

6 - LIGHT SUPPORTS - MK. J4

6 - GALV. U-BOLTS - MK. K4

BILL OF MATERIALS

SHIPPING MARK	SHOP MARK	QTY.	DESCRIPTION
A4		1	W21X44 X CUT & CHIP
B4		1	W21X44 X 9.3 CUT & CHIP
C4		1	W21X44 X CUT & CHIP
D4		1	FE 3/8 X 8 X 5-10 1/4 CUT & CHIP
E4		1	X 5-10 1/4
F4		1	X 5-10 1/4
G4		1	X 5-10 1/4
H4		2	FE 3/8 X 8 X 5-10 1/4 CUT & CHIP
J4		6	LIGHT SUPPORTS
PA4		6	FE 1/2 X 12 X 1'-10 Galv. ASTM A 123
PB4		6	FE 1/2 X 12 X 0'-11 Galv. ASTM A 123
K4		6	3/4" GALV. U-BOLT W/ N&W ASTM A307 Grade C or better. See Note 10 on site 2 of Drawings.
M4		40	LBX4X1/2X0-7 1/2
PLAIN MATERIAL (NO PAINT)			
FIELD BOLTS (THIS SH.)			
		62	1/2" X 2" A325 W/ N&W
		14	3/4" X 2" A325 Typ 1 W/ N&W
FOR APPROVAL ONLY			

MAT'L: A36 DOMESTIC HOLES: 1/8" U.N.O.
WELD: PER WELD PROCEDURE
SURFACE PREP: SP6
FINISH: J4 Galv. ASTM A 123
M4

ARC ENTERPRISES, INC.
ADVANCED RESOURCES & CONSTRUCTION
P.O. BOX 120 KINGFIELD, ME 04947
PHONE: (207) 265-2646 • FAX: (207) 265-4054

DESCRIPTION: DIAPHRAGMS & BRACKETS
PROJECT: JOSHUA CHAMBERLAIN BRIDGE
LOCATION: BANGOR/BREWER, ME.
DESIGNER: ME. D.O.T.
CUSTOMER: REED & REED

DRAWN BY: SNOWMAN DATE: 3/27/97 JOB NUMBER: 97-49 DWG. NO.: 4
CHK'D BY: DATE:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
JUL 0 8 1997
Approved as noted

Proj. #: BH-043-1(34)
Item #: 504.70 & 520.24

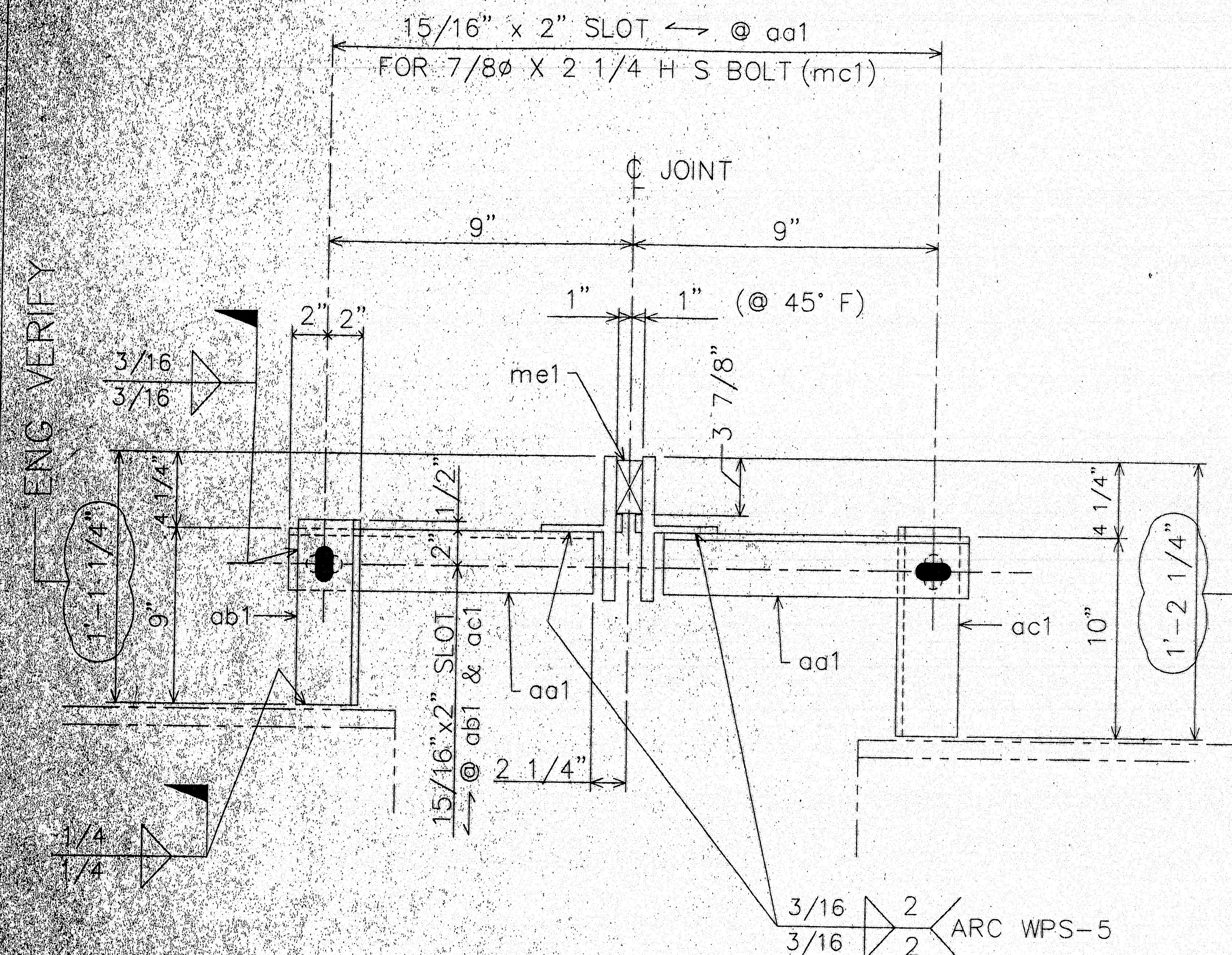
APPROVER PLEASE SUPPLY!

APPROVER PLEASE VERIFY QUANTITY AND FINISH!

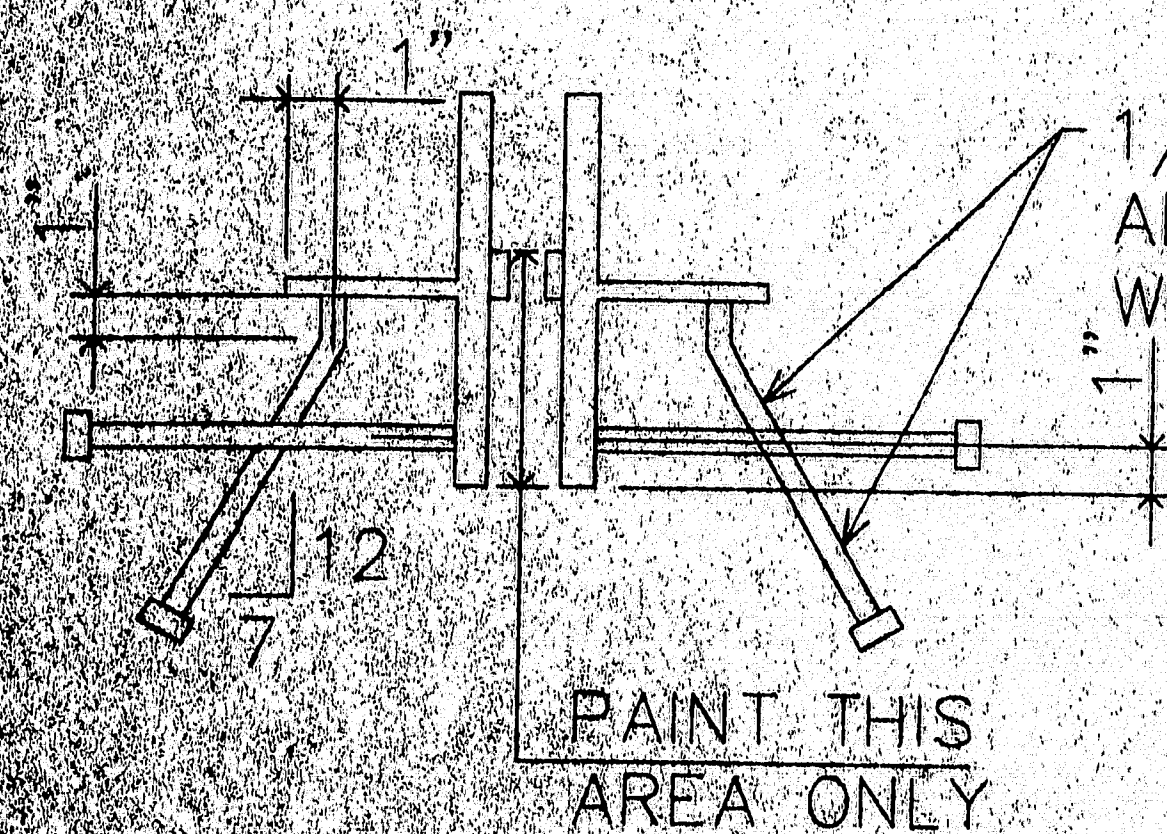
Eliminate Requirement of Diaphragms altogether. (Note 4 of Sht. 8 of Contract Dwg.)
Concrete will be finished in this area in order to accommodate look. (Design Change.)

Galvanize
ASTM A 123.
Also see E2.

AK Galv.
ASTM A 123

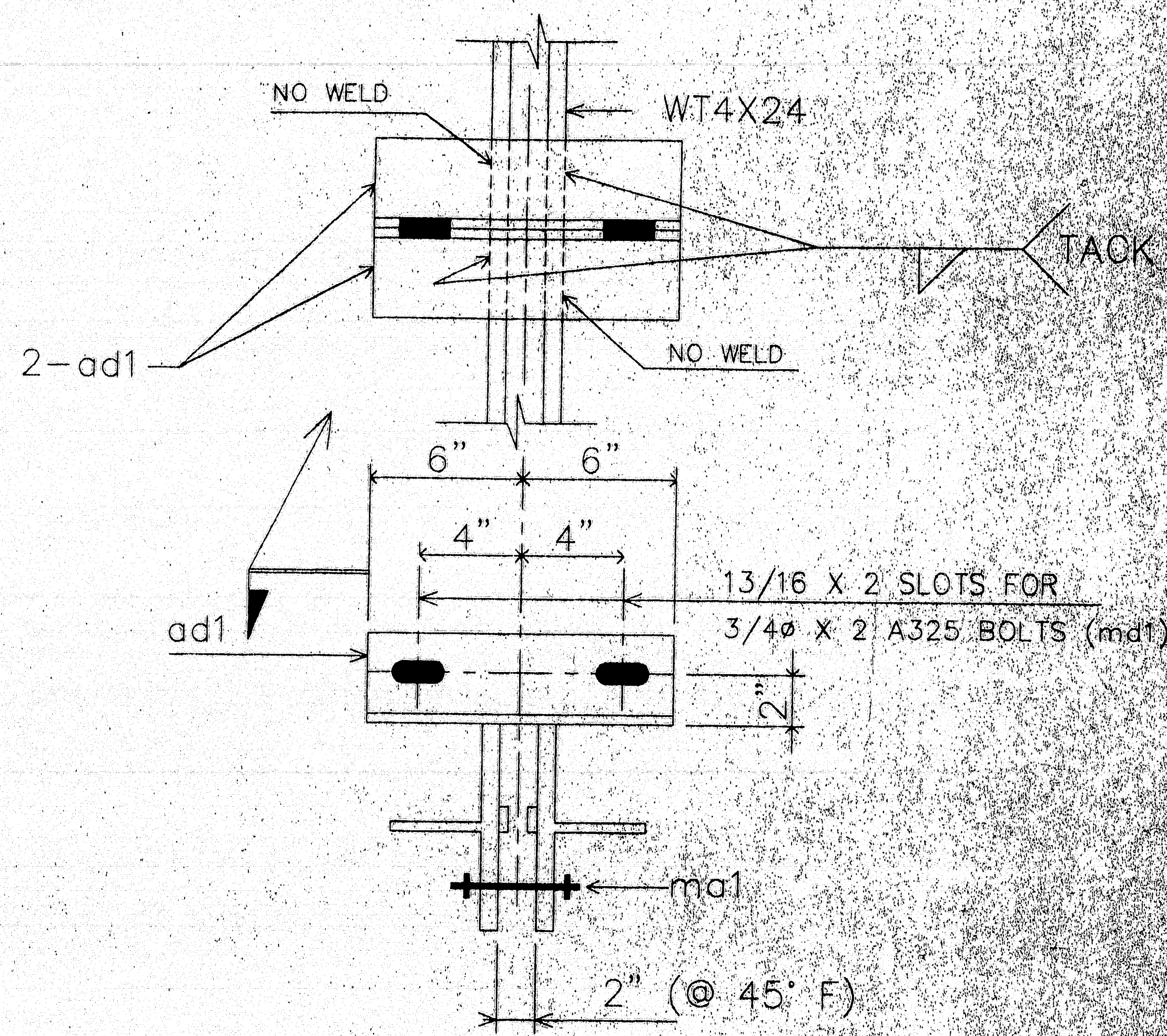


SECT. C-C



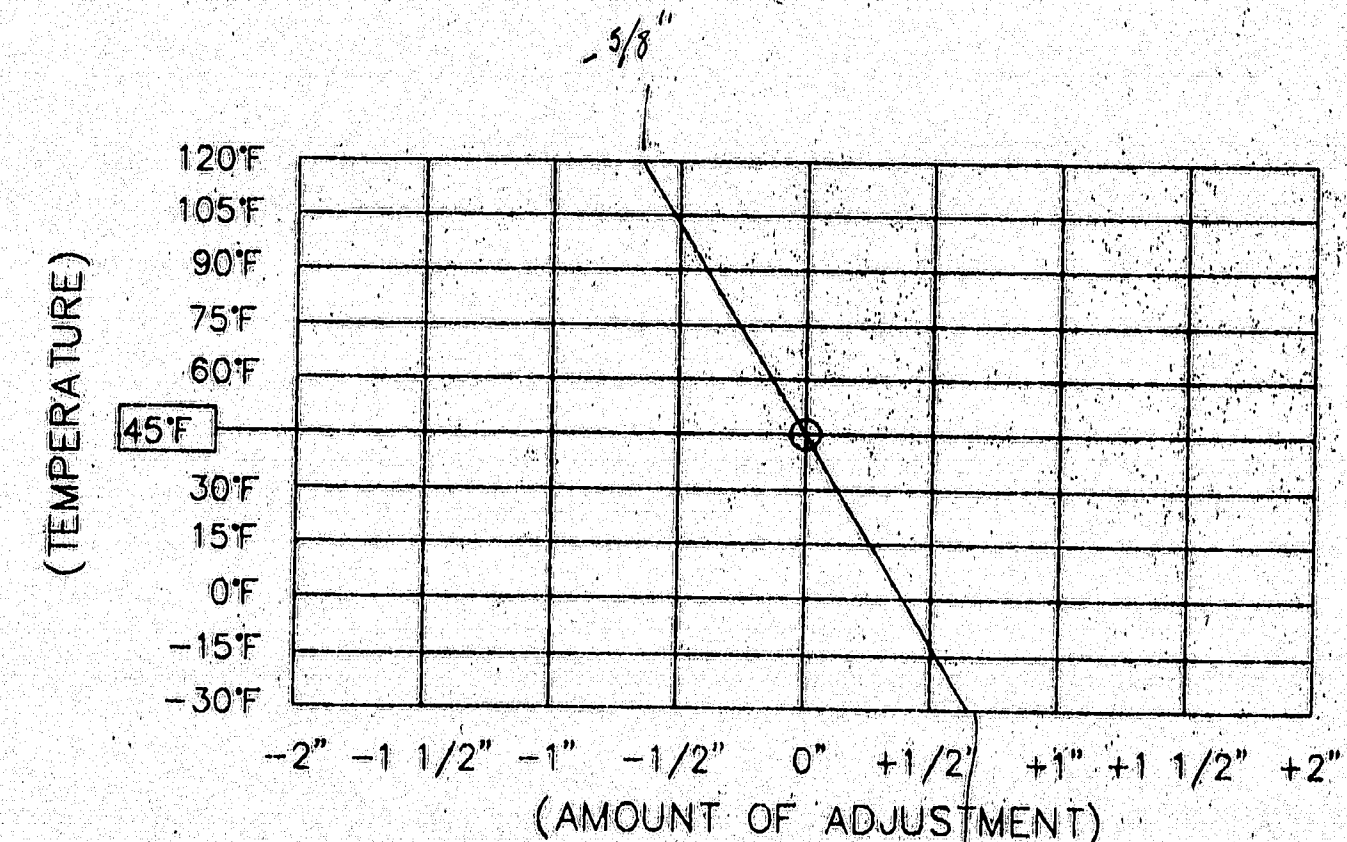
SECT. D-D

ENG VERIFY
in Field Contractor.



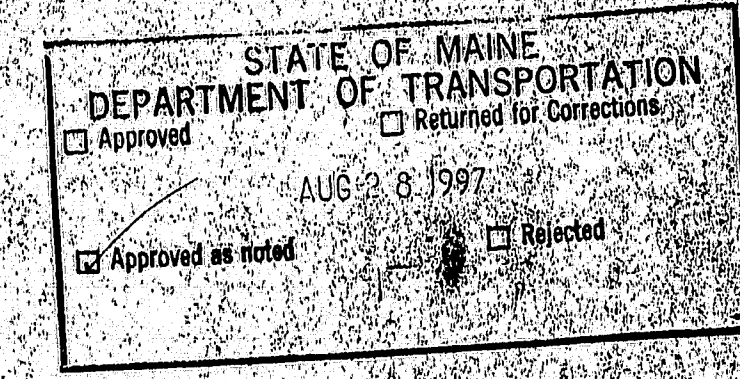
TEMPERATURE ADJUSTING DEVICE

NOTE:
SHOP PLACE ADJUSTING DEVICES AT APPROX. 5'-0" O/C
SHOP TO PRESET THE JOINT OPENING TO THE 45° F SETTING.
CONTRACTOR TO REFER TO THE DESIGN DWG'S & SPEC'S FOR
INSTALLATION INSTRUCTIONS.



COMP. SEAL ADJUSTMENT CHART

FIELD NOTE:
ADJUST JOINT OPENING FOR TEMPERATURE AT TIME
OF INSTALLATION. ADJUSTMENT IS TO BE MEASURED
PARALLEL TO THE WORKING LINE.



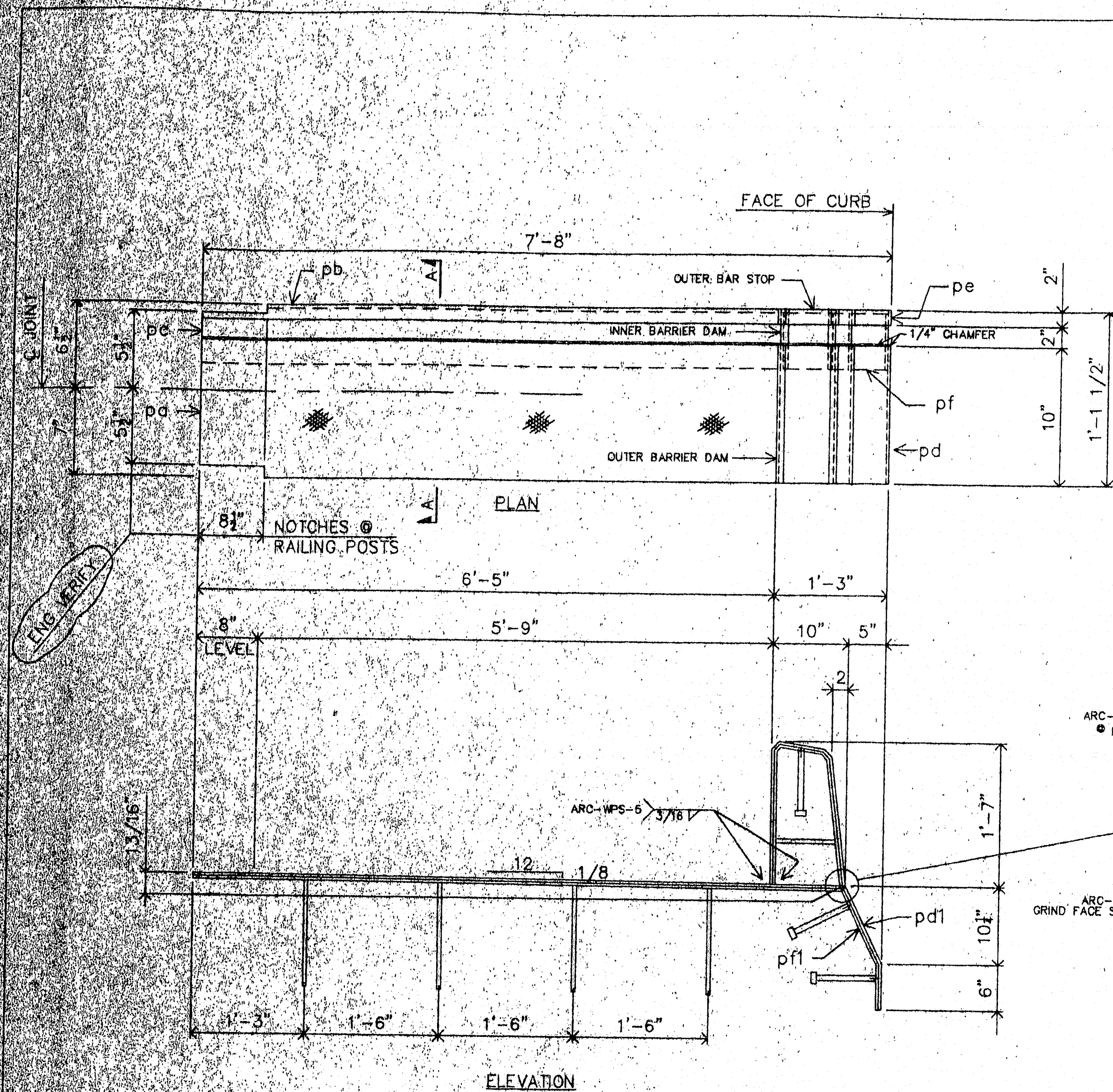
FOR APPROVAL
ONLY

PROJ. NO. : BH-043-1(34)
ITEM NO. : 520.22

120-345

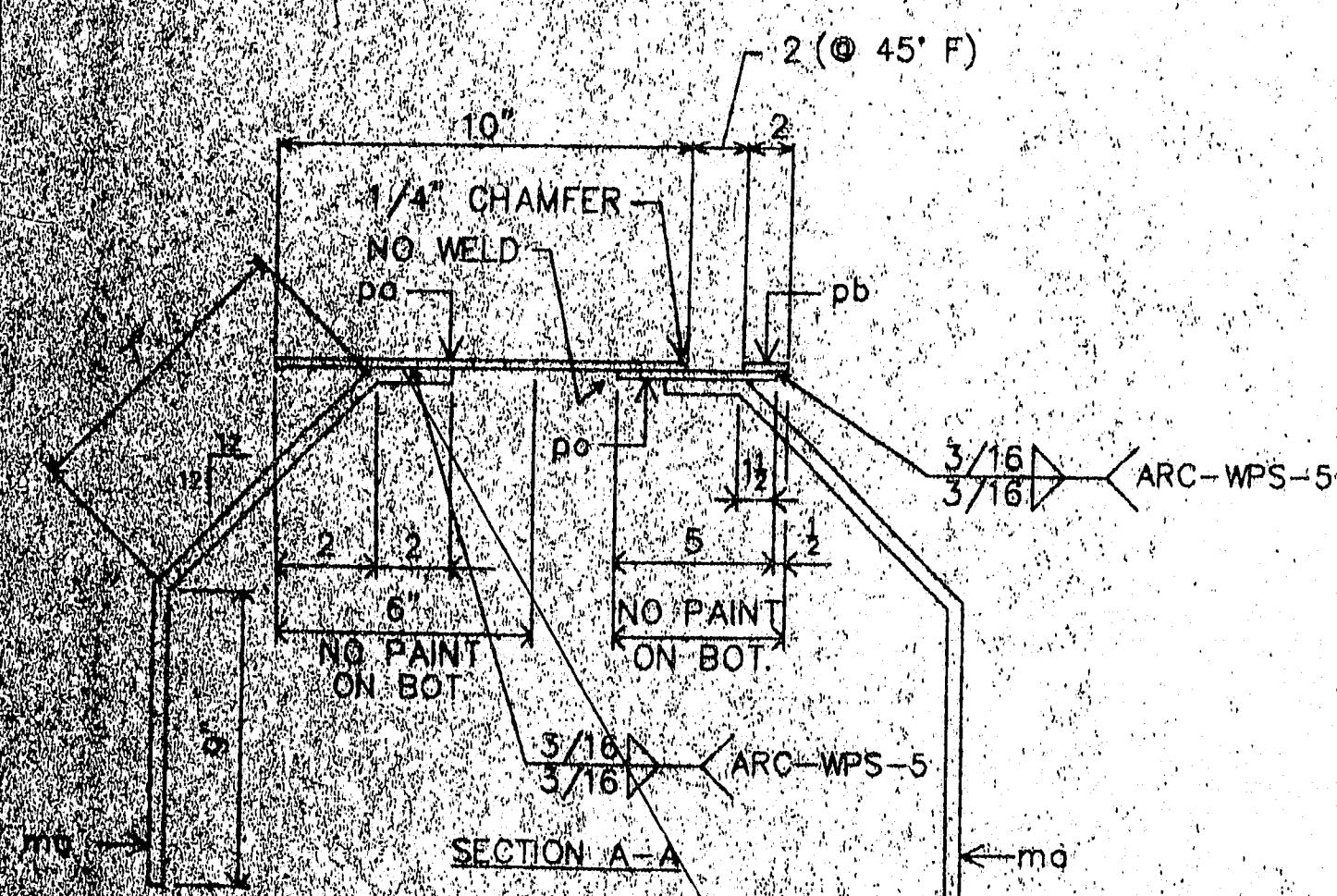
**A.R.C. ENTERPRISES
KINGFIELD, MAINE**

PROJECT: JOSHUA CHAMBERLAIN BRIDGE OVER THE PENOBSCOT RIVER, BANGOR-BREWSTER, ME			
SCALE: 1/4" = 1'-0"	APPROVED BY: [Signature]	DRAWN BY: [Signature]	DATE: 8/97
EXPANSION JOINT DETAIL - PIER 1			
REED & REED	JOB NO. 87-40	DATE: 8/97	

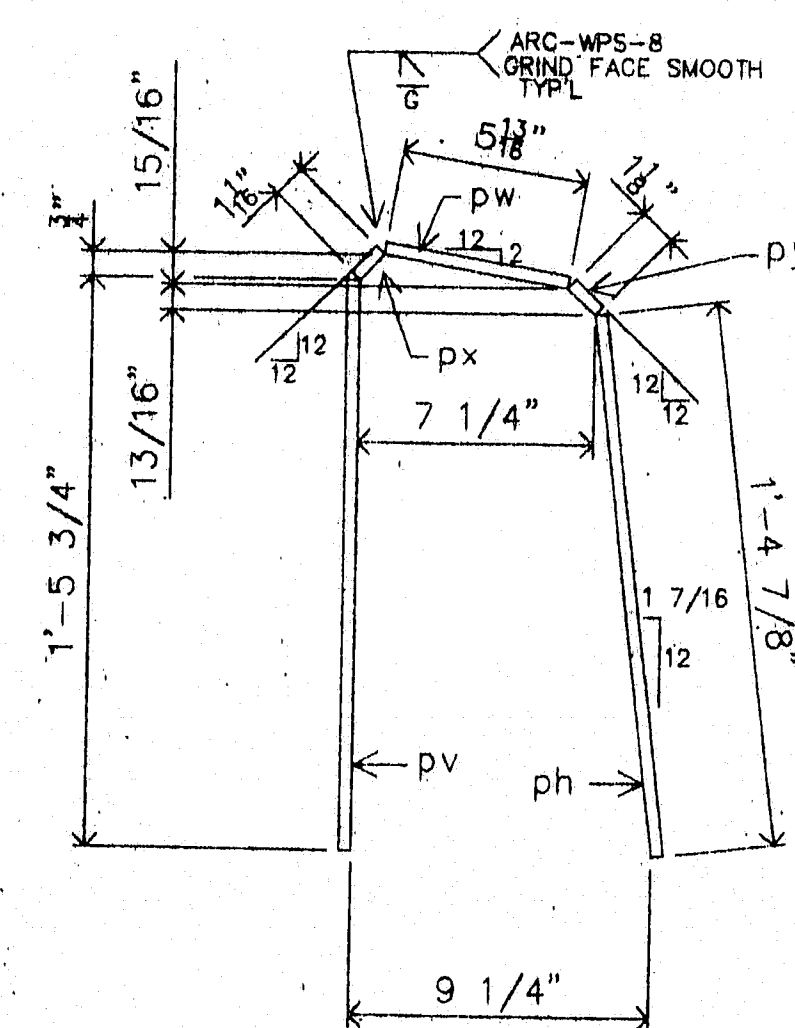


ONE-EXP. JOINT-A3 (AS SHOWN)

ONE-EXP. JOINT-B3 (OPP. HAND)

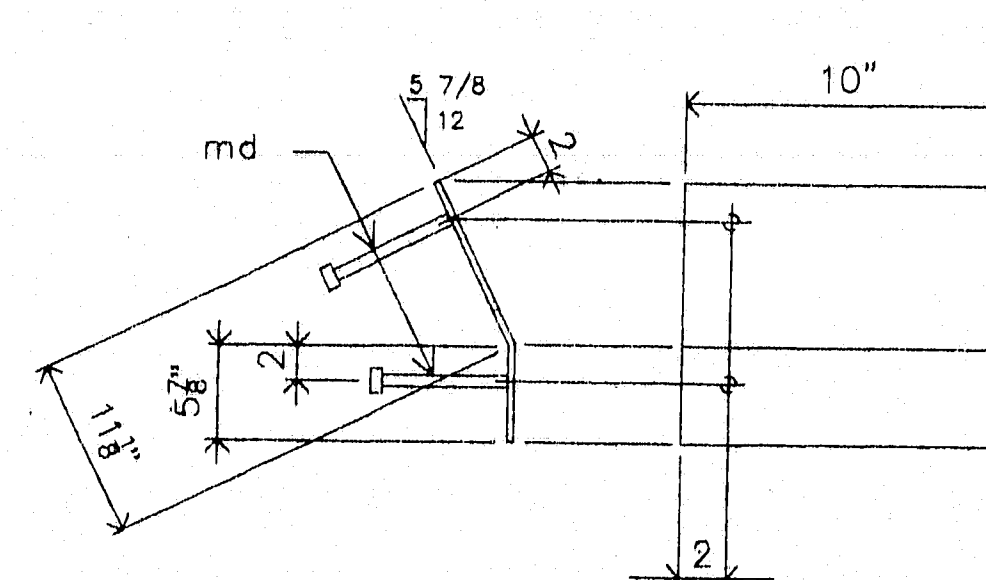


Submit LRP
For the well
Including elevated
temperature Reinforcing
For welding Reinforcing
Steel for AWS D1.4

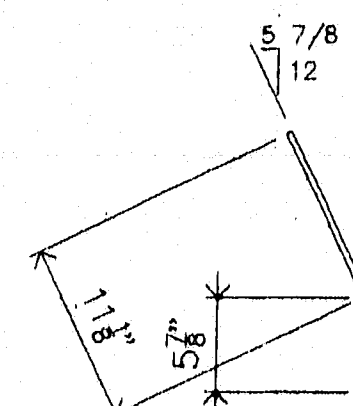


DETAIL @ OUTER BAR STOP

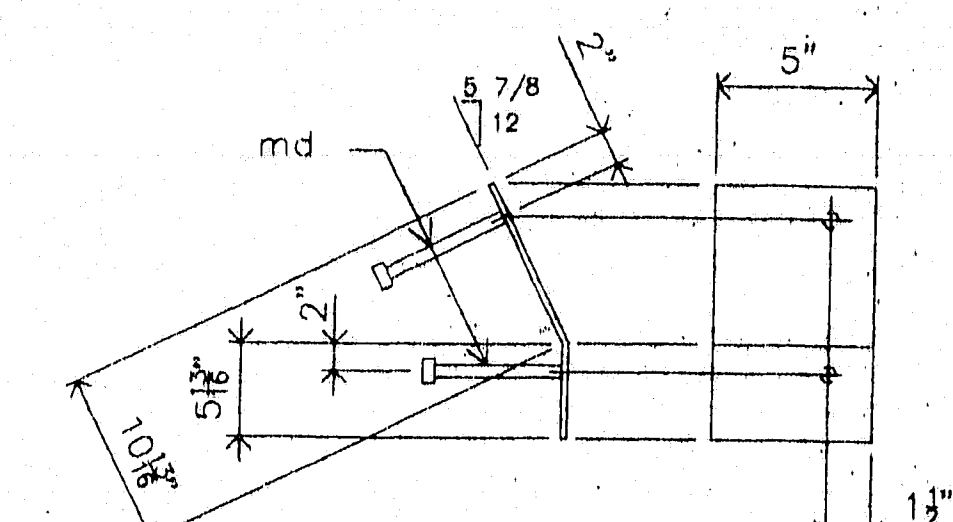
Substitute a Flatbar of
Appropriate size and
Strength and use an
existing Fillet weld procedure.



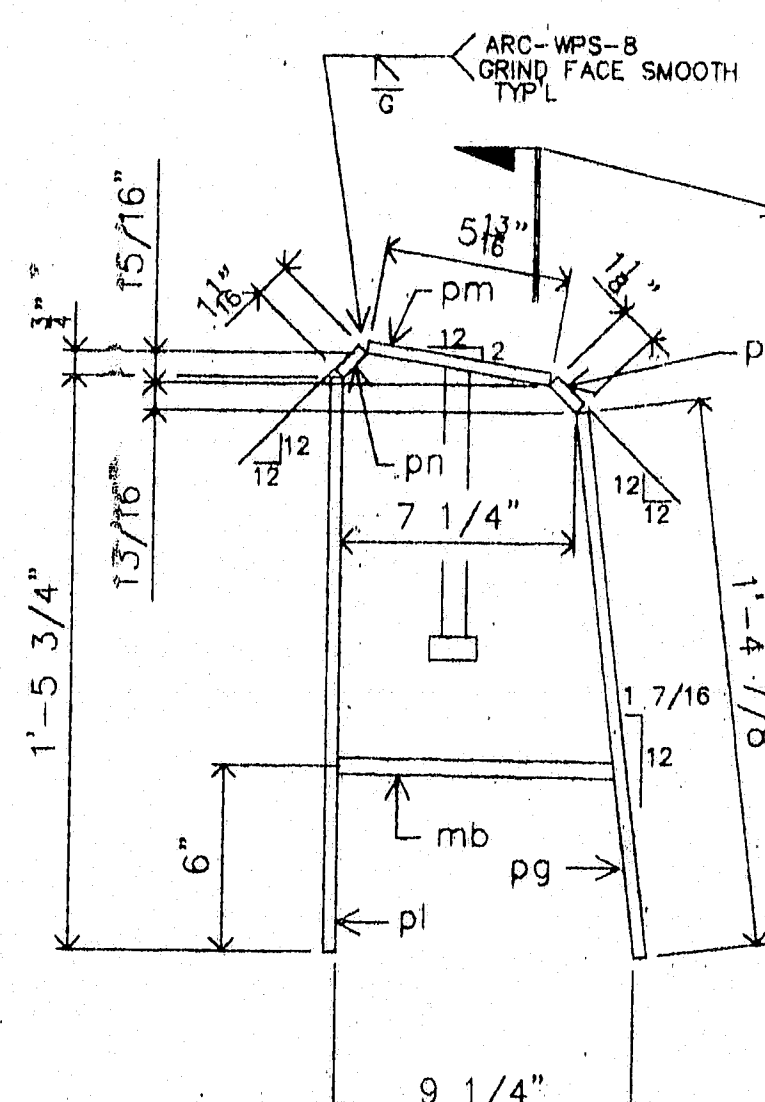
DETAIL @ pd



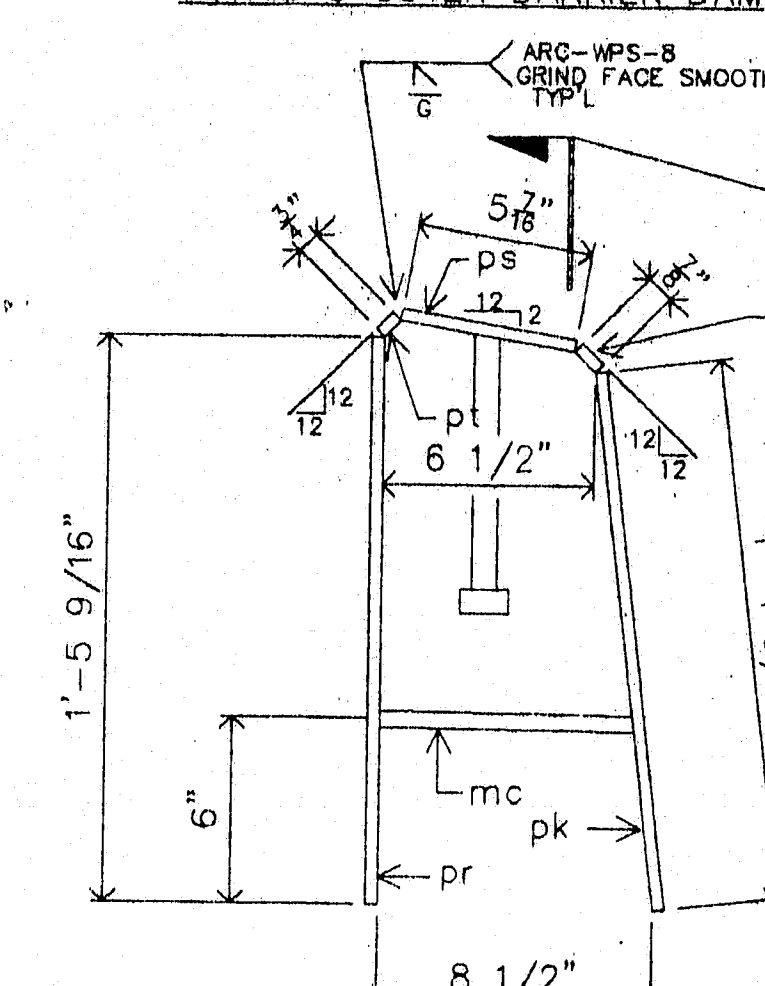
DETAIL @ pe



DETAIL @ pf
(BEND TO FIT INSIDE pd)



DETAIL @ OUTER BARRIER DAM



DETAIL @ INNER BARRIER DAM

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
Approved ☒ Returned for Corrections ☐
AUG 28 1997
Approved as noted ☐ Rejected ☐

* Prefer - Get Price on
Galvanizing Assembly.

or
Use different Paint System.
Use Nipent List:
Typical Systems:
Carboline
Wasser & Long
Kaiser
1) Shellac Rich Primer
2) Zinc Rich Primer
3) Urethane.

MATERIALS LIST

MK	QTY	DESCRIPTION
A3	1	EXPANSION DEVICE ASSEMBLY
B3	1	EXPANSION DEVICE ASSEMBLY
pc3	2	CHK'D PL 3/8" x 10" x 7'-2 3/4" BEND/SHR'D
pb3	2	PL 3/8" x 2" x 7'-2 3/4" BEND/SHR'D 1L-1R
pe3	2	PL 3/8" x 5" x 7'-2 1/2" BEND
pd3	2	PL 3/8" x 10" x 1'-5" BEND 1L-1R
pe3	2	PL 3/8" x 2" x 1'-5" BEND
pf3	2	PL 3/8" x 5" x 1'-4 5/8" BEND
pg3	2	PL 3/8" x 10" x 1'-4 7/8" BEND 1L-1R
ph3	2	PL 3/8" x 2" x 1'-4 7/8" BEND
pk3	2	PL 3/8" x 5" x 1'-4 3/4" BEND
pl3	2	PL 3/8" x 10" x 1'-5 3/4" 1L-1R
pm3	2	PL 3/8" x 5 13/16" x 0'-10" 1L-1R
pn3	2	PL 3/8" x 1 1/16" x 0'-10" 1L-1R
pp3	2	PL 3/8" x 1 1/8" x 0'-10" 1L-1R
pr3	2	FB 3/8" x 2" x 1'-5 3/4"
ps3	2	FB 3/8" x 2" x 0'-5 13/16"
pt3	2	FB 3/8" x 2" x 0'-1 1/16"
pu3	2	PL 3/8" x 2" x 0'-1 1/8"
pv3	2	PL 3/8" x 5" x 1'-5 9/16"
pw3	2	PL 3/8" x 5" x 0'-5 7/16"
px3	2	PL 3/8" x 3/4" x 0'-5"
py3	2	PL 3/8" x 7/8" x 0'-5"
ma3	16	#6 REBAR x 1'-6" BEND AB15 GR 60
mb3	2	#6 REBAR x 1'-5" AB15 GR 60
mc3	2	#6 REBAR x 1'-3 1/2" AB15 GR 60
md3	12	1/2" x 0'-8" CONC STUDS

PROJ. NO. : BH-043-1(34)
ITEM NO. 520.22

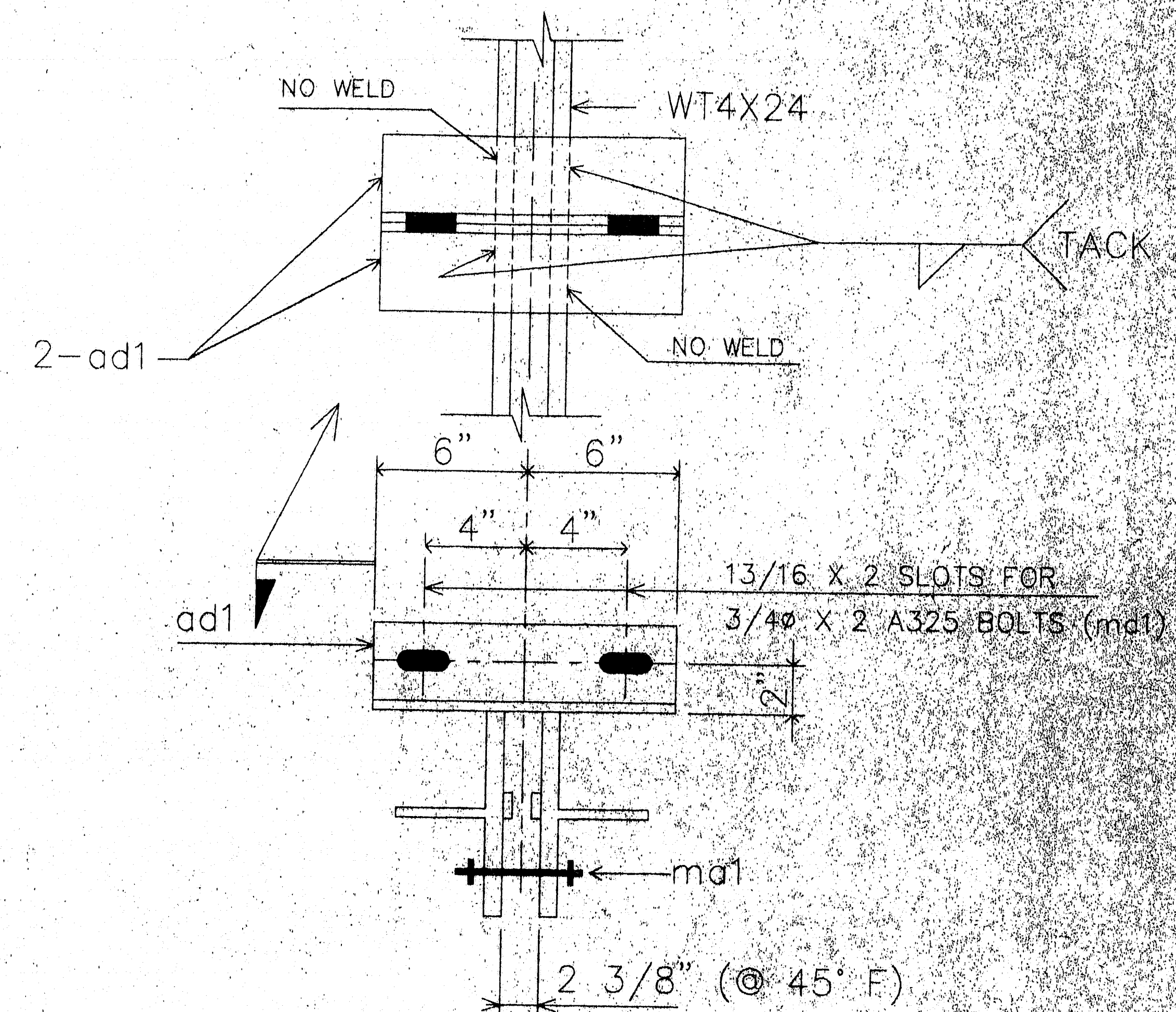
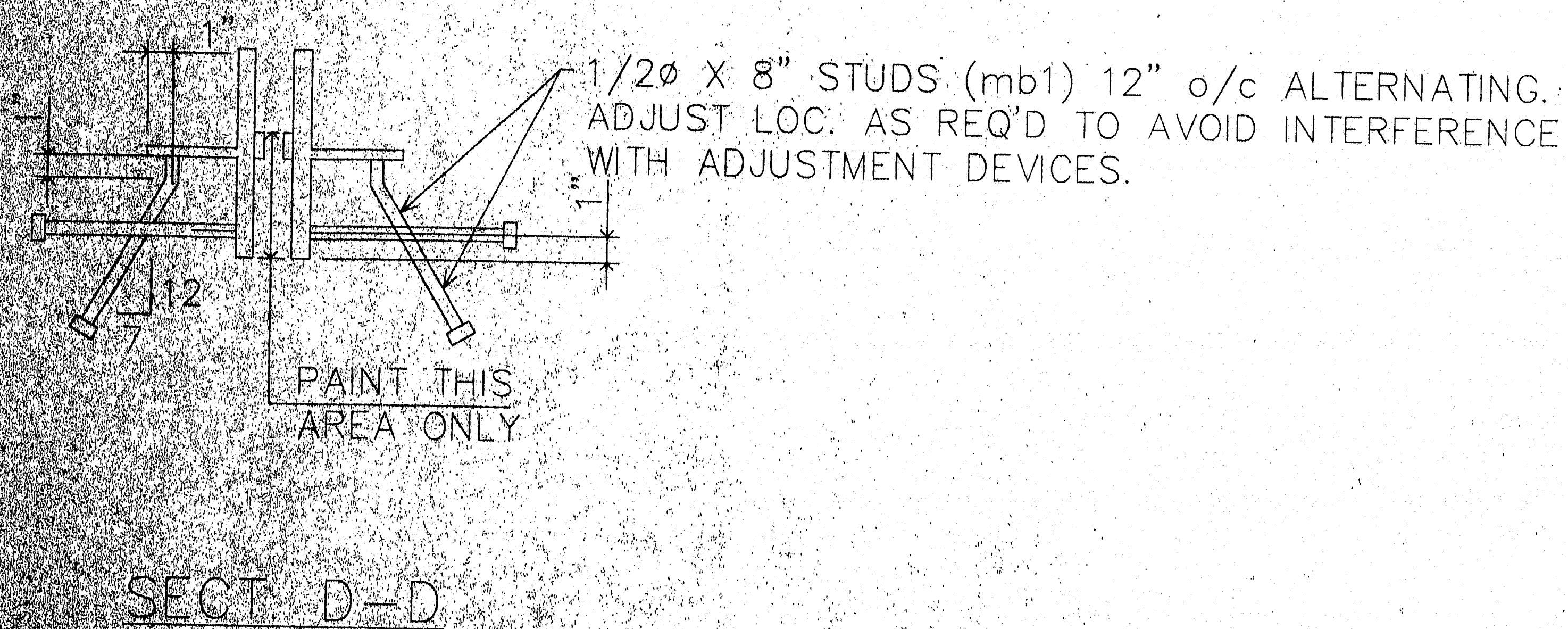
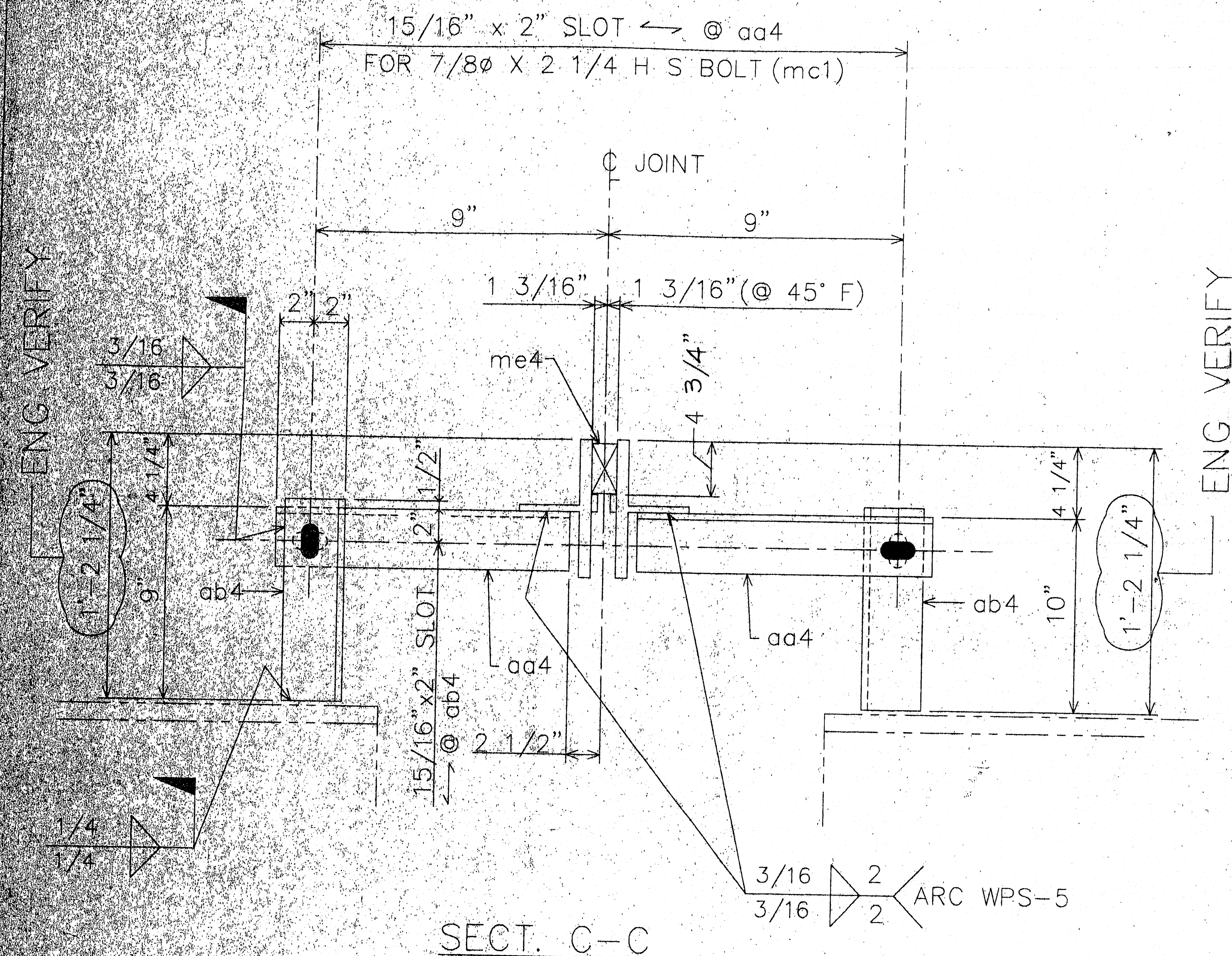
MATL: A36 UN HOLES: AS NOTED
WELD: PER PROCEDURES NOTED
PREP: SP6
FINISH: 3 COATS ZINC RICH PRIMER
3 WDET PER COAT

FOR APPROVAL ONLY

120-346

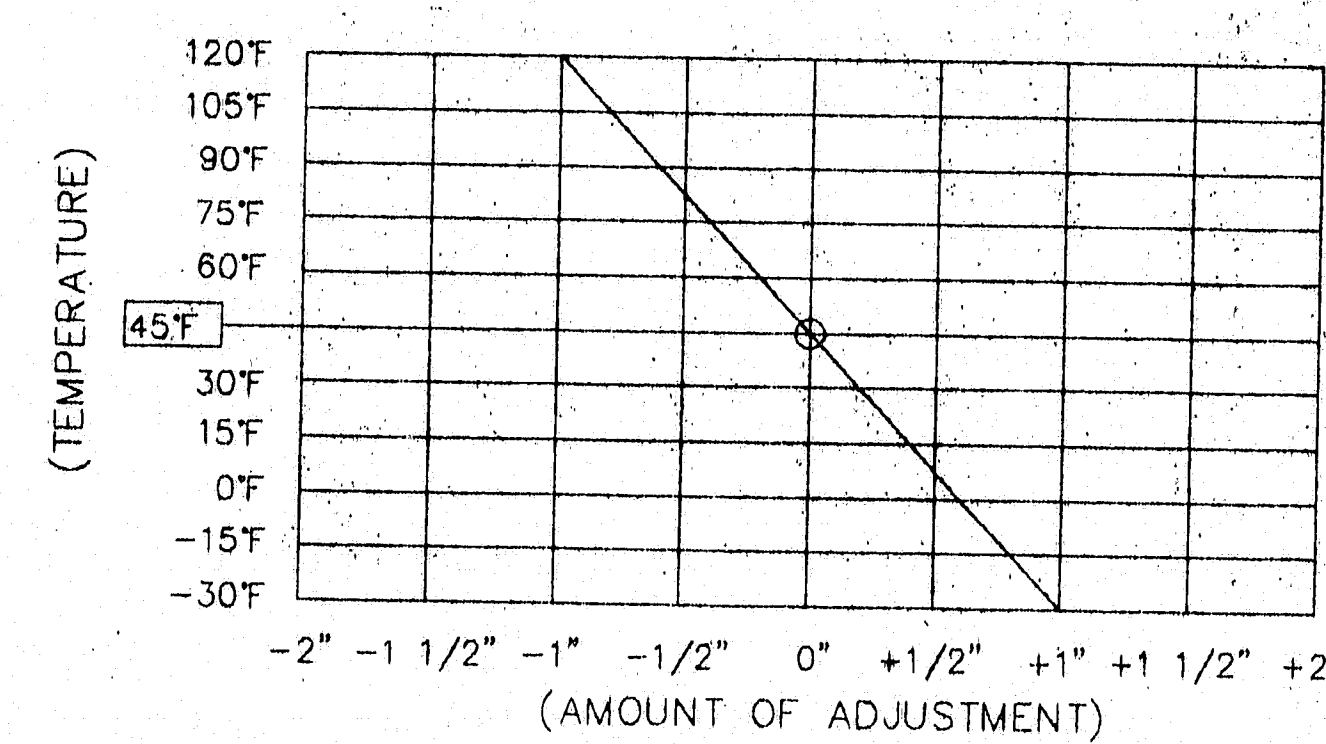
A.R.C. ENTERPRISES
KINGFIELD, MAINE

PROJECT: JOSHUA CHAMBERLAIN BRIDGE OVER THE
PENOBSCOT RIVER, BANGOR-BREWER, ME
SCALE: 1" = 1'-0" APPROVED BY: BB
DATE: 8/97 CHECKED BY: BB
SIDEWALK DAM DETAIL @ PIER
REED & REED JOB NO. 87-49 DWG. NO. 4



TEMPERATURE ADJUSTING DEVICE

NOTE:
SHOP PLACE ADJUSTING DEVICES AT APPROX. 5'-0" O/C.
SHOP TO PRESET THE JOINT OPENING TO THE 45° F. SETTING.
CONTRACTOR TO REFER TO THE DESIGN DWG'S & SPEC'S FOR
INSTALLATION INSTRUCTIONS.



COMP. SEAL ADJUSTMENT CHART

FIELD NOTE:
ADJUST JOINT OPENING FOR TEMPERATURE AT TIME
OF INSTALLATION. ADJUSTMENT IS TO BE MEASURED
PARALLEL TO THE WORKING LINE.

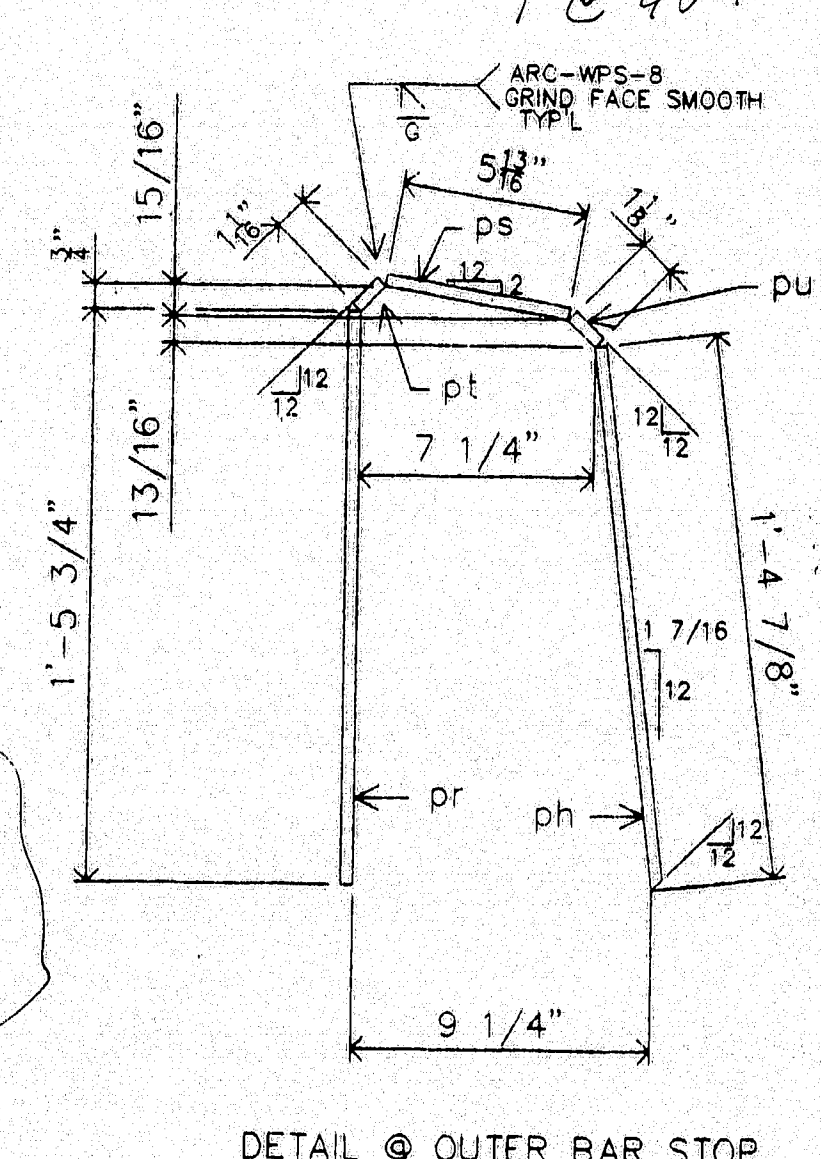
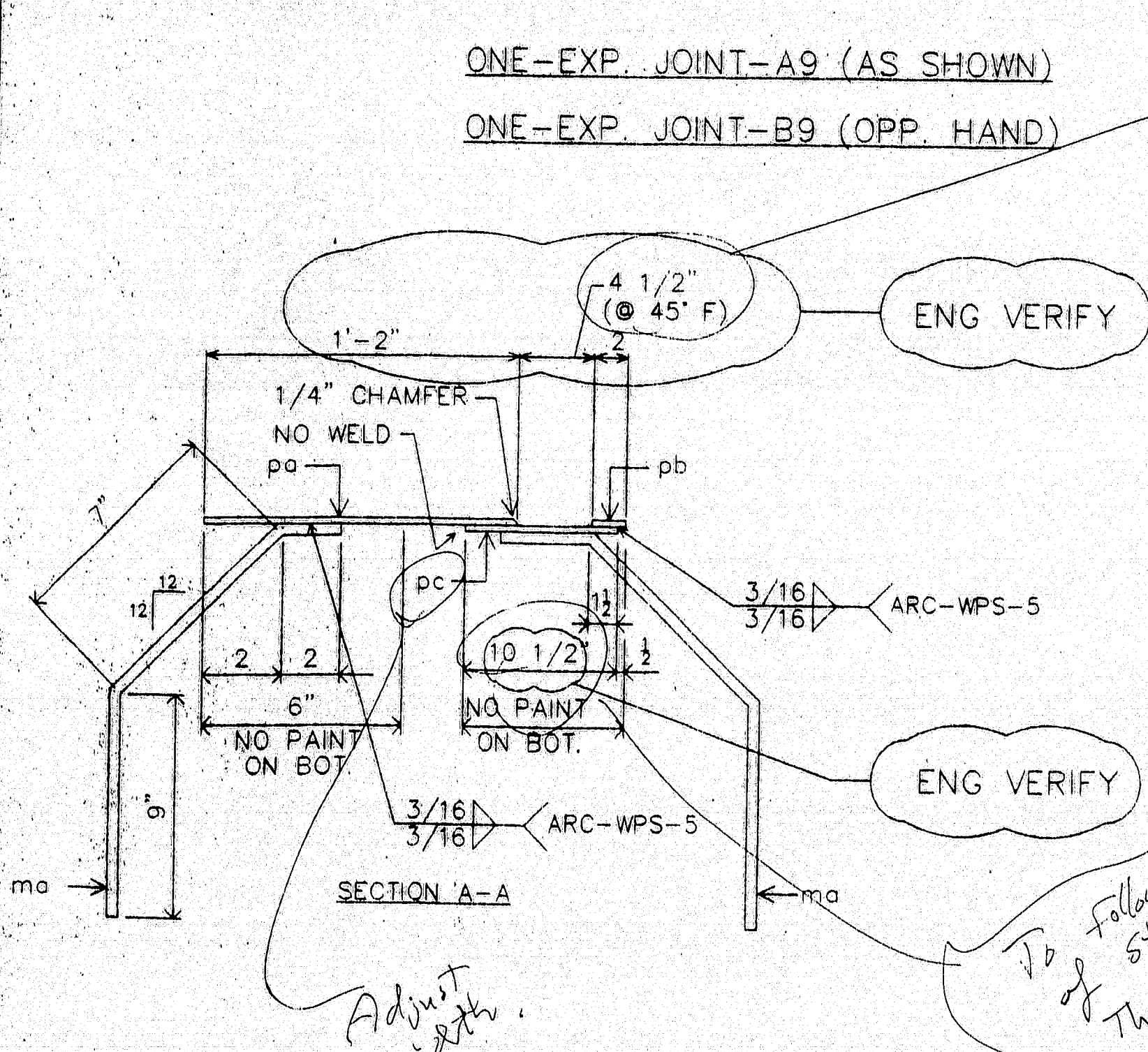
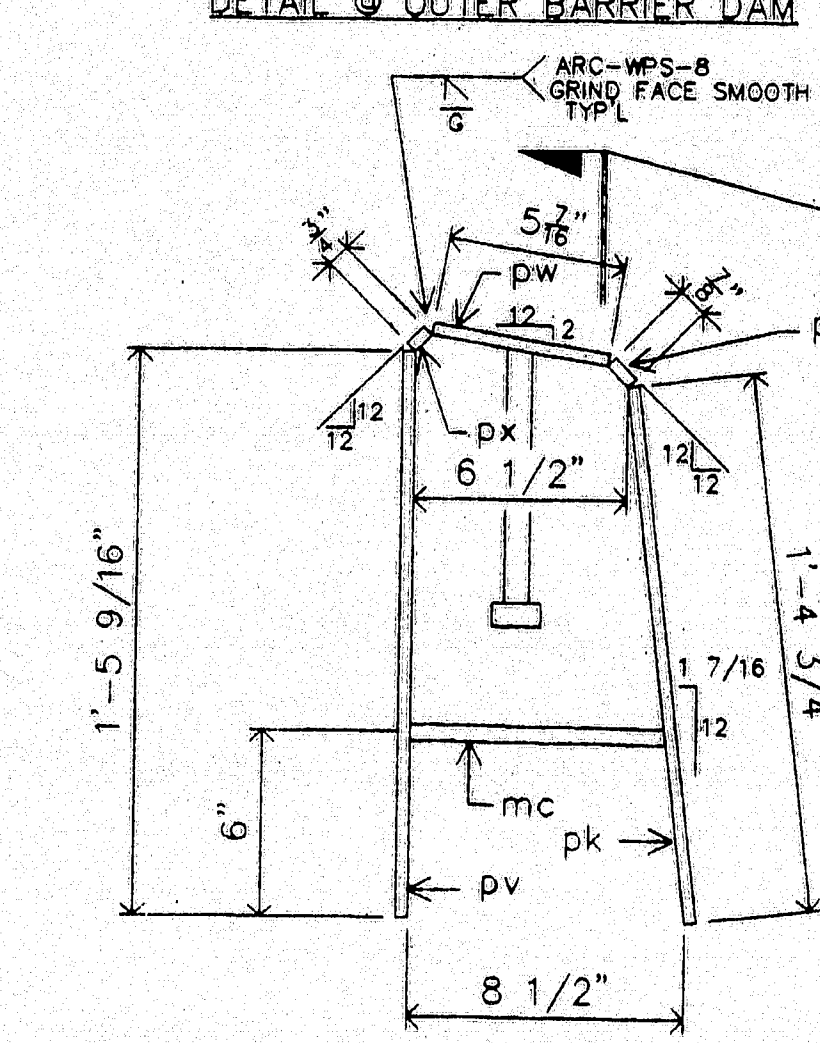
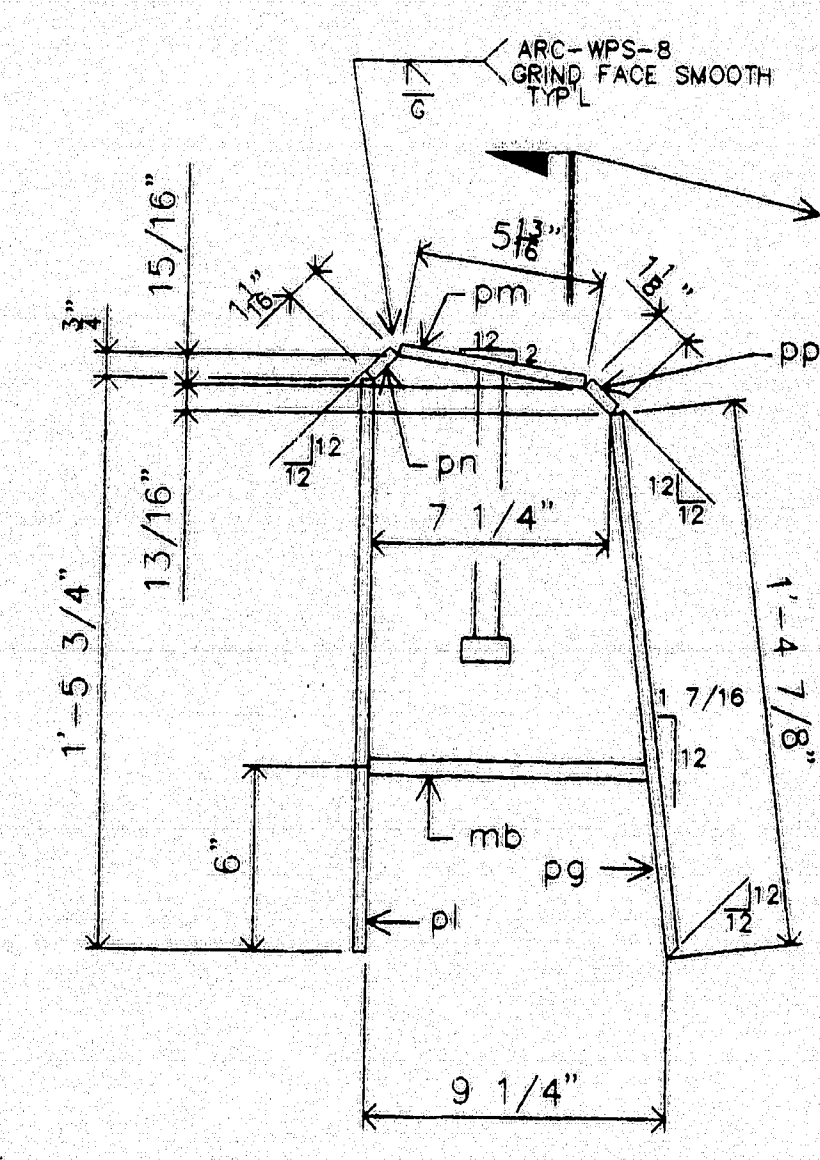
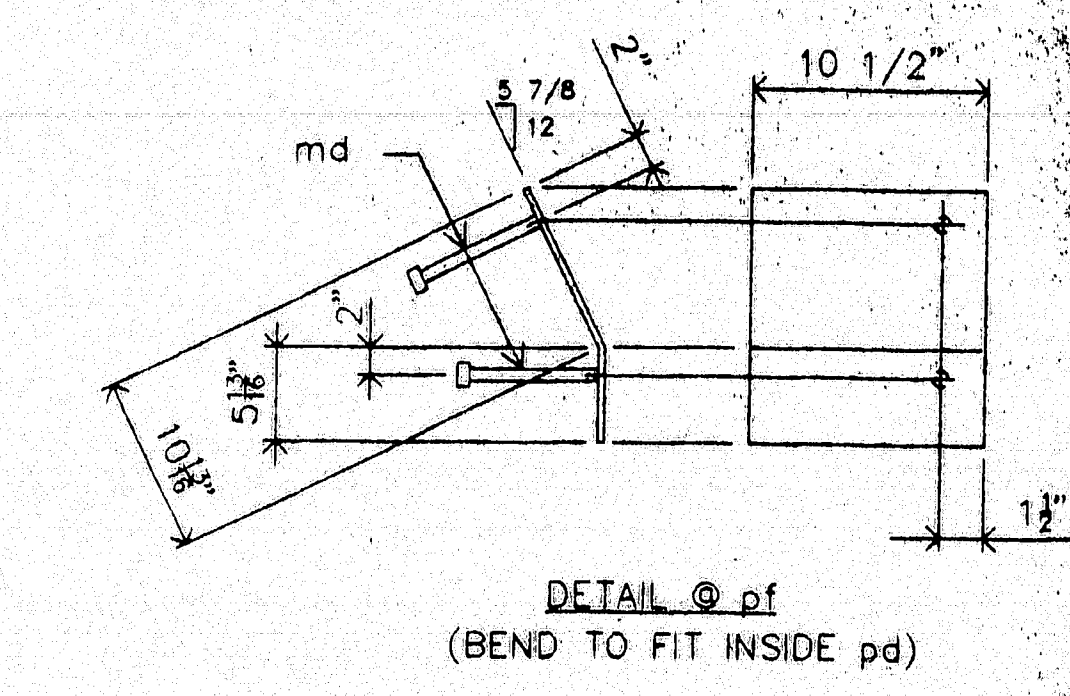
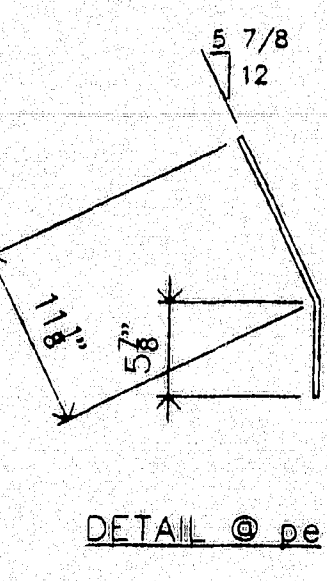
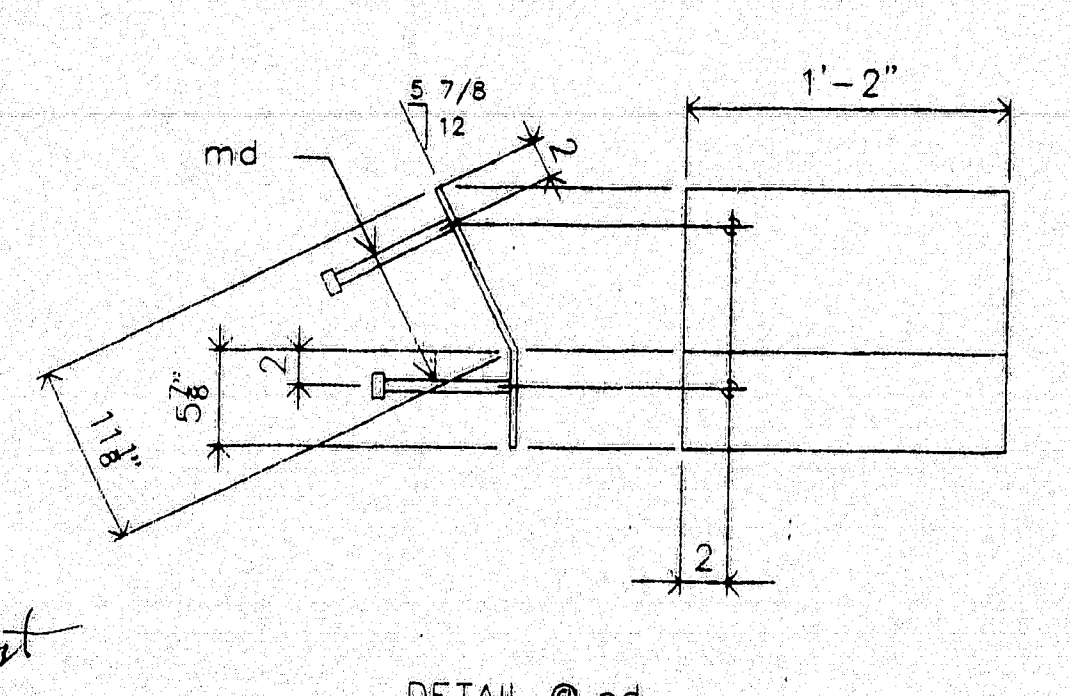
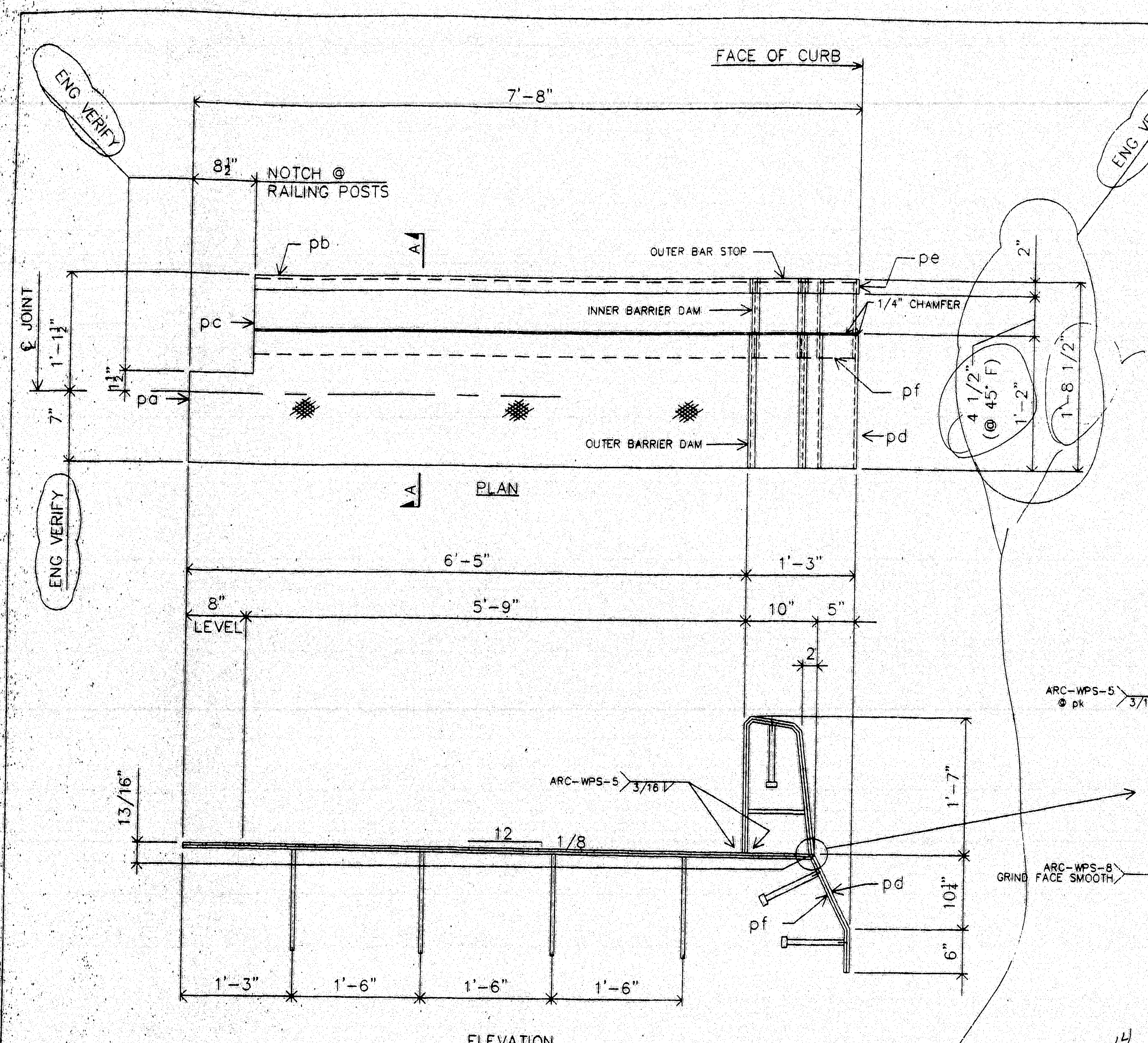
STATE OF MAINE DEPARTMENT OF TRANSPORTATION	
<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Returned for Corrections
AUG 28 1997	
<input checked="" type="checkbox"/> Approved as noted	<input type="checkbox"/> Rejected

FOR APPROVAL
ONLY

PROJ. NO. BH-043-1(34)
ITEM NO. 520.22

120-348

A.R.C. ENTERPRISES KINGFIELD, MAINE			
PROJECT: JOSHUA CHAMBERLAIN BRIDGE OVER THE PENOBSCOT RIVER, BANGOR-BREWER, ME			
SCALE: 1/4"	APPROVED BY:	DRAWN BY:	BB
DATE: 6/97		CHAD, BY	
EXPANSION JOINT DETAIL @ PIER 4			
REED & REED	308 NO. 97-49	DWG. NO. 11	



Expansion Length - Pier #14 @ 35' x 38'
 Pier #10 @ 30' x 29.25'
 509.25'
 Std Detail BD-304-93
 T @ 45° From 440' to 600'
 Length is 5"

MATERIALS LIST		
MK	QTY	DESCRIPTION
A22	1	EXPANSION DEVICE ASSEMBLY
B22	1	EXPANSION DEVICE ASSEMBLY
pa22	2	CHK'D PL 3/8 x 14 x 7'-2 3/4' BEND/SHP'D 1L-1R
pb22	2	PL 3/8 x 2 x 7'-2 3/4' BEND/SHP'D 1L-1R
pc22	2	PL 3/8 x 10 1/2 x 7'-2 1/2' BEND
pd22	2	PL 3/8 x 14 x 1'-5' BEND 1L-1R
pe22	2	PL 3/8 x 2 x 1'-5' BEND
pf22	2	PL 3/8 x 10 1/2 x 1'-4 5/8' BEND
pg22	2	PL 3/8 x 14 x 1'-4 7/8' B1E 1L-1R
ph22	2	PL 3/8 x 2 x 1'-4 7/8' B1E
pk22	2	PL 3/8 x 10 1/2 x 1'-4 3/4'
pl22	2	PL 3/8 x 14 x 1'-5 3/4' 1L-1R
pm22	2	PL 3/8 x 5 13/16 x 1'-2' 1L-1R
pn22	2	PL 3/8 x 1 1/16 x 1'-2' 1L-1R
pp22	2	PL 3/8 x 1 1/8 x 1'-2' 1L-1R
pr22	2	FB 3/8 x 2 x 1'-5 3/4'
ps22	2	FB 3/8 x 2 x 0'-5 13/16'
pt22	2	FB 3/8 x 2 x 0'-1 1/16'
pu22	2	PL 3/8 x 2 x 0'-1 1/8'
pv22	2	PL 3/8 x 10 3/2 x 1'-5 9/16'
pw22	2	PL 3/8 x 5 7/16 x 0'-10 1/2'
px22	2	PL 3/8 x 3/4 x 0'-10 1/2'
py22	2	PL 3/8 x 7/8 x 0'-10 1/2'
ma22	16	#6 REBAR x 1'-6' BEND A615,GR. 60
mb22	2	#6 REBAR x 0'-8 1/2' A615,GR. 60
mc22	2	#6 REBAR x 0'-7 3/4' A615,GR. 60
md22	12	1/2" x 0'-8' CONC STUDS
PROJ. NO. BH-043-1(34)		
ITEM NO. 520.22		

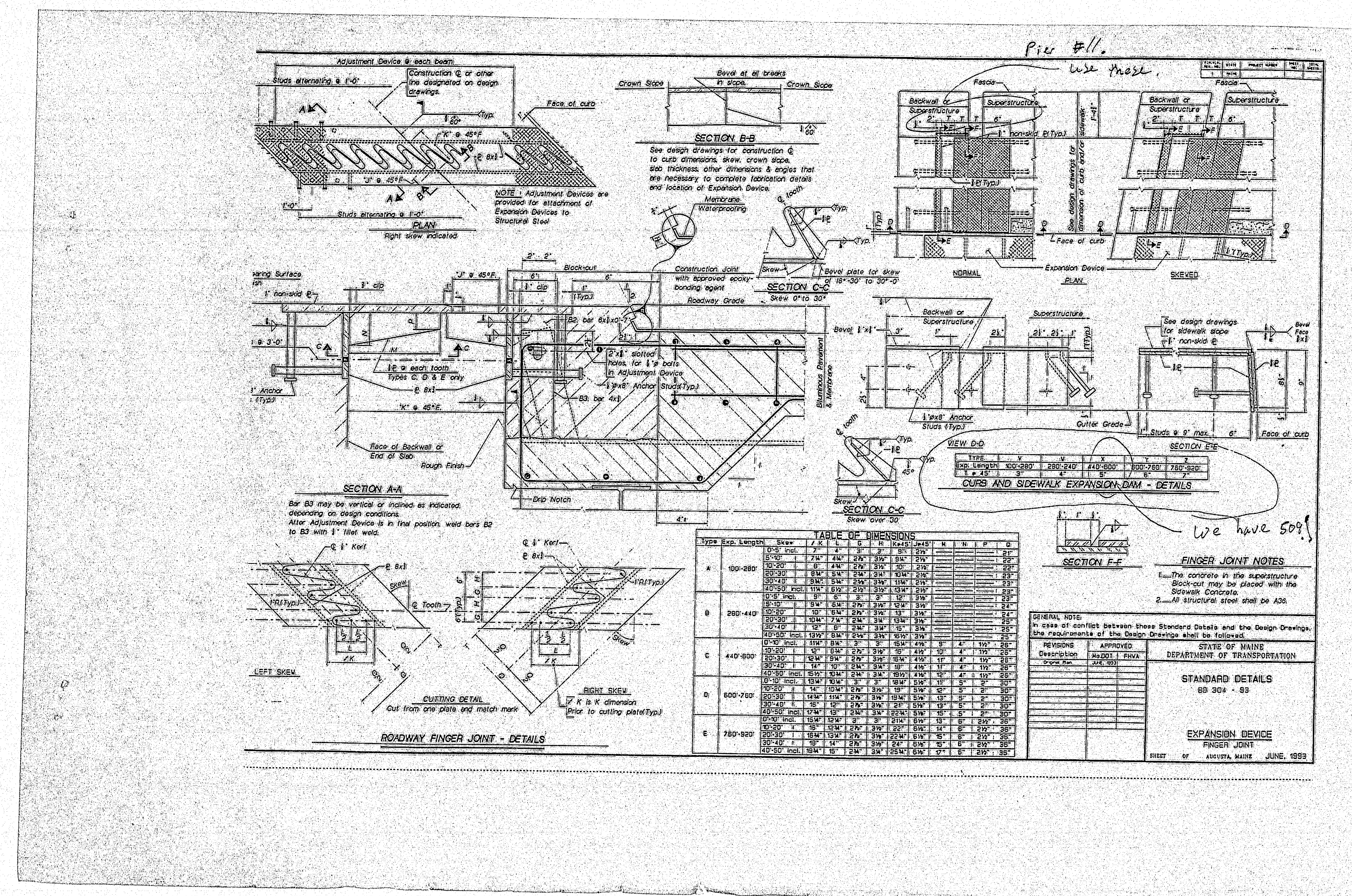
MATL: A36 UN HOLES: AS NOTED
 WELD: PER PROCEDURES NOTED
 PREP: SP6
 FINISH: 3 COATS ZINC RICH PRIMER
 3 MDFT PER COAT

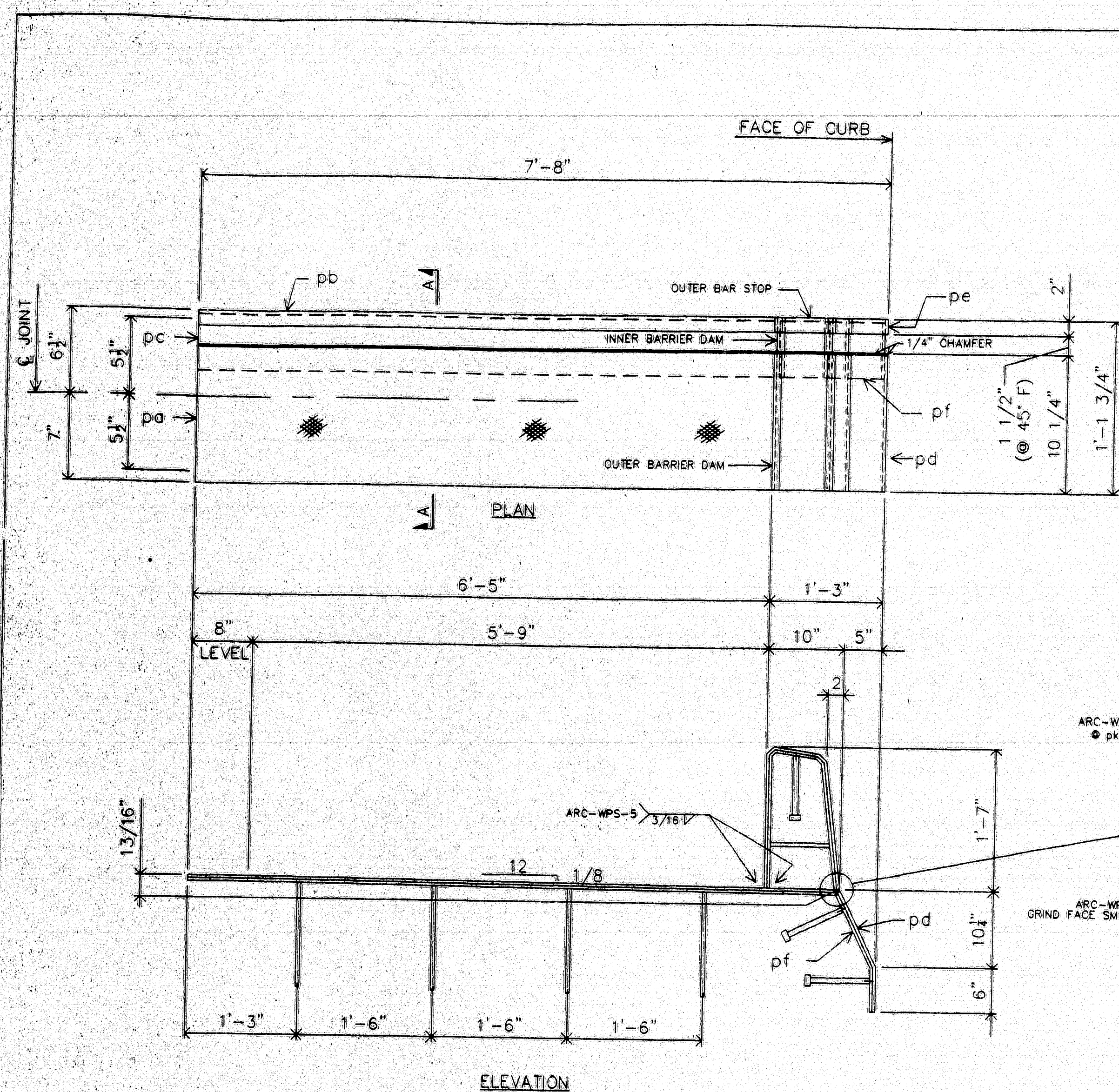
120-349
 FOR APPROVAL ONLY

STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION
 AUG 21 1997
☒ Approved as noted ☐ Rejected

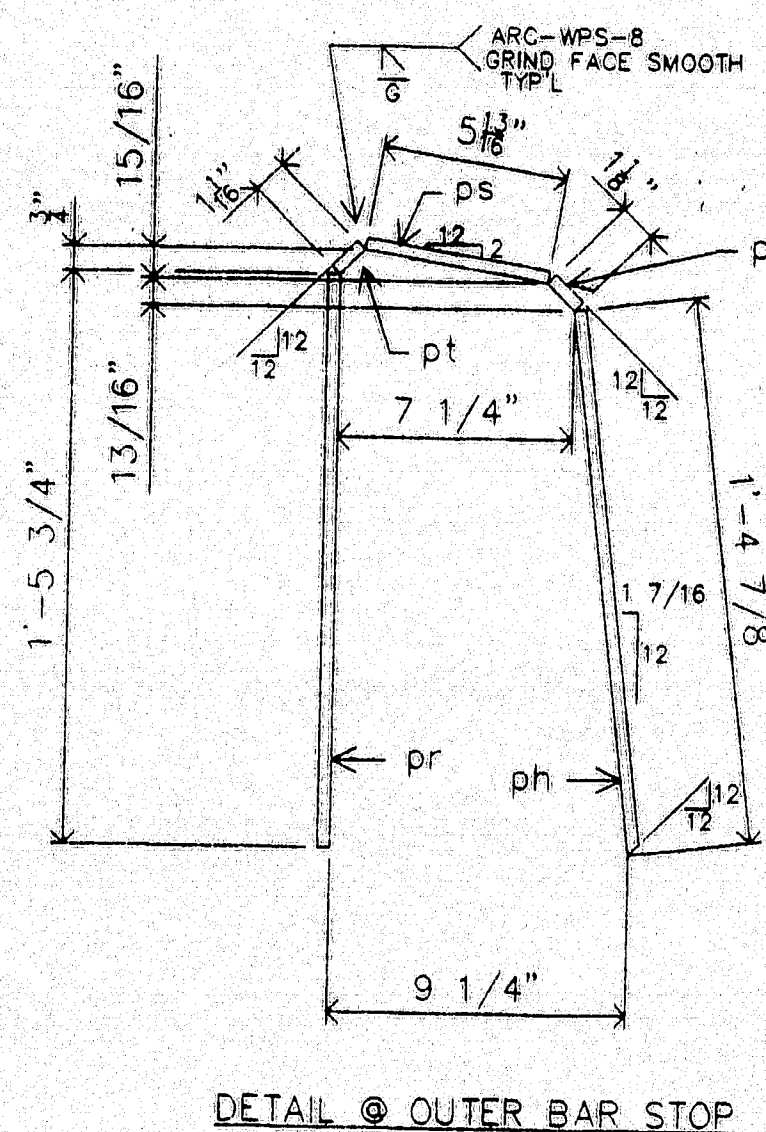
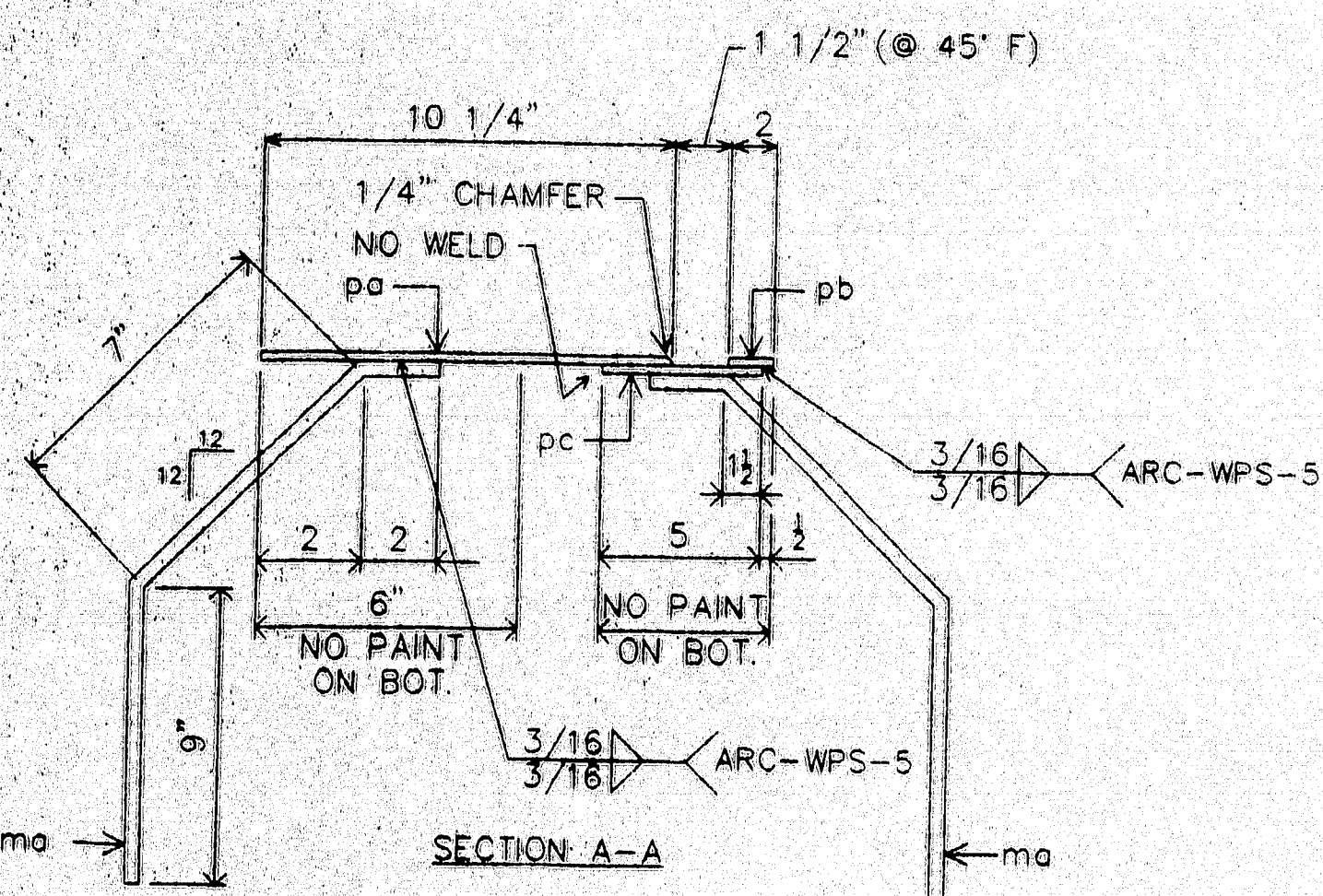
A.R.C. ENTERPRISES
 KINGFIELD, MAINE
 PROJECT: JOSHUA CHAMBERLAIN BRIDGE OVER THE
 PENOBSCOT RIVER, BANGOR-BREWER, ME
 SCALE: ~ APPROVED BY: DRAWN BY: BB
 DATE: 7/97 CHKD BY:
 SIDEWALK DAM DETAIL @ PIER 11
 REED & REED JOB NO. 97-49 DWG. NO. 22

See Sheet
 15 For
 Comments

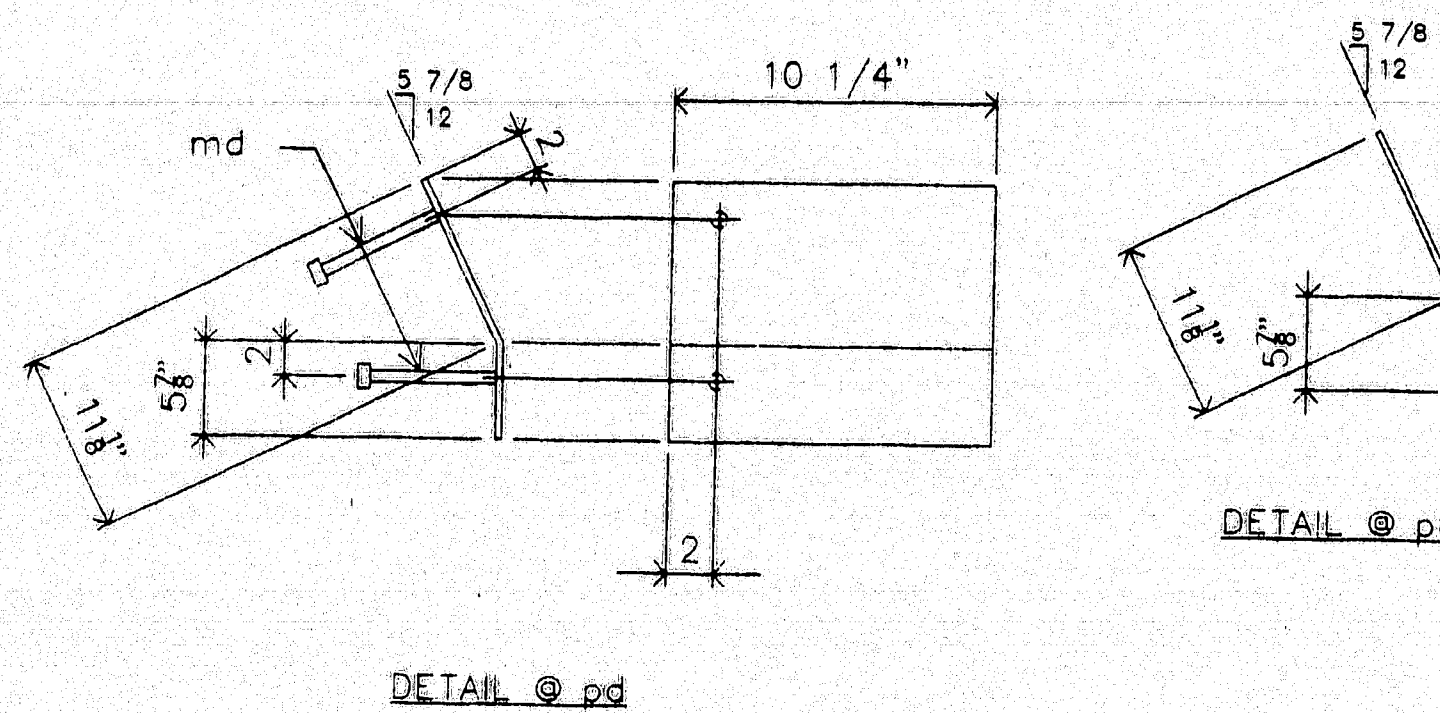




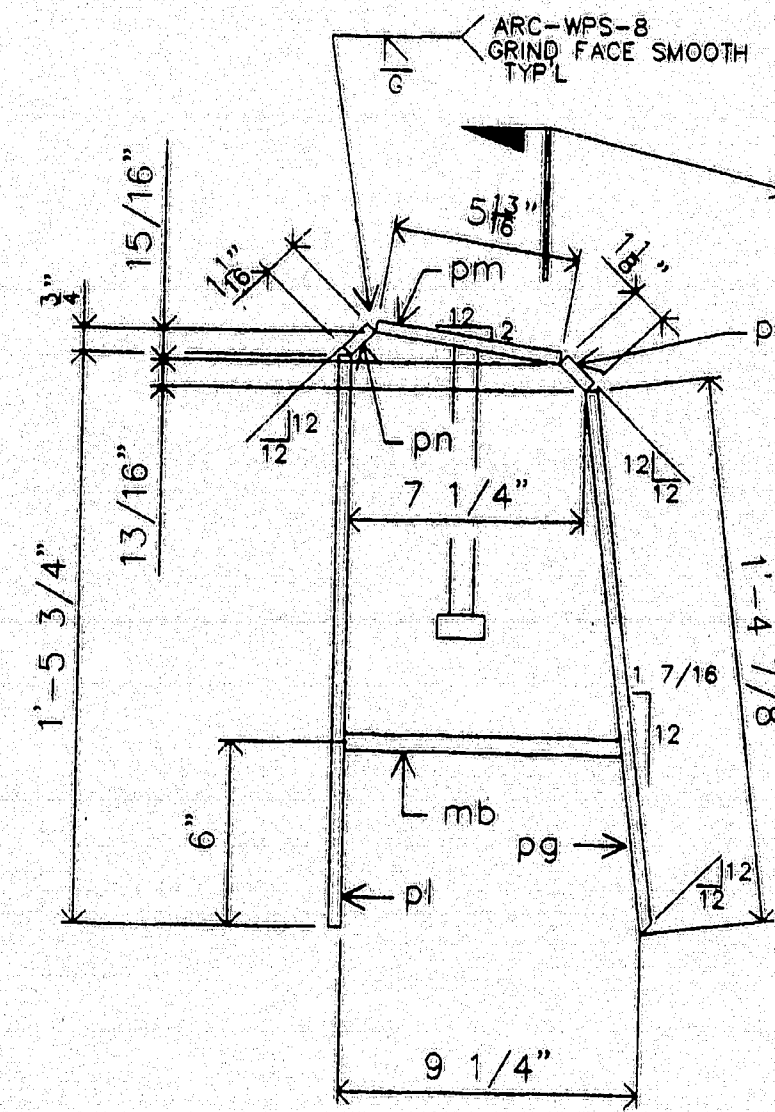
ONE-EXP. JOINT-A21 (AS SHOWN)
ONE-EXP. JOINT-B21 (OPP. HAND)



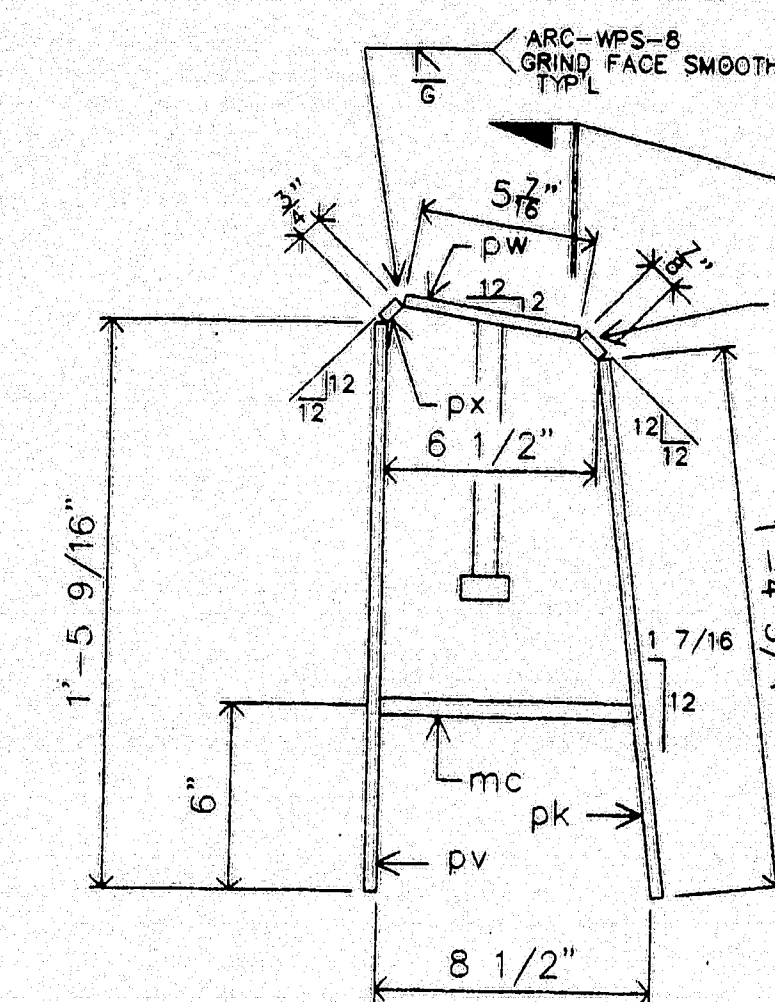
DETAIL @ OUTER BAR STOP



DETAIL @ pd

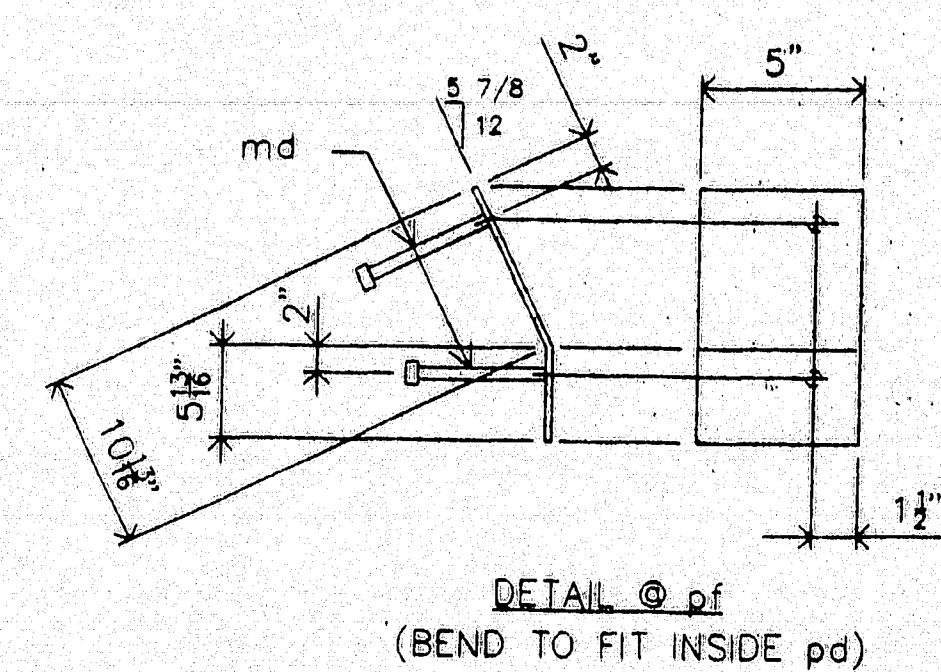


DETAIL @ OUTER BARRIER DAM

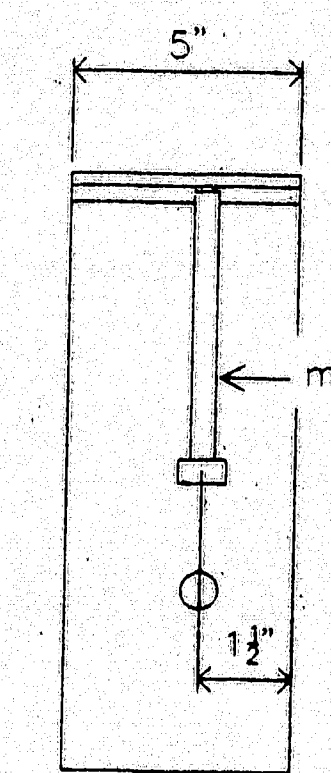
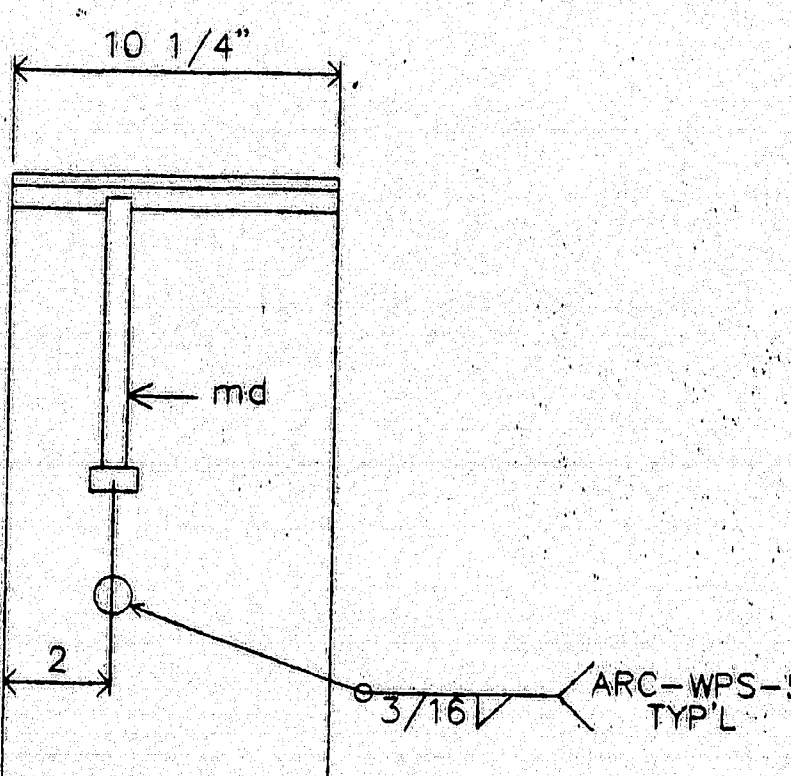


DETAIL @ INNER BARRIER DAM

SHOP NOTE:
OUTER BARRIER & OUTER BAR STOP
TO BE FABRICATED TO FIT OVER THE
INNER BARRIER UNIT.



DETAIL @ pf
(BEND TO FIT INSIDE pd)



See Sht 15
for Comments.

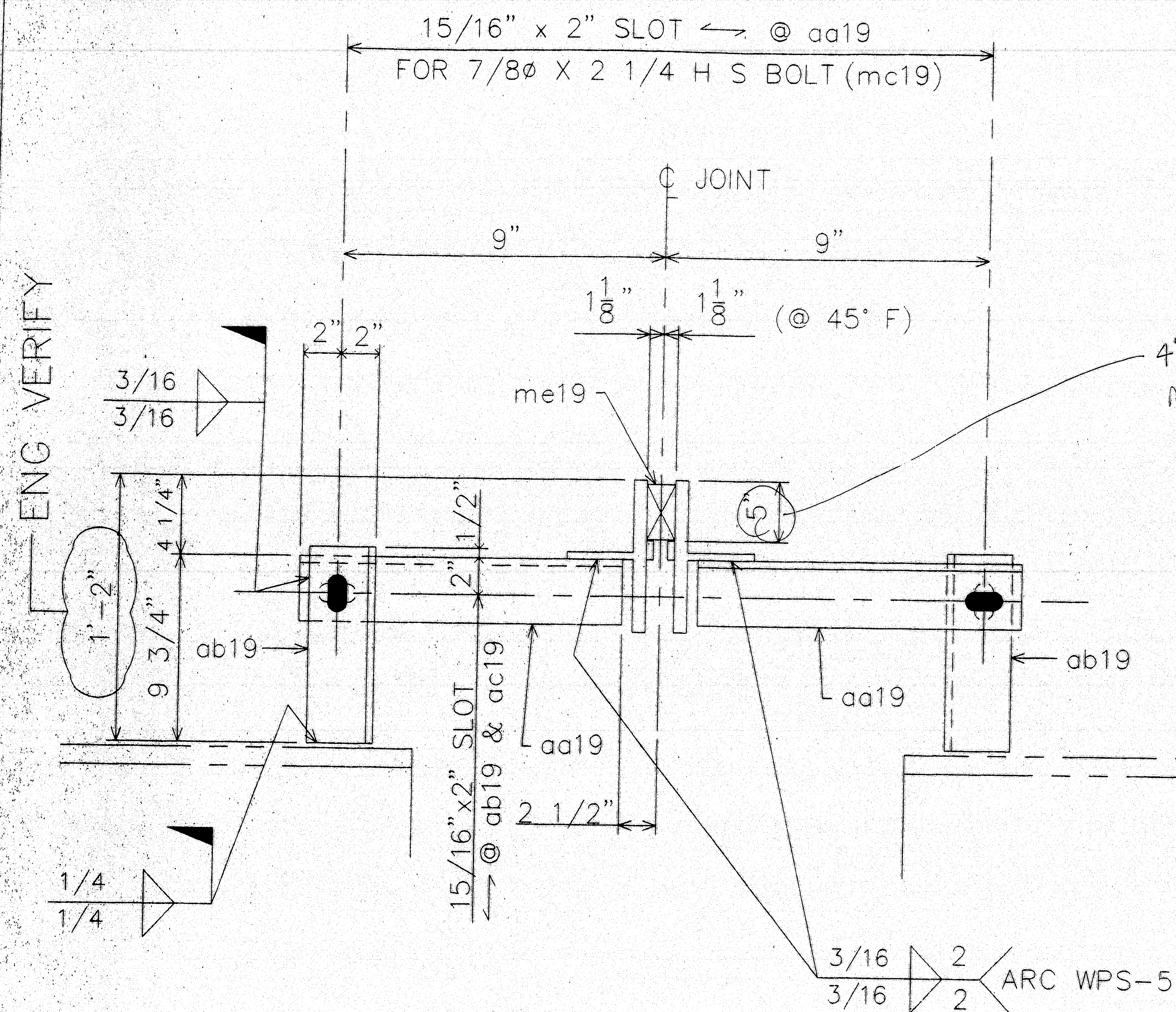
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUG 21 1997
Approved as noted
Approved
Returned for Corrections
Rejected

MATERIALS LIST	
MK QTY	DESCRIPTION
A21 1	EXPANSION DEVICE ASSEMBLY
B21 1	EXPANSION DEVICE ASSEMBLY
pa21 2	CHK'D PL 3/8 X 10 1/4 X 7'-2 3/4 BEND SHPD
pb21 2	PL 3/8 X 2 X 7'-2 3/4 BEND SHPD 1L-1R
pc21 2	PL 3/8 X 5 X 7'-2 1/2 BEND
pd21 2	PL 3/8 X 10 1/4 X 1'-5 BEND 1L-1R
pe21 2	PL 3/8 X 2 X 1'-5 BEND
pf21 2	PL 3/8 X 5 X 1'-4 5/8 BEND
pg21 2	PL 3/8 X 10 1/4 X 1'-4 7/8 BIE 1L-1R
ph21 2	PL 3/8 X 2 X 1'-4 7/8 BIE
pk21 2	PL 3/8 X 5 X 1'-4 3/4
pl21 2	PL 3/8 X 10 1/4 X 1'-5 3/4 1L-1R
pm21 2	PL 3/8 X 5 13/16 X 0'-10 1/4 1L-1R
pn21 2	PL 3/8 X 1 1/16 X 0'-10 1/4 1L-1R
pp21 2	PL 3/8 X 1 1/8 X 0'-10 1/4 1L-1R
pr21 2	FB 3/8 X 2 X 1'-5 3/4
ps21 2	FB 3/8 X 2 X 0'-5 13/16
pt21 2	FB 3/8 X 2 X 0'-1 1/16
pu21 2	PL 3/8 X 2 X 0'-1 1/8
pv21 2	PL 3/8 X 5 X 1'-5 9/16
pw21 2	PL 3/8 X 5 X 0'-5 7/16
px21 2	PL 3/8 X 3/4 X 0'-5
py21 2	PL 3/8 X 7/8 X 0'-5
ma21 16	#6 REBAR X 1'-6 BEND A615, GR 60
mb21 2	#6 REBAR X 0'-8 1/2 A615, GR 60
mc21 2	#6 REBAR X 0'-7 3/4 A615, GR 60
md21 12	1/2 X 0'-8 CONC STUDS
PROJ. NO. BH-043-1(34)	
ITEM NO. 520.22	

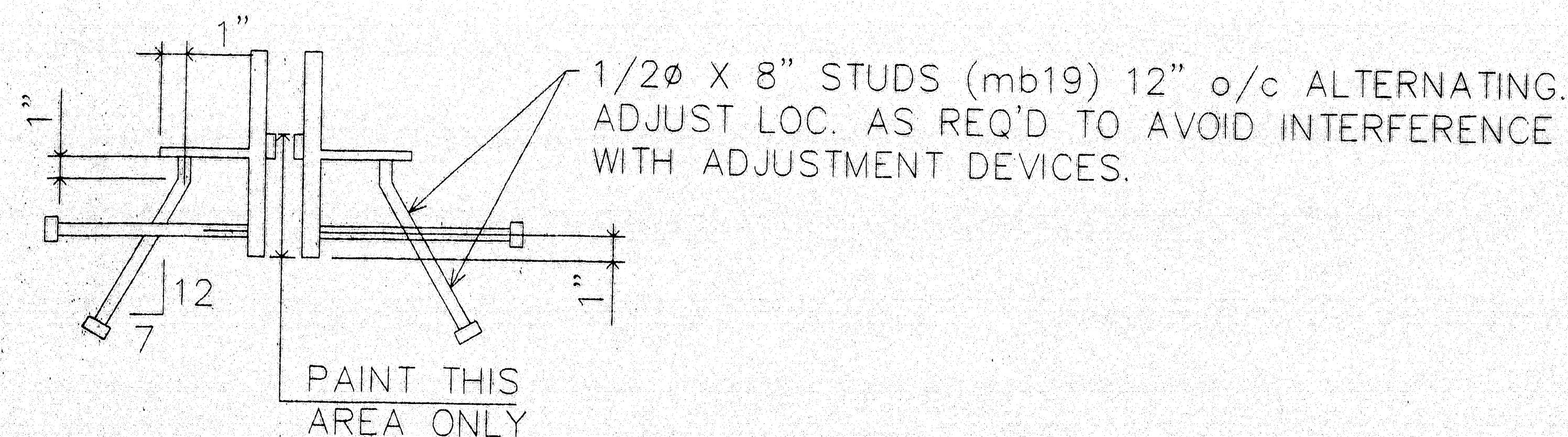
MATL: A36 UN HOLES AS NOTED
WELD: PER PROCEDURES NOTED
PREP: SP6
FINISH: 3 COATS ZINC RICH PRIMER
3 MDFT PER COAT.

120-350
FOR APPROVAL
ONLY

A.R.C. ENTERPRISES
KINGFIELD, MAINE
PROJECT: JOSHUA CHAMBERLAIN BRIDGE OVER THE
PENOBSCOT RIVER, BANGOR-BREWERY, ME
SCALE: 1"=1'-0" APPROVED BY: [Signature] DRAWN BY: [Signature]
DATE: 7/97 CHKD BY: [Signature]
SIDEWALK DAM DETAIL @ HINGE SPAN 9
REED & REED, INC. JOB NO. 97-49 DWG. NO. 21

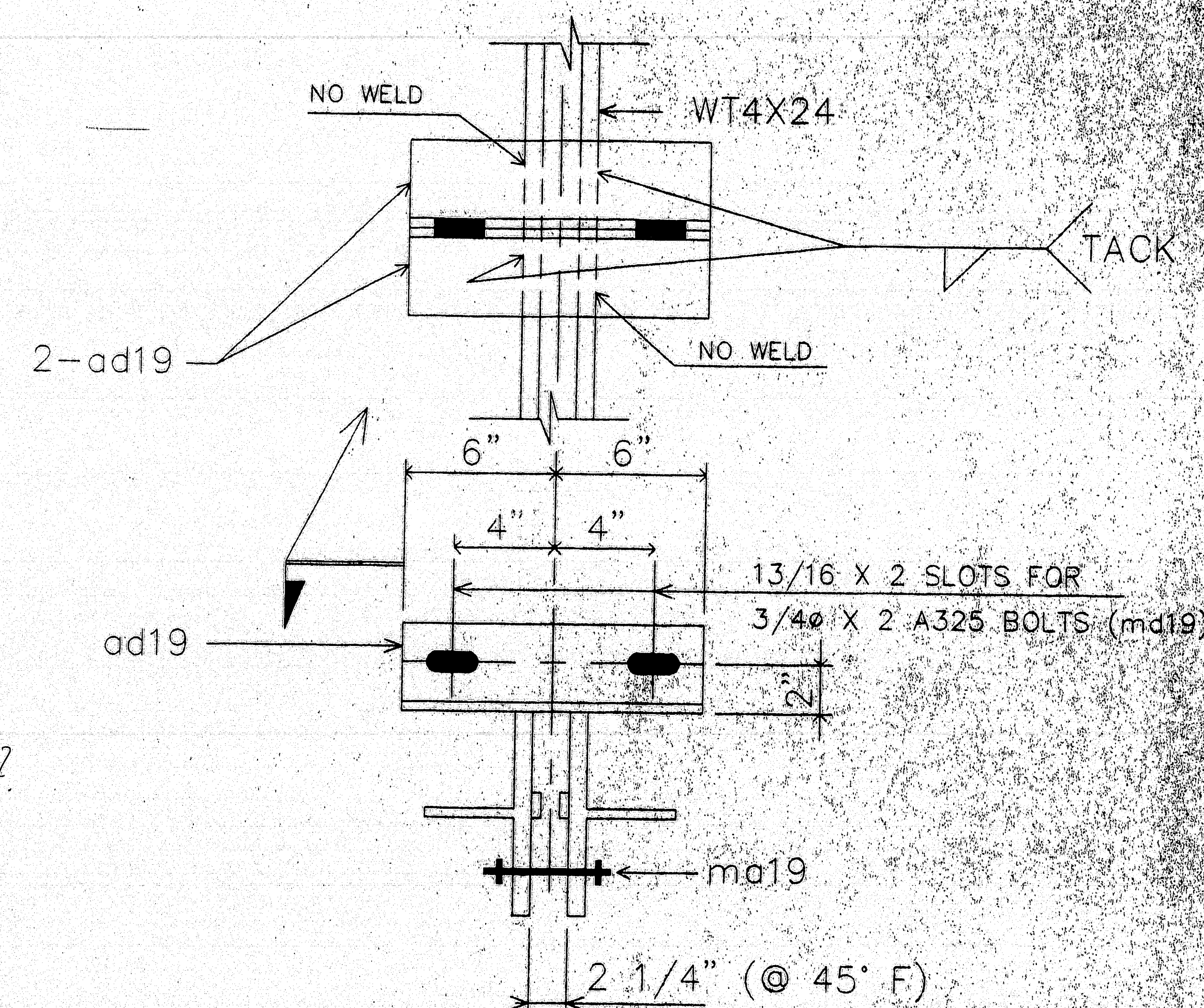


SECT. C-C



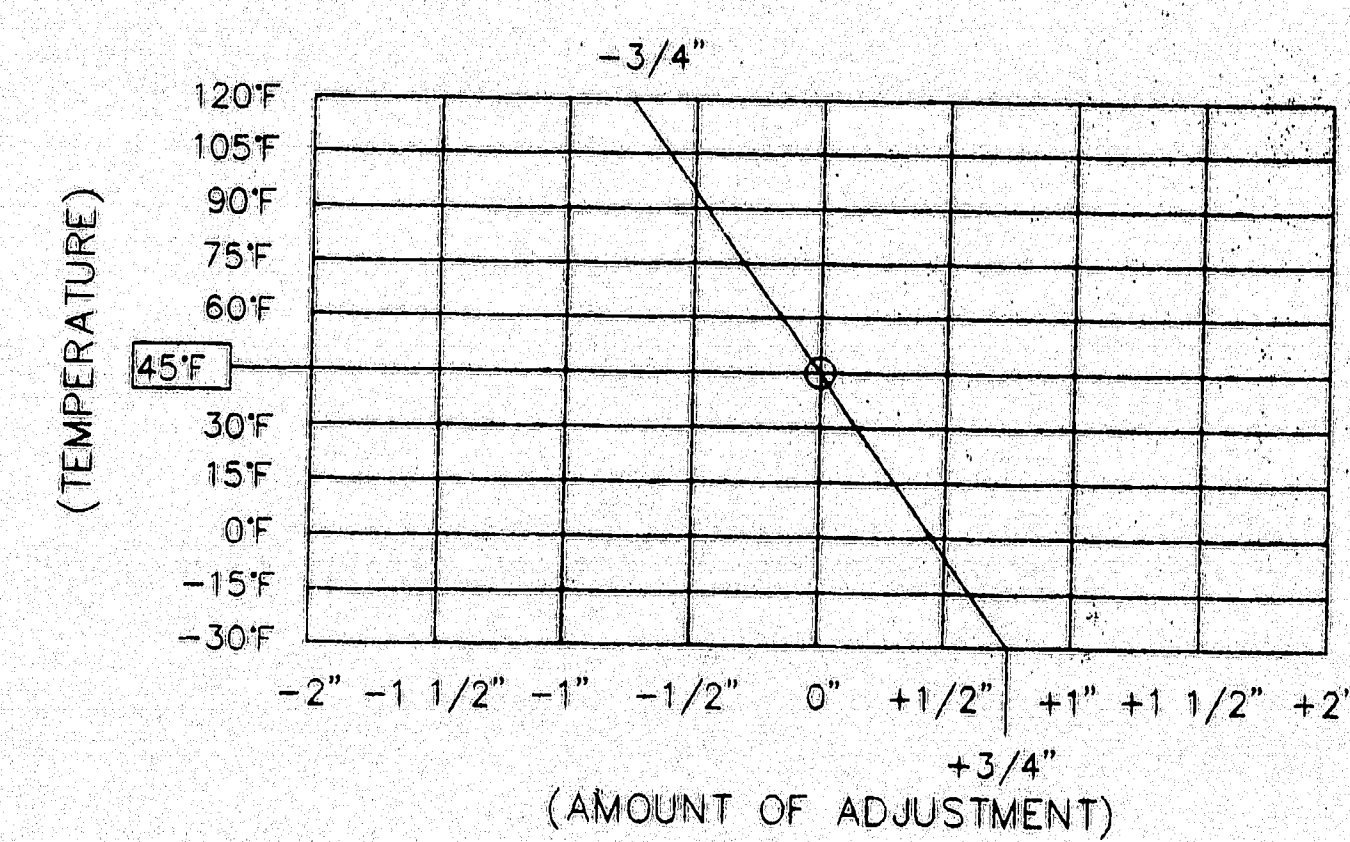
SECT. D-D

4"??
My sales info shows a
WA 350 to be 3 1/2"
in nominal height
sta Detail BD-301-93
indicates a typical
section leaves a 1/2"
clear between top of
seal and top of flange.
3 1/2" + 1/2" = 4"??



TEMPERATURE ADJUSTING DEVICE

NOTE:
SHOP PLACE ADJUSTING DEVICES AT APPROX. 5'-0" O/C.
SHOP TO PRESET THE JOINT OPENING TO THE 45°F SETTING.
CONTRACTOR TO REFER TO THE DESIGN DWG'S & SPEC'S FOR
INSTALLATION INSTRUCTIONS.



COMP. SEAL ADJUSTMENT CHART

FIELD NOTE:
ADJUST JOINT OPENING FOR TEMPERATURE AT TIME
OF INSTALLATION. ADJUSTMENT IS TO BE MEASURED
PARALLEL TO THE WORKING LINE.

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	
<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Returned for Corrections
AUG 21 1997	
<input checked="" type="checkbox"/> Approved as noted	<input type="checkbox"/> Rejected

FOR APPROVAL
ONLY

PROJ. NO. : BH-043-1(34)
ITEM NO. : 520.22

120-351

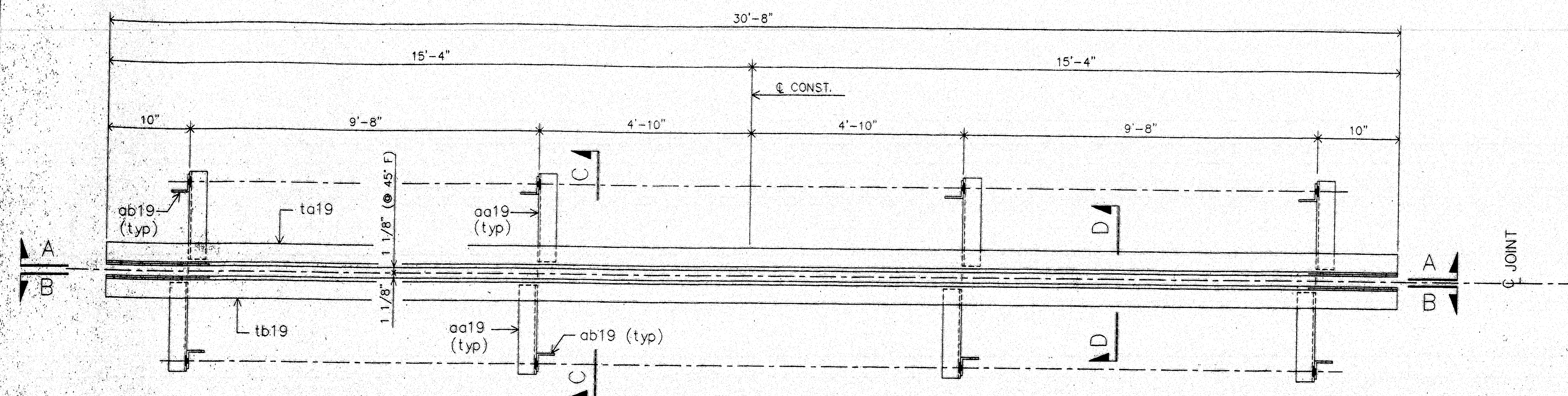
A.R.C. ENTERPRISES
KINGFIELD, MAINE

PROJECT: JOSHUA CHAMBERLAIN BRIDGE OVER THE
PENOBSCOT RIVER, BANGOR-BREWER, ME

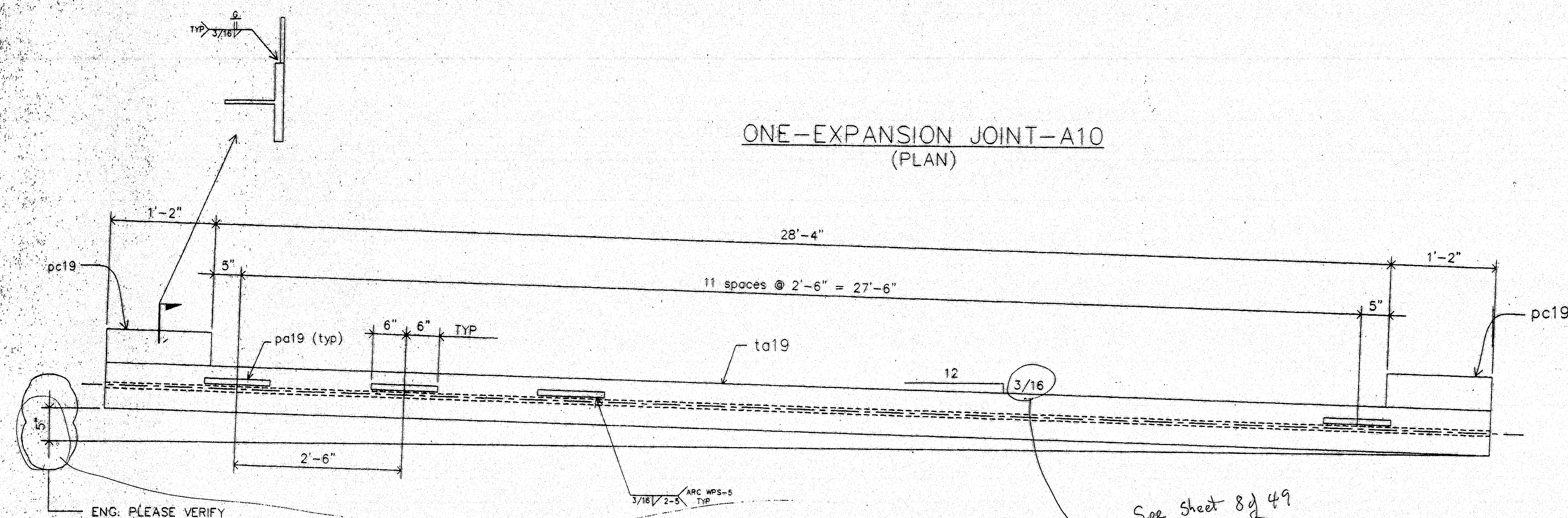
SCALE: DATE: 7/97 APPROVED BY: DRAWN BY: BG

EXPANSION JOINT DETAIL • HINGE SPAN 9

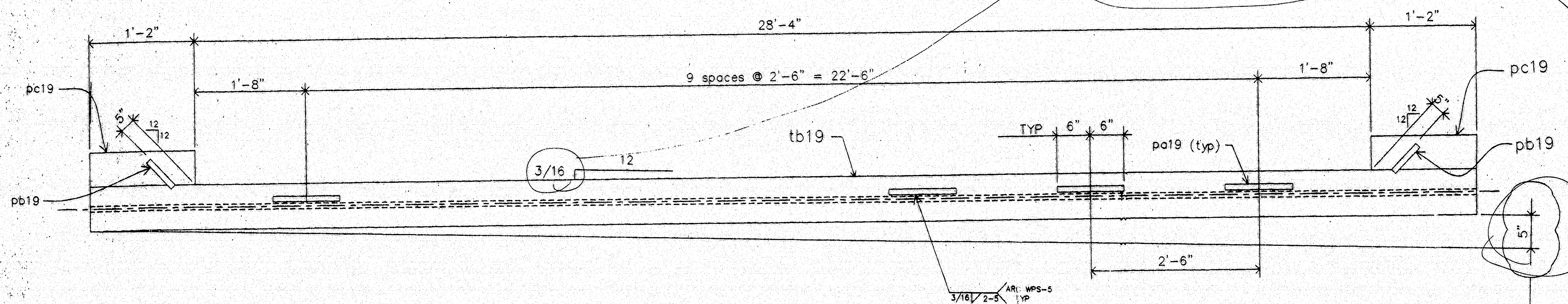
REED & REED JOB NO. 97-49 DWG NO. 20



ONE-EXPANSION JOINT-A10
(PLAN)



SECTION A-A



SECTION B-B

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUG 21 1997
Approved as noted ☒ Rejected ☐

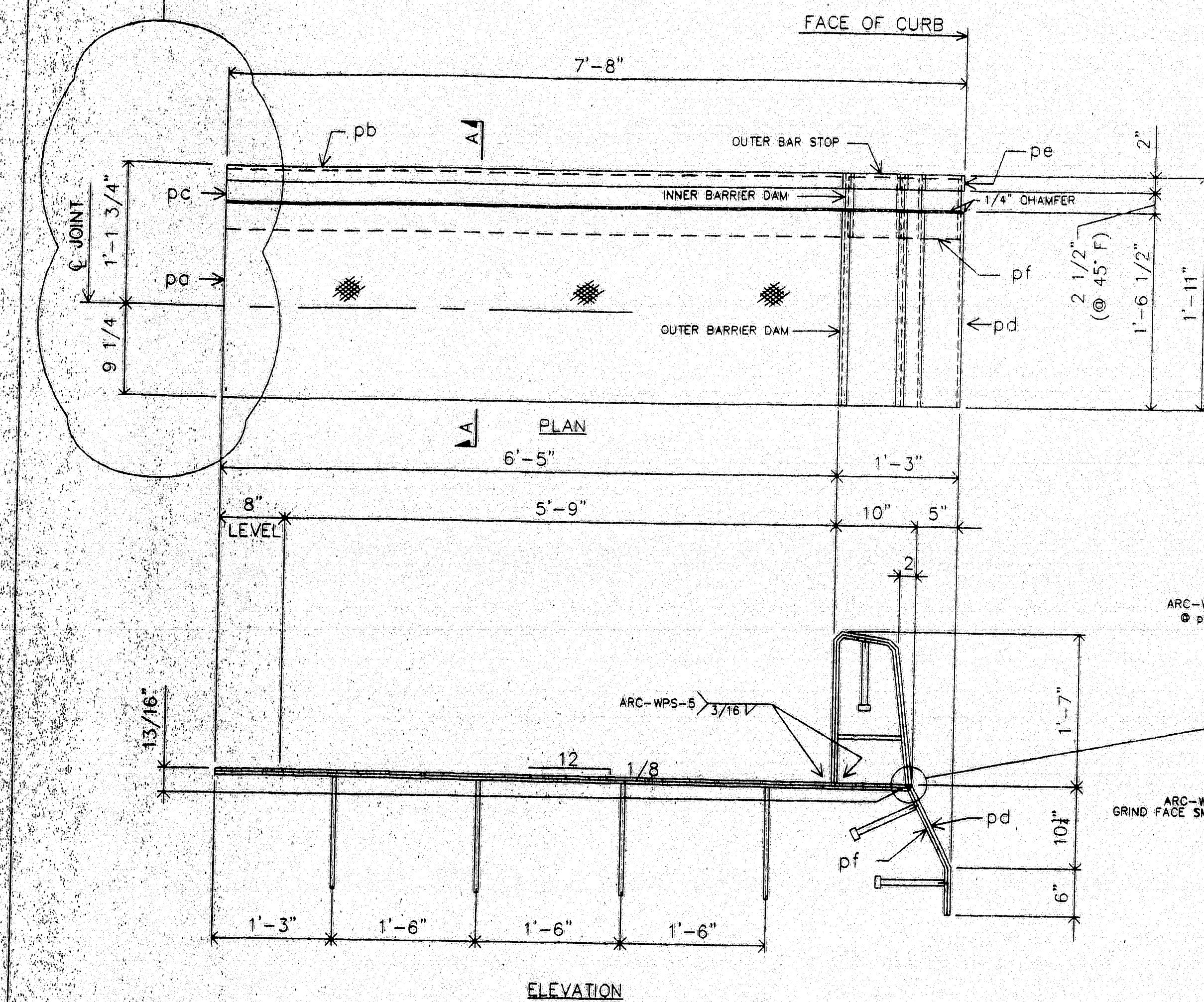
MATERIALS LIST	
MRQTY	DESCRIPTION
A19 ONE	EXPANSION JOINT ASSEMBLY
ta19 1	WT 4 X 24 X 30'-8"
tb19 1	WT 4 X 24 X 30'-8"
aa19 8	L 3 1/2 X 3 1/2 X 3/8 X 0'-8 1/2
ab19 8	L 3 1/2 X 3 1/2 X 3/8 X 0'-10 1/4
ad19 12	L 3 1/2 X 3 1/2 X 3/8 X 1'-0
pa19 22	BAR 1" X 3/8 X 1'-0"
pb19 2	BAR 1" X 3/8 X 0'-6"
pc19 4	PL 1/4 X 6 X 1'-2"
ma19 6	THRD ROD 1/2" X 0'-8" w/ 2N&2W
mb19 68	1/2" X 0'-8" CONC. STUDS
mc19 8	7/8" X 0'-2 1/4" H S BOLTS A325 w/N&2W
md19 12	3/4" X 0'-2" H S BOLTS A325 w/N&2W
me19 1	WATSON-BOWMAN WA 350 COMPRESSION SEAL X 32'-0 WITH ADHESIVE
PROJ. NO.: BH-043-1(34)	
ITEM NO.: 520.22	

MATL: A36, UN HOLES: AS NOTED
WELD: PER PROCEDURES NOTED
PREP: SP6
PAINT: 3 COATS - ZINC RICH PRIMER
3 MDFT PER COAT

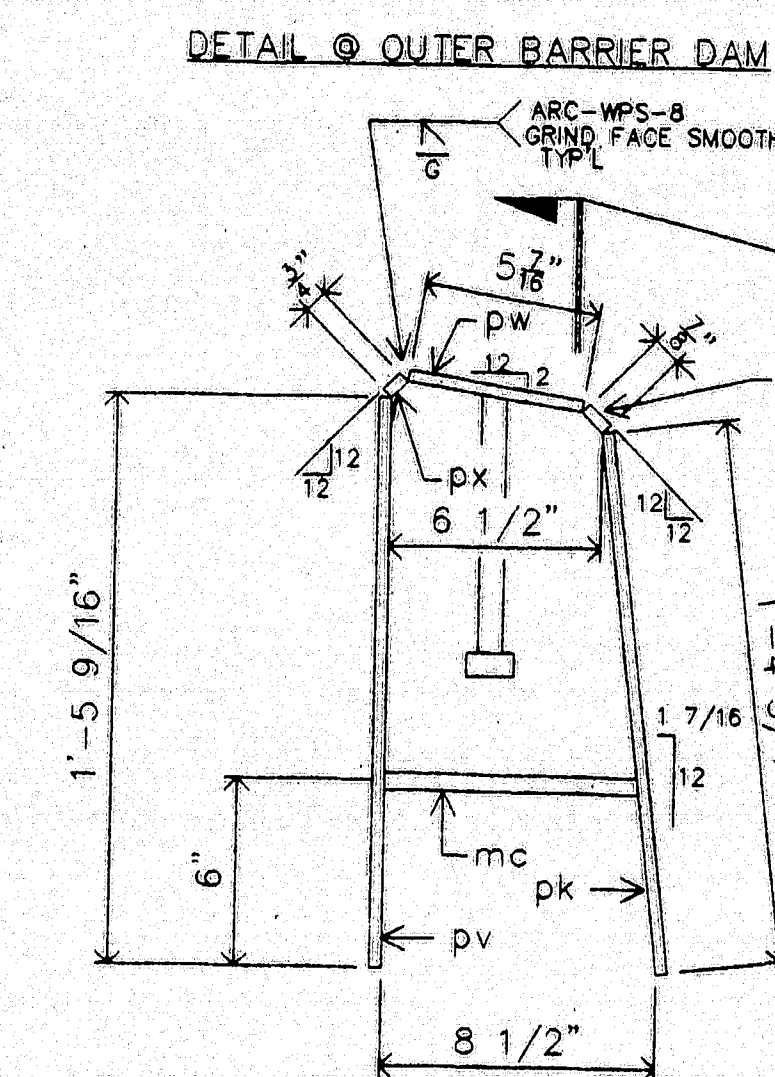
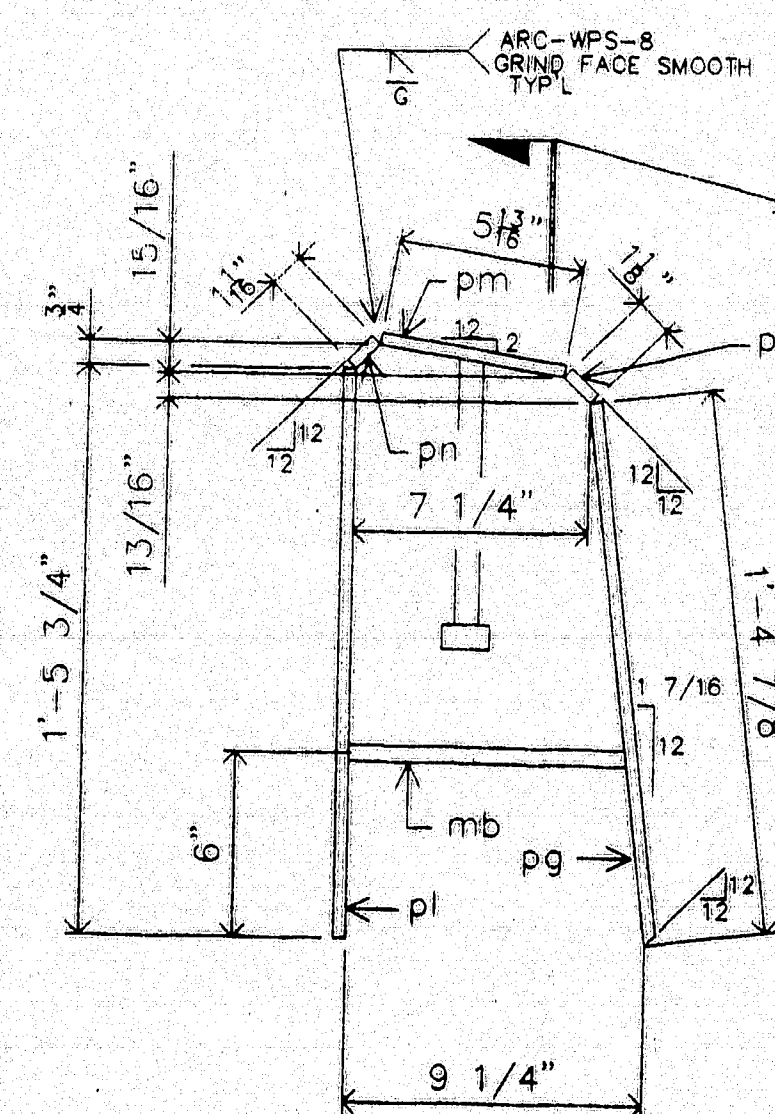
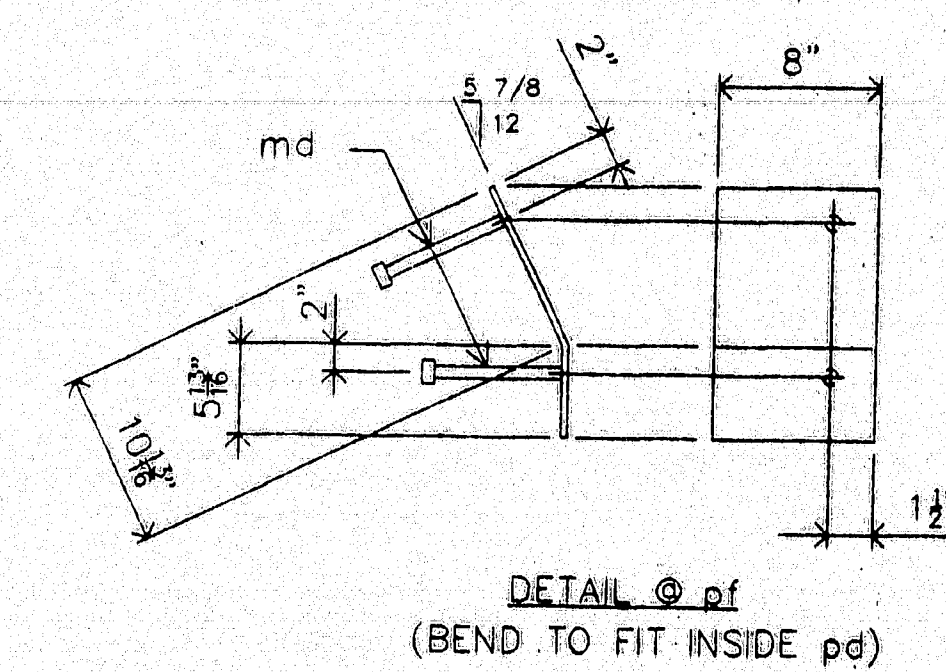
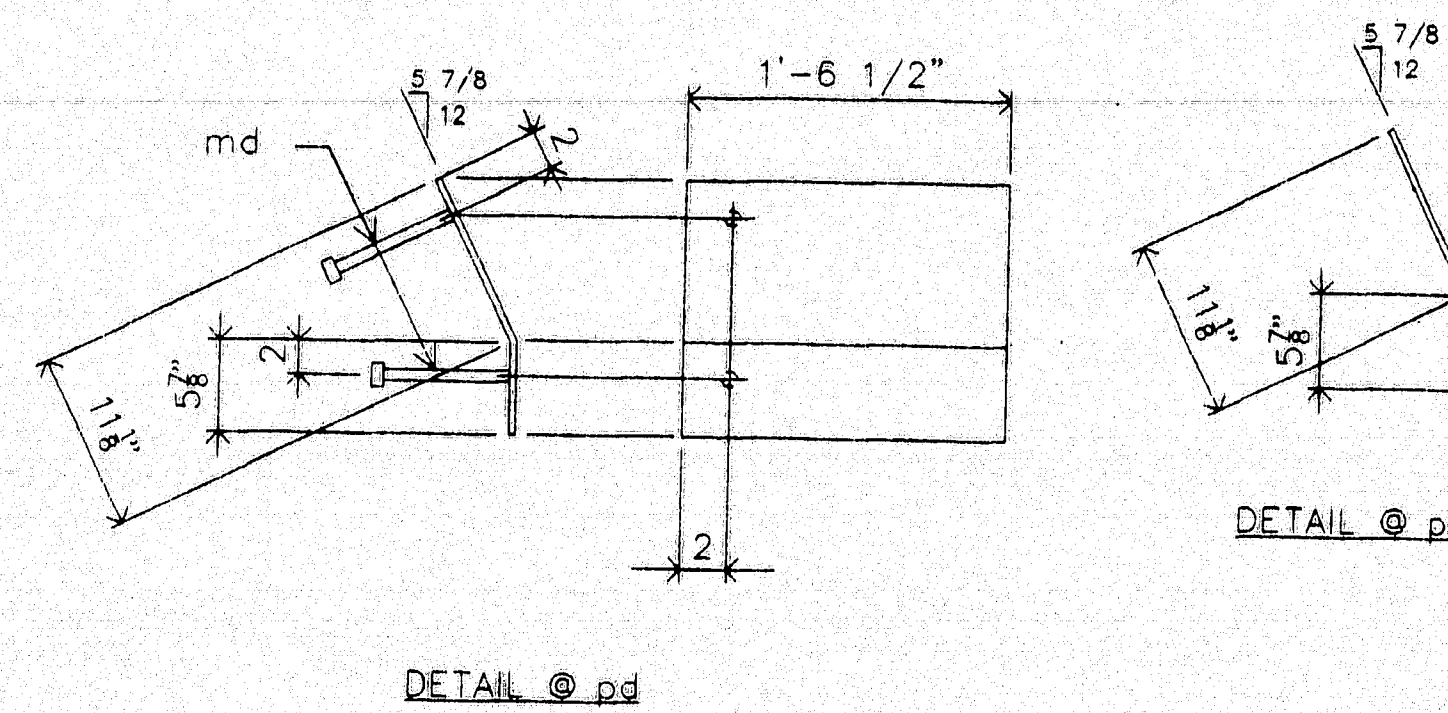
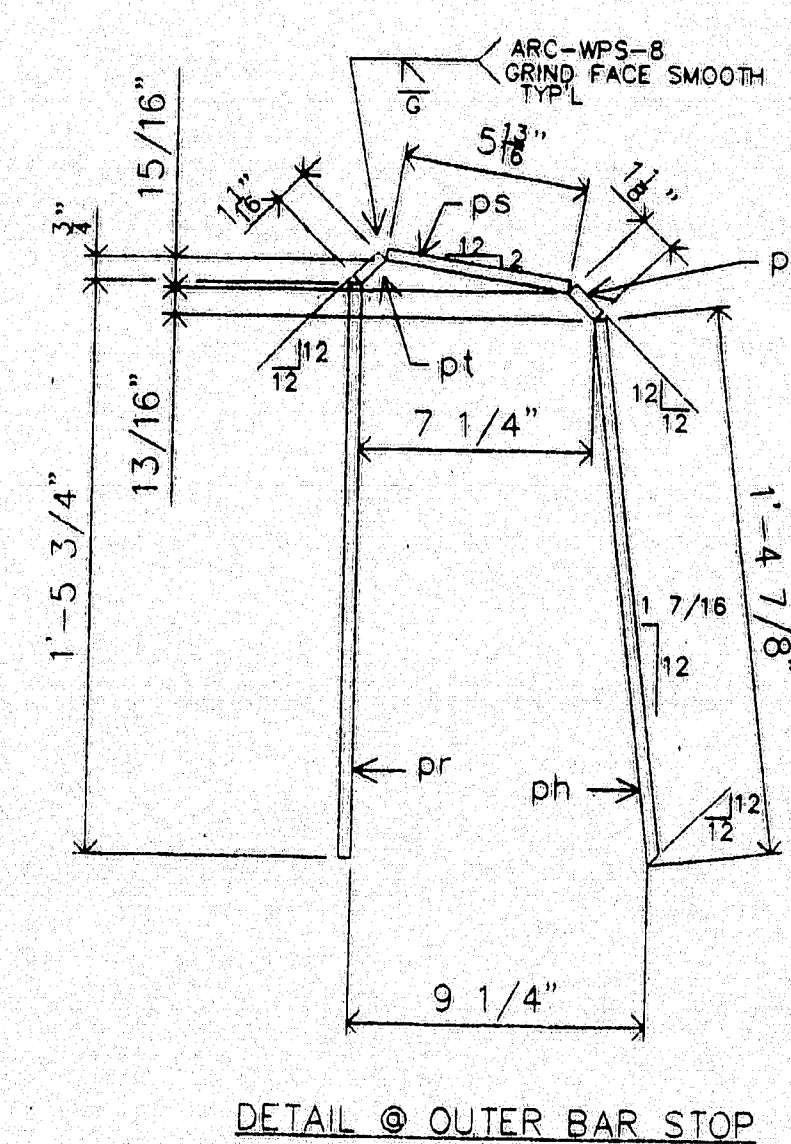
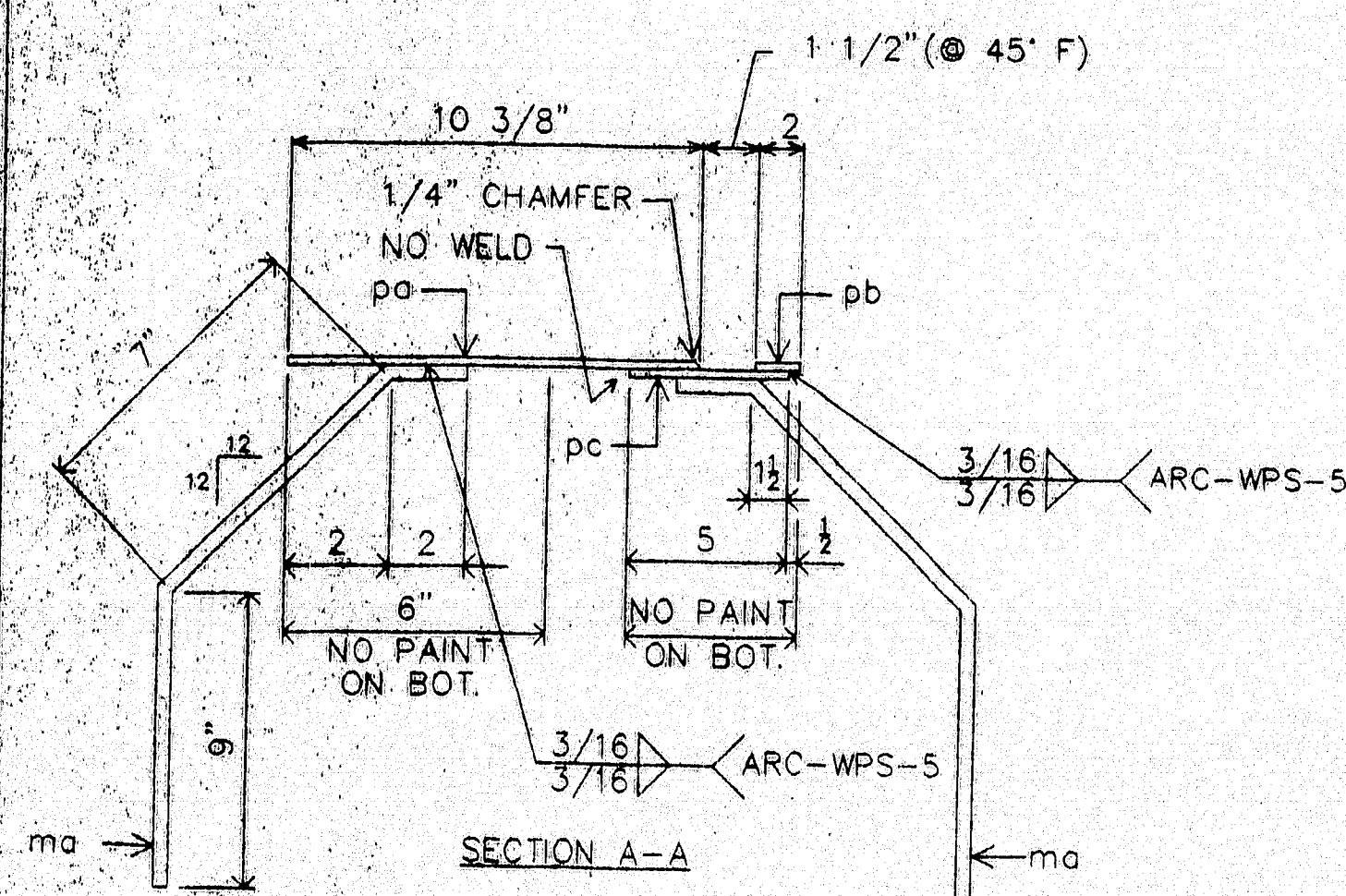
FOR APPROVAL ONLY
120-352
A.R.C. ENTERPRISES
KINGFIELD, MAINE
PROJECT: JOSHUA CHAMBERLAIN BRIDGE OVER THE
PENOBSCOT RIVER, BANGOR-BREWER, ME
SCALE: 1" = 1'-0" APPROVED BY: ☐ DRAWN BY: BB
DATE: 7/97 CHKD BY:
EXPANSION JOINT DETAIL @ HINGE SPAN 2
REED & REED JOB NO. 97-49 DWG. NO. 19

WORK THIS DWG. WITH DWG. 20.

ENG./GC
PLEASE PROVIDE INFO. ON HOW
TO NOTCH DAM @ RAIL POSTS.



ONE-EXP. JOINT-A18 (AS SHOWN)
ONE-EXP. JOINT-B18 (OPP. HAND)



DETAIL @ INNER BARRIER DAM

SHOP NOTE:
OUTER BARRIER & OUTER BAR STOP
TO BE FABRICATED TO FIT OVER THE
INNER BARRIER UNIT.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUG 11 1997
Approved as noted
Returned for Corrections
Rejected

See Comments
on Set 15

MATERIALS LIST

MK	QTY	DESCRIPTION
A18	1	EXPANSION DEVICE ASSEMBLY
B18	1	EXPANSION DEVICE ASSEMBLY
pa18	2	CHK'D PL 3/8 x 18 1/2 x 7'-2 3/4 BEND/SHP'D 1L-1R
pb18	2	PL 3/8 x 2 x 7'-2 3/4 BEND/SHP'D 1L-1R
pc18	2	PL 3/8 x 8 x 7'-2 1/2 BEND
pd18	2	PL 3/8 x 17 x 1'-6 1/2 BEND 1L-1R
pe18	2	PL 3/8 x 2 x 1'-5 BEND
pf18	2	PL 3/8 x 8 x 1'-4 5/8 BEND
pg18	2	PL 3/8 x 16 7/8 x 1'-6 1/2 B1E 1L-1R
ph18	2	PL 3/8 x 2 x 1'-4 7/8 B1E 1L-1R
pk18	2	PL 3/8 x 8 x 1'-4 3/4
pl18	2	PL 3/8 x 17 3/4 x 1'-6 1/2 1L-1R
pm18	2	PL 3/8 x 5 13/16 x 1'-6 1/2 1L-1R
pn18	2	PL 3/8 x 1 1/16 x 1'-6 1/2 1L-1R
pp18	2	PL 3/8 x 1 1/8 x 1'-6 1/2 1L-1R
pr18	2	FB 3/8 x 2 x 1'-5 3/4
ps18	2	FB 3/8 x 2 x 0'-5 13/16
pt18	2	FB 3/8 x 2 x 0'-1 1/16
pu18	2	PL 3/8 x 2 x 0'-1 1/8
pv18	2	PL 3/8 x 8 x 1'-5 9/16
pw18	2	PL 3/8 x 5 7/16 x 0'-8
px18	2	PL 3/8 x 3/4 x 0'-8
py18	2	PL 3/8 x 7/8 x 0'-8

ma18	16	#6 REBAR x 1'-6 BEND A615, GR 60
mb18	2	#6 REBAR x 0'-8 1/2 A615, GR 60
mc18	2	#6 REBAR x 0'-7 3/4 A615, GR 60
md18	12	1/2 x 0'-8 CONC STUDS

PROJ. NO. BH-043-1(34)
ITEM NO. 520.21

MATL: A36 UN
WELD: PER PROCEDURES NOTED
PREP: SP6
FINISH: 3 COATS ZINC RICH PRIMER
3 MDFT PER COAT

120-353 FOR APPROVAL ONLY

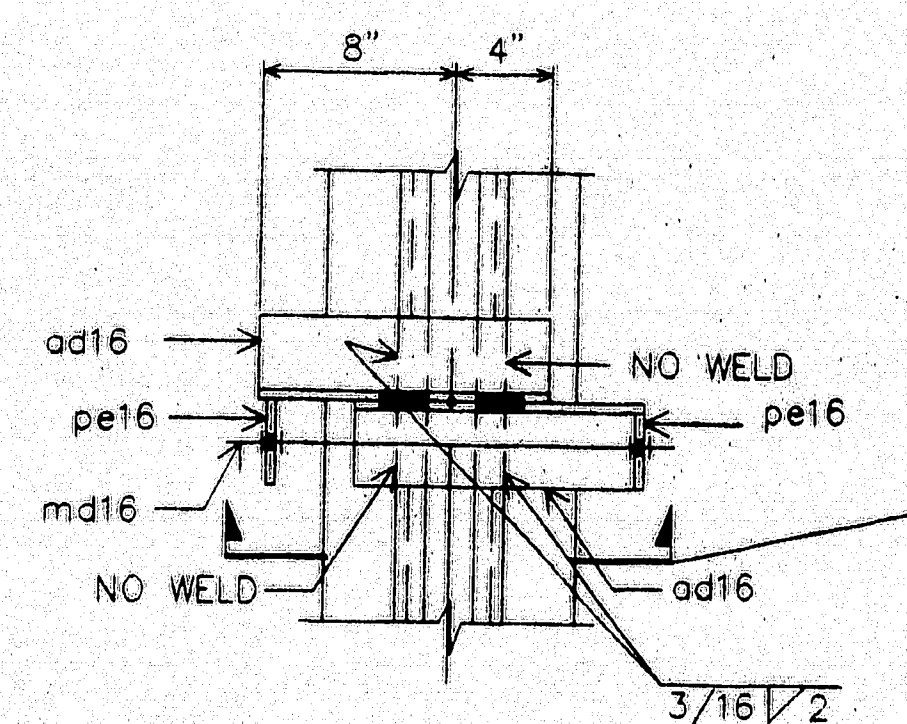
A.R.C. ENTERPRISES
KINGFIELD, MAINE

PROJECT: JOSHUA CHAMBERLAIN BRIDGE OVER THE
PENOBSCOT RIVER, BANGOR-BREWER, ME

SCALE: ~ APPROVED BY: DRAWN BY: BB
DATE: 7/97 CHKD BY:

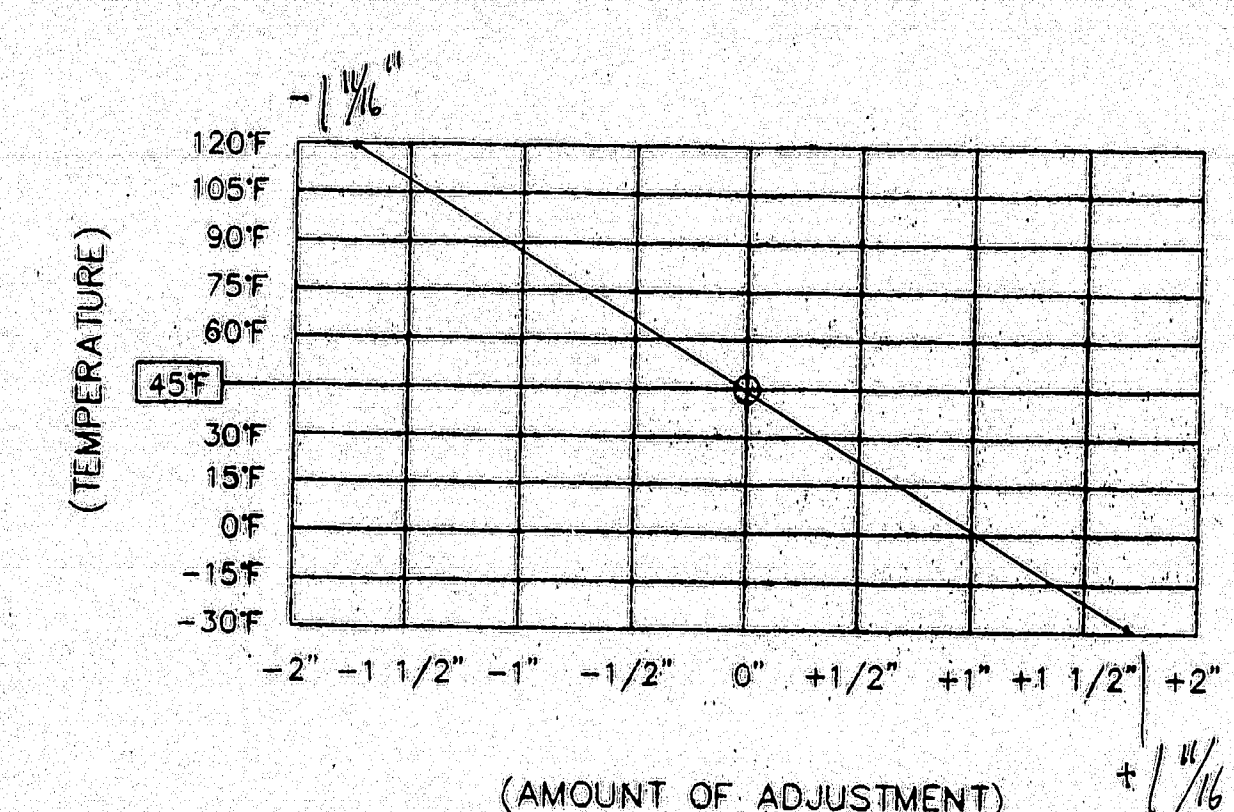
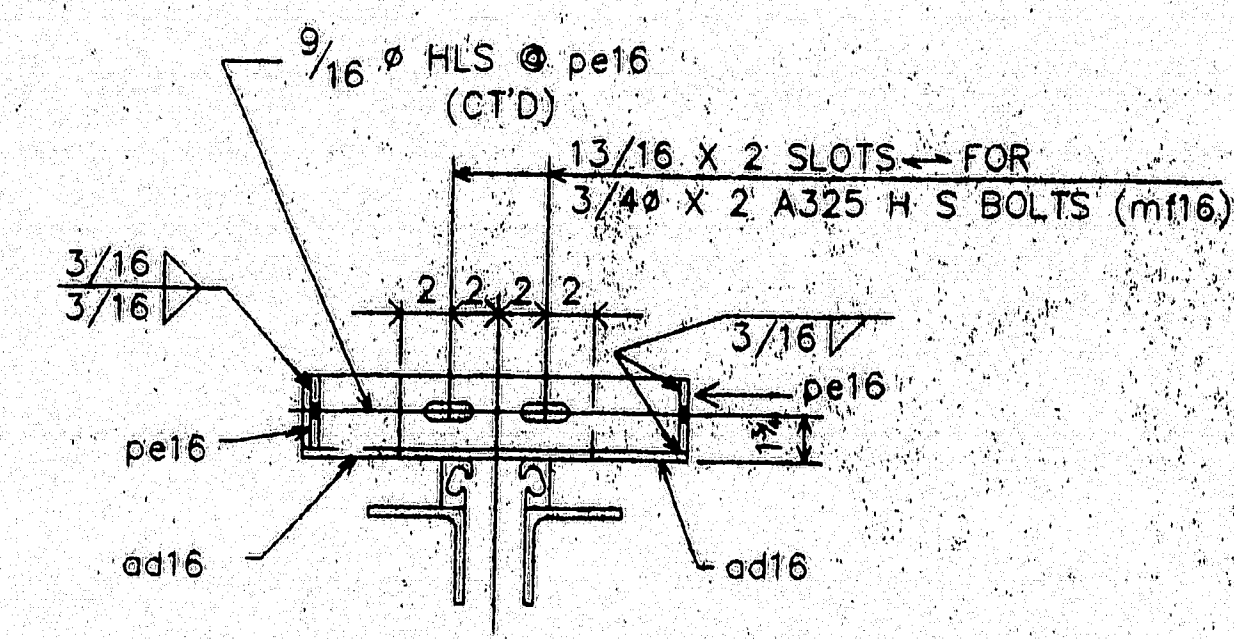
SIDEWALK DAM DETAIL @ ABUT. # 2

REED & REED JOB NO. 97-49 DWG. NO. 316



PLAN

TEMP. ADJUSTING & SHIPPING DEVICE



TEMPERATURE ADJUSTMENT CHART

FIELD NOTE:
ADJUST JOINT OPENING FOR TEMPERATURE AT TIME OF INSTALLATION.

NOTES:

- SHOP TO PLACE ADJUSTING & SHIPPING DEVICES ON EXP. JOINT AFTER PAINTING & SEAL INSTALLATION AT APPROX. 5'-0 O/C.
- PRESET THE OPENING TO THE 45°F SETTING SHOWN ON PLANS.
- CONTRACTOR TO REFER TO DESIGN DWG'S & SPECS FOR INSTALLATION INSTRUCTIONS.
- CONTRACTOR TO TOUCH-UP PAINT AFTER REMOVAL OF SHIPPING DEVICES.

ENG. PLEASE PROVIDE THE AMOUNT OF MOVEMENT FOR THIS JOINT. NOT SHOWN ON DESIGN DWGS.

Sheet 23 of 49 Design Dwg:
Note 2 says use BD 302-93.

BD 302-93, Note 4 depicts Formula:
Correction per 10°F = $\frac{0.0125 \times L (exp)}{15}$

Sheet 8 of 49 Design Dwg:

Distance is appx. Pier 14 to Brewer Abut.

Sta 38+08
Sta 35+38
270 feet

$$\text{Correction} = \frac{0.0125 \times (270)}{15} = 0.225$$

45° to -30° is 75°... 50, 7.5 X 0.225 = 1.6875 each side of 45°F.

∴ = 1 1/16"

STATE OF MAINE	
DEPARTMENT OF TRANSPORTATION	
<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Returned for Corrections
AUG 21 1997	
<input checked="" type="checkbox"/> Approved as noted	<input type="checkbox"/> Rejected

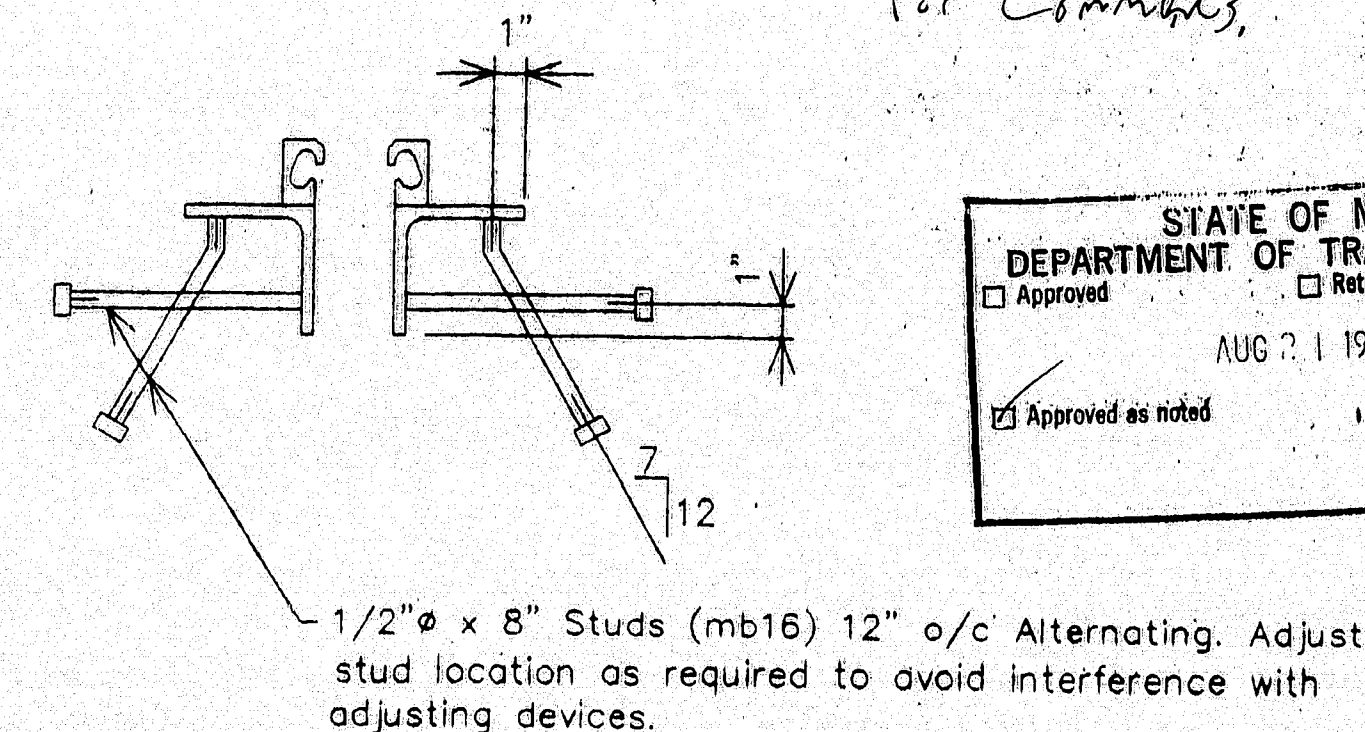
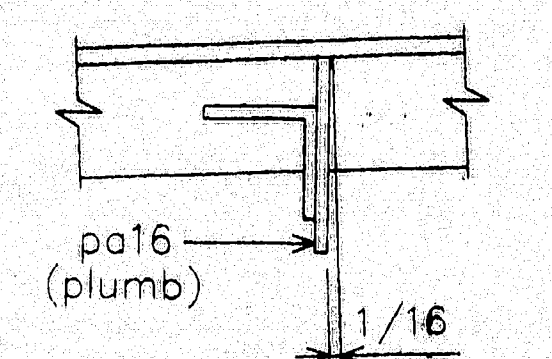
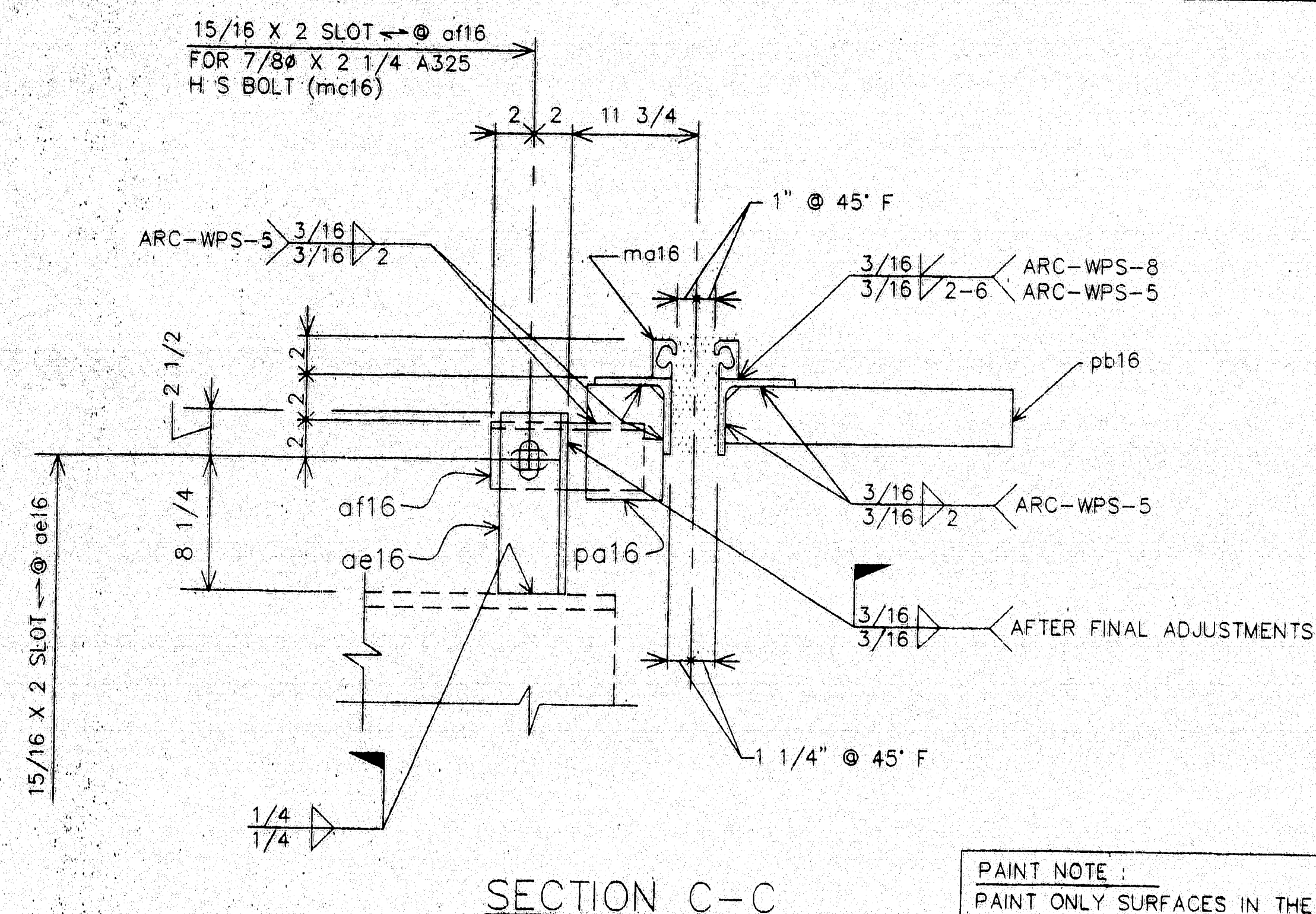
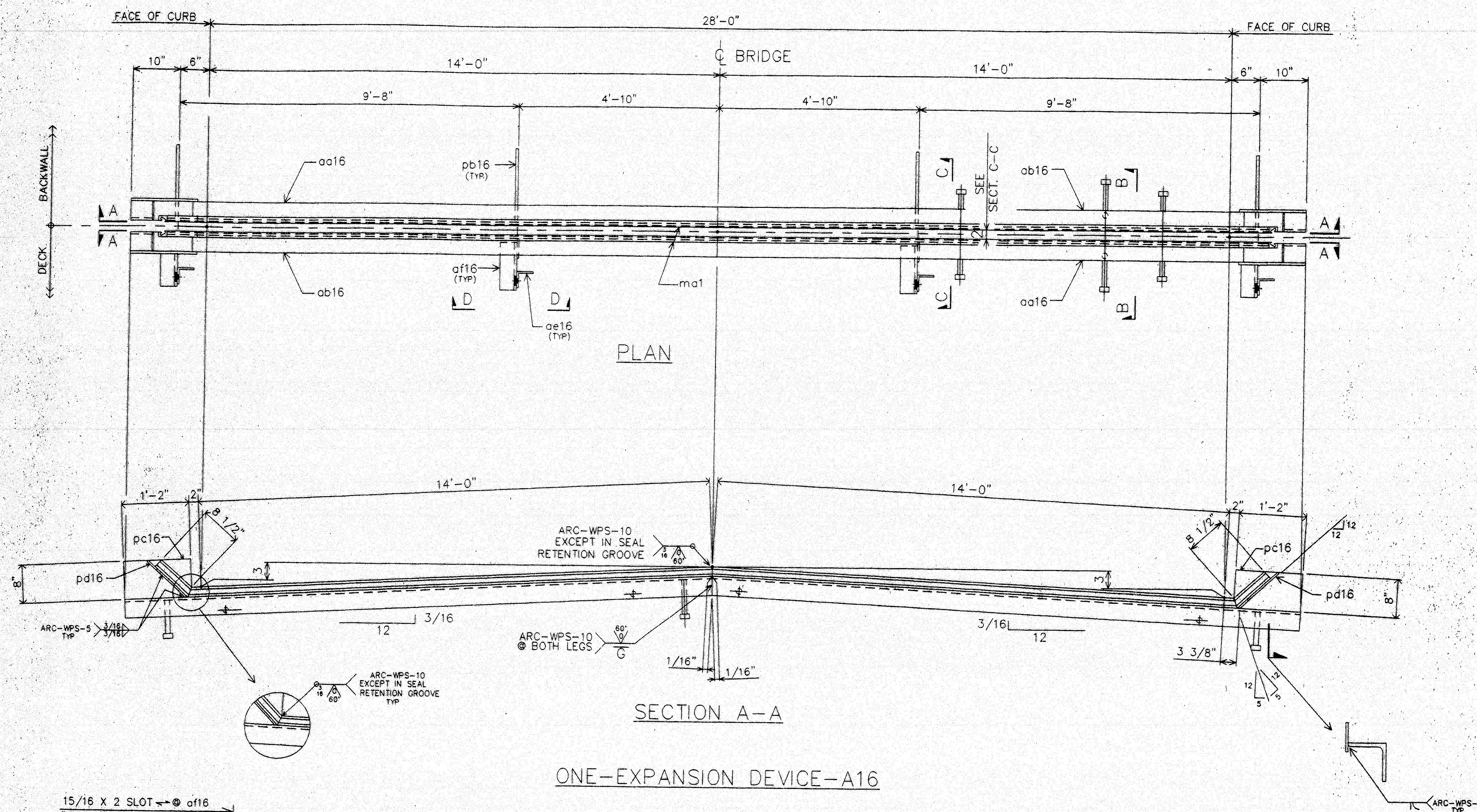
PROJ. NO.: BH-043-1(34)
ITEM NO. 520.21

MATL: A36 UN HOLES: AS NOTED
WELD: PER PROCEDURES NOTED
PREP: SP6
FINISH: 3 COATS ZINC RICH PRIMER
3 MDFT PER COAT

2 cuts ok. 120-354 FOR APPROVAL ONLY

A.R.C. ENTERPRISES	
KINGFIELD, MAINE	
PROJECT: JOSHUA CHAMBERLAIN BRIDGE OVER THE PENOBSCOT RIVER, BANGOR-BREWSTER, ME	
SCALE: ~	APPROVED BY: BB
DATE: 7/97	CHKD. BY:
EXPANSION JOINT DETAIL @ ABUT. # 2	
REED & REED	JOB NO. 97-49 DWG. NO. 17

WORK THIS DWG. W/ DWG. 16



SHOP NOTE
KICK pa16 IN OPPOSITE DIRECTION
ON OTHER SIDE OF CENTER LINE.

PAINT NOTE :
PAINT ONLY SURFACES IN THE SHADED AREAS.
NO PAINT IN THE AREA WHERE SEAL IS TO BE SEATED.

[illegible]

MATL: A36 UN HOLES: AS NOTED
WELD: PER PROCEDURES NOTED
PREP: SP6

FINISH:	3 COATS ZINC RICH PRIMER
	3 MDFT PER COAT

120-355
FOR APPROVAL
ONLY

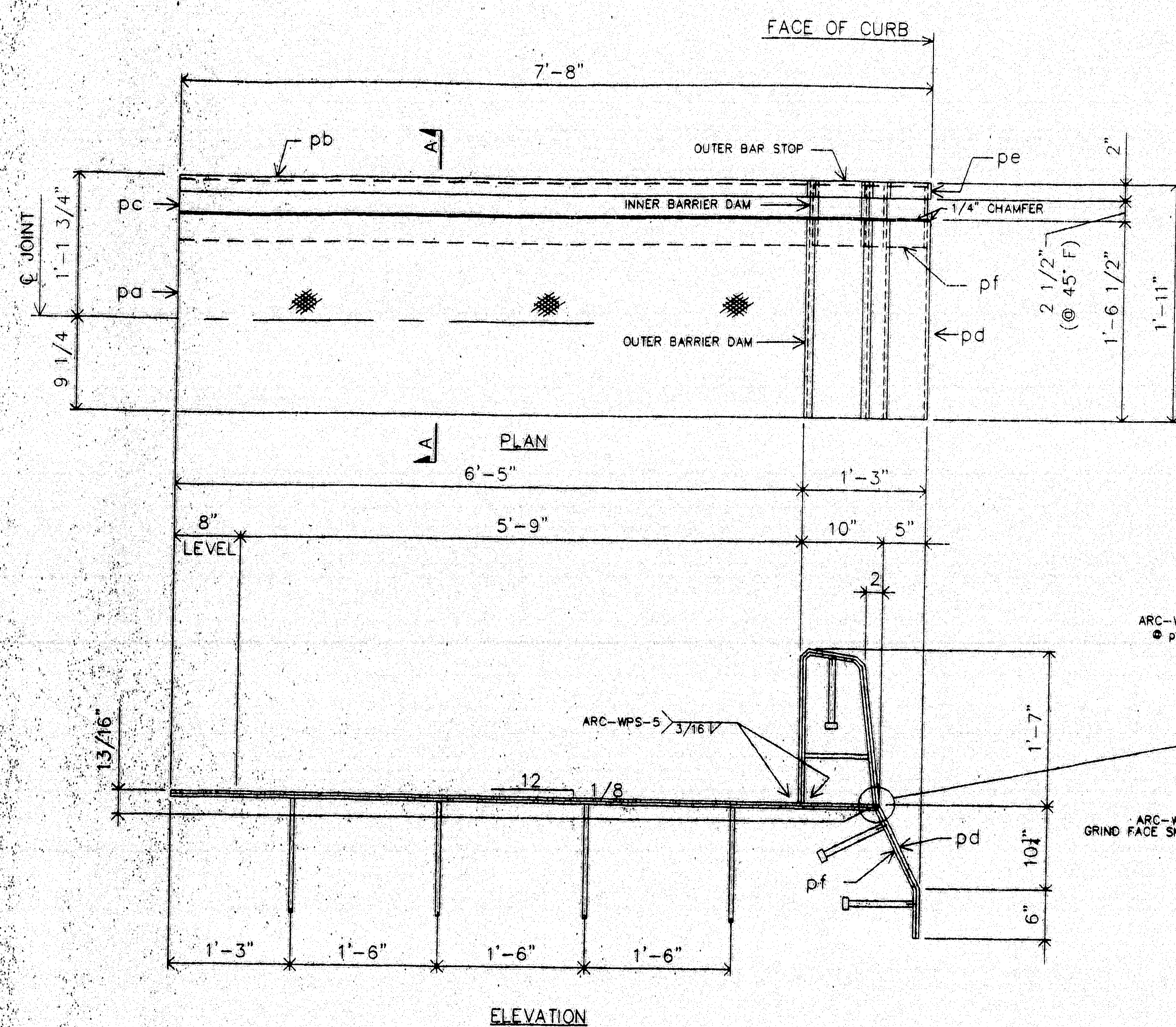
A.R.C. ENTERPRISES
KINGFIELD, MAINE

PROJECT: JOSHUA CHAMBERLAIN BRIDGE OVER THE
PENOBSCOT RIVER, BANGOR-BREWER, ME

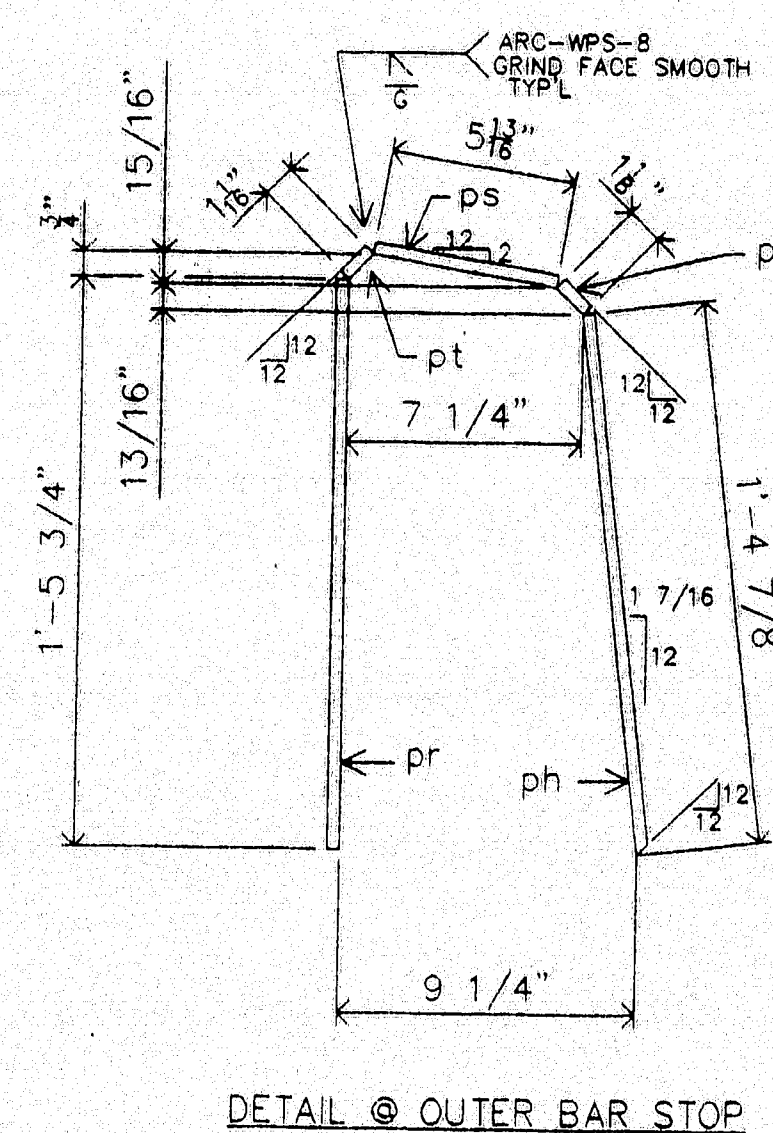
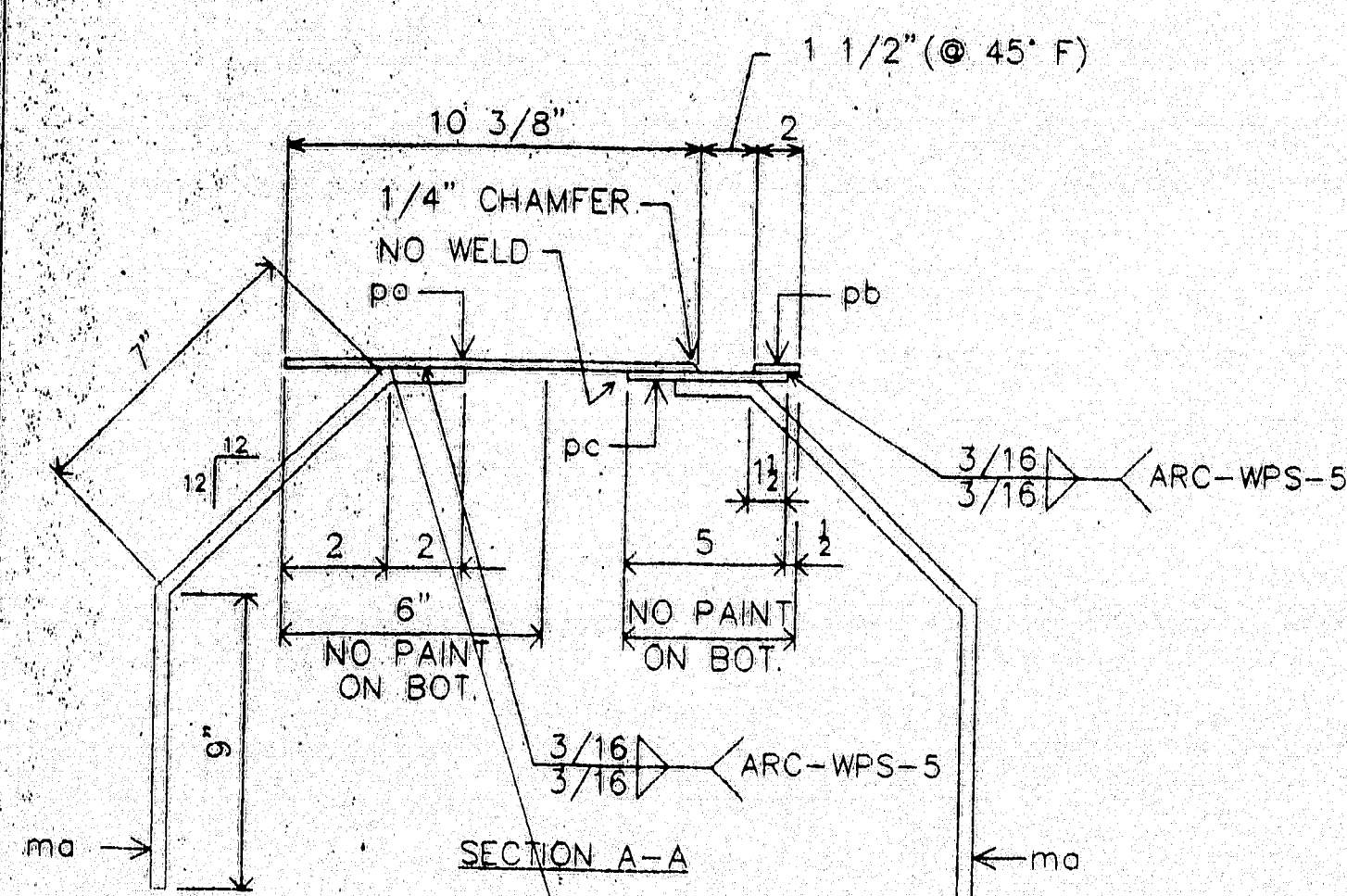
SCALE: ~	APPROVED BY:	DRAWN BY: BB
DATE: 7/97		CHKD. BY:

EXPANSION JOINT @ ABUT. # 2

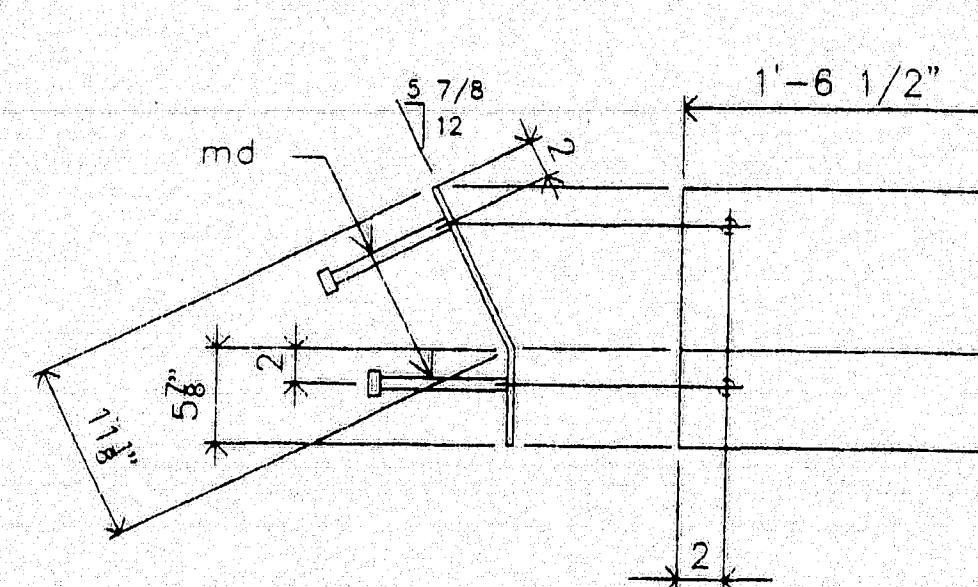
REED, & REED	JOB NO. 97-49	DWG. NO.
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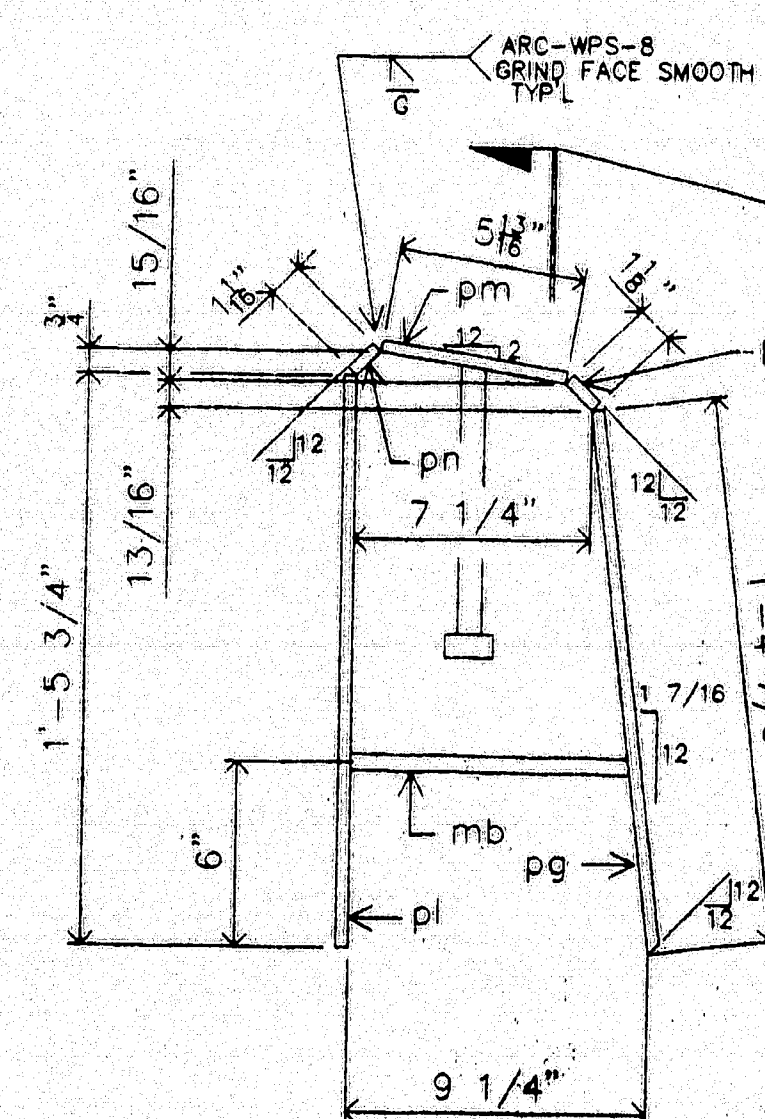
ONE-EXP. JOINT-A15 (AS SHOWN)
ONE-EXP. JOINT-B15 (OPP. HAND)



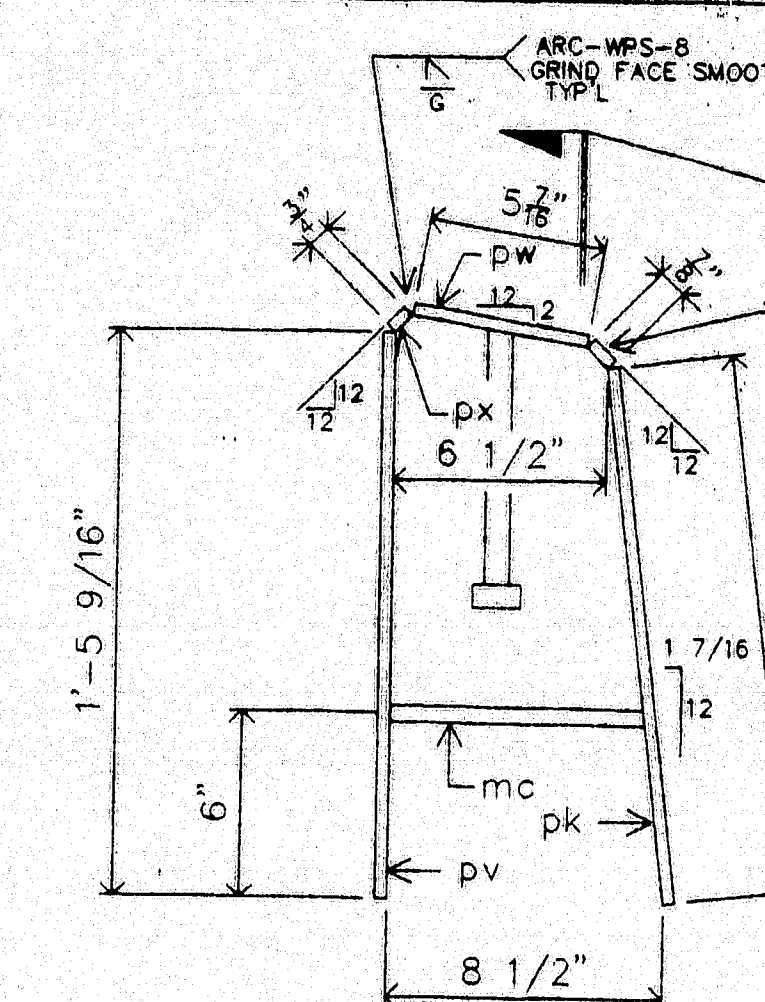
DETAIL @ OUTER BAR STOP



DETAIL @ pd

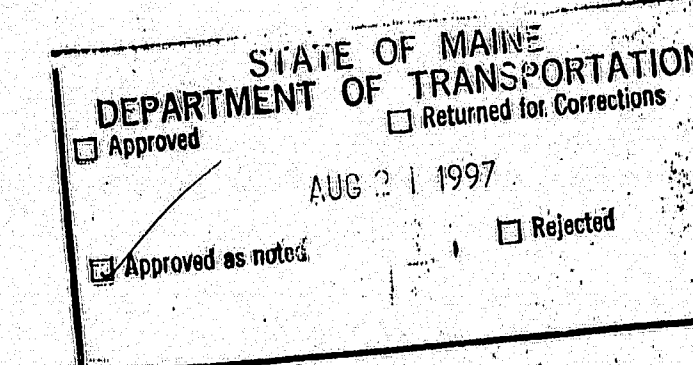
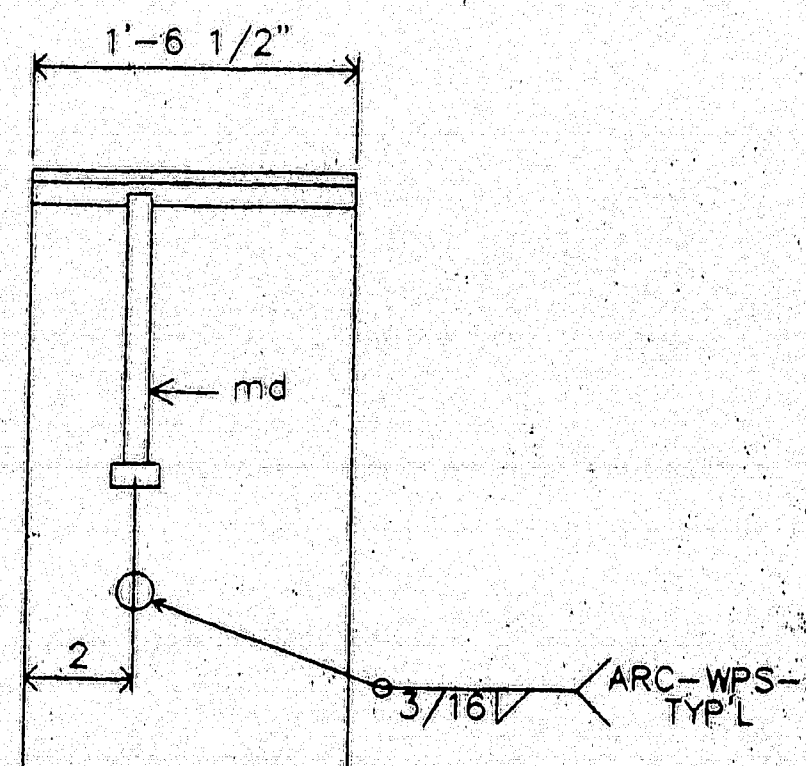
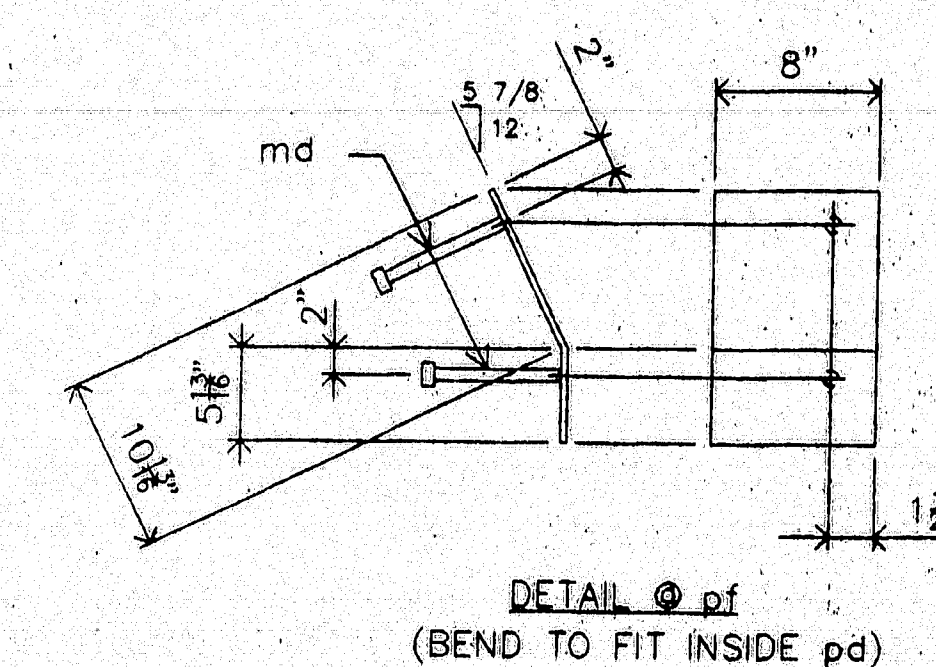


DETAIL @ OUTER BARRIER DAM



DETAIL @ INNER BARRIER DAM

SHOP NOTE:
OUTER BARRIER & OUTER BAR STOP
TO BE FABRICATED TO FIT OVER THE
INNER BARRIER UNIT.



X-tra Work
Preferred Option: Get Price For Galvanizing Assembly.

Select Paint System from Nopcoat List.

1. Inorganic Zinc Primer.
2. 2 Part Epoxy.
3. Weather Topcoat.

Typical Systems
Carboline
Wasser
Ketler & Long
Valpar

MATERIALS LIST

MK	QTY	DESCRIPTION
A15	1	EXPANSION DEVICE ASSEMBLY
B15	1	EXPANSION DEVICE ASSEMBLY
pa15	2	CHK'D PL 3/8 x 18 1/2 x 7'-2 3/4 BEND/SHP'D
pb15	2	PL 3/8 x 2 x 7'-2 3/4 BEND/SHP'D 1L-1R
pc15	2	PL 3/8 x 8 x 7'-2 1/2 BEND
pd15	2	PL 3/8 x 17 x 1'-6 1/2 BEND 1L-1R
pe15	2	PL 3/8 x 2 x 1'-5 BEND
pf15	2	PL 3/8 x 8 x 1'-4 5/8 BEND
pg15	2	PL 3/8 x 16 7/8 x 1'-6 1/2 B1E 1L-1R
ph15	2	PL 3/8 x 2 x 1'-4 7/8 B1E
pk15	2	PL 3/8 x 8 x 1'-4 3/4
pl15	2	PL 3/8 x 17 3/4 x 1'-6 1/2 1L-1R
pm15	2	PL 3/8 x 5 13/16 x 1'-6 1/2 1L-1R
pn15	2	PL 3/8 x 1 1/16 x 1'-6 1/2 1L-1R
pp15	2	PL 3/8 x 1 1/8 x 1'-6 1/2 1L-1R
pr15	2	FB 3/8 x 2 x 1'-5 3/4
ps15	2	FB 3/8 x 2 x 0'-5 13/16
pt15	2	FB 3/8 x 2 x 0'-1 1/16
pu15	2	PL 3/8 x 2 x 0'-1 1/8
pv15	2	PL 3/8 x 8 x 1'-5 9/16
pw15	2	PL 3/8 x 5 7/16 x 0'-8
px15	2	PL 3/8 x 3/4 x 0'-8
py15	2	PL 3/8 x 7/8 x 0'-8
ma15	16	#6 REBAR x 1'-6 BEND: A615,GR 60
mb15	2	#6 REBAR x 0'-8 1/2 A615,GR 60
mc15	2	#6 REBAR x 0'-7 3/4 A615,GR 60
md15	12	1/2 x 0'-8 CONC STUDS

PROJ. NO.: BH-043-1(34)
ITEM NO.: 520.21

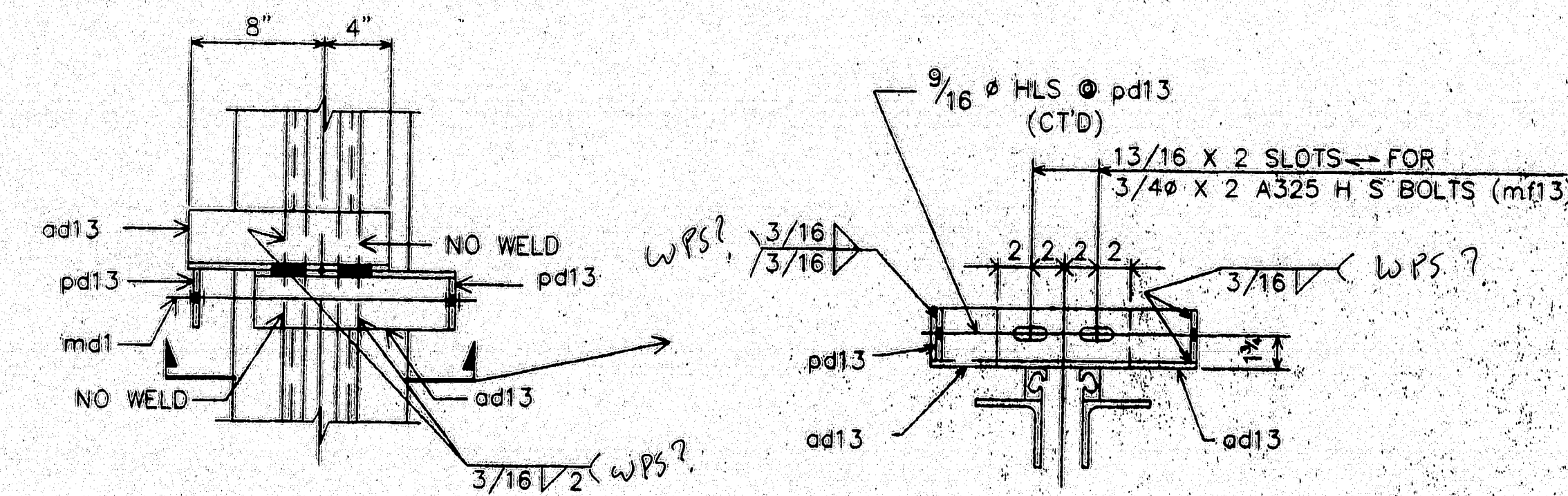
MATL: A36 UN
WELD: PER PROCEDURES NOTED
PREP: SP6
FINISH: 3 COATS ZINC RICH PRIMER
3 MOET PER COAT

120-356 FOR APPROVAL ONLY

A.R.C. ENTERPRISES
KINGFIELD, MAINE

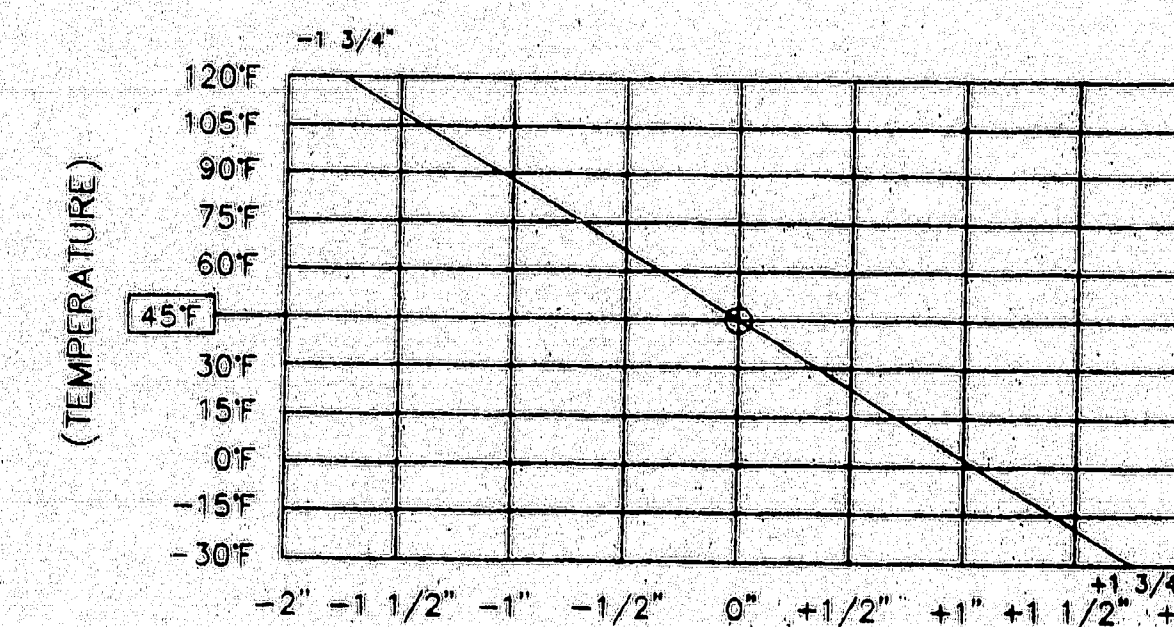
PROJECT: JOSHUA CHAMBERLAIN BRIDGE OVER THE
PENOBSCOT RIVER, BANGOR-BREWER, ME

SCALE: ~ APPROVED BY: DRAWN BY: BB
DATE: 7/97 CHKD BY:
SIDEWALK DAM DETAIL @ HINGE SPAN 7
REED & REED JOB NO. 97-49 DWG NO. 15



PLAN

TEMP. ADJUSTING & SHIPPING DEVICE



(AMOUNT OF ADJUSTMENT)

TEMPERATURE ADJUSTMENT CHART

FIELD NOTE:

ADJUST JOINT OPENING FOR TEMPERATURE AT TIME OF INSTALLATION.

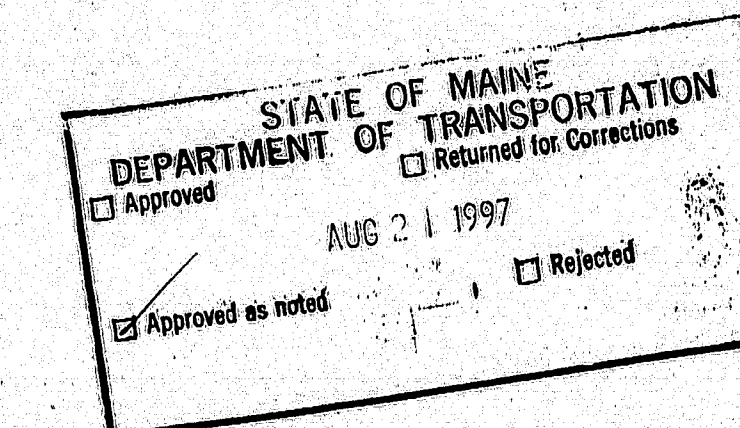
NOTES:

SHOP TO PLACE ADJUSTING & SHIPPING DEVICES ON EXP. JOINT AFTER PAINTING & SEAL INSTALLATION AT APPROX. 5'-0" O/C.

PRESET THE OPENING TO THE 45F SETTING SHOWN ON PLANS.

CONTRACTOR TO REFER TO DESIGN DWG'S & SPECS FOR INSTALLATION INSTRUCTIONS.

CONTRACTOR TO TOUCH-UP PAINT AFTER REMOVAL OF SHIPPING DEVICES.



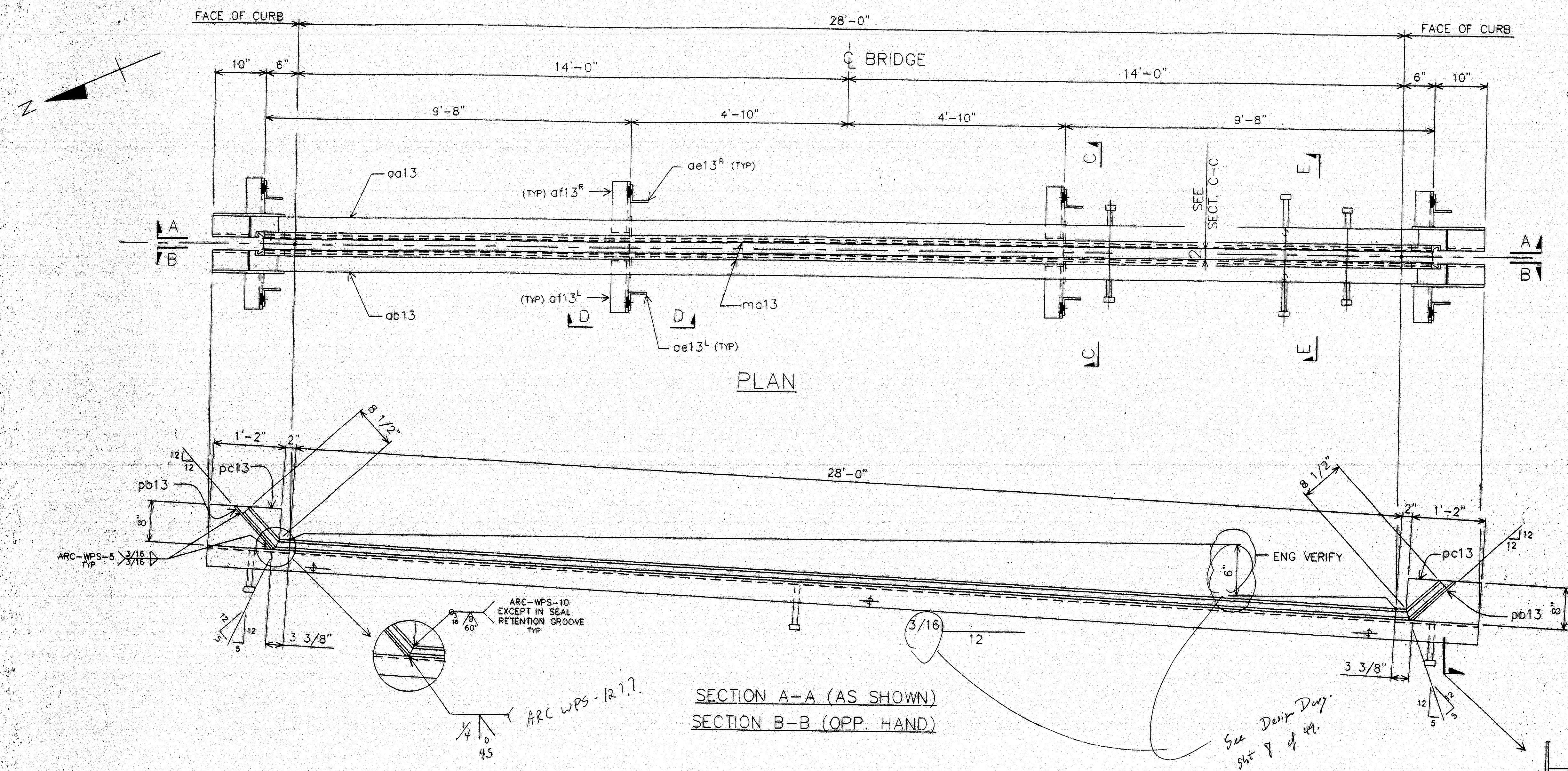
PROJ. NO. : BH-043-1(34)
ITEM NO. 520.21

MATL: A36 UN. HOLES: AS NOTED
WELD: PER PROCEDURES NOTED *Done*
PREP: SP6
FINISH: 3 COATS ZINC RICH PRIMER
3 MDFT PER COAT

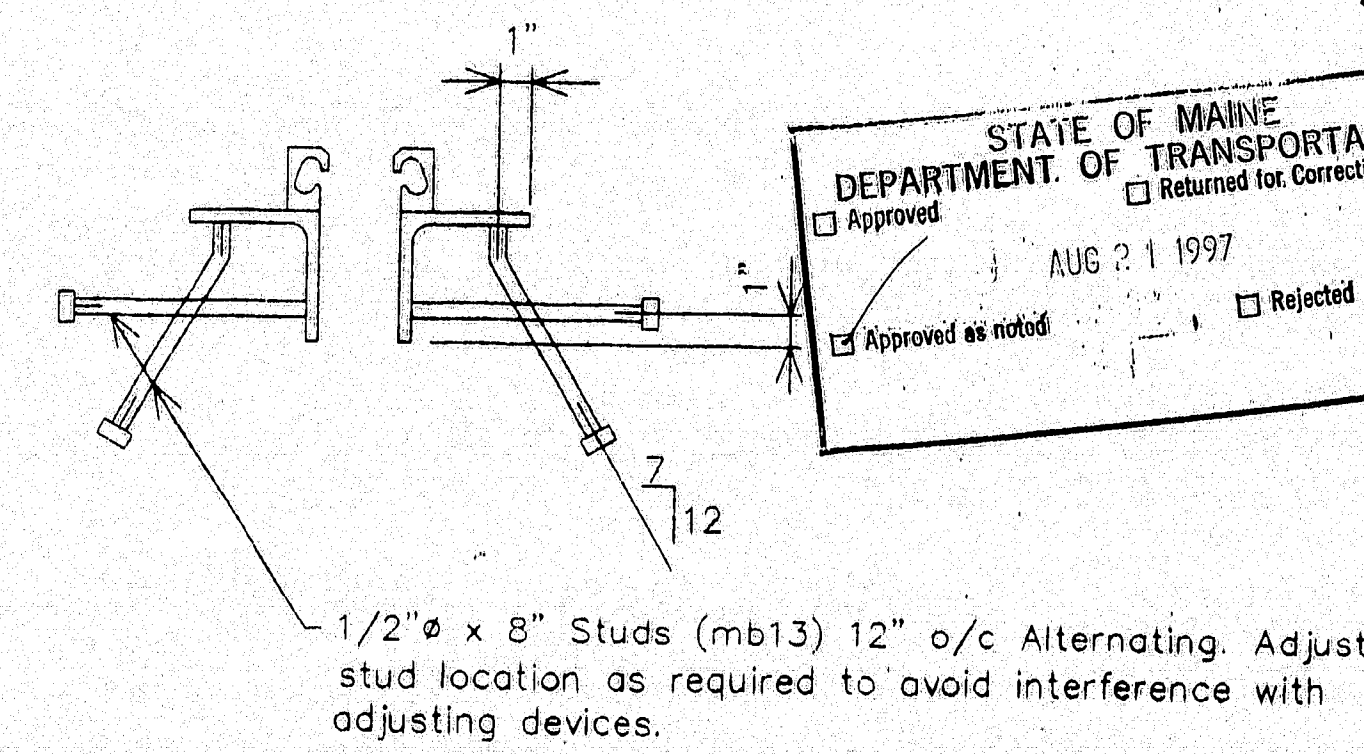
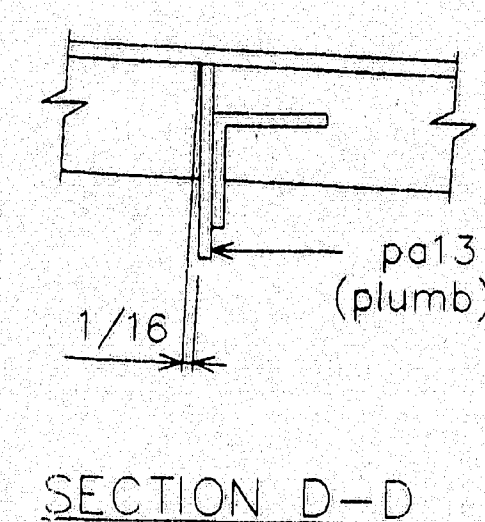
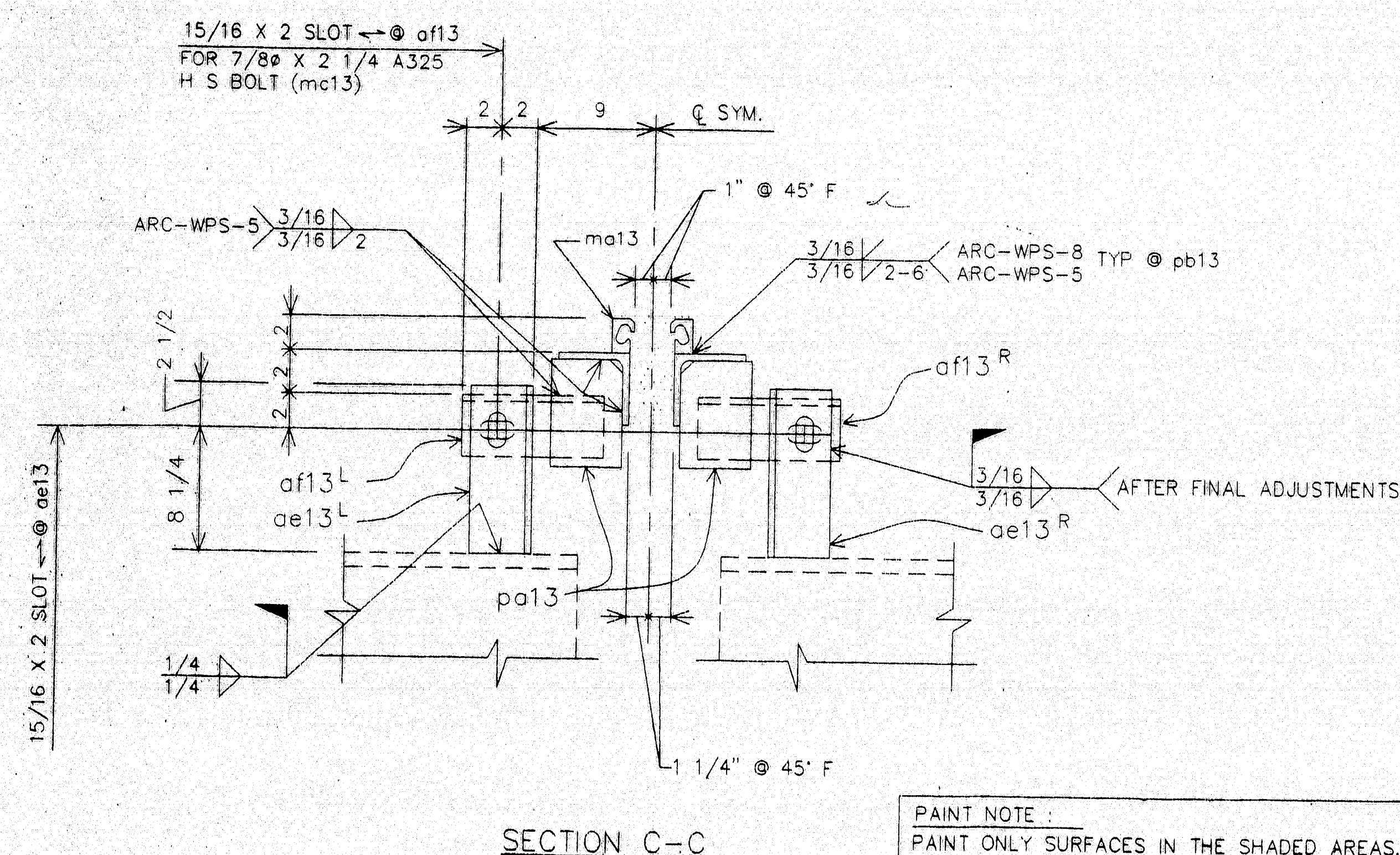
2 coats OK
120-357
FOR APPROVAL ONLY

A.R.C. ENTERPRISES KINGFIELD, MAINE	
PROJECT: JOSHUA CHAMBERLAIN BRIDGE OVER THE PENOBSCOT RIVER, BANGOR-BREWER, ME	
SCALE: ~	APPROVED BY: <i>BB</i>
DATE: 6/97	CHECKED BY: <i>BB</i>
EXPANSION JOINT DETAIL @ HINGE SPAN 7	
REED & REED	JOB NO. 97-49 DWG. NO. 14

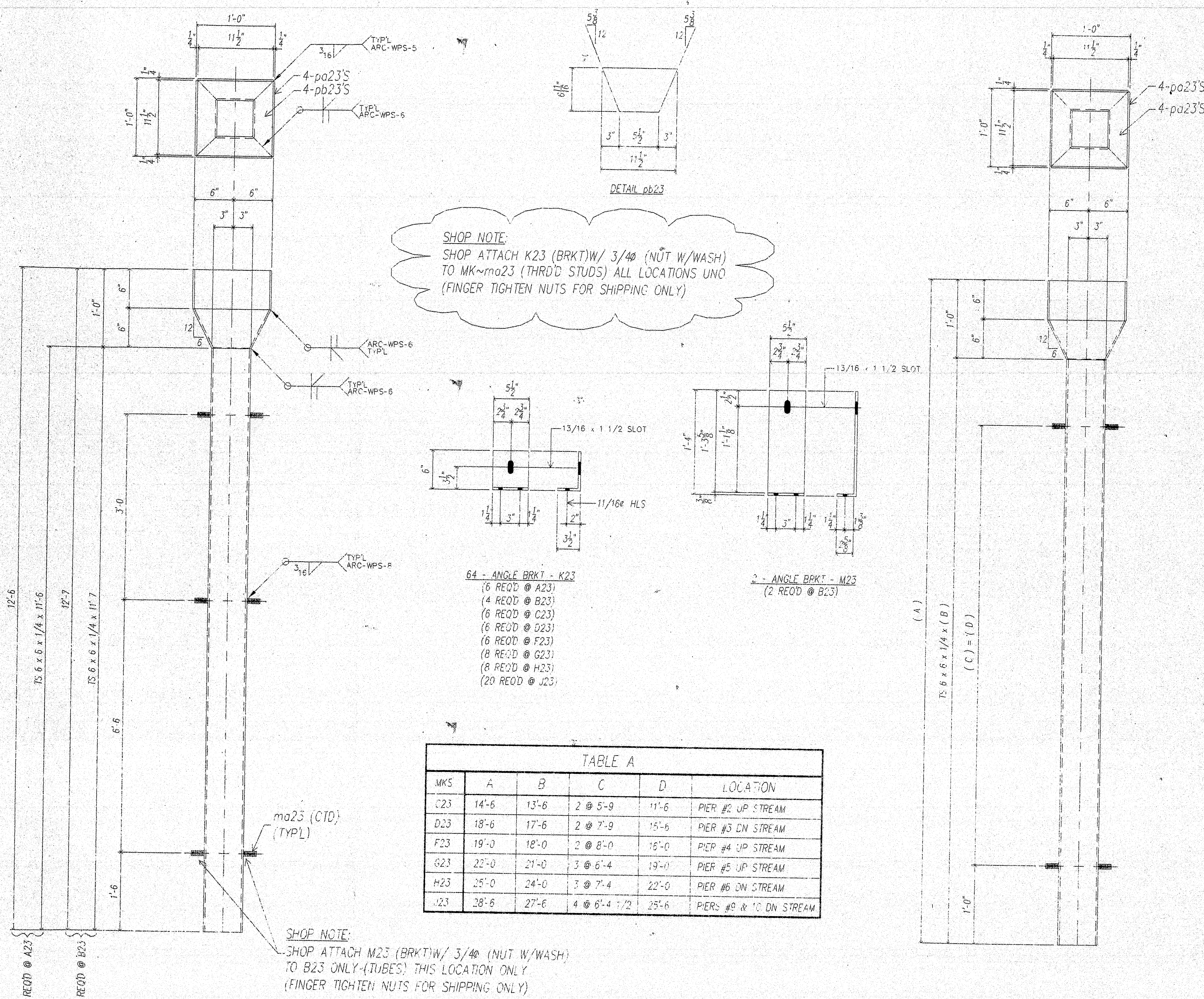
WORK THIS DWG. W/ DWG. 13



MATERIALS LIST	
MK QTY	DESCRIPTION
A13 2	EXPANSION DEVICE ASSEMBLY
aa13 4	L 4 x 4 x 3/8 x 30'-8
ab13 4	L 4 x 4 x 3/8 x 30'-8
ae13 12	L 3 1/2 x 3 1/2 x 3/8 x 1'-0
ae13 8	L 3 1/2 x 3 1/2 x 3/8 x 0'-10 3/4 4L-4R
af13 8	L 3 1/2 x 3 1/2 x 3/8 x 0'-11 4L-4R
ma13 8	PL 3/8 x 4 x 0'-6
pb13 4	FB 4 x 1/4 x 0'-11
pc13 4	PL 1/4 x 8 x 1'-2
pd13 12	PL 3/8 x 3 1/2 x 0'-3 1/2
mf13 12	3/4 x 0'-2 H S BOLTS w/N&2W A325
mb13 68	1/2 x 0'-6 CONC STUDS
mc13 8	7/8 x 0'-2 1/4 H S BOLTS w/N&2W A325
md13 6	THREADED ROD 1/2 x 11'-8 w/ 4-NUTS/EA
mf13 12	3/4 x 0'-2 H S BOLTS w/N&2W A325
ship 1	Watson Bowman Acme SE400 Gland Seal x 32'-0 with Adhesive
PROJ. NO. BH-043-1(34)	
ITEM NO. 520.21	



WORK THIS DWG W/ DWG 14



SHOP NOTE:
SHOP ATTACH K23 (BRKT) W/ 3/4" (NUT W/WASH)
TO MK~ma23 (THRD STUDS) ALL LOCATIONS UNO
(FINGER TIGHTEN NUTS FOR SHIPPING ONLY)

- 64 - ANGLE BRKT - K23
- (6 REQD @ A23)
- (4 REQD @ B23)
- (6 REQD @ C23)
- (6 REQD @ D23)
- (6 REQD @ F23)
- (6 REQD @ G23)
- (6 REQD @ H23)
- (20 REQD @ J23)

MKS	A	B	C	D	LOCATION
C23	14'-6"	13'-6"	2 @ 5'-9"	11'-6"	PIER #2 UP STREAM
D23	18'-6"	17'-6"	2 @ 7'-9"	15'-6"	PIER #3 DN STREAM
F23	19'-0"	18'-0"	2 @ 8'-0"	16'-0"	PIER #4 UP STREAM
G23	22'-0"	21'-0"	3 @ 6'-4"	19'-0"	PIER #5 UP STREAM
H23	25'-0"	24'-0"	3 @ 7'-4"	22'-0"	PIER #6 DN STREAM
J23	28'-6"	27'-6"	4 @ 6'-4 1/2"	25'-6"	PIERS #9 & 10 DN STREAM

SHOP NOTE:
SHOP ATTACH M23 (BRKT) W/ 3/4" (NUT W/WASH)
TO B23 ONLY (TUBES) THIS LOCATION ONLY
(FINGER TIGHTEN NUTS FOR SHIPPING ONLY)

ONE - DOWN SPOUT - A23 (AS NOTED) - PIER #1 UP STREAM
ONE - DOWN SPOUT - B23 (AS NOTED) - PIER #1 DN STREAM

MATERIALS LIST

MK	QTY	DESCRIPTION
A23	ONE	TS 6 x 6 x 1/4 x 11'-6"
B23	ONE	TS 6 x 6 x 1/4 x 11'-7"
C23	ONE	TS 6 x 6 x 1/4 x 13'-6"
D23	ONE	TS 6 x 6 x 1/4 x 17'-6"
F23	ONE	TS 6 x 6 x 1/4 x 18'-0"
G23	ONE	TS 6 x 6 x 1/4 x 21'-0"
H23	ONE	TS 6 x 6 x 1/4 x 24'-0"
J23	2	TS 6 x 6 x 1/4 x 27'-6"

pa23	36	FB 1/4 x 6 x 0'-11 1/2"
pb23	36	FB 1/4 x 6 11/16 x 0'-11 1/2" SHPD
ma23	66	3/4" ROD x 0'-2 THRD

K23	64	L 6 x 3 1/2 x 3/8 x 0'-5 1/2"
M23	2	PL 3/8 x 5 1/2 x 1'-6 1/4 BENT

SHOP	66	3/4" NUTS W/ WASH - GALV
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RELEASED FOR FABRICATION

PLANT MANAGER
DEC 10 1997
O.C. MANAGER

MATL: ASTM A709/A709M GR250 HOLES AS NOTED
WELD: AS NOTED
PREP: SSPC - SP6
PAINT: GALV. PER ASTM A123

120-359

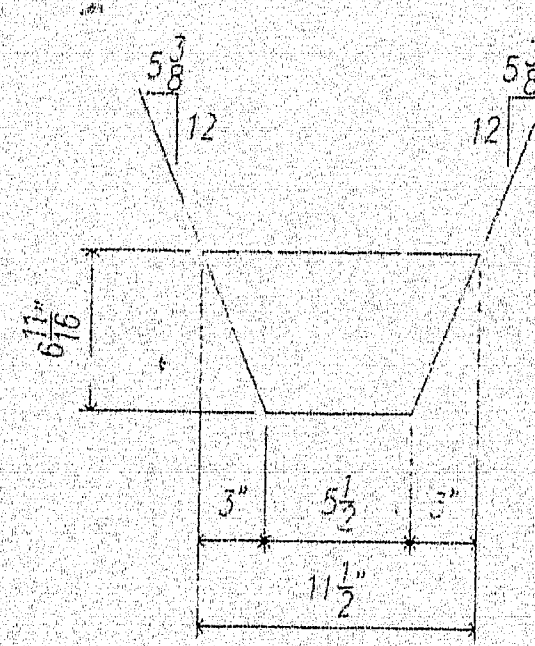
PROJECT NO. BH-043-1(34)
ITEM NO. 520.21

ARC ENTERPRISES, INC
KINGFIELD, MAINE

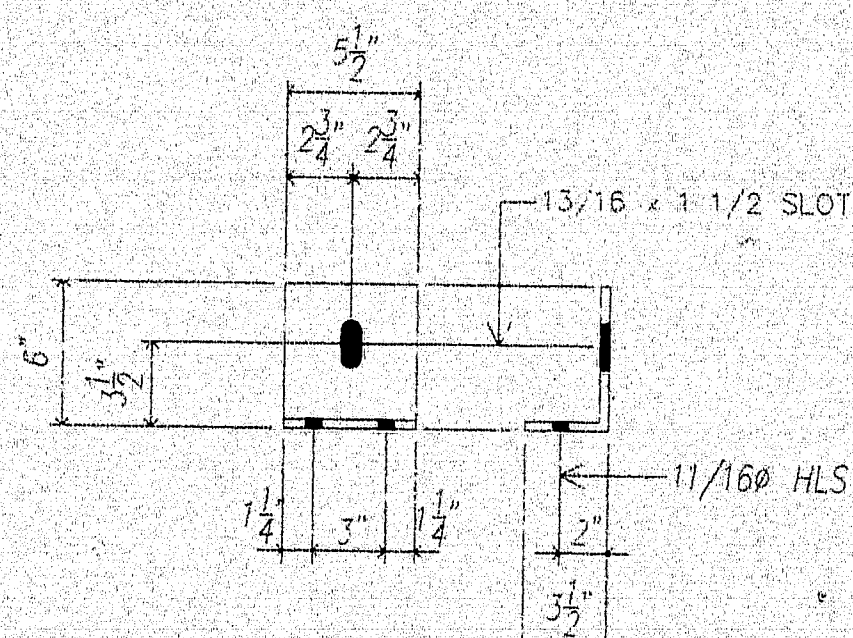
PROJECT:		JOSHUA CHAMBERLAIN BRIDGE PENOBSCOT RIVER - BANGOR/BREWER	
SCALE: ~	APPROVED BY:	DRAWN BY: RMD	
DATE: 12/97		CHKD. BY: GMS	
DRAIN ASSEMBLY DETAILS			
REED & REED / W/O 97-49		DWG. NO.	23

F.B. THIS DWG
132 - 5/8" EXPANSION ANCHORS W/Y&W - GALV

SEE TABLE A FOR DIMS NOT SHOWN



DETAIL pb23



12 - ANGLE BRKT - C24
(6 REQ'D @ A24)
(6 REQ'D @ B24)

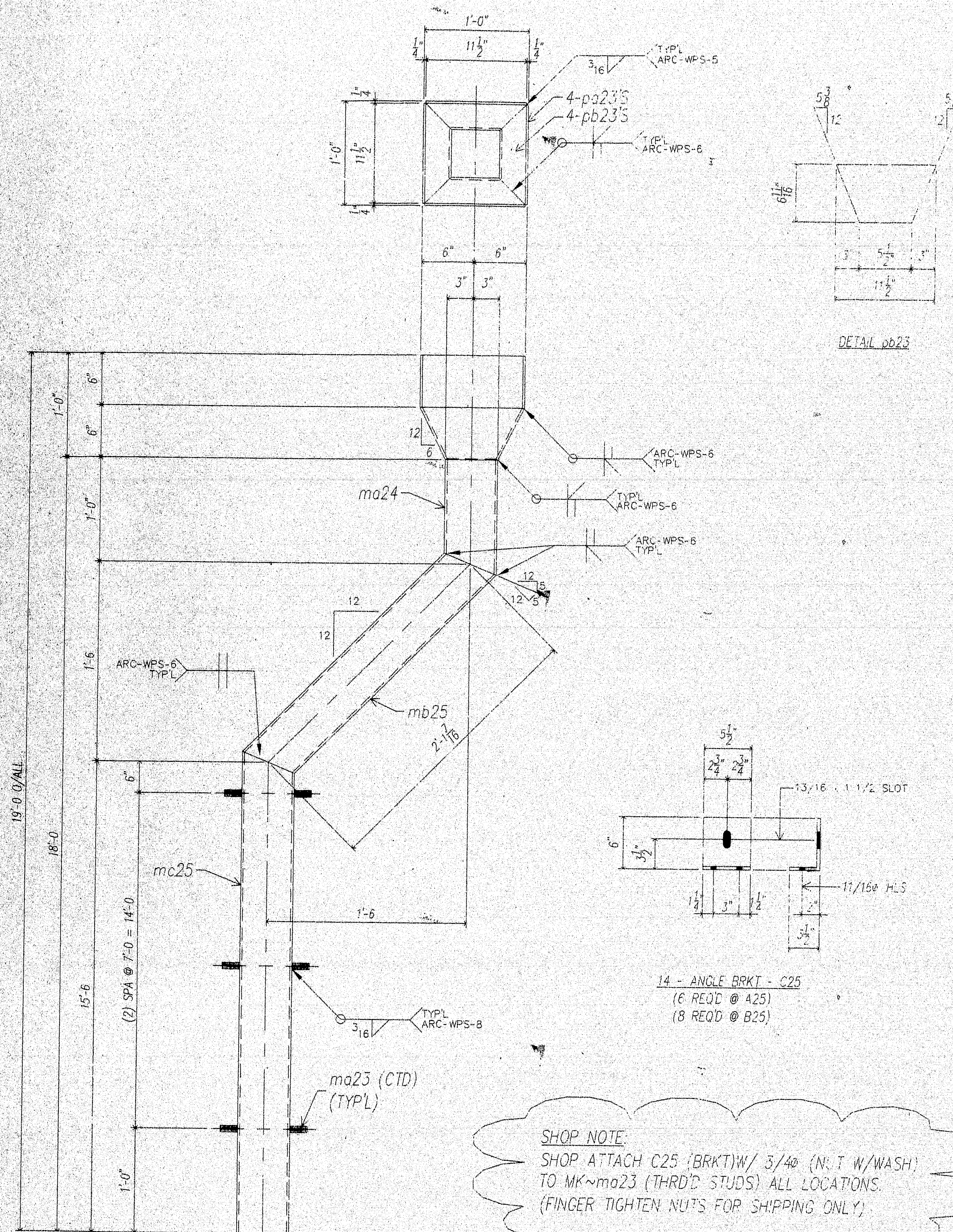
SHOP NOTE:
SHOP ATTACH C24 (BRKT)W/ 3/40 (NUT W/WASH)
TO MK~ma23 (THRD STUDS) ALL LOCATIONS
(FINGER TIGHTEN NUTS FOR SHIPPING ONLY)

ONE - ANGLE BRKT - B24
(LOC. PIER #4 DN STREAM)

F.B. THIS DWG

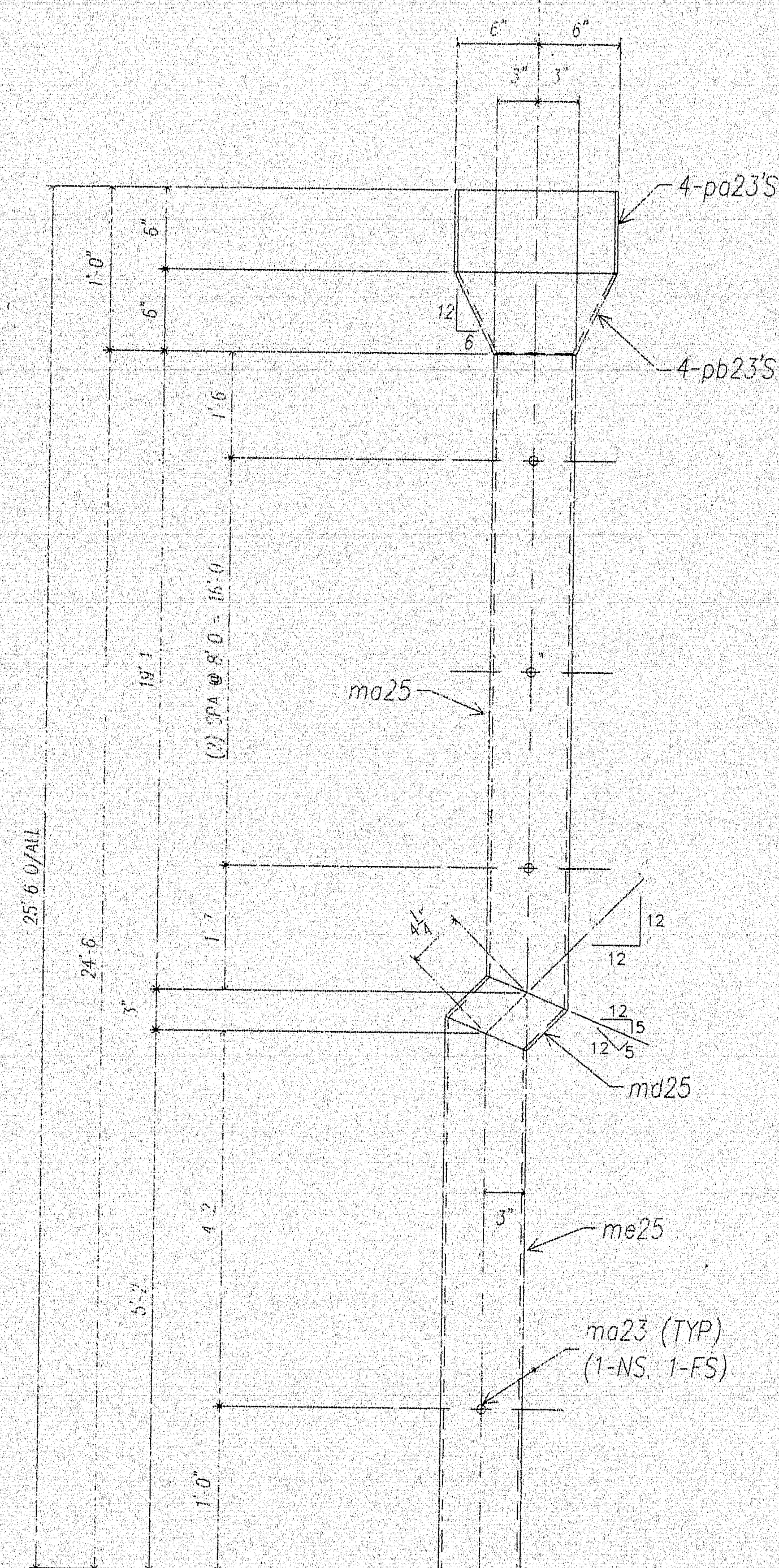
24 - 5/8" EXPANSION ANCHORS W/N&W

DWG. NO. 24



ONE - ANGLE BRKT - A25
(LOC. PIER #5 ON STREAM)

SHOP NOTE:
SHOP ATTACH C25 (BRKT) W/ 3/4" (NUT W/WASH)
TO MK~ma23 (THRD STUDS) ALL LOCATIONS.
(FINGER TIGHTEN NUTS FOR SHIPPING ONLY.)



ONE - ANGLE BRKT - B25
(LOC. PIER #7 ON STREAM)

F.B. THIS DWG
28 - 5/8" EXPANSION ANCHORS W/N&W

MATERIALS LIST

MARK	QTY	DESCRIPTION
A25	ONE	DOWN SPOUT
ma24	1	TS 6 x 6 x 1/4 x 1'-1 1/4 BCIE
ma25	1	TS 6 x 6 x 1/4 x 2'-3 15/16 BCIE
mc25	1	TS 6 x 6 x 1/4 x 15'-7 1/4 BCIE
pa23	4	FB 1/4 x 6 x 0'-11 1/2
pb23	4	FB 1/4 x 6 11/16 x 0'-11 1/2 SHPD
ma23	6	3/4" ROD x 0'-2 THRDD

B25 ONE DOWN SPOUT

ma25 1 TS 6 x 6 x 1/4 x 19'-2 1/4 BCIE

ma25 1 TS 6 x 6 x 1/4 x 0'-6 3/4 BCIE

ma25 1 TS 6 x 6 x 1/4 x 5'-3 1/4 BCIE

pa23 4 FB 1/4 x 6 x 0'-11 1/2

pb23 4 FB 1/4 x 6 11/16 x 0'-11 1/2 SHPD

ma23 6 3/4" ROD x 0'-2 THRDD

C25 14 L 6 x 3 1/2 x 3/8 x 0'-5 1/2

SHOP 14 3/4" NUTS W/ WASH

RELEASED FOR FABRICATION

PLANT MANAGER
DEC 10 1997
Q.C. MANAGER

MATL: ASTM A709/A709M, GR250 HOLES: AS NOTED
WELD: AS NOTED
PREP: SSPC - SP6
PAINT: GALV. PER ASTM A123

PROJECT NO. BH-043-1(34)
ITEM NO. 520.21

120-36

ARC ENTERPRISES, INC
KINGFIELD, MAINE

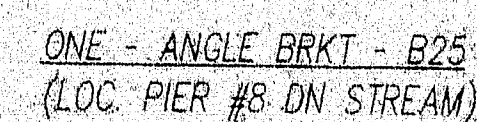
PROJECT: JOSHUA CHAMBERLAIN BRIDGE
PENOBSCOT RIVER - BANGOR, BREWER

SCALE: ~ APPROVED BY: DRAWN BY: RND
DATE: 12/97 RECHK. BY: CND

DRAIN ASSEMBLY DETAILS

REED & REED / W/O-97-49

DWG. NO. 25



SHOP NOTE:
SHOP ATTACH B26 (BRKT)W/ 3/40 (NUT W/WASH)
TO MK~ma23 (THRD STUDS) ALL LOCATIONS UNO.
(FINGER TIGHTEN NUTS FOR SHIPPING ONLY)

F.B. THIS DWG

16 - 5/8" EXPANSION ANCHORS W/N&W

REED & REED / W/O 97-49