

NOTE: If there is a conflict between this Standard
 ⑦ Detail and the Design Drawings, the requirements
 of the Design Drawings shall be followed.

REVISIONS

DATE

①	Revised Stud Detail	3-82
②	Added Curb Section	7-82
③	Added Plastic Tube Drain & modified Structural Concrete Wearing Surface.	11-82
④	Revise Curb Anchorage	2-83
⑤	Revise Curb Title	6-83
⑥	Revise Curb Type 1 B	11-83
⑦	Added Note	1-85

STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION

STANDARD DETAILS

(BD 126-81)

MISCELLANEOUS DETAILS

BRIDGE DRAIN - SHEAR CONNECTORS
 STRUC. CONC. WEAR. SURFACE
 CURB SECTION - APPROACH SLAB
 HAUNCH DETAILS

SHEET OF AUGUSTA, MAINE JUNE 1981

DETAIL "A"

Labels in diagram:

- Neat Line
- Split Face
- Sowed Face
- W.P. Membrane
- W.P. (on slab)
- Ø 1. D. Plastic Tube Drain

Dimensions:

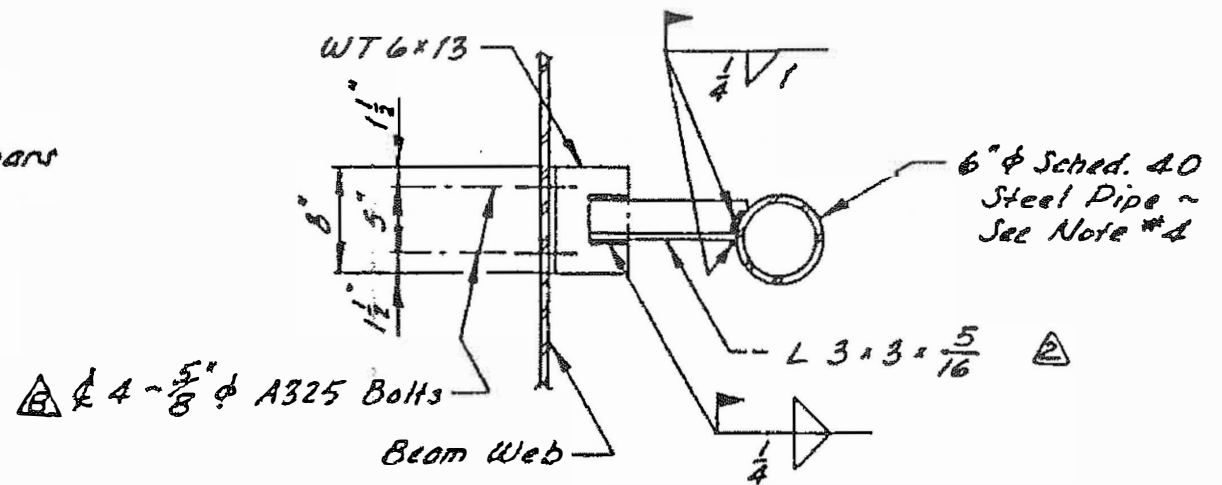
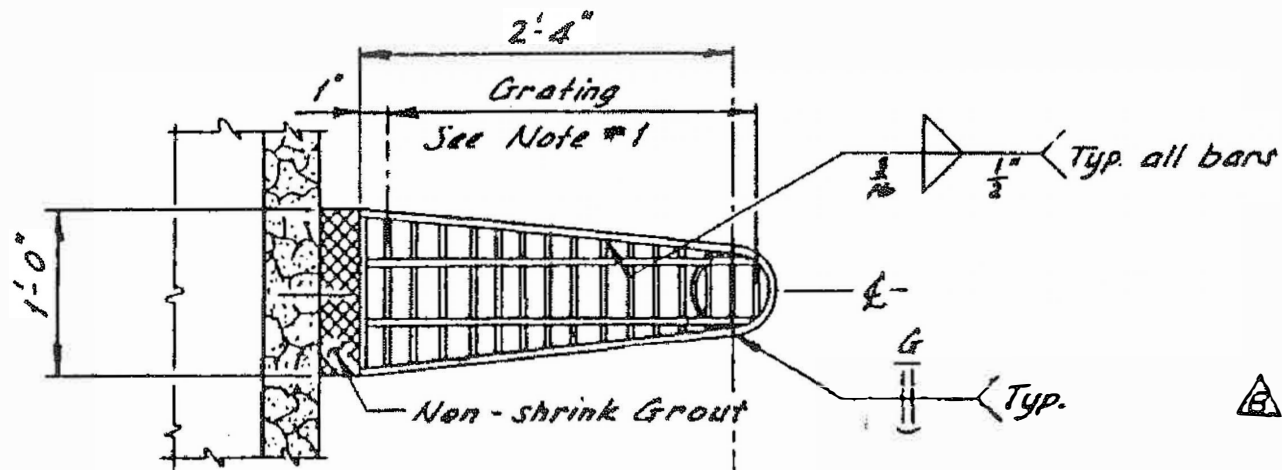
- 9 1/2" (Total Height)
- Max. 1 7/8" (Top Width)
- Min. 1" (Bottom Width)

NOTES

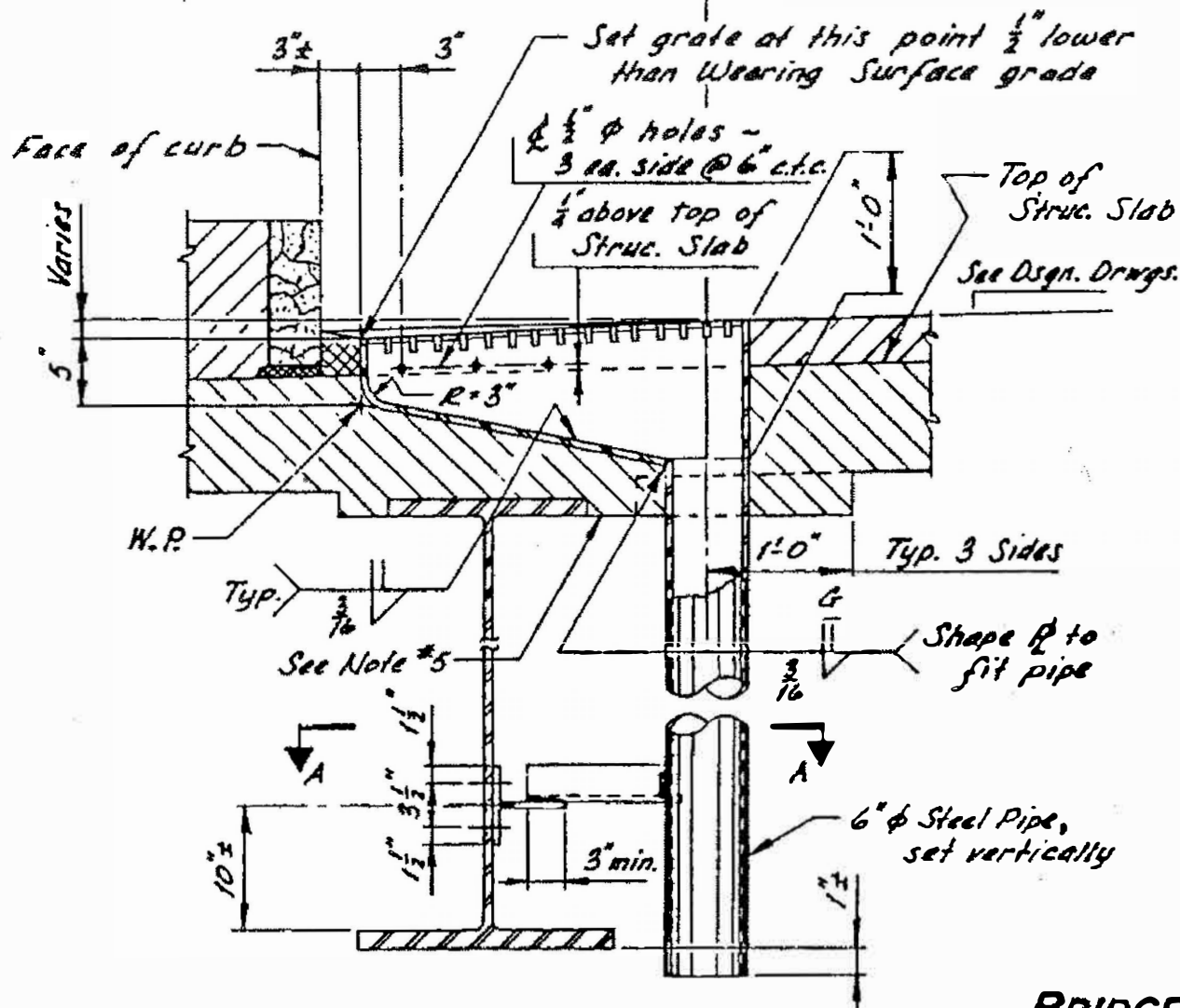
- For dimensions not shown, see Curb Section (Structural Concrete Wearing surface).
- W.P. = Working Point.
- Use drains at low points on slab behind expansion devices. ⓑ

5 bce

CURB SECTION TYPE 1B    
(BITUMINOUS WEARING SURFACE)



SECTION A-A



NOTES:

1. Grating shall be a commercial heavy-duty grating with 1 1/2" x 5/8" bearing bars spaced at 2 3/8" c.t.c., and 3/8" φ cross bars spaced at 4" c.t.c.
2. Plates shall be A.S.T.M. A36, 1/4" thick.
3. WT 6x13 shall be of the same material as the beam web, and shall be paid for under the Structural Steel pay items.
4. At the option of the Contractor, the Bridge Drain may be modified to allow the use of TS 6x6x1/4 conforming to A.S.T.M. A501 or A.S.T.M. A500, Gr. "A", in place of the 6" φ steel pipe.
5. If the minimum thickness of concrete below the Drain is 2" or less, the haunch shall be extended as shown.
6. Painting will not be required when the structural steel is specified to be unpainted.
7. Payment for Bridge Drain shall be as specified under subsection 502.19 of the Standard Specifications.

BRIDGE DRAIN

STATE OF MAINE DEPARTMENT OF TRANSPORTATION



PLANS

SPURWINK BRIDGE OVER SPURWINK RIVER BETWEEN THE TOWNS OF SCARBOROUGH AND CAPE ELIZABETH CUMBERLAND COUNTY MAINE FEDERAL AID SECONDARY PROJECT NO. BR-0120(12) PROJECT LENGTH 0.208 MILES

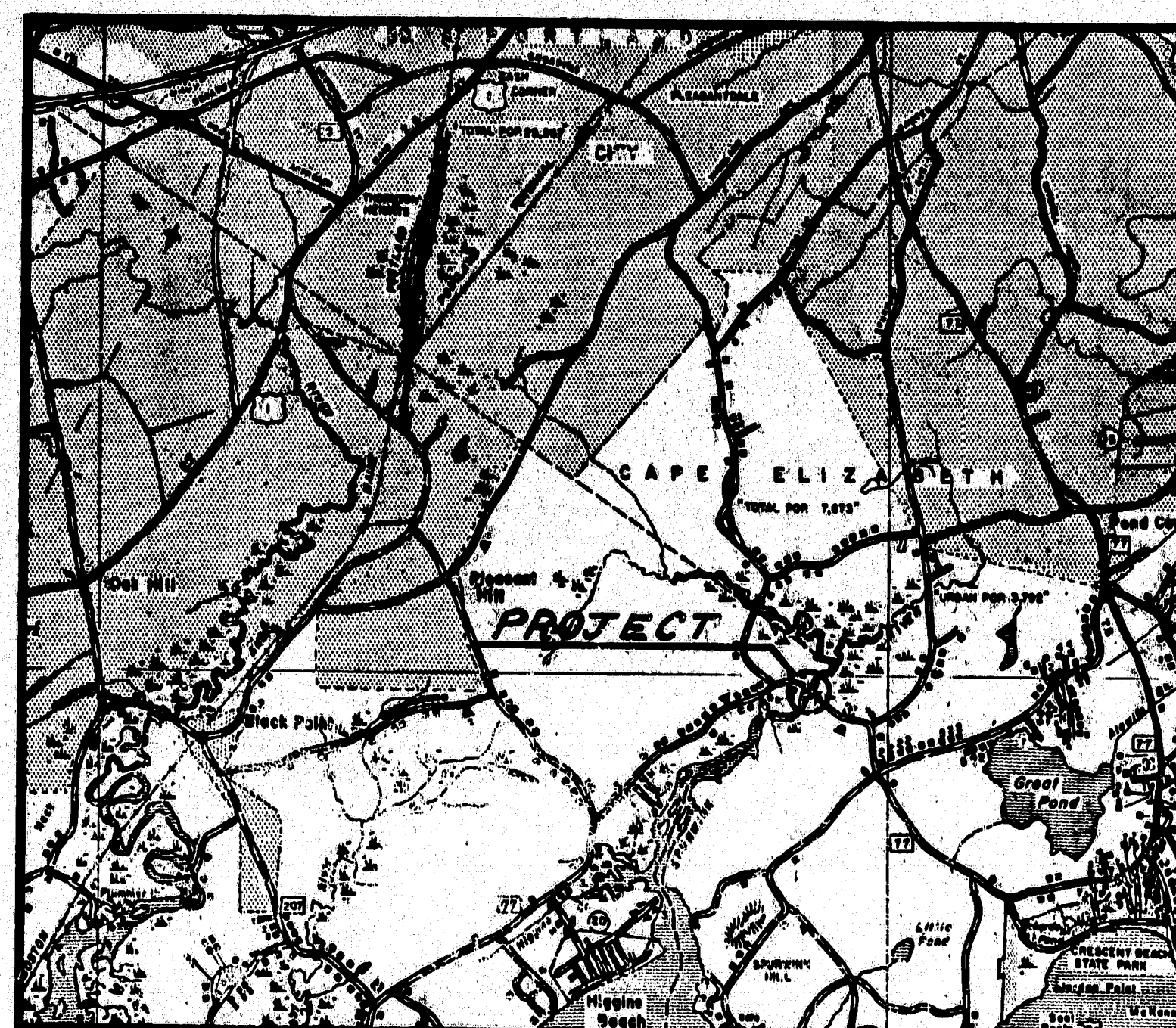
CONVENTIONAL SIGNS	
COUNTY LINES	TRAVELLED WAY - PROPOSED
TOWN LINES	UNDERGROUND UTILITIES - EXISTING
PROPERTY LINES	UNDERGROUND UTILITIES - PROPOSED
R/W LINES - EXISTING	RAILROAD - SINGLE TRACK
R/W LINES - NEW - ACCESS CONTROL	RAILROAD - DOUBLE TRACK
R/W LINES - NEW - NO ACCESS CONTROL	UTILITY POLE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

SPECIFICATIONS

DESIGN: Load Factor Design per AASHTO Standard Specifications for Highway Bridges 1983 and Interim Specifications 1984 and 1985.
CONTRACT: State of Maine, Department of Transportation, Standard Specifications, Highways and Bridges, Revision of January 1984.

DESIGN LOADING

LIVE LOAD: HS25
STRESS CYCLES: 500,000 (Steel Alternate)



LOCATION MAP

MATERIALS

CONCRETE: Precast Concrete Box Beams Class P
Cast in Place Class A
REINFORCING STEEL: ASTM A615 Grade 60 (epoxy coated except as noted)
PRESTRESSING STRANDS: ASTM A416 Grade 270
STRUCTURAL STEEL: All Material (Except as otherwise noted) ASTM A572 (painted)
High Strength Bolts ASTM A325

BASIC DESIGN STRESSES

CONCRETE: $f'_c = 5000$ psi (precast)
 $f_{ci} = 4000$ psi (precast)
 $f'_c = 3000$ psi (cast in place)
REINFORCING STEEL: $f_y = 60,000$ psi
STRUCTURAL STEEL: ASTM A572 $F_y = 50,000$ psi
ASTM A36 $F_y = 36,000$ psi
ASTM A325 $F_v = 25,000$ psi

TRAFFIC DATA

A.D.T. 1985-3080
A.D.T. 2005-6060
D.H.V. 909
T.(%) 5
D.(%) 60
V. 45
P.S.D.(%)
18 KIPS P-2.5-50

Plans of existing bridge and a hydrologic report of the bridge site 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 may have been made to the bridge during its life span. The hydrologic report is based on the interpretation by the Department of information obtained for the subject site and no assurance is given that the information or the conclusions of the report will be representative of actual conditions at the time of construction.

NOTE

All work contemplated under this contract to be governed by and in conformity with the STANDARD SPECIFICATIONS (revision of January 1984) and supplementals thereto, except as modified on the plans and in the special provisions.

APPROVED:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

DATE

8-20-86

COMMISSIONER

Richard A. Coleman
CHIEF ENGINEER

8-20-86

UNITED STATES
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
REGION I

APPROVED:

DIVISION ADMINISTRATOR DATE

INDEX OF SHEETS

DESCRIPTION	SHEET NO.
TITLE SHEET	1
ESTIMATED QUANTITIES	2
SURVEY PLAN AND PROFILE	3 thru 5
FOUNDATION SURVEY AND BORING DETAILS	6-7
CROSS SECTIONS	8 thru 12
STEEL ALTERNATE:	
ABUTMENT #1	13
ABUTMENT #2	14
STRUCTURAL STEEL DETAILS	15
SUPERSTRUCTURE DETAILS	16
CONCRETE ALTERNATE:	
ABUTMENT #1	17
ABUTMENT #2	18
SUPERSTRUCTURE DETAILS (BUTTED BOX-OPTIONS A AND B)	19
SUPERSTRUCTURE DETAILS (SPREAD BOX OPTION)	20
BOX BEAM DETAILS	21
REINFORCING STEEL SCHEDULE	22
BRIDGE STANDARD DETAILS	23 thru 27
HIGHWAY STANDARD DETAILS	28 thru 30
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BRIDGE STANDARD DETAILS:	
BD (113-85) DIAPHRAGMS AND CROSSFRAMES	
BD (114-81) ALUMINUM BRIDGE RAILING	
BD (120-81) CONCRETE END POSTS	
BD (126-81) CURB, SHEAR CONNECTORS, ETC.	
BD (127-81) TEMPORARY BARRIER, ETC.	
HIGHWAY STANDARD DETAILS:	
④ EROSION CONTROL, ETC.	
⑤ MAILBOX POSTS, ETC.	
⑥ TYPE 3 GUARD RAIL, ETC.	

HYDROLOGIC DATA

DRAINAGE AREA UPLAND: 7.16 sq. miles
DESIGN RUNOFF (Q50): 600 cfs
CHECK RUNOFF (Q100): 700 cfs
MEAN LOW WATER: elev. 4.3
MEAN HIGH WATER: elev. 4.8
ANNUAL HIGH TIDE: elev. 7.1
SPRING HIGH TIDE: elev. 6.1
TIDAL DRAIN BASIN AREA: 286 acres

100-1

FORM NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	89-0120(12)	2	36

CONSTRUCTION NOTES

1. All utility facilities shall be adjusted by the respective utilities unless noted.
2. Place a two foot wide sod strip on the side slopes along the top of the riprap. Sodded gutters shall be constructed after paving and shoulder work is complete, where it is apparent that runoff will cause continual erosion.
3. One guard rail delineator post shall be installed at each guard rail end.
4. For easements, construction limits and right of way lines refer to Right of Way map.
5. Do not excavate for Aggregate Subbase Course where existing material is suitable as determined by the engineer. Shaping and compacting of the existing subbase and layers of new subbase six inches or less thick, in areas where the engineer directs the Contractor not to excavate to the subgrade line shown on the plans will be paid for with appropriate equipment rental items.
6. Mechanical Couplers shall meet the requirements of Supplemental Specification 503 and shall be epoxy coated in accordance with Special Provision 503. Epoxy Coating will not be paid for directly but will be considered incidental to Item 503.17.
7. The clearing limits as shown on the plans are approximate. The exact limits shall be established in the field by the Engineer. Payment for clearing shall be incidental to contract items.
8. Granular Borrow shall meet the requirements of Subsection 703.19. Material for underwater backfill.
9. Breakaway Cable Terminals shall be installed concurrently with the placement of each section of beam guardrail.
10. The gravel excavated from the existing roadway meeting the requirements of granular borrow, shall be used in those areas where designated as Granular Borrow, as directed by the Engineer.

MAINTENANCE OF TRAFFIC

1. Traffic shall be maintained on the existing roadway and bridge until traffic is transferred to the new structure.
2. The minimum clear width at all times shall be 22 feet, except for short periods during excavation for and placing of Aggregate Subbase Course Gravel, as approved by the Engineer.
3. Temporary retaining walls will be required at the downstream wingwalls until the rerouting of traffic has been accomplished and the new wingwalls are completed. No separate payment will be made as this work will be considered incidental to the contract items.

CONSTRUCTION NOTES (Continued)

- 11) Reinforcing steel in all cast-in-place concrete shall be epoxy coated in accordance with Special Provision 503. For reinforcing bars in precast concrete to be epoxy coated, see Note 16, Sheet #21.
- 12) The existing steel beams shall be carefully removed and stockpiled as provided for in Special Provision Section 202.
- 13) All hardware used on Cable Guardrail which is to be removed, shall be carefully salvaged by the Contractor and will remain the property of the Department. Associated guardrail cable and posts shall become the property of the Contractor.
- 14) Pavement entrance shall be constructed with 2" Hot Bit. Pavement and 12" aggregate subbase course - gravel. Unpaved aggregate subbase course - gravel.

SYMBOLS

- ☐ New Concrete Elevation
- ☐ New Concrete Section
- ☐ Precast Concrete

100-2

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SPRUELL BRIDGE
OVER
SPRUELL RIVER
BE TOWN OF THE TOWN OF
SPRUELL AND CARL L. BROWN JR.
CONTRACTOR
L. SPRUELL CONTRACTORS

AUGUSTA, MAINE

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY				UNIT
		Steel Alternate	Concrete Alternate			
			Butted Option "A"	Butted Option "B"	Spread Box Option	
202.09	Remove Existing Superstructure (Retained By Department)	1	1	1	1	L.S.
203.20	Common Excavation	6400	6400	6400	6400	C.Y.
203.21	Rock Excavation	50	50	50	50	C.Y.
203.24	Common Borrow	800	800	800	800	C.
203.25	Granular Borrow	1700	1700	1700	1700	C.Y.
206.08	Struc. Earth Excav.-Abut., Ret. Walls, Box Culv. & Struc. Plate Units	35	40	40	40	C.Y.
304.10	Aggregate Subbase Course-Gravel	3800	3800	3800	3800	C.Y.
403.07	Hot Bituminous Pavement, Grading B	450	450	450	450	Ton
403.08	Hot Bituminous Pavement, Grading C	470	470	470	470	Ton
403.101	Hot Bit Pave, Grad D (SidwLks, Shims, Drives, etc)	10	10	10	10	Ton
410.15	Emulsified Asphalt Applied	300	300	300	300	Gal.
501.214	Steel H-Beam Piles 53 lbs/ft.	230	—	—	—	L.F.
501.255	Steel H-Beam Piles	—	250	250	250	L.F.
502.25	Structural Concrete Superstructure Slabs	—	1	1	1	L.S.
502.260	Struc Conc Rdwy & Sidewalk Slabs on Steel Bridges	1	—	—	—	L.S.
503.14	Epoxy Coated Reinf. Steel Fab. & Del.	20,400	—	—	—	Lbs
503.15	Epoxy Coated Reinf. Steel, Placing.	20,400	—	—	—	Lbs
503.20	Epoxy Coated Reinf. Steel (Concrete Alternate)	—	1	1	1	L.S.
503.17	Mechanical/Welded splice	24	28	28	28	Each
504.70	Structural Steel Fab. & Delivered	1	—	—	—	L.S.
504.71	Structural Steel Erection	1	—	—	—	L.S.
505.08	Shear Connectors	1	—	—	—	L.S.
506.141	Field Painting New Structural Steel	1	—	—	—	L.S.
507.092	Aluminum Bridge Railing, 2 Bar	142	146	146	146	L.F.
508.13	Membrane Waterproofing	1	1	1	1	L.S.
514.06	Curing Box For Concrete Cylinders	1	1	1	1	Each
515.21	Protective Coating For Concrete Surfaces	1	1	1	1	L.S.
526.30	Temporary Concrete Barrier Type I	200	200	200	200	L.F.
526.40	Resetting Temp Conc Barrier Type I	100	100	100	100	L.F.
535.62	Prestressed Str. Conc. Box Beams	—	1	1	1	L.S.
606.35	Guard Rail Delineator Post	4	4	4	4	Each
606.47	Single Wood Post	2	2	2	2	Each
606.55	Guard Rail Type 3-Single Rail	625	625	625	625	L.F.
606.77	Breakaway Cable Terminal	4	4	4	4	Each
609.132	Vertical Bridge Curb Type 1B	145	149	149	149	L.F.
610.08	Plain Riprap	1000	1000	1000	1000	C.Y.
615.07	Loam	165	165	165	165	C.Y.
616.08	Sodding	580	580	580	580	S.Y.
618.14	Seeding Method Number 2	30	30	30	30	Units
618.15	Temporary Seeding	26	26	26	26	L.B.
619.12	Mulch	40	40	40	40	Units

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY				UNIT
		Steel Alternate	Concrete Alternate			
			Butted, Option A	Butted, Option B	Spread Box Option	
620.50	Filter Fabric - Woven	9000	9000	9000	9000	S.F.
627.61	4Inch Solid White Pavement Marking Line	2600	2600	2600	2600	L.F.
627.63	4 Inch Solid Yellow Pavement Marking Line	2600	2600	2600	2600	L.F.
627.68	Temp 4" Painted Pave Marking Line, Yellow or White	5200	5200	5200	5200	L.F.
637.07	Sprinkling	50	50	50	50	M.G.
637.08	Calcium Chloride	5	5	5	5	Ton
639.19	Field Office Type B	1	1	1	1	Each
639.22	Testing Facilities Bituminous Mixes	1	1	1	1	L.S.
652.31	Type I Barricade	20	20	20	20	Each
652.33	Drum	10	10	10	10	Each
652.34	Cone	20	20	20	20	Each
652.35	Construction Signs	400	400	400	400	S.F.
652.36	Maintenance Of Traffic Control Devices	165	165	165	165	C.D.
652.38	Flagger	1000	1000	1000	1000	M.H.
656.50	Baled Hay, In Place	20	20	20	20	Each
656.51	Sandbag, In Place	20	20	20	20	Each
656.55	Dumped Stone	5	5	5	5	C.Y.
656.60	Temporary Berm	2000	2000	2000	2000	L.F.
656.62	Temporary Slope Drains	50	50	50	50	L.F.
656.63	Temporary Silt Fence	1000	1000	1000	1000	L.F.
657.24	Seeding Pits	15	15	15	15	Units
659.10	Mobilization	1	1	1	1	L.S.

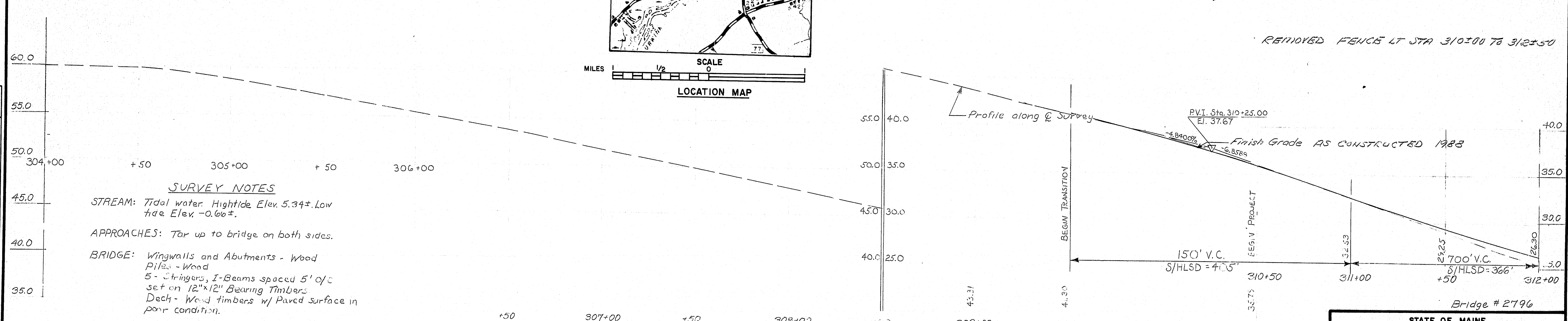
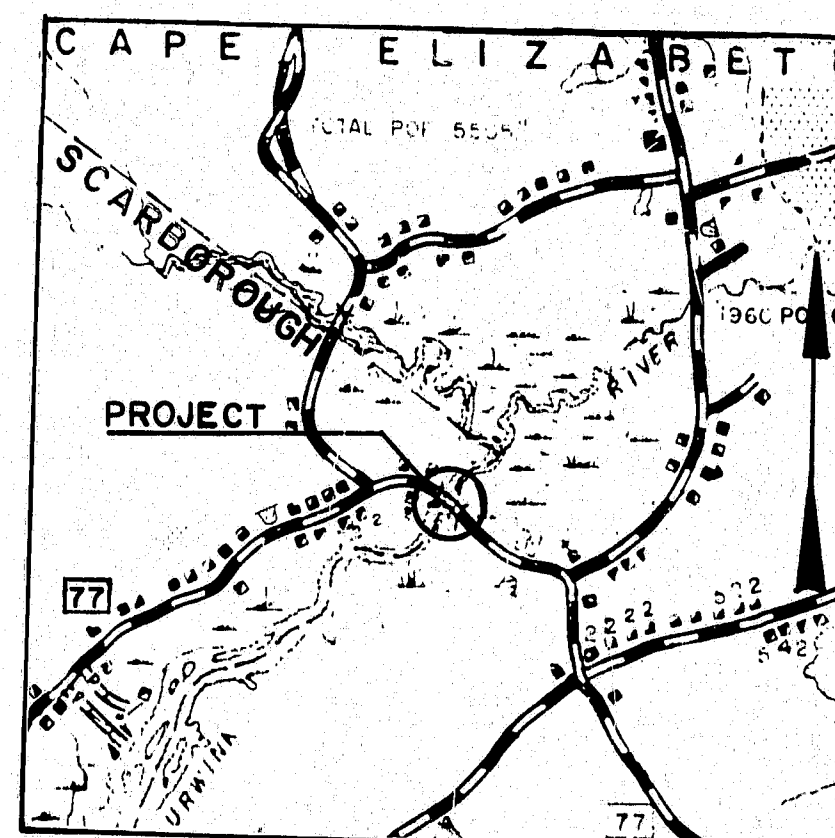
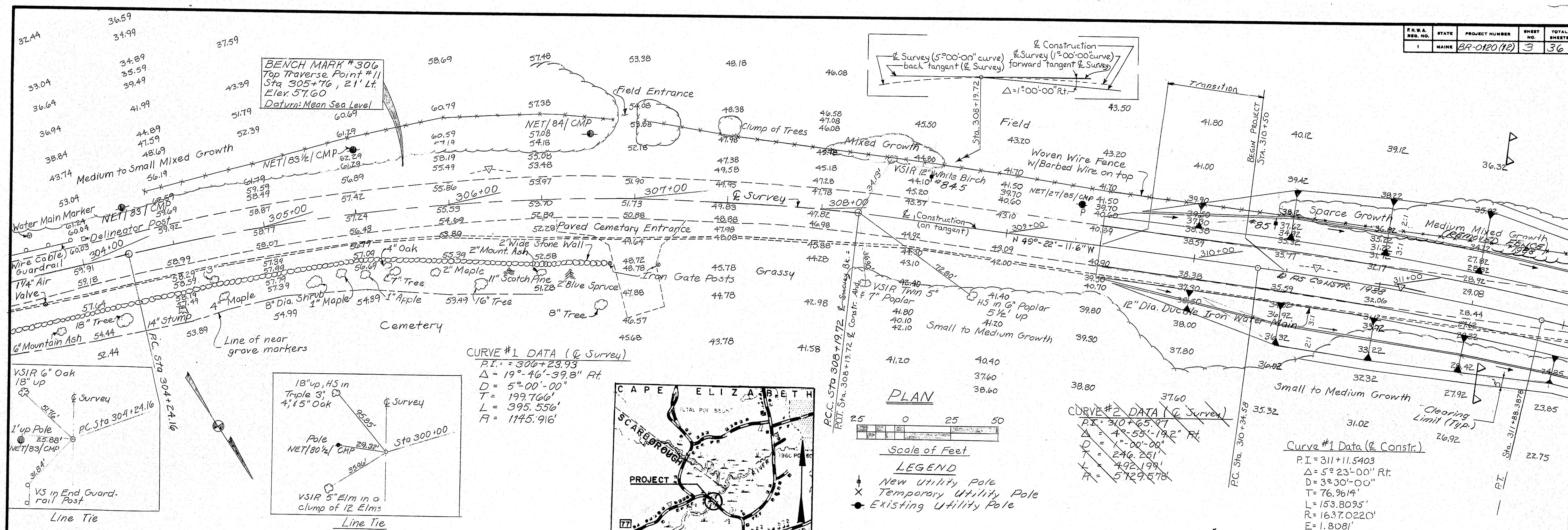
ESTIMATE OF LUMP SUM QUANTITIES

502.25	Str Concrete Supstr Slabs	—	137	135	151	C.Y.
502.260	Str Conc. Rdwy & SW Slabs on Steel Br	162	—	—	—	C.Y.
503.20	Epoxy Coated Reinf. Steel (Concrete Alternate)	—	13,700	13,700	21,200	Lbs.
504.70	Structural Steel Fabricated and Delivered	80,500	—	—	—	Lbs
504.71	Structural Steel Erection	80,300	—	—	—	Lbs
505.08	Shear Connectors	1080	—	—	—	Each
506.141	Field Painting New Structural Steel	80,500	—	—	—	Lbs.
508.13	Membrane Waterproofing	308	308	308	308	S.Y.
535.62	Prestressed Structural Concrete Box Beams	—	163	176	83	C.Y.

PROJECT DESIGN ENGINEER	DATE
CHECKED	BY
REVISIONS	DATE
FIELD CHANGES	DATE
PLANS	DATE

BURNING 44-132-457(0-1)

F.R.D. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0120(12)	3	36



SURVEY NOTES
STREAM: Tidal water. Hightide Elev. 5.34±. Low tide Elev. -0.66±.
APPROACHES: Tar up to bridge on both sides.
BRIDGE: Wingwalls and Abutments - Wood
Piles - Wood
5" Stringers, I-Beams spaced 5' o/c
set on 12"x12" Bearing Timbers
Deck - Wood timbers w/ Paved surface in poor condition.
UTILITIES: Central Maine Power Co.
New England Telephone Co.
Portland Water District - underground
12" dia. ductile iron pipe buried 5' to 6'.
M.E.T. & T may have underground house service in this area.

REFERENCES: The State of Maine Department of Transportation Field Survey Books # 9493 & # 9494.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
SPORWICK BRIDGE
OVER
SPORWICK RIVER
BETWEEN THE TOWNS OF
SCARBOROUGH AND CAPE ELIZABETH
DUMFRIES COUNTY
SURVEY, PLAN AND PROFILE
AUGUSTA, MAINE SEPT. 1983

100-3

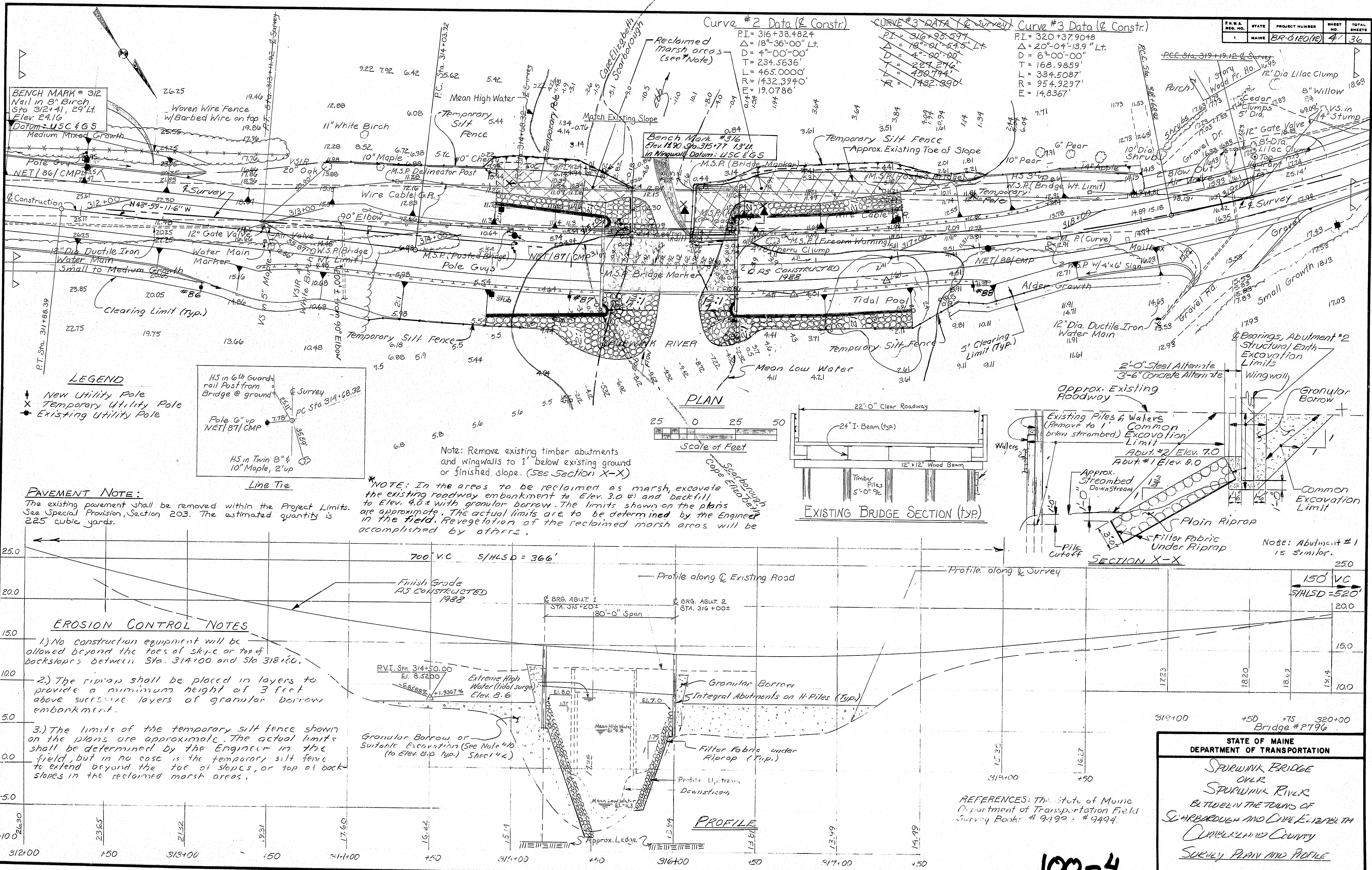
REVISIONS AND ERIE
G.L. 12/20/84, 1984

AUGUSTA, MAINE SEPT. 1983

Prelim Plan, Aug. 7/83
Survey Fielded DWP - 9/83

PROJECT DESIGN ENGINEER	DATE
BY	3/83
DESIGN - DETAILED	
CHECKED	
REVISIONS	
FIELD CHANGES	
PLANS	

BRIDGE 44132 457101



PROJECT NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-6180(18)	4	36

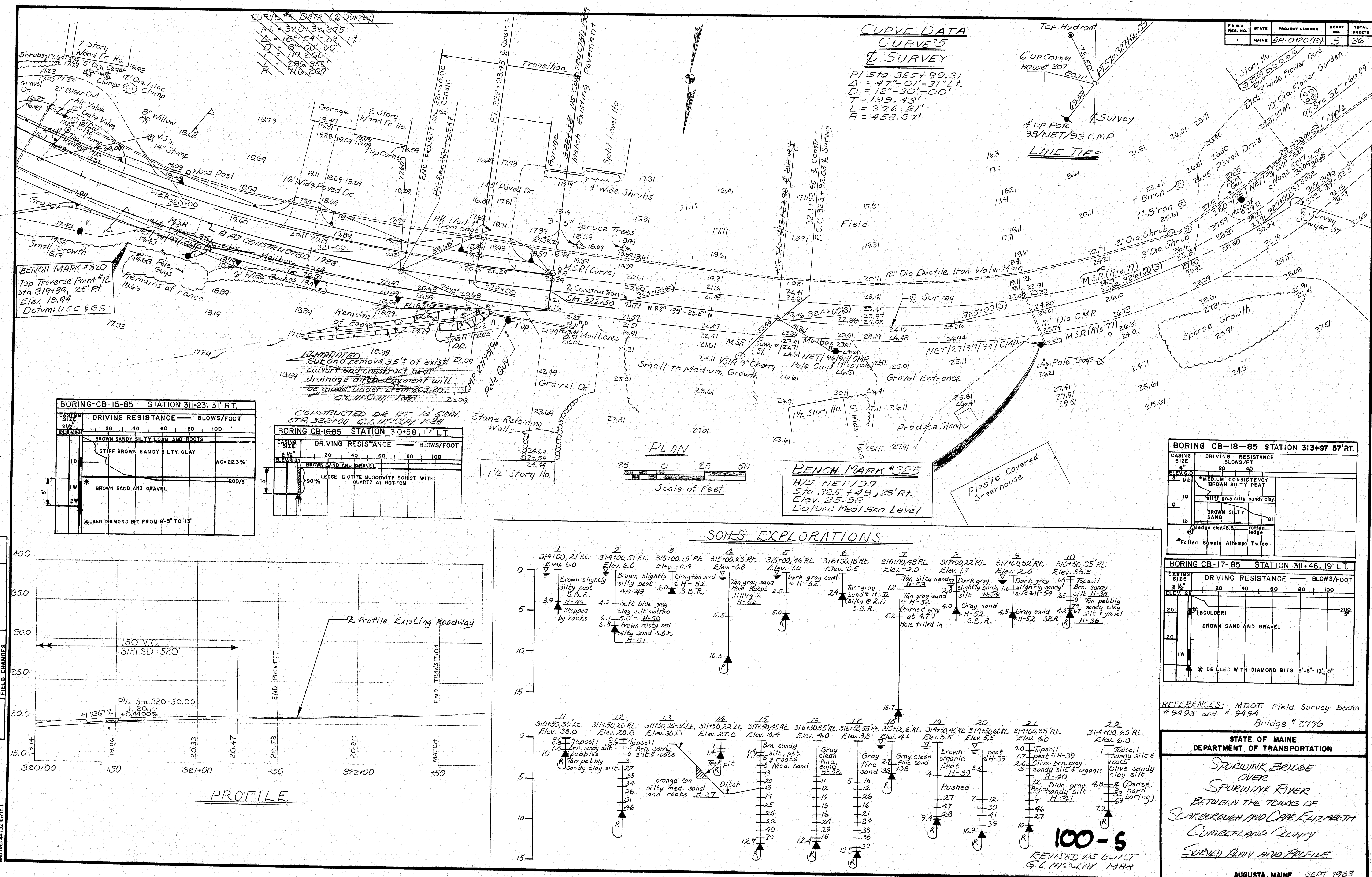
PROJECT DESIGN ENGINEER	DATE
BY	9/88
DESIGN - DETAIL	2/91
CHECKED	3/95
REVISIONS	
FIELD CHANGES	

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

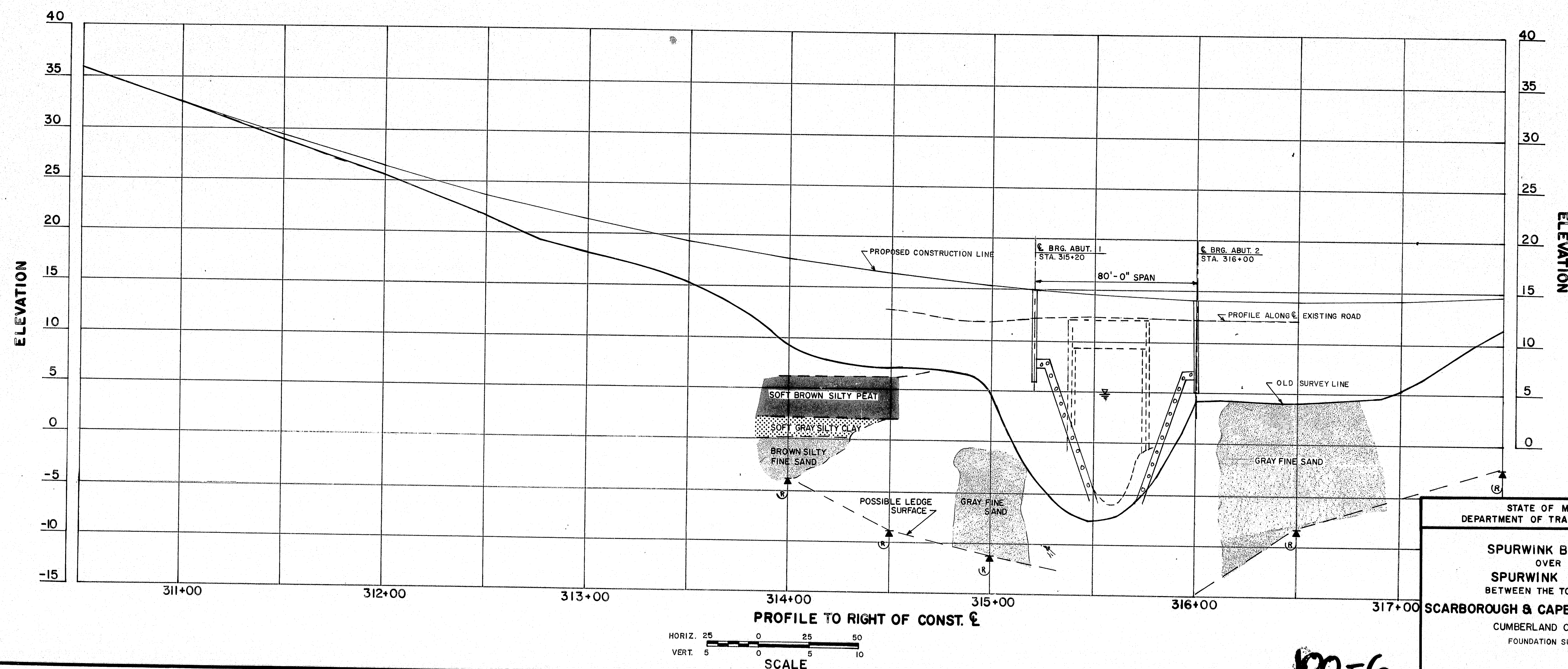
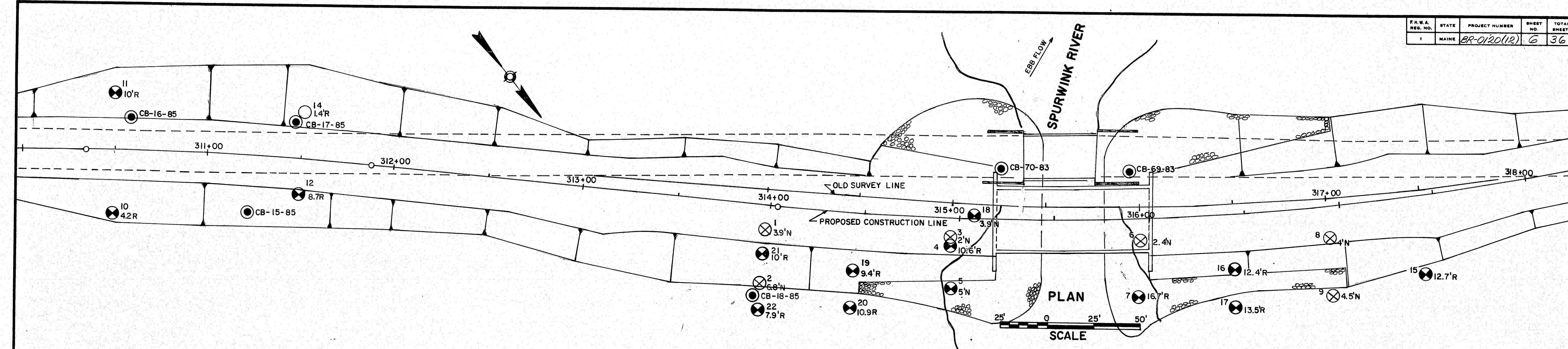
SPURWINK BRIDGE
OVER
SPURWINK RIVER
LOCATED IN THE TOWNS OF
SCARBOROUGH AND CAPE ELIZABETH
CUMBERLAND COUNTY
SURVEY PLAN AND PROFILE

AUGUSTA, MAINE SEPT. 1983

100-4
See Cape Elizabeth



F.C.R.A. REV. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0120(12)	6	36



PROJECT DESIGN ENGINEER	BY	DATE
PLANS		
DESIGN - DETAILED		
CHECKED		
REVISIONS		
FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

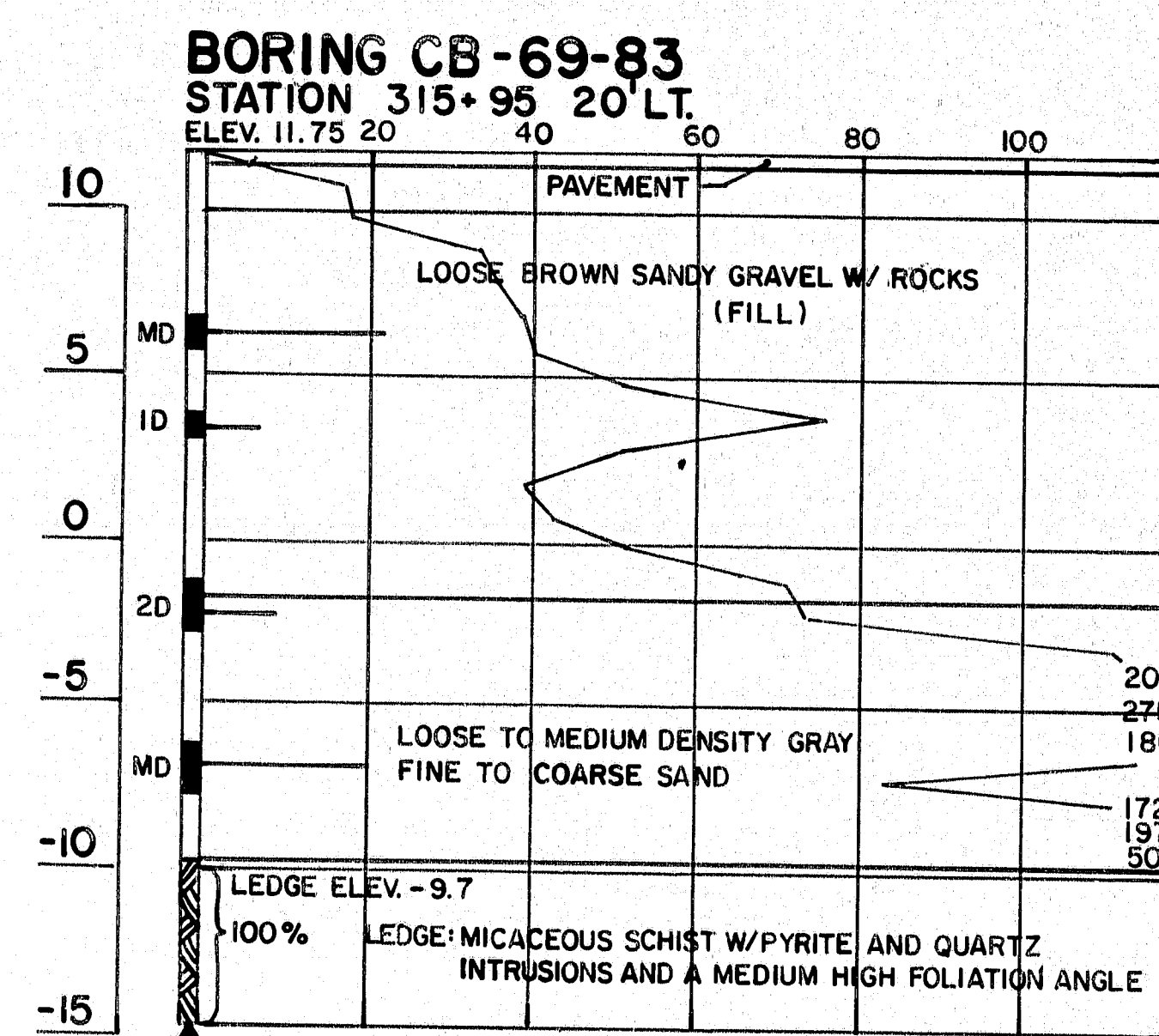
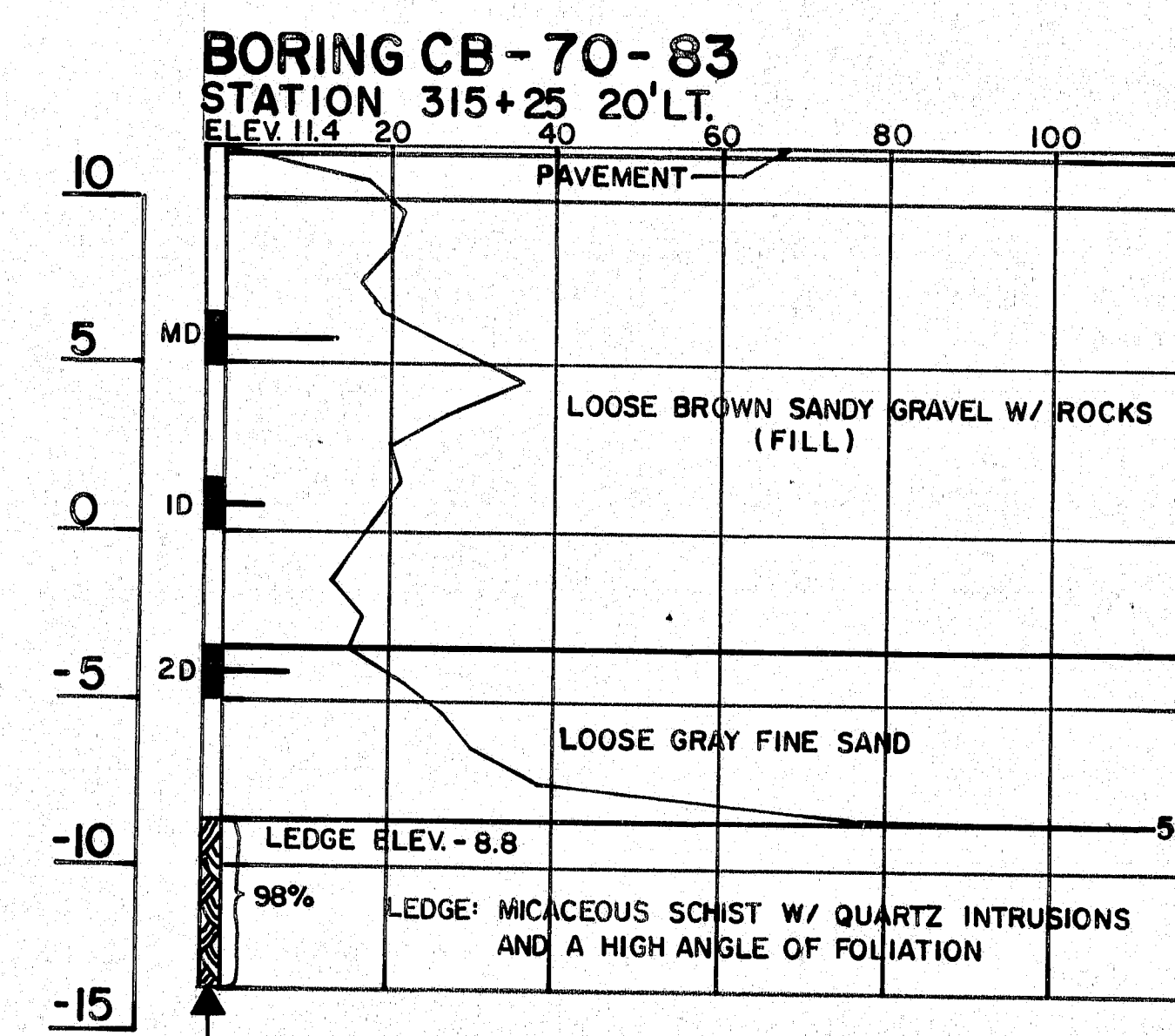
SPURWINK BRIDGE
OVER
SPURWINK RIVER
BETWEEN THE TOWNS OF
SCARBOROUGH & CAPE ELIZABETH
CUMBERLAND COUNTY
FOUNDATION SURVEY

AUGUSTA, MAINE

100-6

A detailed cross-section diagram of Abutment No. 1. The vertical axis is labeled 'ELEVATION' and ranges from -15 to 20. The horizontal axis is labeled 'ABUTMENT NO. 1' and shows distances from the left and right abutments. The diagram illustrates the following features:

- Soil Layers:**
 - LOOSE BROWN SANDY GRAVEL W/ ROCKS (FILL):** A large, stippled area on the left side of the abutment.
 - LOOSE GRAY FINE SAND:** A shaded area below the gravel fill.
 - CLEAN GRAY FINE SAND:** A shaded area to the right of the main abutment structure.
 - GRAY FINE SAND:** A shaded area further to the right, extending towards the right abutment.
- Structural and Survey Features:**
 - CP-70-20:** A point marked on the top left corner of the gravel fill.
 - SURVEY E:** A horizontal line indicating a survey elevation.
 - E CONST:** A vertical line indicating a constant elevation.
 - Possible Ledge Surface:** A dashed line with an arrow pointing to a potential ledge.
 - Bottom of Proposed Integral Abutment:** A dashed line indicating the base of the abutment structure.
 - Points 1, 2, 3, 4, 5:** Numbered points along the right side of the abutment, likely indicating specific locations of interest or measurement.
 - Points R, B, U:** Labeled points (R, B, U) along the right side of the abutment, possibly representing different soil types or structural features.



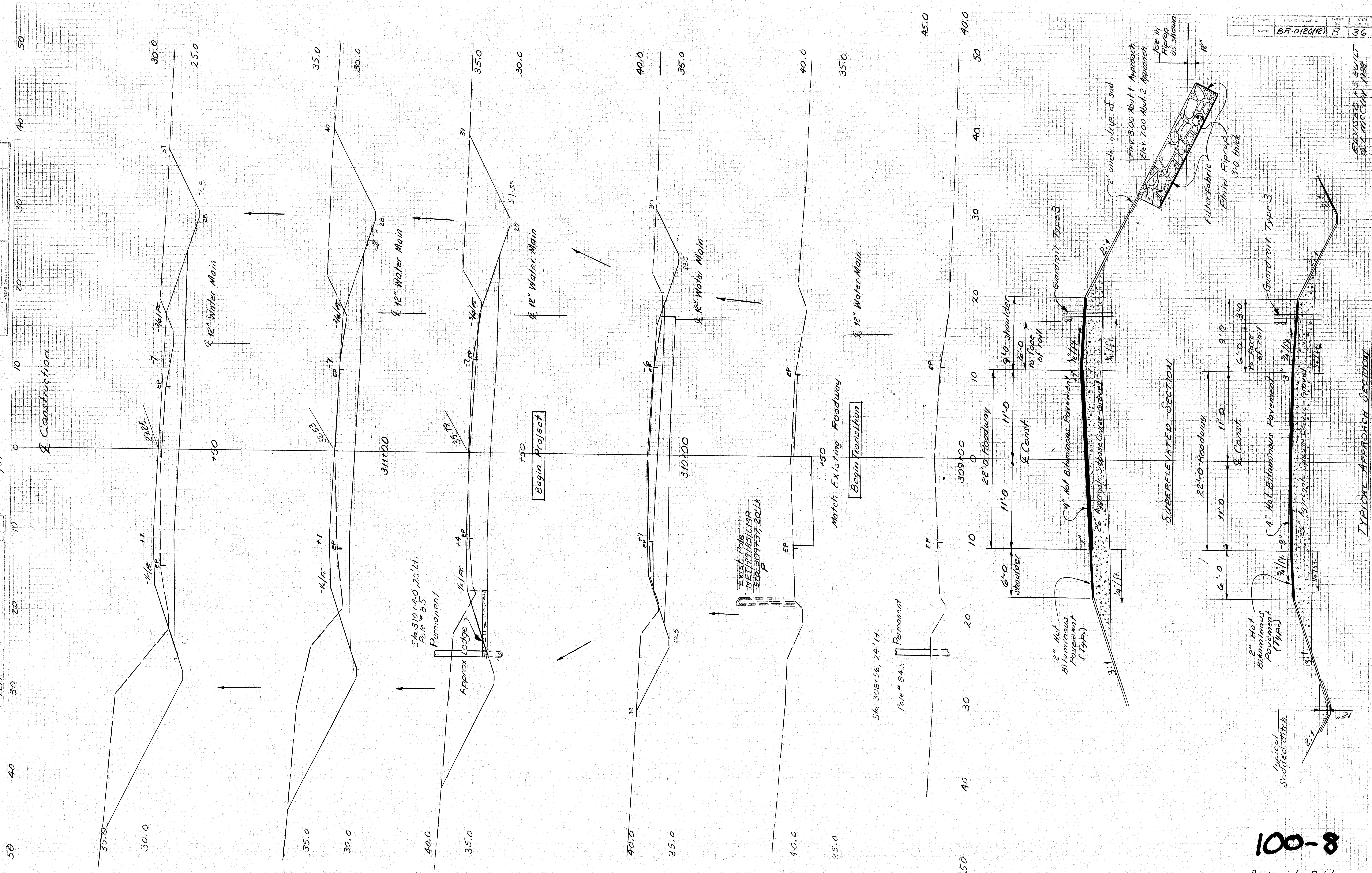
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SPURWINK BRIDGE
OVER
SPURWINK RIVER
BETWEEN THE TOWNS OF
SCARBOROUGH & CAPE ELIZABETH
CUMBERLAND COUNTY
TRANSVERSE SECTIONS & BORING DETAILS
AUGUSTA, MAINE

100-7

DATE	BY
DESIGNED	BY
CHECKED	BY
APPROVED	BY
DATE	BY

9494
 1/8" = 1' R/W
 1/8" = 1' R/W
 1/8" = 1' R/W

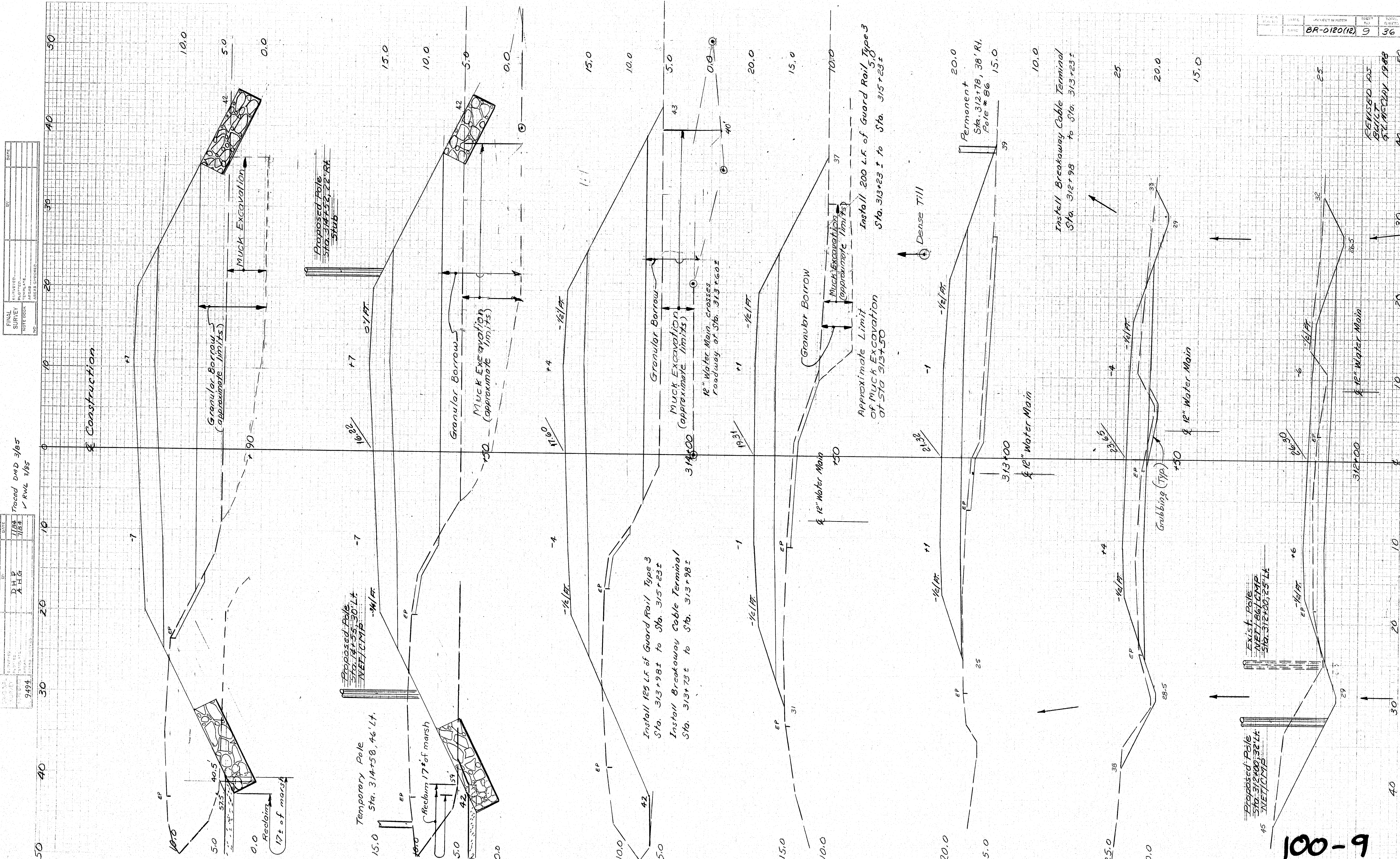


100-8

Spurwink Bridge
 Sta. 309+00 thru Sta. 311+50

NO.	DATE	BY	DATE
7494	7/83	D.H.G.	7/83
		A.H.G.	7/83

NO.	DATE	BY	DATE
7494	7/83	D.H.G.	7/83
		A.H.G.	7/83



NO.	DATE	BY	DATE
7494	7/83	D.H.G.	7/83
		A.H.G.	7/83

NO.	DATE	BY	DATE
7494	7/83	D.H.G.	7/83
		A.H.G.	7/83

NO.	DATE	BY	DATE
7494	7/83	D.H.G.	7/83
		A.H.G.	7/83

NO.	DATE	BY	DATE
7494	7/83	D.H.G.	7/83
		A.H.G.	7/83

NO.	DATE	BY	DATE
7494	7/83	D.H.G.	7/83
		A.H.G.	7/83

NO.	DATE	BY	DATE
7494	7/83	D.H.G.	7/83
		A.H.G.	7/83

NO.	DATE	BY	DATE
7494	7/83	D.H.G.	7/83
		A.H.G.	7/83

NO.	DATE	BY	DATE
7494	7/83	D.H.G.	7/83
		A.H.G.	7/83

NO.	DATE	BY	DATE
7494	7/83	D.H.G.	7/83
		A.H.G.	7/83

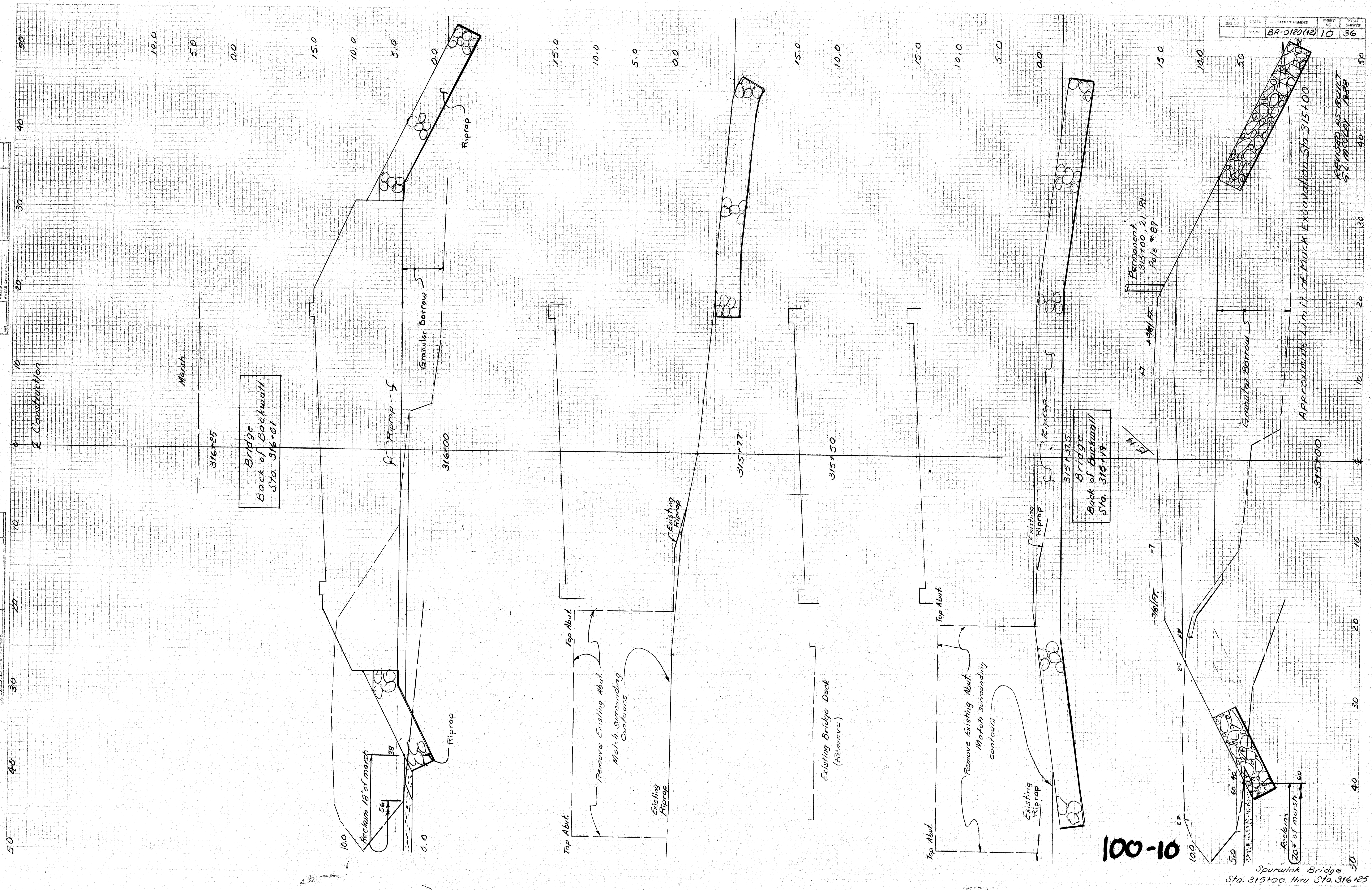
NO.	DATE	BY	DATE
7494	7/83	D.H.G.	7/83
		A.H.G.	7/83

NO.	DATE	BY	DATE
7494	7/83	D.H.G.	7/83
		A.H.G.	7/83

DESIGNED BY	DATE
CHECKED BY	DATE
APPROVED BY	DATE
NOTED BY	DATE
NO.	REVISIONS

DATE	BY
9/29/88	D.H.G.
9/29/88	D.H.G.
9/29/88	D.H.G.
9/29/88	D.H.G.

Traced by DND 3/85
R.W.L. 3/85



FINAL SURVEY	SURVEYED _____	BY _____	DATE _____
NOTE BOOK	PLOTTED _____	TEMP. PLATE _____	
NO. _____	AREAS _____	AREAS CHECKED _____	

Hand-drawn plan view of a road layout. The road is represented by a dashed line with stationing markers: 34, 28.5, 28, 34, 15.0, and 10.0. A solid line represents a crossing, labeled "12" Water Main". A vertical line is labeled "54' Rt.". A note on the right side reads: "Eliminated Sta. 318+40 = Right Install Mail Box Post as directed by the Engineer".

28.5

28

4" 12" Water Main 10.0

64' Rt

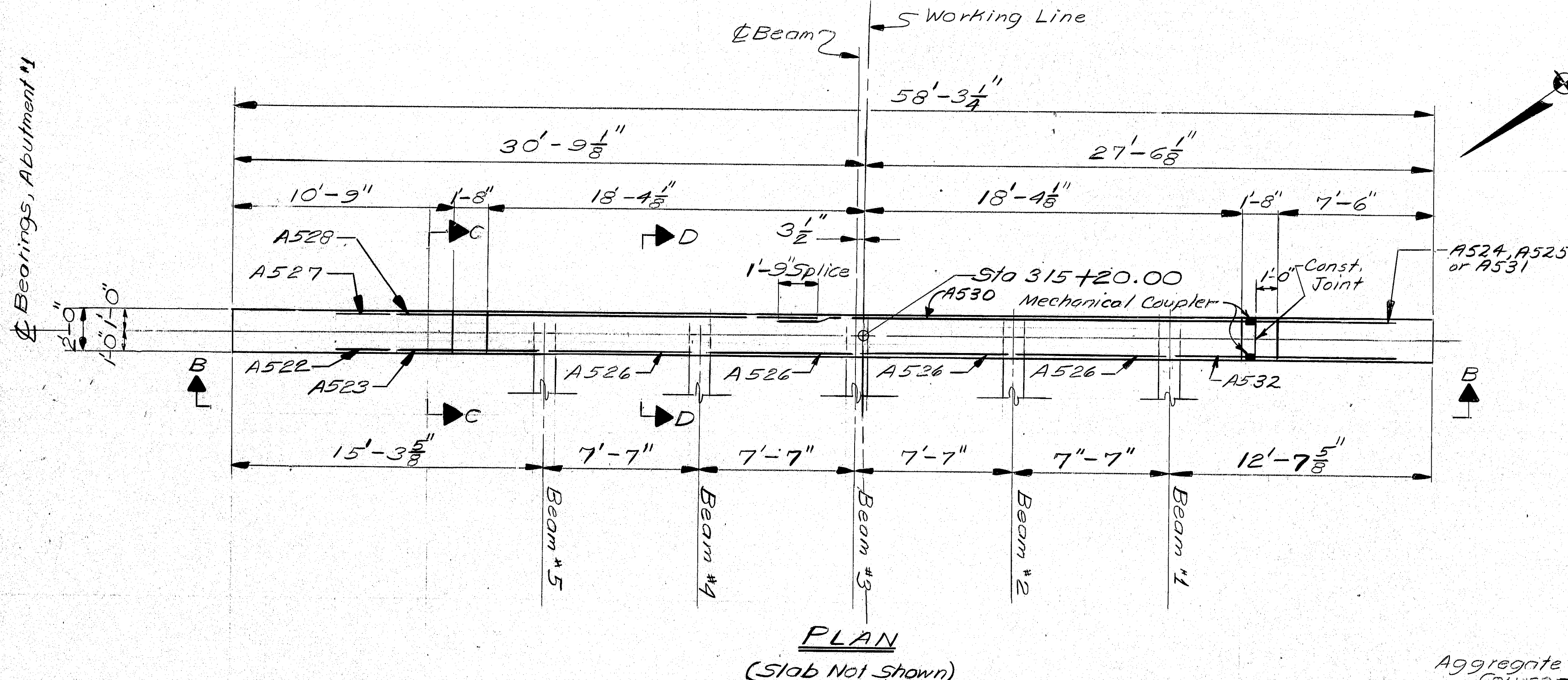
Eliminated Sta. 318+40 ± Right Install Mail Box Post as directed by the Engineer

15.30

19130

ELIOT/HARTCO
Sta. 318+40 = Right Install
Mail Box Post as directed
by the Engineer.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0120(12)	13	30

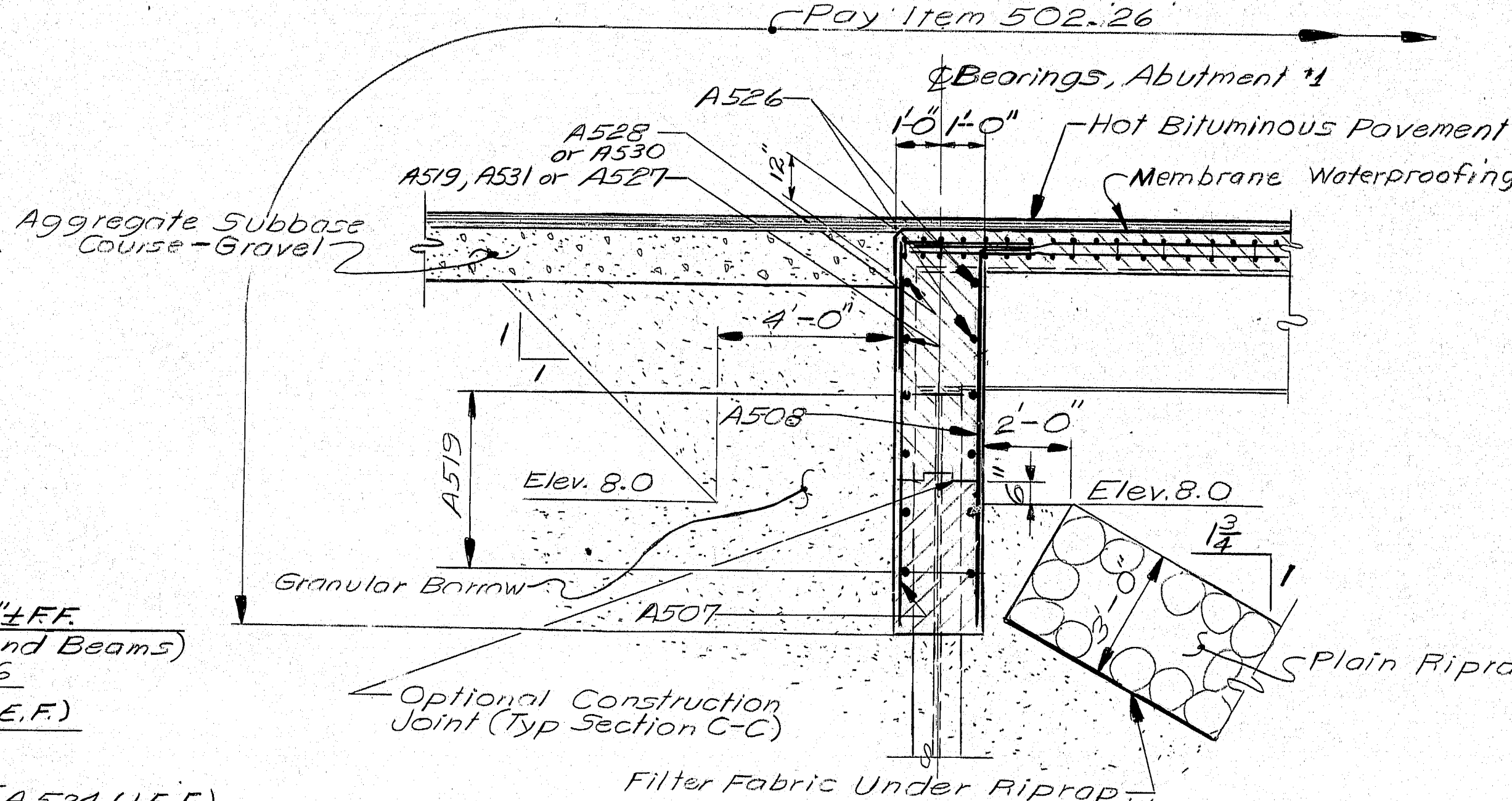


ABUTMENT NOTES

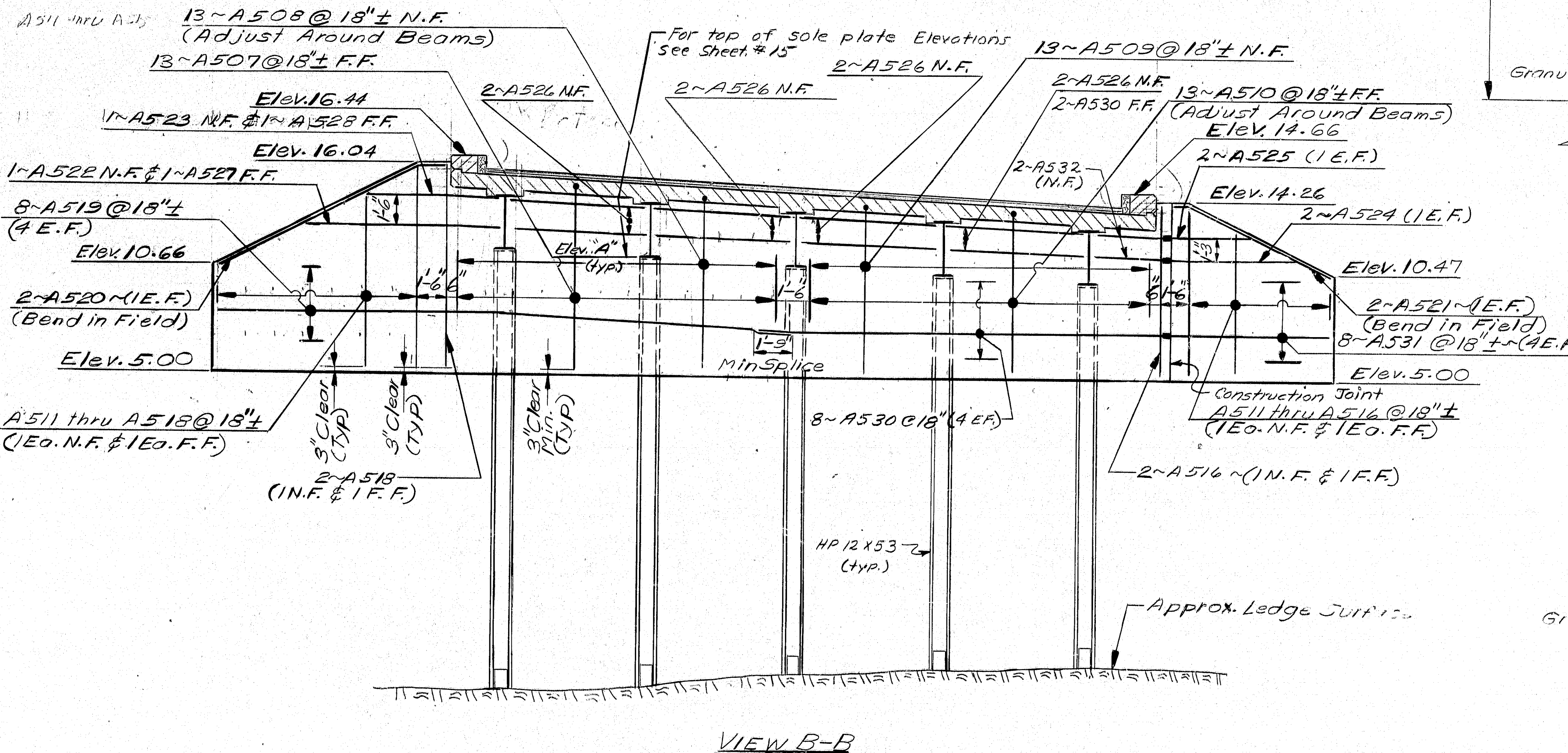
- 1) Reinforcing steel shall have two inches minimum cover unless otherwise noted.
- 2) Protective Coating for concrete surfaces shall be applied to the following areas:
 - Top of concrete curbs
 - Fascia down to drip notch
 - All exposed surfaces of concrete end posts.

PILE NOTES

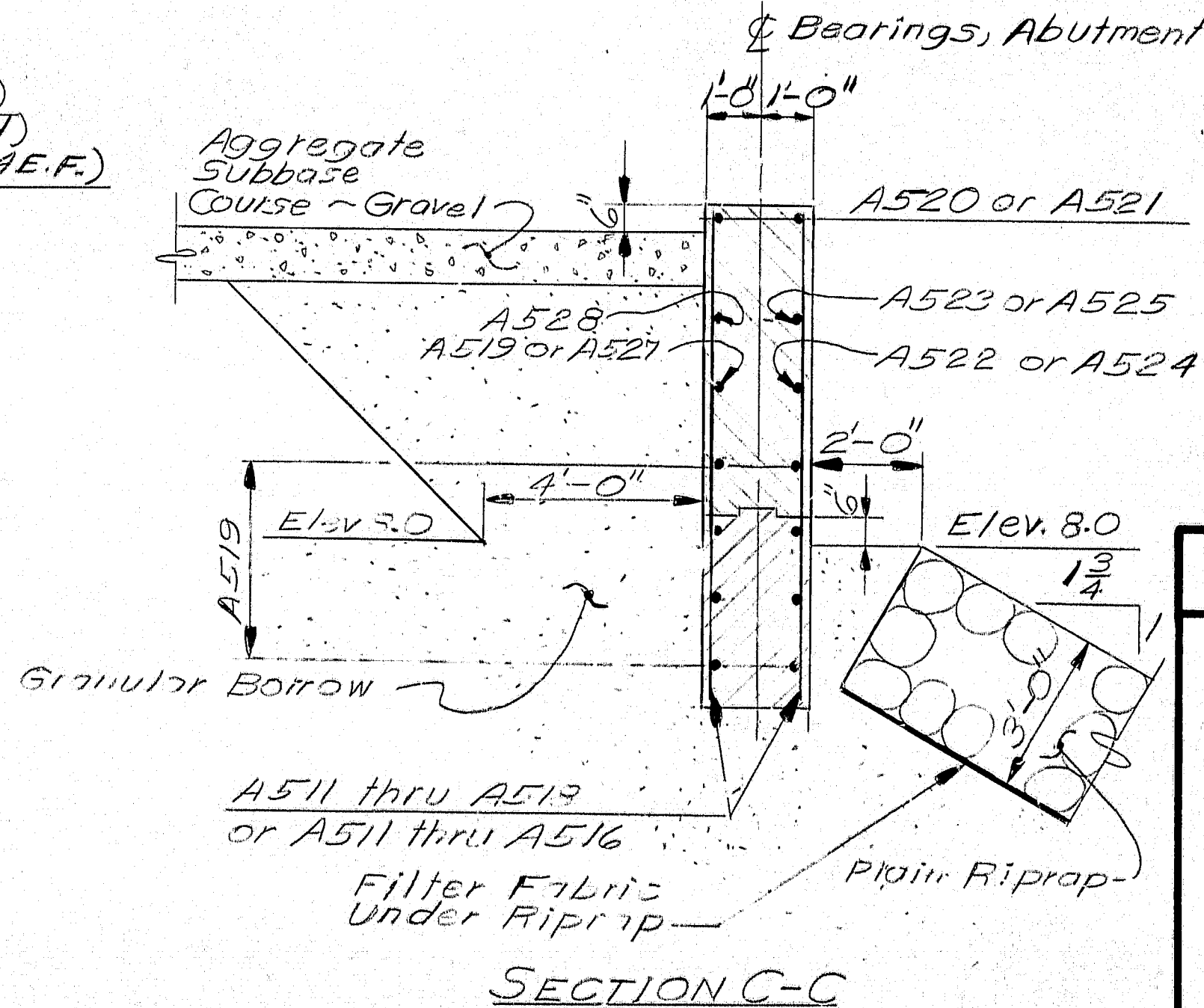
- 1.) Maximum calculated pile loads : 62 tons
- 2.) Estimate of Piles Required:
 $\text{Abutment } \#1 \sim 5\text{-HP } 12 \times 53 \text{ @ } 24'$
 $\text{Abutment } \#2 \sim 5\text{-HP } 12 \times 53 \text{ @ } 24'$
- 3.) Drive piles to ledge or practical refusal.
- 4.) Piles shall not be out of position shown by more than 2 inches in any direction.
- 5.) HP 13 X 60 Piles may be substituted for HP 12 X 53.



SECTION D-D



VIEW B-



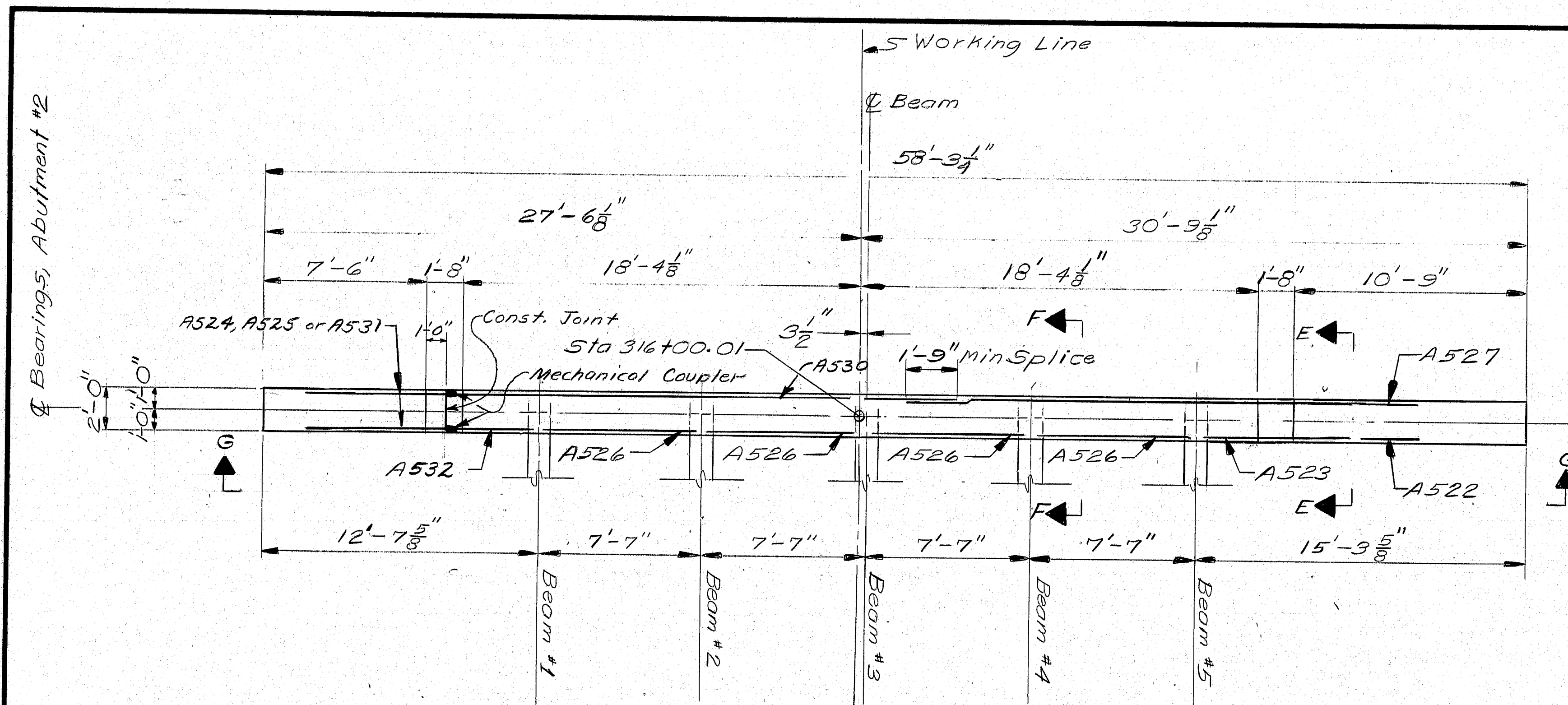
SECTION C-

100-13

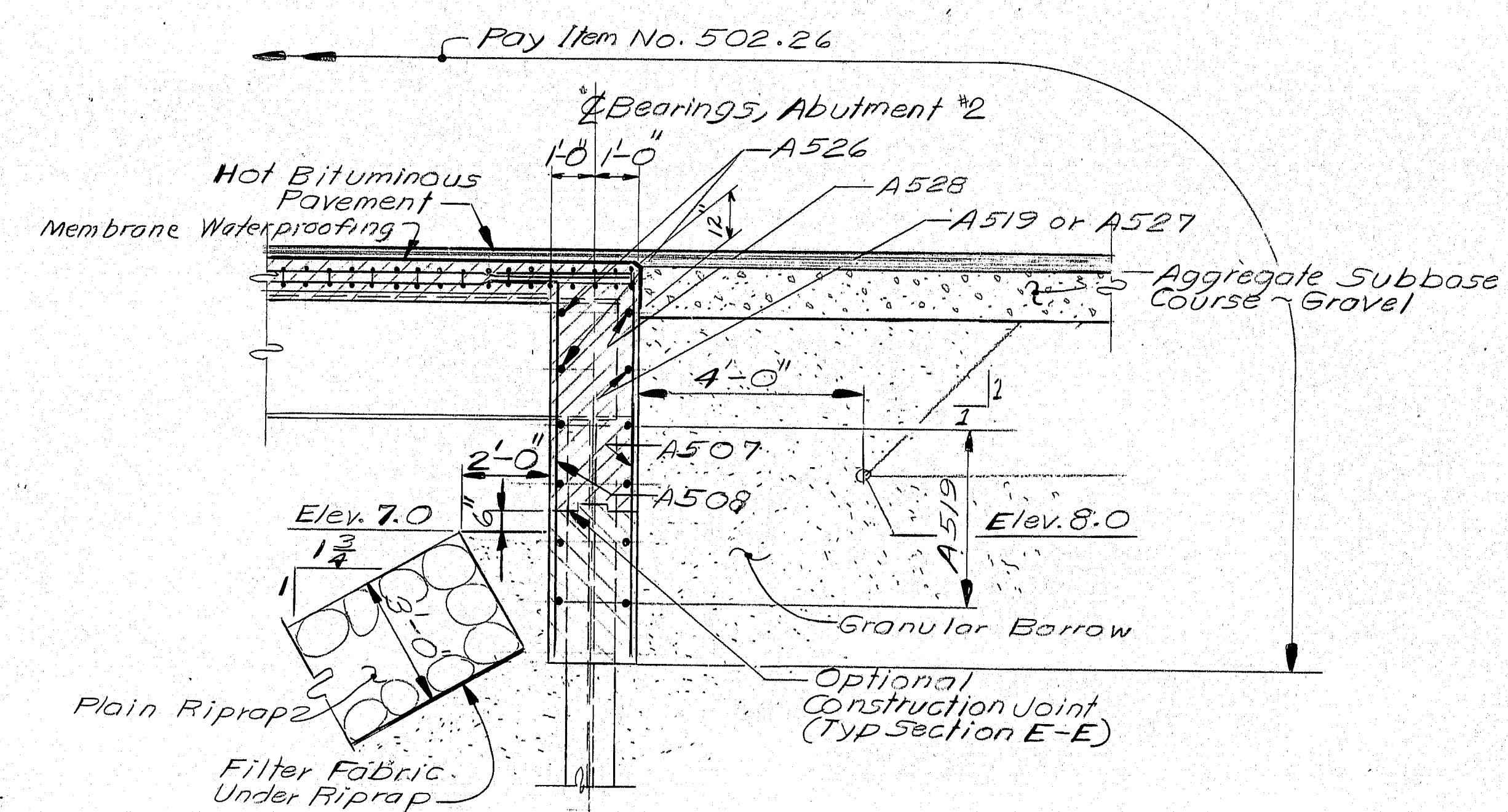
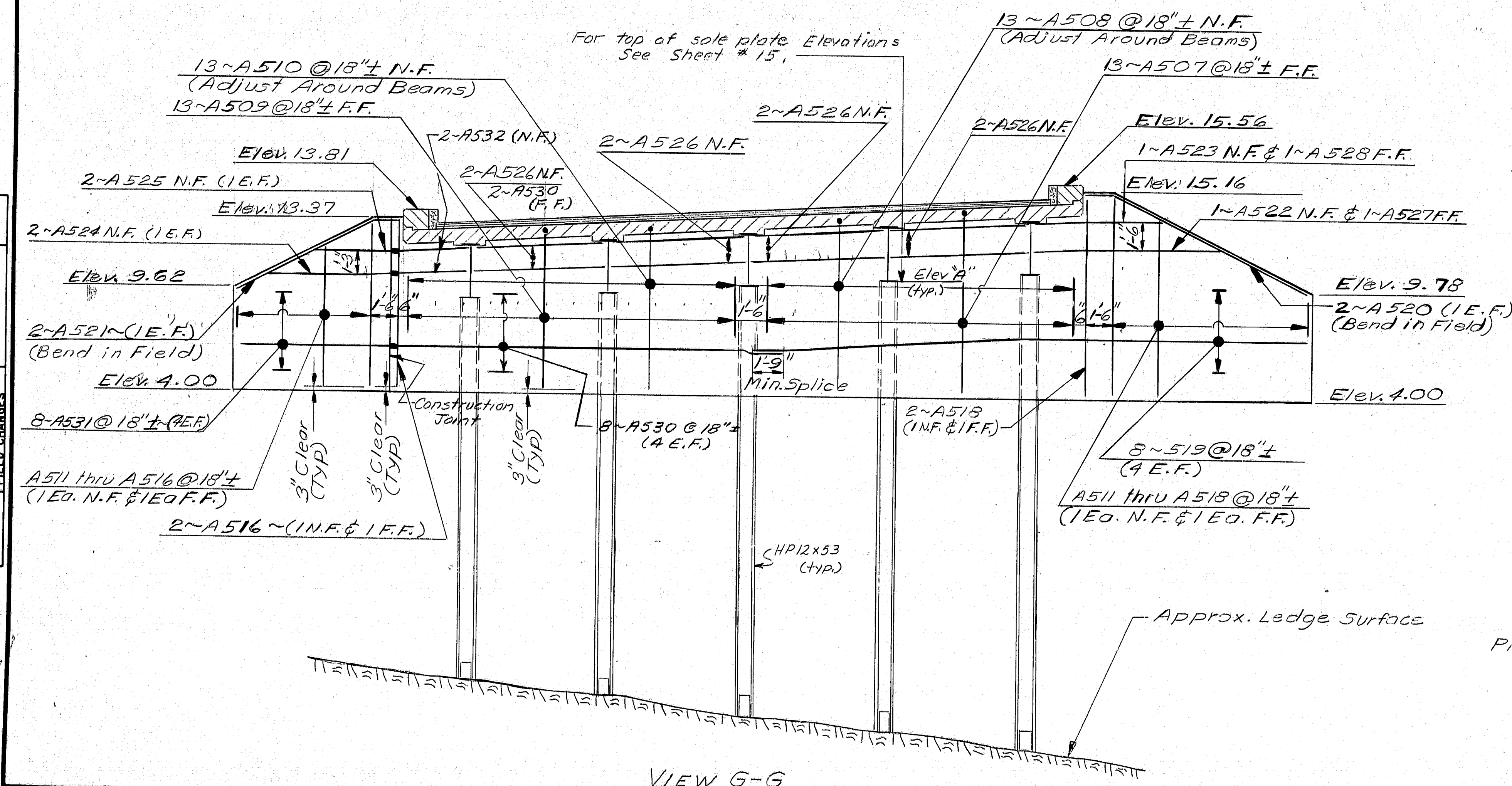
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SPURWINK BRIDGE
OVER
SPURWINK RIVER
BETWEEN THE TOWNS OF
SCARBOROUGH
AND
CAPE ELIZABETH
CUMBERLAND COUNTY
ABUTMENT 1 DETAILS
STEEL ALTERNATE
AUGUSTA, MAINE March

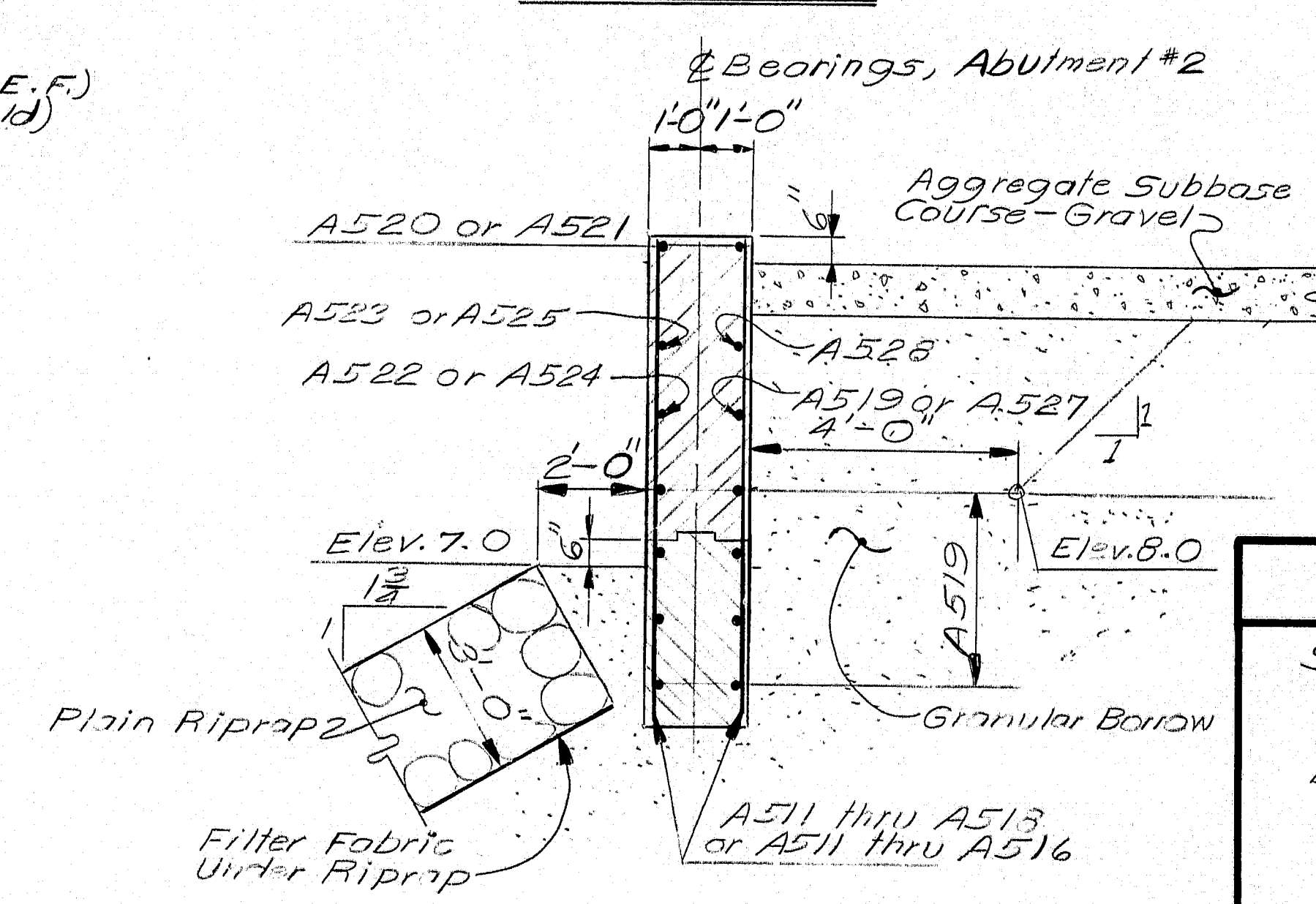
F.R.M.A. REV. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0120(12)	14	36



PLAN
(SLOPE NOT SHOWN)



SECTION F-F



SECTION E-E

100-14

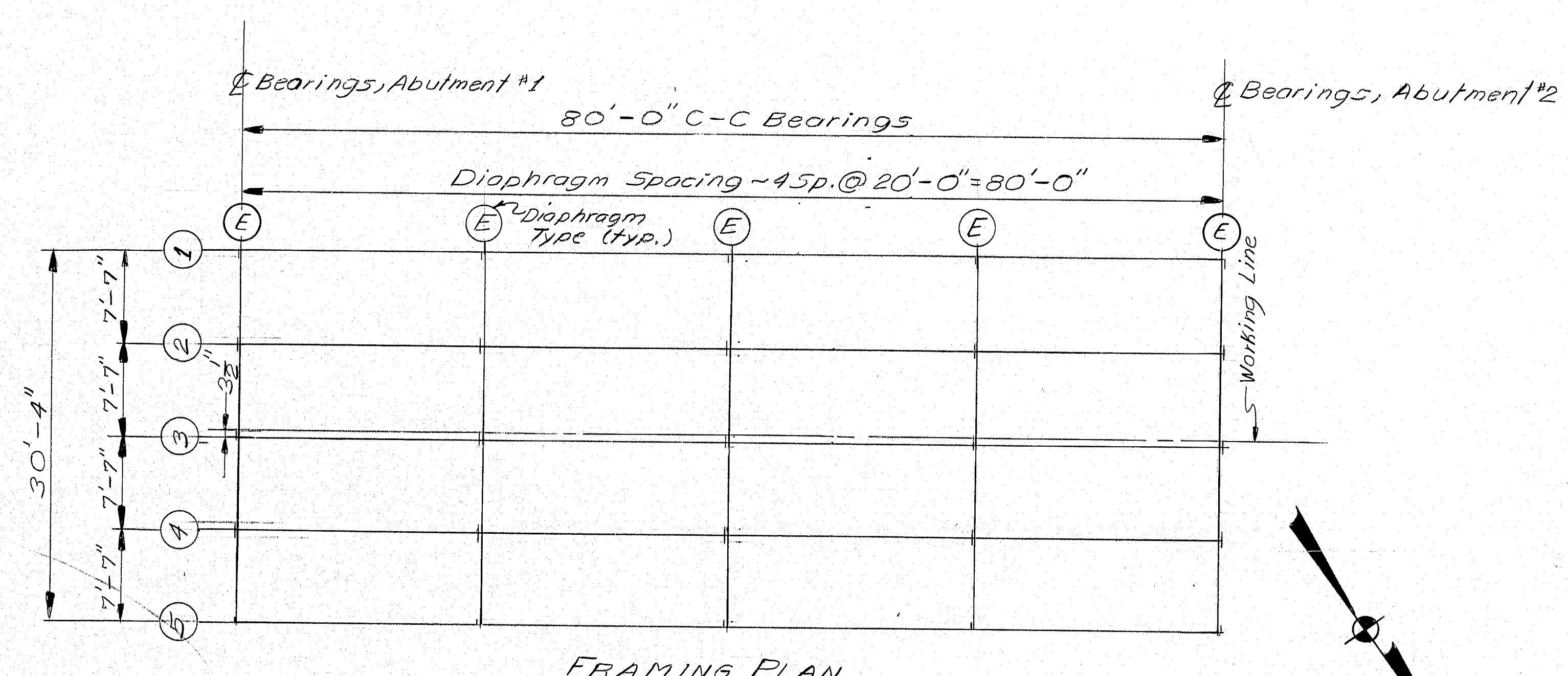
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SPURWINK BRIDGE
OVER
SPURWINK RIVER
BETWEEN THE TOWNS OF
SCARBOROUGH
AND
CAPE ELIZABETH
CUMBERLAND COUNTY
ABUTMENT 2 DETAILS
STEEL ALTERNATE
AUGUSTA, MAINE April 1985

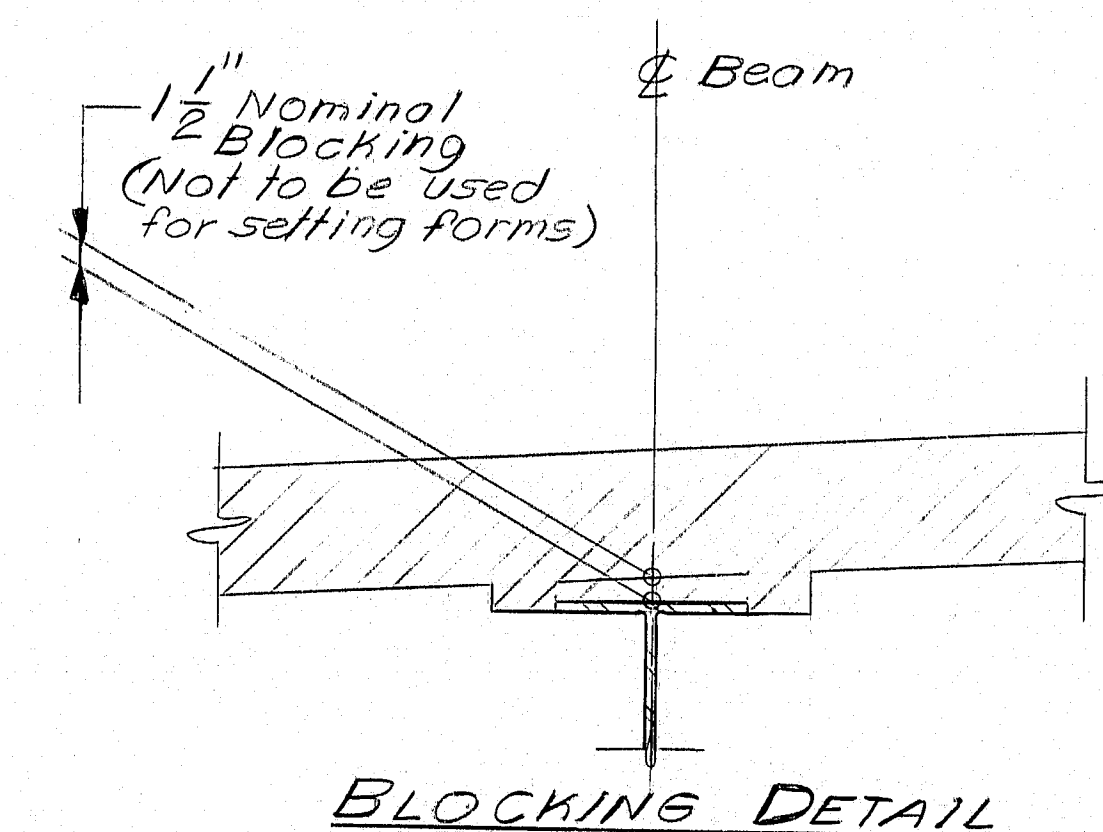
PROJECT DESIGN ENGINEER	DATE
RJM	10/85
DESIGN - CHECKED	REVISIONS
RJM	10/85
PLANS	FIELD CHANGES

BRIDGE 44-122-257(1)

F.A.R.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0120(12)	15	36



FRAMING PLAN



BLOCKING DETAIL

BOTTOM OF SLAB ELEVATIONS									
Beam No.	1	10	20	30	40	50	60	70	8
1	13.08	13.01	12.94	12.85	12.75	12.63	12.50	12.35	12.21
2	13.48	13.41	13.34	13.25	13.15	13.04	12.90	12.74	12.61
3	13.88	13.81	13.74	13.66	13.56	13.44	13.30	13.16	13.02
4	14.28	14.21	14.14	14.06	13.96	13.84	13.71	13.56	13.42
5	14.68	14.61	14.54	14.46	14.36	14.24	14.11	13.97	13.82

STRUCTURAL STEEL NOTES

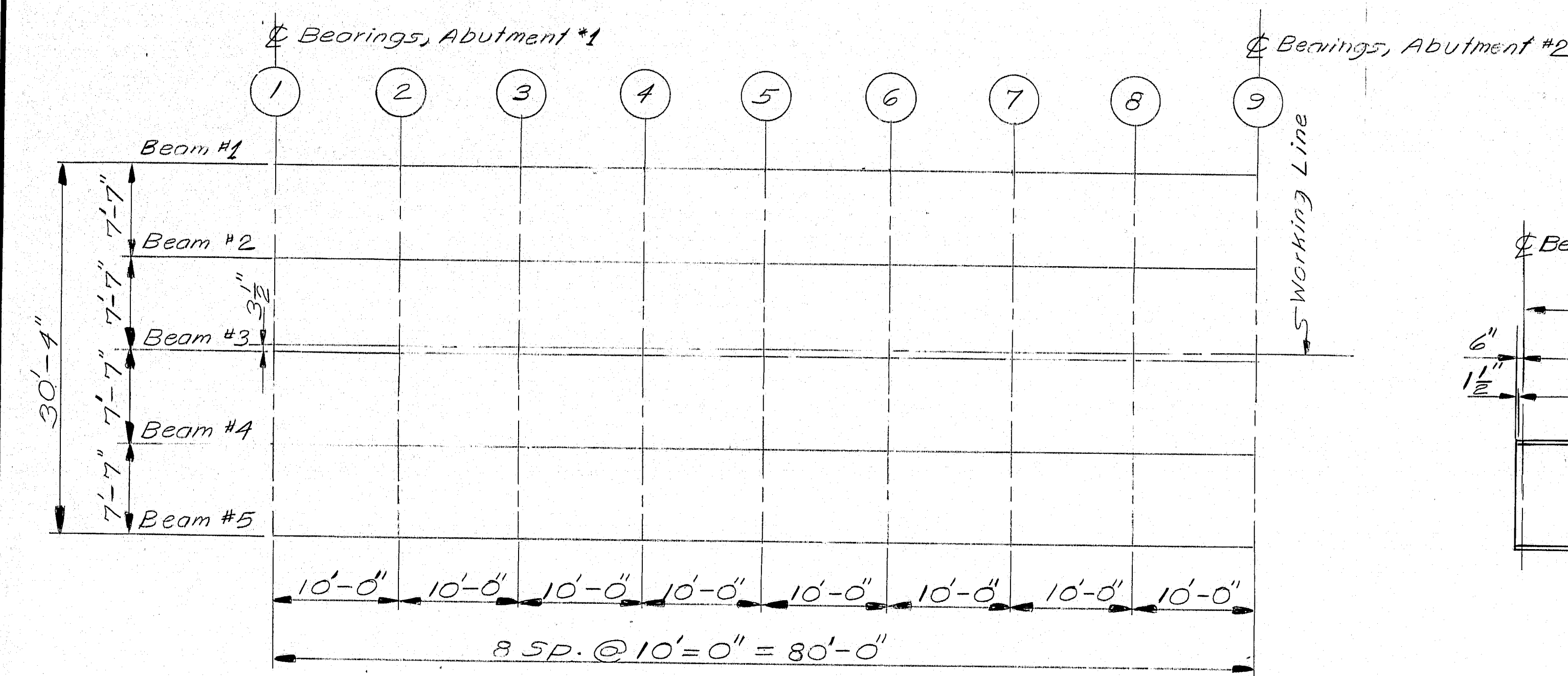
- 1) Cross frame or diaphragm connection plates may be either plumb or normal to the top flange.
- 2) Place natural camber up.

MATERIALS

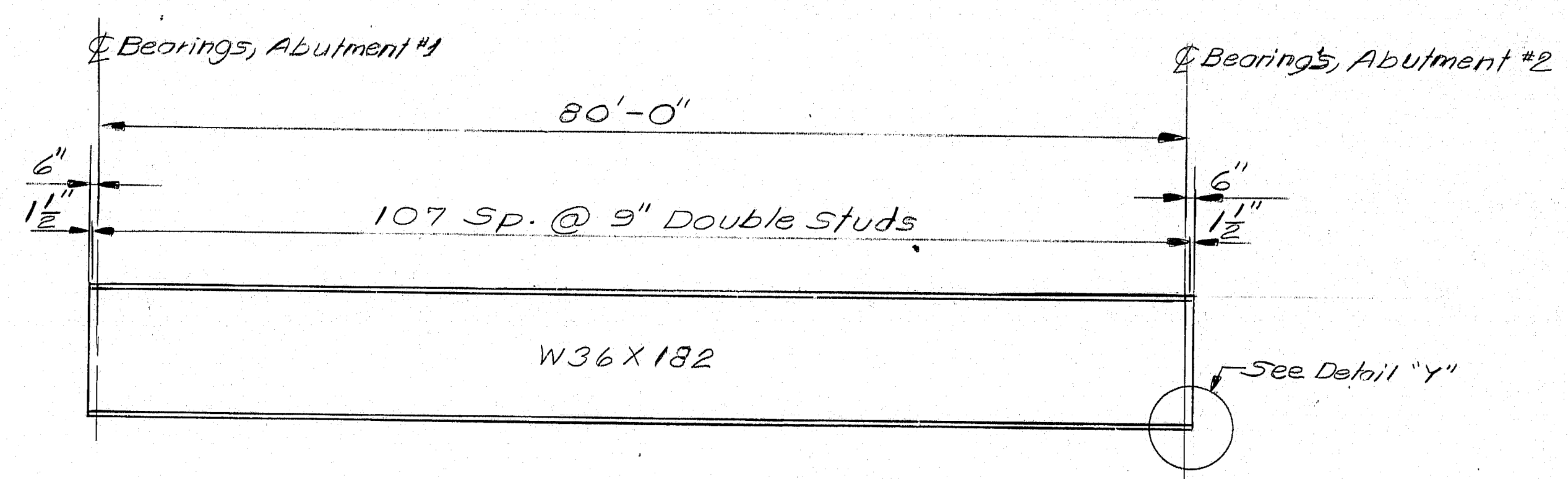
All Structural Steel: ASTM A572 (Painted) except as noted
High Strength Bolts: ASTM A325

BASIC ALLOWABLE STRESSES

Structural Steel: ASTM A572, $F_y = 50,000$ p.s.i.
ASTM A325, $F_v = 25,000$ p.s.i.

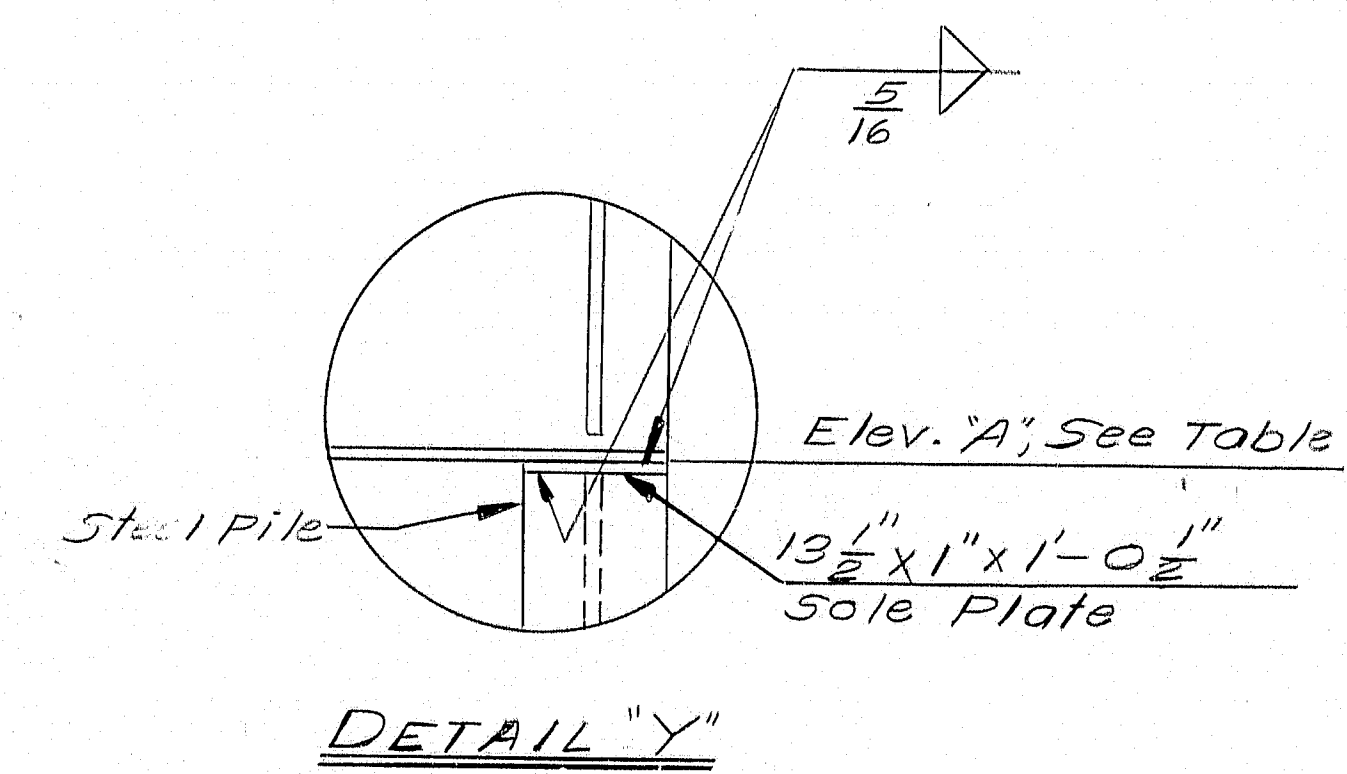


BLOCKING PLAN



BEAM ELEVATION

No. of Studs per Beam = 216
Total No. of Studs = 1,080



DETAIL 'Y'

ELEVATION 'A'		
Point	At Bearing Abut. #1	At Bearing Abut. #2
Beam #1	9.95	9.05
Beam #2	10.35	9.45
Beam #3	10.75	9.85
Beam #4	11.15	10.25
Beam #5	11.55	10.65

PROJECT DESIGN ENGINEER	R.M.	BY	DATE
DESIGN - DETAILED		R.M.	4-85
CHECKED		R.M.	9/85
REVISIONS			
FIELD CHANGES			

BRIDGE 44-132 4570-1

100-15

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

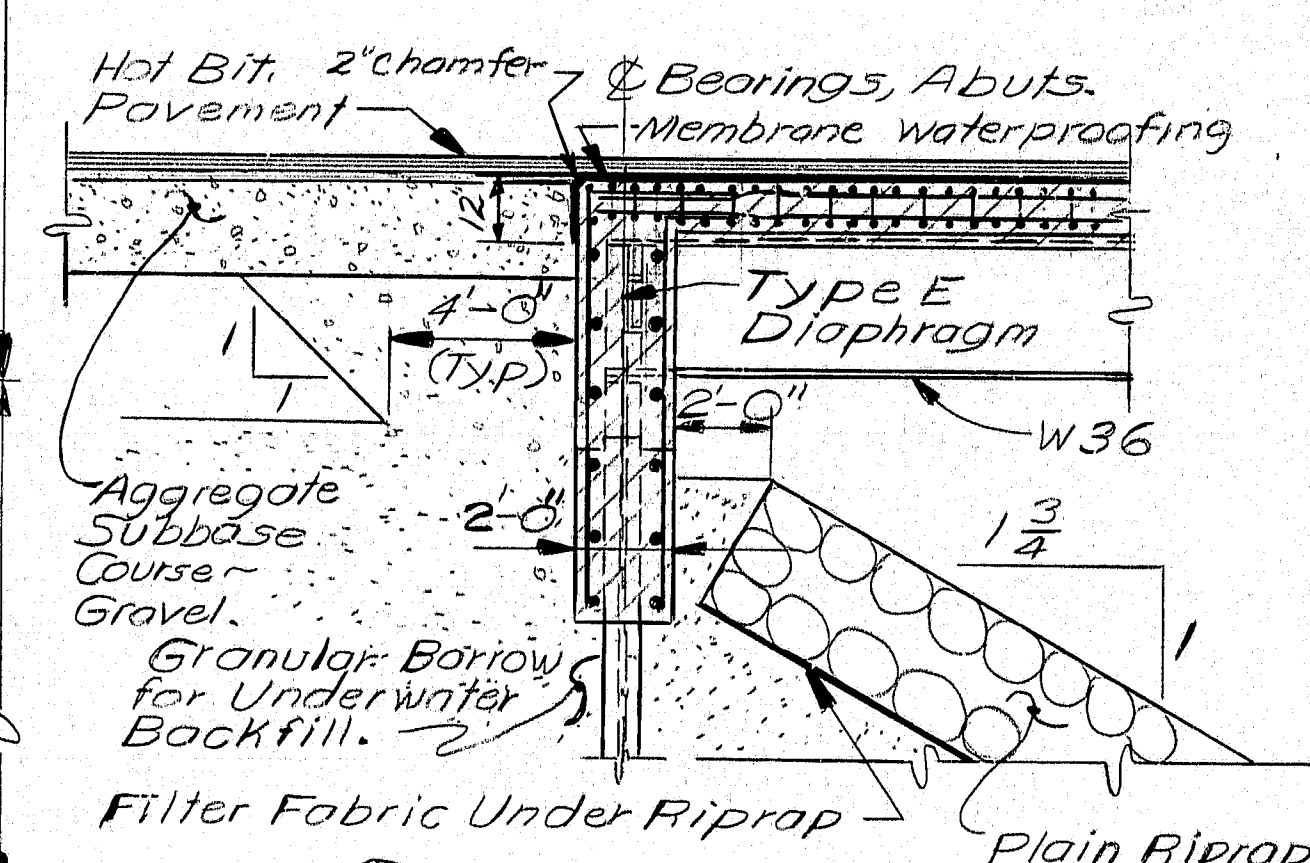
SPURWINK BRIDGE
OVER
SPURWINK RIVER
BETWEEN THE TOWNS OF
SCARBOROUGH
AND
CAPE ELIZABETH
CUMBERLAND COUNTY
STRUCTURAL STEEL DETAILS
STEEL ALTERNATE
AUGUSTA, MAINE APRIL 1985

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
MAINE	BR-012012	16	36

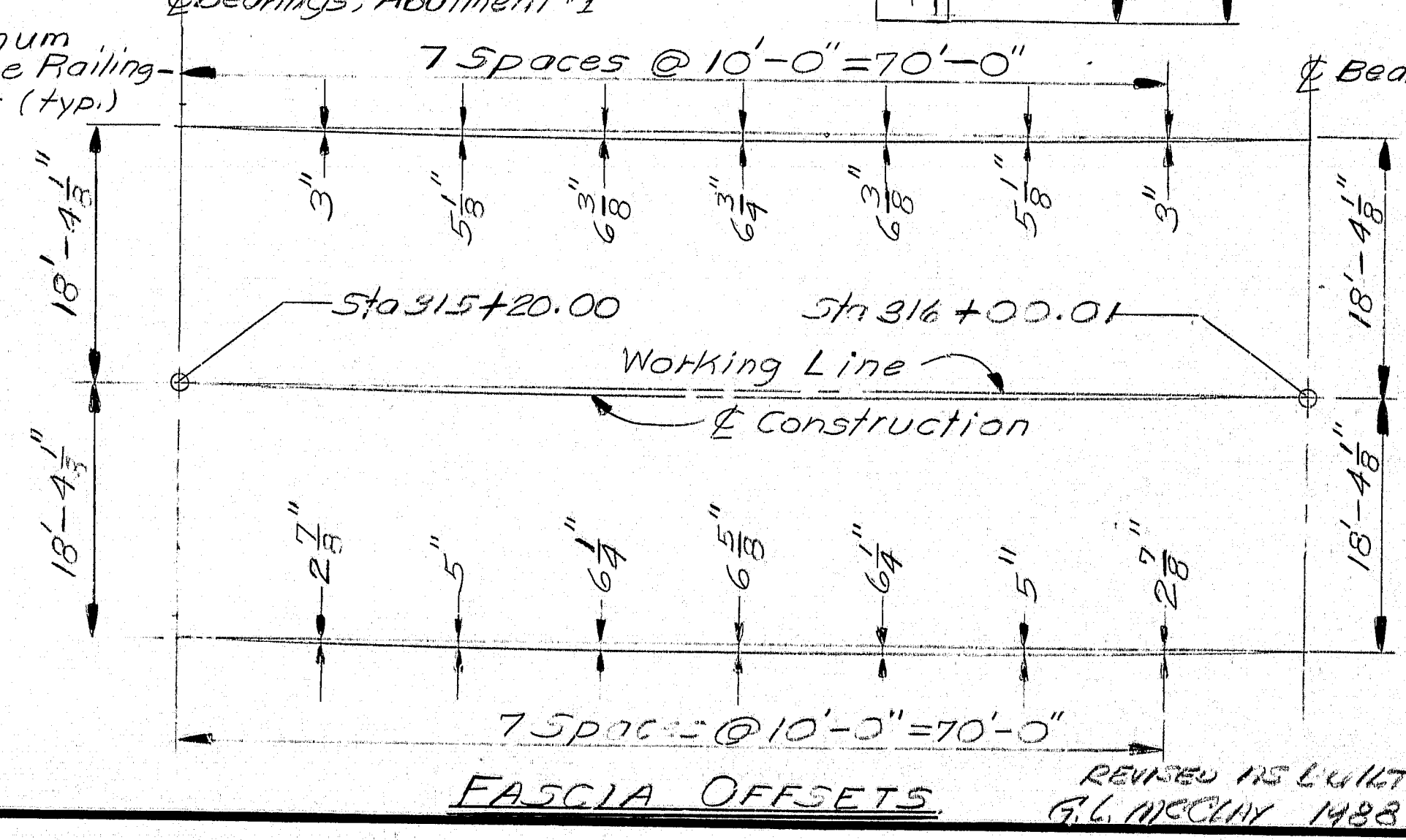
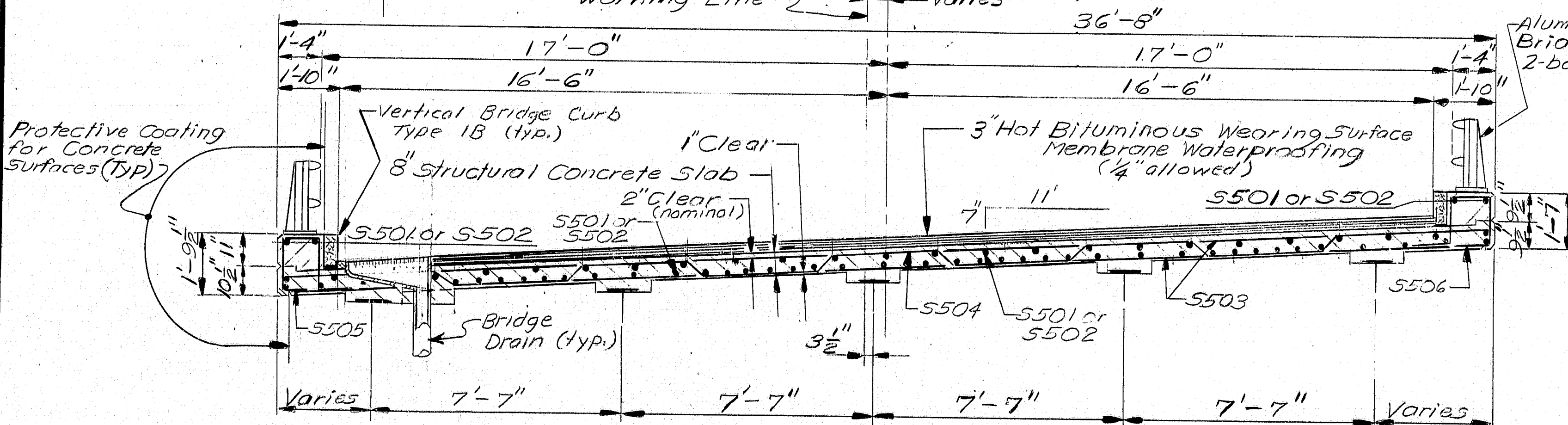
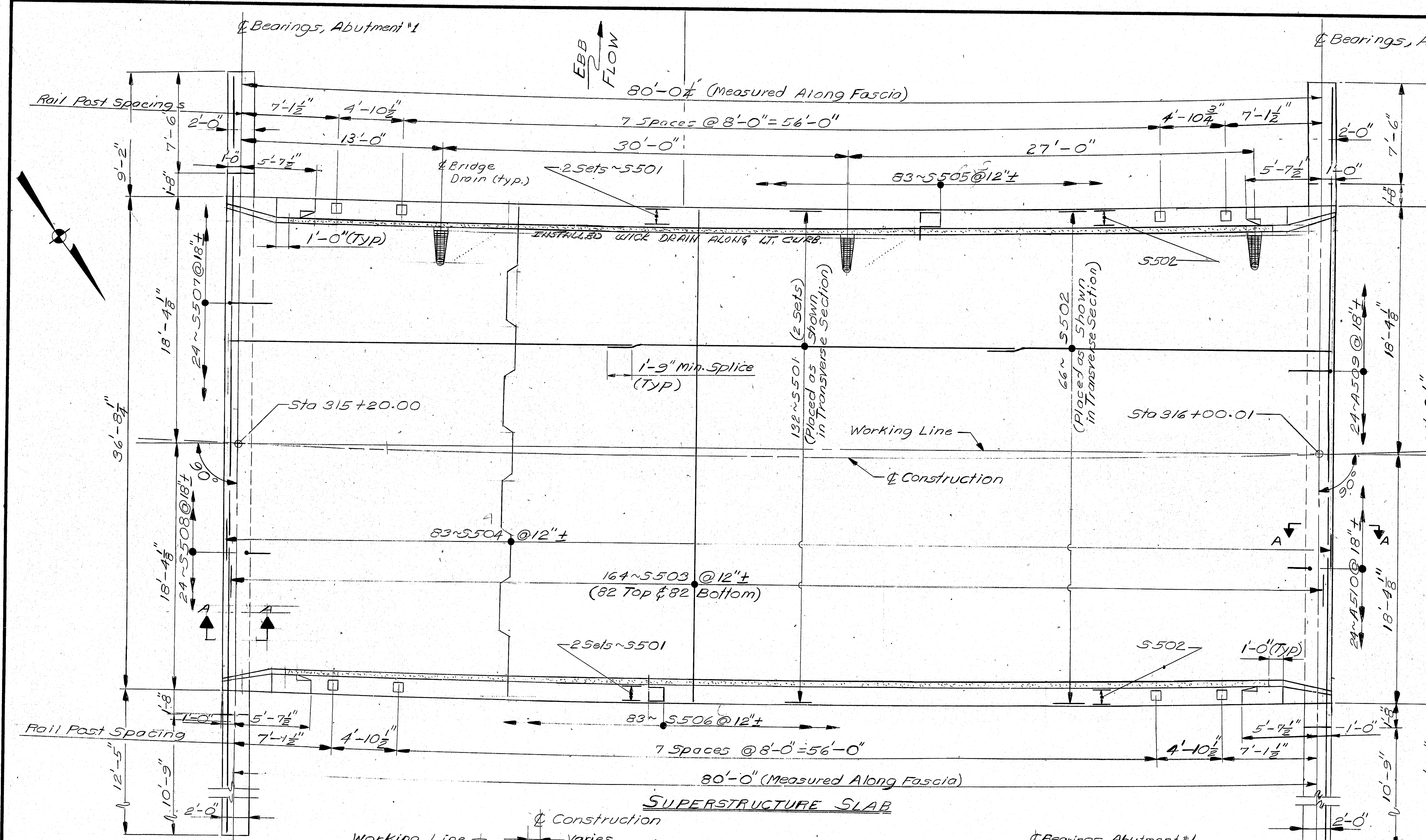
SUPERSTRUCTURE NOTES

- 1) Form a 1" V-groove on the fascias at the horizontal joint between the curb and slab.
- 2) Reinforcing steel shall have a minimum cover of 2" unless otherwise indicated.
- 3) Adjust reinforcing steel to fit around the drains in a manner approved by the Engineer. Do not cut transverse reinforcing bars.
- 4) The superstructure slab concrete for the span shall be placed continuously and shall be kept plastic until the entire span has been placed.
- 5) Mortar for bedding and for joints in the granite curb shall contain an approved non-shrink additive.
- 6) Protective coating for concrete surfaces shall be applied to the following areas:
Top of concrete curbs.
Fascia down to the drip notch.
All exposed surfaces of concrete end posts.
- 7) Payment for concrete end posts will be included in the lump sum payment for Item No. 502.26, Structural Concrete, Roadway and Sidewalk Slabs on Steel Bridges.

INSTALLED GEOTEXTILE WICK DRAIN ALONG LT. CURB, (± 6" WIDE) ON TOP OF PAVEMENT.



SECTION A-A



100-16

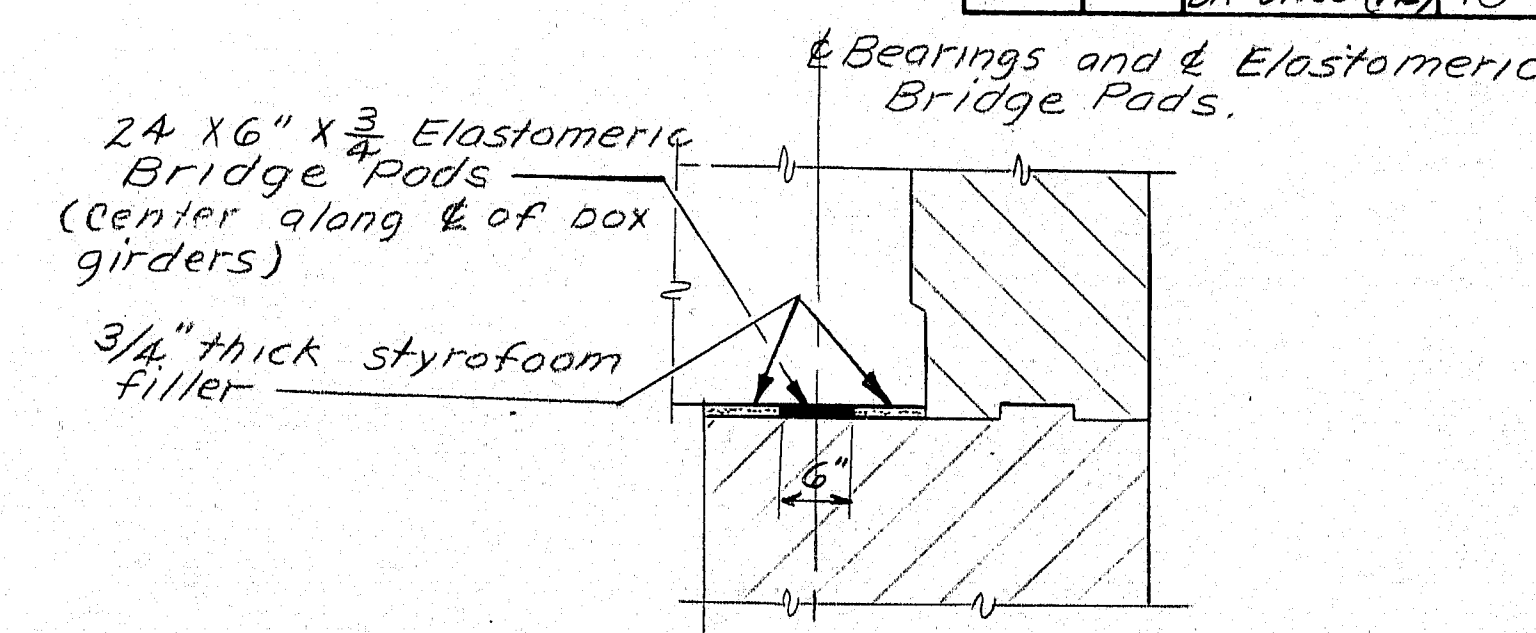
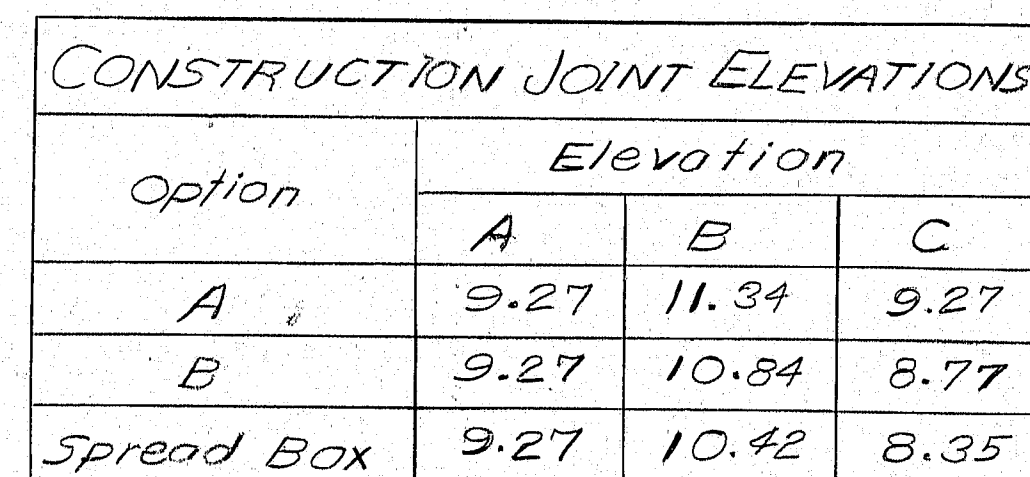
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SPURWINK BRIDGE
OVER
SPURWINK RIVER
BETWEEN THE TOWNS OF
SCARBOROUGH
AND
CAPE ELIZABETH
CUMBERLAND COUNTY
SUPERSTRUCTURE DETAILS
STEEL ALTERNATE
AUGUSTA, MAINE FEB 1985

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	<i>Paul J.T.F.</i>	
CHECKED	<i>R.V.D.</i>	<i>10/85</i>
REVISIONS		

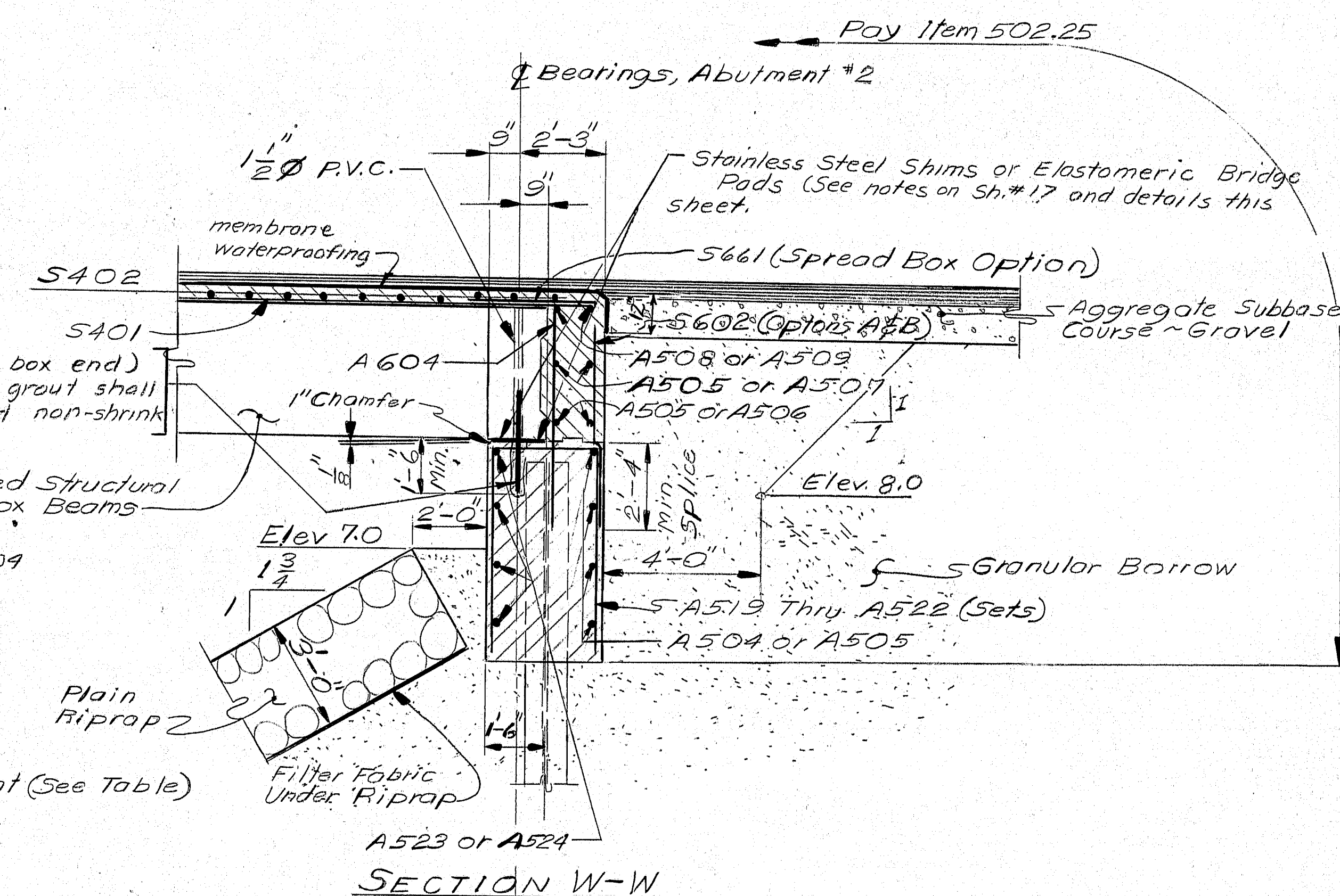
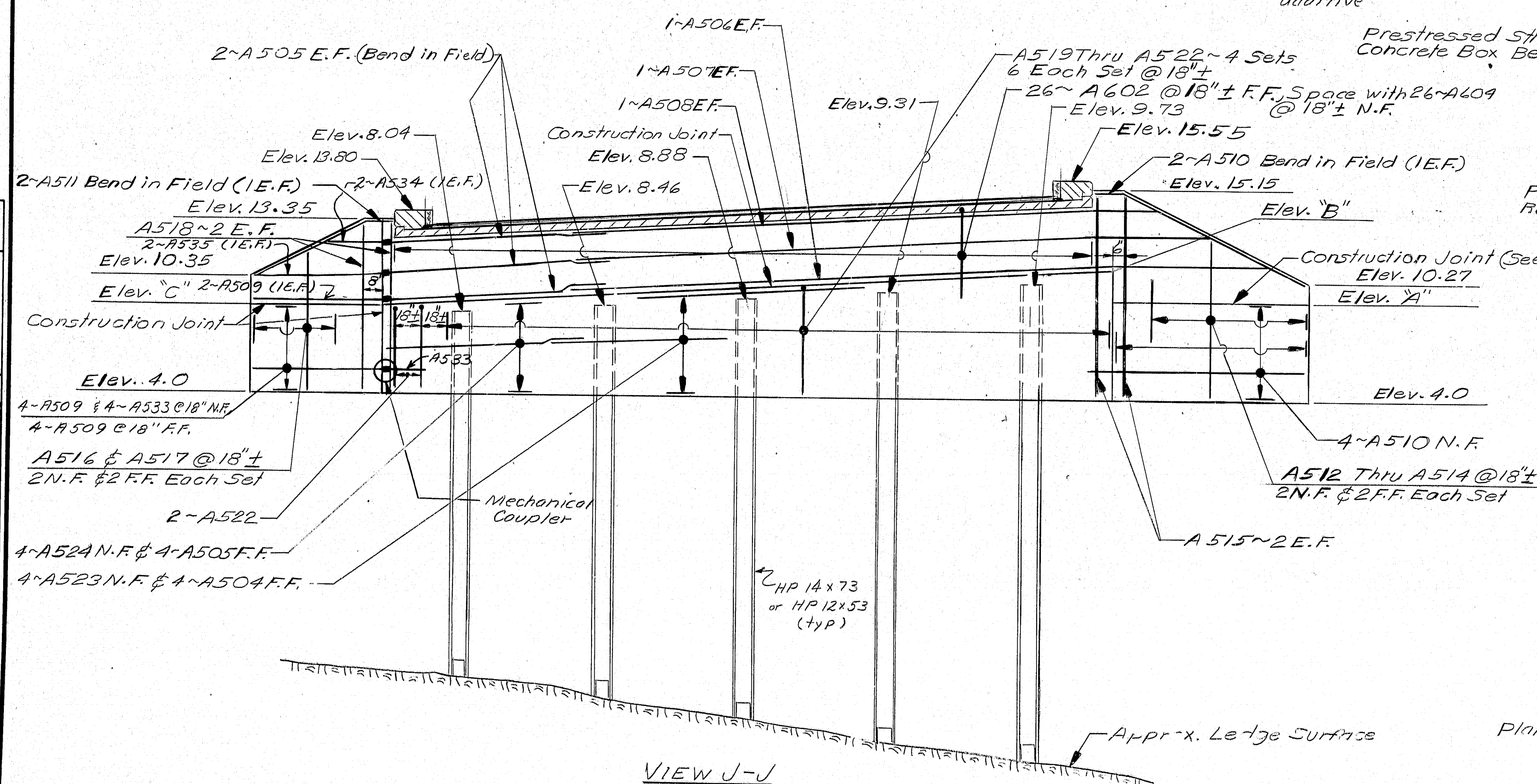
BRIDGE 44-132-45710-1

RUNING 44-132 45710-1			
	REVISIONS		
	FIELD CHANGES		

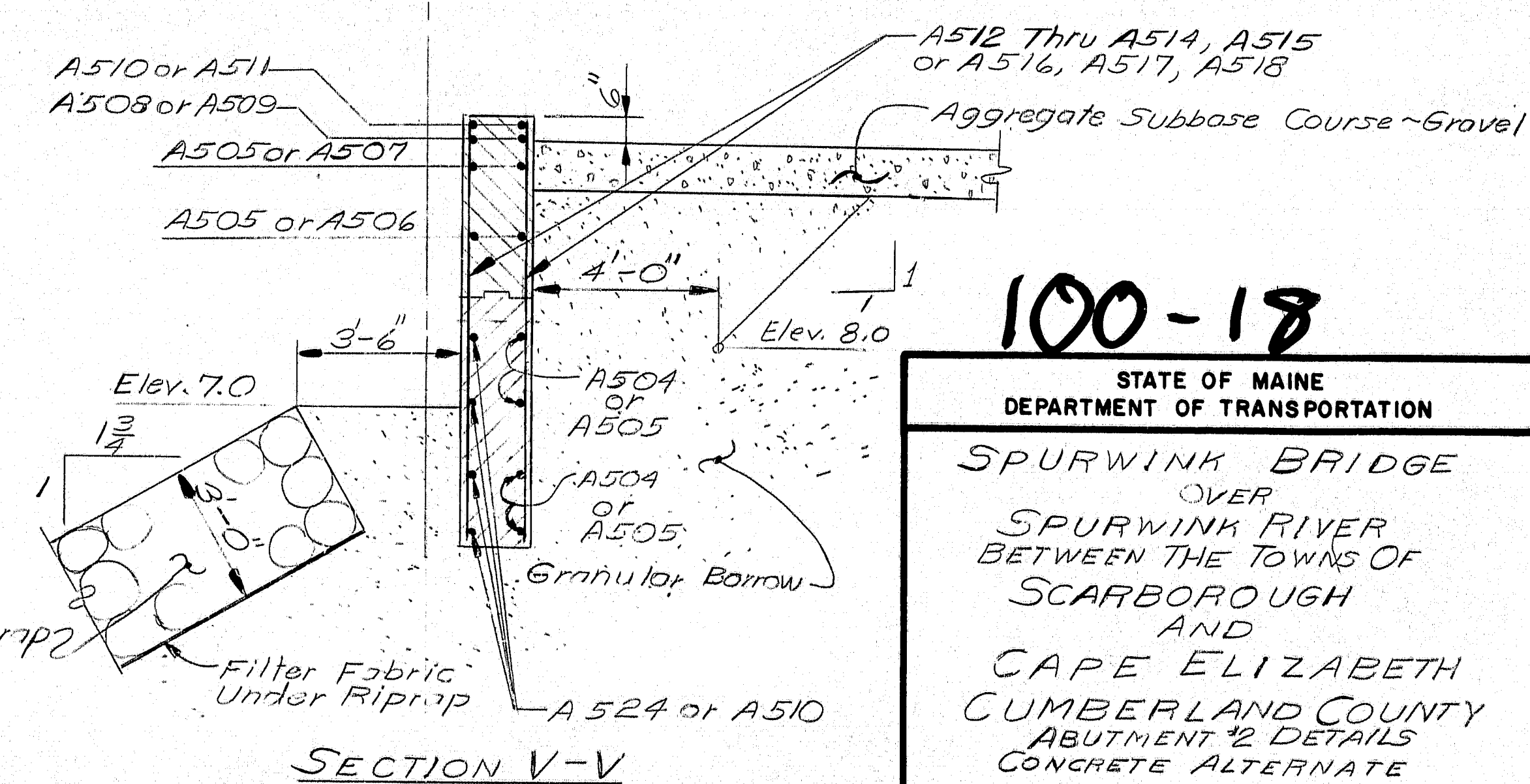


ELASTOMERIC BRIDGE PADS
(One each Box Girder end.)
(See Special Provision 711)

PLAN
(Slab Not Shown)



SECTION W-W



SECTION V-V

100-18

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SPURWINK BRIDGE
OVER
SPURWINK RIVER
BETWEEN THE TOWNS OF
SCARBOROUGH
AND
CAPE ELIZABETH
CUMBERLAND COUNTY
ABUTMENT 2 DETAILS
CONCRETE ALTERNATE
AUGUSTA, MAINE June 1993

F.R.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0120(12)	19	36

SUPERSTRUCTURE NOTES

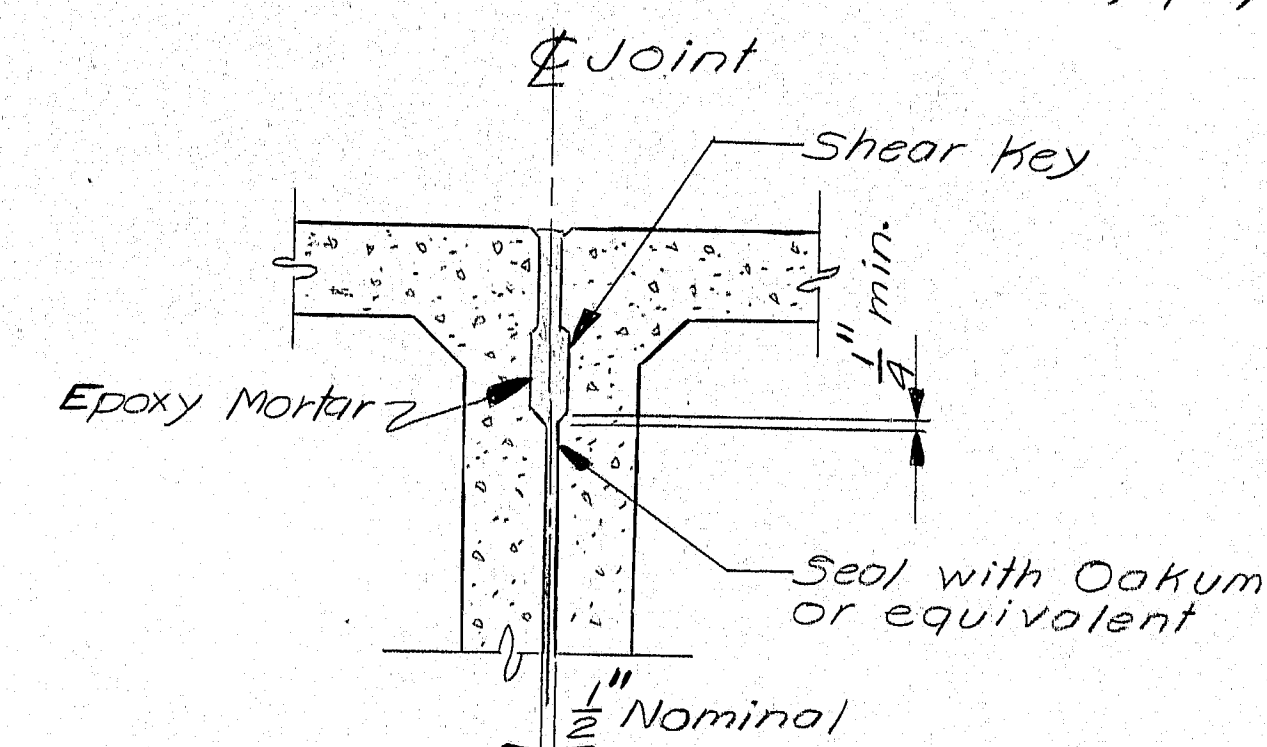
- 1) Reinforcing steel shall have a minimum cover of two inches unless otherwise indicated.
- 2) Form a one inch Vee Groove on the fascias at the horizontal joint between the curb and slab.
- 3) The superstructure slab concrete shall be placed in one continuous operation and the concrete shall be kept plastic until the entire span has been placed.
- 4) Protective Coating for Concrete shall be applied to the following areas:
The top of concrete curbs.
The fascias down to the drip notch.
All exposed surfaces of concrete end posts.

BASIC DESIGN STRESSES-CONCRETE BOX BEAMS

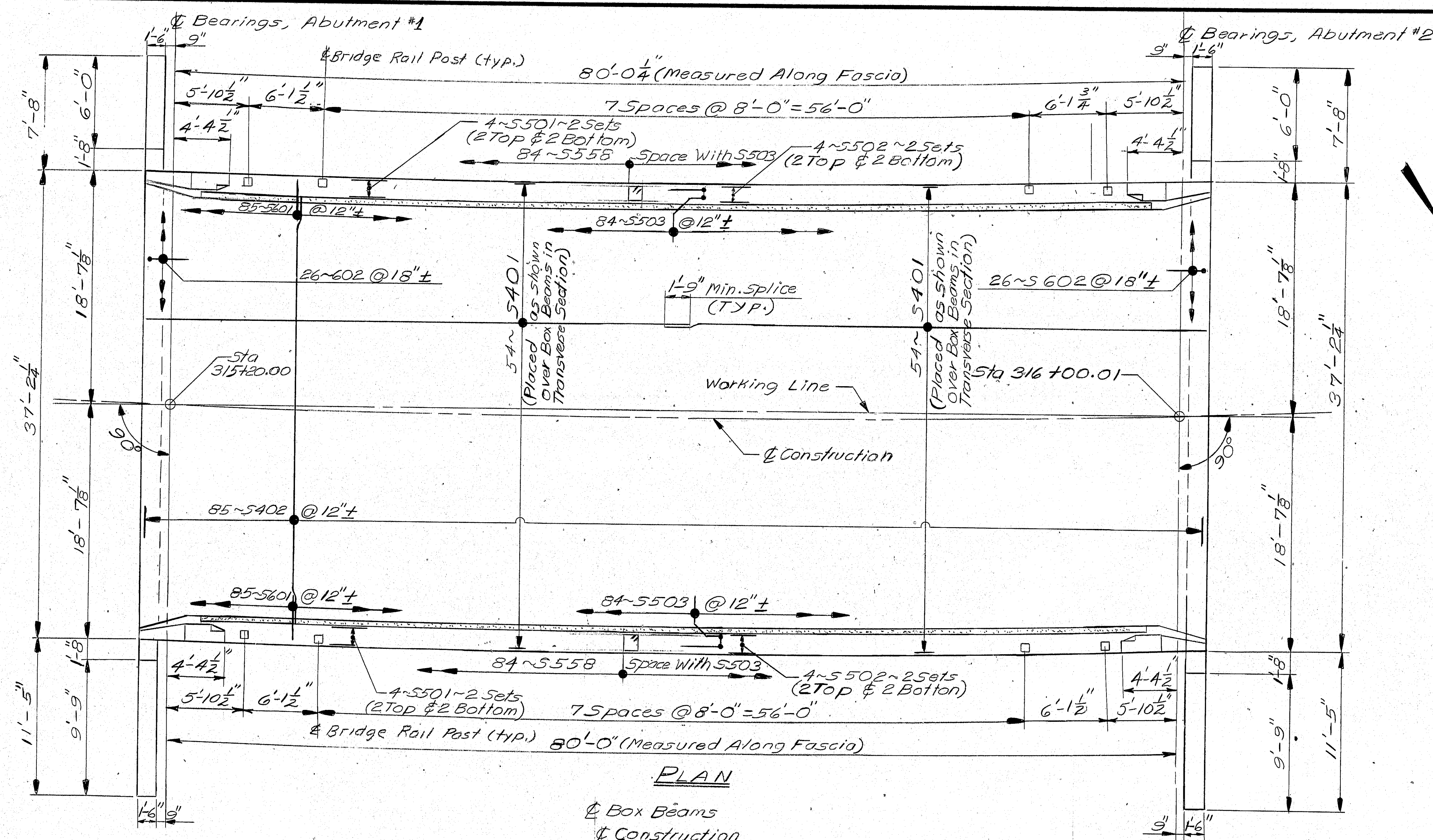
$f'_c = 5000 \text{ PSI}$
 $f_{ci} = 4000 \text{ PSI}$

MATERIALS

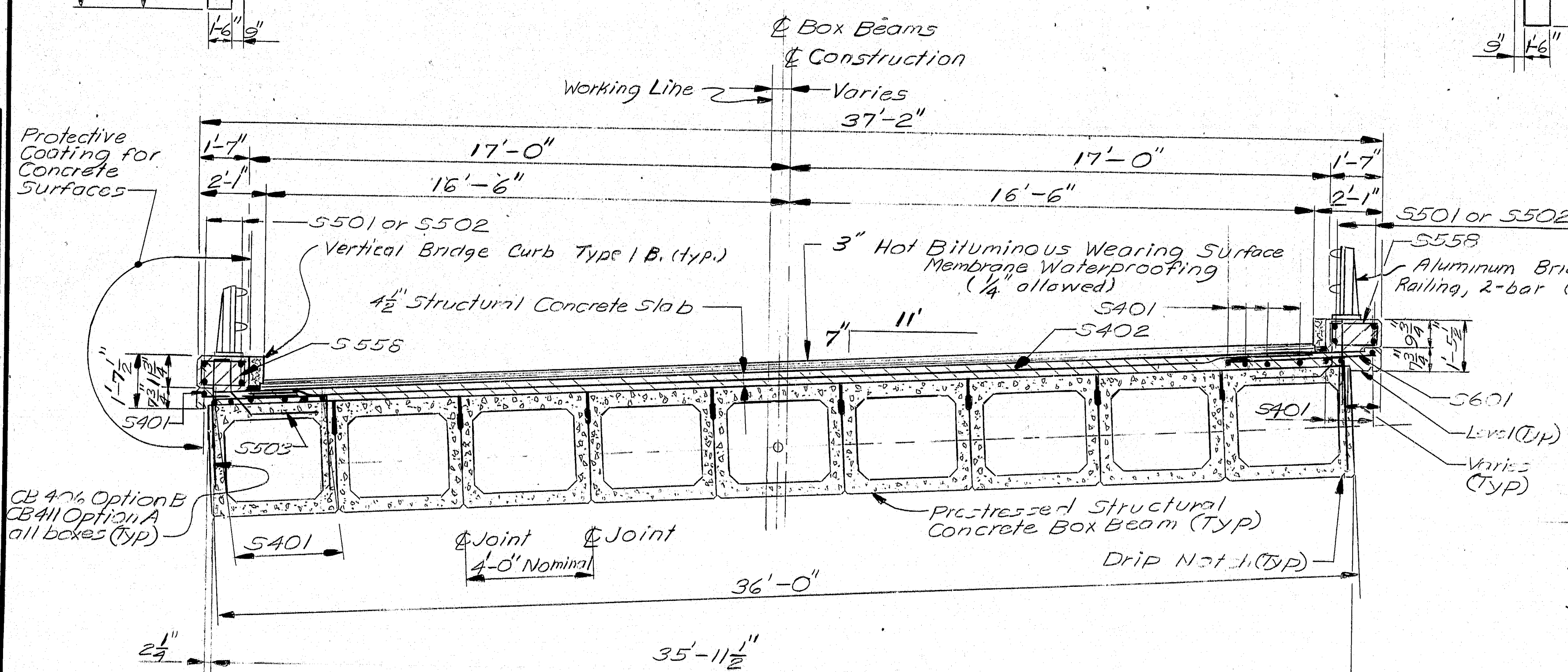
Prestressing Strands: ASTM A416, Grade 270
Non-Prestressed Reinforcement: ASTM A615 Grade 60, Epoxy Coated.



BOX BEAM JOINT DETAIL

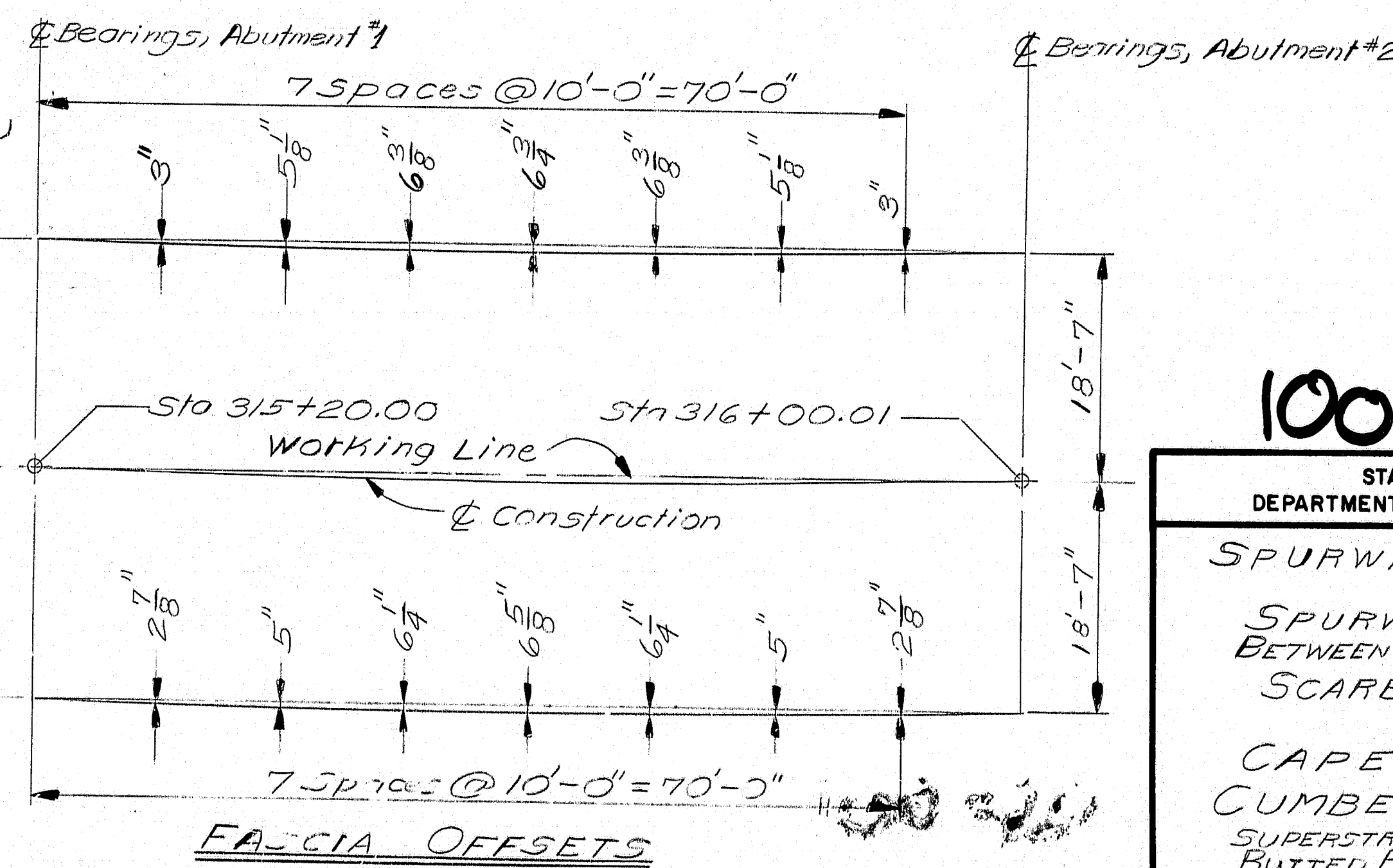


PLAN



TRANSVERSE SECTION

(For Reinforcing Steel not shown, see Slab Plan View, and Sta. 21)



FASCIA OFFSETS

100-19

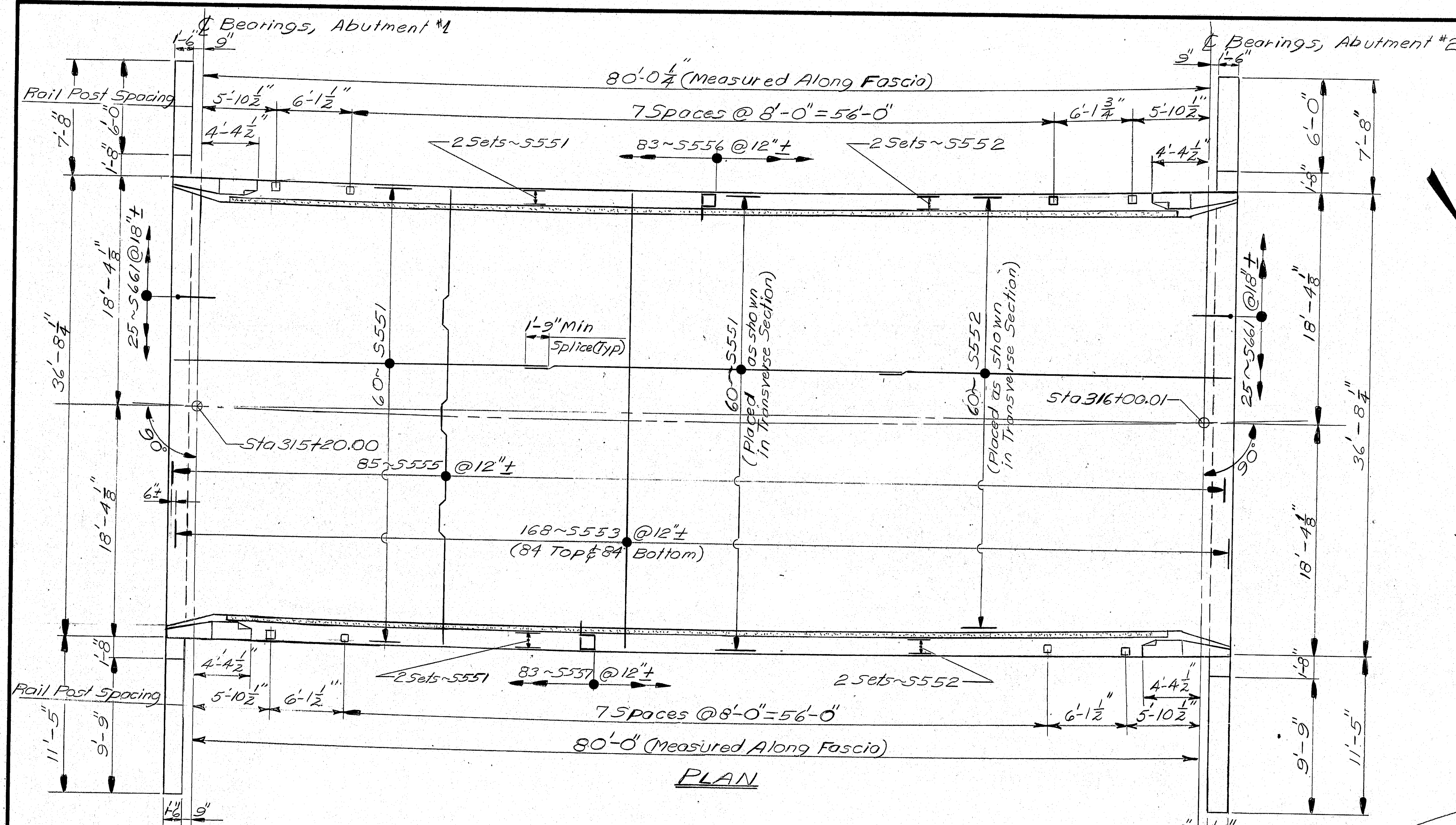
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
SPURWINK BRIDGE
OVER
SPURWINK RIVER
BETWEEN THE TOWNS OF
SCARBOROUGH
AND
CAPE ELIZABETH
CUMBERLAND COUNTY
SUPERSTRUCTURE DETAILS
BUTTED BOX-OPTIONS A&B
AUGUSTA, MAINE JUNE 1985

PROJECT DESIGN ENGINEER	DATE
BY: [Signature]	7/22/85
DESIGN-DETAILED	7/22/85
REVISIONS	
FIELD CHANGES	
PLANS	

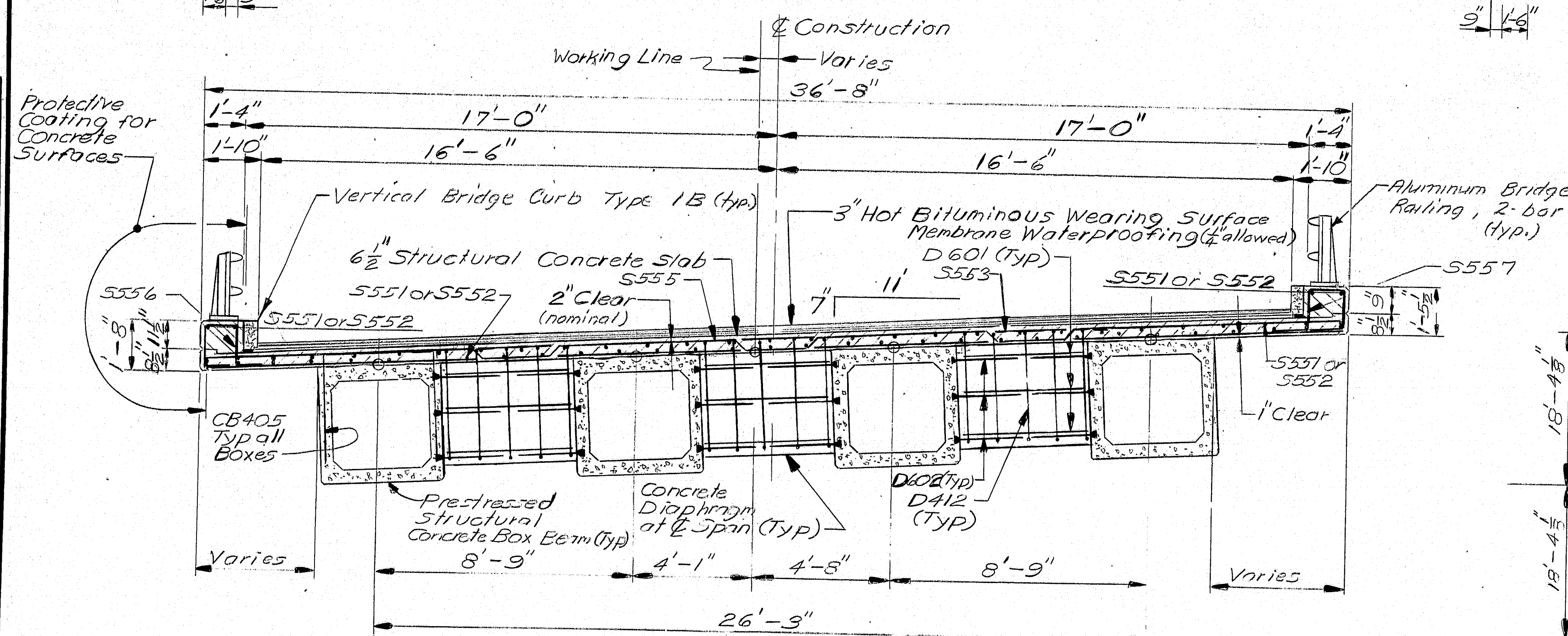
CB 4~4~ Option B
CB 4~4~ Option A
all boxes (typ.)

BRUNING 44-132-45710-1

FWA	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	120 (12)	20	36



PLAN



TRANSVERSE SECTION

(For Reinforcing Steel not shown, see Slab Plan View and Sheet 21)

SUPERSTRUCTURE NOTES

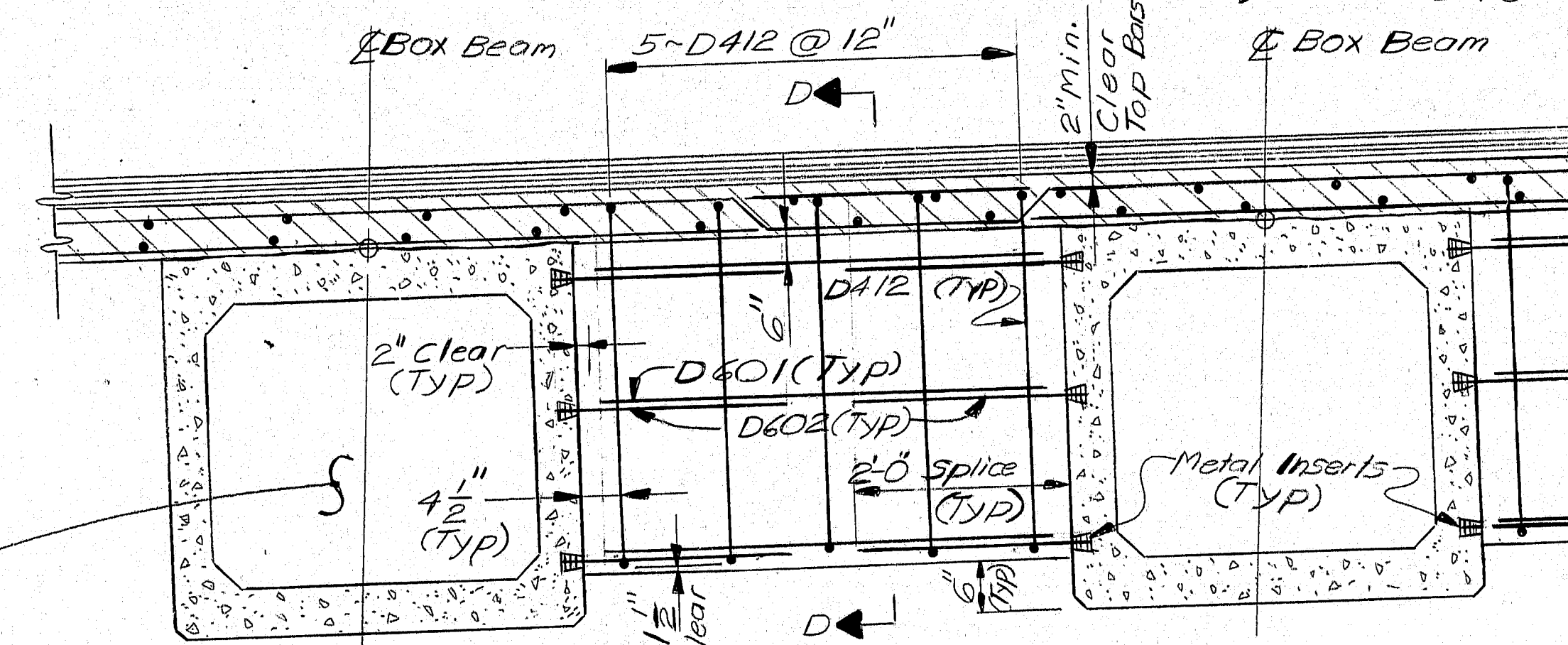
- 1) Reinforcing steel shall have a minimum cover of two inches unless otherwise indicated.
- 2) Form a one inch V-Groove on the fascias at the horizontal joint between the curb and slab.
- 3) The superstructure slab concrete shall be placed in one continuous operation and the concrete shall be kept plastic until the entire span has been placed.
- 4) Protective Coating for Concrete shall be applied to the following areas:
The top of concrete curbs
The fascias down to the drip notch
All exposed surfaces of concrete end posts.

BASIC DESIGN STRESSES-CONCRETE BOX BEAMS

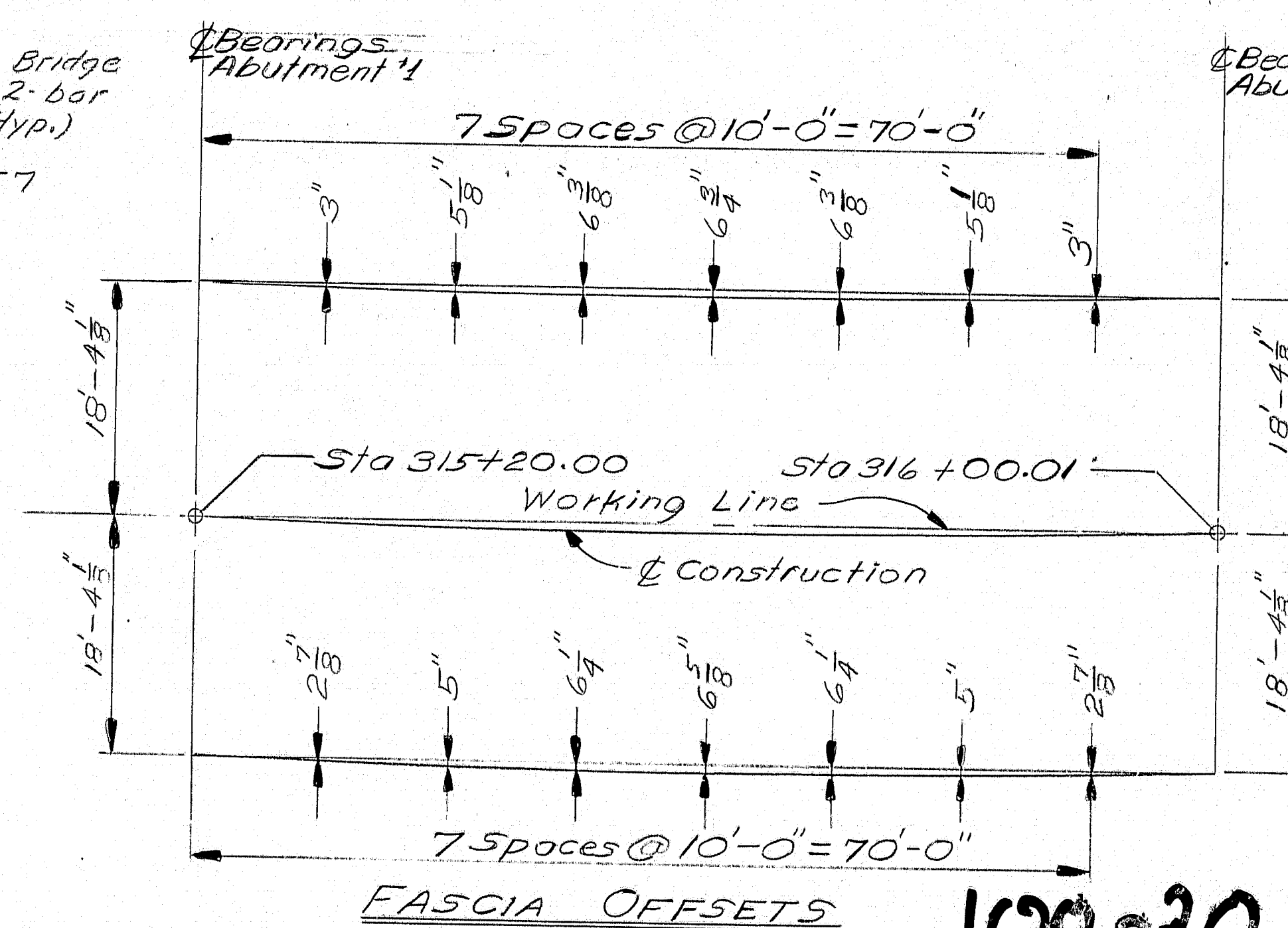
$f'_c = 5000 \text{ psi}$
 $f'_t = 4000 \text{ psi}$

MATERIALS

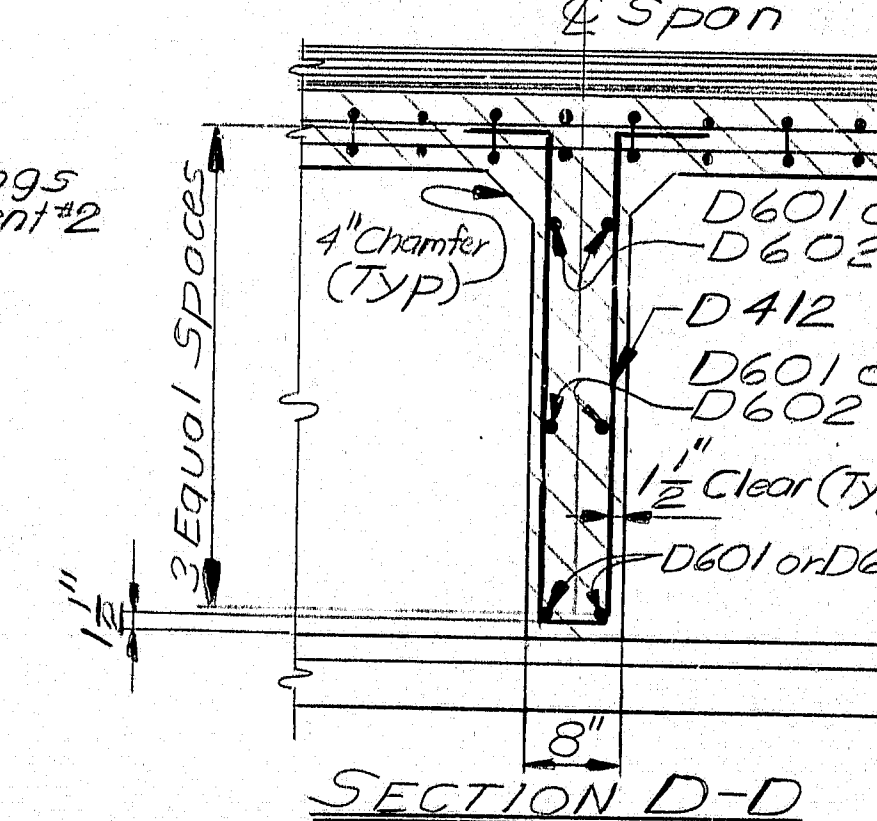
Prestressing Strands: ASTM A416, Grade 270



TRANSVERSE SECTION AT 1/2 SPAN



FASCIA OFFSETS



SECTION D-D

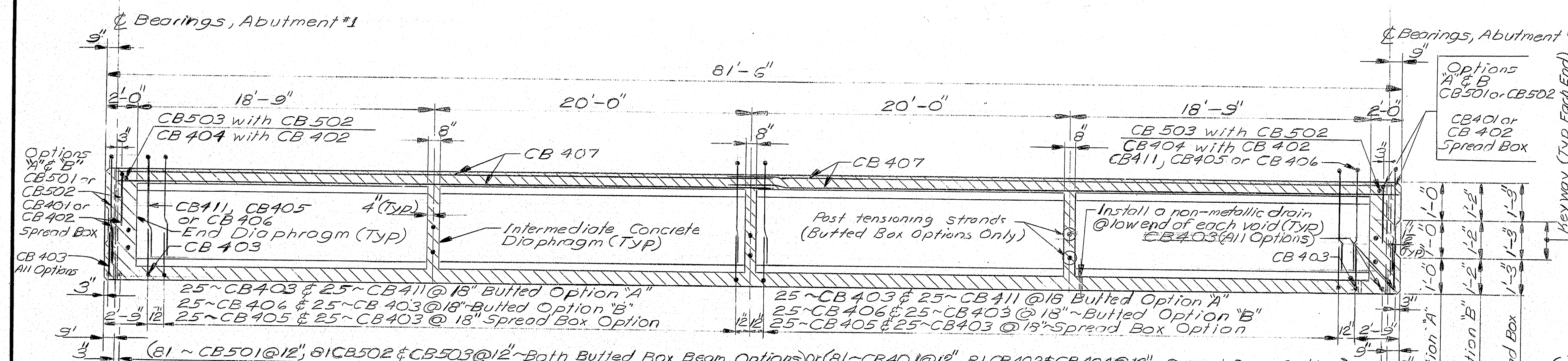
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SPURWINK BRIDGE
OVER
SPURWINK RIVER
BETWEEN THE TOWNS OF
SCARBOROUGH
AND
CAPE ELIZABETH
CUMBERLAND COUNTY
SUPERSTRUCTURE DETAILS
SPREAD BOX OPTION
AUGUSTA, MAINE JUNE 1985

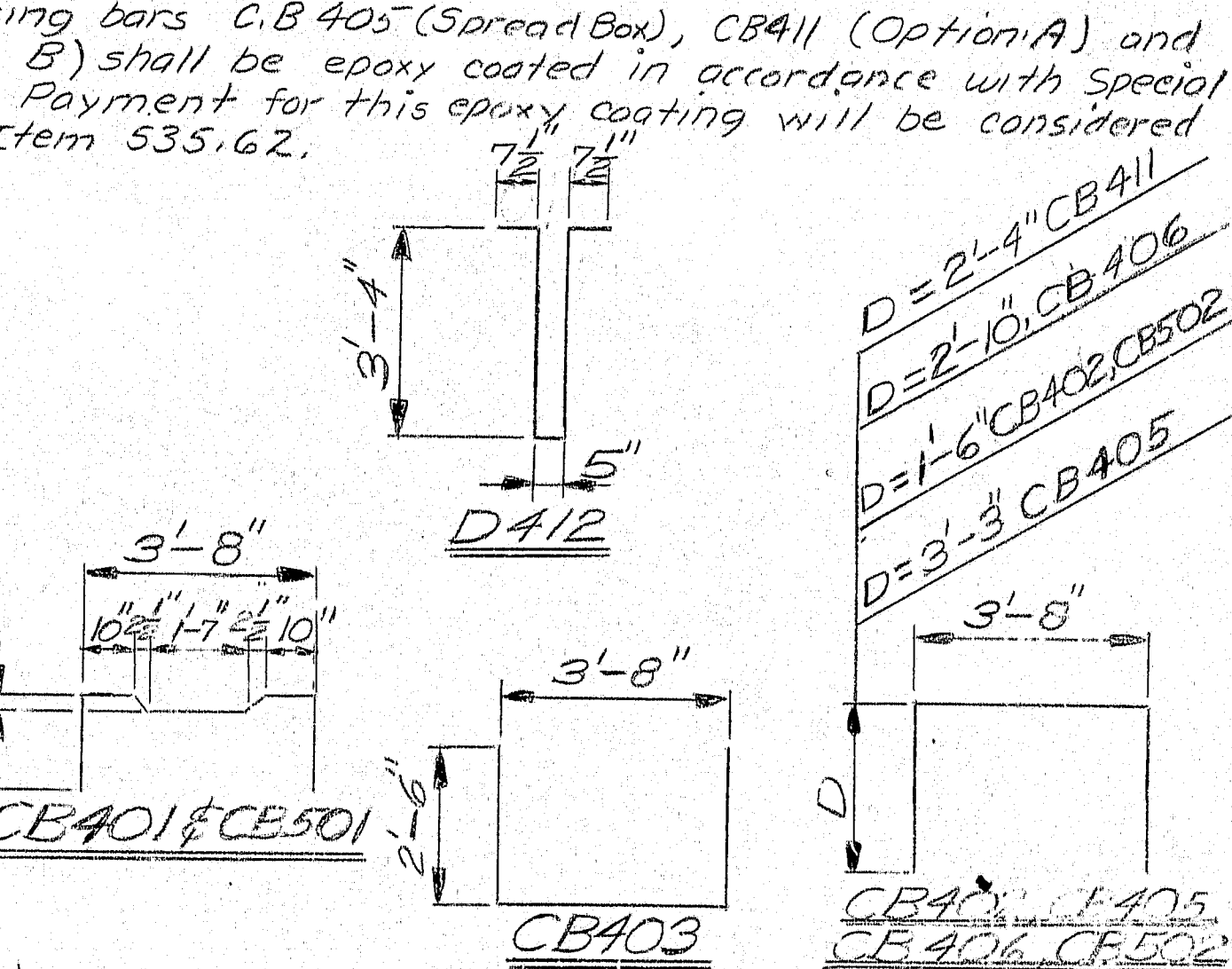
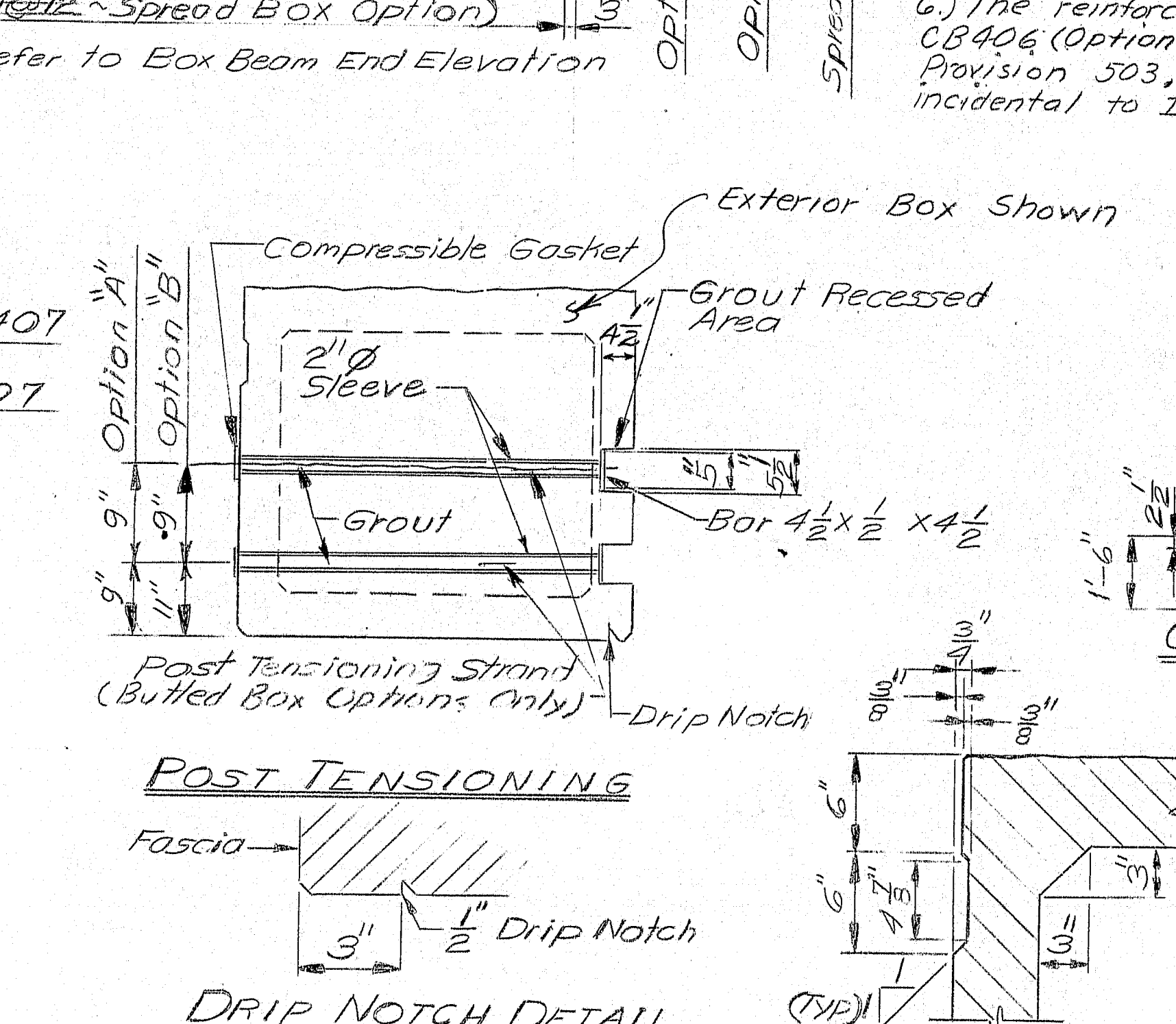
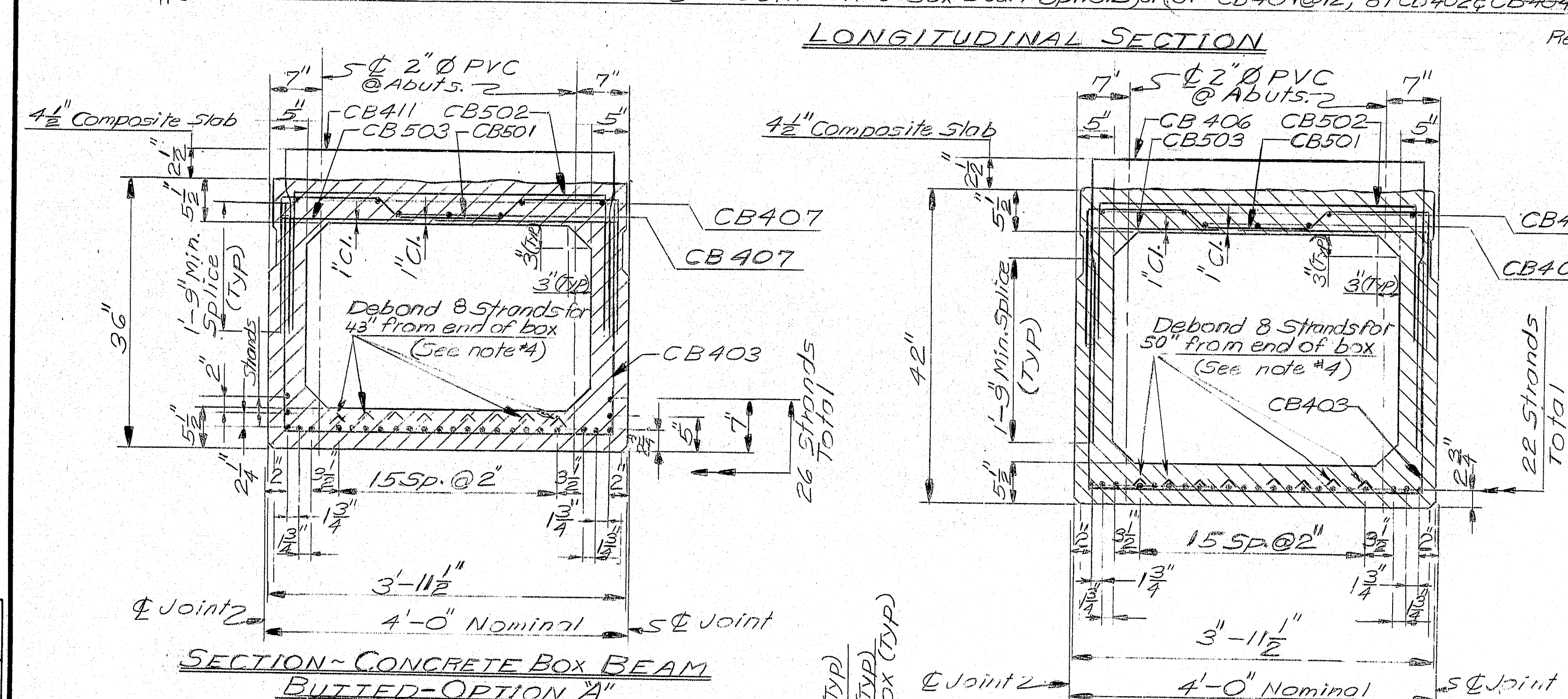
PROJECT	DATE
DESIGN	7/85
CONSTRUCTION	7/85
REVISIONS	
FIELD CHANGES	

BRIDGE 44132-20/01

DATE	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0180(18)	21	36



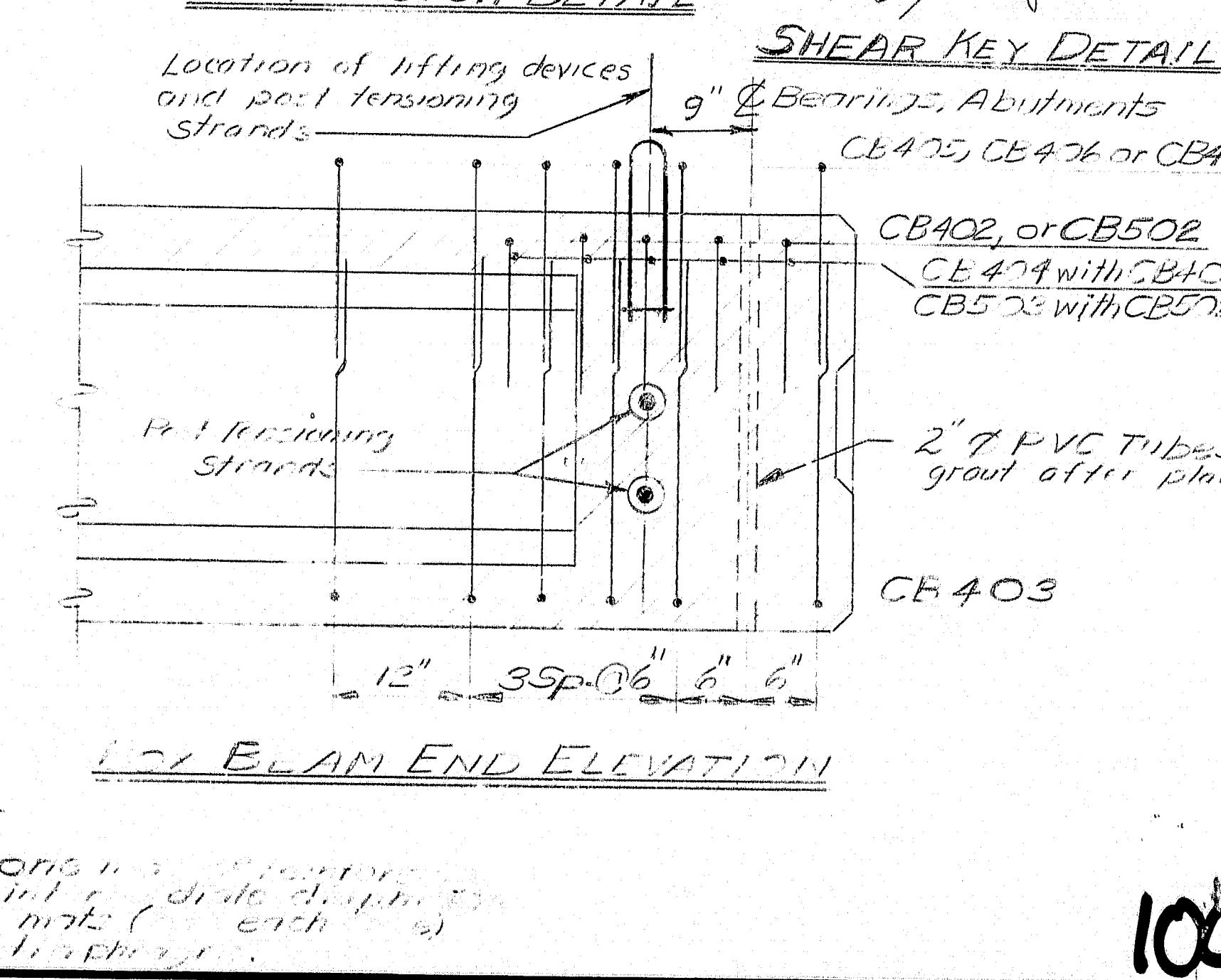
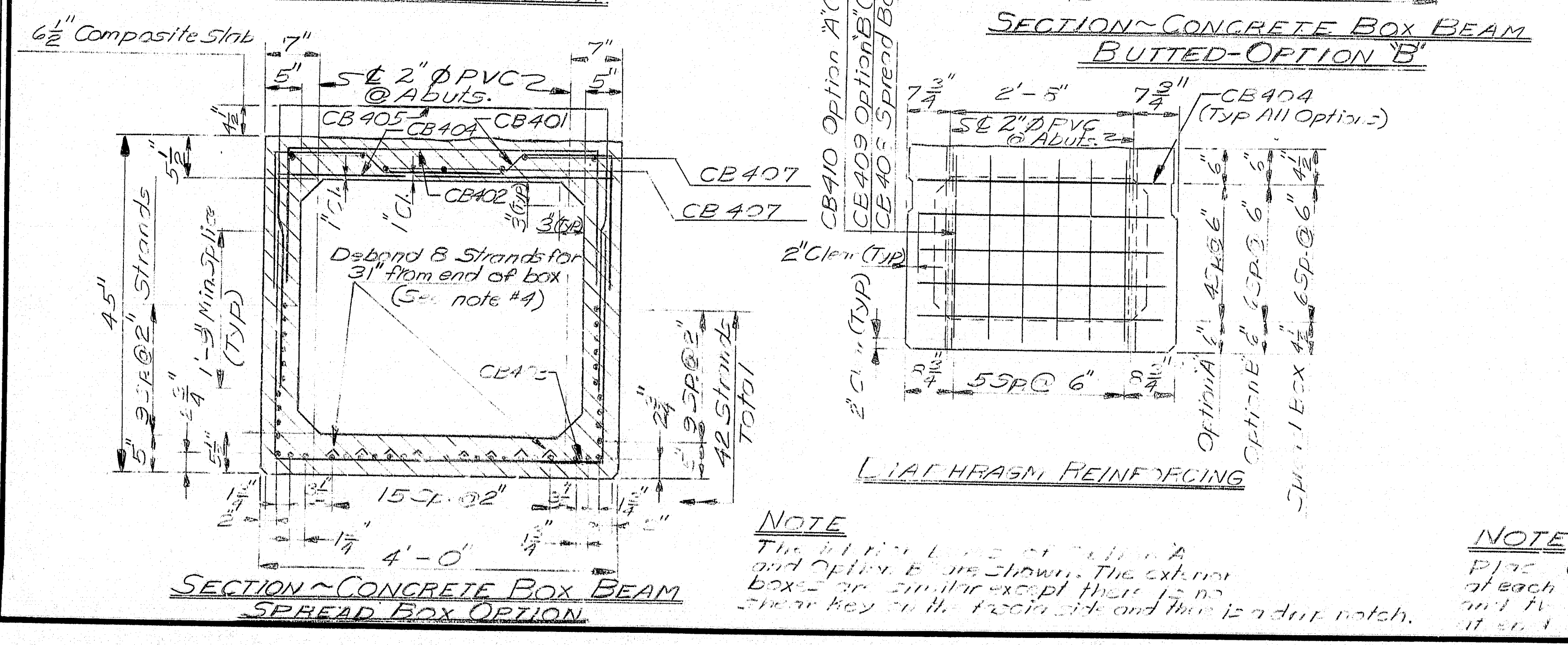
- ### BOX BEAM CONSTRUCTION NOTES
- 1) The minimum compressive stress strength of prestressed concrete at the age of 28 days shall be 5000 psi. Minimum compressive strength at transfer of prestressing force shall be 4000 psi.
 - 2) Prestressing steel shall consist of high tensile strength seven wire strands 270 Grade, with a nominal diameter of one-half inch. The initial tensile force applied to each strand shall be 30,000 lbs. for options A and B and 34,300 for spread box option.
 - 3) Should the camber of the prestressed box be greater than 1/4" Option A, 1" Option B, or 2" for the Spread Box Option upwards of the center of the span, starting at the dead load of the box, the bridge seal elevations shall be adjusted as directed by the Engineer.
 - 4) The debonding sheaths shall be as approved by the Engineer.
 - 5) For the Concrete Alternate, the Contractor has the option of providing the Butted Option A, Butted Option B, or the Spread Box Option.
 - 6) The reinforcing bars CB405 (Spread Box), CB411 (Option A) and CB406 (Option B) shall be epoxy coated in accordance with Special Provision 503. Payment for this epoxy coating will be considered incidental to Item 535.62.



REINFORCING STEEL SCHEDULE

Option A	Option B	Spread Box
Mark No. Length	Mark No. Length	Mark No. Length
CB403 540 8'-6"	CB403 540 8'-6"	CB401 324 6'-10"
CB404 315 9'-8"	CB404 315 9'-8"	CB402 324 6'-8"
CB401 126 42'-0"	CB401 126 42'-0"	CB403 240 5'-8"
CB410 126 42'-0"	CB410 126 42'-0"	CB404 520 3'-8"
CB411 540 8'-6"	CB411 540 8'-6"	CB405 240 5'-8"
CB406 729 6'-6"	CB406 729 6'-6"	CB407 56 3'-0"
CB407 729 6'-6"	CB407 729 6'-6"	CB408 168 3'-5"
CB408 729 6'-6"	CB408 729 6'-6"	D601 18 4'-5"
CB409 729 6'-6"	CB409 729 6'-6"	D602 36 2'-3"
		D412 15 8'-4"

*D602 to be threaded at one end. All reinforcing to be in place to be installed in Item 535.62.



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SPURWINK BRIDGE
 OVER
 SPURWINK RIVER
 BETWEEN THE TOWNS OF
 SCARBOROUGH
 AND
 CAPE ELIZABETH
 CUMBERLAND COUNTY
 EKA LEAN DEVI
 CONCRETE ALTERNATE
 AUGUSTA, MAINE

PROJECT DESIGN ENGINEER	DATE
DESIGN - DETAILED	7/15/23
CHECKED	7/15/23
REVISIONS	
FILE CHARGES	

BRUNING 44-132-457(1)

100-24

REINFORCING STEEL SCHEDULE																												
STRAIGHT BARS								BENT BARS																				
MARK	NO.	LENGTH	LOCATION	MARK	NO.	LENGTH	LOCATION	MARK	NO.	LENGTH	LOCATION	MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION		
ALL CONCRETE OPTIONS				STEEL ALTERNATE				STEEL ALTERNATE				ALL CONCRETE OPTIONS																
A504	8	40'-0"	Abutment Backwalls	A511	8	5'-3"	Abutment Wingwalls	S501	140	30'-0"	Longitudinal in Slab	A519	12	14'-2"	S		5'-3"	2'-8"	5'-3"									Abut. Backwalls
A505	20	11'-0"		A512	8	6'-0"		S502	70	25'-0"	Longitudinal in Slab	A520	12	13'-2"	S		5'-3"	2'-8"	5'-3"									
A506	4	38'-0"		A513	8	6'-3"		S503	164	36'-4"	Transverse in Slab	A521	12	12'-4"	S		4'-10"	2'-8"	4'-10"									
A507	4	36'-0"		A514	8	7'-6"						A522	16	11'-2"	S		4'-3"	2'-8"	4'-3"									Abut. Backwall
A508	4	32'-0"	Abutment Backwalls	A515	8	8'-3"																						
A509	20	6'-11"	Abutment Wings	A516	12	9'-0"																						
A510	8	12'-0"	Abut. Left Wingwall Abut. Right Wingwall	A517	4	9'-3"																						
A511	4	9'-0"	Abut. Left Wingwall Abut. Right Wingwall	A518	8	10'-6"	Abutment Wingwalls																					
A512	8	5'-8"	Abutment Wingwalls	A519	16	29'-3"	Abutment Backwalls					S503	168	9'-0"	Y	2'-6"	6"	1'-2"	6"	1'-4"	3'-0"	1 1/2"	1 7/8"					Superstructure Slab
A513	8	7'-2"	Abutment Wingwalls	A520	4	13'-2"						S558	168	4'-6"	HB	5 3/4"	5 3/4"	1'-4"	5 3/4"	1'-4"		5 1/4"						Curbs
A514	8	8'-8"	Abutment Wingwalls	A521	4	3'-11"						S602	52	9'-3"	L	3'-3"	6'-0"											Abut. Backwall
A515	8	10'-8"	Abut. Right Wingwalls	A522	2	10'-4"																						
A516	8	6'-0"	Abut. Left Wingwalls	A523	2	7'-6"																						
A517	8	7'-6"	Abut. Right Wingwalls	A524	4	5'-6"																						
A518	8	9'-0"	Abut. Left Wingwalls	A525	4	3'-0"																						
A523	8	30'-0"	Abutment Breastwalls	A526	16	7'-3"																						
A524	8	10'-3"	Abutment Breastwalls	A527	2	23'-3"						S555	85	37'-1"	B		7'-1 1/4"	5"	2'-4 1/2"	5'-10 1/2"	7'-11 1/4"		3 1/2"	36'-4"			Superstructure Slab	
A603	36	3'-0"	Box Beam Dovels	A528	4	24'-2"	Abutment Backwalls					S556	83	5'-7"	S	1'-0"	1'-4"	1'-0"	1'-3"			1'-0"						Curbs
A604	54	6'-0"	End of Slab	A530	20	21'-4"						S557	83	5'-4"	S	1'-0"	1'-1 1/2"	1'-0"	1'-8 1/2"			1'-0"						Curbs
A533	8	3'-0"	Abut. Backwall	A531	16	8'-4"						S661	50	9'-3"	L	3'-3"	6'-0"											Abut. Backwalls
A534	4	3'-3	Abut. Wings	A532	4	3'-11																						
A535	4	6'-2	Abut. Wings																									

GENERAL NOTES

1. First digit(s) following the letter of the Mark indicates size of reinf. bar.
Mark (A 502) bar size - #5
Mark (P 1001) bar size - #10
Mark (S 603) bar size - #6
2. Each truss bar, Type B, may be replaced by two (2) straight bars (one top & one bottom) of the same bar size as the truss bar. Payment in either case shall be based on truss bars as scheduled on plans.

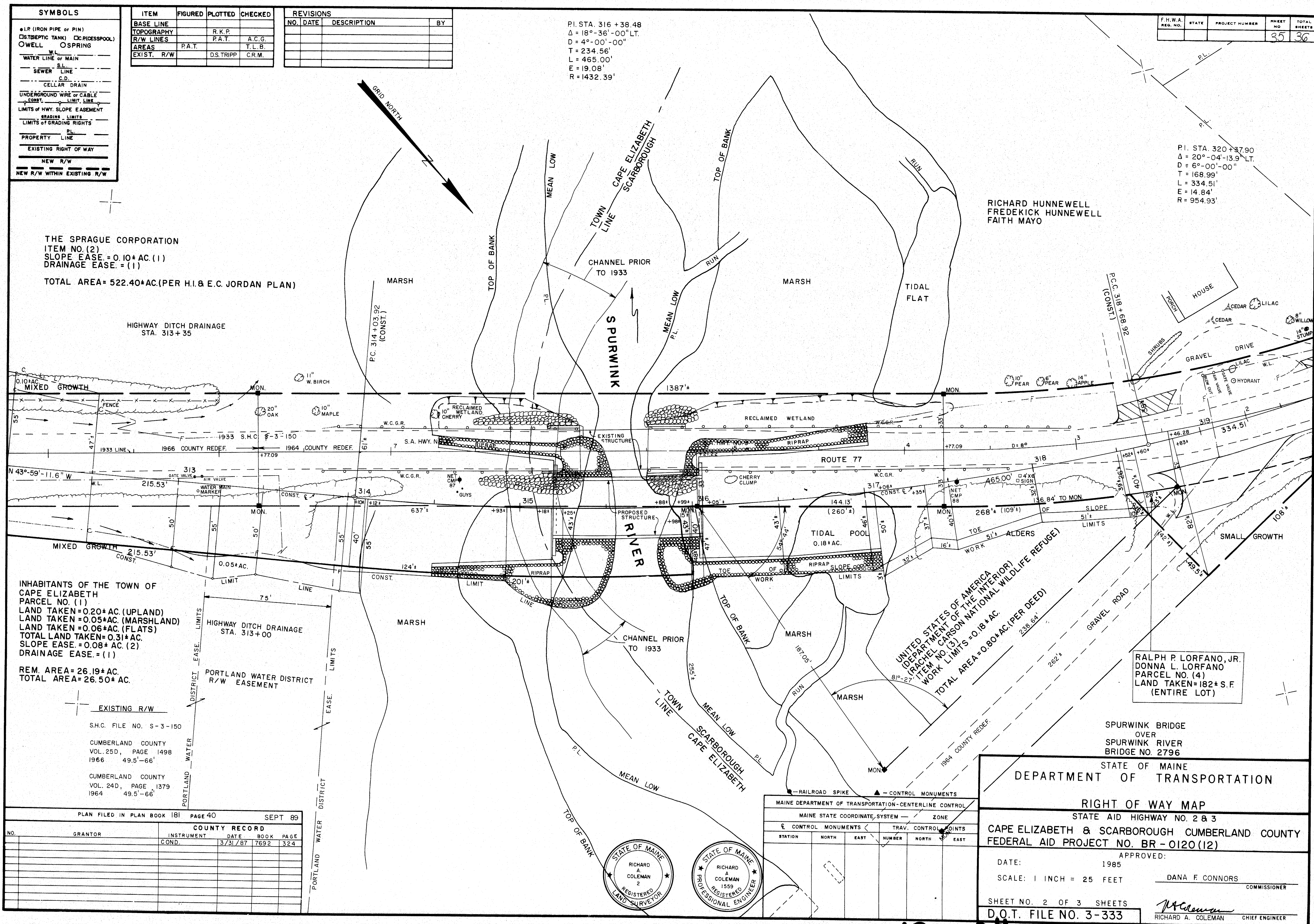
3 | Correcting Dimensions | 8/18/81

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SPURWINK BRIDGE
OVER
SPURWINK RIVER
BETWEEN THE TOWNS OF
SCARECROUGH
AND
CAPE ELIZABETH
CUMBERLAND COUNTY
FRONTING STEEL SCHEDULE
AUGUSTA, MAINE DEC. 1911

AUGUSTA, MAINE DEC 1988

100-20



100-25

