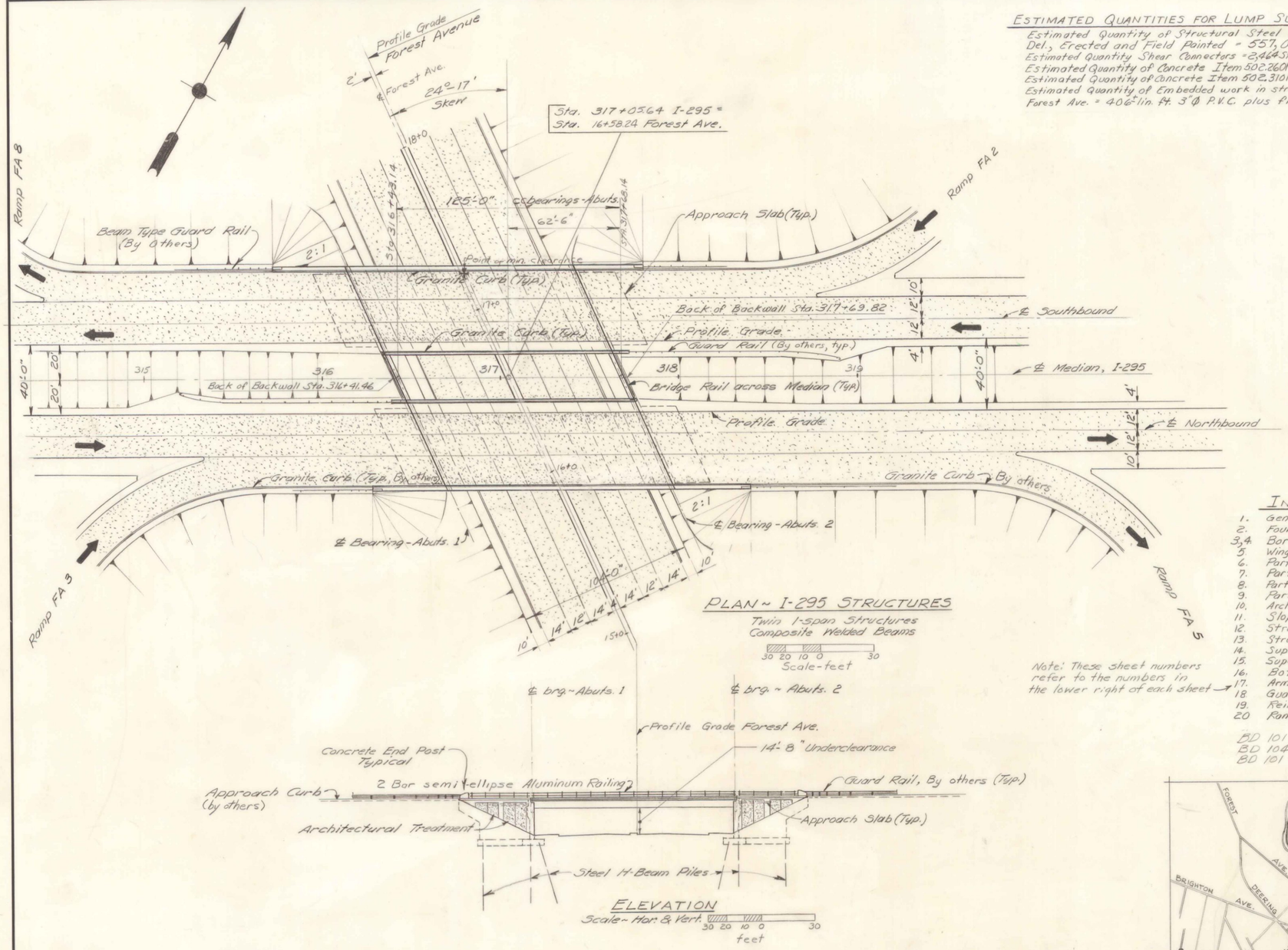
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-295-3(60)	40	236



PLAN ~ I-295 STRUCTURES

Twin 1-span Structures
Composite Welded Beams

Scale-feet: 30 20 10 0 30

ELEVATION

Scale ~ Hor. & Vert.: 30 20 10 0 30 feet

NOTE: This plan and elevation shows the completed bridge. This contract is a stage construction contract which calls for the construction of the bridge structures, bin type retaining wall and part of the embankments. See the plans for details. See highway plans for limits of highway work to be completed under this contract. See sheet No 20 for bin wall details.

ESTIMATED QUANTITIES FOR LUMP SUM ITEMS

Estimated Quantity of Structural Steel Fab, Del., Erected and Field Painted = 557,000 lbs.
Estimated Quantity Shear Connectors = 2,464 Studs & 402 lbs.
Estimated Quantity of Concrete Item 502.2601 = 357 cu.yd.
Estimated Quantity of Concrete Item 502.3101 = 68 cu.yd.
Estimated Quantity of Embedded work in structures Forest Ave. = 406 lin. ft. 3"Ø P.V.C. plus fittings.

ESTIMATED BRIDGE QUANTITES

	Item No.	Description	Unit	Quant.
	501.217	Steel H-beam Piles 89 lbs/ft.	L.F.	13,530
	502.21	Structural Concrete, Abuts. & Retaining Walls	Cu.Yd.	1,340
	502.2601	Struct. Conc., P'way & Sidewalk Slabs on St. Br.	L.S.	1
	502.3101	Structural Concrete, Approach Slabs	L.S.	1
	503.12	Reinforcing Steel, Fab. & Delivered	Lb.	202,137
	503.13	Reinforcing Steel, Placing	Lb.	202,137
	504.7001	Structural Steel, Fab & Delivered	L.S.	1
	504.7101	Structural Steel, Erection	L.S.	1
	505.0801	Shear Connectors	L.S.	1
	506.1901	Field Painting Structural Steel	L.S.	1
	507.08	Bridge Railing	L.F.	690
*	508.10	Membrane Waterproofing	Sq.Yd.	1,321
	512.07	French Drains (Stones only)	Cu.Yd.	59
	513.09	Slope Protection - Portland Cement Conc.	Sq.Yd.	127
	514.06	Curing Box for Concrete Cylinders	each	1
	515.20	Protective Coating for Concrete Surfaces	Sq.Yd.	281
	609.13	Vertical Bridge Curb - Type 1	L.F.	673
	635.09	Metal Bin Type Retaining Wall	Sq.Ft.	2,280
	638.0101	Embedded Work in Structures	L.S.	1
	639.08	Field Office - Type A	each	1
	660.20	On-the-job Training	M.H.	1500
	304.10	Aggregate Subbase Course - Gravel	Cu.Yd.	144

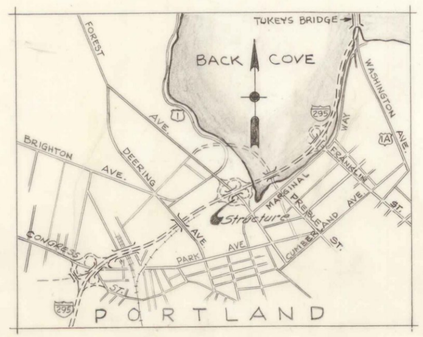
* Item by others, not a part of this contract

INDEX OF SHEETS

1. General Plan
2. Foundation Survey
3,4 Boring Details
5 Wing Details and Footing Plans
6. Part-Abutment No. 1 (N.B.)
7. Part-Abutment No. 1 (S.B.)
8. Part-Abutment No. 2 (S.B.)
9. Part-Abutment No. 2 (N.B.)
10. Architectural Treatment
11. Slope Protection
12. Structural Steel
13. Structural Steel Details
14. Superstructure Slab
15. Superstructure Slab - Typ. Section
16. Bottom of Slab Elevations
17. Armored Joint and Approach Slab
18 Guard Rail and End Post Details
19. Reinforcing Steel Schedule
20 Ramps FA-1 & FA-3 Bin - Wall

BD 101-70.
BD 104-71
BD 101-70

Note: These sheet numbers refer to the numbers in the lower right of each sheet →



LOCATION MAP

SCALE OF MILES 5 0

SPECIFICATIONS

Design: A.A.S.H.O. Standard Specifications for Highway Bridges 1969 with Interim Specifications 1970, 1971 and 1972.

Contract: State of Maine, State Highway Commission, Standard Specifications, Highways and Bridges, Revision of June 1968.

Live Loading - HS 20-44 as modified for Interstate.

MATERIALS

Structural Steel: Flanges and web for beams and bearing stiffeners shall conform to A.S.T.M. designation A 572 (Grade 50). All other steel shall conform to A.S.T.M. designation A 36 unless otherwise noted.

Reinforcing Steel: Reinforcing steel shall conform to A.S.T.M. designation A 615 (Grade 60).

Concrete: All concrete shall be class "A"

ALLOWABLE STRESSES

Structural Steel ~ A 572 (Grade 50)	fs = 27,000 psi
~ A 36	fs = 20,000 psi
Reinforcing Steel	fs = 20,000 psi
Concrete n=10	fc = 1,200 psi

Prel. Des. Eng. 1966

DESIGN - LLR & EDB 5-3-72
TRACE - GWC
CHECK - H.R.Q. & N.E.B. 4/11/72

BRIDGE NO.
SURVEY -
PLOT -

STATE HIGHWAY COMMISSION

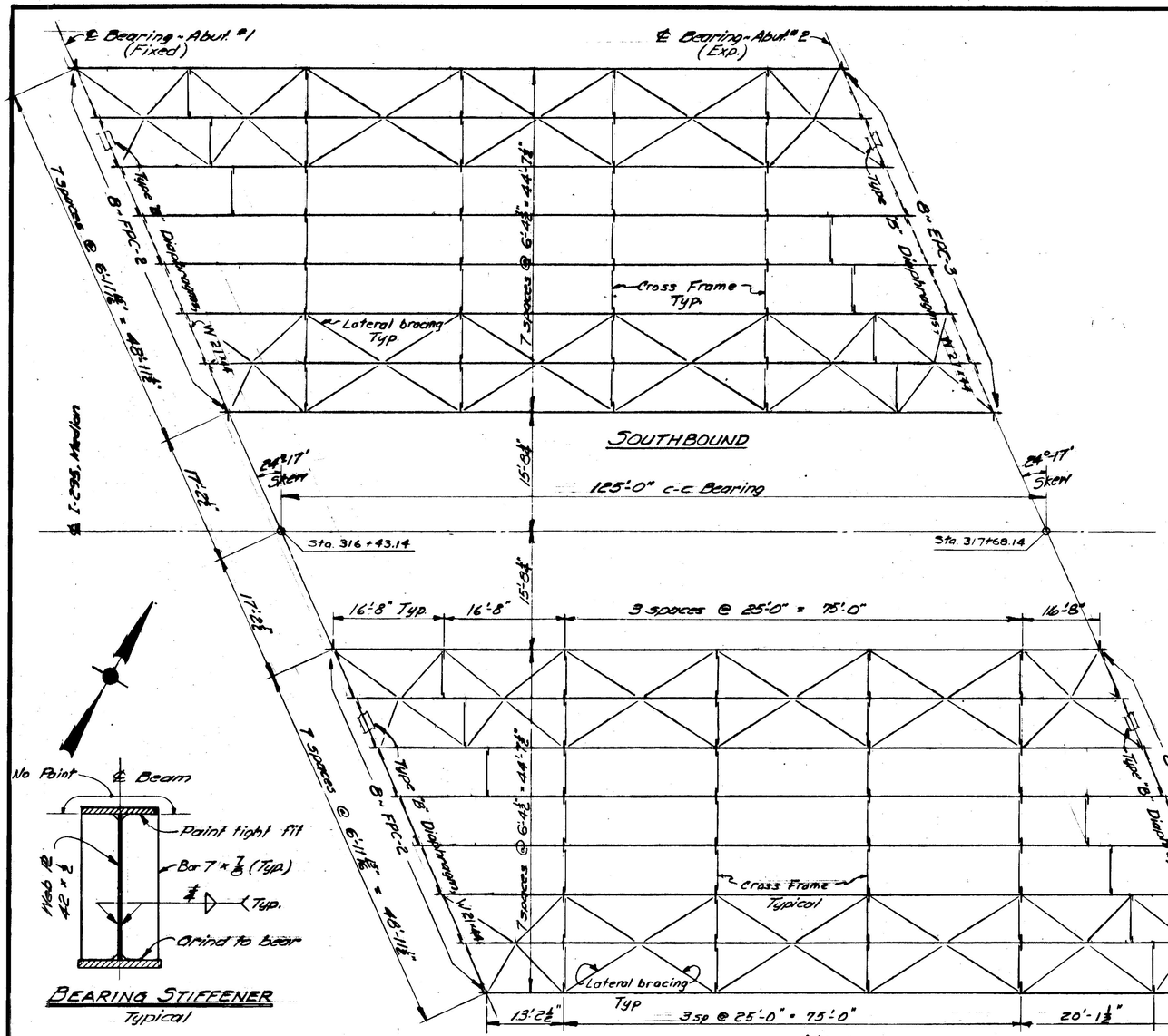
INTERSTATE 295
OVER
FOREST AVENUE
IN THE CITY OF
PORTLAND
CUMBERLAND COUNTY

GENERAL PLAN

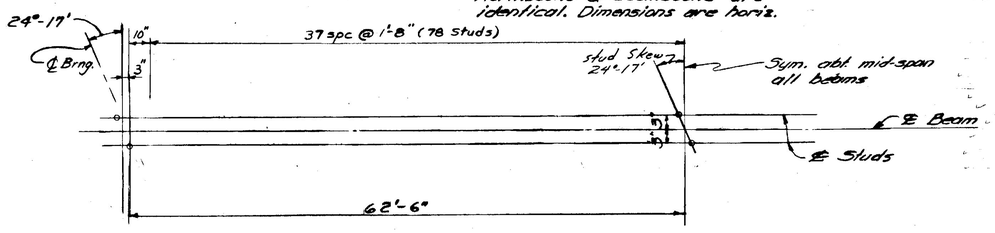
SHEET 1 OF 20 AUGUSTA, MAINE MAY 1972

PORTLAND

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-295-3(60)	51	236



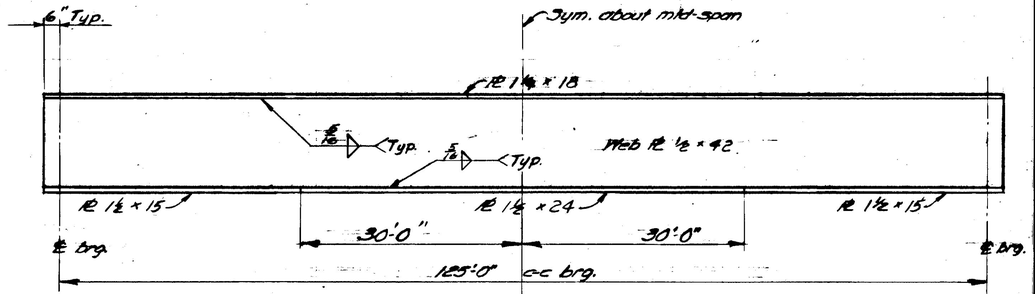
BEARING STIFFENER
Typical



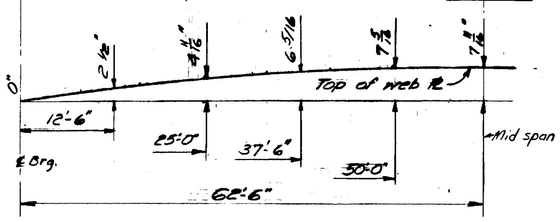
SHEAR CONNECTORS
Typical
Total studs reqd. = 2464
Weight = 2402 Lbs.

STRUCTURAL STEEL CLASSIFICATION

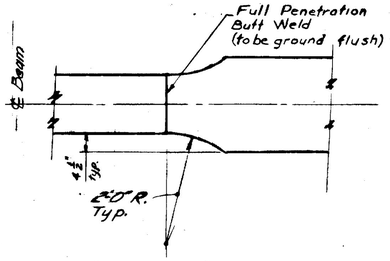
Flanges and Web for beams and bearing stiffeners shall conform to A.S.T.M. designation A572 (Grade 50). All other steel shall conform to A.S.T.M. designation A36 unless otherwise noted.
High Strength Bolts ASTM Designation A325



BEAMS



BEAM CAMBER
Typical & Symetrical about Mid-span
Camber ordinates as shown indicates ½ all dead load deflections plus allowance for vertical curve of profile grade.



FLANGE SPLICE
Shop Butt Joint - Typical

GENERAL NOTES

1. A maximum of two (2) transverse shop butt weld splices will be permitted to fabricate the web plate. Transverse web splices shall not be nearer than 1'-6" to a flange splice.
2. All butt welds in web plate shall be ground flush with base metal.
3. Location and details of butt weld shop splices shall be shown on shop detail drawings for approval by the Engineer.
4. Each flange shall have a maximum of 2 splices.
5. No flange or web splices shall be located within 10 ft. of the mid span point.
6. All erection bolts shall be ⅞" ϕ H.S. Bolts. Holes shall be 15/16" ϕ.
7. Bearing stiffeners shall be plumb after erection and dead loading of the structure.
8. All cross frames or diaphragm connection plates may be plumb or normal to the top flange at the option of the Contractor.
9. For cross frame, diaphragms, & lateral Bracing see Sheet No. 15
10. For Bearing Pedestals see Standard Detail BD 101-70.
11. For Armored Joint see sheet No. 14
12. For Steel Classification see above.
13. For Shear Connectors see sheet No. BD 104-71.

DESIGN- RDB	9-3-72	BRIDGE NO.
TRACE-		SURVEY-
CHECK- NER 9/15/72		PLOT-

STATE HIGHWAY COMMISSION

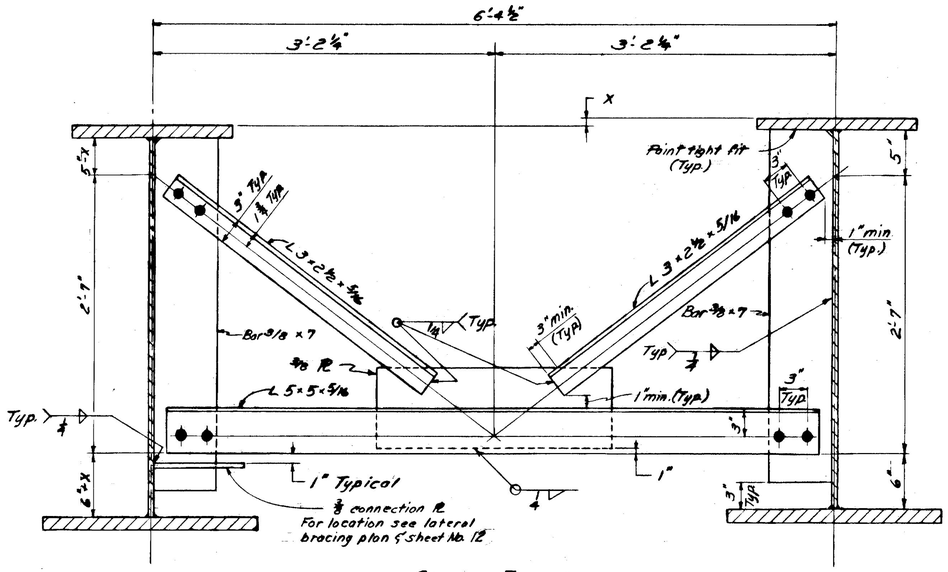
INTERSTATE 295
OVER
FOREST AVENUE
IN THE CITY OF
PORTLAND
CUMBERLAND COUNTY

STRUCTURAL STEEL

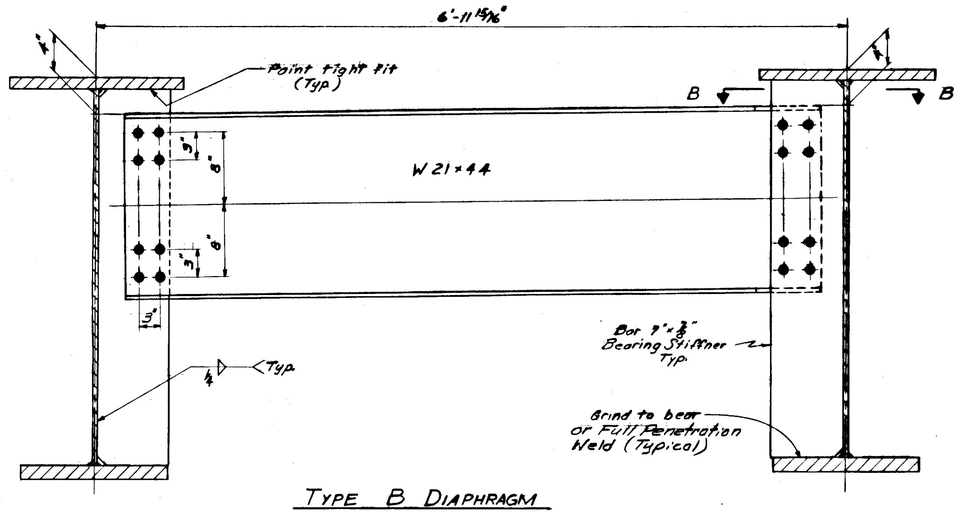
SHEET OF AUGUSTA, MAINE MAY 1972

PORTLAND

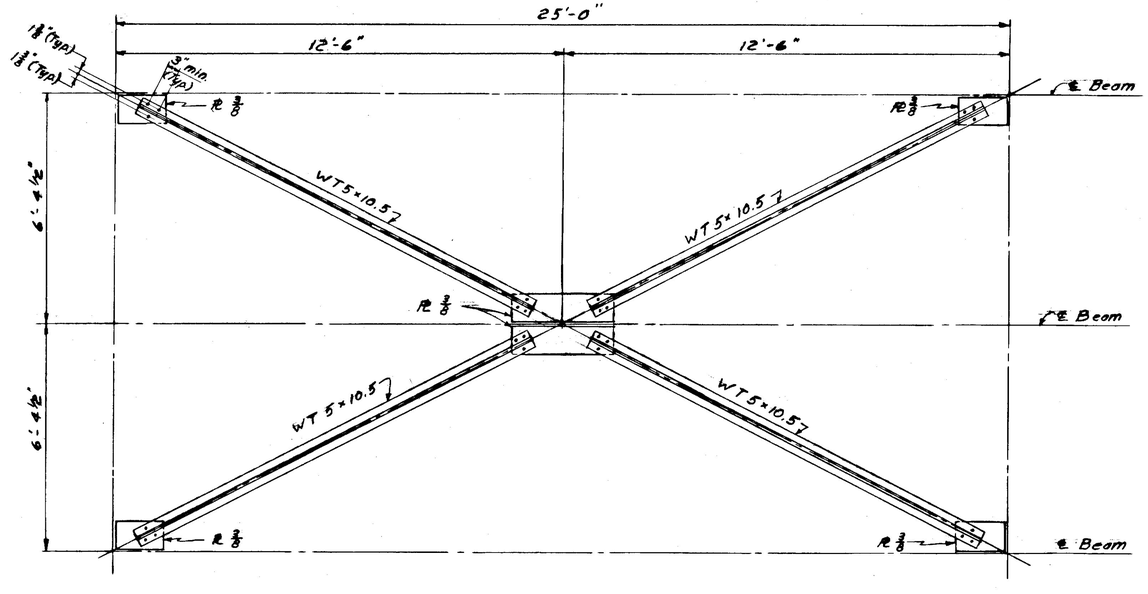
S. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-295-3(60)	52	236



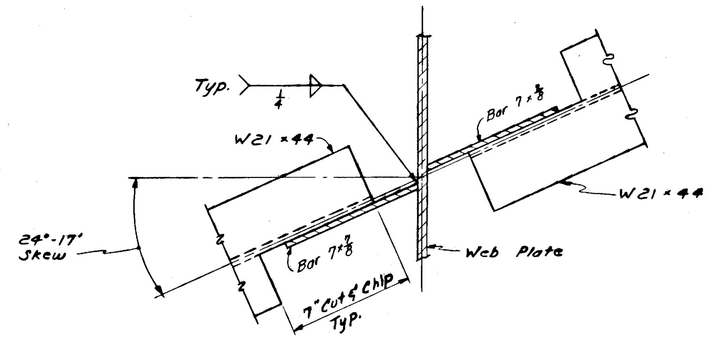
CROSS FRAME



TYPE B DIAPHRAGM



LATERAL BRACING PLAN



SECTION B-B

NOTE:

For Cross Frames, Diaphragms, and Lateral Bracing.
Minimum edge distance for bolt holes shall be 1½" except as shown.
For structural steel notes see Sheet No. 2

PLANS

	BY	DATE
Preliminary Drawing		
DESIGN - DETAILED	RVN	2-23-72
CHECKED	M.E.R.	4/25/72
REVISIONS		
FIELD CHANGES		

STATE HIGHWAY COMMISSION

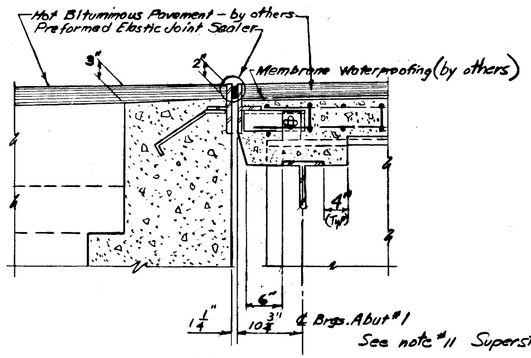
INTERSTATE 295
OVER
FOREST AVENUE
IN THE CITY OF
PORTLAND
CUMBERLAND COUNTY
STRUCTURAL STEEL DETAILS
SHEET OF AUGUSTA, MAINE MAY 1972

JANUARY 1968

203-1 2098

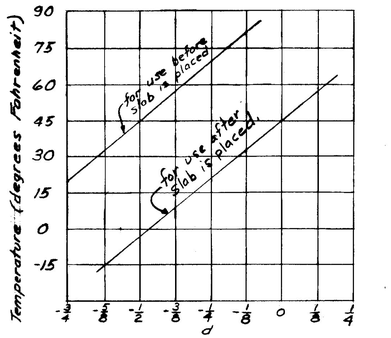
PORTLAND

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-295-3(60)	54	236

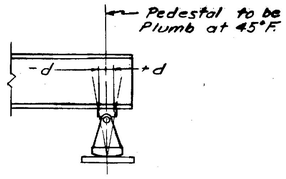


SECTION A-A

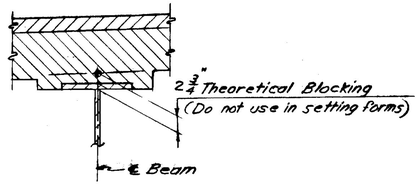
(See Section CC and notes on sheet #17 for details of seal)
See Superstructure Note #11 on this sheet before setting opening for seal at Abutment #1.



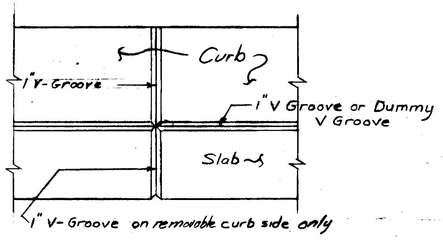
EXPANSION PEDESTAL SETTINGS



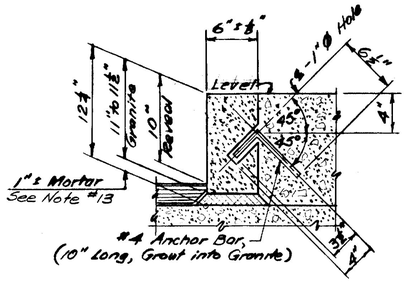
EXPANSION PEDESTALS SETTING DIAGRAM



BLOCKING DETAIL

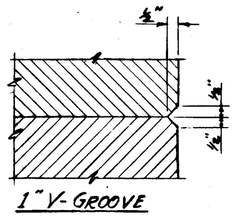


CURB JOINT DETAIL

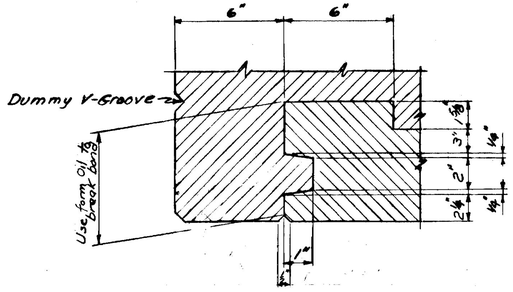


VERTICAL BRIDGE CURB DETAIL

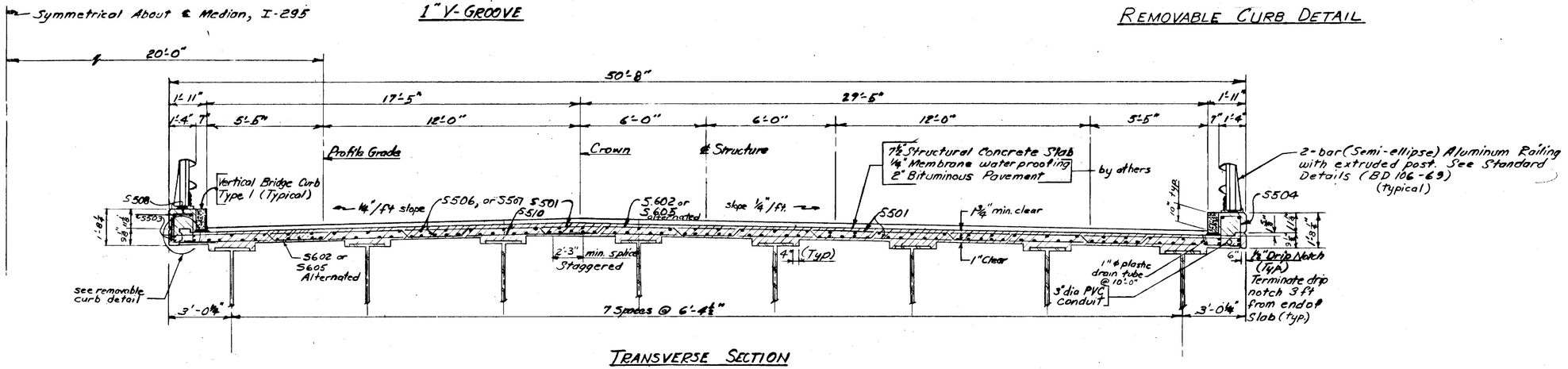
Mortar for bedding and jointing granite curb shall contain a non-shrink additive approved by the Engineer.



1" V-GROOVE



REMOVABLE CURB DETAIL



TRANSVERSE SECTION

Superstructure Notes:

1. At all contraction joints in concrete curbs, break the bond between the concrete surfaces by a method approved by the Engineer.
2. Form a 1" V-Groove on the outside faces of curbs at each curb contraction joint. See curb joint detail.
3. Provide a joint in the Vertical Bridge Curb at each contraction joint in the concrete curbs.
4. Chamfer all exposed edges of concrete ½" unless otherwise indicated.
5. Form a 1" V-Groove on the outside face of slabs at each Construction Joint. See Curb Joint Detail.
6. Coat the top and outside faces of curbs down to the drip notch under the edge of the slab with "Protective Coating for Concrete Surfaces". Item 515.20
7. Place one (1) inch Dia. Plastic tube drains at 10 foot intervals along the sides of the superstructure and as described in subsection 502.17 of the Standard Specifications for Highways and Bridges as revised in June 1968.
8. All reinforcing steel shall have a minimum splice & embedment length of 36 Bar diameters unless otherwise indicated.
9. Reinforcing steel shall have a minimum concrete cover of two (2) inches unless otherwise indicated.
10. Set-retarding admixtures shall be used when authorized by the Engineer and in accordance with SubSection 711.04 of the Standard Specifications for Highways & Bridges as revised in June 1968.
11. At abutment #1 the armored joint opening will increase by 5/8" due to dead load deflections of the beams. The superstructure armored joint shall be set to compensate for this movement.
12. All superstructure concrete shall be class "A"
13. Mortar for bedding and for joints in the granite curb shall contain an approved non-shrink additive.
14. At abutment #2 the armored joint opening will increase by 3/8" due to dead load deflections. The superstructure armored joint shall be set to compensate for this movement.

Proj. Des. Engr.: [illegible]

DESIGN–	BD13	DETAIL–	CJH
TRACE–			
CHECK–	N.E.R. 4/26/72		

BRIDGE NO.
SURVEY–
PLOT–

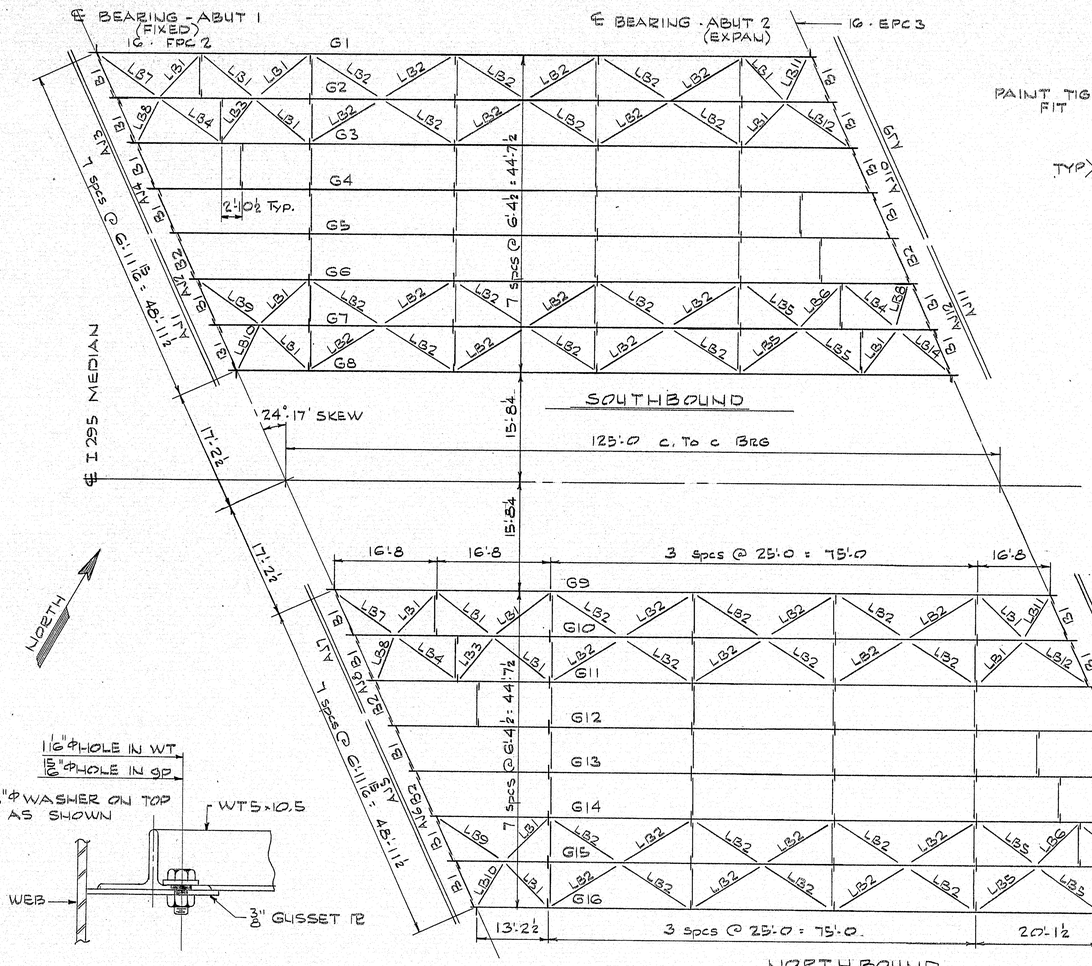
STATE HIGHWAY COMMISSION

INTERSTATE 295
OVER
FOREST AVENUE
IN THE CITY OF
PORTLAND
CUMBERLAND COUNTY

SUPERSTRUCTURE SLAB-TYPICAL SECTION

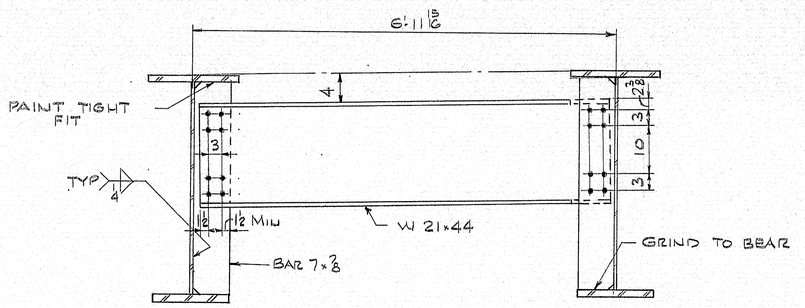
SHEET OF AUGUSTA, MAINE MAY 1972

PORTLAND

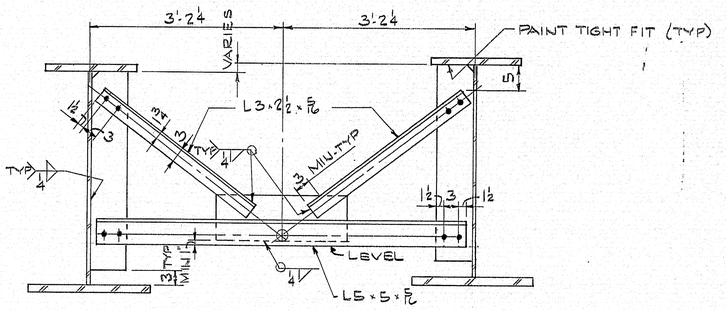


ALL DIMENSIONS HORIZONTAL

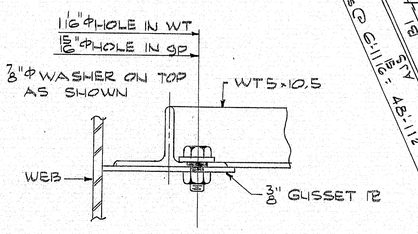
NOTE:
ALL INTERMEDIATE CROSSFRAMES ARE CF1



TYPE B DIAPHRAGM
@ ABUTS



INTERMEDIATE
CROSS FRAME



TYP CONN @ LAT BRACING
4- ⅞"Φ H.S. BOLTS

NOTES:
1) FORM BRACKET HOLES ARE TO BE PLUGGED WITH ⅝"Φ×0'-1½ CARRIAGE BOLTS, HEADS TO BE ON OUTSIDE. HOLES TO BE COMPLETELY COVERED. TACK WELD NUTS TO GIRDER WEB.
2.) ALL SHOP WELDS MUST BE MADE IN ACCORDANCE WITH THE APPROVED WELDING PROCEDURES.

APP. AS NOTED: 10-8-72
ITEM NO: 504.7001
PROJ. NO: I 295-3(60)

FRAMING PLAN

PRINT DIST.			
2D	9-22-72	FA	
1 SEPIA	10-11-72	BREW	
8D	10-11-72	STATE	
2D	11-28-72	Cust	

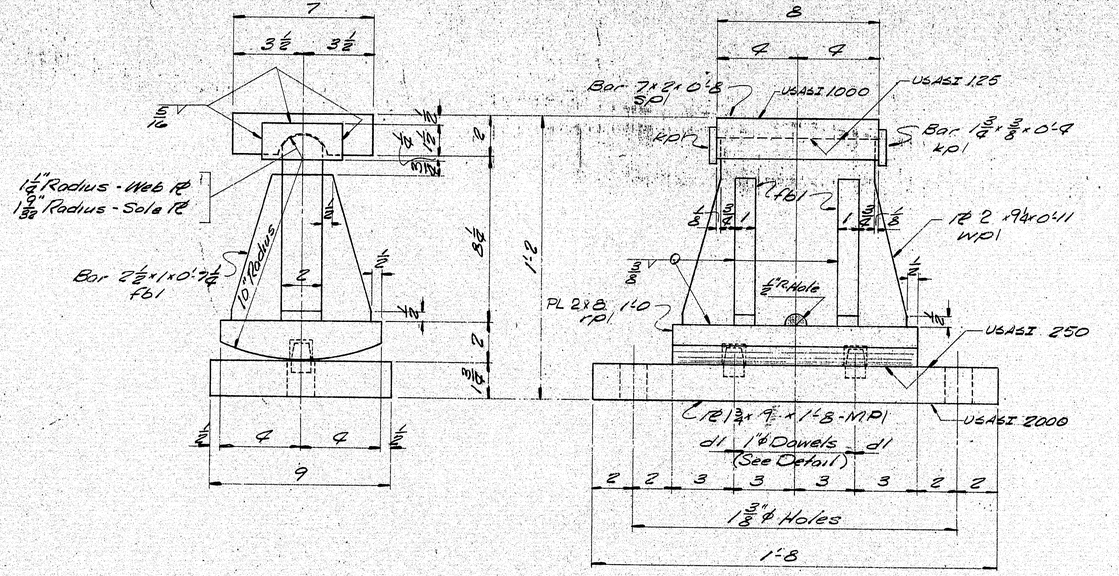
Bancroft & Martin Inc.
South Portland, Maine 04106

JOB: I 295 OVER FOREST AVE PORTLAND MAINE

CUSTOMER: BLUE ROCK INDUSTRIES
DESIGNER: M.S.H.C. BRIDGE DIV.

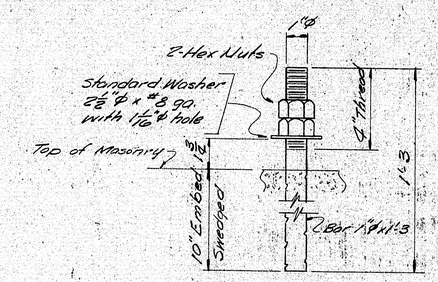
REV.			ORDER NO.	JOB NO.	DRAWING NO.
CHECKED		RGM		B72-228	B1
DRAWN	7-24-72	DWL			

140-28



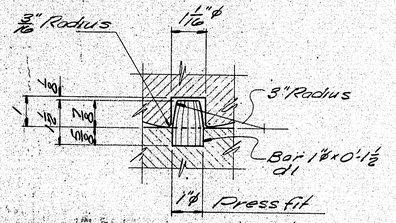
EXPANSION PEDESTAL EPC-3

16 REQ'D.

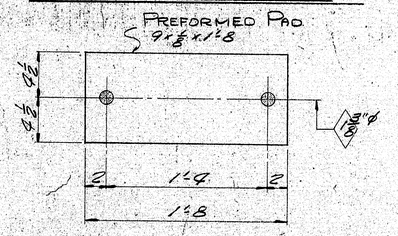


ANCHOR BOLT ABI

32 REQ'D.



DOWEL DETAIL



PREFORMED PAD

FPl 16 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 USASI 125 finish.
coat with mixture of white lead and tallow.
No paint on Anchor Bolts - Oil threads.
Masonry, Pl's & Bearing Surfaces of expansion bearing rockers shall receive 2 coats of shop paint.

SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS	ITEM NO.
EPC-3	16		EXPANSION PEDESTAL ASS'Y.				
MPl	16		Pl 1¾x9	1 8			27
	16	rpl	PL 2x8	1 0			28
	16	WPl	Pl 2x9¼	0 11			29
SPl	16		Bar 7x2	0 8			31
	64	fb1	Bar 2½x1	0 7⅛			30
	32	d1	Bar 1"ø	0 1½			35
	32	kPl	Bar 1¾x⅜	0 4			26
ABl	32		Bar 1"ø	1 3		Swedged	32
	64	shop	1" Hex. Nut				33
Field	32		1" Washer			Std. Washer-2½"O.D.x #890. with 1 1/16"ø hole.	34
FPl	16		Pad 9x⅜	1 8		PREFORMED PAD REQ. NO. 3323	

	APPR.	7-27-72
ITEM		504.7001
PROJECT NO.		I-295-3(40)
Sole plates "SP" to be		field welded
to stringers.		

Bearing material to be ASTM A36; Anchor bolts to be A36.
WELDING ELECTRODE E70S-1B SEE WELDING PROCEDURE
SHOP CONNECTIONS: Welded
FIELD CONNECTIONS: BOLTED
HOLES: As noted
PAINT: Red lead per Maine S.H.C. spec., and as noted.

Cust	11-28-72	ZP
STATE	8-1-72	GP
SHOP	8-1-72	AP
F.A.	7-14-72	ZP
CK'D	7-11-72	DWL

DRAWN	7-5-72	TVB
REVISION		
REVISION		
REVISION		

BEARING PEDESTAL DETAIL

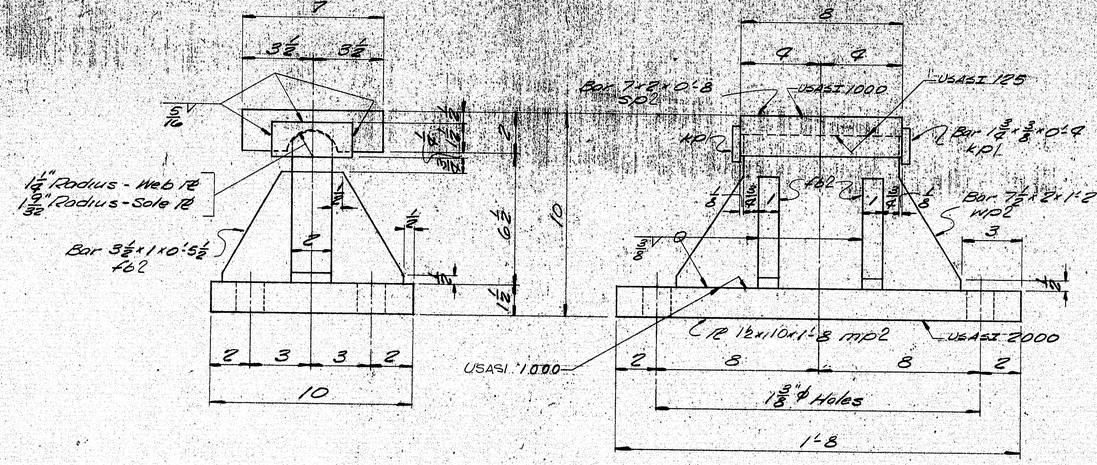
Bancroft & Martin Inc.
South Portland 7, Maine

I-295 OVER FOREST AVE.
PORTLAND, MAINE

CUSTOMER BLUE ROCK INDUSTRIES
DESIGNER M.S.H.C. BRIDGE DIV.

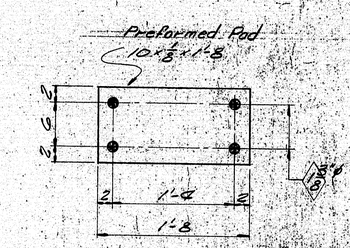
JOB NO. B72-228 DWG. NO. S1-1

140-29 Pg. No. Rev.



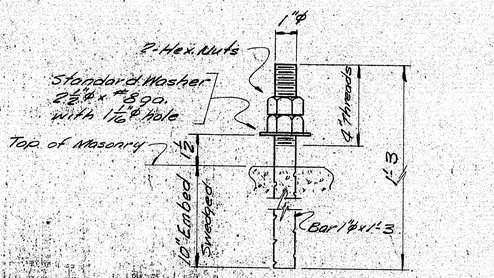
FIXED PEDESTAL FPC-2

10 REQ'D.



PREFORMED PAD.

FP2 10 REQ'D.



ANCHOR BOLT AB1

64 REQ'D.

SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS	ITEM NO.
FPC2	10		FIXED PEDESTAL ASS'Y.				
	10	WP2	PL 12 x 10	1 8			22
	10	WP2	Bar 7½ x 2	1 2			23
SP2	16		Bar 7 x 2	0 8			25
	32	HP1	Bar 1⅜ x ⅜	0 9			26
	64	FB2	Bar 3½ x 1	0 5½			24
AB1	64		Bar 1" ϕ	1 5		Swedged	32
	128	shop	1" Hex. Nut				33
Field	64		1" Washer			Std. Washer 2½ O.D. x 1" Slot. with 1 1/16" ϕ hole.	34
FP2	10		10 x ⅝	1 8		Preformed Pad Rep. # 3323	

APPR. 7-27-72

ITEM: 504.1001

PROJECT No. I-295-3(40)

Sole plates "SP" to be field welded to stringers.

Bearing material to be ASTM A36, Anchor bolts to be A36.

WELD ELECTRODE: E7018-1B SEE WELDING PROCEDURES

SHOP CONNECTIONS: Welded

FIELD CONNECTIONS: BOLTED

HOLES: As noted

PAINT: RED LEAD AS PER MAINE spec., and as noted.

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 USASI 125 finish, coat with mixture of white lead and tallow.

No paint on Anchor bolts - Oil threads.

BEARING PEDESTAL DETAIL

Bancroft & Martin Inc.

South Portland 7, Maine

I-295 OVER FOREST AVE. PORTLAND, MAINE

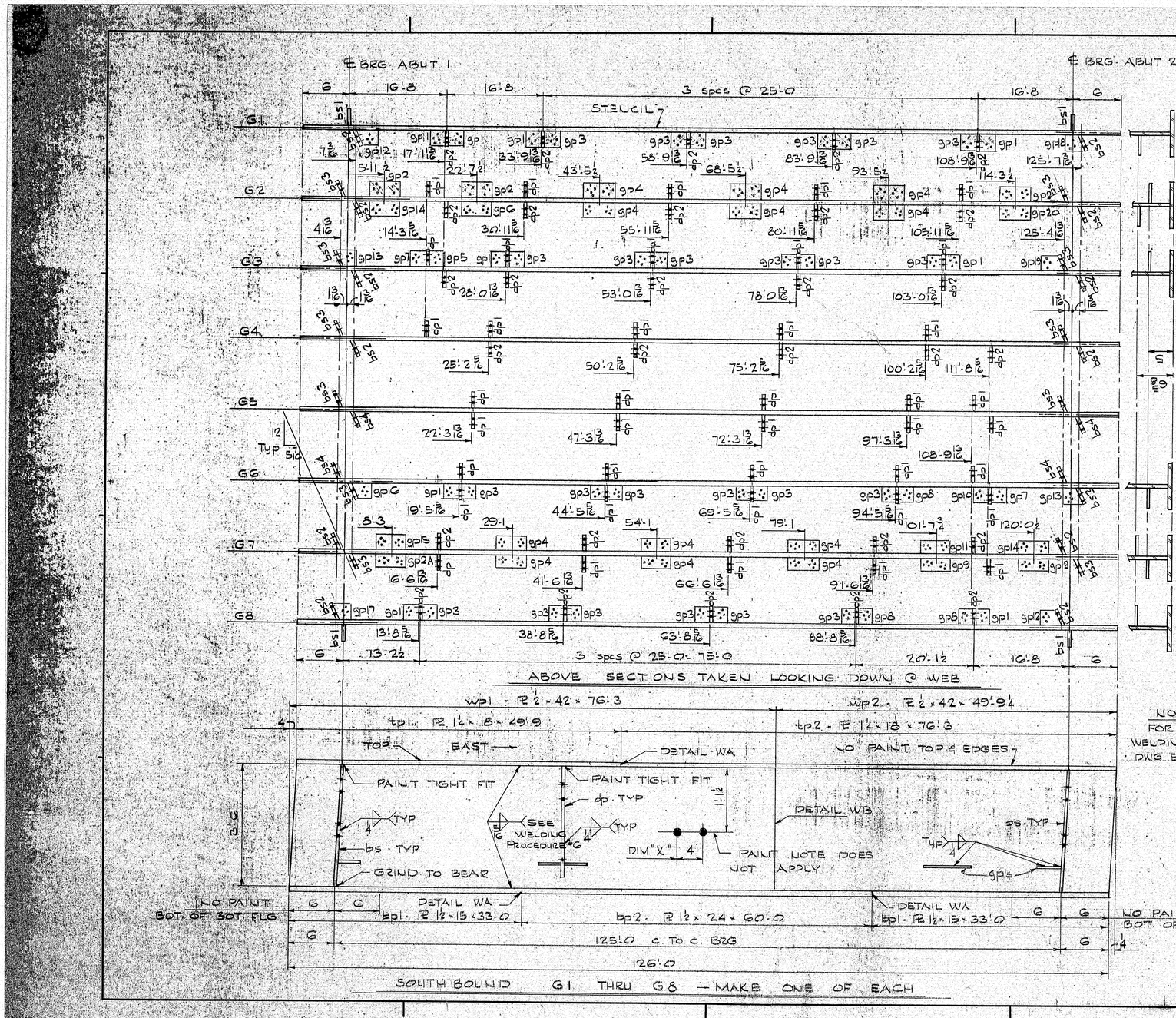
Cust	11-28-72	2p
STATE	8-1-72	4p
SHOP	8-1-72	4p
F.A	7-14-72	2p
CK'D	7-11-72	DWL
DRAWN	7-5-72	TJP
REVISION		
REVISION		
REVISION		

CUSTOMER BLUE ROCK INDUSTRIES

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

JOB NO. B72-228 DWG. NO. S1-2

140-30 RE MK REV



GIRDER G1	GIRDER G8
DIM "X"	
2'-0	1'-6½
7'-0	5'-6½
12'-0	9'-6½
17'-0	13'-6½
21'-2	18'-6½
25'-4	23'-6½
29'-6	28'-6½
33'-8	33'-6½
38'-8	38'-6½
43'-8	43'-6½
48'-8	48'-6½
53'-8	53'-6½
58'-8	58'-6½
63'-8	63'-6½
68'-8	68'-6½
73'-8	73'-6½
78'-8	78'-6½
83'-8	83'-6½
88'-8	88'-6½
93'-8	93'-6⅞
98'-8	98'-7¼
103'-8	103'-7⅝
108'-8	108'-8
113'-8	113'-8
117'-10	118'-8
122'-6	123'-8

NOTE:
FOR STIFFENERS, CAMBER, WELDING & GUSSETS, SEE DWG. 52.3

SHIP	BILL OF MATERIAL						JOB NO. 372-228	DWG. NO. 52-1
MARK	NO.	MARK	SHAPE	LENGTH		WT.	ITEM NO.	REMARKS
G1	1		GIRDER	126	0	—		
G2	1		do	126	0	—		
G3	1		do	126	0	—		
G4	1		do	126	0	—		
G5	1		do	126	0	—		
G6	1		do	126	0	—		
G7	1		do	126	0	—		
G8	1		do	126	0	—		
	8	wp1	PL 2 x 42	76	3		1	CUT FROM PL 2 x 42 x 76:6 PLT FROM PL 2 x 42 x 49:10
	8	wp2	do	49	9¼		2	
	8	tp1	PL 1¼ x 18	49	9		3	
	8	tp2	do	76	3		3a	
	16	bp1	PL 1½ x 15	33	0		4	
	8	bp2	PL 1½ x 24	60	0		6	
								A572 GRADE 50
	4	bs1	BAR 7 x ⅞	3	6		5	
	12	bs2	do	3	6		5	
	12	bs3	do	3	6		5	
	4	bs4	do	3	6		5	
	40	dp1	BAR 7 x ⅜	3	3		7	A36
	30	dp2	BAR 7 x ⅜	3	3		7	A36
	9	gp1	PL ⅜ x 9	1	0		8 thru 8a	
	4	gp2	do	2	0			
	24	gp3	do	1	1¼			
	12	gp4	do	2	2½			
	1	gp5	PL ⅜ x 9 ⅜	0	10¼			
	1	gp6	PL ⅜ x 10¼	1	8			
	2	gp7	PL ⅜ x 9	1	1			
	3	gp8	do	1	0			
	1	gp9	do	2	0			
	1	gp10	PL ⅜ x 9 ⅜	0	10¼			
	1	gp11	do	1	10¼			
	2	gp12	PL ⅜ x 10¼	1	1			
	2	gp13	PL ⅜ x 11	1	0			
	2	gp14	PL ⅜ x 12	1	8			
	1	gp15	PL ⅜ x 10¼	2	1			
	1	gp16	do	1	1			
	1	gp17	PL ⅜ x 11	1	0			
	1	gp18	PL ⅜ x 9	1	3			
	1	gp19	do	1	3			
	1	gp20	do	2	3		8	A36
1	1	gp2A	PL ⅜ x 11	1	9		8	

HOLES ARE FOR HIGH TENSILE BOLTS
They are to be free from burrs and shall not be painted on any surface within 5" of such holes

STEEL: ASTM. A572 GRADE 50 & A36 AS NOTED
WELDING ELECTRODE E72-EM 12K, E7018, E7028 SEE WELDING PROCEDURES
SHOP CONN: WELDED
FIELD CONN: BOLTED
HOLES: ⅞"ø
PAINT: RED LEAD PER MAINE SPECS & AS NOTED
SPECIAL CLEANING: BLAST CLEAN
APPROVED: AS NOTED 10-8-72
ITEM NO: 504.7001
PROJ. NO: I 295-3(60)

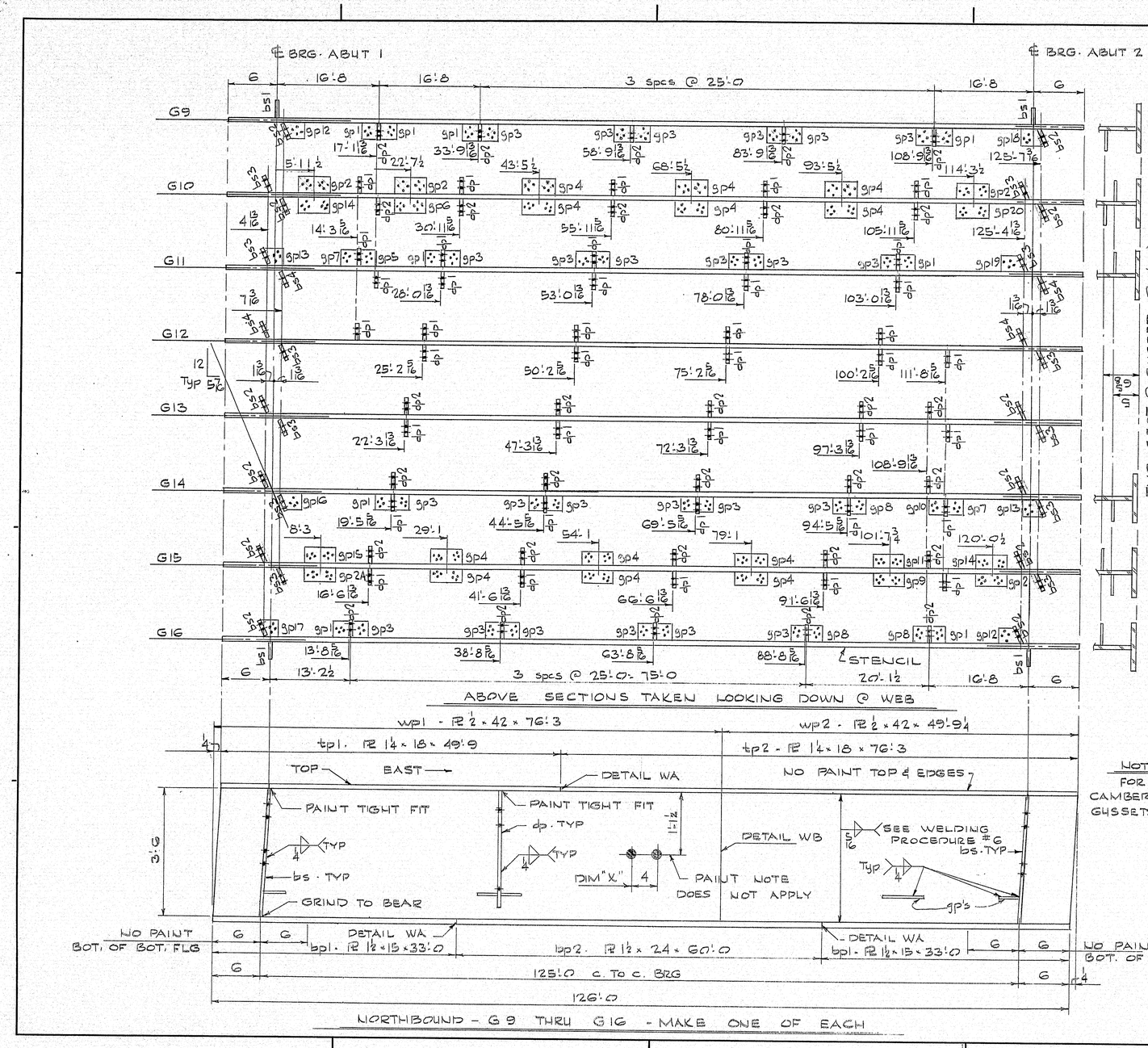
S.B. GIRDERS G1 THRU G8

PRINT DIST.		
2p	9-22-72	FA
1 Sepia	10-11-72	Brewer
8p	10-11-72	State
1 Sepia	10-19-72	Brewer
2p	11-28-72	Cust

Bancroft & Martin Inc.
South Portland, Maine 04106
JOB: I 295 OVER FOREST AVE PORTLAND, MAINE
CUSTOMER: BLUE ROCK INDUSTRIES
DESIGNER: M.S.H.C. BRIDGE DV.

REV. 1	10-18-72	DWL	ORDER NO.	JOB NO. 372-228
CHECKED		RGM		DRAWING NO. 52-1
DRAWN	7-25-72	DWL		

140-31



GIRDER G9	GIRDER G16
DIM "X"	
2'-0	—
7'-0	3'-6½
12'-0	8'-6½
17'-0	13'-6½
21'-2	18'-6½
25'-4	23'-6½
29'-6	28'-6½
33'-8	33'-6½
38'-8	38'-6½
43'-8	43'-6½
48'-8	48'-6½
53'-8	53'-6½
58'-8	58'-6½
63'-8	63'-6½
68'-8	68'-6½
73'-8	73'-6½
78'-8	78'-6½
83'-8	83'-6½
88'-8	88'-6½
93'-8	93'-6⅞
98'-8	98'-7¼
103'-8	103'-7⅜
108'-8	108'-8
113'-8	113'-8
118'-8	118'-8
123'-8	123'-8

NOTE:
FOR STIFFENERS, CAMBER, WELDING & GUSSETS, SEE DWG 52-3

SHIP — **BILL OF MATERIAL** — JOB NO. B72-228 — DWG. NO. 52-2

MARK	NO.	MARK	SHAPE	LENGTH		WT.	ITEM NO.		REMARKS
G9	1		GIRDER	126	0	—			
G10	1		do	126	0	—			
G11	1		do	126	0	—			
G12	1		do	126	0	—			
G13	1		do	126	0	—			
G14	1		do	126	0	—			
G15	1		do	126	0	—			
G16	1		do	126	0	—			
	8	wp1	PL ½ x 42	76	3		1		Cut from PL ½ x 45½ x 76'-6
	8	wp2	do	49	9¼		2		Cut from PL ½ x 45½ x 50'-0
	8	tp1	PL 1¼ x 18	49	9		3		
	8	tp2	do	76	3		3a		
	16	bp1	PL ½ x 15	33	0		4		
	8	bp2	PL ½ x 24	60	0		6		
									A572 GRADE 50
	4	bs1	BAR 7 x ⅞	3	6		5		
	12	bs2	do	3	6		5		
	12	bs3	do	3	6		5		
	4	bs4	do	3	6		5		
	40	dp1	BAR 7 x ⅜	3	3		7		A36
	30	dp2	do	3	3		7		
	9	gp1	PL ⅜ x 9	1	0		8 & 8a		
	4	gp2	do	2	0				
	24	gp3	do	1	1¼				
	12	gp4	do	2	2½				
	1	gp5	PL ⅜ x 9⅜	0	10¼				
	1	gp6	PL ⅜ x 10¼	1	8				
	2	gp7	PL ⅜ x 9	1	1				
	3	gp8	do	1	0				
	1	gp9	do	2	0				
	1	gp10	PL ⅜ x 9⅜	0	10¼				
	1	gp11	PL ⅜ x 9⅜	1	10¼				
	2	gp12	PL ⅜ x 10¼	1	1				
	2	gp13	PL ⅜ x 11	1	0				
	2	gp14	PL ⅜ x 12	1	8				
	1	gp15	PL ⅜ x 10¼	2	1				
	1	gp16	do	1	1				
	1	gp17	PL ⅜ x 11	1	0				HOLES ARE FOR HIGH TENSILE BOLTS. They are to be free from burrs and shall not be painted on any surface within 5" of such oval holes.
	1	gp18	PL ⅜ x 9	1	3				
	1	gp19	do	1	3				
	11	gp20	do	2	3		8		A36
1	1	gp2A	PL ⅜ x 11	1	9		8		

STEEL: ASTM. A572 GRADE 50 & A36 AS NOTED
WELDING ELECTRODE F72-EM12K, E7018, E7028 SEE WELDING PROCEDURES
SHOP CONN: WELDED
FIELD CONN: BOLTED
HOLES: 15/16 ϕ
PAINT: RED LEAD PER MAINE SPECS & AS NOTED
SPECIAL CLEANING: BLAST CLEAN
APPROVED:
ITEM NO: 504.7001
PROJ. NO: I 295-3 (60)

N.B. GIRDERS G9 THRU G16

PRINT DIST.		
2p	9-22-72	FA
1 Sepia	10-11-72	Brewer
8p	10-11-72	State
1 Sepia	10-19-72	Brewer
2 ⅄	11-28-72	Cust

Bancroft & Martin Inc.
South Portland, Maine 04106

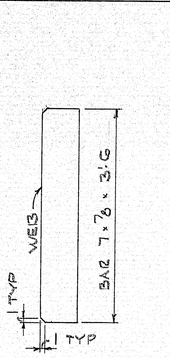
JOB: I 295 OVER FOREST AVE PORTLAND, MAINE

CUSTOMER: BLUE ROCK INDUSTRIES
DESIGNER: M.S.H.C. BRIDGE DIV.

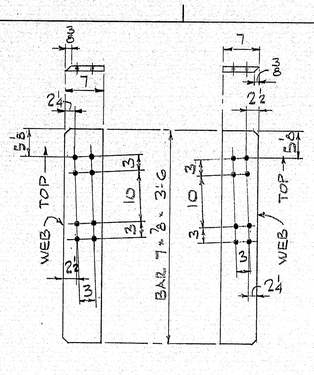
REV.	10-18-72	DWL
CHECKED		RGM
DRAWN	7-25-72	DWL

ORDER NO.	JOB NO.	DRAWING NO.
	B72-228	52-2

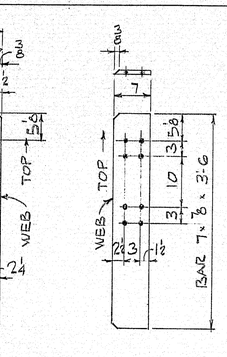
140-32



bs1 - 8 REQ'D

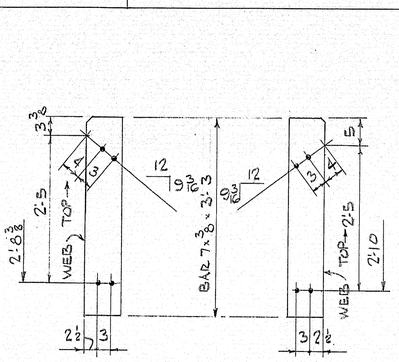


bs2 - 24 REQ'D

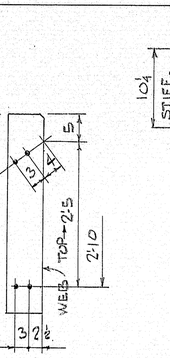


bs3 - 24 REQ'D

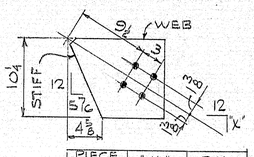
bs4 - 8 REQ'D



dp2 - 60 REQ'D

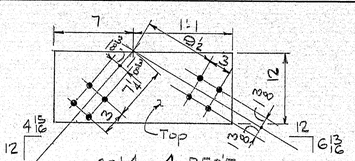


dp1 - 80 REQ'D

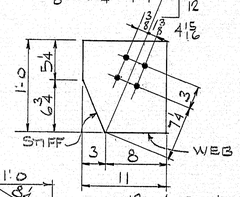


PIECE MARK	"X"	QUAN
gp12	9 5/16	4
gp16	7 5/16	2

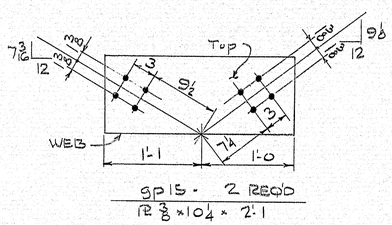
gp12 & gp16
PL 3/8 x 10 1/4 x 1'-1



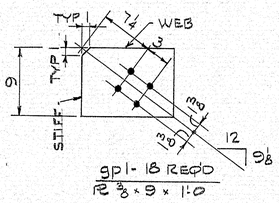
gp14 - 4 REQ'D
PL 3/8 x 12 x 1'-6



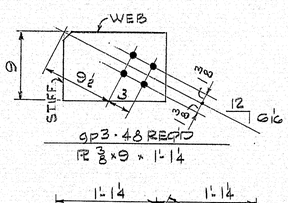
gp13 - 4 REQ'D
PL 3/8 x 11 x 1'-0



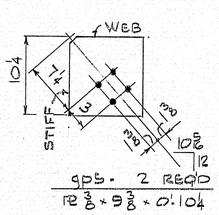
gp15 - 2 REQ'D
PL 3/8 x 10 1/4 x 2'-1



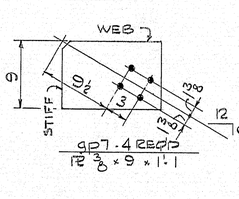
gp1 - 18 REQ'D
PL 3/8 x 9 x 1'-0



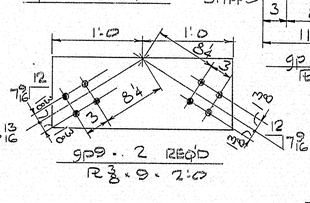
gp3 - 48 REQ'D
PL 3/8 x 9 x 1'-14



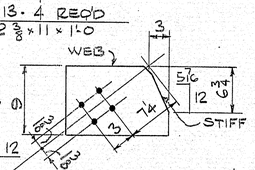
gp5 - 2 REQ'D
PL 3/8 x 9 3/8 x 0'-10 1/4



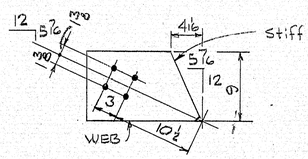
gp7 - 4 REQ'D
PL 3/8 x 9 x 1'-1



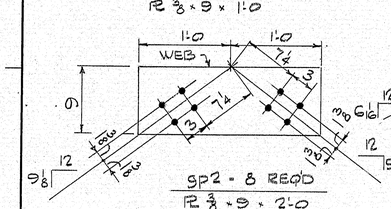
gp9 - 2 REQ'D
PL 3/8 x 9 x 2'-0



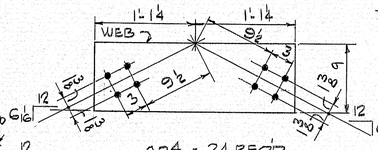
gp18 - 2 REQ'D
PL 3/8 x 9 x 1'-3



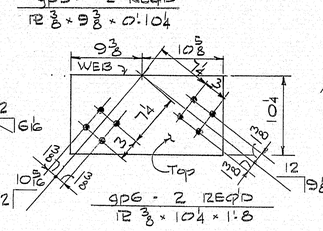
gp19 - 2 REQ'D
PL 3/8 x 9 x 1'-3



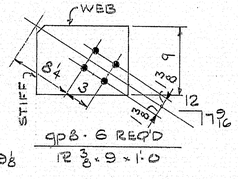
gp2 - 8 REQ'D
PL 3/8 x 9 x 2'-0



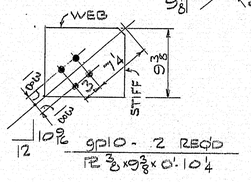
gp4 - 24 REQ'D
PL 3/8 x 9 x 2'-2 1/2



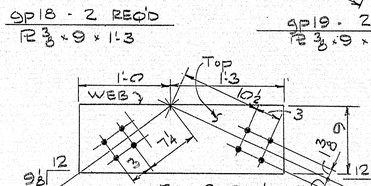
gp6 - 2 REQ'D
PL 3/8 x 10 1/4 x 1'-8



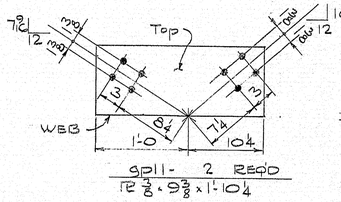
gp8 - 6 REQ'D
PL 3/8 x 9 x 1'-0



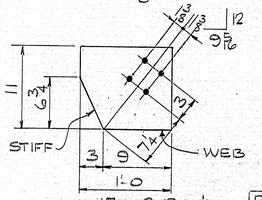
gp10 - 2 REQ'D
PL 3/8 x 9 3/8 x 0'-10 1/4



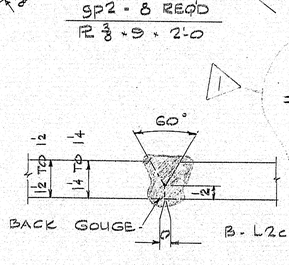
gp20 - 2 REQ'D
PL 3/8 x 9 x 2'-3



gp11 - 2 REQ'D
PL 3/8 x 9 3/8 x 1'-10 1/4

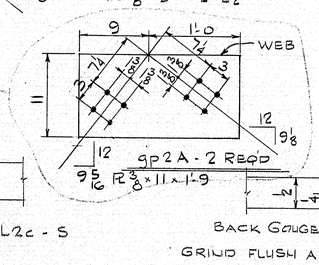


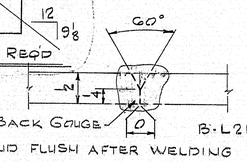
gp17 - 2 REQ'D
PL 3/8 x 11 x 1'-0



DETAIL WA

NOTE: USE WELDING PROCEDURE #3 FOR TOP FLANGE AND PROCEDURE #4 FOR BOT FLANGE.

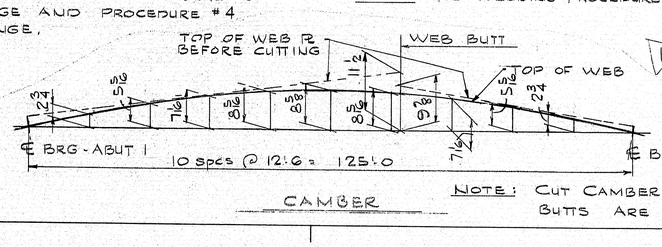




GRIND FLUSH AFTER WELDING

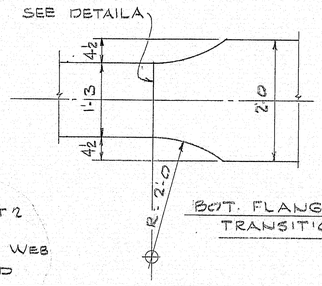
DETAIL WB

NOTE: USE WELDING PROCEDURE #5



CAMBER

NOTE: CUT CAMBER AFTER WEB BUTTS ARE WELDED



BOT. FLANGE ℝ TRANSITION

HOLES ARE FOR HIGH TENSILE BOLTS They are to be free from burrs and shall not be painted on any surface within 5" of such open holes.

PROJ NO: I 295-3(60)
ITEM NO: 504.7001
APP. AS NOTED 10-8-72

STIFFENERS, WELDING, CAMBER & GUSSETS

	PRINT DIST.		
2p	9-22-72	FA	
1 Sepia	10-11-72	Brewer	
8p	10-11-72	State	
1 Sepia	10-19-72	Brewer	
8p	10-19-72	State	
2p	11-28-72	Cust	
REV 1	10-18-72	DWL	
CHECKED		RGM	
DRAWN	7-28-72	DWL	

Bancroft & Martin Inc.
South Portland, Maine 04106

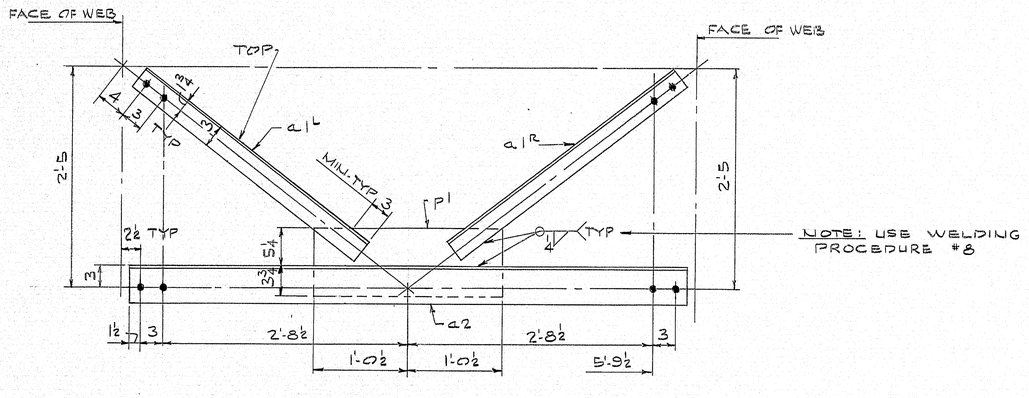
JOB: I 295 OVER FOREST AVE PORTLAND, MAINE

CUSTOMER: BLUE ROCK INDUSTRIES

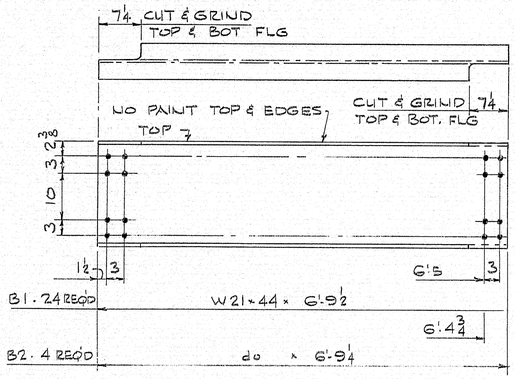
DESIGNER: MSHC BRIDGE DIV

ORDER NO.	JOB NO.	DRAWING NO.
	B72-228	S2-3

140-33



CF1 - 70 REQ'D



SHIP	BILL OF MATERIAL			JOB NO. B72-228	DWG. NO. S3-1			
MARK	NO.	MARK	SHAPE	LENGTH	WT.	ITEM NO.		REMARKS
CF1	70		CROSSFRAMES		—			
	70	a1R	L3×2½×5/16	3	1	11		
	70	a1L	do	3	1	11		
	70	a2	L5×5×5/16	6	2	10		
	70	P1	PL 3/8×9	2	1	12		
B1	24		W21×44	6	9½	9		
B2	4		do	6	9¼	9		
FIELD	1355		⅞"ΦHSBolt	0	2			@CF1 & L8
do	457		do	0	2½			@ B1 & B2
do	1812		⅞"Φ Hard Washers					ASTM A325

HOLES ARE FOR HIGH TENSILE BOLTS
They are to be free from burrs and shall not be painted on any surface within 5" of such open holes.

ITEM NO: 5047001
PROJ NO: I 295-3(60)

STEEL: ASTM. A36 & AS NOTED
WELDING ELECTRODE E7018-E7028 SEE WELDING PROCEDURES
SHOP CONN: WELDED
FIELD CONN: BOLTED
HOLES: 15 @ Φ 16
PAINT: RED LEAD PER MAINE SPECS & AS NOTED
SPECIAL CLEANING: BLAST CLEAN
APPROVED: AS NOTED 10-8-72

CROSSFRAMES & DIAPHRAGMS

PRINT DIST.		
2p	9-22-72	FA
15 Sepia	10-11-72	Brewer
8p	10-11-72	State
2p	11-28-72	Cust

Bancroft & Martin Inc.
South Portland, Maine 04106

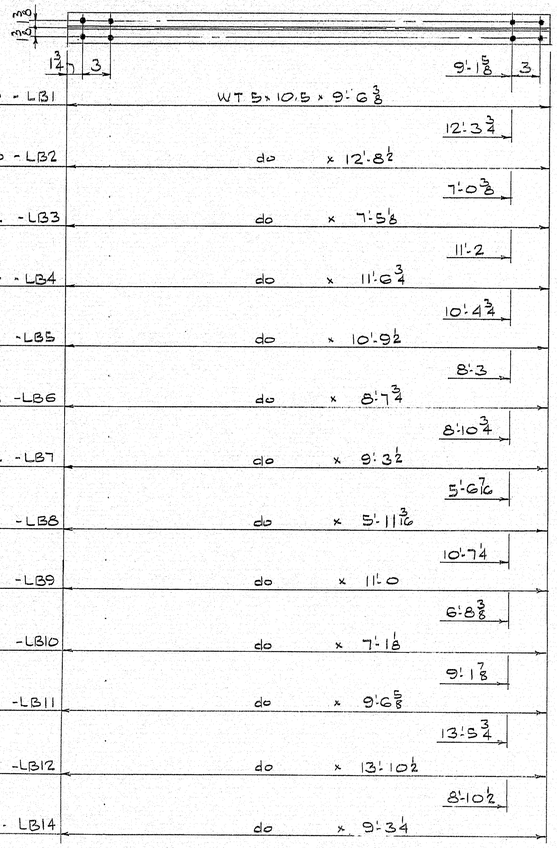
JOB: I295 OVER FOREST AVE PORTLAND, MAINE

CUSTOMER: BLUE ROCK INDUSTRIES
DESIGNER: M.S.H.C. BRIDGE DIV.

REV.		
CHECKED		TGM
DRAWN	7-28-72	DWL

ORDER NO.	JOB NO.	DRAWING NO.
	B72.228	S3-1

140-34



18 - LB1	WT 5 x 10.5 x 9'-6 3/8		
		12'-3 3/4	
48 - LB2	do	x 12'-8 1/2	
		7'-0 3/8	
2 - LB3	do	x 7'-5 1/8	
		11'-2	
4 - LB4	do	x 11'-6 3/4	
		10'-4 3/4	
6 - LB5	do	x 10'-9 1/2	
		8'-3	
2 - LB6	do	x 8'-7 3/4	
		8'-10 3/4	
2 - LB7	do	x 9'-3 1/2	
		5'-6 7/16	
4 - LB8	do	x 5'-11 3/16	
		10'-7 1/4	
2 - LB9	do	x 11'-0	
		6'-8 3/8	
2 - LB10	do	x 7'-1 1/8	
		9'-1 7/8	
2 - LB11	do	x 9'-6 5/8	
		13'-5 3/4	
2 - LB12	do	x 13'-10 1/2	
		8'-10 1/2	
2 - LB14	do	x 9'-3 1/4	

SHIP — **BILL OF MATERIAL** — JOB NO. B72-228 — DWG. NO. S4-1

MARK	NO.	MARK	SHAPE	LENGTH	WT.	ITEM NO.	REMARKS
LB1	18		WT5x10.5	9 6 3/8		14	
LB2	48		do	12 8 1/2		13	
LB3	2		do	7 5 1/8		14	
LB4	4		do	11 6 3/4		14	
LB5	6		do	10 9 1/2		14	
LB6	2		do	8 7 3/4		14	
LB7	2		do	9 3 1/2		14	
LB8	4		do	5 11 3/16		14	
LB9	2		do	11 0		14	
LB10	2		do	7 1 1/8		14	
LB11	2		do	9 6 5/8		14	
LB12	2		do	13 10 1/2		14	
LB14	2		do	9 3 1/4		14	

Proj. NO: I295-3(60)
ITEM NO: 5047.071

STEEL: ASTM. A36
WELDING ELECTRODE —
SHOP CONN: —
FIELD CONN: BOLTED
HOLES: 1 1/16"ϕ
PAINT: RED LEAD PER MAINE SPECS & AS NOTED
SPECIAL CLEANING: BLAST CLEAN
APPROVED: 10-8-72

HOLES ARE FOR HIGH TENSILE BOLTS
They are to be free from burrs and shall not be painted on any surface within 6" of such open holes.

LATERAL BRACING

PRINT DIST.		
2p	9-22-72	FA
1 Sepia	10-11-72	Brewer
6p	10-11-72	State
7p	11-28-72	Cust

Bancroft & Martin Inc.
South Portland, Maine 04106

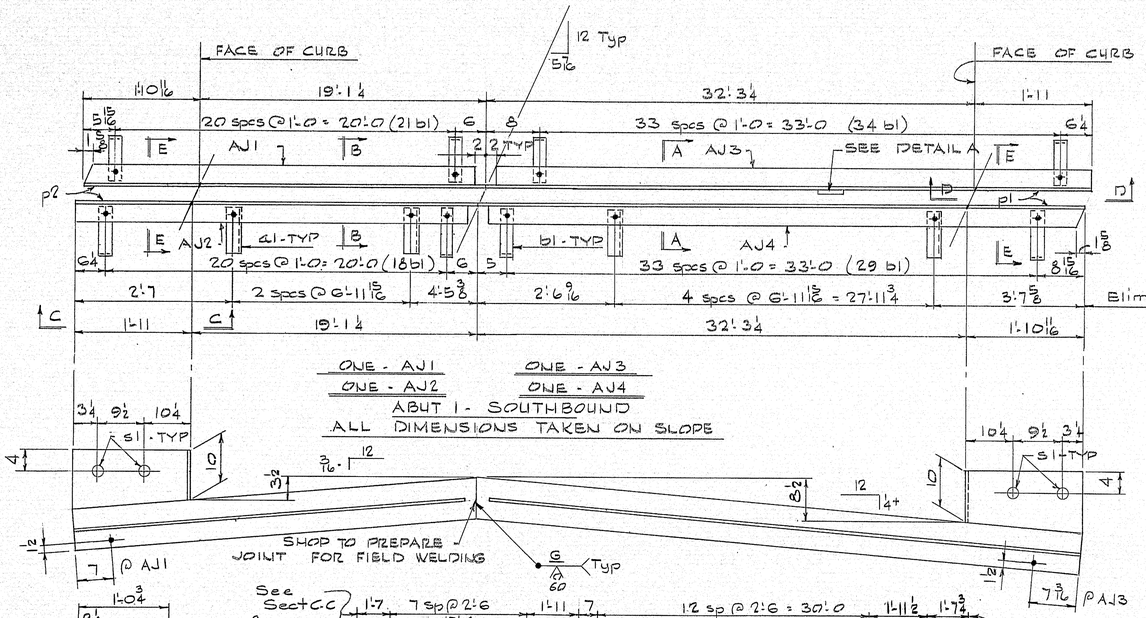
JOB: I 295 OVER FOREST AVE PORTLAND MAINE

CUSTOMER: BLUE ROCK INDUSTRIES
DESIGNER: MSHC BRIDGE DIV

REV.		ORDER NO.	JOB NO.	DRAWING NO.
CHECKED			B72-228	S4-1
DRAWN	8-3-72 DWL			

140-35

[redacted]



SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	ITEM NO.	REMARKS
AJ1	1		WT 4×24	20 11 5/8		15	
AJ2	1		do	21 0 1/4		15	
AJ3	1		do	34 2 1/4		16	
AJ4	1		do	34 1 5/8		16	
	102	b1	BAR 2 1/2 x 3/8	1 3		14a	Bent
	8	a1	L3 1/2 x 3 1/2 x 3/8	0 9		19	
	8	b2	BAR 3 x 3/8	0 7		18	
	8	s1	7/8"ϕ A.STUD	0 5		21	
	2	p1	PL 5/8 x 10 1/2	1 11		17	
	2	p2	PL 5/8 x 10 3/8	1 11		17	
	3	b3	BAR 1/2 x 1/2	1 0		20	Bent
	1	b4	do	1 0		20	Bent
	40	b5	do	1 0		20	
	1	b6	do	0 5 1/2			
	118	SHOP	7/8"ϕ H.S. BOLT	0 2 1/4			
			ITEM NO:	504.7001			
			PROJ NO:	I 295-3(6 P)			

STEEL: ASTM. A36
WELDING ELECTRODE E 7018 - E 7028 SEE WELDING PROCEDURES
SHOP CONN: WELDED
FIELD CONN: BOLTED & WELDED
HOLES: 13/16"ϕ & AS NOTED
PAINT: RED LEAD PER MAINE SPECS & AS NOTED
SPECIAL CLEANING: BLAST CLEAN
APPROVED: As Noted! 11-22-72

ARMORED JOINT ABUT 1 - S.B.

PRINT DIST.		
2p	11-6-72	A
4p	11-28-72	Shop
8p	11-28-72	Staff
Sepia	11-28-72	Brewer

Bancroft & Martin Inc.
South Portland, Maine 04106

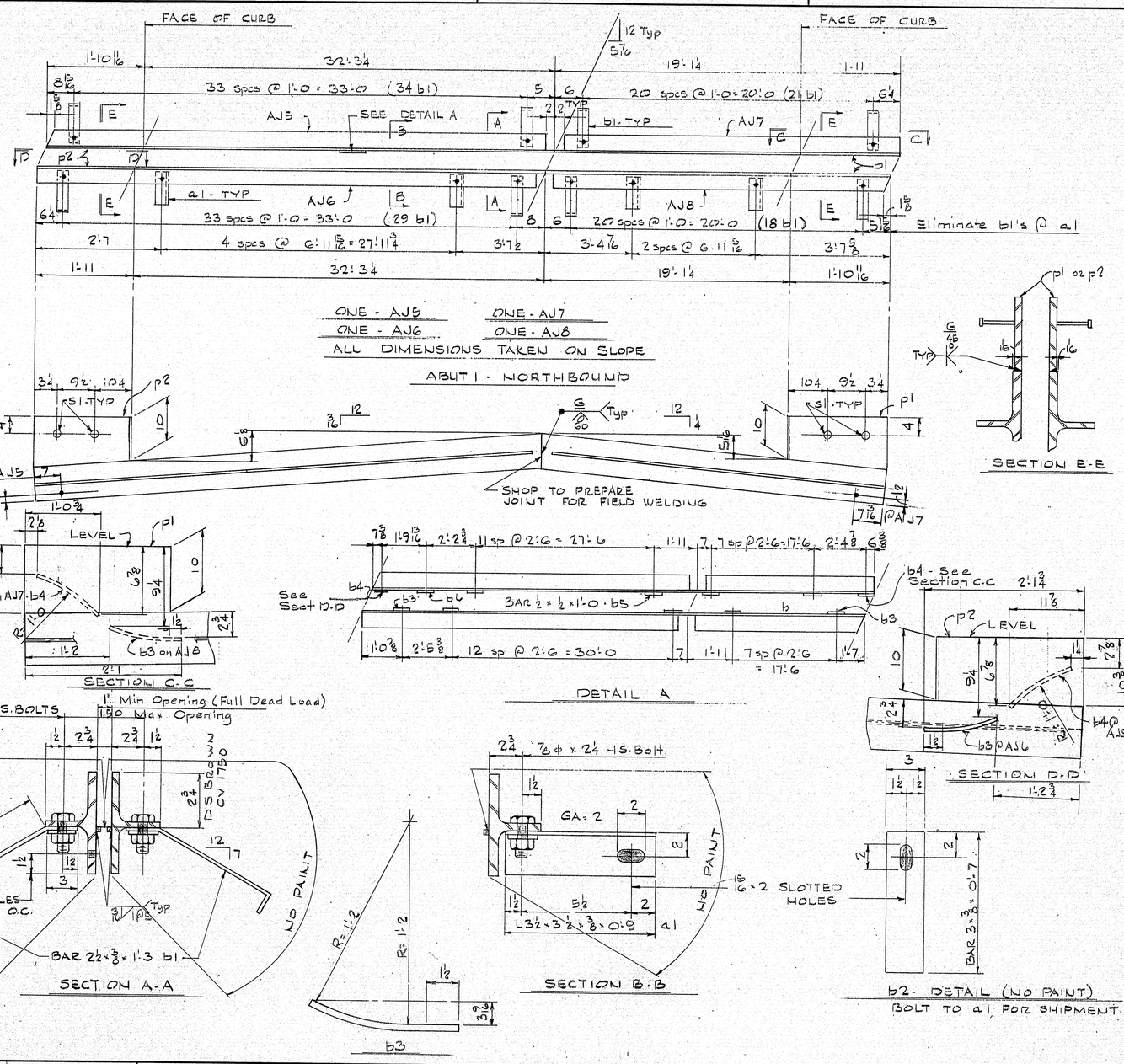
JOB: I 295 OVER FOREST AVE PORTLAND, MAINE

CUSTOMER: BLUE ROCK INDUSTRIES
DESIGNER: M.S.H.C BRIDGE DIV.

REV.		
CHECKED		RGM
DRAWN	9-3-72	DWL

ORDER NO.	JOB NO.	DRAWING NO.
	B72.228	58-1

140-36



SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	ITEM NO.	REMARKS
AJ5	1		WT 4 x 24	34 1 15/16		16	
AJ6	1		do	34 2 4		16	
AJ7	1		do	21 0 4		15	
AJ8	1		do	20 11 15/16		15	
	102	b1	BAR 2 1/2 x 3/8	1 3		14a	Bent
	8	a1	L 3 1/2 x 3 1/2 x 3/8	0 9		19	
	8	b2	BAR 3 x 3/8	0 7		18	
	8	s1	7/8 Φ A STUD	0 5		21	
	2	p1	PL 5/8 x 10 1/2	1 11		17	
	2	p2	PL 5/8 x 10 3/8	1 11		17	
	3	b3	BAR 1/2 x 1/2	1 0		20	Bent
	1	b4	do	L 0		20	Bent
	40	b5	do	1 0		20	
	1	b6	do	0 5 1/2		20	
	118	SHOP	7/8 Φ H.S. BOLT	0 2 4			

ITEM NO: 504.7001
PROJ NO: I 295-3(60)

STEEL: ASTM. A36
WELDING ELECTRODE E7018-E7028 SEE WELDING PROCEDURES
SHOP CONN: WELDED
FIELD CONN: BOLTED & WELDED
HOLES: 13/16"Φ AS NOTED
PAINT: RED LEAD PER MAINE SPECS AS NOTED
SPECIAL CLEANING: BLAST CLEAN
APPROVED: As Noted 11-22-72

ARMORED JOINT ABUT 1 - N.B.

PRINT DIST.		
2p	11-6-72	A
4p	11-28-72	Shop
8p	11-28-72	State
Sepia	11-28-72	Brewer

Bancroft & Martin Inc.
South Portland, Maine 04106

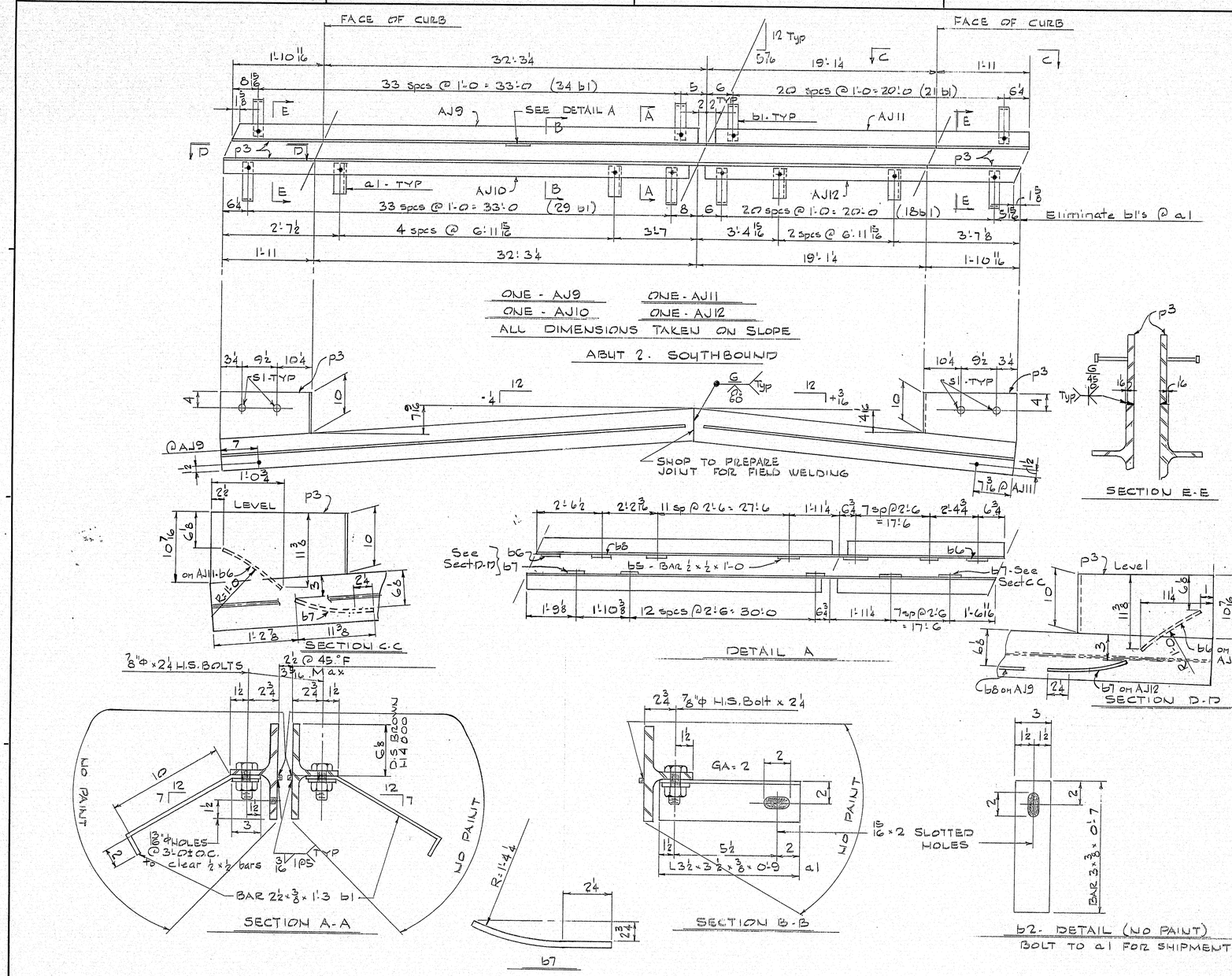
JOB: I295 OVER FOREST AVE PORTLAND, MAINE

CUSTOMER: BLUE ROCK INDUSTRIES
DESIGNER: M.S.H.C. BRIDGE DIV.

REV.		
CHECKED		RGM
DRAWN	10-3-72	DWL

ORDER NO.	JOB NO.	DRAWING NO.
	B72-228	56-2

140-37



SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	ITEM NO.	REMARKS
AJ9	1		WT 4-24	34 1 15/16		16	
AJ10	1		do	34 2¼		16	
AJ11	1		do	21 0¼		13	
AJ12	1		do	20 11 15/16		15	
	102	b1	BAR 2½ x ⅜	1 3		14a	Bent
	8	a1	L3½ x 3½ x ⅜	0 9		19	
	8	b2	BAR 3 x ⅜	0 6½		18	
	8	s1	⅞Φ A STUD	0 5		21	
	4	p3	PL ⅝ x 10 1/16	1 11		17	
	2	b6	BAR ½ x ½	1 0		20	Bent
	3	b7	do	1 0		20	Bent
	4-1	b5	do	1 0		20	
	1	b8	do	0 4⅜		20	
	118	SHOP	⅞"Φ H.S. BOLT	0 2¼			

ITEM NO: 504.7001
PROJ NO: I 295-3(60)

BILL OF MATERIAL JOB NO. B72-228 DWG. NO. SB-3

STEEL: ASTM. A36
WELDING ELECTRODE E7018-E7028 SEE WELDING PROCEDURES
SHOP CONN: WELDED
FIELD CONN: BOLTED & WELDED
HOLES: ⅞"Φ AS NOTED
PAINT: RED LEAD PER MAINE SPECS & AS NOTED
SPECIAL CLEANING: BLAST CLEAN
APPROVED: As Noted: 11-22-72

ARMORED JOINT ABUT 2. SB

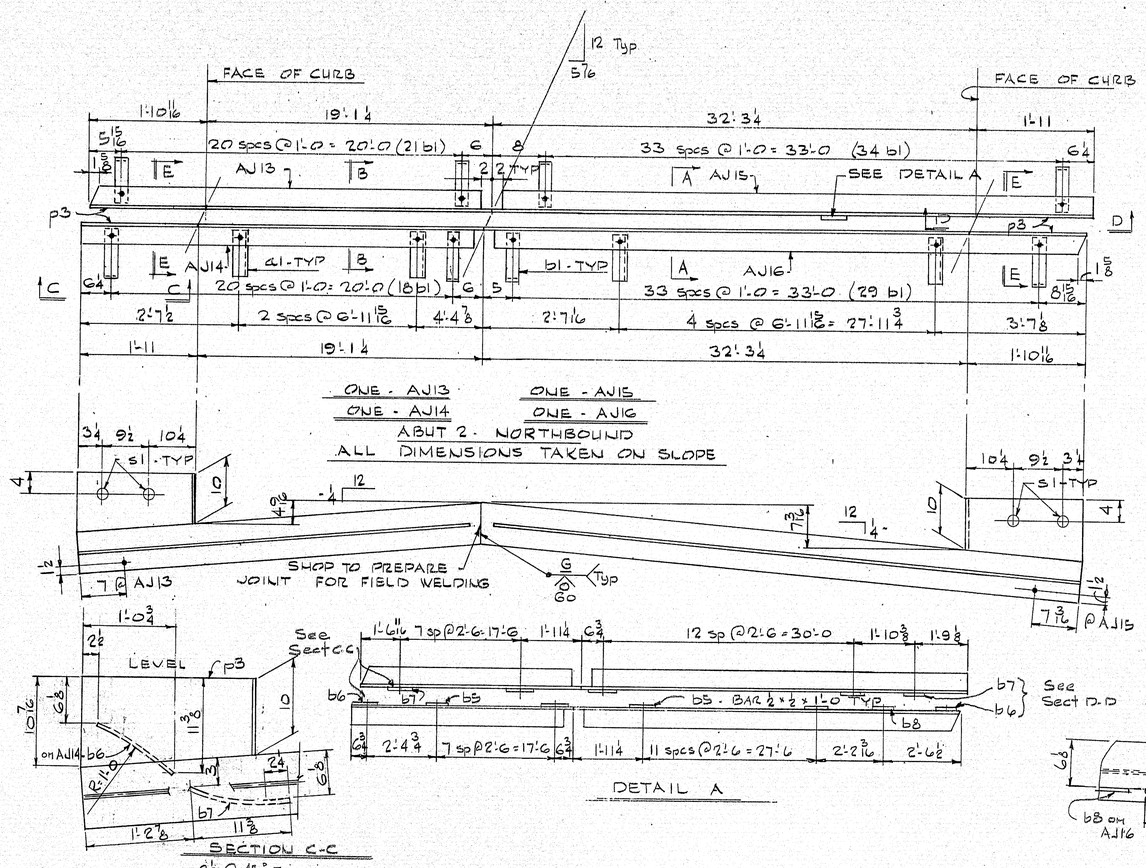
PRINT DIST.		
2p	11-6-72	A
4b	11-28-72	Shop
6b	11-28-72	State
Sep-6	11-28-72	Brewer

Bancroft & Martin Inc.
South Portland, Maine 04106
JOB: I295 OVER FOREST AVE PORTLAND, MAINE
CUSTOMER: BLUE ROCK INDUSTRIES
DESIGNER: M.S.H.C. BRIDGE DIV.

REV.		
CHECKED		RGM
DRAWN	10-3-72	DWL

ORDER NO.	JOB NO.	DRAWING NO.
	B72-228	SB-3

140-38



SHIP	BILL OF MATERIAL			JOB NO. B72-228			DWG. NO. SB-4
MARK	NO.	MARK	SHAPE	LENGTH	WT.	ITEM NO.	REMARKS
AJ13	1		WT 4 x 24	20 11 15/16		15	
AJ14	1		do	21 0 1/4		15	
AJ15	1		do	34 2 1/4		16	
AJ16	1		do	34 1 15/16		16	
	102	b1	BAR 2 1/2 x 3/8	1 3		14a	Bent
	8	a1	L3 1/2 x 3 1/2 x 3/8	0 9		19	
	8	b2	BAR 3 x 3/8	0 6 1/2		18	
	8	s1	7/8"φ A.STUD	0 5		21	
	4	p3	PL 5/8 x 10 7/16	1 11		17	
	2	b6	BAR 1/2 x 1/2	1 0		20	Bent
	3	b7	do	1 0		20	Bent
	41	b5	do	1 0		20	
	1	b8	do	0 4 3/8		20	
	118	SHOP	7/8"φ H.S. BOLT	0 2 1/4			
			ITEM NO: 504.7001				
			PROJ NO: I 295-3(6P)				

STEEL: ASTM. A36
WELDING ELECTRODE E7018 - E7028 SEE WELDING PROCEDURES
SHOP CONN: WELDED
FIELD CONN: BOLTED & WELDED
HOLES: 15/16"φ AS NOTED
PAINT: RED LEAD PER MAINE SPECS & AS NOTED
SPECIAL CLEANING: BLAST CLEAN
APPROVED: As Noted 11-22-72

ARMORED JOINT ABUT 2 N.B

PRINT DIST.		
2p	11-6-72	A
4p	11-28-72	Shop
8p	11-28-72	State
1 Sepia	11-28-72	Brewer

Bancroft & Martin Inc.
South Portland, Maine 04106

JOB: I 295 OVER FOREST AVE PORTLAND, MAINE

CUSTOMER: BLUE ROCK INDUSTRIES
DESIGNER: M.S.H.C. BRIDGE DIV.

REV.		
CHECKED		RGM
DRAWN	10-3-72	DWL

ORDER NO.	JOB NO.	DRAWING NO.
	B72-228	SB-4

140-39