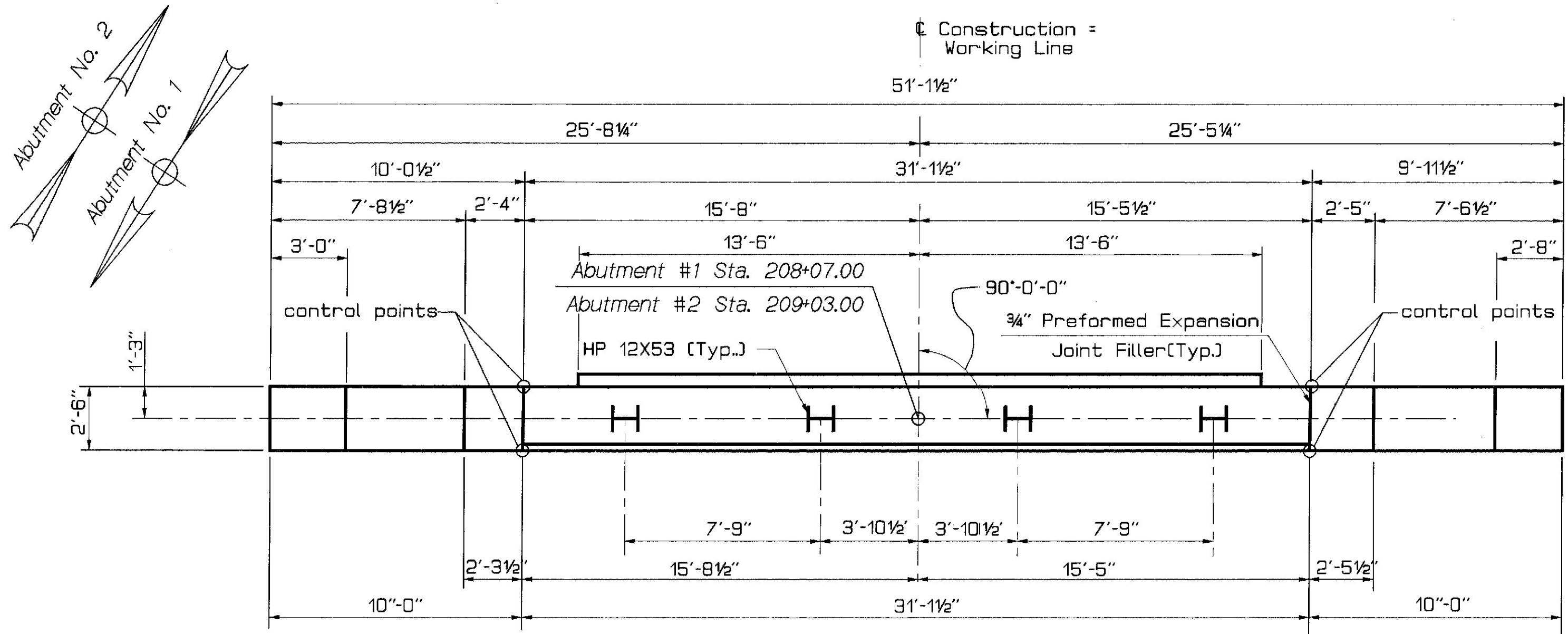
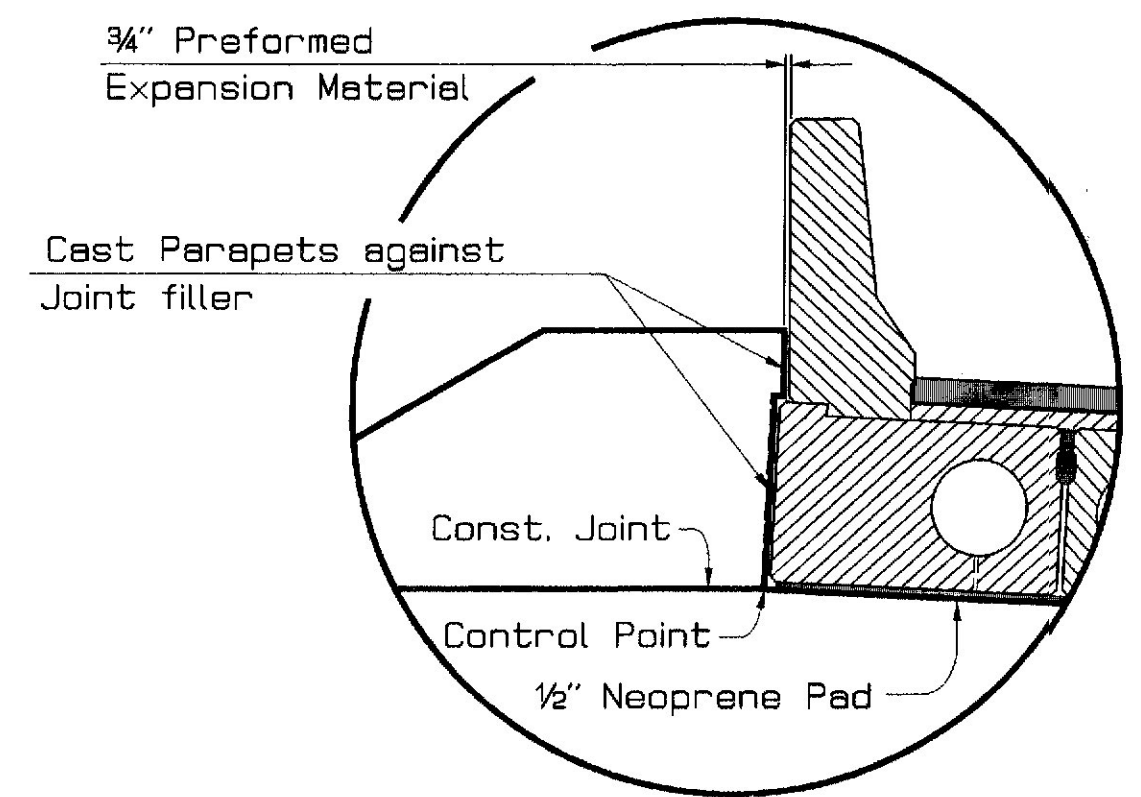


F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-032-2(13)X	17	46

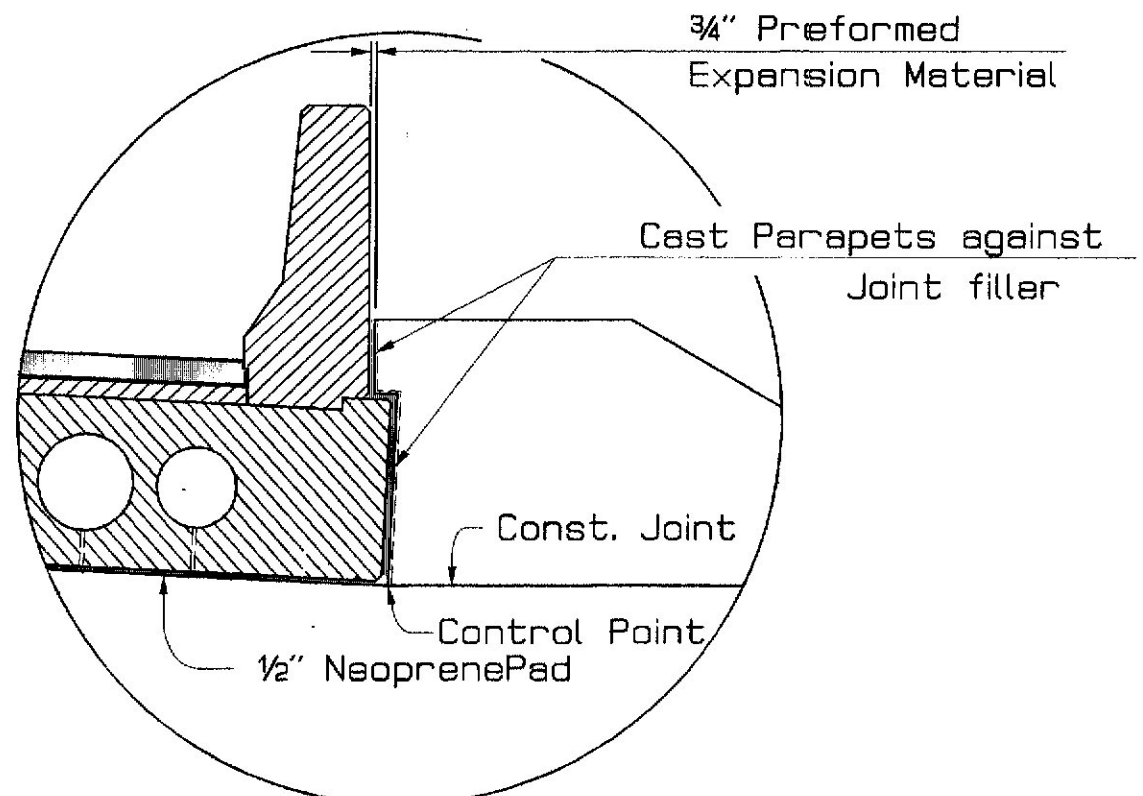


PLAN

[Abutment #1 shown]
[Abutment #2 Symmetrical about C Pier]



DETAIL A



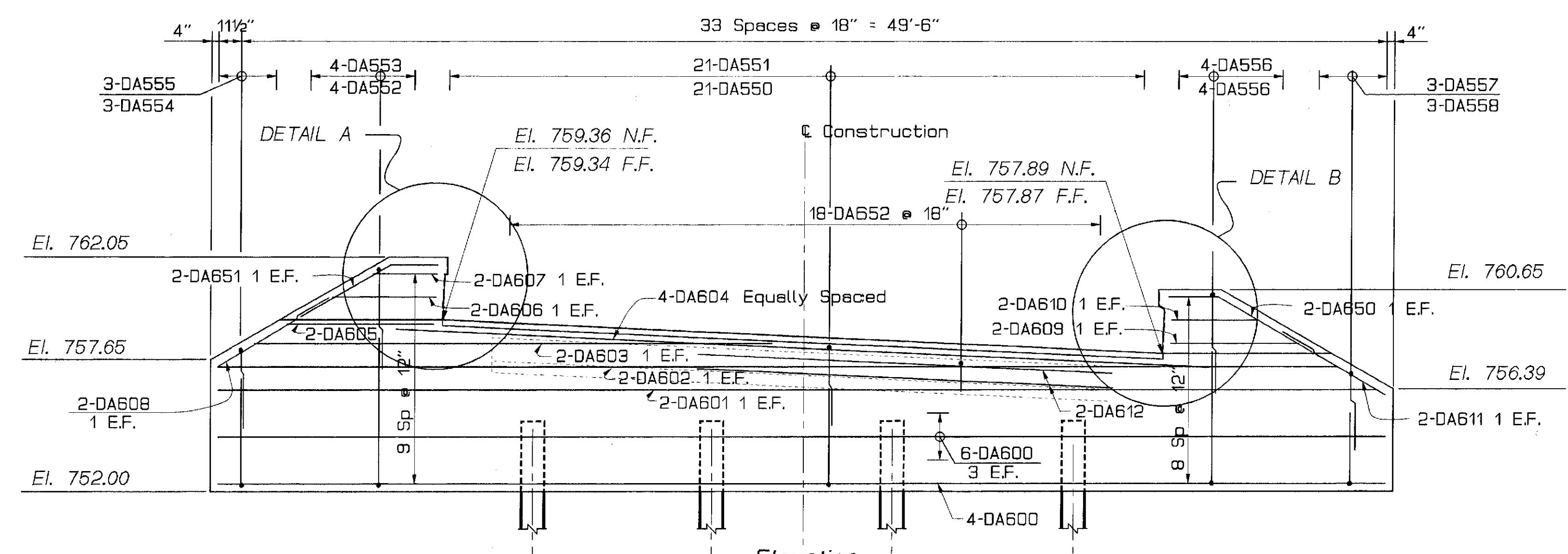
DETAIL B

ABUTMENT NOTES

- 1.....Reinforcing steel shall have 2 inches cover unless noted otherwise.
- 2.....All exposed concrete shall have a 1" chamfer unless noted otherwise.
- 3.....Protective coating for concrete surfaces shall be applied to all exposed surfaces of concrete abutments.
- 4.....The top portion of the abutments shall be placed after the erection of the prestressed beams. Payment incidental to Item 504.16, Bridge Structure.
- 5.....Anchor rods for the prestressed beams shall be drilled and anchored after the beams are erected. Place reinforcement steel in the bridge seat to clear drilling for anchor rods.

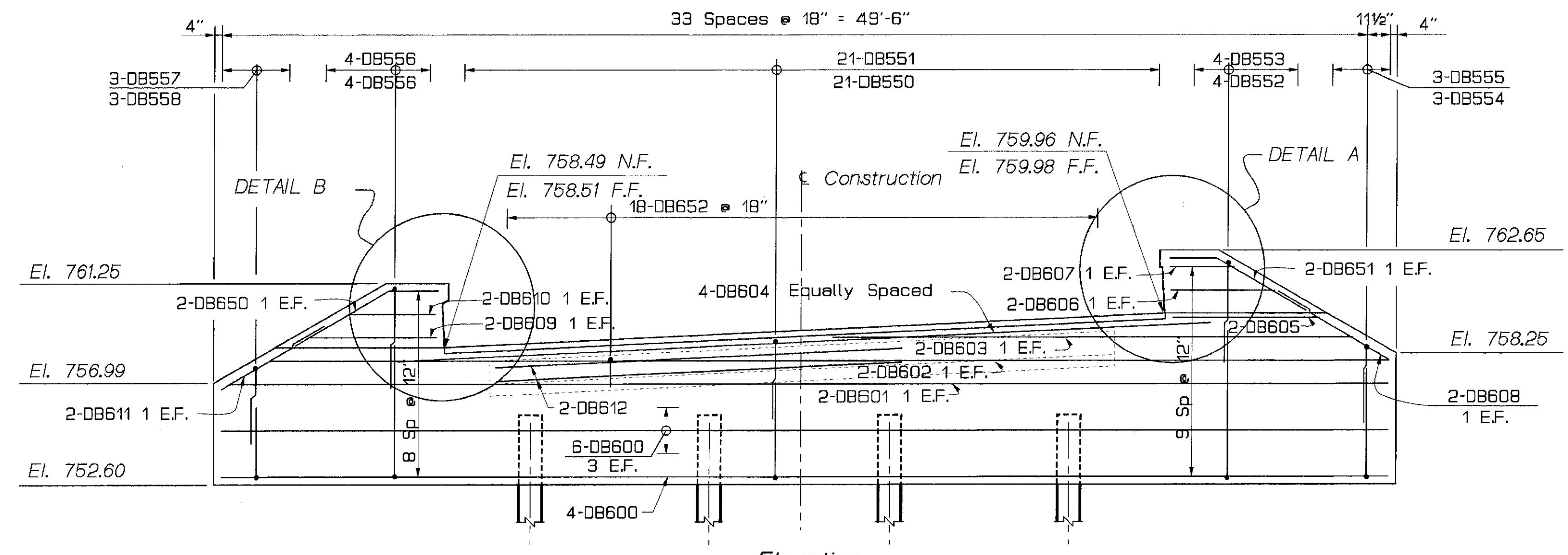
PILE NOTES

- 1.....The design pile load equals 85 tons. The required safety factor is 3.
- 2.....Piles shall not be out of position shown by more than three inches in any direction.
- 3.....For pile splices see BD501-93 of the standard details.
- 4.....Steel piles shall conform to ASTM A709 - Grade 50.
- 5.....Estimate of piles required:
Abutment No. 1 - 4 HP 12X53 @ 40'
Abutment No. 2 - 4 HP 12X53 @ 45'
- 6.....HP 13 x 53 bearing piles may be substituted for HP 12X 53 bearing piles at the option of the Contractor.
- 7.....A wave equation analysis shall be completed by the Contractor and submitted to the Engineer for approval. No direct payment for the wave equation analysis will be made.



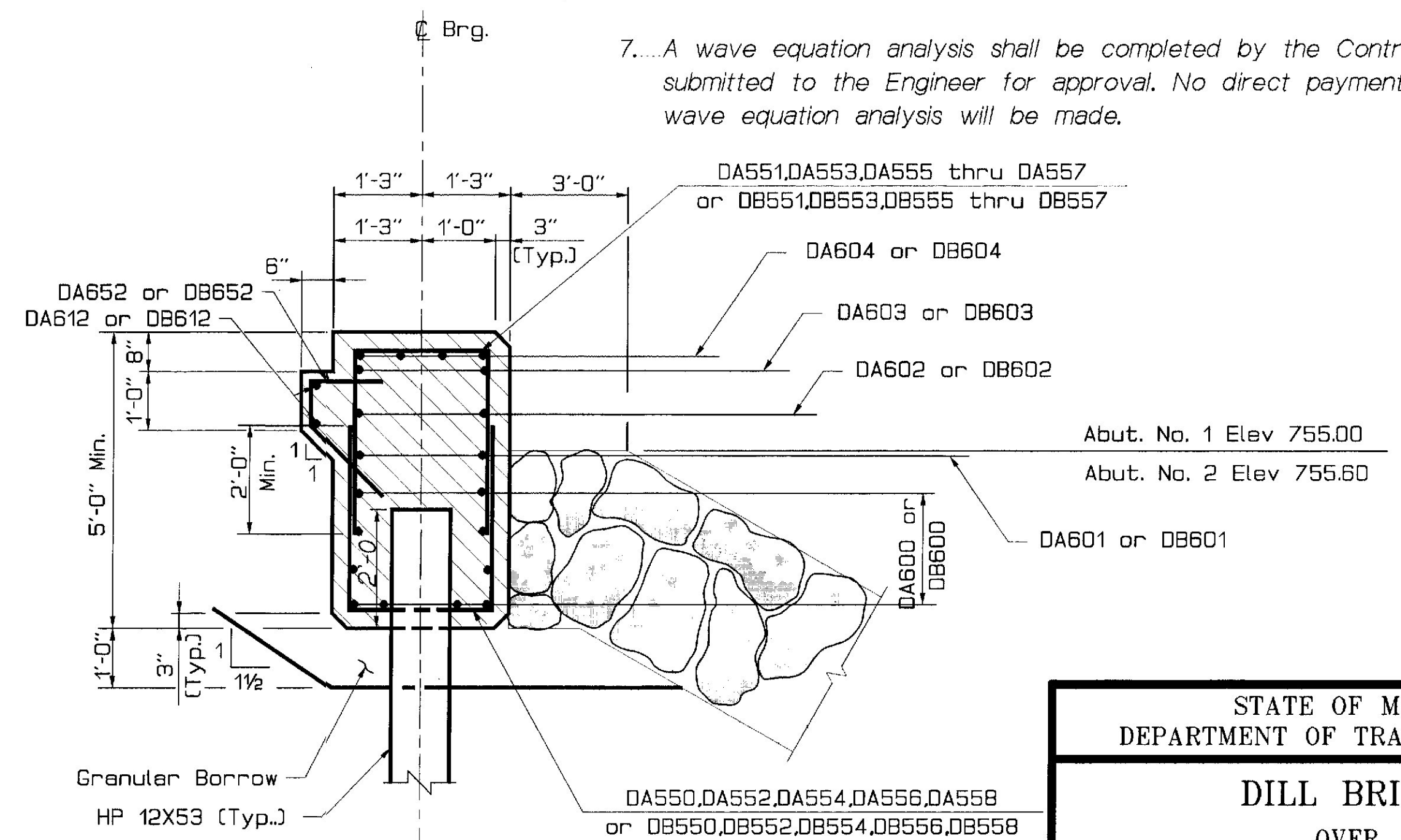
Elevation

(Abutment #1)



Elevation

(Abutment #2)



Abutment Section

Dill Bridge - Abutment Reinforcing
Abutment No. 1 DA5XX
Abutment No. 2 DB5XX

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

DILL BRIDGE
OVER
SOUTH BRANCH SANDY RIVER
IN THE TOWN OF
PHILLIPS
FRANKLIN COUNTY
ABUTMENTS

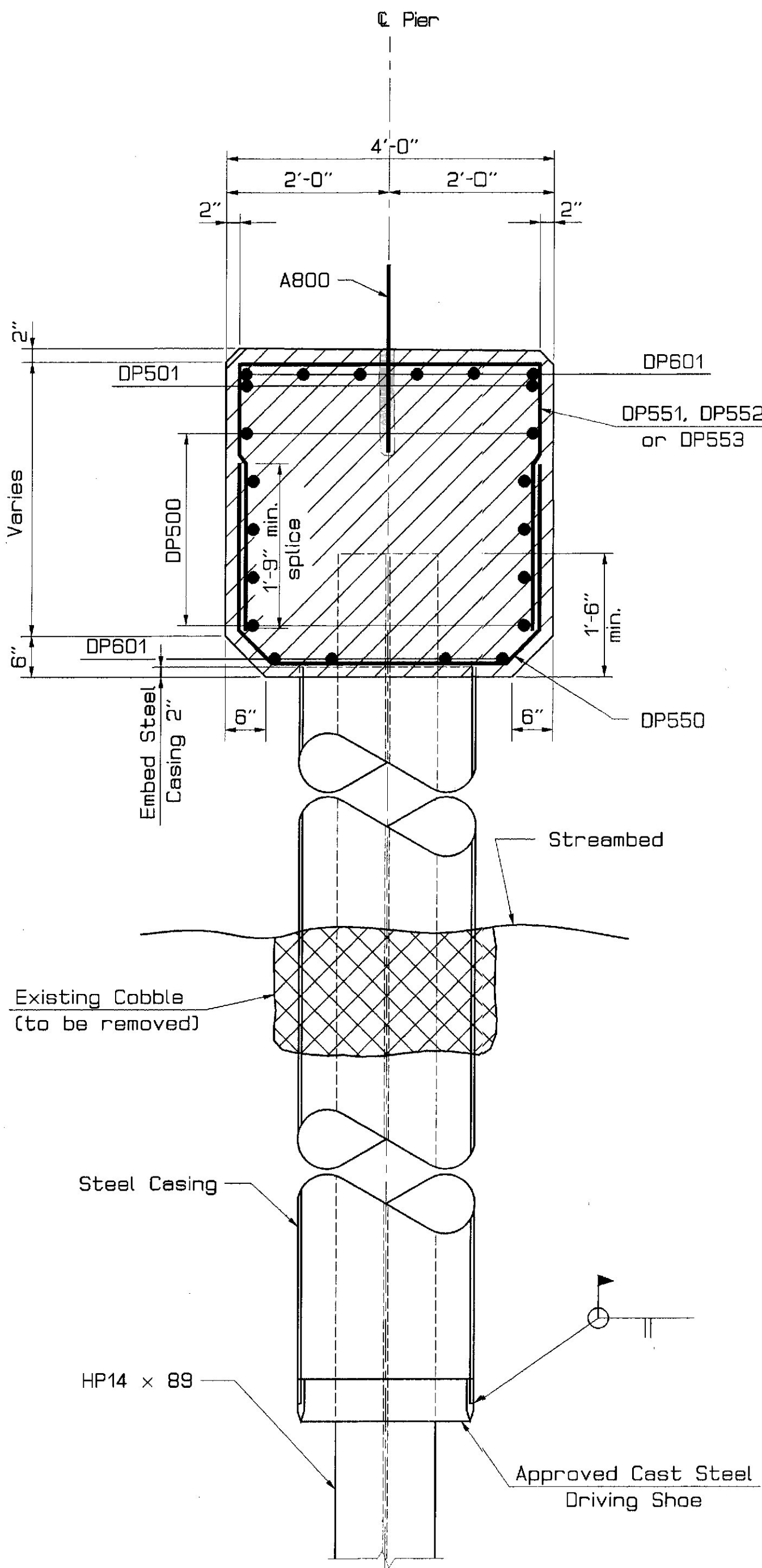
PROJECT DESIGN ENGINEER	DATE
BY: R/V/Nomend	4-97
DESIGN-DETAILED	
CHECKED	
REVISIONS	
FIELD CHANGES	

16APR97-15:06:10
ABUTMENTS

F.H.V.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-032-2(19)X	16	16

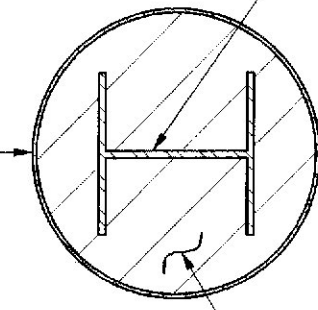
PIER NOTES

1. Reinforcing steel shall have 2 inches minimum cover unless otherwise noted.
2. Design Criteria:
Critical AASHTO LRFD Load Combination Extreme Event II
Buoyancy - Water level assumed at Elevation 755.3(Q50)
Stream Flow - Velocity of 5.8 feet per second skewed at 10 degrees to longitudinal centerline of pier.
Wind - 100 miles per hour.
Ice - 18 inches thick producing 16 ksi ice pressure skewed at 10 degrees to longitudinal centerline of pier, with water level at Elev. 755.3(Q50).
3. Both Weap and Dynamic Analysis of the piles is required. A Wave Equation Analysis of the pile driving equipment shall be completed by the Contractor and submitted to the Engineer for approval. No direct payment for the Wave Equation Analysis will be made as the work will be considered incidental to related contract items.
4. H-piles shall be driven to ledge or practical refusal. Pipe piles shall be driven to Elevation 735.0.
5. All H-piles shall have cast steel prefabricated pointed pile tips equipped with cutting teeth.
6. Estimated driven lengths of piles are determined from available soils information with no allowance for uncertain pile penetration.
7. Piles marked thus  shall be battered 3 1/2 inches per foot in the direction of the arrow.
8. The required ultimate pile capacity of each HP14 x 89 is 495 kips based on a design load of 220 kips. The safety factor is 2.25.
9. Estimate of piles required:
6 - HP14 x 89 @ 40 feet.
4 - 1/2" x 26" O.D. steel casing piles @ 20.2 feet.
2 - 1/2" x 26" O.D. steel casing piles (battered) @ 21.5 feet.
10. Holes shall be drilled in the pipe piles and H-piles to allow for placement of the reinforcing steel bars. Payment will be considered incidental to Item 503.13, Reinforcing Steel, Placing. Holes shall not be drilled until the piles are in their final location.
11. Piles shall not be out of position by more than 2 inches in any direction from the location shown on the plans.
12. Steel Casings shall be driven in accordance with Supplemental Specification 501 and with an approved cast steel pipe pile driving shoe. All cast steel points shall conform to the strength requirements of ASTM A148 Grade 90-60.
13. Remove streambed cobble (18" to 24" max.) to facilitate the driving of piles. All excavation material shall be contained and prevented from entering the stream in a manner approved by the Engineer. Excavation outside the steel casings shall be backfilled with existing material or riprap, as approved by the Engineer. No direct payment will be made for excavation, backfilling, or containment, including construction of cofferdams, as the work will be considered incidental to the placing of the steel casing.



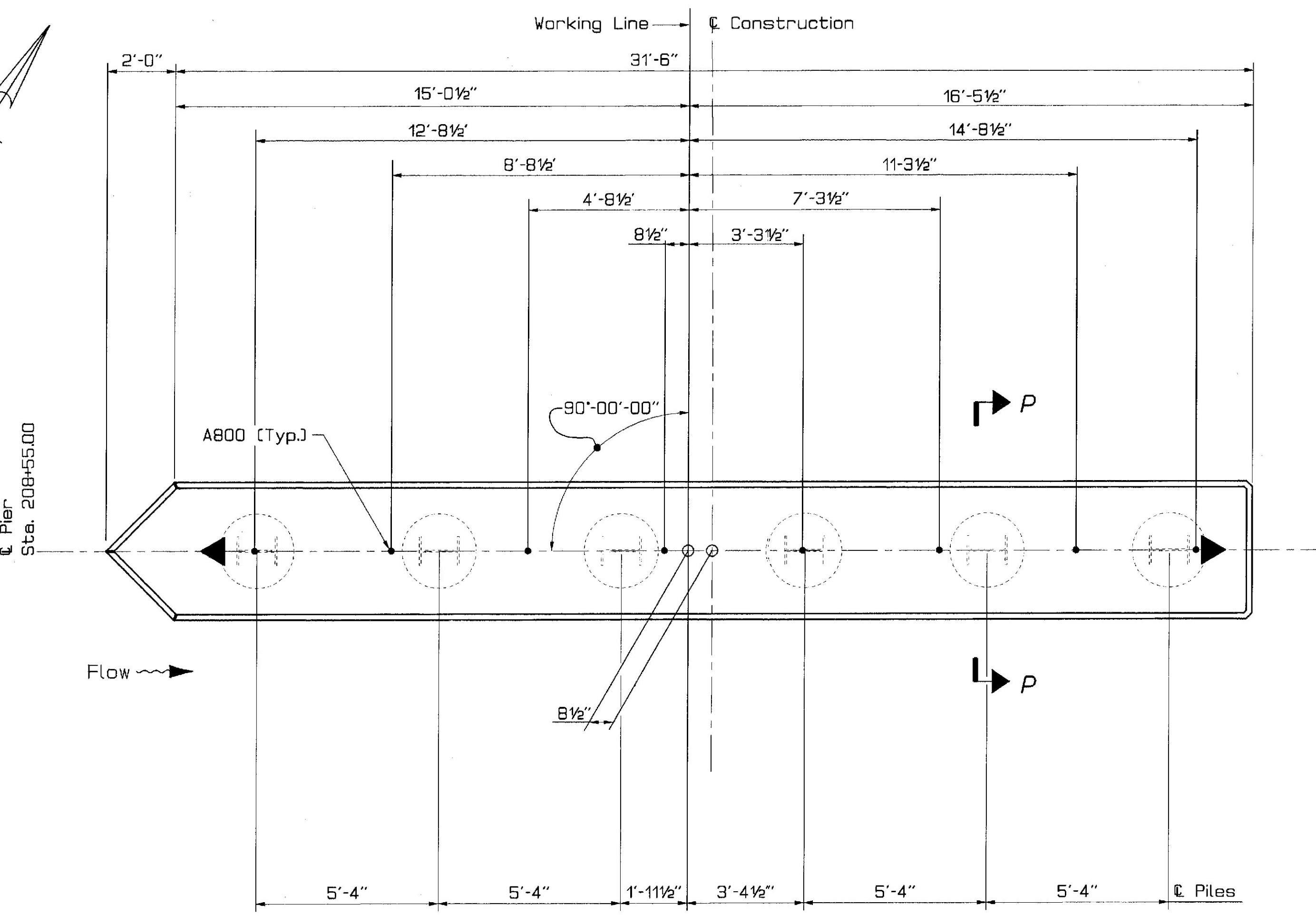
Section P - P

26" O.D. X 0.50" Thick
Pipe Pile with Pile
Protective Coating

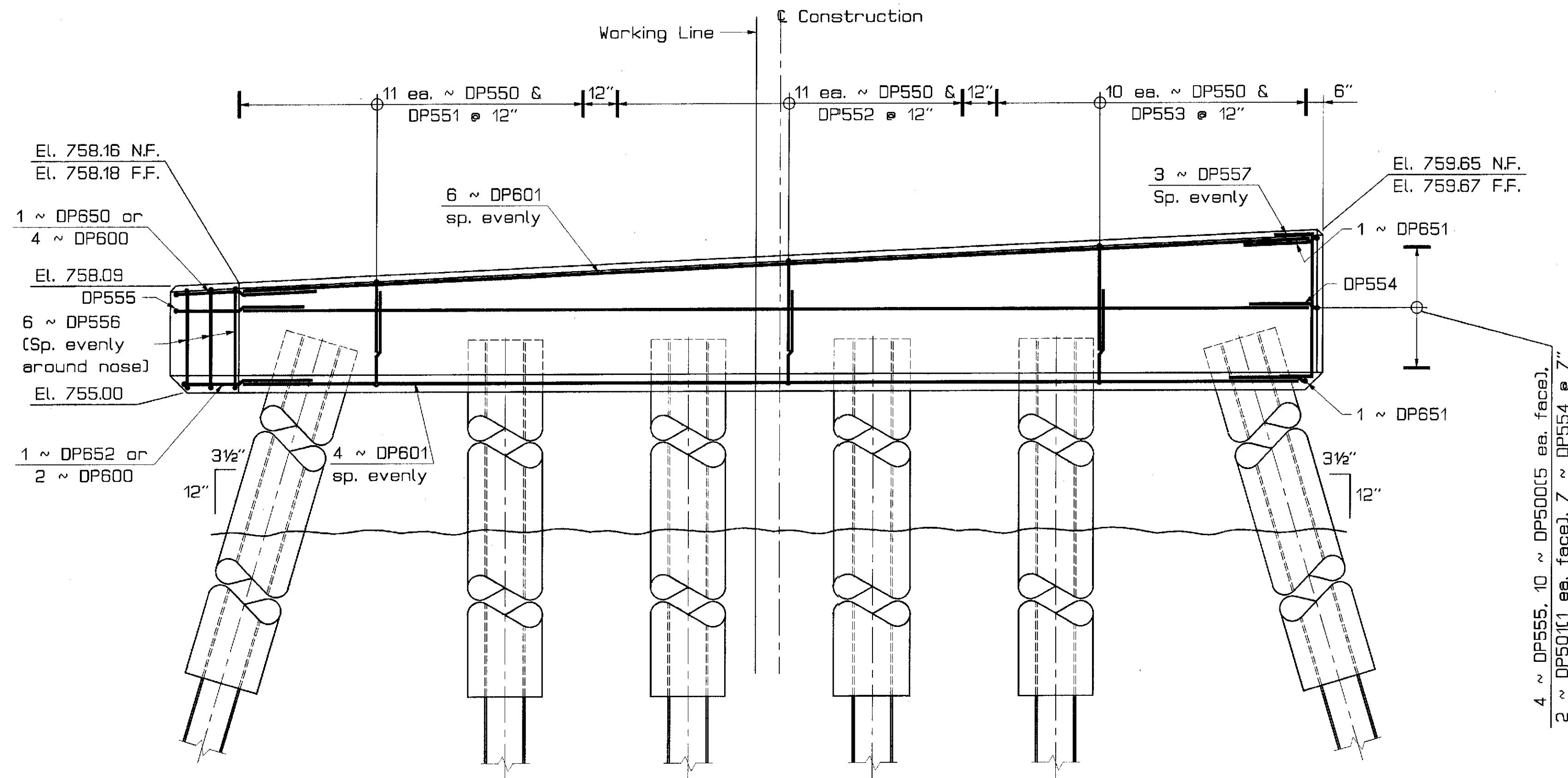


PIPE PILE SECTION

Class S Concrete



PLAN



ELEVATION

PROJECT DESIGN ENGINEER	DATE
BY: R/V/Namand	3-97
DESIGN-DETAILED	CHECKED
REVISIONS	FIELD CHANGES
PLANS	

16APR97-16:06:10
PIER

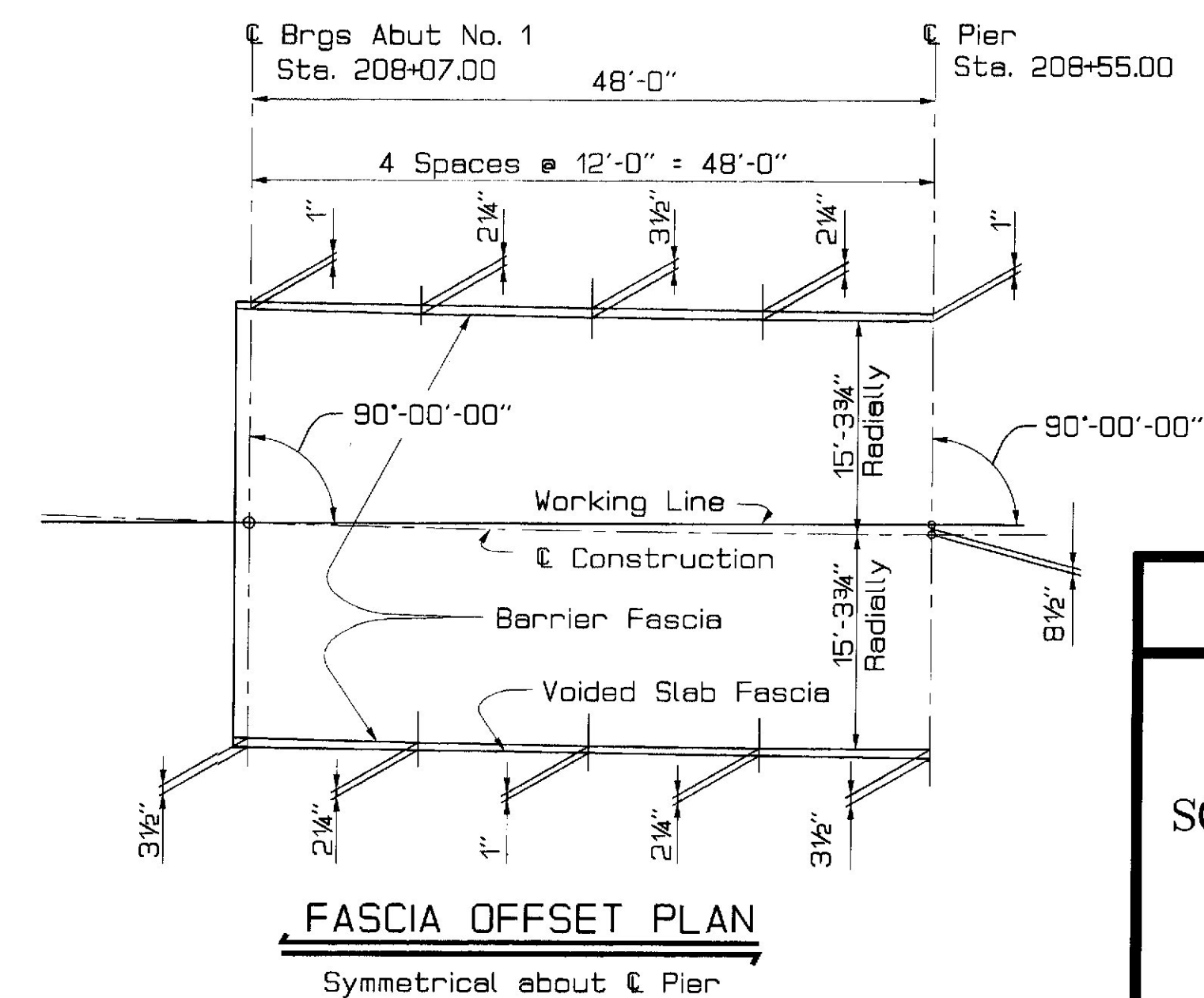
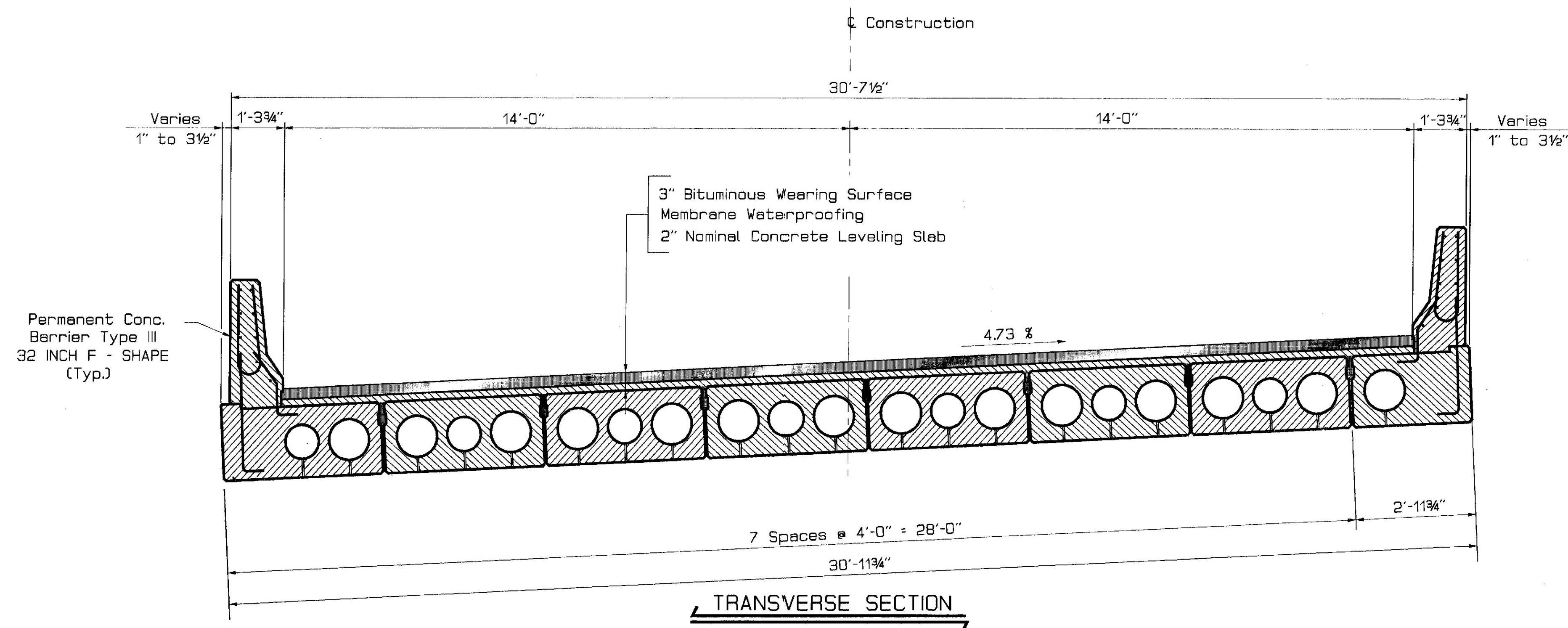
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

DILL BRIDGE
OVER
SOUTH BRANCH SANDY RIVER
IN THE TOWN OF
PHILLIPS
FRANKLIN COUNTY
PIER DETAILS

SHEET OF
AUGUSTA, MAINE
July 1997



- | | | |
|-------------------------|----------|------|
| PROJECT DESIGN ENGINEER | BY | DATE |
| DESIGN-DETAILED | R/Normal | 3-97 |
| CHECKED | | |
| REVISIONS | | |
| FIELD CHANGES | | |



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

DILL BRIDGE
OVER
SOUTH BRANCH SANDY RIVER
IN THE TOWN OF
PHILLIPS
FRANKLIN COUNTY
SUPERSTRUCTURE PLAN

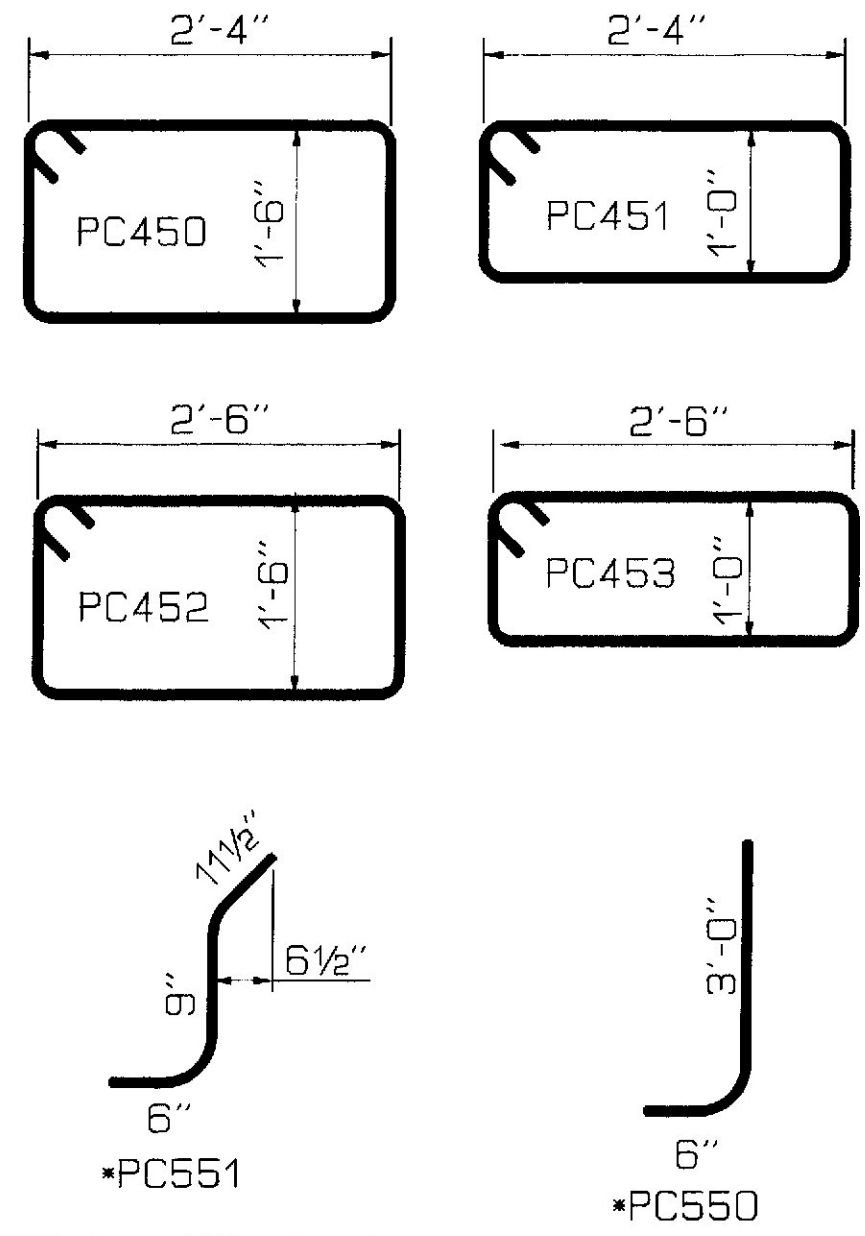
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-032-3(13)X	20	46

REINFORCING NOTES

1. All dimensions are out to out of reinforcing steel.
2. Bending details and hooks shall conform to the recommendations of the current revisions of ACI Standard 318.
3. Reinforcing Bar : ASTM A615 Grade 60.
* = Epoxy Coated Reinforcing Steel

PRESTRESSED SLAB REINFORCING STEEL

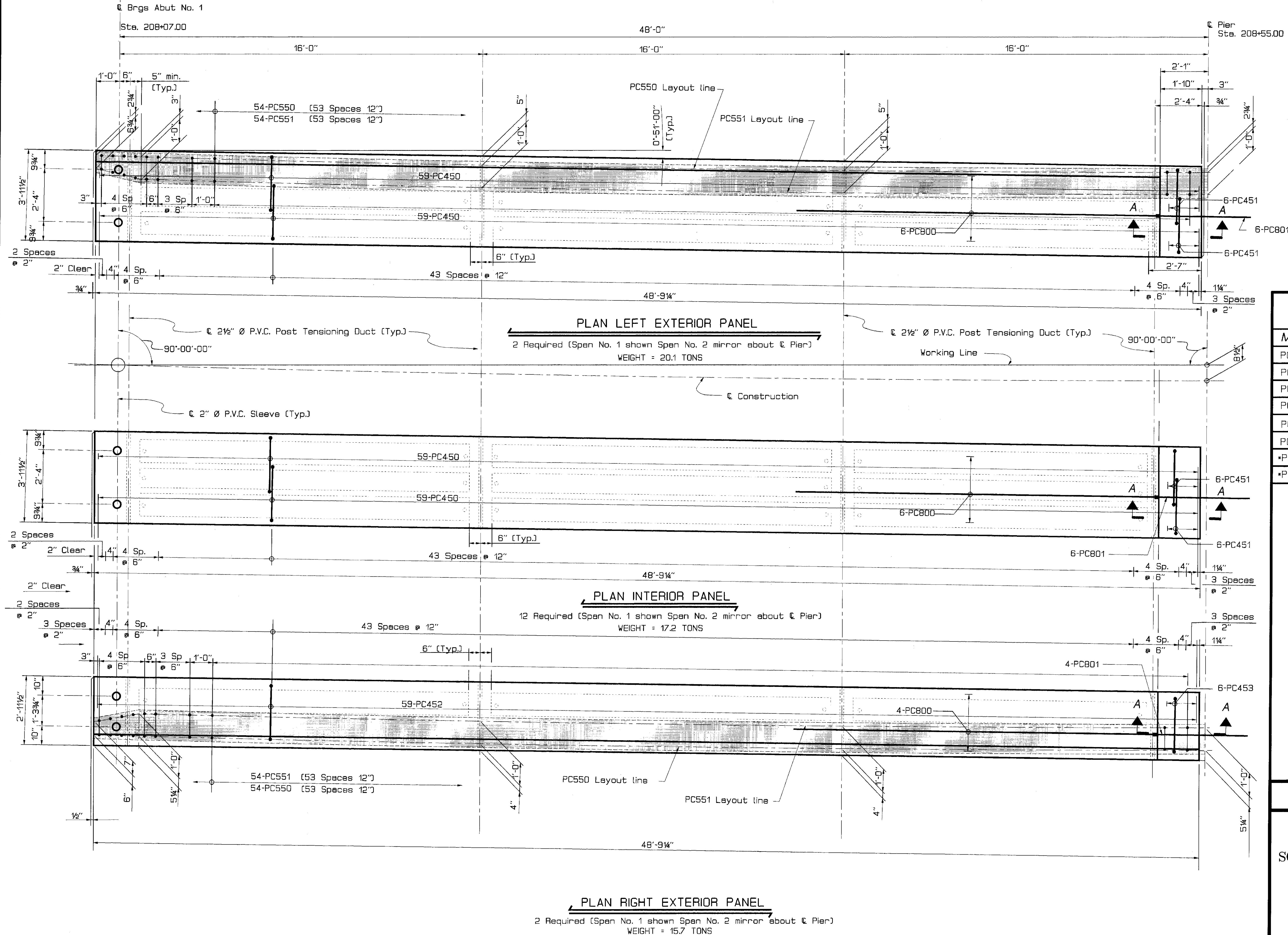
Mark	Quantity	Length	Location
PC450	1652	8'-9"	4 FT Panne
PC451	168	7'-9"	4 FT Panne
PC452	59	9'-1"	3 FT Panne
PC453	6	8'-1"	3 FT Panne
PC800	88	16'-0"	over piers
PC801	88	3'-11"	over piers
*PC551	216	2'-3"	Ext. Panels
*PC551	216	3'-6"	Ext. Panels



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

DILL BRIDGE
OVER
SOUTH BRANCH SANDY RIVER
IN THE TOWN OF
PHILLIPS
FRANKLIN COUNTY
PRECAST SLAB DETAILS

SHEET OF AUGUSTA, MAINE July 1997



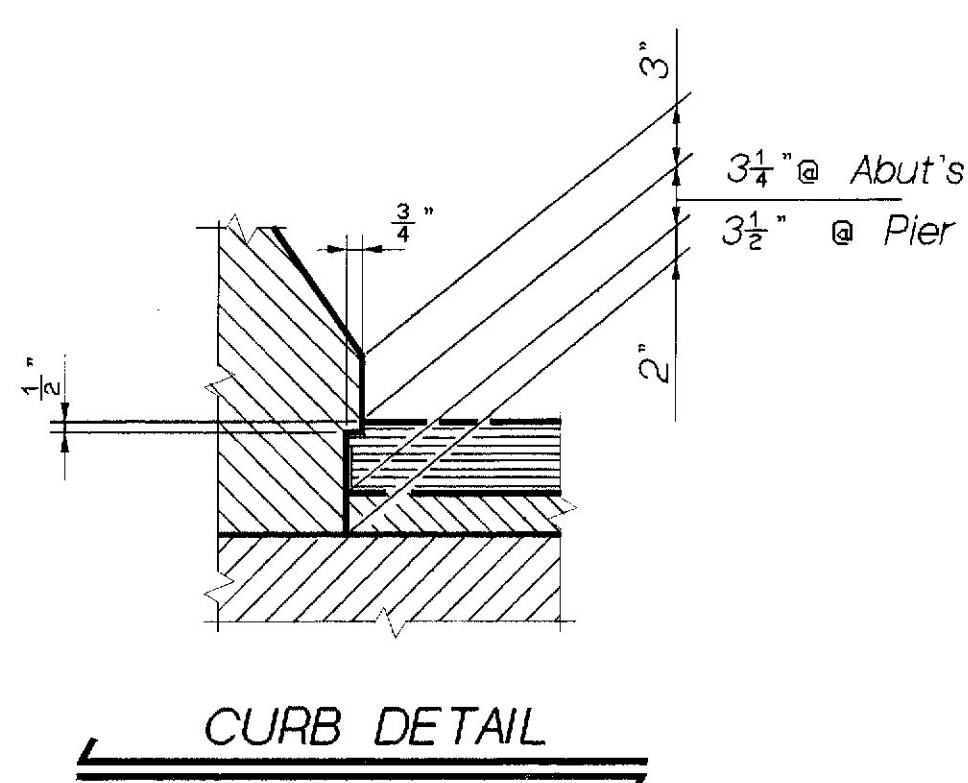
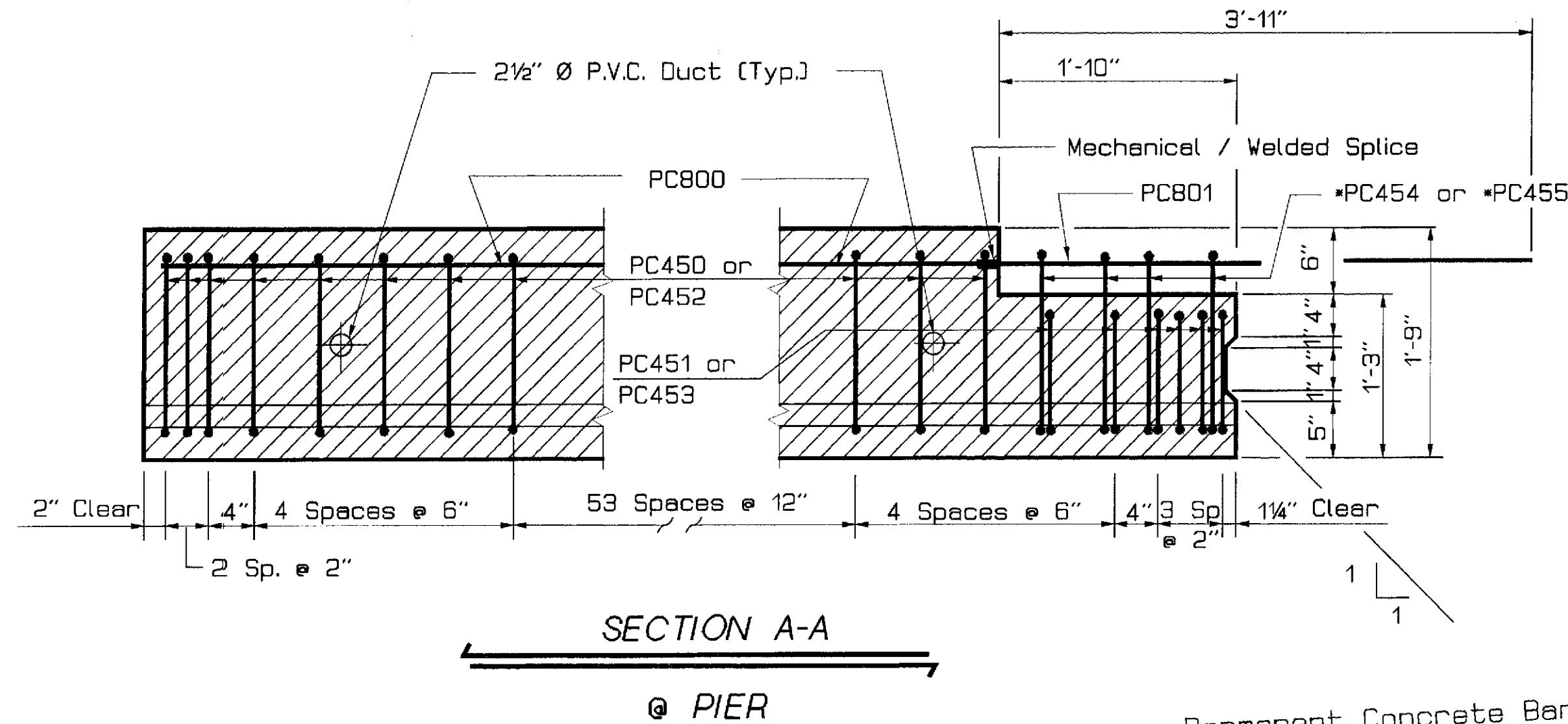
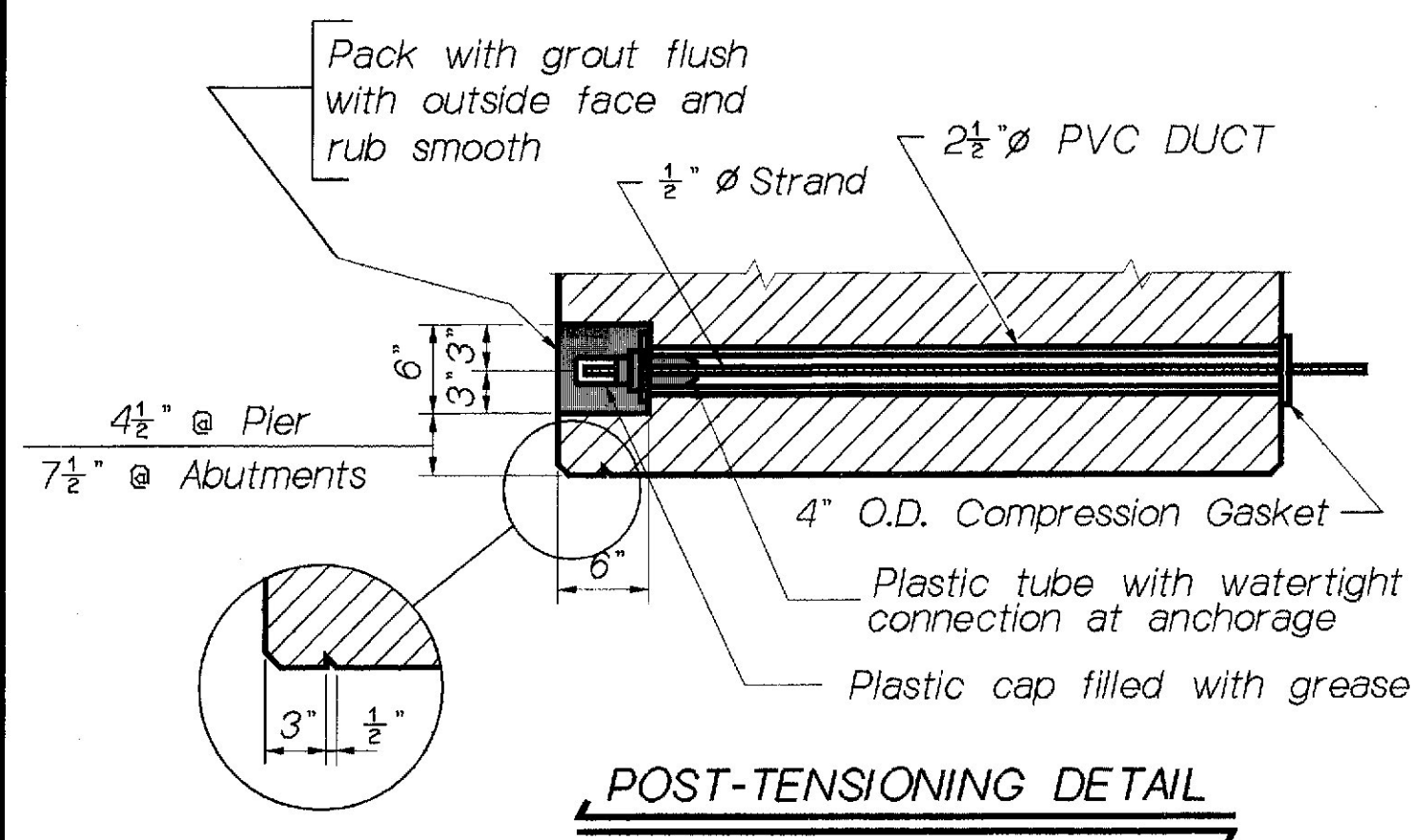
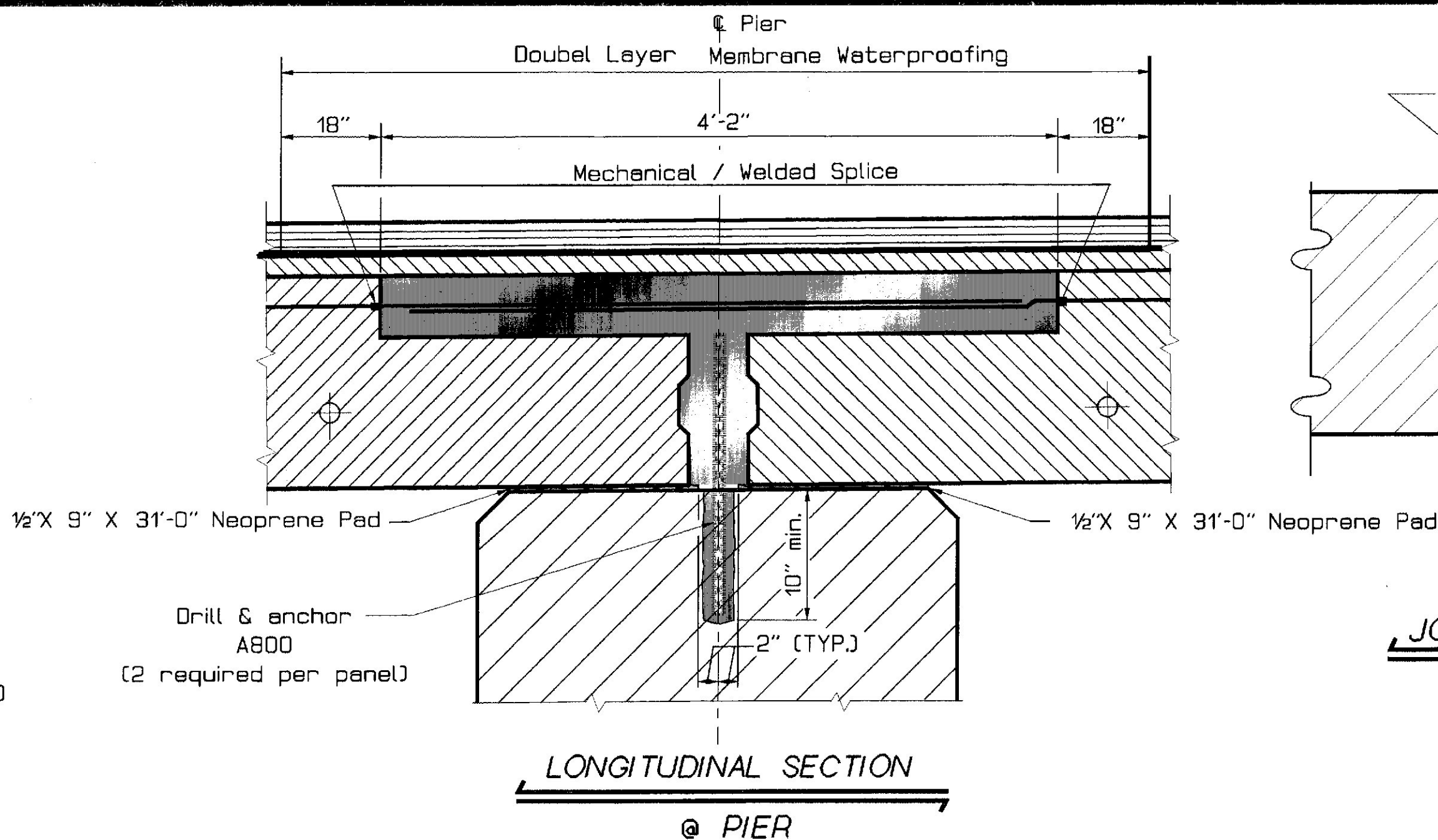
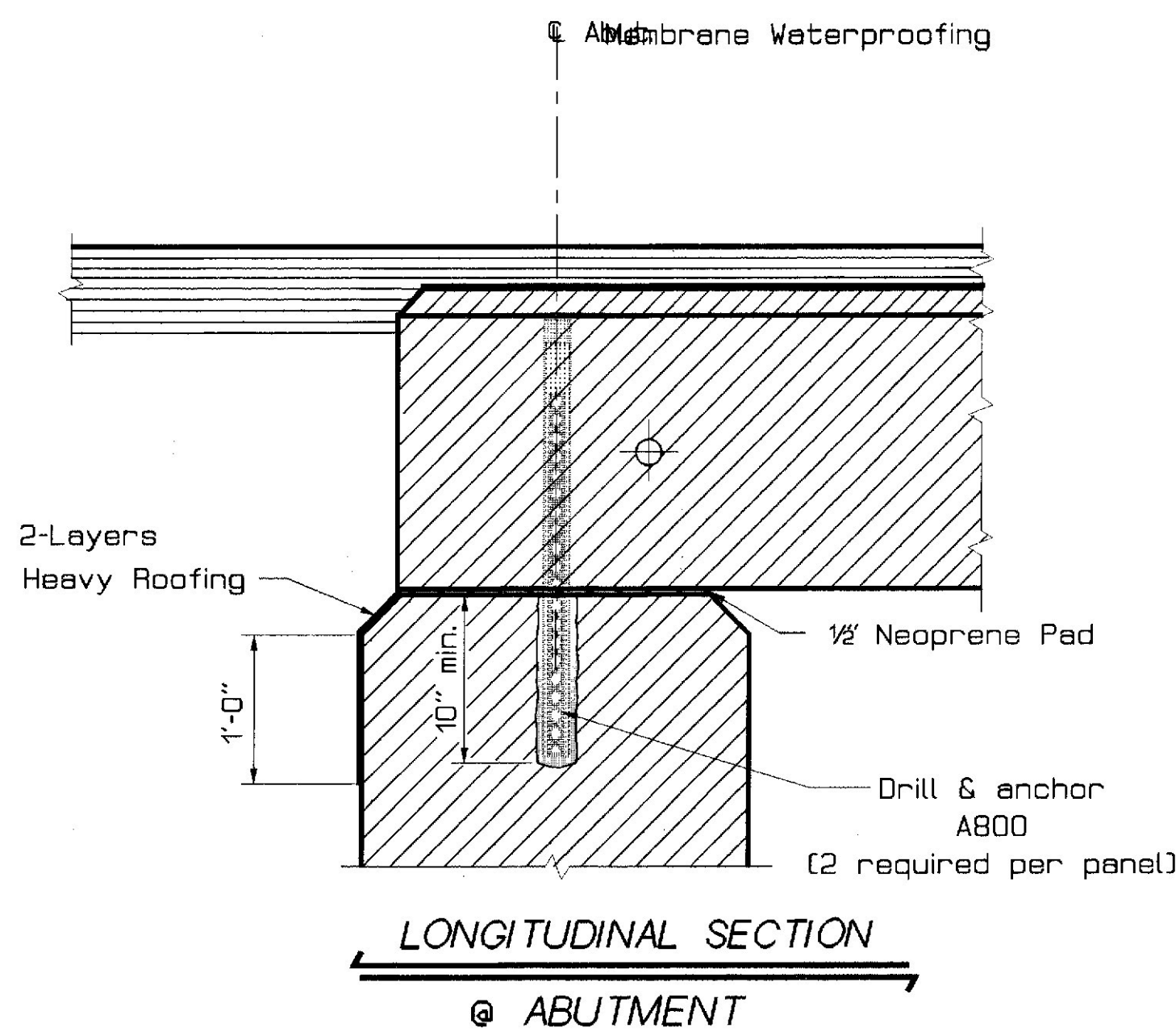
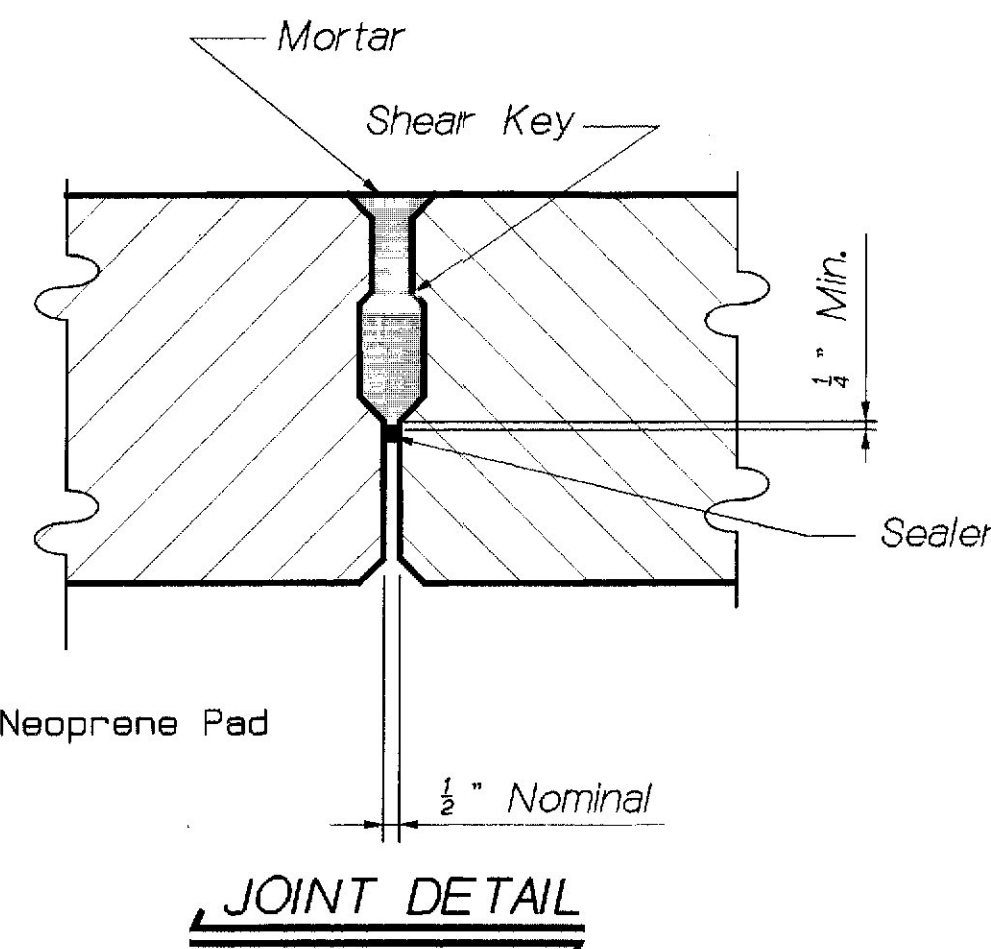
PROJECT DESIGN ENGINEER	DATE
BY: [Signature]	3-97
DESIGN-DETAILED	CHECKED
REVISIONS	FIELD CHANGES

18APR97-15:06:10
CONCLAB

F.H.V.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-032-2(13)X	21	46

PRECAST NOTES

- 1... Tensioning of pretensioned strands shall be done in accordance with Standard and Supplemental Specifications Section 535. The jacking force applied to the prestressing strands shall be 29,000 pounds
- 2... Neoprene pads shall be either polychloroprene or natural polyisoprene of 50±5 Shore A durometer hardness, and shall conform to the requirements of Division 2, Section 18.2 of A.A.S.H.T.O. Standard Specifications for Highway Bridges. Neoprene pads will not be paid for directly, but will be considered incidental to related contract items.
- 3... Install a one inch diameter non-metallic void drain in the bottom of each void at both ends.
- 4... Reinforcing steel shall have two inches minimum cover unless otherwise indicated.
- 5... Post Tensioning shall be covered by a seamless Polypropylene Sheath (with corrosion inhibiting grease between the strands and sheath) for the full length of the strand except at the anchorage location.
- 6... PC800, PC801 and extra PC551's over pier in blockout section, shall be supplied with the Precast Panels. Payment will be considered incidental to item 535.60 Prestressed Concrete Slab.



SPECIFICATION

DESIGN: AASHTO LRFD Bridge Design Specifications 1994
with Interims 1996.

CONTRACT: State of Maine, Department of Transportation,
Standard Specifications Highways and Bridges,
Revisions of April 1995..

DESIGN LOADING

LIVE LOAD: Modified Strength I
Seismic Performance Category A

MATERIALS

CONCRETE:..... Precast Class P
 Blockout & Leveling Slab Class AA
 All Other Class A

REINFORCING STEEL:..... ASTM A615 Grade 60

STRUCTURAL STEEL:..... ASTM A36

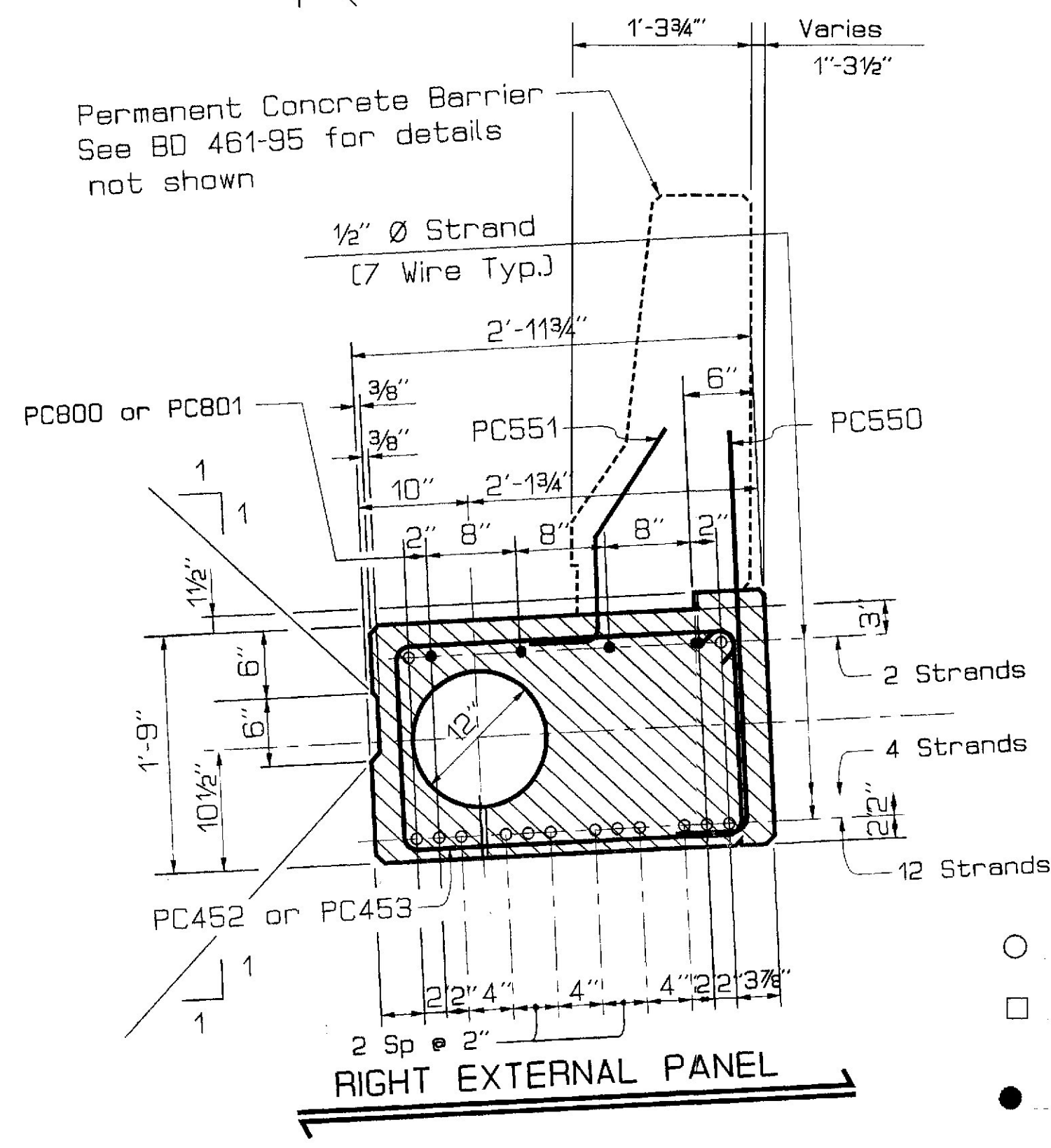
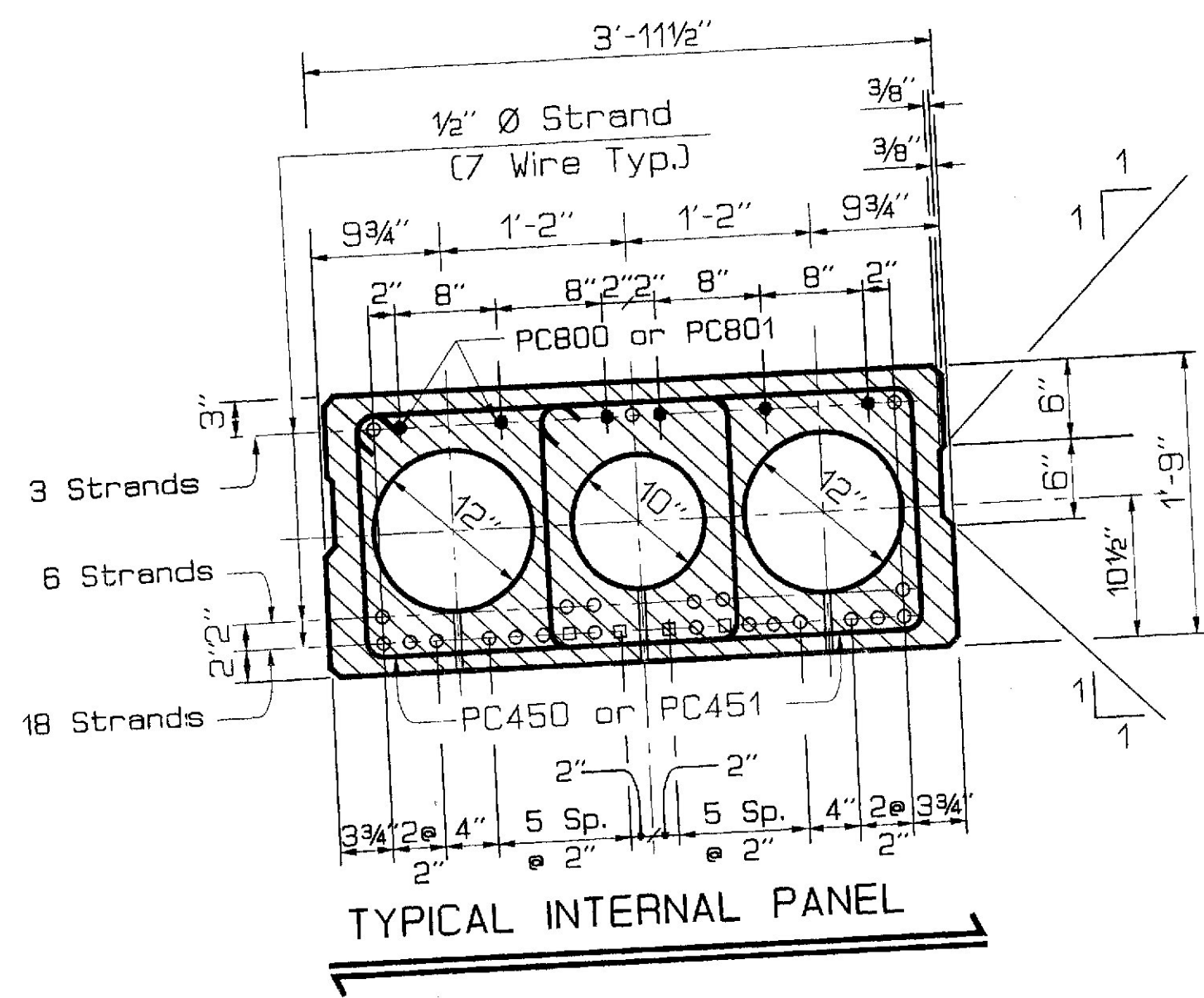
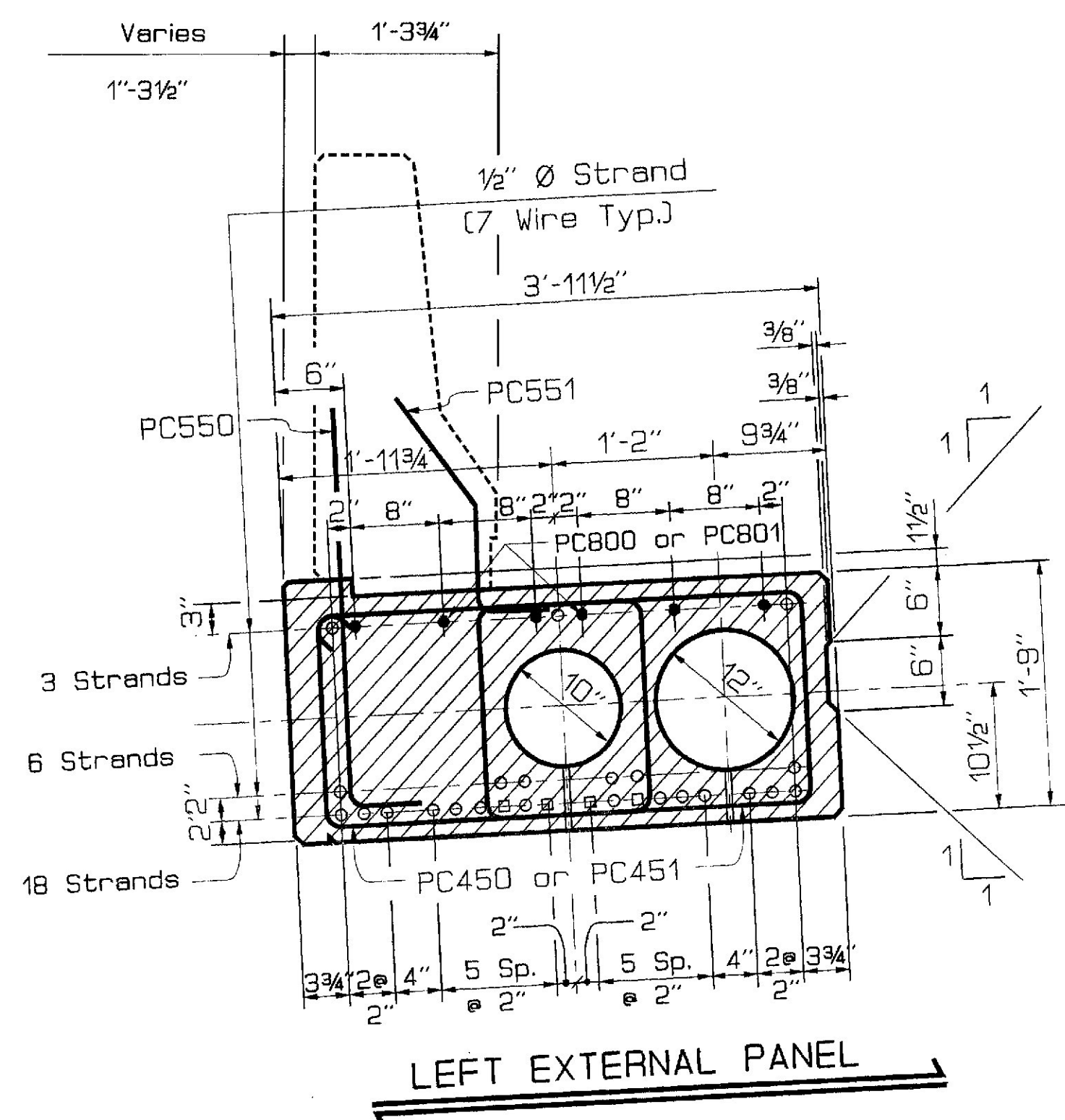
BASIC ALLOWABLE STRESSES

CONCRETE:..... Class P..... f'_c = 6,000 psi.
 f_{ci} = 4,500 psi.
 Class AA..... f_c = 4,000 psi.
 All Other..... f_c = 4,000 psi.

REINFORCING STEEL:..... f_y = 60,000 psi

LEGEND

- ☐ ... Prestressing Strands
- ☐ ... Prestressing Strands
(Debonded 5' from both ends)
- ☒ ... No. 8 Reinforcing Steel

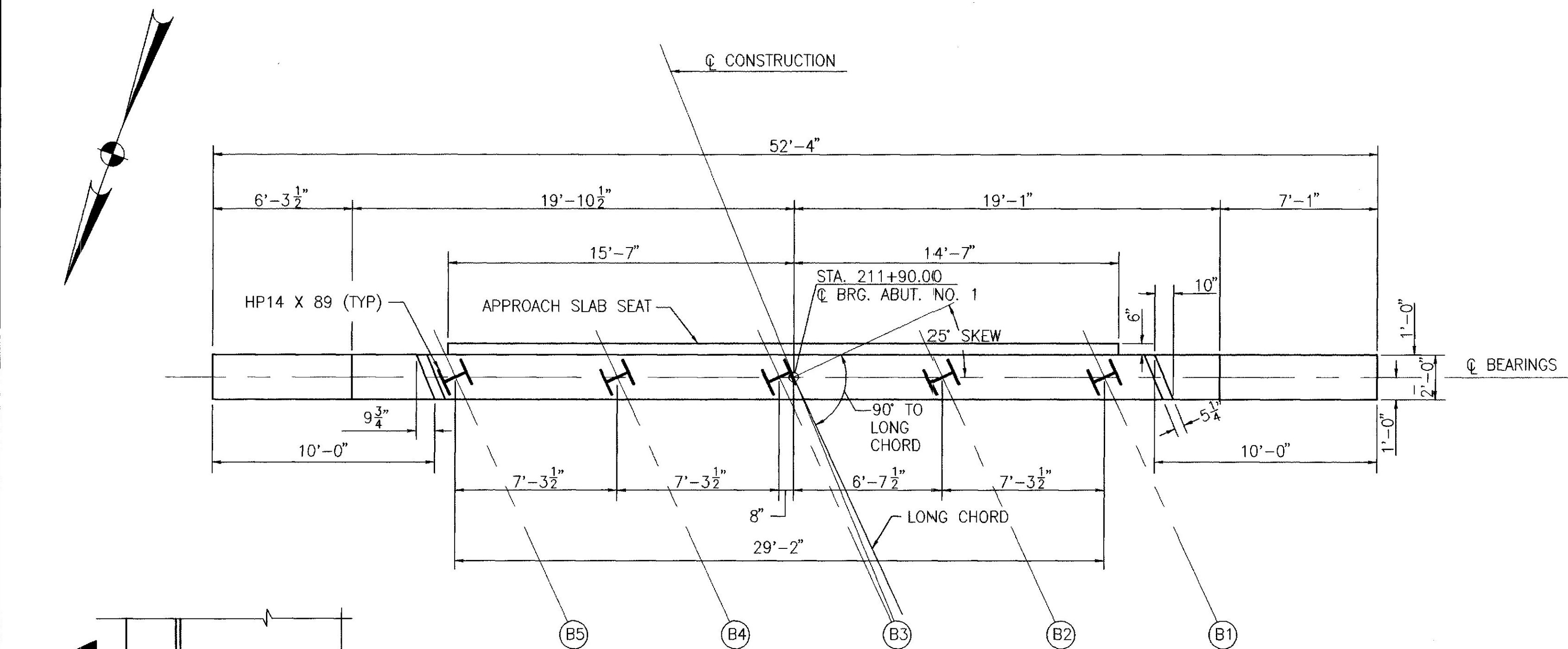


STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

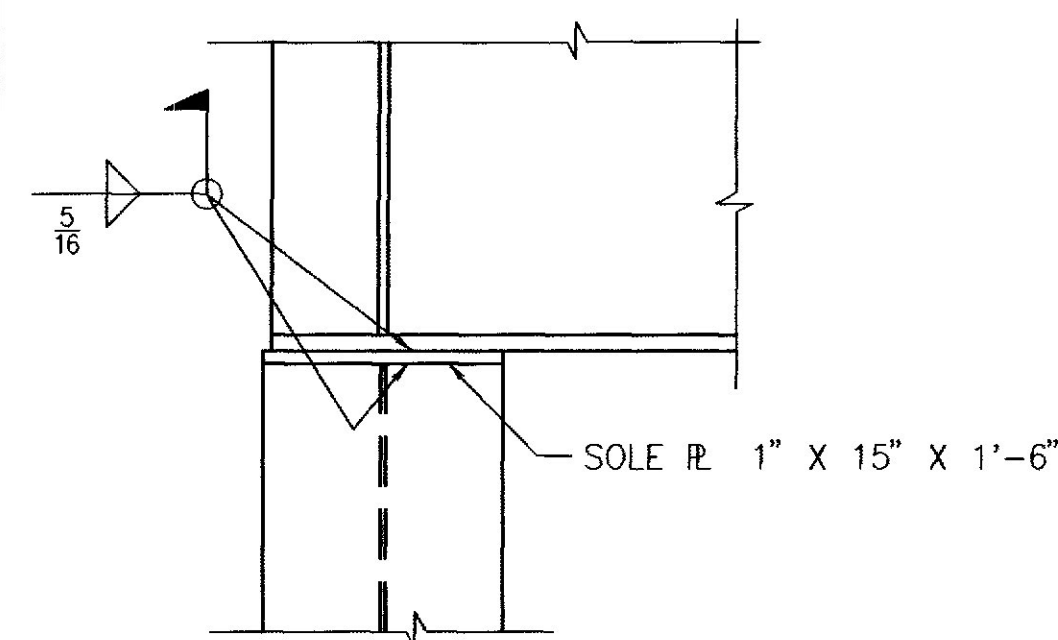
DILL BRIDGE
OVER
SOUTH BRANCH SANDY RIVER
IN THE TOWN OF
PHILLIPS
FRANKLIN COUNTY
REINFORCING STEEL SCHEDULE

HEET OF AUGUSTA, MAINE July 1997

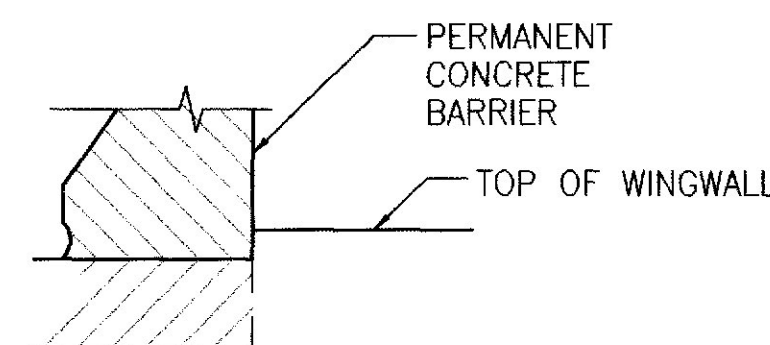
16APR97-15.06.10
REBAR



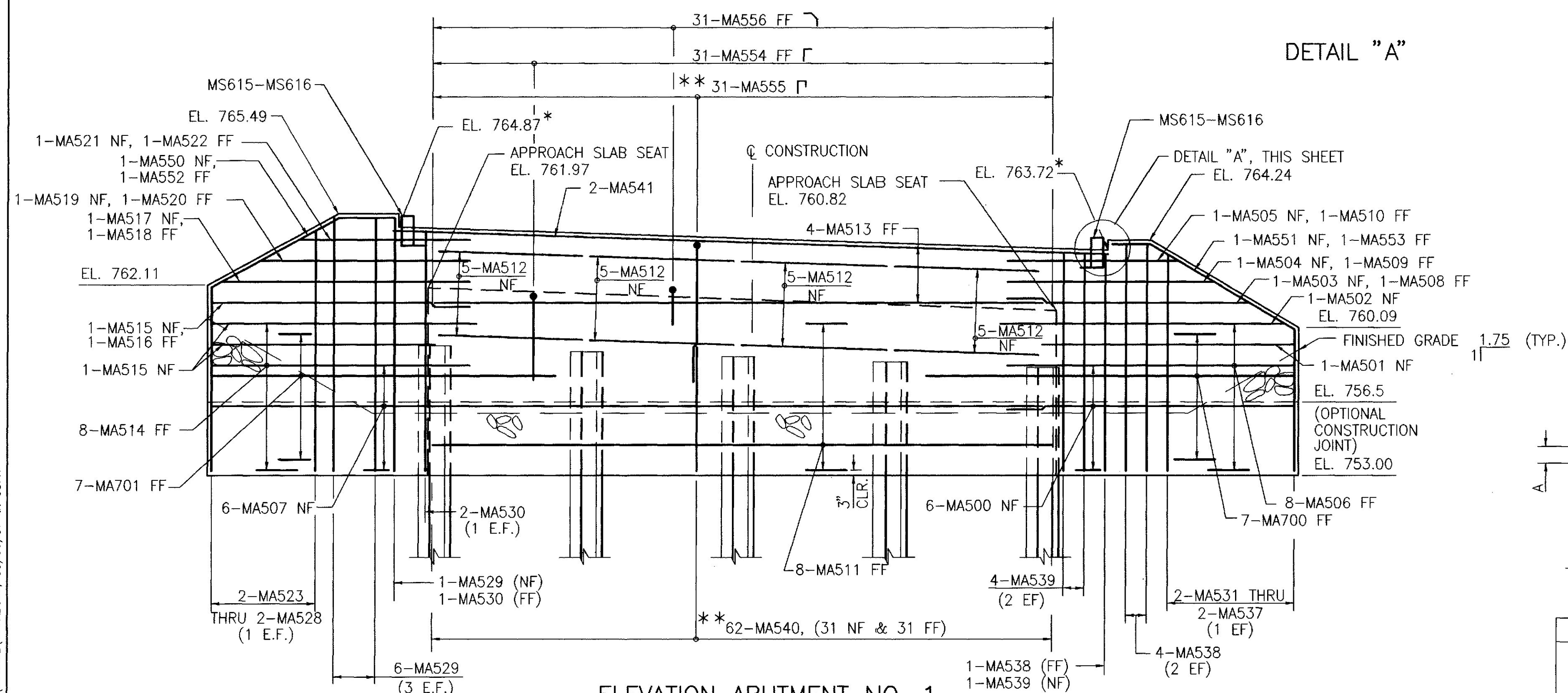
PLAN ABUTMENT NO. 1



BEAM SEAT DETAIL



DETAIL "A"



ELEVATION ABUTMENT NO. 1

* ELEVATIONS ARE TOP OF CONCRETE AT BACK OF ABUTMENT

** NOTE: FIELD ADJUST VERTICAL REINFORCING (MA540 & MA555) TO AVOID INTERFERENCE WITH PLATE GIRDERS

PILE NOTES:

1. THE REQUIRED ULTIMATE PILE CAPACITY OF EACH HP14 X 89 IS 518 KIPS BASED ON A MAXIMUM DESIGN LOAD OF 230 KIPS AND A SAFETY FACTOR OF 2.25.
2. DELETED.
3. THE HP14 X 89 PILE SIZE IS GOVERNED BY COLUMN ACTION. A DIFFERENT PILE SIZE SHALL NOT BE SUBSTITUTED WITHOUT APPROVAL OF THE ENGINEER.
4. BOTH WEAP AND DYNAMIC ANALYSIS OF THE PILES IS REQUIRED. A WAVE EQUATION ANALYSIS OF THE PILE DRIVING EQUIPMENT SHALL BE COMPLETED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR APPROVAL. NO DIRECT PAYMENT FOR THE WAVE EQUATION ANALYSIS WILL BE MADE AS THE WORK WILL BE CONSIDERED INCIDENTAL TO RELATED CONTRACT ITEMS.
5. ESTIMATE OF PILES REQUIRED:
ABUTMENT NO. 1 - 5 HP14 X 89 @ 49'.
ABUTMENT NO. 2 - 5 HP14 X 89 @ 55'.
6. PILES SHALL NOT BE OUT OF POSITION SHOWN BY MORE THAN TWO INCHES IN ANY DIRECTION.

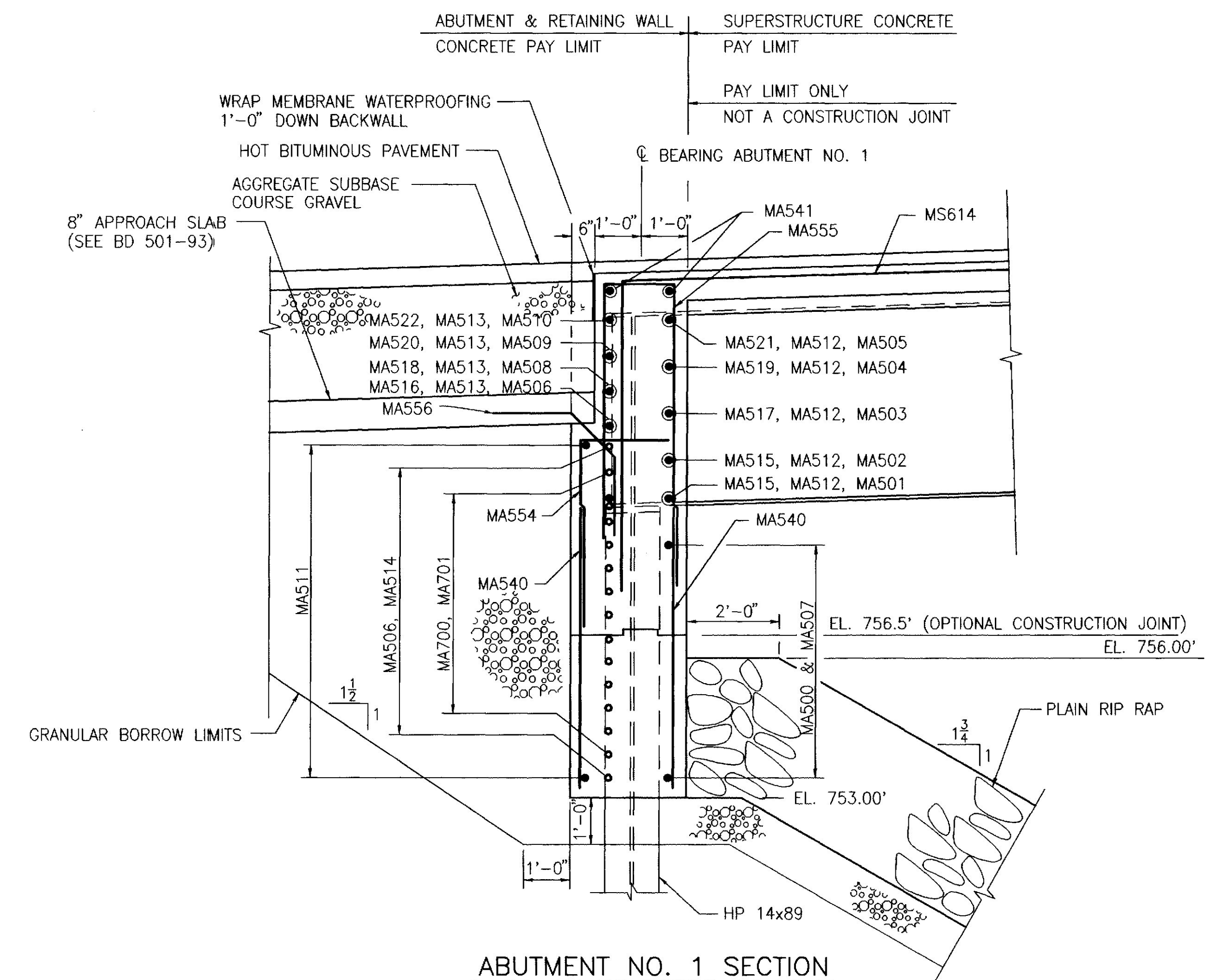
7. CUT-OFF ELEVATIONS FOR TOP OF PILES ARE AS FOLLOWS:

	ABUTMENT NO.1	ABUTMENT NO.2
B1	757.93	762.49
B2	758.19	762.68
B3	758.44	762.88
B4	758.69	763.08
B5	758.95	763.28

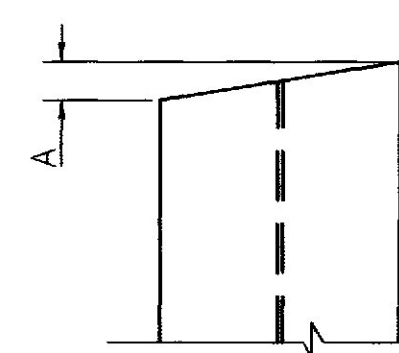
8. SOLE PLATES WILL BE CONSIDERED STRUCTURAL STEEL AND WILL BE PAID UNDER ITEM 504.70 AND 504.71 STRUCTURAL STEEL.

ABUTMENT NOTES:

1. REINFORCING STEEL SHALL HAVE 2 INCHES COVER UNLESS OTHERWISE INDICATED.
2. ALL REINFORCING STEEL SHALL BE SPACED AT 12" IN BOTH DIRECTIONS UNLESS OTHERWISE NOTED.



ABUTMENT NO. 1 SECTION

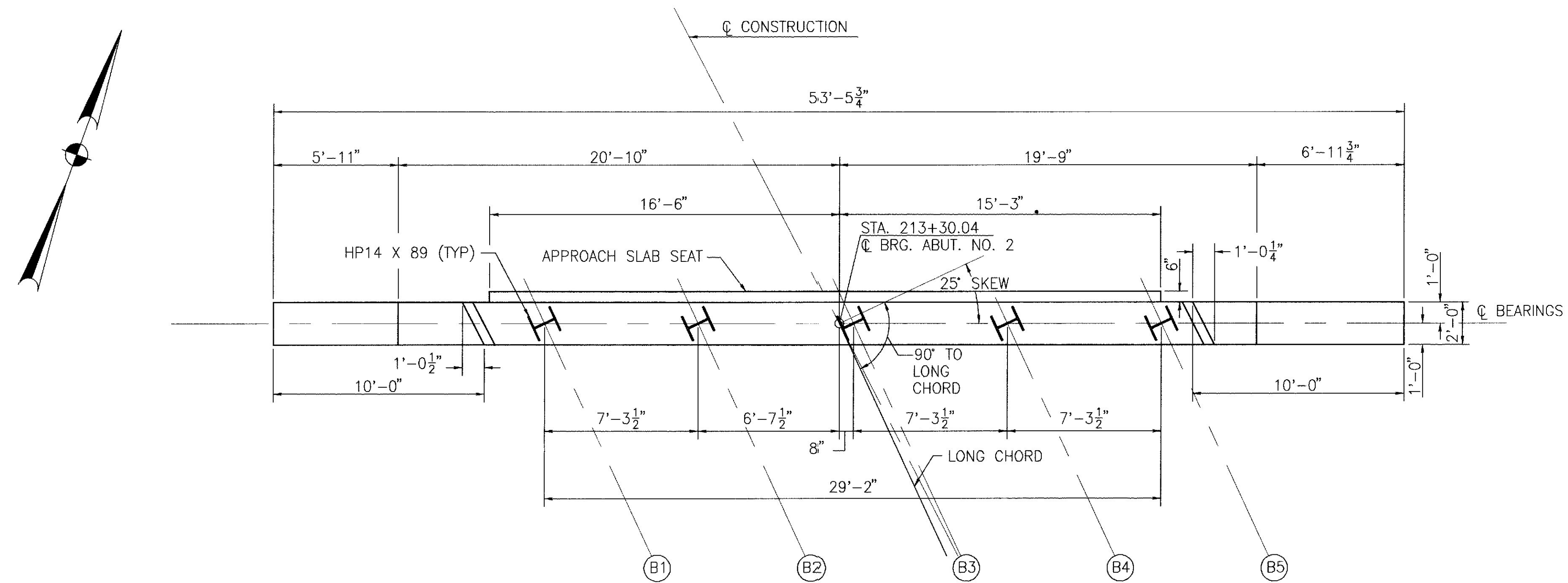


LOCATION	DIM. A
ABUT. 1	5' 8"
ABUT. 2	5' 16"

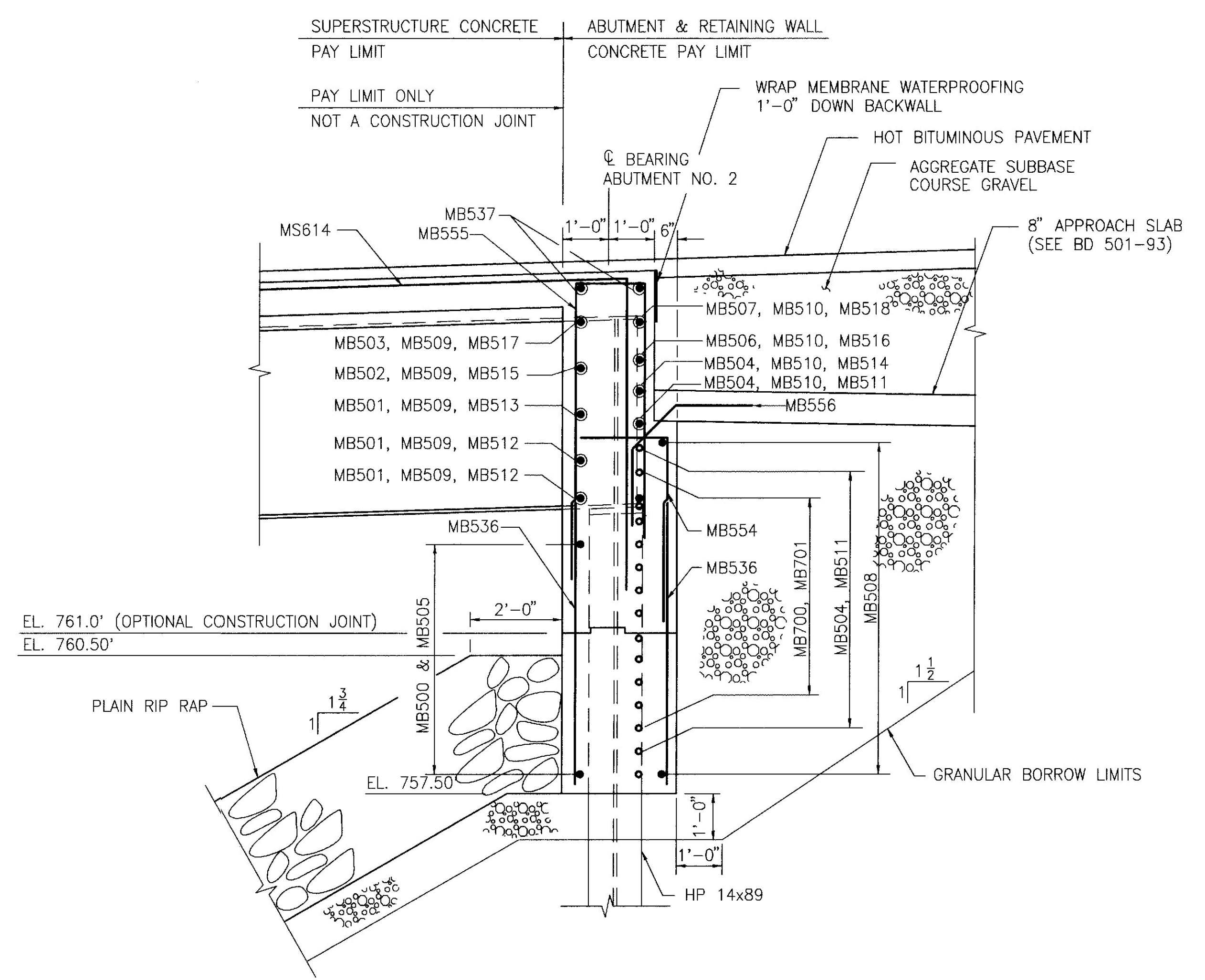
PILE CUTOFF DETAIL

AS BUILT 1998
Vincent Barreira, Jr.

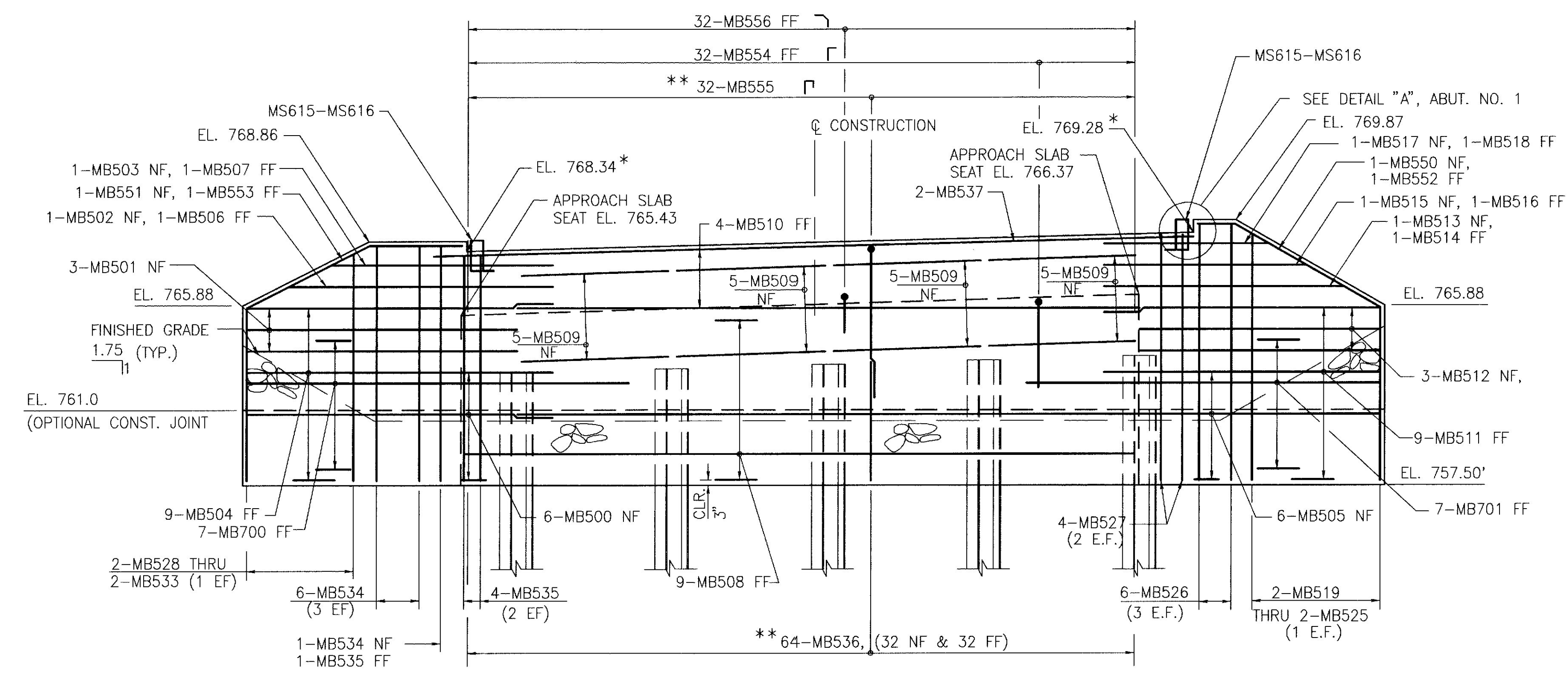
INDEX OF SHEETS		STATE OF MAINE DEPARTMENT OF TRANSPORTATION	
SHEET NO.	DESCRIPTION	MEETING PLACE BRIDGE OVER SANDY RIVER IN THE TOWN OF PHILLIPS FRANKLIN COUNTY ABUTMENT NO. 1	
1	ABUTMENT NO. 1		
2	ABUTMENT NO. 2		
3	FRAMING PLAN		
4	SUPERSTRUCTURE DETAILS		
5	BOTTOM OF SLAB ELEVATIONS		
6	REINFORCING SCHEDULE		
webster-martin, Inc. Consulting Engineers		BY: George A. Bogue 5/30/97	
SHEET 1 OF 6		AUGUSTA, MAINE MAY 1997	



PLAN ABUTMENT NO. 2



ABUTMENT NO. 2 SECTION



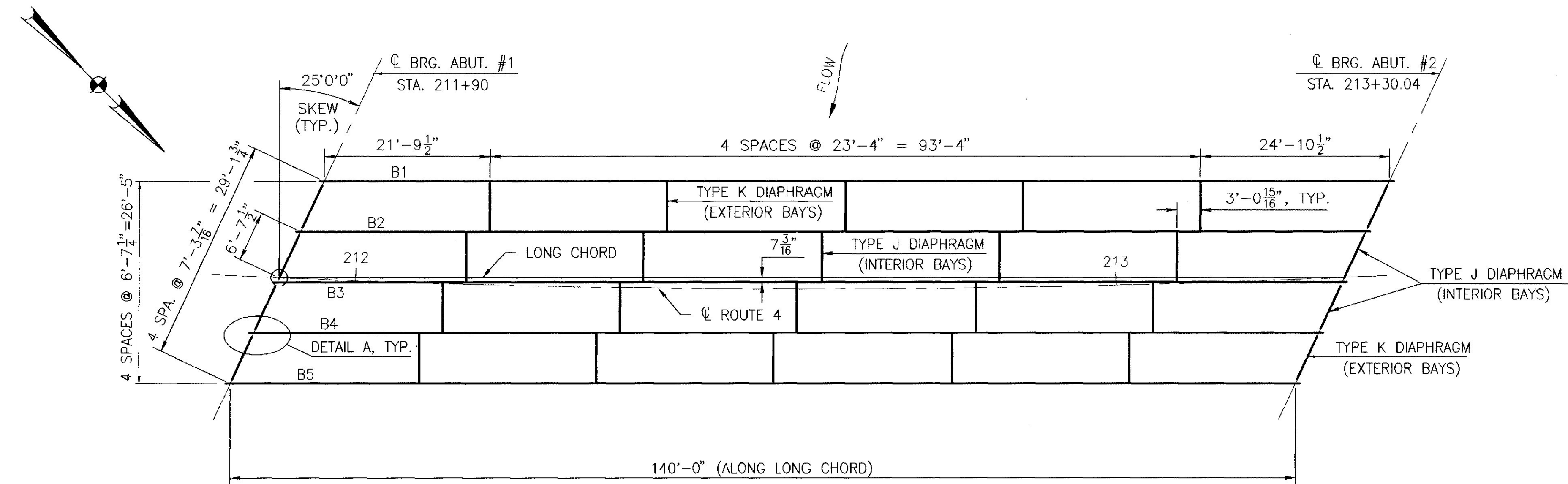
ELEVATION ABUTMENT NO. 2

* ELEVATIONS ARE TOP OF CONCRETE AT BACK OF ABUTMENT

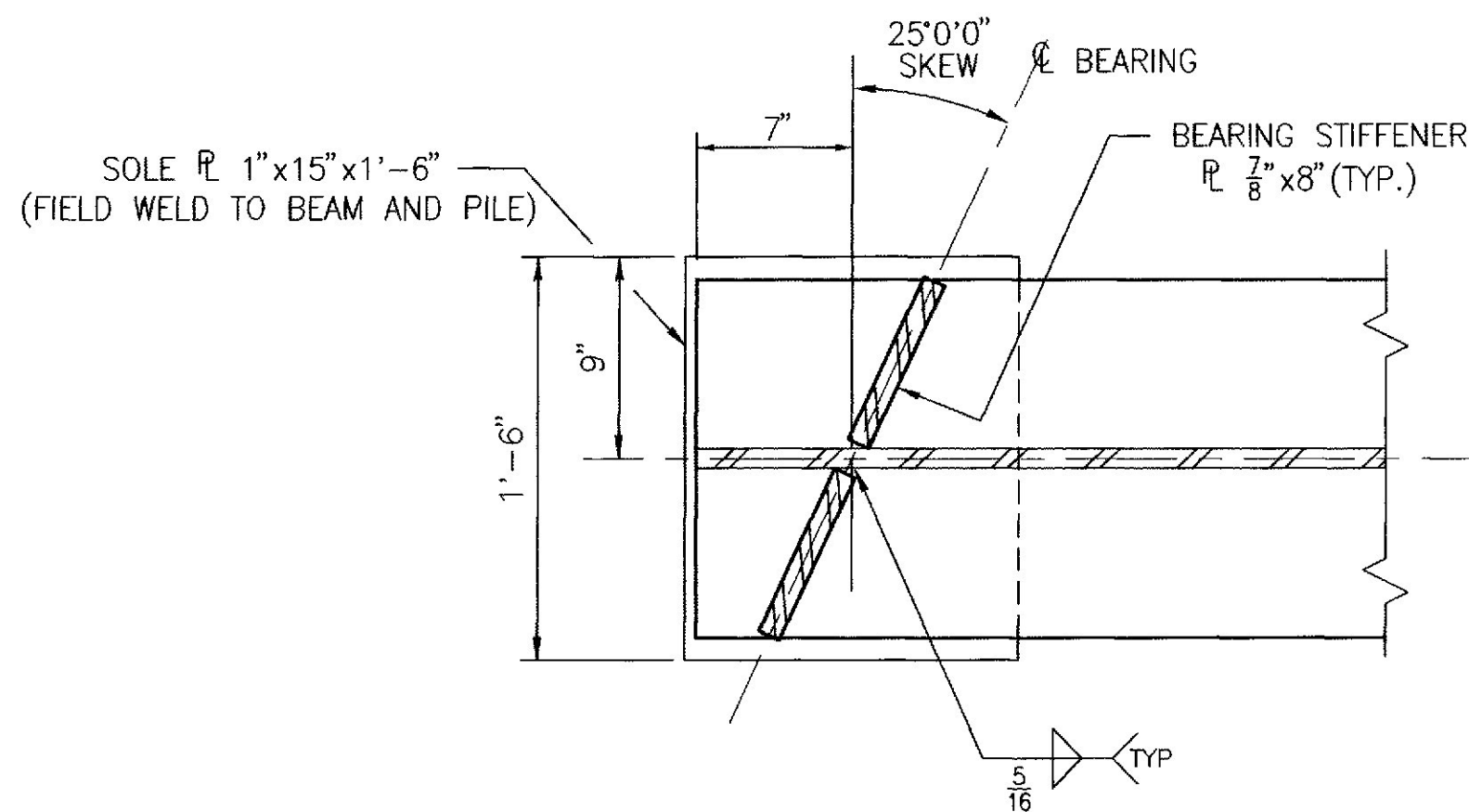
** NOTE: FIELD ADJUST VERTICAL REINFORCING (MB536 & MB555) TO AVOID INTERFERENCE WITH PLATE GIRDERS.

As BUILT 1998
Vincent Bonafide, Jr.

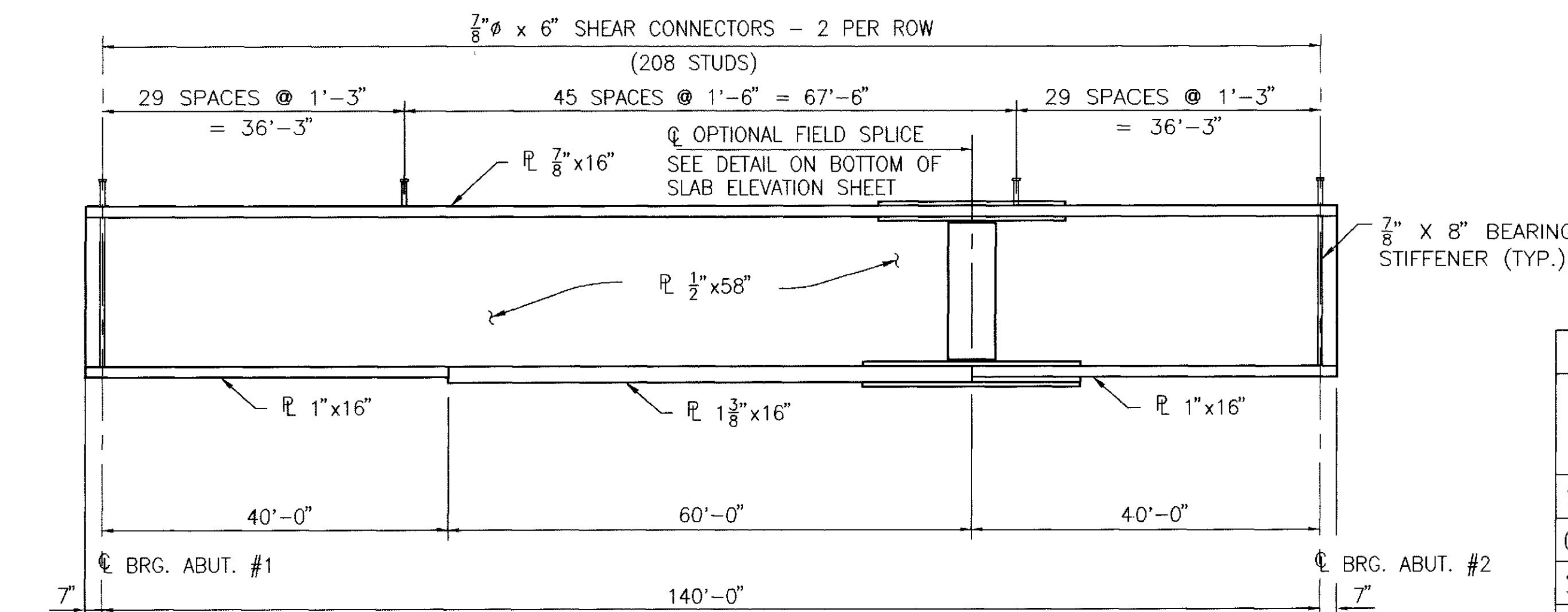
STATE OF MAINE DEPARTMENT OF TRANSPORTATION
MEETING PLACE BRIDGE OVER SANDY RIVER IN THE TOWN OF PHILLIPS FRANKLIN COUNTY ABUTMENT NO. 2
SHEET 2 OF 6 AUGUSTA, MAINE MAY 1997



FRAMING PLAN

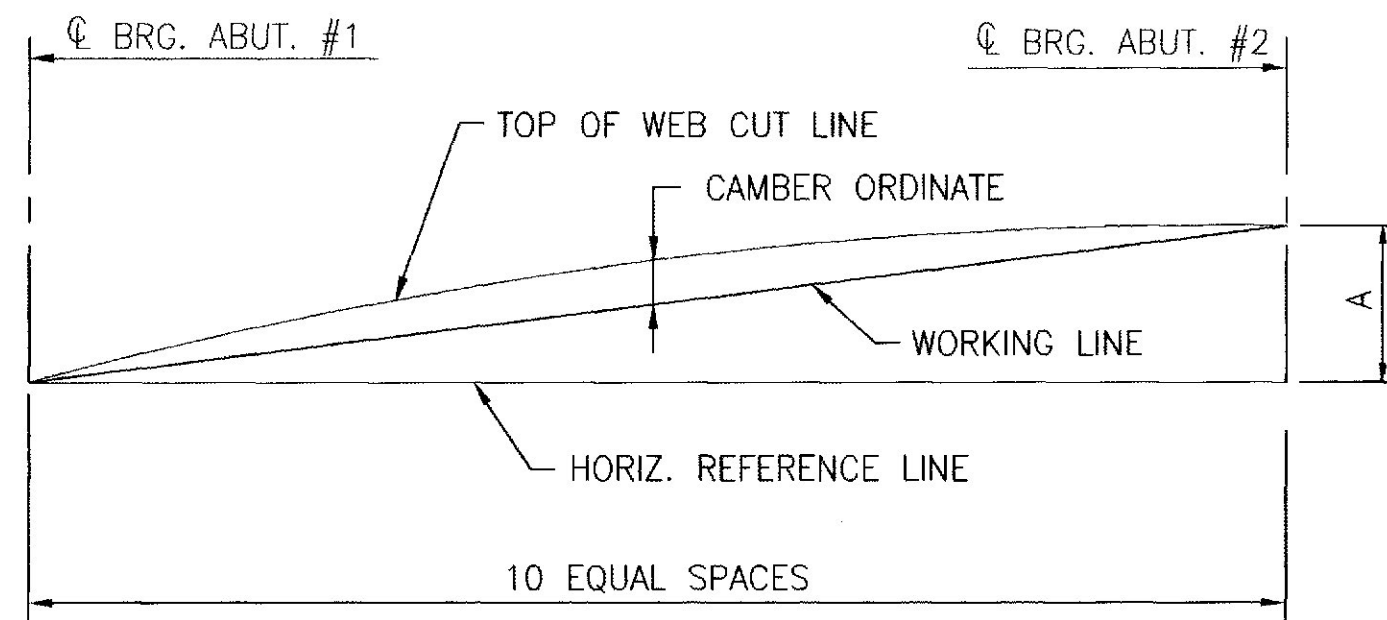


DETAIL A



BEAM ELEVATION

(TOTAL STUDS REQUIRED: 1040)



CAMBER DIAGRAM

CAMBER NOTE:

THE TOTAL CAMBER AS LABELED IS ASSUMED TO BE MEASURED VERTICALLY TO THE TOP OF THE WEB FROM A WORKING LINE. DRAWN THROUGH THE INTERSECTION OF THE TOP OF WEB AT THE CENTERLINE OF BEARING.

CAMBER TABLE											
	BEAM SEGMENT										CL BRG. ABUT. #2
	CL BRG. ABUT. #1	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	
STEEL DEFLECTION	0"	9/16"	1 1/8"	1 1/2"	1 3/4"	1 7/8"	1 3/4"	1 1/2"	1 1/8"	9/16"	0"
CONCRETE DEFLECTION	0"	1 13/16"	3 3/8"	4 9/16"	5 5/16"	5 5/8"	5 5/16"	4 9/16"	3 3/8"	1 13/16"	0"
S.D.L. DEFLECTION	0"	5/8"	1 1/8"	1 9/16"	1 13/16"	1 7/8"	1 13/16"	1 9/16"	1 1/8"	5/8"	0"
VERT. CURVE CAMBER	0"	-1 1/4"	-2 1/8"	-2 9/16"	-2 5/8"	-2 7/8"	-2"	-1 5/8"	-1 3/16"	-5/8"	0"
TOTAL CAMBER ORDINATE	0"	1 3/4"	3 1/2"	5 1/16"	6 1/4"	6 15/16"	6 7/8"	6"	4 7/16"	2 3/8"	0"

S.D.L. = SUPERIMPOSED DEAD LOAD

AS BUILT 1998

Wm. Benoit, Jr.

STRUCTURAL STEEL NOTES:

- ALL DIAPHRAGMS SHALL BE TYPE J OR K, AS SHOWN ON THE FRAMING PLAN.
- DIAPHRAGM CONNECTION PLATES MAY BE EITHER PLUMB OR NORMAL TO THE TOP FLANGE.
- CAMBER ORDINATES, AS SHOWN, ARE COMPUTED TO COMPENSATE FOR ALL DEAD LOAD DEFLECTIONS AND FOR THE CURVATURE OF THE FINISHED GRADE PROFILE.
- NO TRANSVERSE BUTT-WELD SPLICES WILL BE ALLOWED IN THE FLANGE PLATES OR WEB PLATES WITHIN 10 PERCENT OF THE SPAN LENGTH FROM THE POINT OF MAXIMUM POSITIVE MOMENT. BUTT-WELD SPLICES IN FLANGES SHALL BE NOT LESS THAN THREE FEET FROM TRANSVERSE BUTT-WELDS IN THE WEB PLATES AND NO TRANSVERSE WEB OR FLANGE BUTT-WELDS SHALL BE LOCATED WITHIN THREE FEET OF OTHER TRANSVERSE WELDS (e.g. CONNECTION PLATE TO WEB WELDS) ON EITHER FLANGE OR WEB.
- SECTIONS OF FLANGE PLATES OR WEB PLATES BETWEEN TRANSVERSE SHOP SPLICES OR BETWEEN A TRANSVERSE SHOP SPLICE AND A FIELD SPLICE SHALL BE NOT LESS THAN 20 FEET IN LENGTH UNLESS OTHERWISE SHOWN ON THE PLANS.
- BEARING STIFFENERS SHALL BE PLUMB AFTER ERECTION AND DEAD LOADING OF THE STRUCTURE.
- FILLER PLATES MAY BE STEEL CONFORMING TO THE REQUIREMENTS OF AASHTO M270 GRADE 36 AND MILL TESTS WILL NOT BE REQUIRED FOR FILLER PLATES.

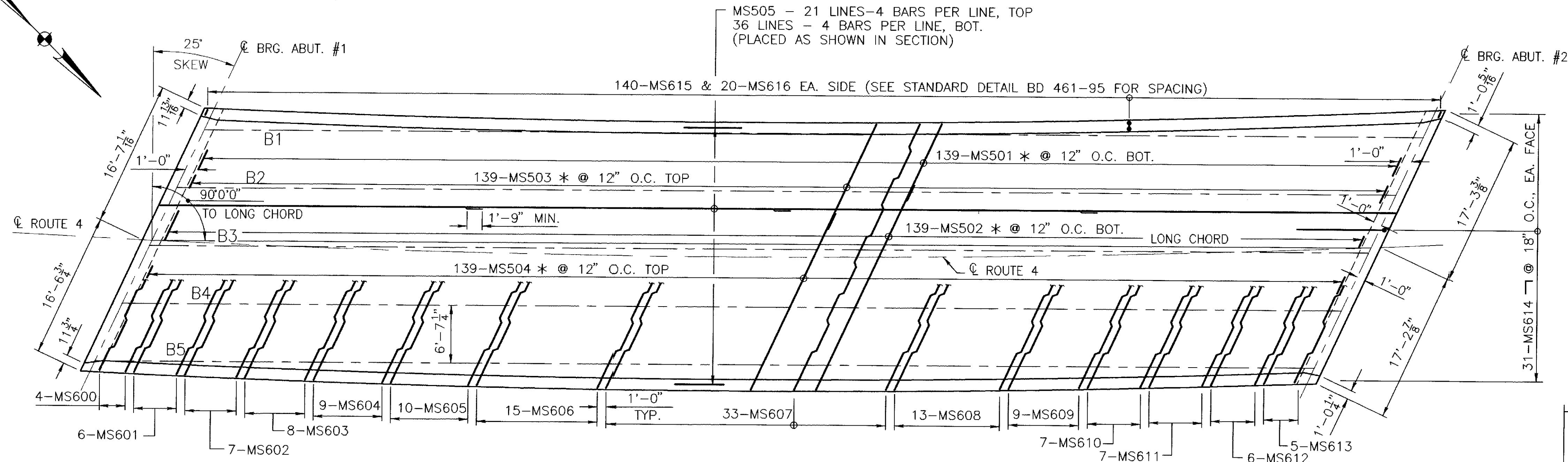
MATERIALS

STRUCTURAL STEEL: All Material ASTM A709, Grade 50W
(unless otherwise noted) (Unpainted)
High Strength Bolts ASTM A325 Type 3

BASIC DESIGN STRESSES

STRUCTURAL STEEL: ASTM A709, Grade 50W Fy = 50,000 psi.
ASTM A325 Fv = 25,000 psi.

CAMBER TABLE	
BEAM	DIM. A
B-1	4'-6 11/16"
B-2	4'-5 7/8"
B-3	4'-5 1/4"
B-4	4'-4 11/16"
B-5	4'-4"

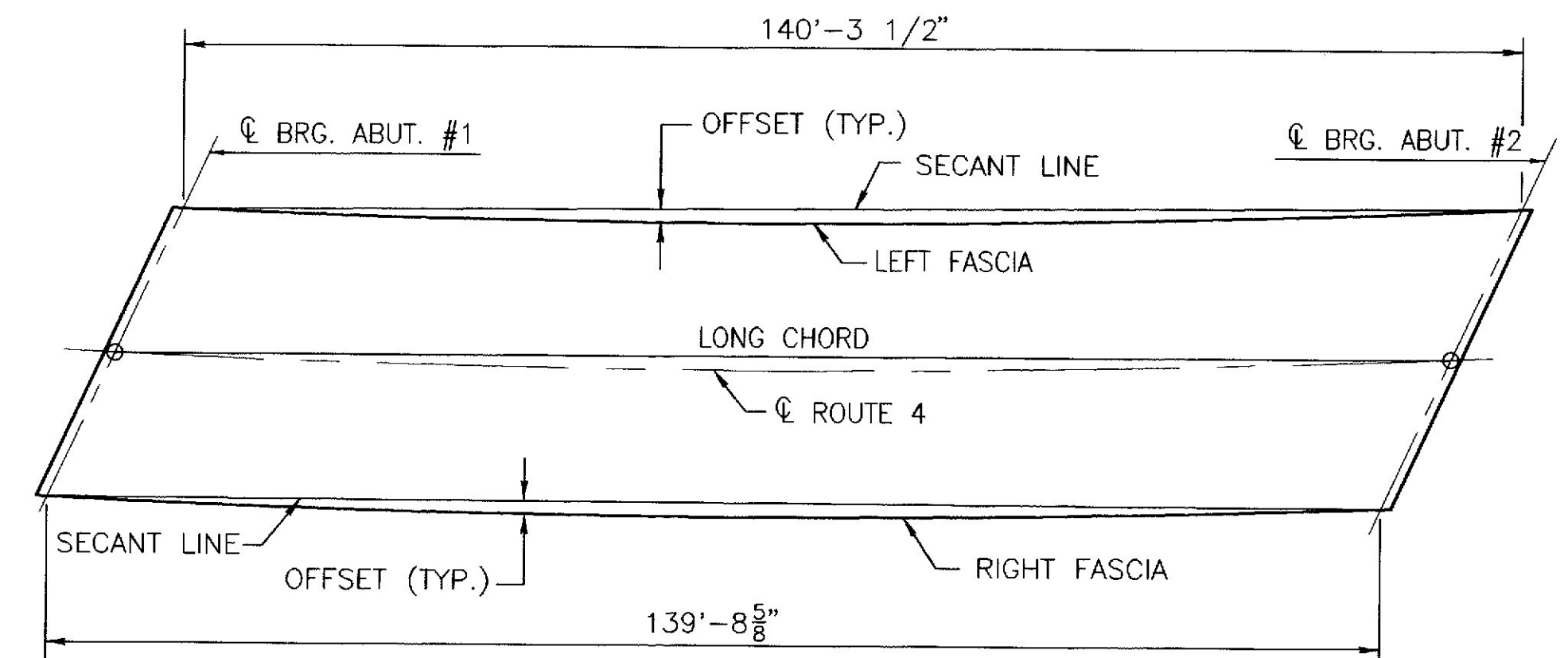


SUPERSTRUCTURE PLAN

* ALTERNATE BARS TO STAGGER SPLICES

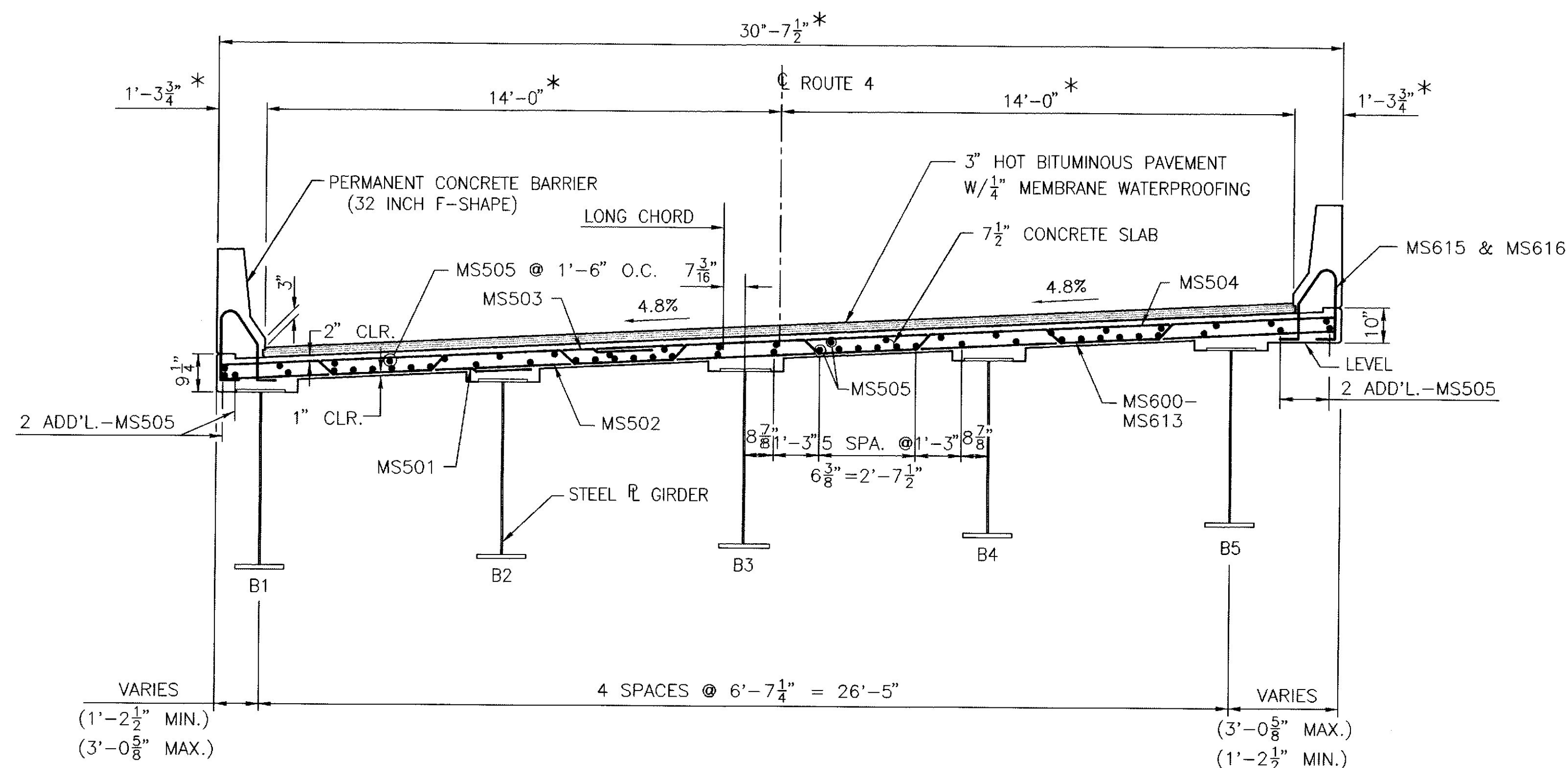
SUPERSTRUCTURE NOTES:

1. REINFORCING STEEL SHALL HAVE A MINIMUM COVER OF 2" UNLESS OTHERWISE NOTED.
2. THE SUPERSTRUCTURE SLAB CONCRETE SHALL BE PLACED IN ONE CONTINUOUS OPERATION AND THE CONCRETE SHALL BE KEPT PLASTIC UNTIL THE PLACEMENT IS COMPLETED.
3. PROTECTIVE COATING FOR CONCRETE SURFACES, ITEM NO. 515.20, SHALL BE APPLIED IN THE FOLLOWING AREAS:
 - FASCIA DOWN TO THE DRIP NOTCH
 - PERMANENT CONCRETE BARRIERS
4. PERMANENT CONCRETE BARRIERS SHALL CONTAIN A SILICA FUME ADDITIVE.
5. FORM A V-GROOVE ON THE FASCIAS AT THE HORIZONTAL JOINT BETWEEN THE CONCRETE BARRIER AND THE SLAB.



FASCIA OFFSETS

FASCIA OFFSETS			
LEFT FASCIA		RIGHT FASCIA	
DISTANCE	OFFSET	DISTANCE	OFFSET
0'	—	0'	—
10'	4 7/8"	10'	4 3/4"
20'	8 7/8"	20'	8 3/4"
30'	1'-0 1/4"	30'	1'-0"
40'	1'-2 7/8"	40'	1'-2 1/2"
50'	1'-4 1/2"	50'	1'-4 1/4"
60'	1'-5 5/8"	60'	1'-5 3/8"
70'	1'-6 1/4"	70'	1'-5 3/4"
80'	1'-5 5/8"	80'	1'-5 3/8"
90'	1'-4 3/4"	90'	1'-4 1/4"
100'	1'-2 7/8"	100'	1'-2 3/8"
110'	1'-0 5/8"	110'	1'-7/8"
120'	9"	120'	8 5/8"
130'	5"	130'	4 5/8"
140'	0 1/8"	139'-8 5/8"	—



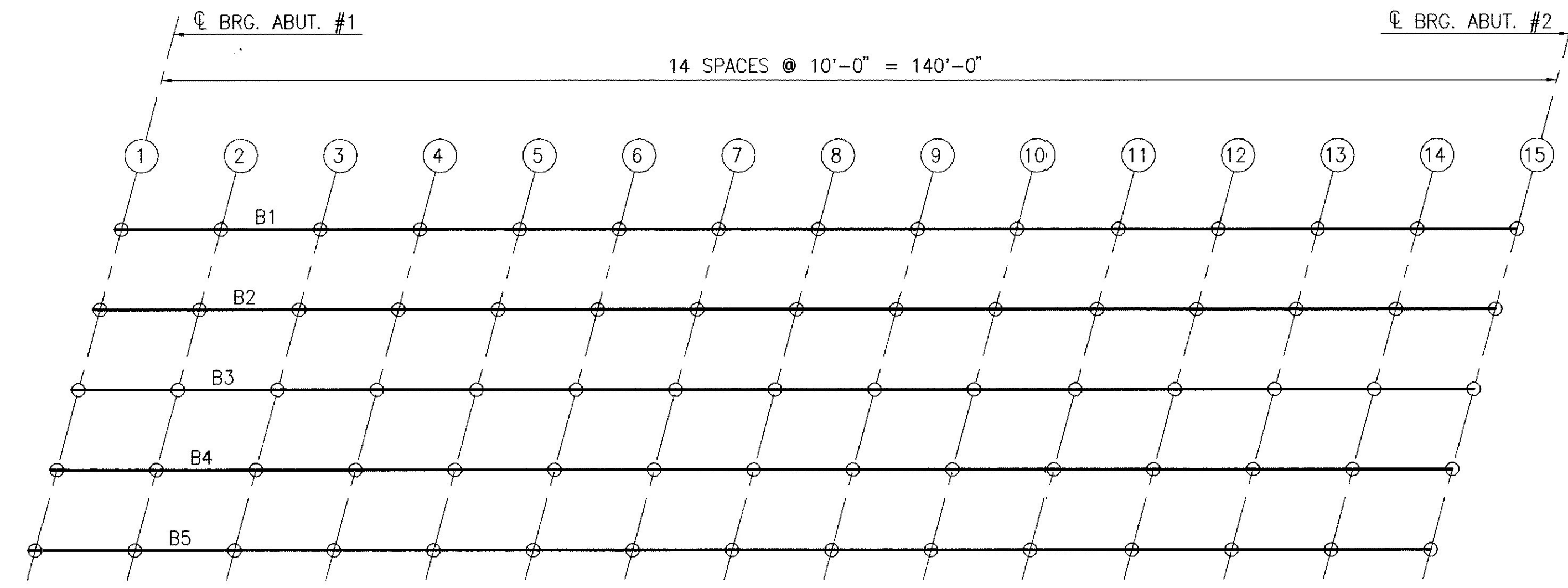
TYPICAL BRIDGE SECTION

* RADIAL DIMENSIONS

AS BUILT 1998
Vincent Bonafina, Jr.

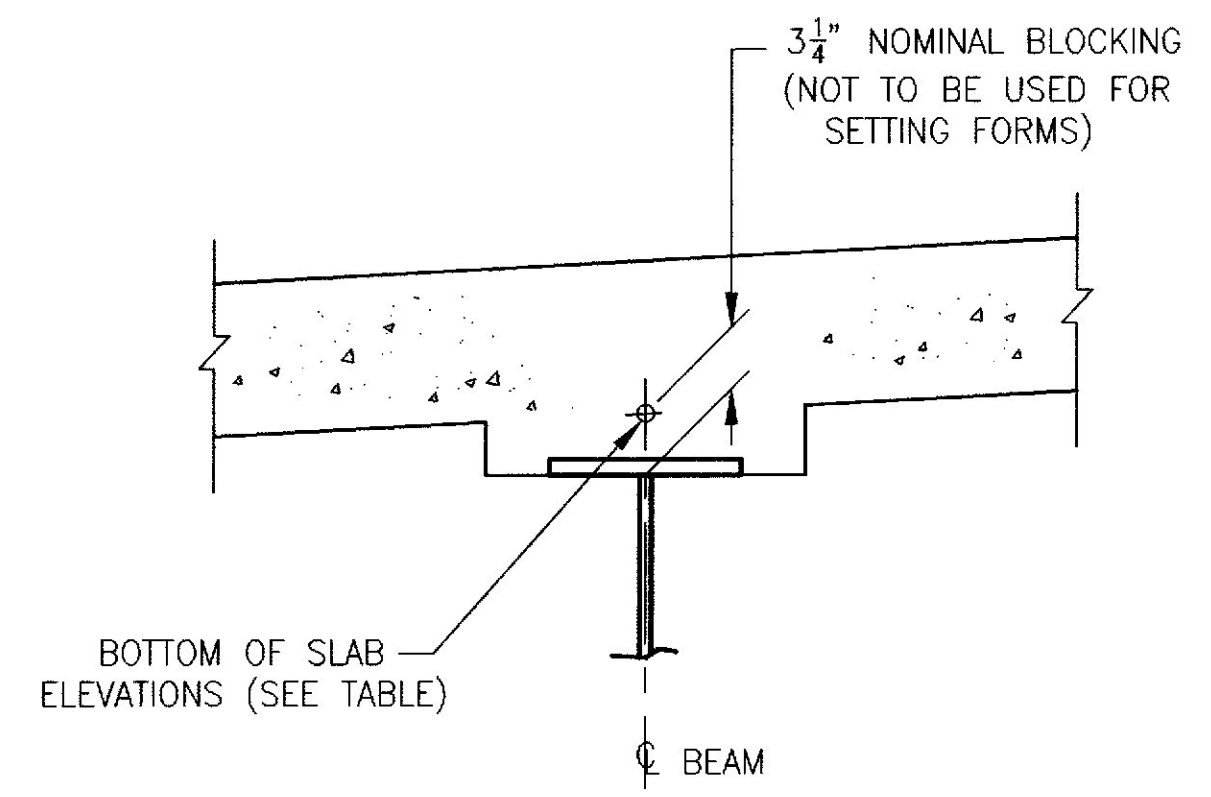
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

MEETING PLACE BRIDGE
OVER
SANDY RIVER
IN THE TOWN OF
PHILLIPS
FRANKLIN COUNTY
SUPERSTRUCTURE DETAILS

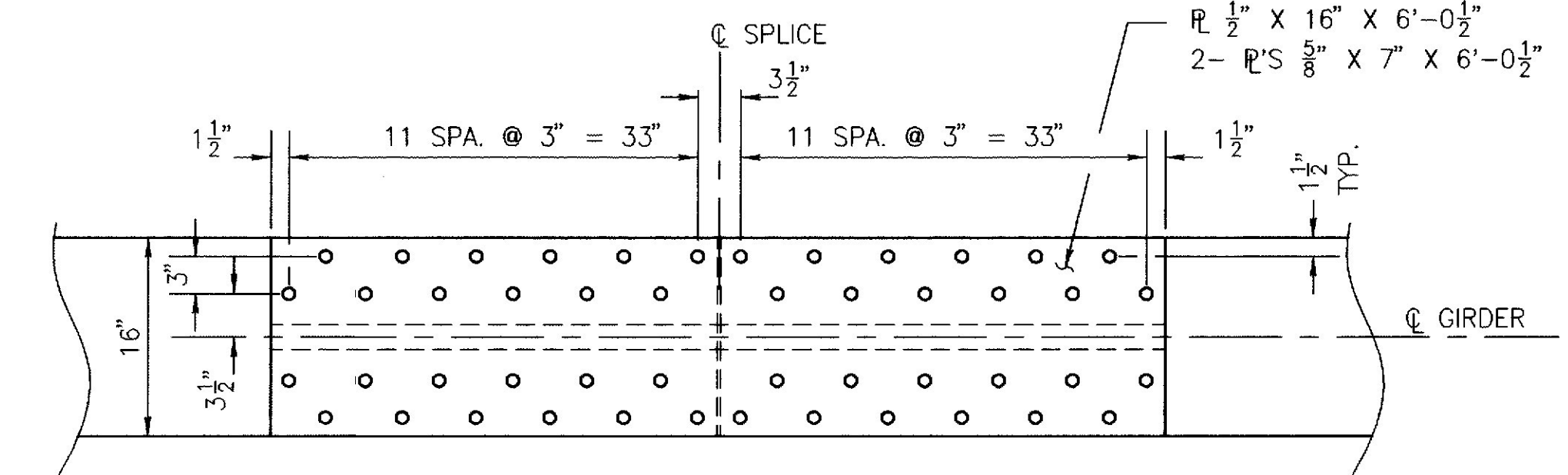


BLOCKING PLAN

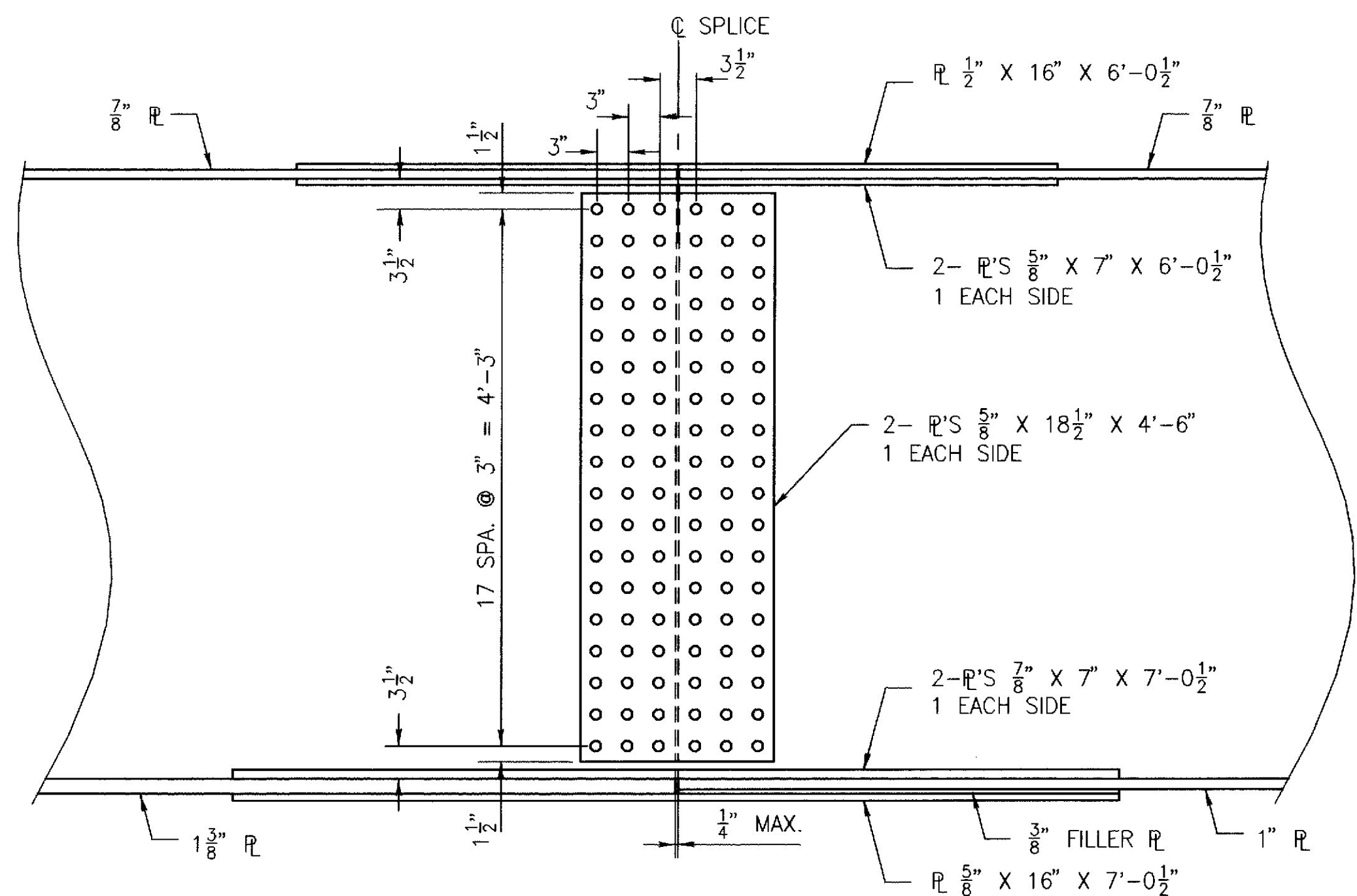
BOTTOM OF SLAB ELEVATIONS															CL BRG. ABUT. #2
	CL BRG. ABUT. #1	SPAN = 140'-0"													
POINT No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
B1	763.21	763.61	764.01	764.41	764.81	765.20	765.58	765.93	766.26	766.56	766.84	767.09	767.32	767.55	767.76
B2	763.46	763.85	764.25	764.65	765.04	765.42	765.79	766.15	766.47	766.77	767.04	767.29	767.53	767.74	767.96
B3	763.71	764.10	764.50	764.88	765.27	765.64	766.01	766.36	766.68	766.98	767.25	767.50	767.73	767.94	768.15
B4	763.97	764.34	764.73	765.12	765.50	765.87	766.23	766.57	766.89	767.18	767.46	767.70	767.93	768.14	768.35
B5	764.22	764.59	764.97	765.35	765.73	766.09	766.45	766.79	767.10	767.40	767.66	767.91	768.13	768.35	768.55



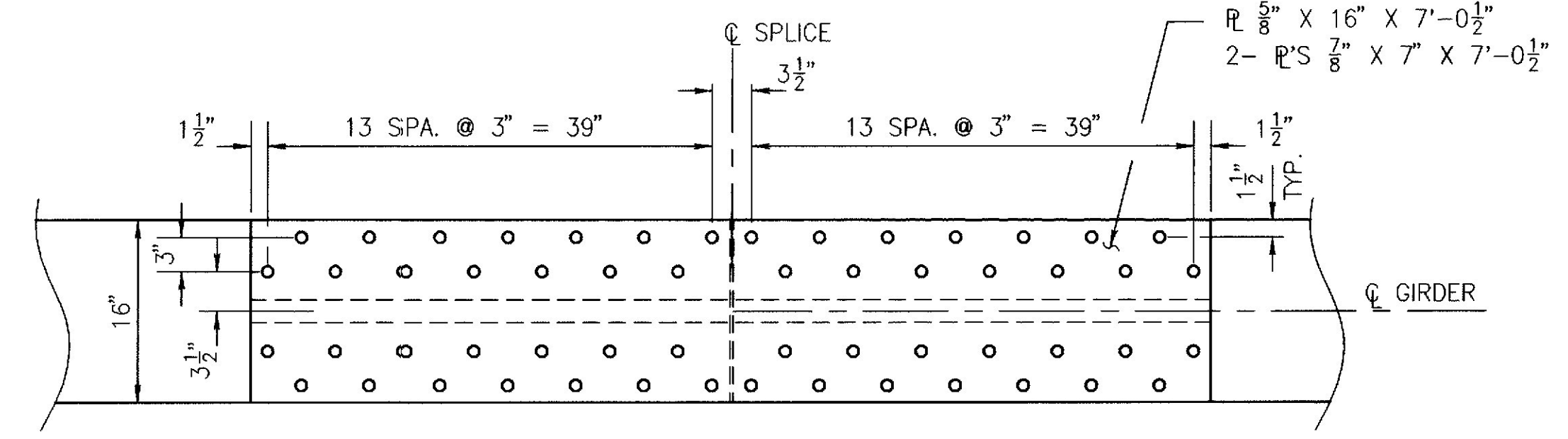
BLOCKING DETAIL



PLAN - TOP FLANGE



ELEVATION



PLAN - BOTTOM FLANGE

FIELD SPLICE DETAILS

As BUILT 1998
Vincent Bonita, Jr.

C:\DWG\W\MA\PLACE\REINFOR1, 05/30/97 at 08:48

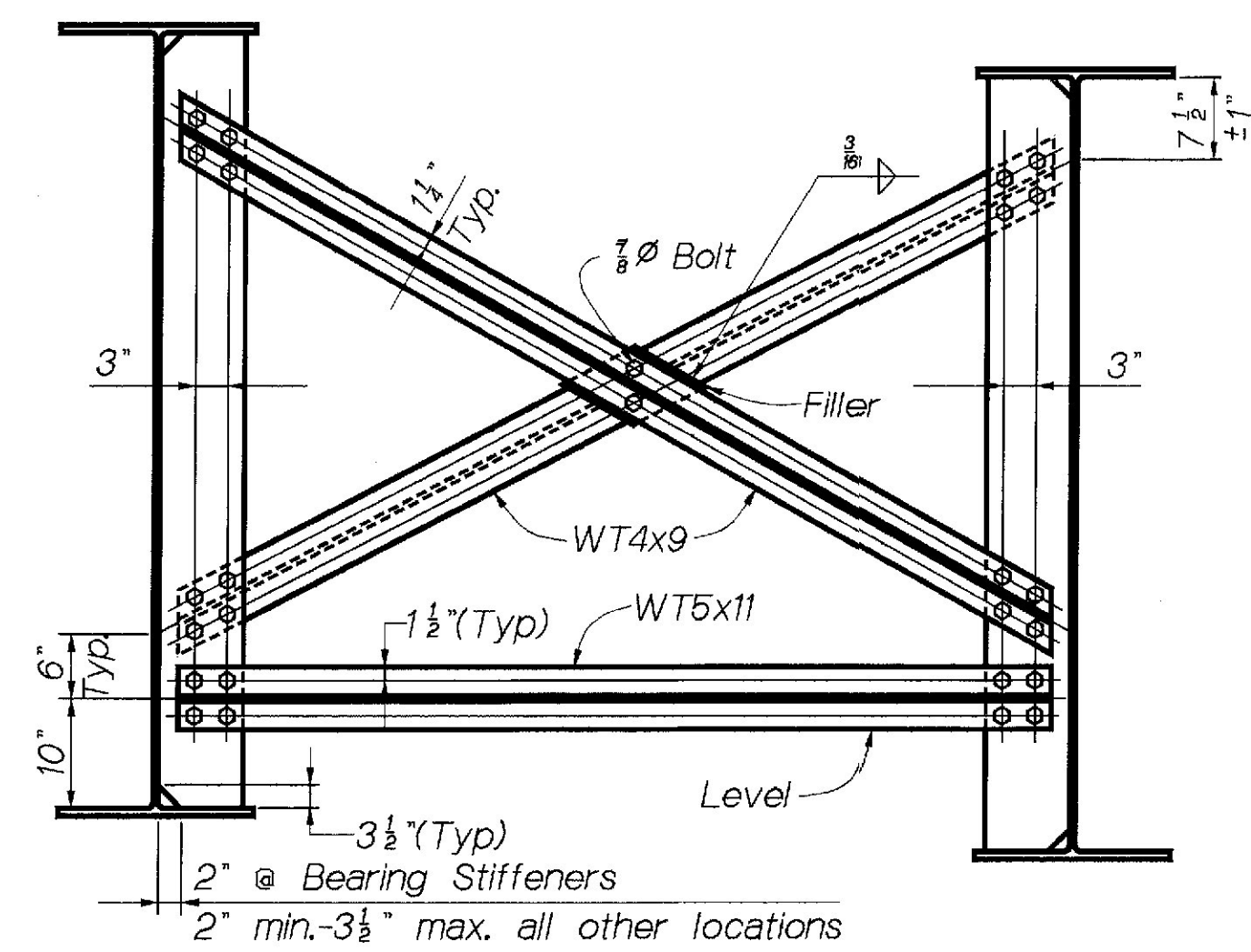
REINFORCING STEEL SCHEDULE

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-032-2(13)X	79	46

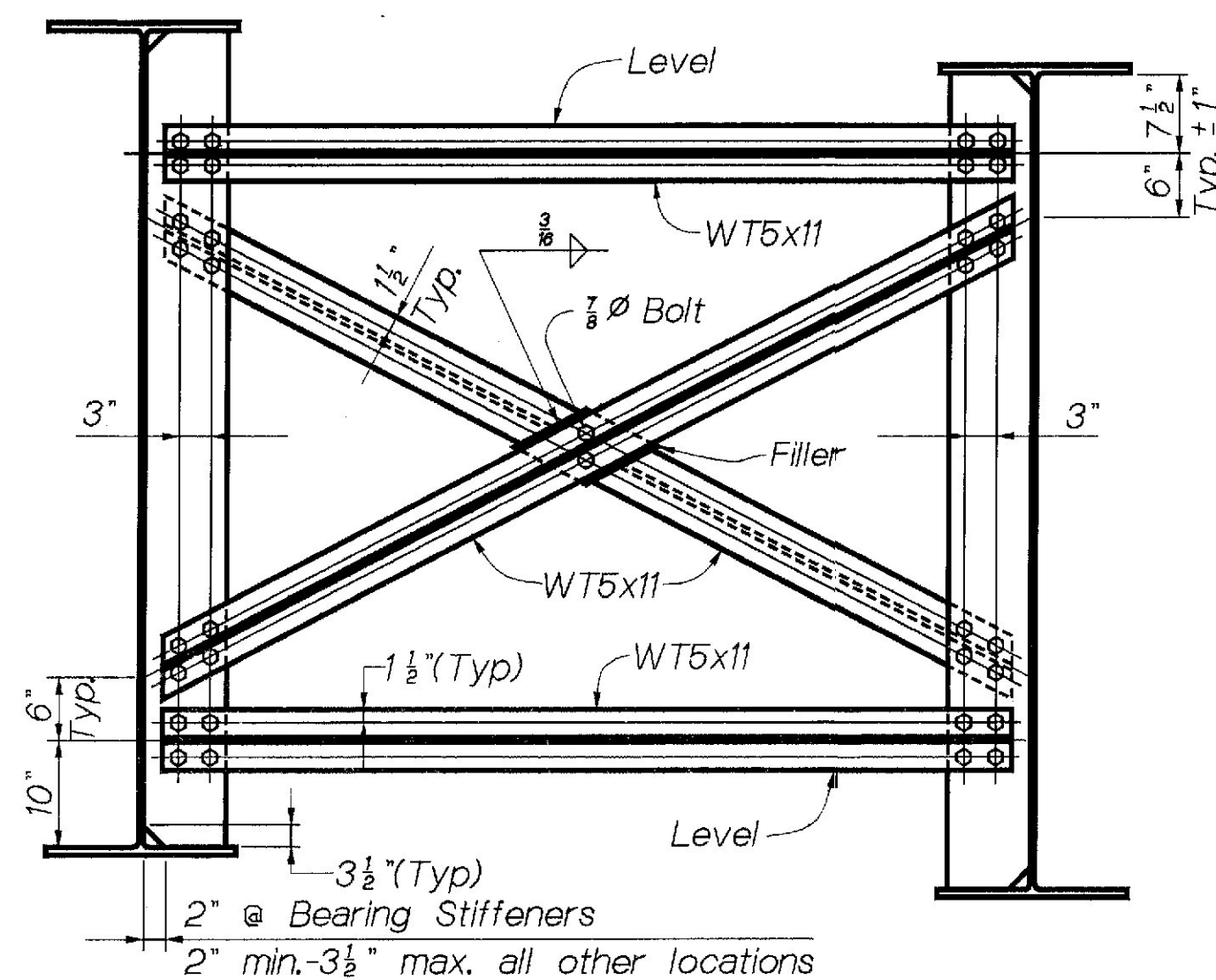
STRAIGHT BARS												BENT BARS															
MARK	NO.	LENGTH	LOCATION	MARK	NO.	LENGTH	LOCATION	MARK	NO.	LENGTH	LOCATION	MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION	
ABUTMENT #1				ABUTMENT #2								ABUTMENT #1															
MA500	6	13'-9"	WEST WING	MB500	6	14'-9"	WEST WING					MA550	1	10'-3"	V				6'-10"	3'-5"			1'-7½"			EAST WING	
MA501	1	11'-5"	WEST WING	MB501	3	12'-8"	WEST WING					MA551	1	9'-8"	V				8'-0"	1'-8"			1'-8"			WEST WING	
MA502	1	10'-11"	WEST WING	MB502	1	10'-8"	WEST WING					MA552	1	9'-5"	V				6'-10"	2'-7"			1'-3"			EAST WING	
MA503	1	9'-2"	WEST WING	MB503	1	8'-8"	WEST WING					MA553	1	10'-8"	V				8'-0"	2'-8"			1'-4"			WEST WING	
MA504	1	7'-6"	WEST WING	MB504	9	14'-6"	ABUTMENT/WINGS					MA554	31	6'-1"	L	2'-1"	4'-0"									ABUTMENT	
MA505	1	5'-10"	WEST WING	MB505	6	40'-0"	ABUTMENT/WINGS					MA555	31	14'-5"	S		7'-4"	1'-7"	5'-6"							ABUTMENT	
MA506	8	13'-8"	ABUTMENT/WINGS	MB506	1	12'-6"	WEST WING					MA556	31	4'-5"	W				1'-8"	1'-1"	1'-8"		9"	3'-5"		APPROACH SLAB DOWEL	
MA507	6	40'-0"	ABUTMENT/WINGS	MB507	1	10'-6"	WEST WING																				
MA508	1	13'-9"	WEST WING	MB508	9	31'-3"	ABUTMENT																				
MA509	1	12'-0"	WEST WING	MB509	20	6'-9"	ABUTMENT																				
MA510	1	10'-4"	WEST WING	MB510	4	28'-10"	ABUTMENT					ABUTMENT #2															
MA511	8	29'-9"	ABUTMENT	MB511	9	13'-3"	EAST WING					MB550	1	9'-7"	V				7'-10"	1'-9"			10½"			EAST WING	
MA512	20	6'-9"	ABUTMENT	MB512	3	10'-8"	EAST WING					MB551	1	9'-10"	V				6'-1"	3'-9"			1'-5"			WEST WING	
MA513	4	28'-10"	ABUTMENT	MB513	1	8'-11"	EAST WING					MB552	1	10'-7"	V				7'-10"	2'-9"			1'-4½"			EAST WING	
MA514	8	12'-1"	EAST WING	MB514	1	11'-6"	EAST WING					MB553	1	8'-10"	V				6'-1"	2'-9"			1'-0½"			WEST WING	
MA515	3	10'-9"	EAST WING	MB515	1	7'-2"	EAST WING					MB554	32	6'-1"	L	2'-1"	4'-0"									ABUTMENT	
MA516	1	12'-3"	EAST WING	MB516	1	9'-9"	EAST WING					MB555	32	14'-5"	S		7'-4"	1'-7"	5'-6"							ABUTMENT	
MA517	1	10'-3"	EAST WING	MB517	1	5'-5"	EAST WING					MB556	32	4'-5"	W				1'-8"	1'-1"	1'-8"		9"	3'-5"		APPROACH SLAB DOWEL	
MA518	1	11'-9"	EAST WING	MB518	1	8'-0"	EAST WING																				
MA519	1	8'-4"	EAST WING	MB519	2	8'-0"	EAST WING																				
MA520	1	9'-11"	EAST WING	MB520	2	8'-6"	EAST WING																				
MA521	1	6'-6"	EAST WING	MB521	2	9'-1"	EAST WING																				
MA522	1	8'-0"	EAST WING	MB522	2	9'-8"	EAST WING																				
MA523	2	8'-8"	EAST WING	MB523	2	10'-3"	EAST WING					SUPERSTRUCTURE															
MA524	2	9'-2"	EAST WING	MB524	2	10'-10"	EAST WING					MS600	4	33'-10¾"	B		3'-11½"	6½"	3'-3¼"	3'-3¼"	2'-8½"		4½"	32'-6¾"		TRANSVERSE	
MA525	2	9'-9"	EAST WING	MB525	2	11'-5"	EAST WING																				
MA526	2	10'-3"	EAST WING	MB526	6	12'-0"	EAST WING					MS601	6	33'-11¾"	B		3'-9"	6½"	3'-3¼"	3'-3¼"	3'-0"		4½"	32'-7¾"		NOTE: DIM. "B" @ LEFT FASCIA DIM. "F" @ RIGHT FASCIA	
MA527	2	10'-10"	EAST WING	MB527	4	11'-4"	EAST WING																				
MA528	2	11'-4"	EAST WING	MB528	2	8'-0"	WEST WING					MS602	7	34'-0¼"	B		3'-6"	6½"	3'-3¼"	3'-3¼"	3'-3½"		4½"	32'-8¼"		TRANSVERSE	
MA529	7	12'-1"	EAST WING	MB529	2	8'-6"	WEST WING																				
MA530	3	11'-4"	EAST WING	MB530	2	9'-0"	WEST WING					MS603	8	34'-0¾"	B		3'-3"	6½"	3'-3¼"	3'-3¼"	3'-7"		4½"	32'-8¾"		TRANSVERSE	
MA531	2	6'-8"	WEST WING	MB531	2	9'-6"	WEST WING																				
MA532	2	7'-3"	WEST WING	MB532	2	10'-0"	WEST WING					MS604	9	34'-2¼"	B		3'-1"	6½"	3'-3¼"	3'-3¼"	3'-10½"		4½"	32'-10¼"		TRANSVERSE	
MA533	2	7'-10"	WEST WING	MB533	2	10'-6"	WEST WING																				
MA534	2	8'-5"	WEST WING	MB534	7	10'-11"	WEST WING					MS605	10	34'-3¾"	B		2'-11"	6½"	3'-3¼"	3'-3¼"	4'-2"		4½"	32'-11¾"		TRANSVERSE	
MA535	2	9'-0"	WEST WING	MB535	5	10'-5"	WEST WING																				
MA536	2	9'-7"	WEST WING	MB536	64	6'-3"	ABUTMENT					MS606	15	34'-4¼"	B		2'-9"	6½"	3'-3¼"	3'-3¼"	4'-4½"		4½"	33'-0¼"		TRANSVERSE	
MA537	2	10'-2"	WEST WING	MB537	2	34'-1"	ABUTMENT																				
MA538	5	10'-9"	WEST WING									MS607	33	34'-7¾"	B		2'-9"	6½"	3'-3¼"	3'-3¼"	4'-8"		4½"	33'-3¾"		TRANSVERSE	
MA539	5	10'-4"	WEST WING																								
MA540	62	6'-3"	ABUTMENT									MS608	13	34'-9¾"	B		3'-1"	6½"	3'-3¼"	3'-3¼"	4'-6"		4½"	33'-5¾"		TRANSVERSE	
MA541	2	33'-2"	ABUTMENT																								
												MS609	9	34'-10¾"	B		3'-4½"	6½"	3'-3¼"	3'-3¼"	4'-3½"		4½"	33'-6¾"		TRANSVERSE	
												MS610	7	35'-0¼"	B		3'-8"	6½"	3'-3¼"	3'-3¼"	4'-1½"		4½"	33'-8¼"		TRANSVERSE	
MA700	7	17'-8"	WEST WING	MB700	7	17'-11"	WEST WING																				
MA701	7	16'-6"	EAST WING	MB701	7	16'-7"	EAST WING					MS611	7	35'-0¾"	B		3'-11½"	6½"	3'-3¼"	3'-3¼"	3'-10½"		4½"	33'-8¾"		TRANSVERSE	
												MS612	6	35'-1¾"	B		4'-3"	6½"	3'-3¼"	3'-3¼"	3'-8"		4½"	33'-9¾"		TRANSVERSE	
												MS613	5	35'-1¾"	B		4'-6½"	6½"	3'-3¼"	3'-3¼"	3'-4½"		4½"	33'-9¾"		TRANSVERSE	
SUPERSTRUCTURE																											
MS501	139	11'-6"	TRANSVERSE									MS614	62	16'-6"	L	10'-0"	6'-6"										DECK ENDS
MS502	139	26'-0"	TRANSVERSE																								
MS503	139	15'-2"	TRANSVERSE																								
MS504	139	22'-4"	TRANSVERSE									MS615	280	5'-2"	CB	0'-6"	0'-7½"	1'-7½"	11½"	11½"		0'-6"	0'-6½"	1'-0"		CONCRETE BARRIER	
MS505	228	37'-0"	LONGITUDINAL									MS616	20	4'-5"	S	0'-6"	1'-5"	0'-7"	1'-5"			0'-6"					CONCRETE BARRIER
APPROACH SLABS																											
AS400	32	29'-3"	ABUTMENTS #1 & #2																								
AS600	108	15'-0"	ABUTMENTS #1 & #2																								
												</															

FABRICATION NOTES

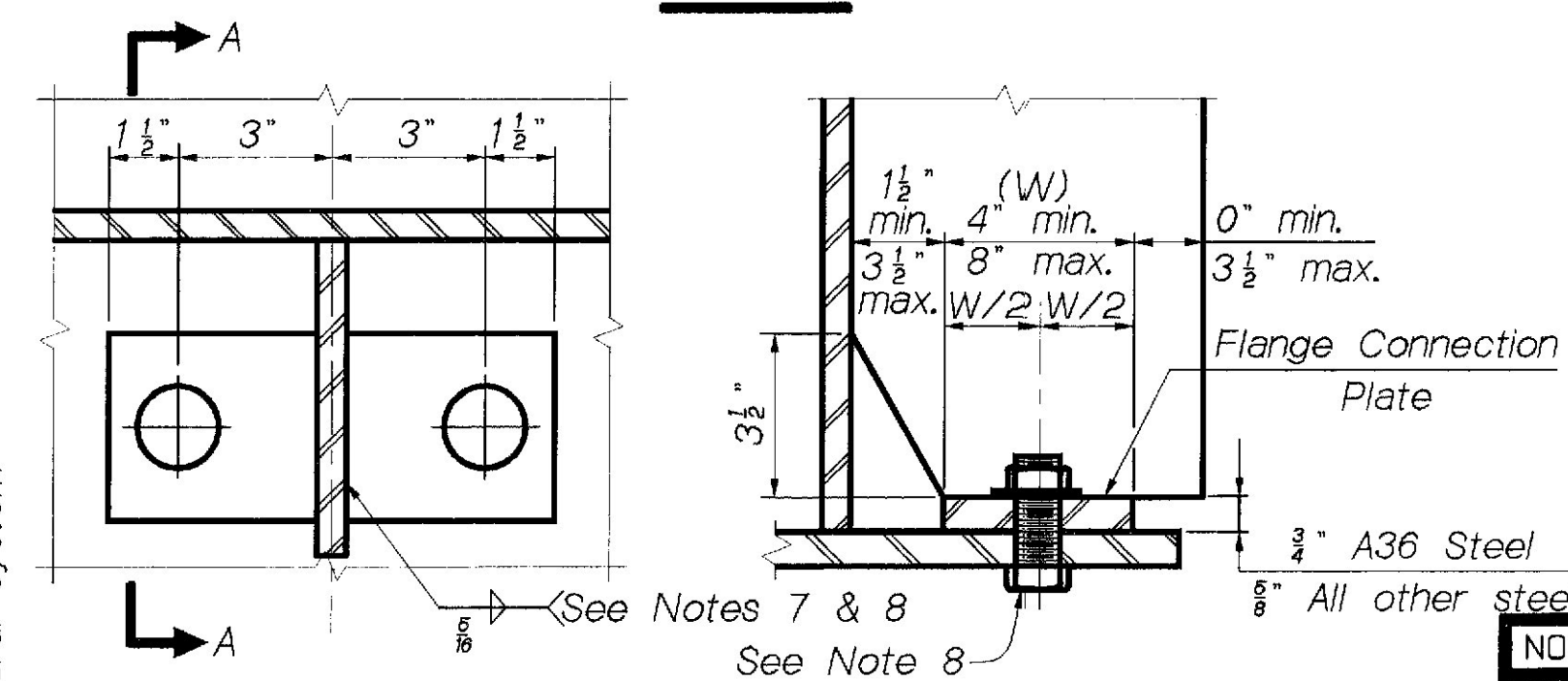
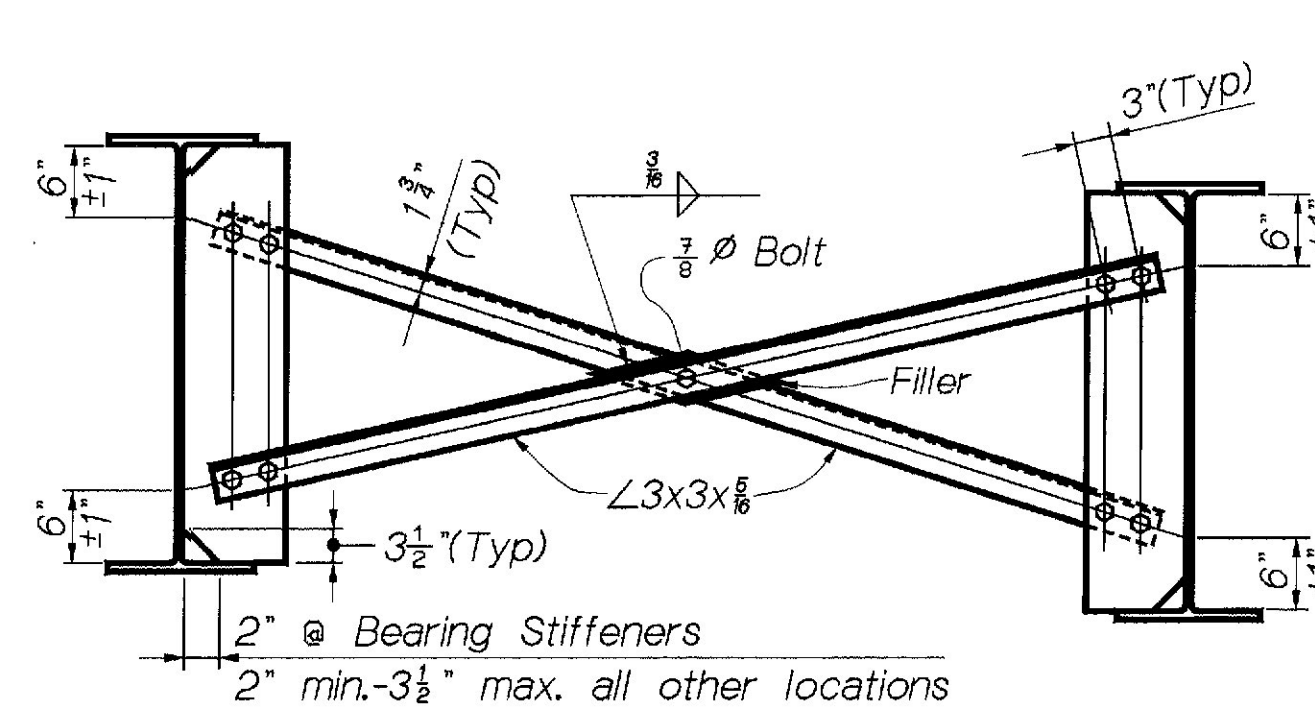
- 1.....All bolts shall be $\frac{3}{8}$ " dia. H.S. Bolts. Hole sizes for bolts shall conform to Section 504.23 of the Standard Specifications, and edge-distances shall be $1\frac{1}{2}$ " min. unless otherwise shown.
- 2.....Connection plates and gusset plates shall have a minimum thickness of $\frac{3}{8}$ " and shall have sufficient width to provide erection clearance. Connection plates shall have a minimum width of 7". For all stiffeners and bent connection plates, the plate thickness will be given on the design drawings.
- 3.....Depending on the skew angle, stiffeners and connection plates shall be welded to the web plates with either fillet welds or a single bevel groove weld. Fillet welds shall be the minimum size specified by the AWS Structural Welding Code D15, table 2.2 unless otherwise shown on the design drawings. Fit-up shall meet the requirements of AWS D15, Art. 3.3, Assembly.
- 4.....All stiffeners and connection plates shall extend to both the top and bottom flanges and shall be welded to the flanges with a fillet weld on both sides of the plate, except as indicated by note 5 and/or 6. Fillet weld size shall be as specified under note 3.
- 5.....Connection plates and stiffeners used as connection plates shall be connected to flanges in tension and stress reversal areas with the "Tension-Flange Connection" detail. All other stiffeners shall fit within $\frac{1}{8}$ " (tight fit) at flanges in tension and stress reversal areas and shall not be welded.
- 6.....Bearing stiffeners shall be machined to have full bearing, and shall have a fillet weld on each side.
- 7.....All fillet welds which connect stiffeners or connection plates to either a flange or web plate, shall be started and stopped approximately $\frac{1}{2}$ inch from the ends or edges of the plate.
- 8.....Bolt tension-flange connection plate to flange before welding stiffener or diaphragm connection plate to it.
- 9.....All dimensions shown as " ± 1 " are variable in order to allow a series of crossframes to have the same slopes and/or dimensions.
- 10.....For unpainted applications all steel for diaphragms and crossframes shall be A.S.T.M.-A588. 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.
- 11.....Use only those items called for on the design drawings.



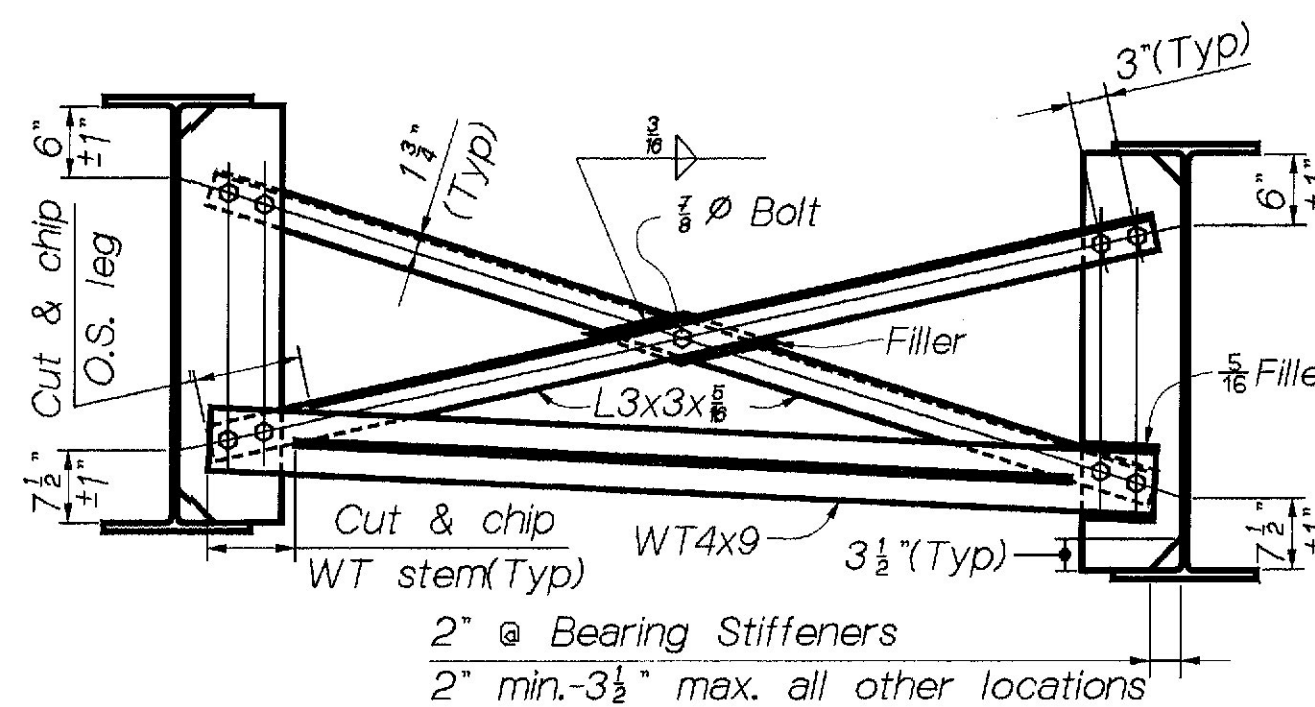
TYPE L



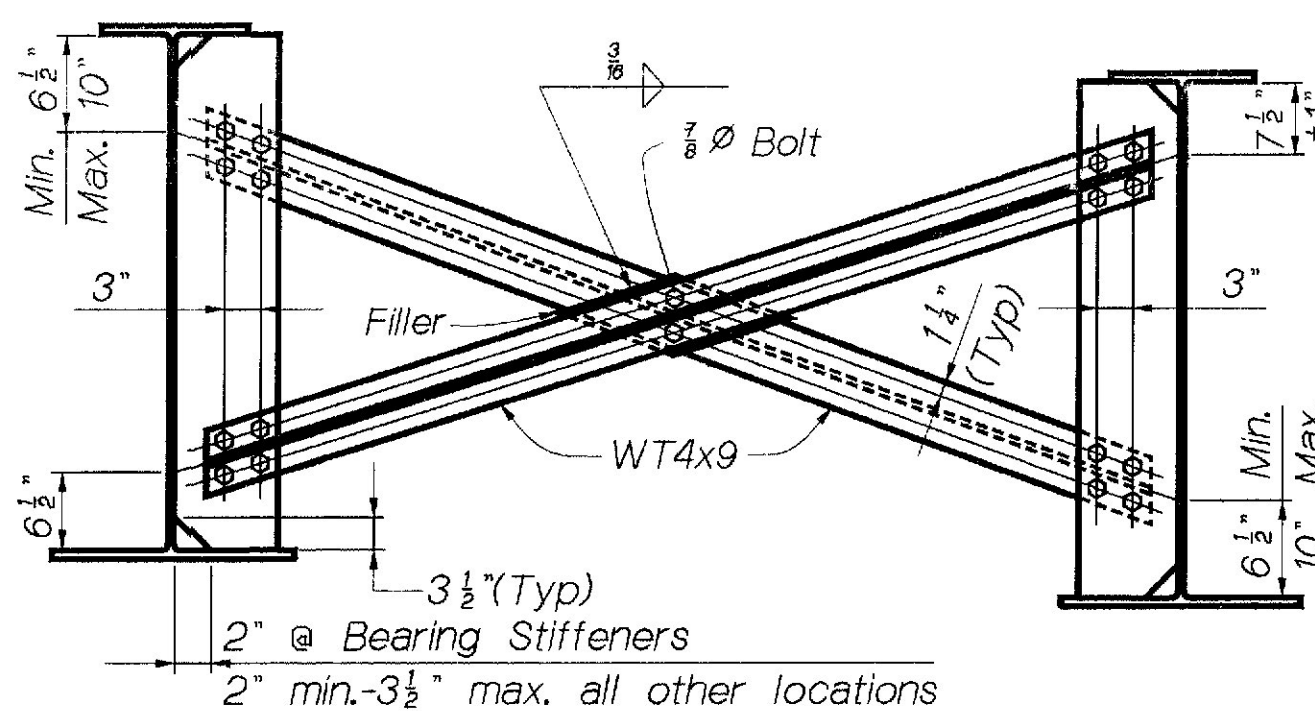
TYPE M

SECTION
TENSION-FLANGE CONNECTION

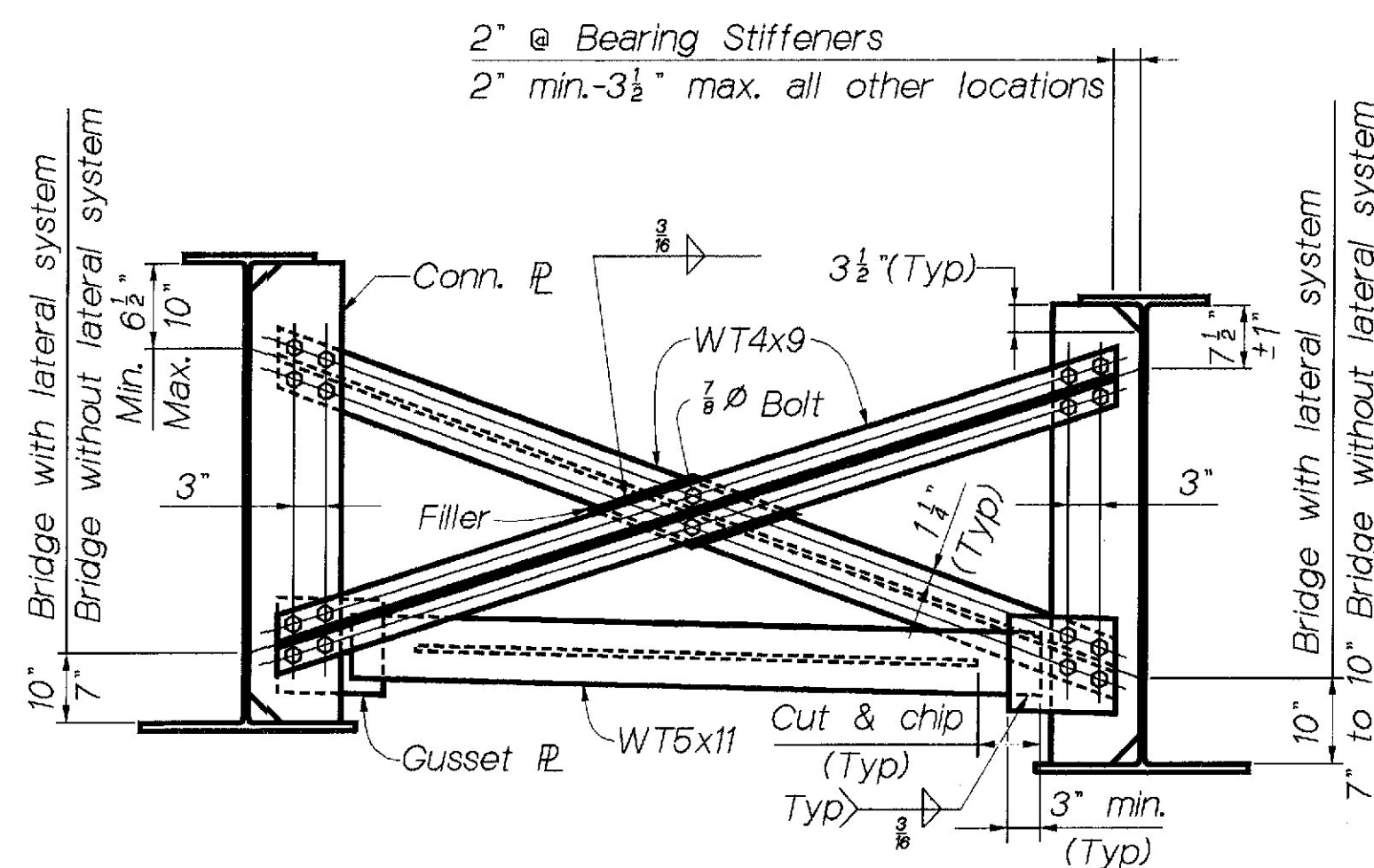
TYPE G



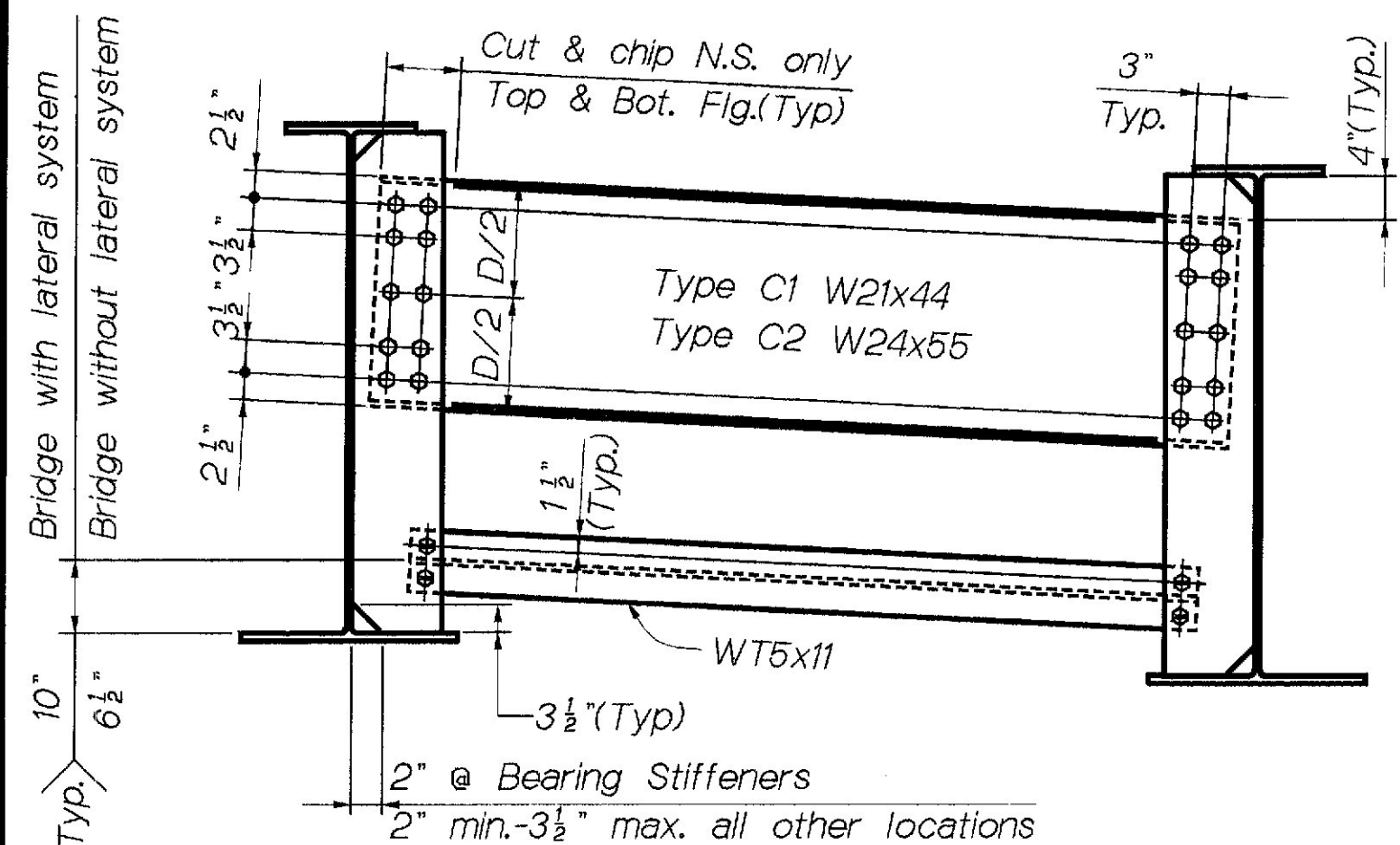
TYPE H



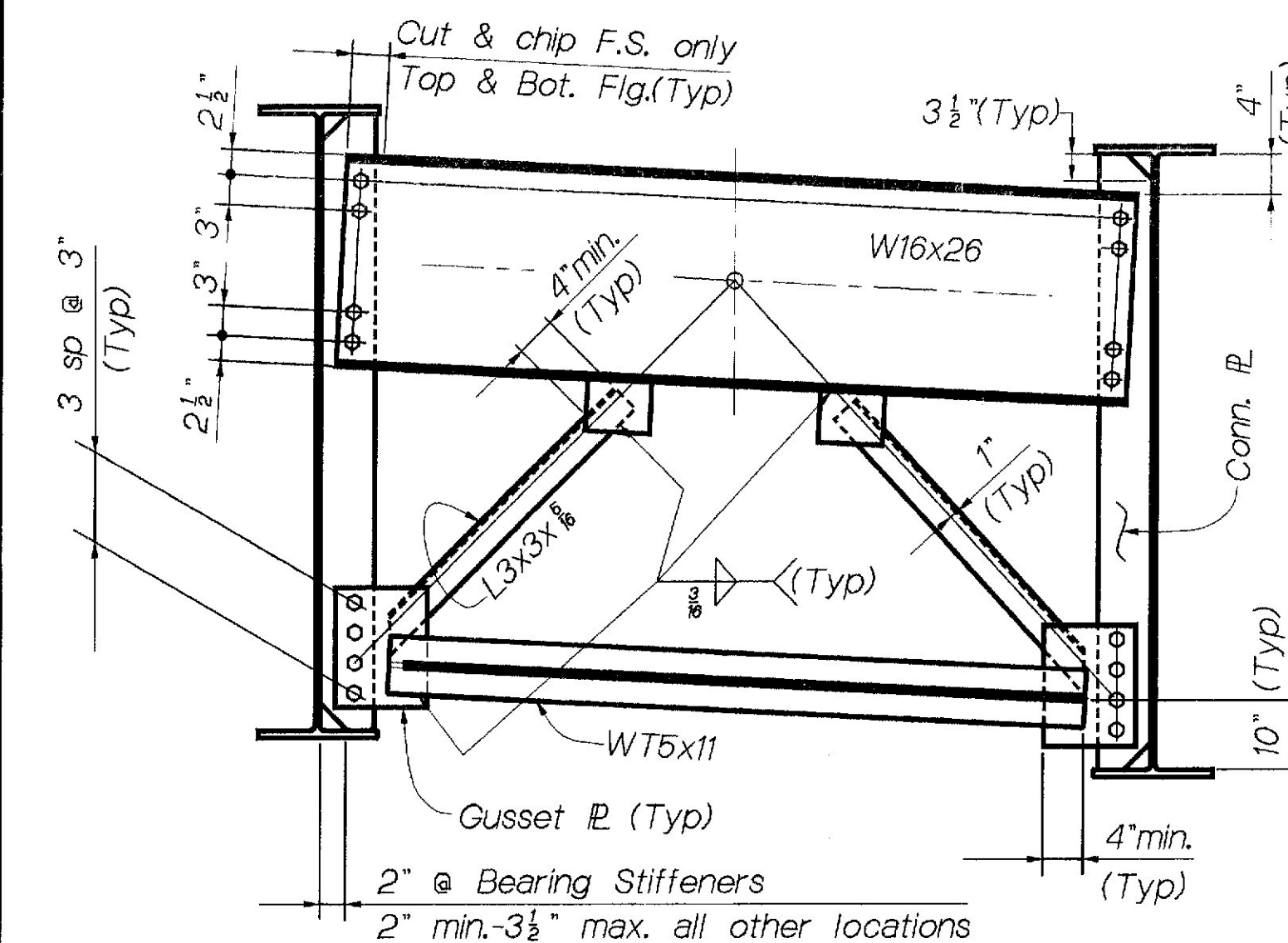
TYPE J



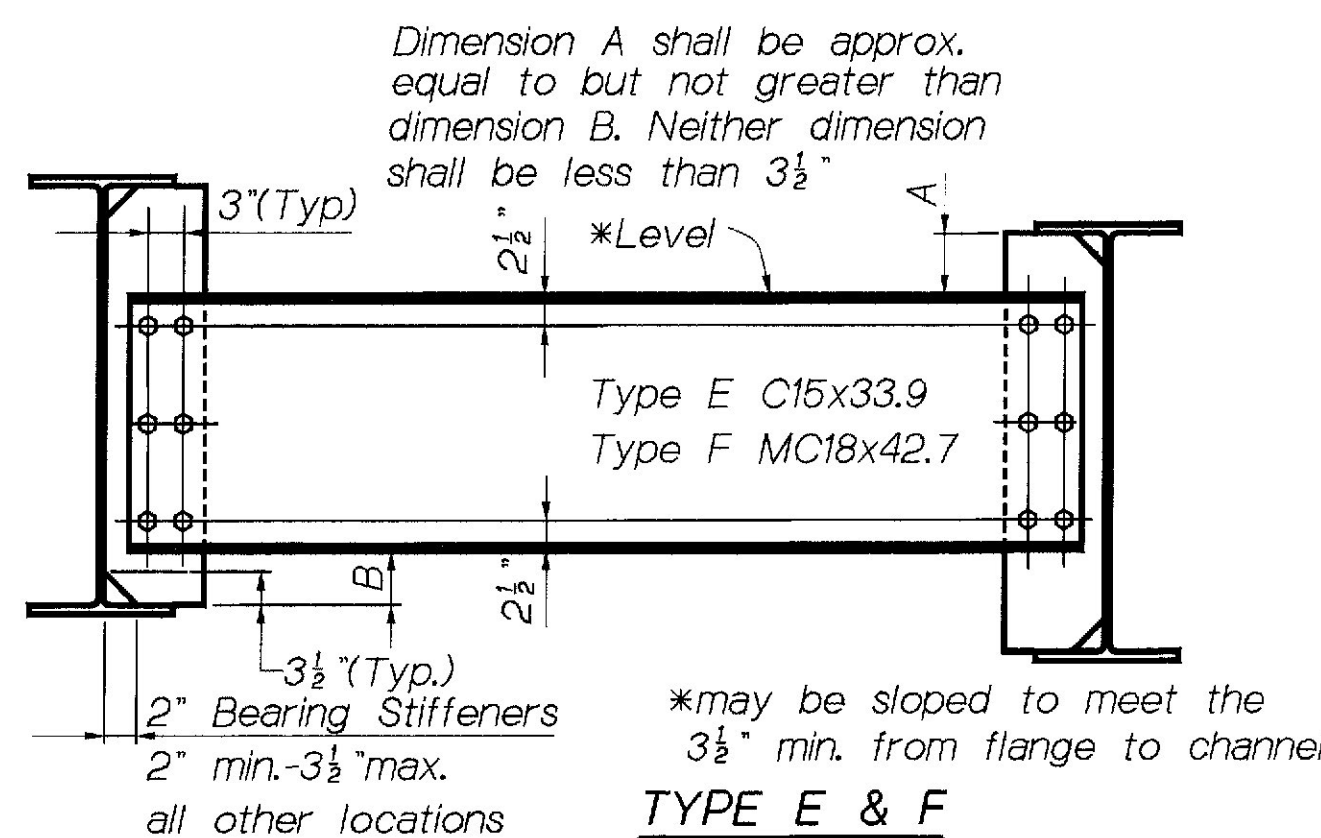
TYPE K



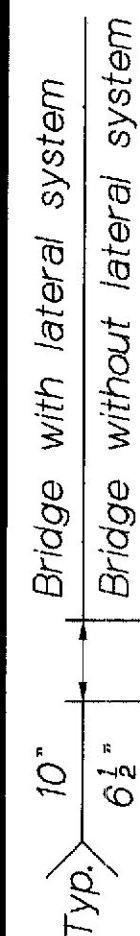
TYPE C1 & C2



TYPE D



TYPE E & F



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

NOTES

- All work and materials shall conform to the provisions of Special Provisions Section 526 - Concrete Barrier (Permanent Concrete Barrier).
- Reinforcing bar designations Type "S" and "CB" refer to type - bending diagrams as shown on the main Reinforcing Steel Schedule. These bars are detailed on the Design Drawings and are included for payment in the Reinforcing Steel pay items.
- Reinforcing steel shall have 1½" minimum concrete cover, except that stirrups Type "S" and "CB" shall have two (2) inches minimum concrete cover.
- The first digit following the letters of the mark indicates the size of the reinforcing bar. (FB500 = bar size #5.) All dimensions are out - to - out of bar.
- The minimum lap splice length for FB400 bars is 1'-8".
- The quantities of reinforcing bars shown are for one barrier end only.
- Bolt holes in concrete shall be formed by a method approved by the Engineer.
- Payment for silica fume, anchor bolts and bearing plate will be considered incidental to the concrete barrier pay item.
- Part designations for the Bridge Transition refer to details shown in "A Guide to Standardized Highway Barrier Rail Hardware" as prepared and approved by the AASHTO - AGC - ARTBA Joint Cooperative Committee, Technical Bulletin No. 268-B.
- After installation of the guard rail is complete, upset the threads on the anchor bolts in three (3) places around each bolt, at the junction of the nut and the exposed thread, with a center punch or similar tool.
- If there is a conflict between these Standard Details and the Design Drawings, the requirements of the Design Drawings shall be followed.

MATERIALS

Concrete Class "AASF" or Class "A" with silica fume
Reinforcing Steel ASTM A615, Grade 60
Bearing Plate ASTM A709, Grade 36 (Galvanized)
Bolts ASTM A325, Type 1 (Galvanized) or Type 3

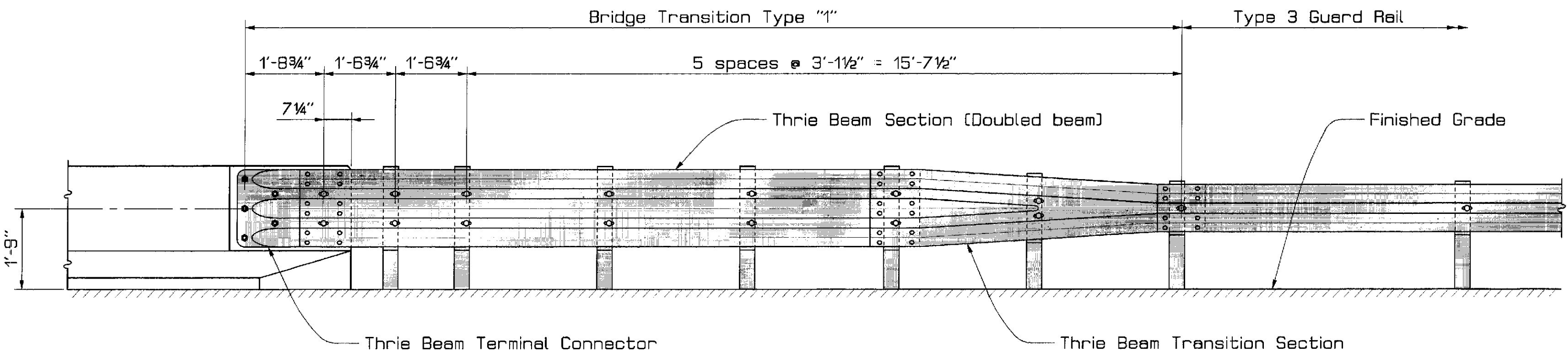
BRIDGE TRANSITION PARTS LIST

Thrie Beam Section (2) RE-63(2)1'-6¾", 3ø3'-1½"12'-6"J-76
Thrie Beam Transition Section (1) RE-69-76
Thrie Beam Terminal Connector (1) RE-67-76
Thrie Beam Post & Offset Block (6) P-54-79
Thrie Beam Timber Post & Offset Block (6) P-55-79

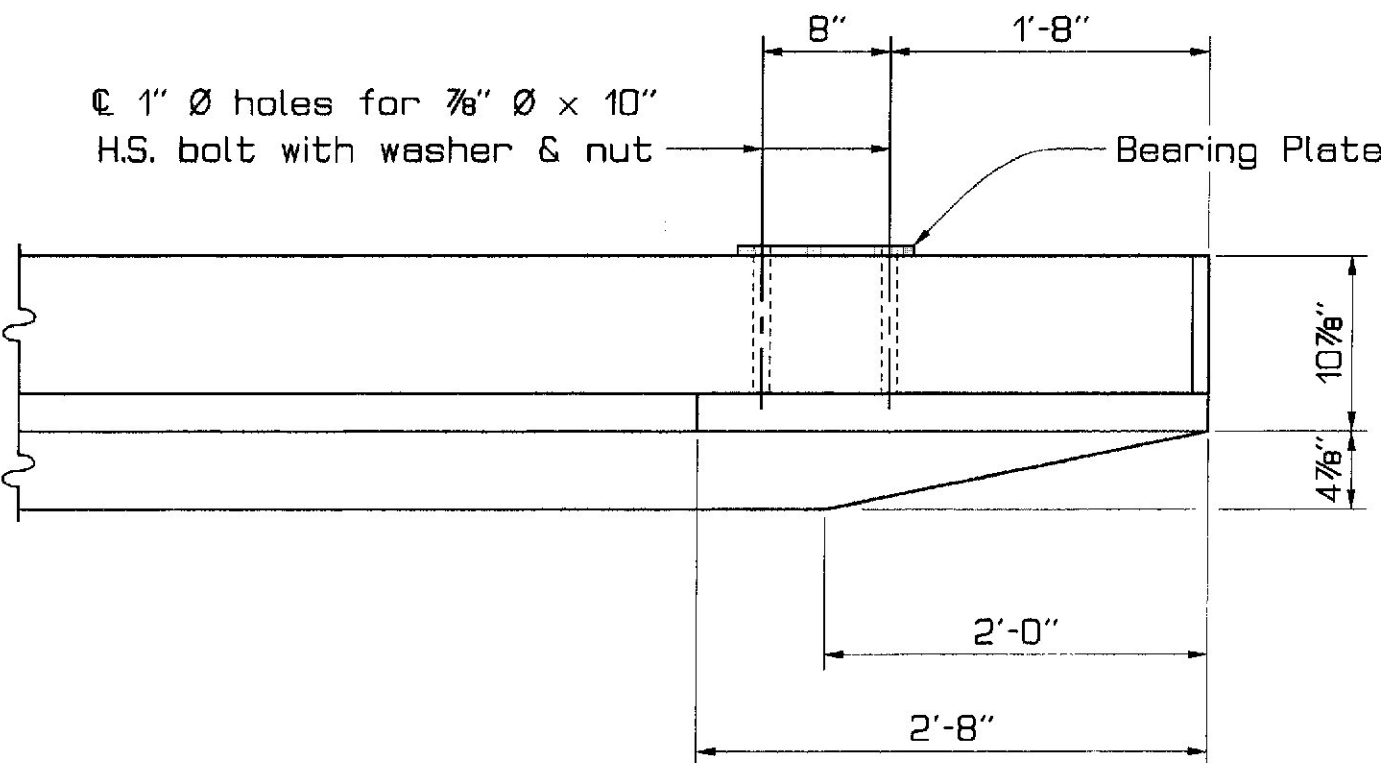
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STANDARD DETAILS
BD 461 - 95

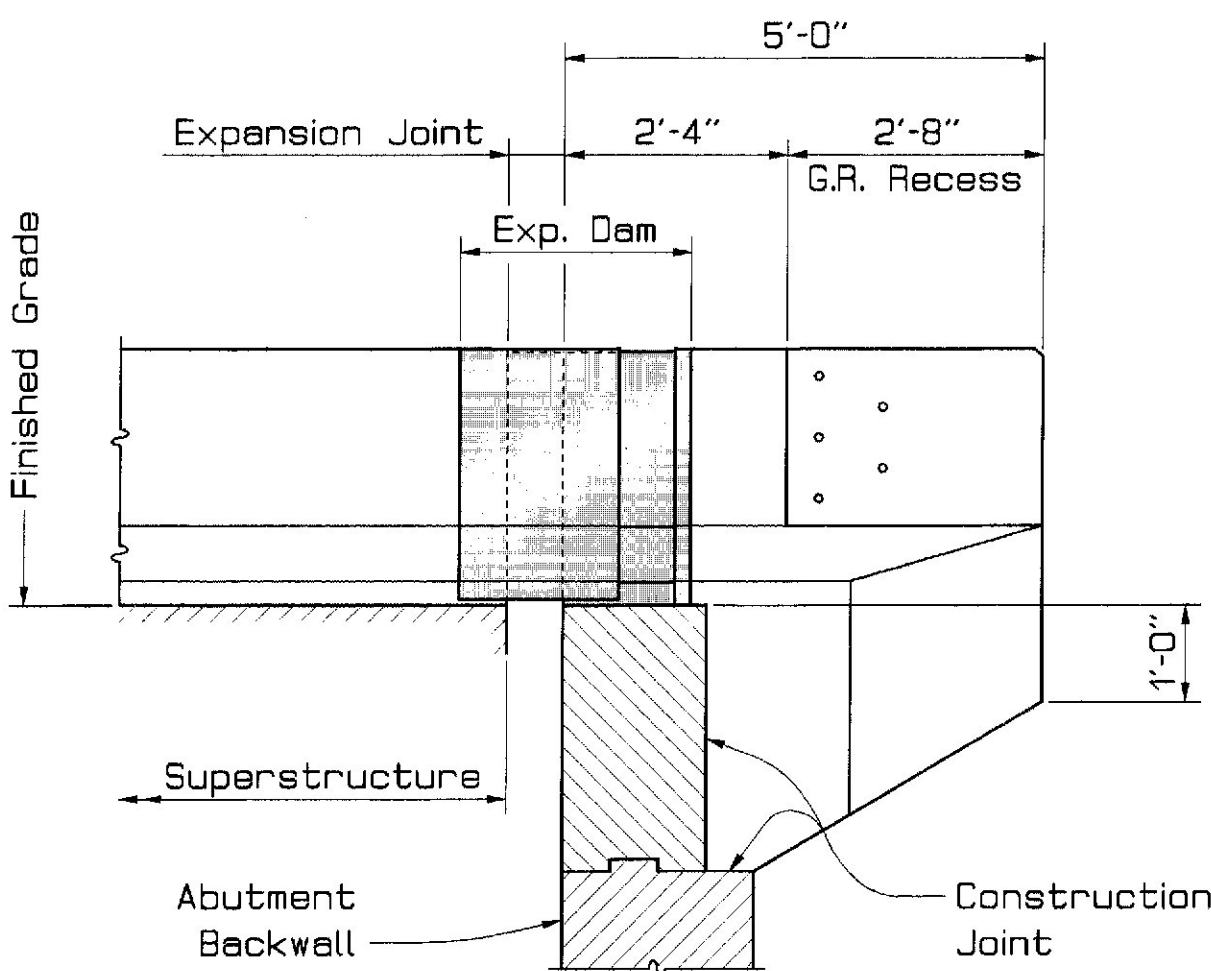
PERMANENT
CONCRETE BARRIER
32 INCH F - SHAPE



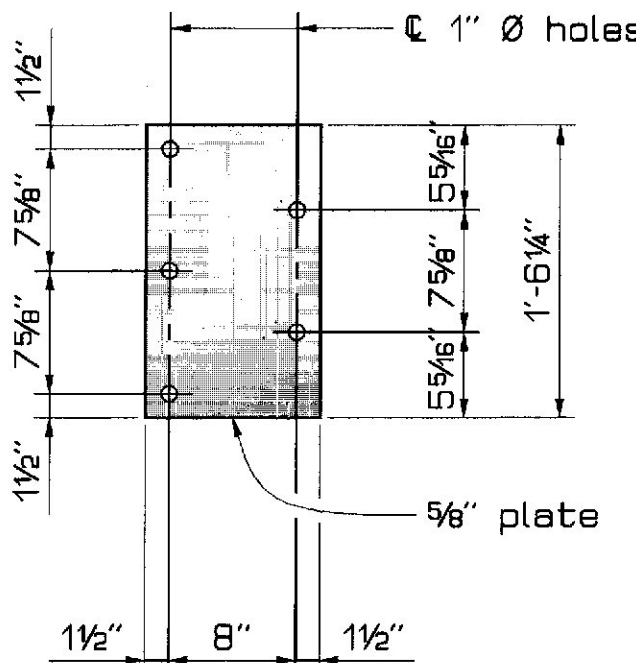
ELEVATION OF BARRIER WITH GUARD RAIL ATTACHMENT



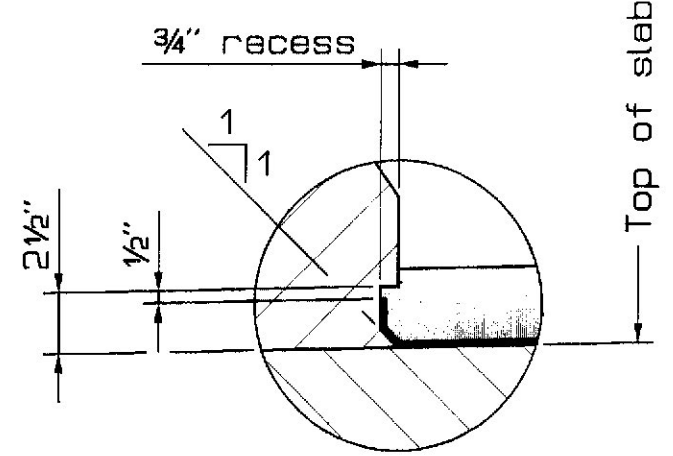
BARRIER PLAN



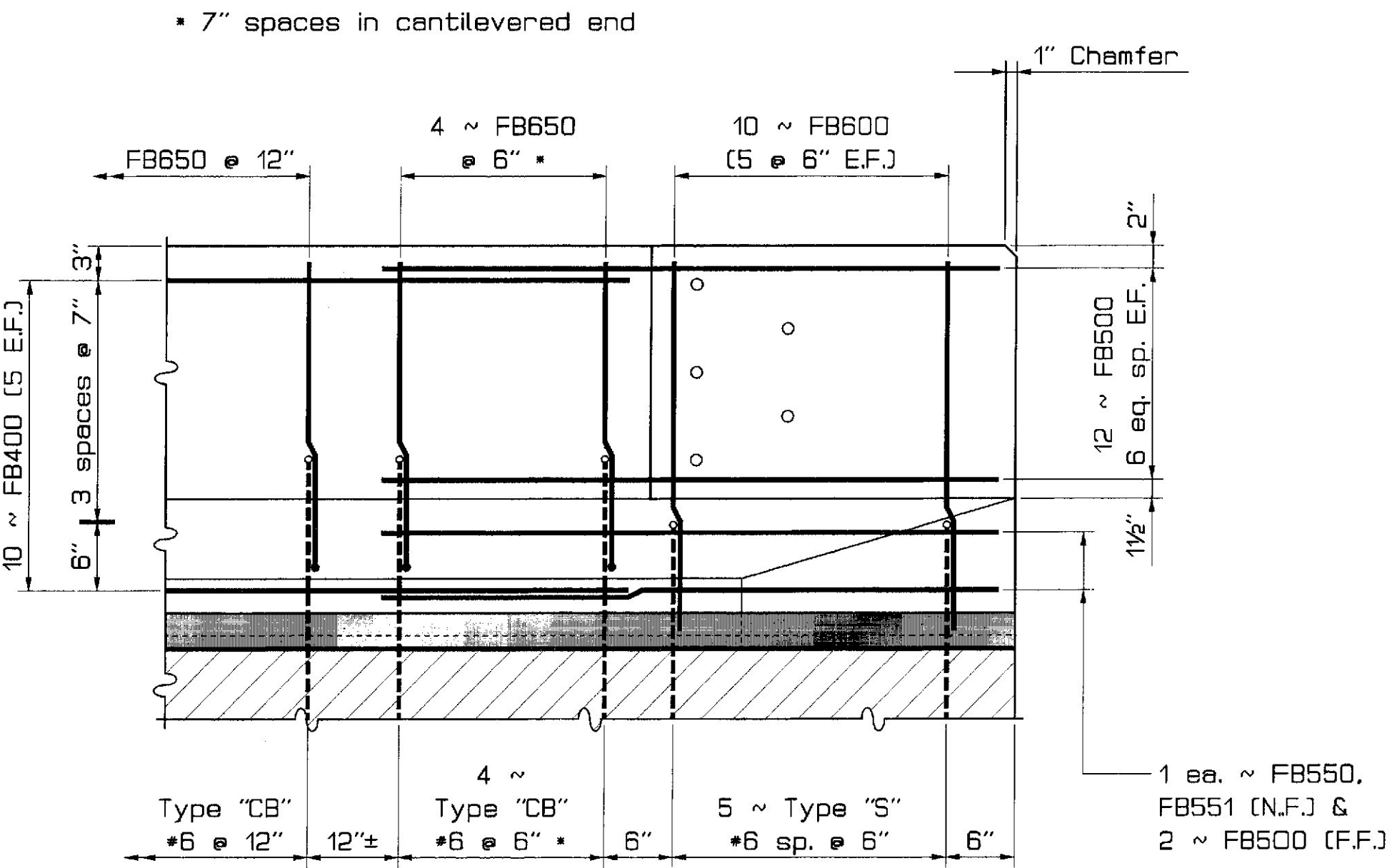
CANTILEVERED END AT EXPANSION JOINT



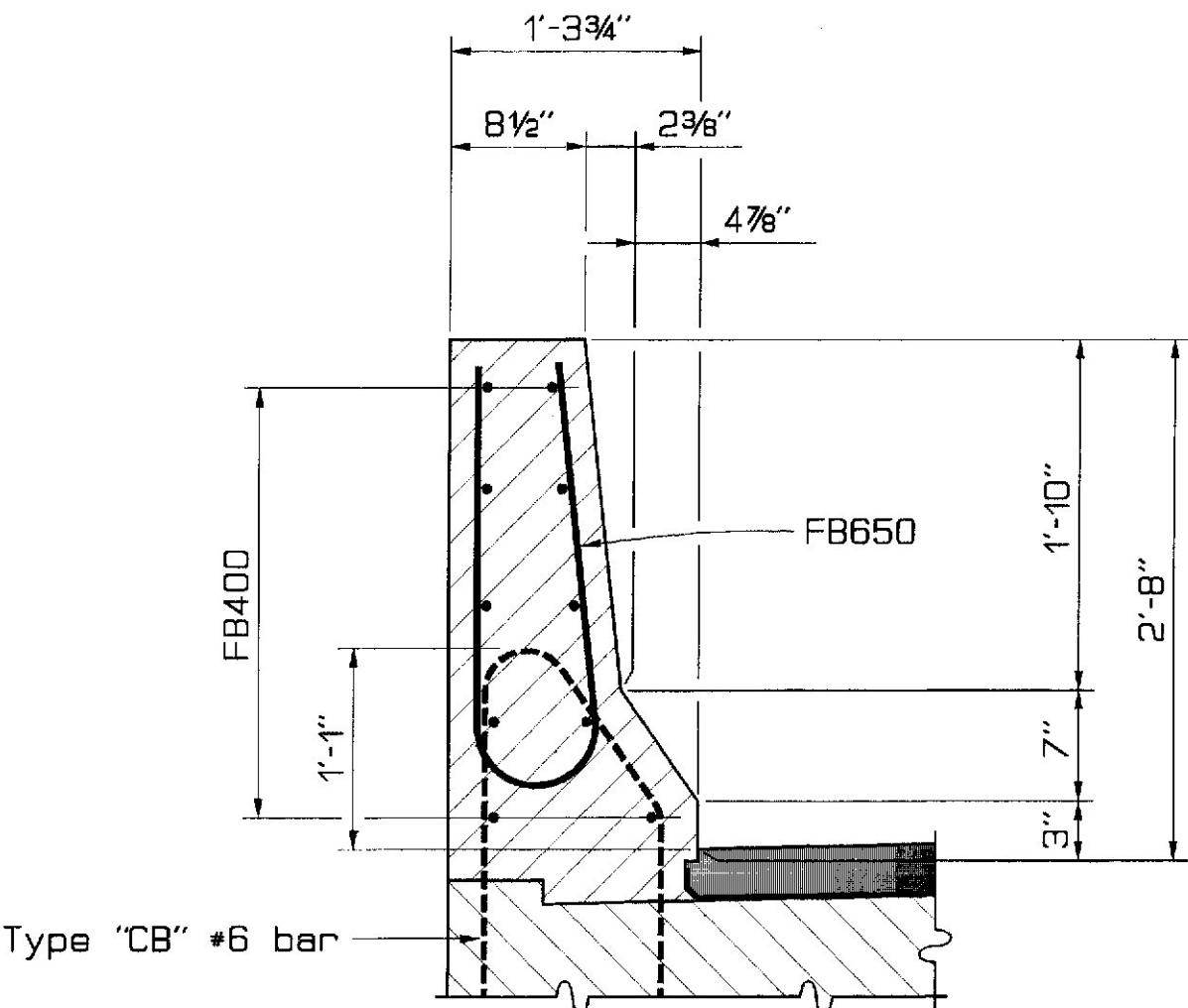
BEARING PLATE



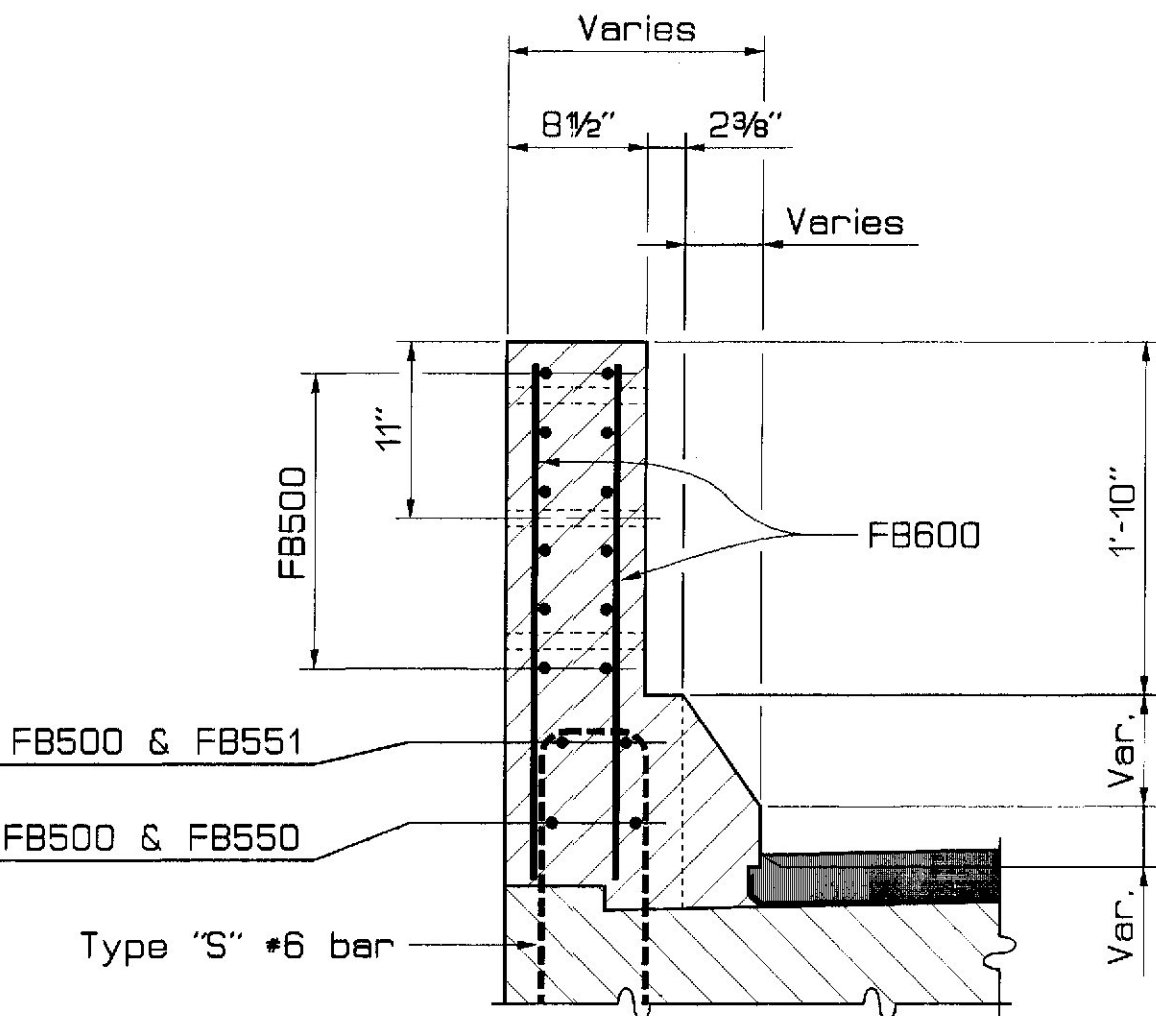
DETAIL AT GUTTER
(showing membrane recess)



BARRIER ELEVATION



BARRIER SECTION



BARRIER END SECTION

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	LTH	9/95
CHECKED		
REVISIONS		
FIELD CHANGES		

16APR97-160610
BD461