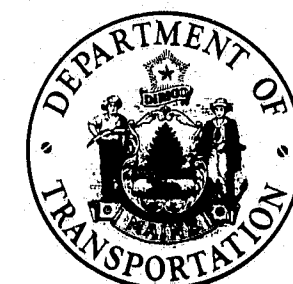
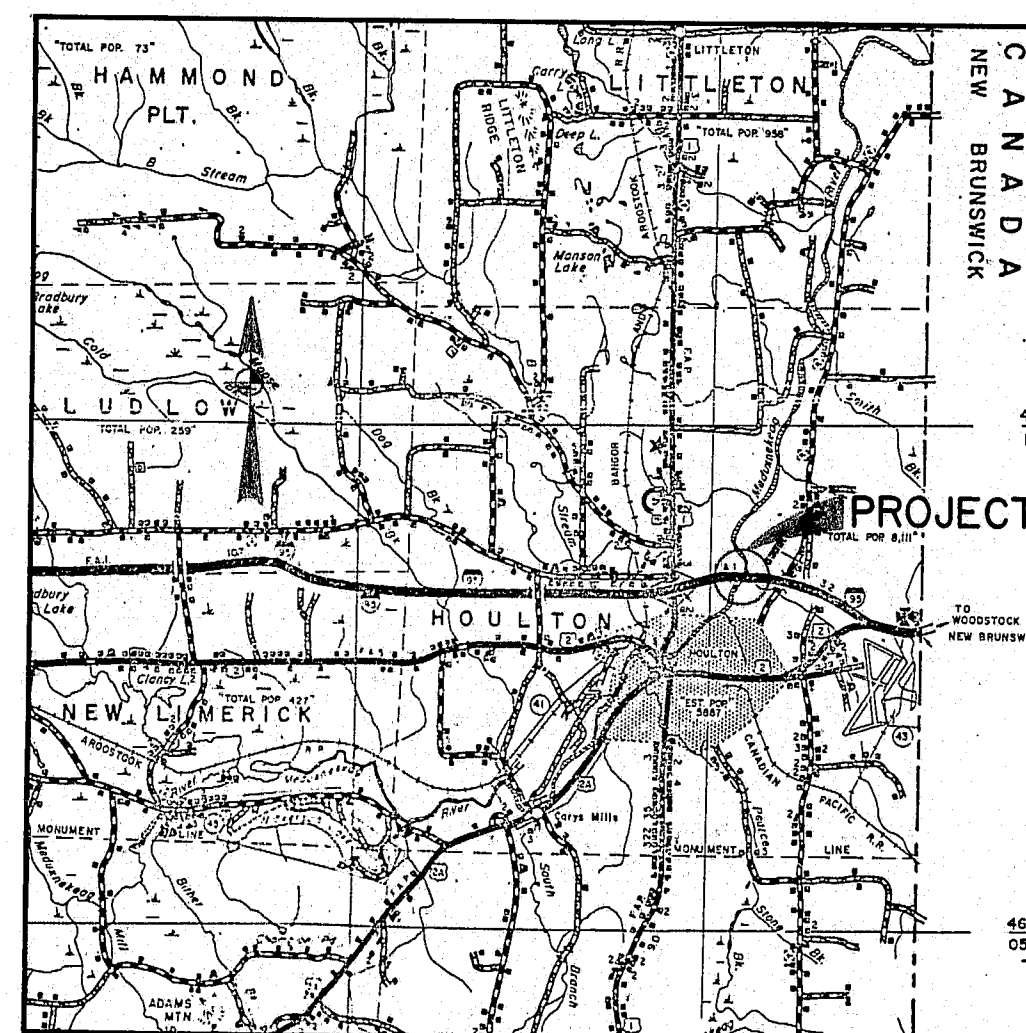


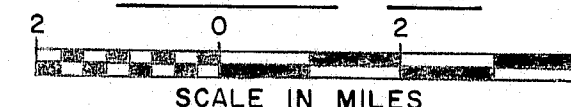
STATE OF MAINE DEPARTMENT OF TRANSPORTATION



BUREAU OF HIGHWAYS HOULTON AROOSTOOK COUNTY MAINE FEDERAL AID INTERSTATE INTERSTATE 95-N.B. BRIDGE OVER MEDUXNEKEAG RIVER PROJECT NO. I-95-9(90)296 TOTAL LENGTH 0.050 MILES



LOCATION MAP



TRAFFIC DATA

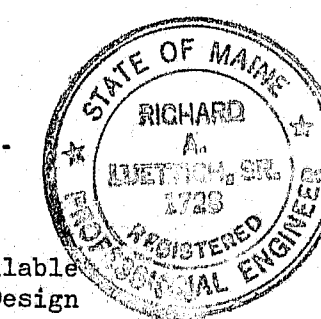
A.D.T. 670 1978
A.D.T. 975 1998
D.H.V. 183
T. (%) 10
D. (%) 100
V. 70 mph

NOTES

See General Plan for Hydrologic Data.

A hydrologic report of the bridge site is available for the Contractor's reference at the Bridge Design Office in Houlton. 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.

APPROVED:



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
COMMISSIONER
BUREAU DIRECTOR AND CHIEF ENGINEER

DATE

1-24-79

1-24-79

As Built by A. Williams 2-3-82

UNITED STATES
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
REGION 1

APPROVED:

DIVISION ADMINISTRATOR DATE

176-128

SPECIFICATIONS

DESIGN: AASHTO, Specifications for Highway Bridges, 1977; and Interim Specifications, 1978.

CONTRACT: State of Maine, State Highway Commission, Standard Specifications, Highway and Bridges, Revision of June 1968.

DESIGN LOADING

LIVE LOAD-----HS 25 As Modified for Interstate Highways

MATERIALS

CONCRETE: Wearing Surface ----- Class AA
All Other ----- Class A
REINFORCING STEEL ----- ASTM A615, Grade 60
STRUCTURAL STEEL:
Beams, Bearings & Splices ----- ASTM A588 (Unpainted)
Diaphragms ----- ASTM A588 (Unpainted)
Drains ----- ASTM A53 and A36 (Unpainted)
Armored Joint ----- ASTM A36
Splice Filler Plates ----- ASTM A588 (Unpainted)
Expansion Device ----- ASTM A36, A572 or A588
High Strength Bolts ----- ASTM A325, Type 3 (Unpainted)
All Other ----- ASTM A36

BASIC ALLOWABLE STRESSES

CONCRETE ----- $f_c = 1200 \text{ psi}$, $n = 9$
REINFORCING STEEL ----- $f_s = 24,000 \text{ psi}$
STRUCTURAL STEEL:
ASTM A588 ----- $f_s = 27,000 \text{ psi}$
ASTM A572 ----- $f_s = 27,000 \text{ psi}$
ASTM A36 ----- $f_s = 20,000 \text{ psi}$
ASTM A53 ----- $f_s = 20,000 \text{ psi}$
ASTM A325, Type 3 ----- $f_v = 25,000 \text{ psi}$ (for Web Splice R.)
ASTM A325, Type 3 ----- $f_v = 19,000 \text{ psi}$ (for Flange Splice R. and Diaphragms)

NOTE

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

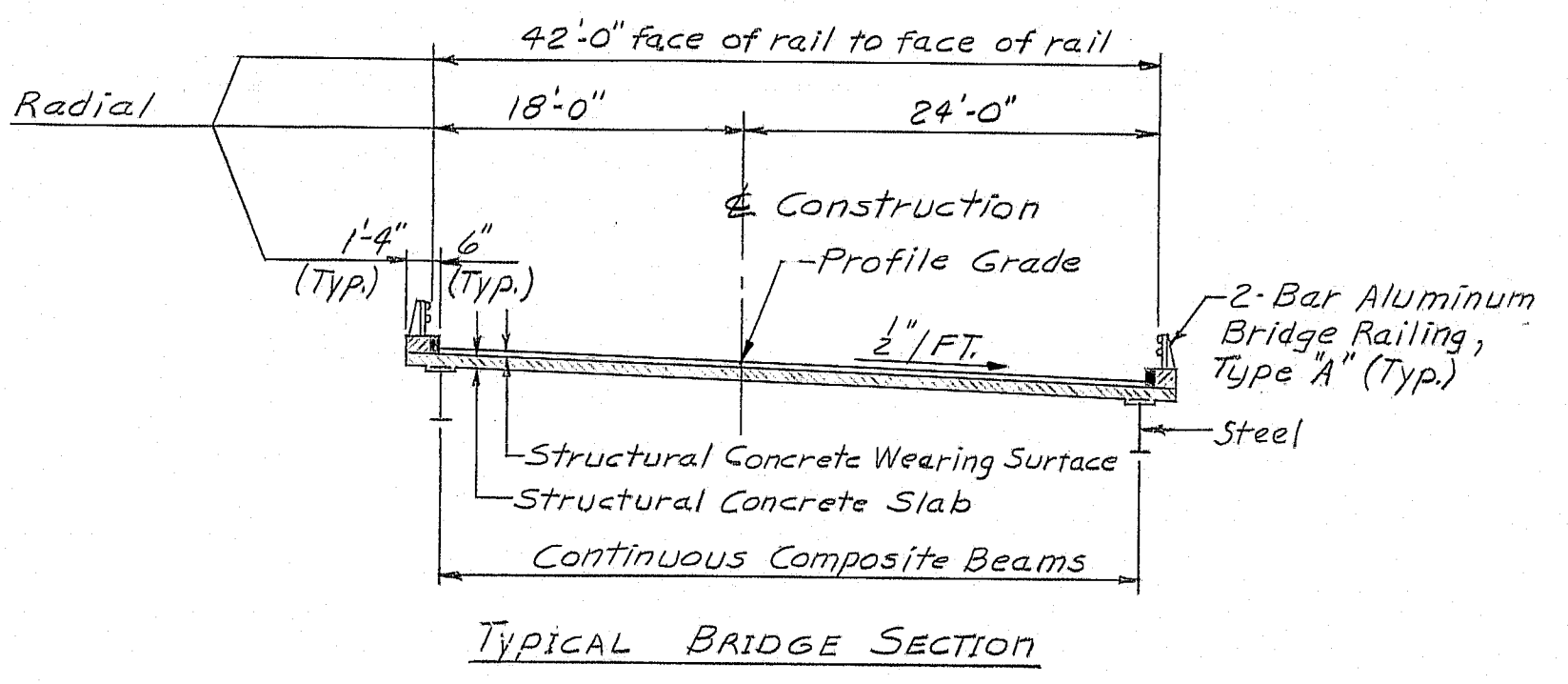
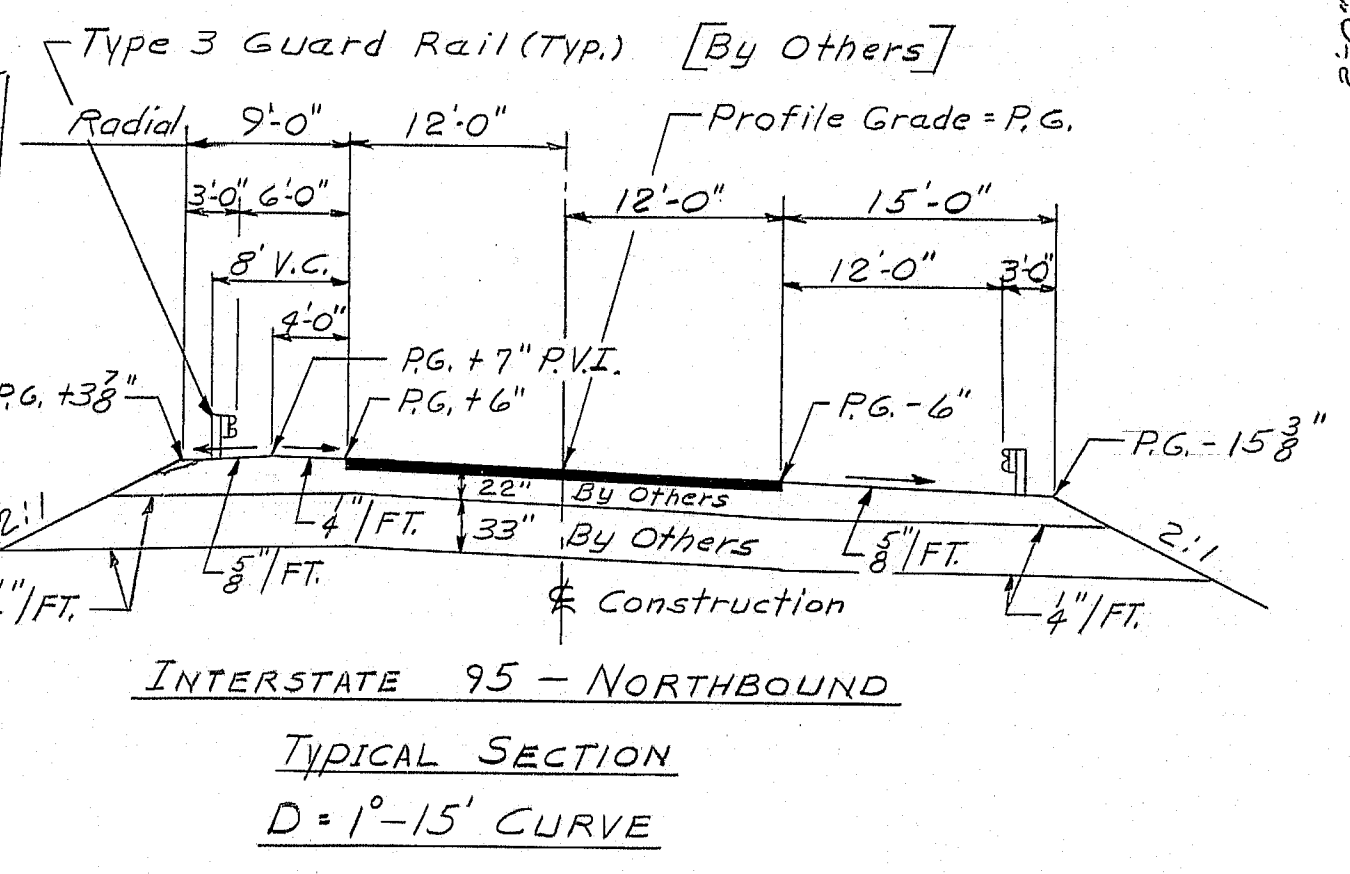
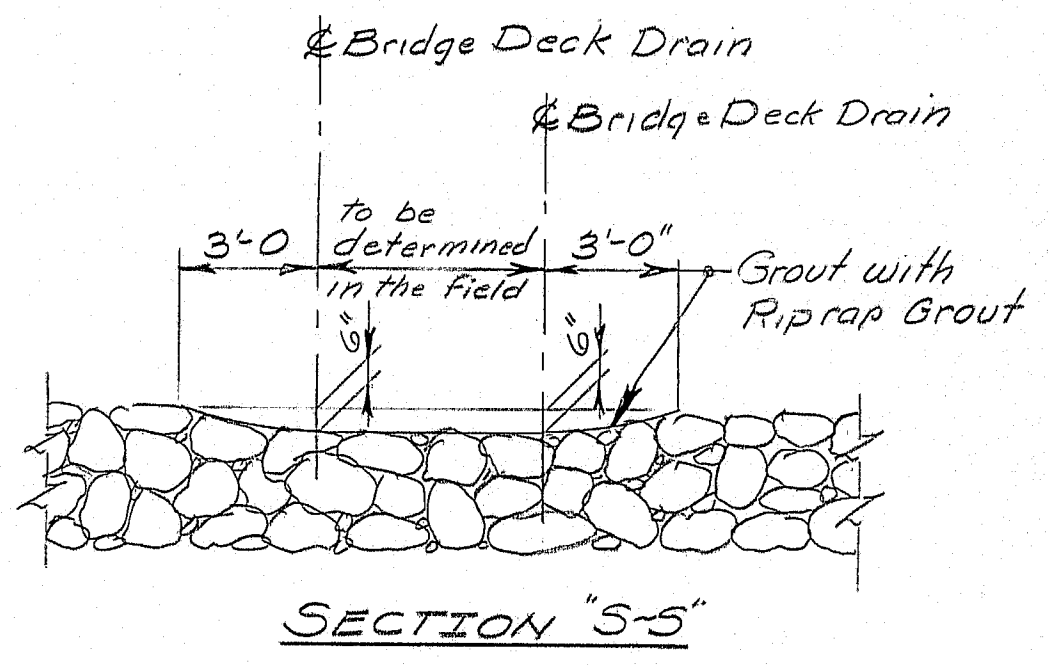
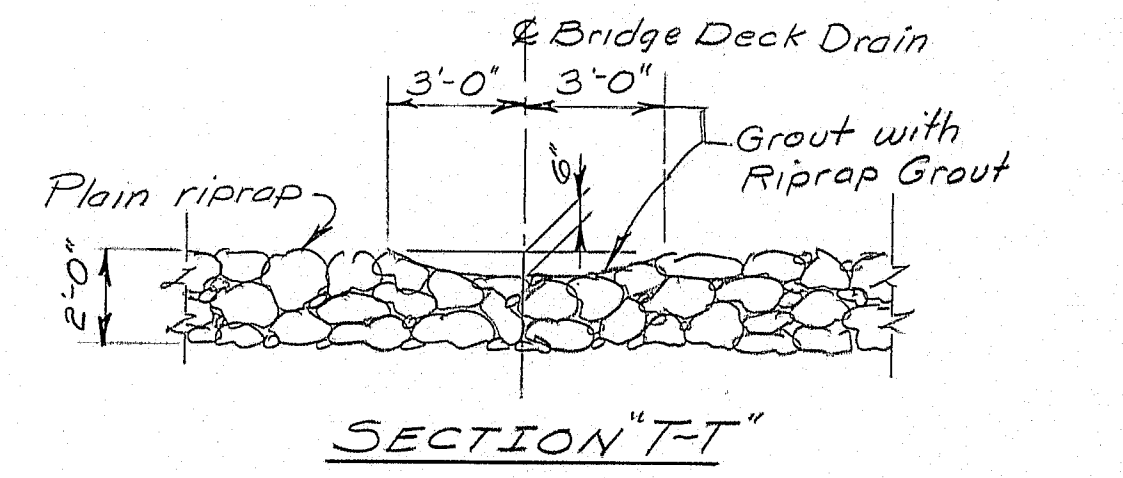
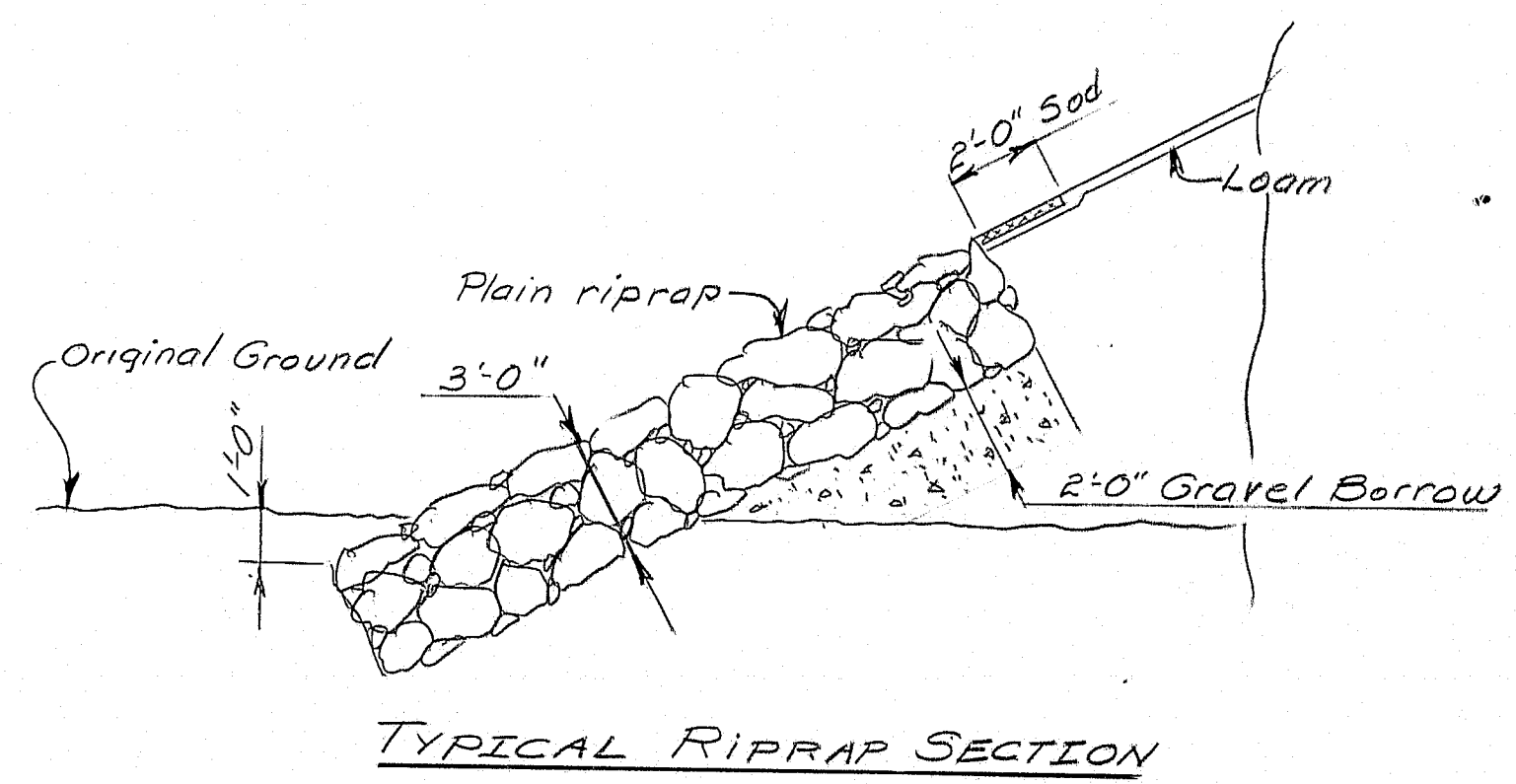
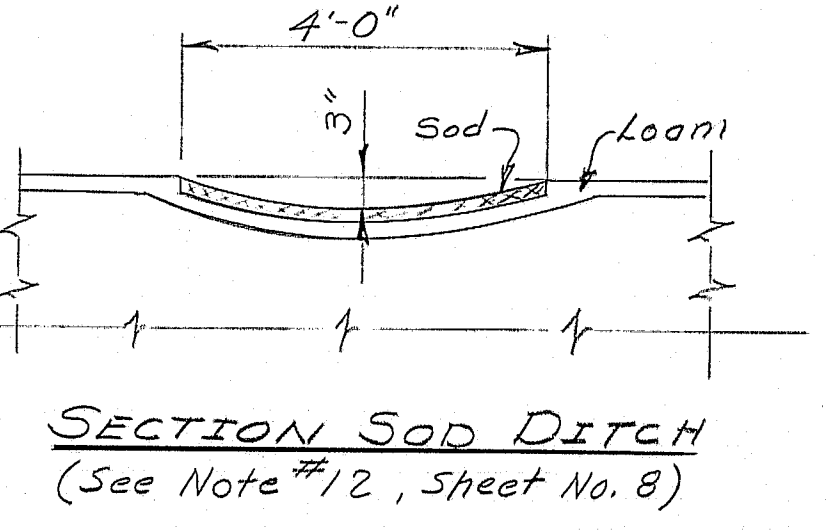
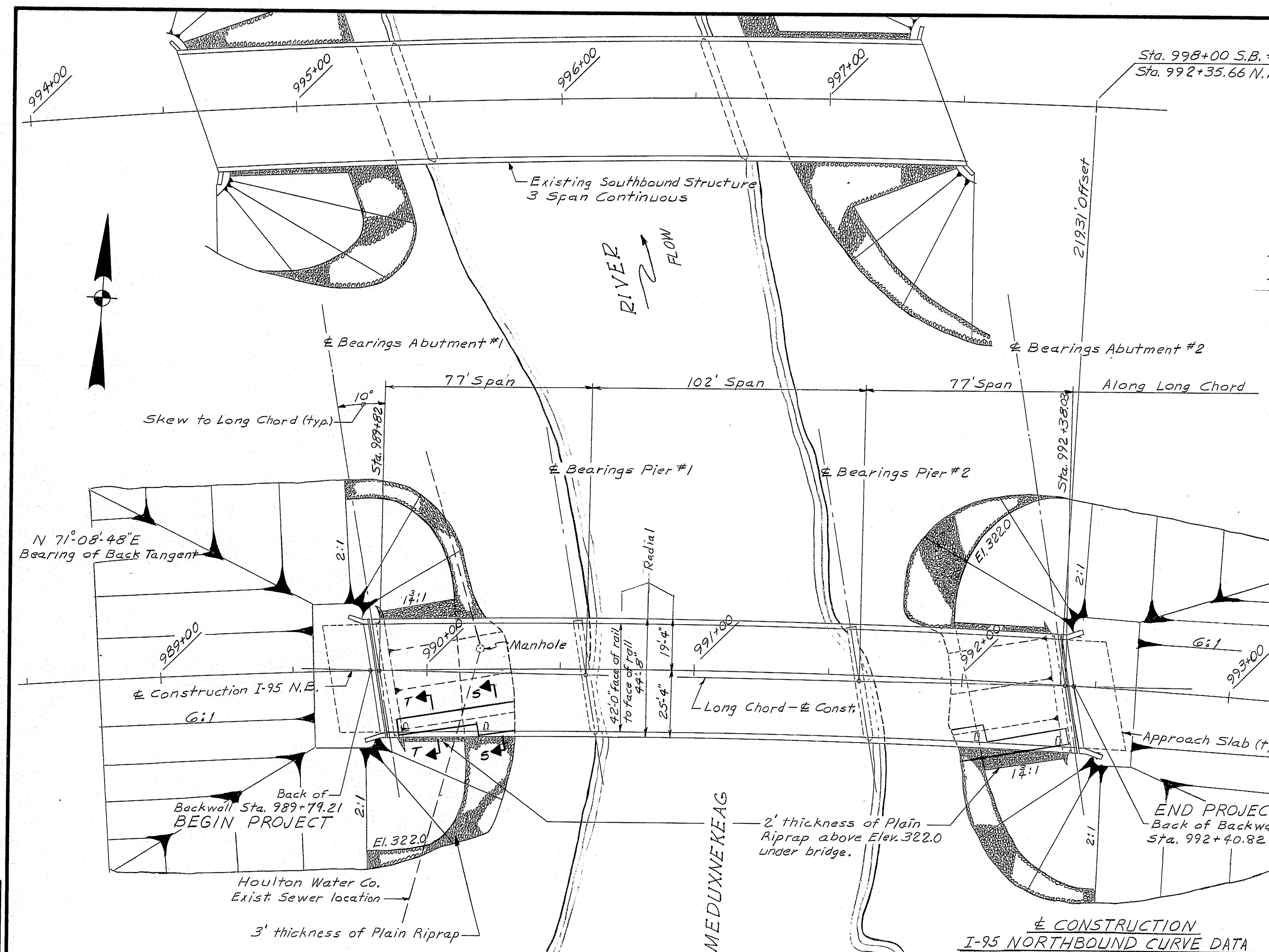
INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	QUANTITIES
3	GENERAL PLAN
4	SURVEY
5	FOUNDATION SURVEY
6	BORING DETAILS
7	PROFILE AND CONSTRUCTION LIMITS
8	ABUTMENT NO. 1
9	ABUTMENT NO. 2
10	ABUTMENT REINFORCING
11	CONCRETE END POSTS
12	APPROACH SLABS
13	PIER NO. 1
14	PIER NO. 2
15	STRUCTURAL STEEL FRAMING PLAN
16	STRUCTURAL STEEL DETAILS AND BLOCKING
17	SUPERSTRUCTURE
18	SUPERSTRUCTURE DETAILS
19 & 20	REINFORCING STEEL SCHEDULE

STANDARD DETAILS

21	BD101-74	BEARING PEDESTALS-April 1974 (Rev. 6-14-78)
22	BD104-77	ARMORED JOINT, DRAIN, SHEAR CONNECTORS, AND MISC. STRUCTURAL DETAILS - Feb. 1977 (Rev. 3-1-77)
23	BD113-78	DIAPHRAGMS AND CROSSFRAMES-June 1978 (Rev. 5-24-79)
24	BD114-77	ALUMINUM BRIDGE RAILING, 2 BAR-Dec. 1977
25	Aug. 1969 (1)	CATCH BASINS AND MANHOLES-(Rev. 7-31-78)
26	Aug. 1969 (5)	GUARD RAIL, EROSION CONTROL, Etc. (Rev. 6-1-78)
27	Aug. 1969 (6)	GUARD RAIL, Etc. (Rev. 6-1-78)
28	Aug. 1969 (9)	BEAM GUARD RAIL END TREATMENT (Rev. 10-14-75)
29		RIGHT-OF-WAY MAP
30	BD103-79	BEAM SPLICES-MAY 1979

F.H.A. RES. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	95-9(90)	3	50

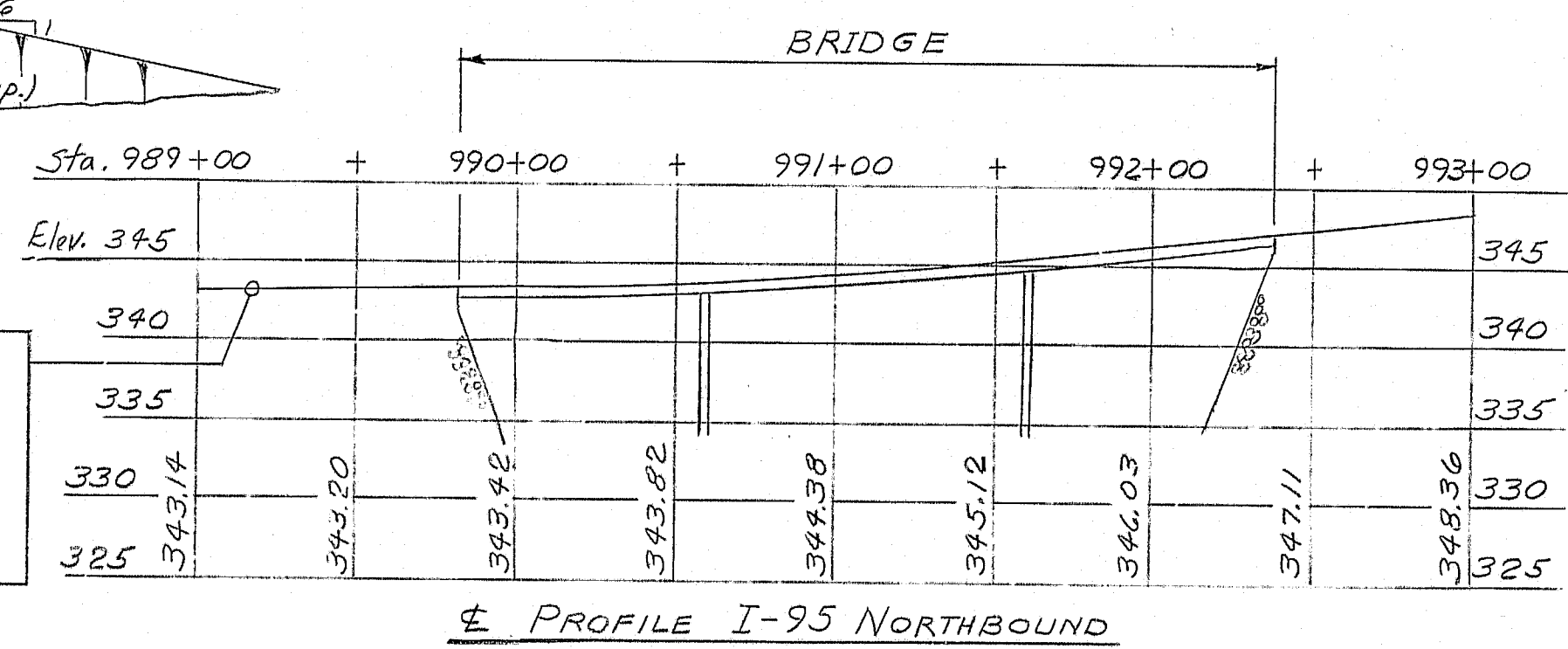
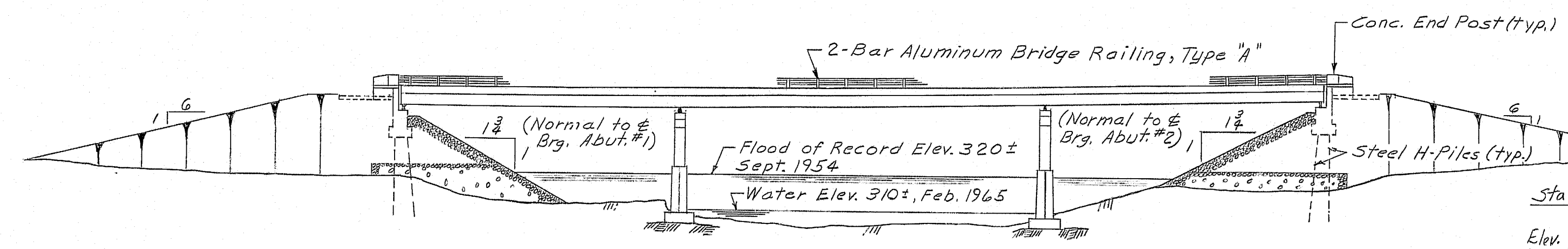


HYDROLOGIC DATA

Drainage Area = 237 square miles
 Design Discharge (Q₅₀) = 10,700 cfs
 Check Discharge (Q₁₀₀) = 12,200 cfs
 Headwater Elevation at (Q₅₀) = 316.7
 Headwater Elevation at (Q₁₀₀) = 317.4
 Discharge Velocity (Q₅₀) = 9.2' / second
 Discharge Velocity (Q₁₀₀) = 9.7' / second
 Flood of Record Elev. 320, Sept. 1954

CONSTRUCTION I-95 NORTHBOUND CURVE DATA

P.I. = Sta. 999+86.60
 Δ = 50°-50'-00"
 D = 1'-15"
 T = 2178.12'
 L = 4066.67'
 E = 491.19'
 R = 4583.66'



As Built STATE OF MAINE 2-3-82
 DEPARTMENT OF TRANSPORTATION

INTERSTATE 95 N.B.
 OVER
MEDUXNEKEAG RIVER
 IN THE TOWN OF
HOULTON
AROOSTOOK COUNTY
 GENERAL PLAN
 SHEET 3 OF 30 AUGUSTA, MAINE MAY 1982

176-130

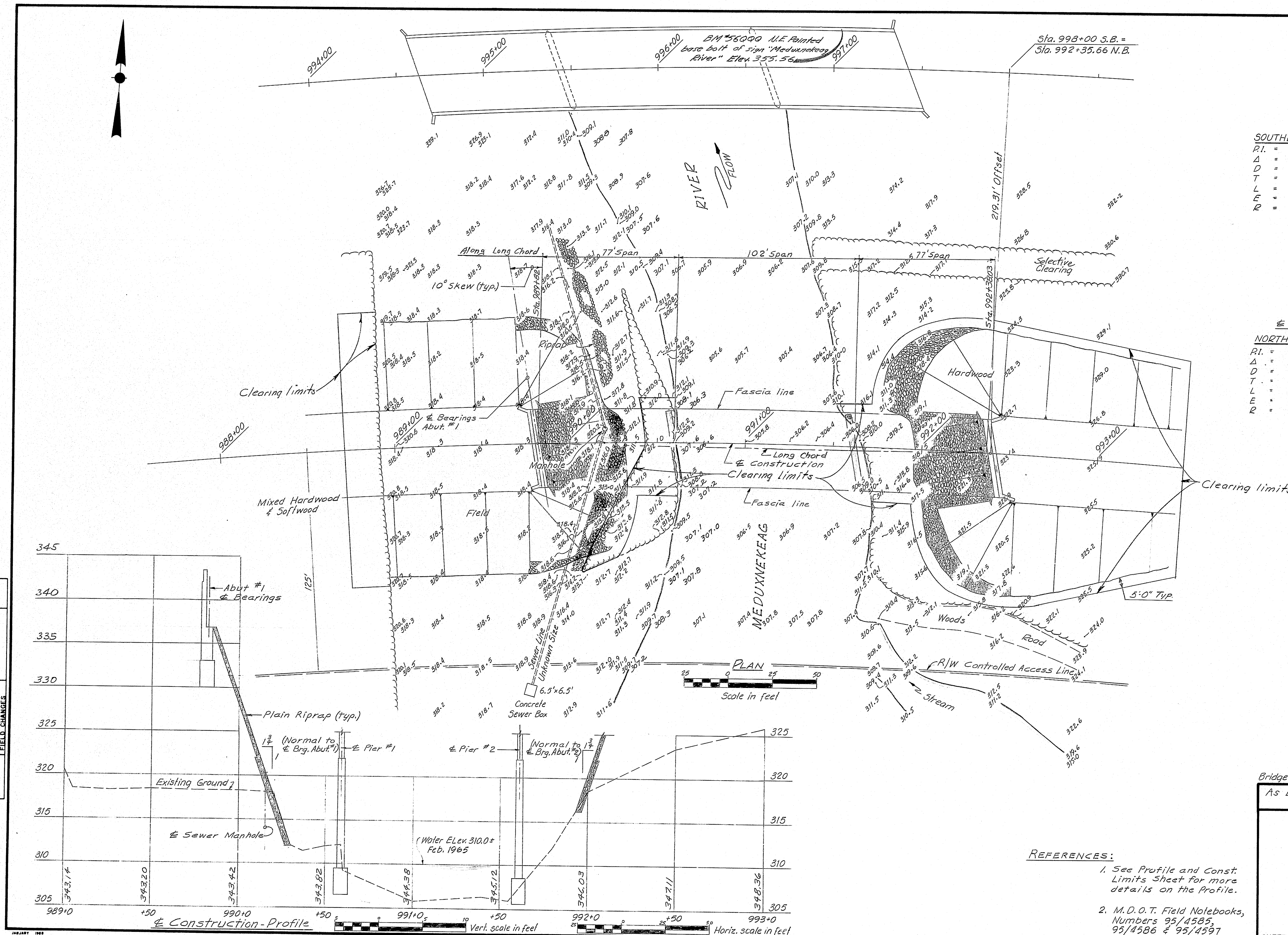
PROJECT DESIGN ENGINEER	DATE
CDH	10-78
DESIGN - CHECKED	BY
TAD	BEW
REVISIONS	DATE
FIELD CHANGES	

JANUARY 1982

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
MAINE	95-9(90)	4	30

SOUTHBOUND CURVE DATA
 P.I. = Sta. 1005+81.65
 Δ = 50°-50'-00"
 D = 1°-15'
 T = 2178.12'
 L = 4066.67'
 E = 491.19'
 R = 4583.66'

NORTHBOUND CURVE DATA
 P.I. = Sta. 999+86.60
 Δ = 50°-50'-00"
 D = 1°-15'
 T = 2178.12'
 L = 4066.67'
 E = 491.19'
 R = 4583.66'



Survey Checked by
 P.T.A. 2-77
 R.C.B. 2-77
 PROJECT DESIGN ENGINEER: C.D.H.
 DESIGN - DETAILED
 CHECKED
 REVISIONS
 FIELD CHANGES

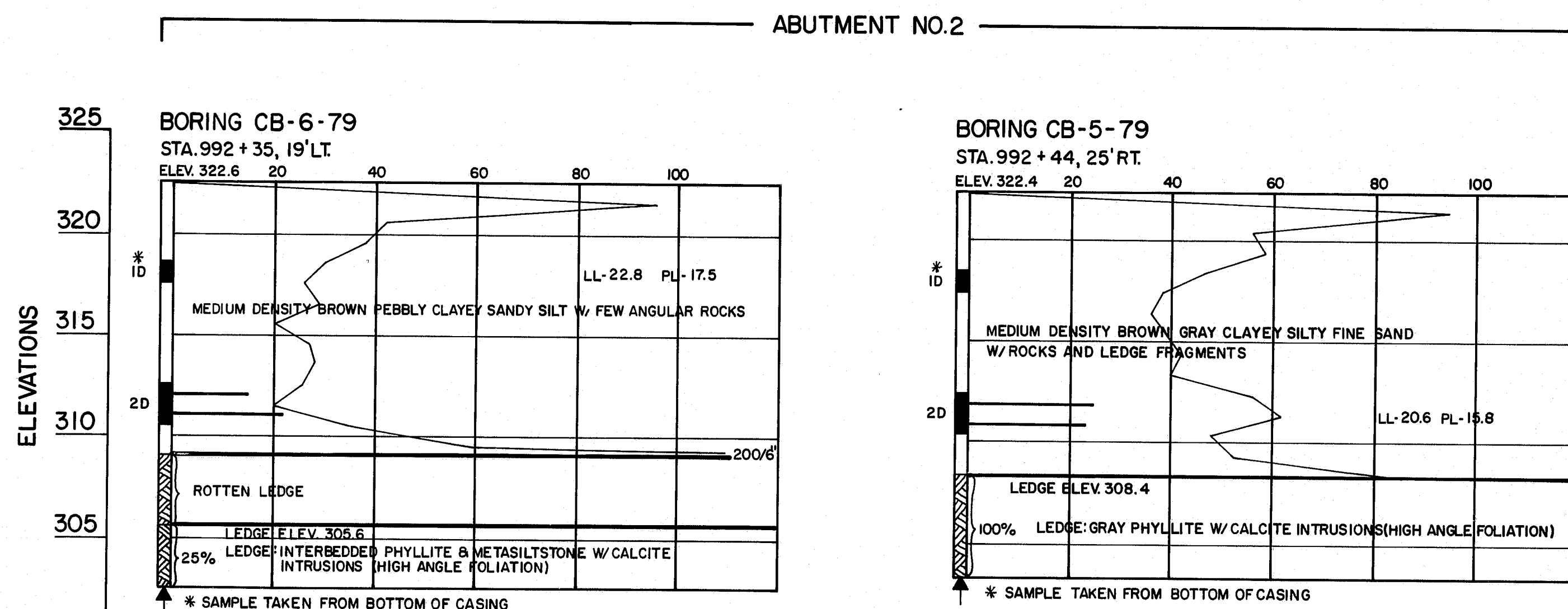
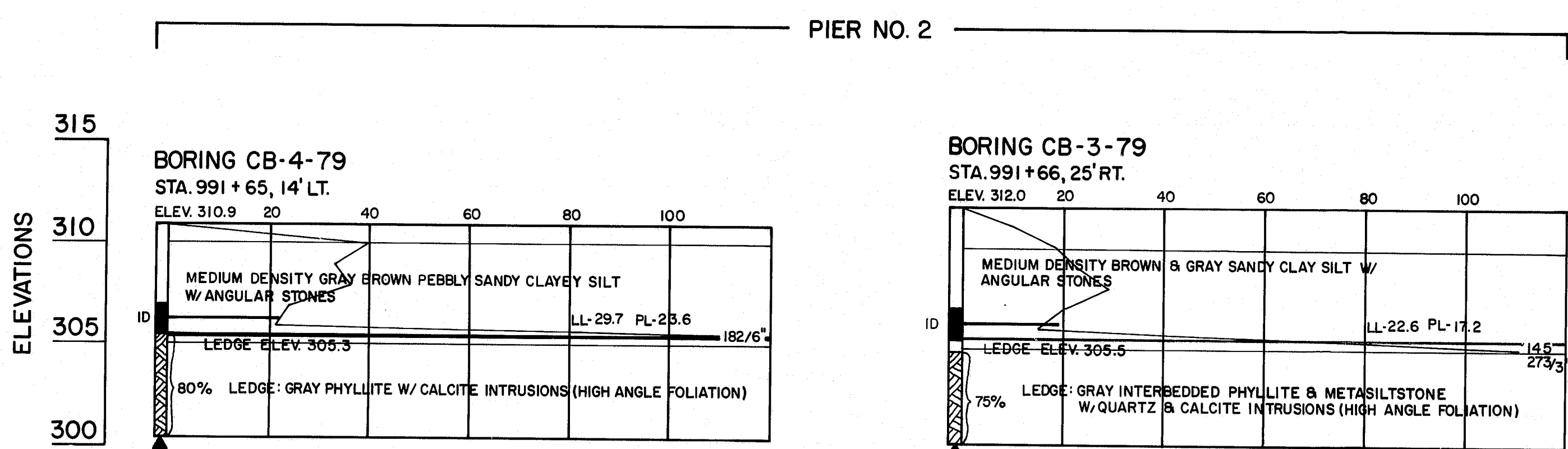
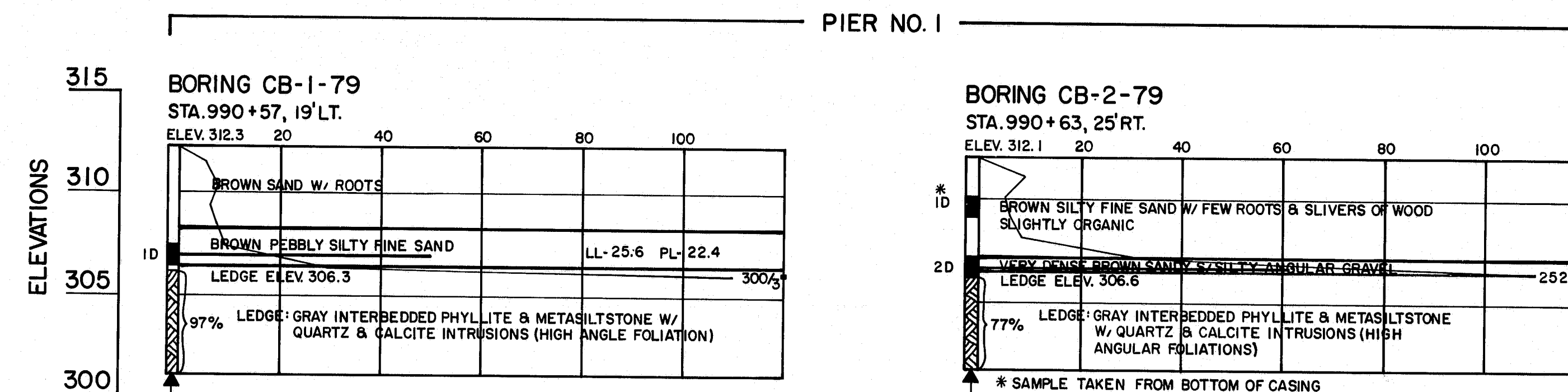
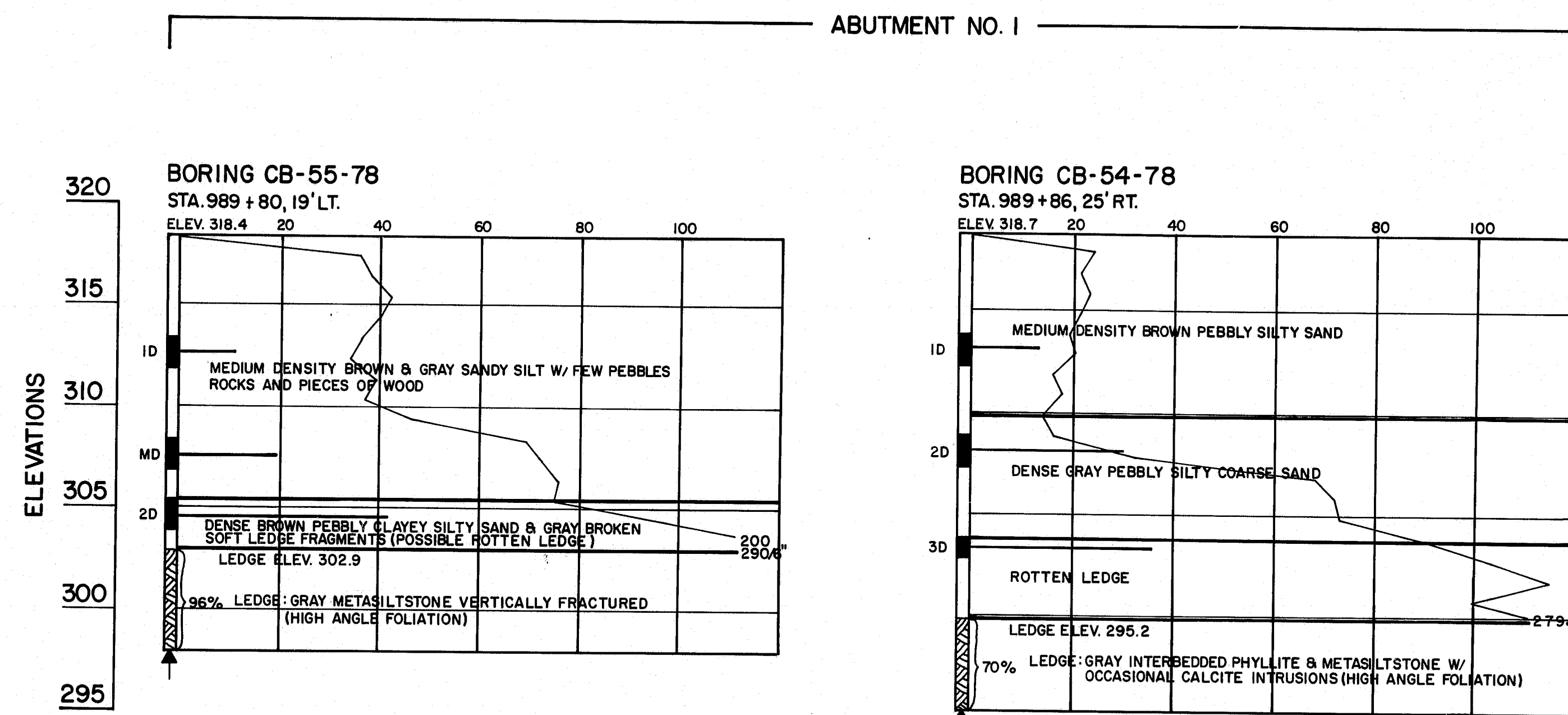
REFERENCES:

1. See Profile and Const. Limits Sheet for more details on the Profile.
2. M.D.O.T. Field Notebooks, Numbers 95/4585, 95/4586 & 95/4597

Bridge No. 1381
 As Built STATE OF MAINE 2-3-82
 DEPARTMENT OF TRANSPORTATION
INTERSTATE-95 N.B.
 OVER
MEDUXNEKEAG RIVER
 IN THE TOWN OF
HOULTON
AROOSTOOK COUNTY
 SURVEY
 SHEET 4 OF 30 AUGUSTA, MAINE May 1979

176-131

F.R.W.A. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	95-9(90)	5	30



BORING NOTES

- All samples and vane are made ahead of casing
- Water elevations
- Number of blows required to drive extra heavy casing one foot with 400 ft. lbs. of energy per blow
- Location of sample or sample attempt
- Number and type of dry sample
- ID S & H Sampler # 1290's
- MD Unsuccessful sample attempt and type of sampler
- Number of blows required to drive spoon or tubing one foot with 350 ft. lbs. of energy per blow
- Bottom of boring (may not be bottom of soil strata)
- 7% Locations cored by diamond bit and per cent recovery of rock

As Built STATE OF MAINE 2-3-82
DEPARTMENT OF TRANSPORTATION

INTERSTATE 95 N.B.
OVER
MEDUXNEKEAG RIVER
IN THE TOWN OF
HOULTON
AROOSTOOK COUNTY
BORING DETAILS

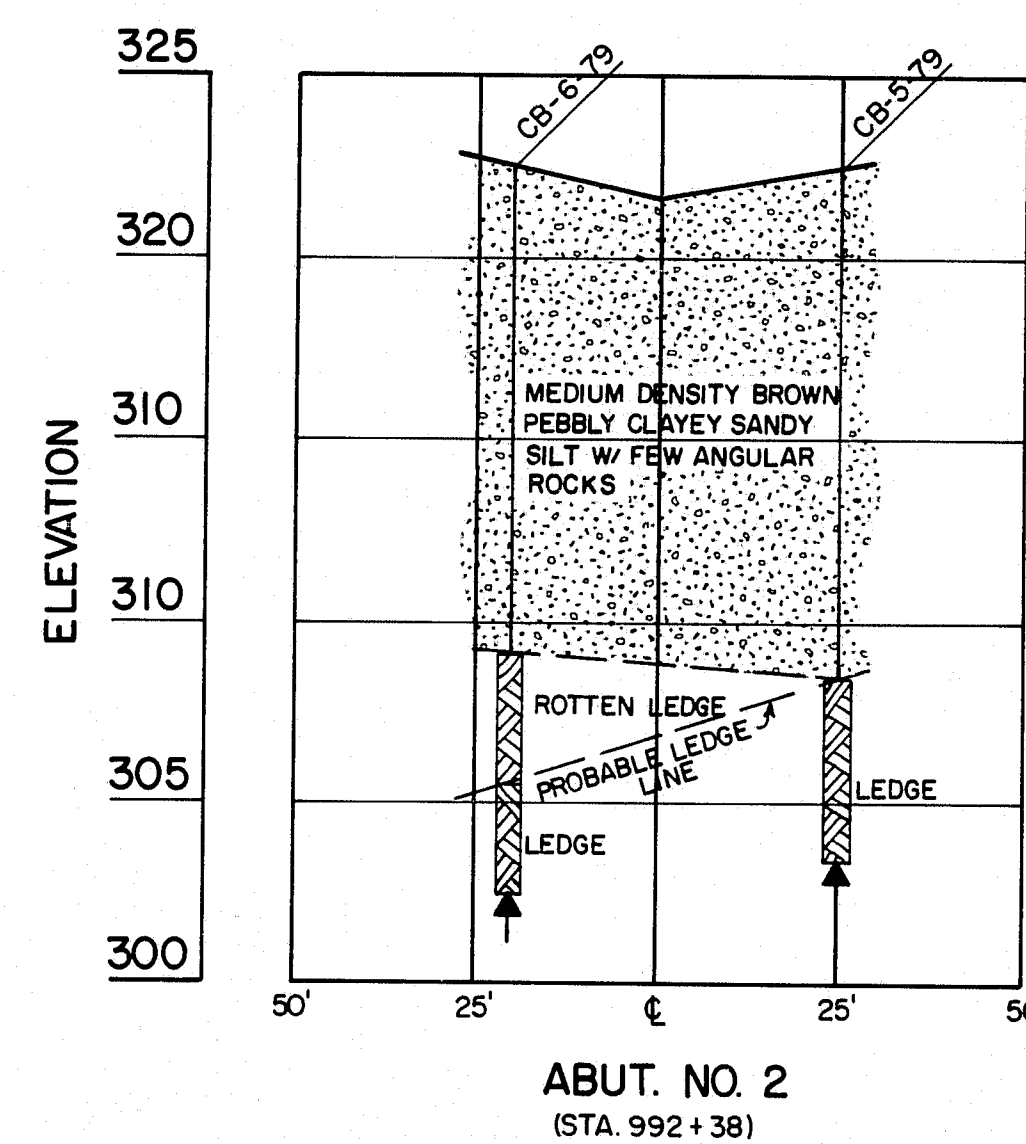
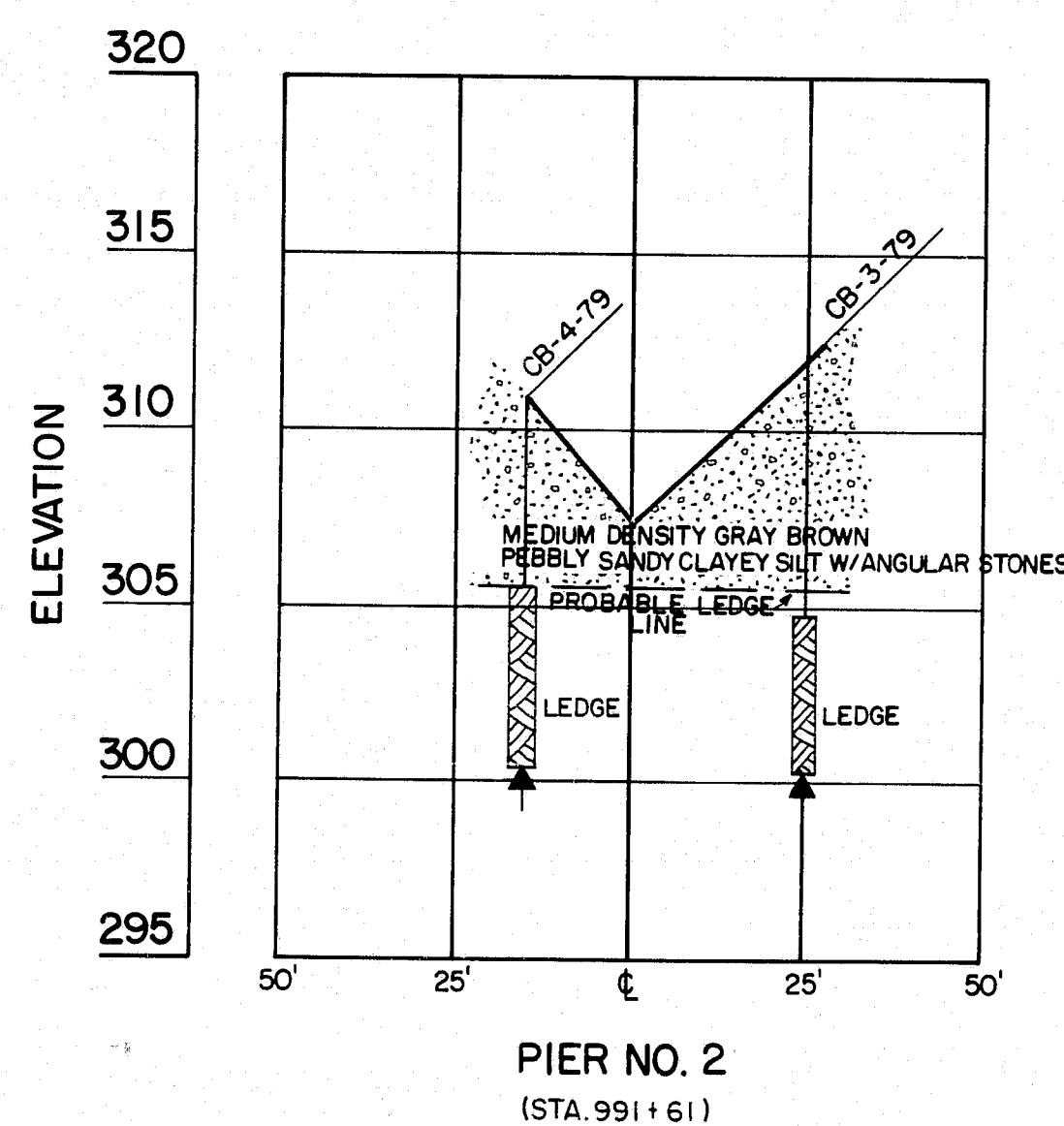
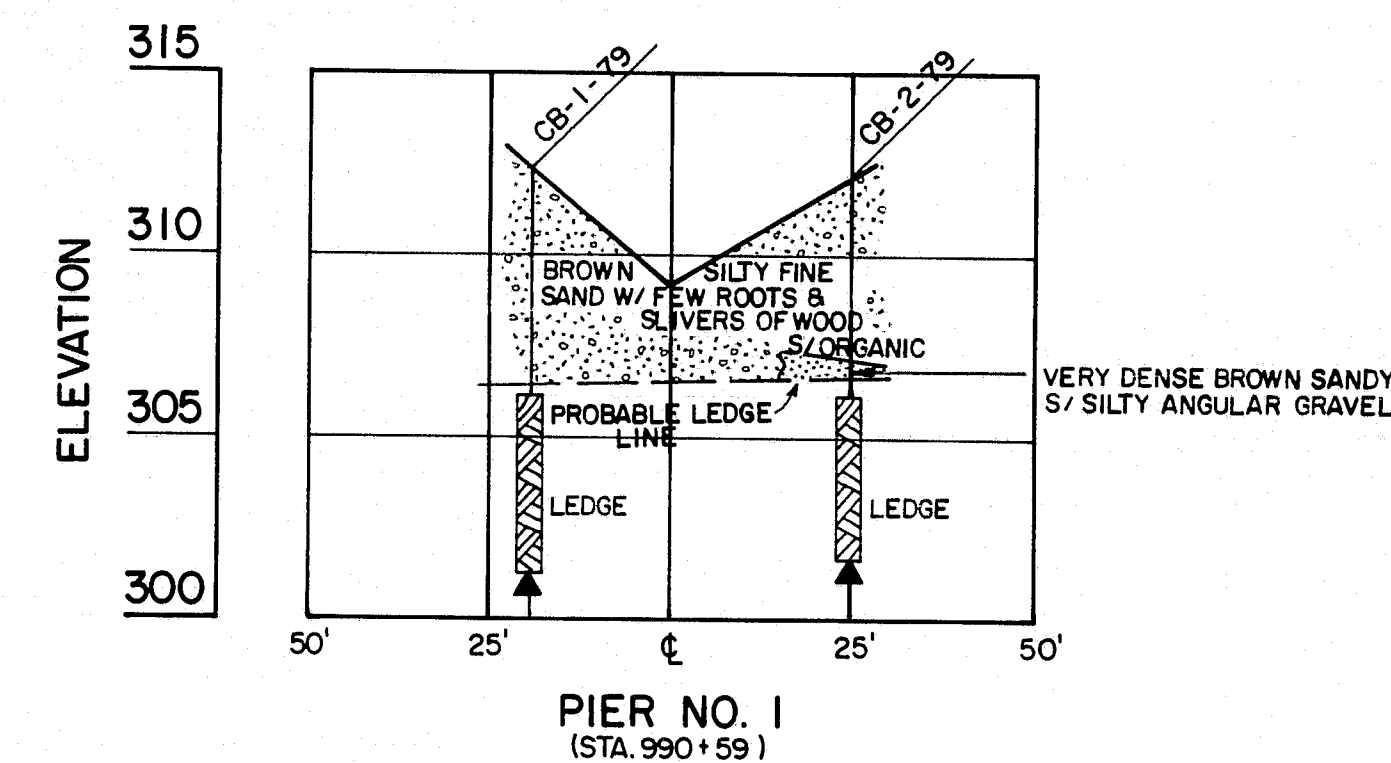
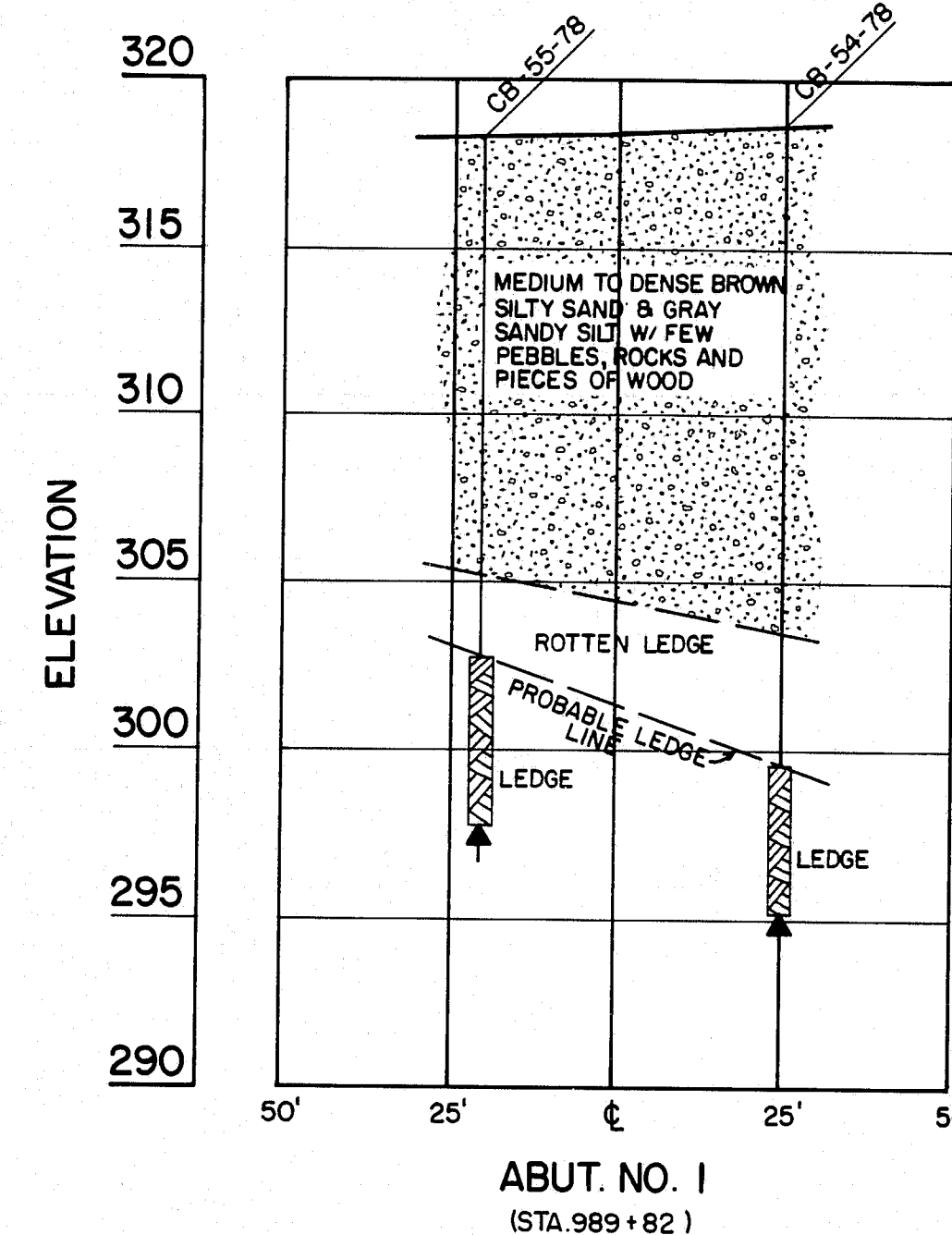
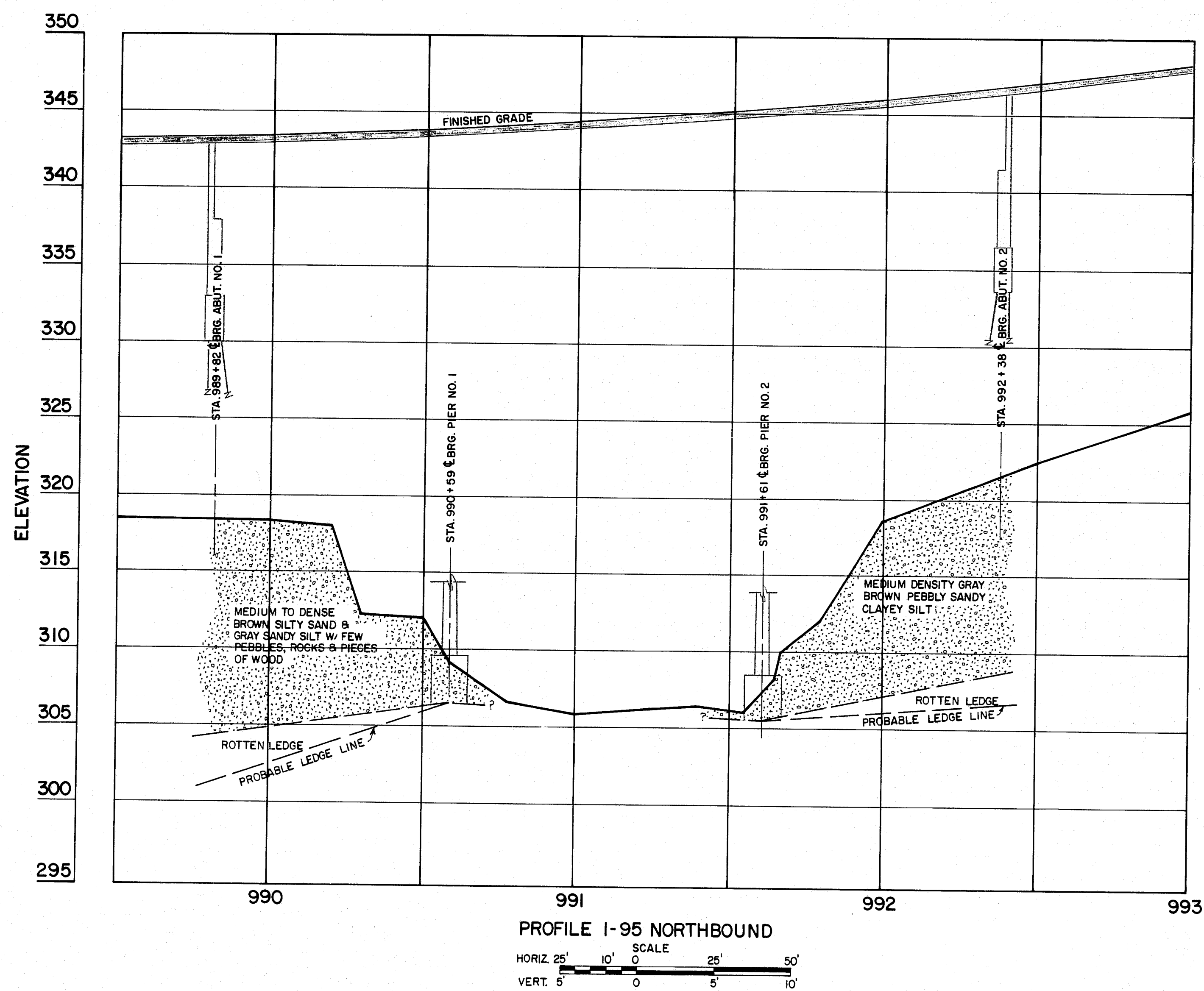
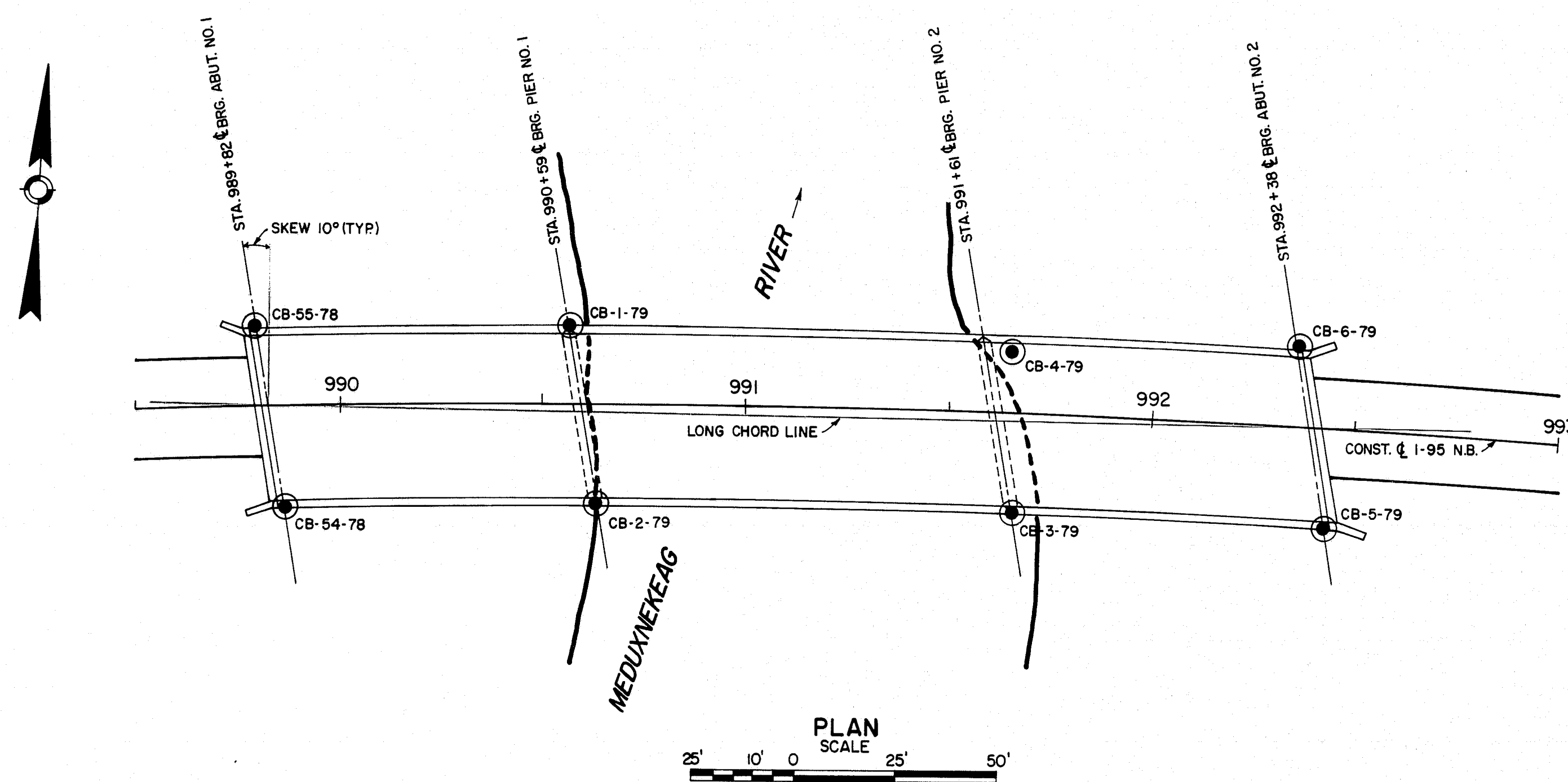
SHEET 6 OF 30 AUGUSTA, MAINE May 1979

176-132

PROJECT DESIGN ENGINEER	DATE
DESIGN - DETAILED	5/8/79
CHECKED	5/8/79
REVISIONS	
FIELD CHANGES	
PLANS	

JANUARY 1988

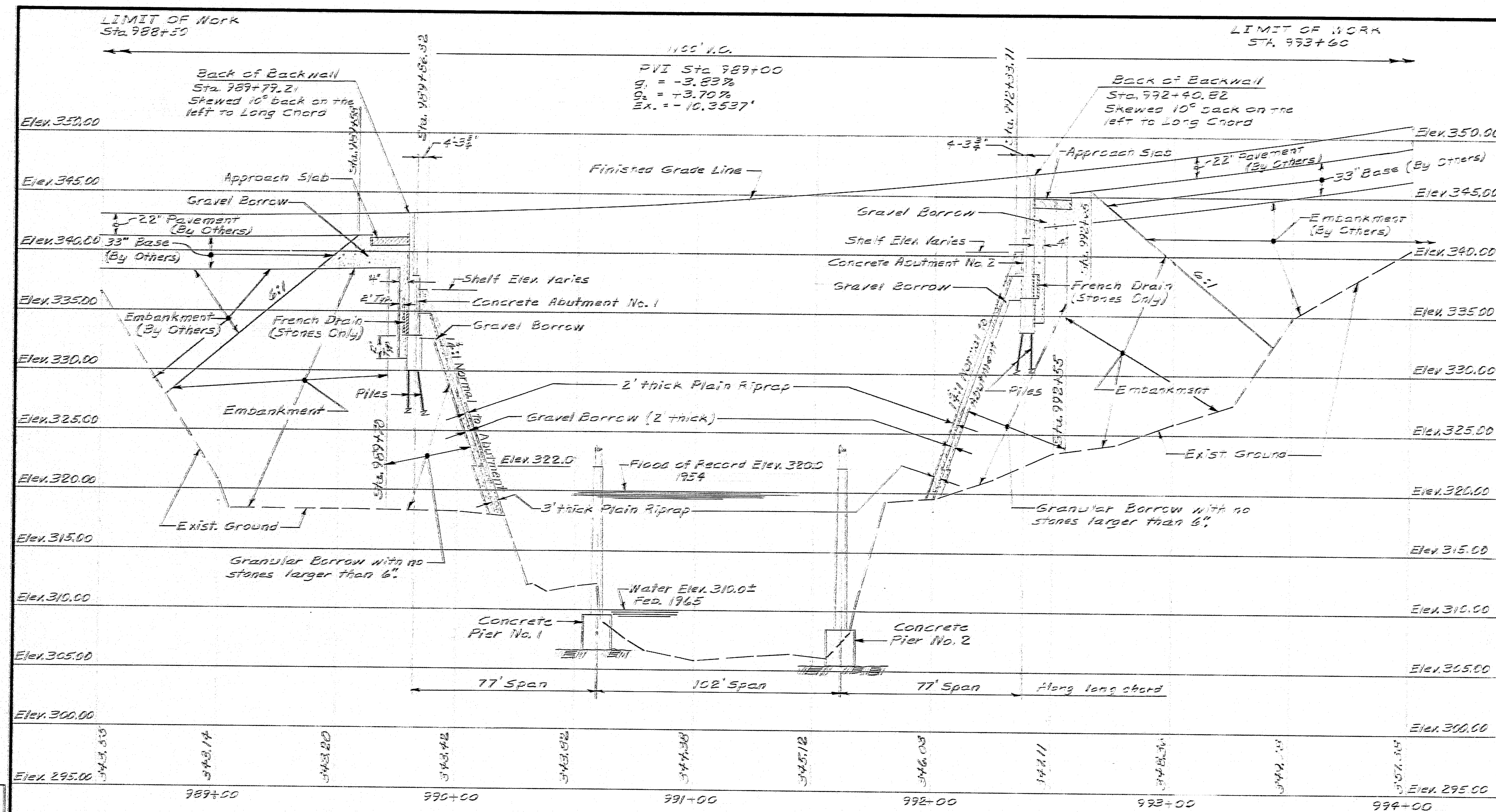
F.D.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	95-9(90)	6	30



TRANSVERSE SECTIONS
SCALE
HORIZ. 25' 10' 0' 25' 50'
VERT. 5' 0' 5' 10'

As Built STATE OF MAINE 0112-3-82
DEPARTMENT OF TRANSPORTATION
INTERSTATE 95 N.B.
OVER
MEDUXNEKEAG RIVER
IN THE TOWN OF
HOULTON
AROOSTOOK COUNTY
FOUNDATION SURVEY
SHEET 5 OF 30 AUGUSTA, MAINE May 1979

176-133



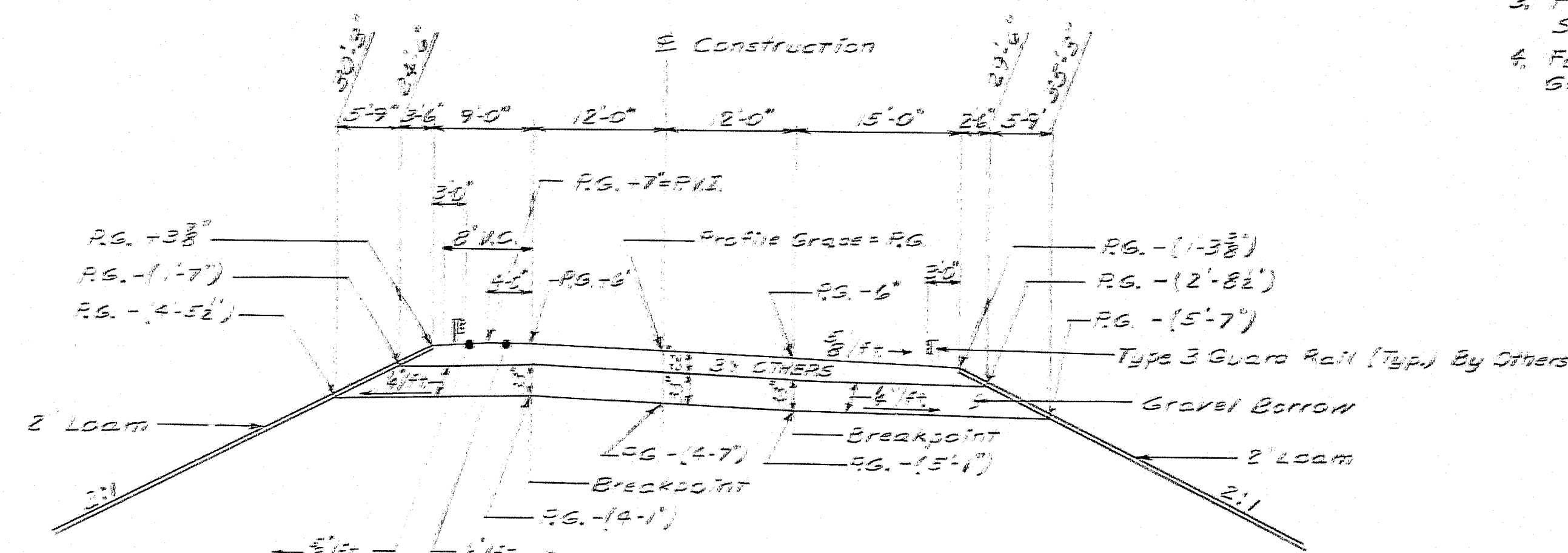
PROFILE & CONSTRUCTION I-95 NORTHBOUND

GENERAL CONSTRUCTION NOTES

1. Side slopes shall be loamed unless otherwise directed by the Engineer.
2. Seeding - Method No. 2 and Mulch all slopes as directed by the Engineer.
3. Loam depth is 2" nominal.
4. The Utilities Involved in this contract are:
Sewer - Houlton Water Co.
5. All Utilities Facilities shall be adjusted by the respective utility unless noted.
6. The clearing limits outlined below are approximate. The actual clearing limits for payment, shall be established in the field by the Engineer. Clearing shall be done within the areas that are bounded by lines that are 5'-0" outside the toe of slope of the embankments and riprap work done under this Contract. Clearing shall also be done in the area that is bounded by lines that are 5'-0" outside the area of the bridge.

REFERENCES

1. See Abutment Sheets 8 and 9
2. See Approach Slab Sheet 12
3. For Slope Protection see General Plan Sheet 3
4. For Typical Interstate Section see General Plan Sheet 3



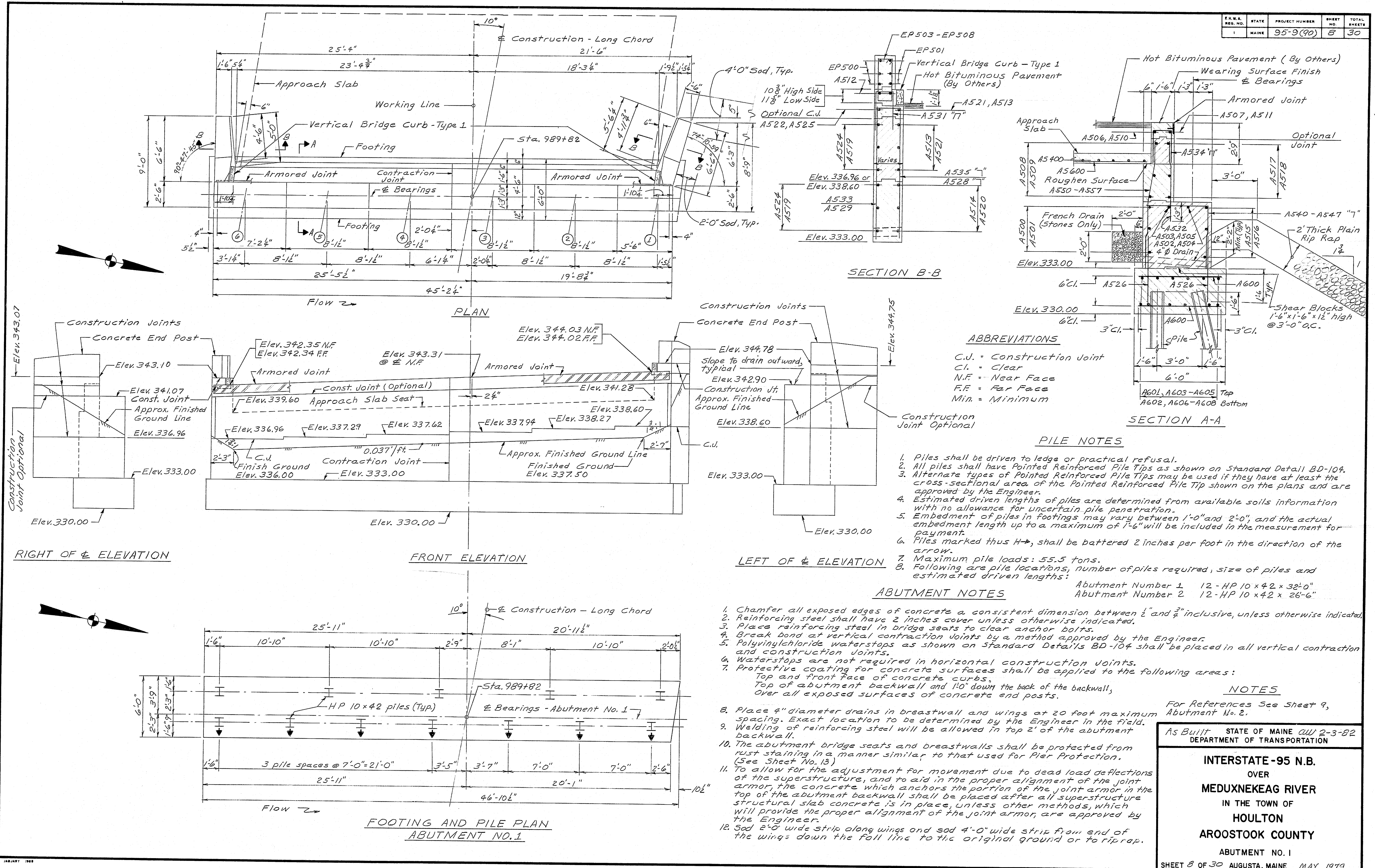
For construction between Sta. 989+58 and Abutment No. 1 & 2
for construction between Abutment No. 2 and Sta. 992+63

TYPICAL INTERSTATE SECTION

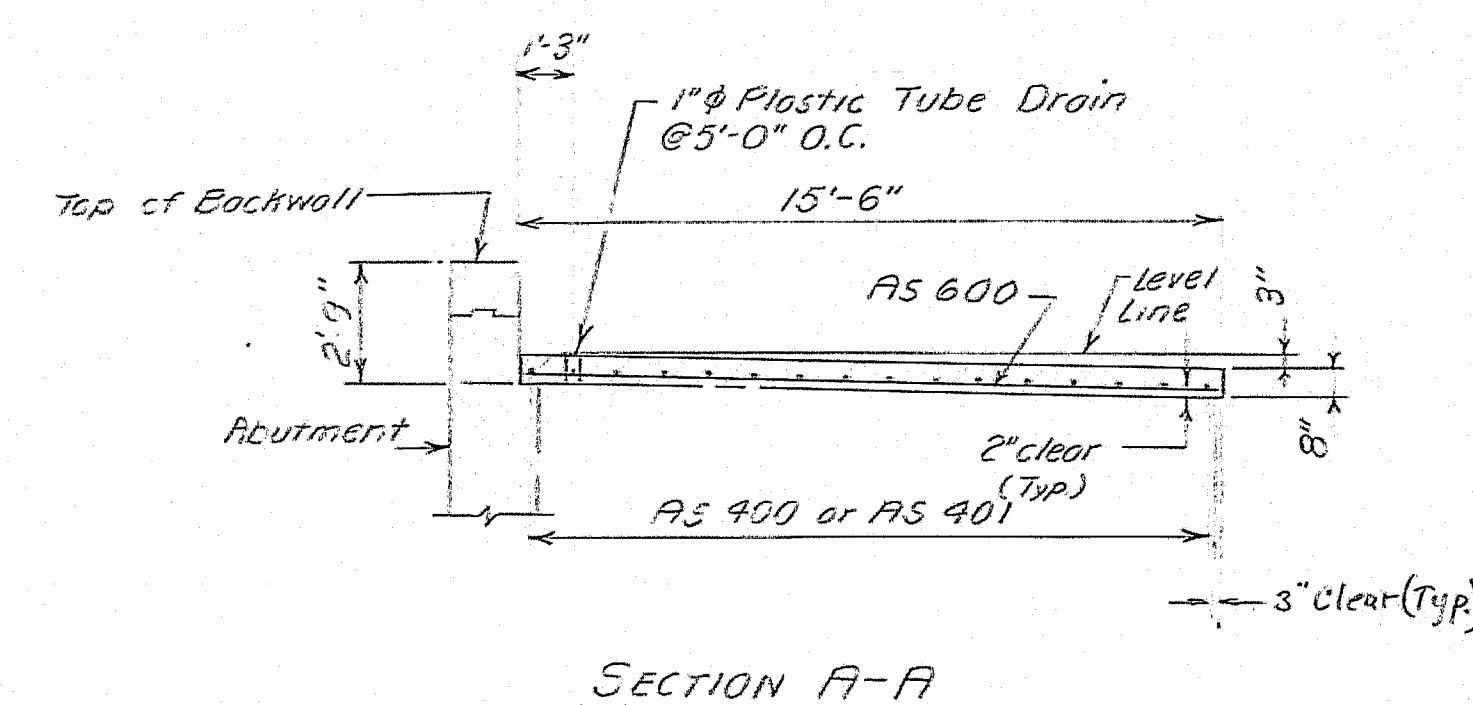
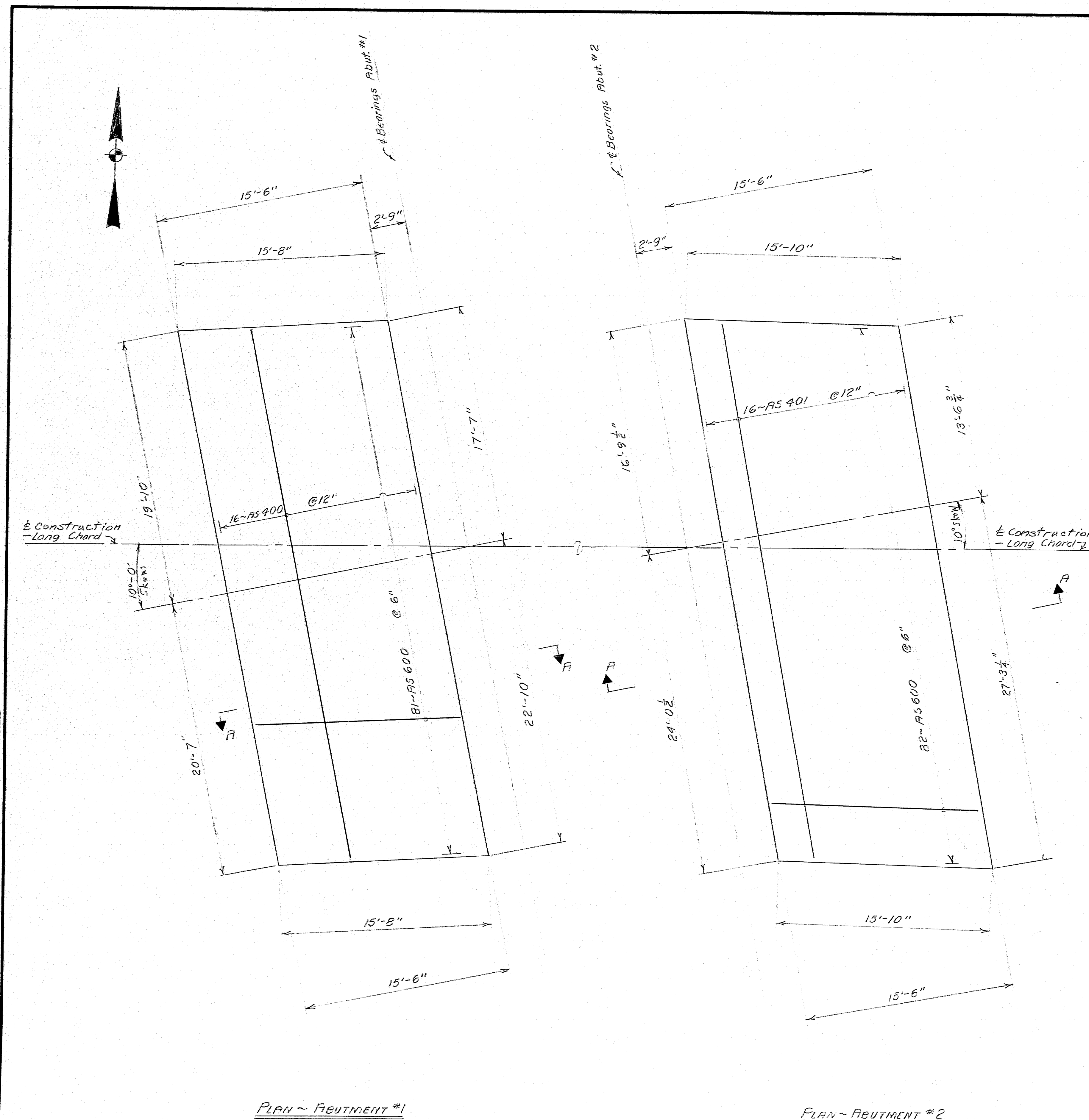
As Built		STATE OF MAINE	ROUTE 2-3-52
DEPARTMENT OF TRANSPORTATION			
INTERSTATE-95 N.B.			
OVER			
MEDUXNEKEAG RIVER			
IN THE TOWN OF			
HOULTON			
AROOSTOOK COUNTY			
PROFILE AND CONSTRUCTION LIMITS			
SHEET 7 OF 30 AUGUSTA, MAINE 11/64 1973			

176-134

P.R.W.A. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	95-9(90)	8	30



PROJECT DESIGN ENGINEER	CDH	BY	DATE
DESIGN - DETAILED	CON	J. H. H. H.	1-77
CHECKED	TAD		
REVISIONS			
FIELD CHANGES			



As Built STATE OF MAINE 0012-2-82
DEPARTMENT OF TRANSPORTATION

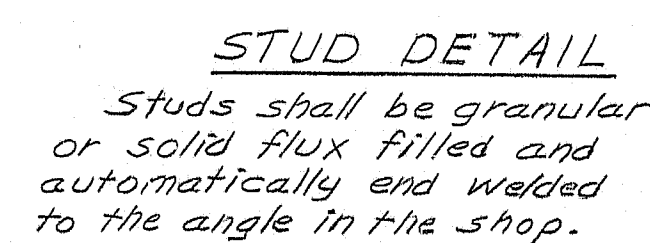
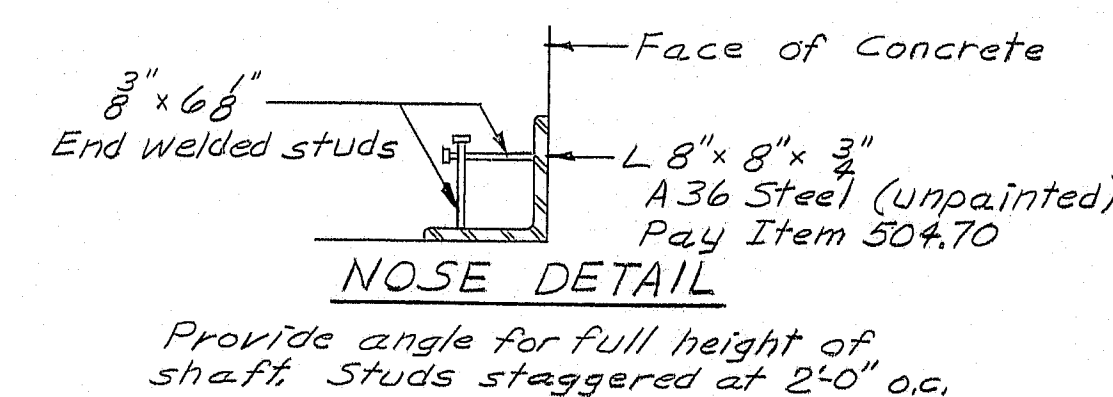
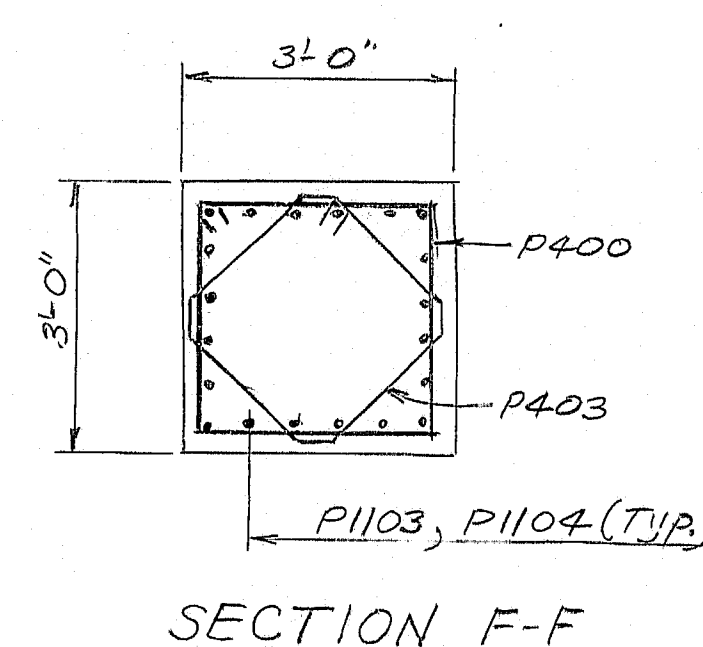
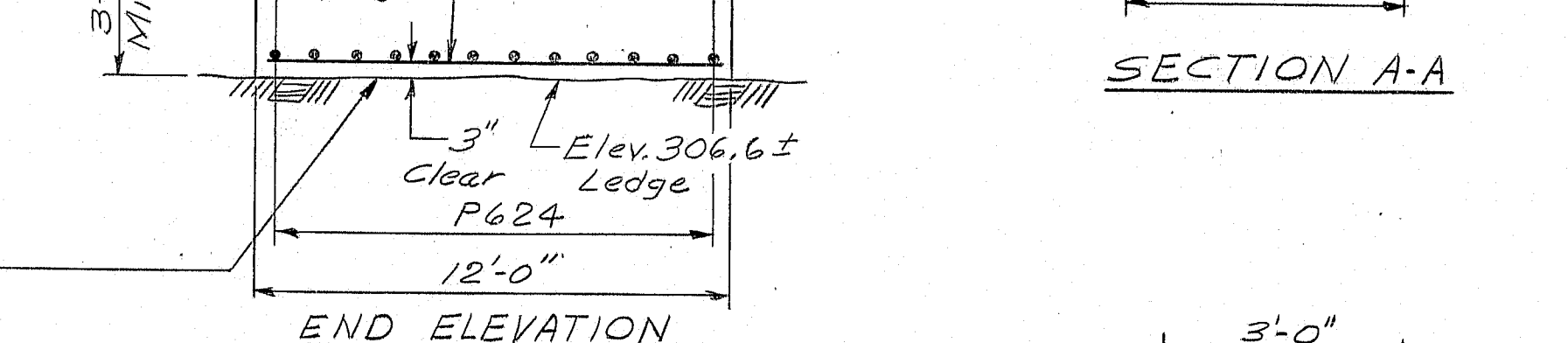
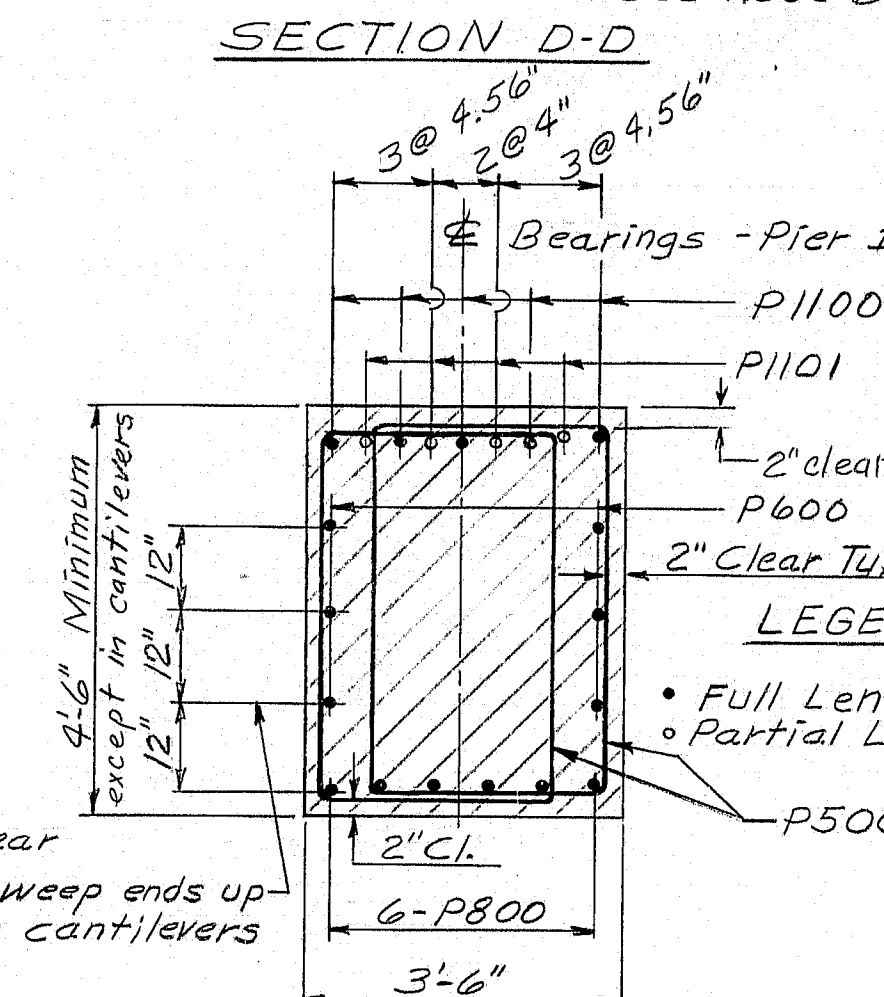
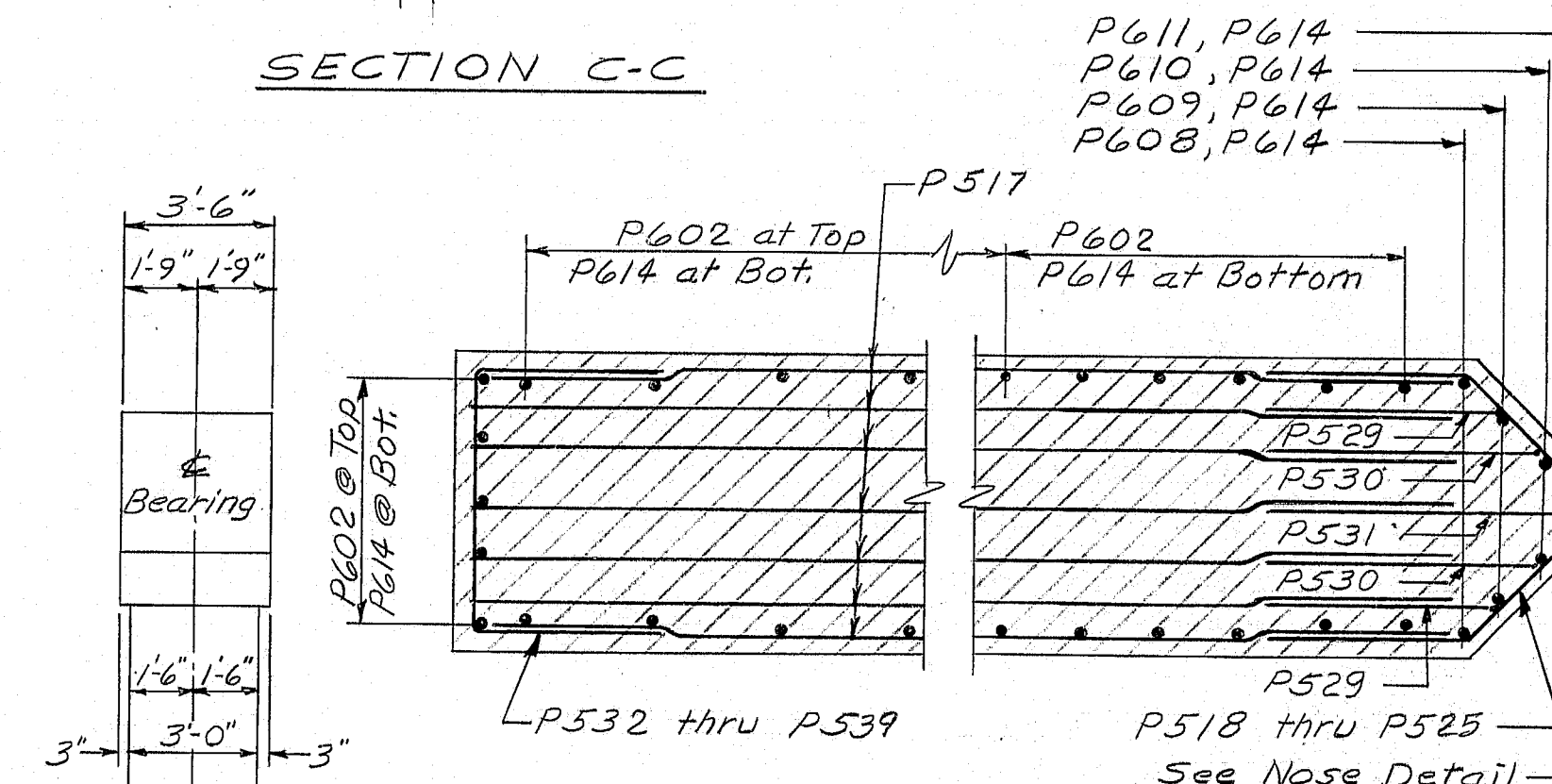
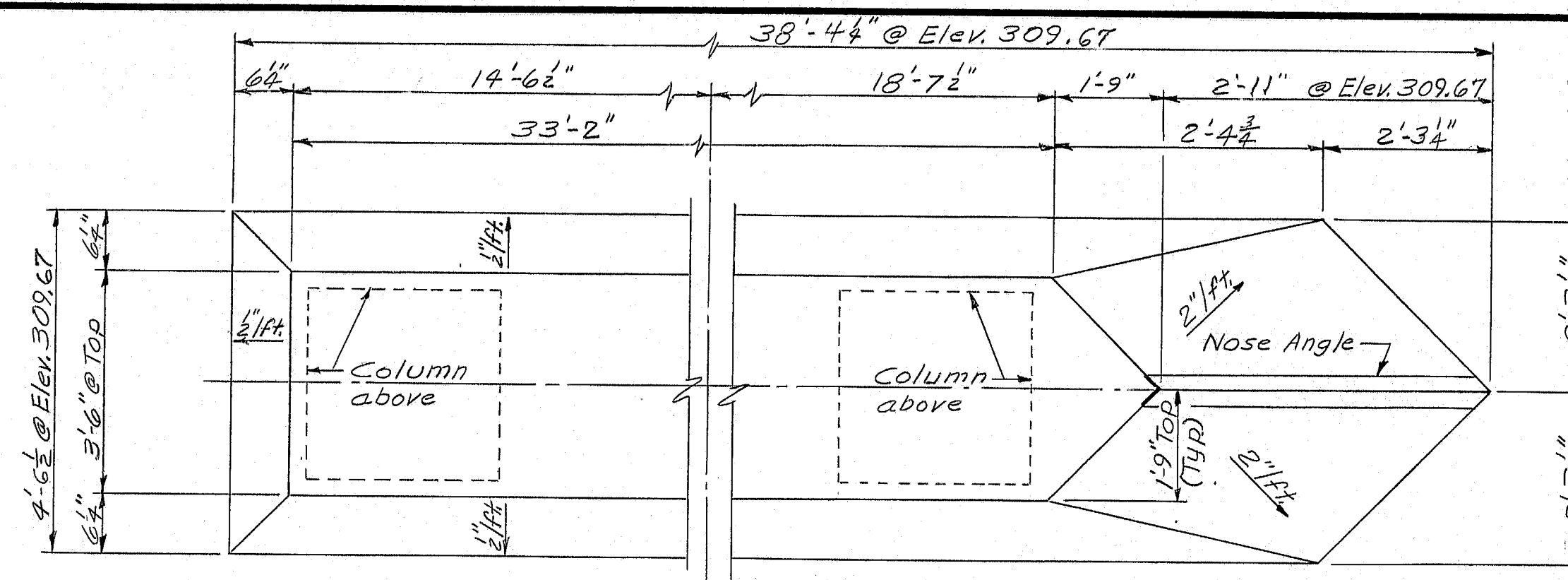
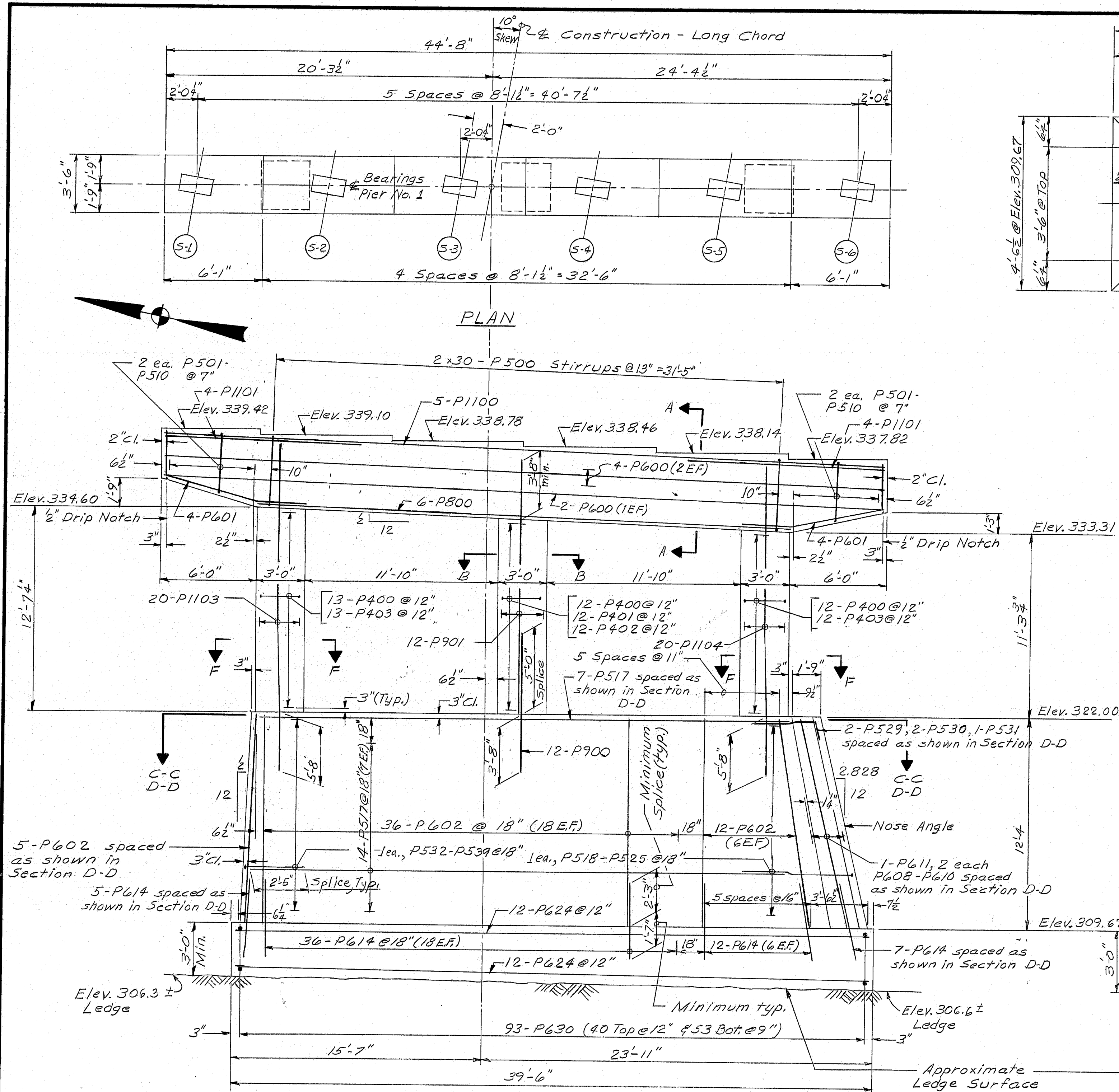
INTERSTATE -95 N.B.
OVER
MEDUXNEKEAG RIVER
IN THE TOWN OF
HOULTON
AROOSTOOK COUNTY

APPROACH SLABS

SHEET 12 OF 30 AUGUSTA, MAINE MAY 1979

PRJ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	95-9(90)	12	30

176-139



- ## GENERAL PIER NOTES
1. After ledge foundation for Pier has been exposed by the Contractor, the elevation of the top of the footing may be adjusted upwards or downwards a maximum of 24 inches as determined by the Engineer. In any case, the footing shall have a 30" minimum thickness and reinforcing steel may have to be adjusted.
 2. Chamfer all exposed edges of concrete $\frac{3}{4}$ inch unless otherwise indicated.
 3. Reinforcing steel shall have 3 inches minimum cover unless otherwise indicated.
 4. Place reinforcing steel in bridge seats to clear anchor bolts.
 5. The Piers shall be protected from rust staining by leaving forms in place temporarily or by covering the concrete after removal of forms. Polyethylene sheets, or other approved material, shall be placed on and around the pier bearing areas prior to setting the bearing pedestals. They shall extend underneath the masonry plates such that water will run off the pedestals onto the sheets. Protective covering of either forms or polyethylene sheeting shall remain in place at least until concrete placement for the Structural Concrete Slab has been completed, and as long after that time as convenient for the Contractor. In any case the Contractor shall obtain approval of the Engineer prior to removing the protective coating.
- Removal of the covering will not be required unless, in the opinion of the Engineer, the contractor has not made satisfactory effort to prevent staining.

- ## DESIGN CRITERIA
1. Critical AASHTO Loading - Group VIII
 2. Buoyancy - Water level assumed at Elevation 320.00
 3. Stream Flow Velocity of 9.2 feet per second skewed at 20 degrees to longitudinal centerline of pier.
 4. Wind - 100 mph.
 5. Ice 12" thick, producing 400 psi.
 $Transverse\ Ice\ Force = .400 \times 12" \times 3.5 \times 12" = 2016\text{ lb}$
 $Longitudinal\ Ice\ Force = 2016\text{ lb} \times \tan 20^\circ = 732\text{ lb}$
 with water level at Elevation 320.00
 6. Safety factor overturning > 1.75

- PIER NOTES
Maximum calculated footing pressure =
4.3 tons per square foot.

- ## REFERENCES
1. For reinforcing steel schedule see
Sheets 19 & 20
 2. For bearing pedestals see Standard
Details BD 101-74.

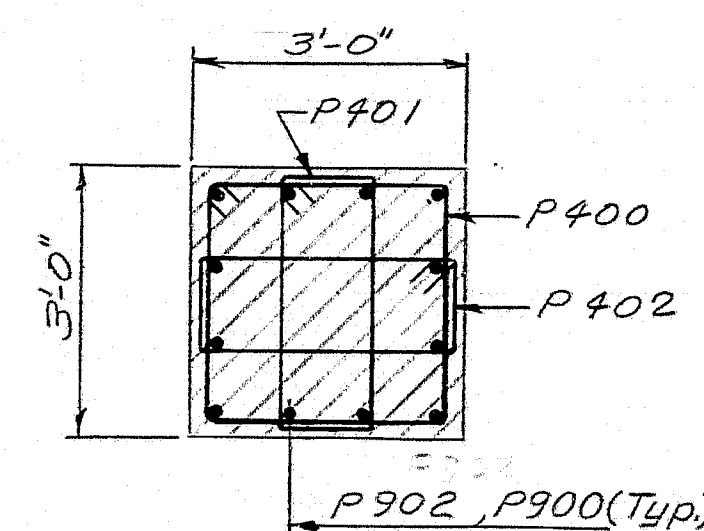
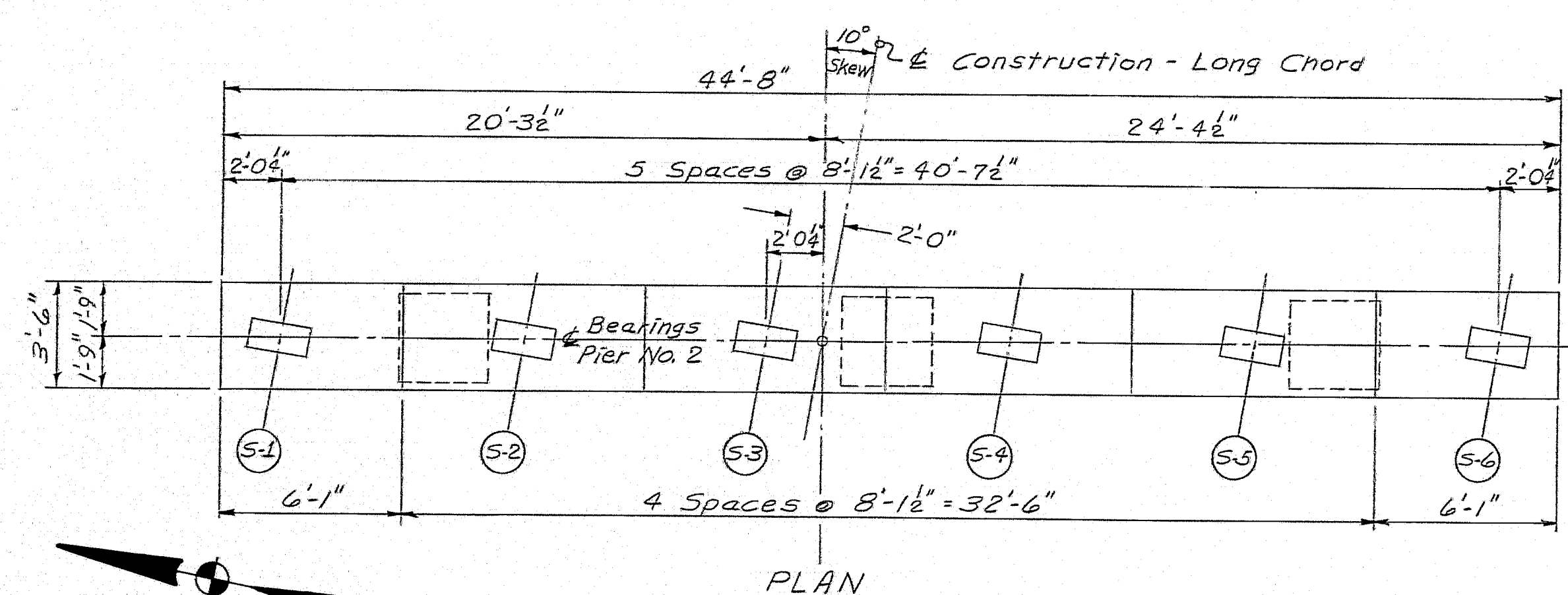
As Built STATE OF MAINE *AW 2-2-82*
DEPARTMENT OF TRANSPORTATION

INTERSTATE -95 N.B.
OVER
MEDUXNEKEAG RIVER
IN THE TOWN OF
HOULTON
ARROSTOOK COUNTY

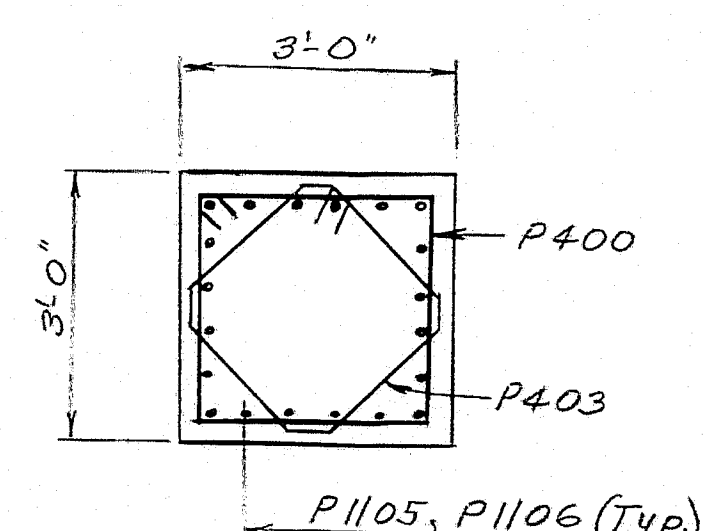
PIER NO. 1

SHEET *13* OF *30* AUGUSTA, MAINE *1 MAY 1979*

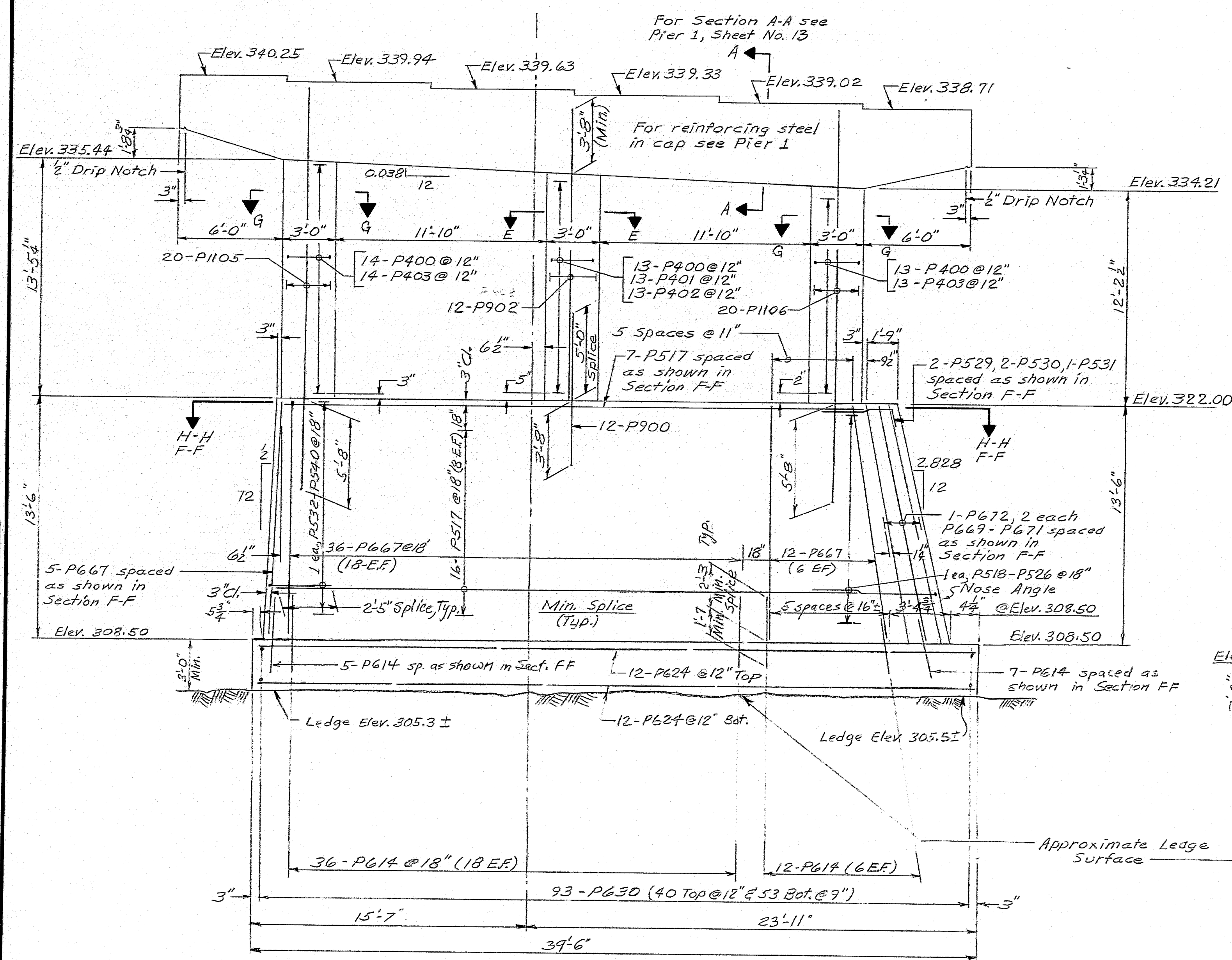
F.R.N. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	95-9(90)	14	30



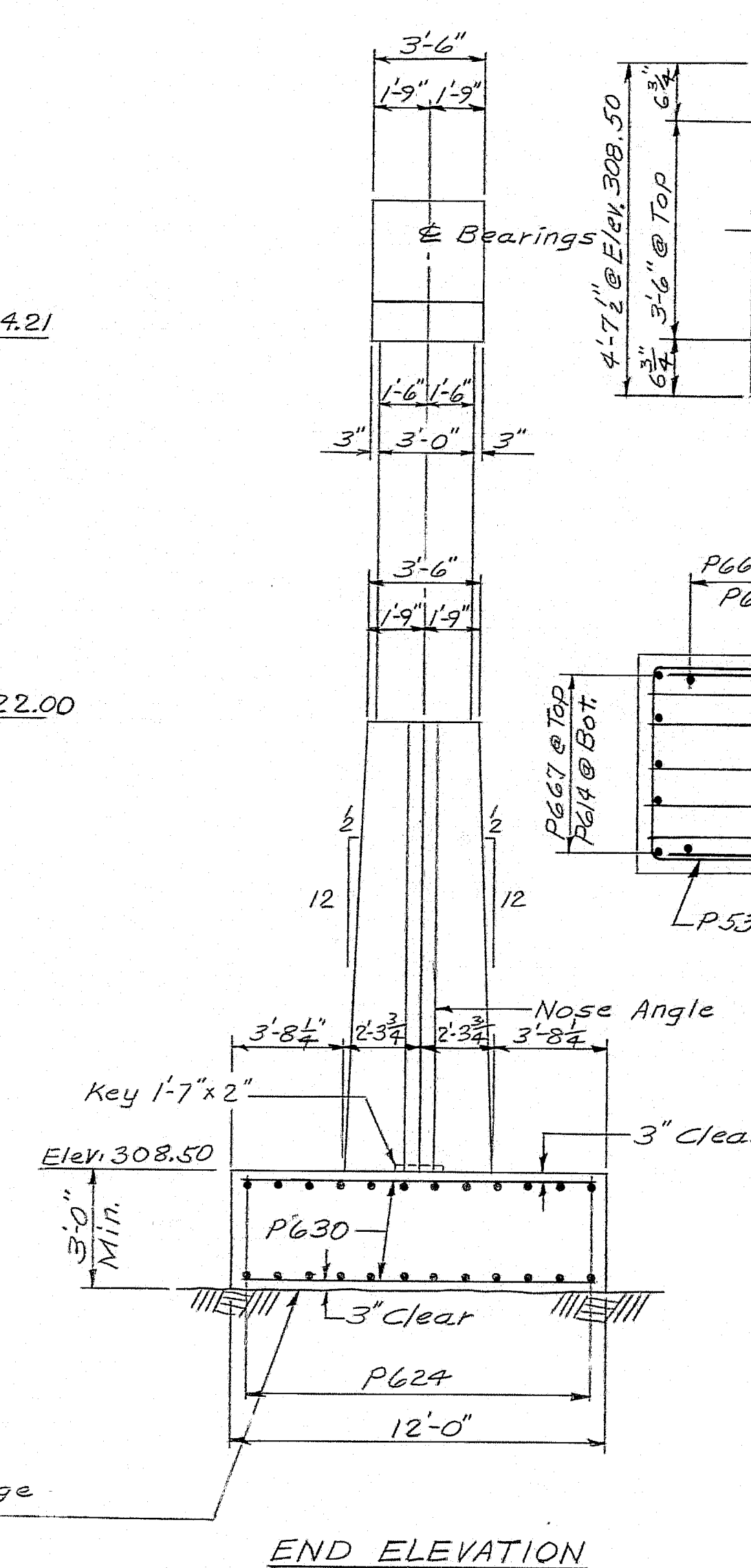
SECTION E-E



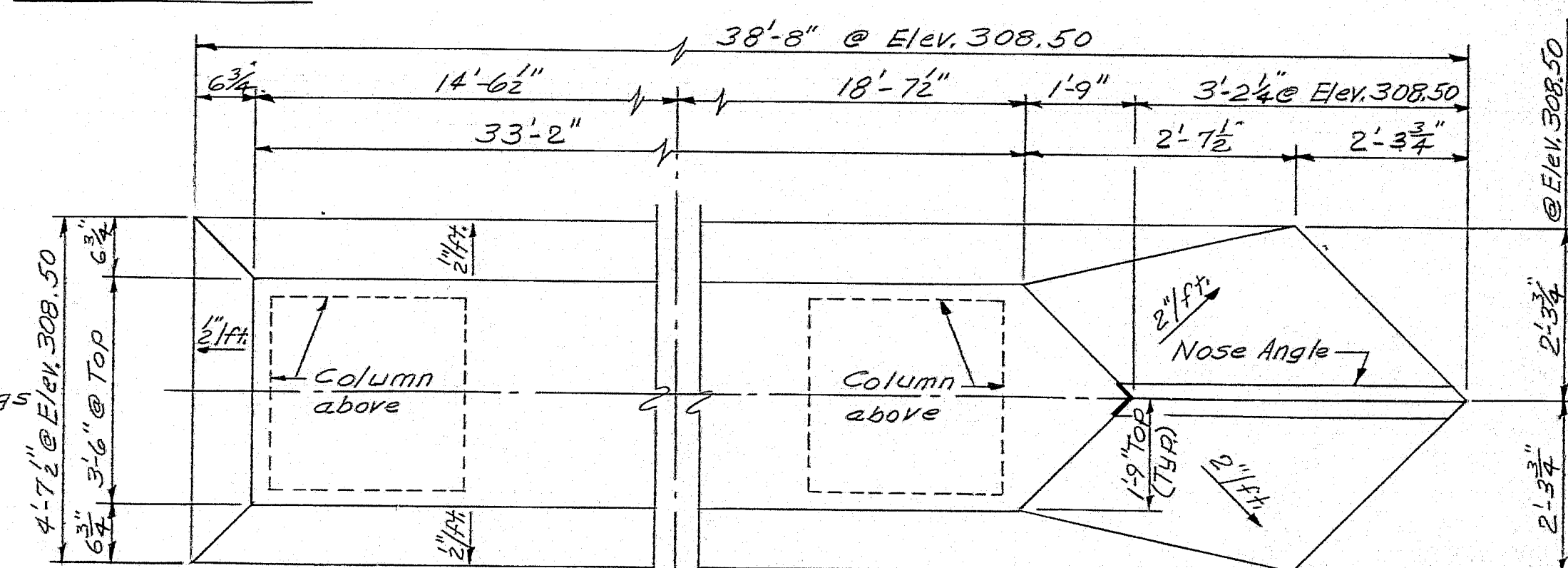
SECTION G-G



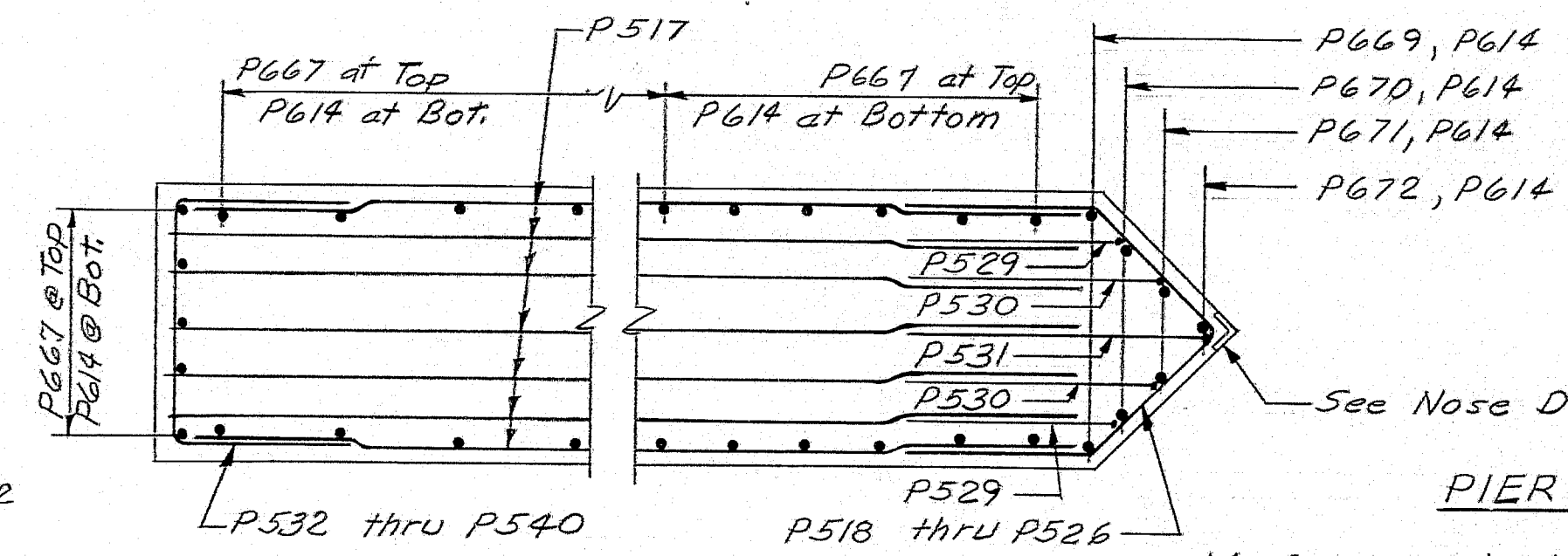
FRONT ELEVATION - PIER 2



END ELEVATION



SECTION H-H



SECTION F-F

PIER NOTES

Maximum calculated footing pressure = 4.9 tons per square foot.

REFERENCES

1. For reinforcing steel schedule see Sheet No. 19-20.
2. For bearing pedestals see Standard Details BD 101-74.
3. For Section A-A, Nose Detail, Stud Detail, General Pier Notes and Design Criteria see Sheet No. 13.

PROJECT DESIGN ENGINEER	DATE
CDH	8/1/77
DESIGN - DETAIL	1-77
REVISIONS	
FIELD CHANGES	

As Built STATE OF MAINE 11/12/82
DEPARTMENT OF TRANSPORTATION

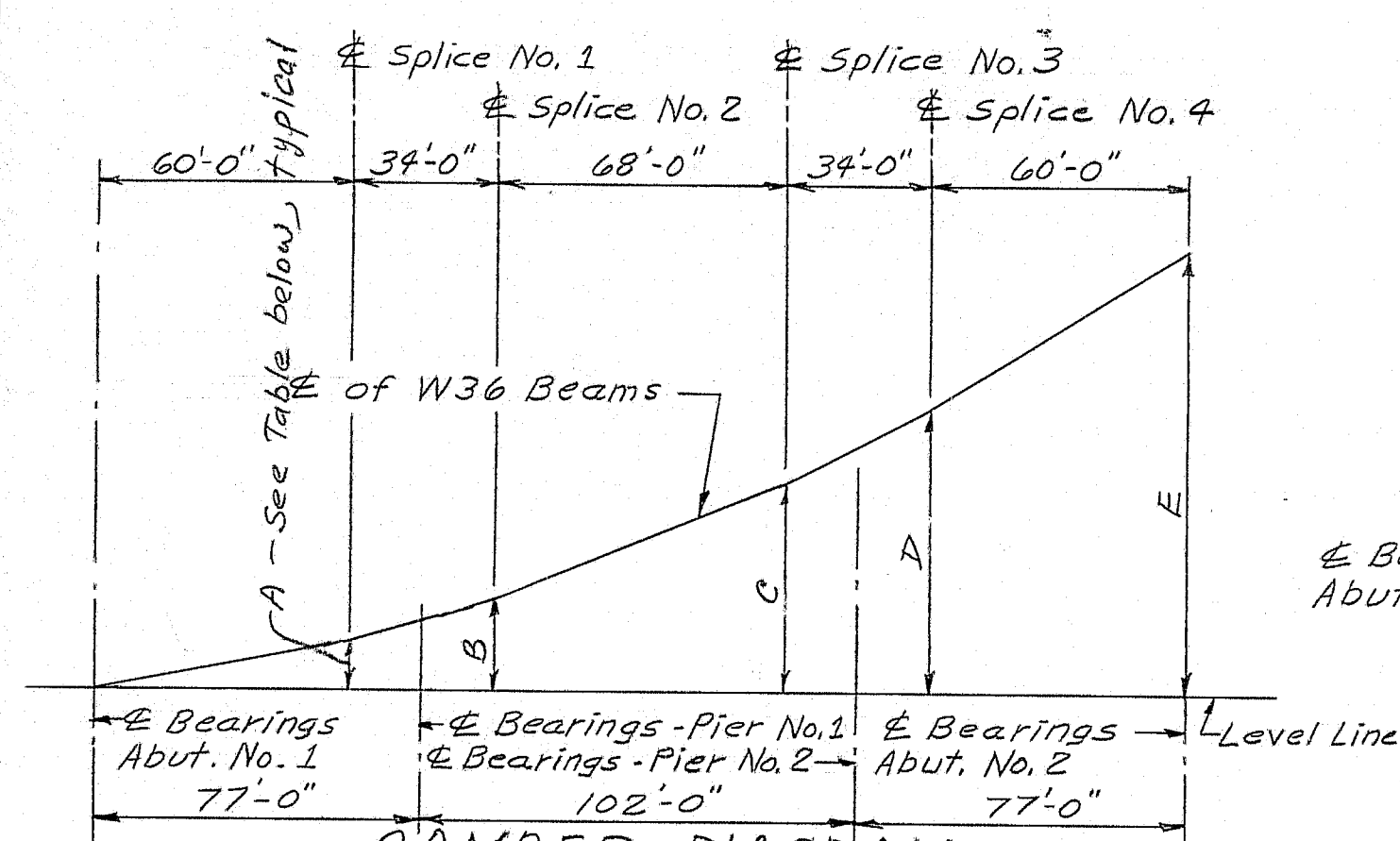
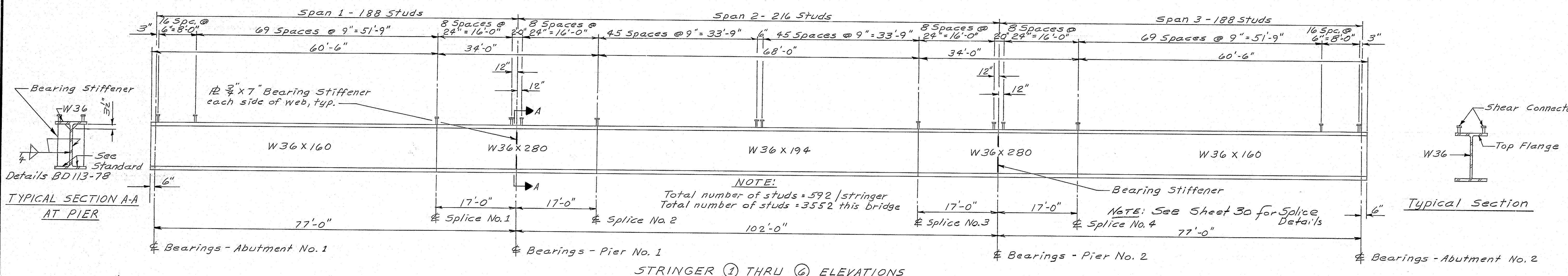
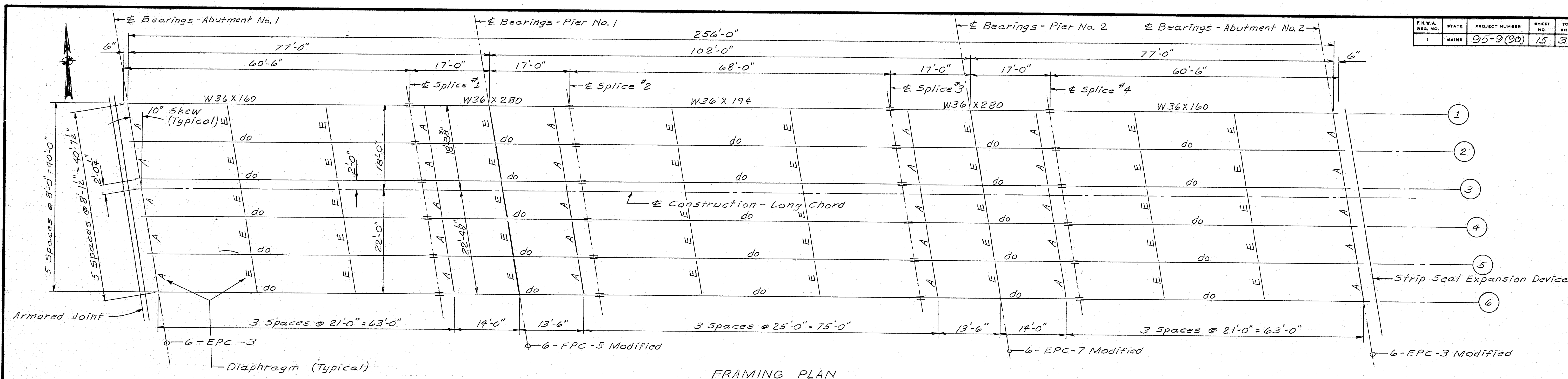
INTERSTATE-95 N.B.
OVER
MEDUXNEKEAG RIVER
IN THE TOWN OF
HOULTON
ARROOSTOOK COUNTY

PIER NO. 2

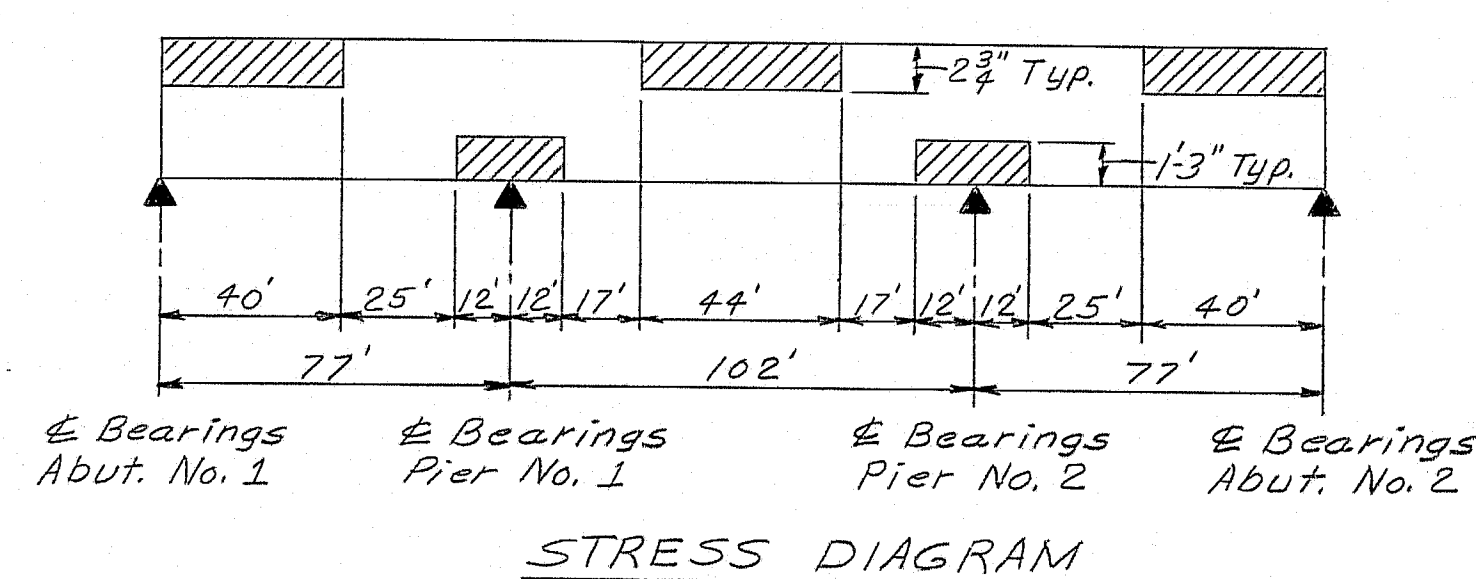
SHEET 14 OF 30 AUGUSTA, MAINE MAY 1977

176-141

F.R.W.A. REQ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	95-9(90)	15	30



Beam No.	A	B	C	D	E
1	4 1/8"	8 3/4"	1' 7 1/8"	2' 2 1/8"	3' 5 1/4"
2	4 7/8"	8 1/8"	1' 7 1/8"	2' 2 3/4"	3' 5 1/4"
3	4 7/8"	9"	1' 8 3/8"	2' 3 1/4"	3' 6 1/8"
4	4 13/16"	9 1/8"	1' 8 3/8"	2' 3 3/8"	3' 6 1/2"
5	4 7/8"	9 1/4"	1' 8 3/8"	2' 3 3/8"	3' 6 1/2"
6	4 9/16"	9 3/8"	1' 8 3/8"	2' 3 3/8"	3' 7 3/16"



- NOTES:**
- Location of maximum negative moments are at & Bearings - Piers.
 - Location of maximum positive moments are: At centerline of span 2. At 31 feet from Abutments.
 - Always in compression.

GENERAL NOTES

- No Camber required in beam pieces. See Camber Diagram for changes in directions at splices.
- Place any natural camber up in pieces at midspans and place any natural camber down in pieces over piers.
- Bearing stiffeners shall be plumb after erection and dead loading of the structure.
- Diaphragm connection plates may be either plumb or normal to the top flange.
- Final cuts of webs and flanges at bolted splices are to be made at time of shop assembly, with abutting members in the exact relative position for erection.
- Filler plates shall be ASTM A588 steel and mill tests for filler plate material will not be required.
- Bearing Pedestal FPC-5 Modified is modified as such: Modify C to 1'-4", EPC-7 Modified is modified as such: Modify C to 1'-4", EPC-3 Modified is modified as such: Modify G to 4' and E to 10'.

BASIC ALLOWABLE STRESSES

Struct. Steel:		
ASTM A588	—	— = 27,000 p.s.i.
ASTM A572	—	— = 27,000 p.s.i.
ASTM A36	—	— = 20,000 p.s.i.
ASTM A53	—	— = 20,000 p.s.i.
ASTM A325, Type 3	—	— = 25,000 p.s.i.
ASTM A325, Type 3	—	— = 19,000 p.s.i.

MATERIALS

Beams, Bearings, Splices	—	— ASTM A588 (Unpainted)
Diaphragms	—	— ASTM A588 (Unpainted)
Drains	—	— ASTM A53 and A36 (Unpainted)
Armored Joint	—	— ASTM A36
Splice Filler Pls.	—	— ASTM A588 (Unpainted)
Expansion Device	—	— ASTM A36, A572 or A588
High Strength Bolts	—	— ASTM A325, Type 3 (Unpainted)
All Other	—	— ASTM A36

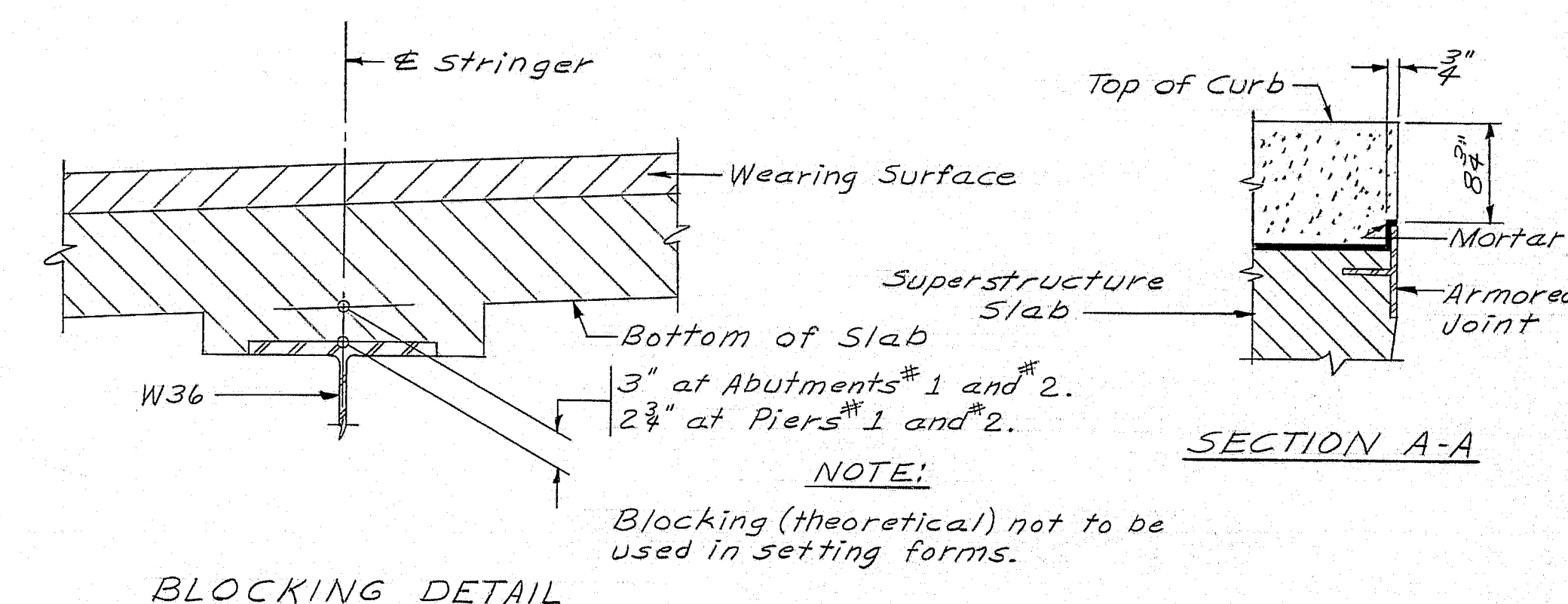
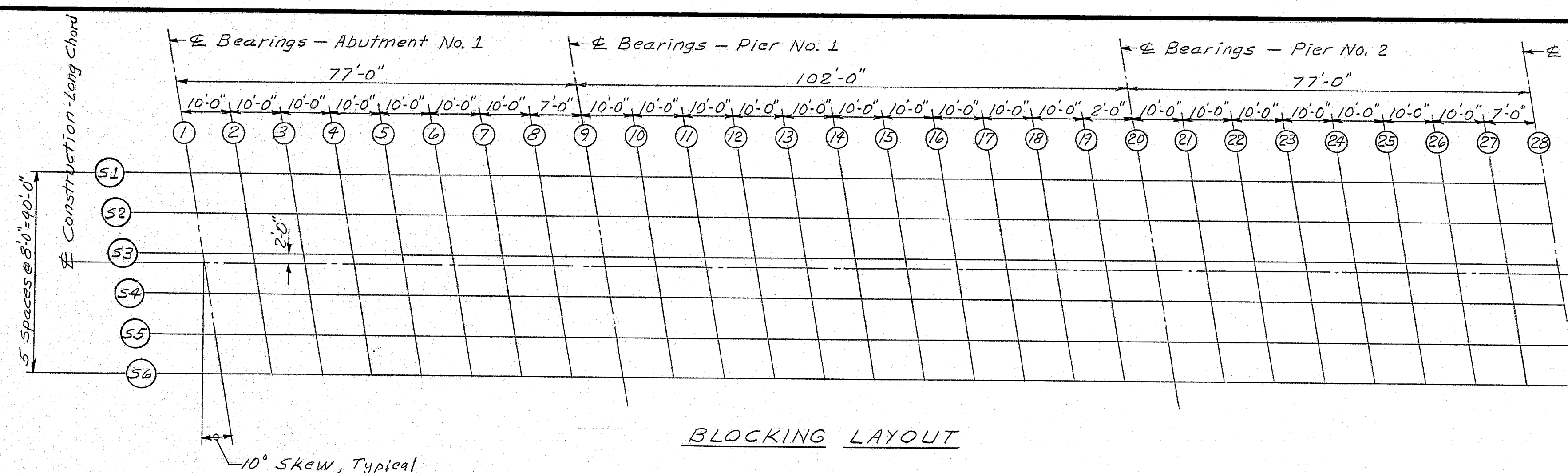
REFERENCES

- For Diaphragms "A" & "E" see BD 113-78
- For Armored Joint details see BD 104-77
- For Shear Connector details see BD 104-77
- For Bearing Pedestal see BD 101-74
- For Strip Seal Expansion Device see Special Provision Sections 520 & 716.
- See sheet 30 for Beam Splices.

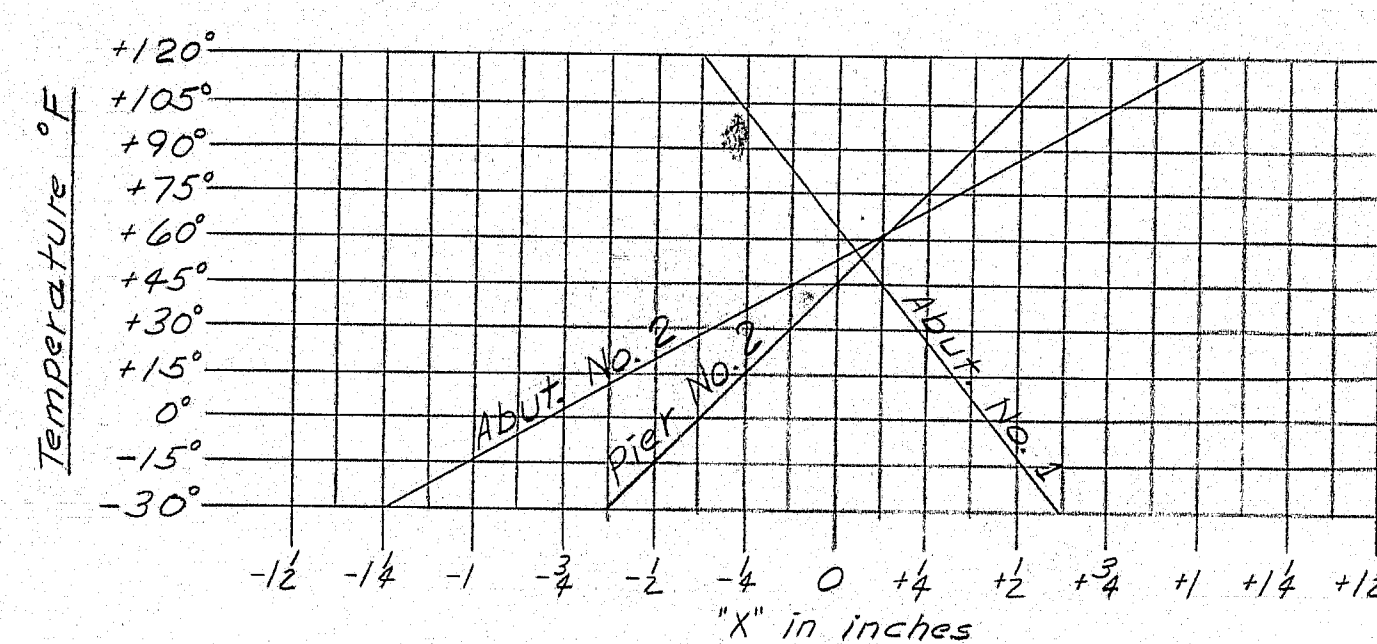
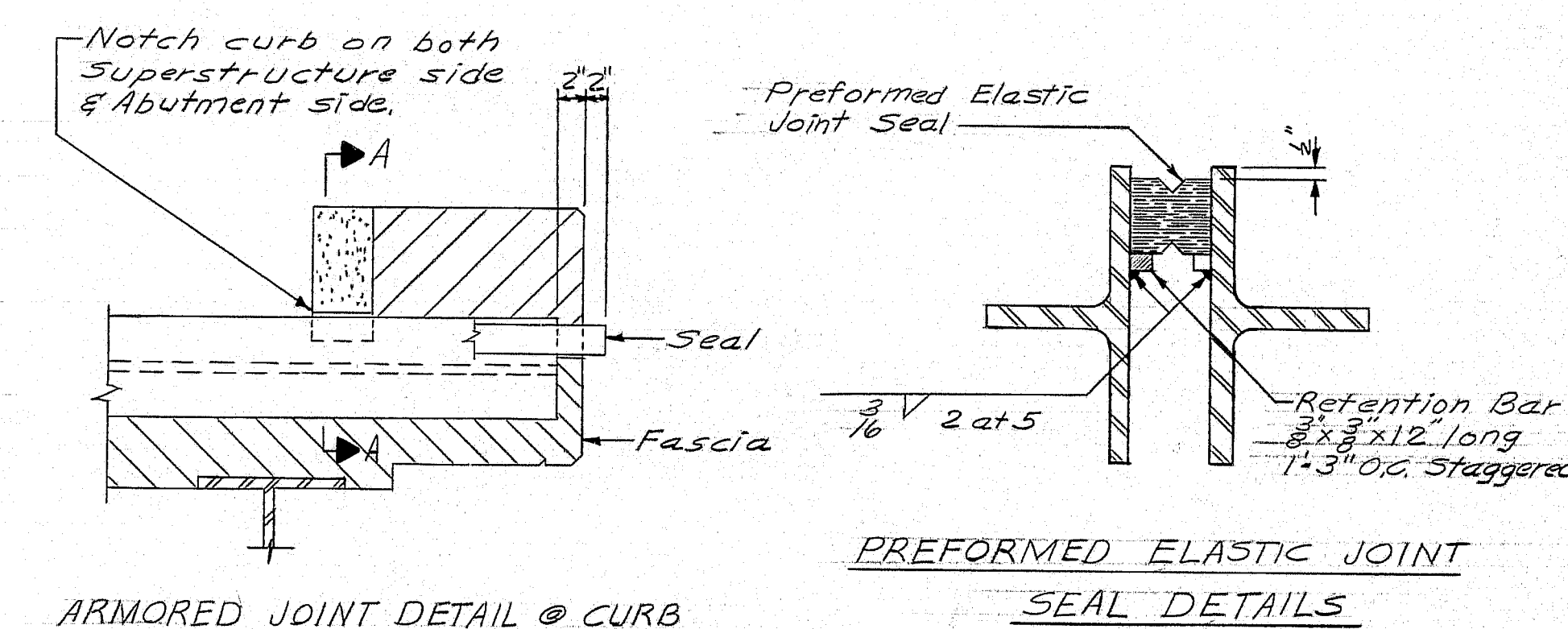
STATE OF MAINE DEPARTMENT OF TRANSPORTATION
INTERSTATE-95 N.B.
OVER
MEDUXNEKEAG RIVER
IN THE TOWN OF
HOULTON
AROOSTOOK COUNTY
STRUCTURAL STEEL FRAMING PLAN
SHEET 15 OF 30 AUGUSTA, MAINE MAY 1979

176-142

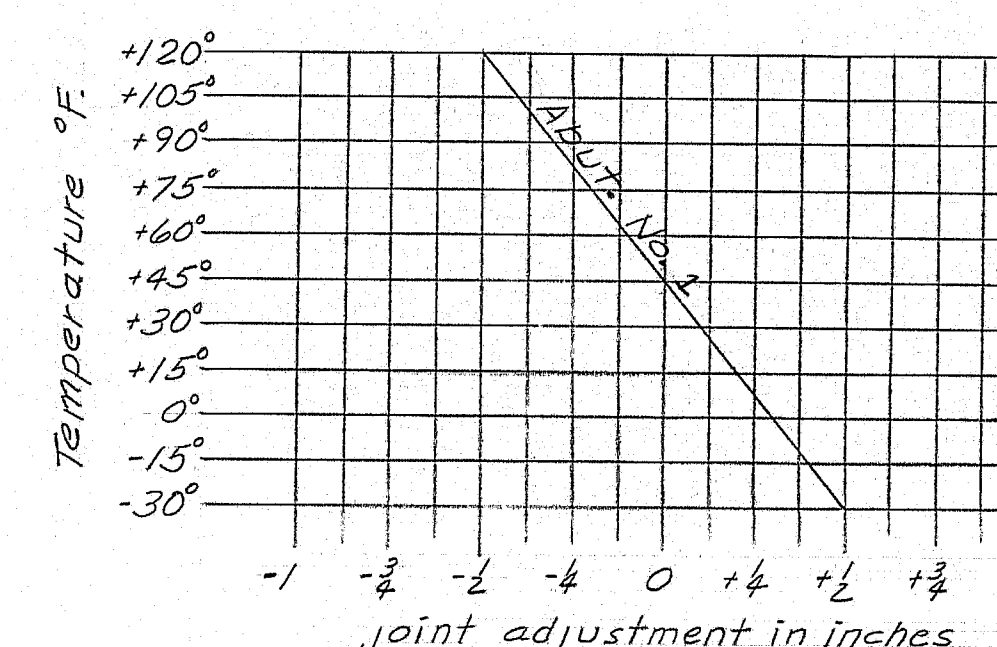
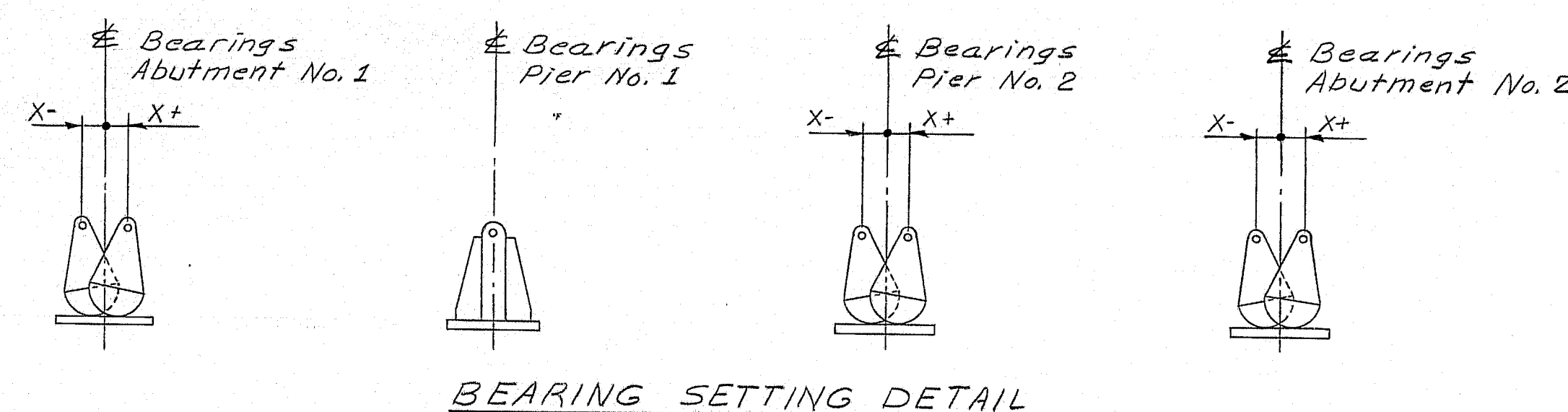
F.H.W.A. SHEET NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	95-9(90)	16	30



		BOTTOM OF SLAB ELEVATIONS																													
Span Points		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28		
Stringers	S1	343.02	343.10	343.18	343.25	343.30	343.35	343.40	343.46	343.52	343.64	343.78	343.93	344.08	344.22	344.35	344.47	344.59	344.71	344.86	344.89	345.08	345.29	345.52	345.74	345.96	346.15	346.33	346.46	Abut. #2	
	S2	342.61	342.78	342.86	342.92	342.98	343.03	343.08	343.14	343.20	343.32	343.46	343.61	343.76	343.90	344.03	344.16	344.28	344.40	344.55	344.59	344.77	344.99	345.22	345.44	345.66	345.85	346.04	346.16		
	S3	342.36	342.45	342.53	342.60	342.65	342.70	342.75	342.82	342.88	343.00	343.14	343.29	343.45	343.59	343.72	343.85	343.97	344.09	344.24	344.28	344.47	344.68	344.91	345.14	345.36	345.55	345.74	345.87		
	S4	342.03	342.12	342.20	342.27	342.33	342.38	342.43	342.50	342.56	342.68	342.82	342.98	343.13	343.27	343.41	343.53	343.66	343.79	343.94	343.97	344.16	344.38	344.61	344.84	345.06	345.26	345.44	345.57		
	S5	341.70	341.79	341.87	341.95	342.00	342.06	342.11	342.18	342.24	342.36	342.51	342.66	342.81	342.96	343.10	343.22	343.35	343.48	343.63	343.67	343.86	344.08	344.31	344.54	344.76	344.96	345.15	345.28		
	S6	341.37	341.46	341.55	341.62	341.68	341.73	341.79	341.86	341.92	342.04	342.19	342.34	342.50	342.65	342.78	342.91	343.04	343.17	343.32	343.36	343.55	343.77	344.01	344.24	344.46	344.66	344.85	344.98		



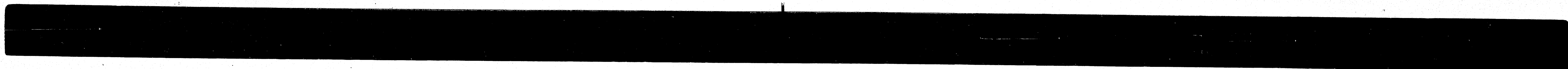
The Bearing Setting Chart indicates the required final position of the bearings. It is anticipated that the bearings at Abutment No. 1 and at Abutment No. 2 will move 8 inch away from the fixed bearings due to the placement of the superstructure concrete. No separate payment will be made for resetting bearings to the final position if an adjustment is required.

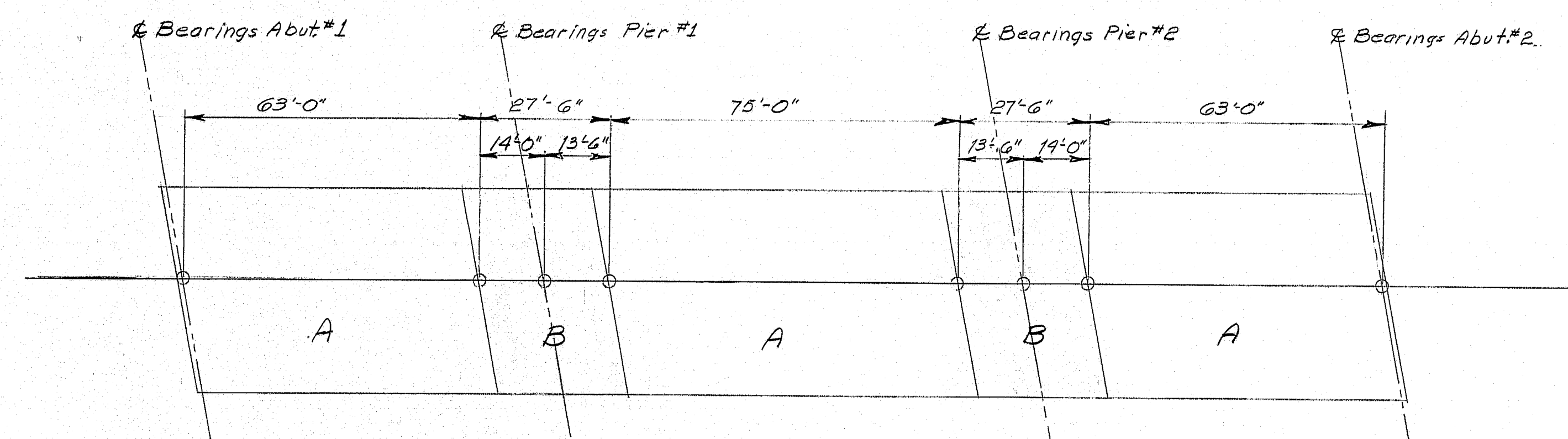


- GENERAL ARMORED JOINT NOTES**
- The seal to be furnished shall have a minimum Movement Rating of 1" at Abutment No. 1.
 - The joint opening will vary depending on the dimensions of the seal selected by the Contractor. The joint opening shall be set according to the opening shown on the approved "Armored Joint" shop detail drawings.
 - The seal shall be approved by the Engineer prior to fabrication of the armored joint.
 - The armored joint adjustment chart shows the adjustment of the joint opening to compensate for temperature only. It is anticipated that the joint will open 8 inch at Abutment No. 1 due to the placement of the superstructure concrete.
 - Run preformed elastic joint seal 2 inches beyond fascias.

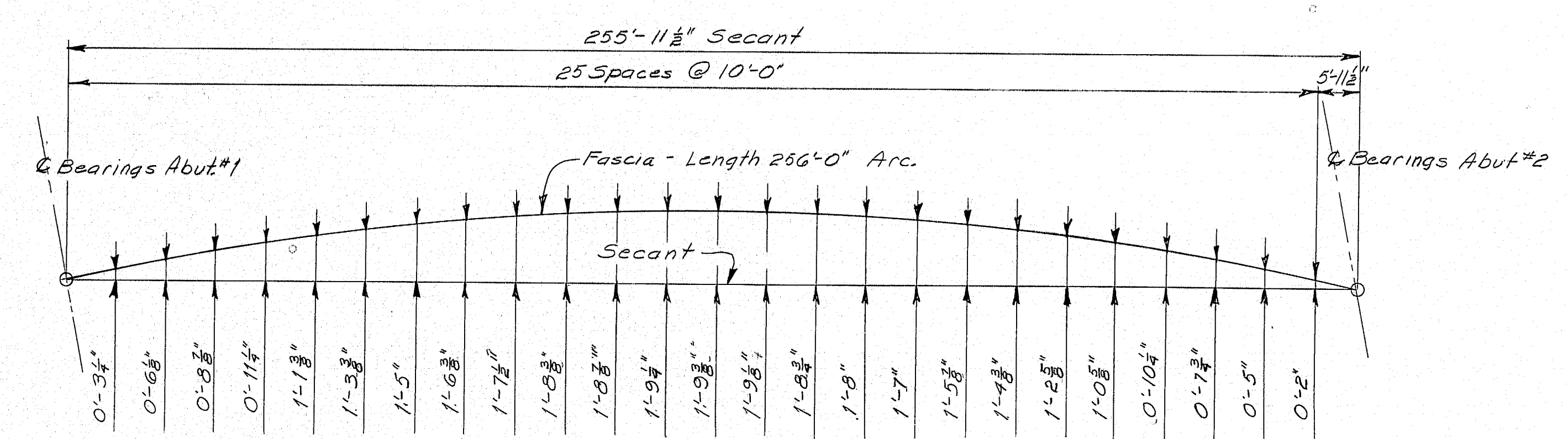
STATE OF MAINE DEPARTMENT OF TRANSPORTATION
INTERSTATE-95 N.B. OVER MEDUXNEKEAG RIVER IN THE TOWN OF HOULTON AROOSTOOK COUNTY
STRUCTURAL STEEL DETAILS AND BLOCKING SHEET 16 OF 30 AUGUSTA, MAINE MAY 1979

176-143

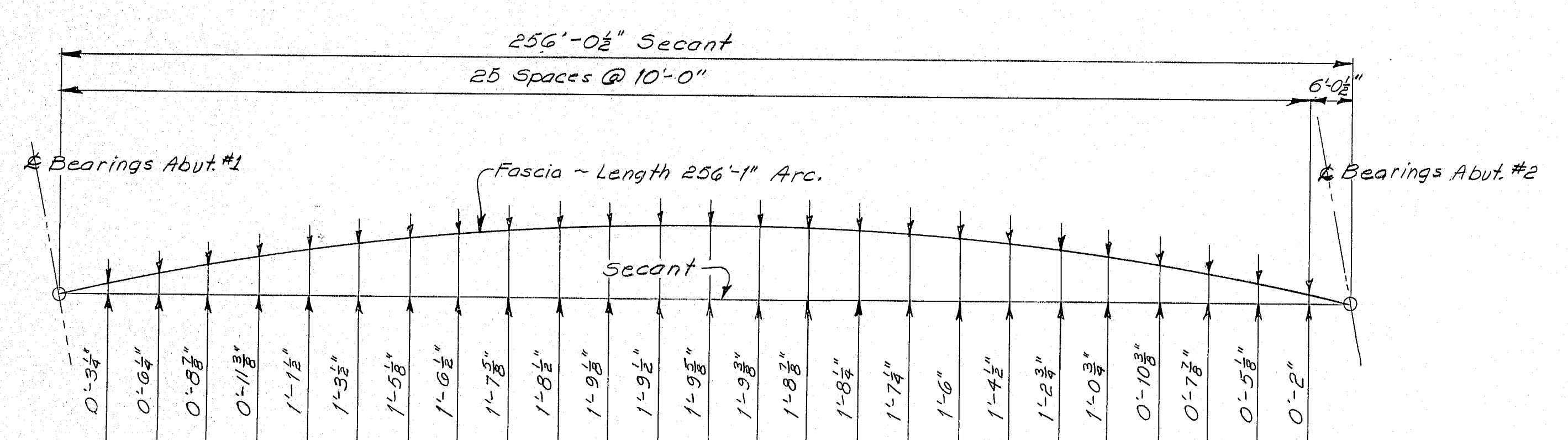




PANEL PLACEMENT PLAN DIAGRAM
(See note #6)



Left Side



Right Side

FASCIA OFFSETS

F.R.E.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	95-9(30)	18	30

GENERAL SUPERSTRUCTURE NOTES

1. Chamfer all exposed edges of concrete a consistent dimension between $\frac{1}{8}$ " and $\frac{3}{8}$ " inclusive, unless otherwise indicated.
2. Form a 1" V-groove on the fascias, at each construction joint in the slab and at the horizontal joints between the curb and slab.
3. Do not break the bond in construction joints in the superstructure slab.
4. Reinforcing Steel shall have a minimum cover of 2 inches unless otherwise indicated.
Reinforcing Steel Splices shall be for #3 bars 1'-0", for #5 bars 1'-9", for #6 bars 2'-3", for #7 bars 3'-0", for all others 36 bar diameters unless otherwise indicated.
5. Sand blast the top of the roadway slab and clean thoroughly before placing structural concrete wearing surface. Payment for this work will be considered incidental to Item 502.26.
6. The superstructure slab may be placed either continuously or by panels as follows:
Continuous Placement - The Contractor's method of placement shall be approved by the Engineer. The concrete shall be kept plastic & complete spans back of the span being placed. The transverse slab joints and haunches shown shall be omitted. Approved set retarding admixtures shall be used when authorized by the Engineer.
Panel Placement - Panels "A" shall be placed before placing any panels "B". A minimum of "7 (seven)" days shall elapse between placements of panels "A" and "B". See Panel Placement Plan Diagram.
7. Protective Coating for Concrete Surfaces shall be applied to the following areas:
concrete wearing surface,
concrete curbs,
concrete fascias down to 3" drip notch,
all exposed surfaces of concrete end posts.
8. Mortar for bedding and for joints in the granite curb shall contain an approved non-shrink additive.
9. Provide an Expansion Device at Abutment No. 2 that shall have a total movement of 2 1/2 inches. The Expansion Device shall be either Acma Strip Seal, Wabco-Maurer Strip Seal, or Onflex 45 Strip Seal. The "X" value measured along & Construction-Long Chord is 1 1/2" @ 45°.

REFERENCES

1. For Armored Joint see Standard Details BD 104-77.
2. For Curb Section see Standard Details BD 104-77.
3. For Aluminum Bridge Railing see Standard Details BD 114-77.
4. For Drain see Standard Details BD 104-77.
5. For Expansion Device at Abutment #2 see Special Provisions Sections 502.6, 716.
6. For Structural Steel see sheet #15.
7. For Reinforcing Steel Schedule see sheet #19 & 20.
8. For Bottom of Slab Elevations see sheet #16.
9. For Concrete End Post see sheet #11.

NOTES:

1. Concrete in Concrete End Post above the top of granite curb will be paid for under Item 502.26.
2. Work this sheet with Superstructure sheet #17.

PROJECT DESIGN ENGINEER	CDH	DATE	1-17-79
DESIGN - CHECKED	CDH	DATE	1-17-79
REVISIONS			
FIELD CHANGES			

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

INTERSTATE -95 N.B.
OVER
MEDUXNEKEAG RIVER
IN THE TOWN OF
HOULTON
AROOSTOOK COUNTY

SUPERSTRUCTURE DETAILS

SHEET 18 OF 30 AUGUSTA, MAINE May 1979

176-145

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		
ABUTMENT NO. 1				ABUTMENT NO. 2				END POSTS				ABUTMENT NO. 1																
A500	3	23'-1	Breastwall - Hor.	B500	3	21'-1	Breastwall - FF Hor.	EP500	12	6'-2	End Post - Hor.	A513	4	7'-0	L		10	6'-2										
A501	3	21'-10	do	B501	3	24'-4	do	EP501	12	6'-4	End Post - Hor.	A519	7	8'-8	V				6'-4	2'-4				7 5/8			Right Wing - Hor.	
A502	4	23'-1	Bridge Seat - Hor.	B502	1	21'-1	Bridge Seat					A521	4	7'-6	V				6'-8	10				9 5/8			Left Wing - Hor.	
A503	1	23'-1	do	B503	1	21'-1	do	APPROACH SLABS				A522	1	8'-7	V				6'-2	2'-5				2'-4			do	
A504	1	21'-5	do	B504	1	23'-5	do	A5600	163	15'-0	Approach Slabs	A525	1	8'-7	L	2'-5	6'-2											Backwall - Hor.
A505	1	21'-5	do	B505	1	23'-10	do	A5400	16	39'-11	do	A528	5	9'-11	L	1'-2	8'-9											do
A506	1	23'-1	Top Backwall - Hor.	B506	1	21'-1	Back Wall - Hor. Top	A5421	16	40'-4	do	A531	14	7'-0	S	φ	3'-0	1'-0	3'-0					φ				Right Wing - Vert.
A507	1	23'-1	do	B507	1	21'-2	do					A534	29	5'-10	S	φ	2'-4	1'-2	2'-4					φ				Wings - Vert.
A508	3	23'-1	Backwall - Hor.	B508	3	21'-1	Back Wall - Hor					A535	4	11'-4	L	1'-0	10'-4											Top Back Wall
A509	3	21'-9	do	B509	3	24'-3	do					A540	3	7'-8	L	4'-2	3'-6											Left Wing - Vert.
A510	1	21'-9	Top Backwall - Hor.	B510	1	24'-3	Back Wall - Hor. Top					A541	4	7'-11	L	4'-2	3'-9											Breastwall - Vert.
A511	1	21'-5	do	B511	1	23'-11	do					A542	4	8'-1	L	4'-2	3'-11											do
A512	4	6'-2	Wings - Hor.	B512	4	6'-0	Wings - Hor.					A543	4	8'-4	L	4'-2	4'-2											do
A514	3	6'-6	Right Wing	B514	4	8'-6	Left Wing - Hor.					A544	3	8'-7	L	4'-2	4'-5											do
A515	3	23'-1	Breastwall	B515	3	21'-5	Breastwall - Hor.					A545	4	8'-10	L	4'-2	4'-8											do
A516	3	21'-5	do	B516	3	23'-0	do					A546	4	9'-1	L	4'-2	4'-11											do
A517	3	23'-1	Backwall	B517	3	21'-2	Back Wall - Hor.					A547	3	9'-4	L	4'-2	5'-2											do
A518	3	21'-5	do	B518	3	23'-11	do																					
A520	4	7'-0	Left Wing	B519	6	8'-9	Right Wing - Hor.					ABUTMENT NO. 2																
A524	6	8'-0	Right Wing	B520	3	7'-8	do					B513	4	8'-7	D				6'-2	2'-5					2'-4			Left Wing - Hor.
A526	69	3'-11	Wing - Vertical and Breastwall	B524	7	8'-8	Left Wing - Hor.					B521	1	8'-11	V				6'-9	2'-2					2'-0 1/2			Right Wing - Hor.
A527	2																											

FHWA RES. NO.	STATE MAINE	PROJECT NUMBER 95-9(90)	SHEET NO. 19	TOTAL SHEETS 30
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TYPE-BENDING DIAGRAMS

B

HB

H

S

SL

SB

L

V

M

PA

EP

PR

J

W

C

D

All dimensions are out to out of reinf. bar.

Bending details and hooks shall conform to the recommendations of ACI Standard 315-65.

Reinforcing Bar: A57M A615 Grade 60

GENERAL NOTES

- 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
- Letter of Marks A, P & S locates bars of Abutments, Piers, and Superstructure parts respectively.
- Abbreviations:
 Hor. = Horizontal
 Vert. = Vertical
 NF = Near Face
 FF = Far Face
 Bot. = Bottom
 do = ditto
 Ftg. = Footing
 Dwl. = Dowel

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

INTERSTATE-95 N.B.
 OVER
MEDUXNEKAG RIVER
 IN THE TOWN OF
HOULTON
 AROOSTOOK COUNTY

REINFORCING STEEL SCHEDULE

SHEET 19 OF 30 AUGUSTA, MAINE MAY 1979

SHEET 19 OF 30 AUGUSTA
176-146

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	
SUPERSTRUCTURE													SUPERSTRUCTURE														
S700	114	51'-3	Deck Slab Distr. @ Piers									S600	256	40'-7	B	—	5'-1	8'-1/2	3'-3 3/4	3'-9 3/4	5'-1	—	6	38'-10 1/4	—	Deck Slab, "Ds" on Top over beams	
S601	512	6'-0	Top Deck Slab End															X 8	X 4	X 3							
S500	512	45'-0	Deck Slab																								
S503	198	53'-3	Deck Slab Distr.									S501	258	5'-0	S	6	1'-6	1'-0	1'-5 1/2	—	—	6	—	—	—	Low Side Curb	
S504	99	55'-6	do									S502	258	4'-10	S	6	1'-4 1/2	1'-0	1'-5	—	—	6	—	—	—	High Side Curb	
S505	136	51'-3	Deck Slab Distr. @ Piers									PIERS															
S506	24	40'-0	Curb Longitudinal									P601	16	11'-2"	X	2'-3"	5'-11 1/2"	2'-11"	—	—	5'-10"	1'-5 3/4"	1'-2"	—	—	Cap Ends	
S507	4	28'-0	Curb Longit. End									P500	120	14'-6"	H	6"	2'-7"	4'-2"	2'-7"	4'-2"	—	6"	—	—	—	Cap Stirrups	
S508	8	45'-3	Curb Longit. @ Piers (22'-0" into Span E)									P501	8	14'-5"	H	↑	↑	4'-1 1/4"	↑	4'-1 1/4"	—	↑	—	—	—	do	
W300	516	21'-2	Wearing Surface									P502	8	14'-7"	H			3'-11 1/2"		3'-11 1/2"	—		—	—	—	do	
W301	246	40'-0	do									P503	8	13'-10"	H			3'-9 3/4"		3'-9 3/4"	—		—	—	—	do	
W302	41	23'-6	do									P504	8	13'-6"	H			3'-8"		3'-8"	—		—	—	—	do	
PIERS													P505	8	13'-3"	H			3'-6 3/4"		3'-6 3/4"	—		—	—	—	do
P1100	10	44'-4"	Cap Horizontal									P506	8	12'-11"	H			3'-4 1/2"		3'-4 1/2"	—		—	—	—	do	
P1101	16	16'-0	do									P507	8	12'-8"	H			3'-2 3/4"		3'-2 3/4"	—		—	—	—	do	
P1103	20	22'-0"	Pier #1, Column									P508	8	12'-4"	H			3'-1"		3'-1"	—		—	—	—	do	
P1104	20	20'-10	do									P509	8	12'-1"	H	↓	↓	2'-11 1/4"	↓	2'-11 1/4"	—	↓	—	—	—	do	
P1105	20	22'-10"	Pier #2, Column									P510	8	11'-9"	H	6"	2'-7	2'-9 1/2"	2'-7"	2'-9 1/2"	—	6"	—	—	—	do	
P1106	20	21'-8"	do									P518	2	9'-4"	PA	2'-6"	2'-1 3/8"	2'-6"	—	—	—	—	1'-6 3/8"	3'-0 3/4"	—	Shaft Nose	
P900	24	8'-8"	Column Vertical									P519	2	10'-2"	PA	2'-10 1/4"	2'-2 3/4"	2'-10 1/4"	—	—	—	—	1'-6 3/8"	3'-1 3/8"	—	do	
P901	12	15'-9"	Pier #1, Column									P520	2	11'-1"	PA	3'-2 1/2"	2'-3 3/4"	3'-2 1/2"	—	—	—	—	1'-7 3/8"	3'-3 1/4"	—	do	
P902	12	16'-8"	Pier #2, Column									P521	2	11'-11"	PA	3'-6 3/8"	2'-4 3/8"	3'-6 3/8"	—	—	—	—	1'-8 3/8"	3'-4 3/8"	—	do	
P800	12	32'-8"	Cap Horizontal									P522	2	12'-10"	PA	3'-11"	2'-5 7/8"	3'-11"	—	—	—	—	1'-9 3/8"	3'-6 3/4"	—	do	
P600	12	44'-4"	do									P523	2	13'-9"	PA	4'-3 1/4"	2'-7"	4'-3 1/4"	—	—	—	—	1'-9 3/8"	3'-7 3/8"	—	do	
P602	53	12'-1"	Shaft Vertical									P524	2	14'-7"	PA	4'-7 1/2"	2'-8"	4'-7 1/2"	—	—	—	—	1'-10 3/8"	3'-9 3/4"	—	do	
P608	2	12'-2"	do									P525	2	15'-6"	PA	4'-11 3/4"	2'-9"	4'-11 3/4"	—	—	—	—	1'-11 3/8"	3'-10 3/4"	—	do	
P609	2	12'-3"	do									P526	1	16'-5"	PA	5'-4"	2'-10 3/8"	5'-4"	—	—	—	—	2'-0 3/8"	4'-0 1/4"	—	do	
P610	2	12'-4"	do									P529	4	4'-3"	V	—	—	—	3'-0"	1'-3"	—	—	1'-2 1/2"	—	—	do	
P611	1	12'-3"	do									P530	4	4'-10"	V	—	—	—	3'-7"	1'-3"	—	—	1'-2 1/2"	—	—	do	
P614	120	3'-10"	Footng Daws, Pier #2									P531	2	5'-5"	V	—	—	—	4'-2"	1'-3"	—	—	1'-2 1/2"	—	—	do	
P624	48	39'-0"	Footng longit, Pier #2									P532	2	7'-11"	S	0	2'-5"	3'-0 3/4"	2'-5"	—	—	0	—	—	—	Shaft D.S. end	
P630	186	11'-6"	Footng Trans., Pier #2									P533	2	8'-0"	S	0	↑	3'-1 3/4"	↑	—	—	0	—	—	—	do	
P667	53	13'-3"	Shaft Vert, Pier #2									P534	2	8'-2"	S	0		3'-3 3/4"		—	—	0	—	—	—	do	
P669	2	13'-4"	Shaft Vert. Nose, Pier #2									P535	2	8'-3"	S	0		3'-4 3/4"		—	—	0	—	—	—	do	
P670	2	13'-5"	do									P536	2	8'-5"	S	0		3'-6 3/4"		—	—	0	—	—	—	do	
P671	2	13'-6"	do									P537	2	8'-6"	S	0		3'-7 3/4"		—	—	0	—	—	—	do	
P672	1	13'-7"	do									P538	2	8'-8"	S	0		3'-9 3/4"		—	—	0	—	—	—	do	
P517	44	32'-10	Shaft Horizontal									P539	2	8'-9"	S	0	↓	3'-10 3/8"	↓	—	—	0	—	—	—	do	
												P540	1	8'-11"	S	0	2'-5"	4'-0 3/4"	2'-5"	—	—	0	—	—	—	do	
												P400	77	11'-0"	H	6"	2'-6"	2'-6"	2'-6"	2'-6"	—	6"	—	—	—	Column Ties	
												P401	25	8'-0"	H	6"	1'-0"	2'-6"	1'-0"	2'-6"	—	6"	—	—	—	do	
												P402	25	8'-0"	H	6"	1'-0"	2'-6"	1'-0"	2'-6"	—	6"	—	—	—	do	
												P403	52	8'-8"	A	6 1/2"	1'-4 1/2"	6"	6"	—	—	—	—	—	—	do	
																X 4	X 4										
MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION													

FWA RES. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	95-9 (90)	20	30

TYPE-BENDING DIAGRAMS

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

GENERAL NOTES

- First digit(s) following the letter of the Mark indicates size of reinf. bar.
Mark (A502) bar size - #5
Mark (P1001) bar size - #10
Mark (S603) bar size - #6
- Letter of Marks A, P & S locates bars of Abutments, Piers, and Superstructure parts respectively.
- Abbreviations:
Distr. = Distribution
Longit. = Longitudinal
Vert. = Vertical
Horiz. = Horizontal
do = ditto
D.S. = Downstream

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**INTERSTATE-95 N.B.
OVER
MEDUXNEAG RIVER
IN THE TOWN OF
HOULTON
AROOSTOOK COUNTY**

REINFORCING STEEL SCHEDULE
SHEET 20 OF 30 AUGUSTA, MAINE MAY 1979

176-147

EXPANSION PEDESTAL - EPA

FIXED PEDESTAL - FPA

EXPANSION PEDESTAL - EPB

FIXED PEDESTAL - FPB

PINTLE DETAIL

ANCHOR BOLT DETAIL

For EPA & EPB
MASONRY PLATE

PEDESTALS — ALLOWABLE LOADS & DIMENSIONS														
<i>Pedestal</i>	<i>Load</i>	A	B	C	D	E	F	G	H	J	K	L	M	N
<i>EPA</i>	132 ^K	—	—	—	—	—	—	—	—	—	8"	4"	3½"	5½"
<i>FPA</i>	130 ^K	—	—	—	—	—	—	—	—	—	—	—	—	—
<i>EPB-1</i>	120 ^K	—	6"	8"	12"	8"	10"	6"	7½"	2"	8"	4"	3½"	5½"
<i>EPB-2</i>	165 ^K	—	7"	10"	14½"	9"	14"	7"	8"	3"	10"	5"	3½"	6½"
<i>EPB-3</i>	224 ^K	—	8"	11"	21½"	10"	14½"	8"	10"	4½"	14½"	5"	4½"	8½"
<i>FPB-1</i>	120 ^K	—	6"	8"	17"	8"	—	—	7½"	2"	—	—	—	—
<i>FPB-2</i>	165 ^K	—	7"	8"	14½"	9"	—	—	8"	3"	—	—	—	—
<i>FPB-3</i>	224 ^K	—	8"	11½"	21½"	10"	—	—	10"	5"	—	—	—	—
<i>ERC-1</i>	70 ^K	2½"	6"	8"	14½"	8"	1½"	3½"	3"	3"	4½"	—	1½"	6"
<i>ERC-2</i>	100 ^K	11½"	8"	8"	14½"	8"	1½"	3½"	3"	3"	6½"	—	1½"	7"
<i>ERC-3</i>	130 ^K	11½"	10"	8"	14½"	9"	1½"	4"	3"	3"	8½"	—	1½"	7"
<i>ERC-4</i>	160 ^K	11½"	10"	8"	14½"	9"	1½"	4"	4"	3"	8½"	—	1½"	7"
<i>ERC-5</i>	190 ^K	11½"	10"	9"	21½"	10"	2"	4½"	5"	3"	8½"	—	1½"	8"
<i>ERC-6</i>	220 ^K	14½"	14½"	10"	21½"	10"	2½"	5"	5"	3"	10½"	—	1"	8"
<i>ERC-7</i>	280 ^K	14½"	14½"	10"	21½"	10"	2½"	5"	5"	4"	10½"	—	1"	8"
<i>RPC-1</i>	100 ^K	—	—	8"	14½"	9"	1½"	2½"	8"	—	6½"	—	—	6"
<i>RPC-2</i>	160 ^K	—	—	8"	14½"	10"	1½"	3"	8"	—	6½"	—	—	7"
<i>RPC-3</i>	190 ^K	—	—	9"	21½"	10"	1½"	3"	10"	—	6½"	—	—	8"
<i>RPC-4</i>	220 ^K	—	—	10"	21½"	10"	1½"	4"	10"	—	6½"	—	—	8"
<i>RPC-5</i>	250 ^K	—	—	10"	21½"	10"	2"	4"	10"	—	6½"	—	—	8"

EXPANSION PEDESTAL - EPC

FIXED PEDESTAL - FPC

NOTE: At the location of bearing pedestals the concrete bridge seats shall be dressed one inch larger all around than size of masonry plates and to exact elevations shown on the plans. If drainage is shown on the plans of the surrounding bridge seat a small channel shall be cut to the edge of the bridge seat for drainage where required by the Engineer. Channels shall have a min. width of 2" and min. slop of 1/4 inch per foot. No separate payment for this work will be made as it shall be considered incidental to contract items.



DESIGN SPECIFICATIONS

AASHTO, Standard Specifications for Highway Bridges 1973, Interims thru 1977

A A.S.T.M. STEEL CLASSIFICATION

(When structural steel is specified to be unpainted)
All structural steel including anchor bolts shall be A588 unpainted.

(When structural steel is specified to be painted)
All structural steel including anchor bolts shall be A36.

	Delete Std. Washer size & change radius	6-14-78
	Change Specifications & Steel Classification	3-1-77
REVISIONS		DATE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

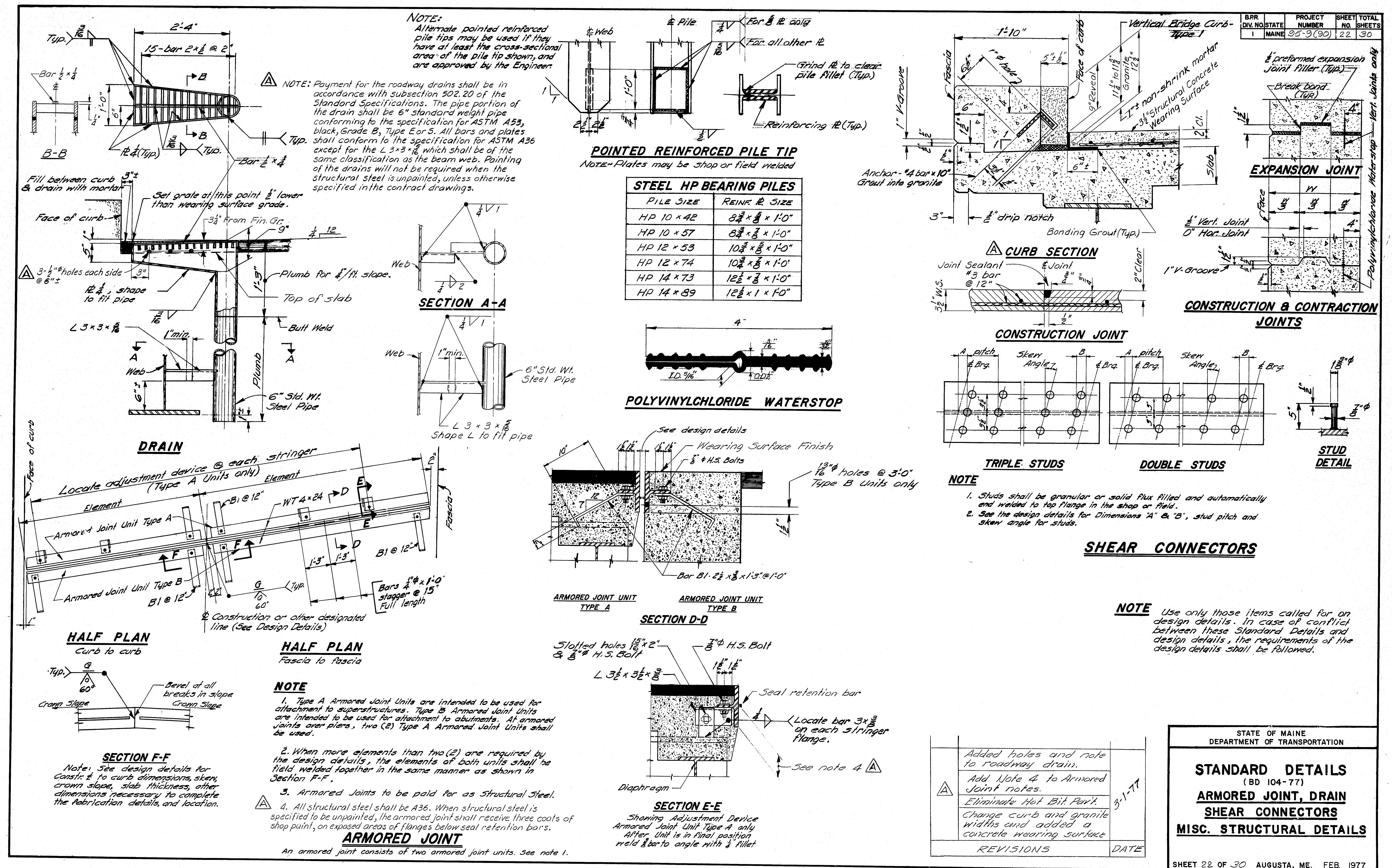
STANDARD DETAILS

(BD 101 -74)

BEARING PEDESTALS

SHEET 21 OF 30 AUGUSTA, ME. APRIL, 1974

176-148



176-149

STATE	PROJECT NUMBER	SHEET	TOTAL
MAINE	35-3-15	23	30

FABRICATION NOTES

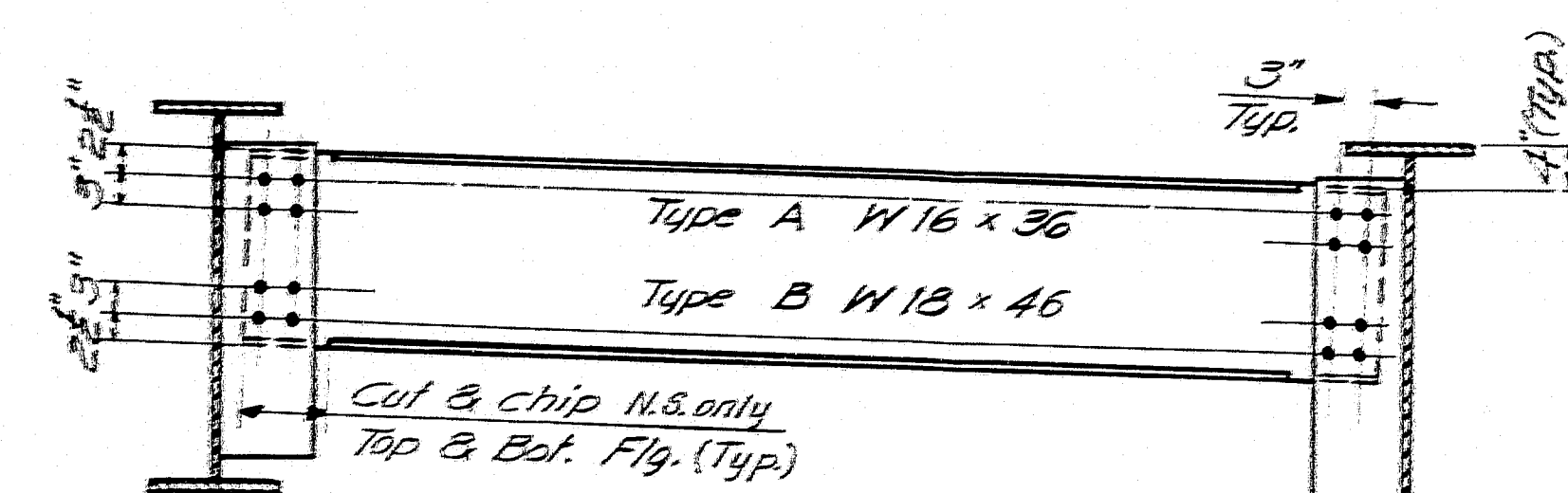
- 1.) All bolts shall be $\frac{7}{8}$ " ϕ H.S. Bolts. Holes for bolts shall be $\frac{15}{16}$ " ϕ and edge-distances shall be $1\frac{1}{2}$ " min. unless otherwise shown.
- 2.) Connection Plates and gusset plates shall have a minimum thickness of $\frac{3}{8}$ " and shall have sufficient width to provide erection clearances. For bearing stiffeners or intermediate stiffeners and for bent connection plates the plate size will be given on the design details.
- 3.) Connection Plates shall be fastened to web plates by fillet welds as shown. All fillet welds shall be the minimum size as specified in A.A.S.H.T.O. Standard Specifications for Highway Bridges, Art. 1.7.26, unless otherwise shown on design plans.
- 4.) Connection Plates shall be $3\frac{1}{2}$ " clear from flanges, except as indicated by notes 5 & 6.
- 5.) Connection Plates on welded beams and girders shall extend to the top flange in areas where the top flange is always in compression.
- 6.) Connection Plates shall extend to the bottom flange at points where lateral bracing is attached and on welded beams and girders in areas where the bottom flange is always in compression.
- 7.) When a connection plate is extended to a flange it shall fit within $\frac{1}{16}$ " except if the design details show it is to be welded.
- 8.) Bearing Stiffeners at end bearings shall extend to both top and bottom flanges and shall be welded to both flanges. Weld at bottom flange shall be a full penetration weld. Weld at top flange shall be a fillet weld both sides (see Note 3).
- 9.) Bearing Stiffeners at other than end bearings shall extend to both top and bottom flanges, shall be welded to the bottom flange with a full penetration weld and shall fit within $\frac{1}{16}$ " at top flange.
- 10.) Intermediate Stiffeners shall extend to both top and bottom flanges, shall be welded to the compression flange with a fillet weld on both sides (see Note 3) and shall fit within $\frac{1}{16}$ " at the tension flange.
- 11.) Use only those items called for on the design details. In case of conflict between these standard details and design details, the design details shall be followed.
- 12.) All dimensions shown as " ± 1 " are variable in order to allow a series of crossframes to have the same slopes and/or dimensions.
- 13.) All connection plates and stiffeners that are extended to a flange shall be clipped $3\frac{1}{2}$ ", except as indicated by note 14.
- 14.) Bearing stiffeners at end bearings shall be clipped 1" at top and bottom. Bearing stiffeners at all other bearings and intermediate stiffeners shall be clipped 1" at the compression flange.
- 15.) For unpainted applications all steel for diaphragms and crossframes shall be A.S.T.M.-A588 or A242. For bridges specified to be painted the steel for diaphragms and connection plates shall be A.S.T.M.-A36, except other steel classifications may be used subject to the approval of the Engineer.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

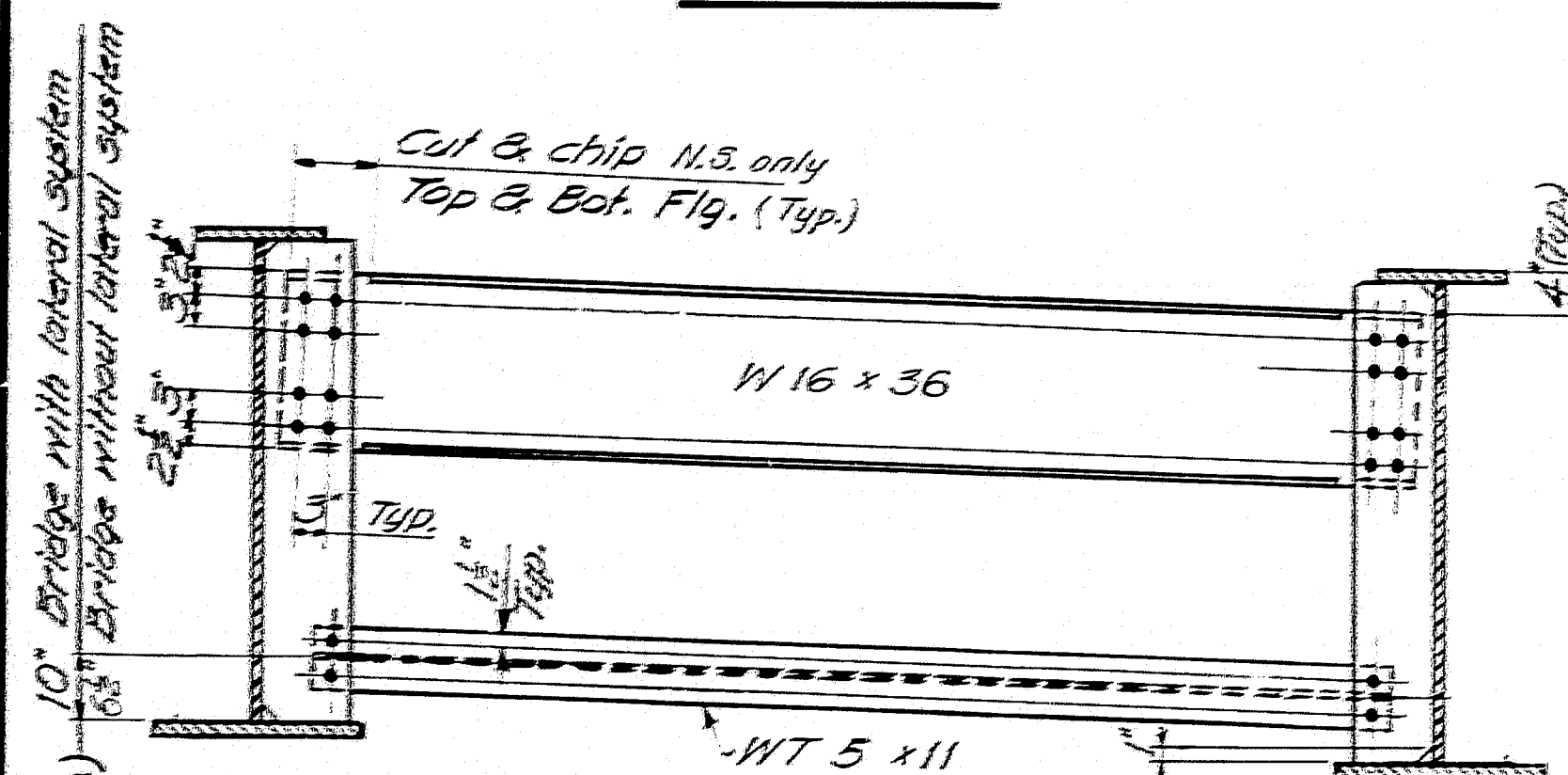
STANDARD DETAILS (BD 113 - 78) DIAPHRAGMS & CROSSFRAMES

SHEET 23 OF 30 AUGUSTA, MAINE June 1978

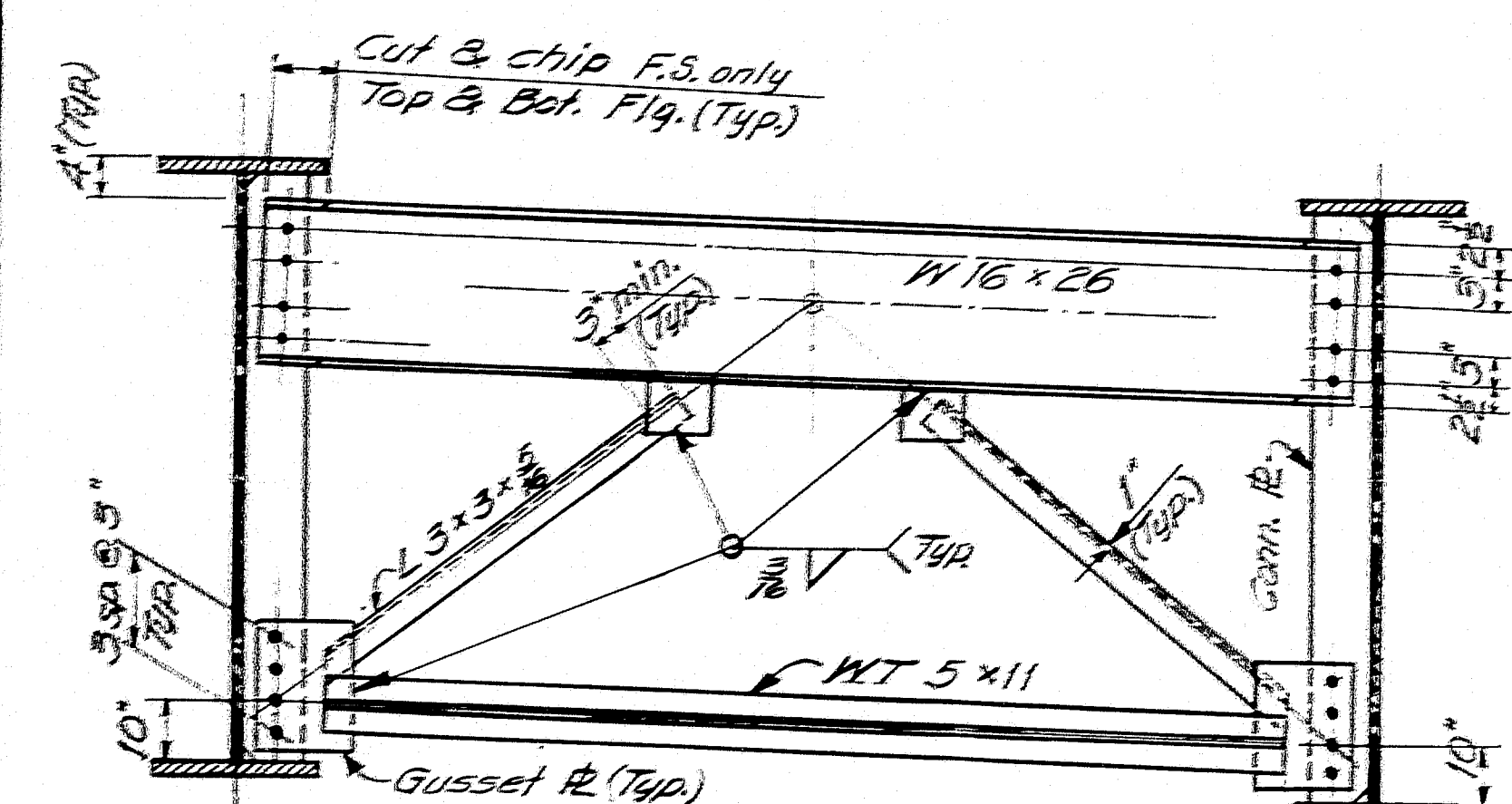
176-150



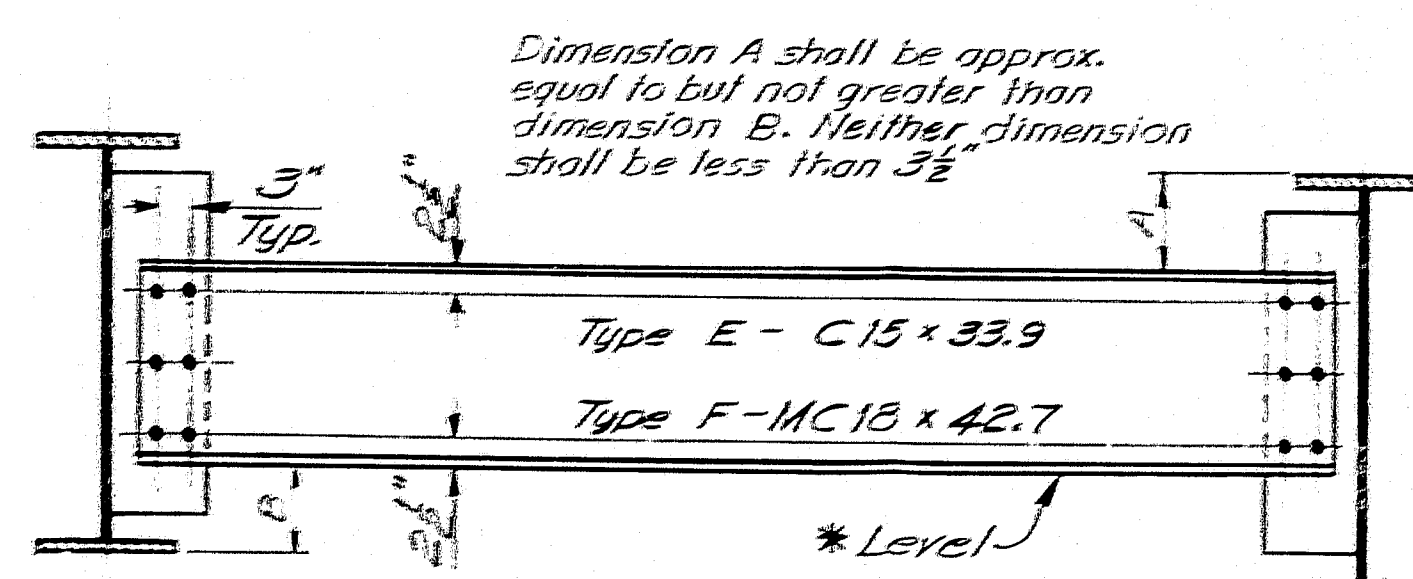
TYPE A & B



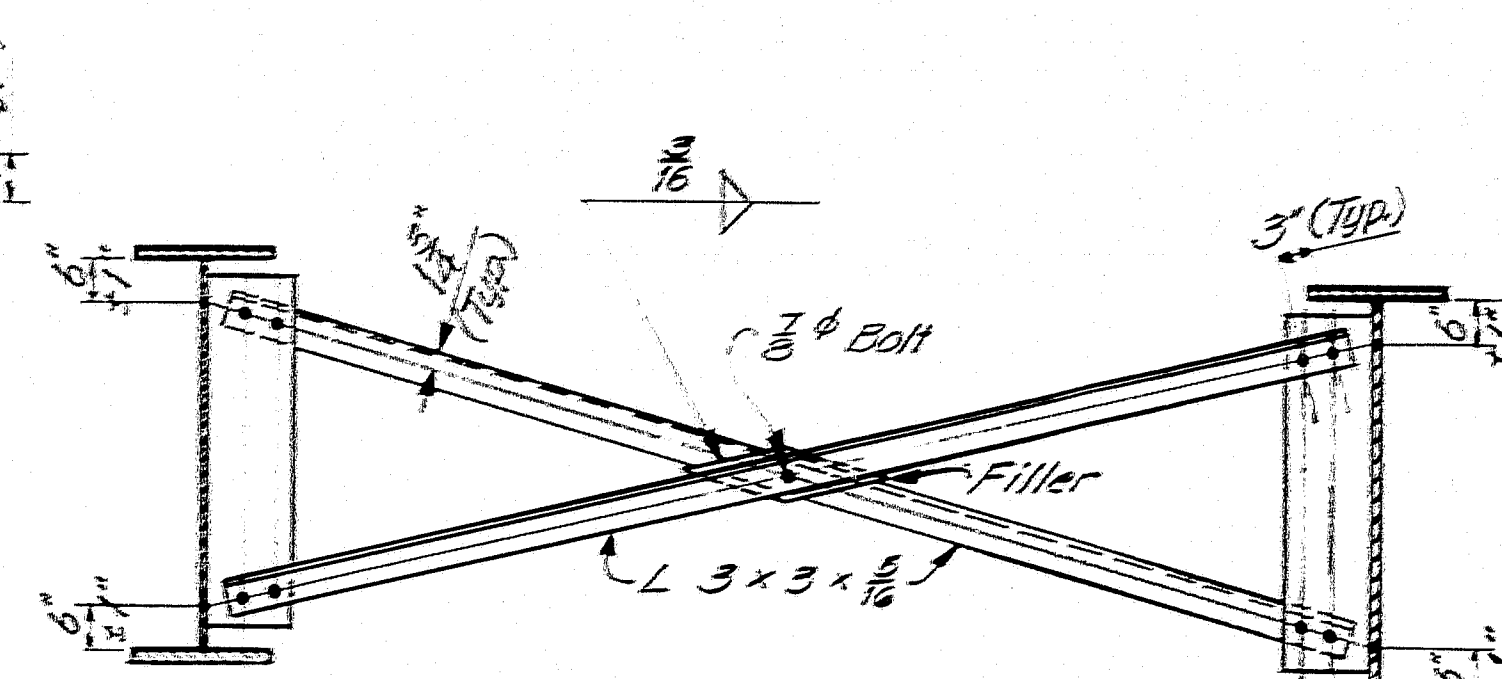
TYPE C



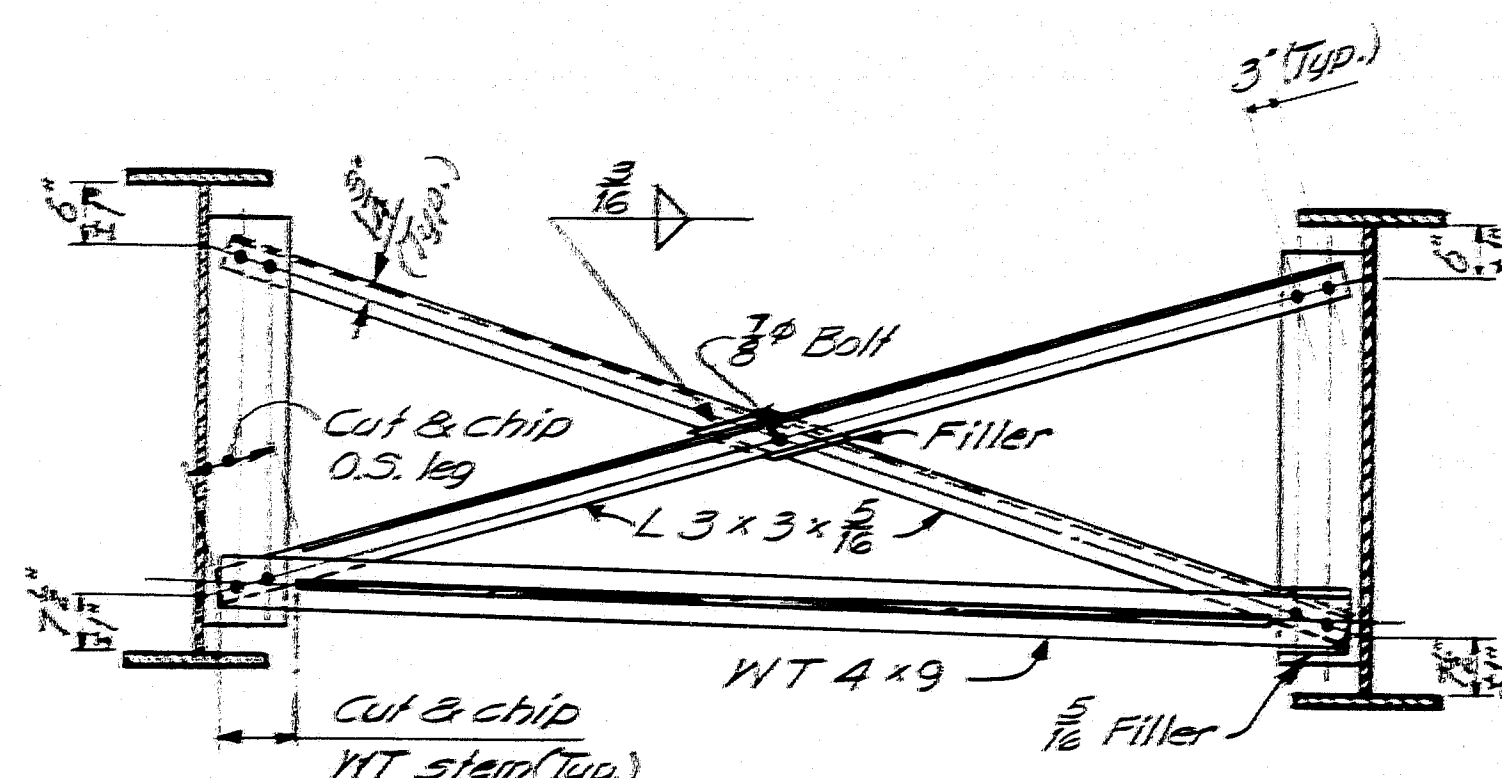
TYPE D



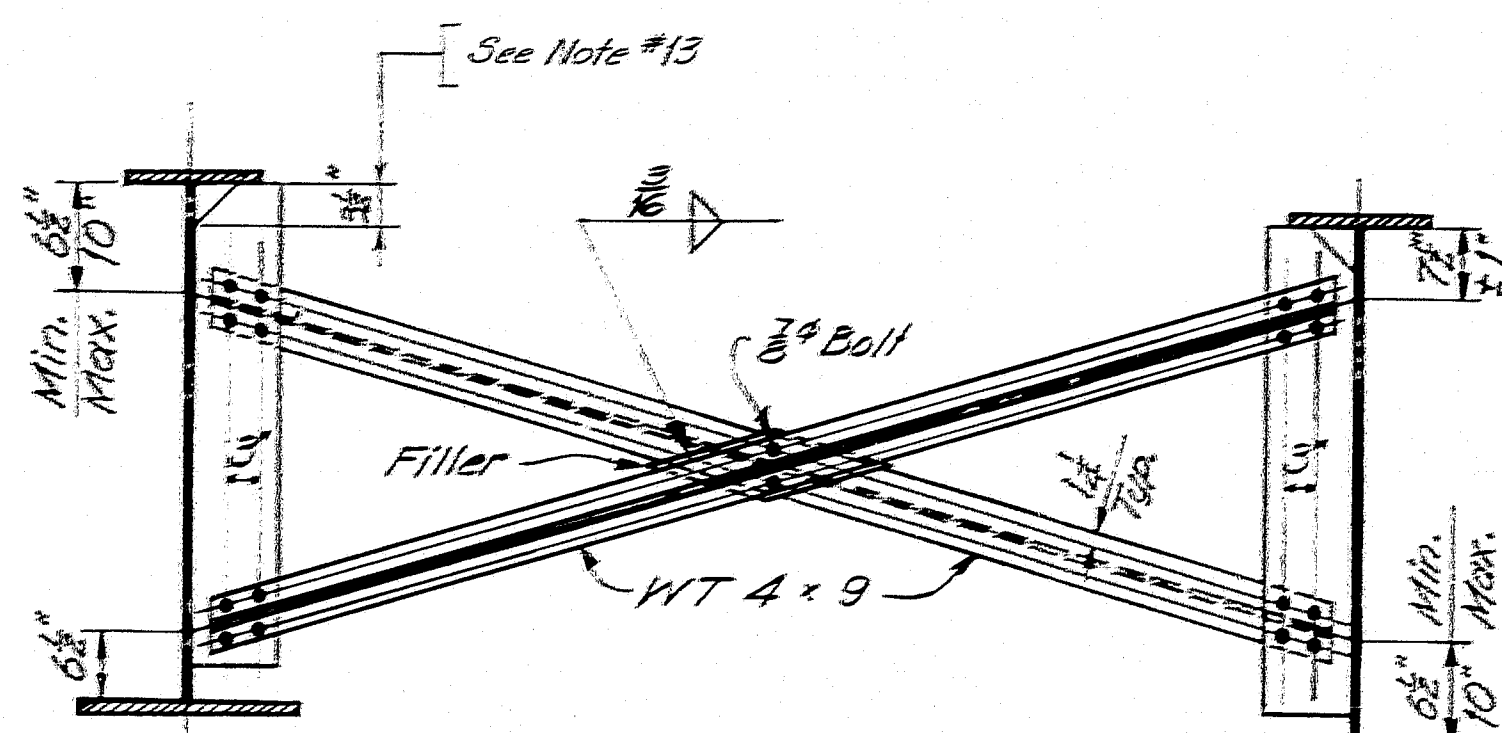
TYPE E & F



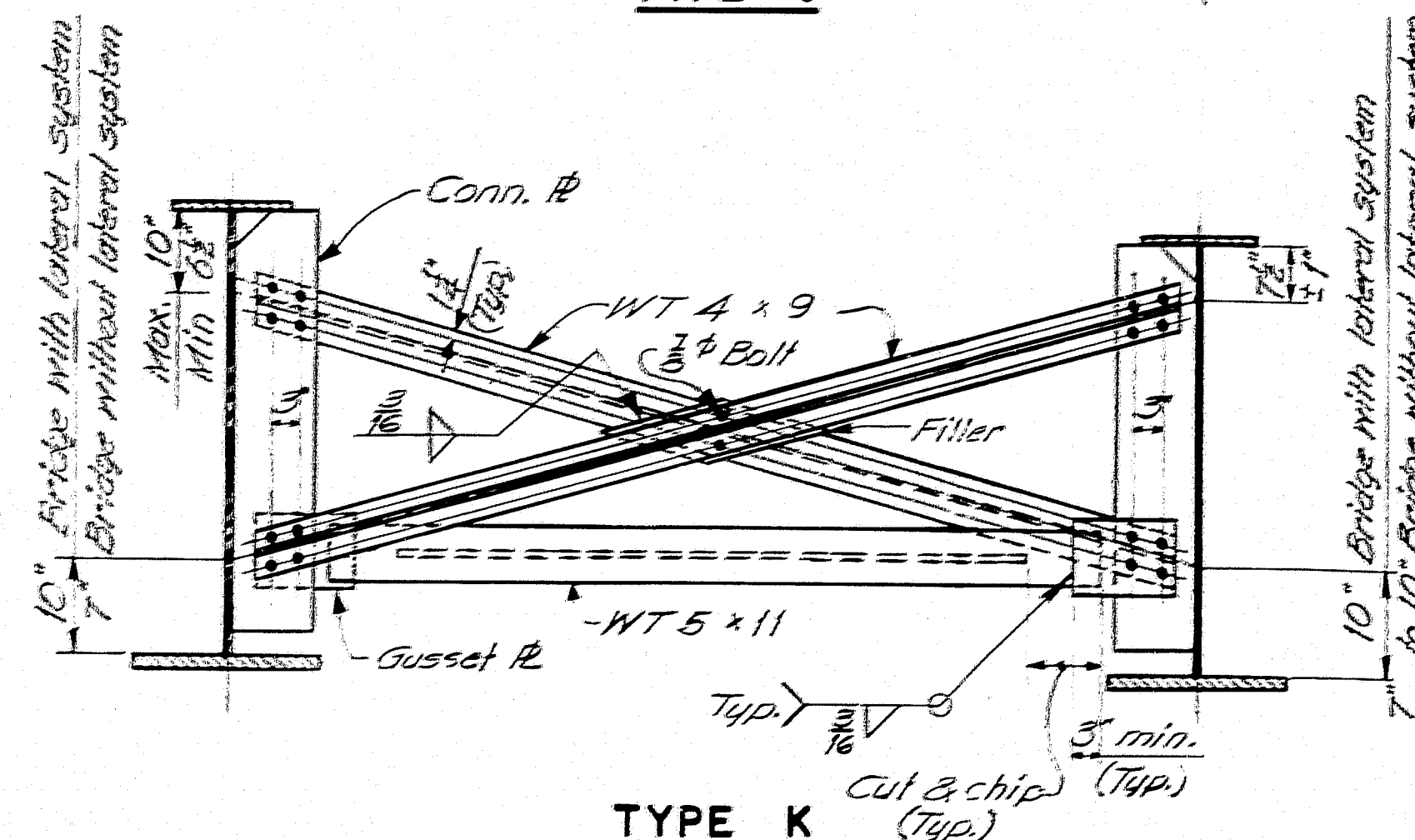
TYPE G



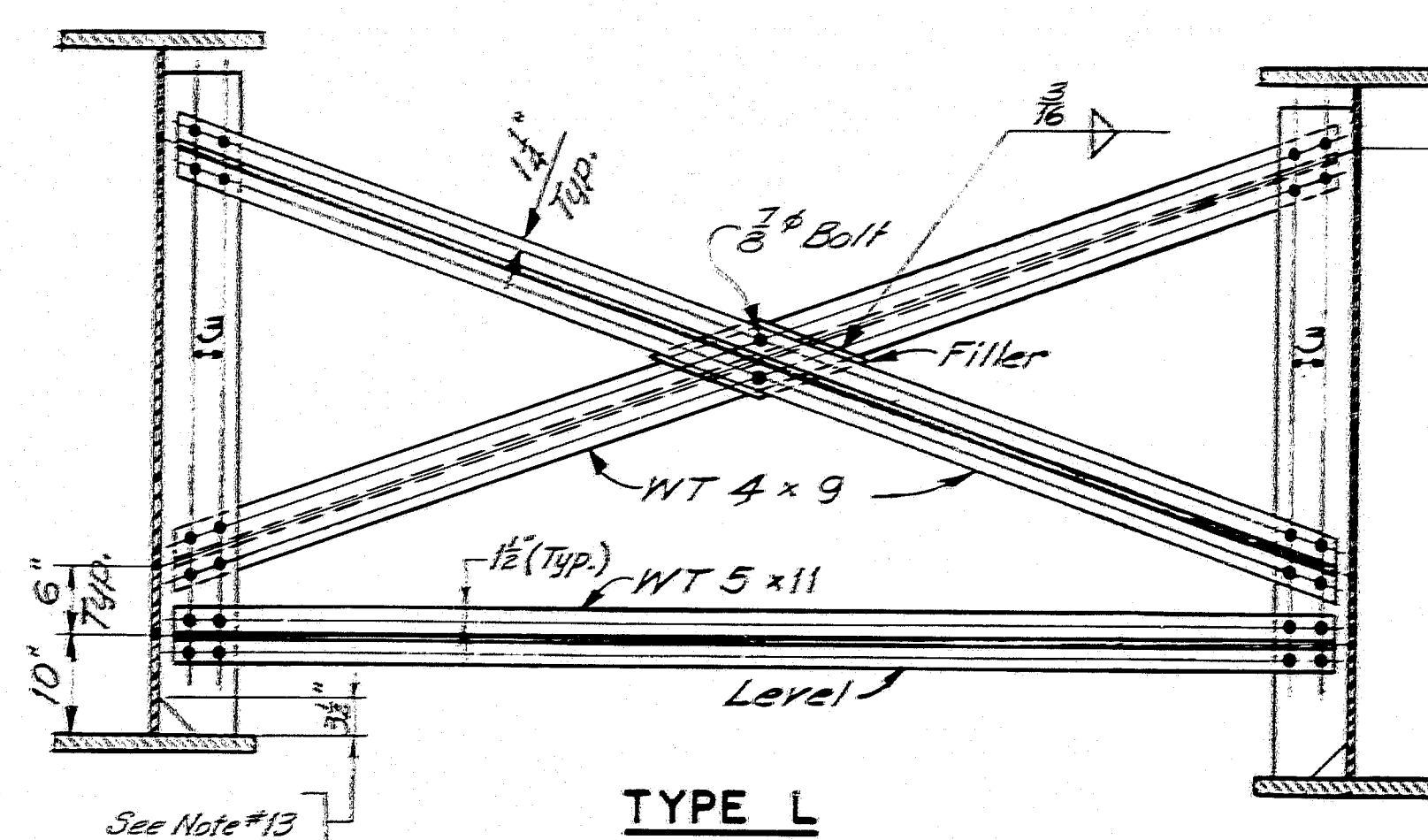
TYPE H



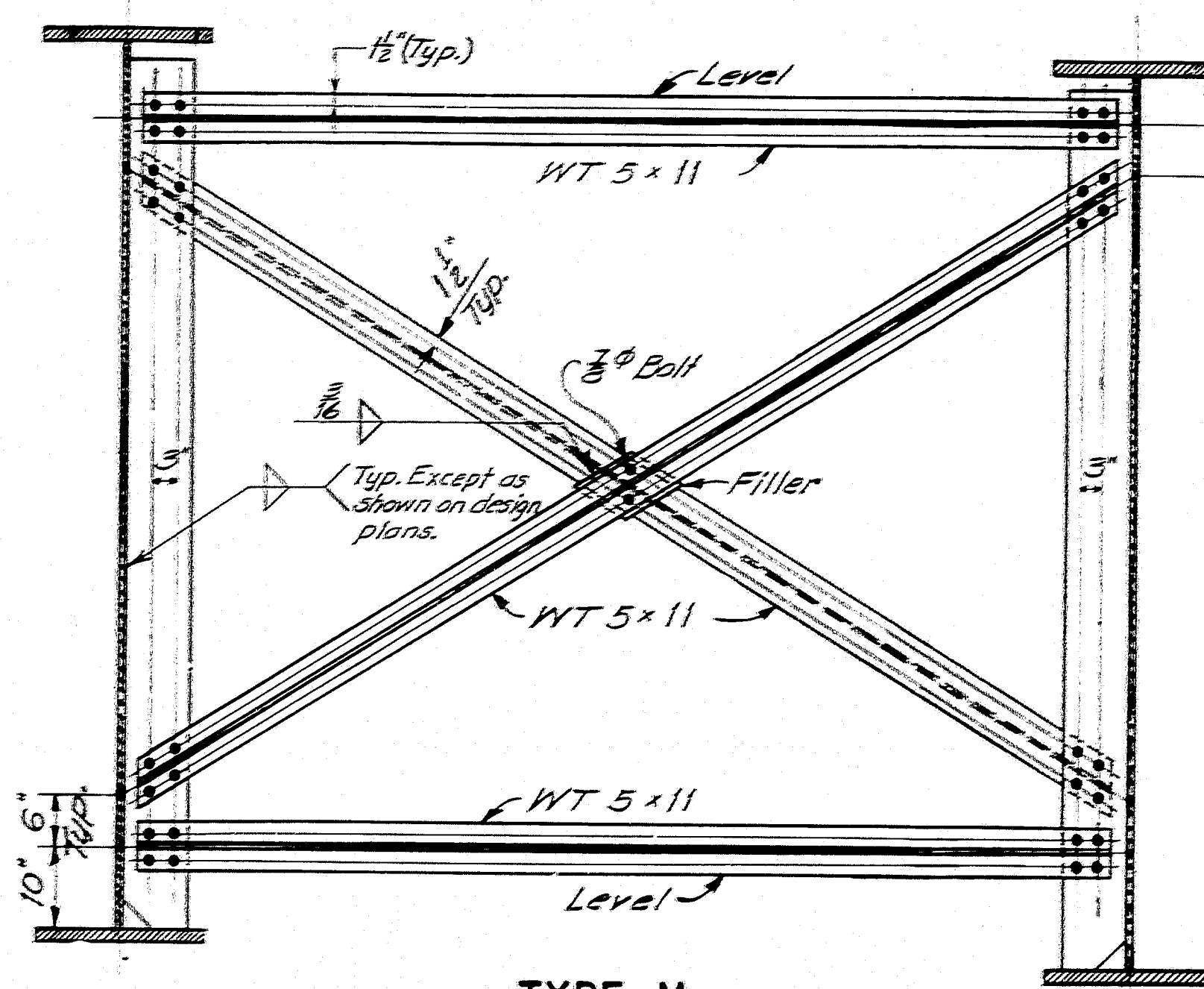
TYPE J



TYPE K



TYPE L



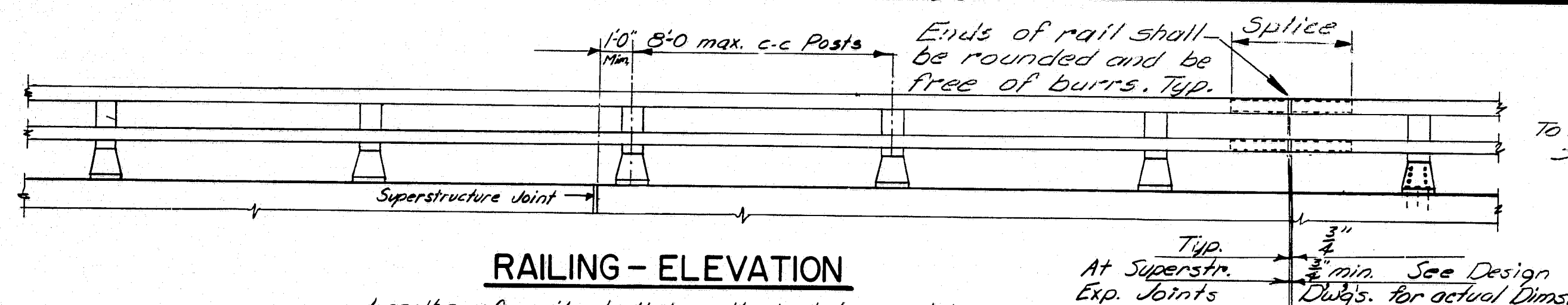
TYPE M

DATE	BY	DESIGN	DRAWN	CHECKED	REVISIONS	FIELD CHANGES

PLANS

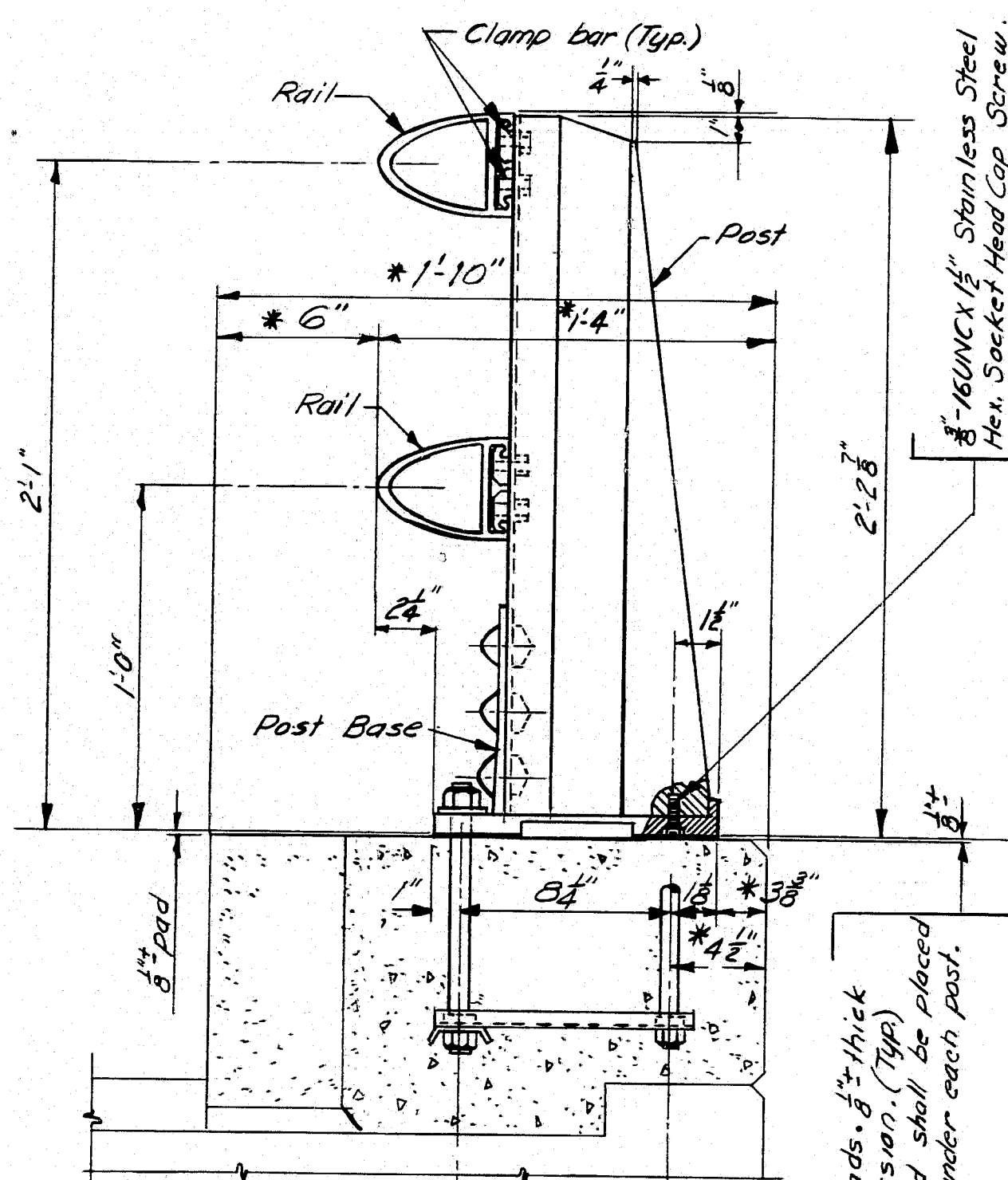
F.R.W. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	95-3 (30)	24	30

DESIGN SPECIFICATIONS
AASHTO Standard Specifications
for Highway Bridges 1973, and
Interims 1974, '75, '76, '77



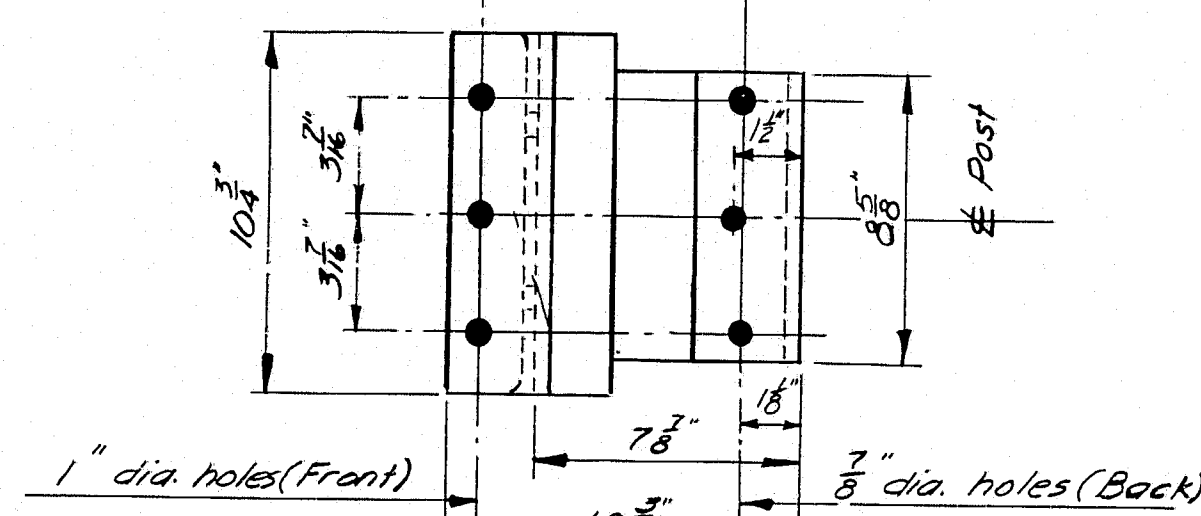
RAILING - ELEVATION

Lengths of rail shall be attached to a minimum of four (4) rail posts wherever possible, and in any case never less than two (2). Rail posts are to be set normal to grade unless otherwise shown on the Bridge Plans.

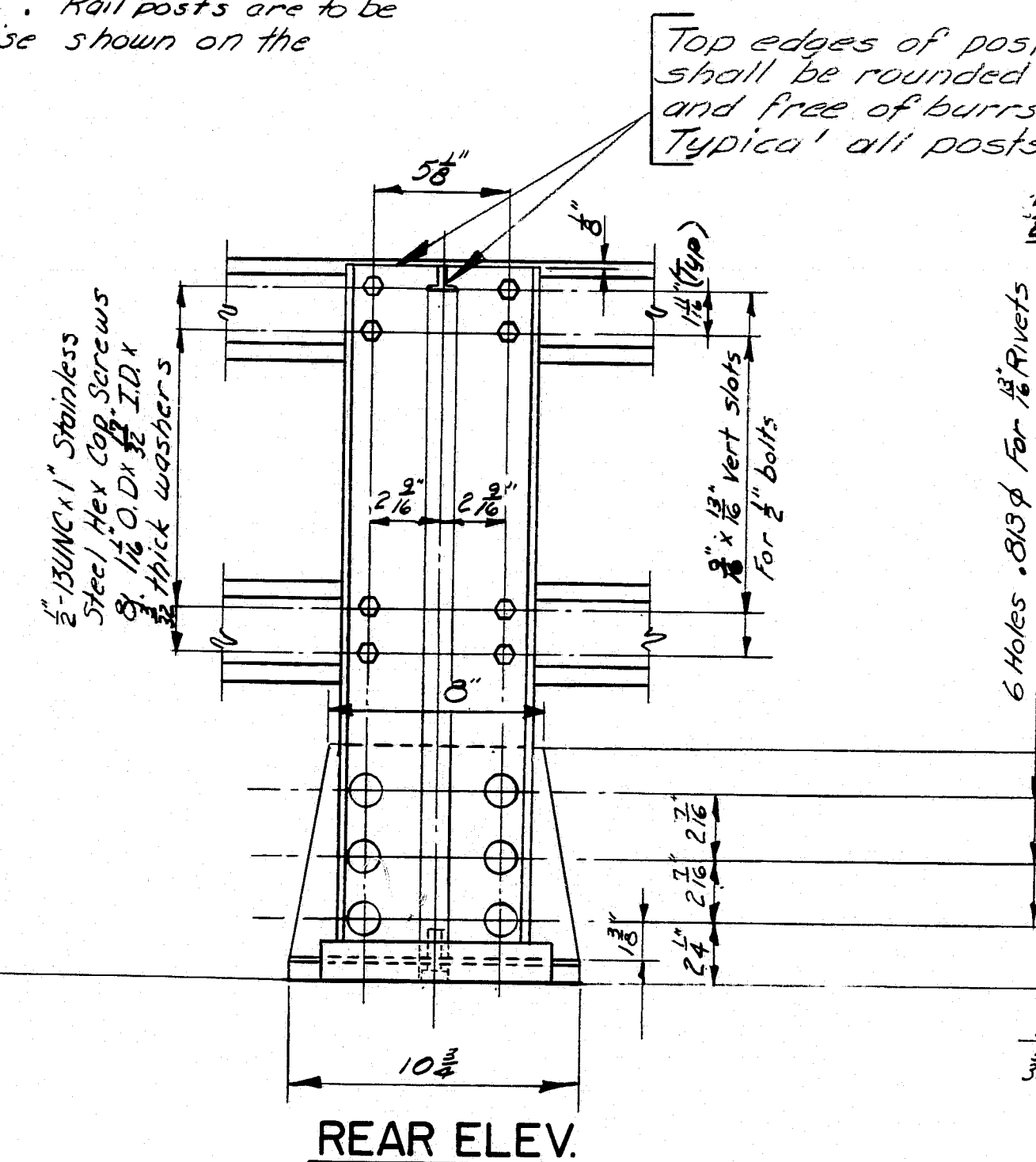


BRIDGE RAILING
(Assembly)

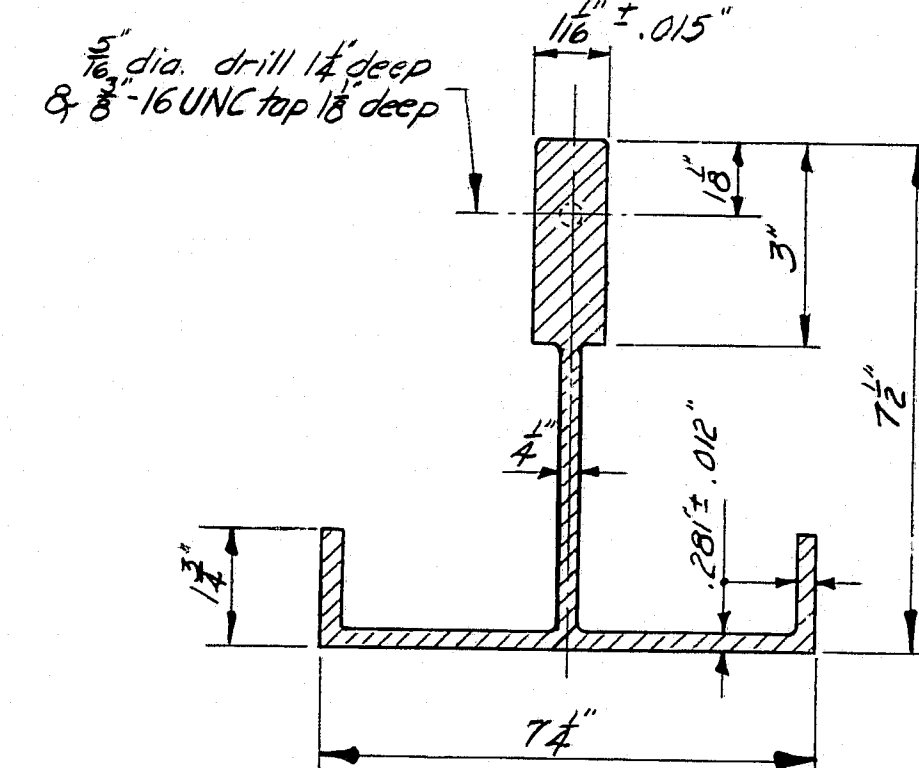
* Preferable minimum dimensions. For actual dimensions see Bridge Plan.



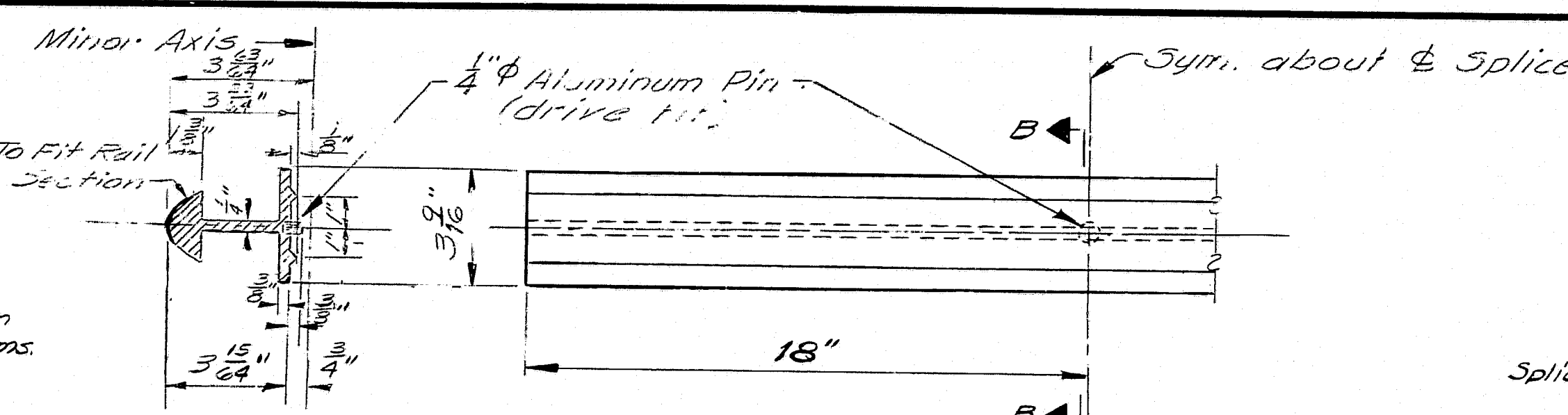
POST BASE
(Bottom View)



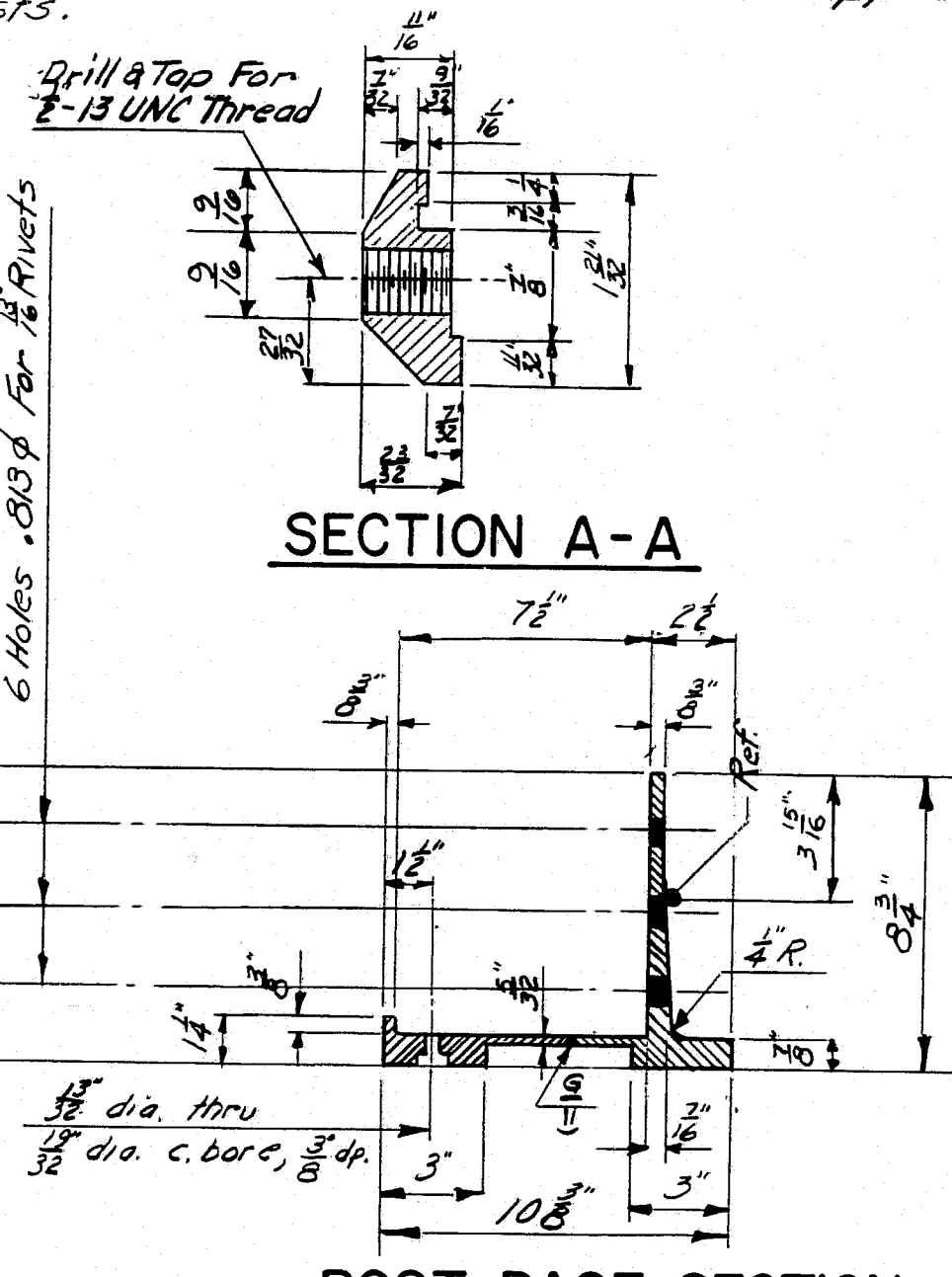
REAR ELEV.



POST SECTION

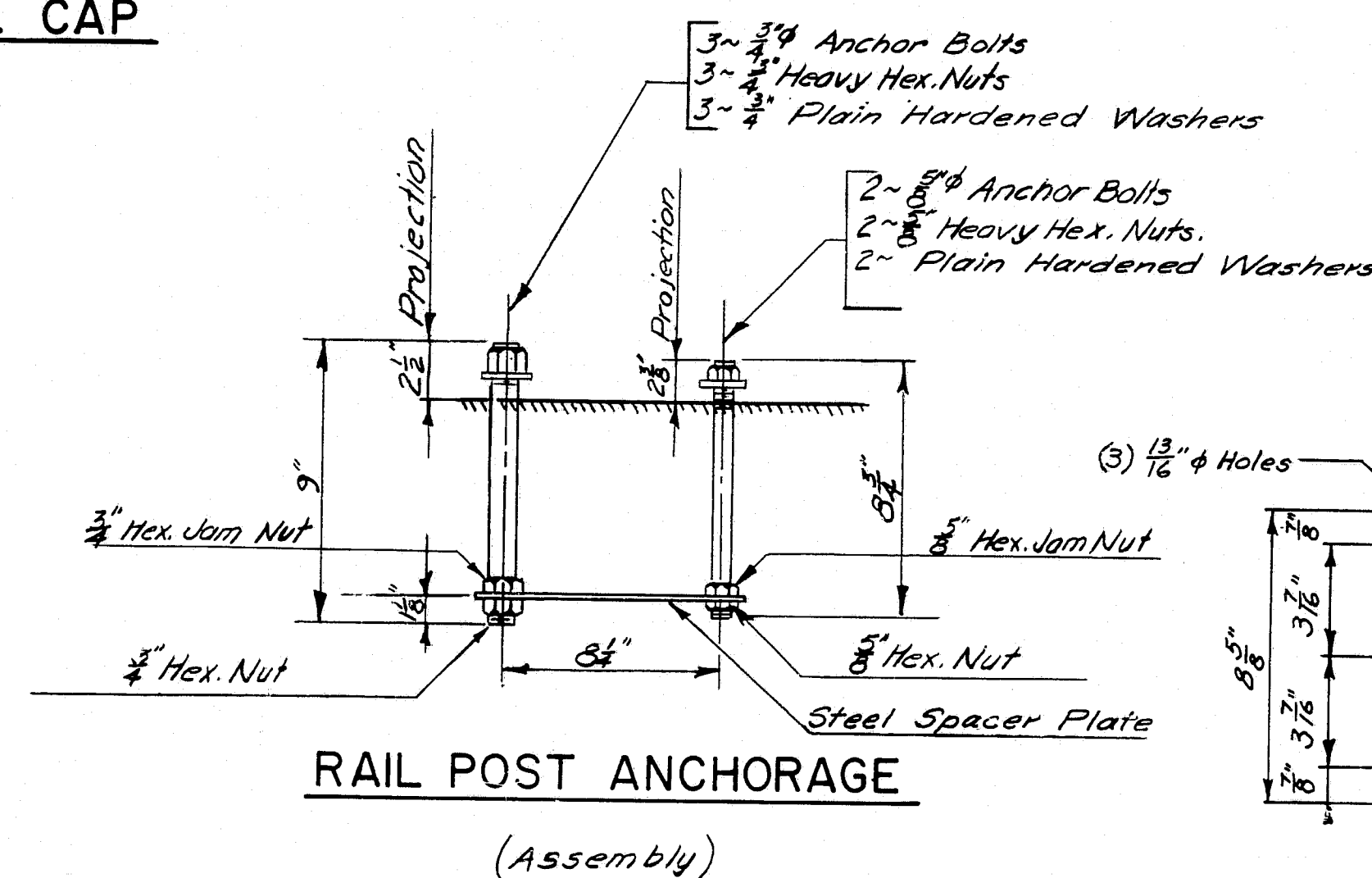
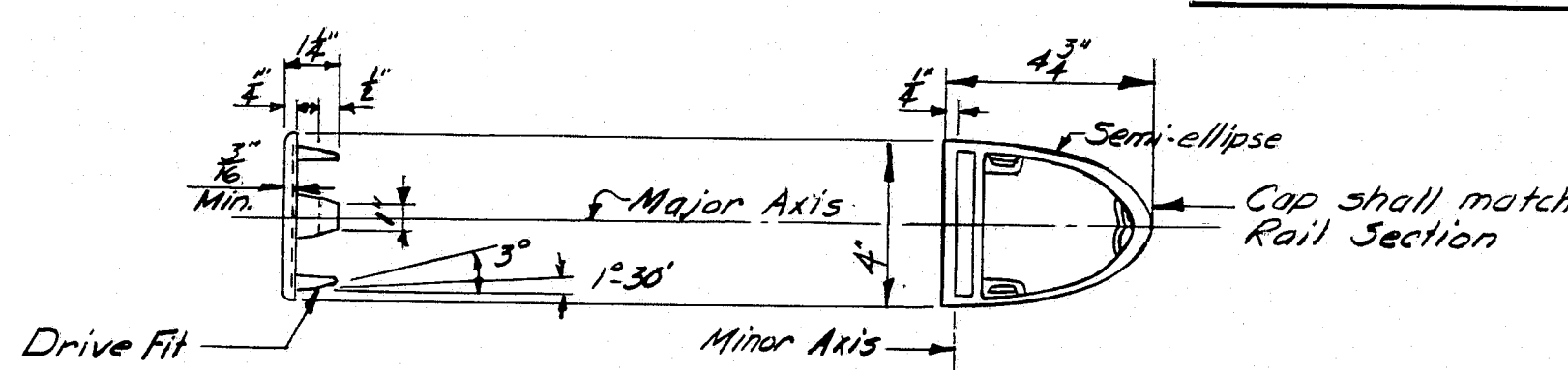


SECTION B-B

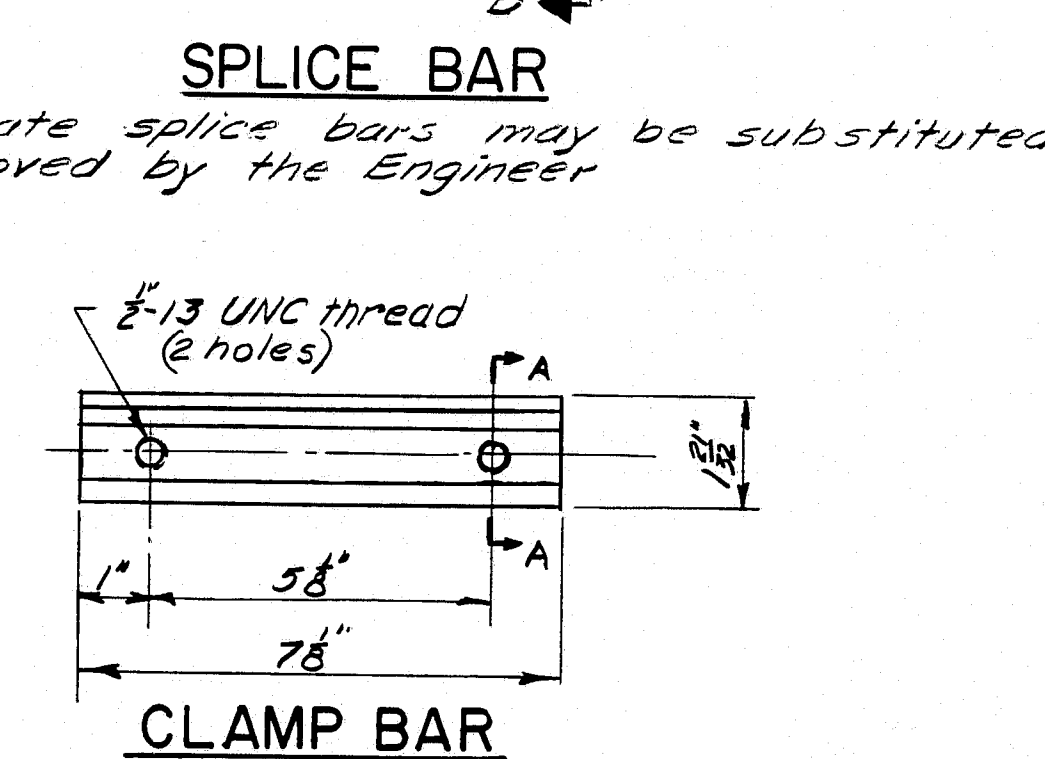


POST BASE SECTION

RAIL CAP

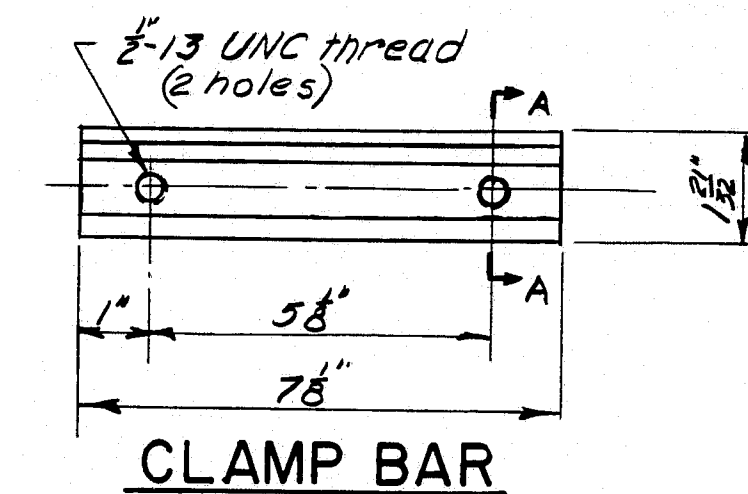


RAIL POST ANCHORAGE
(Assembly)

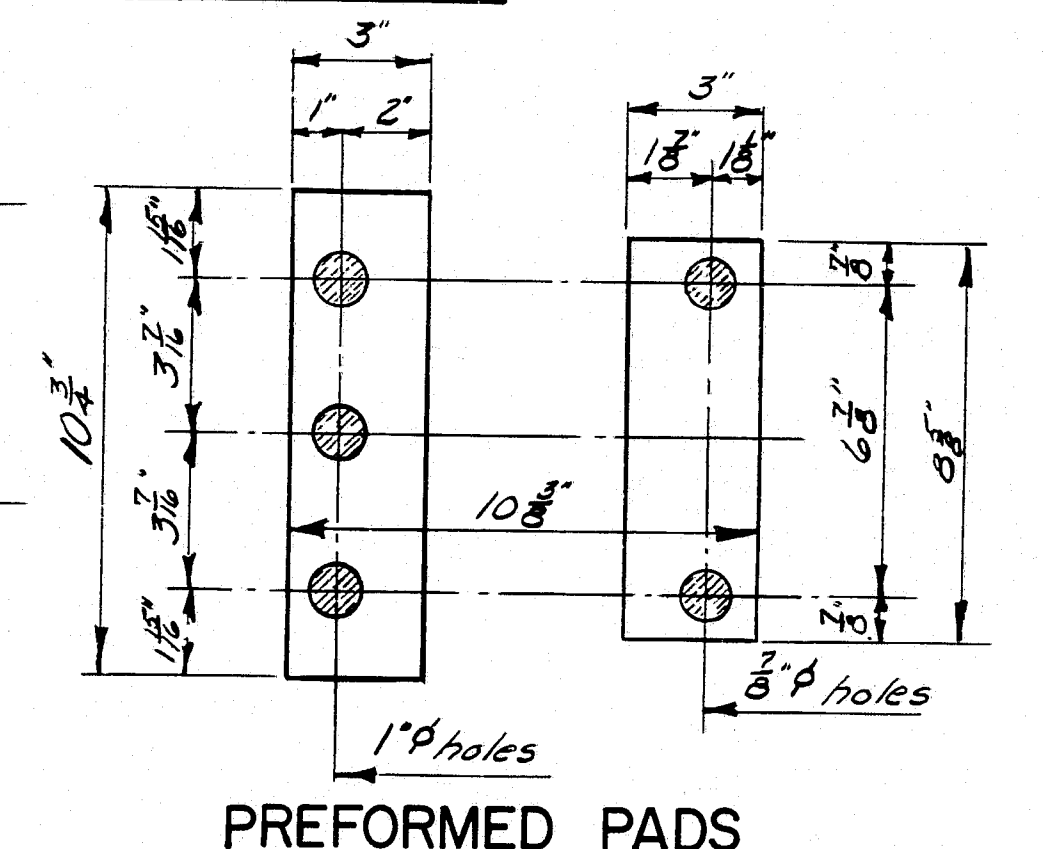


SPLICE BAR

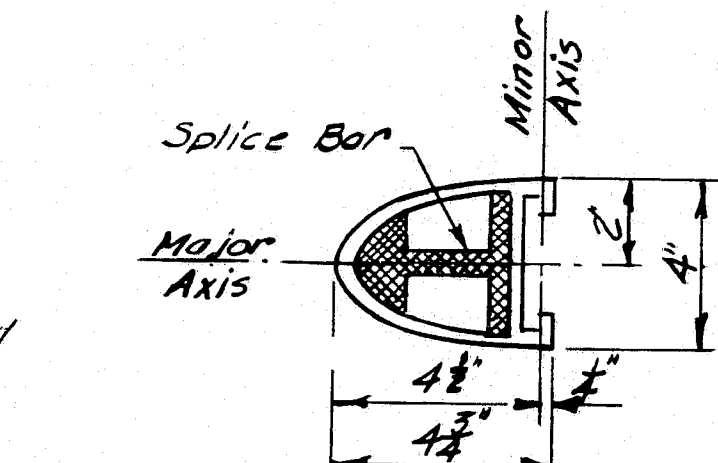
Alternate splice bars may be substituted if approved by the Engineer



CLAMP BAR

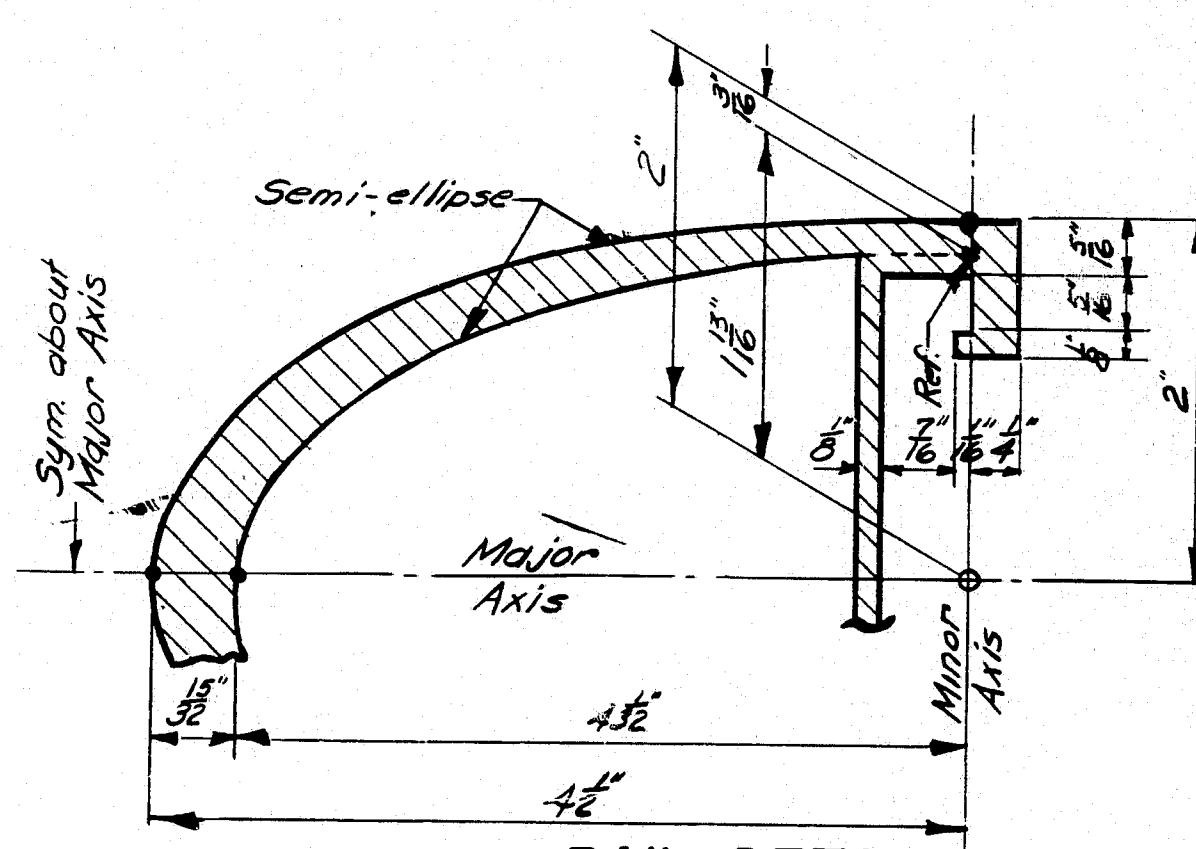


PREFORMED PADS

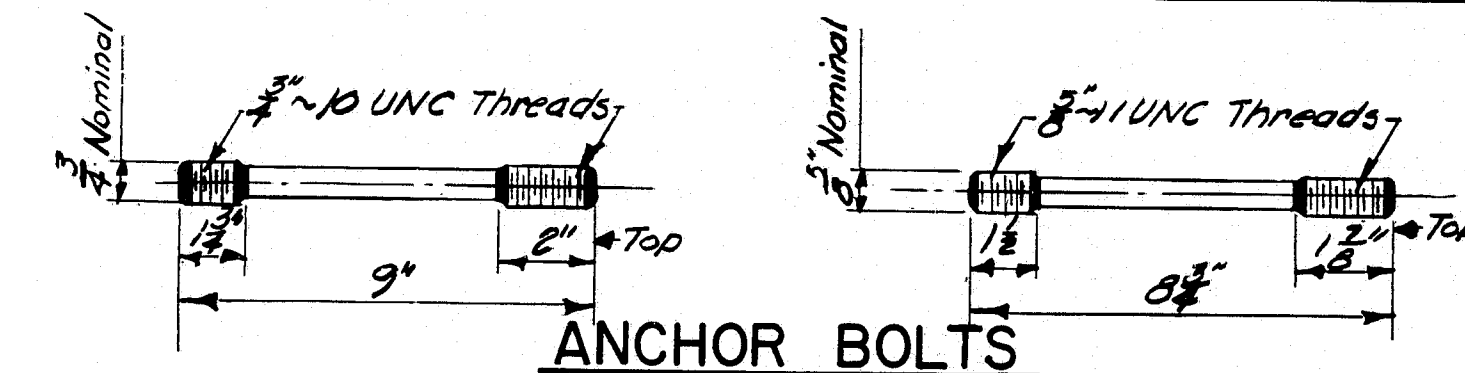


RAIL SECTION

See "Rail Detail"

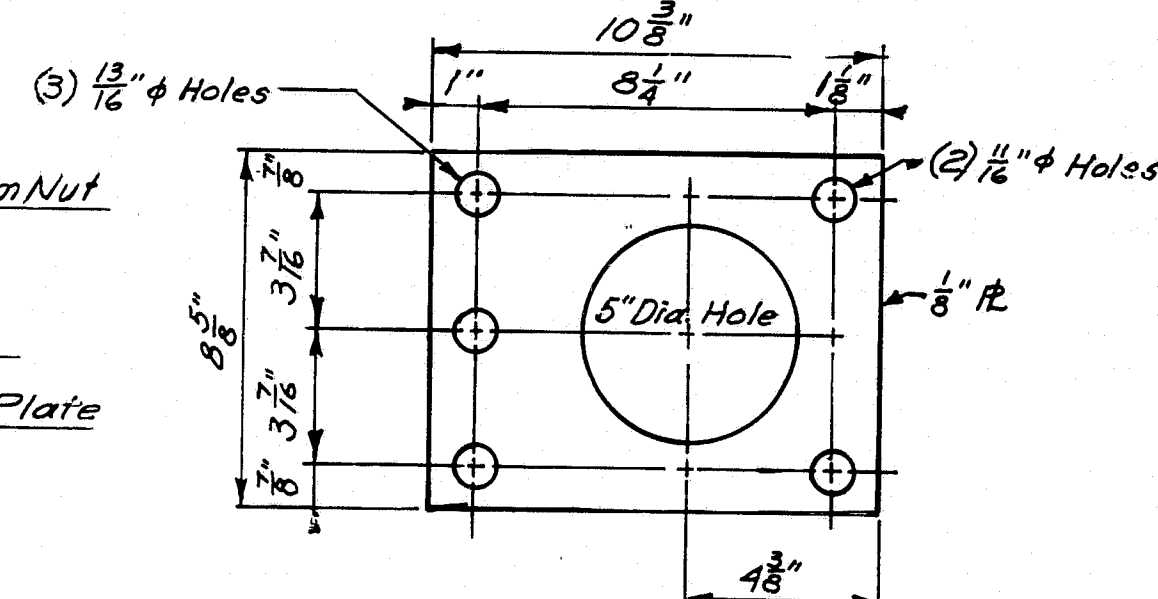


RAIL DETAIL



ANCHOR BOLTS

If cut threads are used, body diameter shall be not less than nominal diameter.
If rolled threads are used, body diameter shall be not less than root diameter of the threads.



STEEL SPACER PLATE
(For Anchorage)

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STANDARD DETAILS
(BD 114 - 77)
ALUMINUM BRIDGE RAILING
2 - BAR (SEMI-ELLIPSE)
TYPE "A"

SHEET 24 OF 30 AUGUSTA, MAINE DEC. 1977

176-151

DESIGN - DETAILED	CHECKED	DATE
K. K. K.	K. K. K.	10/1/77
REVISIONS	BY	DATE
1	K. K. K.	10/1/77
FIELD CHANGES	BY	DATE

PLANS

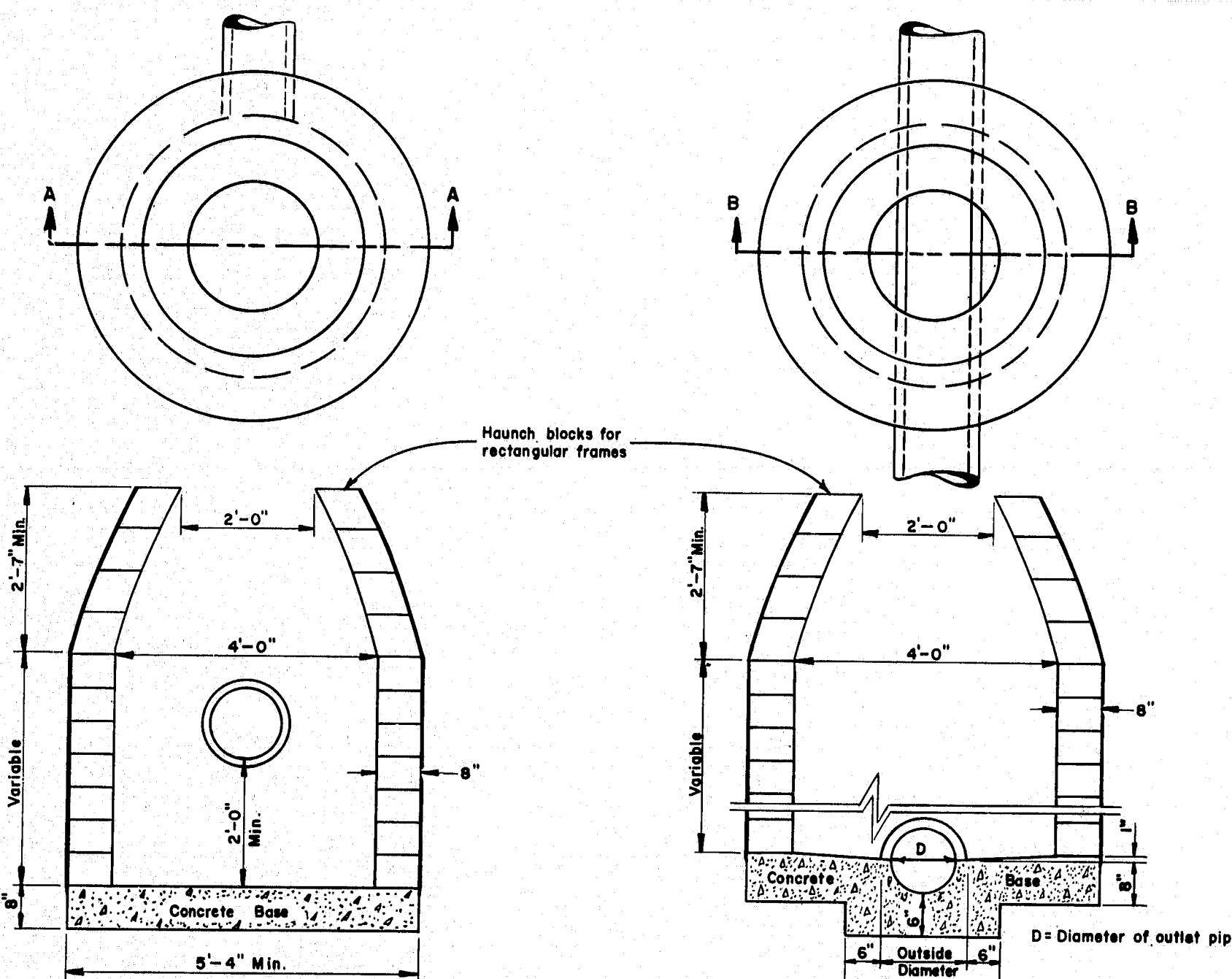
GENERAL NOTES — ALL CATCH BASINS AND MANHOLES

- Any Catch Basin in excess of 8' in depth shall, if directed be provided with steps similar to those detailed for Manholes.
- Frames, Grates & Covers shall be considered as part of the structure, and no separate payment shall be made.

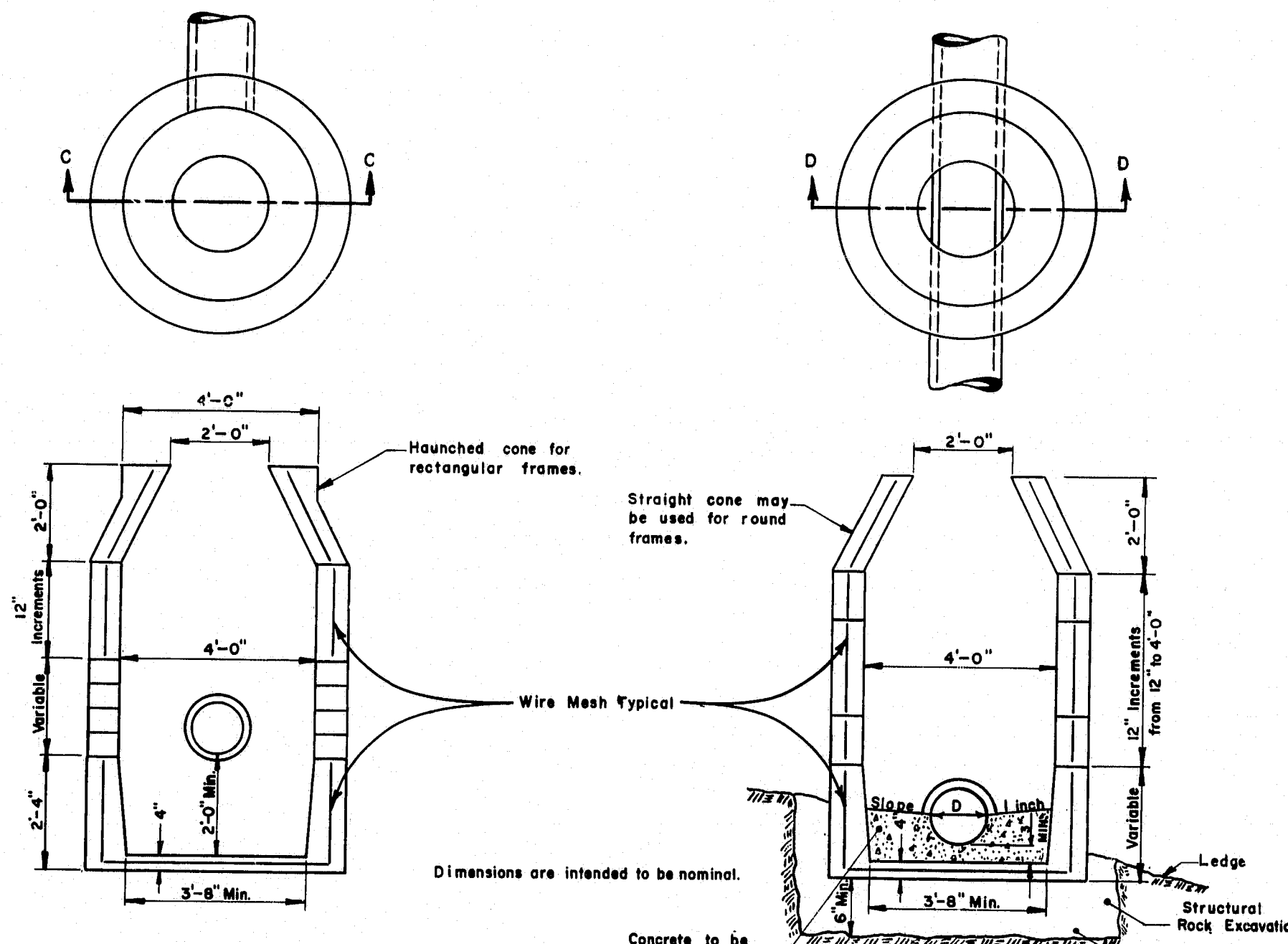
GENERAL NOTES — PRECAST CATCH BASINS AND MANHOLES

- Drain holes in precast sumps to be not over 3" in diameter, and shall be plugged with mortar when constructed.
- All precast sections of less than 8" wall thickness shall have tongue and groove joints.
- Cone and Ring sections wall thickness min. 4", max. 8"
- Minimum wall thickness of sump may be 4" as specified in A.S.T.M. C-475, however, if concrete blocks are used around the inlet and outlet pipes, the wall thickness of sump shall be 8"
- Wall around inlet and outlet pipes may be built of 8" concrete blocks or a precast ring with an opening 2" larger than the outside diameter of the pipe may be used.
- Lift Holes shall be provided.

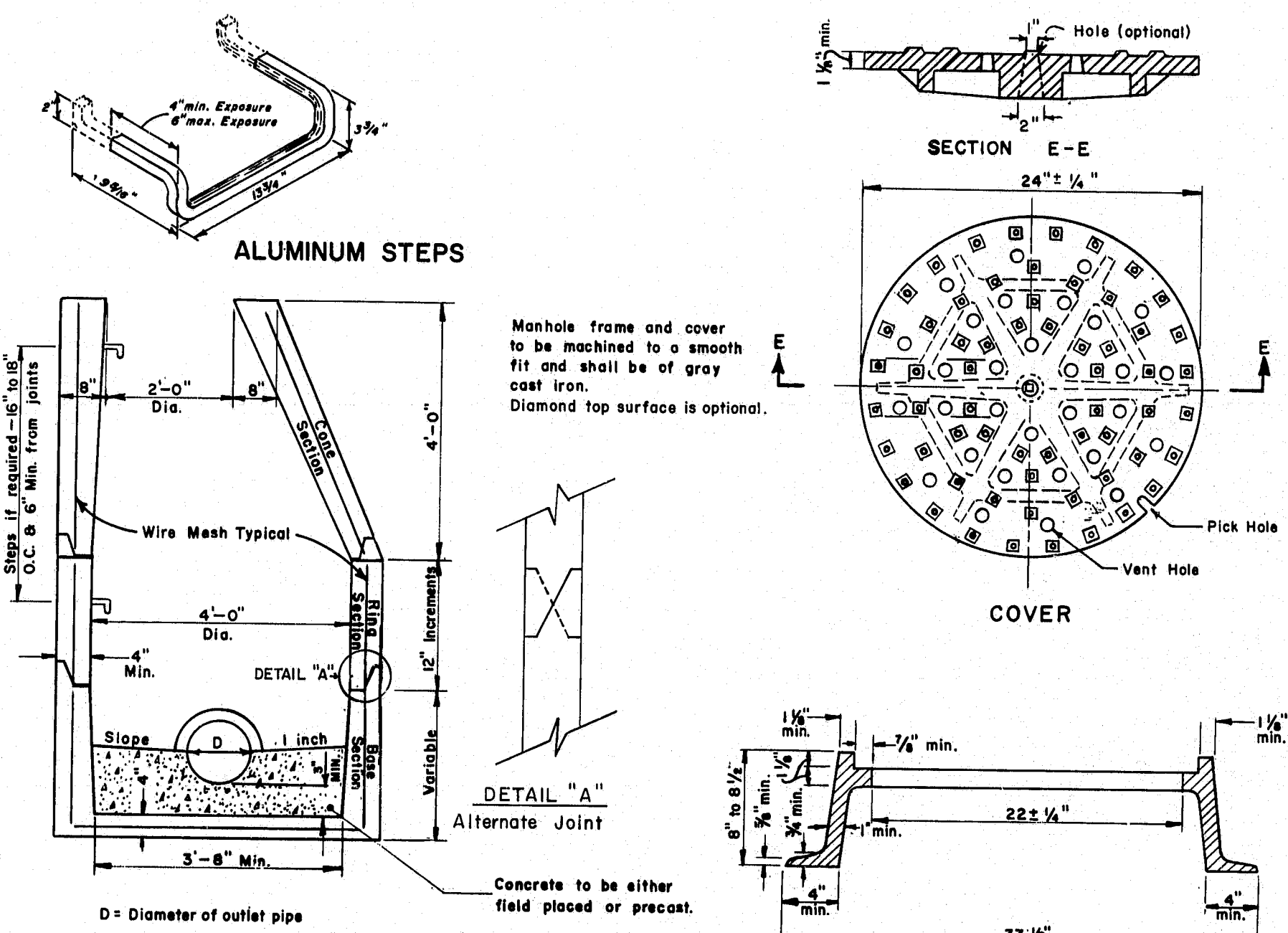
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	95-9 (90)	25	30



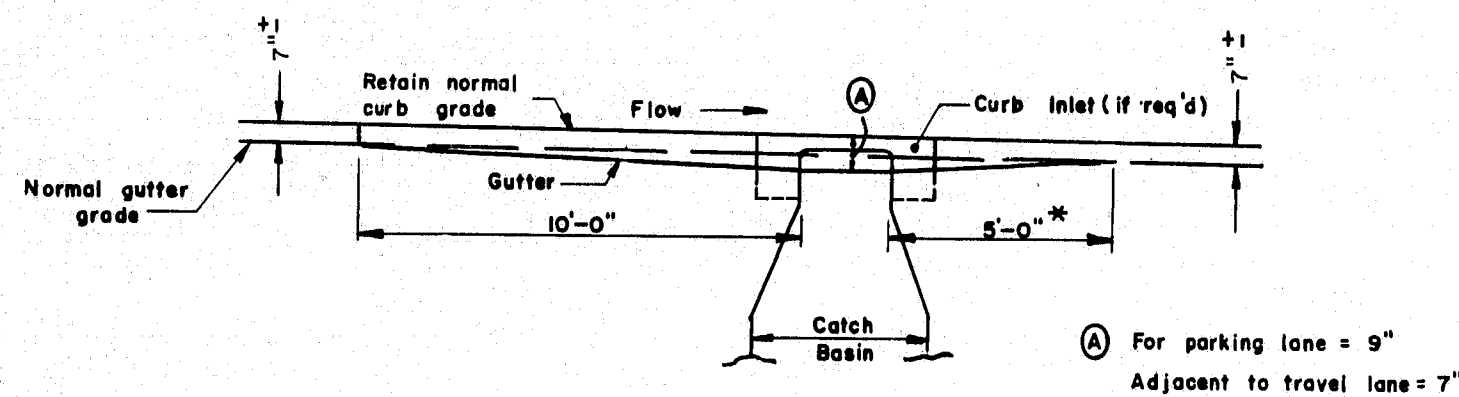
CATCH BASINS
(Concrete Blocks or Bricks)



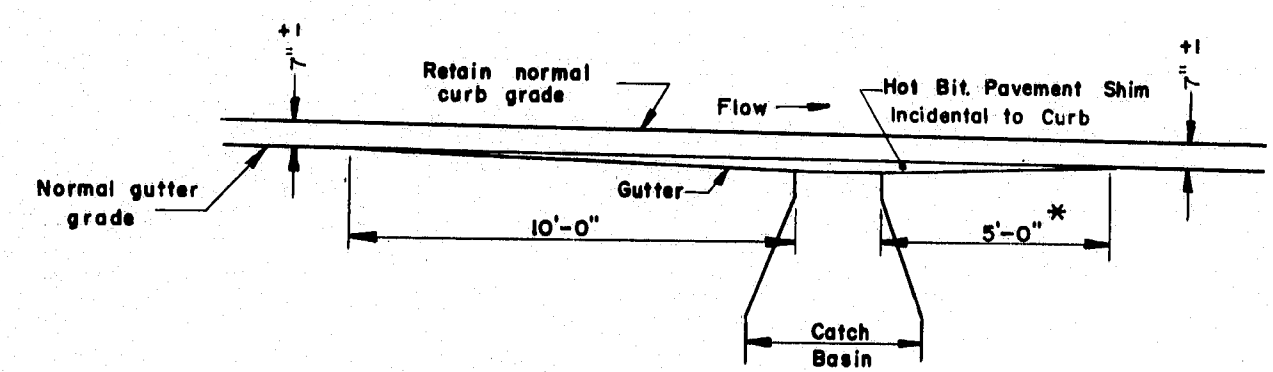
CATCH BASINS
(Precast Units)



MANHOLE



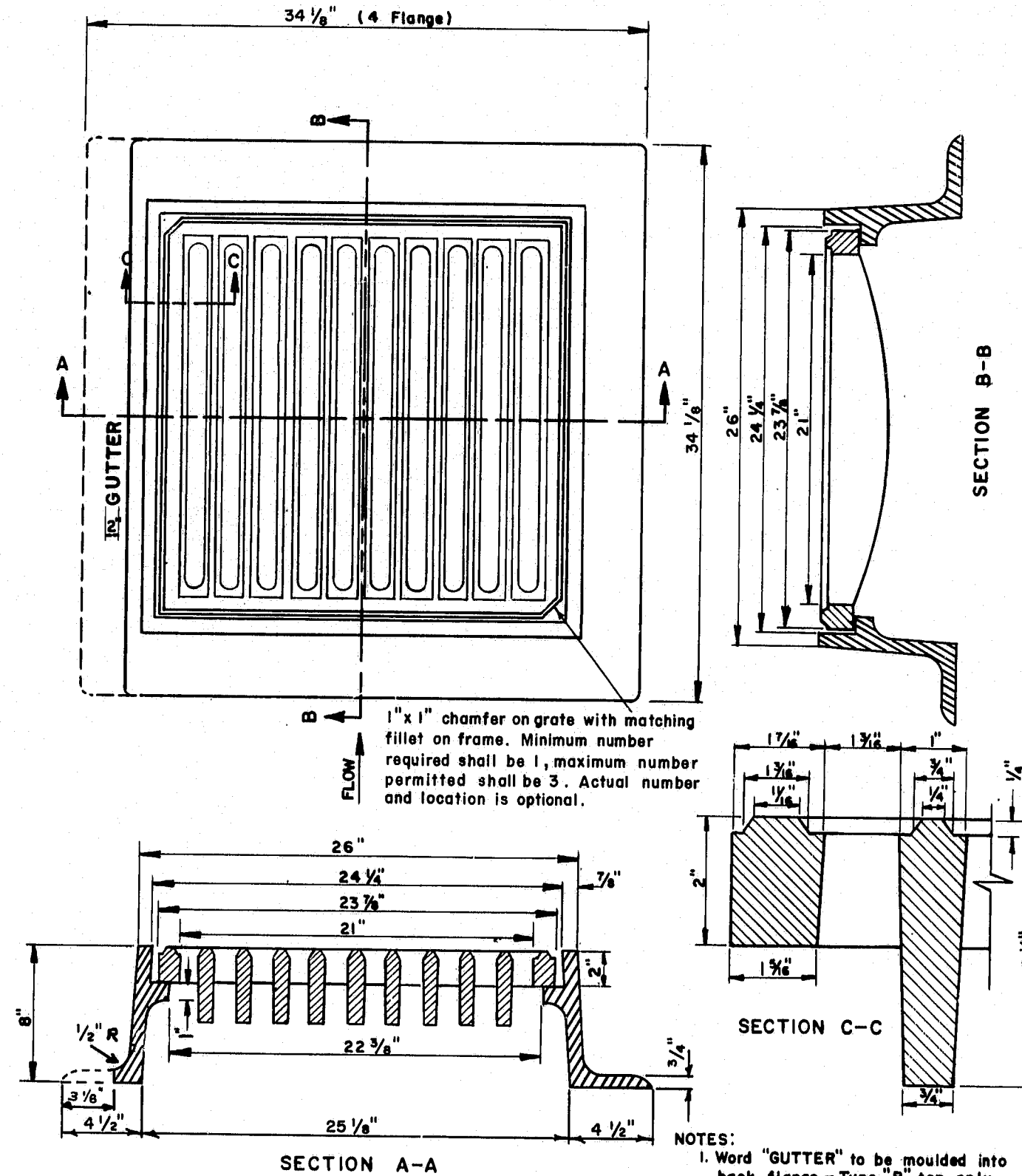
AT CURB INLETS



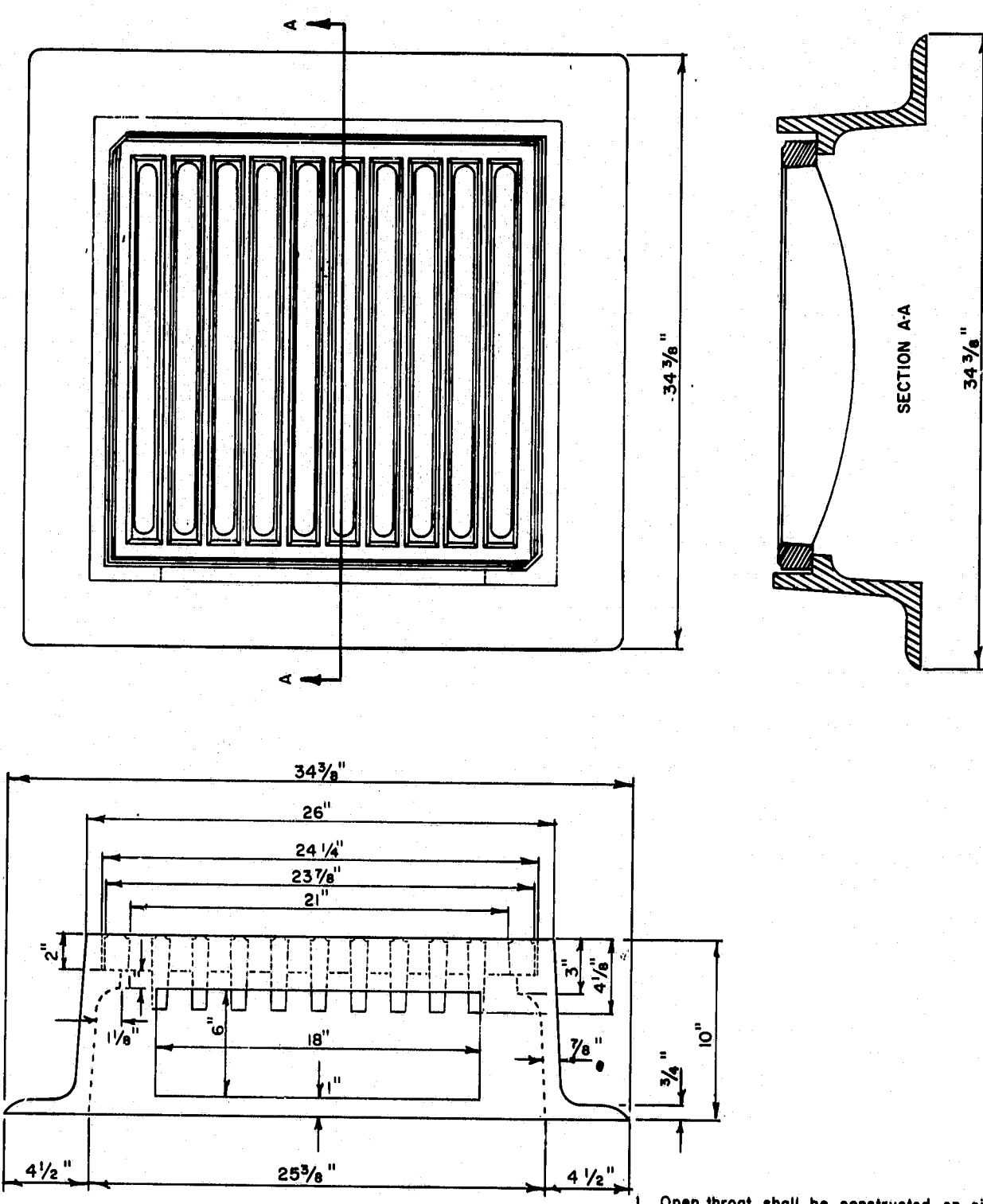
AT CURB WITHOUT INLET STONES

NOTE: PARALLEL BAR GRATES SHALL BE INSTALLED ON A LEVEL GRADIENT. CASCADE GRATES SHALL BE INSTALLED ON GRADIENT OF THE GUTTER. THE GRATES SHALL BE DERESSED 3" BELOW THE NORMAL GUTTER GRADE UNLESS THIS DEPRESSION INTERFERES WITH TRAFFIC. DIMENSIONS ARE INTENDED TO BE NOMINAL.

GUTTER GRADE TRANSITION AT CATCH BASIN



TYPE "A" & "B" CATCH BASIN TOPS
(PARALLEL BAR GRATES)

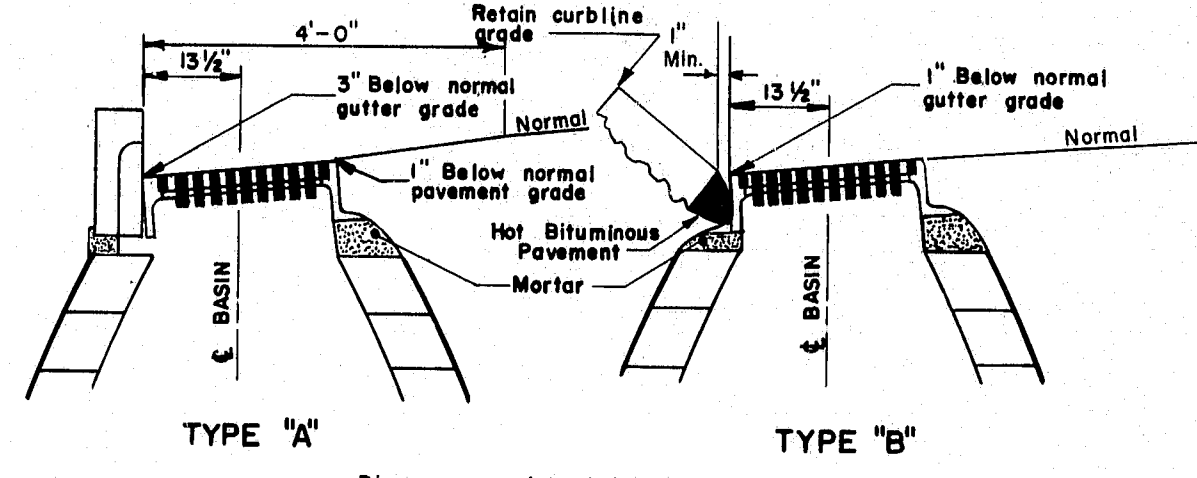


TYPE "C" CATCH BASIN TOPS

STRUCTURE	TOP	SHAPE
CATCH BASIN	A B C D	1 2 3 4 5
Type A-1	X	X X X X X
Type A-2	X	X X X X X
Type B-1	X	X X X X X
Type B-2	X	X X X X X
Type C-1	X	X X X X X
Type C-2	X	X X X X X
MANHOLE	X	X X X X X

TABLE OF CATCH BASIN TYPES
(COMBINATION OF TOPS AND SHAPES)

For Type "E" & Type "F" C.B. See Sheet No. 3



CATCH BASIN TOP INSTALLATION

REVISIONS	
CATCH BASIN TOPS A-B-C	10-21-69
PLATE 'E'	4-21-71
PLATE 'D'	8-26-75
PLATE 'C'	10-14-75
PLATE 'D-C'	7-31-78

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

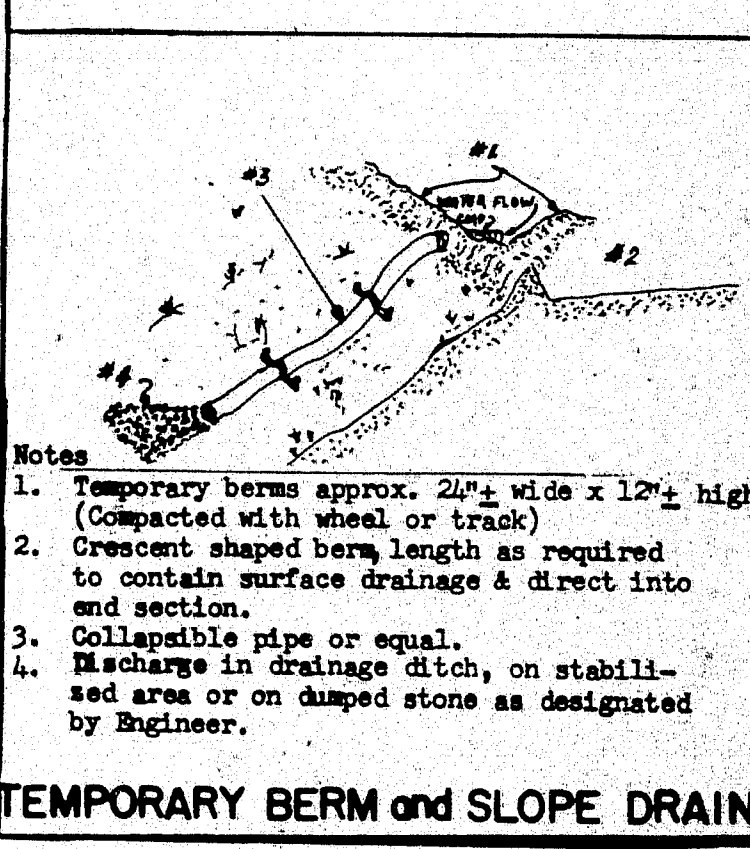
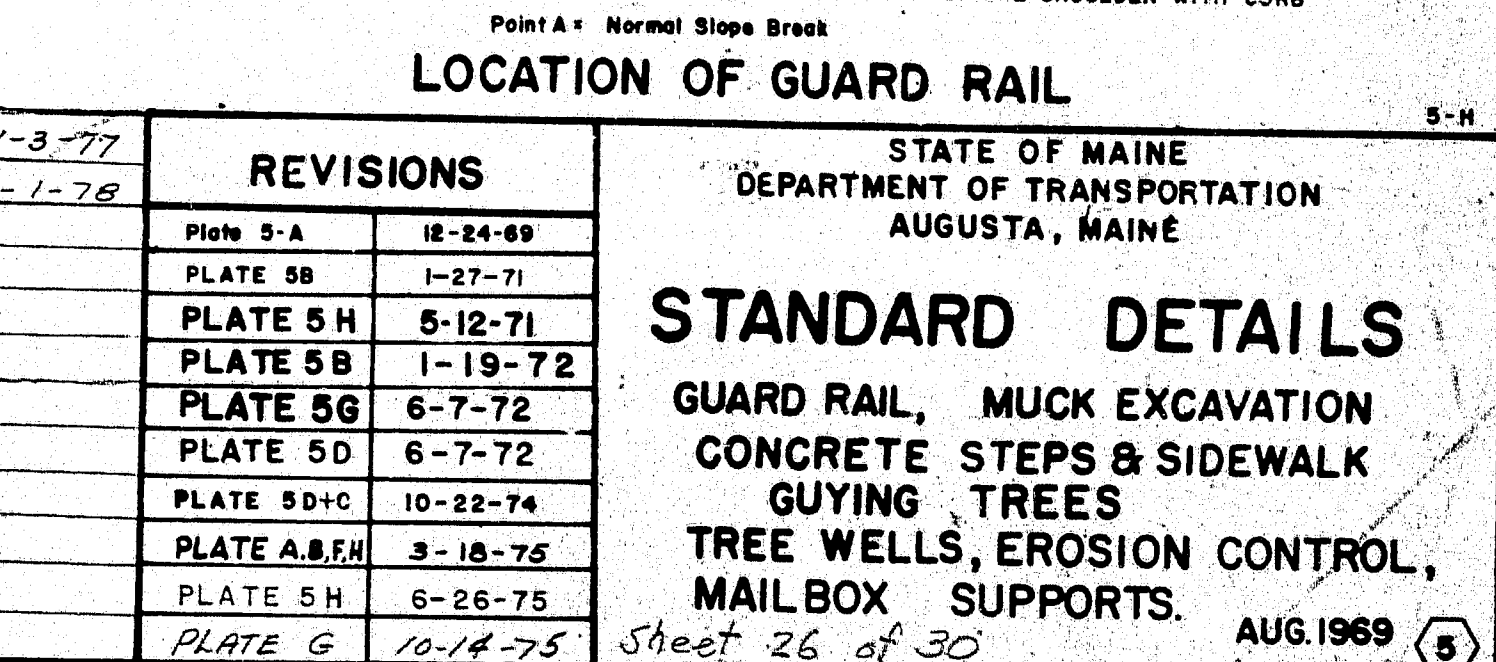
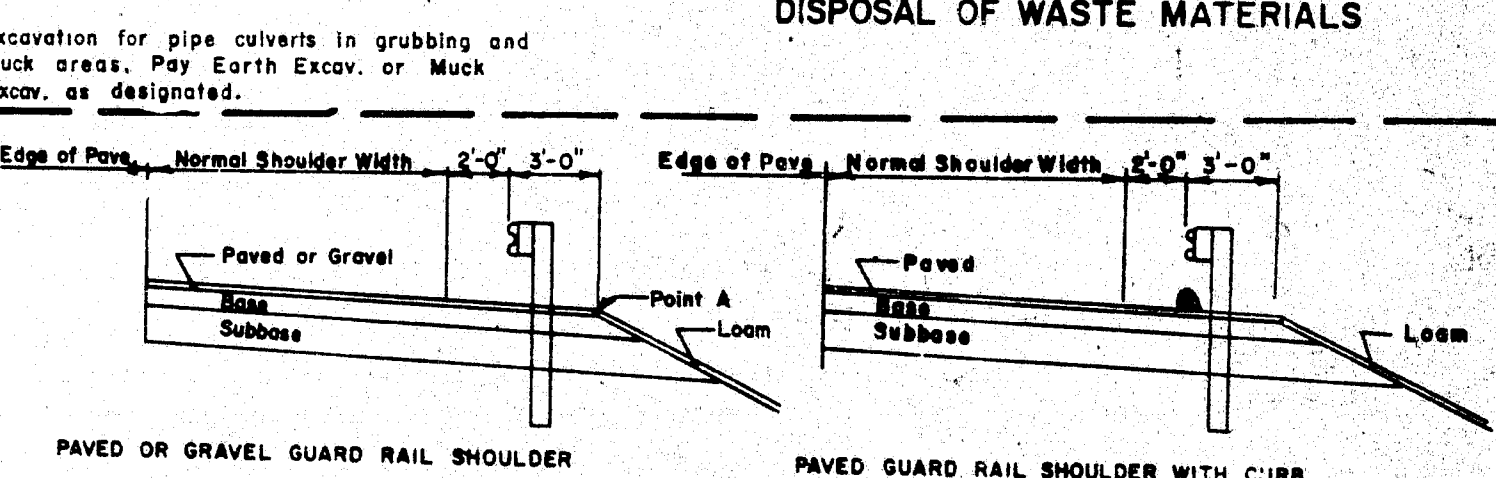
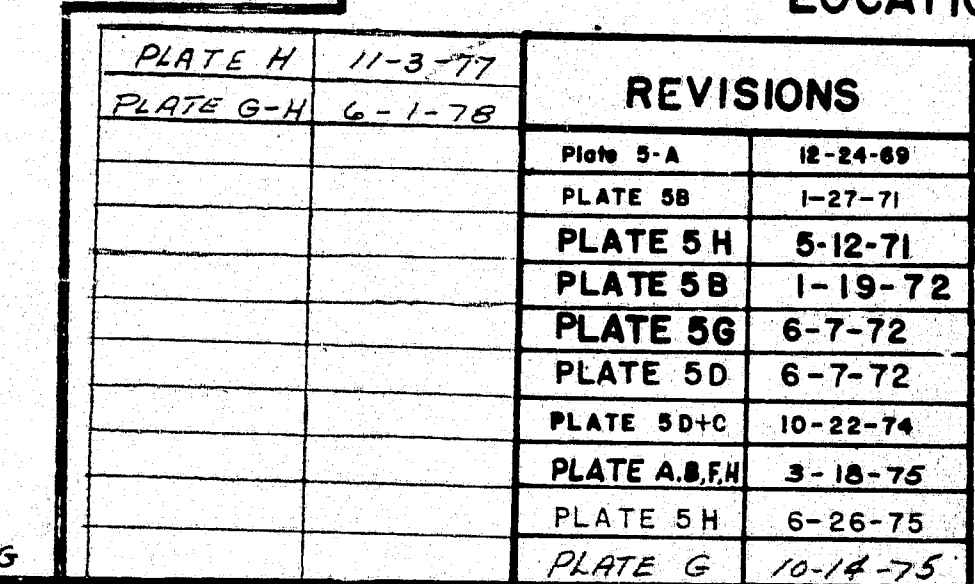
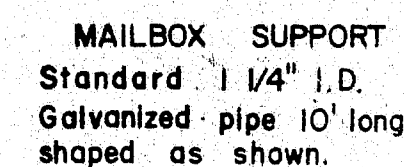
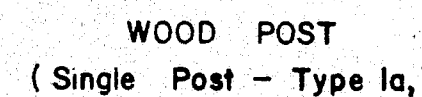
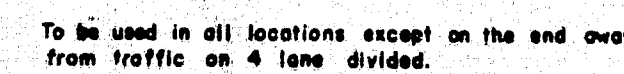
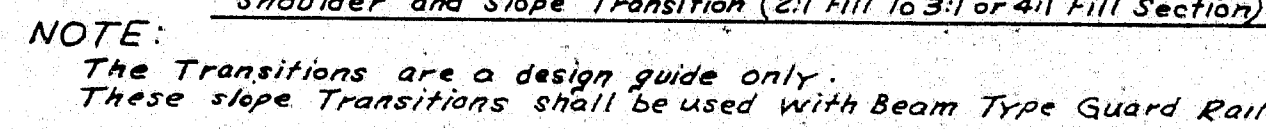
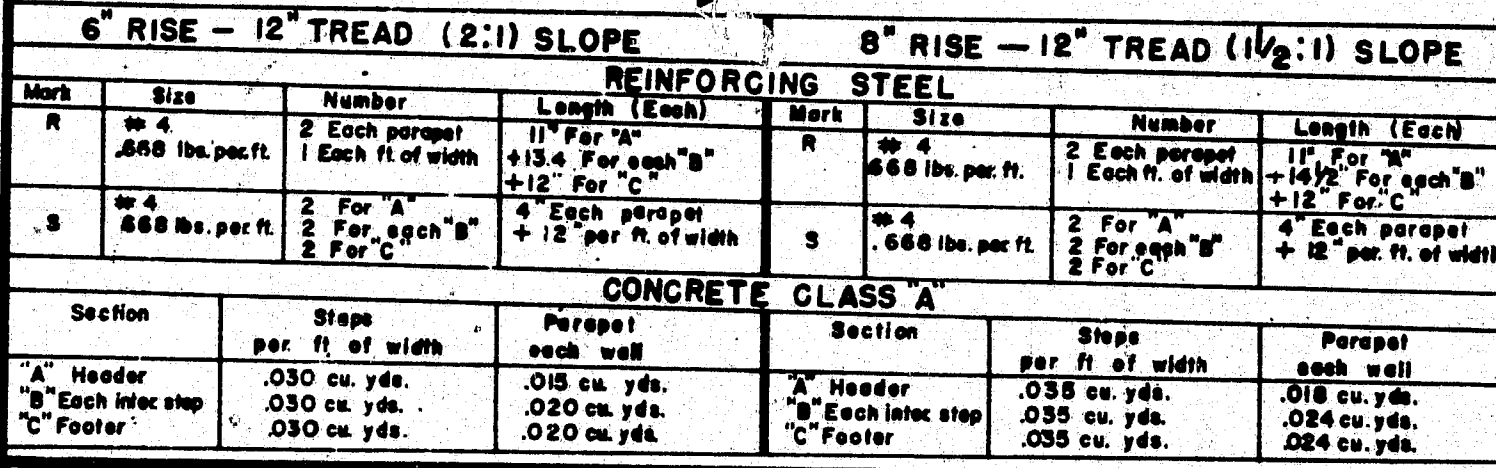
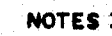
STANDARD DETAILS

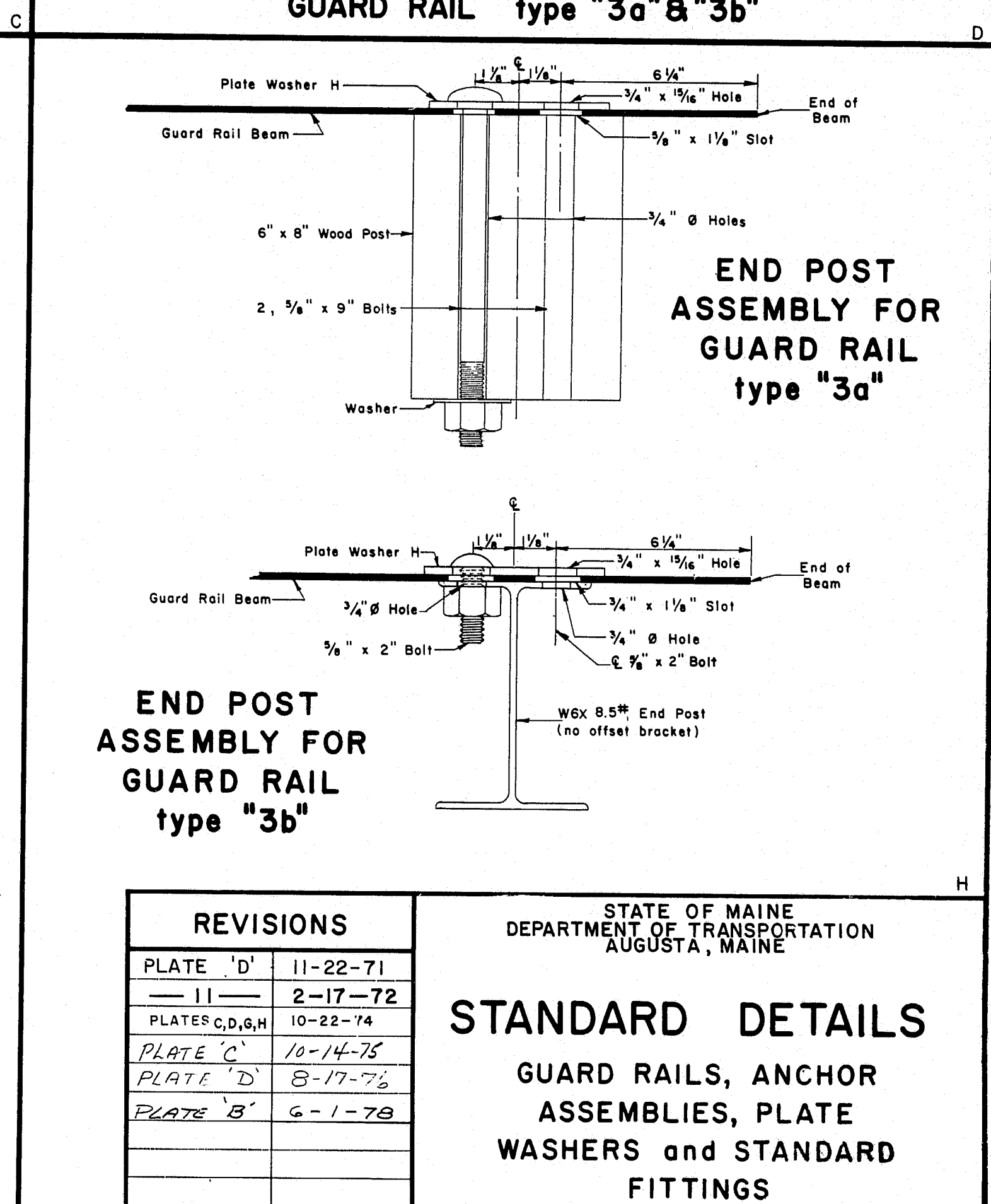
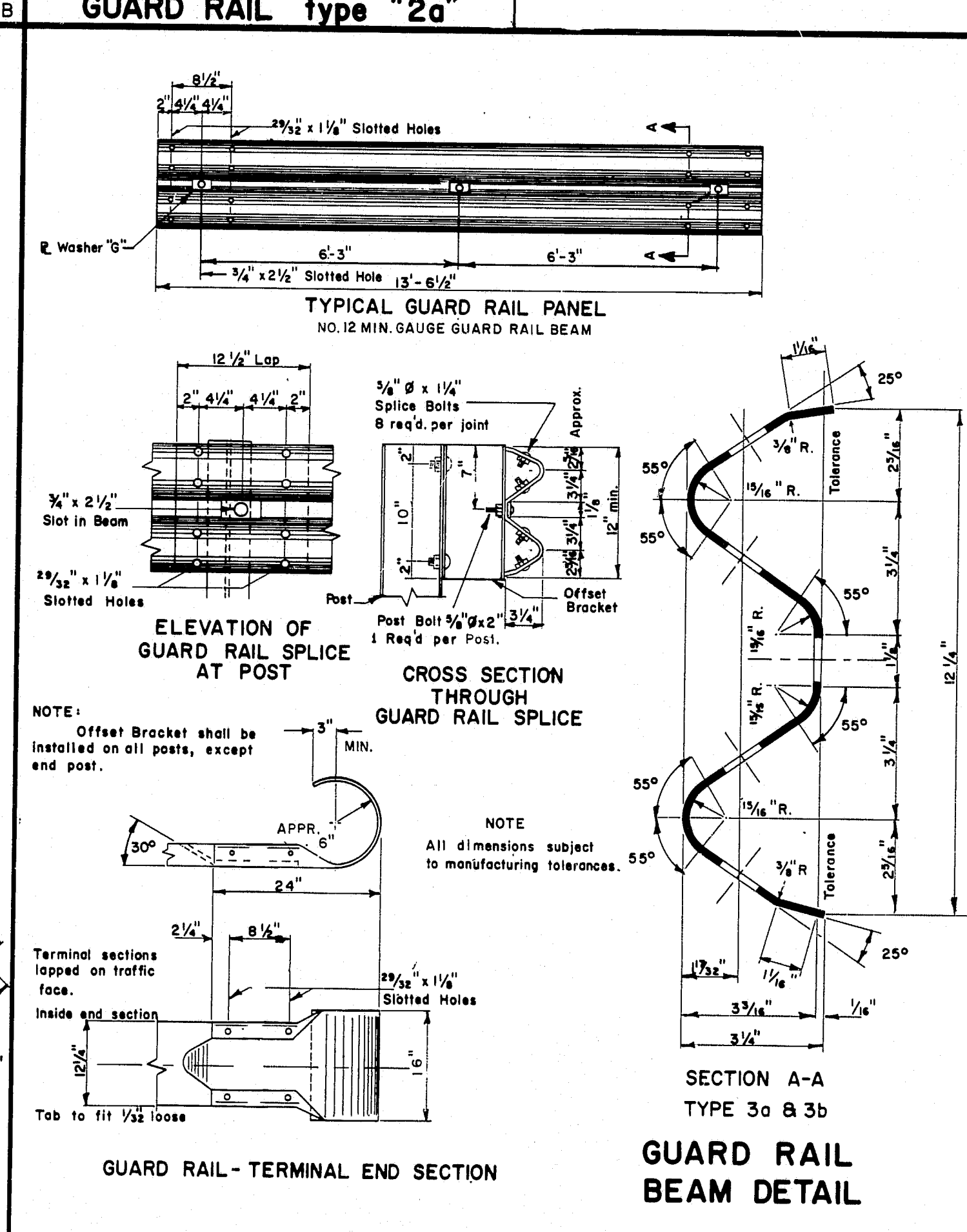
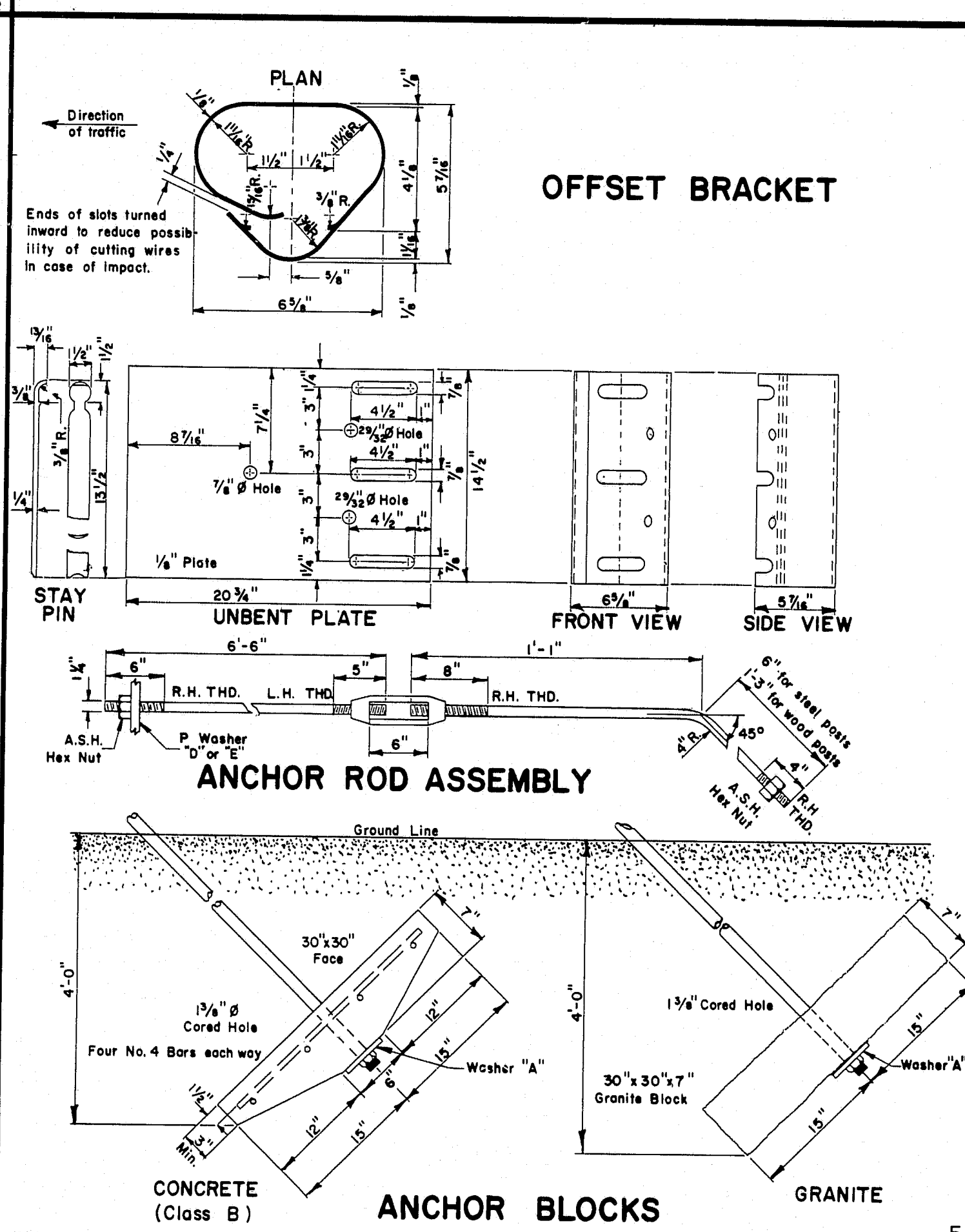
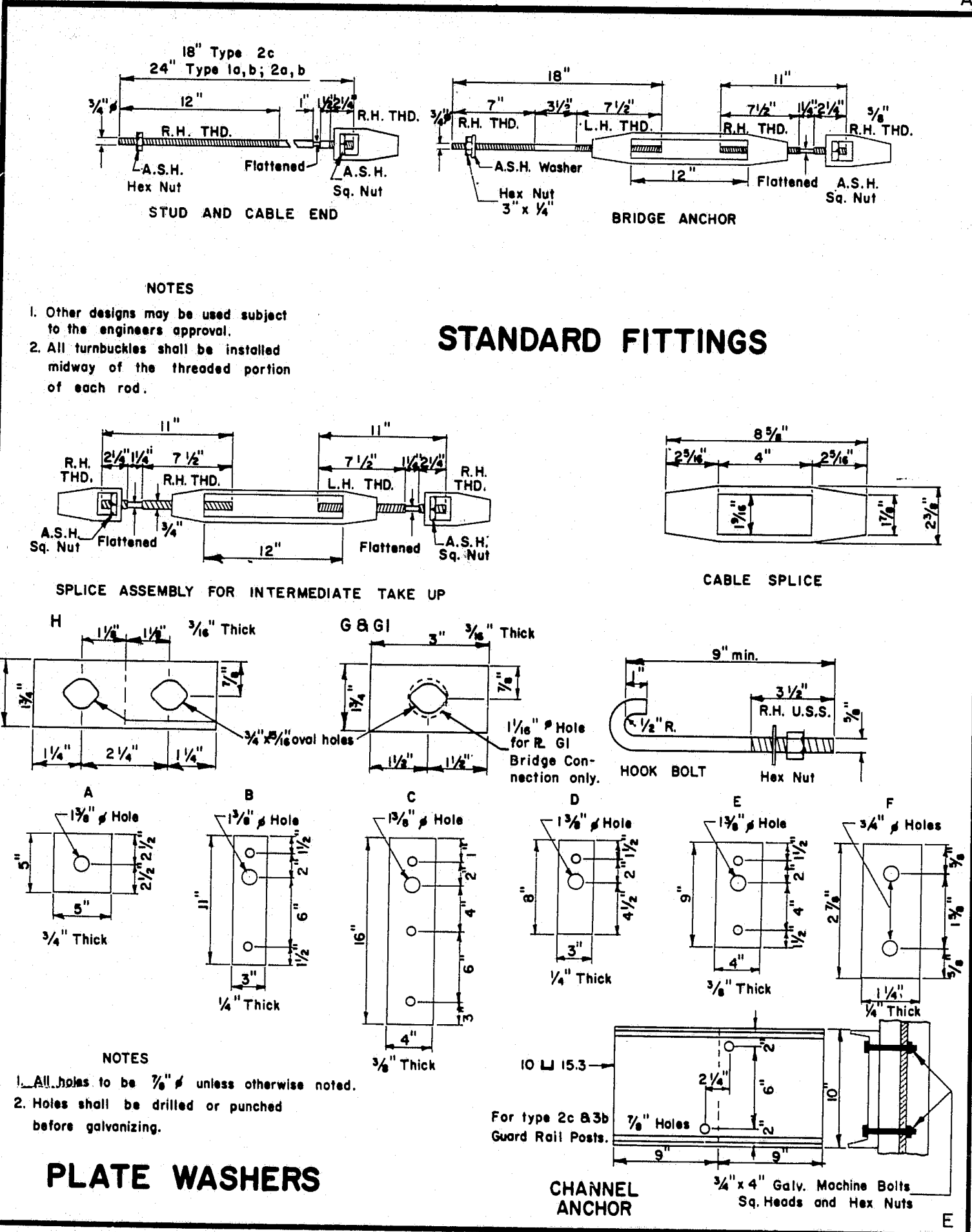
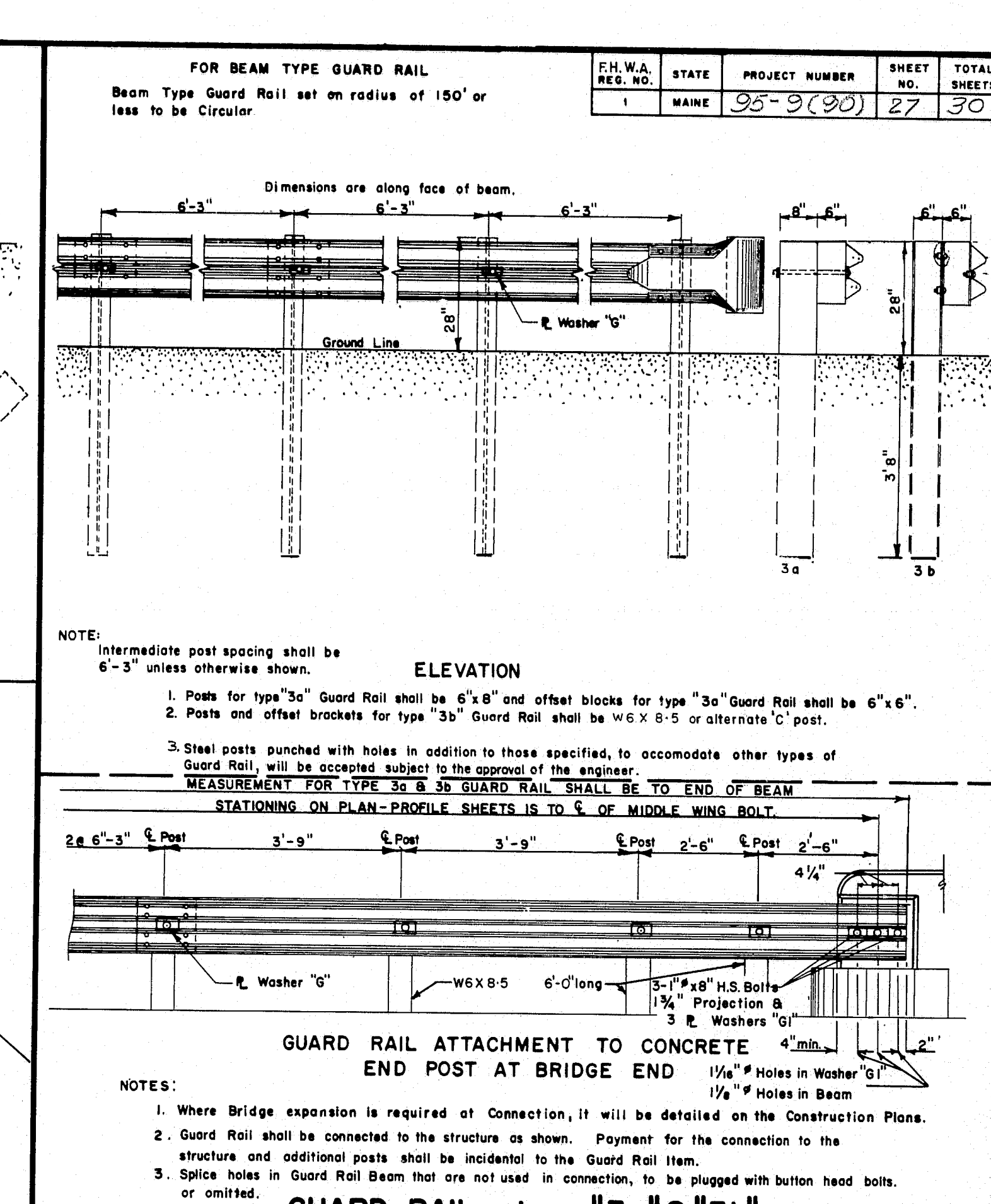
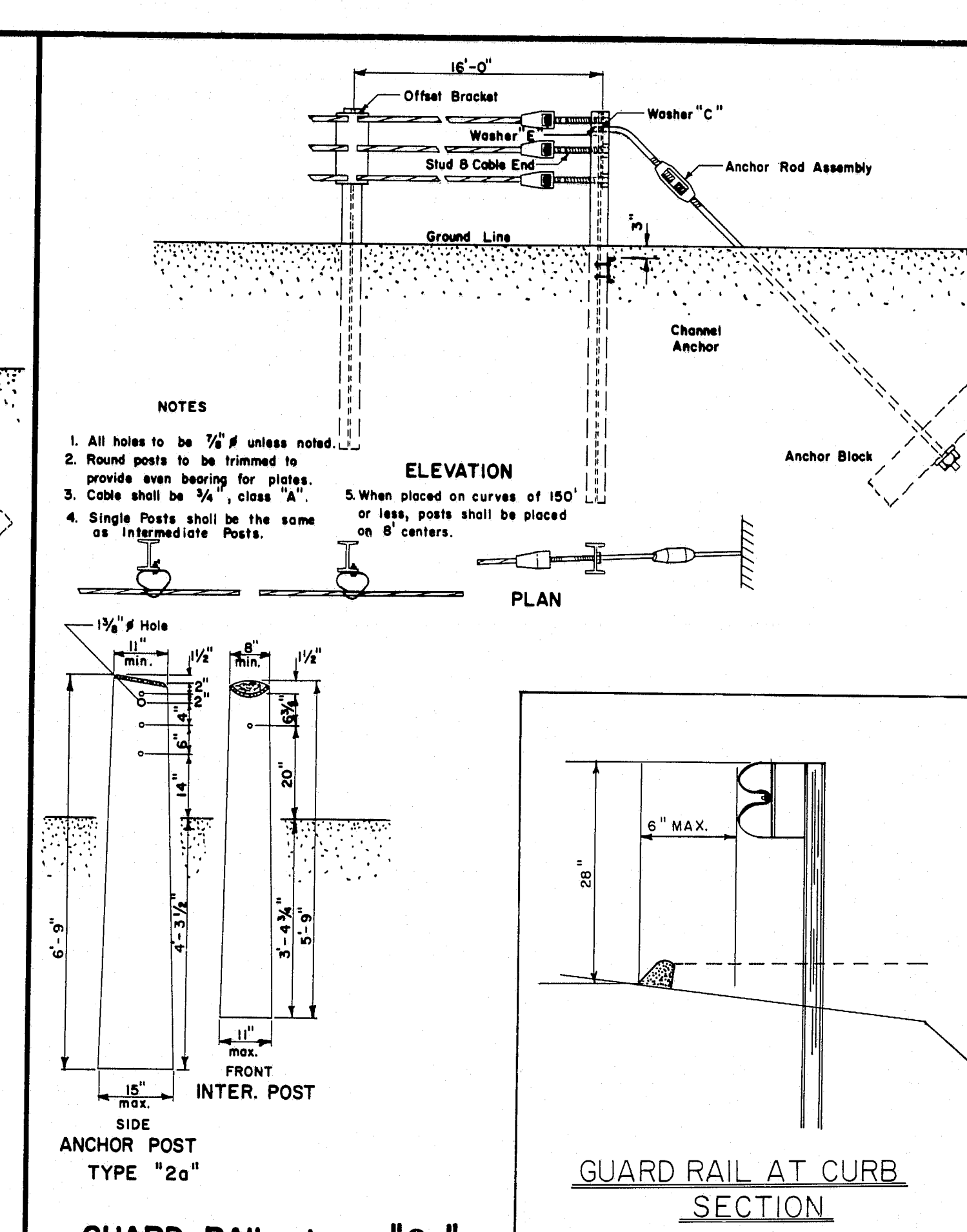
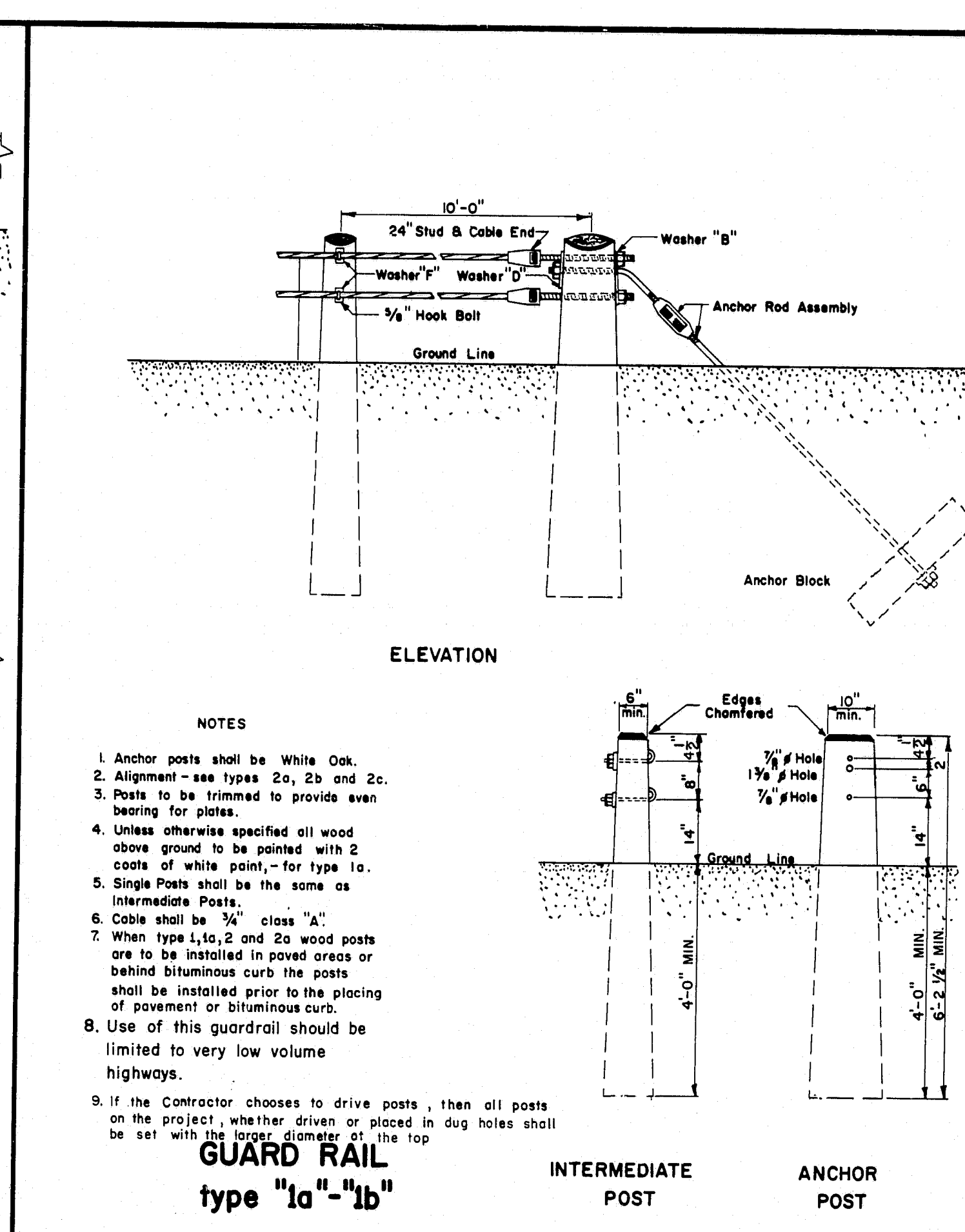
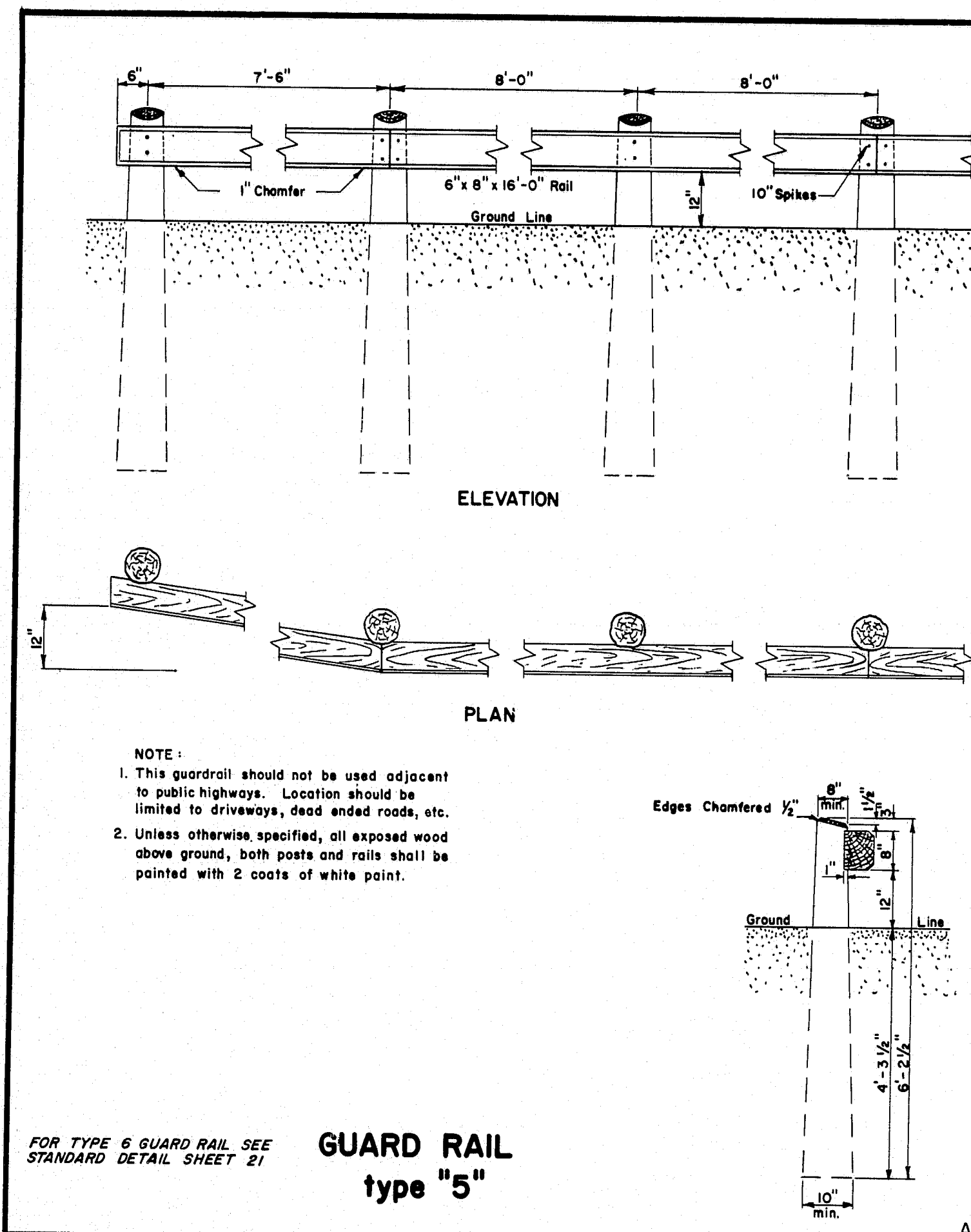
CATCH BASINS
AND
MANHOLES

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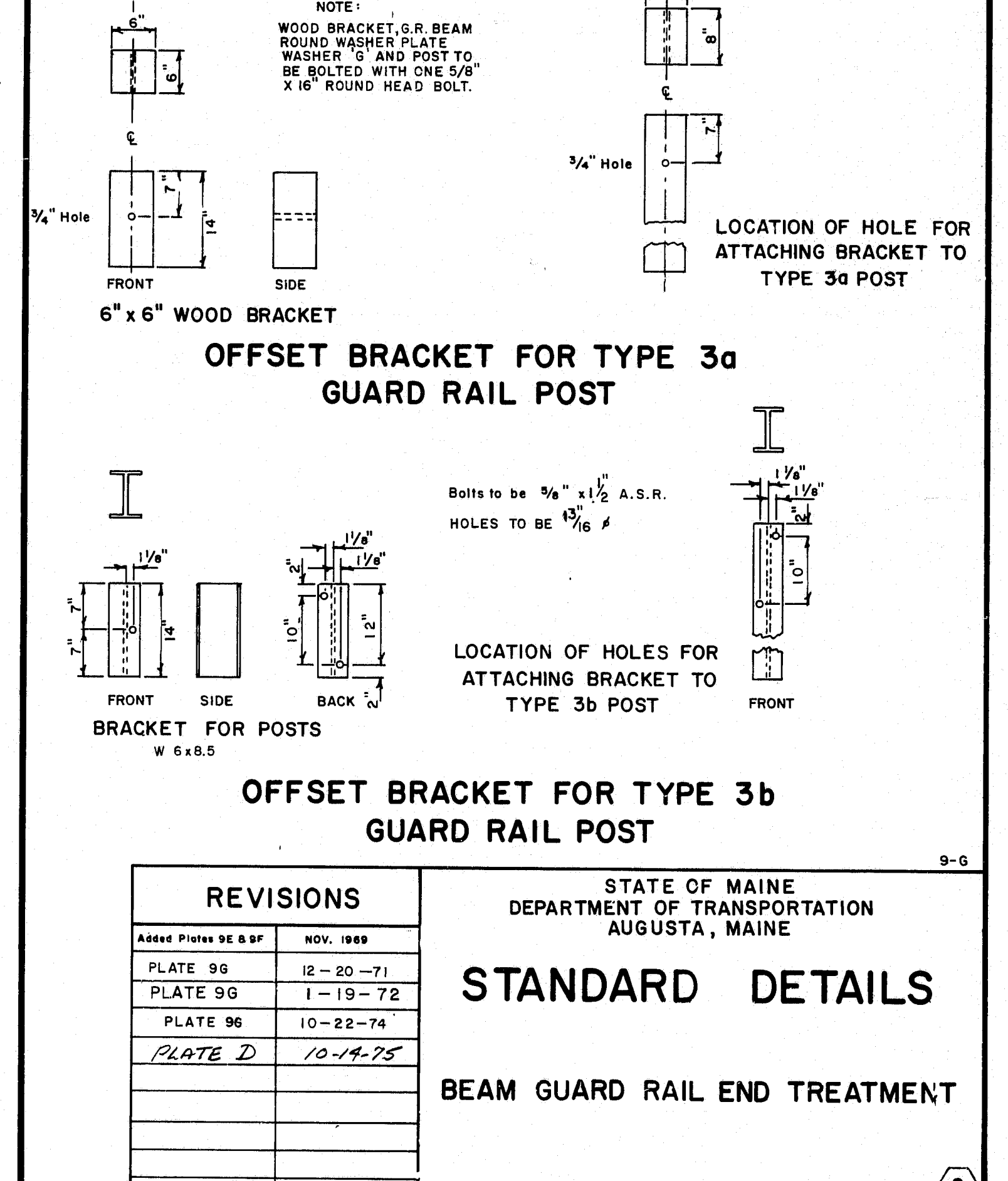
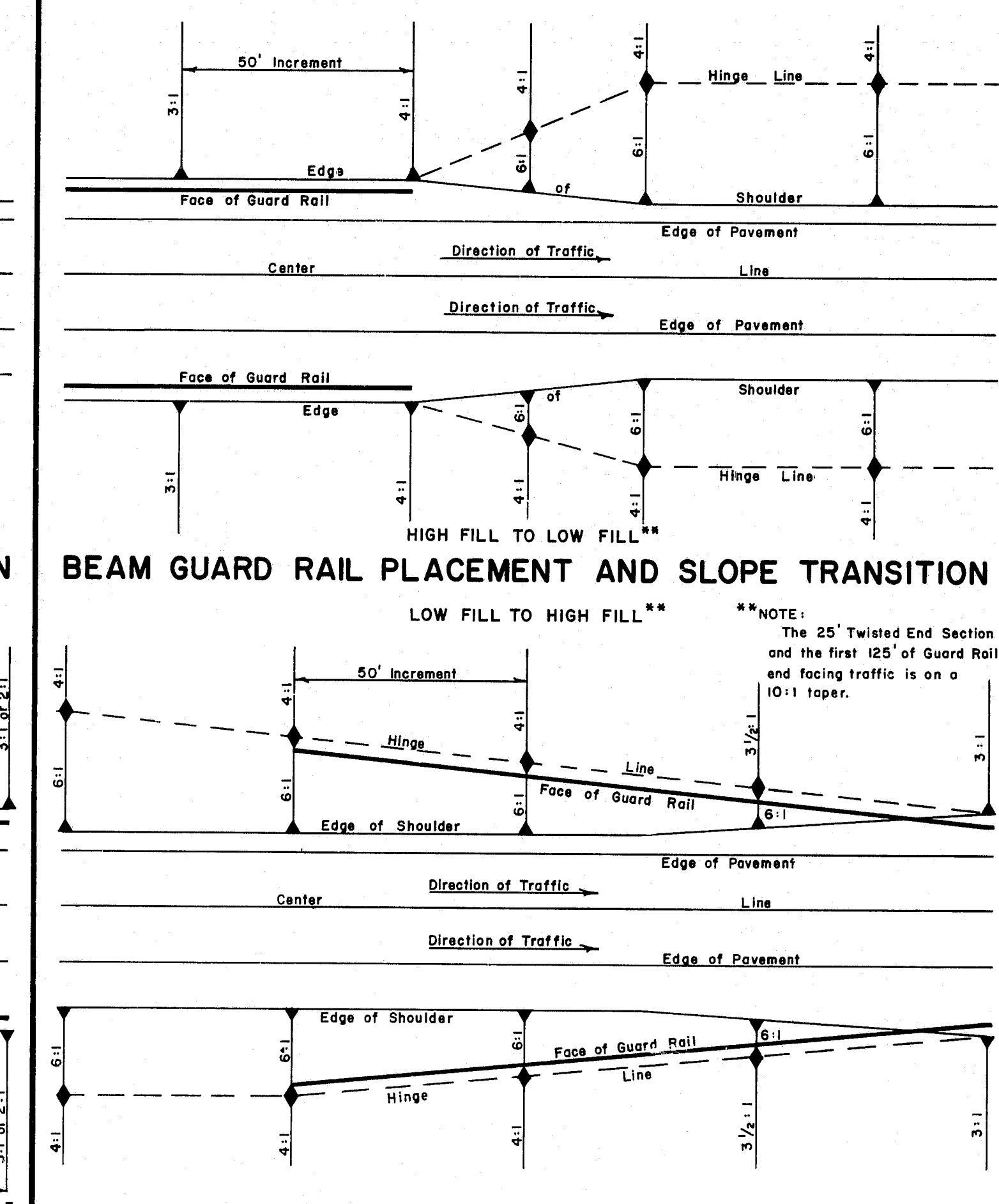
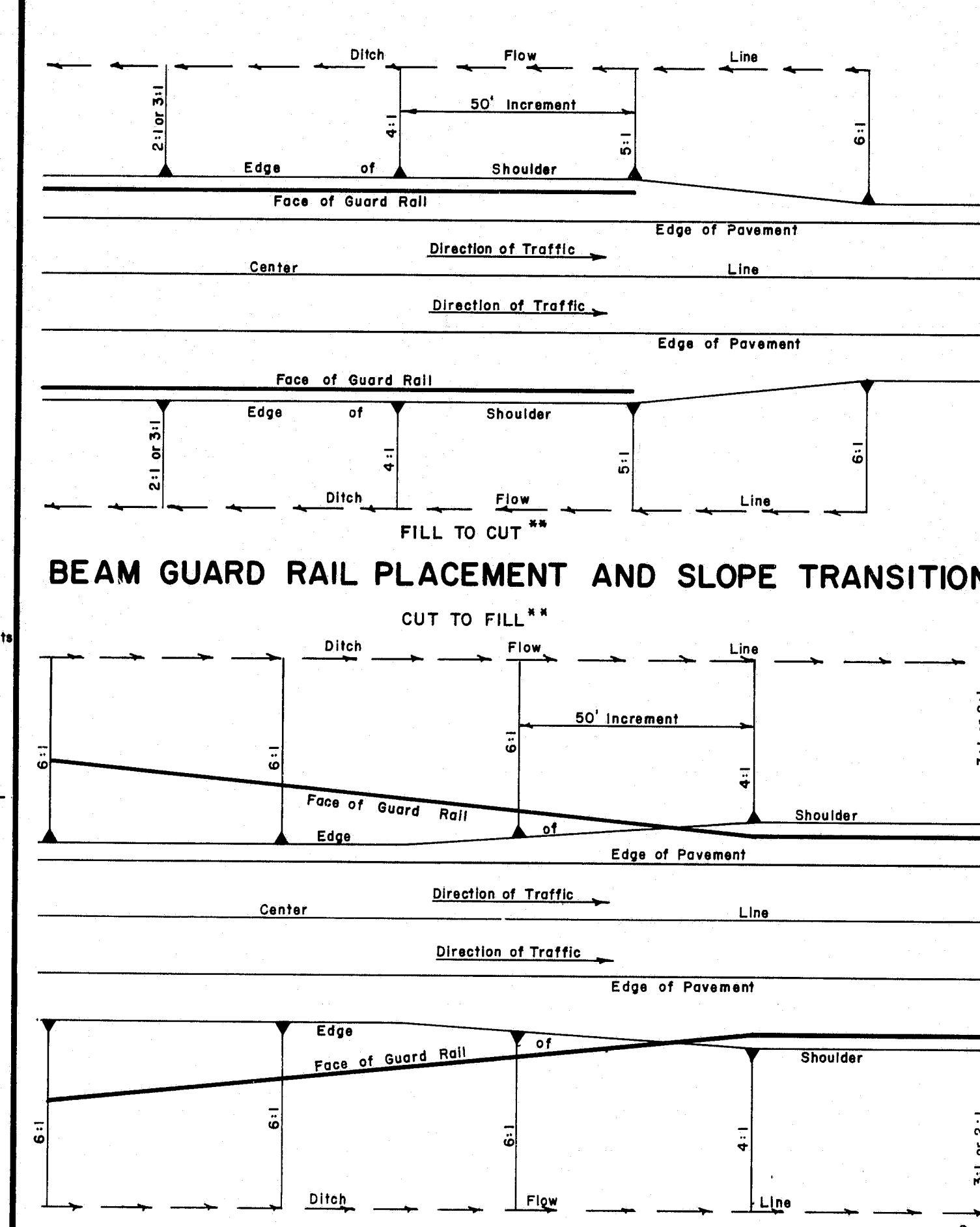
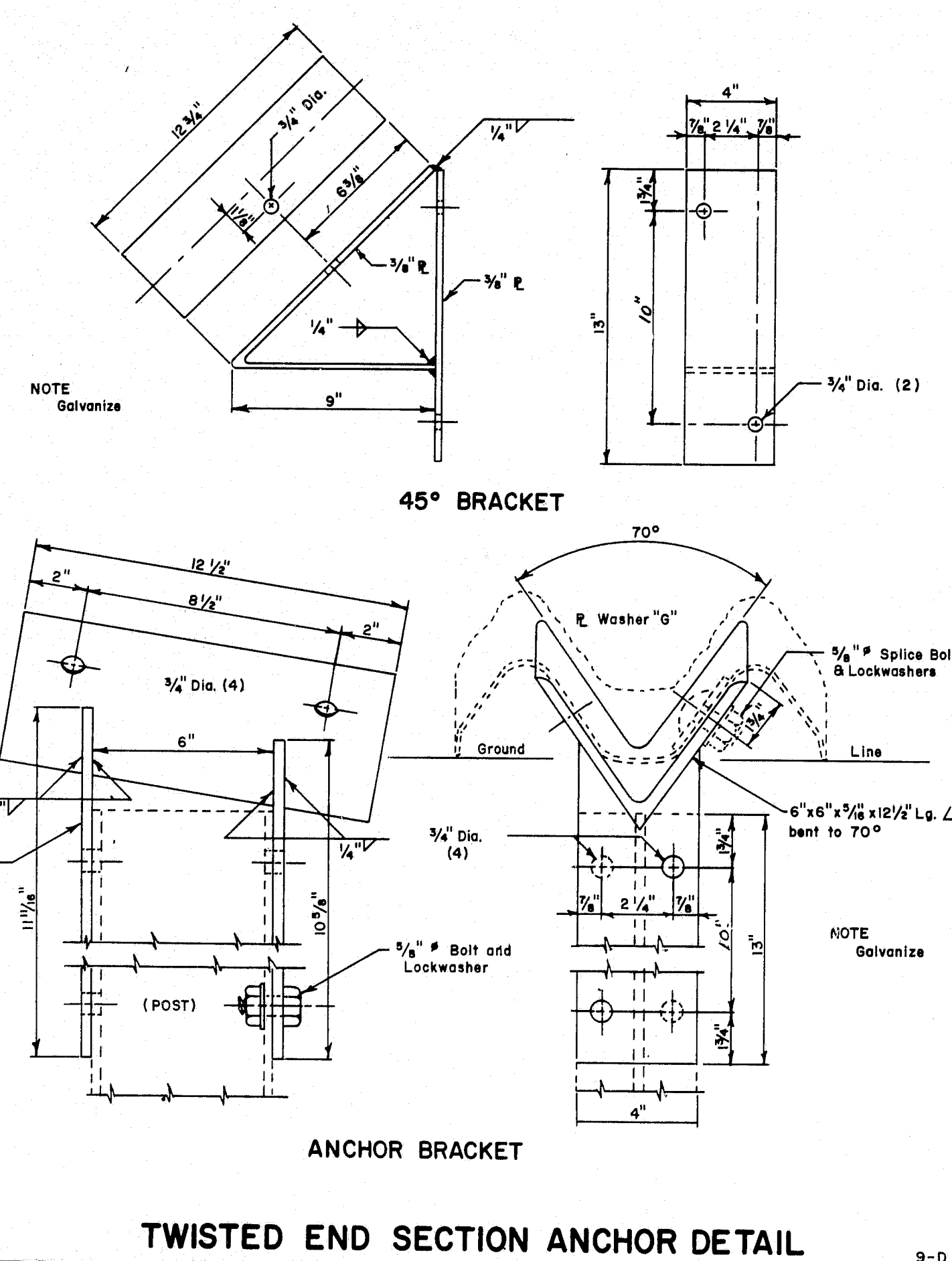
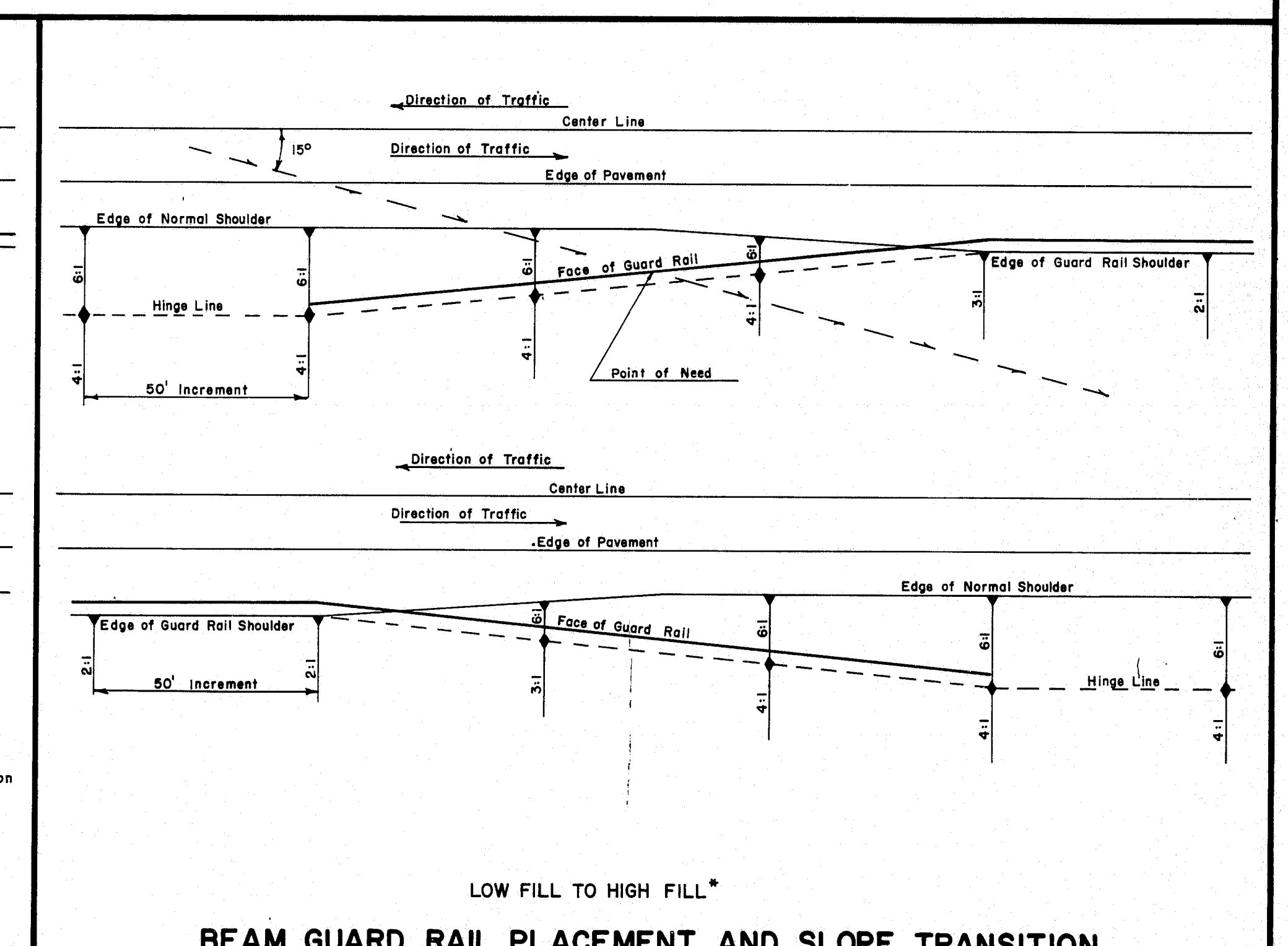
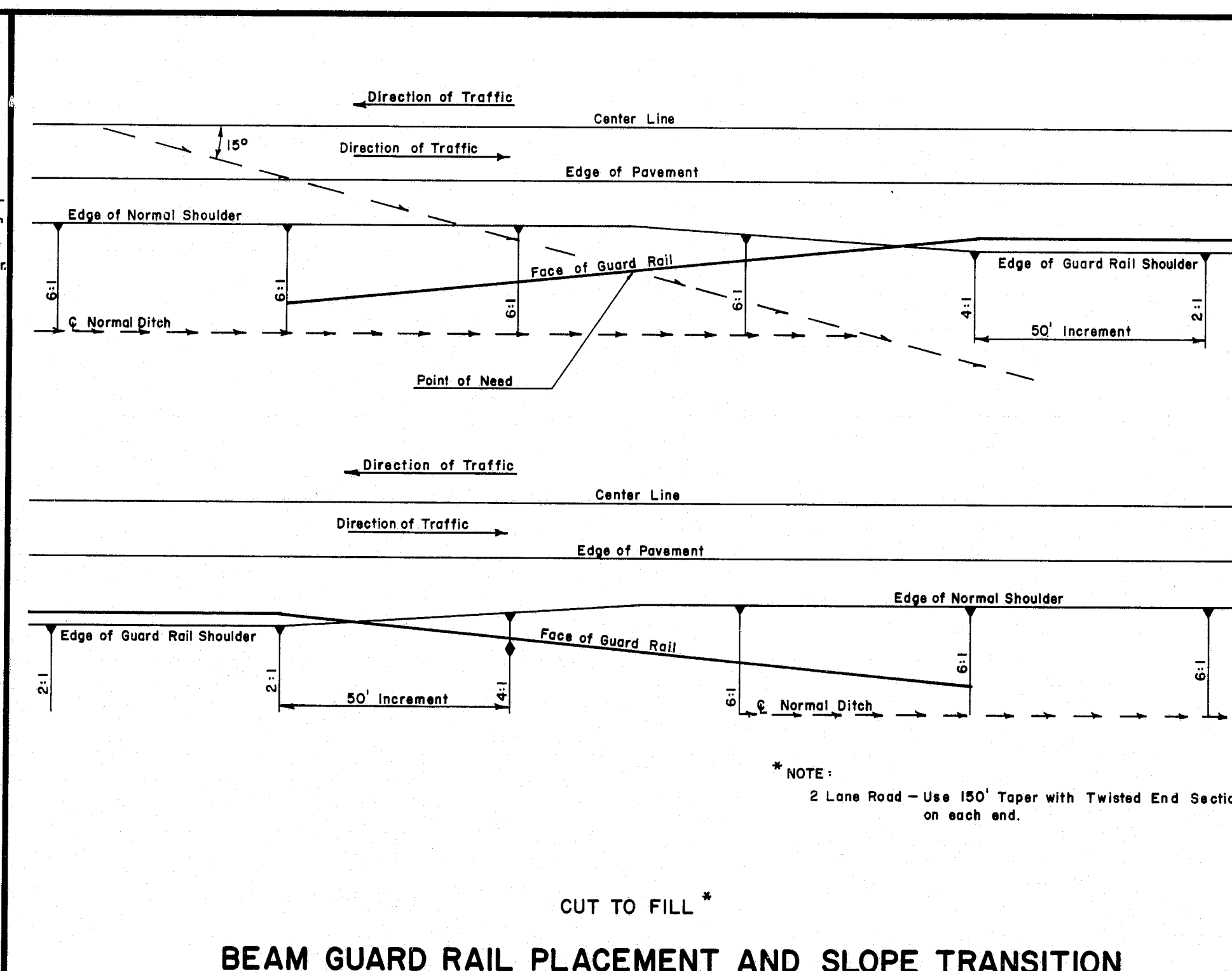
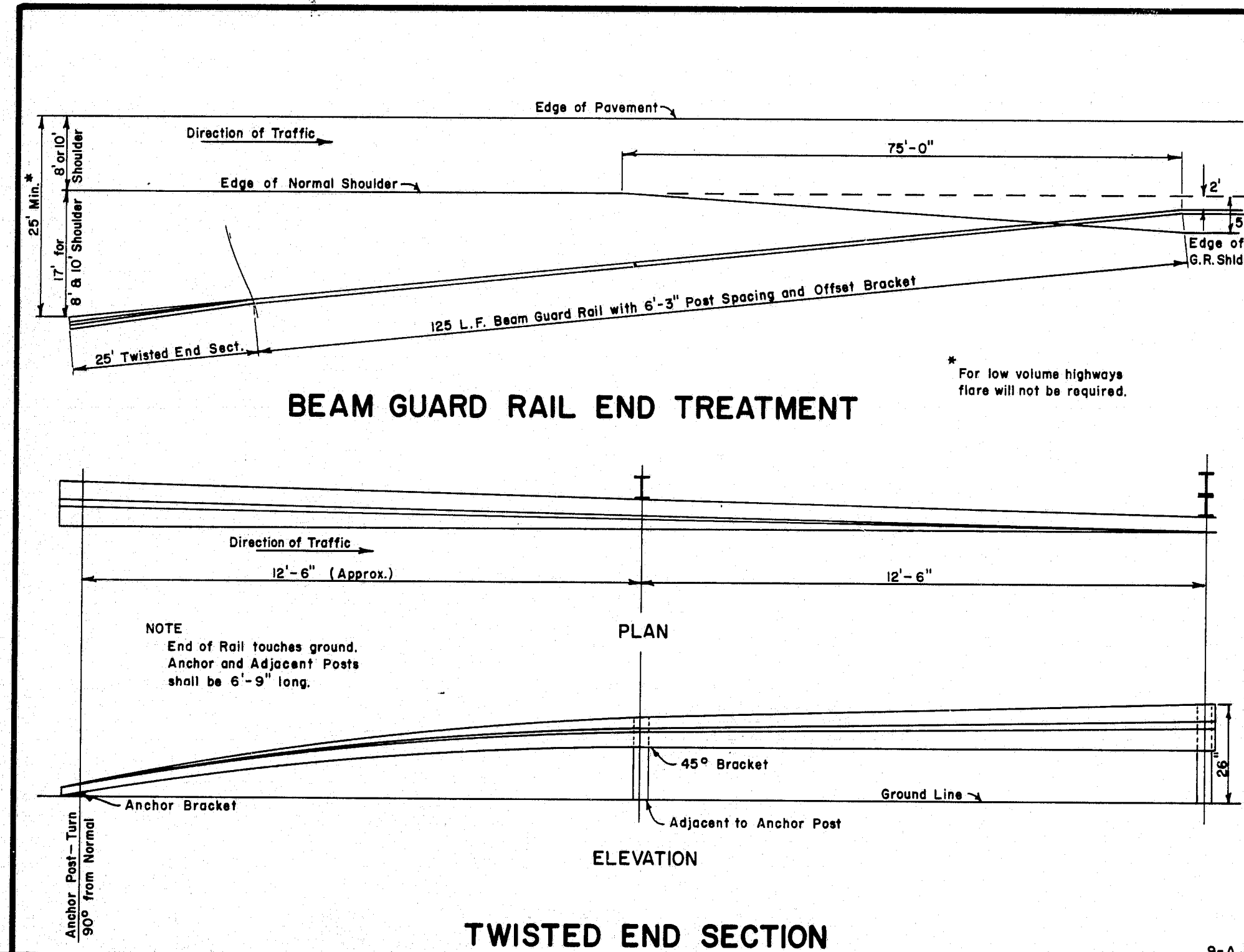
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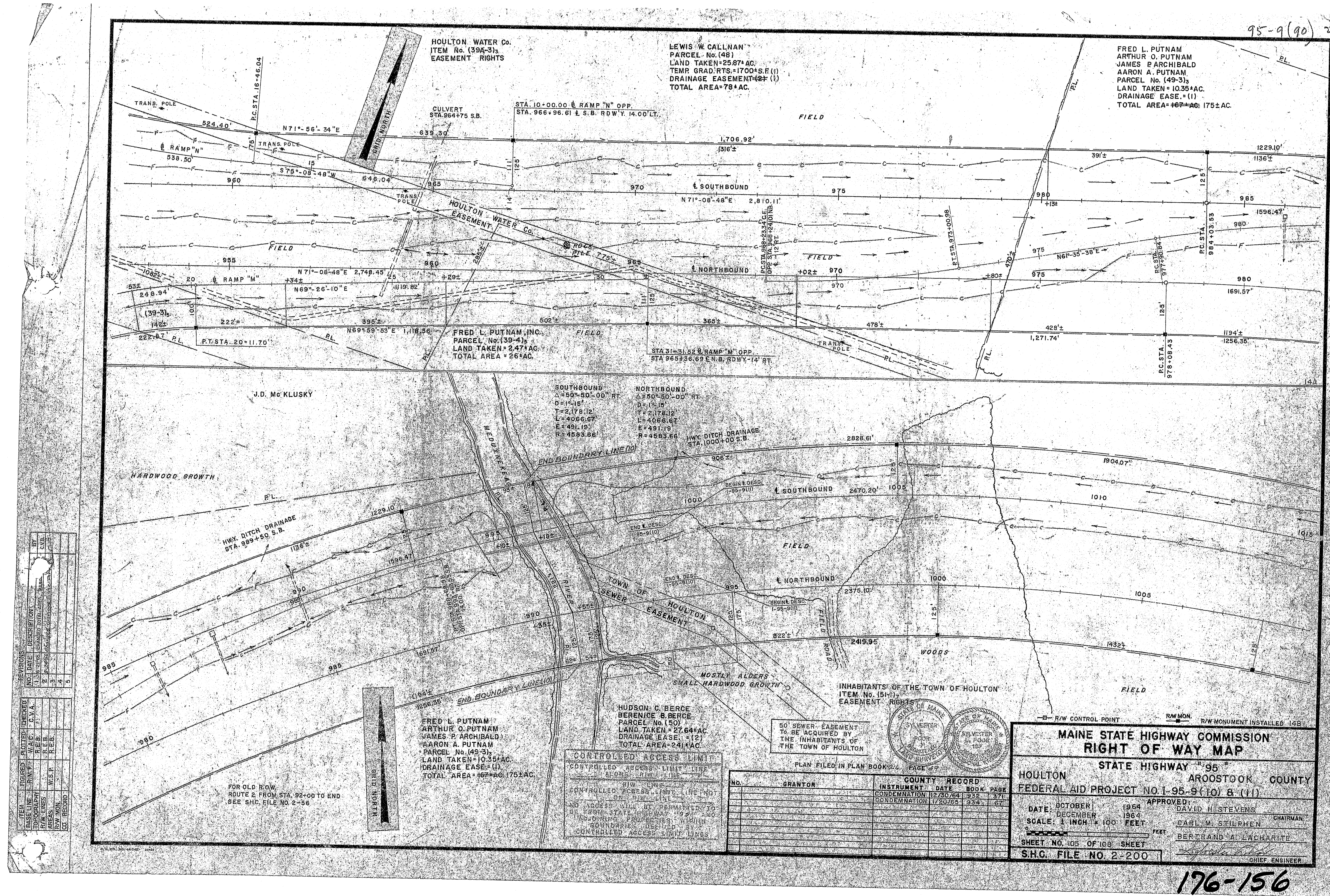




REVISIONS		STATE OF MAINE DEPARTMENT OF TRANSPORTATION AUGUSTA, MAINE	
PLATE 'D'	11-22-71	STANDARD DETAILS GUARD RAILS, ANCHOR ASSEMBLIES, PLATE WASHERS and STANDARD FITTINGS	Sheet 27 of 30 AUG. 1969
PLATE 'C'	2-17-72		
PLATE 'D'	10-22-74		
PLATE 'C'	10-14-78		
PLATE 'B'	6-1-79		

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REVISIONS	NO.	DATE	DESCRIPTION	BY	CHKD.
1	10/15/64	10/15/64	10/15/64	10/15/64	10/15/64
2	10/15/64	10/15/64	10/15/64	10/15/64	10/15/64
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10	10/15/64	10/15/64	10/15/64	10/15/64	10/15/64