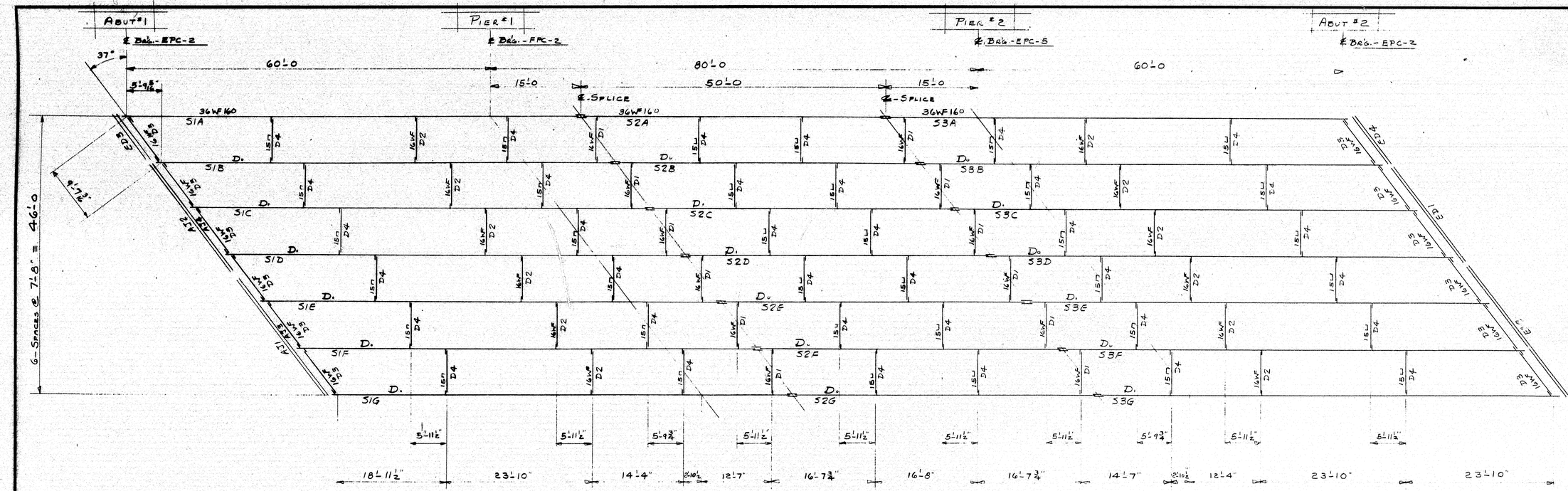
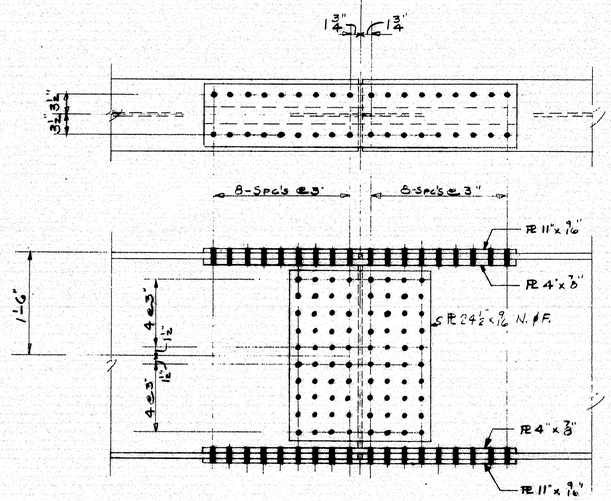
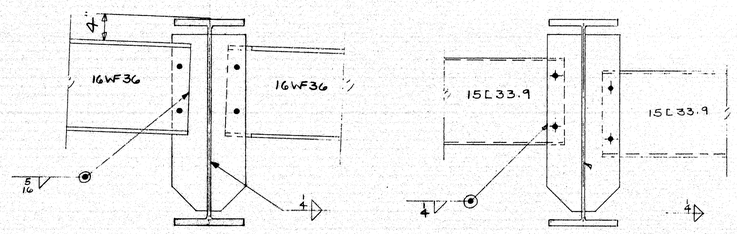


FRAMING PLAN



SPLICE DETAIL



DIAPHRAGM DETAILS

FRAMING PLAN

PRINT ISSUE			
1	SPPA S.H.C.	12-22-69	
2	S.H.C.	9-10-68	
3	CUST.	9-10-68	
2	SHOP	9-10-68	
3	F.A.	9-3-68	
DRAWN	7-29-68	D.C.	
REVISION			
REVISION			
REVISION			

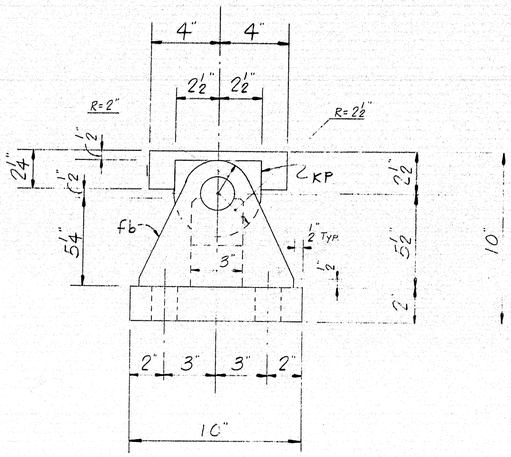
Bancroft & Martin Inc.
Brewer, Maine 04412

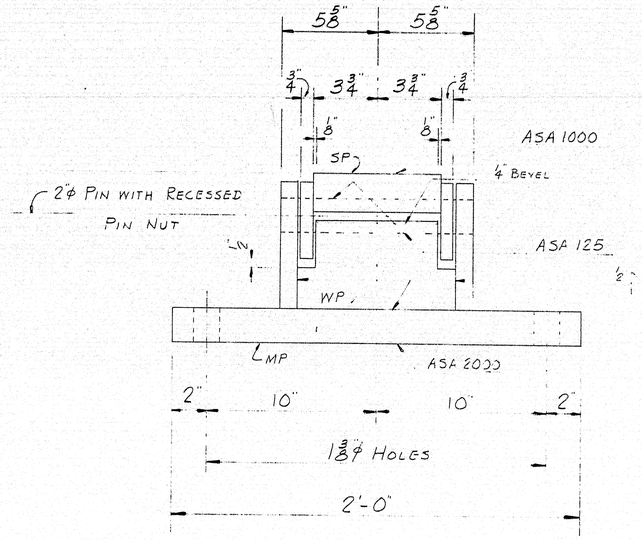
AUSTIN BRIDGE
BINGHAM MAINE

CUSTOMER REED & REED
DESIGNER BRIDGE DIV. S.H.C.
ORDER VERBAL DWG. B68-286-E1

103-101

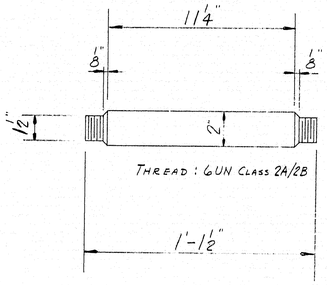
0 1 2 3 4 5 INCHES



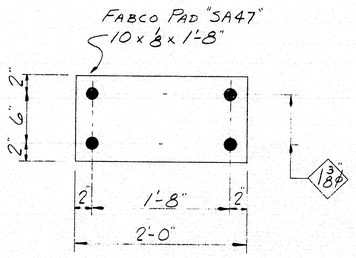


FIXED PEDESTAL FPC-2

7 - REQ'D.

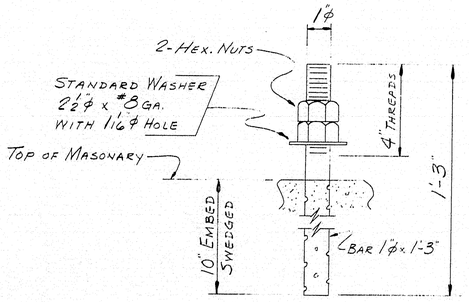


RECESSED PIN DETAIL



FABCO SA47 PAD

FP1 7-REQ'D.



ANCHOR BOLT AB1

28 - REQ'D.

PAINT NOTE:

NO PAINT ON TOP OF SOLE PLATES "SP" AND 1" DOWN FROM TOP ON SIDES, COAT WITH BOILED LINSEED OIL.

NO PAINT ON SURFACE WITH ASA 125 FINISH, COAT WITH MIXTURE OF WHITE LEAD AND TALLOW.

NO PAINT ON ANCHOR BOLTS - OIL THREADS.

SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
FPC-2	7		FIXED PEDESTAL Assy.			
	7	MP	PL 10 x 2	2 0		
	7	WP	PL 5'4 x 3	0 9¾		
	7	SP	PL 7½ x 2'4	0 8		
	14	fb	PL 7½ x 1	0 9		
	14	KP	PL 5 x ¾	0 4½		
	7		2"ϕ RECESSED PIN	1 1½		PIN & NUTS
FP1	7		10 x ⅛	2 0		FABCO PAD "SA47"
AB1	28		1"ϕ ROD	1 3		SWEDGED
	56	SHOP	1"ϕ HEX NUTS			
FIELD	28		1"ϕ WASHER			STD. WASHER 2½" O.D. x "8 GA WITH 1⅛"ϕ HOLE
			ALLOWANCE TO BE MADE FOR MACHINING WHEN CUTTING ABOVE PLATES.			
			ITEM PROJECT No. ER-033-1(16)			
			SOLE PLATE 'SP' TO BE FIELD WELDED TO STRINGERS.			

STEEL: ASTM. A36
WELDING ELECTRODE E70
SHOP CONN: WELD
FIELD CONN:
HOLES: AS NOTED
PAINT: RED LEAD PER MAINE S.H.C. SPECS
SPECIAL CLEANING:
APPROVED: AS NOTED 8-13-68

BEARING PEDESTALS

PRINT DIST.			
1	12-22-69	SSP/A SHEET	
2	1 26 68	S.H.C.	
3	8-14-68	CUST.	
4	8-14-68	BET.	
3	8-12-68	F.A.	
REV.			
CHECKED			
DRAWN	8-8-68	C.J.M.	

Bancroft & Martin Inc.
Brewer, Maine

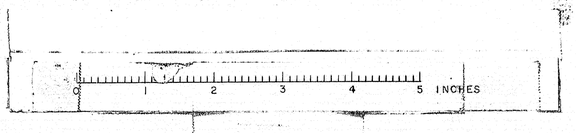
JOB: AUSTIN BRIDGE
BINGHAM, MAINE

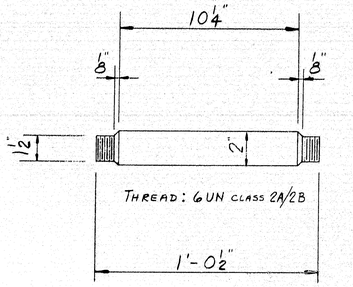
CUSTOMER: REED & REED

DESIGNER: M.S.H.C.

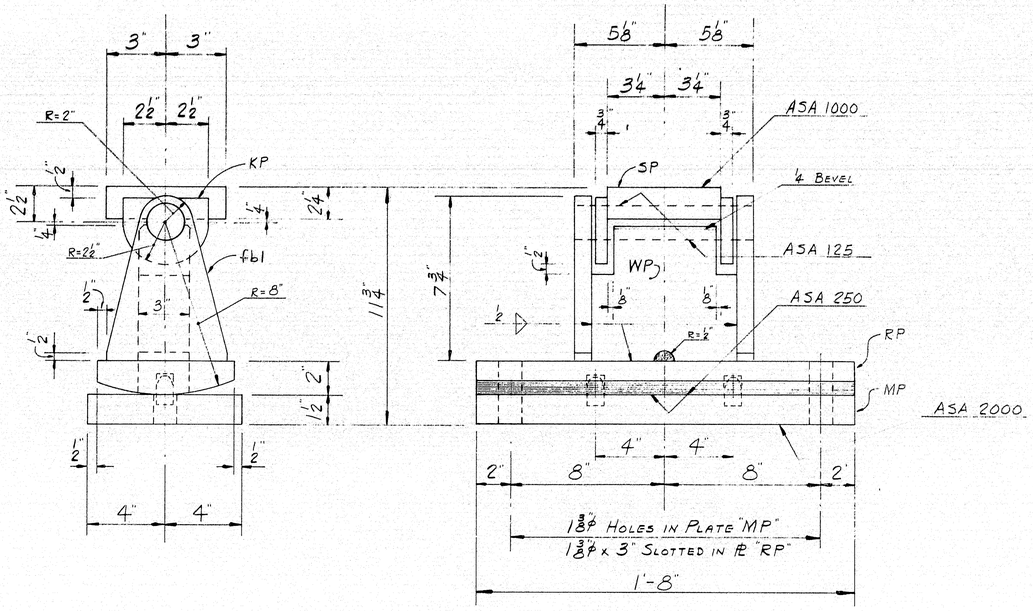
ORDER NO.	JOB NO.	DRAWING NO.
VERBAL	B68-286	51

103-102

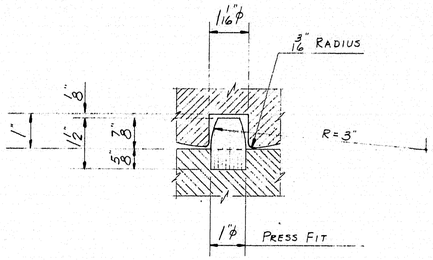




RECESSED PIN DETAIL



EXPANSION PEDESTAL EPC-2
14-REQ'D.



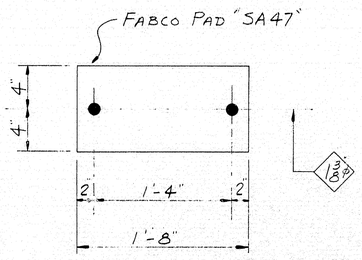
R1-DOWEL DETAIL

PAINT NOTE:

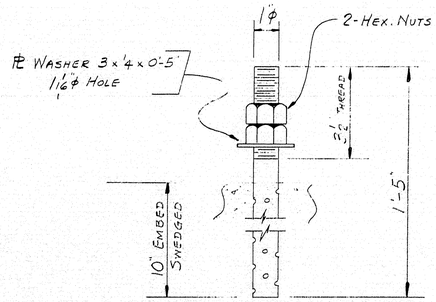
NO PAINT ON TOP OF SOLE PLATES "SP" AND 1" DOWN FROM TOP ON SIDES, COAT WITH BOILED LINSEED OIL.

NO PAINT ON SURFACE WITH ASA 125 FINISH, COAT WITH MIXTURE OF WHITE LEAD AND TALLOW.

NO PAINT ON ANCHOR BOLTS - OIL THREADS.



FP2 14-REQ'D.



ANCHOR BOLT AB2
28-REQ'D.

SHIP	BILL OF MATERIAL			JOB NO. B68:286	DWG. NO. 52	
MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
EPC-2	14		EXPANSION PEDESTAL Ass'y.			
	14	MP	PL 8 x 1½	1 8		
	14	RP	PL 7 x 2	1 8		
	14	WP	PL 5½ x 3"	0 8¼		
	14	SP	PL 6 x 24	0 66		
	28	fb1	PL 6 x 1	0 7¾		
	28	KP	PL 4½ x ¾	0 5		
	28	R1	1ϕ ROD	0 1½		DOWEL
	14		2ϕ RECESS PIN	1 0½		RECESS PIN & NUTS
AB2	28		1ϕ ROD	1 5		ANCHOR BOLT
	56	SHOP	1ϕ HEX NUTS			
FIELD	28		PL 3 x ¼	0 5		PL WASHER
FP2	14		⅜ x 18	1 8		FABCO PAD SA47

ALLOWANCE TO BE MADE FOR MACHINING WHEN CUTTING ABOVE PLATES.

ITEM
PROJECT NO. ER-033-1(16)

SOLE PLATE "SP" TO BE FIELD WELDED TO STRINGERS.

STEEL: ASTM. A36
WELDING ELECTRODE E70
SHOP CONN: WELD
FIELD CONN:
HOLES: AS NOTED
PAINT: RED LEAD PER MAINE S.H.C. SPEC'S
SPECIAL CLEANING:
APPROVED: AS NOTED 8-13-68

BEARING PEDESTALS

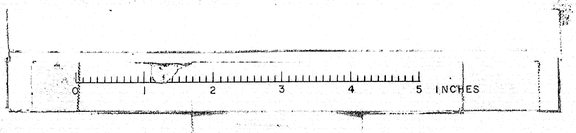
PRINT DIST.		
2	9-26-68	S.H.C.
3	8-14-68	CUST.
4	8-14-68	PORT.
3	8-12-68	T.H.
REV.		
CHECKED		
DRAWN		

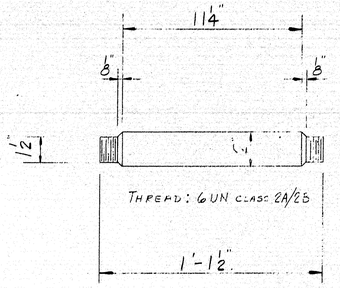
Bancroft & Martin Inc.
Brewer, Maine

JOB: AUSTIN BRIDGE
BINGHAM, MAINE
CUSTOMER: REED & REED
DESIGNER: M S.H.C.

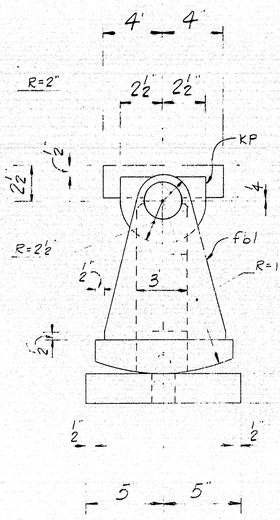
ORDER NO	JOB NO	DRAWING NO.
		52

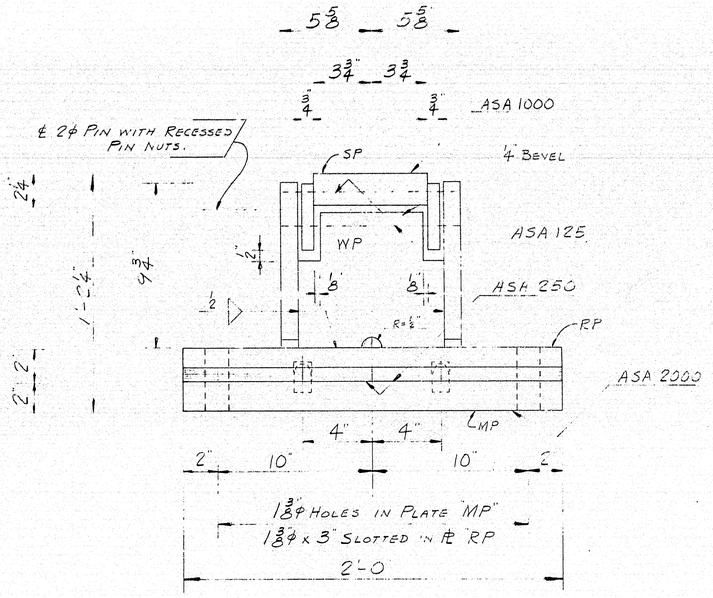
103-103



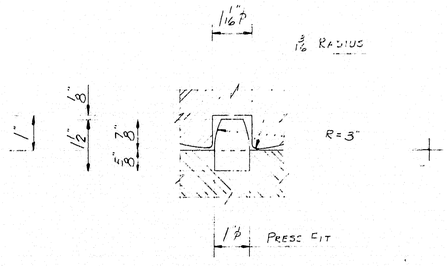


RECESSED PIN DETAIL





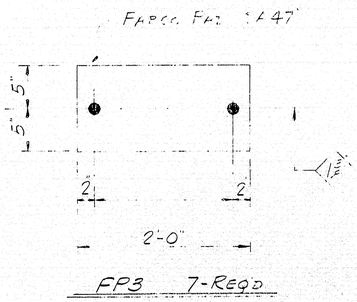
EXPANSION PEDESTAL EPC-5
7- REQ'D.



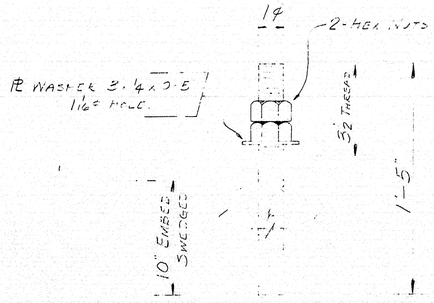
DOWEL DETAIL

PAINT NOTE:

NO PAINT ON TOP OF SOLE PLATES OR ANY 1" DOWN FROM TOP ON SIDES. COAT WITH BOILED LINSEED OIL.
NO PAINT ON SURFACE WITH ASA 125 OR ANY COAT WITH MIXTURE OF WHITE LEAD AND TALLOW.
NO PAINT ON ANCHOR BOLTS - OIL FACINGS.



FP3 7-REQD



ANCHOR BOLT ABE
14-REQD.

SHIP	BILL OF MATERIAL			JOB NO. B68-28	DWG. NO. 53	
MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
EPC5	7		EXPANSION PEDESTAL			
	7	MP	PL 10 x 2	2 0		
	7	RP	PL 9 x 2	2 0		
	7	WP	PL 7 1/2 x 3	0 9 4		
	7	SP	PL 7 1/2 x 24	0 8		
	14	Fol	PL 8 x 1	0 9 3/4		
	14	KP	PL 4 1/2 x 3/4	0 5		
	4	R1	1¢ ROD	0 1 1/2		DOWEL
	7		2¢ COC	1 1 1/2		RECESS PIN NUTS
AB2	14		1¢ EYE	1 5		ANCHOR BOLT
	28		1¢ HEX. NUTS			
FCW	14		PL 2 x 1/4	0 5		PL WASHER
EP=	7		10 x 1/2	2 0		FABCO PAD

ALLOWANCE TO BE MADE FOR MACHINING WHEN CUTTING ABOVE PLATES.

ITEM
PROJECT NO. ER-223-1(16)

SOLE PLATE SP TO BE FIELD WELDED TO SPRINGERS.

STEEL: ASTM. A36
WELDING ELECTRODE E70
SHOP CONN: WELD
FIELD CONN:
HOLES: AS NOTED
PAINT: RED OXIDE PER SPECIFICATIONS
SPECIAL CLEANING:
APPROVED: AS NOTED 8-18-69

BILLING PRELIMINARY

PRINT DIST		
1	12-22-69	SPEC. SHEET
2	1-[illegible]	SHEET
3	8-14-69	CUST
4	8-14-69	FILE
5	8-12-68	F.A.
REV.		
CHECKED		
DRAWN	[illegible]	

Bancroft & Martin Inc.
Bremen, Maine

JOB: [illegible]
CUSTOMER: PAUL A. REED
DESIGNER: M.C.H.C.

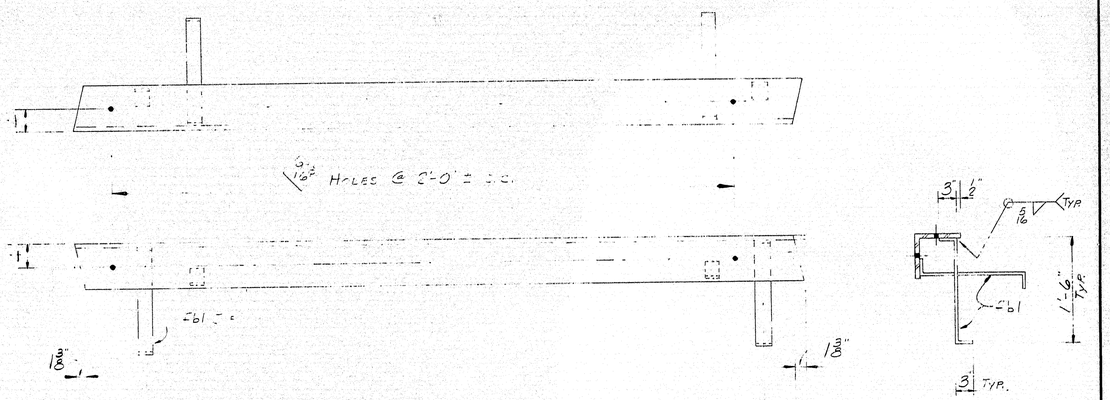
ORDER NO	JOB NO	DRAWING NO
VEE 01	B68-28	53

103-104

0 1 2 3 4 5 INCHES

SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
PN-1	1		PL 8 x 8 x 5/8 ±	13 1/15		A36 PIER #1
PN-2	1		PL 8 x 8 x 5/8 ±	12 3		A36 PIER #2
	22	FC	FB 2 1/2 x 1/2	2 0		BENT

BILL OF MATERIAL DWG. B68-286-54



PN-1 — 6 — 16-SPACES @ 9" STAGGERED = 12'-0"

PN-2 — 6 — 15-SPACES @ 9" STAGGERED = 11'-3"

PL 8 x 8 x 5/8 x 13'-15/16" — 1-PN-1

PL 8 x 8 x 5/8 x 12'-3" — 1-PN-2

SHOP CONNECTIONS: WELD
FIELD CONNECTIONS:
HOLES: 13/16"ø
PAINT: GALVANIZED

HPR AS NOTED 8-8-68

PIER NOSING

PRINT ISSUE		
1	SEPIA S.H.C.	12-22-67
2	S.H.C.	8-7-68
3	CUST.	8-9-68
6	SEPIA	8-7-68
5	F.A.	8-6-68
DRAWN	8-6-68	C.J.M.
REVISION		
REVISION		
REVISION		

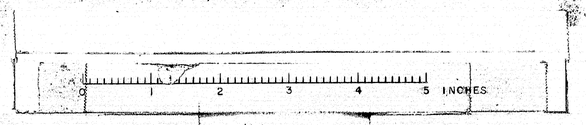
Bancroft & Martin Rolling Mills Company
Brewer, Maine

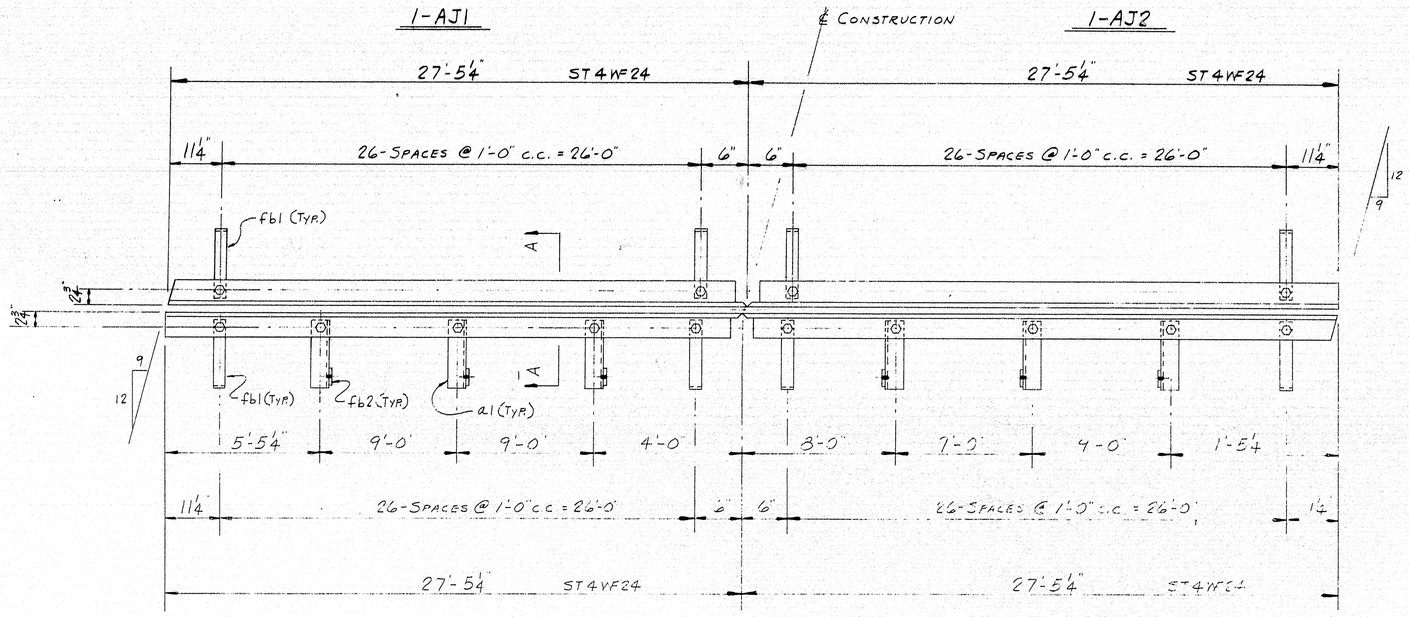
AUSTIN BRIDGE
BINGHAM, MAINE

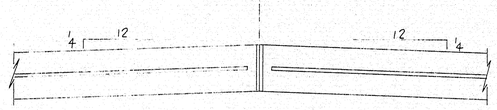
CUSTOMER REED & REED
DESIGNER W.S.H.C.

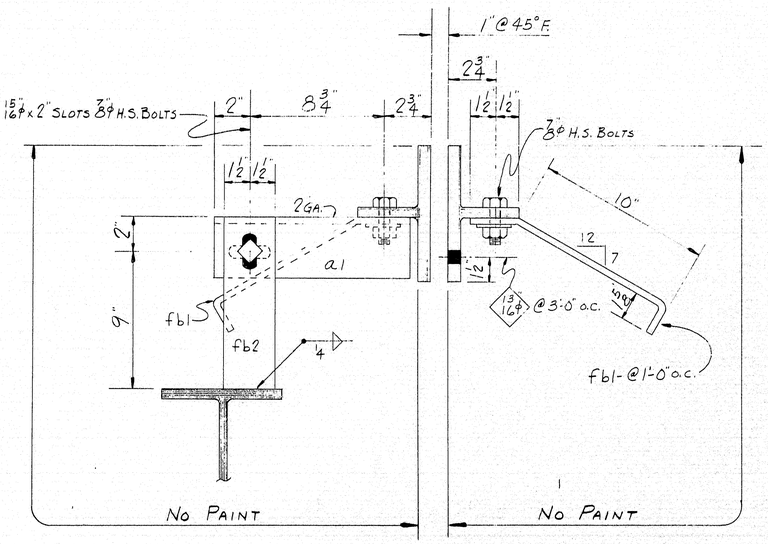
ORDER VERBAL DWG. B68-286-54

103-105

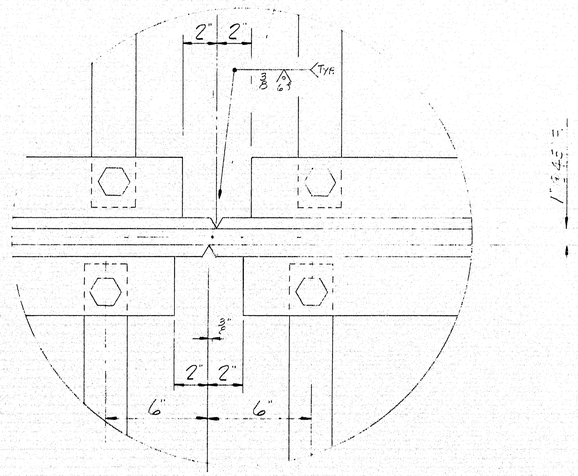








SECTION A-A



DETAIL AT ℄

SHIP	BILL OF MATERIAL	JOB NO. B68-286	DWG. NO. 55

MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
AJ1	1		ST4WF24	27 5¼		
AJ2	1		〃	27 5¼		
AJ3	1		〃	27 5¼		
AJ4	1		〃	27 5¼		
	6	a1	3½x3½x3/8	1 0 4		3-E 3-L
	108	fb1	FB. 2½x3/8	1 3		BENT
	6	fb2	FB. 3x3/8	0 11		
	120	SHOP	7/8ϕ H.S. BOLT	0 2¼		HEAVY NUTS A325
	120	SHOP	7/8ϕ H.S. WASHER			

PROJECT NO. ER-1323-1 (16)

STEEL: ASTM. A36
WELDING ELECTRODE E70
SHOP CONN: 7/8ϕ H.S. BOLTS
FIELD CONN: RIVETS
HOLES: 15/16ϕ U.N.O.
PAINT: STATE OF MAINE SPEC.
SPECIAL CLEANING:
APPROVED: U.S.C.&G.

ARTICLE TWENTY ABUT #1

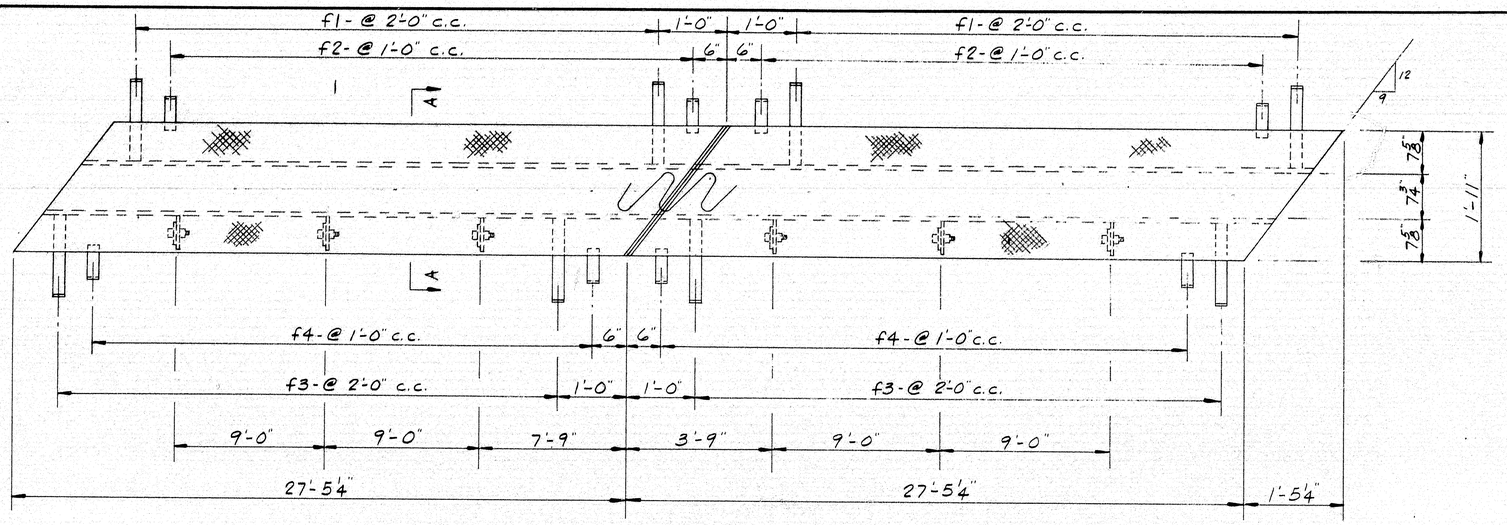
PRINT DIST.		
1	12.02.67	SEPIA & N.C.
2	" " "	" "
3	1.16.68	CUST
6	2.23.68	SHOP
3	3.13.68	F.A.
REV.		
CHECKED	8.29.68	R.F.D.
DRAWN	8.12.68	C.J.M.

Bancroft & Martin Inc.
Brewer, Maine

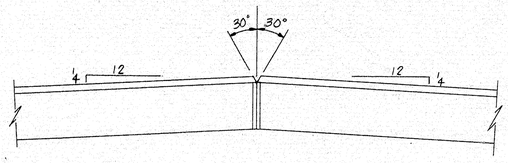
JOB: AUSTIN BRIDGE
BINGHAM, MAINE
CUSTOMER: REED & REED
DESIGNER: M.S.H.C.

ORDER NO.	JOB NO.	DRAWING NO.
VERBAL	B68-286-	55

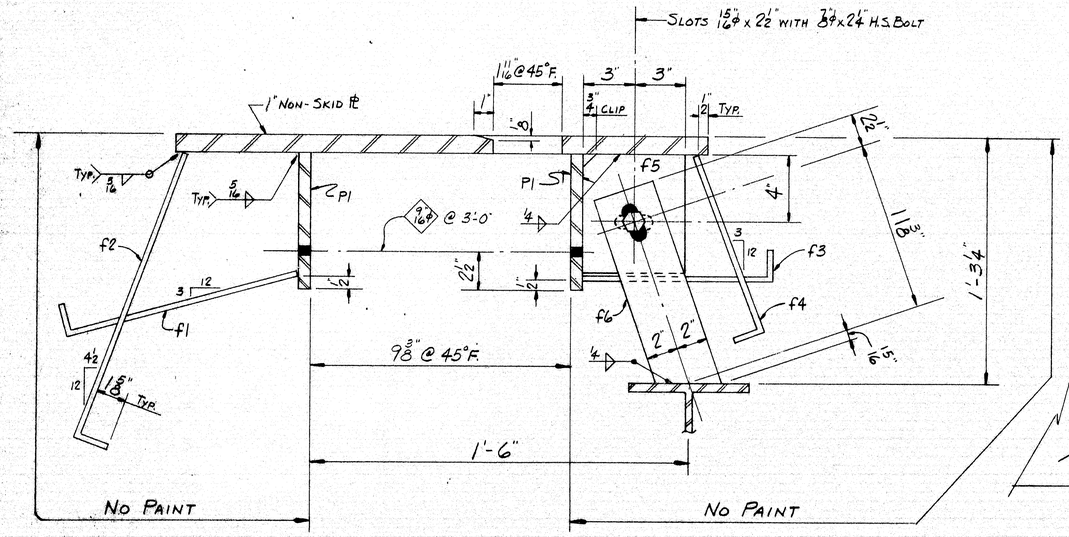
103-106



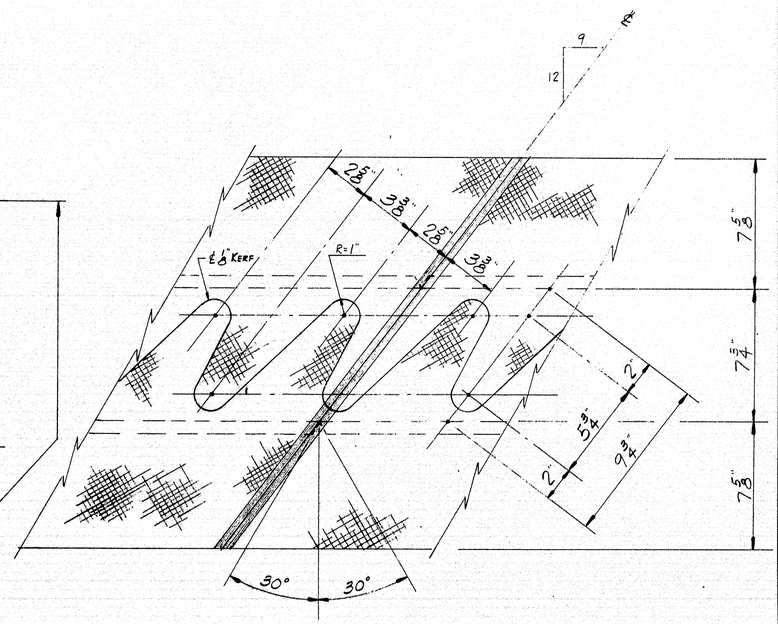
1-ED1



1-ED2



Section A-A



Cutting Detail

SHIP	BILL OF MATERIAL			JOB NO. B68-286		DWG. NO. 56
MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
ED1	1		Pl 23 x 1	28 10½		Chkd. Pl
ED2	1		do	28 10½		do
	4	Pl	Pl 8 x ¾	27 5¼		
	28	f1	F.B. 2 x ⅜	1 4		
	54	f2	⟨	1 8		
	28	f3		1 1		
	54	f4	do	1 1		
	6	f5	F.B. 6 x ⅜	0 7		
	6	f6	F.B. 4 x ⅜	1 2 1/16		
	6	Shop	⅞ø H.S. Bolt	0 2¼		
	6	Shop	⅞ H.S. Washer			

STEEL: ASTM. A36
WELDING ELECTRODE E70
SHOP CONN: Weld & Bolt
FIELD CONN: Weld
HOLES: 15/16" ø U.N.
PAINT: State of Maine Spec's.
SPECIAL CLEANING:
APPROVED: 8-19-68

Expansion Dam Abut. #2

Bancroft & Martin Inc.
Brewer, Maine

JOB: Austin Bridge
Bingham, Maine

CUSTOMER: Reed & Reed

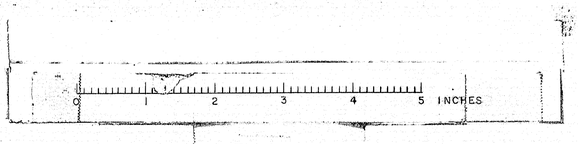
DESIGNER: M. S. H. C.

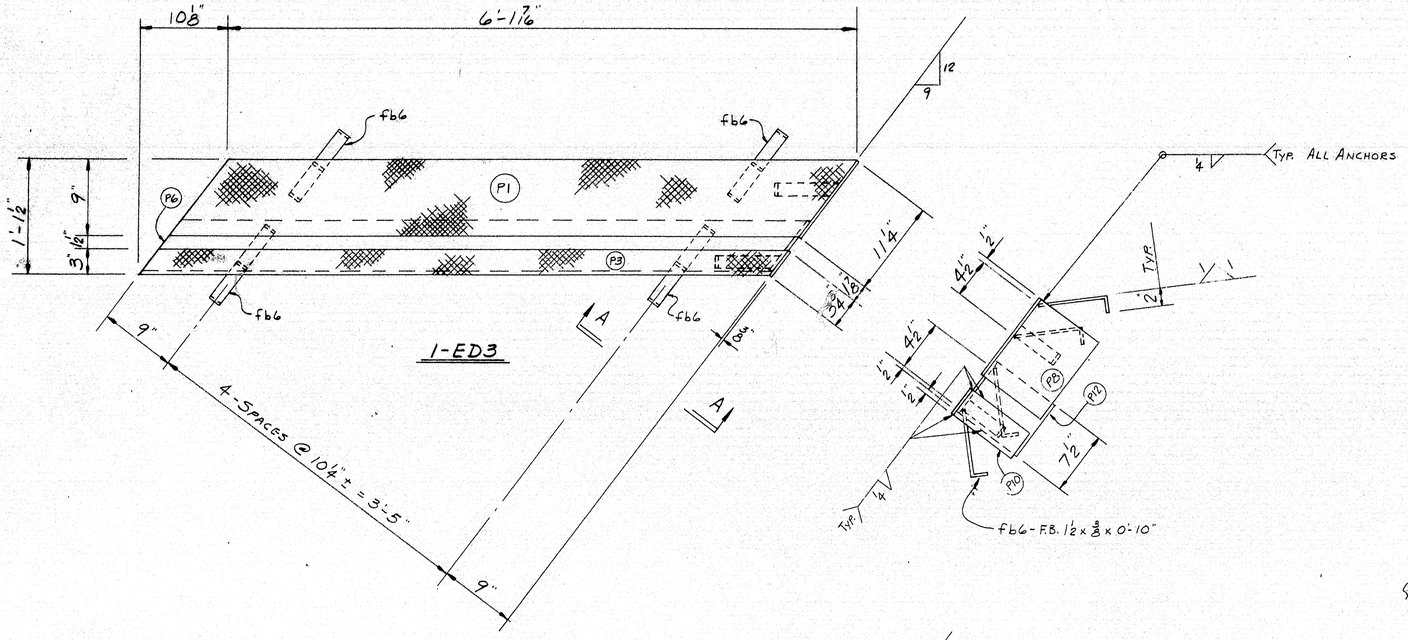
PRINT DIST.		
1	12-22-69	Sept. P. S.H.C.
2	9-10-68	S.H.C.
3	9-10-68	Cust.
6	9-5-68	Shop
3	8-16-68	F.A.
3	8-14-68	F.A.

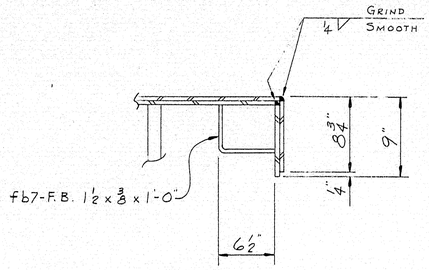
REV.	8-16-68	C.J.M.
CHECKED	8-4-68	J.M.
DRAWN	8-13-68	C.J.M.

ORDER NO.	JOB NO.	DRAWING NO.
Verbal	B68-286-	56

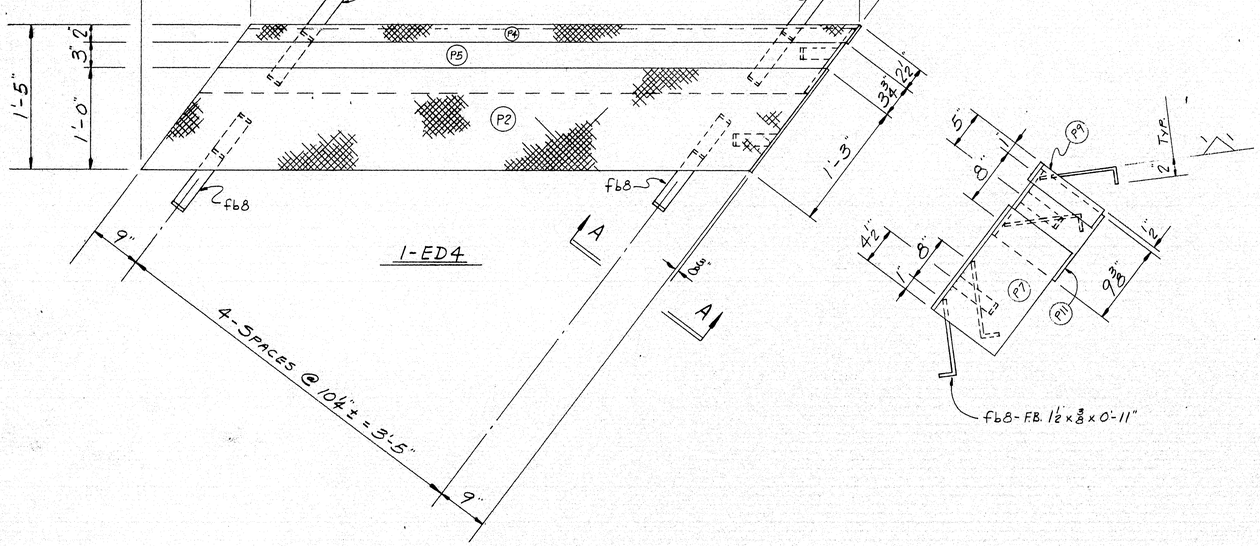
103-107







SECTION A-A



SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
ED3	1		EXPAN. DAM			ABUT. #1
ED4	1		EXPAN. DAM			ABUT. #2
	1	P1	PL 9 x ⅜	6 8 3/16		CHKD. PLATE
	1	P2	PL 12 x ⅜	6 10 7/16		do
	1	P3	PL 3 x ⅜	6 3 1/16		do
	1	P4	PL 2 x ⅜	6 2 1/16		do
	1	P5	PL 7½ x ⅜	6 6 5/8		
	1	P6	PL 6 x ⅜	6 5½		
	1	P7	PL 8⅜ x ⅜	1 3		
	1	P8	do	0 11¼		
	1	P9	do	0 2½		
	1	P10	do	0 3¾		
	1	P11	PL 8¼ x ⅜	0 9⅜		
	1	P12	do	0 7½		
	20	fb6	F.B. 1½ x ⅜	0 10		BENT
	4	fb7	do	1 0		do
	20	fb8	do	0 11		do

BILL OF MATERIAL — JOB NO. B68-286 DWG. NO. S7

STEEL: ASTM. A 36
WELDING ELECTRODE E70
SHOP CONN: WELD
FIELD CONN: ———
HOLES: ———
PAINT: STATE OF MAINE SPEC'S.
SPECIAL CLEANING:
APPROVED: 8-22-68

SIDEWALK EXPANSION DAMS

PRINT DIST.

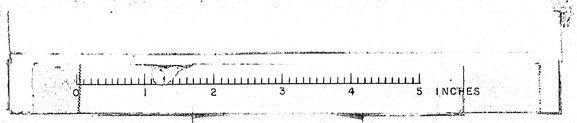
REV.		
1	12-22-69	SEPIA S.H.C.
2	9-10-68	S.H.C.
3	9-10-68	CUST.
6	9-3-68	SHOP
5	8-21-68	F.A.
CHECKED	8-28-68	R.F.D.
DRAWN	8-20-68	C.J.M.

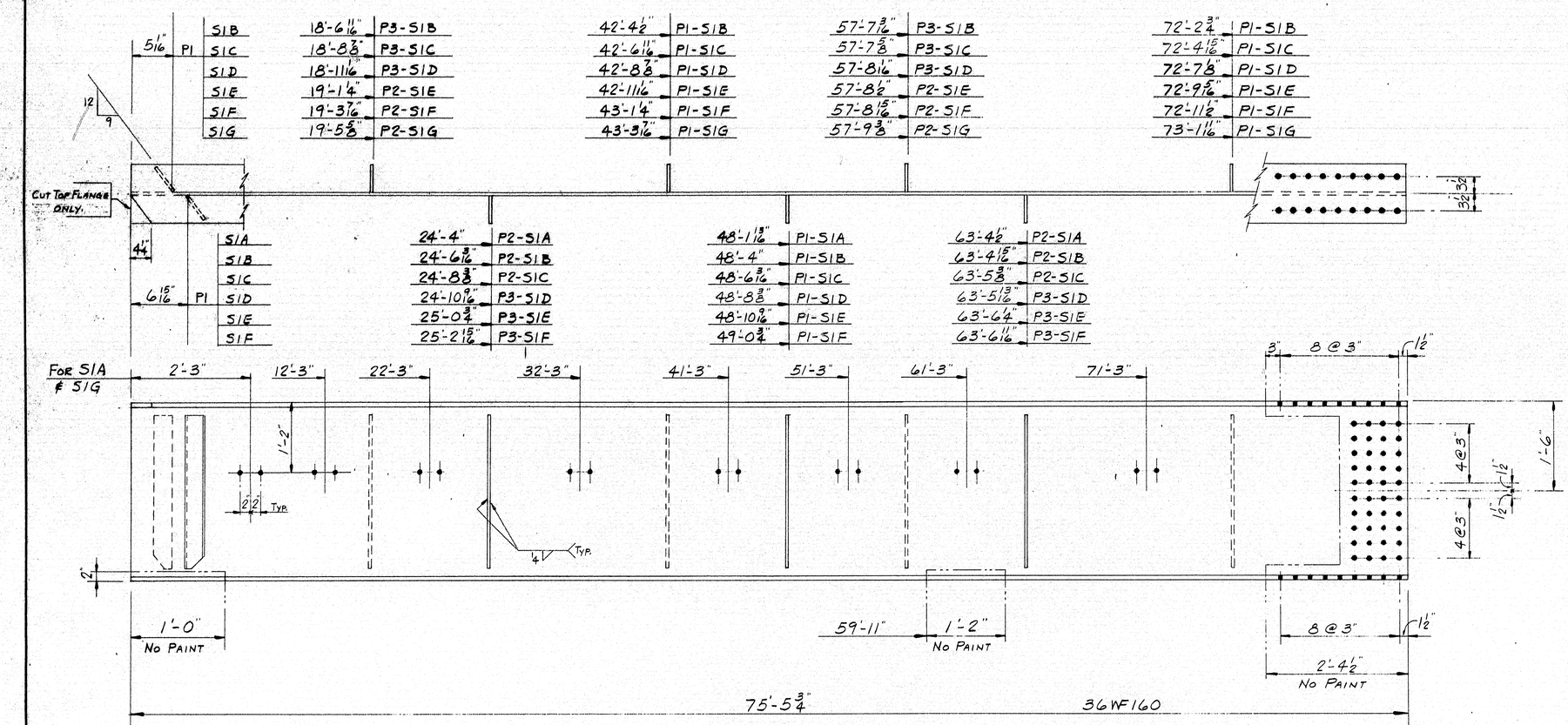
Bancroft & Martin Inc.
Brewer, Maine

JOB: AUSTIN BRIDGE
BINGHAM, MAINE
CUSTOMER: REED & REED
DESIGNER: M. S. H. C.

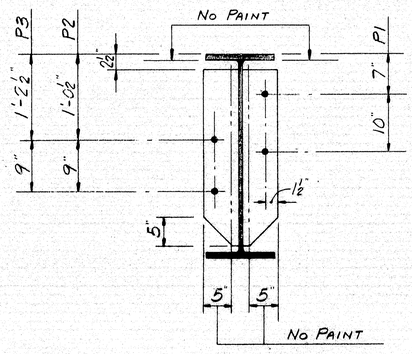
ORDER NO.	JOB NO.	DRAWING NO.
VERBAL	B68-286	S7

103-108





ONE EACH
S1A-S1B-S1C-S1D-S1E-S1F-S1G



THIS END ABUT. #1

PLACE ANY NATURAL CAMBER UP.

MATCH THIS END WITH STRINGERS MARKED "S2"

SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
S1A	1		36WF160	75 5 3/4		A572
S1B	1			75 5 3/4		
S1C	1			75 5 3/4		
S1D	1			75 5 3/4		
S1E	1			75 5 3/4		
S1F	1			75 5 3/4		
S1G	1		do	75 5 3/4		do
	30	P1	PL 6 x 3/8	2 7		A36
	12	P2	do	2 7		do
	12	P3	do	2 7		do

BILL OF MATERIAL — JOB NO. B68-286 DWG. NO. 58

Proj. No. ER-033-1(16)

STEEL: ASTM. A36 U.N.
WELDING ELECTRODE E7028
SHOP CONN: WELD
FIELD CONN: 3/4" ϕ H.S. BOLTS
HOLES: 15/16" ϕ U.N.
PAINT: STATE OF MAINE SPEC'S.
SPECIAL CLEANING:
APPROVED: AS NOTED 9-9-68

STRINGERS SPAN #1

PRINT DIST.		
1	12-22-69	SEPIA S.H.C.
2	9-10-68	S.H.C.
3	9-10-68	CUST.
6	9-10-68	SHOP
3	8-30-68	F.A.

Bancroft & Martin Inc.
Brewer, Maine

JOB: AUSTIN BRIDGE
BINGHAM, MAINE

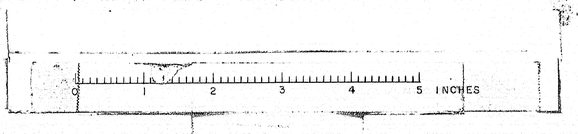
CUSTOMER: REED & REED

DESIGNER: M. S. H. C.

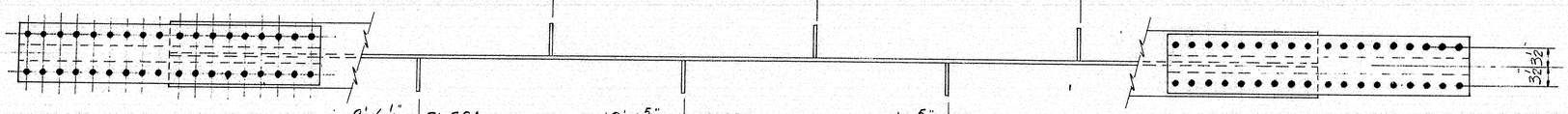
REV.		
CHECKED	9-4-68	J.E.M.
DRAWN	8-23-68	C.J.M.

ORDER NO.	JOB NO.	DRAWING NO.
VERBAL	B68-286	58

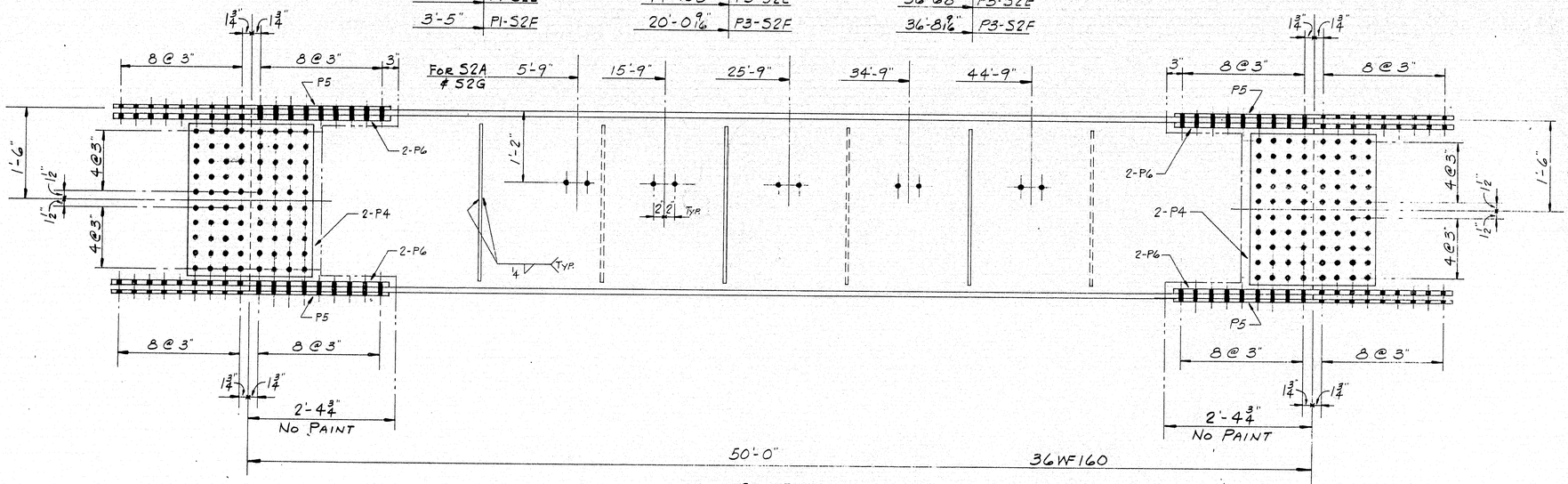
103-109



13'-4 5/16"	P3-S2B	30'-0 5/16"	P3-S2B	46'-7 1/2"	P1-S2B
13'-6 1/2"	P3-S2C	30'-2 1/2"	P3-S2C	46'-9 11/16"	P1-S2C
13'-8 11/16"	P3-S2D	30'-4 11/16"	P3-S2D	46'-11 7/8"	P1-S2D
13'-10 7/8"	P2-S2E	30'-6 7/8"	P2-S2E	47'-2 1/16"	P1-S2E
14'-1 1/16"	P2-S2F	30'-9 1/16"	P2-S2F	47'-4 1/4"	P1-S2F
14'-3 1/4"	P2-S2G	30'-11 1/4"	P2-S2G	47'-6 7/16"	P1-S2G



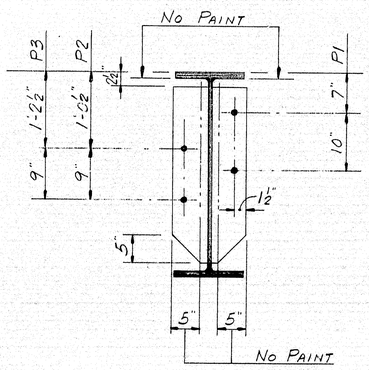
2'-6 1/16"	P1-S2A	19'-1 5/8"	P2-S2A	35'-9 5/8"	P2-S2A
2'-8 1/4"	P1-S2B	19'-3 13/16"	P2-S2B	35'-11 13/16"	P2-S2B
2'-10 7/16"	P1-S2C	19'-6"	P2-S2C	36'-2"	P2-S2C
3'-0 5/8"	P1-S2D	19'-8 3/16"	P3-S2D	36'-4 3/16"	P3-S2D
3'-2 13/16"	P1-S2E	19'-10 3/8"	P3-S2E	36'-6 3/8"	P3-S2E
3'-5"	P1-S2F	20'-0 9/16"	P3-S2F	36'-8 9/16"	P3-S2F



ONE EACH
S2A-S2B-S2C-S2D-S2E-S2F-S2G

MATCH THIS END WITH STRINGERS MARKED-S1

PLACE ANY NATURAL CAMBER UP.



MATCH THIS END WITH STRINGERS MARKED-S3

SHIP	BILL OF MATERIAL			JOB NO. B68-286		DWG. NO. 59
MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
S2A	1		36WF160	50 0		A572
S2B	1			50 0		
S2C	1			50 0		
S2D	1			50 0		
S2E	1			50 0		
S2F	1			50 0		
S2G	1		do	50 0		do
	12	P1	PL 6 x 3/8	2 7		A36
	12	P2	do	2 7		do
	12	P3	do	2 7		do
	28	P4	PL 24 1/2 x 9/16	2 6		A572
	28	P5	PL 11 x 9/16	4 6 1/2		do
	56	P6	PL 4 x 3/8	4 6 1/2		do
	112	SHOP	3/4" H.S. BOLT	0 3 3/4		A325 FLANGE BOLT
	28	SHOP	do	0 3 3/4		do WEB BOLT
	140	SHOP	3/4" H.S. WASHER			do
FIELD	1008		3/4" H.S. BOLT	0 3 3/4		A325
do	112		do	0 3 3/4		do
do	8128		3/4" H.S. WASHERS			do

PROJ. NO. ER-033-1(16)

STEEL: ASTM. AS NOTED
WELDING ELECTRODE E70XX
SHOP CONN: WELD
FIELD CONN: 3/4" ϕ H.S. BOLTS
HOLES: 15/16" ϕ U.N.
PAINT: STATE OF MAINE SPECS.
SPECIAL CLEANING:
APPROVED: AS NOTED 9-9-68

STRINGERS SPAN #2

PRINT DIST.			
1	12-22-69	SBM & S.H.C.	
2	9-10-68	S.H.C.	
3	9-10-68	CUST.	
1/2	7-10-68	SHOP	
3	8-30-68	F.A.	
REV.			
CHECKED	9-4-68	J.E.N.	
DRAWN	8-26-68	C.J.M.	

Bancroft & Martin Inc.
Brewer, Maine

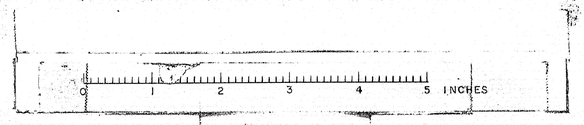
JOB: AUSTIN BRIDGE
BINGHAM, MAINE

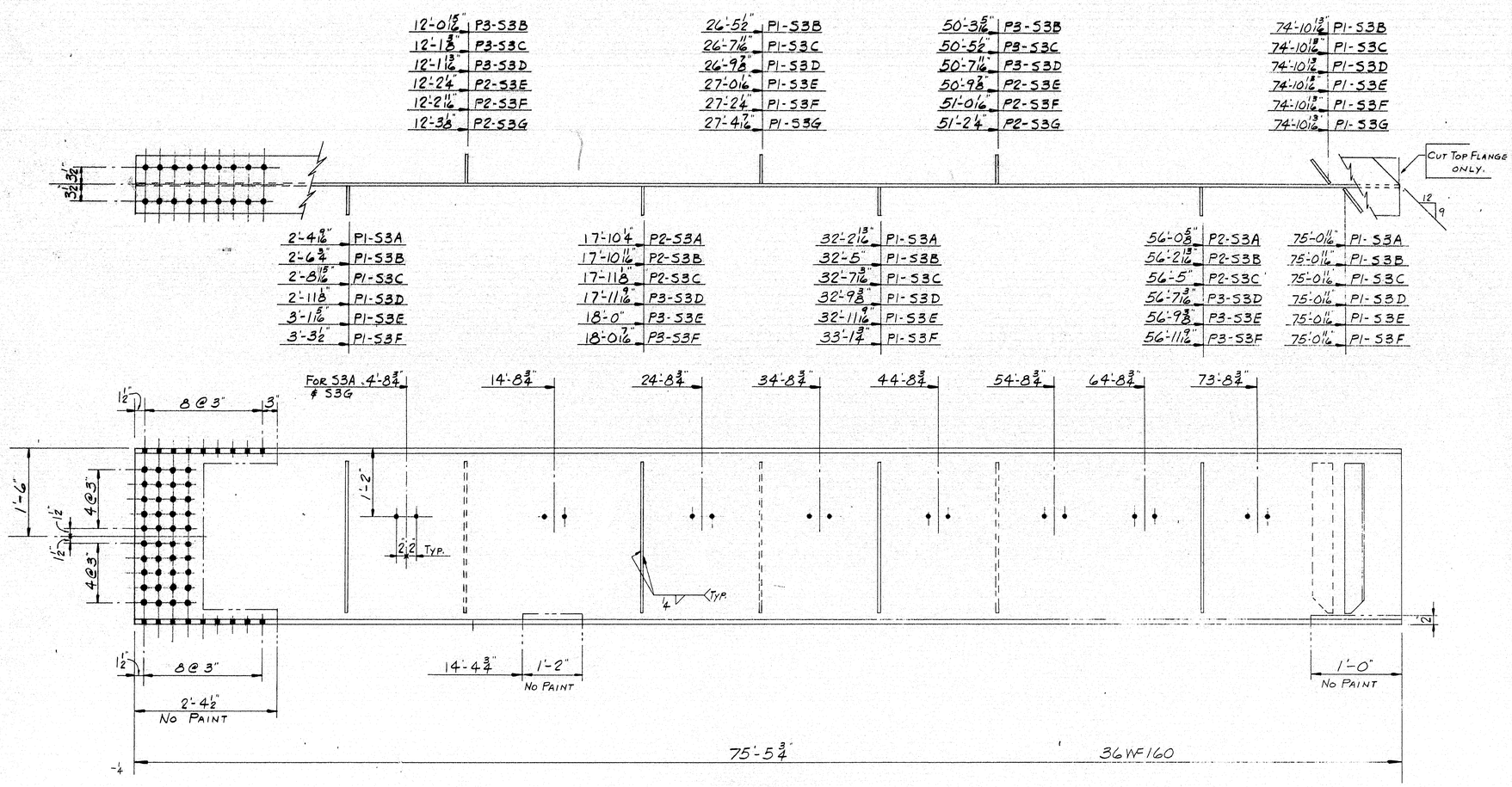
CUSTOMER: REED & REED

DESIGNER: M.S.H.C.

ORDER NO.	JOB NO.	DRAWING NO.
VERBAL	B68-286-	59

103-110

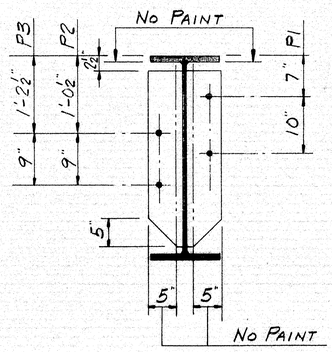




ONE EACH
S3A-S3B-S3C-S3D-S3E-S3F-S3G

MATCH THIS END WITH STRINGERS MARKED-S2"

PLACE ANY NATURAL CAMBER UP.



THIS END ABUT. #2

SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
S3A	1		36WF160	75 5 3/4		A572
S3B	1			75 5 3/4		
S3C	1			75 5 3/4		
S3D	1			75 5 3/4		
S3E	1			75 5 3/4		
S3F	1			75 5 3/4		
S3G	1		do	75 5 3/4		do
	30	P1	PL 6 x 3/8	2 7		A36
	12	P2	do	2 7		do
	12	P3	do	2 7		do

PROJ. NO. ER-033-1(16)

STEEL: ASTM. AS NOTED
WELDING ELECTRODE E7028
SHOP CONN: WELD
FIELD CONN: 7/8" ϕ H.S. BOLT
HOLES: 15/16" ϕ U.N.
PAINT: STATE OF MAINE SPEC'S.
SPECIAL CLEANING:
APPROVED: AS NOTED 7-9-68

STRINGERS SPAN #3

PRINT DIST.		
1	12-22-69	SAME S.H.C.
2	9-10-68	S.H.C.
3	9-10-68	CUST.
6	9-10-68	SHOP
3	8-30-68	F.A.
REV.		
CHECKED	8-30-68	J.E.M.
DRAWN	8-29-68	C.J.M.

Bancroft & Martin Inc.
Brewer, Maine

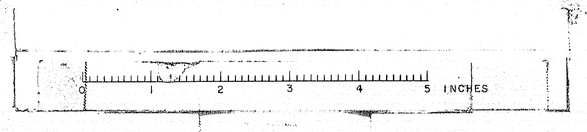
JOB: AUSTIN BRIDGE
BINGHAM, MAINE

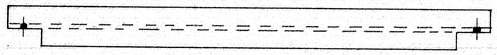
CUSTOMER: REED & REED

DESIGNER: M.S.H.C.

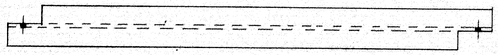
ORDER NO.	JOB NO.	DRAWING NO.
VERBAL	B68-286-	S10

103-111

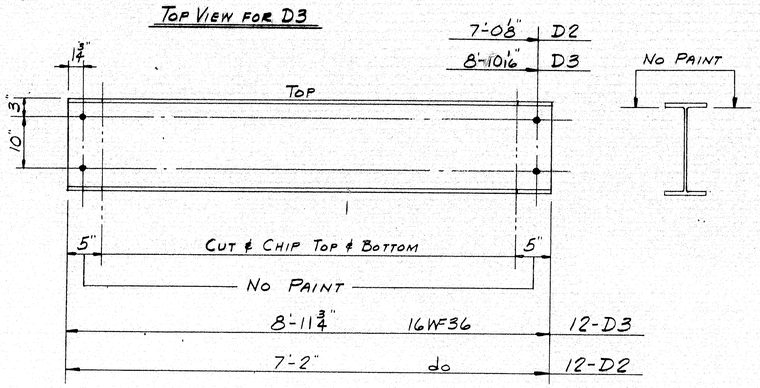


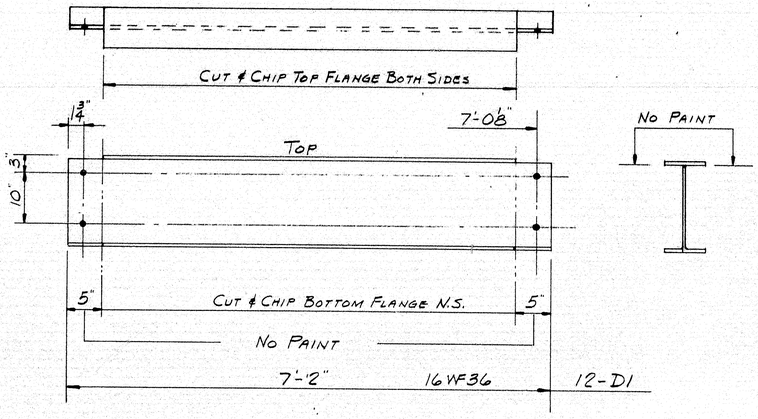


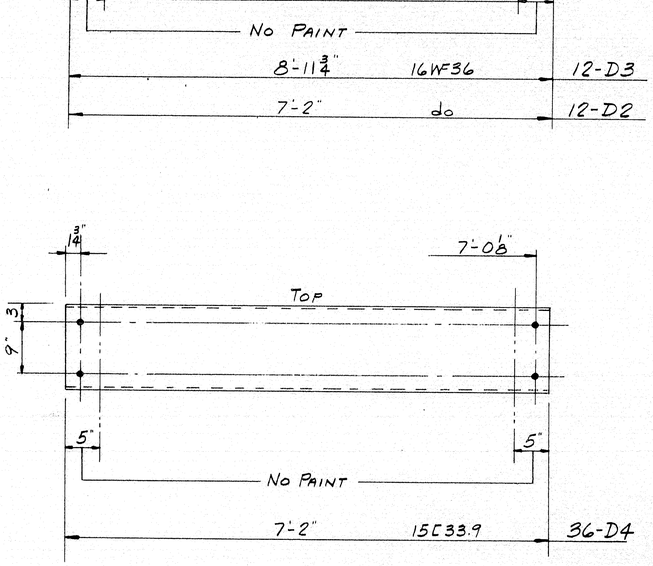
TOP VIEW FOR D2

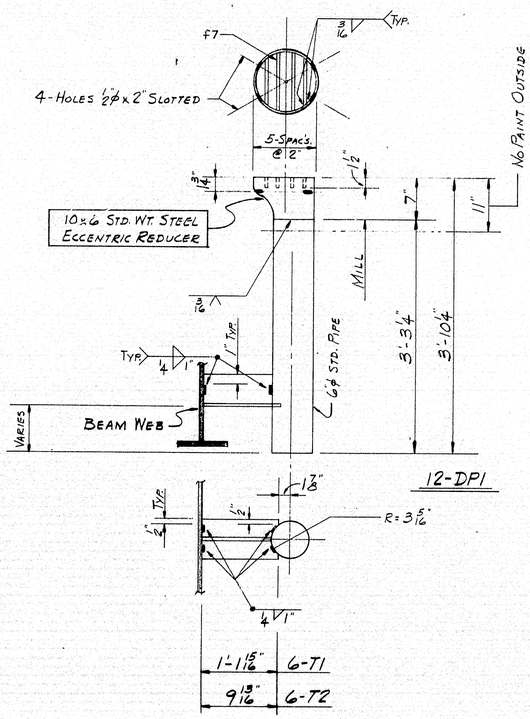


TOP VIEW FOR D3









NO PAINT OUTSIDE

SHIP MARK	NO.	MARK	SHAPE	LENGTH		WT.	REMARKS
D1	12		16WF36	7	2		
D2	12		16WF36	7	2		
D3	12		16WF36	8	11¾		
D4	36		15C33.9	7	2		
DP1	12		6"ø STD. PIPE	3	3¼		MIE
	12	SHOP	10"x6" STD. WT. ECCENT. REDUCER				
	48	F7	FB. 1½"x½"	0	10		SHOP CUT TO FIT
T1	6		ST6WF13.5	1	1 1/16		
T2	6		do	0	9 13/16		
FIELD	300		⅞"ø M. BOLT	0	2		
do	300		⅞"ø STD. WASHER				

STEEL: ASTM. A36
WELDING ELECTRODE E7028
SHOP CONN: WELD
FIELD CONN: WELD & BOLT
HOLES: 15/16"ø U.N.
PAINT: STATE OF MAINE SPEC'S.
SPECIAL CLEANING:
APPROVED: 9-9-68

DIAPHRAGMS & DRAINS

REV.	PRINT DIST.	
1	12-22-69	SEPIA S.H.C.
2	9-10-68	S.H.C.
3	9-10-68	CUST.
4	9-10-68	SHOP
3	9-3-68	F.A.
REV.		
CHECKED	9-4-68	J.E.M.
DRAWN	8-31-68	C.J.M.

Bancroft & Martin Inc.
Brewer, Maine

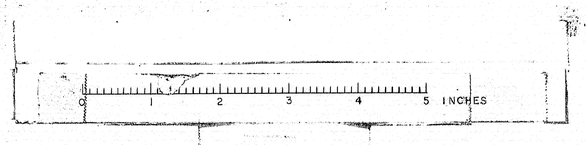
JOB: AUSTIN BRIDGE
BINGHAM, MAINE

CUSTOMER: REED & REED

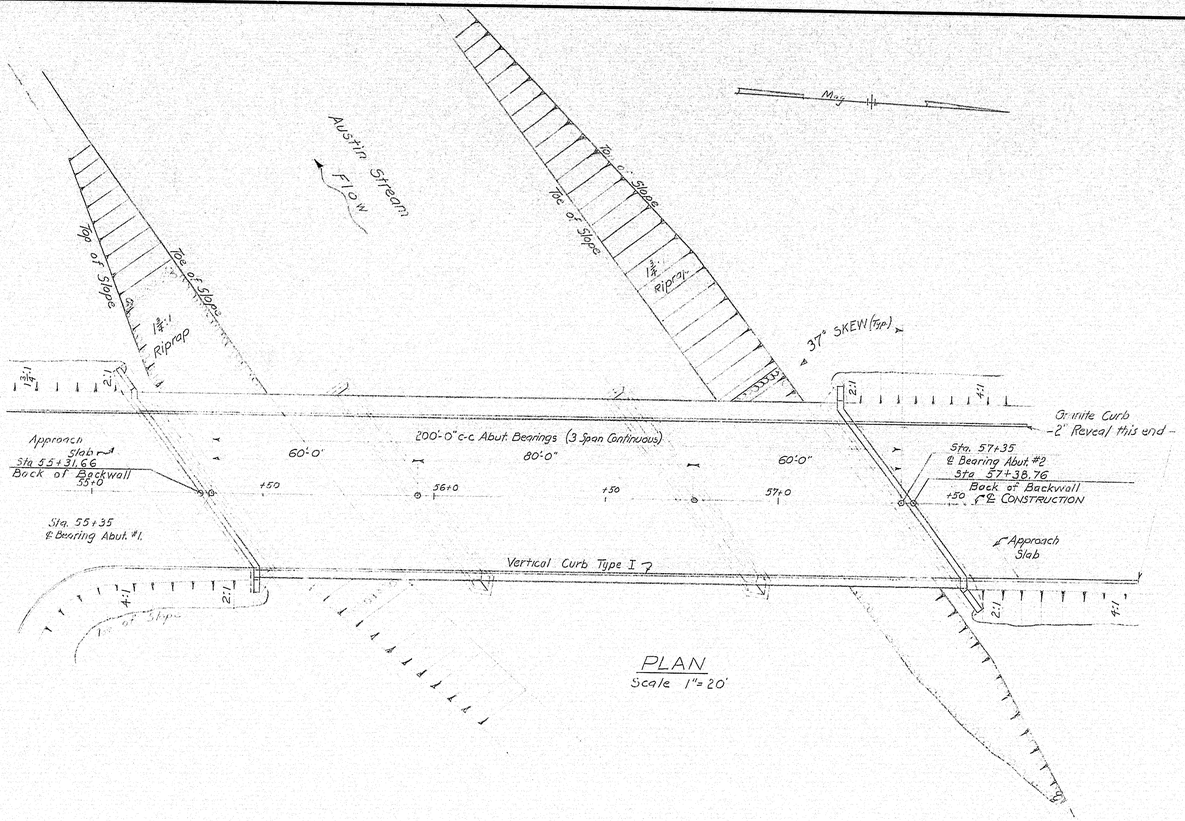
DESIGNER: M.S.H.C.

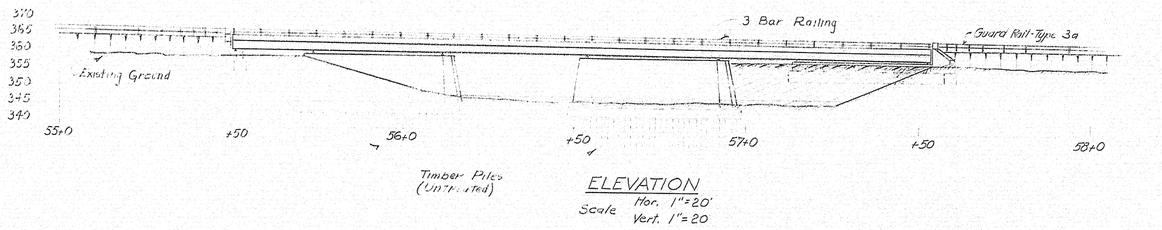
ORDER NO.	JOB NO.	DRAWING NO.
VERBAL	B68-286-	S11

103-112



B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	ER-033-1(116)	19	145





ESTIMATED BRIDGE QUANTITIES

Description	Unit	Quantity
Structural Earth Excavation, Abuts. & Ret. Walls	C.Y.	440
Structural Earth Excavation, Channel	C.Y.	3,500
Timber Piles (untreated)	Lin.ft.	4,600
Structural Concrete, Abutments & Retaining Walls	C.Y.	278
Structural Concrete, Rdwy & Sidewalk Slabs on Steel Br.	L.S.	
Structural Concrete, Approach Slabs	L.S.	
Reinforcing Steel, Fab. & Delivered	lbs.	96,500
Reinforcing Steel, Placing	lbs.	96,500
Structural Steel, Fab. & Delivered	L.S.	
Structural Steel, Erection	L.S.	
Field Painting, Structural Steel	L.S.	
Bridge Railing	Lin. ft.	385
Curing Box for Concrete Cylinders	Each	1
Epoxy Resin Surface Sealant	S.Y.	165
Vertical Bridge Curb - Type 1	Lin. ft.	406
Plain Riprap	C.Y.	500
Hand Laid Riprap	C.Y.	25
Field Office, Type B	Each	1
Crane Laid Riprap	C.Y.	1,100
Structural Concrete, Piers	C.Y.	272
Membrane Waterproofing	Sq. Yds.	988
Cofferdams, Pier #1	L.S.	
Cofferdams, Pier #2	L.S.	
Structural Earth Excavation, Piers	C.Y.	350
Hot Bituminous Pavement (Grading C)	Tons	105
Asphalt Cement	Tons	7
Removal of Existing Superstructure (approx. 27' roadway)	L.S.	
Removal of Existing Concrete	C.Y.	180
Gravel Borrow	C.Y.	160
Structural Concrete, Piers (placed under water)	C.Y.	300
Special Detour 22 ft. Rdwy	L.S.	

Note:

a. The approximate weight of structural steel based on nominal sizes, but not including the weight of welds, nuts, bolts, washers or rivets, is 273,500 pounds.

b. The approximate volume of structural concrete is:

1. Str. Conc. Rdwy & Sdwlk slabs 325 C.Y.
2. Str. Conc. Approach Slabs 32 C.Y.
3. Removal of Existing Superstructure 225 C.Y.

INDEX OF SHEETS

Sh No.	Title	Sh No.	Title
1	General Plan	10	Blocking - Bry Pedestals -
2	Survey	10	- Sidwlk. Expan Dam.
2-A	Channel Excav. Section	11	Superstructure
2-B	Channel Excav. Section	12	Superstructure Details
3	Foundation Survey	13	Bridge Rail
4	Foundation Survey	14	Rein. Steel Schedule
5	Abutment No. 1		STANDARD DETAILS
6	Abutment No. 2		BD-104-66
7	Abutment Details & Approach Slab		BD-105-64
8	Piers		BD-106-65
9	Framing Plan		

DESIGN: AASHO Standard Specifications for Highway Bridges 1965.

CONTRACT: State of Maine, State Highway Commission, Standard Specifications for Highways and Bridges, Revision of June 1965

TRAFFIC

ADT (1967)	1835
ADT (1987)	2570
DHV	360
T	6 %
D	55
V	45

DESIGN DATA

Live Loading: HS20-44

Allowable Stresses:

Concrete

f_c = 1200 #/□"

n = 10

Reinforcing Steel

Intermediate Grade - f_s = 20,000 #/□"

Structural Steel

ASTM-A572, Grade 50, 27,000 #/□"

ASTM-A572, Grade 45, 25,000 #/□"

ASTM-A36 20,000 #/□"

FLOOD DATA

Maximum flood of record - 11-3-66

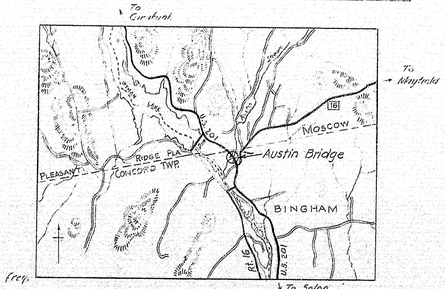
At gaging station just upstream from bridge, maximum recorded flow = 8280 c.f.s. with a c.f.s.m. of 92. Est. water elev. at 8000 c.f.s. = 356.01, 50 yr. freq.

CONCRETE CLASSIFICATION

Piers - placed under water - Class S

Piers - above footings - Class B

All other - Class A



LOCATION MAP

Scale 2" = 1 mi.

DESIGN—
TRACE—
CHECK— P.J.L.

BRIDGE NO.
SURVEY—
PLOT—

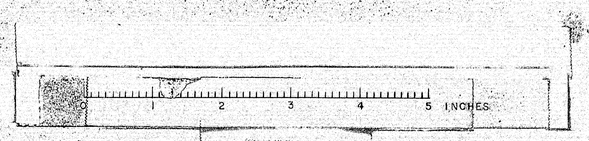
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUSTIN BRIDGE
OVER
AUSTIN STREAM
IN THE TOWN OF
BINGHAM
SOMERSET COUNTY

GENERAL PLAN

SHEET 1 OF 14 AUGUSTA, MAINE MAY 68

M-2557



B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	ER-033-1(16)	20	145

℄ L
PI 52+00.71
Δ = 13° 32'15" Lt
D = 3°-36'-00"
T = 331.59'
L = 653.82'
R = 1591.55'
E = 34.13'

Survey ℄
PI = 60+29.65
Δ = 2°-21'-20"
D = 0° 30'
T = 235.60'
L = 471.12'
R = 11,459.16
E = 2.42'

PLAIN RIPRAP

Crane Laid Riprap

Hand Laid Riprap 3'-0" Thick (Typ)

CRANE LAID RIPRAP ABUTMENT #1 & #2
TYPICAL

NOTES

Existing Superstructure - 7½" Reinforced Conc. slab, with wearing surface 5" @ ℄ and 3" @ curb. Reinf. Conc. sidewalk slab, 6 concrete beams 1'-3" to 1'-7" wide, 5 @ 3'-1½" & 1 @ 4'-4" high x 101'-6" span.

Existing Substructure — Mass concrete abutments and one stone pier.

Stream - Width at all stages, flood and tidal regimen. Drainage area 99.8 sq. mi.

Foundation - Entire stream bed of coarse gravel and boulders.

CONSTRUCTION NOTES

Remove Existing Superstructure, Payment will be made under Item 202.10 Removal of Existing Superstructure (Property of Contractor) Lump Sum. Est. Volume = 225 c.y.

Remove Existing Pier and Northerly Abutment to streambed elev. and remove Existing Southerly Abutment to 4ft. below the new channel backslope, Payment will be made at the contract unit price per cubic yard under Item 202.12 Removal of Existing Concrete.

El. 360.71 Abut 1
El. 359.35 Abut 2

NOTE

If in the opinion of the Engineer the channel back slopes beyond the crane laid riprap are not of a material which will resist erosion, they shall be protected with Plain Riprap.

Note - Existing Structure to be removed

Elevation Limits

Scales: Horiz ~ 1" = 25'
Vert. ~ 1" = 5'

PROJECT ER-033-1(16)

DESIGN -
TRACE -
CHECK -

BRIDGE NO. 2027
SURVEY - F. BARNES
PLOT - B. HARRIS

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

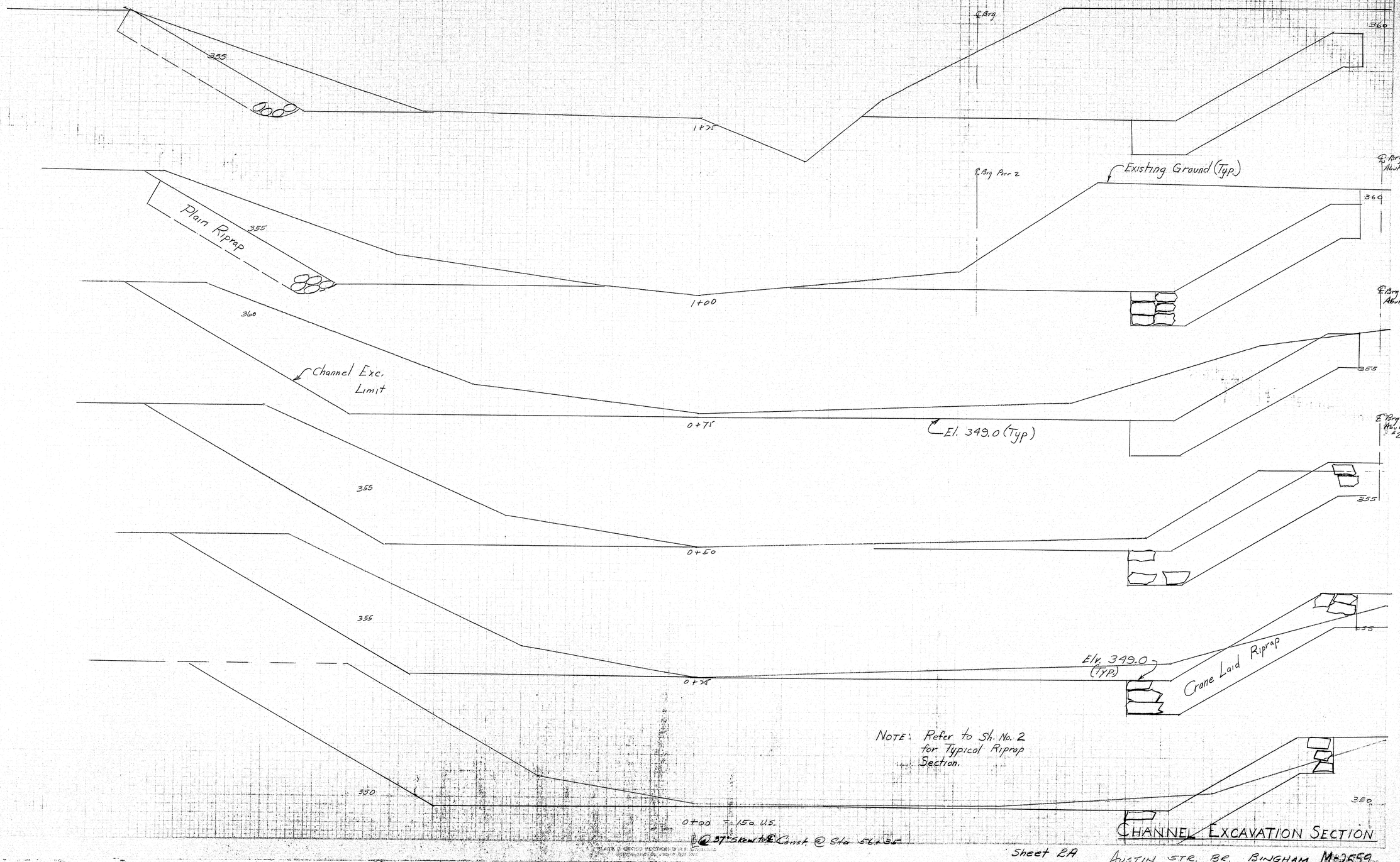
AUSTIN BRIDGE
OVER
AUSTIN STREAM
IN THE TOWN OF
BINGHAM
SOMERSET COUNTY

SURVEY

SHEET 2 OF 14 AUGUSTA, MAINE DECEMBER 1966

M-2558

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
WYO.	ER-033-1(16)	20A	195



NOTE: Refer to Sh. No. 2 for Typical Riprap Section.

CHANNEL EXCAVATION SECTION

Sheet 2A AUSTIN STR. BR. BINGHAM M-2559

PLATE 2 CROSS SECTIONS

0 1 2 3 4 5 INCHES

B. F. R. REC. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	ER-033-1(16)	208	145

Baseline for Channel Exc.

13.11 Crane Laid Riprap

2+75

350

℄ Brg Abut 1

℄ Face Existing Abut 1

2+50

plain Riprap

Note: Limits of Plain Riprap to be determined by Engineer in field

Existing Ground

360

Note: Refer to Sh. 2 for Typical Riprap Sections

℄ Brg Abut #1

2+25

355

Existing Ground

Channel Excavation limit

2+00

℄ El. 349.0

356

360

℄ Brg Pier 1

355

plain Riprap

350

1+75

Exc. for all Riprap will be paid for Under Item 206.12 Str. Earth Excav.-Channel.

℄ Brg Pier 2

360

℄ Brg Pier 1

355

Face Existing Abut #2

Crane Laid Riprap

350

1+50 = Mid Point of Structure on ℄ Const = Sta 56+35

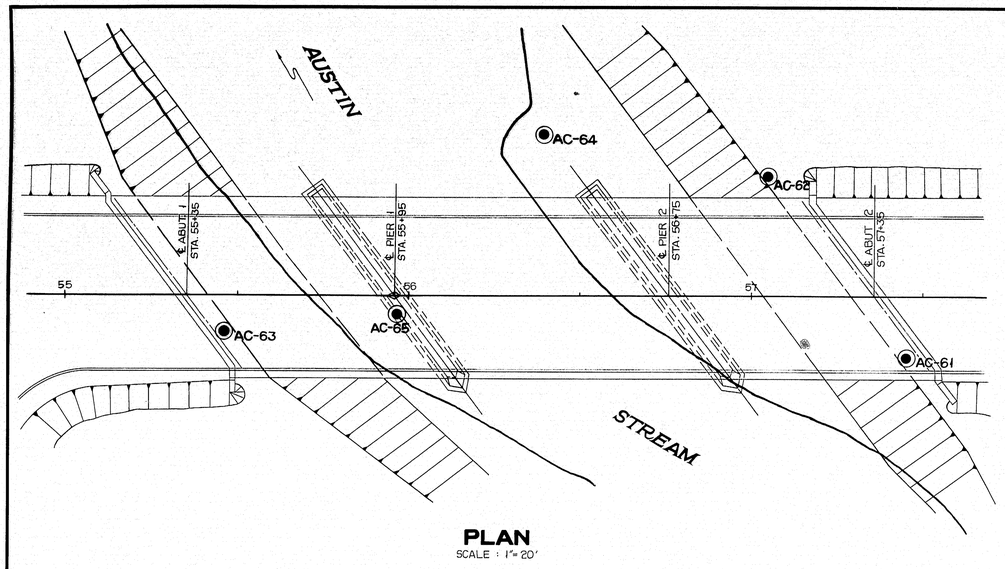
PLA & N. Morrison

0 1 2 3 4 5 INCHES.

CHANNEL EXCAVATION SECTION

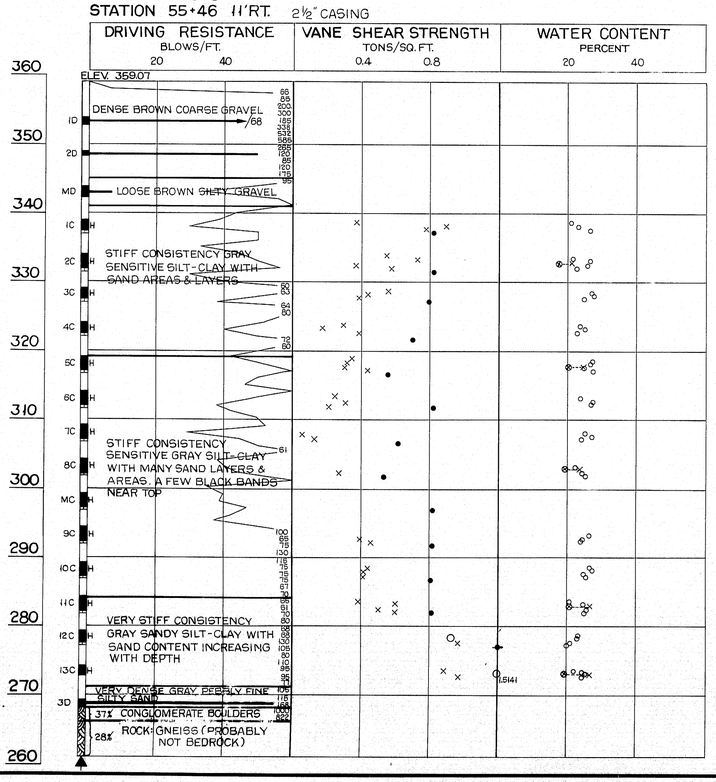
Sheet 2B AUSTIN STR BR BINGHAM M-2560

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	ER-033-1(16)	21	145

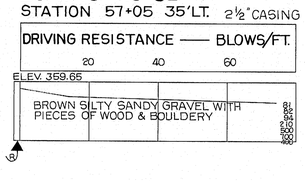


PLAN
SCALE : 1"= 20'

BORING AC-63
STATION 55+46 11'RT. 2½" CASING



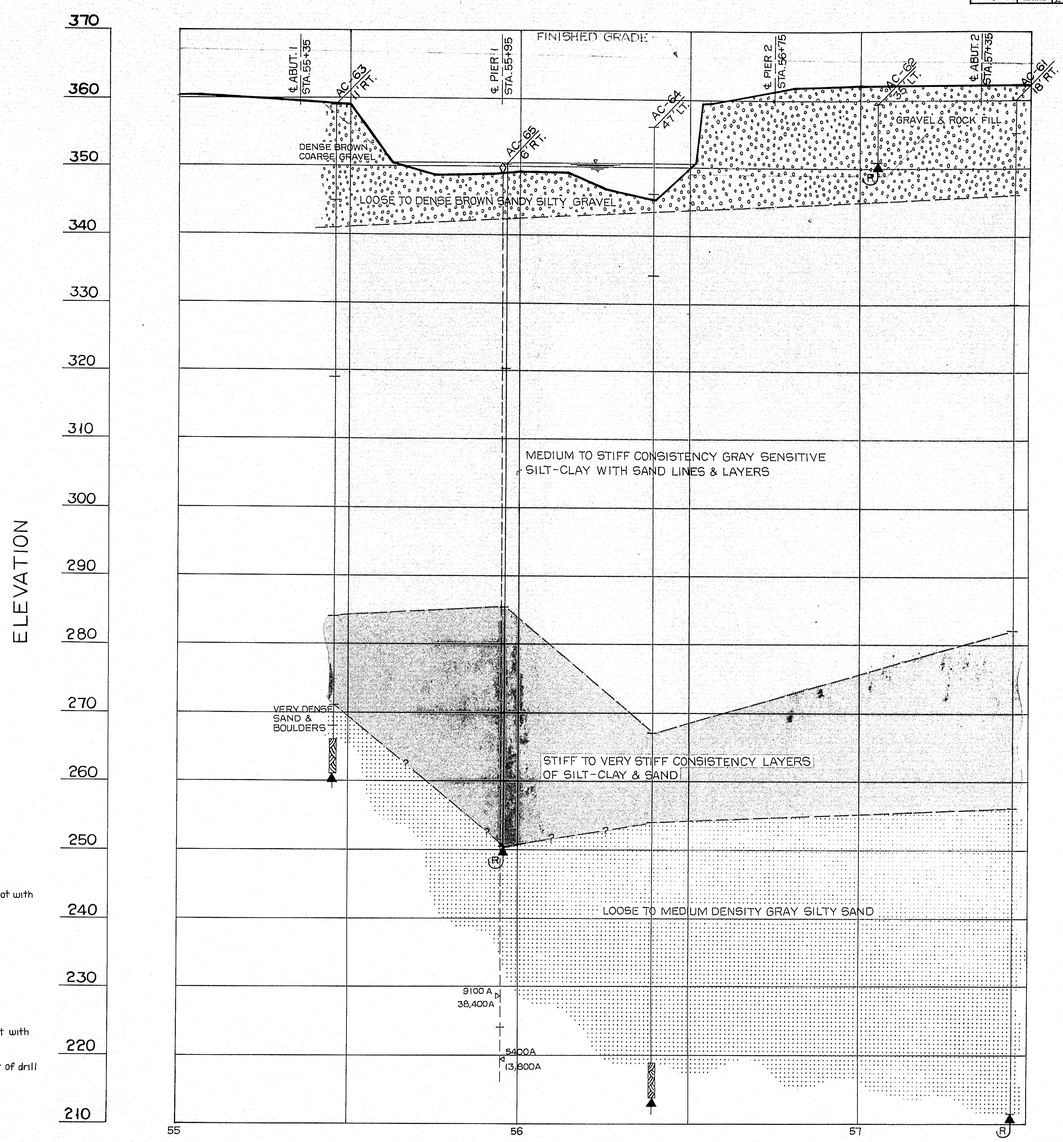
BORING AC-62
STATION 57+05 35'LT. 2½" CASING



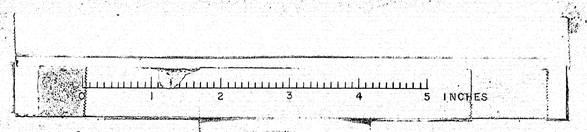
BORING NOTES
- All samples and vanes are made ahead of casing
- Number of blows required to drive extra heavy casing one foot with 400 ft. lbs. of energy per blow
- Location of sample or sample attempt
- Number and type of dry sample
  - ID S & H. Sampler # 1290's
  - IC 2" O.D. 16 ga. seamless tubing
  - IU 3 ½" O.D. 16 ga. seamless tubing
- MD Unsuccessful sample attempt and type of sampler
- Number of blows required to drive spoon or tubing one foot with 350 ft. lbs. of energy per blow.
- H Sampling spoon or seamless tubing driven by static weight of drill rods and hammer
- P Piston sampler
- Field vane test
- Bottom of boring (may not be bottom of soil strata)
- Refusal of drill rods or casing (may not be ledge)
- 71% Locations cored by diamond bit and per cent recovery of rock

SHEAR NOTES
- ● Field vane shear strengths
- × Laboratory vane shear strength
- → Shear strengths in excess of capacity of equipment
- ○ One half unconfined compressive strengths

WATER CONTENT NOTES
- o Natural water contents, given as percent of dry weight
- ⊕--X Plastic and liquid limits



PROFILE
SCALE : 1"= 10' VERT.
1"= 20' HORIZ.



DESIGN— TRACE— CHECK— From Soils Div.

BRIDGE NO. SURVEY— PLOT—

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUSTIN BRIDGE
OVER
AUSTIN STREAM
IN THE TOWN OF
BINGHAM
SOMERSET COUNTY
FOUNDATION SURVEY

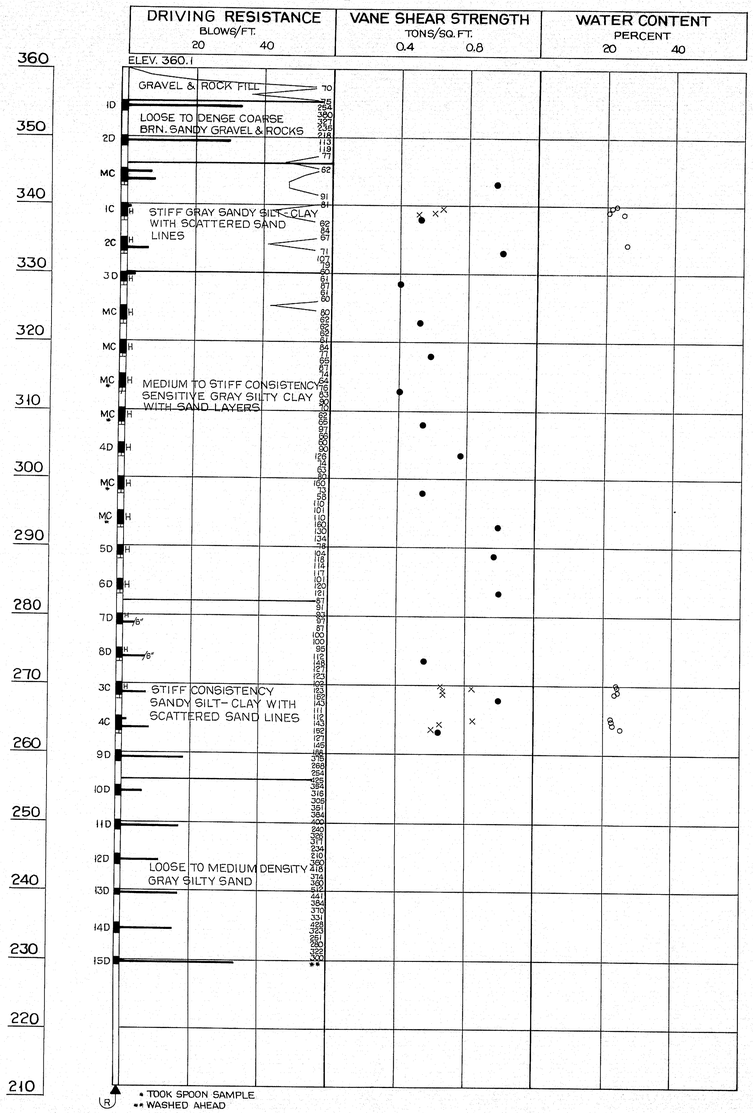
SHEET 3 OF 14 AUGUSTA, MAINE

M-2561

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	ER-033-1(16)	22	145

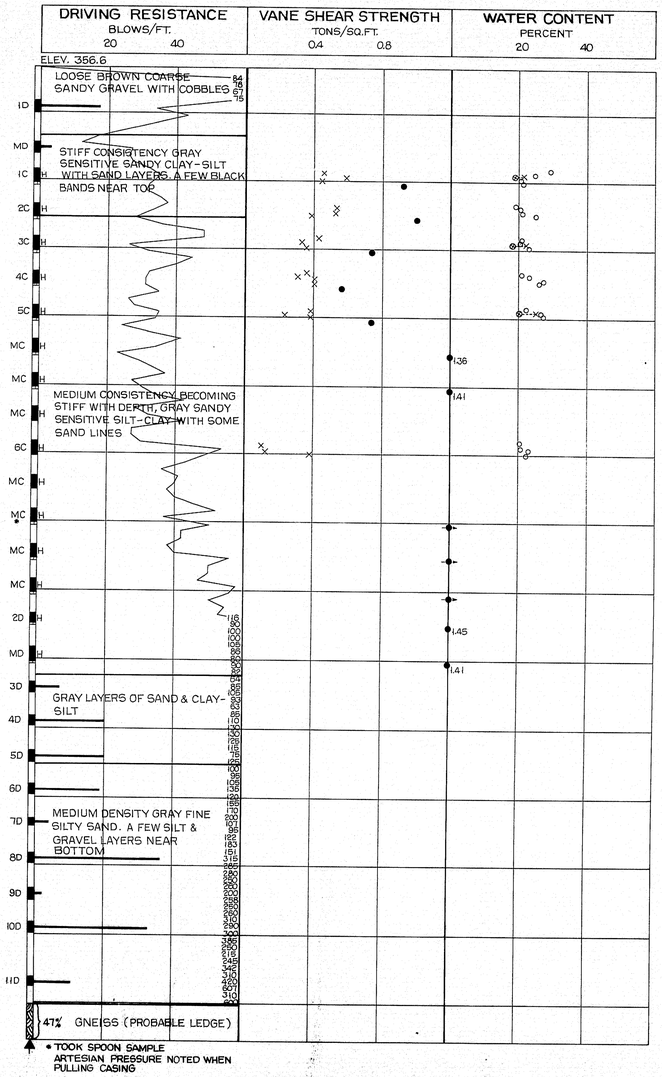
BORING AC-61

STATION 57+45 18'RT. 2½" CASING



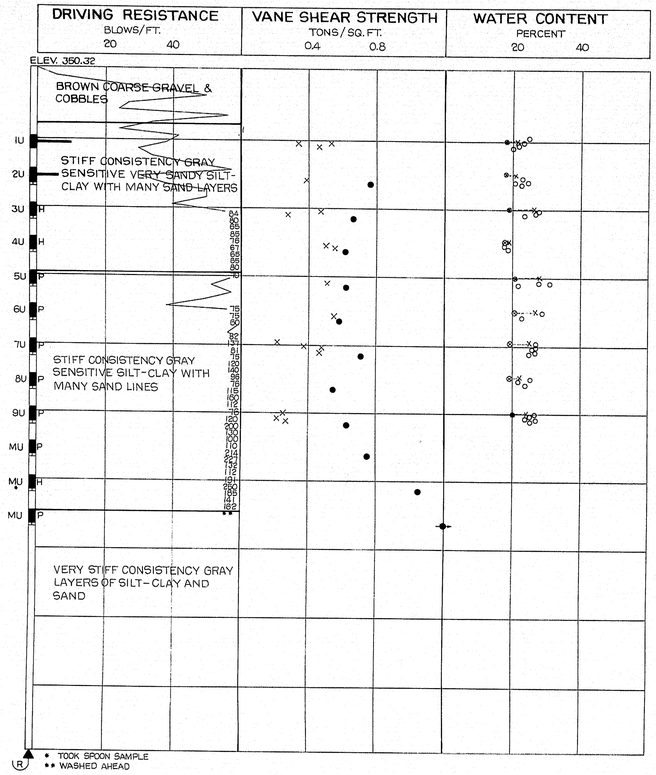
BORING AC-64

STATION 56+39 47'LT. 2½" CASING



BORING AC-65

STATION 55+96 6'RT. 4" CASING



DESIGN— TRACE— CHECK— } From Soils Dr.

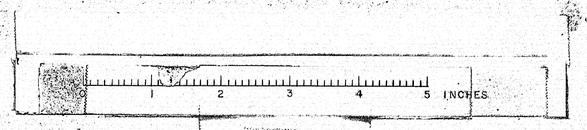
BRIDGE NO.
SURVEY—
PLOT—

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

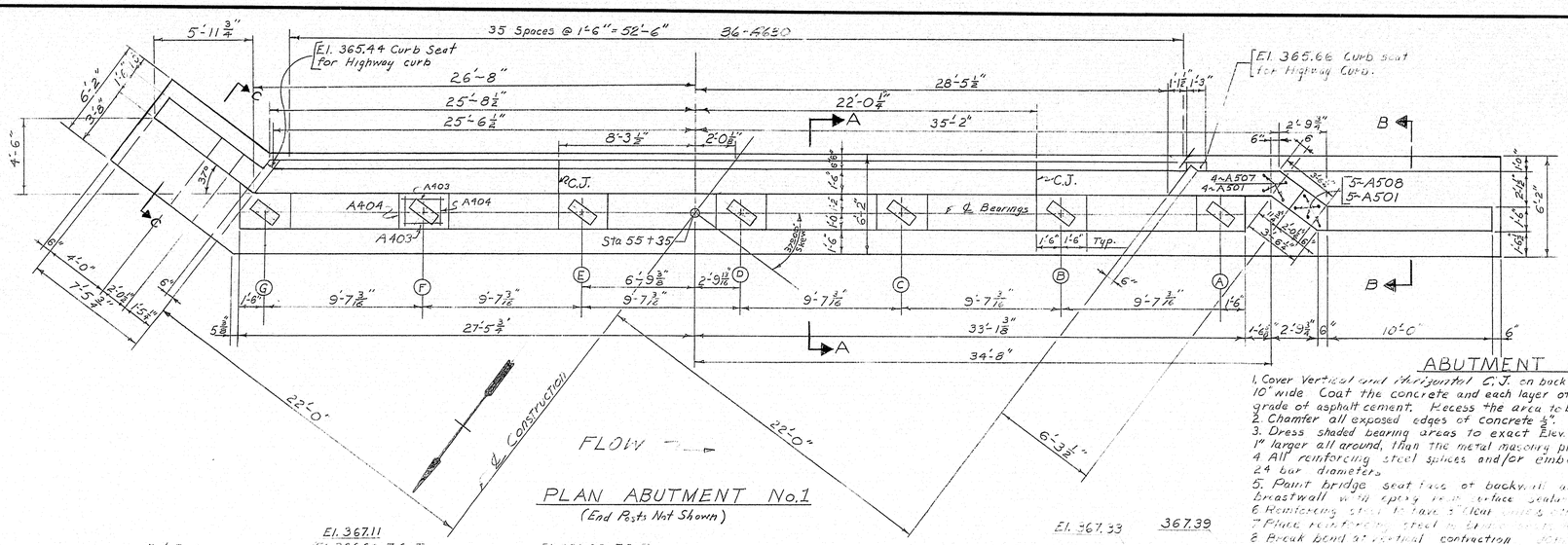
AUSTIN BRIDGE
OVER
AUSTIN STREAM
IN THE TOWN OF
BINGHAM
SOMERSET COUNTY
FOUNDATION SURVEY

SHEET 4 OF 14 AUGUSTA, MAINE

M-2562



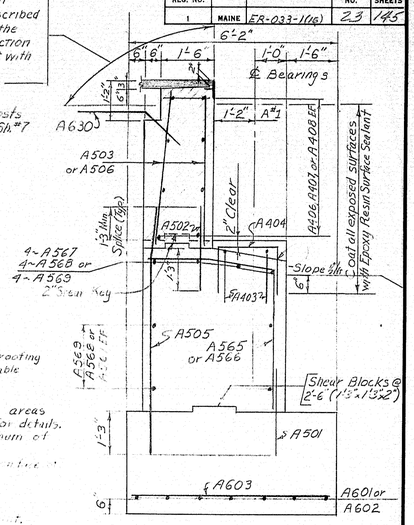
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	ER-033-1(16)	23	145



PLAN ABUTMENT No.1
(End Posts Not Shown)

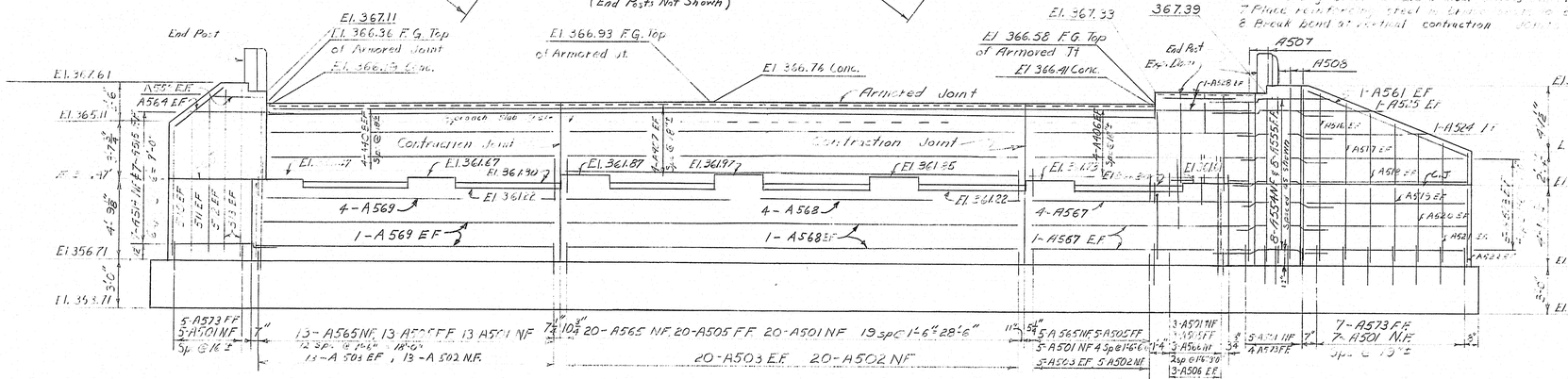
Epoxy Resin Surface Sealant
Apply a sand coating as described in Subsection 515.03 (b) of the Supplemental Specifications Section 515 to the areas in contact with Hot Bituminous Pavement.

Note: For Details of End Posts and Wing Corners, See Sh #7

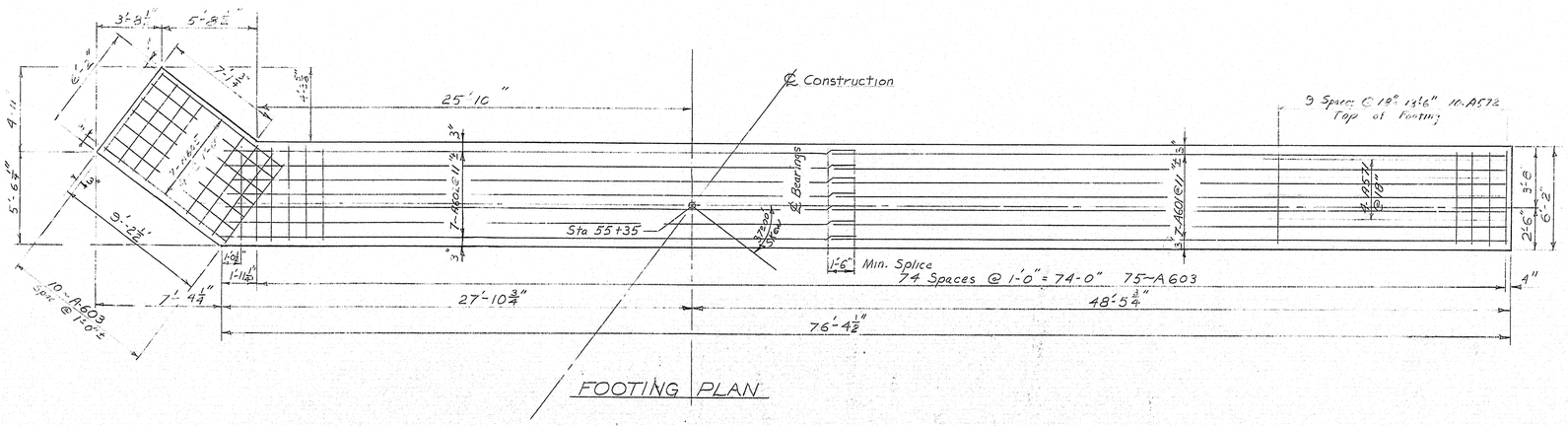


ABUTMENT NOTES

1. Cover Vertical and Horizontal C.J. on back side with 2 layers of heavy roofing 10" wide. Coat the concrete and each layer of roofing as applied with a suitable grade of asphalt cement. Recess the area to be covered $\frac{1}{4}$".
2. Chamfer all exposed edges of concrete $\frac{3}{4}$".
3. Dress shaded bearing areas to exact Elev. shown. Dress shaded bearing areas 1" larger all around, then the metal masonry plates. See sheet # 10 of 14 for details.
4. All reinforcing steel splices and/or embedments are to be a minimum of 24 bar diameters.
5. Paint bridge seat face of backwall and 6" below top of wings, abut. & breastwall with epoxy resin surface sealant.
6. Reinforcing steel to have 2" clear cover to concrete, typ.
7. Place reinforcing steel in Elements [illegible] to form anchor bolts.
8. Break bond at vertical contraction [illegible] with a coat of [illegible].



FRONT ELEVATION ABUTMENT No. 1



FOOTING PLAN

SECTION A-A

Note:
N.F. = Near Face
F.F. = Far Face
E.F. = Each Face
C.J. = Construction or Contraction Joints

DESIGN—
TRACE—
CHECK—

BRIDGE NO.
SURVEY—
PLOT—

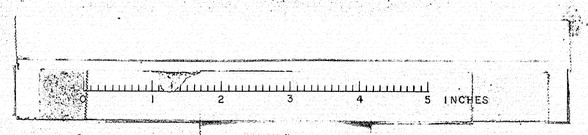
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUSTIN BRIDGE
OVER
AUSTIN STREAM
IN THE TOWN OF
BINGHAM
SOMERSET COUNTY

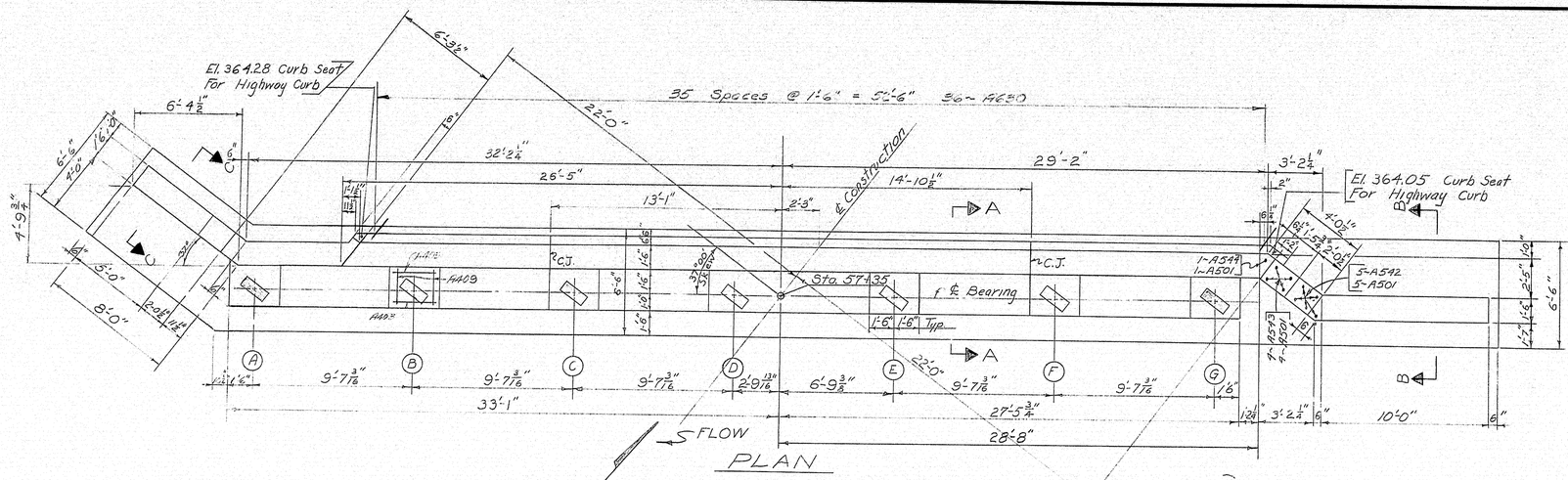
ABUTMENT No. 1

SHEET 5 OF 14 AUGUSTA, MAINE MAY 68

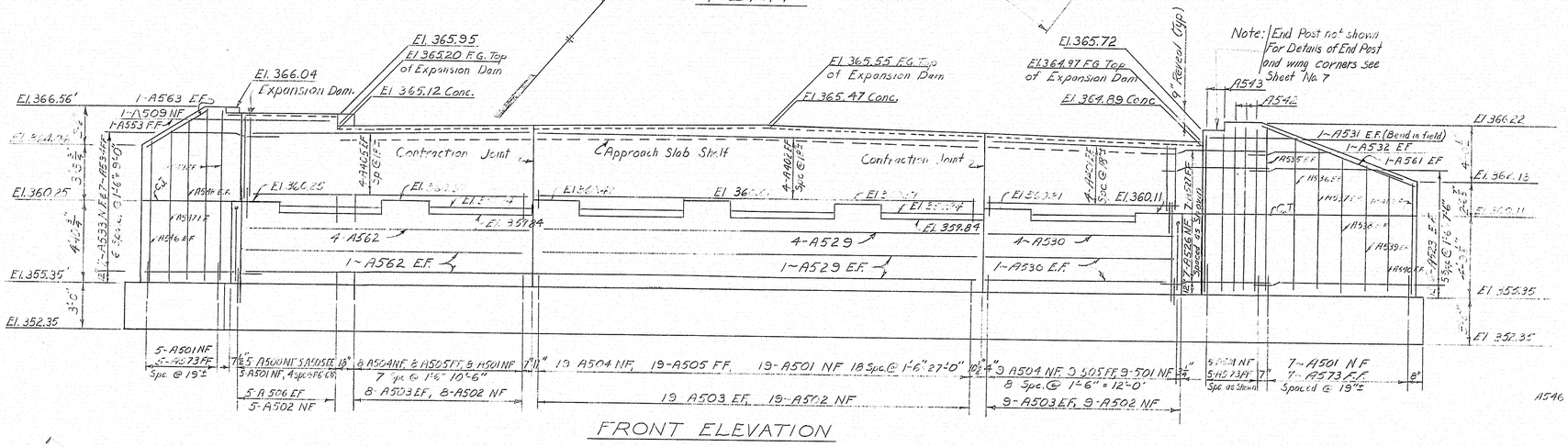
M-2563



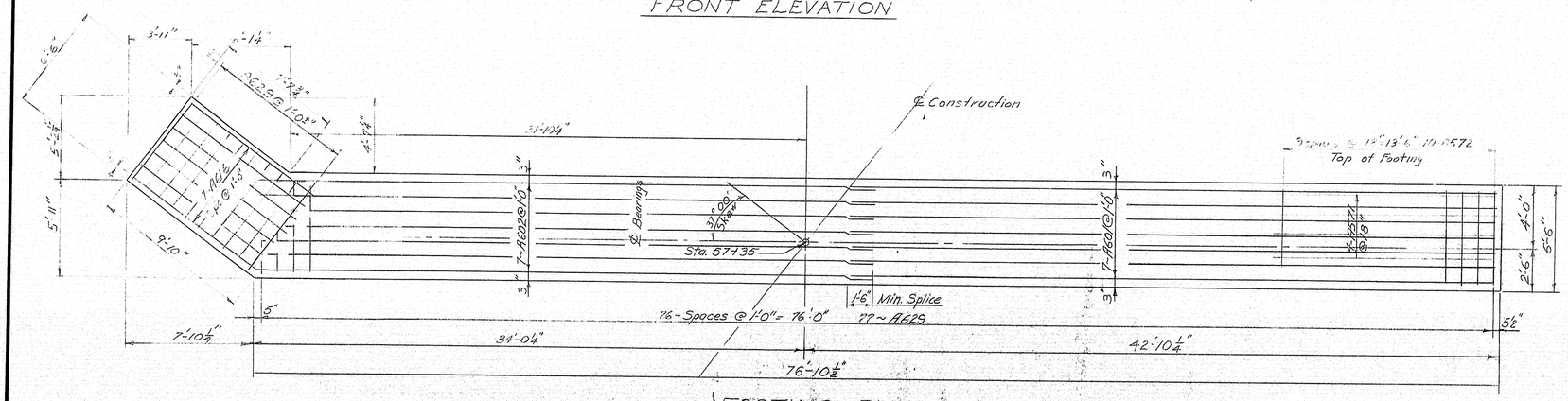
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	FR-033-1(6)	24	145



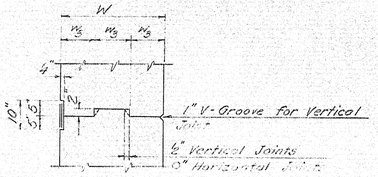
PLAN



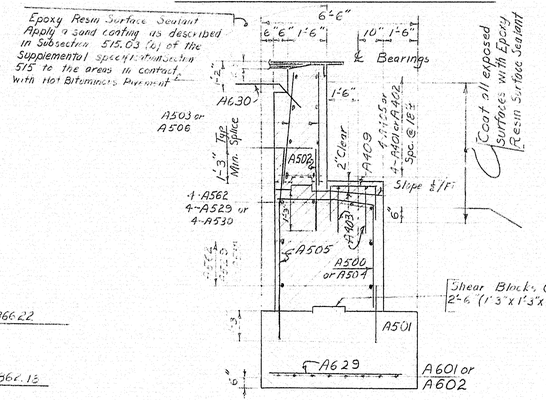
FRONT ELEVATION



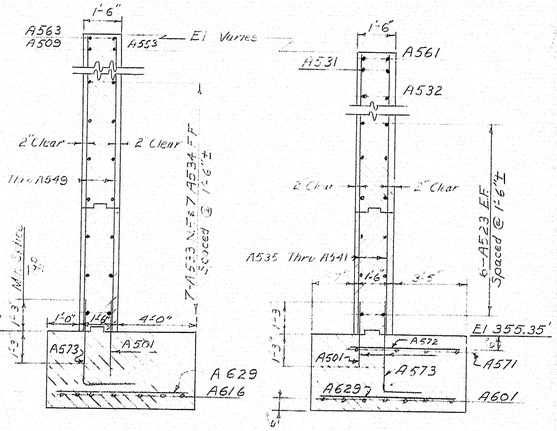
FOOTING PLAN



TYPICAL JOINT DETAIL



SECTION A-A



SECTION C-C

SECTION B-B

NOTE:

N.F. = Near Face
F.F. = Far Face
E.F. = Each Face
C.J. = Construction or Contraction Joints.

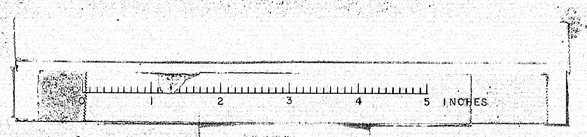
DESIGN- GDT	BRIDGE NO.
TRACE-	SURVEY-
CHECK- SAR	PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

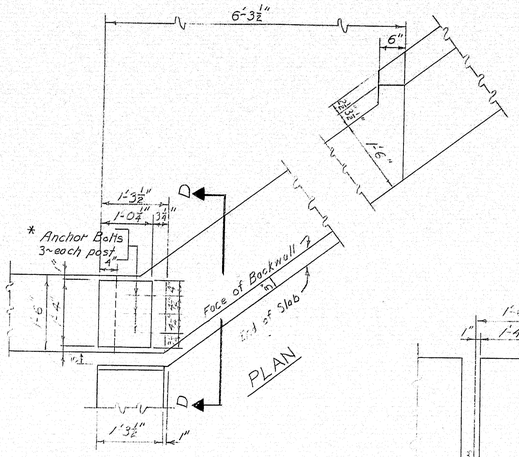
AUSTIN BRIDGE
OVER
AUSTIN STREAM
IN THE TOWN OF
BINGHAM
SOMERSET COUNTY
ABUTMENT No. 2

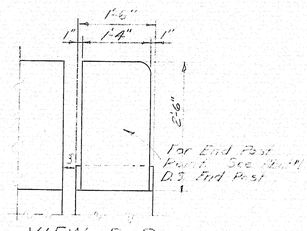
SHEET 6 OF 14 AUGUSTA, MAINE MAY 68

M-2564

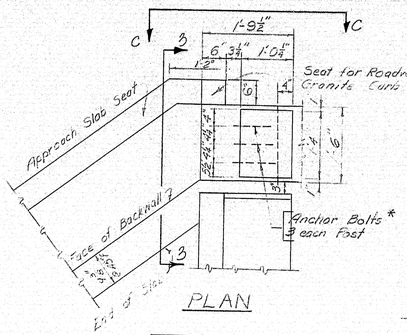


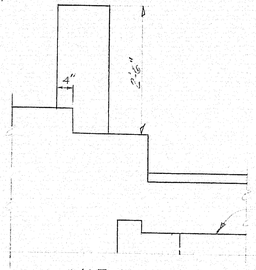
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	ER-1033-1(14)	25	145

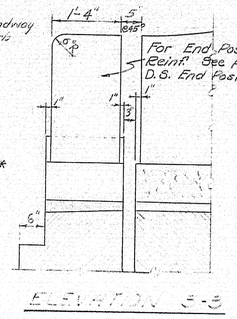




END POST D.S. ABUT. No. 2







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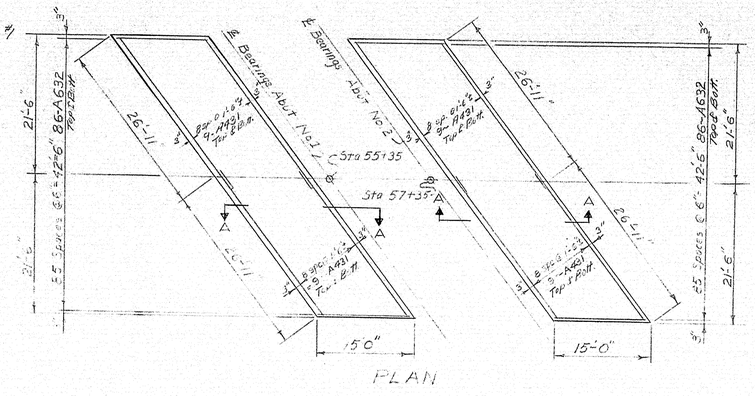
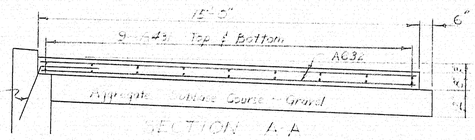
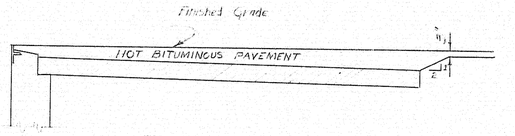
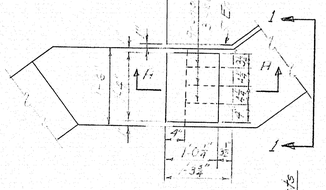
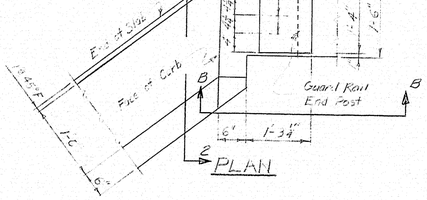
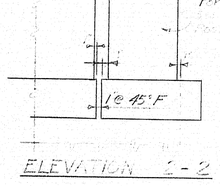


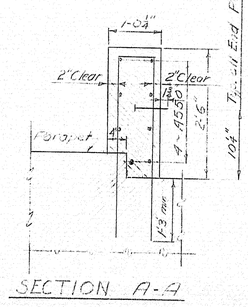


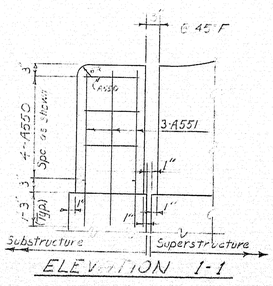




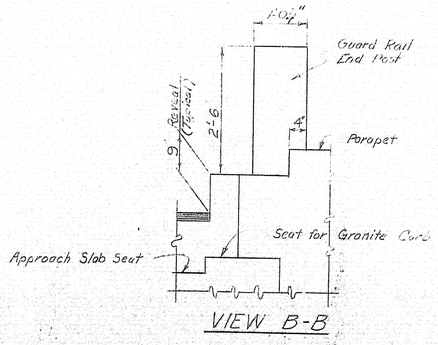








END POST D.S. ABUT No. 1



END POST U.S. ABUT No. 1

* NOTE:
Anchor bolts for Guard Rail Type 3D shall be 1¼"ø x 8'-0" long, HS bolts with nut and hardened washer 1½ - 7D - 10.3 with 1⅞ hole. Provide 1½" holes in guard rail beam. Spacing as shown on Standard Details, Dec 1961 ed. Anchor bolts, nuts and washers shall be galvanized.

DESIGN- G.O.T.	BRIDGE NO.
TRACE- R.Detwiler K.G	SURVEY-
CHECK- L.L.R.	PLOT-

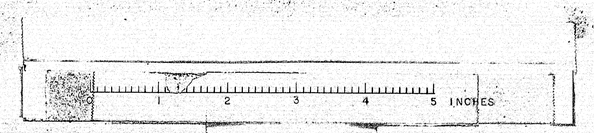
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUSTIN BRIDGE
OVER
AUSTIN STREAM
IN THE TOWN OF
BINGHAM
SOMERSET COUNTY

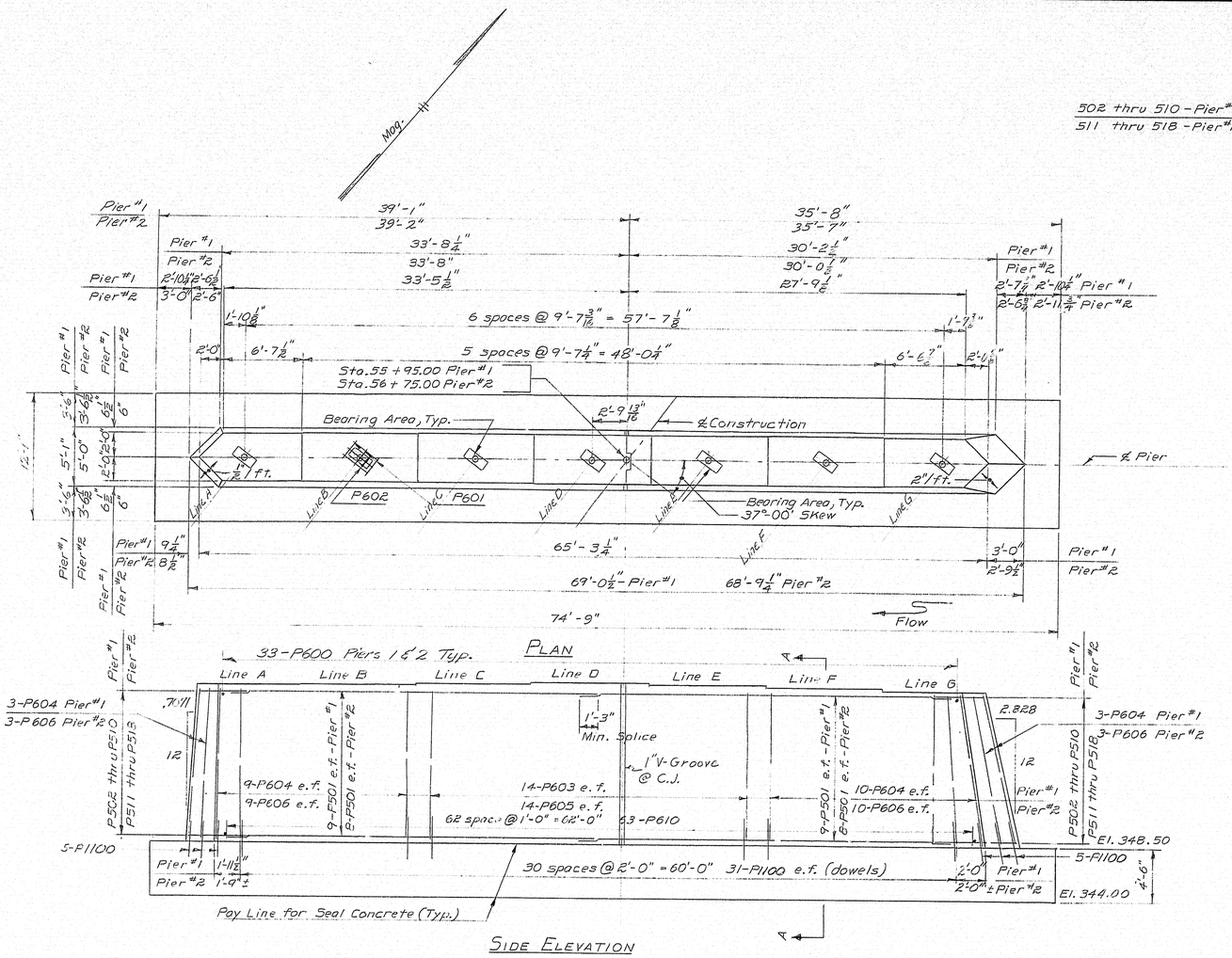
ABUTMENT DETAILS & APROACH SLAB

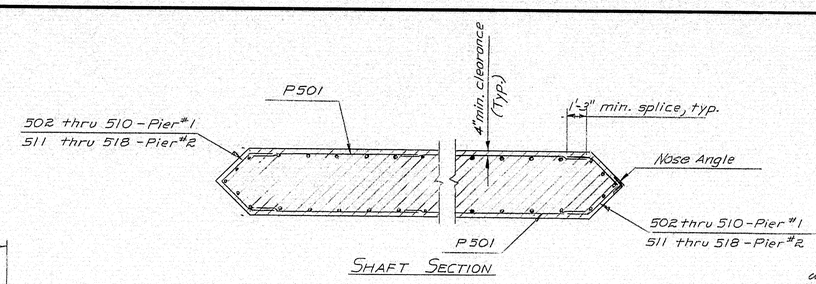
SHEET 7 OF 14 AUGUSTA, MAINE MAY 68

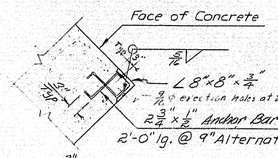
M-2565



B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	ER-033-1(16)	26	145



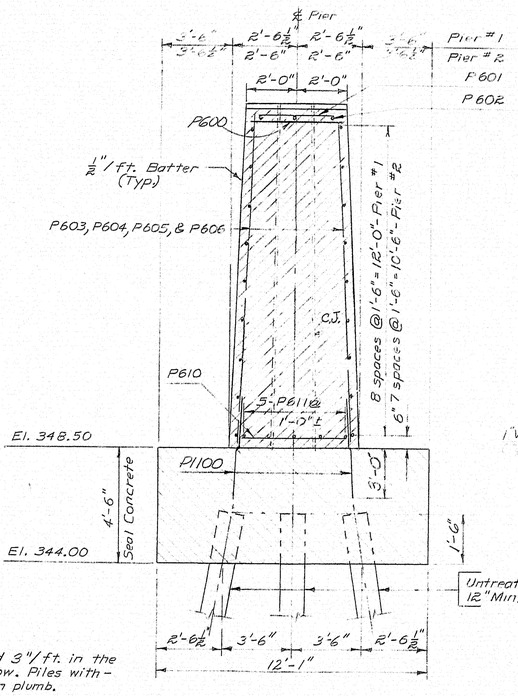




8"x8"x3/4" Nose Angle Shall conform with ASTM designation A 44 / modified. Contain restraint steel, upstream end of pier only. Payment for nose angle shall be incidental to Item 502.25 Structural Concrete Piers

NOSE ANGLE DETAIL

Bearing Elevations							
Line	A	B	C	D	E	F	G
Pier #1	361.34	361.41	361.59	361.71	361.60	361.40	361.20
Pier #2	360.45	360.51	360.69	360.81	360.71	360.51	360.31



SECTION A-A

GENERAL PIERS NOTES

Seal concrete dimension are predicated on use of DP2 or equivalent steel sheet piling with appropriate standard rolled corners.

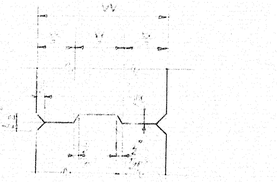
Seal concrete is intended to be placed under water and to be paid for under Item 502.24.

The depth of concrete seal is calculated assuming a water elevation of 354.00.

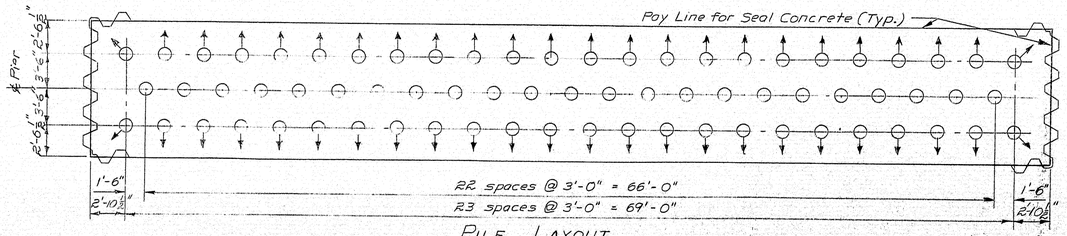
Drilling and grouting of dowels, P1100 to be incidental to Item 503.13. The mortar to be used for grouting the P1100 dowels shall be an approved Non-shrink mortar.

Reinforcing steel shall have 4" Cover unless otherwise shown.

Place bars P601 & P602 to clear anchor bolts.



VERTICAL CONSTRUCTION JOINT



PILE LAYOUT

PILE NOTES

Piles to be battered 3" / ft. in the direction of the arrow. Piles without arrows to be driven plumb.

Piles to have a 12" min. diameter 3 ft. from butt and an 8" min. tip diameter.

142 piles req'd, driven length to be 30' (±6") below bottom of seal elev. as shown on plans unless a driving resistance of 24 tons/piles is reached first. Each pile is to be driven in one operation, and in no case shall a pile be left above grade if it has not reached a driving resistance of 24 tons.

e.f. = each face

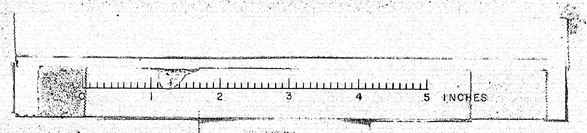
DESIGN- J.C.	BRIDGE NO.
TRACE- C.M.R.	SURVEY-
CHECK- J.H.K.Jr.	PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUSTIN BRIDGE
OVER
AUSTIN STREAM
IN THE TOWN OF
BINGHAM
SOMERSET COUNTY
PIERS

SHEET 8 OF 14 AUGUSTA, MAINE MAY 68

M-2566



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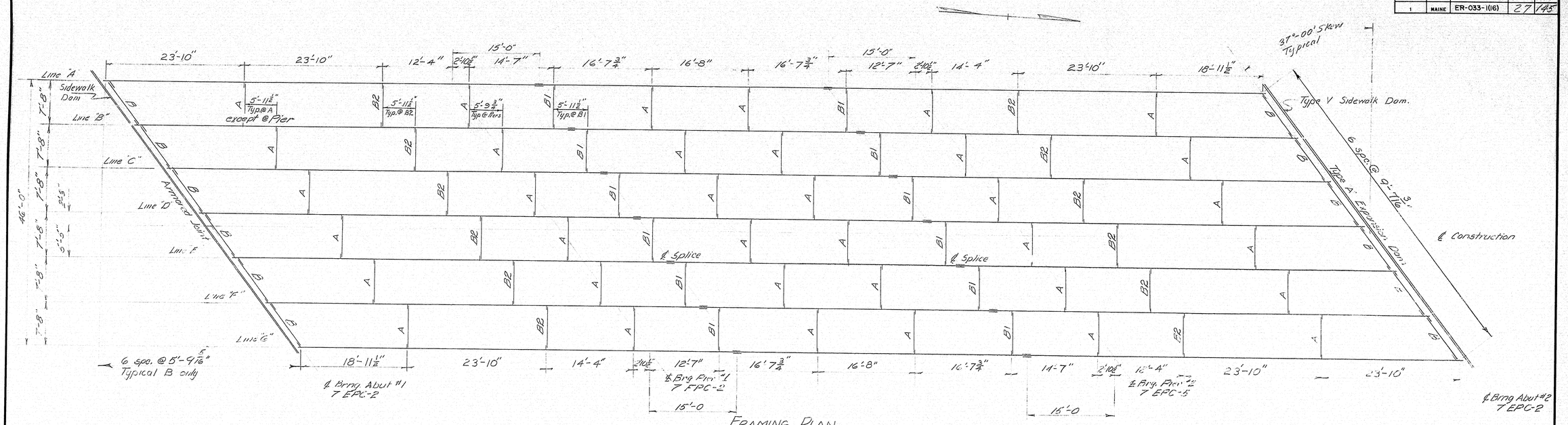
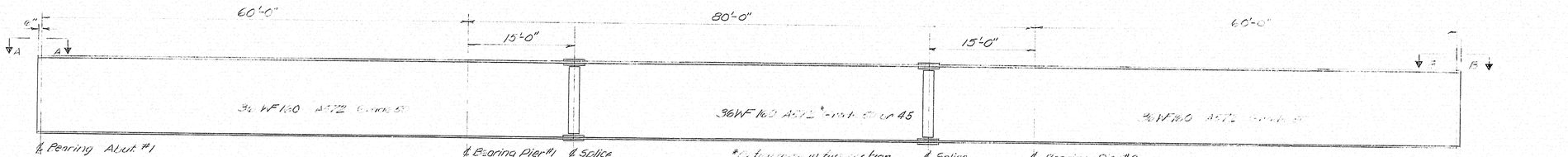
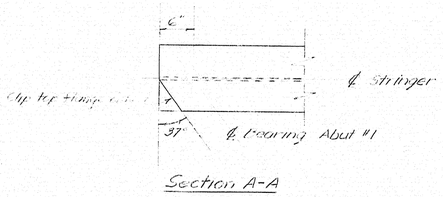


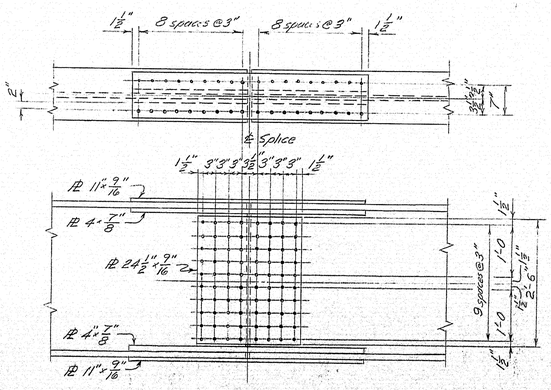
FRAMING PLAN



TYPICAL STRINGER ELEVATION

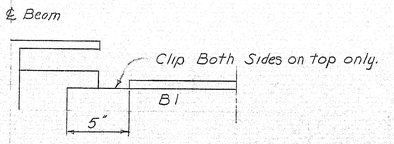


Section A-A

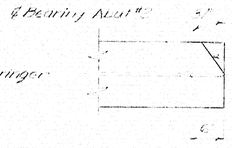


SPLICE DETAIL

7/8" H.S. Bolts ~ 15/16" ℄ Holes



DIAPHRAGMS B1 DETAIL



Section B-B

NOTES:

1. Structural steel beams and splices shall conform to A.S.T.M. designation A572 Grade 50, except as an option ASTM A572 Grade 45 will be allowed for splice plates and for the beam section as shown in the Typical Stringer Elevation.
2. All other structural steel except as noted on the Standard Details, shall conform to A.S.T.M. designation A36.
3. No camber required.
4. All dimensions are horizontal.
5. For abut #1 sidewalk expansion dam see sheet #10
6. For bearing pedestals see sheet #10
7. Standard Detail References
   - For Diaphragms (36 Type A; 12 each, Types B, B1, B2) — BD 104-66
   - For Armored Joints — BD-104-66
   - For Expansion Dams — BD-105-64
   - For Drains (12 required) — BD-104-66

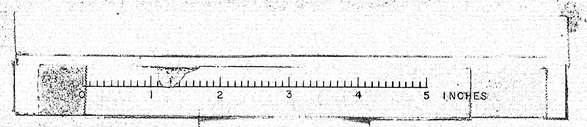
DESIGN- J.C.
TRACE- T.W.R.
CHECK- D.F.P.G.
BRIDGE NO.
SURVEY- F. Barnes
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

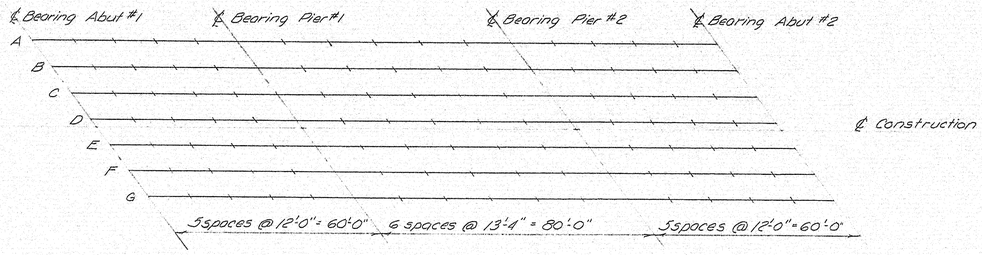
AUSTIN BRIDGE
OVER
AUSTIN STREAM
IN THE TOWN OF
BINGHAM
SOMERSET COUNTY
FRAMING PLAN

SHEET 9 OF 14 AUGUSTA, MAINE MAY 68

M-2567



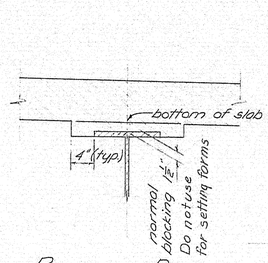
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	ER-033-1(06)	28	145



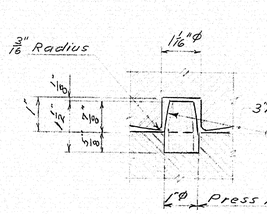
	℄ Brg Abut 1	+12'-0"	+24'-0"	+36'-0"	+48'-0"	℄ Brg Pier 1	+13'-4"	+26'-8"	+40'-0"	+53'-4"	+66'-8"	℄ Brg Pier 2	+12'-0"	+24'-0"	+36'-0"	+48'-0"	℄ Brg Abut 2
Line A	365.71	365.66	365.59	365.50	365.39	365.30	365.24	365.19	365.11	365.01	364.88	364.76	364.68	364.62	364.55	364.46	364.35
Line B	365.83	365.78	365.71	365.62	365.52	365.43	365.36	365.31	365.23	365.13	365.00	364.88	364.81	364.74	364.67	364.58	364.47
Line C	365.95	365.90	365.83	365.74	365.64	365.55	365.48	365.43	365.35	365.25	365.12	365.00	364.93	364.86	364.79	364.70	364.59
Line D	366.07	366.02	365.95	365.86	365.76	365.67	365.60	365.55	365.47	365.37	365.24	365.12	365.05	364.98	364.91	364.82	364.71
Line E	365.97	365.92	365.84	365.75	365.65	365.56	365.50	365.44	365.37	365.26	365.13	365.02	364.94	364.88	364.81	364.72	364.61
Line F	365.77	365.72	365.64	365.55	365.45	365.36	365.30	365.24	365.17	365.06	364.93	364.82	364.74	364.68	364.61	364.52	364.41
Line G	365.57	365.52	365.45	365.36	365.25	365.16	365.10	365.05	364.97	364.86	364.74	364.62	364.54	364.48	364.41	364.32	364.21

- BLOCKING LOCATIONS & BOTTOM OF SLAB ELEVATIONS -

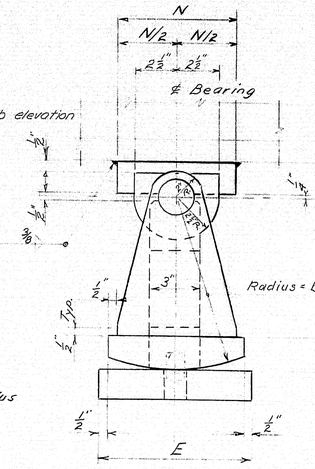
NOTE: The above bottom of slab elevations have been adjusted to compensate for the effects of the dead loads.

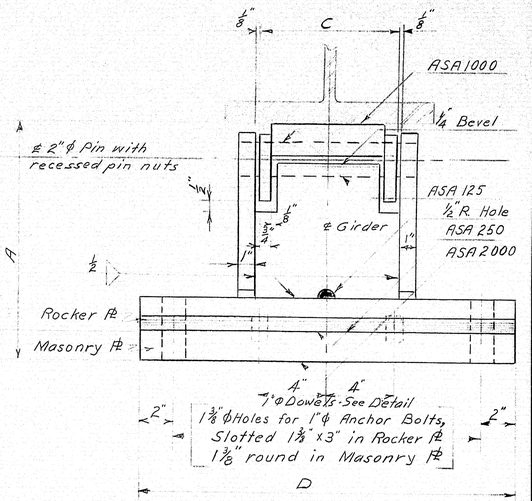


- BLOCKING DETAIL -



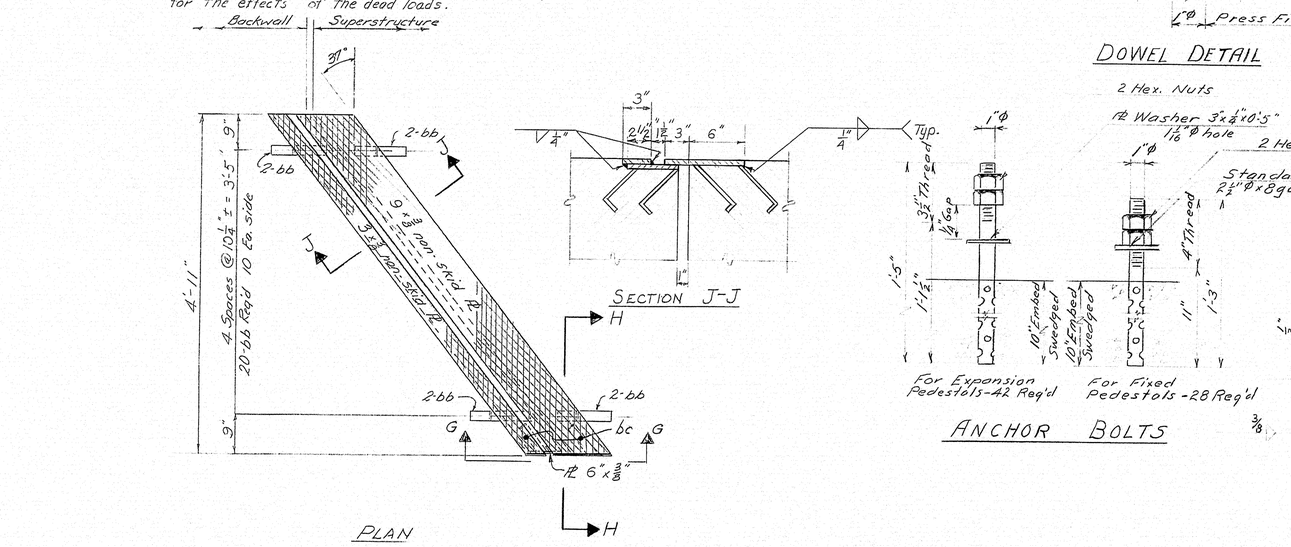
DOWEL DETAIL





Pedestal / Dim.	A	B	C	D	E	F	N	Location	No. Required
EPC-2	11 3/16"	8"	8"	1'-8"	8"	1 1/2"	6"	Abut 1 & 2	14
EPC-5	1'-2 1/4"	10"	9"	2'-0"	10"	2"	8"	Pier 2	7

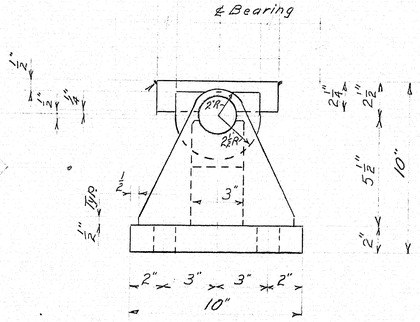
EXPANSION PEDESTALS

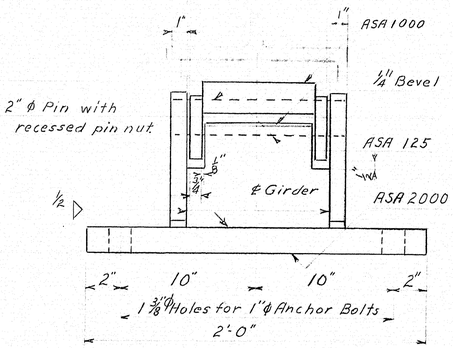


Note: Refer to Standard Details (BD 105-64) for Sidewalk Expansion Dam @ Abut #2.

SIDEWALK EXPANSION DAM

1 Req'd (Abut #1 End)





FPC-2 FIXED PEDESTAL

7 Required Pier 1

NOTE:-

At the location of bearing pedestals, the concrete bridge seats shall be dressed one inch larger all around than the size of the masonry plates and to the exact elevations shown on the plans. If the dressed areas are below the surrounding bridge seat, a small channel shall be cut to the edge of the bridge seat for drainage where required by the Engineer. Channels shall have a minimum width of 2" and a minimum slope of 1/2"/ft. No separate payment is to be made for this work as it shall be considered incidental to the contract items.

Fabricate pedestals with 3/8" shop fillet welds unless otherwise shown.

DESIGN- E. Stevens 6 66
TRACE- T.W.B. 5 22 67 AUST
CHECK- JWK 12-67

BRIDGE NO.
SURVEY- F. Barnes
PLOT-

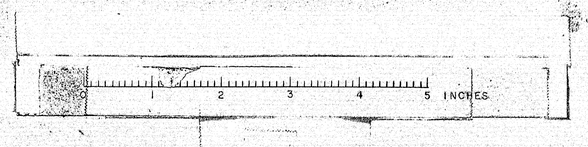
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUSTIN BRIDGE
OVER
AUSTIN STREAM
IN THE TOWN OF
BINGHAM
SOMERSET COUNTY

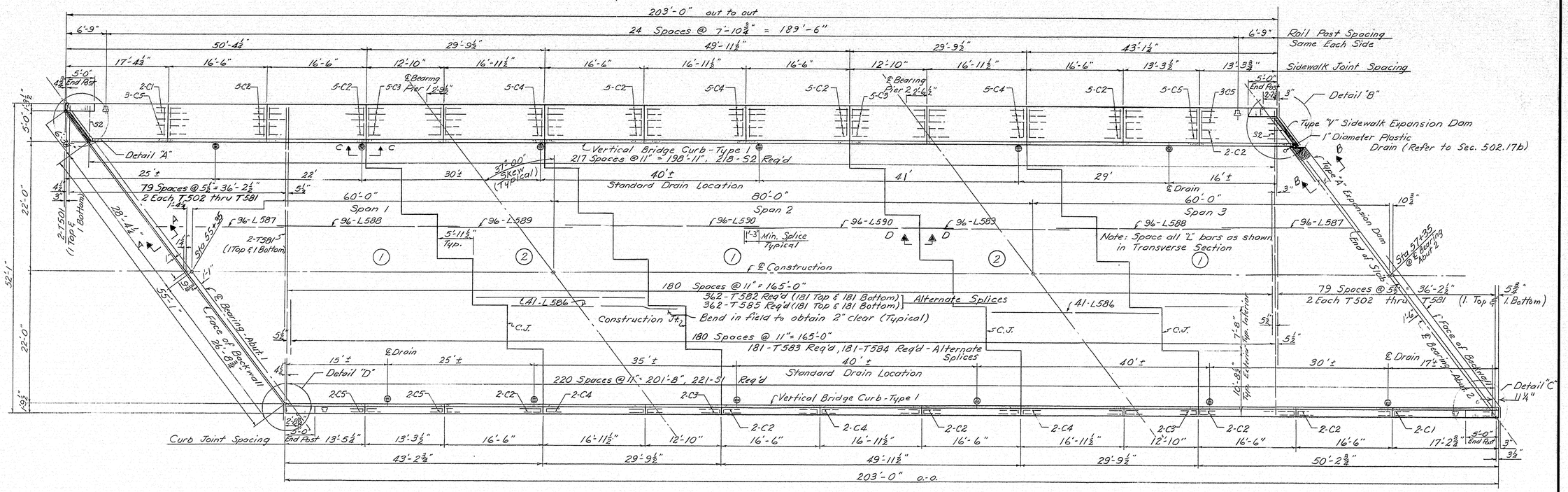
BLOCKING - BRG. PEDESTALS - SDWLK. EXPAN. DAM.

SHEET 10 OF 14 AUGUSTA, MAINE MAY, 68

M-2568

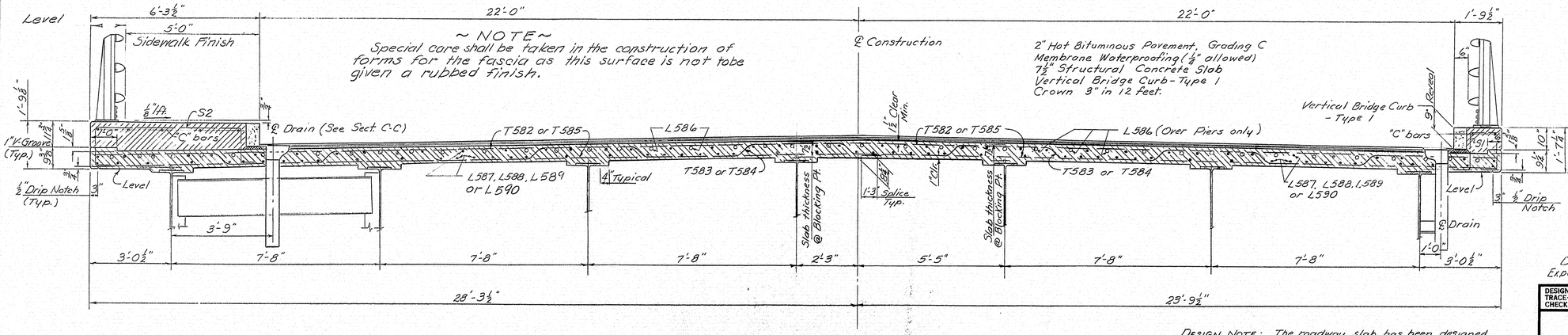


B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	ER-033-1(16)	29	195



SUPERSTRUCTURE PLAN

Place all panels marked (1) before placing panels marked (2)



TRANSVERSE SECTION

DESIGN NOTE: The roadway slab has been designed for a total depth ¼" less than the detailed dimension because of the tolerance allowed in fabricating reinforcing steel as stated in subsection 503.05 of the Standard Specifications.

NOTES

1. Provide joints in granite at every joint in concrete curb.
2. Form a 1" V-Groove on outside face of curb and slab at each Contraction Joint.
3. At curb contraction joints over centerline of Piers, use ½" preformed expansion joint filler for granite and concrete curb. At all other contraction joints in concrete curb, break the bond by coating with a suitable grade of asphalt paint.
4. Reinforcing Steel to have 2" clearance unless otherwise noted.
5. See Sh. 12 for details.

REFERENCES

Drains - Standard Details BD 104-66
Expansion Dams - Standard Details BD 105-64

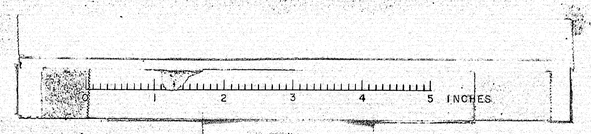
DESIGN- E. STEVENS & J.C.	BRIDGE NO.
TRACE- DETAIL- P.L.A.	SURVEY-
CHECK-	PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUSTIN BRIDGE
OVER
AUSTIN STREAM
IN THE TOWN OF
BINGHAM
SOMERSET COUNTY
SUPERSTRUCTURE

SHEET 11 OF 14 AUGUSTA, MAINE MAY 1968

M-2569



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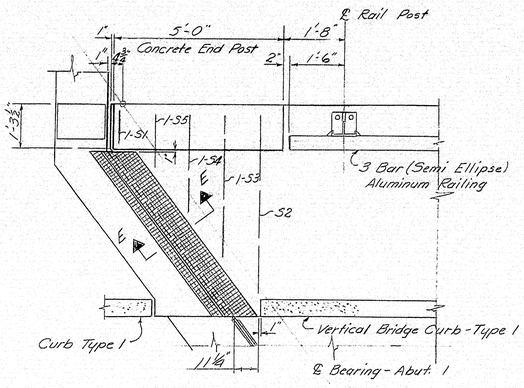
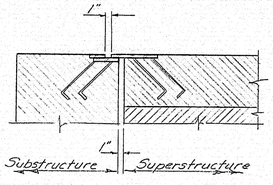
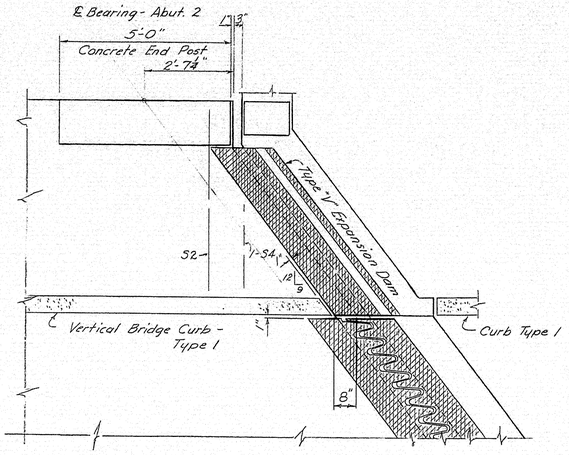


DETAIL "A"

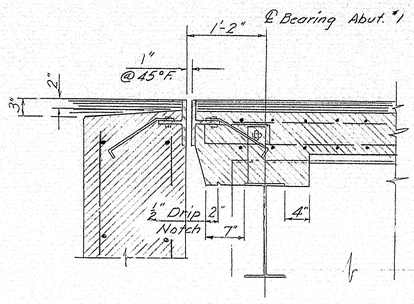
Refer to Sheet 10 for Expansion Dam Detail.



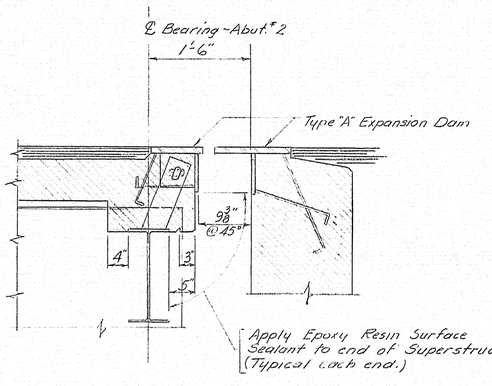
SECTION E-E



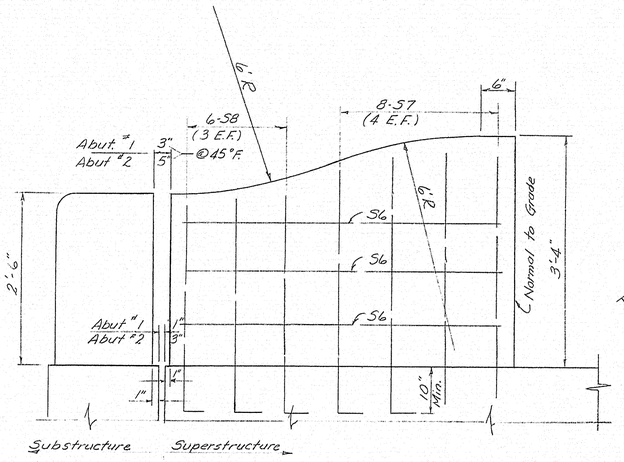
DETAIL "B"



SECTION A-A

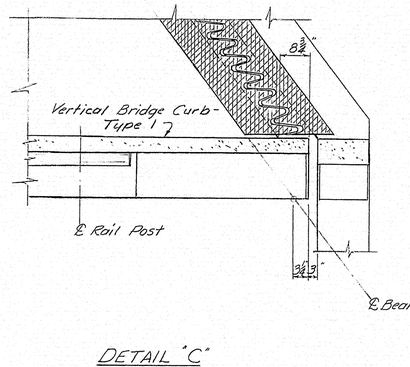


SECTION B-B

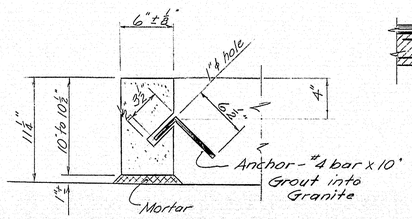


SUPERSTRUCTURE END POST DETAIL

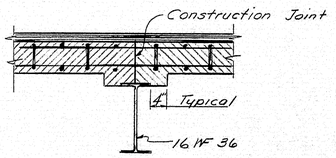
DETAIL "D"



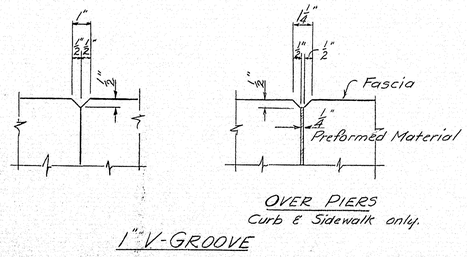
DETAIL "C"



DETAIL - VERTICAL BRIDGE CURB - TYPE 1

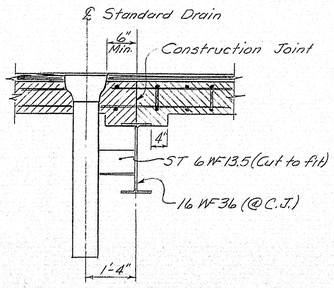


SECTION D-D



OVER PIERS
Curb & Sidewalk only.

1" V-GROOVE



SECTION C-C

DESIGN-	BRIDGE NO.
TRACE- DETAIL V.L.A.	
CHECK-	SURVEY-
	PLOT-

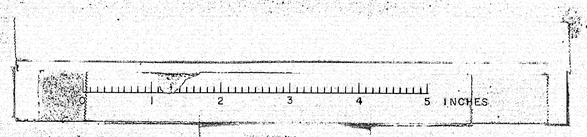
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUSTIN BRIDGE
OVER
AUSTIN STREAM
IN THE TOWN OF
BINGHAM
SOMERSET COUNTY

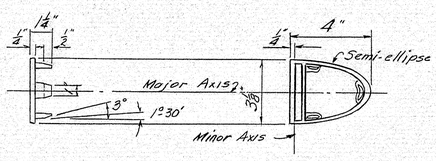
SUPERSTRUCTURE DETAILS

SHEET 12 OF 14 AUGUSTA, MAINE MAY 68

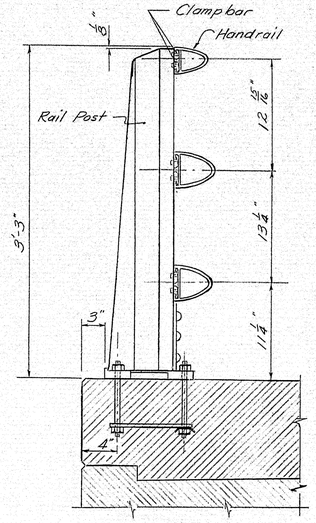
M-2570



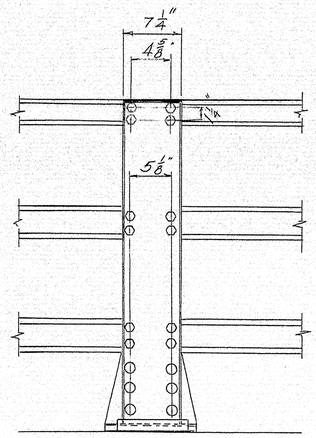
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	ER-033-1(16)	31	145



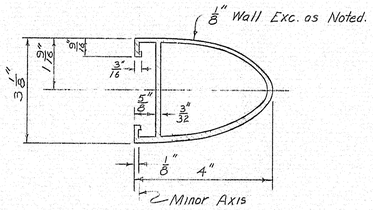
HAND RAIL CAP



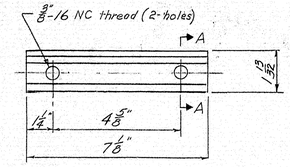
BRIDGE RAIL



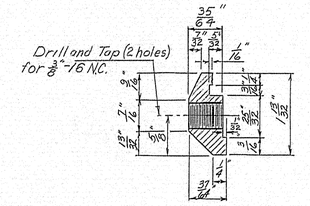
REAR ELEVATION



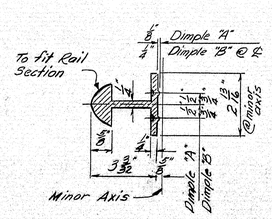
HAND RAIL SECTION



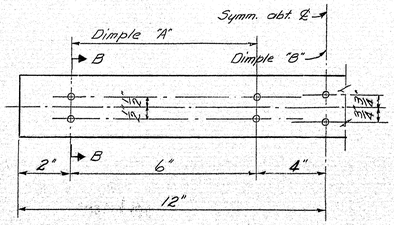
HAND RAIL CLAMP BAR



SECTION A-A



SECTION B-B



HAND RAIL SPLICE BAR

Note: Use this sheet with BD 106-69 Standard Details apply except as noted here.

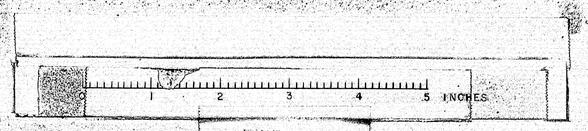
DESIGN- P.A. TRACE- CHECK- D.H. L.J.	BRIDGE NO. SURVEY- PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUSTIN BRIDGE
OVER
AUSTIN STREAM
IN THE TOWN OF
BINGHAM
SOMERSET COUNTY
BRIDGE RAIL

SHEET 13 OF 14 AUGUSTA, MAINE MAY 68

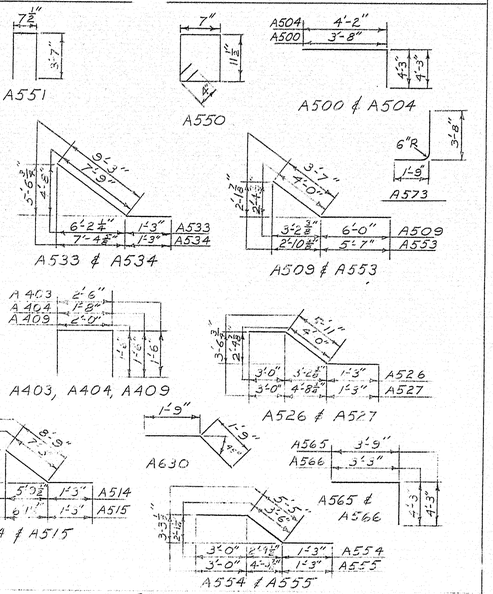
M-2571



REINFORCING STEEL SCHEDULE

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	ER-033-1(16)	32	145

ABUTMENTS No. 1 & No. 2



BENT BARS

MARK	SIZE	No.	LENGTH	LOCATION
A500	5	5	2'-11"	Abut #2 Breastwall
A551		12	7'-10"	Abut #1 "L" End Pcs.
A550		16	3'-10"	Abut #1 "L" End Pcs.
A504		36	8'-5"	Abut #2 Breastwall
A533		1	9'-0"	Abut #2 D.S. Wing
A534		1	10'-6"	Abut "2 D.S. Wing
A509		1	10'-0"	Abut #2 D.S. Wing
A553		1	5'-6"	Abut #2 D.S. Wing
A526		1	8'-3"	Abut #2 U.S. Wing
A527		1	10'-0"	Abut #2 U.S. Wing
A514		1	8'-6"	Abut #1 U.S. Wing
A515		1	10'-0"	Abut #1 U.S. Wing
A565		28	3'-0"	Abut #1 Breastwall
A566		3	7'-6"	Abut #1 Breastwall
A554		8	7'-3"	Abut #1 D.S. Wing
A555	5	8	5'-9"	Abut #1 D.S. Wing
A573	5	33	5'-5"	Wing Dowels Model "1" & "2
A403	4	28	5'-6"	Abut "1" & "2 Bearing Areas
A404	4	14	4'-6"	Abut "1" Bearing Areas
A409	4	14	5'-0"	Abut "2 Bearing Areas
A630	6	72	3'-6"	Abut "1 & 2 Backwall

STRAIGHT BARS

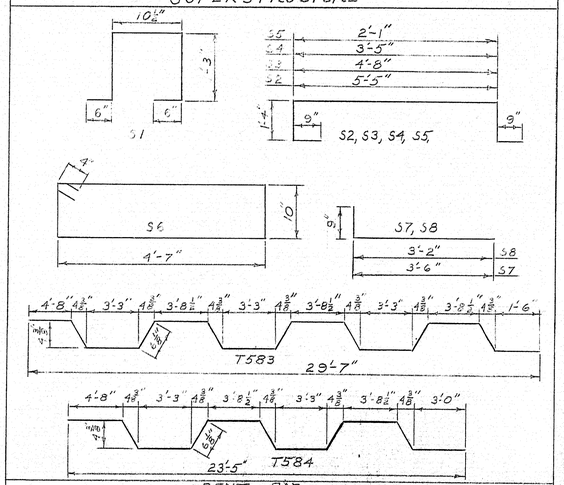
A501	5	149	3'-0"	Abut "1 & "2 Footing
A502	5	82	3'-2"	Abut "1 & "2 Breastwall
A503	4	148	4'-7"	Abut "1 & "2 Backwall
A505		82	7'-9"	Abut "1 & "2 Back of Breastwall
A506		13	5'-6"	Abut "1 & "2 Backwall
A507		4	10'-4"	Abut "1 Backwall
A508		5	10'-10"	Abut "1 Backwall
A510		2	8'-2"	Abut "1 U.S. Wing
A511		2	9'-1"	
A512		2	10'-0"	
A513		4	10'-9"	Abut "2 U.S. Wing
A516		2	10'-6"	Abut "1 D.S. Wing
A517		2	10'-0"	
A518		2	9'-4"	
A519		6	8'-9"	
A520		2	8'-0"	
A521		2	7'-6"	
A522		2	6'-10"	Abut "1 D.S. Wing
A523		22	10'-0"	Abut "2 U.S. Wing & Abut "1 D.S. Wing
A524		2	6'-0"	Abut "1 D.S. Wing
A525		2	4'-0"	Abut "1 D.S. Wing
A528		2	5'-6"	Abut "1 Backwall
A529		8	28'-3"	Abut "2 Breastwall
A530		8	12'-4"	Abut "2 Breastwall
A531		2	5'-6"	Abut "2 U.S. Wing
A532		2	4'-6"	Abut "2 U.S. Wing
A535		2	10'-0"	
A536		2	9'-6"	
A538		2	8'-4"	
A539		2	7'-9"	
A540		2	7'-2"	
A541	5	2	6'-7"	Abut "2 U.S. Wing

ABUTMENTS No. 1 & No. 2 CONT.

STRAIGHT BARS

MARK	SIZE	No.	LENGTH	LOCATION
A542	5	5	10'-6"	Abut "2 U.S. Wing
A543		4	10'-0"	Abut "2 U.S. Wing
A544		1	9'-3"	Abut "2 U.S. Wing
A546		3	8'-6"	Abut "2 D.S. Wing
A547		2	9'-5"	Abut "2 D.S. Wing
A548		2	10'-2"	Abut "2 D.S. Wing
A552		2	3'-6"	Abut "1 U.S. Wing
A561		4	10'-4"	Abut "1 D.S. Wing & Abut "2 U.S. Wing
A562		8	18'-8"	Breastwall Abut "2
A563		2	5'-6"	Abut "2 D.S Wing
A564		2	4'-0"	Abut "1 U.S. Wing
A567		8	10'-10"	Abut "1 Breastwall
A568		8	28'-10"	Abut "1 Breastwall
A569	5	8	18'-11"	Abut "1 Breastwall
A401	4	8	13'-4"	Abut "2 Backwall
A402		8	28'-3"	Abut "2 Backwall
A405		8	18'-0"	Abut "2 Backwall
A406		8	11'-10"	Abut "1 Backwall
A407		8	29'-10"	Abut "1 Backwall
A408		8	18'-5"	Abut "1 Backwall
A431	4	72	27'-2"	Abut "1 & "2 Approach Slabs
A601	6	14	40'-0"	Footing Abut "1 & 2
A602	6	14	37'-6"	Footing Abut "1 & 2
A603	6	75	5'-8"	Footing Abut "1
A605	6	1	8'-8"	Footing Abut "1
A571	5	8	13'-9"	Footing Abut "1 & "2
A572	5	20	9'-9"	Footing Abut "1 & "2
H616	6	7	5'-6"	Footing Abut "2
A623	6	77	6'-0"	Footing Abut "2
A632	6	344	14'-6"	Abut "1 & "2 Approach Slabs
A537	5	2	8'-11"	Abut "2 U.S Wing
A549	5	4	11'-0"	Abut "2 D.S. Wing

SUPERSTRUCTURE



BENT BAR

MARK	SIZE	NUMBER	LENGTH	LOCATION
S1	5	222	4'-4½"	Curb - Stirrups
S2		218	9'-7"	Sidewalk - Stirrups
S3		1	8'-10"	Sidewalk Abut "1
S4		2	7'-7"	Sidewalk - Abut "1 & "2
S5		1	6'-3"	Sidewalk - Abut "2
S6		12	11'-6"	End Post - Stirrups
S7		132	4'-3"	End Post - Dowels
S8	5	264	3'-11"	End Post - Dowels
T583	5	181	30'-8"	Slab - Transverse
T584	5	181	24'-2"	Slab - Transverse

Abutment: Design: GDT Check: LRR

SUPERSTRUCTURE CONT.

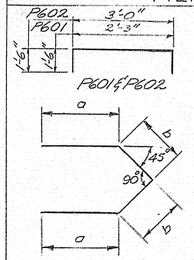
STRAIGHT BARS

MARK	SIZE	NUMBER	LENGTH	LOCATION
C1	5	4	16'-11"	Curb & Sidewalk
C2		37	16'-2"	Sidewalk & Curb
C3		14	12'-6"	Curb & Sidewalk
C4		21	16'-7"	Curb & Sidewalk
C5	5	15	13'-0"	Curb & Sidewalk
T501	5	2	1'-4"	Slab
T502		4	1'-5"	
T503			2'-1"	
T504			2'-8"	
T505			3'-3"	
T506			3'-10"	
T507			4'-6"	
T508			5'-1"	
T509			5'-8"	
T510			6'-3"	
T511			6'-10"	
T512			7'-6"	
T513			8'-1"	
T514			8'-8"	
T515			9'-4"	
T516			9'-11"	
T517			10'-6"	
T518			11'-1"	
T519			11'-8"	
T520			12'-4"	
T521			12'-11"	
T522			13'-6"	
T523			14'-2"	
T524			14'-9"	
T525			15'-4"	
T526			15'-11"	
T527			16'-7"	
T528			17'-2"	
T529			17'-9"	
T530			18'-4"	
T531			18'-11"	
T532			19'-7"	
T533			20'-2"	
T534			20'-9"	
T535			21'-4"	
T536			22'-0"	
T537			22'-7"	
T538			23'-2"	
T539			23'-10"	
T540			24'-5"	
T541			25'-0"	
T542			25'-7"	
T543			26'-2"	
T544			26'-10"	
T545			27'-5"	
T546			28'-0"	
T547			28'-7"	
T548			29'-3"	
T549			29'-10"	
T550			30'-5"	
T551			31'-1"	
T552			31'-8"	
T553			32'-3"	
T554			32'-10"	
T555			33'-5"	
T556			34'-1"	
T557			34'-8"	
T558			35'-3"	
T559			35'-10"	
T560			36'-6"	
T561			37'-1"	
T562			37'-8"	
T563			38'-3"	
T564			38'-11"	
T565			39'-6"	
T566			40'-1"	
T567			40'-9"	
T568			41'-4"	
T569			41'-11"	
T570			42'-6"	
T571			43'-1"	
T572			43'-9"	
T573			44'-4"	
T574			44'-11"	
T575			46'-4"	
T576			46'-11"	
T577			47'-6"	
T578			48'-2"	
T579			48'-9"	
T580			49'-4"	
T581		4	50'-0"	Slab
T582		362	30'-0"	Slab Transverse
T585		362	23'-0"	Slab Transverse
L586		82	29'-5"	Slab Over Piers
L587		192	22'-8"	Longitudinal Bars
L588		192	30'-0"	Longitudinal Bars
L589	5	192	20'-0"	Longitudinal Bars
L590	5	192	33'-0"	Longitudinal Bars

Note: All Dimensions to ℄ of Bars

Superstructure: Design PLA Check: M.K.D.

PIERS No. 1 & No. 2



Bar Dimensions					
Bar	a	b	Bar	a	b
P502	3'-0½"	3'-0½"	P511	2'-9"	3'-0"
P503	2'-10½"	2'-11½"	P512	2'-7¼"	2'-10¾"
P504	2'-8"	2'-10½"	P513	2'-5¼"	2'-9¾"
P505	2'-6"	2'-9½"	P514	2'-3¼"	2'-8¾"
P506	2'-3¼"	2'-8¾"	P515	2'-1¼"	2'-7¾"
P507	2'-1¼"	2'-7¾"	P516	2'-0½"	2'-6½"
P508	1'-11¼"	2'-6¾"	P517	1'-10½"	2'-5½"
P509	1'-9½"	2'-5"	P518	1'-8"	2'-4½"
P510	1'-7½"	2'-4"			

P502, P503, P504, P505, P506, P507, P508, P509, P510, P511, P512, P513, P514, P515, P516, P517, & P518

BENT BARS

MARK	SIZE	NUMBER	LENGTH	LOCATION
P502	#5	2	12'-2"	Pier Ends - Pier #1
P503			11'-8"	
P504			11'-1"	
P505			10'-7"	
P506			9'-11"	
P507			9'-5"	
P508			8'-11"	
P509			8'-5"	
P510			7'-11"	Pier Ends - Pier #1
P511			11'-6"	Pier Ends - Pier #2
P512			12'-0"	
P513			10'-6"	
P514			10'-0"	
P515			9'-6"	
P516			9'-2"	
P517			8'-8"	
P518	#5	2	8'-1"	Pier Ends - Pier #2
P1100	#11	148	6'-0"	Shaft - Both Piers
P601	#6	42	5'-3"	Bearing Areas - Both Piers
P602	#6	42	6'-0"	Bearing Areas - Both Piers

STRAIGHT BARS

MARK	SIZE	NUMBER	LENGTH	LOCATION
P501	#5	68	31'-6"	Shaft - Both Piers
P600	#6	66	3'-4"	Pier Shaft Both Piers
P603		28	12'-9"	Shaft - Pier #1
P604		44	12'-5"	Shaft - Pier #1
P605		28	11'-10"	Shaft - Pier #2
P606		44	11'-6"	Shaft - Pier #2
P610		126	4'-4"	Bottom of Pier Shaft - Both Piers
P611	#6	80	32'-0"	Bottom of Pier Shaft - Both Piers

Design: C.M.A. Check: M.K.D.

DESIGN- AS NOTED
TRACE- K.G.
CHECK- AS NOTED
PLOT-

BRIDGE NO.
SURVEY-

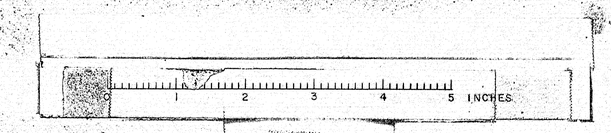
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUSTIN BRIDGE
OVER
AUSTIN STREAM
IN THE TOWN OF
BINGHAM
SOMERSET COUNTY

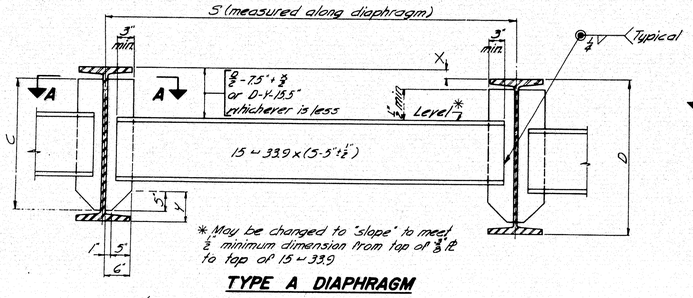
REINFORCING STEEL SCHEDULE

SHEET 14 OF 14 AUGUSTA, MAINE MAY 68

M-2572

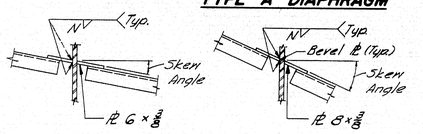


B.R.R. DIV. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
I	MAINE	EA-033-1(13)	16	145



* May be changed to 'slope' to meet ½ minimum dimension from top of ⅜ PL to top of 15 WF 33.9

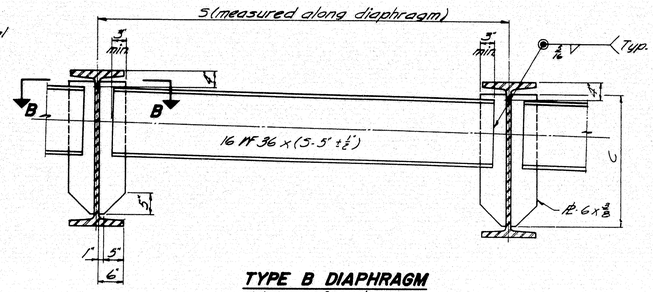
TYPE A DIAPHRAGM



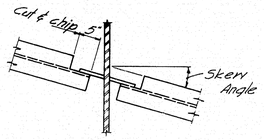
SECTION A-A
Skew Angle 0° to 10°-00'

SECTION A-A
Skew Angle over 10°00' to 20°00'

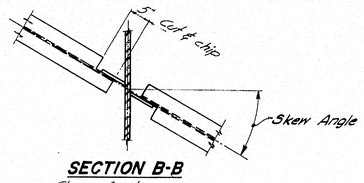
FILLET WELD SIZE "N" & DIMENSION "C" FOR DIAPHRAGM PLATES		
BEAM	C	N
27 WF 84 to 114 incl.	1'-11"	½"
30 WF 99 to 132 incl.	2'-2"	½"
33 WF 118 to 152 incl.	2'-5"	½"
36 WF 135 to 194 incl.	2'-7"	½"
36 WF 230 to 300 incl.	2'-6"	⅝"



TYPE B DIAPHRAGM
Welding 6 x ⅜ plates to web same as for Type A Diaphragm.



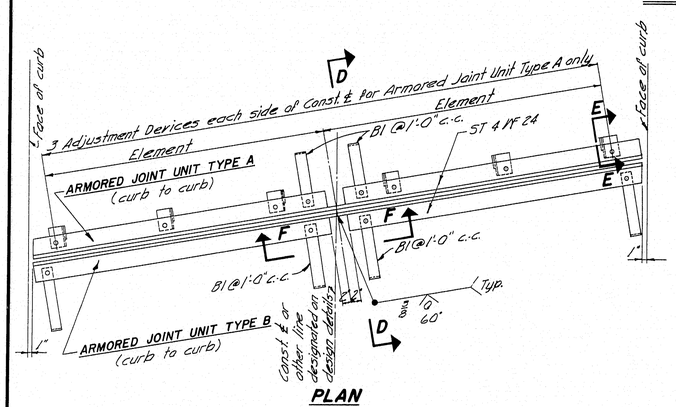
SECTION B-B
Skew Angle 0° to 10°-00'



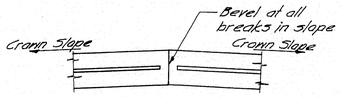
SECTION B-B
Skew Angle over 10°00'

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

DIAPHRAGMS



PLAN



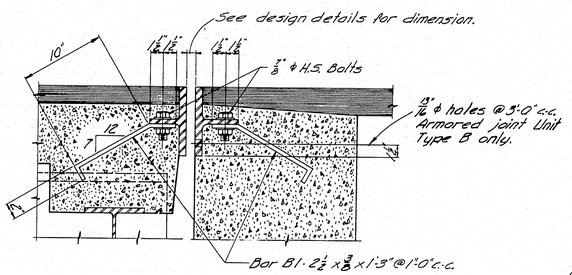
SECTION F-F
Note: See design details for Const. ℄ to curb dimensions, skew, crown slope, slab thickness, other dimensions necessary to complete the fabrication details, and location.

NOTE

1. Type A Armored Joint Units are intended to be used for attachment to superstructures. Type B Armored Joint Units are intended to be used for attachment to abutments. At armored joints over piers, two (2) Type A Armored Joint Units shall be used.
2. If more elements than the two shown in the 'Plan' are required by the design details, there shall be three adjustment devices for each element for Armored Joint Unit Type A and the elements of both units shall be field welded together in the same manner as shown in the 'Plan'.
3. Armored Joints to be paid for as Structural Steel.

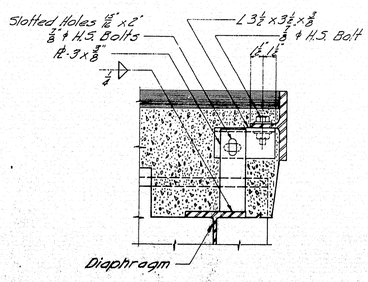
ARMORED JOINT

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

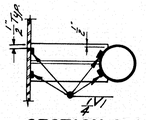


ARMORED JOINT UNIT TYPE A — ARMORED JOINT UNIT TYPE B

SECTION D-D



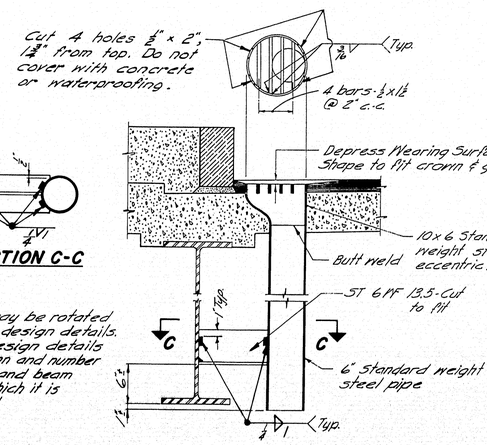
SECTION E-E
Showing Adjustment Device Armored Joint Unit Type A only - After Unit is in final position weld ⅜ PL to angle with ¼ Fillet



SECTION C-C

NOTE

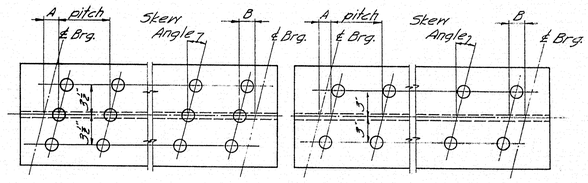
1. Drain may be rotated 180°. See design details.
2. See design details for location and number of drains and beam size to which it is connected.



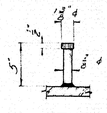
DRAIN

SHEAR CONNECTOR NOTE

The connectors may be either steel studs or spirally formed bars. At the request of the contractor a plan for using spirally formed bars will be provided.



TRIPLE STUDS — **DOUBLE STUDS**



STUD DETAIL

NOTE

1. Studs shall be granular or solid flux filled and automatically end welded to top flange in the shop or field.
2. See the design details for Dimensions "A" & "B", stud pitch and skew angle for studs.

SHEAR CONNECTORS

GENERAL NOTE

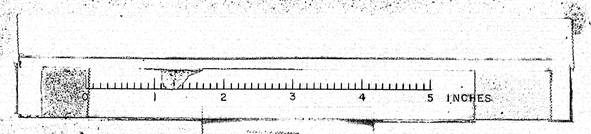
Use only those items called for on design details. In case of conflict between these Standard Details and the design details, the requirements of the design details shall be followed.

MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

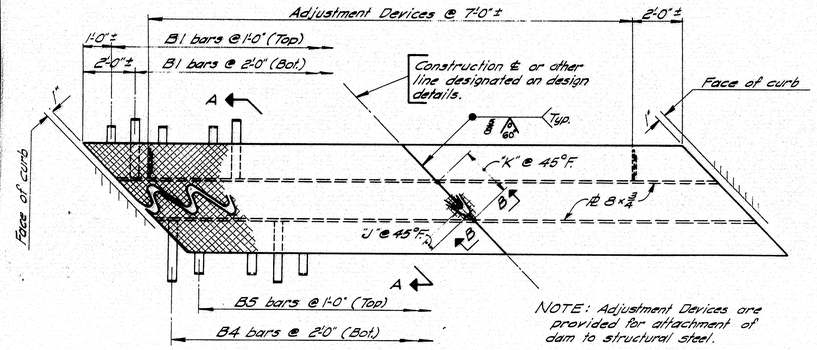
STANDARD DETAILS
(BD 104-66)
DIAPHRAGMS, ARMORED JOINT, SHEAR CONNECTORS, DRAIN

SEPTEMBER 1966

M-2572A AUSTIN STREAM BRIDGE - BINGHAM

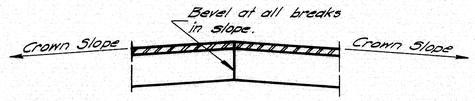


B.P.R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	ER-033-1(16)	17	22



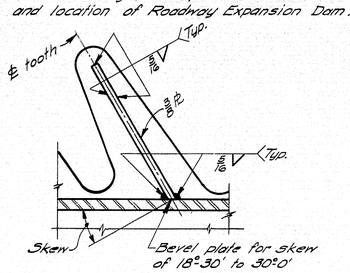
PLAN

Right skew indicated



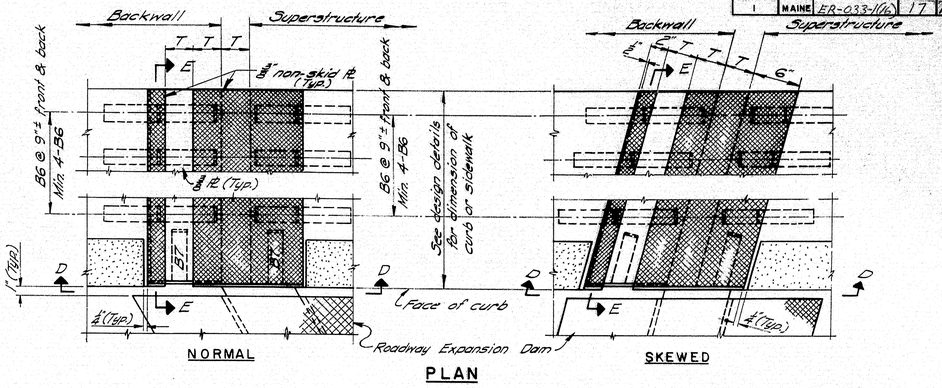
SECTION B-B

See design details for construction ℄ to curb dimensions, skew, crown slope, slab thickness, other dimensions & angles that are necessary to complete fabrication details and location of Roadway Expansion Dam.

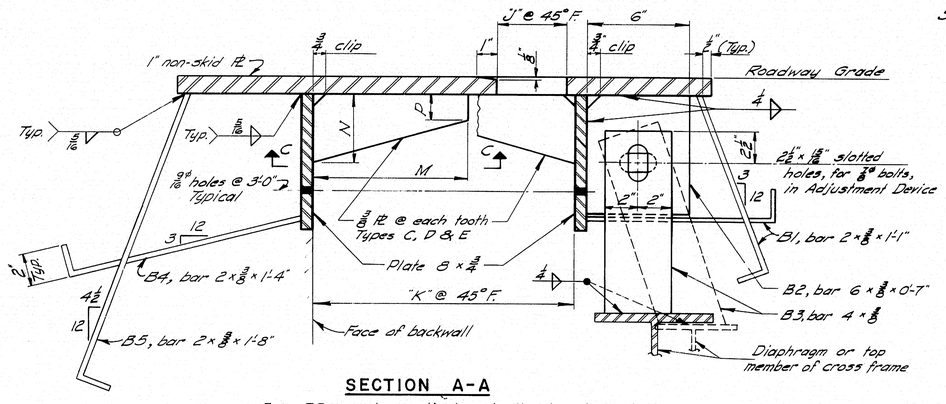


SECTION C-C

Skew ~0° to 30°0'

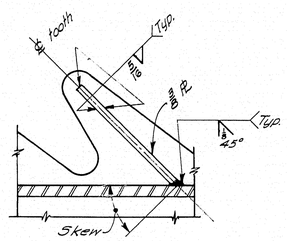


PLAN



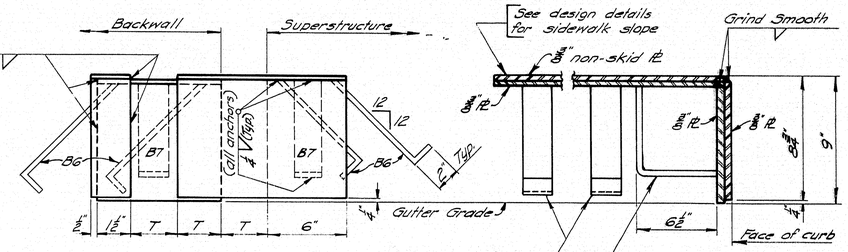
SECTION A-A

Bar B3 may be vertical or inclined as indicated, depending on design conditions. After Adjustment Device is in final position weld bars B2 to B3 with 1/4" fillet weld.



SECTION C-C

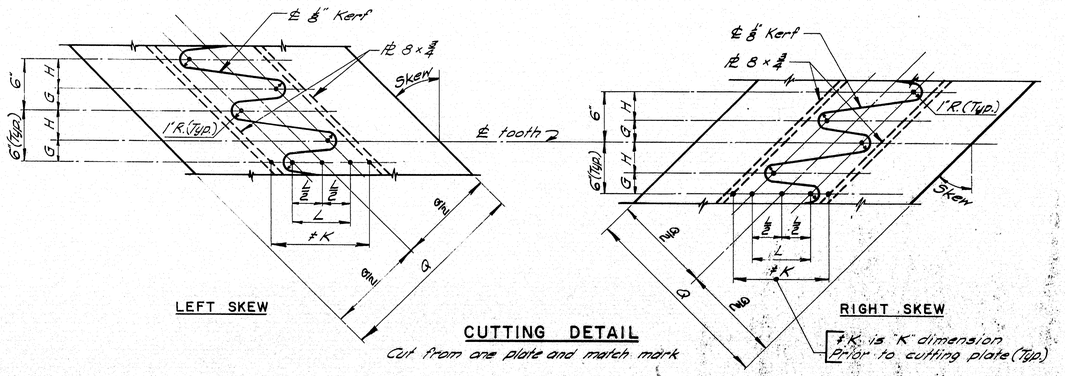
Skew over 30°



VIEW D-D **SECTION E-E**

TYPE	V	W	X	Y	Z
Exp. Length	100'-280'	280'-440'	440'-600'	600'-760'	760'-920'
T	3"	4"	5"	6"	7"

CURB AND SIDEWALK EXPANSION DAM - DETAILS



CUTTING DETAIL

Cut from one plate and match mark

ROADWAY EXPANSION DAM - DETAILS

TABLE OF DIMENSIONS												
Type	Exp. Length	Skew	≠K	L	G	H	K@45°	J@45°	M	N	P	Q
A	100'-280'	0°-5° incl.	7"	4"	3"	3"	9"	2 3/8"	—	—	—	21"
		5°-10°	7 1/4"	4 1/2"	2 3/8"	3 3/8"	9 1/4"	2 3/8"	—	—	—	22"
		10°-20°	8"	4 3/8"	2 3/8"	3 3/8"	10"	2 3/8"	—	—	—	22"
		20°-30°	8 3/8"	5 1/4"	2 3/4"	3 3/4"	10 3/8"	2 3/8"	—	—	—	23"
		30°-40°	9 1/2"	5 3/8"	2 3/8"	3 3/8"	11 1/8"	2 3/8"	—	—	—	23"
		40°-50° incl.	11 1/4"	6 1/2"	2 3/8"	3 3/8"	13 1/8"	2 3/8"	—	—	—	23"
B	280'-440'	0°-5° incl.	9"	6"	3"	3"	12"	3 3/8"	—	—	—	23"
		5°-10°	9 1/2"	6 1/4"	2 3/8"	3 3/8"	12 1/4"	3 3/8"	—	—	—	24"
		10°-20°	10"	6 3/8"	2 3/8"	3 3/8"	13"	3 3/8"	—	—	—	24"
		20°-30°	10 3/8"	7 1/4"	2 3/8"	3 3/8"	13 3/8"	3 3/8"	—	—	—	25"
		30°-40°	12"	8"	2 3/8"	3 3/8"	15"	3 3/8"	—	—	—	25"
		40°-50° incl.	13 5/8"	8 3/8"	2 3/8"	3 3/8"	16 1/2"	3 3/8"	—	—	—	25"
C	440'-600'	0°-10° incl.	11 1/4"	8 1/4"	3"	3"	15 1/8"	4 3/8"	3"	4"	1 1/8"	26"
		10°-20°	12"	8 3/8"	2 3/8"	3 3/8"	16"	4 3/8"	10"	4"	1 1/2"	26"
		20°-30°	12 3/8"	9 1/4"	2 3/8"	3 3/8"	16 3/8"	4 3/8"	11"	4"	1 3/4"	26"
		30°-40°	14"	10"	2 3/8"	3 3/4"	18"	4 3/8"	11"	4"	1 3/4"	26"
		40°-50° incl.	15 3/8"	10 3/4"	2 3/8"	3 3/4"	19 1/8"	4 3/8"	12"	4"	1 3/4"	26"
D	600'-760'	0°-10° incl.	13 1/4"	10 1/4"	3"	3"	18 1/8"	5 3/8"	11"	5"	2"	30"
		10°-20°	14"	10 3/8"	2 3/8"	3 3/8"	19"	5 3/8"	12"	5"	2"	30"
		20°-30°	14 3/8"	11 1/4"	2 3/8"	3 3/8"	19 3/8"	5 3/8"	13"	5"	2"	30"
		30°-40°	16"	12"	2 3/8"	3 3/8"	21"	5 3/8"	13"	5"	2"	30"
		40°-50° incl.	17 3/8"	13"	2 3/8"	3 3/4"	22 3/8"	5 3/8"	15"	5"	2"	30"
E	760'-920'	0°-10° incl.	15 1/4"	12 1/4"	3"	3"	21 1/8"	6 3/8"	13"	6"	2 1/8"	36"
		10°-20°	16"	12 3/8"	2 3/8"	3 3/8"	22"	6 3/8"	14"	6"	2 1/2"	36"
		20°-30°	16 3/8"	13 1/4"	2 3/8"	3 3/8"	22 3/8"	6 3/8"	15"	6"	2 3/4"	36"
		30°-40°	18"	14"	2 3/8"	3 3/4"	24"	6 3/8"	15"	6"	2 3/4"	36"
		40°-50° incl.	19 3/8"	15"	2 3/4"	3 3/4"	25 3/8"	6 3/8"	17"	6"	2 3/4"	36"

GENERAL NOTES

Expansion Dams to be paid for as Structural Steel.

If there is conflict between this Standard Detail and the design details, the requirements of the design details shall be followed.

Steel Classification: A.S.T.M. A36

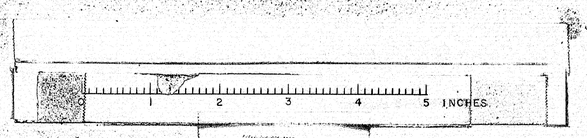
MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

STANDARD DETAILS
(BD 105 - 64)

EXPANSION DAMS

APRIL 1964

M-25728 AUSTIN STREAM BRIDGE - BINGHAM



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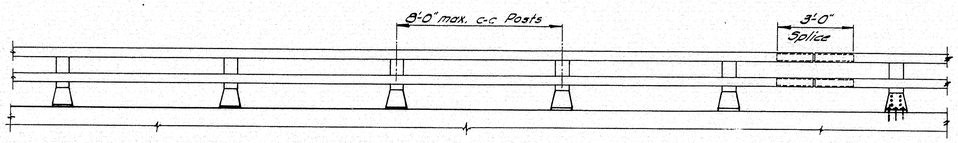
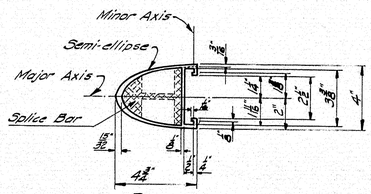
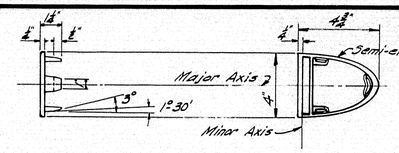


RAIL - ELEVATION

Lengths of rail shall be attached to a minimum of (4) four rail posts, wherever possible, and in any case never less than (2) two.

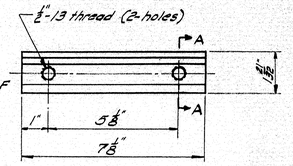


RAIL SECTION



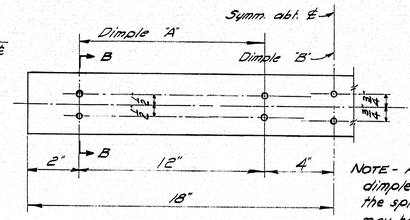
RAIL CAP

ASTM B 26, Aluminum Assoc. Alloy 43-F or 356-F



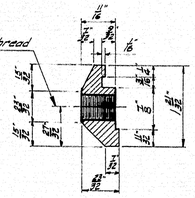
CLAMP BAR

SECTION B-B



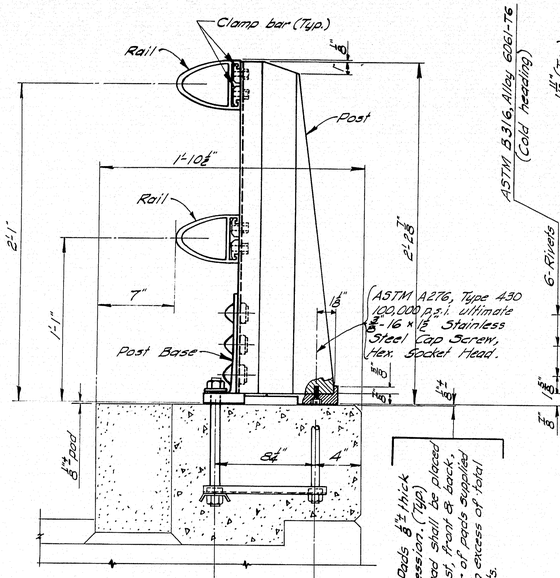
SPLICE BAR

NOTE - An alternate to the dimple system for holding the splice bar in position may be used if approved by the Engineer.



SECTION A-A

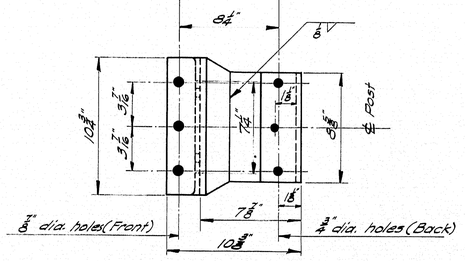
Post, Post Base, Rail, Splice Bar, & Clamp Bar = ASTM B 221, Alloy 6061-T6



BRIDGE RAIL

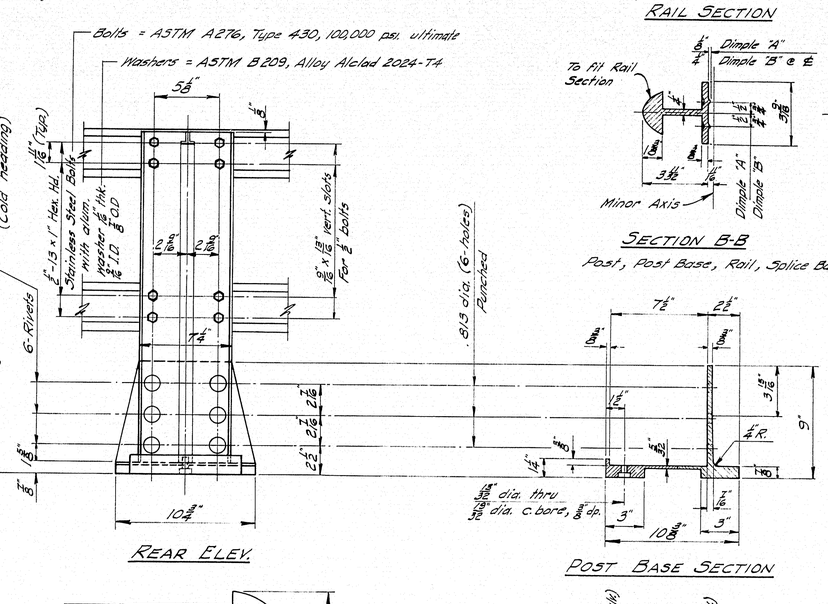
Assembly

Preformed Pads ⅜" thick (Typ.) shall be placed under each post, front & back, one the number of pads supplied shall be 0.8 in excess of total number of posts.

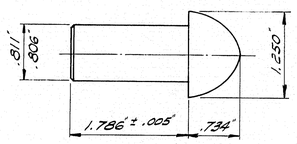


POST BASE

(Bottom View)

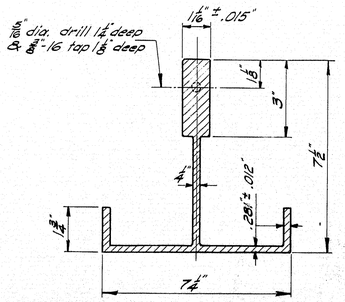


REAR ELEV.



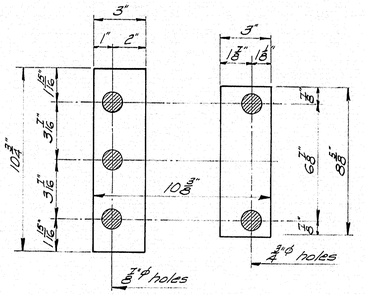
RIVET

Shop rivet rail post to base



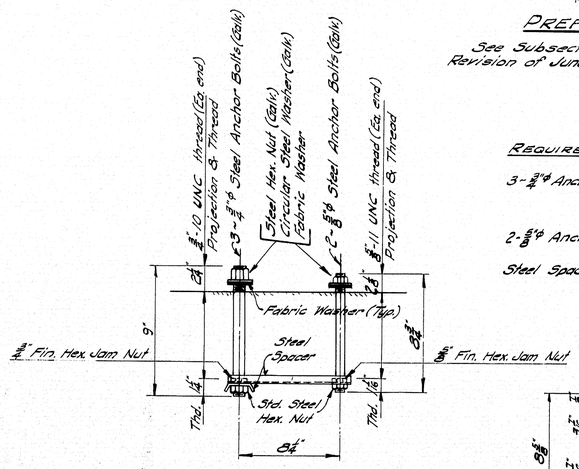
POST SECTION

POST BASE SECTION



PREFORMED PADS

See Subsection 7.13.03 Standard Specifications Revision of June 1965 for pad and fabric washers.



RAIL POST ANCHORAGE

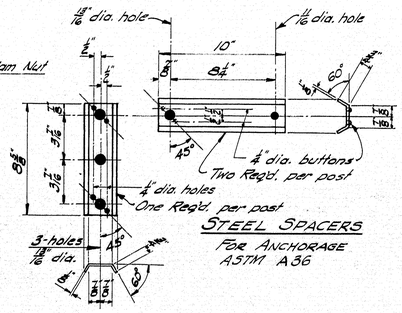
Assembly

Anchor Bolts, Nuts, & Steel Washers = ASTM A325
Anchor Bolts, Nuts & Steel Washers at top, Galv. ASTM A153

REQUIRED PER RAIL POST ANCHORAGE

- 3-¾"℄ Anchor Bolts { 2-Hex. Nuts, 1-Hex. Jam Nut; 3-Circular Steel Washers; 3-Fabric Washers }
- 2-⅞"℄ Anchor Bolts { 2-Hex. Nuts, 1-Hex. Jam Nut; 2-Circular Steel Washers; 2-Fabric Washers }

Steel Spacers as detailed below.



STEEL SPACERS

For Anchorage ASTM A36

DESIGN SPECIFICATIONS

A. A. S. H. O. Interim Specifications Int. I (64)

Revised- Splice Bar Alternate Feb. 1967

MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

STANDARD DETAILS

(BD 106 - 65)

ALUMINUM RAILING

2 - BAR (SEMI-ELLIPSE) EXTRUDED POST

OCTOBER 1965

M-2572C AUSTIN STREAM BRIDGE - BINGHAM