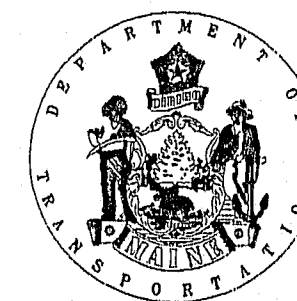


STATE OF MAINE DEPARTMENT OF TRANSPORTATION



PLANS

I-95 N.B. BRIDGES OVER PISCATAQUIS R.-SEBOEIS RD.-MATTAMISCONTIS STR. IN THE TOWNS OF HOWLAND AND T2R8 & LINCOLN SPUR OVER I-95 N.B. & S.B. IN THE TOWN OF T2R8 PENOBSCOT COUNTY PROJECT NO. IR-IM-95-8(147)

SPECIFICATIONS

DESIGN: LOAD FACTOR DESIGN PER AASHTO STANDARD SPECIFICATIONS FOR
HIGHWAY BRIDGES 1989 AND INTERIM SPECIFICATIONS 1990, 1991.

CONTRACT: STATE OF MAINE, DEPARTMENT OF TRANSPORTATION, STANDARD
SPECIFICATIONS, HIGHWAYS AND BRIDGES, REVISION OF OCTOBER 1990.

MATERIALS

CONCRETE: ENDOPOSTS..... CLASS A
CONCRETE REPAIR..... CLASS AA
ALL OTHER..... CLASS A
STRUCTURAL STEEL..... ASTM A36
REINFORCING STEEL..... ASTM A615 GRADE 60

BASIC DESIGN STRESSES

CONCRETE..... $f'_c = 3,000$ psi
REINFORCING STEEL..... (NEW) $f_y = 60,000$ psi
(EXISTING) $f_y = 24,000$ psi
STRUCTURAL STEEL: ASTM A36..... $F_y = 36,000$ psi

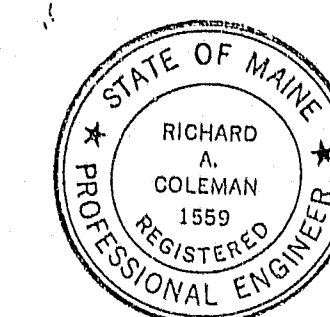
Plans of existing bridge are available for the Contractor's reference at the Bridge Design office in Augusta. The plans are reproductions of original drawings as prepared for the construction of the bridge and it is very unlikely that the plans will show any construction field changes or any alterations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

NOTE
ALL WORK CONTEMPLATED UNDER THIS CONTRACT TO BE GOVERNED BY AND IN CONFORMITY WITH THE STANDARD SPECIFICATIONS (REVISION OF OCTOBER 1990) AND SUPPLEMENTALS THERETO AS MODIFIED ON THE PLANS AND IN THE SPECIAL PROVISIONS.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	IR-IM-95-8(147)	1	14
		PIN	004200.00	

INDEX OF SHEETS

PROJECT	NO. DESCRIPTION
	1 TITLE SHEET
	2 ESTIMATED QUANTITIES
	3 GENERAL PLAN
I-95 NB over PISCATAQUIS RIVER	4 ABUT #2 DETAILS & GEN. NOTES
	5 ABUT #2 EXPANSION DEVICE DETAILS
	6 ABUT #2 FINGER JOINT DETAILS
I-95 NB over SEBOEIS RD	7 GENERAL PLAN
I-95 NB over MATTAMISCONTIS STREAM	8 GENERAL PLAN
I-95 NB over PISCATAQUIS R. SEBOIS RD & MATTAM. STR	9 TYPICAL DETAILS
LINCOLN SPUR over I-95	10 GENERAL PLAN
	11 JOINT DETAILS
	12 END POST & RAIL DETAILS
	13 APPROACHES
	14 APPROACHES



APPROVED:
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

COMMISSIONER
CHIEF ENGINEER

3-29-93
DATE
3-29-93
DATE

107-384

Revised "As Built" 1993 P. Roberts

UNITED STATES
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

REGION 1
APPROVED:
DIVISION ADMINISTRATOR
DATE

23MAR95-010030

F.H.V.A.	STATE	PROJECT NUMBER	SHEET	TOTAL
RES. NO.	MAINE	IR-M-95-8(147)	2	14
PIN	004200.00			

IR-M-95-8(147) ESTIMATED QUANTITIES		LIN. SPUR BRIDGE	LIN. SPUR HIGHWAY	PIS. R. N.B.	SEB. RD. N.B.	MAT.STR. N.B.	004200.00	
ITEM NO.	DESCRIPTION	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	UNIT	TOTALS
202.127	REMOVING OF EXISTING BITUMINOUS PAVEMENT	.16		.27	.07	.05	LS	.55
202.13	REMOVING EXISTING RAILINGS--RETAINED BY DEPARTMENT	904					LF	904
202.17	REMOVAL OF EXISTING STRUCTURAL CONCRETE	1					LS	1
202.203	PAVEMENT BUTT JOINTS						LS	
403.08	HOT BITUMINOUS PAVEMENT, GRADING C		1025	370	370	900	SY	2565
403.10	HOT BITUMINOUS PAVEMENT, GRADING D		550				TONS	550
403.121	HOT BITUMINOUS PAVEMENT, GRADING E (SHIMMING)	252		490	190	110	TONS	1042
409.15	BITUMINOUS TACK COAT, APPLIED		300				TONS	300
411.10	UNTREATED AGGREGATE SURFACE COURSE, TRUCK MEASURE		120	32	32	16	GAL	200
502.21	STRUCTURAL CONCRETE, ABUTMENTS & RETAINING WALLS		20				CY	20
503.12	REINFORCING STEEL FABRICATED & DELIVERED	2650		2			CY	2
503.13	REINFORCING STEEL PLACING	2650		45			LB	2695
505.08	SHEAR CONNECTORS			45			LB	2695
506.17	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	1					LS	1
506.172	FIELD PAINTING EXISTING STRUCTURAL STEEL			.53	.19	.28	LS	1
506.18	CONTAINMENT AND POLLUTION CONTROL			.53	.19	.28	LS	1
506.19	DISPOSAL OF HAZARDOUS OR TOXIC MATERIAL			.53	.19	.28	LS	1
507.092	ALUMINUM BRIDGE RAILING, 2 BAR			.53	.19	.28	LS	1
507.30	ALUMINUM BRIDGE RAIL SPLICE RETROFIT	906					LF	906
508.13	MEMBRANE WATERPROOFING			52	16	8	EACH	76
519.09	SLOPE PROTECTION--PORTLAND CEMENT CONCRETE	.16		.27	.07	.05	LS	.55
514.06	CURING BOX FOR CONCRETE CYLINDERS	.20		.20			SY	.35
515.21	PROTECTIVE COATING FOR CONCRETE SURFACES	.42		.42	.10	.06	EACH	.80
518.30	REHAB. OF STRUCT. CONC. SLAB--TO REINFORCING STEEL	1000		2164	560	360	SF	4084
518.31	REHAB. OF STRUCT. CONC. SLAB--TO BELOW REINFORCING STEEL	1372		1082	280	180	SF	2914
518.32	REHAB. OF STRUCT. CONC. SLAB--FULL DEPTH			540	140	90	SF	770
518.35	REHAB. OF CONC. CURBS & SIDEWALKS--HORIZONTAL SURFACES			160	90	30	SF	280
518.39	REPAIRING GRANITE CURB BEDDING MORTAR	450		1060	290	180	LF	1970
520.241	BRIDGE JOINT MODIFICATION TYPE I			1	2	2	EACH	5
520.244	BRIDGE JOINT MODIFICATION TYPE IV			1			EACH	1
520.245	BRIDGE JOINT MODIFICATION TYPE V	2					EACH	2
521.30	FABRIC TROUGH FOR FINGER JOINTS			1			EACH	1
526.301	TEMPORARY CONCRETE BARRIER TYPE I	21		26	.10	.11	LS	.68
527.32	PORTABLE CRASH BARRELS	9		15			EACH	39
606.1731	BRIDGE CONNECTION	4					EACH	6
606.178	GUARD RAIL BEAM	50	100				LF	150
606.35	GUARD RAIL DELINEATOR POST		4				EACH	4
606.364	GUARD RAIL, REMOVE, MODIFY AND RESET TYPE 3b	200	1550				LF	1750
606.367	REPLACE UNUSABLE EXISTING GUARD RAIL POST	10	10				EACH	20
606.751	WIDEN SHOULDER FOR BREAKAWAY CABLE TERMINAL		4				EACH	4
606.77	BREAKAWAY CABLE TERMINAL		4				EACH	4
610.12	PORTLAND CEMENT FOR RIPRAP GROUT			5			BRRL	5
610.18	STONE DITCH PROTECTION			20			CY	20
627.61	4 INCH SOLID WHITE PAVEMENT MARKING LINE	900	3600				LF	4500
627.611	6 INCH SOLID WHITE PAVEMENT MARKING LINE			780	385	95	LF	1250
627.621	6 INCH BROKEN WHITE PAVEMENT MARKING LINE			1530	1530	835	LF	3895
627.63	4 INCH SOLID YELLOW PAVEMENT MARKING LINE	900	3200				LF	4100
627.631	6 INCH SOLID YELLOW PAVEMENT MARKING LINE			780	385	95	LF	1250
627.65	WHITE OR YELLOW PAVEMENT AND CURB MARKING		50				SF	50
627.67	REMOVING PAVEMENT MARKINGS	87		375		375	SF	837
627.68	TEMP. 4" PAINTED PAVEMENT MARKING LINE, YELLOW OR WHITE	2400	3200				LF	5600
627.691	TEMP. 6" PLASTIC PAVEMENT MARKING LINE, YELLOW OR WHITE			4150	790	1660	LF	7000
629.05	HAND LABOR, STRAIGHT TIME	16	3	16	16	16	MH	.67
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	24	5	24	24	24	HOUR	101
631.14	GRADER (INCLUDING OPERATOR)		5				HOUR	5
631.172	TRUCK--LARGE (INCLUDING OPERATOR)	24	5	24	24	24	HOUR	101
631.36	FOREMAN		5				HOUR	5
639.19	FIELD OFFICE TYPE A	.15	.05	.20	.05	.05	EACH	.5
639.22	TESTING FACILITIES BITUMINOUS MIXES	.15	.15	.20	.05	.05	LS	.5
639.23	TESTING FACILITIES CONCRETE	.20		.20	.20	.20	LS	.80
643.72	TEMPORARY TRAFFIC SIGNAL	1					LS	1
652.30	FLASHING ARROW BOARD			1		1	EACH	2
652.31	TYPE I BARRICADE	20	5	5	5	5	EACH	40
652.311	TYPE II BARRICADE	2	2	2	2	2	EACH	10
652.33	DRUM	10	5	20	20	20	EACH	75
652.34	CONE	20	10	20	20	20	EACH	90
652.35	CONSTRUCTION SIGNS	360	100	245	170	275	SF	1150
652.36	MAINTENANCE OF TRAFFIC CONTROL DEVICES	11	20	14	10	10	CD	65
652.38	FLAGGER	200	200	200	200	200	MH	1000
656.50	BALED HAY, IN PLACE		20				EACH	20
656.51	SANDBAG, IN PLACE		20				EACH	20
656.631	15" TEMPORARY SILT FENCE		200				LF	200
656.632	30" TEMPORARY SILT FENCE		100				LF	100
659.10	MOBILIZATION	.15	.05	.20	.05	.05	LS	.5

ESTIMATE OF LUMP SUM QUANTITIES		LIN. SPUR BRIDGE	LIN. SPUR HIGHWAY	PIS. R. N.B.	SEB. RD. N.B.	MAT.STR. N.B.	
ITEM NO.	DESCRIPTION	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	UNIT
202.127	REMOVING OF EXISTING BITUMINOUS PAVEMENT	1400		2405	625	400	SY
202.17	REMOVING EXISTING STRUCTURAL CONCRETE	2					CY
505.08	SHEAR CONNECTORS	120					EA
506.17	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			9500	3500	5100	LB
506.172	FIELD PAINTING EXISTING STRUCTURAL STEEL			9500	3500	5100	LB
506.13	MEMBRANE WATERPROOFING	1400		2405	625	400	SY
526.301	TEMPORARY CONCRETE BARRIER TYPE I	900		1130	410	460	LF
515.21	PROTECTIVE COATING FOR CONCRETE SURFACES	420		415	95	60	SY

PROJECT DESIGN ENGINEER	DATE
B. ZIM	2/29/93
DESIGN DETAILER	2/29/93
CHECKED	
REVISIONS	
FIELD CHANGES	

23MAR93-01:00:30

107-385

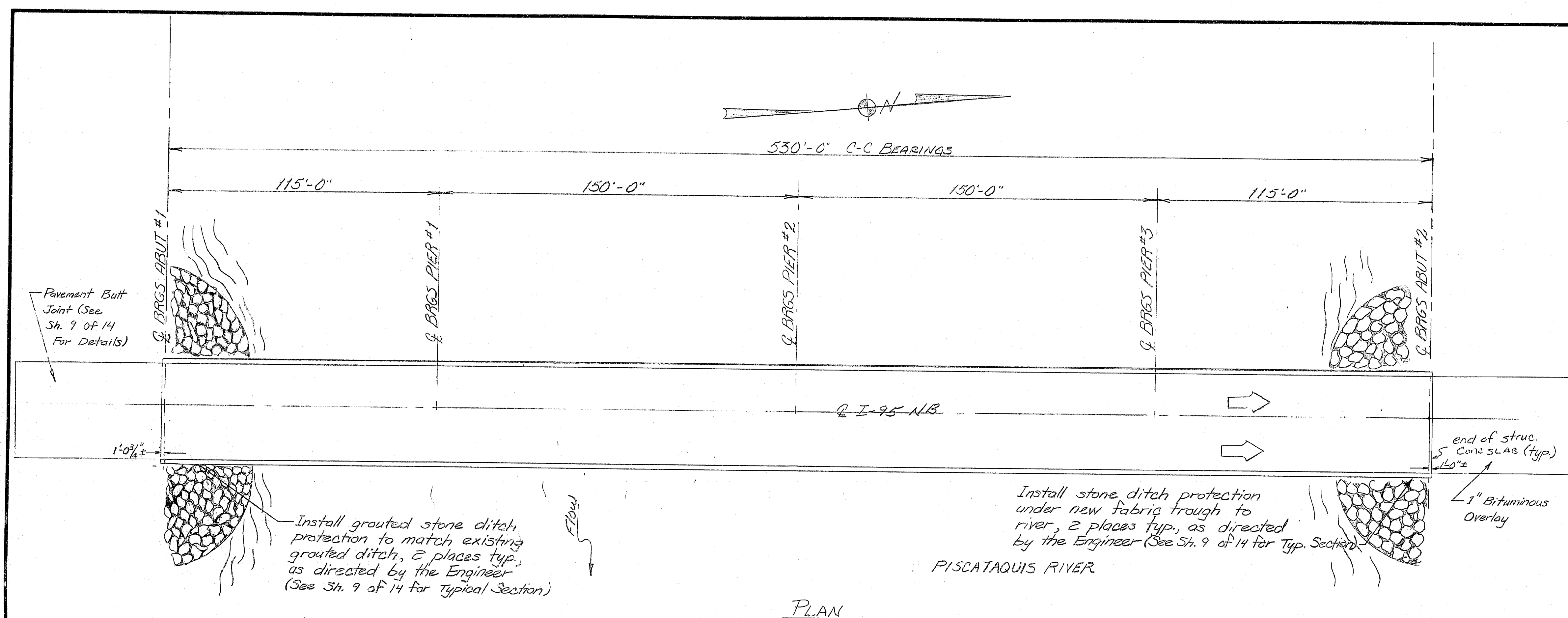
84

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

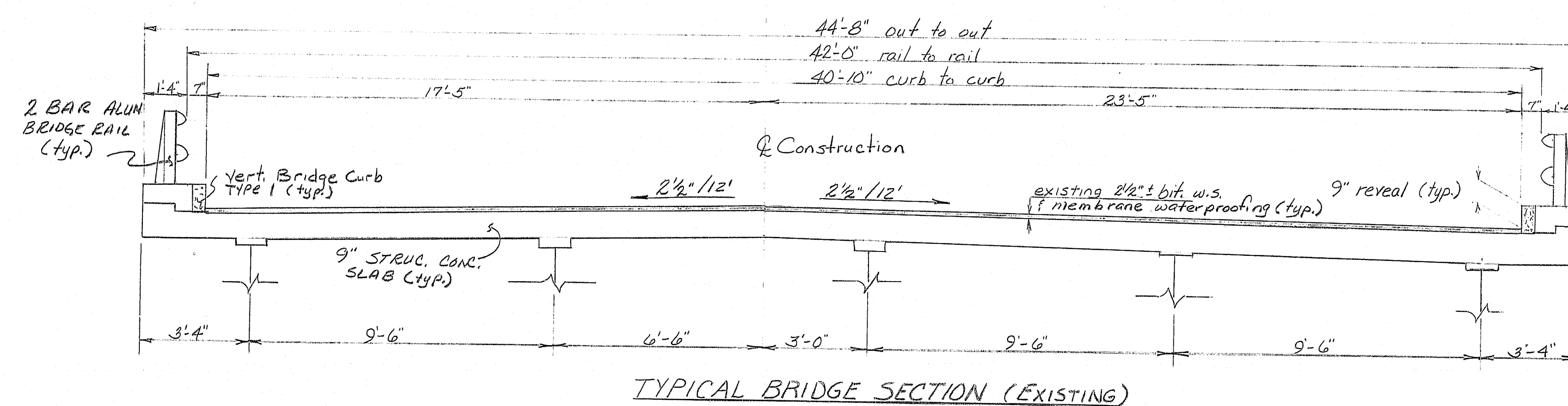
ESTIMATED QUANTITIES
HOWLAND - T2-R8

SHEET 2 OF 14 APPROX. 1000'

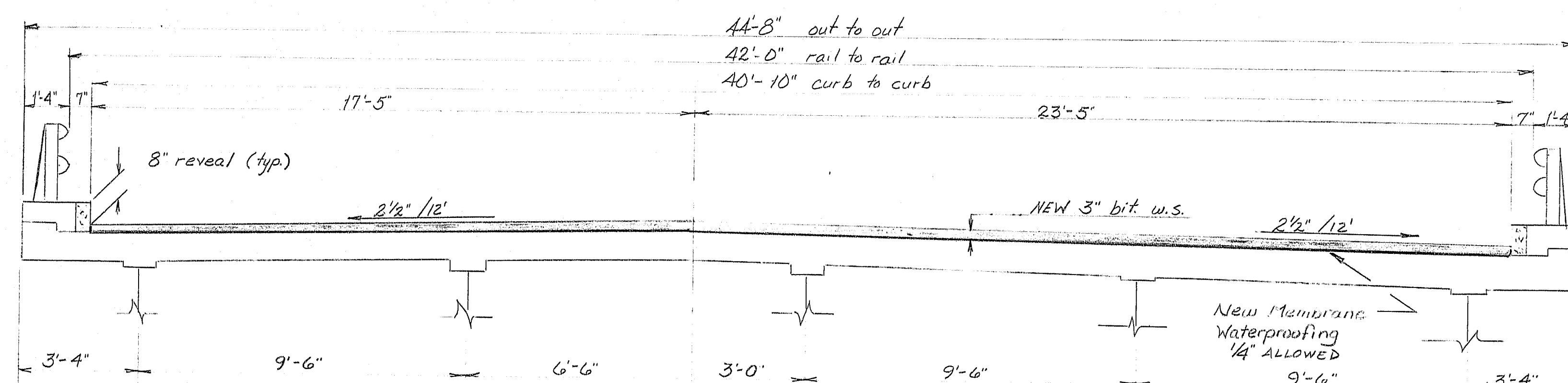
F.R.W.A. REV. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	107-386-8(147)	3	14



PLAN



TYPICAL BRIDGE SECTION (EXISTING)



TYPICAL BRIDGE SECTION (PROPOSED)

DESIGN LOADING

LIVE LOAD (EXISTING) HS20

MAINTENANCE OF TRAFFIC

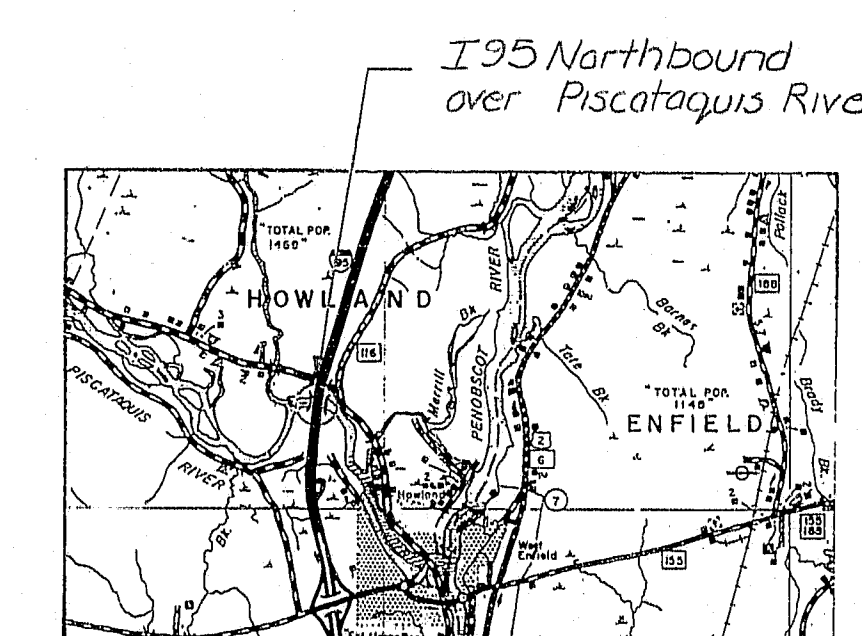
MAINTAIN ONE 12' MIN. LANE OF TRAFFIC DURING CONSTRUCTION.

SCOPE OF WORK

- Replace existing 2 1/2" bituminous wearing surface and membrane waterproofing with new membrane and 3" bituminous wearing surface.
- Rehabilitate structural slab and curbs.
- Repair upstream wing at Abutment #2.
- Modify expansion devices at both abutments.
- Apply Protective Coating to concrete surfaces.
- Clean and paint all abutment bearings, and last 3' of Girders @ Abut #2.
- Transition pavement on leading end and pave 1" depth to face of guard rail from Abut #2. Present from Abut #1 to Abut #2.
- Repair granite curb bedding Mortar.
- Install grouted stone ditch protection @ Abutment 1; install stone ditch protection @ Abutment 2.

Note: Copies of existing bridge plans are available for the Contractor's reference at the Bridge Design Office in Augusta. The plans are reproduction of original drawings, and it is very unlikely that the plans will show construction field changes or any alterations made to the bridge during its life span.

A Bridge Deck Evaluation report of the existing bridge is also available at the Design Office in Augusta. The report contains visual inspection information and deck core data of the bridge. There is no assurance that the information or data is a true representation of the conditions of the entire deck.



LOCATION MAP

107-386

Revised "As Built" 1993 P. Roberts
BRIDGE No. 1419

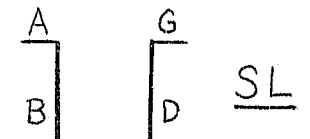
TRAFFIC DATA	
AADI 1989	3120
AADI 2009	4640
DHV	726
T %	20
D %	100
18 KIP FEMV P2.5	909

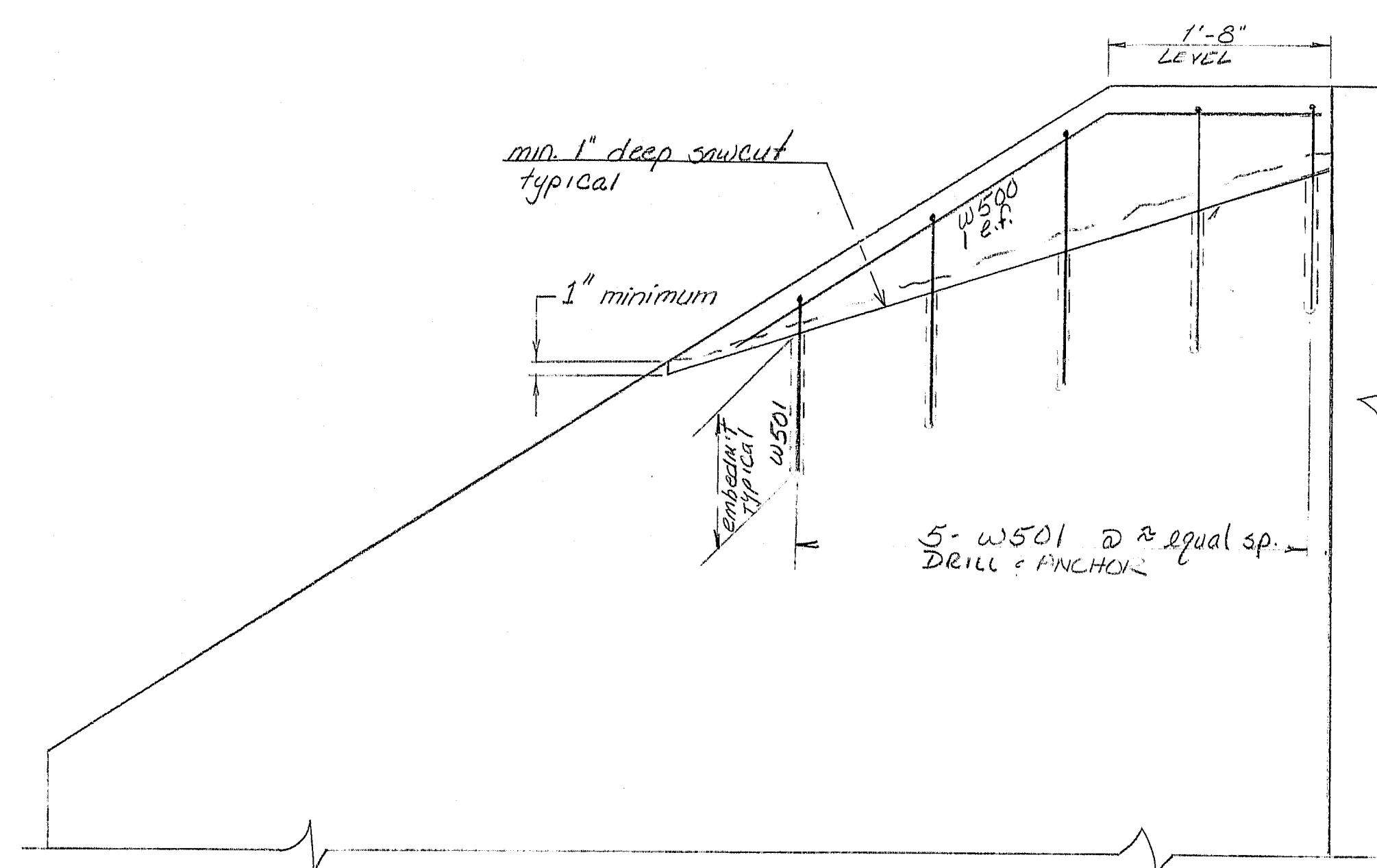
STATE OF MAINE DEPARTMENT OF TRANSPORTATION	
I-95 NB over the Piscataquis River in the town of HOWLAND Penobscot County GENERAL PLAN	
SHEET 3 OF 14	AUGUSTA, MAINE

PROJECT DESIGN ENGINEER	DATE
BY	12/18/2012
DESIGN - CHECKED	ECB
REVISIONS	ECB
FIELD CHANGES	5/1/12
PLANS	

GENERAL NOTES - I-95 NB BRIDGES OVER PISCATAQUIS RIVER,
SEBOEIS ROAD, AND MATTAMISCONTIS STREAM.

1. REINFORCING STEEL SHALL HAVE 2" MINIMUM CONCRETE COVER.
2. PROTECTIVE COATING FOR CONCRETE SURFACES SHALL BE APPLIED TO THE FOLLOWING AREAS:
 - a. TOP & FASCIA OF CURBS, DOWN TO DRIP NOTCH.
 - b. ALL EXPOSED REPAIRED AREAS OF SUPERSTRUCTURES, SUBSTRUCTURES, AND WINGWALLS.
3. REPAIR granite curb bedding mortar as directed by the ENGINEER. Payment will be made under Item 518.39, Repairing Granite Curb Bedding Mortar.
4. The top surfaces of the existing concrete slabs and curbs shall be repaired as directed by the Engineer. Payment will be made under the appropriate item.
5. Depress the new bituminous wearing surface around existing bridge drains as directed by the Engineer.
6. Payment for drilling and anchoring of reinforcing steel will be considered incidental to Item 503.13, Reinforcing Steel, Placing.
7. Clean and paint all Abutment bearings and miscellaneous specified areas in accordance with Item 506.17, Surface Prep of Existing Structural Steel, 506.172 Field Painting Existing Structural Steel, 506.18 Containment and Pollution Control, and 506.19 Disposal of Hazardous or Toxic Materials, as directed by the Engineer.
8. All curb concrete shall contain a Silica Fume additive which shall be incidental to related contract items.
9. Reinforcing shall be drilled and anchored in accordance with Supplemental Specification Section 503, Anchoring Reinforcing Steel.
10. Reinforcing Steel for Abut #2 upstream wingwall shall be bent and cut to fit in the field. Payment shall be incidental to 503.13 Reinforcing Steel Placing.
11. Retrofit existing bridge rail splices in accordance with Special Provision 507, Aluminum Bridge Rail Splice Retrofit.

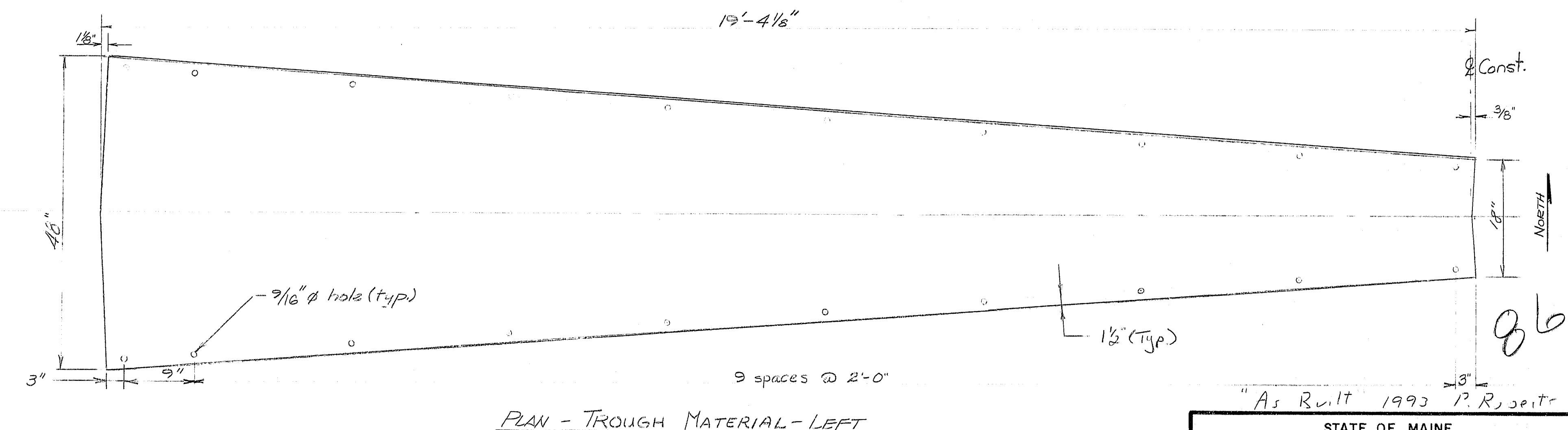
REINFORCING STEEL SCHEDULE									
STRAIGHT BARS									
MARK	NO.	LENGTH	LOCATION						
W500	2	7'0"	Wing						
BENT BARS									
MARK	NO.	LENGTH	TYPE	A	B	C	D	G	LOCATION
W501	5	5'6"	SL	0	2'3"	1'0"	2'3"	0	Wing



ELEVATION - ABUTMENT #2 UPSTREAM WINGWALL -
REPAIR DETAIL

CONSTRUCTION NOTES - I-95 NB OVER THE
PISCATAQUIS RIVER

1. Repair Abut #2 upstream wing as directed by the Engineer. Payment will be made under Item 502.21, Structural Concrete, Abutments and Retaining Walls.
2. For details of membrane waterproofing not shown, see BD 521-89.
3. See sheet 9 of 14 for Approach Taper Details.
4. Abutment #2 Joint Armor Cover Plate notes:
 - Cover PL shall be 7/8" thick A36 checkered plate.
 - Holes shall be drilled, flame cutting will not be allowed.
 - Dimensions should be field verified prior to fabrication.
 - Cover PL may be tack welded to existing PL to facilitate drilling of existing PL.
5. Fabrication and installation of trough and trough hangers @ Abut #2 Finger Joint shall be paid under Item 521.30, Fabric Trough for Finger Joints.
6. Any excavation, backfill, loam: seed required for repair of Abut #2 upstream wingwall shall be considered incidental to related contract items.
7. Repair Abut #2 bridge seats as directed by the Engineer. Payment will be made under Item 518.31 Rehabilitation of Structural Concrete, Slab - to below reinforcing.
8. For Abut #1 joint modification details, see Typical Bridge Joint Modification (Compression Seal), sheet 9 of 14.
9. Fasteners specified to be hot-dip galvanized shall conform to the requirements of ASTM A153, Class C. Fasteners specified to be stainless shall conform to the requirements of ASTM F393, Alloy Group 1.
10. Existing deteriorated concrete on Abut #2 Upstream wing will be removed to the limits directed by the Engineer. Removal of existing concrete and construction requirements will be in accordance with Supplemental Specification 518 Rehabilitation of Structural Concrete Bridge Decks, Subsections 518.05 General, 518.06 Reinforcing Steel, and 518.07 Bonding Grout. Payment for this work will be incidental to Item 502.21 Structural Concrete, Abutments and Retaining Walls.
11. Repair of Abut #2 bridge seats will be in accordance with Supplemental Specification Section 518 Rehabilitation of Concrete Bridge Decks.
12. See sheets 11 through 13 of Project F-STP-049(1)X for Maintenance of Traffic in Construction Zones.

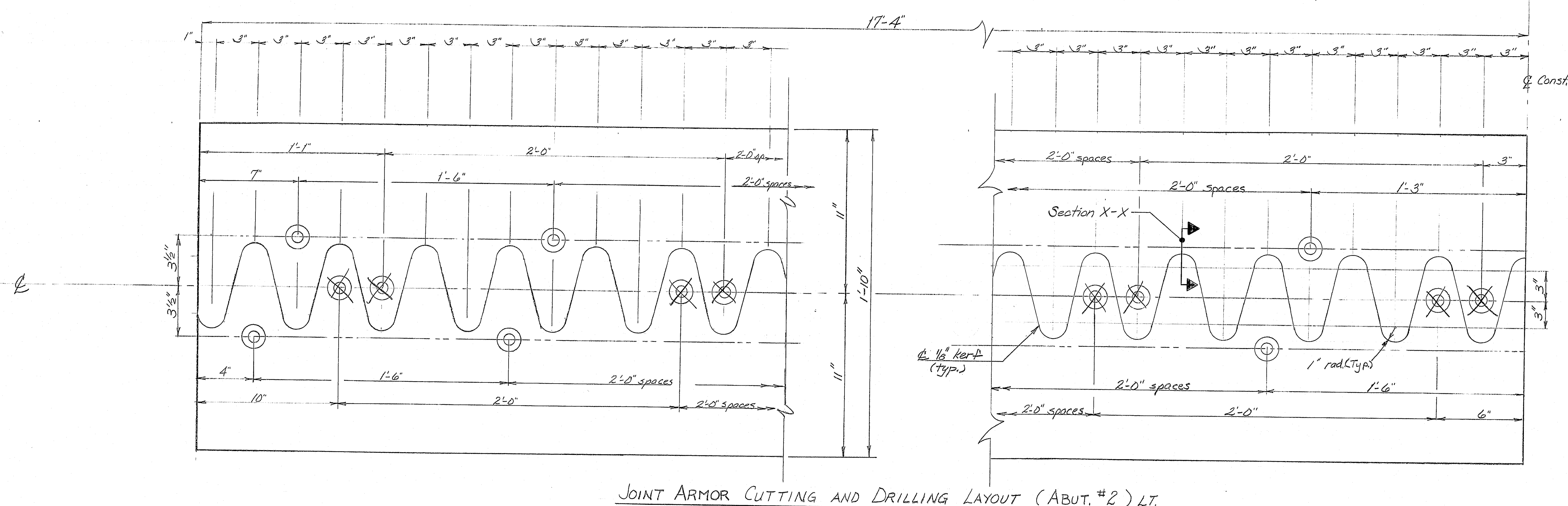


PLAN - TROUGH MATERIAL - LEFT

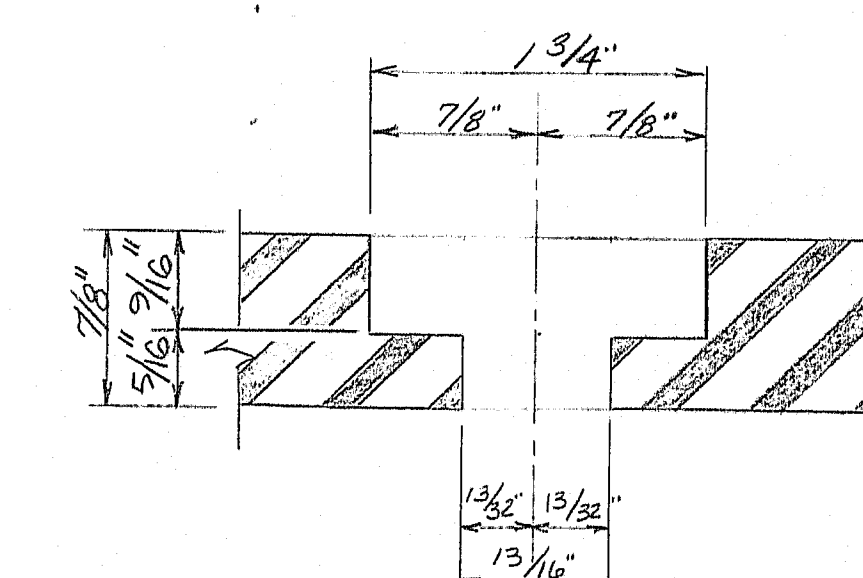
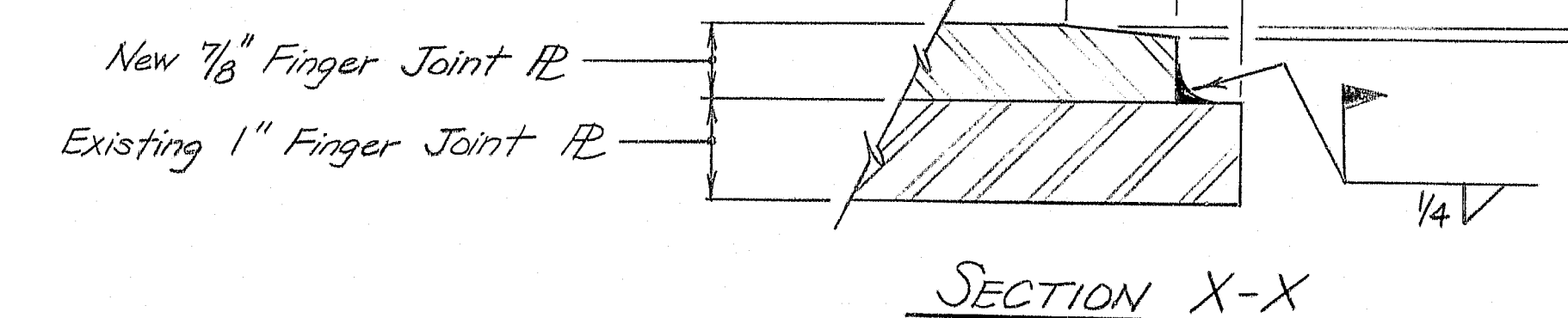
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
I-95 NB
over the
PISCATAQUIS RIVER
in the town of
HOWLAND
PENOBSCOT COUNTY
ABUTMENT #2 DETAILS
SHEET 1 of 14 AUGUSTA, MAINE

107-387

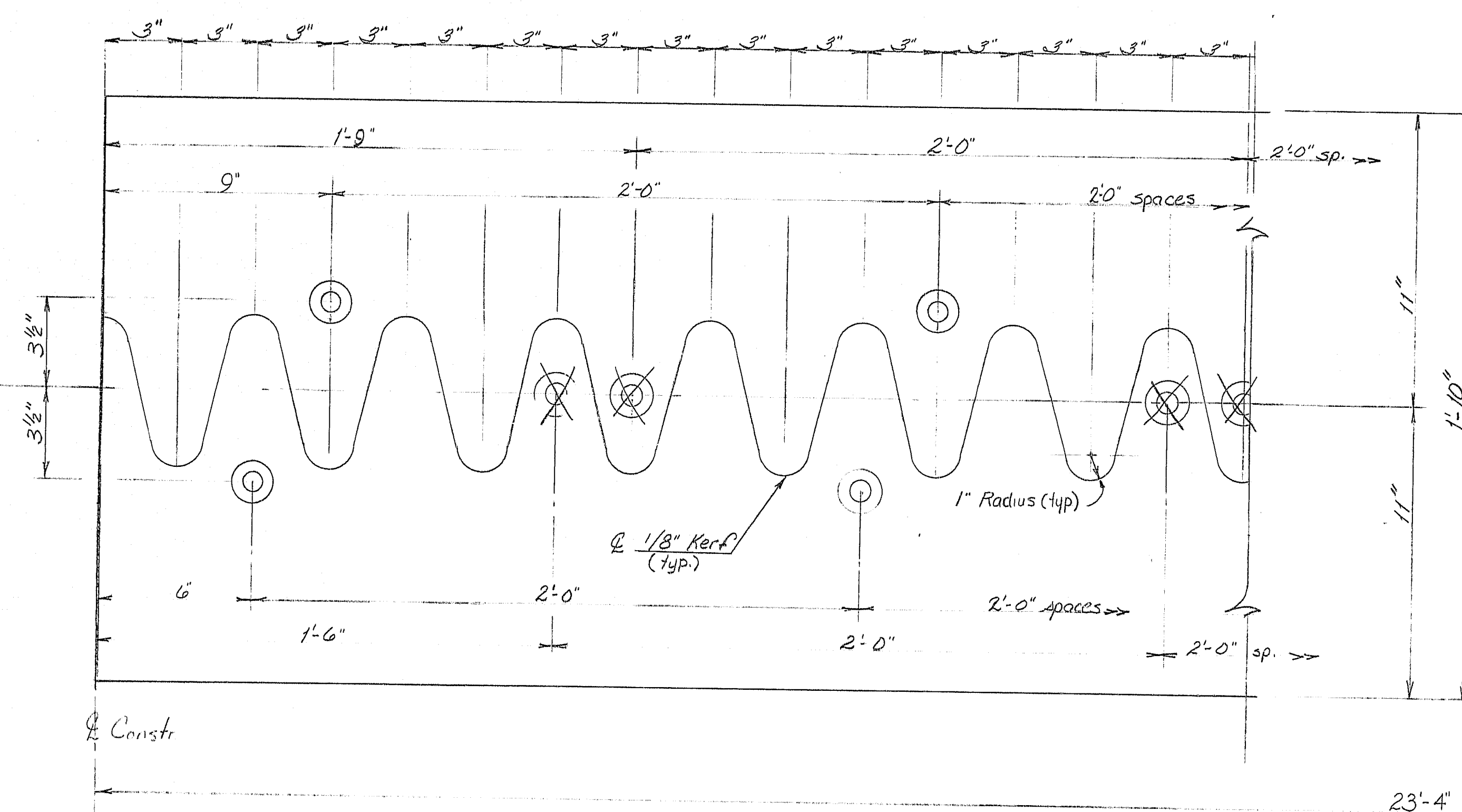
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TO SH
1	MAINE	TP-1M-95-8(147)	5	1



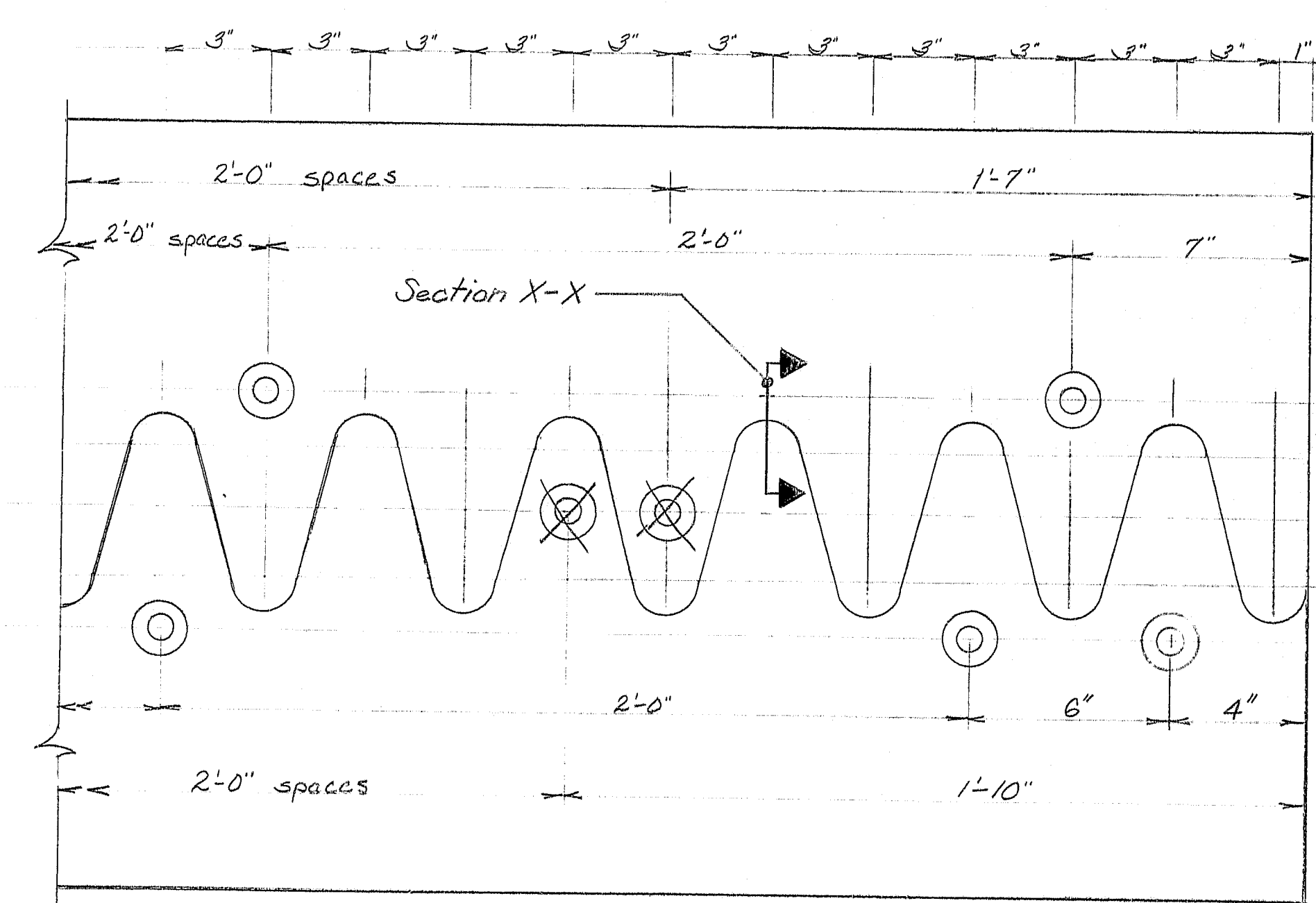
JOINT ARMOR CUTTING AND DRILLING LAYOUT (ABUT. #2) LT.



DRILLING DETAIL 87



JOINT ARMOR CUTTING AND DRILLING LAYOUT (ABUT. #2) Rt.



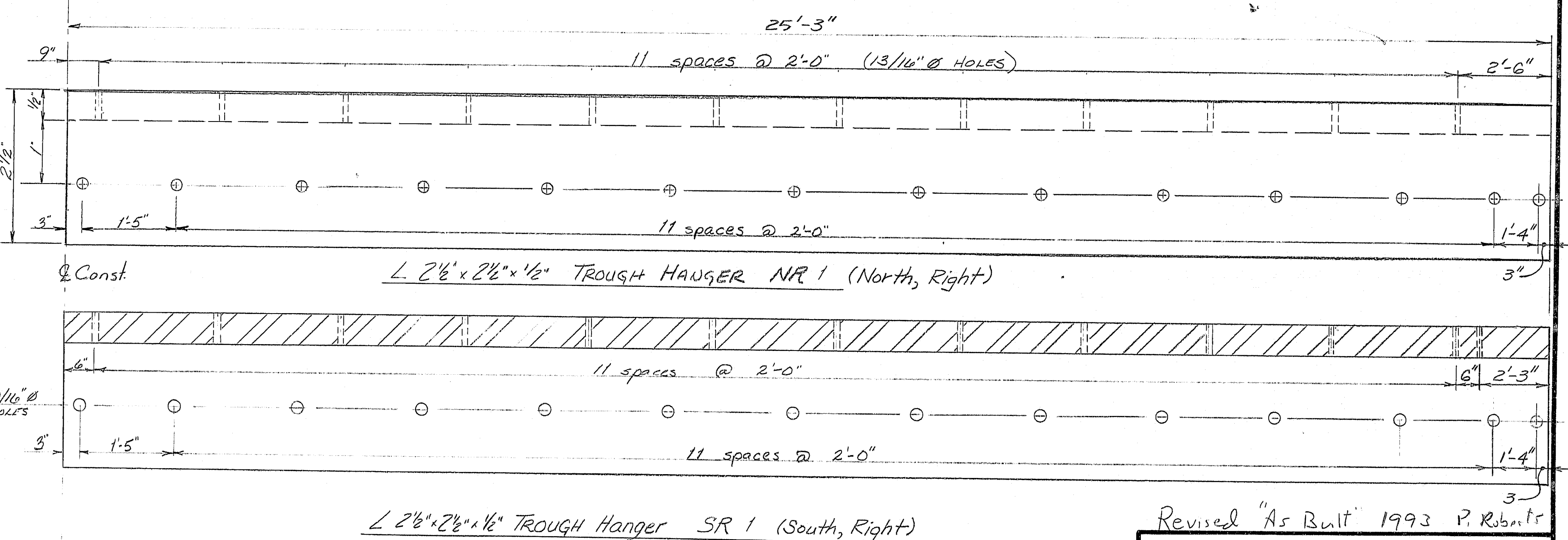
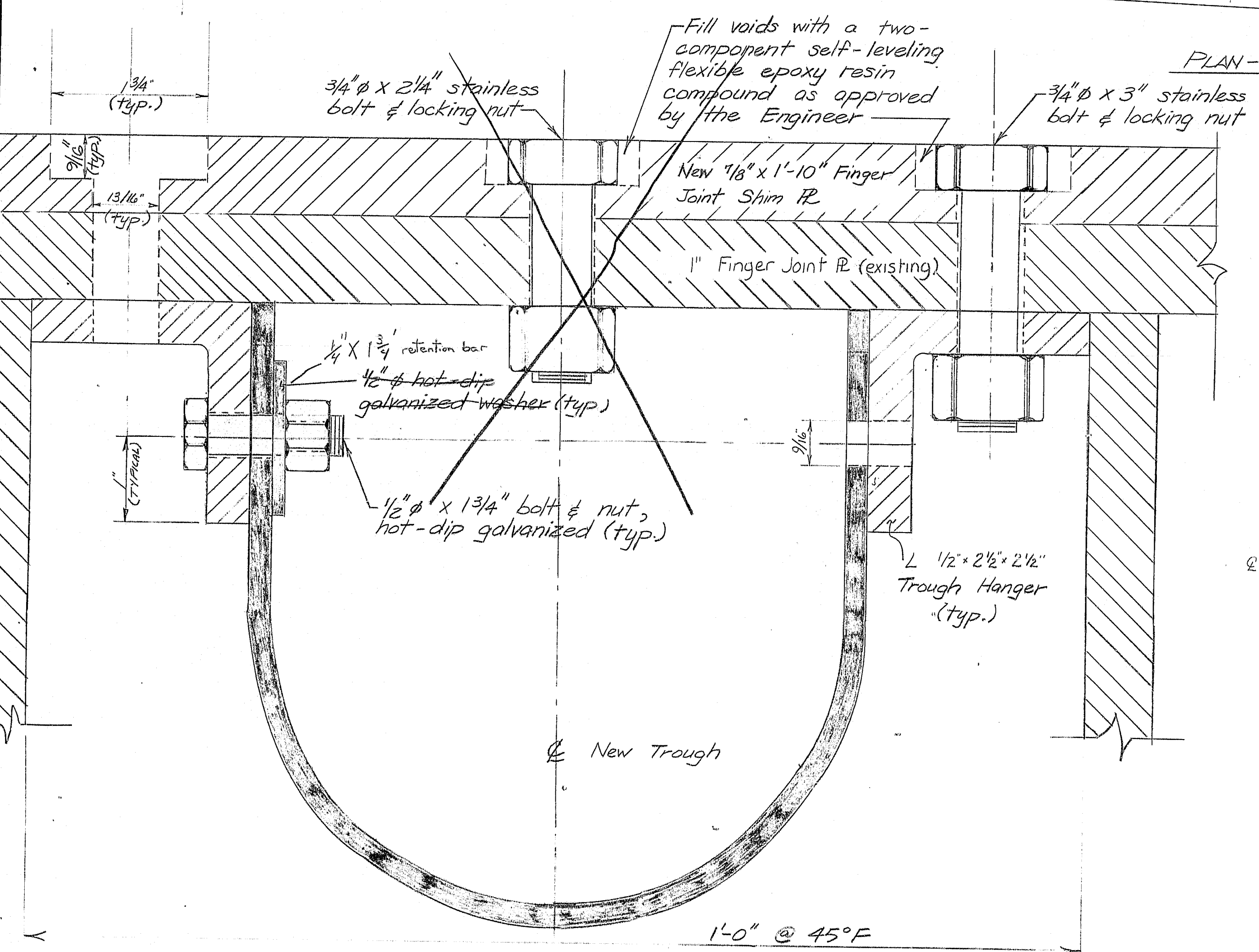
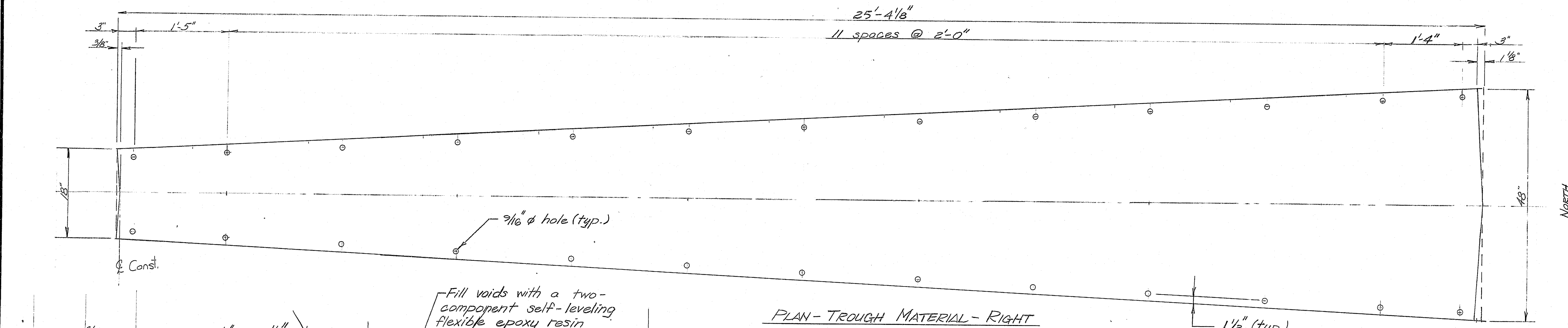
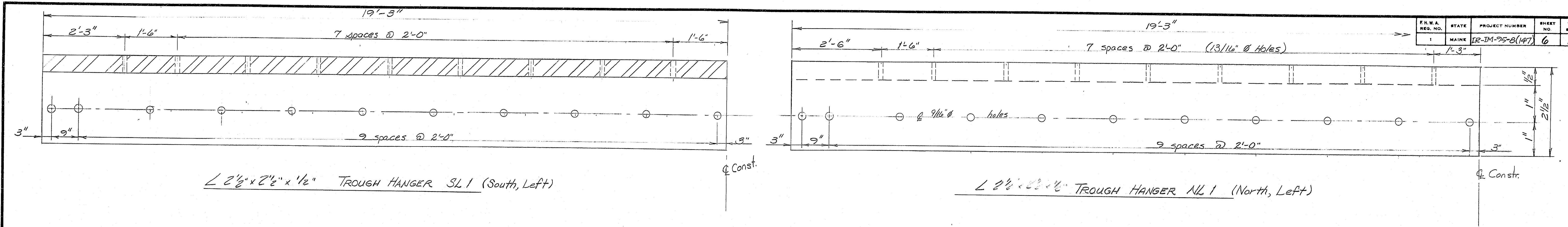
107-388

Revised "Ar. Built" 1993 P Roberts

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

I-95 NB
over the
PISCATAQUIS RIVER
in the town of
HOWLAND, Penobscot County
ABUTMENT #2
EXPANSION DEVICE DETAILS
SHEET 5 OF 8 AUGUST, MAINE

F.R.W.A. RES. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	IR-34-95-B(147)	6	14

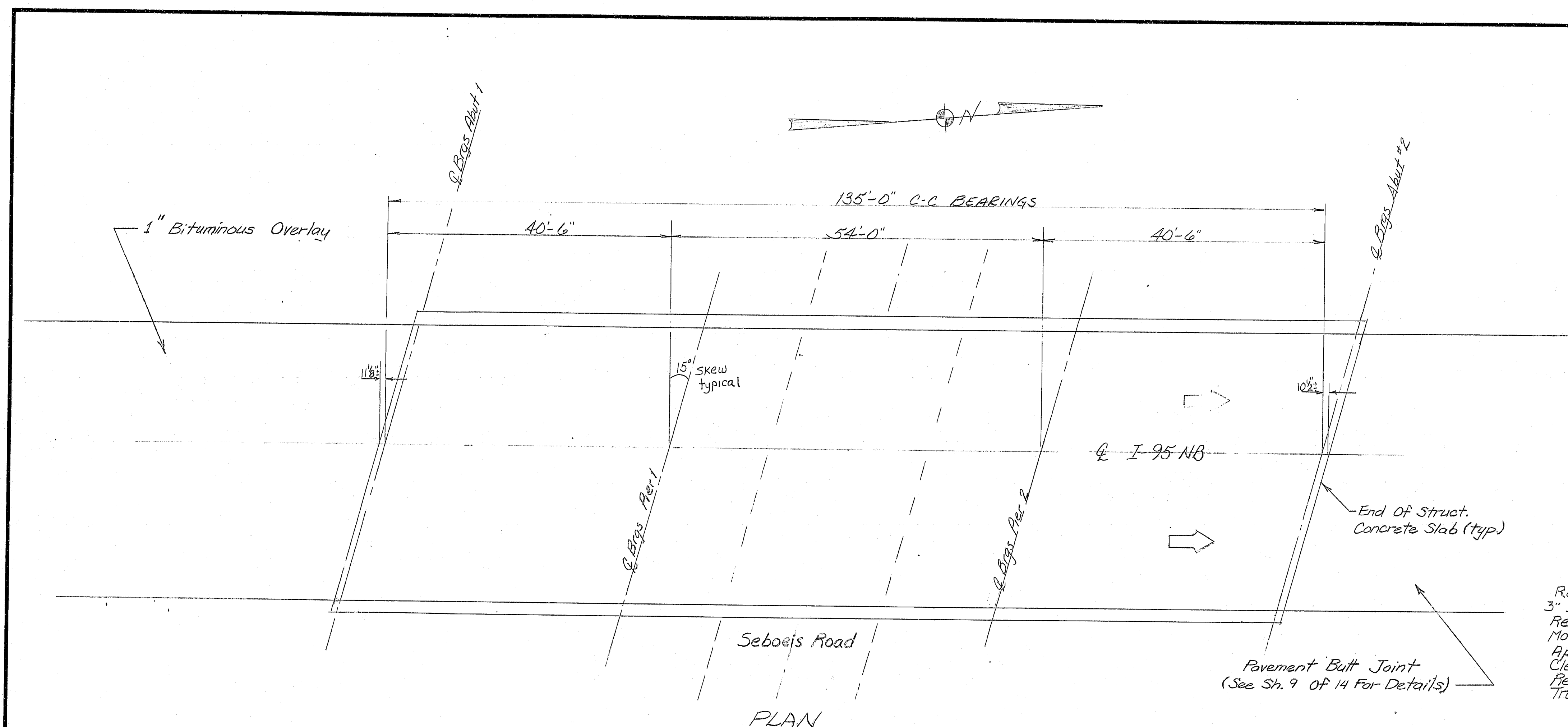


PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	12/8	3/92
CHECKED	ECS	5/92
REVISIONS		
FIELD CHANGES		

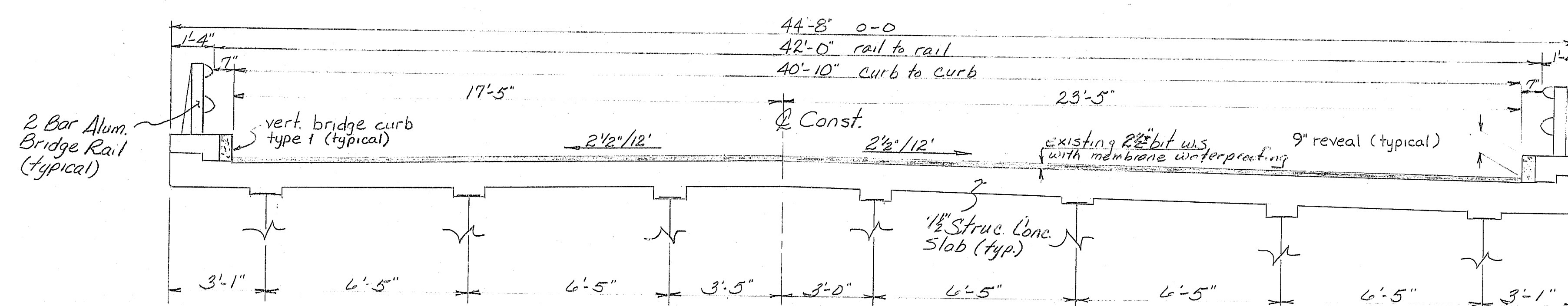
107-389

Revised "As Built" 1993 P. Roberts
 STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION
 I-95 NB
 over the
 Piscataquis River
 in the town of
 HOWLAND
 PENOBSCOT COUNTY
 FINGER JOINT MODIFICATIONS
 and
 DETAILS, Abutment #2
 SHEET 6 OF 14 AUGUSTA, MAINE

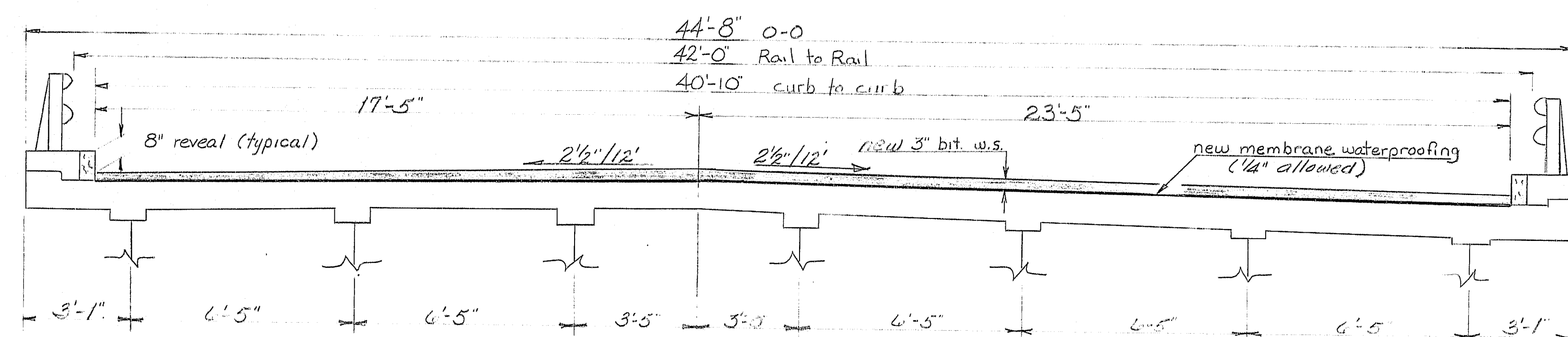
F.R.A. REQ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	18-14-95-8(147)	17	14



PLAN



TYPICAL TRANSVERSE BRIDGE SECTION (EXISTING)



TYPICAL TRANSVERSE BRIDGE SECTION (PROPOSED)

CONSTRUCTION NOTES

- NONE REQUIRED
- Repair superstructure haunch concrete, adjacent to Abut. #2. Joint armor, as directed by the Engineer. Payment will be made under Item 518.30 Rehabilitation of Structural Concrete Slab-to reinforcing, or Item 518.31 Rehabilitation of Structural Concrete Slab-to below reinforcing, as required.
- See sheet 9 of 14 for Typical Bridge Joint Modification and approach taper details.
- For details of membrane waterproofing not shown, see BD 521-89.

DESIGN LOADING

LIVE LOAD (EXISTING) HS20

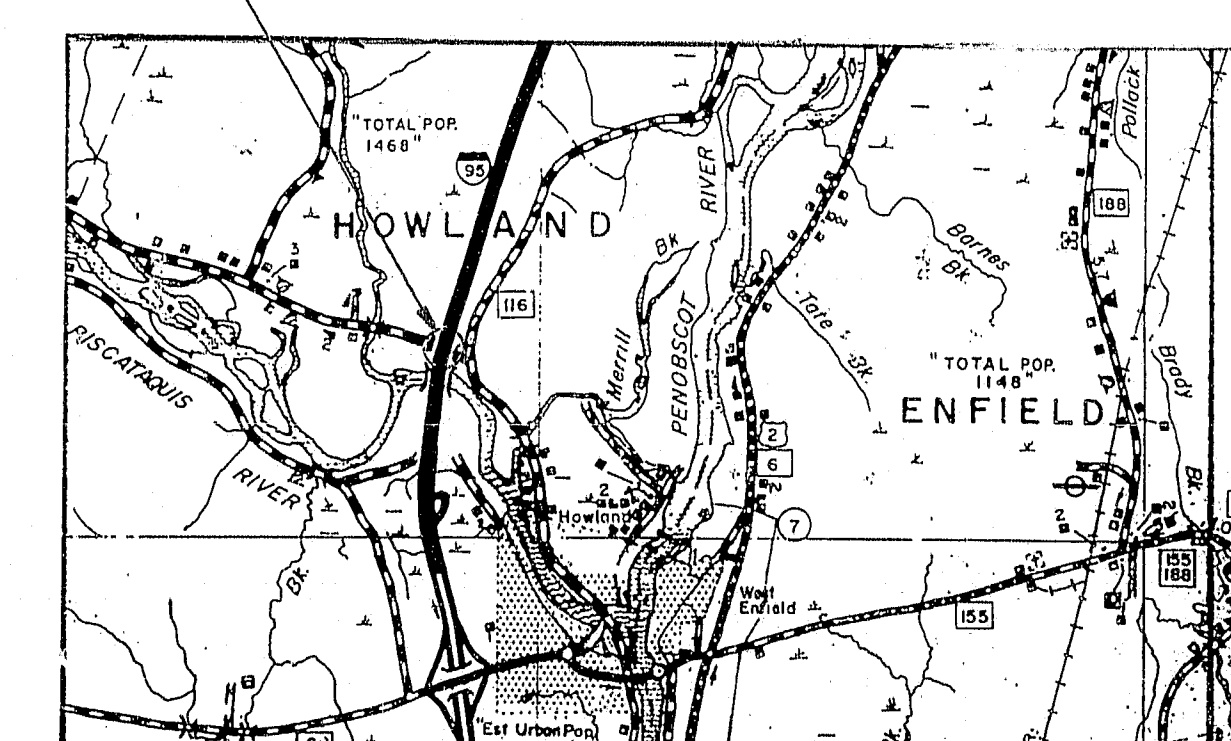
MAINTENANCE OF TRAFFIC

MAINTAIN ONE 12' MIN. LANE OF TRAFFIC DURING CONSTRUCTION.

SCOPE OF WORK

Replace existing 2 1/2" bituminous wearing surface and membrane waterproofing with new membrane and 3" bituminous wearing surface.
Rehabilitate structural slab and curbs.
Modify expansion devices @ both abutments.
Apply Protective Coating to concrete surfaces.
Clean and Paint all abutment bearings.
Repair Granite Curb Bedding Material.
Transition pavement on trailing end, to accommodate new wearing surface depth.

I-95 Northbound over Seboeis Road



LOCATION MAP

Note: Copies of existing bridge plans are available for the Contractor's reference at the Bridge Design office in Augusta. The plans are reproductions of original drawings, and it is very unlikely that the plans will show construction field changes or any alterations made to the bridge during its life span.
A Bridge Deck Evaluation report of the existing bridge is also available at the Design Office. The report contains visual inspection information and deck core data of the bridge. There is no assurance that the information or data is a true representation of the conditions of the entire deck.

TRAFFIC DATA	
AADT 1989	3120
AADT 2009	4640
DHV	726
T%	20
D%	100
18 KIP EQUIV. P 2.5	909

Revised "As Built" 1993 Project
BRIDGE #1418

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

I-95 NB over Seboeis Road
in the town of
Howland
Penobscot County
General Plan