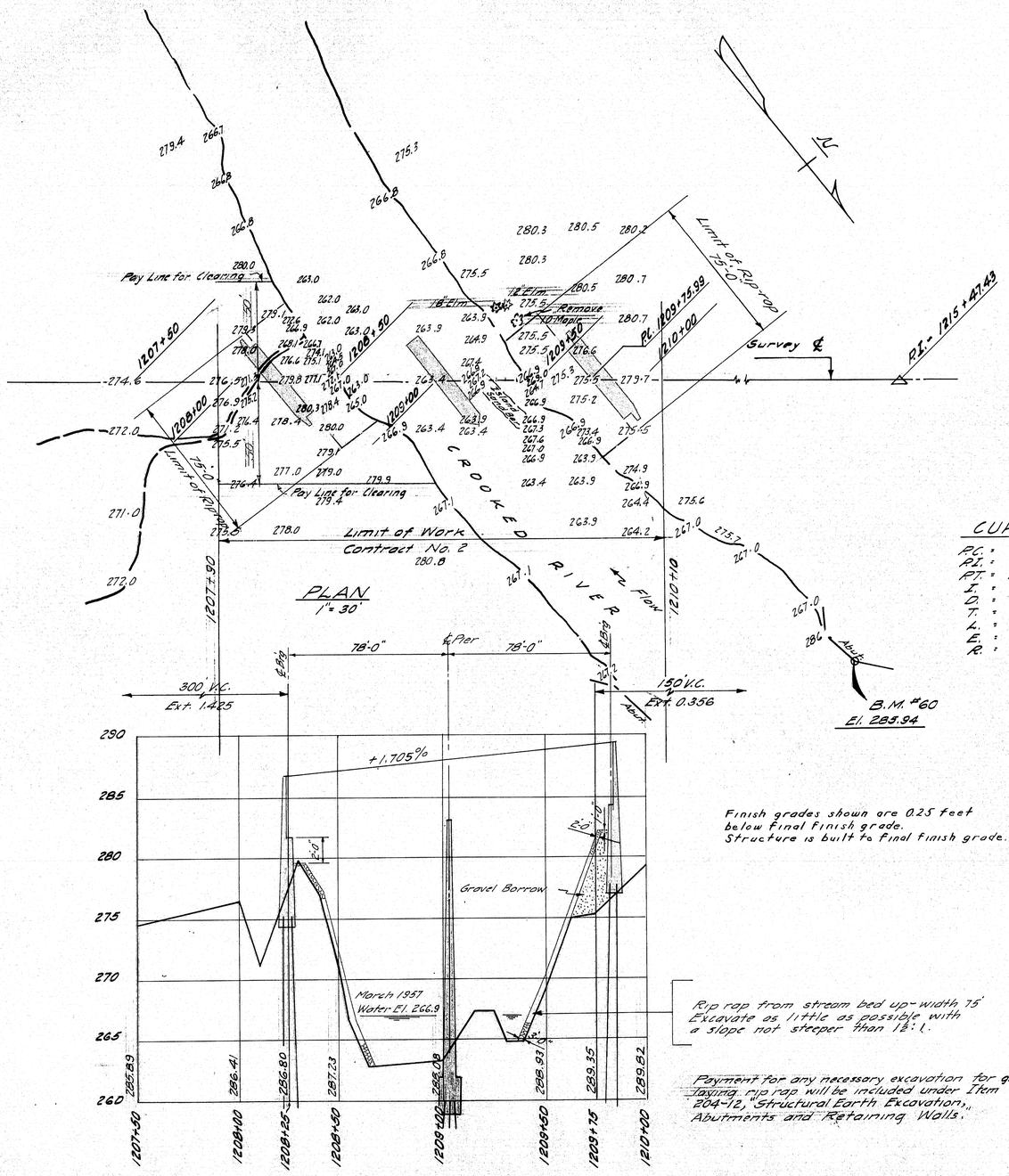
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F-014-1(6)	2	13



CURVE DATA

P.C. =	1209 + 75.99
P.I. =	1215 + 47.43
P.T. =	1220 + 95.99
I. =	28°-00'
D. =	2°-30'
T. =	571.44'
L. =	1120.0'
E. =	70.16'
R. =	2291.83'

NOTES:

Existing Superstructure is a 2-Span Concrete T-Beam in fair condition.
Existing Substructure is Mass Concrete Abutments & Pier.
Stream: High water is never over road - swift current at high stages - Extreme High Water El. 280.0± - Ordinary High Water El. 276.0±
Underclearance at pier El. 281.4.

BENCH MARK

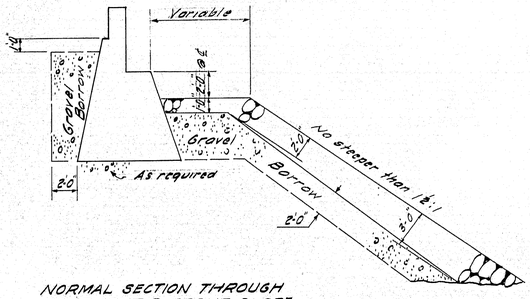
Bench Mark #60 - 145 Right Sta. 1211+28 on Up-stream side, North East corner - an ⊗ in wing wall.

El. 285.94

Finish grades shown are 0.25 feet below Final Finish grade.
Structure is built to Final finish grade.

Rip rap from stream bed up - width 75'
Excavate as little as possible with a slope not steeper than 1½:1.

Payment for any necessary excavation for gravel borrow & laying rip rap will be included under Item 204-12, "Structural Earth Excavation, Abutments and Retaining Walls."



NORMAL SECTION THROUGH ABUTMENT & FRONT SLOPE
(Both Abutments Similar)

Gravel Borrow under abutments to be placed to elevation bottom of abutments before piles are driven.

DESIGN -	BRIDGE NO.
TRACE - W.H.Y.	SURVEY -
CHECK -	PLOT - BLAKE BUNKER

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

CROOKED RIVER BRIDGE

BETWEEN THE TOWNS OF

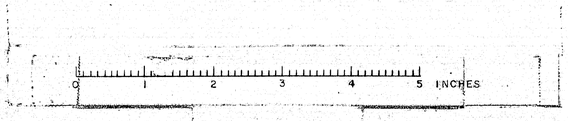
CASCO & NAPLES

CUMBERLAND COUNTY

SURVEY

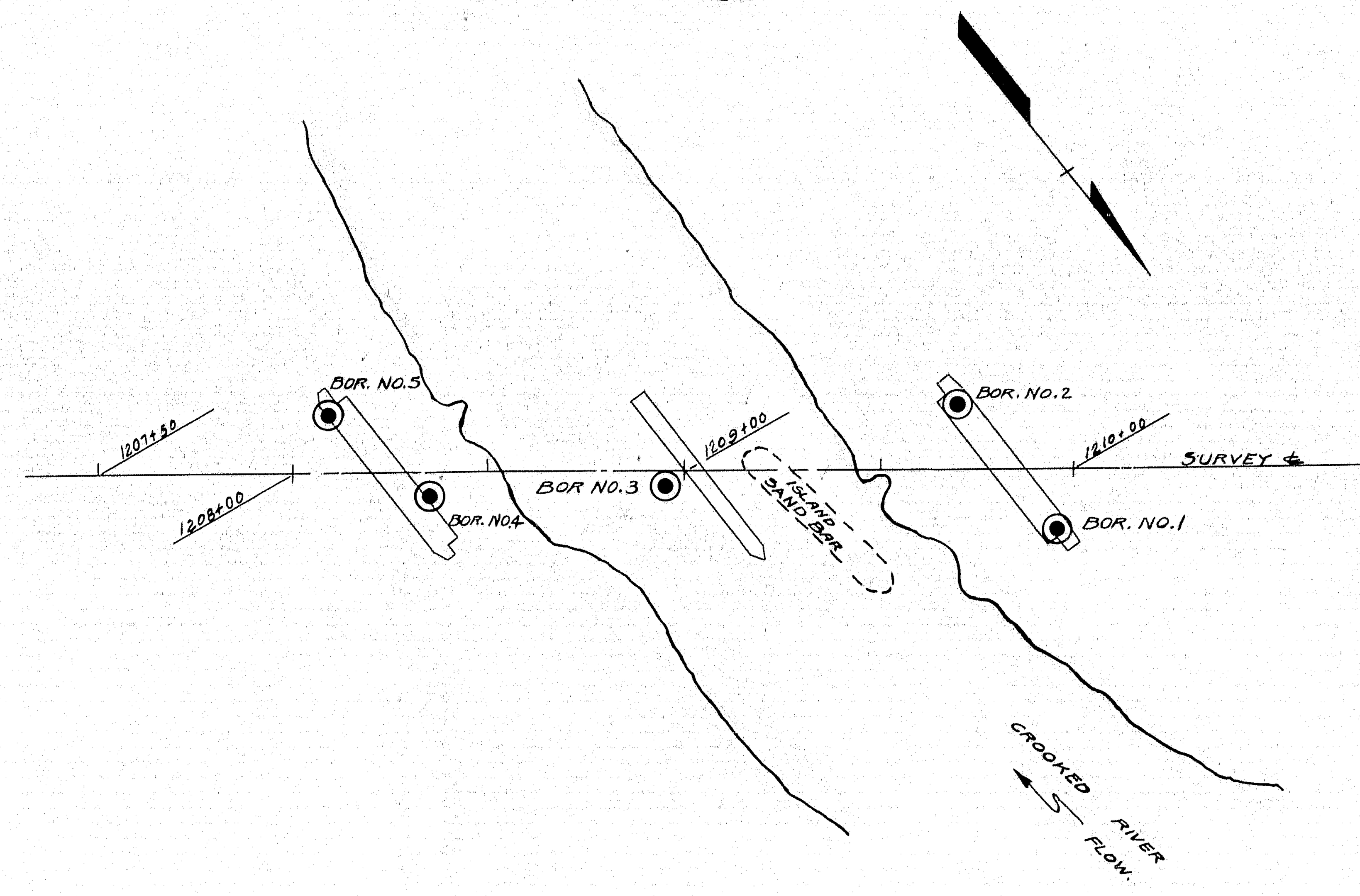
SHEET 2 OF 13 AUGUSTA, MAINE MARCH 1957

68-65

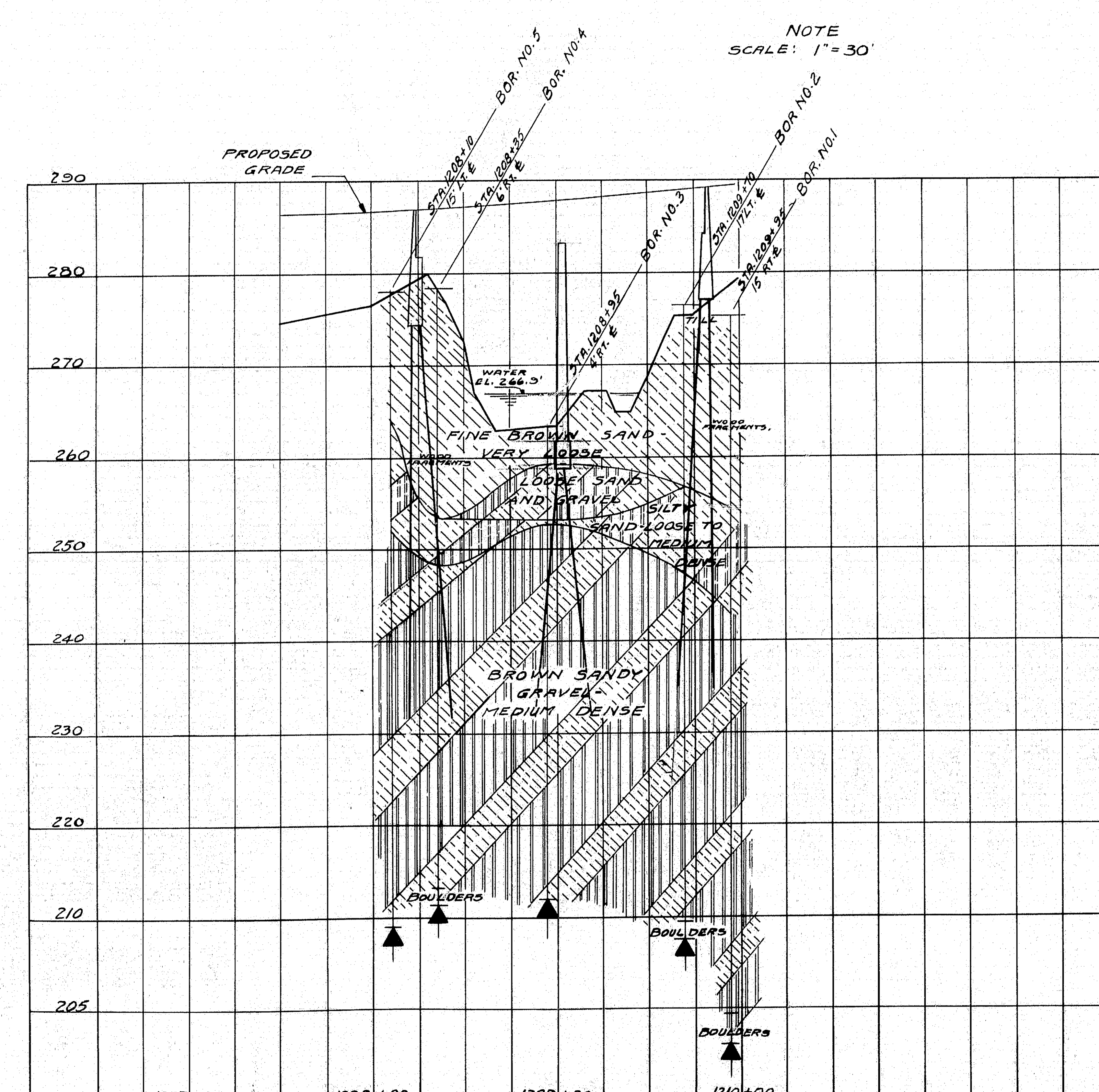


R.R. REG. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	F-014-1(6)	3	13

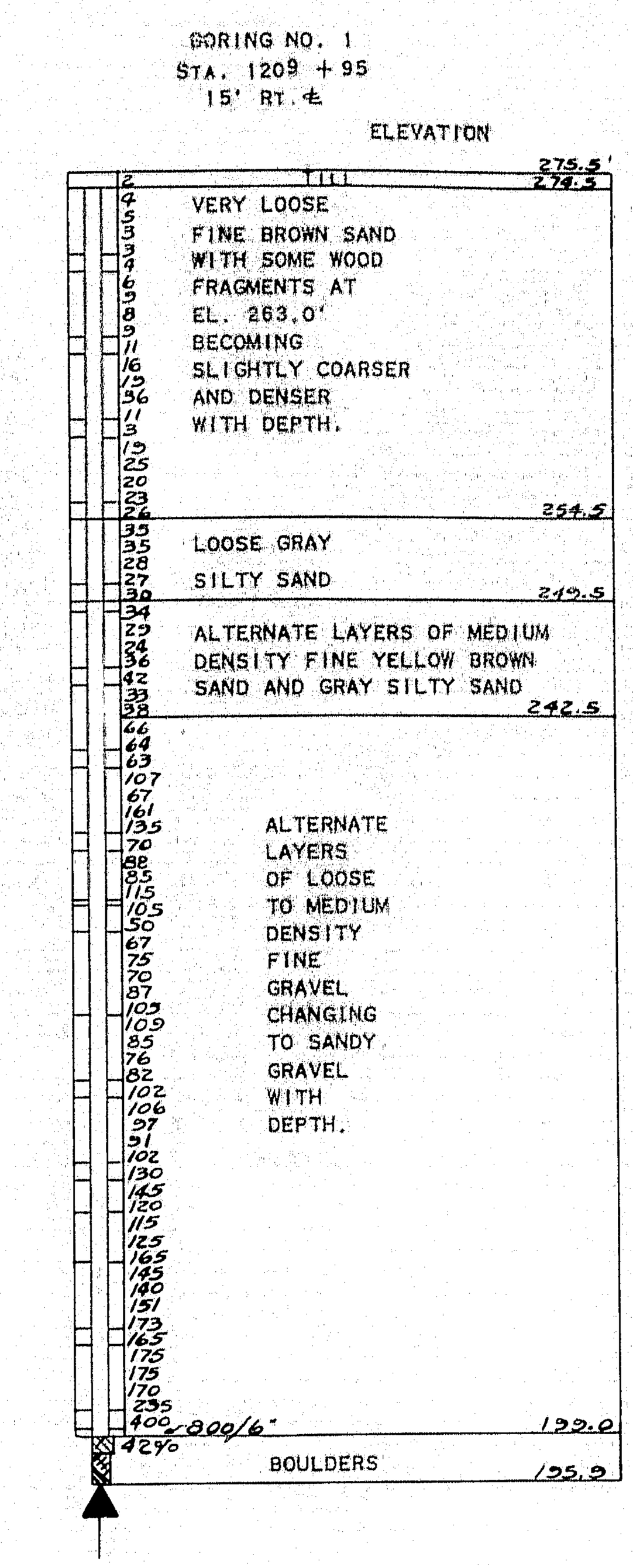
PLAN & PROFILE

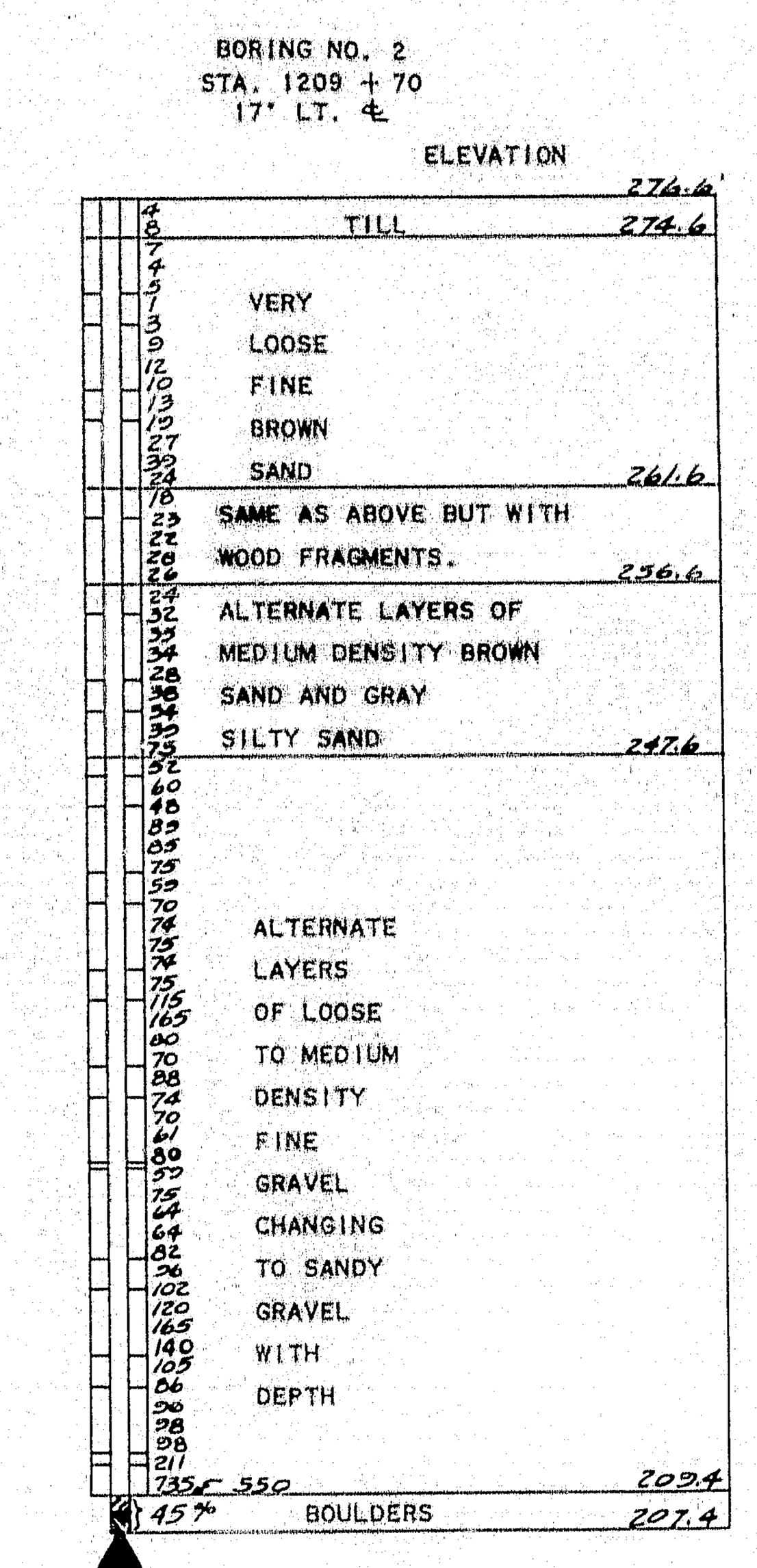


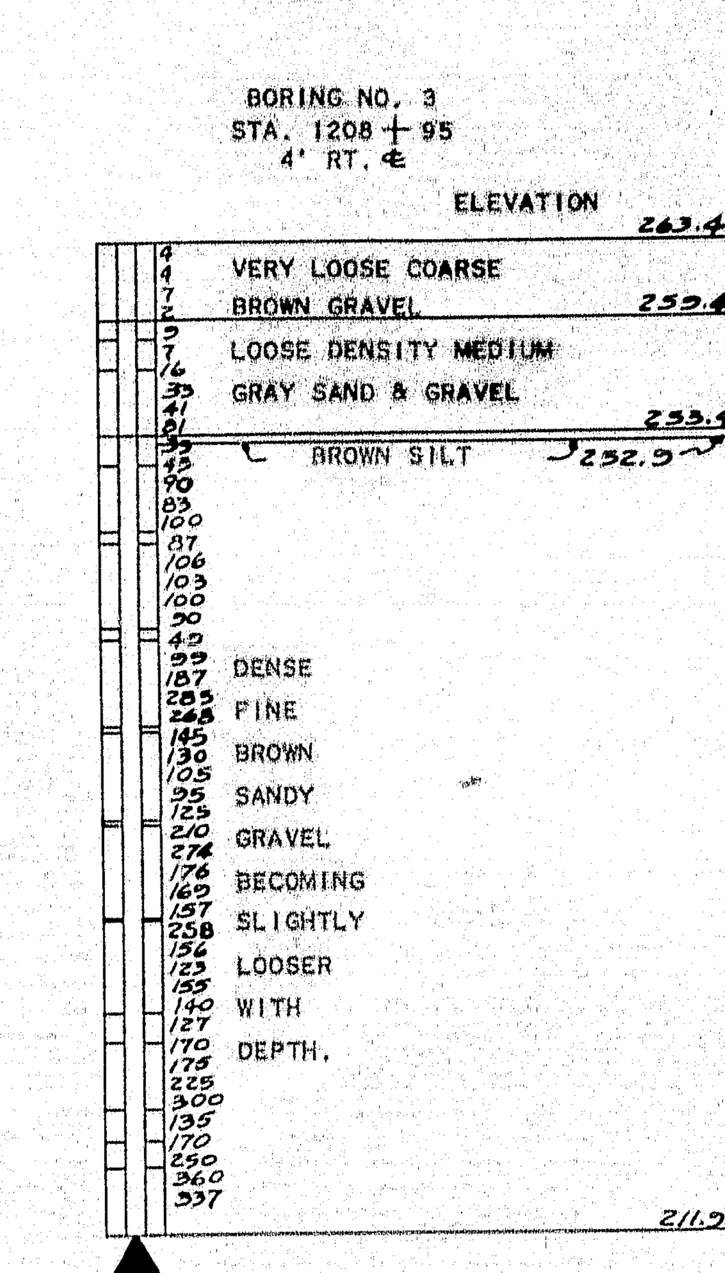
NOTE
SCALE: 1" = 30'

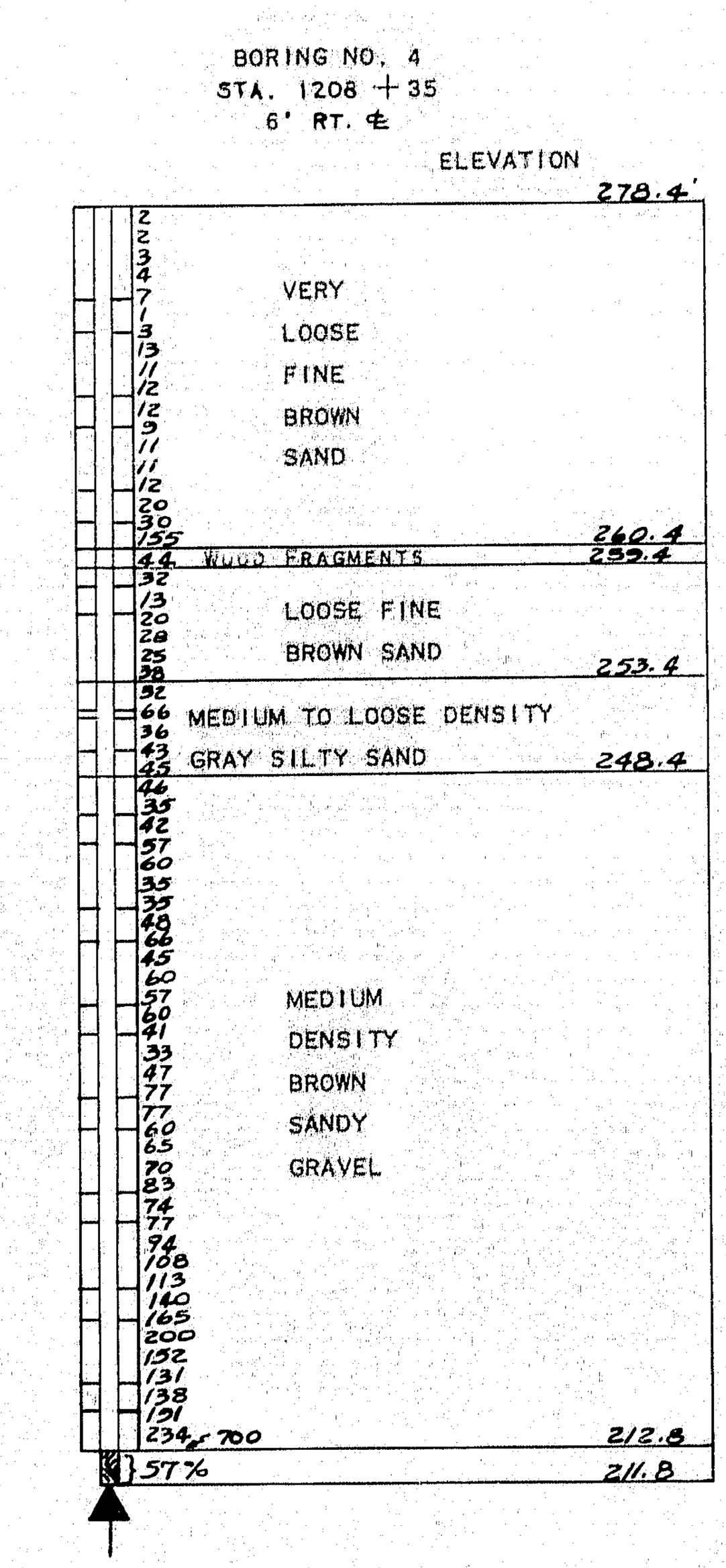


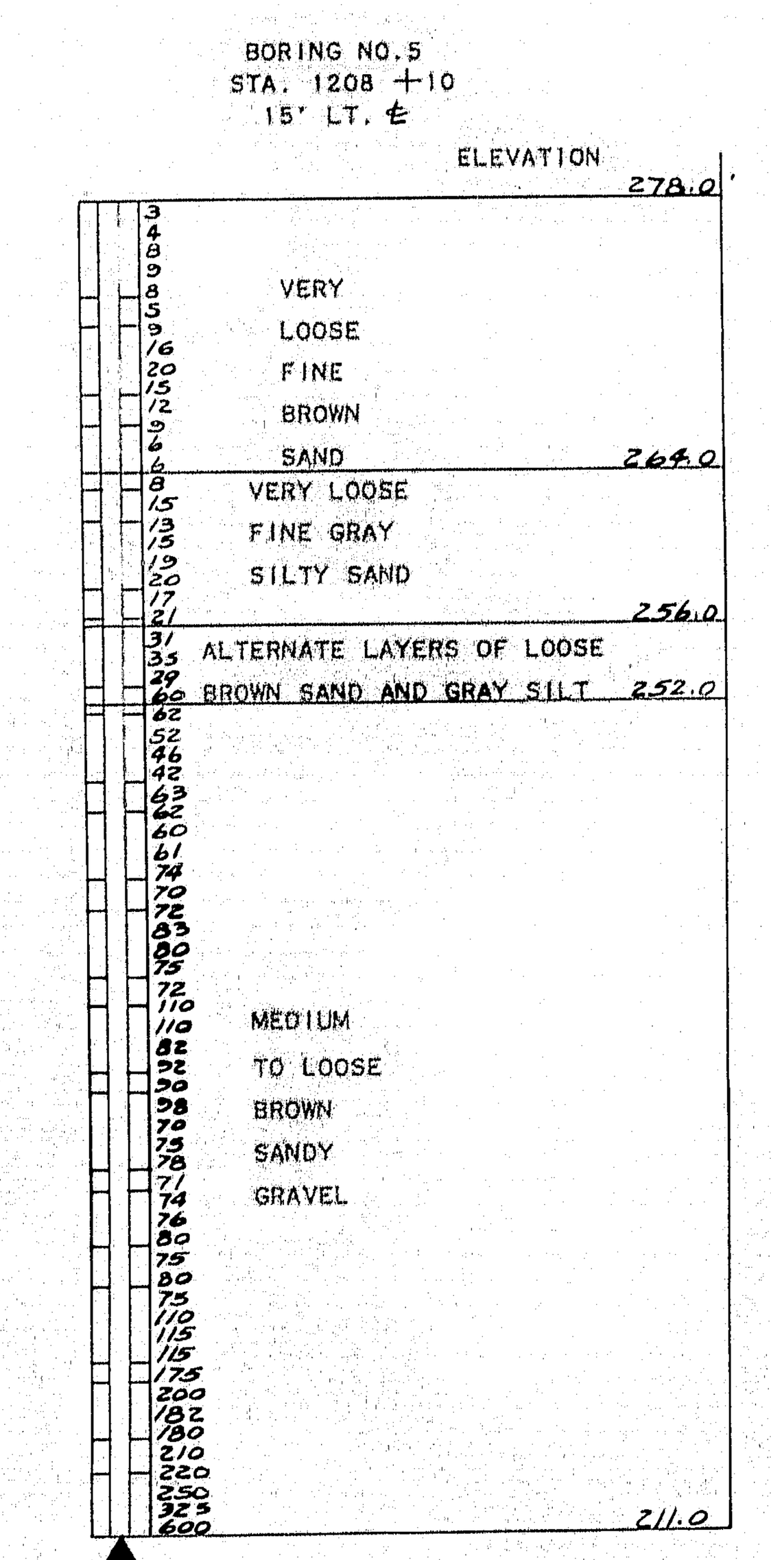
BORING LOGS











Scale 1" = 10'

BORING NOTES.

Number of blows of 275# hammer falling 18 inches required to drive extra heavy casing one foot thus: 40

% Recovery of rock core by size "E" diamond bit thus: 71%

Bottom of boring indicated thus:

DESIGN TRACE JONES CHECK E.V.S.	BRIDGE NO. SURVEY PLOT

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

CROOKED RIVER BRIDGE

BETWEEN THE TOWNS OF

CASCO & NAPLES
CUMBERLAND COUNTY

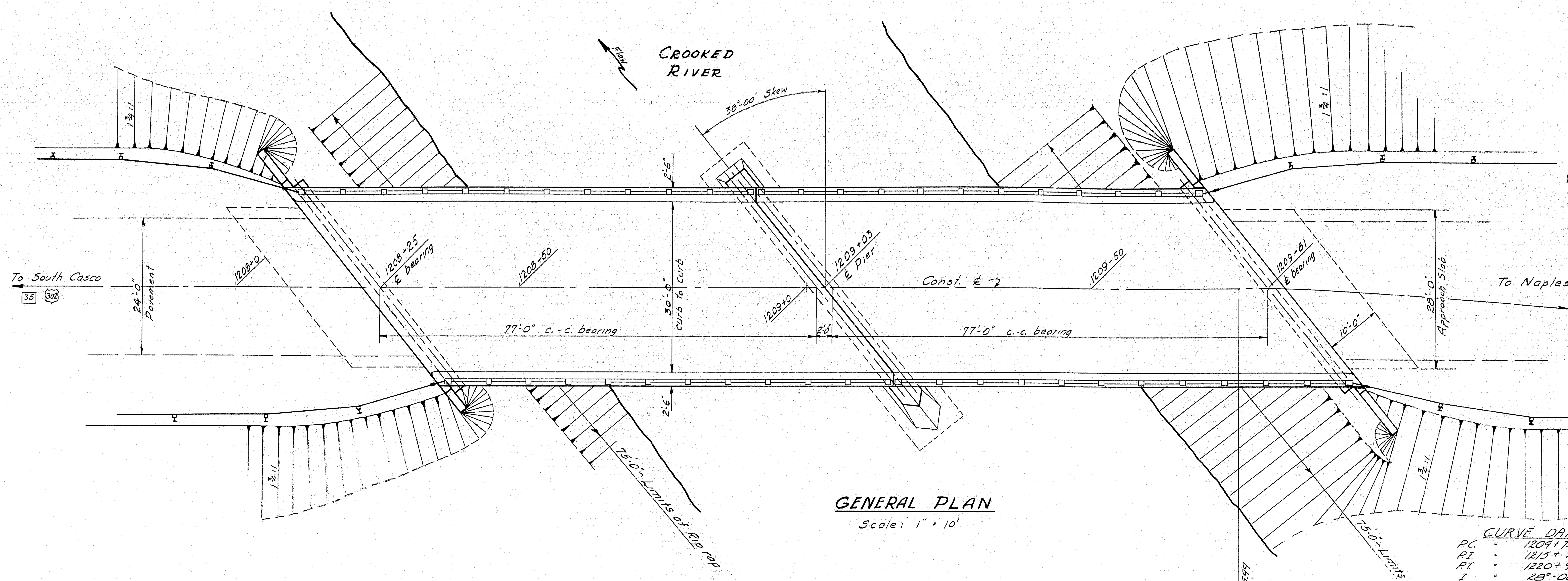
FOUNDATION SURVEY

SHEET 3 OF 13 AUGUSTA, MAINE SEPT. 1957

68-66

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F-014-1(6)	4	13

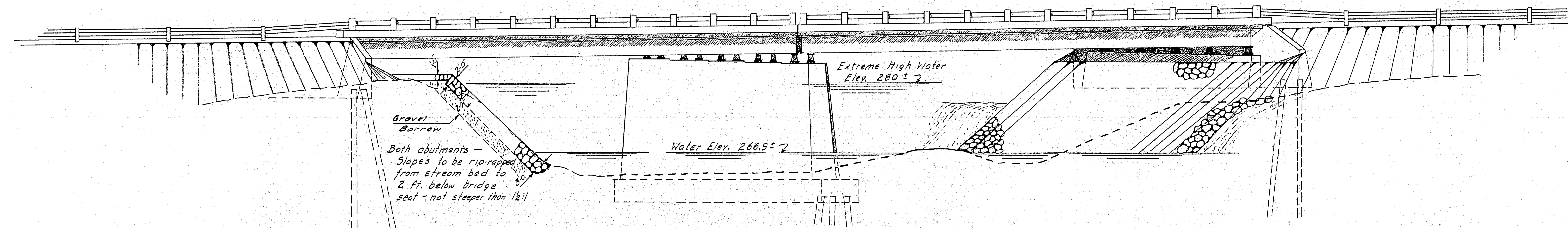


GENERAL PLAN

Scale: 1" = 10'

CURVE DATA

P.C.	=	1209 + 75.99
P.I.	=	1215 + 47.43
P.T.	=	1220 + 95.99
I	=	28°-00'
D	=	2°-30'
T	=	571.44'
L	=	1120.0'
E	=	70.16'
R	=	2291.83'



GENERAL ELEVATION

Scales: { Horiz. 1" = 10' / Vert. 1" = 10' }

DESIGN SPECIFICATIONS

The American Association of State Highway Officials, Standard Specifications for Highway Bridges, Revision of 1953, with supplements.

CONSTRUCTION SPECIFICATIONS

All work contemplated under the contract covering this project to be governed by and in conformity with State of Maine, State Highway Commission, Standard Specifications, Highways and Bridges, Revision of January 1956, except as modified on these plans or in the Special Specifications.

CONCRETE CLASSIFICATIONS

Superstructure and Approach Slabs ---------- Class "A"
Abutments and Piers ---------- Class "B"
Rail Posts and Bars ---------- Class "Y"

DESIGN DATA

Loading H20-S16-44
f_s = 18,000
f_c = 1200
n = 10

Revised 10-30-57
Curve & Data shown

DESIGN- } FORTIER
TRACE-
CHECK- C.S.A.

BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

CROOKED RIVER BRIDGE

BETWEEN THE TOWNS OF

CASCO & NAPLES
CUMBERLAND COUNTY

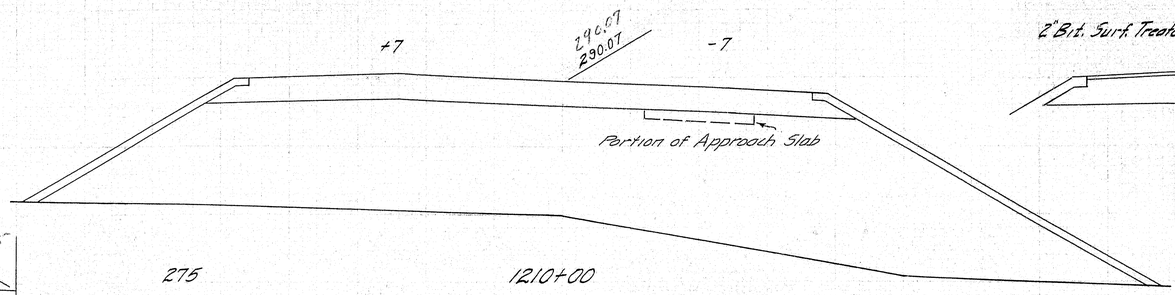
— GENERAL PLAN —

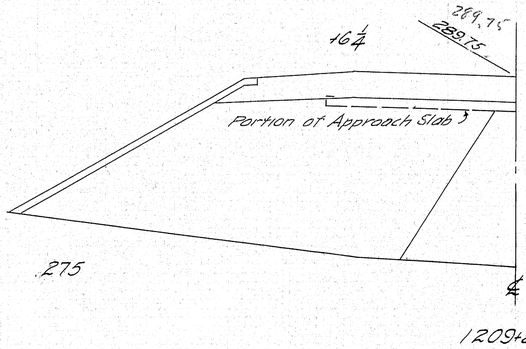
SHEET 4 OF 13 AUGUSTA, MAINE SEPT. 1957

68-67

0 1 2 3 4 5 INCHES

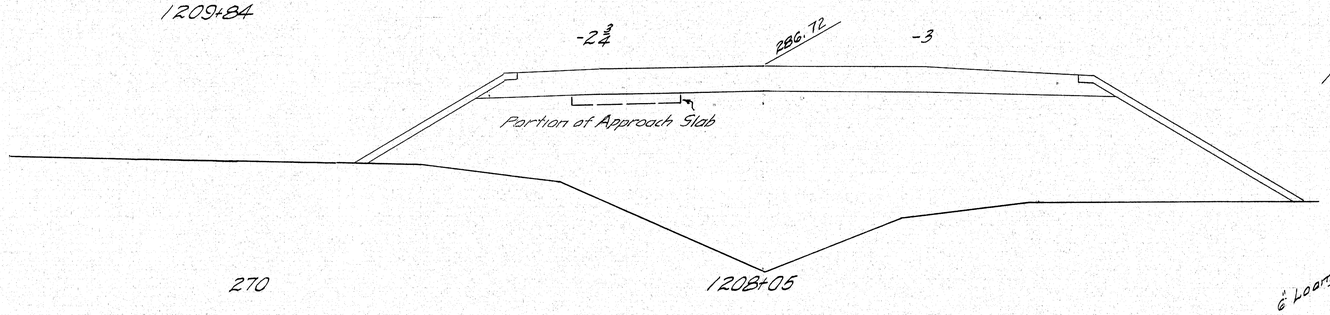
B. P. R. R.E.&W.NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	F-014-1(6)	5	13



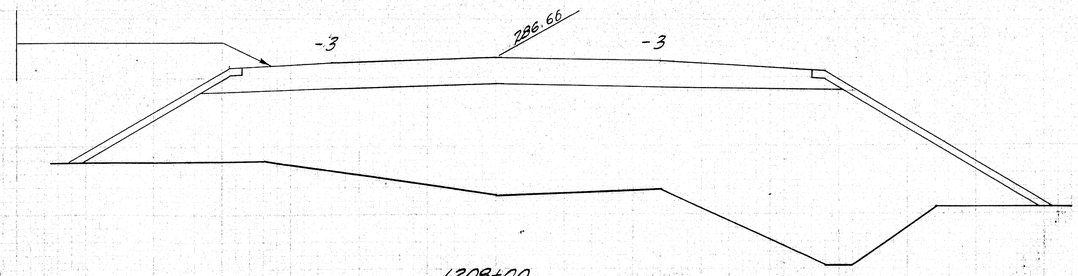


CONTRACT NOTE:

The Bituminous Concrete Surface Course, the Crushed Gravel Base Course and the 2" Bituminous Surface Treated Shoulders are not to be a part of this contract but will be furnished and installed under the Highway Contract. (Contract No. 1)



Note:
Shoulders have a width of 12'0" 32' from ends of bridge curbs. Warp shoulders from 12'0" to fit berm line of structure in 32'0".



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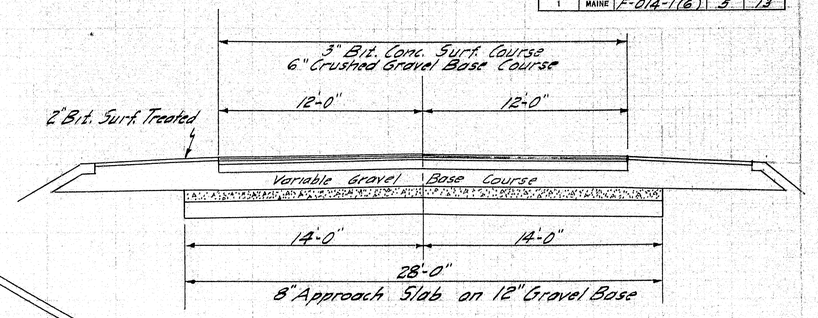
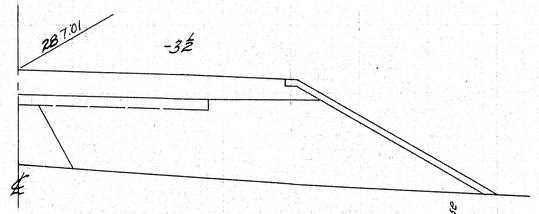


TYP. SECT. @ APPROACH SLAB



275

SECTIONS AWAY FROM SLAB

DESIGN — YOUNG
TRACE — "
CHECK — C.S.A.

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

CROOKED RIVER BRIDGE

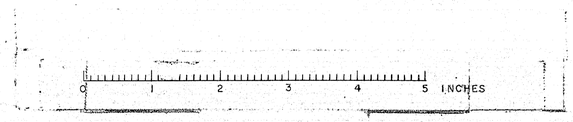
BETWEEN THE TOWNS OF

CASCO & NAPLES
CUMBERLAND COUNTY

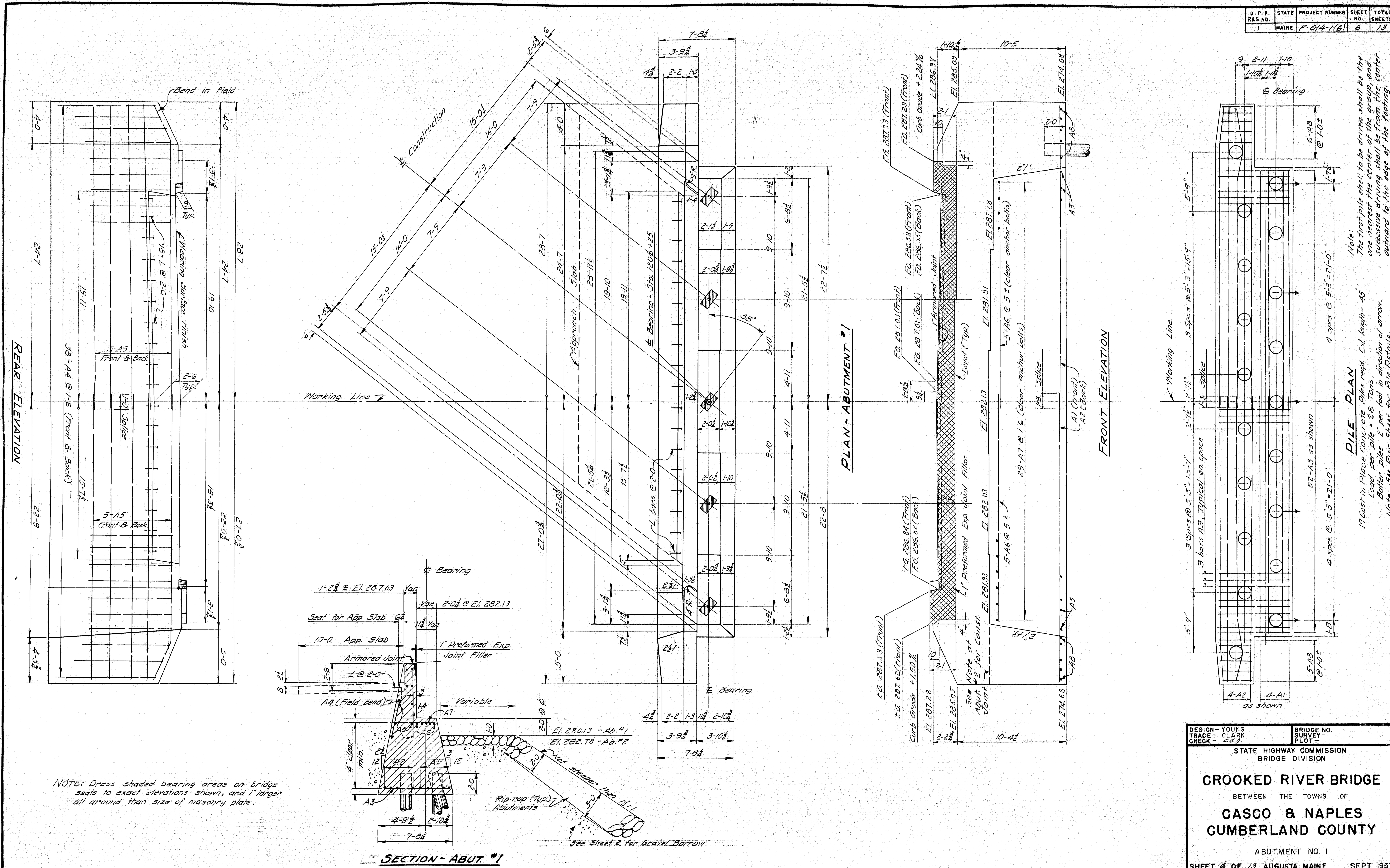
CROSS SECTIONS

SHEET 5 OF 13 AUGUSTA, MAINE SEPT. 1957

68-68



B.P.R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F-014-1(6)	6	13



NOTE: Dress shaded bearing areas on bridge seats to exact elevations shown, and 1" larger all around than size of masonry plate.

DESIGN – YOUNG
TRACE – CLARK
CHECK – G.S.A.

BRIDGE NO.
SURVEY –
PLOT –

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

CROOKED RIVER BRIDGE

BETWEEN THE TOWNS OF

CASCO & NAPLES
CUMBERLAND COUNTY

ABUTMENT NO. 1

SHEET 6 OF 13 AUGUSTA, MAINE SEPT. 1957

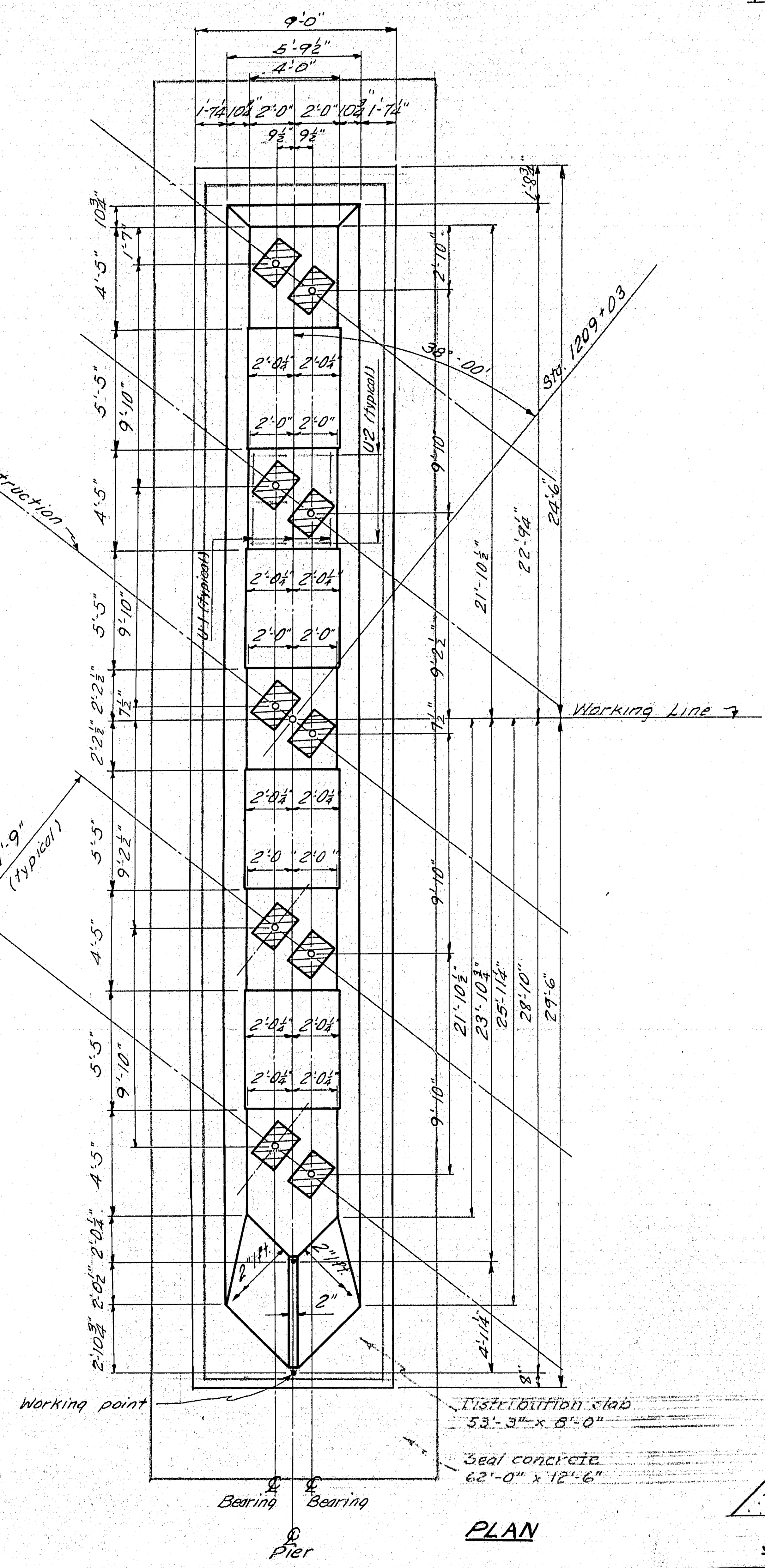
68-69

0 1 2 3 4 5 INCHES

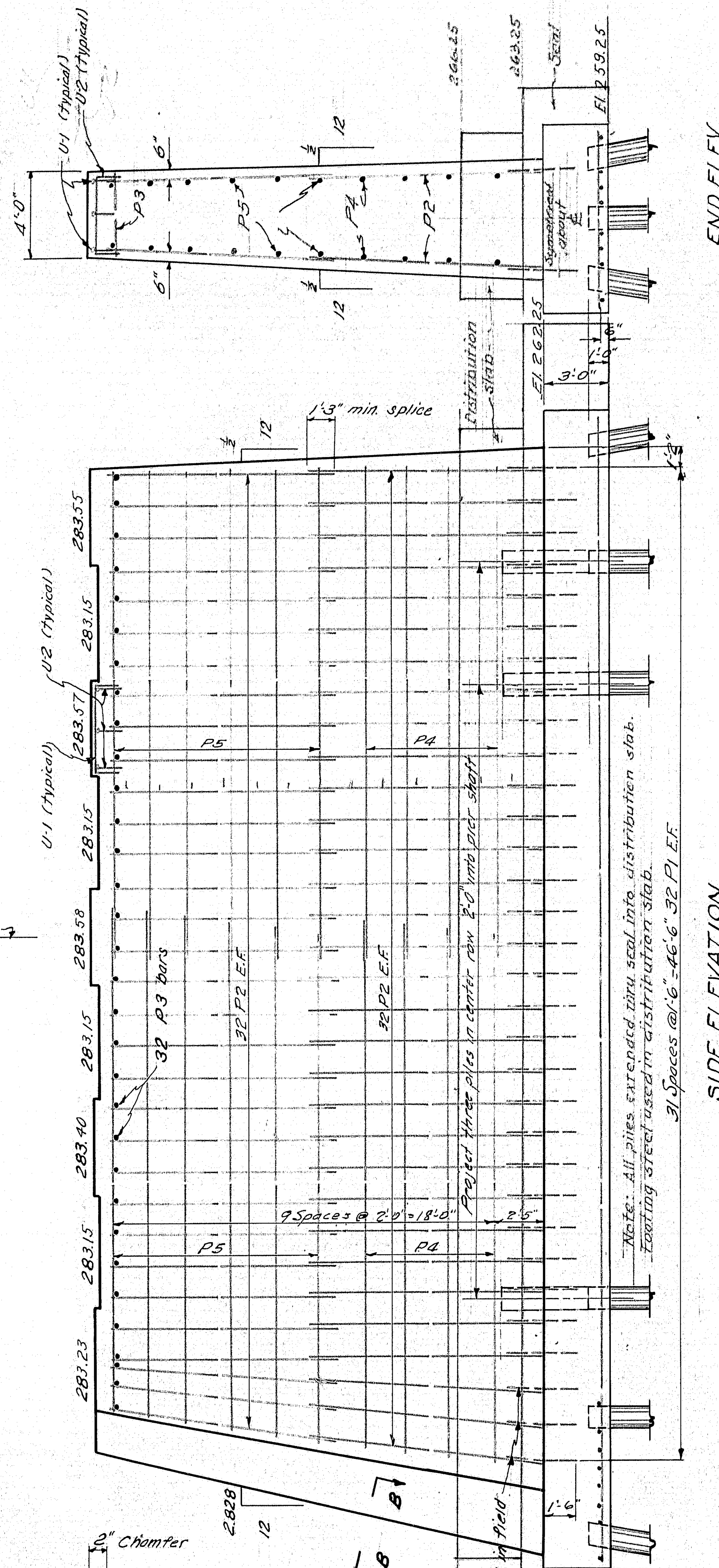
B.P.R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F-014-1(6)	7	13

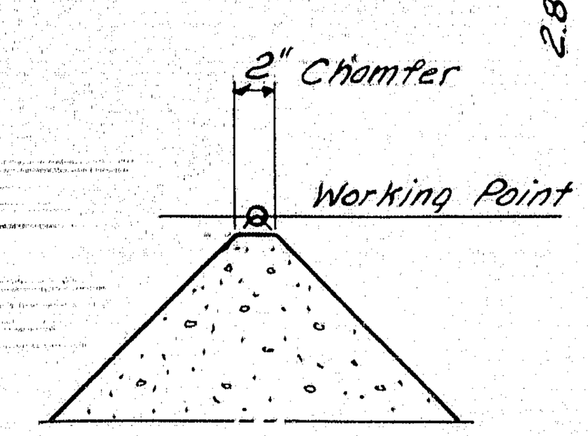
Notes

Note: Dress shaded areas 1" larger all around than size of bearing plate to exact elevation indicated.
Place U-1 and U-2 bars under each bearing area to clear anchor bolts.



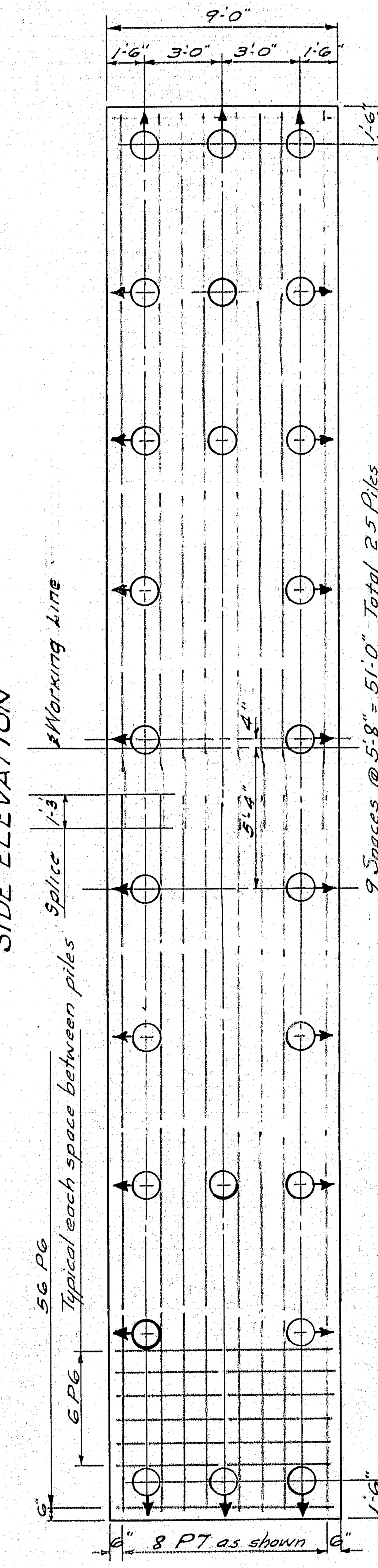
PLAN





Section B-B

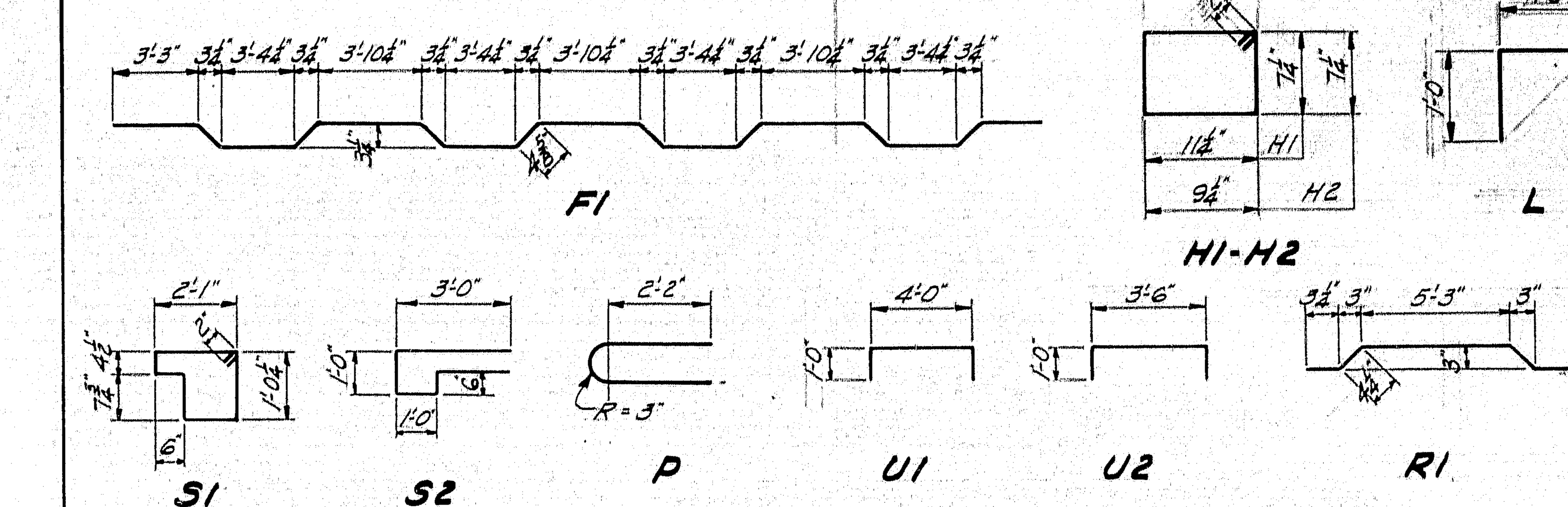
Note:
The first pile shell to be driven shall be the one nearest the center of the group, and successive driving shall be from the center outward to the edge of the footing.



PILE & FOOTING STEEL PLAN

Batter piles 2"/ft. in direction of arrow

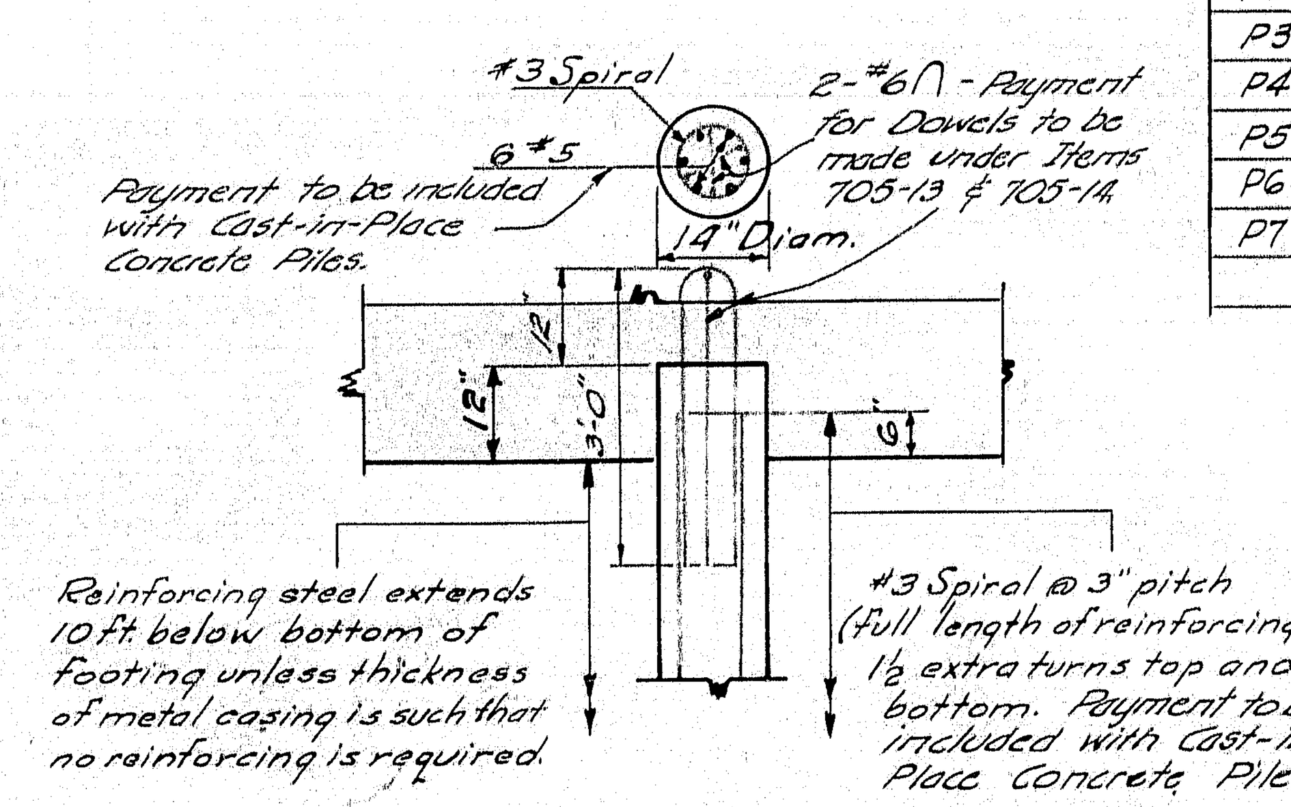
REINFORCING STEEL SCHEDULE



NOTE: Dimensions to ℄ bars.

BENT BARS				
MARK	SIZE	NO.	LENGTH	LOCATION
F1	#5	116	34'-7"	Floor Slab
H1	#3	12	3'-5"	End Rail Posts
H2	#3	132	3'-1"	Int. " "
P	#6	96	5'-1"	Rail Posts
R1	#5	88	6'-6"	" Bars
S1	#3	212	6'-6"	Curbs
S2	#4	112	7'-6"	Over diaph. @ Supports
U1	#5	15	6'-0"	Pier - Bridge Seats
U2	#5	15	5'-6"	" " "
L	#6	36	2'-0"	Dowels - App. Slabs
STRAIGHT BARS				
A1	#6	16	22'-7"	Abutments
A2	#6	16	28'-3"	"
A3	#6	104	7'-6"	"
A4	#6	152	7'-0"	"
A5	#5	40	28'-2"	"
A6	#6	20	21'-8"	"
A7	#5	58	2'-6"	"
A8	#5	21	3'-0"	Abutments
AS1	#5	220	12'-4"	Approach Slabs
AS2	#4	40	35'-0"	" "
C1	#4	8	26'-1"	Curbs
C2	#4	4	24'-2"	"
C3	#4	8	26'-9"	"
C4	#4	4	25'-2"	"
R2	#5	88	6'-4"	Rail Bars

STRAIGHT BARS (Continued)				
MARK	SIZE	NO.	LENGTH	LOCATION
F2	#5	228	33'-8"	Floor Slab
F3	↑	16	31'-8"	↑
F4		↑	30'-6"	
F5			29'-4"	
F6			28'-2"	
F7			27'-0"	
F8			25'-10"	
F9			24'-8"	
F10			23'-6"	
F11			22'-4"	
F12			21'-2"	
F13			20'-0"	
F14			18'-10"	
F15			17'-8"	
F16			16'-6"	
F17			15'-4	
F18			14'-2"	
F19			13'-0"	
F20			11'-10"	
F21			10'-8"	
F22			9'-4"	
F23			8'-2"	
F24		↓	7'-0"	
F25		16	5'-10"	
F26		36	4'-8"	
F27		16	3'-6"	
F28		16	2'-4"	
F29	↓	16	1'-2"	
F30	#5	8	32'-6"	↓
F31	#4	318	26'-9"	Floor Slab
F32	#5	48	9'-6"	Over diaph. @ Supports
P1	#6	64	3'-0"	
P2	#6	128	11'-0"	Pier Shaft
P3	#5	32	3'-6"	" "
P4	#5	16	24'-6"	" "
P5	#5	24	23'-6"	" "
P6	#6	56	8'-8"	Pier Footing
P7	#6	16	27'-6"	" "



CAST-IN-PLACE CONCRETE PILE DETAIL

25 Req'd (Pier) Estimated Length {22 @ 30' / 3 @ 35'}
Max. Load 28 Tons.

"As built" in red 3/22/62

Revised 10-30-57
Steel Added - Piles to Footings.

DESIGN - MOLLICONE
TRACE - "
CHECK - Allen, W.H.Y.

BRIDGE NO.
SURVEY -
PLOT -

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

CROOKED RIVER BRIDGE

BETWEEN THE TOWNS OF

CASCO & NAPLES
CUMBERLAND COUNTY

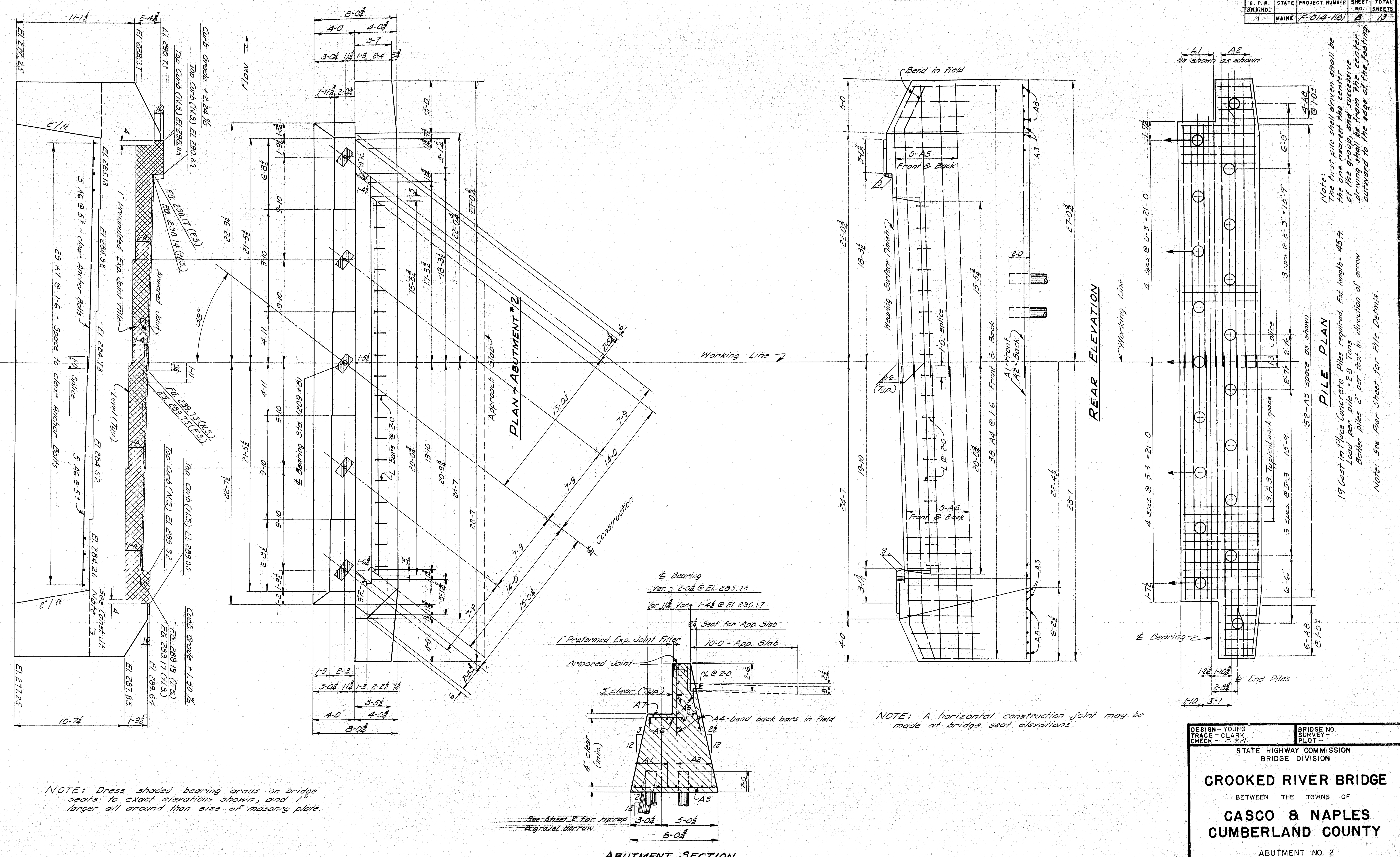
PIER
&
REINFORCING STEEL

SHEET 7 OF 13 AUGUSTA, MAINE SEPT. 1957

68-70

0 1 2 3 4 5 INCHES

B.P.R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F-014-1(6)	8	13



DESIGN - YOUNG
TRACE - CLARK
CHECK - C.S.A.

BRIDGE NO.
SURVEY -
PLOT -

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

CROOKED RIVER BRIDGE

BETWEEN THE TOWNS OF

CASCO & NAPLES
CUMBERLAND COUNTY

ABUTMENT NO. 2

SHEET 8 OF 13 AUGUSTA, MAINE SEPT. 1957

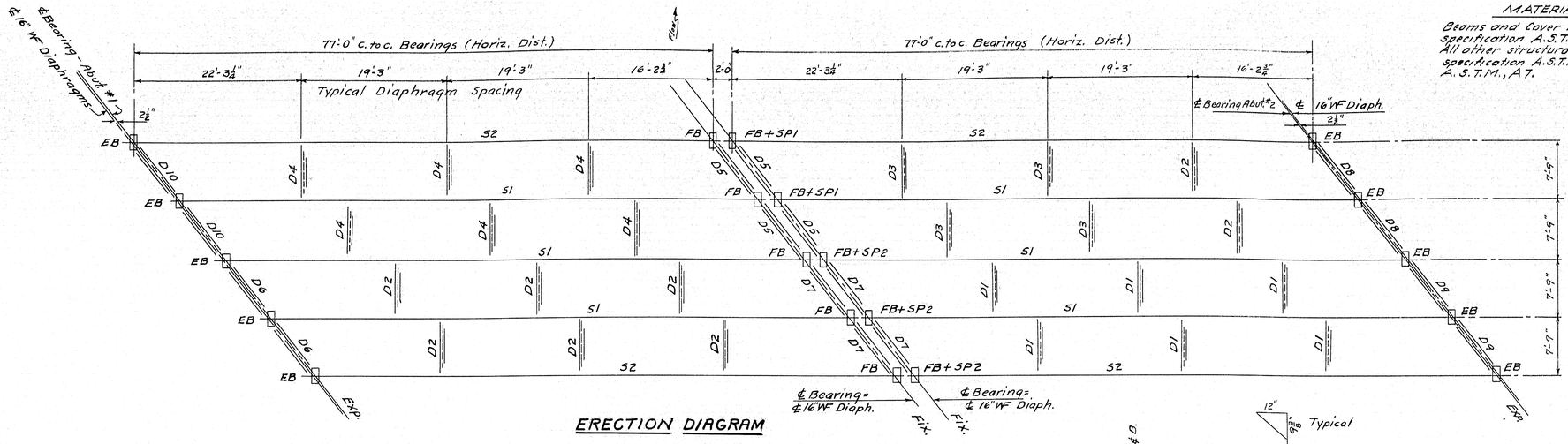
68-71

0 1 2 3 4 5 INCHES

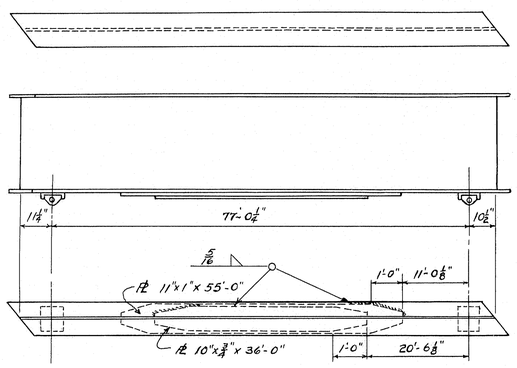
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F-014-1(6)	9	13

MATERIALS NOTE

Beams and Cover Plates to conform to specification A.S.T.M. Designation A-373. All other structural steel to conform to either specification A.S.T.M., A-373 or to specification A.S.T.M., A7.

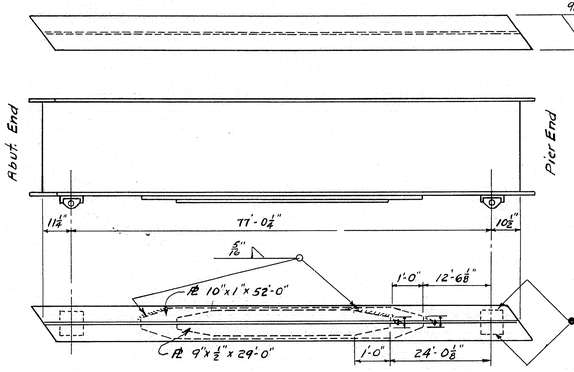


ERECTION DIAGRAM



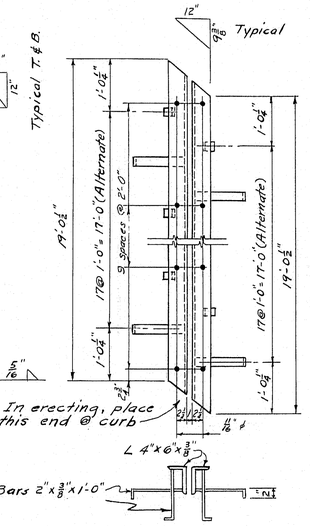
S1 - 36"WF 170# 78'-10" Camber 3" - 6 Reqd.

S1



S2 - 36"WF 170#- 78'-10" - Camber 3" - 4 Reqd.

S2



HALF PLAN

6 ℄s Reqd. as shown

ARMORED JOINT

D1, as shown - 6 Reqd.
D2, " " - 8 "
D3, " " - 4 "
D4, " " - 6 "

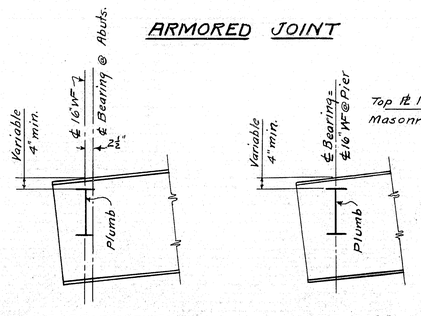
D1, D2, D3, D4

DIAPH. TO STRINGER

D5, as shown - 4 Reqd.
D6 " " - 2 "
D7 " " - 4 "
D8 " " - 2 "
D9 " " - 2 "
D10 " " - 2 "
(Diaphragms D5 through D10 detailed facing Abut. #2)

D5, D6, D7, D8, D9, D10

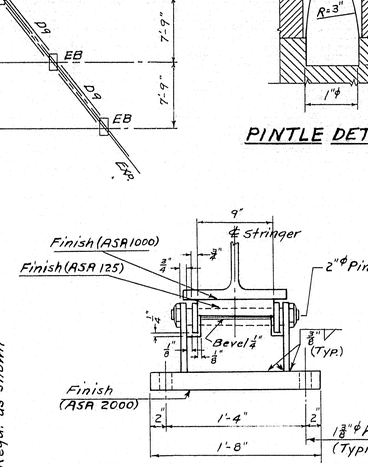
DIAPH. TO STRINGER



AT ABUTMENTS

AT PIER

DETAILS - 16"WF DIAPHRAGMS

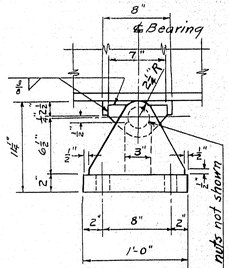


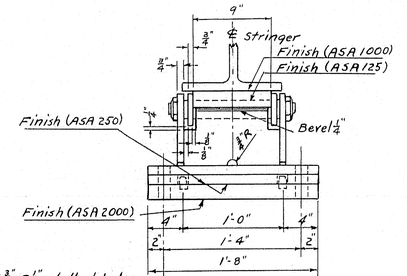
PINTLE DETAIL

1"ϕ Swedge Anchor Bolt with 1 hex. nut & 1-3"ϕx⅜" Washer
AB1 as shown - 40 Reqd.
AB2 " " - 20 "

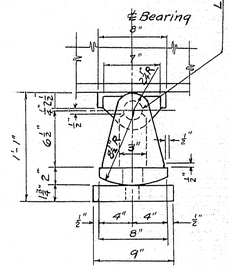
AB1, AB2

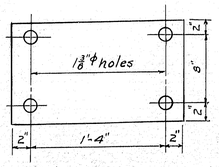
FIXED BEARING - FB





EXPANSION BEARING - EB





SP1 - 12"x½"x1'-8" as shown - 2 Reqd.
SP2 - 12"x⅜"x1'-8" " " - 3 "

SP1, SP2 (Shim ℔'s)

DESIGN - YOUNG	BRIDGE NO.
TRACE - WELCH	SURVEY -
CHECK - C. S. G.	PLOT -

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

CROOKED RIVER BRIDGE

BETWEEN THE TOWNS OF

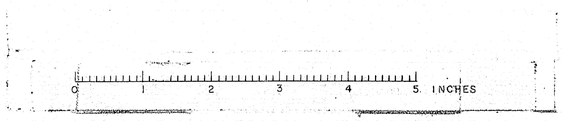
CASCO & NAPLES

CUMBERLAND COUNTY

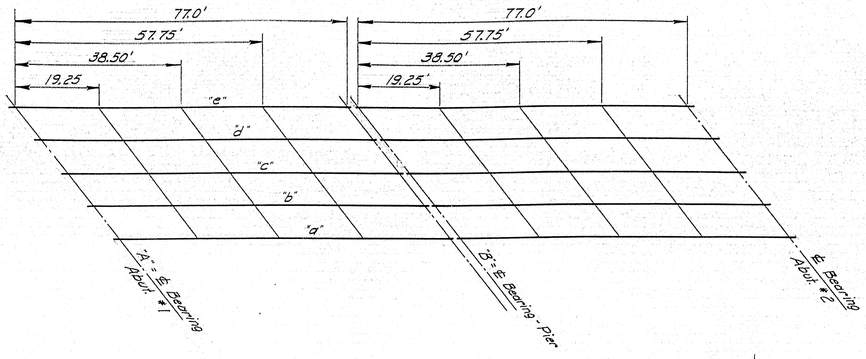
STRUCTURAL STEEL DETAILS

SHEET 9 OF 13 AUGUSTA, MAINE SEPT. 1957

68-72



B. P. R. R.F.A. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F-014-1(6)	10	13

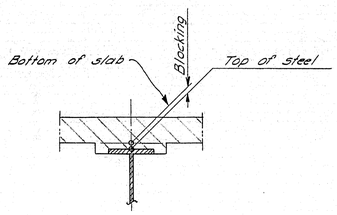


ELEVATIONS ~ BOTTOM OF SLAB

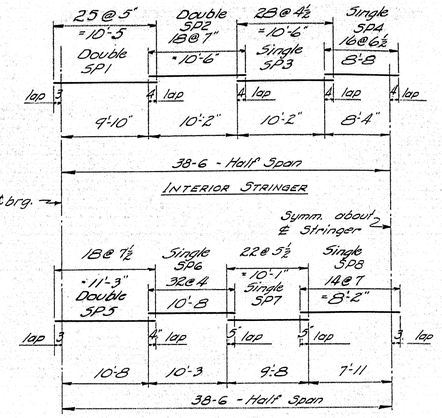
	Point	Line "a"	Line "b"	Line "c"	Line "d"	Line "e"
℄ brg.-Abut. #1	A	286.18	286.28	286.38	286.16	285.93
	+19.25'	286.54	286.67	286.79	286.62	286.43
	+38.50'	286.86	287.01	287.15	287.03	286.89
	+57.75'	287.12	287.28	287.44	287.38	287.23
℄ brg. Pier-Sp. #1	+77.0'	287.34	287.52	287.69	287.68	287.66
℄ brg. Pier-Sp. #2	B	287.36	287.55	287.73	287.72	287.70
	+19.25'	287.72	287.94	288.14	288.18	288.20
	+38.50'	288.04	288.28	288.50	288.59	288.66
	+57.75'	288.30	288.55	288.79	288.94	289.06
℄ brg.-Abut. #2	+77.0'	288.51	288.77	289.03	289.23	289.43

NOTE: In order to compensate for "Dead Load" Deflection, as well as inequalities in the "Rolled Camber" of the beams, the following procedure shall be used: After the beams are in position, the Engineer shall take elevation along the beams at points indicated. The difference between this elevations and the "Elev.-Bottom of Slab" shall determine the blocking to be used for constructing slab forms.

Blocking may be determined directly by tack welding small bars to beams at points indicated and spotting on "Elevations - Bottom of Slab." String-Line between bars for top of slab flooring.



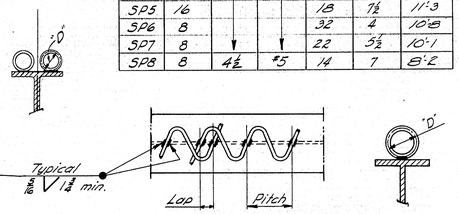
BLOCKING DATA

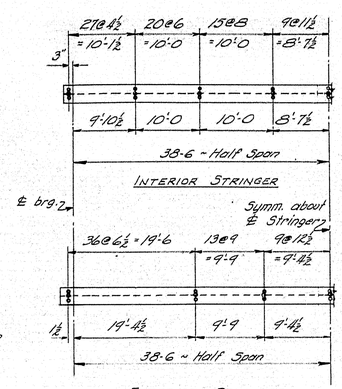


LAYOUT (Spirals)

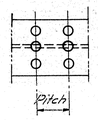
SPIRAL TABLE

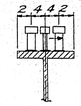
Mark	No.	"D"	Size	Spaces	Pitch	Length
SP1	24	4½	#5	25	5	10'-5
SP2	24			18	7	10'-6
SP3	12			28	4½	10'-6
SP4	12			16	6½	8'-8
SP5	16			18	7½	11'-3
SP6	8			32	4	10'-8
SP7	8			22	5½	10'-1
SP8	8	4½	#5	14	7	8'-2





LAYOUT (Studs)



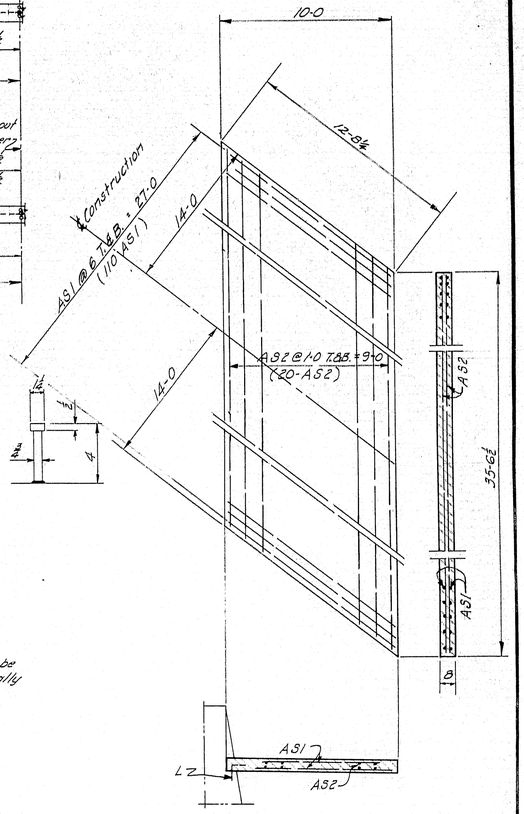


STUD DETAIL

397B Required

NOTE: Shear Connectors may be welded spirals or automatically end-welded studs.

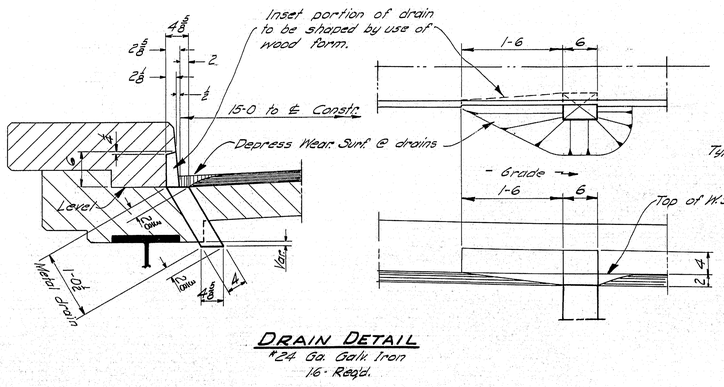
SHEAR CONNECTORS



APPROACH SLAB

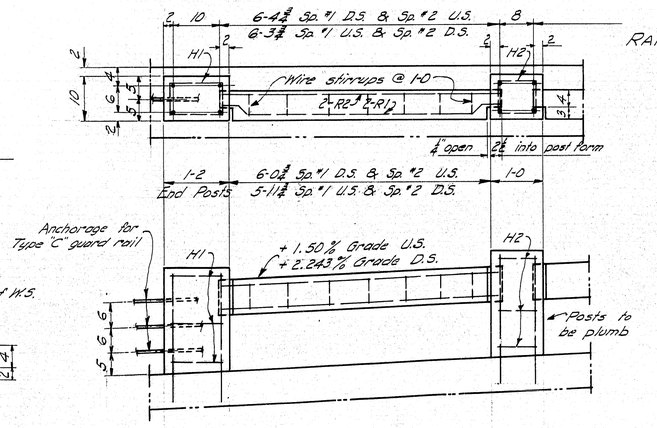
Abutments #1 & #2

Note: Payment for Concrete in Approach Slabs will be made under Item 701-40, Pl. Conc. Roadway and Sidewalk Slabs on Steel Bridges.



DRAIN DETAIL

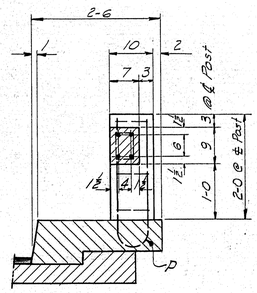
#24 Ga. Galv. Iron
16" Req'd.



RAIL NOTE: Wrap tongue ends of rail bars with 2-layers of heavy roofing.

Construct wire stirrups in the field from a single strand of #9 annealed wire making a complete turn around each "R" bar.

Chamfer exposed edges of concrete ¼"



RAIL DETAIL

Revised 10-30-57
Shear Connectors

DESIGN - YOUNG	BRIDGE NO.
TRACE - CLARK	SURVEY -
CHECK - C.S.H.	PLOT -

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

CROOKED RIVER BRIDGE

BETWEEN THE TOWNS OF

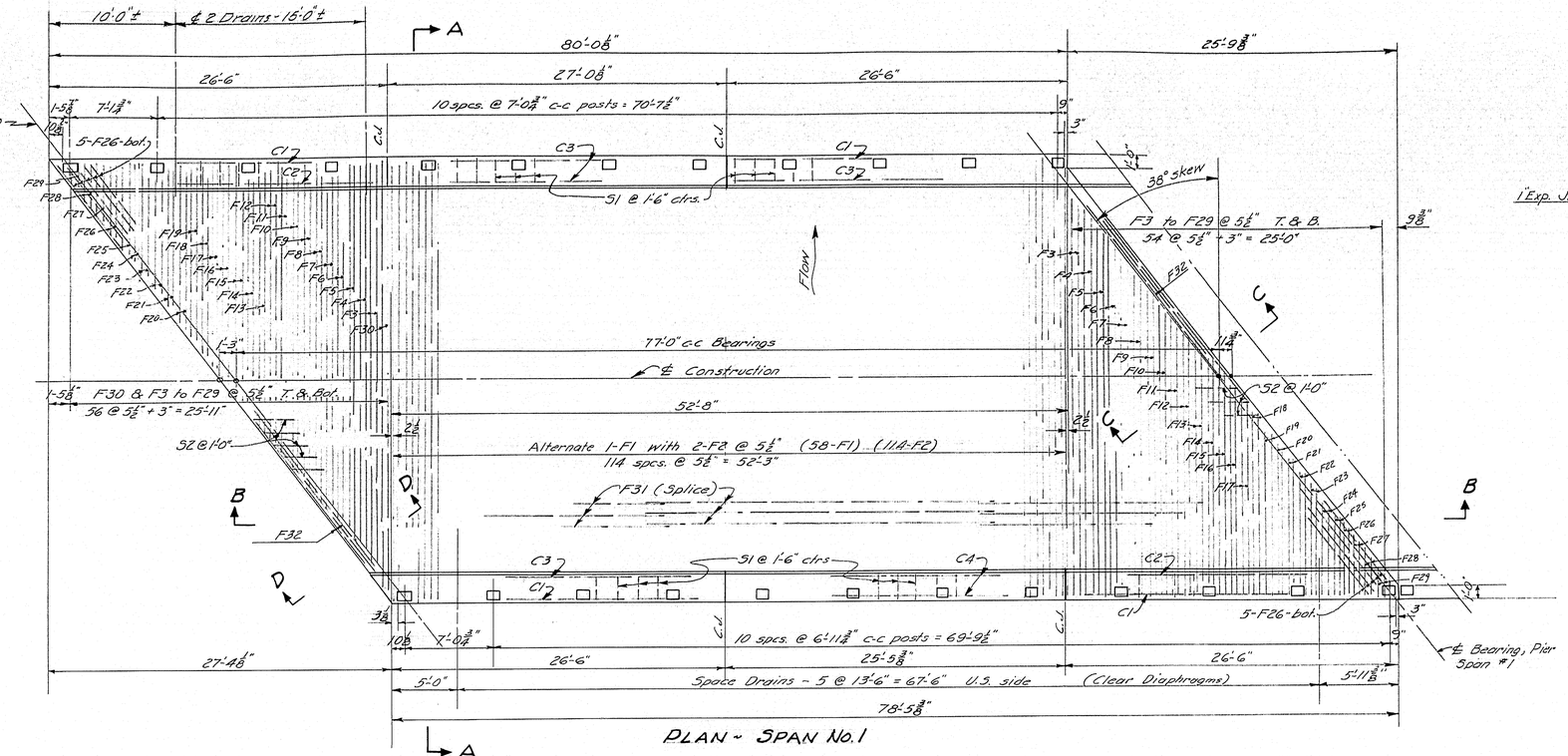
CASCO & NAPLES
CUMBERLAND COUNTY

DETAILS

SHEET 10 OF 13 AUGUSTA, MAINE SEPT. 1957

68-73

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F-014-1(6)	11	13



CONSTRUCTION NOTE:

The concrete decks shall be screeded precisely to the cross section. Any holes, joints or cracks in the concrete shall be filled flush with 1:2 mortar, and any high spots shall be chipped or ground smooth.

CONTRACT NOTE:

The Bituminous Concrete Surface Course and the Membrane Waterproofing are not a part of this contract but will be furnished and installed under the Highway Contract (Contract No. 1)

NOTES: Stirrups (S1) to be in place before concrete slab is placed. Post steel (P) to be in place before curb is placed.

Concrete for Curb shall not be placed until Superstructure Slab has been in place for a minimum period of seven days; during this period, form-work for curbs may proceed but hand equipment only shall be allowed on the slab.

DESIGN - YOUNG
TRACE - LEWIS
CHECK - C.S.H.

BRIDGE NO.
SURVEY -
PLOT -

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

CROOKED RIVER BRIDGE

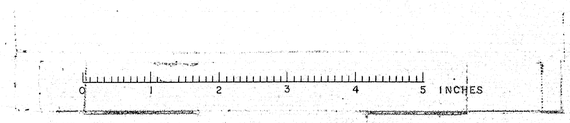
BETWEEN THE TOWNS OF

CASCO & NAPLES
CUMBERLAND COUNTY

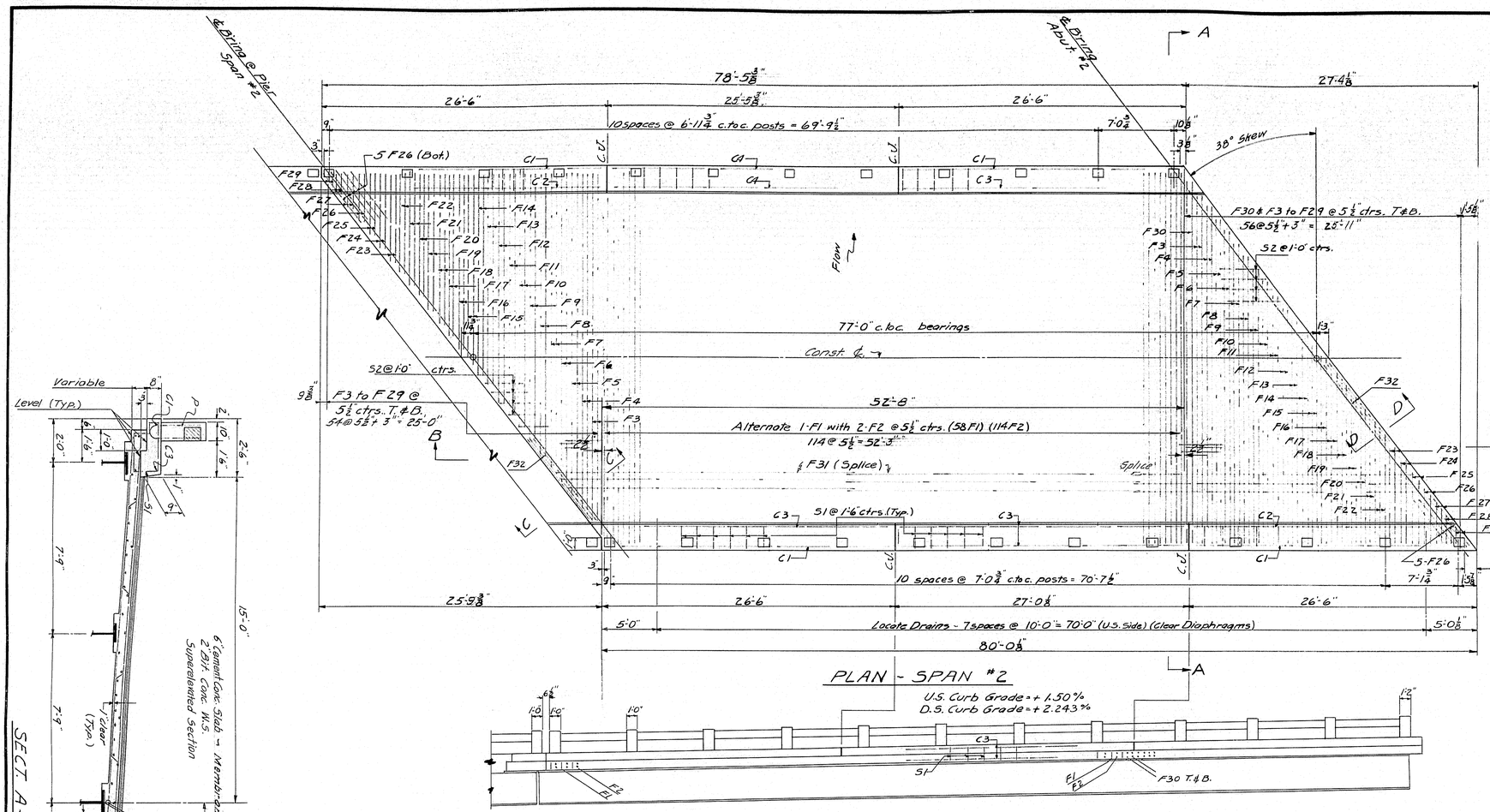
SUPERSTRUCTURE - SPAN NO. 1

SHEET 11 OF 13 AUGUSTA, MAINE SEPT. 1957

68-74



B. P. R. REQ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F-014-1(6)	12	13



Notes:
Stirrups (S1) to be in place before concrete for slab is placed.
Post steel (P) to be in position before concrete for curb is placed.

Note: For construction and contract notes, see Sheet No. 11.

DESIGN - YOUNG
TRACE - JONES
CHECK - C.S.A.
BRIDGE NO.
SURVEY -
PLOT -

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

CROOKED RIVER BRIDGE

BETWEEN THE TOWNS OF

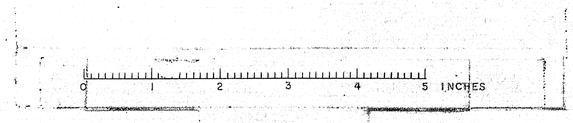
CASCO & NAPLES

CUMBERLAND COUNTY

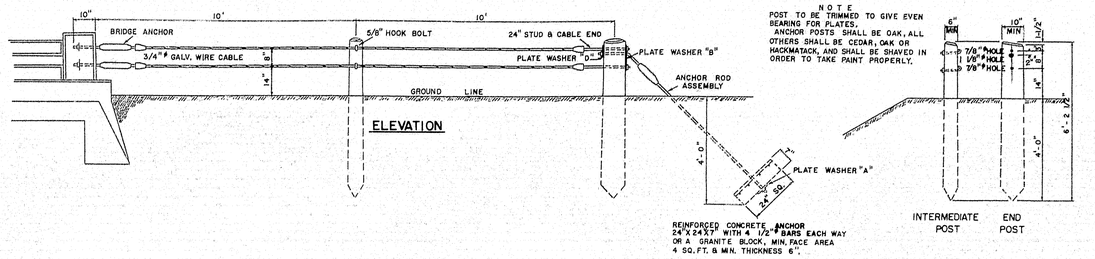
SUPERSTRUCTURE - SPAN NO. 2

SHEET 12 OF 13 AUGUSTA, MAINE SEPT. 1957

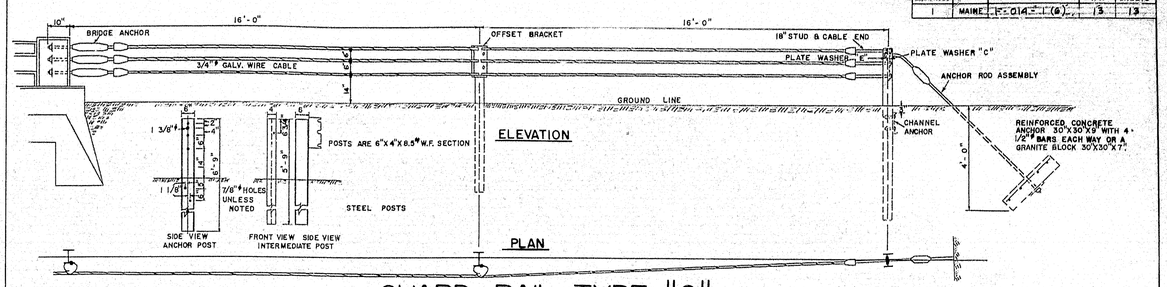
68-75



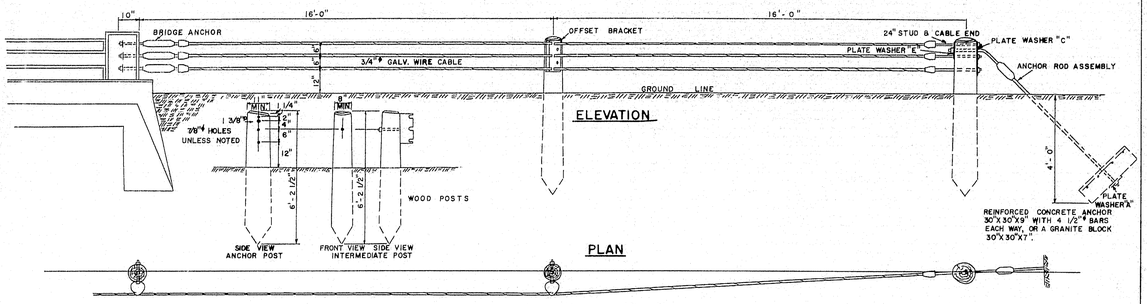
B.P.R. S.E.C. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F-014-1(6)	13	13



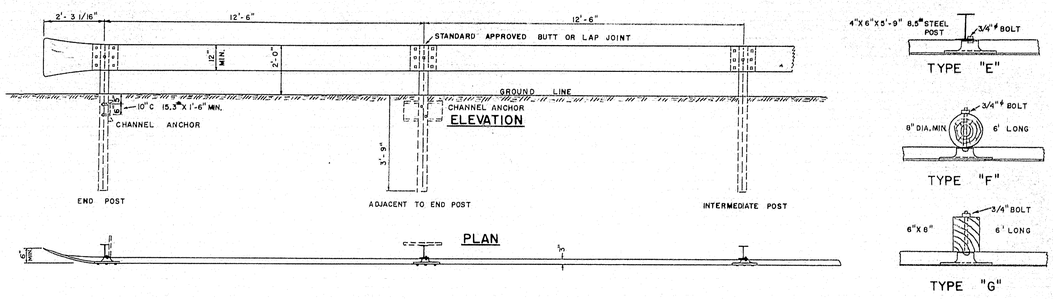
GUARD RAIL TYPE "A" & "B"



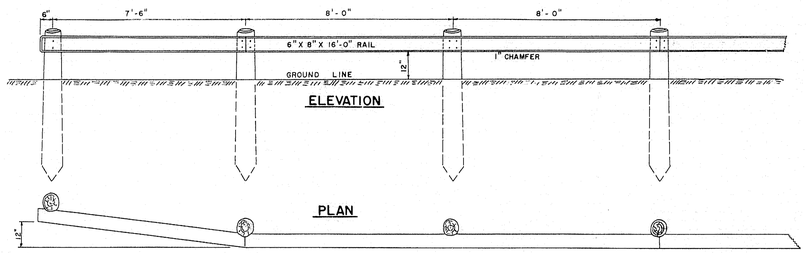
GUARD RAIL TYPE "C"



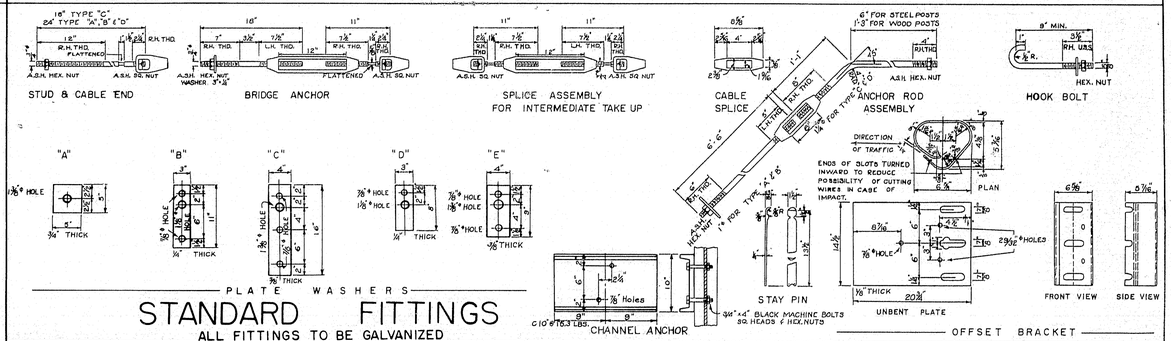
GUARD RAIL TYPE "D"



GUARD RAIL TYPE "E", "F" & "G"

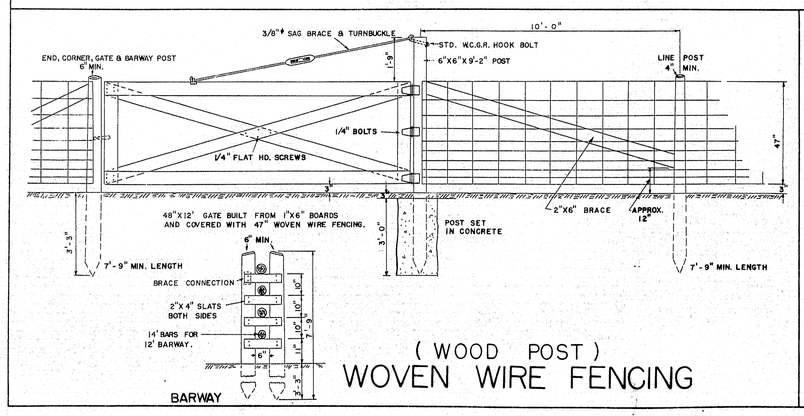


GUARD RAIL TYPE "H"



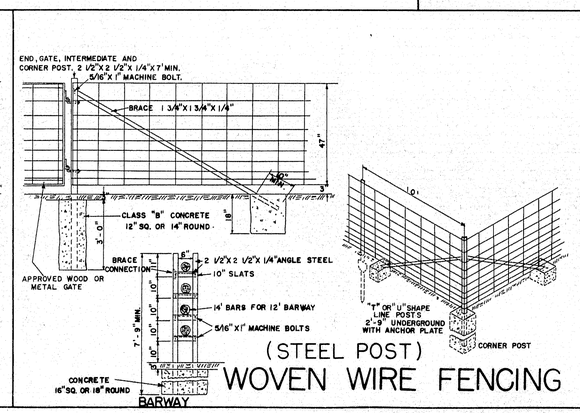
STANDARD FITTINGS

ALL FITTINGS TO BE GALVANIZED



(WOOD POST)

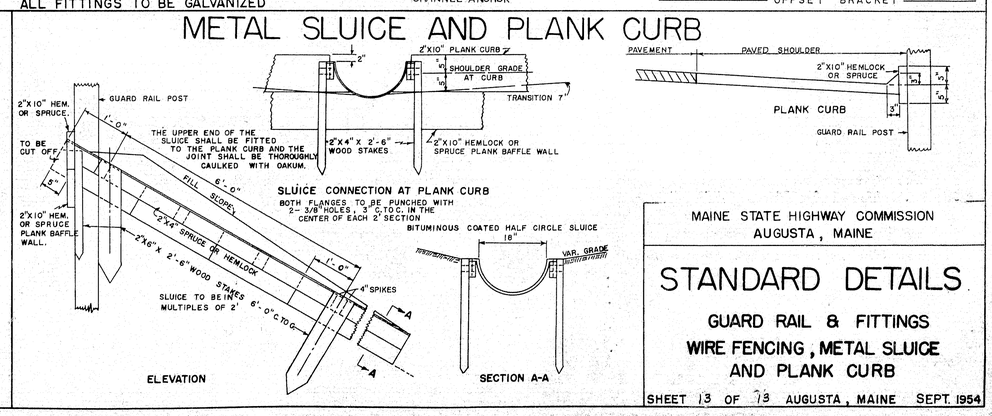
WOVEN WIRE FENCING



(STEEL POST)

WOVEN WIRE FENCING

METAL SLUICE AND PLANK CURB



MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

STANDARD DETAILS

GUARD RAIL & FITTINGS
WIRE FENCING, METAL SLUICE AND PLANK CURB

SHEET 13 OF 13 AUGUSTA, MAINE SEPT. 1954

68-76

0 1 2 3 4 5 INCHES

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F-014-1(49)	1	57

Raymond - Casco - Naples

REEL 299

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PLANS

RAYMOND ~ CASCO ~ NAPLES
CUMBERLAND COUNTY
MAINE FEDERAL AID PRIMARY
PROJECT NO. F-014-1(49)
TOTAL LENGTH = 6.326 MILES
A RESURFACING PROJECT

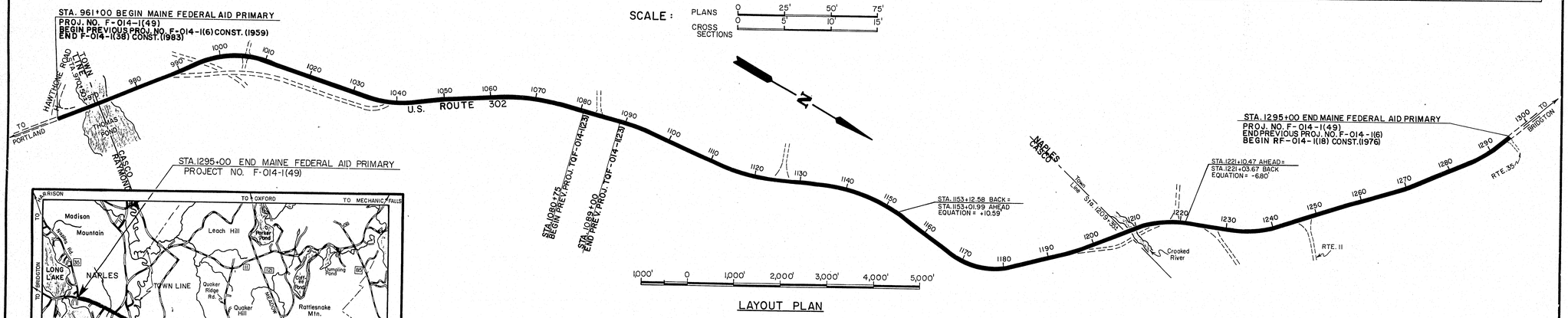
SCALE: PLANS 0 25' 50' 75'; CROSS SECTIONS 0 5' 10' 15'

CONVENTIONAL SIGNS

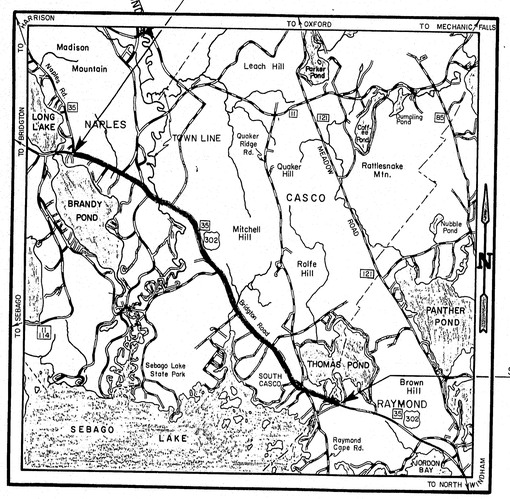
COUNTY LINES
TOWN LINES
PROPERTY LINES
R/W LINES - EXISTING
R/W LINES - NEW - ACCESS CONTROL
R/W LINES - NEW - NO ACCESS CONTROL
CULVERT - EXISTING
CULVERT - PROPOSED
CURBING - EXISTING
CURBING - PROPOSED
TRAVELLED WAY - EXISTING
TRAVELLED WAY - PROPOSED
UNDERGROUND UTILITIES - EXISTING
UNDERGROUND UTILITIES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

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2-3	TYPICAL SECTIONS
4	ESTIMATED QUANTITES/SUMMARY OF EXCAVATION & BURROW
5-6	CONSTRUCTION NOTES
7	GENERAL NOTES
8-18	STANDARD DETAILS
19	BRIDGE ESTIMATED QUANTITES / GENERAL CONSTRUCTION NOTES
20-24	BRIDGE PLANS
25-27	BRIDGE STANDARD DETAILS
28-35	PLAN SHEETS
36-52	CROSS SECTIONS
53-57	RIGHT OF WAY MAPS



LAYOUT PLAN



A PORTION OF CUMBERLAND COUNTY

SCALE: 1.0 0 1.0 2.0 3.0 4.0 5.0 MILES

TRAFFIC DATA

A.A.D.T.	1991	11,240
A.A.D.T.	2001	16,510
D.H.V.		2,310
T. (%) A.A.D.T.		8
D. (%)		52
V.	AS POSTED	
P.S.D. (%)	N/A	
18 KIPS (P2.5)		314

NOTE

All work contemplated under this contract to be governed by and in conformity with the STANDARD SPECIFICATIONS (revision of OCT. 1990) and supplementals thereto, except as modified on the plans and in the special provisions.

STATE OF MAINE RICHARD A. COLEMAN 1559 REGISTERED PROFESSIONAL ENGINEER

109-372

236

APPROVED:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION — DATE 8-6-90
COMMISSIONER

CHIEF ENGINEER — DATE 8-6-90

Revised As Built
Pelletier Apr 94

UNITED STATES
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
REGION 1

APPROVED:

DIVISION ADMINISTRATOR — DATE

BRUNING 33253 JANUARY 1993 203-1 2060

Raymond - Casco - Naples

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
201.11	CLEARING	29	AC
202.1271	REMOVING OF EXISTING BITUMINOUS PAVEMENT (530 SY)	1	LS
202.1272	REMOVING OF EXISTING BITUMINOUS PAVEMENT (225 SY)	1	LS
202.1281	REMOVING OF EXISTING CONCRETE--CURBS AND SIDEWALKS (21 CY)	1	LS
202.1282	REMOVING OF EXISTING CONCRETE--CURBS AND SIDEWALKS (4 CY)	1	LS
202.14	REMOVING EXISTING RAILINGS--PROPERTY OF CONTRACTOR	406	LF
202.203	PAVEMENT BUTT JOINTS	2300	SY
203.20	COMMON EXCAVATION	280	CY
203.24	COMMON BORROW	1,800	CY
204.41	REHABILITATION OF EXISTING SHOULDER, PLAN QUANTITY	63,600	SY
304.103	AGGREGATE SUBBASE COURSE--GRAVEL, TRUCK MEASURE	190	CY
403.07	HOT BITUMINOUS PAVEMENT, GRADING B	340	TONS
403.08	HOT BITUMINOUS PAVEMENT, GRADING C	14,000	TONS
403.10	HOT BITUMINOUS PAVEMENT, GRADING D	125	TONS
403.101	HOT BIT. PVMT., GRD D (SIDEWALKS, SHIMS, DRIVES, INCIDENTALS)	240	TONS
403.121	HOT BITUMINOUS PAVEMENT, GRADING E (SHIMMING)	5,800	TONS
409.15	BITUMINOUS TACK COAT, APPLIED	2,150	GAL
411.10	UNTREATED AGGREGATE SURFACE COURSE, TRUCK MEASURE	240	CY
502.26	STRUCT. CONC. RDWY. & SW. SLAB ON STEEL BRIDGES (22 CY)	1	LS
502.4711	SILICA FUME ADDITIVE (1,400 LBS.)	1	LS
502.70	BRIDGE DRAINS	5	EACH
502.75	PLUGGING EXISTING BRIDGE DRAINS	20	EACH
503.12	REINFORCING STEEL FABRICATED & DELIVERED	2,300	LB
503.13	REINFORCING STEEL PLACING	2,300	LB
506.1701	SURFACE PREP OF EXIST STRC STEEL	1	LS
506.1702	SURFACE PREP OF EXIST STRC STEEL	1	LS
506.1721	FIELD PAINTING EXISTING STRC. STEEL	1	LS
506.1722	FIELD PAINTING EXISTING STRC. STEEL	1	LS
506.1801	CONTAINMENT AND POLLUTION CONTROL	1	LS
506.1802	CONTAINMENT AND POLLUTION CONTROL	1	LS
506.1901	DISPOSAL OF HAZARD OR TOXIC MATERIAL	1	LS
506.1902	DISPOSAL OF HAZARD OR TOXIC MATERIAL	1	LS
507.092	ALUMINUM BRIDGE RAILING, 2 BAR	301	LF
508.1301	MEMBRANE WATERPROOFING	1	LS
508.1302	MEMBRANE WATERPROOFING	1	LS
514.06	CURING BOX FOR CONCRETE CYLINDERS	2	EACH
515.2101	PROTECTIVE COATING FOR CONCRETE SURFACES	1	LS
515.2102	PROTECTIVE COATING FOR CONCRETE SURFACES	1	LS
518.30	REHAB. OF STRUCT. CONC. SLAB--TO REINFORCING STEEL	400	SF
518.31	REHAB. OF STRUCT. CONC. SLAB--TO BELOW REINFORCING STEEL	320	SF
518.32	REHAB. OF STRUCT. CONC. SLAB--FULL DEPTH	70	SF
520.24	BRIDGE JOINT MODIFICATION	2	EACH
526.3011	TEMPORARY CONCRETE BARRIER TYPE I	1	LS
526.3012	TEMPORARY CONCRETE BARRIER TYPE I	1	LS
526.32	PERMANENT CONCRETE BARRIER TYPE III	92	LF
603.16	15 INCH CULVERT PIPE OPTION I	200	LF
603.17	18 INCH CULVERT PIPE OPTION I	20	LF
603.195	24 INCH REINF. CONC. PIPE CLASS III	60	LF
603.271	72 INCH CORREGATED METAL PIPE	18	LF
603.7372	REMOVE AND RELAY METAL PIPE : 72 INCH	32	LF
604.161	ALTER CATCH BASIN TO TYPE B1-C	2	EACH
605.09	6 INCH UNDERDRAIN TYPE B	100	LF
605.10	6 INCH UNDERDRAIN OUTLET	250	LF

• UNDETERMINED LOCATIONS

NOTE: INCLUDES BOTH BRIDGE AND HIGHWAY ITEMS.

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
606.17	GUARD RAIL TYPE 3b--SINGLE RAIL	7,325	LF
606.178	GUARD RAIL BEAM	75	LF
606.22	GUARD RAIL TYPE 3b--OVER 15 FOOT RADIUS	250	LF
606.25	TERMINAL CONNECTOR	8	EACH
606.265	TERMINAL END--SINGLE RAIL--GALVANIZED STEEL	3	EACH
606.35	GUARD RAIL DELINEATOR POST	15	EACH
606.351	GUARD RAIL DELINEATOR POST REMOVE AND RESET	30	EACH
606.364	GUARD RAIL, REMOVE AND RESET	1,175	LF
606.367	REPLACE UNUSABLE EXISTING GUARD RAIL POST	10	EACH
606.47	SINGLE WOOD POST	15	EACH
606.751	WIDEN SHOULDER FOR BREAKAWAY CABLE TERMINAL	27	EACH
606.77	BREAKAWAY CABLE TERMINAL	27	EACH
607.10	BARBED WIRE FENCE--WOOD POSTS	200	LF
609.31	CURB TYPE 3	4,050	LF
609.40	RESET CURB TYPE 5	63	LF
610.08	PLAIN RIPRAP	30	CY
610.11	STONE BLANKET	32	CY
612.06	BITUMINOUS SEALING--BLACK	540	SY
613.319	TEMPORARY EROSION CONTROL BLANKET	3,300	SY
614.18	APPLYING FERTILIZER TO EXISTING GRASSED AREAS	624	LB
615.07	LOAM	575	CY
616.08	SODDING	1,200	SY
617.30	COMPOSTED BARK MIX	2,450	CY
618.13	SEEDING METHOD NUMBER 1	55	UNIT
618.14	SEEDING METHOD NUMBER 2	335	UNIT
618.16	CROWN VETCH SEED	42	LB
618.20	ANNUAL - RYE GRASS SEED	42	LB
618.25	APPLIED WATER	18	MG
619.12	MULCH	490	UNIT
620.58	EROSION CONTROL GEOTEXTILE	64	SY
627.61	4 INCH SOLID WHITE PAVEMENT MARKING LINE	66,900	LF
627.62	4 INCH BROKEN WHITE PAVEMENT MARKING LINE	5,100	LF
627.63	4 INCH SOLID YELLOW PAVEMENT MARKING LINE	36,400	LF
627.64	4 INCH BROKEN YELLOW PAVEMENT MARKING LINE	22,300	LF
627.68	TEMP. 4" PAINTED PAVEMENT MARKING LINE, YELLOW OR WHITE	117,100	LF
629.05	HAND LABOR, STRAIGHT TIME	150	MH
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	105	HOUR
631.172	TRUCK--LARGE (INCLUDING OPERATOR)	200	HOUR
631.21	ROAD BROOM (INCLUDING OPERATOR AND HAULER)	20	HOUR
631.32	CULVERT CLEANER (INCLUDING OPERATOR)	94	HOUR
639.18	FIELD OFFICE TYPE A	1	EACH
639.22	TESTING FACILITIES BITUMINOUS MIXES	1	LS
639.23	TESTING FACILITIES CONCRETE	1	LS
643.7201	TEMPORARY TRAFFIC SIGNAL:	1	LS
643.7202	TEMPORARY TRAFFIC SIGNAL:	1	LS
652.31	TYPE I BARRICADE	100	EACH
652.311	TYPE II BARRICADE	20	EACH
652.33	DRUM	100	EACH
652.34	CONE	60	EACH
652.35	CONSTRUCTION SIGNS	1,900	SF
652.36	MAINTENANCE OF TRAFFIC CONTROL DEVICES	180	CD
652.38	FLAGGER	2,500	MH
656.50	BALED HAY, IN PLACE	54	EACH
656.51	SANDBAG, IN PLACE	54	EACH
656.55	DUMPED STONE	30	CY
656.631	15" TEMPORARY SILT FENCE	570	LF
656.632	30" TEMPORARY SILT FENCE	900	LF
658.20	ACRYLIC LATEX COLOR FINISH, GREEN	300	SY
659.10	MOBILIZATION	1	LS

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN DETAILED		
CHECKED		
REVISIONS		
FIELD CHANGES		

PLANS

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F-014-1(49)	4	57

SUMMARY OF EXCAVATION AND BORROW

COMMON EXCAVATION

COMMON EXCAVATIONS (FROM CROSS SECTIONS)	241 C.Y.
GRUBBING IN FILL	35 C.Y.
TOTAL COMMON EXCAVATION	276 C.Y.

FILL FOR BORROW CALCULATIONS

COMMON FILL (FROM CROSS SECTIONS)	1,121 C.Y.
GRUBBING IN FILL	35 C.Y.
FILL FOR DRIVES	181 C.Y.
EDGE OF SHOULDER	265 C.Y.
TOTAL FILL	1,602 C.Y.

AVAILABLE COMMON EXCAVATION FOR BORROW CALCULATIONS

(1) TOTAL COMMON EXCAVATION	276 C.Y.
GRUBBING IN CUT	189 C.Y.
GRUBBING IN FILL	35 C.Y.
(2) TOTAL DEDUCTIONS	224 C.Y.
TOTAL AVAILABLE COMMON EXCAVATION (1) MINUS (2)	52 C.Y.
TOTAL AVAILABLE NON-ROCK EXCAVATION	52 C.Y.

COMPUTATION OF WASTE STORAGE

TOTAL AVAILABLE WASTE STORAGE (FROM CROSS SECT.)	0 C.Y.
GRUBBING IN CUT	189 C.Y.
GRUBBING IN FILL	35 C.Y.
TOTAL WASTE MATERIAL	224 C.Y.

COMPUTATION OF COMMON BORROW FOR ESTIMATE

TOTAL FILL	1,602 C.Y.
TOTAL AVAILABLE NON-ROCK EXCAV. 52 X 0.85 =	44 C.Y.
AVAILABLE WASTE MATERIAL 0 X 1.00 =	0 C.Y.
TOTAL AVAILABLE EXCAVATION	44 C.Y.
TOTAL FILL MINUS TOTAL AVAILABLE EXCAVATION	1,558 C.Y.
COMMON BORROW 1,558 X 1.15 =	1,792 C.Y.

109-373

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F-019-1(99)	19	57

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY		TOTAL	UNIT
		CROOKED RIVER BRIDGE	THOMAS POND OUTLET BRIDGE		
202.1271	Removing of Existing Bituminous Pavement	1	~	1	LS
202.1272	Removing of Existing Bituminous Pavement	~	1	1	LS
202.1281	Removing Existing Conc. - Curbs & Sidewalks	1	~	1	LS
202.1282	Removing Existing Conc. - Curbs & Sidewalks	~	1	1	LS
202.19	Removing Existing Railings - Property of Cont.	314	92	406	LF
903.10	Hot Bituminous Pavement, Grading D	90	35	125	T
502.26	Struc. Conc. Rdwy. & SW Slabs On Steel Bridges (22 cy)	1	~	1	LS
502.9711	Silica Fume Additive (1900 lbs.)	.6	.9	1	LS
502.70	Bridge Drains	5	~	5	EA
502.75	Plugging Existing Bridge Drains	16	4	20	EA
503.12	Reinforcing Steel Fabricated & Delivered	2300	~	2300	LB
503.13	Reinforcing Steel Placing	2300	~	2300	LB
506.1701	Surface Preperation of Existing Struc. Steel	1	~	1	LS
506.1702	Surface Preperation of Existing Struc. Steel	~	1	1	LS
506.1721	Field Painting Existing Structural Steel	1	~	1	LS
506.1722	Field Painting Existing Structural Steel	~	1	1	LS
506.1801	Containment and Pollution Control	1	~	1	LS
506.1802	Containment and Pollution Control	~	1	1	LS
506.1901	Disposal of Hazardous or Toxic Material	1	~	1	LS
506.1902	Disposal of Hazardous or Toxic Material	~	1	1	LS
507.092	Aluminum Bridge Railing, 2 Bar	301	~	301	LF
508.1301	Membrane Waterproofing	1	~	1	LS
508.1302	Membrane Waterproofing	~	1	1	LS
514.06	Curing Box For Concrete Cylinders	1	1	2	EA
515.2101	Protective Coating For Concrete Surfaces	1	~	1	LS
515.2102	Protective Coating For Concrete Surfaces	~	1	1	LS
518.30	Rehab. of Struc. Conc. Slab - To Rein. Steel	280	120	400	SF
518.31	Rehab. of Struc. Conc. Slab - To Below Rein. Steel	260	60	320	SF
518.32	Rehab. of Struc. Conc. Slab - Full Depth	50	20	70	SF
520.24	Bridge Joint Modification - Compression Seal	2	~	2	EA
526.3011	Temporary Concrete Barrier Type I	1	~	1	LS
526.3012	Temporary Concrete Barrier Type I	~	1	1	LS
526.32	Permanent Concrete Barrier Type III	~	92	92	LF
606.25	Terminal Connector	4	4	8	EA
639.23	Testing Facilities Concrete	.6	.4	1	LS
643.7201	Temporary Traffic Signal	1	~	1	LS
643.7202	Temporary Traffic Signal	~	1	1	LS
652.31	Type I Barricade	20	20	40	EA
652.34	Cone	5	5	10	EA
652.35	Construction Signs	200	200	400	SF
652.36	Maintenance Of Traffic Control Devices	40	40	80	CD
652.38	Flagger	50	50	100	MH

★ BRIDGE ITEMS ONLY

JANUARY 1988

PROJECT DESIGN ENGINEER	BY	DATE
PLANS DESIGN - DETAILED	S.Lebrun	2-91
CHECKED		
REVISIONS		
FIELD CHANGES		

GENERAL CONSTRUCTION NOTES

1.) Existing reinforcing steel that has been exposed from concrete removal that will be on a finished concrete surface shall be removed to two inches below the finish surface and the holes shall be filled with an approved non-shrink grout. Payment will be incidental to related contract items.

2.) The new curb stirrups for Crooked River Bridge and the new concrete barrier bars for Thomas Pond Outlet Bridge shall be drilled and grouted by a method approved by the Engineer and shall meet in place proof load requirements for unconfined pull out of 11,300 lbs. service load. Proof loading will be the responsibility of the Department and will be done at the discretion of the Engineer. Minimum set time for proof loading shall be specified by the Contractor. The minimum proof loading obtained will be 150% of Service Load. Payment for labor, materials and all incidentals required to complete this work shall be considered incidental to Item 503.13 Reinforcing Steel Placing.

3.) Replace existing bridge drains as indicated on the plans for Crooked River Bridge. All other existing bridge drains for the two bridges shall be plugged.

4.) Protective coating shall be applied to all new concrete surfaces and to the face of the existing fascias.

5.) All existing structural steel shall be cleaned and painted. Payment will be made under Items 506.17 Surface Preperation of Existing Structural Steel and 506.172 Field Painting Existing Structural Steel.

6.) All curb and barrier concrete shall contain a Silica Fume Additive.

7.) Reinforcing steel shall have 2 inches cover unless otherwise indicated.

8.) Removal of existing bituminous pavement will be paid for under Item 202.1271 or 202.1272, Removing of Existing Bituminous Pavement.

9.) Existing reinforcing steel to remain shall be cleaned as directed prior to placing new concrete.

10.) All utility facilities shall be adjusted by the respective utilities unless noted. The utilities are:
Thomas Pond Outlet Bridge —
Central Maine Power
New England Telephone
Casco-Raymond Fire Department
Crooked River Bridge —
Central Maine Power
New England Telephone

11.) The top of the concrete slab where concrete has been removed or rehabilitated shall be prepared to a suitable surface to receive the membrane waterproofing by a method approved by the Engineer. Payment for all labor, materials and equipment will be incidental to related contract items.

12.) At the Contractor's option an approved quick set concrete mix may be used to patch the concrete decks in accordance with Section 518 of the Standard Specifications.

13.) The existing concrete, as shown on the plans, shall be removed so as to not damage the existing vertical reinforcing steel in the curb, the existing vertical and horizontal reinforcing steel in the abutment backwalls or the existing vertical and horizontal reinforcing steel in the deck. Any damaged reinforcing steel shall be replaced at the Contractor's expense. Payment will be made under Item 202.1281 or 202.1282 Removing Existing Concrete - Curbs & Sidewalks.

14.) The dimensions shown on the plans are based on the existing bridge plans. The Contractor shall verify existing needed dimensions before beginning work.

15.) The existing concrete bridge railings shall be removed. Payment will be made under Item 202.19 Removing Existing Railings - Property of Contractor.

NOTE: Plans of the existing bridge are available for the Contractor's reference at the Bridge Design office in Augusta. The plans are reproductions of the original drawings as prepared for the construction of the bridge and it is very unlikely that the plans will show any construction field changes or any alterations which may have been made to the bridge during its life span.

109-374 237

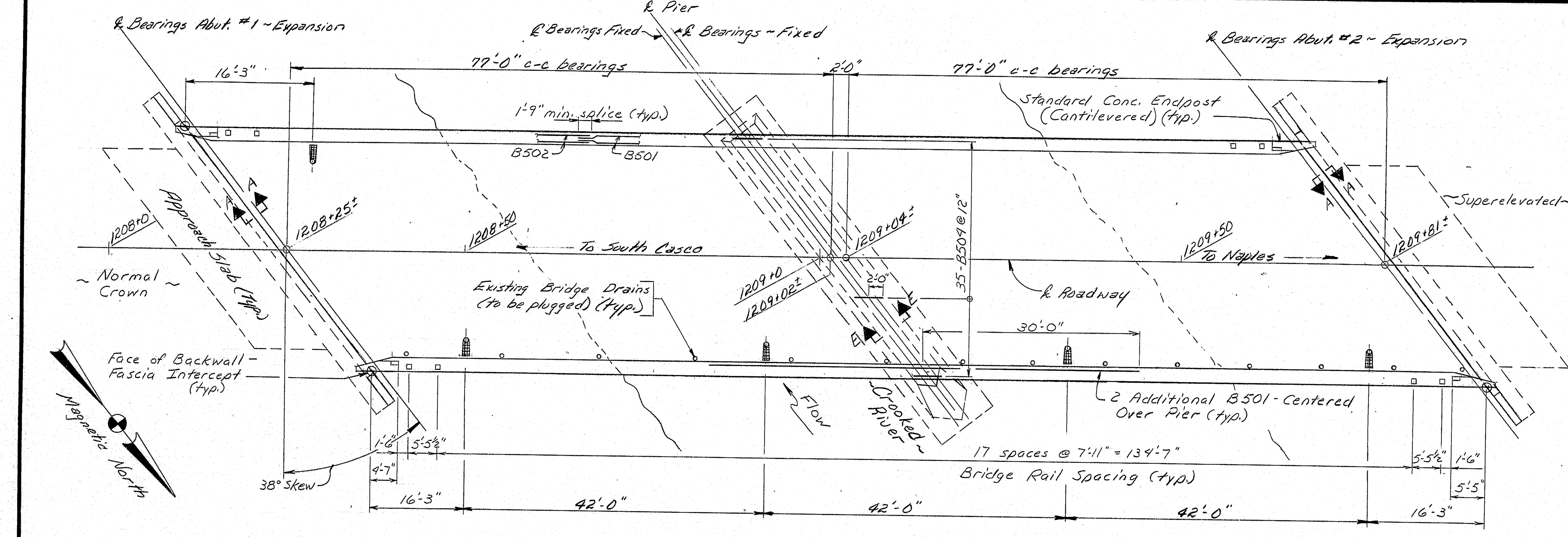
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

CROOKED RIVER BRIDGE
CROOKED RIVER
THOMAS POND OUTLET BRIDGE
DINGLEY BROOK
BETWEEN
NAPLES - CASCO
CASCO - RAYMOND
CUMBERLAND COUNTY
ESTIMATED QUANTITIES

SHEET 1 OF 4 AUGUSTA, MAINE

RAYMOND - CASCO - NAPLES RTE. 302

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F-014-1(49)	20	57



PLAN

SCOPE OF WORK

- Remove existing wearing surface, concrete curb, and bridge rail.
- Rehabilitate Structural Concrete slab.
- Modify tops of backwalls and/or superstructure slab, as necessary to install new sealed joints.
- Construct new concrete curbs, end posts and install new bridge rail
- Plug existing bridge drains and install new bridge drains.
- Construct new wearing surface with membrane waterproofing.
- Clean and paint existing structural steel.

SEQUENCE OF CONSTRUCTION

STAGE I - Install Traffic Control Devices to maintain 22'-0" clear roadway on right side.
- Remove and replace rail and curb on left side.
- Place temporary pavement to grade.
- Plug existing drains and install new drains.

STAGE II - Reset Traffic Control Devices to maintain 22'-0" clear roadway on left side.
- Remove and replace rail and curb on right side.
- Plug existing drains and install new drains.

STAGE III - Reset Traffic Control Devices to maintain 12'-8" one lane roadway with traffic signals on left side.
- Remove existing bituminous pavement on right side.
- Rehabilitate superstructure slab on right side.
- Place membrane waterproofing and hot bituminous pavement on right side.

STAGE IV - Reset Traffic Control Devices to maintain 12'-8" one lane roadway with traffic signals on right side.
- Remove existing bituminous pavement on left side.
- Rehabilitate superstructure slab on left side.
- Place membrane waterproofing and hot bituminous pavement on left side.

SPECIFICATIONS

DESIGN: Load Factor Design per AASHTO Standard Specifications for Highway Bridges 1989 With Interim Specifications Thru 1990.

CONTRACT: State of Maine, Department of Transportation, Standard Specifications, Highways and Bridges, Revision of October 1990.

DESIGN LOADING

LIVE LOAD: HS20 (Existing)

MATERIALS

CONCRETE: (unless otherwise specified) Class A

REINFORCING STEEL: ASTM A615 Grade 60

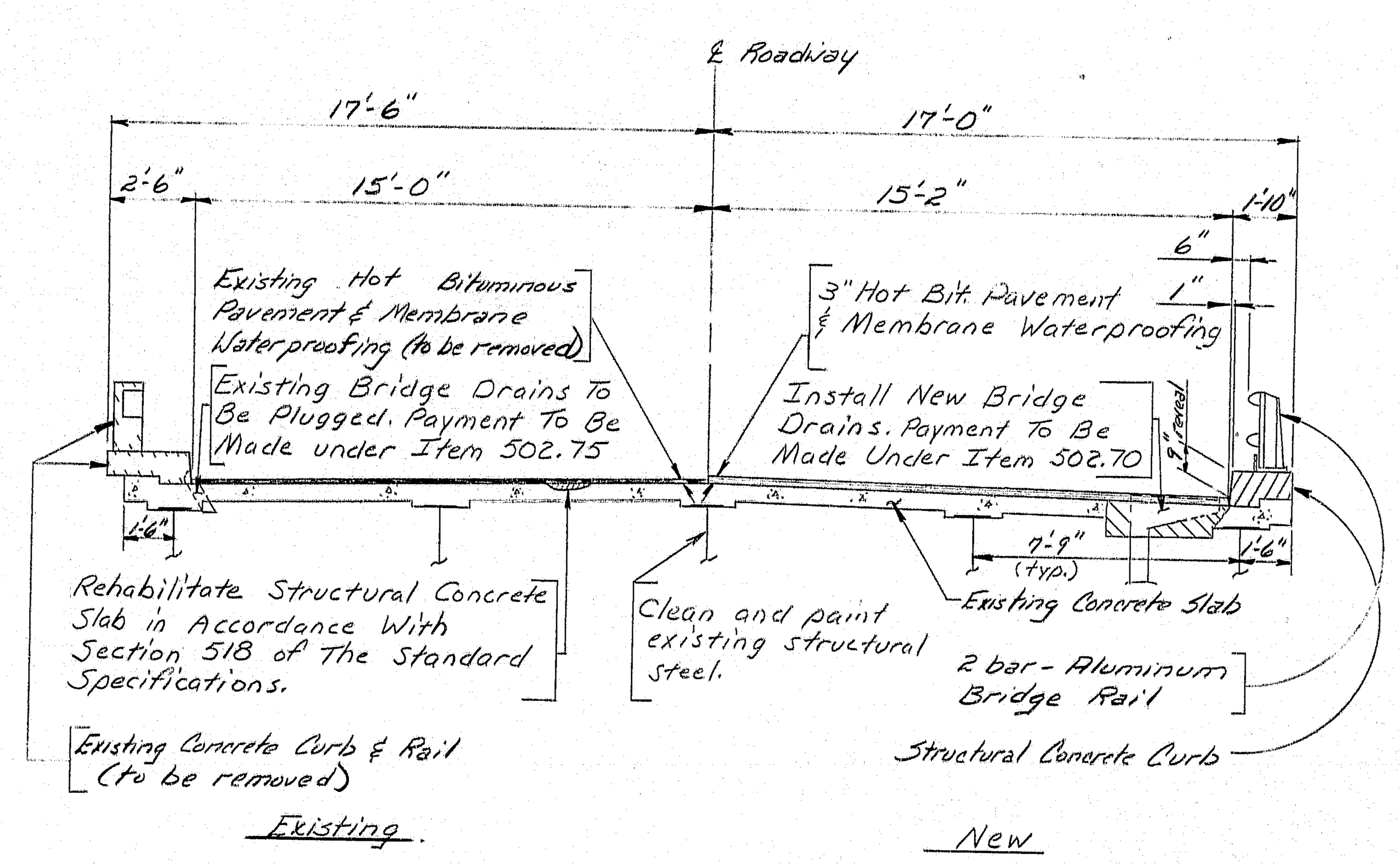
BASIC DESIGN STRESSES

CONCRETE: f'c = 3,000 psi

REINFORCING STEEL: fy = 60,000 psi

TRAFFIC DATA

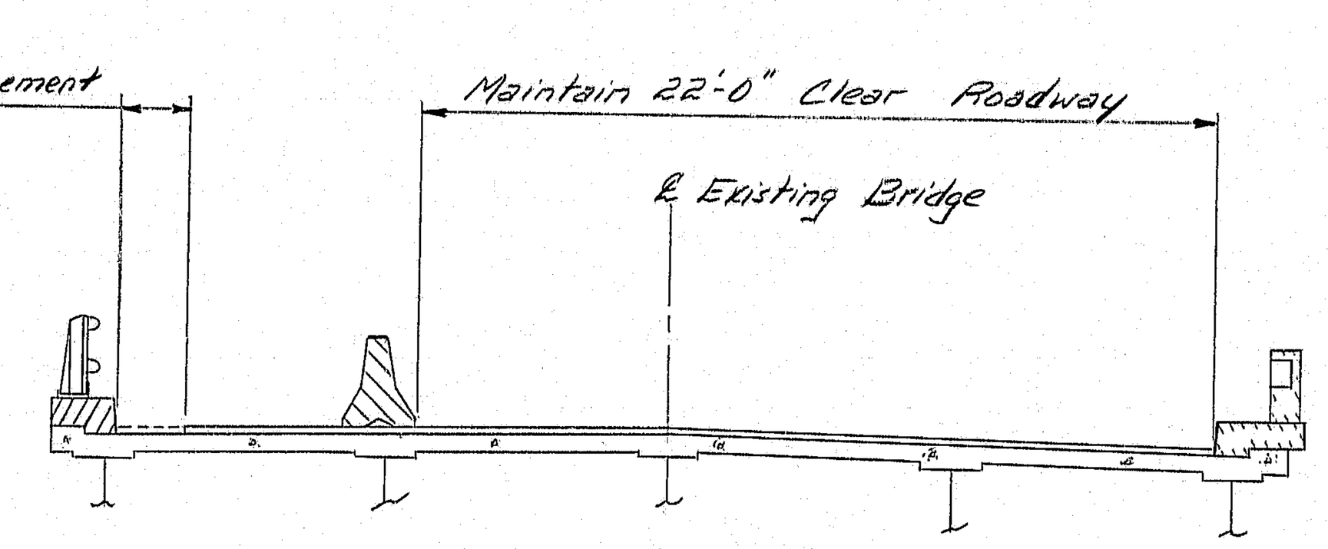
AADT 1991 = 11,240
AADT 2001 = 16,510
DHV = 2,310
T % = 5
D % = 52
V = 55
18 Kips (P2.5) = 314



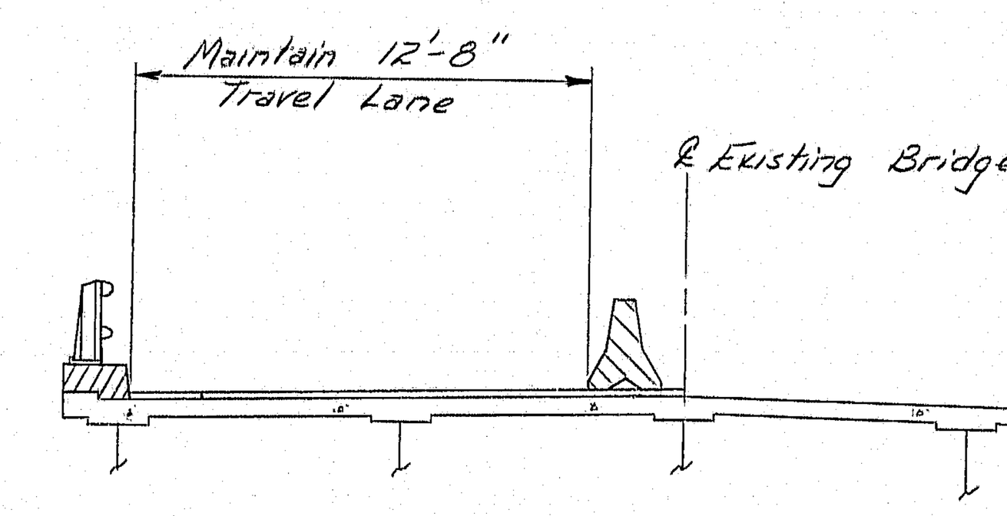
BRIDGE SECTION

NOTE: Variable Crown approaching Superelevated Section.

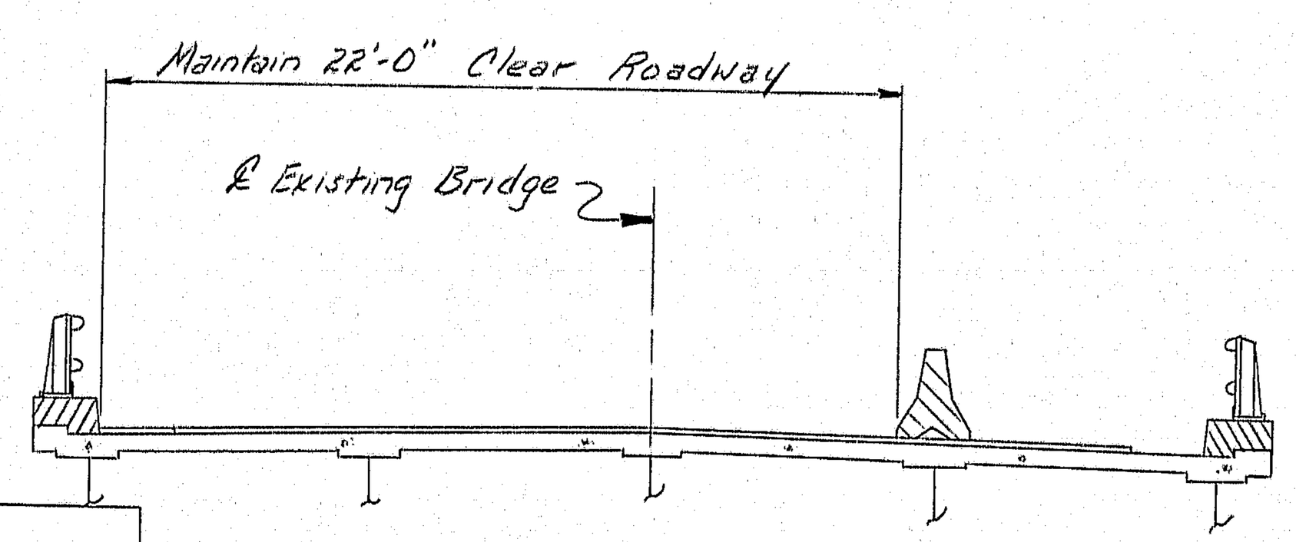
LEGEND	
Concrete To Be Removed	▭
Concrete To Remain	▦
New Concrete	▨



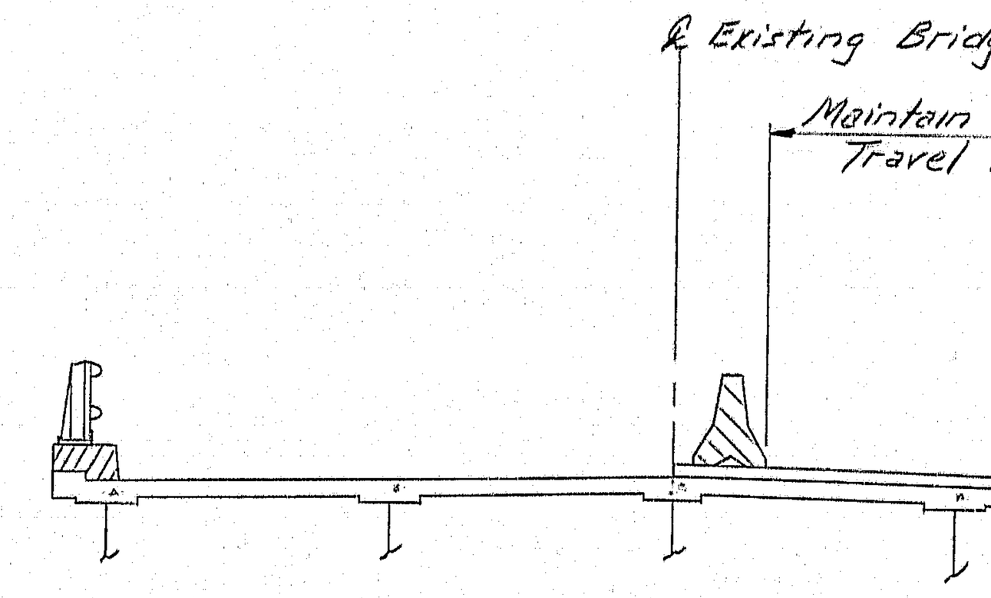
STAGE I



STAGE III

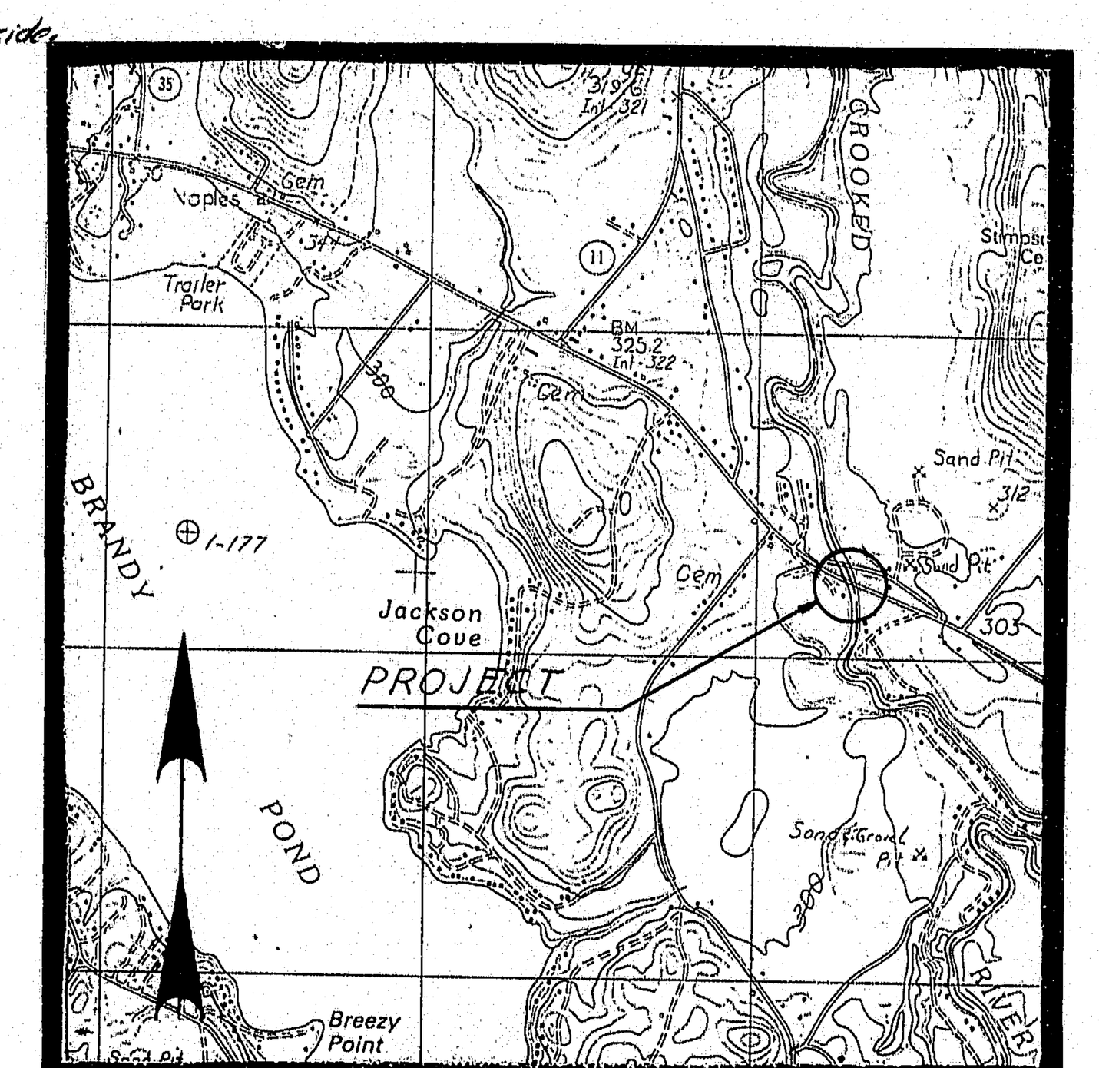


STAGE II



STAGE IV

MAINTENANCE OF TRAFFIC



LOCATION MAP

Scale of miles

.5 0 .5 1

238

Reference = Existing Plans
Bridge #2200 Pin # 002844.00

109-375

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

CROOKED RIVER BRIDGE

CROOKED RIVER
BETWEEN
NAPLES - CASCO
CUMBERLAND COUNTY
GENERAL PLAN

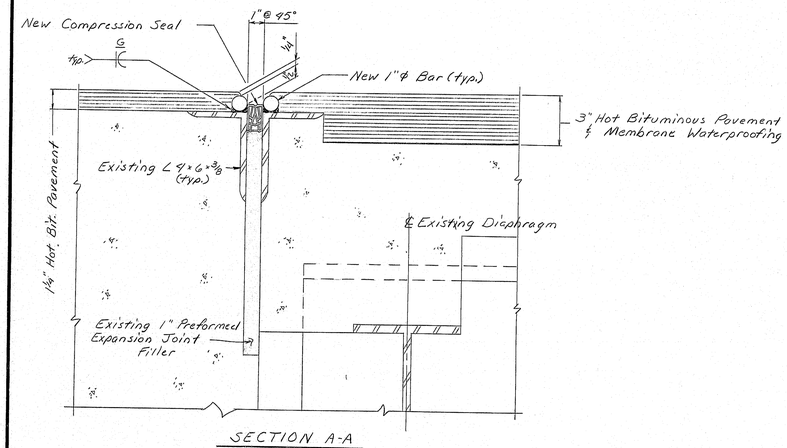
SHEET 2 OF 4 AUGUSTA, MAINE

RAYMOND-CASCO-NAPLES RTE. 302

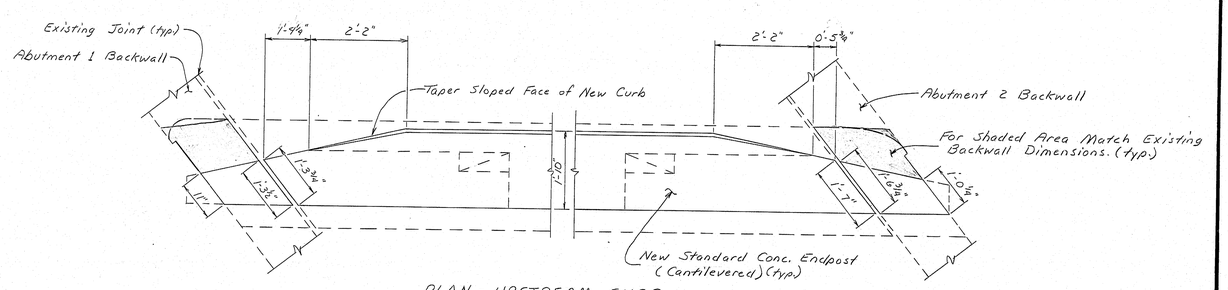
PROJECT DESIGN ENGINEER	BY	DATE
PLANS DESIGN - DETAILED	RJN	11/90
CHECKED		
REVISIONS		
FIELD CHANGES		

BRUNING 45710-1

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F-019-1(99)	21	57



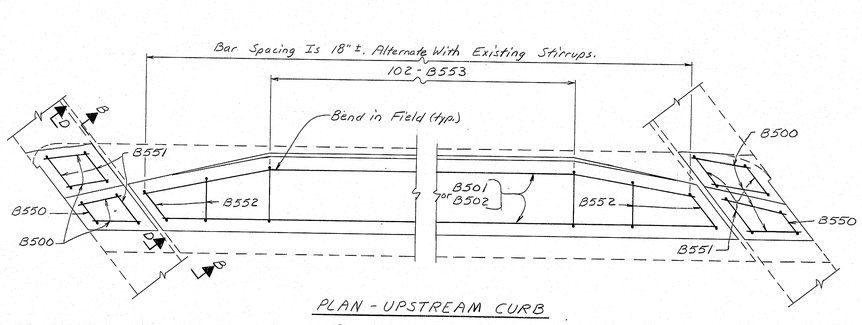
SECTION A-A



PLAN - UPSTREAM CURB

DIMENSIONS

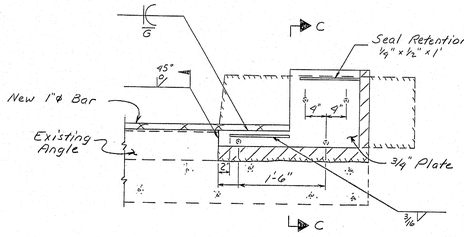
(Downstream Curb Similar)



PLAN - UPSTREAM CURB

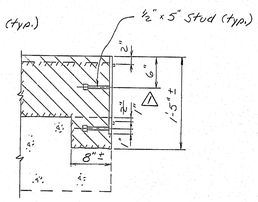
REINFORCING STEEL

(Downstream Curb Similar)

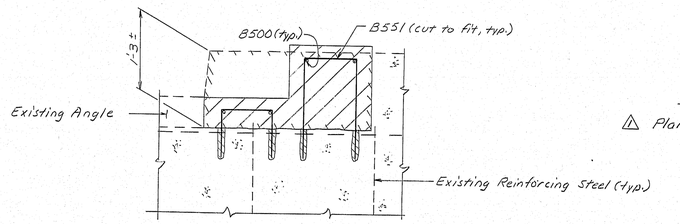


SECTION B-B

Superstructure Element Shown
Backwall Element Similar
Typical Each Corner



SECTION C-C



SECTION D-D

(Typical Each Corner)

109-376

239

REVISIONS

△ Plan Change 9-91

PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN - DETAILED	S. Cebrun	12-90
CHECKED		
REVISIONS		
FIELD CHANGES		

BRUNING 45710-1

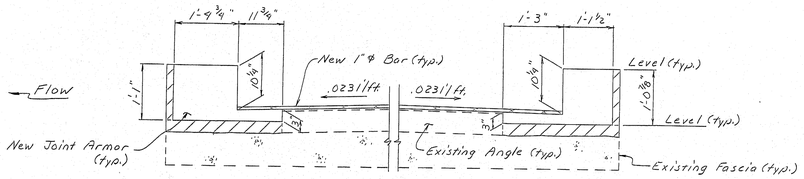
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

CROOKED RIVER BRIDGE
CROOKED RIVER
BETWEEN
NAPLES - CASCO
CUMBERLAND COUNTY
DETAILS

SHEET 3 OF 9 AUGUSTA, MAINE

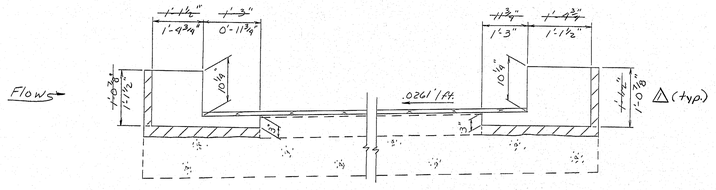
RAYMOND - CASCO - NAPLES RTE. 302

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F-019-1(49)	22	57

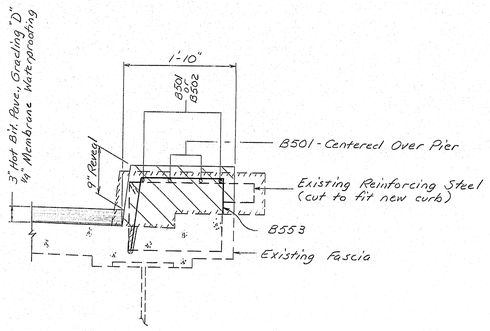


ABUTMENT 1 - SUPERSTRUCTURE JOINT ARMOR
(Backwall Joint Armor Similar)

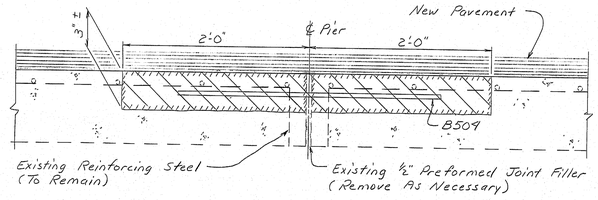
Note: All dimensions are normal to the joint openings.



ABUTMENT 2 - SUPERSTRUCTURE JOINT ARMOR
(Backwall Joint Armor Similar)



TYPICAL CURB SECTION

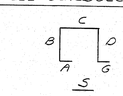


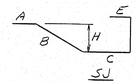
SECTION E-E

REINFORCING STEEL SCHEDULE

STRAIGHT BARS

Mark	No.	Length	Location
EP900	29	2'-0"	End Post
EP905	10	1'-10"	End Post
B500	16	1'-9"	Backwall
B501	12	60'-0"	Curb
B502	4	92'-0"	Curb
B509	35	4'-0"	Deck





BENT BARS

Mark	No.	Length	Type	A	B	C	D	E	F	G	H	Location
EP901	16	4'-11"	S	0	2'-0	0'-11	2'-0			0		End Post
EP902	8	4'-6"	S	0	2'-0	0'-6	2'-0			0		↓
EP500	16	7'-10"	S	0	5'-6	0'-7	1'-9			0		
EP501	16	6'-8"	SJ	0	3'-1	2'-7	1'-0	0			0-8	
EP502	16	4'-7"	S	0	1'-10	0'-11	1'-10			0		
EP503	8	4'-2"	S	0	1'-10	0'-6	1'-10			0		↓
B550	9	3'-11"	S	0	1'-8	0'-7	1'-8			0		Backwall
B551	12	4'-3"	S	0	1'-8	0'-11	1'-8			0		Backwall
B552	8	2'-8"	S	0	1'-1	1'-2	0'-5					Curb
B553	204	2'-11	S	0	1'-1	1'-5						Curb

All dimensions are out to out of reinforcing bar.
Bending details and hooks shall conform to the recommendations of ACI Standard 315-65.
Reinforcing Bar: ASTM A615 Grade 60.

NOTES

1) The seal to be furnished shall be D.S. Brown H-1625, Wabo WA-162 or approved equal.

2) The preformed expansion joint filler at the Abutments shall be used to support the new compression seals. The existing filler shall be removed to 1½ below the top of the existing joint armor. If the existing filler is not present or useable new preformed expansion joint filler shall be added to bring the level of the filler to the required height as directed by the Engineer. Payment for all work involving the expansion joint filler will be incidental to related contract items.

3) Removal and replacement of concrete necessary to modify existing slab joint over the pier shall be paid for under the applicable pay item in section 518 of the Standard Specifications.

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	S.Lebrun	2-91
CHECKED		
REVISIONS		
FIELD CHANGES		

PLANS

45710-1 BRUNING

REVISIONS

△ Plan Change 9-91

109-377 240

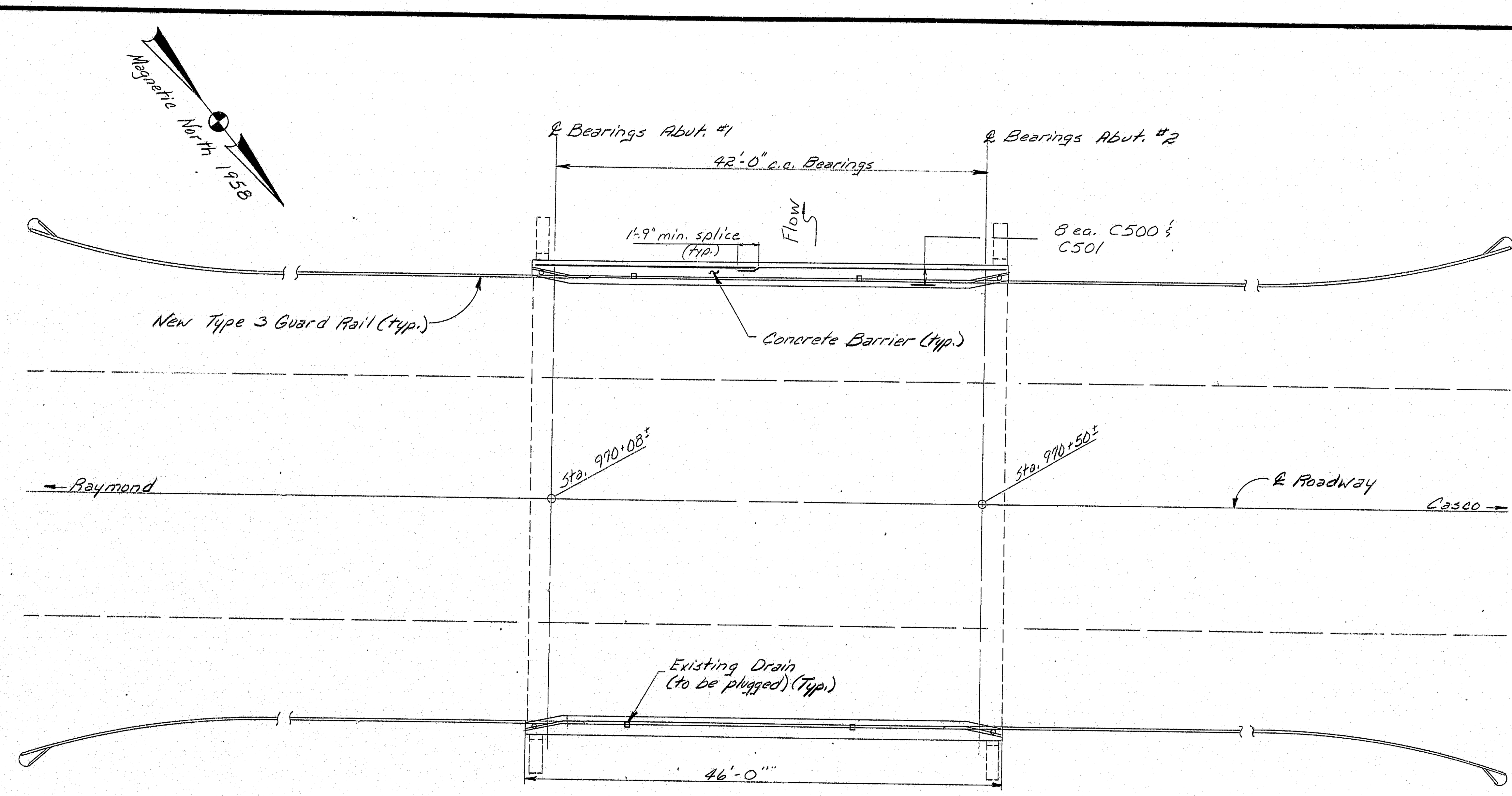
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

CROOKED RIVER BRIDGE
CROOKED RIVER
BETWEEN
NAPLES - CASCO
CUMBERLAND COUNTY
DETAILS

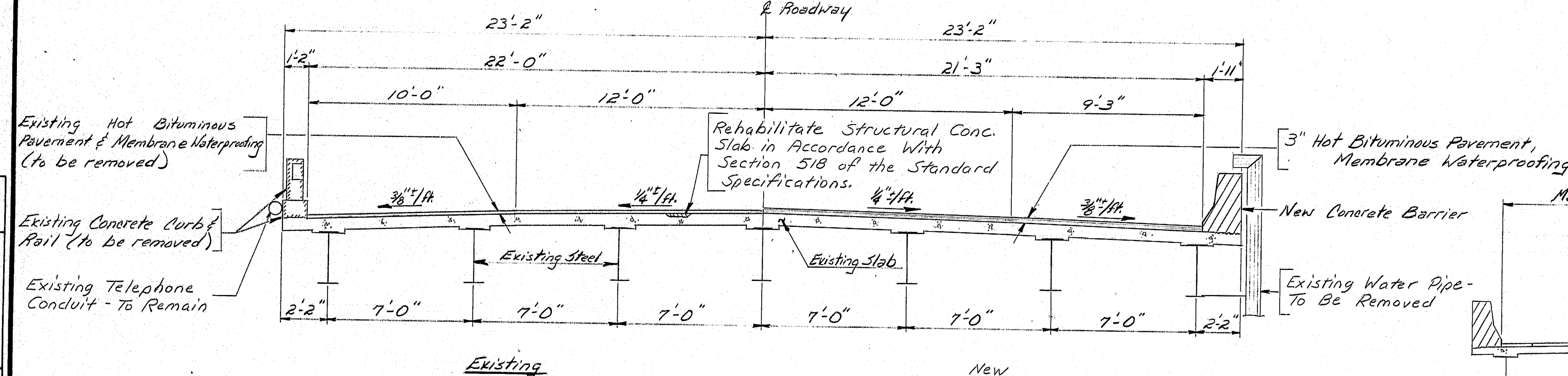
SHEET 4 OF 4 AUGUSTA, MAINE

RAYMOND - CASCO - NAPLES RTE. 302

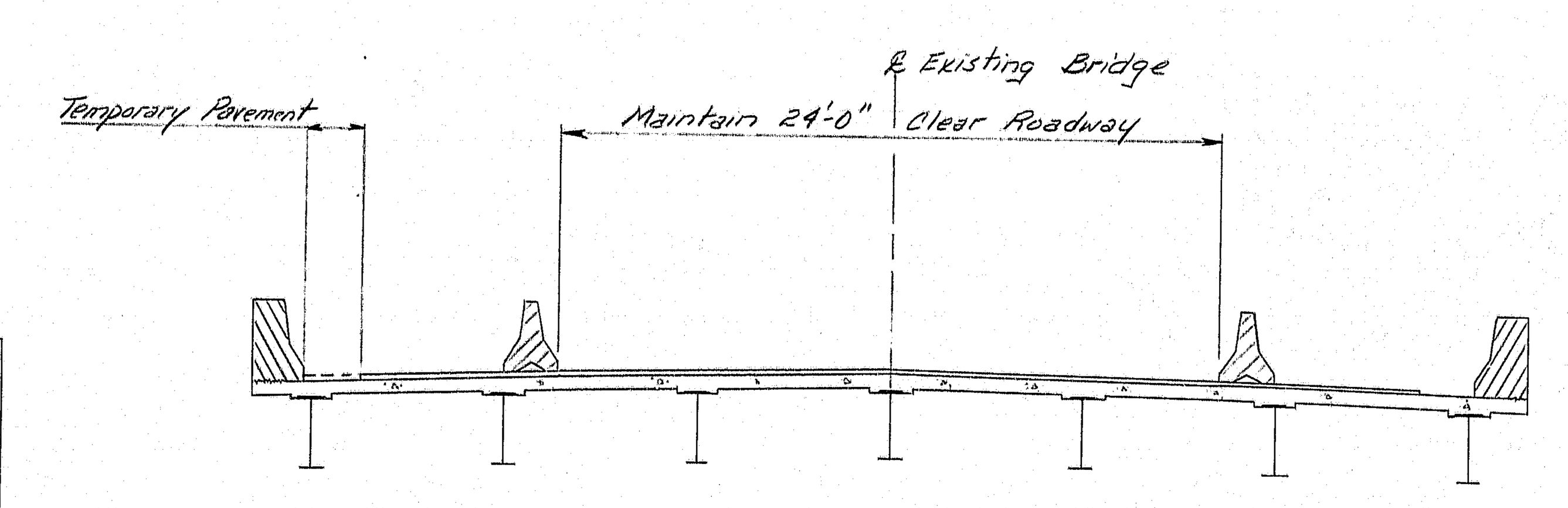
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F-014-1(49)	23	57



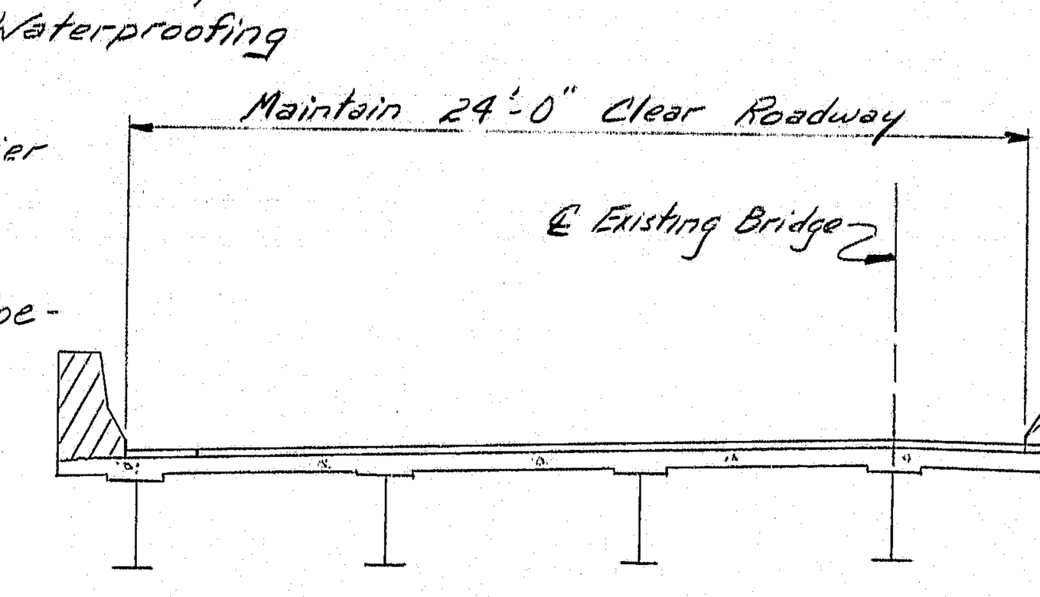
PLAN



TYPICAL BRIDGE SECTION



STAGE I



STAGE II

℄ Existing Bridge

Maintain 12'-6" Travel Lane

STAGE III

MAINTENANCE OF TRAFFIC

LEGEND	
Concrete To Be Removed	▨
Concrete To Remain	▨
New Concrete	▨

SCOPE OF WORK

- Remove existing wearing surface.
- Rehabilitate existing concrete deck.
- Remove existing concrete curb and rail.
- Construct new concrete barriers.
- Construct new wearing surface with membrane waterproofing.
- Remove existing cable type guard rail and install new beam type guard rail.
- Clean and paint existing structural steel and bearings.
- Plug existing drains.

SEQUENCE OF CONSTRUCTION

STAGE I - Install Traffic Control Devices to maintain 24'-0" clear roadway in center of bridge.
- Remove existing rail and curb both sides.
- Place new concrete barriers both sides.
- Place temporary pavement left side.

STAGE II - Reset Traffic Control Devices to maintain 24'-0" clear roadway on left side.
- Remove existing bituminous pavement right side.
- Rehabilitate superstructure slab on right side.
- Place membrane waterproofing and hot bituminous pavement on right side.

STAGE III - Reset Traffic Control Devices to maintain 12'-6" one lane roadway with traffic signals on right side.
- Remove existing bituminous pavement left side.
- Rehabilitate superstructure slab on left side.
- Place membrane waterproofing and hot bituminous pavement on left side.

SPECIFICATIONS

DESIGN: Load Factor Design per AASHTO Standard Specifications for Highway Bridges 1989 with Interim Specifications Thru 1990.

CONTRACT: State of Maine, Department of Transportation, Standard Specifications, Highways and Bridges, Revision of October, 1990.

DESIGN LOADING

LIVE LOAD: __________ HS20 (Existing)

MATERIALS

CONCRETE: (unless otherwise specified): Class "A"

REINFORCING STEEL: ___ ASTM A615 Grade 60

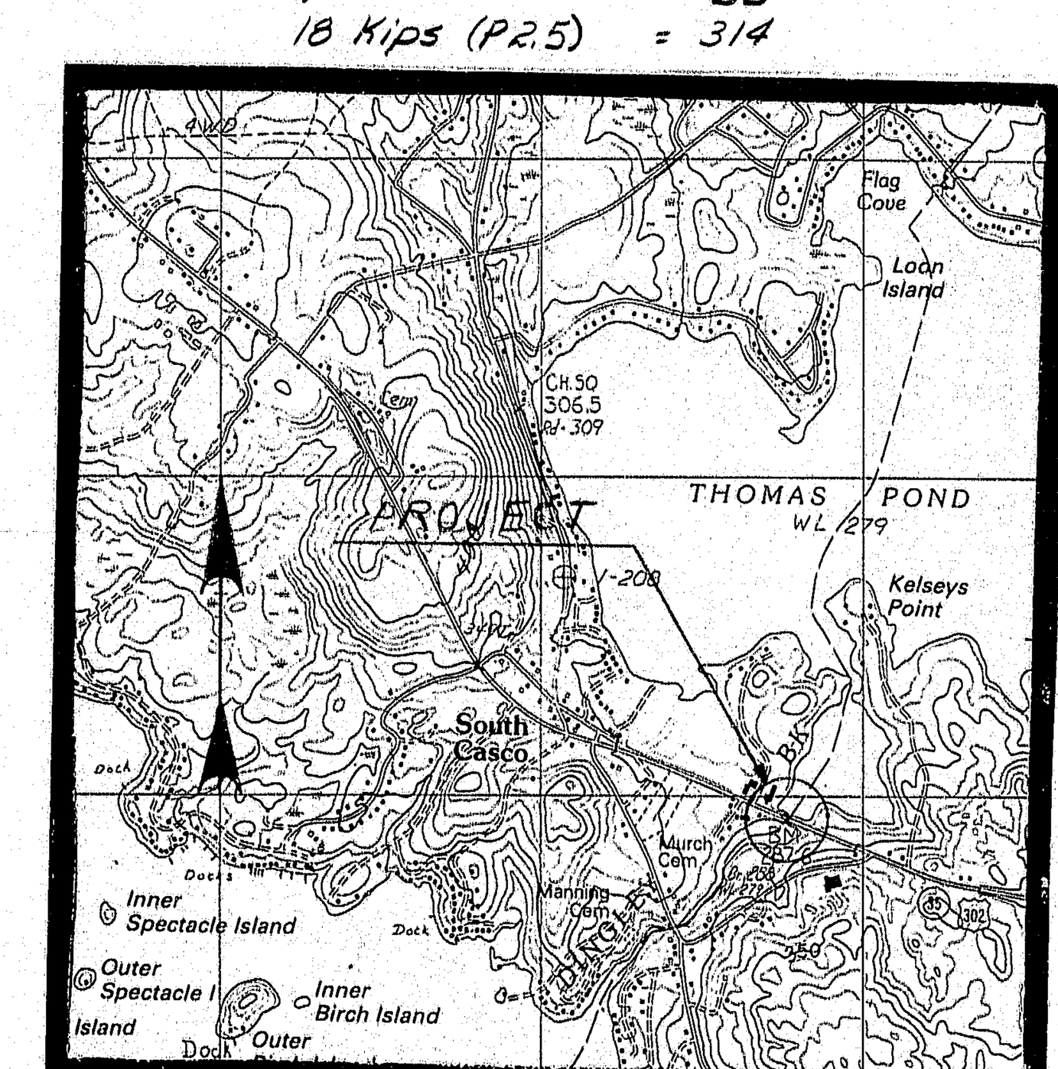
BASIC DESIGN STRESSES

CONCRETE: ___________ f'c = 3000 psi

REINFORCING STEEL: ______ fy = 60,000 psi

TRAFFIC DATA

AADT 1991	= 11,240
AADT 2001	= 16,510
DHV	= 2,310
T%	= 5
D%	= 52
V	= 55
18 Kips (P2.5)	= 314



LOCATION MAP

Scale of miles

.5 0 .5 1.0

109-378

241

Reference = Existing Plans Bridge #2847 P.I.N. # 002844.00

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	RJN	10/90
	CHECKED	S. Lebrun	2-91
	REVISIONS		
	FIELD CHANGES		

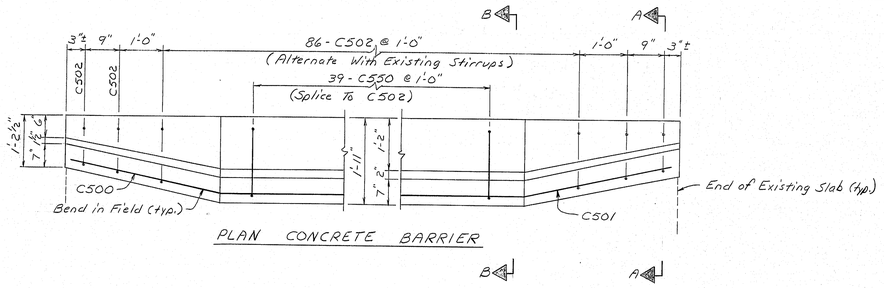
BRUNING 45710-1

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

THOMAS POND OUTLET BRIDGE
OVER
DINGLEY BROOK
BETWEEN THE TOWNS OF
CASCO-RAYMOND
CUMBERLAND COUNTY
GENERAL PLAN
SHEET 1 OF 2 AUGUSTA, MAINE

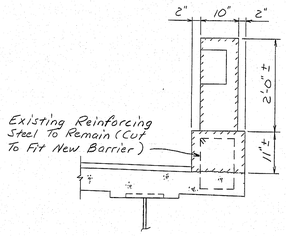
RAYMOND - CASCO - NAPLES RTE 302

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F-019-1(49)	24	57

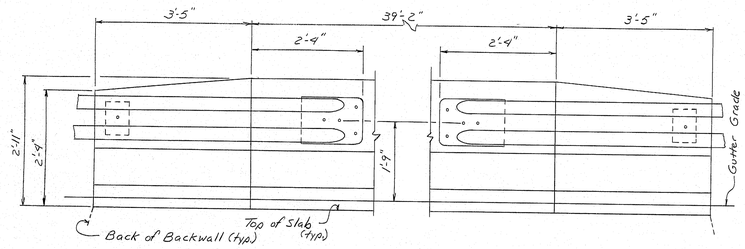


PLAN CONCRETE BARRIER

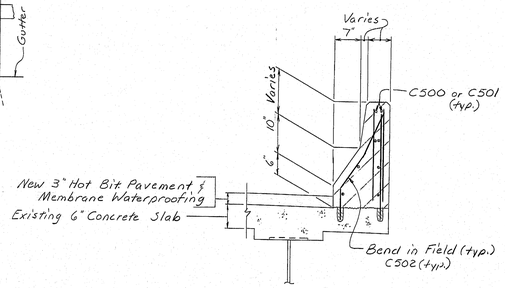
Note: For details not shown see BD 201-89



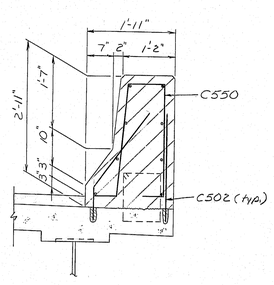
TYPICAL EXISTING CURB SECTION



ELEVATION CONCRETE BARRIER

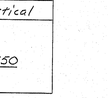


SECTION A-A

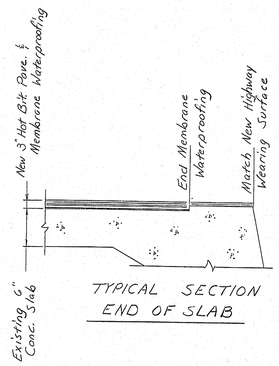


SECTION B-B

REINFORCING STEEL SCHEDULE			
STRAIGHT BARS			
Mark	No.	Length	Location
C500	16	20'-0"	Horizontal
C501	16	27'-9"	"
C502	188	2'-9"	Vertical
BENT BAR			
C550	78	6'-10"	Vertical



1) All dimensions are out to out of reinforcing bar.
2) Bending details and hooks shall conform to the recommendations of the current revision of ACI Standard 318.
3) Reinforcing Bar: ASTM A615 Grade 60



TYPICAL SECTION END OF SLAB

PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN - DETAILED	S.L.Lebrun	2-91
CHECKED		
REVISIONS		
FIELD CHANGES		

BRINNING 457101

109-379 242

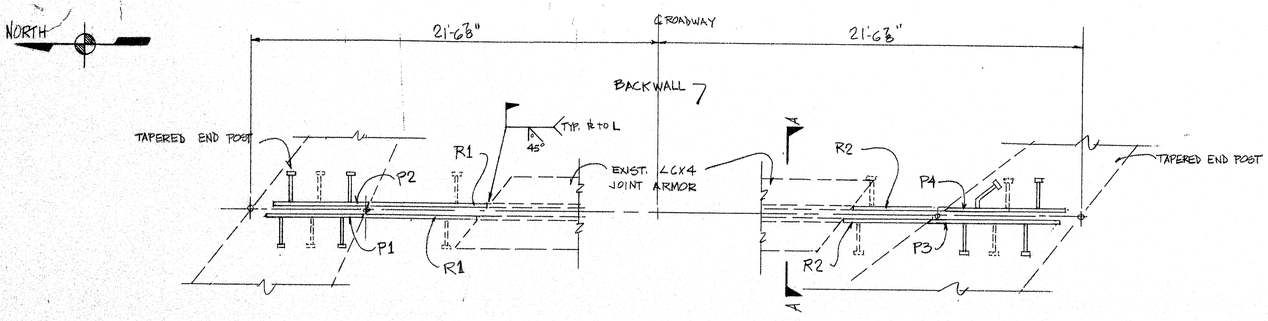
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

THOMAS POND OUTLET BRIDGE
OVER
DINGLEY BROOK
BETWEEN THE TOWNS OF
CASCO - RAYMOND
CUMBERLAND COUNTY
DETAILS

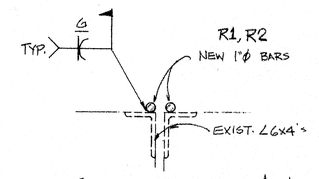
SHEET 2 OF 2 AUGUSTA, MAINE

RAYMOND-CASCO-NAPLES RTE. 302

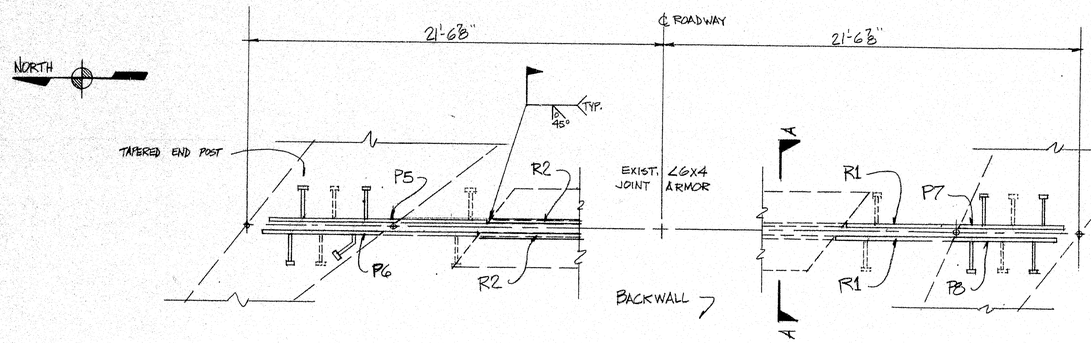
#69



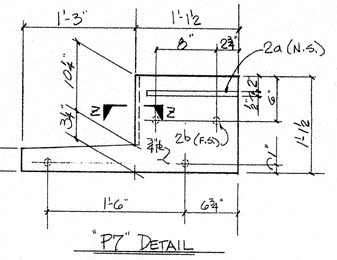
ABUTMENT #1 (PLAN VIEW)

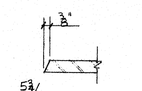


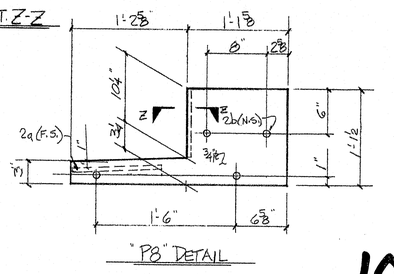
TYPICAL SECTION A-A

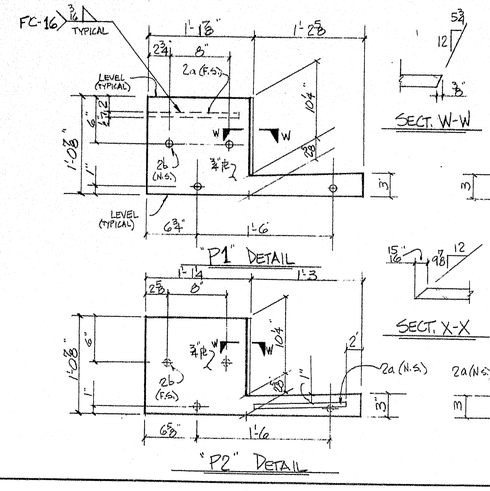


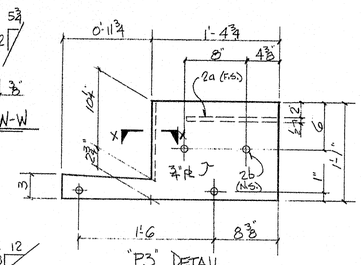
ABUTMENT #2 (PLAN VIEW)

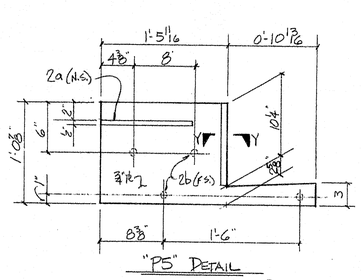


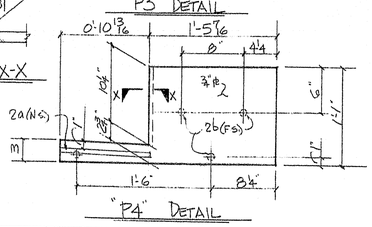


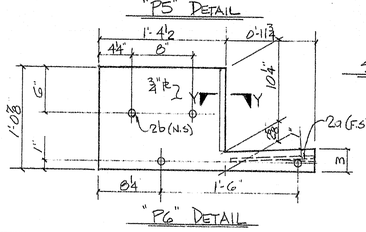


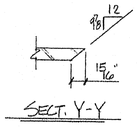












BILL OF MATERIAL

QTY.	MARK	SHAPE	LENGTH		REMARKS
* ONE	P1	PB ⅜ X 12⅜	2	4½	TEMP.
* ONE	P2	PB ⅜ X 12⅜	2	4¼	TEMP.
2	2a	PB 4 X ½	1	0	
8	2b	½ϕ STUDS	0	5	
* ONE	P3	PB ⅜ X 13	2	4½	TEMP.
* ONE	P4	PB ⅜ X 13	2	4¼	TEMP.
2	2a		1	0	
8	2b		0	5	
* ONE	P5	PB ⅜ X 13½	2	4½	TEMP.
* ONE	P6	PB ⅜ X 13½	2	4¼	TEMP.
2	2a		1	0	
8	2b		0	5	
* ONE	P7	PB ⅜ X 12⅜"	2	4½	TEMP.
* ONE	P8	PB ⅜ X 12⅜"	2	4¼	TEMP.
2	2a		1	0	
8	2b		0	5	
* 4	R1	1"ϕ H.R.	20	5½"	C.T.L. IN FIELD
* 4	R2	1"ϕ H.R.	20	2"	C.T.L. IN FIELD

OFFICE COPY (1)
RECEIVED SEP 2 4
CHECKED BY
REVIEWED BY 11/9/25/91

Notes
All Steel to be AASHTO M183 (ASTM A-36)
Compression Seal to be H-1625 as manufactured by the D.S. Brown Co., Field installed in one piece w/Approved Lubricant Adhesive.
Shop paint per State of Maine Approval Basic Lead Silico Chromate (2 coats). Paint all exposed surfaces of plate UNDER compression seal only. Blast clean per SSPC-SP6.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
☑ Approved ☐ Returned for Corrections
SEP 24 1991
☐ Approved as noted ☐ Rejected
K. Jacobs
WELDING ENGR

107-9

DRAWING COVERS:
EXPANSION JOINT REHAB

REV. NO.	DATE	DESCRIPTION
HOLES		
PAINT		

DATE SUB.	9-3-91
	9-19-91
DATE APP.	
DATE DIST.	9-19
PROJECT	RAYMOND - CASCO - NAPLES, ME.
	CROOKED RIVER BRIDGE F-014-1(99)
LOCATION	
ARCHITECT	
ENGINEER	MAINE D.O.T.
CUSTOMER	BRIDGE CONSTRUCTION

MERRIMACK SHEET METAL
119 HALL ST.
CONCORD N.H.
03301
Tel. (603)224-7766
Fax (603)224-7925

DRAWN BY: RGS
CKD. BY
JOB NO. 4833
DWG. NO. ED-1