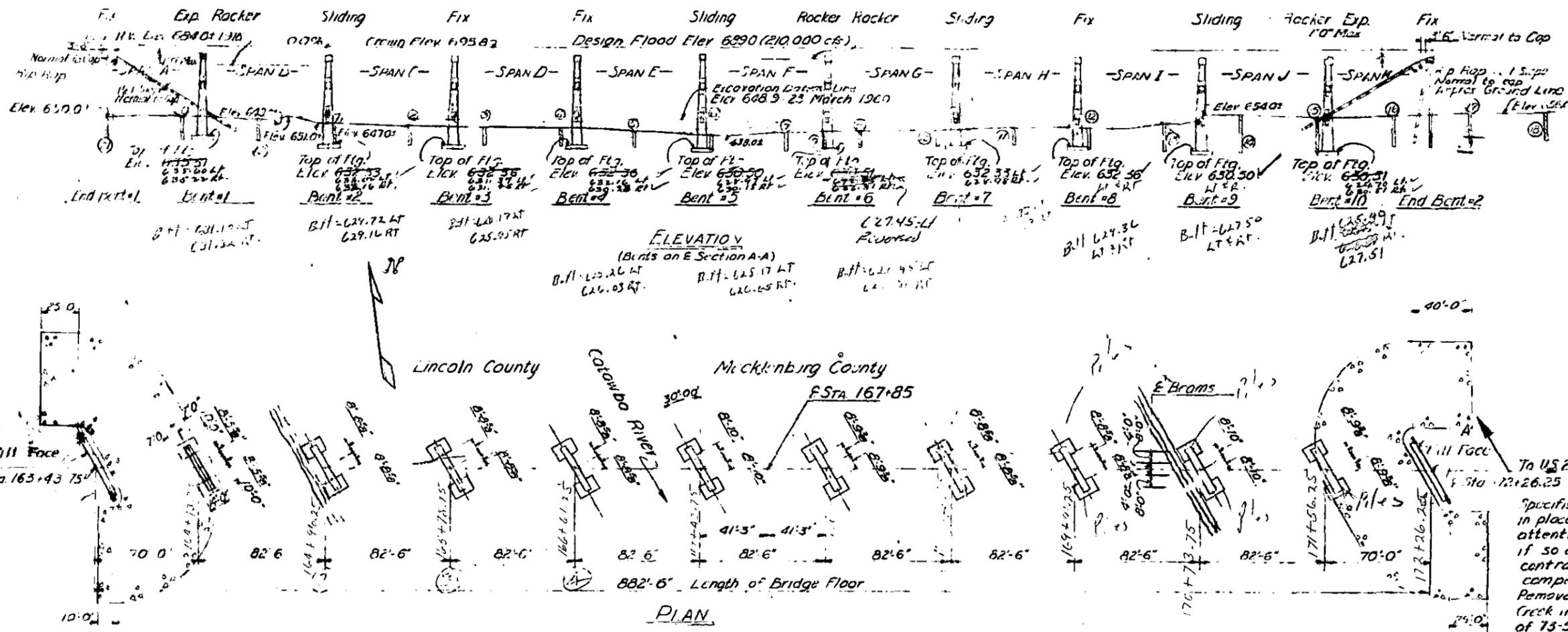
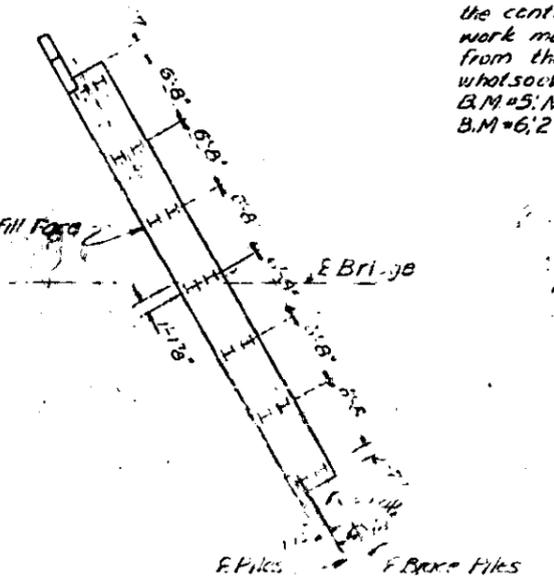


-NOTES-
 Assumed Live Load - H20-S16 40
 For other Design Data and General Notes See Sheet 20
 Computed foundation load for Interior Bents equal 4 tons per sq. ft.
 Footings to be carried at least 6" into rock with minimum thickness as shown on plans.
 Work is not to be started on Bents 1 & 10 until fills have been placed.
 Piles for E Bt 1 & 2 to be driven to a minimum bearing capacity of 29 tons each.
 In test piles are required Order lengths shall be 60 ft for End Bts 1 & 2.
 Piles for End Bts 1 & 2 to be driven through the roadway fill.
 Removal of Existing Structure (Bridge #73-55 over Catowba River approximately 4.5 miles west of Sta. 167+85) The superstructure of the existing bridge on NC 73 over the Catowba River which consists of 6@19' steel I-beam spans with timber flooring and 10@12', 10@20', 10@28' & 10@20' thru steel truss spans with timber flooring shall be removed as follows:
 The 6@19' I-beam spans shall be removed in accordance with the Specifications.
 The timber flooring, railers, wheel guards and handrails on the four steel truss spans shall be removed in accordance with the Specifications.
 The four steel trusses, together with the steel floor beam and stringer systems, shall be removed from the bents and dumped into the river with no salvage made.
 The substructure shall be left in place. See Specifications.
 Removal of Existing Structure (Bridge #73-55 over Border Creek in Lincoln County approximately 0.5 miles west of Sta. 167+85) The superstructure of the existing bridge on NC 73 over Border Creek which consists of 7@17' composite timber/concrete spans shall be completely removed in accordance with the Specifications. The substructure of this bridge shall be left in place. See Specifications. However, the contractor's attention is called to the fact that the above work may, if so directed by the Engineer, be eliminated from the contract and he will then have no claim whatsoever for any compensation for this item.
 Removal of Existing Structure (Bridge #73-60 over Davidson Creek in Mecklenburg County approximately 0.85 miles East of Sta. 172+25) The superstructure of the existing bridge on NC 73 over Davidson Creek which consists of 5@31'6" steel I-beam spans with concrete floor shall be completely removed in accordance with the Specifications. However, the contractor's attention is called to the fact that the above work may, if so directed by the Engineer, be eliminated from the contract and he will then have no claim whatsoever for any compensation for this item.
 B.M.#5: Nail in base 18" Birch, 150' Left Sta. 163+50. Elev. 653.04
 B.M.#6: 2 nails in base 6" Birch, 150' Left Sta. 170+85. Elev. 655.04



Sta	Top	Bot	Type	Remarks
165+00	6570	6550	Rock	
165+50	6470	6320		
166+00	6470	6320		
166+50	6470	6320		
167+00	6470	6320		
167+50	6470	6320		
168+00	6470	6320		
168+50	6470	6320		
169+00	6470	6320		
169+50	6470	6320		
170+00	6470	6320		
170+50	6470	6320		
171+00	6470	6320		
171+50	6470	6320		
172+00	6470	6320		
172+50	6470	6320		
173+00	6470	6320		
173+50	6470	6320		
174+00	6470	6320		
174+50	6470	6320		
175+00	6470	6320		

TOTAL BILL OF MATERIALS		Class A	Reinforcing Steel (lbs)	Structural Steel (lbs)	12" Dia. Steel Piles (No.)	Excavation (cu yd)	Rip Rap (cu yd)	Removal of Existing Structure (Estimate)
Superstructure	144.6		35,154	125,000				
2 Simple Spans	729.0		201,015	812,300				
9 Cont. Spans	18.5		4,124		14	240		
End Bent 1	18.5		4,124		14	240		
Bent 1	11,239	144	20,420					
Bent 2	11,239	144	20,765					
Bent 3	11,239	144	20,765					
Bent 4	11,239	144	20,765					
Bent 5	11,239	144	21,155					
Bent 6	11,239	144	21,040					
Bent 7	11,239	144	20,765		20			
Bent 8	11,239	144	20,765		40			
Bent 9	11,239	144	21,155		40			
Bent 10	11,239	144	21,431		20			
End Bent 2	18.5		4,124		14	240		
Approach Cuts	32.4		76					
Totals	20,222.3		453,587	937,300	88	339.35	2612.2	118.7

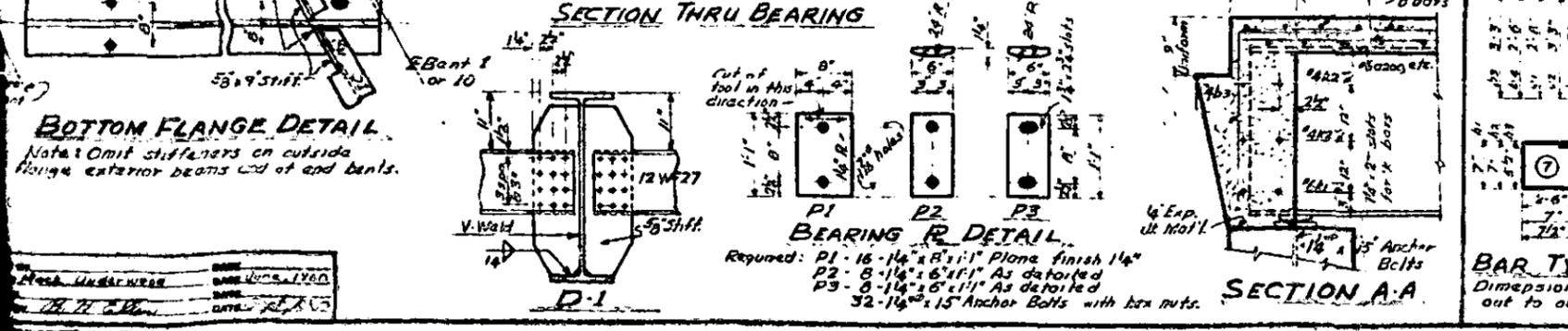
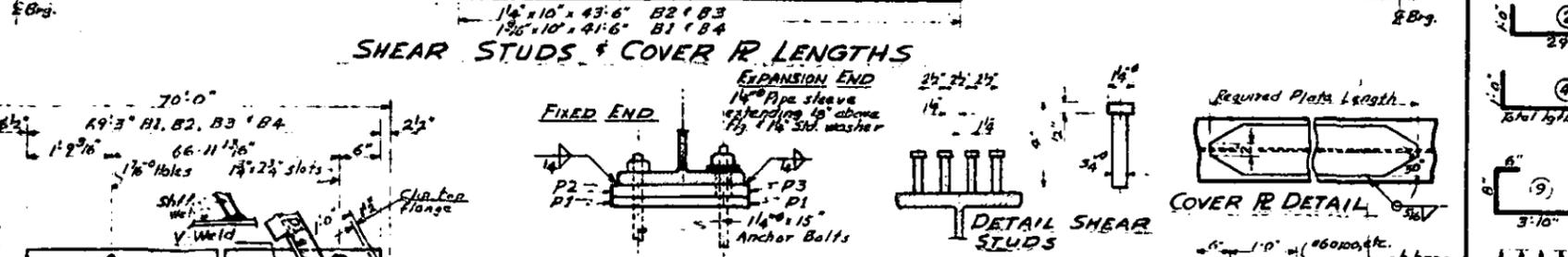
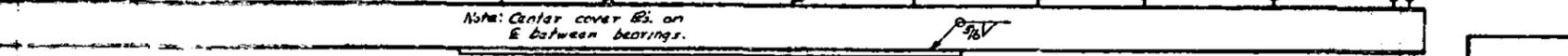
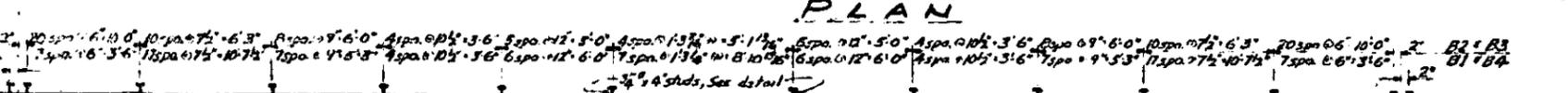
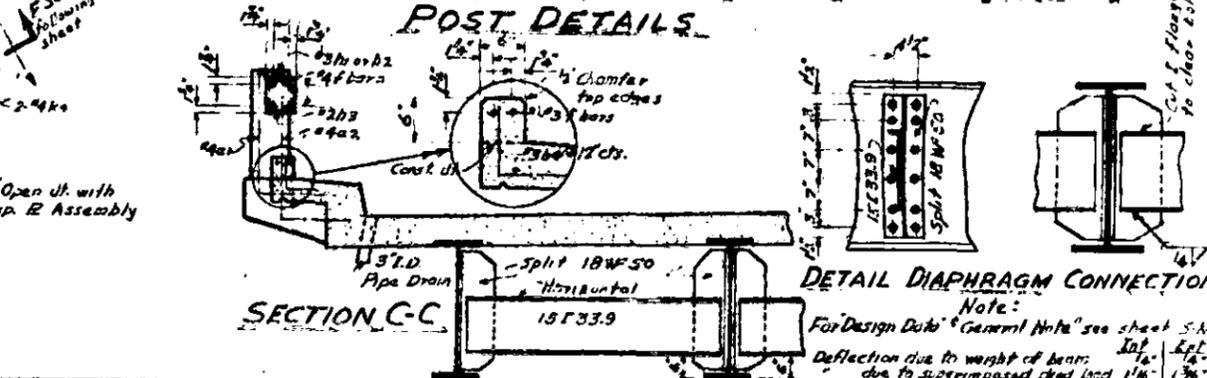
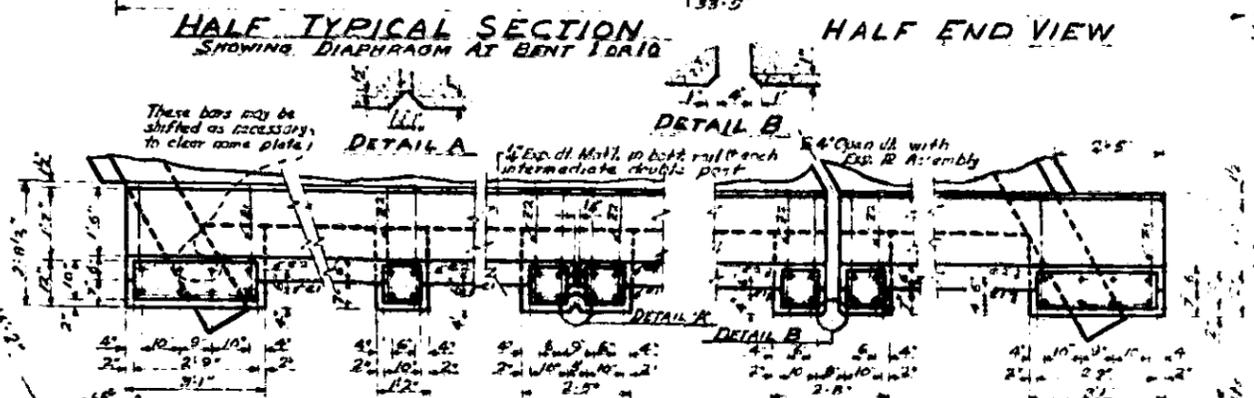
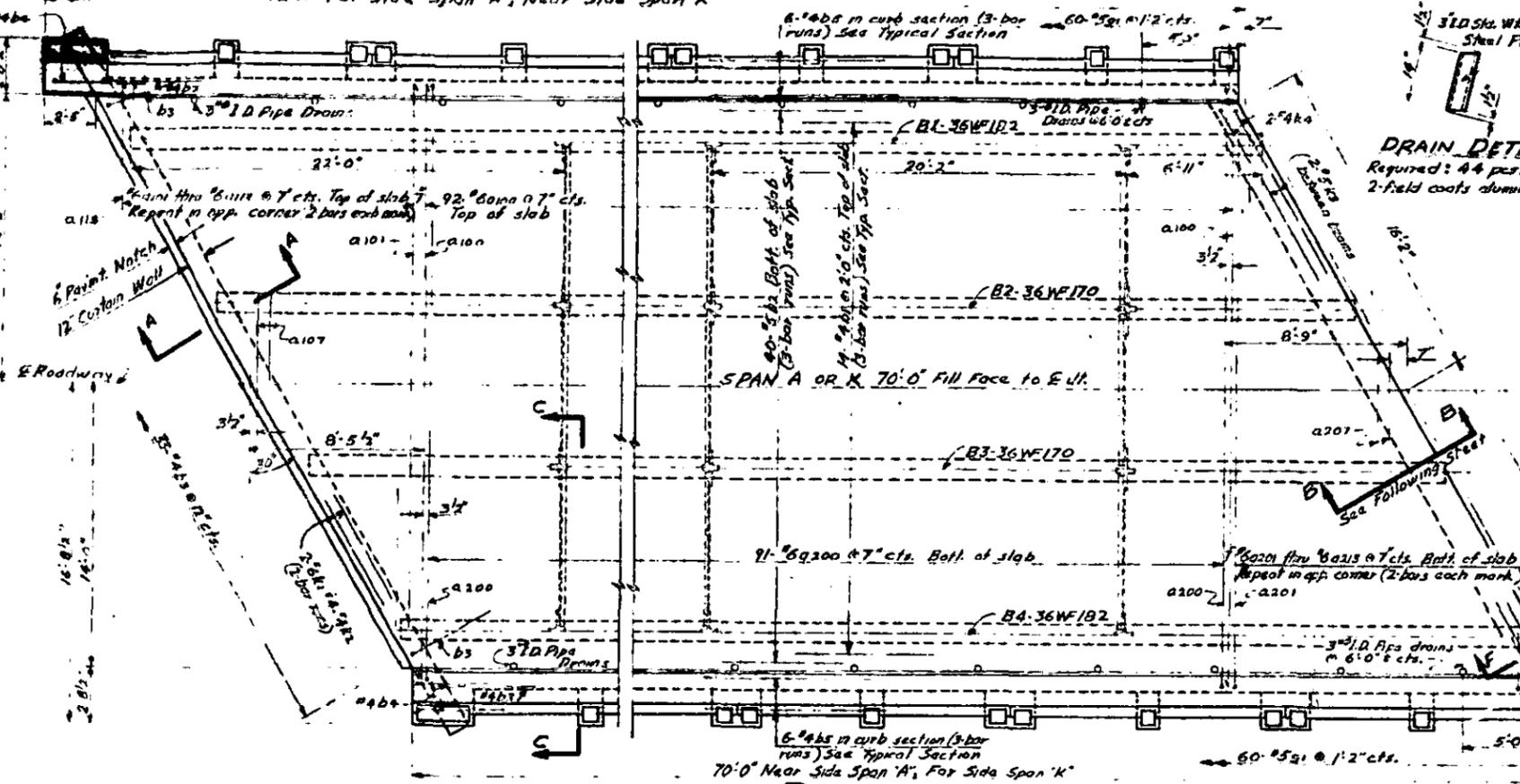
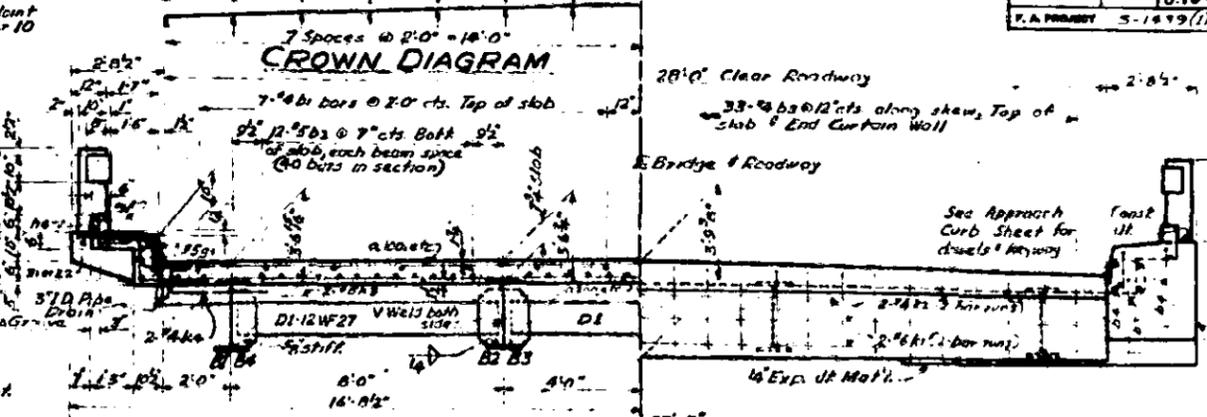
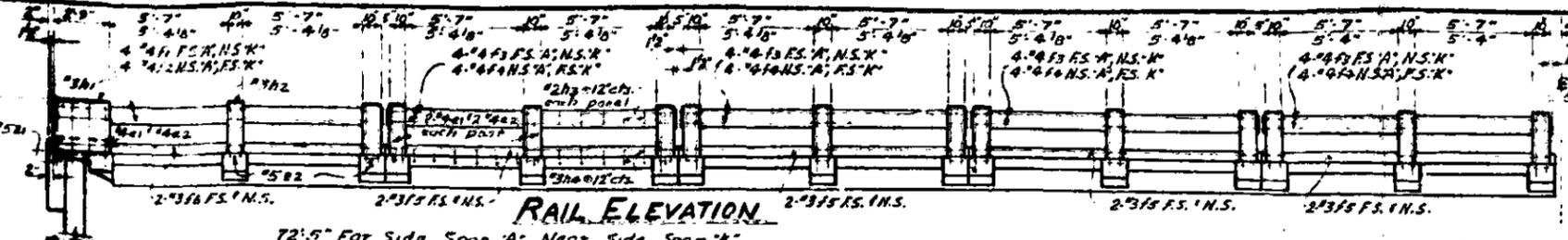


PROJECT NO. 167+85
COUNTY LINCOLN
STATION: 167+85
 JULY 1960

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
 GENERAL DIRECTOR
 BRIDGE OVER CATOWBA RIVER
 ON N.C. 73 BETWEEN STA. 164+50 & 175+00

DESIGNED BY: [Signature]
 CHECKED BY: [Signature]
 APPROVED BY: [Signature]

ENLARGED PLAN OF END BENT 1 & 2
 Revision #1 - Piling to change from 24" to 12" dia. by JLS & ALB.



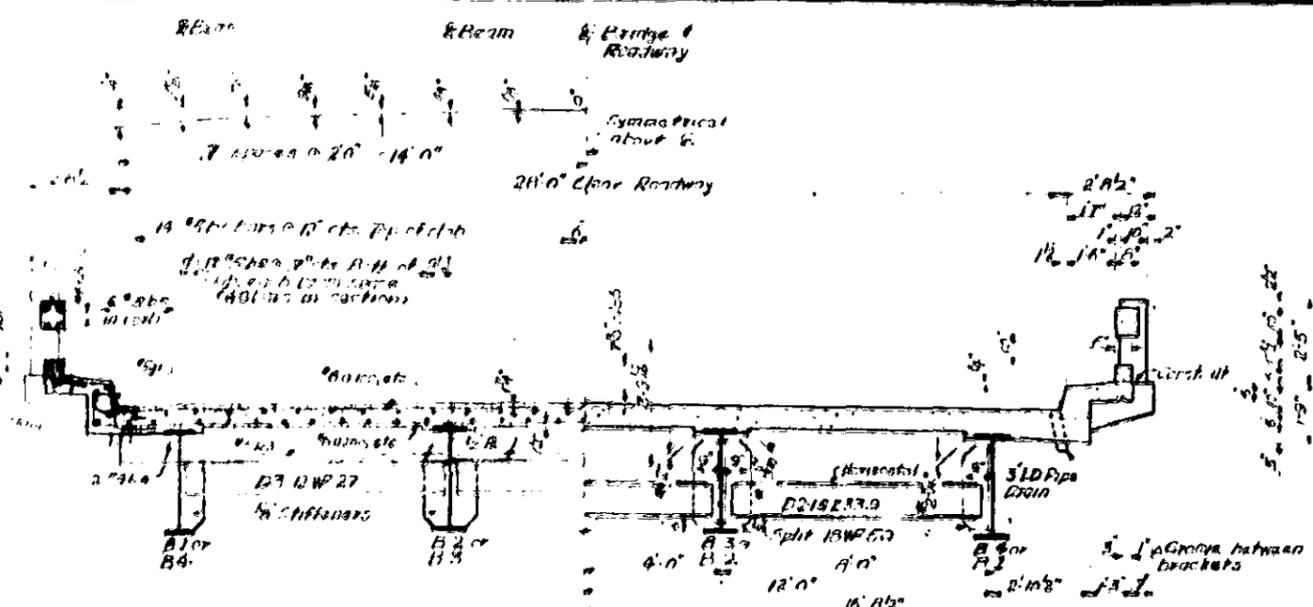
BILL OF MATERIAL FOR SPAN A AND SPAN K

Bar No.	Size	Type	Length	Weight	Bar No.	Size	Type	Length	Weight
a100	1/4"	1/4"	30'-9"	8498	b1	1/4"	1/4"	24'-4"	1365
a101	1/4"	1/4"	27'-5"	329	b2	1/4"	1/4"	24'-4"	6091
a102	1/4"	1/4"	25'-5"	305	b3	1/4"	1/4"	5'-6"	257
a103	1/4"	1/4"	23'-5"	281	b4	1/4"	1/4"	5'-6"	25
a104	1/4"	1/4"	21'-4"	256	b5	1/4"	1/4"	25'-2"	1310
a105	1/4"	1/4"	19'-4"	232	b6	1/4"	1/4"	5'-4"	356
a106	1/4"	1/4"	17'-4"	208	b7	1/4"	1/4"	5'-4"	406
a107	1/4"	1/4"	15'-4"	184	b8	1/4"	1/4"	15'-4"	83
a108	1/4"	1/4"	13'-4"	160	b9	1/4"	1/4"	15'-4"	11
a109	1/4"	1/4"	11'-4"	136	b10	1/4"	1/4"	13'-8"	292
a110	1/4"	1/4"	9'-3"	111	b11	1/4"	1/4"	13'-2"	281
a111	1/4"	1/4"	7'-3"	87	b12	1/4"	1/4"	13'-0"	160
a112	1/4"	1/4"	5'-2"	67	b13	1/4"	1/4"	15'-3"	46
a113	1/4"	1/4"	3'-2"	38	b14	1/4"	1/4"	6'-4"	1085
a200	1/2"	1/2"	37'-5"	8580	b15	1/4"	1/4"	6'-8"	10
a201	1/2"	1/2"	25'-5"	377	b16	1/4"	1/4"	2'-10"	60
a202	1/2"	1/2"	26'-5"	315	b17	1/4"	1/4"	7'-2"	120
a203	1/2"	1/2"	24'-5"	291	b18	1/4"	1/4"	5'-7"	165
a204	1/2"	1/2"	22'-2"	266	b19	1/4"	1/4"	20'-3"	243
a205	1/2"	1/2"	20'-2"	242	b20	1/4"	1/4"	11'-11"	213
a206	1/2"	1/2"	18'-2"	218	b21	1/4"	1/4"	8'-10"	111
a207	1/2"	1/2"	16'-2"	194	b22	1/4"	1/4"	5'-0"	27
a208	1/2"	1/2"	14'-2"	170	b23	1/4"	1/4"	9'-4"	39
a209	1/2"	1/2"	12'-2"	146	b24	1/4"	1/4"	7'-5"	433
a210	1/2"	1/2"	10'-1"	121	Reinforcing Steel 35,154 # 16				
a211	1/2"	1/2"	8'-1"	77	Structural Steel 125,000 # 16				
a212	1/2"	1/2"	6'-1"	73	Class 'A' Conc. 144.6 cu. yds.				
a213	1/2"	1/2"	4'-0"	45					

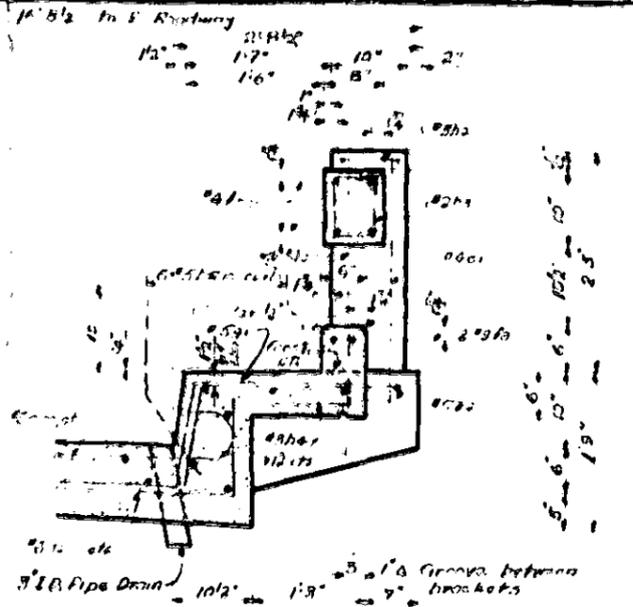
PROJECT NO. 8.16477
LINCOLN-MECKLENBURG COUNTY
STATION 167+85

STATE HIGHWAY COMMISSION
SALISBURY
SUPERSTRUCTURE
SPAN A AND SPAN K

June, 1960



TYPICAL HALF SECTION SHOWING DIAPHRAGM AT BENTS 2-3, 4-5, 7-8, 9



RAIL & CURB SECTION

BILL OF MATERIAL FOR (9) SPANS - SPAN B-C-D-E-F-G-H-I-J

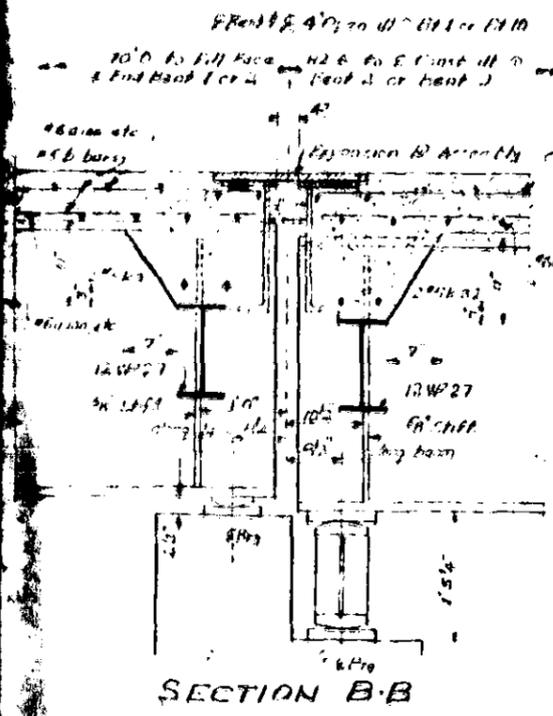
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1018	12WP27	1	EA	1.25	1.25
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1020	12WP27	1	EA	1.25	1.25
1021	12WP27	1	EA	1.25	1.25
1022	12WP27	1	EA	1.25	1.25
1023	12WP27	1	EA	1.25	1.25
1024	12WP27	1	EA	1.25	1.25
1025	12WP27	1	EA	1.25	1.25
1026	12WP27	1	EA	1.25	1.25
1027	12WP27	1	EA	1.25	1.25
1028	12WP27	1	EA	1.25	1.25
1029	12WP27	1	EA	1.25	1.25
1030	12WP27	1	EA	1.25	1.25
1031	12WP27	1	EA	1.25	1.25
1032	12WP27	1	EA	1.25	1.25
1033	12WP27	1	EA	1.25	1.25
1034	12WP27	1	EA	1.25	1.25
1035	12WP27	1	EA	1.25	1.25
1036	12WP27	1	EA	1.25	1.25
1037	12WP27	1	EA	1.25	1.25
1038	12WP27	1	EA	1.25	1.25
1039	12WP27	1	EA	1.25	1.25
1040	12WP27	1	EA	1.25	1.25
1041	12WP27	1	EA	1.25	1.25
1042	12WP27	1	EA	1.25	1.25
1043	12WP27	1	EA	1.25	1.25
1044	12WP27	1	EA	1.25	1.25
1045	12WP27	1	EA	1.25	1.25
1046	12WP27	1	EA	1.25	1.25
1047	12WP27	1	EA	1.25	1.25
1048	12WP27	1	EA	1.25	1.25
1049	12WP27	1	EA	1.25	1.25
1050	12WP27	1	EA	1.25	1.25

BAR TYPES
Dimensions are cut to cut

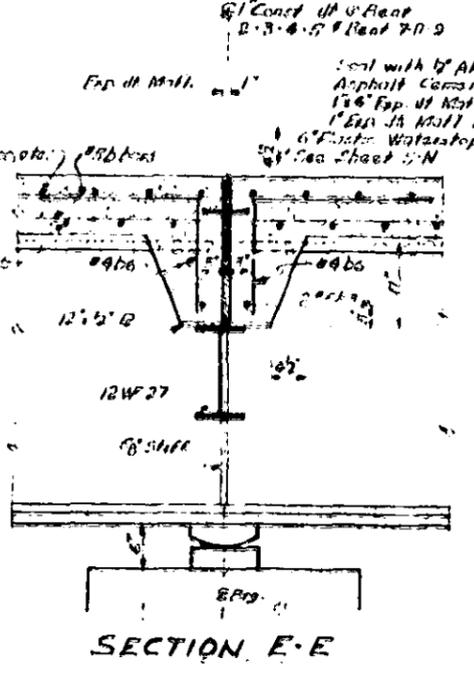
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12WP27	12	12	12	12	12
12WP27	12	12	12	12	12
12WP27	12	12	12	12	12
12WP27	12	12	12	12	12

Reinforcing Steel
Structural Steel
Class 'A' Concrete

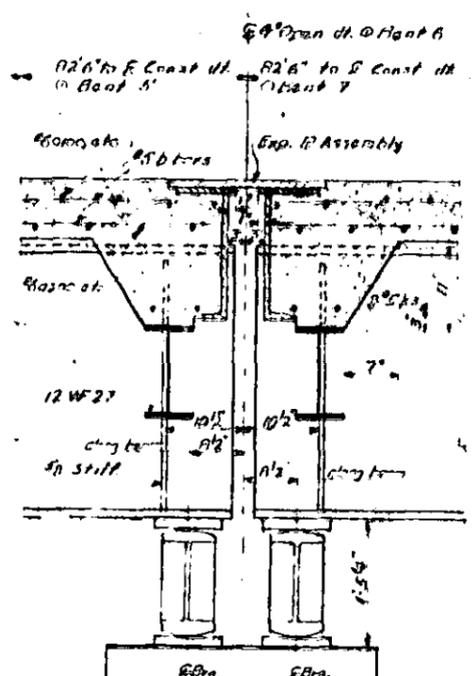
* At E bearing only. These dimensions shall be increased later on bearing posts to compensate for load deflection. See post detail.



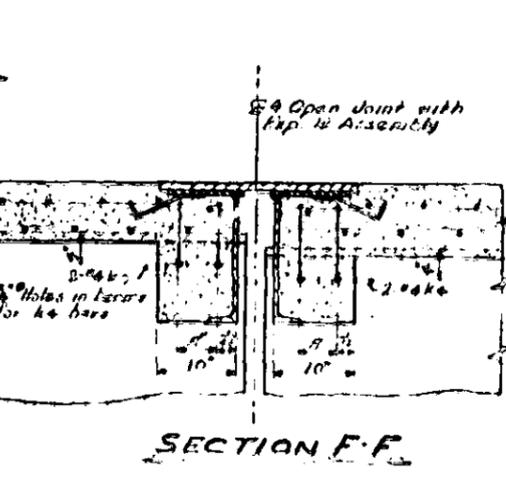
SECTION B-B



SECTION E-E



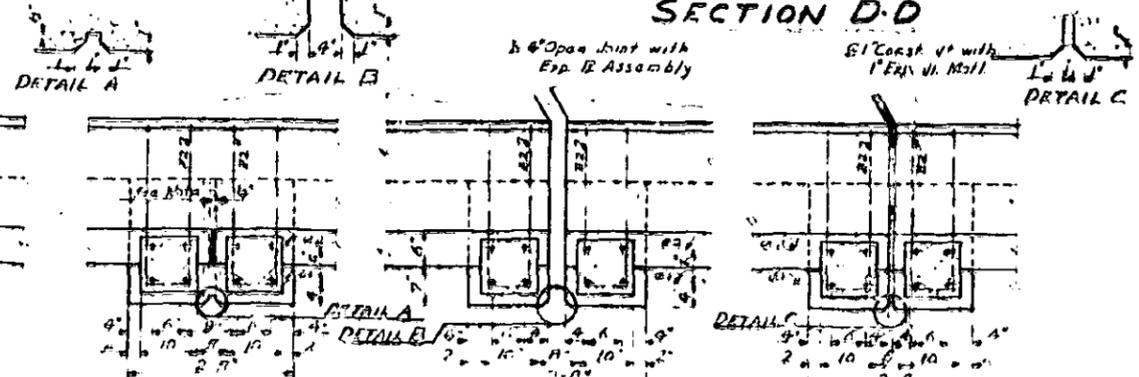
SECTION D-D



SECTION F-F



SECTION G-G

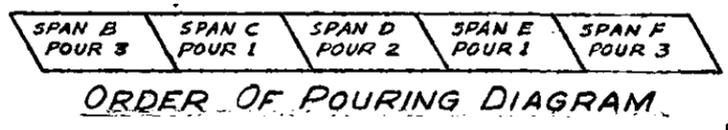
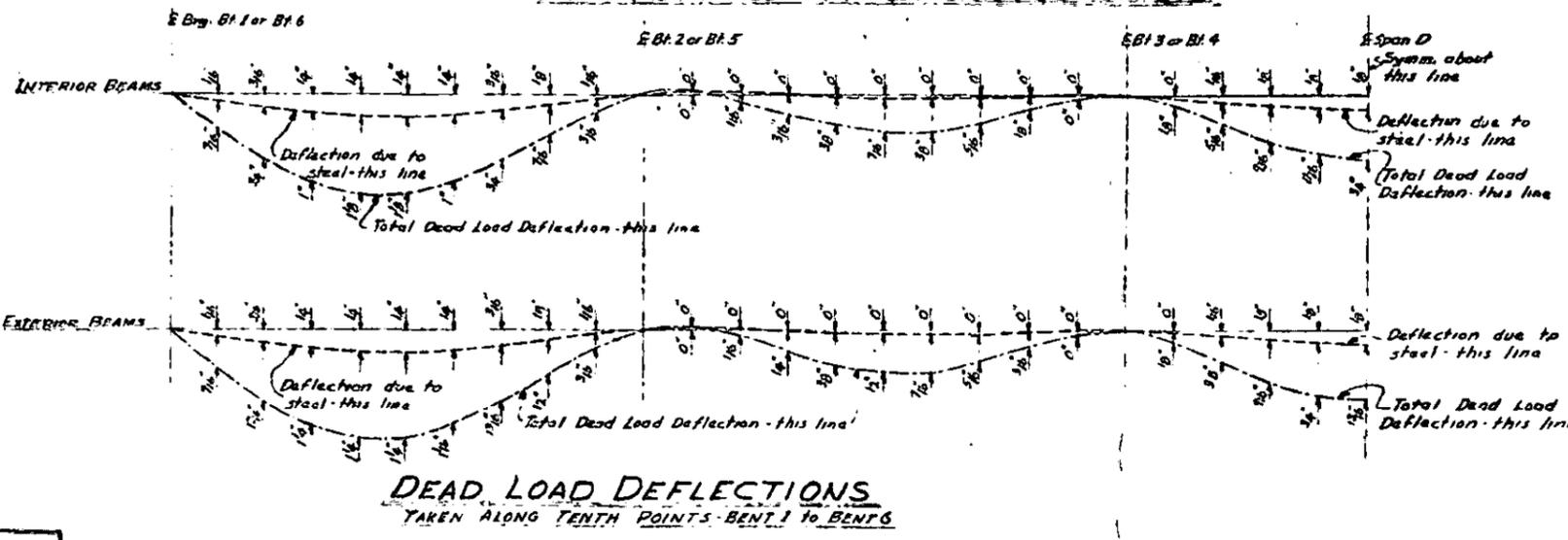
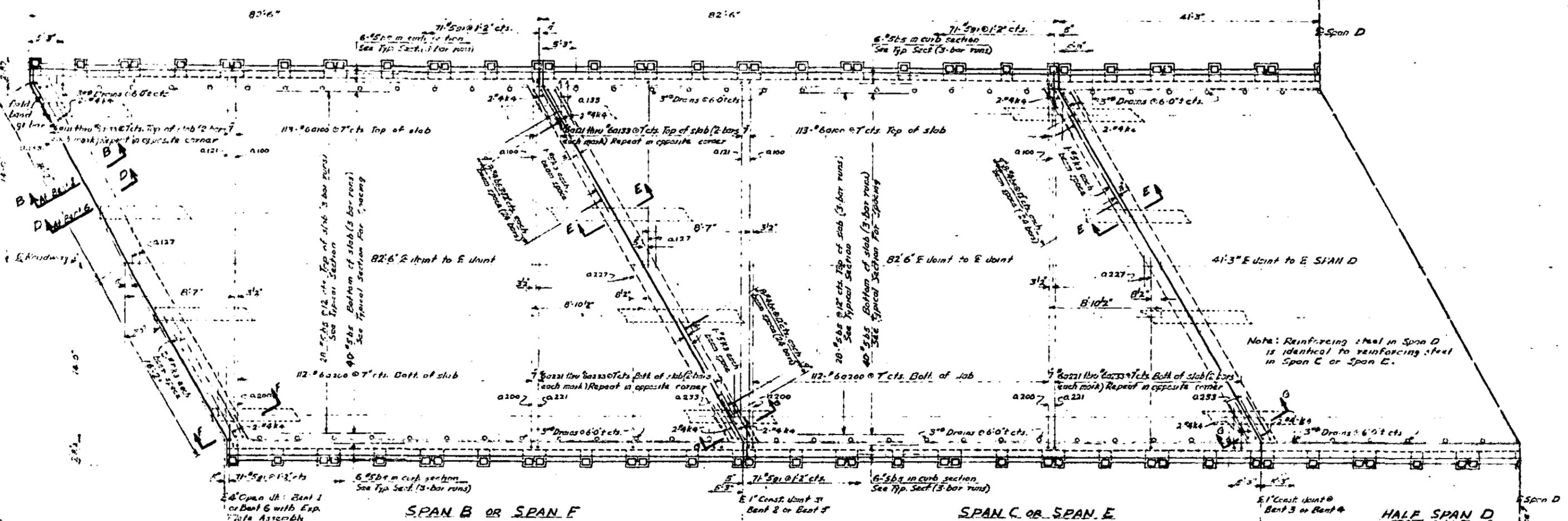
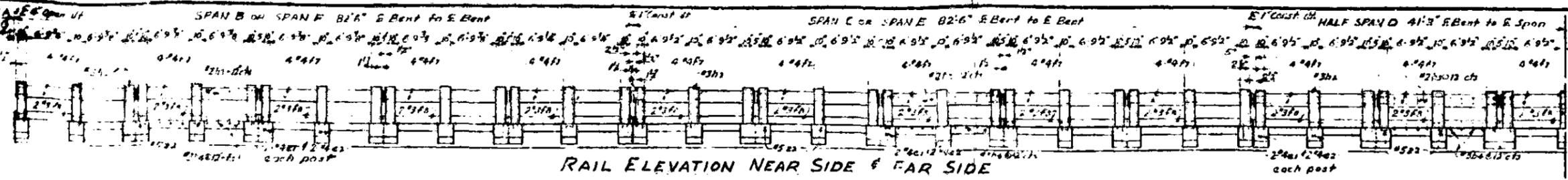


SINGLE POST
DOUBLE POST
POSTS AT 4\"/>

PROJECT No. 8.16477
LINCOLN-MECKLENBURG COUNTY
SPAN 167+85

STATE HIGHWAY COMMISSION
SUPERSTRUCTURE
TYPICAL SECTIONS &
BILL OF MATERIAL
FOR SPANS B-C-D-E-F-G-H-I-J
July, 1960

REV.	BY	DATE	REVISION
1			
2			



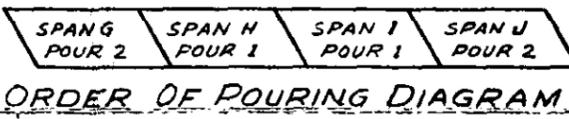
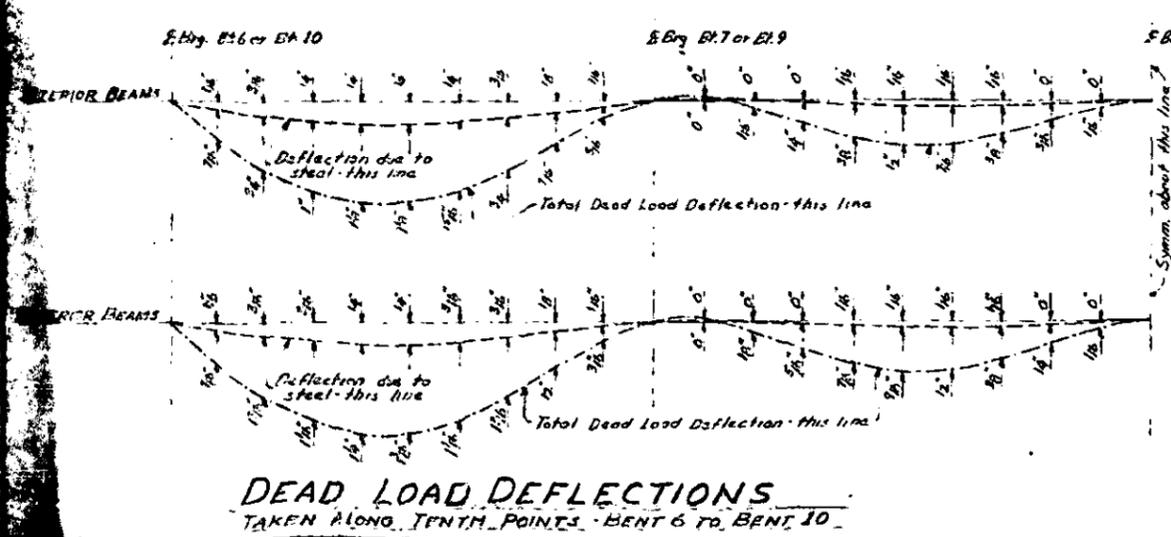
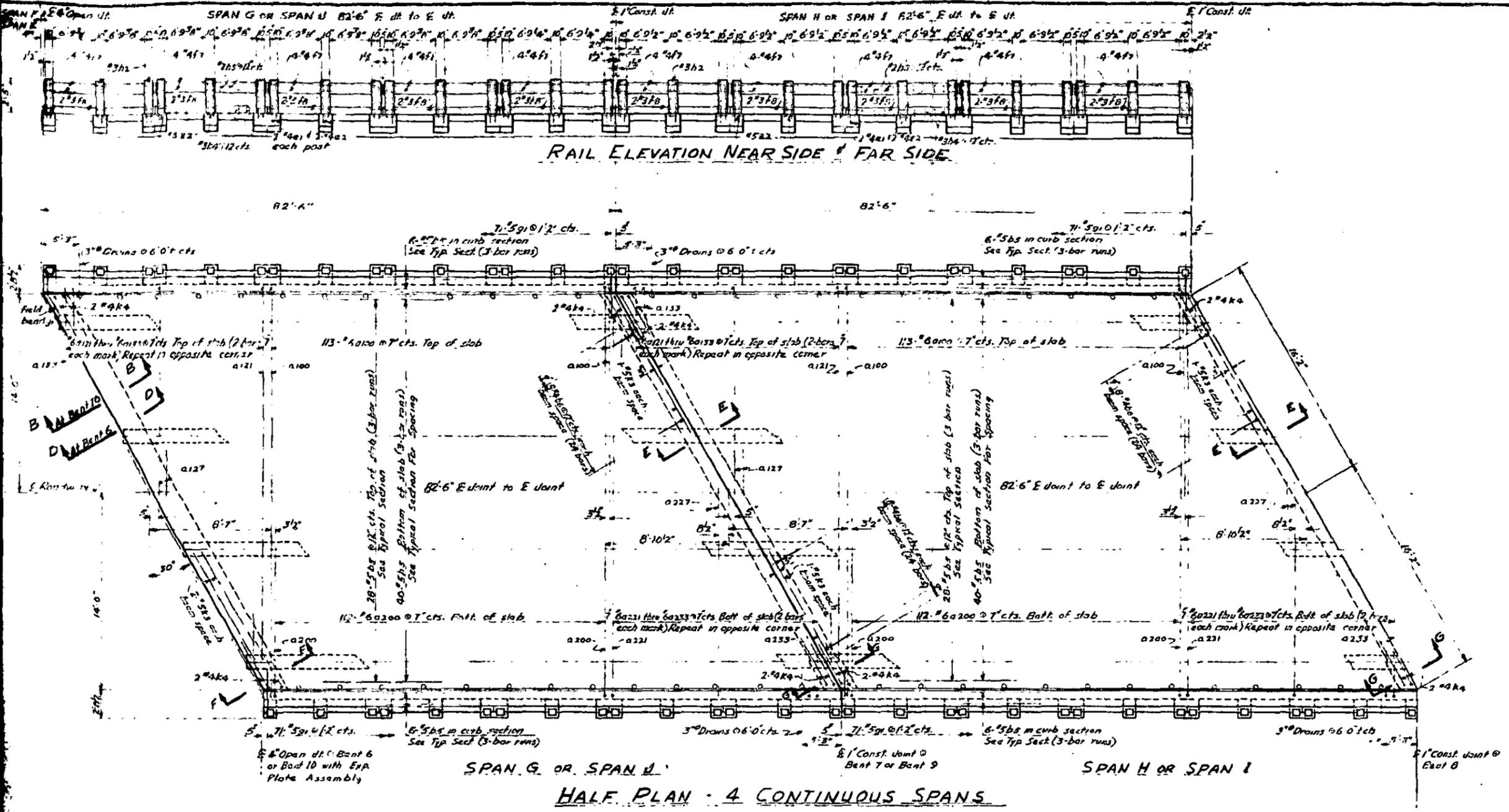
PROJECT No. B.16477
LINCOLN-MECKLENBURG COUNTY
STATION 167+85

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
SUPERSTRUCTURE
5 CONTINUOUS SPANS
SPANS B-C-D-E-F
July, 1960

NO.	BY	DATE	NO.	BY	DATE
1			2		
3			4		

DATE: 7/1/60
DRAWN BY: [Signature]
CHECKED BY: [Signature]

FED. ROAD DIST. NO.	STATE	PROJECT NO.
8	N.C.	16477
I.A. PROJECT 5: 4397		

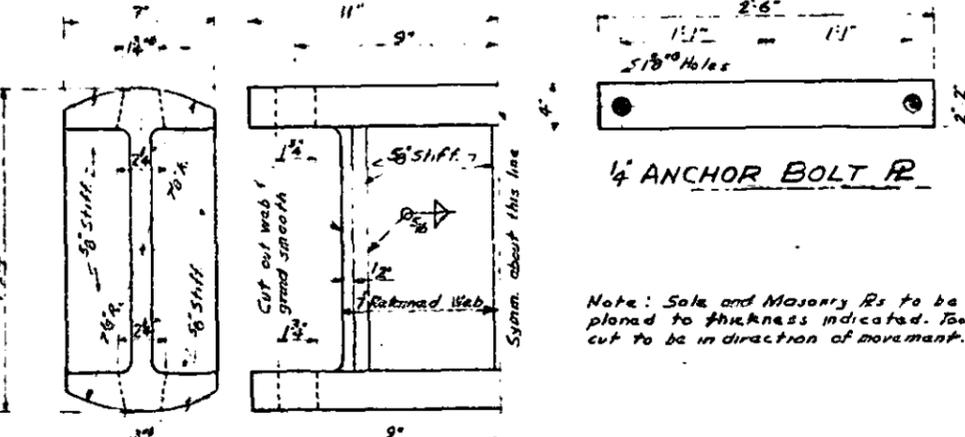
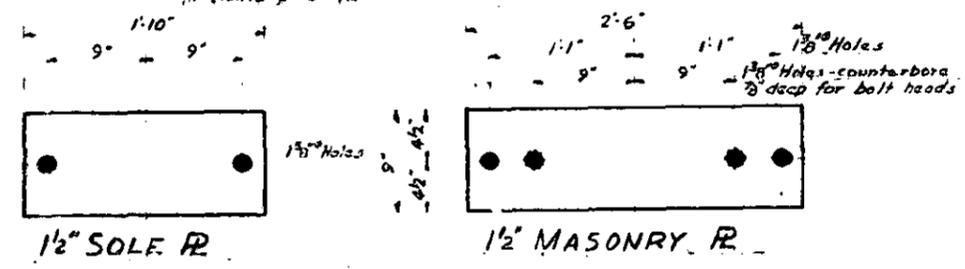
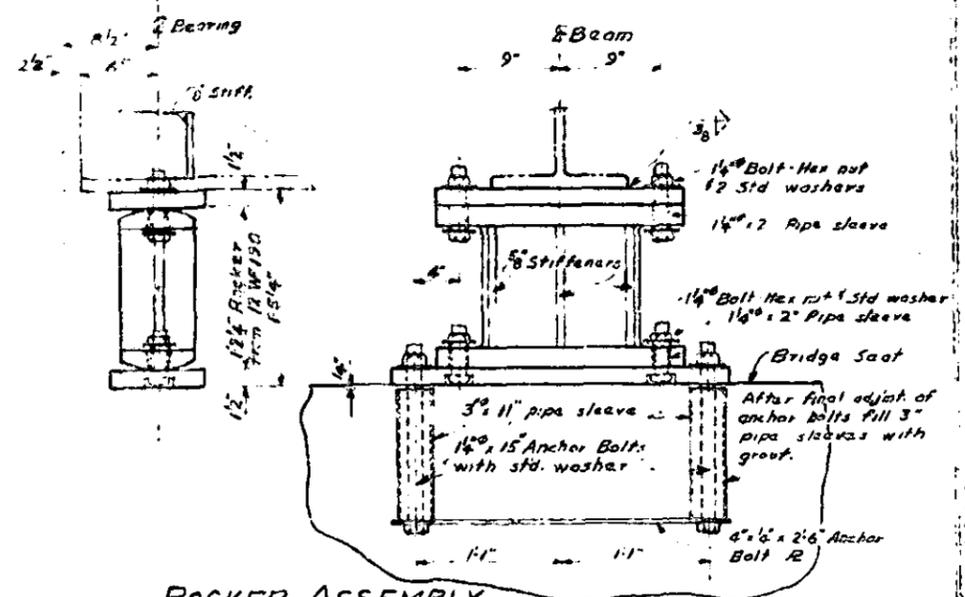


PROJECT No. 816477
 LINCOLN-MECKLENBURG COUNTY
 STATION 167+85

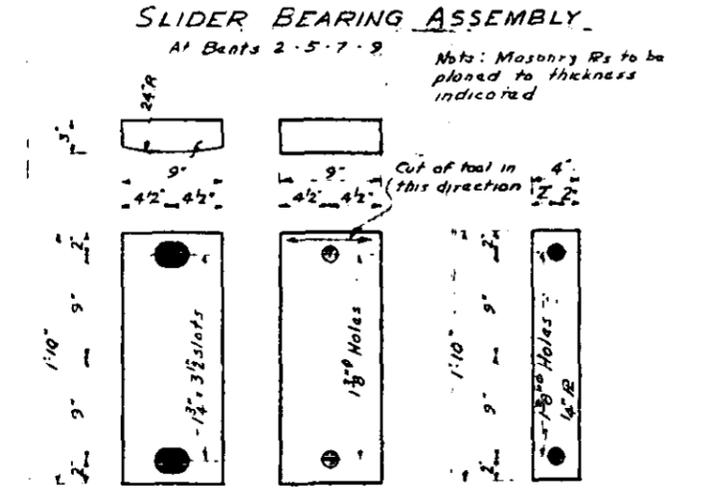
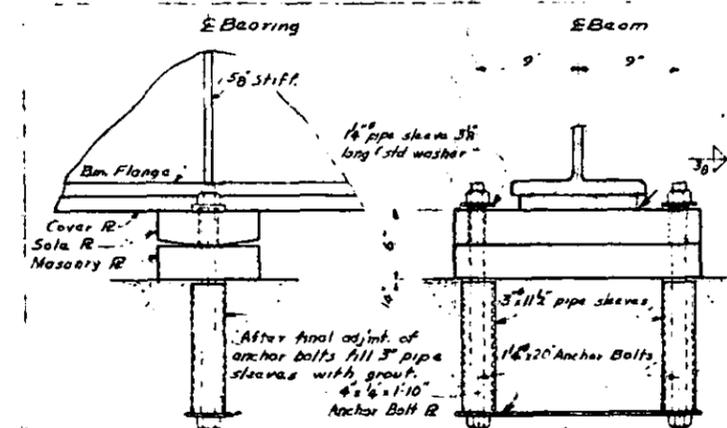
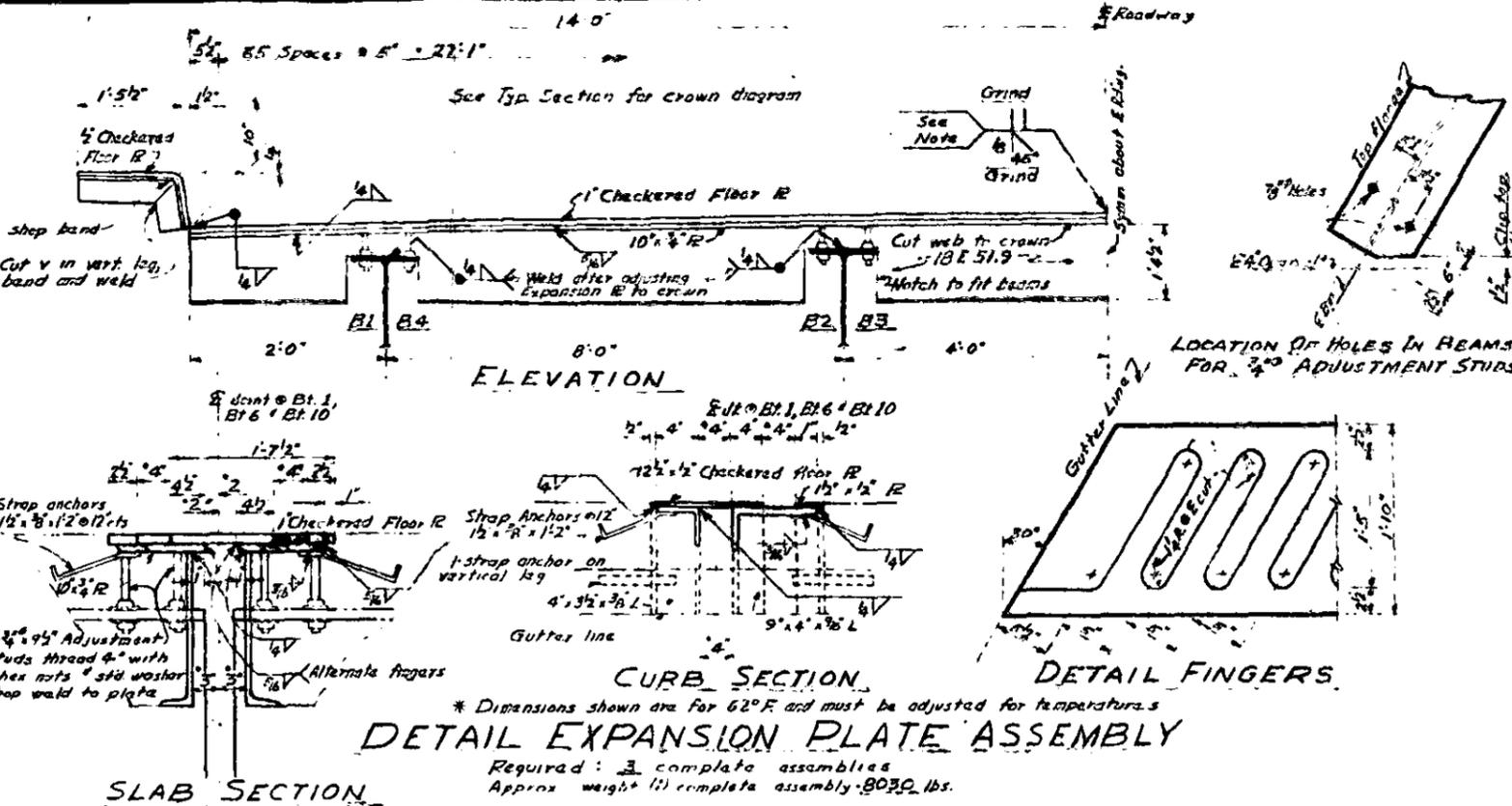
STATE OF NORTH CAROLINA
 STATE HIGHWAY COMMISSION
 SUPERSTRUCTURE
 4 CONTINUOUS SPANS
 SPANS G-H-I-J
 July, 1960

DATE	BY	CHKD.	APP'D.
APR 14 1960	MACK UNDERWOOD		

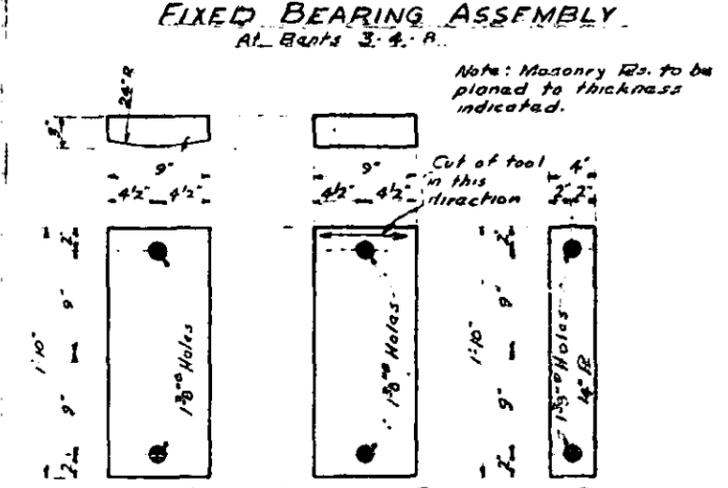
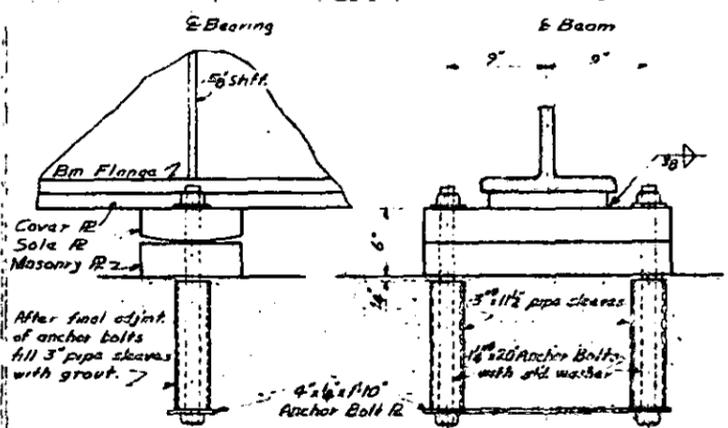
DATE: APR 14 1960
 BY: MACK UNDERWOOD
 CHECKED: [Signature]
 APPROVED: [Signature]



Required: 16 complete assemblies
 Approx. weight (1) complete assembly: 600 lbs.



DETAIL SLIDER BEARING
 Required: 16 complete assemblies
 Approx. weight (1) complete assembly: 376 lbs.



DETAIL FIXED BEARING
 Required: 12 complete assemblies
 Approx. weight (1) complete assembly: 376 lbs.

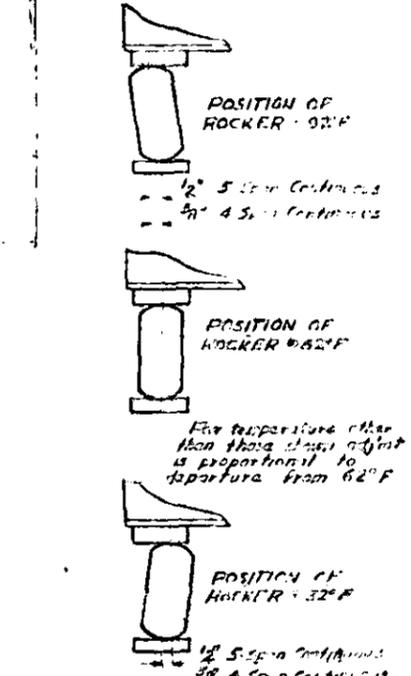
EXPANSION ASSEMBLY NOTES

Cut teeth by a single pass made by a machine guided torch. Grind off burrs on bottom of surface of plate and grind smooth edges of fingers. Fingers to have 1/4" clearance in closed position after finishing.

Roadway sections to be fabricated full length. Finger plates may be shop welded as indicated at a roadway. Curb sections to be shipped separate.

Where full walls are indicated the shops shall be prepared in the shop.

For Crown Diagram and crown drop of beam - see Typical Section



ROCKER ADJUSTMENT FOR TEMPERATURE VARIATIONS

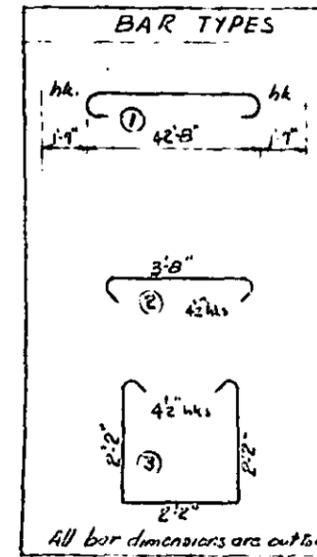
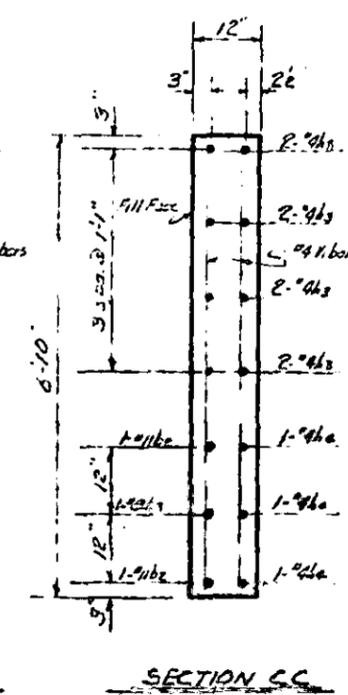
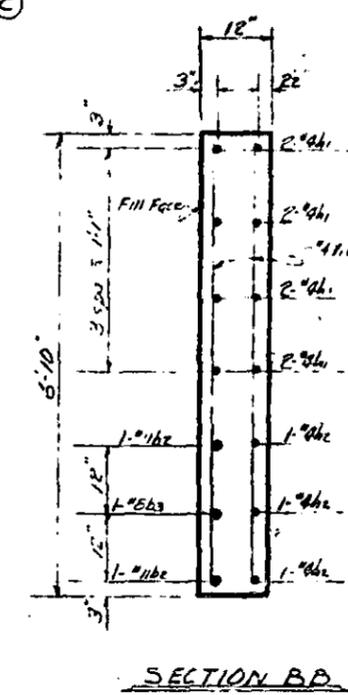
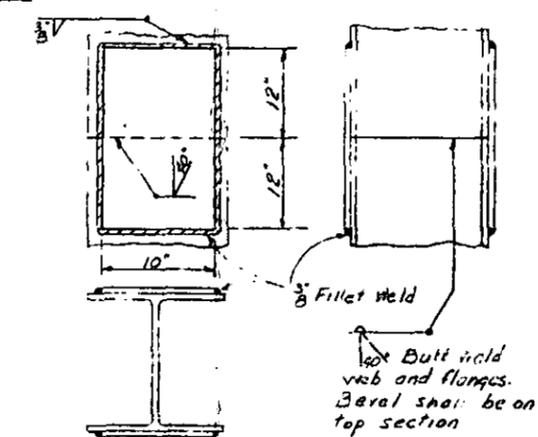
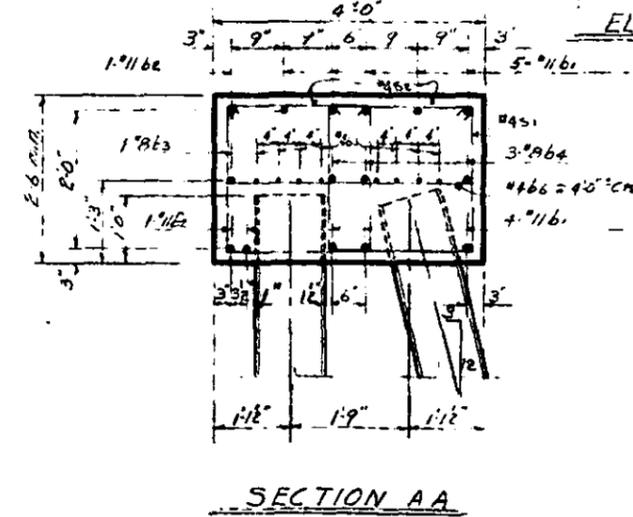
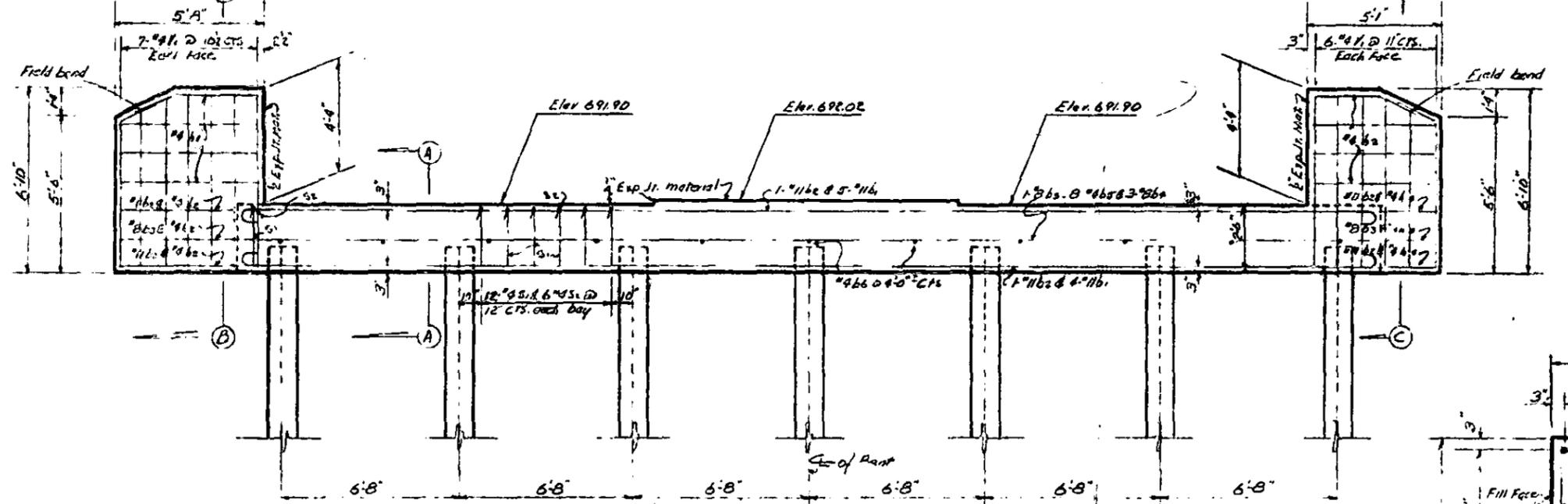
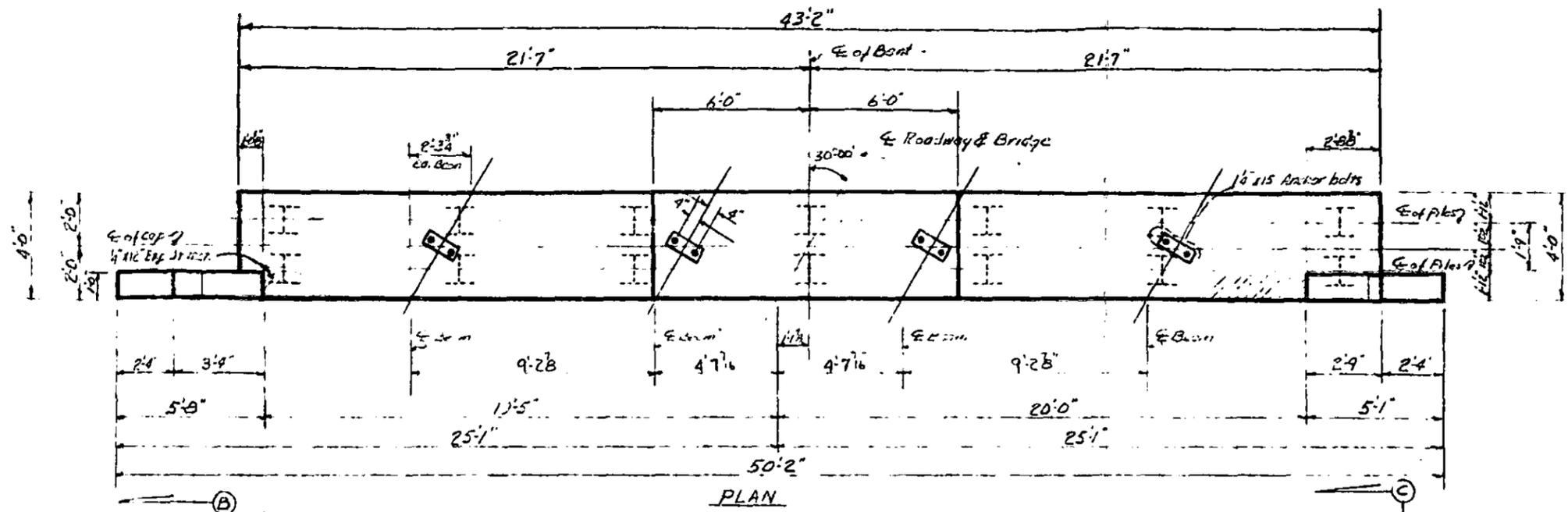
PROJECT NO. 16477
LINCOLN-MECKLENBURG COUNTY
STATION 167+85

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION

DETAILS
BEARING ASSEMBLIES
EXPANSION R ASSEMBLY

July, 1960

REV.	BY	DATE	APP.	DATE
1				
2				



BAR TYPES		BILL OF MATERIALS FOR ONE END BENT - 2 RECS				
BAR NO.	SIZE	TYPE	LENGTH	WEIGHT		
61	9	#11	42'-8"	7100		
62	2	#11	42'-8"	275		
63	1	#11	42'-8"	110		
64	3	#11	42'-8"	240		
65	16	#11	12'-0"	250		
66	11	#11	8'-8"	170		
71	7/8	#11	2'-5"	260		
81	3/4	#11	4'-5"	110		
91	3/8	#11	5'-4"	190		
92	3/8	#11	6'-0"	180		
93	3/8	#11	6'-0"	180		
94	3/8	#11	6'-0"	180		

END BENT 1
 Class 'A' concrete C.Y. 18.0
 Reinf. Steel 165.4125
 12 H.E.3 Steel Piles No. 12 LE 400

END BENT 2
 Class 'A' concrete C.Y. 13.5
 Reinf. Steel 165.4125
 12 H.E.3 Steel Piles No. 12 LE 400

Piles for End Bent No. 1 and End Bent No. 2 to be driven to a minimum bearing capacity of 29 tons each.

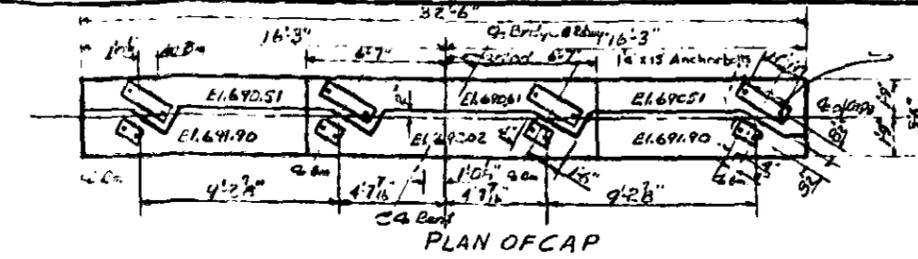
PROJECT No. B.16477
 LINCOLN-MECKLENBURG COUNTY
 STATION 167+85

STATE OF NORTH CAROLINA
 STATE HIGHWAY COMMISSION
 SUBSTRUCTURE
 END BENTS 1 & 2
 JUNE 1960

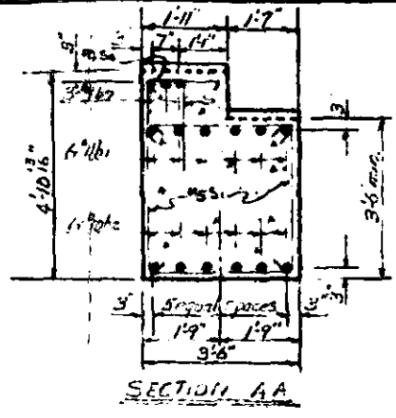
NO.	BY	DATE	NO.	BY	DATE
1			2		
2			3		

Barney

DATE	2-2-1960
DATE	
DATE	

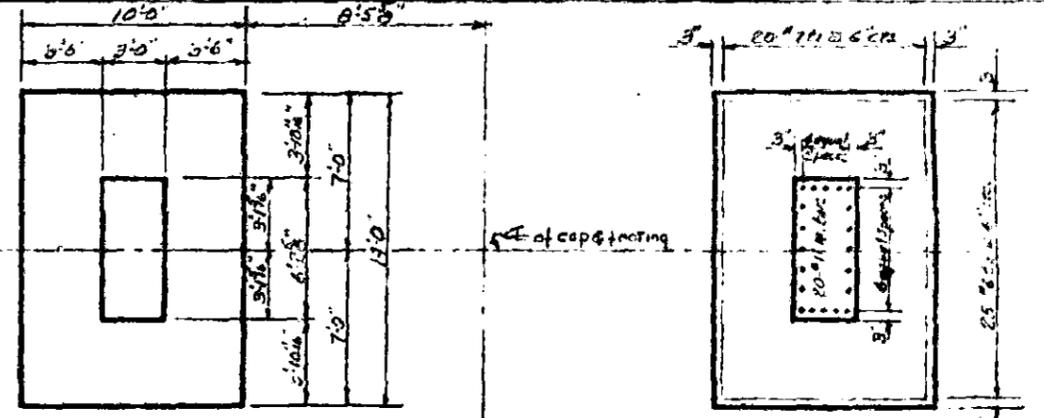
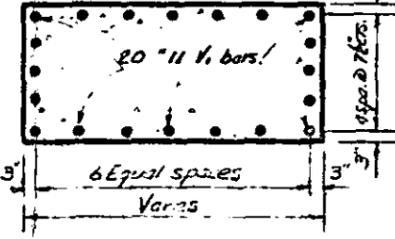
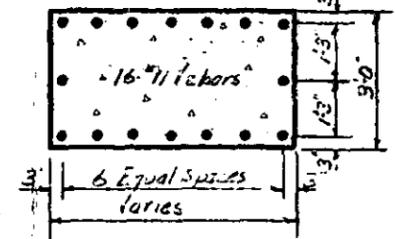
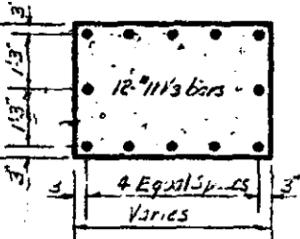
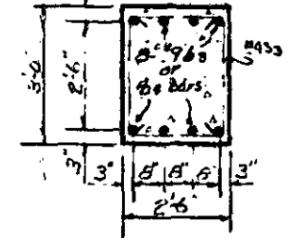
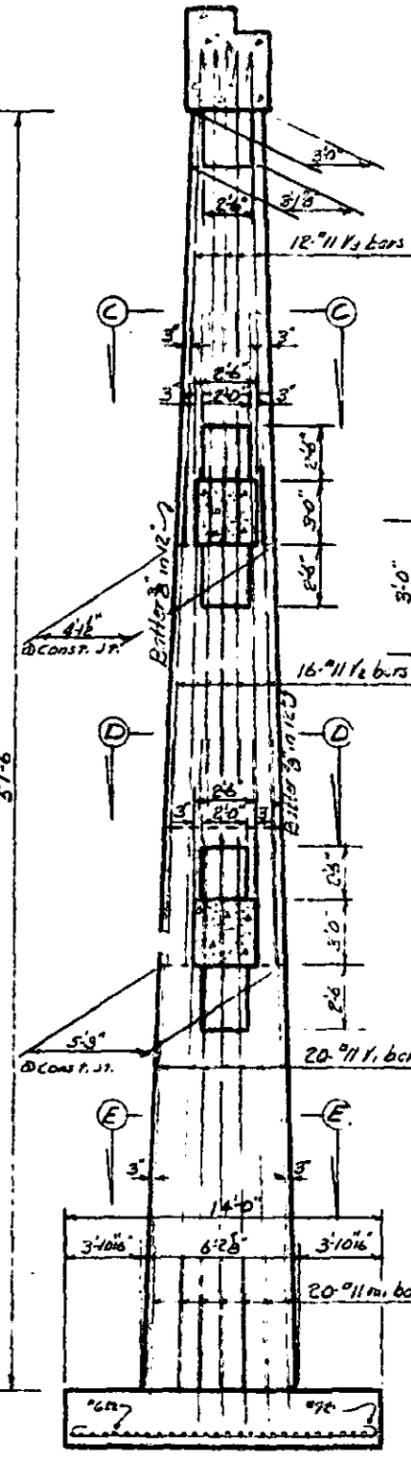
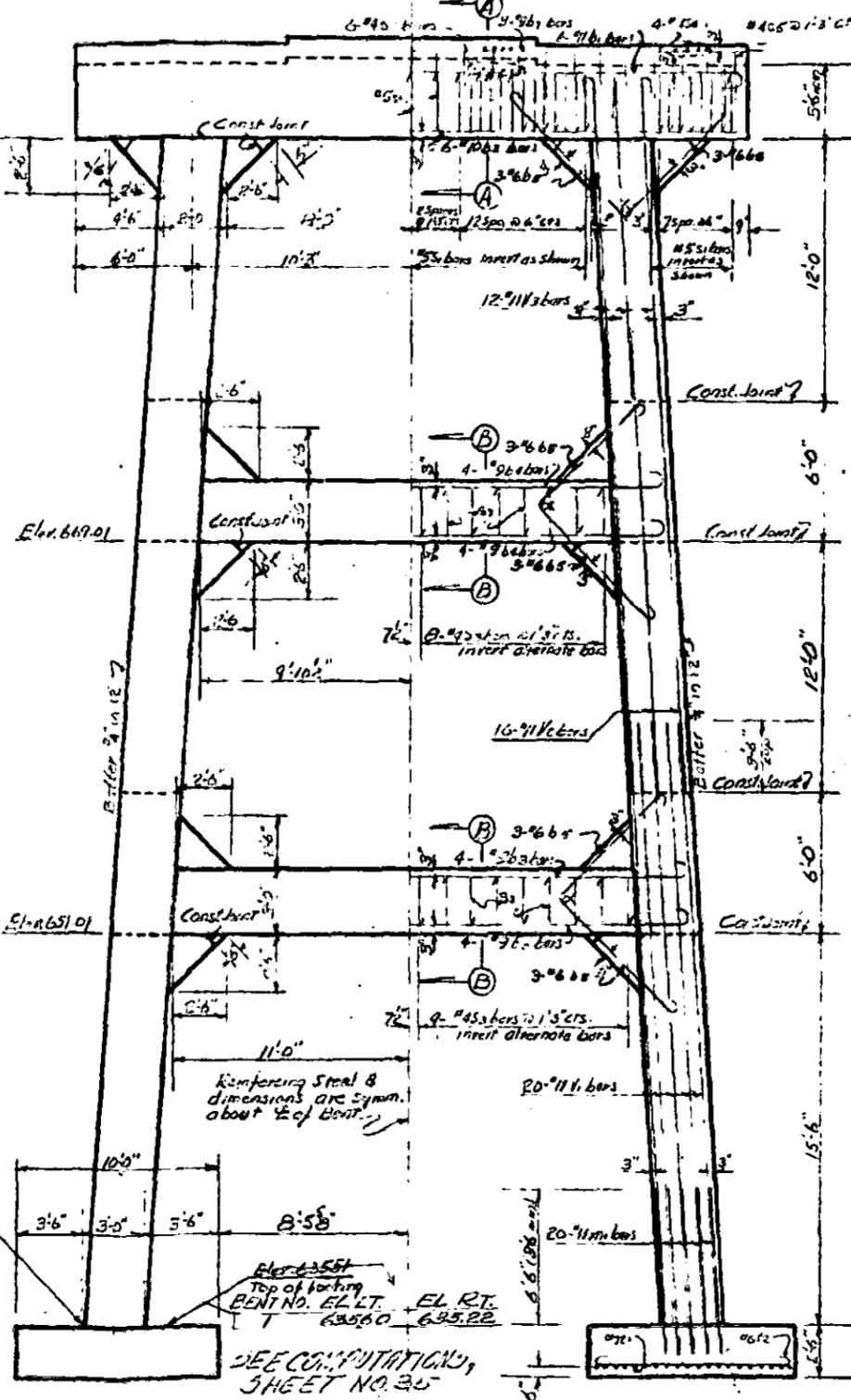


See bearing plate detail for placement of anchor bolts & anchor bolt plates



BAR TYPES				BILL OF MATERIAL			
NO.	QTY.	TYPE	LENGTH	WEIGHT	NO.	QTY.	TYPE
1	1	17"	32'-0"	11.1	1	1	17"
2	6	10"	27'-0"	30.0	2	6	10"
3	8	13"	24'-8"	27.6	3	8	13"
4	8	8"	7'-0"	27.2	4	8	8"
5	10	10"	13'-6"	31.5	5	10	10"
6	8	8"	9'-6"	23.0	6	8	8"
7	45	12"	12'-0"	16.5	7	45	12"
8	12	12"	3'-11"	3.1	8	12	12"
9	34	12"	3'-3"	5.3	9	34	12"
10	16	12"	4'-2"	2.5	10	16	12"
11	26	12"	5'-7"	10.0	11	26	12"
12	40	12"	9'-10"	20.0	12	40	12"
13	40	12"	25'-0"	53.3	13	40	12"
14	32	12"	21'-6"	34.5	14	32	12"
15	24	12"	16'-7"	21.7	15	24	12"
16	40	12"	15'-2"	12.0	16	40	12"
17	52	12"	10'-10"	9.1	17	52	12"

Reinf. Steel 10s / 20424
Class A Zone C, III, 9111
Luxy Excavation, -7
Wet Excavation, C.Y.
SEE X-SECTION COMPUTATION



Computed foundation load equals 4 tons per sq. ft.
Reinf. Steel may be shifted to clear anchor bolts.

PROJECT NO. 816-77
LINCOLN-MECKLENBURG COUNTY
STATION 167+85

STATE OF NORTH CAROLINA
STATE ENGINEER COMMISSION
REGISTERED
SUBSTRUCTURE
BENT No 1
JULY 1960

SEE COMPUTATIONS,
SHEET NO. 35

ELEVATION

SECTION at E

SECTION BB

PLAN OF FOOTING

PROJECT NO. 816-77

LINCOLN-MECKLENBURG COUNTY

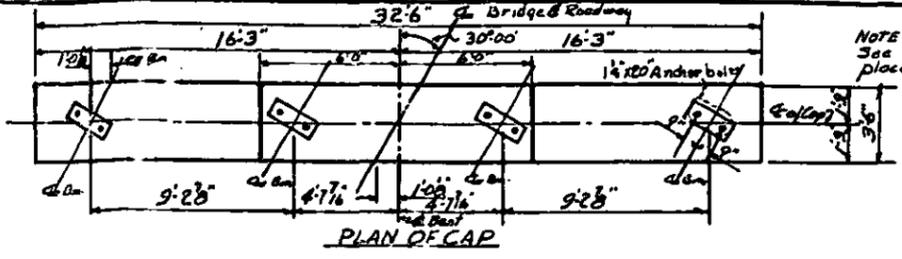
STATION 167+85

SUBSTRUCTURE

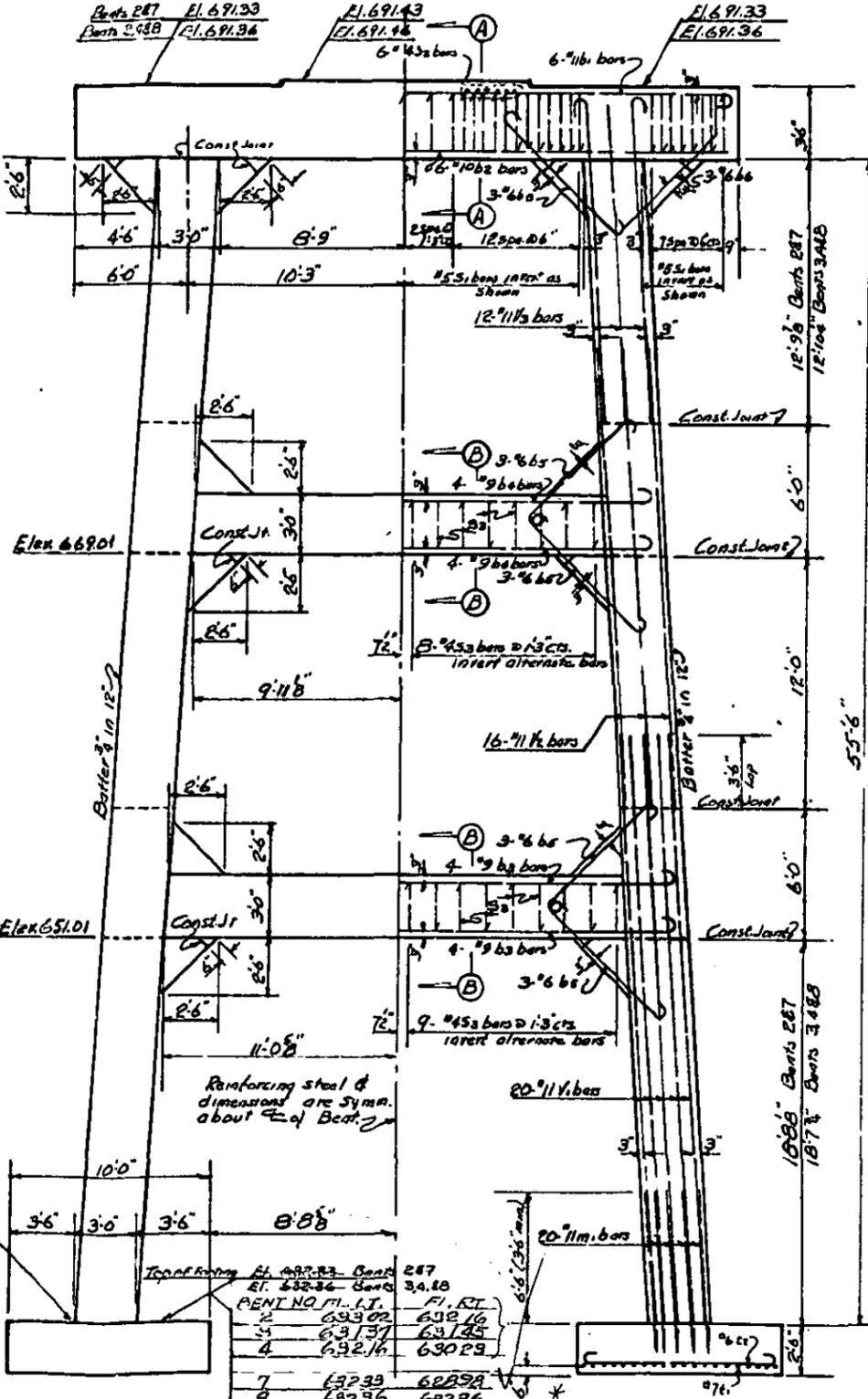
BENT No 1

JULY 1960

NO.	BY	DATE	REVISION
1			
2			

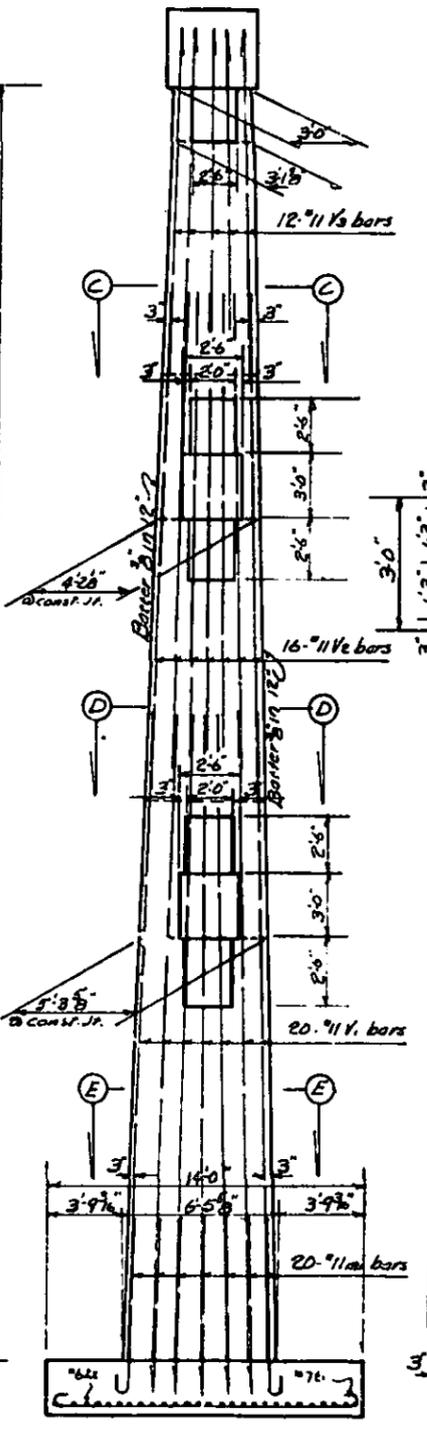


NOTE:
See bearing plate detail for placement of anchor bolts & anchor bolt plates

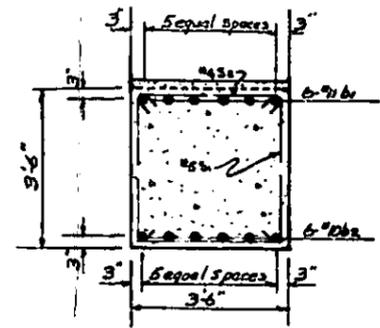


ELEVATION

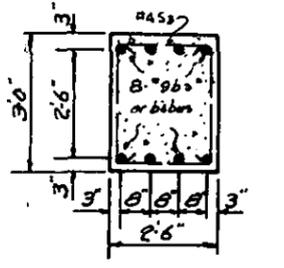
SEE COMPUTATIONS, SHEETS NO. 95-36



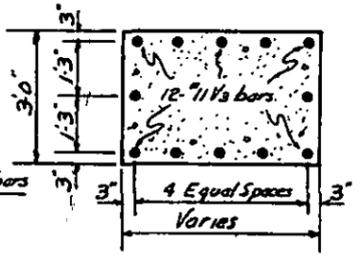
SECTION at E



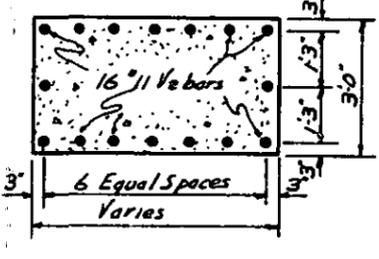
SECTION AA



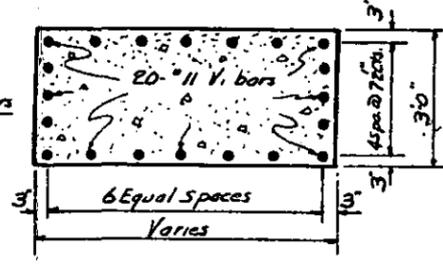
SECTION BB



SECTION CC



SECTION DD

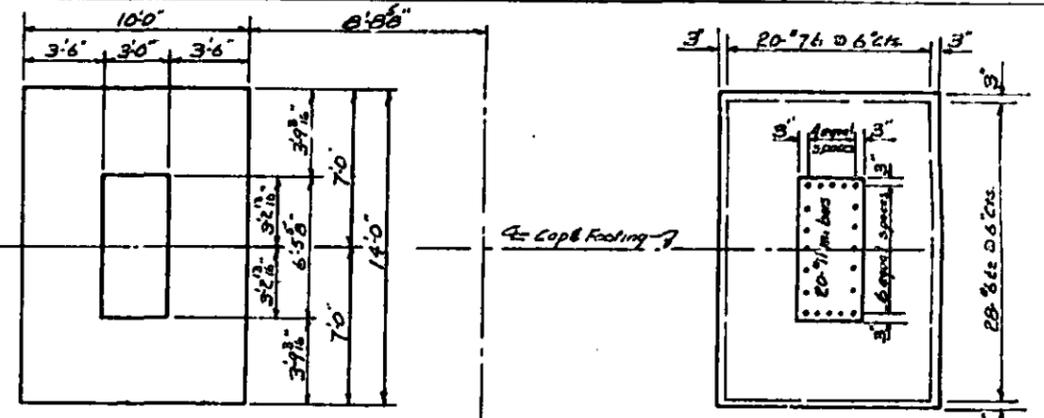


SECTION EE

BAR TYPES			
hk.	①	hk.	
1'-7"	32'-0"	b1	1'-7"
1'-3"	27'-2"	b2	1'-3"
1'-3"	24'-10"	b3	1'-3"
8"	7'-0"	b4	8"
10"	13'-6"	b5	10"
8"	9'-6"	b6	8"
hk.	②	hk.	
1'-7"	8'-3"	m1	
1'-7"	15'-10"	m2	
hk.	③	hk.	
3'-2"	4'-2"	4'-2"	3'-2"
3'-2"	2'-2"	2'-2"	3'-2"

BILL OF MATERIAL					
FOR ONE BENT 5 x 20					
BAR NO.	SIZE	TYPE	LENGTH	WEIGHT	
b1	6	#11	1	35.2	351
b2	6	#11	SPR.	32.0	320
b3	6	#11	1	27.4	274
b4	8	#11	1	27.4	274
b5	10	#11	1	27.4	274
b6	6	#11	5	42	420
m1	40	#11	2	9.10	2040
m2	40	#11	SPR.	28.2	6760
m3	32	#11	SPR.	21.6	3620
m4	24	#11	2	17.5	2220
m5	40	#7	1	1.52	1212
m6	56	#6	1	12.10	911

Class 'A' Concrete C.Y. 112.8
Rein. Steel lbs 20963
Wet Excavation C.Y. 280
Wet Excavation C.Y. 280
Wet Excavation C.Y. 200



PLAN OF FOOTING

Computed foundation load equals 4 tons per sq. ft.
Cap steel may be shifted to clear anchor bolts.

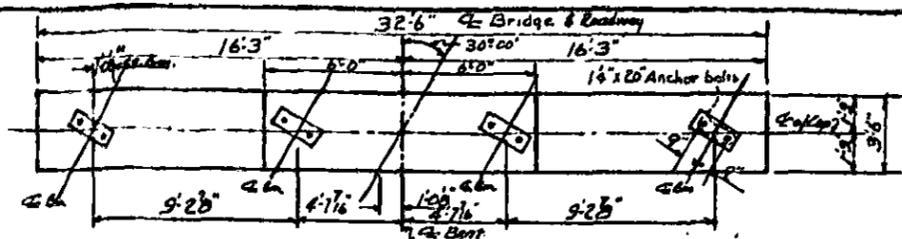
PROJECT No. 816477
LINCOLN-MECKLENBURG COUNTY
STATION 1621.85

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
DIVISION

SUBSTRUCTURE
BENTS No 2-3-4-788

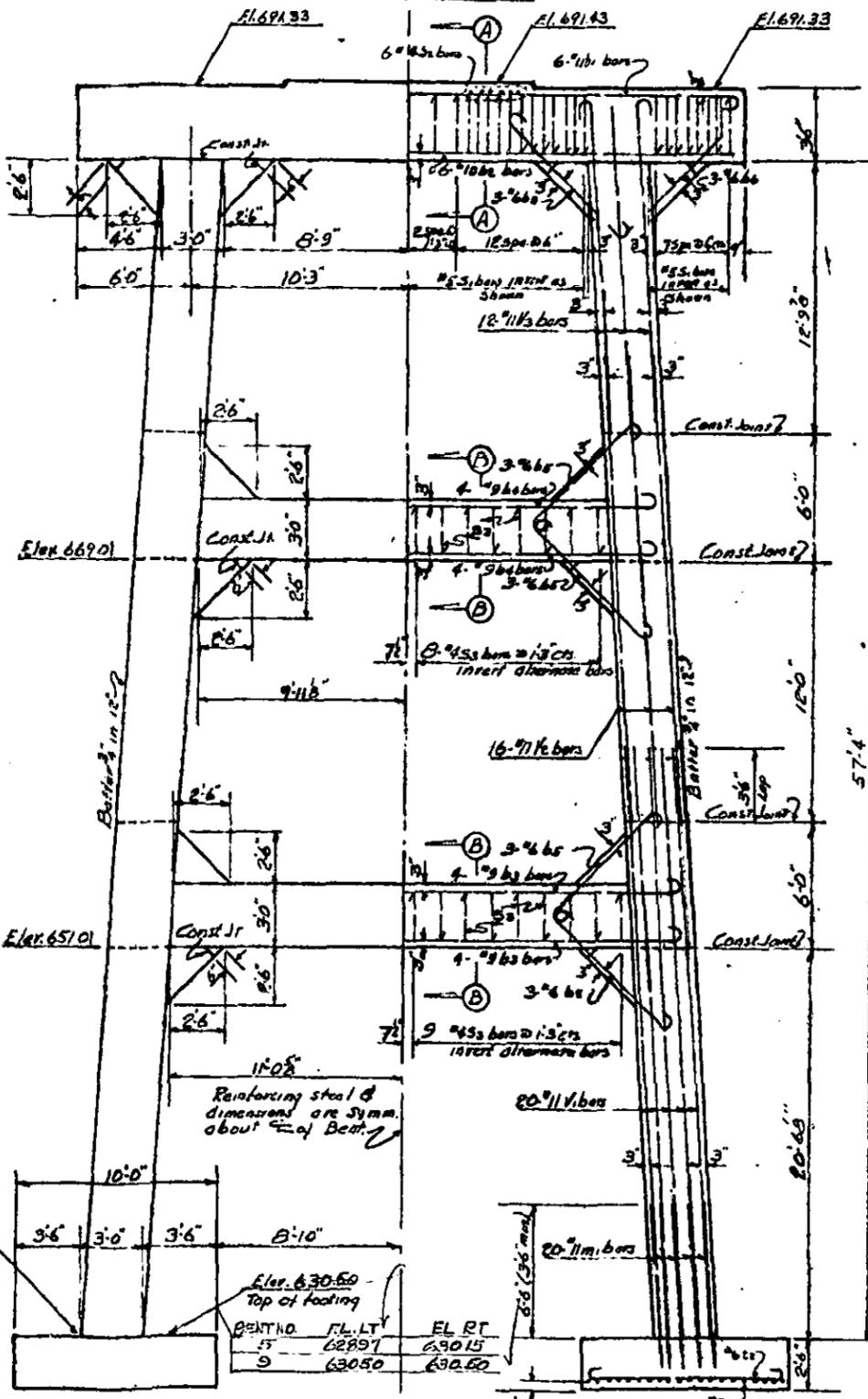
JULY 1960

NO.	BY	DATE	NO.	BY	DATE	SHEET NO.
1			2			TOTAL SHEETS
3			4			67-11



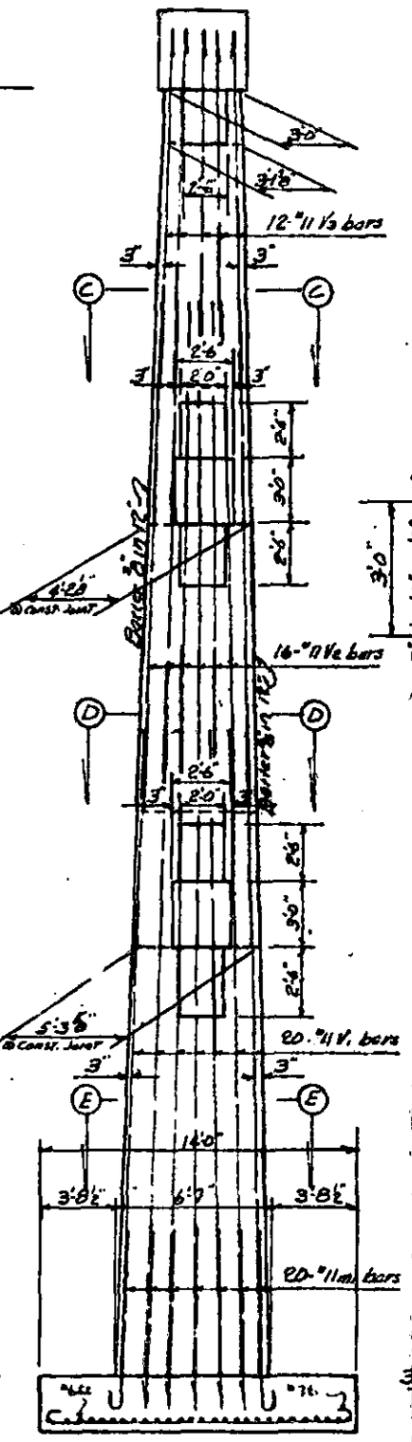
NOTE
See bearing plate detail for placement of anchor bolts & anchor bolt plates

PLAN OF CAP

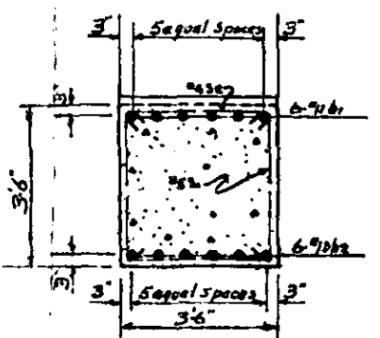


ELEVATION

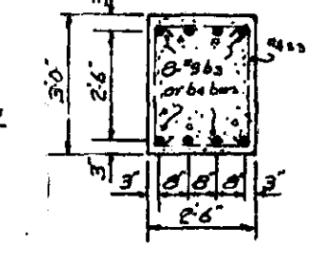
SEE COMPUTATIONS, SHEETS NO 35-36



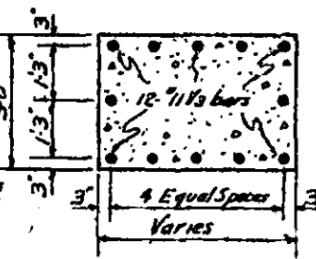
SECTION at F



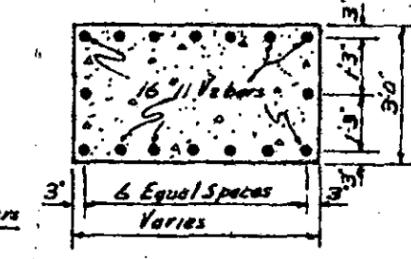
SECTION AA



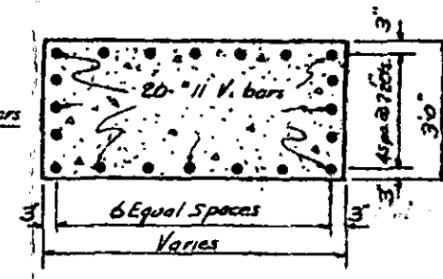
SECTION AB



SECTION AC



SECTION AD



SECTION AE

BAR TYPES			
hk.	①	hk.	
1'-9"	32'-0"	h1	1'-7"
1'-3"	27'-2"	h2	1'-3"
1'-3"	24'-10"	h3	1'-3"
8"	7'-0"	h4	8"
10"	13'-6"	h5	10"
8"	9'-6"	h6	8"

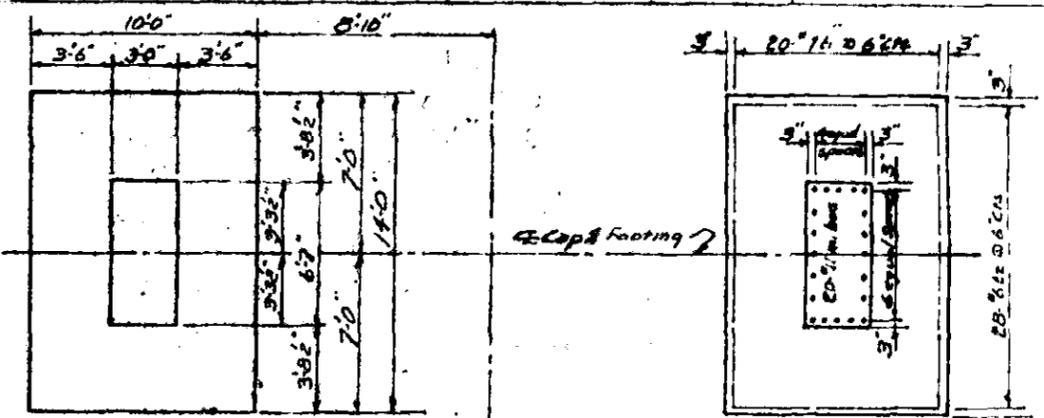
hk.	②	hk.	
1'-7"	8'-3"	h1	
1'-7"	15'-10"	h2	

3'-4 1/2"	4 1/2" dia	3'-2 1/2"	2'-8"
3'-2"		2'-2"	

④ 42" dia

BILL OF MATERIAL FOR ONE BENT - 2 REGR					
BAR NO	SIZE	TYPE	LENGTH	WEIGHT	
B1	6	"11	1	35'	1121
B2	6	"10	5	32'	826
B3	8	"9	1	29'	807
B4	8	"9	1	27'	743
B5	30	"6	1	8'	375
B6	6	"8	5	9'	83
B7	45	"5	3	10'	484
B8	12	"4	4	3'	31
B9	24	"4	3	8'	187
B10	40	"7	2	9'	2010
B11	40	"11	3	30'	6376
B12	38	"11	3	21'	3655
B13	28	"11	2	17'	2221
B14	40	"7	1	15'	1240
B15	40	"6	1	10'	911

Class A Concrete C.Y. 1164
Reinf Steel 161,21155
Wet Excavation C.Y. 175
Wet Excavation C.Y. 340
Dry Excavation C.Y. 50



PLAN OF FOOTING

PROJECT NO. B16417
LINCOLN-MECKLENBURG COUNTY
STATION 167.85

Computed foundation load equal: 4 tons per sq ft.
Cap steel may be shifted to clear anchor bolts

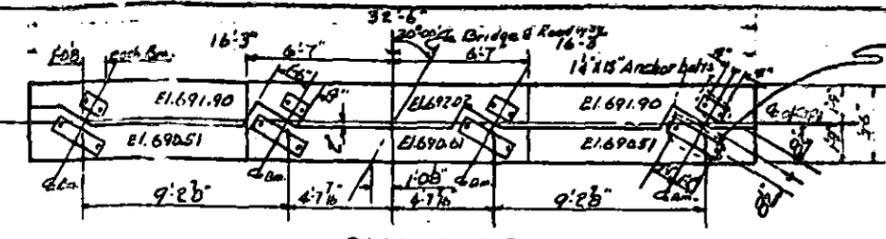
STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

SUBSTRUCTURE
BENTS No 589

JULY 1960

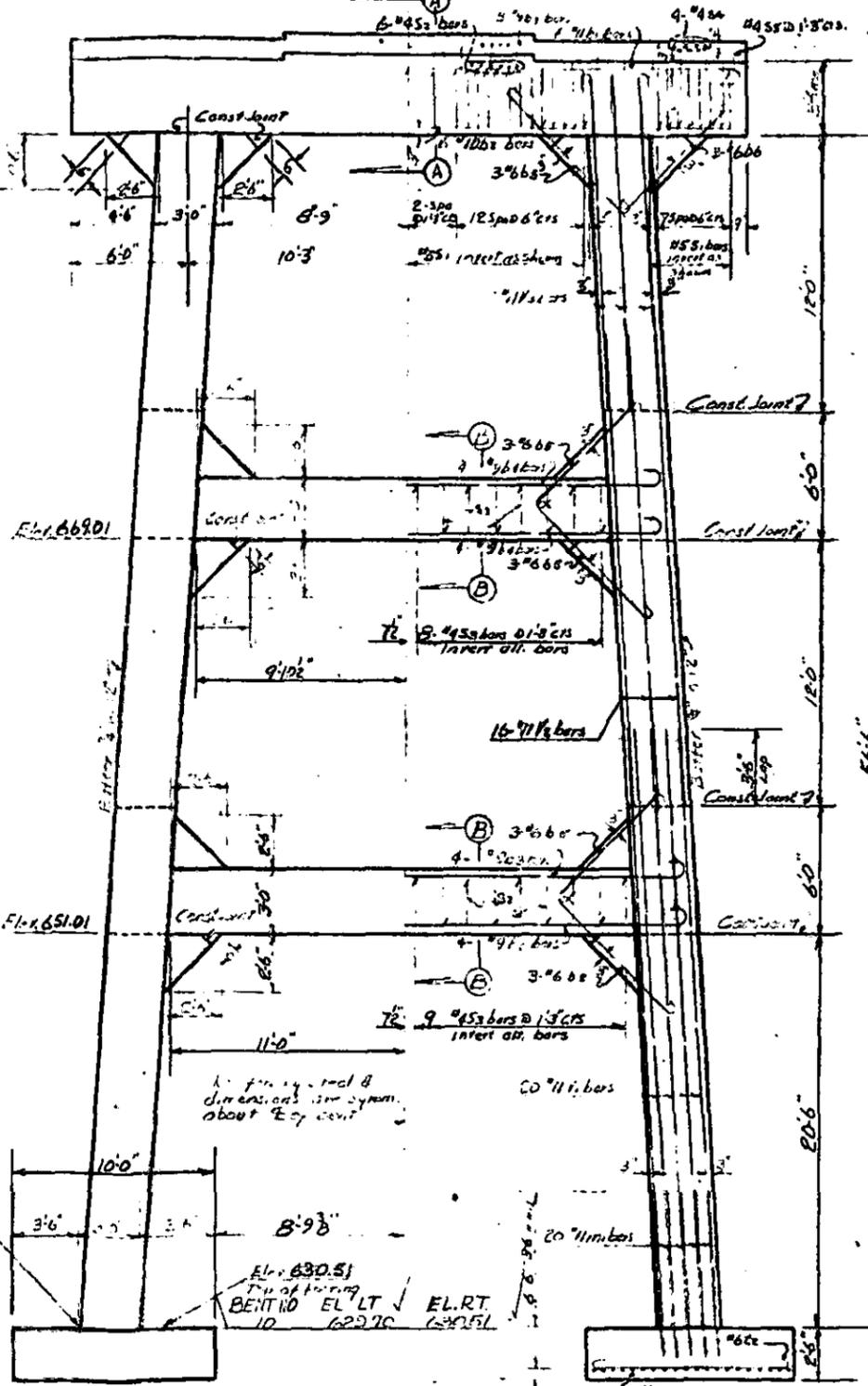
NO.	BY	DATE	REV.	BY	DATE
1			2		
2			4		

SHEET NO. 18
TOTAL SHEETS 40

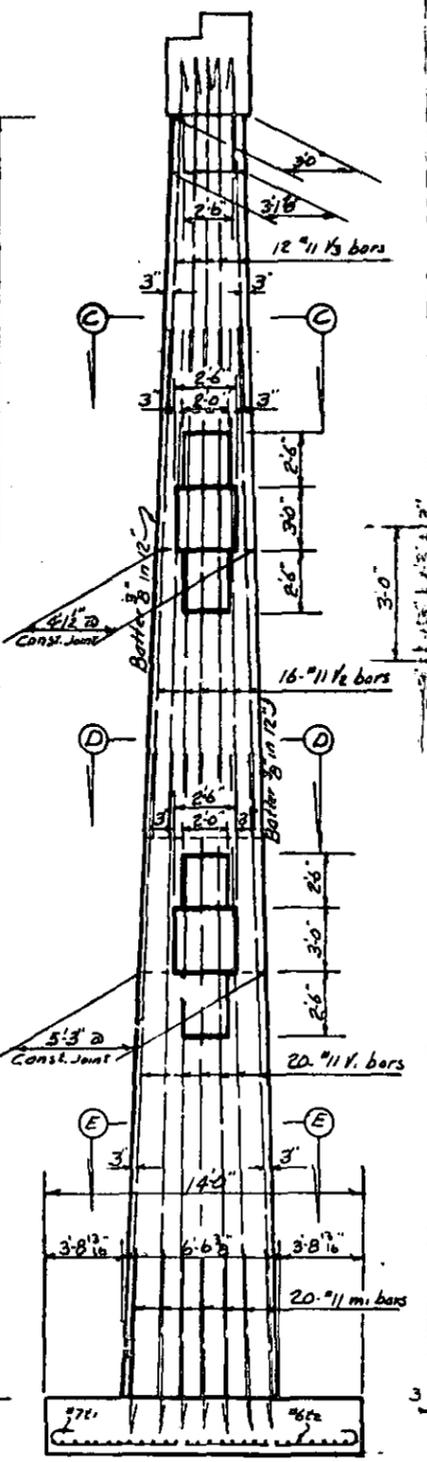


PLAN OF CAP

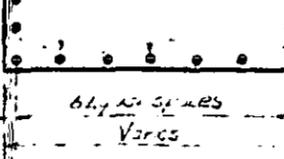
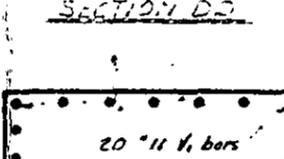
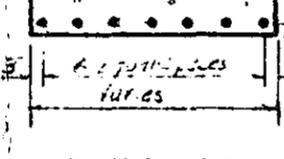
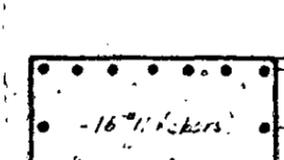
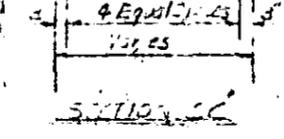
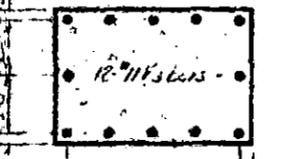
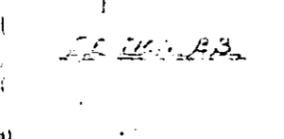
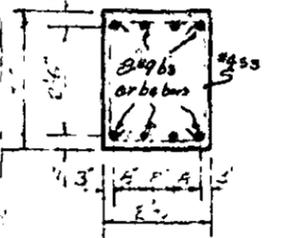
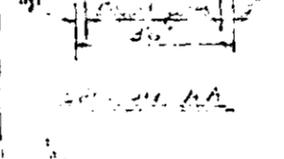
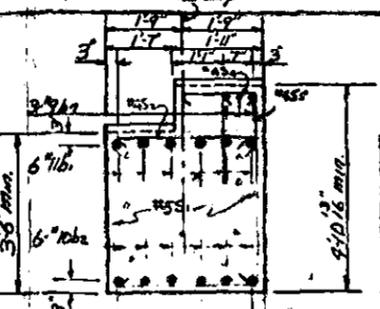
See bearing plate detail for placement of anchor bolts & anchor bolt plates



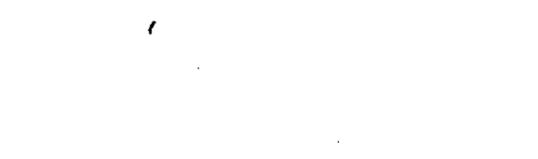
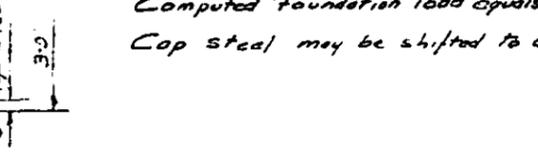
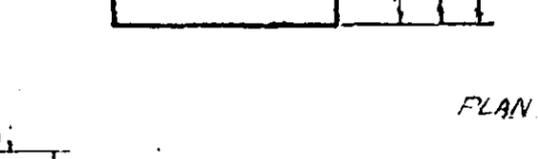
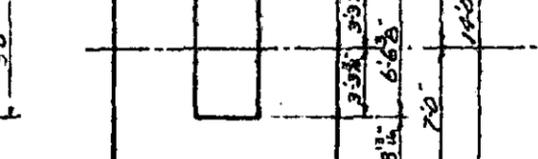
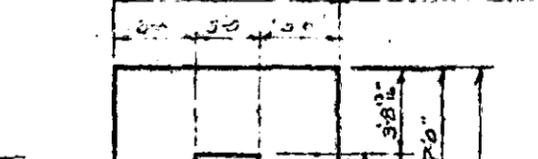
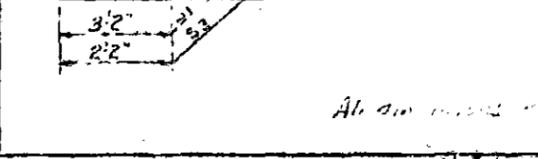
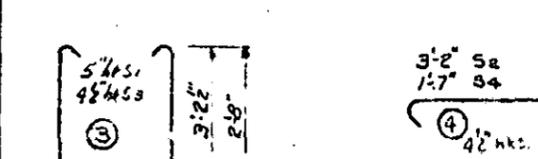
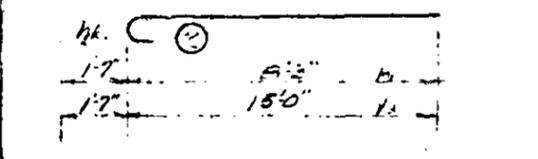
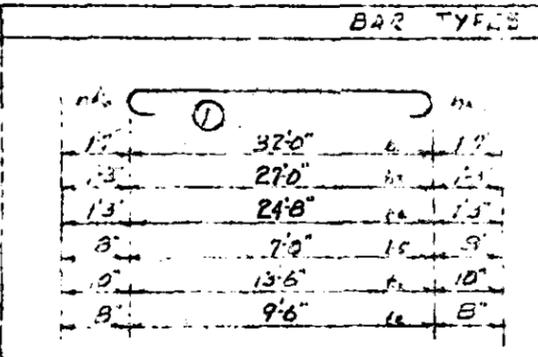
ELEVATION



SECTION OF F



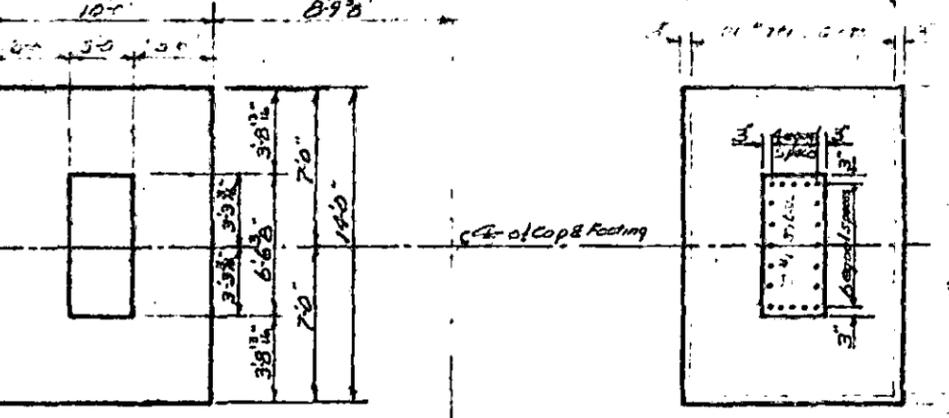
SECTION OF A



BAR TYPES

NO.	DESCRIPTION	QTY.	WEIGHT	TOTAL WEIGHT
1	32'0"	1	1.7	1.7
2	27'0"	1	1.5	1.5
3	24'8"	1	1.3	1.3
4	7'0"	15	9	135
5	13'6"	1	10	10
6	9'6"	16	8	128
7	3'2"	52	1.7	88.4
8	4'2"	54	1.7	91.8
9	3'2"	52	1.7	88.4
10	4'2"	54	1.7	91.8
11	3'2"	52	1.7	88.4
12	4'2"	54	1.7	91.8
13	3'2"	52	1.7	88.4
14	4'2"	54	1.7	91.8
15	3'2"	52	1.7	88.4
16	4'2"	54	1.7	91.8
17	3'2"	52	1.7	88.4
18	4'2"	54	1.7	91.8
19	3'2"	52	1.7	88.4
20	4'2"	54	1.7	91.8
21	3'2"	52	1.7	88.4
22	4'2"	54	1.7	91.8
23	3'2"	52	1.7	88.4
24	4'2"	54	1.7	91.8
25	3'2"	52	1.7	88.4
26	4'2"	54	1.7	91.8
27	3'2"	52	1.7	88.4
28	4'2"	54	1.7	91.8
29	3'2"	52	1.7	88.4
30	4'2"	54	1.7	91.8
31	3'2"	52	1.7	88.4
32	4'2"	54	1.7	91.8
33	3'2"	52	1.7	88.4
34	4'2"	54	1.7	91.8
35	3'2"	52	1.7	88.4
36	4'2"	54	1.7	91.8
37	3'2"	52	1.7	88.4
38	4'2"	54	1.7	91.8
39	3'2"	52	1.7	88.4
40	4'2"	54	1.7	91.8
41	3'2"	52	1.7	88.4
42	4'2"	54	1.7	91.8
43	3'2"	52	1.7	88.4
44	4'2"	54	1.7	91.8
45	3'2"	52	1.7	88.4
46	4'2"	54	1.7	91.8
47	3'2"	52	1.7	88.4
48	4'2"	54	1.7	91.8
49	3'2"	52	1.7	88.4
50	4'2"	54	1.7	91.8
51	3'2"	52	1.7	88.4
52	4'2"	54	1.7	91.8
53	3'2"	52	1.7	88.4
54	4'2"	54	1.7	91.8
55	3'2"	52	1.7	88.4
56	4'2"	54	1.7	91.8
57	3'2"	52	1.7	88.4
58	4'2"	54	1.7	91.8
59	3'2"	52	1.7	88.4
60	4'2"	54	1.7	91.8
61	3'2"	52	1.7	88.4
62	4'2"	54	1.7	91.8
63	3'2"	52	1.7	88.4
64	4'2"	54	1.7	91.8
65	3'2"	52	1.7	88.4
66	4'2"	54	1.7	91.8
67	3'2"	52	1.7	88.4
68	4'2"	54	1.7	91.8
69	3'2"	52	1.7	88.4
70	4'2"	54	1.7	91.8
71	3'2"	52	1.7	88.4
72	4'2"	54	1.7	91.8
73	3'2"	52	1.7	88.4
74	4'2"	54	1.7	91.8
75	3'2"	52	1.7	88.4
76	4'2"	54	1.7	91.8
77	3'2"	52	1.7	88.4
78	4'2"	54	1.7	91.8
79	3'2"	52	1.7	88.4
80	4'2"	54	1.7	91.8
81	3'2"	52	1.7	88.4
82	4'2"	54	1.7	91.8
83	3'2"	52	1.7	88.4
84	4'2"	54	1.7	91.8
85	3'2"	52	1.7	88.4
86	4'2"	54	1.7	91.8
87	3'2"	52	1.7	88.4
88	4'2"	54	1.7	91.8
89	3'2"	52	1.7	88.4
90	4'2"	54	1.7	91.8
91	3'2"	52	1.7	88.4
92	4'2"	54	1.7	91.8
93	3'2"	52	1.7	88.4
94	4'2"	54	1.7	91.8
95	3'2"	52	1.7	88.4
96	4'2"	54	1.7	91.8
97	3'2"	52	1.7	88.4
98	4'2"	54	1.7	91.8
99	3'2"	52	1.7	88.4
100	4'2"	54	1.7	91.8

Class A Concrete C.Y. 1522
 Reinf. Steel 16.2191
 Dry Excavation C.Y. 40
 Wet Excavation C.Y. 800



PLAN OF FOOTING

Computed foundation load equals 4 tons per sq. ft.
 Cap steel may be shifted to clear anchor bolts.

PROJECT NO. B11417
 LINCOLN-MECKLENBURG COUNTY
 STATION 161+95

STATE OF NORTH CAROLINA
 STATE HIGHWAY COMMISSION
 RALEIGH
 STRUCTURE
 BRIDGE NO. 10
 JULY 1960

REVISIONS

NO.	BY	DATE	NO.	BY	DATE
1			2		
2			3		
3			4		

DESIGNED BY
 DRAWN BY
 CHECKED BY
 DATE
 DATE
 DATE

SEE COMPUTATIONS, SHEET NO. 36

THE FINAL ESTIMATE
NC PROJECT NO 816477 STRUCTURES
FA PROJECT NO 514390

SEE SHEET NO.	QUANTITY	UNIT	ITEM	CONTRACT UNIT PRICE	AMOUNT
39	1137 ✓	CUYD	DRY EXCAVATION	300 ✓	34110 ✓
	26122 ✓	CUYD	WET EXCAVATION (00'-30')	1600 ✓	41,79520 ✓
	89 ✓	CUYD	WET EXCAVATION (30'-6.0')	1900 ✓	16913 ✓
	250000 ✓	L.S.	REMOVAL OF EXISTING STRUCTURE 73-55-1	15 ✓	250000 ✓
	340000 ✓	L.S.	REMOVAL OF EXISTING STRUCTURE 73-60-1	15 ✓	340000 ✓
	709225 ✓	CUYD	CLASS A CONCRETE (FOR BRIDGE)	3600 ✓	117,1649 ✓
	6085 ✓	CUYD	CLASS A CONCRETE (FOR CHEVERTS)	4350 ✓	26,121.75 ✓
	566351 ✓	LB.	REINFORCING STEEL	0.105 ✓	59,466.86 ✓
	1140000 ✓	L.S.	STRUCTURAL STEEL (937,500 LBS.)	15 ✓	114,000.00 ✓
	339425 ✓	LINEFT	12" x 53" STEEL H PILES	550 ✓	18,668.38 ✓
39	50425 ✓	LINEFT	12" x 53" STEEL H PILES CUT-OFF	275 ✓	13,866.88 ✓
TOTAL AMOUNT OF THIS ESTIMATE					385,013.37 ✓
LESS PREVIOUS PAYMENTS (ESTIMATES 1-13 INCLUSIVE)					354,212.48 ✓
AMOUNT DUE ON THIS FINAL ESTIMATE					30,800.89 ✓

I HEREBY CERTIFY THAT I HAVE CHECKED THIS ESTIMATE AND THAT IT IS TRUE AND CORRECT ACCORDING TO MY BEST KNOWLEDGE AND BELIEF.
SIGNED AT [] DATE 8/10/62
RESIDENT ENGINEER

I HEREBY CERTIFY THAT I HAVE EXAMINED THIS ESTIMATE IN DETAIL AND THAT IT IS TRUE AND CORRECT ACCORDING TO MY BEST KNOWLEDGE AND BELIEF.
SIGNED [] DATE Aug 20, 1962
DIVISION ENGINEER

ADJUSTMENT - CONCRETE IN STEMS

NO. 10 557
35 60
PLAN NO. 5-139(1)

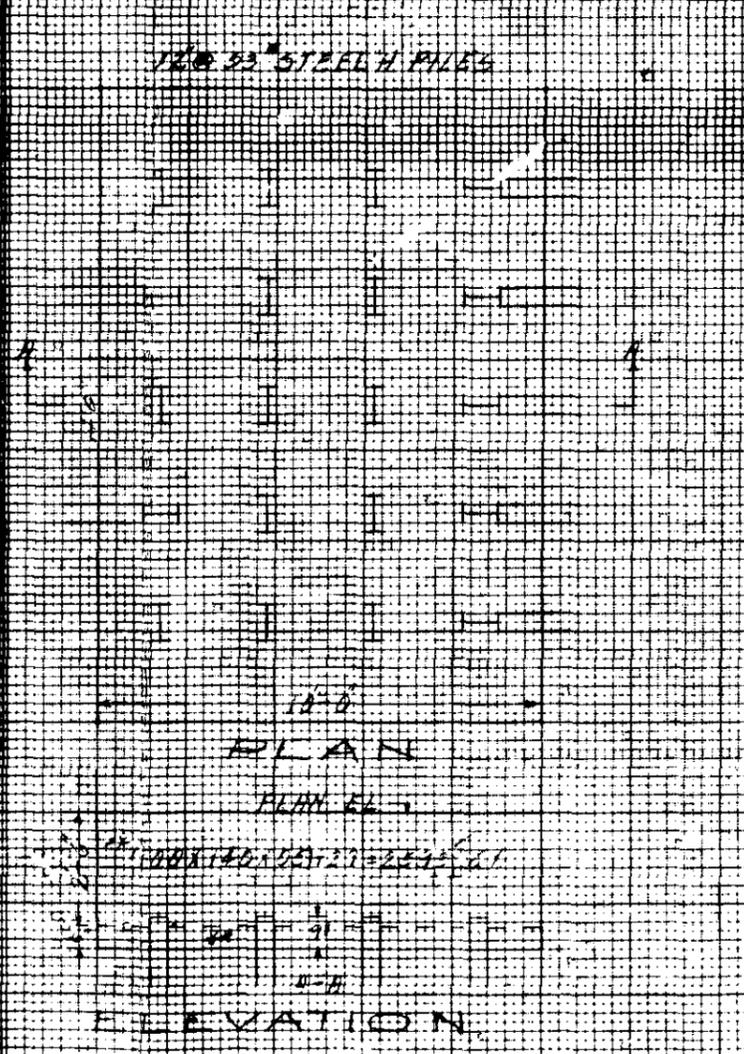
BENT NO. 1	BENT NO. 2	BENT NO. 3	BENT NO. 4	BENT NO. 5	BENT NO. 6
<p>CONST. ELEV. 100.000 STEM LONG = 0.00</p> <p>300X621A8 = 18.621A8 300X61357 = 18.61357</p> <p>1.155-ADJUST 1.155-ADJUST EXTRA CONC. IN FOOTINGS = 0.000 PLAIN QUANTITY-SUBSTRUCT = 1.155 TOTAL = 1.155</p> <p>SEE MASONRY BOOK NO. 2 - PAGE 69</p>	<p>CONST. ELEV. 100.000 STEM LONG = 0.00</p> <p>300X621A8 = 18.621A8 300X61357 = 18.61357</p> <p>1.155-ADJUST 1.155-ADJUST EXTRA CONC. IN FOOTINGS = 0.000 PLAIN QUANTITY-SUBSTRUCT = 1.155 TOTAL = 1.155</p> <p>SEE MASONRY BOOK NO. 2 - PAGE 69</p>	<p>CONST. ELEV. 100.000 STEM LONG = 0.00</p> <p>300X621A8 = 18.621A8 300X61357 = 18.61357</p> <p>1.155-ADJUST 1.155-ADJUST EXTRA CONC. IN FOOTINGS = 0.000 PLAIN QUANTITY-SUBSTRUCT = 1.155 TOTAL = 1.155</p> <p>SEE MASONRY BOOK NO. 2 - PAGE 69</p>	<p>CONST. ELEV. 100.000 STEM LONG = 0.00</p> <p>300X621A8 = 18.621A8 300X61357 = 18.61357</p> <p>1.155-ADJUST 1.155-ADJUST EXTRA CONC. IN FOOTINGS = 0.000 PLAIN QUANTITY-SUBSTRUCT = 1.155 TOTAL = 1.155</p> <p>SEE MASONRY BOOK NO. 2 - PAGE 69</p>	<p>CONST. ELEV. 100.000 STEM LONG = 0.00</p> <p>300X621A8 = 18.621A8 300X61357 = 18.61357</p> <p>1.155-ADJUST 1.155-ADJUST EXTRA CONC. IN FOOTINGS = 0.000 PLAIN QUANTITY-SUBSTRUCT = 1.155 TOTAL = 1.155</p> <p>SEE MASONRY BOOK NO. 2 - PAGE 69</p>	<p>CONST. ELEV. 100.000 STEM LONG = 0.00</p> <p>300X621A8 = 18.621A8 300X61357 = 18.61357</p> <p>1.155-ADJUST 1.155-ADJUST EXTRA CONC. IN FOOTINGS = 0.000 PLAIN QUANTITY-SUBSTRUCT = 1.155 TOTAL = 1.155</p> <p>SEE MASONRY BOOK NO. 2 - PAGE 69</p>

BENT NO. 7	BENT NO. 8	BENT NO. 9	BENT NO. 10	BENT NO. 11	BENT NO. 12
<p>CONST. ELEV. 100.000 STEM LONG = 0.00</p> <p>300X621A8 = 18.621A8 300X61357 = 18.61357</p> <p>1.155-ADJUST 1.155-ADJUST EXTRA CONC. IN FOOTINGS = 0.000 PLAIN QUANTITY-SUBSTRUCT = 1.155 TOTAL = 1.155</p> <p>SEE MASONRY BOOK NO. 2 - PAGE 70</p>	<p>CONST. ELEV. 100.000 STEM LONG = 0.00</p> <p>300X621A8 = 18.621A8 300X61357 = 18.61357</p> <p>1.155-ADJUST 1.155-ADJUST EXTRA CONC. IN FOOTINGS = 0.000 PLAIN QUANTITY-SUBSTRUCT = 1.155 TOTAL = 1.155</p> <p>SEE MASONRY BOOK NO. 2 - PAGE 70</p>	<p>CONST. ELEV. 100.000 STEM LONG = 0.00</p> <p>300X621A8 = 18.621A8 300X61357 = 18.61357</p> <p>1.155-ADJUST 1.155-ADJUST EXTRA CONC. IN FOOTINGS = 0.000 PLAIN QUANTITY-SUBSTRUCT = 1.155 TOTAL = 1.155</p> <p>SEE MASONRY BOOK NO. 2 - PAGE 70</p>	<p>CONST. ELEV. 100.000 STEM LONG = 0.00</p> <p>300X621A8 = 18.621A8 300X61357 = 18.61357</p> <p>1.155-ADJUST 1.155-ADJUST EXTRA CONC. IN FOOTINGS = 0.000 PLAIN QUANTITY-SUBSTRUCT = 1.155 TOTAL = 1.155</p> <p>SEE MASONRY BOOK NO. 2 - PAGE 70</p>	<p>CONST. ELEV. 100.000 STEM LONG = 0.00</p> <p>300X621A8 = 18.621A8 300X61357 = 18.61357</p> <p>1.155-ADJUST 1.155-ADJUST EXTRA CONC. IN FOOTINGS = 0.000 PLAIN QUANTITY-SUBSTRUCT = 1.155 TOTAL = 1.155</p> <p>SEE MASONRY BOOK NO. 2 - PAGE 70</p>	<p>CONST. ELEV. 100.000 STEM LONG = 0.00</p> <p>300X621A8 = 18.621A8 300X61357 = 18.61357</p> <p>1.155-ADJUST 1.155-ADJUST EXTRA CONC. IN FOOTINGS = 0.000 PLAIN QUANTITY-SUBSTRUCT = 1.155 TOTAL = 1.155</p> <p>SEE MASONRY BOOK NO. 2 - PAGE 70</p>

ADJUSTMENT-CONCRETE IN STEMS & FOOTINGS

BENT NO. 7		BENT NO. 8		BENT NO. 9		BENT NO. 10	
LT	RT	LT	RT	LT	RT	LT	RT
CONST. EL. 63000		CONST. EL. 63000		CONST. EL. 63000		CONST. EL. 63000	
12" x 33" H PILES		12" x 33" H PILES		12" x 33" H PILES		12" x 33" H PILES	
300X6600 = 198000 300X6600 = 198000 = 396000		300X6600 = 198000 300X6600 = 198000 = 396000		300X6600 = 198000 300X6600 = 198000 = 396000		300X6600 = 198000 300X6600 = 198000 = 396000	
STEM BUILT AS PER PLANS		STEM BUILT AS PER PLANS		STEM BUILT AS PER PLANS		STEM BUILT AS PER PLANS	
EXTRA CONC. IN FOOTINGS		EXTRA CONC. IN FOOTINGS		EXTRA CONC. IN FOOTINGS		EXTRA CONC. IN FOOTINGS	
PLAN QUANTITY SUBTRACT		PLAN QUANTITY SUBTRACT		PLAN QUANTITY SUBTRACT		PLAN QUANTITY SUBTRACT	
TOTAL		TOTAL		TOTAL		TOTAL	
SEE MASONRY BOOK NO. 1 - PAGE 74		SEE MASONRY BOOK NO. 1 - PAGE 74		SEE MASONRY BOOK NO. 1 - PAGE 74		SEE MASONRY BOOK NO. 1 - PAGE 74	

BENT NO. 10	
LT	RT
CONST. EL. 63000	
12" x 33" H PILES	
300X6600 = 198000 300X6600 = 198000 = 396000	
STEM BUILT AS PER PLANS	
EXTRA CONC. IN FOOTINGS	
PLAN QUANTITY SUBTRACT	
TOTAL	
SEE MASONRY BOOK NO. 1 - PAGE 74	



NOTE:
 PILES IN BENTS NO. 7 & 8 START AT RT TO RT
 OF 12" x 33" STEEL H PILES IN EACH FOOTING
 SEE SECTIONAL AREA OF PILE 11550"
 DEDUCT 11550" x 2 (ROTATION) = 23100"
 EXTRA CONC. IN FOOTING 23100" x 2 = 46200"
 2 FOOTINGS x 23100" = 46200"
 SEE MASONRY BOOK NO. 2 - PAGE 63
 Formulas for extra concrete in footings
 See formula (C.5.10.2.1) - 3.595

LAYOUT OF PILES IN FOOTINGS AND DISPLACEMENT COMPUTATIONS

DATE PILED

BENT NO. 7	LT	3-13-62
"	R	12-7-61
"	LT	11-8-61
"	R	12-8-61
"	LT	11-16-61
"	R	1-16-62

SEE COMPUTATION SHEETS
 ALL COMPUTATIONS ON THIS SHEET

