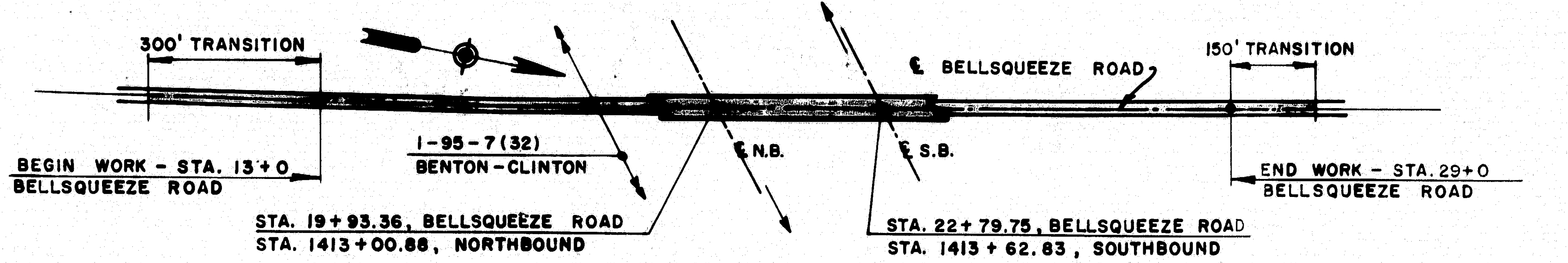
B.P.R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-7 (38)	1	25

STATE OF MAINE
STATE HIGHWAY COMMISSION

BELLSQUEEZE ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
BENTON
KENNEBEC COUNTY
FEDERAL AID PROJECT NO. I-95-7(38)130

INDEX OF SHEETS

1	TITLE SHEET
2-3	SURVEY & UTILITIES
4 THRU 11	CROSS SECTIONS
12-13	FOUNDATION SURVEY
14	GENERAL PLAN, ESTIMATE OF QUANTITIES
15	ABUTMENT NO. 1
16	APPROACH SLAB, GRANITE BRIDGE CURB, & RAIL POST SPACING.
17	ABUTMENT NO. 2
18-18A	SLOPE PAVING (ALTERNATE USED)
19	PIERS
20	STRUCTURAL STEEL ERECTION DIAGRAM
21	STRUCTURAL STEEL DETAILS
22	SHEAR CONNECTORS, BEAM GRADES, & BLOCKING
23-24	SUPERSTRUCTURE
25	REINFORCING STEEL
BD 101-62	STANDARD DETAILS-BEARING PEDESTALS
BD 102-62	STANDARD DETAILS-BRIDGE RAIL
BD 103-62	STANDARD DETAILS-BEAM SPLICES
BD 104-62	STANDARD DETAILS-DIAPHRAGMS, ARMORED JOINT, SHEAR CONNECTORS, & DRAINS
	STANDARD DETAILS - GUARD RAIL & FITTINGS, WIRE FENCING, METAL SLUICE AND PLANK CURB



LAYOUT

SCALE- 1" = 200'

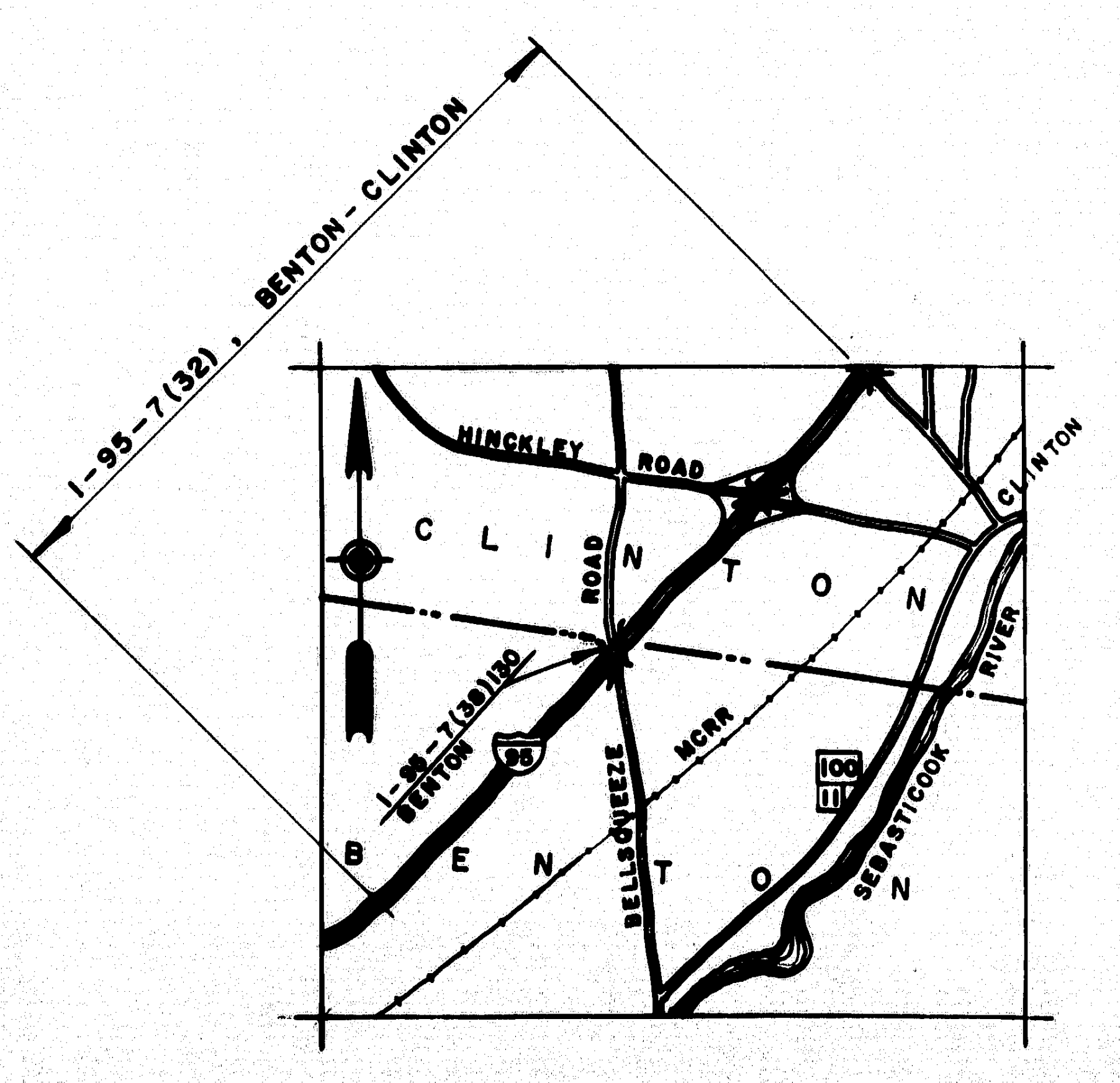
TRAFFIC

A.D.T. ___ 1963 ___ 35
A.D.T. ___ 1975 ___ 45
A.D.T. ___ 1983 ___ 50
D ------------ 60%
T ------------ 11%
V ------------ 45 M.P.H.

SCALES

PLAN & PROFILE- { HOR. 1" = 50'
VERT. 1" = 5'

CROSS SECTIONS ___ 1" = 5'



LOCATION MAP

APPROX. SCALE - 1" = 1 MILE

APPROVED
MAINE STATE HIGHWAY COMMISSION

CHAIRMAN

R. Lon Williams

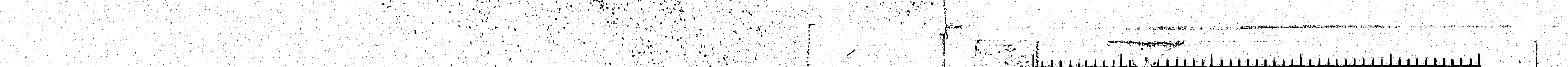
CHIEF ENGINEER

5/8/63
DATE

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
REGION 1

APPROVED

DIVISION ENGINEER
DATE



B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-7(38)	2	25

LEGEND

⊕ — TEMPORARY POLE 1ST STAGE - REMOVE 2ND STAGE

● — NEW POLE 1ST STAGE - REMAIN 2ND STAGE

X — PERMANENT POLE 2ND STAGE

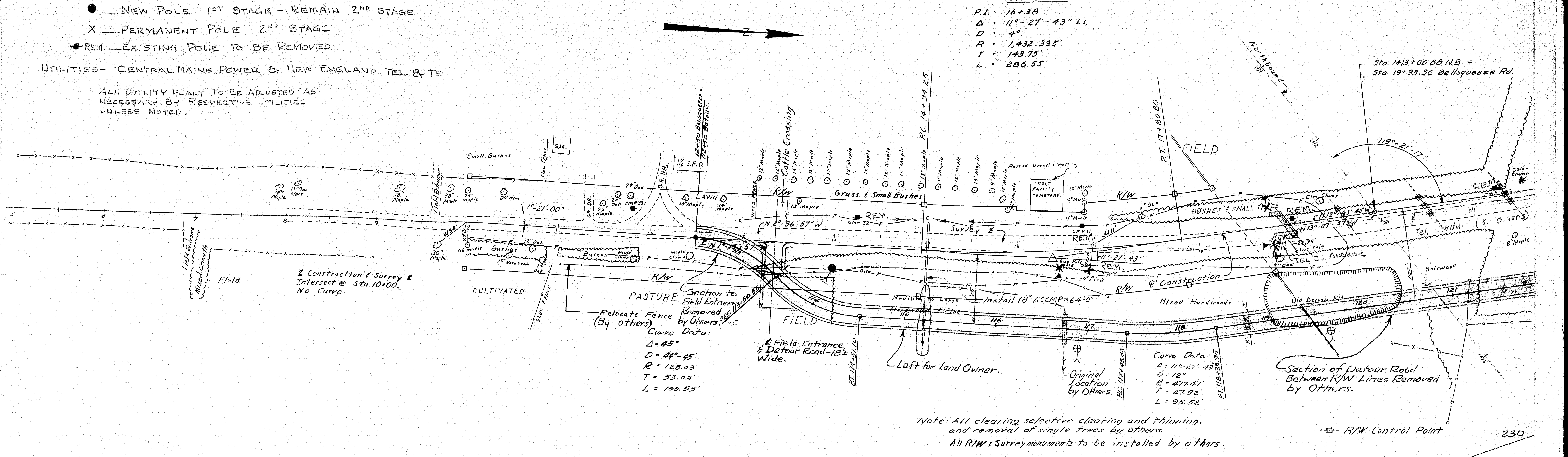
REM. — EXISTING POLE TO BE REMOVED

UTILITIES - CENTRAL MAINE POWER & NEW ENGLAND TEL. & TEL.

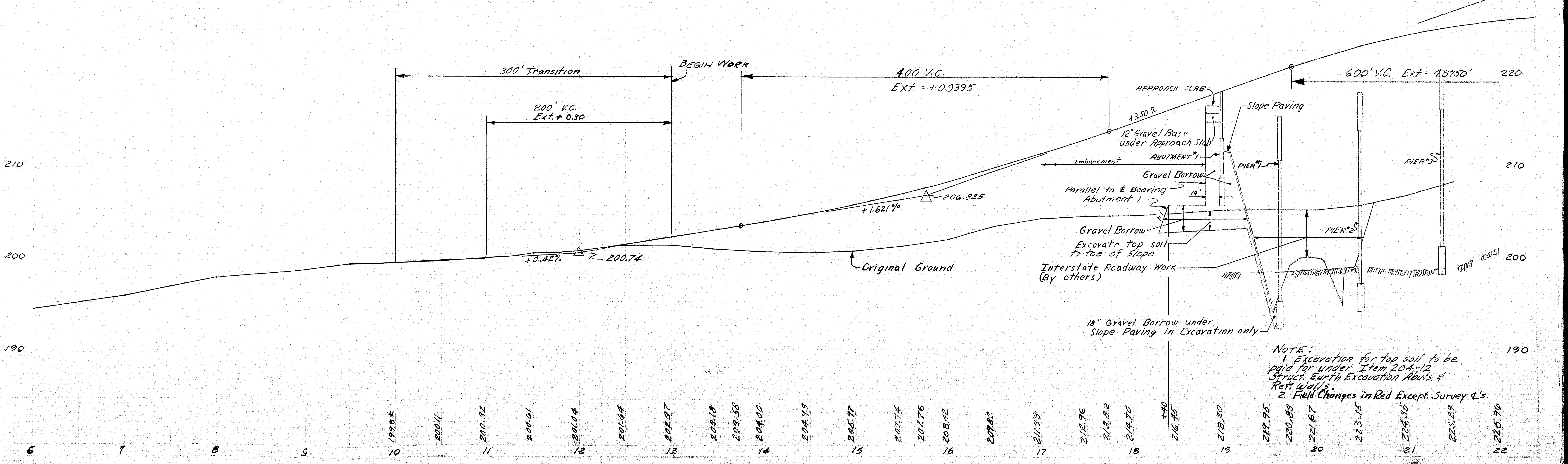
ALL UTILITY PLANT TO BE ADJUSTED AS
NECESSARY BY RESPECTIVE UTILITIES
UNLESS NOTED.

℄ CONSTRUCTION
CURVE DATA

P.I. = 16+38
Δ = 11° - 27' - 43" Lt.
D = 4°
R = 1,432.395'
T = 143.75'
L = 286.55'



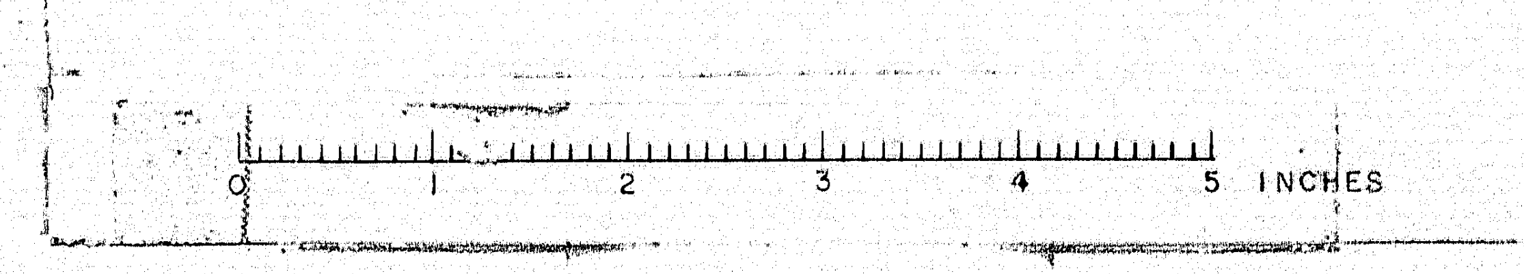
Note: All clearing, selective clearing and thinning, and removal of single trees by others.
All R/W & Survey monuments to be installed by others.



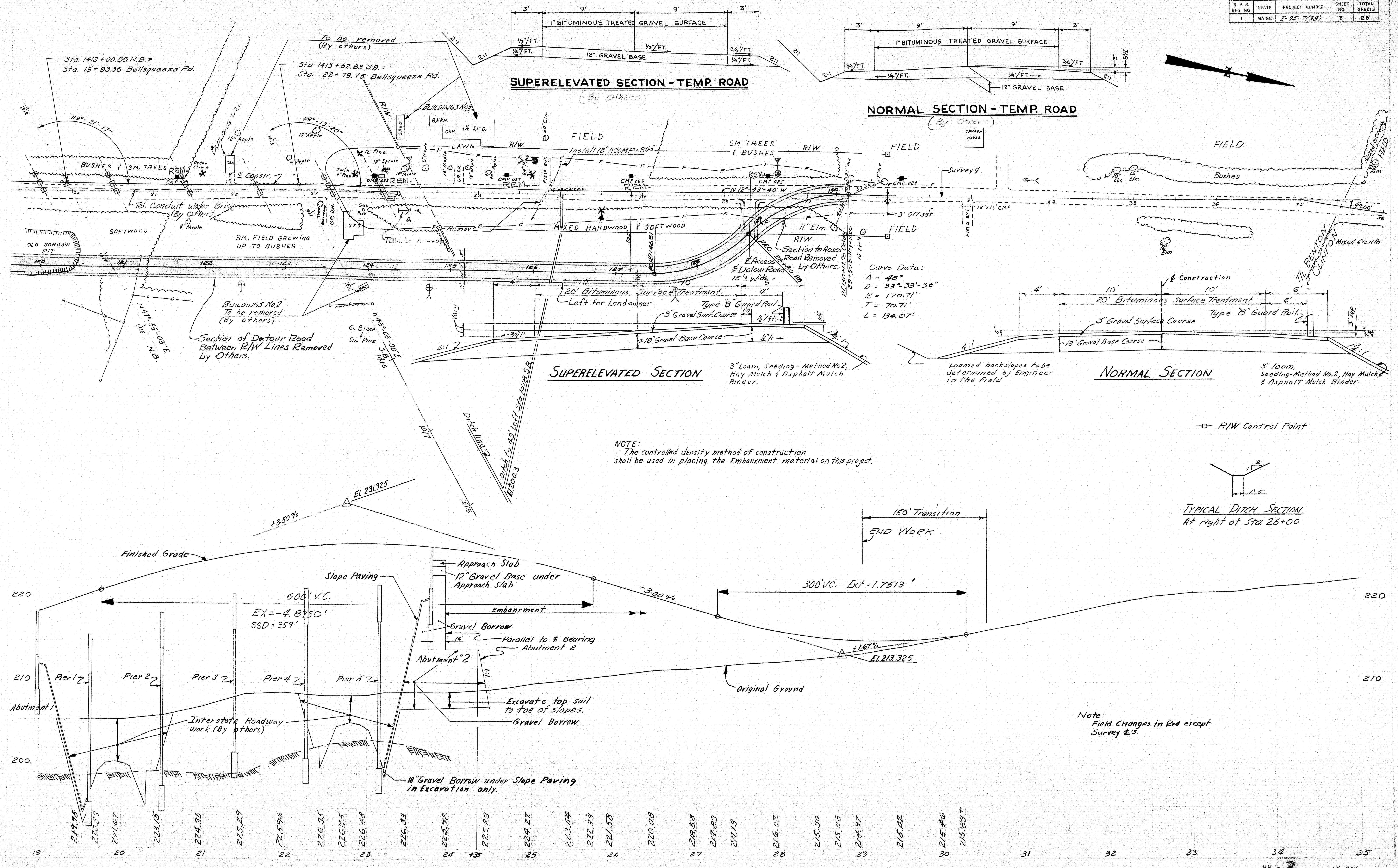
NOTE:
1. Excavation for top soil to be paid for under Item 204-12 Struct. Earth Excavation Abuts. & Ret. Walls.
2. Field Changes in Red Except Survey ℄'s.

88 - 2

✓ CDH



D. P. R. REG. NO	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-7(38)	3	25



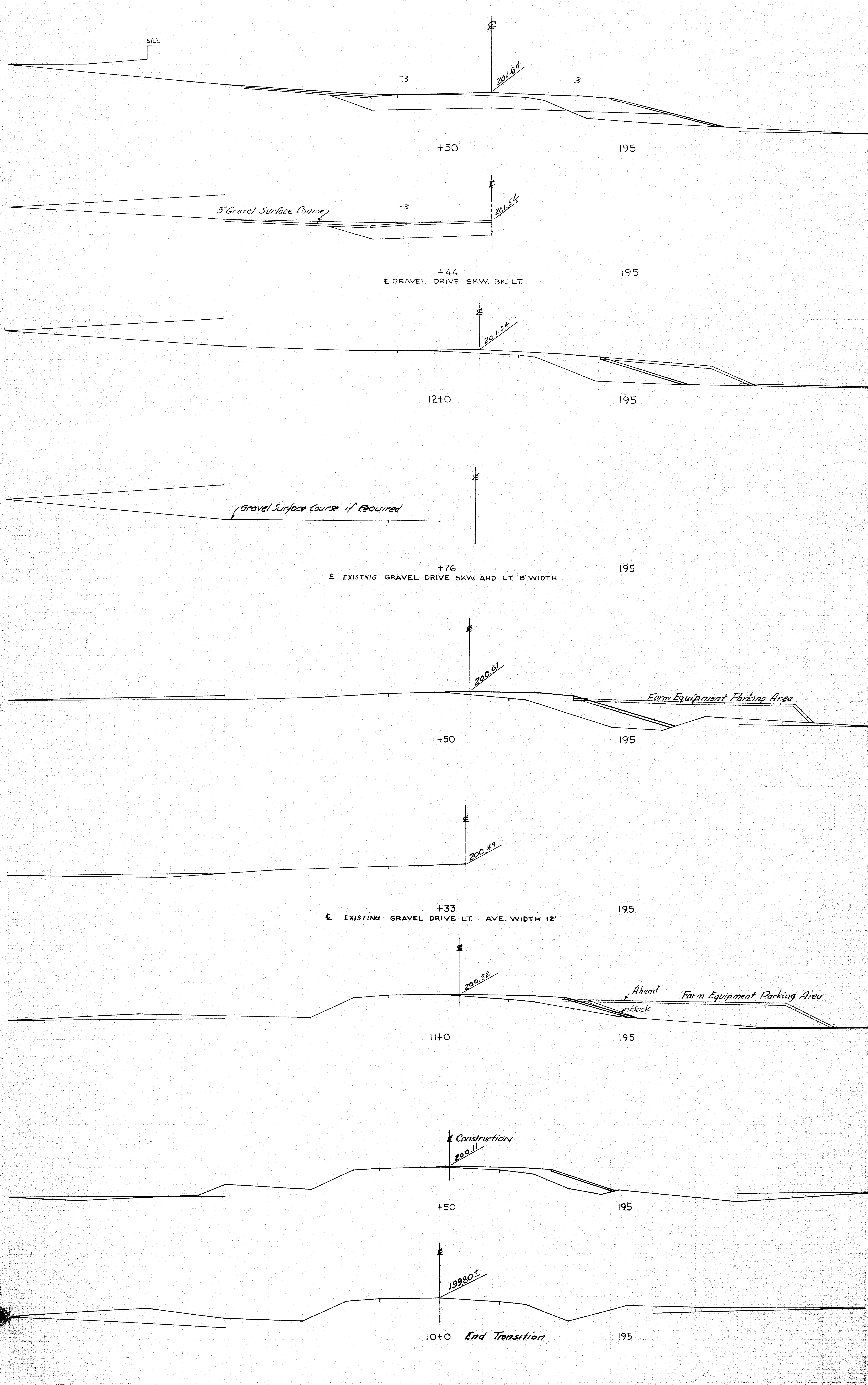
NOTE:
The controlled density method of construction shall be used in placing the Embankment material on this project.

-□- R/W Control Point

Note:
Field Changes in Red except Survey ℄'s.

BWhitcomb Sept. 62

95/468


℄
SILL
℄
201.64
-3
-3
+50
195
3" Gravel Surface Course
-3
℄
201.54
+44
195
℄ GRAVEL DRIVE SKW. BK. LT.
℄
201.04
12+0
195
Gravel Surface Course if Required
℄
+76
195
℄ EXISTNIG GRAVEL DRIVE SKW. AHD. LT. 8' WIDTH
℄
200.61
Farm Equipment Parking Area
+50
195
℄
200.49
+33
195
℄ EXISTING GRAVEL DRIVE LT. AVE. WIDTH 12'
℄
200.32
Ahead
Back
Farm Equipment Parking Area
11+0
195
℄ Construction
200.11
+50
195
℄
199.80±
10+0
End Transition
195

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-7(38)	4	25

88

✓ COH

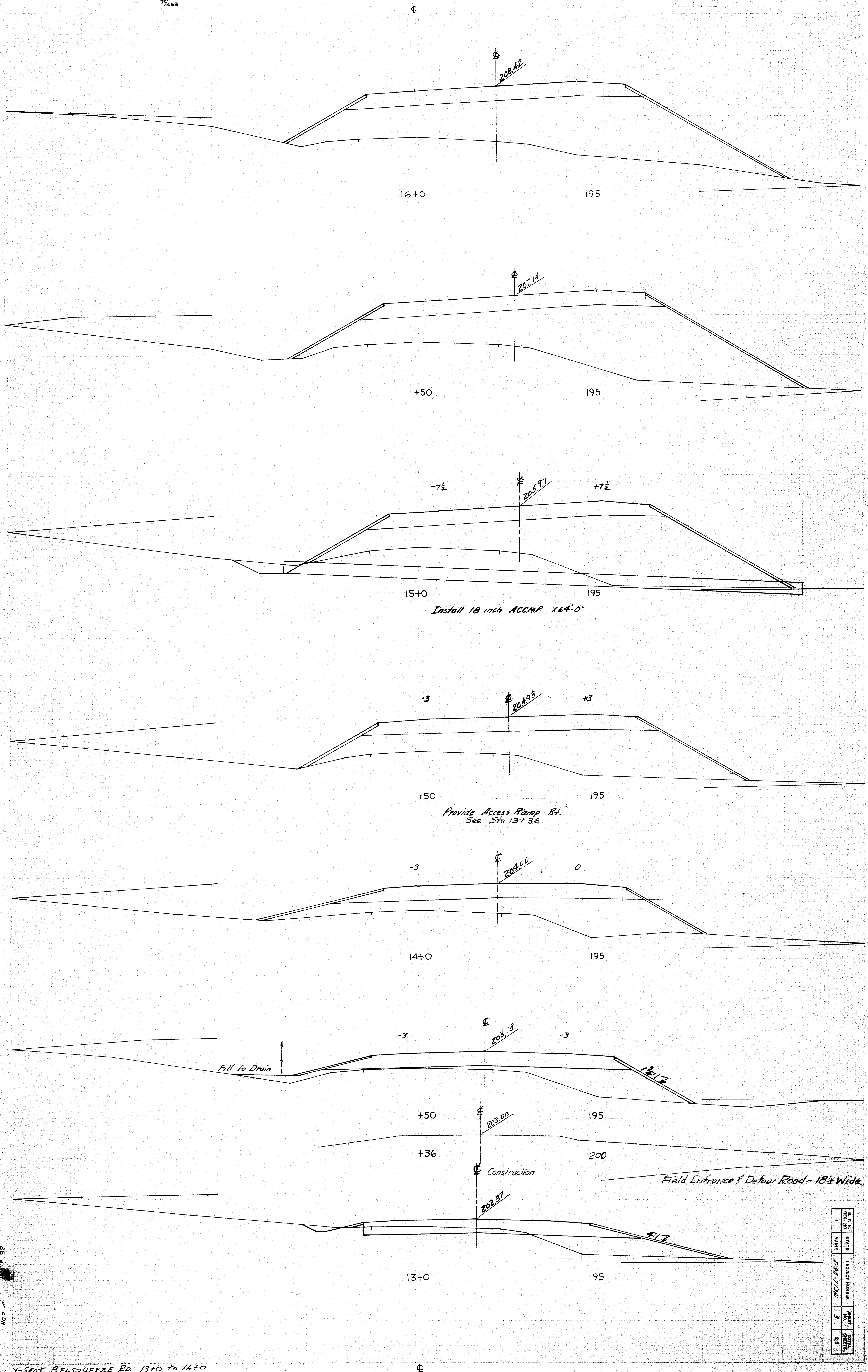
X-Sect. Belsqueeze Rd 10+0 to 12+50

Survey ℄

95/468

B. WHITCOMB SEPT. 62

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-7(38)	5	25



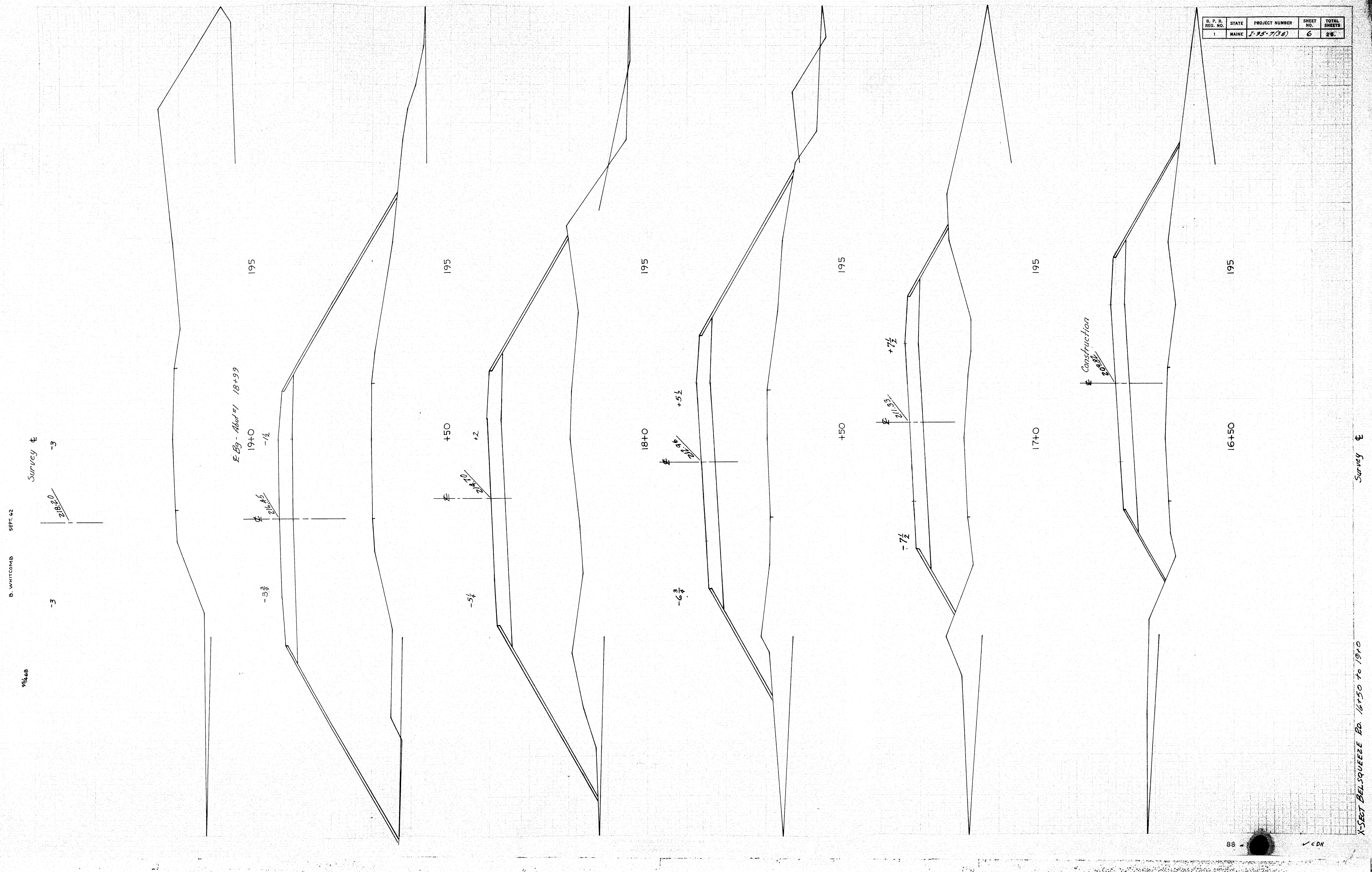
X-SECT. BELSQUEEZE RD. 13+0 to 16+0

88

✓ CDH

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-7(38)	6	25

X-SECT BELSQUEEZE RD 16+50 to 19+0



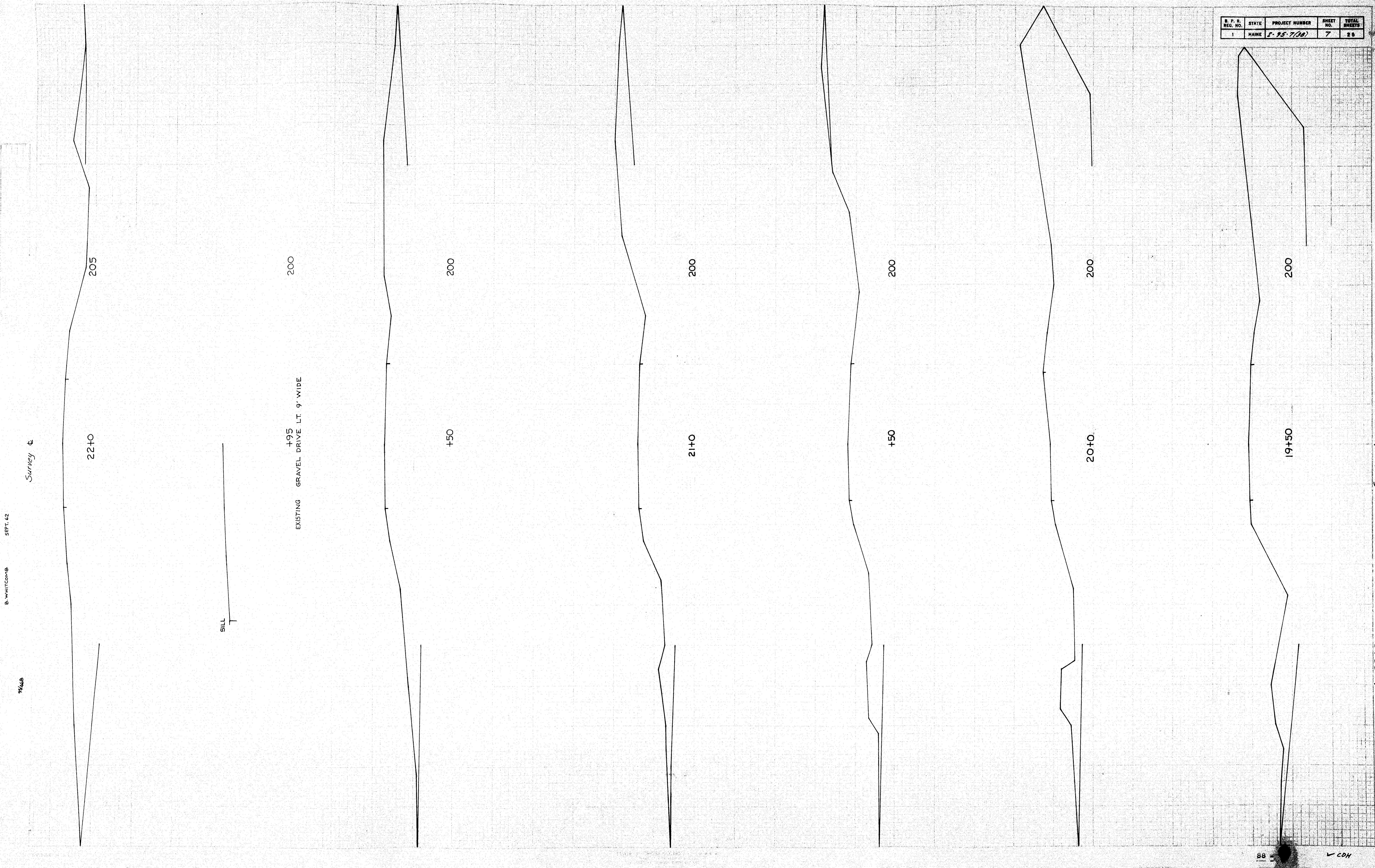
0 1 2 3 4 5 INCHES

88

✓CDH

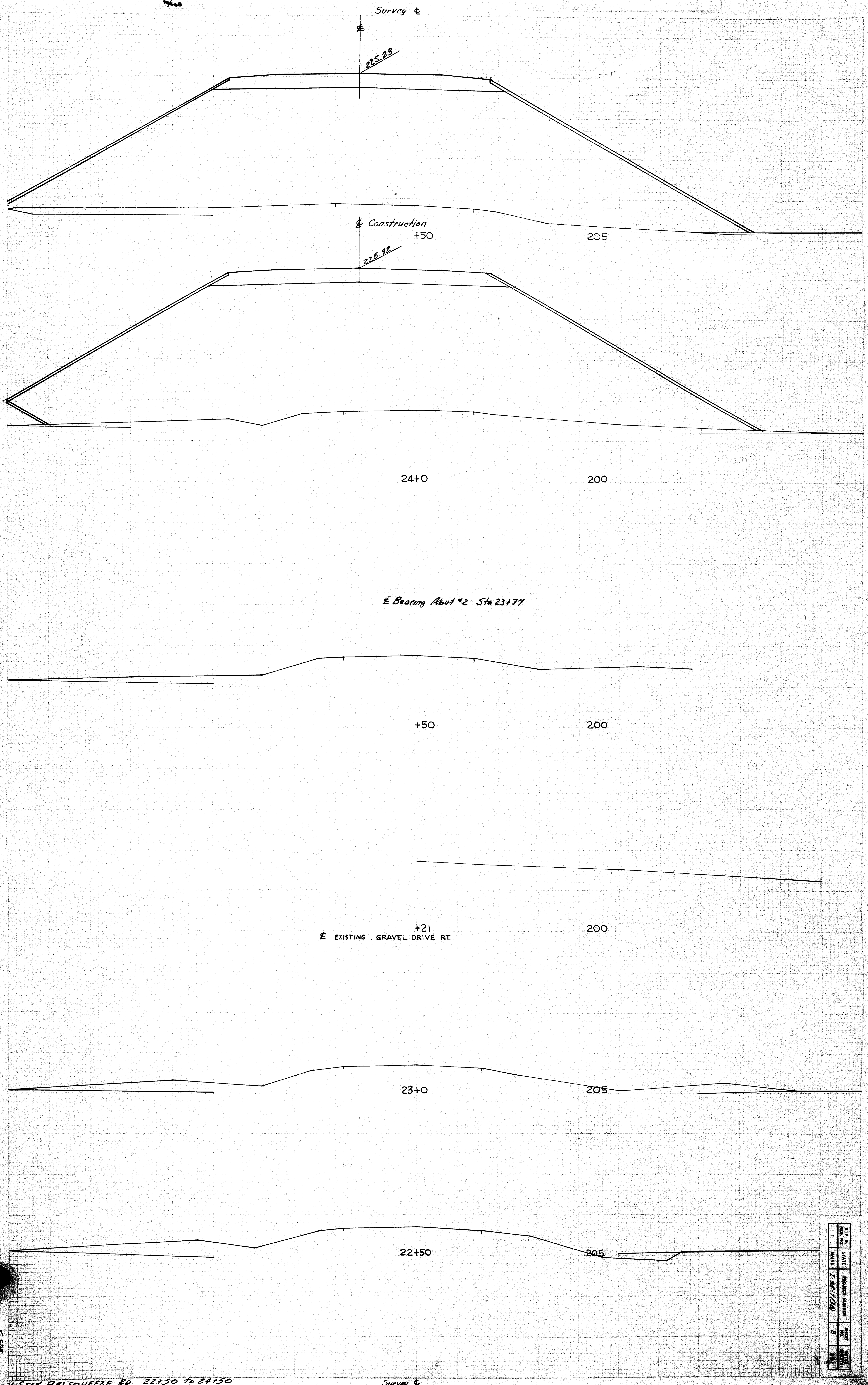
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-7(38)	7	26

X-SECT. BELSQUEEZE RD. 19+50 to 22+0



B. WHITCOMB SEPT. 62

95/468



B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-7(30)	8	26

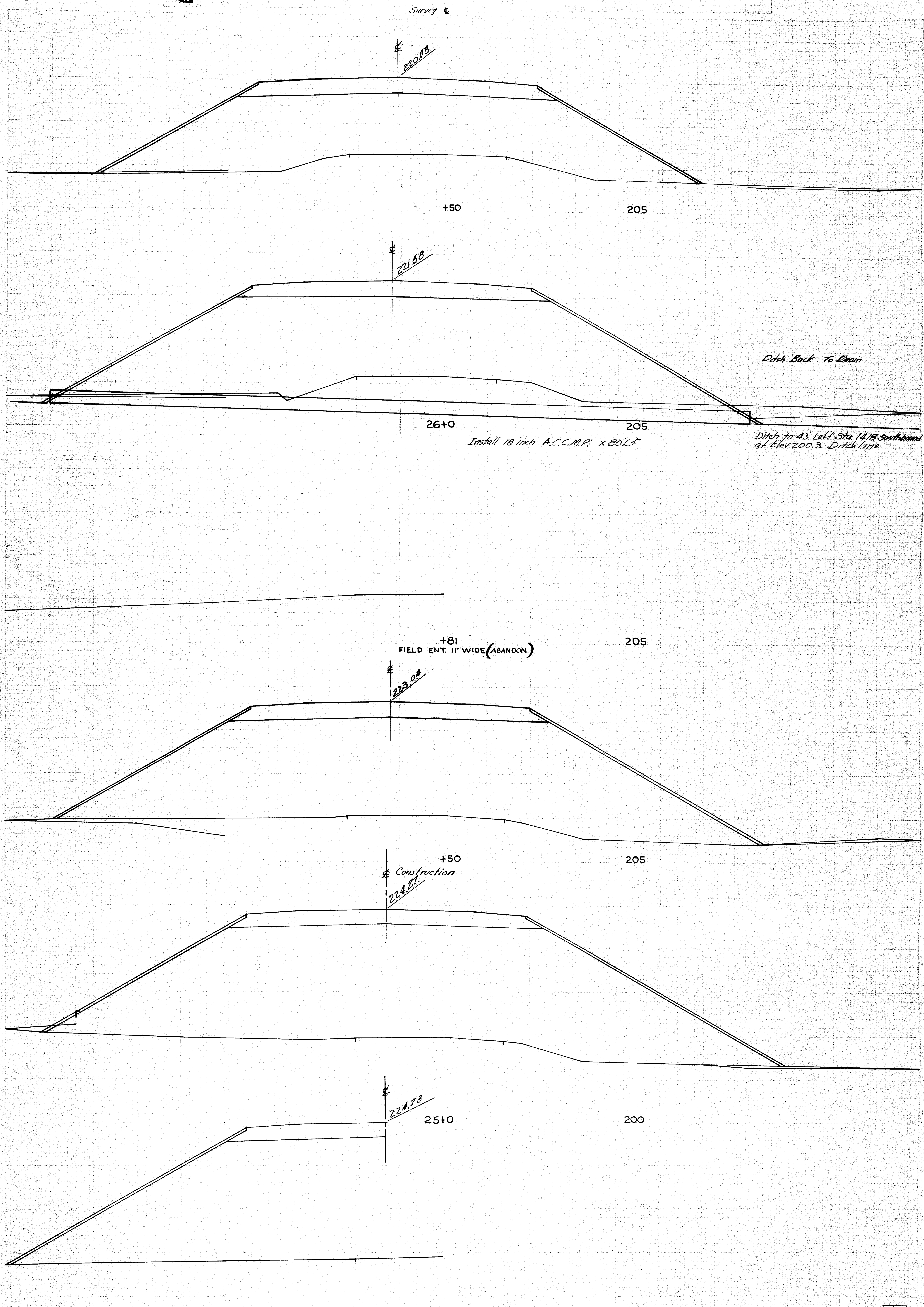
88

✓ CDM

X-Sect Belsqueeze Rd. 22+50 to 24+50

95/468

B. WHITCOMB SEPT. 62


Survey ℄
℄ 220.08
+50
205
℄ 221.58
Ditch Back To Drain
26+0
205
Install 18 inch A.C.C.M.P. x 80 L.F
Ditch to 43' Left Sta. 14.18 southbound at Elev 200.3 - Ditch line
+81
FIELD ENT. 11' WIDE (ABANDON)
205
℄ 223.04
+50
205
℄ Construction
224.27
℄ 224.78
25+0
200
24+75
℄ GRAVEL DRIVE LT. 12' WIDE (ABANDON)
200
Survey ℄

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-7(34)	9	26

X-SECT BELSQUEEZE RD. 24+75 to 26+50

88 =

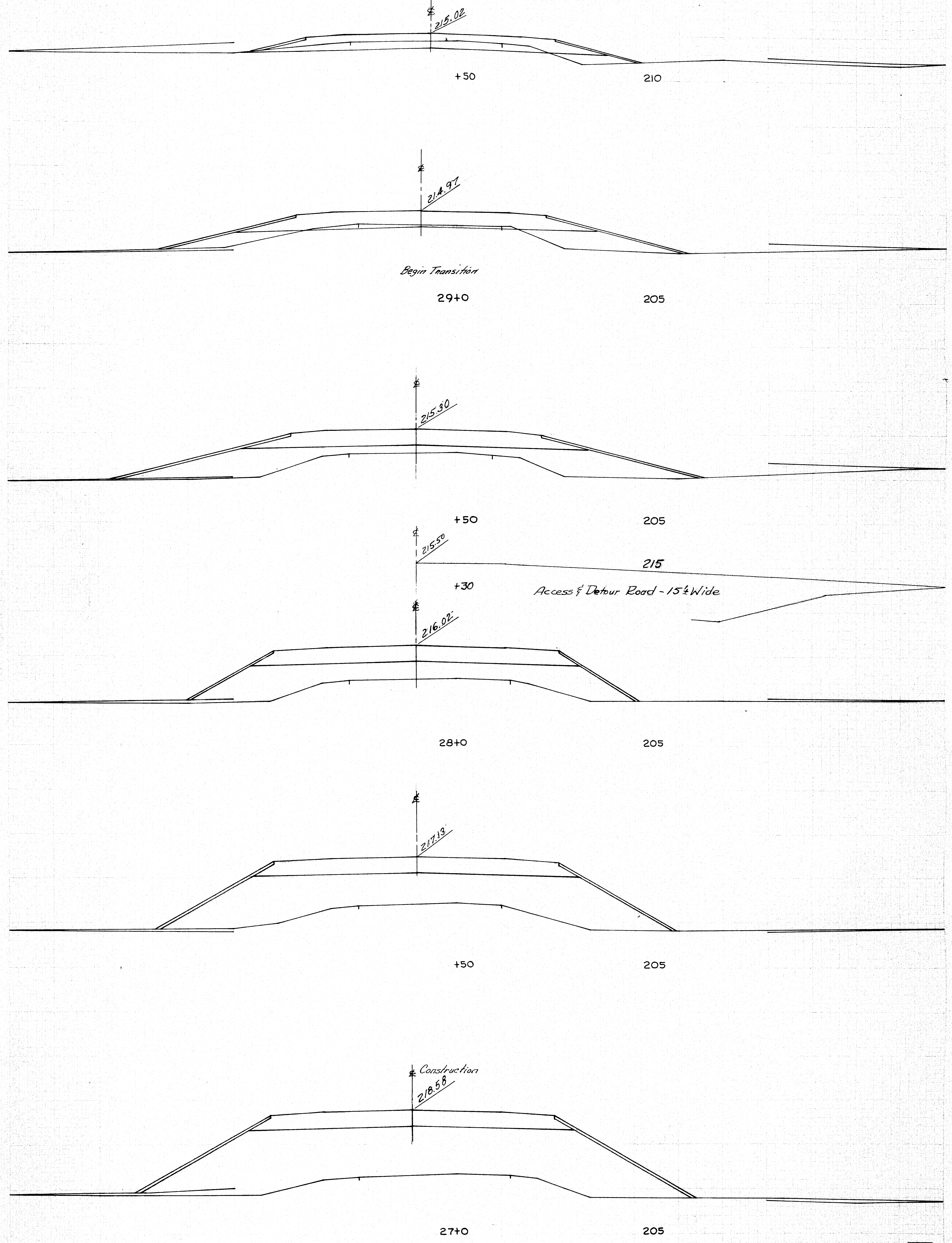
✓ CDH

0 1 2 3 4 5 INCHES

B. WHITCOMB SEPT. 62

95/468

Survey ℄



B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-7(38)	10	28

88

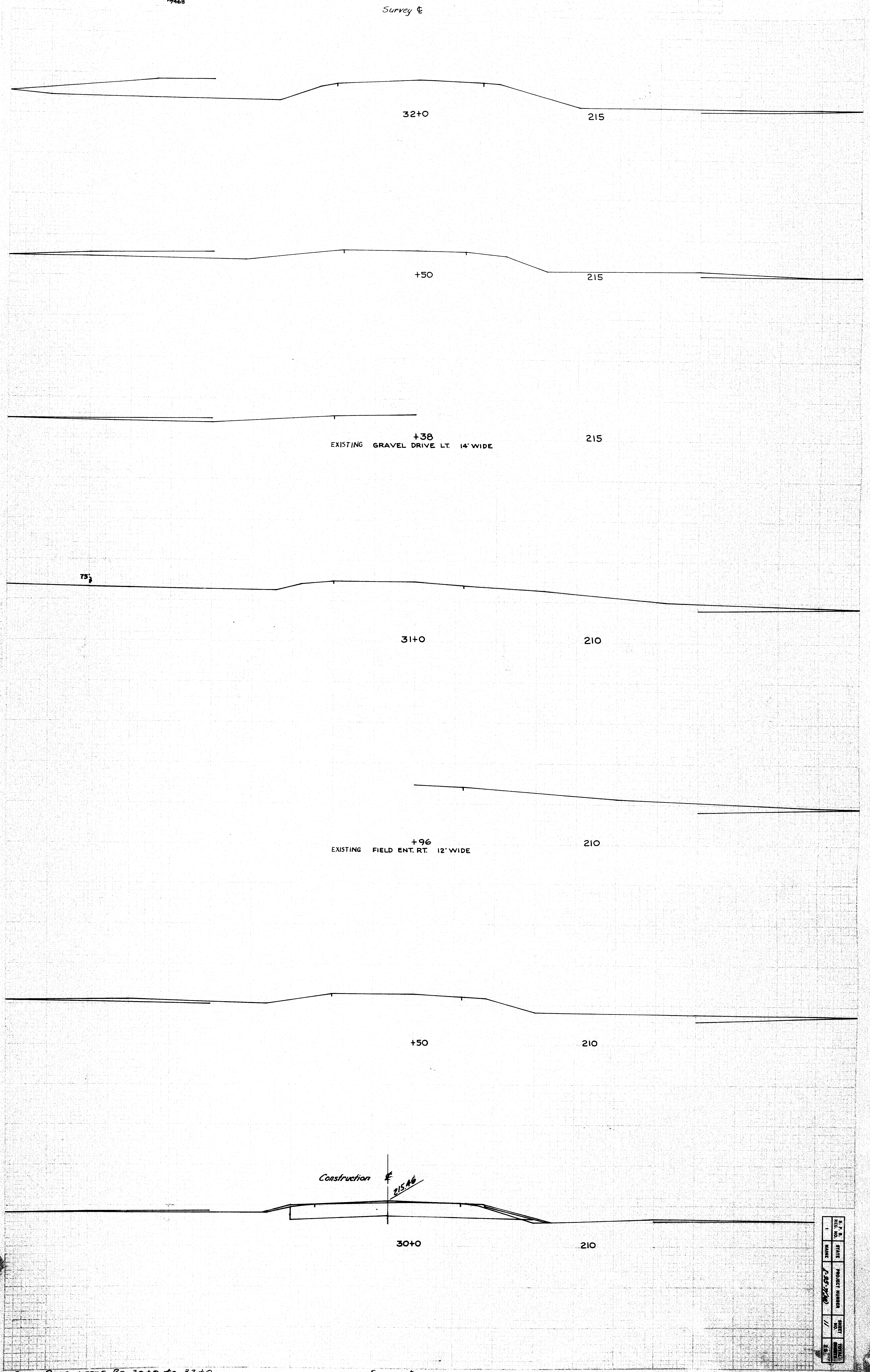
✓ CDH

X-SECT. BELSQUEEZE RD. 27+0 to 29+50

Survey ℄

B. WHITCOMB SEPT. 62

93/468



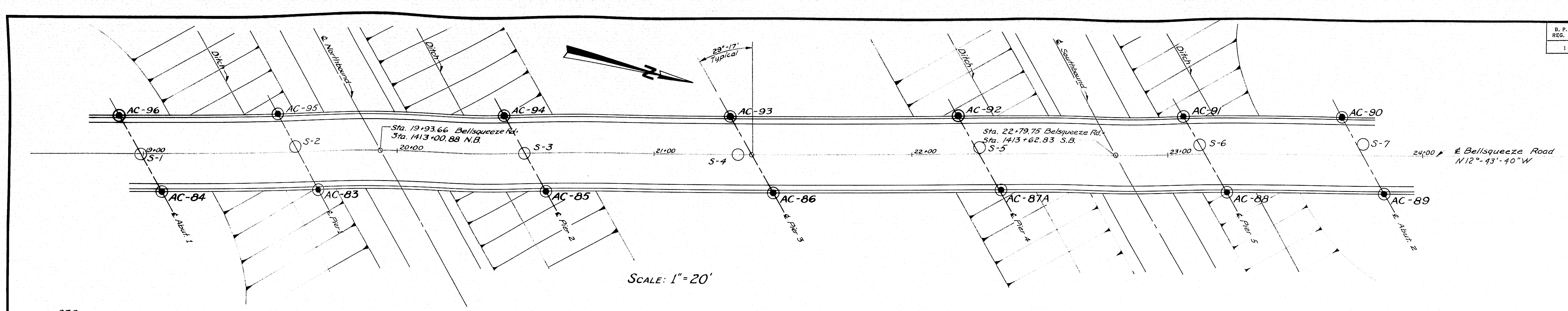
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-7(30)	11	26

X-SECT. BELSQUEEZE RD. 30+0 to 32+0

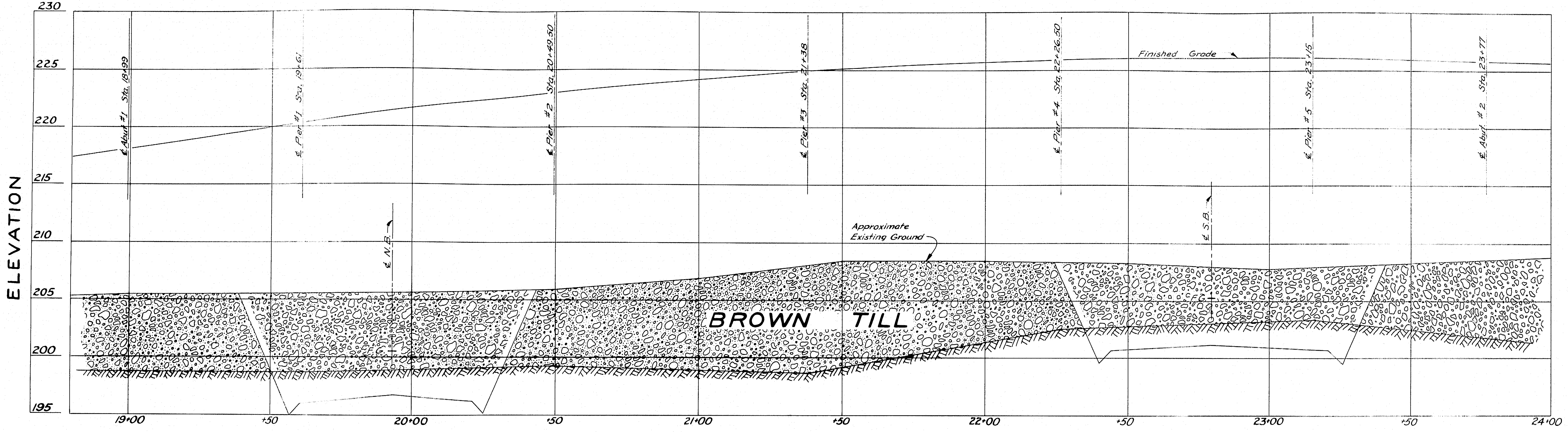
88

✓CH

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-7(38)	12	25

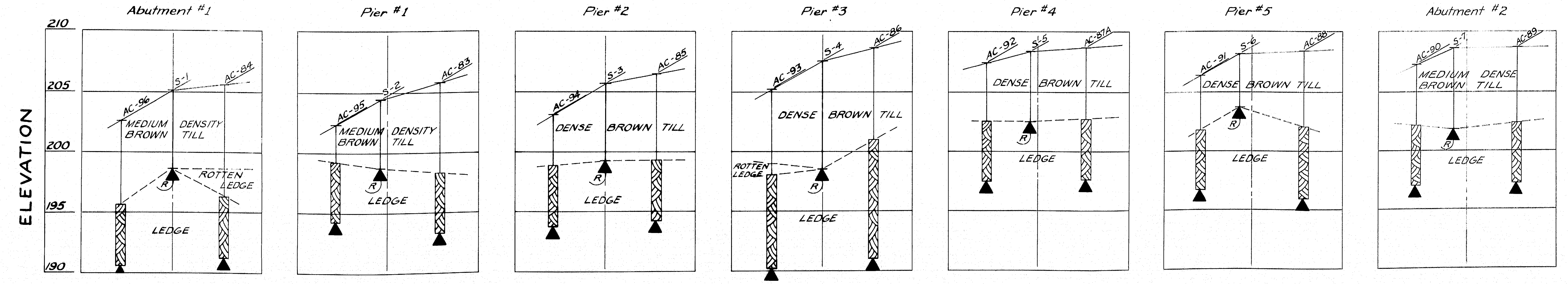


SCALE: 1" = 20'



SCALE:
Vert. 1" = 5'
Horiz. 1" = 20'

TRANSVERSE PROFILES



DESIGN—
TRACE— - SOILS DIVISION
CHECK—

BRIDGE NO
SURVEY—
PLOT—

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

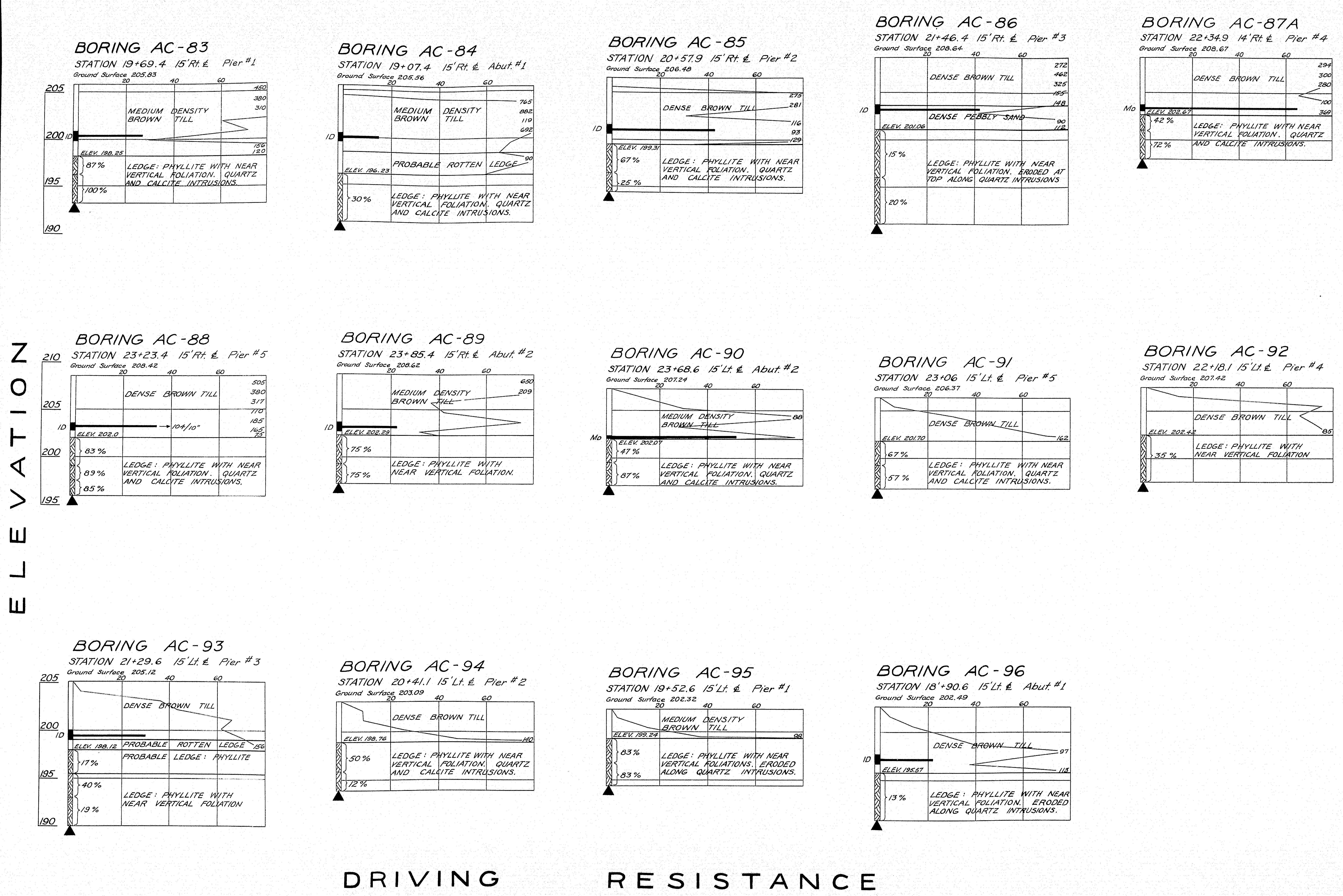
BELLSQUEEZE ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
BENTON
KENNEBEC COUNTY
FOUNDATION SURVEY

SHEET 12 OF 25 AUGUSTA, MAINE MARCH, 1963

C. D. CO. NO. 379B 25767

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-7(38)	13	25


BORING AC-83
STATION 19+69.4 15'Rt. ℄ Pier #1
Ground Surface 205.83
20
40
60
205
200
195
190
ID
MEDIUM DENSITY BROWN TILL
450
380
310
156
120
ELEV. 198.25
87%
100%
LEDGE: PHYLLITE WITH NEAR VERTICAL FOLIATION. QUARTZ AND CALCITE INTRUSIONS.
BORING AC-84
STATION 19+07.4 15'Rt. ℄ Abut. #1
Ground Surface 205.56
765
882
119
692
90
ID
MEDIUM BROWN DENSITY TILL
PROBABLE ROTTEN LEDGE
ELEV. 196.23
30%
LEDGE: PHYLLITE WITH NEAR VERTICAL FOLIATION. QUARTZ AND CALCITE INTRUSIONS.
BORING AC-85
STATION 20+57.9 15'Rt. ℄ Pier #2
Ground Surface 206.48
275
281
116
93
129
DENSE BROWN TILL
ID
ELEV. 199.31
67%
25%
LEDGE: PHYLLITE WITH NEAR VERTICAL FOLIATION. QUARTZ AND CALCITE INTRUSIONS.
BORING AC-86
STATION 21+46.4 15'Rt. ℄ Pier #3
Ground Surface 208.64
DENSE BROWN TILL
272
462
325
155
148
90
112
ID
DENSE PEBBLY SAND
ELEV. 201.06
15%
20%
LEDGE: PHYLLITE WITH NEAR VERTICAL FOLIATION. ERODED AT TOP ALONG QUARTZ INTRUSIONS
BORING AC-87A
STATION 22+34.9 14'Rt. ℄ Pier #4
Ground Surface 208.67
DENSE BROWN TILL
294
300
280
100
369
Mo
ELEV. 202.67
42%
72%
LEDGE: PHYLLITE WITH NEAR VERTICAL FOLIATION. QUARTZ AND CALCITE INTRUSIONS.
BORING AC-88
STATION 23+23.4 15'Rt. ℄ Pier #5
Ground Surface 208.42
210
205
200
195
DENSE BROWN TILL
505
380
317
110
185
165
75
ID
104/10"
ELEV. 202.0
83%
89%
85%
LEDGE: PHYLLITE WITH NEAR VERTICAL FOLIATION. QUARTZ AND CALCITE INTRUSIONS.
BORING AC-89
STATION 23+85.4 15'Rt. ℄ Abut. #2
Ground Surface 208.62
650
209
MEDIUM DENSITY BROWN TILL
ID
ELEV. 202.29
75%
75%
LEDGE: PHYLLITE WITH NEAR VERTICAL FOLIATION.
BORING AC-90
STATION 23+68.6 15'Lt. ℄ Abut. #2
Ground Surface 207.24
MEDIUM DENSITY BROWN TILL
88
Mo
ELEV. 202.07
47%
87%
LEDGE: PHYLLITE WITH NEAR VERTICAL FOLIATION. QUARTZ AND CALCITE INTRUSIONS.
BORING AC-91
STATION 23+06 15'Lt. ℄ Pier #5
Ground Surface 206.37
DENSE BROWN TILL
162
ELEV. 201.70
67%
57%
LEDGE: PHYLLITE WITH NEAR VERTICAL FOLIATION. QUARTZ AND CALCITE INTRUSIONS.
BORING AC-92
STATION 22+18.1 15'Lt. ℄ Pier #4
Ground Surface 207.42
DENSE BROWN TILL
85
ELEV. 202.42
35%
LEDGE: PHYLLITE WITH NEAR VERTICAL FOLIATION
ELEVATION
BORING AC-93
STATION 21+29.6 15'Lt. ℄ Pier #3
Ground Surface 205.12
205
200
195
190
DENSE BROWN TILL
ID
ELEV. 198.12
PROBABLE ROTTEN LEDGE
156
PROBABLE LEDGE: PHYLLITE
17%
40%
19%
LEDGE: PHYLLITE WITH NEAR VERTICAL FOLIATION
BORING AC-94
STATION 20+41.1 15'Lt. ℄ Pier #2
Ground Surface 203.09
DENSE BROWN TILL
ELEV. 198.76
140
50%
12%
LEDGE: PHYLLITE WITH NEAR VERTICAL FOLIATION. QUARTZ AND CALCITE INTRUSIONS.
BORING AC-95
STATION 19+52.6 15'Lt. ℄ Pier #1
Ground Surface 202.32
MEDIUM DENSITY BROWN TILL
ELEV. 199.24
98
83%
83%
LEDGE: PHYLLITE WITH NEAR VERTICAL FOLIATIONS. ERODED ALONG QUARTZ INTRUSIONS.
BORING AC-96
STATION 18'+90.6 15'Lt. ℄ Abut. #1
Ground Surface 202.49
DENSE BROWN TILL
97
113
ID
ELEV. 195.57
13%
LEDGE: PHYLLITE WITH NEAR VERTICAL FOLIATION. ERODED ALONG QUARTZ INTRUSIONS.
DRIVING RESISTANCE
BLOWS / FOOT

BORING NOTES

ALL SAMPLES ARE MADE AHEAD OF CASING.

⟋ NUMBER OF BLOWS REQUIRED TO DRIVE EXTRA HEAVY CASING ONE FOOT WITH 400 FT. LBS. OF ENERGY PER BLOW.

▮ LOCATION OF SAMPLE OR SAMPLE ATTEMPT.

NUMBER AND TYPE OF DRY SAMPLE

ID S&H SAMPLER #1290's

Mo 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.

▲ BOTTOM OF BORING (MAY NOT BE BOTTOM OF SOIL STRATA.)

▨ }72 LOCATIONS CORED BY DIAMOND BIT AND PERCENT RECOVERY OF ROCK.

NOTE: Till is a mixture of stones, sand, and silt.

DESIGN— TRACE— CHECK— SOILS DIVISION	BRIDGE NO. SURVEY— PLOT—

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

BELLSQUEEZE ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
BENTON
KENNEBEC COUNTY
FOUNDATION SURVEY

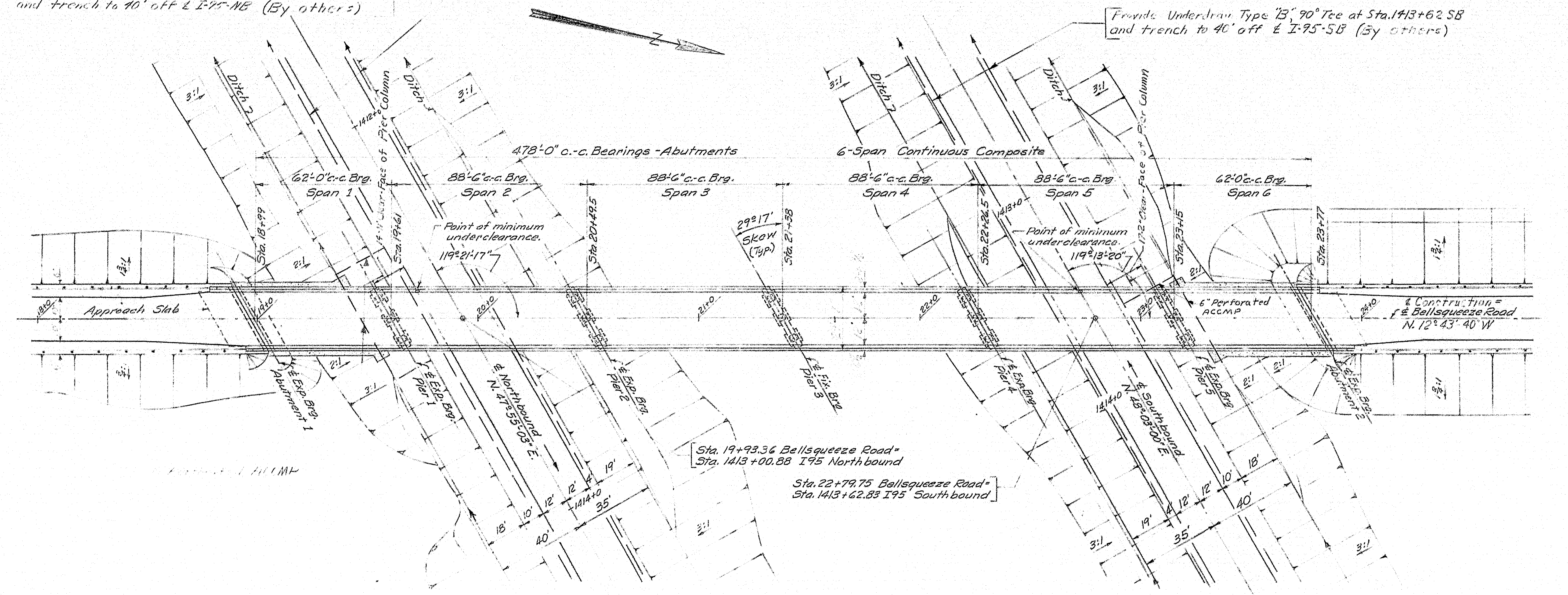
SHEET 13 OF 25 AUGUSTA, MAINE MARCH, 1963

C. D. CO., NO. 3798 33797

88-13

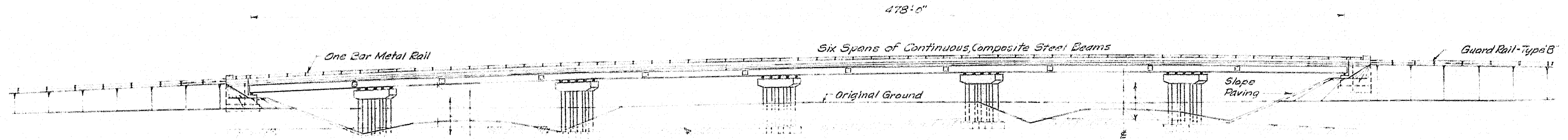
0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-7(38)	14	25


Provide Underdrain Type "B", 90° Tee at Sta. 1412+56 N.B, and trench to 40' off ℄ I-95-NB (By others)
Provide Underdrain Type "B", 90° Tee at Sta. 1413+62 SB and trench to 40' off ℄ I-95-SB (By others)
N
Ditch 7
Ditch
3:1
2:1
13:1
478'-0" c.-c. Bearings - Abutments
6-Span Continuous Composite
62'-0" c.-c. Brg. Span 1
88'-6" c.-c. Brg. Span 2
88'-6" c.-c. Brg. Span 3
88'-6" c.-c. Brg. Span 4
88'-6" c.-c. Brg. Span 5
62'-0" c.-c. Brg. Span 6
17'-2" Clear - Face of Pier Column
1412+0
1413+0
1414+0
Sta. 18+99
Sta. 19+61
Sta. 20+49.5
Sta. 21+38
Sta. 22+26.5
Sta. 23+15
Sta. 23+77
Point of minimum underclearance.
119°21'-17"
119°13'-20"
29°17' Skew (Typ.)
Approach Slab
18+0
19+0
20+0
21+0
22+0
23+0
24+0
℄ Exp. Brg. Abutment 1
℄ Exp. Brg. Pier 1
℄ Exp. Brg. Pier 2
℄ Fix. Brg. Pier 3
℄ Exp. Brg. Pier 4
℄ Exp. Brg. Pier 5
℄ Exp. Brg. Abutment 2
℄ Northbound N. 47°55'03" E.
℄ Southbound N. 48°03'00" E.
6" Perforated ACCMP
℄ Construction = ℄ Bellsqueeze Road N. 12°43'40" W
Sta. 19+93.36 Bellsqueeze Road = Sta. 1413+00.88 I95 Northbound
Sta. 22+79.75 Bellsqueeze Road = Sta. 1413+62.83 I95 Southbound
18'
10'
12'
12'
4'
19'
35'
40'

GENERAL PLAN

Scale: 1" = 30'-0"



6" Actual
16'-7" Minimum Underclearance

GENERAL ELEVATION

Scale: 1" = 30'-0"

2½" Actual
17'-2" Minimum Underclearance

ESTIMATE OF QUANTITIES

ITEM DESCRIPTION	UNIT	TOTAL QUANTITIES	BRIDGE QUANTITIES
Earth Excavation	Cu. Yds.	50	
Structural Earth Excavation - Drainage	Cu. Yds.	130	
Structural Earth Excavation Abutments & Retaining Walls	Cu. Yds.	1150	1150
Structural Earth Excavation - Piers	Cu. Yds.	140	140
Structural Rock Excavation - Piers	Cu. Yds.	225	225
Gravel Borrow - In Place Measure	Cu. Yds.	2900	
Borrow	Cu. Yds.	16500	
Gravel Base Course - In Place Measure	Cu. Yds.	2400	
Gravel Surface Course	Cu. Yds.	440	
Bituminous Concrete Surface Course - Type "B"	Tons	140	140
Road Tar	Gal.	2250	
~~Cement~~ Asbestos 6" [illegible] ~~[illegible] Metal~~ Pipe	Lin. Ft.	144	
18" Asphalt Coated Corrugated Metal Pipe	Lin. Ft.	150	
Portland Cement Concrete - Abutments & Retaining Walls	Cu. Yds.	168	168
Portland Cement Concrete - Piers	Cu. Yds.	265	265
Portland Cement Concrete - Rdwy. & Sidewalk Slabs on Steel Bridge	Cu. Yds.	444	444
Portland Cement	Bbls.	1225	1225
Structural Steel - Fabricated and Delivered	L. S.	Lump Sum	Lump Sum
Structural Steel - Erection	L. S.	Lump Sum	Lump Sum
Structural Steel - Field Painting	L. S.	Lump Sum	Lump Sum
Reinforcing Steel - Delivered	lbs.	119800	119800
Reinforcing Steel - Placing	lbs.	119800	119800
Shear Connectors	L. S.	Lump Sum	Lump Sum
Bridge Rail	Lin. Ft.	990	970
Membrane Waterproofing	Sq. Yds.	1280	1280
Epoxy Resin Surface Sealant	Sq. Yds.	60	60
Slope Paving	Sq. Yds.	430	
Granite Bridge Curb	Lin. Ft.	1000	1000
Guard Rail - Type "B"	Lin. Ft.	800	
Anchors Type "B" Guard Rail	Each	8	
Loam Borrow	Cu. Yds.	450	
Seeding Method No. 2	Units	50	
Hay Mulch	Ton	5.5	
Asphalt Mulch Binder	Gal.	1370	

Estimated Quantity of Structural Steel in Bridge [illegible] lbs.

SPECIFICATIONS

Design: AASHO Standard Specifications for Highway Bridges (1961), & Interim Specifications 1963.
Construction: State of Maine, State Highway Commission, Standard Specifications for Highways and Bridges, Revision of 1956, and Supplemental Specifications (1962)

LIVE LOADING

H20-44

ALLOWABLE STRESSES

Concrete (n=10) f_c = 1200 p.s.i.
Reinforcing Steel Intermediate Grade, f_s = 20000 p.s.i.
Structural Steel, A36-20,000 p.s.i., A7-18,000 p.s.i.

CONCRETE CLASSIFICATION

All Concrete Class "A"

STRUCTURAL STEEL CLASSIFICATION

[illegible] the [illegible] A36 [illegible] A36 or A7.

Note: Field Changes in Red

DESIGN - RAS	BRIDGE NO.
TRACE -	SURVEY -
CHECK - CDH	PLOT -

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

BELLSQUEEZE ROAD BRIDGE

OVER

INTERSTATE 95

IN THE TOWN OF

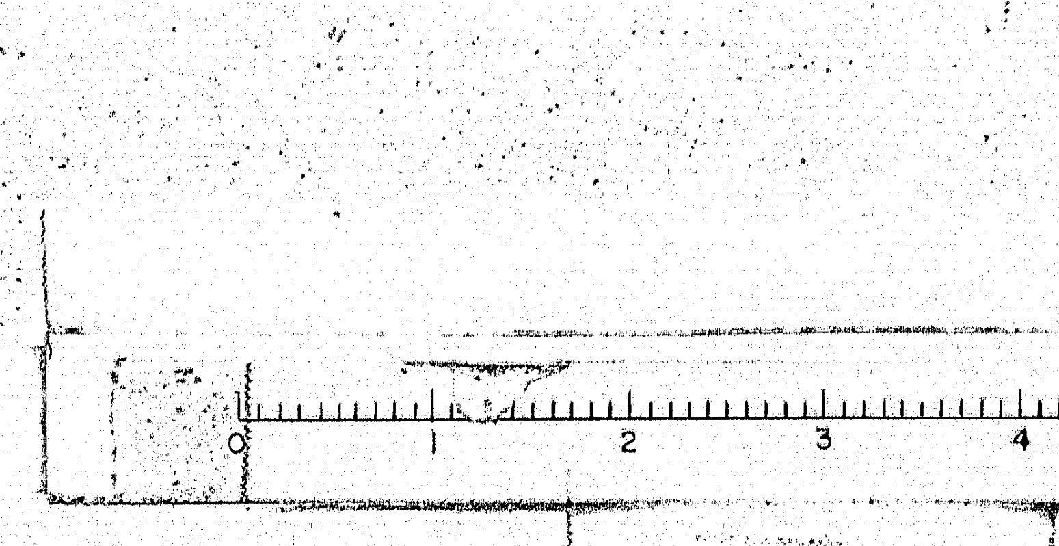
BENTON

KENNEBEC COUNTY

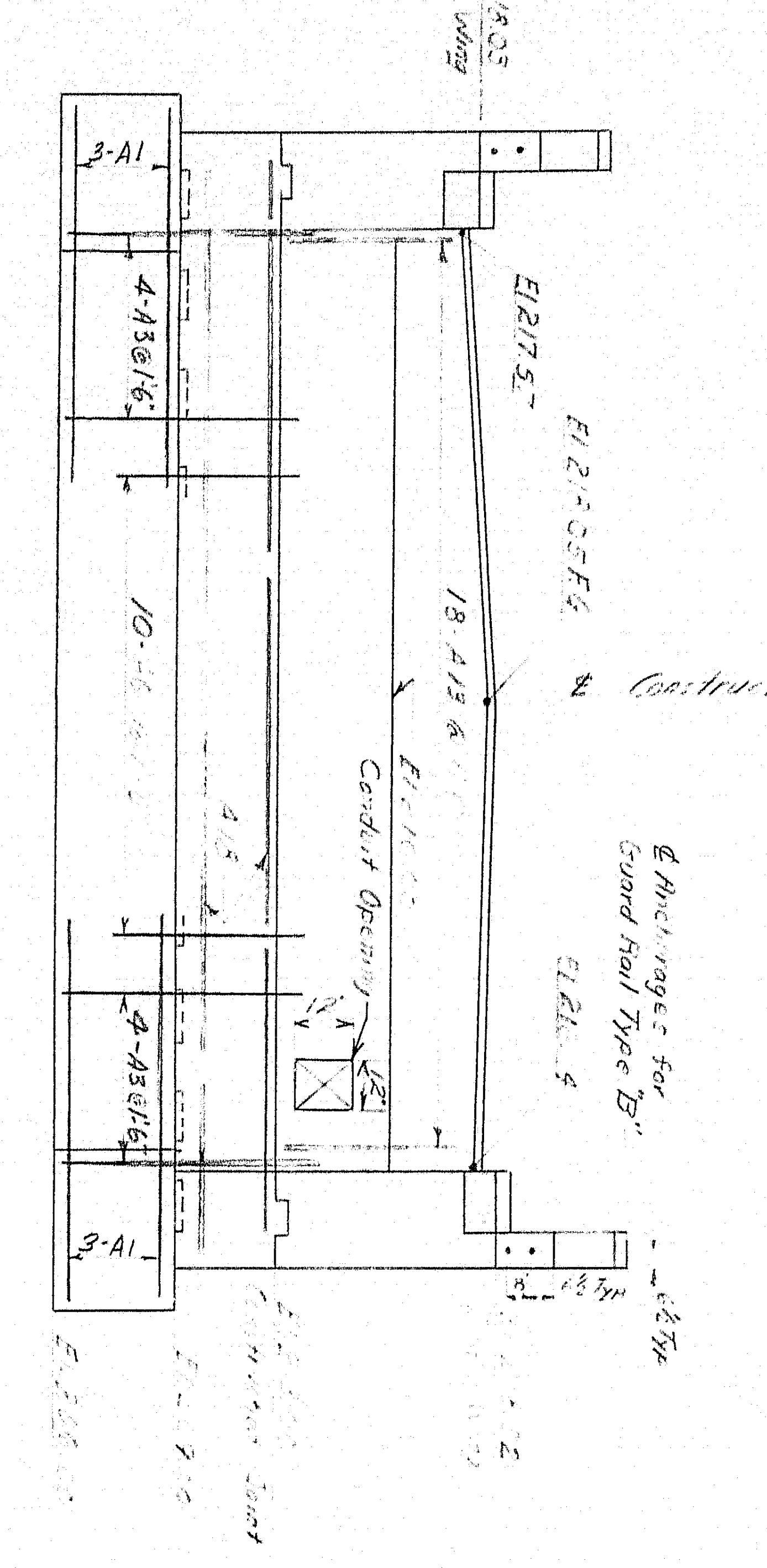
GENERAL PLAN, ESTIMATE OF QUANTITES

SHEET 14 OF 25 AUGUSTA, MAINE MARCH 1963

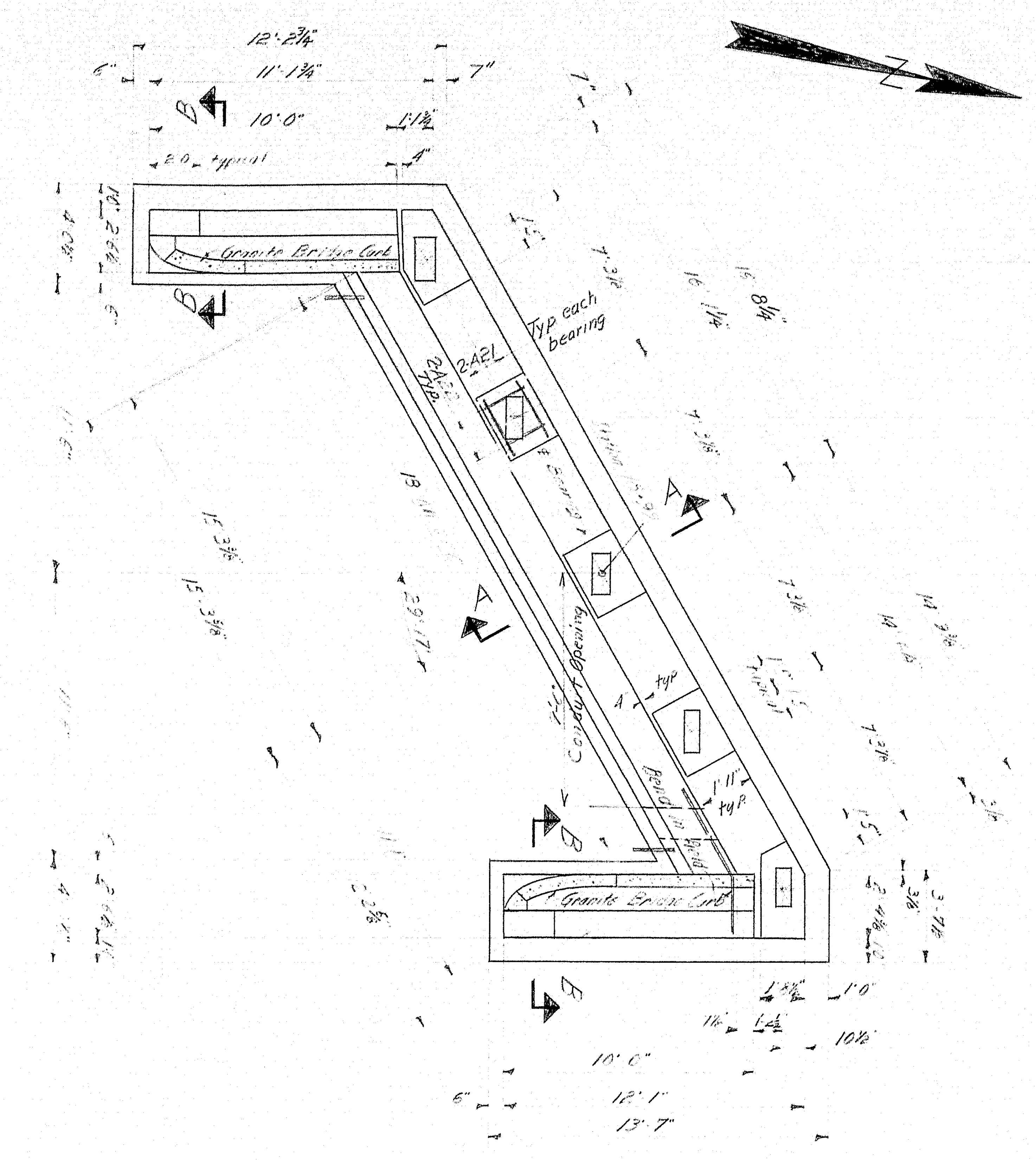
14



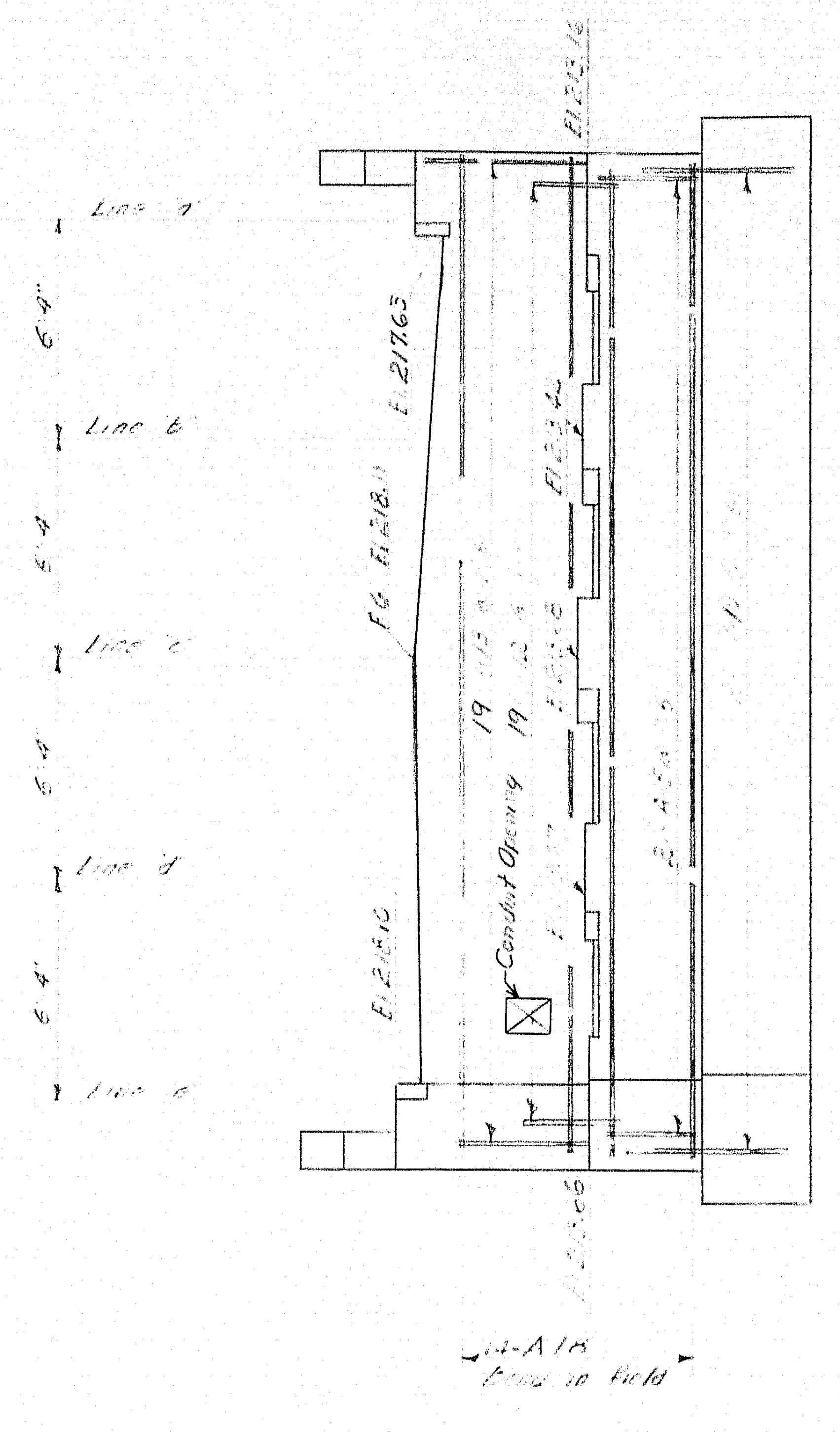
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-7 (38)	15	25



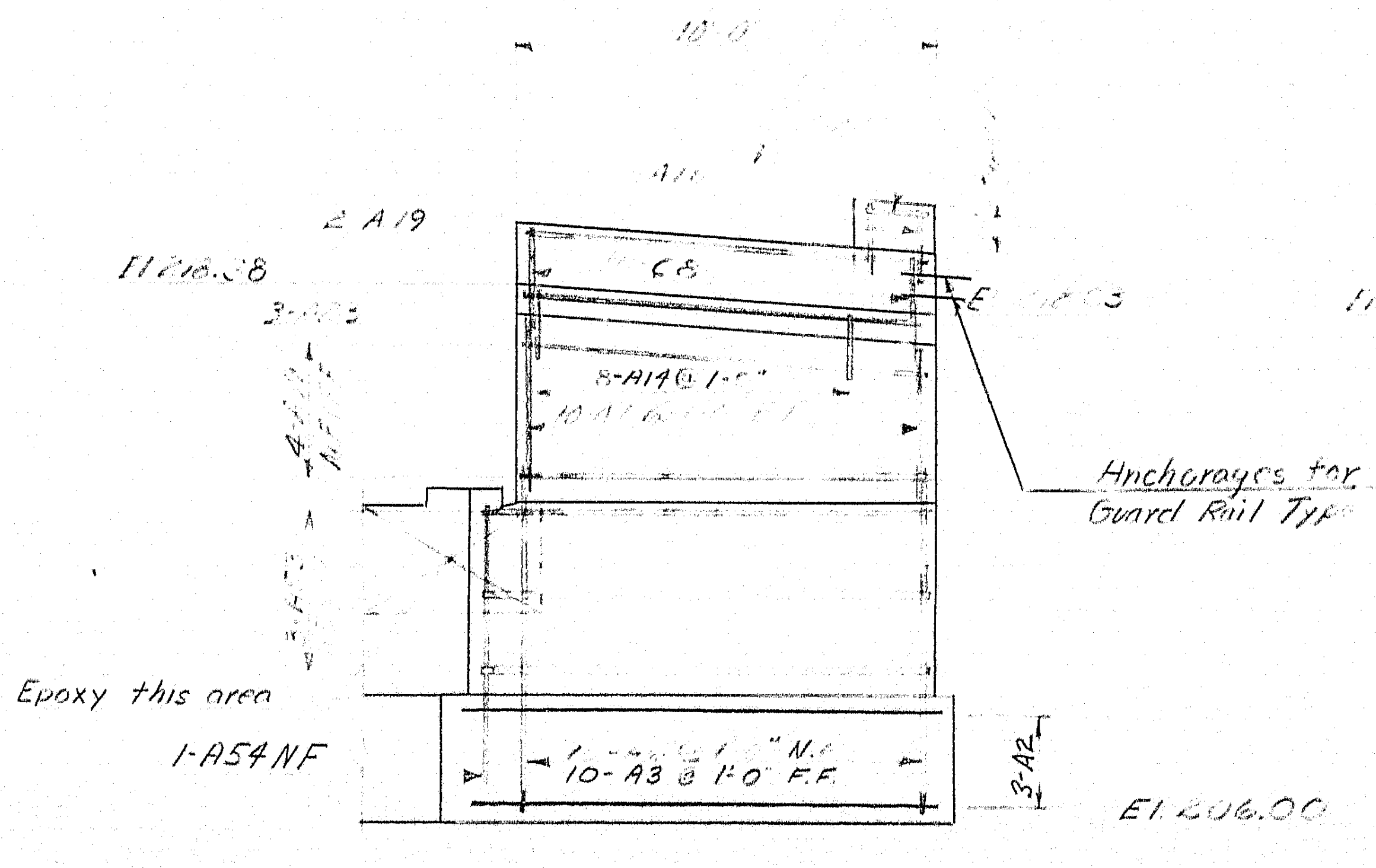
REAR ELEVATION ABUTMENT #1



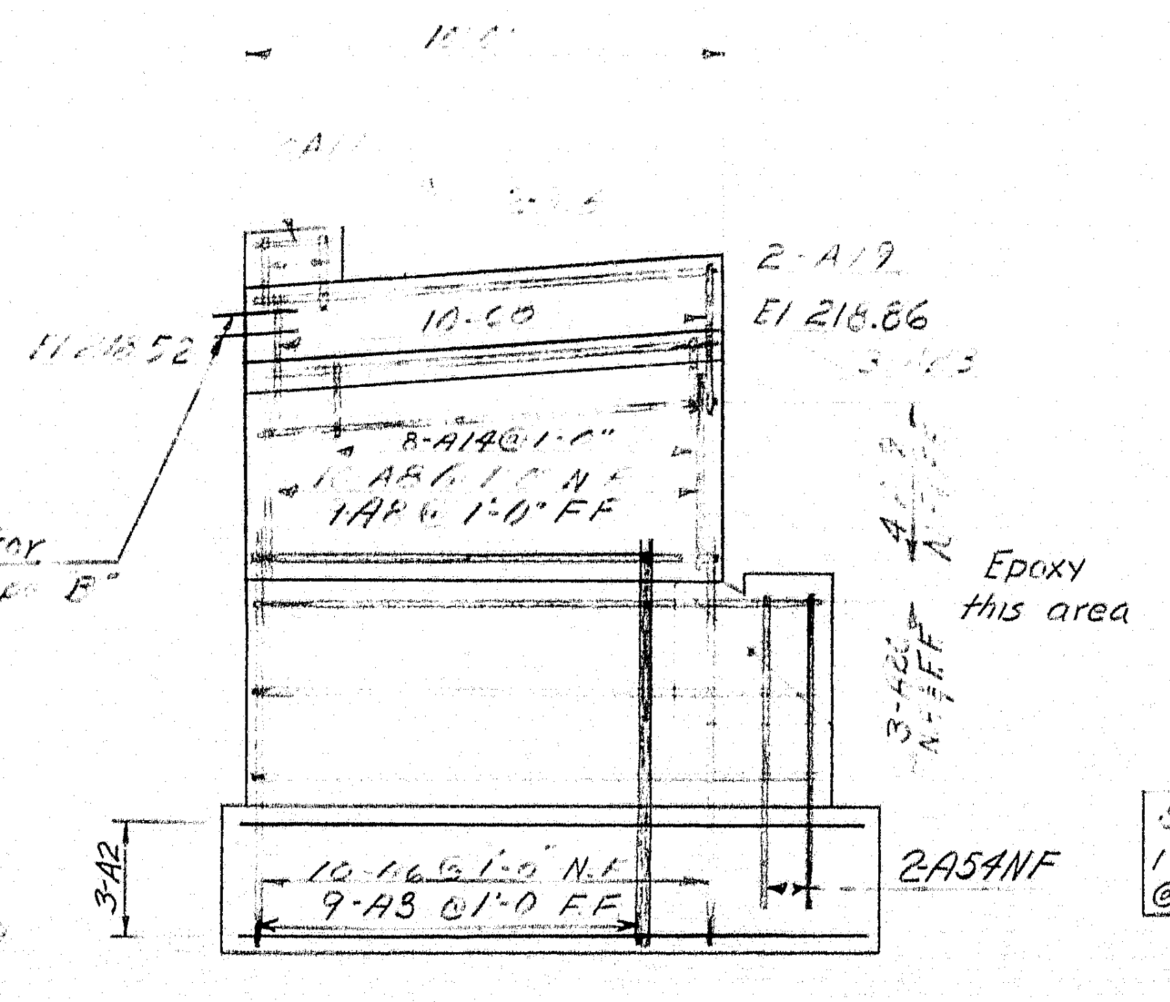
PLAN



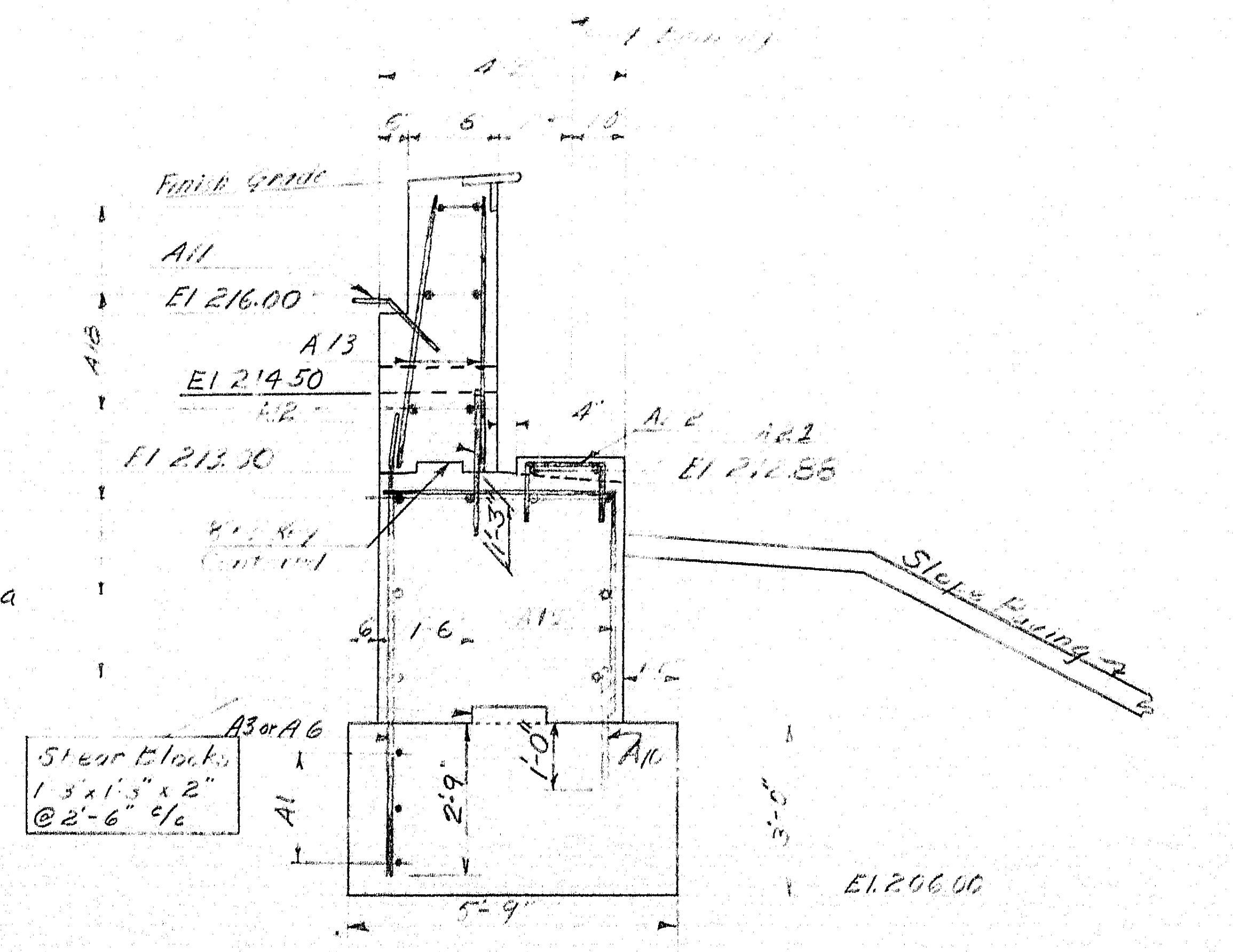
FRONT ELEVATION ABUTMENT #1



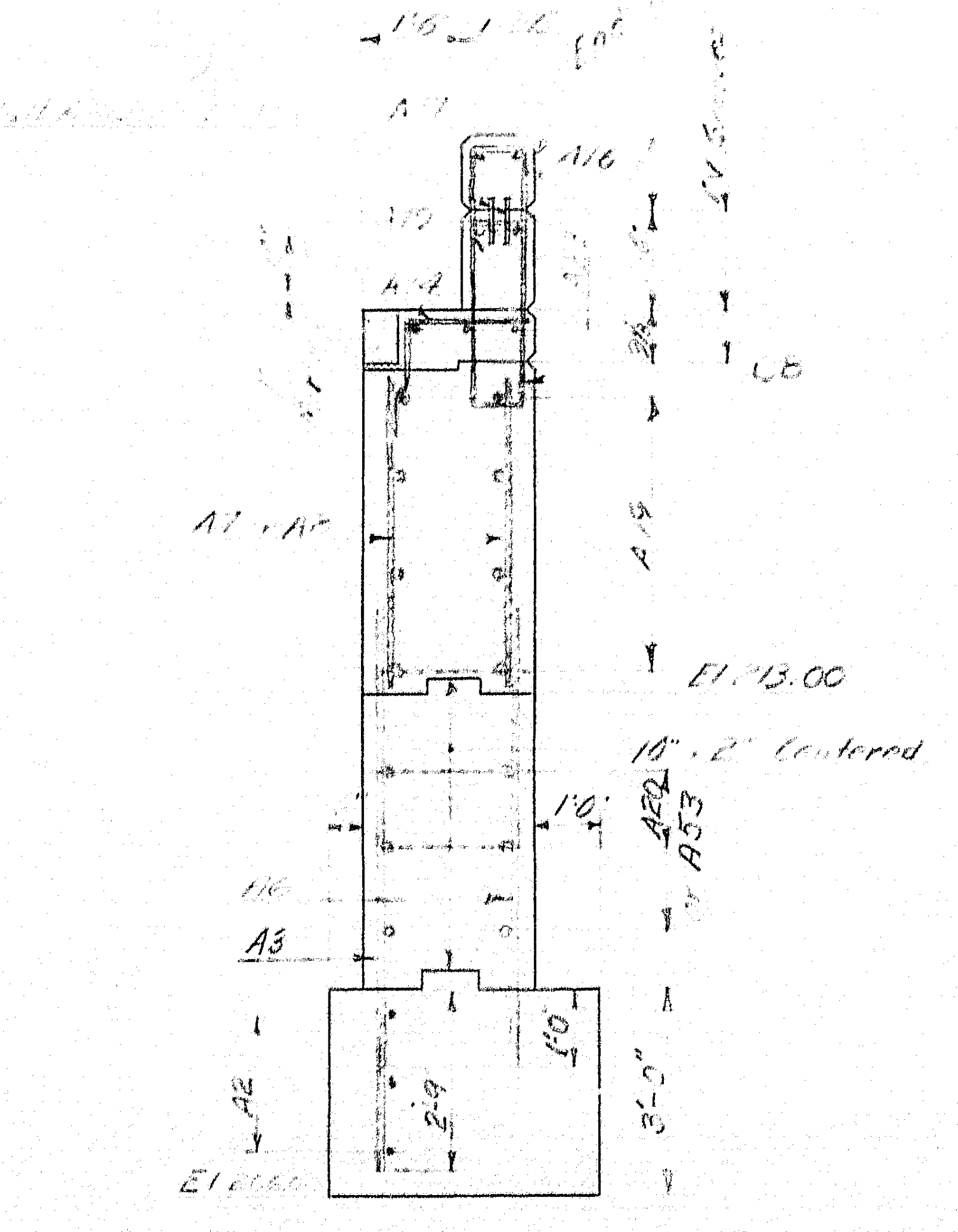
WEST WING ELEVATION



EAST WING ELEVATION



SECTION A-A



SECTION B-B

Design Notes

Drawings [illegible]
[illegible] than the [illegible]
[illegible]
to [illegible]
[illegible] #24.
[illegible] 16.
[illegible] 16 and [illegible] El [illegible].
[illegible]
Allow 2" clear for reinforcing steel unless otherwise noted

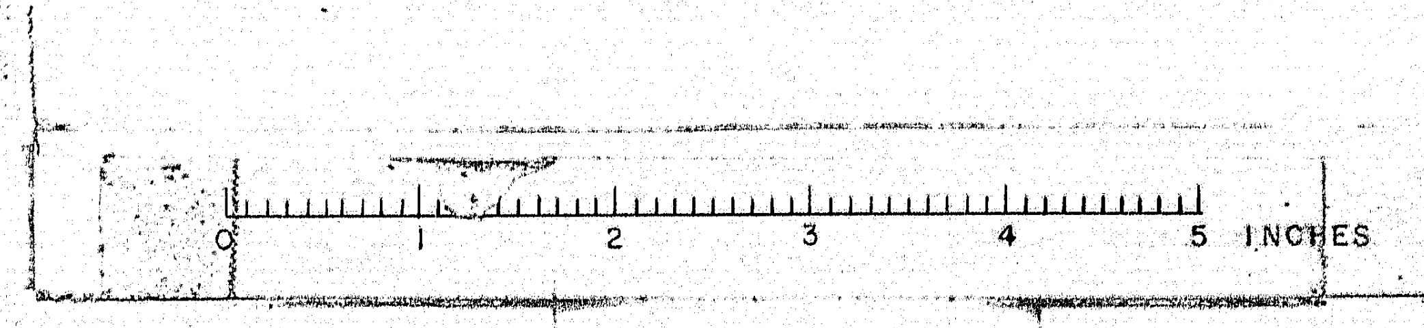
N.F. Near Face
F.F. Far Face
E.F. Each Face

DESIGN-R.A.S. DETAIL C.W.M.
TRACE-R.T.A.
CHECK-C.D.H.

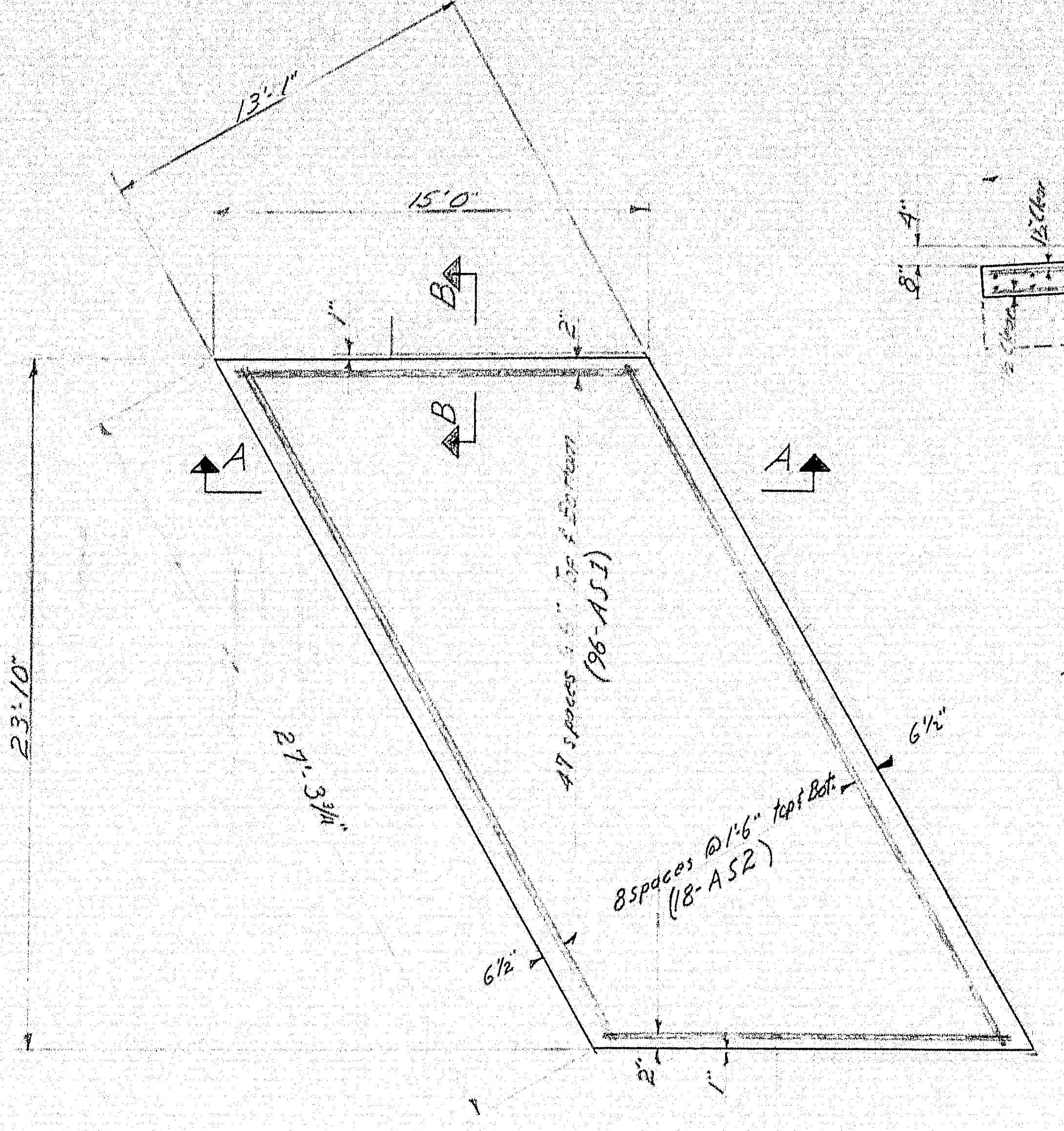
BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION
BELLSQUEEZE ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
BENTON
KENNEBEC COUNTY
ABUTMENT NO. 1
SHEET 15 OF 25 AUGUSTA, MAINE MARCH 1963

C. B. CO., NO. 44-302

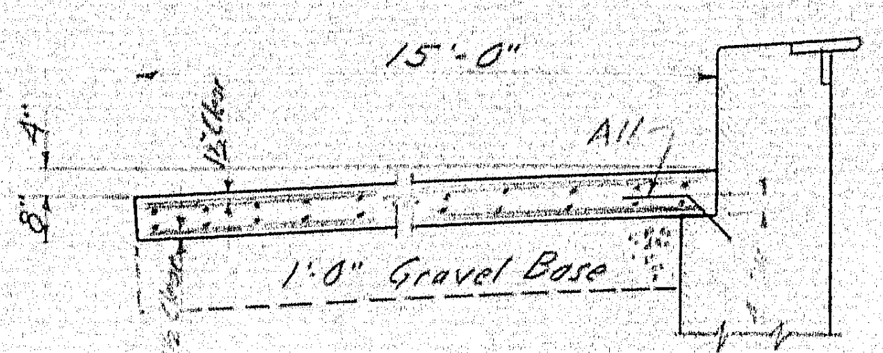


B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	1-95-7(38)	16	25

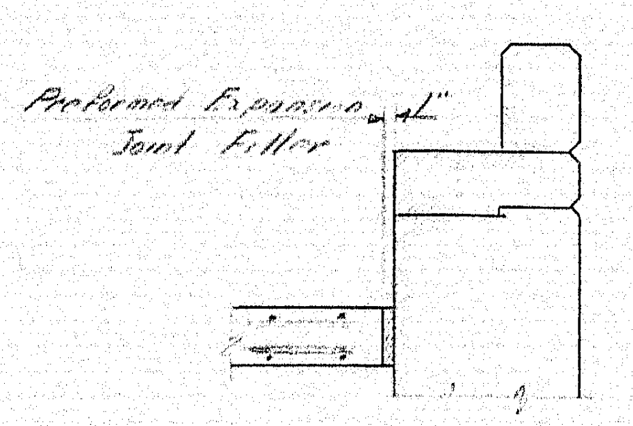


PLAN

Abutment "1 Rotate 180° for Abutment "2



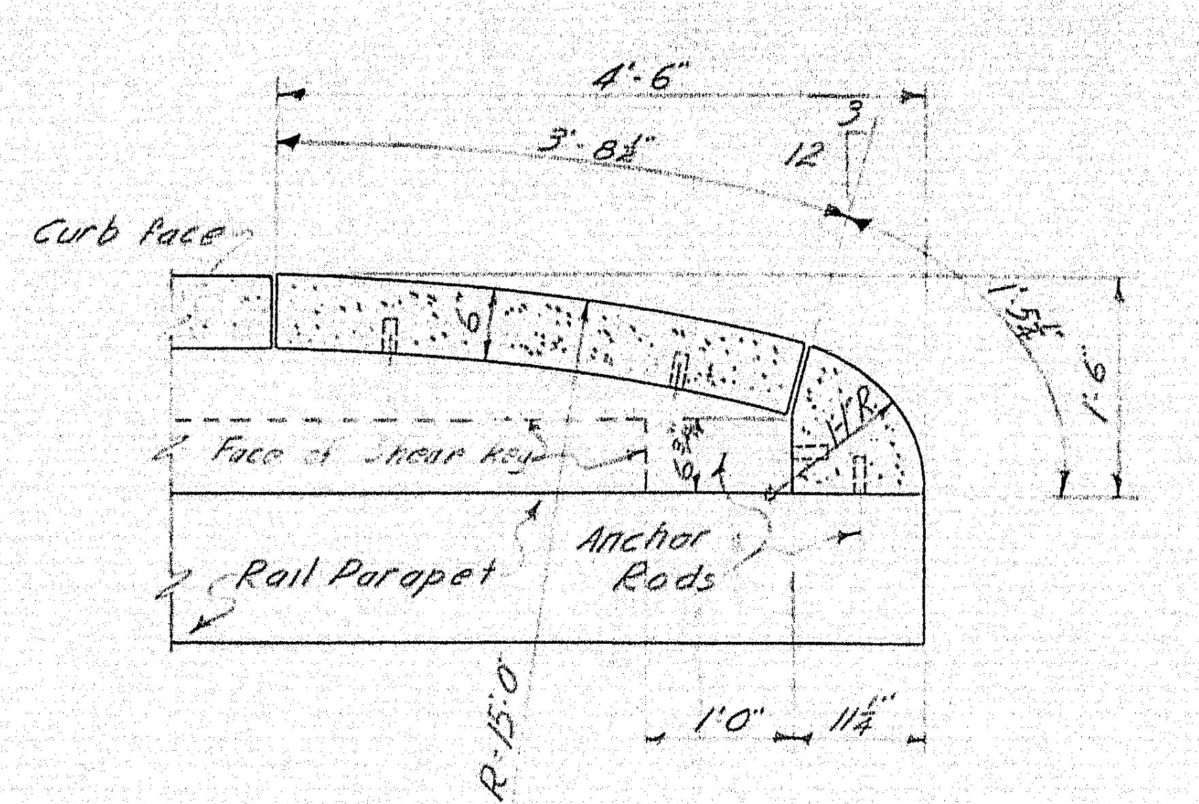
SECTION A-A



SECTION B-B

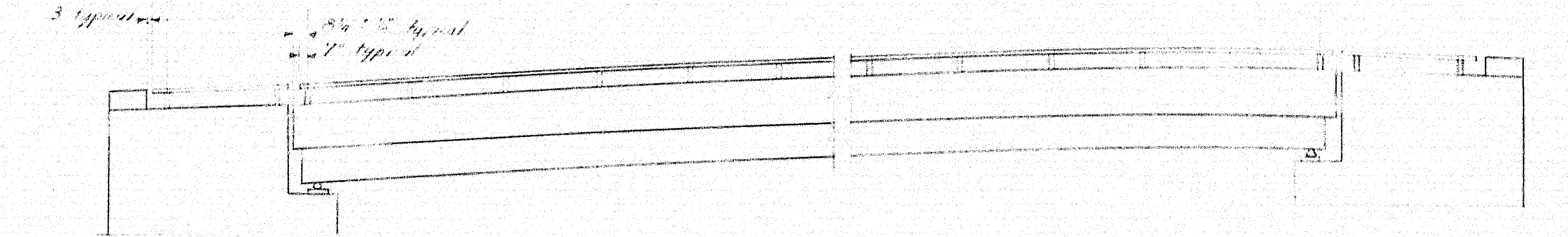
APPROACH SLAB

Portland Cement Concrete in the approach slabs to be paid for under Item [illegible]-33, Portland Cement Concrete, Abutments and Retaining Walls.



END GRANITE BRIDGE CURB

See Superstructure Sheet "24 for typical section



RAIL POST SPACINGS

DESIGN- R.A.S. DETAIL- R.T.A.
TRACE-
CHECK- CDH

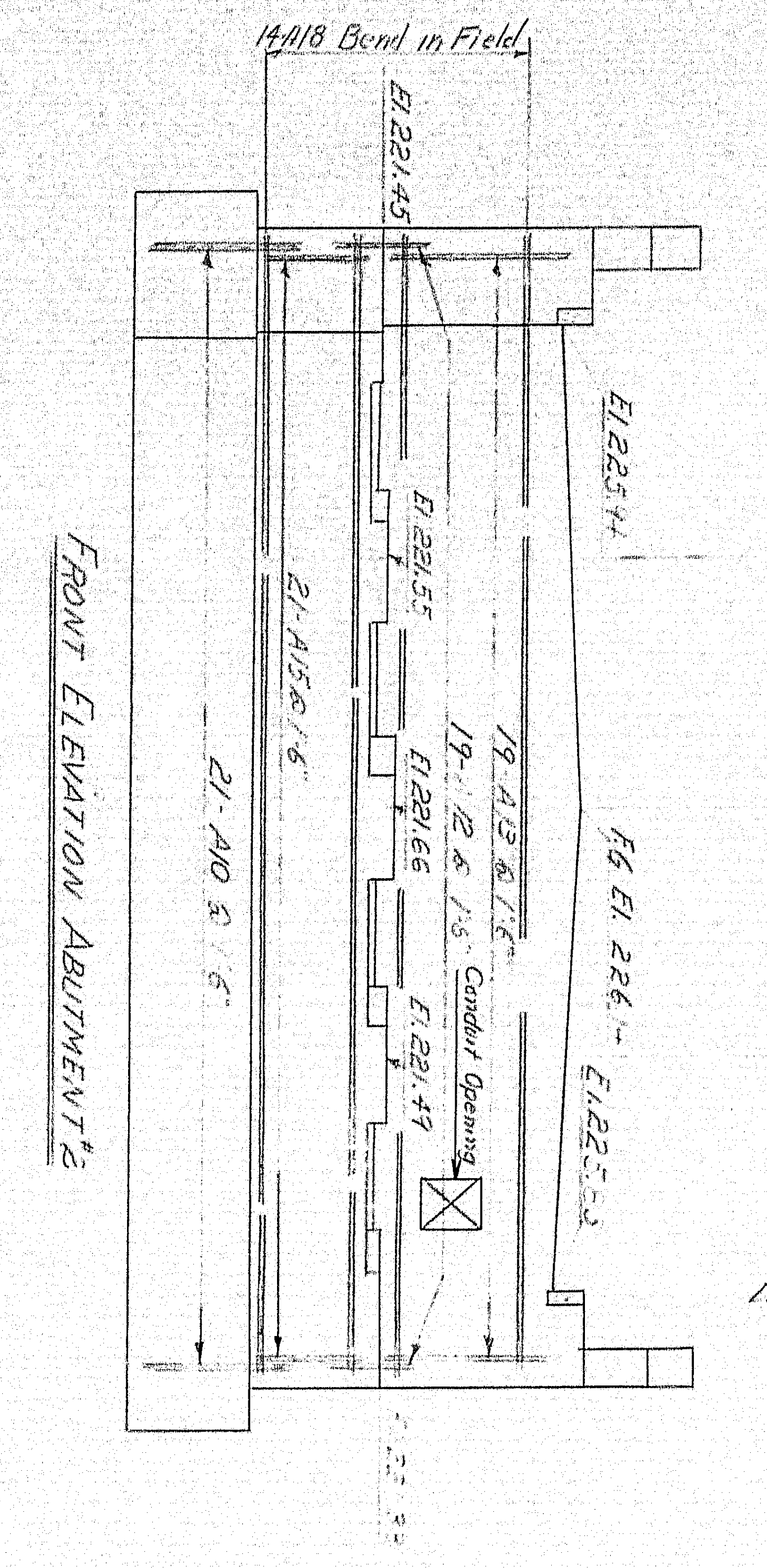
BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

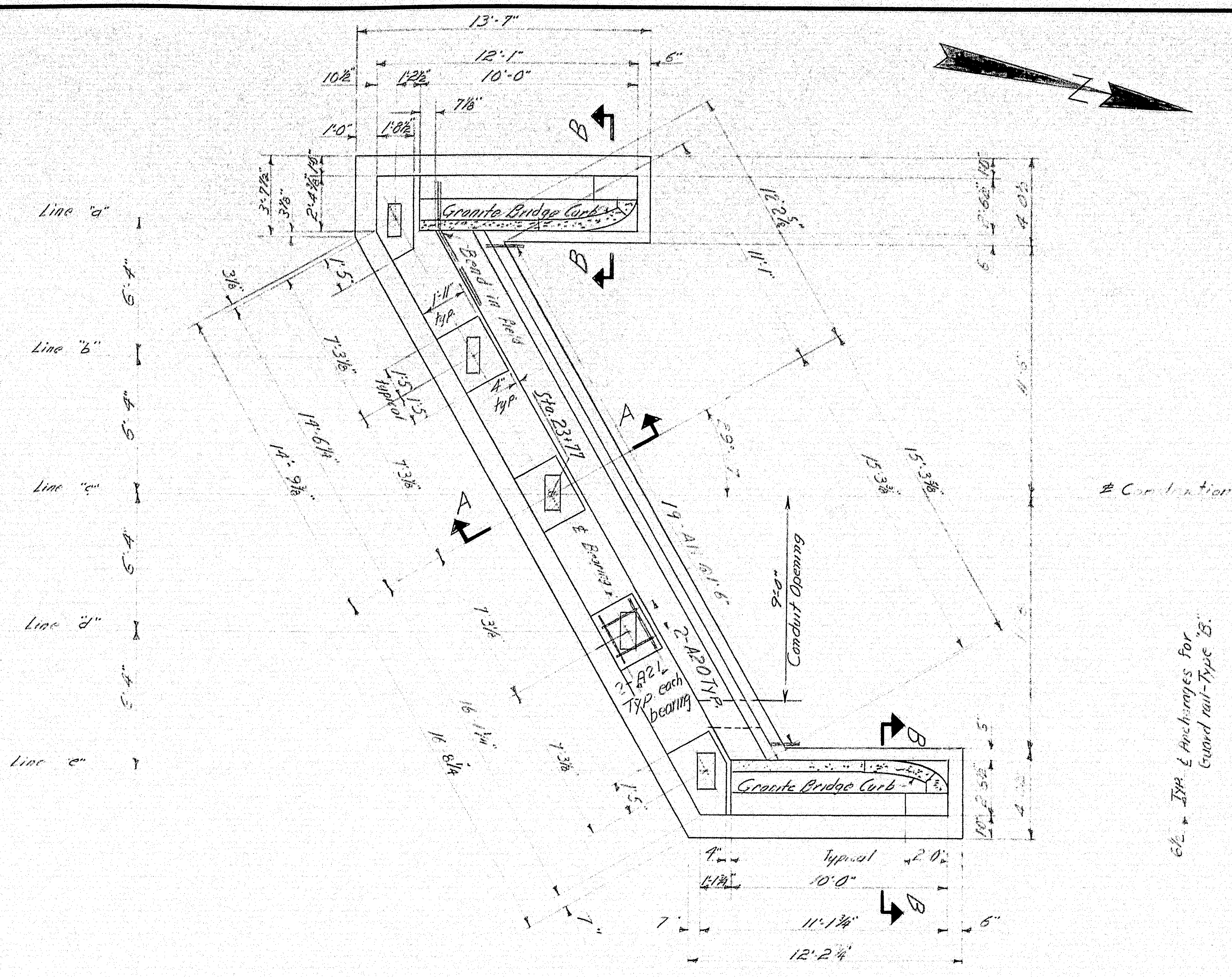
BELLSQUEEZE ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
BENTON
KENNEBEC COUNTY
APPROACH SLAB, GRANITE BRIDGE CURB,
RAIL POST SPACING
SHEET 16 OF 25 AUGUSTA, MAINE MARCH 1963

88 16

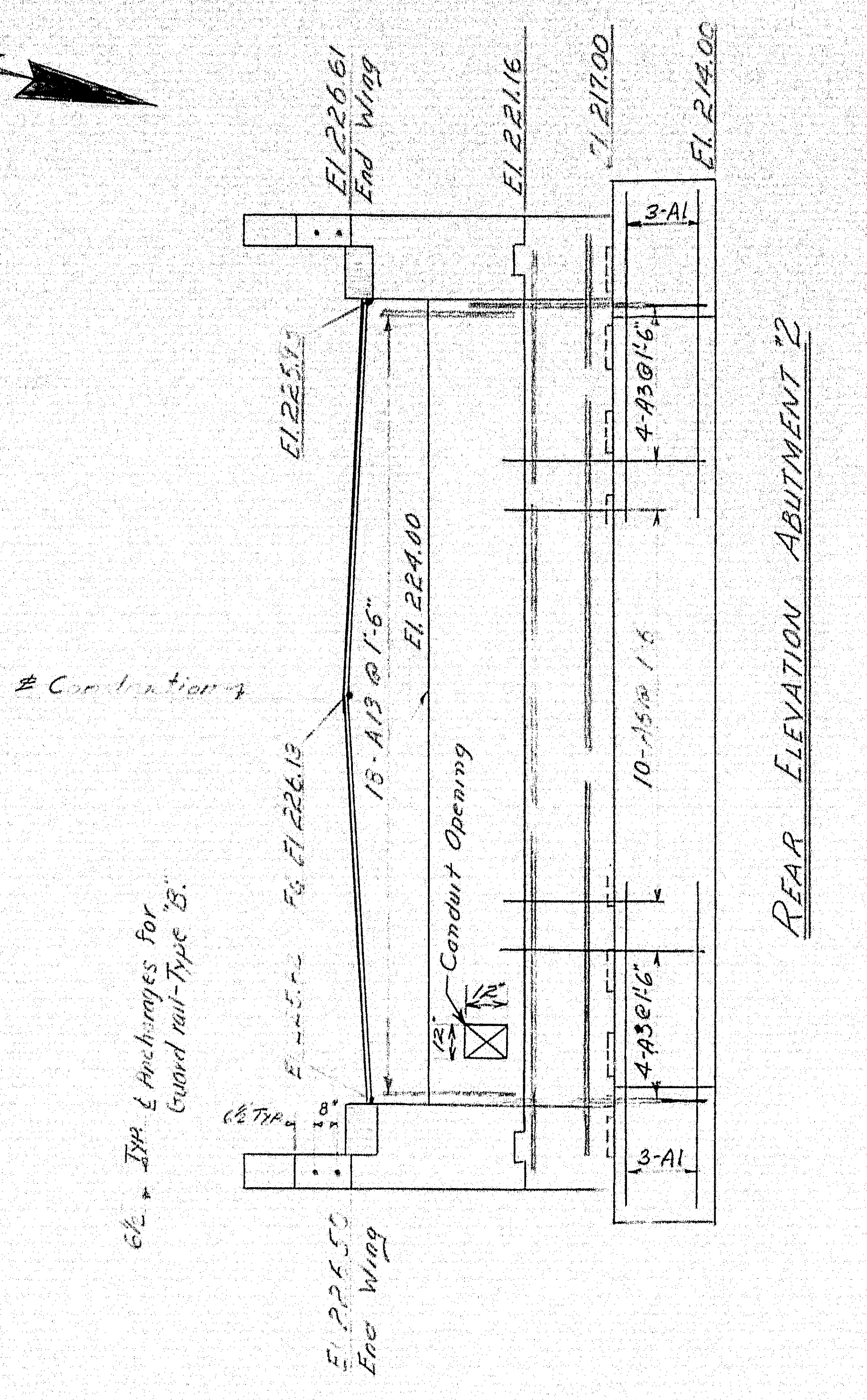
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-7(38)	17	25



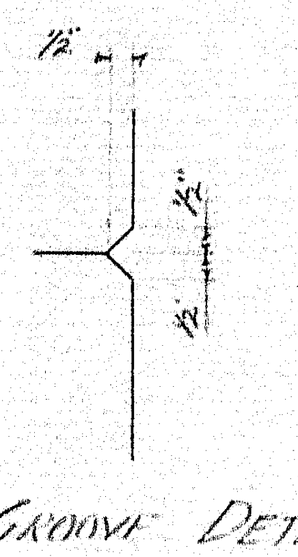
FRONT ELEVATION ABUTMENT #2



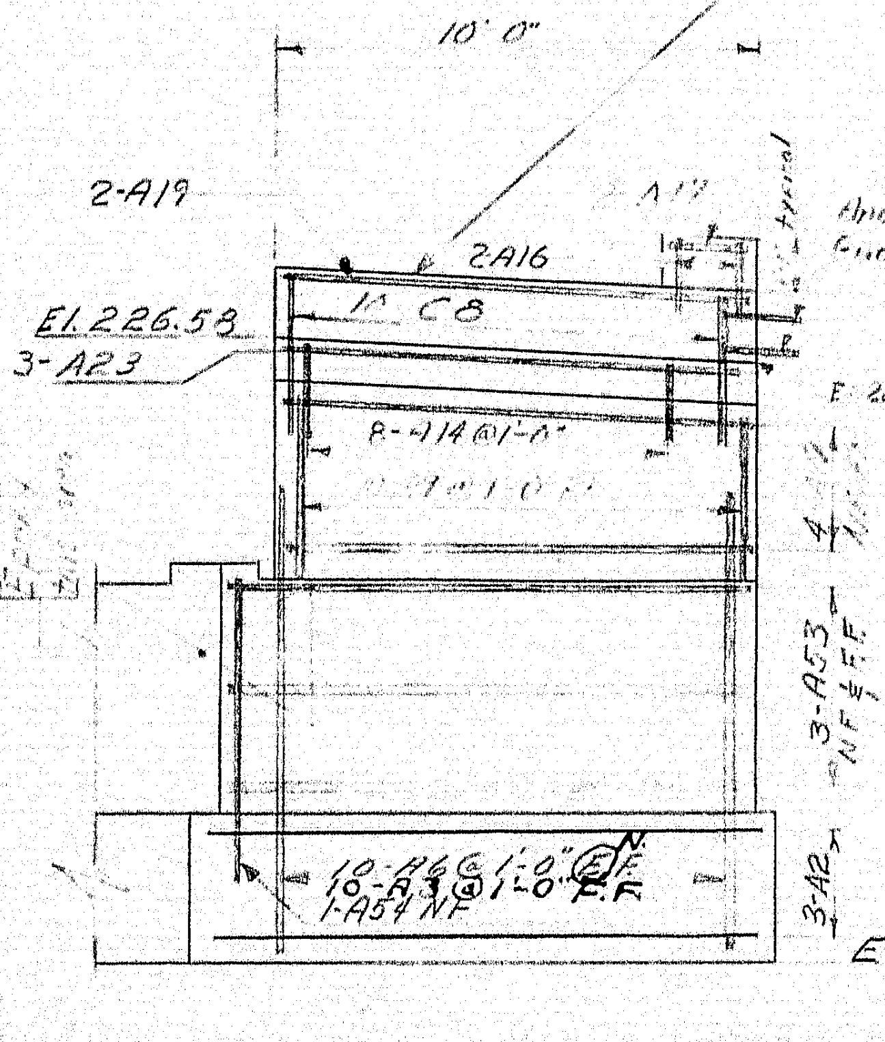
PLAN



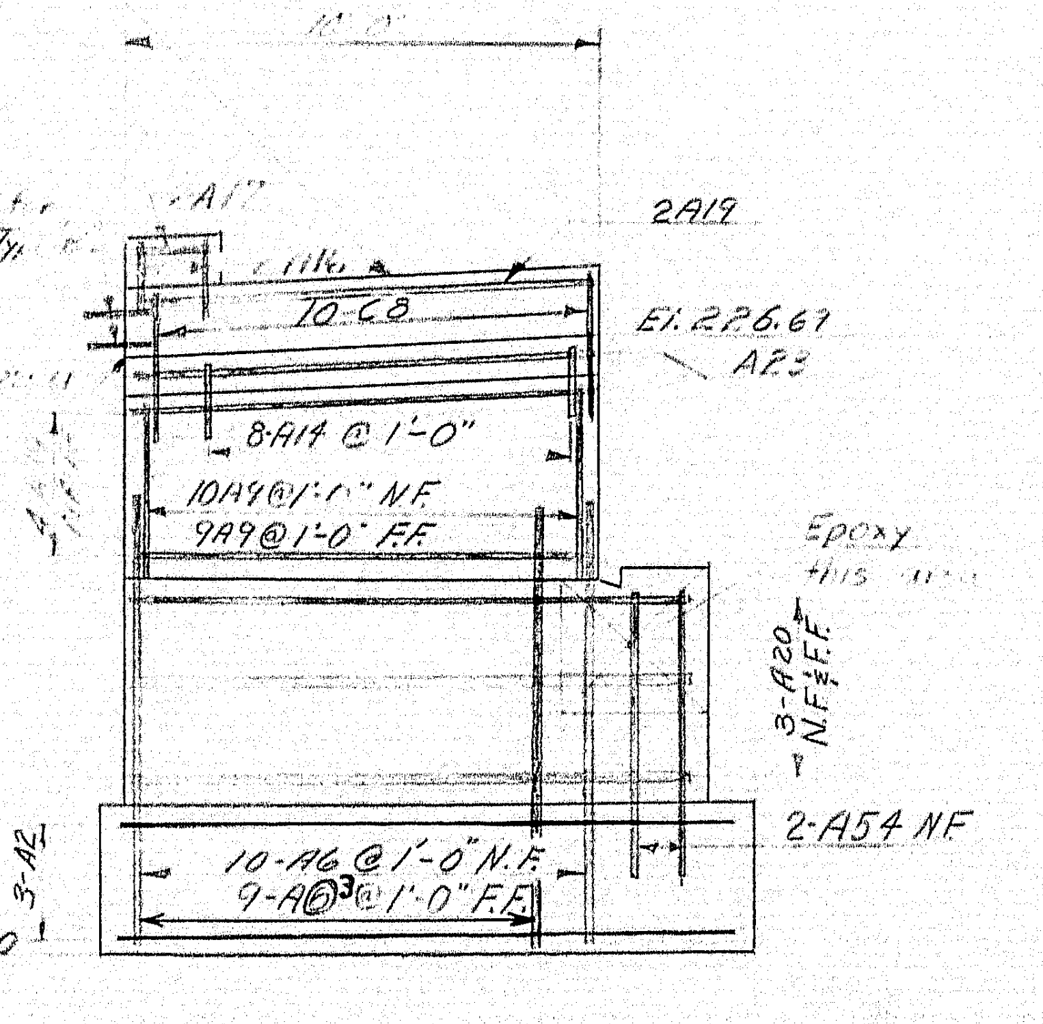
REAR ELEVATION ABUTMENT #2



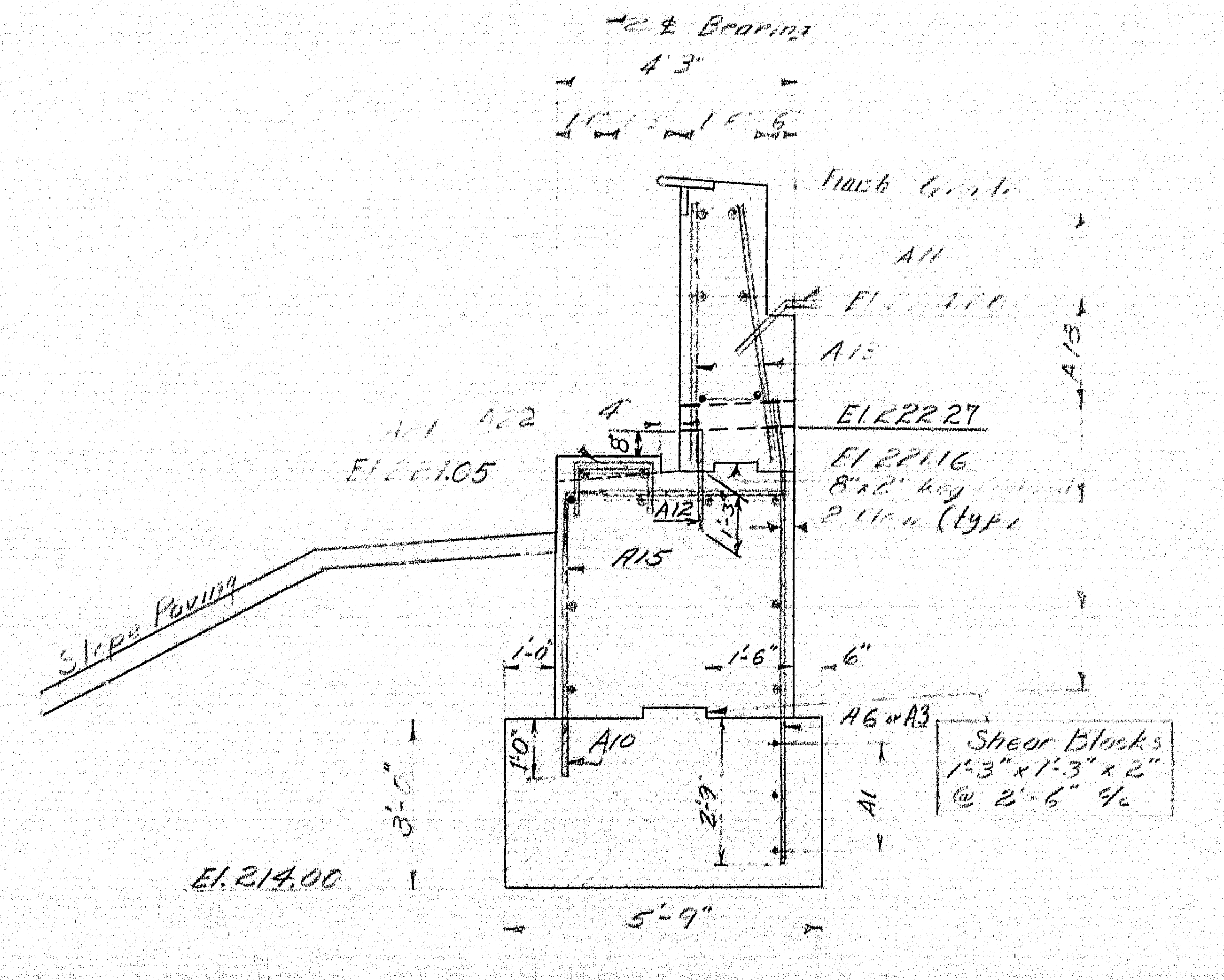
1" V GROOVE DETAIL



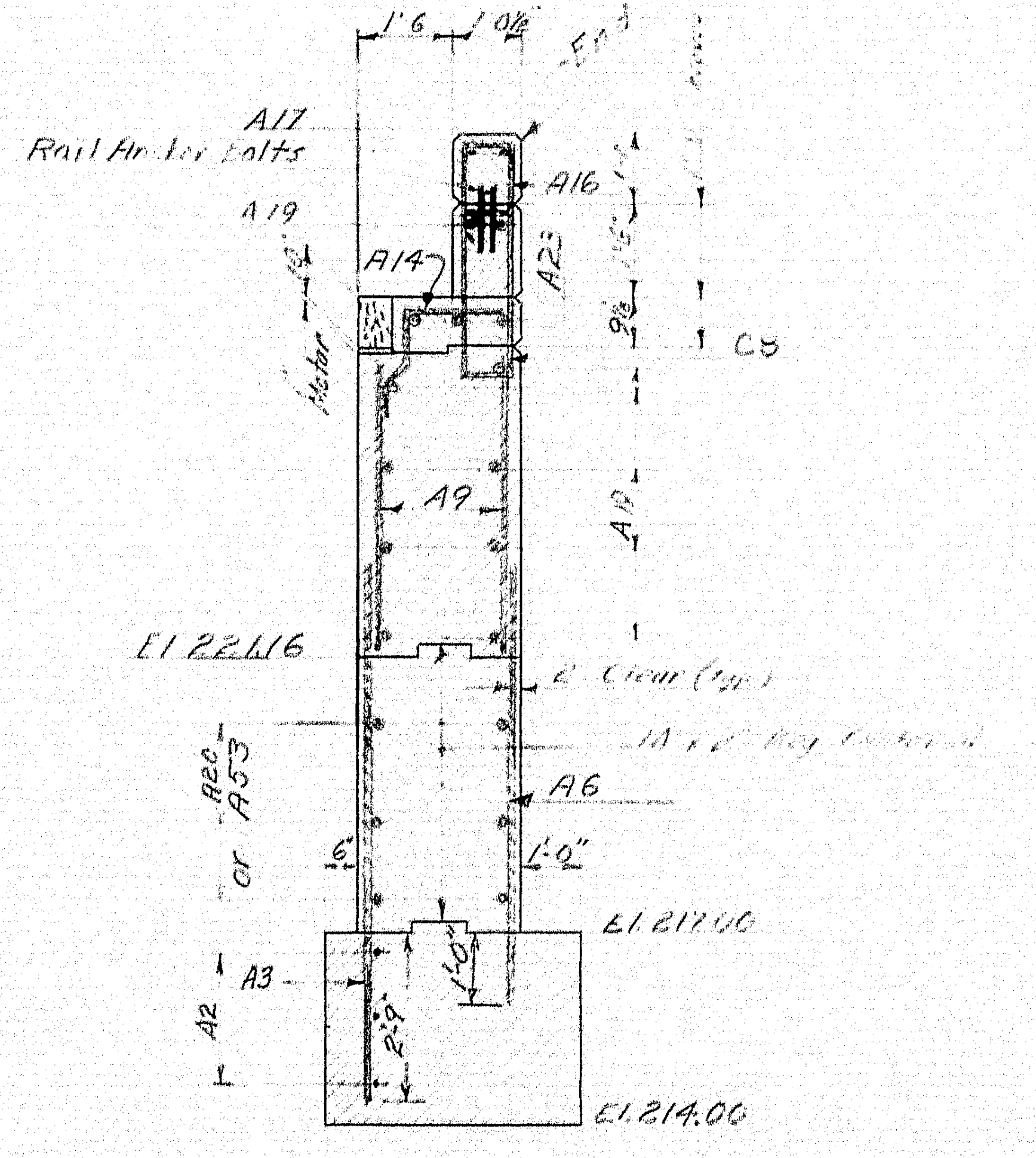
EAST WING ELEVATION



WEST WING ELEVATION



SECTION A-A



SECTION B-B

Note
For General Notes [illegible] Abutment #1.
Field Changes in Red

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

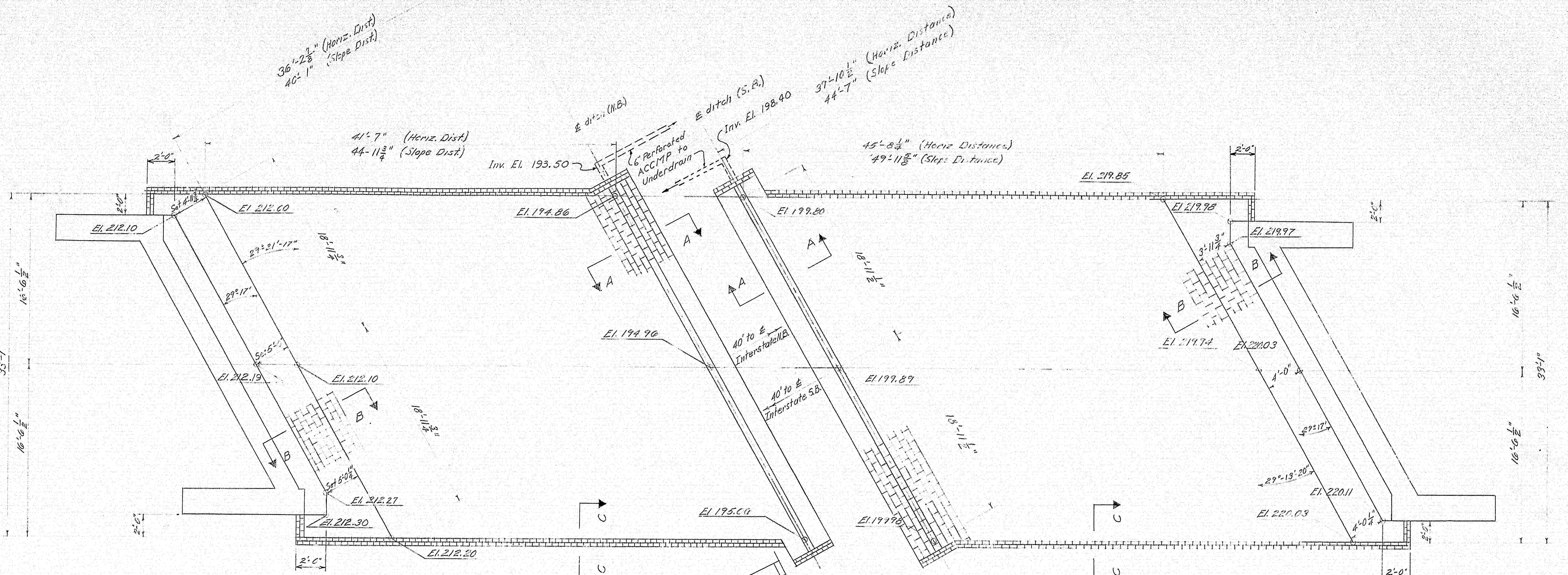
DESIGN– R.A.S. DETAIL C.W.M.
TRACE– R.T.A.
CHECK– C.D.H.

BRIDGE NO.
SURVEY–
PLOT–

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

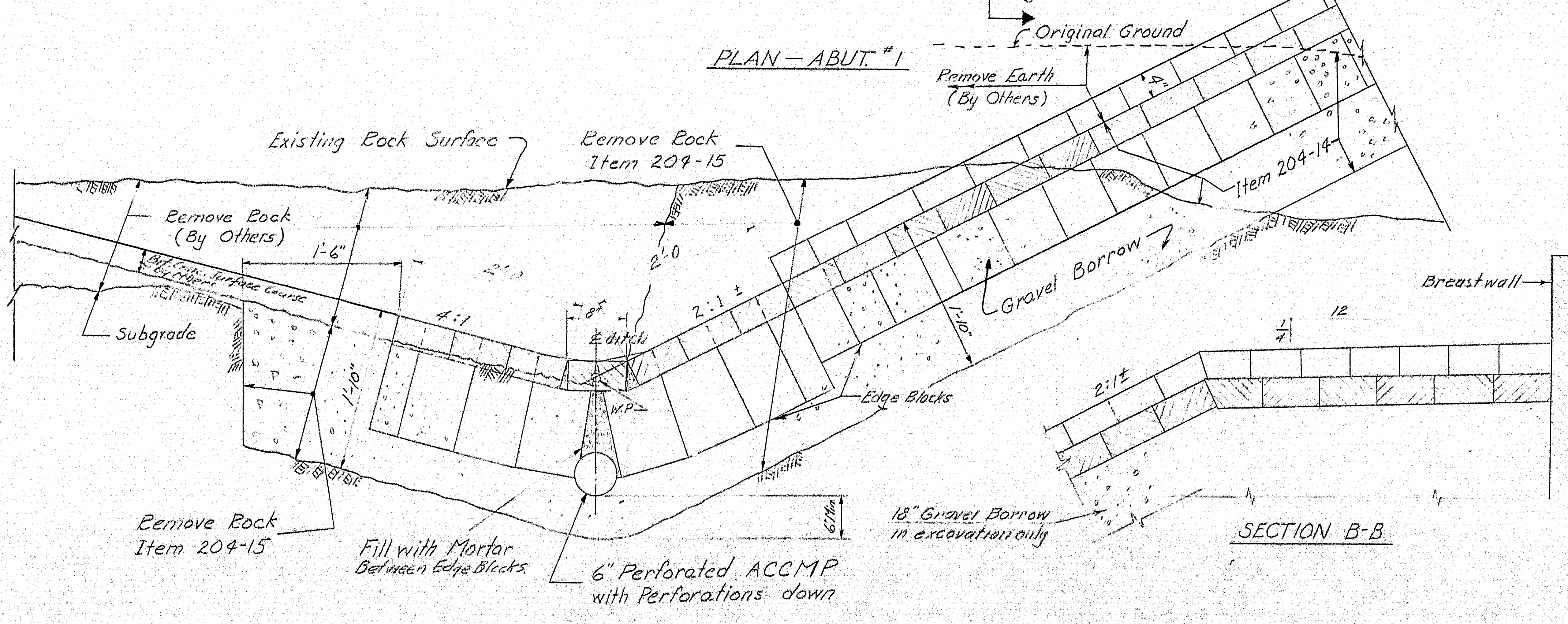
BELLSQUEEZE ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
BENTON
KENNEBEC COUNTY
ABUTMENT NO. 2
SHEET 17 OF 25 AUGUSTA, MAINE MARCH 1963

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	1-95-7(38)	18	25



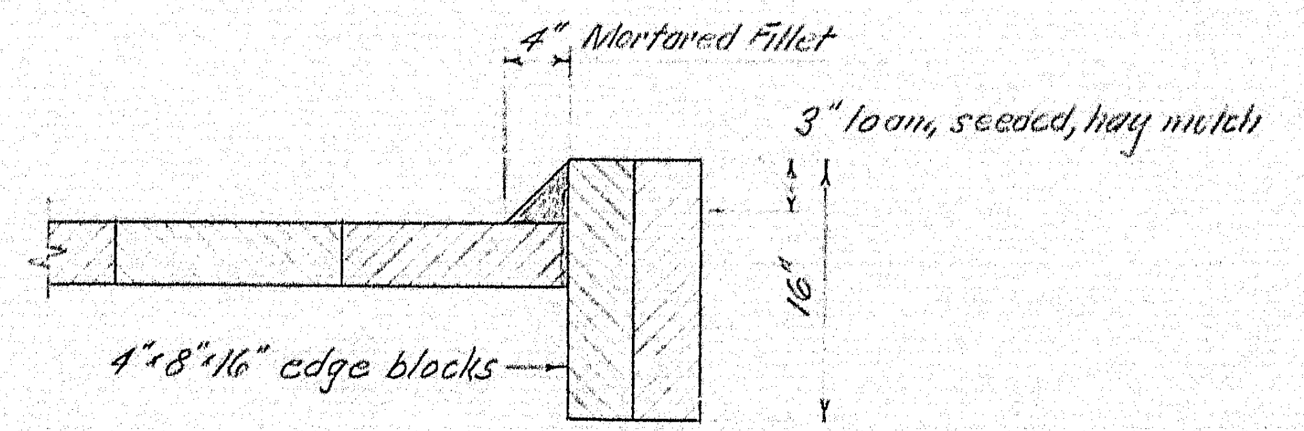
PLAN – ABUT. #1

PLAN – ABUT. #2



SECTION A-A

SECTION B-B



SECTION C-C

NOTES

1. Payment for excavation for Gravel Borrow under Slope Paving to be made under Item 204-14, Structural Earth Excavation – Piers, or Item 204-15, Structural Rock Excavation – Piers.
2. Depth of Gravel Borrow under slope paving may be reduced or omitted, if in the opinion of the Resident Engineer, existing material is suitable.
3. Slope Paving shall be solid concrete blocks 8"×16"×4" with mortared joints or See Supplemental Specifications Section 808 for an Alternate.

DESIGN & DETAIL– J.C.
TRACE–
CHECK– CDH

BRIDGE NO.
SURVEY–
PLOT–

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

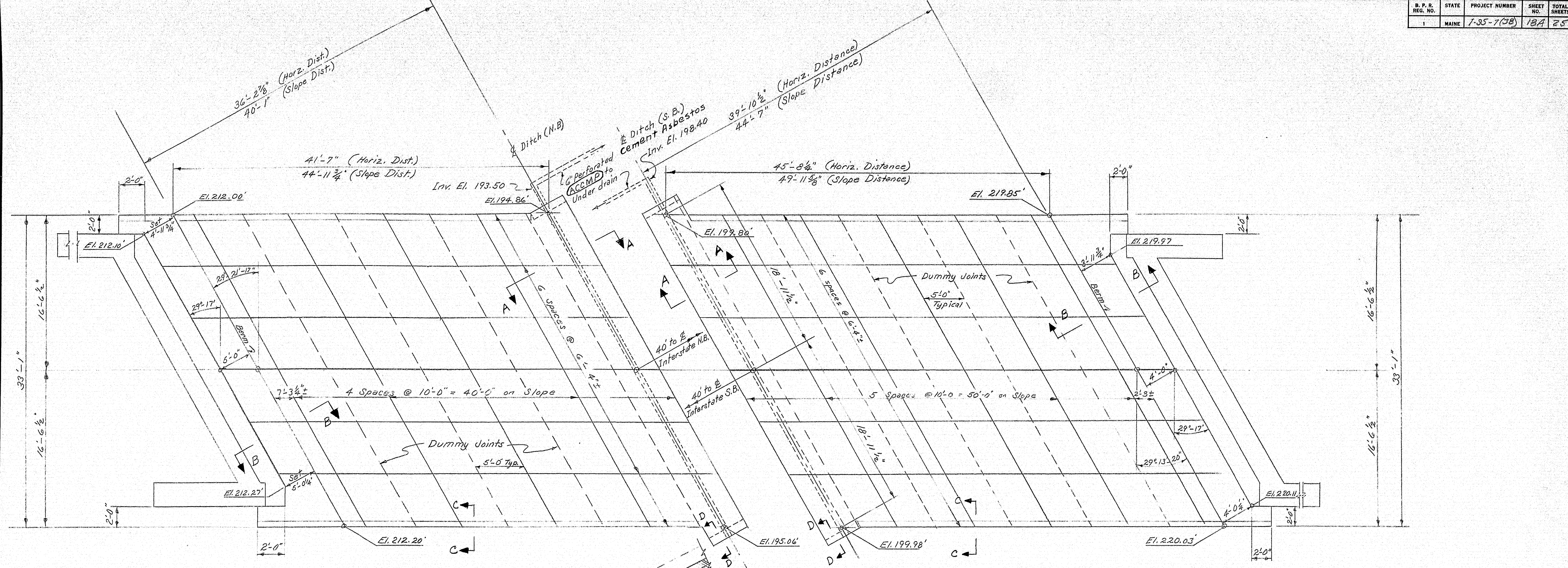
BELLSQUEEZE ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
BENTON
KENNEBEC COUNTY

SLOPE PAVING

SHEET 18 OF 25 AUGUSTA, MAINE MARCH 1963

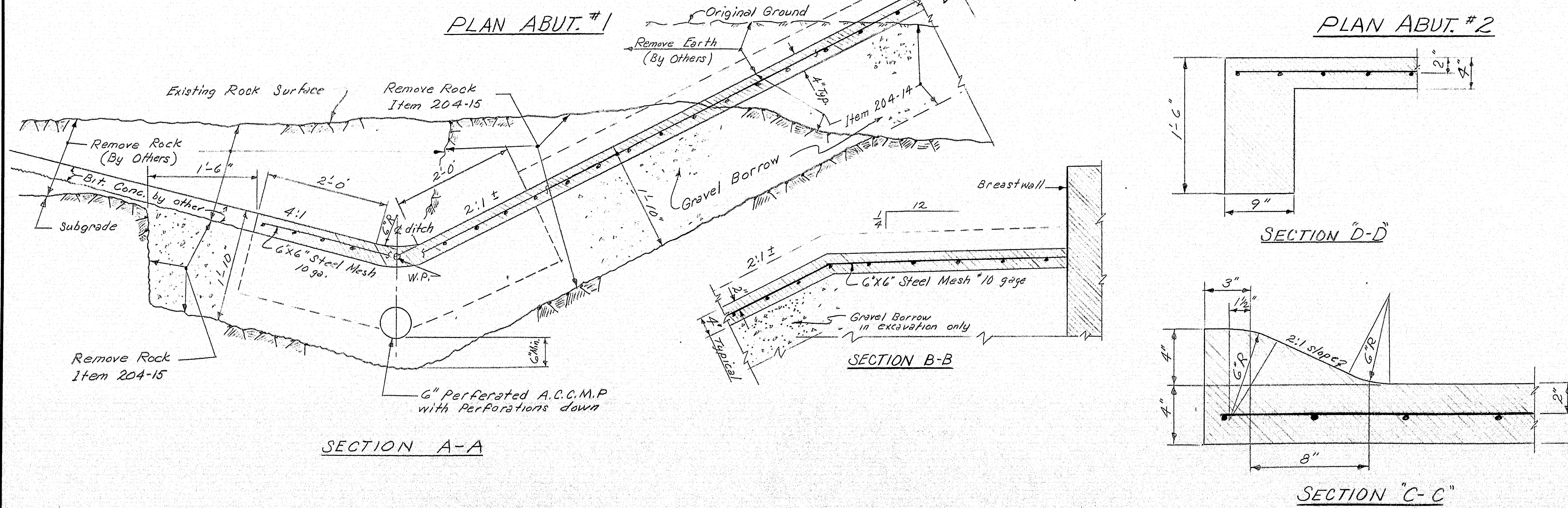
88 – 18

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-7(38)	18A	25



PLAN ABUT. #1

PLAN ABUT. #2



SECTION A-A

SECTION B-B

SECTION "D-D"

SECTION "C-C"

NOTES:
1. Break bond at Construction Joints with a coat of asphalt paint.
2. Reinforce with #10 Gage 6"x6" Steel Mesh, not to pass through Construction Joints.
3. At Contractors option, sections of the same strip may be cast in order. Bond will be broken between adjoining sections with 1/4" of Bit. Treated Preformed Expansion Joint Filler.
4. Dummy Joints shall be made with a sidewalk edging tool to a depth of 1/4".
5. The 18" Gravel Borrow under the slope paving may be reduced or omitted, if in the opinion of the Engineer, the existing material is suitable.
6. Payment for excavation for Gravel Borrow under Slope Paving to be made under Item 204-14, Structural Earth Excavation - Piers or Item 204-15 Structural Rock Excavation - Piers.
7. Field Changes in Red.

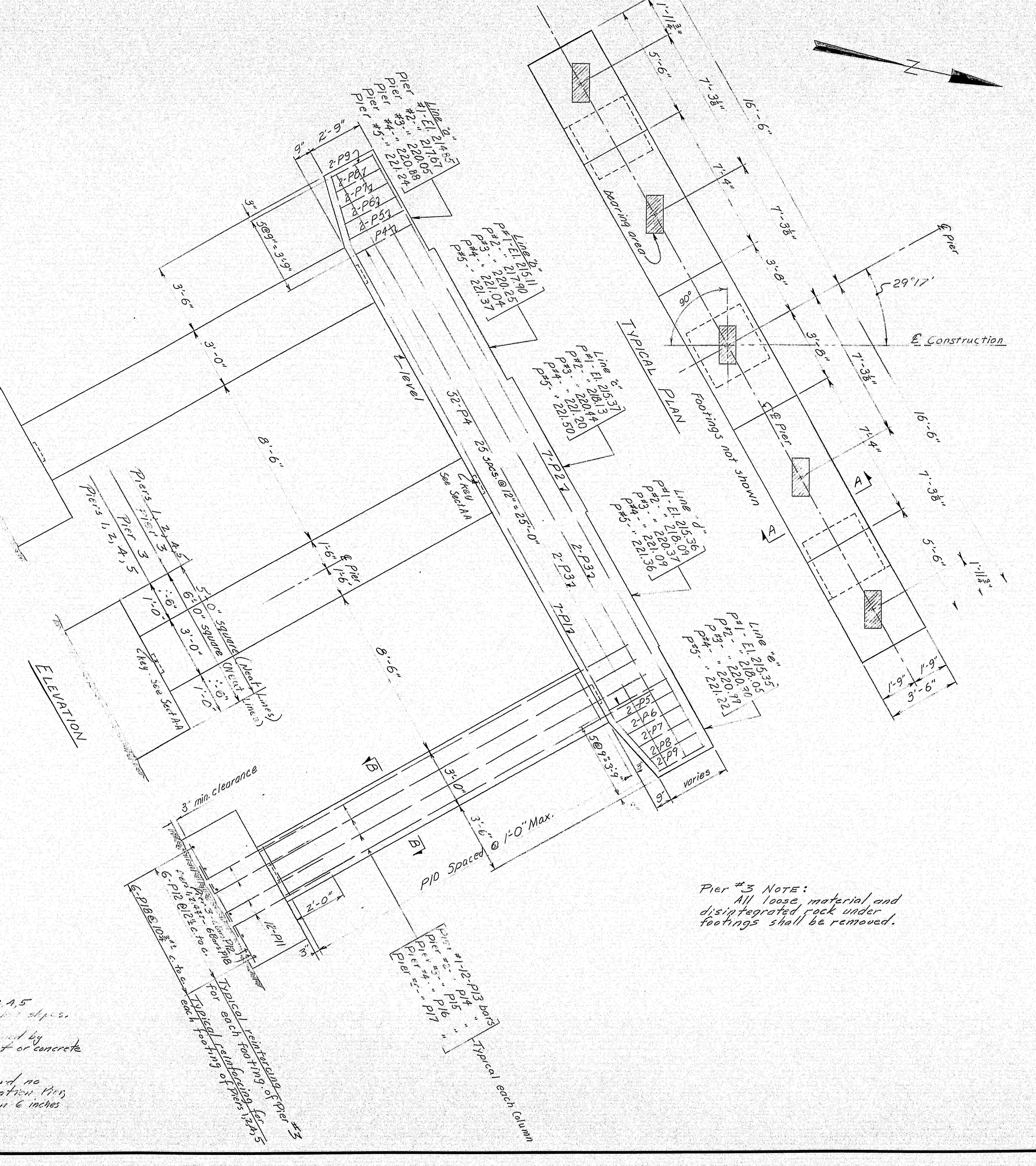
DESIGN- CWM
TRACE- "
CHECK- HCR

BRIDGE NO.
SURVEY-
PLOT-

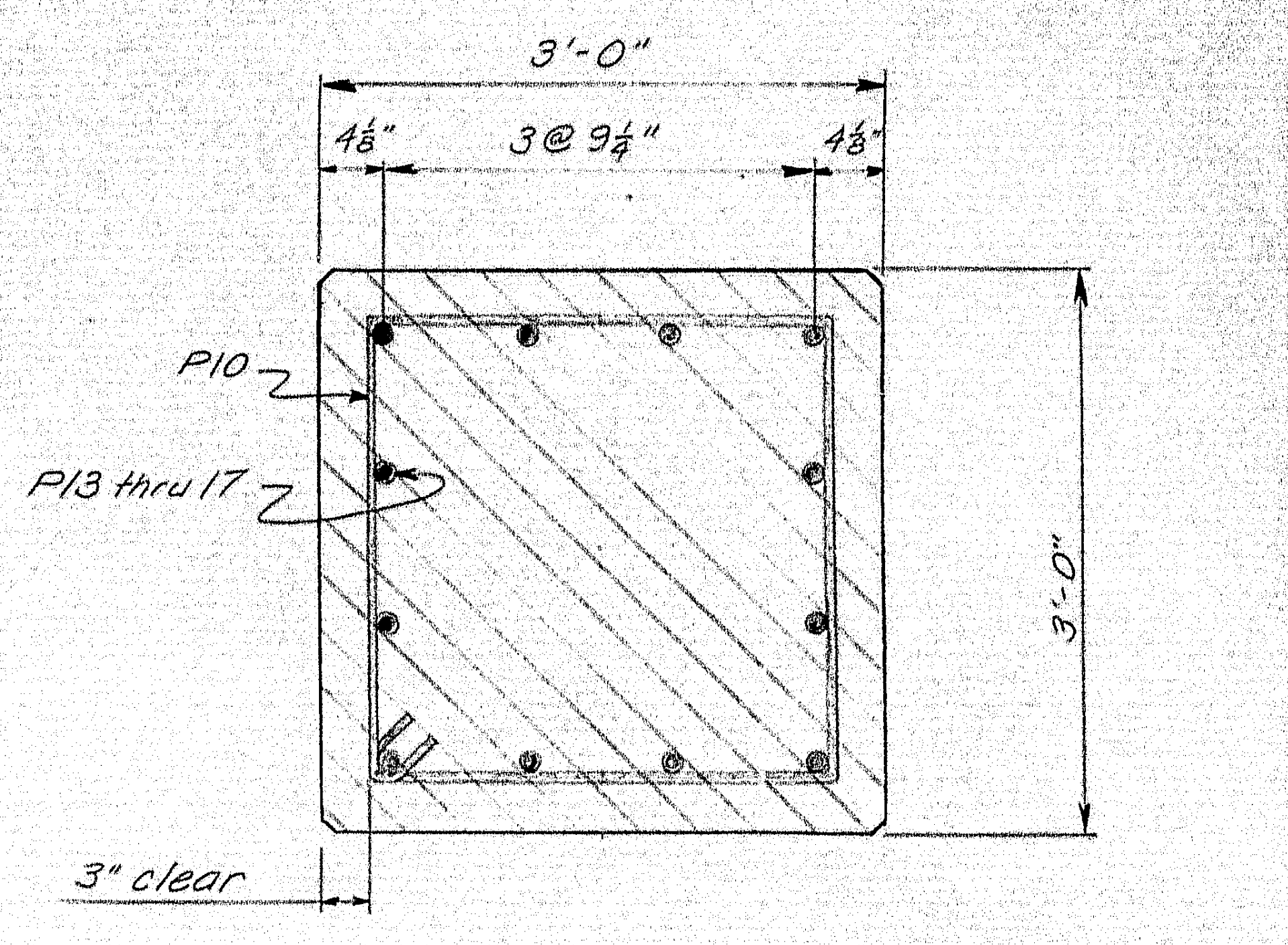
STATE HIGHWAY COMMISSION
BRIDGE DIVISION
BELLSQUEEZE ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
BENTON
KENNEBEC COUNTY
SLOPE PAVING
SHEET 18A OF 25 AUGUSTA, MAINE MARCH 1963

18A

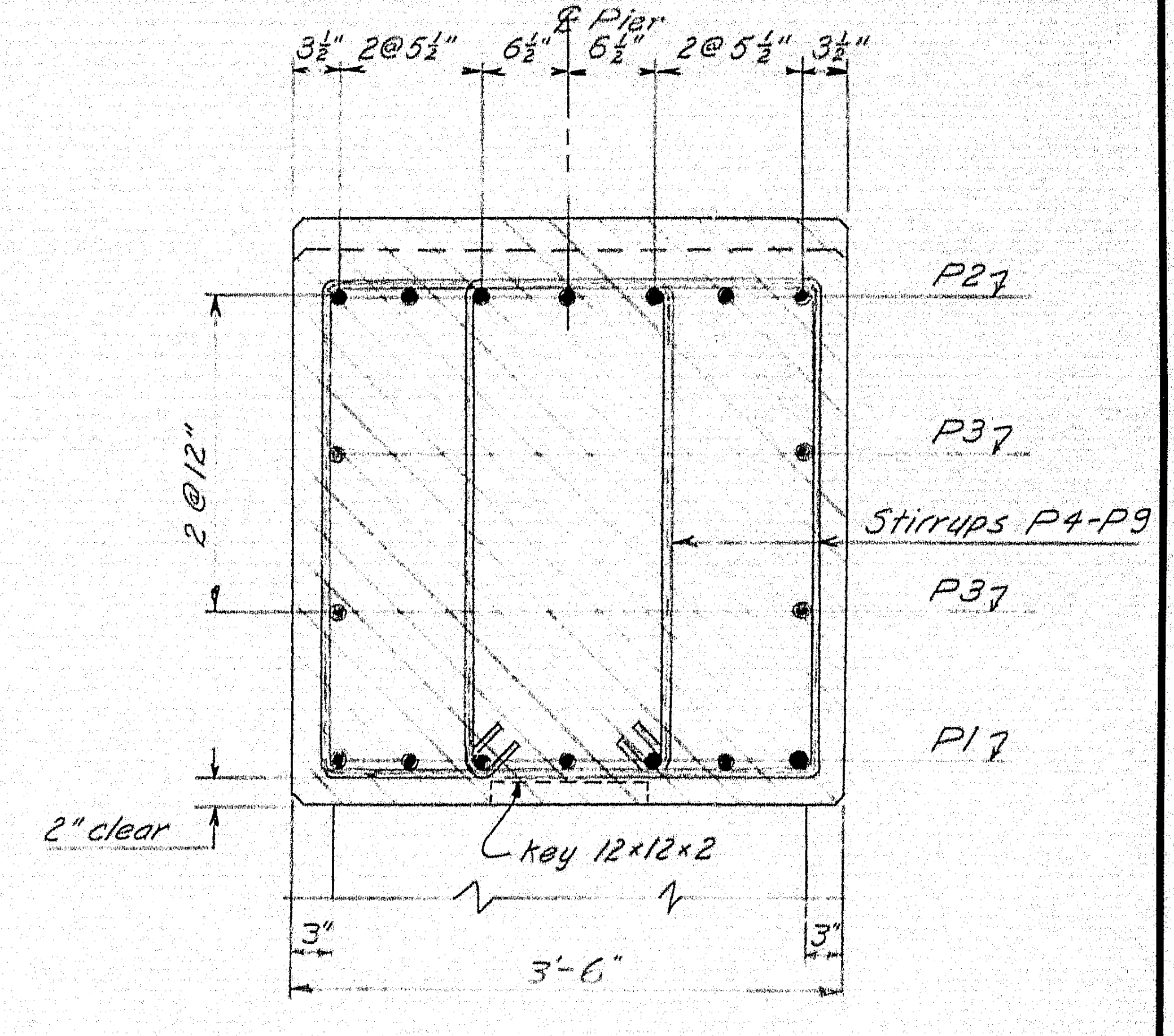
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-7(38)	19	25



Pier #3 NOTE: All loose material and disintegrated rock under footings shall be removed.



SECTION B-B

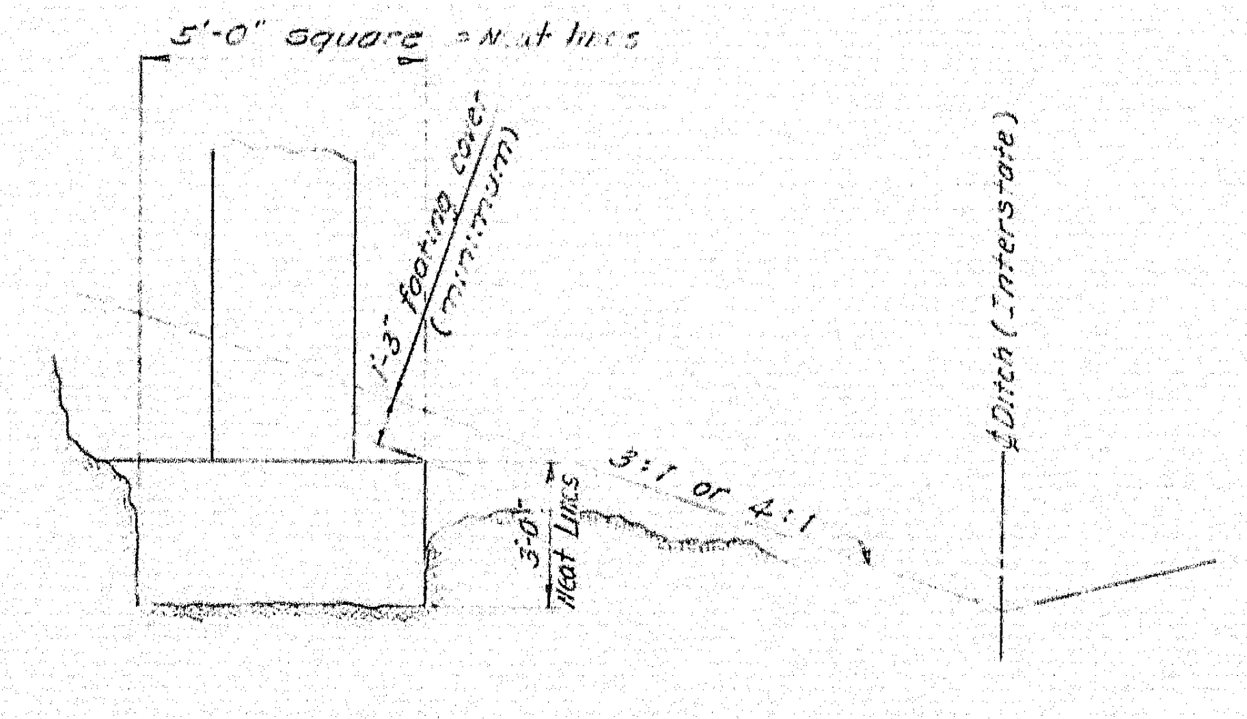


SECTION A-A

NOTES

1. Locate reinforcing bars to clear anchor bolts.
2. Dress bearing areas to exact elevation shown, and 1" larger, all around, than masonry plates.

Piers #1,2,4,5 Max. Footing Pressure = 15.0 Tons/Sq. Ft.
Pier 3 Max. Footing Pressure = 11.0 Tons/Sq. Ft.



DETAIL - PIERS 1,2,4&5

NOTES:

1- Elevations for bottom of footings for Piers 1,2,4,5 were set from the 1'-3" dimension normal to the finished slopes.

2- Footing side forms may be omitted if approved by the engineer. No payment will be made for cement or concrete outside the neat lines shown.

3- In case of breakage of ledge downward no payment will be made for Structural Rock Excavation Piers, Concrete and Cement (for piers 1,2,4,5) more than 6 inches below the elevations shown.

DESIGN- R.A.S.
TRACE-
CHECK- CDH

BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

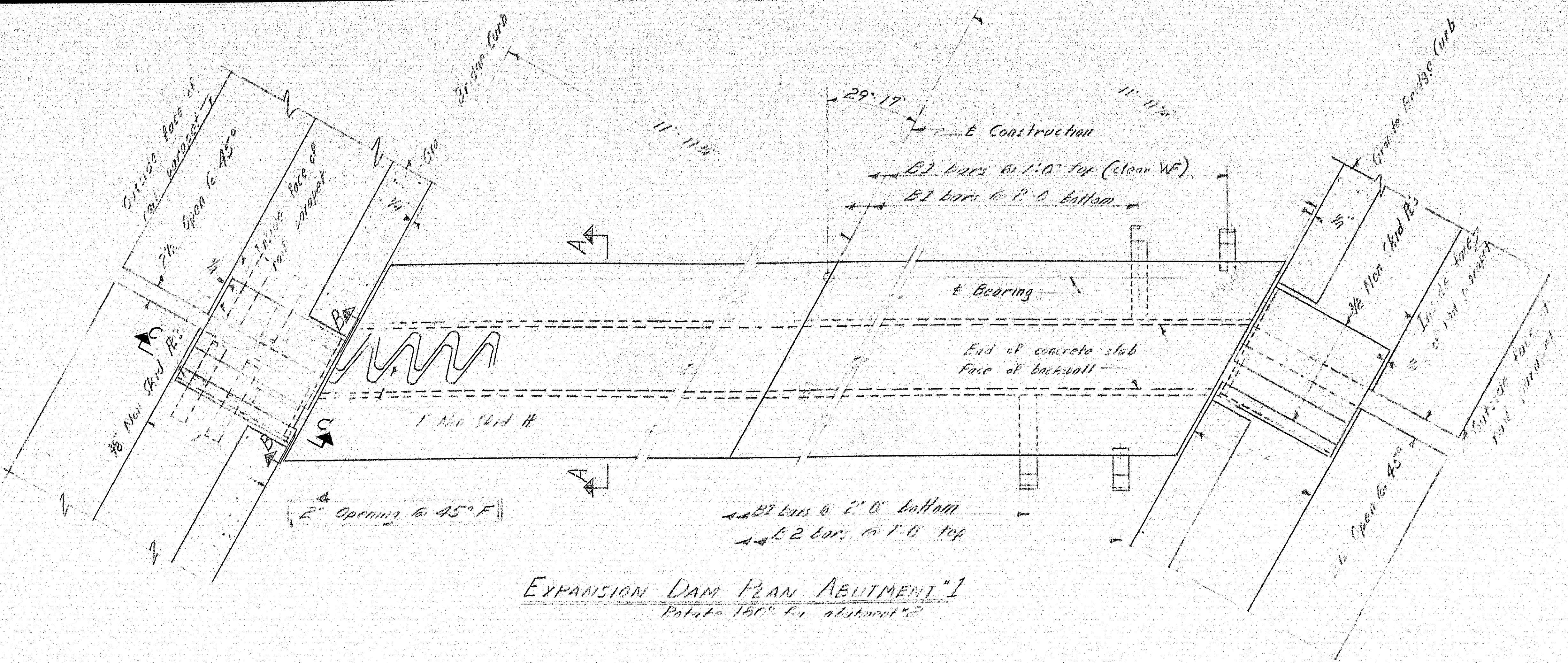
BELLSQUEEZE ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
BENTON
KENNEBEC COUNTY
PIERS

SHEET 19 OF 25 AUGUSTA, MAINE MARCH 1963

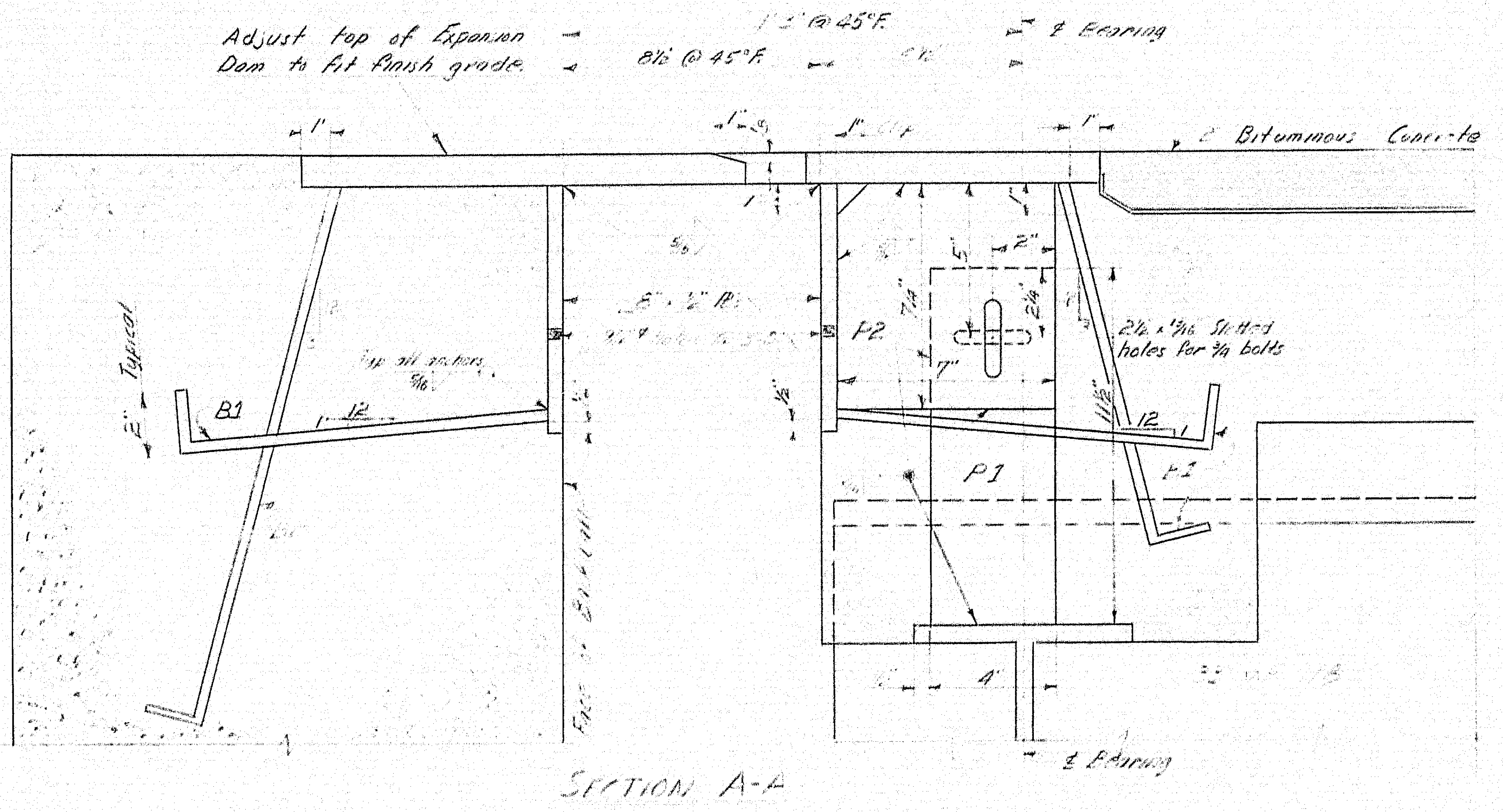
C. B. CO., NO. 44-302 28216

19

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-7(38)	21	25



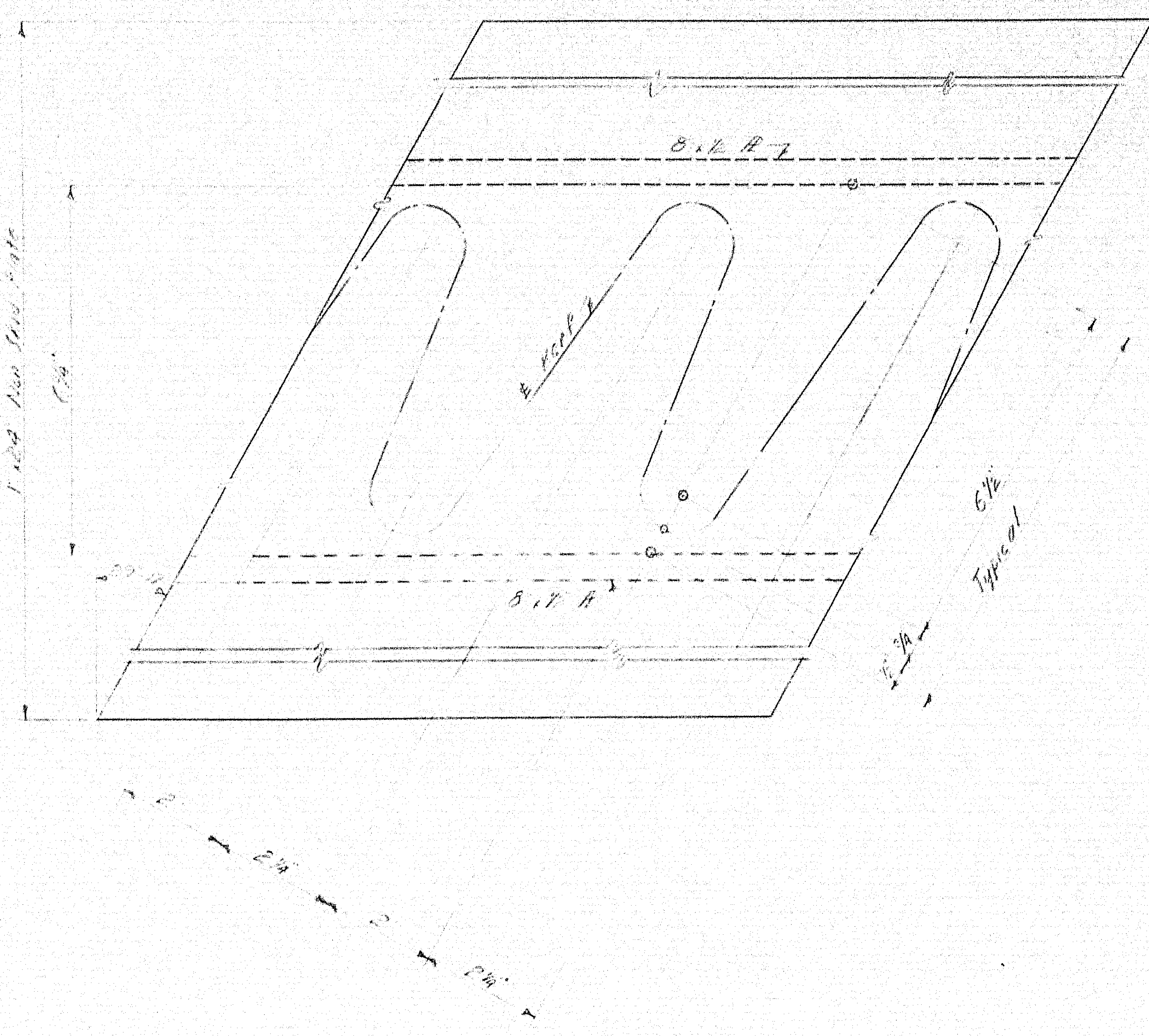
EXPANSION DAM PLAN ABUTMENT "1
Rotate 180° for abutment "2



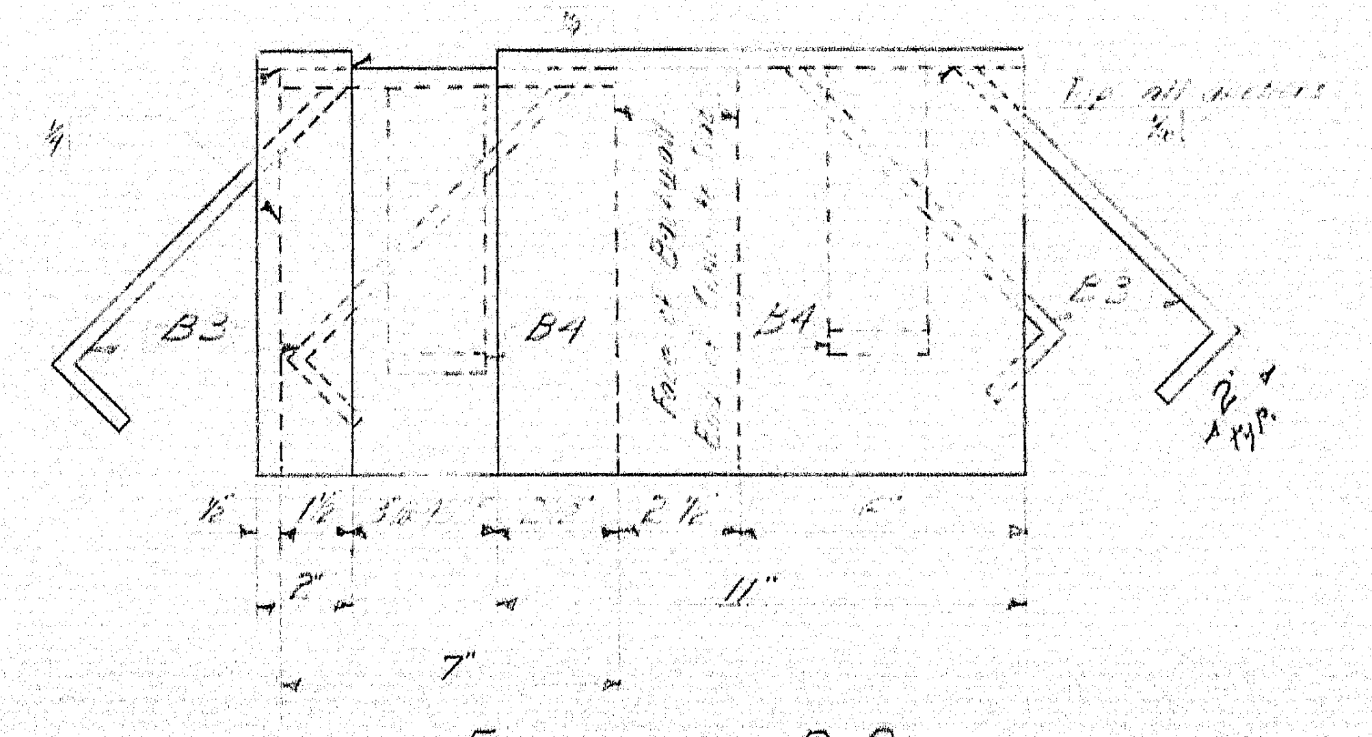
SECTION A-A

BARS:
B1 ~ 2½" x ⅜ x 1'-2"
B2 ~ 2½ x ⅜ x 1'-8"
B3 ~ 2" x ⅜ x 0'-10"
B4 ~ 2" x ⅜ see section C-C

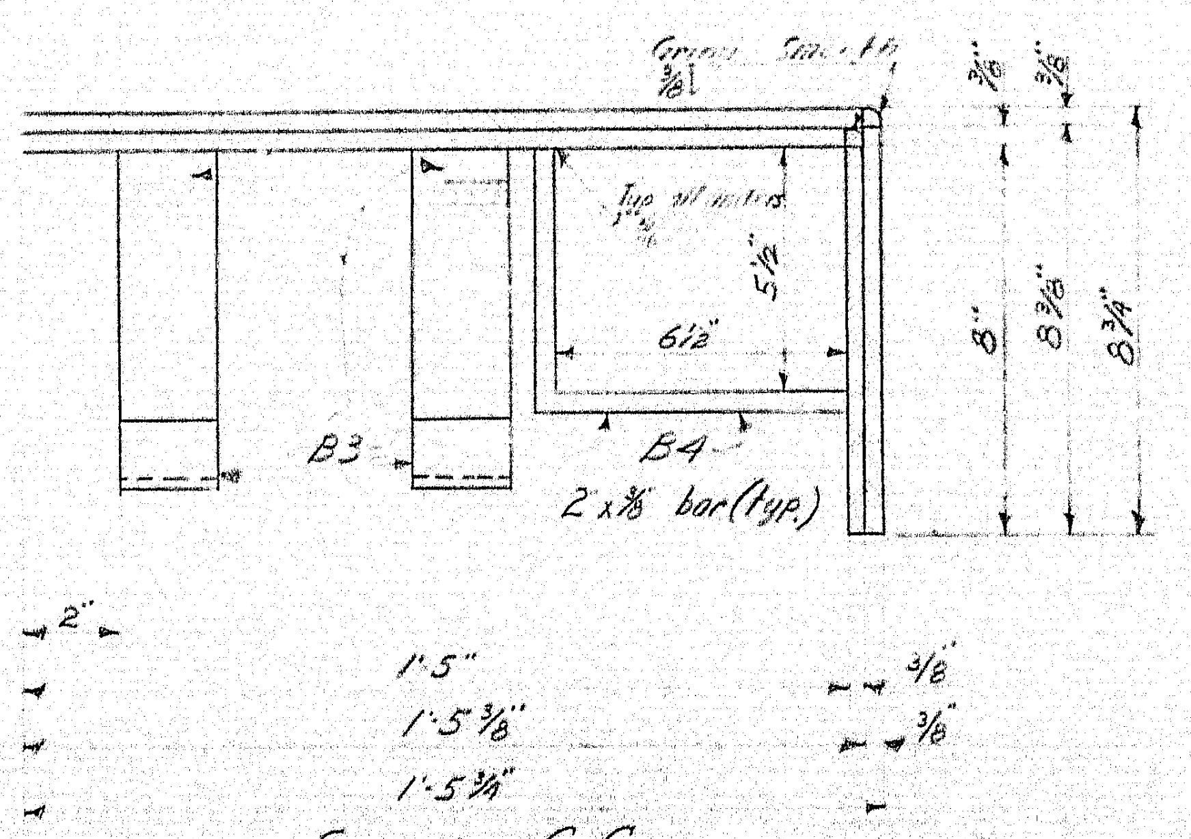
16 Adjustment Devices required two on each 16WF @ Abutments.



TOOTH DETAIL



ELEVATION B-B



SECTION C-C

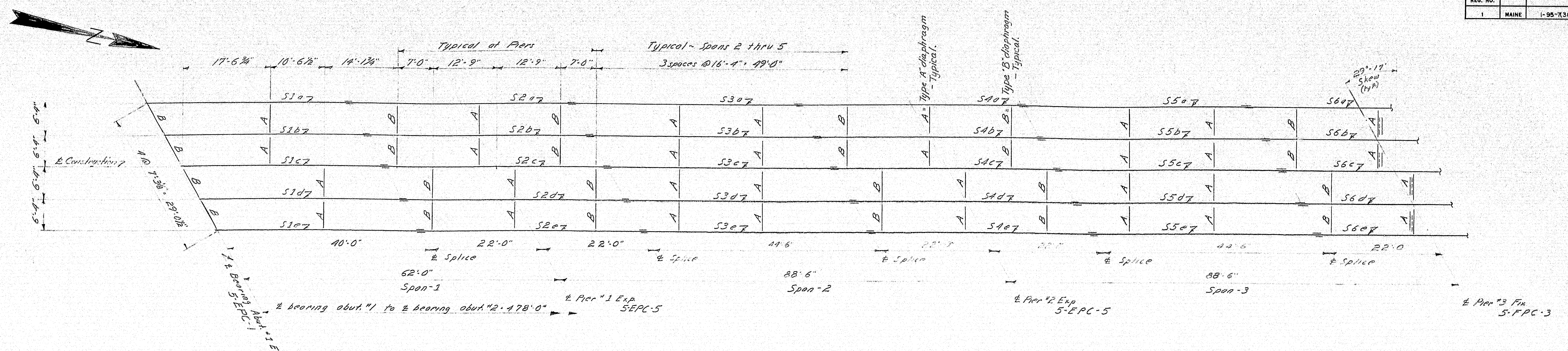
DESIGN- R.A.S. DETAIL- R.T.A.
TRACE-
CHECK- W.H.Y.

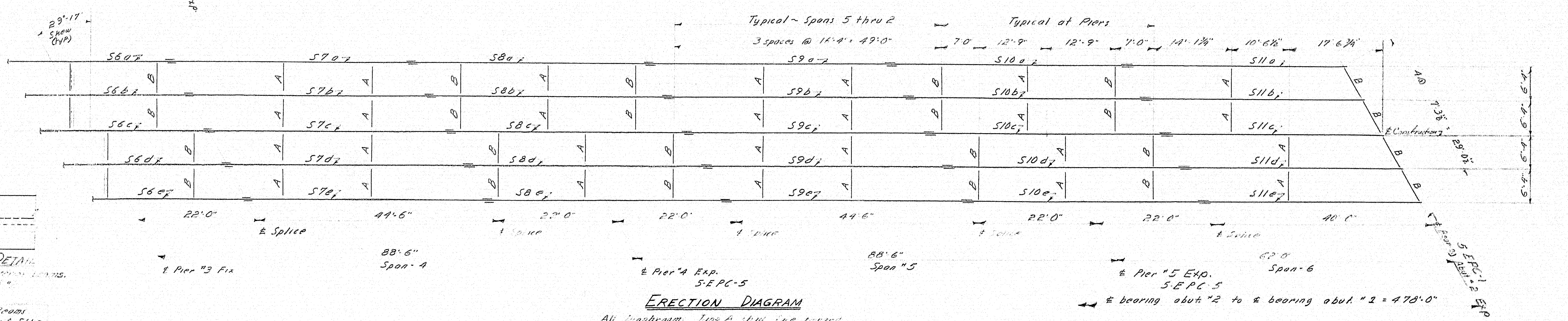
BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

BELLSQUEEZE ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
BENTON
KENNEBEC COUNTY
STRUCTURAL STEEL DETAILS
SHEET 21 OF 25 AUGUSTA, MAINE **MARCH 1963**

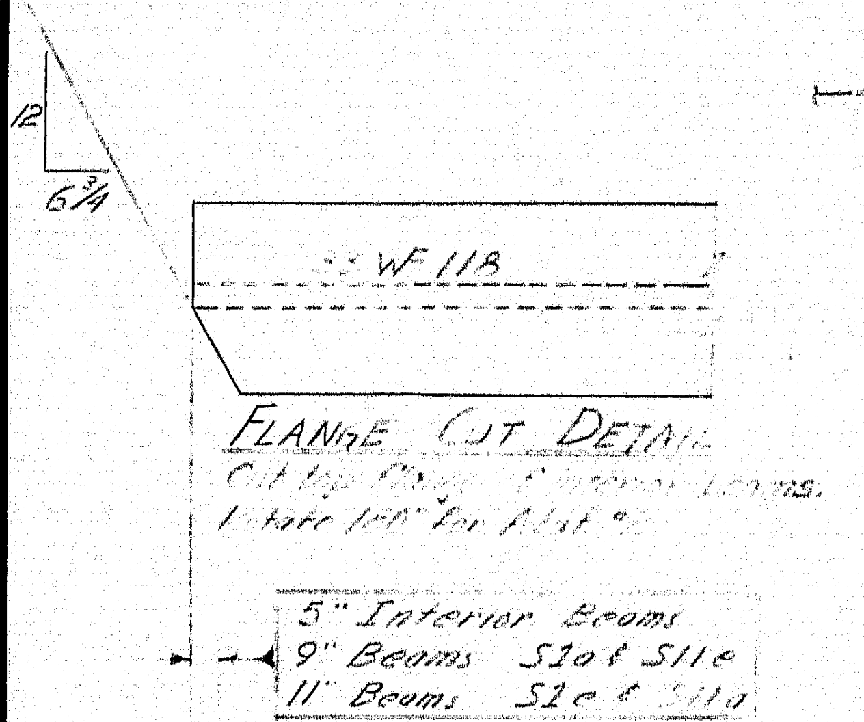
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-7(38)	20	25

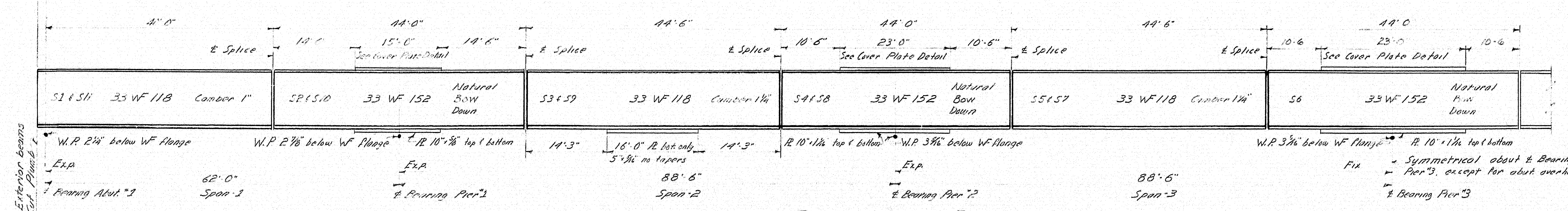


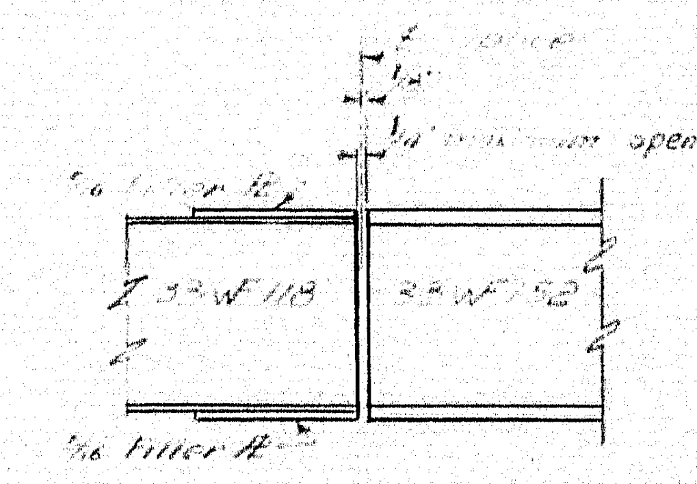


ERECTION DIAGRAM

All diaphragms Type A shall face toward Pier #3 thus; [→ Pier #3, except as indicated at Pier #3.




4'-0"
44'-0"
44'-6"
14'-6"
15'-0"
10'-6"
23'-0"
℄ Splice
See Cover Plate Detail
S1 & S11 33 WF 118 Camber 1"
S2 & S10 33 WF 152 Natural Bow Down
S3 & S9 33 WF 118 Camber 1¾"
S4 & S8 33 WF 152 Natural Bow Down
S5 & S7 33 WF 118 Camber 1¾"
S6 33 WF 152 Natural Bow Down
W.P. 2¼" below WF flange
W.P. 2⁹⁄₁₆" below WF flange
W.P. 3⁹⁄₁₆" below WF flange
W.P. 3⁵⁄₁₆" below WF flange
Pl. 10" × 1⁵⁄₁₆" top & bottom
Pl. 10" × 1¹⁄₁₆" top & bottom
14'-3"
16'-0" Pl. bot. only 5" × ⁵⁄₁₆" no tapers
Exp.
Fix
℄ Bearing Abut. #1
62'-0" Span-1
℄ Bearing Pier #1
88'-6" Span-2
℄ Bearing Pier #2
88'-6" Span-3
℄ Bearing Pier #3
Symmetrical about ℄ Bearing Pier #3, except for abut. overhang
Exterior beams Cut Pinch



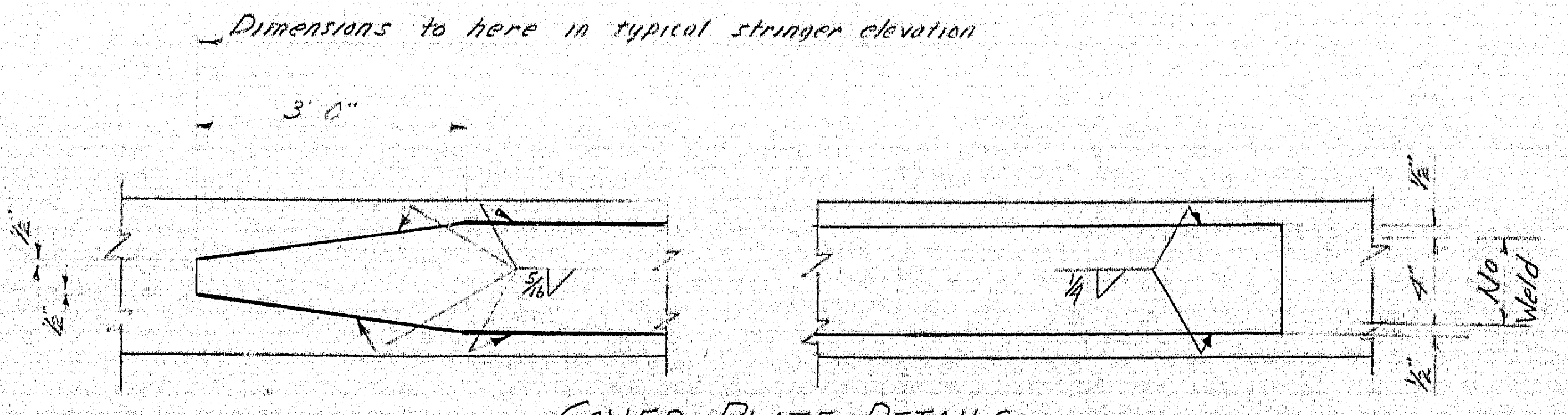
FILLER PLATE DETAIL

TYPICAL STRINGER ELEVATION

Dimensions are horizontal from working points located at centers of pin of Bearings.

REFERENCE

Splice ~ See Standard Details BD 103-62
Diaphragms ~ See Standard Details BD 104-62
Grades of Beams & Shear Connectors ~ See sheet #22.



COVER PLATE DETAILS

GENERAL NOTES

1. See General Plan sheet 14 for Structural Steel Classification.
2. Field connections shall be ⅞"ø High Tensile Strength Bolts.
3. The Engineer shall be supplied with a diagram showing match marks of connecting parts assembled in the shop.
4. Do not paint where steel is in contact with concrete

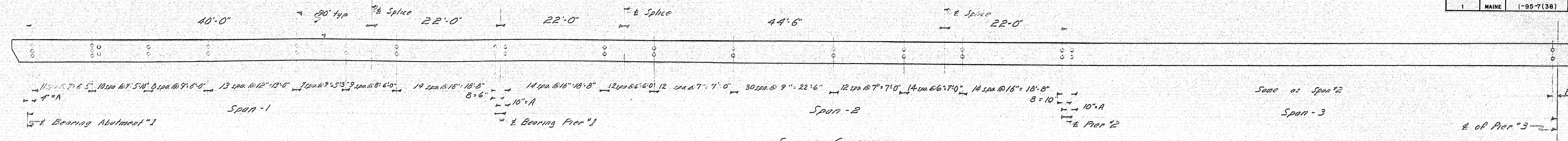
DESIGN– R.A.S.
TRACE–
CHECK– CDH

BRIDGE NO.
SURVEY–
PLOT–

STATE HIGHWAY COMMISSION
BRIDGE DIVISION
BELLSQUEEZE ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
BENTON
KENNEBEC COUNTY
STRUCTURAL STEEL-
ERECTION DIAGRAM
SHEET 20 OF 25 AUGUSTA, MAINE MARCH 1963

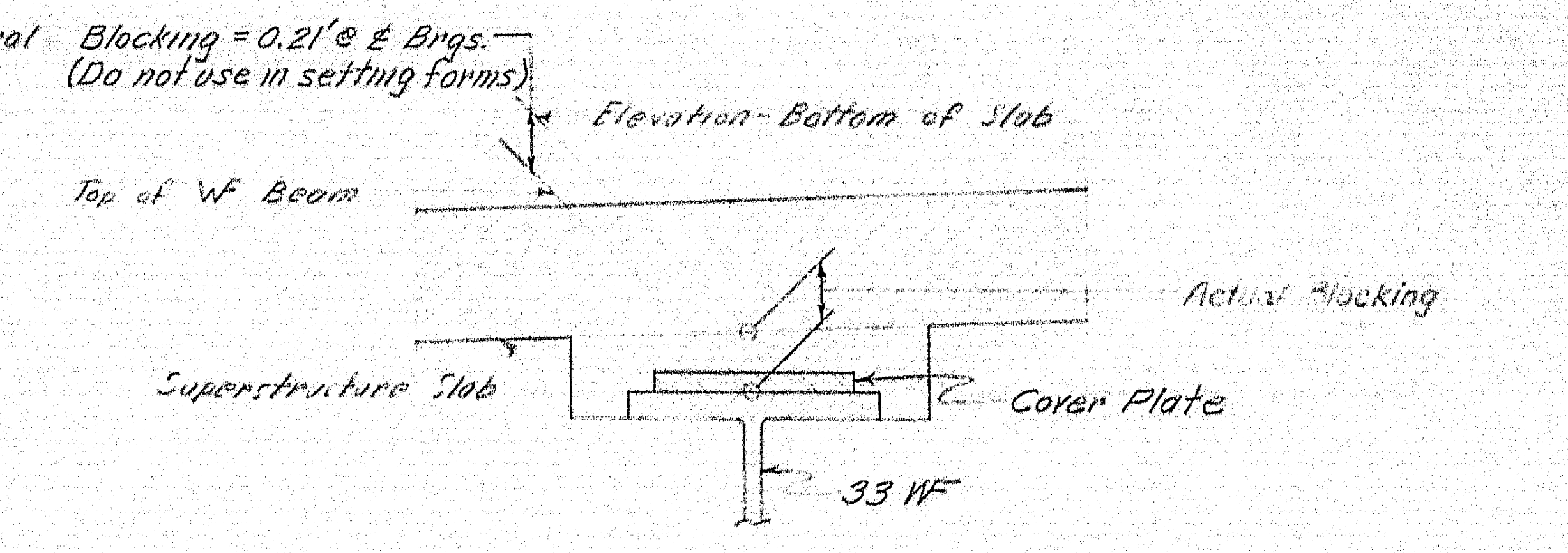
1188/str.

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-7(38)	22	25



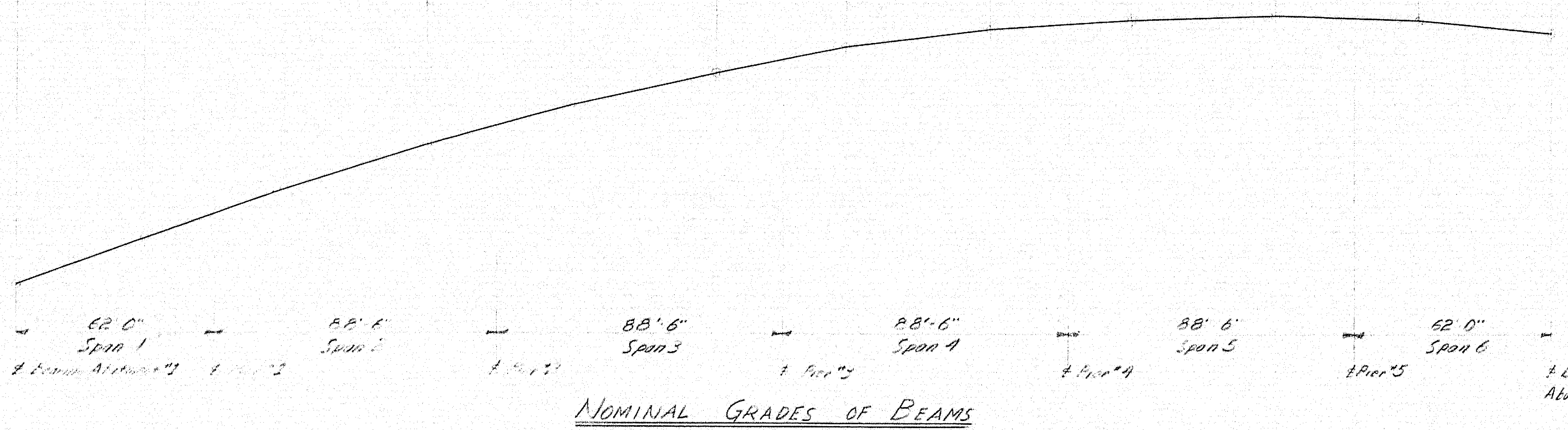
SHEAR CONNECTORS

7/8"⌀ Studs ~ 5,940 Req'd.
See Standard Details BD 104-62 with the following exception:
No option is permitted. Only studs are allowed as specified.


Theoretical Blocking = 0.21' @ ℄ Brgs.
(Do not use in setting forms)
Elevation - Bottom of Slab
Top of WF Beam
Actual Blocking
Superstructure Slab
Cover Plate
33 WF

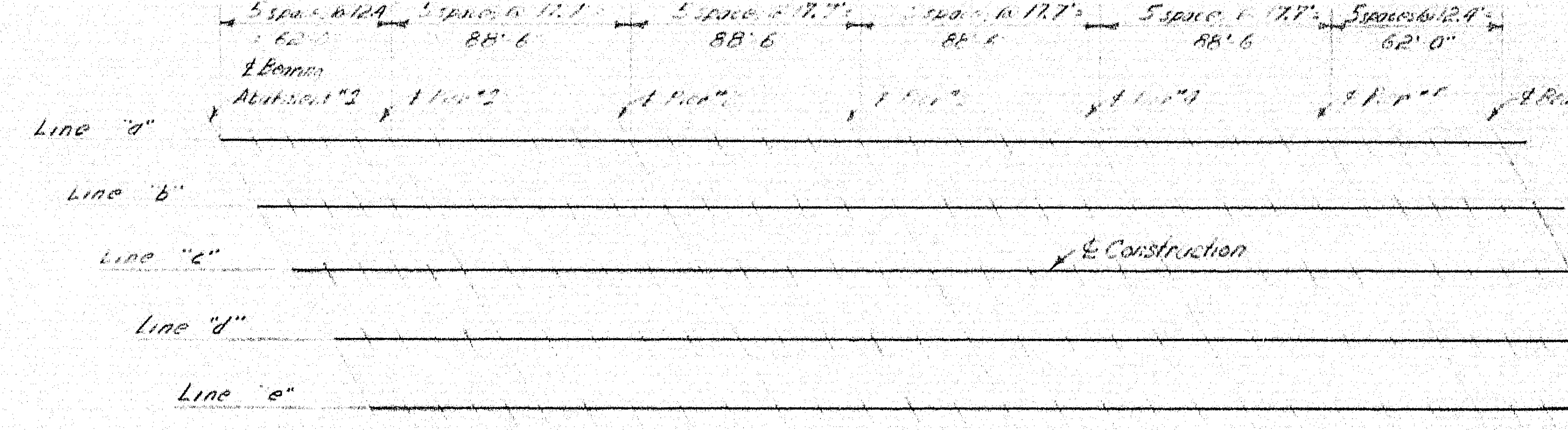
TRANSVERSE SECTION

Stringer	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11
Line "a"	+ 3.435 %	+ 3.500 %	+ 3.326 %	+ 2.739 %	+2.308 %	+1.811 %	+ 1.334 %	+0.852 %	+ 0.373 %	- 0.1045 %	-0.562 %
Line "b"	+ 3.435 %	+ 3.500 %	+ 3.281 %	+ 2.709 %	+2.265 %	+1.773 %	+ 1.294 %	+ 0.8136 %	+0.335 %	- 0.141 %	-0.603 %
Line "c"	+ 3.440 %	+ 3.493 %	+ 3.225 %	+ 2.695 %	+2.213 %	+1.734 %	+ 1.254 %	+0.777 %	+0.2966 %	- 0.1818 %	-0.640 %
Line "d"	+ 3.445 %	+ 3.484 %	+ 3.184 %	+ 2.657 %	+2.173 %	+1.695 %	+ 1.218 %	+0.736 %	+0.2607 %	- 0.223 %	-0.6775 %
Line "e"	+ 3.453 %	+ 3.473 %	+ 3.139 %	+2.618 %	+2.137 %	+1.659 %	+1.177 %	+0.700 %	+0.218 %	- 0.259 %	-0.715 %



NOMINAL GRADES OF BEAMS

Dimensions are horizontal and are to working points shown on Typical Stringer Elevation Sheet 20. Grades are parallel to beam flanges, without deflections and cambers.
(For use in detailing Structural Steel only)


5 spaces @ 12.4' = 62'-0"
5 spaces @ 17.7' = 88'-6"
5 spaces @ 17.7' = 88'-6"
5 spaces @ 17.7' = 88'-6"
5 spaces @ 17.7' = 88'-6"
5 spaces @ 12.4' = 62'-0"
℄ Bearing Abutment #1
℄ Pier #1
℄ Pier #2
℄ Pier #3
℄ Pier #4
℄ Pier #5
℄ Bearing Abutment #2
Line "a"
Line "b"
Line "c"
Line "d"
Line "e"
℄ Construction

BLOCKING DIAGRAM

In order for the superstructure slab to conform to the profile and cross sections shown on these plans, the accompanying table of elevations is given. Elevations for the bottom of the slab are computed to compensate for dead load deflections caused by the weight of the concrete deck, curbs, wearing surface and rail.

Before any slab forms are constructed, elevations are to be taken on the top of the structural steel at the points indicated and subtracted from "Bottom of Slab Elevations" shown below. The result is the depth of blocking to be used in the formwork.

Points	℄ Brg. Abut. #1	+12.4'	+24.8'	+37.2'	+49.6'	℄ Pier 1	+17.7'	+35.4'	+53.1'	+70.8'	℄ Pier #2	+17.7'	+35.4'	+53.1'	+70.8'	℄ Pier #3	+17.7'	+35.4'	+53.1'	+70.8'	℄ Pier #4	+17.7'	+35.4'	+53.1'	+70.8'	℄ Pier #5	+12.4'	+24.8'	+37.2	+49.6'	℄ Brg. Abut. #2
Line "a"	216.93	217.38	217.82	218.24	218.66	219.09	219.75	220.40	220.97	221.47	221.95	222.45	222.93	223.34	223.67	223.98	224.31	224.62	224.85	225.01	225.15	225.32	225.46	225.53	225.52	225.48	225.47	225.44	225.36	225.32	225.21
Line "b"	217.18	217.64	218.08	218.50	218.92	219.35	220.01	220.65	221.21	221.70	222.18	222.67	223.15	223.55	223.88	224.17	224.50	224.81	225.03	225.18	225.32	225.47	225.61	225.67	225.66	225.61	225.59	225.56	225.51	225.43	225.31
Line "c"	217.44	217.89	218.33	218.76	219.17	219.61	220.26	220.90	221.46	221.94	222.40	222.90	223.36	223.76	224.08	224.36	224.69	224.99	225.20	225.35	225.48	225.62	225.76	225.81	225.79	225.74	225.71	225.68	225.63	225.54	225.42
Line "d"	217.43	217.88	218.33	218.75	219.17	219.60	220.25	220.88	221.43	221.91	222.37	222.85	223.31	223.70	224.01	224.29	224.61	224.90	225.11	225.25	225.37	225.51	225.64	225.68	225.66	225.60	225.57	225.53	225.47	225.38	225.25
Line "e"	217.42	217.88	218.32	218.74	219.16	219.59	220.24	220.86	221.41	221.88	222.33	222.80	223.26	223.64	223.95	224.22	224.53	224.82	225.02	225.15	225.26	225.40	225.52	225.56	225.52	225.46	225.42	225.38	225.32	225.22	225.09
Deflection	0.0'	0.021'	0.030	0.018'	0.002'	0.0'	0.036'	0.075'	0.072'	0.028'	0.0'	0.026'	0.069'	0.075'	0.036'	0.0'	0.036'	0.075'	0.069'	0.026'	0.0'	0.028'	0.072'	0.075'	0.036'	0.0'	0.002'	0.018'	0.030'	0.021'	0.0'

BOTTOM OF SLAB ELEVATIONS

Note: Field Change in Red

DESIGN— R.A.S.
TRACE—
CHECK— CDH

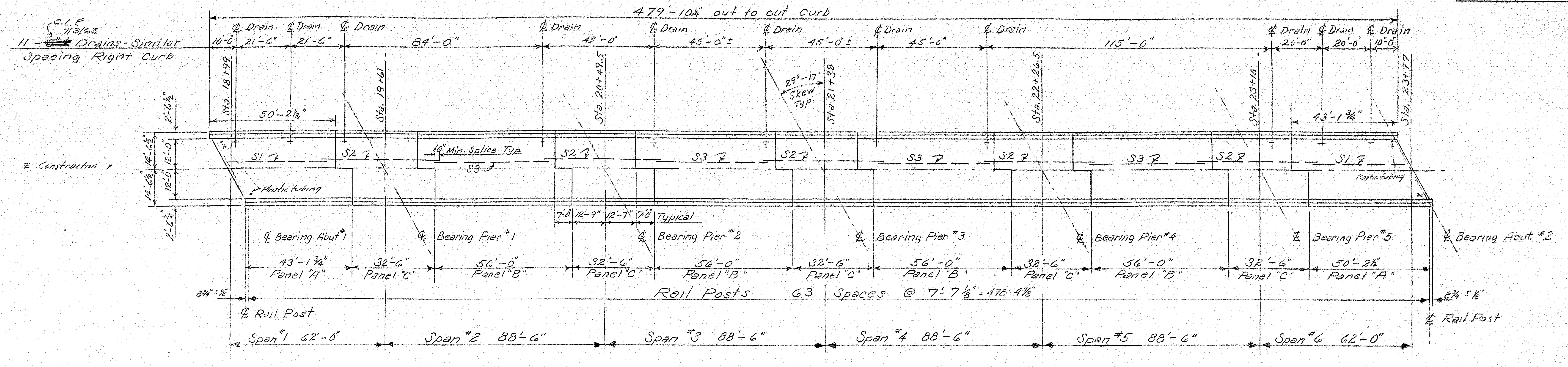
BRIDGE NO.
SURVEY—
PLOT—

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

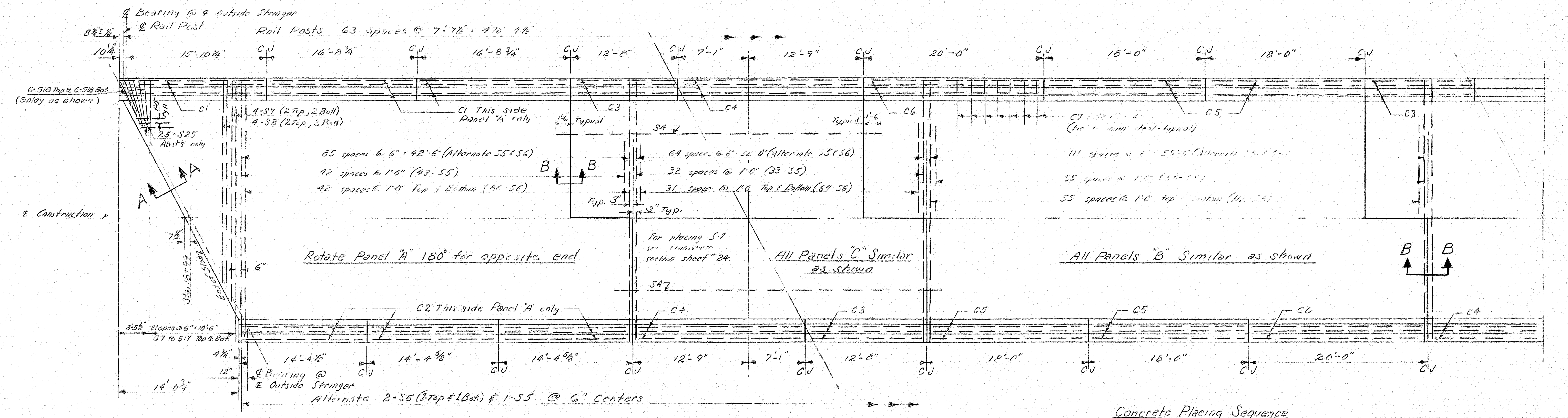
BELLSQUEEZE ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
BENTON
KENNEBEC COUNTY
SHEAR CONNECTOR, BEAM GRADES & BLOCKING
SHEET 22 OF 25 AUGUSTA, MAINE MARCH 1963

88 - 22

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-7(38)	23	25



PLAN


℄ Bearing @ ℄ Outside Stringer
℄ Rail Post
Rail Posts 63 Spaces @ 7'-7⅛" = 478'-4⅞"
8¾" ± ⅛"
10¼"
15'-10¼"
16'-8¾"
16'-8¾"
12'-8"
7'-1"
12'-9"
20'-0"
18'-0"
18'-0"
C J
6-S18 Top & 6-S18 Bot. (Splay as shown)
C1
4-S7 (2 Top, 2 Bott)
4-S8 (2 Top, 2 Bott)
C1 This side Panel "A" only
25-S25 Abut's only
C3
C4
C5
C6
C7
(tie to main steel-typical)
1'-6" Typical
S4
85 spaces @ 6" = 42'-6" (Alternate S5 & S6)
42 spaces @ 1'-0" (43-S5)
42 spaces @ 1'-0" Top & Bottom (86-S6)
64 spaces @ 6" = 32'-0" (Alternate S5 & S6)
32 spaces @ 1'-0" (33-S5)
31 spaces @ 1'-0" Top & Bottom (64-S6)
55 spaces @ 1'-0" top & bottom
Typ. 3"
3" Typ.
A
B
℄ Construction
7½"
6"
Sta. 18+99
For placing S4 see transverse section sheet #24.
Rotate Panel "A" 180° for opposite end
All Panels "C" Similar as shown
All Panels "B" Similar as shown
C2 This side Panel "A" only
3'-5½"
21 spaces @ 6" = 10'-6"
S7 to S17 Top & Bot.
4¼"
12"
14'-0¾"
14'-4⅝"
14'-4⅝"
14'-4⅝"
12'-9"
7'-1"
12'-8"
18'-0"
18'-0"
20'-0"
℄ Bearing @ ℄ Outside Stringer
Alternate 2-S6 (1-Top & 1-Bot.) & 1-S5 @ 6" Centers

PART PLAN

Concrete Placing Sequence
Panels "A" must be placed first
Panels "B" next and then
Panels "C" last.

Note:
Concrete for Curbs is not to be placed until the concrete in the slab has been in place for a minimum period of 7 Days. During the 7 Day period, form work may be placed, but hand equipment only, will be allowed on the slab.

For Sections A-A & B-B See sheet # 24.

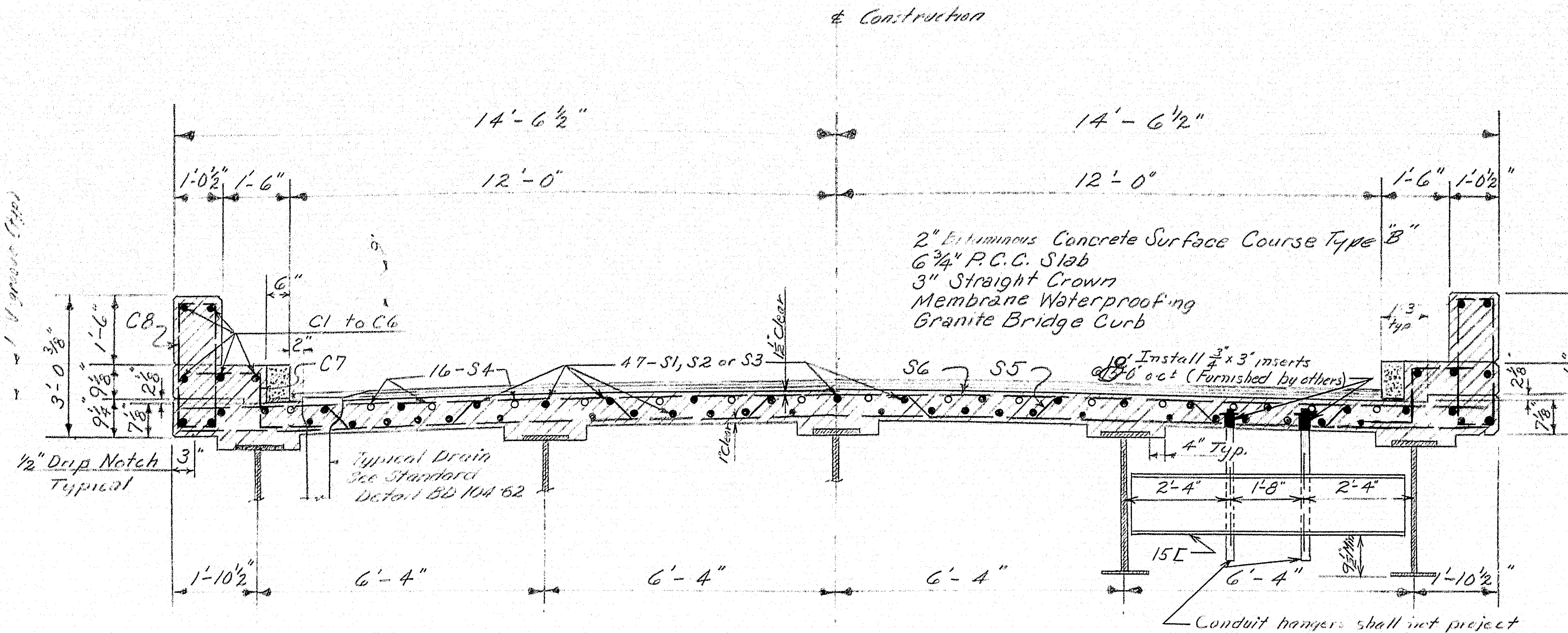
DESIGN—R.A.S. DETAIL—C.W.M.
TRACE—
CHECK— W.H.Y.

BRIDGE NO.
SURVEY—
PLOT—

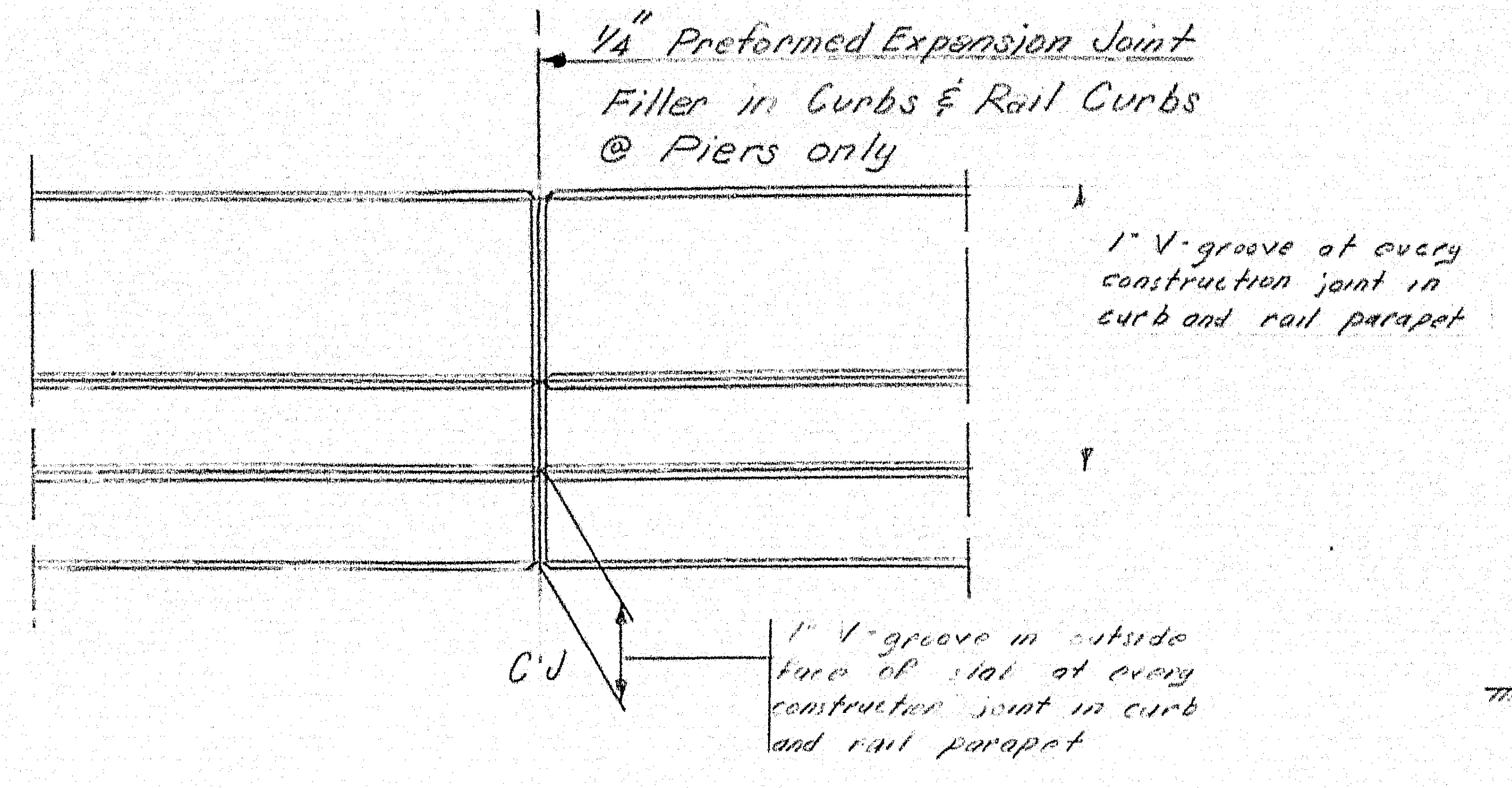
STATE HIGHWAY COMMISSION
BRIDGE DIVISION
BELLSQUEEZE ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
BENTON
KENNEBEC COUNTY
SUPERSTRUCTURE
SHEET 23 OF 25 AUGUSTA, MAINE MARCH 1963

C. B. CO., NO. 44-302

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I - 95-7(38)	24	25

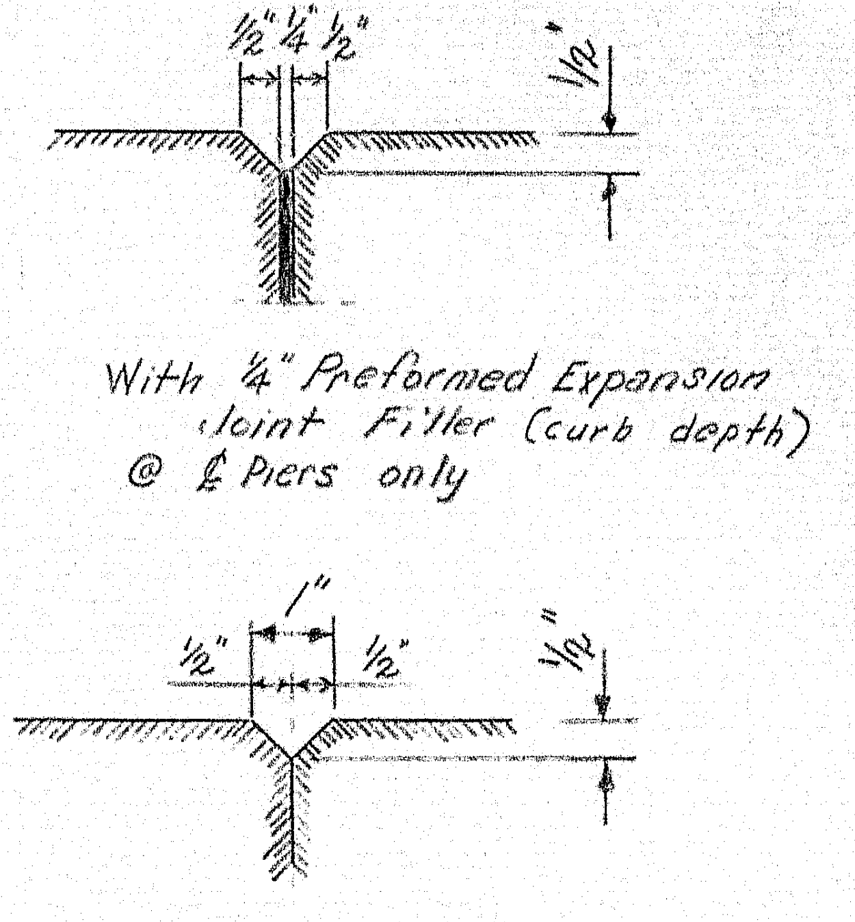


TRANSVERSE SECTION



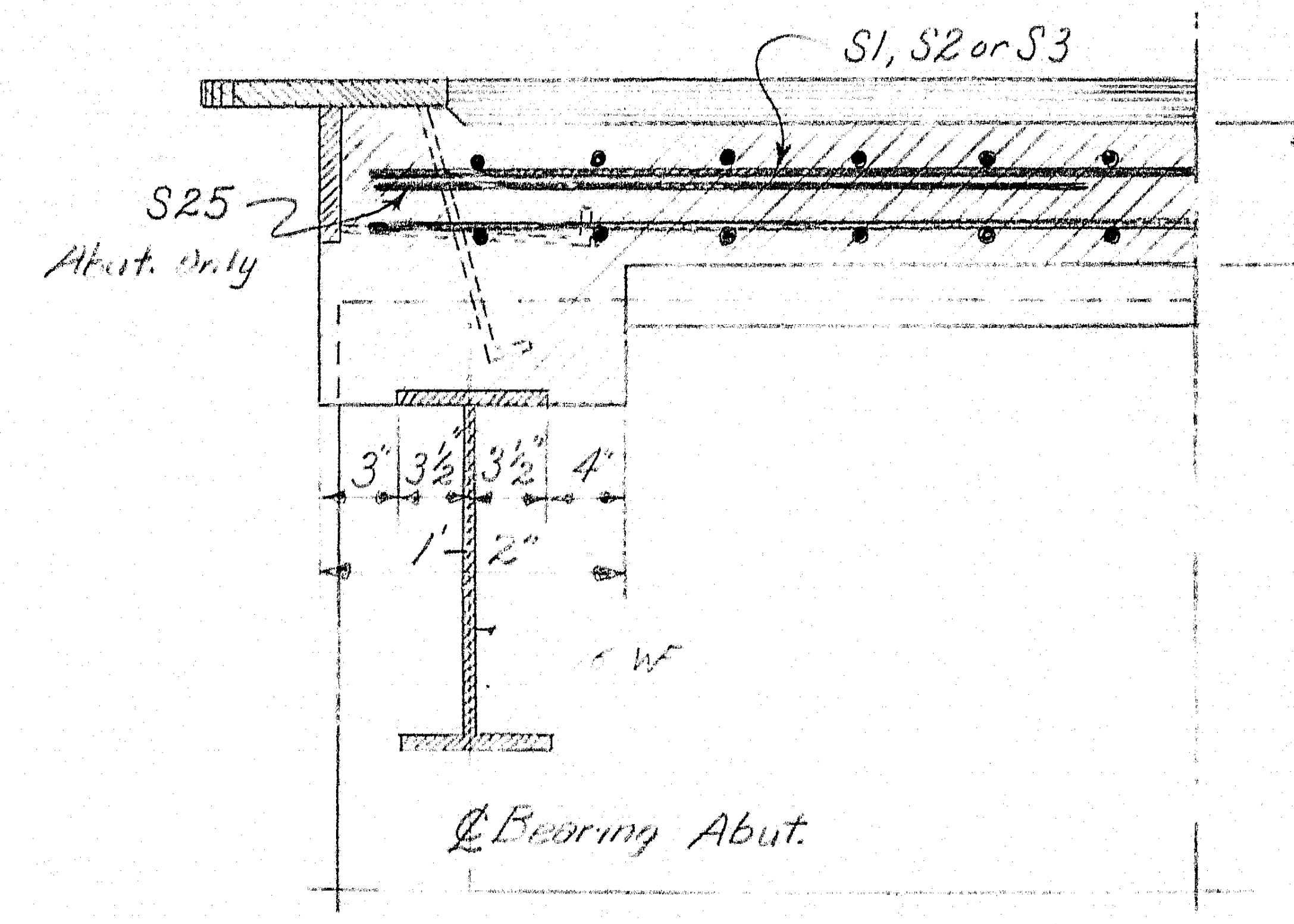
¼" Preformed Expansion Joint
Filler in Curbs & Rail Curbs
@ Piers only
1" V-groove at every construction joint in curb and rail parapet
C.J
1" V-groove in outside face of slab at every construction joint in curb and rail parapet

SIDE ELEVATION

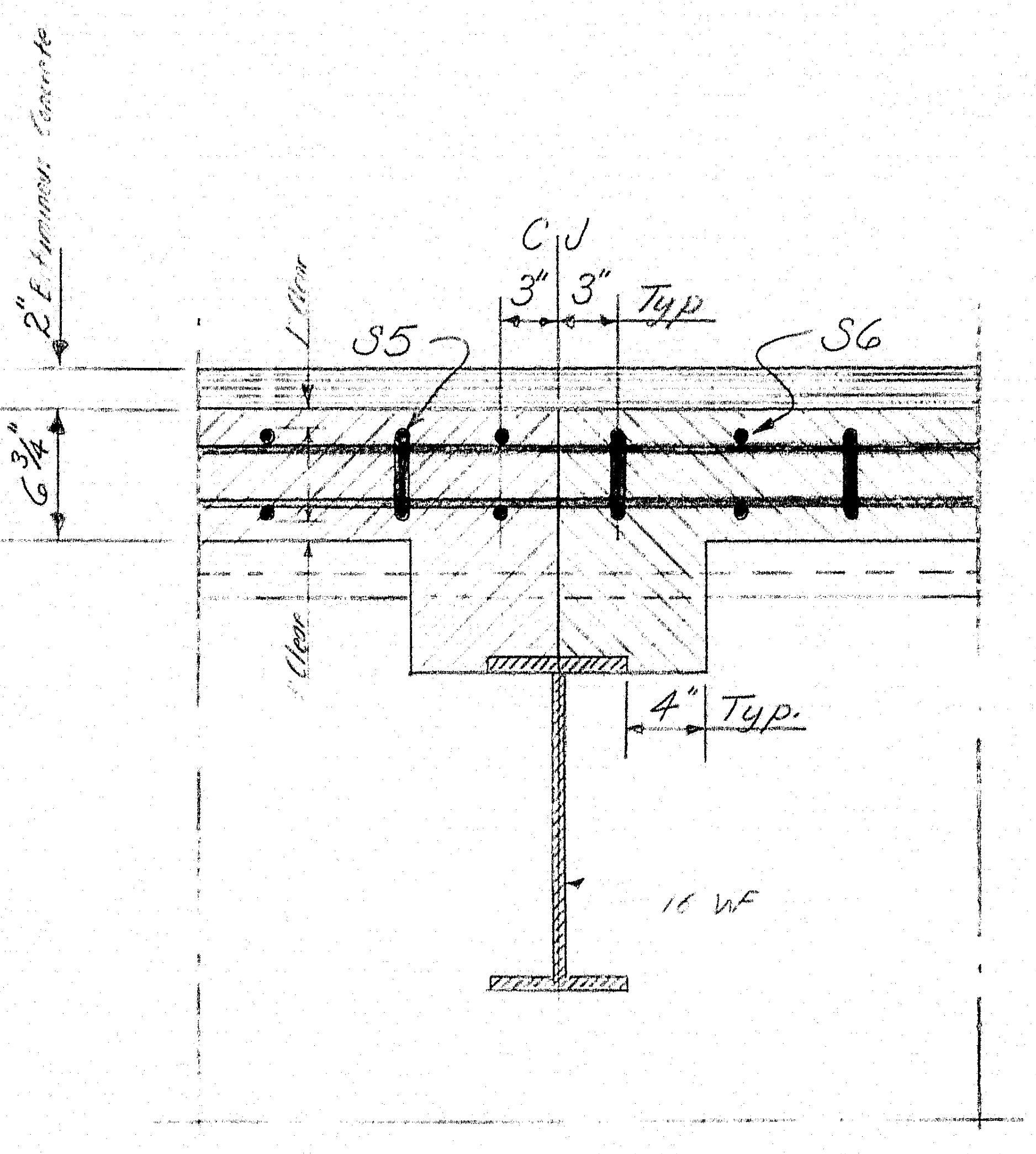


½" ¼" ½"
½"
With ¼" Preformed Expansion Joint Filler (curb depth) @ ℄ Piers only
1"
½"
½"
½"

DETAIL 1" V- GROVE



SECTION "A-A"



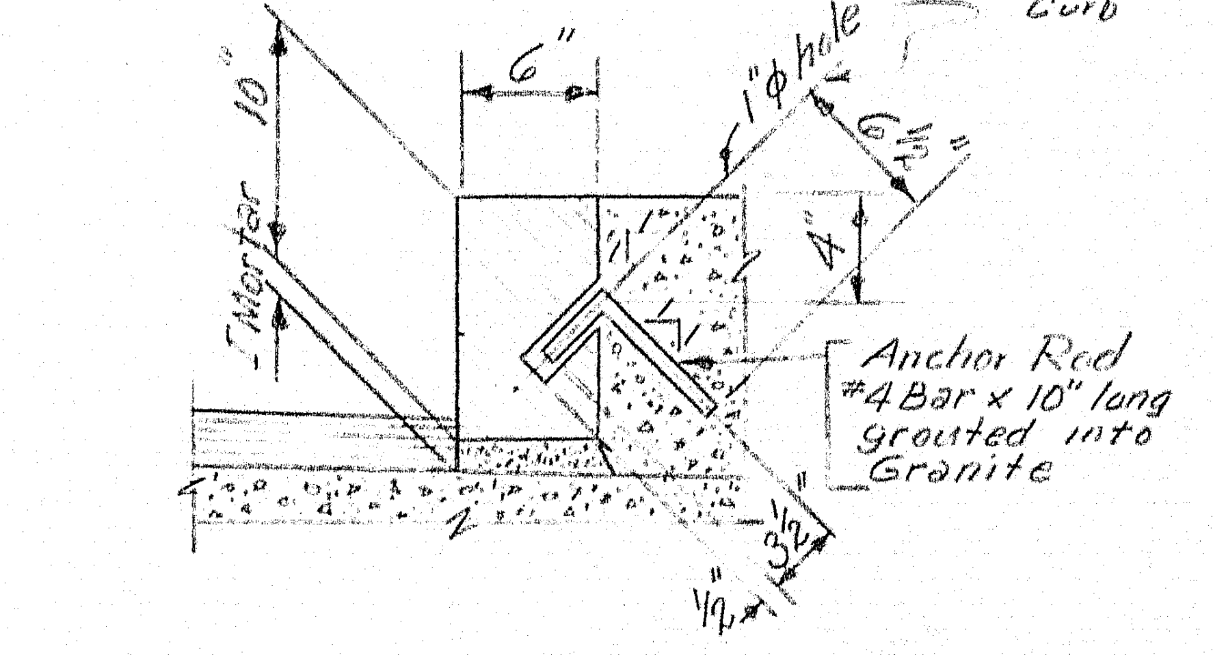
SECTION "B-B"

General Notes:
Chamfer all exposed concrete edges ½
For Rail Detail see sheets 16 & 3D 102-62.
For Expansion Dam Detail see sheet 21.

Construction Joints
Curb Joints:- Break bond with a heavy coat of asphalt paint at all curb joints except at curb joints at bearing lines of Piers, where a ¼" layer of Preformed Bit. Joint Filler is to be used. (Note: Do not Paint Granite Curb, or Slab Joints.)
Granite Bridge Curb Joints:- Granite curb joints are to be mortared and pointed at all joints except those at Pier bearing lines.

At low points in slab place 1"⌀ plastic tubing through slab for drainage. Do not cover with waterproofing. Exact location to be determined by the Engineer. This work to be considered as incidental to contract items.

For location of 1"⌀ x 4" holes, see Suplement Specification Section 901 Granite Bridge Curb



GRANITE BRIDGE CURB DETAIL

Note! Field Change in Red.

DESIGN- R.A.S. DETAIL- C.W.M TRACE- CHECK- W.H.Y.	BRIDGE NO. SURVEY- PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION
BELLSQUEEZE ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
BENTON
KENNEBEC COUNTY
SUPERSTRUCTURE
SHEET 24 OF 25 AUGUSTA, MAINE MARCH 1963

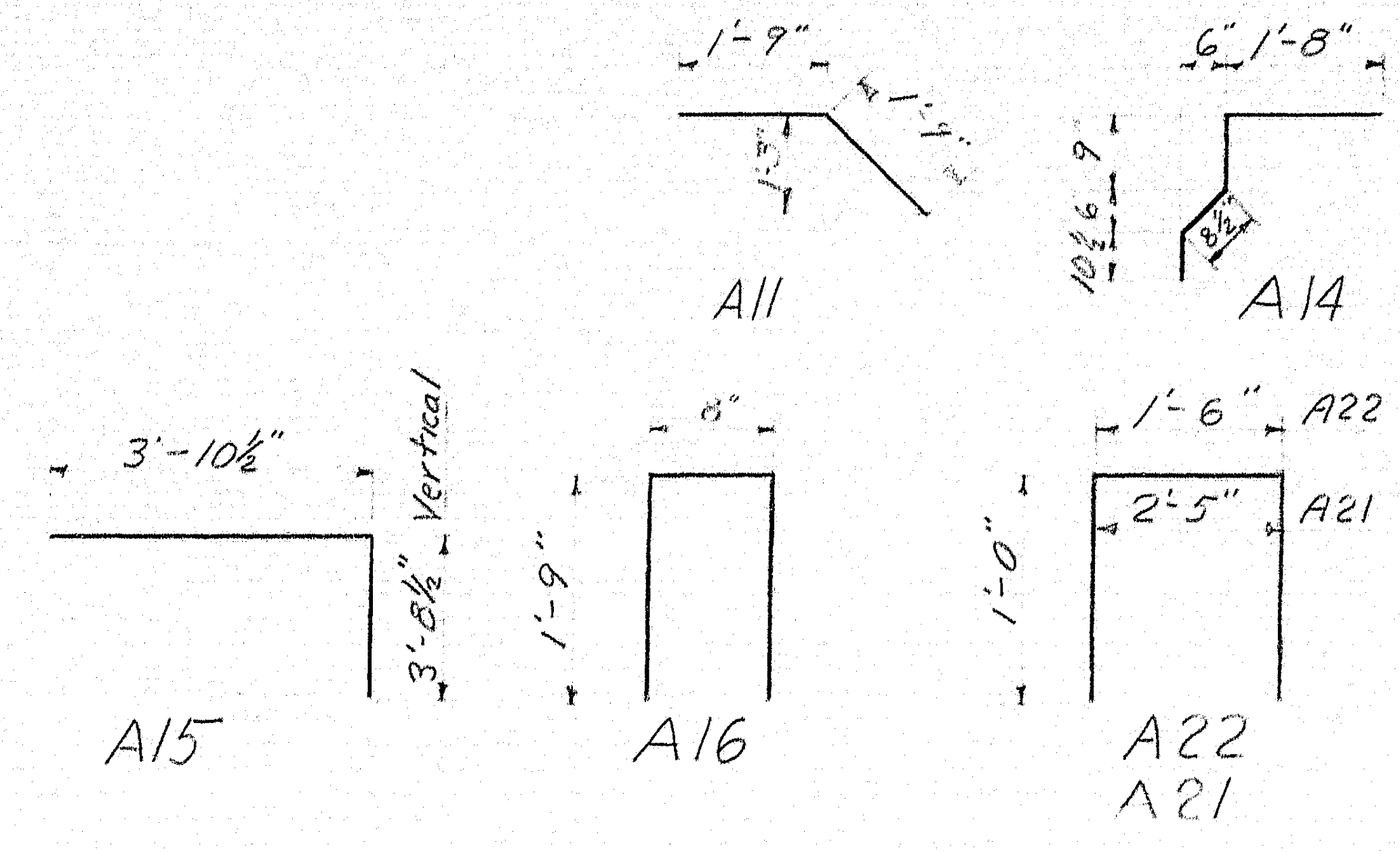
C. D. CO., NO. 44-30E

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-7(38)	25	25

REINFORCING STEEL SCHEDULE

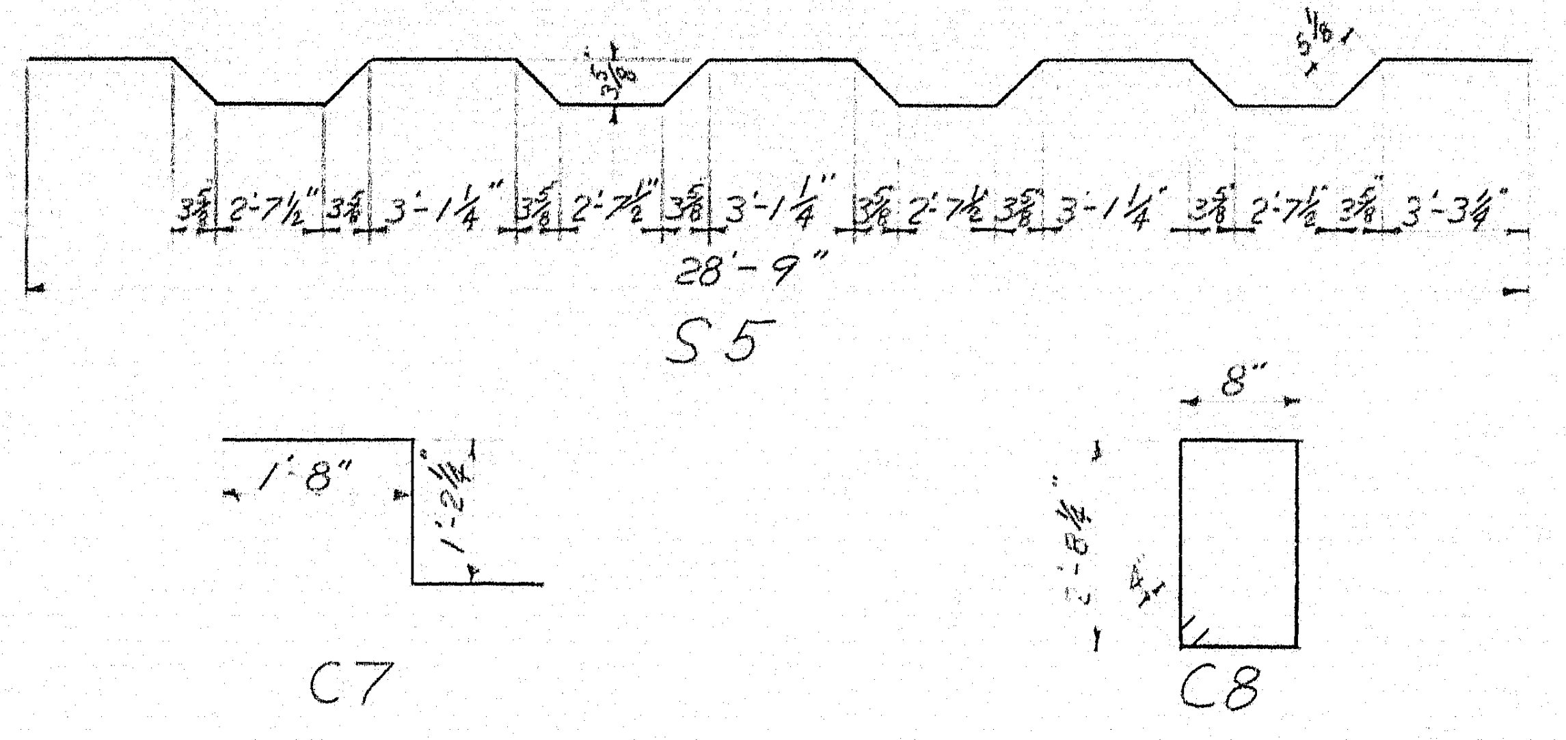
ABUTMENTS

CHECK CDH



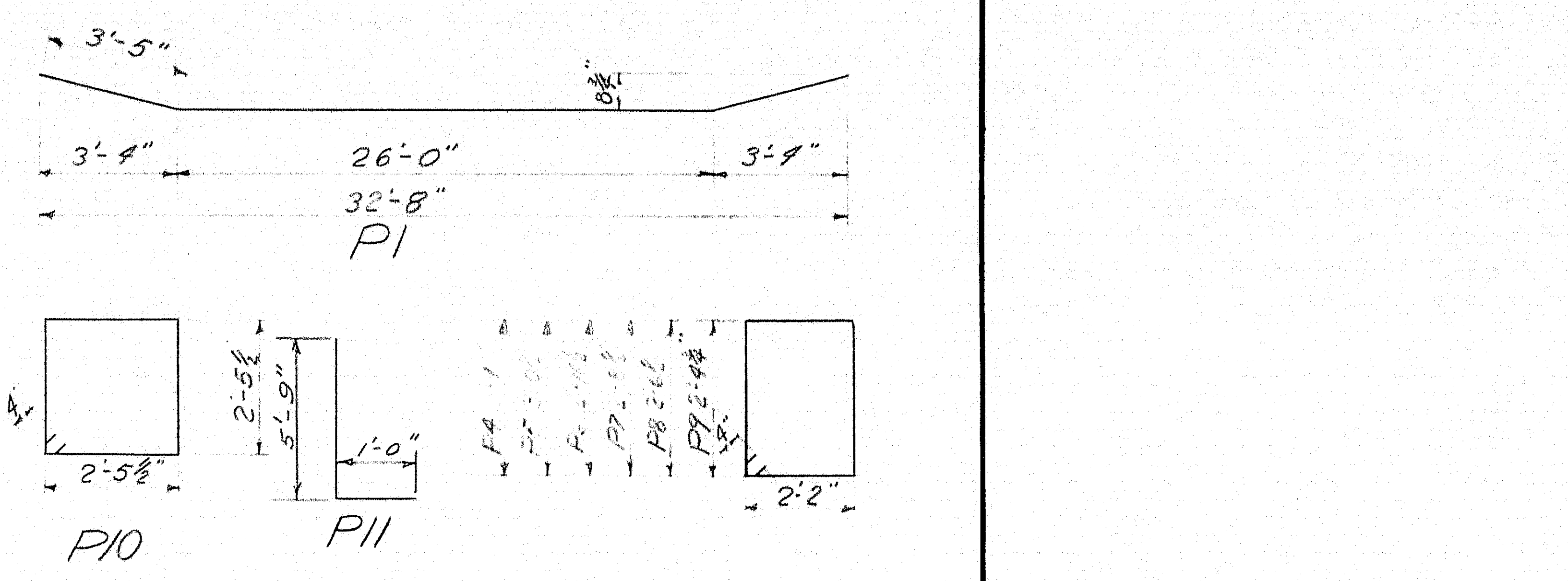
SUPERSTRUCTURE

CHECK CDH



PIERS

CHECK CDH



BENT BARS

Mark	Size	Number	Length	Location
A11	#6	36	3'-6"	Dowels Appr Slab
A14	#5	32	4'-0"	Wings
A15	#5	42	7'-[illegible]"	Breastwall
A16	#4	8	4'-2"	End Post
A22	#4	20	3'-6"	Bearing Pads
A21	#4	20	4'-5"	" "

STRAIGHT BARS

Mark	Size	Number	Length	Location
A1	#6	12	10'-[illegible]	Breastwall Footings
A2	#6	12	11'-9	Wing Footings
A3	#5	㉟ 54	[illegible]	Footings
A6	#5	(79) 60	6'-3"	Footings - Abut & Wings
A7	#5	20	3'-11"	West Wing Abut #1
A8	#5	19	4'-5"	East Wing " #1
A9	#5	34	4'-3"	Both Wings " #2
A10	#5	42	2'-0"	Dowels Footings
A12	#5	36	2'-6"	" Breastwall
A13	#5	74	4'-4"	Backwall
A17	#4	8	1'-8"	End Post
A18	#5	28	32'-8"	Breastwall & Backwall
A19	#5	40	4'-8"	Wings
A20	#6	12	11'-9"	"
A23	#4	12	8'-6"	Wings
A51	#5	192	14'-6"	Approach Slabs Abut #1 & #2
A52	#4	36	26'-10"	" " " #1 & #2
A53	#6	12	10'-9"	Wings
A54	#5	6	3'-9"	"

Note:
See Superstr Schedule for bars C8.

BENT BARS

Mark	Size	Number	Length	Location
S5	#5	475	29'-9"	Slab
C7	#4	682	4'-1"	Curb
C8	#4	722	7'-5"	Rail Curb (Superstr. & Abutments)

STRAIGHT BARS

Mark	Size	Number	Length	Location
S1	#5	94	40'-0"	Slab Panels A
S2	#5	235	46'-9"	Slab Panels C
S3	#5	188	45'-1"	" " B
S4	#5	80	35'-6	" " C
S6	#5	940	28'-9"	Slab
S7		8	24'-11"	"
S8		8	23'-2"	"
S9		8	21'-4"	"
S10		8	19'-7"	"
S11		8	17'-10"	"
S12		8	16'-[illegible]"	"
S13		8	14'-3"	"
S14		8	12'-[illegible]"	"
S15		8	10'-[illegible]"	"
S16		8	8'-11"	"
S17		8	7'-1"	"
S18	#5	24	6'-0"	"
S25	#5	50	3'-0"	"
C1	#4	30	16'-6"	Curb
C2		30	14'-2"	"
C3		50	16'-6"	"
C4		50	19'-8"	"
C5		80	17'-10"	"
C6	#4	40	19'-10"	"

BENT BARS

Mark	Size	Number	Length	Location
P1	#9	35	32'-10"	Pier Cap
P4	#5	260	11'-2"	" "
P5		20	11'-1"	" "
P6			[illegible]	" "
P7			[illegible]	" "
P8			[illegible]	" "
P9	#5	20	9'-[illegible]	" "
P10	#4	267	10'-6"	Columns
P11	#9	180	6'-9"	Footing Dowels

STRAIGHT BARS

Mark	Size	Number	Length	Location
P2	#10	35	32'-8"	Pier Cap
P3	#6	20	32'-8"	" "
P12	#6	(144) 36	5'-6"	Footing Mat - Piers (1,2,4,5) 3
P13	#9	36	18'-9"	Column Pier #1
P14			19'-9"	" " #2
P15			18'-0"	" " #3
P16			19'-3"	" " #4
P17	#9	36	21'-0"	" " #5
P18	#6	㊱ 144	4'-6"	Footing Mat - Piers ③ 1,2,4,5

NOTE: All dimensions to ℄ bars.
All reinforcing steel to be Intermediate Grade.

Field Changes in Red.

DESIGN- RAS
TRACE- DETAIL-CKB
CHECK- AS INDICATED

BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

BELLSQUEEZE ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
BENTON
KENNEBEC COUNTY
REINFORCING STEEL
SHEET 25 OF 25 AUGUSTA, MAINE MARCH 1963