

S. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	# 2253	1	45

STATE OF MAINE

STATE HIGHWAY COMMISSION



MACHIAS RIVER

BRIDGE

BETWEEN THE TOWNS OF

MACHIASPORT & EAST MACHIAS

WASHINGTON COUNTY

PROJECT NO. 2253 (OEP NO. 284 DR A-244 )

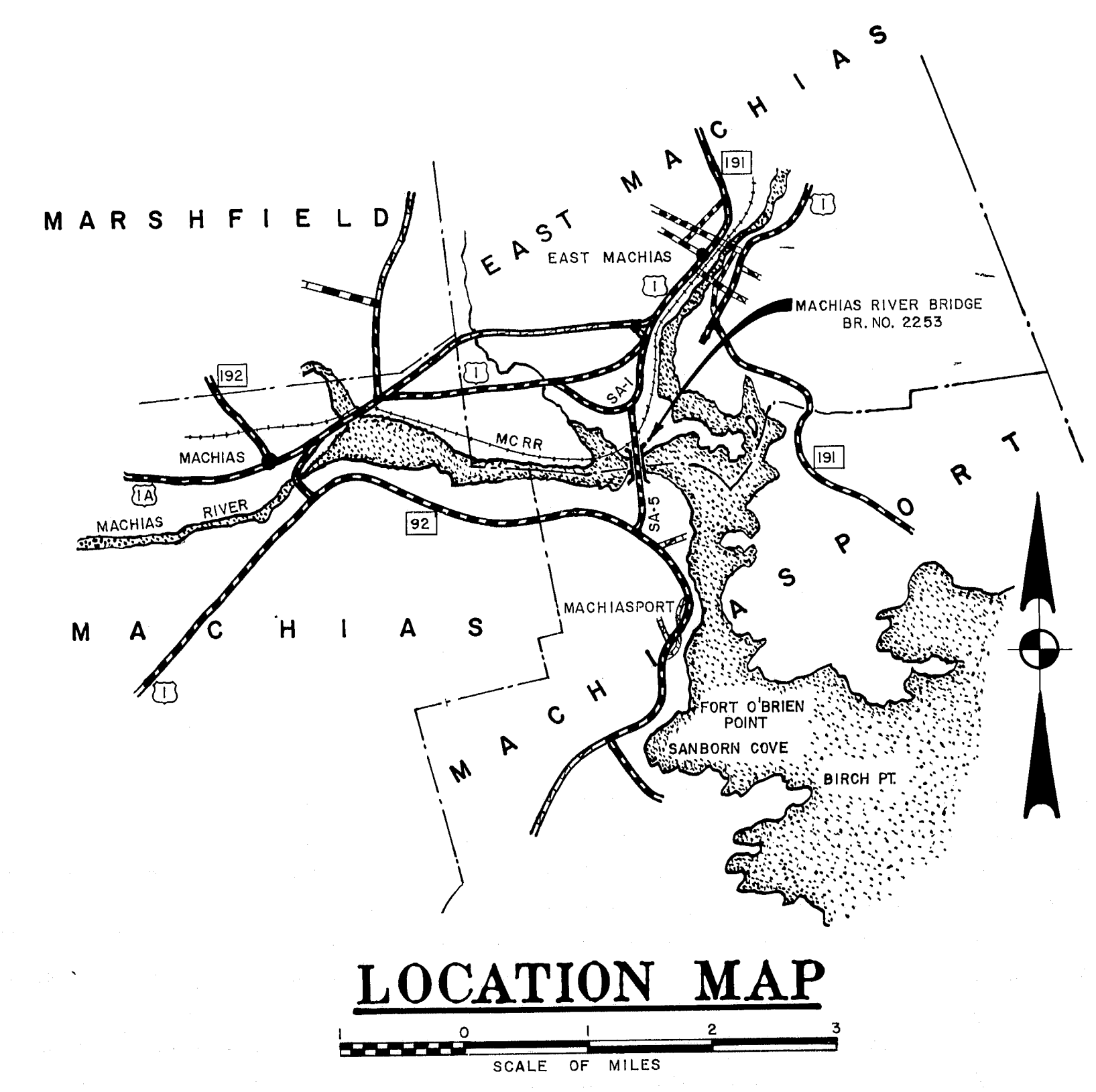
LENGTH OF PROJECT 0.360 MILE

CONVENTIONAL SIGNS

COUNTY LINES	-----	TRAVELLED WAY - PROPOSED	=====
TOWN LINES	-----	UNDERGROUND UTILITIES - EXISTING	-----
PROPERTY LINES	-----	UNDERGROUND UTILITIES - PROPOSED	-----
R/W LINES - EXISTING	=====	RAILROAD - SINGLE TRACK	=====
R/W LINES - NEW - ACCESS CONTROL	=====	RAILROAD - DOUBLE TRACK	=====
R/W LINES - NEW - NO ACCESS CONTROL	=====	UTILITY POLE - EXISTING	♦
CULVERT - EXISTING	=====	UTILITY POLE - JOINT OCCUPANCY	♦ J
CULVERT - PROPOSED	=====	PROPOSED UTILITY POLE - TEMPORARY	X
CURBING - EXISTING	=====	PROPOSED UTILITY POLE - PERMANENT	+
CURBING - PROPOSED	=====	TREES	⊗ hardwood ⊙ softwood
TRAVELLED WAY - EXISTING	=====	WOODS	=====

INDEX OF SHEETS

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BRIDGE STANDARDS	
BD 100-70	BEARING PEDESTALS
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HIGHWAY STANDARDS	
④ AUG. 1969	CULVERT INLETS & OUTLETS
⑥ AUG. 1969	GUARD RAILS, ANCHOR ASSEMBLIES
⑪ AUG. 1969	BARRICADES & WARNING SIGNS
⑫ AUG. 1969	DRIVEWAYS & FIELD OFFICES



TRAFFIC DATA

A.D.T.	1970 - 435
A.D.T.	1990 - 540
D.H.V.	70
T. (%)	8.0
D. (%)	60
V.	30 mph
P.S.D. (%)	Not Applicable
18 KIPS	10

APPROVED	DATE
MAINE STATE HIGHWAY COMMISSION	
<i>David H. Stevens</i>	9-70
CHAIRMAN	
<i>Robert L. Lech</i>	9-70
<i>James D. Shaw</i>	9-70
<i>Stephen L. Foor</i>	9-70
CHIEF ENGINEER	

DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

BUREAU OF PUBLIC ROADS

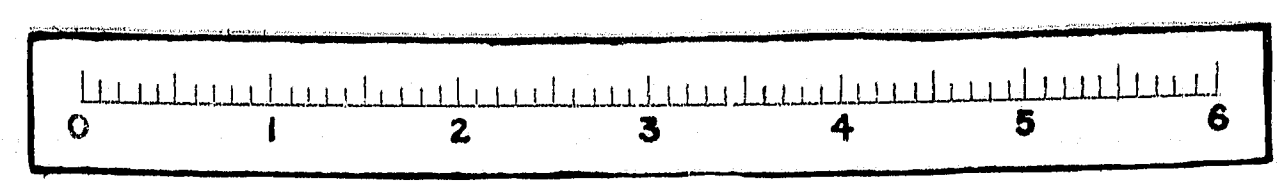
REGION 1

APPROVED

DIVISION ENGINEER

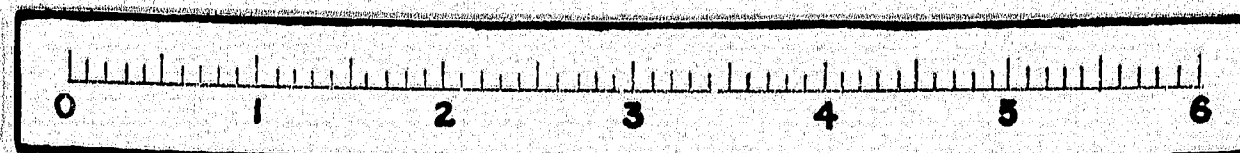
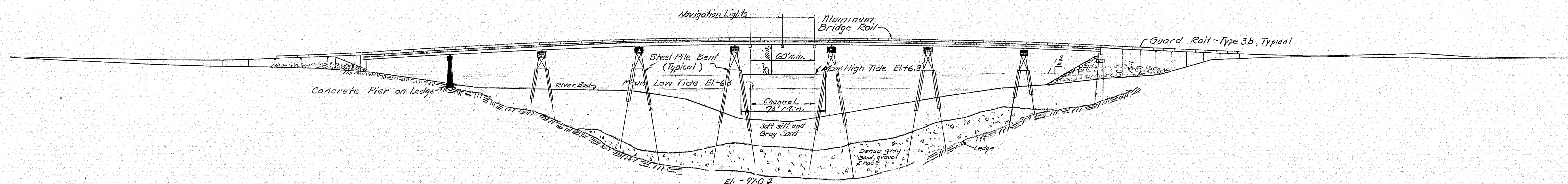
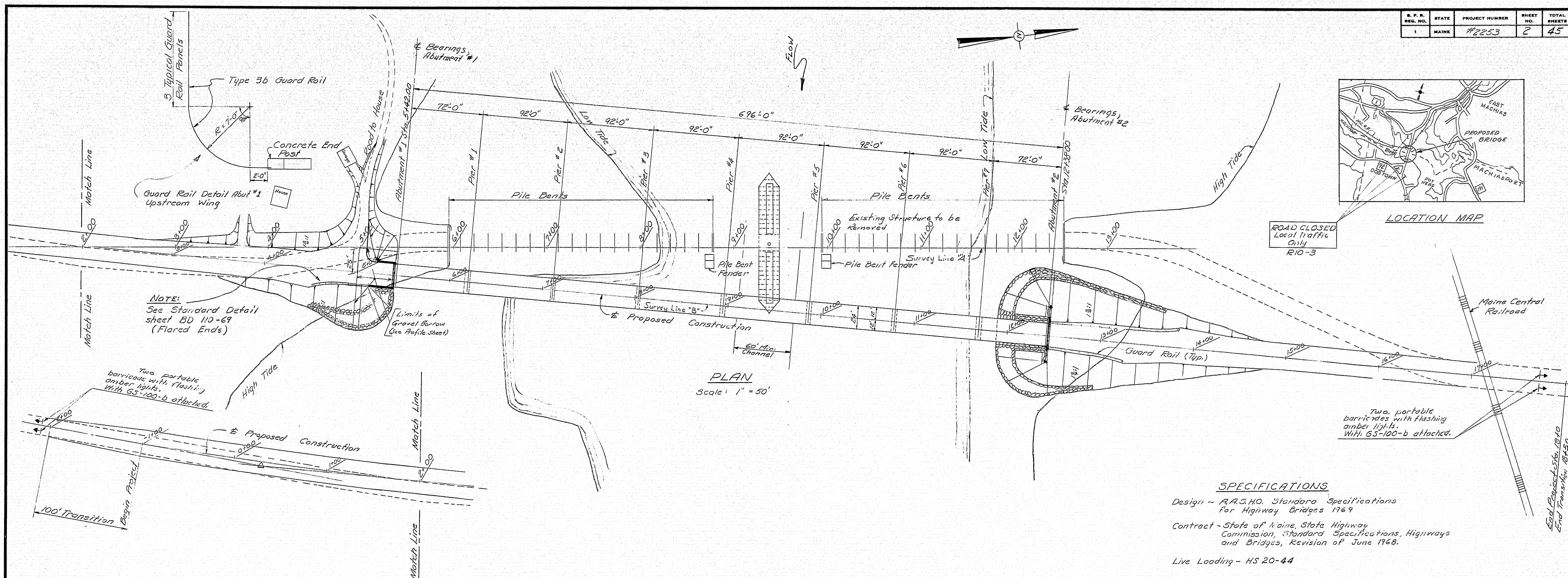
DATE

122-116





S. P. N. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	#2253	2	45



STATE HIGHWAY COMMISSION  
**MACHIAS RIVER BRIDGE**  
 BETWEEN THE TOWNS OF  
**MACHIASPORT & EAST MACHIAS**  
 WASHINGTON COUNTY  
 GENERAL PLAN & SIGNING  
 SHEET 2 OF 45 AUGUSTA, MAINE JUNE 1970

12.2-11718

PLANS	DESIGN - DETAILED	CHECKED	REVISIONS	FIELD CHANGES
DATE	6-3-70	6-3-70		
BY	ALL	GOT		
	W.F.R.			



ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
201.13	Removing Single Trees, 9" to 24", Tops only.	2	Each
201.19	Removing Stumps, 9" to 24"	2	Each
202.19	Removal of Existing Bridge	L.S.	L.S.
203.20	Common Excavation	4100	Cu.Yd.
203.21	Rock Excavation	600	Cu.Yd.
203.24	Common Borrow	100	Cu.Yd.
203.26	Gravel Borrow	3,350	Cu.Yd.
205.04	Overhaul (In Place Measure)	3500	Yd. Mi.
205.05	Overhaul (Pit Measure)	10,000	Yd. Mi.
206.06	Str. Earth Excav. - Drainage & Minor Strs.	20	Cu.Yd.
206.08	Str. Earth Excav. - Abuts. & Ret. Walls	10	Cu.Yd.
206.09	Str. Rock Excav. - Abuts. & Ret. Walls	10	Cu.Yd.
206.10	Str. Earth Excav. - Piers.	50	Cu.Yd.
206.11	Str. Rock Excav. - Piers.	10	Cu.Yd.
304.10	Aggregate Subbase Course - Gravel	2,600	Cu.Yd.
403.08	Hot Bit. Pavement, Grading C	34	Ton.
410.13	Tar, Applied	1,950	Gal.
410.16	Cover Coat Material, Sand	20	Cu.Yd.
410.19	Blotter Material	20	Cu.Yd.
411.09	Untreated Aggregate Surface Course	230	Cu.Yd.
501.211	Steel H-beam Piles 42 lbs/ft.	240	L.F.
501.212	Steel H-beam Piles 89 lbs/ft.	5100	L.F.
502.21	Structural Concrete, Abuts. & Retaining Walls	170	Cu.Yd.
502.23	Structural Concrete, Piers.	430	Cu.Yd.
502.26	Structural Concrete, Roadway & Sidewalk Slabs on Steel Bridges.	L.S.	L.S.
502.35	Structural Concrete - Pile Castings	2,390	L.F.
503.12	Reinforcing Steel, Fab. & Delivered	177,200	Lb.
503.13	Reinforcing Steel, Placing	177,200	Lb.
504.70	Structural Steel, Fab. & Delivered	L.S.	L.S.
504.71	Structural Steel, Erection	L.S.	L.S.
505.08	Shear Connectors	L.S.	L.S.
506.14	Field Painting, Structural Steel	L.S.	L.S.
507.08	Bridge Railing	1,420	L.F.
511.071	Cofferdams - Abutment #1	L.S.	L.S.
511.072	Cofferdams - Pier #1	L.S.	L.S.
512.06	French Drains	40	Cu.Yd.
514.06	Curing Box for Concrete Cylinders	1	Each
515.20	Protective Coating for Concrete Surfaces	950	Sq.Yd.
515.21	Coal Tar Epoxy Seal Coat	1860	Sq.Yd.
520.08	Elastomeric Expansion Device (Type II)	50	L.F.
603.161	15 inch Corrugated Metal Pipe	72	L.F.
603.171	18 inch Corrugated Metal Pipe	50	L.F.
603.172	18 inch Btl. Coated Corr. Metal Pipe	90	L.F.
606.17	Guard Rail Type 3b - Single Rail	306	L.F.
606.21	Guard Rail Type 3b - Circular - 15 foot radius and less	11	L.F.
606.22	Guard Rail Type 3b - Circular - Greater than 15 foot radius	38	L.F.
606.26	Terminal Ends - Single Rail	4	Each
610.09	Hand Laid Riprap	800	Cu.Yd.
615.07	Loam	430	Cu.Yd.
616.08	Sodding	50	Sq.Yd.
618.14	Seeding, Method Number 2	45	Unit
618.15	Temporary Seeding	50	Pound
619.08	Hay Mulch.	3	Ton
623.06	Right-of-Way Monuments	12	Each
633.10	Portable Barricade with Flashing Lights	4	Each
634.18	Steel Conduit	30	L.F.
634.19	Non-Metallic Conduit	100	L.F.
637.07	Sprinkling	75	M.G.
637.08	Calcium Chloride	10	Ton.

ESTIMATED QUANTITIES

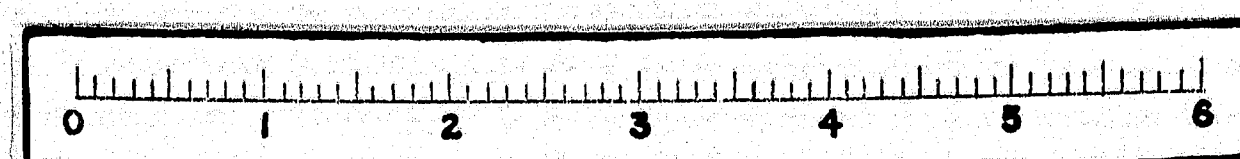
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
639.11	Bridge Navigation Lighting	L.S.	L.S.
639.08	Field Office, Type A	1	Each
637.20	Seed and Application, Method A	1	Acre

ESTIMATED QUANTITIES FOR LUMP SUM ITEMS.  
502.26 - Structural Concrete, Roadway & Sidewalk Slab on Steel Bridges - 625 Cubic Yards.  
504.70 - Structural Steel, Fab. & Delivered - 823,000 Pounds.  
504.71 - Structural Steel, Erection - 529,000 Pounds.  
505.08 - Shear Connectors - 4828 Pieces.  
506.14 - Field Painting - 510,000 Pounds.  
Field Painting Includes piles and bracing to be painted at piers.

STATE HIGHWAY COMMISSION  
MACHIAS RIVER BRIDGE  
BETWEEN THE TOWNS OF  
MACHIASPORT &  
EAST MACHIAS  
WASHINGTON COUNTY

QUANTITIES  
SHEET 3 OF 45 AUGUSTA, MAINE SEPT. 1970

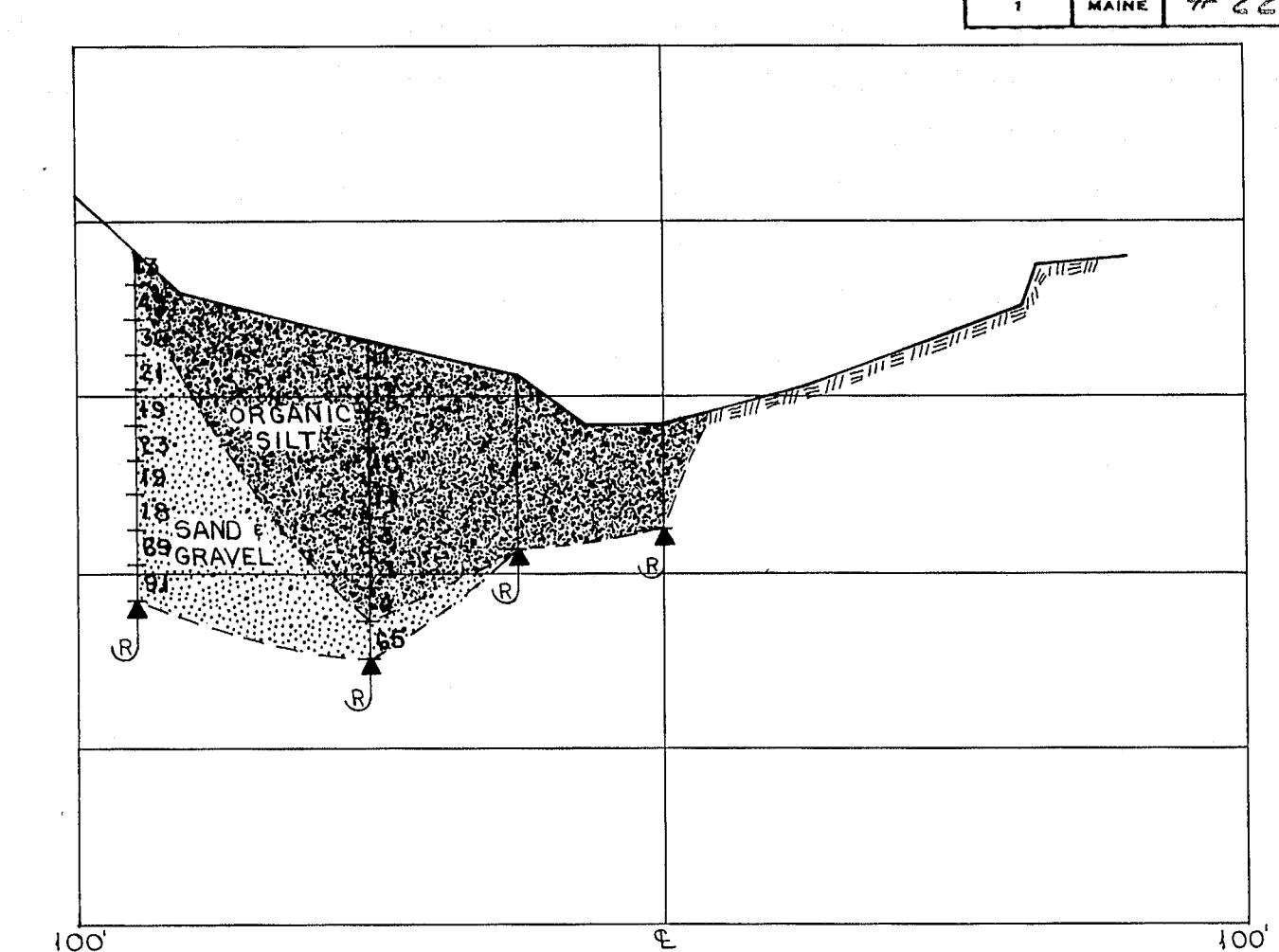
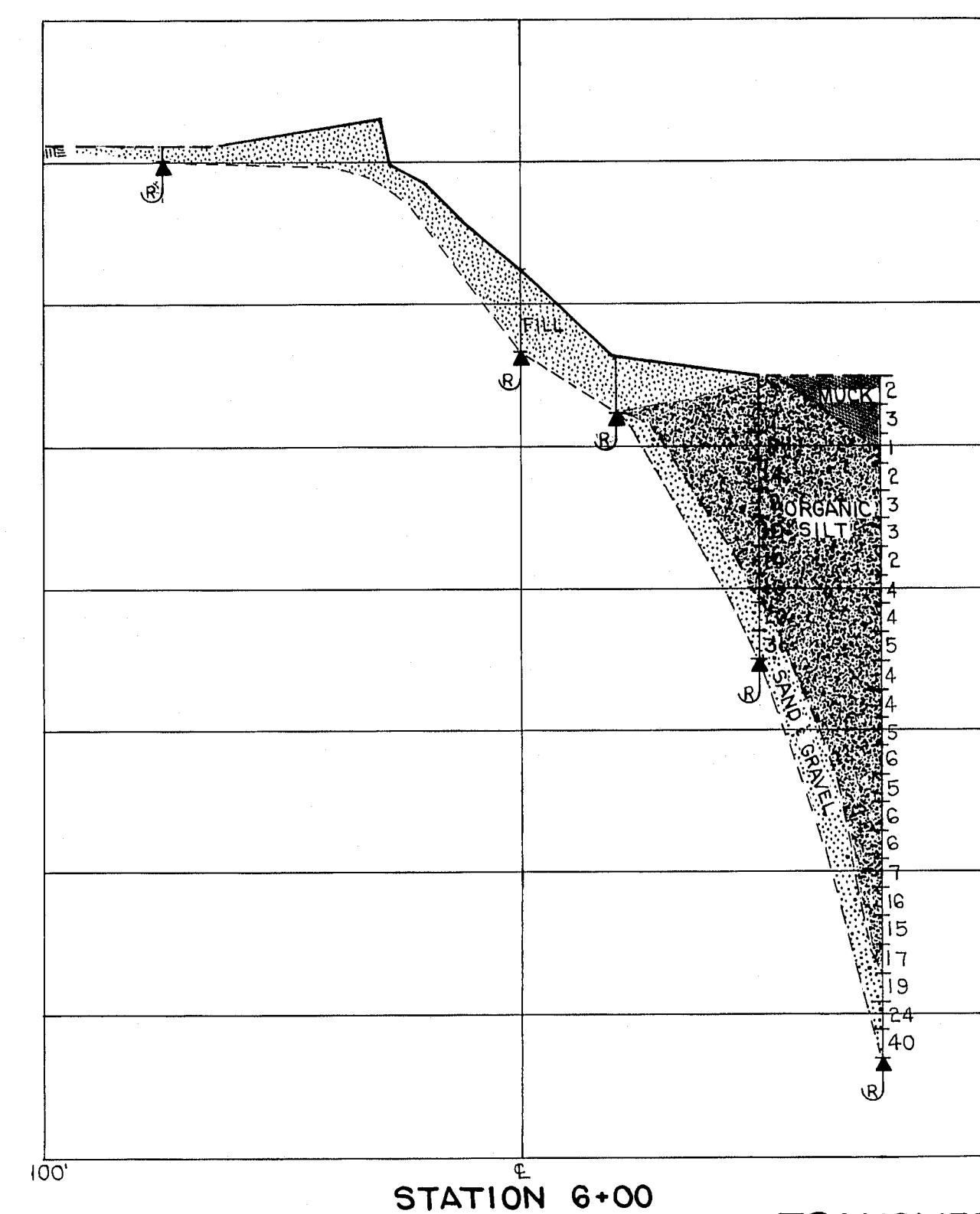
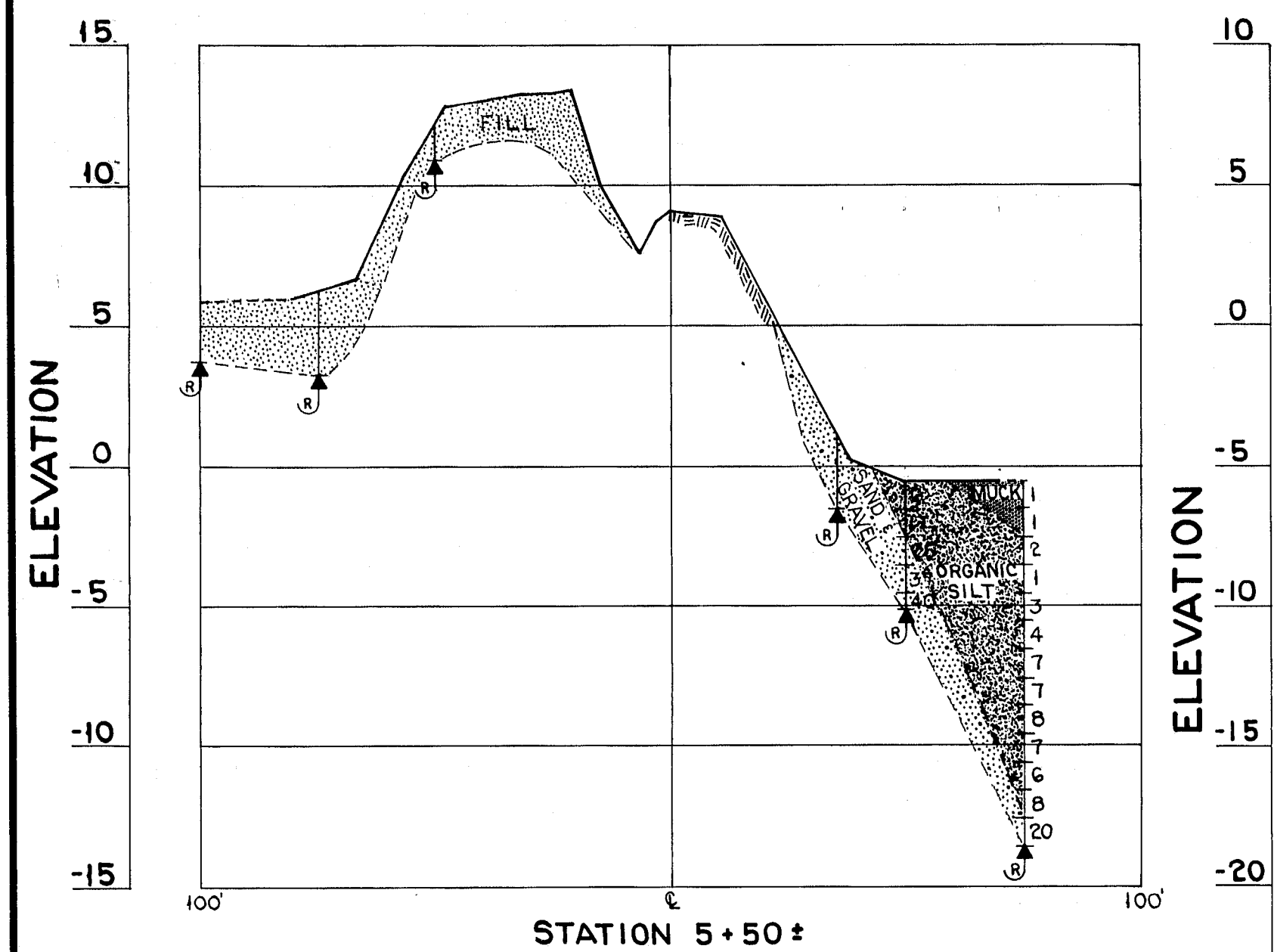
122-118











TRANSVERSE SECTIONS  
SCALE: 1" = 30' HORIZ.  
1" = 5' VERT.

BORING AC-28 (70) STATION 8+02

ELEVATION	DRIVING RESISTANCE Blows/Ft.		VANE SHEAR STRENGTH Tons/Sq.Ft.		WATER CONTENT Percent	
	20	40	0.4	0.8	20	40
10					IGN. LOSS	6.9%
20					IGN. LOSS	4.7%
30					IGN. LOSS	5.1%
40					IGN. LOSS	6.2%
50					IGN. LOSS	6.9%
60					IGN. LOSS	6.5%
70						
80						
90						
100						

BLACK SILT AND MUCK

SOFT TO MEDIUM SANDY SILT WITH SAND LINES AND SHELLS

MEDIUM CONSISTENCY GRAY SANDY SILT AND SHELLS

VERY DENSE FINE BLACK GRAVEL WITH COARSE GRAY SILTY SAND

WASHED AHEAD

77% LEDGE: PORPHYRITIC RHYOLITE

CASING SIZE 2 1/2" NOTE ARTESIAN PRESSURE @ 55'

STATE HIGHWAY COMMISSION  
**MACHIAS RIVER BRIDGE**  
BETWEEN THE TOWNS OF  
**MACHIASPORT & EAST MACHIAS**  
WASHINGTON COUNTY  
TRANSVERSE SECTIONS AND BORING DETAILS

SHEET 5 OF 45 AUGUSTA, MAINE

BORING AC-26 (70) STATION 6+38

DRIVING RESISTANCE Blows/Ft.		VANE SHEAR STRENGTH Tons/Sq.Ft.		WATER CONTENT Percent	
20	40	0.4	0.8	20	40

ELEV. -5.88

GRAY & BROWN GRAVEL FILL

LEDGE SURFACE EL. -10.05

42% 100% 100% 100%

LEDGE: PORPHYRITIC RHYOLITE

CASING SIZE 2 1/2"

BORING AC-25 (70) STATION 6+50 60' RT.

DRIVING RESISTANCE Blows/Ft.		VANE SHEAR STRENGTH Tons/Sq.Ft.		WATER CONTENT Percent	
20	40	0.4	0.8	20	40

ELEV. -7.11

SOFT ORGANIC GRAY SILTY CLAY WITH SHELLS, SAND AND WOOD

IGN. LOSS 7.5%

IGN. LOSS 7.9%

IGN. LOSS 5.1%

VERY DENSE BROWN SAND \* ROCKS AND GRAVEL (TILL)

\* CHANGED CASING FROM 4" TO 2 1/2" CASING

BORING AC-27 (70) STATION 7+10

DRIVING RESISTANCE Blows/Ft.		VANE SHEAR STRENGTH Tons/Sq.Ft.		WATER CONTENT Percent	
20	40	0.4	0.8	20	40

ELEV. -7.81

BLACK SILT AND MUCK

IGN. LOSS 7.3%

IGN. LOSS 6.1%

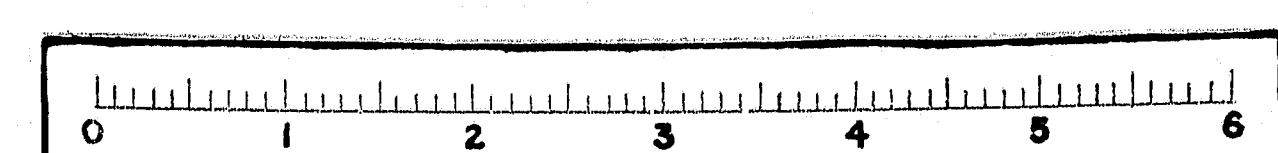
IGN. LOSS 5.7%

LEDGE SURFACE EL. -30.81

62% LEDGE: PORPHYRITIC RHYOLITE

100%

CASING SIZE 4"



DESIGN - DETAILED  
CHECKED  
REVISIONS  
FIELD CHANGES

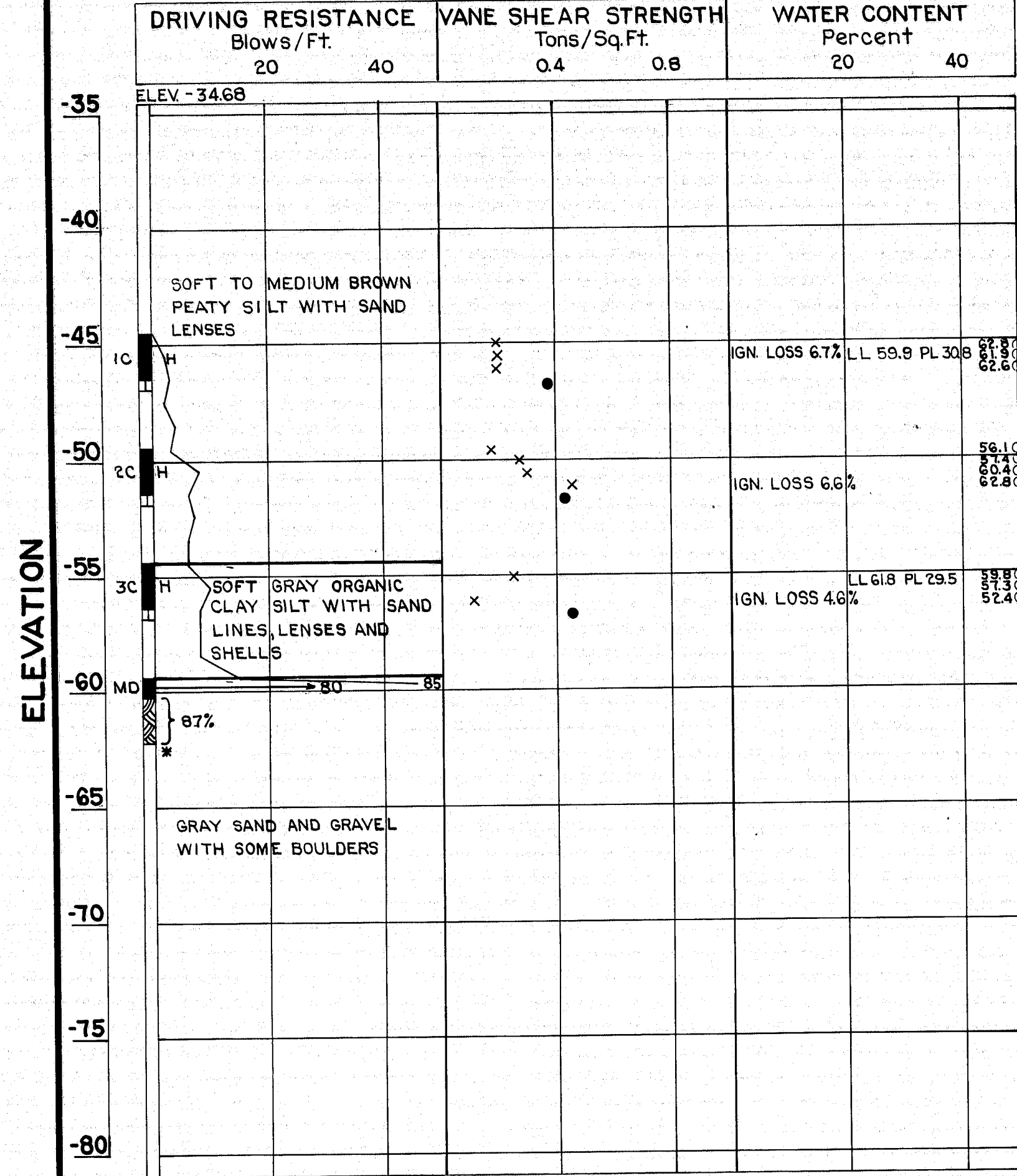
PLANS

BY

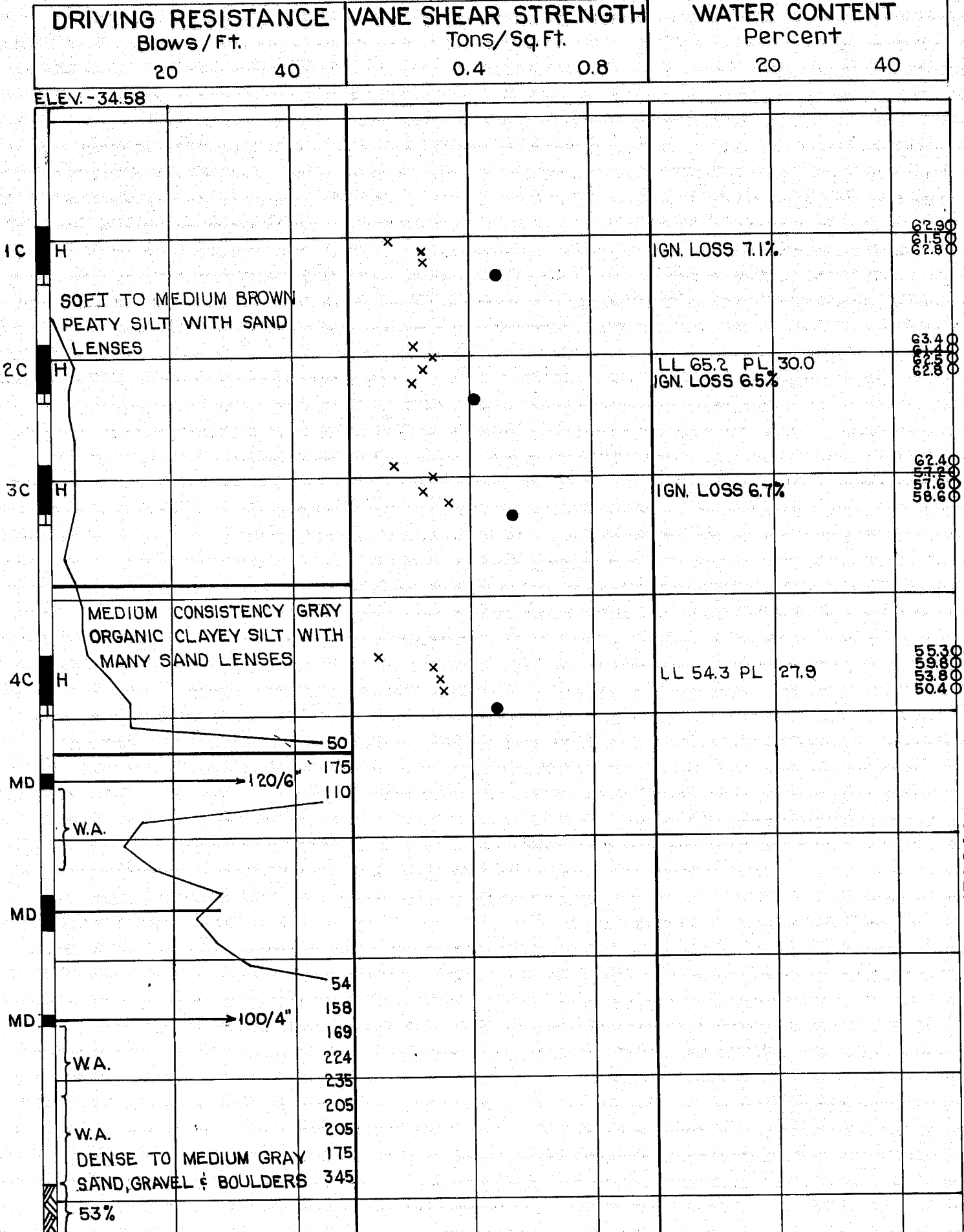
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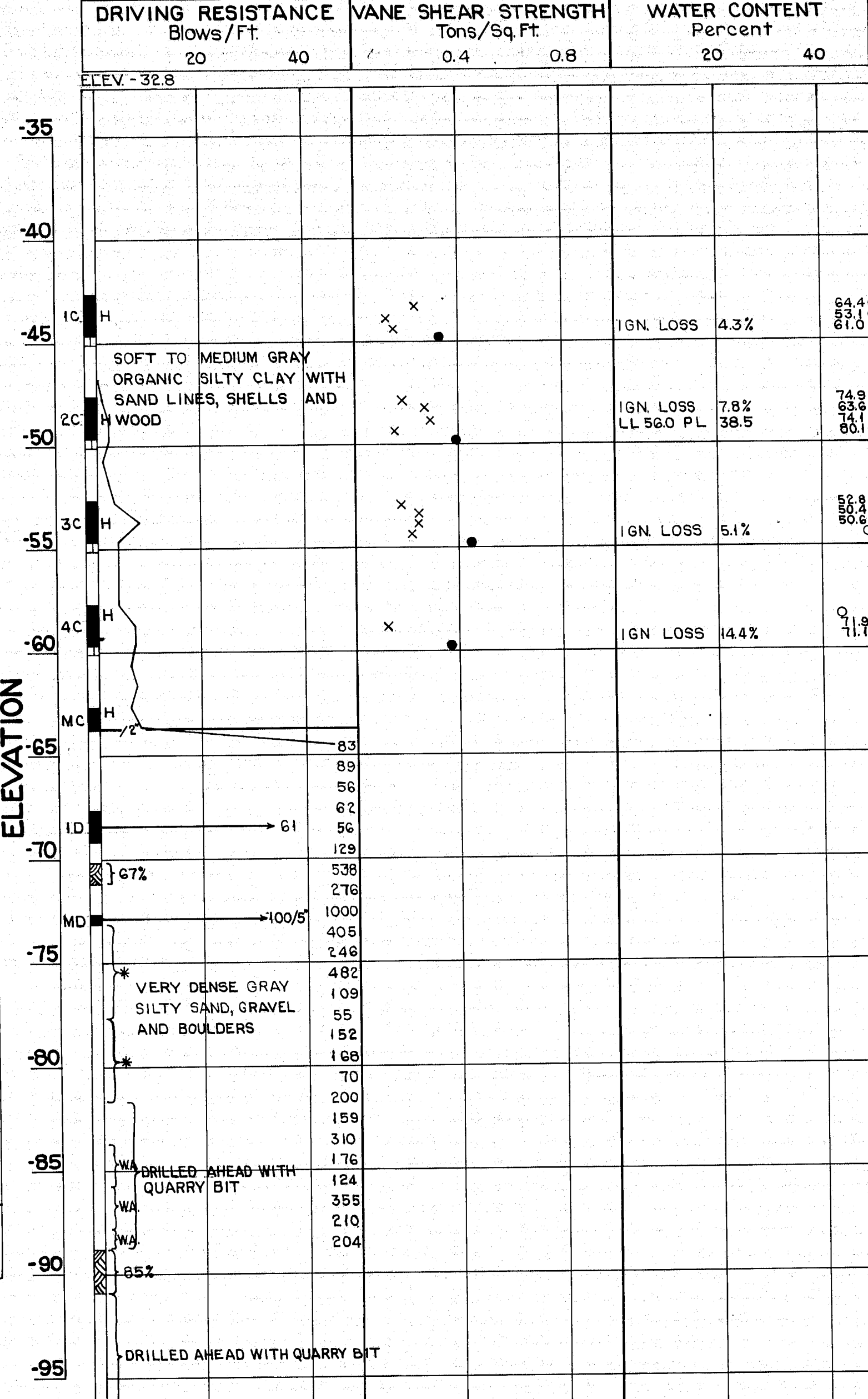
### BORING AC-29 (70) STATION 8+94 C



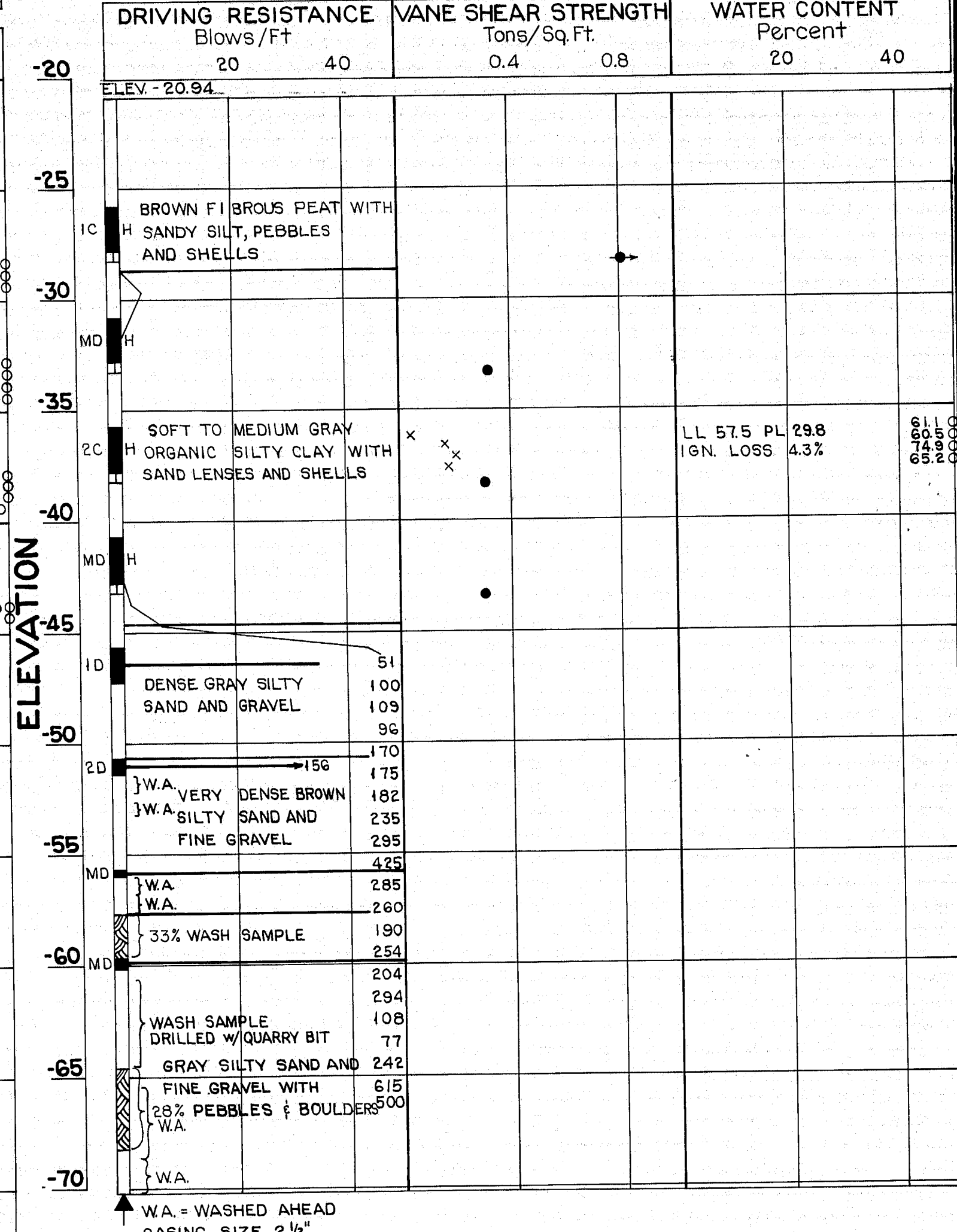
### BORING AC-30 (70) STATION 8+94 IRT



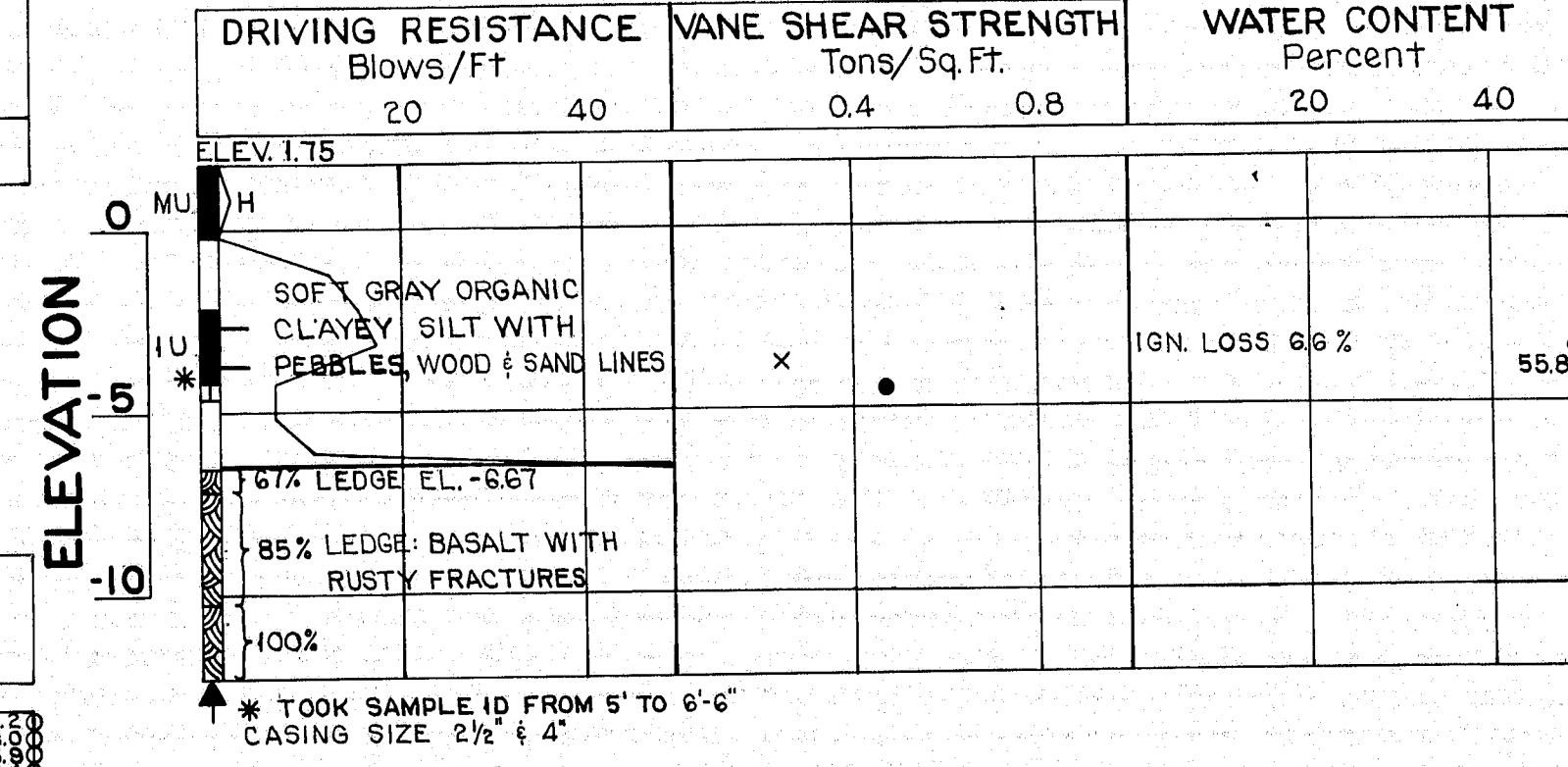
### BORING AC-24 (70) STATION 9+86 C



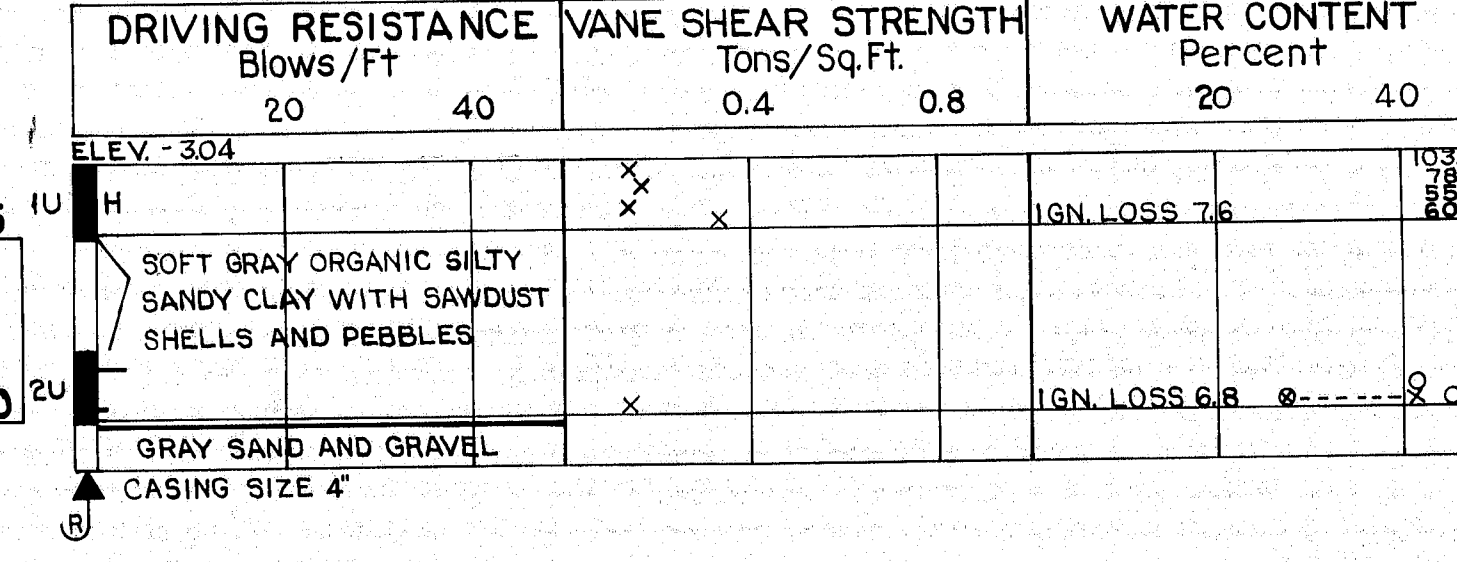
### BORING AC-23 (70) STATION 10+78 C



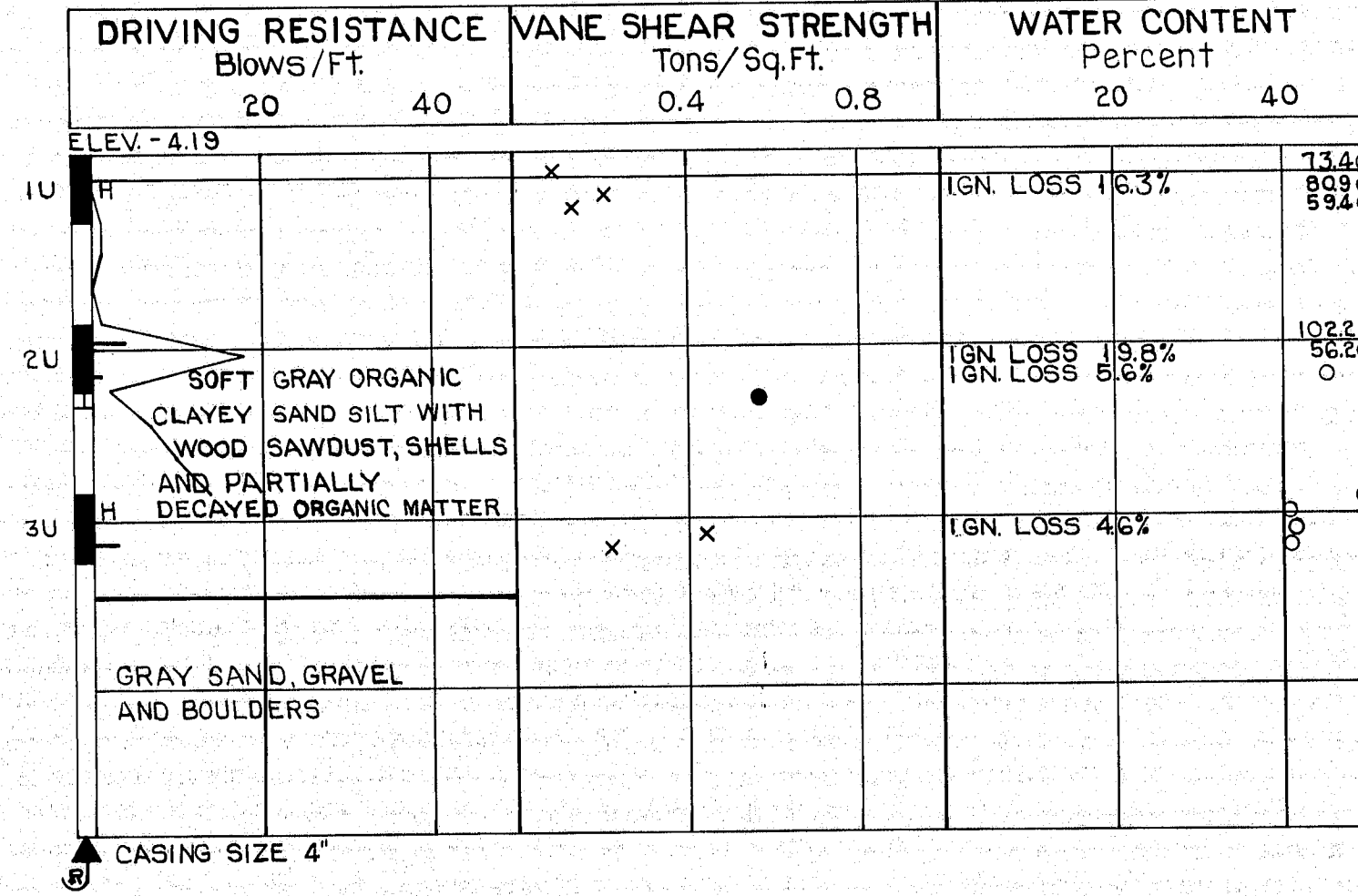
### BORING AC-20 & 21 (70) STATION 12+42 3'LT.



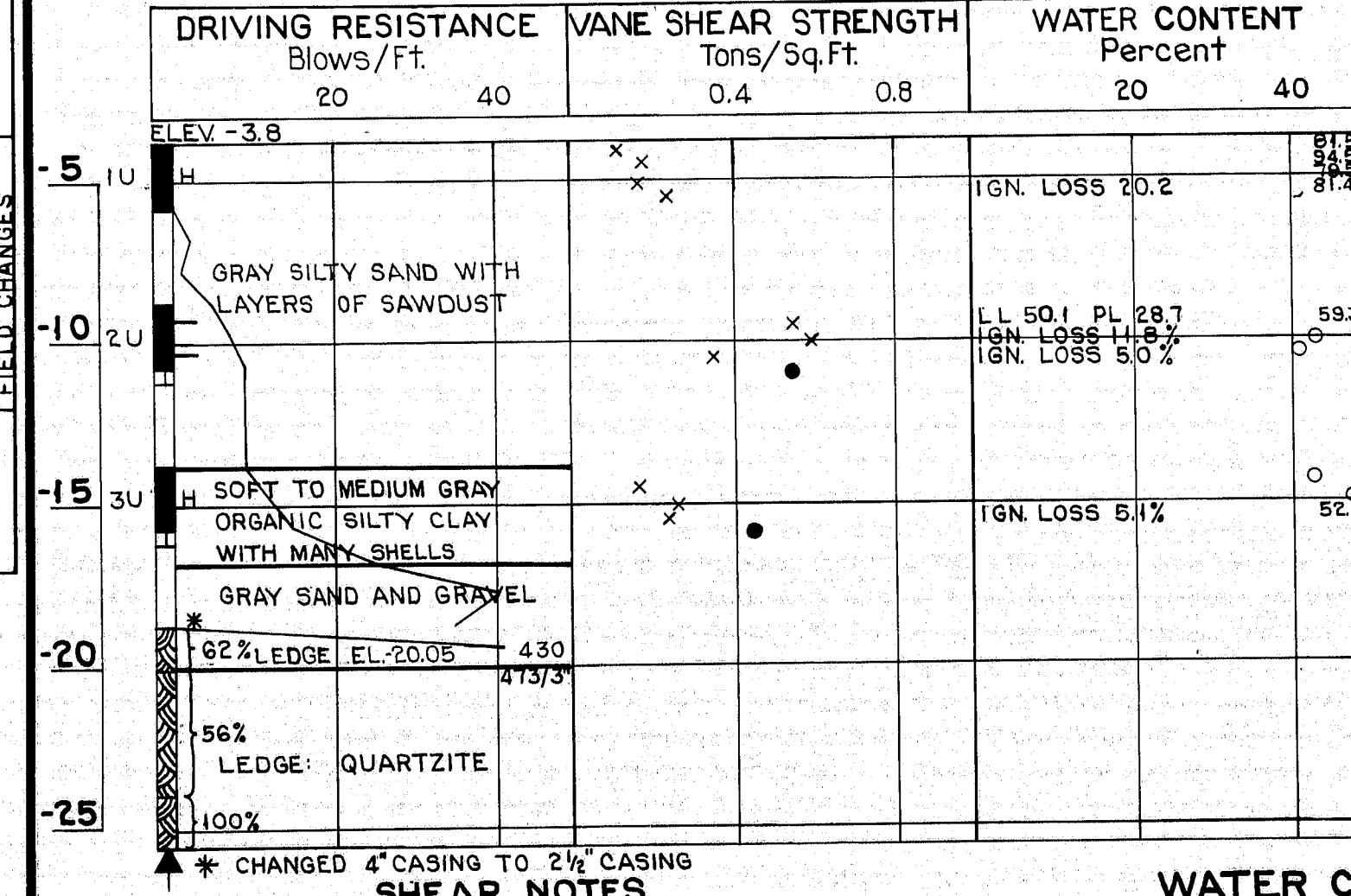
### BORING AC-32 (70) STATION 11+90 35'RT.



### BORING AC-31 (70) STATION 11+90 35'LT.



### BORING AC-22 (70) STATION 11+75 C



**BORING NOTES**

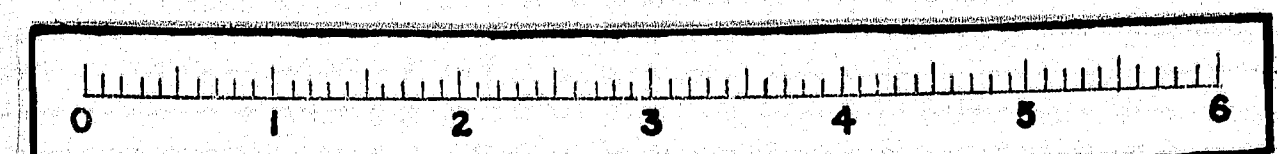
All Samples and vanes are made ahead of casing.  
 Number of blows required to drive extra heavy casing one foot with 400 ft. lbs. of energy per blow.  
 Location of sample or sample attempt.  
 Number and type of dry sample.  
 S + H Sampler # 1250's.  
 2" O.D. 16 ga. seamless tubing.  
 3 1/2" O.D. 16 ga. seamless tubing.  
 I.W. Wash sample and number.  
 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.  
 Sampling spoon or seamless tubing driven by static weight of drill rods and hammer.  
 Field vane test.  
 Bottom of boring (may not be bottom of soil strata).  
 Refusal of drill rods or casing (may not be ledge).  
 Locations cored by diamond bit and percent recovery of rock.

**WATER CONTENT NOTES**

○ Natural water contents given as percent of dry weight.  
 ○-x Plastic and liquid limits.  
 Ignition losses are given as percent of dry weight.

**NEAR NOTES**

● Field vane shear strengths.  
 x Laboratory vane shear strengths.  
 - Shear strengths in excess of capacity of equipment.  
 ○ One half unconfined compressive strengths.



STATE HIGHWAY COMMISSION

**MACHIAS RIVER BRIDGE**  
 BETWEEN THE TOWNS OF  
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 EAST MACHIAS**  
 WASHINGTON COUNTY

BORING DETAILS

SHEET 6 OF 45 AUGUSTA, MAINE

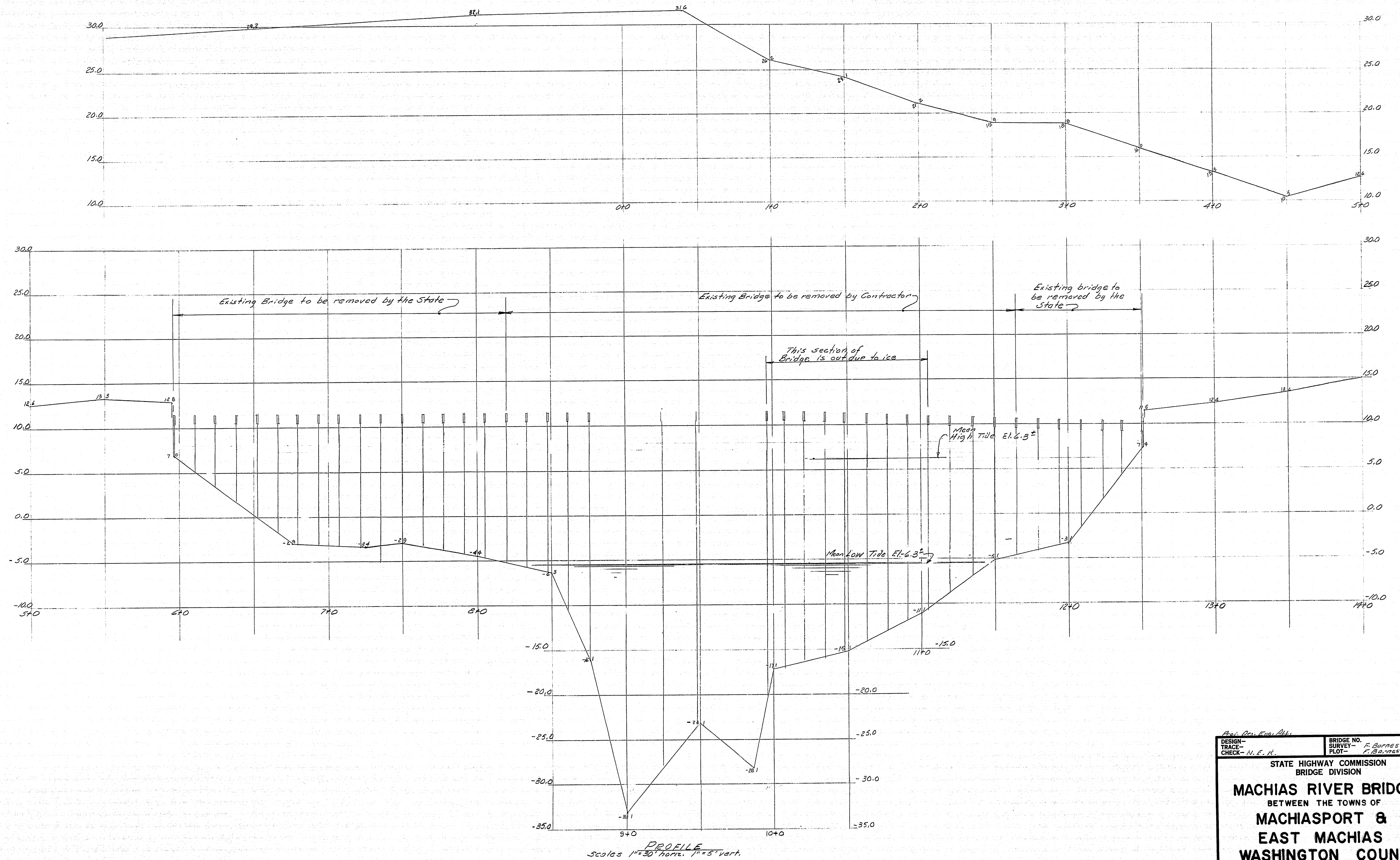
122-121





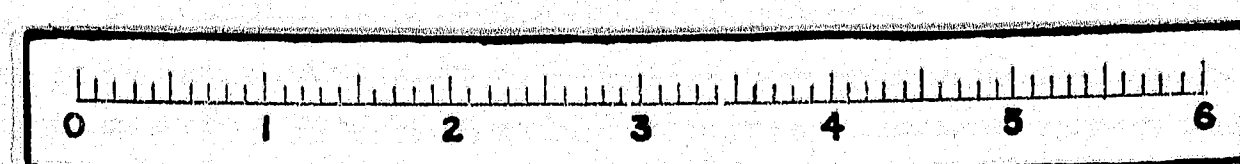


B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	#2253	8	45



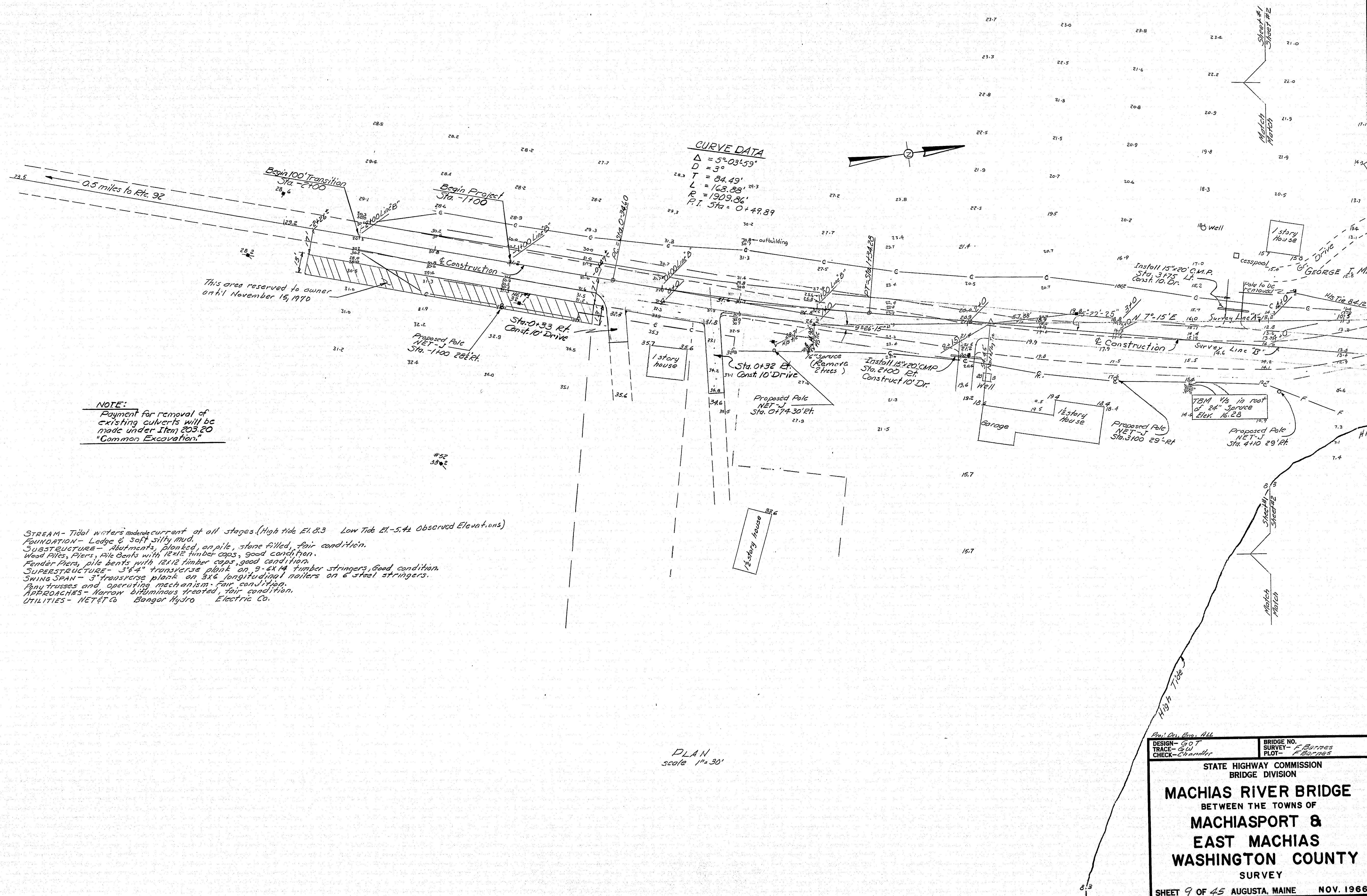
DESIGN - *N. E. K.*  
 CHECK - *N. E. K.*  
 BRIDGE NO. *2253*  
 SURVEY - *R. Barnes*  
 PLOT - *R. Barnes*  
 STATE HIGHWAY COMMISSION  
 BRIDGE DIVISION  
**MACHIAS RIVER BRIDGE**  
 BETWEEN THE TOWNS OF  
**MACHIASPORT & EAST MACHIAS**  
**WASHINGTON COUNTY**  
 SURVEY LINE "A" PROFILE  
 SHEET 8 OF 45 AUGUSTA, MAINE NOV. 1966

122-123





B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	2-1-3	9	45



STREAM - Tidal waters moderate current at all stages (High tide El. 8.3 Low tide El. 5.4 Observed Elevations)  
 FOUNDATION - Ledge & soft silty mud.  
 SUBSTRUCTURE - Abutments, pilings, on pile, stone filled, fair condition.  
 WEAR PILINGS, PIERS, PILE BENTS WITH 12x12 timber caps, good condition.  
 FENDER PIERS, pile bents with 12x12 timber caps, good condition.  
 SUPERSTRUCTURE - 3x4" transverse plank on 9x4x4 timber stringers, good condition.  
 SPAN - 3" transverse plank on 5x6 longitudinal rollers on 6 steel stringers.  
 BRIDGE TRUSSES AND OPERATING MECHANISM - Fair condition.  
 APPROACHES - Narrow bituminous treated, fair condition.  
 UTILITIES - NET & Co Bangor Hydro Electric Co.

PLAN  
scale 1"=30'

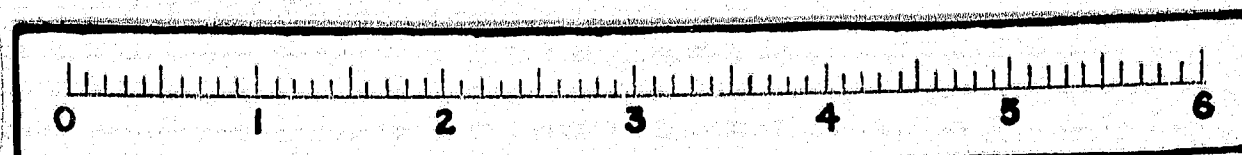
DESIGN - G.O.T.  
 SURVEY - F. Barnes  
 CHECK - Chandler

BRIDGE NO. 1  
 SURVEY - F. Barnes  
 PLOT - F. Barnes

STATE HIGHWAY COMMISSION  
 BRIDGE DIVISION

**MACHIAS RIVER BRIDGE**  
 BETWEEN THE TOWNS OF  
**MACHIASPORT &**  
**EAST MACHIAS**  
**WASHINGTON COUNTY**  
 SURVEY

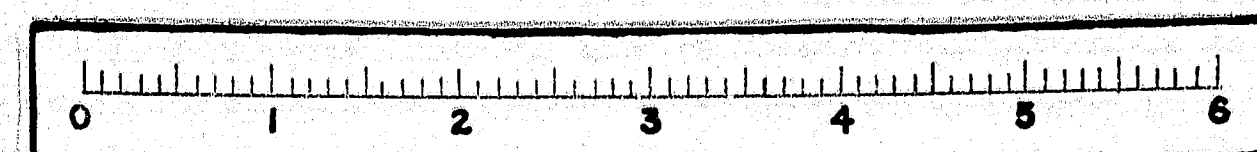
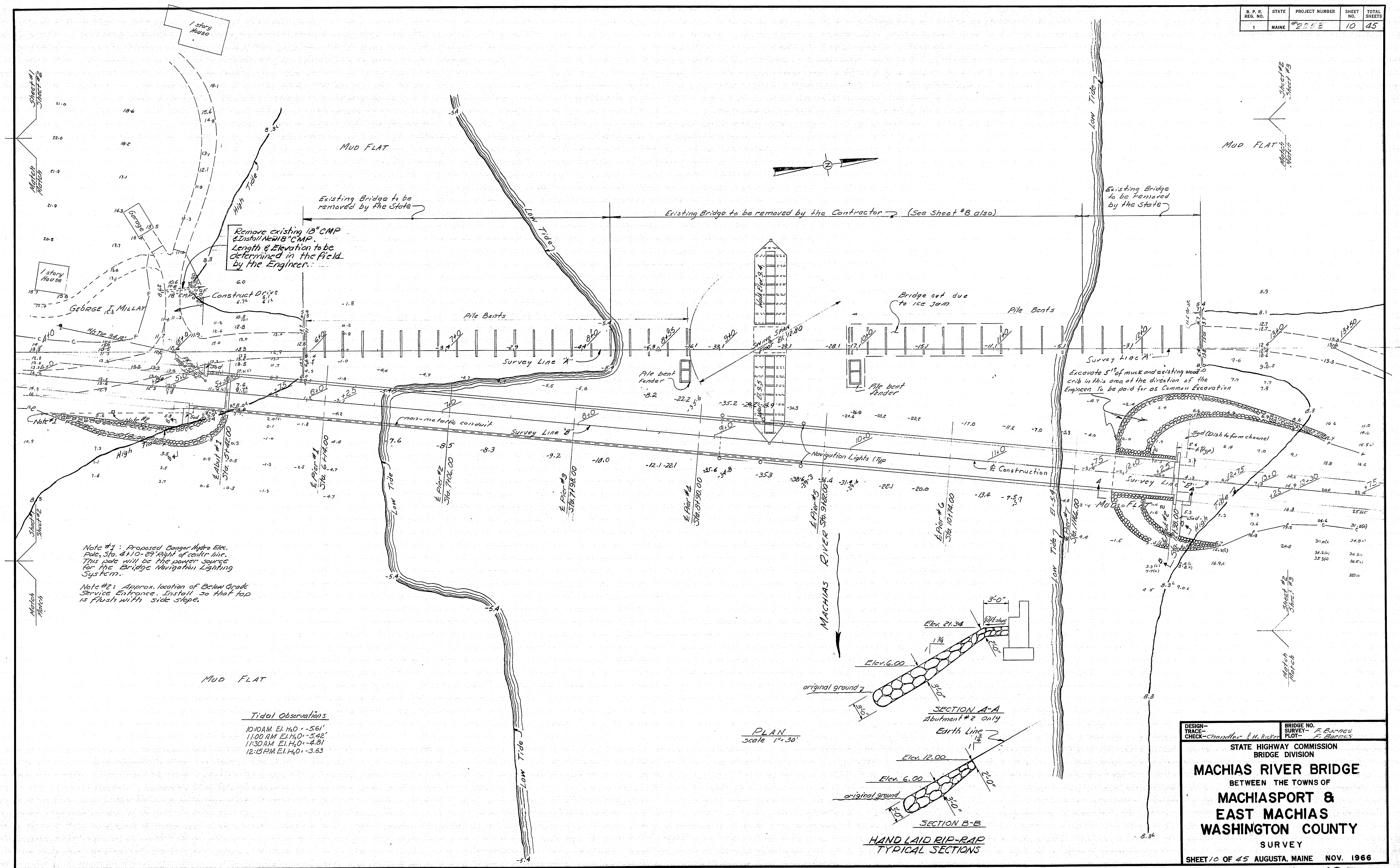
SHEET 9 OF 45 AUGUSTA, MAINE NOV. 1966



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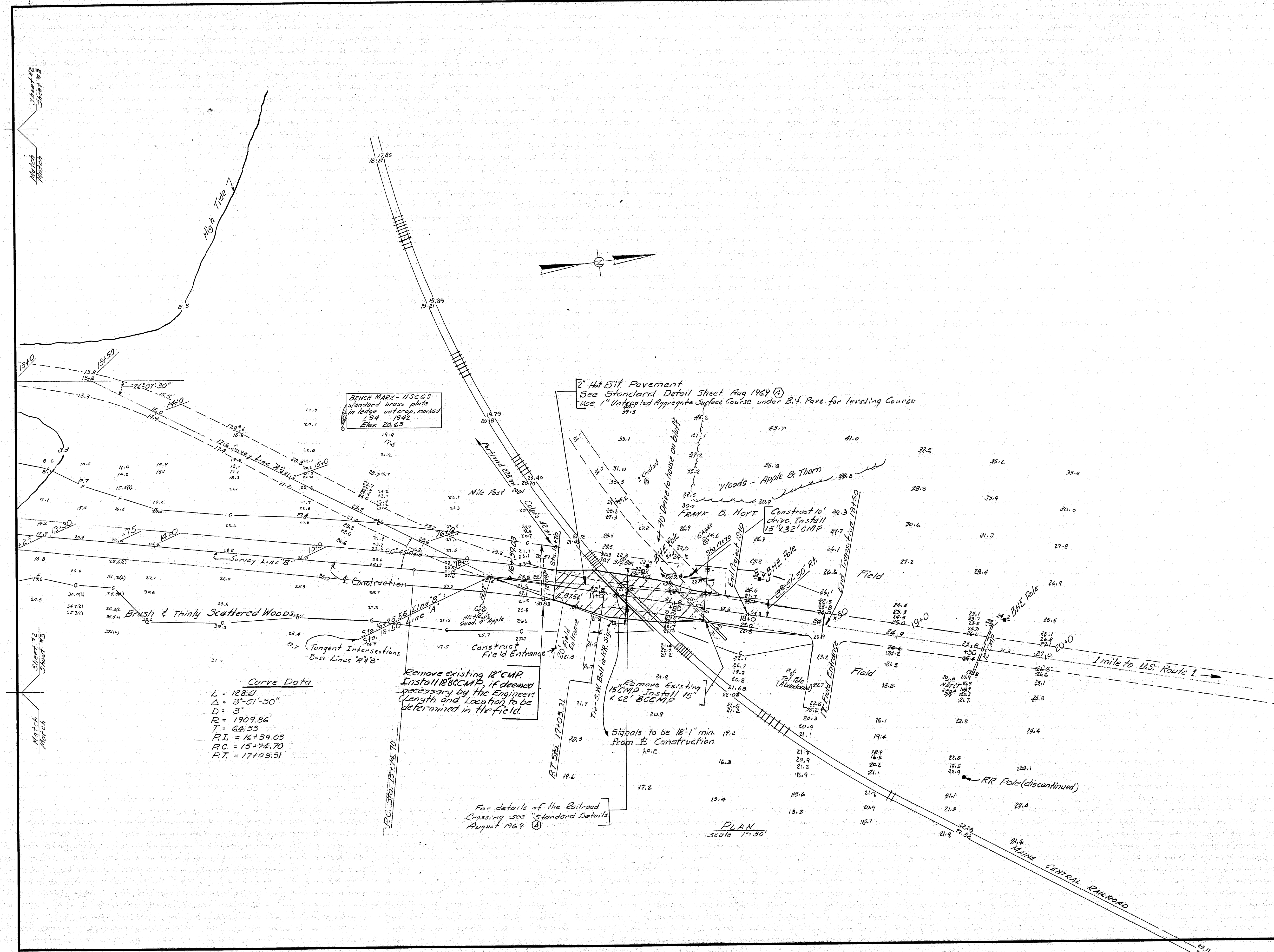
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	22-125	10	45



122-125



B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	2253	11	45



DESIGN - G. T.  
 TRACE - G. T.  
 CHECK - Chandler

BRIDGE NO.  
 SURVEY - F. BARNES - F. FORTIN  
 PLOT - F. BARNES - D. V. P.

STATE HIGHWAY COMMISSION  
 BRIDGE DIVISION  
**MACHIAS RIVER BRIDGE**  
 BETWEEN THE TOWNS OF  
**MACHIASPORT &**  
**EAST MACHIAS**  
**WASHINGTON COUNTY**  
 SURVEY

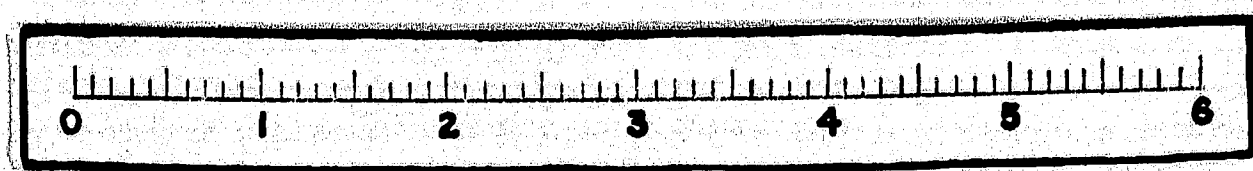
SHEET 11 OF 45 AUGUSTA, MAINE NOV. 1966

122-126



PLAN	SURVIVED	BY	DATE
NOTE BOOK	PLOTTED		
	ALIGNMENT CHECKED		
	HE UP WAY CHECKED		

PROFILE	SUMMERED	BY	DATE
NOVA BECK	FLOATED	G.W.	7-70
	ORDERS CHECKED		
	O. MS. NOTED		

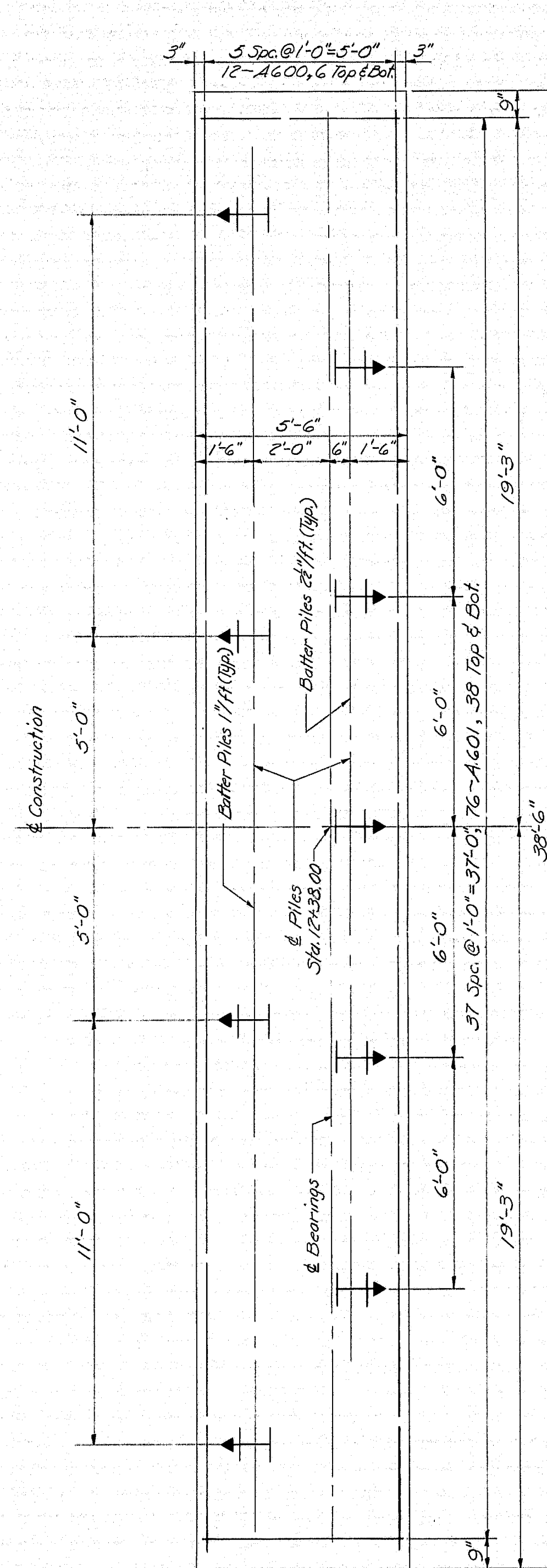




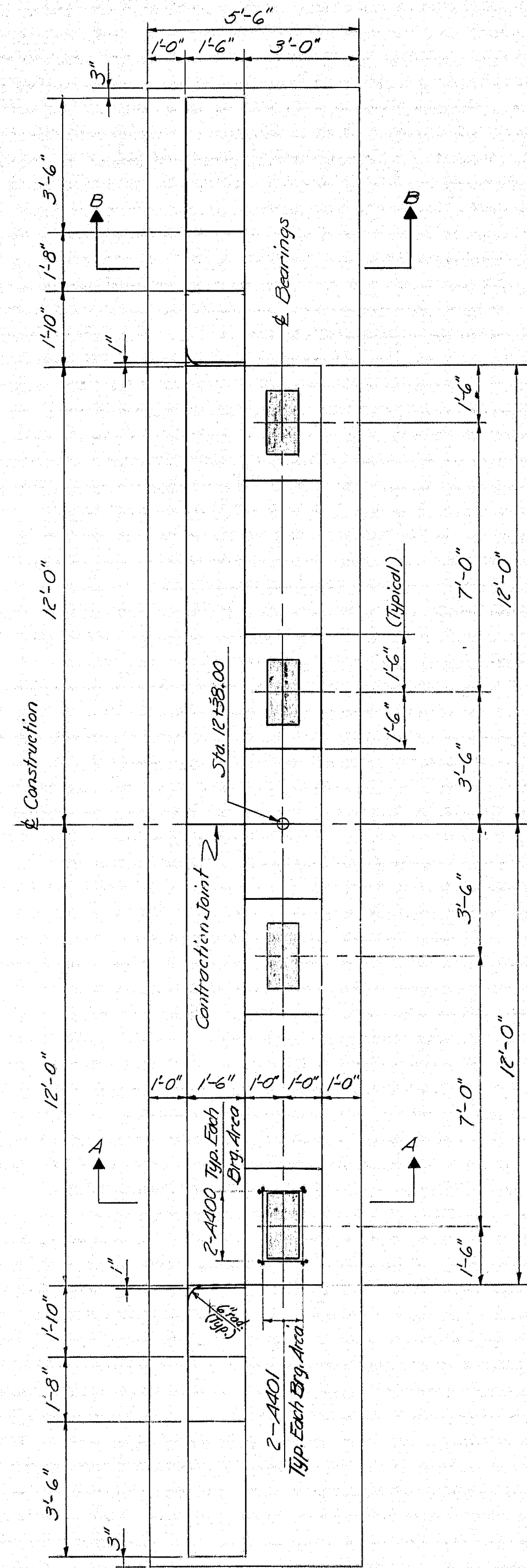




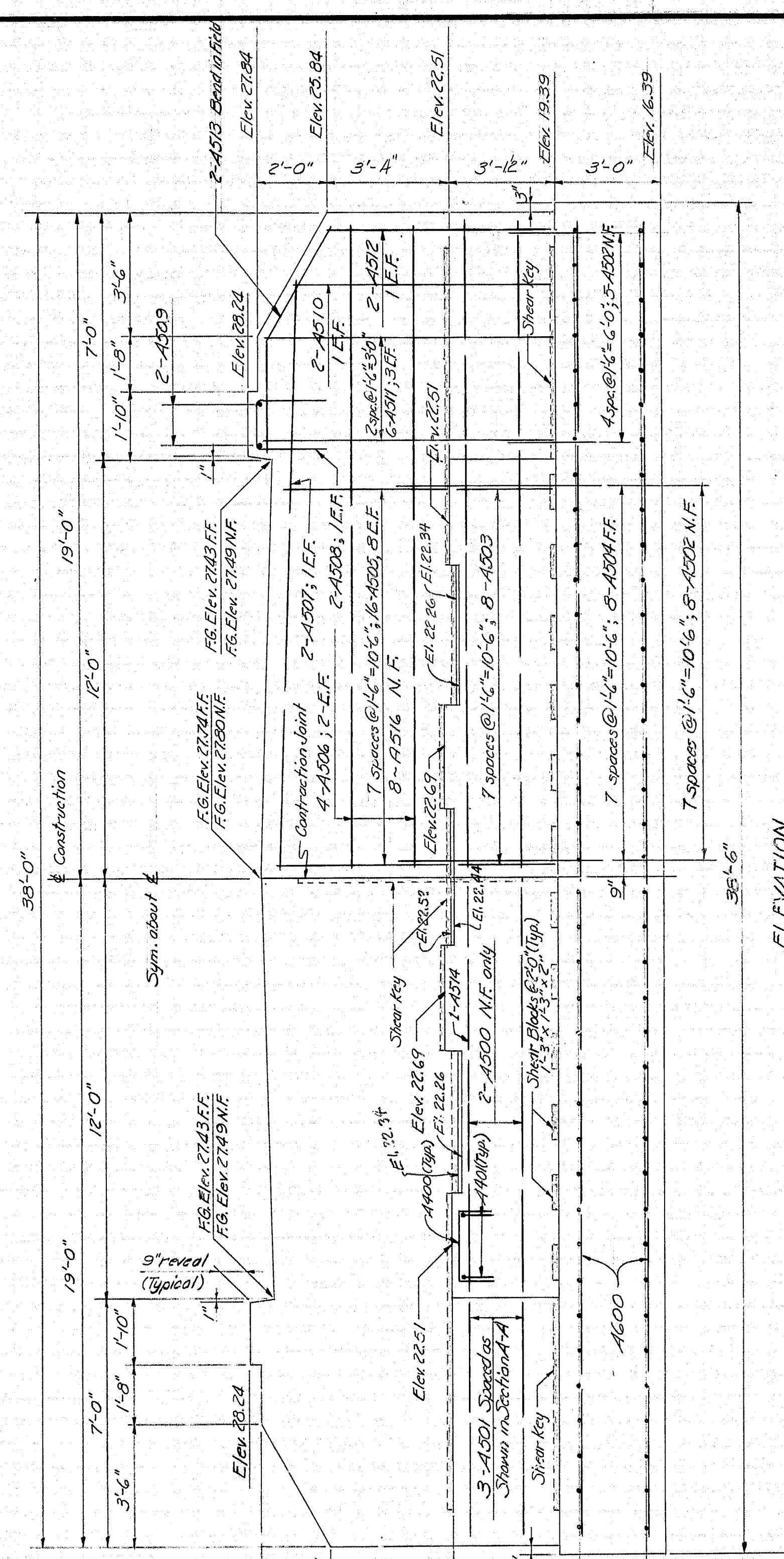
S. P. R. REQ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	#2253	17	45



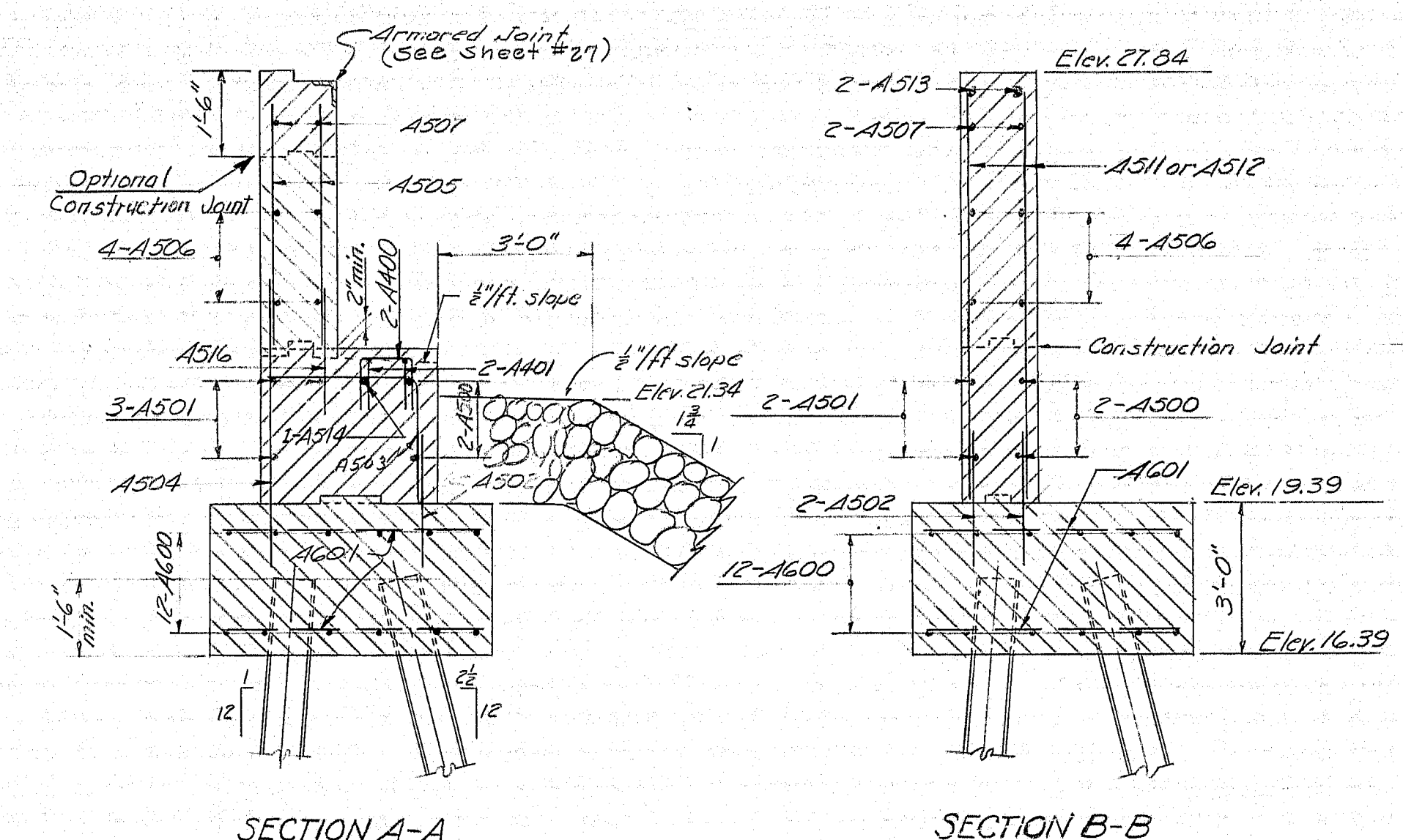
FOOTING & PILE PLAN



PLAN - ABUTMENT #2



ELEVATION

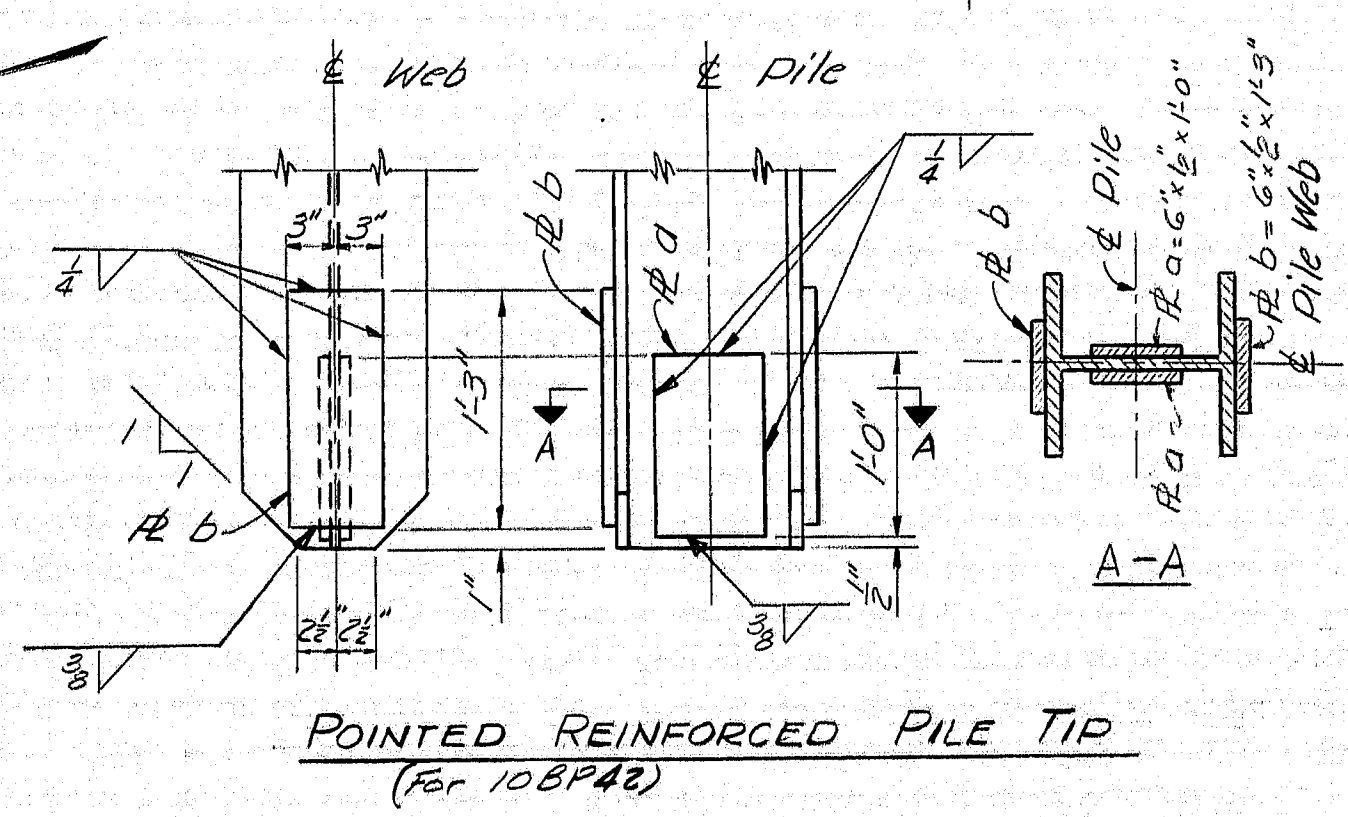


- PILE NOTES**
1. Abutment Piles shall be 10 EP 42
  2. Allowable Pile Load = 55.5 Tons.
  3. Piles marked thus H- shall be battered in the direction of the arrows.
  4. Piles in the front row shall be battered 2 1/4 ft; Piles in the back row shall be battered 1 1/4 ft.
  5. Piles shall be driven to ledge or practical refusal.
  6. Piles shall be cut-off 1'-6" + 6" above the elevation of the bottom of the footing.
  7. Estimated length of piles; Abutment #2 only = 35'

- ABUTMENT NOTES**
1. Chamfer all exposed edges of concrete 1/4"
  2. Dress shaded bearing areas 1" larger all around than the metal masonry plates.
  3. All reinforcing steel splices or embedments are to be a minimum of 24 bar diameters.
  4. Reinforcing steel to have 3" cover unless otherwise noted.
  5. Place reinforcing steel in bridge seats to clear anchor bolts.
  6. Backwalls above the optional construction joint may not be built until the Superstructure Slab has been placed, except by permission of the Engineer.
  7. Apply Protective Coating for Concrete Surfaces to top of backwall, top and inside face of curb and end posts all over.
  8. Fill shall not be placed above bridge seat elevations until the Superstructure concrete has been placed.
  9. All Structural Excavation required below elevations shown shall be paid for at the contract unit bid price.
  10. Coat the exposed top of backwall with Cool Tar Epoxy Seal Coat.

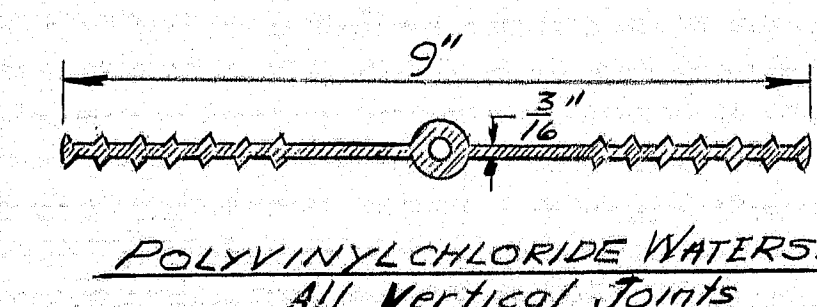
**LEGEND**  
N.F. = Near Face  
E.F. = Each Face  
F.F. = Far Face

Concrete shall be Class "A"

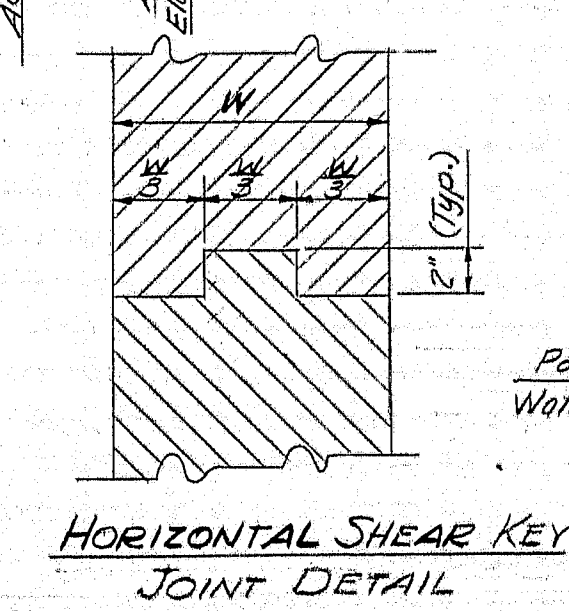


POINTED REINFORCED PILE TIP  
(Per 10BPR42)

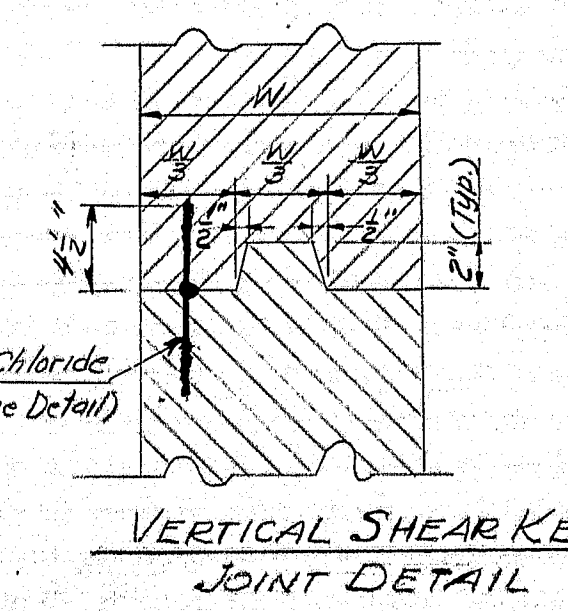
- PILE TIP NOTES:**
1. Plates a & b may be shop or field welded and shall be placed symmetrically about & as indicated.
  2. Standard manufactured Pile Tip may be used if approved by the Engineer.



POLYVINYLCHLORIDE WATERSTOP  
All Vertical Joints



HORIZONTAL SHEAR KEY  
JOINT DETAIL



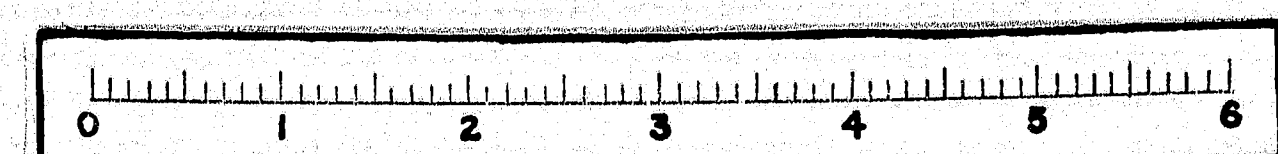
VERTICAL SHEAR KEY  
JOINT DETAIL

STATE HIGHWAY COMMISSION

**MACHIAS RIVER BRIDGE**  
BETWEEN THE TOWNS OF  
**MACHIASPORT &  
EAST MACHIAS**  
**WASHINGTON COUNTY**

ABUTMENT # 2  
SHEET 7 OF 45 AUGUSTA, MAINE JUNE 1970

122-129









B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	#2253	19	45

### PILE NOTES

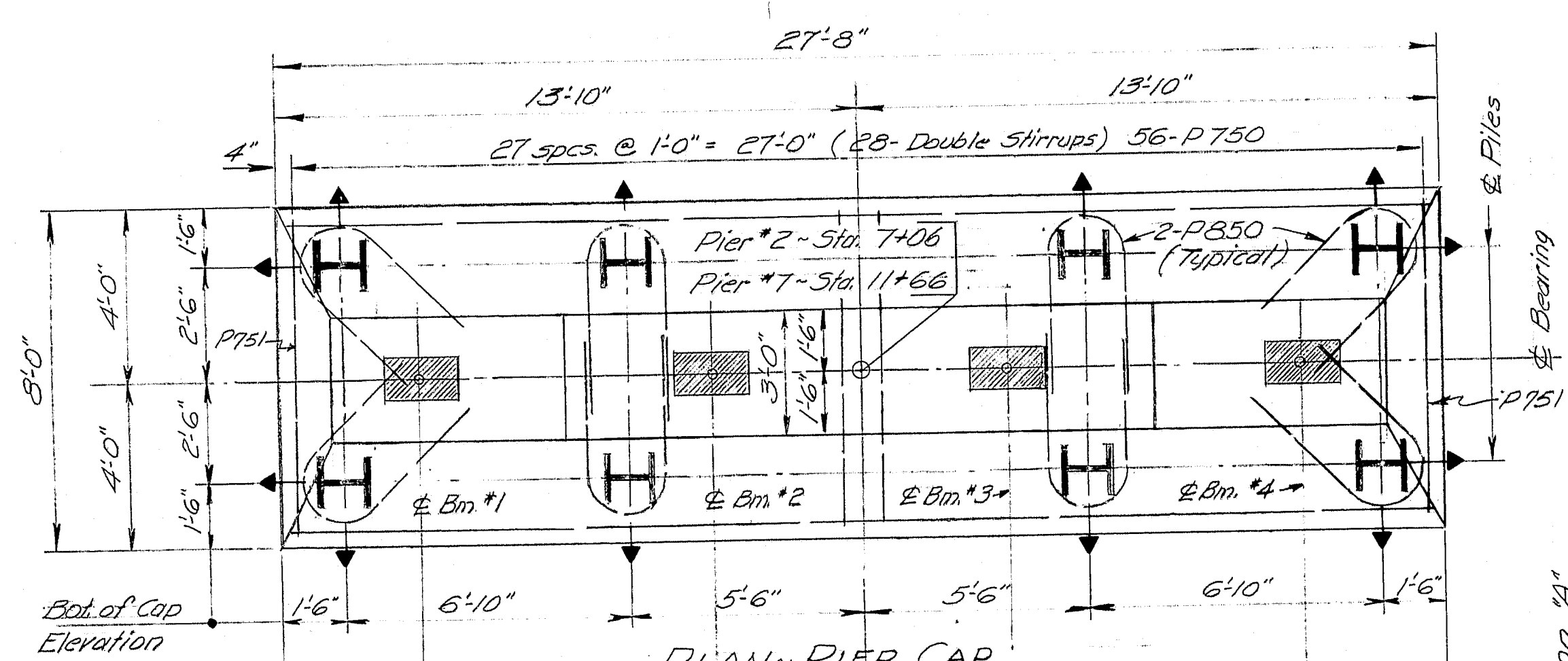
All piles shall be 14 BP 89, battered 2" per foot in the direction of arrows as indicated.

All Piles shall be driven to ledge or practical refusal, and shall have a reinforced pointed tip.

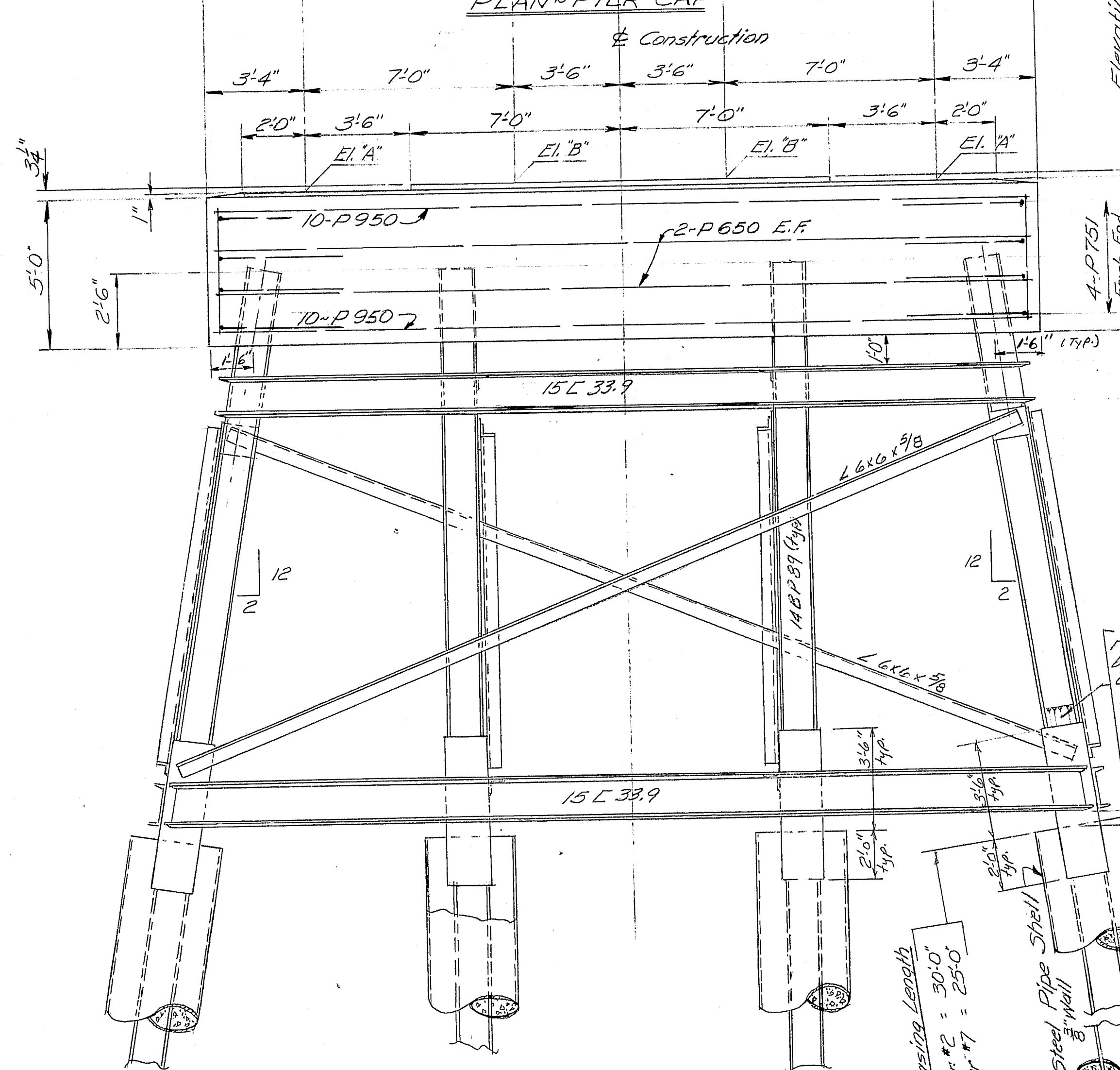
Estimated Pile Driven Lengths:

- Pier #2 ~ 8' @ 60 Feet
- Pier #3 ~ 10 @ 105 Feet
- Pier #4 ~ 10 @ 125 Feet
- Pier #5 ~ 10 @ 125 Feet
- Pier #6 ~ 10 @ 110 Feet
- Pier #7 ~ 8 @ 55 Feet

Estimated driven pile lengths are estimated from available soils information with no allowance for pile cutoffs and no allowance for uncertain pile penetration.

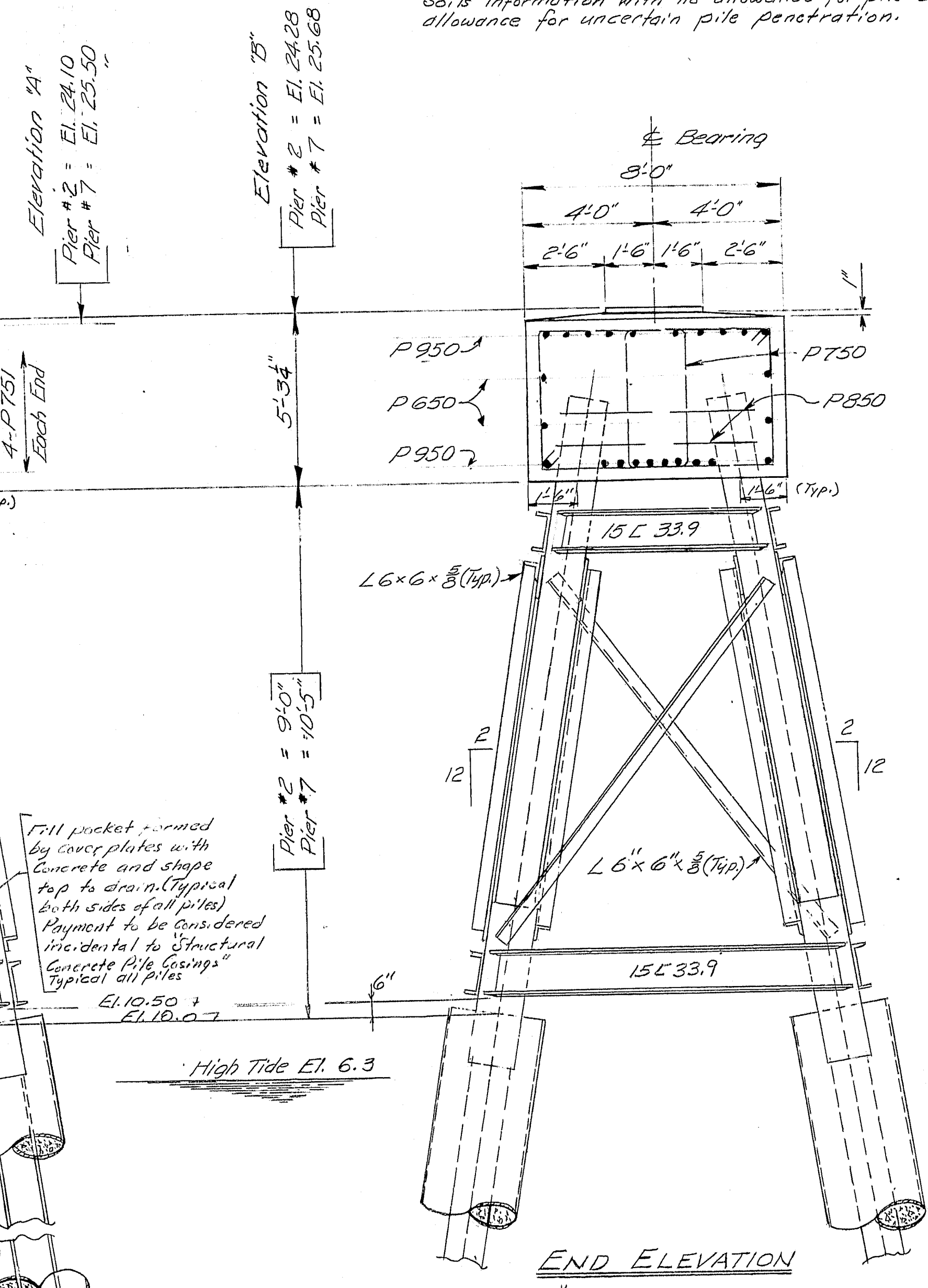


PLAN - PIER CAP

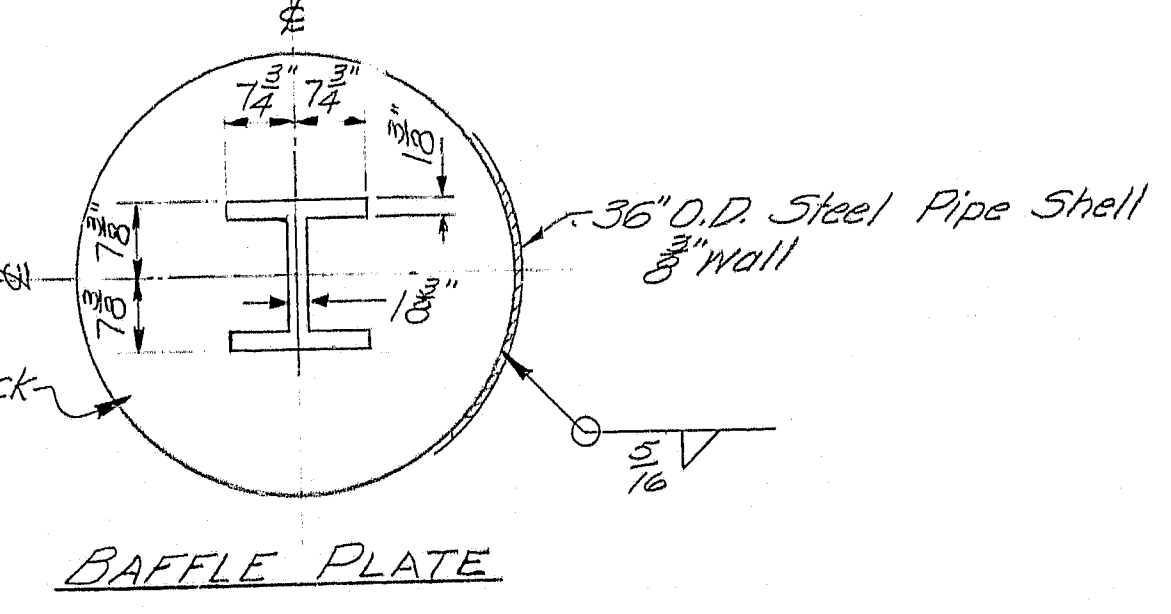


SIDE ELEVATION

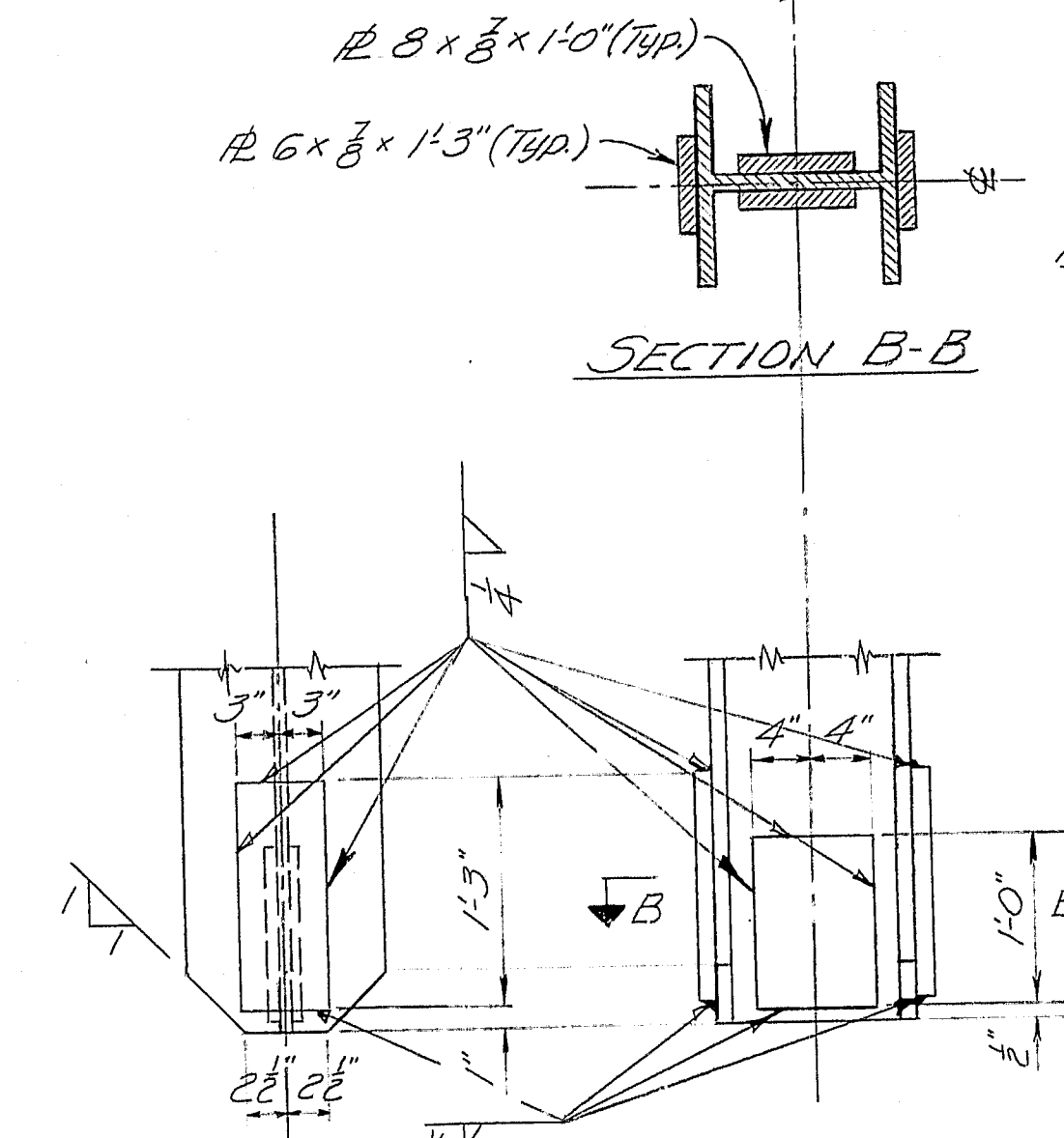
PIERS #2 AND #7  
3 Pile - Bents



END ELEVATION

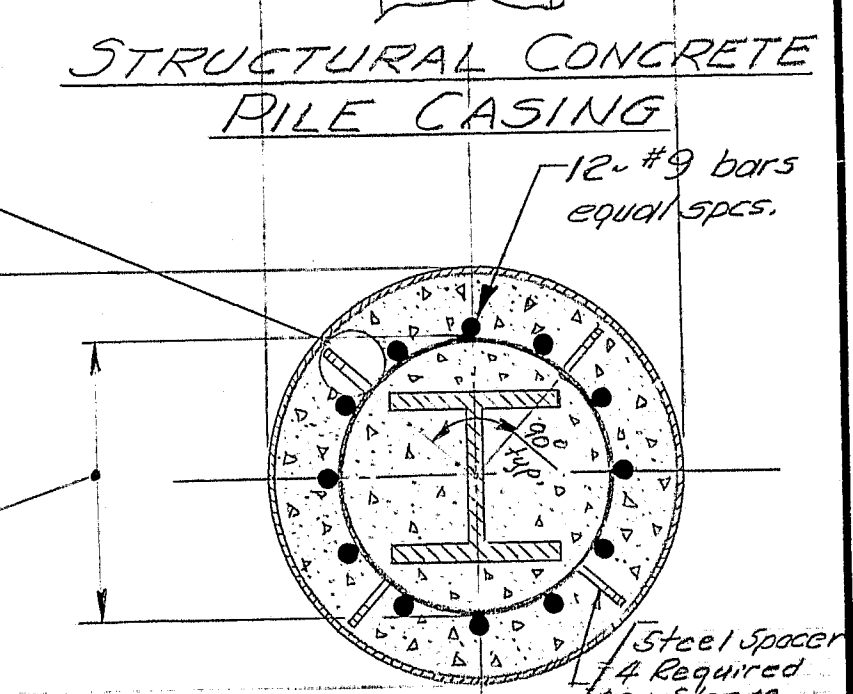
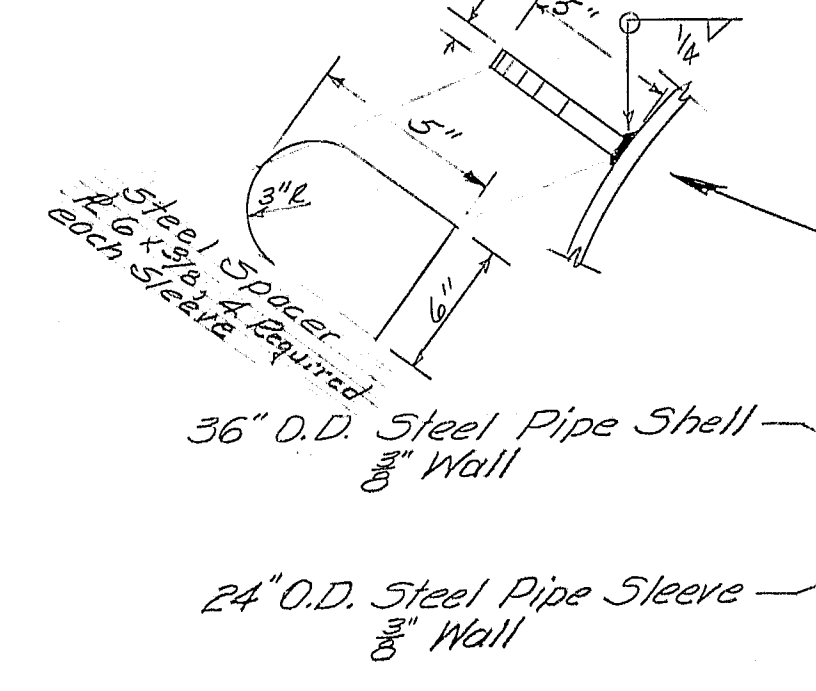


BAFFLE PLATE



POINTED REINFORCED PILE TIP

Note: Alternate types of pointed pile tips may be used if they are equal to or better than the Reinforced Pile Tip shown if approved by the Engineer.

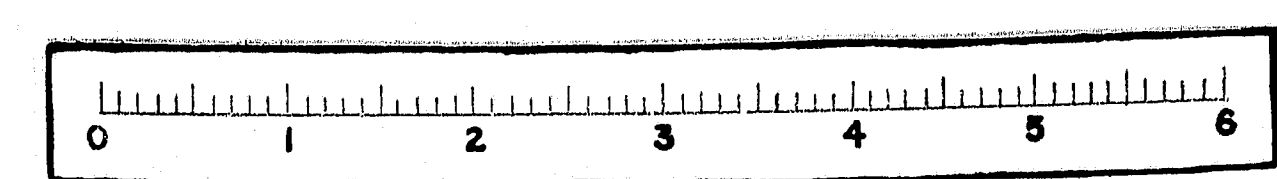


SECTION A-A

NOTE: See sheet #19A for Details of Pile-Bent connections.  
See sheet #20 for notes  
See sheet #19A for pier framing  
For pile notes see sheet #20 and above

STATE HIGHWAY COMMISSION  
**MACHIAS RIVER BRIDGE**  
BETWEEN THE TOWNS OF  
**MACHIASPORT & EAST MACHIAS**  
**WASHINGTON COUNTY**  
PIER NO. 2 & PIER NO. 7  
SHEET 19 OF 45 AUGUSTA, MAINE SEPT 1970

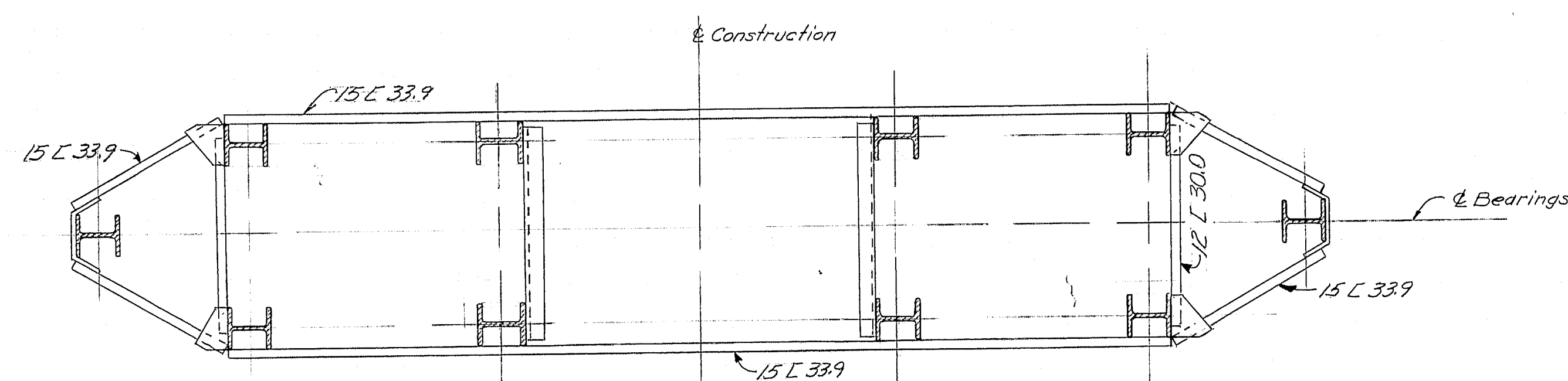
122-131



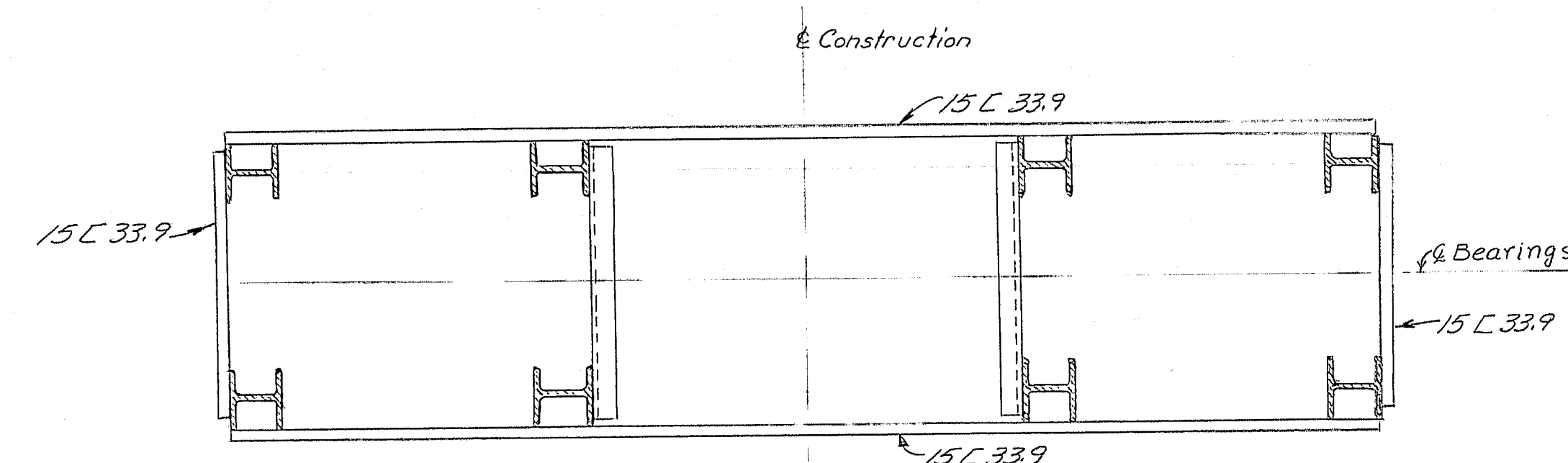
DATE	BY	DESIGN - DETAILED	CHECKED	REVISIONS	FIELD CHANGES
8-70	ALL	G.W.C.	J.C.	M.E.R.	7-70
PLANS					



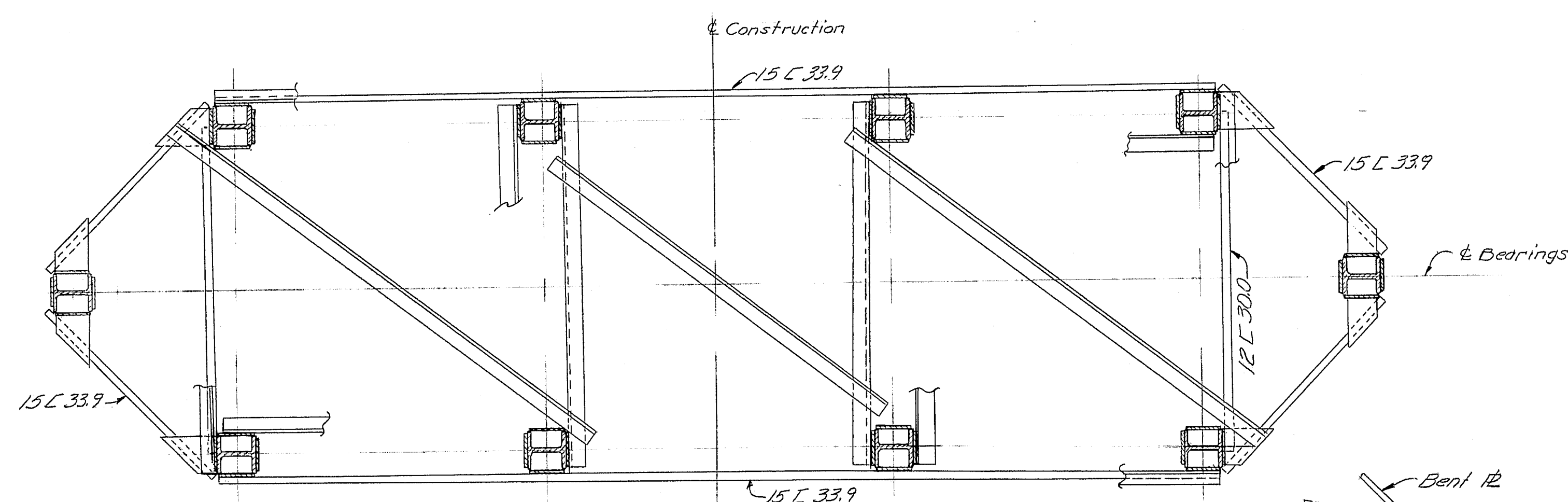
S. P. R. RES. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	2253	19A	



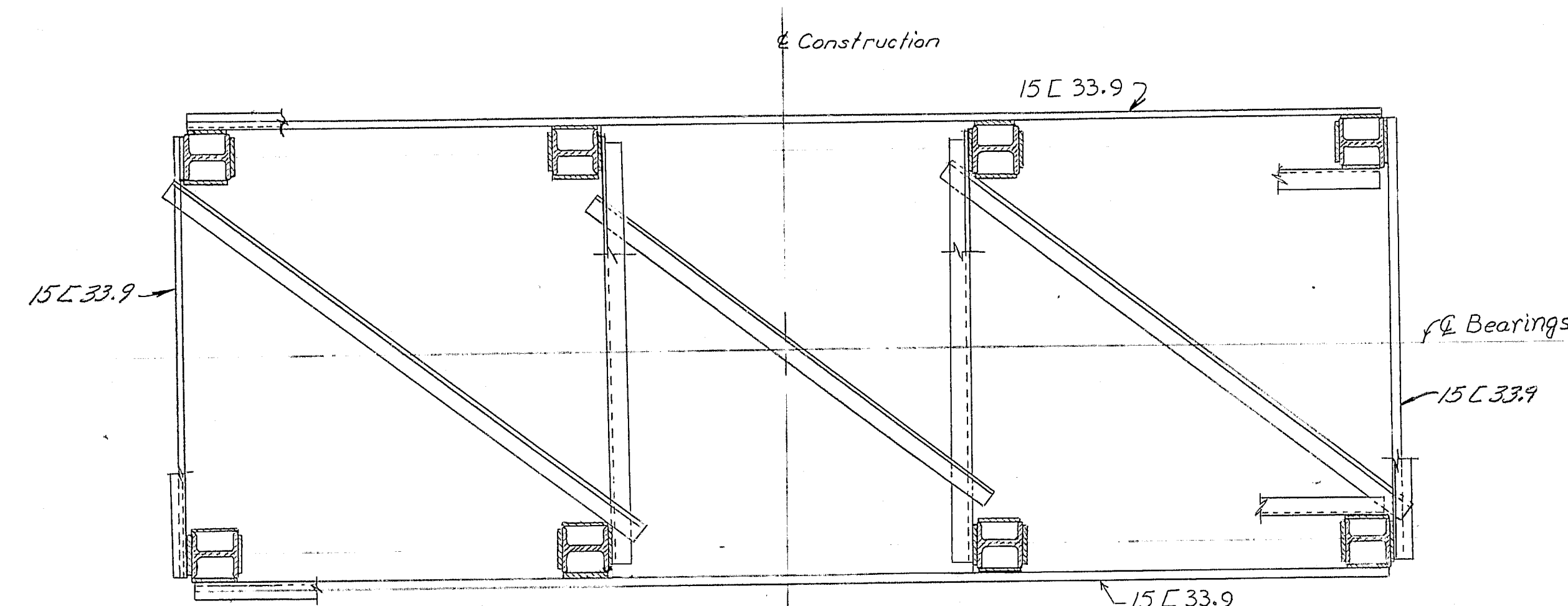
SECTION A-A  
(at 1'-0" below bottom of Cap)



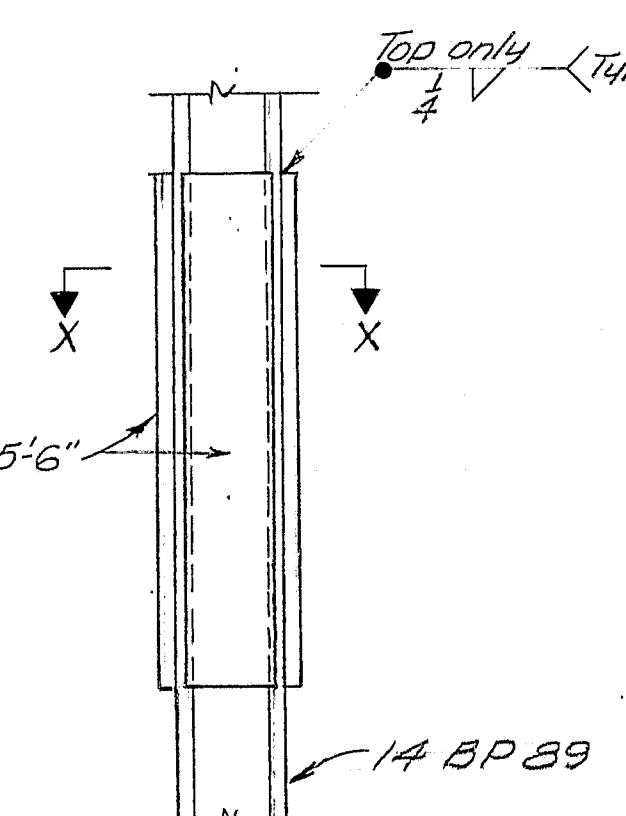
SECTION A-A  
(at 1'-0" below bottom of Cap)



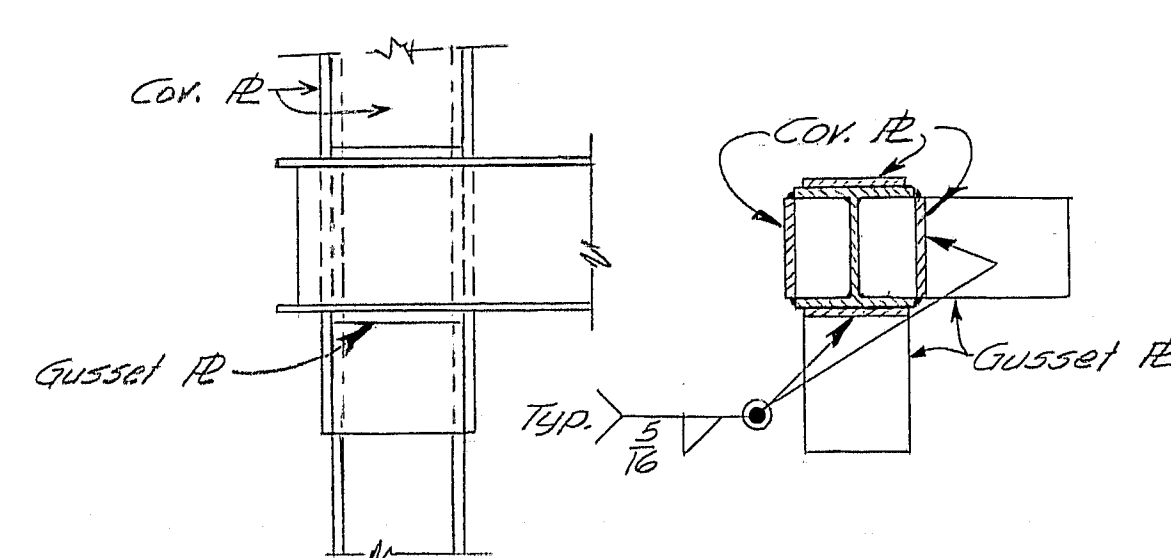
SECTION B-B  
(at approx. Elev. 11.00)  
NOTE: All cross bracing & diagonals  
shall be angles 6x6x $\frac{3}{8}$ . All gusset 12 $\frac{3}{4}$ .  
PIER #3 thru #6



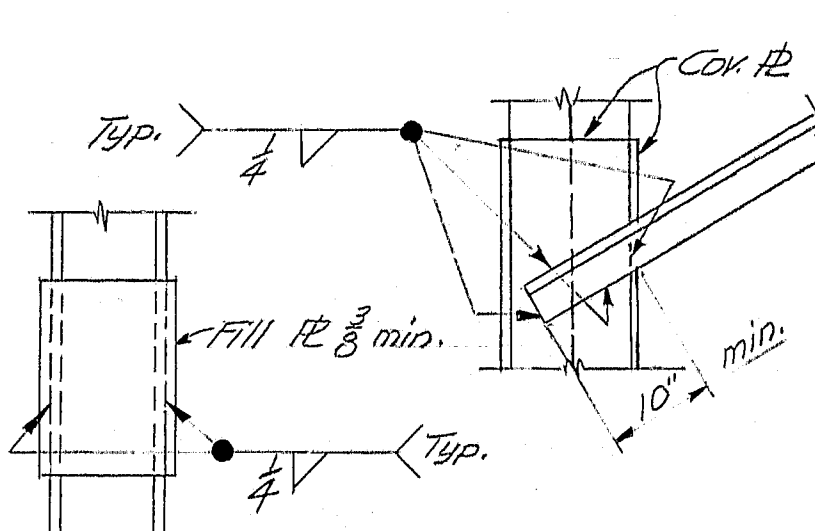
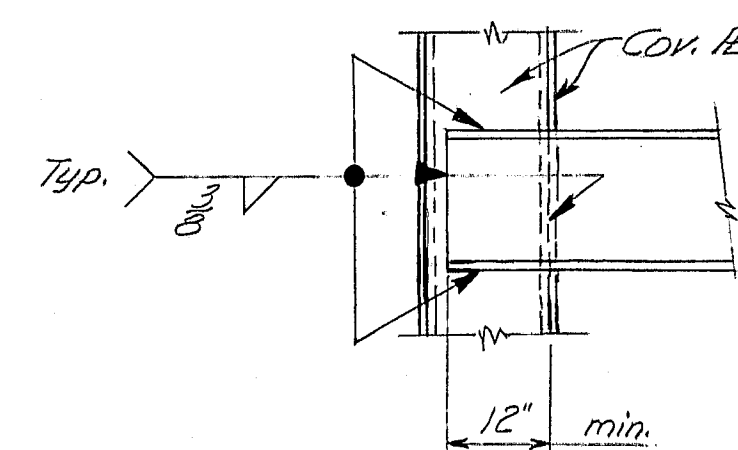
SECTION B-B  
(at approx. Elev. 11.00)  
NOTE: All cross bracing & diagonals  
shall be angles 6x6x $\frac{3}{8}$ .  
PIER #2 & #7



COVER PLATE DETAIL

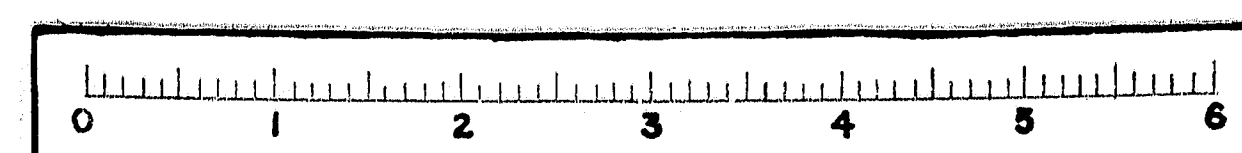


TYPICAL CHANNEL CONNECTIONS



TYPICAL ANGLE CONNECTIONS

Fill 12 may be used to  
accommodate connections  
on approval of the Engineer.



PLANS	DESIGN - DETAIL	CHECKED	REVISIONS	FIELD CHANGES
1	ALL	ALL	ALL	ALL
2	ALL	ALL	ALL	ALL
3	ALL	ALL	ALL	ALL
4	ALL	ALL	ALL	ALL
5	ALL	ALL	ALL	ALL
6	ALL	ALL	ALL	ALL
7	ALL	ALL	ALL	ALL
8	ALL	ALL	ALL	ALL
9	ALL	ALL	ALL	ALL
10	ALL	ALL	ALL	ALL
11	ALL	ALL	ALL	ALL
12	ALL	ALL	ALL	ALL
13	ALL	ALL	ALL	ALL
14	ALL	ALL	ALL	ALL
15	ALL	ALL	ALL	ALL
16	ALL	ALL	ALL	ALL
17	ALL	ALL	ALL	ALL
18	ALL	ALL	ALL	ALL
19	ALL	ALL	ALL	ALL
20	ALL	ALL	ALL	ALL

STATE HIGHWAY COMMISSION  
MACHIAS RIVER BRIDGE  
BETWEEN THE TOWNS OF  
MACHIASPORT &  
EAST MACHIAS  
WASHINGTON COUNTY  
PILE-BENT PIER DETAILS  
SHEET 19A OF 45 AUGUSTA, MAINE SEPT. 1970

122-132



S. P. R.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	#2253	20	45

# PIER NOTES - PIERS 2 THROUGH 7

1. Pier cap concrete to be class "A"
2. Concrete for Structural Concrete Pile Casings shall be class "V" as altered in the Special Provisions Section 502
3. No Pier cap concrete shall be placed on a pier until the concrete has been placed in all the pile casings of the pier for at least (7) seven days
4. Piers No. 2 thru No. 7 shall not be subjected to river ice loads before the Superstructure is in place.
5. Piles to be 14 BP 89  
Pile Load = 118 Tons  
Piles shall be driven to practical or absolute refusal.
6. Piles shall be battered 2" per foot in direction of the arrow.
7. All Pier bracing shall be in place and bracing welds complete before concrete in cap is placed
8. One Cover plate per pile, at the top of the Structural Concrete Pile Casings may be left off to make room for a transverse weld on just prior to completion of the filling of the casing. This shall be done while the concrete just below the cover plates is still fluid and shall be done in a manner so that no "cold" joints will occur in the concrete and no deleterious material is trapped.
9. All pier bracing members shall meet ASTM A36
10. For estimated pile lengths see sheet #19
11. Pier framing is to be painted from top of Structural Concrete Pile Casings to the bottom of the pier caps. This painting shall conform to Section 506 "Painting Structural Steel" and will be paid for under Item 506.14

NOTE: For Sections A-A & B-B and Details of connections see sheet #19A  
For Pile Notes see sheet #19 and above

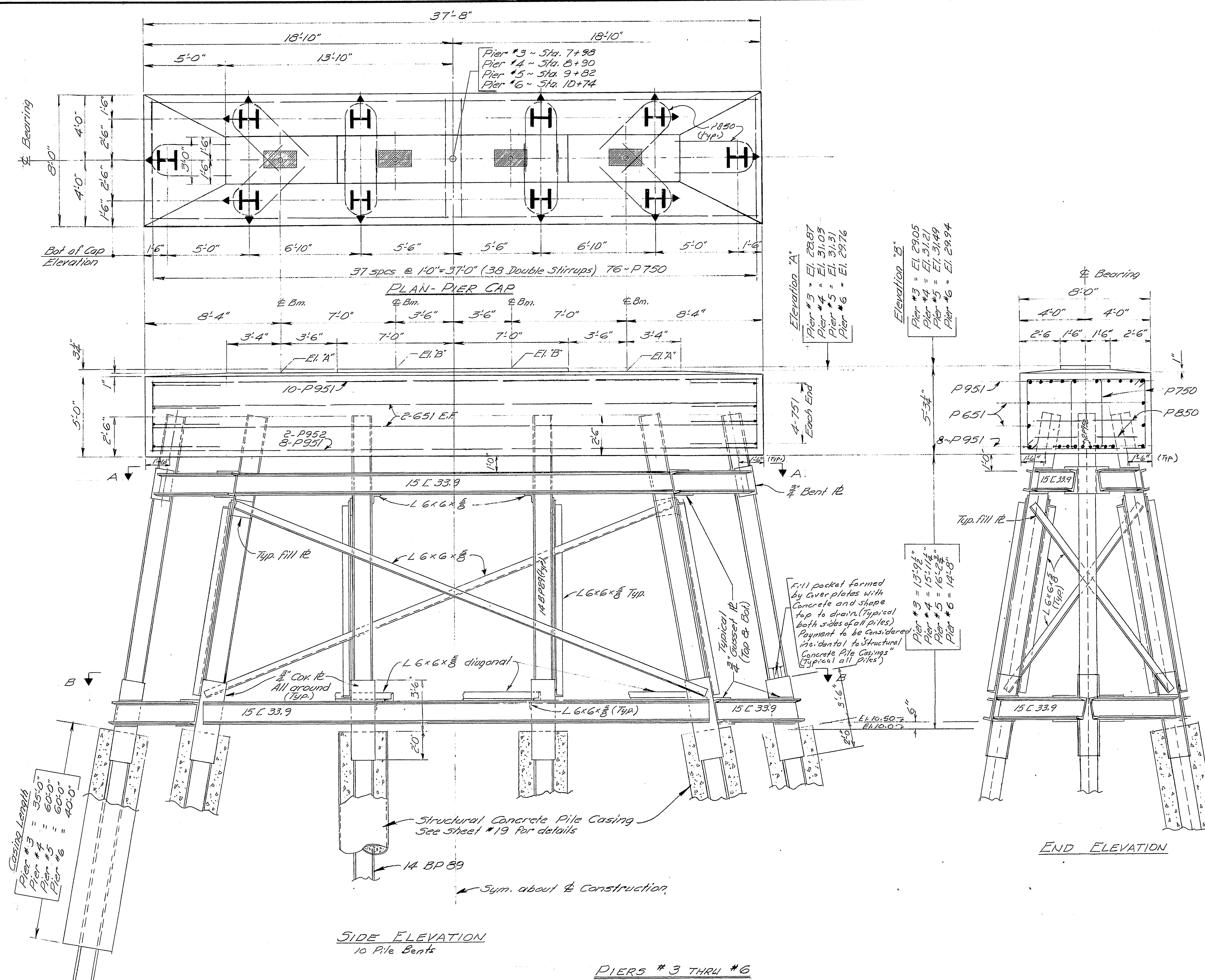
STATE HIGHWAY COMMISSION

## MACHIAS RIVER BRIDGE BETWEEN THE TOWNS OF MACHIASPORT & EAST MACHIAS WASHINGTON COUNTY

PIER NO. 3, 4, 5 AND 6

SHEET 20 OF AUGUSTA, MAINE SEPT. 1970

122-133

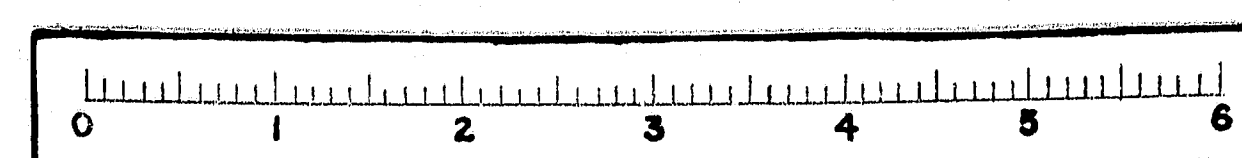


PLANS	DESIGN - ALL	BY	DATE
DESIGN - DETAILED	ALL	SMC	8-70
CHECKED	J.C.	M.E.R.	9-70
REVISIONS			
FIELD CHANGES			

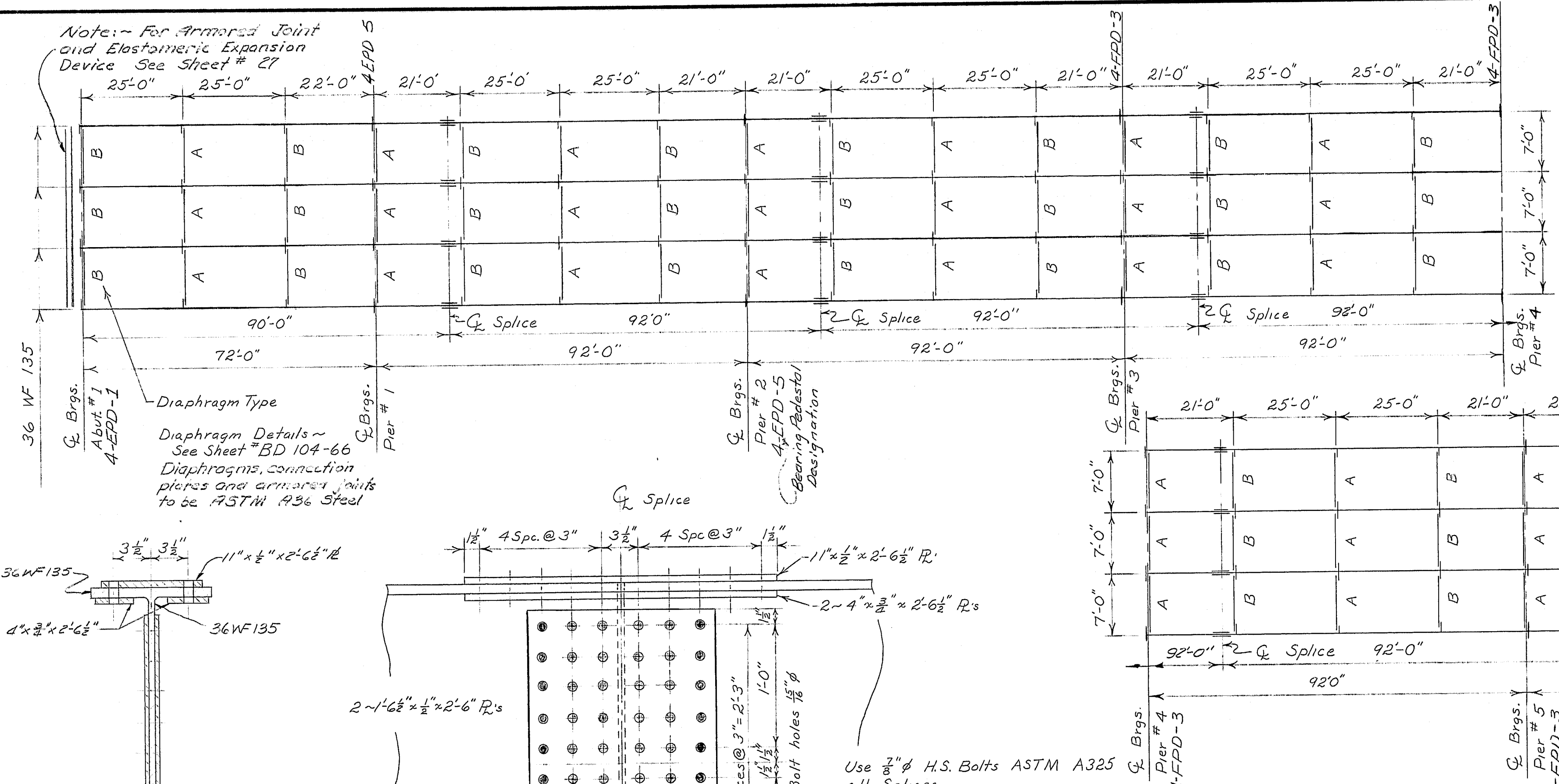
Casing Length  
Pier #3 = 35'-0"  
Pier #4 = 60'-0"  
Pier #5 = 60'-0"  
Pier #6 = 40'-0"

SIDE ELEVATION  
10 Pile Bents

PIERS #3 THRU #6

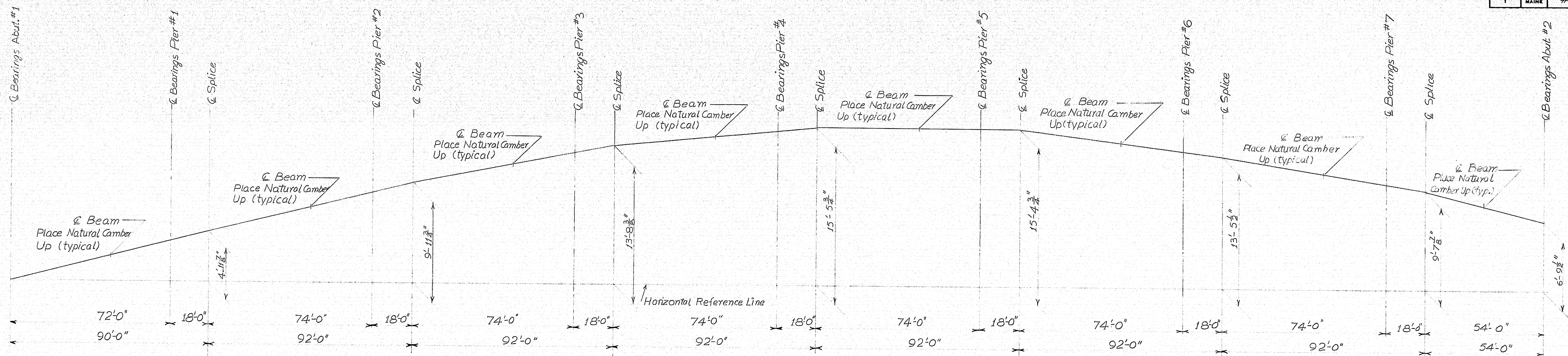








S. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	#2253	22	45

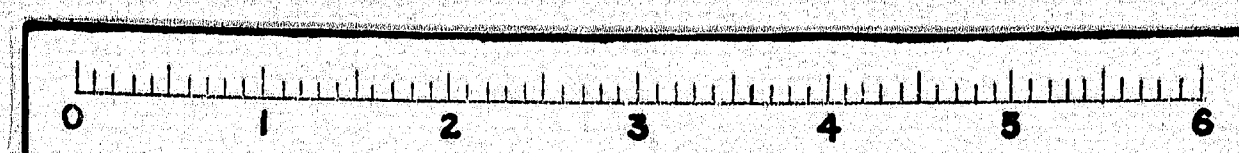


BEAM SLOPES

PLANS	DATE
DESIGN - DETAILED	7/8/70
CHECKED	9/10/70
REVISIONS	
FIELD CHANGES	

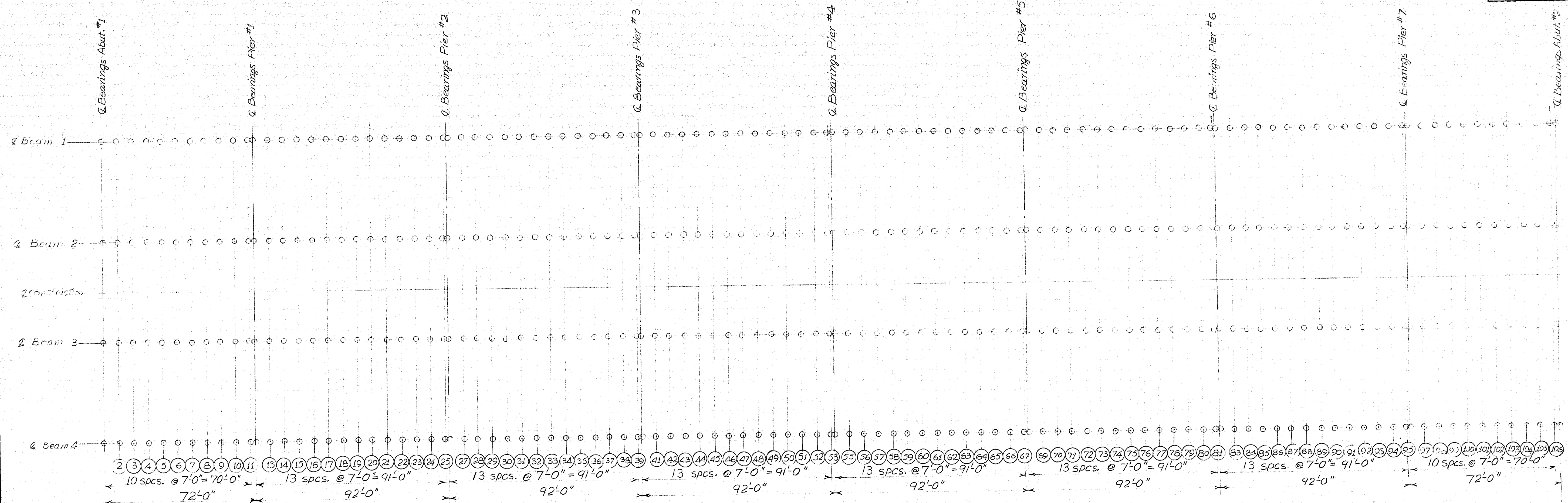
STATE HIGHWAY COMMISSION  
**MACHIAS RIVER BRIDGE**  
 BETWEEN THE TOWNS OF  
**MACHIASPORT &  
 EAST MACHIAS**  
 WASHINGTON COUNTY  
 BEAM SLOPES  
 SHEET 22 OF 45 AUGUSTA, MAINE JUNE 1970

122-135





S. P. & L. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	#2253	23	45

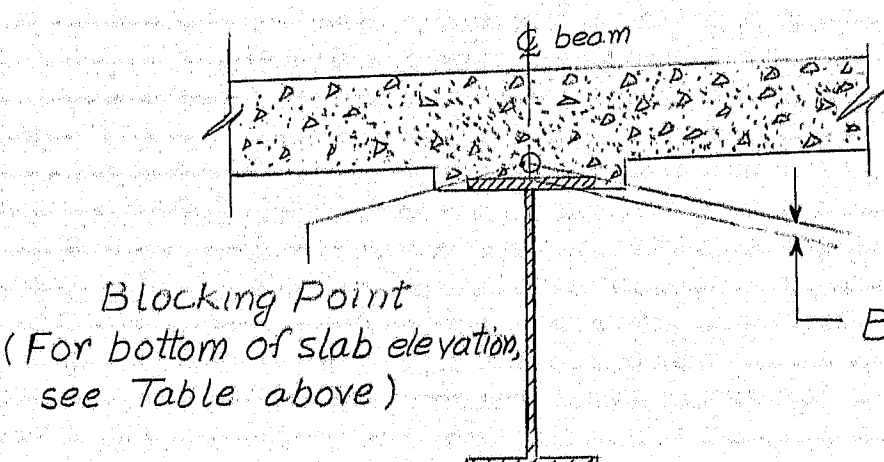


BLOCKING POINTS DIAGRAM

BOTTOM OF SLAB ELEVATIONS

	G.B.g. Abur1												G.B.g. Per1												G.B.g. Per2												G.B.g. Per3												G.B.g. Per4												G.B.g. Abur2											
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54																			
Beam 1&4	20.08	20.49	20.90	21.30	21.69	22.07	22.44	22.82	23.18	23.56	23.93	24.04	24.44	24.83	25.24	25.65	26.05	26.44	26.83	27.20	27.57	27.93	28.30	28.66	29.04	29.10	29.47	29.85	30.21	30.57	30.91	31.24	31.54	31.84	32.10	32.35	32.60	32.83	33.07	33.10	33.33	33.57	33.80	34.01	34.22	34.40	34.56	34.71	34.83	34.95	35.05	35.14	35.24	35.25																		
Beam 2&3	20.26	20.68	21.08	21.48	21.87	22.26	22.63	23.00	23.36	23.74	24.11	24.22	24.62	25.02	25.43	25.83	26.24	26.62	27.01	27.38	27.76	28.12	28.48	28.85	29.22	29.28	29.66	30.03	30.39	30.75	31.10	31.43	31.73	32.02	32.28	32.53	32.78	33.02	33.25	33.28	33.52	33.75	33.98	34.19	34.40	34.58	34.75	34.89	35.01	35.13	35.23	35.33	35.42	35.43																		
	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107																			
Beam 1&4	35.34	35.43	35.52	35.59	35.66	35.70	35.72	35.70	35.67	35.63	35.58	35.54	35.53	35.48	35.43	35.38	35.31	35.22	35.12	35.00	34.86	34.71	34.54	34.36	34.16	33.98	33.75	33.76	33.57	33.37	33.16	32.94	32.70	32.44	32.16	31.87	31.56	31.22	30.90	30.56	30.51	30.17	29.85	29.50	29.15	28.78	28.42	28.04	27.68	27.32	26.96	26.87																				
Beam 2&3	35.53	35.61	35.70	35.77	35.84	35.88	35.90	35.90	35.88	35.85	35.81	35.77	35.72	35.71	35.66	35.61	35.56	35.49	35.41	35.31	35.19	35.05	34.89	34.72	34.54	34.35	34.16	34.13	33.95	33.75	33.56	33.35	33.12	32.88	32.62	32.34	32.05	31.74	31.40	31.08	30.74	30.69	30.35	30.03	29.69	29.33	28.97	28.60	28.22	27.86	27.50	27.14	27.05																			

NOTES:  
The 'Bottom of Slab Elevations' in the Table include Dead Load Deflections.  
Before setting forms for bottom of slab, the welding of shear connectors to the top flange and diaphragms to the connection plates must be completed. No slab form must be started before slab elevations are taken.



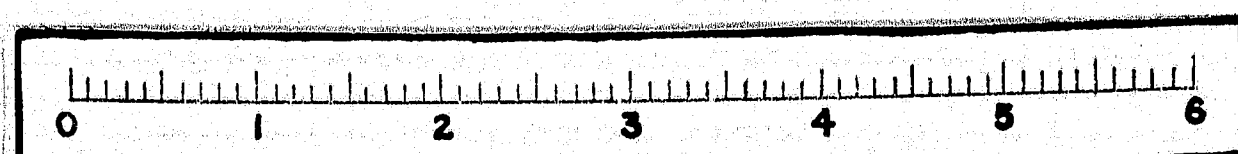
BLOCKING POINT DETAIL

Following is the blocking used at the bearings. These values are for use as a reference only and are not to be used to set blocking points, by the Contractor.

Abut. #1 = 2"	Abut. #2 = 2"
Pier #1 = 1 1/2"	
" #2 = 2 1/2"	
" #3 = 2 1/2"	
" #4 = 2 1/2"	
" #5 = 2 1/2"	
" #6 = 2"	
" #7 = 2 1/2"	

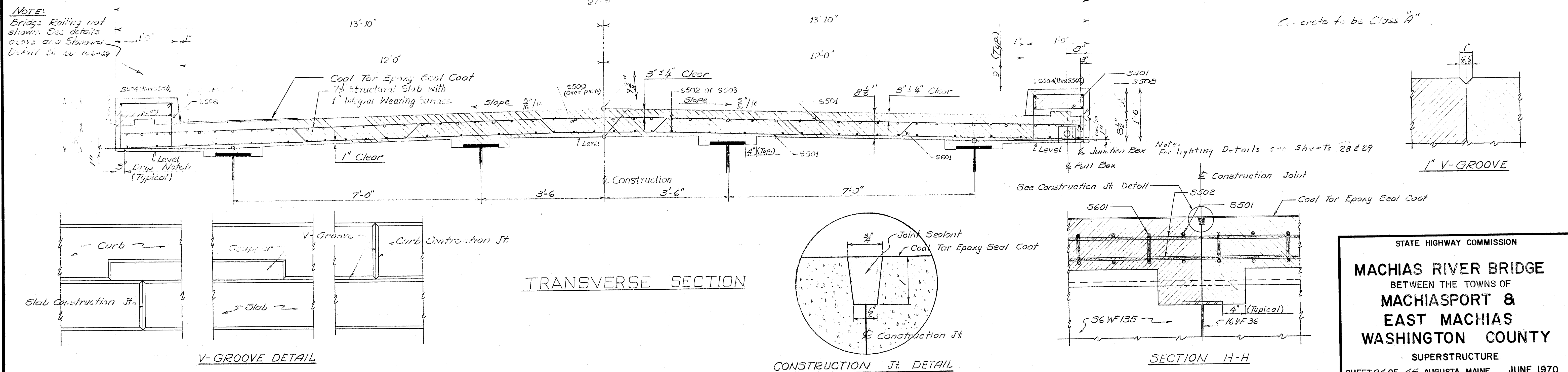
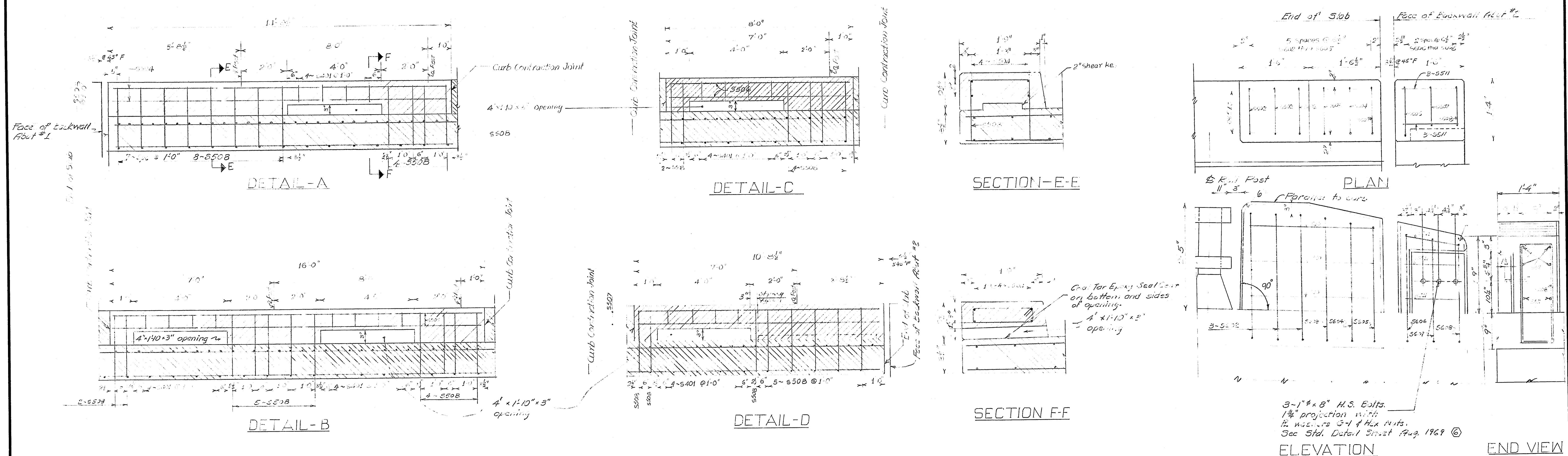
STATE HIGHWAY COMMISSION  
MACHIAS RIVER BRIDGE  
BETWEEN THE TOWNS OF  
MACHIASPORT &  
EAST MACHIAS  
WASHINGTON COUNTY  
BOTTOM OF SLAB ELEVATIONS  
SHEET 23 OF 45 AUGUSTA, MAINE JUNE 1970

122-136





R.F.R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	#2258	24	45



STATE HIGHWAY COMMISSION

**MACHIAS RIVER BRIDGE**

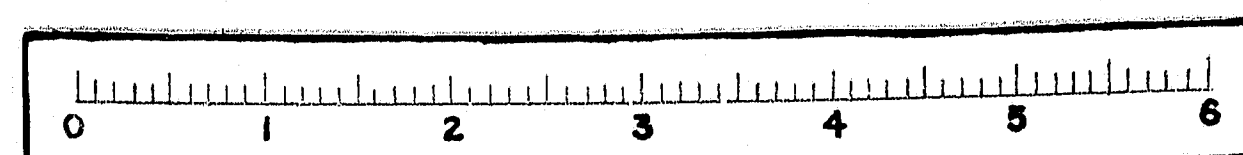
BETWEEN THE TOWNS OF

**MACHIASPORT & EAST MACHIAS**

WASHINGTON COUNTY

SUPERSTRUCTURE

SHEET 24 OF 45 AUGUSTA, MAINE JUNE 1970



PLANS	DESIGN - DETAILED	CHECKED	REVISIONS	FIELD CHANGES
BY	DATE			
J.C.	7/15/70			
M.M.	7/15/70			



B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	#2253	25	45

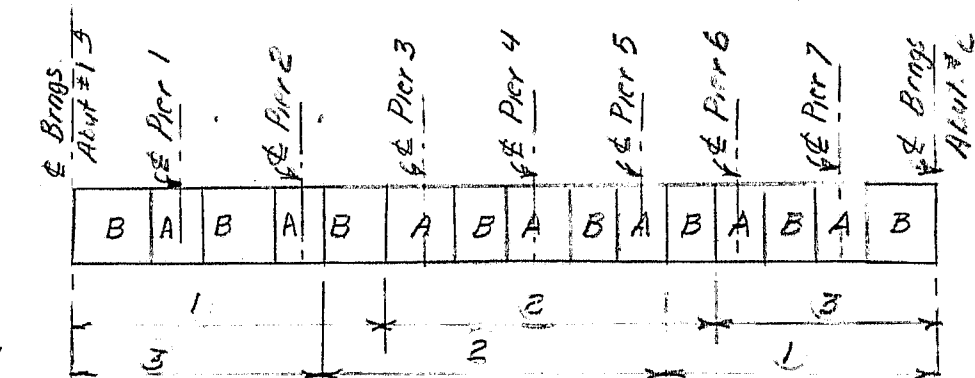
SUPERSTRUCTURE NOTES

1. Lay all Contraction Joints in curves, crack the 1st joint in the center of the curve, by a method to be approved by the Engineer.
2. Form a 1" V-Groove on the outside faces of curves of each contraction joint.
3. Chisel all exposed edges of concrete to unless ready.
4. Do not break the bond between the concrete surfaces of vertical contraction joints in Superstructure Slabs.
5. Form a 1" V-Groove on the outside faces of Slabs of each Contraction Joint.
6. Chisel away each joint to form a clear cover, unless otherwise noted.
7. All reinforcement steel cables and encasements are to be covered with 2" of concrete.
8. For the 1st and 2nd face of curve, cross of slab, finish with a 1/2" wide and 1/4" deep, side to side surface and a 1/2" wide and 1/4" deep, bottom to top surface.
9. Coat surfaces of Superstructure with a 1/2" of concrete and 2" of water, Coat Top Epoxy Seal Coat.

Street in Sub  
500-1000 - General

For the concrete placement method used concrete shall be placed in lift. E' points in bottom concrete shall be placed in the 'B' portion. E' point of the concrete reinforcement shall be placed first with the 'E' points at all elevations placed last in the 'B' panel placement.

Continuous Placement  
If the contractor is to place material in a continuous manner, he will have the option of placing the material in one or more lifts. In the continuous placement, or up to three individual continuous placements. In the latter case, it is assumed that the contractor spreads the entire width of the lift and then continues by laying the continuous placement. Since 2015 prices are only based on the lift of "Lor 12" one continuous spread for the entire width, two days until deployment of the lift is permitted. If the continuous placement method is used in a lift, which is approved by the Engineer, it is necessary to be the "continuous" and longer than for the complete lift, before the grain being placed.  
If the continuous method is used, payment for the material shall be made in accordance with Chapter 502 of the Standard Specifications.



SCHEMATIC DIAGRAM

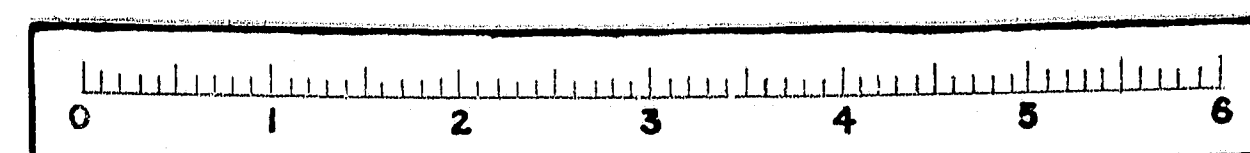
Showing continuous placement by combining panels as in 1, 2, 3. (For alternate methods, see above.)

STATE HIGHWAY COMMISSION

**MACHIAS RIVER BRIDGE**  
BETWEEN THE TOWNS OF  
**MACHIASPORT &**  
**EAST MACHIAS**  
**WASHINGTON COUNTY**

SUPERSTRUCTURE

SHEET 25 OF 45    AUGUSTA, MAINE    JUNE 1970





# "REINFORCING STEEL SCHEDULE"

ABUTMENT #1					
BENT BARS					
<p>The diagram shows bent bars for Abutment #1. It includes sections for A430 &amp; A431 (1'-8" wide, 1'-0" high), A557 &amp; A558 (1'-0" wide, 1'-3" high), A430 &amp; A451 (1'-0" wide, 1'-0" high), A550 (6'-0" wide, 1'-3" high), A560 &amp; A561 (9" wide, 3'-3" high), and A562 (6" wide, 2'-9" high).</p>					
MARK	SIZE	No.	LENGTH	LOCATION	
A430	#4	8	3'-8"	Bridge Seats	
A431	#4	8	2'-10"	Bridge Seats	
A550	#5	40	15'-0"	Right & Left Wing	
A557	#5	4	3'-6"	Curb	
A558	#5	4	3'-9"	Curb	
A560	#5	4	8'-10"	End Post	
A561	#5	2	8'-4"	End Post	
A562	#5	2	7'-0"	End Post	
STRAIGHT BARS					
MARK	SIZE	No.	LENGTH	LOCATION	
A551	#5	4	23'-6"	Right Wing	
A552	"	4	13'-6"	Left Wing	
A553	"	8	5'-3"	Backwall	
A554	"	40	4'-6"	Backwall	
A555	"	16	13'-4"	Backwall	
A556	"	40	3'-3"	Abutment	
A559	"	40	3'-0"	Abutment	
A563	#5	12	4'-6"	End Post	
A660	#6	15	10'-0"	Footings	
A661	#6	11	15'-0"	Footings	
Checked C.V. & N.E.K					

ABUTMENT #2																																																																																					
BENT BARS																																																																																					
<table><thead><tr><th>MARK</th><th>SIZE</th><th>NO.</th><th>LENGTH</th><th>LOCATION</th></tr></thead><tbody><tr><td>A400</td><td>#4</td><td>8</td><td>3'-0"</td><td>Bridge Seats</td></tr><tr><td>A401</td><td>#4</td><td>8</td><td>4'-0"</td><td>Bridge Seats</td></tr><tr><td>A500</td><td>#5</td><td>4</td><td>20'-0"</td><td>Abutment &amp; Wing Near Face</td></tr><tr><td>A503</td><td>#5</td><td>16</td><td>5'-5"</td><td>Abutment</td></tr><tr><td>A508</td><td>#5</td><td>4</td><td>5'-4"</td><td>Curb</td></tr><tr><td>A606</td><td>#6</td><td>2</td><td>7'-4"</td><td>End Post</td></tr><tr><td>A607</td><td>#6</td><td>2</td><td>6'-6"</td><td>End Post</td></tr><tr><td>A608</td><td>#6</td><td>2</td><td>6'-4"</td><td>End Post</td></tr></tbody></table>						MARK	SIZE	NO.	LENGTH	LOCATION	A400	#4	8	3'-0"	Bridge Seats	A401	#4	8	4'-0"	Bridge Seats	A500	#5	4	20'-0"	Abutment & Wing Near Face	A503	#5	16	5'-5"	Abutment	A508	#5	4	5'-4"	Curb	A606	#6	2	7'-4"	End Post	A607	#6	2	6'-6"	End Post	A608	#6	2	6'-4"	End Post																																			
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A606	#6	2	7'-4"	End Post																																																																																	
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A608	#6	2	6'-4"	End Post																																																																																	
STRAIGHT BARS																																																																																					
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MARK	SIZE	NO.	LENGTH	LOCATION																																																																																	
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Checked J.C. & M.E.																																																																																					

SUPERSTRUCTURE					
BENT BARS					
<p>27'-4" MAX. OUT TO OUT</p> <p>4'-9" 4/16" 2'-11" 4/16" 3'-5" 4/16" 2'-11" 4/16" 3'-5" 4/16" 2'-11" 4/16" 4'-9"</p> <p>4/16" 7/16" 5/16" 7/16"</p> <p>S601</p> <p>2'-8" S602 2'-7" S603 2'-6" S604 2'-5" S605</p> <p>1/4" 7/16"</p> <p>1'-3" 1/2" 5/8" 7/16"</p> <p>S508</p> <p>3" 1'-3" 4/8" 7/16"</p> <p>S401</p>					
<u>S602, S603, S604 &amp; S605</u>					
MARK	SIZE	NO.	LENGTH	LOCATION	
S401	#4	688	3'-8"	Curb	
S508	#5	968	3'-9"	Curb	
S601	#6	697	27'-11"	Slab	
S602	#6	6	8'-0"	End Post	
S603	#6	2	7'-10"	End Post	
S604	#6	2	7'-8"	End Post	
S605	#6	2	7'-4"	End Post	
STRAIGHT BARS					
MARK	SIZE	NO.	LENGTH	LOCATION	
S501	#5	1394	27'-3"	Slab	
S502	#5	1518	30'-0"	Slab	
S503	#5	66	40'-0"	Slab	
S504	#5	8	14'-3"	Curb	
S505	#5	320	15'-6"	Curb	
S506	#5	32	7'-6"	Curb	
S507	#5	8	10'-3"	Curb	
S509	#5	182	20'-0"	Slab over Piers	
S510	#5	6	2'-8"	End Post of Abut. #2	
S511	#5	6	1'-2"	End Post of Abut. #2	
open End J.C. & N.E.					

# PIER NO. 1

## BENT BARS

P501 thru P511

P500

MARK	"d"	"b"	"c"	"d"
P501	3'-5"	11'-0"	2'-5"	4'-10"
P502	3'-2"	11'-0"	2'-5"	4'-6"
P503	3'-0"	11'-0"	2'-1 1/2"	4'-3"
P504	2'-10"	11'-0"	2'-0"	4'-0"
P505	2'-6"	11'-0"	1'-10"	3'-8"
P506	2'-5"	11'-0"	1'-8 1/2"	3'-5"
P507	2'-2"	11'-0"	1'-6 3/4"	3'-1"
P508	2'-0"	11'-0"	1'-5"	2'-10"
P509	1'-10"	10'-0"	1'-3 1/2"	2'-7"
P510	1'-7"	10'-0"	1'-2"	2'-3"
P511	1'-5"	10'-0"	1'-0"	2'-0"

MARK	SIZE	NO.	LENGTH	LOCATION
P500	#5	19	14'-6"	Pier Cap (Stirrup)
P501		2	28'-10"	Pier (Shaft)
P502			28'-4"	
P503			28'-0"	
P504			27'-8"	
P505			27'-1"	
P506			26'-10"	
P507			26'-4"	
P508			26'-0"	
P509			23'-8"	
P510			23'-2"	
P511	#5	2	22'-10"	Pier (Shaft)

## STRAIGHT BARS

MARK	SIZE	NO.	LENGTH	LOCATION
P512	#5	36	18'-6"	Pier (Shaft)
P513	#5	36	4'-6"	Pier Footing (Dowels)
P600	#6	10	27'-0"	Pier Cap (Bottom)
P700	#7	4	27'-0"	Pier Cap (Top)

# PIER NO. 2 thru PIER NO. 7

## BENT BARS

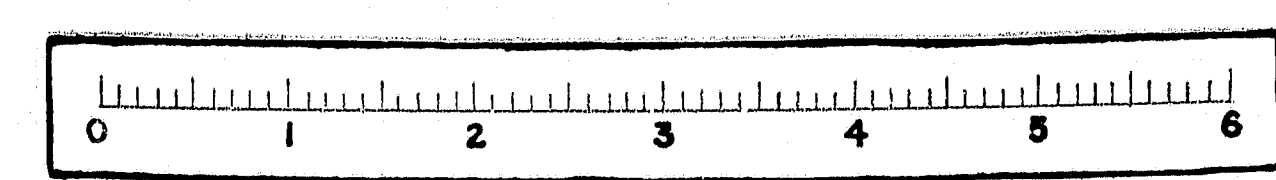
MARK	SIZE	NO.	LENGTH	LOCATION
P750	#7	416	18'-10"	All Pier Caps
P751	#7	48	15'-0"	All Pier Caps
P850	#8	112	12'-0"	All Pier Caps

## STRAIGHT BARS

MARK	SIZE	NO.	LENGTH	LOCATION
P650	#6	8	27'-0"	Pier Cap No. 2 & 7
P651	#6	16	37'-0"	Pier Cap No. 3, 4, 5 & 6
P950	#9	40	27'-0"	Pier Cap No. 2 & 7
P951	#9	72	37'-0"	Pier Cap No. 3, 4, 5 & 6
P952	#9	8	33'-0"	Pier Cap No. 3, 4, 5 & 6

Note: All dimensions are to E of Lave.  
Reinforcing Steel to be A615 Grade 60

STATE HIGHWAY COMMISSION  
**MACHIAS RIVER BRIDGE**  
BETWEEN THE TOWNS OF  
**MACHIASPORT &  
EAST MACHIAS**  
**WASHINGTON COUNTY**  
REINFORCING STEEL SCHEDULE  
SHEET 26 OF 45 AUGUSTA, MAINE JUNE 1970



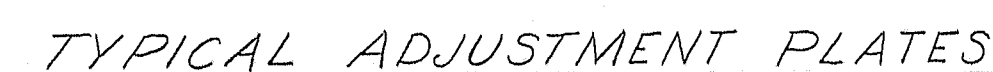
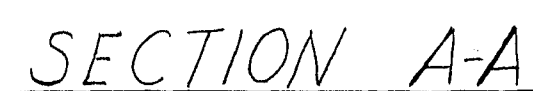
122-139



<b>PLANS</b>	DESIGN - DETAILED	BY	DATE
	CHECKED	CB	8-70
	REVISIONS		
	FIELD CHANGES		



### Construction

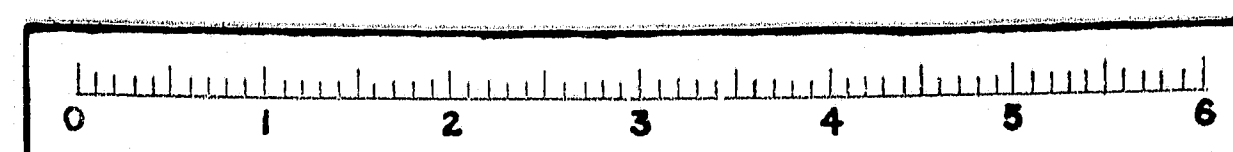


STATE HIGHWAY COMMISSION

**MACHIAS RIVER BRIDGE**  
BETWEEN THE TOWNS OF  
**MACHIASPORT &  
EAST MACHIAS**  
**WASHINGTON COUNTY**  
ELASTOMERIC EXPANSION DEVICE

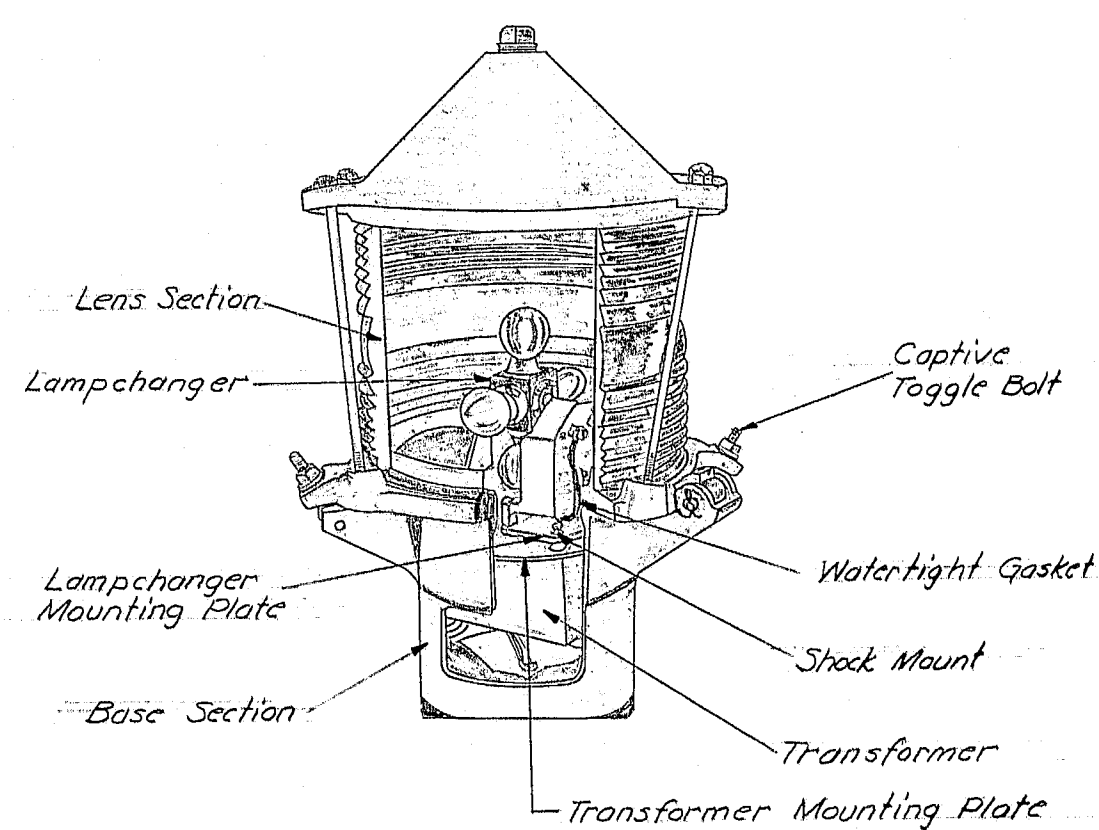
SHEET 27 OF 45      AUGUSTA, MAINE      SEPT 1970

122-140

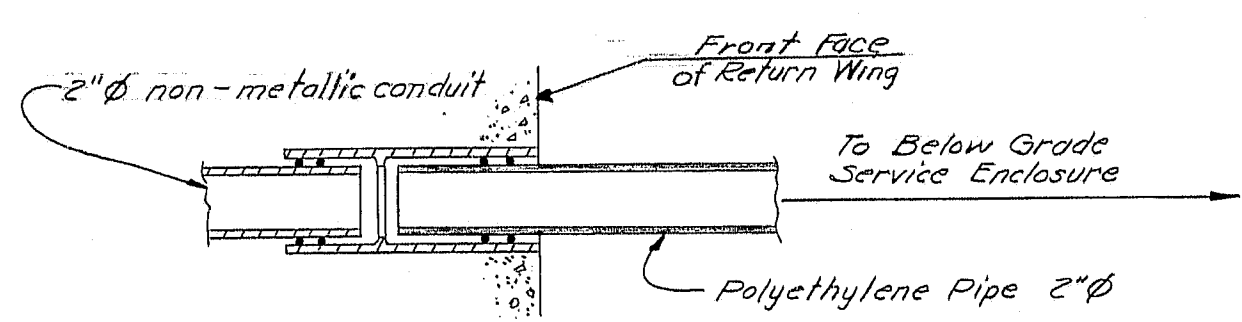




S.P.R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	#2253	28	45



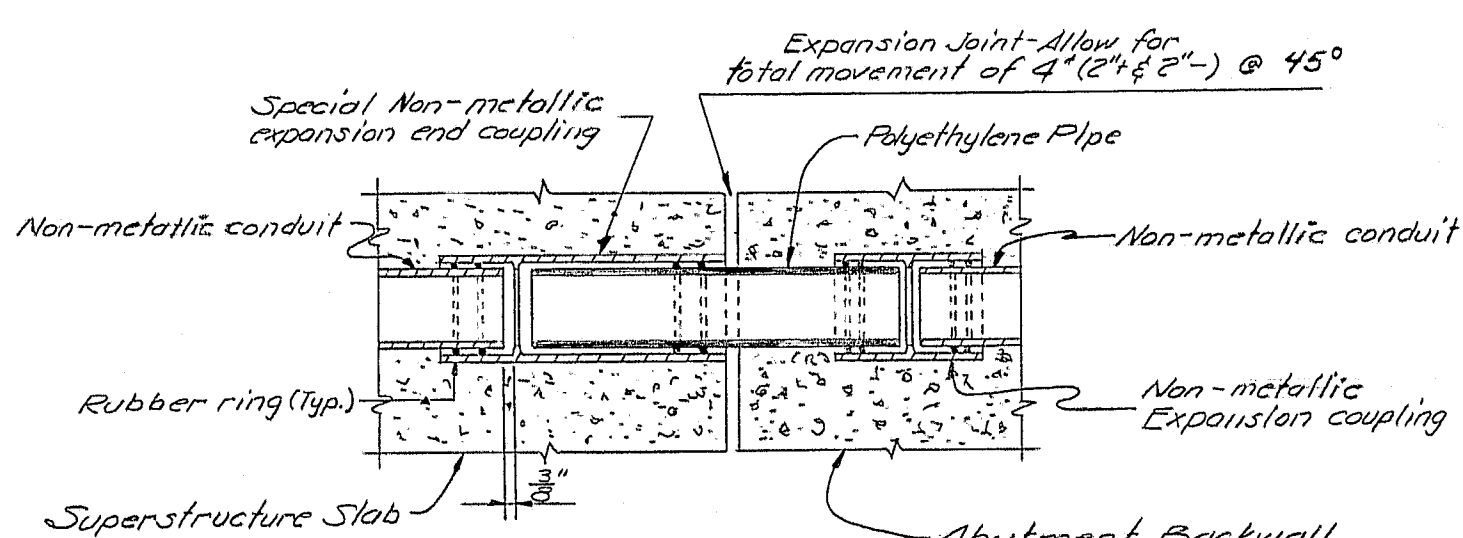
CUT-AWAY VIEW OF  
NAVIGATION LIGHT



CONNECTION BETWEEN NON-METALLIC CONDUIT EMBEDDED IN STRUCTURE  
AND DIRECT BURIED POLYETHYLENE PIPE

DEVICE AT SIDE OF RETURN WING

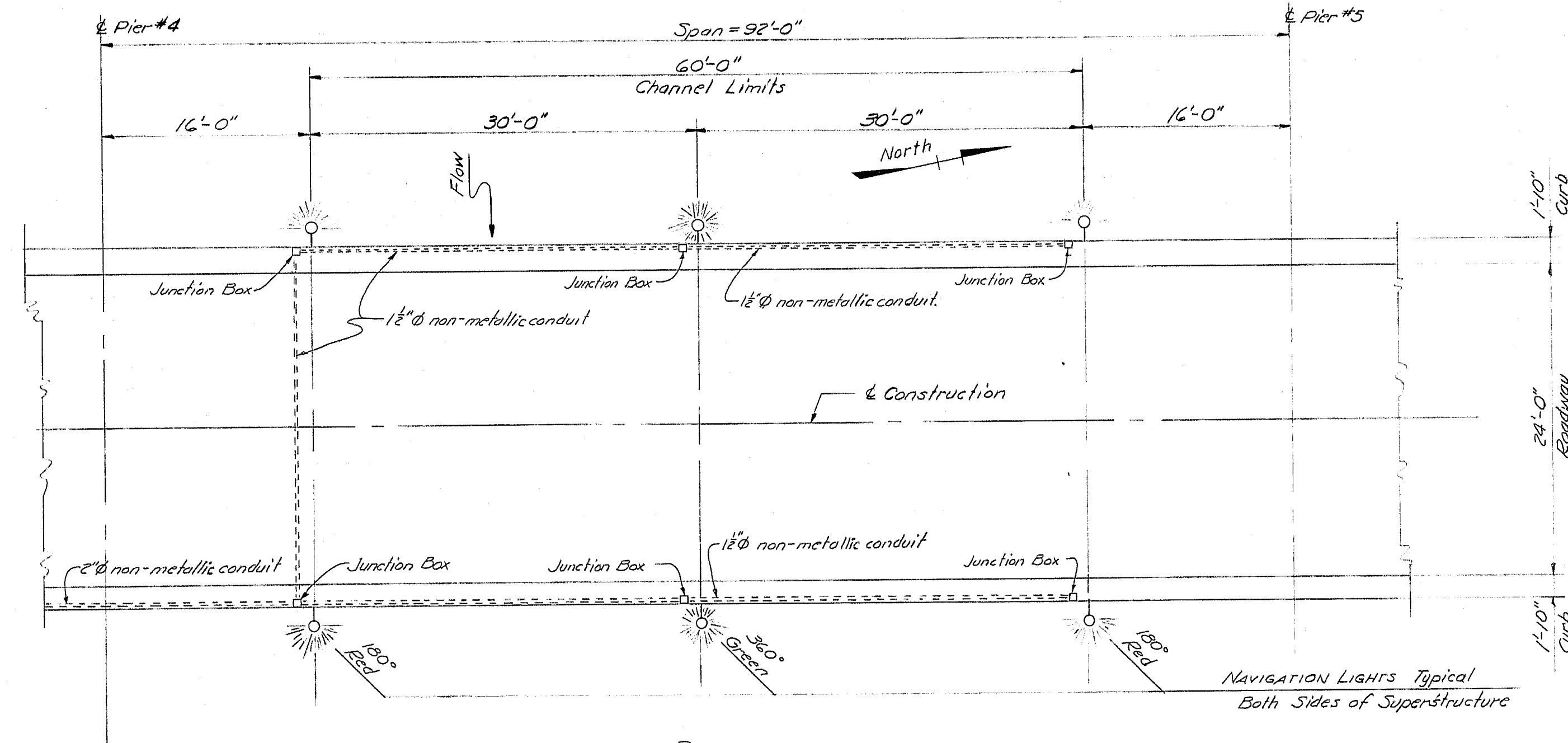
1- Required



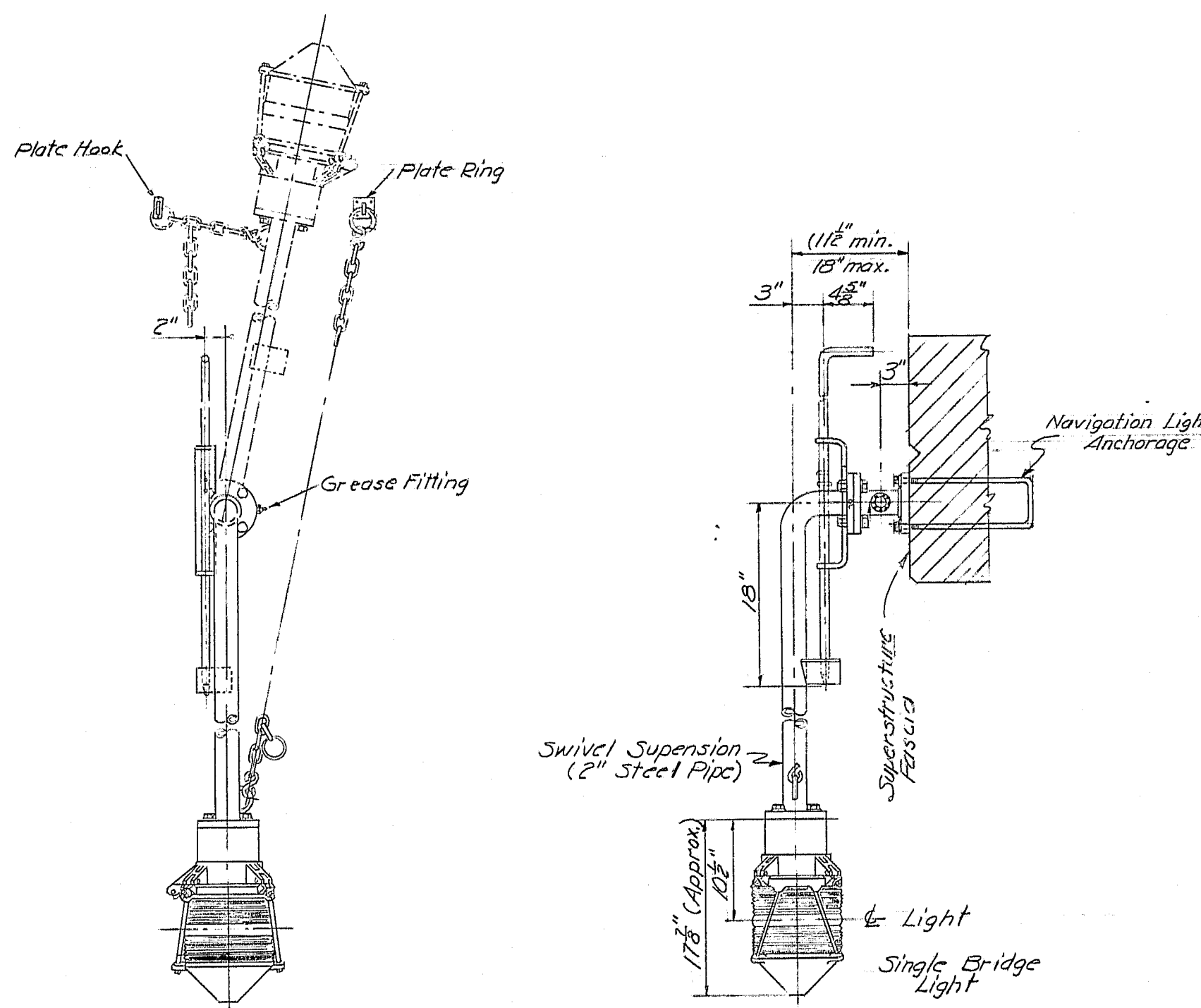
EXPANSION DEVICE FOR NON-METALLIC CONDUIT

AT ABUTMENT & END OF SLAB

1- Required



PLAN

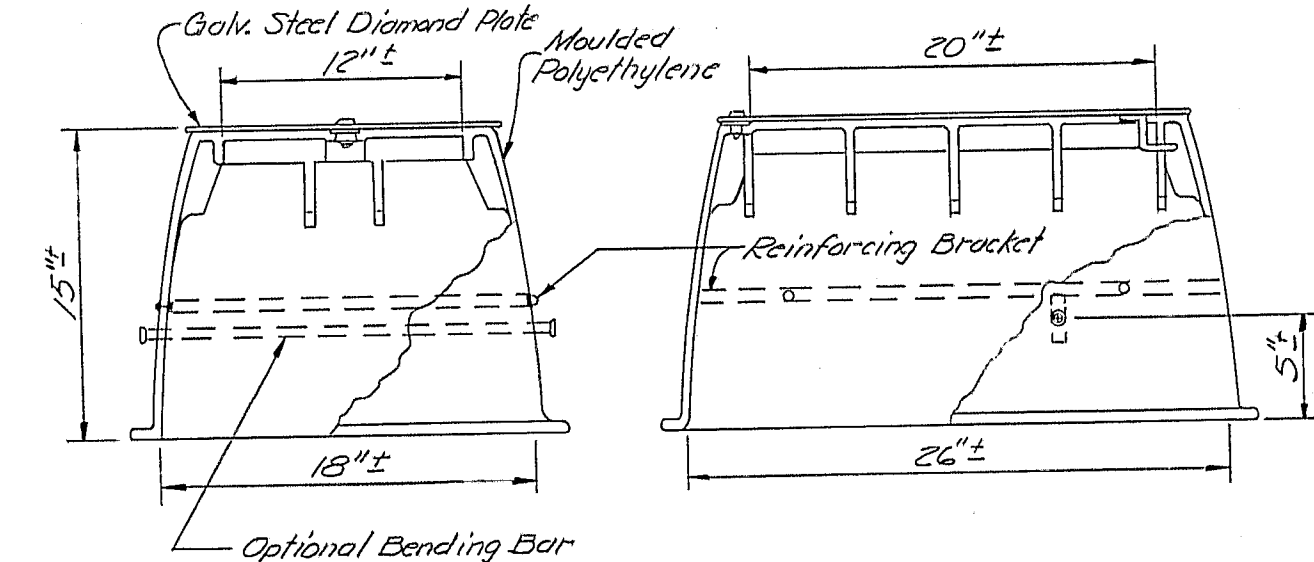


FRONT VIEW

SIDE VIEW

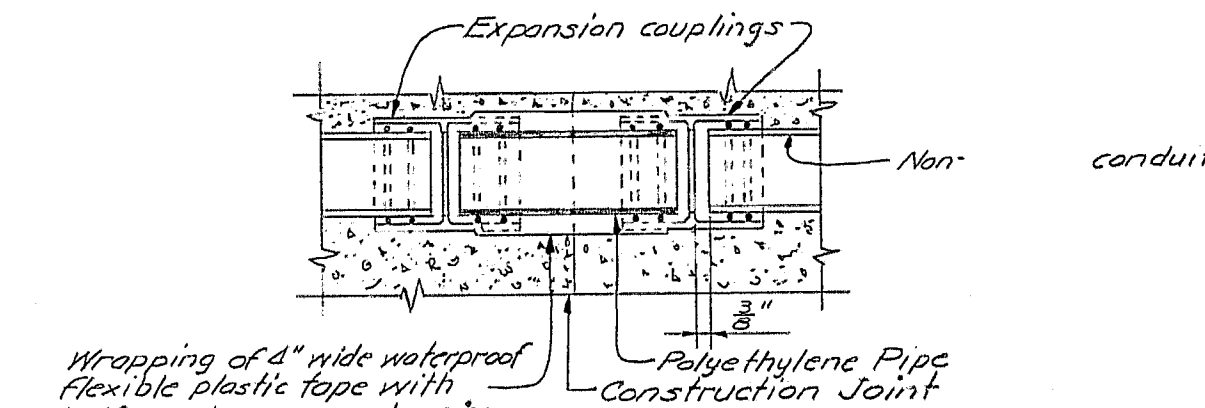
NAVIGATION LIGHT DETAILS

2- 360° Green Req.  
4- 120° Red Req.



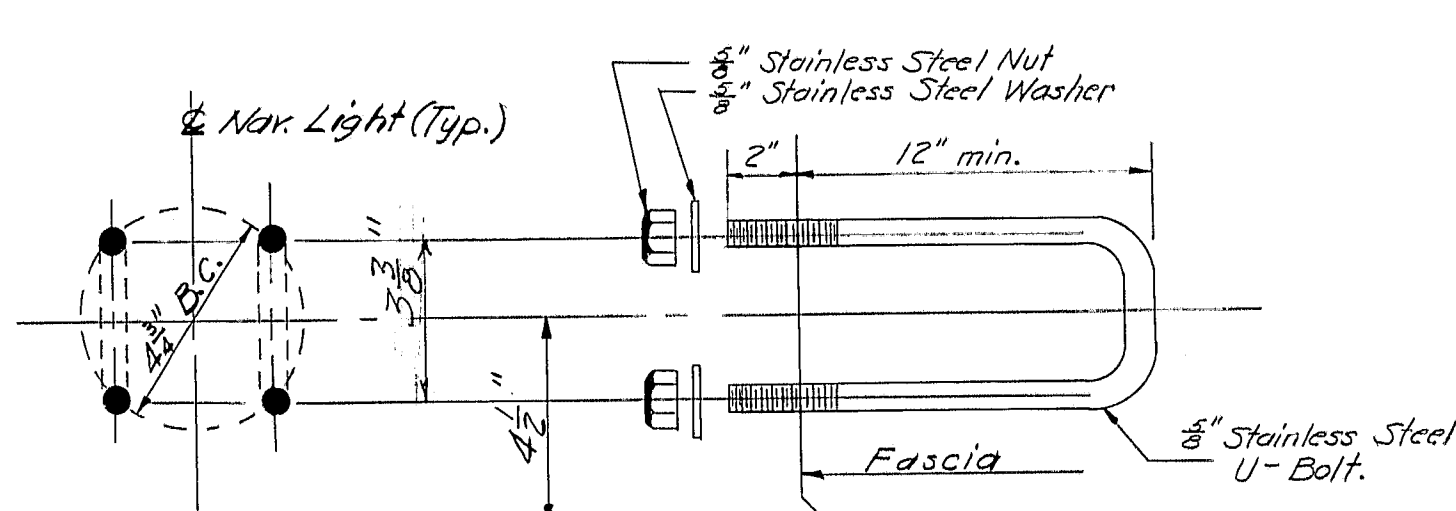
BELOW GRADE SERVICE ENCLOSURE

1- Required



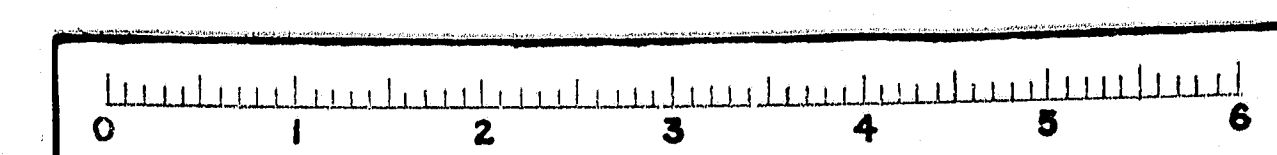
EXPANSION DEVICE FOR NON-METALLIC CONDUIT AT CONSTRUCTION JOINTS

12- Required



NAVIGATION LIGHT ANCHORAGE

12- Required



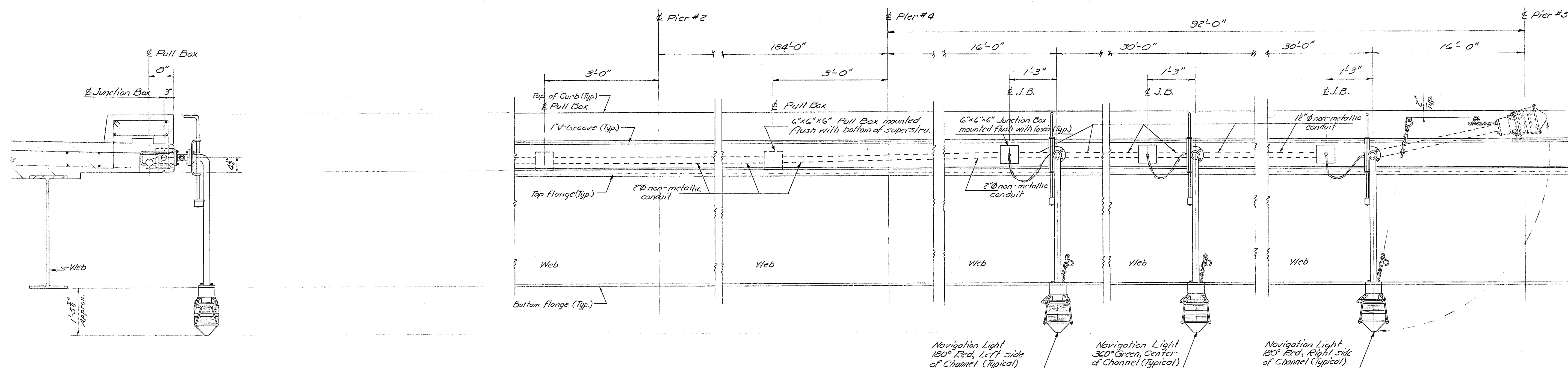
PLANS	DESIGN - DETAILED	CHECKED	REVISIONS	FIELD CHANGES
By: <i>W. E. G. Allen</i>	DATE: <i>8/17/70</i>	BY: <i>G. E. W. Chandler</i>	DATE: <i>8-70</i>	

STATE HIGHWAY COMMISSION  
MACHIAS RIVER BRIDGE  
BETWEEN THE TOWNS OF  
MACHIASPORT &  
EAST MACHIAS  
WASHINGTON COUNTY  
DETAILS OF NAVIGATION LIGHTING  
SHEET 28 OF 45 AUGUSTA, MAINE JUNE 1970

122-142

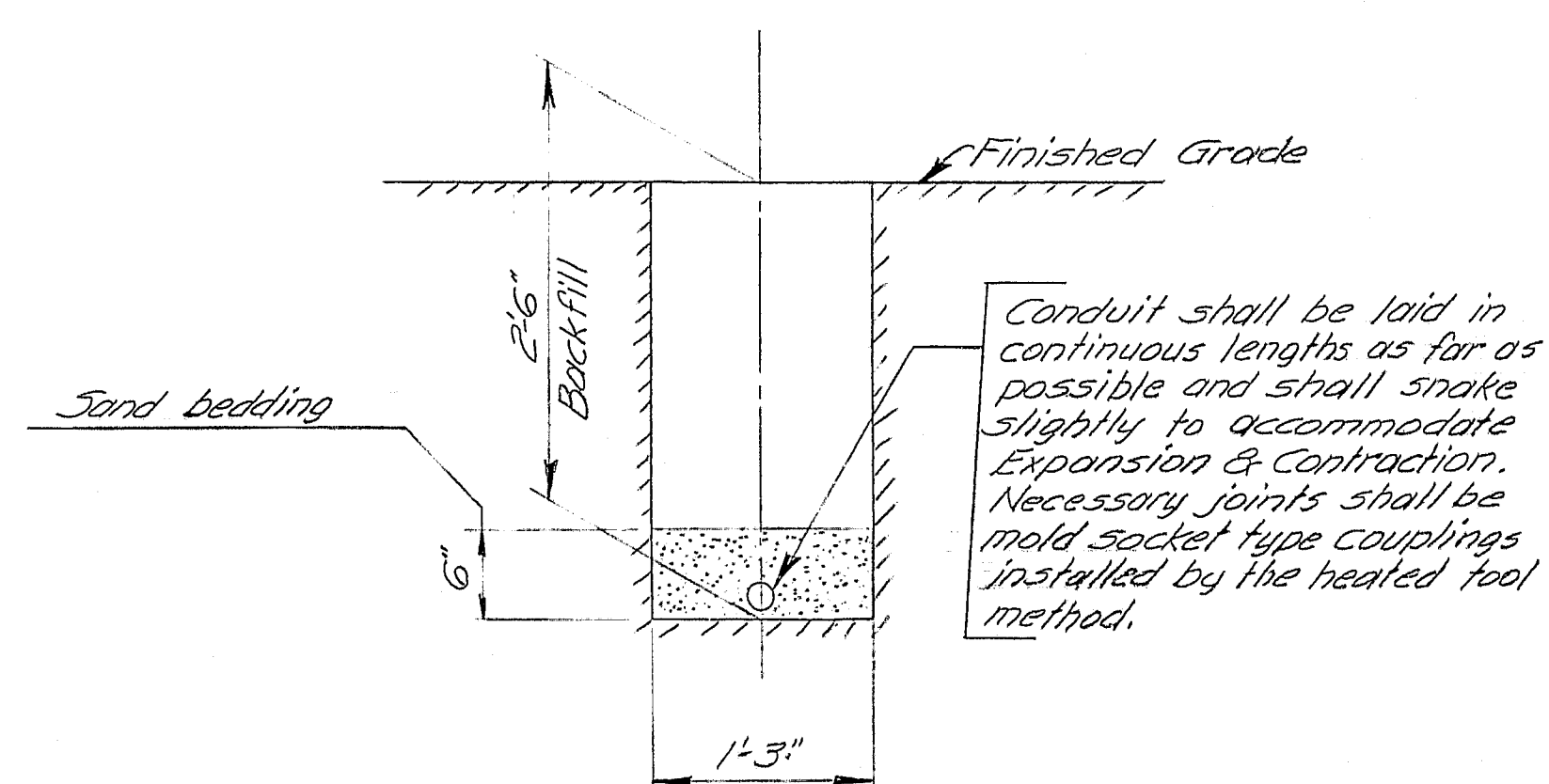


D. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	#2253	29	45



ELEVATION

NOTE:  
All Navigation Light Details are  
Typical of each location.  
All Details Typical both  
upstream & downstream side  
of Superstructure.

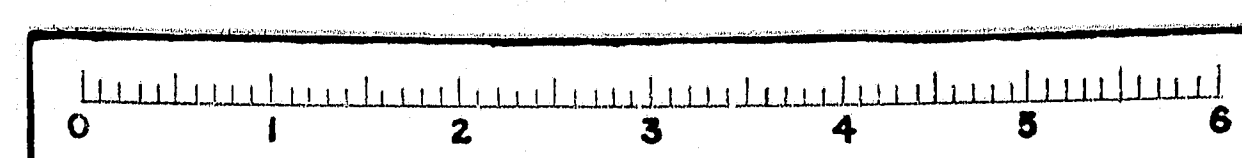


NON-METALLIC CONDUIT INSTALLATION  
Typical for Approaches

PLANS	By: Mr. E. J. Hall	DATE
	DESIGN - DETAIL	8/9/70
	CHECKED	Chandler
	REVISIONS	
	FIELD CHANGES	

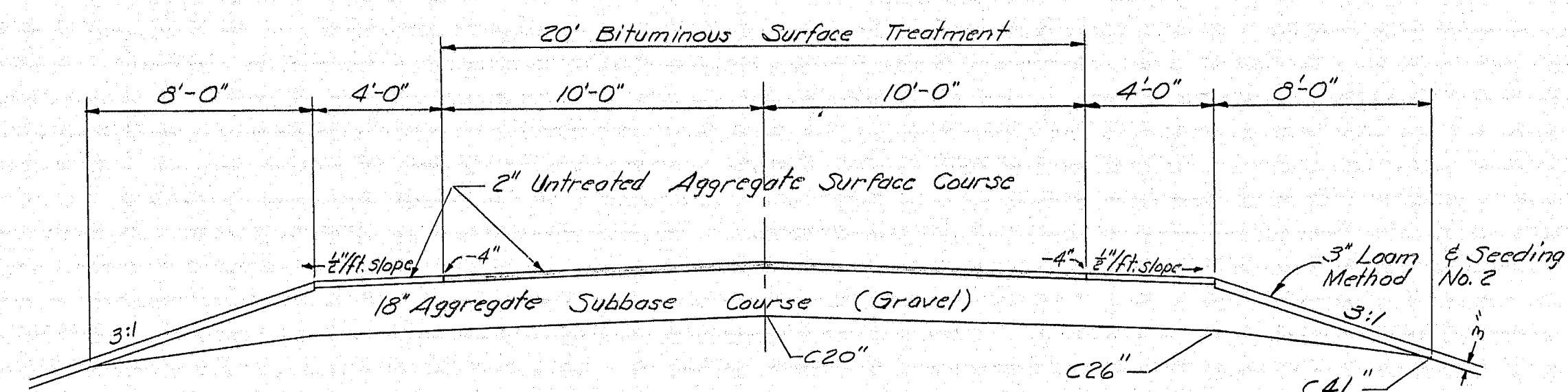
STATE HIGHWAY COMMISSION  
**MACHIAS RIVER BRIDGE**  
BETWEEN THE TOWNS OF  
**MACHIASPORT &  
EAST MACHIAS**  
**WASHINGTON COUNTY**  
DETAILS OF NAVIGATION LIGHTING  
SHEET 29 OF 45 AUGUSTA, MAINE JUNE 1970

122-142



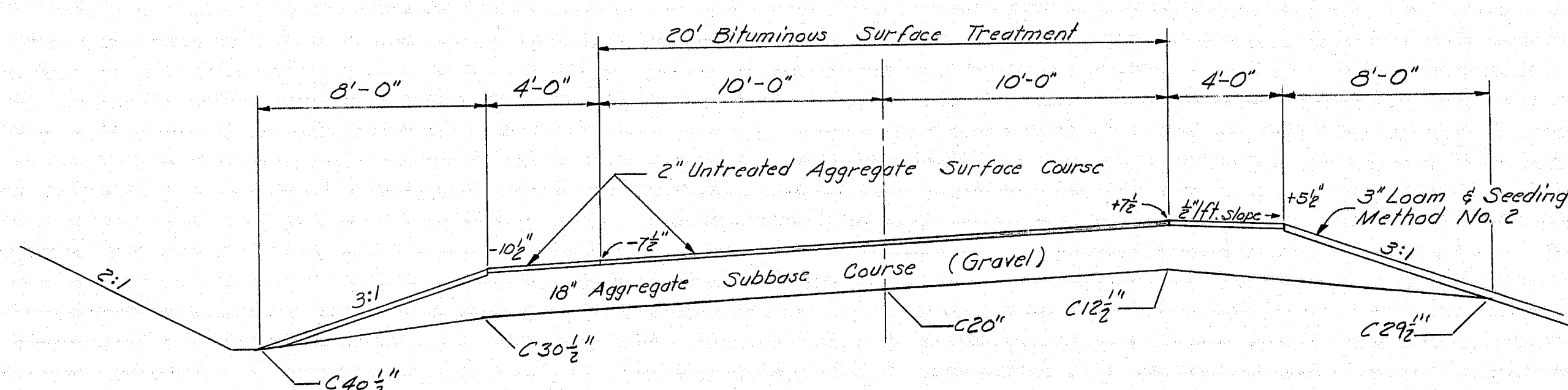


D. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	2253	30	45

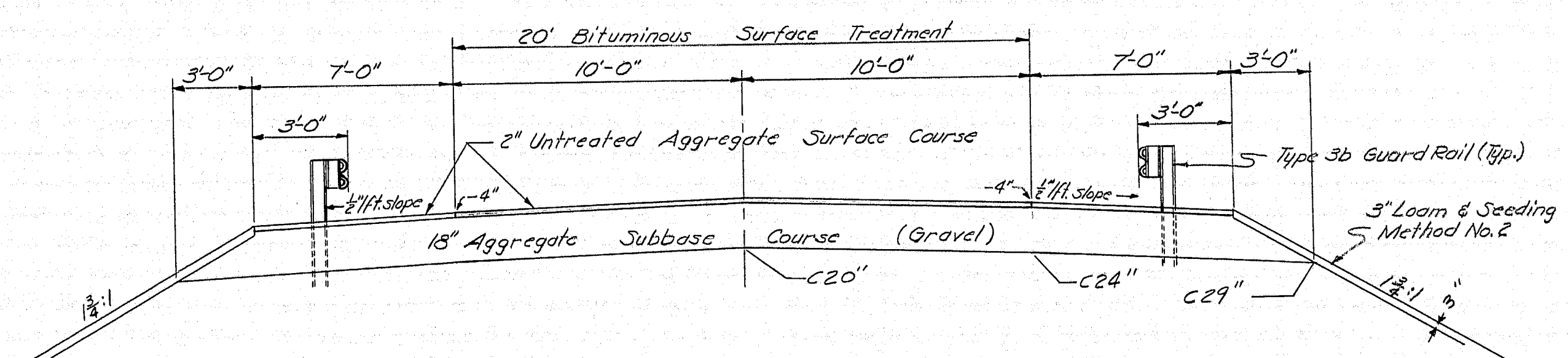


TYPICAL NORMAL SECTION

Note: Bituminous Material shall be Road Tar, RTS  
 Cover Coat material shall be "Cover Coat Material-Sand"  
 The Road Tar shall be applied in 3 applications of .5 gallons prime coat per sq. yd. first, then .2 gallons per sq. yd. seal coat.  
 The pavement at the Railroad Crossing is to be Hot Bituminous Pavement as shown on the Survey Sheet #11



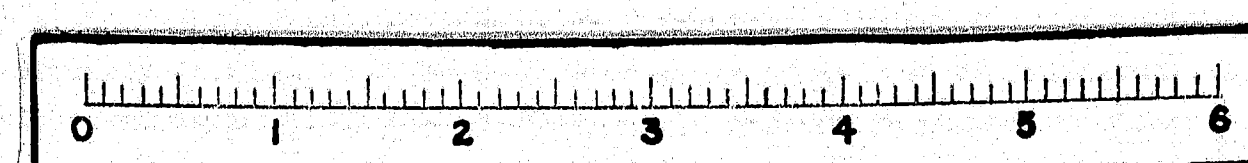
TYPICAL SUPERELEVATED SECTION



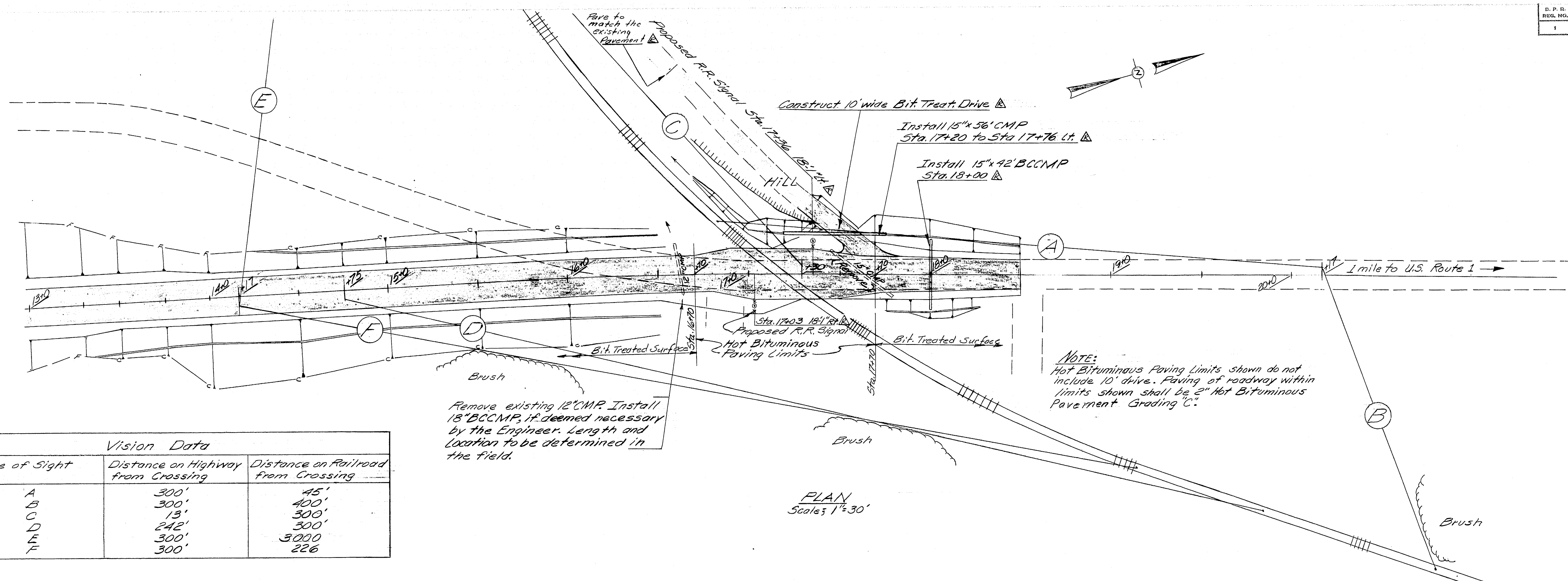
TYPICAL NORMAL SECTION  
WITH GUARD RAIL

DESIGN - <i>ALL</i> TRACE - <i>SW</i> CHECK - <i>Chandler</i>	BRIDGE NO. SURVEY - PLOT -
STATE HIGHWAY COMMISSION BRIDGE DIVISION	
MACHIAS RIVER BRIDGE BETWEEN THE TOWNS OF MACHIASPORT & EAST MACHIAS WASHINGTON COUNTY	
TYPICAL SECTIONS	
SHEET 30 of 45 AUGUSTA, MAINE JUNE 1970	

122-143



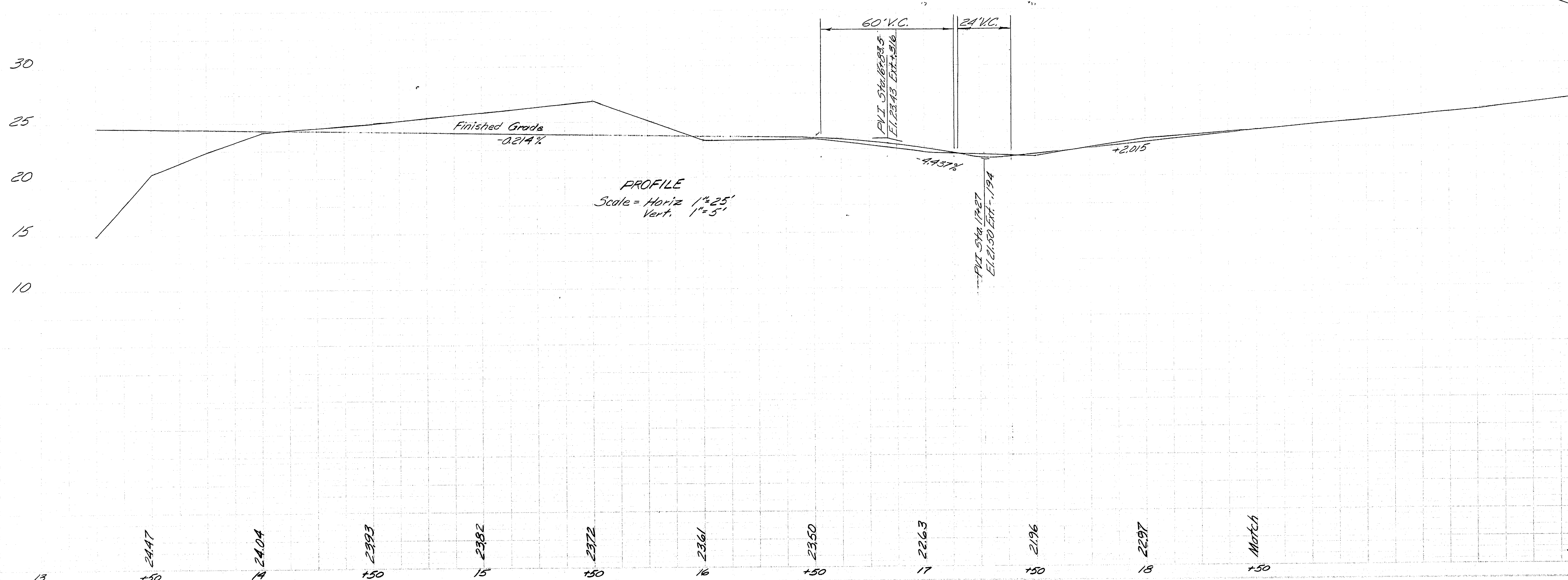




Vision Data		
Line of Sight	Distance on Highway from Crossing	Distance on Railroad from Crossing
A	300'	45'
B	300'	400'
C	13'	300'
D	242'	300'
E	300'	3000'
F	300'	226'

Remove existing 12' CMP. Install 18' BCCMP, if deemed necessary by the Engineer. Length and location to be determined in the field.

PLAN  
Scale 1"=30'



△ Indicates a revision of the contract plans.

Prof. Des. Eng. All.

DESIGN - M.P.  
CHECK - G.O.

SURVEY - E. BARNES - E. Farther  
PLOT - E. BARNES - D.M.P.

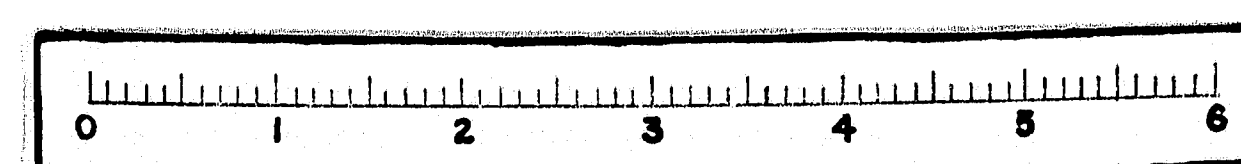
STATE HIGHWAY COMMISSION  
BRIDGE DIVISION

**MACHIAS RIVER BRIDGE**  
BETWEEN THE TOWNS OF  
**MACHIASPORT &  
EAST MACHIAS**  
**WASHINGTON COUNTY**

RAILROAD SIGNALS & DRAINAGE REVISIONS

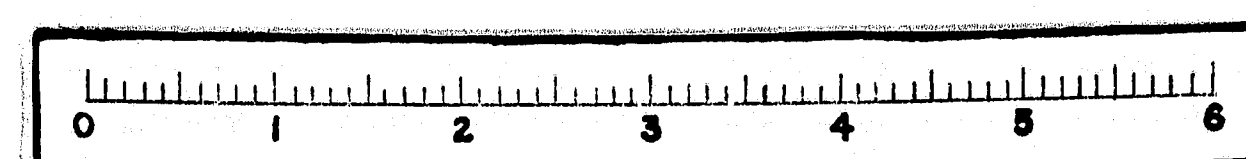
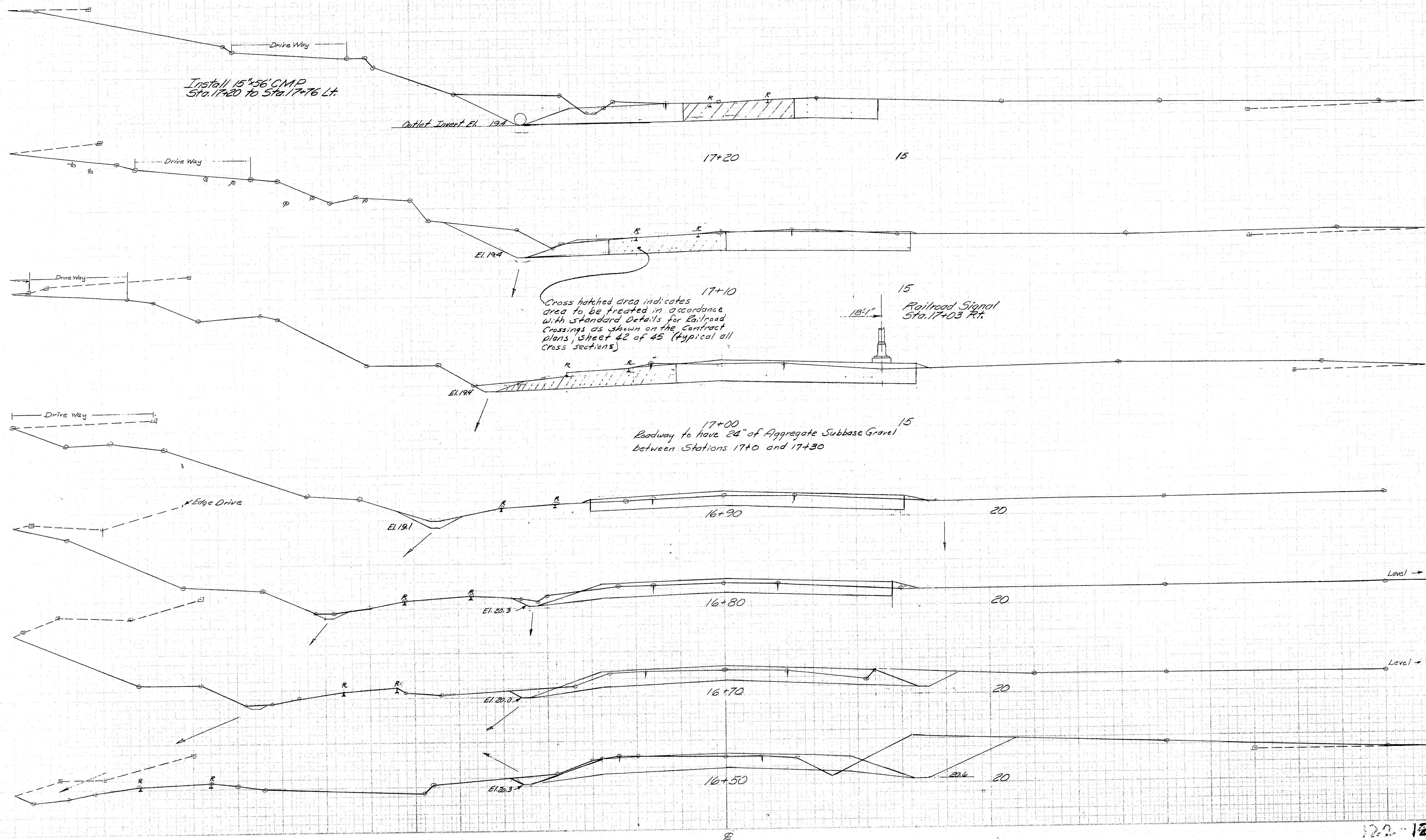
SHEET 11 OF 31 AUGUSTA, MAINE JAN. 1971

122-144





S. P. R. SHEET NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	2253	21	31



122-122-145

Proj. Design Engineer  
11-23-20  
1-9-71  
1-71  
GAT



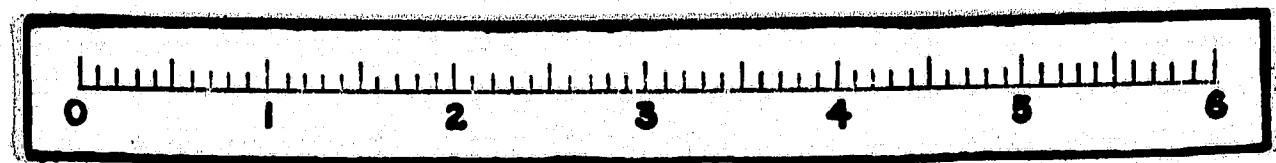
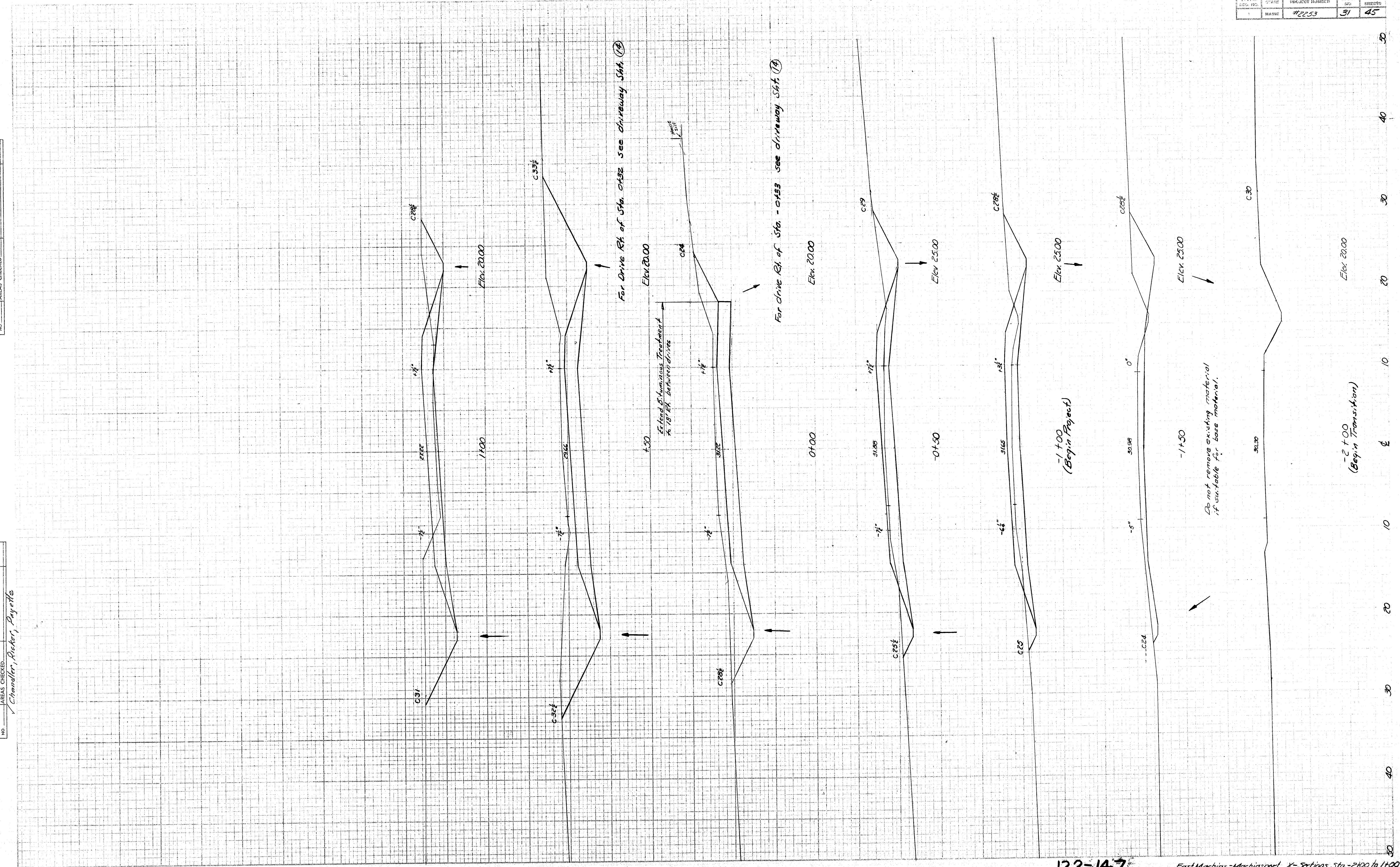




*Original Design Exp. 4/11*

ORIGINAL	BY	DATE
SURVEY	W.H. FARRAR	7-75
NOTED	W.H. FARRAR	7-75
NO	AREAS CHECKED	

FINAL	BY	DATE
SURVEY		
NOTED		
NO	AREAS CHECKED	



122-147

East Machias-Machiasport X-Sections Sta. 2100 to 1100

DATE	STATE	PROJECT NUMBER	DISTRICT	TOTAL SHEETS
7-75	MAINE	122-147	31	45

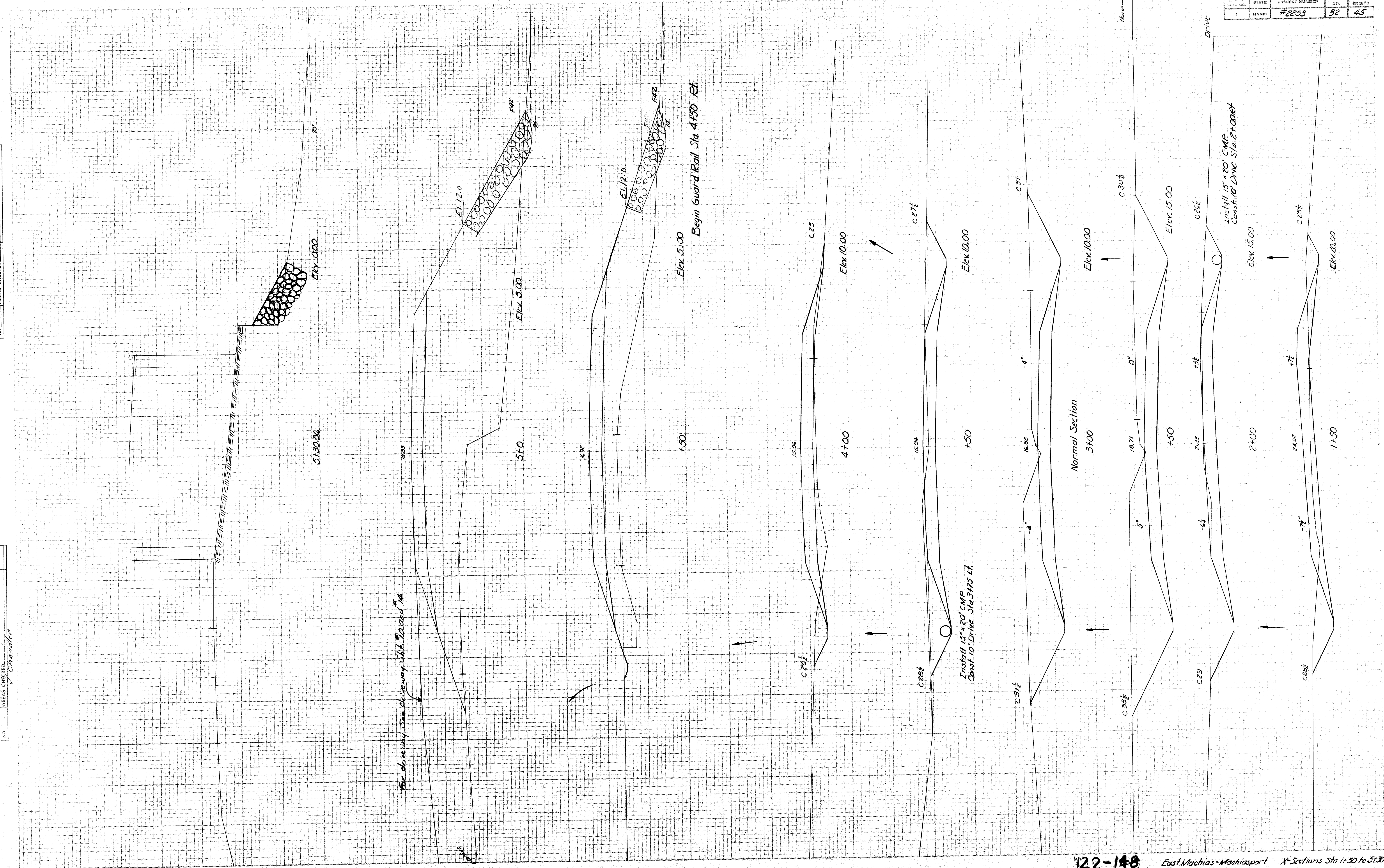


FINAL	SURVEYED	BY	DATE
NO	NO		
NO	NO		
NO	NO		
NO	NO		

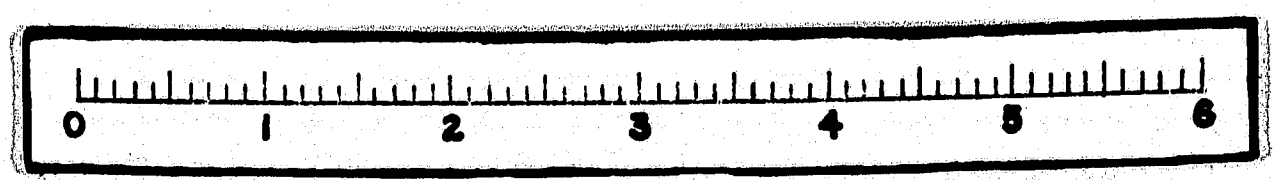
ORIGINAL	SURVEYED	BY	DATE
NO	NO		
NO	NO		
NO	NO		
NO	NO		

Proj. Des. Exp. 11/14

Charlton



STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
MAINE	#2253	32	45



122-140 East Machias-Machiasport X-Sections Sta 11+50 to 51+30.86







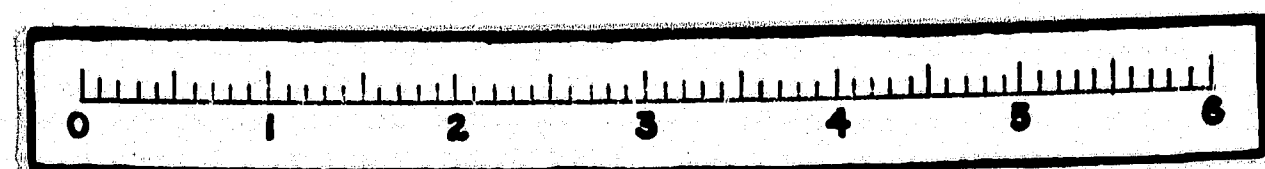
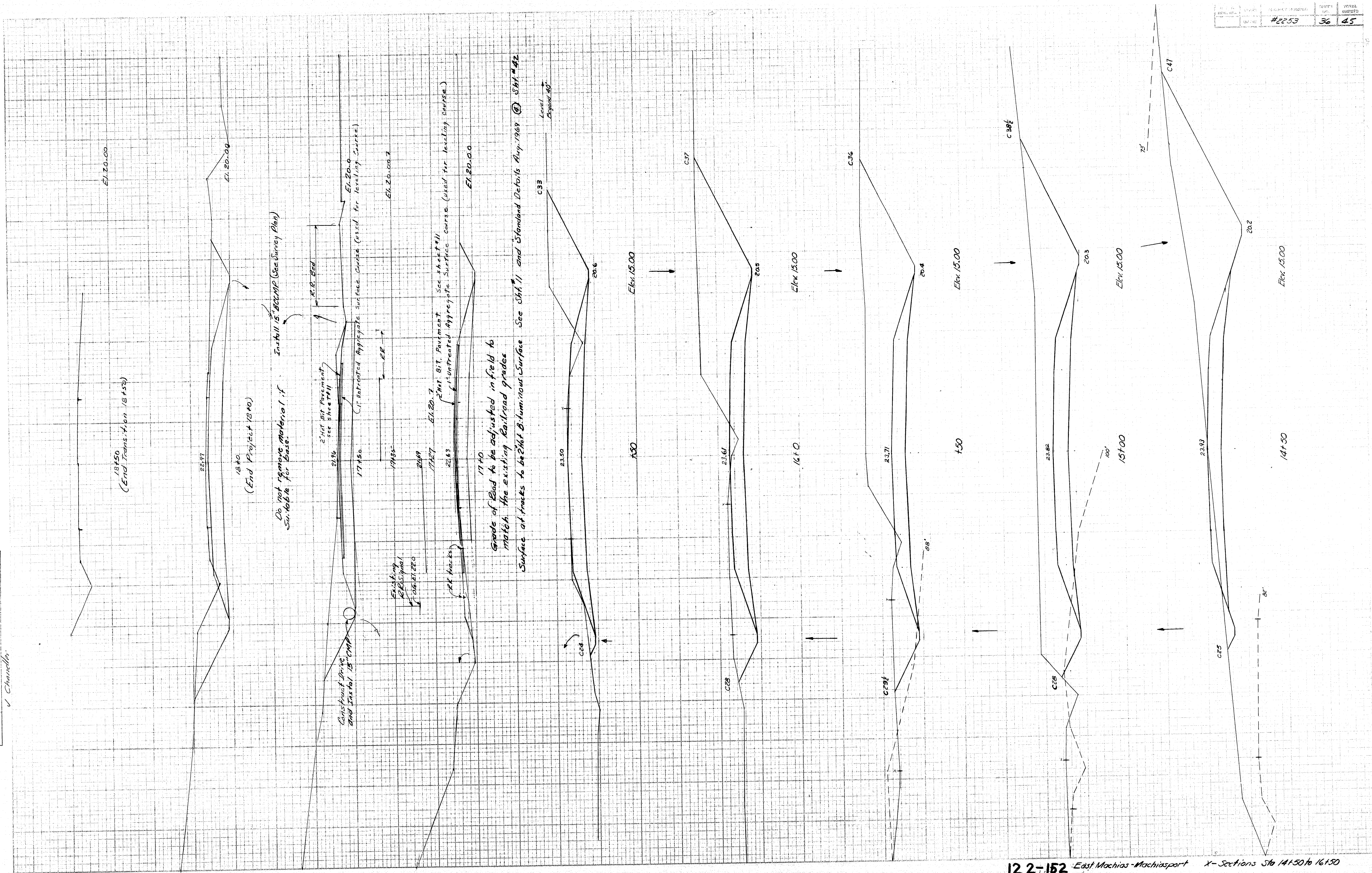








FINAL SURVEY	SURVEYED PLOTTED TEMPLATE AREAS AREAS CHECKED	BY	DATE
NOTE BOOK NO.			



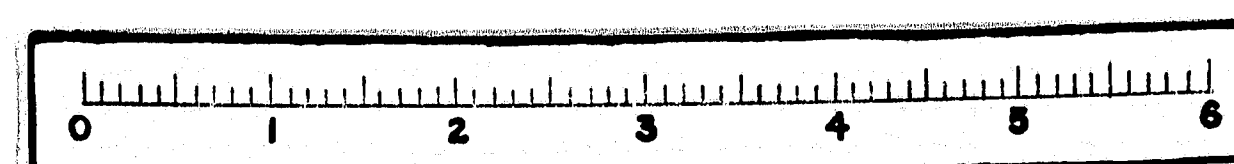
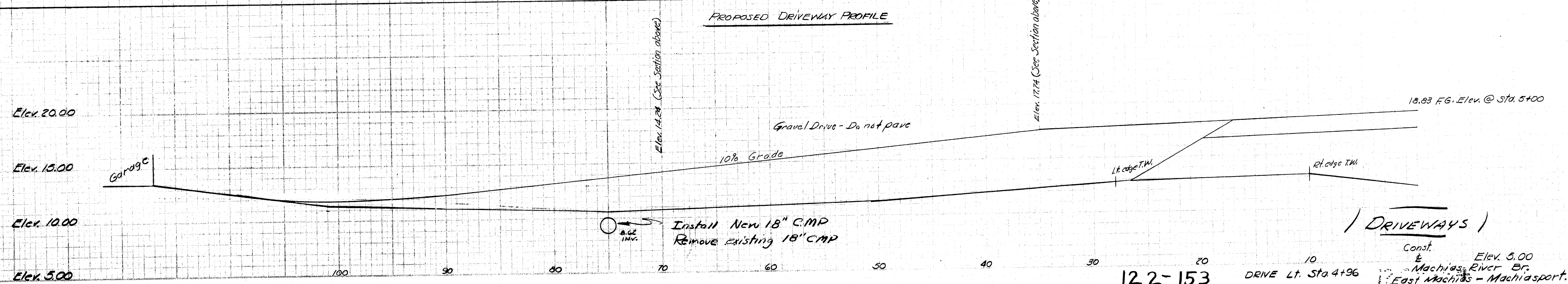
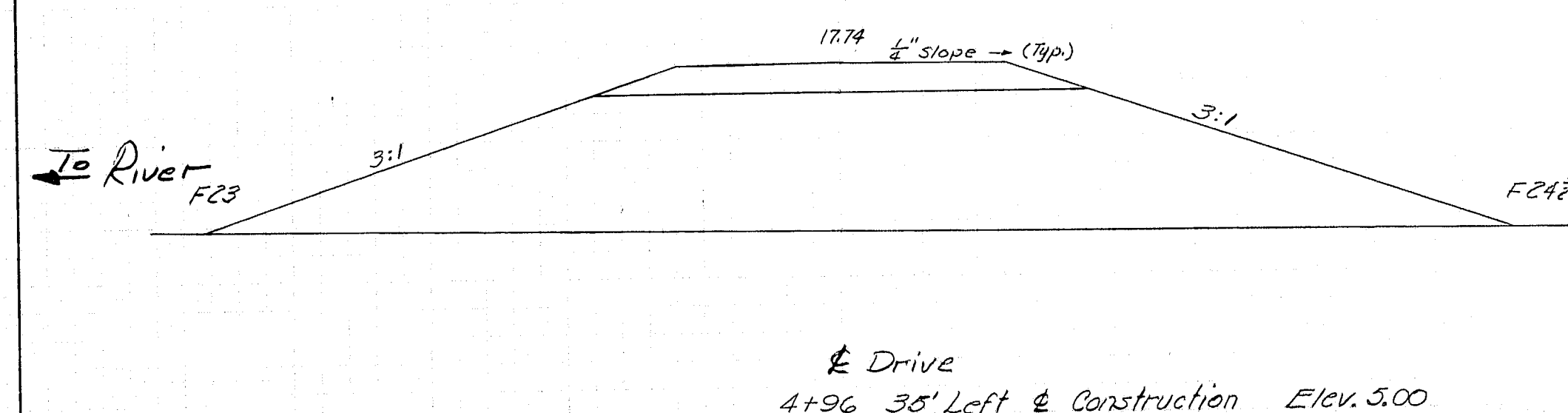
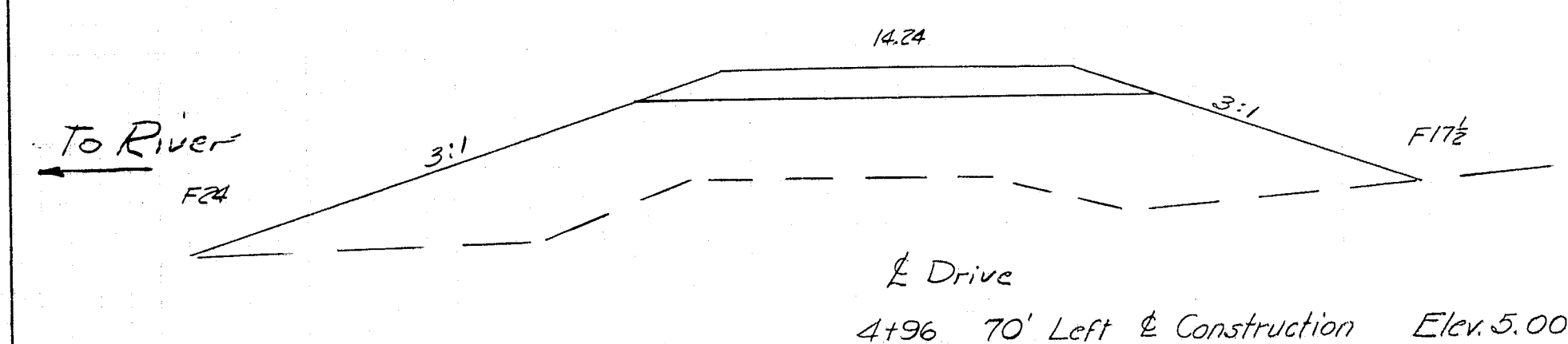
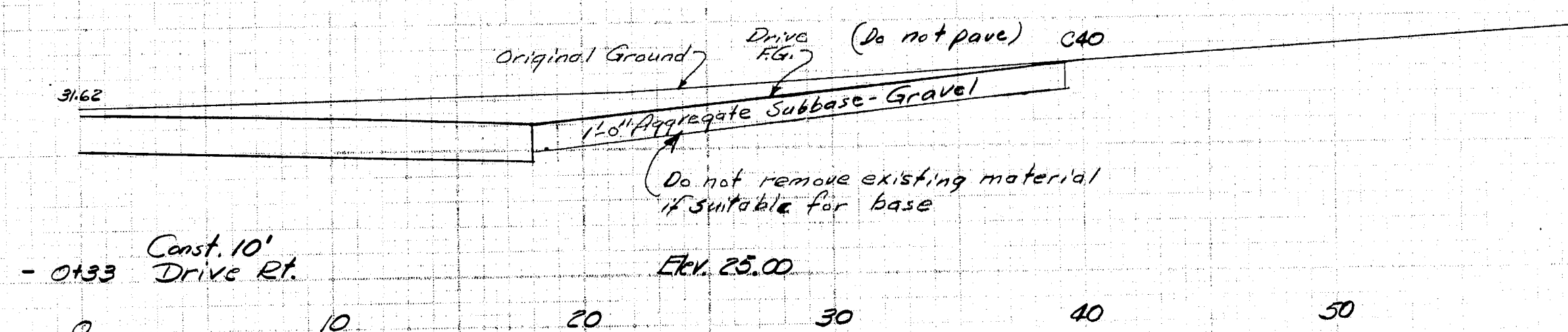
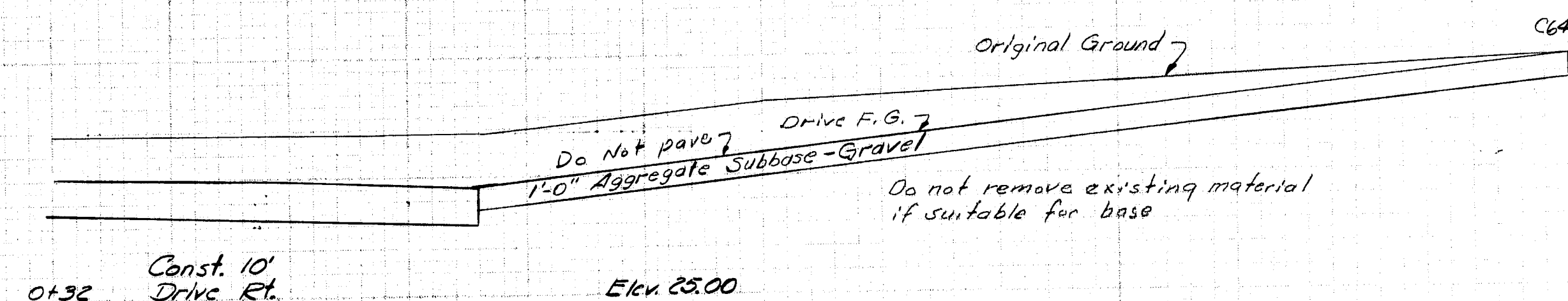
DATE	05/22/01	PROJECT NUMBER	00000	TOTAL AMOUNT
TIME, YR.				
		#2253	36	45

122-152 East Machias-Machiasport X-Sections Sta 14+50 to 16+50

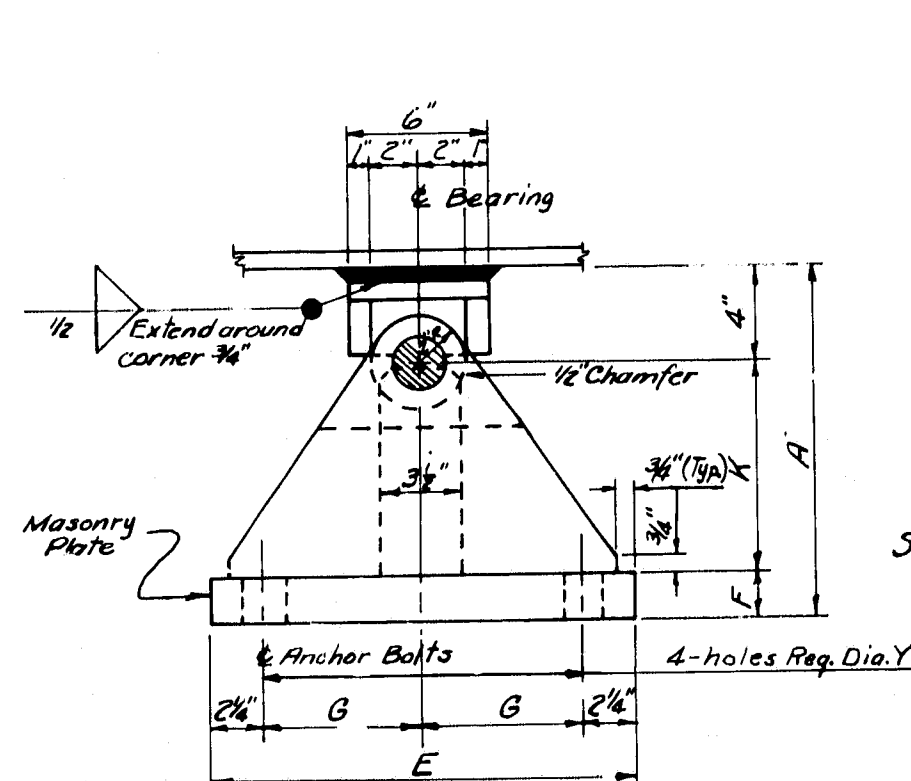
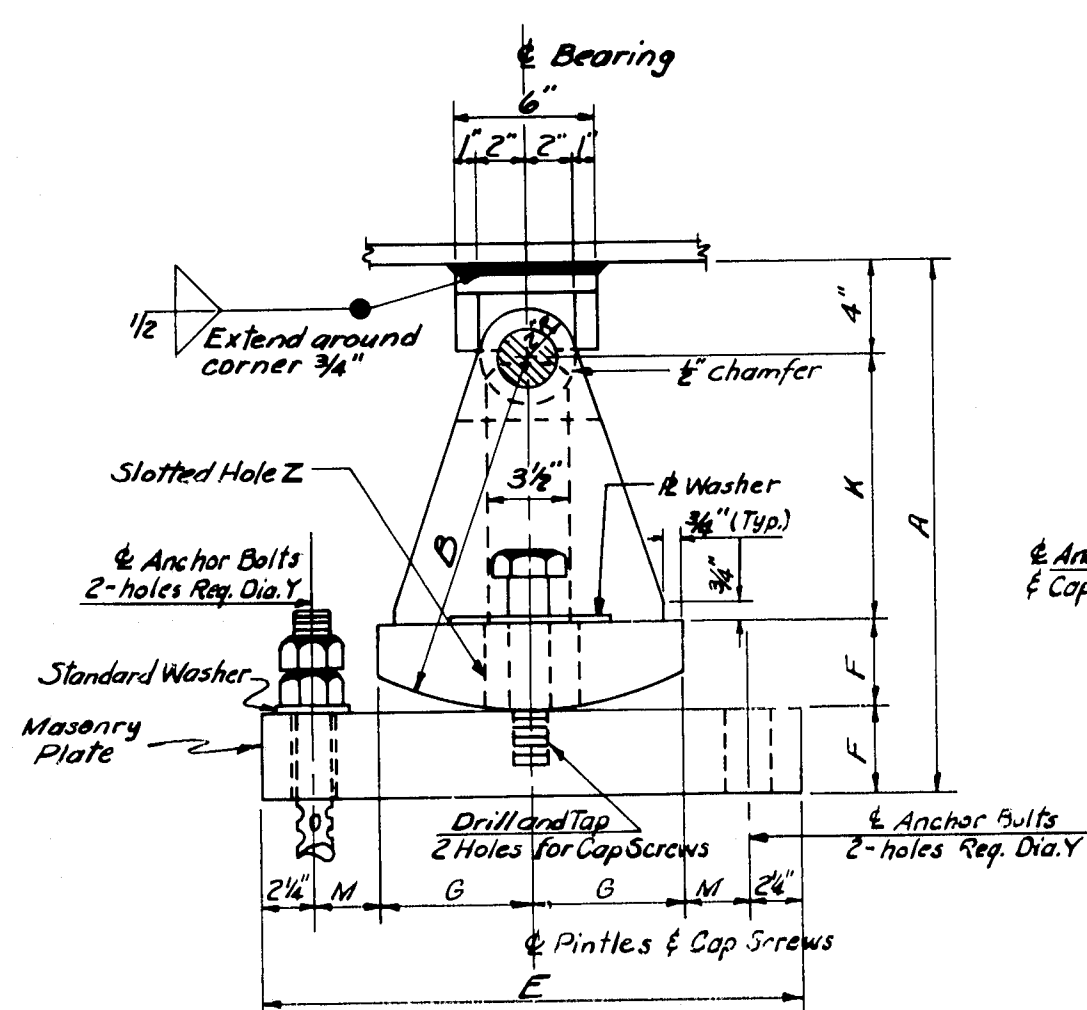


FINAL SURVEY	DATE
NO. 1	BY
NO. 2	DATE
NO. 3	DATE
NO. 4	DATE
NO. 5	DATE
NO. 6	DATE
NO. 7	DATE
NO. 8	DATE
NO. 9	DATE
NO. 10	DATE

ORIGINAL SURVEY	DATE
NO. 1	BY
NO. 2	DATE
NO. 3	DATE
NO. 4	DATE
NO. 5	DATE
NO. 6	DATE
NO. 7	DATE
NO. 8	DATE
NO. 9	DATE
NO. 10	DATE





[illegible]

### CAP SCREW DETAIL

GENERAL NOTES

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

A.A.S.H.O., Standard Specifications for  
Highway Bridges, 1969

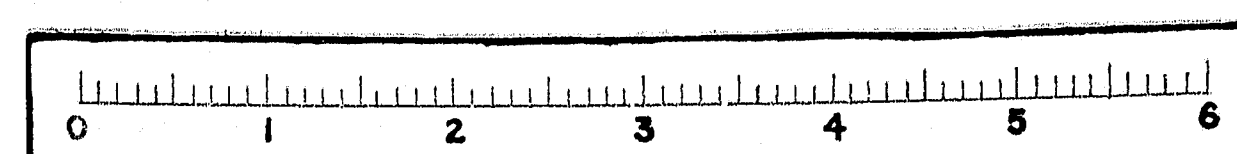
A.S.T.M. STEEL CLASSIFICATION  
All structural steel shall be -A36 except  
the following:  
2"Ø Pin -A36; A235, Class E or A108, Grade  
1016 -1030 inclusive.

Technical drawings of two types of pintles:

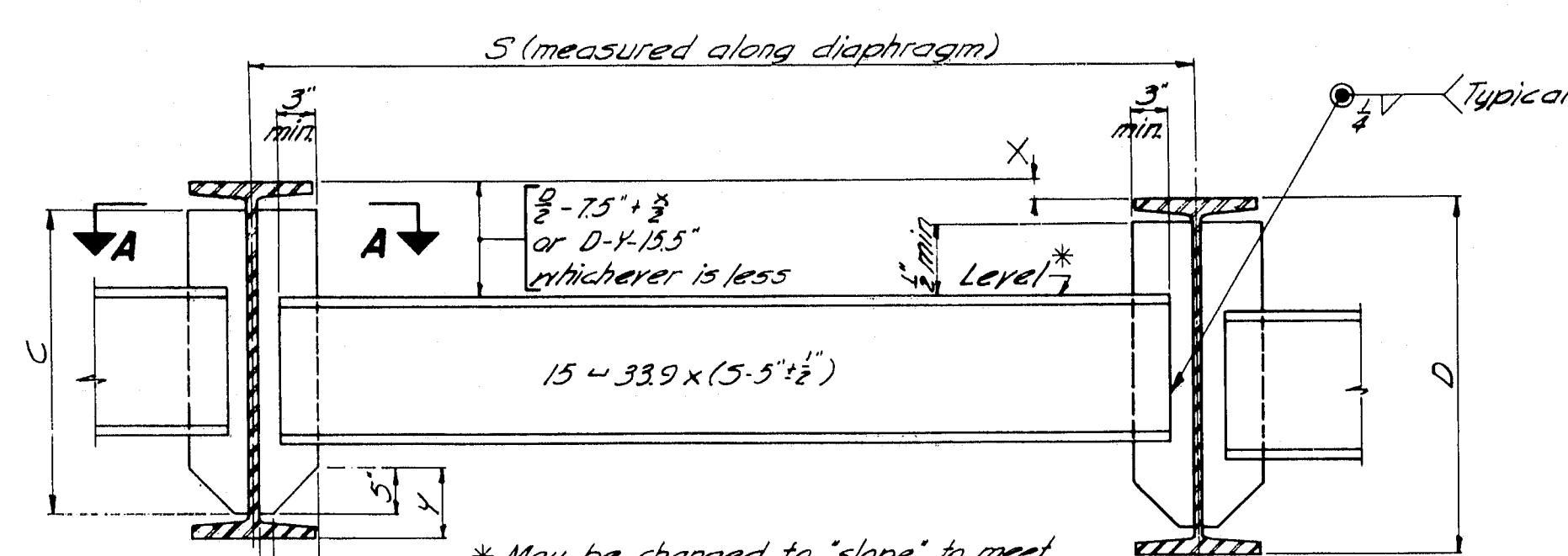
- 1" Ø PINTLE:**
  - Top view: 1 1/16" wide flange, 3/8" wide body, 1/8" wide base.
  - Side view: 3/16" radius on top flange, 1/16" radius on base.
  - Cross-section: 1/8" wide hole in the center of the body.
- 1/2" Ø PINTLE:**
  - Top view: 1/8" wide flange, 1/4" wide body, 1/16" wide base.
  - Side view: 3/16" radius on top flange, 1/16" radius on base.
  - Cross-section: 1/8" wide hole in the center of the body.

NOTE:  
Use 1"  $\varnothing$  Pintles with 1"  $\varnothing$  Anchor Bolts &  
1 1/2"  $\varnothing$  Pintles with 1 1/2"  $\varnothing$  Anchor Bolts.

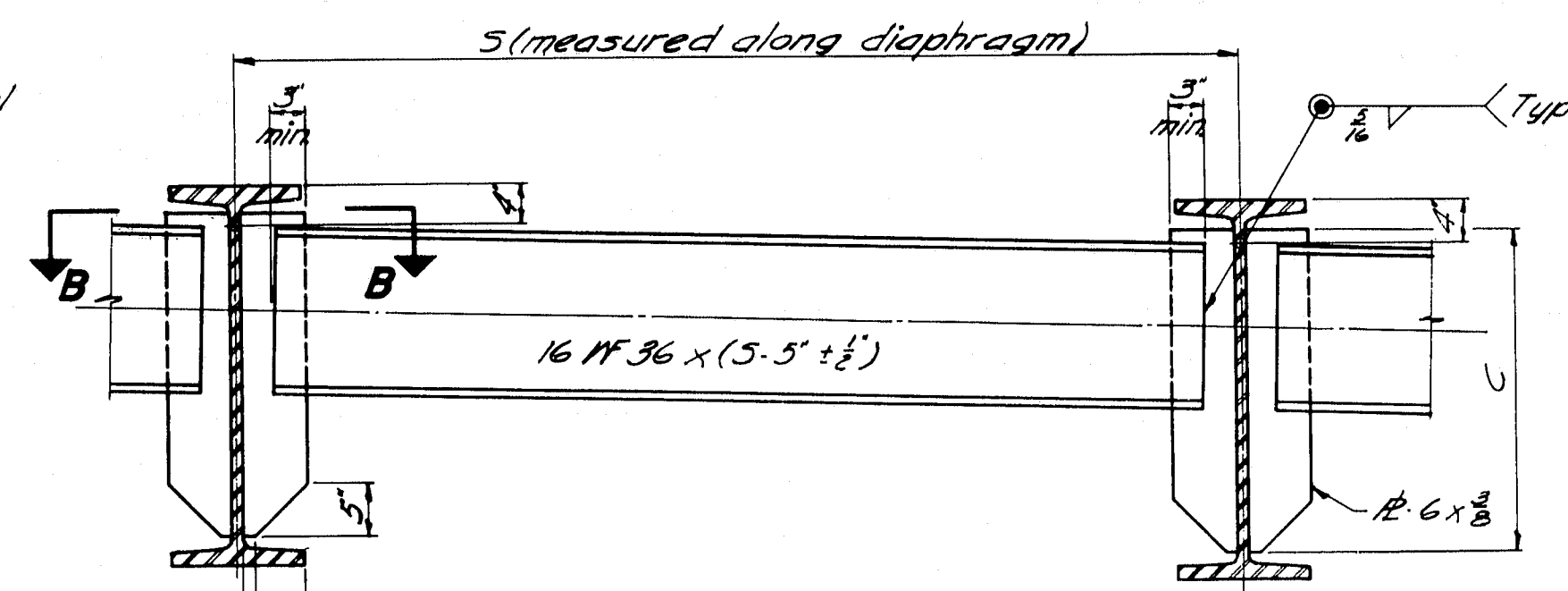
122-154.



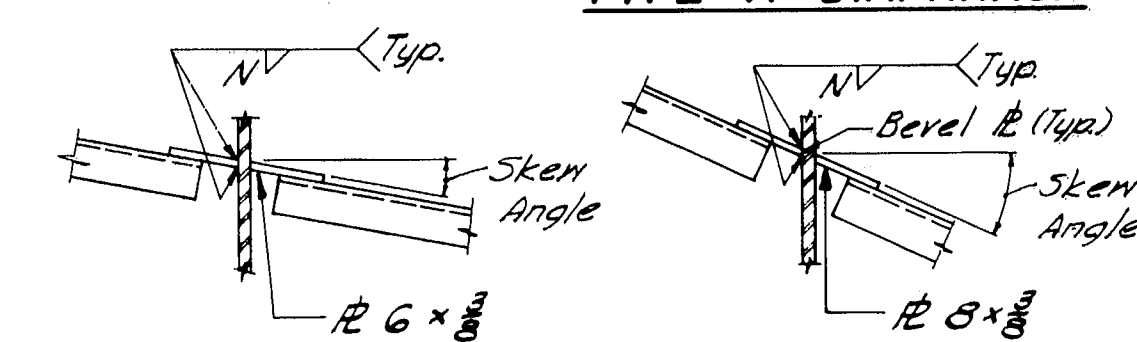




**TYPE A DIAPHRAGM**



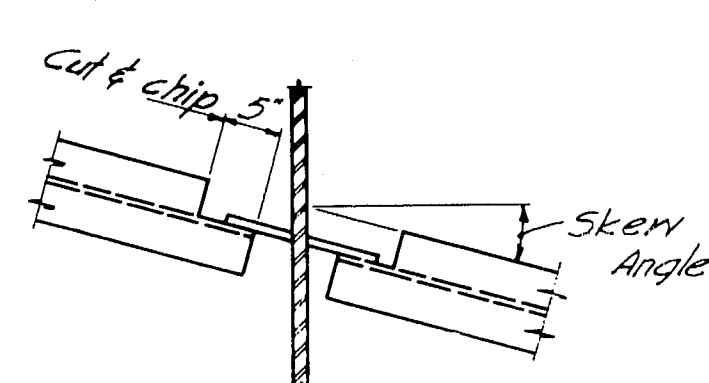
**TYPE B DIAPHRAGM**  
Welding 6x3 plates to web same as for Type A Diaphragm.



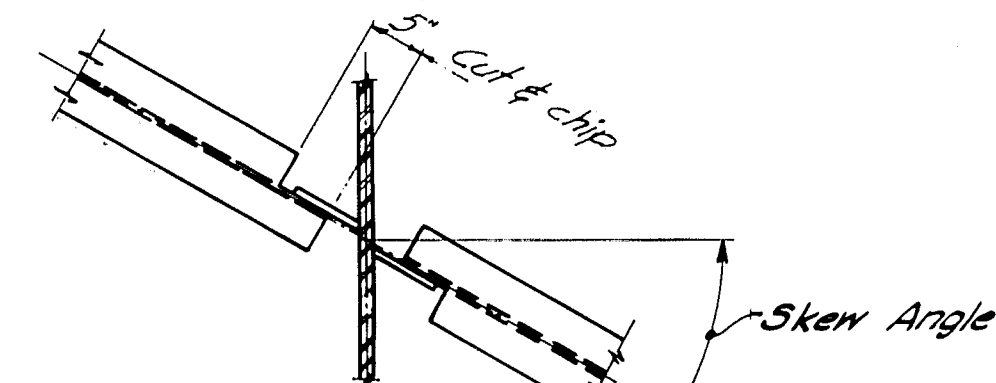
**SECTION A-A**  
Skew Angle 0° to 10°-00'

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

Fillet Weld Size "N" & Dimension "C" for Diaphragm Plates		
BEAM	C	N
27" 1/4" 84 to 114 incl.	1-11"	3/4"
30" 1/4" 99 to 132 incl.	2-2"	3/4"
33" 1/4" 118 to 152 incl.	2-5"	3/4"
36" 1/4" 135 to 194 incl.	2-7"	3/4"
36" 1/4" 230 to 300 incl.	2-6"	3/4"



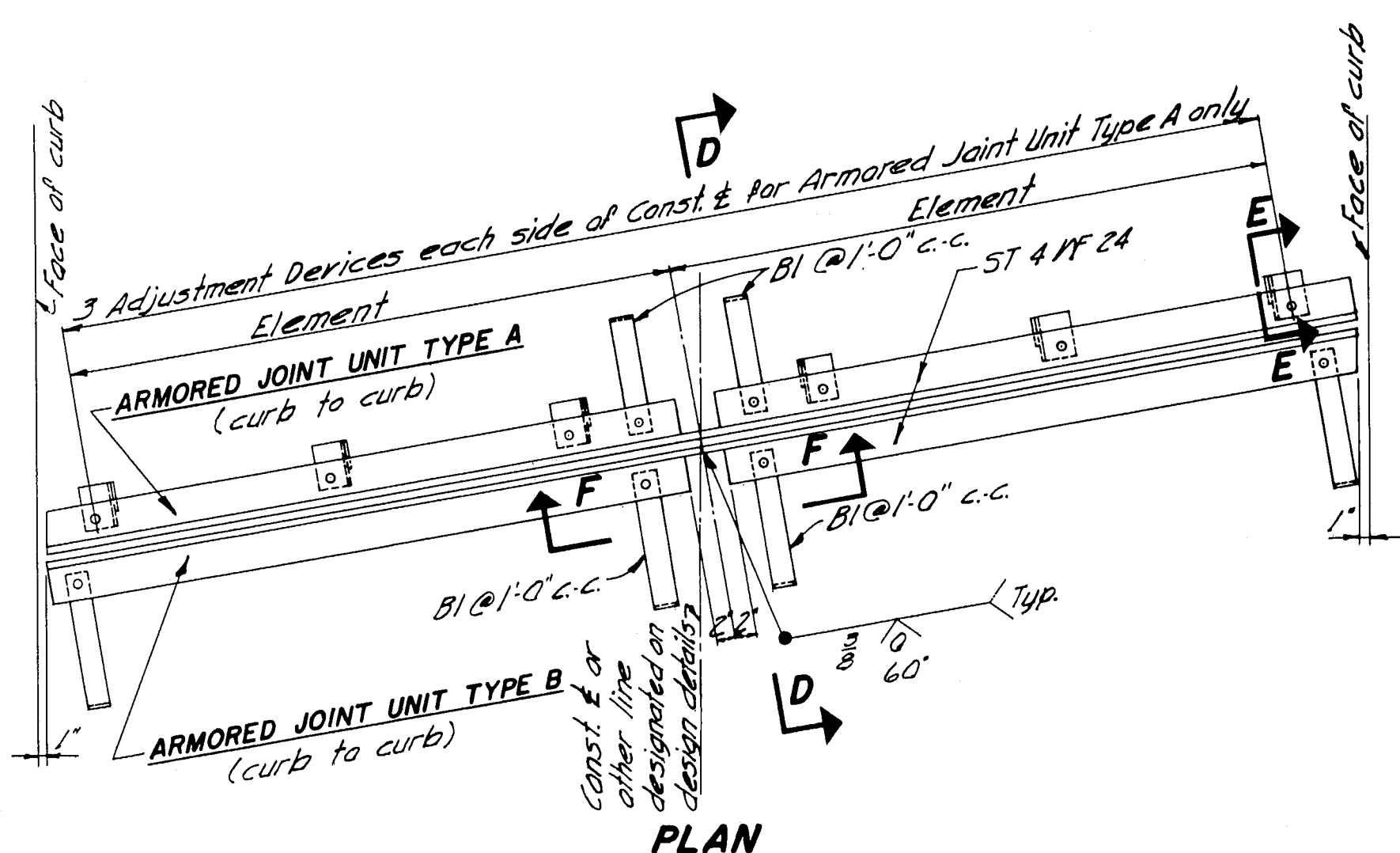
**SECTION B-B**  
Skew Angle 0° to 10°-00'



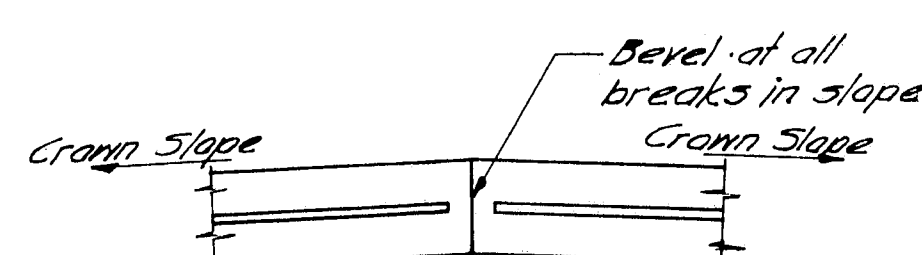
**SECTION B-B**  
Skew Angle over 10°-00'

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

## DIAPHRAGMS



**PLAN**



**SECTION F-F**

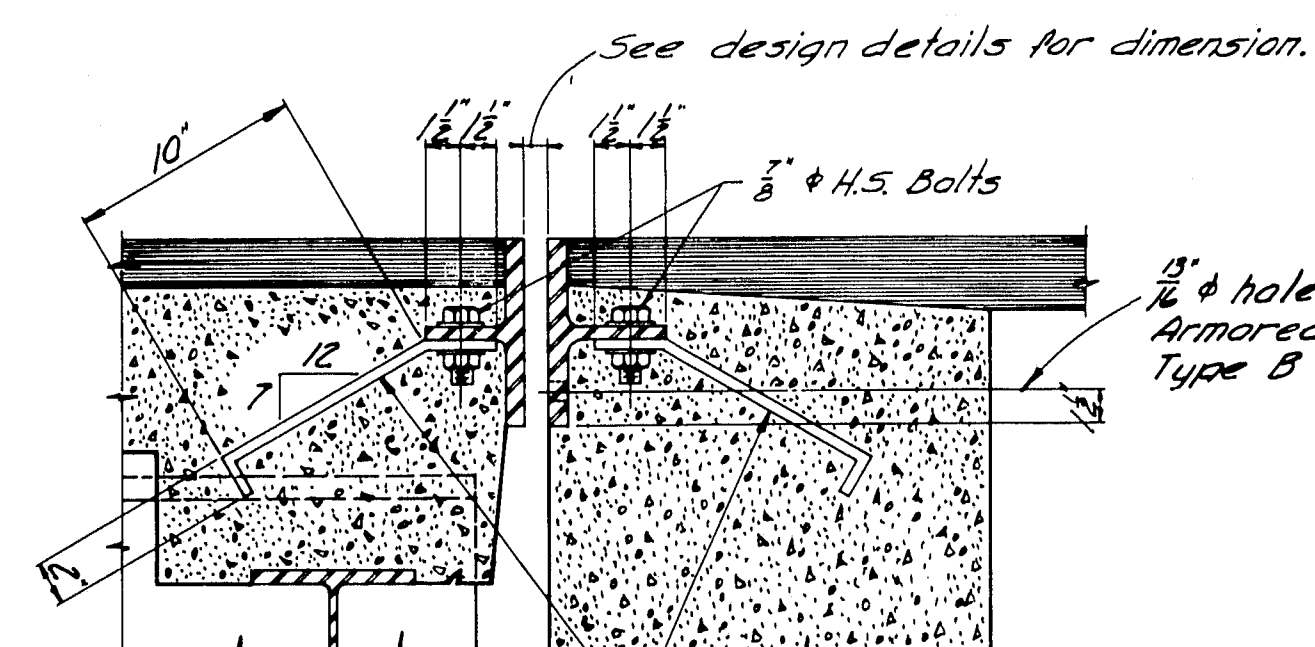
Note: See design details for Const. & to curb dimensions, skew, crown slope, slab thickness, other dimensions necessary to complete the fabrication details, and location.

## 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

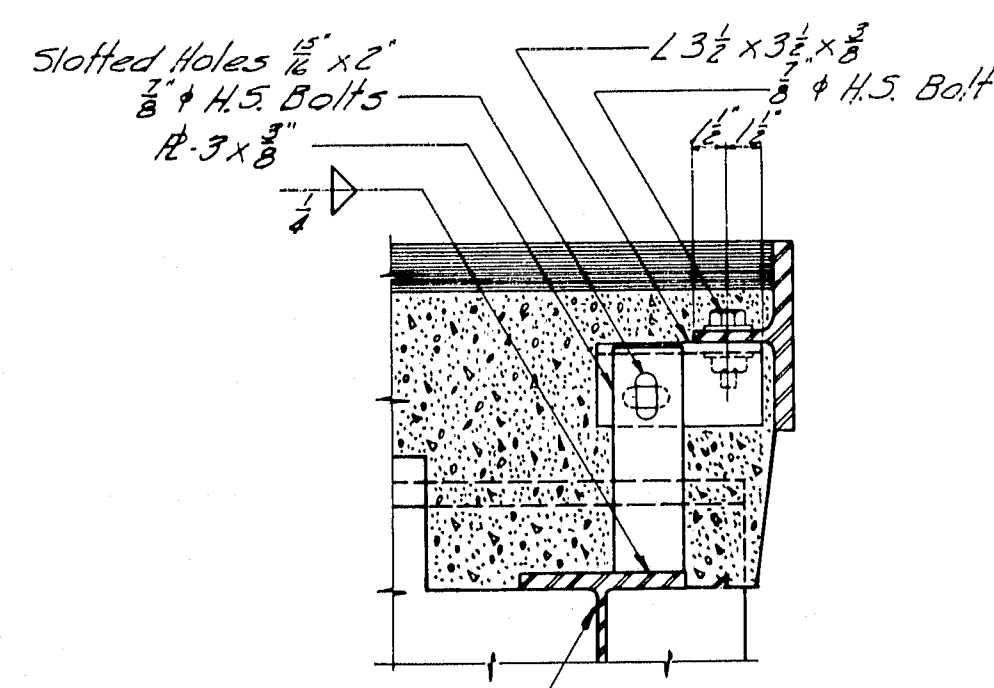
An armored joint consists of two armored joint units. See note 1.



**ARMORED JOINT UNIT TYPE A**

**ARMORED JOINT UNIT TYPE B**

**SECTION D-D**

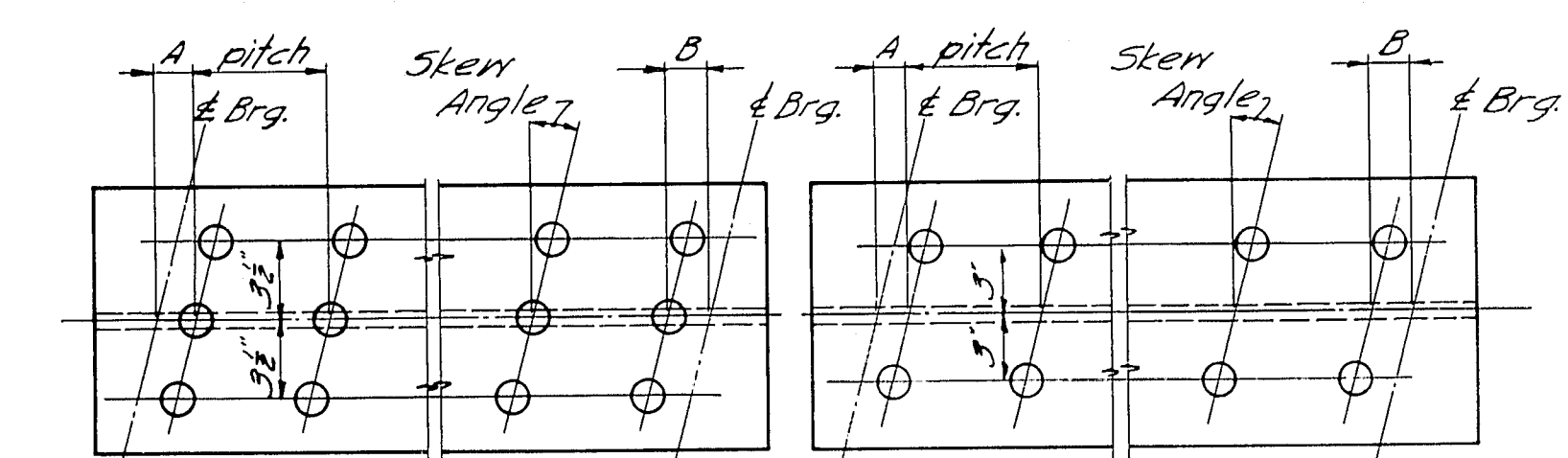


**SECTION E-E**

Showing Adjustment Device Armored Joint Unit Type A only - After Unit is in final position weld 3/8" to angle with 1/2" fillet

## 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**

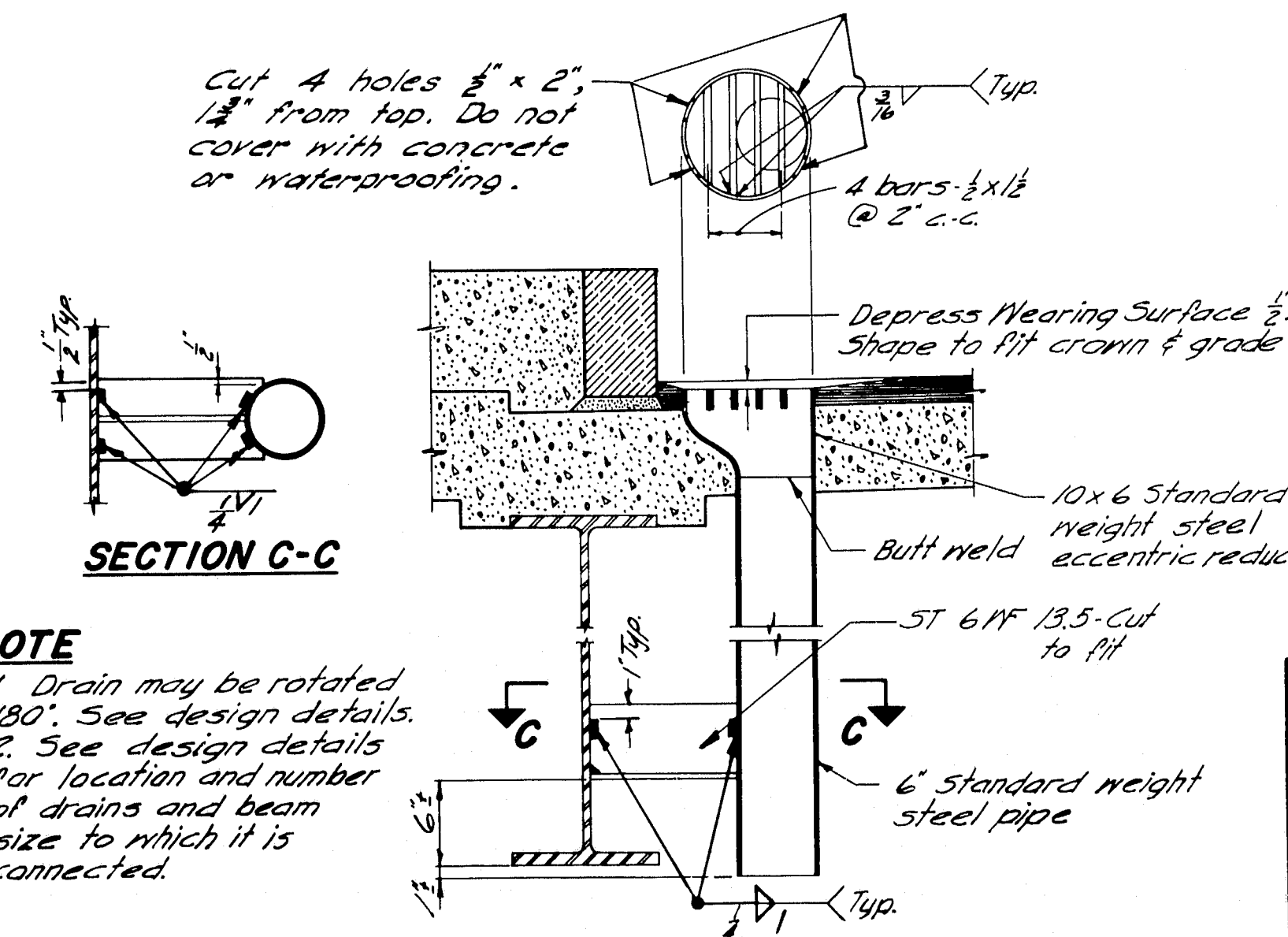
**DOUBLE STUDS**

**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



## 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**

## 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.

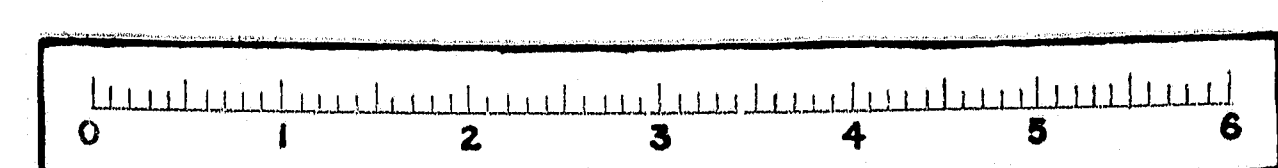
## STANDARD DETAILS

(BD 104-66)

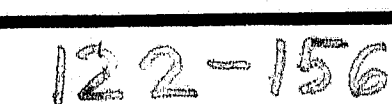
DIAPHRAGMS, ARMORED JOINT, SHEAR CONNECTORS, DRAIN

SEPTEMBER 1966

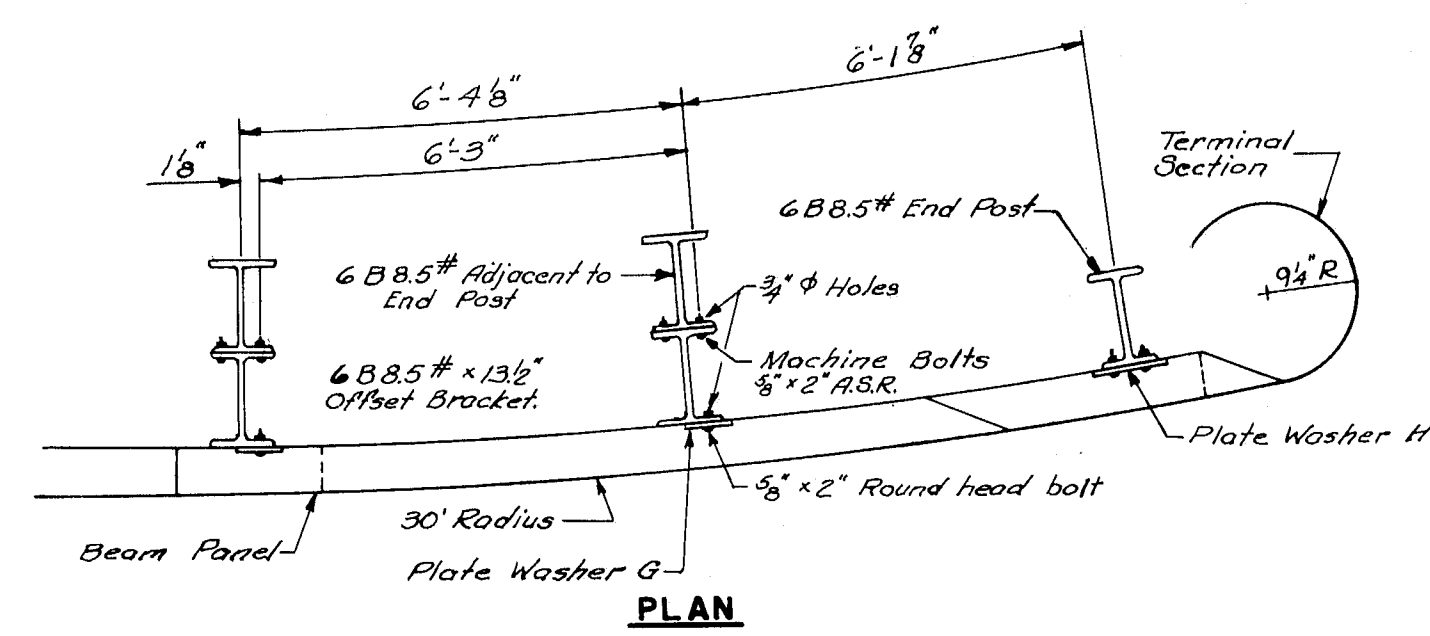
122-155



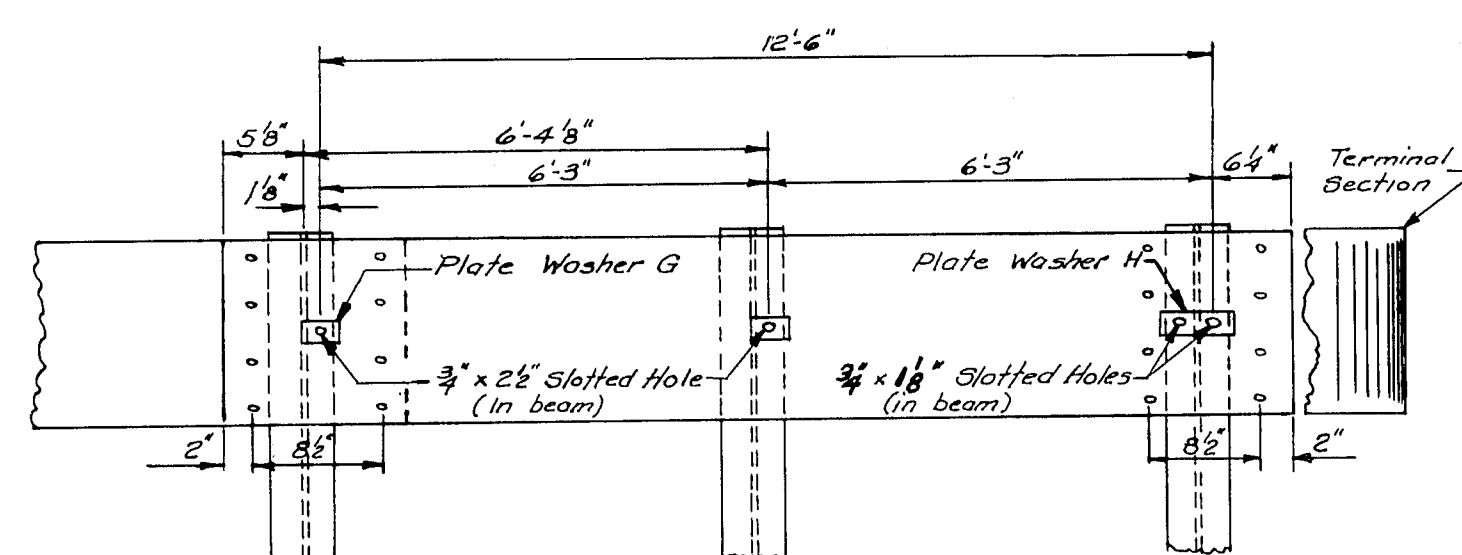




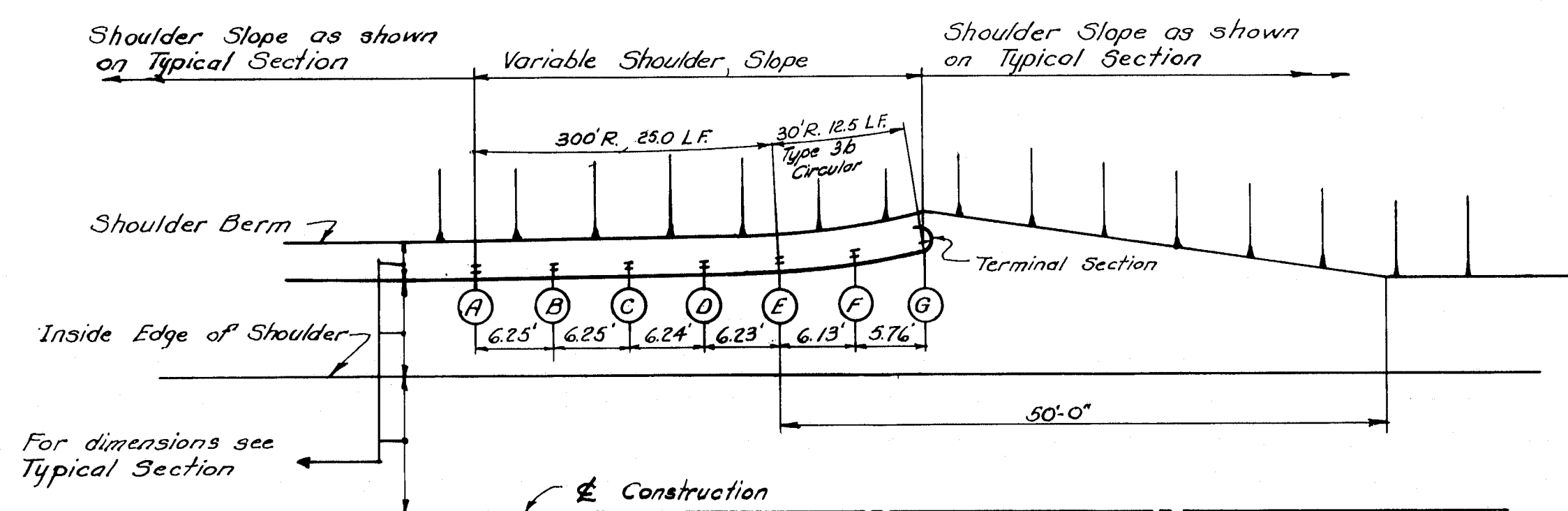




Note: Offset Bracket shall be installed on all posts, except end post.



### END BEAM ASSEMBLY-SPACING OF POSTS GUARD RAIL TYPE 3b



Note: Offset in feet from the normal face of the Guard Rail.

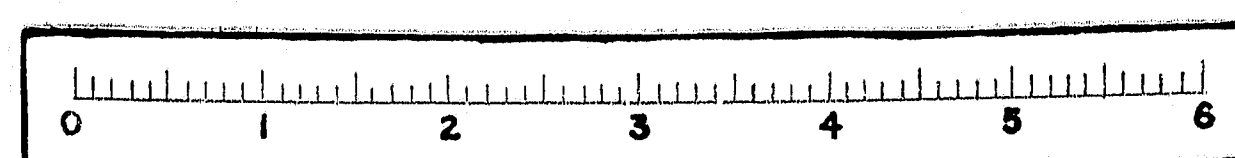
Post	Offset
A	0.00'
B	0.06'
C	0.26'
D	0.59'
E	1.04'
F	2.20'
G	4.61'

### GUARD RAIL END TRANSITION

MAINE STATE HIGHWAY COMMISSION  
AUGUSTA, MAINE

**STANDARD DETAILS**  
(BD 110-69)  
GUARD RAIL-TYPE 3b  
(FLARED ENDS)

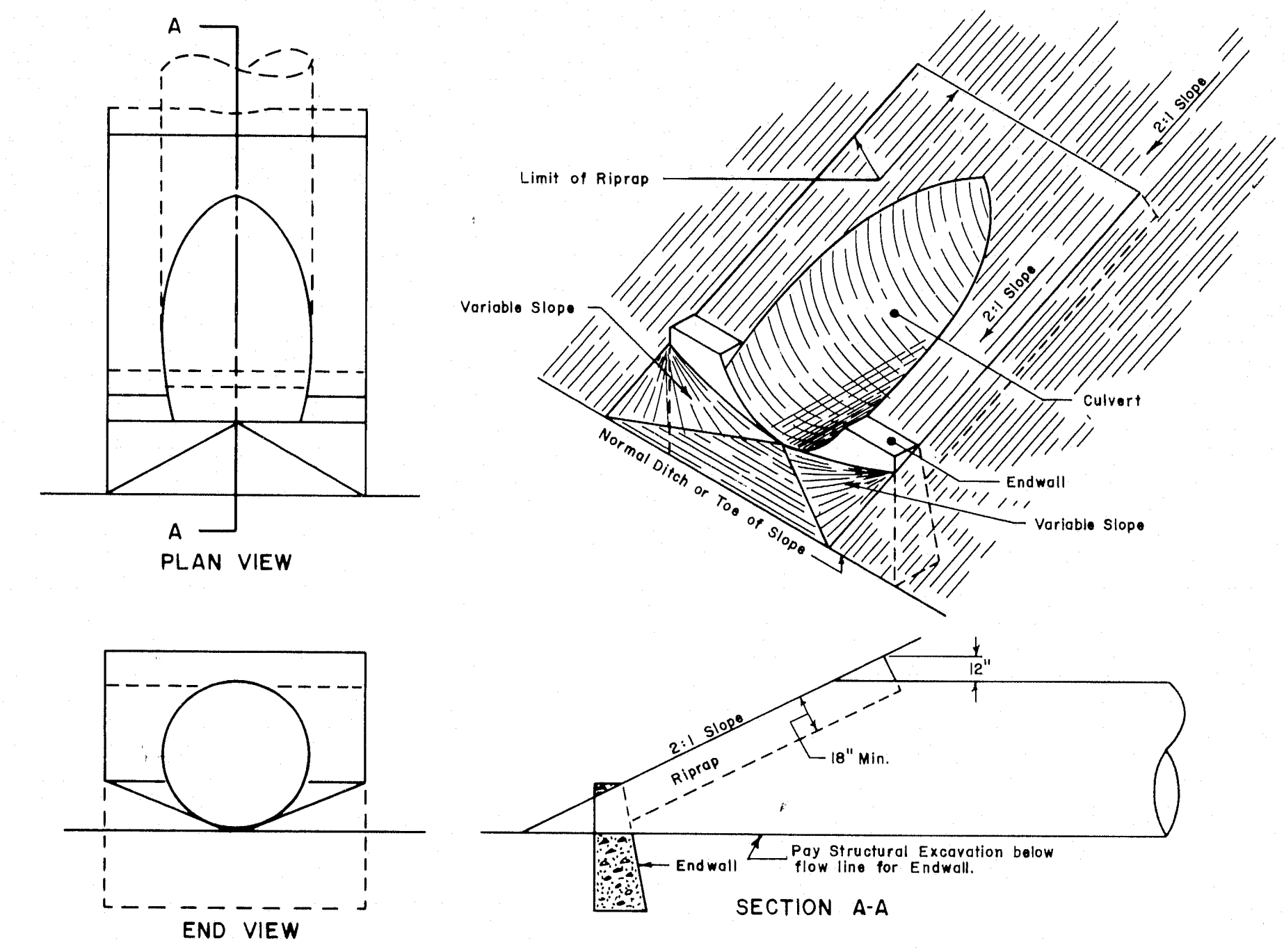
FEBRUARY 1969



22-157

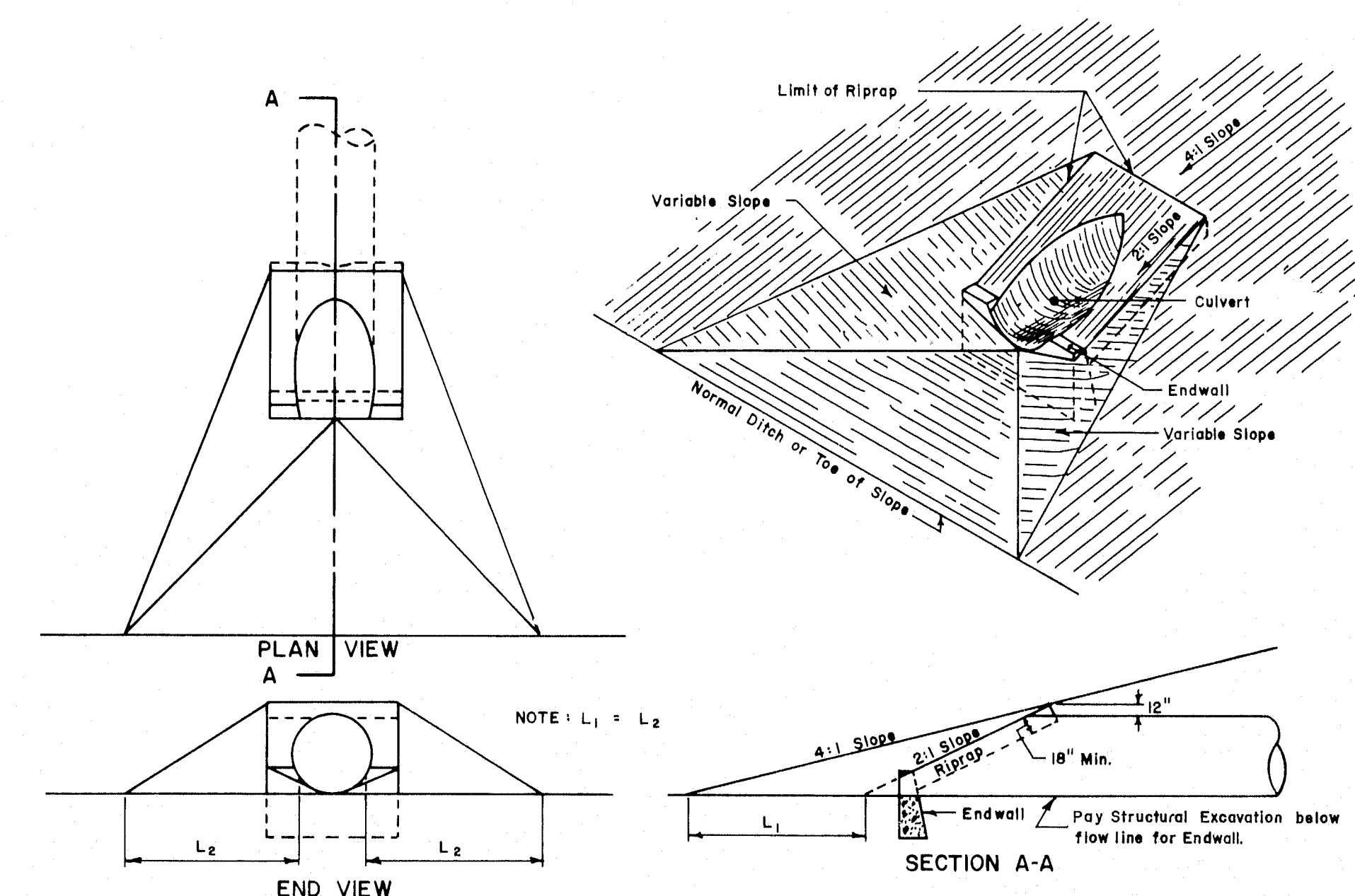


### CONCRETE INLET ENDWALLS FOR RIVETED AND STRUCTURAL PLATE PIPES 60" TO 180" IN 2:1 SLOPES



4-E

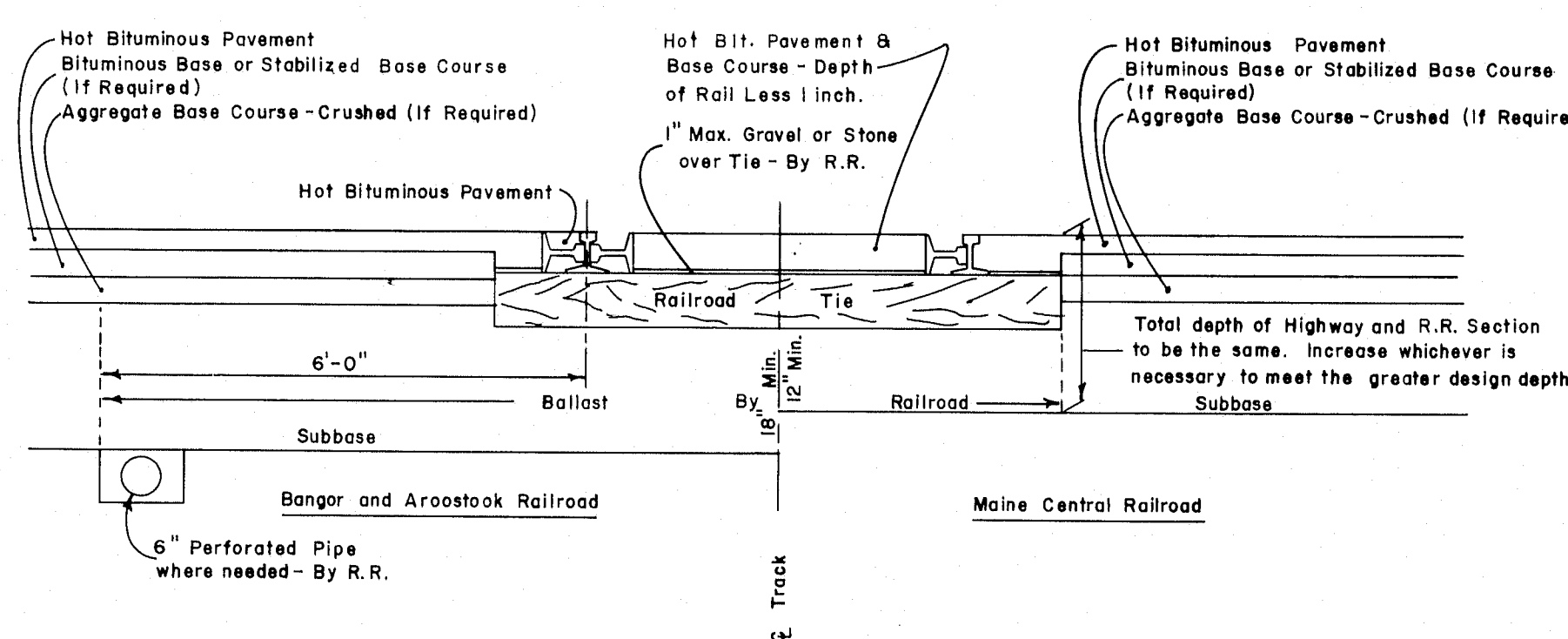
### CONCRETE INLET ENDWALLS FOR RIVETED AND STRUCTURAL PLATE PIPES 60" TO 180" IN 4:1 SLOPES



4-F

#### NOTES:

1. Cross-ties through crossing.
2. Rail joints in crossing to be welded.
3. Stone Ballast to extend along track beyond each side of the crossing approximately 40'-0" By Railroad.
4. Work to be done by Railroad.
  - A. Placement of Ballast.
  - B. Placement of Ties and Rails.
  - C. Placement of 1" max. Gravel over Ties.



4-A

TABLE A

RIVETED PIPES		
SIZE	NO. HOOK BOLTS REQUIRED	"X" DIMENSION
60"	4	1.5
66"	4	1.5
72"	4	1.5
78"	5	1.5
84"	5	1.5

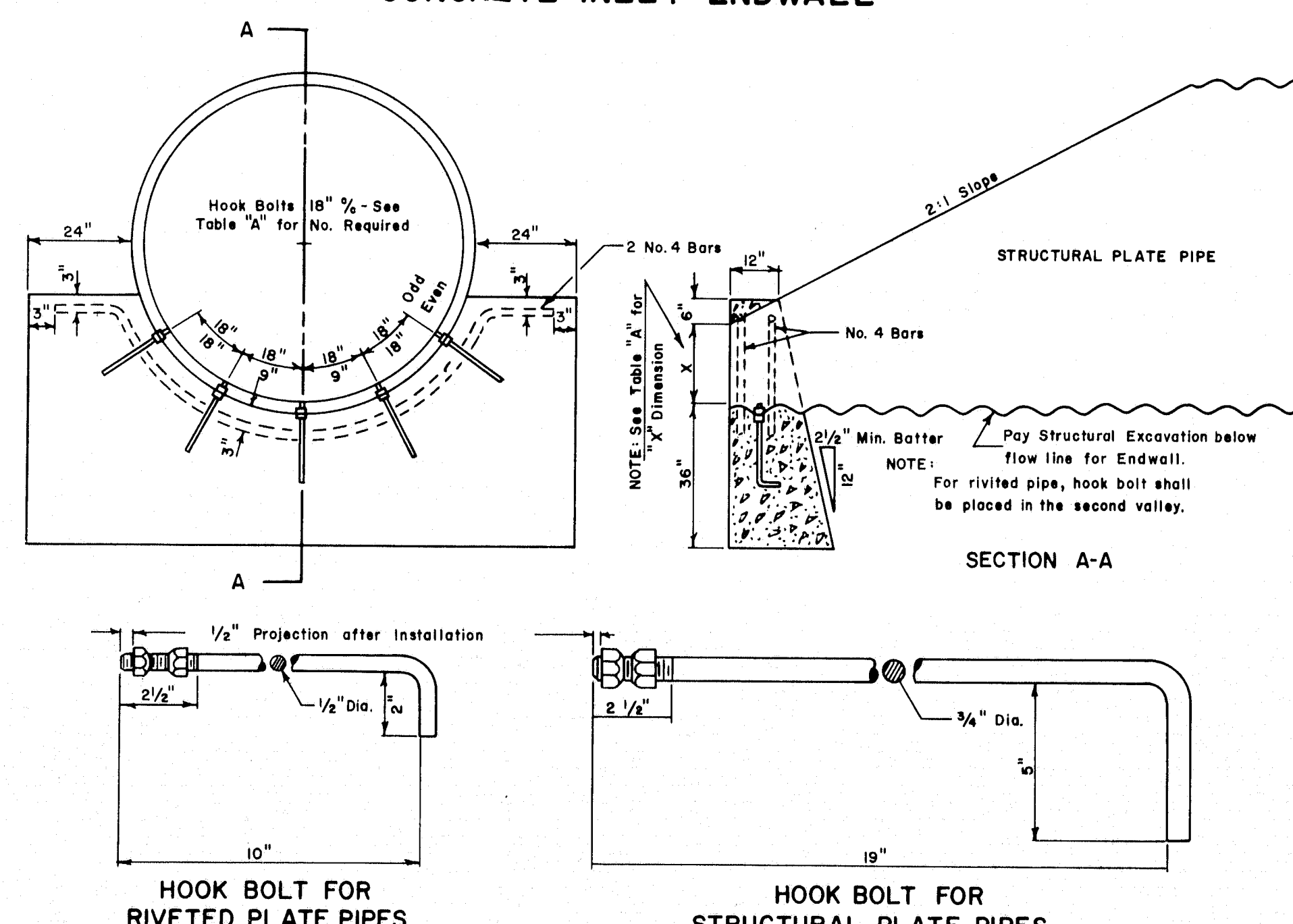
STRUCTURAL PLATE PIPE		
SIZE	NO. HOOK BOLTS REQUIRED	"X" DIMENSION
72"	4	1.5
78"	5	1.625
84"	5	1.75
90"	5	1.875
96"	6	2.0
102"	6	2.125
108"	6	2.25
114"	7	2.375
120"	7	2.5
126"	7	2.625
132"	8	2.75
138"	8	2.875
144"	9	3.0
150"	9	3.125
156"	9	3.25
162"	10	3.375
168"	10	3.5
174"	10	3.625
180"	11	3.75

#### NOTES

1. Culverts installed under 2:1 slopes shall have riprap laid on 2:1 slope and no ditch transitions.
2. Excavation required to grade culvert inlets and outlets as shown will not be paid separately, but will be incidental to the culvert.
3. Hook bolts are required in metal pipes only and will be incidental to concrete item.
4. Concrete endwall shall be structural concrete class "A" and shall be paid for as item 502.32 structural concrete culvert endwalls.
5. All riprap as shown shall be hand laid.

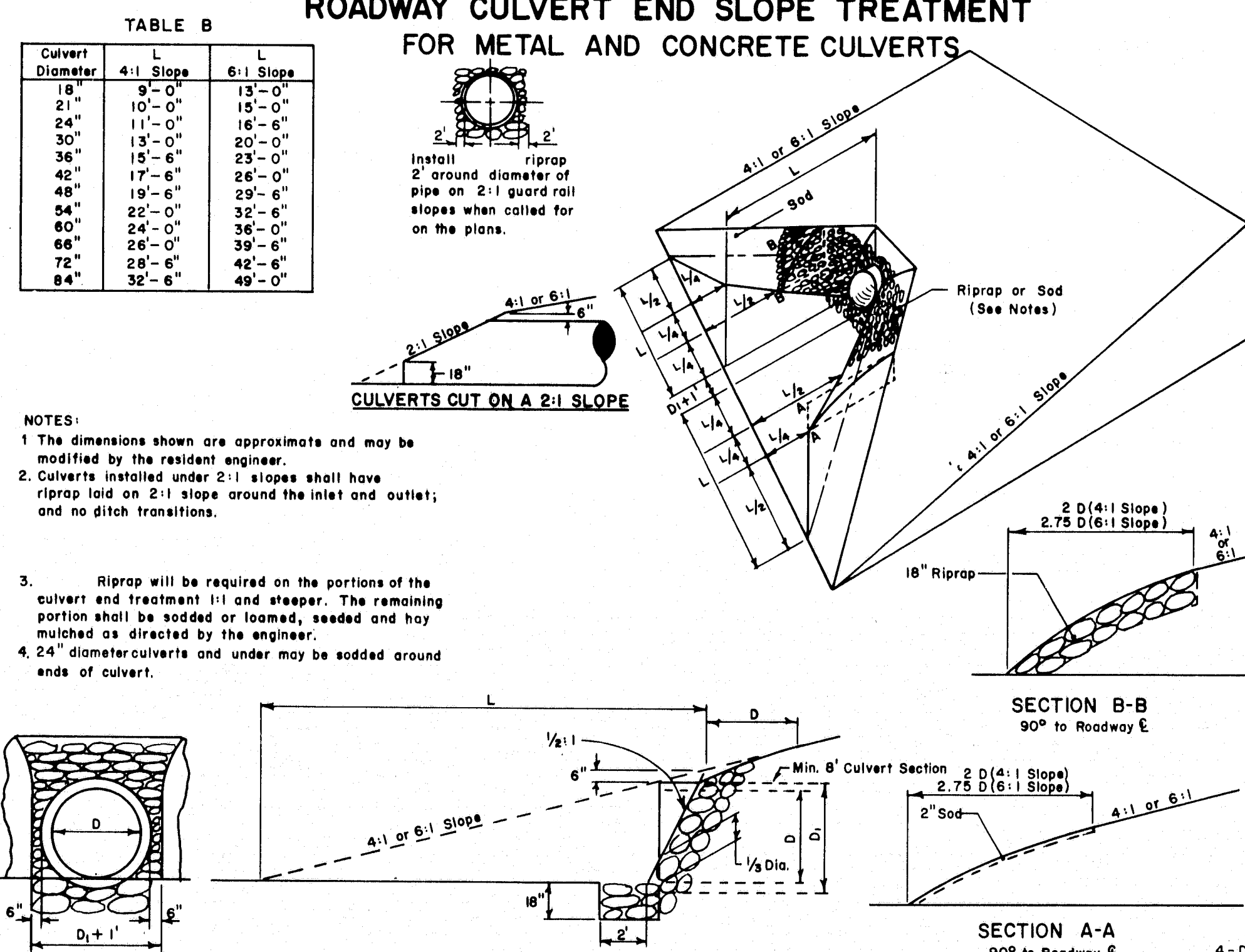
4-B

### CONCRETE INLET ENDWALL



4-C

### ROADWAY CULVERT END SLOPE TREATMENT FOR METAL AND CONCRETE CULVERTS



4-D

#### REVISIONS

Plate	Revised	By	Date
Plate 4-D	12-23-69		

MAINE STATE HIGHWAY COMMISSION  
AUGUSTA, MAINE

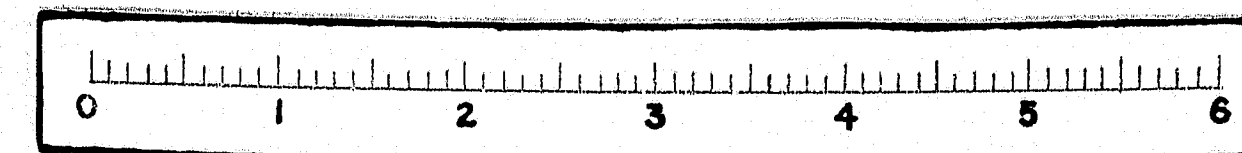
### STANDARD DETAILS

#### CULVERT INLETS & OUTLETS

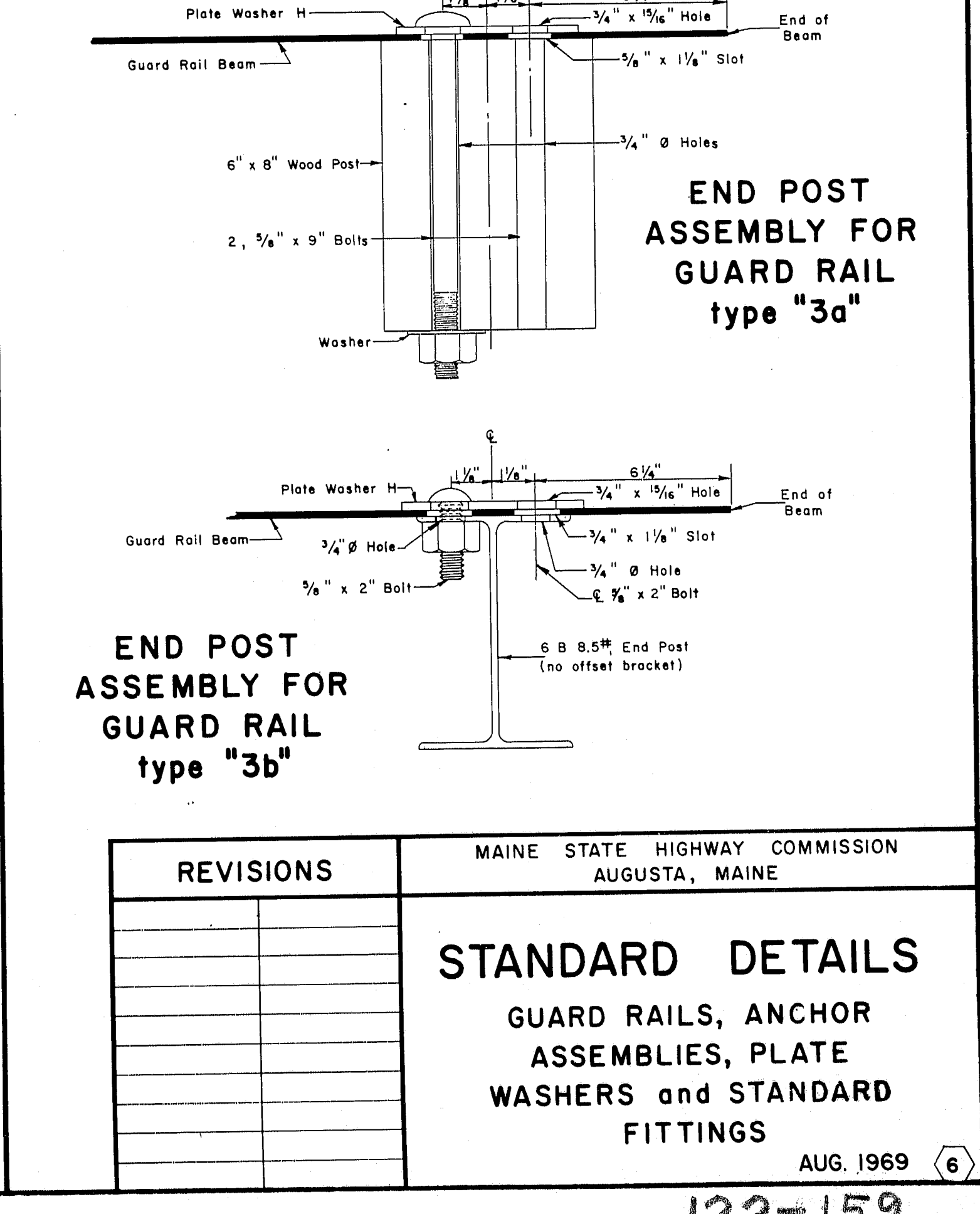
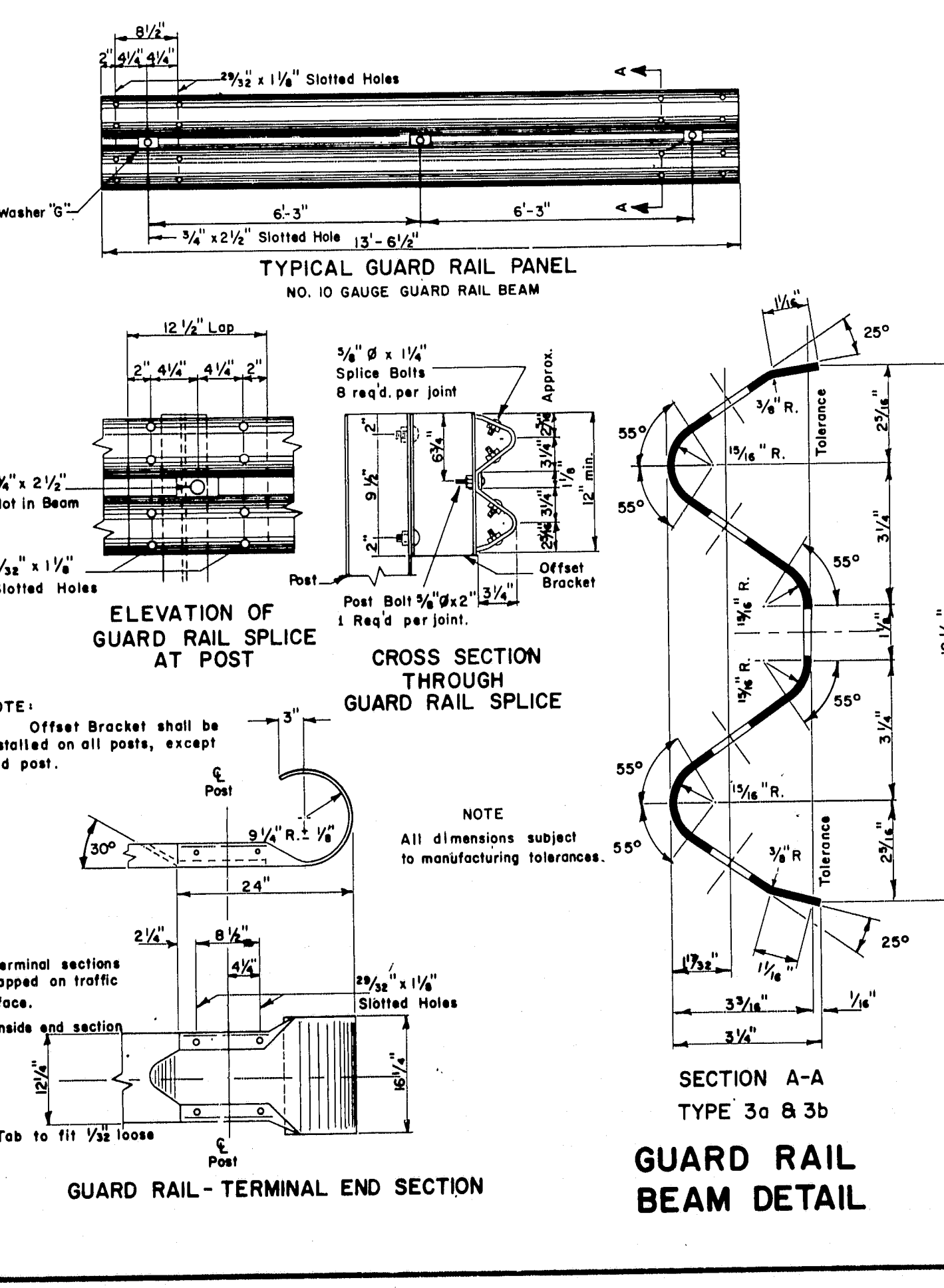
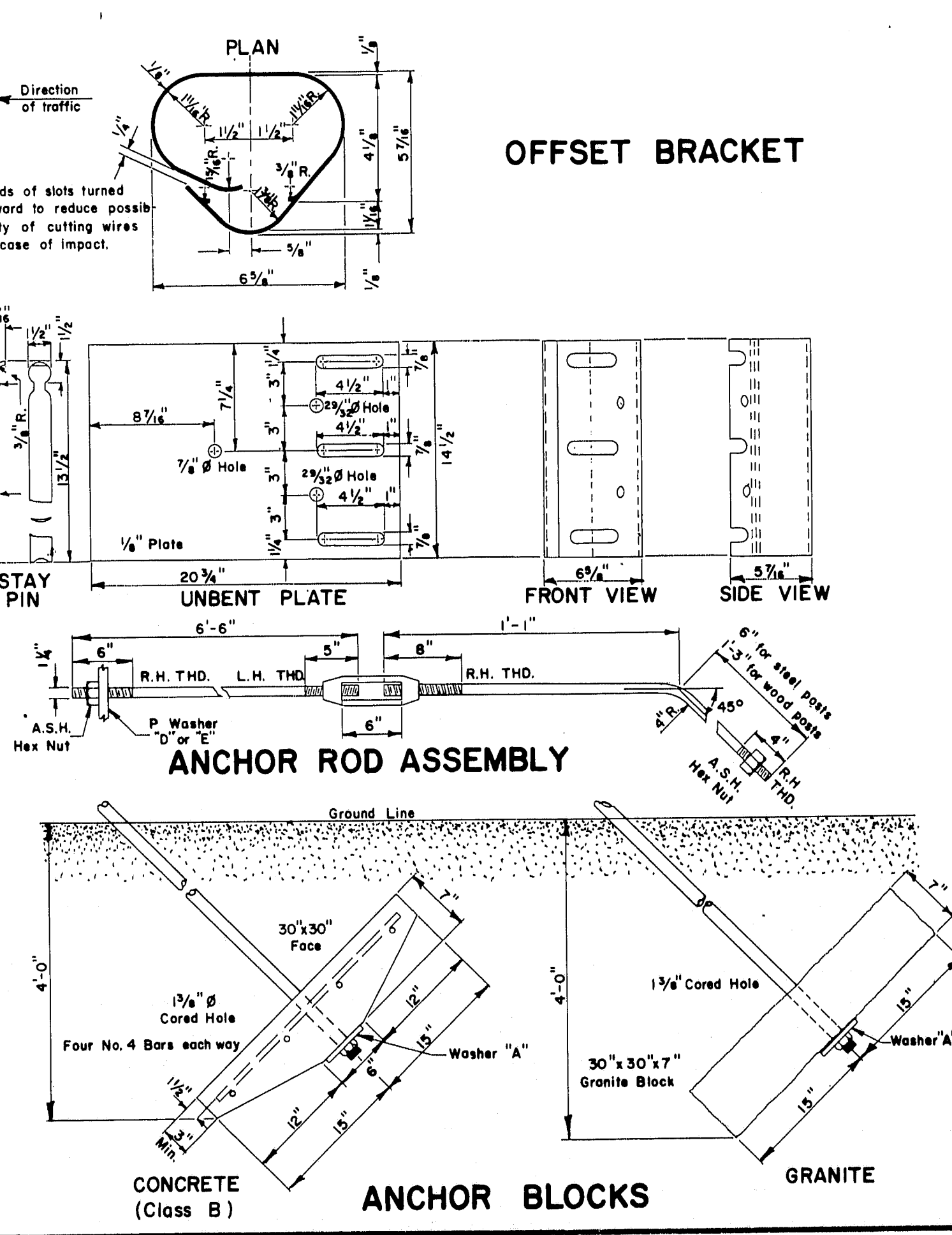
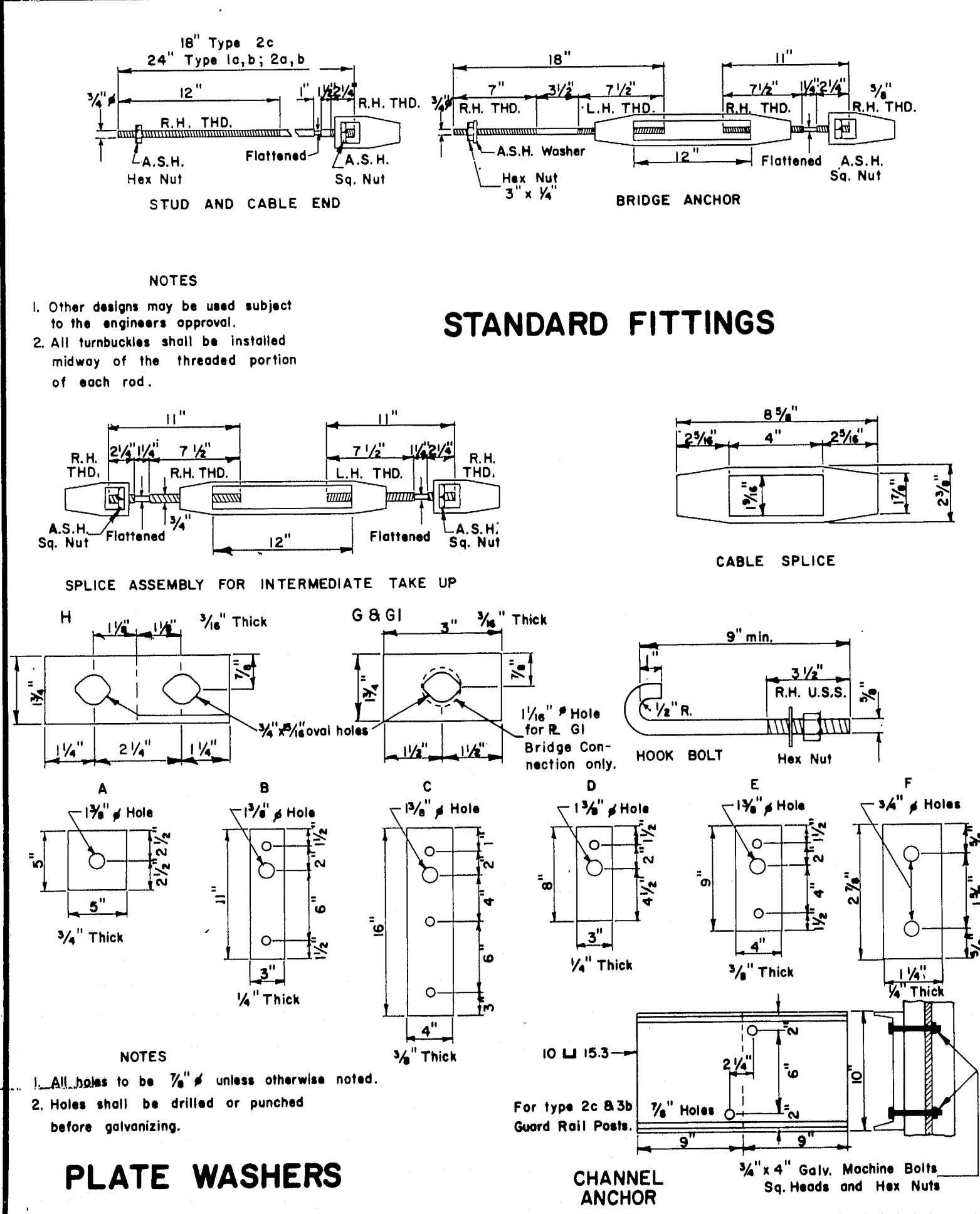
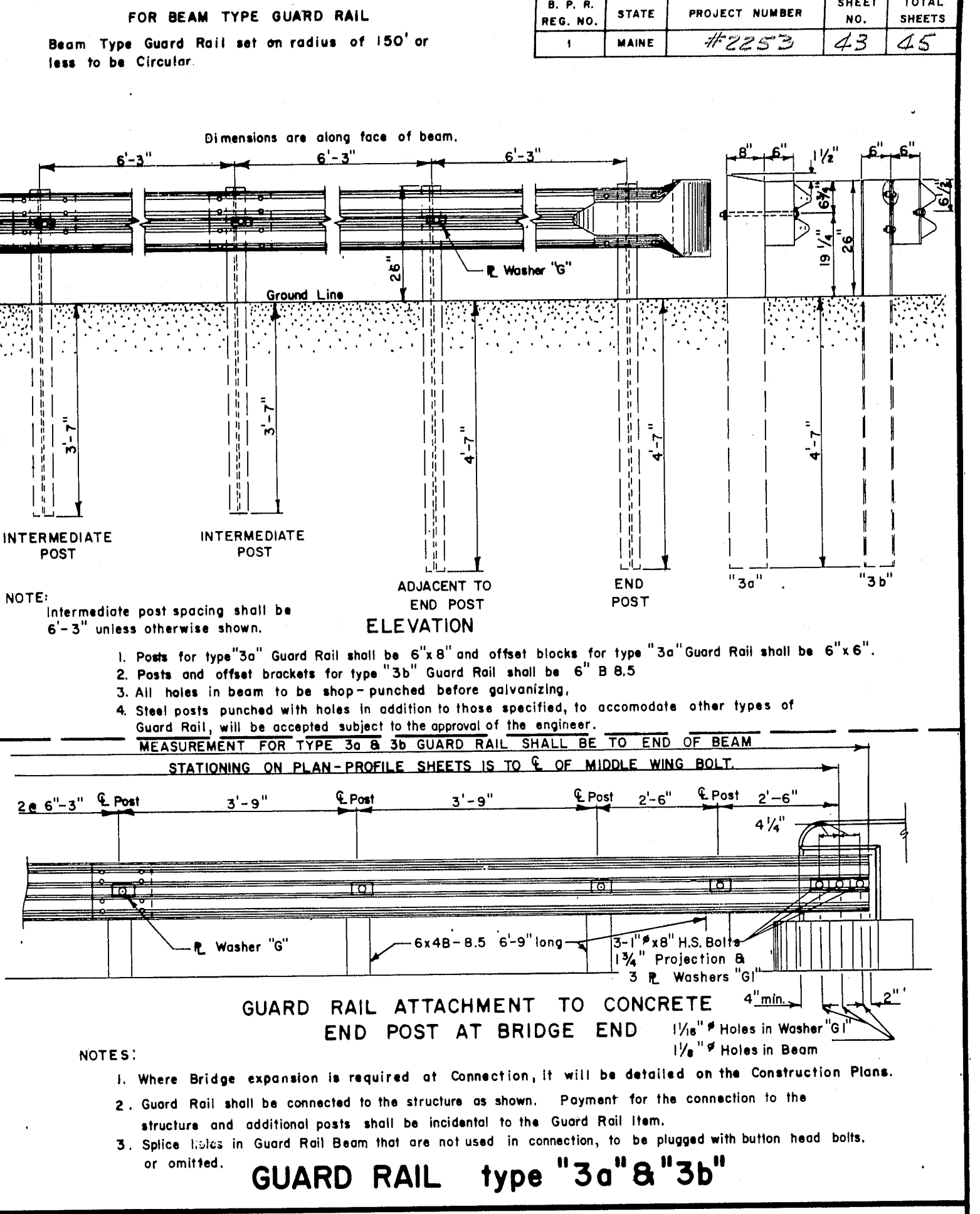
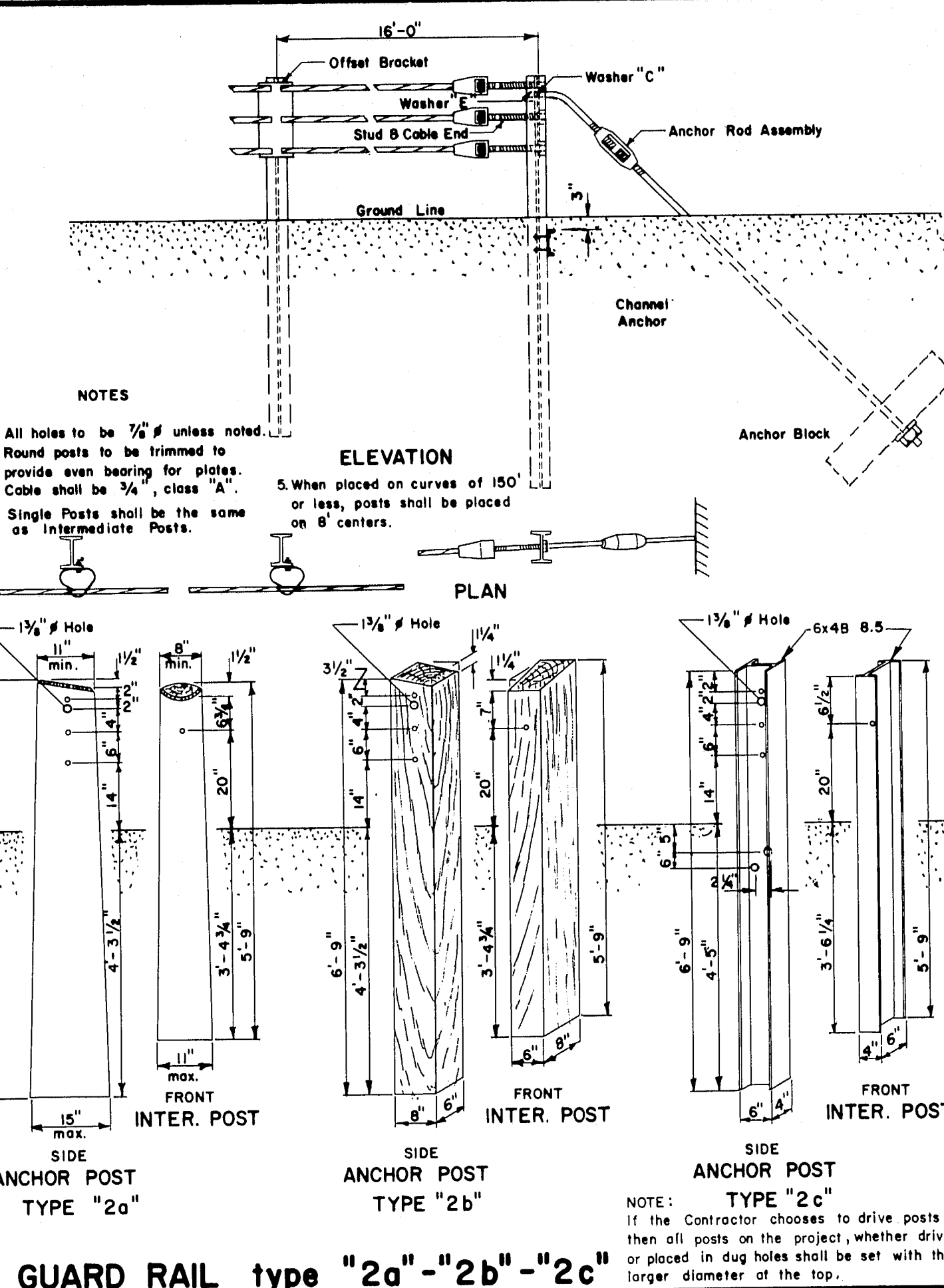
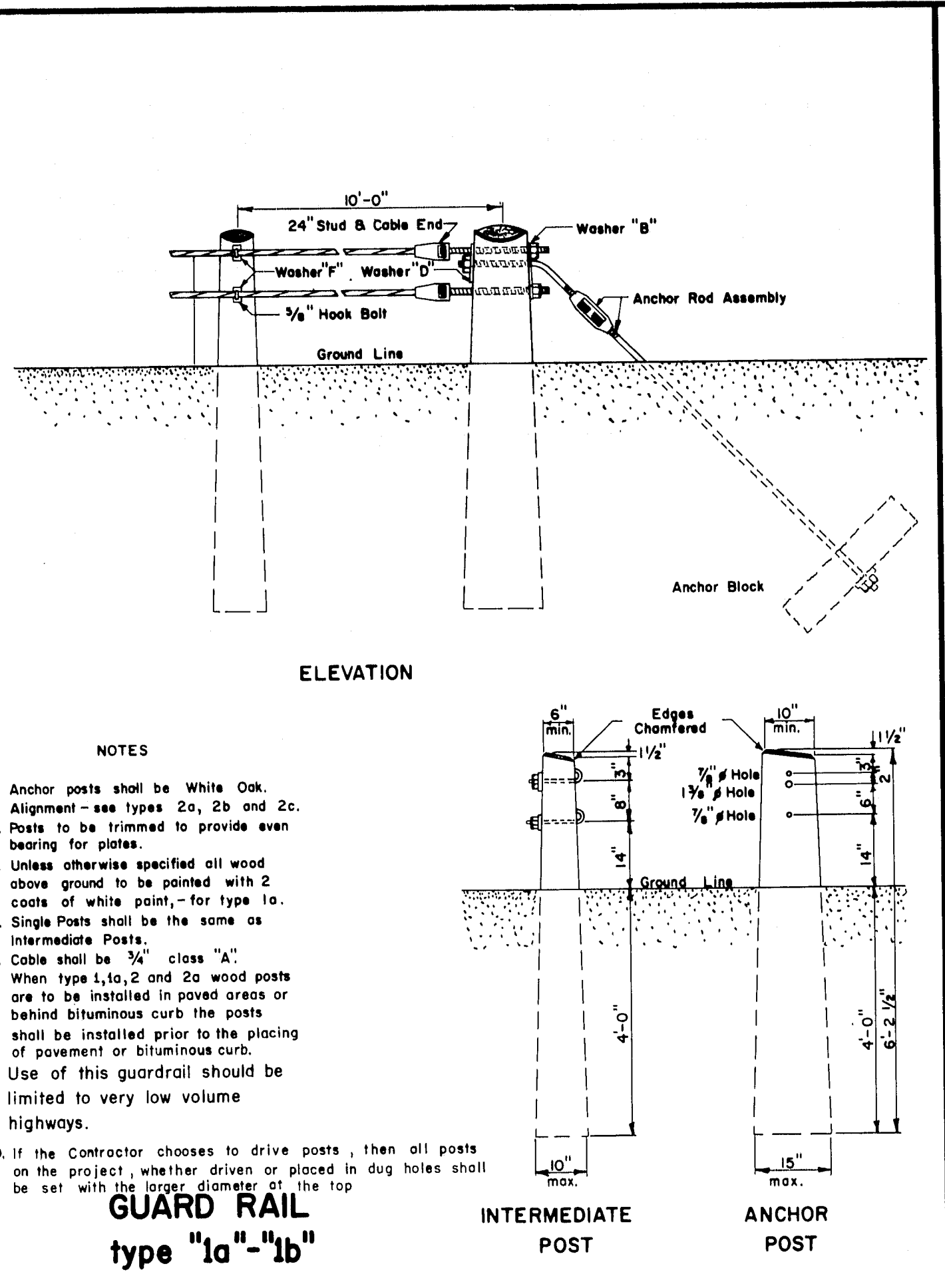
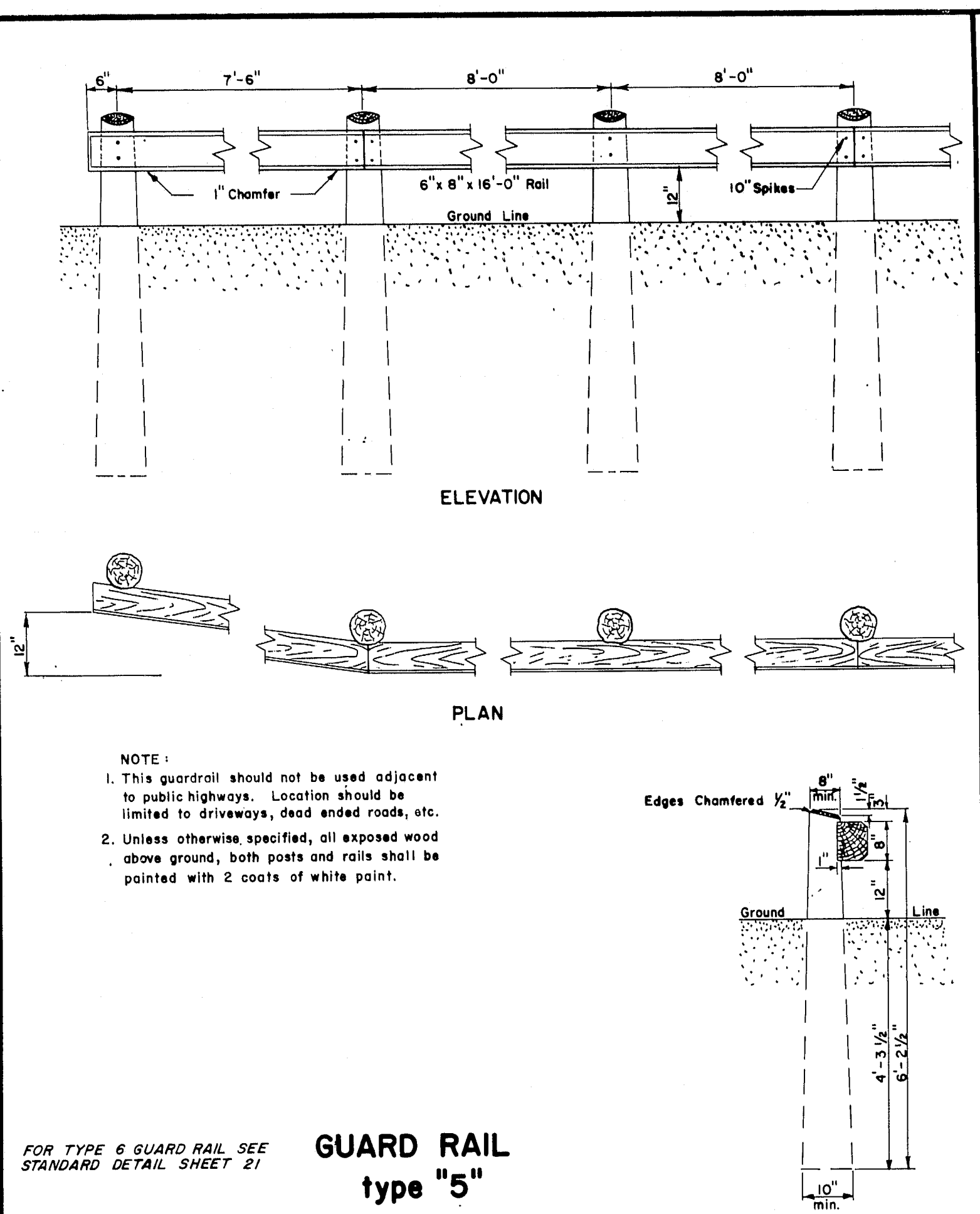
AUG. 1969

4

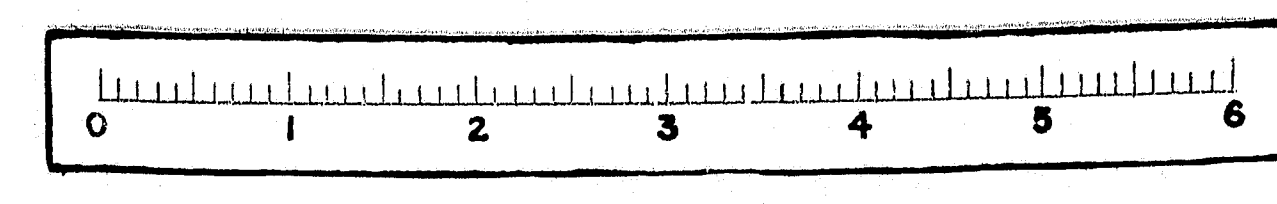
122-158



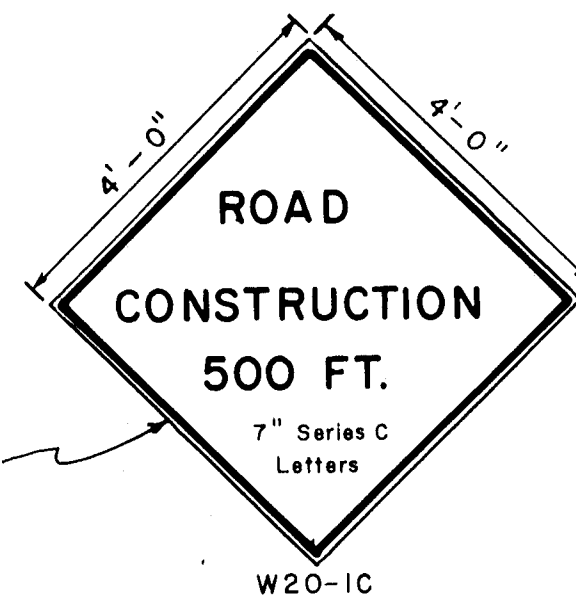
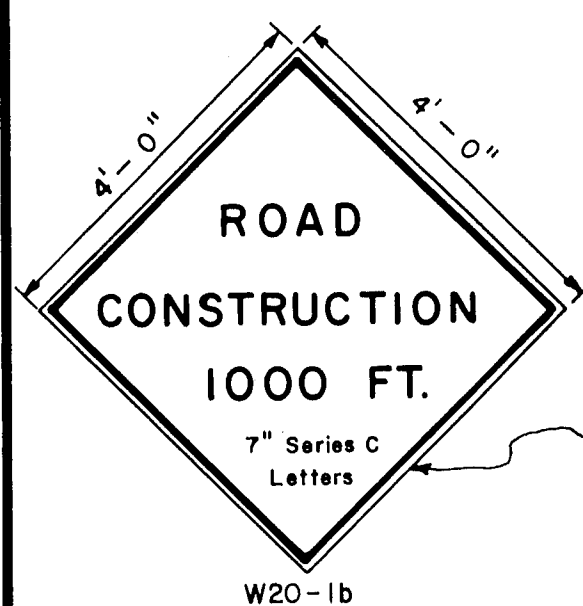
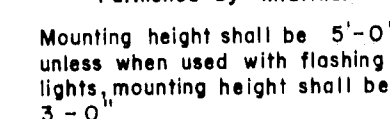
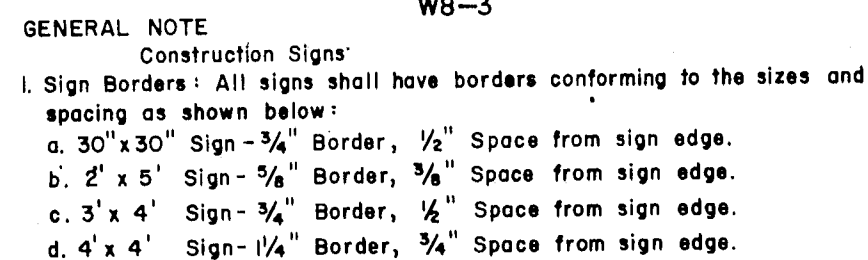




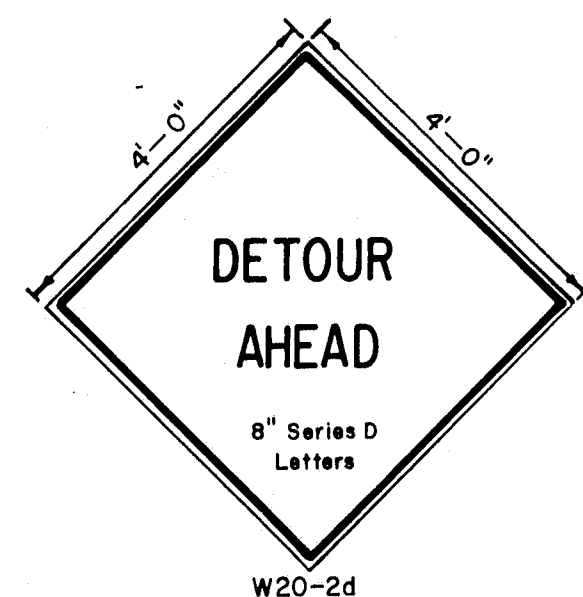
REVISIONS		MAINE STATE HIGHWAY COMMISSION AUGUSTA, MAINE	
		<b>STANDARD DETAILS</b>	
		GUARD RAILS, ANCHOR ASSEMBLIES, PLATE WASHERS and STANDARD FITTINGS	
		AUG. 1969	



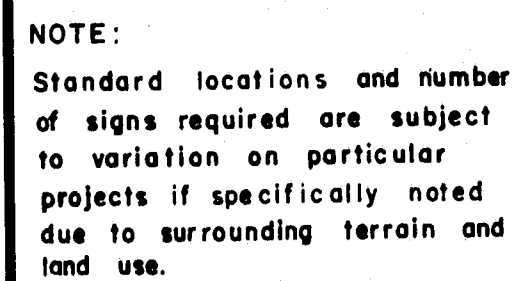
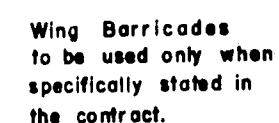




## CONSTRUCTION SIGNS



## STANDARD SIGN LOCATIONS



## GENERAL NOTES - BARRICADES

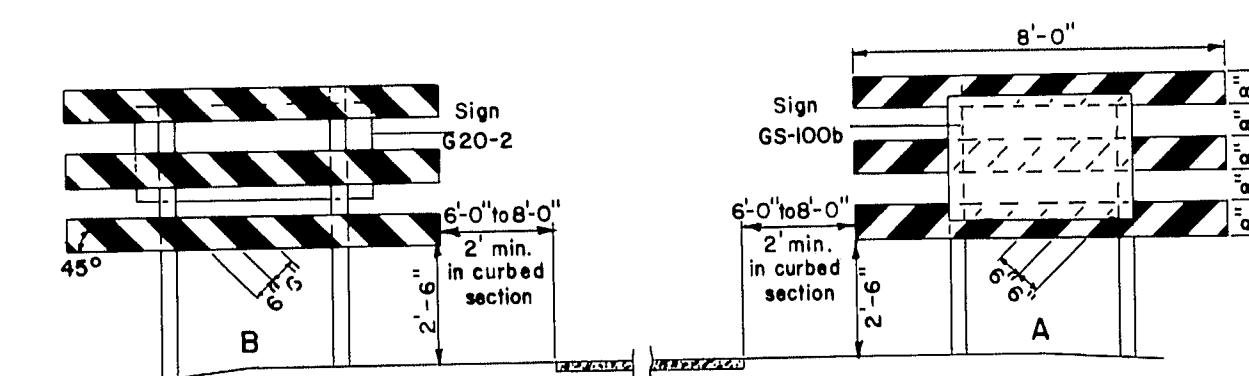
- GENERAL NOTES -- BARRICADES
1. Unless otherwise designated, sign designation letters shall refer to the "Manual of Uniform Traffic Control Devices for Streets and Highways", published by the Department of Commerce, Bureau of Public Roads.
2. White strips shall be of silver reflective sheeting bonded to 0.019 minimum gauge aluminum, 16 mil minimum gauge galvanized steel, or 1/8" plywood. Individual white sheets may be attached to a black painted background to form the black and white stripes. At the Contractor's option the reflective sheeting and backing may extend the full width of the barricade with an opaque film or paint applied to form the stripes.
3. All signs shall be of reflective sheeting on 5/8" thick plywood. The plywood shall conform to subsection 712.25, Maine State Highway Commission, Standard Specifications, June 1965.
4. Pressure sensitive reflective sheeting will be an acceptable alternate to the reflective sheeting required by Maine State Highway Commission, Standard Specifications.

## NOTES - PORTABLE BARRICADES

- NOTES - PORTABLE BARRICADES shall be 2" x 8" except posts which shall be 4" x 4" (nominal sizes).
- Lumber sizes for portable barricades shall be 2" x 8" except posts which shall be 4" x 4" (nominal sizes).
- The detour sign shall be an oversized M5-7 sign with a demountable "DETOUR" message which shall be made of screened reflective sheathing on 1/4" plywood, monomant, sheet steel or sheet aluminum.
  - Hazard markers shall be attached to the barricade with a ball assembly of steel cadmium plated 5/16" bolt, lock washer and vandal resistant nuts.
  - When two W-6 signs are required, R10-2 or R10-3 signs shall be omitted.
  - Flashing light housings shall be mounted, perpendicular to the vertical axis to allow for adjustment to face oncoming traffic.
  - Location of electric service and meter to be determined after the power source has been located.

## NOTES-WING BARRICADES

- NOTES-WING BARRICADES
1. Lumber sizes for wing barricades shall be 1" x 8" except posts which shall be 4" x 4" (nominal sizes).
  2. Wing barricades will not be required unless specifically called for in the special provisions.
  3. Location of signs and barricades will be determined by the Engineer.

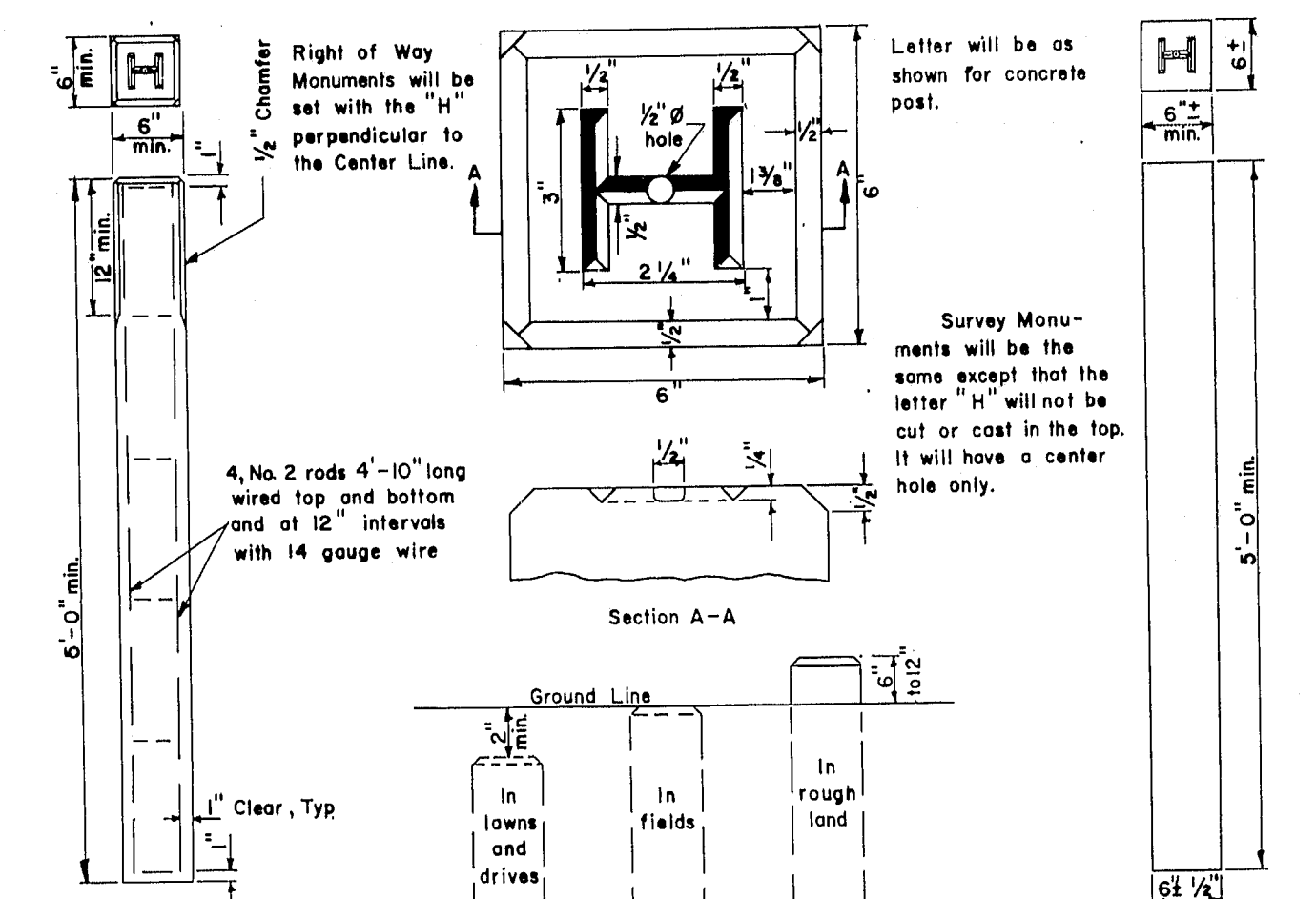


## WING BARRICADES



## BARRICADES

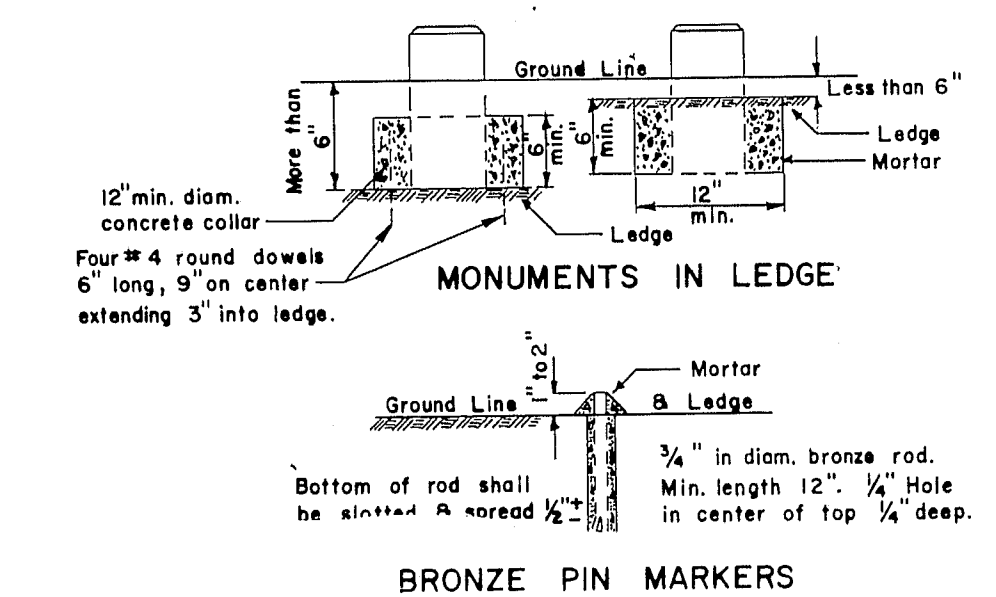
## RIGHT OF WAY & SURVEY MONUMENTS



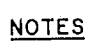
CONCRETE  
MONUMENT

## MONUMENTS IN EARTH

GRANITE  
MONUMENT



## BRONZE PIN MARKERS



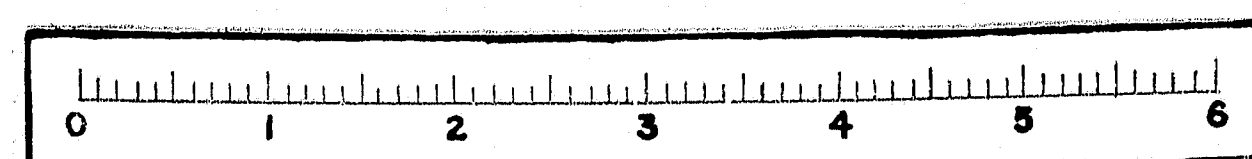
1. Distance from roadway shall be 30' minimum.
2. When posts cannot be set on the exact station, the front of the post shall be painted black from the top to 3' down, and the offset distance marked on rear with an arrow pointing in direction of beginning or end of project.
3. All markings to be 1/4" deep and 3/4" wide.

## PROJECT MARKERS

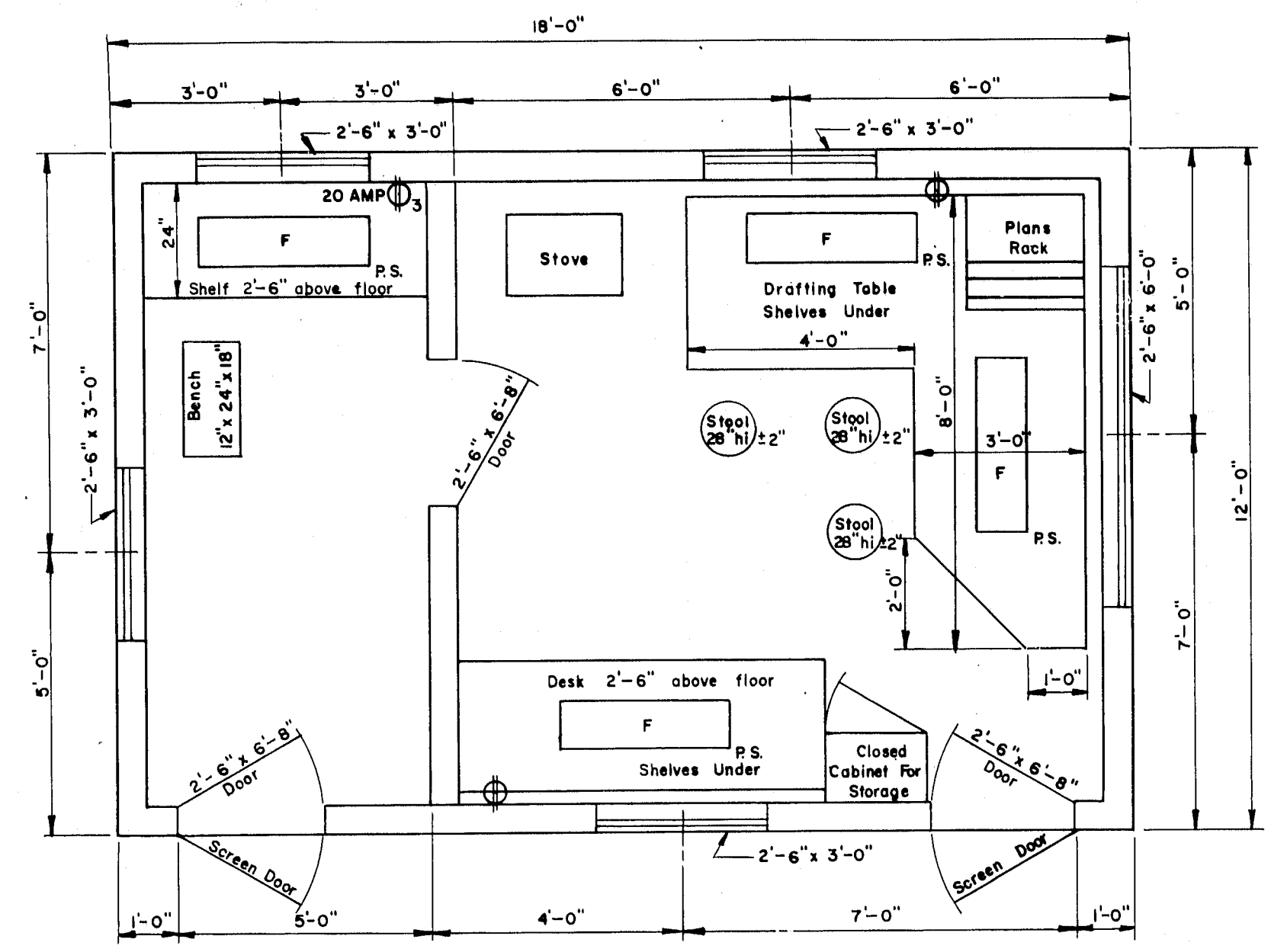
REVISION		MAINE STATE HIGHWAY COMMISSION AUGUSTA, MAINE
		<b>BARRICADES WARNING SIGNS MONUMENTS PROJECT MARKERS</b>
		AUG. 1969 <div style="text-align: right;">1</div>

AUG. 1969

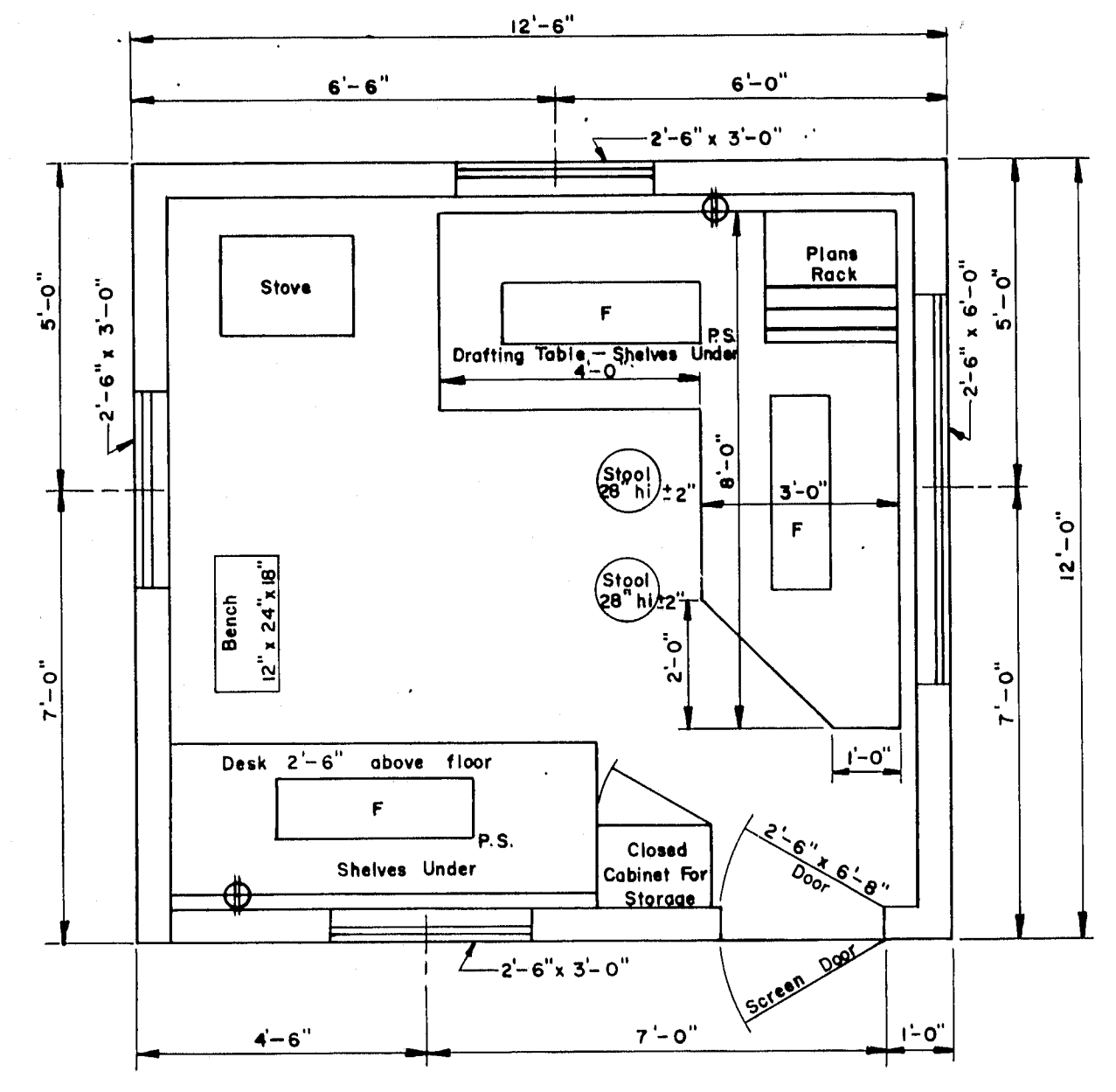
122-160



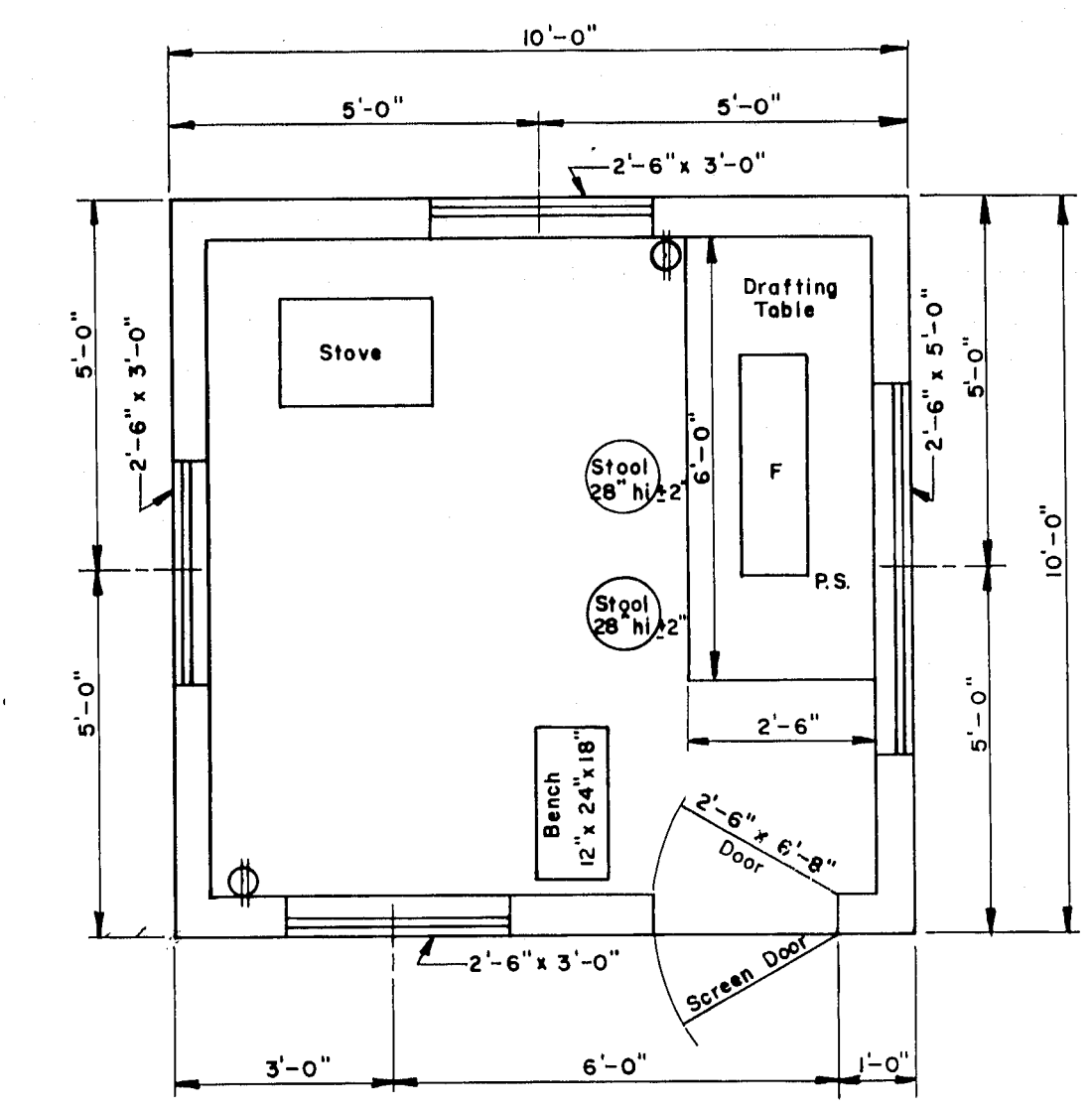




FLOOR PLAN  
TYPE "A"

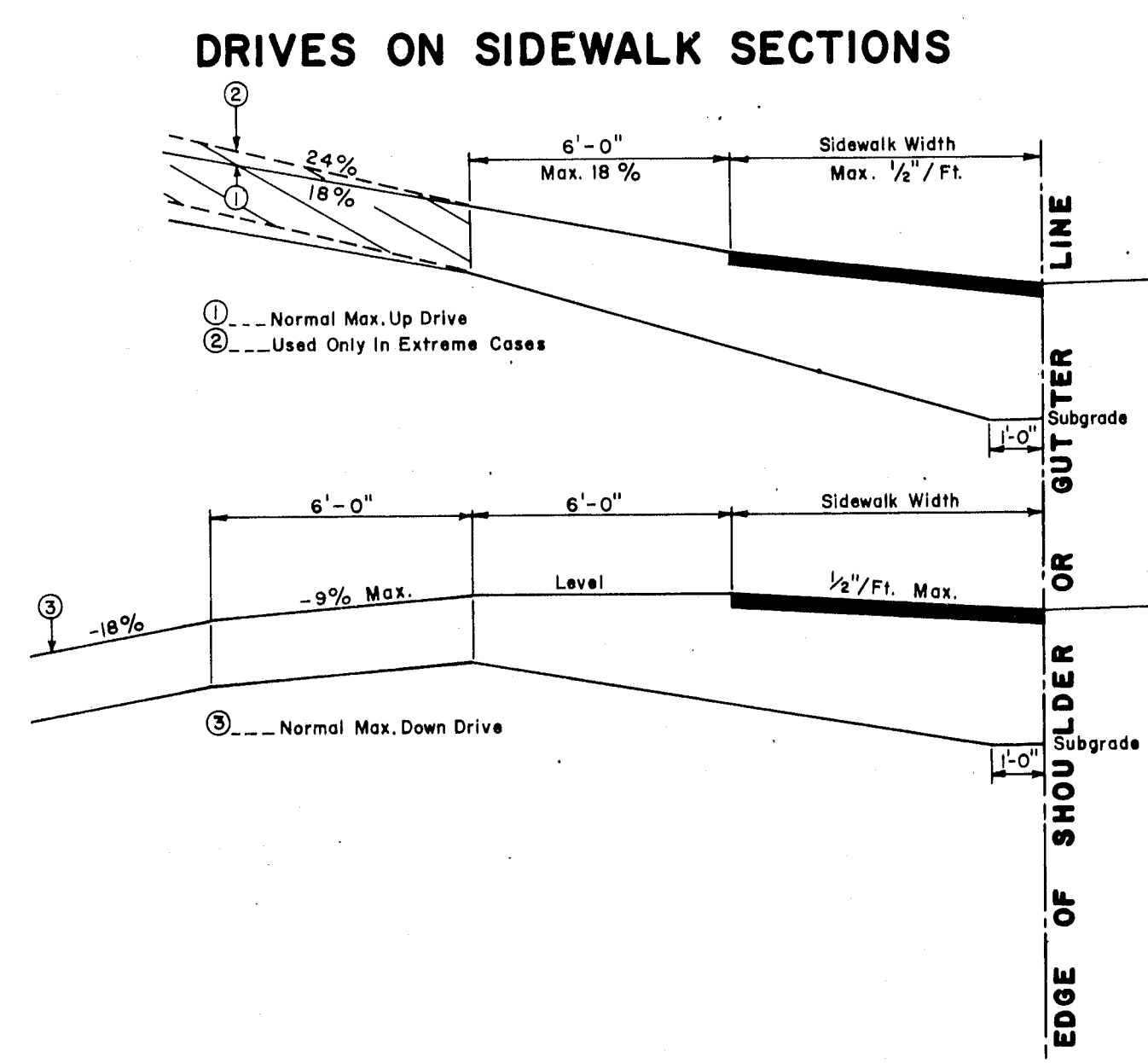


FLOOR PLAN  
TYPE "B"

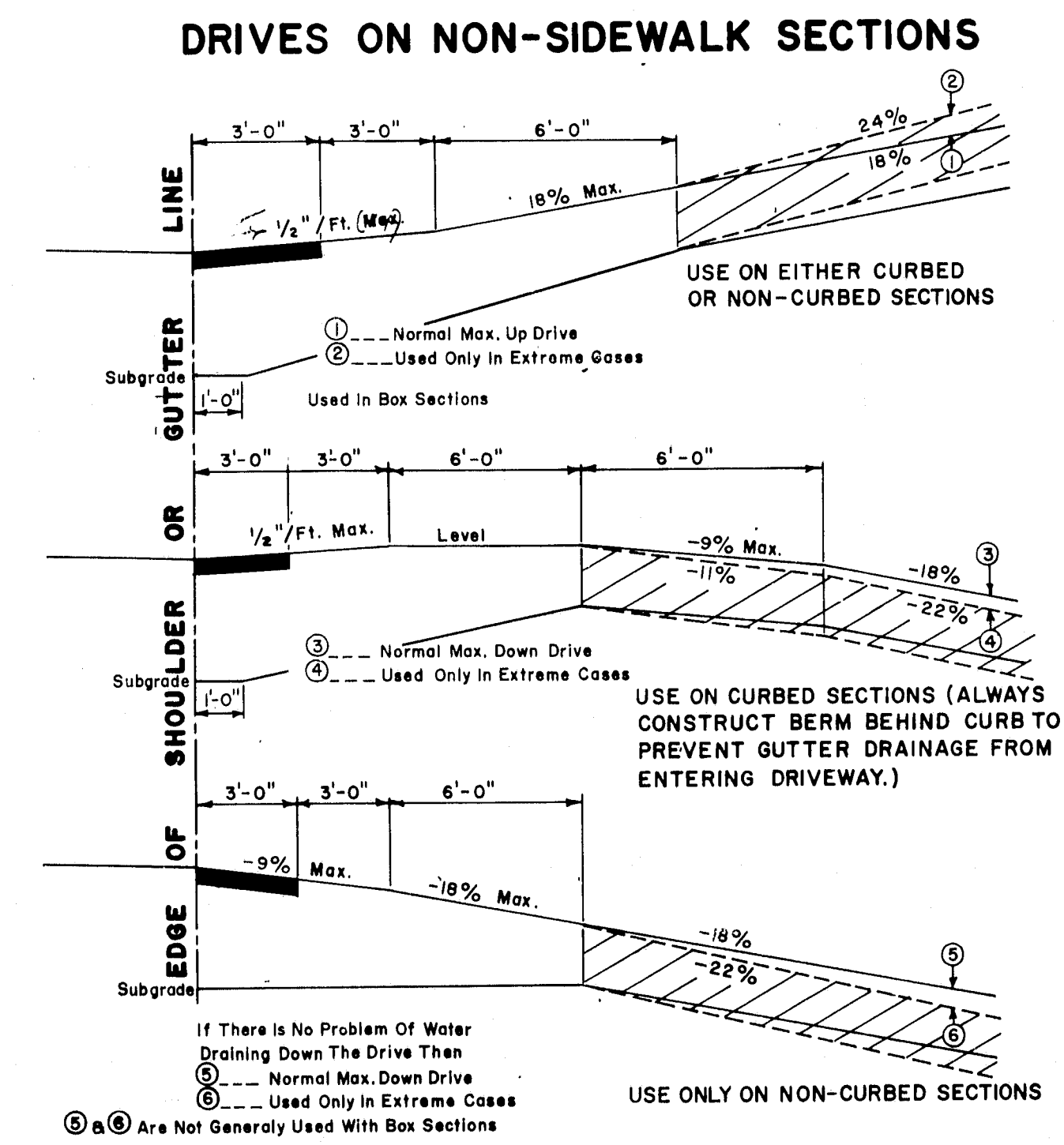


FLOOR PLAN  
TYPE "C"

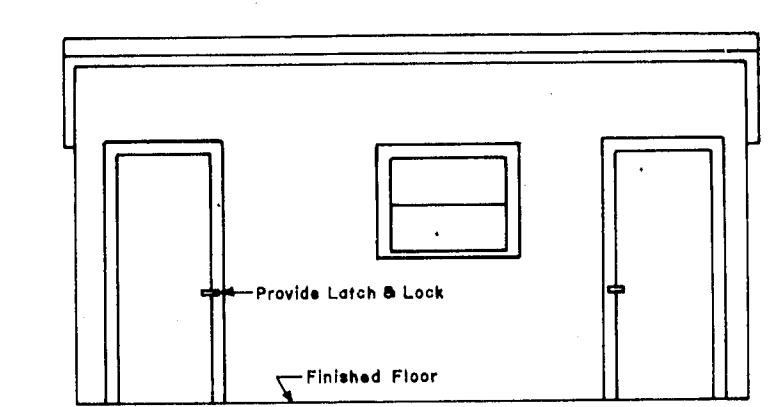
- GENERAL NOTES**
- Drafting table shall be 3'-4" high at front edge and placed 2" from studs to allow prints to hang down behind table when in use.
  - Shelves under desk shall be constructed to received 1 1/2" x 14" x 25" transfiles.
  - Windows shall be double hung.
  - Stovepipe shall not be in direct contact with combustible material; the pipe shall be surrounded with at least 6" of fireproof material.
  - Continuous 110 volt 60 cycle electric service shall be supplied.
  - The engineer may rearrange the items shown on the plan views during construction of the field office.
  - FURNISHINGS TO BE SUPPLIED:**
    - 2 Straight back chairs for types A and B
    - Bench for types A, B & C
    - Stool for type A
    - 2 Stools for types B & C
  - SYMBOLS:**
    - F Fluorescent lights (2 light, rapid start 48" strips and 40 watt bulbs.)
    - P.S. Pull switch
    - ⊕ Duplex wall outlet—15 amp unless otherwise noted.
    - ⊕ Triplex Wall Outlet
  - For the Type "A" Field Office one clean 55 gal. drum shall be supplied, installed on a suitable rack and equipped with a spigot suitable for drawing off water. The drum shall be furnished with water at all times.



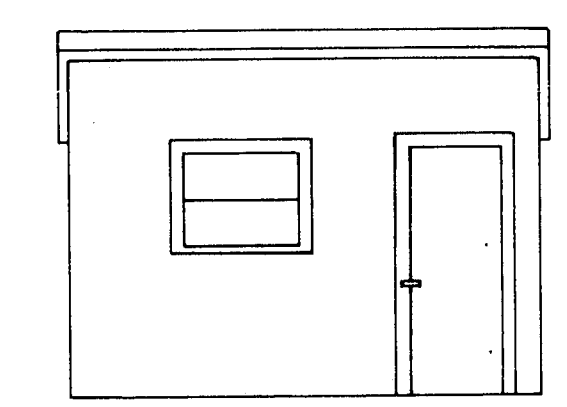
- GENERAL NOTES**
- The sidewalk width shall be paved in all cases.
  - All residential or commercial drives over 10% to be paved.
- NOTES ON MAXIMUM DRIVEWAY PROFILES**
- These profiles are a guide for the majority of cases, but should be field checked when the main line grade is steep (4% to 6% or greater) or the angle of approach to the drive is unusual.
  - Generally the majority of drives on a project will be built with flatter profiles than these maximum cases.
  - When grading drives which are flatter than the maximum profiles the following rule of thumb should be used, do not exceed a grade % change of more than 9% in a 6 foot increment of driveway length. This applies to both up and down profiles.



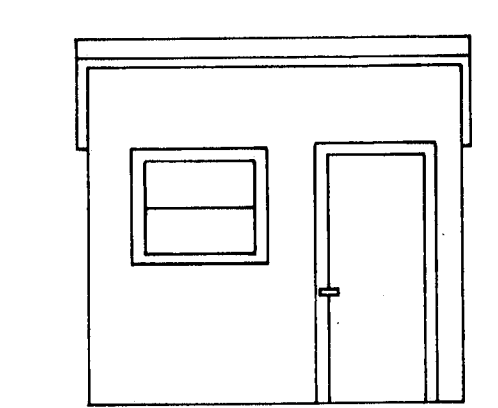
- GENERAL NOTES**
- The first 3' shown as pavement shall be paved only when abutting a paved area.
  - All residential or commercial drives over 10% to be paved.
- NOTES ON MAXIMUM DRIVEWAY PROFILES**
- These profiles are a guide for the majority of cases, but should be field checked when the main line grade is steep (4% to 6% or greater) or the angle of approach to the drive is unusual.
  - Generally the majority of drives on a project will be built with flatter profiles than these maximum cases.
  - When grading drives which are flatter than the maximum profiles the following rule of thumb should be used, do not exceed a grade % change of more than 9% in a 6 foot increment of driveway length. This applies to both up and down profiles.



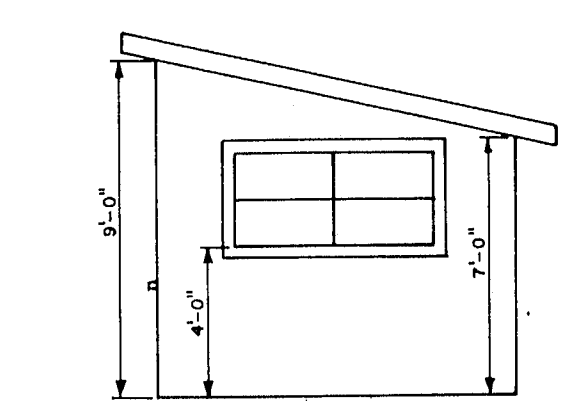
FRONT ELEVATION  
TYPE "A"



FRONT ELEVATION  
TYPE "B"

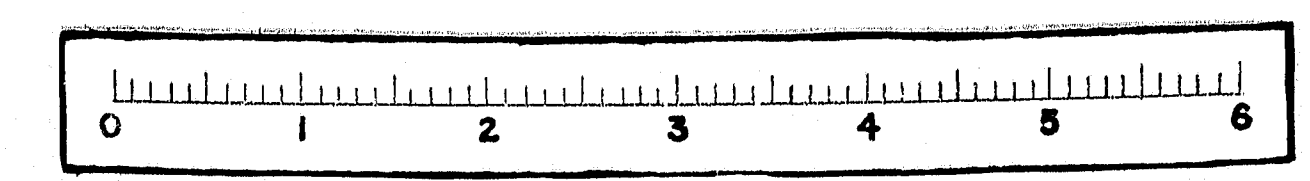


FRONT ELEVATION  
TYPE "C"



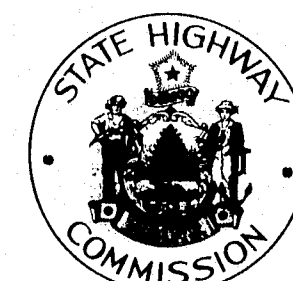
SIDE ELEVATION  
TYPES "A" "B" & "C"

REVISIONS		MAINE STATE HIGHWAY COMMISSION AUGUSTA, MAINE	
		<b>STANDARD DETAILS</b>  DRIVEWAY DETAILS FIELD OFFICES TESTING LABORATORY  AUG. 1969	





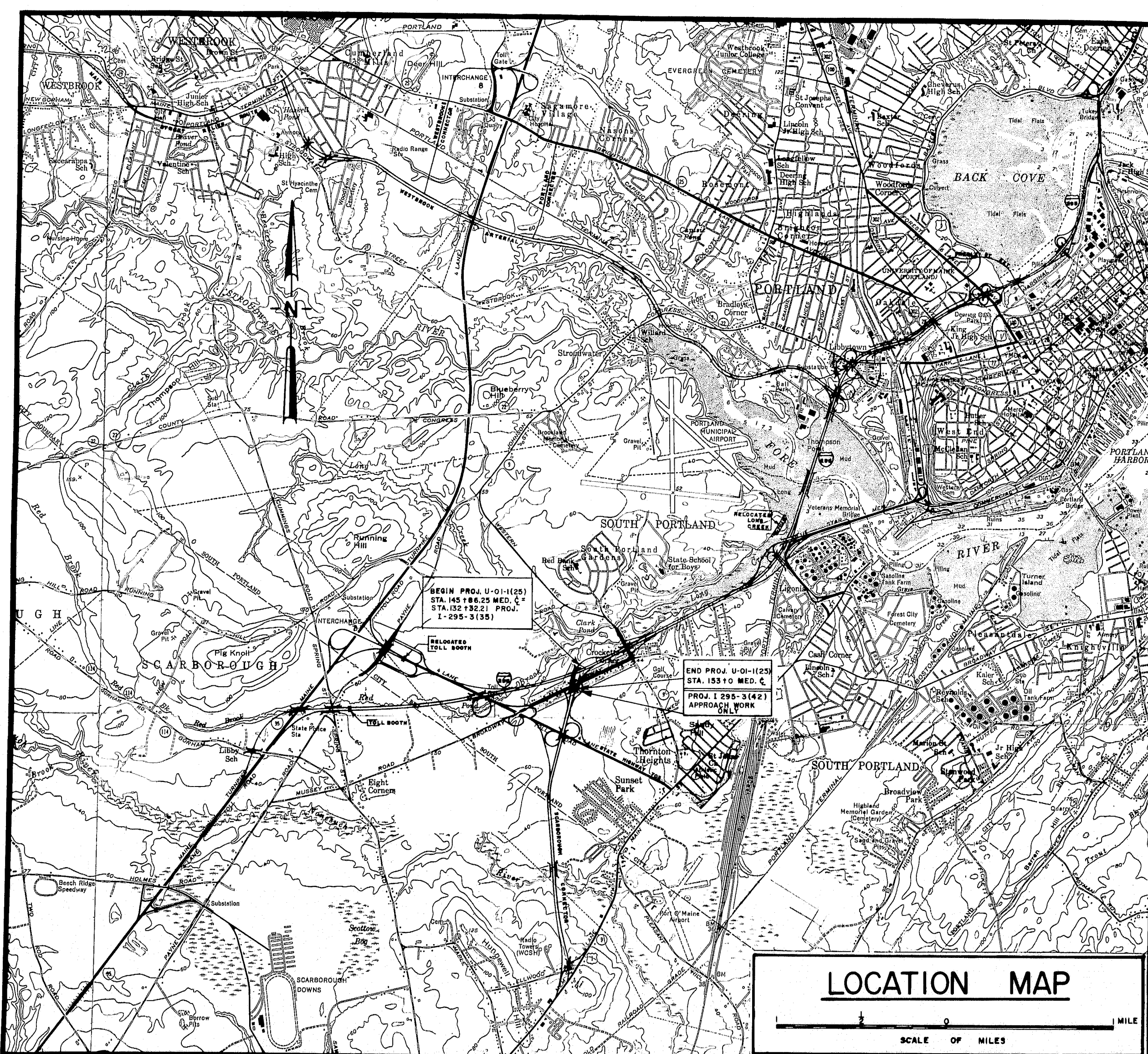
S. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-295-3 (42) 11-01-1 (25)	1	1



## CONVENTIONAL SIGNS

COUNTY LINES	----	TRAVELLED WAY - PROPOSED	=====
TOWN LINES	----	UNDERGROUND UTILITIES - EXISTING	-----
PROPERTY LINES	----	UNDERGROUND UTILITIES - PROPOSED	-----
R/W LINES - EXISTING	=====	RAILROAD - SINGLE TRACK	=====
R/W LINES - NEW - ACCESS CONTROL	=====	RAILROAD - DOUBLE TRACK	=====
R/W LINES - NEW - NO ACCESS CONTROL	=====	UTILITY POLE - EXISTING	◆
CULVERT - EXISTING	=====	UTILITY POLE - JOINT OCCUPANCY	◆ J
CULVERT - PROPOSED	=====	PROPOSED UTILITY POLE - TEMPORARY	X
CURBING - EXISTING	=====	PROPOSED UTILITY POLE - PERMANENT	◆
CURBING - PROPOSED	=====	hardwood	◆
TRAVELLED WAY - EXISTING	=====	WOODS	◆ softwood

INDEX OF SHEETS		<u>SCALE</u>	
SHEET NO.	DESCRIPTION	HORIZ.	VERT.
1	TITLE SHEET		
2	LAYOUT PLAN AND GENERAL NOTES	1" = 300'	
3 - 4	TYPICAL SECTIONS	1" = 5'	1" = 5'
5 - 6	QUANTITIES		
7 - 19	STANDARD DETAILS (HIGHWAY & BRIDGE)		
20	SPECIAL DETAILS - BRIDGE LIGHTING		
21 - 39	BRIDGE PLANS - RTE. 1 CONN. N.B. OVER BROADWAY		
40 - 55	BRIDGE PLANS - RTE. 1 CONN. S.B. OVER BROADWAY		
56 - 74	BRIDGE PLANS - RTE. 1 CONN. S.B. OVER I-295		
75 - 80	PLAN AND PROFILE STA. 12+00 TO STA. 44+50	1" = 50'	1" = 5'
81 - 82	GRADING PLANS	1" = 20'	
83 - 99	CROSS SECTIONS - BROADWAY STA. 12+00 TO STA. 44+50	1" = 5'	1" = 5'
100 - 103	CROSS SECTIONS - RAMP BW-1 AND BW-2	1" = 10'	1" = 10'
104 - 110	CROSS SECTIONS - RTE. 1 CONN. N.B. AND S.B.	1" = 10'	1" = 10'
111 - 112	CROSS SECTIONS - BROADWAY PAVEMENT OVERLAY AREA	1" = 5'	1" = 2'



REVISED PLANS  
January 12, 1970

<u>TRAFFIC DATA</u>	<u>RTE. I S.B.</u>	<u>RTE. I N.B.</u>	<u>BROADWAY</u>
A.D.T. <u>1970</u>	<u>2980</u>	<u>3655</u>	<u>5509</u>
A.D.T. <u>1990</u>	<u>4950 *</u>	<u>4950 *</u>	<u>7982 *</u>
D.H.V. _____	<u>495</u>	<u>495</u>	<u>798</u>
T. (%) _____	<u>8</u>	<u>8</u>	<u>8</u>
D. (%) _____	<u>100</u>	<u>100</u>	<u>55</u>
V. _____	<u>50 MPH</u>	<u>50 MPH</u>	<u>50 MPH</u>
P.S.D. (%) <u>Not Applicable</u>			
18 KIPS _____	<u>298</u>	<u>316</u>	<u>74</u>
* MAINE TURNPIKE TOLL FREE			

SCHEDULE OF REVISIONS		
REVISION 1 OF 1		
Sheet to be Revised	Sheet to be Superseded	Remarks
1 of 112	37 of 112 by	37A of 112
21	38	38A
22	39	39A
23	40	40A
24	41	41A
25	42	42A
26	43	43A
27	44	44A
28	45	45A
29	46	46A
30	47	47A
31	48	48A
32	49	49A
33	50	50A
34	51	51A
35	52	52A
36	53	53A
37	54	54A
38	55	55A
39	56	56A
40	57	57A
41	58	58A
42	59	59A
43	60	60A
44	61	61A
45	62	62A
46	63	63A
47	64	64A
48	65	65A
49	66	66A
50	67	67A
51	68	68A
52	69	69A
53	70	70A
54	71	71A
55	72	72A
56	73	73A
57	74	74A
58	75	75A
59	76	76A
60	77	77A
61	78	78A
62	79	79A
63	80	80A
64	81	81A
65	82	82A
66	83	83A
67	84	84A
68	85	85A
69	86	86A
70	87	87A
71	88	88A
72	89	89A
73	90	90A
74	91	91A
75	92	92A
76	93	93A
77	94	94A
78	95	95A
79	96	96A
80	97	97A
81	98	98A
82	99	99A
83	100	100A
84	101	101A
85	102	102A
86	103	103A
87	104	104A
88	105	105A
89	106	106A
90	107	107A
91	108	108A
92	109	109A
93	110	110A
94	111	111A
95	112	112A

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



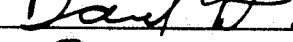
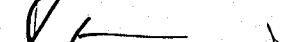
Wm. W. White 5/20/69  
DATE

DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
BUREAU OF PUBLIC ROADS  
REGION 1

APPROVED: \_\_\_\_\_  
 DIVISION ENGINEER DATE

NOTE

ALL WORK CONTEMPLATED UNDER THIS CONTRACT SHALL BE GOVERNED BY AND IN CONFORMITY WITH THE STANDARD SPECIFICATIONS (REVISION OF JUNE 1968 AND SUPPLEMENTS THERETO, EXCEPT AS MODIFIED ON THE PLANS AND IN THE SPECIAL PROVISIONS.

APPROVED:	DATE
<div style="text-align: center;">             CHAIRMAN         </div>	5-28-69
<div style="text-align: center;">             CHAIRMAN         </div>	5-28-69
<div style="text-align: center;">             CHAIRMAN         </div>	5-28-69
<div style="text-align: center;">             CHIEF ENGINEER         </div>	5-28-69

122-162

