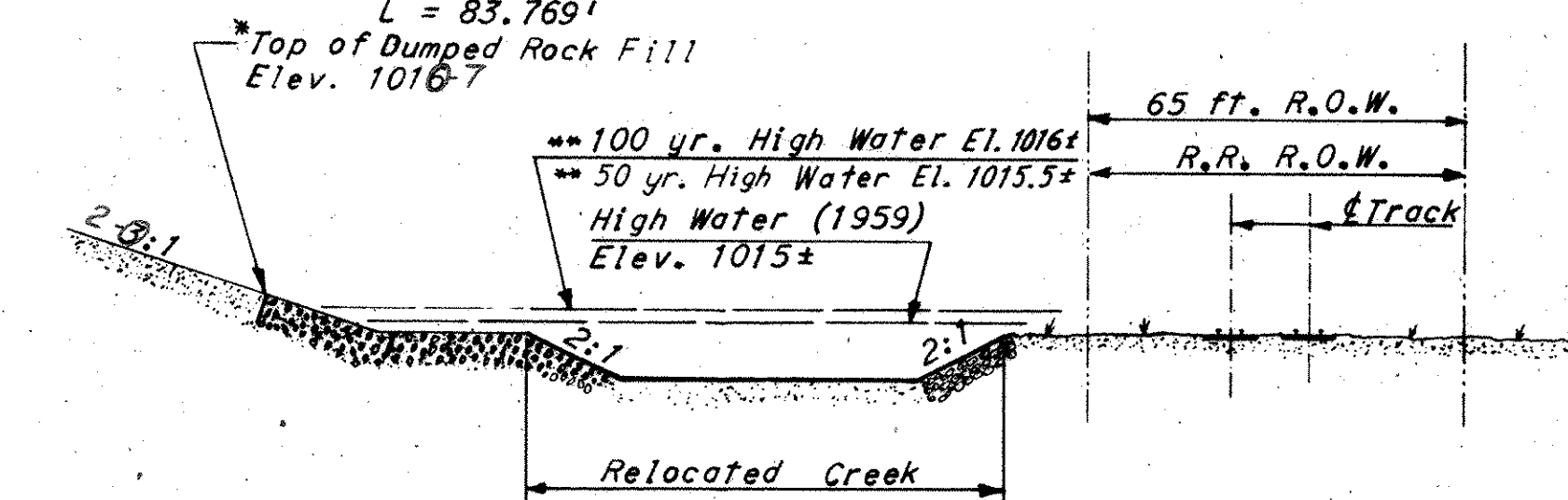


STARK COUN
STA-30-14.12
STA-77-9.25

RAMP E CURVE DATA

P.I. Sta. 962+21.944
D = 3°05'15.9"
Δ = 26°35'26.7" L t.
R = 1855.585
T = 438.484
L = 861.167

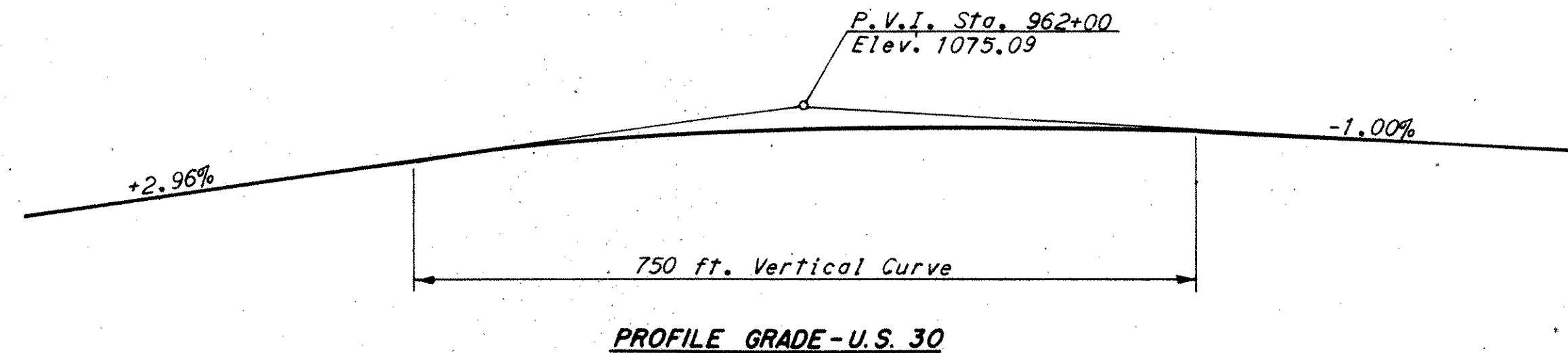
*To be paid for under "Rock without Channel Protection, Type A, with bedding." See Roadway Plans.



SECTION THRU W. BRANCH NIMISHILLEN CREEK

FLOOD DISCHARGE					
WEST BRANCH NIMISHILLEN CREEK AT NAVARRE ROAD BRIDGE.					
Occurance Interval (years)	5	10	20	50	100
*Discharge Q (c.f.s.)	1360	1680	2010	2520	3000

*Taken from Table 5, "Flood Discharge-Frequency Relationship", page 74-23, "Flood Plain Study-Main Report", Corps of Engineers, Feb. 1967.



NOTE: Profile grade is at the top of the Portland Cement Concrete on the bridge deck and approach slabs. The Contractor shall, in a length of 75 feet, make a vertical adjustment in the finished surface of the approach roadway in order to provide a 1 1/2 inch vertical transition to the higher asphalt concrete roadway surface on the structure and approach slabs.

PROPOSED STRUCTURE

Type: Continuous Welded Girder with Reinforced Concrete Slab.
Spans: Eastbound: 55.5'±, 55.5'±, 55.5'±, 55.5'±, 55.5'±,
107.0'±, 91.0'±, 90.0'±, 107.5'±, 70.5'± =
656.5'± Ctr. to Ctr. End Bearings Along
U.S. 30.
Westbound: 55.5'±, 85.5'±, 73.0'±,
110.0'±, 74.0'±, 80.5'±, 107.5'±, 70.5'±, =
656.5'± Ctr. to Ctr. End Bearings.
Along U.S. 30.
Roadway: Varies; 102.0'± to 117.0'± face to
face of parapets including 3'-0" Median Barrier.
Loading: HS 20-44
Skews: Varies: 7° Maximum from Local Radial Line
Wearing Surface: 1½" Asphalt Concrete
Approach Slab: AS-1-72 (25' Long) (Modified)
Alignment: 450' Spiral to 3'00" Curve to 450' Spiral Lt.

EXISTING UTILITY LEGEND

_____ 4" *GS* _____ GAS
 _____ 4" *W* _____ WATER
 _____ 16" *Storm* _____ STORM SEWER
 _____ 8" *San* _____ SANITARY SEWER
 _____ T _____ TELEPHONE
 _____ F _____ POWER LINES

4W-E4KV	{ 4 WIRE, PRIMARY 4 KILOVOLT
3W-E ₃	3 WIRE, SECONDARY
□	WATER HYDRANT
○	MANHOLE
^d □	CATCH BASIN

Modify Std. Drwg. AS-1-72 by providing 3" clear over the top rebars instead of the 2" shown on the Std. Drwg. The jacking holes as called for on Std. Drwg. AS-1-72 are not required.

Notes

The following items are not included in the bridge plans. See roadway plans for detail.

- 1. Relocation or removal of existing utilities
- 2. Approach grading, pavements and slabs.
- 3. Guardrails.

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

□ Denotes 1987 average daily traffic. For information not shown see General Plan Sheet 2/24

- Denotes Standard Scupper

For Estimated Quantities, see Sheet 3658

Piling for the West Abutment of Br. No. Sta. 30+1489 and the three northern most footings for Pier No. 1 of Br. No. Sta. 30+1487 shall be driven before placing any concrete for either substructure unit.

Hunter Bridge No. 2 Revised 6-9-75 By RAS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF 1/24
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

SITE PLAN

U.S. 30 OVER RAMP B, C, I-77
AND PENNSYLVANIA R.R.

BR. NO. STA. 30-1487
SCALE: 1" = 50' - 0"

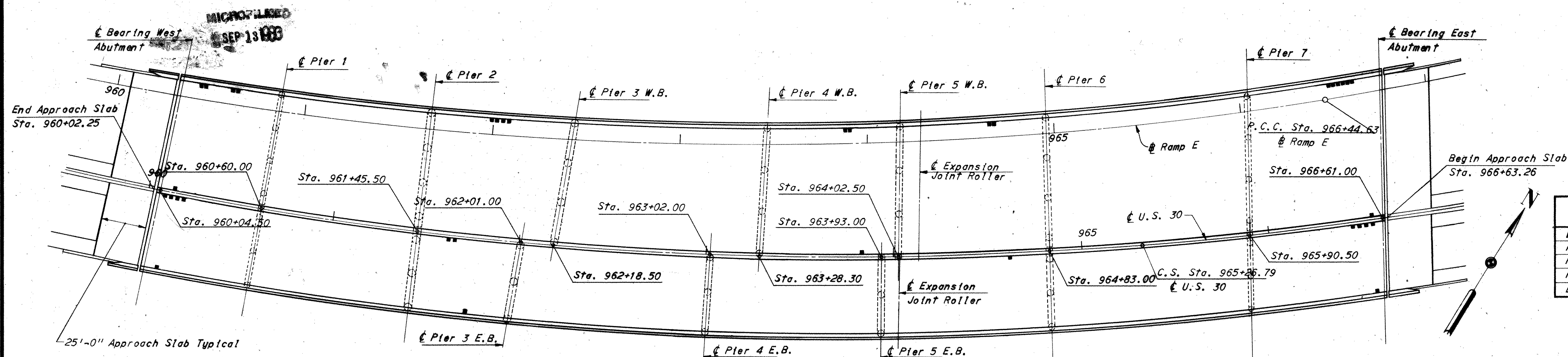
RELOCATED U.S. 30

CANTON STARK COUNTY OHIO

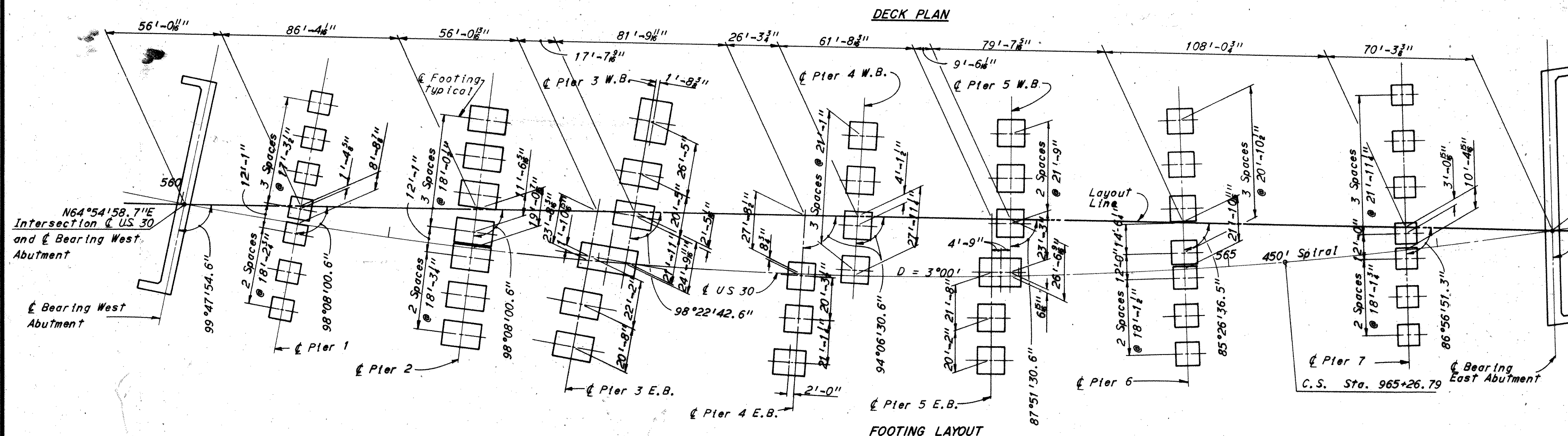
DRAWN <i>LDE</i>	TRACED	CHECKED <i>MAG</i>	REVIEWED <i>MJK</i>	REVISED <i>10-29-71</i>
DATE <i>12-11-69</i>	DATE	DATE <i>5-26-70</i>	DATE <i>11-22-71</i>	<i>1668</i>

STARK COUNTY
STA-30-14.12
STA-77-9.22

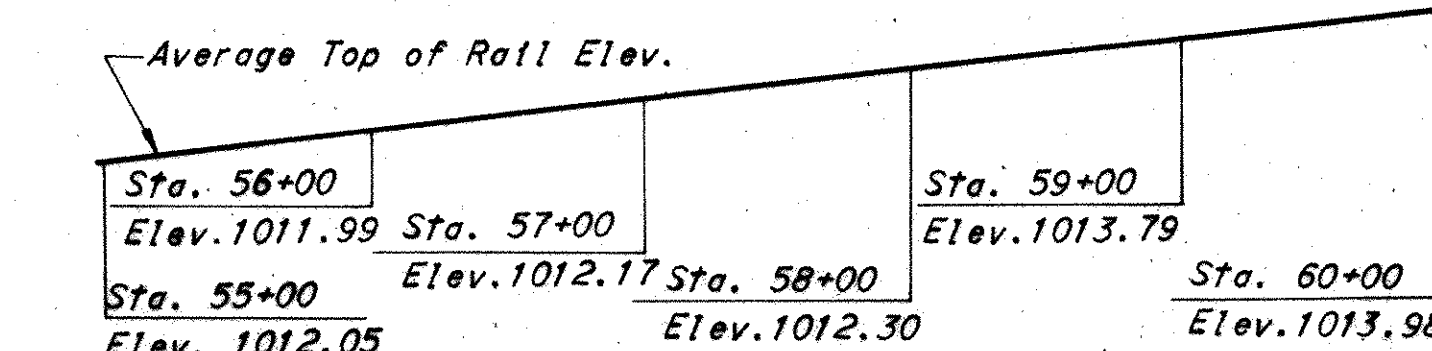
ESTIMATED AVERAGE PILE LENGTHS FOR PILING	
West Abutment	85'
Piers 1, 2 and 3	70'
Piers 4 and 5	60'
Piers 6 and 7	75'
East Abutment	85'



DECK PLAN



FOOTING LAYOUT

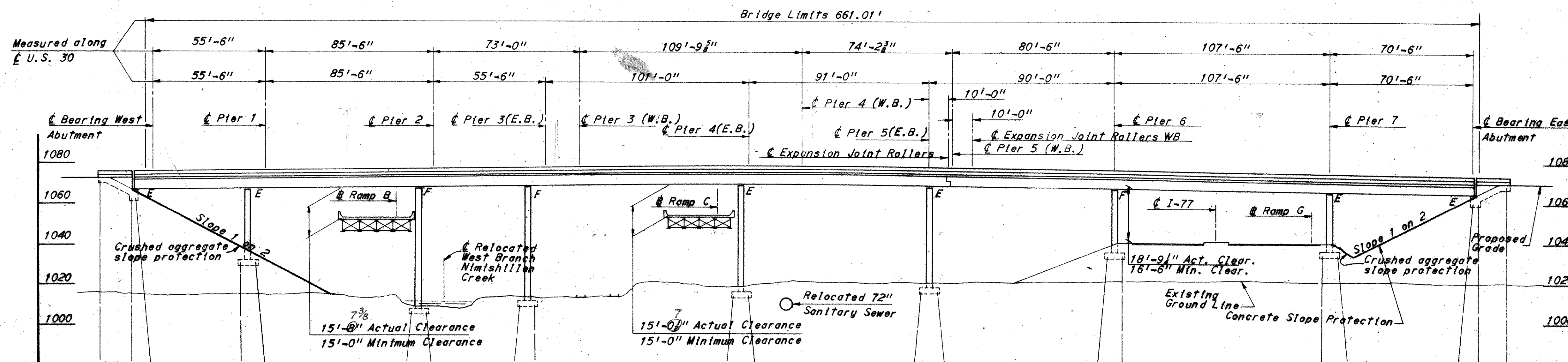


PROFILE GRADE - PENNSYLVANIA R.R.

Intersection U.S. 30
and Bearing East
Abutment

Notes:
For profile grades see Sheets 264, 1/24 and 325.
The embankments shall be constructed to the level of the subgrade for a minimum distance of 200 feet back of the abutments. Excavation shall then be made for the abutments and for piers 1, 6 and 7.
All earthwork in the area of the existing channel shall be completed before construction of piers 2 and 3.

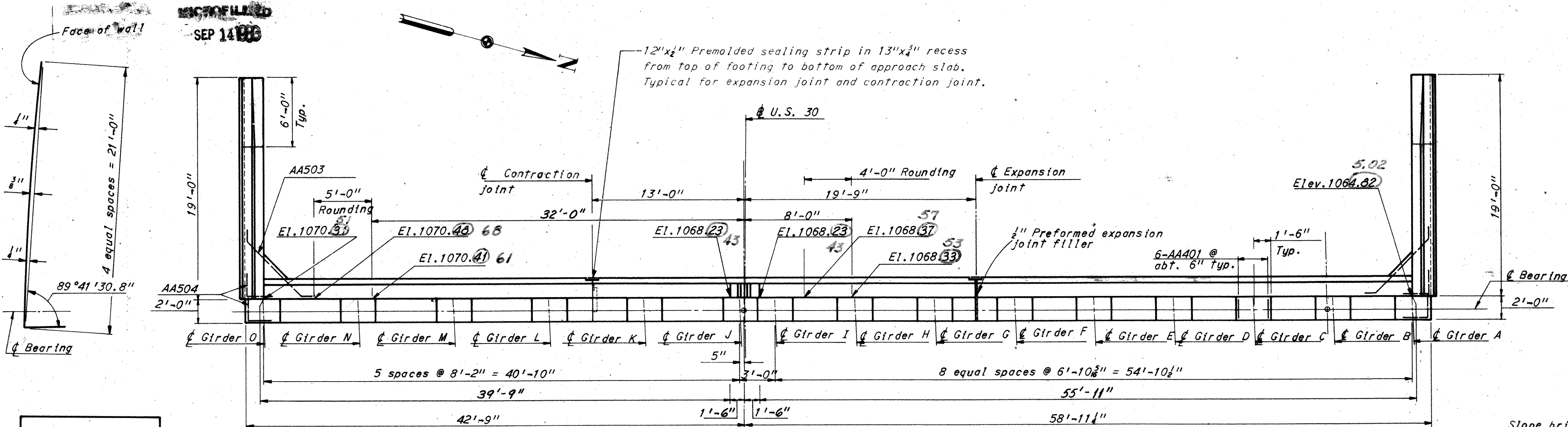
For details of Piers 1 and 2 see Sheet 6/24
For details of Piers 3 and 4 Westbound see Sheet 7/24
For details of Piers 3 and 4 Eastbound see Sheet 8/24
For details of Pier 5 see Sheet 9/24
For details of Piers 6 and 7 see Sheet 10/24
For abutment details see Sheets 3/24 thru 5/24
For lighting details see Lighting Plans.
■ Denotes Standard Scupper.
W.B. denotes Westbound.
E.B. denotes Eastbound.
All piles shall be 12" cast-in-place concrete.



DEVELOPED ELEVATION

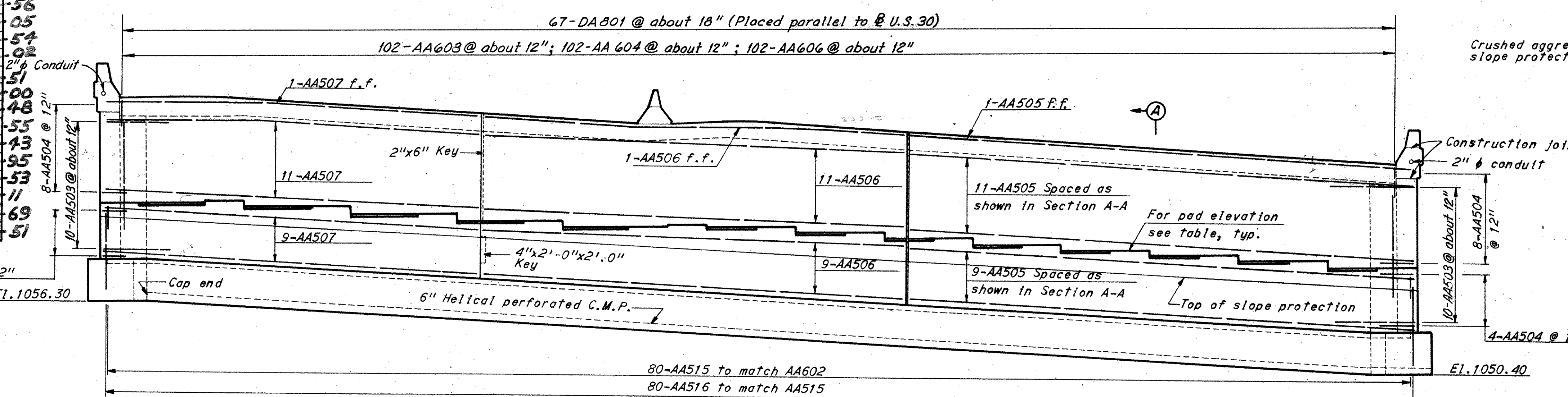
H.N.T.B. BRIDGE NO. 2		Revised 6-9-75		By RAS
HOWARD, NEEDLES, TAMMEN & BERENDSON CONSULTING ENGINEERS KANSAS CITY CLEVELAND NEW YORK				
GENERAL PLAN U.S. 30 OVER RAMP B, C, I-77 AND PENNSYLVANIA R.R.				
BR. NO. STA. 30-1487		STA. 960 + 02.25		
SCALE: 1"=30'-0"		STA. 966 + 63.26		
RELOCATED U.S. 30				
CANTON	STARK COUNTY	OHIO		
DRAWN LDE	CHECKED HAG	REVIEWED MTK	DATE 11-22-71	
DATE 12-3-69	DATE 6-16-70	DATE 11-22-71	1668	

STARK COUNTY
STA-30-14.12
STA-77-9.22

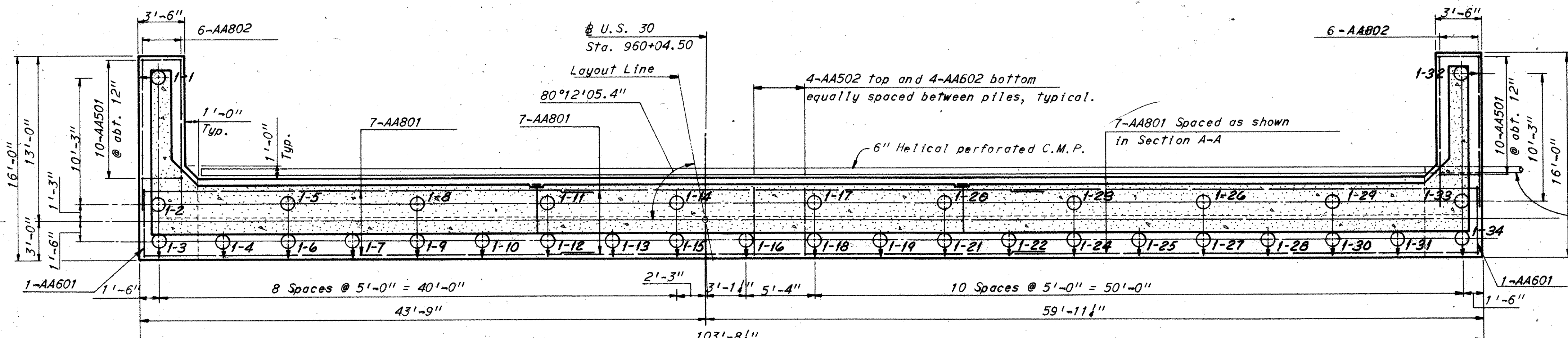


PAD ELEVATIONS

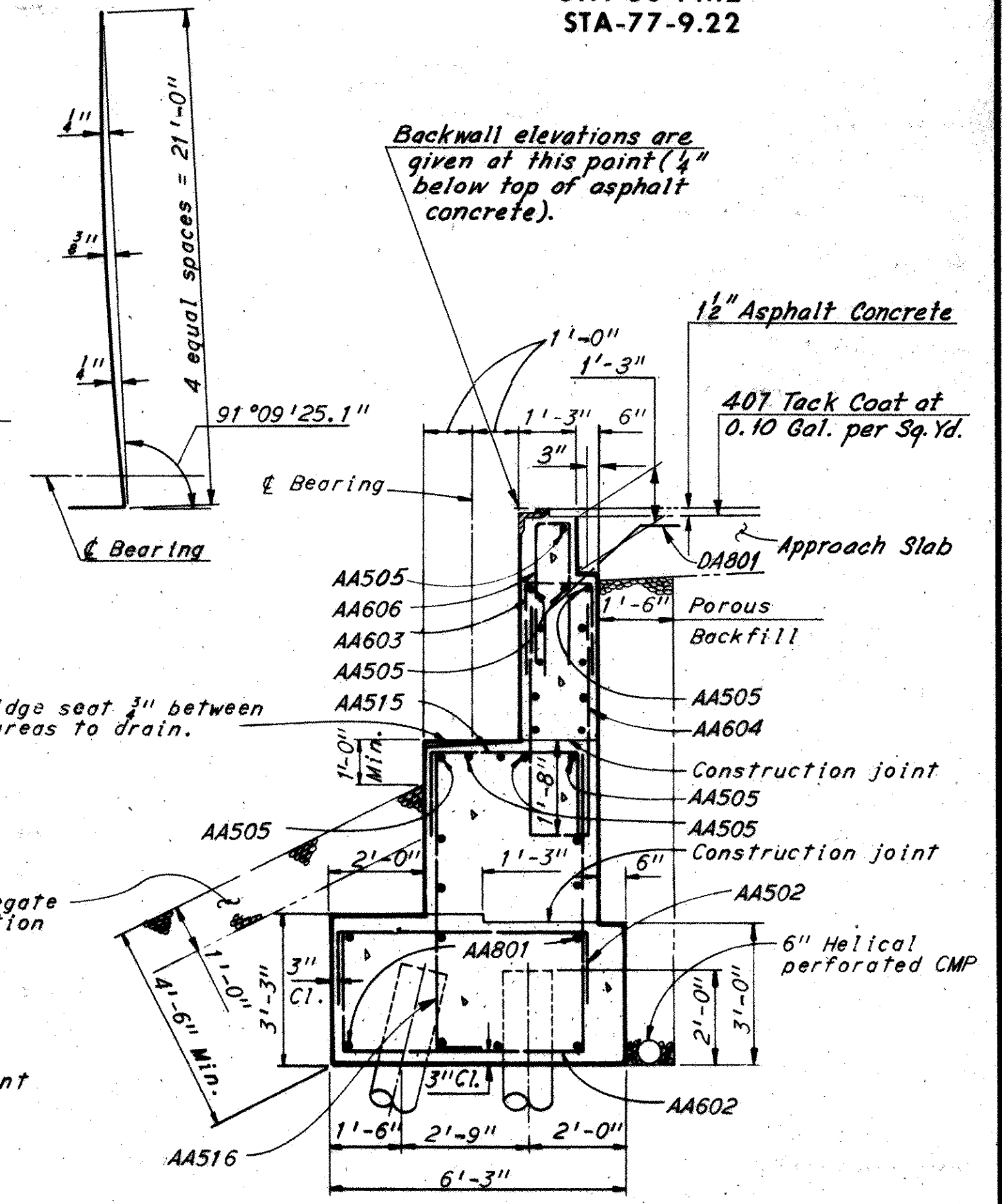
Girder	Elev.
A	1058.09
B	1058.58
C	1059.05
D	1059.55
E	1060.04
F	1060.52
G	1061.01
H	1061.50
I	1061.99
J	1062.48
K	1062.97
L	1063.46
M	1063.95
N	1064.44
O	1064.93



ELEVATION



FOOTING PLAN

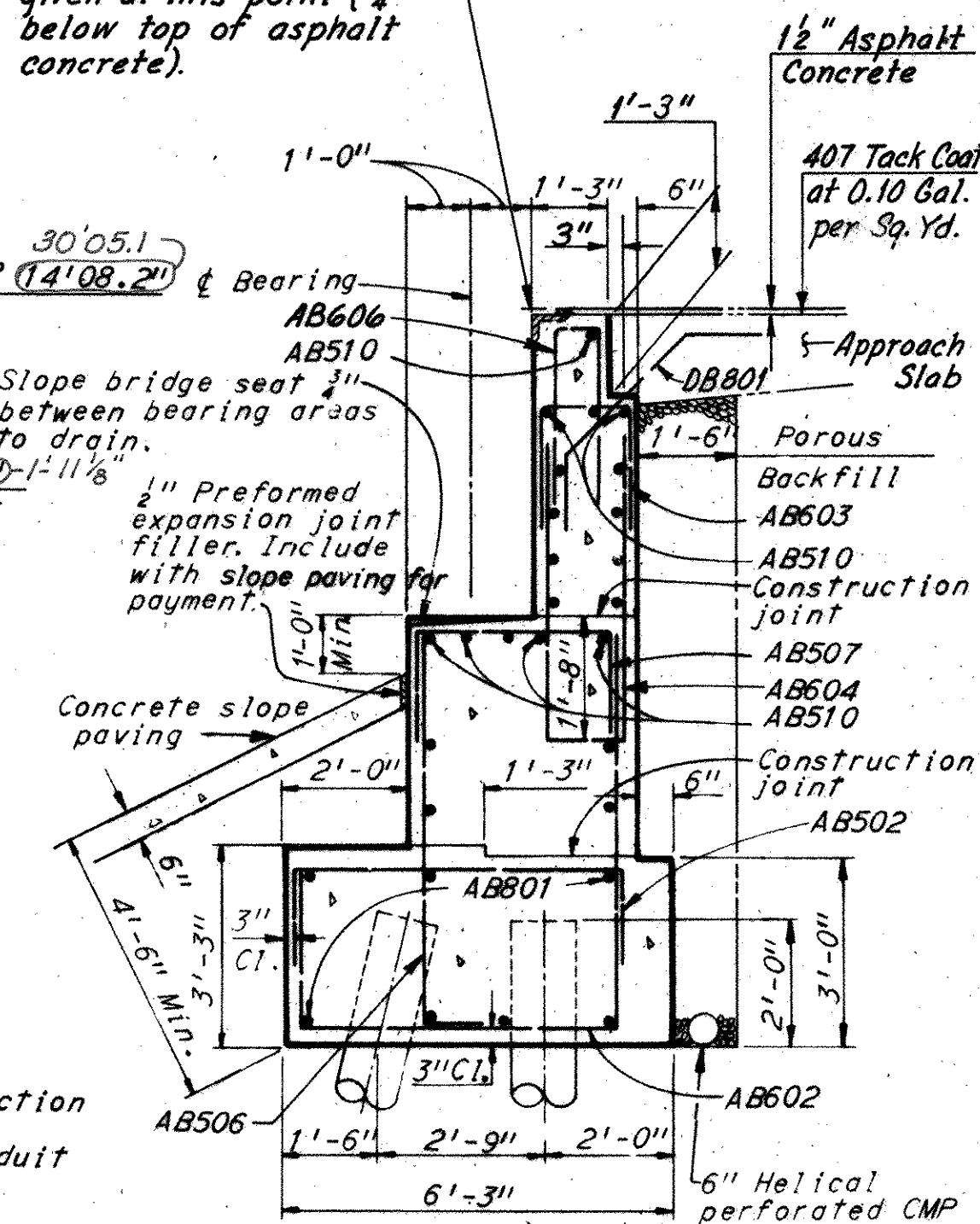


H.N.T.B. BRIDGE NO. 2		Revised 6-9-75		By RAS
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS KANSAS CITY CLEVELAND NEW YORK				
WEST ABUTMENT U.S. 30 OVER RAMP B, C, I-77 AND PENNSYLVANIA R.R.				
BR. NO. STA. 30-1487		STA. 960 + 02.25		
SCALE: 3/16" = 1'-0"		STA. 966 + 63.26		
RELOCATED U.S. 30				
CANTON		STARK COUNTY		OHIO
DRAWN	TRACED	CHECKED	REVIEWED	REVISOR
DATE 1-3-70	DATE 5-6-70	DATE 11-22-71	DATE 7-12-76	1668

Revised 9-21-76

1 1/2" Asphalt
Concrete

407 Tack Coat
at 0.10 Gal.
per Sq. Yd.



SECTION A - A

Notes:

For roadway end dam details see Ohio Standard Drawing SD-1-69, Sheets 1 and 2 of 4, and Sheet 359.

AB401 bars shall be placed $2\frac{1}{2}$ " below top of bridge seat.

n.f. denotes near face, f.f. denotes far face, and e.f. denotes each face.

For reinforcement schedule see Sheet 20/24

Shear keys at contraction joints shall be centered between front and back faces.

For placement of conduit in wingwalls see Sheet. 5/24

All battered piles are battered 3 in 12.

Pile dimensions are measured along bottom of footing.

All piles are 12" ϕ cast-in-place concrete.

○→ Denotes battered piles and direction of batter. For girder skew angles see sheet 12/24

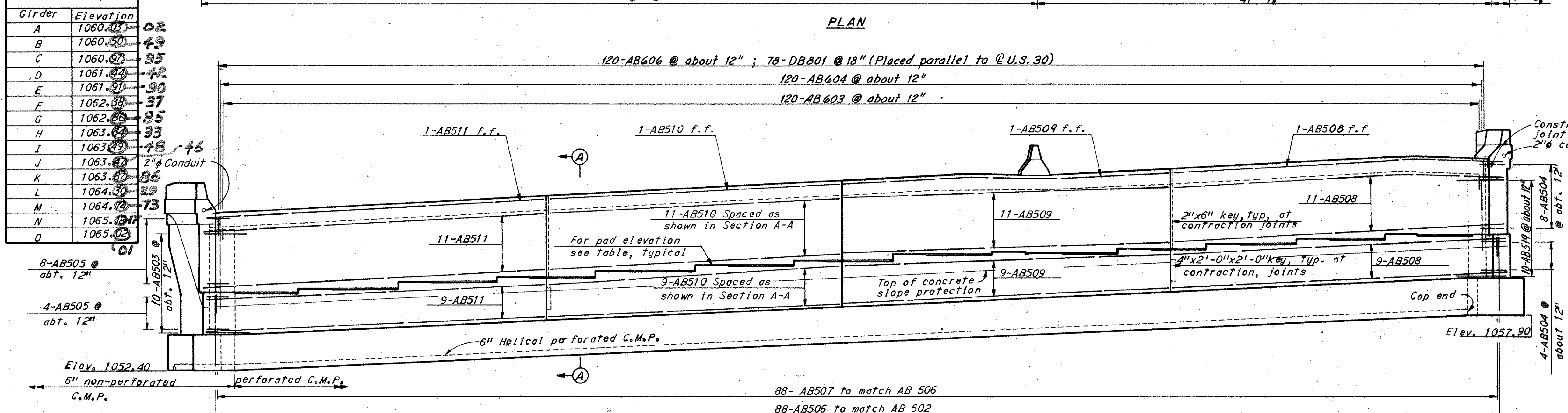
For median Details see Sheet 5/24

For Wingwall details see Sheet 5/24

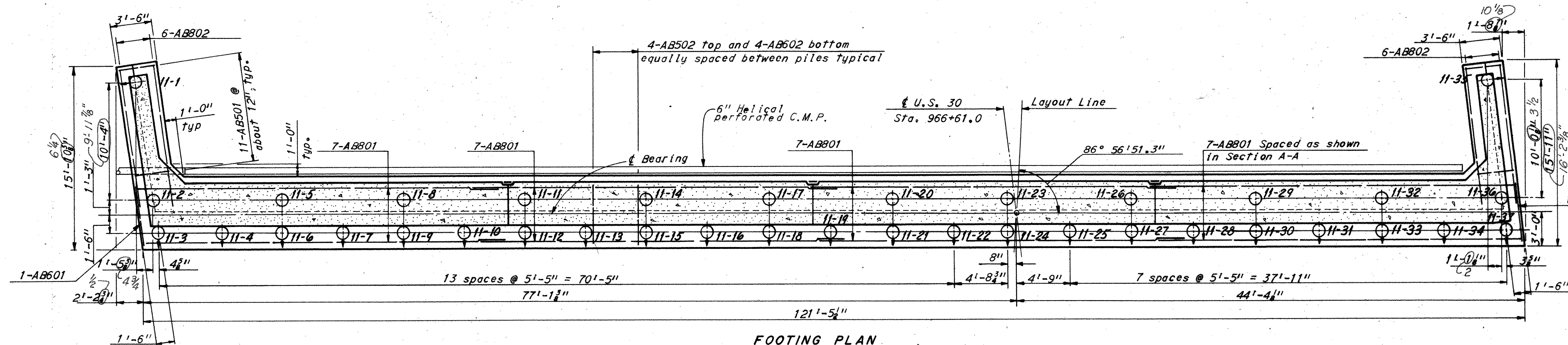
For details of C.M.P. outlet at side slopes see Sheet 359.

PAD ELEVATIONS

Girder	Elevation
A	1060.03
B	1060.50
C	1060.87
D	1061.24
E	1061.91
F	1062.38
G	1062.85
H	1063.64
I	1063.99
J	1063.40
K	1063.87
L	1064.30
M	1064.78
N	1065.34
O	1065.02



ELEVATION



FOOTING PLAN

H.N.T.B. BRIDGE NO. 2 Revised 6-9-75 By RAS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF 4 / 24
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

EAST ABUTMENT

U.S. 30 OVER RAMP B, C, I-77
AND PENNSYLVANIA R.R.

BR. NO. STA. 30-1487
SCALE: 3/16" = 1'-0"

STA. 960 + 02.25
STA. 966 + 63.26

RELOCATED U.S. 30

CANTON STARK COUNTY OHIO

DRAWN <i>DMB</i>	TRACED	CHECKED <i>ASS</i>	REVIEWED <i>MJK</i>	REVISED <i>9-12-76</i>
DATE <i>4-20-70</i>	DATE	DATE <i>5-6-70</i>	DATE <i>11-22-71</i>	1668

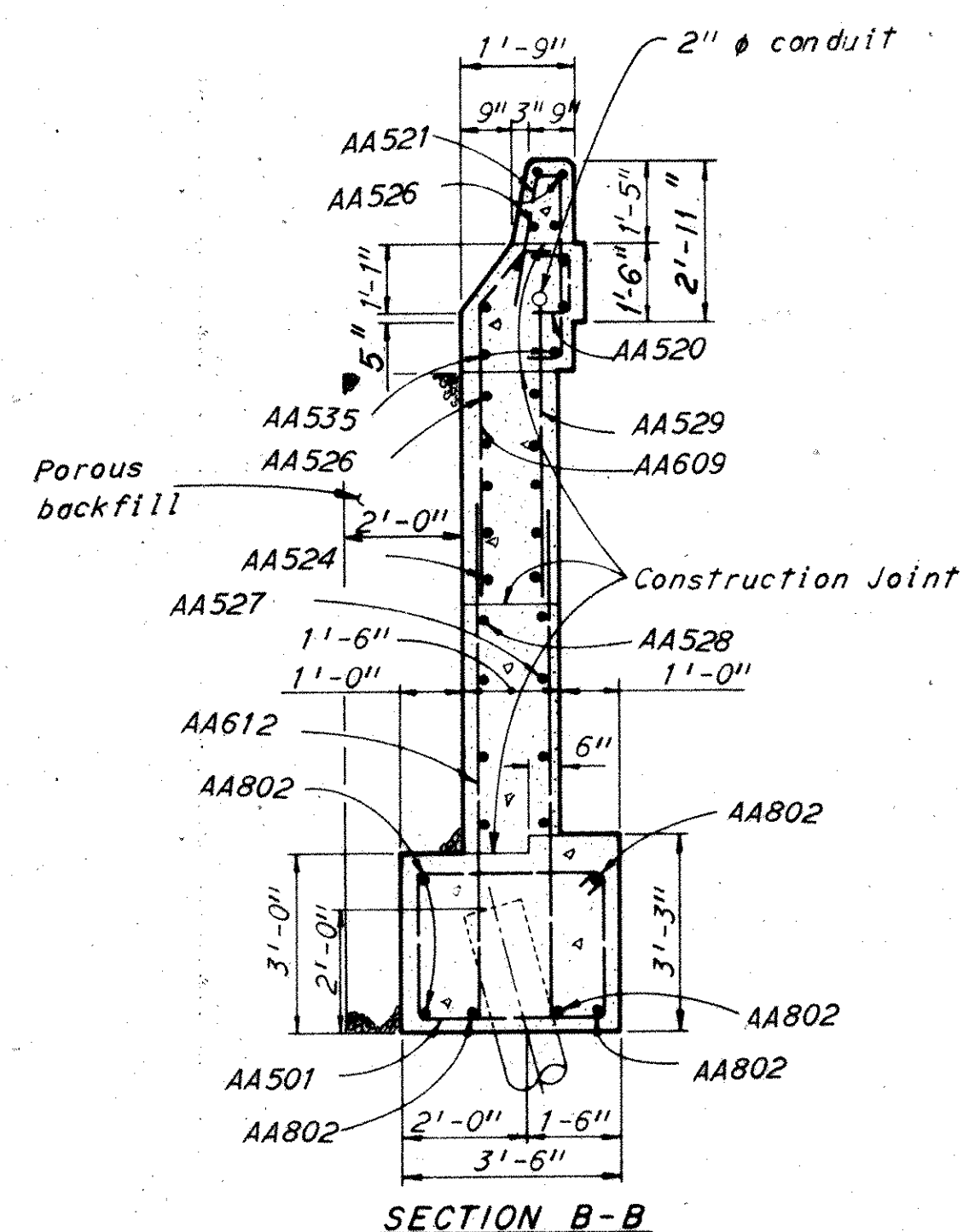
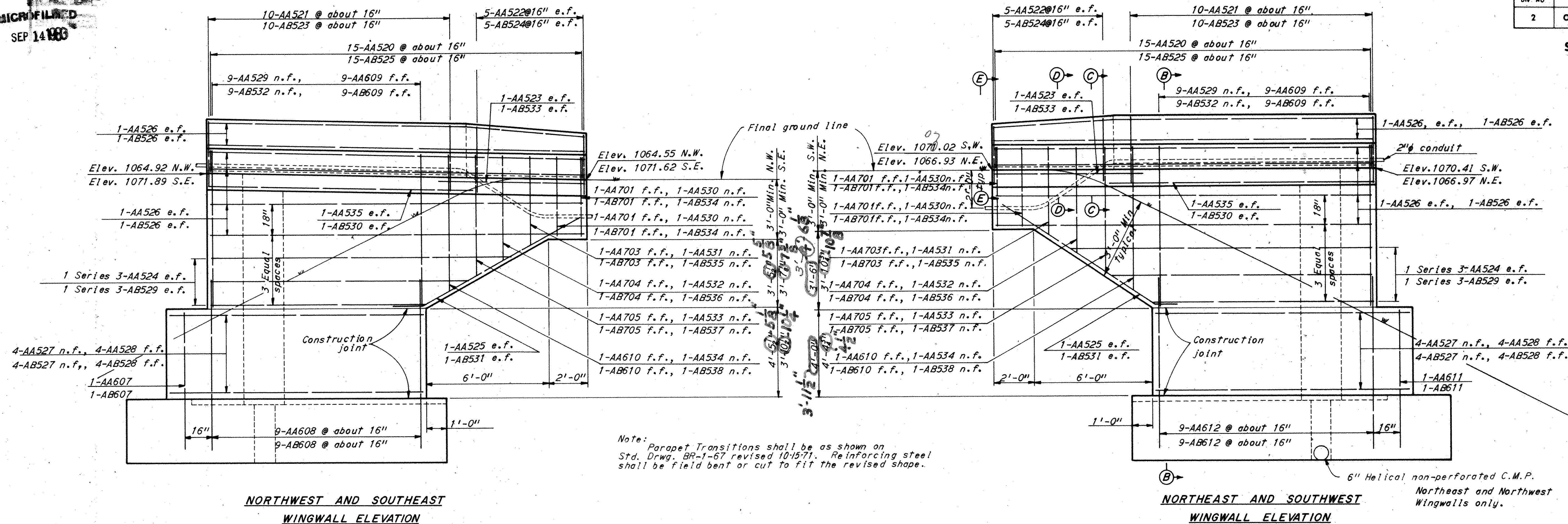
Revised 9-21-76 Revised 4-28-77

MICROFILMED
SEP 14 1983

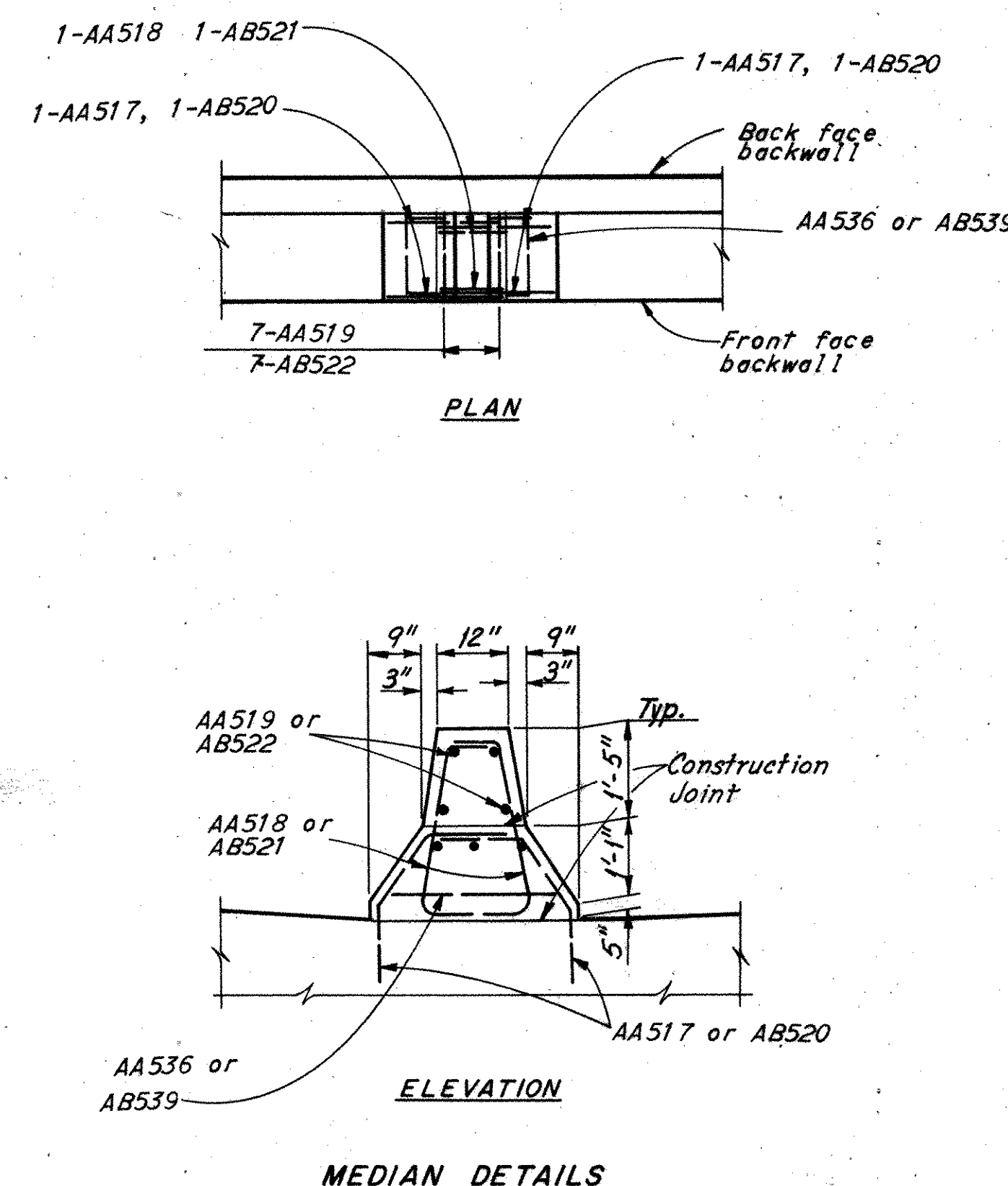
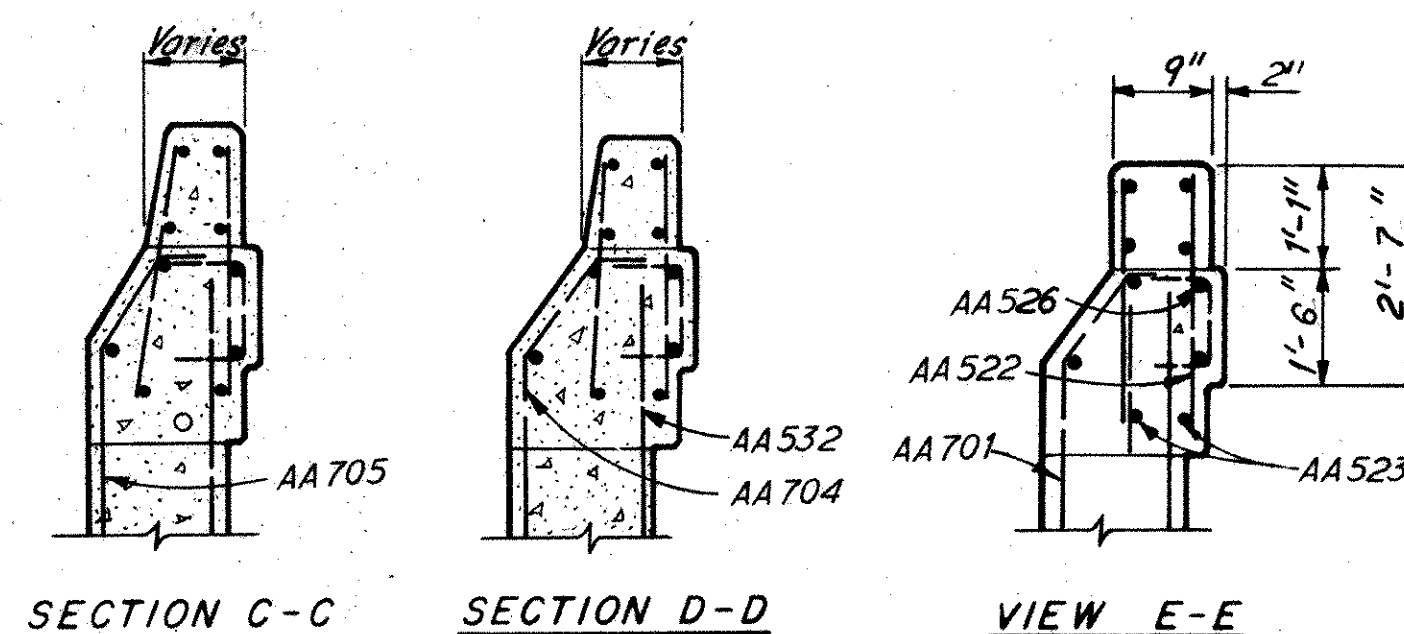
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO		

237	389
-----	-----

STARK COUNTY
STA-30-14.12
STA-77-9.22



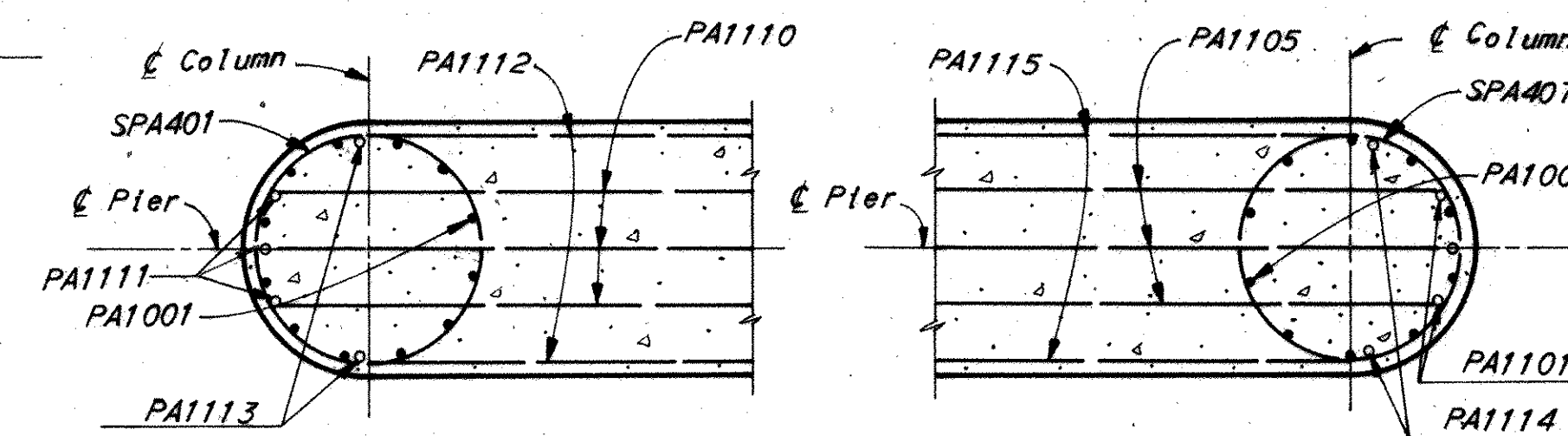
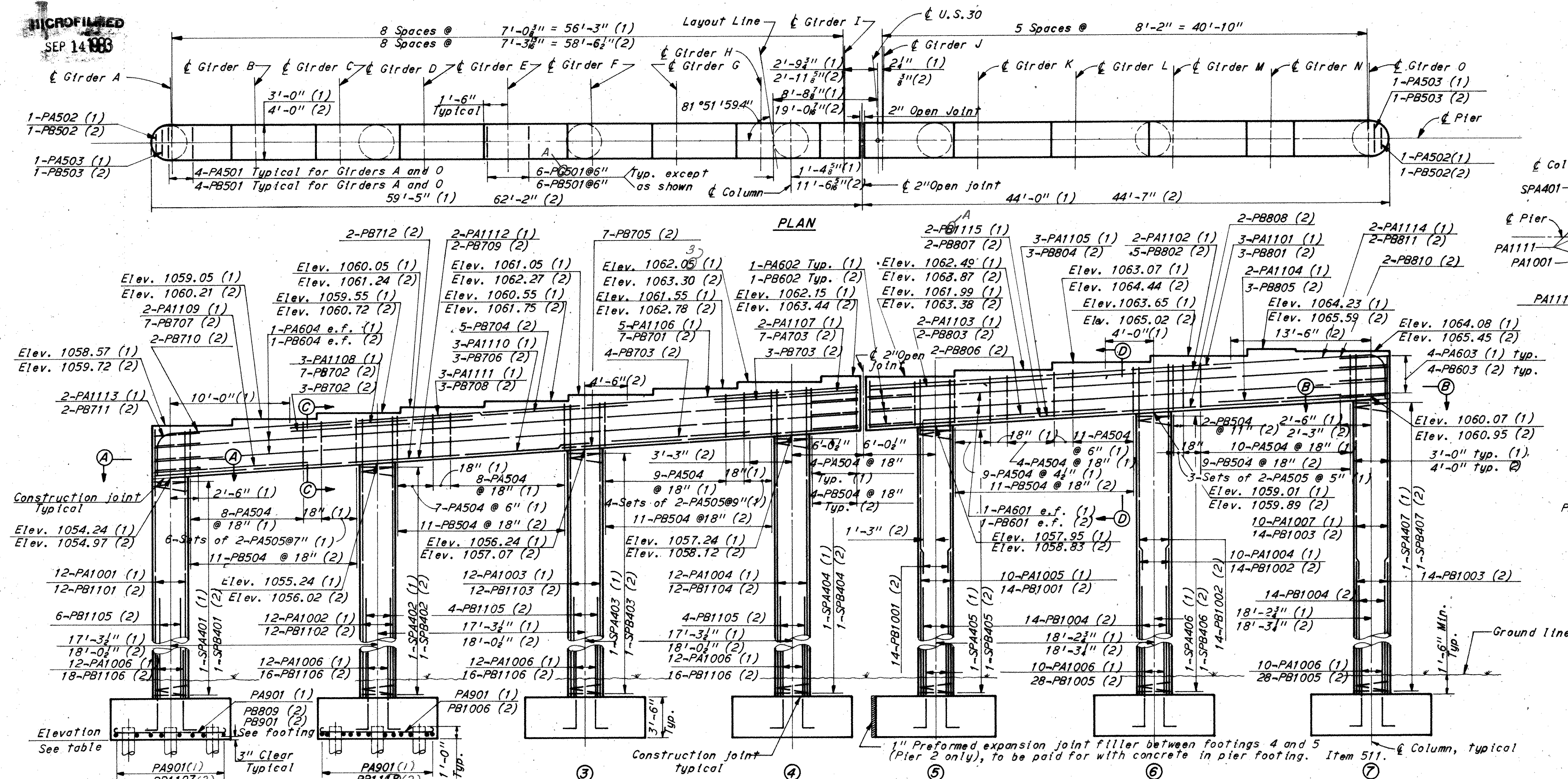
Note:
Sections shown are for Southwest Wingwall. Other wingwalls similar.



H.N.T.B. BRIDGE NO. 2	Revised 6-9-75	By RAS
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS KANSAS CITY CLEVELAND NEW YORK	5/24	
ABUTMENT DETAILS		
U.S. 30 OVER RAMP B, C, I-77 AND PENNSYLVANIA R.R.		
BR. NO. STA. 30-1487	STA. 960 + 02.25	
SCALE: NONE	STA. 966 + 63.26	
RELOCATED U.S. 30		
CANTON	STARK COUNTY	OHIO
DRAWN BY	TRACED	CHECKED
DATE 5-23-70	DATE	DATE 5-6-70
		REVIEWED
		DATE 11-22-71
		REVISION 9-21-76
		1668

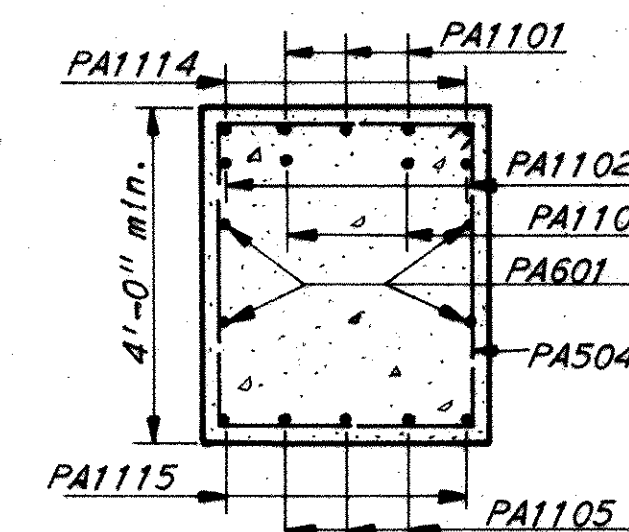
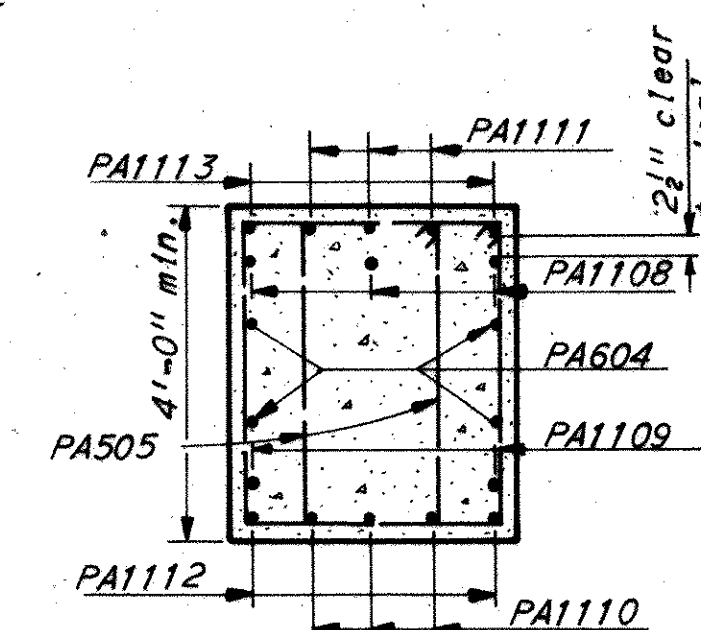
Revised 4-28-77

STARK COUNTY
STA-30-14.12
STA-77-9.22



SECTION A-A

SECTION B-B



SECTION C-C

SECTION D-D

PIER 1 SECTIONS

Notes:

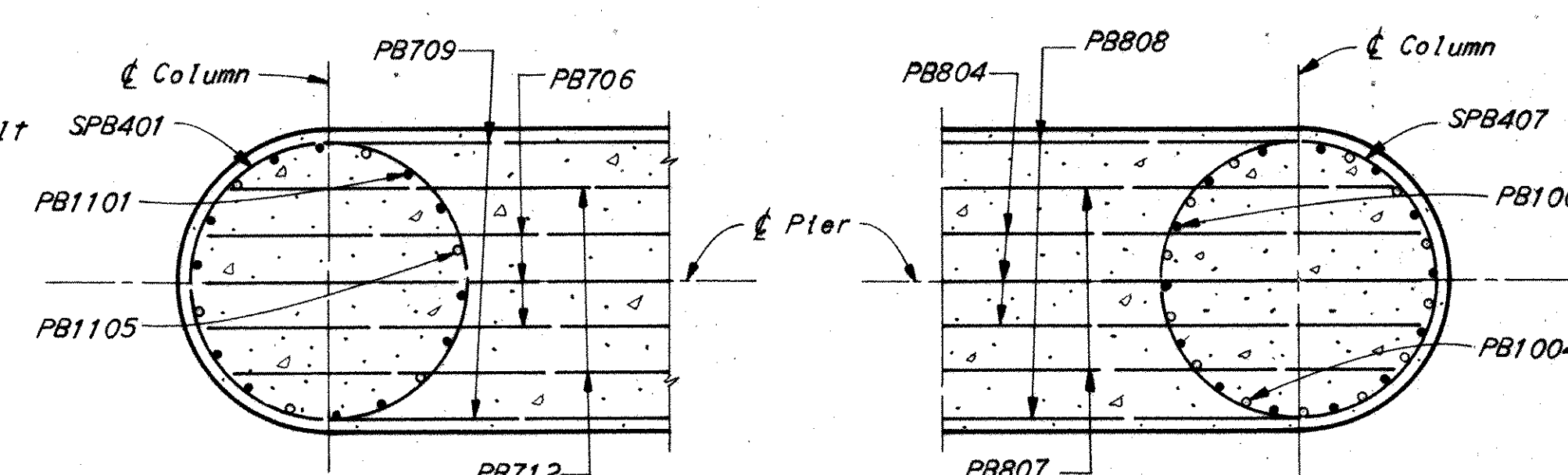
Special care shall be taken when placing reinforcing steel in cap beam so as not to interfere with anchor bolt setting. Pier 2 only. See Sheet Z14.

PA501, PA502, PA503, PB501, PB502 and PB503 bars shall be placed 2" below top of cap beam.

(1) denotes Pier 1
(2) denotes Pier 2
For reinforcement schedule see Sheet 20/24
For footing layout see Sheet 2/24
e.f. denotes each face.

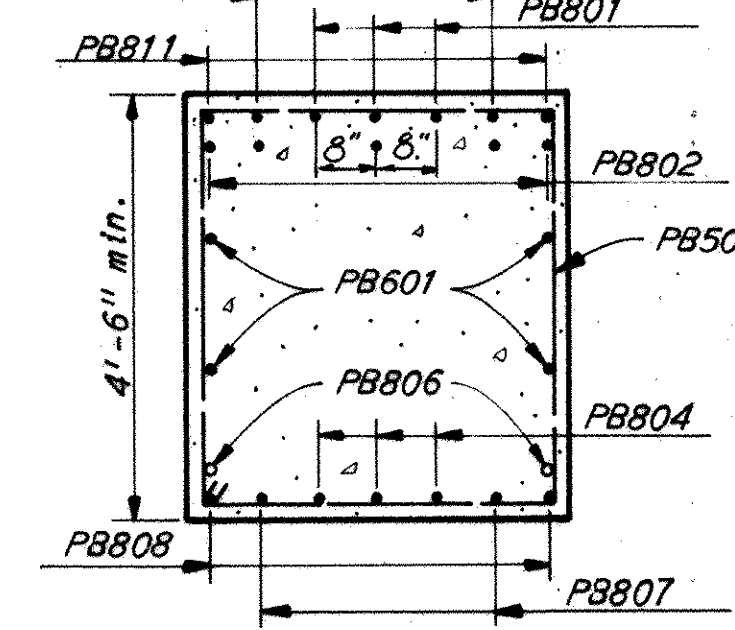
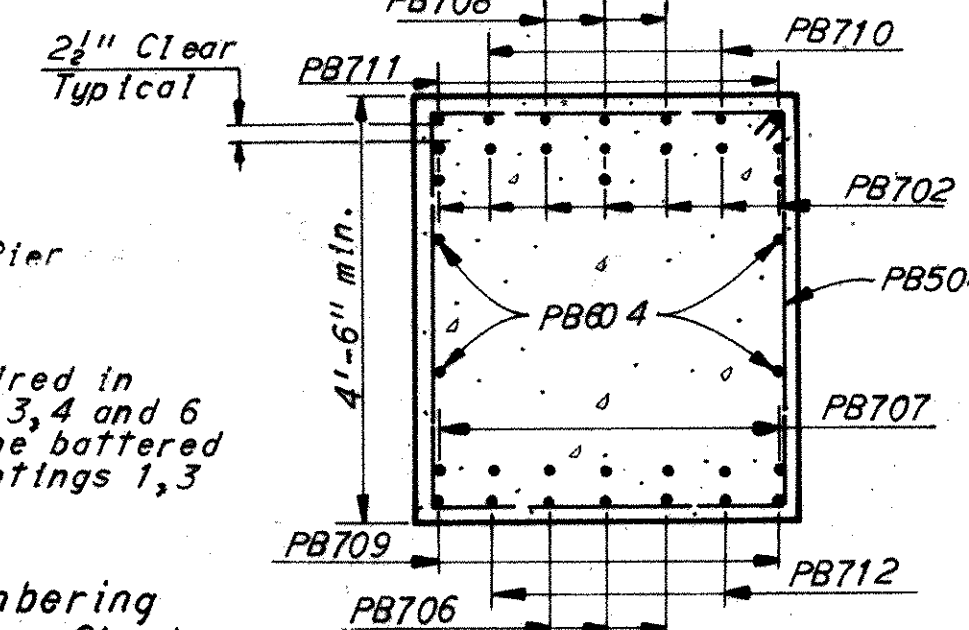
All stirrups within 4 feet of $\frac{1}{2}$ Columns and in cantilever areas shall be placed with hooks in the bottom of cap. All others shall be placed with hooks in the top.

○ Denotes battered Piles.
Pile dimensions are measured along bottom of footing.
All battered piles shall be battered 3 in 12
except as shown.
All piles are 12" cast-in-place concrete.



SECTION A-A

SECTION B-B

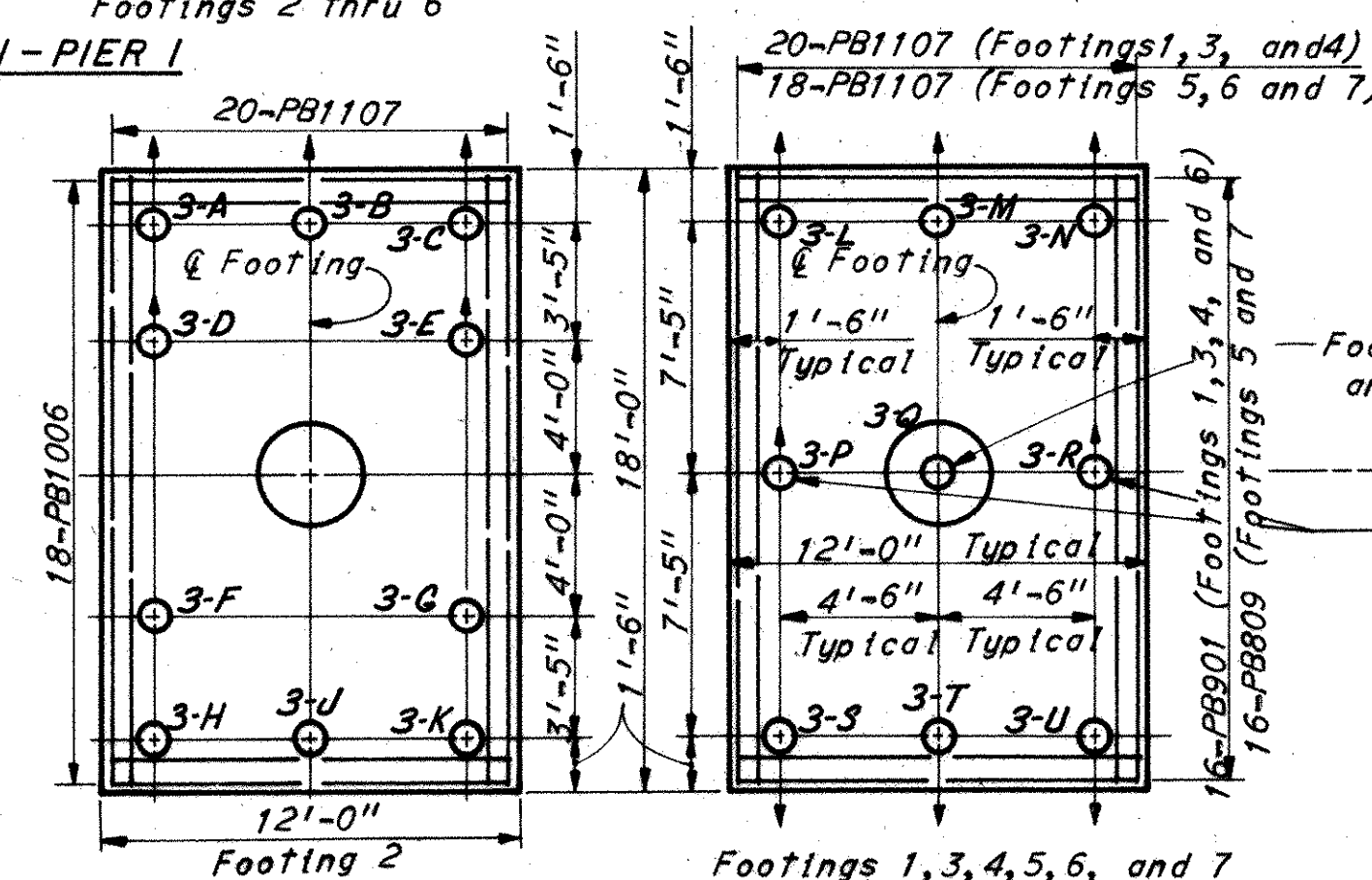


SECTION C-C

SECTION D-D

PIER 2 SECTIONS

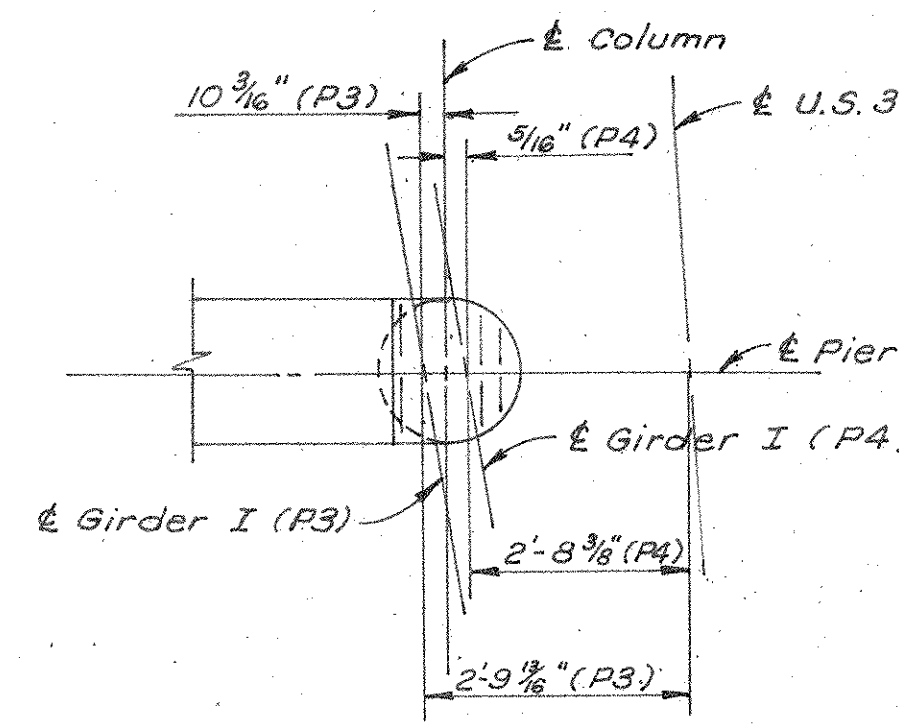
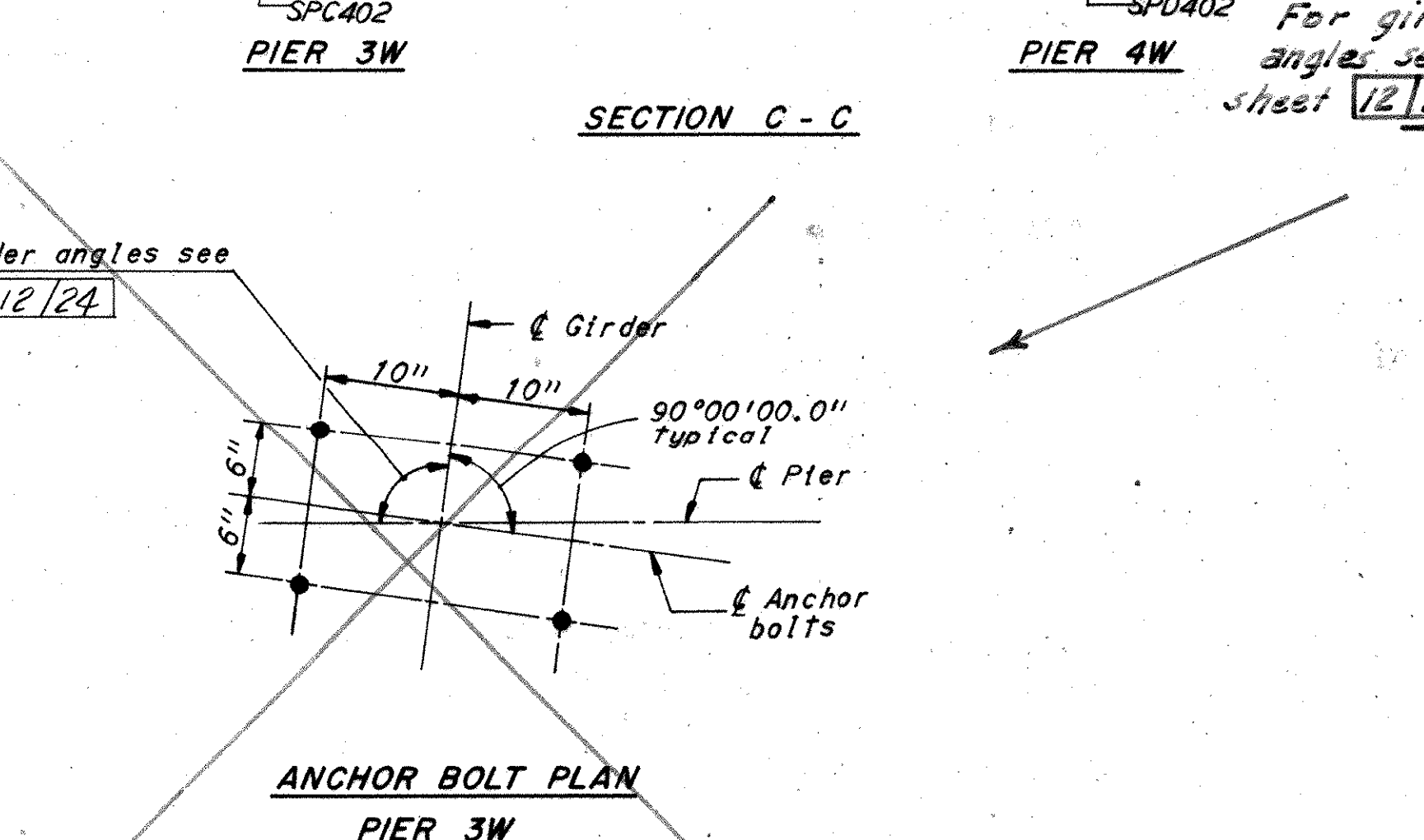
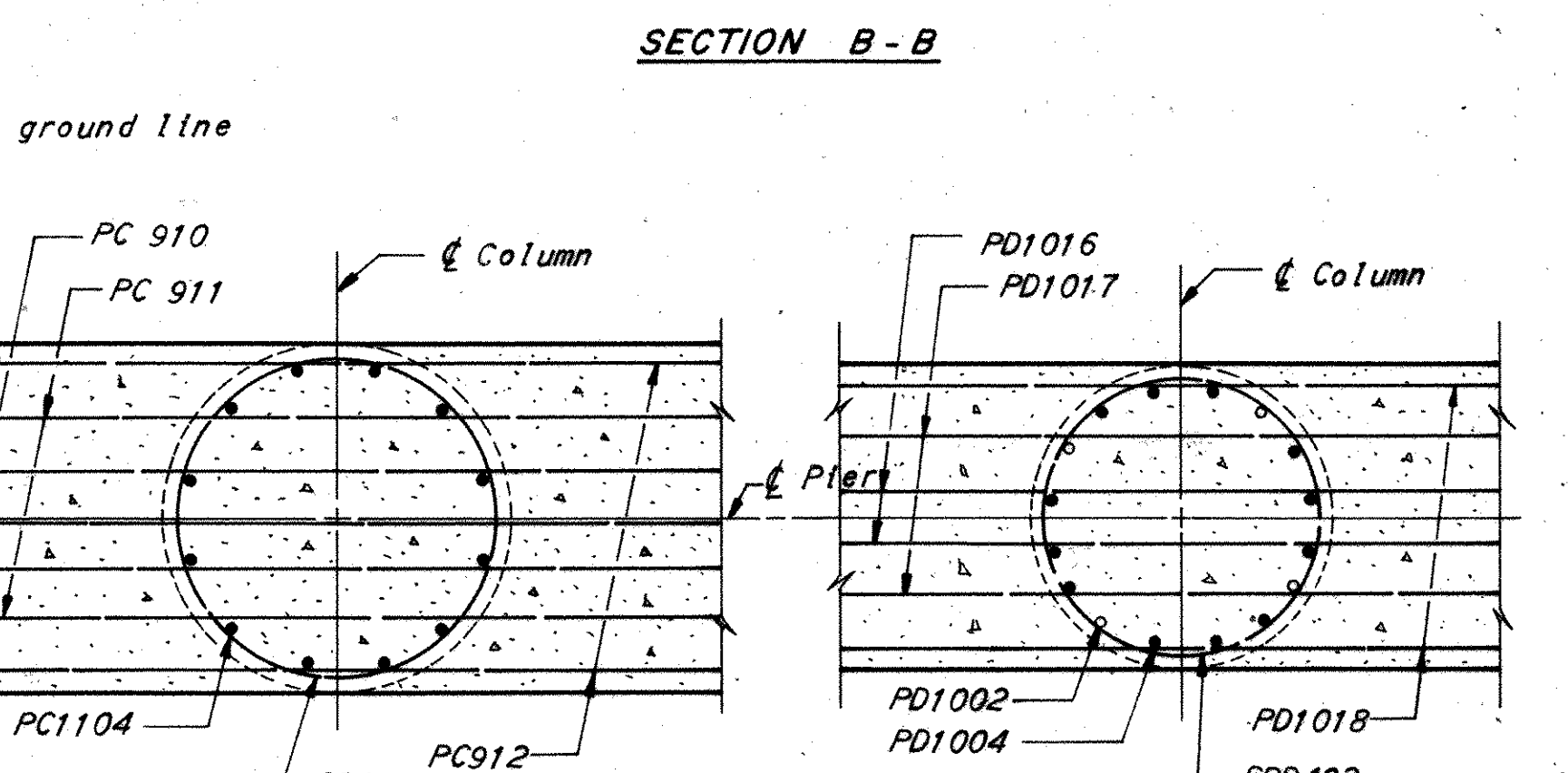
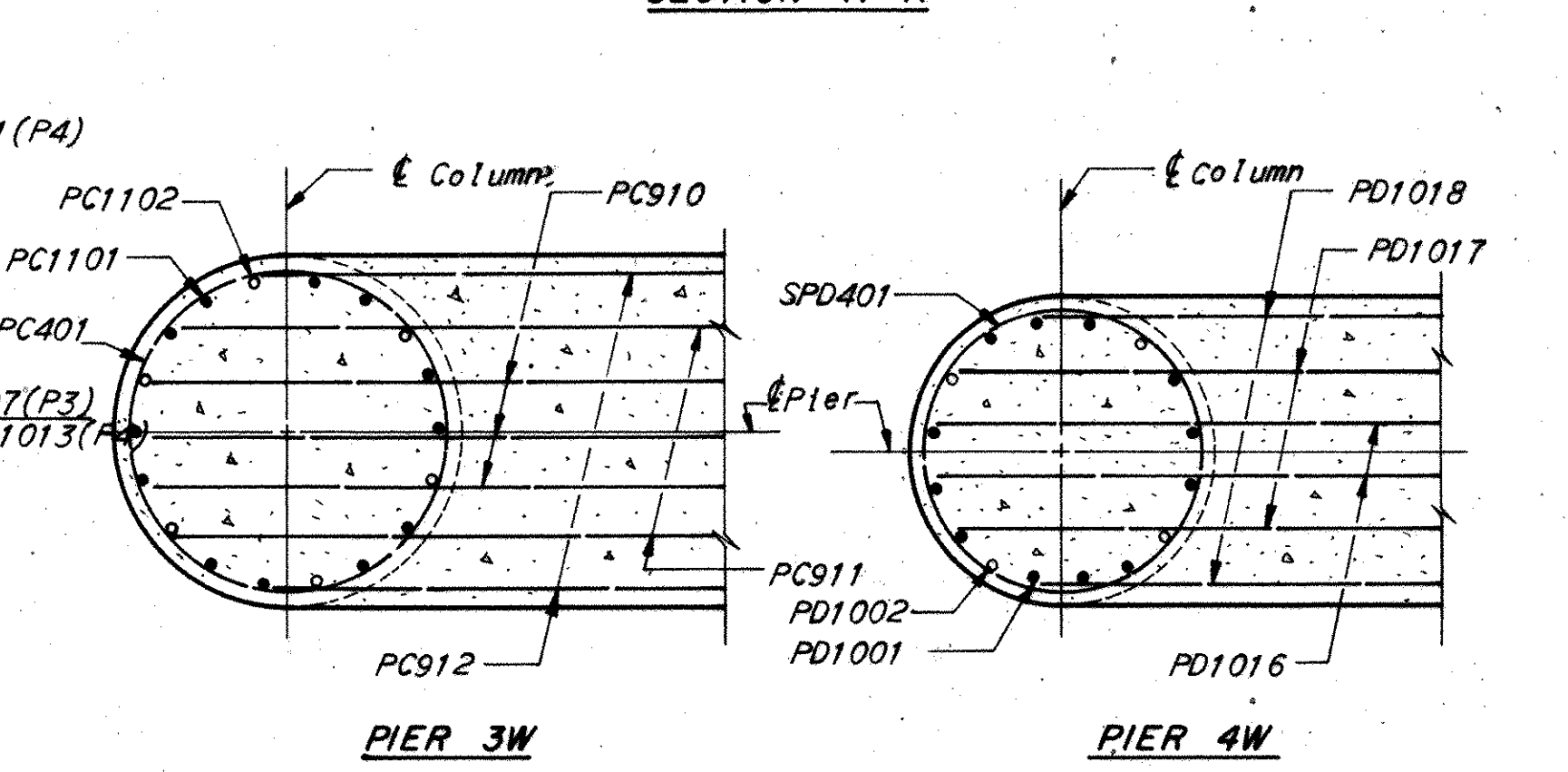
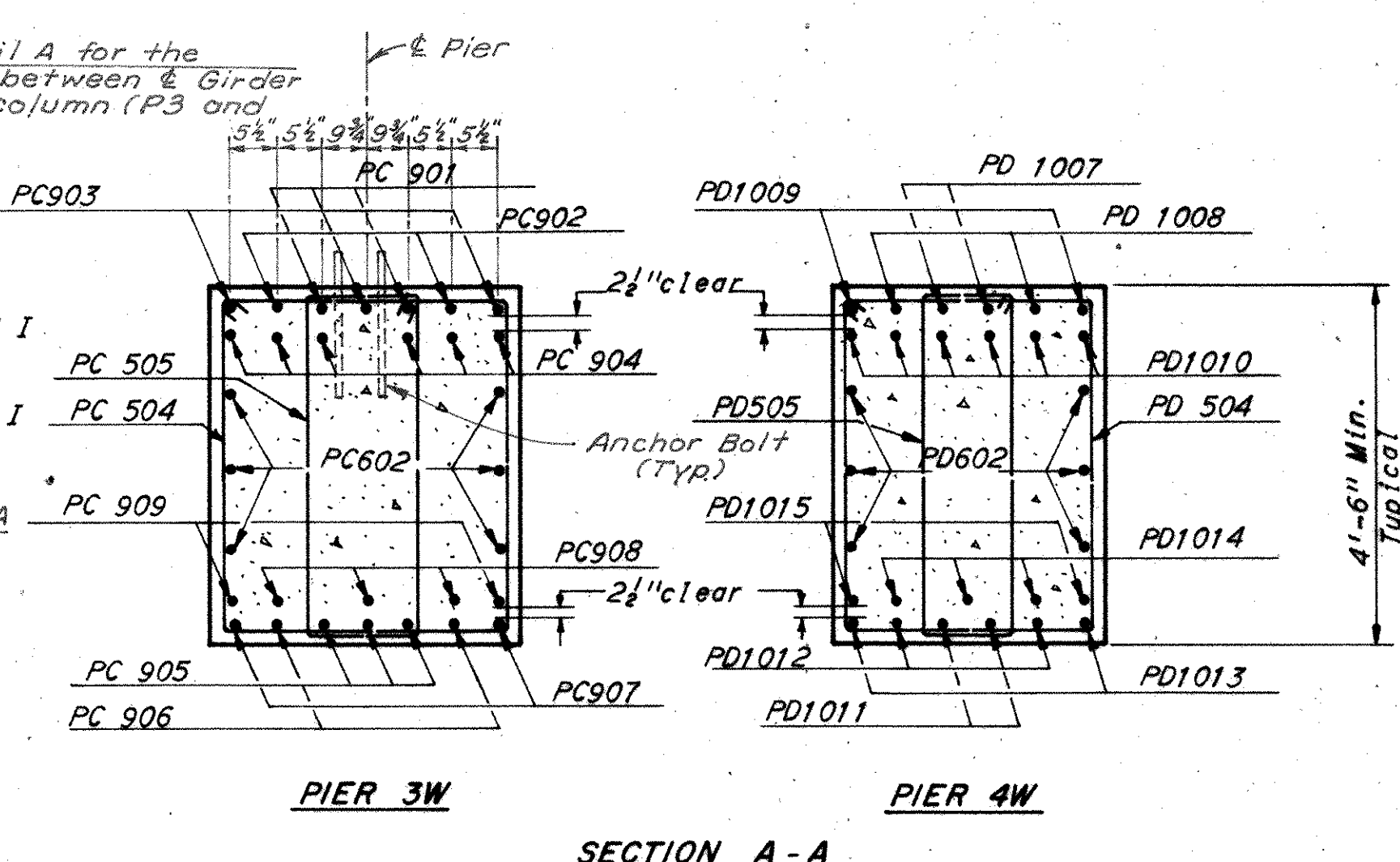
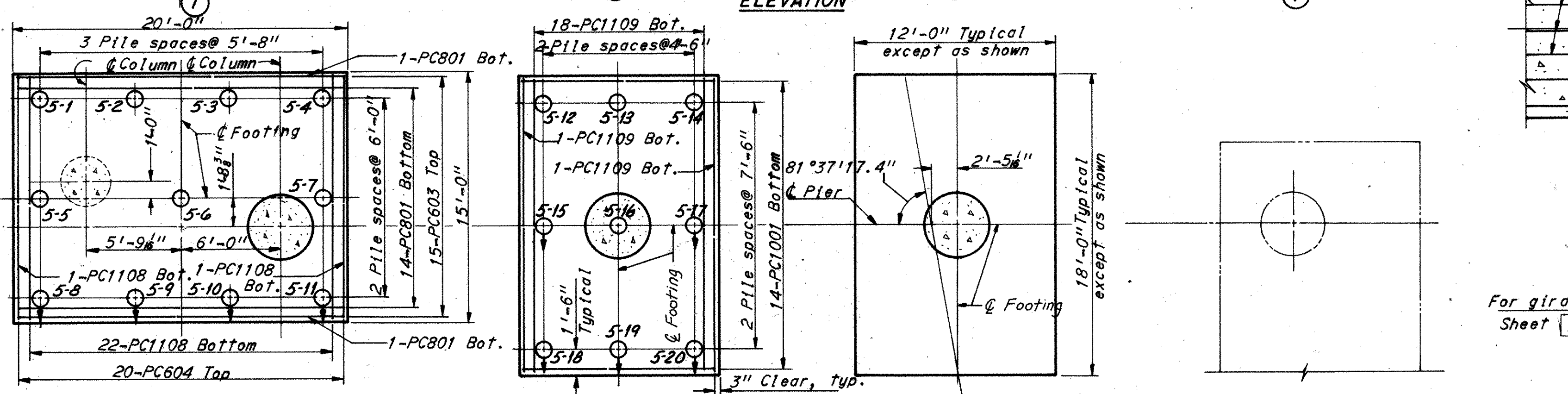
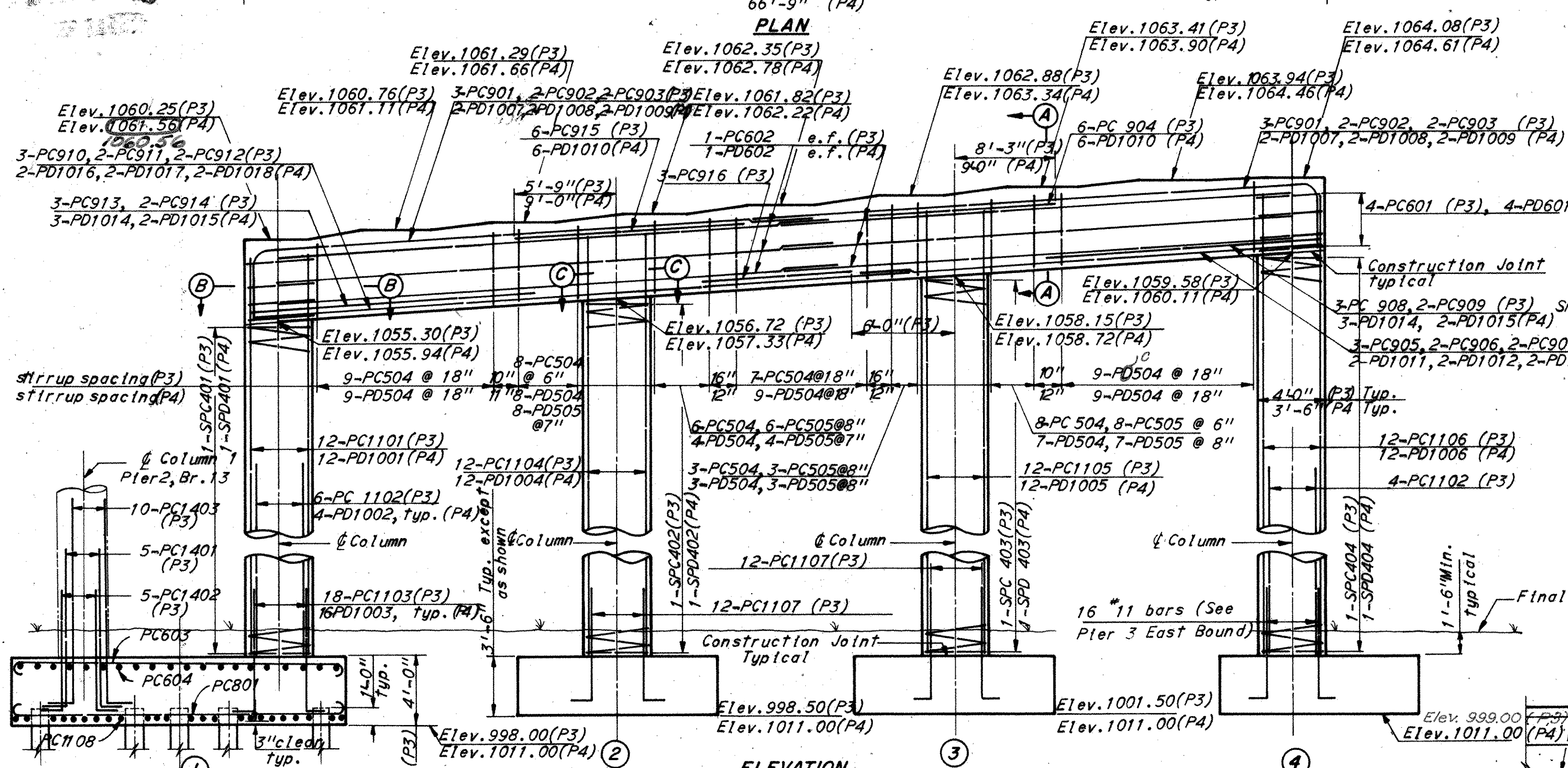
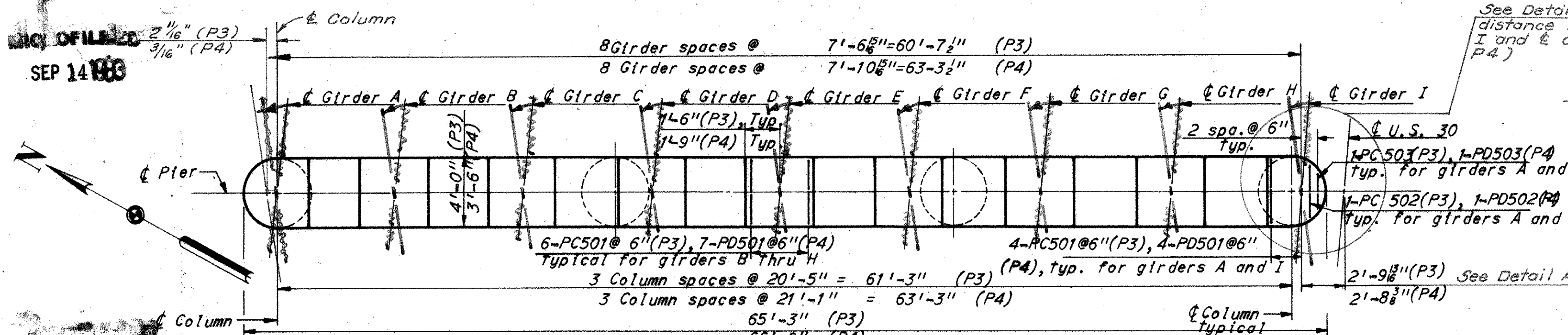
BOTTOM OF FOOTING ELEVATION		
Footings	Pier 1	Pier 2
1	1032.00	1007.00
2	1025.00	1004.50
3	1023.00	1001.50
4	1023.00	999.50
5	1024.00	999.50
6	1024.00	999.50
7	1024.00	999.50



PART FOOTING PLAN - PIER 2

For Pile Numbering
Designation, see Sheet
24/24

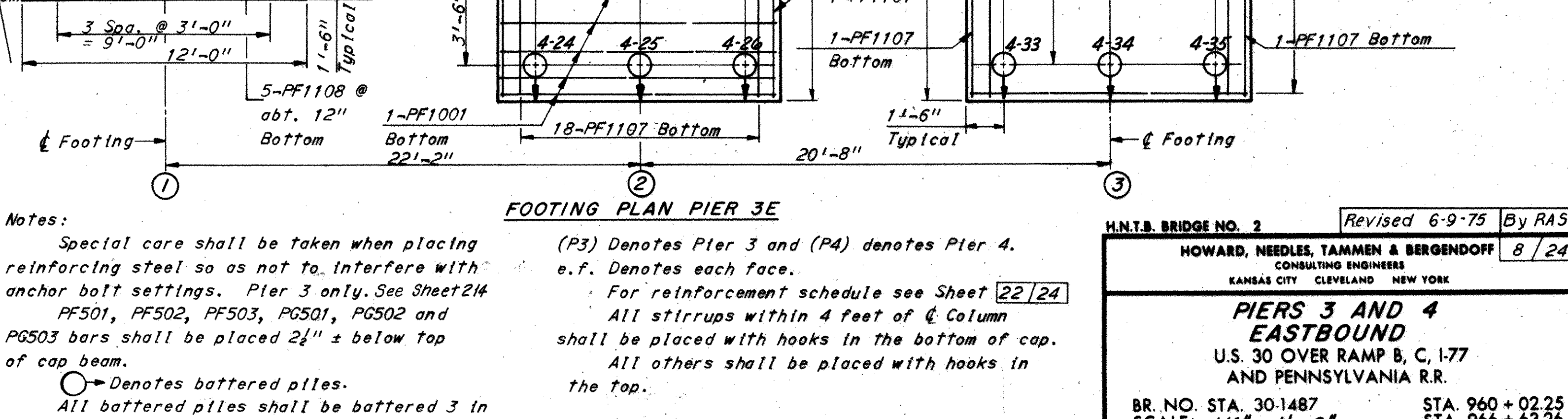
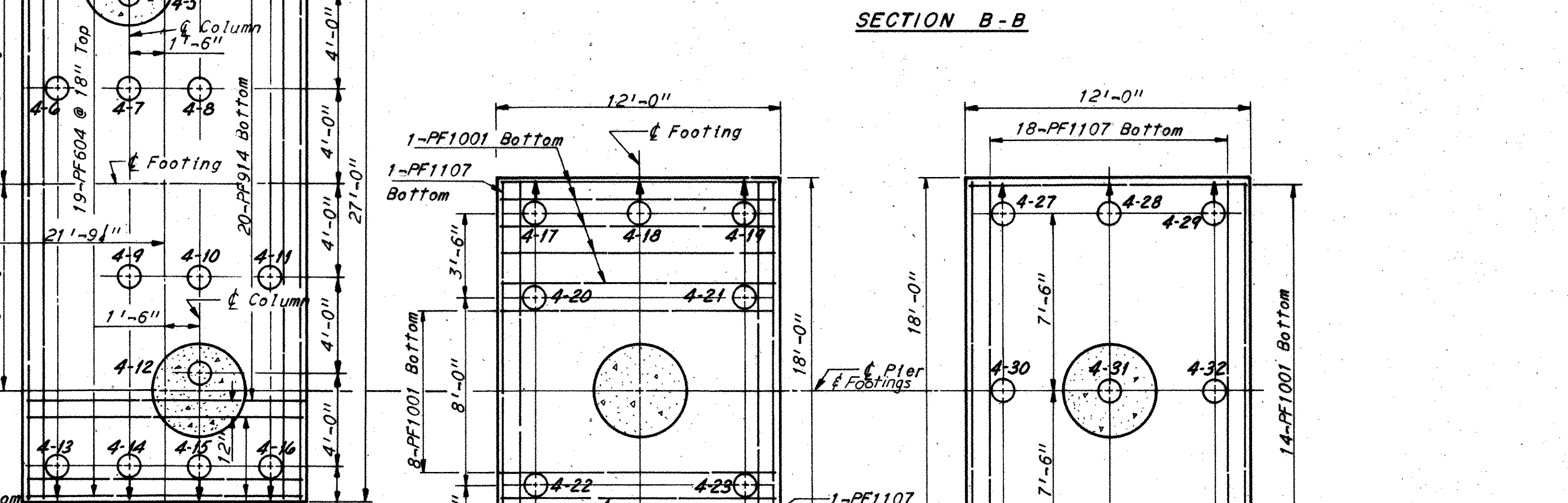
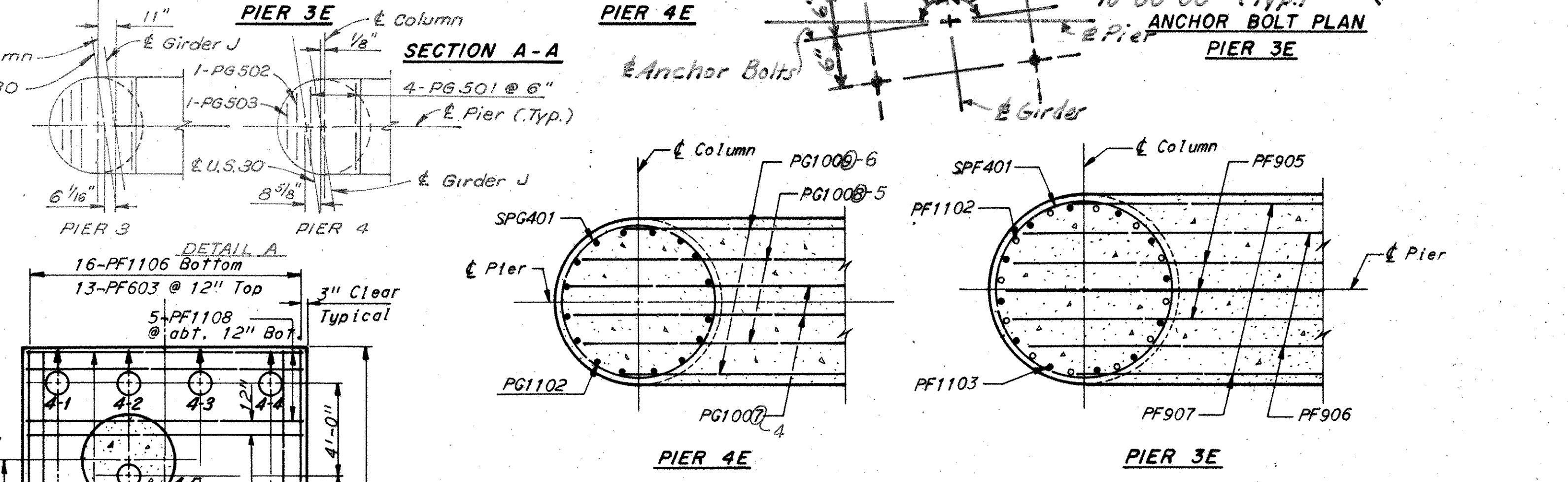
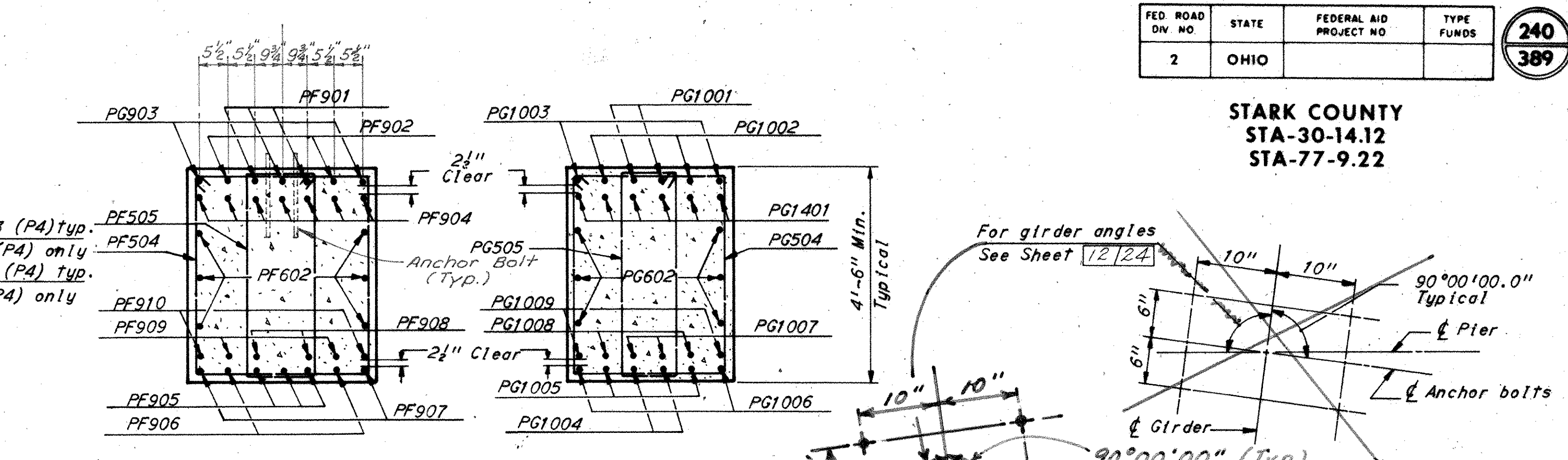
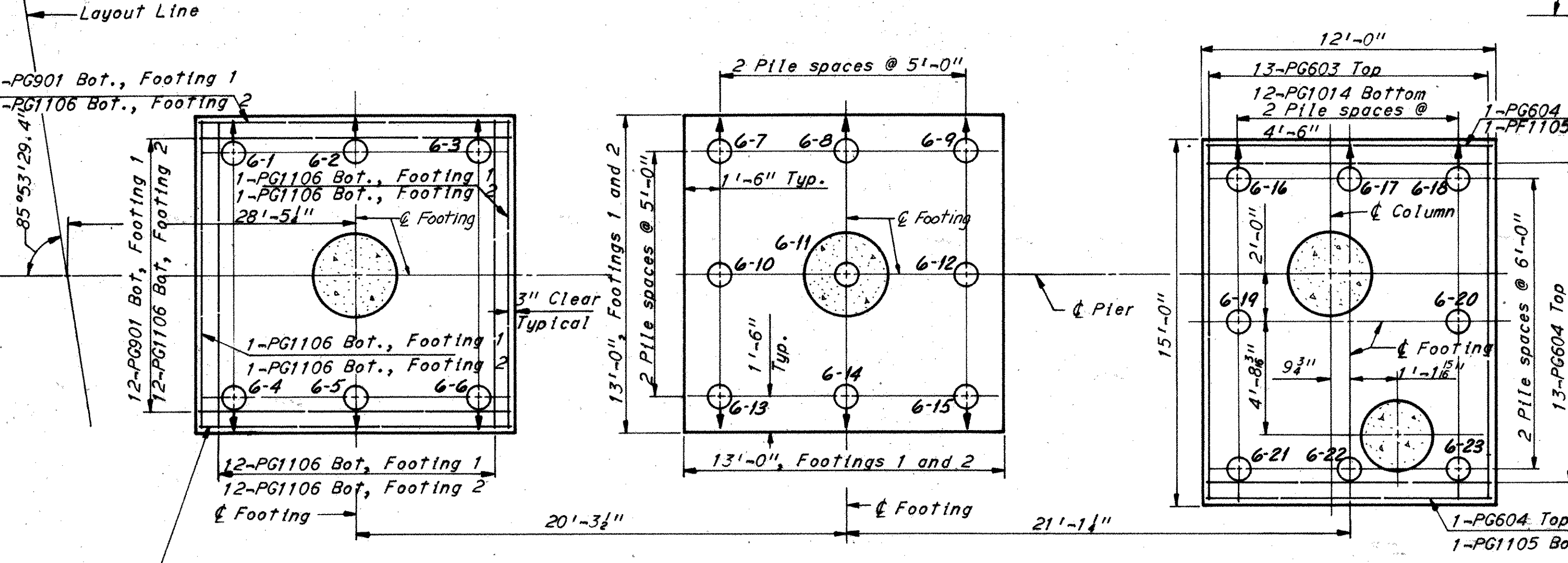
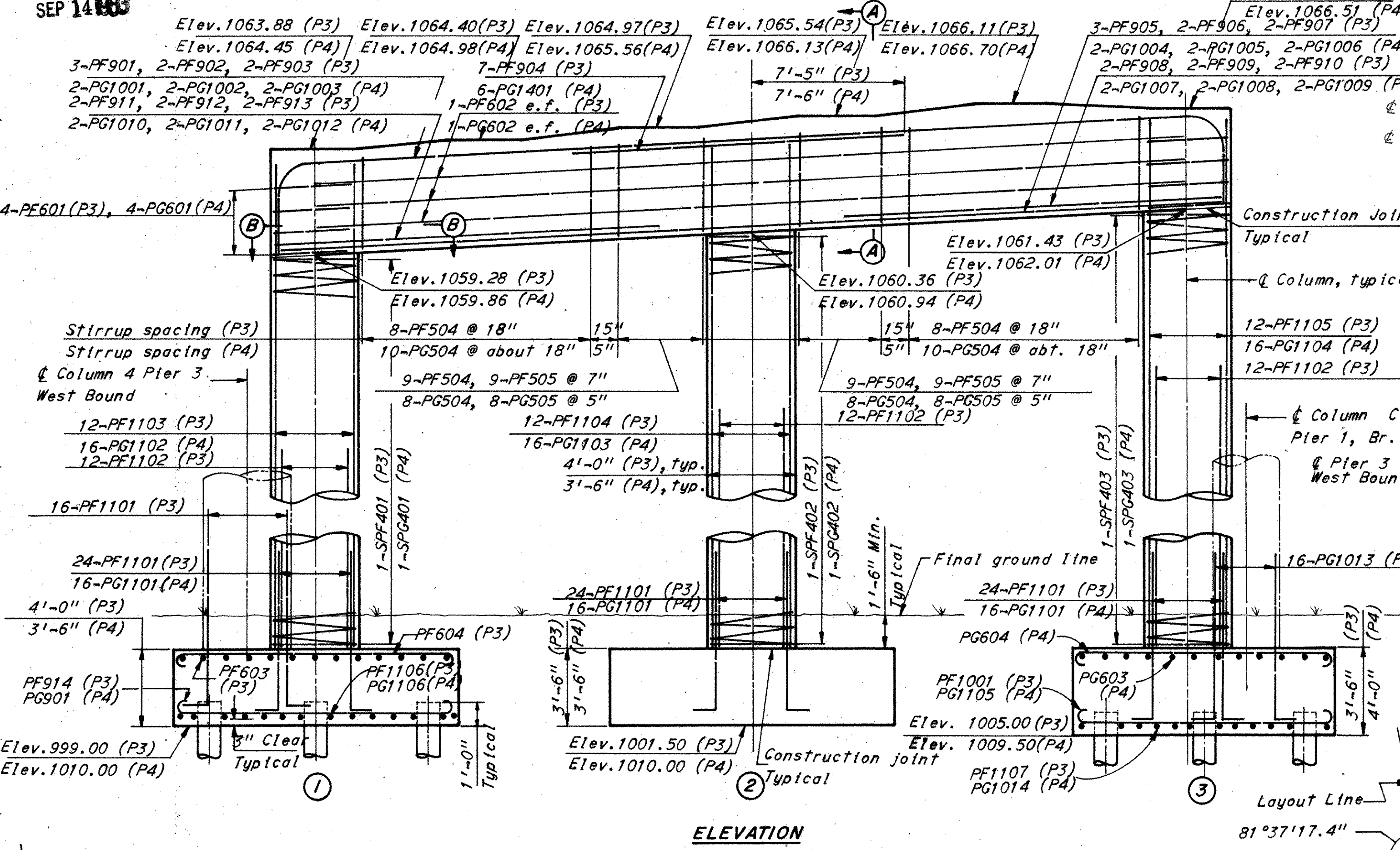
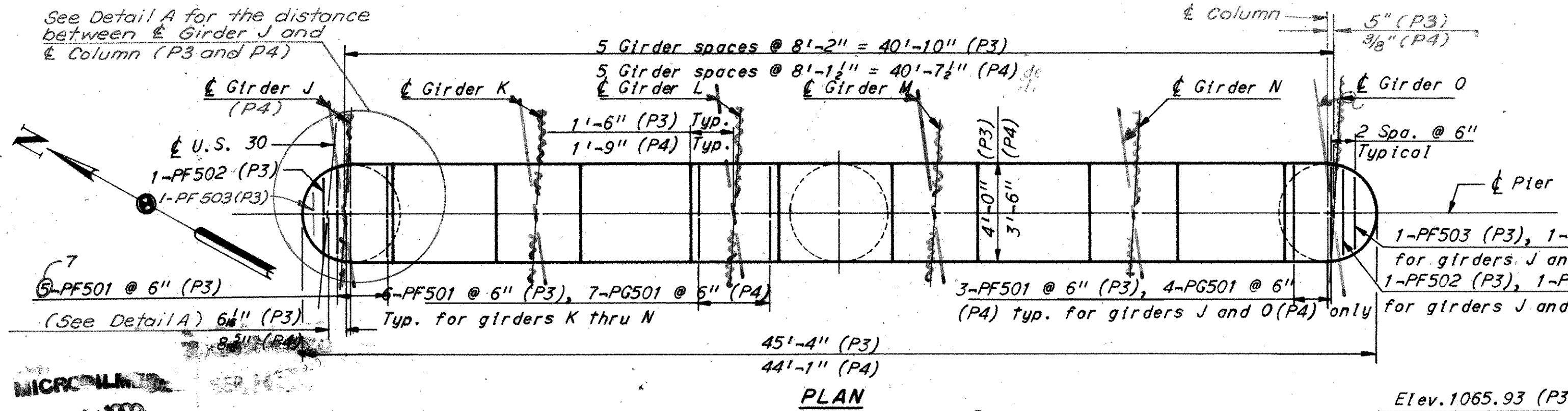
**STARK COUNTY
STA-30-14.12
STA-77-9.22**



Notes:
PC501, PC502, PC503, PD501, PD502 and PD503 bars shall be placed 2" ± below top of cap beam.
○ Denotes battered piles.
All battered piles shall be battered 3 in 12.
Pile dimensions are measured along bottom of footing.
All piles are 12" Ø cast-in-place concrete.
(P3) Denotes Pier 3 and (P4) denotes Pier 4.
e.f. Denotes each face.
For footing 4 of Pier 3 details see Sheet 8/24
Footing 3 of Pier 3 is identical to Footing 2 of Pier 3.
Footing 2 of Pier 4 is identical to Footing 3 of Pier 4.
All stirrups within 4 feet of column shall be placed with hooks in the bottom of cap. All others shall be placed with hooks in the top.
Special care shall be taken when placing reinforcing steel so as not to interfere with anchor bolt settings. Pier 3 only. See Sheet 21/24.
For reinforcement schedule see Sheet 21/24

H.N.T.B. BRIDGE NO. 2		Revised 6-9-75		By RAS	
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS KANSAS CITY CLEVELAND NEW YORK					
PIERS 3 AND 4 WESTBOUND					
U.S. 30 OVER RAMP B, C, I-77 AND PENNSYLVANIA R.R.					
BR. NO. STA. 30-1487		STA. 960 + 02.25			
SCALE: 3/16" = 1'-0"		STA. 966 + 63.26			
RELOCATED U.S. 30					
CANTON		STARK COUNTY		OHIO	
DRAWN KSS	TRACED	CHECKED	REVIEWED	DATE	
4-22-70	DATE	DATE 6-16-70	DATE 7-12-76	1668	

STARK COUNTY
STA-30-14.12
STA-77-9.22



Notes:

Special care shall be taken when placing reinforcing steel so as not to interfere with anchor bolt settings. Pier 3 only. See Sheet 24.

PF501, PF502, PF503, PG501, PG502 and PG503 bars shall be placed 2 1/2" ± below top of cap beam.

○ Denotes battered piles.

All battered piles shall be battered 3 in 12.

Pile dimensions are measured along bottom of footing.

All piles are 12" φ cast-in-place concrete.

(P3) Denotes Pier 3 and (P4) denotes Pier 4.

e.f. Denotes each face.

For reinforcement schedule see Sheet 22/24.

All stirrups within 4 feet of Column shall be placed with hooks in the bottom of cap.

All others shall be placed with hooks in the top.

H.M.T.B. BRIDGE NO. 2

Revised 6-9-75 By RAS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

PIERS 3 AND 4
EASTBOUND
U.S. 30 OVER RAMP B, C, I-77
AND PENNSYLVANIA R.R.

BR. NO. STA. 30-1487 STA. 960 + 02.25
SCALE: 1/4" = 1'-0" STA. 966 + 63.26

RELOCATED U.S. 30

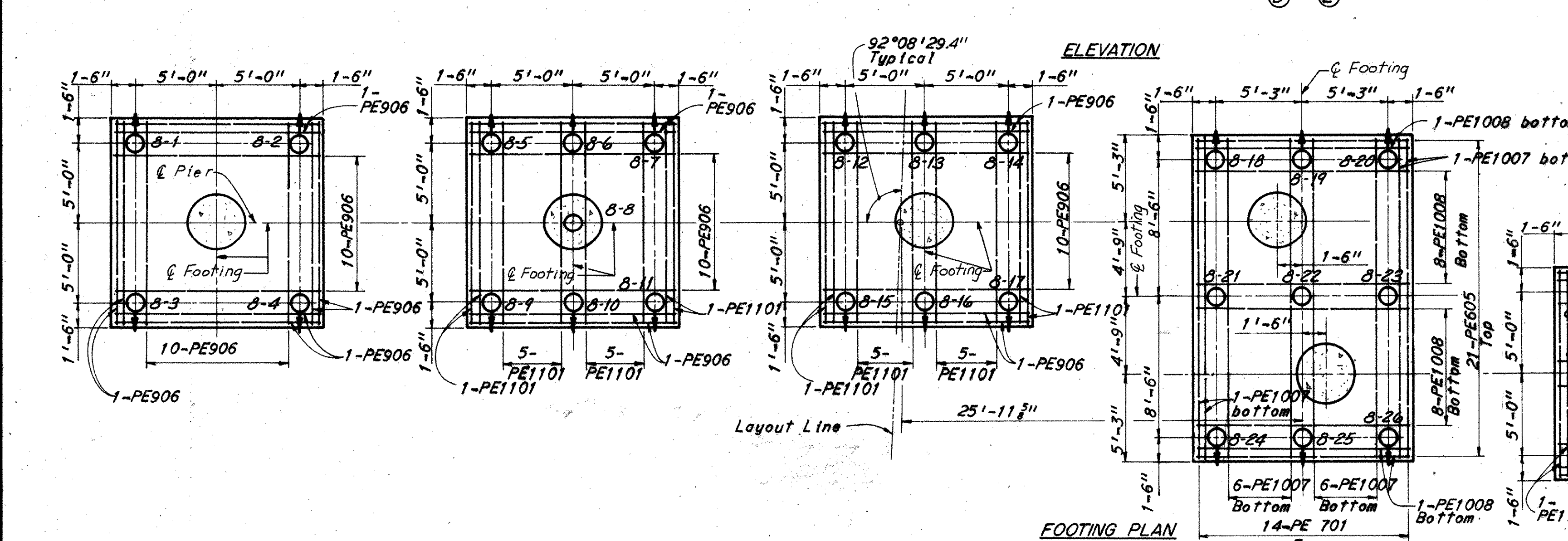
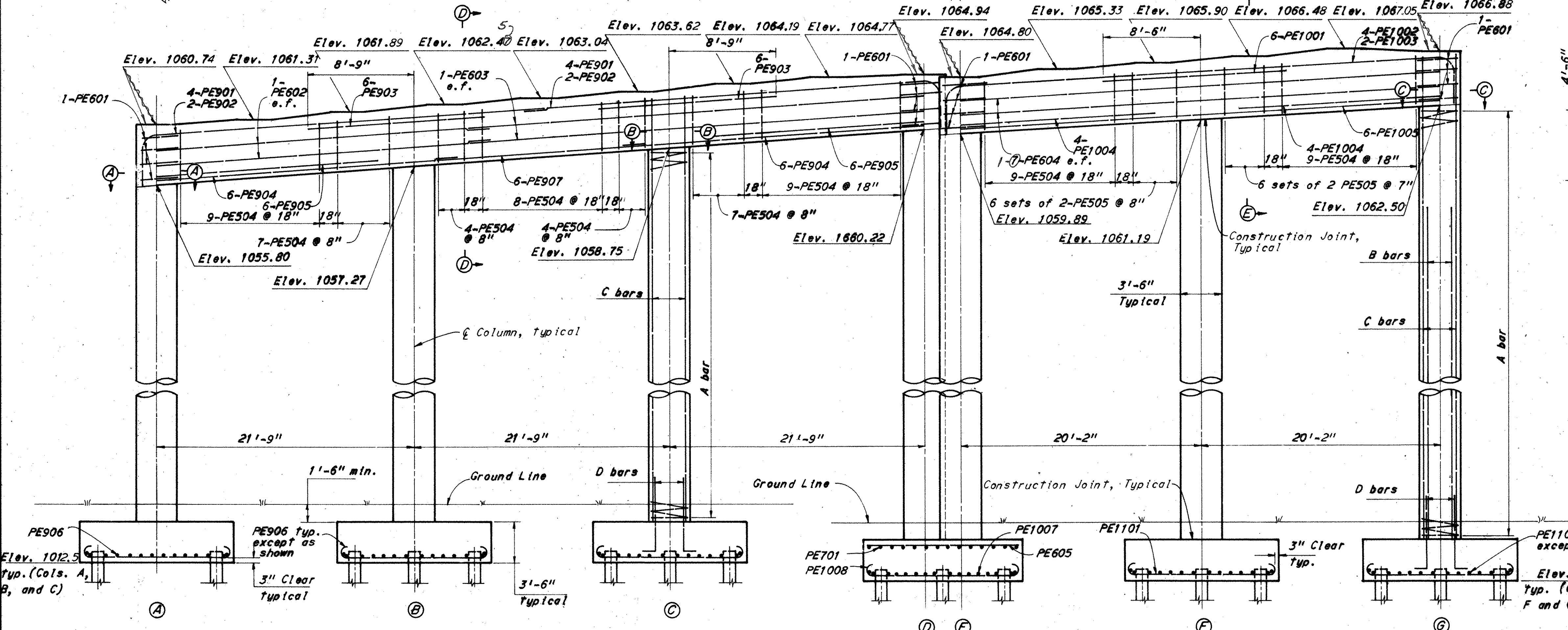
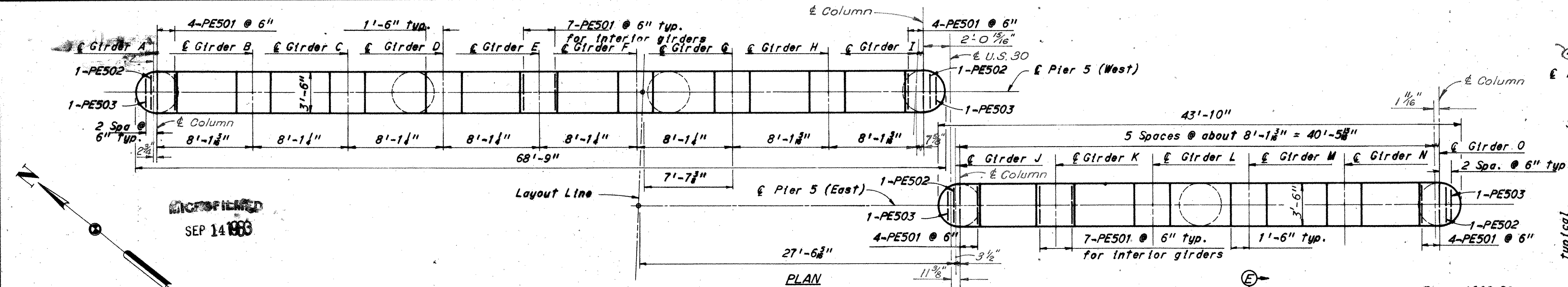
CANTON STARK COUNTY OHIO

DRAWN: KSS TRACED: DATE: 4-29-70 CHECKED: MJK REVISION: 7-12-76 DATE: 11-22-71

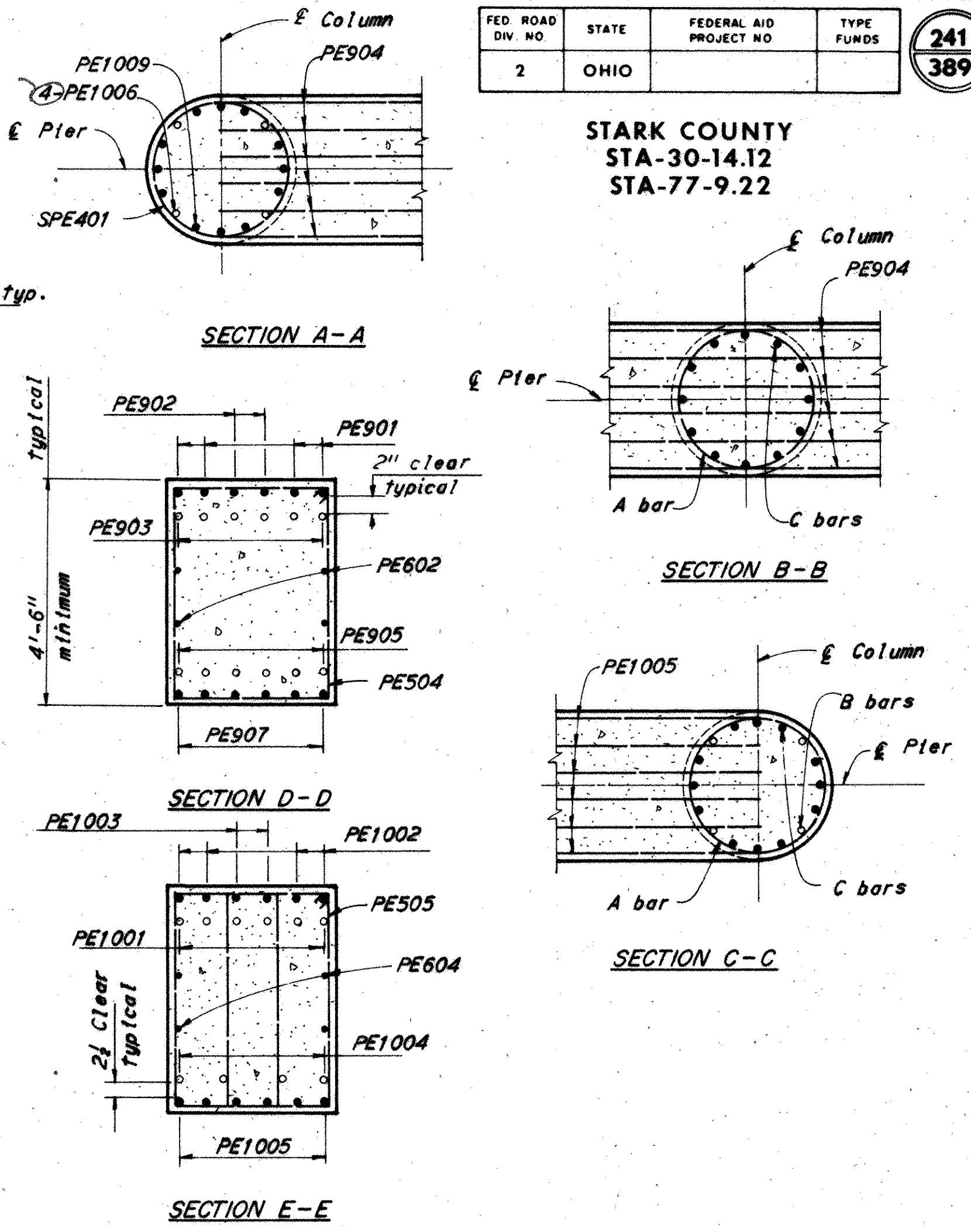
1668

Revised 4-28-77

STARK COUNTY
STA-30-14.12
STA-77-9.22



COLUMN REINFORCING STEEL							
Column	A	B	C	D	E	F	G
A bars	1-SPE401	1-SPE402	1-SPE403	1-SPE404	1-SPE405	1-SPE406	1-SPE407
B bars	4-PE1006				4-PE1010	4-PE1010	4-PE1010
C bars	12-PE1009	12-PE1013	12-PE1014	12-PE1015	12-PE1015	12-PE1016	12-PE1017
D bars	16-PE1011	12-PE1011	12-PE1011	12-PE1011	16-PE1011	16-PE1011	16-PE1011



Notes:
 PE501, PE502 and PE503 bars shall be placed 2 1/2" below top of cap beam.
 For reinforcement schedule see Sheet 22/24
 All battered piles shall be battered 3 in 12. Piles dimensions are measured along bottom of footing.
 All piles are 12" cast-in-place concrete.
 For girder angles see Sheet 12/24
 e.f. denotes each face.
 All stirrups within 4 feet of E Column shall be placed with hooks in the bottom of cap. All others shall be placed with hooks in the top.
 For footing layout see Sheet 2/24
 O Denotes battered piles.

H.N.T.B. BRIDGE NO. 2 Revised 6-9-75 By RAS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

PIER 5
U.S. 30 OVER RAMP B, C, I-77
AND PENNSYLVANIA R.R.

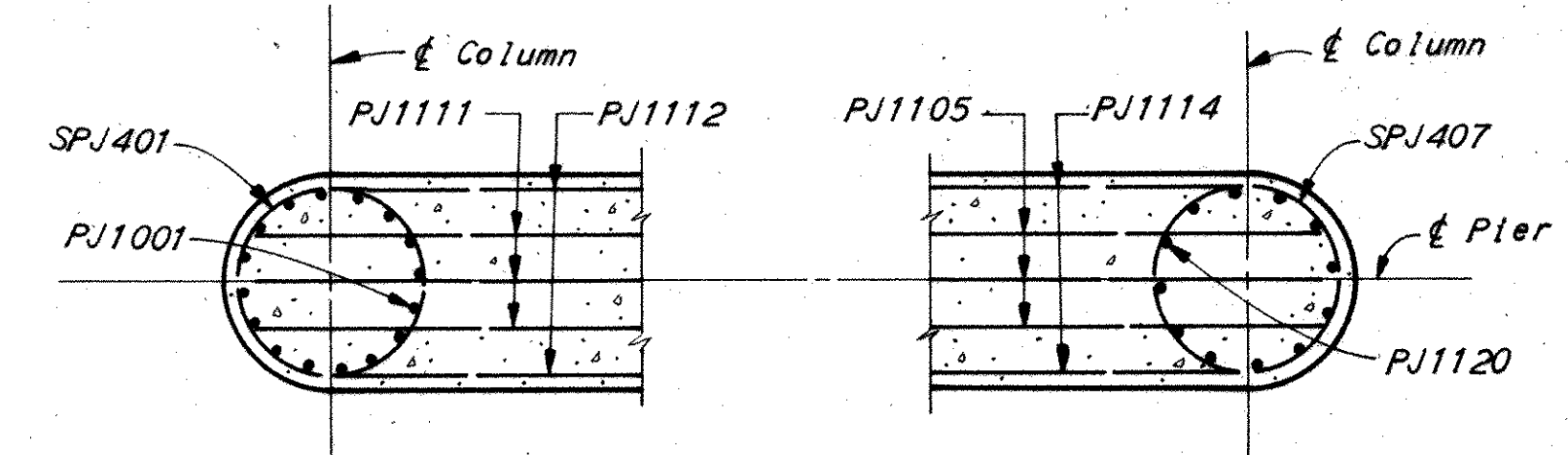
BR. NO. STA. 30.1487 STA. 960 + 02.25
SCALE: 3/16" = 1'-0" STA. 966 + 63.26

RELOCATED U.S. 30

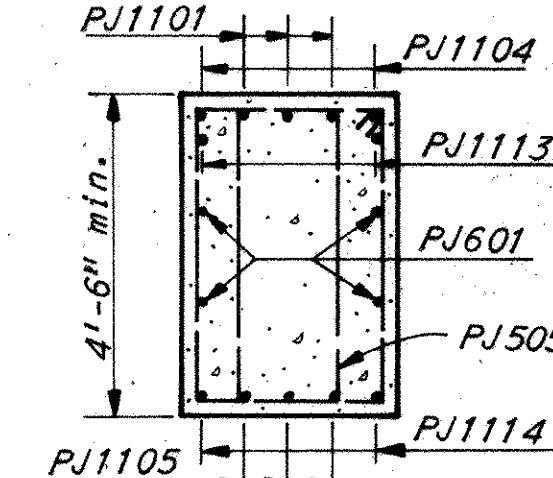
CANTON STARK COUNTY OHIO

DRAWN B.M.	TRACED	CHECKED	REVIEWED	DATE
DATE 4/24/70	DATE	DATE 5-21-70	DATE 11-12-71	1668

Revised 4-28-77



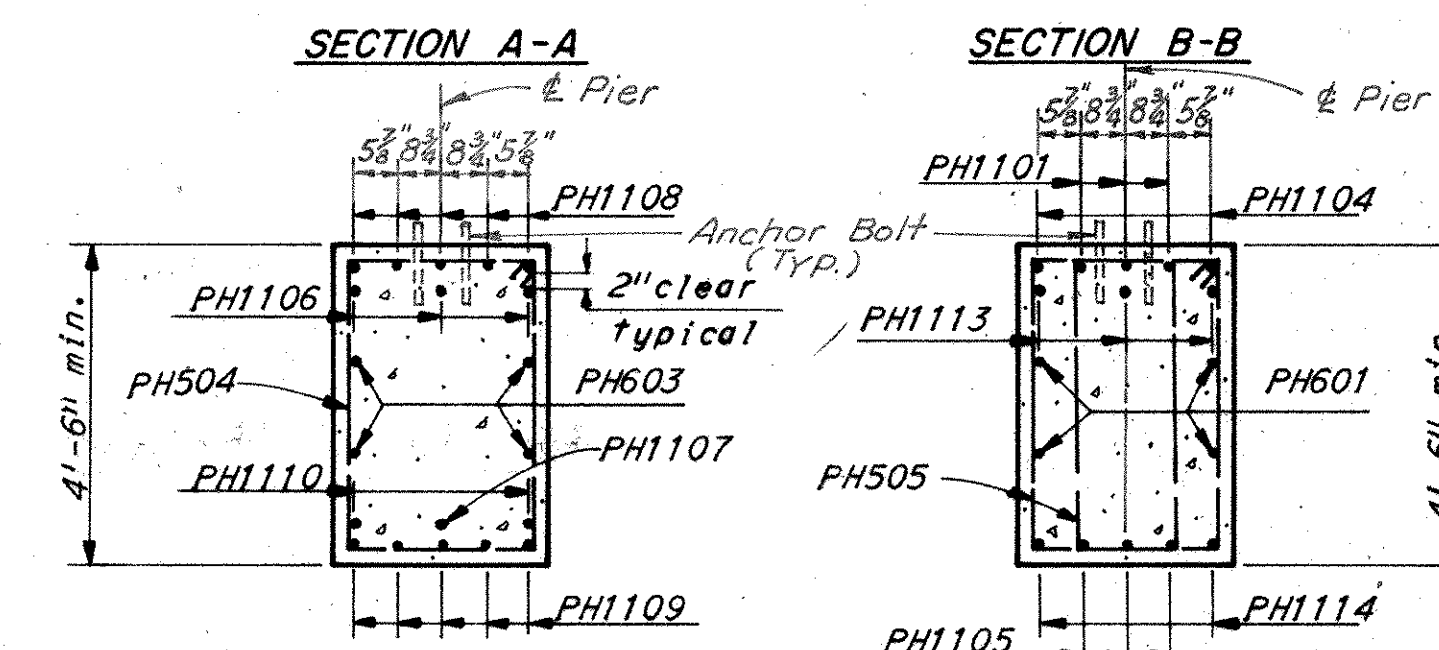
SECTION B-B



SECTION D-D

PIER 7 SECTIONS

Splices in No. 14 size reinforcing bars shall be made by an approved positive mechanical method designed to develop 125% of the specified yield strength of the bar.



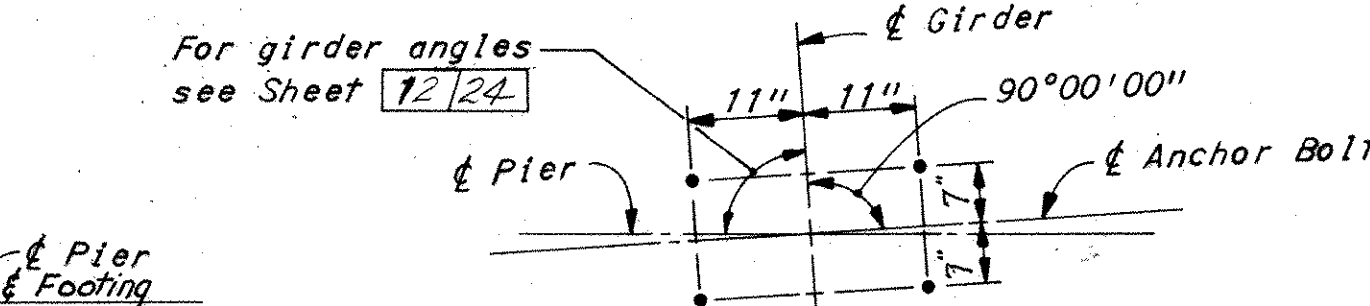
SECTION B-E

SECTION D-

PIER 6 SECTIONS



and 4 FOOTINGS
PART FOOTING PLAN - PIER 6



ANCHOR BOLT PLAN
PIER 6 ONLY

For Pile Numbering
Designation, see
Sheet **24/24**.

PART FOOTING PLAN - PIER 7

STARK COUNTY
STA-30-14.12
STA-77-9.22

Notes:
Top and bottom flanges are identical in size.
All stiffeners shall be placed normal to girder flanges.
All intermediate stiffener to web welds shall be 4" continuous fillets on both sides of stiffeners.
For detail of field splices see Sheet 355.
All intermediate stiffeners shall be Pls. 4 1/2 x 8.

Intermediate stiffeners shall be placed as shown on framing plan, equally spaced between crossframes or crossframes and bearing stiffeners or crossframes and splices.

End crossframe details shall be same as shown on Ohio Standard Drawing SD-1-69, Sheet 1 of 4.
For intermediate crossframe details see Sheet 360. All crossframes are intermediate crossframes unless shown otherwise.
For details of roadway end dam, see Ohio Standard Drawing SD-1-69, Sheet 1 of 4, and Sheet 359.
For details of curb plates at concrete bridge railing see Ohio Standard Drawing, SD-1-69, Sheet 2 of 4.

For details at rockers and bolsters see Ohio Standard Drawing RB-1-55.
The girders shall be fabricated to lines parallel to profiles formed by top of pavement elevations directly over girders, plus the camber required to compensate for dead load deflection.

The allowance to be made in screed settings to compensate for dead load deflections due to concrete and wearing course are to be made above or below the top of the pavement elevations as required. Screeds may require further adjustment due to irregularities in fabricated steel.

F.S. denotes Field Splice.

For girder angles see Sheet 12/24.

Dimensions to scuppers are measured along centerline of girders.

■ Denotes standard scupper.

For bend point crossframe details see Sheet 360.

→ Denotes bend point crossframe.

For Camber and Deflection Table see Sheet 363.
For expansion joint crossframes see Sheet 360.

The rockers and bolsters at girders A and I shall have the 1/2" side plate omitted at Piers 3, 4 and 5.

For expansion joint details see sheet 357.

For detail of intermediate stiffeners see Sheet 360.

For underdeck lighting details see Lighting Plans.
Scupper shall be in accordance with Std. Drwg. SD-1-69 except that scupper pipe shall extend 8" below the bottom of the girders instead of 2"

** Elevations given are at Field Splice.

Note:
The gutterline elevations shown have been adjusted for dead load deflections caused by the weight of concrete and wearing course and are the elevations required before the concrete deck is placed. No concrete shall be placed until the screed rails have been set for the entire unit.

H.N.T.B. BRIDGE NO. 2		Revised 6-9-75	By RAS
HOWARD, NEEDLES, TAMMEN & BERGENOFF CONSULTING ENGINEERS KANSAS CITY CLEVELAND NEW YORK			
FRAMING PLAN UNIT I-WESTBOUND U.S. 30 OVER RAMP B, C, I-77 AND PENNSYLVANIA R.R.			
BR. NO. STA. 30-1487		STA. 960 + 02.25	
SCALE: 1/4"=20'-0"		STA. 966 + 63.26	
RELOCATED U.S. 90			
CANTON		STARK COUNTY OHIO	
DRAWN DATE 11-24-69	CHECKED DATE 1-14-70	REVIEWED DATE 1-12-71	REVISION DATE 1-12-74
11-24-69		1668	

Revised 4-28-77

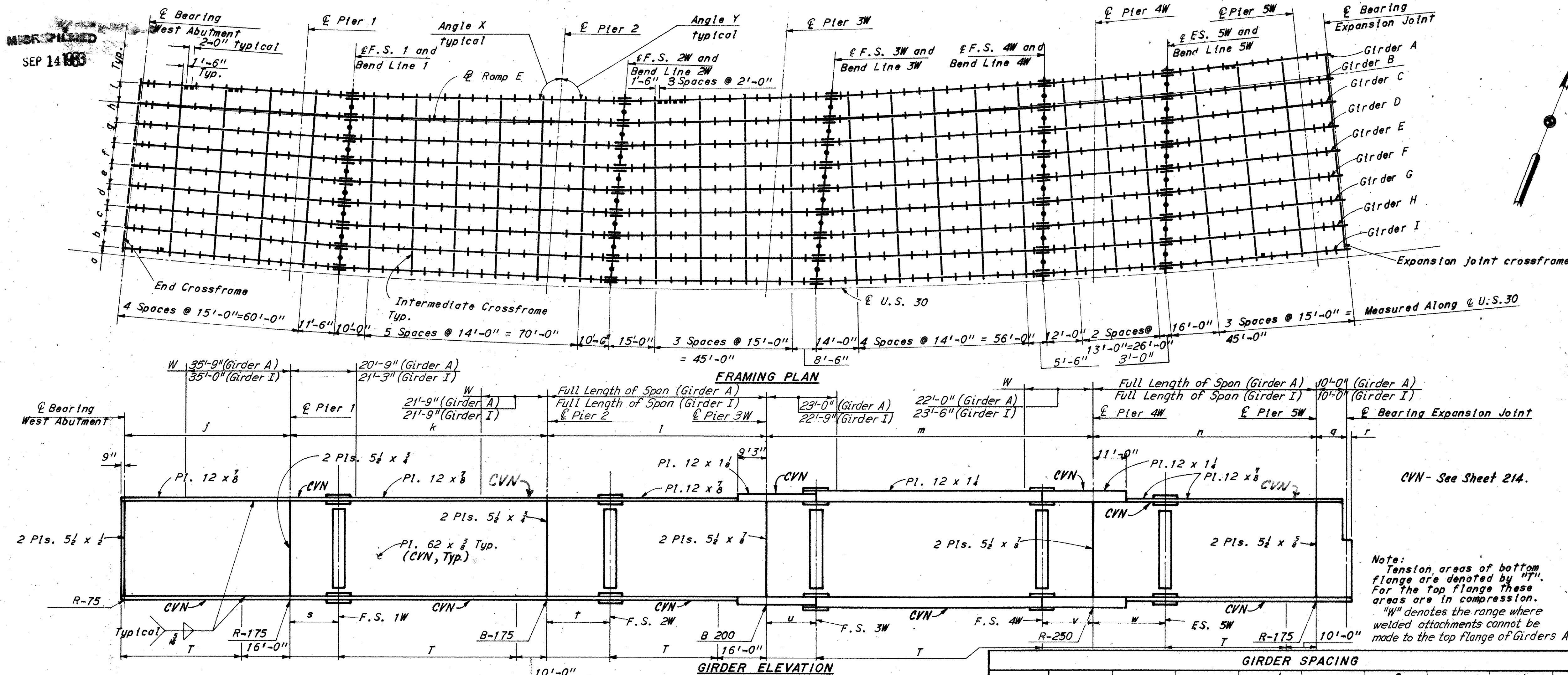


TABLE OF DIMENSIONS

Girder	j	k	l	m	n	o	p	q	r	s	t	u	v	w
A	53'-9 1/2"	85'-7 1/2"	73'-5 1/2"	105'-2 1/2"	67'-0 1/2"			101'-0"	7 1/2"	16'-0"	21'-0 1/2"	16'-6 1/2"	17'-10 3/4"	23'-3"
B	54'-0 1/2"	85'-6 1/2"	73'-4 1/2"	105'-1 3/4"	67'-10 3/4"			101'-0"	7 1/2"	16'-0"	21'-0 1/2"	16'-6 1/2"	17'-10 1/2"	23'-2 1/2"
C	54'-2 1/2"	85'-1 1/2"	73'-3 1/2"	106'-3 1/2"	68'-8 1/2"			101'-0"	7 1/2"	16'-0"	21'-0 1/2"	16'-6 1/2"	17'-10 1/2"	23'-2 1/2"
D	54'-5 1/2"	85'-6 1/2"	73'-3 1/2"	106'-10 3/4"	69'-7 1/2"			101'-0"	7 1/2"	16'-0"	21'-0 1/2"	16'-6 1/2"	17'-10"	23'-2 1/2"
E	54'-7 1/2"	85'-6 1/2"	73'-2 1/2"	107'-4 1/2"	70'-5 1/2"			101'-0"	7 1/2"	16'-0"	20'-11 1/2"	16'-6"	17'-9 1/2"	23'-2 1/2"
F	54'-9 1/2"	85'-6 1/2"	73'-1 1/2"	107'-11 1/2"	71'-3 1/2"			101'-0"	7 1/2"	16'-0"	20'-11 1/2"	16'-5 1/2"	17'-9 1/2"	23'-2 1/2"
G	55'-0 1/2"	85'-6 1/2"	73'-1 1/2"	108'-5 1/2"	72'-2 1/2"			101'-0"	7 1/2"	16'-0"	20'-11 1/2"	16'-5 1/2"	17'-9 1/2"	23'-2 1/2"
H	55'-2 1/2"	85'-6 1/2"	73'-0 1/2"	109'-0 1/2"	73'-0 1/2"			101'-0"	7 1/2"	16'-0"	20'-11 1/2"	16'-5 1/2"	17'-9 1/2"	23'-2 1/2"
I	55'-5"	85'-6 1/2"	73'-0 1/2"	109'-7 1/2"	73'-10 1/2"			101'-0"	7 1/2"	16'-0"	20'-11 1/2"	16'-5 1/2"	17'-9 1/2"	23'-2 1/2"

TOP OF PORTLAND CEMENT CONCRETE ELEVATION

Girder	£ Brg. N.Abut.	0.25	0.50	0.75	£ Pier 1	**0.25	0.50	0.75	£ Pier 2	**0.25	0.50	0.75	£ Pier 3W	0.10	** 0.20	0.30	0.40	0.50	0.60	0.70	**0.80	0.90	£ Pier 4W
A	1064.94	1065.19	1065.43	1065.66	1065.88	1066.13	1066.51	1066.78	1067.03	1067.25	1067.40	1067.56	1067.70	1067.77	1067.80	1067.89	1067.94	1067.98	1068.02	1068.06	1068.09	1068.10	1068.12
B	1065.43	1065.67	1065.90	1066.13	1066.36	1066.63	1066.98	1067.25	1067.52	1067.77	1067.91	1068.06	1068.21	1068.29	1068.34	1068.41	1068.46	1068.50	1068.55	1068.59	1068.64	1068.65	1068.67
C	1065.92	1066.16	1066.39	1066.63	1066.86	1067.13	1067.49	1067.76	1068.03	1068.29	1068.43	1068.59	1068.74	1068.82	1068.87	1068.95	1069.00	1069.05	1069.10	1069.14	1069.20	1069.21	1069.23
D	1066.40	1066.65	1066.89	1067.12	1067.36	1067.63	1067.99	1068.28	1068.55	1068.81	1068.95	1069.11	1069.27	1069.36	1069.40	1069.49	1069.54	1069.59	1069.64	1069.69	1069.75	1069.77	1069.78
E	1066.89	1067.14	1067.38	1067.62	1067.86	1068.13	1068.50	1068.79	1069.06	1069.33	1069.47	1069.64	1069.80	1069.89	1069.94	1070.03	1070.08	1070.14	1070.19	1070.24	1070.31	1070.32	1070.34
F	1067.38	1067.63	1067.87	1068.12	1068.36	1068.63	1069.01	1069.30	1069.58	1069.85	1070.00	1070.17	1070.33	1070.42	1070.47	1070.56	1070.62	1070.68	1070.74	1070.79	1070.86	1070.88	1070.90
G	1067.86	1068.12	1068.37	1068.61	1068.86	1069.13	1069.51	1069.81	1070.09	1070.37	1070.52	1070.69	1070.86	1070.96	1071.01	1071.10	1071.16	1071.23	1071.28	1071.34	1071.41	1071.43	1071.46
H	1068.35	1068.61	1068.86	1069.11	1069.36	1069.63	1070.02	1070.32	1070.61	1070.89	1071.04	1071.22	1071.39	1071.49	1071.54	1071.64	1071.71	1071.77	1071.83	1071.89	1071.97	1071.99	1072.02
I	1068.42	1068.70	1068.97	1069.23	1069.46	1069.72	1069.99	1070.27	1070.54	1070.81	1071.08	1071.35	1071.62	1071.71	1071.76	1071.86	1071.93	1072.00	1072.05	1072.10	1072.13	1072.17	

TOP OF PORTLAND CEMENT CONCRETE ELEVATIONS AT GUTTERLINE

Girder	W. Abut.	0.25	0.50	0.75	W. Pier 1	0.25	0.50	0.75	W. Pier 2	0.25	0.50	0.75	W. Pier 3W	0.10
A	1064.94	1065.19	1065.43	1065.66	1065.88	1066.23	1066.53	1066.80	1067.03	1067.23	1067.39	1067.55	1067.70	1067.79
B	1065.43	1065.67	1065.90	1066.13	1066.36	1066.71	1067.01	1067.28	1067.51	1067.71	1067.87	1068.03	1068.18	1068.27
C	1065.92	1066.16	1066.39	1066.63	1066.86	1067.21	1067.51	1067.78	1068.01	1068.21	1068.37	1068.53	1068.68	1068.77
D	1066.40	1066.65	1066.89	1067.12	1067.36	1067.71	1068.01	1068.28	1068.51	1068.71	1068.87	1069.03	1069.18	1069.27
E	1066.89	1067.14	1067.38	1067.62	1067.86	1068.21	1068.51	1068.78	1069.01	1069.21	1069.37	1069.53	1069.68	1069.77
F	1067.38	1067.63	1067.87	1068.12	1068.36	1068.71	1069.01	1069.28	1069.51	1069.71	1069.87	1070.03	1070.18	1070.27
G	1067.86	1068.12	1068.37	1068.61	1068.86	1069.21	1069.51	1069.78	1070.01	1070.21	1070.37	1070.53	1070.68	1070.77
H	1068.35	1068.61	1068.86	1069.11	1069.36	1069.71	1070.01	1070.28	1070.51	1070.71	1070.87	1071.03	1071.18	1071.27
I	1068.42	1068.70	1068.97	1069.23	1069.46	1069.81	1070.11	1070.38	1070.61	1070.81	1070.97	1071.13	1071.28	1071.37

STARK COUNTY
STA-30-14.12
STA-77-9.22

UNIT 1 - WESTBOUND										
		Girder A	Girder B	Girder C	Girder D	Girder E	Girder F	Girder G	Girder H	Girder I
℄ Bearing W. Abutment	X	92°33'53.4"	92°22'28.7"	92°11'07.9"	91°59'50.9"	91°48'37.6"	91°37'28.1"	91°26'22.4"	91°15'20.5"	91°04'22.2"
	Y	87°26'06.6"	87°37'31.3"	87°48'52.1"	88°00'09.1"	88°11'22.4"	88°22'31.9"	88°33'37.6"	88°44'39.6"	88°55'37.8"
℄ Pier 1	X	90°53'59.4"	90°42'34.7"	90°31'13.9"	90°19'56.9"	90°08'43.6"	89°57'34.1"	89°46'28.4"	89°35'26.5"	89°24'28.2"
	Y	89°06'00.6"	89°17'25.3"	89°28'46.1"	89°40'03.1"	89°51'16.4"	90°02'25.9"	90°13'31.6"	90°24'33.5"	90°35'31.8"
B. L. 1	X	90°53'59.4"	90°42'34.7"	90°31'13.9"	90°19'56.9"	90°08'43.6"	89°57'34.1"	89°46'28.4"	89°35'26.5"	89°24'28.2"
	Y	86°36'48.0"	86°48'23.2"	86°59'58.8"	87°11'34.3"	87°23'10.3"	87°34'46.4"	87°46'22.8"	87°57'59.3"	88°09'36.0"
℄ Pier 2	X	93°23'12.0"	93°11'36.8"	93°00'01.4"	92°48'25.7"	92°36'49.7"	92°25'13.6"	92°13'37.2"	92°02'00.7"	91°50'24.0"
	Y	86°36'48.0"	86°48'23.2"	86°59'58.8"	87°11'34.3"	87°23'10.3"	87°34'46.4"	87°46'22.8"	87°57'59.3"	88°09'36.0"
B. L. 2W	X	93°23'12.0"	93°11'36.8"	93°00'01.4"	92°48'25.7"	92°36'49.7"	92°25'13.6"	92°13'37.2"	92°02'00.7"	91°50'24.0"
	Y	84°08'25.0"	84°20'34.9"	84°32'46.1"	84°44'58.5"	84°57'12.0"	85°09'26.8"	85°21'42.6"	85°33'59.6"	85°46'17.7"
℄ Pier 3W	X	96°06'17.0"	95°54'07.1"	95°41'55.9"	95°29'43.5"	95°17'30.0"	95°05'15.2"	94°52'59.4"	94°40'42.4"	94°28'24.3"
	Y	83°53'43.0"	84°05'52.9"	84°18'04.1"	84°30'16.5"	84°42'30.0"	84°54'44.8"	85°07'00.6"	85°19'17.6"	85°31'35.7"
B. L. 3W	X	96°06'17.0"	95°54'07.1"	95°41'55.9"	95°29'43.5"	95°17'30.0"	95°05'15.2"	94°52'59.4"	94°40'42.4"	94°28'24.3"
	Y	81°43'41.8"	81°56'39.0"	82°09'24.2"	82°21'57.8"	82°34'20.0"	82°46'31.0"	82°58'31.0"	83°10'20.2"	83°21'59.0"
B. L. 4W	X	94°00'06.2"	93°47'09.0"	93°34'23.8"	93°21'50.2"	93°09'28.0"	92°57'17.0"	92°45'17.0"	92°33'27.8"	92°21'49.0"
	Y	84°15'46.4"	84°27'56.7"	84°40'07.5"	84°52'18.8"	85°04'30.5"	85°16'42.8"	85°28'55.4"	85°41'08.5"	85°53'21.9"
℄ Pier 4W	X	95°44'13.6"	95°32'03.3"	95°19'52.5"	95°07'41.2"	94°55'29.5"	94°43'17.2"	94°31'04.6"	94°18'51.5"	94°06'38.1"
	Y	84°15'46.4"	84°27'56.7"	84°40'07.5"	84°52'18.8"	85°04'30.5"	85°16'42.8"	85°28'55.4"	85°41'08.5"	85°53'21.9"
B. L. 5W	X	95°44'13.6"	95°32'03.3"	95°19'52.5"	95°07'41.2"	94°55'29.5"	94°43'17.2"	94°31'04.6"	94°18'51.5"	94°06'38.1"
	Y	82°47'33.4"	83°00'38.0"	83°13'18.2"	83°25'34.9"	83°37'29.2"	83°49'02.1"	84°00'14.6"	84°11'07.5"	84°21'41.7"
℄ Pier 5W	X	90°57'26.6"	90°44'22.0"	90°31'41.8"	90°19'25.1"	90°07'30.8"	89°55'57.9"	89°44'45.6"	89°33'52.5"	89°23'18.3"
	Y	89°02'33.4"	89°15'38.0"	89°28'18.2"	89°40'34.9"	89°52'29.2"	90°04'02.1"	90°15'14.6"	90°26'07.5"	90°36'41.7"
℄ Bearing Exp. Joint	X	90°57'26.6"	90°44'22.0"	90°31'41.8"	90°19'25.1"	90°07'30.8"	89°55'57.9"	89°44'45.4"	89°33'52.5"	89°23'18.3"
	Y	86°51'03.3"	87°02'32.5"	87°13'56.4"	87°25'15.0"	87°36'28.4"	87°47'36.6"	87°58'39.7"	88°09'37.8"	88°20'30.8"

UNIT 1 - EASTBOUND									
		Girder J	Girder K	Girder L	Girder M	Girder N	Girder O		
℄ Bearing	X	91°04'22.2"	→	→	→	→	→	91°04'22.2"	
W. Abutment	Y	88°55'37.8"	→	→	→	→	→	88°55'37.8"	
	X	89°24'28.2"	→	→	→	→	→	89°24'28.2"	
℄ Pier 1	Y	90°35'31.8"	→	→	→	→	→	90°35'31.8"	
	X	89°24'28.2"	→	→	→	→	→	89°24'28.2"	
B. L. 1	Y	88°09'36.0"	→	→	→	→	→	88°09'36.0"	
	X	91°50'24.0"	→	→	→	→	→	91°50'24.0"	
℄ Pier 2	Y	88°09'36.0"	→	→	→	→	→	88°09'36.0"	
	X	91°50'24.0"	→	→	→	→	→	91°50'24.0"	
B. L. 2E	Y	86°47'43.4"	→	→	→	→	→	86°47'43.4"	
	X	93°26'58.6"	→	→	→	→	→	93°26'58.6"	
℄ Pier 3E	Y	86°33'01.4"	→	→	→	→	→	86°33'01.4"	
	X	93°26'58.6"	→	→	→	→	→	93°26'58.6"	
B. L. 3E	Y	84°05'18.7"	→	→	→	→	→	84°05'18.7"	
	X	91°38'29.3"	→	→	→	→	→	91°38'29.3"	
B. L. 4E	Y	86°44'05.9"	→	→	→	→	→	86°44'05.9"	
	X	93°15'54.1"	→	→	→	→	→	93°15'54.1"	
℄ Pier 4E	Y	86°44'05.9"	→	→	→	→	→	86°44'05.9"	
	X	93°15'54.1"	→	→	→	→	→	93°15'54.1"	
B. L. 5E	Y	84°55'20.1"	→	→	→	→	→	84°55'20.1"	
	X	88°49'39.9"	→	→	→	→	→	88°49'39.9"	
℄ Pier 5E	Y	91°10'20.1"	→	→	→	→	→	91°10'20.1"	
	X	88°49'39.9"	→	→	→	→	→	88°49'39.9"	
℄ Bearing	X	88°49'39.9"	→	→	→	→	→	88°49'39.9"	
Exp. Joint	Y	88°20'30.8"	→	→	→	→	→	88°20'30.8"	

UNIT 2 - WESTBOUND										
		Girder A	Girder B	Girder C	Girder D	Girder E	Girder F	Girder G	Girder H	Girder I
℄ Bearing Exp. Joint	X	90°57'26.6"	90°44'22.0"	90°31'41.8"	90°19'25.1"	90°07'30.8"	89°55'57.9"	89°44'45.4"	89°33'52.5"	89°23'18.3"
	Y	86°51'03.3"	87°02'32.5"	87°13'56.4"	87°25'15.0"	87°36'28.4"	87°47'36.6"	87°58'39.7"	88°09'37.8"	88°20'30.8"
℄ Pier 6	X	90°44'02.6"	90°32'33.4"	90°21'09.5"	90°09'50.9"	89°58'37.5"	89°47'29.3"	89°36'26.2"	89°25'28.1"	89°14'35.1"
	Y	89°15'57.4"	89°27'26.6"	89°38'50.5"	89°50'09.1"	90°01'22.5"	90°12'30.7"	90°23'33.8"	90°34'31.9"	90°45'24.9"
B. L. 7	X	90°44'02.6"	90°32'33.4"	90°21'09.5"	90°09'50.9"	89°58'37.5"	89°47'29.3"	89°36'26.2"	89°25'28.1"	89°14'35.1"
	Y	86°49'50.6"	87°01'35.2"	87°13'24.7"	87°25'19.1"	87°37'18.6"	87°49'23'0"	88°10'32.5"	88°13'47.1"	88°26'06.8"
B. L. 8	X	94°40'24.2"	94°28'39.6"	94°16'50.1"	94°04'55.7"	93°52'56.2"	93°40'51.8"	93°28'42.3"	93°16'27.7"	93°04'08.0"
	Y	82°55'32.0"	83°09'45.0"	83°23'58.8"	83°38'13.4"	83°52'28.8"	84°06'44.9"	84°21'01.8"	84°35'19.4"	84°49'37.7"
℄ Pier 7	X	97°04'28.0"	96°50'15.0"	96°36'01.2"	96°21'46.6"	96°07'31.2"	95°53'15.1"	95°38'58.2"	95°24'40.6"	95°10'22.3"
	Y	82°55'32.0"	83°09'45.0"	83°23'58.8"	83°38'13.4"	83°52'28.8"	84°06'44.9"	84°21'01.8"	84°35'19.4"	84°49'37.7"
℄ Bearing E. Abutment	X	97°04'28.0"	96°50'15.0"	96°36'01.2"	96°21'46.6"	96°07'31.2"	95°53'15.1"	95°38'58.2"	95°24'40.6"	95°10'22.3"
	Y	82°55'32.0"	83°09'45.0"	83°23'58.8"	83°38'13.4"	83°52'28.8"	84°06'44.9"	84°21'01.8"	84°35'19.4"	84°49'37.7"

UNIT 2 - EASTBOUND									
		Girder J	Girder K	Girder L	Girder M	Girder N	Girder O		
℄ Bearing	X	88°49'39.9"	→	→	→	→	→	88°49'39.9"	
Exp. Joint	Y	88°20'30.8"	→	→	→	→	→	88°20'30.8"	
	X	89°14'35.1"	→	→	→	→	→	89°14'35.1"	
℄ Pier 6	Y	90°45'24.9"	→	→	→	→	→	90°45'24.9"	
	X	89°14'35.1"	→	→	→	→	→	89°14'35.1"	
B. L. 7	Y	88°26'06.8"	→	→	→	→	→	88°26'06.8"	
	X	93°04'08.0"	→	→	→	→	→	93°04'08.0"	
B. L. 8	Y	84°49'37.7"	→	→	→	→	→	84°49'37.7"	
	X	95°10'22.3"	→	→	→	→	→	95°10'22.3"	
℄ Pier 7	Y	84°49'37.7"	→	→	→	→	→	84°49'37.7"	
	X	95°10'22.3"	→	→	→	→	→	95°10'22.3"	
℄ Bearing	X	95°10'22.3"	→	→	→	→	→	95°10'22.3"	
E. Abutment	Y	84°49'37.7"	→	→	→	→	→	84°49'37.7"	

88°01'32.5"

H.N.T.B. BRIDGE NO. 2

HOWARD, NEEDLES, TAMMEN & BERGENDOFF 12/24
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

GIRDER ANGLES

U.S. 30 OVER RAMP B, C, I-77
AND PENNSYLVANIA R.R.BR. NO. STA. 30-1487 STA. 960 + 02.25
SCALE: NONE STA. 966 + 63.26

RELOCATED U.S. 30

CANTON STARK COUNTY OHIO

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
DATE 5-6-70	DATE	DATE 5-26-70	DATE 11-22-71	DATE 7-12-76

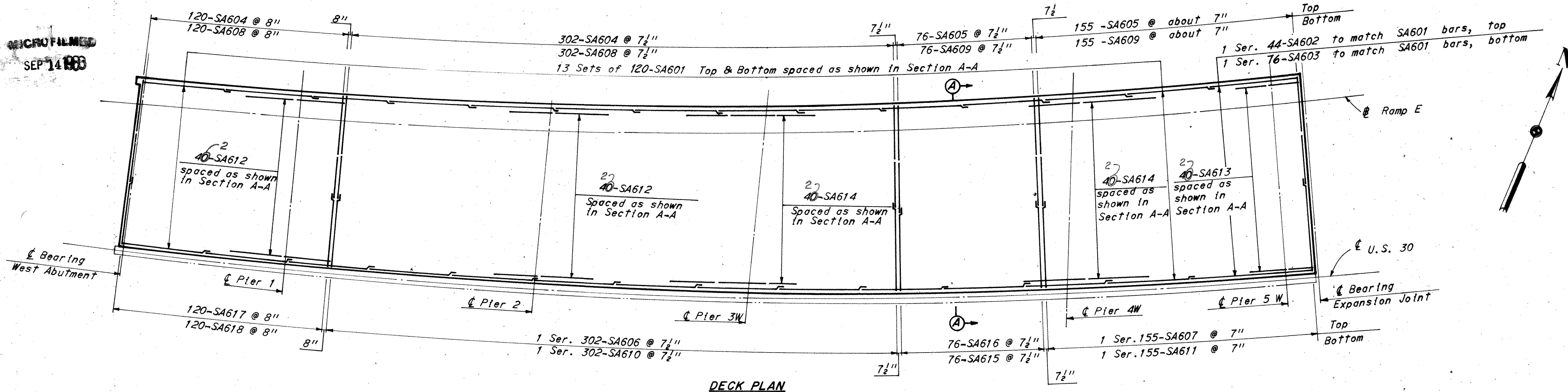
1668

MICROFILMED
SEP 14 1983

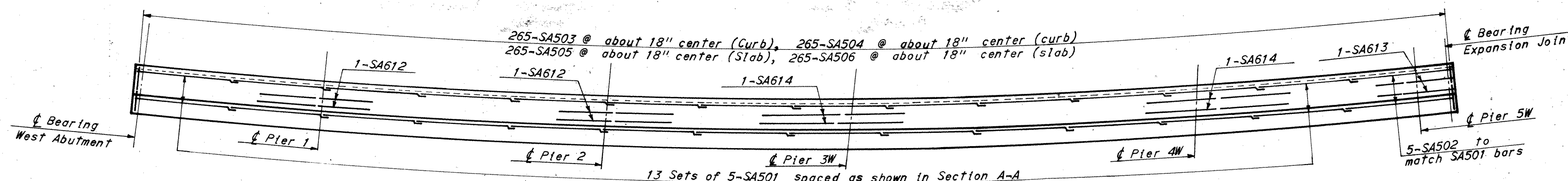
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO		

245
389

STARK COUNTY
STA-30-14.12
STA-77-9.22



DECK PLAN



NORTH CURB PLAN

*This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the girder may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per Sec. 511.18 of the Construction and Materials Specifications.

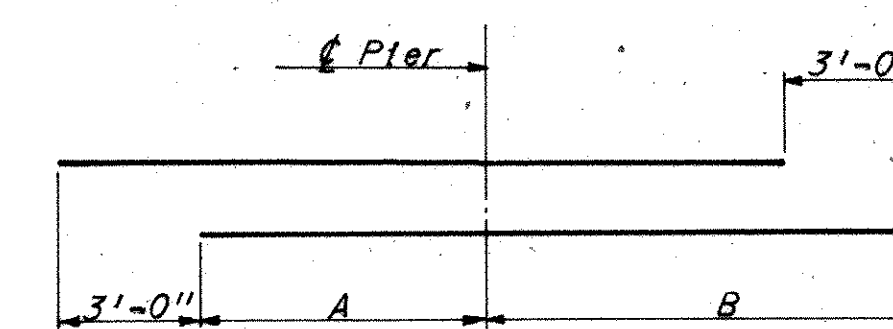


DIAGRAM SHOWING STAGGER OF
ADDITIONAL BARS OVER PIERS

#SA612 and SA614 bars

	A	B
Pier 1	19'-0"	15'-0"
Pier 2	14'-0"	20'-0"
Pier 3	27'-0"	16'-0"
Pier 4	17'-0"	26'-0"

NOTES:

Reinforcing Steel shall be adjusted as required to clear scuppers.

A typical haunch width of 9" shall be used for computing quantity of concrete. However, the haunch width may vary between 6" and 12" provided that the slope shall be not more than 1:4 for a haunch less than 9" in width.

For concrete railing details see Sheet 362.

For deflection joint details see Sheet 361.

For median and parapet details see Sheet 359.

For reinforcement schedule see Sheet 23/24

Transverse reinforcing steel shall be placed radial to U.S. 30 and spaced along left median gutterline.

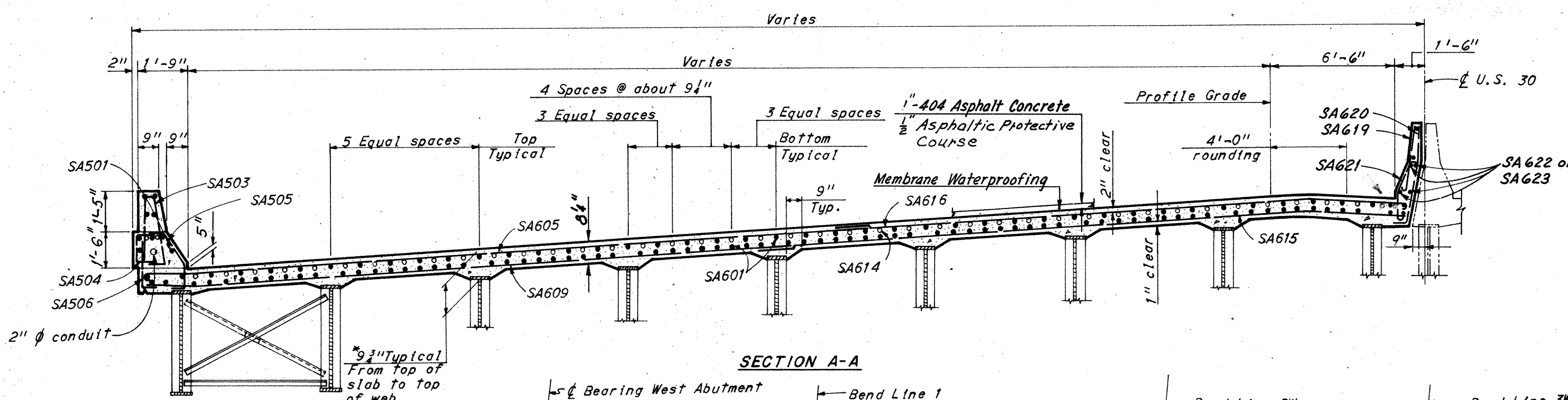
Slab horizontal offsets given are at tenth points between bearing and bend line, or between two bend lines.

For superelevation data see Sheet 15/24

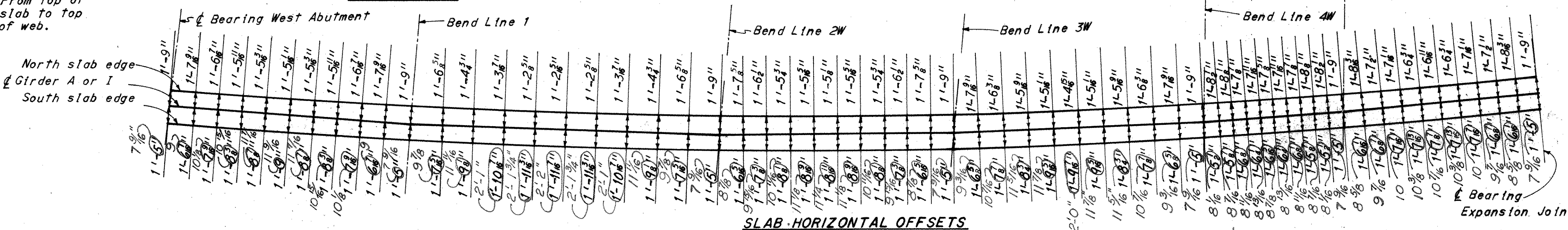
Concrete shall be placed from the expansion joint to Pier 6 before placing concrete from the expansion joint to Pier 4W.

For subdrainage details, see Sheet 365A.

For median curb plan, see Sheet 17/24



SECTION A-A



SLAB HORIZONTAL OFFSETS

H.N.T.B. BRIDGE NO. 2		Revised 6-9-75 By RAS	
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS KANSAS CITY CLEVELAND NEW YORK			
DECK PLAN UNIT 1-WESTBOUND U.S. 30 OVER RAMP B, C, I-77 AND PENNSYLVANIA R.R.			
BR. NO. STA. 30-1487		STA. 960 + 02.25	
SCALE: NO SCALE		STA. 966 + 63.26	
RELOCATED U.S. 30			
CANTON		STARK COUNTY OHIO	
DRAWN OPK DATE 12-8-69	TRACED DATE	CHECKED DATE 6-1-70	REVIEWED DATE 11-22-71
		REVISED 3-2-76 1668	

Revised 4-28-77

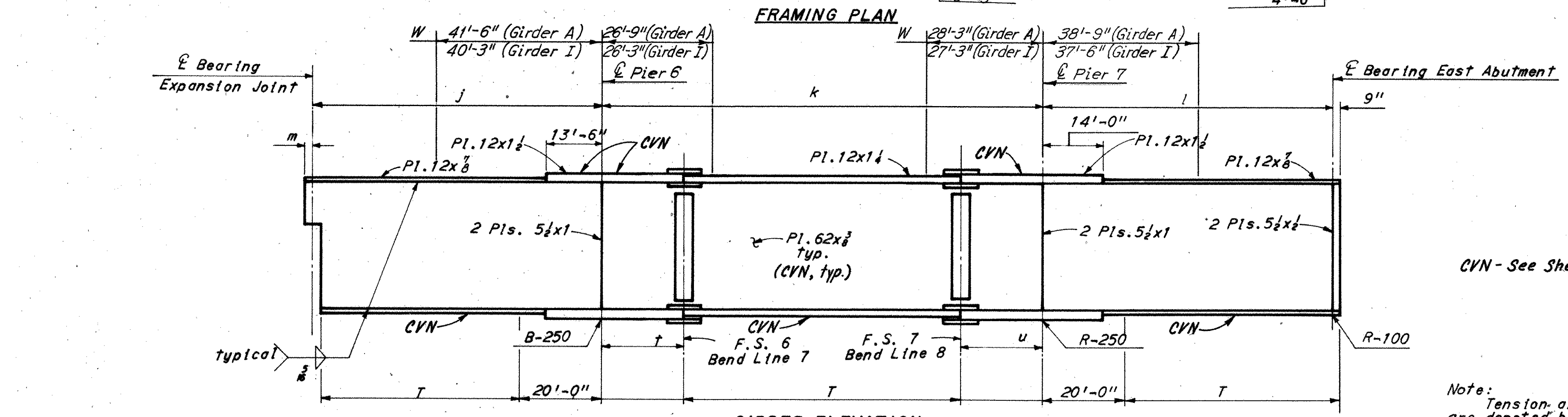
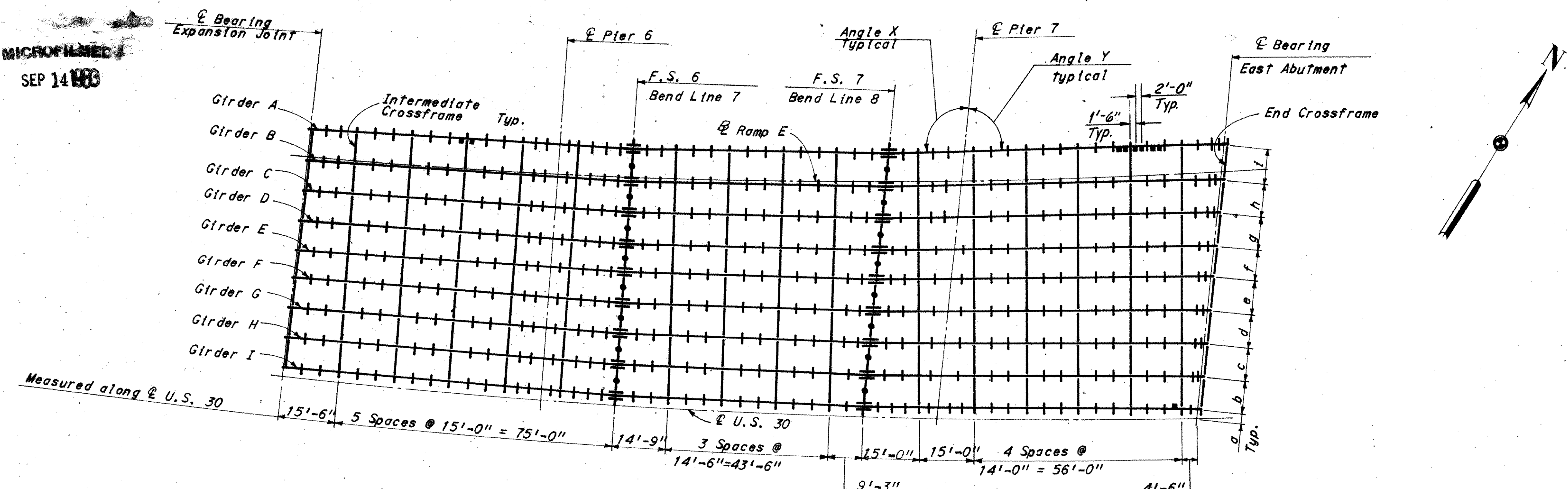


TABLE OF DIMENSIONS

Girder	j	k	l	m	t	u
A	67'-7 1/2"	109'-6 3/8"	70'-8 3/4"	7 1/2"	20'-0"	20'-1 1/2"
B	67'-11 3/4"	109'-3 3/8"	70'-8 3/4"	7 1/2"	20'-0"	20'-1 1/2"
C	68'-3 3/8"	109'-0 3/8"	70'-7 3/4"	7 1/2"	20'-0"	20'-0 3/4"
D	68'-7 3/8"	108'-9 3/8"	70'-7 3/4"	7 1/2"	20'-0"	20'-0 3/4"
E	69'-0 3/8"	108'-6 3/8"	70'-7"	7 1/2"	20'-0"	20'-0 3/4"
F	69'-4 3/8"	108'-3 3/8"	70'-6 3/4"	7 1/2"	20'-0"	20'-0 3/4"
G	69'-8 3/8"	108'-0 3/8"	70'-6 1/4"	7 1/2"	20'-0"	20'-0 3/4"
H	70'-0 3/8"	107'-10"	70'-5 3/4"	7 1/2"	20'-0"	20'-0 3/4"
I	70'-4 3/8"	107'-7 1/4"	70'-5 3/4"	7 1/2"	20'-0"	20'-0 3/4"

GIRDER SPACING

	a	b	c	d	e	f	g	h	i
*Exp. Jt.	2'-7"	8'-1 1/8"	8'-1 1/8"	8'-1 1/8"	8'-1 1/8"	8'-1 1/8"	8'-1 1/8"	8'-1 1/8"	8'-1 1/8"
± Pier 6	2'-11 1/8"	8'-4 3/8"	8'-4 3/8"	8'-4 3/8"	8'-4 1/4"	8'-4 1/4"	8'-4 1/4"	8'-4 1/4"	8'-4 1/4"
F.S. 7	2'-7"	8'-5 1/8"	8'-5 1/8"	8'-5 1/8"	8'-5 1/8"	8'-5 1/8"	8'-5 1/8"	8'-5 1/8"	8'-5 1/8"
F.S. 8	2'-7 1/4"	8'-8 1/8"	8'-8 1/8"	8'-8 1/8"	8'-8 1/8"	8'-8 1/8"	8'-8 1/8"	8'-8 1/8"	8'-8 1/8"
± Pier 7	2'-11"	8'-9 1/8"	8'-9 1/8"	8'-9 1/8"	8'-9 1/8"	8'-9 1/8"	8'-9 1/8"	8'-9 1/8"	8'-9 1/8"
± E. Abut.	2'-7 3/8"	9'-0 3/8"	9'-0 3/8"	9'-0 3/8"	9'-0 3/8"	9'-0 3/8"	9'-0 3/8"	9'-0 3/8"	9'-0 3/8"

TOP OF PORTLAND CEMENT CONCRETE ELEVATIONS

Girder	± Brg. Exp. Jt.	0.25	0.50	0.75	± Pier 6	0.10	**0.20	0.30	0.40	0.50	0.60	0.70	**0.80	0.90	± Pier 7	0.25	0.50	0.75	± E. Abut.
A	1068.03	1067.96	1067.88	1067.79	1067.67	1067.59	1067.52	1067.43	1067.37	1067.33	1067.30	1067.28	1067.24	1067.21	1067.18	1067.12	1067.07	1067.01	1066.97
B	1068.61	1068.52	1068.43	1068.34	1068.24	1068.15	1068.12	1068.02	1067.95	1067.90	1067.86	1067.83	1067.80	1067.75	1067.69	1067.61	1067.54	1067.48	1067.43
C	1069.18	1069.10	1069.02	1068.93	1068.83	1068.77	1068.72	1068.62	1068.55	1068.49	1068.44	1068.40	1068.35	1068.30	1068.23	1068.13	1068.05	1067.97	1067.90
D	1069.76	1069.69	1069.61	1069.52	1069.43	1069.37	1069.32	1069.22	1069.14	1069.08	1069.02	1068.97	1068.91	1068.85	1068.77	1068.66	1068.55	1068.46	1068.37
E	1070.34	1070.27	1070.19	1070.11	1070.02	1069.96	1069.91	1069.81	1069.74	1069.67	1069.61	1069.55	1069.48	1069.40	1069.31	1069.18	1069.06	1068.95	1068.85
F	1070.92	1070.85	1070.78	1070.70	1070.61	1070.56	1070.51	1070.41	1070.33	1070.26	1070.19	1070.12	1070.04	1069.95	1069.86	1069.71	1069.57	1069.44	1069.32
G	1071.50	1071.43	1071.36	1071.29	1071.21	1071.16	1071.11	1071.01	1070.93	1070.85	1070.77	1070.70	1070.60	1070.51	1070.40	1070.24	1070.08	1069.94	1069.80
H	1072.07	1072.01	1071.95	1071.88	1071.80	1071.75	1071.71	1071.61	1071.53	1071.44	1071.36	1071.27	1071.17	1071.06	1070.95	1070.77	1070.60	1070.43	1070.28
I	1072.23	1072.22	1072.18	1072.11	1072.02	1071.95	1071.89	1071.82	1071.74	1071.66	1071.57	1071.47	1071.34	1071.26	1071.16	1070.99	1070.81	1070.62	1070.43

TOP OF PORTLAND CEMENT CONCRETE ELEVATIONS AT GUTTERLINE

	± Brg. Exp. Jt.	0.25	0.50	0.75	± Pier 6	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	± Pier 7	0.25	0.50	0.75	± E. Abut.
North Gutterline	1068.03	1067.97	1067.89	1067.79	1067.67	1067.60	1067.54	1067.48	1067.44	1067.39	1067.36	1067.33	1067.28	1067.22	1067.18	1067.12	1067.08	1067.02	1066.97
South Gutterline	1072.16	1072.14	1072.09	1072.01	1071.93	1071.88	1071.84	1071.79	1071.72	1071.64	1071.55	1071.45	1071.32	1071.20	1071.08	1070.90	1070.74	1070.56	1070.37

Notes:
 Top and bottom flanges are identical in size.
 All stiffeners shall be placed normal to girder flanges.
 All intermediate stiffener to web welds shall be 1/4" continuous fillets on both sides of stiffeners.
 For detail of field splices see Sheet 355.
 All intermediate stiffeners shall be Pls. 4 1/2"x 3/8".
 F.S. denotes Field Splice.

Intermediate stiffeners shall be placed as shown on framing plan, equally spaced between crossframes or crossframes and bearing stiffeners or crossframes and splices.

End crossframe details shall be same as shown on Ohio Standard Drawing SD-1-69, Sheet 1 of 4.
 For intermediate crossframe details see Sheet 360.
 All crossframes are intermediate crossframes unless shown otherwise.
 For details of roadway end dam, see Ohio Standard Drawing SD-1-69, Sheet 1 of 4, and Sheet 359.
 For details at rockers and bolsters see Ohio Standard Drawing RB-1-55.

The girders shall be fabricated to lines parallel to profiles formed by top of pavement elevations directly over girders, plus the camber required to compensate for dead load deflection.

The allowance to be made in screed settings to compensate for dead load deflections due to concrete and wearing course are to be made above or below the top of the pavement elevations as required. Screeds may require further adjustment due to irregularities in fabricated steel.

For details of curb plates at concrete bridge railing see Ohio Standard Drawing SD-1-69, Sheet 2 of 4.

For bend point crossframe details see Sheet 360.
 ± Denotes bend point crossframe.
 Set bend point crossframes normal to girder near the bend point.

Dimensions to scuppers are measured along center-line of girders.

± Denotes standard scupper.
 For Camber and Deflection Table see Sheet 363.
 For girder angles see Sheet 12/24.
 For expansion joint details see Sheet 357.
 The rockers and bolsters at girders A and I shall have the 1/2" side plate omitted.
 For detail of intermediate stiffeners see Sheet 360.
 For underdeck lighting details see Lighting Plans.
 Scuppers shall be in accordance with Std. Dwg. SD-1-69 except that scupper pipes shall extend 8" below the bottom of girders instead of 2".

Note:
 The gutterline elevations shown have been adjusted for dead load deflections caused by the weight of concrete and wearing course and are the elevations required before the concrete deck is placed. No concrete shall be placed until the screed rails have been set for the entire unit.

H.N.T.B. BRIDGE NO. 2 Revised 6-9-75 By RAS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY CLEVELAND NEW YORK

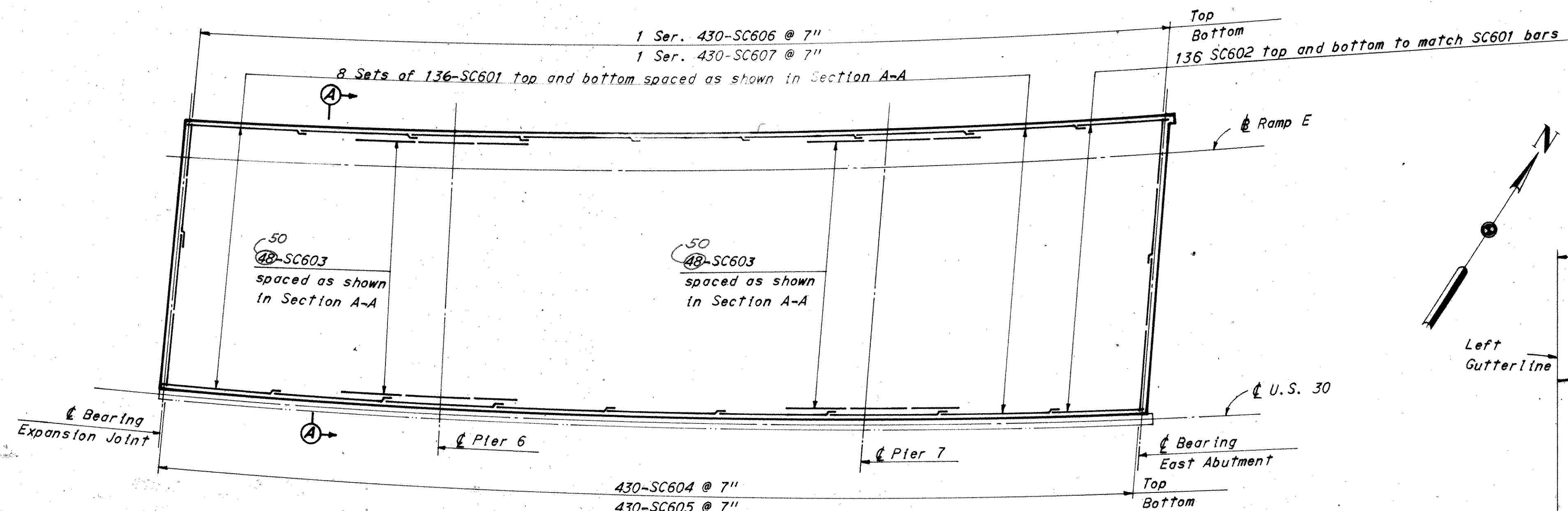
FRAMING PLAN
UNIT 2-WESTBOUND
 U.S. 30 OVER RAMP B, C, I-77
 AND PENNSYLVANIA R.R.

BR. NO. STA. 30-1487 STA. 960+02.25
 SCALE: 1"=20'-0" STA. 966+63.26

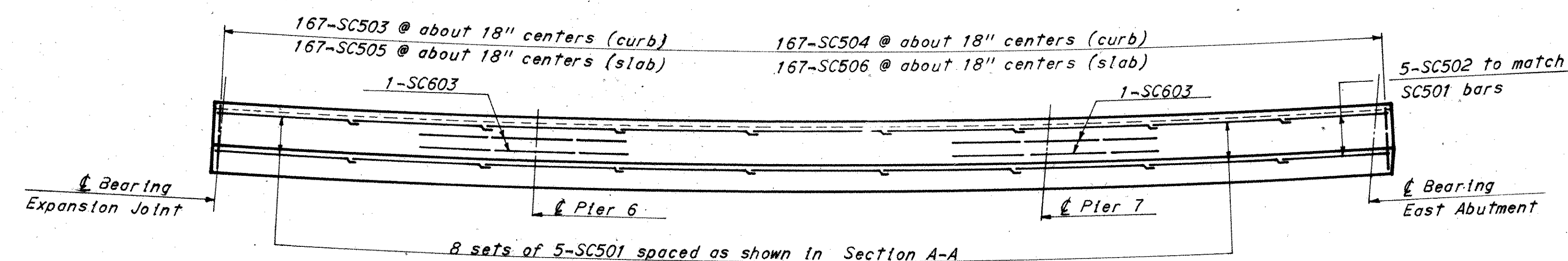
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CANTON STARK COUNTY OHIO

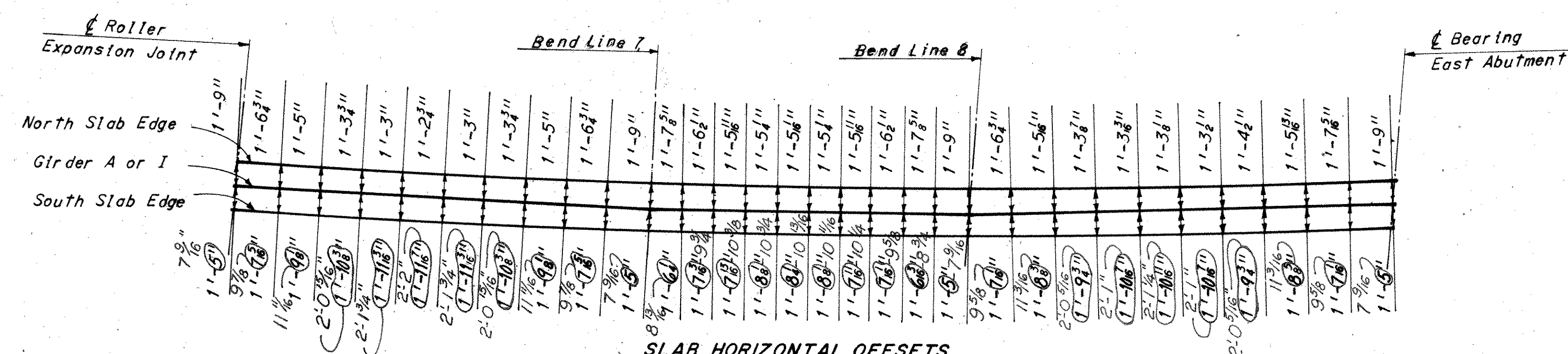
DRAWN BY DATE 12-2-69 TRACED DATE CHECKED DATE 5-5-70 REVIEWED DATE 11-21-71 REVISIONS 1668



DECK PLAN



NORTH CURB PLAN



SLAB HORIZONTAL OFFSETS

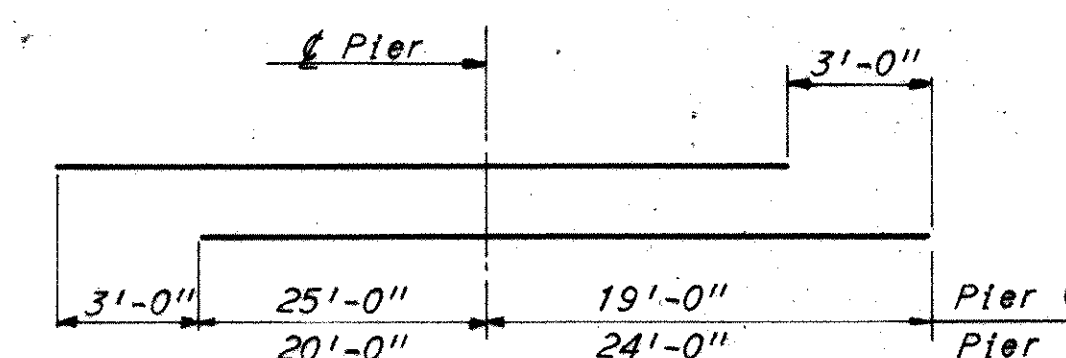


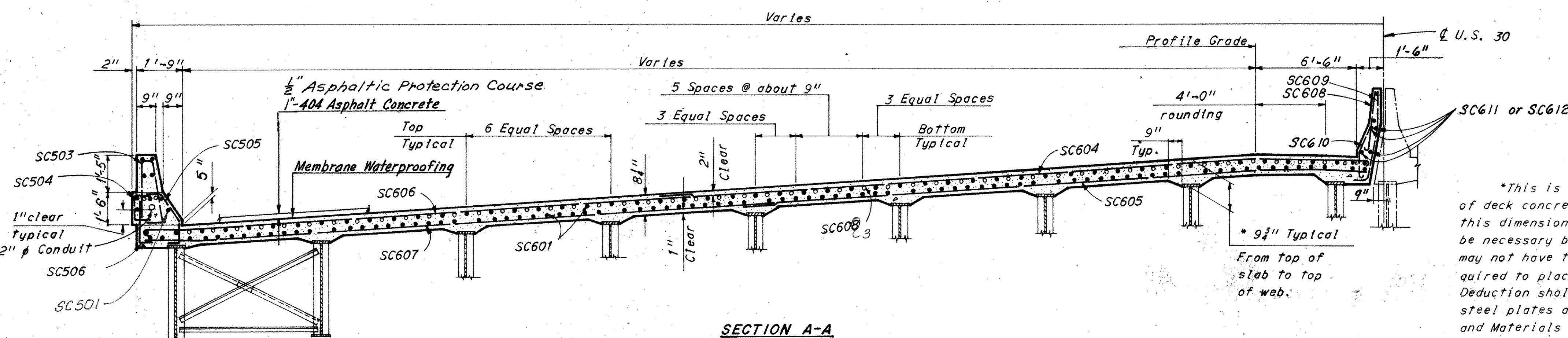
DIAGRAM SHOWING STAGGER OF
SC 603 BARS OVER PIERS

NOTES:

Reinforcing steel shall be adjusted as required to clear scuppers.

A typical haunch width of 9" shall be used for computing quantity of concrete. However, the haunch width may vary between 6" and 12" provided that the slope shall be not more than 1:4 for a haunch less than 9" in width.

For deflection joint details see Sheet 361.
For median and parapet details see Sheet 359.
For reinforcement schedule see Sheet 24/24
For handrail and parapet details see Sheet 362.
Transverse reinforcing steel shall be placed parallel to ϕ Bearing East Abutment.
Slab horizontal offsets given are at tenth points between ϕ Bearing and ϕ Bend Line or between two Bend Lines.
For subdrainage details, see Sheet 365A.
For median curb plan, see Sheet 19/24.



SECTION A-A

**This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the girder may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per Sec. 511.18 of The Construction and Materials Specifications.*

H.N.T.S. BRIDGE NO. 2		Revised 6-9-75		By RAS	
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS KANSAS CITY CLEVELAND NEW YORK				15 / 24	
DECK PLAN UNIT 2-WESTBOUND U.S. 30 OVER RAMP B, C, I-77 AND PENNSYLVANIA R.R.					
BR. NO. STA. 30.1487		STA. 960 + 02.25			
SCALE: 1"=20'-0"		STA. 966 + 63.26			
RELOCATED U.S. 30					
CANTON		STARK COUNTY		OHIO	
DRAWN OPK DATE 12-11-69	TRACED DATE	CHECKED MKG DATE 2-20	REVIEWED MJK DATE 11-22-71	REVISOR	3-2-76
					1668

STARK COUNTY
STA-30-14.12
STA-77-9.22

Notes:
Top and bottom flanges are identical in size.
All stiffeners shall be placed normal to girder flanges.
All intermediate stiffener to web welds shall be 1" continuous fillets on both sides of stiffeners.
For detail of field splices see Sheet 355.
All intermediate stiffeners shall be Pls 4 1/2" x 3/8"
For Camber and Deflection Table see Sheet 363.

Intermediate stiffeners shall be placed as shown on framing plan, equally spaced between crossframes or crossframes and bearing stiffeners or crossframes and splices.

End crossframe details shall be same as shown on Ohio Standard Drawing SD-1-69, Sheet 1 of 4.
For intermediate crossframe details see Sheet 360.
All crossframes are intermediate crossframes unless shown otherwise.
For details of roadway end dam, see Ohio Standard Drawing SD-1-65, Sheet 1 of 4, and Sheet 359.
For girder angles see sheet 12/24
For expansion joint details see sheets 356 and 357.

F.S. denotes field splice and B.L. denotes bend line.
For details at rockers and bolsters see Ohio Standard Drawing RB-1-55.

The girders shall be fabricated to lines parallel to profiles formed by top of pavement elevations directly over girders, plus the camber required to compensate for dead load deflection.

The allowance to be made in screed settings to compensate for dead load deflections due to concrete and wearing course are to be made above or below the top of the pavement elevations as required. Screeds may require further adjustment due to irregularities in fabricated steel.

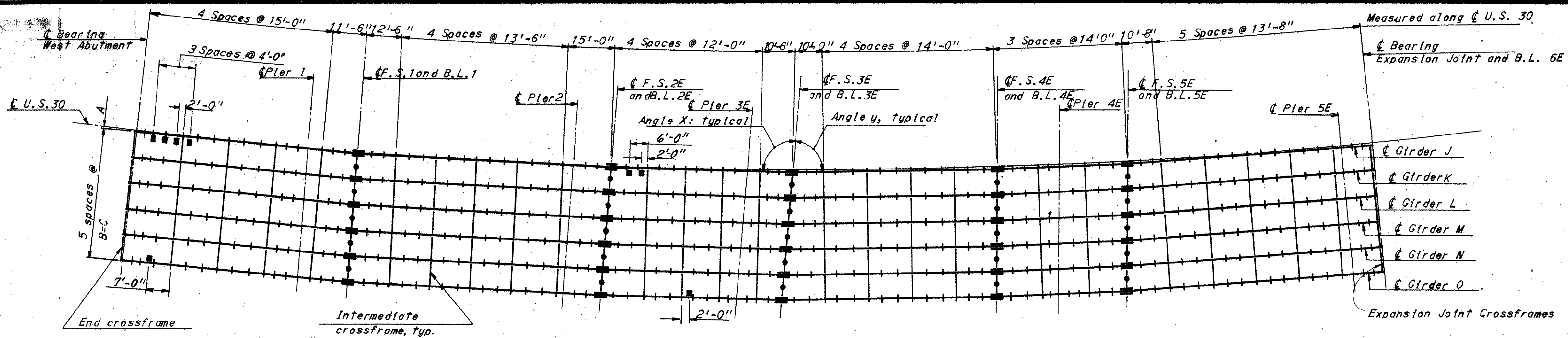
For details of curb plates at concrete bridge railing see Ohio Standard Drawing SD-1-69, Sheet 2 of 4.
For bend point crossframe details see Sheet 360.

Denotes bend point crossframe.
Dimensions to scuppers are measured along center-line of girders.

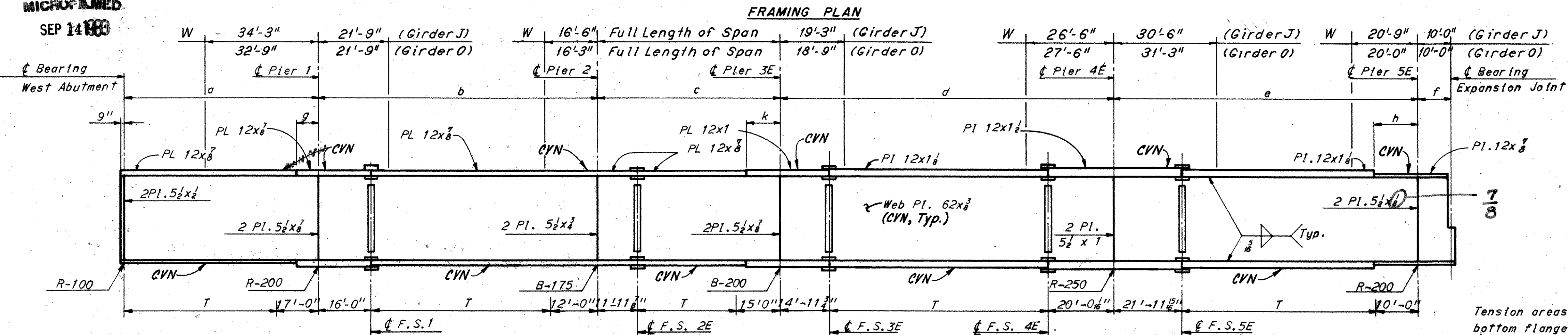
Denotes standard scupper.
For details of expansion joint crossframe see sheet 360.

For detail of intermediate stiffeners see sheet 360.
For underdeck light details see Lighting Plans.
Scuppers shall be in accordance with Std.

Dwg. SD-1-69 except that scupper pipes shall extend 8" below the bottom of girders instead of 2".



MICROFILMED
SEP 14 1980



Tension areas of the bottom flange are denoted by "T". For the top flange these areas are in compression.
"W" denotes the range where welded attachments cannot be made to the top flange of girders J or O.

CVN - See Sheet 214.

TABLE OF DIMENSIONS									
Girder	a	b	c	d	e	f	g	h	k
J	55'-6 1/2"	85'-6 1/2"	55'-5 1/2"	101'-0 1/2"	91'-0 1/2"	10'-0"	6'-6"	13'-5"	9'-7"
K	55'-8 1/2"		55'-5 1/2"	101'-7 1/2"	91'-11 1/2"			13'-5"	
L	55'-11 1/2"		55'-4 1/2"	102'-3 1/2"	92'-10 1/2"			13'-0"	
M	56'-2 1/2"		55'-4 1/2"	102'-10 1/2"	93'-8 1/2"			12'-8"	
N	56'-5 1/2"		55'-4"	103'-5 1/2"	94'-7 1/2"			12'-3"	
O	56'-8 1/2"	85'-6 1/2"	55'-3 1/2"	104'-1"	95'-6"	10'-0"	6'-6"	12'-3"	9'-7"

TOP OF PORTLAND CEMENT CONCRETE ELEVATIONS														
Girder	Brig. W. Abut.	.25	.50	.75	Pier 1	.25	.50	.75	Pier 2	.25	.50	.75	Pier 3E	.1
J	1068.35	1068.62	1068.89	1069.14	1069.38	1069.65	1070.07	1070.38	1070.66	1070.81	1070.99	1071.14	1071.28	1071.42
K	1068.87	1069.13	1069.38	1069.64	1069.89	1070.17	1070.56	1070.86	1071.15	1071.31	1071.49	1071.65	1071.80	1071.96
L	1069.45	1069.71	1069.96	1070.22	1070.47	1070.75	1071.13	1071.43	1071.72	1071.88	1072.06	1072.22	1072.37	1072.54
M	1070.03	1070.29	1070.54	1070.80	1071.05	1071.33	1071.71	1072.01	1072.30	1072.46	1072.64	1072.79	1072.95	1073.11
N	1070.61	1070.87	1071.12	1071.38	1071.63	1071.91	1072.29	1072.58	1072.87	1073.03	1073.21	1073.37	1073.52	1073.68
O	1070.43	1070.71	1070.98	1071.23	1071.47	1071.73	1072.16	1072.46	1072.73	1072.87	1073.06	1073.20	1073.33	1073.47
	.2	.3	.4	.5	.6	.7	.8	.9	Pier 4E	.25	.50	.75	Pier 5E	Brig. Exp. Jt.
J	1071.47	1071.55	1071.63	1071.71	1071.78	1071.84	1071.90	1071.95	1072.00	1072.08	1072.14	1072.18	1072.18	1072.17
K	1072.01	1072.08	1072.16	1072.23	1072.30	1072.37	1072.44	1072.49	1072.53	1072.63	1072.66	1072.69	1072.71	1072.72
L	1072.58	1072.65	1072.73	1072.80	1072.88	1072.95	1073.02	1073.06	1073.11	1073.20	1073.27	1073.29	1073.29	1073.29
M	1073.15	1073.23	1073.30	1073.38	1073.45	1073.52	1073.59	1073.64	1073.68	1073.77	1073.81	1073.84	1073.86	1073.87
N	1073.72	1073.80	1073.88	1073.95	1074.02	1074.09	1074.17	1074.21	1074.26	1074.35	1074.39	1074.42	1074.44	1074.44
O	1073.52	1073.61	1073.69	1073.77	1073.84	1073.90	1073.97	1074.02	1074.07	1074.15	1074.23	1074.27	1074.26	1074.25

* Denotes field splice

TOP OF PORTLAND CEMENT CONCRETE ELEVATIONS AT GUTTERLINE													
	Brig. N. Abut.	.25	.50	.75	Pier 1	.25	.50	.75	Pier 2	.25	.50	.75	Pier 3
North Gutterline	1068.35	1068.62	1068.89	1069.14	1069.38	1069.76	1070.11	1070.41	1070.66	1070.82	1070.98	1071.13	1071.28
South Gutterline	1070.43	1070.70	1070.97	1071.22	1071.46	1071.83	1072.18	1072.47	1072.72	1072.87	1073.03	1073.18	1073.33
	.2	.3	.4	.5	.6	.7	.8	.9	Pier 4	.25	.50	.75	Pier 5
North Gutterline	1071.50	1071.60	1071.70	1071.77	1071.83	1071.88	1071.93	1071.96	1072.00	1072.10	1072.18	1072.21	1072.18
South Gutterline	1073.55	1073.66	1073.76	1073.83	1073.89	1073.94	1073.99	1074.03	1074.07	1074.18	1074.26	1074.29	1074.26

Note: The gutterline elevations shown have been adjusted for dead load deflections caused by the weight of concrete and wearing course and are the elevations required before the concrete deck is placed. No concrete shall be placed until the screed rails have been set for the entire unit.

H.N.T.B. BRIDGE NO. 2		Revised 6-9-75	By RAS
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS KANSAS CITY CLEVELAND NEW YORK			
FRAMING PLAN UNIT I - EASTBOUND U.S. 30 OVER RAMP B, C, I-77 AND PENNSYLVANIA R.R.			
BR. NO. STA. 30-1487		STA. 960 + 02.25	
SCALE: 1" = 20'-0"		STA. 966 + 63.26	
RELOCATED U.S. 30 CANTON STARK COUNTY OHIO			
DRAWN DATE 2-3-69	TRACED DATE	CHECKED DATE 2-5-70	REVIEWED DATE 7-12-76
		1668	

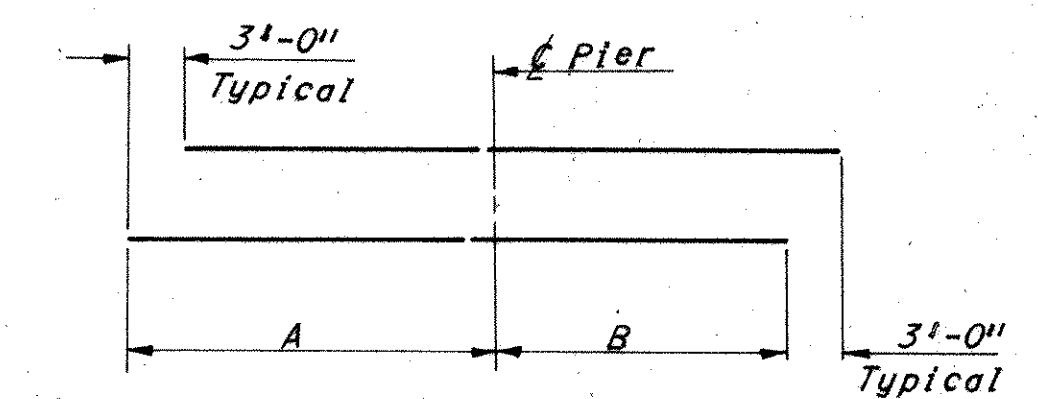
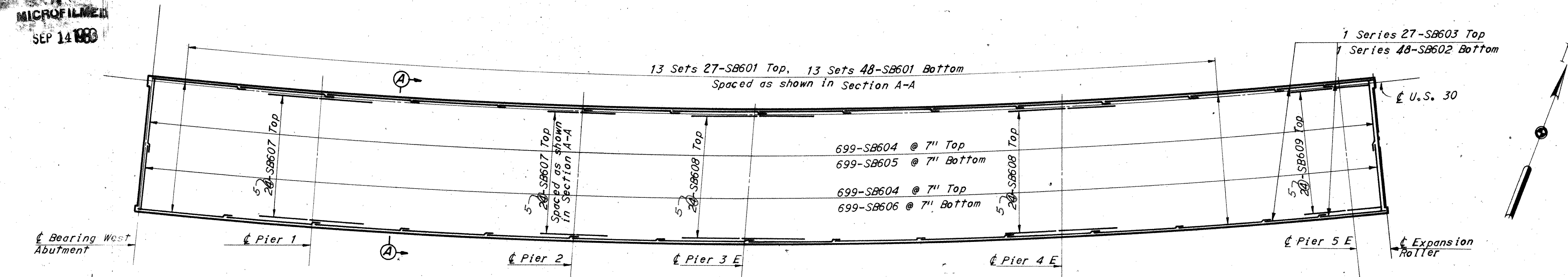
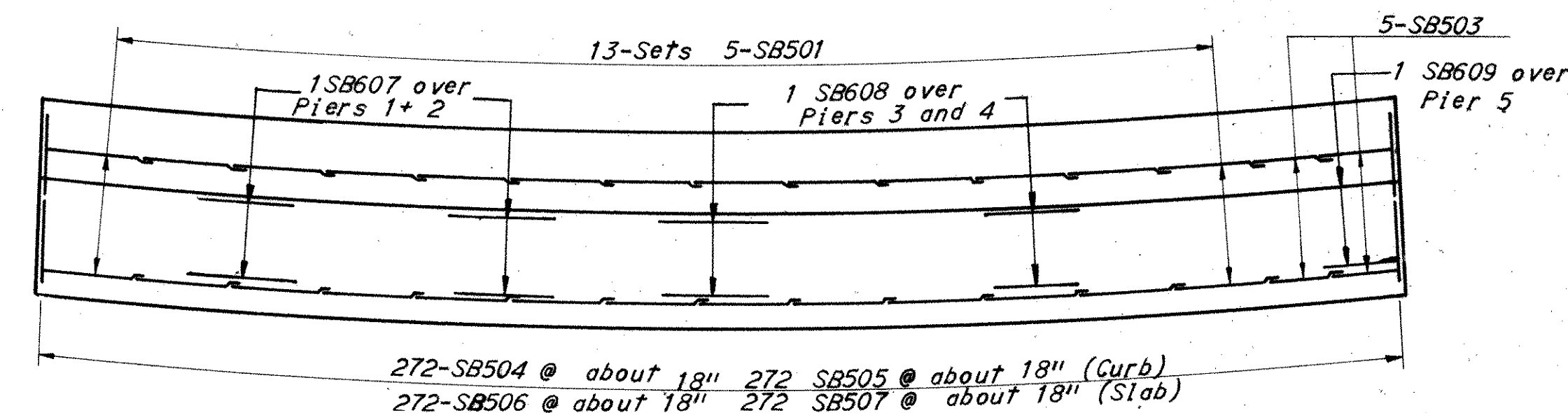
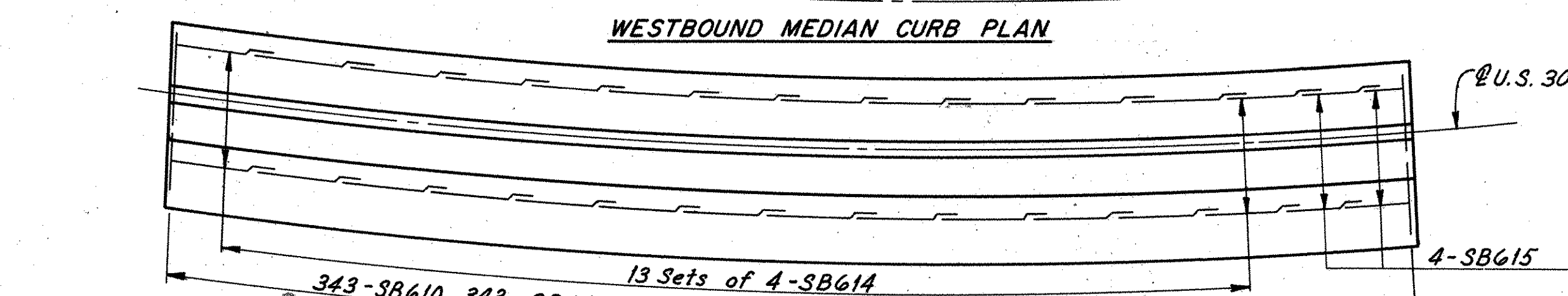
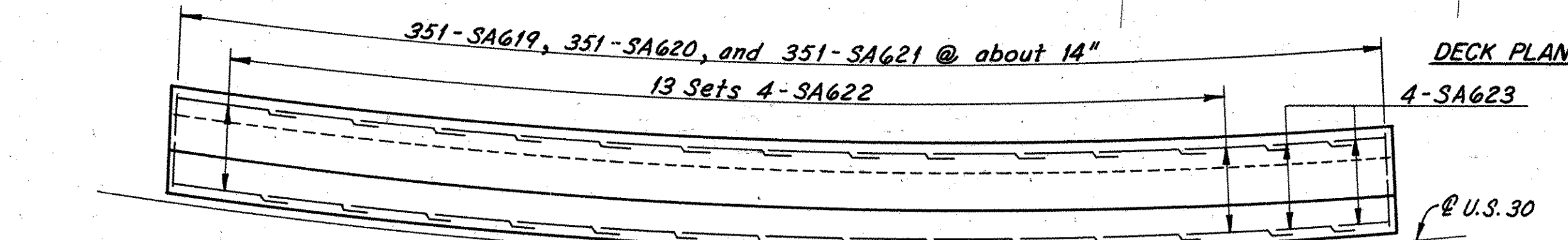
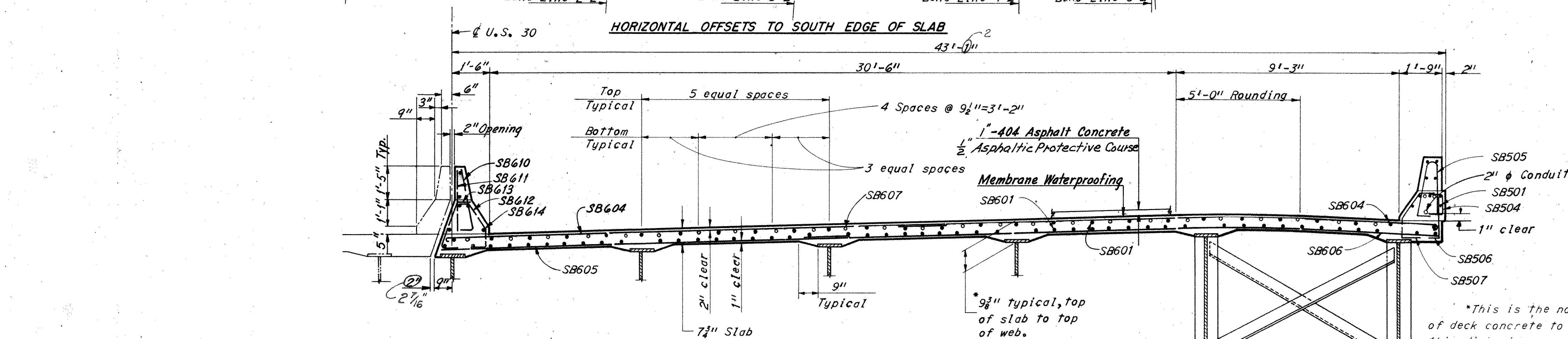
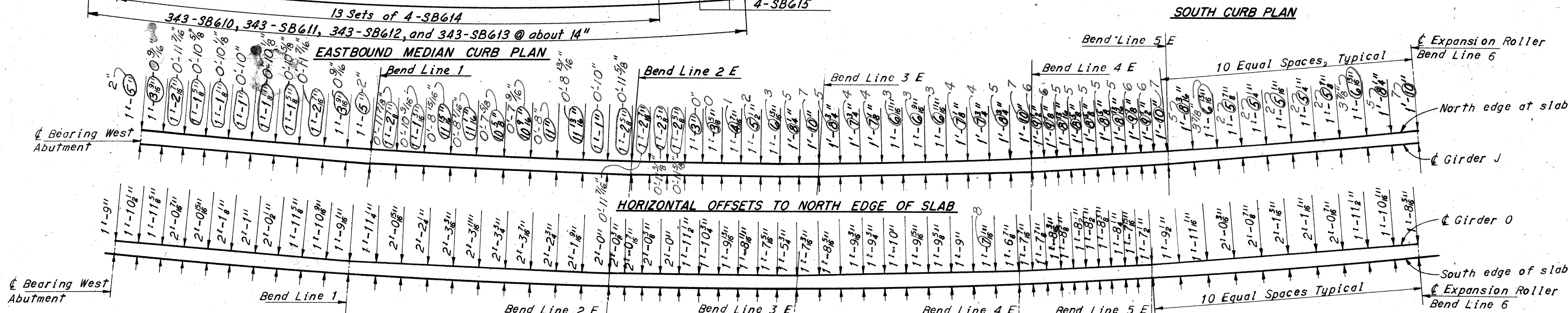


DIAGRAM SHOWING STAGGER OF
SB607 AND SB608
BARs OVER PIERS 1 THRU 4

	<i>A</i>	<i>B</i>
<i>Pier 1</i>	19°-0''	15°-0''
<i>Pier 2</i>	12°-0''	22°-0''
<i>Pier 3</i>	27°-0''	15°-0''
<i>Pier 4</i>	21°-0''	21°-0''



SOUTH CURB PLAN



SECTION A-A

Notes:

For Superelevation see Sheet

15	24
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For Subdrainage details, see Sheet 365A.

Reinforcing steel shall be adjusted as required to clear scuppers.

A typical haunch width of 9" shall be used for computing quantity of concrete. However, the haunch width may vary between 6" and 12" provided that the slope shall be not more than 1:4 for a haunch less than 9" in width.

For concrete railing details see Sheet 362.

For deflection joint details see Sheet 361.

For median details see Sheet 359.

For parapet details see Sheet 359.

Transverse reinforcing steel shall be placed radial to U.S. 30 and spaced along south edge of slab.

Concrete shall be placed from the expansion joint to Pier 6 before placing concrete from the expansion joint to Pier 4E.

*This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the girder may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per Sec. 511.18 of the Construction and Materials Specifications.

H.N.T.B. BRIDGE NO. 2	Revised 6-9-75	By RAS
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HOWARD. NEEDLES, TAMMEN & BERGENDOFF	1
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CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

BECK BLANK UNIT 1

DECK PLAN-UNIT 1
EASTBOUND

EASTBOUND

U.S. 30 OVER RAMP B, C, I-77
AND PENNSYLVANIA P.D.

AND PENNSYLVANIA R.R.

STA. 30-1487 STA. 960

1"=20'-0" STA. 966

RELOCATED U.S. 30

STARK COUNTY

ACED	CHECKED MAG	REVIEWED MJK	REVISED
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DATE	DATE 6-3-70	DATE 11-22-71	
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Revised 4-

Revised 4-28-77.

STARK COUNTY
STA-30-14.12
STA-77-9.22

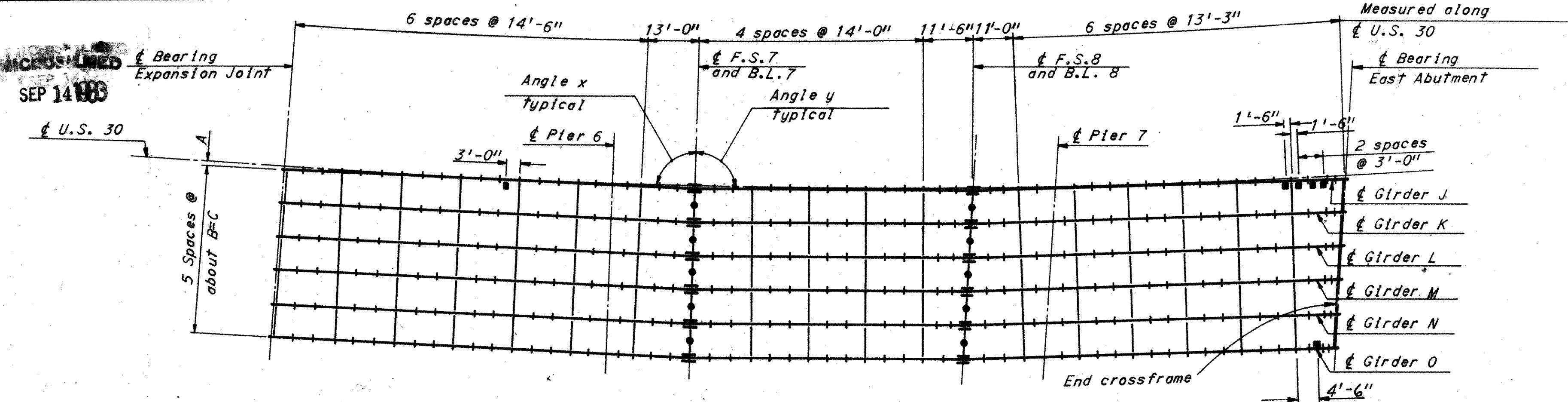
Notes:
 Top and bottom flanges are identical in size.
 All stiffeners shall be placed normal to girder flanges.
 All intermediate stiffener to web welds shall be 1/4" continuous fillets on both sides of stiffeners.
 For detail of field splices see Sheet 355
 All intermediate stiffeners shall be Pls 4 1/2" x 5/8"
 For Camber and Deflection Table see Sheet 363

Intermediate stiffeners shall be placed as shown on framing plan, equally spaced between crossframes or crossframes and bearing stiffeners or crossframes and splices.

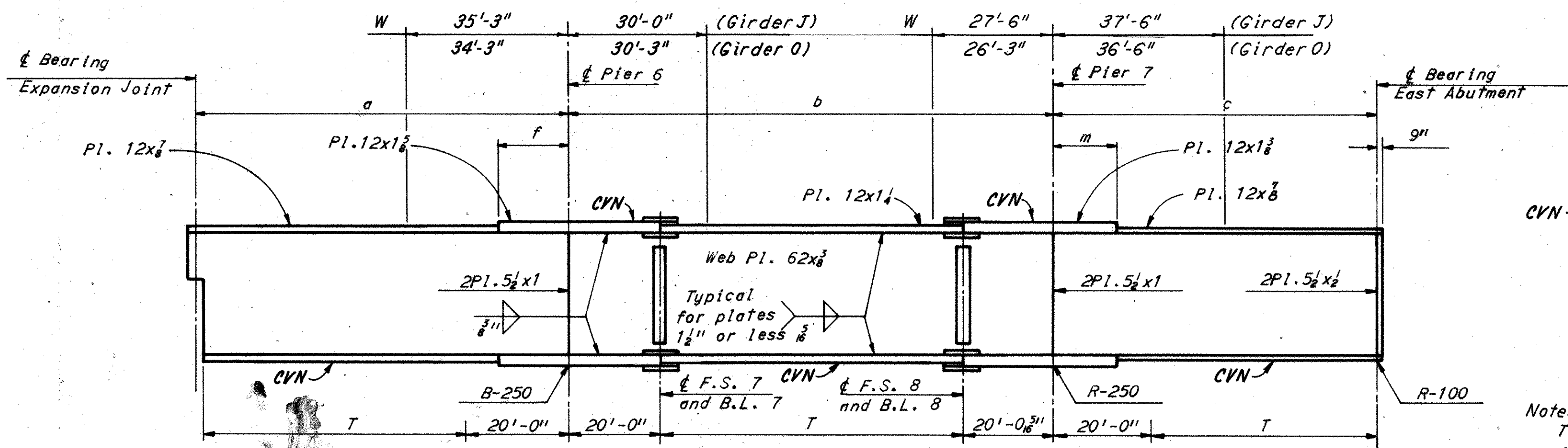
End crossframe details shall be same as shown on Ohio Standard Drawing SD-1-69, Sheet 1 of 4.
 For intermediate crossframe details see Sheet 356
 All crossframes are intermediate crossframes unless shown otherwise.
 For details of roadway end dam, see Ohio Standard Drawing SD-1-69, Sheet 1 of 4, and Sheet 359.
 For girder angles see Sheet 12/24

For expansion joint details see Sheets 356 and 357.
 F.S. denotes field splice and B.L. denotes bend line.
 For details of rockers and bolsters see Ohio Standard Drawing RB-1-55.
 The girders shall be fabricated to lines parallel to profiles formed by top of pavement elevations directly over girders, plus the camber required to compensate for dead load deflection.
 The allowance to be made in screed settings to compensate for dead load deflections due to concrete and wearing course are to be made above or below the top of the pavement elevations as required. Screeds may require further adjustment due to irregularities in fabricated steel.

For bend point crossframe details see Sheet 360.
 — Denotes bend point crossframe.
 Dimensions to scuppers are measured along center-line of girders.
 ■ Denotes standard scupper.
 For underpass light support details see Lighting plans
 For detail of intermediate stiffeners see Sheet 360.
 Scuppers shall be in accordance with Std.
 Dwg. SD-1-69 except that scupper pipes shall extend 8" below the bottom of girders instead of 2".



FRAMING PLAN



GIRDER ELEVATION

Notes:
 Tension areas of the bottom flange are denoted by "T".
 For the top flange, these areas are in compression.
 "W" denotes the range where welded attachments cannot be made to the top flange of girders J and O.

TABLE OF DIMENSIONS					
Girder	a	b	c	f	m
J	80'-0 1/4"	107'-6 1/4"	70'-5 3/8"	15'-0"	13'-9"
K	80'-4 3/8"	107'-3 3/8"			
L	80'-8 3/8"	107'-1"			
M	81'-0 1/2"	106'-10 1/2"			
N	81'-4 3/8"	106'-7 1/4"			
O	81'-8 3/8"	106'-5 3/8"	70'-5 3/8"	15'-0"	13'-9"

GIRDER SPACING			
	A	B	C
Exp. Jt.	10"	8'-1 3/4" ±	40'-5 3/8"
Pier 6	2 3/8"	8'-1 1/4" ±	40'-5 3/8"
B.L. 7	7"	8'-1 1/4" ±	40'-5 3/8"
B.L. 8	7"	8'-1 1/4" ±	40'-6 3/8"
Pier 7	3"	8'-1 1/4" ±	40'-6 3/8"
E. Abut.	6 3/8"	8'-1 1/4" ±	40'-6 3/8"

TOP OF PORTLAND CEMENT CONCRETE ELEVATIONS																			
Girder	£ Brg. Exp. Jt.	.25	.50	.75	£ Pier 6	.1	.2 *	.3	.4	.5	.6	.7	.8*	.9	£ Pier 7	.25	.50	.75	£ Brg. E. Abut
J	1072.17	1072.14	1072.10	1072.02	1071.93	1071.87	1071.82	1071.74	1071.66	1071.58	1071.49	1071.40	1071.28	1071.19	1071.08	1070.90	1070.73	1070.55	1070.38
K	1072.72	1072.66	1072.59	1072.51	1072.43	1072.39	1072.35	1072.25	1072.17	1072.08	1071.98	1071.88	1071.77	1071.65	1071.53	1071.33	1071.13	1070.95	1070.77
L	1073.29	1073.23	1073.16	1073.09	1073.01	1072.96	1072.92	1072.83	1072.74	1072.64	1072.54	1072.43	1072.30	1072.18	1072.04	1071.82	1071.61	1071.41	1071.21
M	1073.87	1073.81	1073.74	1073.66	1073.58	1073.54	1073.50	1073.40	1073.31	1073.20	1073.09	1072.97	1072.83	1072.70	1072.55	1072.31	1072.08	1071.86	1071.65
N	1074.44	1074.38	1074.31	1074.24	1074.16	1074.11	1074.07	1073.97	1073.88	1073.77	1073.65	1073.52	1073.36	1073.22	1073.06	1072.81	1072.56	1072.32	1072.09
O	1074.25	1074.24	1074.20	1074.13	1074.03	1073.97	1073.91	1073.83	1073.74	1073.64	1073.51	1073.37	1073.20	1073.08	1072.94	1072.69	1072.44	1072.19	1071.92

* Denotes field splice

TOP OF PORTLAND CEMENT CONCRETE ELEVATIONS AT GUTTERLINE																			
	£ Brg. Exp. Jt.	.25	.50	.75	£ Pier 6	.1	.2	.3	.4	.5	.6	.7	.8	.9	£ Pier 7	.25	.50	.75	£ Brg. E. Abut.
North Gutterline	1072.16	1072.16	1072.12	1072.03	1071.93	1071.88	1071.83	1071.78	1071.71	1071.63	1071.54	1071.44	1071.32	1071.20	1071.08	1070.90	1070.74	1070.56	1070.38
South Gutterline	1074.24	1074.24	1074.19	1074.11	1074.01	1073.96	1073.91	1073.86	1073.77	1073.67	1073.54	1073.40	1073.24	1073.07	1072.91	1072.66	1072.42	1072.17	1071.91

Note: The gutterline elevations shown have been adjusted for dead load deflections caused by the weight of concrete and wearing course and are the elevations required before the concrete deck is placed. No concrete shall be placed until the screed rails have been set for the entire unit.

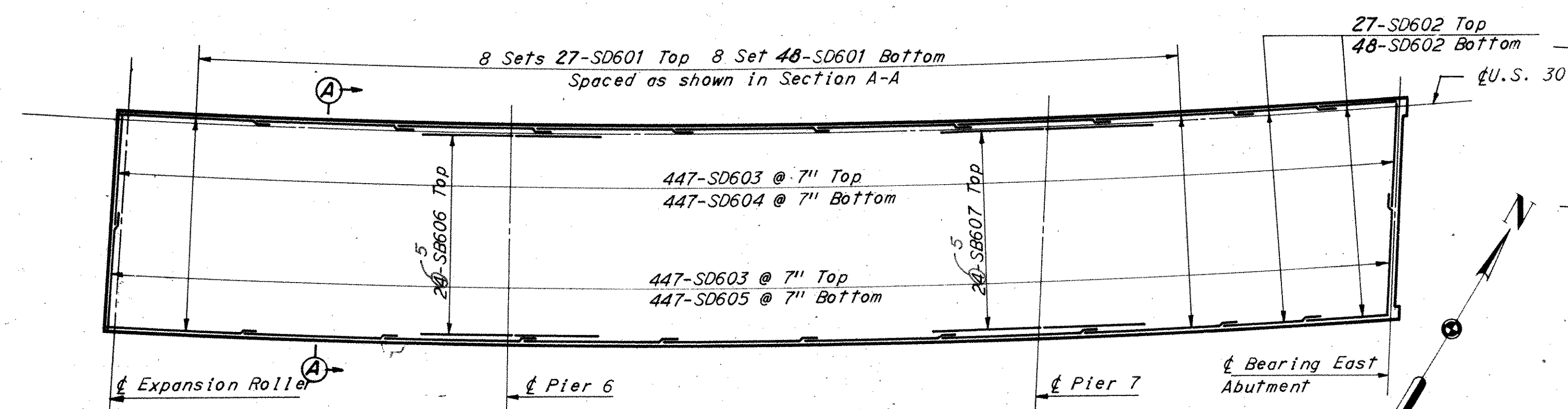
H.N.T.B. BRIDGE NO. 2		Revised 8-9-75		By RAS	
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS KANSAS CITY CLEVELAND NEW YORK					
FRAMING PLAN UNIT 2 - EASTBOUND U.S. 30 OVER RAMP B, C, I-77 AND PENNSYLVANIA R.R.					
BR. NO. STA. 30-1487		STA. 960 + 02.25			
SCALE: 1" = 20'-0"		STA. 966 + 63.26			
RELOCATED U.S. 30 CANTON STARK COUNTY OHIO					
DRAWN BY	TRACED	CHECKED BY	REVIEWED	REVIS	
DATE 12-8-69	DATE	DATE 5-5-70	DATE 1-22-71	DATE 7-20-76	1668

SEP 14 1983

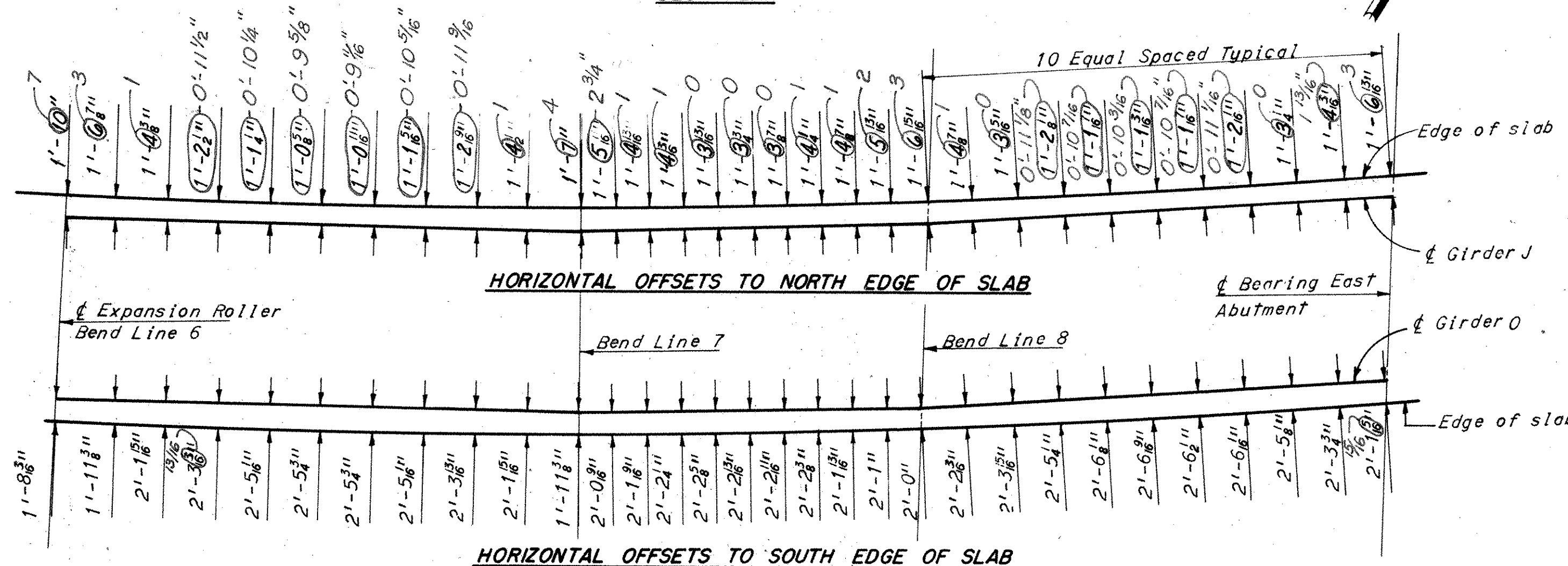
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2	OHIO		

251
389

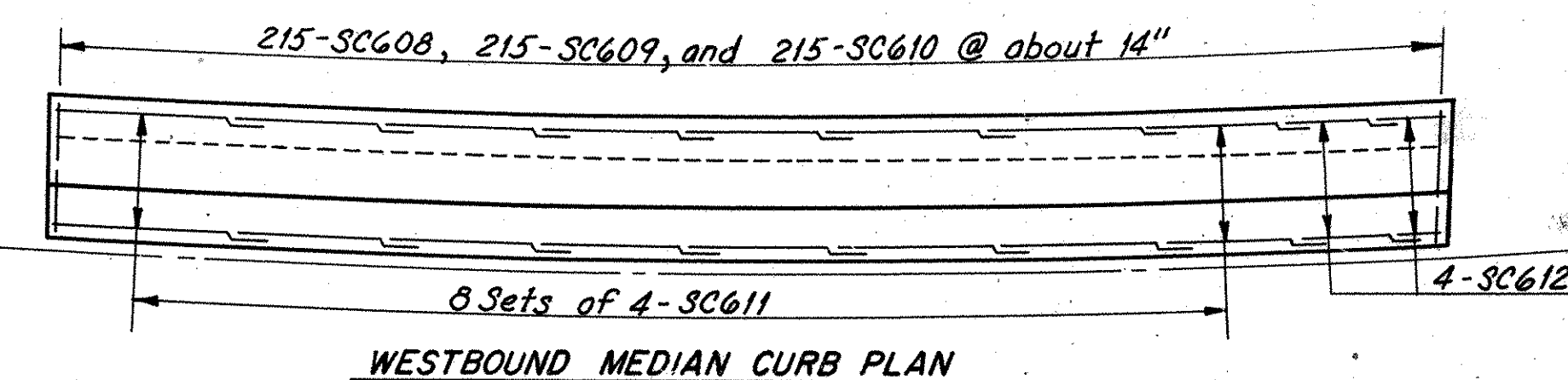
STARK COUNTY
STA-30-14.12
STA-77-9.22



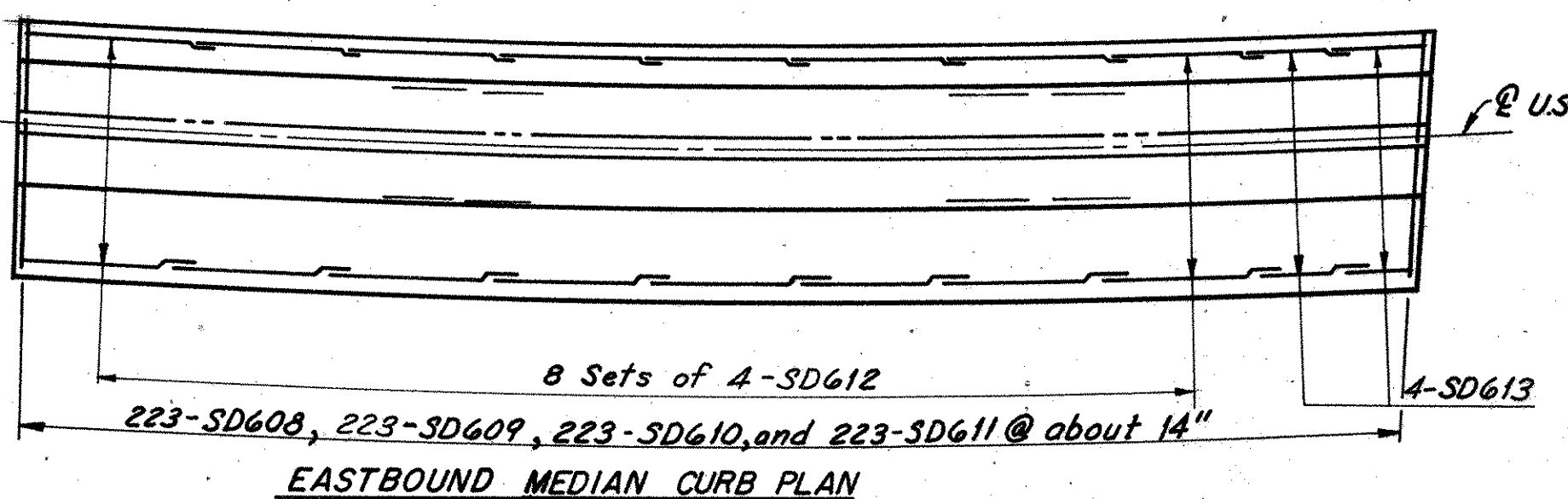
DECK PLAN



HORIZONTAL OFFSETS TO SOUTH EDGE OF SLAB



WESTBOUND MEDIAN CURB PLAN



EASTBOUND MEDIAN CURB PLAN

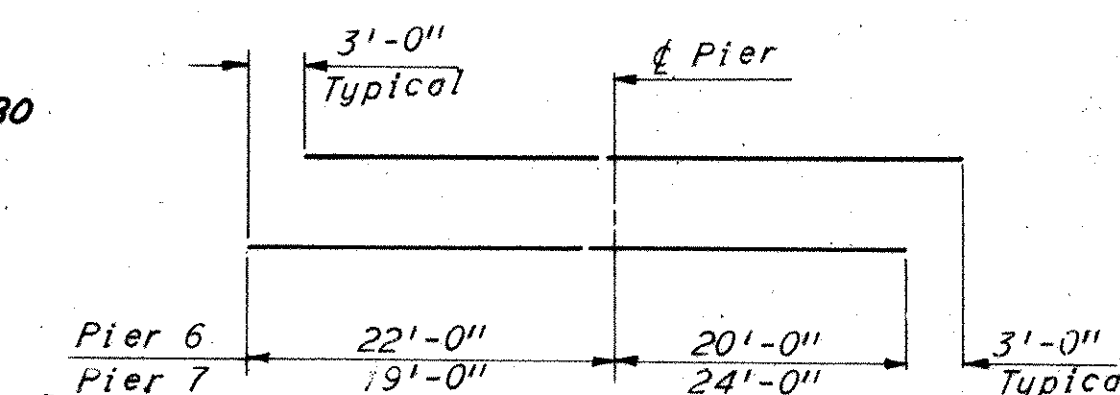
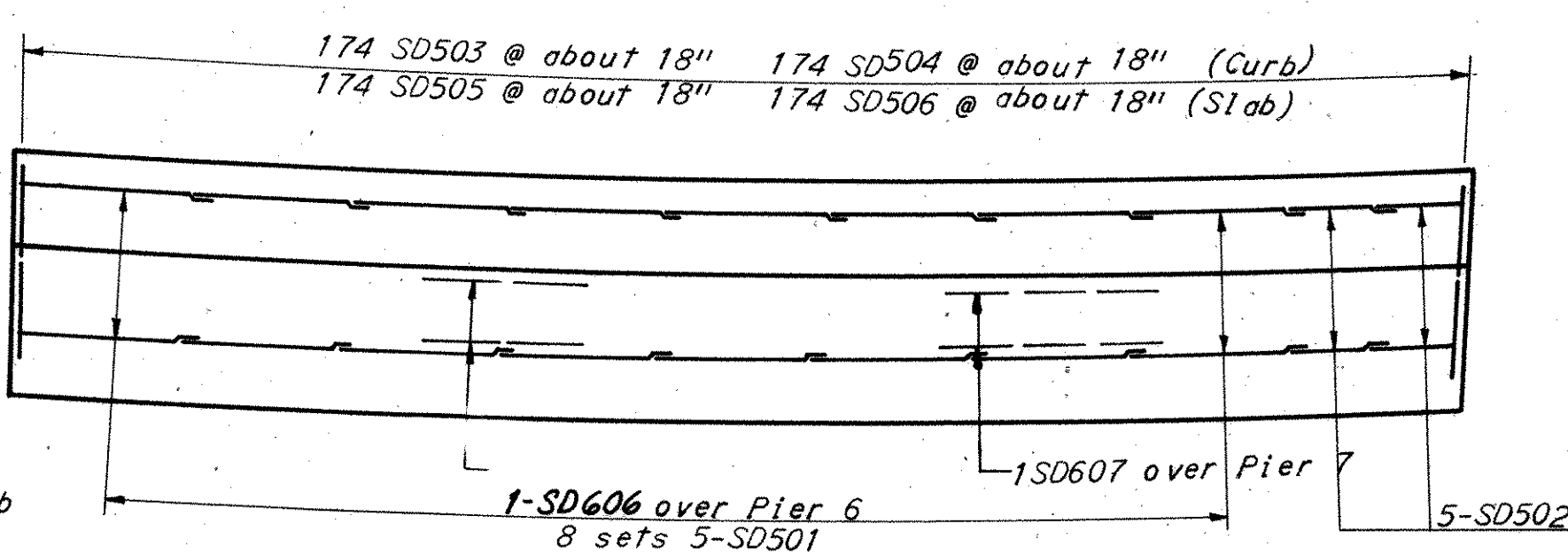
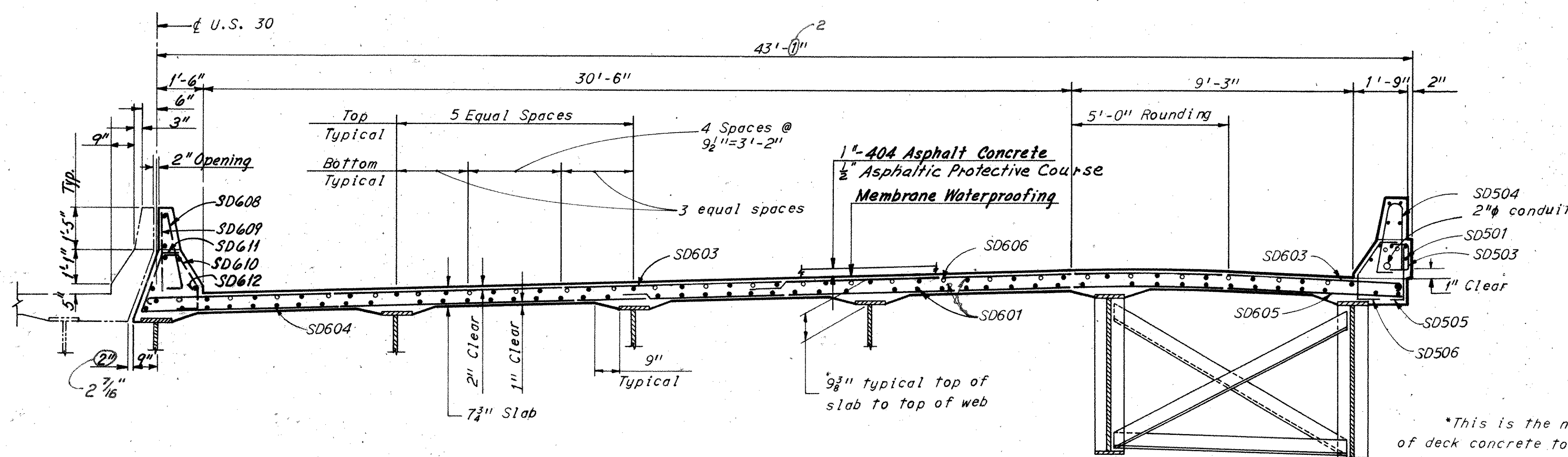


DIAGRAM SHOWING STAGGER OF
SD606 AND SD607
BARS OVER PIERS 6 AND 7



SOUTH CURB PLAN



SECTION A-A

Notes:

Reinforcing steel shall be adjusted as required to clear scuppers.

A typical haunch width of 9" shall be used for computing quantity of concrete. However, the haunch width may vary between 6" and 12" provided that the slope shall be not more than 1:4 for a haunch less than 9" in width.

For concrete railing details see Sheet 362.

For deflection joint details see Sheet 361.

For median details see Sheet 359.

For parapet details see Sheet 359.

Transverse reinforcing steel shall be placed parallel to Bearing East Abutment.

For Superelevation data see Sheet 15/24.

For reinforcement schedule see Sheet 24/24.

For subdrainage details, see Sheet 365-A.

*This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the girder may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per Sec. 511.18 of the Construction and Materials Specifications.

H.N.T.B. BRIDGE NO. 2		Revised 6-9-75	By RAS
HOWARD, NEEDLES, TAMMEN & BERGENDOFF		19/24	
CONSULTING ENGINEERS			
KANSAS CITY CLEVELAND NEW YORK			
DECK PLAN-UNIT 2			
EASTBOUND			
U.S. 30 OVER RAMP B, C, I-77			
AND PENNSYLVANIA R.R.			
BR. NO. STA. 30-1487	STA. 960 + 02.25		
SCALE: 1"=20'-0"	STA. 966 + 63.26		
RELOCATED U.S. 30			
CANTON STARK COUNTY OHIO			
DRAWN/DE	TRACED	CHECKED	REVIEWED
DATE 12-16-69	DATE	DATE 11-14-71	DATE 3-2-76
			1668

Revised 4-28-77

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS			SERIES INCRE.	WEIGHT POUNDS
				A	B	C		
WEST ABUTMENT								
AA401	90	3'-5"	105	1'-0"	1'-8"			206
AA501	20	11'-10"	109	3'-6"	2'-6"			247
AA502	80	8'-4"	105	1'-7"	5'-5"			695
AA503	20	9'-8"	117	6'-6"	4'-7"	1'-2 1/2"		202
AA504	24	3'-10"	104	2'-0"	2'-0"			96
AA505	21	38'-10"	Str.					851
AA506	21	32'-5"	Str.					710
AA507	21	29'-5"	Str.					644
AA515	80	6'-3"	105	1'-7"	3'-4"			530
AA516	80	7'-8"	104	6'-9"	1'-0"			640
AA517	4	4'-1"	115	1'-11"	9"	12"		17
AA518	4	3'-10"	168	9"	2'-7"			16
AA519	7	11"	Str.					7
AA520	30	2'-4"	105	9"	1'-1"			73
AA521	20	6'-10"	114	3'-2"				143
AA522	20	2'-9"	Str.					57
AA523	4	7'-0"	Str.					29
AA524	4 Ser. 3	11'-2" to 15'-2"	Str.				2'-0"	165
AA525	4	10'-7"	108	1'-7"	9'-0"	4'-6"		44
AA526	24	18'-8"	Str.					468
AA527	8	12'-6"	Str.					105
AA528	8	9'-0"	Str.					75
AA529	18	7'-3"	Str.					136
AA530	4	3'-6"	Str.					15
AA531	2	4'-0"	Str.					9
AA532	2	4'-9"	Str.					10
AA533	2	5'-6"	Str.					12
AA534	2	6'-3"	Str.					13
AA535	4	13'-6"	Str.					57
AA536	1	6'-10"	109	2'-3"	11"			7

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS			SERIES INCRE.	WEIGHT POUNDS
				A	B	C		
EAST ABUTMENT								
AB401	90	3'-5"	105	1'-0"	1'-8"			206
AB501	22	11'-10"	109	3'-2"	2'-6"			271
AB502	88	8'-4"	105	1'-7"	5'-5"			765
AB503	10	10'-0"	117	6'-10"	4'-6"	1'-5"		104
AB504	12	4'-7"	118	1'-7"	1'-6"	2"		57
AB505	12	3'-2"	108	1'-7"	1'-7"	1'-6"		40
AB506	88	7'-6"	104	6'-7"	1'-0"			689
AB507	88	6'-4"	105	1'-7"	3'-5"			581
AB508	21	30'-4"	Str					664
AB509	21	29'-8"	Str					650
AB510	21	26'-8"	Str					585
AB511	21	31'-0"	Str					679
AB519	10	9'-2"	117	6'-0"	4'-6"	1'-1"		96
AB520	4	4'-1"	115	1'-11"	9"	12"		17
AB521	4	3'-10"	168	9"	2'-7"			16
AB522	7	11"	Str					7
AB523	20	6'-10"	114	3'-2"				143
AB524	20	2'-9"	Str					57
AB525	30	2'-4"	105	9"	1'-1"			73
AB526	24	18'-8"	Str					467
AB527	8	12'-6"	Str					105
AB528	8	9'-6"	Str					80
AB529	4 Ser. 3	11'-2" to 15'-2"	Str				2'-0"	163
AB530	4	13'-6"	Str					56
AB531	4	10'-7"	108	1'-7"	9'-0"	4'-9"		44
AB532	18	7'-3"	Str					136
AB533	4	7'-0"	Str					29
AB534	4	3'-6"	Str					15
AB535	2	4'-0"	Str					8
AB536	2	4'-9"	Str					10
AB537	2	5'-6"	Str					12
AB538	2	6'-3"	Str					13
AB539	1	6'-10"	109	2'-3"	11"			7
AB601	2	16'-4"	109	5'-5"	2'-6"			49
AB602	88	14'-4"	106	5'-5"	6'-7"	2'-8"		1900
AB603	120	5'-1"	105	2'-0"	1'-5"			916
AB604	120	16'-1"	105	7'-6"	1'-5"			2,899
AB606	120	7'-3"	105	3'-4"	11"			1,307
AB607	1	7'-6"	104	1'-0"	6'-8"			11
AB608	9	18'-8"	105	8'-11"	1'-2"			252
AB609	18	8'-6"	115	6'-10"	9"	7 1/2"		230
AB610	2	7'-10"	115	6'-2"	9"	7 1/2"		24
AB611	1	8'-1"	104	1'-0"	7'-3"			12
AB612	9	19'-10"	105	9'-6"	1'-2"			268
AB701	4	5'-1"	115	3'-5"	9"	7 1/2"		42
AB703	2	5'-8"	115	4'-0"	9"	7 1/2"		23
AB704	2	6'-6"	115	4'-10"	9"	7 1/2"		27
AB705	2	7'-4"	115	5'-8"	9"	7 1/2"		30
DB801	78	5'-3"	141	3'-2"				1093
AB801	28	32'-3"	Str					2415
AB802	12	12'-9"	Str					410
	</							

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS			SERIES INCRE.	WEIGHT POUNDS
				A	B	C		
PIER 1								
SPA401	1	432'-11"	112	52.4	18'-8"	2'-8"		349
SPA402	1	609'-1"	112	73.8	26'-8"	2'-8"		492
SPA403	1	675'-1"	112	81.8	29'-8"	2'-8"		546
SPA404	1	697'-1"	112	84.4	30'-8"	2'-8"		564
SPA405	1	691'-7"	112	83.8	30'-5"	2'-8"		559
SPA406	1	713'-7"	112	86.4	31'-5"	2'-8"		577
SPA407	1	737'-6"	112	89.3	32'-6"	2'-8"		597
PA501	86	4'-5"	105	1'-0"	2'-8"			396
PA502	2	4'-0"	105	1'-0"	2'-3"			8
PA503	2	3'-1"	105	1'-0"	1'-4"			7
PA504	74	13'-4"	109	2'-8"	3'-8"			1030
PA505	26	12'-0"	109	2'-0"	3'-8"			326
PA601	4	42'-3"	Str					254
PA602	6	6'-2"	105	1'-11"	2'-8"			56
PA603	8	8'-1"	113	1'-11"	4'-3"	2'-8"		97
PA604	4	57'-6"	Str					346
PA901	132	12'-0"	100	9'-6"				5390
PA1001	12	22'-9"	Str					1174
PA1002	12	30'-9"	Str					1590
PA1003	12	34'-3"	Str					1770
PA1004	22	35'-3"	Str					3340
PA1005	10	34'-0"	Str					1464
PA1006	78	7'-3"	104	6'-5"	1'-1"			2440
PA1007	10	36'-3"	Str					1560
PA1101	3	47'-6"	111	42'-1"	2'-0"			756
PA1102	2	10'-3"	Str					109
PA1103	2	30'-3"	Str					322
PA1104	2	10'-6"	Str					112
PA1105	3	43'-6"	Str					693
PA1106	5	33'-3"	Str					884
PA1107	2	12'-3"	Str					130
PA1108	3	15'-3"	Str					243
PA1109	2	9'-0"	Str					96
PA1110	3	58'-6"	Str					931
PA1111	3	32'-6"	111	28'-2"	2'-0"			518
PA1112	2	57'-6"	Str					610
PA1113	2	31'-5"	111	27'-1"	2'-0"			334
PA1114	2	45'-1"	111	40'-9"	2'-0"			480
PA1115	2	42'-3"	Str					450

FED. ROAD DIV. NO. 2
STATE OHIO
FEDERAL AID PROJECT NO.
TYPE FUNDS

252
389

STARK COUNTY
STA-30-14.12
STA-77-9.22

SEP 14 1983

REINFORCEMENT SCHEDULE

U.S. 30 OVER RAMP B, C, 1-77
AND PENNSYLVANIA R.R.

BR. NO. STA. 30-1487
SCALE: STA. 960 + 02.25
STA. 966 + 63.26

RELOCATED U.S. 30

CANTON STARK COUNTY OHIO

DRAWN 2085 TRACED DATE 7-6-70 CHECKED 2074 DATE 7-28-70 REVIEWED DATE 11-22-71

1668

BENDING DIAGRAMS

Notes:
All bar dimensions are given out to out.
All bars of a series shall vary in length by a constant increment.
For replacement reinforcement schedule see sheet 24/24
Four steel channels, tee or angle spacers weighing approximately 0.80 pounds per linear foot shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. An allowance of 0.80 pounds per linear foot for spacers is included with the weight of the spiral bars and paid for as reinforcing steel.

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS			SERIES INCRE.	WEIGHT POUNDS
				A	B	C		
PIER 2								
SPB401	1	1387'-4"	112	121.1	44'-5"	3'-8"		1069
SPB402	1	1497'-3"	112	130.7	48'-0"	3'-8"		1154
SPB403	1	1618'-8"	112	141.3	52'-0"	3'-8"		1247
SPB404	1	1713'-9"	112	149.6	55'-1"	3'-8"		1320
SPB405	1	1737'-10"	112	151.7	55'-10"	3'-8"		1339
SPB406	1	1766'-6"	112	154.2	56'-10"	3'-8"		1362
SPB407	1	1799'-8"	112	157.1	57'-11"	3'-8"		1385
PB501	86	5'-5"	105	1'-0"	3'-8"			486
PB502	2	5'-0"	105	1'-0"	3'-3"			10
PB503	2	4'-1"	105	1'-0"	2'-4"			9
PB504	63	16'-4"	109	3'-8"	4'-2"			1078
PB601	4	42'-3"	Str					254
PB602	6	7'-2"	105	1'-11"	3'-8"			65
PB603	8	9'-7"	113	1'-11"	5'-9"	3'-8"		115
PB604	4	59'-9"	Str					359
PB701	7	33'-0"	Str					472
PB702	10	12'-6"	Str					256
PB703	14	11'-6"	Str					330
PB704	5	9'-9"	Str					100
PB705	7	26'-0"	Str					372
PB706	3	37'-9"	Str					232
PB707	7	13'-3"	Str					190
PB708	3	36'-6"	111	31'-5"	2'-9"			224
PB709	2	36'-3"	Str					148
PB710	2	36'-1"	111	31'-0"	2'-9"			147
PB711	2	34'-10"	111	29'-9"	2'-9"			142
PB712	2	37'-3"	Str					151
PB801	3	47'-8"	111	42'-6"	2'-9"			381
PB802	5	10'-3"	Str					137
PB803	2	9'-9"	Str					52
PB804	3	43'-9"	Str					350
PB805	3	10'-0"	Str					80
PB806	2	15'-3"	Str					82
PB807	2	43'-6"	Str					232
PB808	2	42'-3"	Str					228
PB809	32	13'-8"	100	11'-6"				1160
PB810	2	47'-3"	111	42'-1"	2'-9"			252
PB811	2	46'-0"	111	40'-10"	2'-9"			246
PB901	64	14'-0"	100	11'-6"				3050
PB1001	28	31'-9"	Str					3820
PB1002	28	32'-3"	Str					3900
PB1003	28	32'-8"	Str					3920
PB1004	42	42'-9"	Str					7725
PB1005	84	7'-3"	104	6'-5"	1'-1"			2620
PB1006	18	14'-4"	100	11'-6"				1114

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS			SERIES INCRE.	WEIGHT POUNDS
				A	B	C		
PB1101	12	49'-0"	Str.					3120
PB1102	12	52'-5"	Str.					3350
PB1103	12	56'-3"	Str.					3590
PB1104	12	60'-0"	Str.					3830
PB1105	18	34'-9"	Str.					3325
PB1106	66	7'-8"	104	6'-9"	1'-2"			2660
PB1107	134	20'-8"	100	17'-6"				1470
				Total	Pier	2 =		64,710
								77,985
PIER 3 WESTBOUND								
SPC401	1	1656'-0"	112	144.4	53'-2"	3'-8"		1277
SPC402	1	1699'-0"	112	148.2	54'-7"	3'-8"		1308
SPC403	1	1650'-0"	112	144.0	53'-0"	3'-8"		1270
SPC404	1	1588'-0"	112	138.7	51'-0"	3'-8"		1223
PC501	50	5'-5"	105	1'-0"	3'-8"			282
PC502	2	4'-11"	105	1'-0"	3'-2"			10
PC503	2	4'-3"	105	1'-0"	2'-6"			9
PC504	50	16'-2"	109	3'-8"	4'-2"			840
PC505	17	12'-6"	109	1'-10"	4'-2"			222
PC601	8	9'-9"	113	2'-0"	5'-9"	3'-8"		117
PC602	12	31'-7"	Str.					568
PC603	15	20'-10"	100	19'-6"				470
PC604	20	15'-10"	100	14'-6"				476
PC801	16	21'-8"	100	19'-6"				926
PC901	6	37'-4"	111	32'-6"	2'-6"			762
PC902	4	37'-1"	111	32'-3"	2'-6"			505
PC903	4	36'-1"	111	31'-3"	2'-6"			490
PC904	6	14'-6"	Str.					296
PC905	3	28'-0"	Str.					286
PC906	2	27'-6"	Str.					187
PC907	2	26'-6"	Str.					180
PC908	3	16'-9"	Str.					171
PC909	2	15'-6"	Str.					106
PC910	3	39'-6"	Str.					403
PC911	2	39'-0"	Str.					265
PC912	2	38'-0"	Str.					258
PC913	3	17'-6"	Str.					179
PC914	2	16'-6"	Str.					112
PC915	6	13'-9"	Str.					280
PC916	3	8'-9"	Str.					89
PC1001	28	14'-4"	100	11'-6"				1730
PC1101	12	57'-0"	Str.					3640
PC1102	10	34'-0"	Str.					1810
PC1103	18	8'-8"	104	7'-9"	1'-2"			830
PC1104	12	58'-6"	Str.					3735
PC1105	12	56'-9"	Str.					3620
PC1106	12	54'-9"	Str.					3500

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS			SERIES INCRE.	WEIGHT POUNDS
				A	B	C		
PC1107	24	8'-2"	104	7'-3"	1'-2"			1043
PC1108	24	17'-8"	100	14'-6"				2255
PC1109	40	20'-8"	100	17'-6"				4400
PC1401	5	14'-8"	104	13'-0"	2'-1"			560
PC1402	5	10'-5"	104	8'-9"	2'-1"			400
PC1403	10	20'-8"	104	19'-0"	2'-1"			1585
				Total	Pier	3W =		42,675
								43,177
PIER 4 WESTBOUND								
SPD401	1	1111'-3"	112	113.1	41'-5"	3'-2"		874
SPD402	1	1148'-4"	112	116.9	43'-10"	3'-2"		904
SPD403	1	1178'-11"	112	120.0	44'-0"	3'-2"		928
SPD404	1	1220'-5"	112	124.2	45'-7"	3'-2"		961
PD501	57	4'-11"	105	1'-0"	3'-2"			292
PD502	2	4'-9"	105	1'-0"	3'-0"			10
PD503	2	4'-3"	105	1'-0"	2'-6"			9
PD504	49	15'-0"	109	3'-2"	4'-1"			767
PD505	22	11'-0"	109	1'-2"	4'-1"			253
PD601	8	9'-0"	113	2'-0"	5'-0"	3'-2"		108
PD602	12	33'-3"	Str.					600
PD901	42	15'-0"	100	12'-6"				2140
PD1001	12	45'-0"	Str.					2323
PD1002	16	24'-6"	Str.					1690
PD1003	64	7'-8"	104	6'-10"	1'-1"			2110
PD1004	12	46'-3"	Str.					2390
PD1005	12	47'-9"	Str.					2470
PD1006	12	49'-3"	Str.					2550
PD1007	4	38'-6"	111	33'-8"	2'-6"			663
PD1008	4	38'-2"	111	33'-4"	2'-6"			655
PD1009	4	37'-3"	111	32'-5"	2'-6"			640
PD1010	12	15'-3"	Str.					790
PD1011	2	27'-11"	Str.					240
PD1012	2	27'-8"	Str.					238
PD1013	2	26'-9"	Str.					230
PD1014	6	18'-9"	Str.					485
PD1015	4	17'-7"	Str.					302
PD1016	2	41'-10"	Str.					360
PD1017	2	41'-7"	Str.					358
PD1018	2	40'-8"	Str.					350
PD1101	70	15'-8"	100	12'-6"				5830
				Total	Pier	4W =		32,520

FED. ROAD DIV. NO. 2
STATE OHIO
FEDERAL AID PROJECT NO.
TYPE FUNDS

253
389

STARK COUNTY
STA-30-14.12
STA-77-9.22
SEP 14 1983

BENDING DIAGRAMS

Notes:
 All bar dimensions are given out to out.
 All bars of a series shall vary in length by a constant increment.
 For replacement reinforcement schedule see sheet 24/24
 Four steel channels, tee or angle spacers, weighing approximately 0.80 pounds per linear foot shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. An allowance of 0.80 pounds per linear foot for spacers is included with the weight of the spiral bars and paid for as reinforcing steel.

Splices in No. 14 or No. 18 size reinforcing bars shall be made by an approved positive mechanical method designed to develop 125% of the specified yield strength of the bar.

H.N.T.B. BRIDGE NO. 2
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

REINFORCEMENT SCHEDULE
 U.S. 30 OVER RAMP B, C, I-77
 AND PENNSYLVANIA R.R.
 BR. NO. STA. 30-1487
 SCALE: STA. 960 + 02.25
 STA. 966 + 63.26

CANTON STARK COUNTY OHIO

DATE 7-6-70 TRACED DATE CHECKED 7-28-70 REVIEWED 11-12-71 REVISION 3-2-76

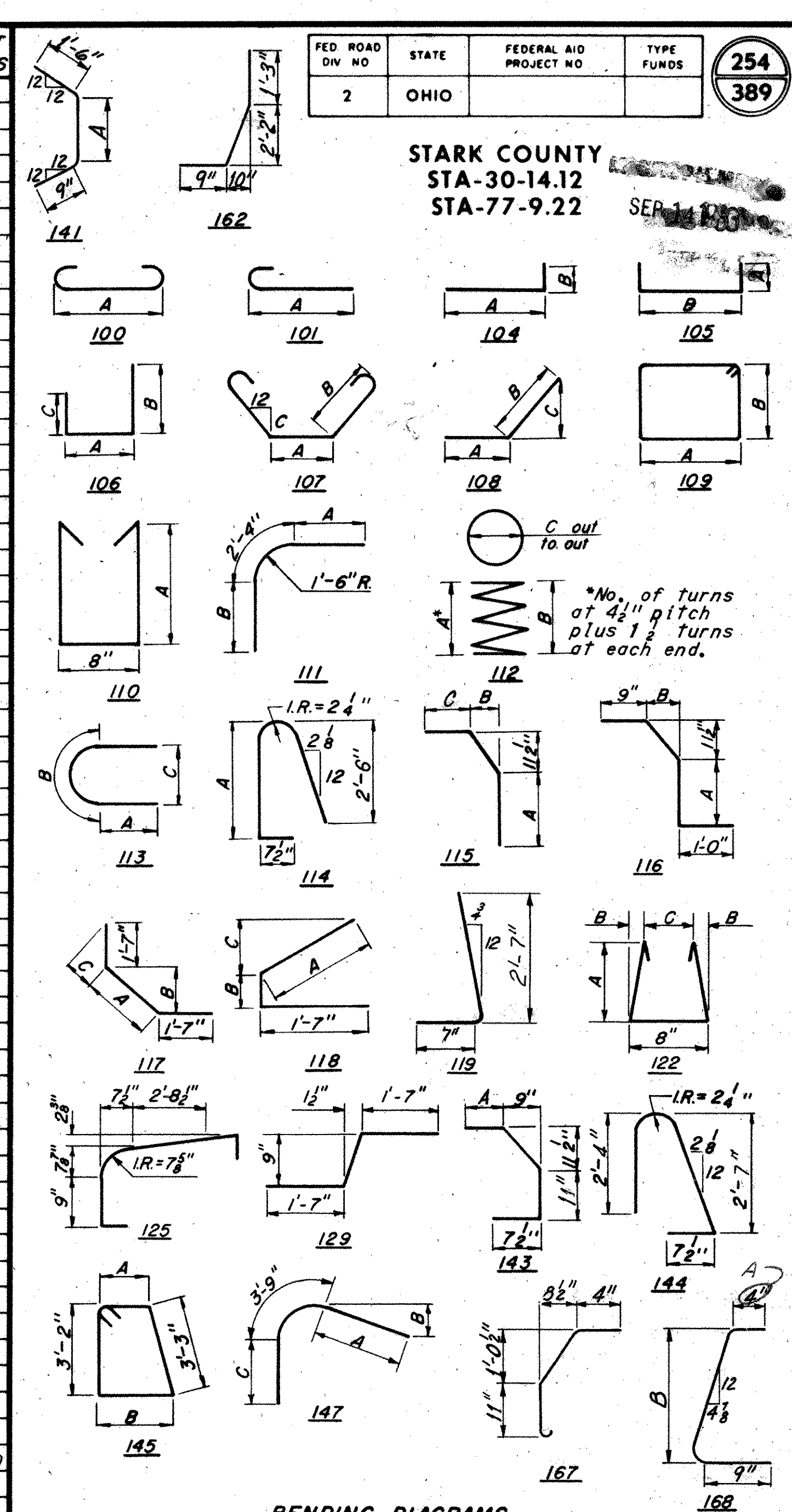
Revised 6-9-75 By RAS
 21/24

Revised 4-28-77

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS			SERIES INCRE.	WEIGHT POUNDS
				A	B	C		
PIER 3 EASTBOUND								
SPF401	1	1750'-5"	112	152.4	56'-2"	3'-8"		1350
SPF402	1	1732'-11"	112	150.0	55'-3"	3'-8"		1337
SPF403	1	1639'-6"	112	143.3	52'-9"	3'-8"		1264

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS			SERIES INCRE.	WEIGHT POUNDS
				A	B	C		
PG601	8	9'-0"	113	2'-0"	5'-0"	3'-2"		108
PG602	6	40'-7"	Str.					366
PG603	13	15'-10"	100	14'-6"				310
PG604	15	12'-10"	100	11'-6"				290
PG901	14	15'-0"	100	12'-6"				715
PG1001	2	50'-6"	105	4'-0"	43'-1"			435
PG1002	2	50'-0"	105	4'-0"	42'-7"			430
PG1003	2	48'-6"	105	4'-0"	41'-1"			418
PG1004	2	43'-5"	Str.					374
PG1005	2	43'-1"	Str.					370
PG1006	2	40'-7"	Str.					350
PG1007	2	18'-0"	Str.					155
PG1008	2	17'-10"	Str.					154
PG1009	2	16'-9"	Str.					144
PG1010	2	17'-6"	Str.					156
PG1011	2	17'-4"	Str.					149
PG1012	2	16'-4"	Str.					141
PG1013	16	8'-1"	104	7'-3"	1'-1"			556
PG1014	12	17'-4"	100	14'-6"				895
PG1101	48	8'-1"	104	7'-2"	1'-2"			2065
PG1102	16	50'-6"	Str.					4300
PG1103	16	51'-9"	Str.					4400
PG1104	16	52'-9"	Str.					4494
PG1105	14	14'-8"	100	11'-6"				90
PG1106	4-32	15'-8"	100	12'-6"				3500
PG1401	6	15'-6"	Str.					712
PIER 5								
SPE401	1	1065'-0"	112	108.4	39'-8"	3'-2"		839
SPE402	1	1104'-4"	112	112.4	41'-2"	3'-2"		870
SPE403	1	1144'-7"	112	116.5	42'-8"	3'-2"		901
SPE404	1	1220'-3"	112	124.2	45'-7"	3'-2"		961
SPE405	1	1211'-5"	112	123.3	45'-3"	3'-2"		954
SPE406	1	1245'-9"	112	126.8	46'-7"	3'-2"		982
SPE407	1	1277'-3"	112	130.0	47'-9"	3'-2"		1006
PE501	93	4'-11"	105	1'-0"	3'-2"			477
PE502	4	4'-6"	105	1'-0"	2'-9"			19
PE503	4	3'-9"	105	1'-0"	2'-0"			16
PE504	66	15'-2"	109	3'-2"	4'-2"			1045
PE505	24	13'-2"	109	2'-2"	4'-2"			329
Total Pier 4E = 30,100								
1,021								

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS			SERIES INCRE.	WEIGHT POUNDS
				A	B	C		
PE601	16	9'-0"	113	2'-0"	5'-0"	3'-2"		208
PE602	4	28'-2"	Str.					169
PE603	4	39'-0"	Str.					234
PE604	4	40'-4"	Str.					242
PE605	21	13'-0"	Str.					410
PE701	14	19'-6"	Str.					560
PE901	8	38'-0"	104	34'-3"	4'-0"			1035
PE902	4	39'-3"	104	35'-6"	4'-0"			534
PE903	12	15'-0"	Str.					612
PE904	12	26'-6"	Str.					1080
PE905	12	18'-9"	Str.					765
PE906	70	15'-0"	100	12'-6"				3570
PE907	6	18'-3"	Str.					372
PE1001	6	15'-6"	Str.					400
PE1002	4	47'-9"	105	4'-0"	40'-4"			822
PE1003	2	50'-9"	105	4'-0"	43'-4"			437
PE1004	8	17'-0"	Str.					585
PE1005	6	40'-4"	Str.					1040
PE1006	4	21'-3"	Str.					366
PE1007	16	22'-4"	100	19'-6"				1540
PE1008	20	15'-10"	100	13'-0"				1363
PE1009	12	43'-9"	Str.					2260
PE1010	12	28'-0"	Str.					1445
PE1011	100	7'-6"	104	6'-9"	1'-0"			3230
PE1012	12	51'-6"	Str.					2660
PE1013	12	45'-3"	Str.					2335
PE1014	12	46'-9"	Str.					2415
PE1015	24	49'-6"	Str.					5110
PE1016	12	50'-9"	Str.					2622
PE1101	70	15'-8"	100	12'-6"				5830
Total Pier 5 = 52,630								



H.N.T.B. BRIDGE NO. 2		Revised 6-9-75		By RAS	
HOWARD, NEEDLES, TAMMEN & BERGENDOFF				22/24	
CONSULTING ENGINEERS					
KANSAS CITY CLEVELAND NEW YORK					
REINFORCEMENT SCHEDULE					
U.S. 30 OVER RAMP B, C, I-77					
AND PENNSYLVANIA R.R.					
BR. NO. STA. 30-1487			STA. 960 + 02.25		
SCALE:			STA. 966 + 63.26		
RELOCATED U.S. 30					
CANTON		STARK COUNTY		OHIO	
DRAWN D&S	TRACED	CHECKED R&P	REVIEWED	REVISED 3-2-76	
DATE 7-6-70	DATE	DATE 7-29-70	DATE 11-22-71		1668

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS			SERIES INCR.	WEIGHT POUNDS
				A	B	C		
PIER 6								
SPH401	1	484'-7"	112	58.7	21'-0"	2'-8"		391
SPH402	1	508'-6"	112	61.6	22'-1"	2'-8"		410
SPH403	1	534'-2"	112	64.7	23'-3"	2'-8"		431
SPH404	1	561'-5"	112	68.0	24'-6"	2'-8"		454
SPH405	1	576'-3"	112	69.8	25'-2"	2'-8"		466
SPH405	1	600'-3"	112	72.7	26'-3"	2'-8"		485
SPH407	1	621'-9"	112	75.3	27'-3"	2'-8"		503
PH501	112	4'-5"	105	1'-0"	2'-8"			515
PH502	2	4'-0"	105	1'-0"	2'-3"			8
PH503	2	3'-1"	105	1'-0"	1'-4"			7
PH504	75	14'-2"	109	2'-8"	4'-2"			1110
PH505	64	10'-0" 63'-2	109	1'-9" 2'-2"	4'-2"			823 79
PH601	4	41'-9"	Str.					251
PH602	8	6'-0"	105	1'-11"	2'-6"			72
PH603	8	34'-6"	Str.					414
PH604	8	8'-1"	113	1'-11"	4'-3"	2'-8"		97
PH901	138	14'-0"	100	11'-6"				6570
PH902	10	13'-0"	100	10'-6"				443
PH1001	60	13'-4"	100	10'-6"				3440
PH1101	3	46'-10"	111	41'-9"	2'-9"			735
PH1102	2	11'-9"	Str.					125
PH1103	2	10'-9"	Str.					115
PH1104	2	45'-4"	111	40'-3"	2'-9"			482
PH1105	3	42'-9"	Str.					681
PH1106	3	13'-9"	Str.					220
PH1107	1	13'-0"	Str.					69
PH1108	5	37'-6"	Str.					1000
PH1109	5	28'-0"	Str.					745
PH1110	2	56'-0"	Str.					596
PH1111	3	45'-3"	Str.					721
PH1112	2	44'-3"	Str.					471
PH1113	3	30'-6"	Str.					486
PH1114	2	41'-9"	Str.					445
PH1115	3	16'-0"	Str.					256
PH1116	3	40'-4"	111	35'-3"	2'-9"			643
PH1117	2	38'-10"	111	33'-9"	2'-9"			414
PH1118	5	16'-6"	Str.					439
PH1119	2	9'-3"	Str.					99
PH1401	20	19'-6"	Str.					2980
PH1402	10	20'-9"	Str.					1588
PH1403	10	21'-9"	Str.					1665
PH1404	40	23'-5"	104	21'-9"	2'-1"			7170
PH1405	10	23'-6"	Str.					1800
PH1406	10	20'-6"	Str.					1570
PH1407	10	21'-6"	Str.					1645
PH1408	70	10'-8"	104	9'-0"	2'-1"			5700
PH1409	30	17'-3"	Str.					3964
PH1410	30	14'-11"	104	13'-3"	2'-1"			3420
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MARK	NUMBER	LENGTH	TYPE	DIMENSIONS			SERIES INCRE.	WEIGHT POUNDS
				A	B	C		
				PIER 7				
SPJ401	1	418'-6"	112	50.7	18'-0"	2'-8"		337
SPJ402	1	442'-6"	112	53.6	19'-1"	2'-8"		357
SPJ403	1	468'-1"	112	56.7	20'-3"	2'-8"		377
SPJ404	1	492'-0"	112	59.6	21'-4"	2'-8"		397
SPJ405	1	502'-9"	112	60.9	21'-10"	2'-8"		406
SPJ406	1	524'-1"	112	63.6	22'-10"	2'-8"		424
SPJ407	1	544'-11"	112	66.0	23'-9"	2'-8"		440
PJ501	112	4'-5"	105	1'-0"	2'-8"			516
PJ502	2	4'-0"	105	1'-0"	2'-3"			9
PJ503	2	3'-1"	105	1'-0"	1'-4"			7
PJ504	82	14'-2"	109	2'-8"	4'-2"			1212
PJ505	68	12'-10"	109	2'-0"	4'-2"			910
PJ601	4	42'-0"	Str.					252
PJ602	8	6'-0"	105	1'-11"	2'-6"			72
PJ603	8	36'-9"	Str.					440
PJ604	8	8'-1"	113	1'-11"	4'-3"	2'-8"		97
PJ901	148	12'-0"	100	9'-6"				6050
PJ1001	16	22'-0"	Str.					1515
PJ1002	16	23'-6"	Str.					1620
PJ1003	16	25'-0"	Str.					1720
PJ1004	16	26'-0"	Str.					1790
PJ1005	64	7'-3"	104	6'-5"	1'-1"			2000
PJ1101	3	47'-1"	111	42'-0"	2'-9"			752
PJ1102	2	11'-0"	Str.					117
PJ1103	3	10'-9"	Str.					172
PJ1104	2	45'-7"	111	40'-6"	2'-9"			485
PJ1105	3	43'-0"	Str.					686
PJ1106	3	14'-3"	Str.					228
PJ1107	1	15'-6"	Str.					83
PJ1108	5	41'-6"	Str.					1105
PJ1109	5	2-30'-6"-3	Str.					836
PJ1110	2	2-60'-0"	Str.					638
PJ1111	3	44'-3"	Str.					706
PJ1112	2	43'-6"	Str.					463
PJ1113	2	30'-3"	Str.					322
PJ1114	2	42'-0"	Str.					446
PJ1115	3	17'-3"	Str.					276
PJ1116	3	38'-7"	111	33'-6"	2'-9"			615
PJ1117	2	37'-1"	111	32'-0"	2'-9"			394
PJ1118	12	26'-3"	Str.					1673
PJ1119	12	27'-3"	Str.					1740
PJ1120	12	28'-0"	Str.					1790
PJ1121	36	7'-8"	104	6'-9"	1'-2"			1470
PJ1122	5	16'-9"	Str.					445
PJ1123	3	12'-6"	Str.					200
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MARK	NUMBER	LENGTH	TYPE	DIMENSIONS			SERIES INCR.	WEIGHT POUNDS
				A	B	C		
DECK - UNIT 1 - WESTBOUND								
SA501	65	30'-0"	Str.					2040
SA502	5	26'-0"	Str.					136
SA503	265	5'-8"	144					1566
SA504	265	2'-2"	105	7 1/2"	1'-2"			599
SA505	265	3'-7"	143	9"				990
SA506	265	2'-4"	104	7 1/2"	1'-10"			645
SA601	1560	30'-0"	Str.					70,294
SA602	1 Ser. 44	44'-0" to 30'-0"	Str.				4"	2445
SA603	1 Ser. 76	44'-0" to 30'-0"	Str.				2 1/4"	4224
SA604	422	34'-8"	101	34'-0"				22,000
SA605	231	37'-8"	101	37'-0"				13,800
SA606	1 Ser. 302	34'-0" to 29'-9"	101	33'-4" to 29'-1"			3/8"	14,459
SA607	1 Ser. 155	33'-9" to 31'-9"	101	33'-1" to 31'-1"			3/8"	7625
SA608	422	30'-6"	Str.					19,320
SA609	231	33'-0"	Str.					11,450
SA610	1 Ser. 302	36'-9" to 32'-6"	Str.				3/8"	15,706
SA611	1 Ser. 155	37'-0" to 35'-0"	Str.				3/8"	8381
SA612	840 8	34'-0"	Str.					4300
SA613	420 4	22'-0"	Str.					1390
SA614	840 8	43'-0"	Str.					5630
SA615	76	35'-0"	Str.					3995
SA616	76	31'-9"	101	31'-1"				3624
SA617	120	29'-9"	101	29'-1"				5362
SA618	120	32'-6"	Str.					5858
SA619	351	3'-4"	101	2'-8"				1757
SA620	351	4'-2"	162					2197
SA621	351	3'-0"	167					1582
SA622	52	30'-0"	Str.					2343
SA623	8	20'-0"	Str.					240
		63						

