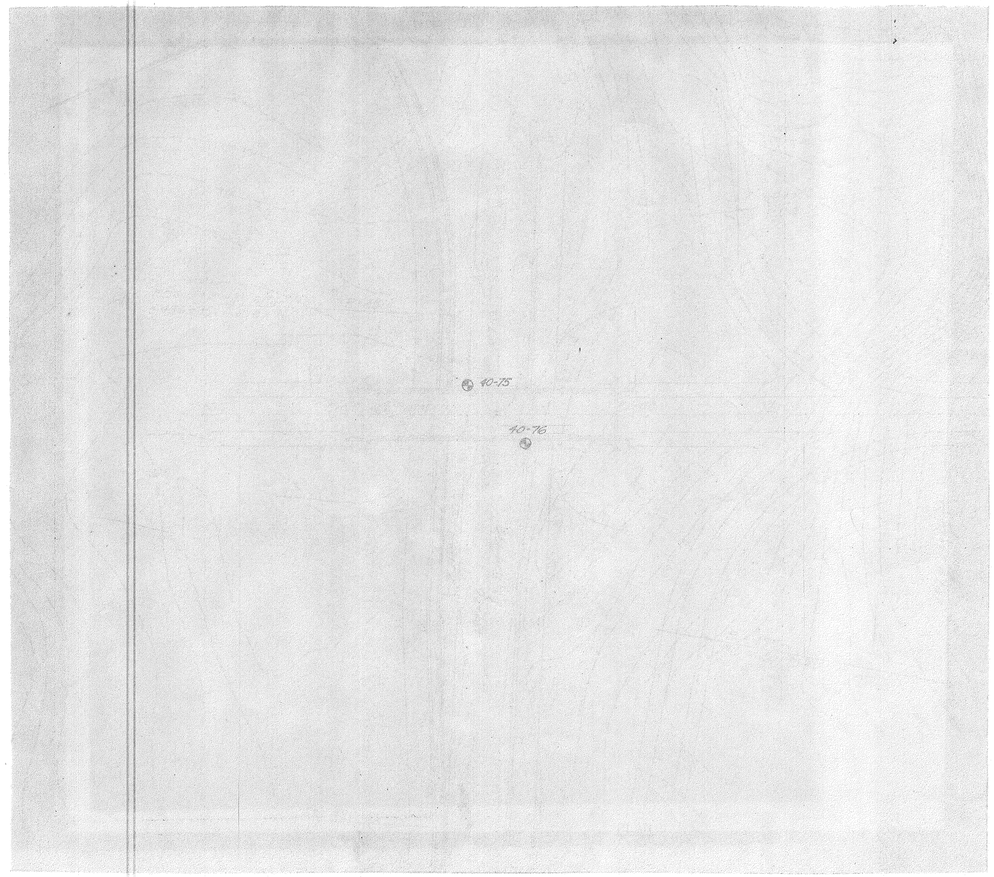
B O R I N G S

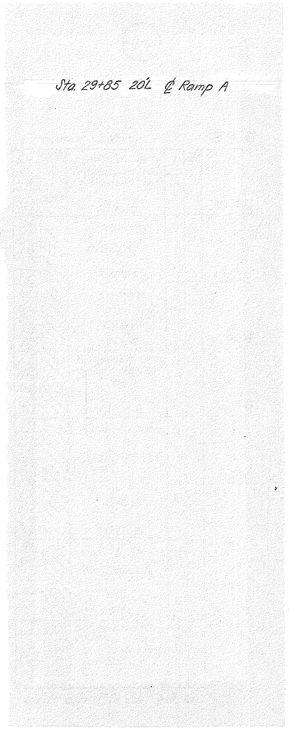
HOWARD, NEEDLES, TAMMEN & BERGENDOFF	SCALE: 1/8" = 1.0'
CONSULTING ENGINEERS	CONTRACT NO.
NEW YORK KANSAS CITY	SHEET NO. 330 OF

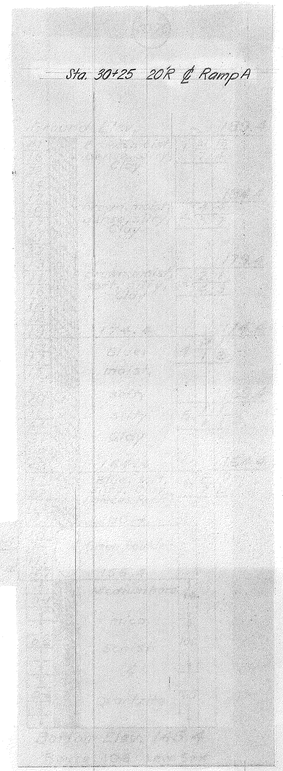
STRUCTURE No. 588

330

ARMCO 1988 Printed in U.S.A.







	BY	DATE				
MADE	R.B.W.	4/4/54				
TRACED						
CHECKED						
IN CHARGE OF			No.	REVISION	BY	DATE

MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE

SECTION 2 – PORTLAND TO AUGUSTA

LEWISTON INTERCHANGE

INTERCHANGE BRIDGE over RTE. 196

BORINGS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK KANSAS CITY

SCALE: 3/16" = 1.0'
CONTRACT NO. _____
SHEET NO. 330 OF ____

STRUCTURE No. 588

330

ALBANENE 150M TRACING PAPER 8017