

NOTE:
All piles shall be steel HP12x53 bearing piles.
Estimated average pay lengths for the piles are:

South Abutment	- 60'
Pier No. 1	- 50'
Pier No. 2	- 50'
Pier No. 3	- 45'
North Abutment	- 50'

TRAFFIC DATA	
CURRENT ADT (1984):	27,227 (Southbound) 36,809 (Northbound)
DESIGN YEAR ADT (2004):	34,737 (Southbound) 46,966 (Northbound)
V (DESIGN SPEED):	55 MPH.
PERCENTAGE TRUCKS:	5%

EXISTING STRUCTURE DATA

TYPE: Continuous steel beam with reinforced concrete deck and substructure
SPAN: 82'-6", 55'-0" c/c Brg's.
ROADWAY: 49'-0" f/f curbs including 4'-0" median & 1'-9" safety curbs
SKEW: 14° 32' Left forward
DESIGN LOADING: CF-1000
DATE BUILT:
STRUCTURE FILE NO.:
CONDITION: To be removed

PROPOSED STRUCTURE

TYPE: Continuous steel beams composite with reinforced concrete deck and substructure
SPAN: 42'-0", 60'-0", 74'-5", 52'-0" c/c Brg's.
ROADWAY: Width varies; 111.5' (±) Avg. f/f deflector parapets (BR-1), conc. barrier median.
DESIGN LOADING: HS 20-44 (case II) and the alternate military loading
SKEW: 26° 37' 11" Left forward
WEARING SURFACE: Monolithic concrete
APPROACH SLABS: AS-1-81, 25' long
ALIGNMENT: Tangent
SUPERELEVATION: Varies
LATITUDE: N39° 57' 57" LONGITUDE: W83° 01' 16"
STRUCTURE FILE NO.:

Earthwork limits shown are approximate.
Actual slopes shall conform to plan cross-sections.

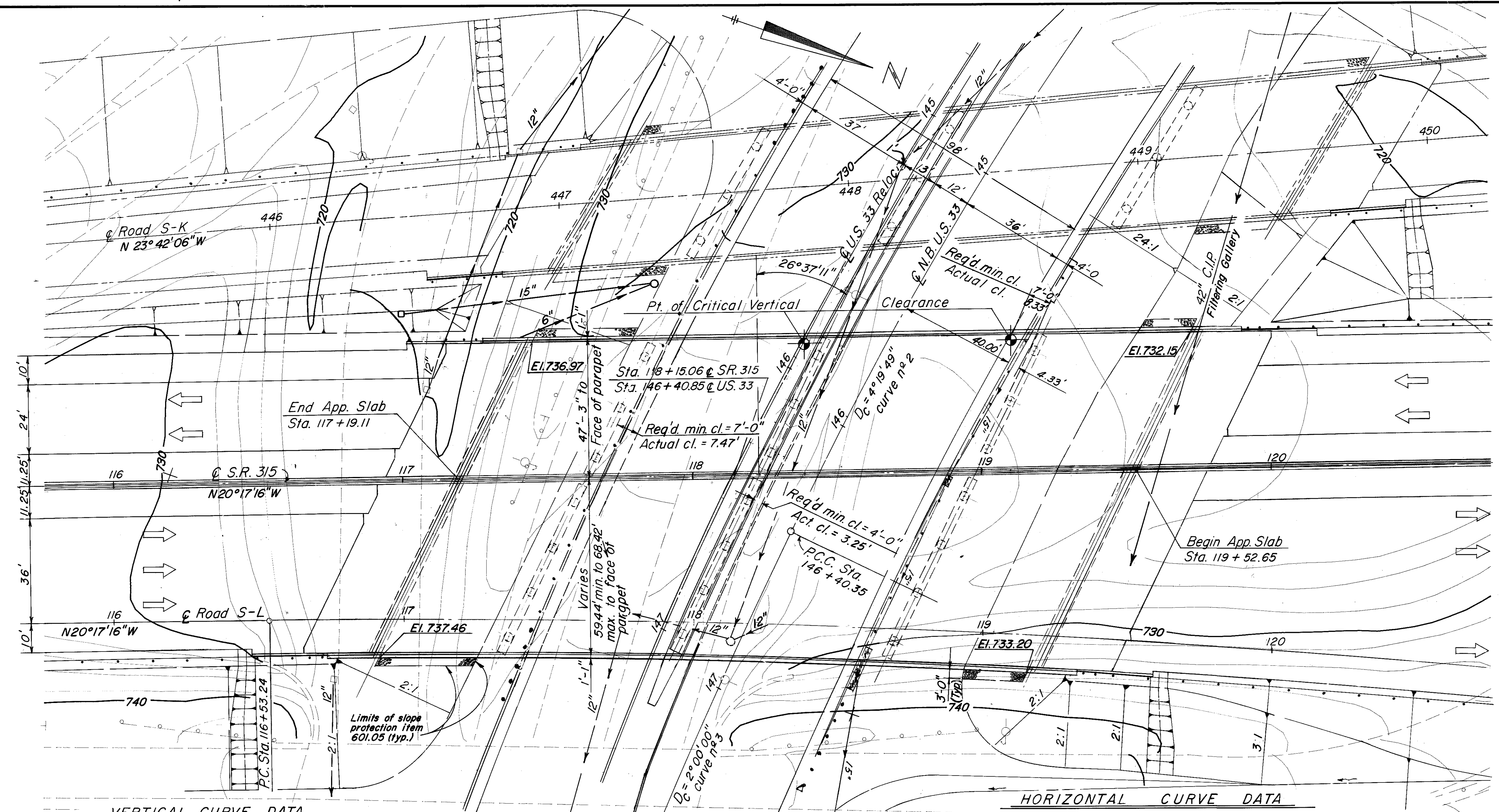
ALDEN E. STILSON & ASSOCIATES
CONSULTING ENGINEERING AND ARCHITECTURE
COLUMBUS, CLEVELAND, WILTON

SITE PLAN

BRIDGE NO. FRA-33-1542
S.R. 315 OVER U.S. 33 RELOCATED

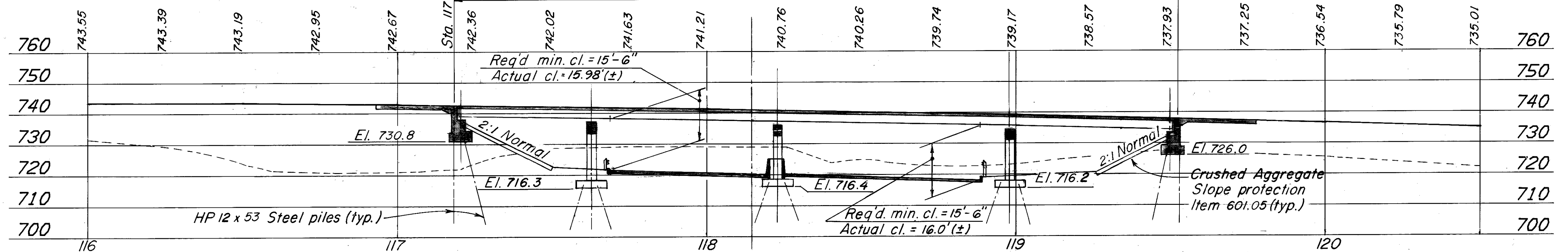
FRANKLIN COUNTY STA. 117+19.11 TO STA. 119+52.65

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
G.W.M.	G.W.M.	K.R.H.	M.A.P.	G.W.M.	9/9/84	



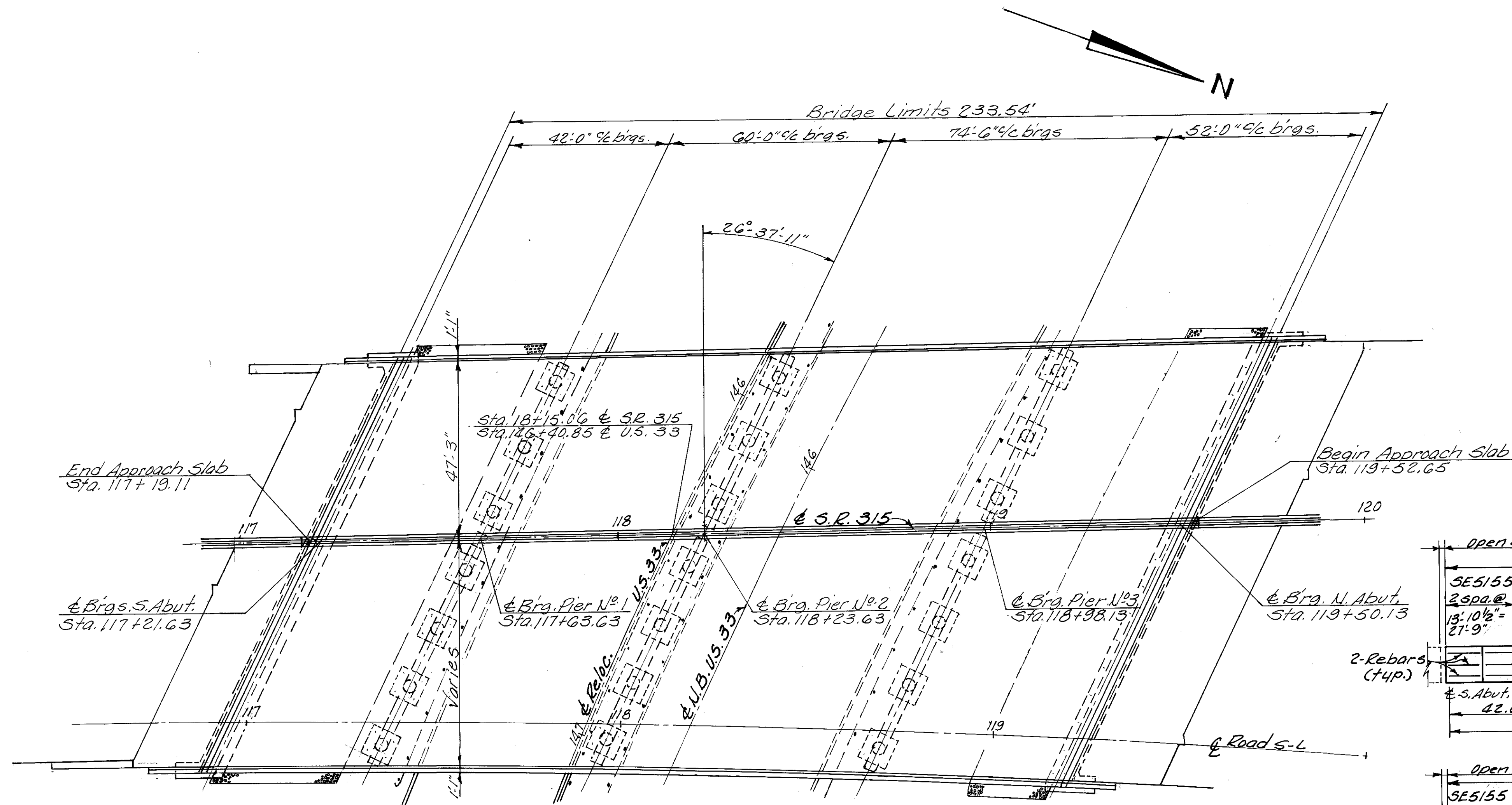
U.S. 33 RELOC.		S.R. 315		Road S-L		U.S. 33 RELOCATED		CURVE No. 1		CURVE No. 2		CURVE No. 3	
P.V.I. Sta. 146+00	350' V.C.	P.V.I. Sta. 115+10.00	1350' V.C.	P.I. Sta. 119+02.81	$\Delta = 7^{\circ} 28' 35''$	P.I. Sta. 144+61.67	$\Delta = 37^{\circ} 19' 55''$	P.I. Sta. 141+35.91	$\Delta = 14^{\circ} 30' 03''$	P.I. Sta. 144+91.79	$\Delta = 12^{\circ} 55' 18''$	P.I. Sta. 148+88.71	$\Delta = 9^{\circ} 54' 34''$
Elev. = 718.37		Elev. = 757.14		$\Delta = 1^{\circ} 30' 00''$		$\Delta = 4^{\circ} 15' 00''$		$\Delta = 3^{\circ} 30' 00''$		$\Delta = 4^{\circ} 19' 49''$		$\Delta = 2^{\circ} 00' 00''$	
Corr. = + 2.17		Corr. = - 13.30		$R = 3819.719'$		$R = 1348.136'$		$R = 1637.022'$		$R = 1323.136'$		$R = 2864.789'$	
EI. = 720.54		P.G. EI. = 743.84		$T = 249.57'$		$T = 455.42'$		$T = 208.27'$		$T = 149.84'$		$T = 248.35'$	
$G_1 = -3.00, G_2 = +1.96$		$G_1 = 3.88\%, G_2 = -4.00\%$		$Lc = 498.43'$		$Lc = 878.39'$		$Lc = 414.31'$		$Lc = 298.40'$		$Lc = 495.47'$	

PLAN

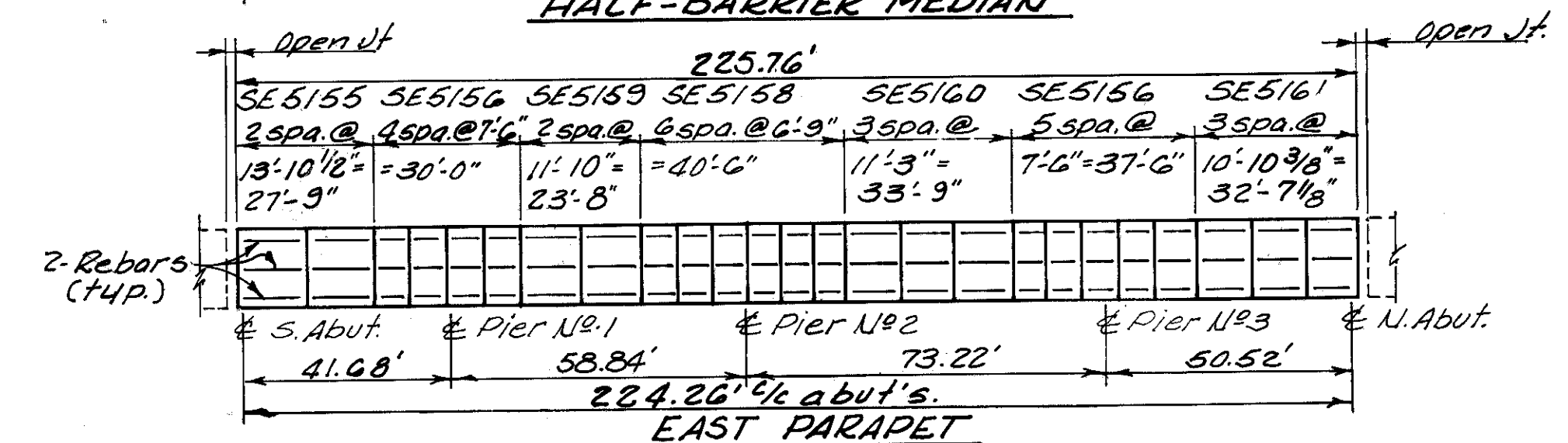
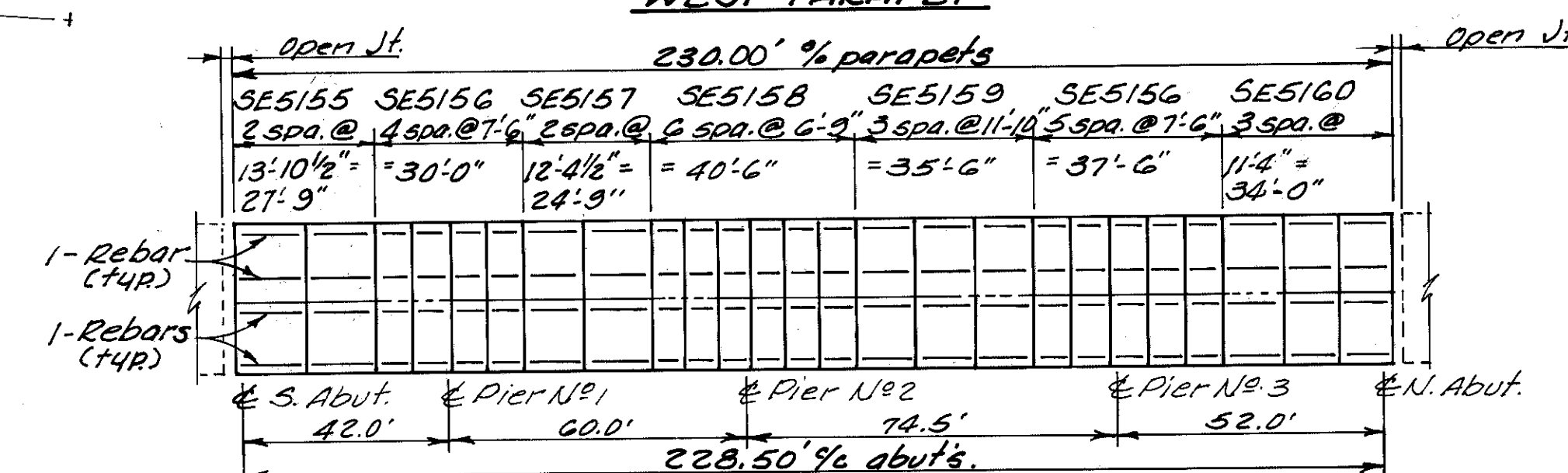
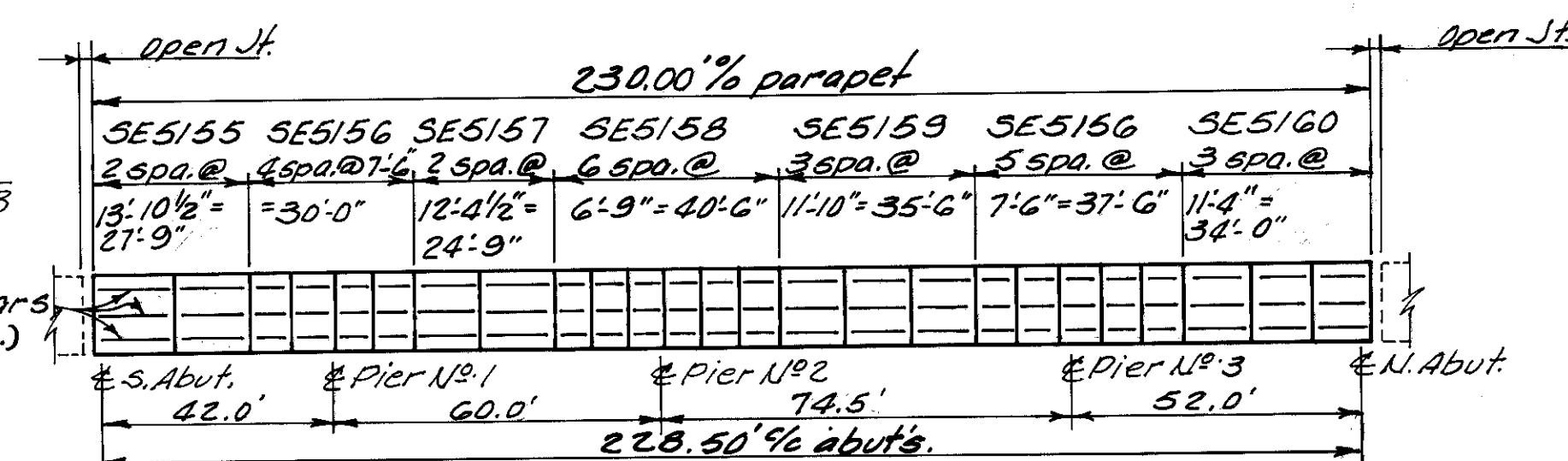
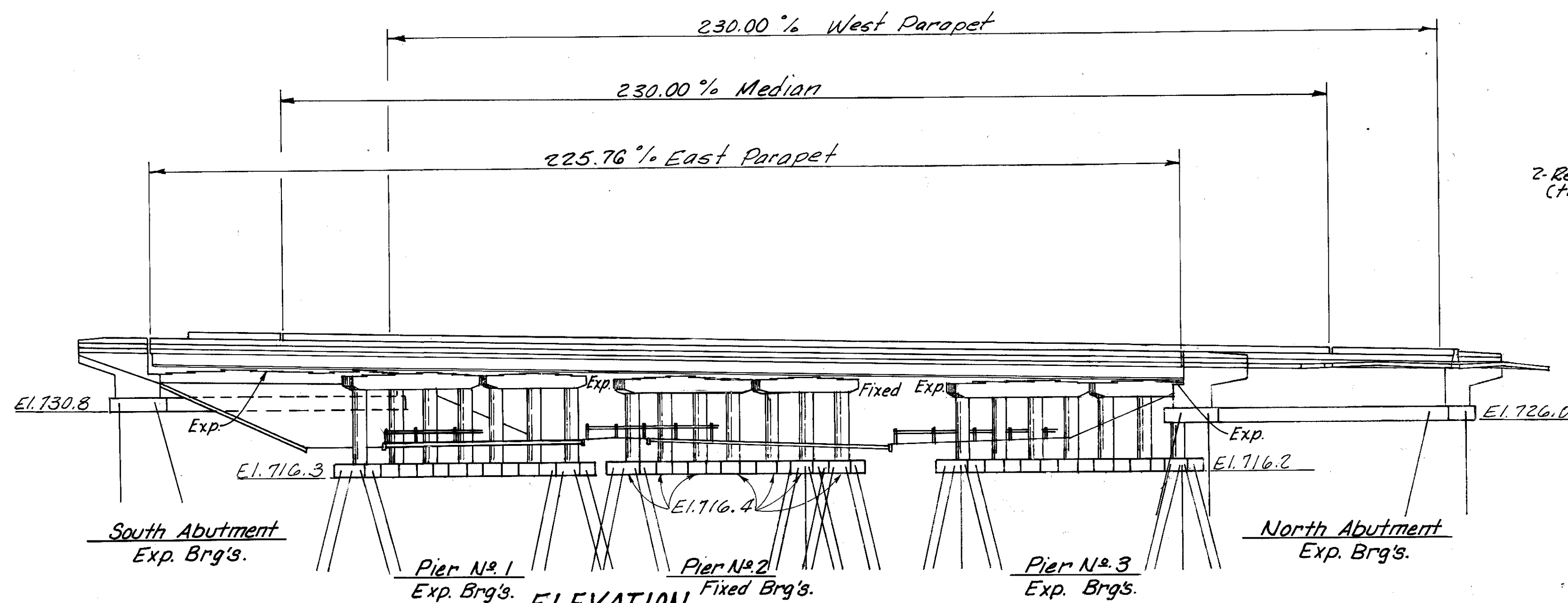


PROFILE ALONG & S.R. 315

B322001A



GENERAL PLAN



DEFLECTION JOINT SPACING

Note:
For barrier median and parapet
details see Transverse Section
Sheet 16/24

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COLUMBUS, CLEVELAND, WERTON

GENERAL PLAN

BRIDGE NO. FRA - 33-1542
S.R. 315 OVER U.S. 33 RELOCATED

FRANKLIN COUNTY STA. 117+19.11 TO
STA. 119+52.65

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DEM	R.T.		MAP	G.W.M.	9/24/89	

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COLUMBUS AND CLEVELAND

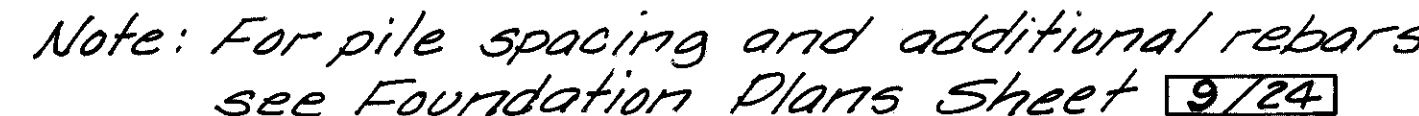
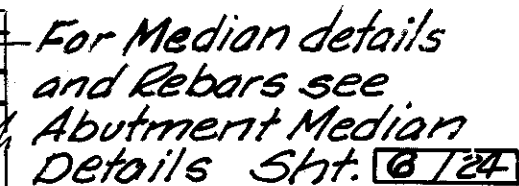
**ESTIMATED QUANTITIES
AND GENERAL NOTES**

BRIDGE NO. FRA-33-1542

S.R.315 OVER U.S.33 RELOCATED

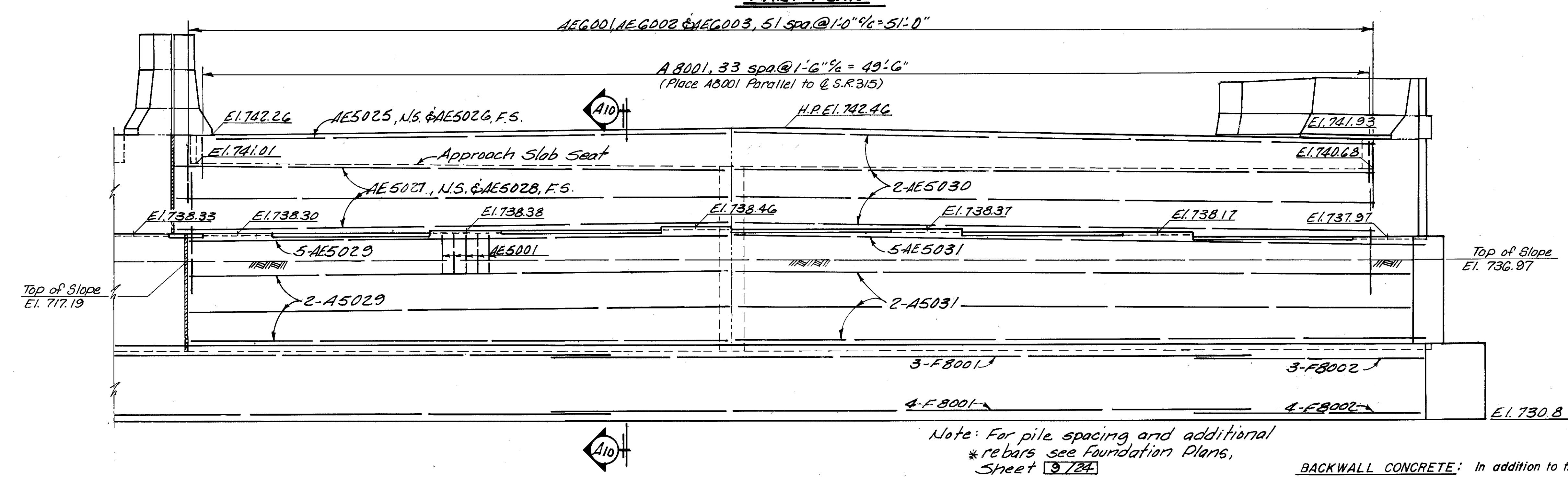
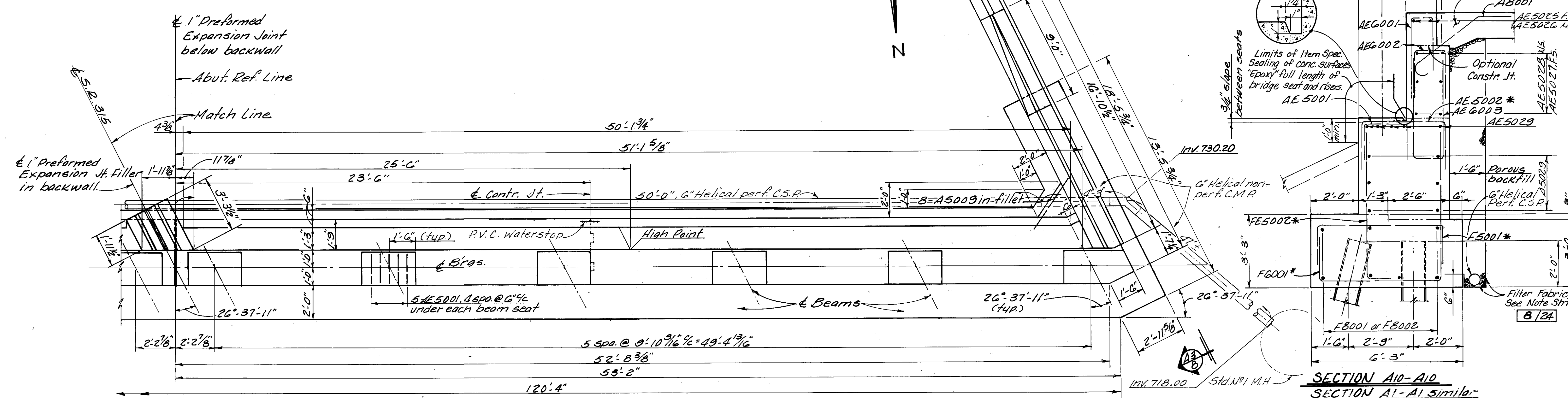
FRANKLIN COUNTY STA. 117+19.11 TO
STA. 119+52.65

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DEM	GV		MAP	GWM	5-24-89	



DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DEM	R.T.		MAP	G.W.M.	5/24/89	

ELEVATION



SECTION A10-A10
SECTION A1-A1 Similar

NOTES:

In reinforcing bar callouts:
N.S. indicates near side.
F.S. indicates far side.

Elevations shown thus are pavement elevations at the face of backwall and the point indicated.

Porous Backwall 1.5 ft. thick shall extend up to the plane of the subgrade and laterally to the ends of the wing walls.

6" Helical Perforated C.S.P. shall have all ends capped.
6" Helical non-perforated C.S.P. shall extend into crushed aggregate or into a manhole.

For details of expansion and contraction joint see "Common Detail Sheet" 1/1.

Concrete and reinforcing steel for parapets is included for payment with Item 511 concrete and 509 Reinforcing Steel.

A joint shall be provided in the abutment portion of the end dam at expansion and contraction joint.

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COLUMBUS, CLEVELAND, WERTON

SOUTH ABUTMENT DETAILS

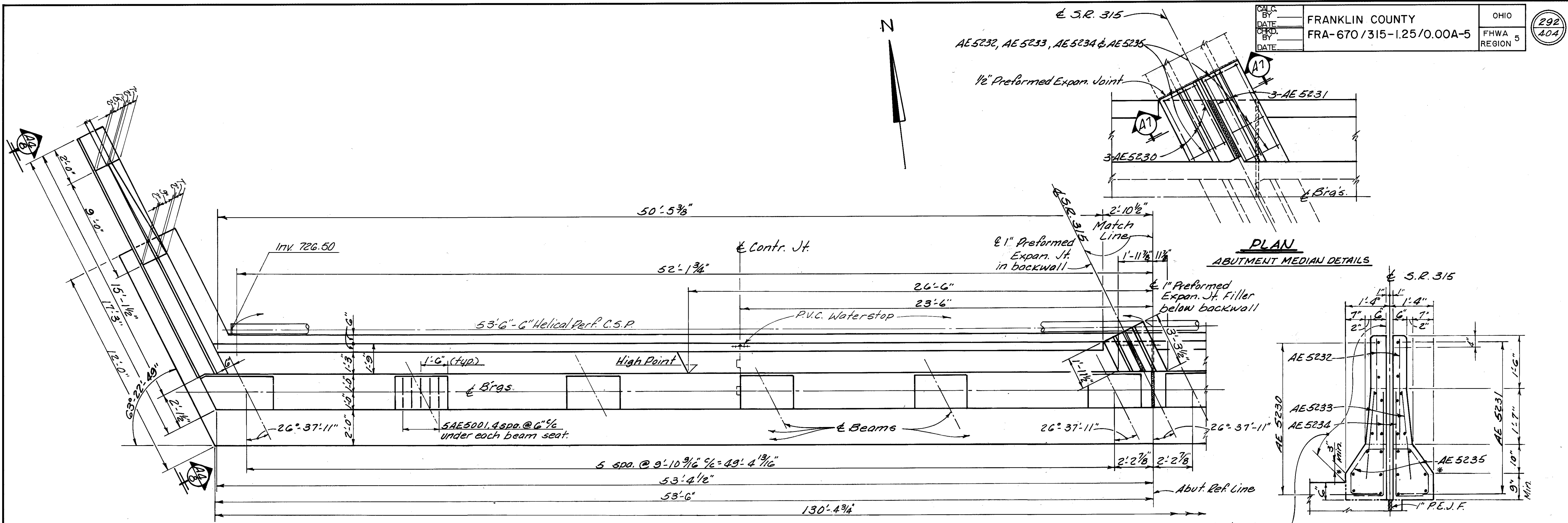
BRIDGE NO. FRA-33-1542
S.R. 315 OVER U.S. 33 RELOCATED

FRANKLIN COUNTY STA. 117+19.11 TO STA. 119+52.65

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVIEWED
DEM	R.T.		MAP	G.W.M.	7/24/89	

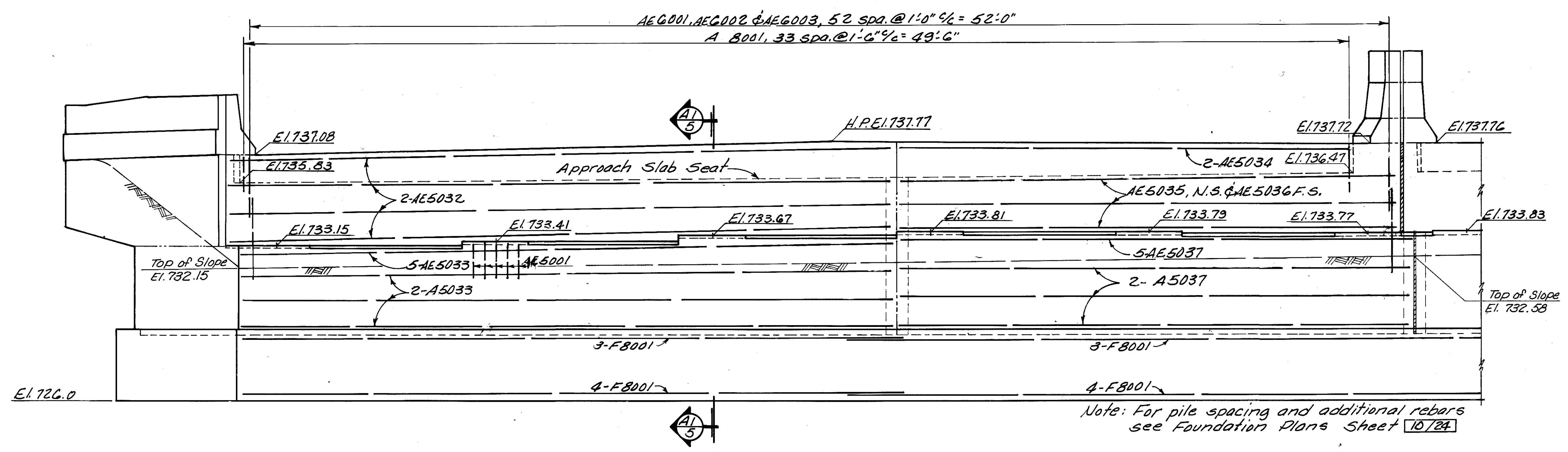
BACKWALL CONCRETE: In addition to the provisions of 511.08, backwall concrete shall not be placed until after the concrete in the span adjacent to the backwall has been placed.

Note: For pile spacing and additional *rebars see Foundation Plans, Sheet 9/24



PART PLAN

SECTION A1-A1
*Top of curb shall be the same elevation



ELEVATION

Note: For pile spacing and additional rebars see Foundation Plans Sheet 10/24

6/24

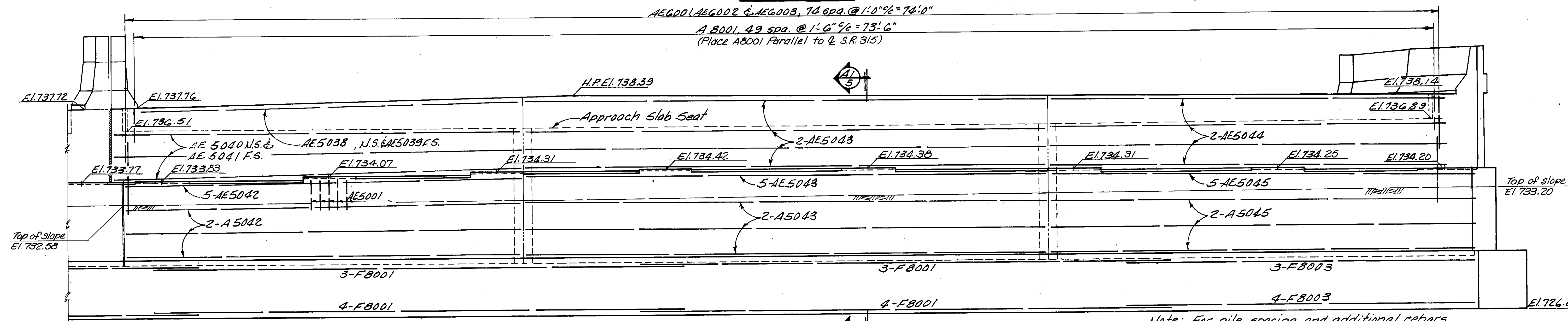
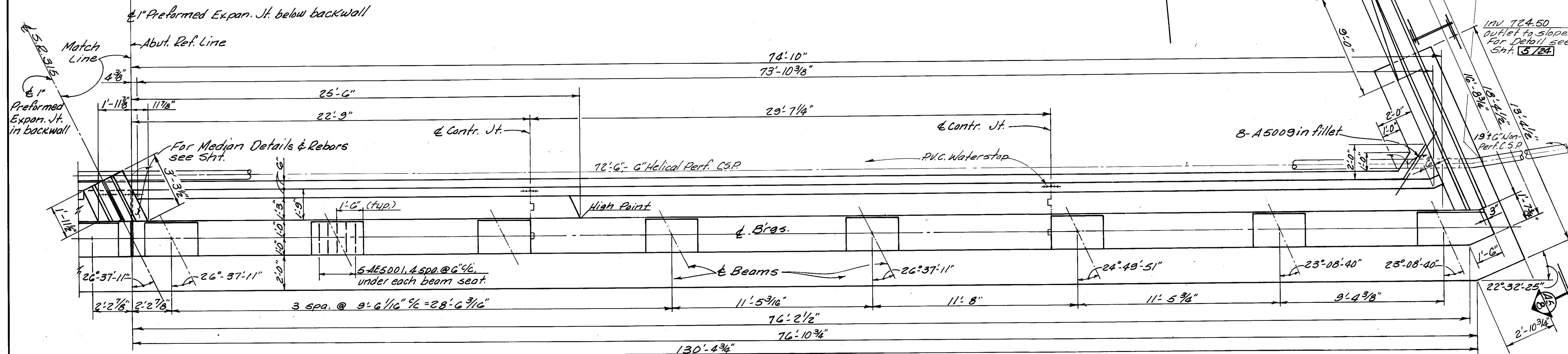
ALDEN E. STILSON & ASSOCIATES
CONSULTING ENGINEERING AND ARCHITECTURE
COLUMBUS, CLEVELAND, WEIRTON

NORTH ABUTMENT DETAILS

BRIDGE NO. FRA-33-1542
S.R. 315 OVER U.S. 33 RELOCATED

FRANKLIN COUNTY STA. 117+19.11 TO STA. 119+52.65

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DEM	R.T.		MAP	G.W.M.	5/24/99	



Note: For pile spacing and additional rebars see Foundation Plans Sheet 10/24

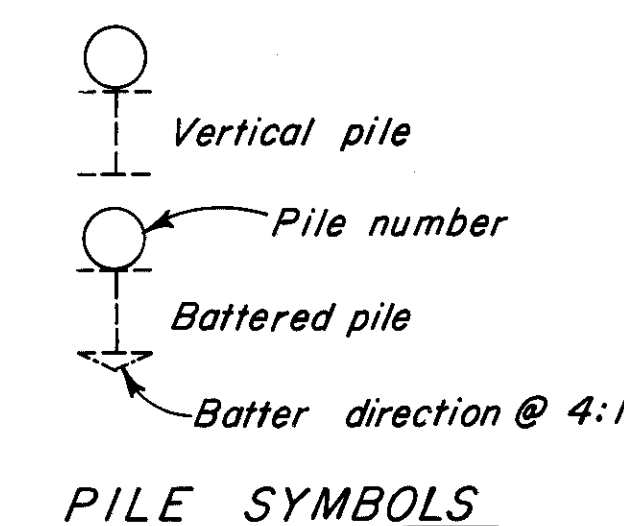
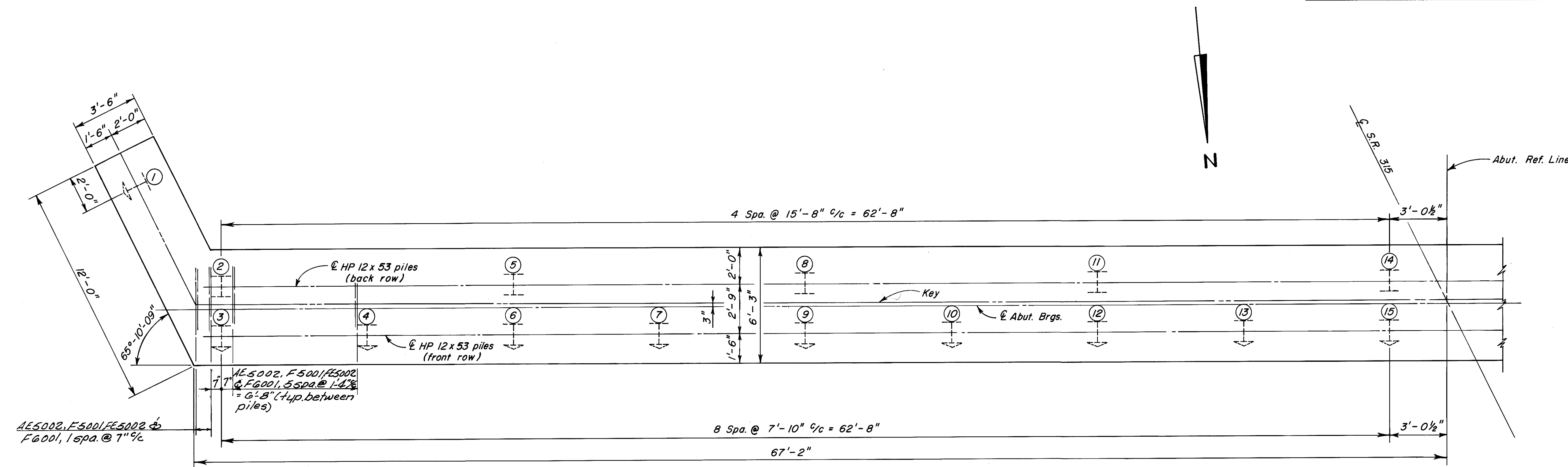
ALDEN E. STILSON & ASSOCIATES CONSULTING ENGINEERING AND ARCHITECTURE COLUMBUS, CLEVELAND, WEIRTON						
NORTH ABUTMENT DETAILS						
BRIDGE NO. FRA-33-1542						
S.R. 315 OVER U.S. 33 RELOCATED						
FRANKLIN COUNTY STA. 117+19.11 TO STA. 119+52.65						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVIS
DEM	R.T.		MAP	G.W.M.	7/24/89	



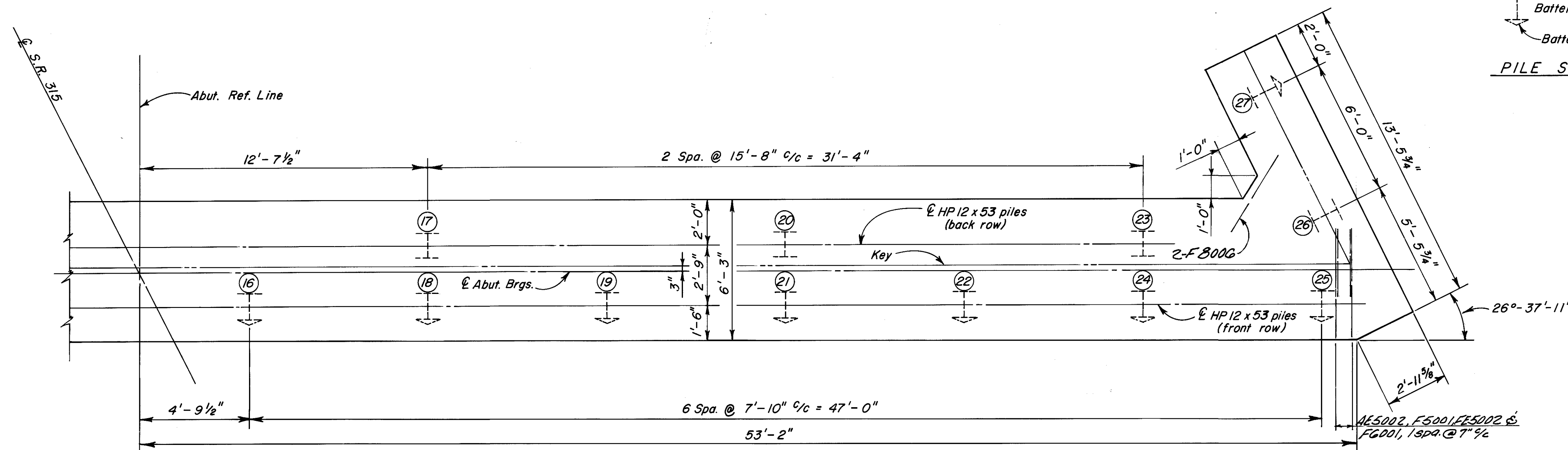
NOTE: Filter fabric shall be placed between the porous backfill and the approach fill and below the porous backfill as shown. The fabric shall conform to 712.09 type A, B, or C and shall be included with the porous backfill for payment.



Note: Reinforcing bars not shown are the same as Elevation A2-A2

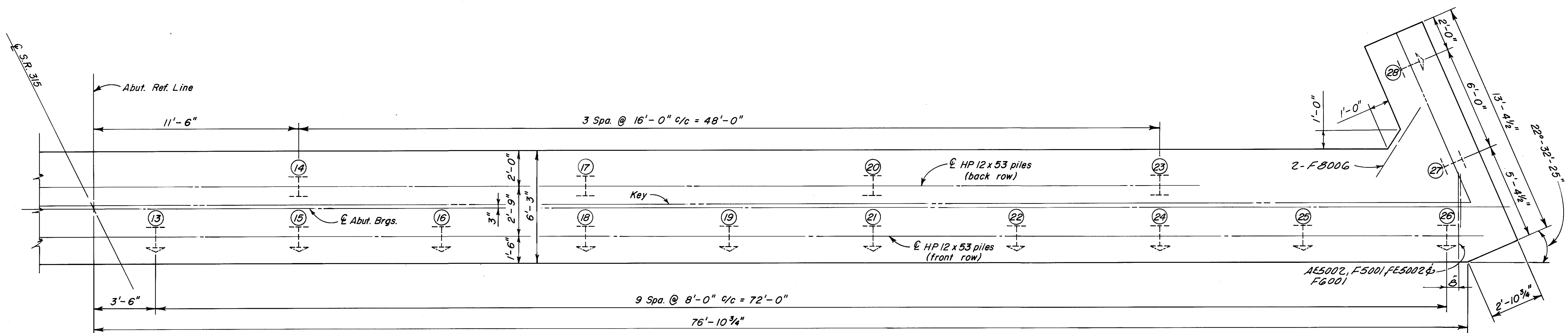
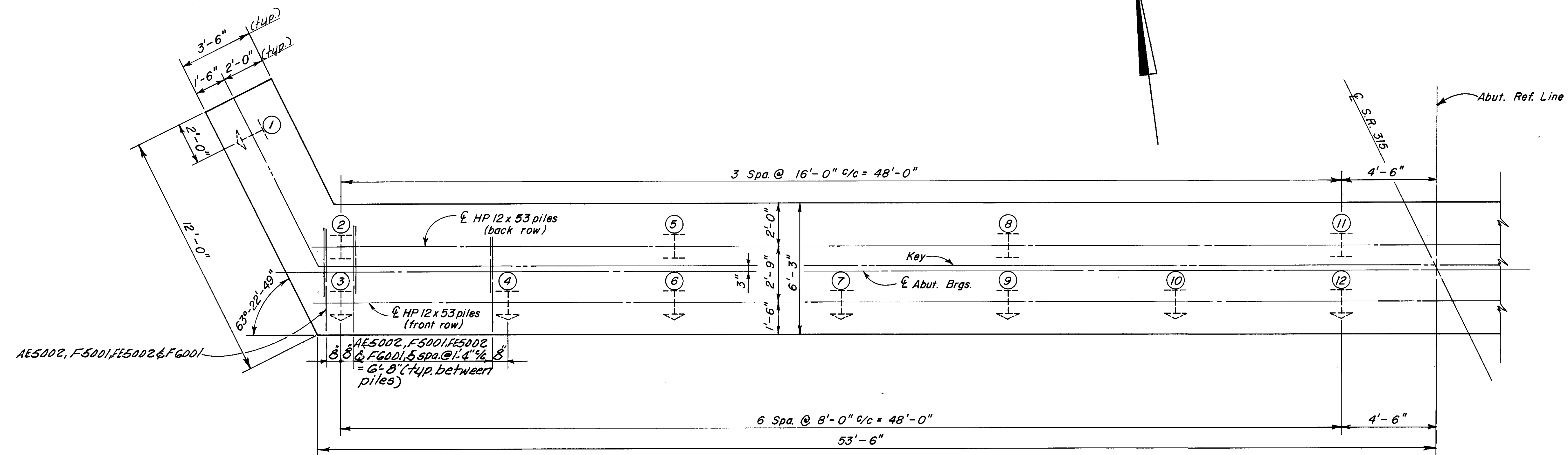


For additional footing reinf. see Abut. Elev. sheet 445/24



SOUTH ABUTMENT
FOUNDATION PLAN

ALDEN E. STILSON & ASSOCIATES CONSULTING ENGINEERING AND ARCHITECTURE COLUMBUS, CLEVELAND, WEIRTON							
ABUTMENT DETAILS							
BRIDGE NO. FRA - 33-1542							
S.R. 315 OVER U.S. 33 RELOCATED							
FRANKLIN COUNTY				STA. 117+19.11 TO STA. 119+52.65			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
DEM	KRH		MAP	G.W.M.	5/24/89		

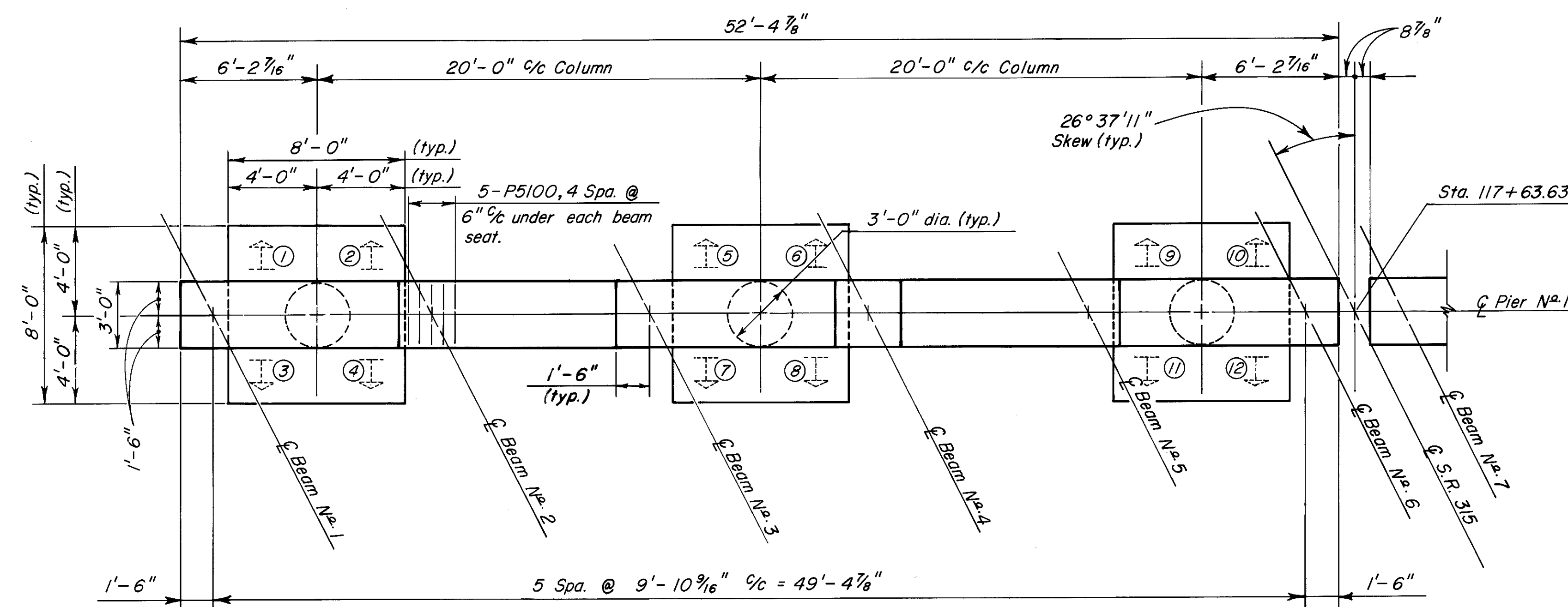


NOTE: For additional footing reinf.
see Abut. Elev. sheet 647/24

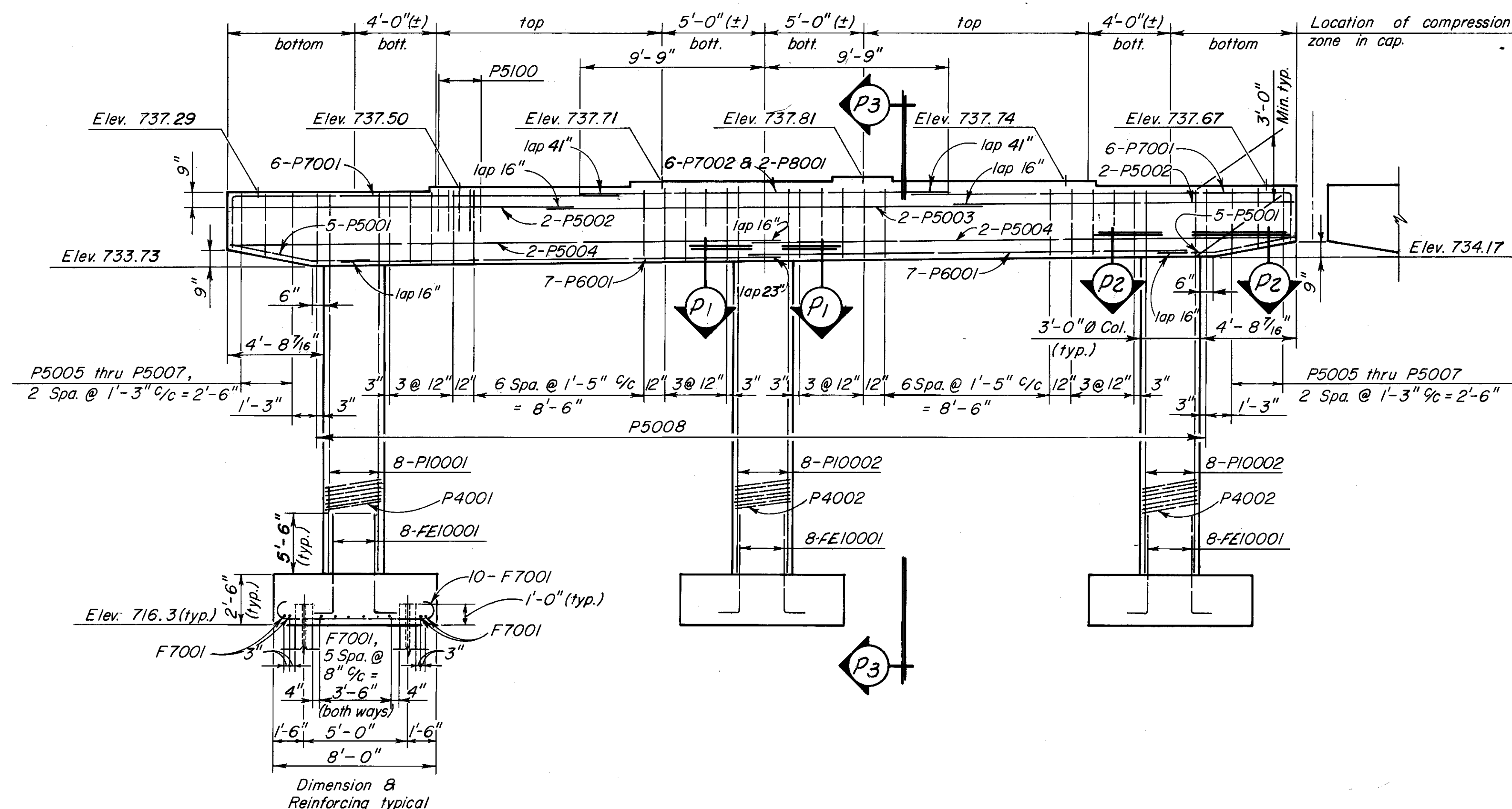
NORTH ABUTMENT

FOUNDATION PLAN

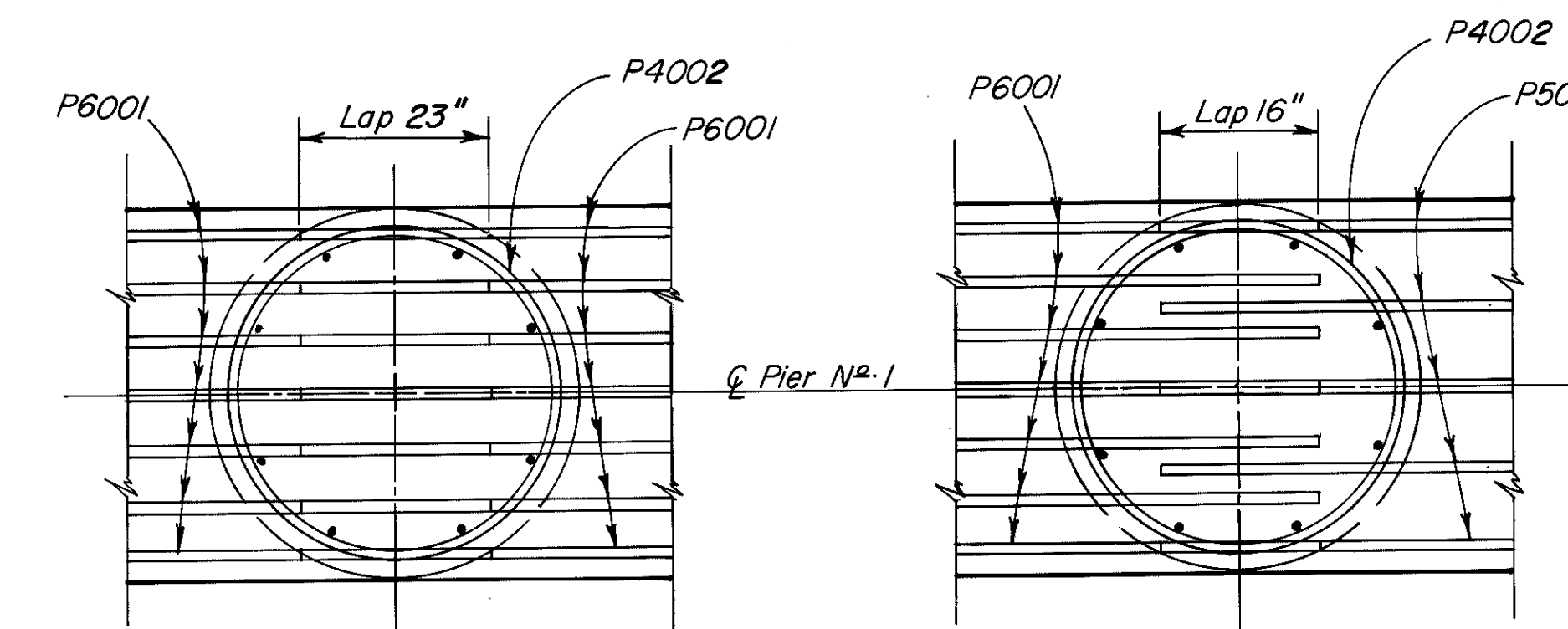
ALDEN E. STILSON & ASSOCIATES CONSULTING ENGINEERING AND ARCHITECTURE COLUMBUS, CLEVELAND, WEIRTON						
ABUTMENT DETAILS						
BRIDGE NO. FRA - 33-1542						
S.R. 315 OVER U.S. 33 RELOCATED						
FRANKLIN COUNTY STA. 117+19.11 TO STA. 119+52.65						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DEM	KRH		MAP	G.W.M.	5/24/89	



PLAN

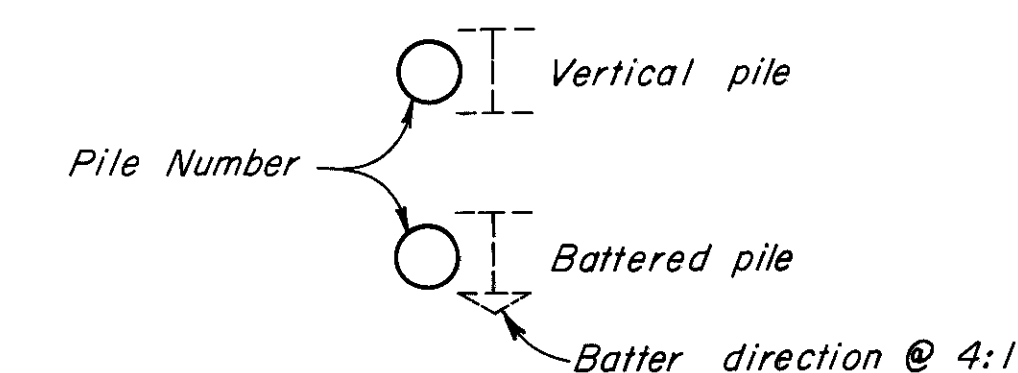


ELEVATION



SECTION P1-P1
Vertical Col. Steel P10 bars

SECTION P2-P2
Vertical Col. Steel P10 bars



PILE SYMBOLS

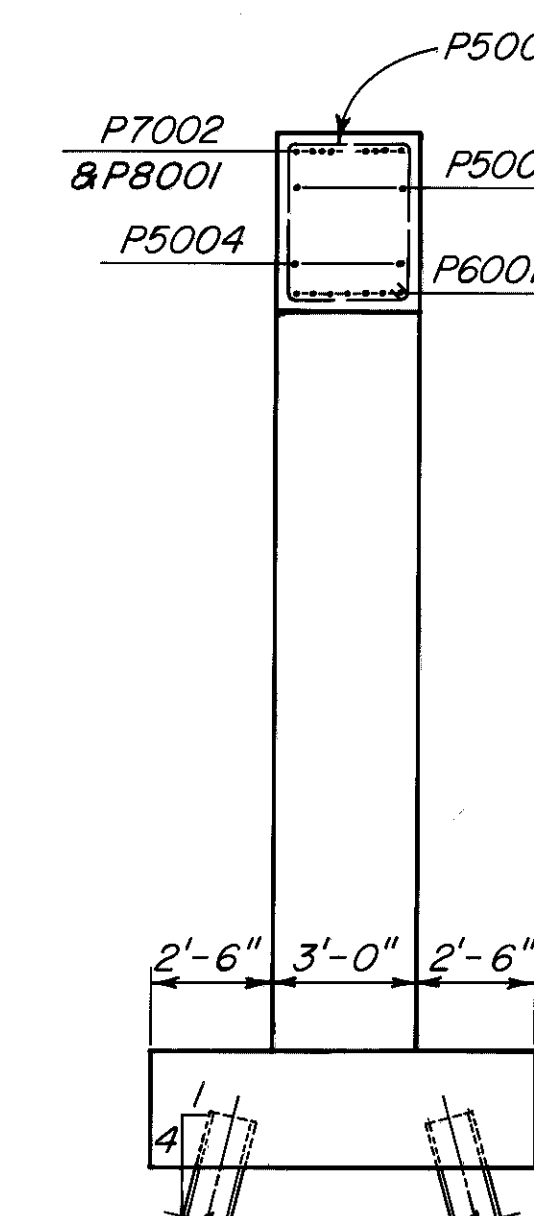
NOTES:

The hooked corner of the stirrups shall be placed in the compression zone of the pier cap.

All pier column and cap rebars are to be Epoxy Coated. Where the prefix "D" is used in bar callouts it shall be understood to read "DE". For Item 509 Note see 3124.

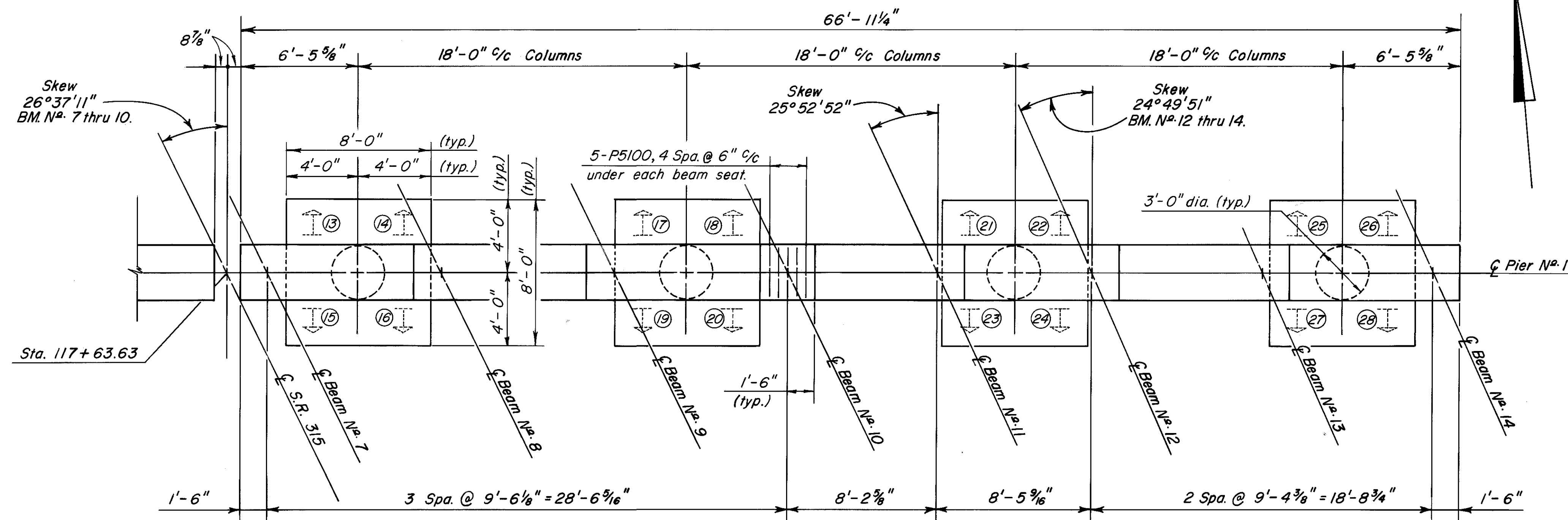
Limits of "Sealing of concrete surface, non-Epoxy" full perimeter of column from top of footing to bottom of cap. Also seal the full length of cap (sides and bottom) including ends.

Limits of "Sealing of concrete surfaces, Epoxy" full length of bridge seat including risers.

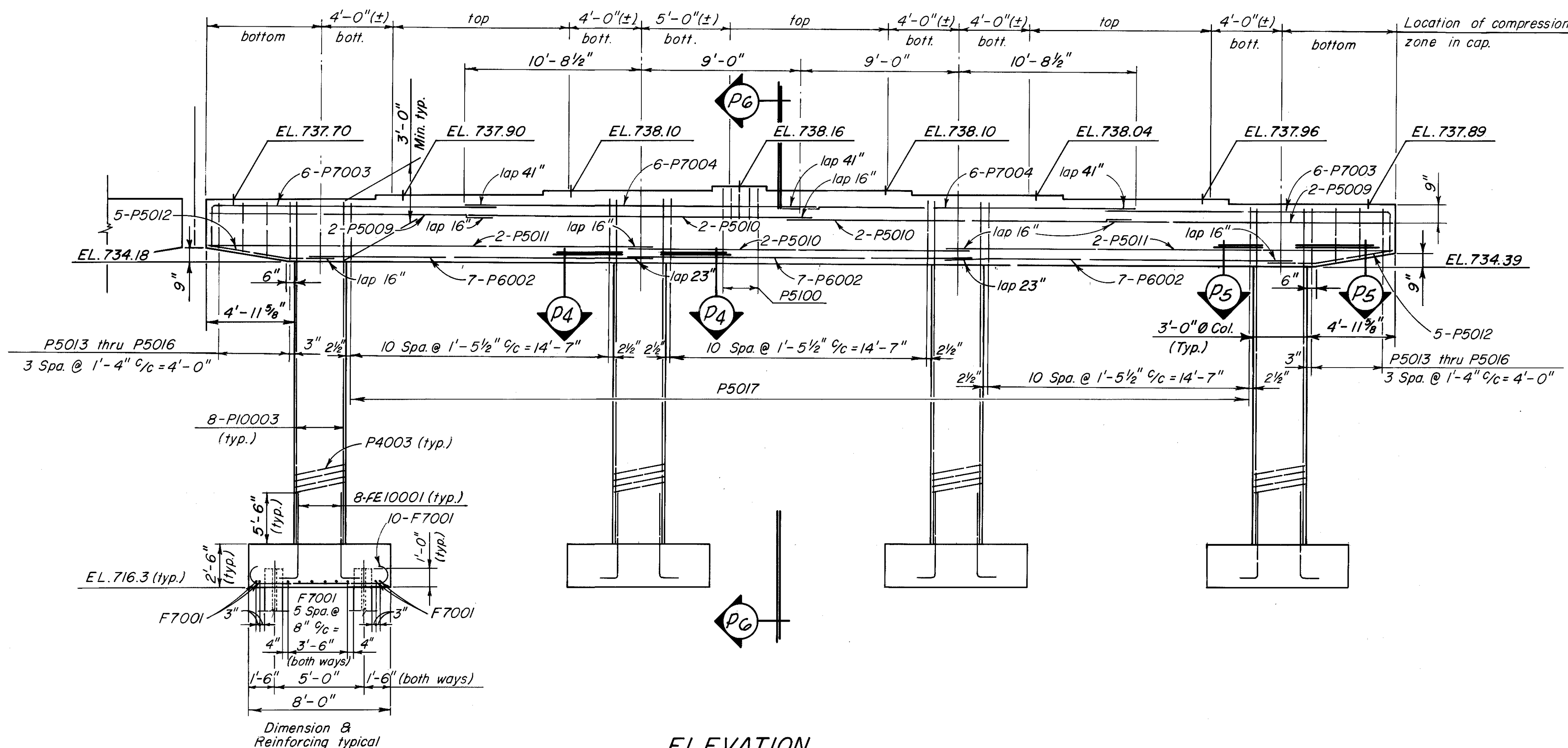


SECTION P3-P3

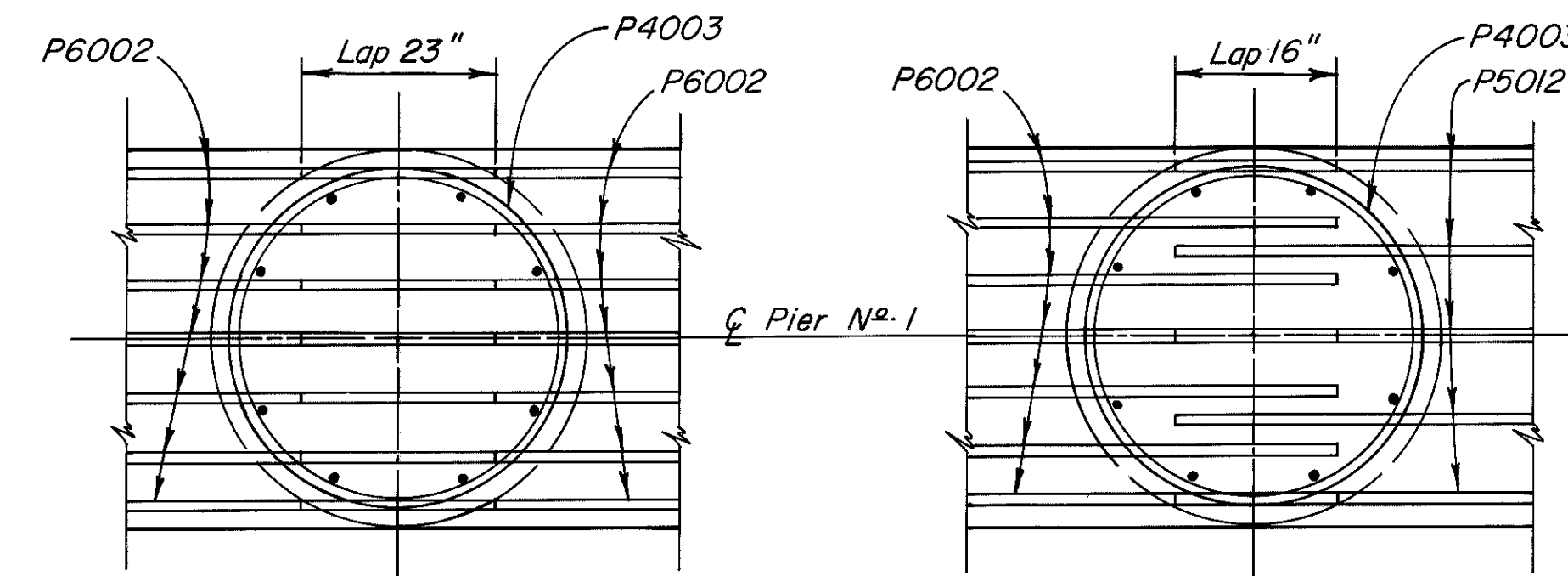
ALDEN E. STILSON & ASSOCIATES CONSULTING ENGINEERING AND ARCHITECTURE COLUMBUS, CLEVELAND, WERTON					
PIER NO. 1-WEST BENT					
BRIDGE NO. FRA - 33 - 1542					
S.R. 315 OVER U.S. 33 RELOCATED					
FRANKLIN COUNTY STA. 117+19.11 TO STA. 119+52.65					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
DEM	KRH		MAP	G.W.M.	5/24/89



PLAN

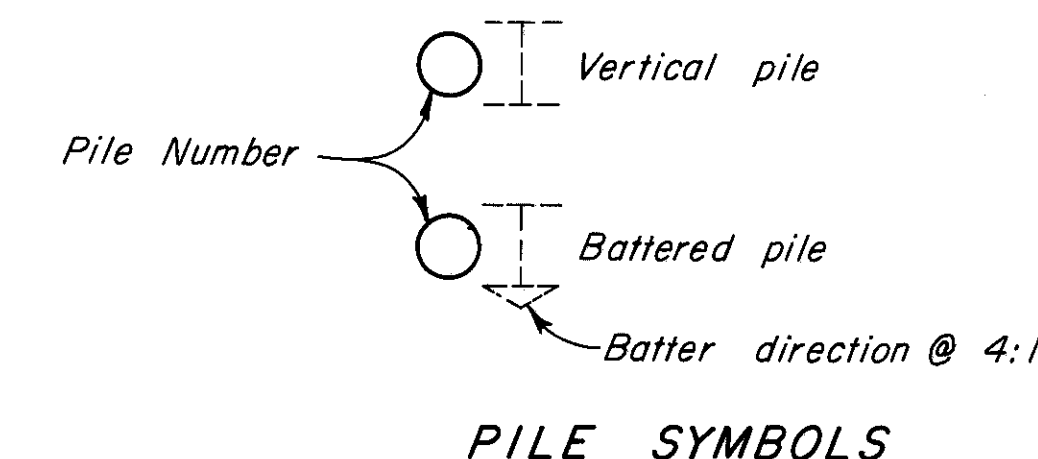


ELEVATION

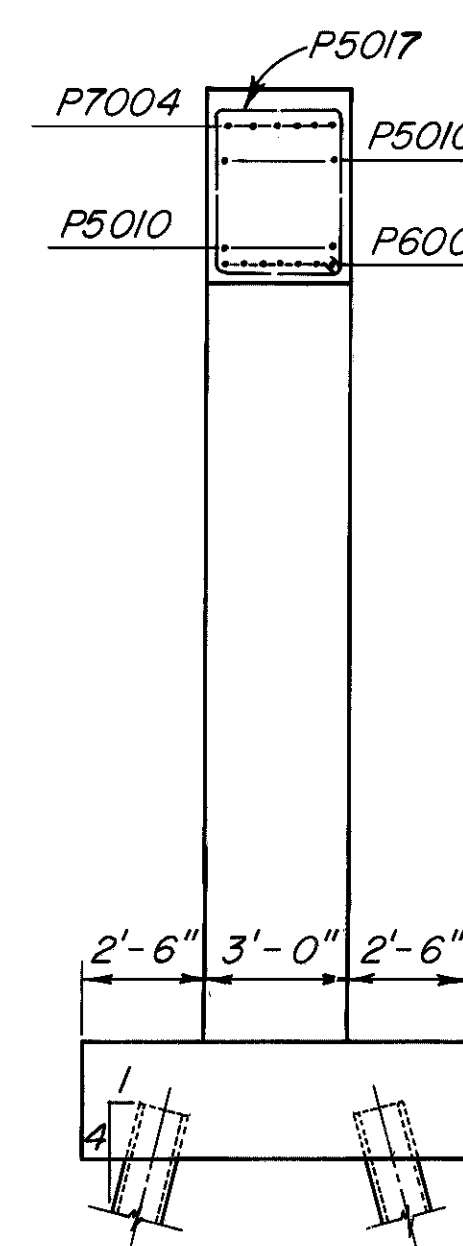


SECTION P4-P4
Vertical Col. Steel P10 bars

SECTION P5-P5
Vertical Col. Steel P10 bars



NOTES:
The hooked corner of the stirrups shall be placed in the compression zone of the pier cap.
For additional notes see Sht. 11/24.
Pier No. 1 West Bent.



SECTION P6-P6

ALDEN E. STILSON & ASSOCIATES CONSULTING ENGINEERING AND ARCHITECTURE COLUMBUS, CLEVELAND, WEIRTON							
PIER NO. 1 - EAST BENT							
BRIDGE NO. FRA - 33-1542							
S.R. 315 OVER U.S. 33 RELOCATED							
FRANKLIN COUNTY STA. 117+19.11 TO STA. 119+52.65							
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
DEM	KRH		MAP	G.N.M.	5/24/89		



Diagram illustrating the reinforcement details for Pier 283. The pier is circular with a diameter of 30 feet. The reinforcement consists of P7005 bars (top and bottom) and P4005 or P4010 bars (sides). The reinforcement is spaced at 30 inches (Lap 30 inches). The pier is labeled "Pier 283".

Diagram of Pier 283 showing reinforcement details. The pier is a circular structure with horizontal reinforcement bars. A vertical section is shown with a "Lap 16"

The diagram illustrates the classification of piles based on their batter direction. A horizontal line labeled "Pile Number" branches into two arrows. The upper arrow points to a circle representing a pile, with a vertical dashed line to its right labeled "Vertical pile". The lower arrow points to a circle representing a pile, with a dashed line to its right labeled "Battered pile". An arrow points to the dashed line for the battered pile, labeled "Batter direction @ 4:1".

[illegible]

Typ. for interior col. footings

Figure 1 is an elevation view of a wall section. The wall is shown in cross-section, with a vertical centerline. The top of the wall is labeled P8003, P7005, and P500. The wall has a width of 2'-6" and a height of 3'-0". The top section is labeled P502. The wall is supported by a foundation with three vertical reinforcement bars labeled 1, 2, and 3.

NOTES:
The hooked corner of the stirrups shall be placed in the compression zone of the pier cap.
For additional notes see Sht 11/24
Pier No. 1 West Bent.

For additional notes see Sht. 11 24
 Dier 112: 1 West Bent.

7/21/15 7:00 AM EDT

13/24

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COLUMBUS, CLEVELAND, WERTON

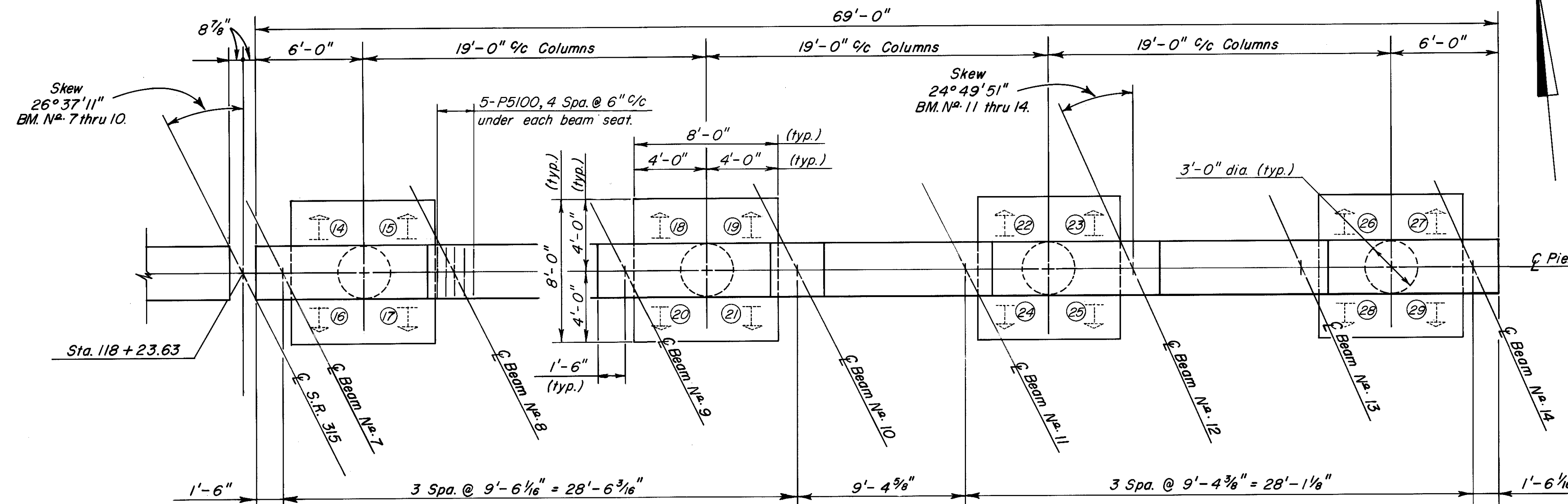
PIER NO. 2&3-WEST BENT

BRIDGE NO. FRA - 33 - 1542

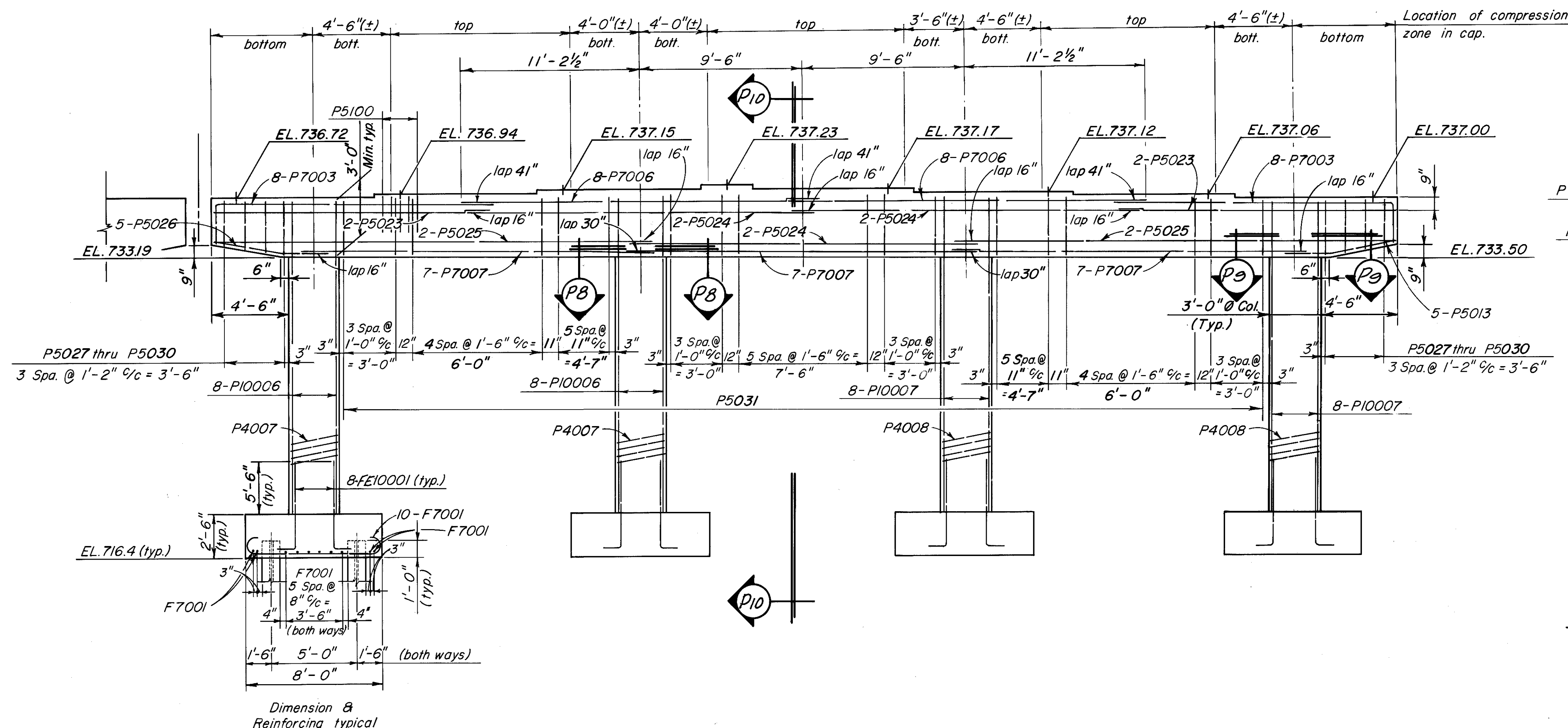
S.R. 315 OVER U.S. 33 RELOCATED

FRANKLIN COUNTY STA. 117+19.11
STA. 119+52.65

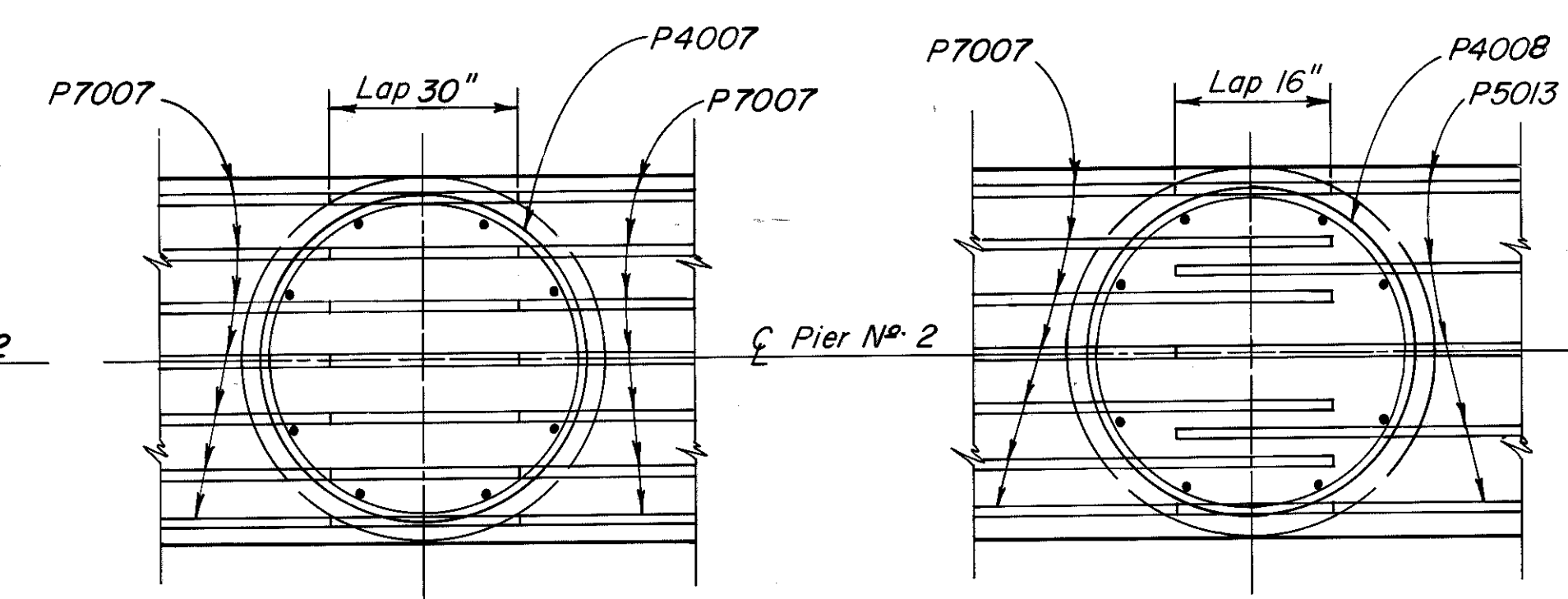
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DEM	KRH		MAP	G.W.M.	5/24/89	



PLAN

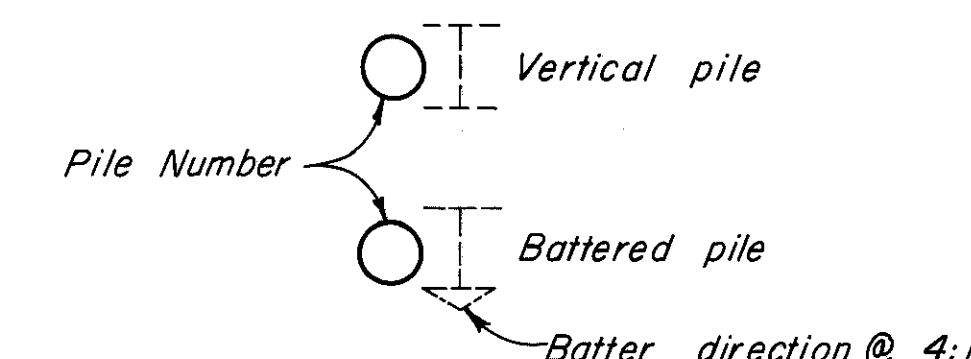


ELEVATION



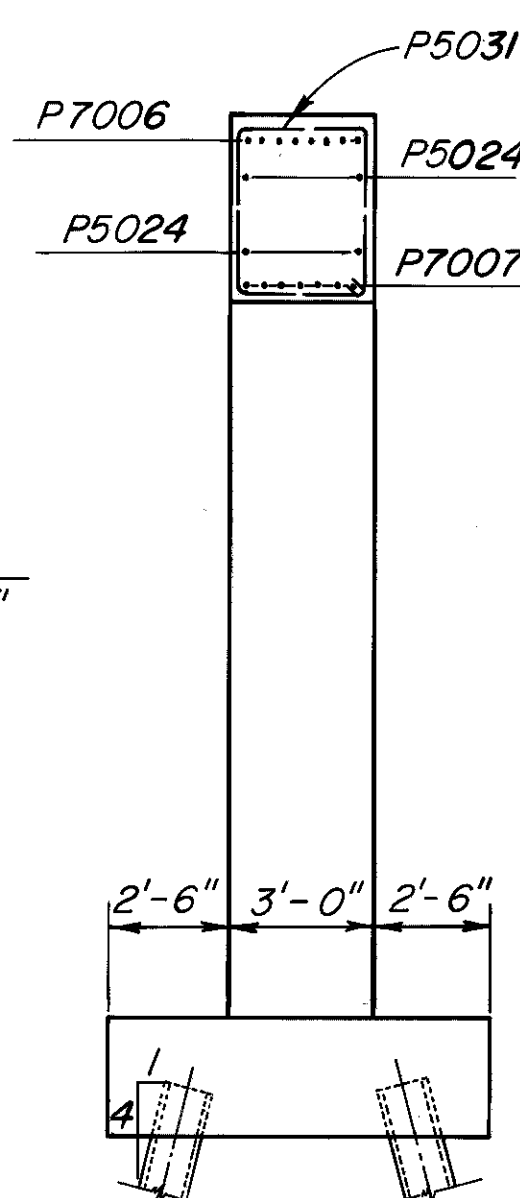
SECTION P8-P8
Vertical Col. Steel P10 bars

SECTION P9-P9
Vertical Col. Steel P10 bars



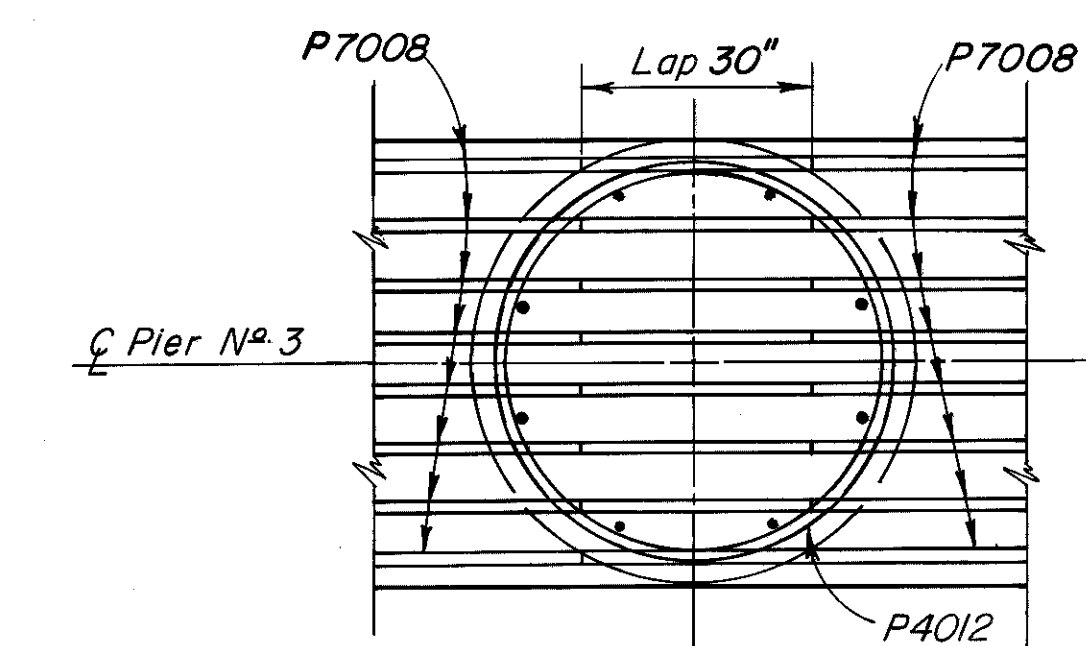
PILE SYMBOLS

NOTES:
 The hooked corner of the stirrups shall be placed in the compression zone of the pier cap.
 For additional notes see Sht. 11/24
 Pier No. 1 West Bent.
 For Bearing Anchor Rod Layout see Sht. 13/24



SECTION P10-P10

ALDEN E. STILSON & ASSOCIATES CONSULTING ENGINEERING AND ARCHITECTURE COLUMBUS, CLEVELAND, WERTON						
PIER NO.2- EAST BENT BRIDGE NO. FRA - 33-1542 S.R. 315 OVER U.S. 33 RELOCATED FRANKLIN COUNTY STA. 117+19.11 TO STA. 119+52.65						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DEM	KRH		MAP	G.W.M.	12/24/99	



Technical drawing of a circular pier cross-section showing reinforcement details. The drawing includes a central circular core with horizontal reinforcement bars. A vertical section line is labeled "C Pier N.º 3". Reinforcement bars are labeled P7008, P5001, and P4013. A dimension "Lap 16''" is indicated for the top reinforcement bars.

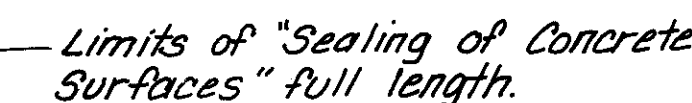
SECTION P₁₃-P₁₃

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVIS
DEM	KRH		MAP	G.W.M.	5/24/90	



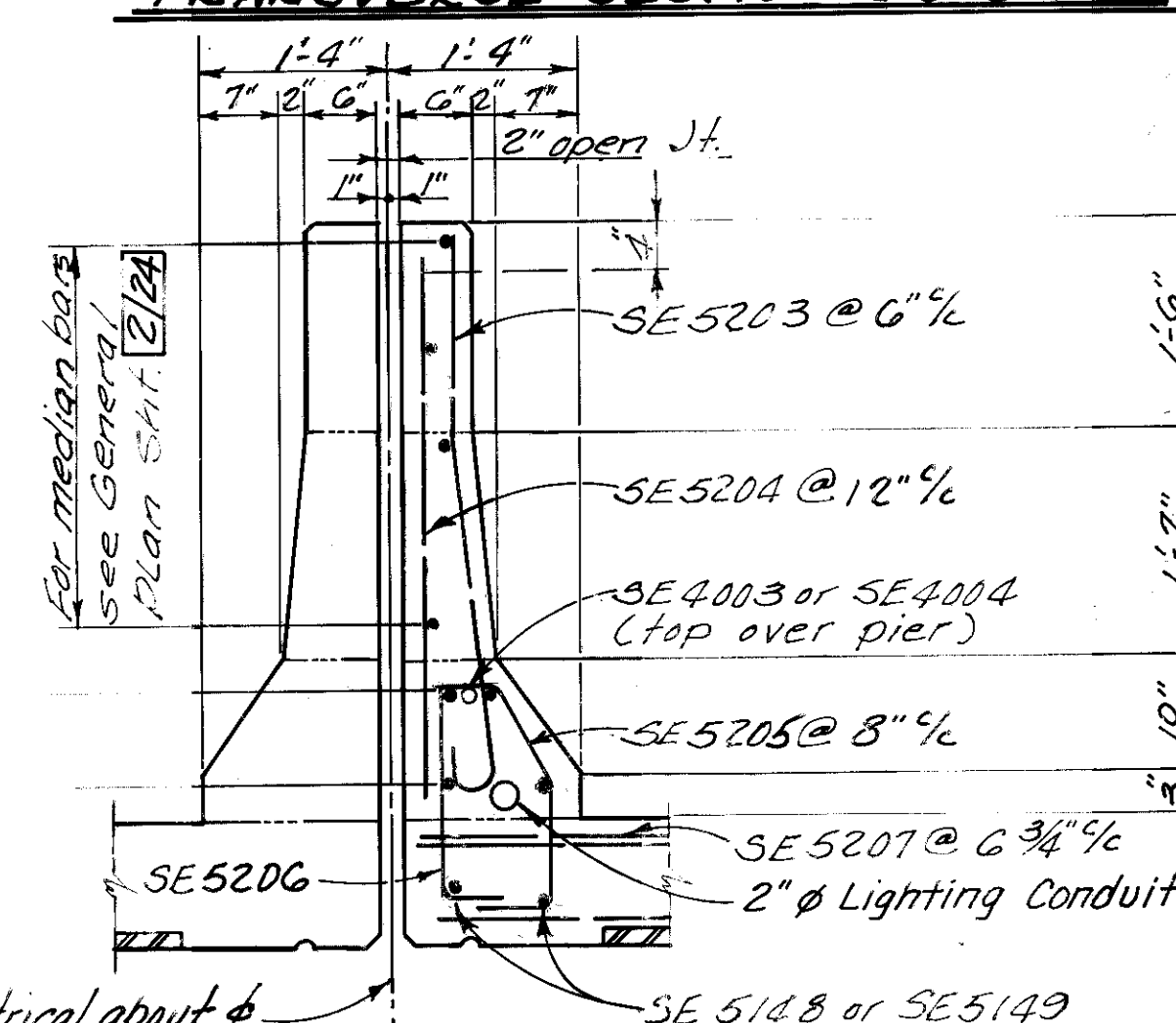


Field bending of transverse slab steel to be included in Item 509 for payment.

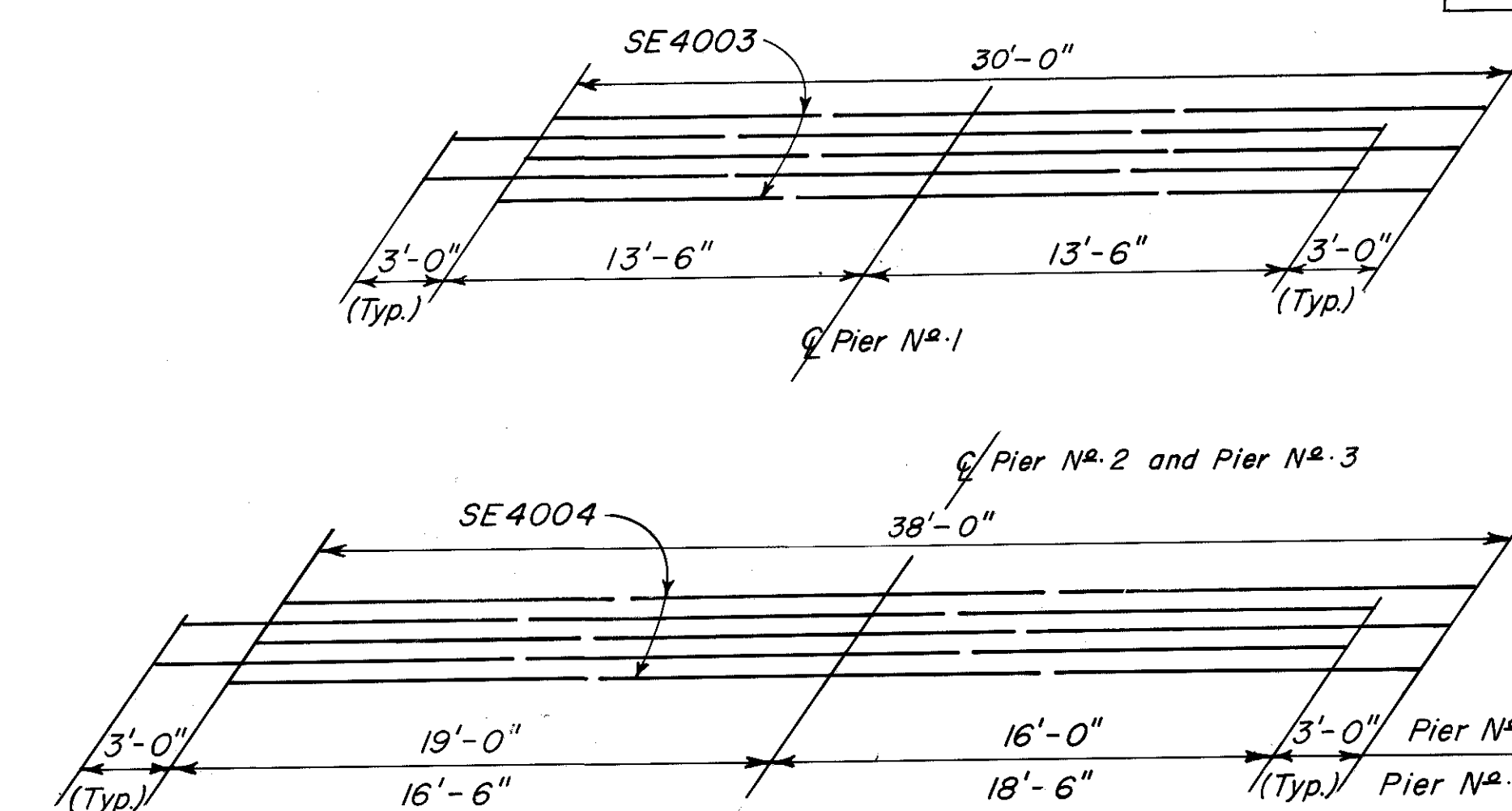


Hand-drawn cross-section diagram of a bridge deck and pier. The diagram shows a rectangular pier with a rounded top. Reinforcement bars are indicated with labels: SE 4001 or SE 4002 (vertical bars on the pier face), SE 5200 @ 12" c/c (horizontal bars in the pier), SE 4003 or SE 4004 (top over pier), SE 5201 @ 12" c/c (horizontal bars in the pier), SE 5202 @ 12" c/c (horizontal bars in the pier), and SE 5207 @ 1'-1 1/2" c/c (horizontal bars in the pier). Dimensions include 2", 3", 7", 10", 1'-7", 1'-1", 3", 10", 3", 2", 3", 6", 6". A note says "For railing bars see General Plan Sht. 2/24". A note on the right says "SE 4001 or SE 4002". A note at the bottom right says "Median sur".

TRANSVERSE SECTION N.B. LANES



4 S.R. 015
 MEDIAN BARRIER DETAIL



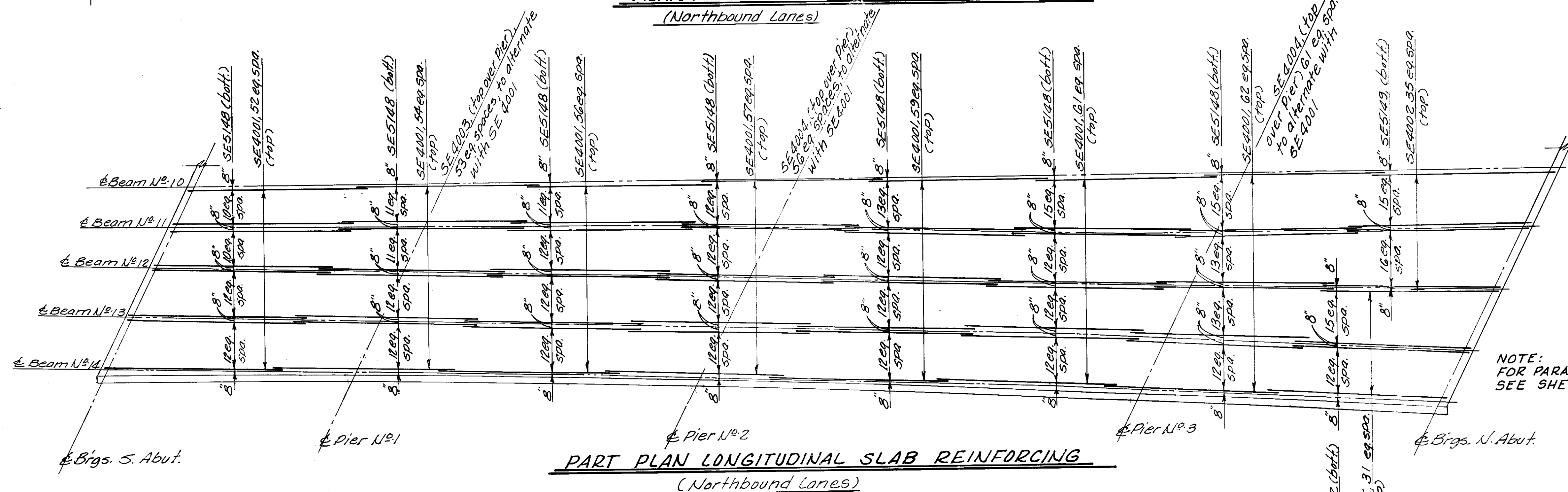
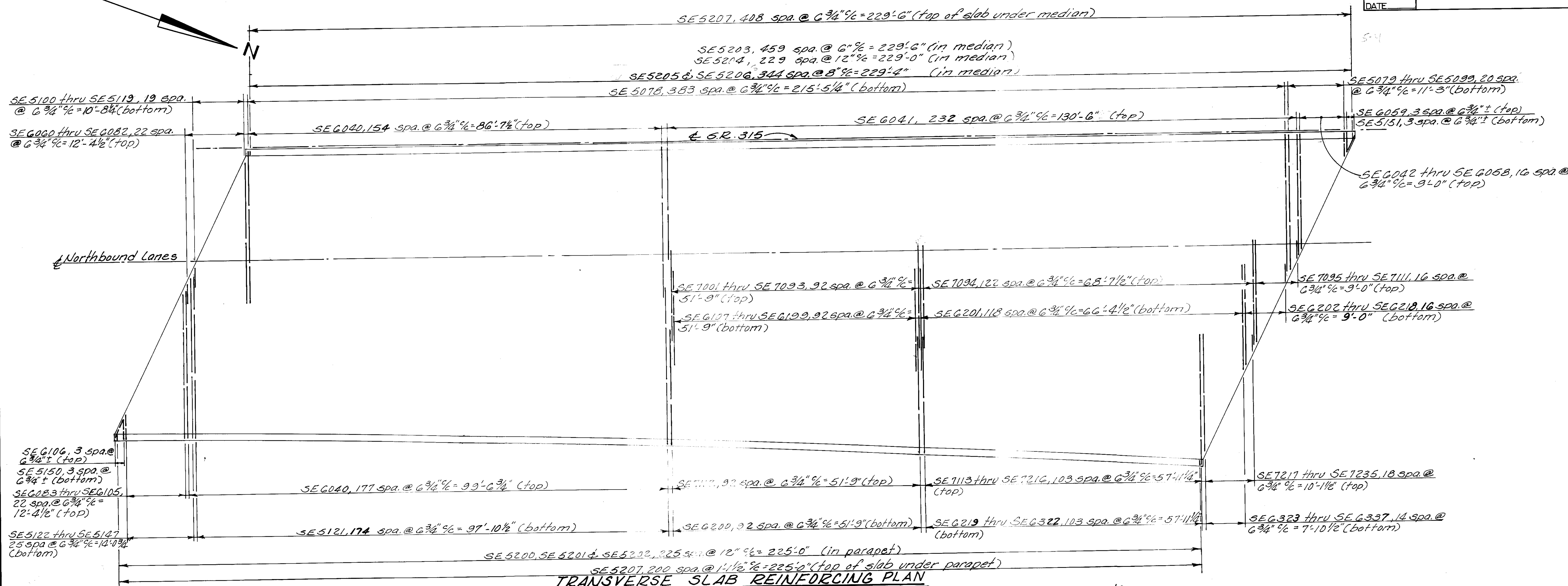
DIAGRAMS SHOWING STAGGER OF BARS OVER PIERS

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CONSULTING ENGINEERING AND ARCHITECTURE
COLUMBUS, CLEVELAND, WEIRTON

BRIDGE NO. FRA - 33-1542
S.R. 315 OVER U.S. 33 RELOCATED

FRANKLIN COUNTY STA. 117+19.11 TO
STA. 119+52.65

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REV
DEM	R.T.		MAP	G.W.M.	5/24/89	



- Notes:
- For rebar minimum lap requirements, see note 9ht. 16/24
 - For Item 509 note see 3/24

NOTE: FOR PARAPET & MEDIAN DETAILS SEE SHEET 2/24

ALDEN E. STILSON & ASSOCIATES
CONSULTING ENGINEERING AND ARCHITECTURE
COLUMBUS, CLEVELAND, WEITON

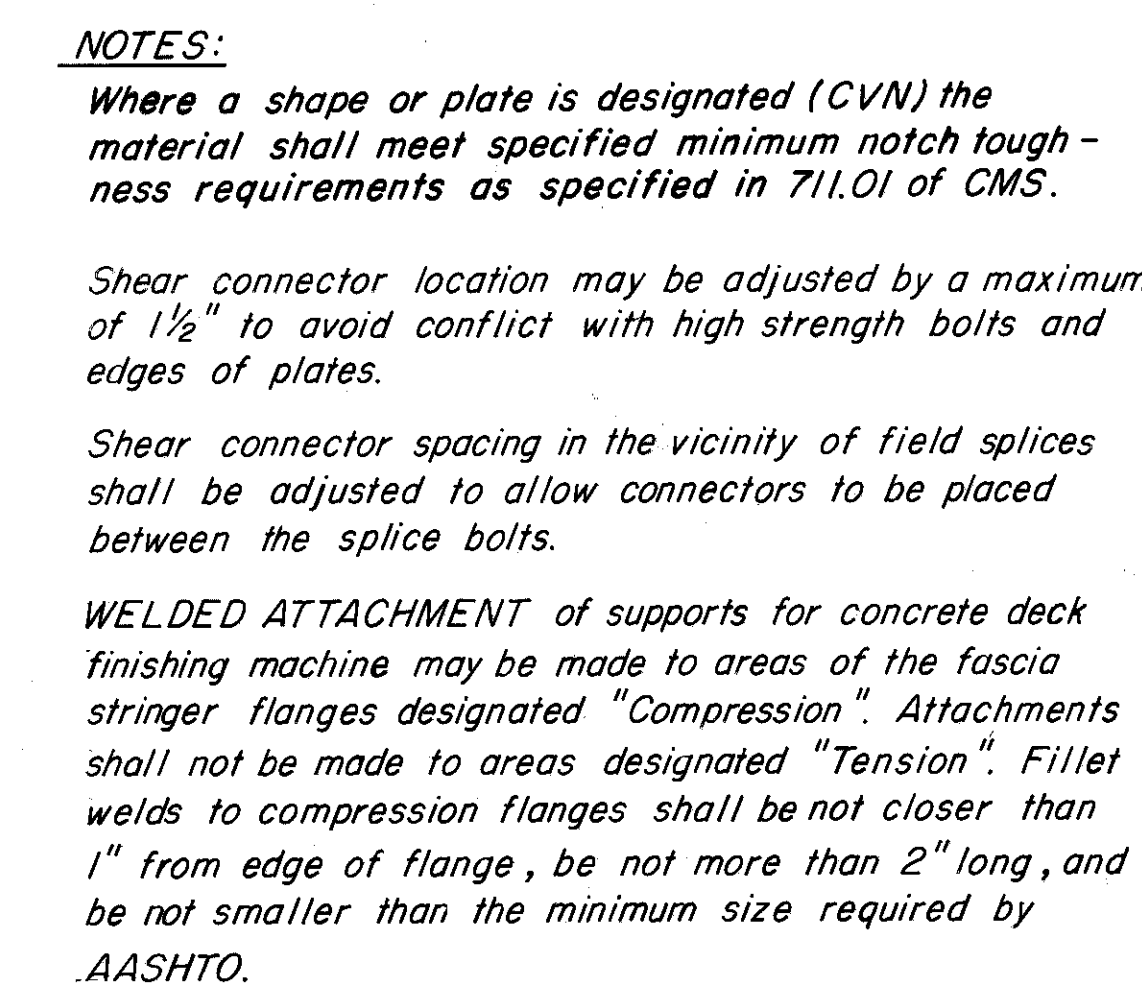
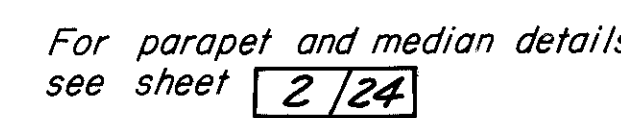
SUPERSTRUCTURE DETAILS

BRIDGE NO. FRA - 33-1542
S.R. 315 OVER U.S. 33 RELOCATED

FRANKLIN COUNTY STA. 117+19.11 TO STA. 119+52.65

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DEM	D.T.		MAP	G.W.M.	5/24/89	

Note: For additional longitudinal reinforcing bars see Transverse Section, Sheet 16/24
For beam locations see Framing Plan, Sheet 19/24



SECTION S2 - S2

178/24 ALDEN E. STILSON & ASSOCIATES CONSULTING ENGINEERING AND ARCHITECTURE COLUMBUS, CLEVELAND, WEIRTON						
SUPERSTRUCTURE DETAILS BRIDGE NO. FRA - 33 - 1542 S.R. 315 OVER U.S. 33 RELOCATED FRANKLIN COUNTY STA. 117 + 19.11 TO STA. 119 + 52.65						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DEM	KRH		MAP	G.W.M.	12/24/89	

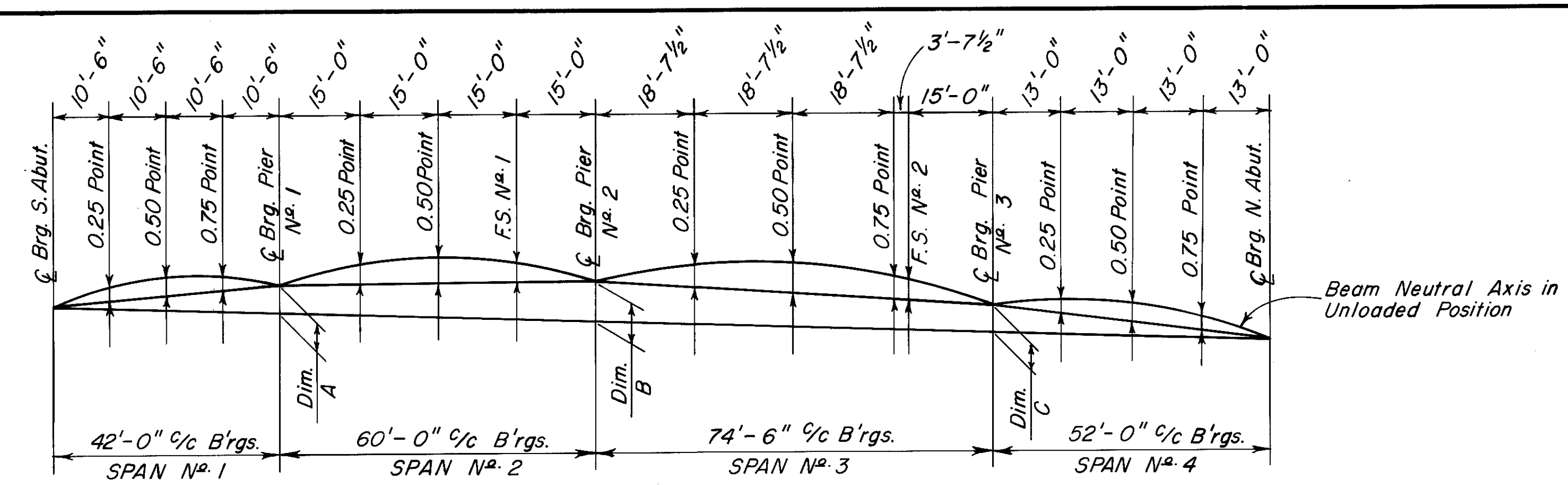


Scale: $\frac{3}{32}'' = 1' - 0''$

Crossframe spacing maybe adjusted to clear field splices.

Deflection Sign Convention: Negative (-) to Right.

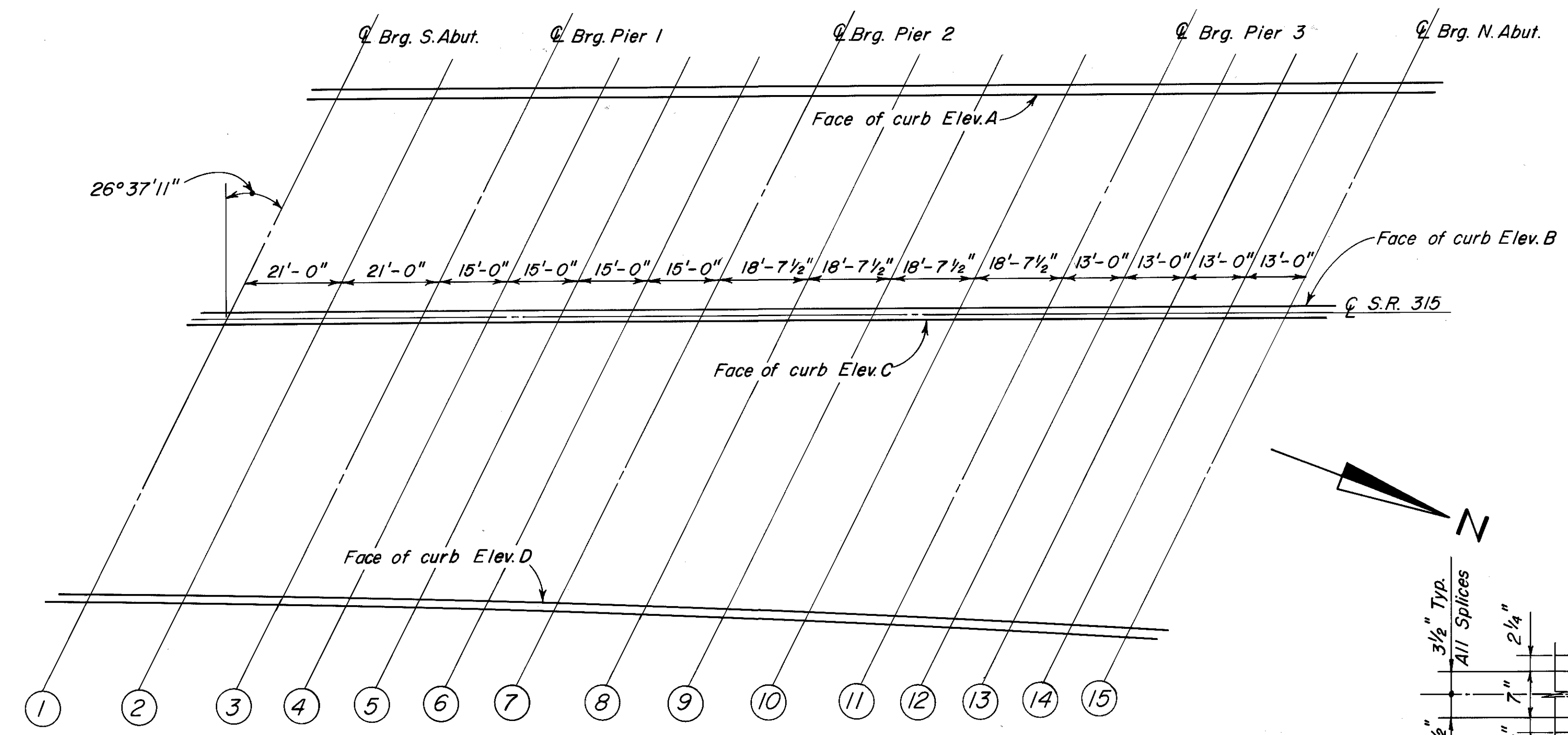
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DEM	KRH		MAP	G.W.M.	5/24/89	



CAMBER AND BLOCKING DIAGRAM

DEFLECTION AND CAMBER													
Location	SPAN N ^o . 1			SPAN N ^o . 2			SPAN N ^o . 3				SPAN N ^o . 4		
Point along Beam	0.25	0.50	0.75	0.25	0.50	F.S.#1	0.25	0.50	0.75	F.S.#2	0.25	0.50	0.75
Deflection due to weight of steel	0	0	0	0	0	0	1/16	1/8	1/16	1/16	0	0	0
Deflection due to remaining dead load	1/8	1/8	1/16	1/8	3/16	1/16	7/16	3/4	7/16	3/8	1/16	3/16	1/8
Adjust req'd. for vertical curve	1/8	3/16	1/8	1/4	5/16	1/4	3/8	1/2	3/8	5/16	3/16	1/4	3/16
Required shop camber	1/4	5/16	3/16	3/8	1/2	5/16	7/8	1 3/8	7/8	3/4	1/4	7/16	5/16

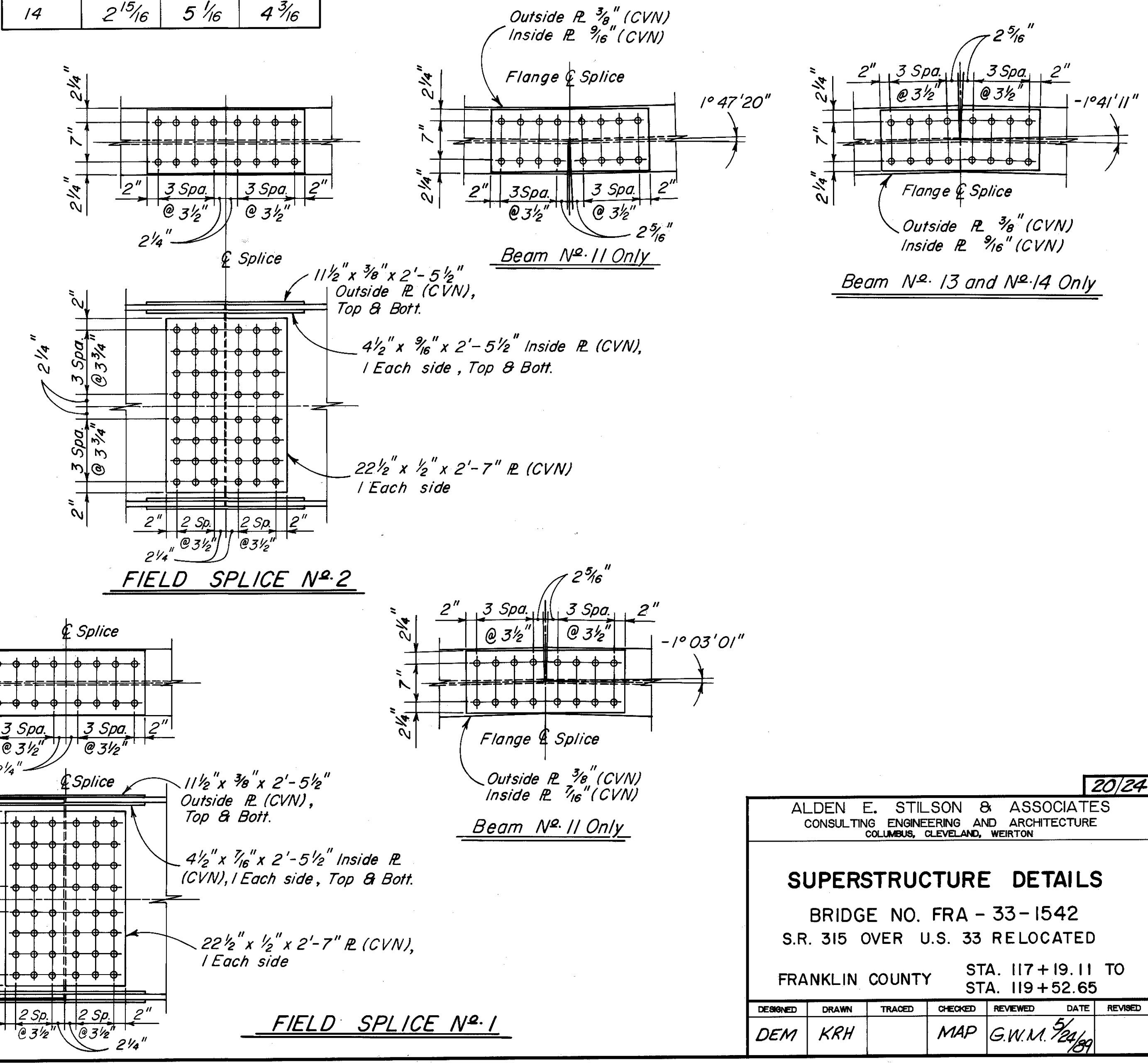
BLOCKING DIMENSIONS			
Beam N ^o .	Dim. "A"	Dim. "B"	Dim. "C"
1 thru 10	2 3/4	4 1/2	3 3/16
11	2 3/4	4 1/2	3 3/8
12	2 3/4	4 5/8	3 3/16
13	2 7/8	4 15/16	4
14	2 15/16	5 1/16	4 3/16



SCREED ELEVATION LOCATIONS

NOTE:
The screed elevations listed are those which are required prior to placing of the concrete deck. Proper allowance has been made for the dead load deflection caused by the weight of the concrete.

TABLE OF SCREED ELEVATIONS														
Line	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Elev. A	741.92	741.62	741.27	741.02	740.74	740.46	740.15	739.80	739.42	738.96	738.48	738.16	737.83	737.48
Elev. B	742.25	741.98	741.65	741.43	741.17	740.90	740.62	740.29	739.94	739.51	739.05	738.75	738.43	738.10
Elev. C	742.27	741.99	741.67	741.45	741.19	740.93	740.64	740.32	739.96	739.54	739.08	738.78	738.46	738.14
Elev. D	742.40	742.16	741.87	741.67	741.44	741.20	740.94	740.64	740.31	739.91	739.49	739.20	738.89	738.54



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COLUMBUS, CLEVELAND, WEIRTON

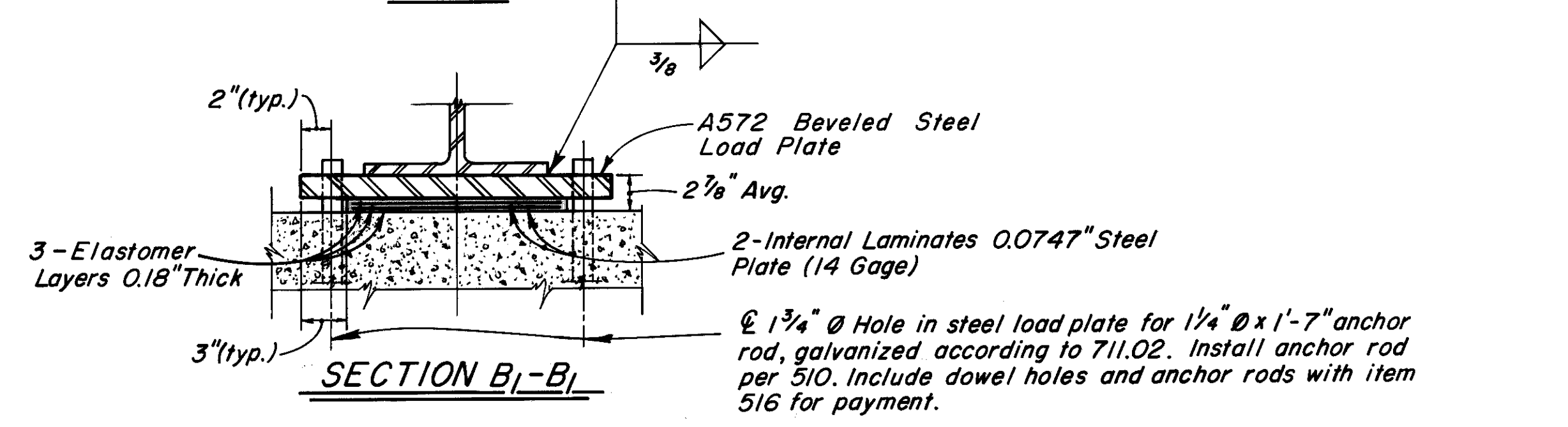
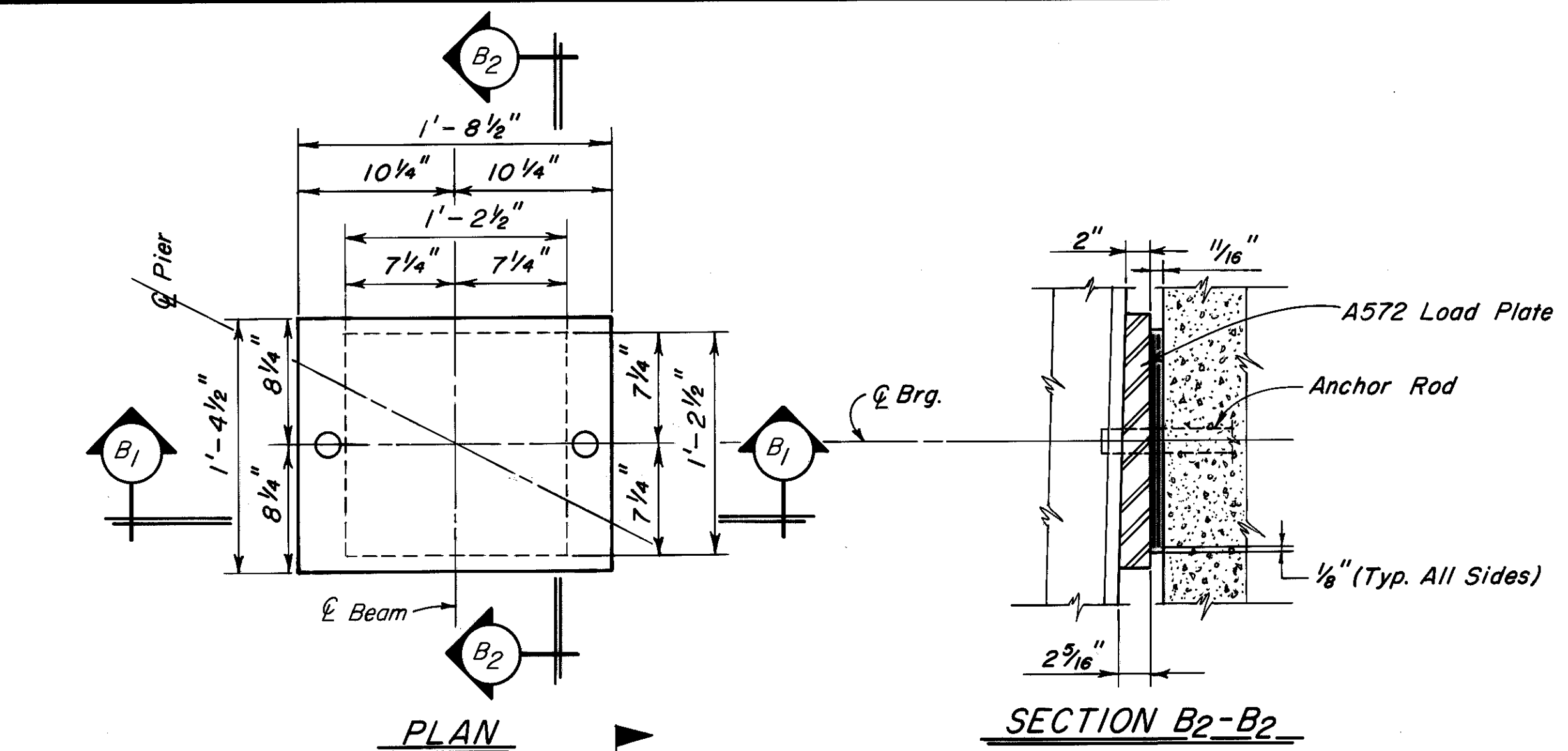
SUPERSTRUCTURE DETAILS

BRIDGE NO. FRA - 33-1542

S.R. 315 OVER U.S. 33 RELOCATED

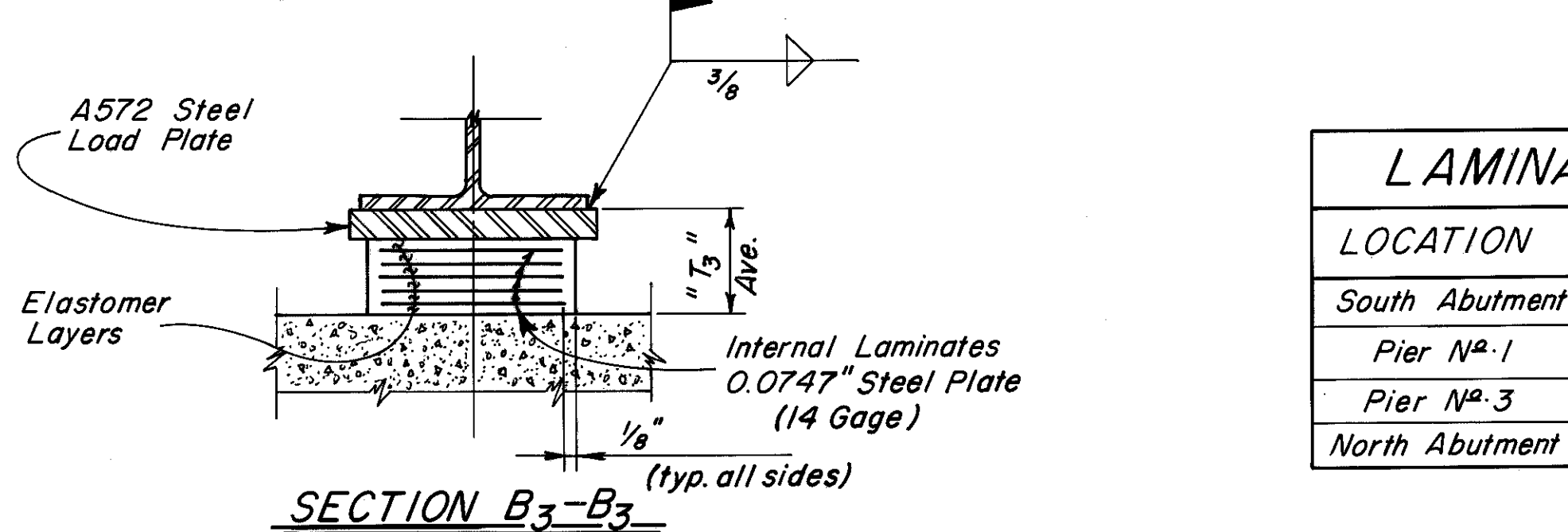
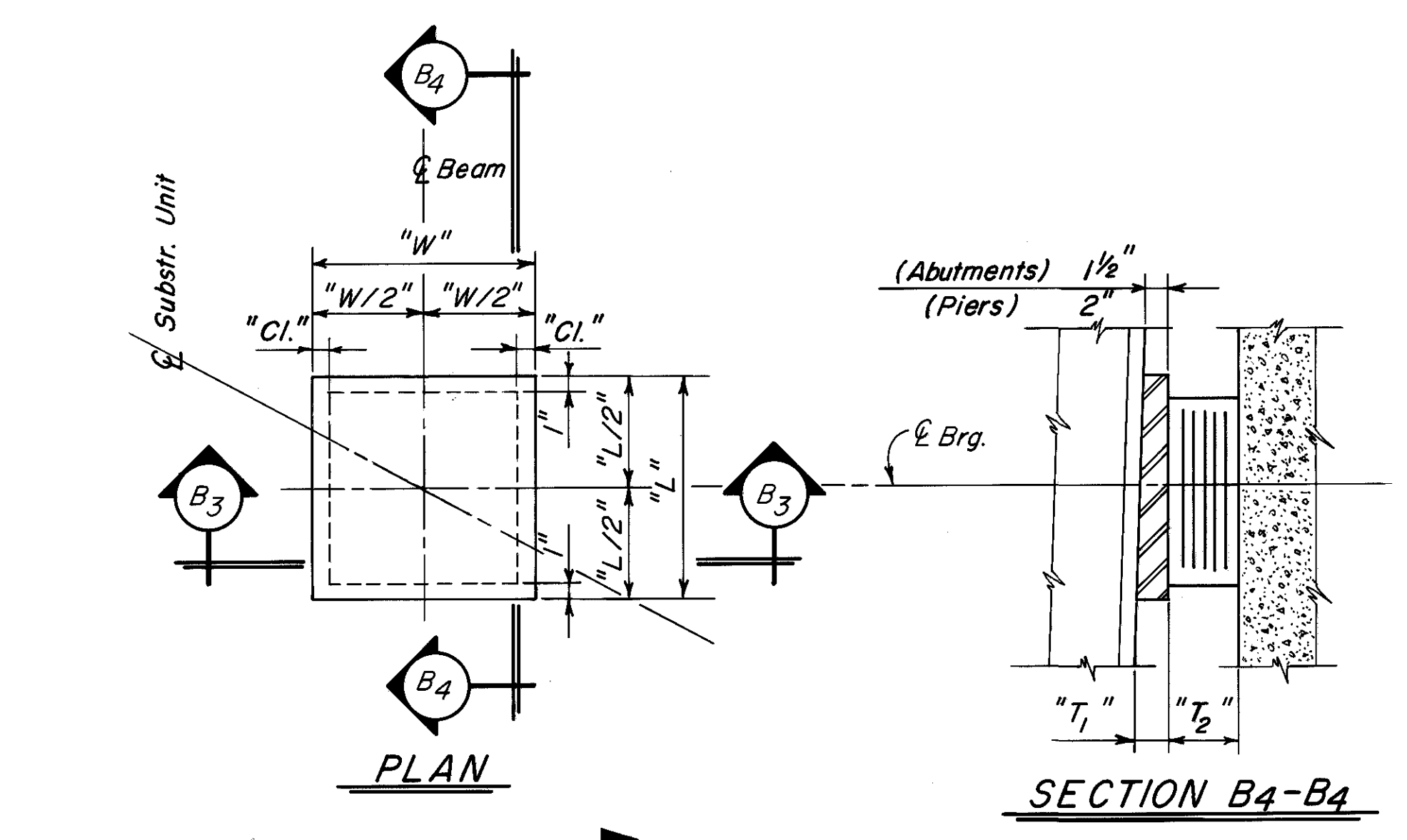
FRANKLIN COUNTY STA. 117+19.11 TO STA. 119+52.65

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DEM	KRH		MAP	G.W.M.	5/24/99	



FIXED BEARING
PIER No. 2

BEARING	REACTIONS		
LOCATION	Dead Load (Kips)	Live Load (Kips)	Maximum Reaction (Kips)
South Abutment	23.2	72.1	95.3
Pier No. 1	78.9	105.7	184.6
Pier No. 2	104.5	122.7	227.2
Pier No. 3	106.2	119.2	225.4
North Abutment	27.2	78.7	105.9



EXPANSION BEARINGS

LAMINATED ELASTOMERIC EXPANSION BEARINGS								
LOCATION	"W"	"L"	"CL."	"T ₁ "	"T ₂ "	"T ₃ "	Elastomer Layers	Internal Laminates
South Abutment	1'-2"	1'-1"	1 1/2"	1 1/16"	1 29/32"	3 3/8"	7-0.19"	6
Pier No. 1	1'-6"	1'-6"	1"	2 1/4"	1 9/16"	3 1/16"	5-0.25"	4
Pier No. 3	1'-6"	1'-6"	1"	2 3/8"	1 9/16"	3 3/4"	5-0.25"	4
North Abutment	1'-2"	1'-1"	1 1/2"	1 13/16"	1 29/32"	3 7/16"	7-0.19"	6

NOTES:

The elastomer for fixed and expansion bearings shall be neoprene of 50 durometer hardness.

The elastomer shall be vulcanized bonded to the steel load plate during the molding process.

Welding shall be controlled so that the plate temperature at the elastomer bonded surface does not exceed 400°F. as determined by use of pyrometric sticks or other temperature monitoring devices.

NOTES:

The steel laminate shall be vulcanized bonded to the neoprene during the molding process as per item 711.23.

At the option of the contractor, the bearing anchor rods (or formed holes), located and supported by templates, may be cast in place.

The anchor rods shall be galvanized according to 711.02. Install the anchor rod as per 510. Include dowel holes and anchor rods with item 516 for payment.

If deck concrete is placed at an ambient temperature higher than 80°F or lower than 40°F, and the bearing shear deflection exceeds one-sixth of the bearing height at 60°F ± 10°F, the beams shall be raised to allow the bearings to return to their undeformed shape at 60°F ± 10°F.

Bearing seats shall be level.

The unit bid price shall include all materials, labor and incidentals necessary to furnish and install laminated elastomeric bearings either fixed or expansion. Payment will be made at the contract price for item 516, each, laminated elastomeric bearings (___" x ___" x ___" laminated elastomeric pad with ___" x ___" x ___" steel load plate).

Tolerances: Individual elastomer layer thickness: ± 20% of design value
Plan dimensions: - 0", + 1/4"; Design thickness: - 0", + 1/4"; Edge cover of embedded laminates: - 0", + 1/8"

The laminated elastomeric bearing manufacturer shall proof load each laminated elastomeric bearing with a compressive load equal to 1.5 times the maximum design load as per article 25.7, bearing tests and acceptance criteria, division II, construction of the 1985 interim specifications for the "Standard Specifications For Highway Bridges" adopted by the American Association of State Highway and Transportation Officials, thirteenth edition, 1983. The testing shall be included in the price bid for the bearings. Acceptance of the bearing shall be according to level I acceptance criteria of article 25.7 and 711.23 of the construction and material specifications. The manufacturer shall furnish certified test data.

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ALDEN E. STILSON & ASSOCIATES
CONSULTING ENGINEERING AND ARCHITECTURE
COLUMBUS, CLEVELAND, WEIRTON

SUPERSTRUCTURE DETAILS

BRIDGE NO. FRA - 33-1542
S.R. 315 OVER U.S. 33 RELOCATED

FRANKLIN COUNTY STA. 117+19.11 TO STA. 119+52.65

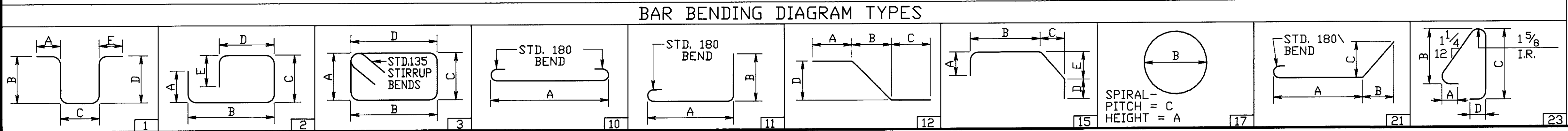
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DEM	KRH		MAP	G.W.M.	5/24/89	

NOTE:
SEE NOTES ON 24/24.

MARK	NUM.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	NOTE
PIER 1-EAST BENT										
PE 5009	4	15-11	66	ST						
PE 5010	6	19- 4	121	ST						
PE 5011	4	24-11	104	ST						
PE 5012	10	7- 0	73	12	2- 8	4- 3		0- 9		
PE 5013	2	10-11		3	2- 8	2- 6	2- 8	2- 6		1
THRU			97		VARY LENGTH BY		0- 5 3/ 8			
					VARY DIM. B BY		0- 2 5/ 8			
					VARY DIM. D BY		0- 2 5/ 8			
PE 5016	2	12- 3		3	2- 8	3- 2	2- 8	3- 2		1
PE 5017	33	12- 3	422	3	2- 8	3- 2	2- 8	3- 2		
PE 5100	40	6- 5	268	1		2- 0	2- 8	2- 0		
PIER 2-WEST BENT										
PE 4004	1	13- 9	265	17	13- 9	2- 8				6
					NO. TURNS= 40		NO. SPACERS= 4			
PE 4005	1	14- 0	265	17	14- 0	2- 8				6
					NO. TURNS= 40		NO. SPACERS= 4			
PE 4006	1	14- 3	272	17	14- 3	2- 8				6
					NO. TURNS= 41		NO. SPACERS= 4			
PE 5001	10	6- 9	70	12	2- 8	4- 0		0- 9		
PE 5002	4	16- 8	70	ST						
PE 5003	2	21- 4	45	ST						
PE 5004	4	26- 8	111	ST						
PE 5018	2	11- 1		3	2- 8	2- 7	2- 8	2- 7		1
THRU			97		VARY LENGTH BY		0- 4			
					VARY DIM. B BY		0- 2			
					VARY DIM. D BY		0- 2			
PE 5021	2	12- 1		3	2- 8	3- 1	2- 8	3- 1		1
PE 5022	48	12- 3	613	3	2- 8	3- 2	2- 8	3- 2		
PE 5100	30	6- 5	201	1		2- 0	2- 8	2- 0		
PE 7005	14	21-11	627	ST						
PE 8002	14	22- 5	838	1	2- 5	20- 3				
PE 8003	8	20- 8	441	ST						
PE10004	8	16- 9	577	ST						
PE10005	16	17- 3	1188	ST						
F 7001	60	9- 2	1124	10	7- 6					
FE10001	24	8- 10	912	1	1- 8	7- 6				

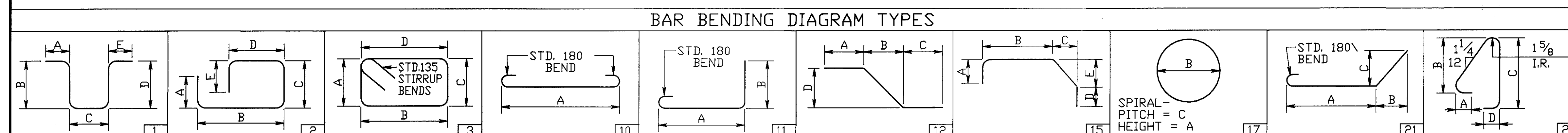
MARK	NUM.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	NOTE
PIER 2-EAST BENT										
PE 4007	2	14- 3	543	17	14- 3	2- 8				6
					NO. TURNS= 41		NO. SPACERS= 8			
PE 4008	2	14- 6	556	17	14- 6	2- 8				6
					NO. TURNS= 42		NO. SPACERS= 8			
PE 5023	4	16- 0	67	ST						
PE 5024	6	20- 4	127	ST						
PE 5025	4	25- 6	106	ST						
PE 5026	10	6-10	71	12	2- 8	4- 1		0- 9		
PE 5027	2	11- 1		3	2- 8	2- 7	2- 8	2- 7		1
THRU			97		VARY LENGTH BY		0- 4 5/ 8			
					VARY DIM. B BY		0- 2 3/ 8			
					VARY DIM. D BY		0- 2 3/ 8			
PE 5030	2	12- 3		3	2- 8	3- 2	2- 8	3- 2		1
PE 5031	44	12- 3	562	3	2- 8	3- 2	2- 8	3- 2		
PE 5100	40	6- 5	268	1		2- 0	2- 8	2- 0		
PE 7003	16	19- 3	630	1	2- 5	17- 0				
PE 7006	16	22- 5	733	ST						
PE 7007	21	21- 2	909	ST						
PE10006	16	17- 4	1193	ST						
PE10007	16	17- 7	1211	ST						
F 7001	80	9- 2	1499	10	7- 6					
FE10001	32	8- 10	1216	1	1- 8	7- 6				
PIER 3-WEST BENT										
PE 4009	1	12- 2	232	17	12- 2	2- 8				6
					NO. TURNS= 35		NO. SPACERS= 4			
PE 4010	1	12- 6	239	17	12- 6	2- 8				6
					NO. TURNS= 36		NO. SPACERS= 4			
PE 4011	1	12-10	245	17	12-10	2- 8				6
					NO. TURNS= 37		NO. SPACERS= 4			
PE 5001	10	6- 9	70	12	2- 8	4- 0		0- 9		
PE 5002	4	16- 8	70	ST						
PE 5003	2	21- 4	45	ST						
PE 5004	4	26- 8	111	ST						
PE 5018	2	11- 1		3	2- 8	2- 7	2- 8	2- 7		1
THRU			97		VARY LENGTH BY		0- 4			
					VARY DIM. B BY		0- 2			
					VARY DIM. D BY		0- 2			
PE 5021	2	12- 1		3	2- 8	3- 1	2- 8	3- 1		1
PE 5022	48	12- 3	613	3	2- 8	3- 2	2- 8	3- 2		
PE 5100	30	6- 5	201	1		2- 0	2- 8	2- 0		
PE 7006	14	21-11	627	ST						
PE 8002	14	22- 5	838	1	2- 5	20- 3				
PE 8003	8	20- 8	441	ST						
PE10008	8	15- 2	522	ST						
PE10009	16	15-10	1090	ST						
F 7001	60	9- 2	1124	10	7- 6					
FE10001	24	8- 10	912	1	1- 8	7- 6				

PIER 3-EAST BENT										
PE 4012	2	12-10	490	17	12-10	2- 8				6
					NO. TURNS= 37		NO. SPACERS= 8			
PE 4013	2	13- 1	503	17	13- 1	2- 8				6
					NO. TURNS= 38		NO. SPACERS= 8			
PE 5001	10	6- 9	70	12	2- 8	4- 0		0- 9		
PE 5032	4	16- 6	69	ST						
PE 5033	6	21- 4	134	ST						
PE 5034	4	26- 6	111	ST						
PE 5027	2	11- 1		3	2- 8	2- 7	2- 8	2- 7		1
THRU			97		VARY LENGTH BY		0- 4 5/ 8			
					VARY DIM. B BY		0- 2 3/ 8			
					VARY DIM. D BY		0- 2 3/ 8			
PE 5030	2	12- 3		3	2- 8	3- 2	2- 8	3- 2		1
PE 5031	54	12- 3	690	3	2- 8	3- 2	2- 8	3- 2		
PE 5100	40	6- 5	268	1		2- 0	2- 8	2- 0		
PE 7007	16	19- 9	646	1	2- 5	17- 6				
PE 7008	24	22- 2	1087	ST						
PE 8004	14	24- 0	897	ST						
PE10010	16	16- 0	1102	ST						
PE10011	16	16- 3	1119	ST						
F 7001	80	9- 2	1499	10	7- 6					
FE10001	32	8- 10	1216	1	1- 8	7- 6				
SUPERSTRUCTURE-EPOXY COATED										
SE 4001	1276	30- 0	25571	ST						
SE 4002	160	28- 7	3055	ST						
SE 4003	164	30- 0	3287	ST						
SE 4004	339	38- 0	8605	ST						
SE 4005	32	25- 2	538	ST						
SE 5001	390	20- 4	8271	ST						
SE 5002	1	4- 5		ST						1
THRU			194		VARY LENGTH BY		1- 1 5/ 8			
SE 5016	1	20- 4		ST						1
SE 5017	1	2- 6		ST						1
THRU			331		VARY LENGTH BY		1- 1 5/ 8			
SE 5038	1	26- 4		ST						1
SE 5039	8	4- 5	37	ST						
SE 5040	1	4- 5		ST						1
THRU			401		VARY LENGTH BY		1- 1 3/ 8			
SE 5062	1	29- 0		ST						1
SE 5063	382	29- 0	11554	ST						
SE 5064	1	2- 9		ST						1
THRU			148		VARY LENGTH BY		1- 1 5/ 8			
SE 5077	1	17- 6		ST						1
SE 5078	384	28- 0	11214	ST						
SE 5079	1	5- 4		ST						1
THRU			365		VARY LENGTH BY		1- 1 5/ 8			
SE 5099	1	28- 0		ST						1
SE 5100	1	6- 6		ST						1
THRU			360		VARY LENGTH BY		1- 1 5/ 8			
SE 5119	1	28- 0		ST						1
SE 5021	175	35-10	6540	ST						
SE 5122	1	5- 6		ST						1
THRU			534		VARY LENGTH BY		1- 1 5/ 8			
SE 5147	1	33-11		ST						1



[illegible]

ALL REINFORCING STEEL SHALL BE EPOXY
COATED. SEE ITEM 509 NOTE ON [3/24].



<div style="text-align: right;">27</div> <div style="text-align: center;"> STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE COLUMBUS AND CLEVELAND </div>						
<h2>REINFORCING STEEL LIST</h2>						
BRIDGE NO. FRA-33-1542 S.R.315 OVER U.S.33 RELOCATED						
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