

CURVE DATA - RAMP "I"
 P.I. STA. I-1512+40.77
 $\Delta = 50^\circ 47' 23''$ Rt.
 $D = 3^\circ 00' 00''$
 $R = 1909.86'$
 $T = 906.66'$
 $L = 1692.99'$
 $E = 204.28'$

MICROFILMED
 AUG 9 1979
 REPRODUCTION

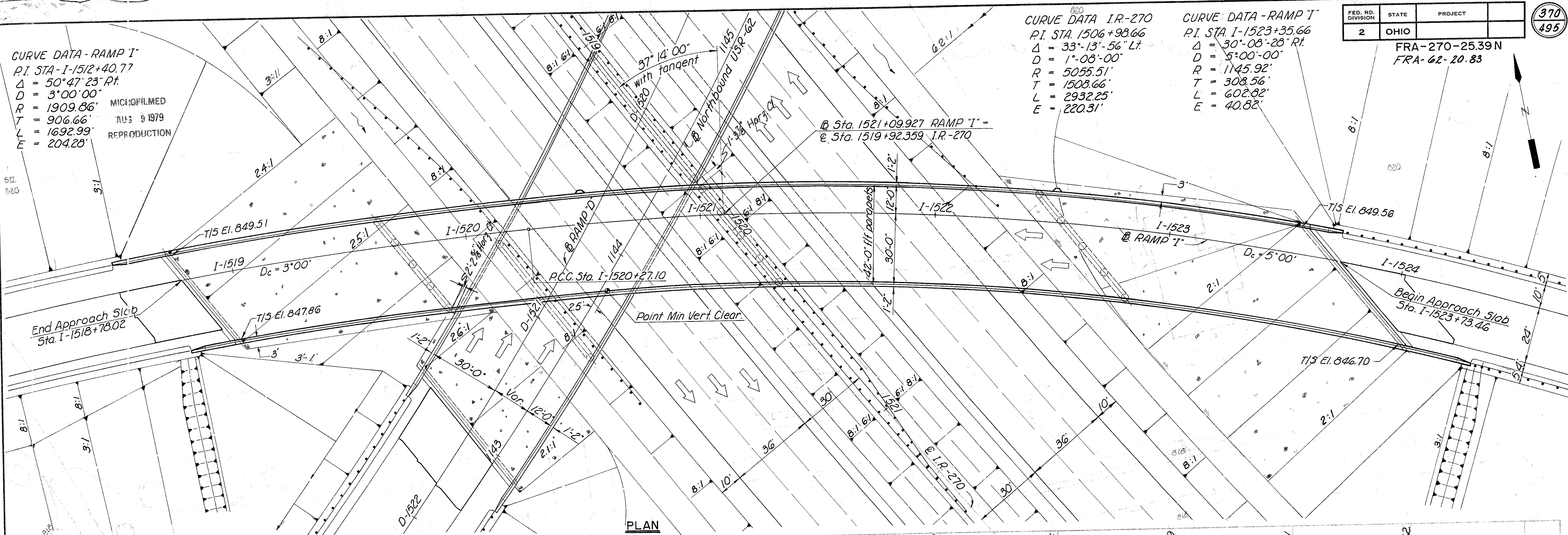
CURVE DATA I.R.-270
 P.I. STA. 1506+98.66
 $\Delta = 33^\circ 13' 56''$ Lt.
 $D = 1^\circ 08' 00''$
 $R = 5055.51'$
 $T = 1508.66'$
 $L = 2932.25'$
 $E = 220.31'$

CURVE DATA - RAMP "I"
 P.I. STA. I-1523+35.66
 $\Delta = 30^\circ 08' 28''$ Rt.
 $D = 5^\circ 00' 00''$
 $R = 1145.92'$
 $T = 308.56'$
 $L = 602.82'$
 $E = 40.82'$

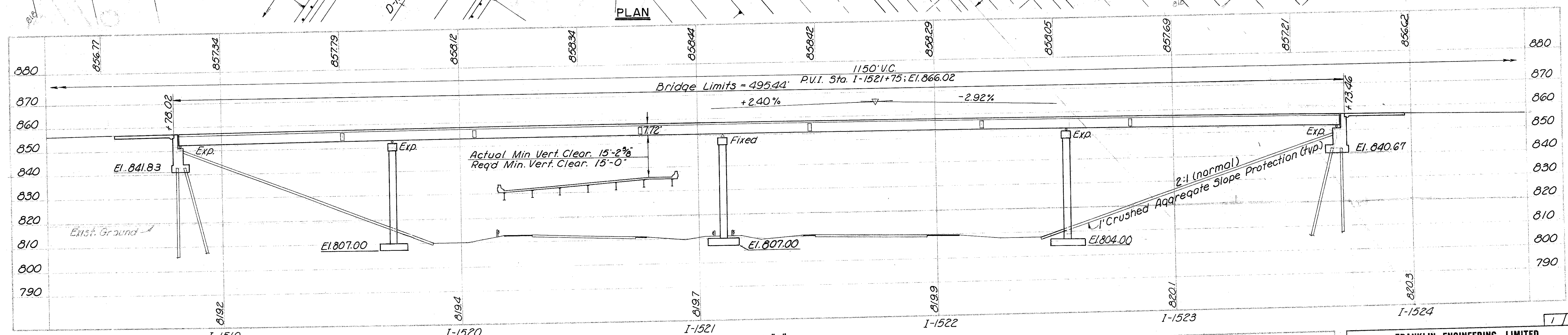
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

370
495

FRA-270-2539N
 FRA-62-20.83



PLAN



PROFILE ALONG RAMP "I"

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

Abutment Piles 12" Cast-in-Place Concrete Piles 35'-0" long

PROPOSED STRUCTURE
 TYPE: Continuous Steel Girder Bridge with reinf. conc. deck & substructures
 SPANS: 90'-4"; 139'-0"; 144'-6"; 115'-6" brqs.
 ROADWAY: 42'-0" face/face parapets
 WEARING SURFACE: 1" monolithic concrete
 SKEW: 37°-14'-00" R.F. with tangent
 APPROACH SLAB: AS-I-67 (25'-0" long)
 ALIGNMENT: 3°00'00" & 5°00'00" curves (rt)
 SUPERELEVATION: Variable
 LOADING: HS20-44
 AVERAGE DAILY TRAFFIC: 7573 (1973)

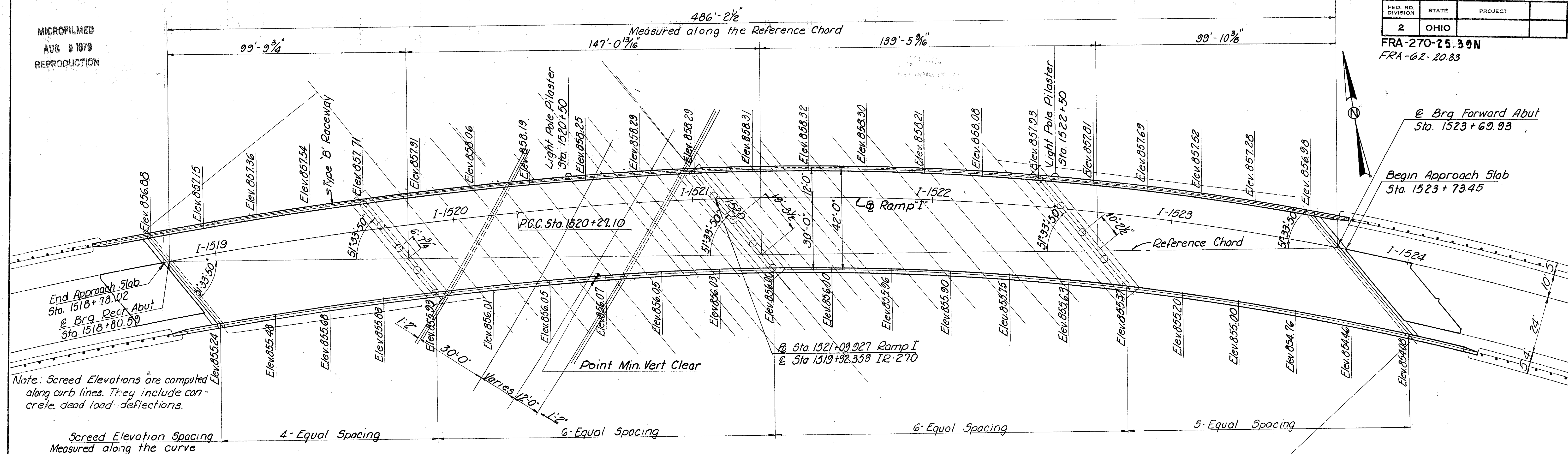
FRANKLIN ENGINEERING, LIMITED					
COLUMBUS,		Consulting Engineers		OHIO	
SITE PLAN					
BRIDGE NO. FRA-270-2667N under RAMP "I"					
FRANKLIN COUNTY					
USR-270					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
FM				JF	2/18/89

MICROFILMED
AUG 9 1978
REPRODUCTION

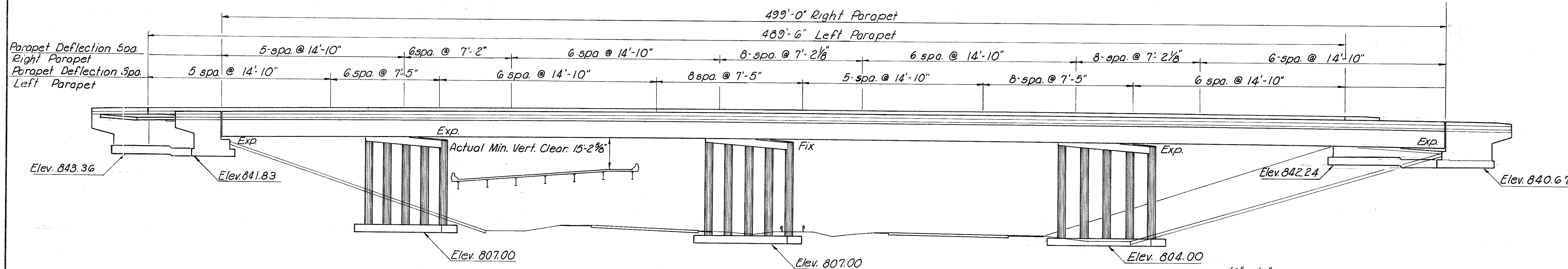
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

FRA-270-25.39N
FRA-62-20.83

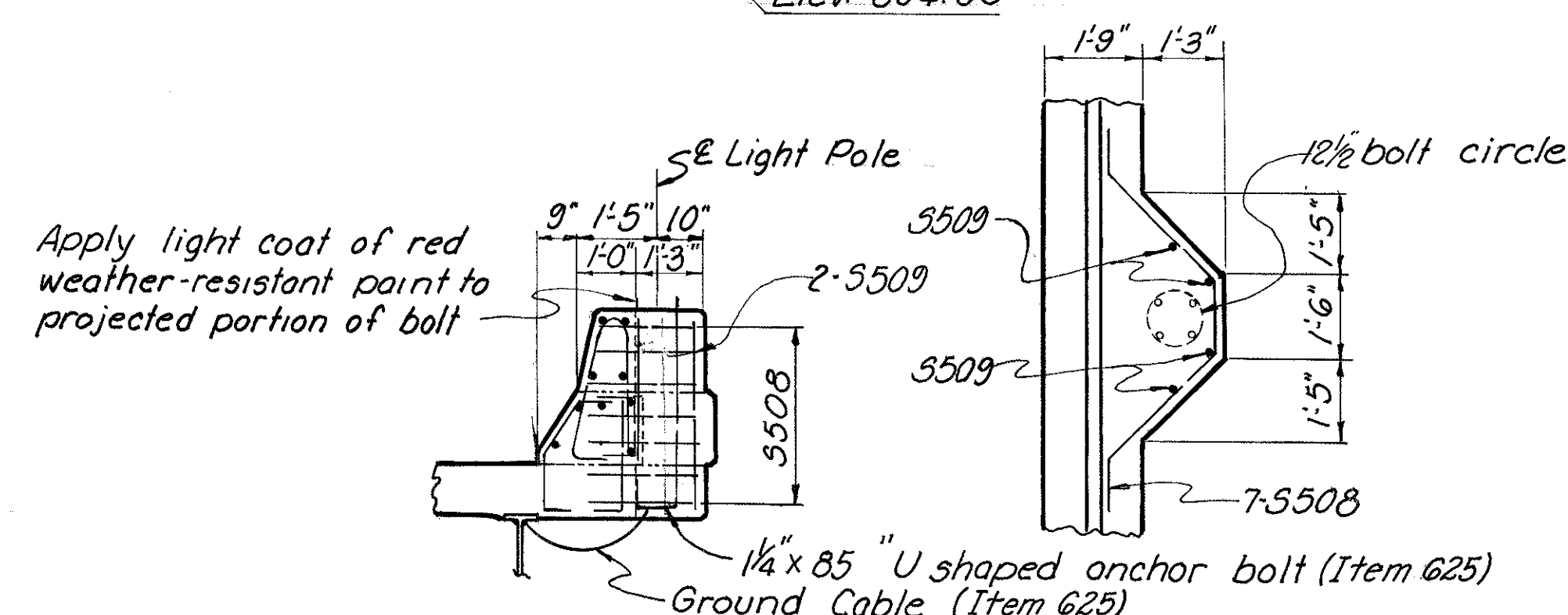
371
495



PLAN



ELEVATION



LIGHT POLE PILASTER

2/16

FRANKLIN ENGINEERING, LIMITED							
Consulting Engineers				OHIO			
COLUMBUS,							
GENERAL PLAN & SCREED ELEVATION							
BRIDGE N° FRA-270-2667N							
UNDER							
RAMP I							
FRANKLIN COUNTY				USR 270			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVIS	
M.G.	<i>JS</i>			<i>JF</i>	<i>4/3-70</i>		

MICROFILMED

AUG 9 1979

REPRODUCTION

ESTIMATED QUANTITIES									
ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	PIERS	ABUT.	GEN'L		
503	1207	Cu.Yds.	Unclassified Excavation		837	370			
503	Lump	Sum	Cofferdams, Cribbs, and Sheeting.				Lump		
505	Lump	Sum	First Test Pile				Lump		
507	1140	Lin.Ft.	12" Cast-in place concrete piles			1140			
509	394744	Lbs.	Reinforcing Steel	210,570	164,852	19,322			
511	264	Cu.Yds.	Class "C" Concrete, Abutment			264			
511	289	Cu.Yds.	Class "C" Concrete, Piers above Footings		289				
511	289	Cu.Yds.	Class "C" Concrete, Pier Footings		289				
511	688	Cu.Yds.	Class "C" Concrete, Superstructure	688					
513	1045192	Lbs.	Structural Steel	1,045,192					
518	17	each	Scuppers, including Supports	17					
518	96	Cu.Yds.	Porous Backfill			96			
518	102	Lin.Ft.	6" Perf. Helical Corrugated Metal Pipe, including Specials (707.01)			102			
518	105	Lin.Ft.	6" Non-Perforated Helical Corrugated Metal Pipe (707.01)			105			
601	2325	3q.Yds.	Crushed Aggregate Slope Protection				2325		
808	688	units	Chemical Admixtures for Concrete, Type A, B or D	688					
514	1045192	Lbs.	Field Painting of Structural Steel	1,045,192					
625			See Sheet 302 for Lighting Summary						

REFERENCE shall be made to Standard Drawings AS-1-67 (Rev 6/12/69), RB-1-55 (2/2/59) SD-1-69 (Dated 6/12/69) Sheets 1, 2, 3, and 4 of 4, and Supplemental Specifications 808 (Dated 11/14/69), 811 (Dated 1/1/69) and 836 (Dated 6/17/69).

DESIGN SPECIFICATIONS

This structure conforms to "Standard Specifications for Highway Bridges" adopted by the American Association of State Highway Officials, 1969, including the Ohio "Supplement" to these specifications.

DESIGN DATA

Design Loading	HS 20-44
Concrete Class C	Unit Stress 1200 p.s.i. for Superstructure
	Unit Stress 1333 p.s.i. for Substructure
Structural Steel	ASTM A36, Unit Stress 20,000 p.s.i.
Reinforcing Steel	ASTM A615, A616 or A617, Unit Stress 20,000 p.s.i. Spiral reinforcement shall be plain bars ASTM A306 or A499.

EMBANKMENT CONSTRUCTION

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, rear pier and forward pier.

PILES shall be driven to a minimum bearing capacity of 35 tons per pile for the abutments. The Contractor may prebore holes through the embankment before driving the abutment piles. at his own option and expense.

FOUNDATION BEARING PRESSURE

Pier spread footings are designed for a maximum bearing pressure of 2.5 tons per square foot.

UTILITY LINES

All expense involved in relocating the affected utility lines shall be borne by the Owners. The Contractor and Owners are requested to cooperate by arranging their work in such a manner that inconvenience to either would be held to a minimum.

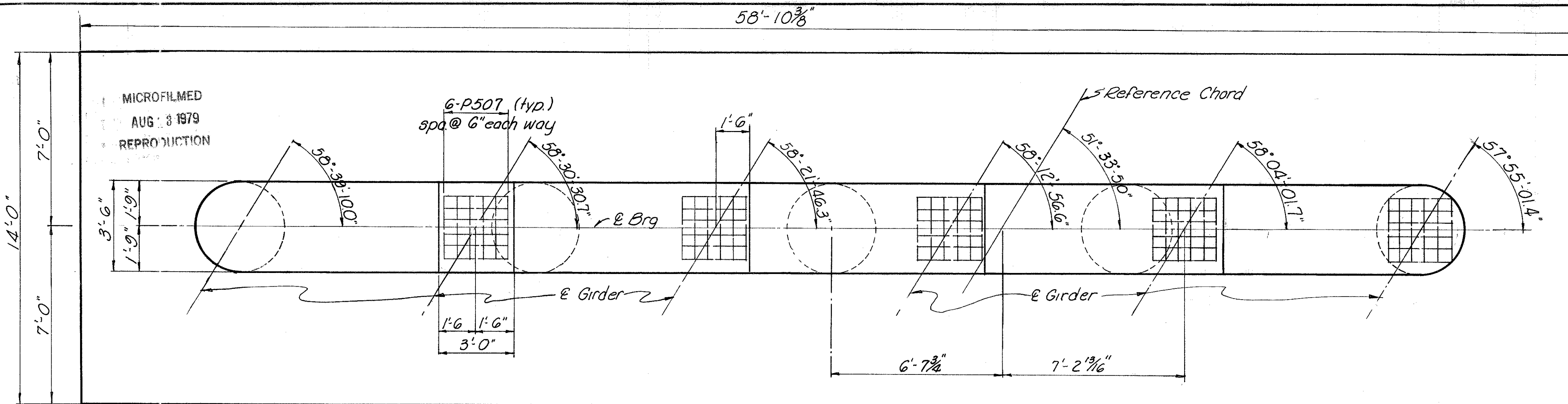
For Lighting Details not shown see sheet No. 309 and Standard Construction Drawing H L-4

FRANKLIN ENGINEERING, LIMITED Consulting Engineers						COLUMBUS, OHIO	
ESTIMATED QUANTITIES & GENERAL NOTES BRIDGE N° FRA-270-2667N UNDER RAMP I							
FRANKLIN COUNTY				U 3R-270			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
3/15-70	3		M. G. 4/13-70	JF	4/13-70		

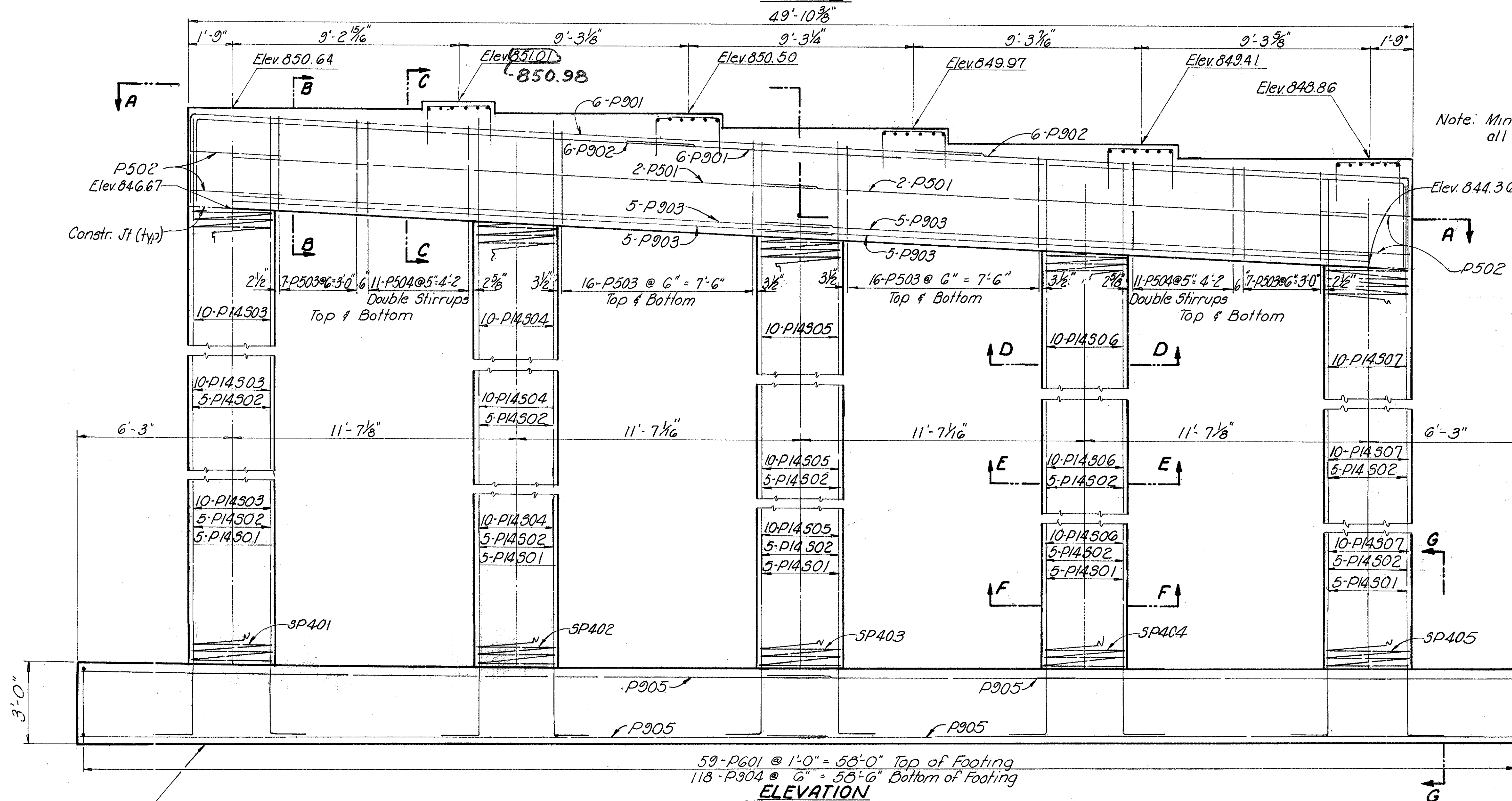
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

373
495

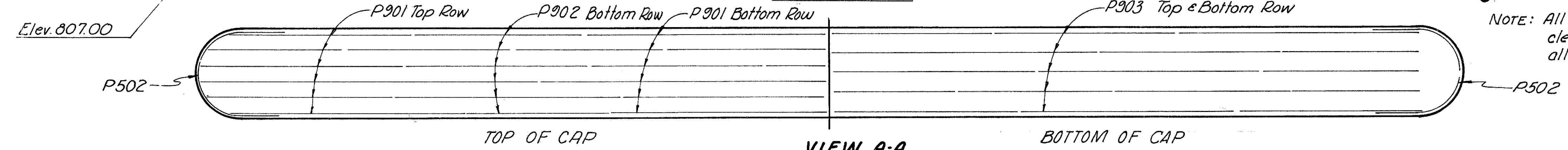
FRA. 270 - 25.39N
FRA-62-20.83



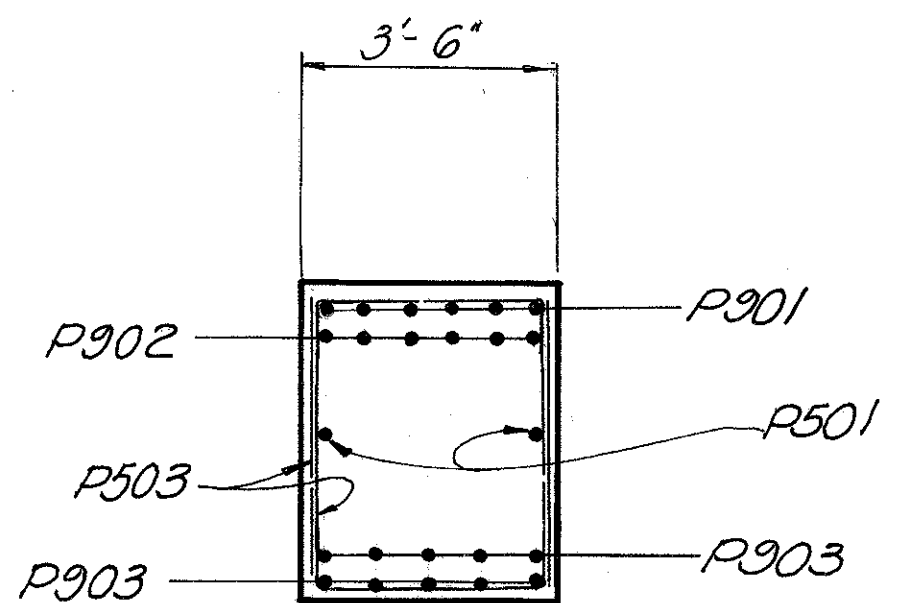
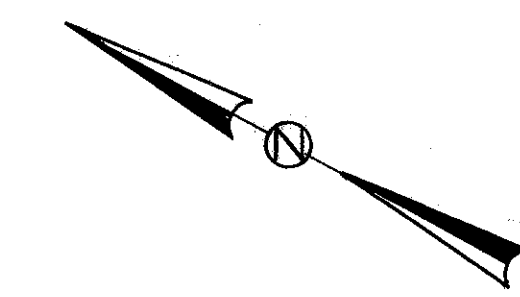
PLAN



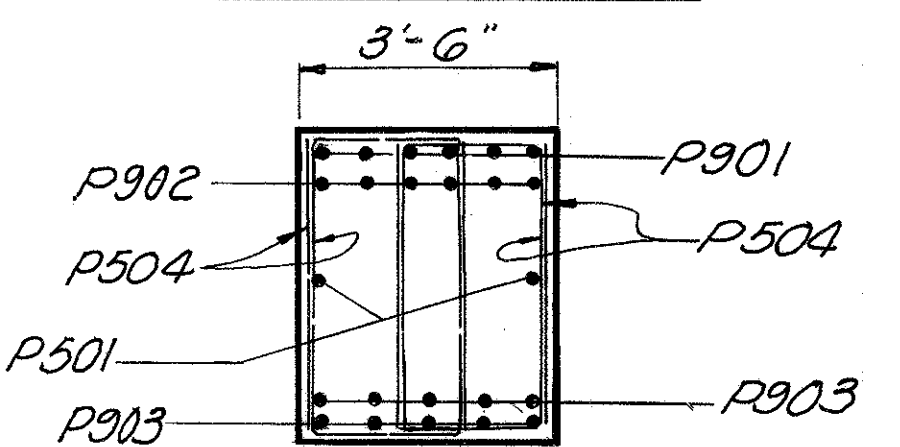
ELEVATION



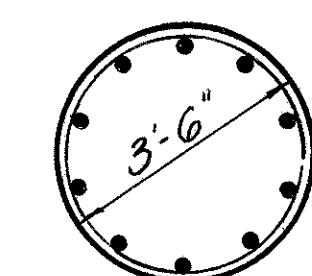
VIEW A-A



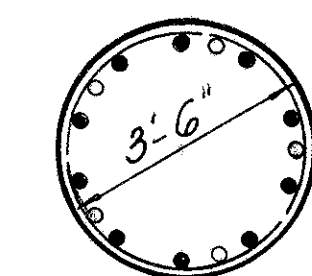
SECTION B-B



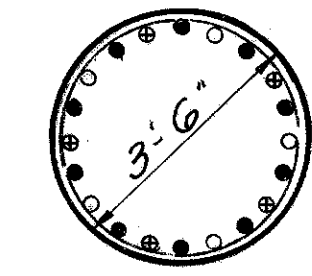
SECTION C-C



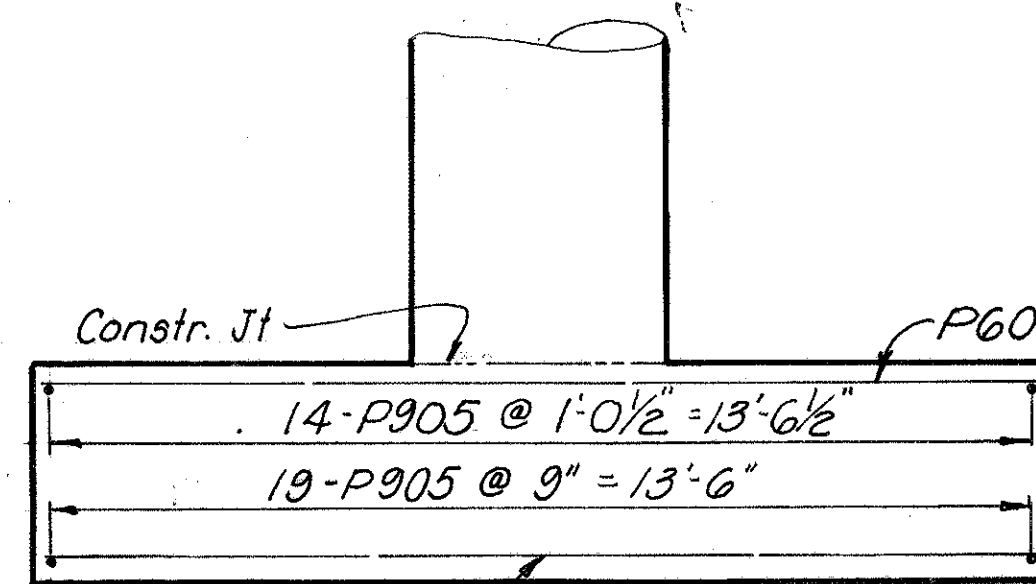
SECTION D-D



SECTION E-E



SECTION F-F



SECTION G-G

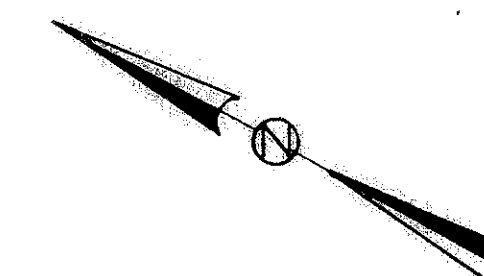
NOTE: All footing Reinforcing Steel shall have 3" clearance from all concrete surfaces (typical all footings)

FRANKLIN ENGINEERING, LIMITED
Consulting Engineers
COLUMBUS, OHIO

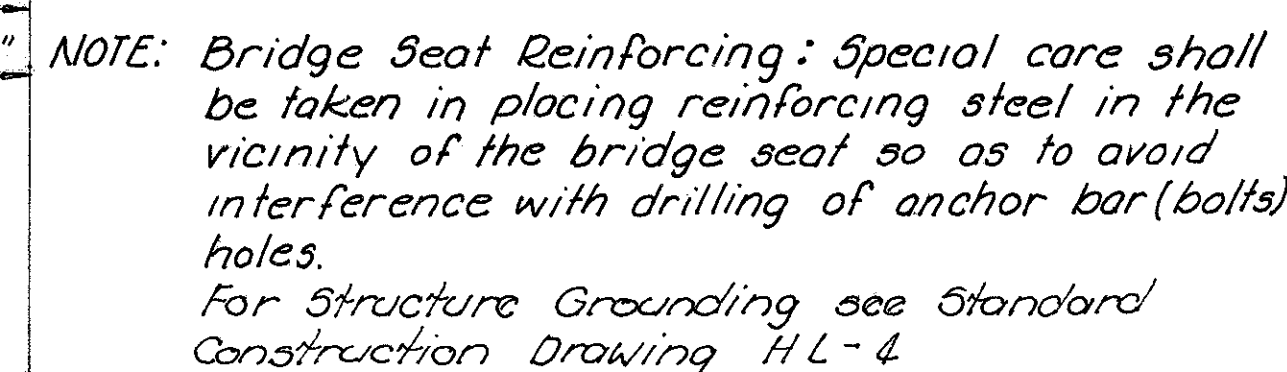
REAR PIER
BRIDGE N° FRA. 270-2677N
UNDER RAMP I

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
M.G.	J		Ann	J	4-3-70	3-71

FRA. 270 - 25.39N
FRA-62-20.83



PLAN

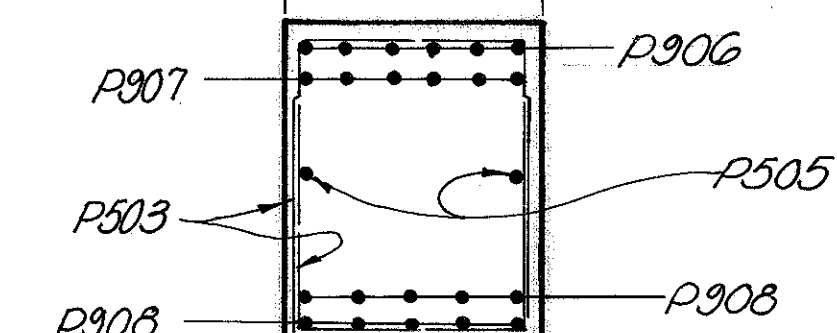


~~Elev. 844.14~~

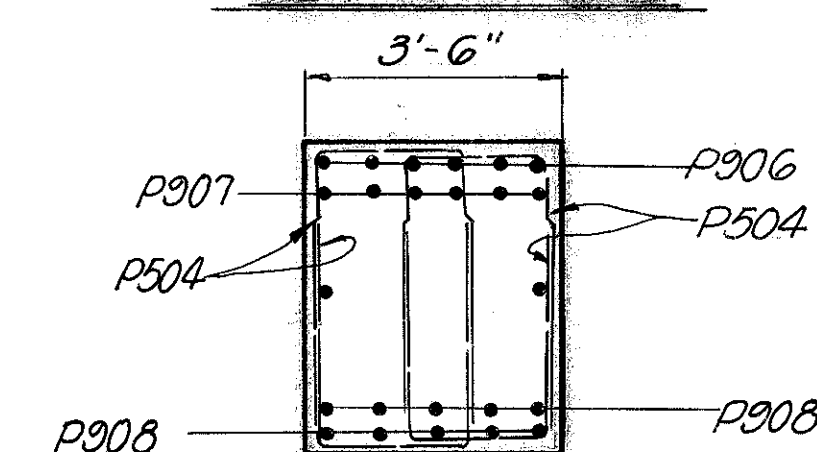
—P502

—Constr. Jt. (typ.)

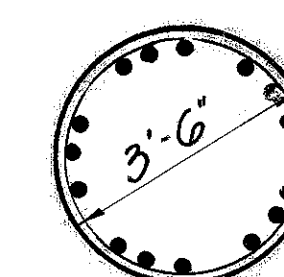
- P1103, P1104, P1105, P1106 & P1107
- P1102



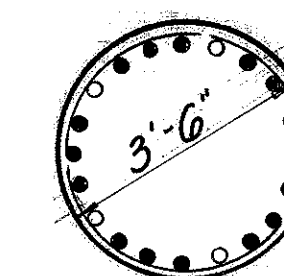
SECTION B-B



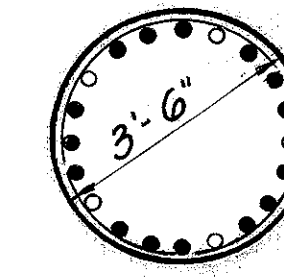
SECTION C-C



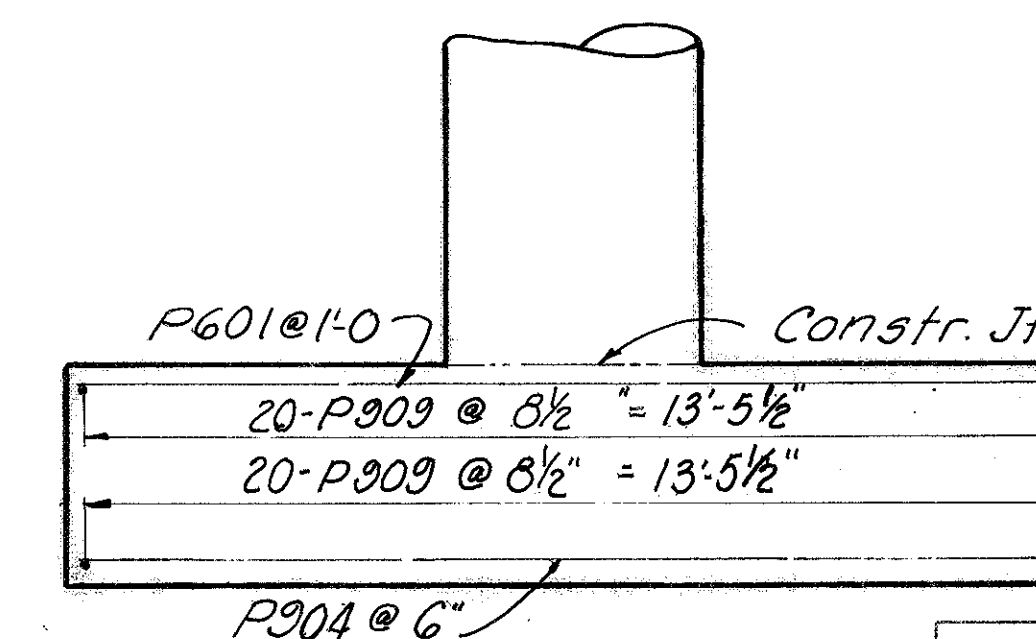
SECTION D-D



SECTION E-E

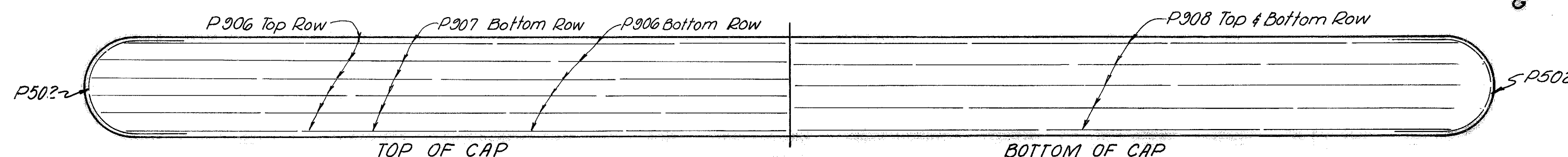


SECTION F-F



SECTION G-G

Elev: 807.00



VIEW A-A

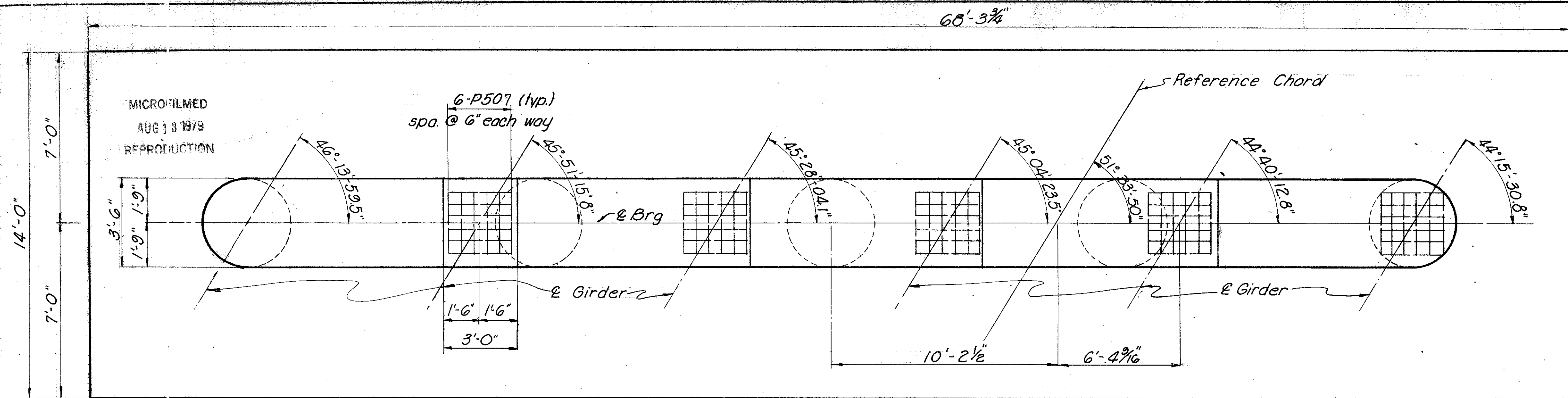
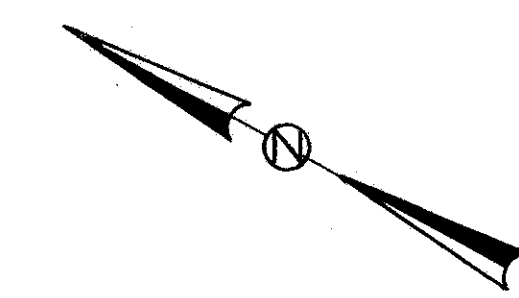
FRANKLIN ENGINEERING, LIMITED
Consulting Engineers

CENTER PIER
BRIDGE N° FRA-270-2677N
UNDER
RAMP I

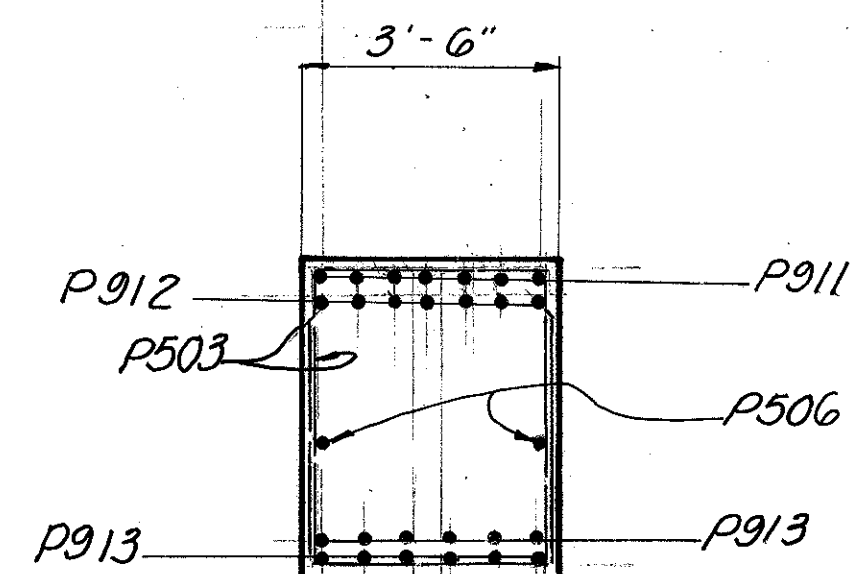
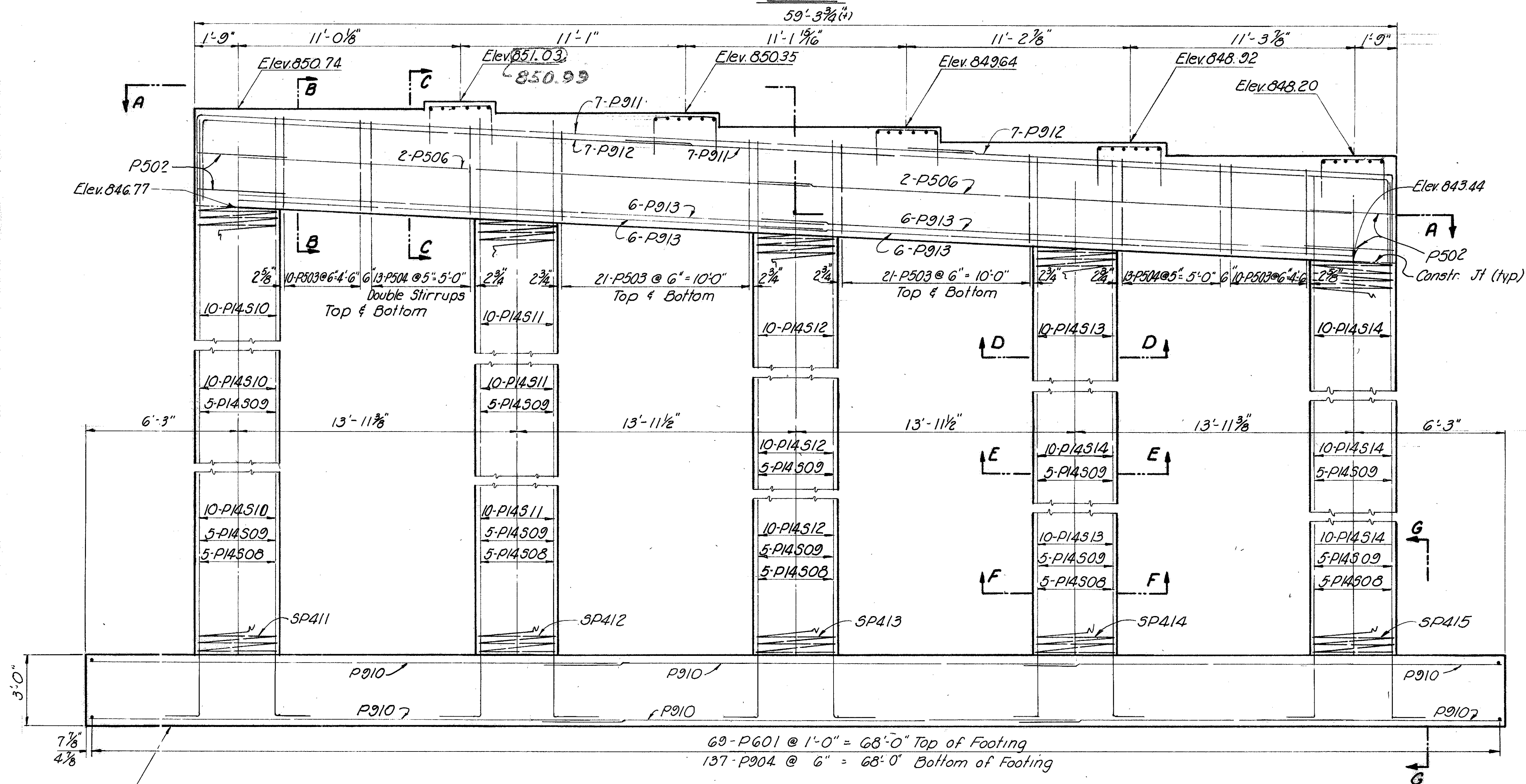
FRANKLIN COUNTY					IR 270	
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
M.G.	<i>[Signature]</i>		<i>[Signature]</i>	<i>FF</i>	4/3-70	

Revised
9-3-76

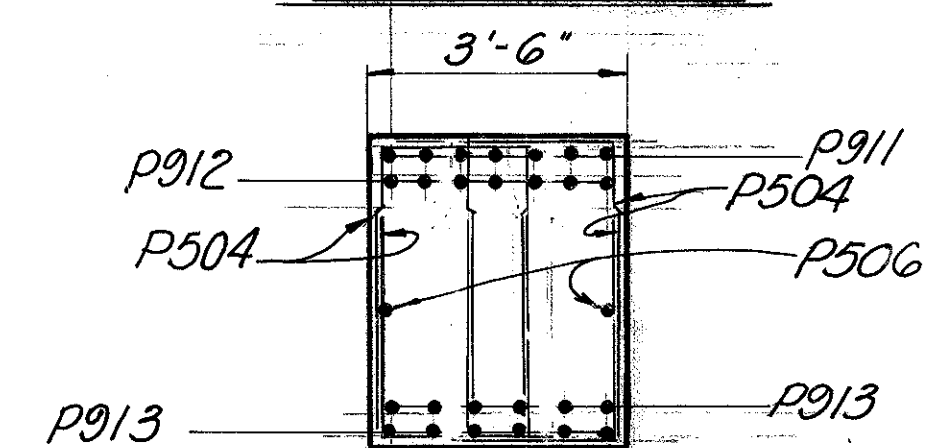
FRA 270 - 25.39N
FRA-62-20.83



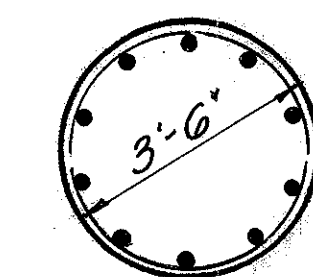
PLAN



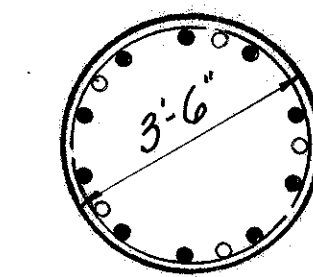
SECTION B-B



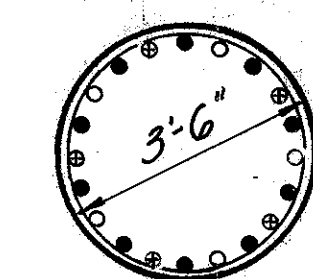
SECTION C-C



SECTION D-D

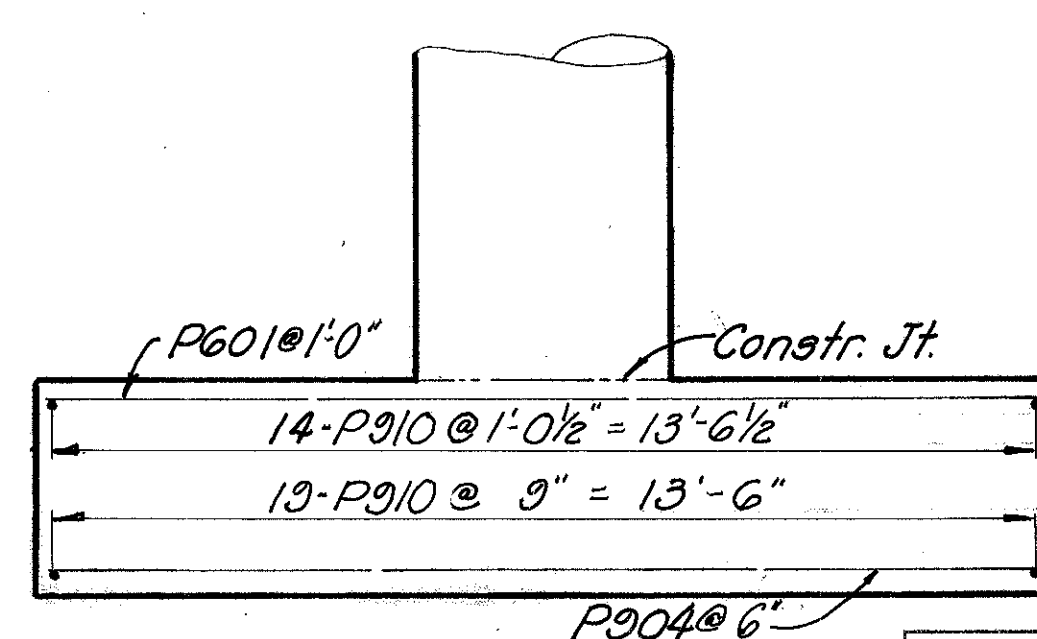


SECTION E-E

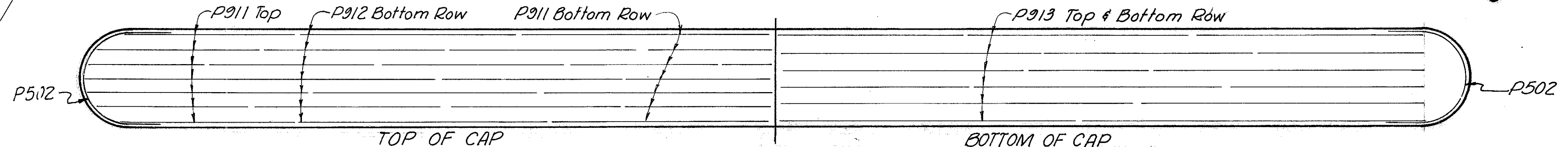


SECTION F-F

- P14510, P14511, P14512, P14513 & P14514
- P14509
- P14508



SECTION G-G



VIEW A-A

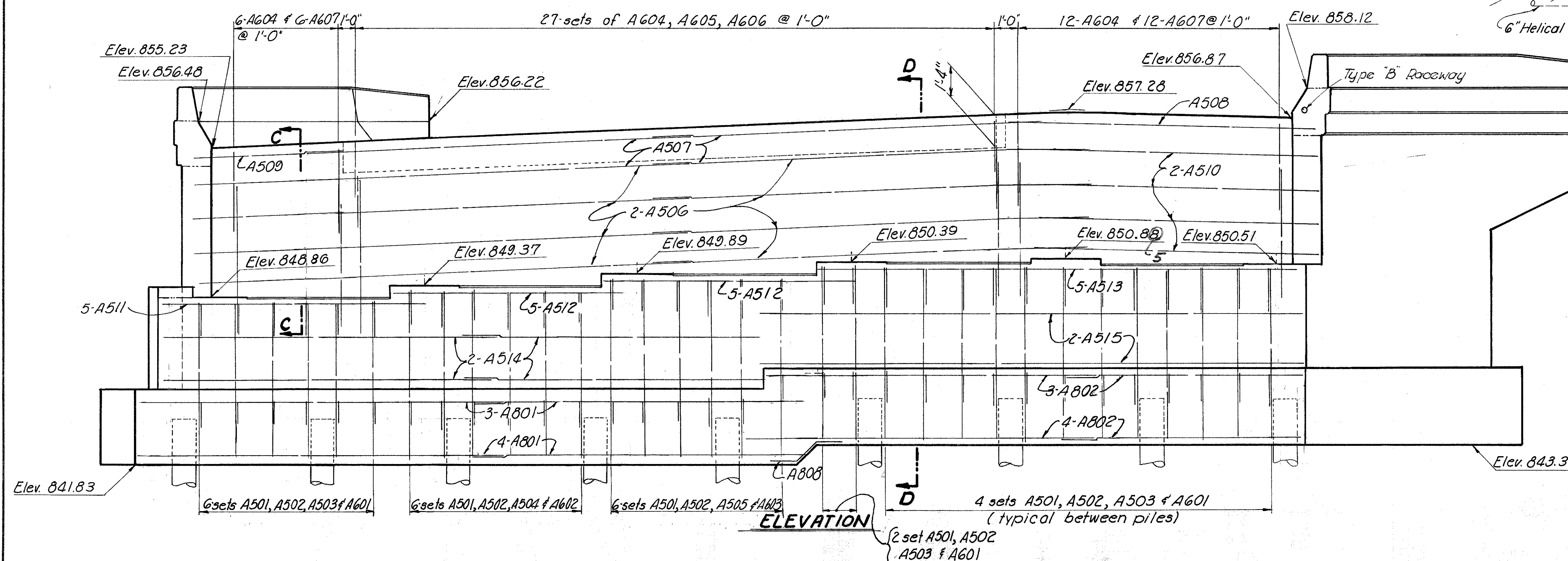
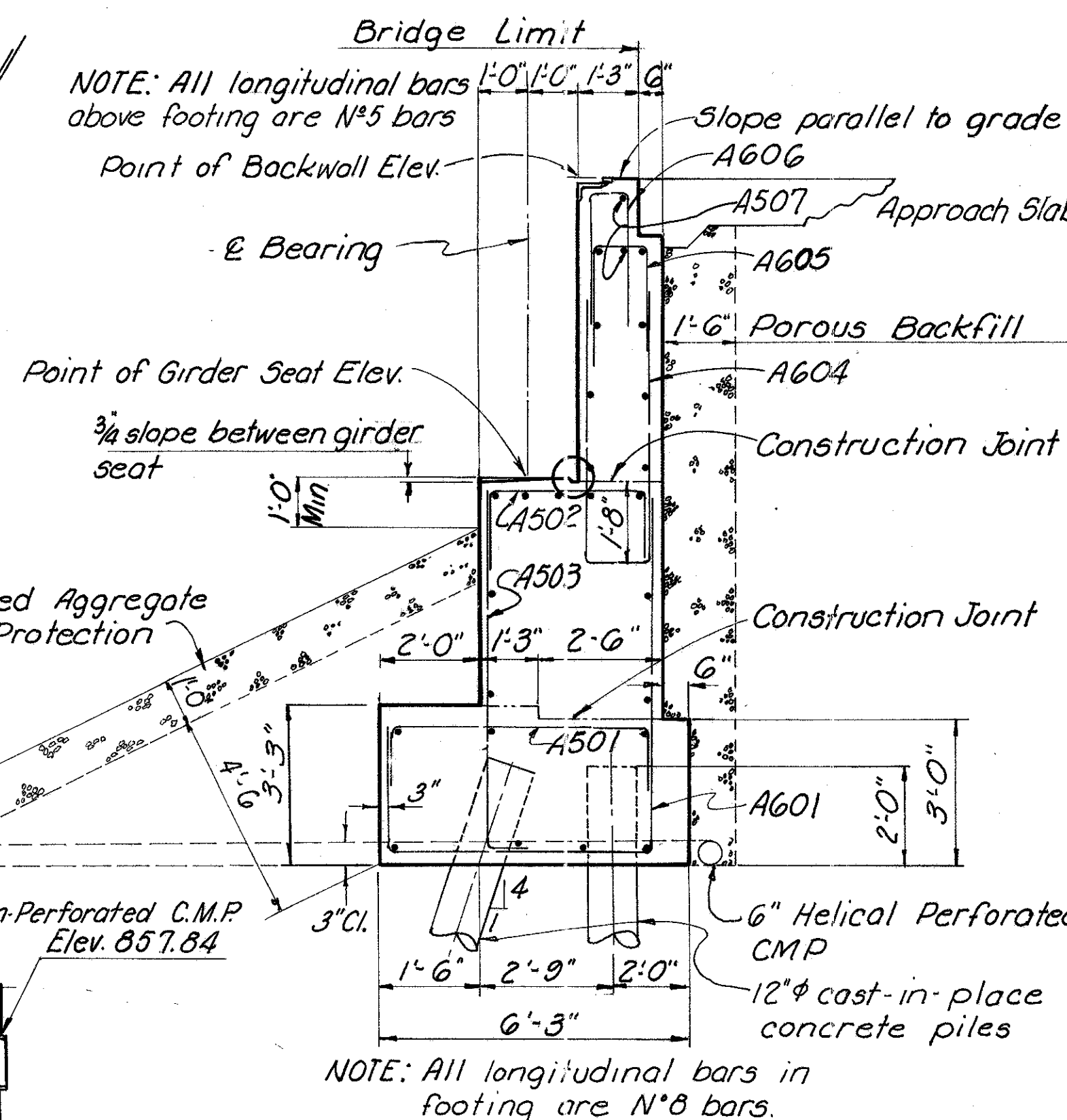
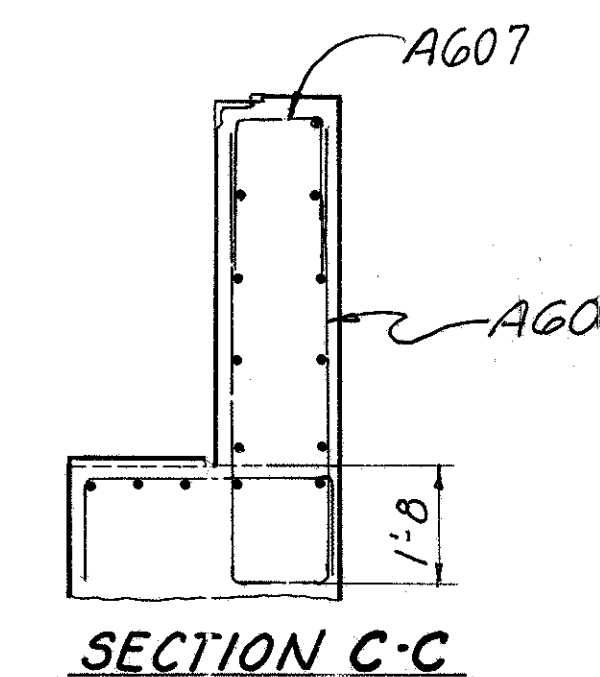
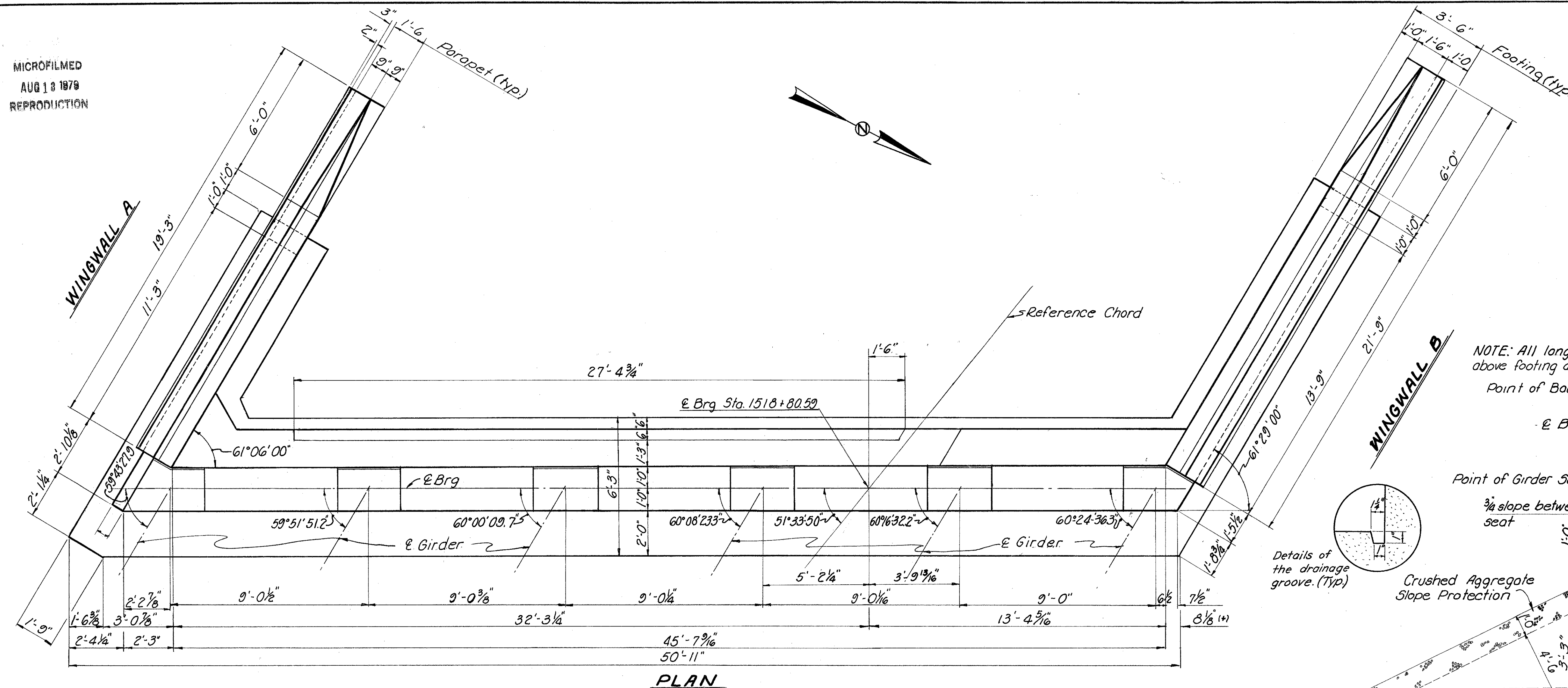
FRANKLIN ENGINEERING, LIMITED COLUMBUS, OHIO					
FORWARD PIER BRIDGE N° FRA 270-2667N UNDER RAMP I					
FRANKLIN COUNTY					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
M.G.	J.F.	R.M.	J.F.	9-3-70	12 270

MICROFILMED
AUG 13 1979
REPRODUCTION

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

FRA-270-25.39N
FRA-62-20.83

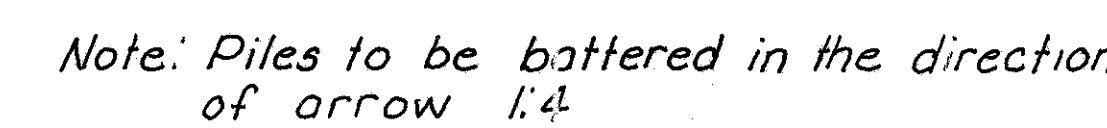
376
495



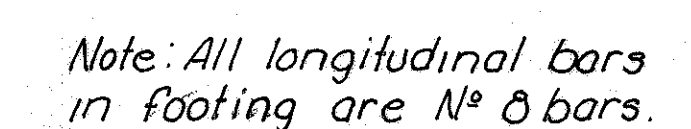
FRANKLIN ENGINEERING, LIMITED							
COLUMBUS, OHIO				OHIO			
REAR ABUTMENT							
BRIDGE N° FRA-270-2667N							
UNDER RAMP I							
FRANKLIN COUNTY				USR-270			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
MLC	JF		Rnu	JF	4/3-70	3-3-71	

377
495

FRA-270-25.391
FRA-62-20.83



FOOTING PLAN



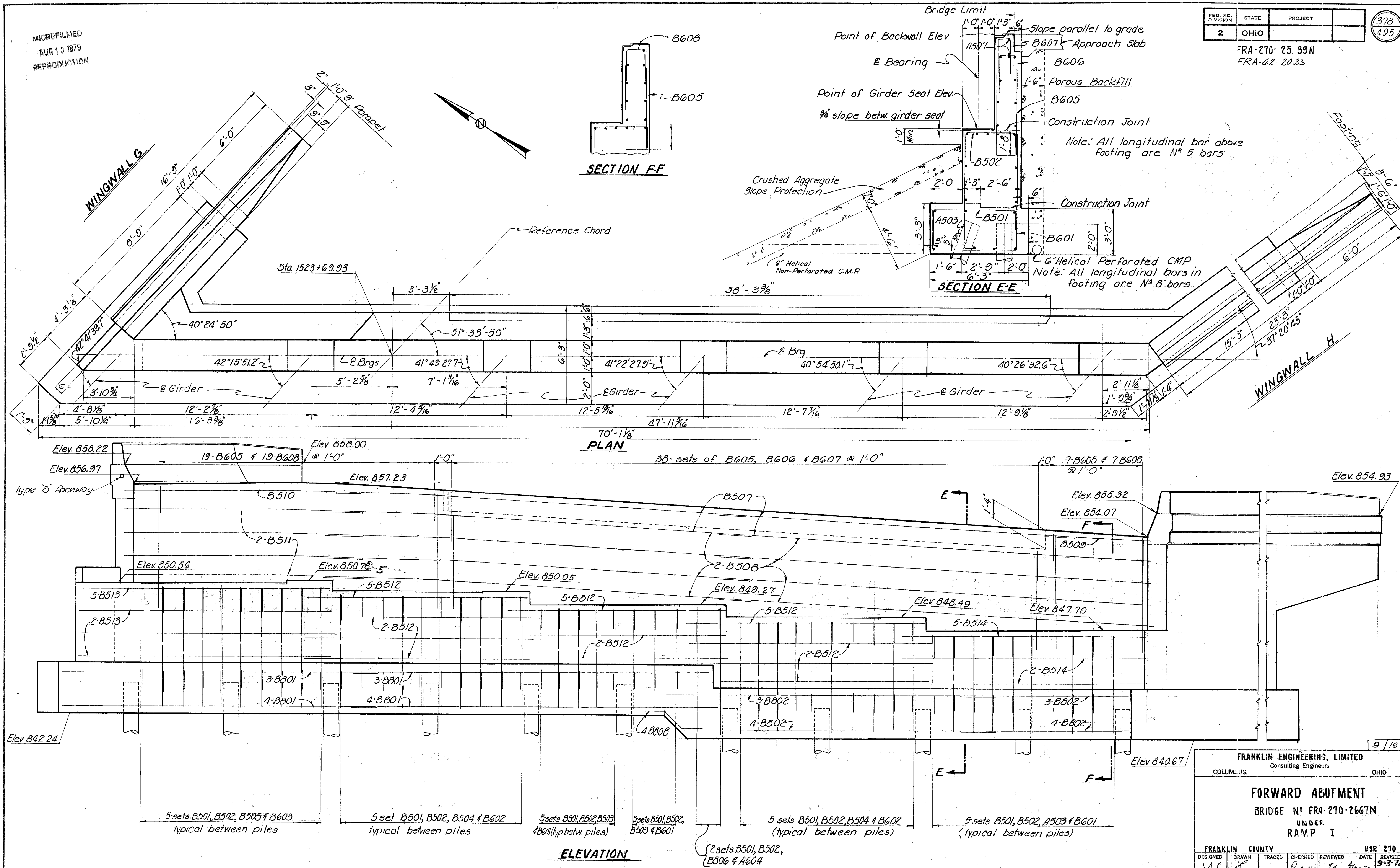
Provide sufficient clearance
for passage of the 6 helical
CMP thru the bottom of the footing.

MICROFILMED
AUG 13 1979
REPRODUCTION

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

FRA-270-25.39N
FRA-62-20.83

378
495

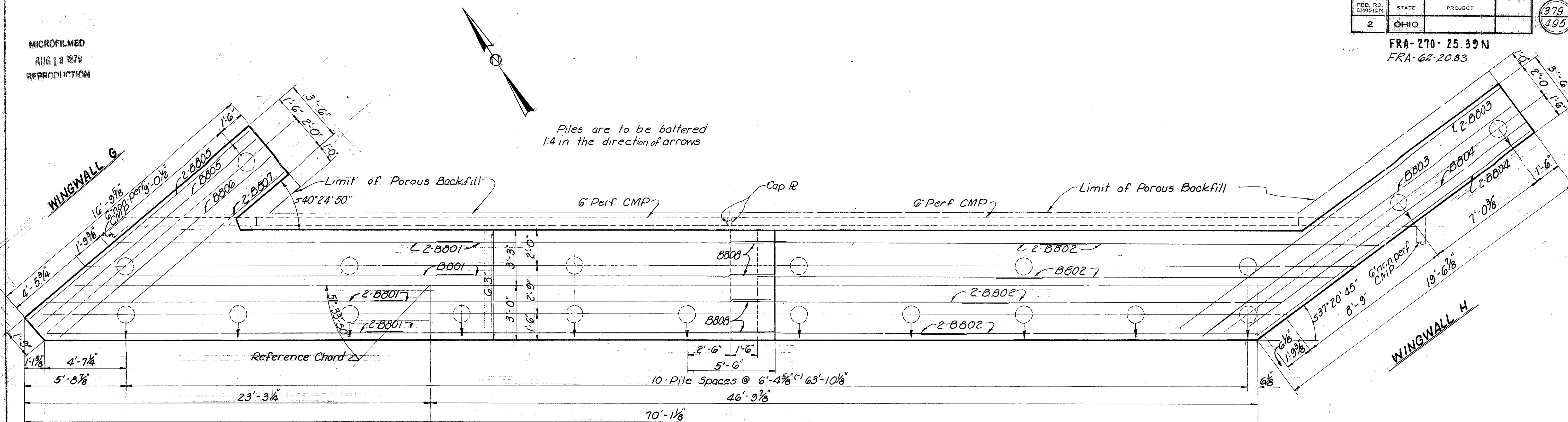


MICROFILMED
AUG 13 1979
REPRODUCTION

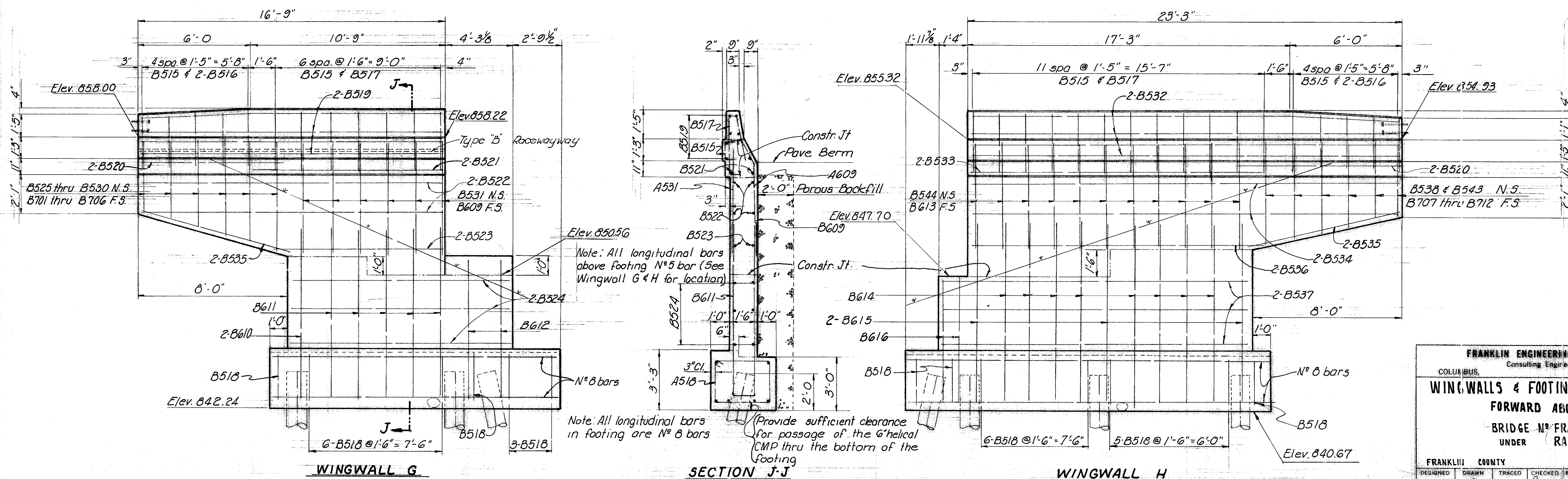
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

379
195

FRA-270-25.39N
FRA-62-20.83

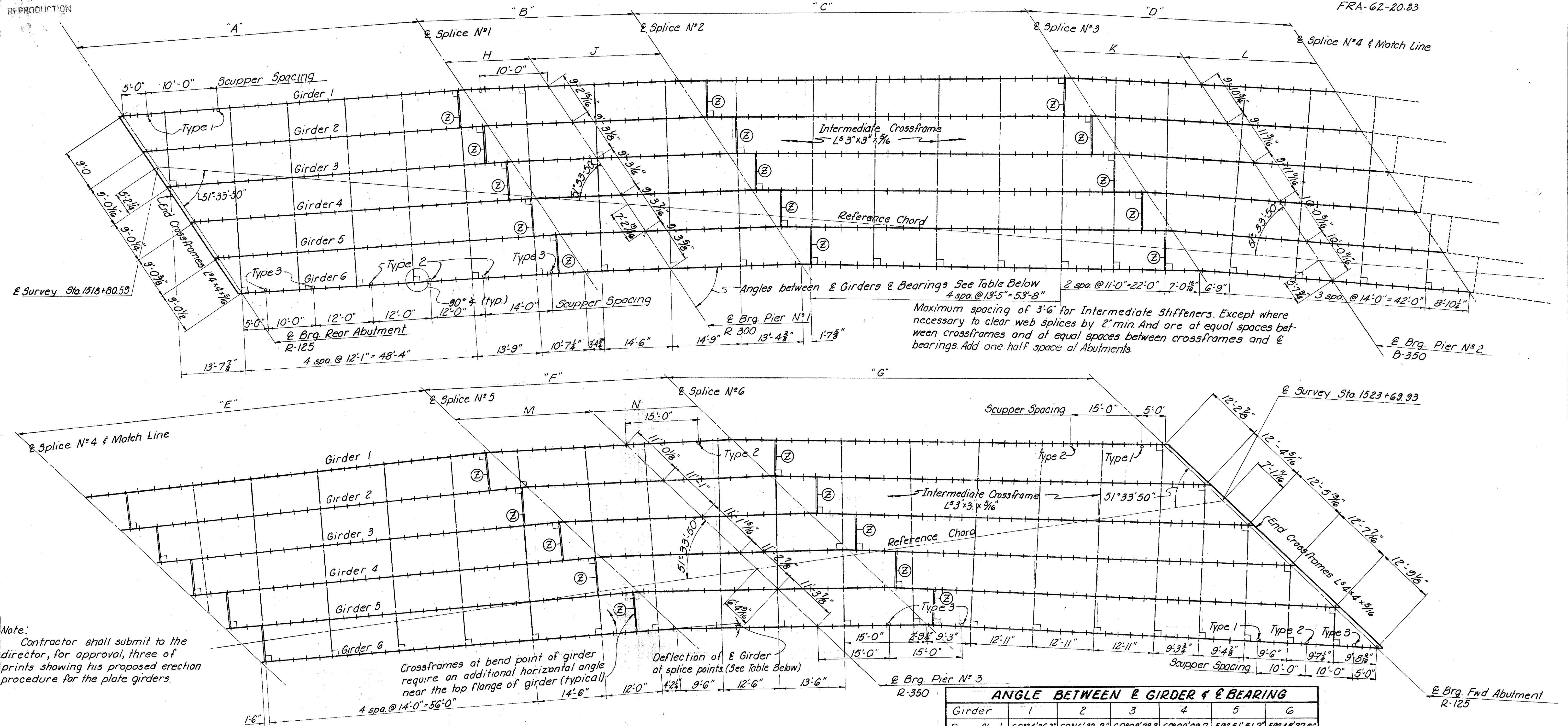


FOOTING PLAN



FRANKLIN ENGINEERING, LIMITED Consulting Engineers COLUMBUS, OHIO					
WINGWALLS & FOOTING DETAILS FORWARD ABUTMENT BRIDGE No. FRA-270-2667N UNDER RAMP I					
FRANKLIN COUNTY, OHIO DESIGNED: M.G. DRAWN: J. TRACED: R.M. CHECKED: J.F. DATE: 4/13/70					
USR 270 10/16					

MICROFILMED
AUG 13, 1979
REPRODUCTION

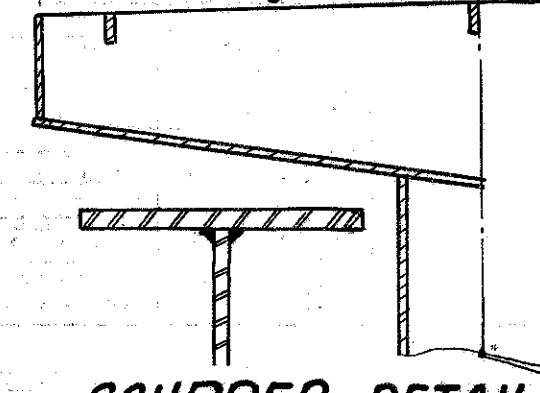


Note:
Contractor shall submit to the director, for approval, three of prints showing his proposed erection procedure for the plate girders.

Crossframes at bend point of girder require an additional horizontal angle near the top flange of girder (typical)

Deflection of & Girder at splice points (See table below)

6 spaces @ 3" = 1'-6" Type 1
7 spaces @ 3" = 1'-9" Type 2
8 spaces @ 3" = 2'-0" Type 3
For Details not shown See Std Drwg SD-1-69



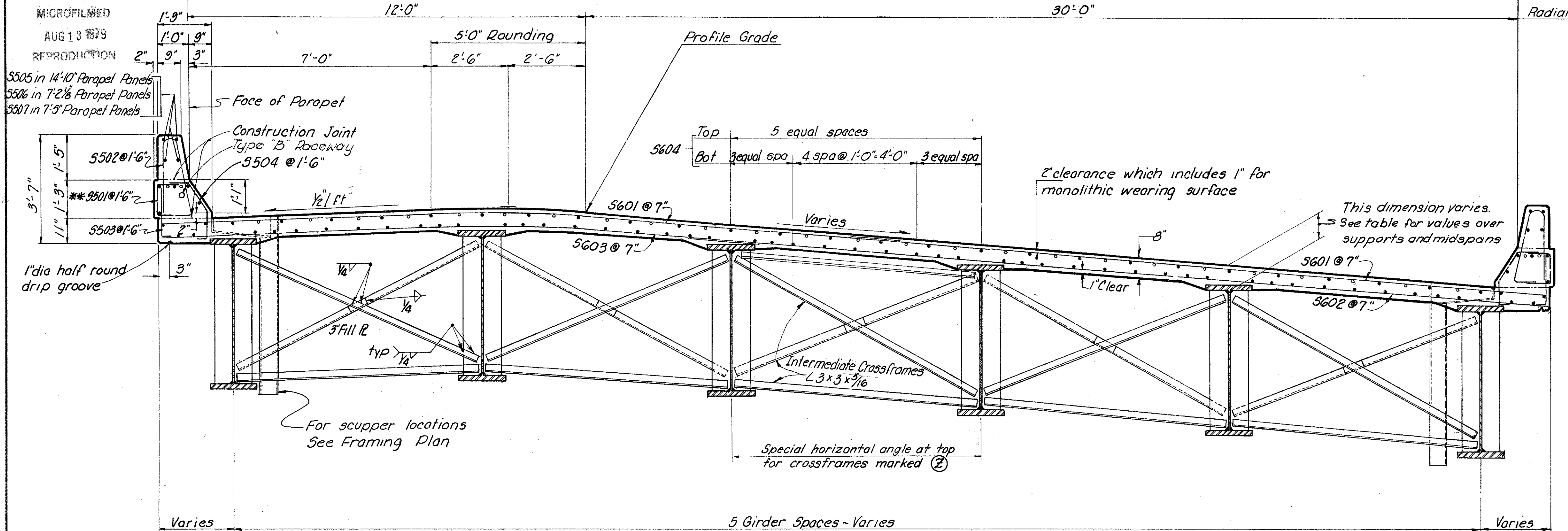
For Location of Scuppers See above Framing Plan.

Location	LENGTH OF GIRDERS						DISTANCE BETWEEN & SPLICE & BEARING						
	A	B	C	D	E	F	G	H	J	K	L	M	N
Girder 1	72'-2 5/16"	45'-7 1/16"	83'-2 1/8"	56'-5 1/8"	85'-10 5/16"	51'-6 1/4"	91'-4 3/4"	18'-0 1/2"	27'-7 7/8"	27'-10 1/4"	28'-6 7/8"	29'-0 3/8"	22'-6 1/4"
Girder 2	72'-3 3/16"	45'-8 5/8"	83'-4 1/16"	56'-7 13/16"	86'-3 1/2"	51'-10 1/4"	92'-1 3/4"	18'-0 13/16"	27'-7 7/8"	27'-11 1/8"	28'-8 1/4"	29'-2 7/8"	22'-7 13/16"
Girder 3	72'-4 7/8"	45'-9 1/2"	83'-7 7/16"	56'-10 1/2"	86'-8 1/8"	52'-2 5/8"	92'-11 3/8"	18'-1 1/8"	27'-8 3/8"	28'-0 1/8"	28'-9 3/8"	29'-4 3/4"	22'-9 9/16"
Girder 4	72'-5 1/16"	45'-10 3/8"	83'-10 3/16"	57'-1 1/16"	87'-2 1/16"	52'-6 3/8"	93'-9 1/8"	18'-1 1/2"	27'-8 3/8"	28'-2 1/8"	28'-11"	29'-7 1/8"	22'-11 1/2"
Girder 5	72'-7 1/16"	45'-11 1/4"	84'-1 3/8"	57'-4 1/4"	87'-8 1/4"	52'-11 1/8"	94'-7 1/2"	18'-1 7/8"	27'-9 3/8"	28'-3 3/4"	29'-0 1/2"	29'-9 1/8"	23'-1 1/4"
Girder 6	72'-8 1/4"	46'-0 1/8"	84'-4 3/8"	57'-7 1/4"	88'-2 1/4"	53'-3 3/4"	95'-6 1/16"	18'-2 3/8"	27'-9 3/8"	28'-5 1/4"	29'-2"	30'-0 5/8"	23'-3 1/8"

ANGLE BETWEEN & GIRDER & BEARING						
Girder	1	2	3	4	5	6
Rear Abut.	60°24'36.3"	60°16'32.2"	60°08'29.3"	60°00'09.7"	59°51'51.2"	59°43'27.9"
Pier N°1	58°39'10.0"	58°30'30.7"	58°21'46.3"	58°12'56.6"	58°04'01.7"	57°55'01.4"
Pier N°2	53°09'29.6"	52°51'44.2"	52°33'39.8"	52°15'15.7"	51°56'31.4"	51°37'26.2"
Pier N°3	46°13'59.5"	45°51'15.8"	45°28'04.1"	45°04'23.5"	44°40'12.8"	44°15'30.8"
Fwd Abut.	42°41'39.7"	42°15'51.2"	41°49'27.7"	41°22'27.3"	40°54'50.1"	40°26'32.6"

DEFLECTION OF & GIRDER AT SPLICE POINTS						
Girder	1	2	3	4	5	6
Splice N°1	1'-45'26.3"	1'-46'01.5"	1'-46'37.0"	1'-47'13.1"	1'-47'49.5"	1'-48'26.5"
Splice N°2	2'-11'27.8"	2'-16'08.8"	2'-21'40.1"	2'-27'02.6"	2'-33'17.5"	2'-40'05.8"
Splice N°3	3'-18'12.6"	3'-23'37.7"	3'-26'46.4"	3'-30'38.3"	3'-34'12.8"	3'-37'29.4"
Splice N°4	3'-31'23.7"	3'-33'49.5"	3'-36'19.4"	3'-38'53.6"	3'-41'32.3"	3'-43'51.7"
Splice N°5	3'-24'06.4"	3'-26'38.9"	3'-29'16.3"	3'-31'58.6"	3'-34'46.3"	3'-37'39.7"
Splice N°6	3'-32'19.2"	3'-35'24.6"	3'-38'36.4"	3'-41'55.6"	3'-45'22.7"	3'-48'58.2"

**Except where needed
to clear parapet joints



TRANSVERSE SECTION

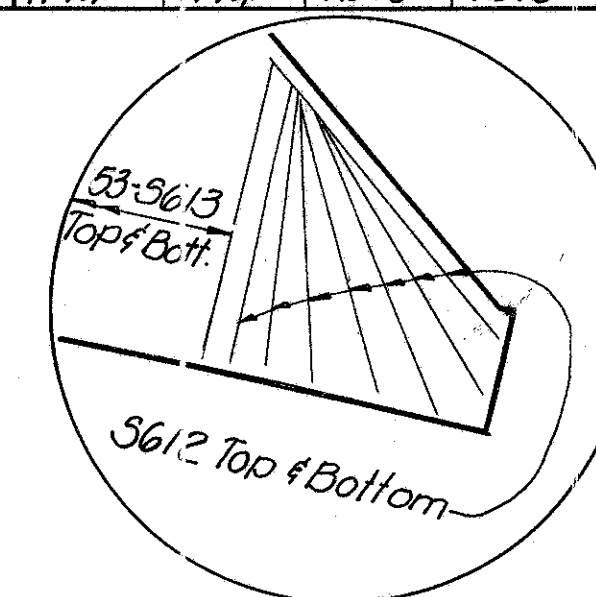
* This is the design dimension. The quantity of deck concrete to be paid for shall be based upon this dimension, even though deviation from it may be necessary because the top flange of the girder may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per 511.19

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

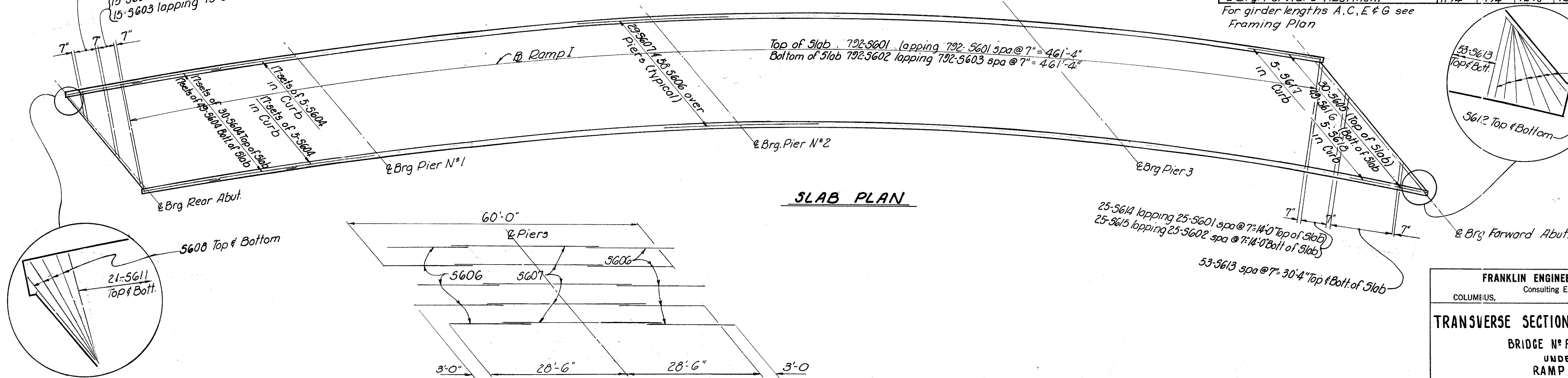
SLAB DEPTH OVER GIRDERS

Girder	1	2	3	4	5	6
Brig. Rear Abutment	11 1/4"	11 1/4"	12 1/8"	12 1/8"	12 1/8"	12 1/8"
Mid-point-Girder Length "A"	11 7/8"	11 3/8"	11 3/8"	11 3/8"	11 3/8"	11 3/8"
Brig. Pier No. 1	11 5/8"	11 5/8"	12	12	12	12
Mid-point-Girder Length "C"	11 9/16"	11 9/16"	11 7/8"	11 3/8"	11 3/8"	11 3/8"
Brig. Pier No. 2	11 3/8"	11 3/8"	11 3/4"	11 3/4"	11 3/4"	11 3/4"
Mid-point-Girder Length "E"	11 5/8"	11 5/8"	11 1/4"	11 1/4"	11 1/4"	11 1/4"
Brig. Pier No. 3	11 3/8"	11 3/8"	11 3/8"	11 3/8"	11 3/8"	11 3/8"
Mid-point-Girder Length "G"	11 1/16"	11 9/16"	11 3/16"	11 1/8"	11 1/8"	11 1/8"
Brig. Forward Abutment	11 1/4"	11 1/4"	12 1/8"	12 1/8"	12 1/8"	12 1/8"

For girder lengths A, C, E & G see Framing Plan



21-5611 spa @ 7" = 11'-0" Top of Slab
15-5601 lapping 15-5609 spa @ 7" = 8'-2" Top of Slab
15-5603 lapping 15-5610 spa @ 7" = 8'-2" Bottom of Slab



SLAB PLAN

**DIAGRAM SHOWING STAGGER
OF 5606 AND 5607 OVER PIERS (TYP)**

FRANKLIN ENGINEERING, LIMITED
Consulting Engineers
COLUMBUS, OHIO

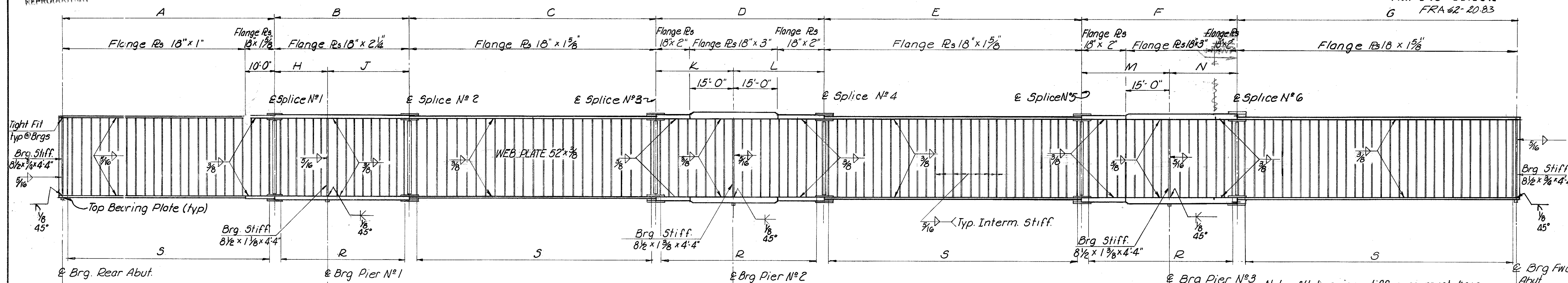
TRANSVERSE SECTION & SLAB PLAN
BRIDGE No FRA-270-2677N
UNDER
RAMP I

FRANKLIN COUNTY

IR 270

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
M.G.	J.F.			J.F.	4-3-70	

12/16

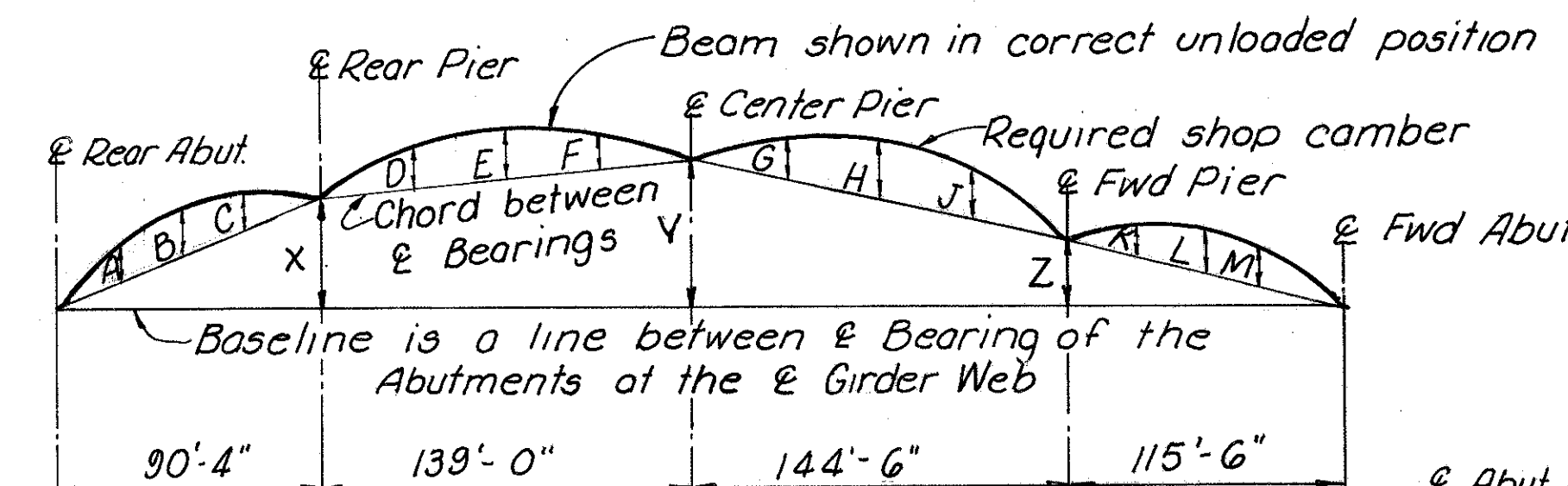
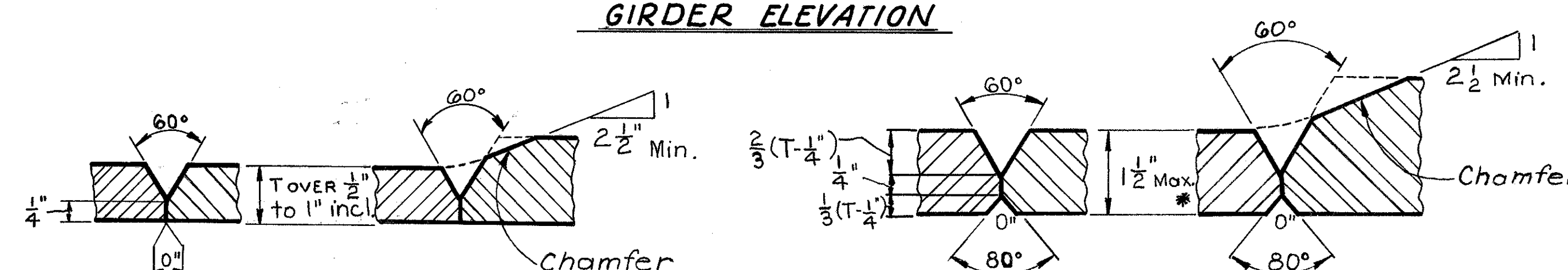


Note: All bearing stiffeners must have contact bearing at Top & Bottom Flanges
Note: Stiffeners shall have contact bearing at top and 1/4" maximum clearance at bottom
Note: Stiffeners shall have contact bearing at bottom and 1/4" maximum clearance at top
All web stiffeners are plates 6" x 5/16" x 4'-2 3/4"

All flange plates to be butt welded except at splices

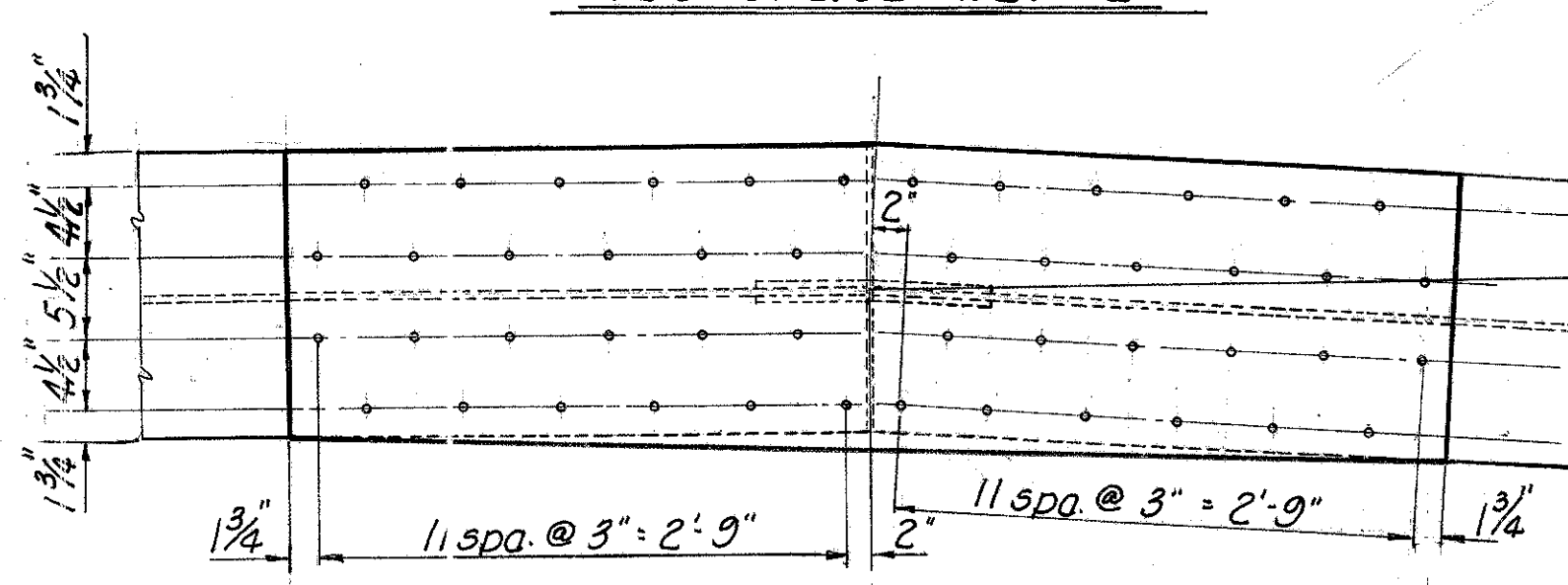
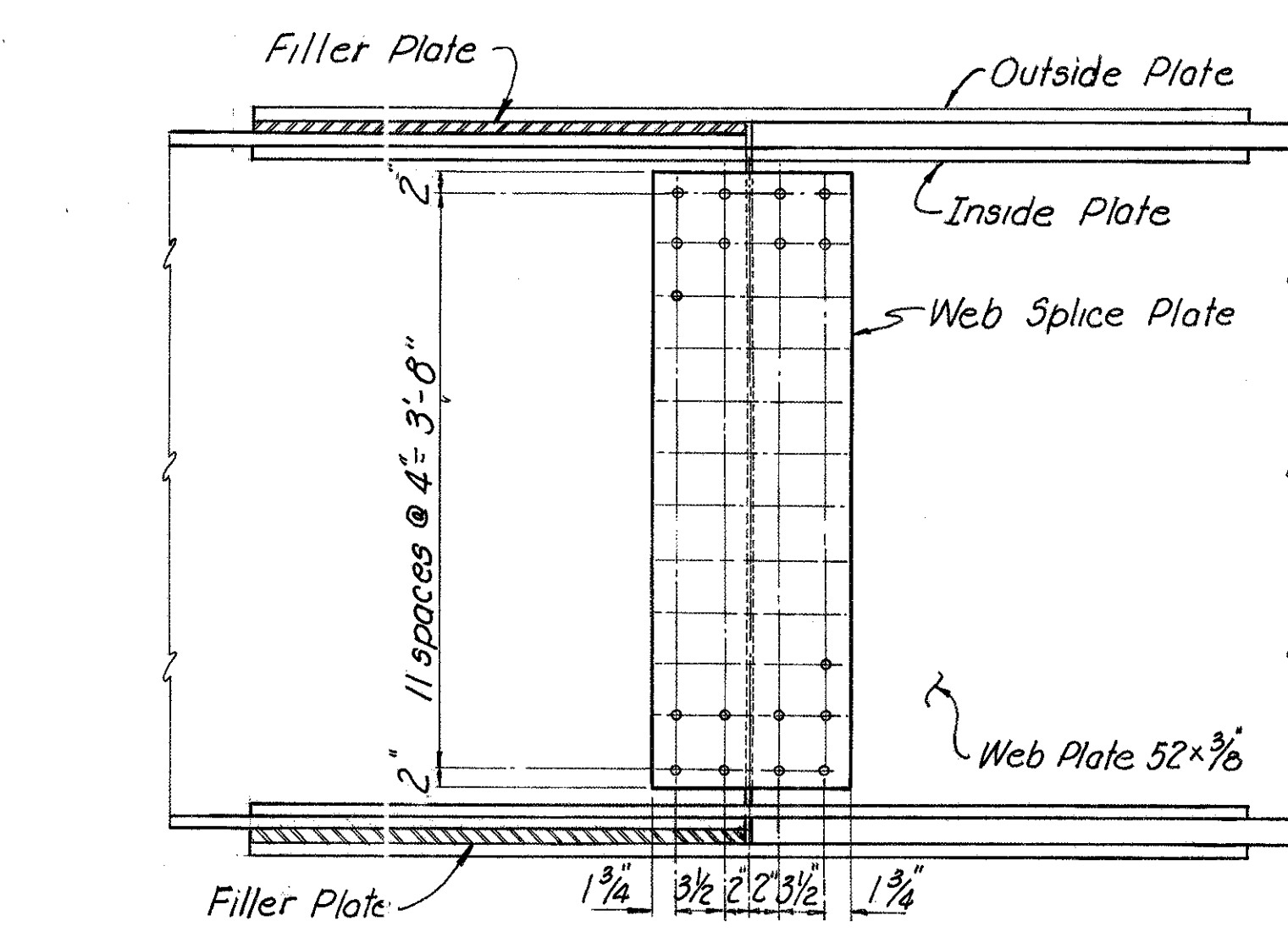
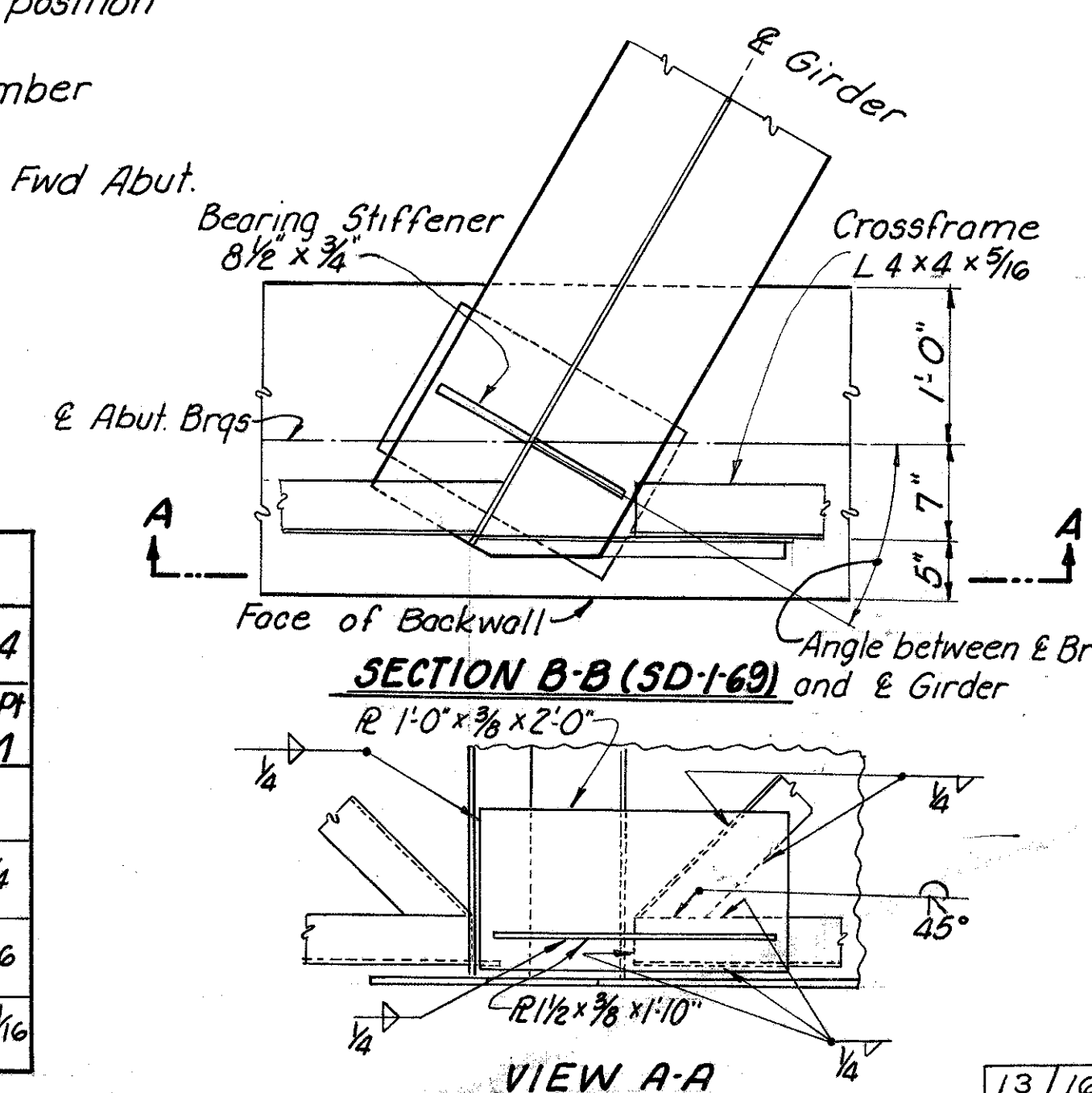
ROCKER-BOLSTER DIMENSIONS													
Bearing	A	B	C	D	F	G	H	K	L	M	R	T	Y
B350 R350	4	22	3 3/4	3 1/2	3/8	13	19 1/8	15	30	27	12 3/4	3 1/4	1 1/16

Note: This table is to be used with reference to Standard Drawing RB-1-55, revised 2-2-59



CAMBER & DEFLECTION TABLE												
SPAN	SPAN No. 1			SPAN No. 2			SPAN No. 3			SPAN No. 4		
LOCATION	1/4 Pt	1/2 Pt	3/4 Pt	1/4 Pt	1/2 Pt	3/4 Pt	1/4 Pt	1/2 Pt	3/4 Pt	1/4 Pt	1/2 Pt	3/4 Pt
Deflection due to weight of steel	0	0	0	1/4	3/8	1/2	1/4	3/8	1/2	1/4	3/8	1/2
Deflection due to remaining dead load	1/4	1/4	0	3/16	1/8	3/16	3/8	1/2	3/8	3/8	7/8	3/4
Adjustment required for vertical curve	3/16	3/16	3/16	1	1 1/8	1	1 1/8	1 3/8	1 1/8	1 1/8	1 5/8	1 1/8
Required shop camber	1/16	1/16	1/16	1 1/8	2 1/8	1 1/8	1 1/8	2 1/8	1 1/8	1 1/8	2 1/8	1 1/8

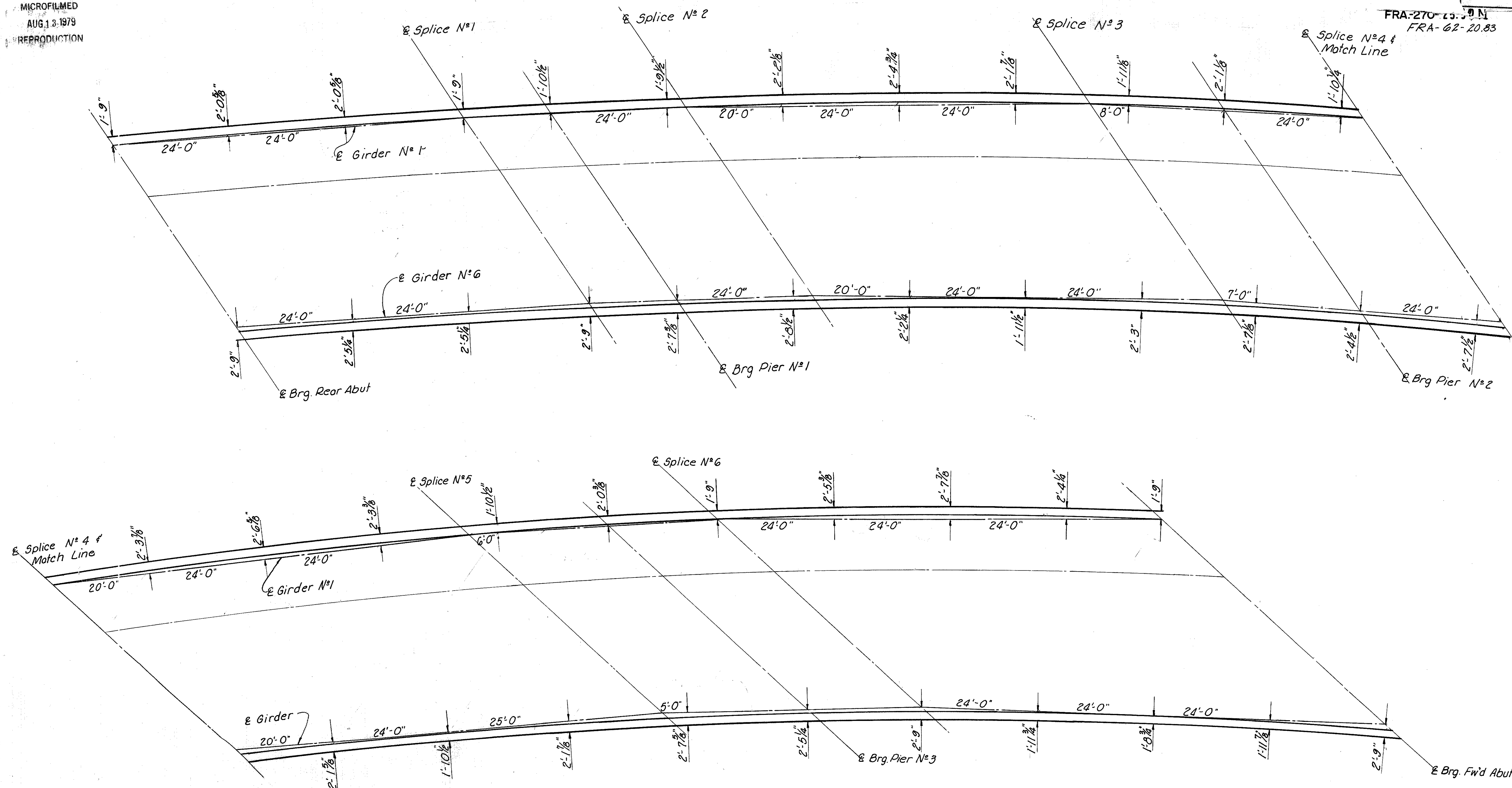
TABLE OF DIMENSIONS						
Girder	1	2	3	4	5	6
X	9 9/16	9 15/16	10 3/16	10 7/16	10 9/16	10 11/16
Y	1'-4 1/4"	1'-4 3/8"	1'-4 3/8"	1'-4 3/8"	1'-3 3/8"	1'-3 3/8"
Z	11 9/16	1'-0"	11 1/16	11 1/16	11 1/16	1'-0"



All bolts are 1" High Strength Bolts

MICROFILMED
AUG 13 1979
REPRODUCTION

FRA-270-25.50 N
FRA-62-20.83



OFFSETS FROM EDGE OF SLAB TO & EXTERIOR GIRDER

NOTE:
All offsets are measured perpendicular to & Girders
All horizontal dimensions are measured along & Girders

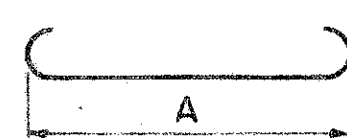
FRANKLIN ENGINEERING, LIMITED Consulting Engineers COLUMBUS, OHIO					
EDGE OF SLAB OFFSETS BRIDGE N° FRA-270-2667N UNDER RAMP 1					
FRANKLIN COUNTY IR 270					
DESIGNED M.G.	DRAWN J.	TRACED	CHECKED	REVIEWED JF	DATE 4/3-70

MICROFILMED
AUG 13 1978
REPRODUCTION

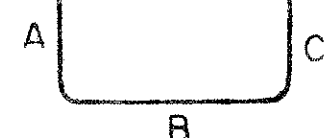
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

384
495

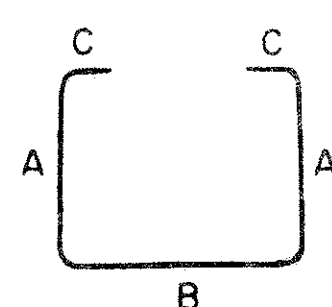
FRA-270.25.39N
FRA-62-20.83



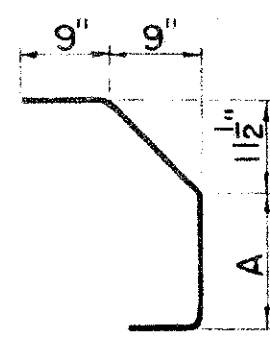
TYPE 1



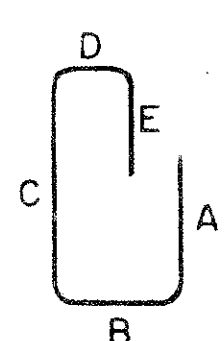
TYPE 2



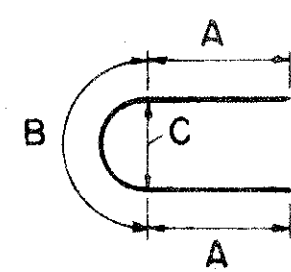
TYPE 3



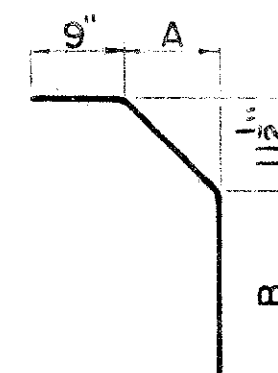
TYPE 4



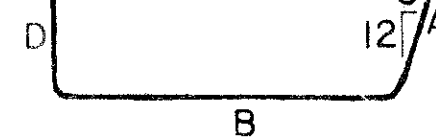
TYPE 5



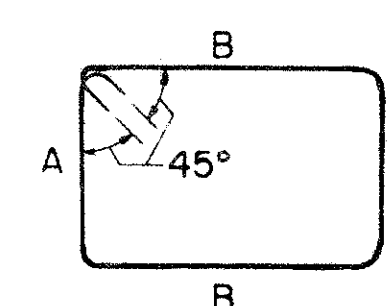
TYPE 6



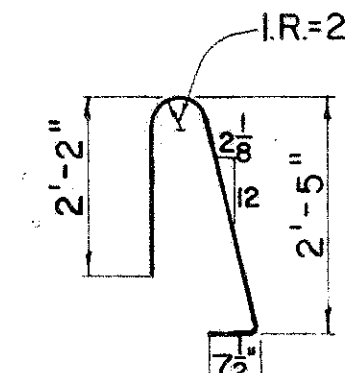
TYPE 7



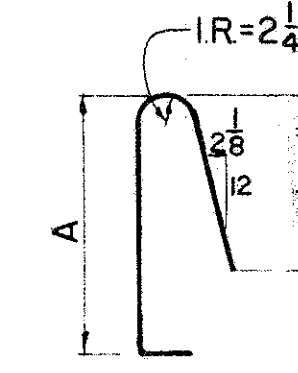
TYPE 8



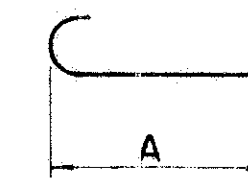
TYPE 9



TYPE 10



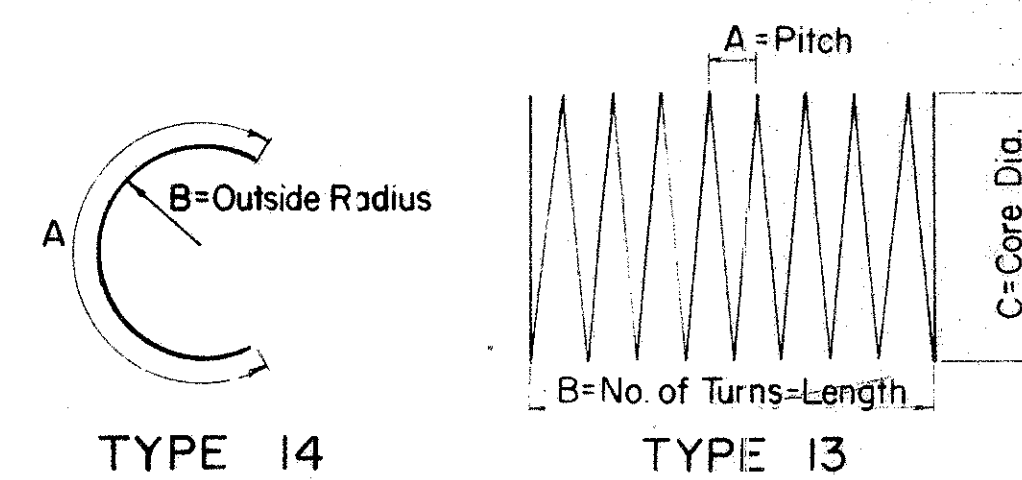
TYPE 11



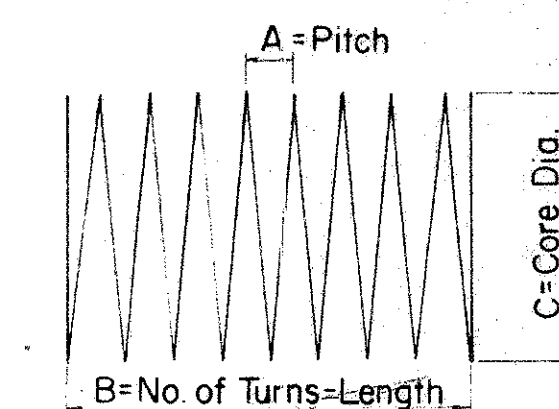
TYPE 12

ABUTMENTS

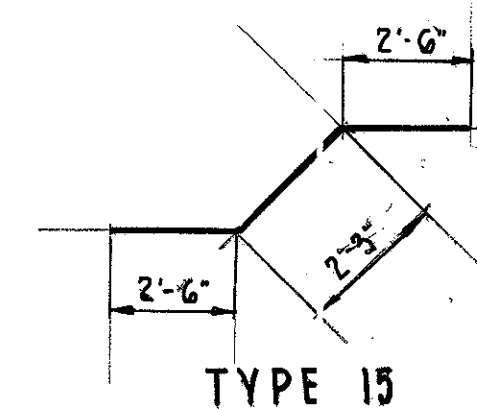
MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT	MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT	MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT
A801	14	16'-3"	5						607	A530	2	4'-3"	5						9	B508	16	30'-0"	5						501
A802	14	14'-3"	5						533	A531	18	4'-7"	5						86	B509	1	10'-0"	5						10
A803	3	16'-8"	5						134	A532	27	11'-1"	9	2'-4"	3'-0"				312	B510	1	19'-0"	5						20
A804	1	16'-3"	5						43	A533	4	8'-0"	5						33	B511	8	16'-6"	5						138
A805	2	15'-10	5						85	A534	8	21'-5"	Field Bent						179	B512	31	14'-3"	5						461
A806	3	19'-0"	5						152	A535	2	15'-9"	5						33	B513	11	15'-0"	5						172
A807	3	17'-5"	5						140	A536	4	21'-5"	5						89	B514	9	18'-6"	5						174
A808	4	7'-3"	15						77	A537	2	13'-5"	5						28	B515	29	2'-0"	2	7 1/2"	1'-0"	7 1/2"			60
										A538	6	14'-10"	5						93	B516	20	3'-0"	3						63
A701	2	4'-0"	5						16											B517	19	6'-3"	11	3'-1"					124
A702	2	5'-0"	7	2 1/4"	3'-5"				20											B518	25	11'-1"	9	2'-4"	3'-0"				289
A703	2	5'-4"	7	4"	3'-8"				22											B519	8	16'-5"	Field Bent						137
A704	2	5'-8"	7	6"	3'-11"				23											B520	4	7'-6"	5						31
A705	2	6'-0"	7	9"	4'-2"				25											B521	2	10'-9"	5						22
A706	2	6'-3"	7	9"	4'-5"				26	B801	14	22'-10"	5						854	B522	4	16'-5"	5						69
										B802	14	20'-4"	5						760	B523	2	9'-6"	3						20
A601	20	14'-2"	2	2'-7"	5'-4"	6'-7"			426	B803	3	22'-0"	5						176	B524	6	12'-8"	5						79
A602	6	14'-8"	2	2'-7"	5'-4"	7'-1"			132	B804	3	19'-0"	5						152	B525	1	3'-0"	3						3
A603	6	15'-2"	2	2'-7"	5'-4"	7'-7"			137	B805	3	16'-3"	5						130	B526	1	3'-5"	5						4
A604	45	12'-9"	2	5'-10"	1'-5"	5'-10"			862	B806	1	16'-0"	5						43	B527	1	3'-10"	5						4
A605	27	6'-9"	2	2'-10"	1'-5"	2'-10"			274	B807	2	11'-6"	5						61	B528	1	4'-3"	5						4
A606	27	7'-1"	2	3'-3"	11"	3'-3"			287	B808	4	7'-3"	15						77	B529	1	4'-8"	5						5
A607	18	9'-5"	2	4'-2"	1'-5"	4'-2"			255											B530	1	5'-1	5						5
A608	18	6'-5"	7	9"	4'-7"				173	B701	1	4'-0"	5						8	B531	6	5'-5"	5						34
A609	6	20'-10"	2	10'-0"	1'-2"	10'-0"			188	B702	1	5'-2"	7	2 1/4"	3'-7"				11	B532	8	22'-11"	Field Bent						191
A610	4	10'-0"	3						60	B703	1	5'-8"	7	4"	4'-0"				12	B533	2	17'-3"	5						36
A611	4	6'-7"	3						40	B704	1	6'-2"	7	6"	4'-5"				13	B534	4	22'-11"	5						96
A612	4	10'-1"	3						61	B705	1	6'-8"	7	9"	4'-10"				14	B535	4	8'-0"	5						33
A613	8	21'-0"	2	10'-1"	1'-2"	10'-1"			252	B706	1	7'-1"	7	9"	5'-3"				15	B536	2	16'-0"	5						33
A614	1	13'-10"	2	6'-6"	1'-2"	6'-6"			21	B707	1	4'-0"	5						8	B537	6	16'-3"	5						102
										B708	1	5'-0"	7	2 1/4"	3'-5"				10	B538	1	3'-0"	5						3
A501	32	8'-3"	2	1'-7"	5'-4"				275	B709	1	5'-4"	7	4"	3'-8"				11	B539	1	3'-3"	5						3
A502	32	6'-4"	2	1'-7"	3'-5"				211	B710	1	5'-8"	7	6"	3'-11"				12	B540	1	3'-6"	5						4
A503	20	7'-1"	2	6'-6"	8"				148	B711	1	6'-0"	7	9"	4'-2"				12	B541	1	3'-9"	5						4
A504	6	7'-7"	2	7'-0"	8"				48	B712	1	6'-3"	7	9"	4'-5"				13	B542	1	4'-0"	5						4
A505	6	8'-1"	2	7'-6"	8"				51											B543	1	4'-3	5						4
A506	16	20'-0"	3						334	B601	18	14'-2"	2	2'-7"	5'-4"	6'-7"			383	B544	11	4'-7"	5						53
A507	4	16'-3"	3						68	B602	20	15'-0	2	2'-7"	5'-4"	7'-5"			451										
A508	1	14'-0"	3						15	B603	10	15'-3"	2	2'-7"	5'-4"	7'-8"			229										
A509	1	6'-0"	3						6	B604	2	15'-9"	2	2'-7"	5'-4"	8'-2"			47										
A510	8	12'-0"	3						100	B605	64	12'-9"	2	5'-10"	1'-5"	5'-10"			1226										
A511	5	11'-3"	3						59	B606	38	6'-9"	2	2'-10"	1'-5"	2'-10"			385										
A512	10	10'-10"	5						113	B607	38	7'-1"	2	3'-3"	11"	3'-3"			404										
A513	5	20'-8"	5						108	B608	26	9'-4"	2	4'-2"	1'-5"	4'-2"			364										
A514	8	13'-10"	5						115	B609	6	7'-4"	7	9"	5'-6"				66										
A515	4	25'-8"	5						107	B610	2	10'-8"	5						32										
A516	20	3'-0"	5						63	B611	5	22'-2"	2	10'-8"	1'-2"	10'-8"			166										
A517	30	2'-0"	2	7 1/2"	1'-0"	7 1/2"			63	B612	2	17'-2"	2	8'-8"	1'-2"	7'-8"			52										
A518	20	6'-3"	11	3'-1"					130	B613	11	6'-5"	7	9	4'-7"				106										
A519	8	18'-11"	Field Bent if necessary						158	B614	8	20'-10"	2	10'-0"	1'-2"	10'-0"			250										
A520	4	7'-6"	5						31	B615	6	10'-10"	5						90										
A521	2	13'-3"	5						28	B616	2	13'-6"	2	6'-4"	1'-2"	6'-4"			41										
A522	4	18'-11"	5						79																				
A523	2	12'-0"	5						25	B501	50	8'-3"	2	1'-7"	5'-4"	1'-7"			430										
A524	6	13'-9"	5						86	B502	50	6'-4"	2	1'-7"	3'-5"	1'-7"			330										
A525	2	3'-0"	5						6	B503	18	7'-1"	2	6'-6"	8"	0"			133										
A526	2	3'-3"	5						7	B504	20	7'-11"	2	7'-4"	8"	0			165										
A527	2	3'-6"	5						7	B505	10	8'-2"	2	7'-7"	8"	0			85										
A528	2	3'-9"	5						8	B506	2	8'-8"	2	8'-1"	8"	0"			18										
A529	2	4'-0"	5						8	B507	4	22'-0"	5						92										
TOTAL										TOTAL										TOTAL									



TYPE 14



TYPE 13

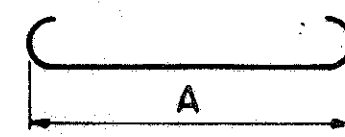


TYPE 15

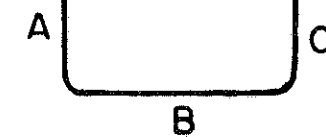
NOTES:

SPIRAL REINFORCING BARS: The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap. The "No. of Turns" shown is the "Length" divided by the pitch, plus three turns (total number of closed coils), expressed as the nearest whole number. Spiral reinforcing bars shall not have deformation, but shall in other respects conform to Item 509. 1 1/2

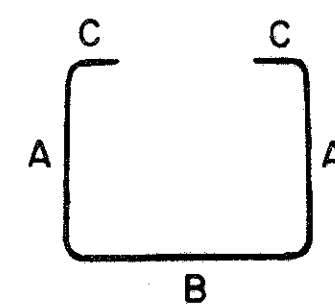
MICROFILMED
AUG 13 1979
REPRODUCTION



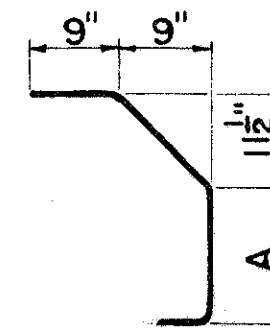
TYPE 1



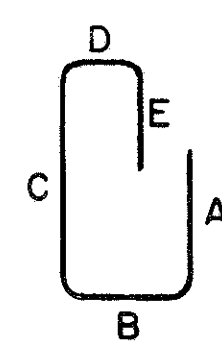
TYPE 2



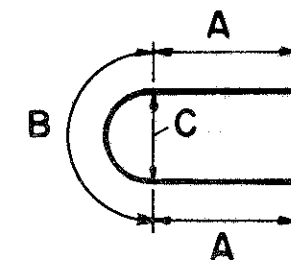
TYPE 3



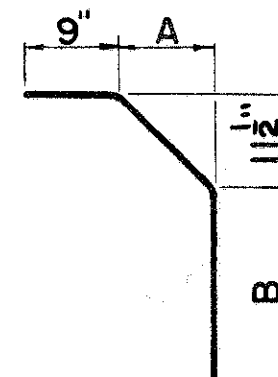
TYPE 4



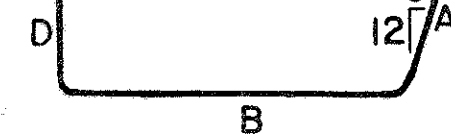
TYPE 5



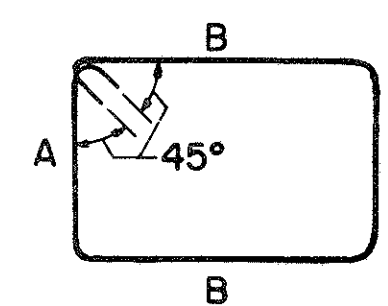
TYPE 6



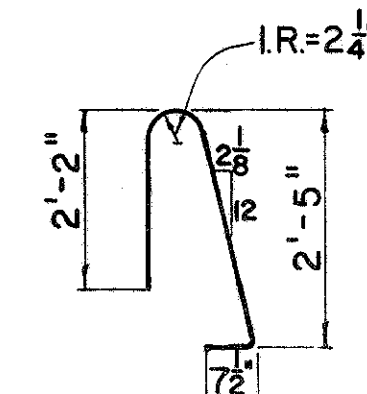
TYPE 7



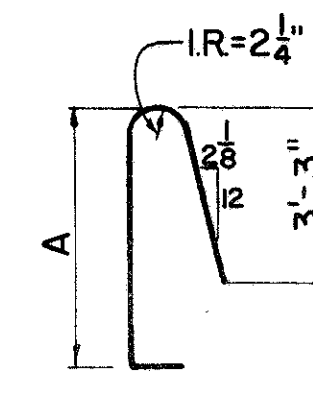
TYPE 8



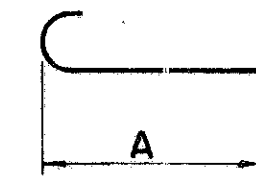
TYPE 9



TYPE 10



TYPE 11



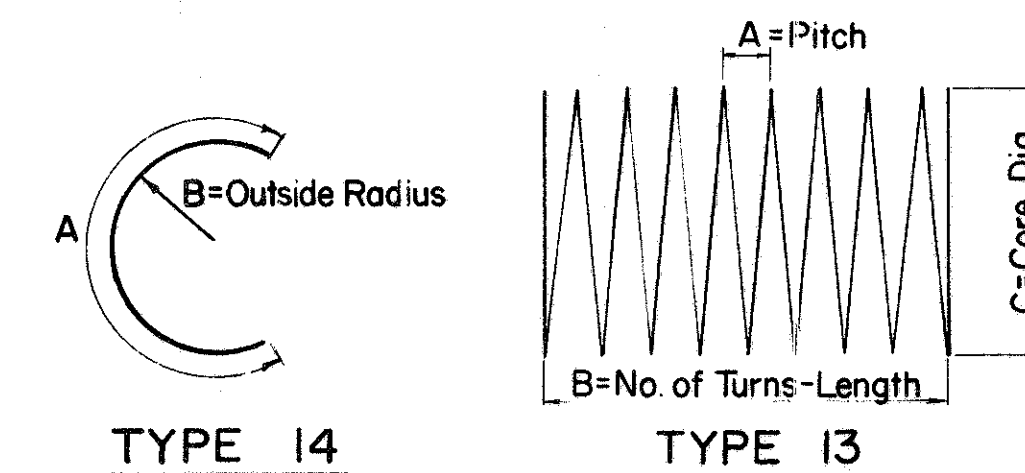
TYPE 12

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

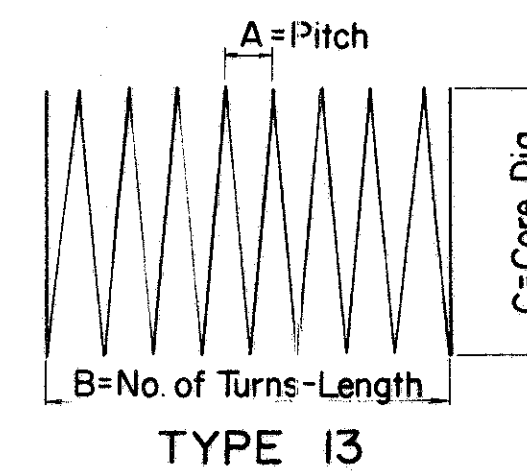
386
495

FRA-270.25.30 N
FRA-62-20.83

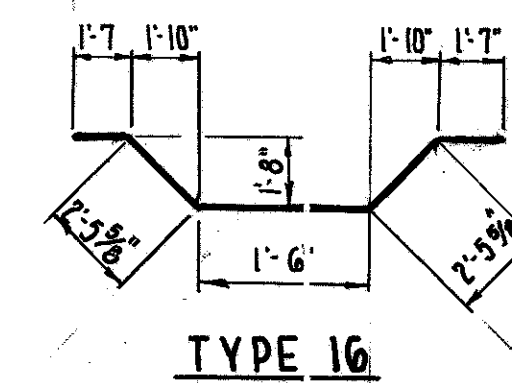
ABUTMENTS										PIERS										SUPERSTRUCTURES											
MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT	MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT	MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT		
										P14501	25	27'-1"	2	25'-0"	2'-7"				5180	5601	1624	22'-10"	5							55,696	
										P14502	25	37'-1"	2	35'-0"	2'-7"				7092	5602	817	27'-10"	5							34,155	
										P14503	10	45'-1"	2	43'-0"	2'-7"				3449	5603	807	19'-3"	5							23,333	
										P14504	10	45'-0"	2	42'-11"	2'-7"				3443	5604	1513	30'-0"	5							68,176	
										P14505	10	44'-6"	2	42'-5"	2'-7"				3404	5605	30	*	5	*Varies 21'-8" to 12'-0" Incr. = 4"					759		
										P14506	10	43'-11"	2	41'-10"	2'-7"				3360	5606	174	17'-0"	5							4,443	
										P14507	10	43'-4"	2	41'-3"	2'-7"				3315	5607	87	30'-0"	5							3920	
										P14508	25	30'-1"	2	28'-0"	2'-7"				5753	5608	8	3'-6"	5							42	
										P14509	25	40'-1"	2	38'-0"	2'-7"				7666	5609	15	*	5	*Varies 20'-0" to 5'-5" Incr. = 1'-0 1/2"					286		
										P14510	10	48'-1"	2	46'-0"	2'-7"				3678	5610	15	*	5	*Varies 25'-0" to 10'-5" Incr. = 1'-0 1/2"					399		
										P14511	10	47'-10"	2	45'-9"	2'-7"				3659	5611	42	*	5	*2 sets of 21 Varies 25'-6" to 4'-8" Incr. 1'-0 1/2"					952		
										P14512	10	47'-1"	2	45'-0"	2'-7"				3602	5612	14	4'-4"	5							91	
										P14513	10	46'-5"	2	44'-4"	2'-7"				3551	5613	106	*	5	*2 set of 53- Varies 29'-8" to 4'-10" Incr. 5 3/4"					2753		
										P14514	10	45'-8"	2	43'-7"	2'-7"				3494	5614	25	*	5	*Varies 19'-9" to 8'-3" Incr. 5 3/4"					526		
																			5615	25	*	5	*Varies 14'-9" to 3'-3" Incr. 5 3/4"					338			
										P1101	100	7'-4"	2	6'-2"	1'-6"				3896	5616	49	*	5	*Varies 21'-8" to 12'-8" Incr. 2 1/4"					1263		
										P1102	25	25'-0"	5						3321	5617	5	12'-2"	5							91	
										P1103	15	40'-11"	5						3261	5618	5	21'-7"	5							162	
										P1104	15	40'-8"	5						3241												
										P1105	15	40'-0"	5						3188												
										P1106	15	39'-4"	5						3135	5501	660	2'-0"	2	7 1/2	1'-0"	7 1/2				1377	
										P1107	15	38'-8"	5						3082	5502	660	5'-4"	10/16							3671	
										P901	12	34'-5"	2	31'-0"	3'-8"				1404	5503	660	2'-4"	2	1'-10	7"					1606	
										P902	12	25'-8"	2	22'-3"	3'-8"				1047	5504	660	3'-5"	4	11"						2352	
										P903	20	24'-8"	5						1677	5505	180	14'-6"	5							2722	
										P904	372	13'-6"	5						17075	5506	88	6'-10"	5							627	
										P905	66	30'-8"	5						6882	5507	88	7'-1"	5							650	
										P906	12	36'-9"	2	33'-4"	3'-8"				1429	5508	14	9'-7"	16							140	
										P907	12	26'-5"	2	23'-0"	3'-8"				1078	5509	8	3'-1"	5							26	
										P908	20	26'-5"	5						1796												
										P909	120	21'-3"	5						8670												
										P910	39	24'-9"	5						8331												
										P911	14	40'-3"	2	36'-10"	3'-8"				1216												
										P912	14	28'-11"	2	25'-6"	3'-8"				1376												
										P913	24	29'-5"	5						2400												
										P601	187	13'-6"	5						3792											270,570	
										P501	4	24'-0"	5						100											210,556	
										P502	12	8'-2"	6	1'-7"	5'-0"	3'-2"			102												
										P503	324	10'-3"	2	3'-8"	3'-2"	3'-8"			3464												
										P504	280	9'-0"	2	3'-8"	1'-11"	3'-8"			2628												
										P505	4	25'-9"	5						107	RE1401	4	2'-6"	5								
										P506	4	28'-9"	5						120	RE1101	2	8'-7"	5								
										P507	180	5'-9"	2	1'-6"	3'-0"	1'-6"			1080	RE901	3	7'-10"	5								
										SP401	1	36'-8"	13	3 1/2	128	3'-2"			961	RE801	1	7'-6"	5								
										SP402	1	36'-1 1/8"	13	3 1/2	126	3'-2"			946	RE706	1	7'-1"	7	9"	5'-3"						
										SP403	1	35'-6 1/8"	13	3 1/2	124	3'-2"			932	RE601	11	6'-11"	5								
										SP404	1	34'-11 3/8"	13	3 1/2	122	3'-2"			917	RE501	2	6'-7"	5								
										SP405	1	34'-4 3/8"	13	3 1/2	120	3'-2"			902	RE401	1	6'-3"	14	6'-3	1'-7"						
										SP406	1	37'-1 3/8"	13	3 1/2	129	3'-2"			973												
										SP407	1	36'-4 3/8"	13	3 1/2	127	3'-2"			954												
										SP408	1	35'-7 3/8"	13	3 1/2	124	3'-2"			935												
										SP409	1	34'-10 3/8"	13	3 1/2	121	3'-2"			916												
										SP410	1	34'-1 3/8"	13	3 1/2	119	3'-2"			896												
										SP411	1	39'-9 1/8"	13	3 1/2	138	3'-2"			1041												
										SP412	1	38'-11 3/8"	13	3 1/2	136	3'-2"			1020												
										SP413	1	38'-1 1/8"	13	3 1/2	133	3'-2"			998												
										SP414	1	37'-3 1/8"	13	3 1/2	130	3'-2"			977												
										SP415	1	36'-5 3/8"	13	3 1/2	127	3'-2"			955												
																		164,637													



TYPE 14



TYPE 13



TYPE 16

NOTES:
SPIRAL REINFORCING BARS: The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap. The "No. of Turns" shown is the "Length" divided by the pitch, plus three turns (total number of closed coils), expressed as the nearest whole number. Spiral reinforcing bars shall not have deformation but shall in other respects conform to Item 509. 1 1/2 closed coils shall be provided at the ends of each spiral unit. Four steel channels, tee or angle spacers, weighing approximately 0.80 lbs. per lin. ft. of spacers, shall be provided for each spiral unit. The spacers shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.80 lbs. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

BAR SIZE: The bar size is indicated in the bar mark. The first digit where three digits are used, the first two digits where four are used, indicate the bar size number. For example: A506 is a No. 5 size bar and P101 is a