

SECTION ALONG LEFT LANE



PLAN OF LEFT LANE

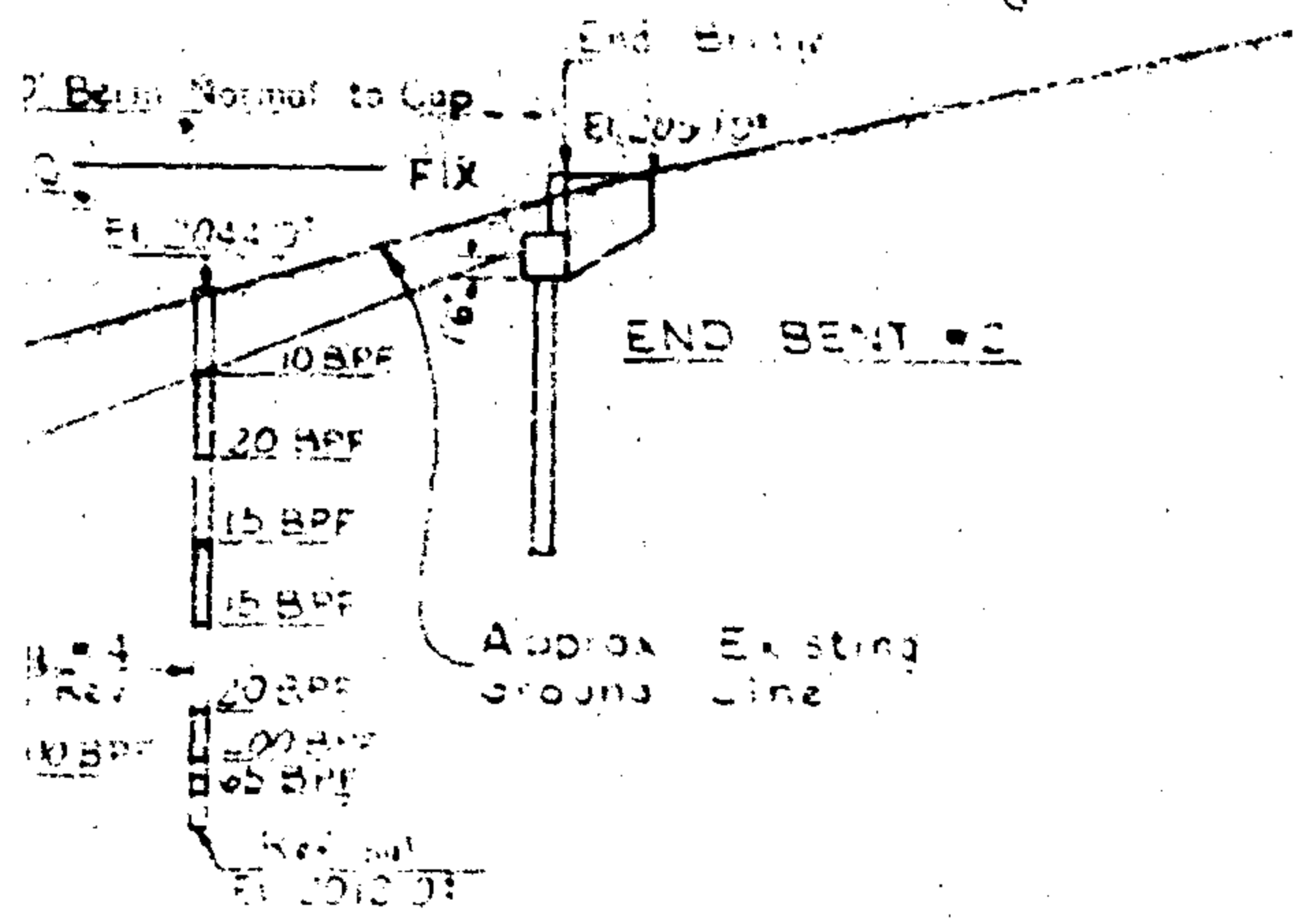
TOTAL BILL OF MATERIAL						
	CLASS A CONCRETE	CLASS AA CONCRETE	REIN. STEEL	STRUCT. STEEL	PIPE	ENCLOSURE BAR
	CU YDS	CU YDS	LOS	SPER LIN	INCHES	CU YDS
SUPERSTRUCTURE						
END BENT #1						698.74
BENT #1						5750.76
BENT #2						537.92.77
END BENT #2						250.00.78
						205.00.80

SB

A	66° 18' 04.6"	J	65° 07' 55.7"
B	66° 22' 45.4"	K	65° 11' 39.7"
C	66° 27' 27.1"	L	65° 15' 26.7"
D	66° 32' 09.8"	M	64° 03' 21.8"
E	66° 36' 52.9"	N	64° 05' 35.8"
F	66° 41' 36.2"	O	64° 07' 53.6"
G	66° 46' 03.7"	P	64° 10' 15.9"
H	66° 50' 41.2"	Q	64° 12' 41.9"
I	65° 04' 14.5"	R	64° 15' 13.0"

BEAM LENGTHS			
BEAM	DIMEN A	DIMEN B	DIMEN C
B1	59' 4 3/8"	60' 7 1/8"	61' 2 1/8"
B2	59' 3 1/2"	60' 7 1/8"	61' 2 1/8"
B3	59' 3 1/2"	60' 7"	61' 1 7/8"
B4	59' 3 1/2"	60' 6 9/16"	61' 1 7/8"
B5	59' 2 5/8"	60' 6 3/8"	61' 1"
B6	59' 2 1/2"	60' 5 7/8"	61' 0 1/2"
B7	71' 2 1/8"	71' 10 1/8"	72' 8 1/8"
B8	91' 2 3/8"	71' 11 1/8"	72' 2 1/8"
B9	71' 1 15/16"	71' 7 1/2"	72' 1 1/2"
B10	71' 1 7/16"	71' 7 1/4"	72' 1 3/8"
B11	71' 1"	71' 9"	72' 1"
B12	71' 0 9/16"	71' 8 9/16"	72' 0 9/16"
B13	58' 2 3/8"	59' 6 1/8"	60' 1 1/8"
B14	58' 2 1/2"	59' 6 1/4"	60' 1 1/4"
B15	58' 2 1/4"	59' 5 1/4"	60' 1 1/4"
B16	58' 2 1/8"	59' 5 1/8"	60' 0 7/8"
B17	58' 1 15/16"	59' 5 1/16"	60' 0 1/16"
B18	58' 1 1/16"	59' 4 1/16"	60' 0 1/16"

PCB NO.	DATE	PROJECT
8186	11/18	

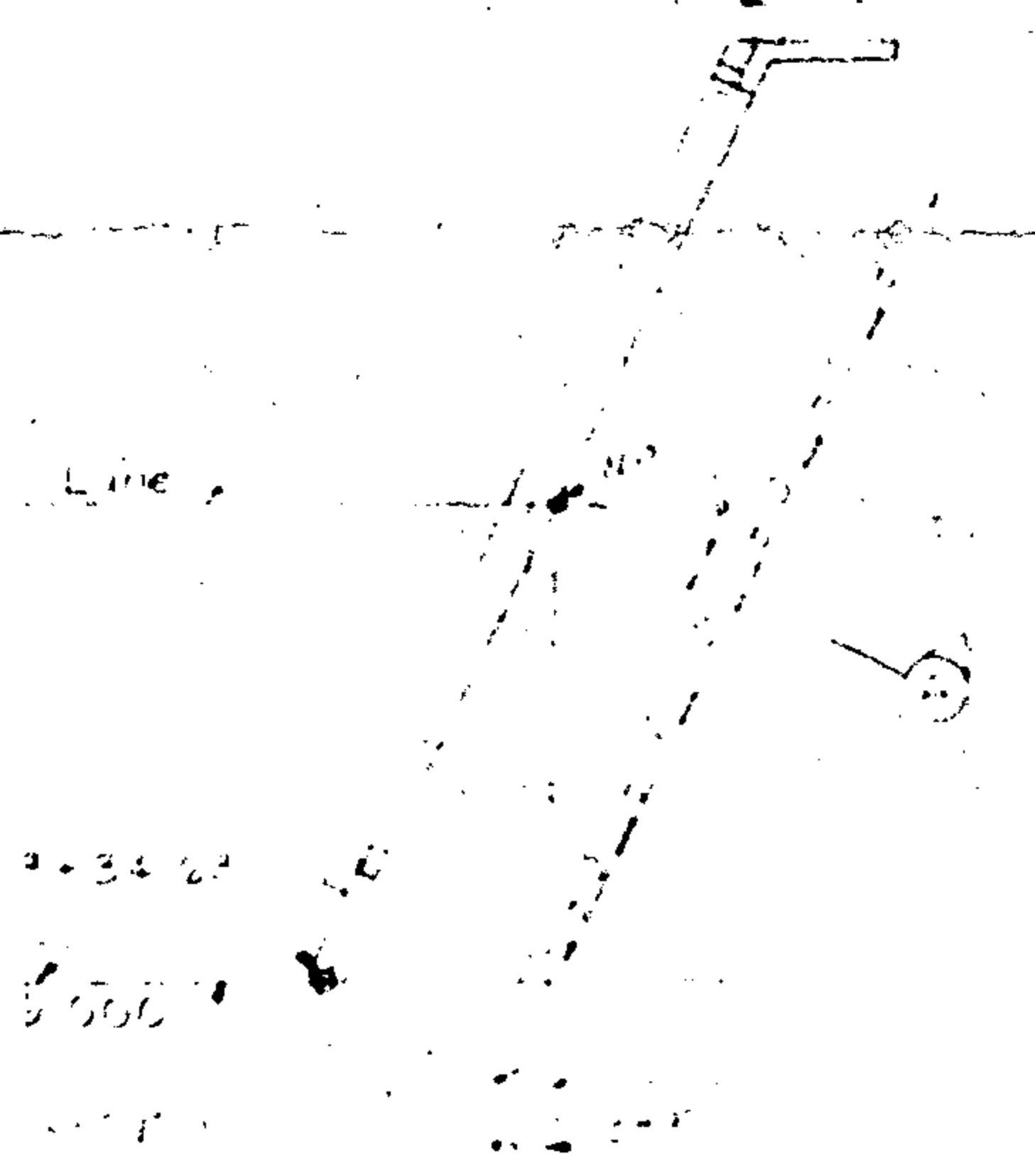


NOTES

- Assumed Live Load - H20 (S16(44)) or Alternate Loading.
- For other Design Data and General Note see Sheet S-N.
- The Contractor ~~shall be~~ responsible for determining the lengths of piles required. See Special Provisions.
- The Contractor ~~will be~~ required to excavate through approximately 25 feet of fill at End Bent #1 before driving piles.
- Piles in End Bents ~~to be~~ driven to a minimum bearing capacity of 30 tons each or rock or practical refusal.
- Piles in Interior Bents ~~to be~~ driven to a minimum bearing capacity of 35 tons each or rock or practical refusal.
- Work ~~is not to be started~~ on Bent #2 until after roadway section has been excavated by the roadway contractor.
- Unexcavated structure elevation for Bent #1 ~~to be~~ measured from center of roadway.
- Unexcavated structure elevation for Bent #2 ~~to be~~ measured from center of roadway.
- Class 'A' concrete ~~shall be~~ used in the superstructure and in the concrete ~~retaining~~ used in all other parts of the structure. See also the General and Special Provisions.
- See ~~specification~~ for method of laying bridge deck and ~~method~~ ~~of~~ ~~laying~~ the ~~concrete~~ ~~retaining~~.
- Work ~~is not to be started~~ on Bent #1 until fill at End Bent #1 ~~has~~ been placed by Roadway Contractor.

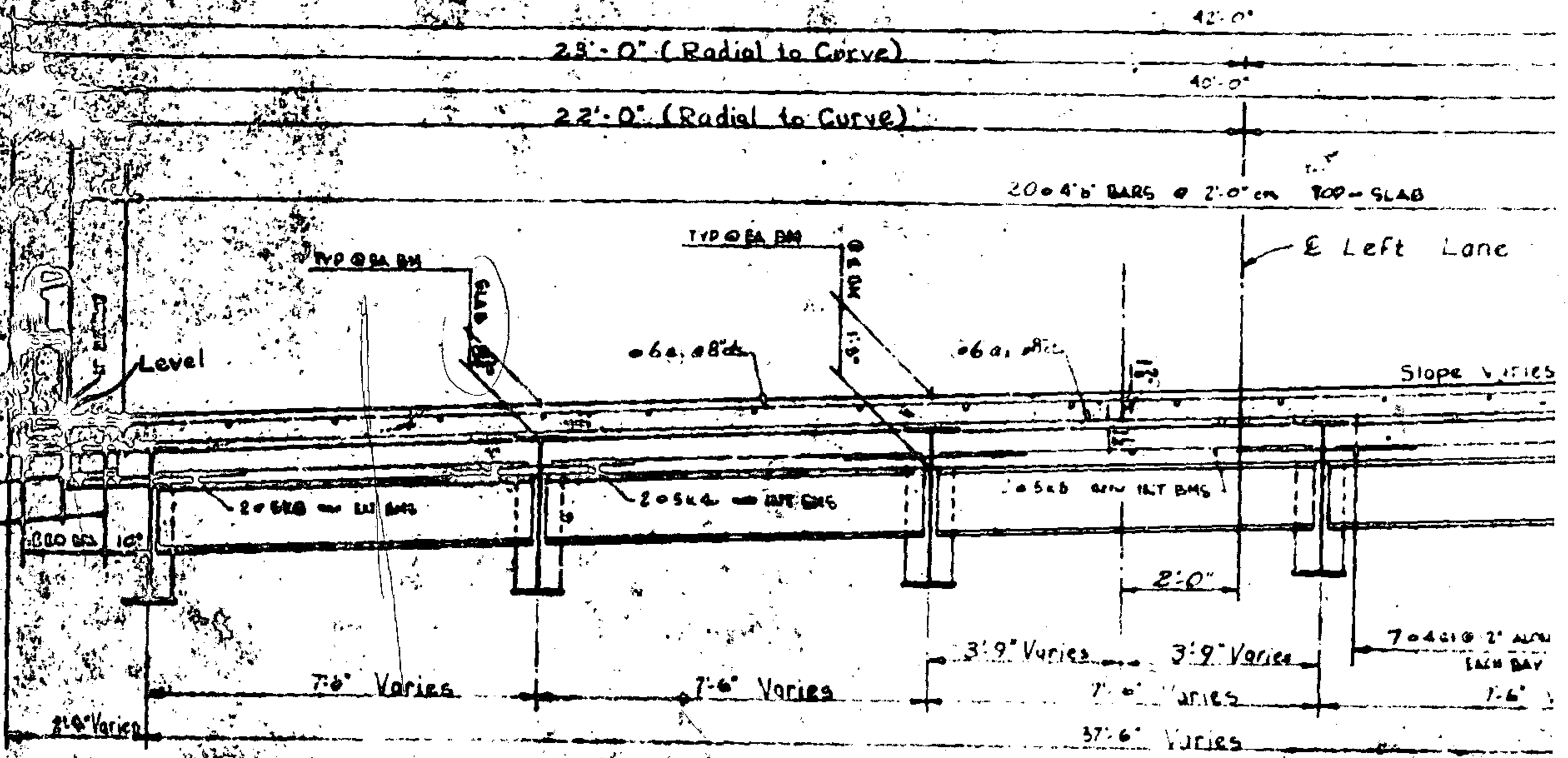
I hereby certify that this structure was built according to plan

*[Signature]*  
Resident Engineer

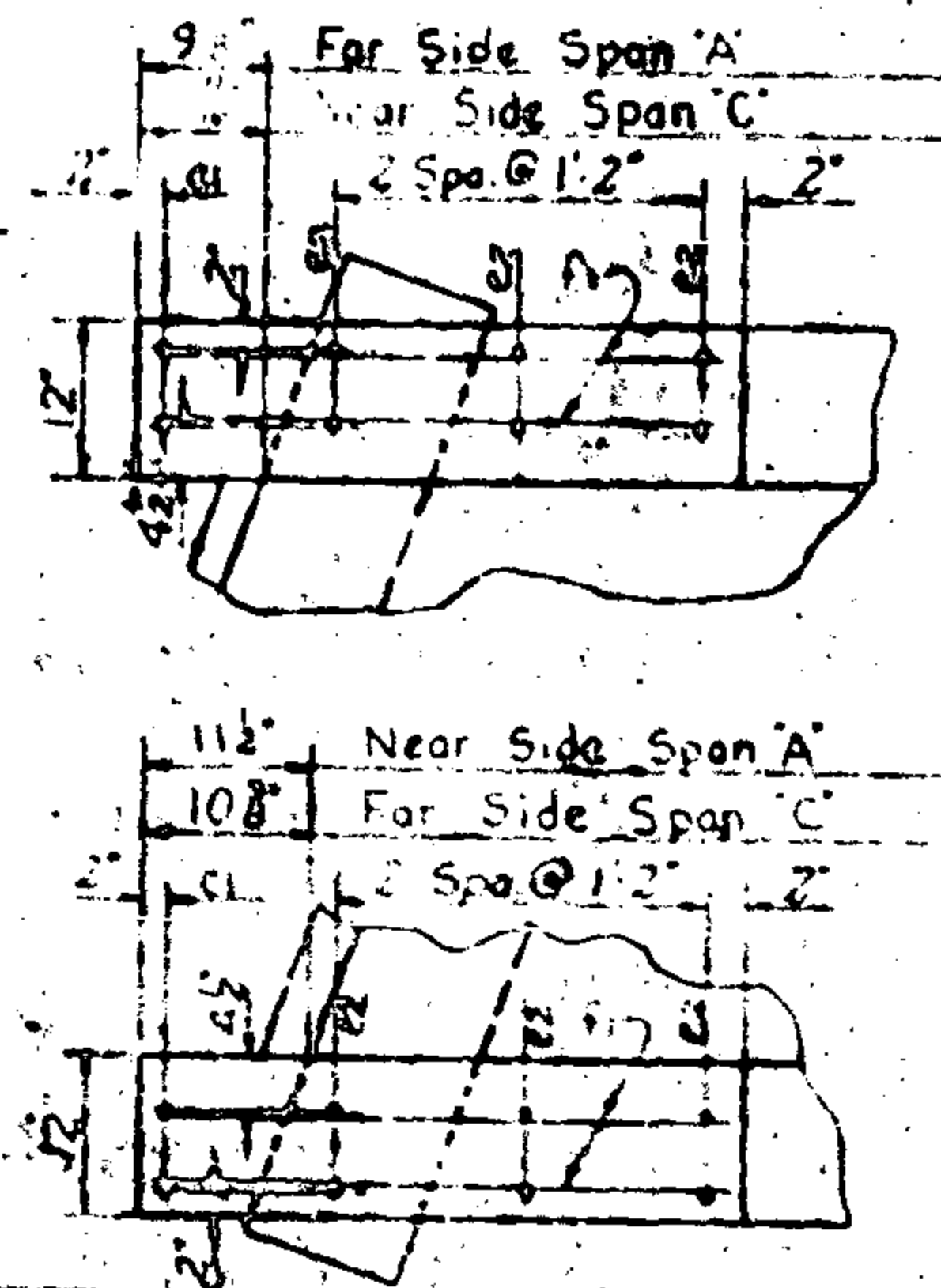
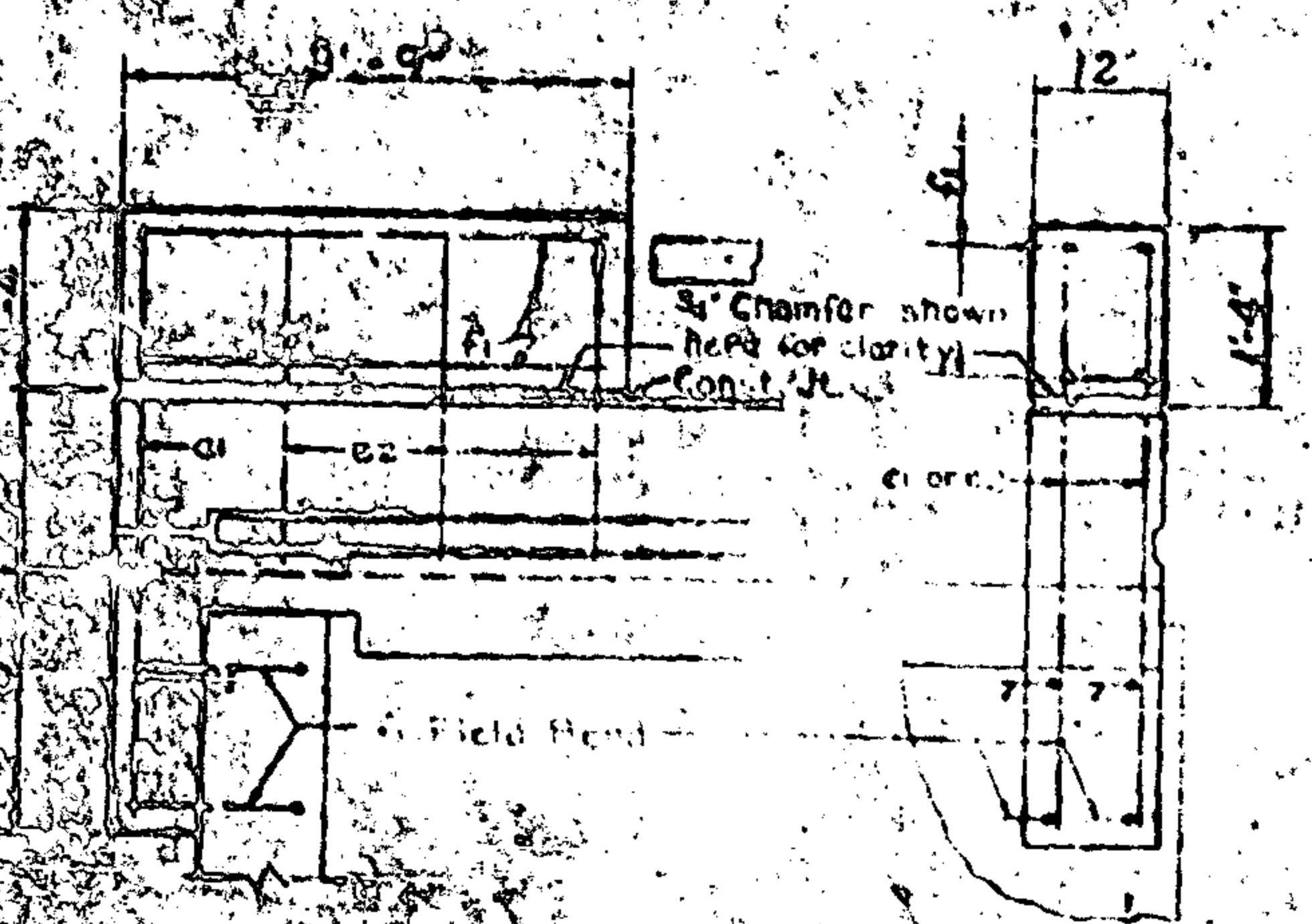
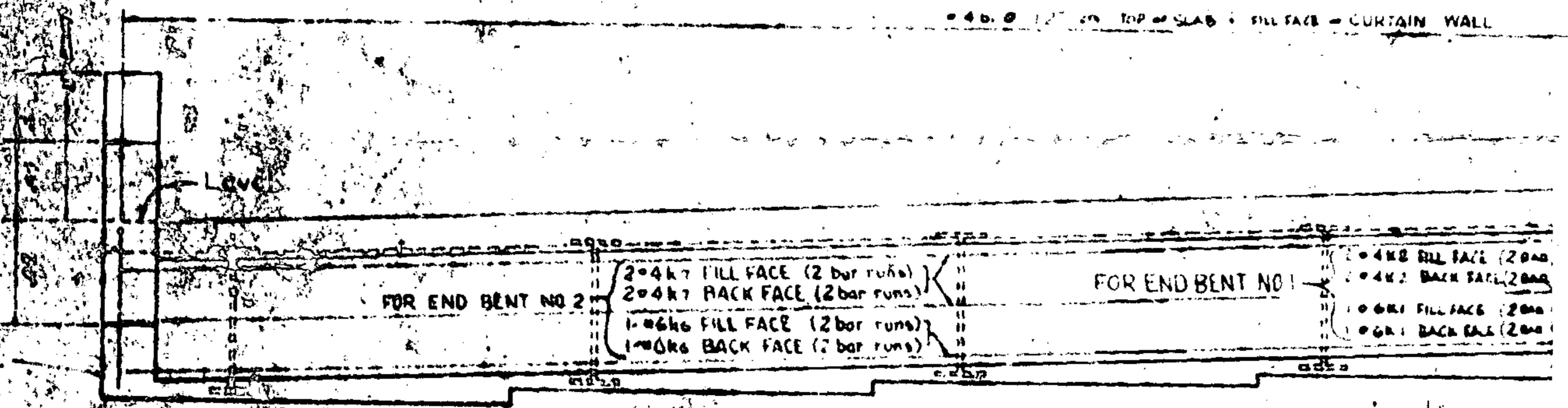


LEFT LANE  
PROJECT No. 81869003  
POLK COUNTY  
STATION 668+38.38 & Me  
10+27.3 'Y'

STATE OF MISSISSIPPI  
**STATE HIGHWAY COMMISSION**  
GENERAL DRAWING FOR  
BRIDGE ON PROJECT BETWEEN  
POLK AND SALUDA  
COUNTIES



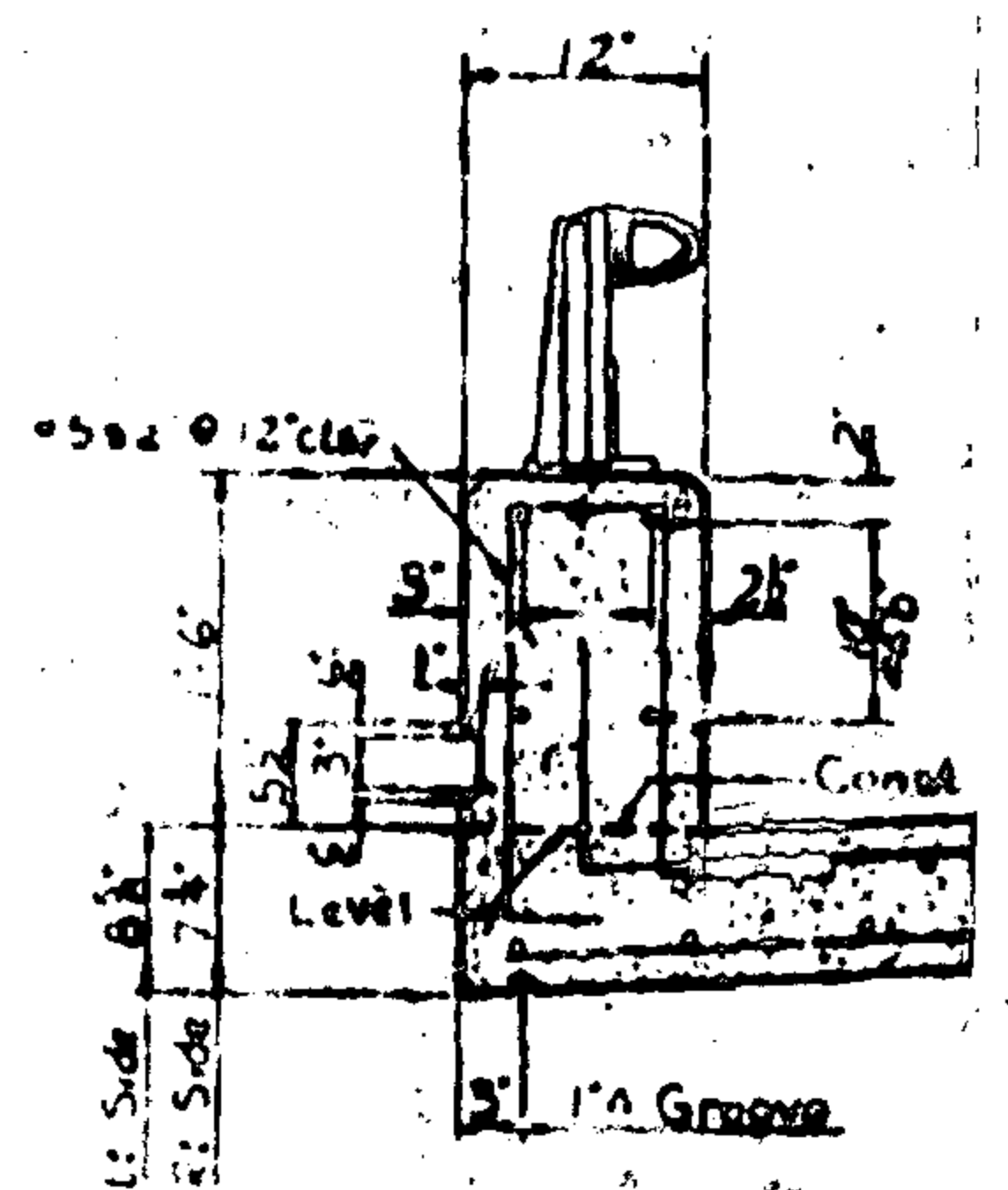
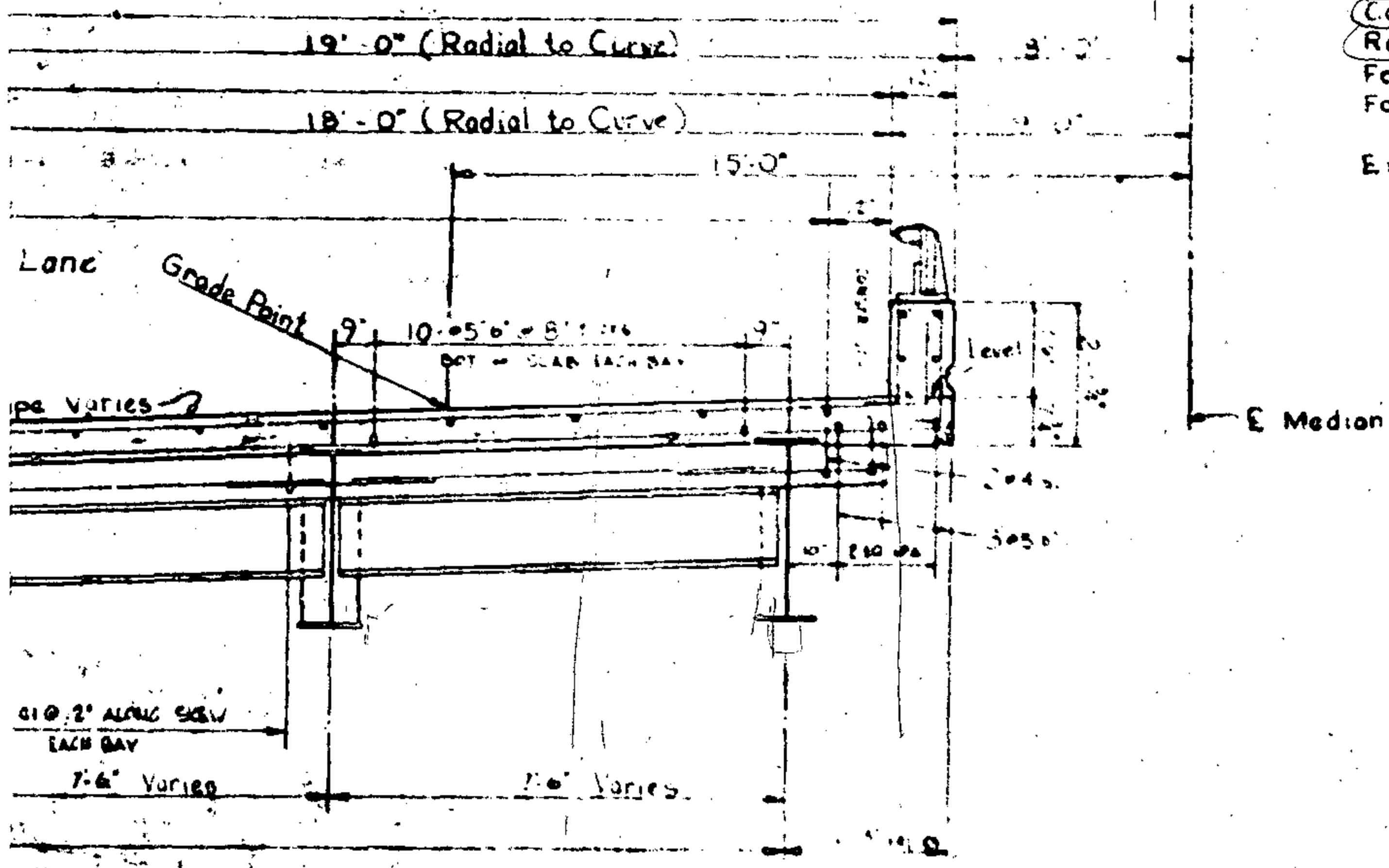
TYPICAL SECTION  
(SHOWING DIAPHRAGMS AT BENTS)



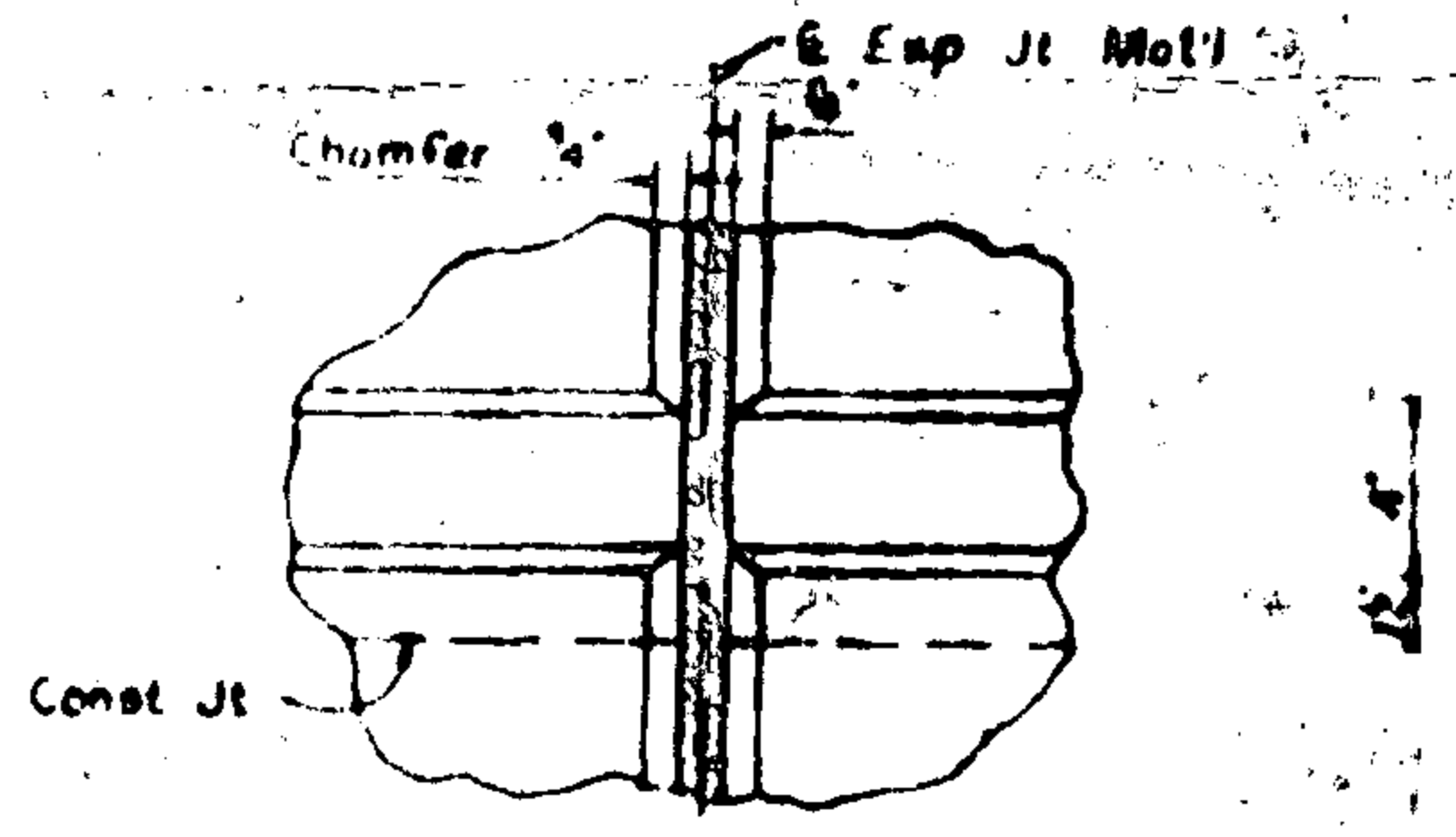
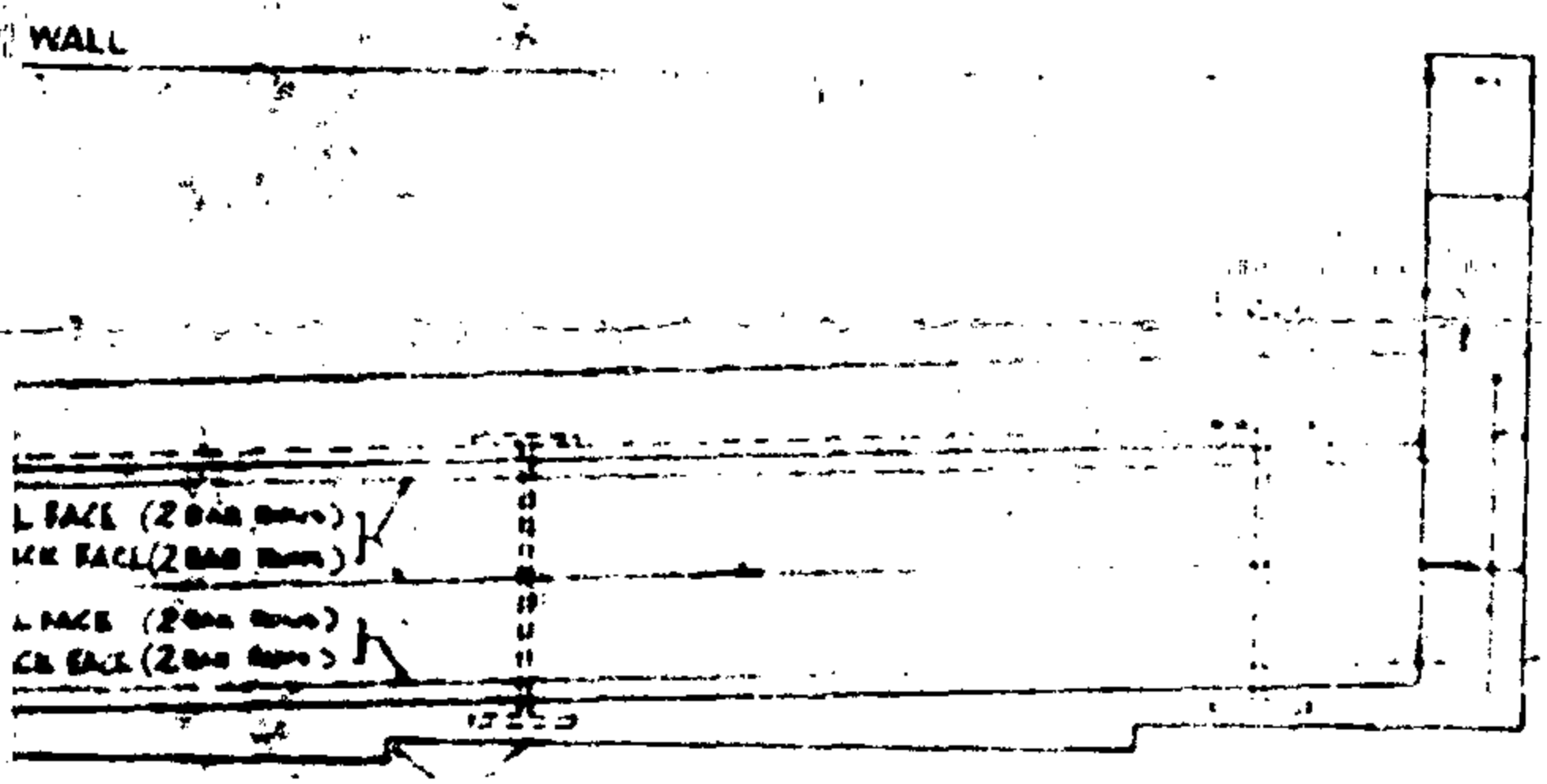
END POST DETAILS

**NOTES**

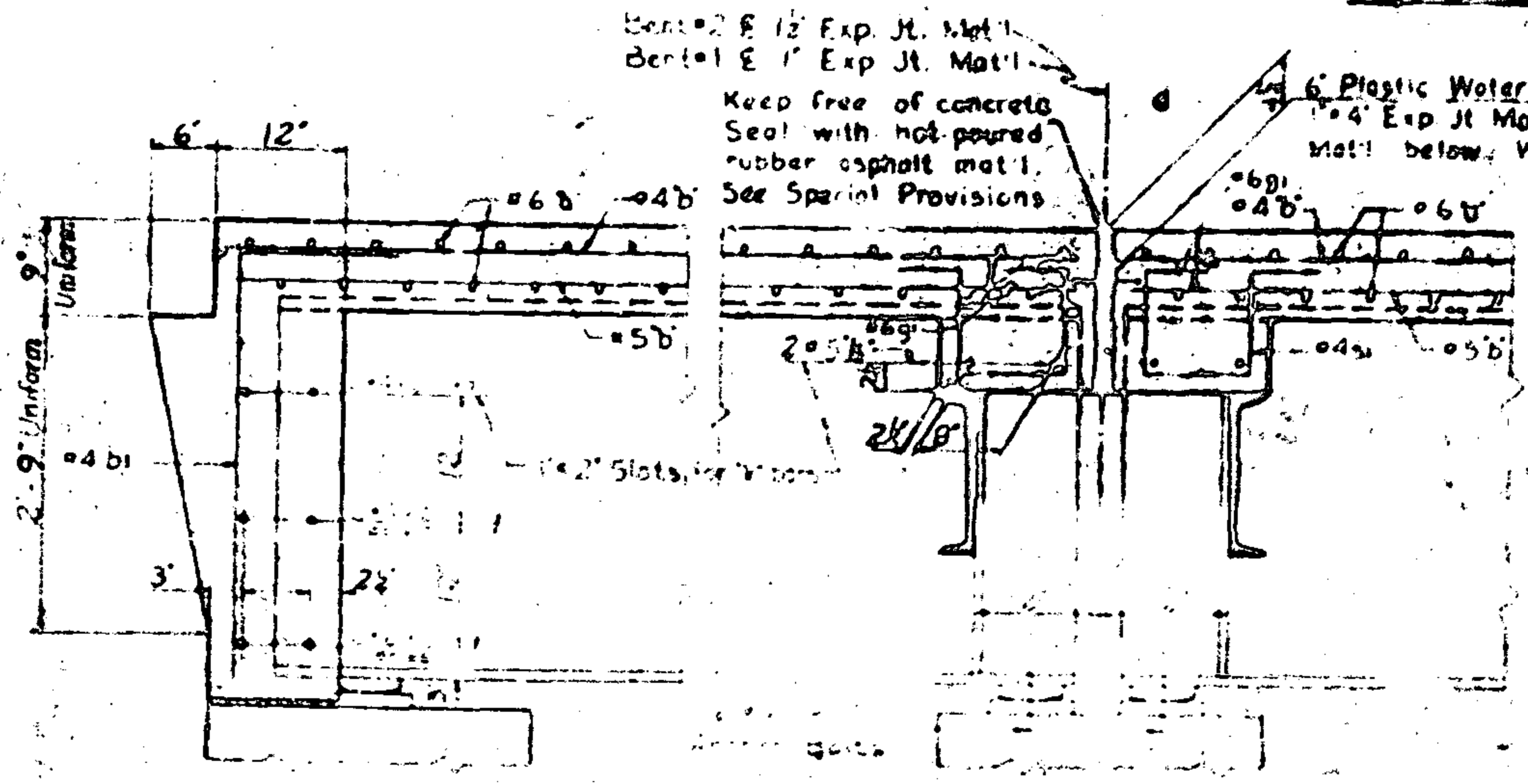
Assumed Live Load ..... H20-516  
 Concrete in Compression ..... 1,100 lbs  
 Reinforcing Steel in Tension ..... 20,000  
 For other design data and General  
 For bars indicated and no bar marks  
 for each span.  
 Expansion joints to be kept free of  
 hot-poured rubber asphalt material



**SECTION THRU PARAPET**



**PARAPET GROOVE**



**SECTION A-A**

**SECTION B-B**

STAY
STAND
40'

62'-0" (Measured along inside face of Parapet) Length

61 #5 @ 12' cts in Parapet

4 #4 b2 in Parapet  
(3 bar runs)

Field bend  
91 bars under  
parapet

9'-6"

36 W 135

36 W 135

8' #6 @ 8" cts Bottom of Slab  
(2 bars each mark)

8' #6 @ 8" cts Top of Slab  
(2 bars each mark)

8' #6 #6 @ 8" cts Top of Slab

8' #6 #6 @ 8" cts Bottom of Slab

36 W 135

of 12' Short Chord

61.127' Arc Distance

E Left Lane

36 W 135

36 W 135

36 W 135

4 #4 b2 in Parapet  
(3 bar runs)

61 #5 @ 12' cts in Parapet

62'-0" (Measured along inside face of Parapet) Length

PLAN - SPAN "A"

Face of Curb - 23'-10"  
Pavement  
Notch

Curtain Wall

A

A

8' #6 @ 8" cts Top of Slab  
(2 bars each mark)

8' #6 @ 8" cts Bottom of Slab  
(2 bars each mark)

(3 bar runs)

Top of Slab

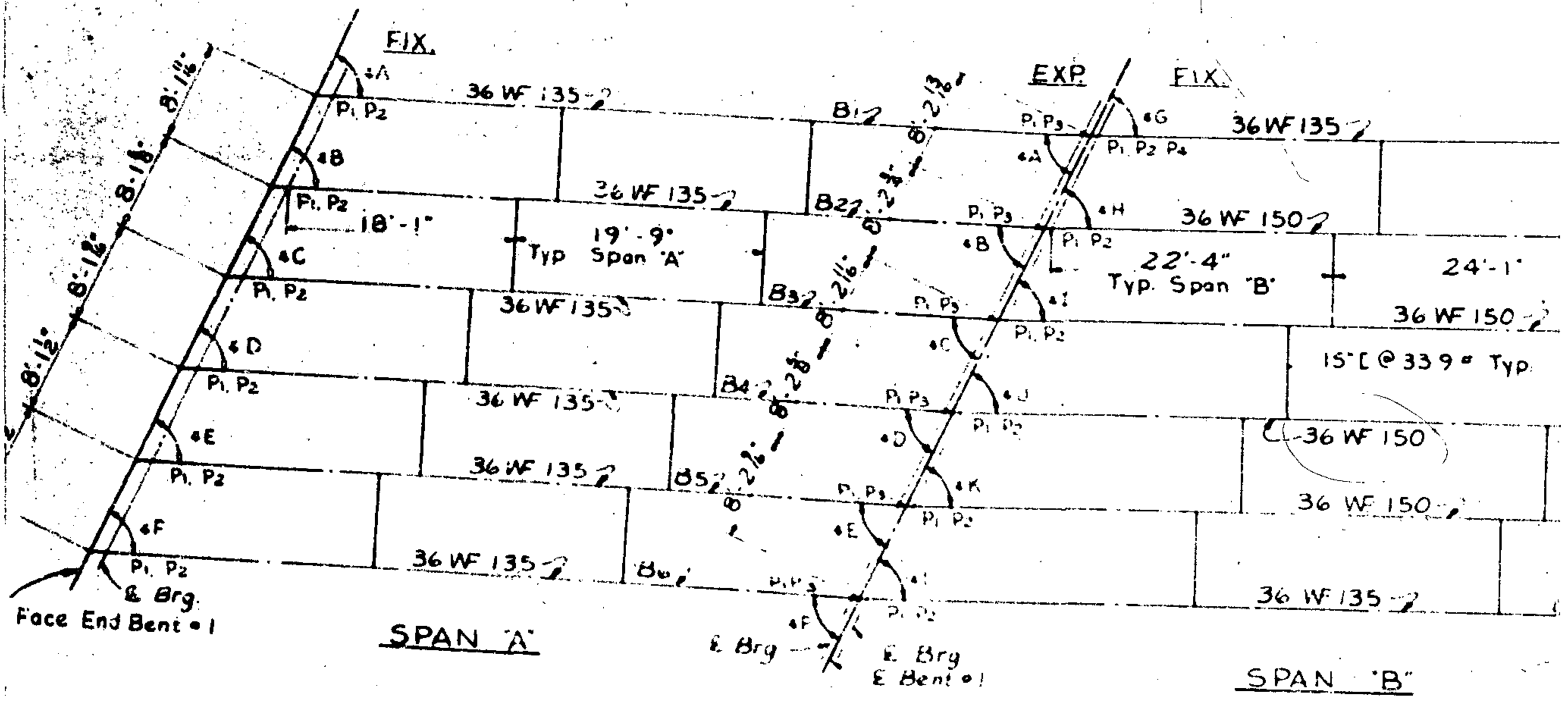
20 #6 @ 2' cts

See Typical Section for Spacing

50 #5 @ Bottom of Slab - 2 bar runs

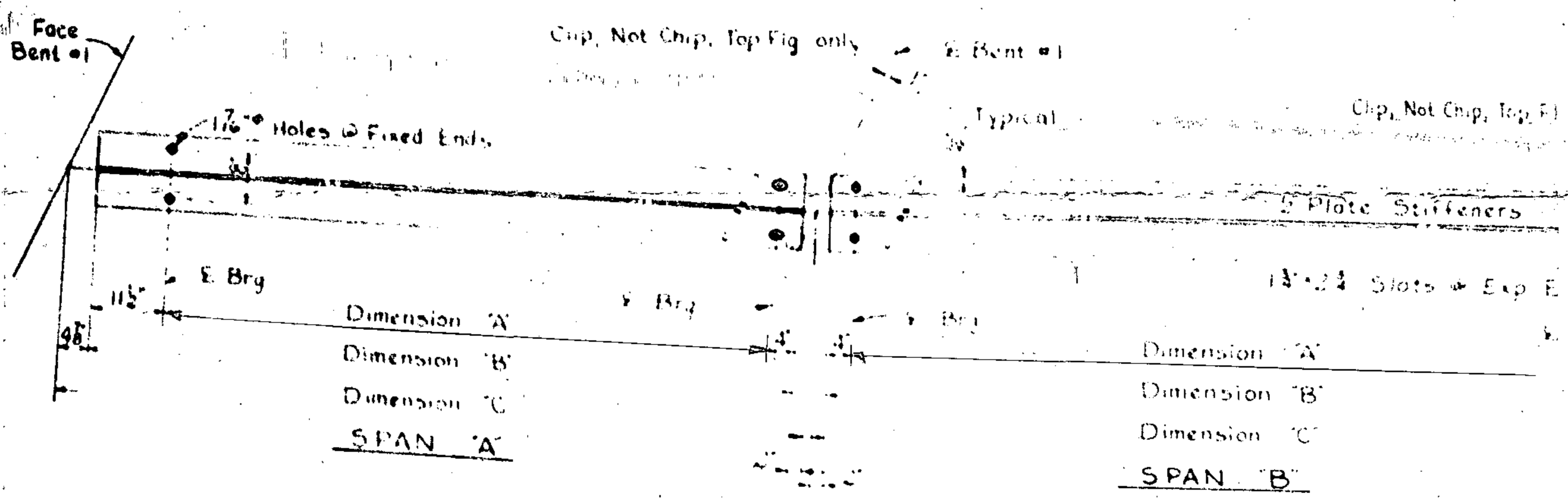
B

B

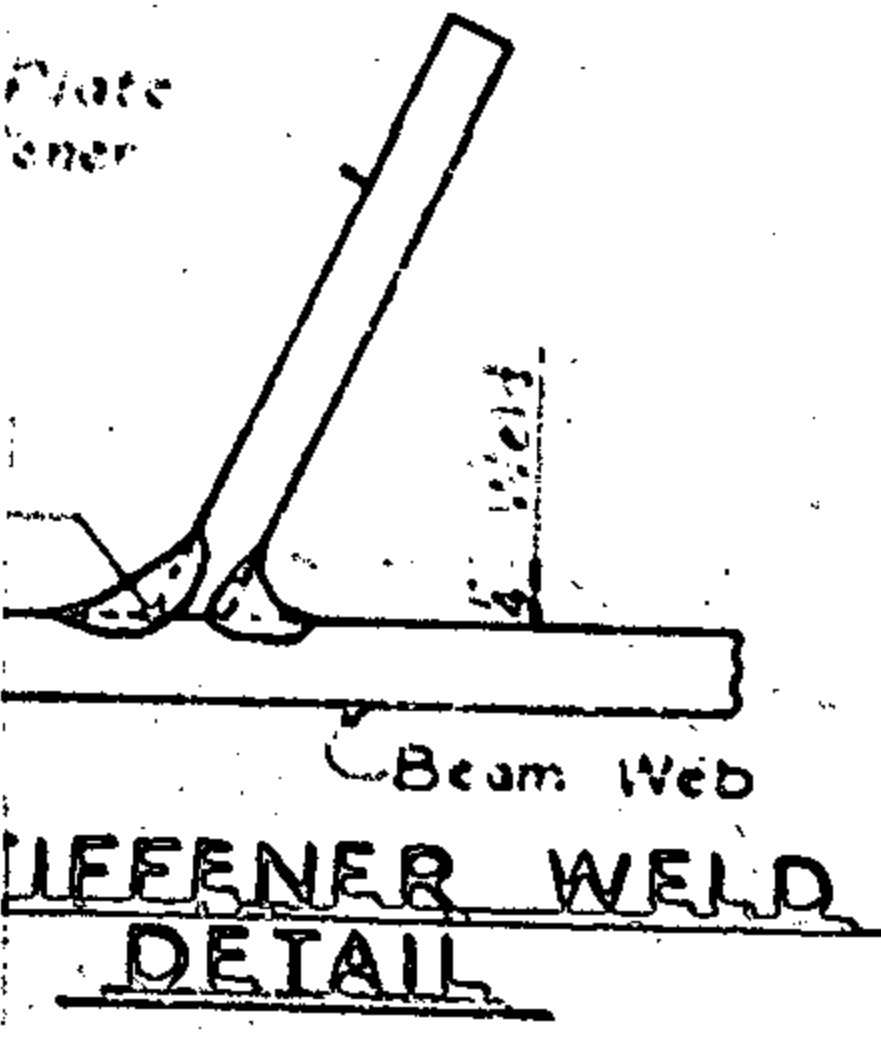


**LAYOUT SKETCH**

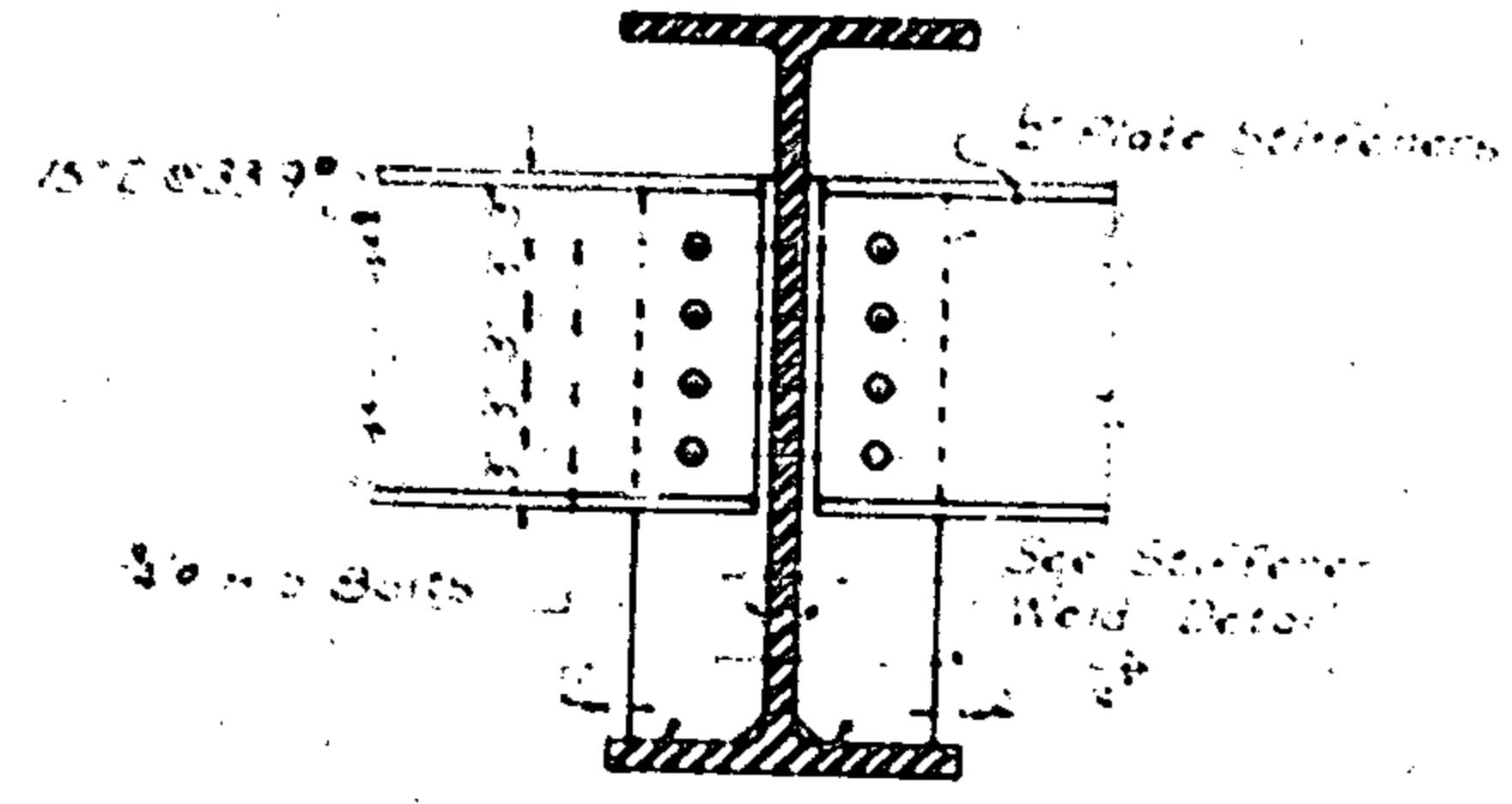
(Showing Location of Brg. R's & Steel Diaphragm)



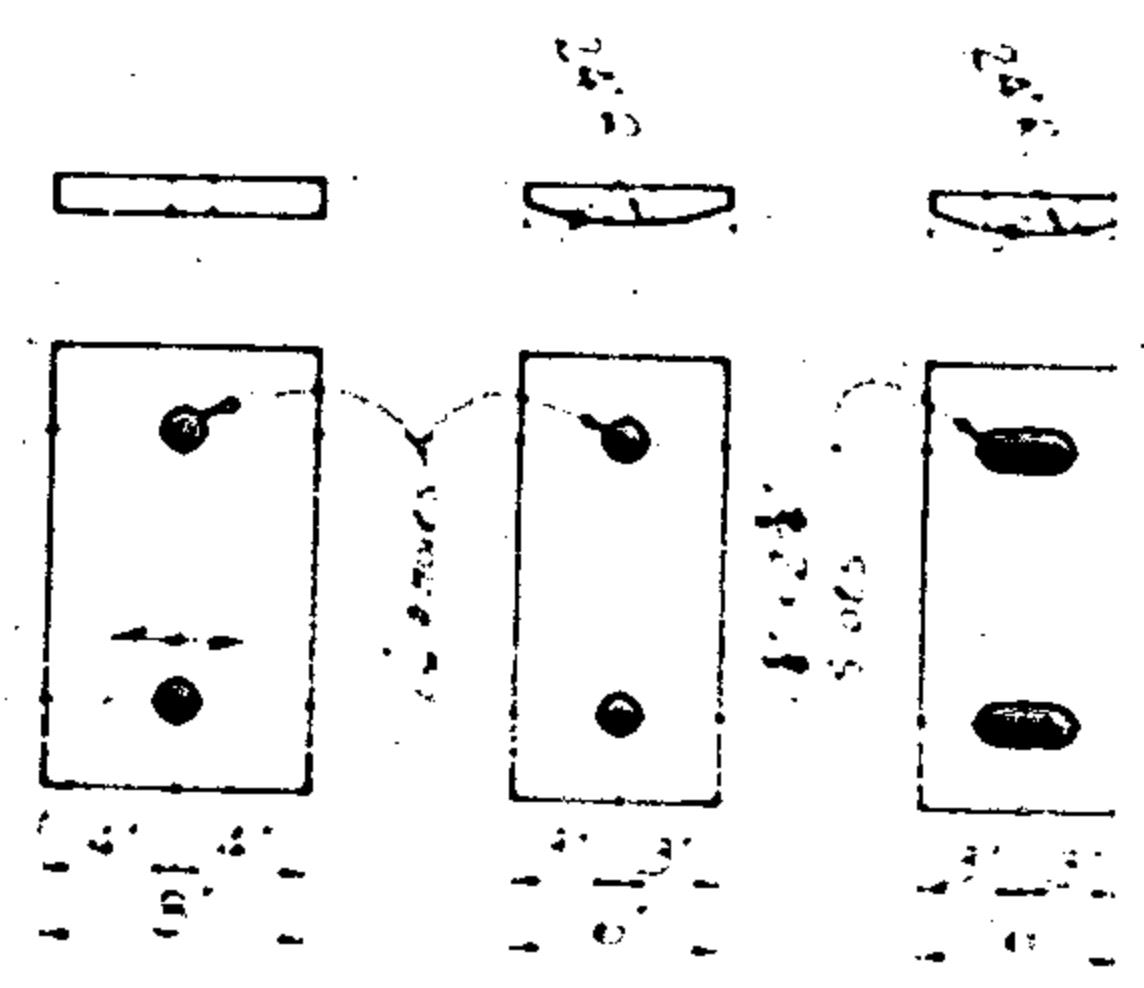
**BOTTOM FLANGE DETAIL**



**STIFFENER WELD DETAIL**

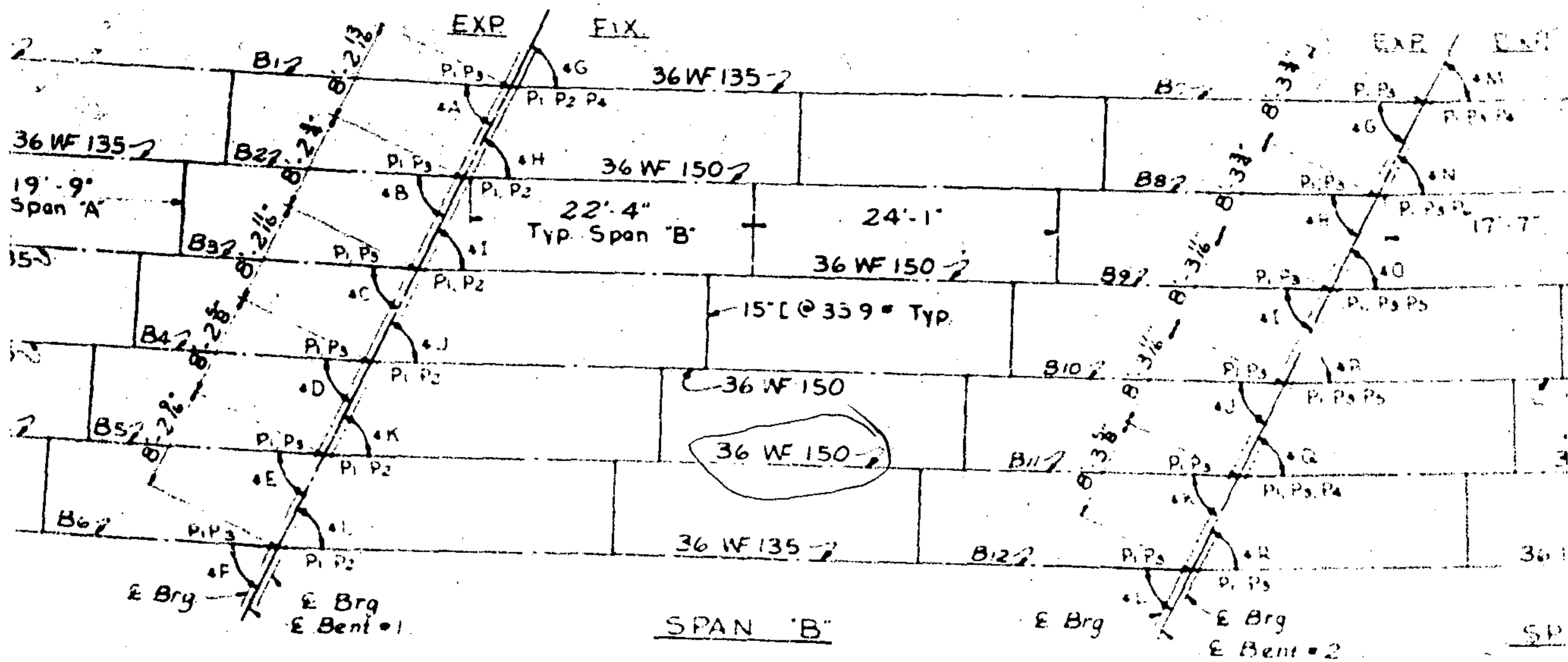


**DIAPH. CONN. @ INT. BENTS**



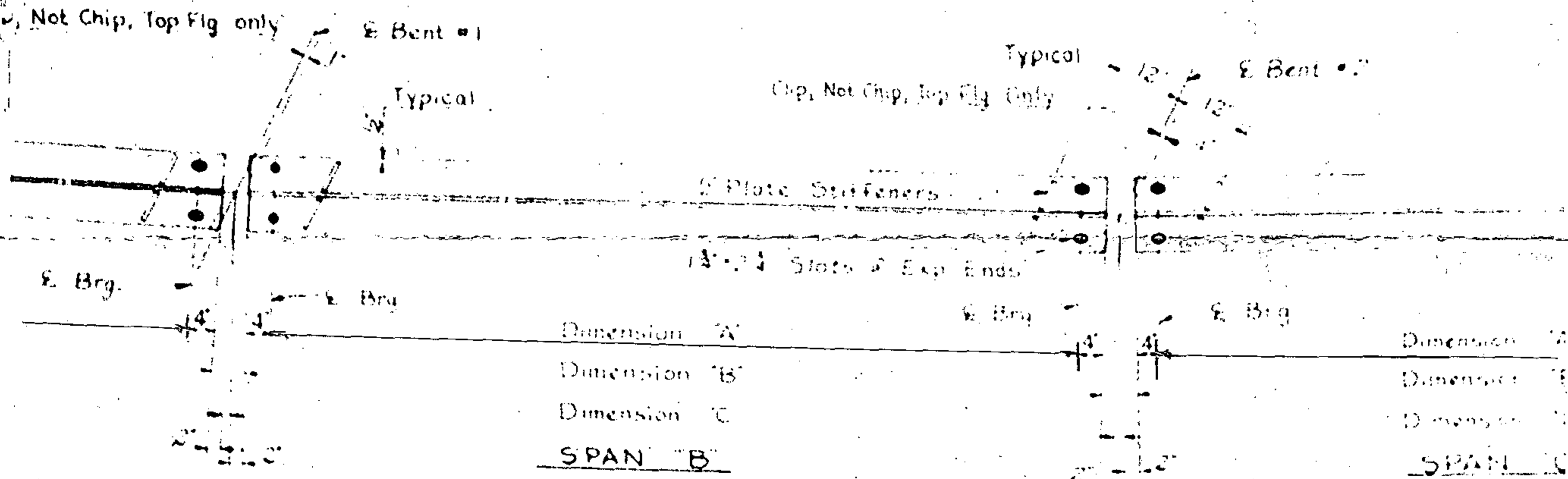
**BEARING PLATE C**

DESIGNED BY LYNER. DATE: JUN 1967  
 DRAWN BY: [Name]. DATE: [Date]

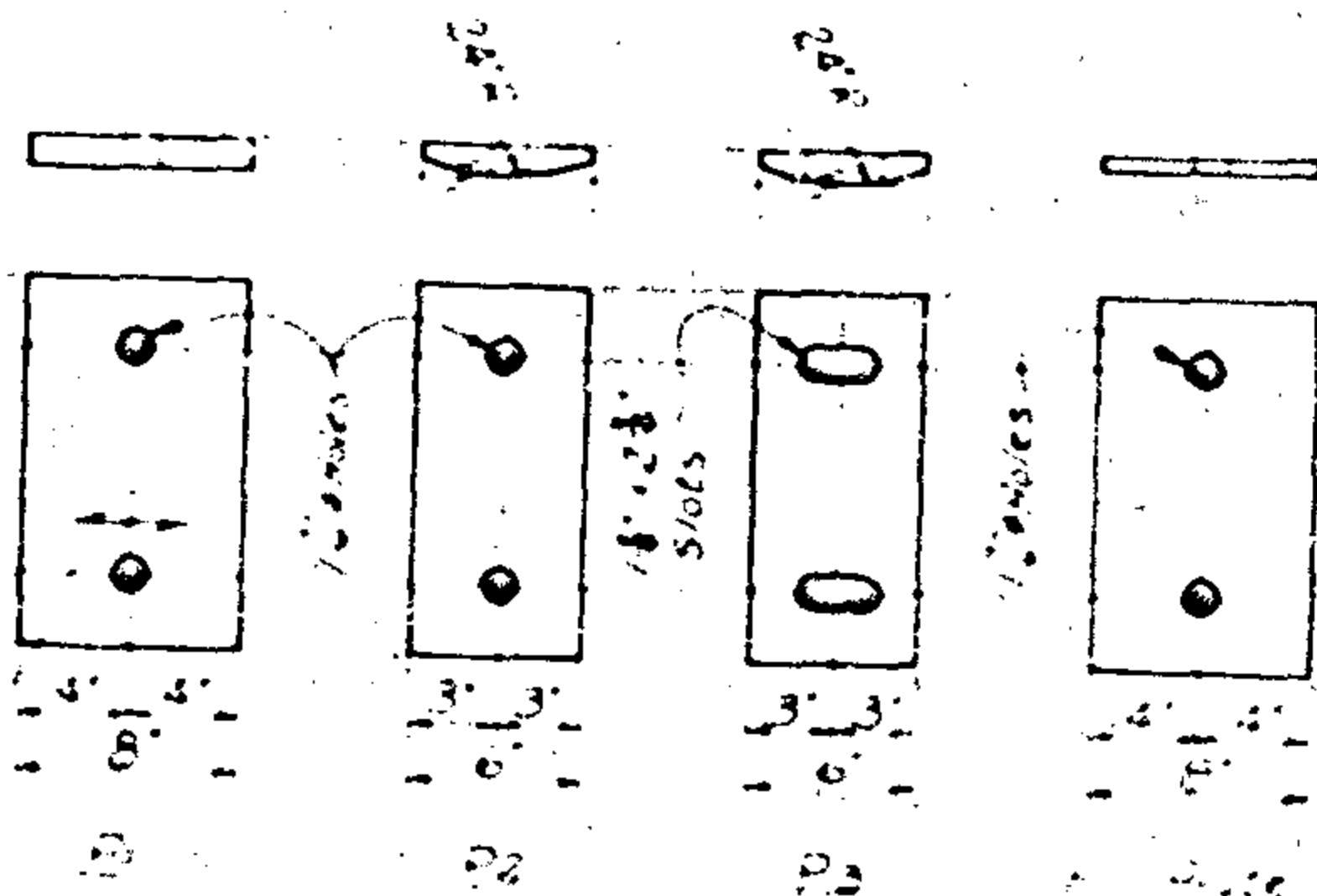
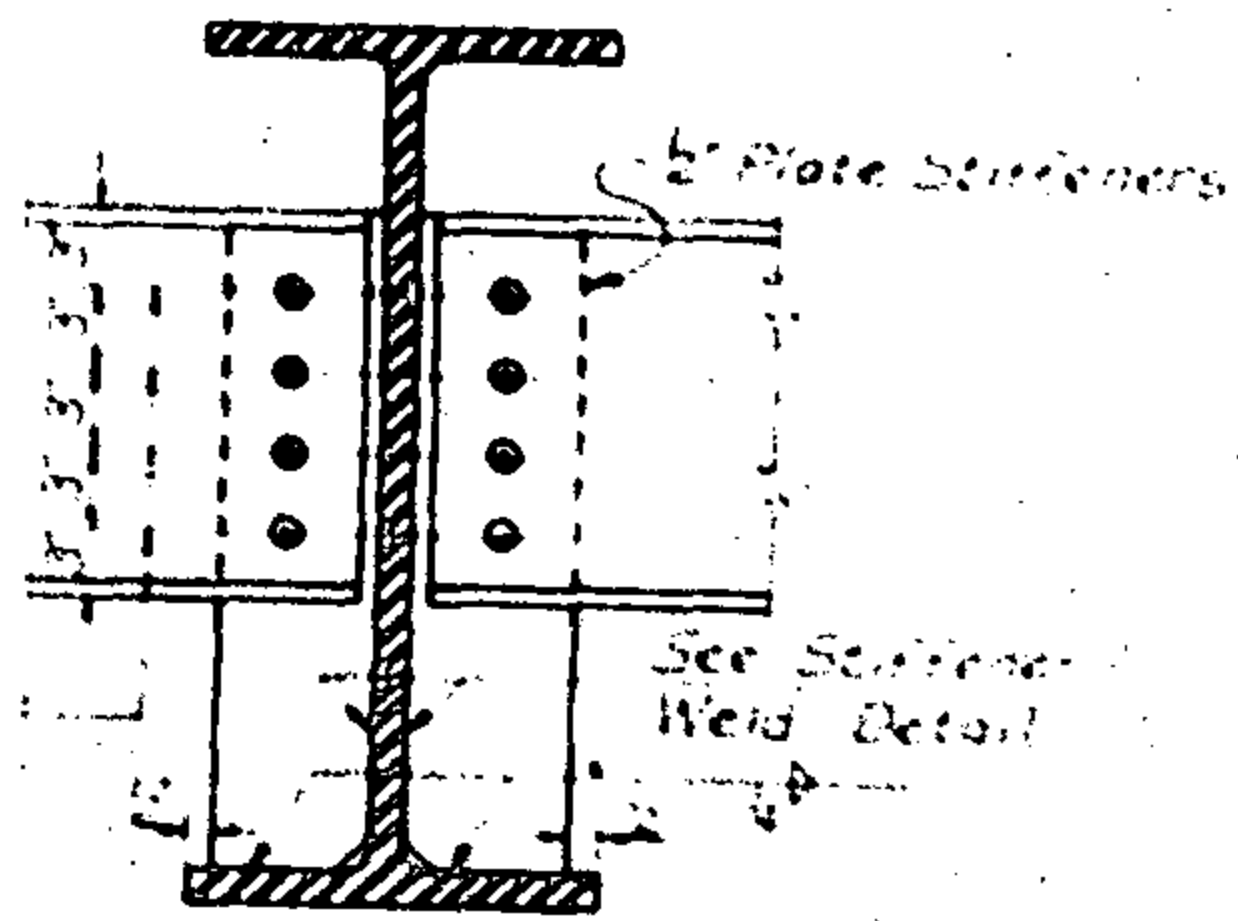


**LAYOUT SKETCH**

(Showing Location of Brg. P's & Steel Diaphragms)



**BOTTOM FLANGE DETAIL**

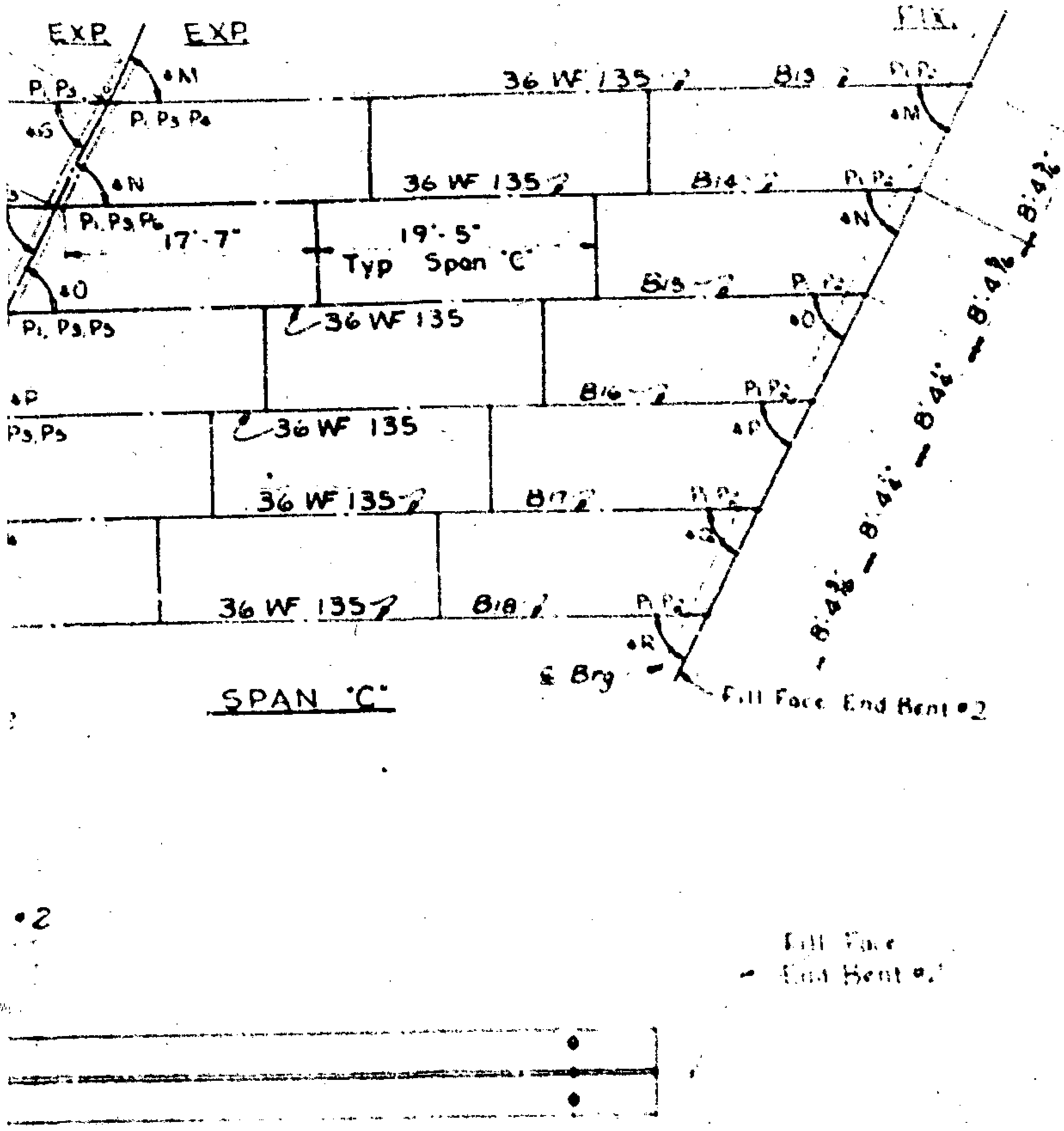


**BEARING PLATE DETAILS**

Required: 3x P1, 3x P2, 3x P3, 3x P4, 3x P5







ANGLES			
A	66°-18'-01.6"	J	65°-07'-35"
B	66°-22'-45.4"	K	69°-11'-58.7"
C	66°-27'-27.1"	L	69°-19'-27"
D	66°-32'-09.8"	M	64°-09'-21"
E	66°-36'-52.9"	N	64°-05'-39.6"
F	66°-41'-36.2"	O	64°-07'-59.7"
G	64°-57'-03.7"	P	64°-10'-15.9"
H	65°-00'-37.2"	Q	64°-12'-41.9"
I	65°-04'-14.5"	R	64°-15'-13.0"

BEAM LENGTHS			
BEAM	DIMEN A	DIMEN B	DIMEN C
B1	59'-4 1/8"	60'-7 1/8"	61'-2 1/8"
B2	59'-5 1/8"	60'-7 3/8"	61'-2 3/8"
B3	59'-3 1/8"	60'-7"	61'-1 1/8"
B4	59'-3 1/8"	60'-6 3/8"	61'-1 1/8"
B5	59'-2 1/8"	60'-6 1/8"	61'-1 1/8"
B6	59'-2 1/8"	60'-5 1/8"	61'-0 1/8"
B7	71'-2 1/8"	71'-10 1/8"	72'-2 1/8"
B8	71'-2 1/8"	71'-10 3/8"	72'-2 3/8"
B9	71'-1 1/8"	71'-9 1/8"	72'-1 1/8"
B10	71'-1 1/8"	71'-9 3/8"	72'-1 3/8"
B11	71'-1 1/8"	71'-9"	72'-1"
B12	71'-0 1/8"	71'-8 1/8"	72'-0 1/8"
B13	59'-2 1/8"	59'-6 1/8"	60'-1 1/8"
B14	59'-2 1/8"	59'-6 3/8"	60'-1 3/8"
B15	59'-2 1/8"	59'-5 1/8"	60'-1 1/8"
B16	59'-2 1/8"	59'-5 3/8"	60'-0 1/8"
B17	59'-1 1/8"	59'-5 1/8"	60'-0 1/8"
B18	59'-1 1/8"	59'-5 1/8"	60'-0 1/8"

Dimension 'A'  
 Dimension 'B'  
 Dimension 'C'  
SPAN 'C'

DEFLECTION TABLE						
	SPAN 'A'		SPAN 'B'		SPAN 'C'	
	INT.	EXT.	INT.	EXT.	INT.	EXT.
Deflection due to beam weight						
Deflection due to superimposed D.L.						
Total Deflection						
for street						
Center Beams						

PROJECT No. 8.1869003  
 POLK COUNTY  
 STATION 668+38.38 (E.M.)  
 LEFT LANE

Sheet 1 of 2

APPROX STRUCTURAL STEEL WEIGHT	
Span A	
Span B	
Span C	
Total	

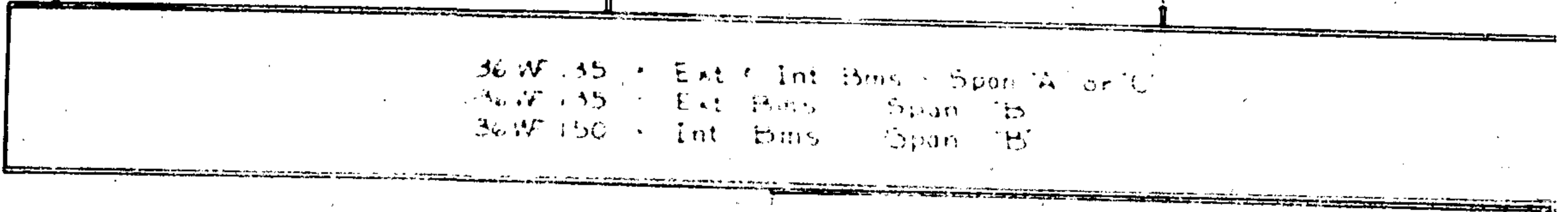
STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 DATE: \_\_\_\_\_  
 STRUCTURAL STEEL  
 DETAILS

JUL 1967

Studs Per Bm.

448	30 Spa @ 5" = 12' 6"	17 Spa @ 7" = 9' 11"	8 Equal Spac
312	19 Spa @ 7" = 11' 1"	12 Spa @ 10" = 10' 0"	7 Equal Spac
536	35 Spa @ 5" = 14' 7"	21 Spa @ 7" = 12' 3"	10 Equal Spac
376	24 Spa @ 7" = 14' 0"	14 Spa @ 10" = 11' 8"	8 Equal Spac
440	29 Spa @ 5" = 12' 1"	17 Spa @ 7" = 9' 11"	8 Equal Spac
304	18 Spa @ 7" = 10' 6"	12 Spa @ 10" = 10' 0"	7 Equal Spac

ε Brg. 2



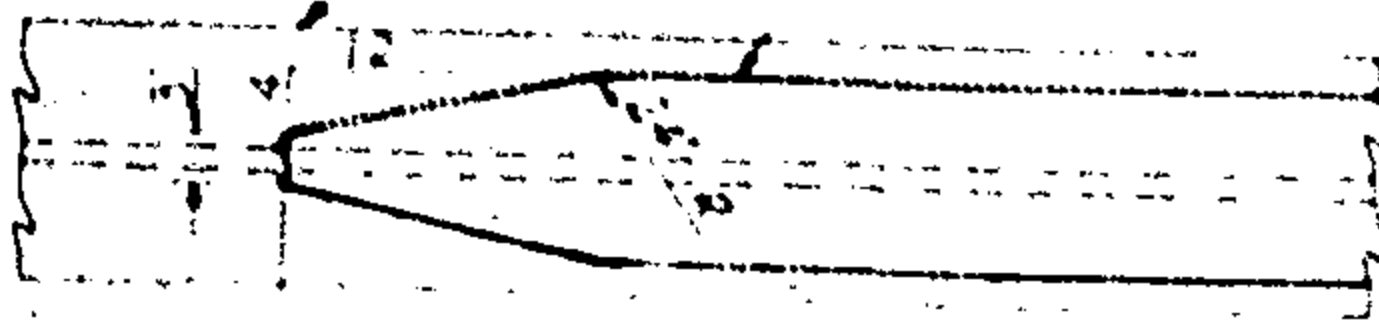
36 W 135 • Ext & Int Bms • Span A or C  
 36 W 135 • Ext Bms • Span B  
 36 W 150 • Int Bms • Span B

NOTE: At the contractor's option he may substitute for the cover plates designated on the plans cover plates of equivalent area provided these plates are at least 5/8" in thickness and do not exceed a width equal to the flange width less 2" or a thickness equal to 1 1/2" times the flange thickness. The size of the weld for attaching these cover plates shall be in accordance with the AWS Specifications.

19' 6"	Int Bms	Span A	
18' 3"	Ext Bms	Span A	
25' 3"	Int Bms	Span B	
25' 9"	Ext Bms	Span B	
18' 9"	Int Bms	Span C	
17' 6"	Ext Bms	Span C	
A 10' 0"	39' 0"	Interior Bms	S <sub>1</sub>
A 8' 0"	36' 6"	Exterior Bms	S <sub>1</sub>
B 10' 0"	50' 6"	Interior Bms	S <sub>1</sub>
B 10' 0"	51' 6"	Exterior Bms	S <sub>1</sub>
C 10' 0"	37' 6"	Interior Bms	S <sub>1</sub>
C 6" x 1/2"	35' 0"	Exterior Bms	S <sub>1</sub>

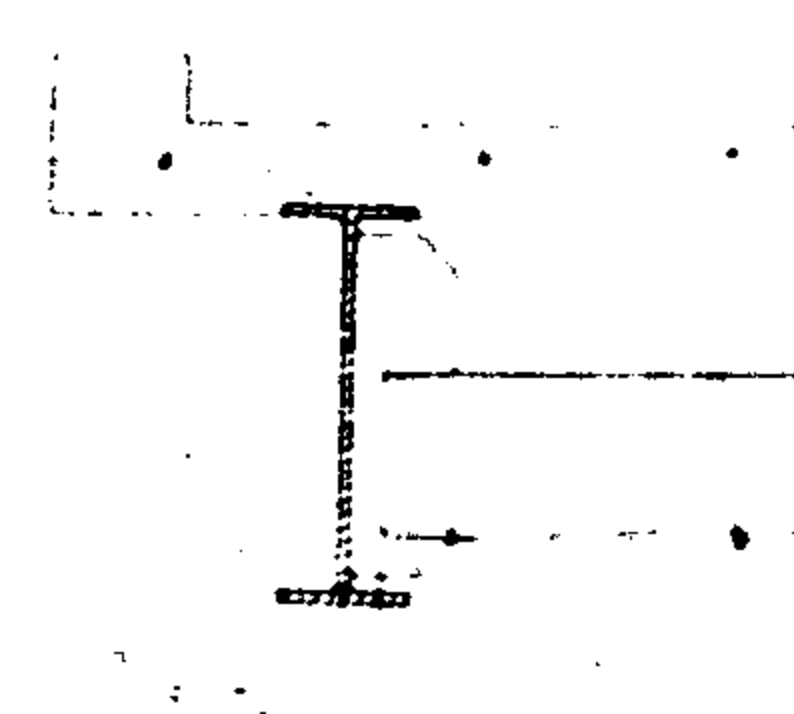
SHEAR STUD SPACING & COVER PLATE DETAIL

Bot Fly of Beam



Cover Plate Length

COVER PLATE WELD DETAIL



MIDSPAN

NOTE

**NOTES**

All beams and cover plates shall be of ASTM grade structural steel. See S-N Sheet.

No web stiffeners are required on outside of beams or at End Bents. Stiffeners are to be to ends of beams.

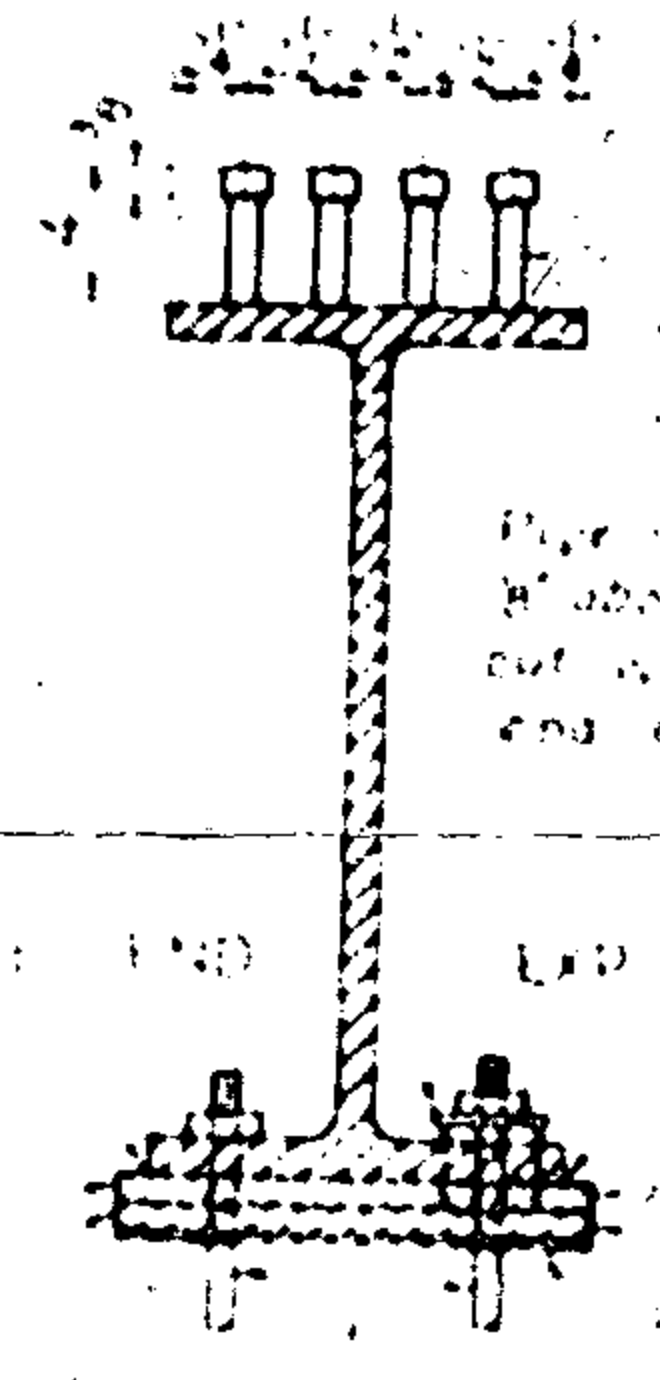
The contractor may at his option but without of the contract price or structural steel, use split connections bolted to the web of beam and weld the channel diaphragm in lieu of the welded plate intermediate diaphragm connections shown.

At contractor's option, fire plates, when used, in compliance with insurance policy.

6"	Int Bms.	Span A
6"	Ext Bms.	Span A
6"	Int Bms.	Span B
6"	Ext Bms.	Span B
6"	Int Bms.	Span C
6"	Ext Bms.	Span C

Stud spacing symmetrical about  $\bar{X}$  between bearings.

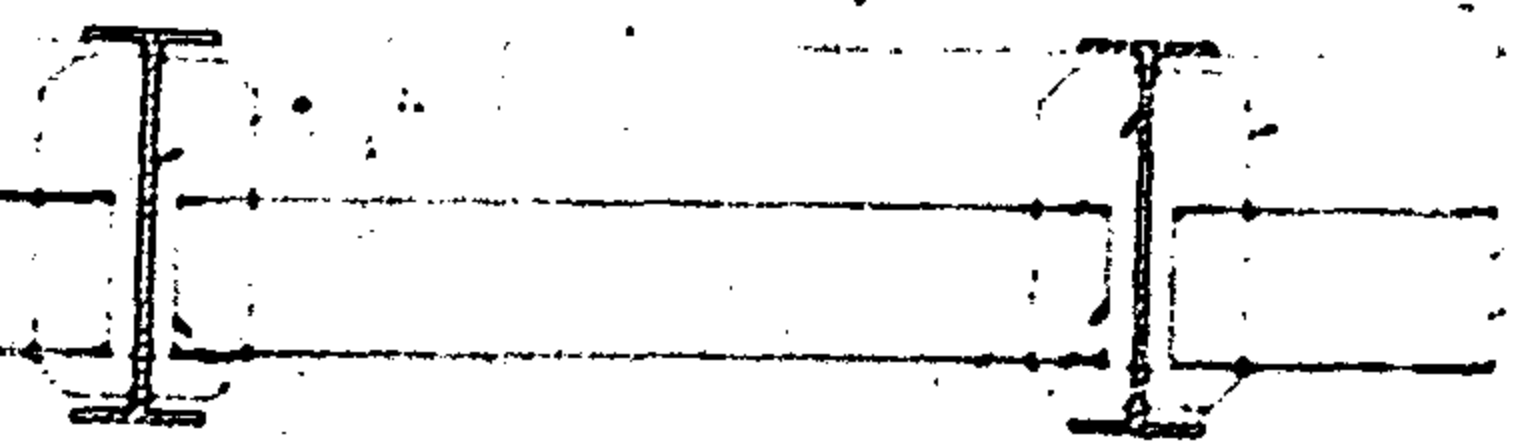
A  
A  
B  
B  
C  
C



3" Stud shear  
connections  
See Special Provisions for  
description of shear of 3"

Flange cover to extend  
8" above flange and  
out weather side,  
and 6"

**SECTION THRU BEAM**



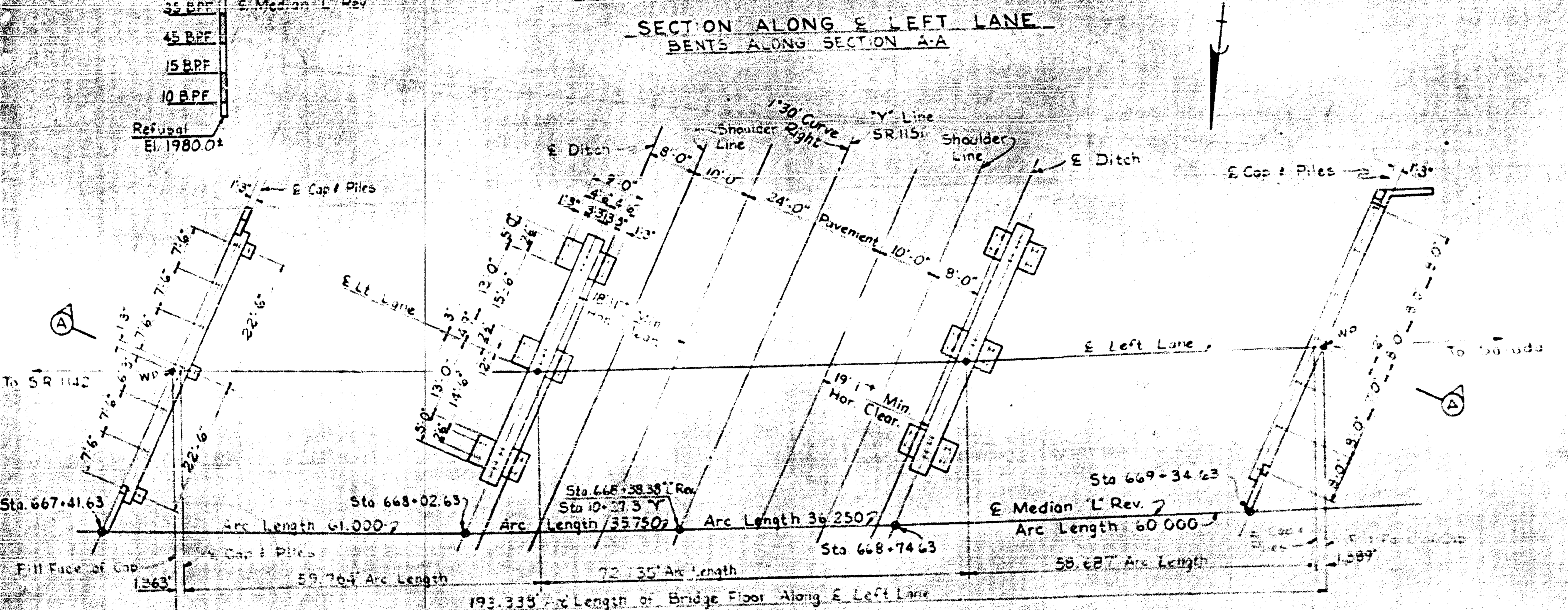
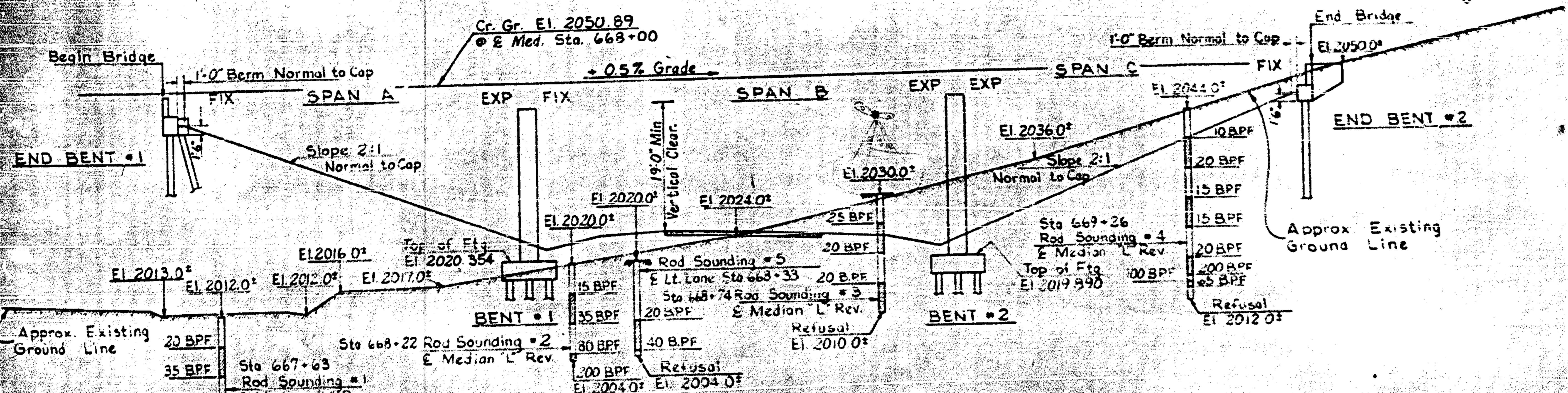
**DIAPHRAGM CONNECTION DETAIL**

the welding procedure for steel and field we to indicated  
intermediate diaphragm connections, the contractor may, at his

PROJECT NO 8.18  
POLK  
STATION 668 + 3  
LEFT

STATE OF IOWA  
**STATE HIGHWAY COMM**  
STRUCTURAL ST  
DETAILS

DATE	BY	REVISION



- NOTES**
- Assumed Live Load = H20-S16(44) or Alternate Loading. For other Design Data and General Note see Sheet S-N.
  - The Contractor shall be responsible for determining the lengths of piles required. See Special Provisions.
  - The Contractor will be required to excavate through approximately 25 feet of fill at End Bent #1 before driving piles.
  - Piles in End Bents to be driven to a minimum bearing capacity of 30 tons each or rock or practical refusal.
  - Piles in Interior Bents to be driven to a minimum bearing capacity of 35 tons each or rock or practical refusal.
  - Work ~~was not~~ to be started on Bent #2 until after roadway section has been excavated by the roadway contractor.
  - Unclassified Structure Excavation for Bent #1 to be measured from surface of roadway fill.
  - Unclassified Structure Excavation for Bent #2 to be measured from surface of roadway cut.
  - Class "AA" concrete shall be used in the superstructure and Class "A" concrete shall be used in all other portions of the structure. See Special Provisions and Specifications.
  - See Special Provisions for method of curing bridge deck and mixing and applying the linseed oil solution.
  - Work ~~was not~~ to be started on Bent #1 until fill at End Bent #1 has been placed by Roadway Contractor.

I hereby certify that this structure was built according to plan.

*G. J. Davis*  
President Engineer

**LEFT LANE**  
**PROJECT No. 8.1869003**  
**POLK COUNTY**  
**STATION 668+38.38 & N 10+27.3 Y**

Sheet 1 of 2

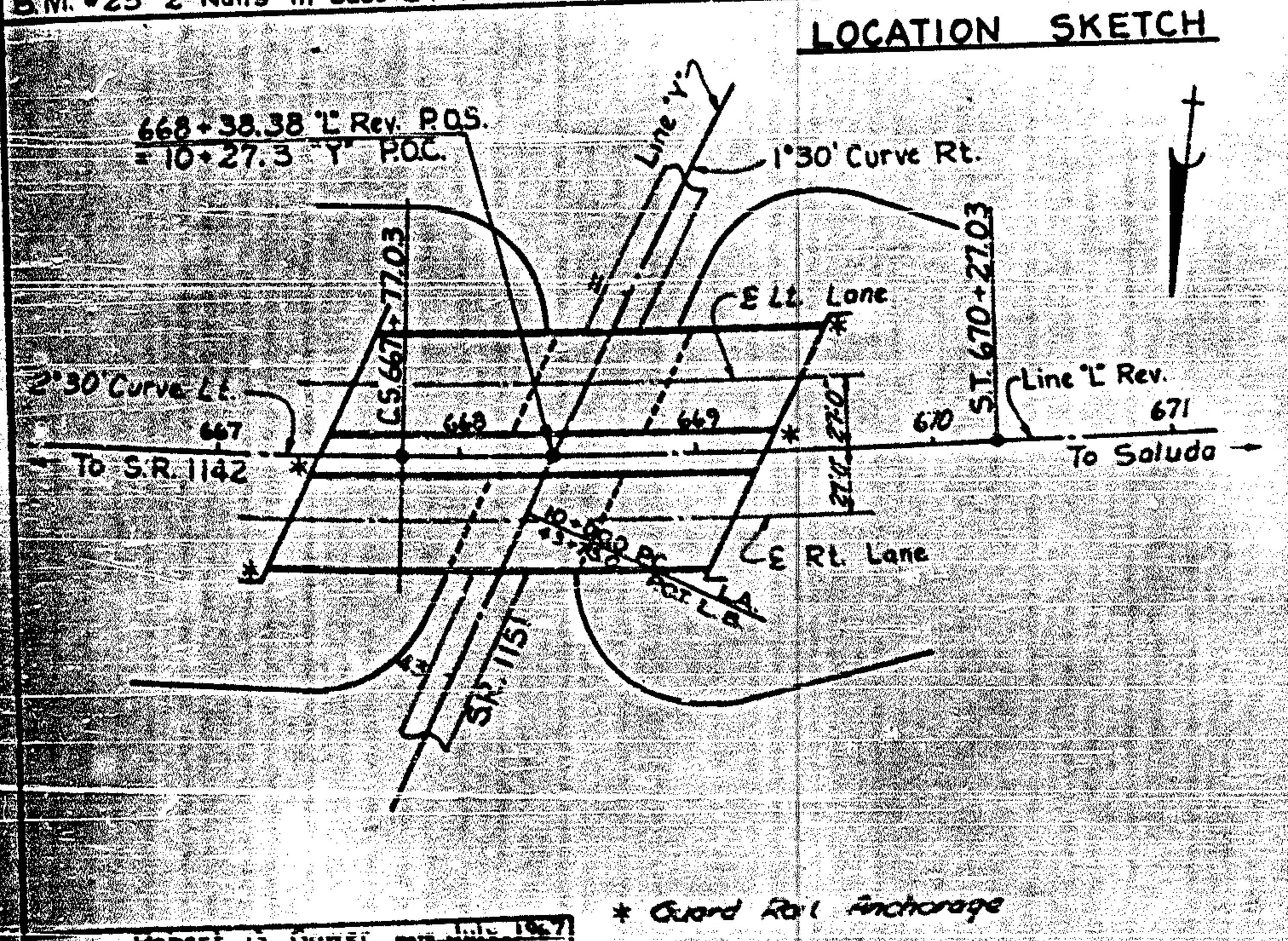
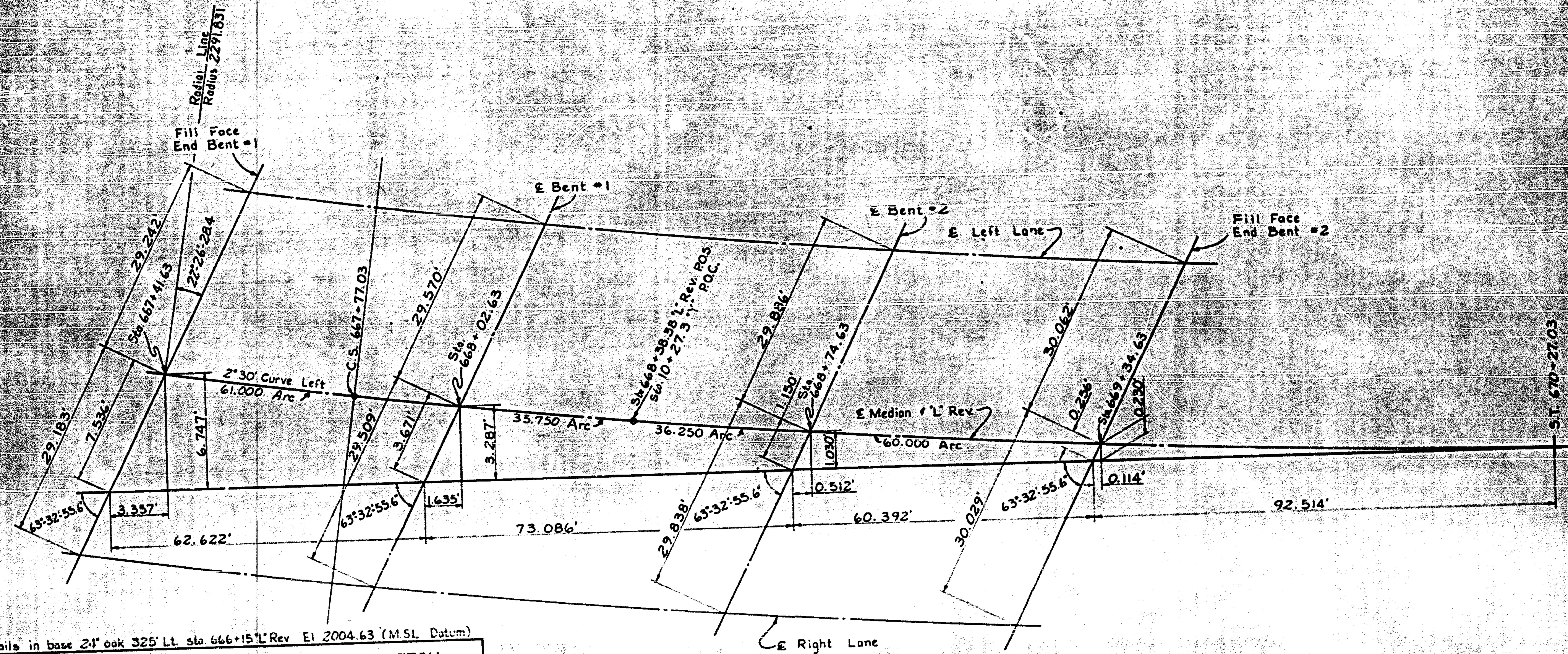
**TOTAL BILL OF MATERIAL**

	CLASS 'A' CONCRETE	CLASS 'AA' CONCRETE	REINF. STEEL	STRUCT. STEEL	12 H53 UNCLASS. PILES	1" BAR METAL RAIL	LINSEED OIL CONC. PROTECT	12 H53 STEEL PILES	See Sheet
	CU. YDS.	CU. YDS.	LSB.	APPR. LBS.	NO. LIN. FT.	CU. YDS.	GALLONS	LINE FT.	
SUPERSTRUCTURE		243.7	57,053	201,800			19		69.72
END BENT #1	16.2		3,590		10,750			10,872.30	76
BENT #1	57.1		8,780		18,150			18,372.00	77
BENT #2	56.8		2,556		7,315			18,266.78	78
END BENT #2	6.8		3,332					7,306.91	80
<b>TOTALS</b>	<b>136.9</b>	<b>243.7</b>	<b>81,591</b>	<b>201,800</b>	<b>55,875</b>		<b>375.28</b>	<b>63,157.44</b>	

STATE OF NORTH CAROLINA  
**STATE HIGHWAY COMMISSION**  
 RALEIGH  
 GENERAL DRAWING FOR  
 BRIDGE ON PROJECT BETWEEN  
 S.R. 1142 AND SALUDA  
 OVER S.R. 1151

JULY 1967

NO.	BY	DATE	REVISION
1			
2			



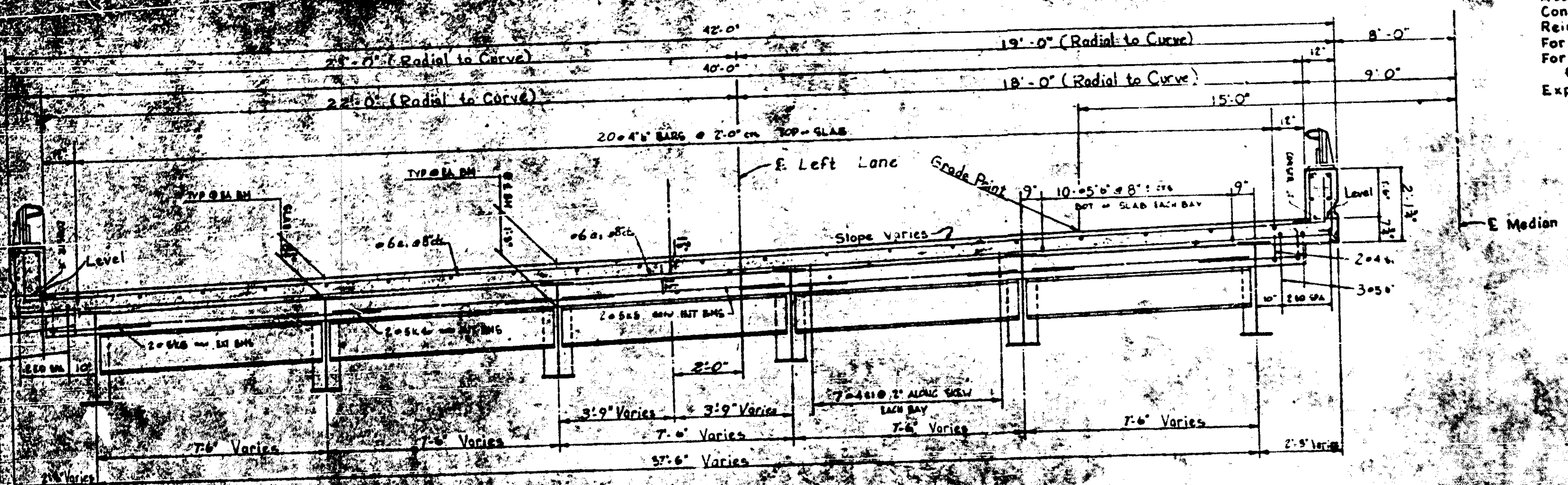
PROJECT No. 8-1869008  
 POLK COUNTY  
 STATION 668+38.38 L. Rev. 10+27.3 Y  
 Sheet 2 of 2

STATE OF NORTH CAROLINA  
**STATE HIGHWAY COMMISSION**  
 CALDWELL  
 GENERAL DRAWING FOR  
 BRIDGE ON PROJECT BETWEEN  
 SR. 1142 AND SALUDA OVER  
 SR. 1151  
 JULY 1977

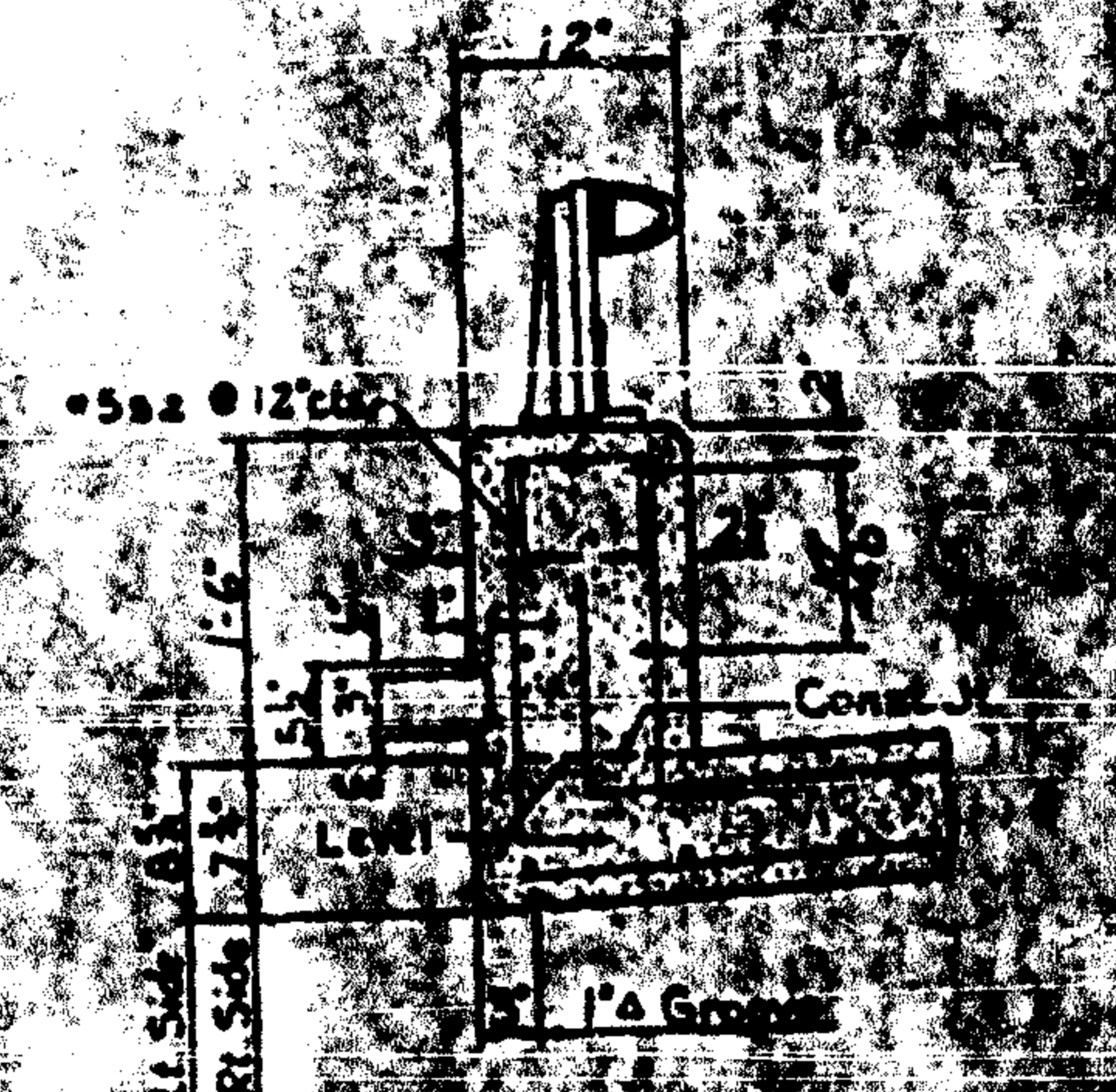
REVISIONS				
NO.	BY	DATE	DESCRIPTION	DATE
1				
2				

**NOTES**

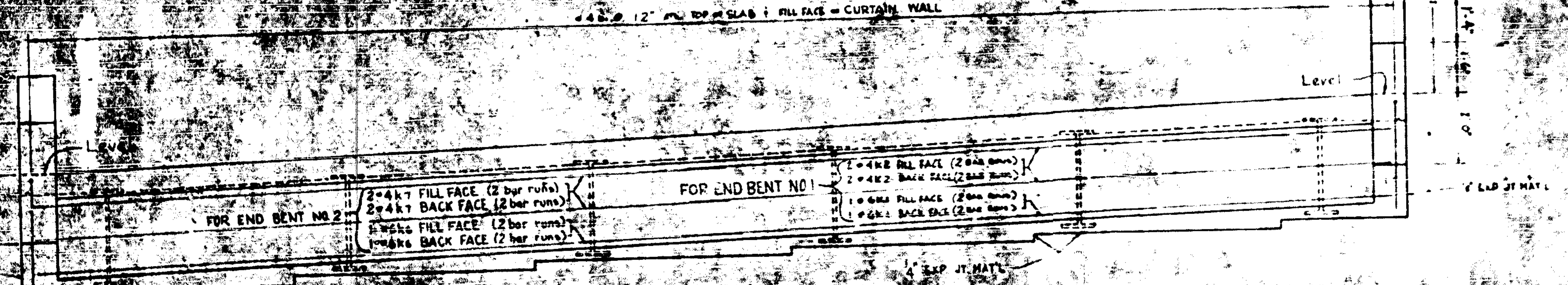
Assumed Live Load ..... H20-S16 44 or Alternate  
 Concrete in Compression ..... 1,100 lbs per sq ft  
 Reinforcing Steel in Tension ..... 20,000 lbs per sq ft  
 For other design data and General Notes see  
 For bars indicated and no bar marks shown see  
 for each span.  
 Expansion joints to be kept free of concrete. Seal with  
 hot-poured rubber asphalt material. See Special Provisions



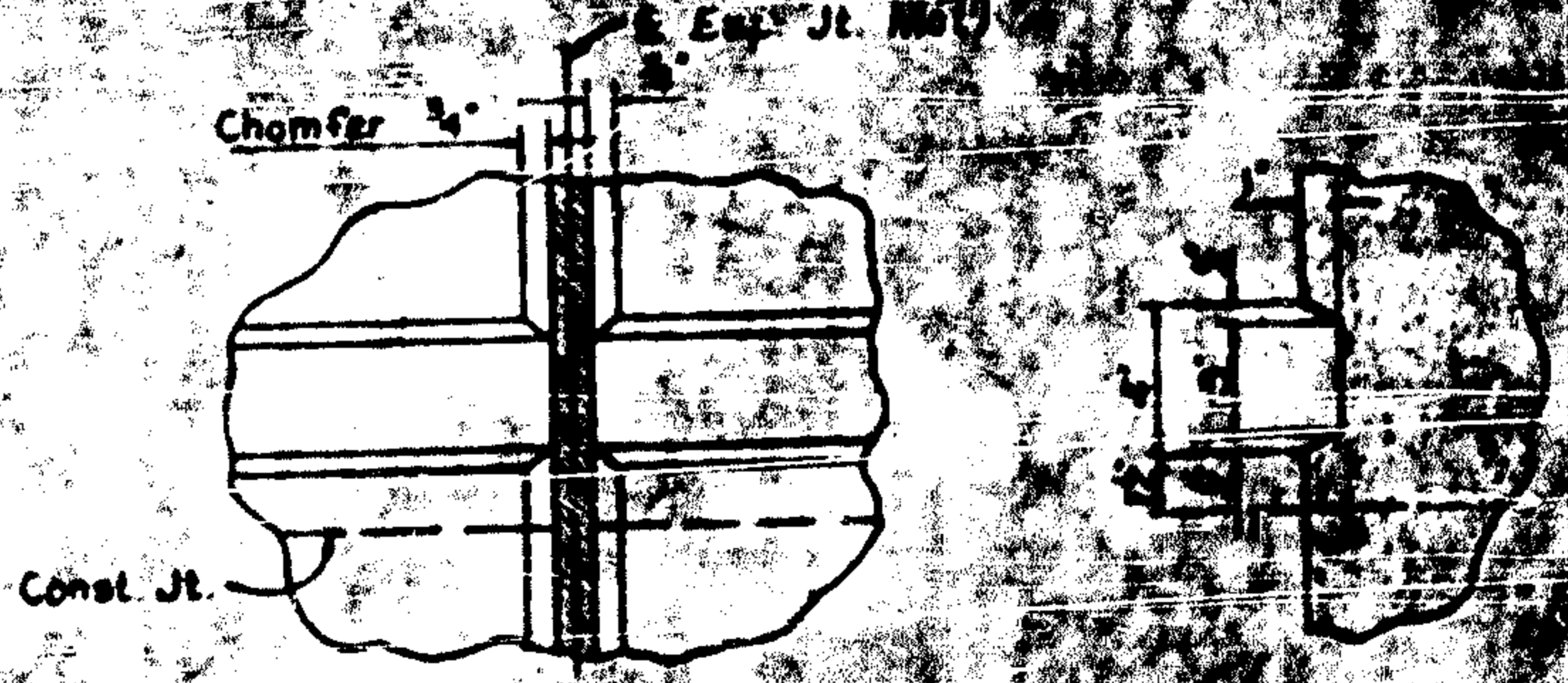
**TYPICAL SECTION**  
 (SHOWING DIMENSIONS AND REINFORCEMENT)



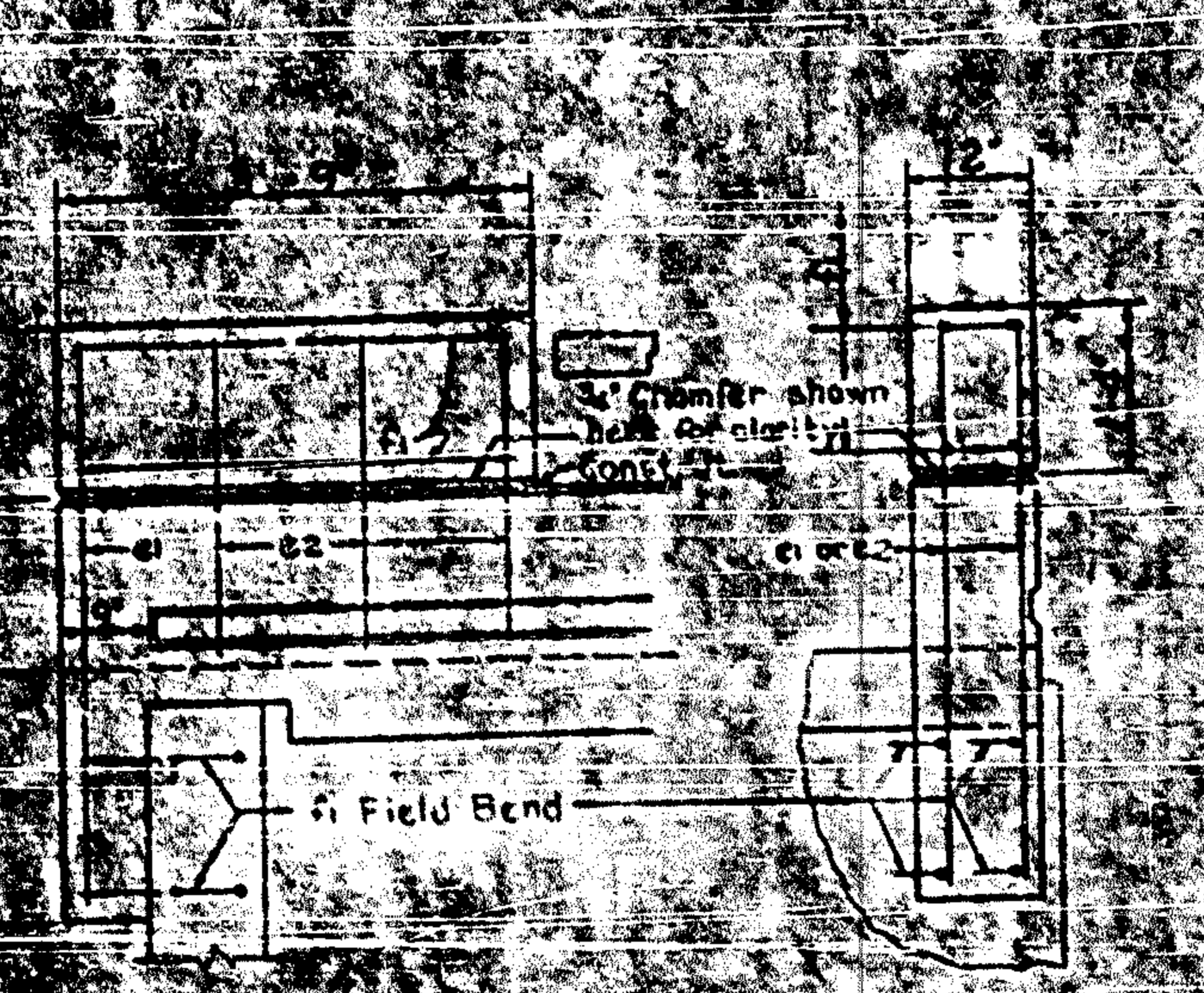
**SECTION THRU PARAPET**



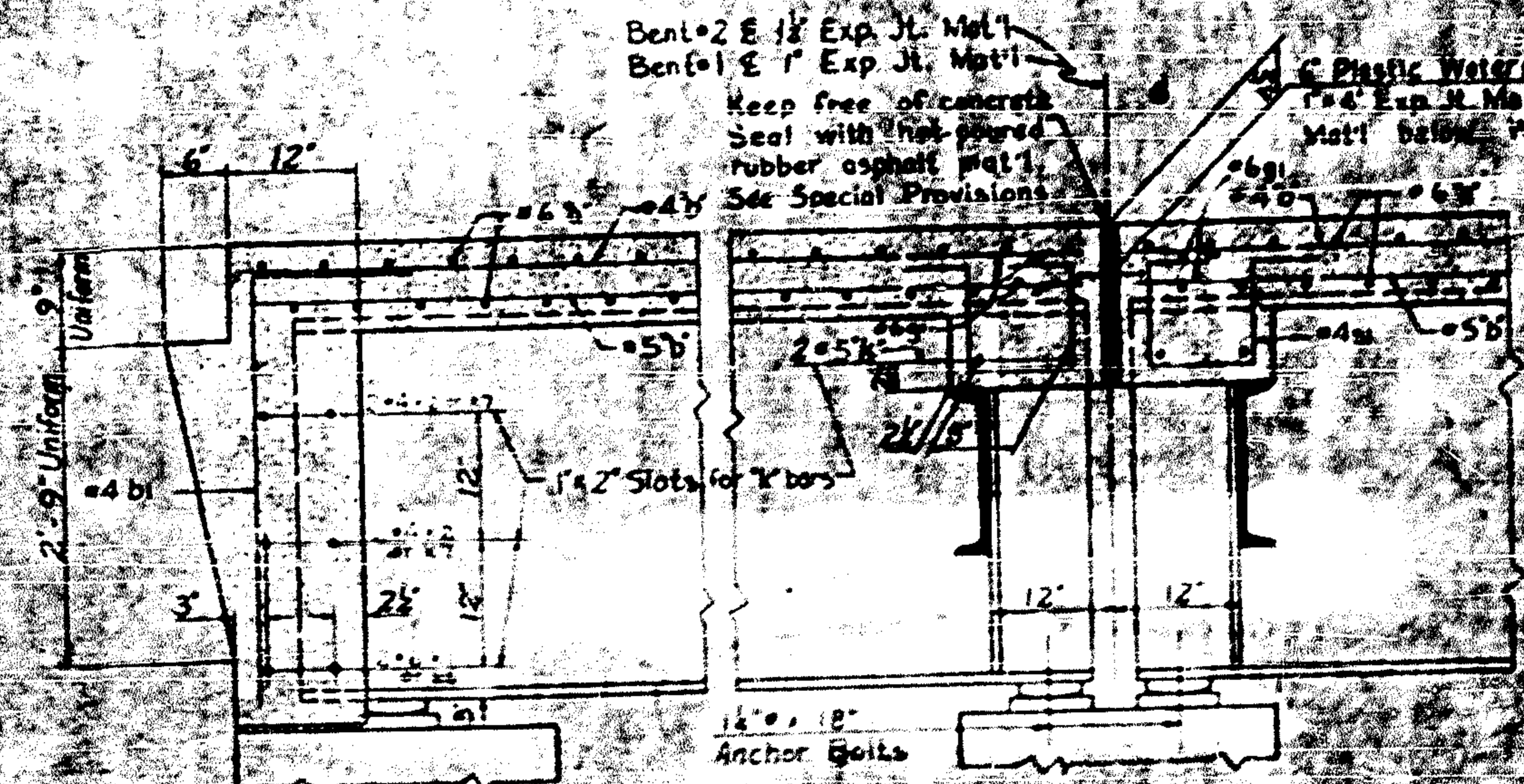
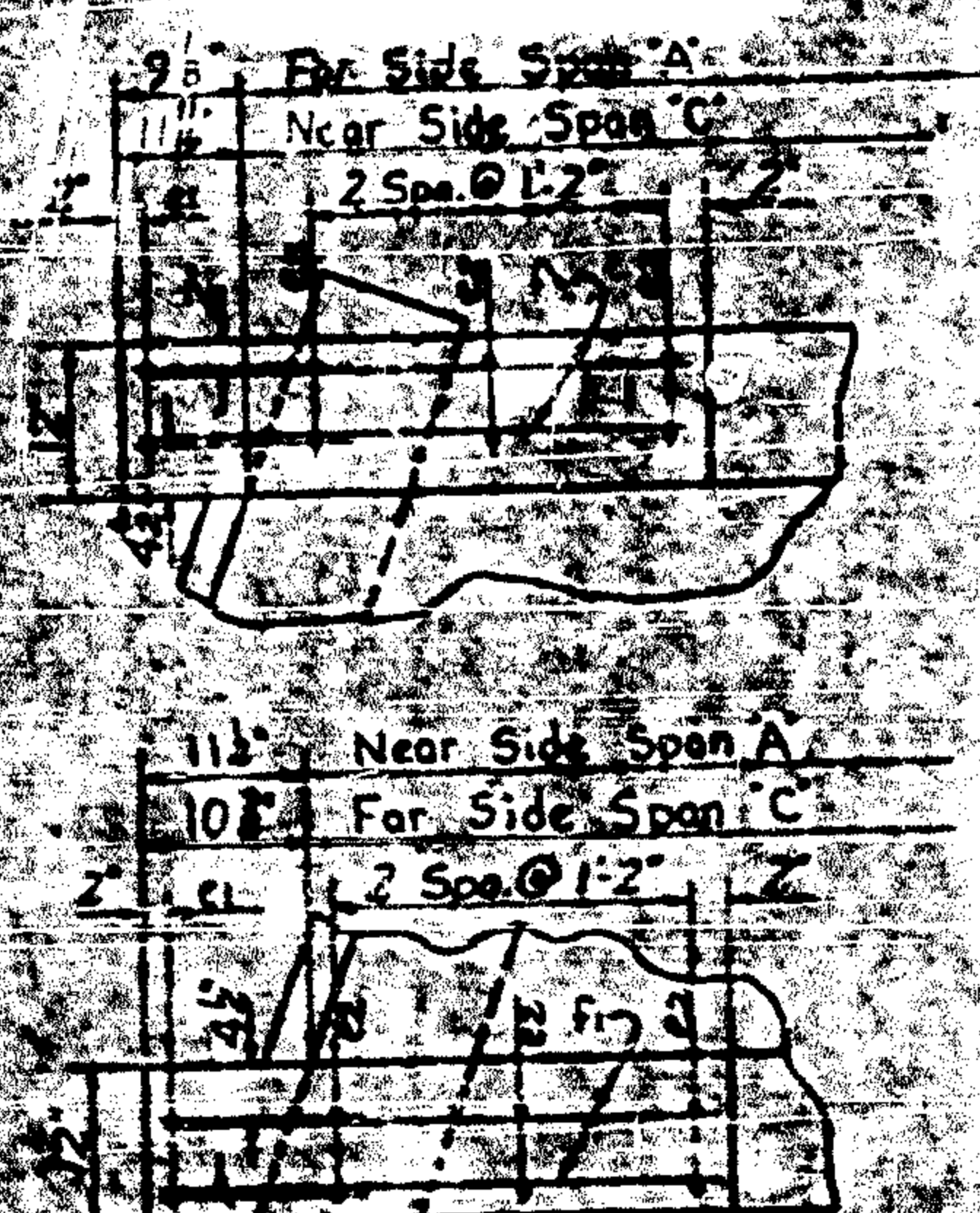
**END ELEVATION**



**PARAPET GROOVE DETAIL**



**END REST DETAILS**



**SECTION A-A**

**SECTION B-B**

**PROJECT NO.**  
**RD. 111**  
**STATION 111+00**

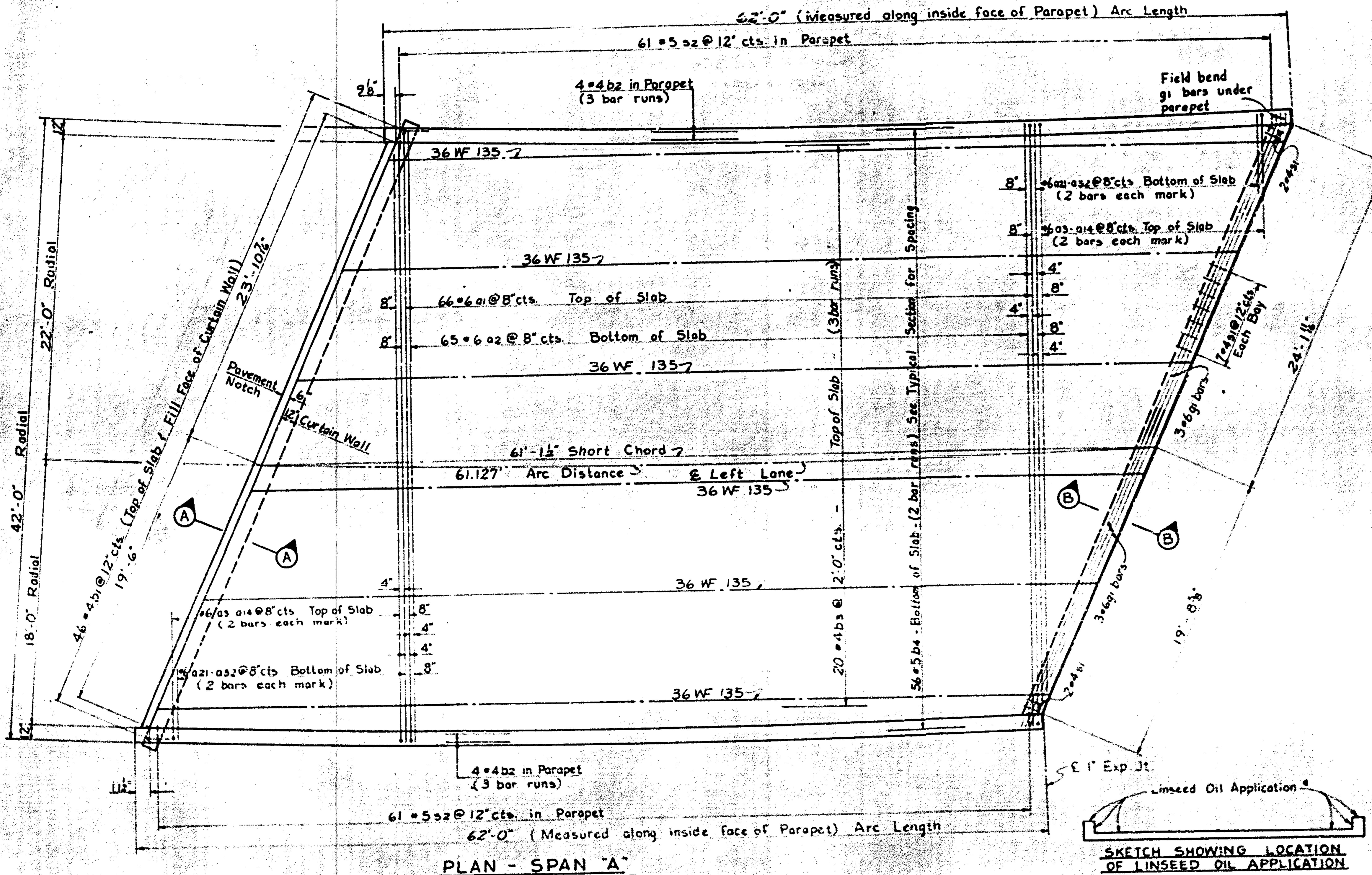
**STATE HIGHWAY**

**SUBSTRUCTURE**

**STANDARD TYPE**

**40' ROADWAY**

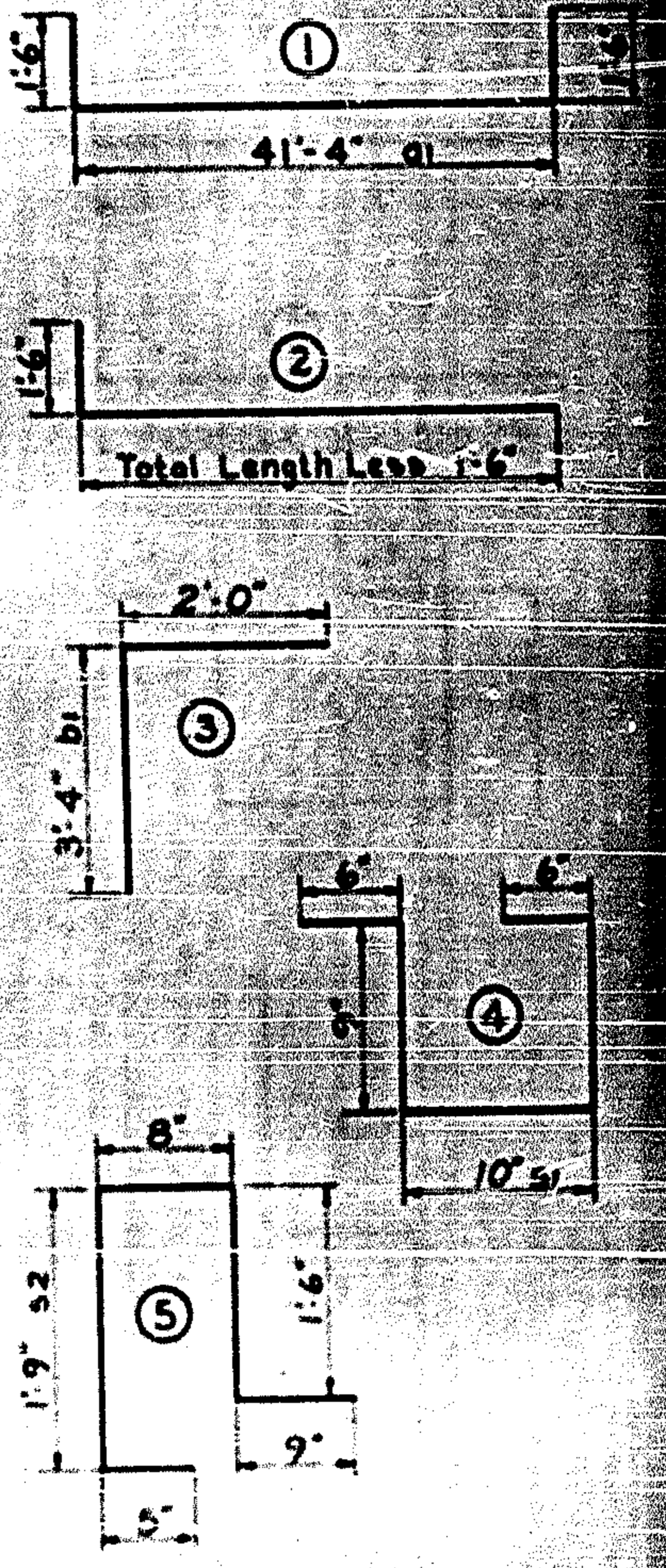
**JUNE 1967**



PLAN - SPAN "A"

BILL OF MATERIAL FOR SPAN "A"					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
01	66	#6		44'-4"	4,395
02	65	#6	Str.	41'-8"	4,068
03	4	#6		39'-1"	295
04				36'-0"	216
05				32'-1"	198
06				29'-10"	179
07				26'-9"	161
08				23'-9"	143
09				20'-8"	124
10				17'-7"	106
11				14'-6"	87
12				11'-5"	69
13				8'-4"	50
14	4	#6	2	5'-4"	32
021	4	#6	Str.	38'-6"	251
022				35'-5"	213
023				32'-4"	194
024				29'-3"	176
025				26'-2"	158
026				23'-2"	139
027				20'-1"	121
028				17'-0"	102
029				13'-11"	84
030				10'-10"	65
031				7'-10"	47
032	4	#6	Str.	4'-9"	29
b1	46	#4	3	5'-4"	164
b2	24	#4	Str.	21'-5"	348
b3	60	#4	Str.	21'-1"	842
b4	112	#5	Str.	31'-4"	3,660
c1	4	#4	Str.	4'-6"	12
c2	12	#4	Str.	2'-8"	21
f1	16	#4	Str.	3'-6"	37
g1	6	#6	Str.	24'-0"	216
k1	4	#6	Str.	24'-0"	144
k2	8	#4		23'-6"	126
k3	4	#5		3'-1"	13
k4	8	#5		3'-10"	32
k5	10	#5	Str.	8'-0"	83
s1	39	#4	4	3'-4"	87
s2	122	#5	5	5'-1"	647

BAR DETAILS  
All bar dimensions are out to out.

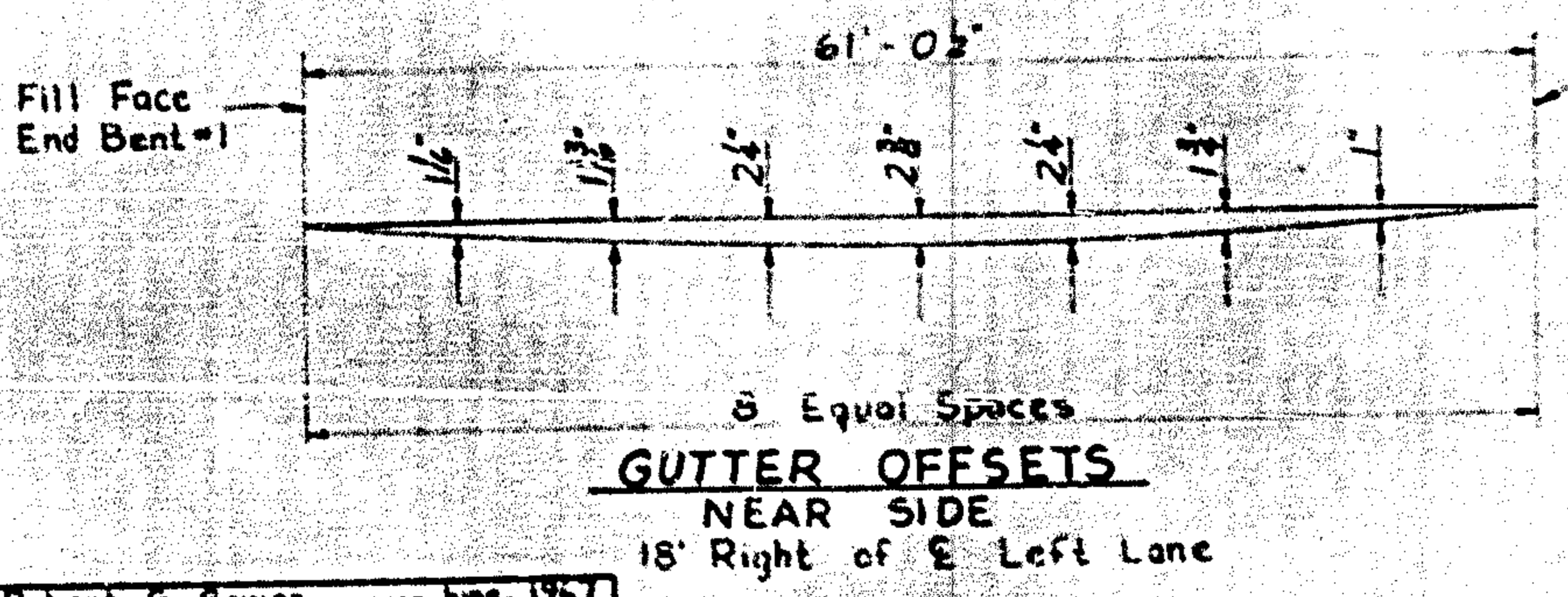


SUPERSTRUCTURE TOTALS			
	Reinf. Steel Lbs.	Class AA Conc. Cu Yds.	Struct. Steel Approx. Lbs.
Span A	18,052	79.3	60,000
Span B	21,152	86.1	83,400
Span C	17,849	78.3	58,400
Total	57,053	243.7	201,800

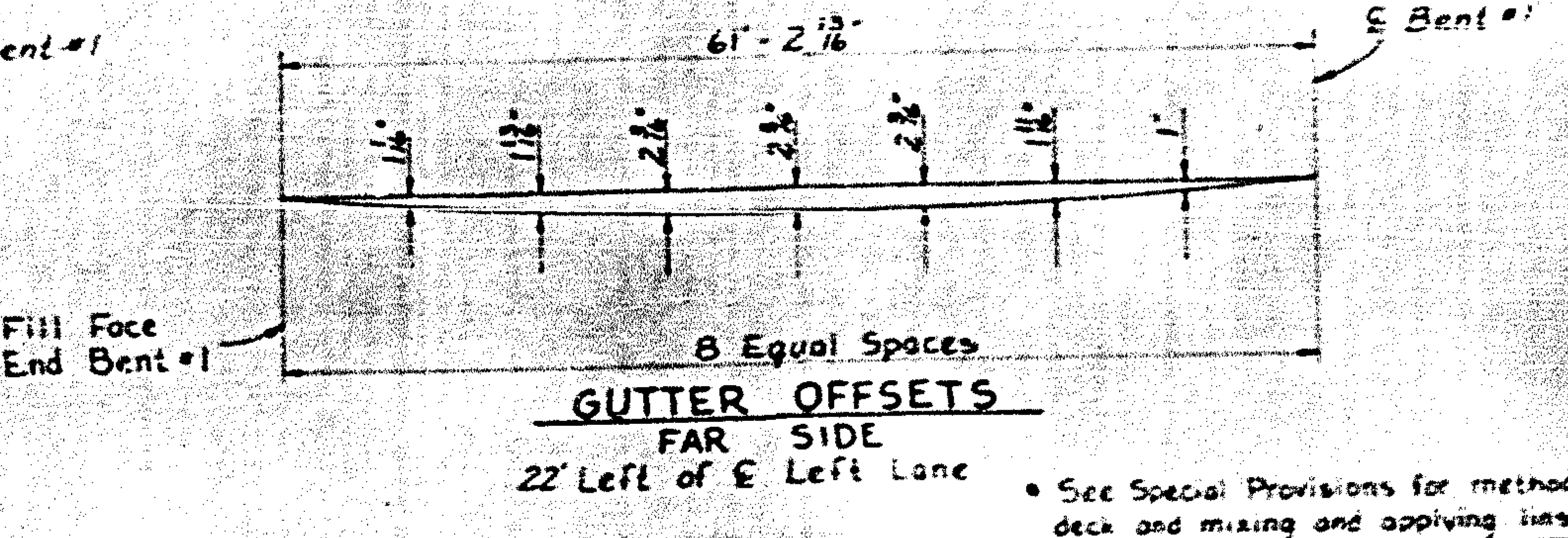
PROJECT No. 81869003  
POLK COUNTY  
STATION 668+38.38 E 1/4 LEFT LANE

STATE OF NORTH CAROLINA  
STATE HIGHWAY COMMISSION  
SUPERSTRUCTURE PLAN - SPAN "A"

REVISIONS	
NO.	DATE

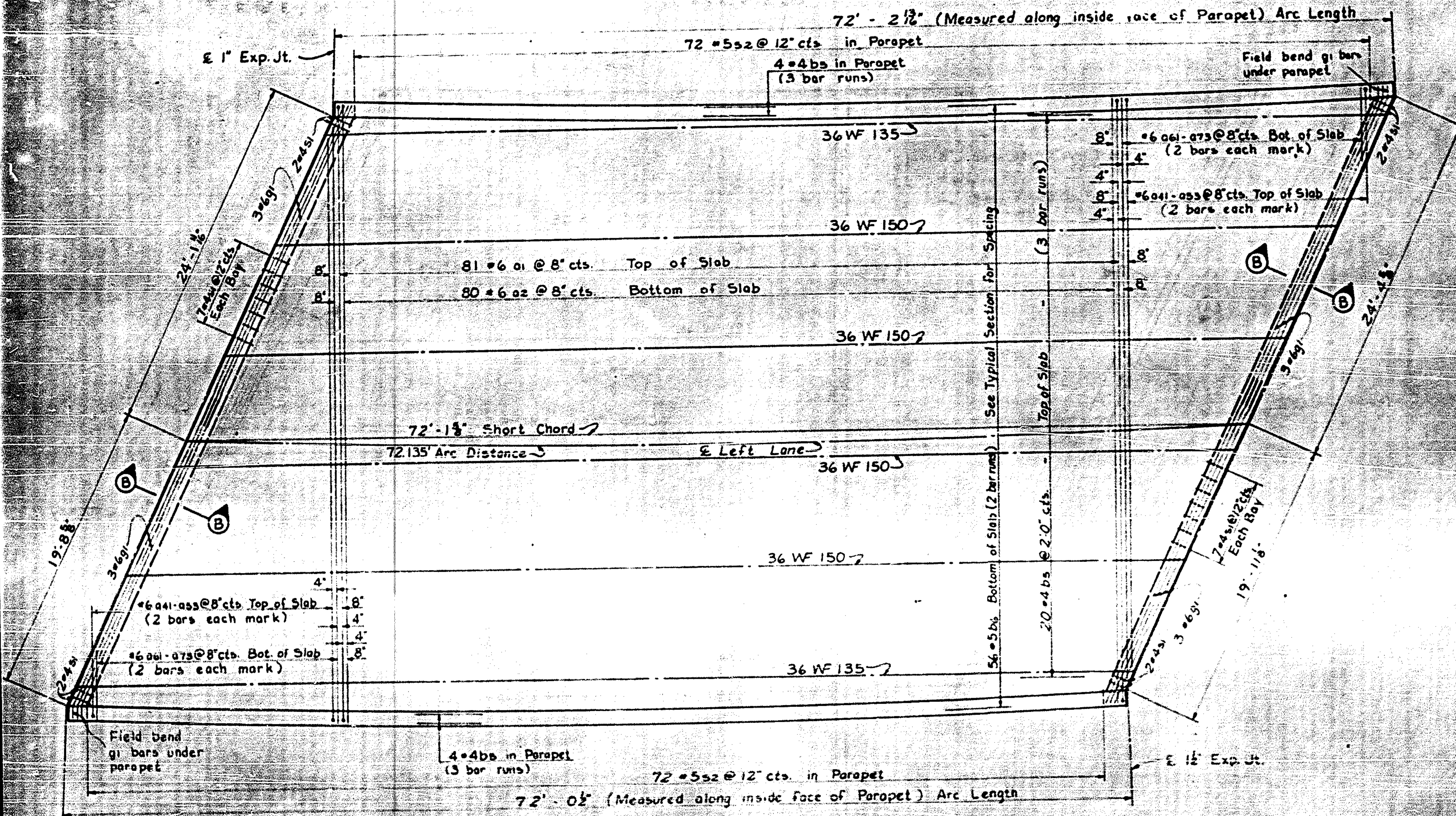


GUTTER OFFSETS NEAR SIDE  
18' Right of E Left Lane

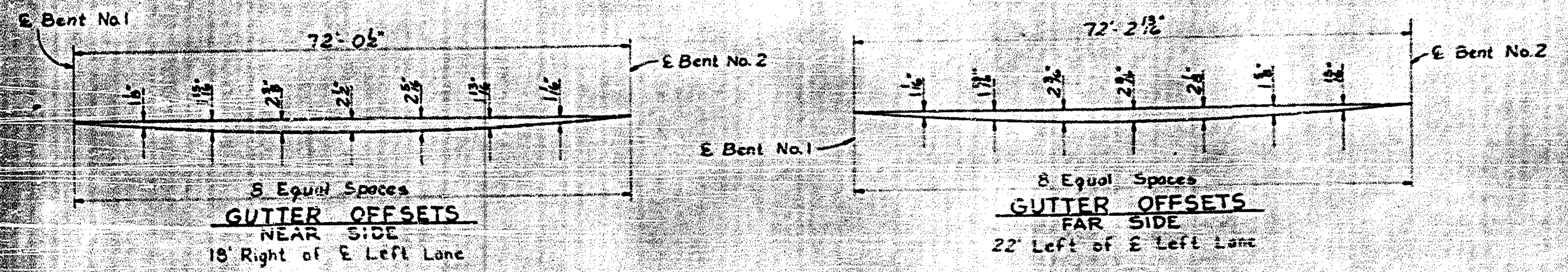


GUTTER OFFSETS FAR SIDE  
22' Left of E Left Lane

See Special Provisions for method of curing bridge deck and mixing and applying linseed oil solution.



PLAN SPAN 'B'



GUTTER OFFSETS NEAR SIDE 18' Right of E Left Lane

GUTTER OFFSETS FAR SIDE 22' Left of E Left Lane

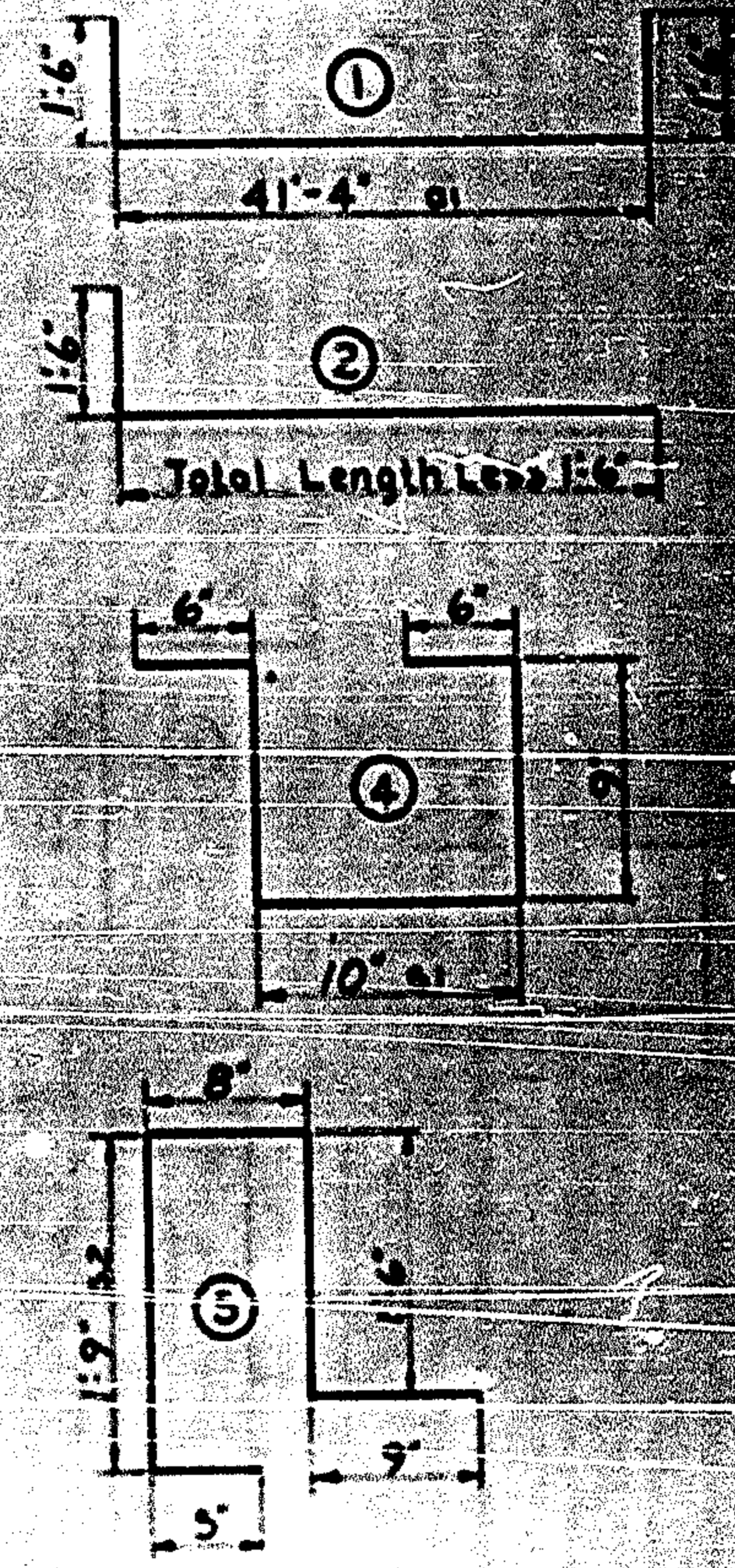
BILL OF MATERIAL

FOR SPAN 'B'

BAR NO.	SIZE	TYPE	LENGTH	WEIGHT
01	#6	Str	44'-4"	5,394
02	#6	Str	41'-8"	5,007
04	#6	2	39'-5"	236
041	#6	1	36'-5"	219
043	#6	1	35'-6"	201
044	#6	1	30'-8"	184
045	#6	1	27'-9"	167
046	#6	1	24'-11"	150
047	#6	1	23'-0"	132
048	#6	1	19'-2"	115
049	#6	1	16'-3"	98
050	#6	1	13'-5"	81
051	#6	1	10'-6"	63
052	#6	1	7'-8"	46
053	#6	2	4'-9"	29
06	#6	Str	38'-8"	232
062	#6	1	35'-9"	215
063	#6	1	32'-11"	198
064	#6	1	30'-0"	180
065	#6	1	27'-2"	163
066	#6	1	24'-3"	146
067	#6	1	21'-5"	129
068	#6	1	18'-6"	111
069	#6	1	15'-8"	94
070	#6	1	12'-9"	77
071	#6	1	9'-11"	60
072	#6	1	7'-0"	42
073	#6	Str	4'-2"	25
b5	#4	Str	21'-9"	1,389
b6	#5	Str	37'-0"	4,322
g	#6	Str	24'-0"	433
k3	#5	Str	3'-1"	26
k4	#5	Str	3'-10"	64
k5	#5	Str	8'-0"	157
s1	#4	4	3'-4"	174
s2	#5	5	3'-1"	763

BAR DETAILS

All bar dimensions are out to



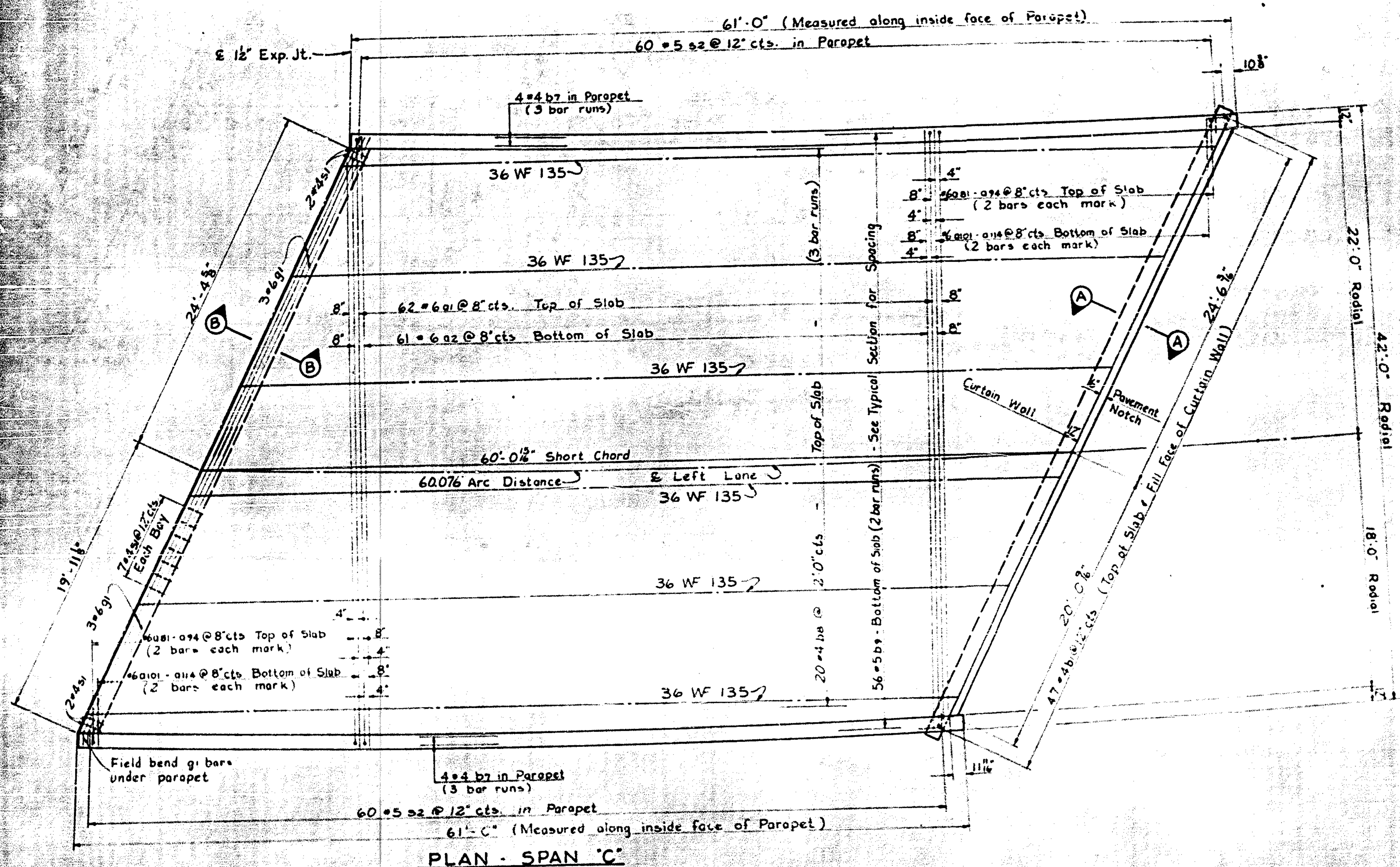
PROJECT No. B.1869008  
 POLK COUNTY  
 STATION 668+38.38 E of  
 LEFT LANE

STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 SUPERSTRUCTURE  
 PLAN - SPAN 'B'

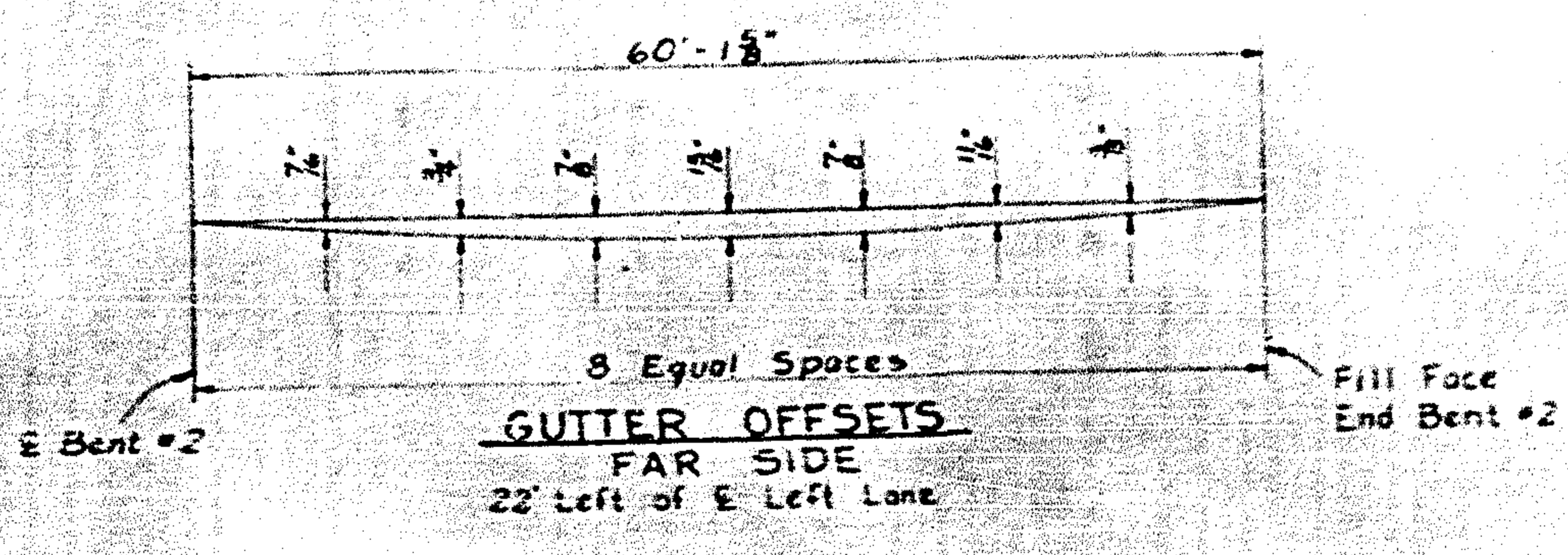
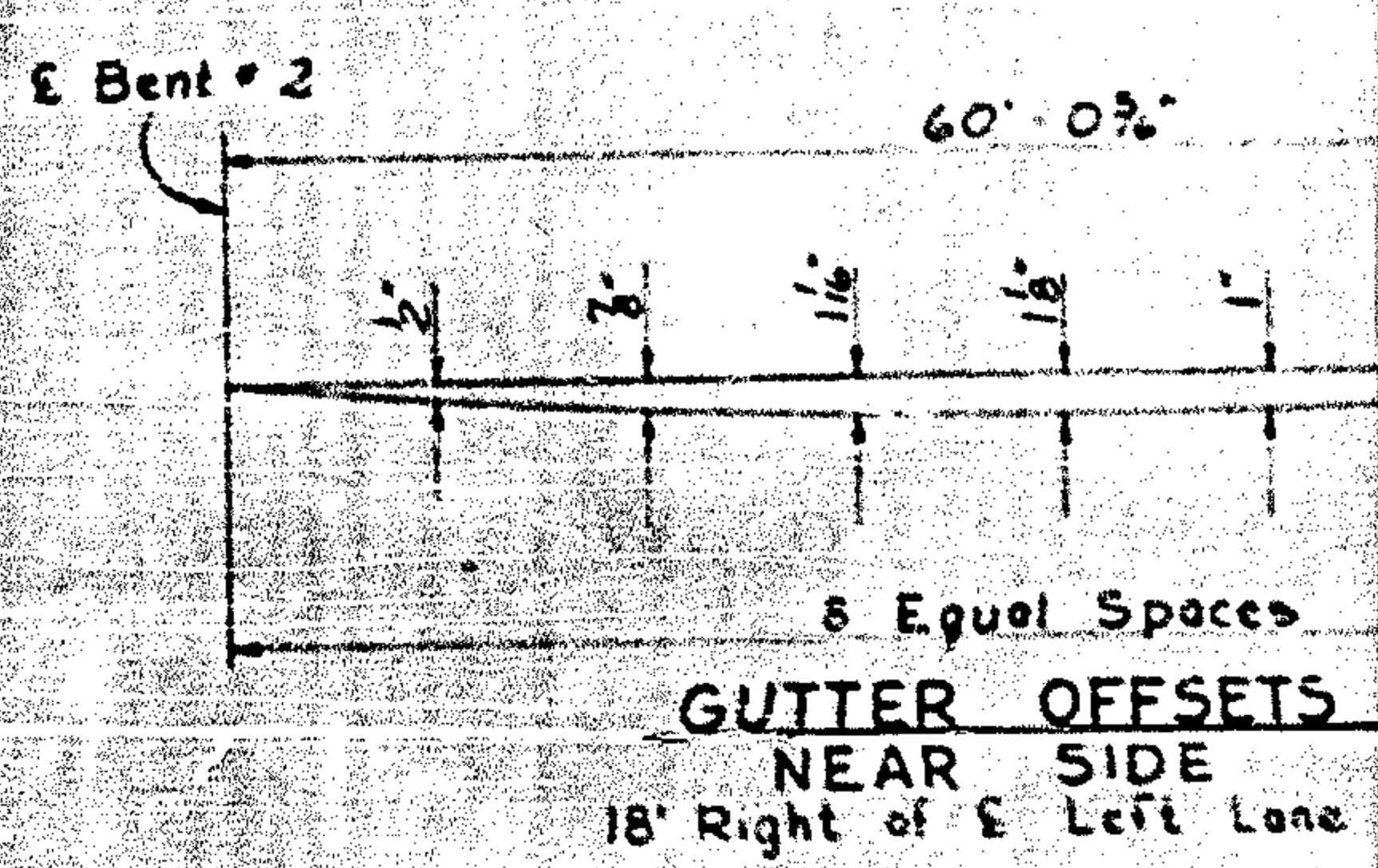
Reinforcing Steel Lbs. 21,132  
 Class 'AA' Concrete Cu. Yds. 56.1

NO.	BY	DATE	NO.	BY	DATE

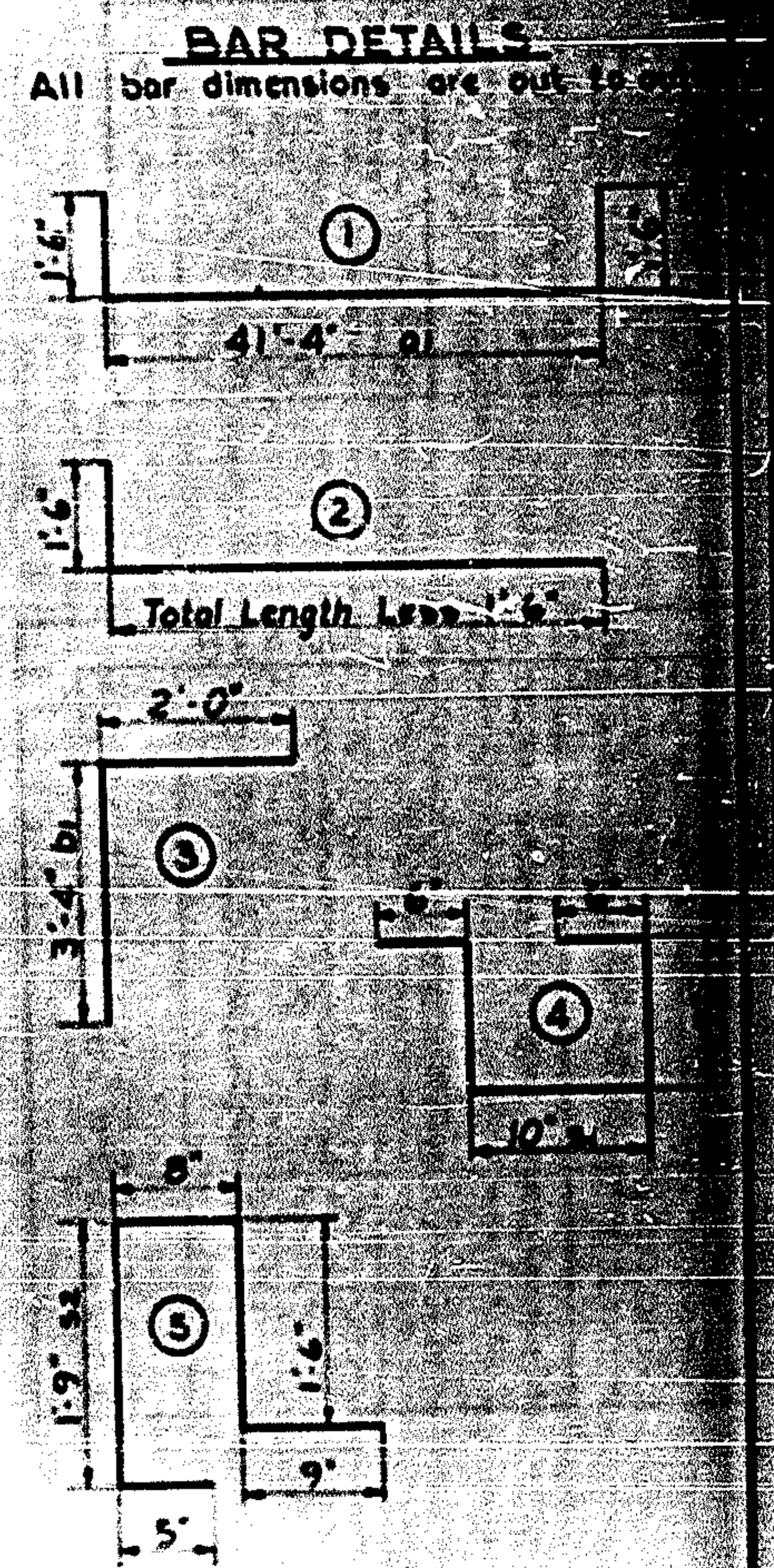




PLAN - SPAN 'C'



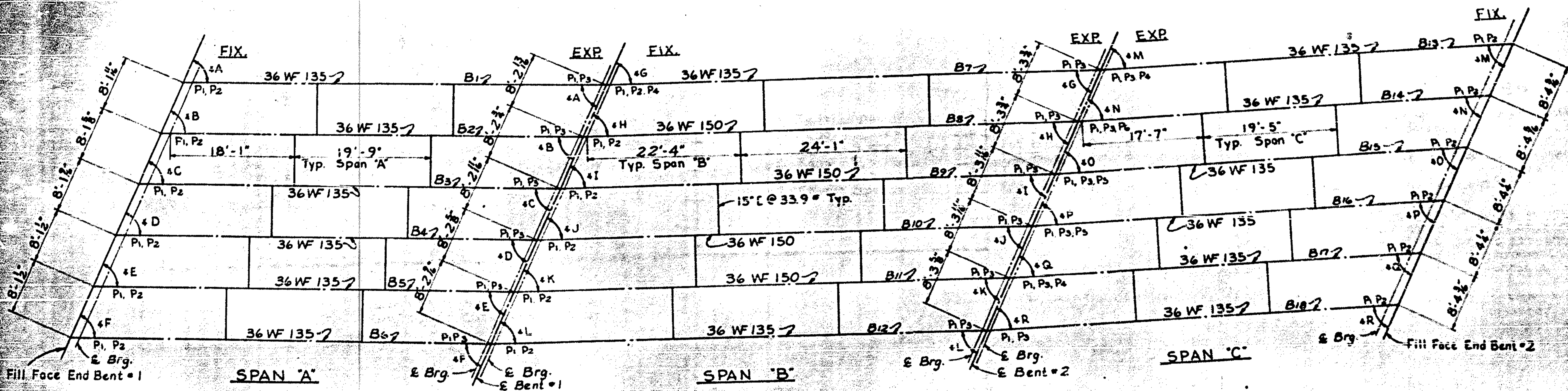
BILL OF MATERIAL					
FOR SPAN 'C'					
BAR	NO	SIZE	TYPE	LENGTH	WEIGHT
01	62	#6	1	44'-4"	1,129
02	61	#6	Str	41'-8"	3,818
081	4	#6	2	39'-4"	236
082				36'-7"	220
083				33'-10"	203
084				31'-1"	187
085				28'-4"	170
086				25'-7"	154
087				22'-10"	137
088				20'-1"	121
089				17'-4"	104
090				14'-7"	88
091				11'-10"	71
092				9'-1"	55
093				6'-4"	38
094	4	#6	2	3'-7"	22
0101	4	#6	Str	38'-9"	233
0102				36'-0"	216
0103				33'-3"	200
0104				30'-6"	183
0105				27'-8"	166
0106				24'-11"	150
0107				22'-2"	133
0108				19'-5"	117
0109				16'-8"	100
0110				13'-11"	84
0111				11'-2"	67
0112				8'-5"	51
0113				5'-8"	34
0114	4	#6	Str	2'-11"	18
b1	47	#4	3	5'-4"	167
b7	24	#4	Str	21'-1"	338
b8	60	#4	Str	20'-9"	832
b9	112	#5	Str	30'-9"	3,592
c1	4	#4	Str	4'-6"	12
c2	12	#4	Str	2'-8"	21
f1	16	#4	Str	3'-6"	37
g1	6	#6	Str	24'-0"	216
k3	4	#5	Str	3'-1"	13
k4	8	#5		3'-10"	32
k5	10	#5		8'-0"	83
k6	4	#6		24'-7"	148
k7	8	#4	Str	24'-3"	130
s1	39	#4	4	3'-2"	87
s2	120	#5	5	5'-1"	636



PROJECT No. 8.1869003  
POLK COUNTY  
STATION 668+38.38 E.L.  
LEFT LANE

STATE OF NORTH CAROLINA  
STATE HIGHWAY COMMISSION  
SUPERSTRUCTURE  
PLAN - SPAN 'C'

JUNE 1967	
NO.	DATE



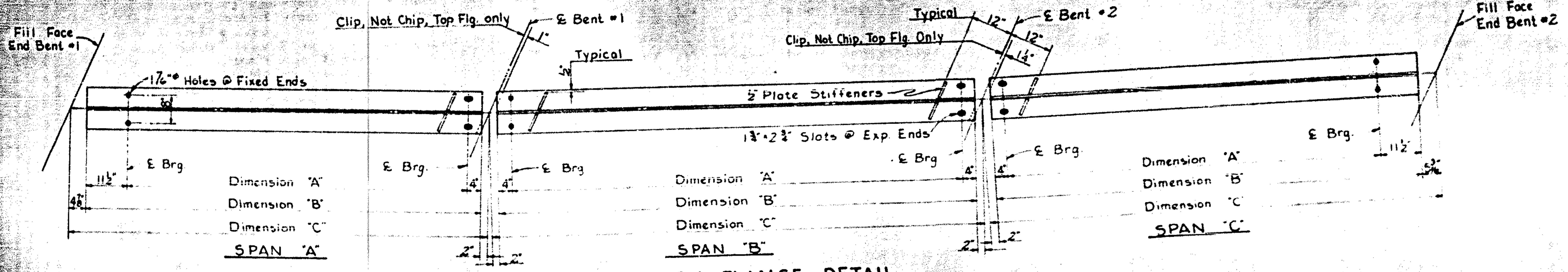
**LAYOUT SKETCH**  
 (Showing Location of Brg. R's & Steel Diaphragms)

**ANGLES**

A	66-18-04.6	J	65-07-55
B	66-22-45.4	K	65-11-53
C	66-27-27.1	L	65-15-52
D	66-32-09.8	M	64-03-52
E	66-36-52.7	N	64-05-53
F	66-41-36.2	O	64-07-53
G	64-57-03.7	P	64-10-15
H	65-00-57.2	Q	64-12-41
I	65-04-14.5	R	64-15-13

**BEAM LENGTHS**

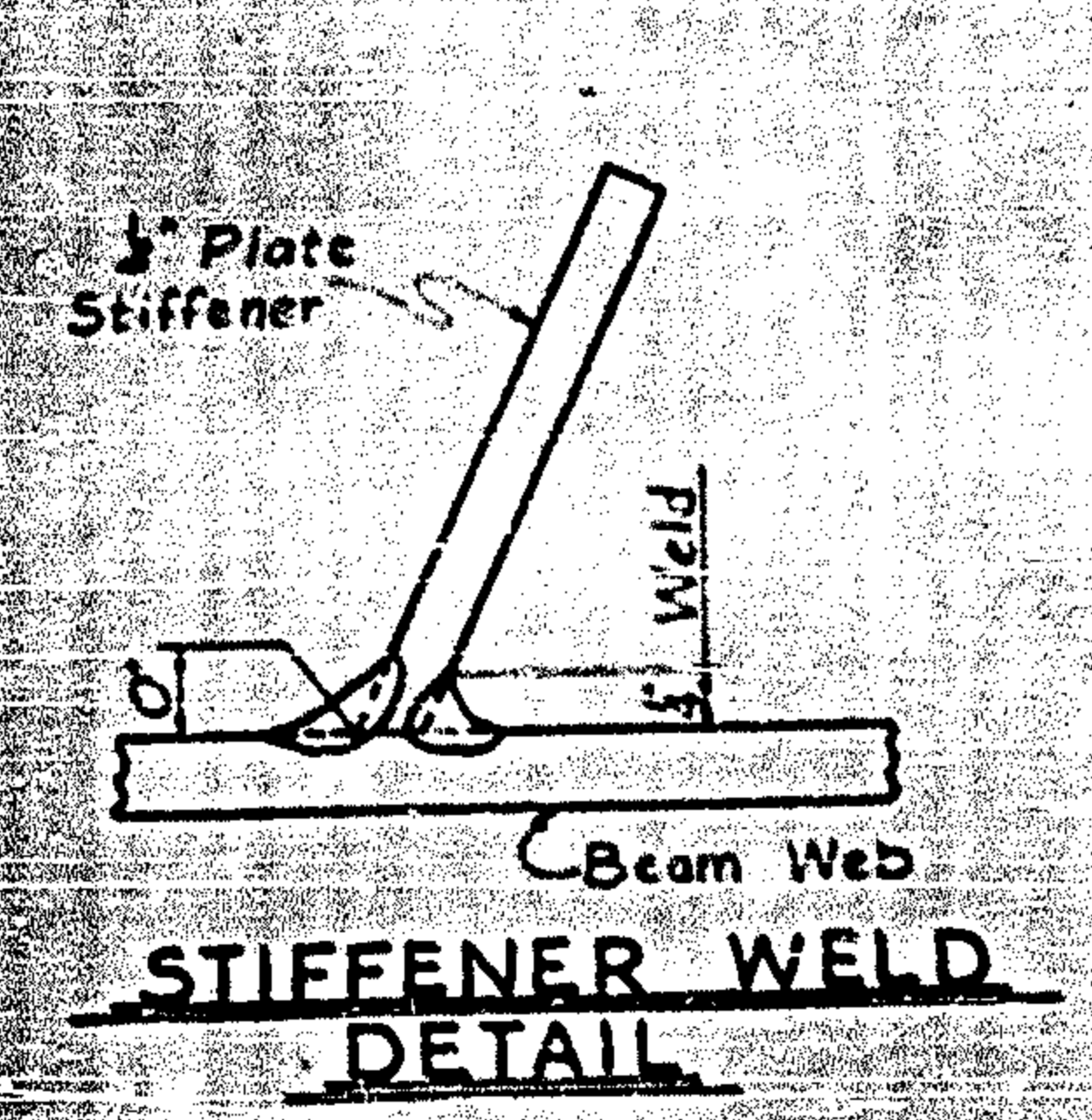
BEAM	DIMEN 'A'	DIMEN 'B'	DIMEN 'C'
B1	59'-4"	60'-7"	61'-2"
B2	59'-5"	60'-7"	61'-2"
B3	59'-5"	60'-7"	61'-1"
B4	59'-5"	60'-6"	61'-1"
B5	59'-2"	60'-6"	61'-1"
B6	59'-2"	60'-5"	61'-0"
B7	71'-2"	71'-10"	72'-2"
B8	71'-2"	71'-10"	72'-2"
B9	71'-1"	71'-9"	72'-1"
B10	71'-1"	71'-9"	72'-1"
B11	71'-1"	71'-9"	72'-1"
B12	71'-0"	71'-8"	72'-0"
B13	58'-2"	59'-6"	60'-0"
B14	58'-2"	59'-6"	60'-0"
B15	58'-2"	59'-5"	60'-0"
B16	58'-2"	59'-5"	60'-0"
B17	58'-1"	59'-5"	60'-0"
B18	58'-1"	59'-5"	60'-0"



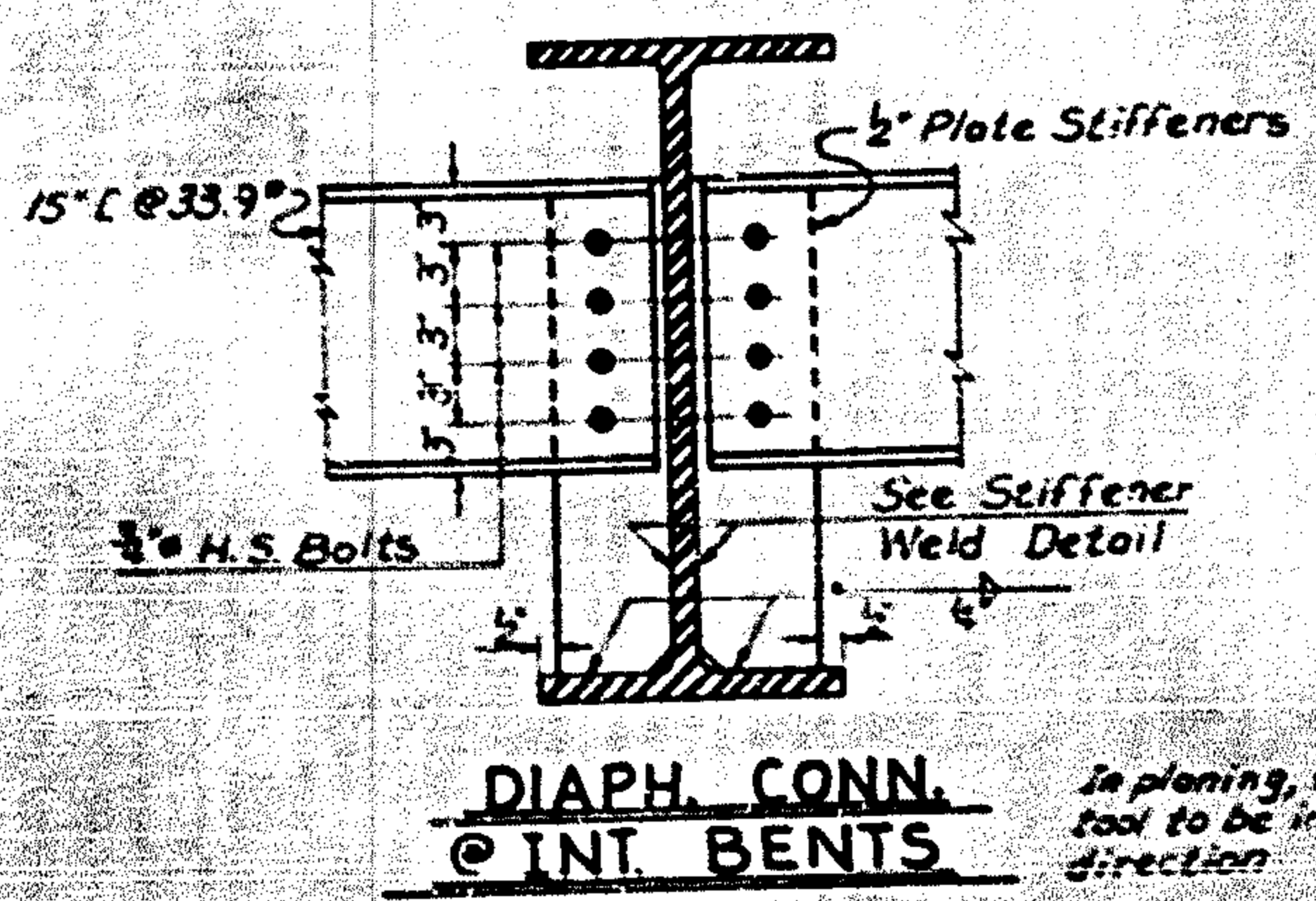
**BOTTOM FLANGE DETAIL**

**DEFLECTION TABLE**

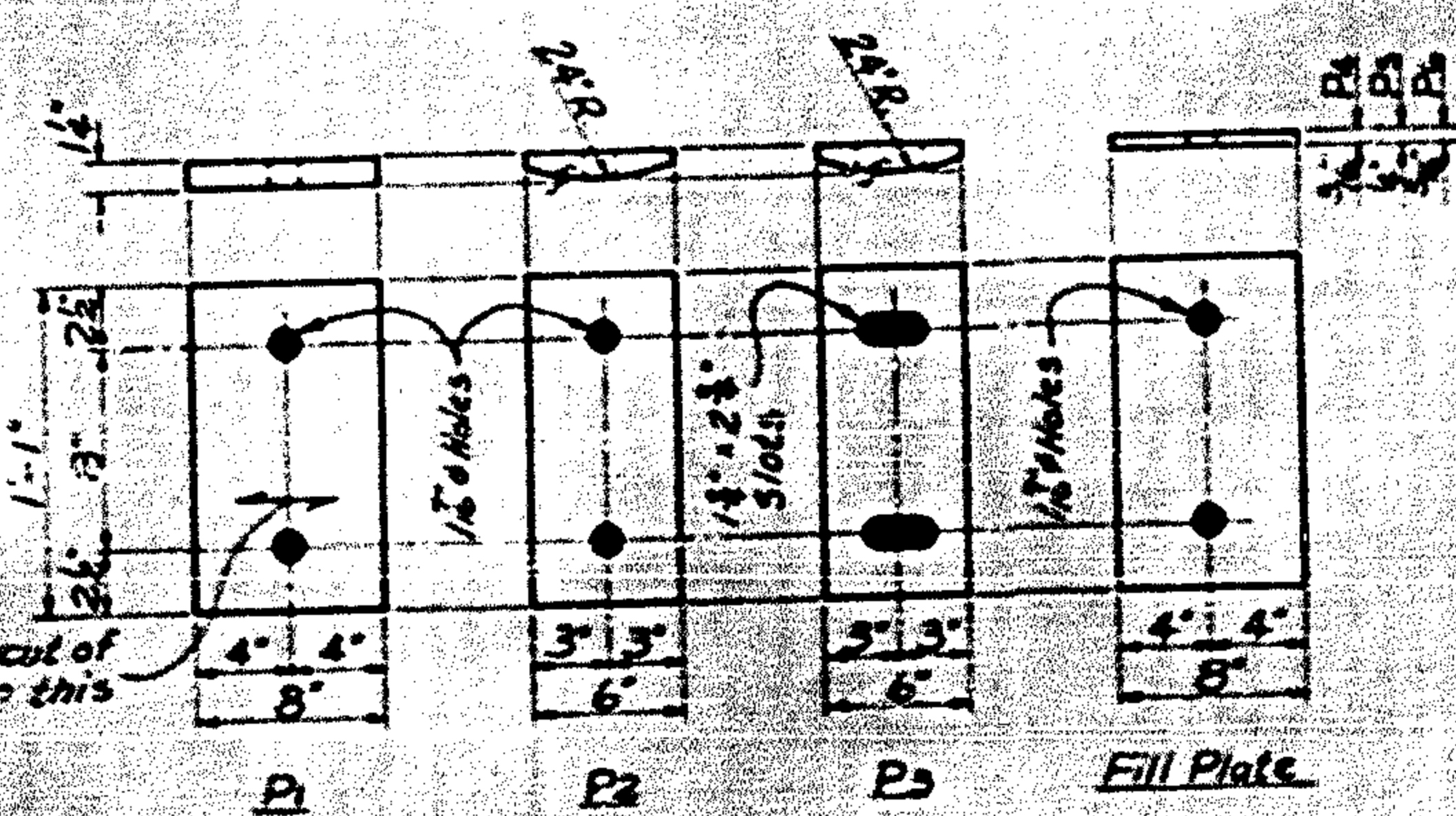
	SPAN 'A'		SPAN 'B'		SPAN 'C'	
	INT.	EXT.	INT.	EXT.	INT.	EXT.
Deflection due to beam weight	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
Deflection due to superimposed D.L.	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"
Total Deflection	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"
Curve shift	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
Camber Beams	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"



**STIFFENER WELD DETAIL**



**DIAPH. CONN. @ INT. BENTS**



**BEARING PLATE DETAILS**

Required: 36 P1, 18 P2, 18 P3, 3 P4, 2 P5 & 1 P6

**APPROX. STRUCTURAL STEEL WEIGHT**

Span A	60,000
Span B	83,400
Span C	58,400
Total	201,800

PROJECT No. 8.1869003  
 POLK COUNTY  
 STATION 668+38.38 EN  
 LEFT LANE

Sheet 1 of 2

STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 STRUCTURAL STEEL  
 DETAILS

JUNE 1967

NO.	BY	DATE	NO.	BY	DATE
1					
2					

Studs Per Bm.	Spa. @	Spa. @	Equal Spaces	Int. Bms. - Span
448	30 Spa @ 5" = 12'-6"	17 Spa @ 7" = 9'-11"	8 Equal Spaces	6" Int. Bms. - Span 'A'
312	19 Spa @ 7" = 11'-1"	12 Spa @ 10" = 10'-0"	7 Equal Spaces	6" Ext. Bms. - Span 'A'
536	35 Spa @ 5" = 14'-7"	21 Spa @ 7" = 12'-3"	10 Equal Spaces	6" Int. Bms. - Span 'B'
376	24 Spa @ 7" = 14'-0"	14 Spa @ 10" = 11'-8"	8 Equal Spaces	6" Ext. Bms. - Span 'B'
440	29 Spa @ 5" = 12'-1"	17 Spa @ 7" = 9'-11"	8 Equal Spaces	6" Int. Bms. - Span 'C'
304	18 Spa @ 7" = 10'-6"	12 Spa @ 10" = 10'-0"	7 Equal Spaces	6" Ext. Bms. - Span 'C'

E. Erg. 2

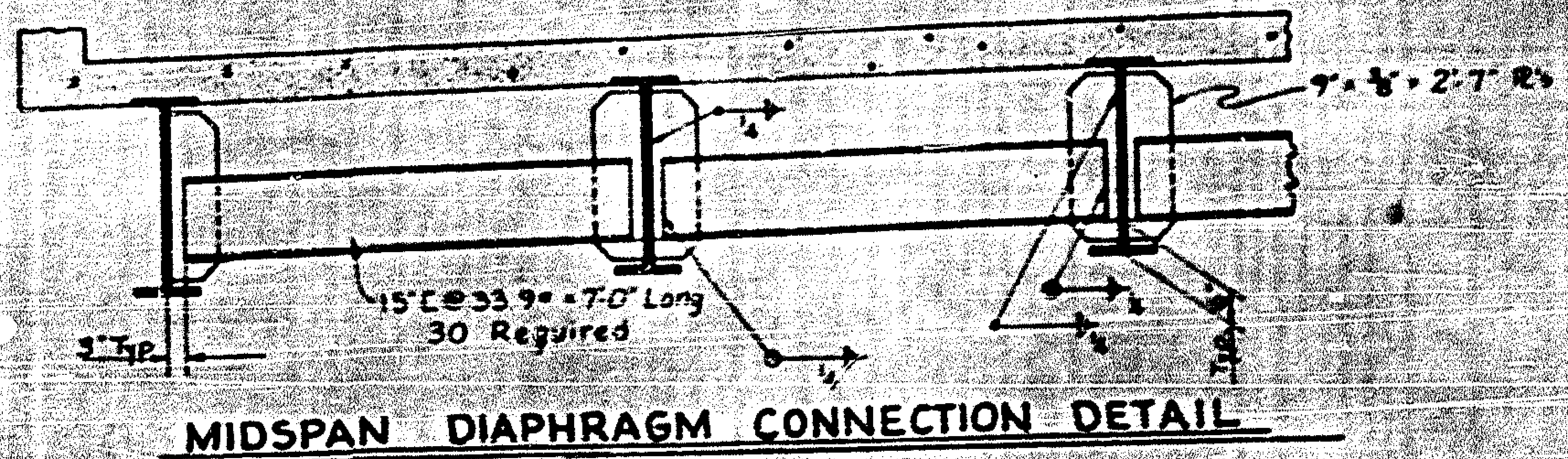
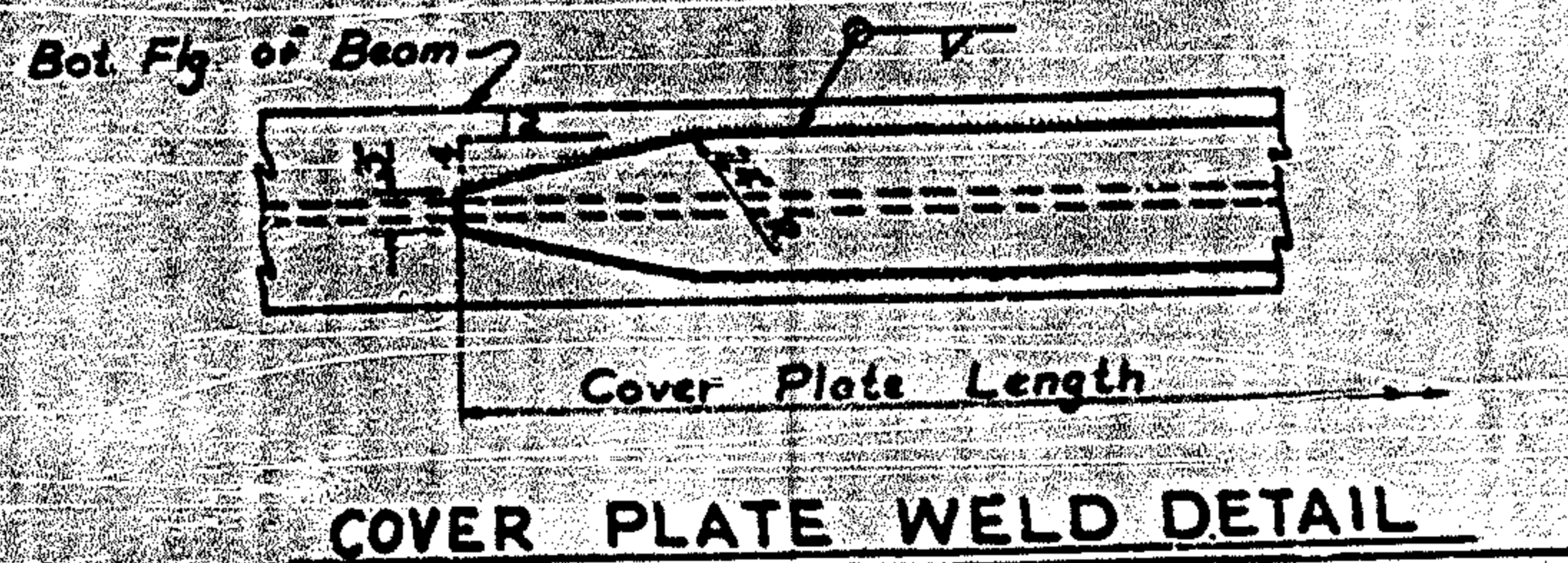
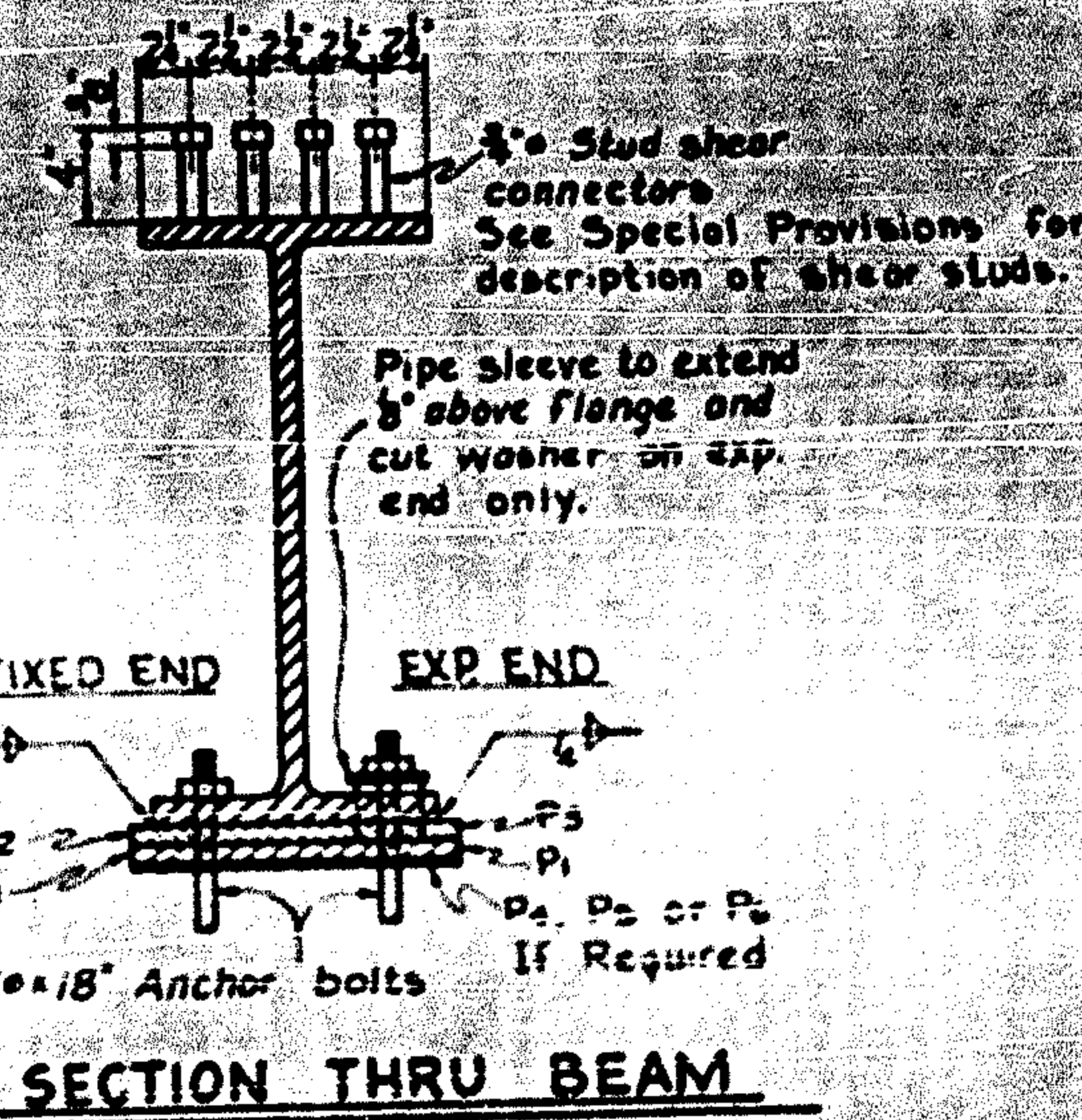
36 WF 135 - Ext. & Int. Bms. - Span 'A' or 'C'  
 36 WF 135 - Ext. Bms. - Span 'B'  
 36 WF 150 - Int. Bms. - Span 'B'

Stud spacing  
 symmetrical about  
 C between bearings

19'-6" Int. Bms. - Span 'A'
18'-3" Ext. Bms. - Span 'A'
25'-3" Int. Bms. - Span 'B'
25'-9" Ext. Bms. - Span 'B'
18'-9" Int. Bms. - Span 'C'
17'-6" Ext. Bms. - Span 'C'
10' x 1/2" x 39'-0" Interior Bms. - Span 'A'
8' x 1/2" x 36'-6" Exterior Bms. - Span 'A'
10' x 1/2" x 50'-6" Interior Bms. - Span 'B'
10' x 1/2" x 51'-6" Exterior Bms. - Span 'B'
10' x 1/2" x 37'-6" Interior Bms. - Span 'C'
6' x 1/2" x 35'-0" Exterior Bms. - Span 'C'

NOTE: At the contractor's option he may substitute for the cover plates designated on the plans cover plates of equivalent area provided these plates are at least 3/16" in thickness and do not exceed a width equal to the flange width less 2" or a thickness equal to 1 1/2" times the flange thickness. The size of the weld for attaching these cover plates shall be in accordance with the AWS Specifications.

**SHEAR STUD SPACING & COVER PLATE DETAILS**



NOTE: In lieu of the welding procedure for shop and field welds indicated for the intermediate diaphragm connections, the contractor may, at his option, use the Gold weld.

**NOTES**

All beams and cover plates shall be of ASTM A-36 grade structural steel. See S-N Sheet.

No web stiffeners are required on outside of exterior beams or at End Bents. Stiffeners are to be parallel to ends of beams.

The contractor may at his option but without change in the contract price of structural steel, use split 18 WF connections bolted to the web of beam and welded to the channel diaphragm in lieu of the welded plate intermediate diaphragm connections shown.

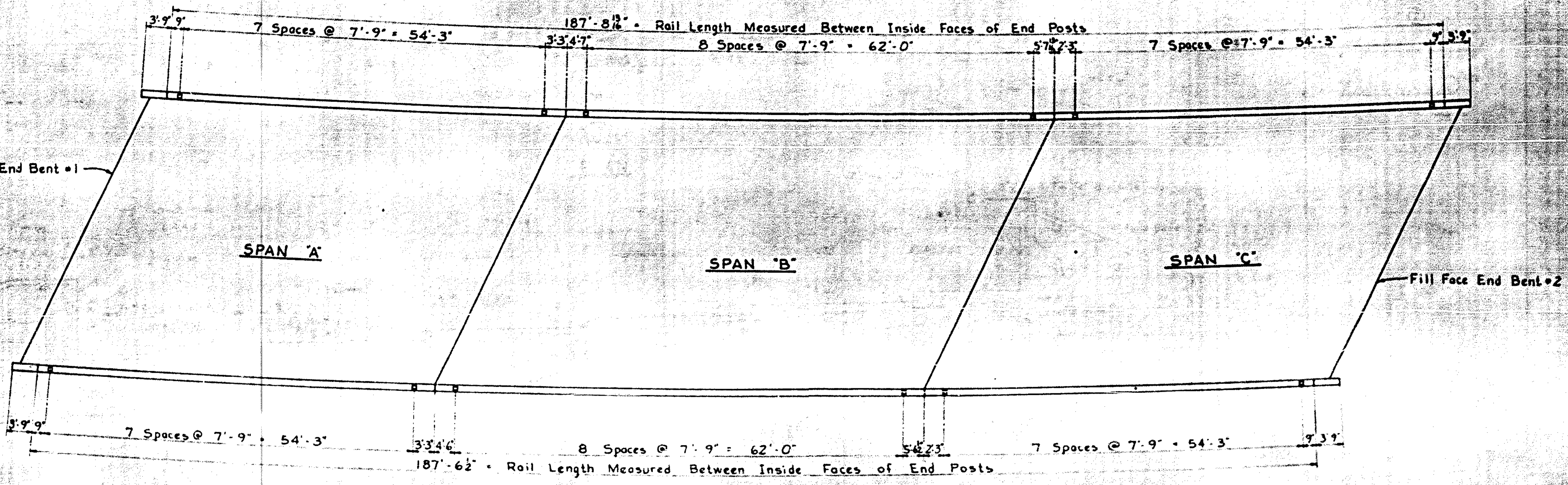
At contractor's option fill plates, when used, may be combined with masonry plate.

PROJECT No. 8.186900  
 POLK COUNTY  
 STATION: 668+38.365  
 LEFT LANE

Sheet 2 of 2

STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 RALEIGH  
 STRUCTURAL STEEL  
 DETAILS

JUNE



PLAN  
SHOWING RAIL POST SPACING

PROJECT No. 8.1869003  
 POLK COUNTY  
 STATION 658+38.38 E/M  
 LEFT LANE

Sheet 2 of 2

STATE OF NORTH CAROLINA  
**STATE HIGHWAY COMMISSION**  
 RALEIGH

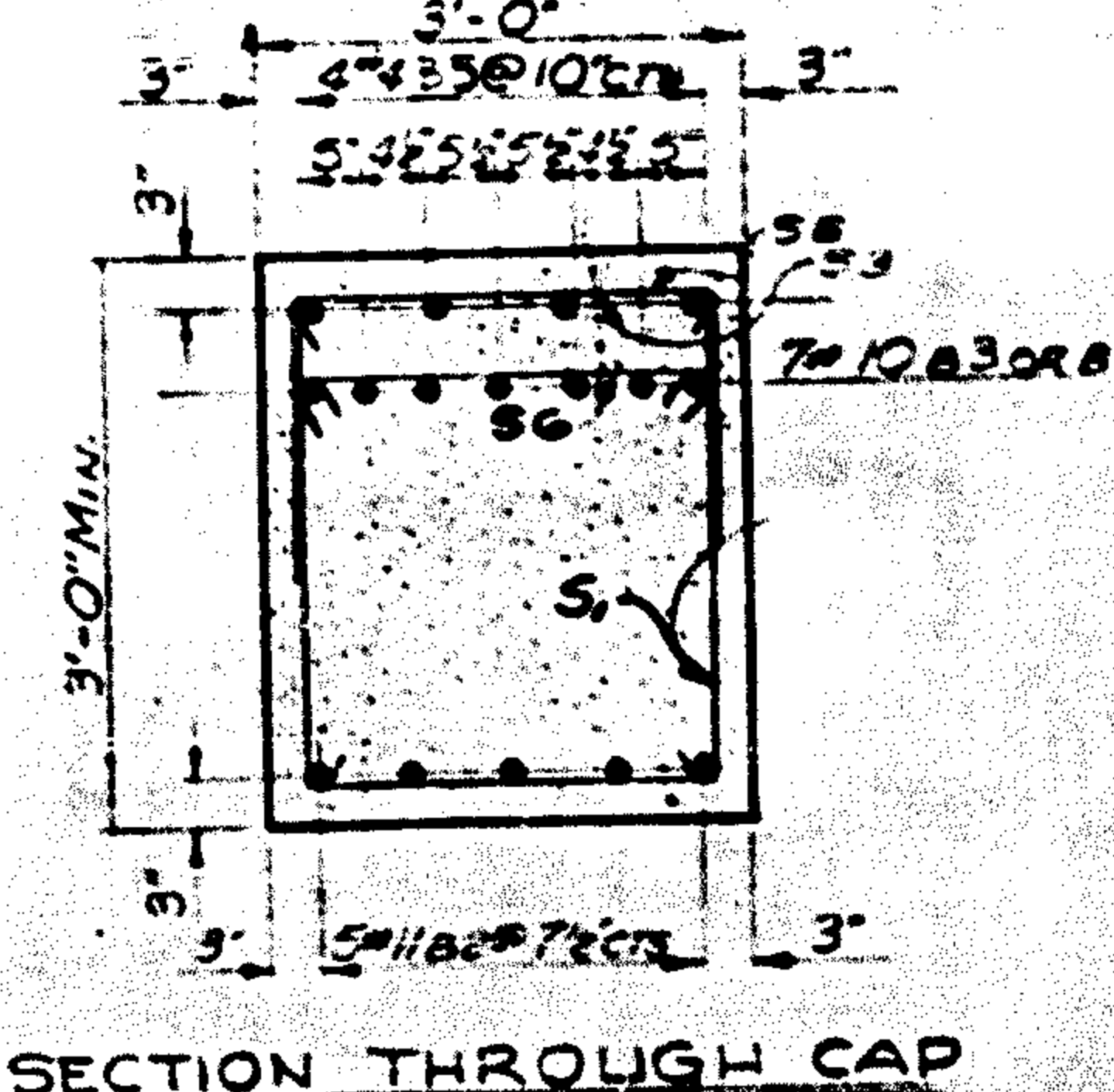
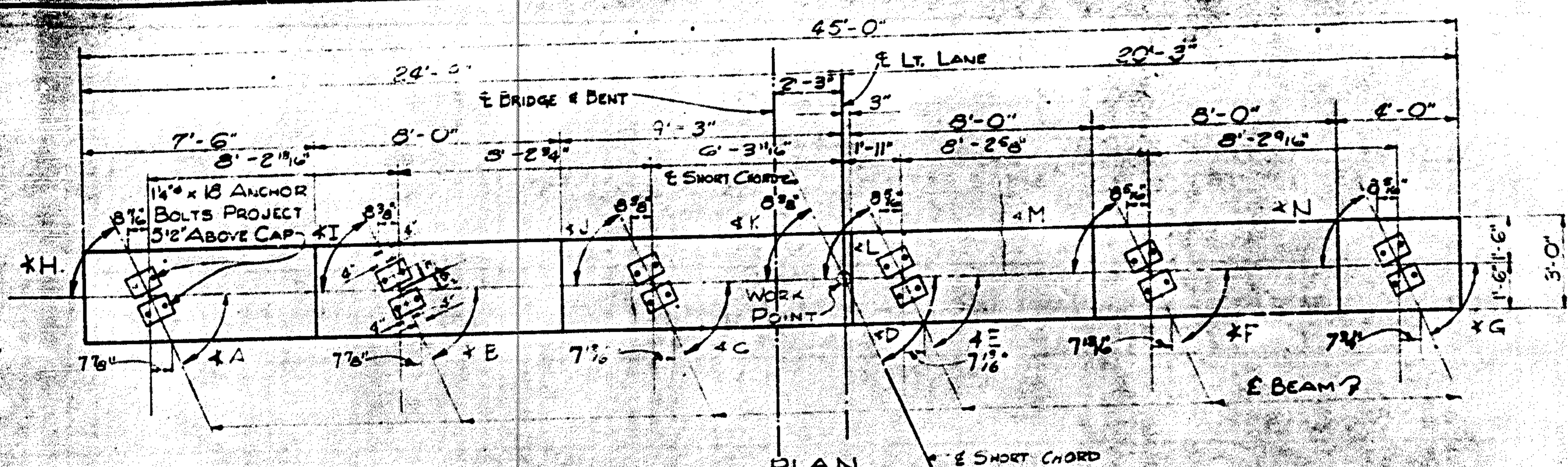
**SUPERSTRUCTURE**  
**RAIL POST SPACING**

JUNE 1967

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

DRAWN BY Robert G. Gaver DATE June 1967  
 CHECKED BY J. P. ... DATE 6/6/67

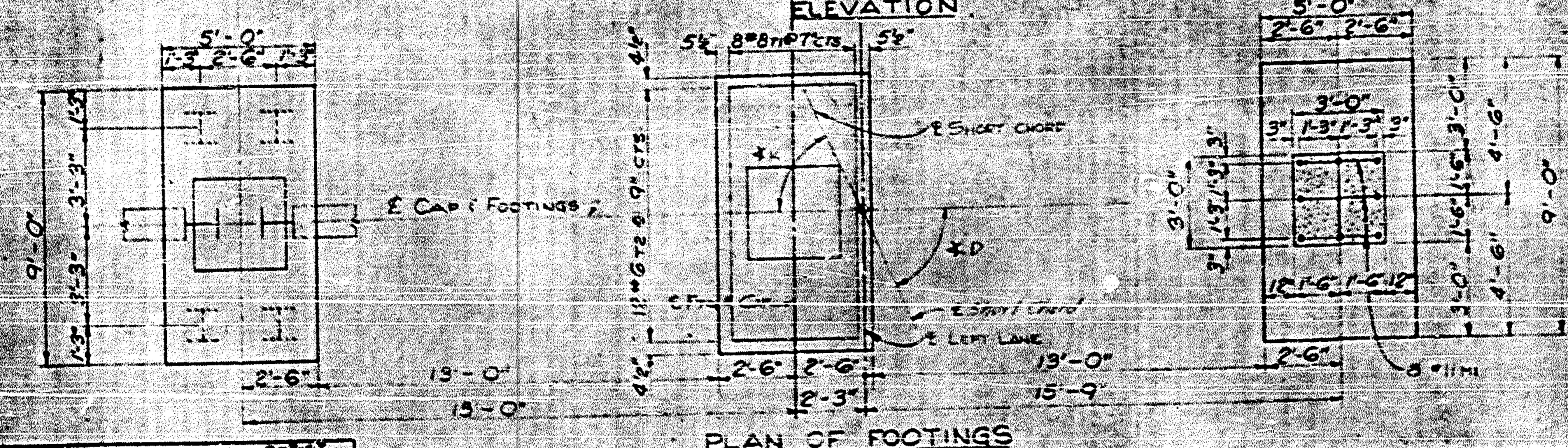
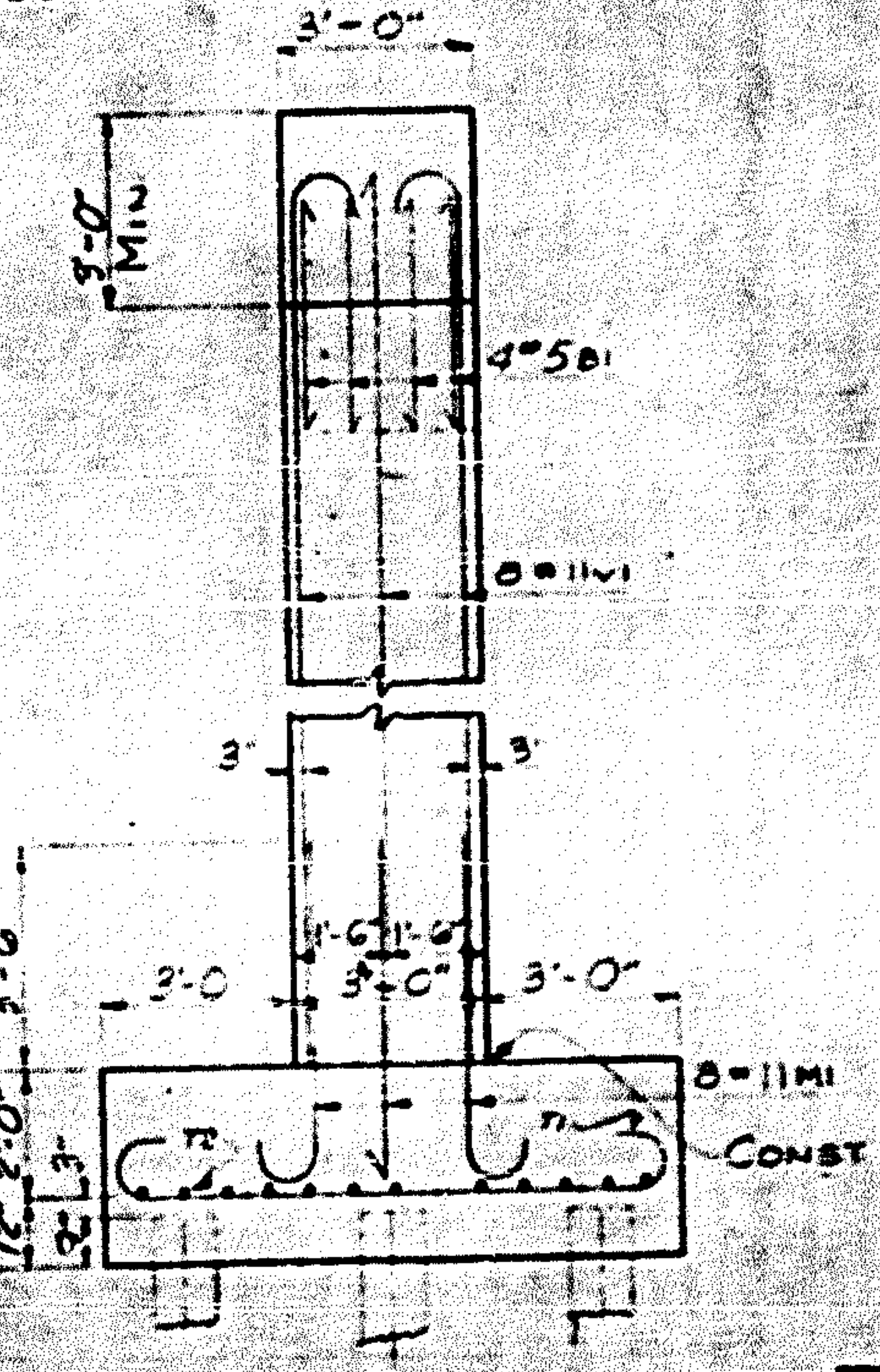
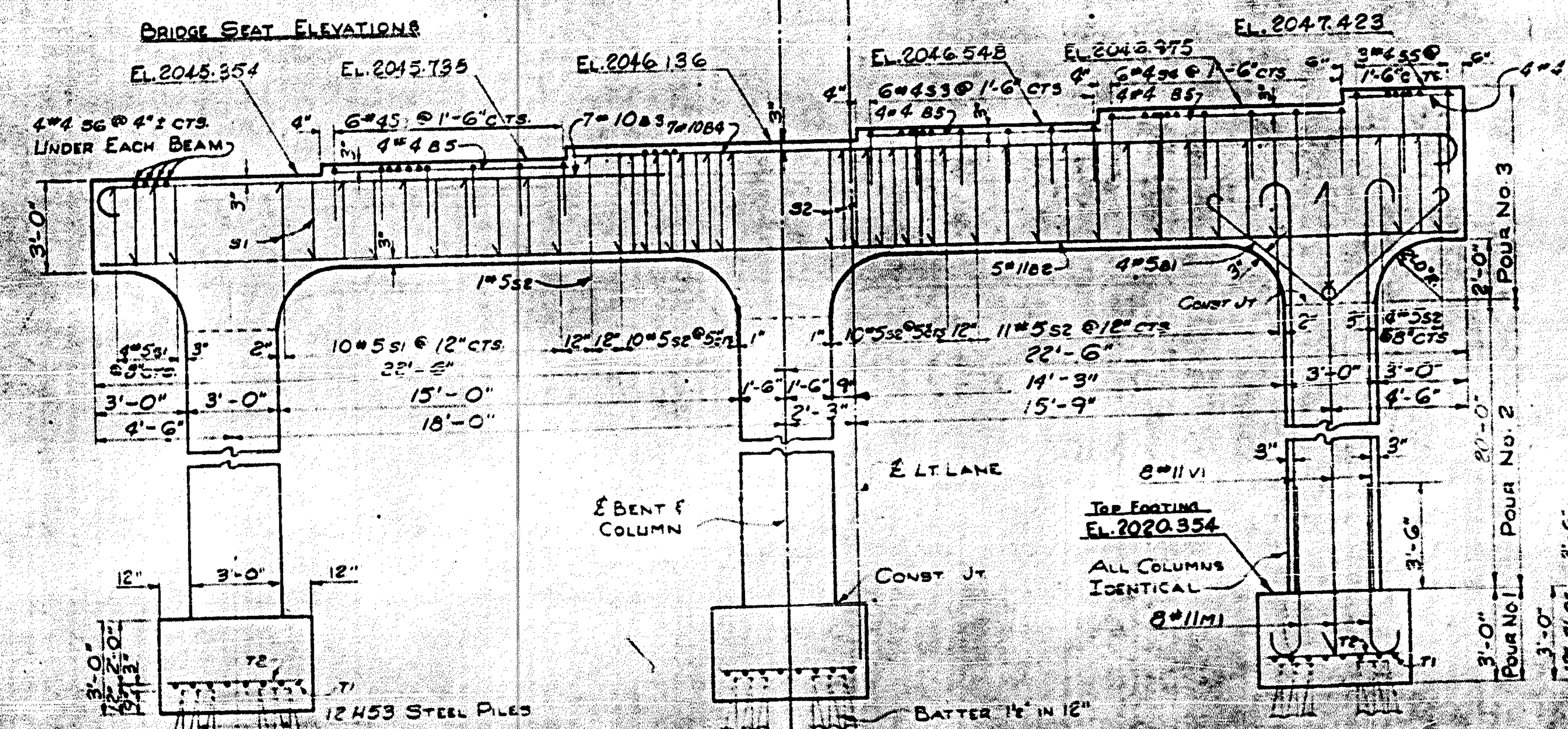




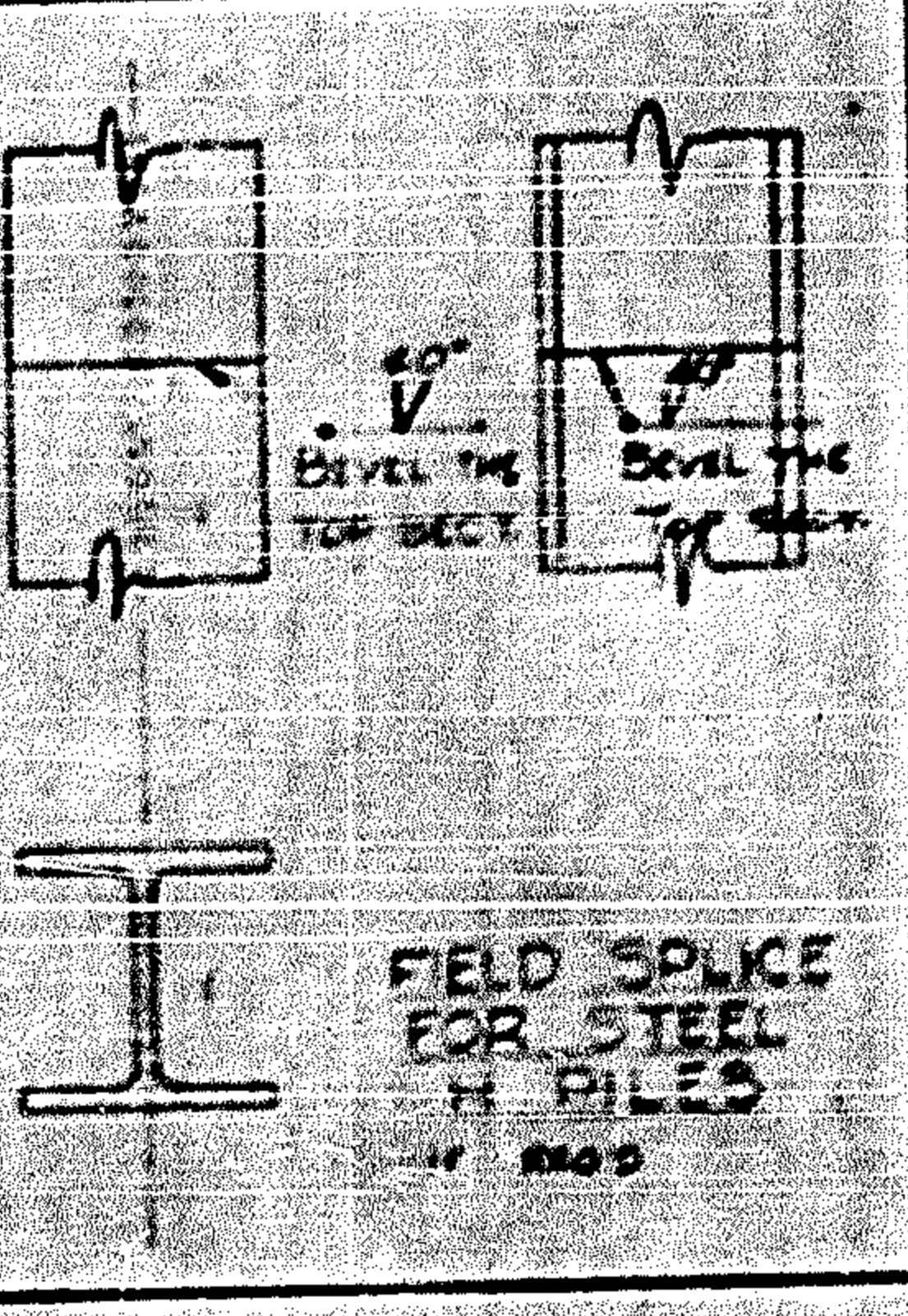
ANGLES	
H	64°-57'-03.7"
I	65°-02'-37.2"
J	65°-04'-14.5"
K	65°-07'-03.7"
L	65°-07'-53.2"
M	65°-11'-31.7"
N	65°-15'-22.7"
O	65°-18'-04.6"
P	66°-22'-45.4"
Q	66°-27'-27.1"
R	66°-31'-03.3"
S	66°-32'-07.5"
T	66°-35'-32.9"
U	66°-41'-36.2"

BAR DETAILS  
ALL BAR DIMENSIONS  
ARE CUT TO OUT

BILL OF MATERIAL		BENT NO. 1			
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	24	#5	B	6'-0"	1.80
B2	5	#1	B	4'-0"	0.15
B3	7	#10	B	20'-0"	4.20
B4	7	#10	B	30'-0"	6.30
B5	18	#4	STR.	7'-10"	0.80
B6	4	#4	STR.	3'-0"	0.15
B7	25	#1	B	7'-0"	0.30
B8	16	#4	B	8'-10"	1.20
B9	25	#5	B	17'-0"	3.00
B10	18	#4	B	16'-11"	2.10
B11	6	#4	B	6'-10"	0.40
B12	9	#4	B	7'-0"	0.60
B13	24	#4	B	3'-0"	0.30
T1	24	#5	B	10'-0"	2.40
T2	36	#5	STR.	4'-0"	1.80
V1	24	#1	B	20'-0"	4.20



DIVISION OF CONCRETE	
BENT NO. 1	
POUR No. 1	CU. YDS.
1 FOOTINGS	15.0
2 COLUMNS	20.0
3 CAP	22.1
TOTAL	57.1

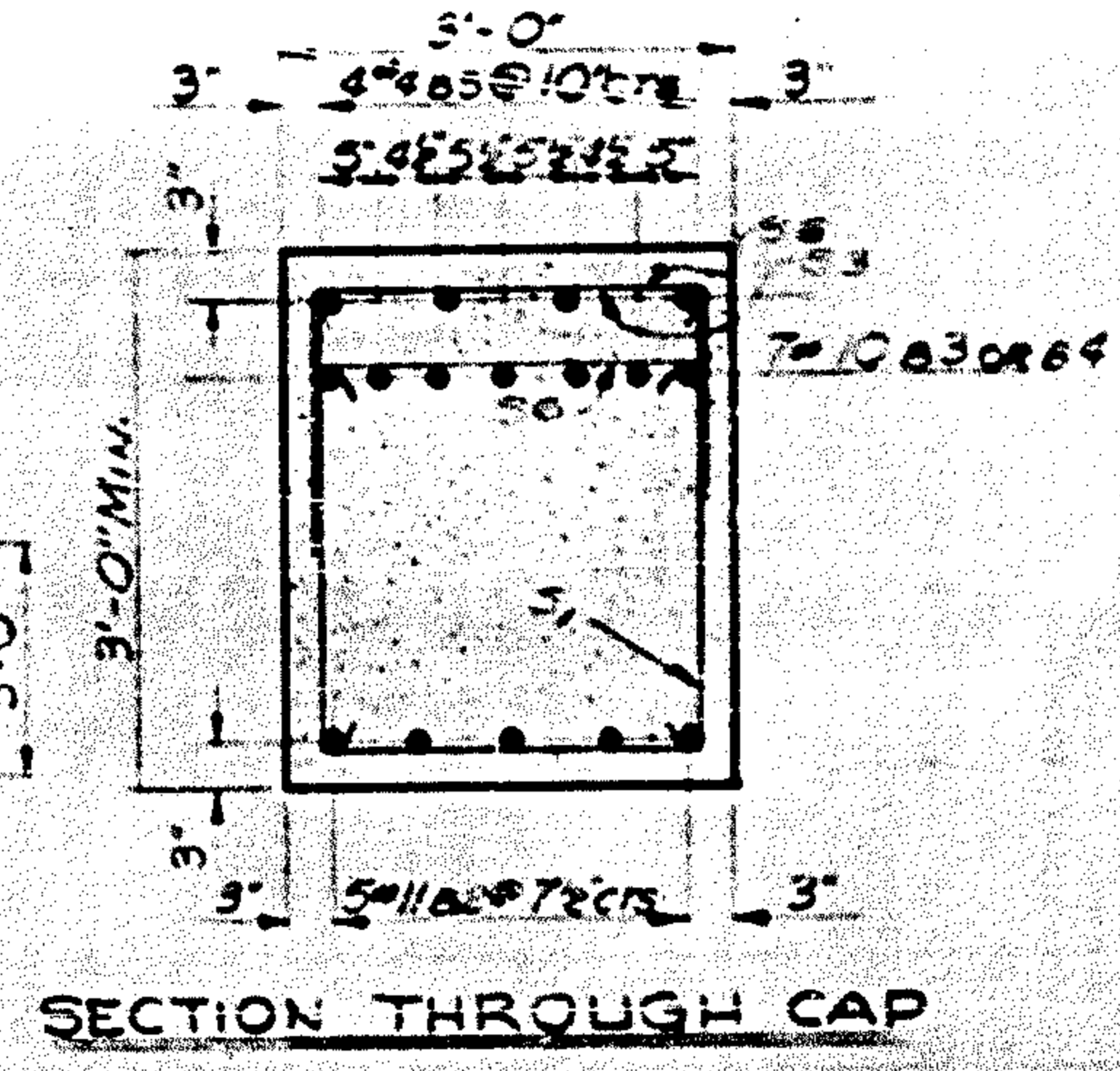
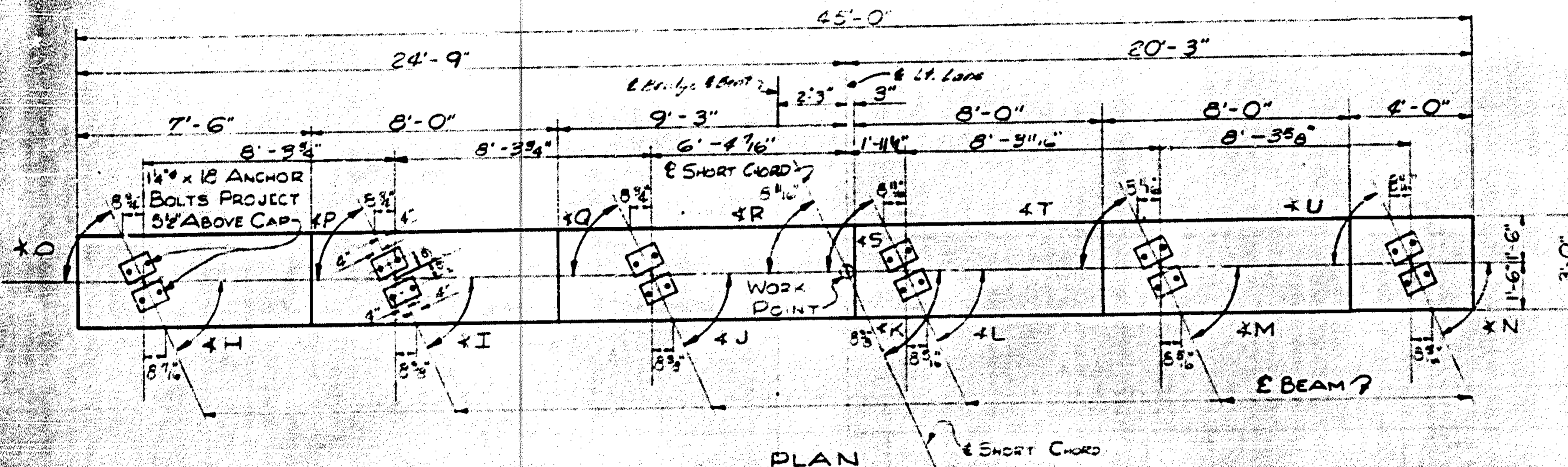


PROJECT No. 5-1069003  
POLK COUNTY  
STATION 662+20.35 E.M.

STATE OF NORTH CAROLINA  
STATE HIGHWAY COMMISSION  
RALEIGH  
BENT NO. 1  
LEFT LANE

JUNE 1967	
NO.	DATE

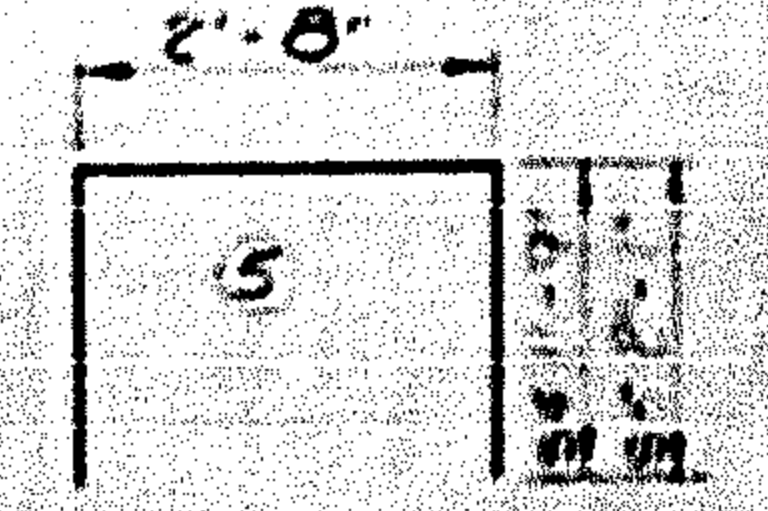
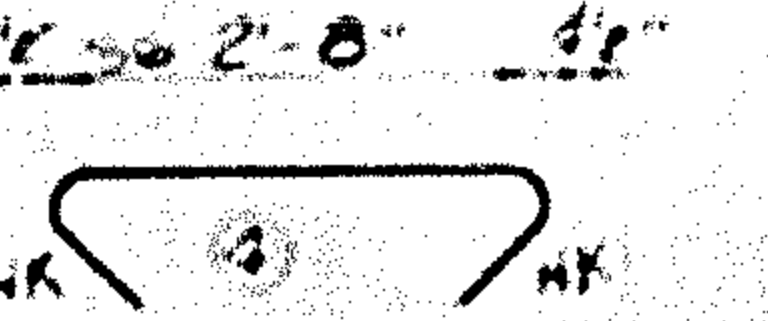
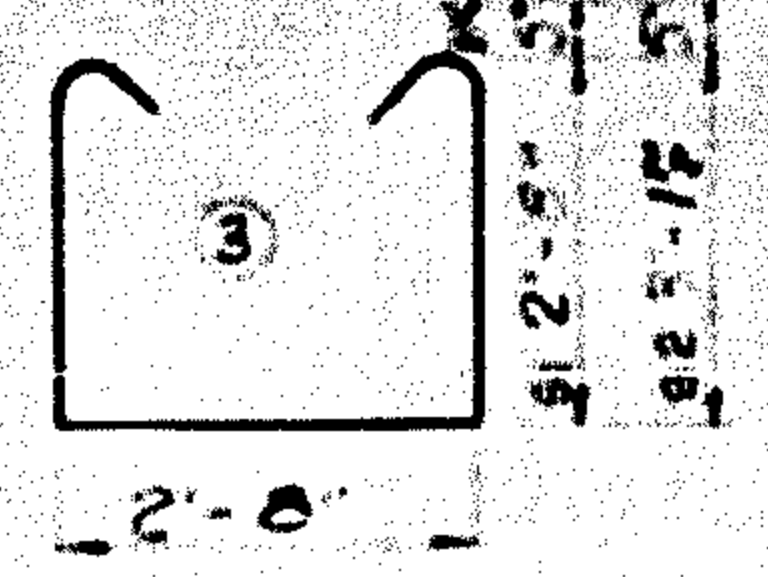
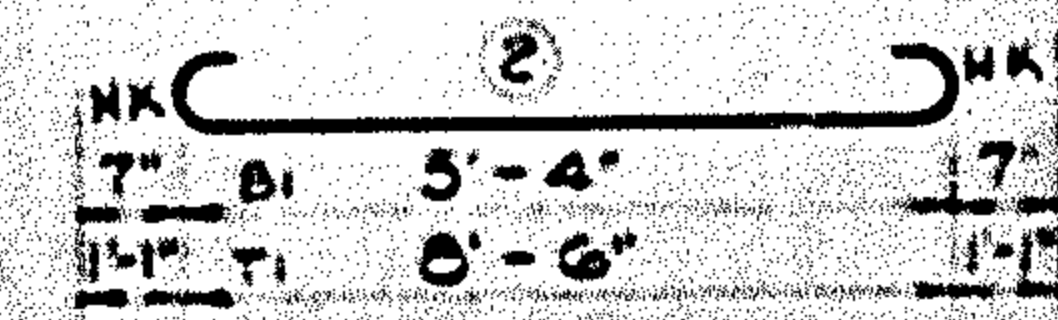
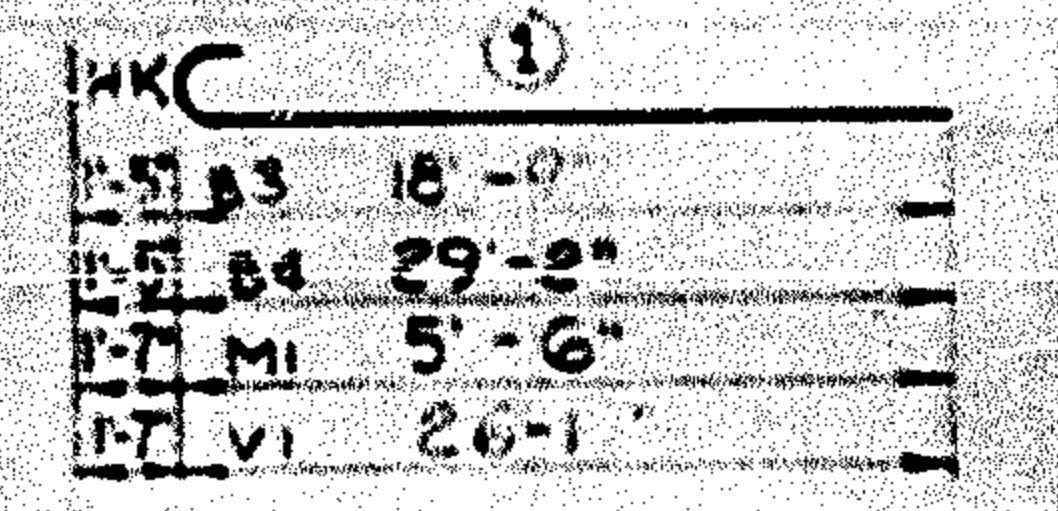
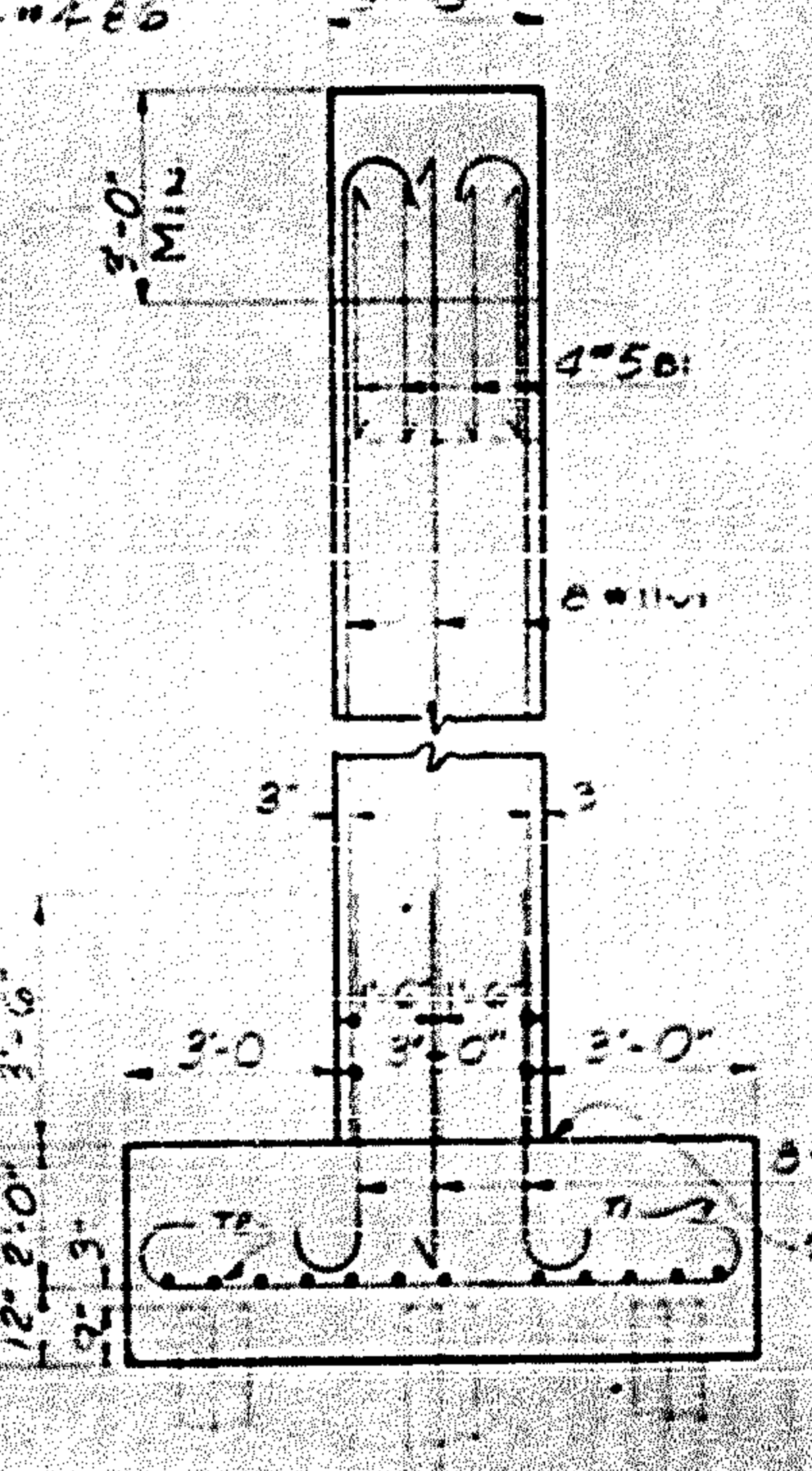
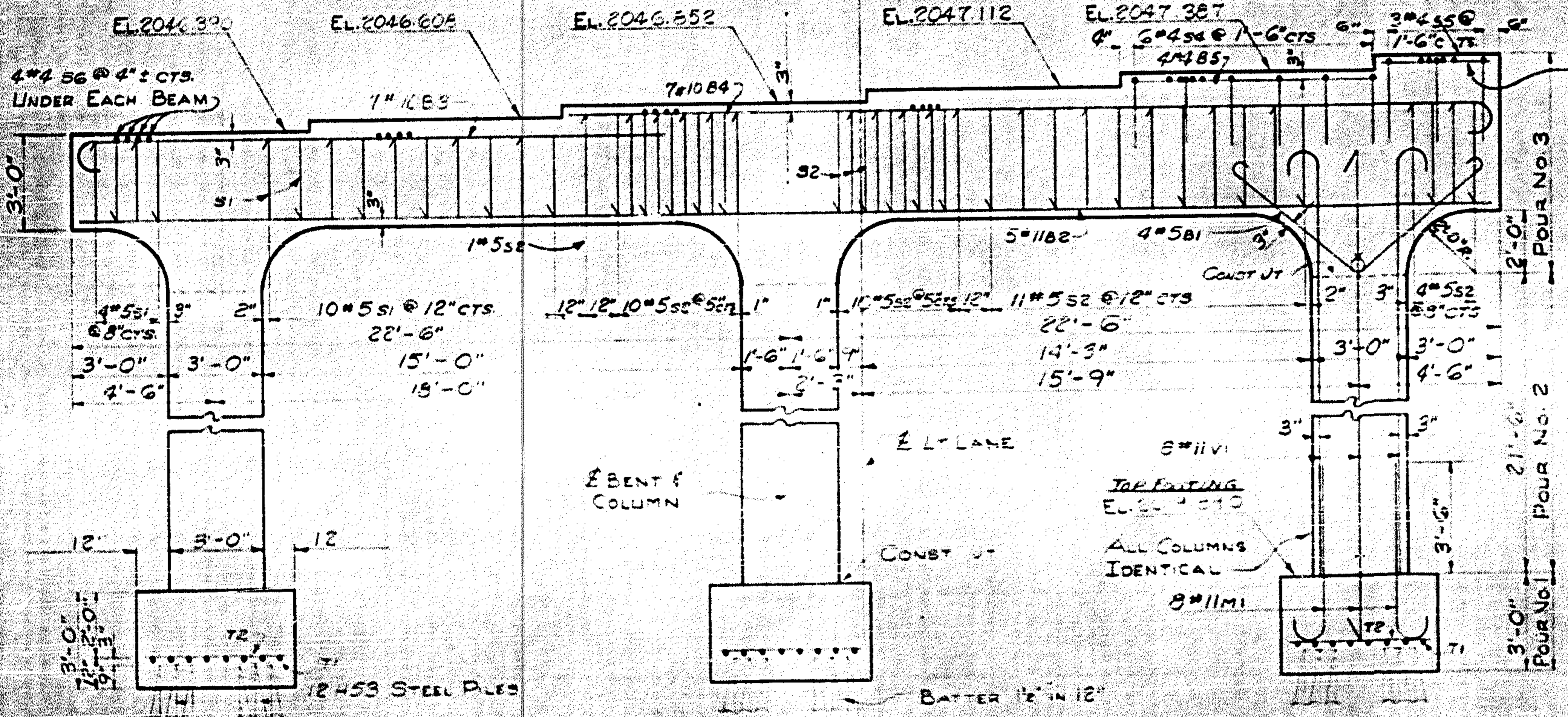
DESIGNED BY: J. HARVARD  
DATE: 5-1-67  
CHECKED BY: J. HARVARD  
DATE: 5-1-67



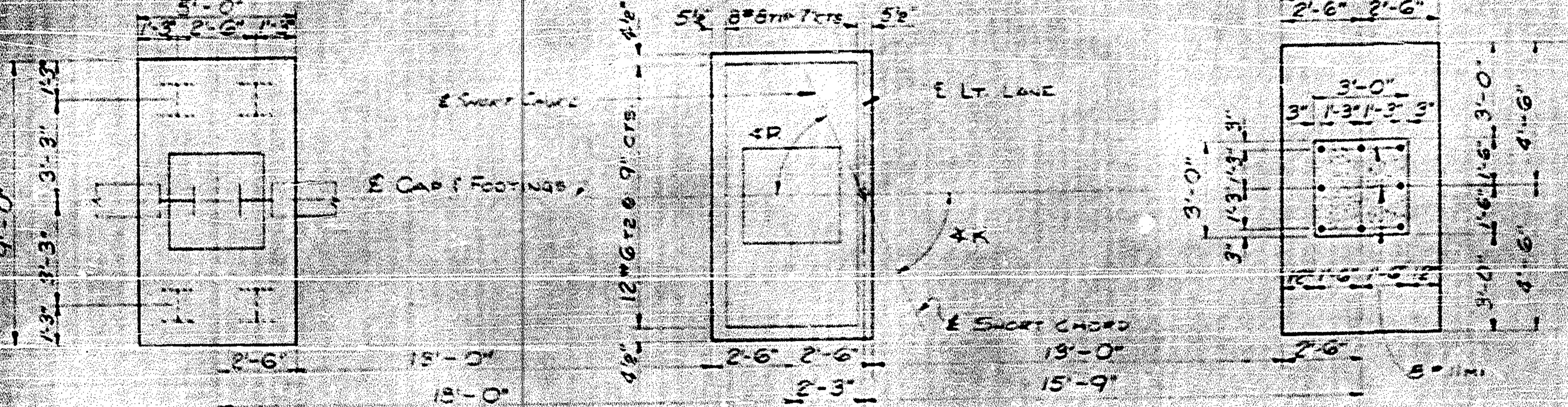
ANGLES	
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2	4" x 4" x 1/4"
3	4" x 4" x 1/4"
4	4" x 4" x 1/4"
5	4" x 4" x 1/4"
6	4" x 4" x 1/4"
7	4" x 4" x 1/4"
8	4" x 4" x 1/4"
9	4" x 4" x 1/4"
10	4" x 4" x 1/4"
11	4" x 4" x 1/4"
12	4" x 4" x 1/4"
13	4" x 4" x 1/4"
14	4" x 4" x 1/4"
15	4" x 4" x 1/4"
16	4" x 4" x 1/4"
17	4" x 4" x 1/4"
18	4" x 4" x 1/4"
19	4" x 4" x 1/4"
20	4" x 4" x 1/4"
21	4" x 4" x 1/4"
22	4" x 4" x 1/4"
23	4" x 4" x 1/4"
24	4" x 4" x 1/4"
25	4" x 4" x 1/4"
26	4" x 4" x 1/4"
27	4" x 4" x 1/4"
28	4" x 4" x 1/4"
29	4" x 4" x 1/4"
30	4" x 4" x 1/4"

BAR DETAILS  
ALL BAR DIMENSIONS ARE OUT TO OUT

BRIDGE SEAT ELEVATIONS

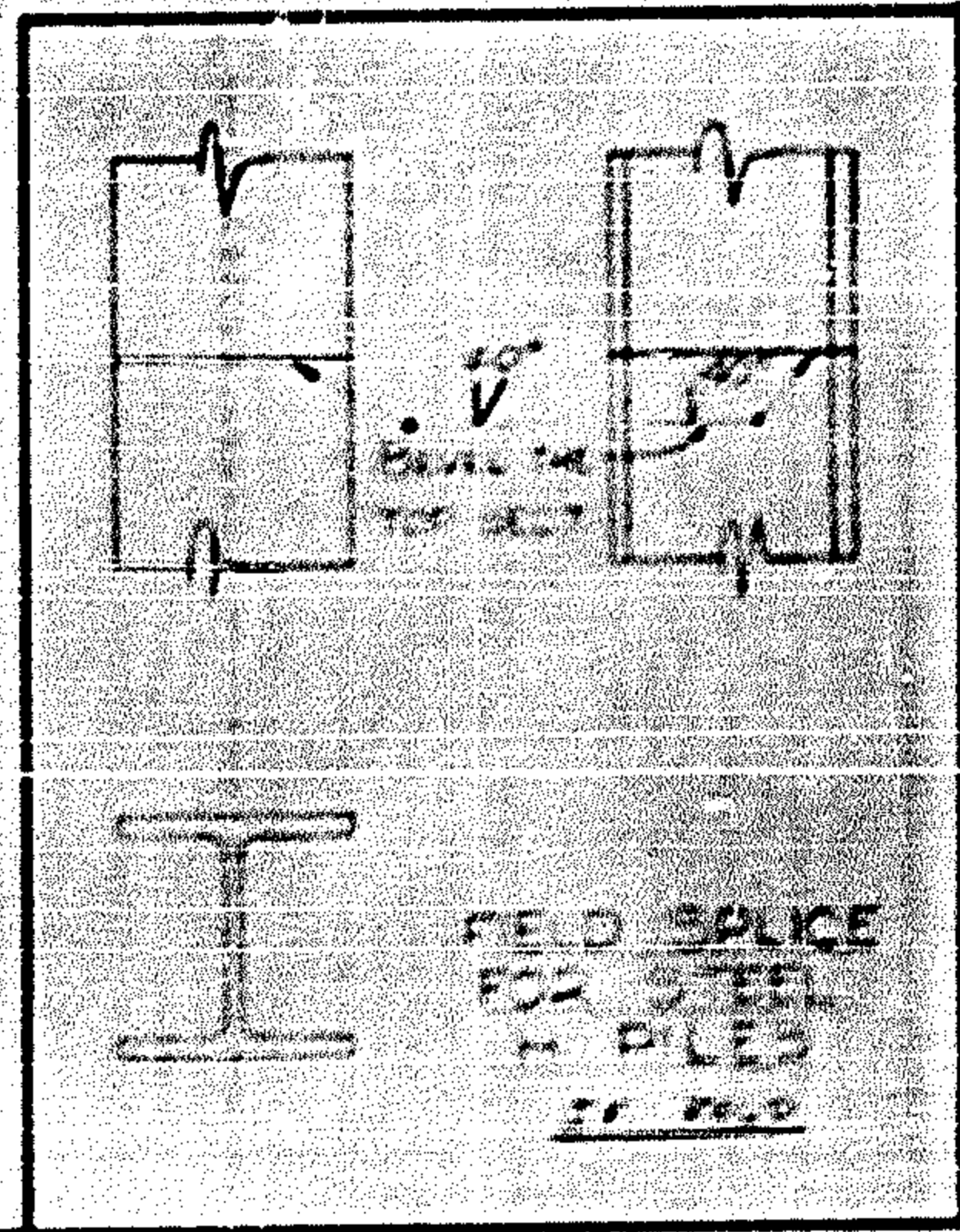


ELEVATION



PLAN OF FOOTINGS

DIVISION OF CONCRETE	
BENT NO. 2	
POUR NO. 1	24 YDS
FOOTINGS	15.0
COLUMNS	21.3
CAP	20.3
TOTAL	56.6



BILL OF MATERIAL

BENT NO. 2

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	24	#5	2	66.6	11.2
B2	5	#11	STE	23.6	17.1
B3	7	#10	1	27.5	6.0
B4	7	#10	1	37.7	9.7
B5	4	#4	5/8	11.4	2.1
B6	4	#4	5/8	9.6	1.9
MI	27	#11	1	72.11	10.8
VI	27	#11	1	27.5	3.5
TI	27	#8	2	10.47	2.6
TE	36	#6	3/4	21.6	24.1

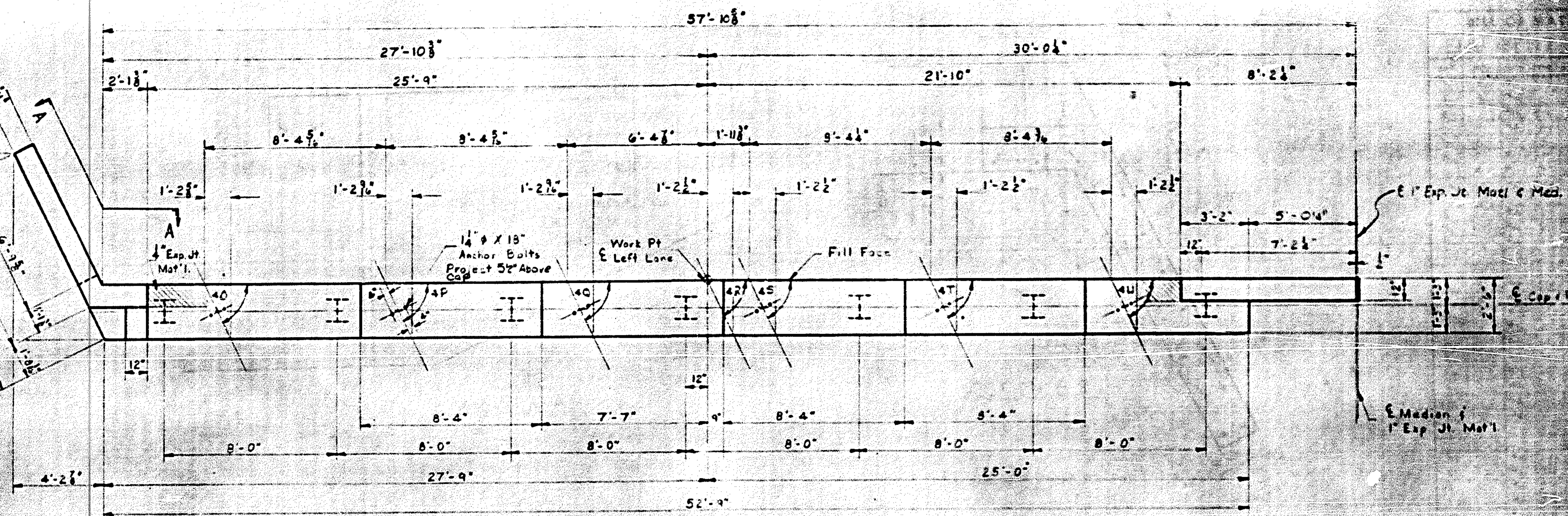
PROJECT No. 6-1562003  
POLK COUNTY  
STATION 665 + 35.52 E.M.P.

STATE OF NORTH CAROLINA  
STATE HIGHWAY COMMISSION

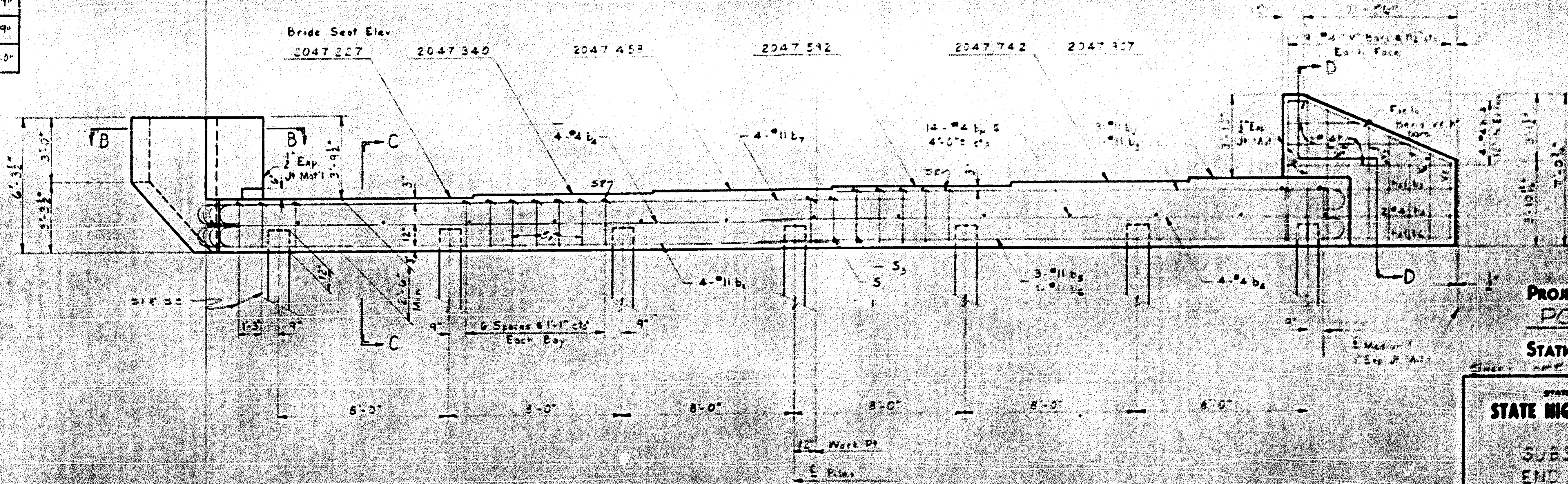
BENT NO. 2  
LEFT LANE

JUNE 1967

Angle	Degrees
O	64° 05' 21.8"
P	64° 05' 35.8"
Q	64° 07' 05.6"
R	64° 09' 42.0"
S	64° 10' 15.9"
T	64° 12' 41.9"
U	64° 15' 13.0"



PLAN



ELEVATION

PROJECT No. 21864003  
 POLK COUNTY  
 STATION 665-38.33

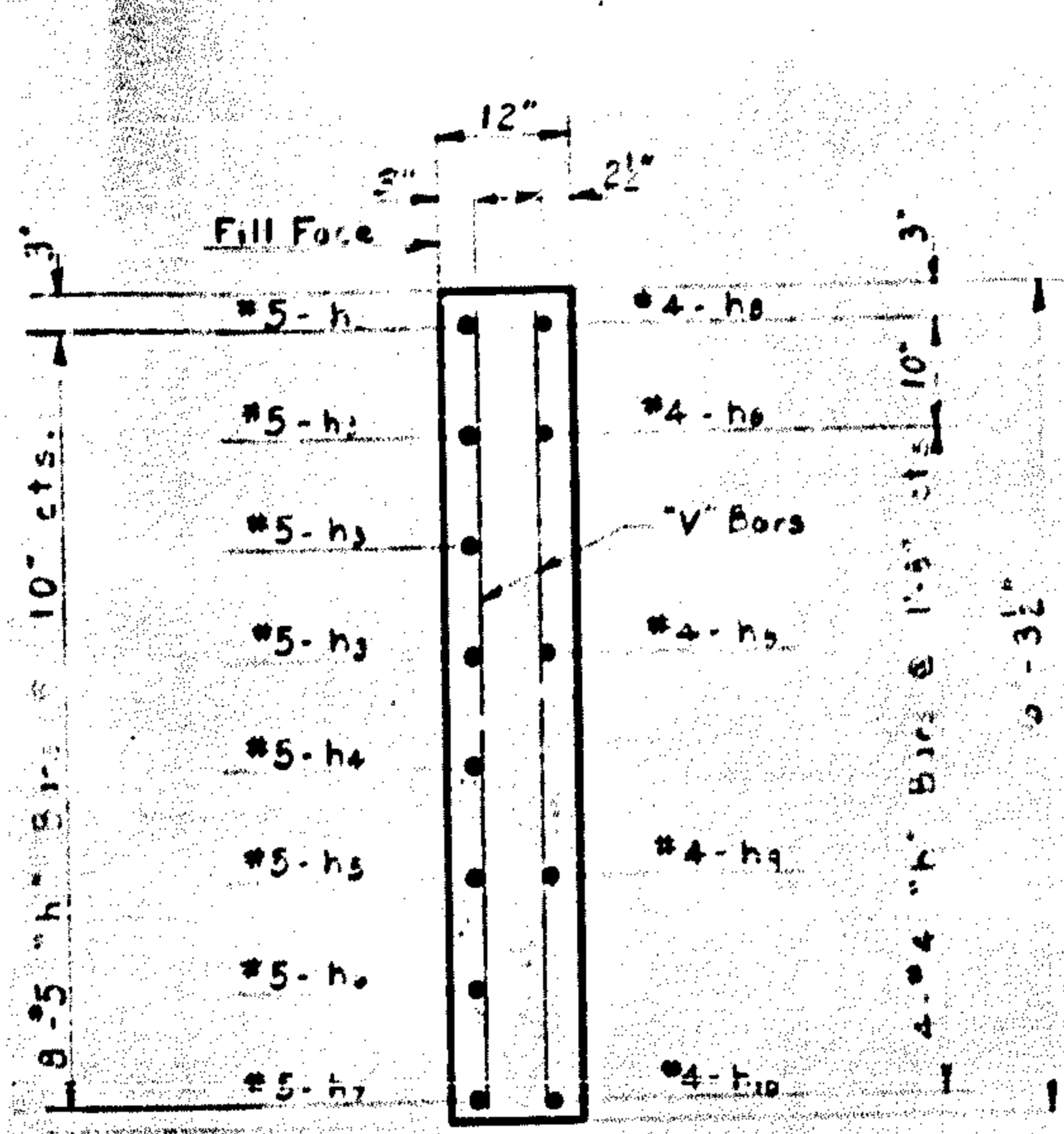
STATE OF NORTH CAROLINA  
**STATE HIGHWAY COMMISSION**  
 Raleigh

SUBSTRUCTURE  
 END BENT NO. 2  
 LEFT LANE

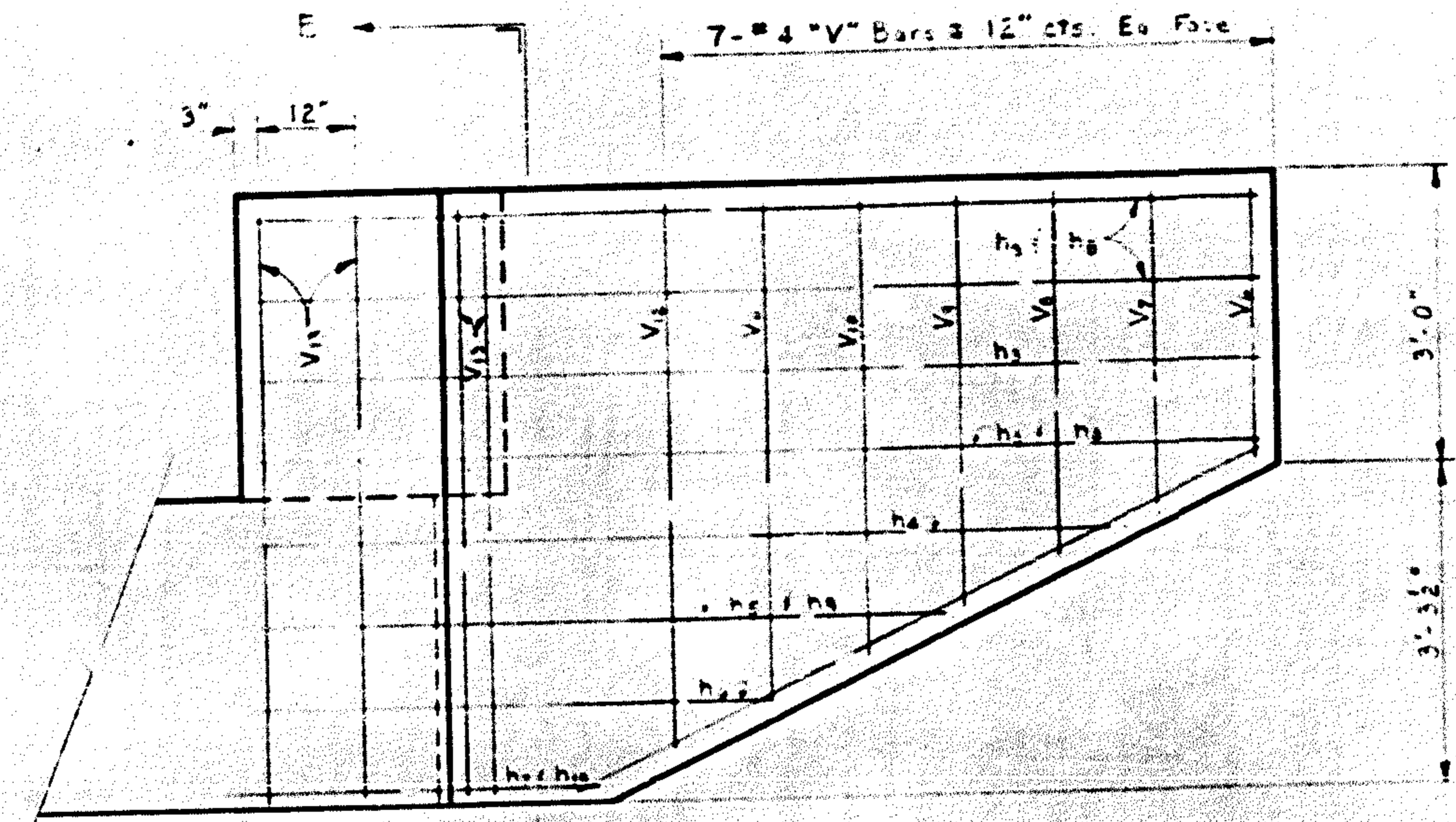
REV.	BY	DATE	DESCRIPTION

DESIGNED BY: J. J. ... DATE: 1-17-47  
 CHECKED BY: ... DATE: 1-16-47

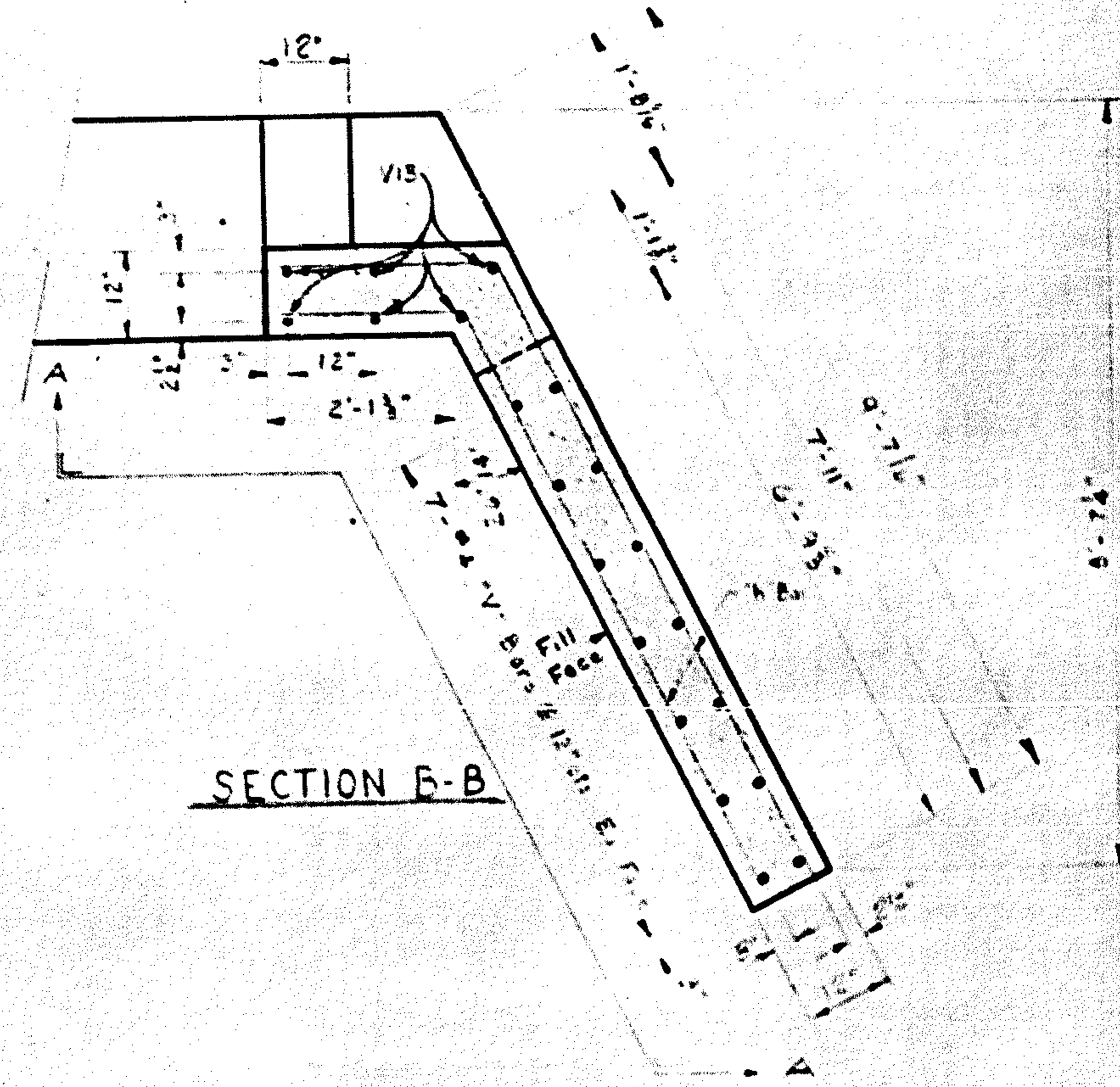




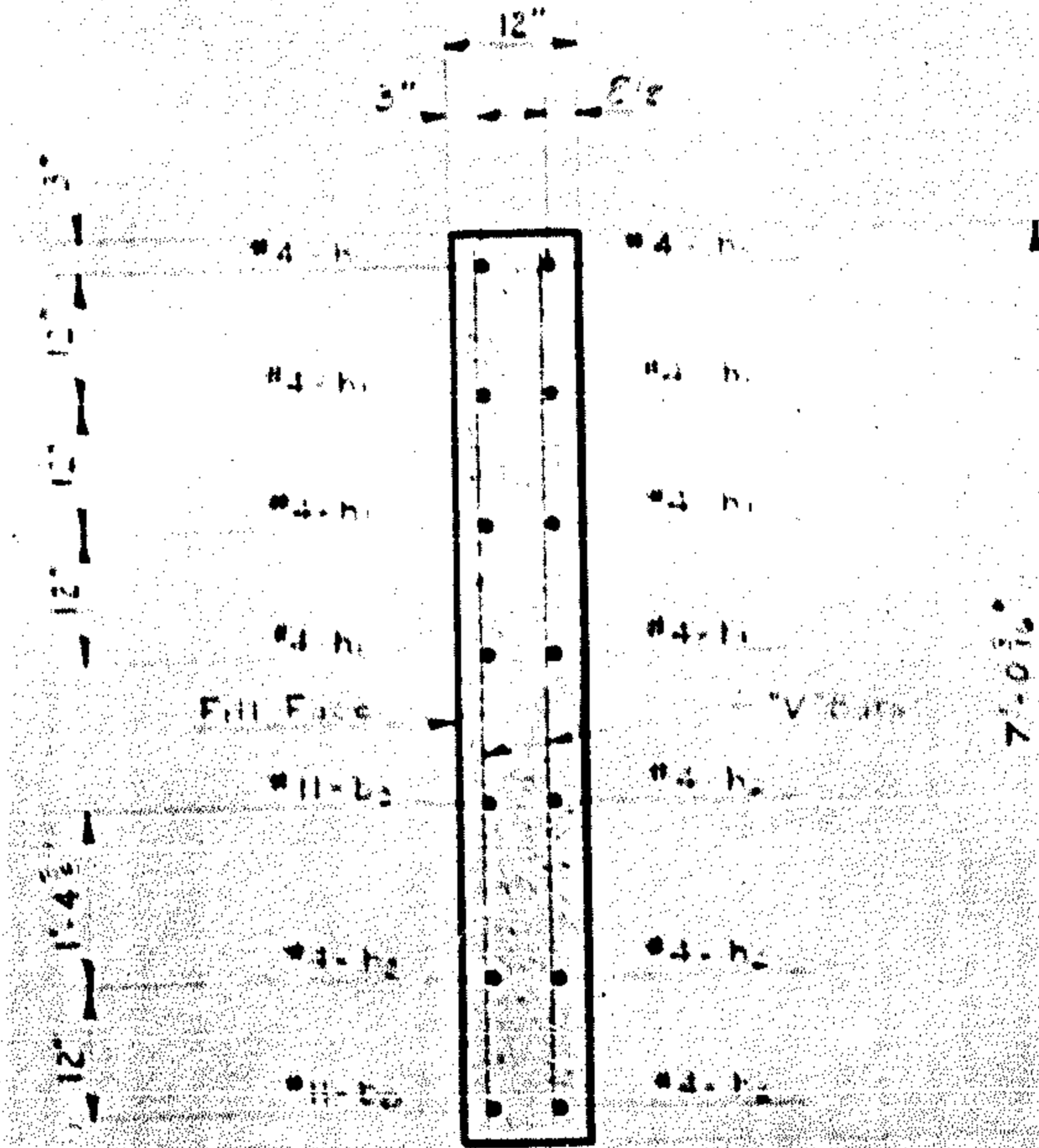
SECTION E-E



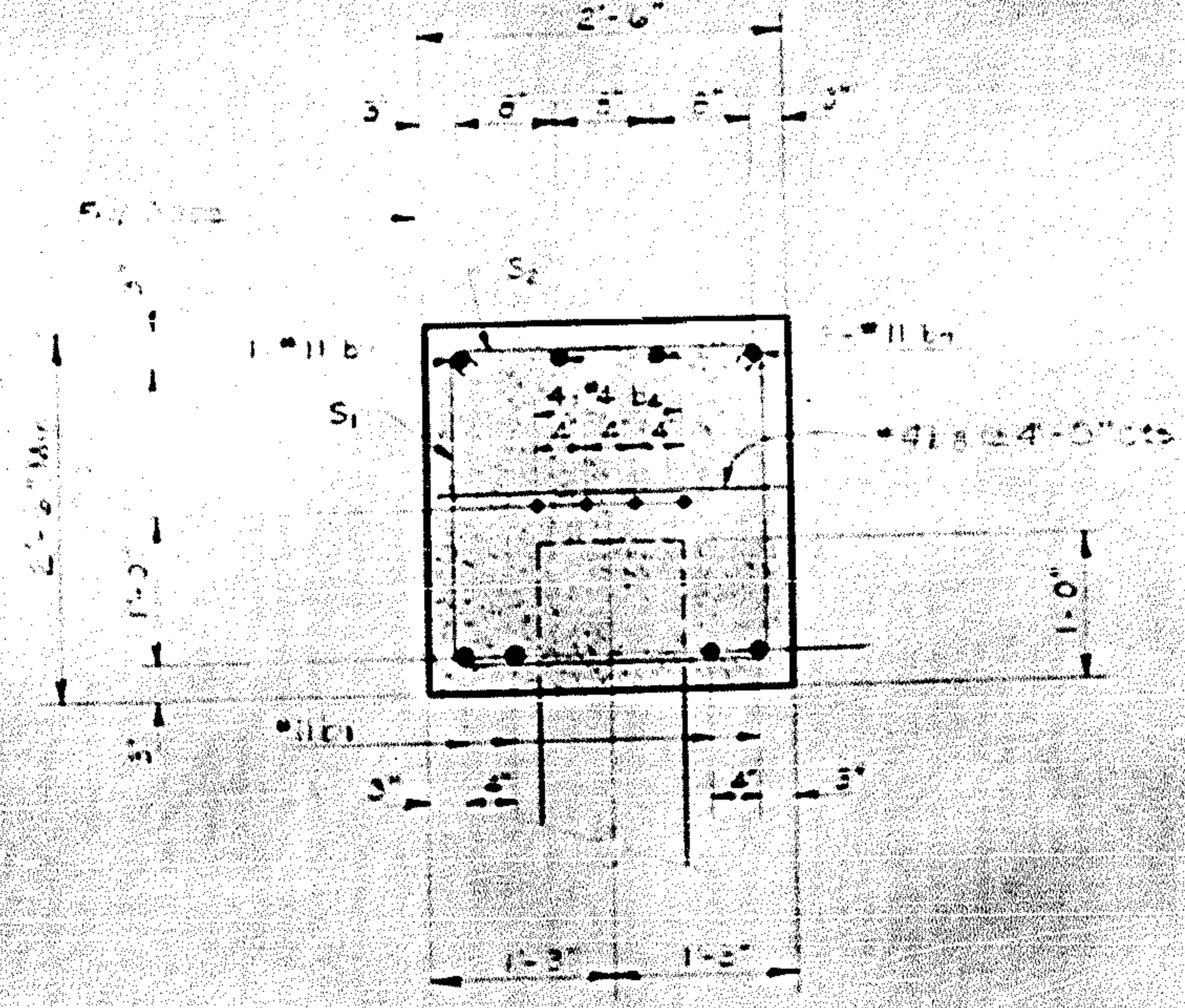
VIEW A-A



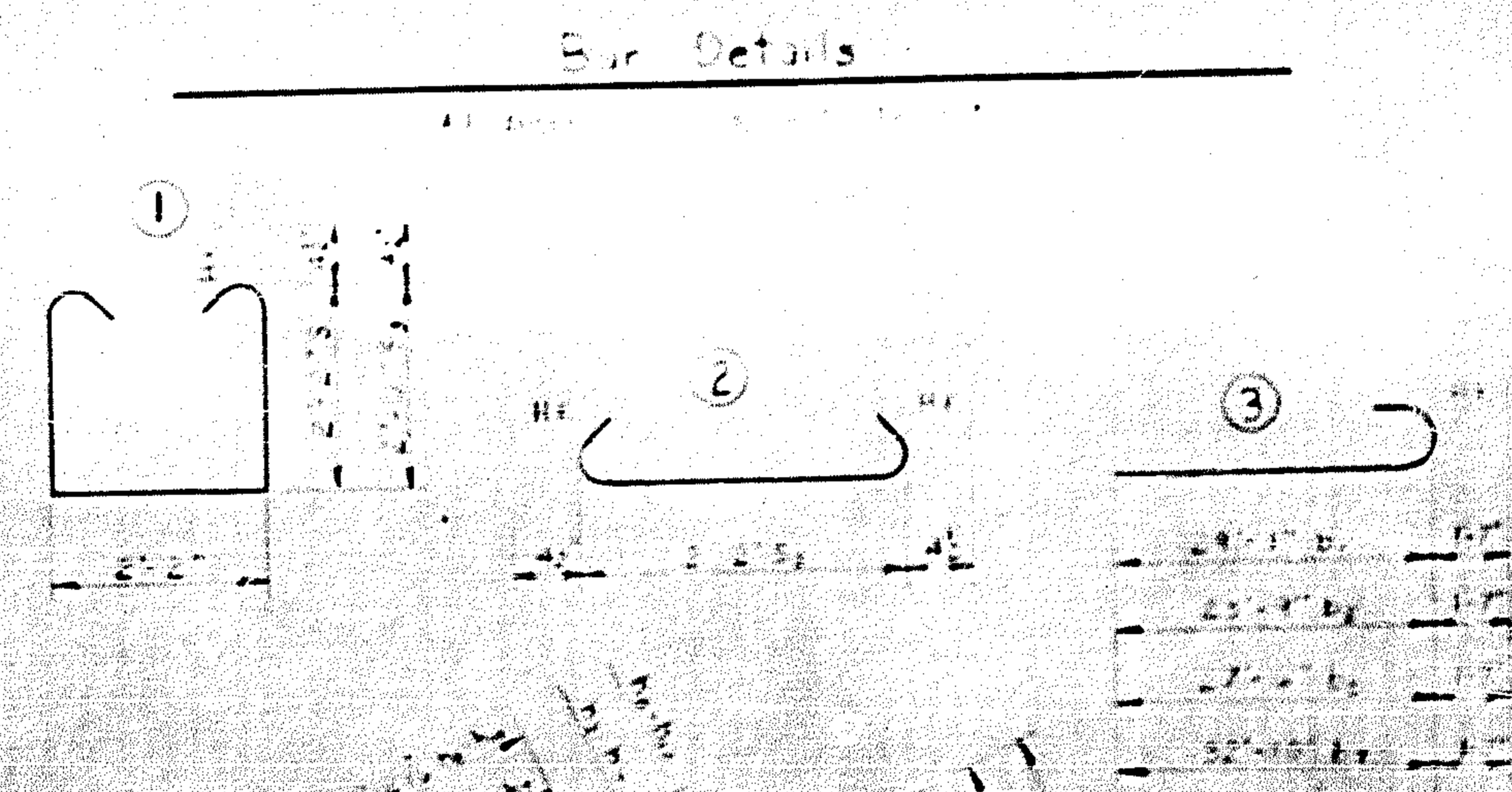
SECTION B-B



SECTION D-D



SECTION C-C



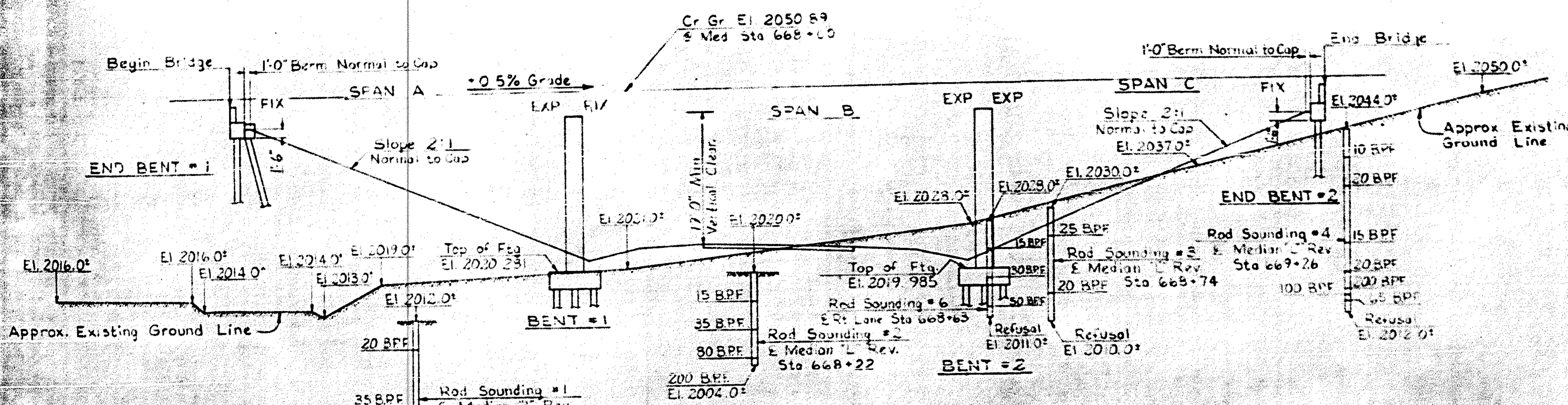
Bar Details

BILL OF MATERIAL					
END BENT NO. 2					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
b1	4	#11	Str.	25'-8"	687
b2	3	#11	Str.	25'-4"	402
b3	1	#11	Str.	28'-10"	51
b4	8	#6	Str.	27'-2"	128
b5	3	#11	Str.	25'-1"	464
b6	1	#11	Str.	32'-7"	110
b7	4	#7	Str.	34'-5"	70
b8	14	#4	Str.	2'-2"	20
S1	25	#4	1	7'-3"	121
S2	45	#4	2	2'-11"	88
S3	20	#4	1	7'-11"	156
h1	8	#6	Str.	7'-10"	43
h2	4	#6	Str.	6'-5"	17
h3	4	#5	7	4'-4"	34
h4	1	#5	4	7'-11"	8
h5	1	#5	4	4'-4"	5
h6	1	#5	4	4'-4"	5
h7	1	#5	4	2'-7"	3
h8	3	#4	4	10'-1"	10
h9	1	#4	4	6'-10"	8
h10	1	#4	4	3'-6"	2
V1	4	#4	Str.	2'-8"	18
V2	4	#4	Str.	2'-2"	16
V3	4	#4	Str.	5'-4"	14
V4	4	#4	Str.	4'-2"	12
V5	2	#4	Str.	3'-8"	6
V6	2	#4	Str.	2'-4"	4
V7	2	#4	Str.	3'-3"	4
V8	2	#4	Str.	3'-4"	5
V9	2	#4	Str.	4'-2"	6
V10	2	#4	Str.	4'-8"	6
V11	2	#4	Str.	5'-2"	7
V12	2	#4	Str.	2'-0"	4
V13	2	#4	Str.	5'-0"	7
Reinforcing Steel 100 - 3100 - 3100					
Concrete 12 M 50' Steel Piling 140 - 7					
See Proj. Award No. 2, Apr. 16					

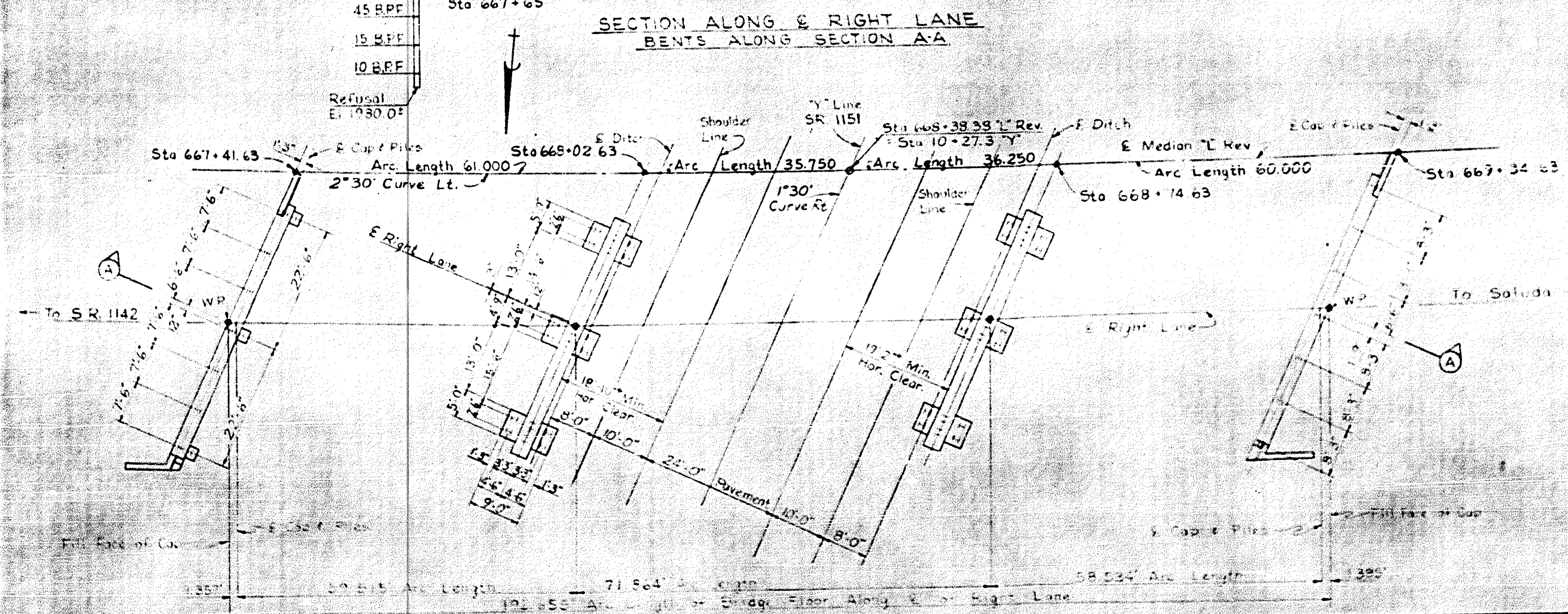
PROJECT No. B1864003  
 POLK COUNTY  
 STATION 208 + 54.22  
 SHEET 208-2

STATE OF NORTH CAROLINA  
**STATE HIGHWAY COMMISSION**  
 RALEIGH  
 SUBSTRUCTURE  
 END BENT NO. 2  
 LEFT LAINE

DRAWN BY: [Signature] DATE: 2-15-71  
 CHECKED BY: [Signature] DATE: 2-15-71



NOTE:  
For Notes, Extended Tangent Layout,  
and Location Sketch see General Drawing  
for Left Lane.



I hereby certify that this structure was  
built according to plan *B. J. Davis*  
Resident Engineer

**RIGHT LANE**  
PROJECT No. 8.1869003  
POLK COUNTY  
STATION 668+38.38 E. Med  
10+27.3 Y

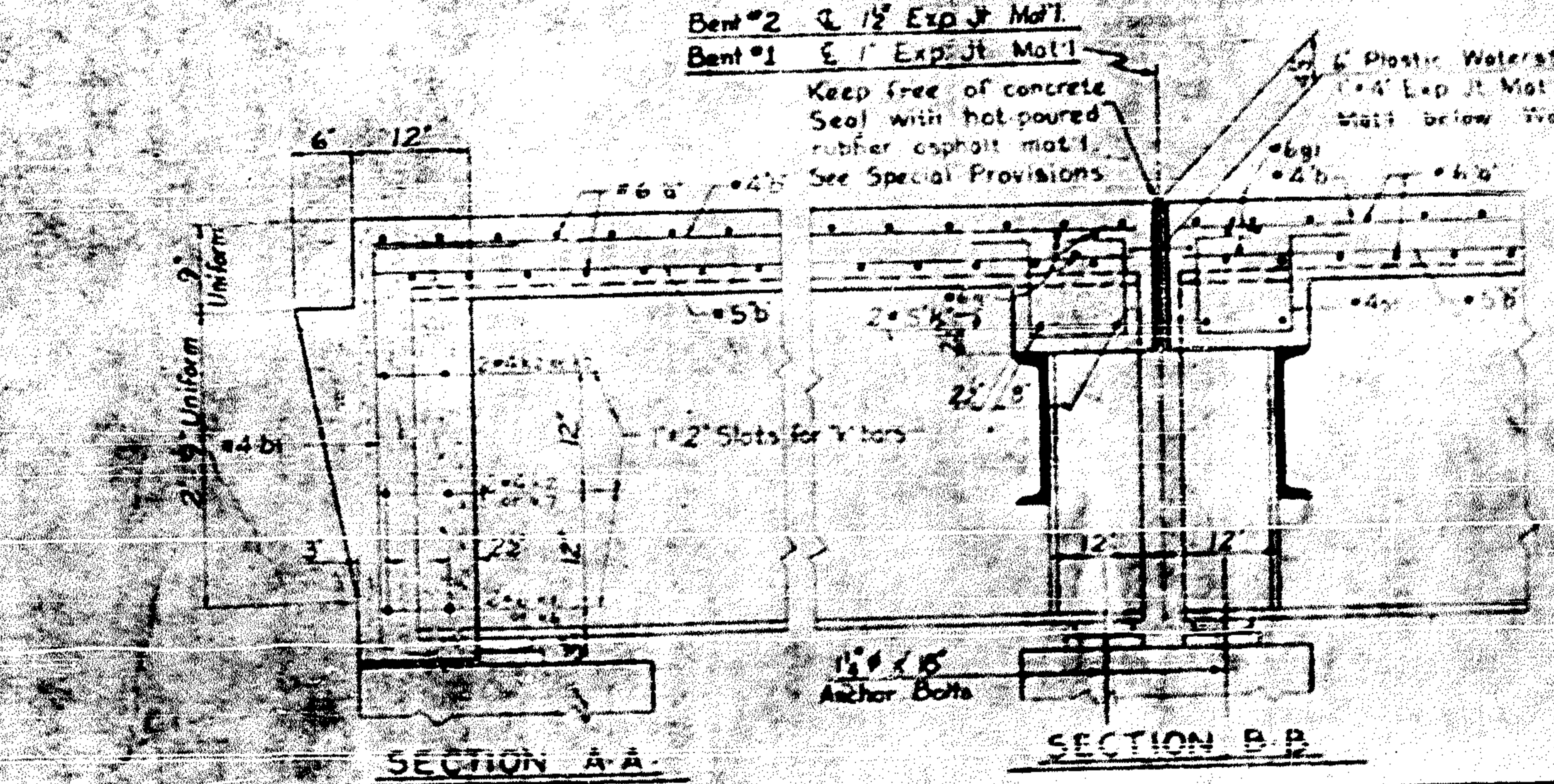
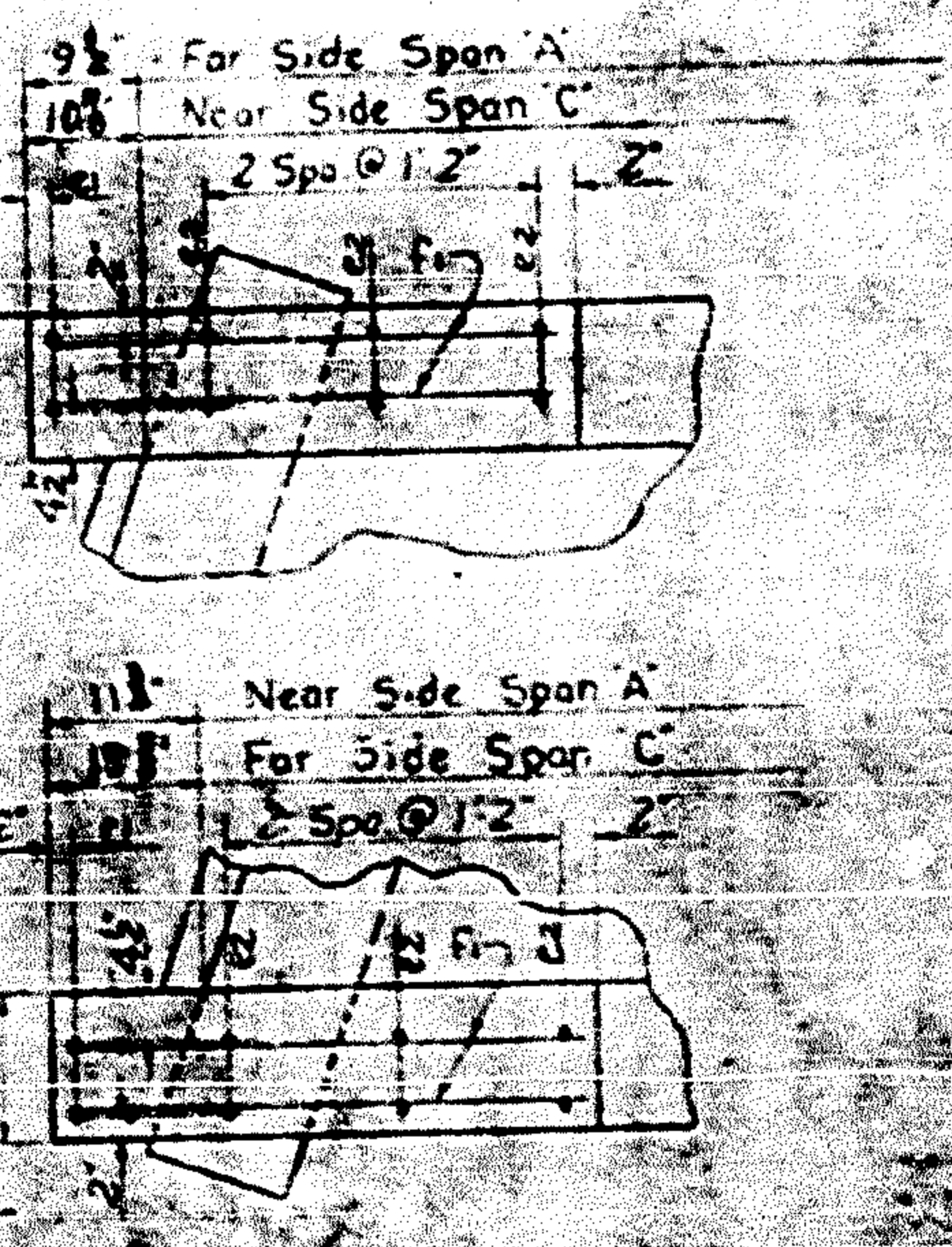
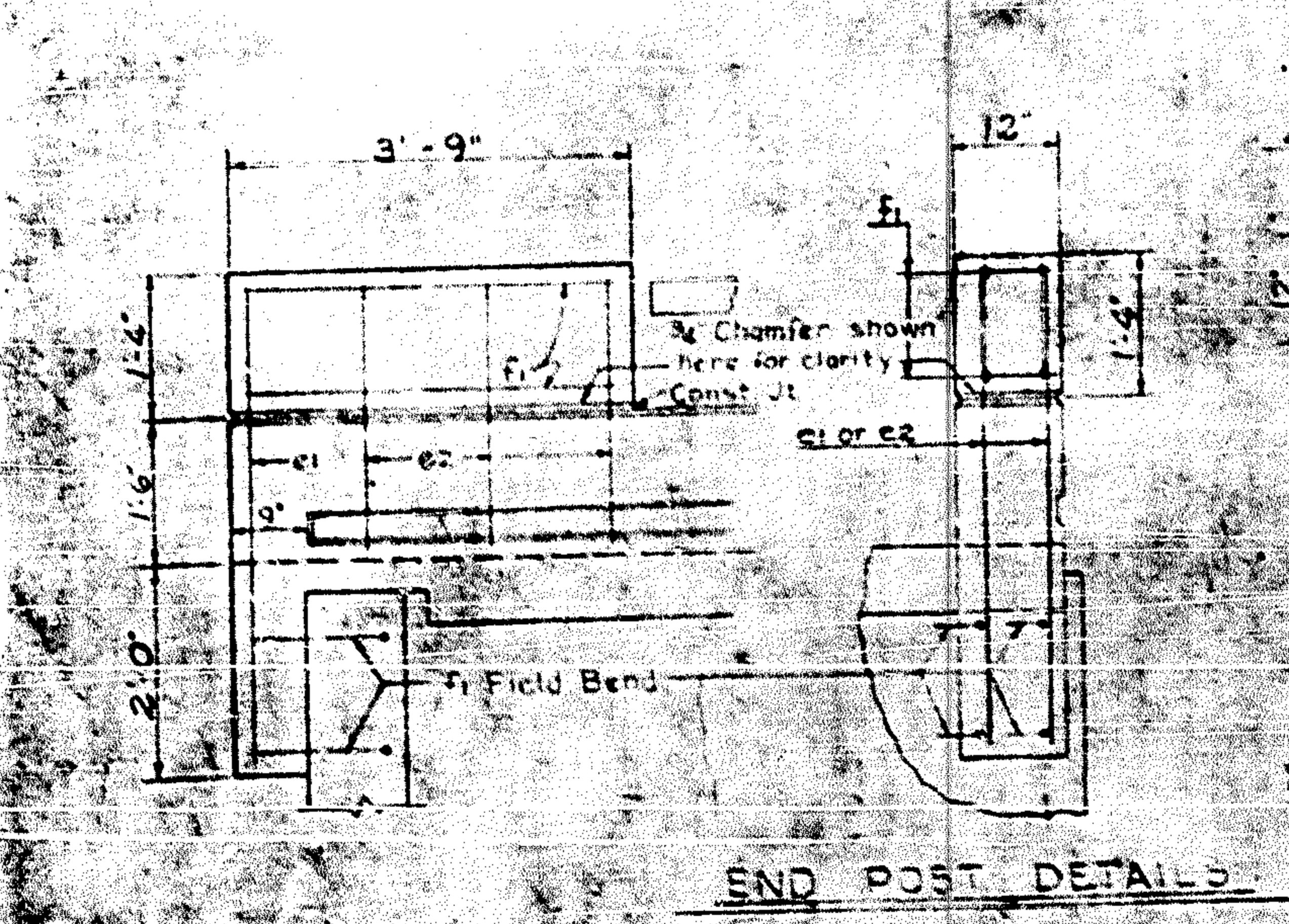
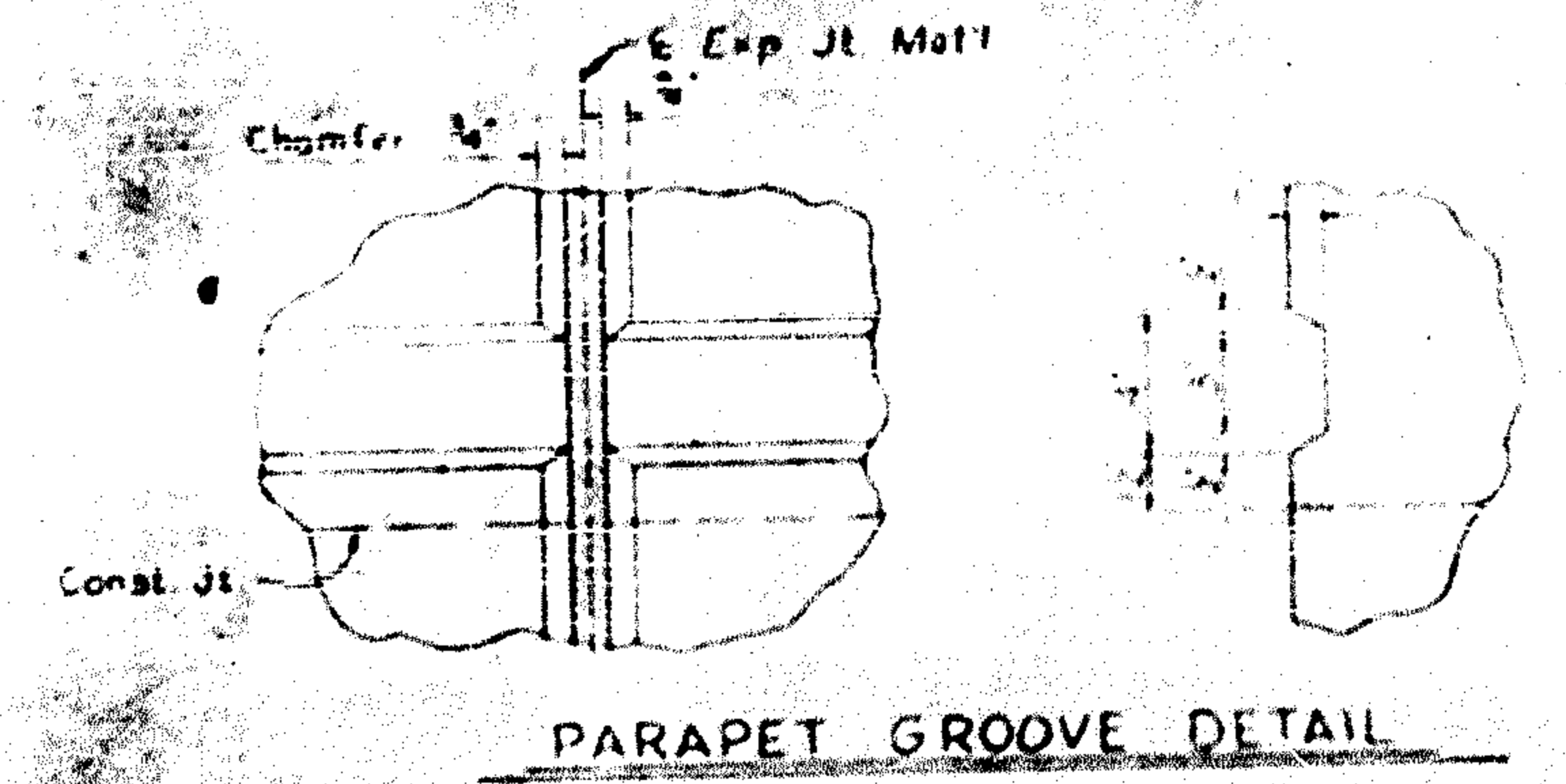
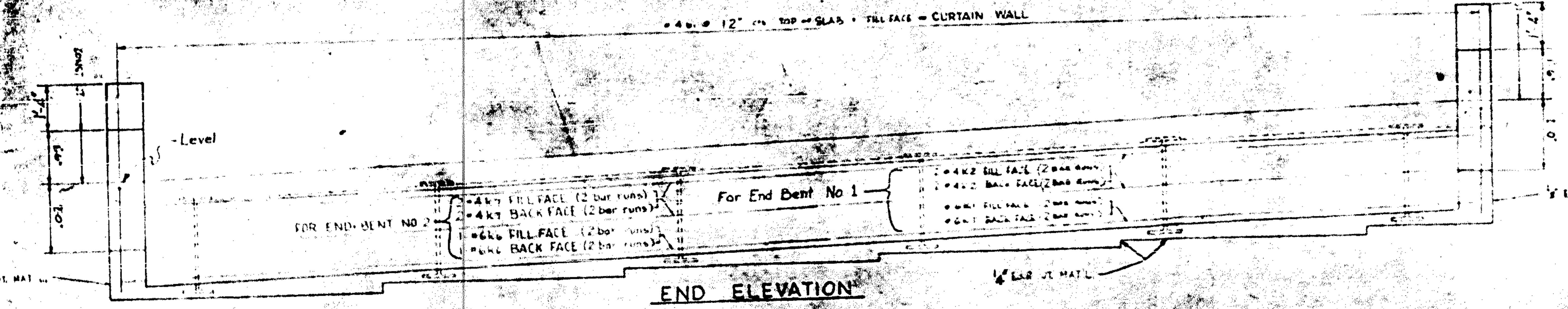
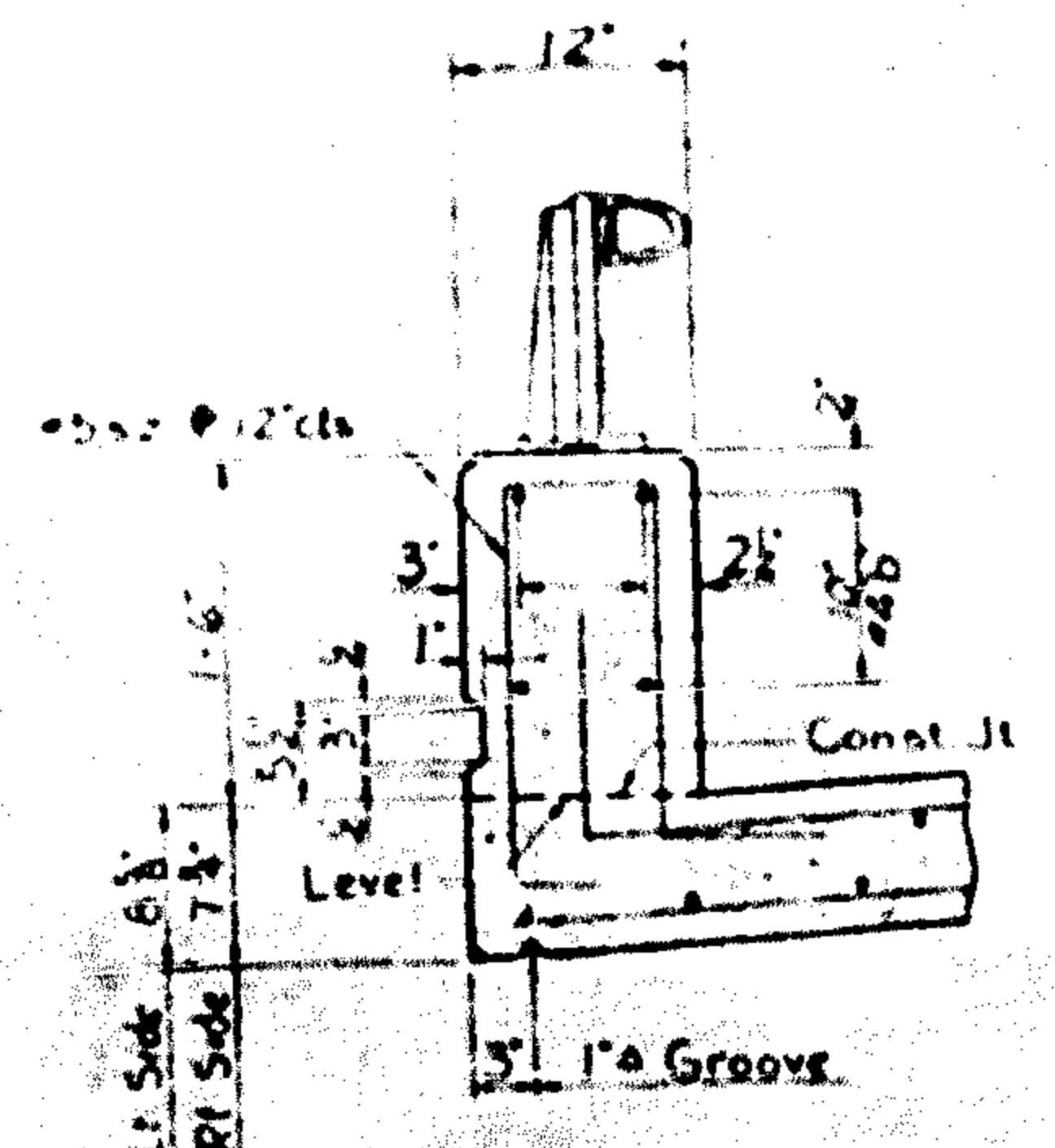
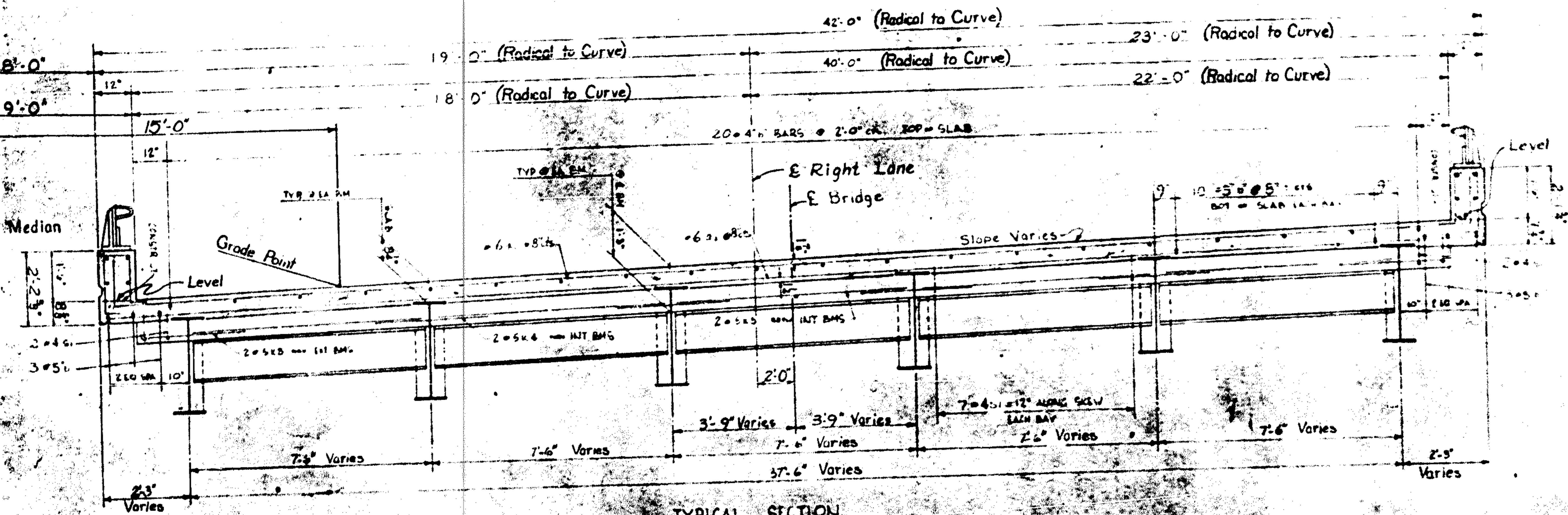
NOTE: See Special Provisions for method of curing  
bridge deck and mixing and applying the  
linseed oil solution.

	TOTAL BILL OF MATERIAL						
	CLASS A CONCRETE	CLASS AA CONCRETE	REINF STEEL	STRUCT STEEL	12 H53 STEEL PILES	UNCLASS STRUCT METAL PILE	1-BAR METAL PILING
SUPERSTRUCTURE		242.8	56,781	201,300			373.71
END BENT #1	17.4		3,878				
BENT #1	59.6		8,958				
BENT #2	58.6		9,048				
END BENT #2	18.5		3,525				
TOTALS	154.1	242.8	82,220	201,300	63	1,675	373.71

STATE OF NORTH CAROLINA  
**STATE HIGHWAY COMMISSION**  
RALEIGH  
GENERAL DRAWING FOR  
BRIDGE ON PROJECT BETWEEN  
SR 1142 AND SALUDA  
OVER SR 1151  
AUGUST 1967

**NOTES**

Assumed base load... 120-S16-44 on Alternate Loading.  
 Concrete in compression... 3,000 lbs. per square inch.  
 Reinforcing Steel in Tension... 50,000 lbs. per square inch.  
 For other design data and General Notes see S-N sheet.  
 For bars indicated and no bar marks shown see concrete plan.  
 Expansion joints to be kept free of concrete. Seal with  
 hot-poured rubber asphalt material. See Special Provisions.

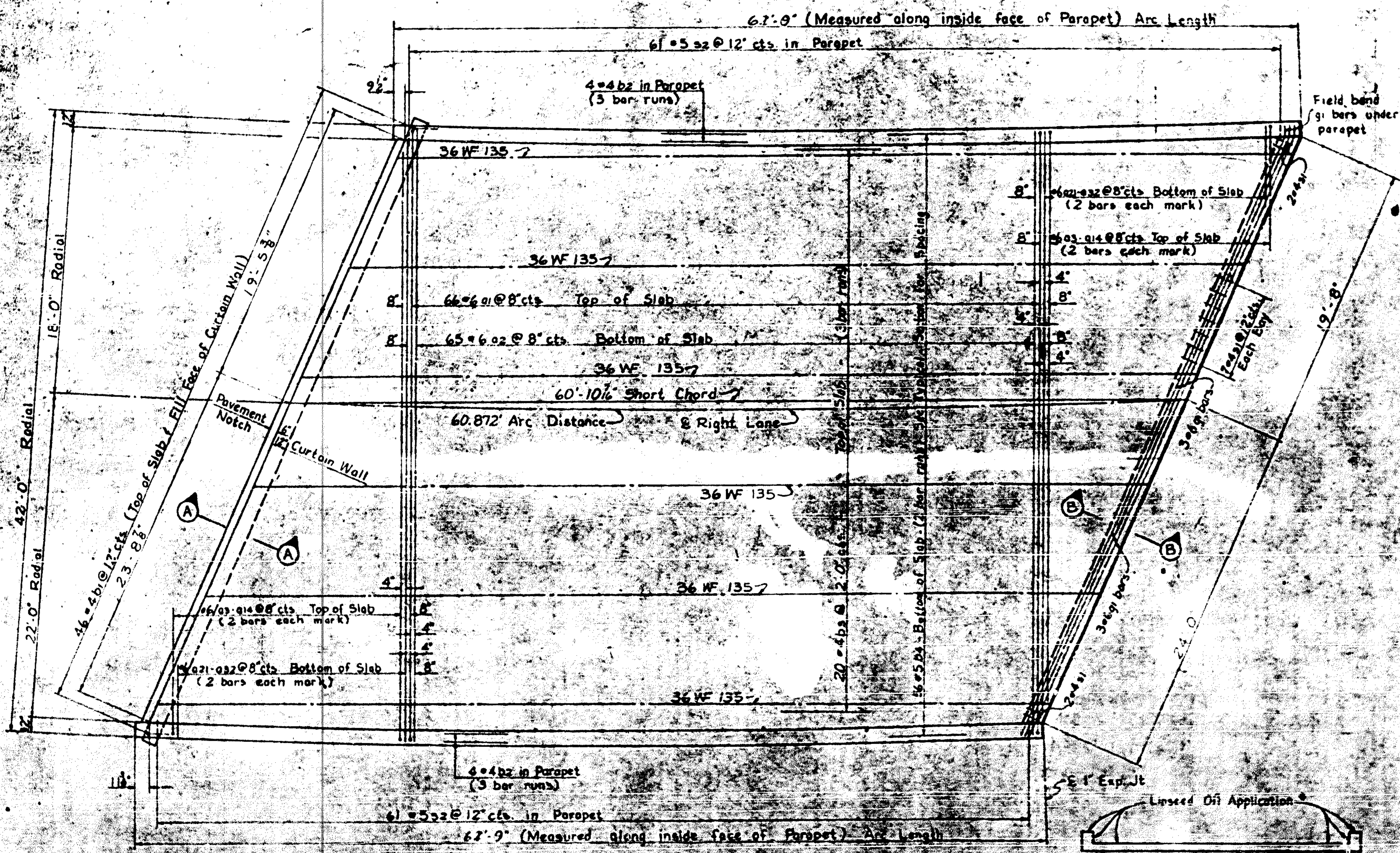


**PROJECT NO. B 186903**  
**POLK COUNTY**  
**STATION 668+38.38 END**  
**RIGHT LANE**

STATE OF NORTH CAROLINA  
**STATE HIGHWAY COMMISSION**

SUBSTRUCTURE  
 STANDARD TYPICAL SECTIONS  
 40 ROADWAY - 6 STEEL BEAMS

JUNE 1967



PLAN - SPAN A

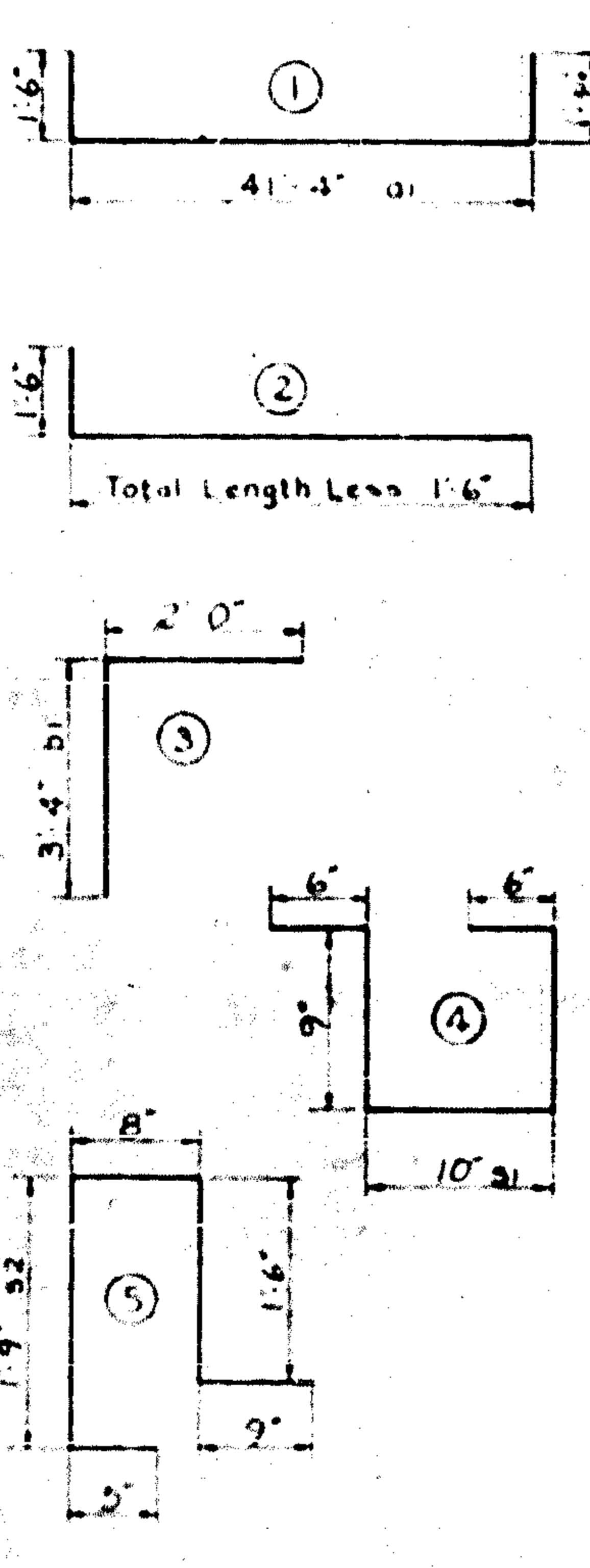
BILL OF MATERIAL

FOR SPAN A

BAR	NO	SIZE	TYPE	LENGTH	WEIGHT
01	66	#6	1	44.4'	4,395
02	65	#6	Str	41.8'	4,060
03	4	#6	2	39.0'	234
04	1	#6	1	35.0'	215
05	1	#6	1	32.2'	193
06	1	#6	1	29.0'	174
07	1	#6	1	25.0'	155
08	1	#6	1	22.8'	136
09	1	#6	1	19.0'	117
10	1	#6	1	16.4'	98
11	1	#6	1	13.4'	79
12	1	#6	1	10.7'	61
13	1	#6	1	7.5'	42
14	4	#6	2	4.5'	26
15	1	#6	1	3.9'	23
b1	46	#4	3	5.4'	164
b2	24	#4	Str	21.5'	342
b3	60	#4	Str	21.1'	845
b4	112	#5	Str	31.4'	3,660
s1	4	#4	Str	4.6'	12
s2	12	#4	Str	2.8'	21
f1	16	#4	Str	3.6'	37
s3	6	#6	Str	24.0'	276
k1	4	#6	Str	24.0'	14
k2	8	#4	Str	24.0'	126
k3	4	#5	Str	13.1'	19
k4	8	#5	Str	3.10'	32
k5	10	#5	Str	8.0'	83
s4	39	#4	4	3.4'	87
s5	122	#5	5	5.1'	627

BAR DETAILS

All bar dimensions are out to out

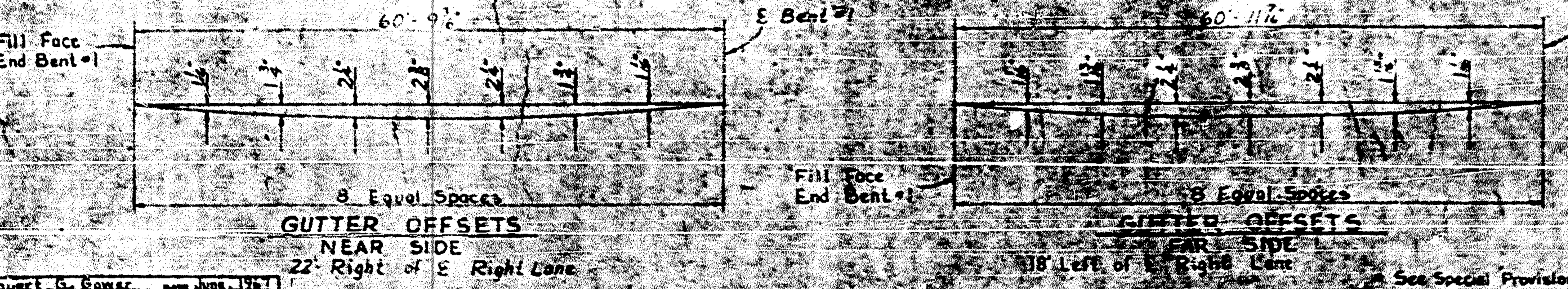


SUPERSTRUCTURE TOTALS

	Rein Steel Lbs.	Class AA Conc Cu Yds.	Struct Steel Approx lbs.
Span A	17,980	79.0	59,80
Span B	21,024	85.8	81,20
Span C	17,777	78.0	58,30
Total	56,781	242.8	201,30

PROJECT No. 81869003  
 POLK COUNTY  
 STATION 668 + 38.38 E. M.  
 RIGHT LANE

STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 SUPERSTRUCTURE  
 PLAN - SPAN A



GUTTER OFFSETS NEAR SIDE

GUTTER OFFSETS FAR SIDE

See Special Provisions for method of curing bridge deck and mixing and applying linseed oil solution.

Drawn by Robert G. Boyer  
 Checked by [Signature]

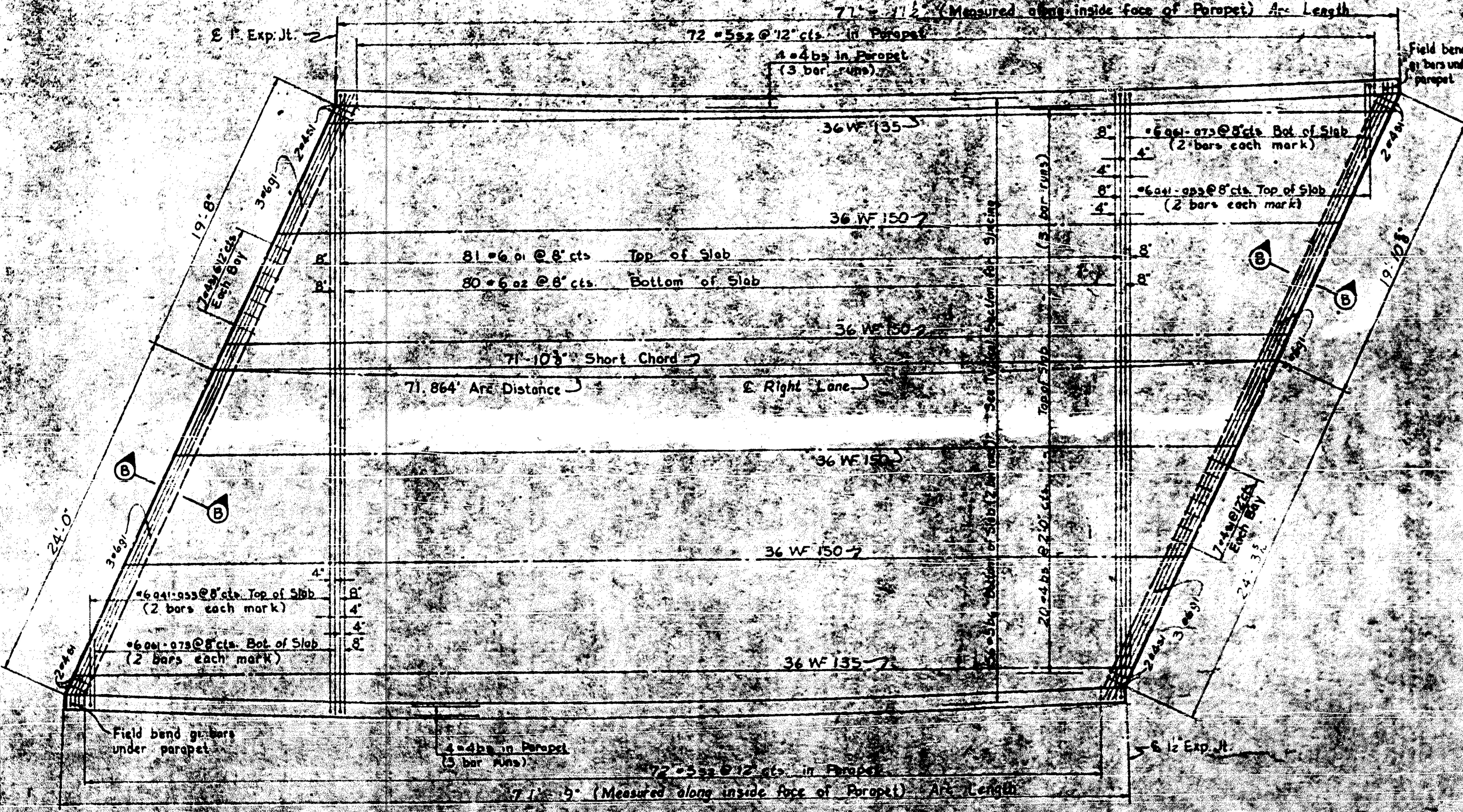
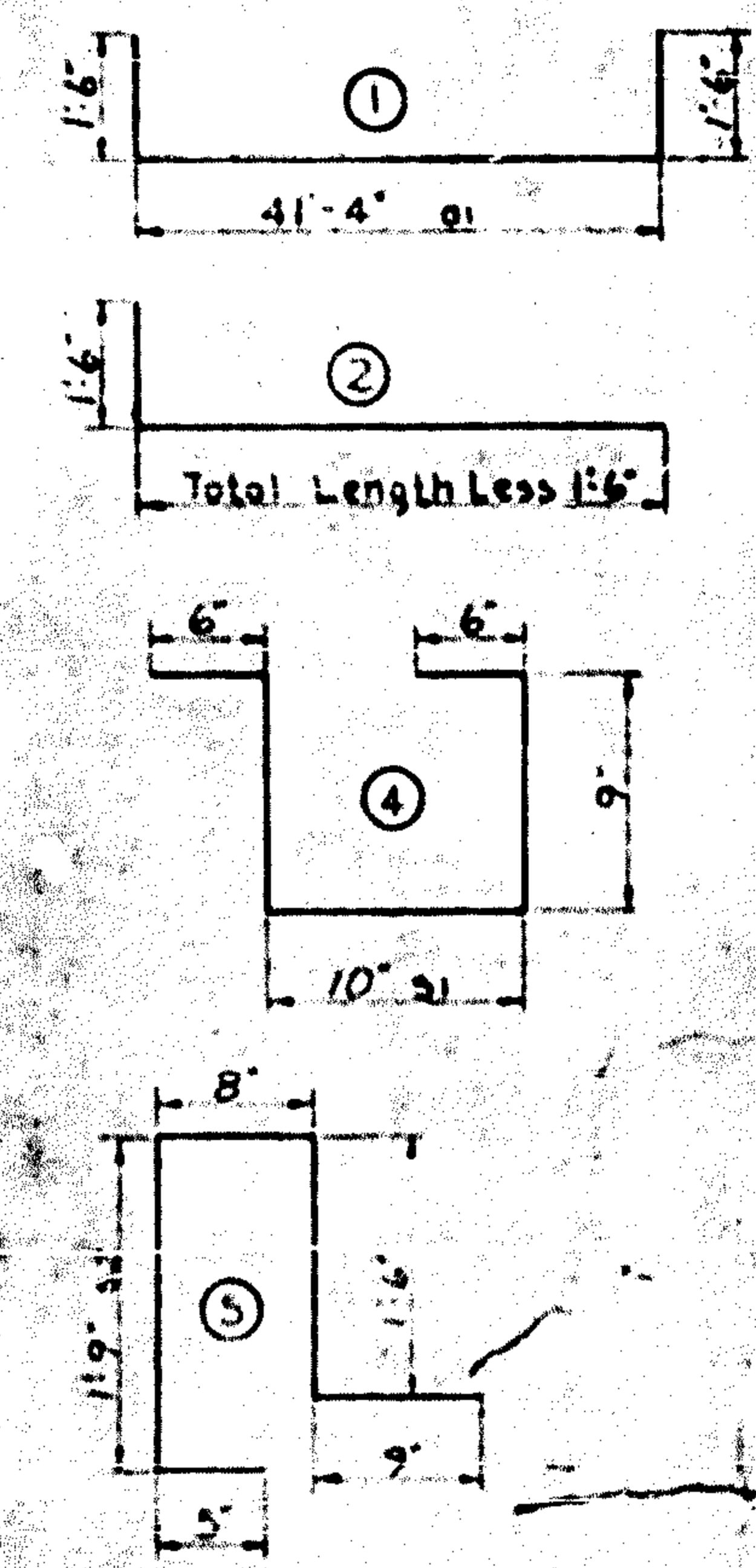
**BILL OF MATERIAL**

**FOR SPAN 'B'**

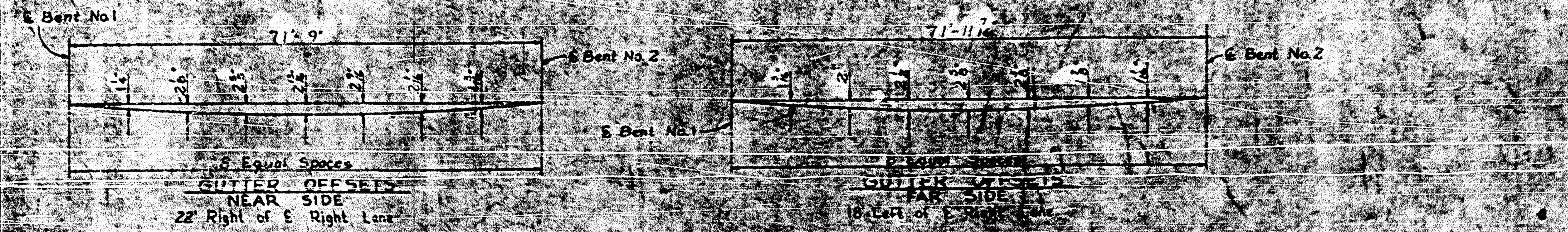
BAR NO.	NO.	SIZE	TYPE	LENGTH	WEIGHT
01	81	#6	1	44.4'	5,394
02	80	#6	Str.	41.8'	5,007
031	4	#6	2	39.2'	235
042	4	#6	1	36.3'	218
043	4	#6	1	33.4'	200
044	4	#6	1	30.5'	183
045	4	#6	1	27.5'	165
046	4	#6	1	24.6'	147
047	4	#6	1	21.7'	130
048	4	#6	1	18.8'	112
049	4	#6	1	15.8'	94
050	4	#6	1	12.9'	77
051	4	#6	1	9.10'	59
052	4	#6	1	6.11'	42
053	4	#6	2	3.11'	24
061	4	#6	Str.	38.7'	232
062	4	#6	1	35.8'	214
063	4	#6	1	32.9'	197
064	4	#6	1	29.9'	179
065	4	#6	1	26.10'	160
066	4	#6	1	23.11'	144
067	4	#6	1	21.0'	126
068	4	#6	1	18.0'	108
069	4	#6	1	15.1'	94
070	4	#6	1	12.2'	75
071	4	#6	1	9.3'	56
072	4	#6	1	6.3'	38
073	4	#6	Str.	3.4'	20
b2	84	#4	Str.	24.9'	1,389
b4	112	#5	Str.	36.8'	4,283
g1	12	#6	Str.	24.0'	433
k9	8	#5	Str.	3.1'	26
k2	16	#5	Str.	3.10'	64
k9	20	#5	Str.	8.0'	167
01	76	#4	4	3.4'	174
02	144	#5	5	5.1'	763

**BAR DETAILS**

All bar dimensions are out to out



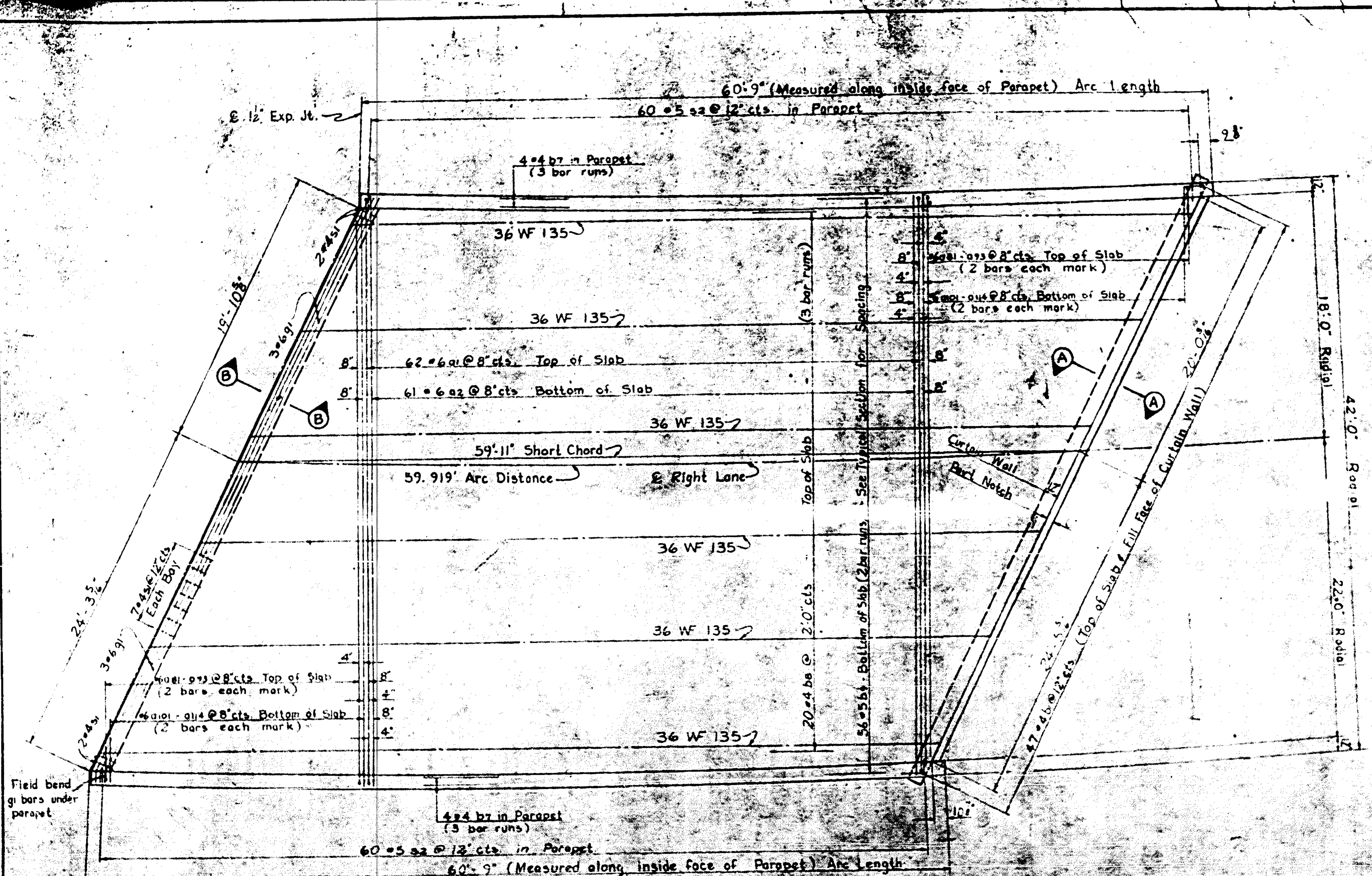
**PLAN SPAN 'B'**



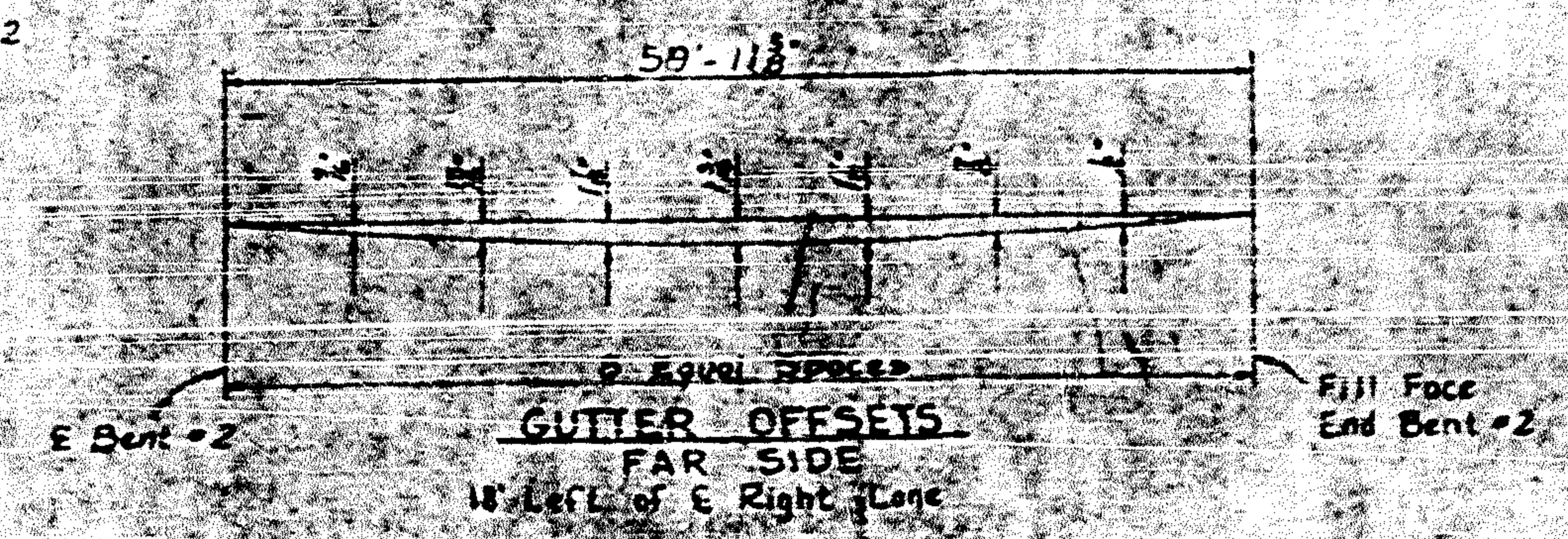
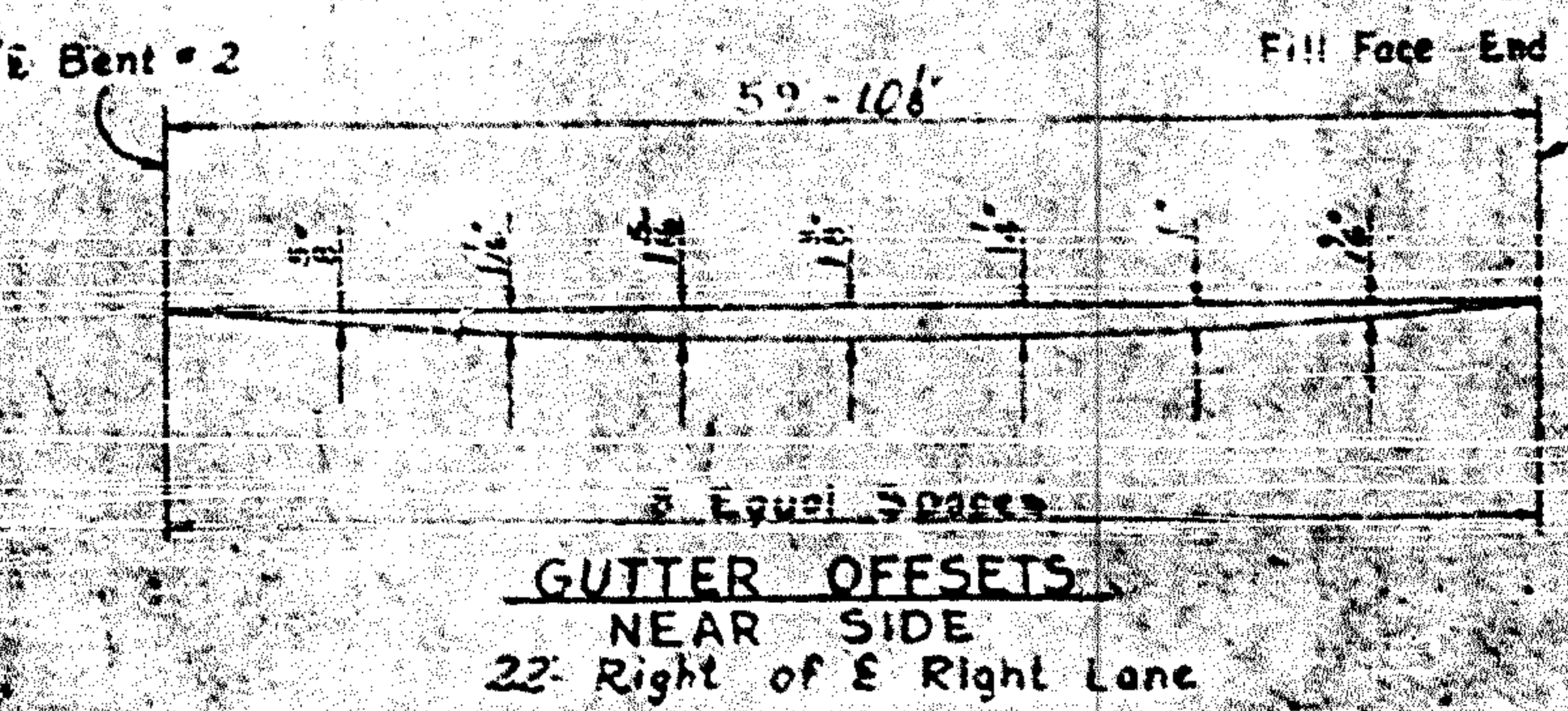
PROJECT No. B.1869003  
 POLK COUNTY  
 STATION 668+38.38 E.M.  
 RIGHT LANE

STATE OF NORTH CAROLINA  
**STATE HIGHWAY COMMISSION**  
 SUPERSTRUCTURE  
 PLAN - SPAN 'B'

DATE	REVISION	BY	DATE



PLAN - SPAN 'C'

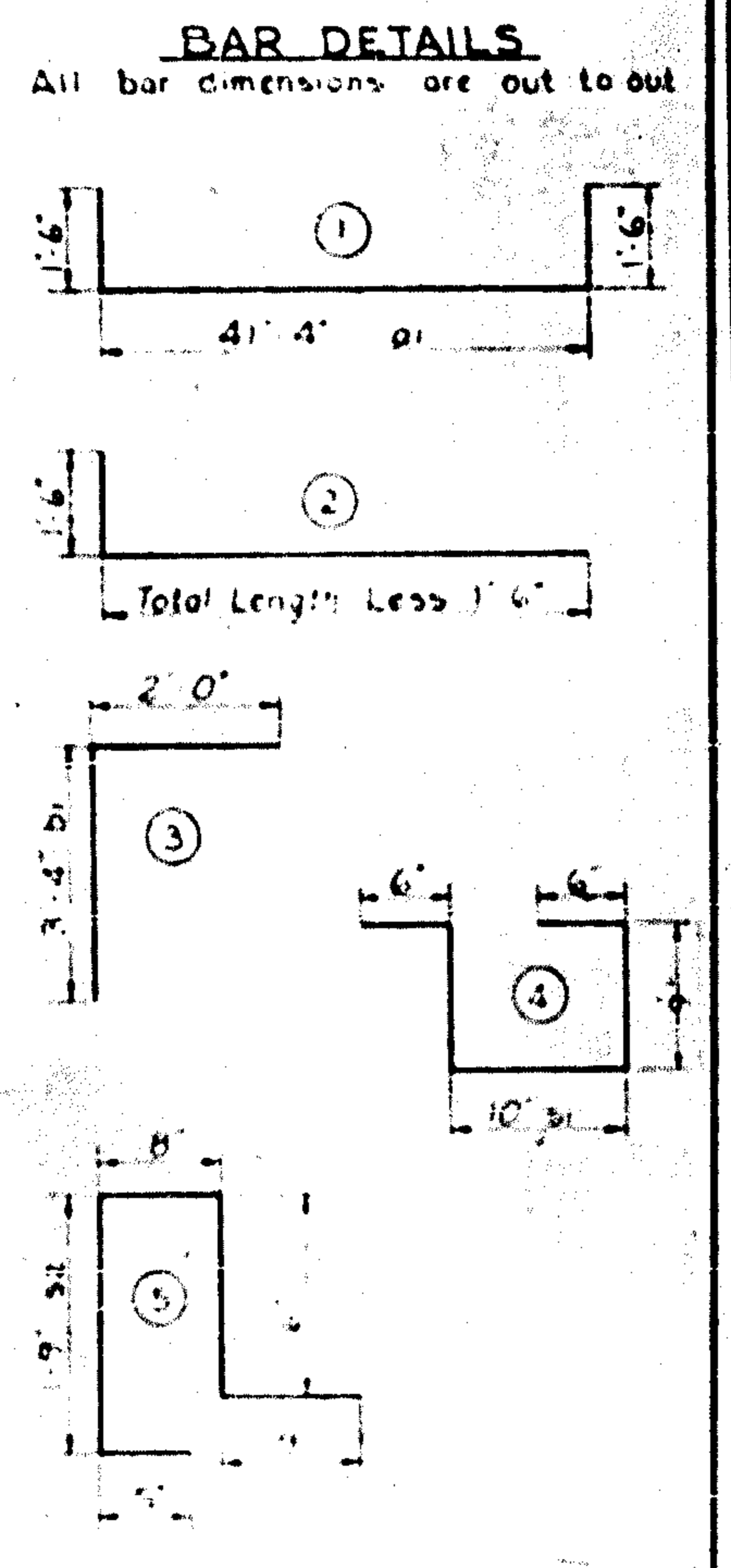


BILL OF MATERIAL FOR SPAN 'C'

BAR NO	SIZE	TYPE	LENGTH	WEIGHT
01	62	#6	44'-4"	4,129
02	61	#6 Str.	41'-8"	3,810
001	4	#6	39'-4"	236
002	1		35'-6"	219
003	1		33'-9"	209
004	1		30'-11"	186
005	1		28'-2"	189
006	1		25'-4"	152
007	1		22'-7"	136
008	1		19'-9"	127
009	1		17'-0"	108
010	1		14'-2"	85
011	1		11'-5"	69
012	1		8'-7"	52
013	4	#6	5'-10"	35
0101	4	#6 Str.	35'-8"	232
0102	1		35'-11"	216
0103	1		33'-11"	199
0104	1		30'-4"	182
0105	1		27'-6"	162
0106	1		24'-9"	149
0107	1		21'-11"	132
0108	1		19'-2"	115
0109	1		16'-4"	98
0110	1		13'-7"	82
0111	1		10'-9"	65
0112	1		8'-0"	48
0113	1		5'-2"	31
0114	4	#6 Str.	2'-5"	15
b1	47	#4	5'-4"	167
b7	24	#4 Str.	2'	357
b8	60	#4 Str.	20'-9"	852
b9	112	#5 Str.	30'-9"	592
e1	4	#4 Str.	4'-6"	12
e2	12	#4 Str.	2'-"	21
f1	16	#4 Str.	3'-6"	47
g1	6	#6 Str.	24'-0"	216
k3	4	#5 Str.	3'-1"	13
k4	8	#5	3'-10"	32
k5	10	#5	8'-0"	89
k6	4	#6	24'-6"	147
k7	8	#4 Str.	24'-2"	129
91	39	#4	3'-4"	87
92	120	#5	5'-"	636

FED. ROAD DIST. NO.	STATE	PROJECT NO.
0	N.C.	8186903

PROJECT Z-26-1(1887)

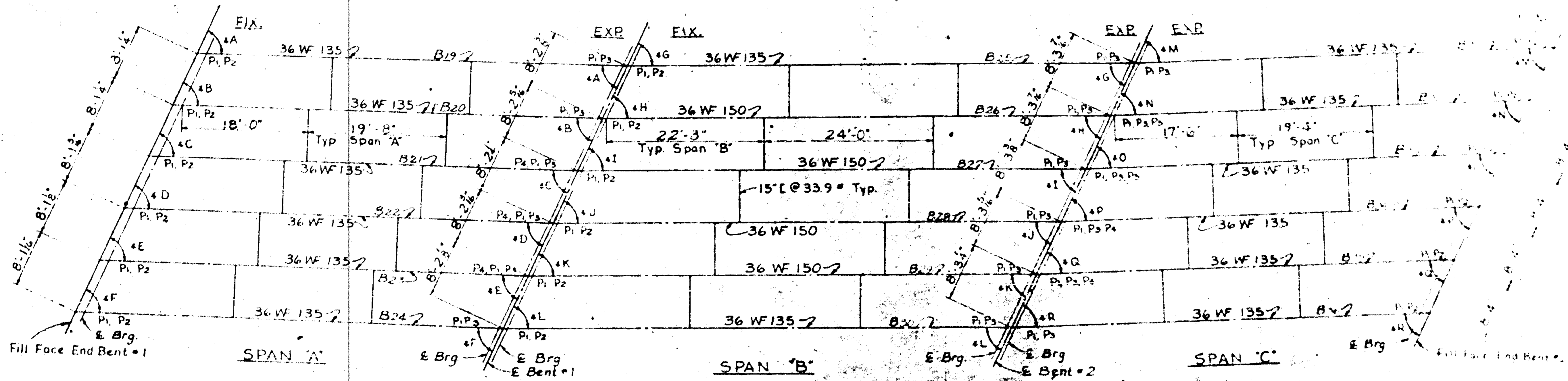


PROJECT No 8.1869003  
POLK COUNTY  
STATION 668+38.38 (Med)  
RIGHT LANE

STATE OF NORTH CAROLINA  
**STATE HIGHWAY COMMISSION**  
SUPERSTRUCTURE  
PLAN - SPAN 'C'

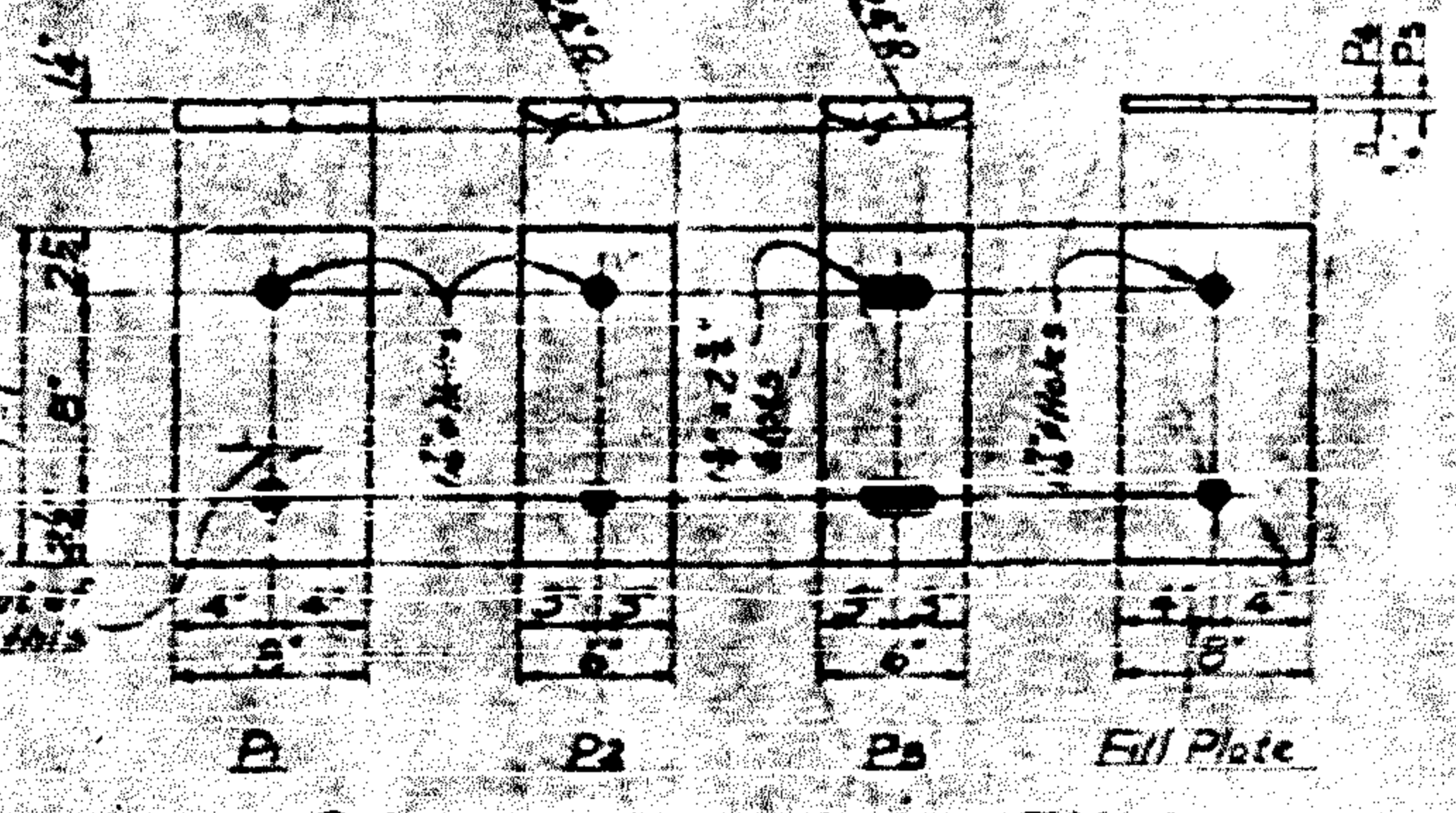
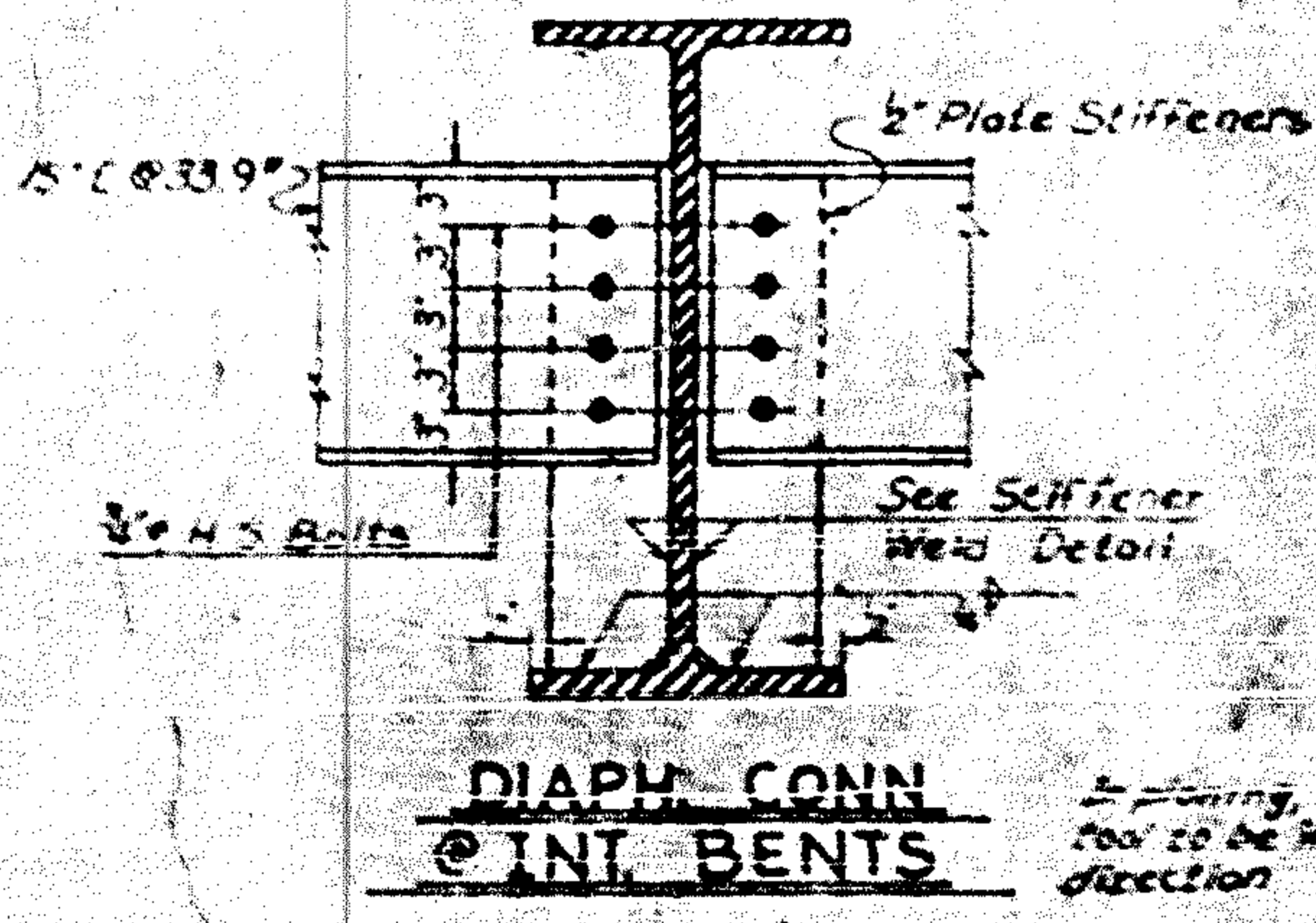
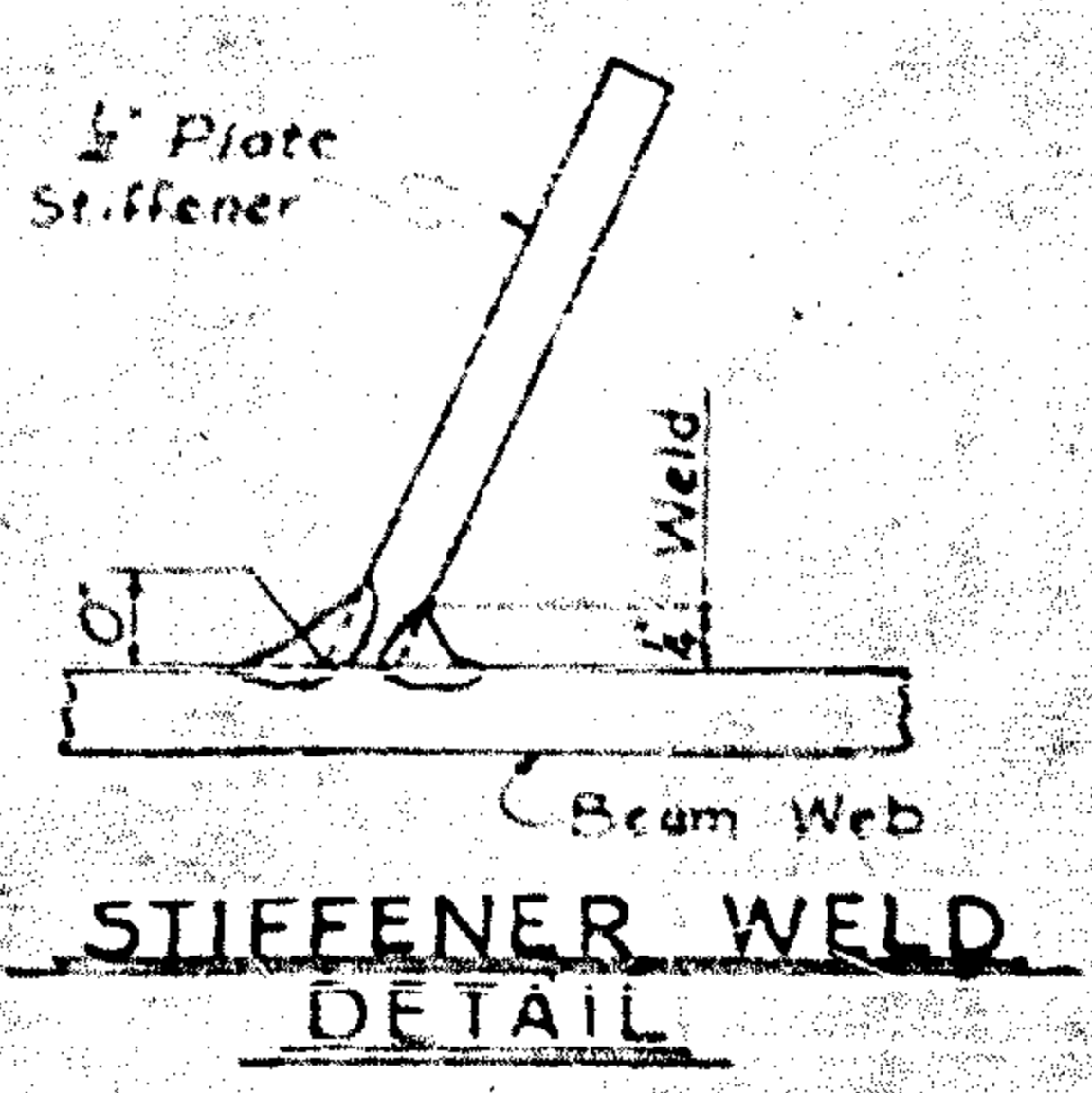
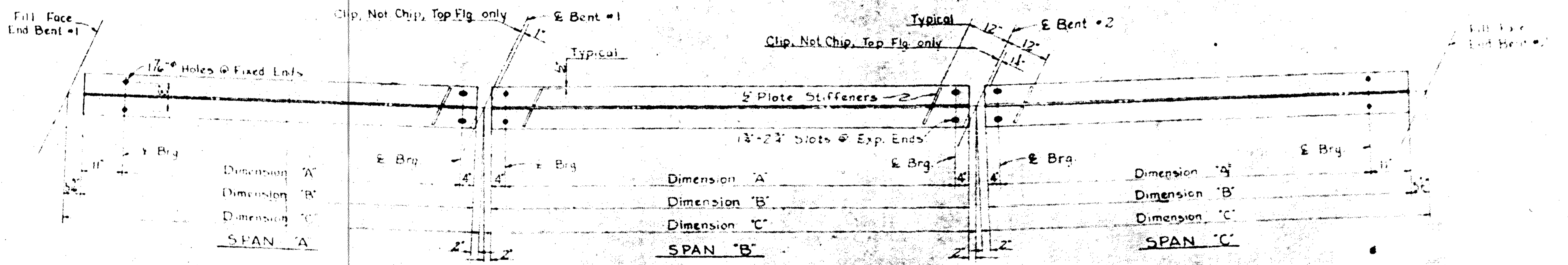
JUNE 1957

Drawn by Robert G. Gayer, June 1957



ANGLES		
A	65° 38' 24"	
B	65° 42' 31"	
C	65° 46' 22"	
D	64° 32' 59"	
E	64° 35' 18"	
F	64° 38' 33"	
G	64° 40' 44"	
H	64° 33' 59"	
I	64° 36' 49"	

BEAM LENGTHS			
BEAM	DIMEN.	WIDTH	DIMEN.
B19	57'	60"	60'
B20	57'	60"	60'
B21	58'	60"	60'
B22	58'	60"	60'
B23	58'	60"	60'
B24	58'	60"	60'
B25	70'	71"	71'
B26	70'	71"	71'
B27	7'	71"	71'
B28	7'	71"	71'
B29	7'	71"	71'
B30	7'	71"	71'
B31	7'	71"	71'
B32	58'	60"	60'
B33	58'	60"	60'
B34	58'	60"	60'
B35	58'	60"	60'



DEFLECTION TABLE						
	SPAN 'A'		SPAN 'B'		SPAN 'C'	
	INT.	EXT.	INT.	EXT.	INT.	EXT.
Deflection due to beam weight	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
Deflection due to superimposed DL	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
Total Deflection	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Curve shift	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
Comber Beams	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"

APPROX STRUCTURAL STEEL WEIGHT	
Span 'A'	84,000
Span 'B'	83,200
Span 'C'	51,200
Total	218,400

PROJECT No 81869003  
 POLK COUNTY  
 STATION 668+38.38 EN.  
 RIGHT LANE

Sheet 1 of 2

STATE OF NORTH CAROLINA  
**STATE HIGHWAY COMMISSION**  
 DIVISION OF  
**STRUCTURAL STEEL**  
 DETAILS

JUNE 1967

Studs Per. Bm.

448	30 Spa @ 5" = 12'-6"	17 Spa @ 7" = 9'-11"	8 Equal Spaces	6" Int Bms - Span 'A'
312	19 Spa @ 7" = 11'-1"	12 Spa @ 10" = 10'-0"	7 Equal Spaces	6" Ext Bms - Span 'A'
536	35 Spa @ 5" = 14'-7"	21 Spa @ 7" = 12'-3"	10 Equal Spaces	6" Int Bms - Span 'B'
376	24 Spa @ 7" = 14'-0"	14 Spa @ 10" = 11'-8"	8 Equal Spaces	6" Ext Bms - Span 'B'
440	29 Spa @ 5" = 12'-11"	17 Spa @ 7" = 9'-11"	8 Equal Spaces	6" Int Bms - Span 'C'
304	18 Spa @ 7" = 10'-6"	12 Spa @ 10" = 10'-0"	7 Equal Spaces	6" Ext Bms - Span 'C'

⊕ Brg

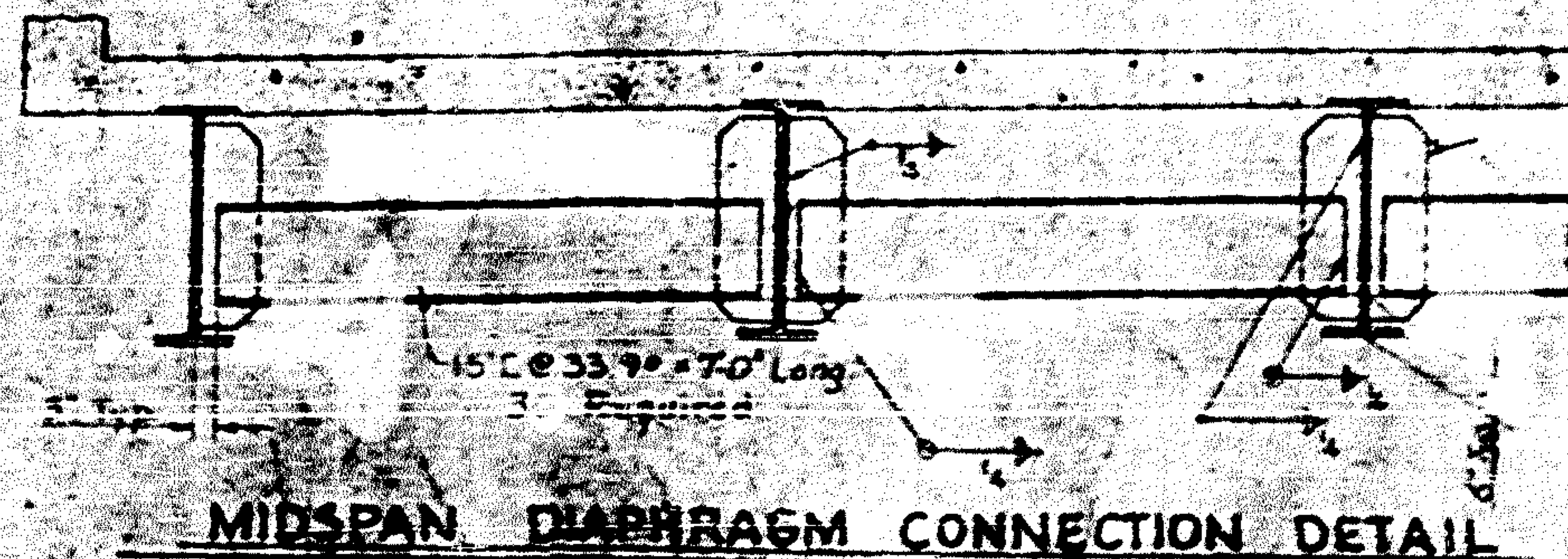
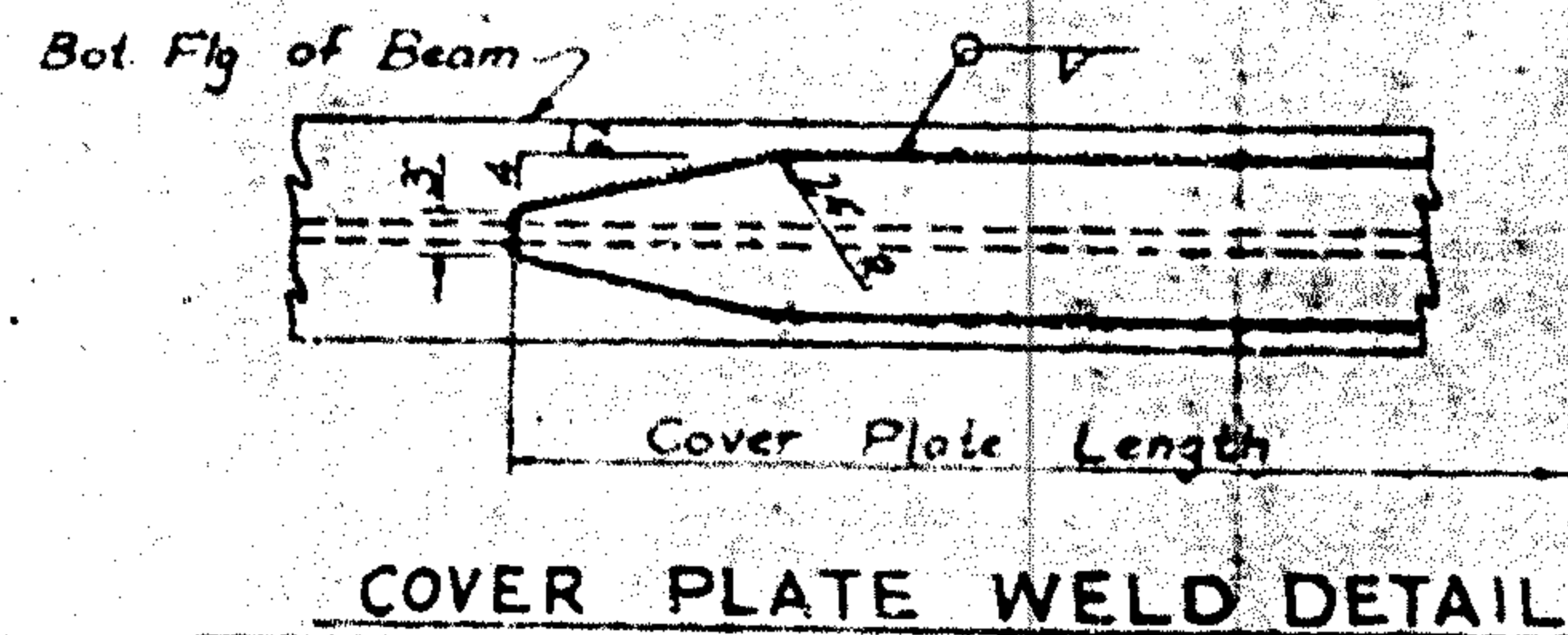
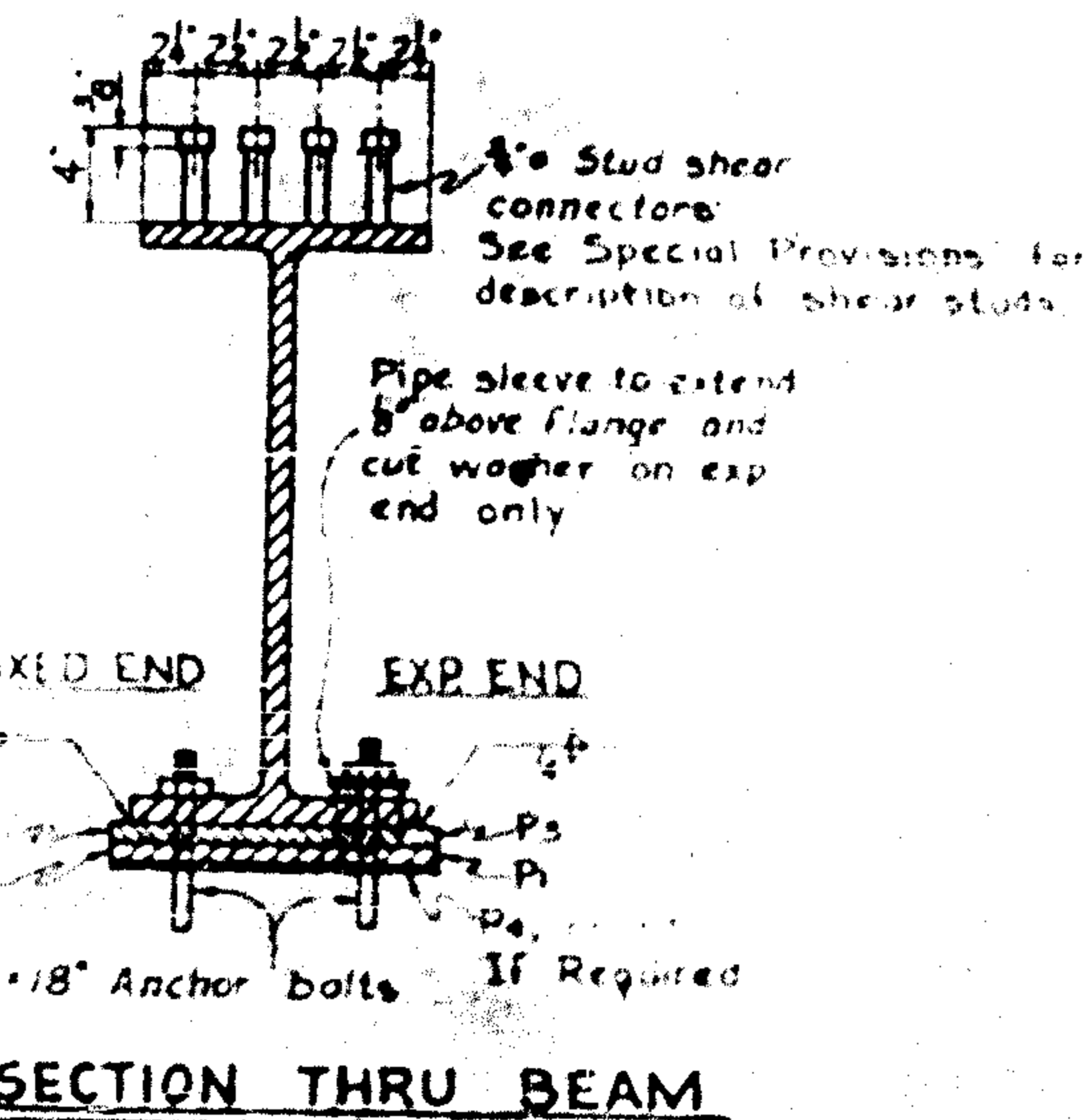
36 WF 135 - Ext & Int Bms - Span 'A' or 'C'  
 36 WF 135 - Ext Bms - Span 'B'  
 36 WF 150 - Int. Bms - Span 'B'

Stud spacing  
 Symmetrical about  
 ⊕ between bearings

19'-6" Int. Bms - Span 'A'  
 18'-3" Ext. Bms - Span 'A'  
 25'-3" Int. Bms - Span 'B'  
 25'-9" Ext. Bms - Span 'B'  
 18'-9" Int. Bms - Span 'C'  
 17'-6" Ext. Bms - Span 'C'  
 10'-1/2" x 39'-0" Interior Bms - Span 'A'  
 8'-2" x 36'-6" Exterior Bms - Span 'A'  
 10'-1/2" x 50'-6" Interior Bms - Span 'B'  
 10'-1/2" x 51'-6" Exterior Bms - Span 'B'  
 10'-1/2" x 37'-6" Interior Bms - Span 'C'  
 6'-2" x 35'-0" Exterior Bms - Span 'C'

NOTE: At the contractor's option he may substitute for the cover plates designated on the plans cover plates of equivalent area provided these plates are at least 5/16" in thickness and do not exceed a width equal to the flange width less 2" or a thickness equal to 1 1/2" times the flange thickness. The size of the weld for attaching these cover plates shall be in accordance with the AWS Specifications.

**SHEAR STUD SPACING & COVER PLATE DETAILS**



NOTE: In lieu of the welding procedure for shop and field welds indicated for the intermediate diaphragm connections, the contractor may, at his option, shop weld the connector plates to the beam webs and field weld the channels to the connector plates. Special care in handling the beams must be observed if connector plates are shop welded to the beam webs.

**NOTES**

All beams and cover plates shall be of ASTM A 36 grade structural steel. See S.N. Sheet.

No web stiffeners are required on outside of exterior beams or at End Bents. Stiffeners are to be parallel to ends of beams.

The contractor may at his option, but without change in the contract price, use structural steel, i.e. split 18 WF 50 connections bolted to the web of beams and welded to the channel diaphragm in lieu of the welded plate intermediate diaphragm connections shown.

At contractor's option, fill plates, when used, may be combined with masonry plate.

PROJECT No. 8.1869003

POLK COUNTY

STATION 668+38.38

Sheet 2 of 2

RIGHT LANE

STATE OF NORTH CAROLINA  
**STATE HIGHWAY COMMISSION**  
 STRUCTURAL STEEL  
 DETAILS

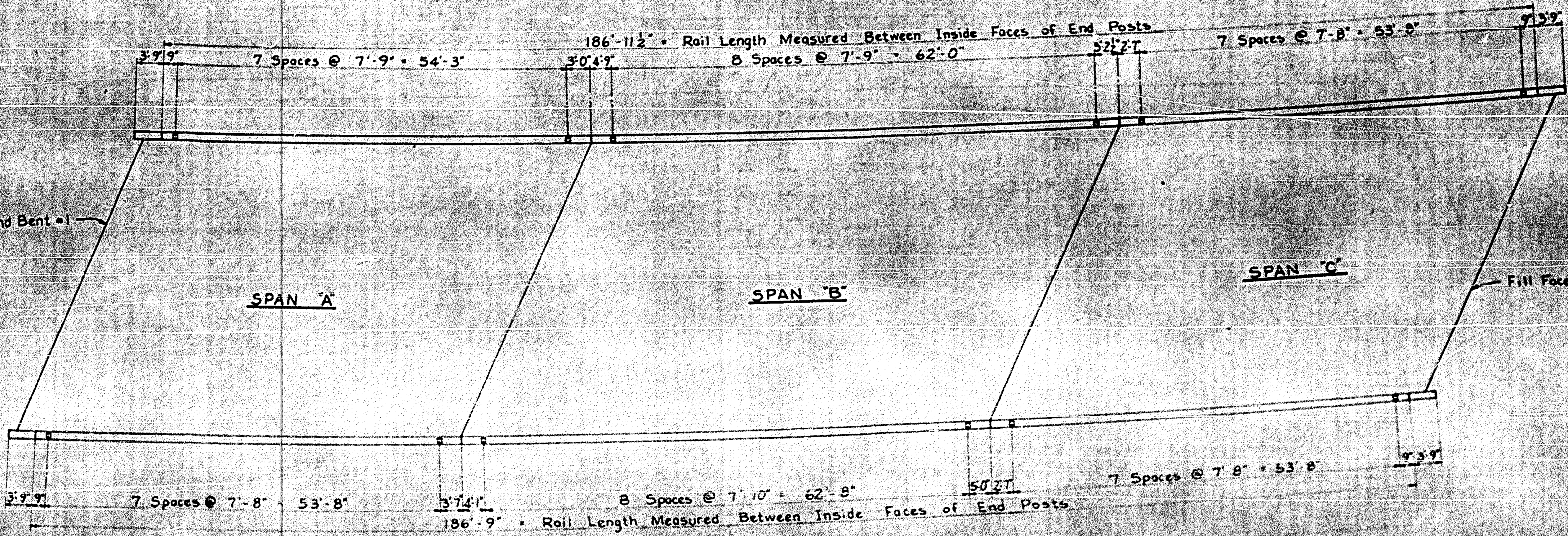
JUNE

1967

BY Robert G. POWER, ENGINEER, S.E.  
 CHECKED BY [Signature]

DATE	BY	REVISION





**PLAN**  
 SHOWING RAIL POST SPACING

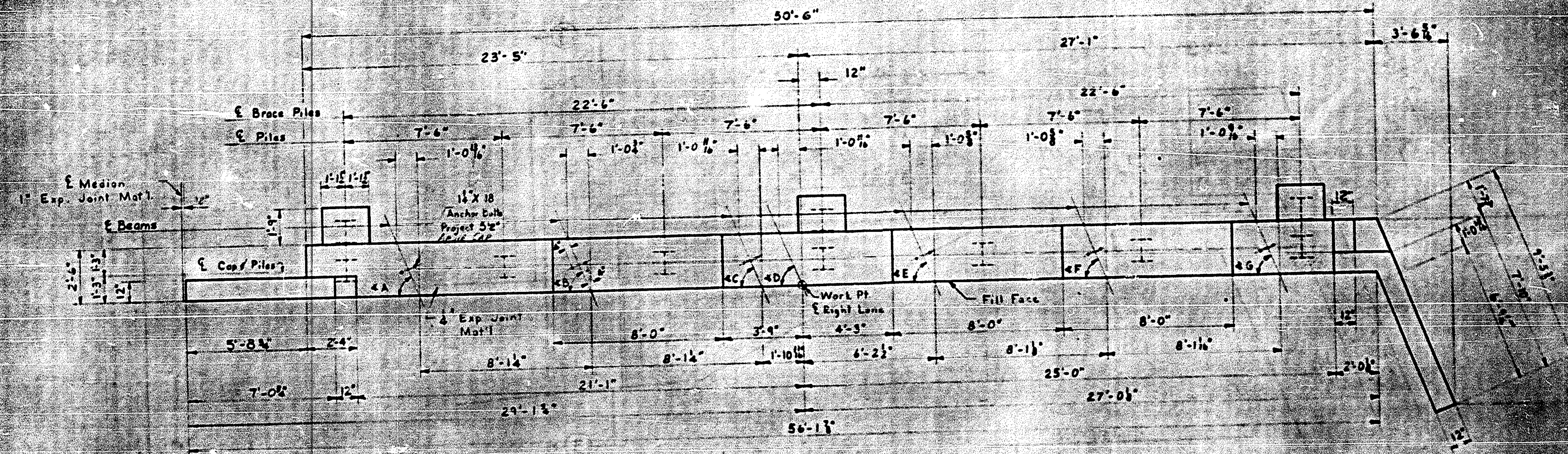
PROJECT No. B.1869003  
 POLK COUNTY  
 STATION 668+38.38  
 RIGHT LANE

Sheet 2 of 2

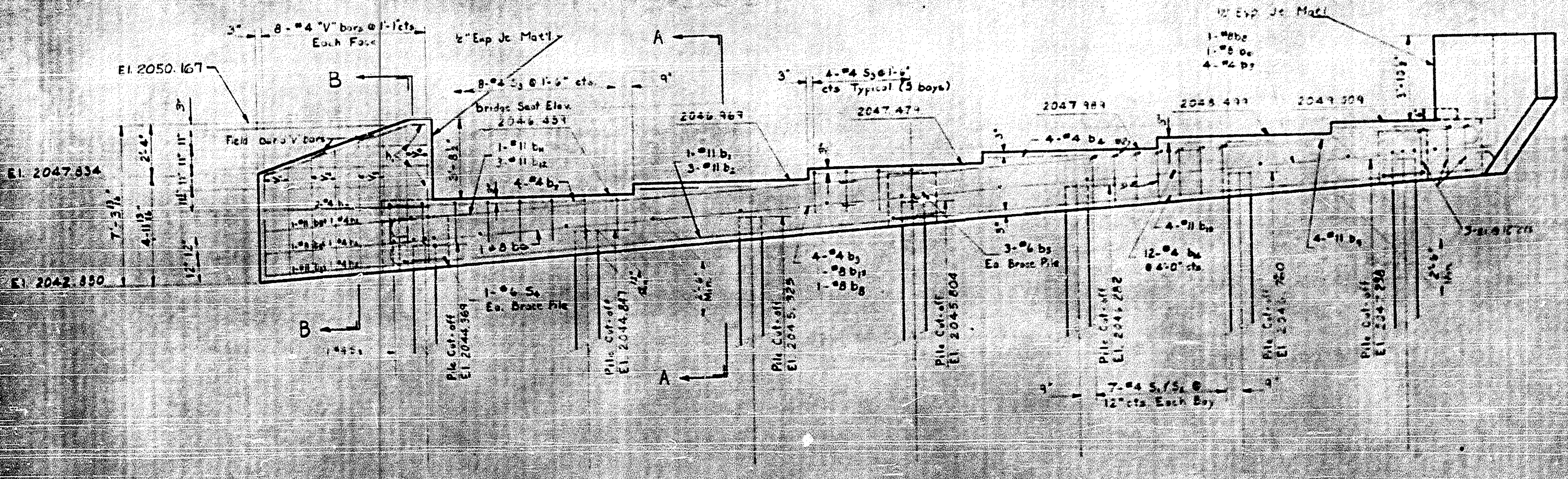
STATE OF NORTH CAROLINA  
**STATE HIGHWAY COMMISSION**  
 SUPERSTRUCTURE  
 RAIL POST SPACING

JULY

NO.	BY	DATE	REVISIONS



PLAN



ELEVATION

Angle	Degrees
A	66° 54' 28"
B	67° 14' 11"
C	67° 01' 30"
D	67° 01' 30"
E	67° 01' 30"
F	67° 15' 05"
G	67° 15' 05"

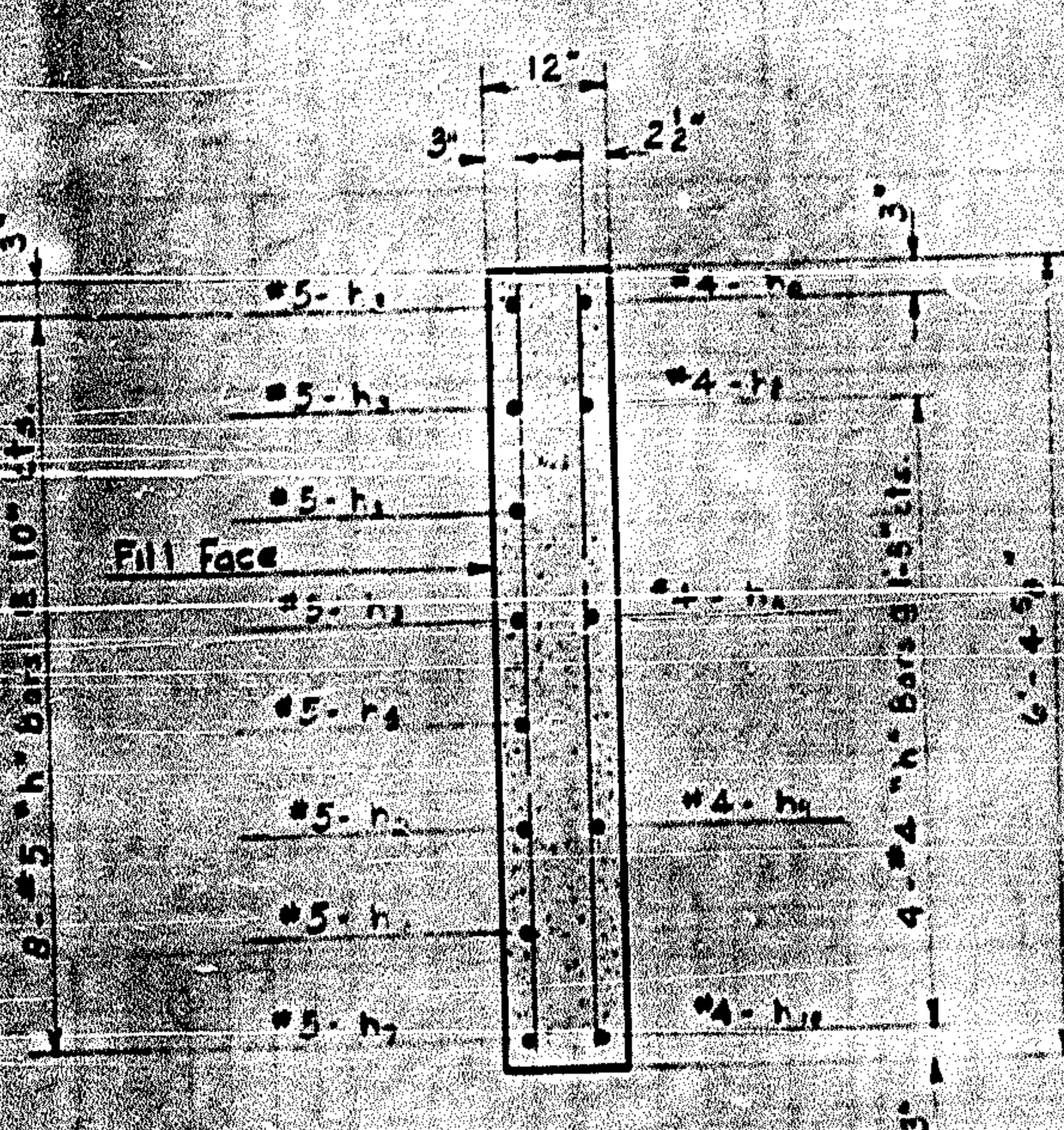
PROJECT No. 8 1864003  
 POLK COUNTY  
 STATION 668+38.38 E.N.

Sheet 1902

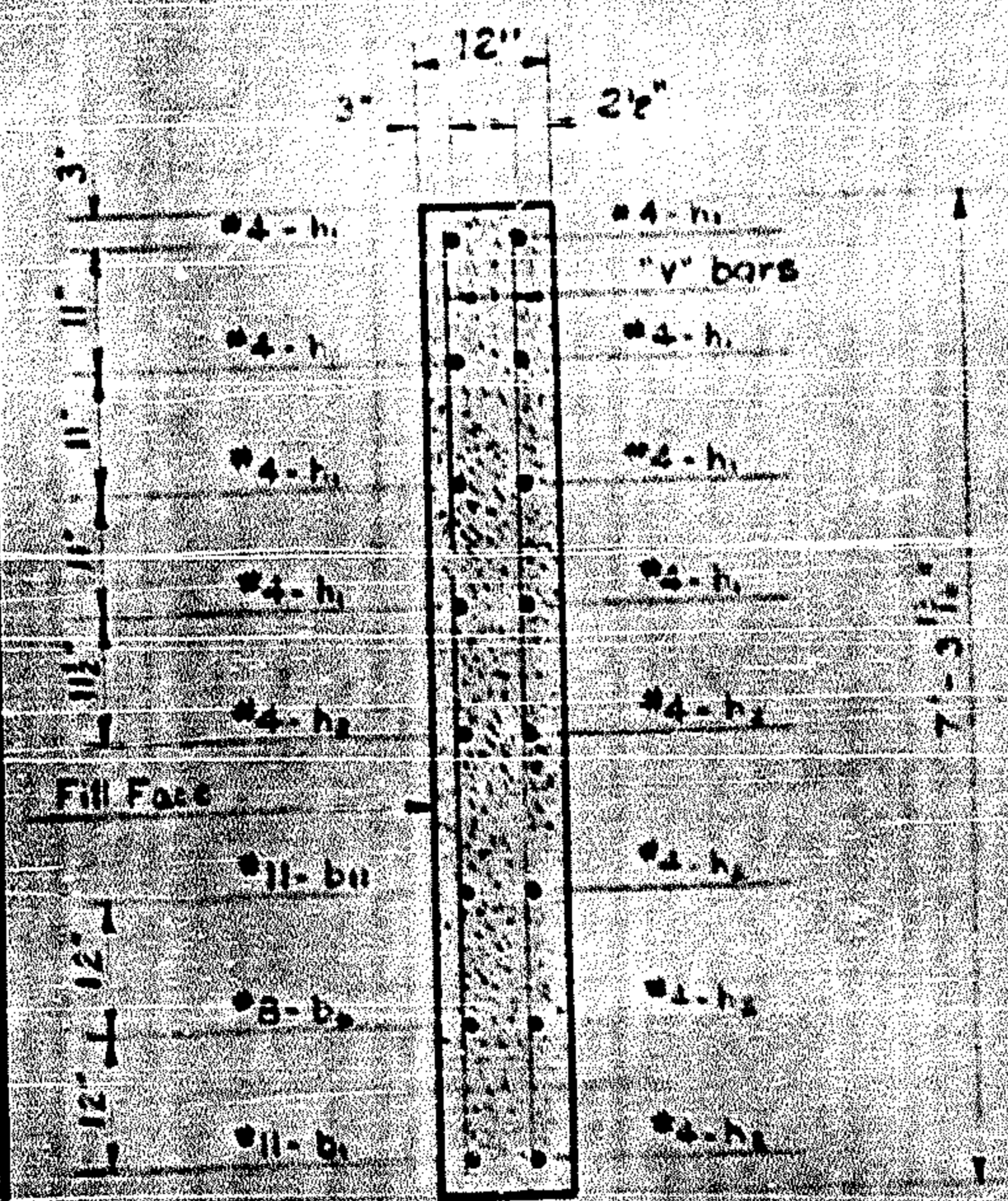
STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 DIVISION

SUBSTRUCTURE  
 END FENT NOT  
 EIGHT LANE  
 JUNE 1967

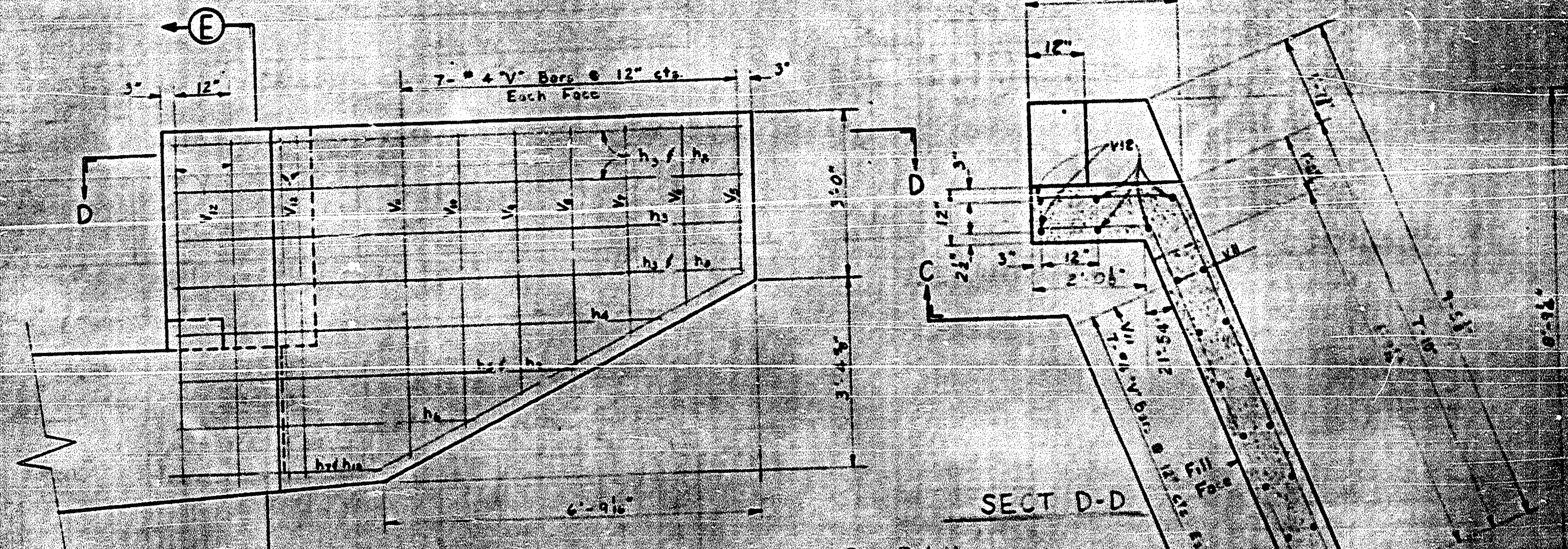
NO.	BY	DATE	NO.	BY	DATE



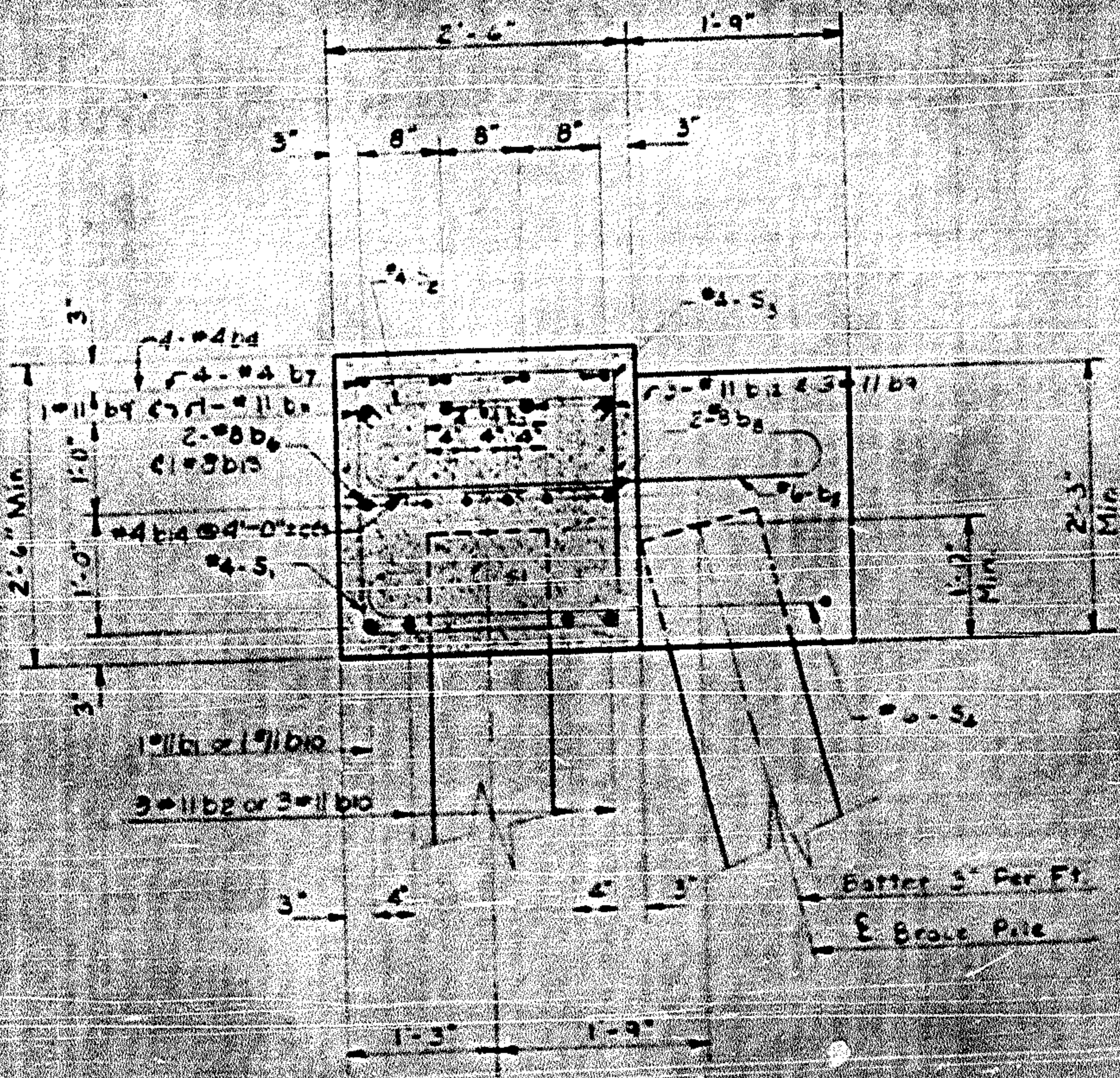
SECTION E-E



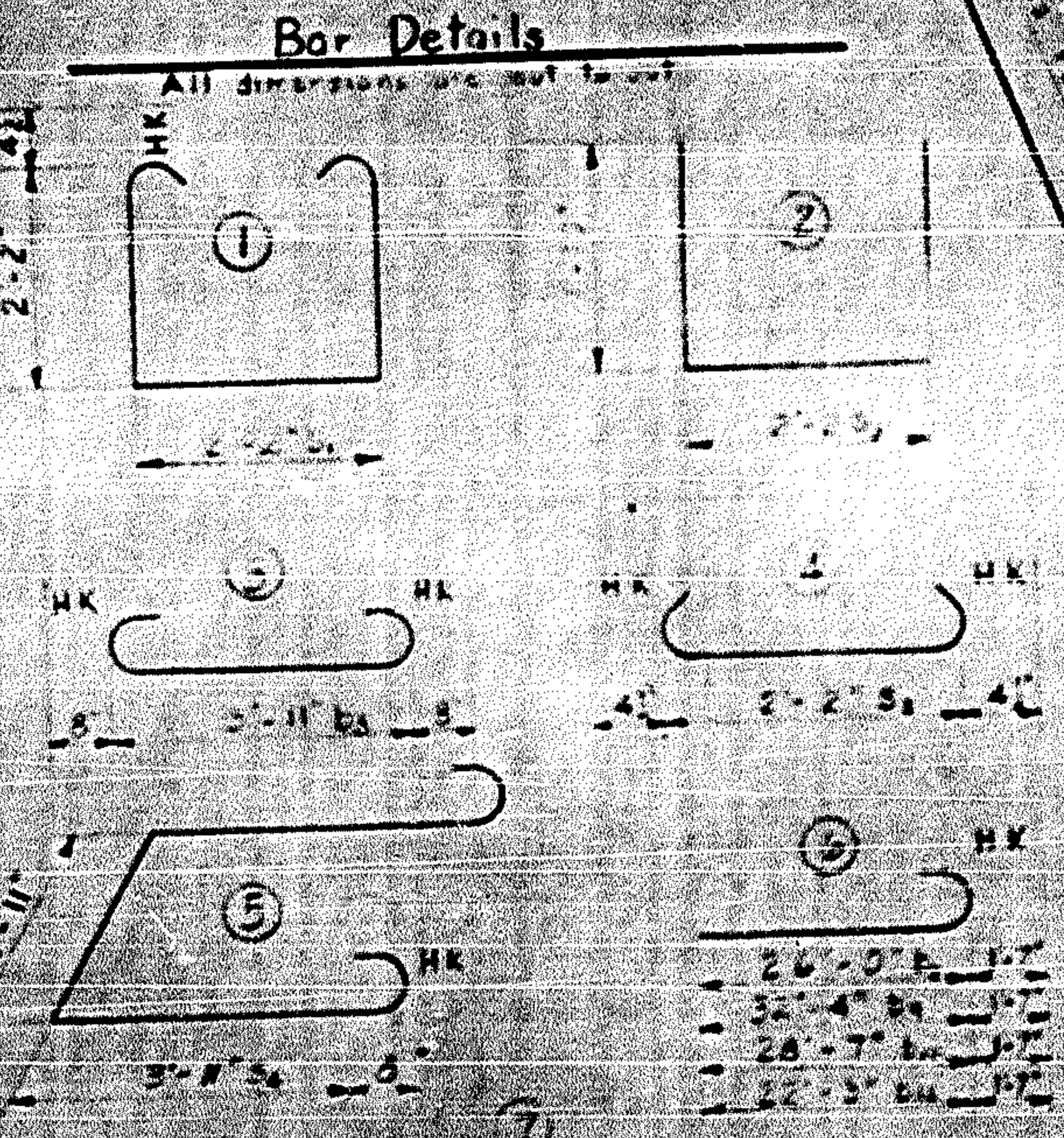
SECTION B-B



VIEW C-C



SECTION A-A



Bar Details

All dimensions are in inches

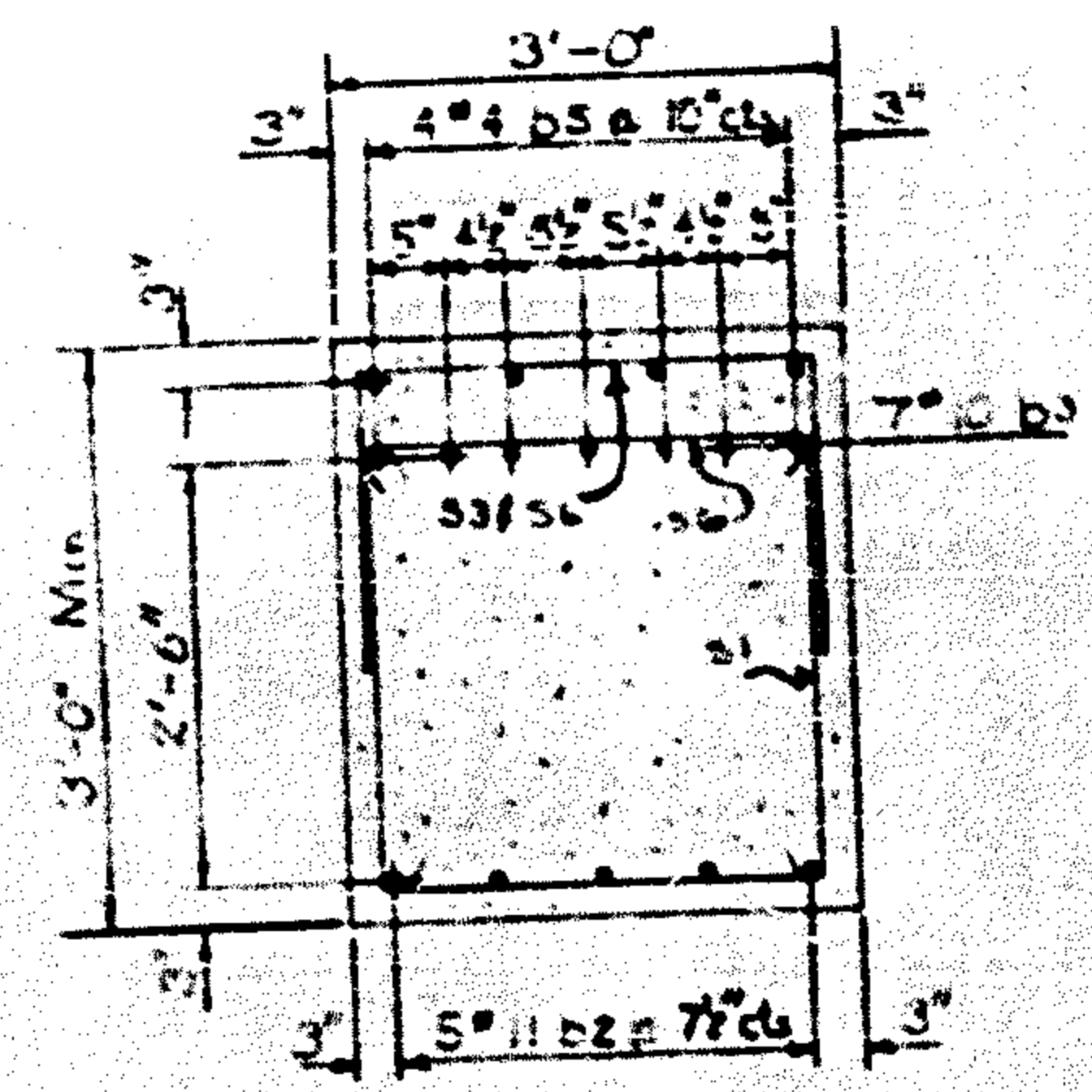
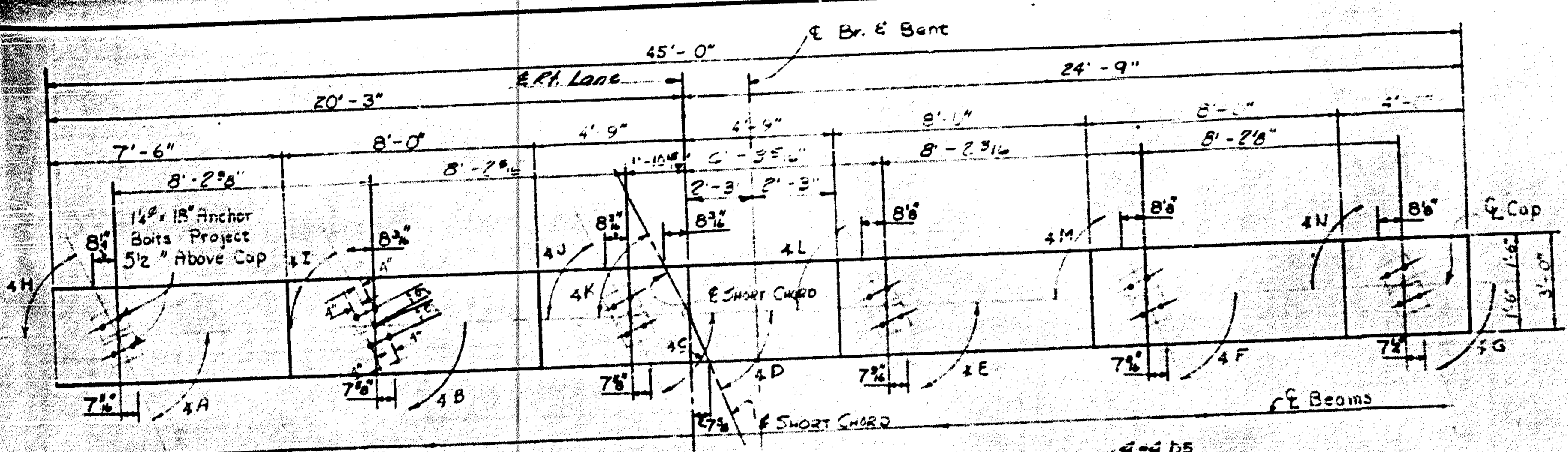
SECT D-D

Reinforcing steel for - 55 ksi  
 Class 'A' Concrete - 4000 psi  
 12.4.53 Special No. 10  
 See Proj. Record No. 2, Page 240

STATE OF NORTH CAROLINA  
 END BENT

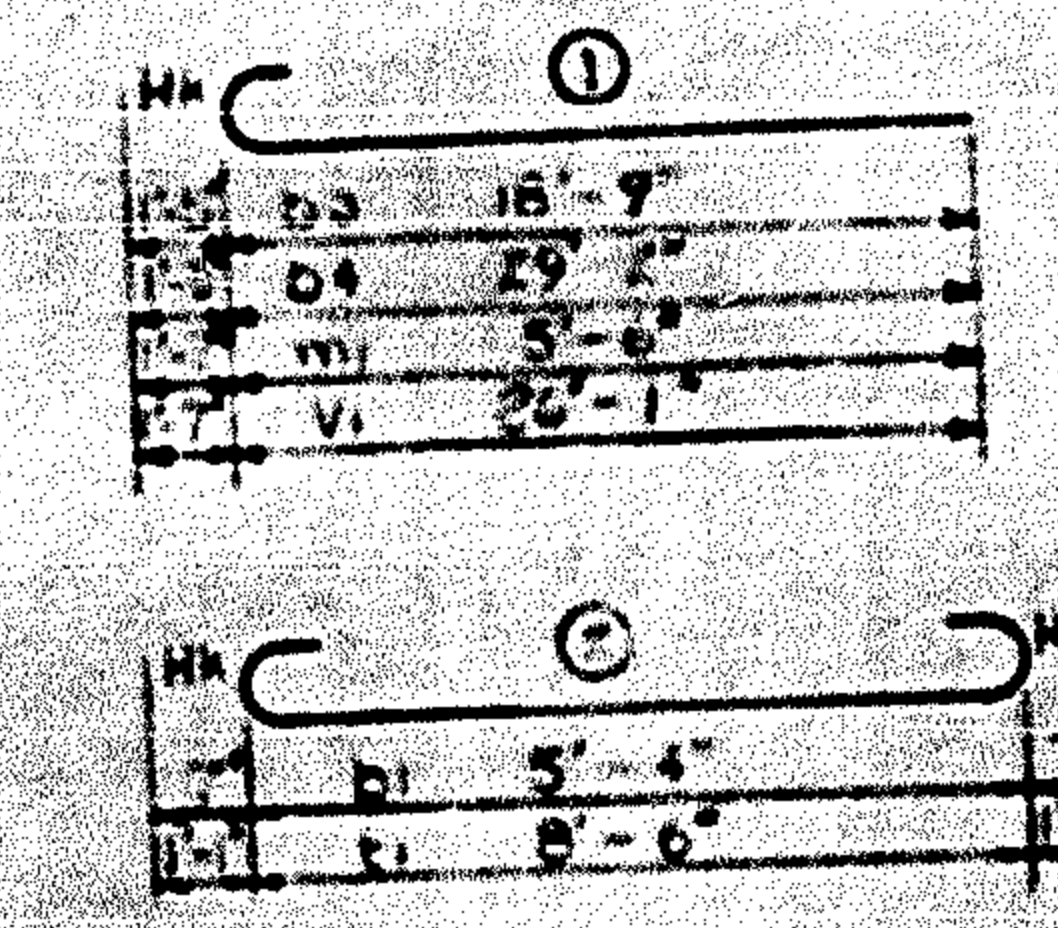
PROJECT No. 8 56950  
 POLK County  
 STATION 6+50.00

STATE HIGHWAY COMMISSION  
 END BENT NO.  
 RIGHTWAY  
 USE 1967



ANGLES	
H	65°-26'-03.3"
I	65°-30'-01.7"
J	65°-34'-02.9"
K	65°-34'-59.8"
L	65°-38'-07.1"
M	65°-42'-13.1"
N	65°-46'-22.3"
A	66°-54'-28.8"
B	66°-59'-11.1"
C	67°-03'-32.1"
D	67°-07'-57.3"
E	67°-08'-31.4"
F	67°-13'-05"
G	67°-17'-47.6"

BAR DETAILS  
 All bar dimensions are cut to out



**BILL OF MATERIAL**  
 Bent No. 1

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
b1	24	#5	E	6'-6"	115
b2	3	#11	Str.	4'-6"	115
b3	7	#10		20'-2"	60
b4	7	#10		30'-7"	92
b5	12	#4	Str.	7'-10"	63
b6	4	#4	Str.	3'-0"	10

mi	24	#11	I	7'-1"	80
----	----	-----	---	-------	----

b1	14	#5	S	4'-10"	115
b2	36	#5	S	5'-6"	415
b3	12	#4	S	6'-1"	75
b4	6	#4	S	7'-2"	40
b5	3	#4	S	8'-2"	20
b6	24	#4	S	5'-3"	115

ti	24	#8	E	10'-6"	80
tz	36	#6	Str.	9'-4"	280

vi	24	#11	I	27'-8"	225
----	----	-----	---	--------	-----

vi	24	#11	I	27'-8"	225
----	----	-----	---	--------	-----

Reinforcing Steel, Inc. 500  
 Class A Concrete, Grade 3000  
 12 H53 Steel Piles, No. 18  
 Min. Fl. 450  
 16885

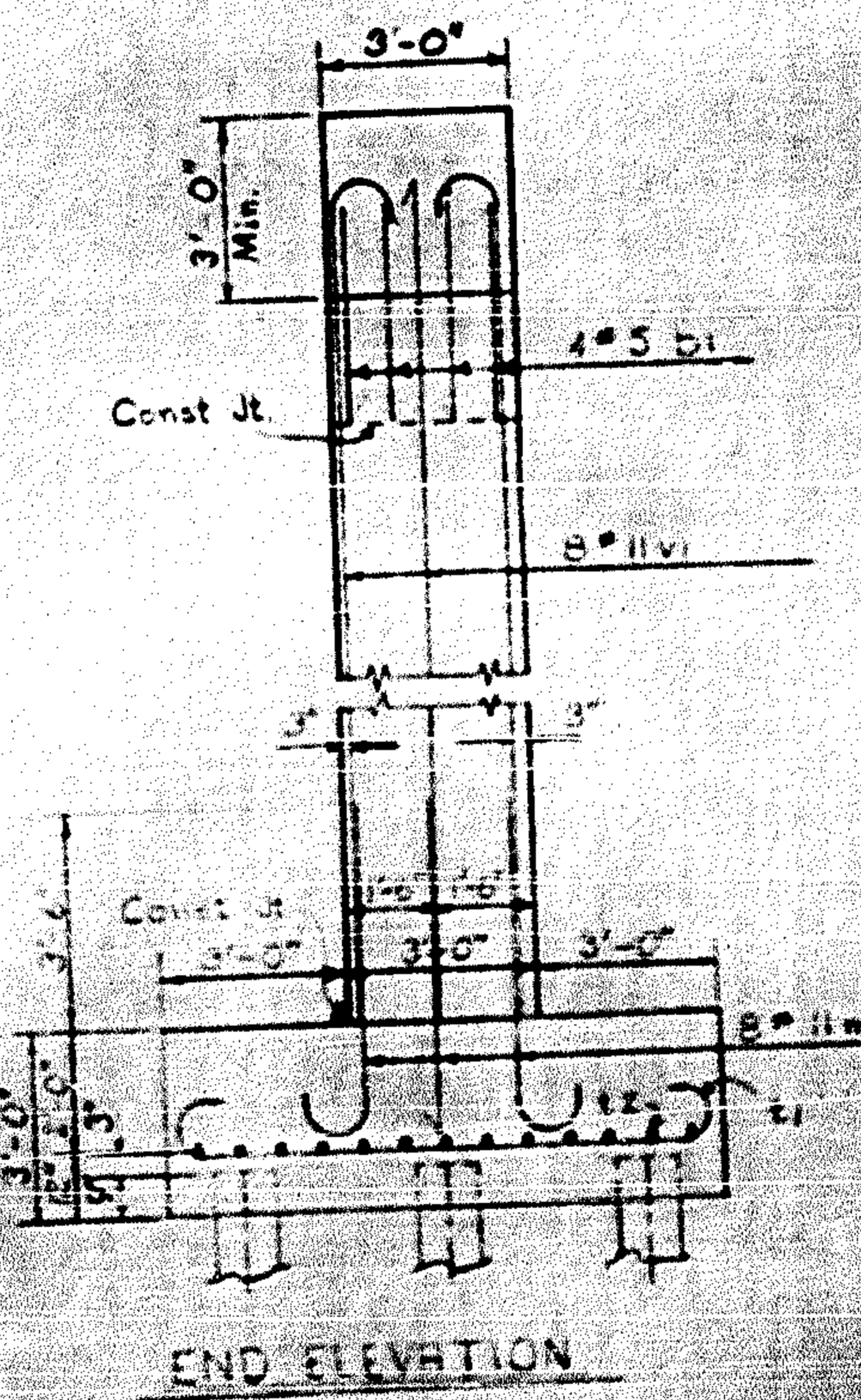
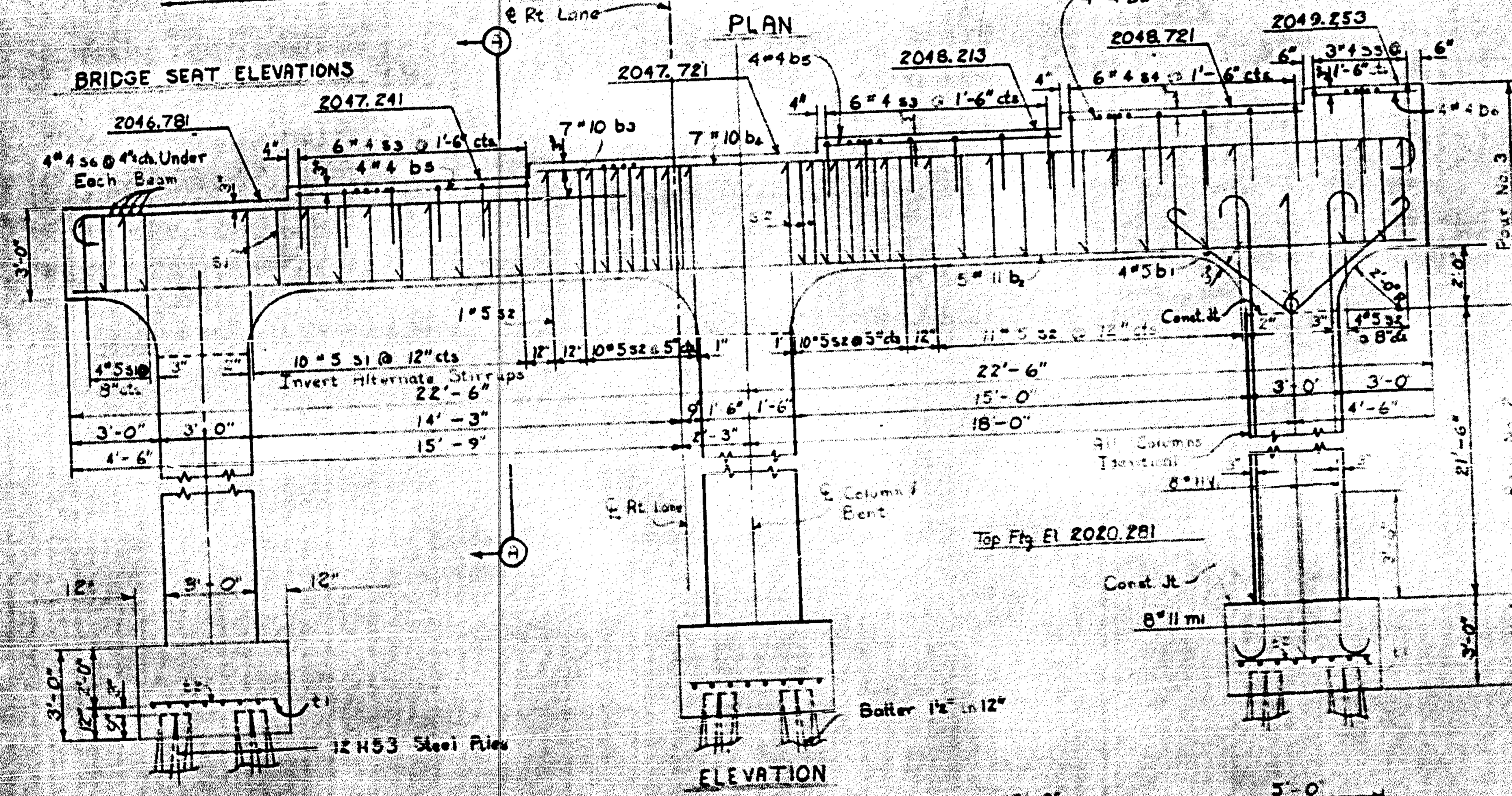
See Appendix B, 2 Page 200

PROJECT No. 8169003  
 POLK COUNTY  
 STATION. 665+38.38 & 1/4

STATE OF NORTH CAROLINA  
**STATE HIGHWAY COMMISSION**

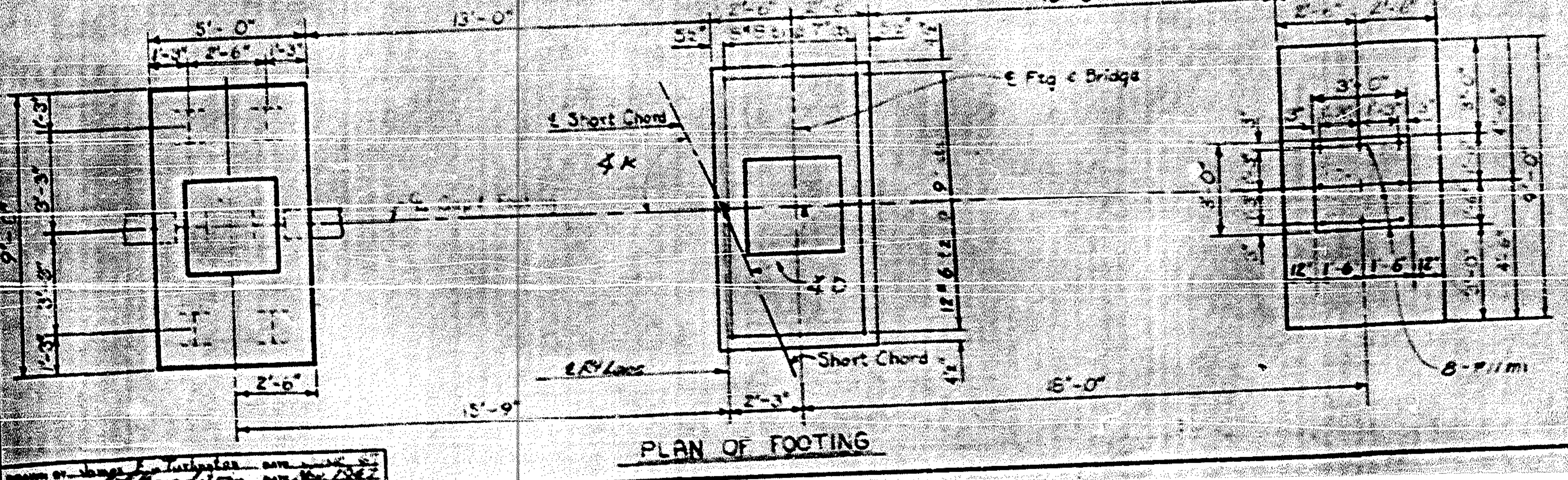
BENT NO. 1  
 RIGHT LANE

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

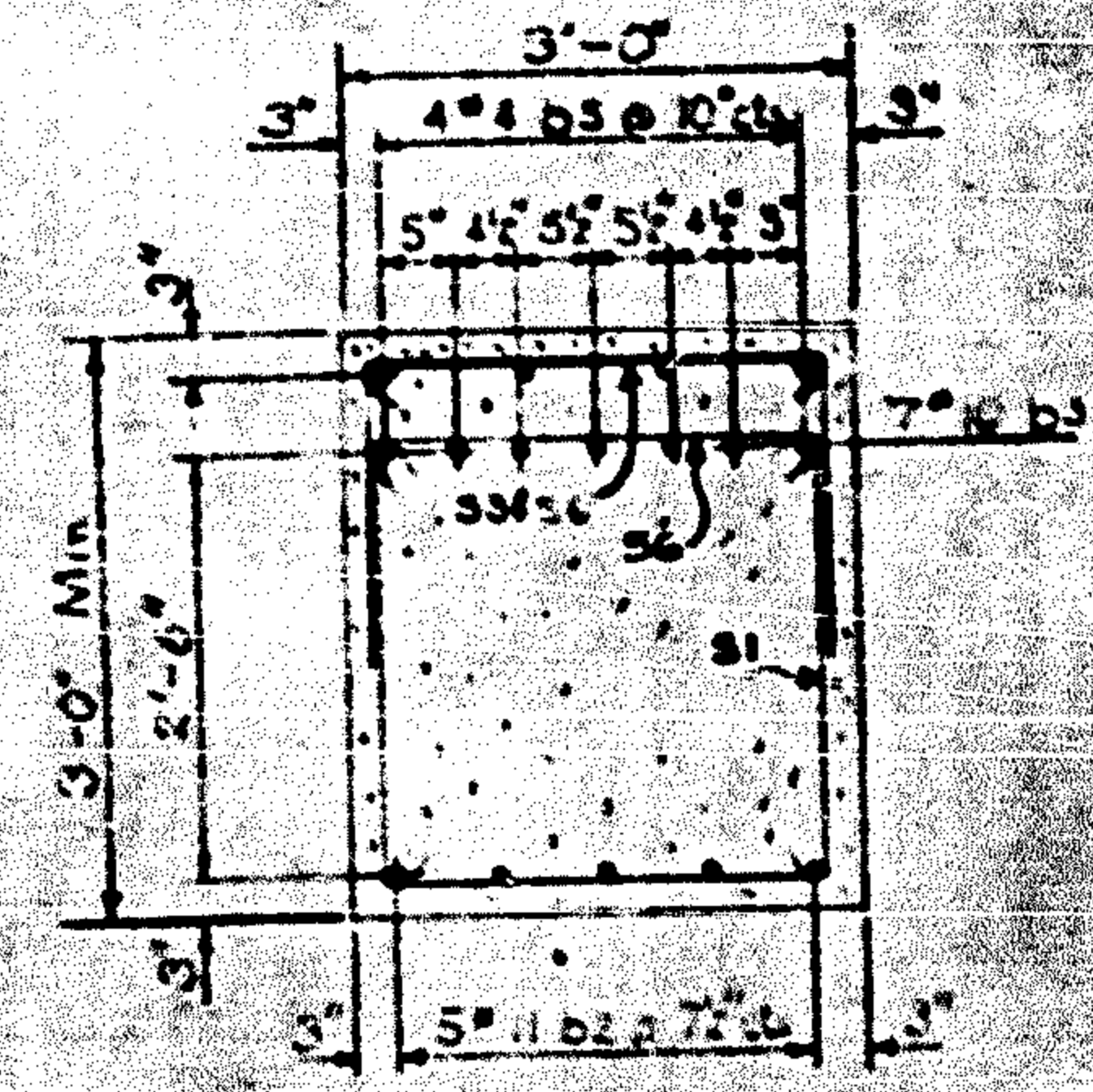
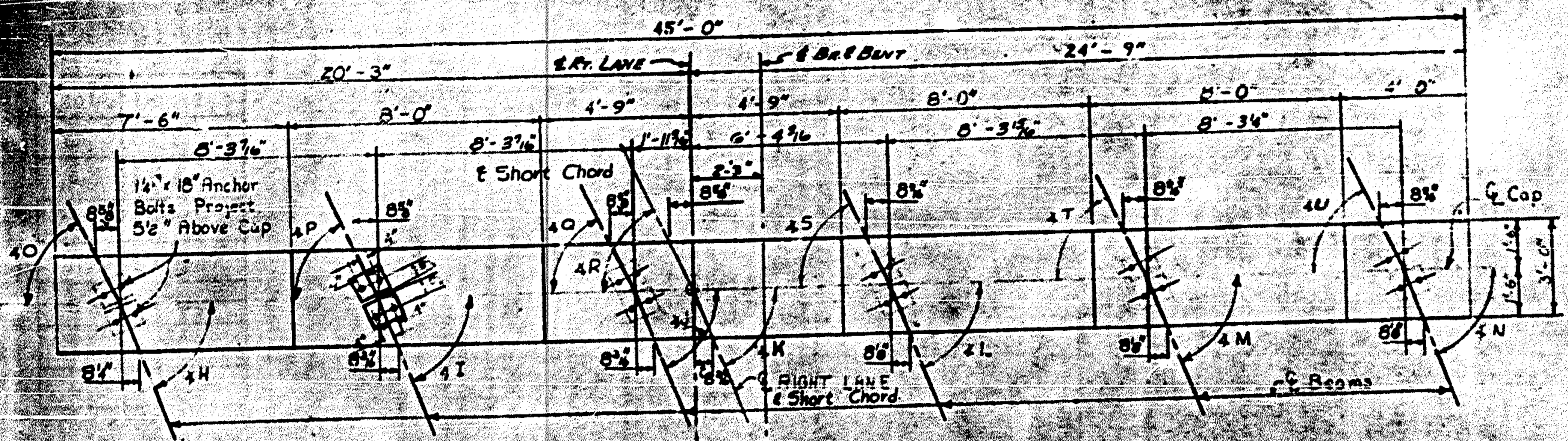


DIVISION OF CONCRETE		BENT NO. 1	
POUR NO.	CU. YDS.	FOOTING	15.0
		COLUMNS	21.3
		CAP	23.1
		TOTAL	59.6

NOTE: If pile splice is required see detail Bent #1 at left lane station 665+38.38

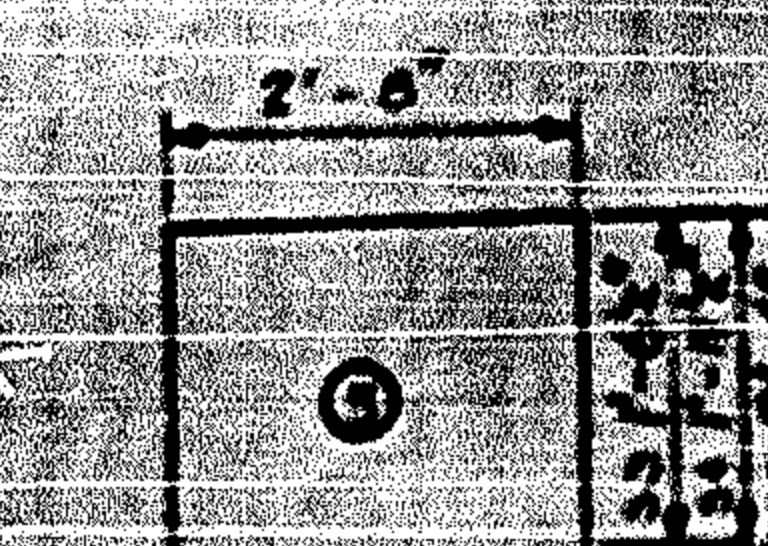
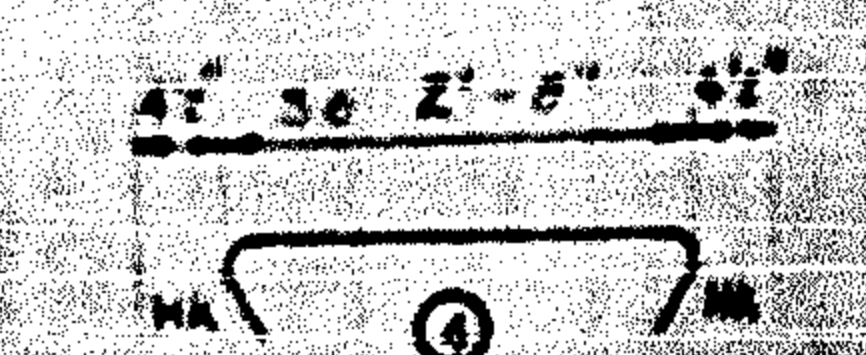
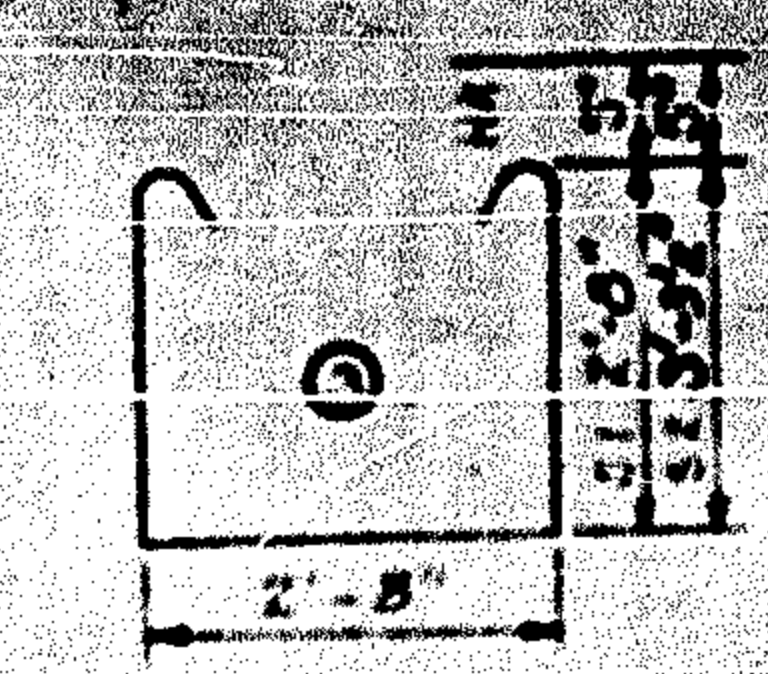
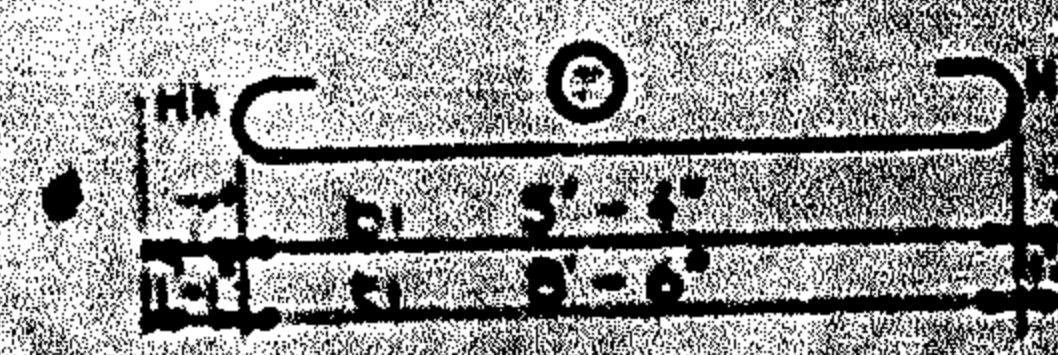
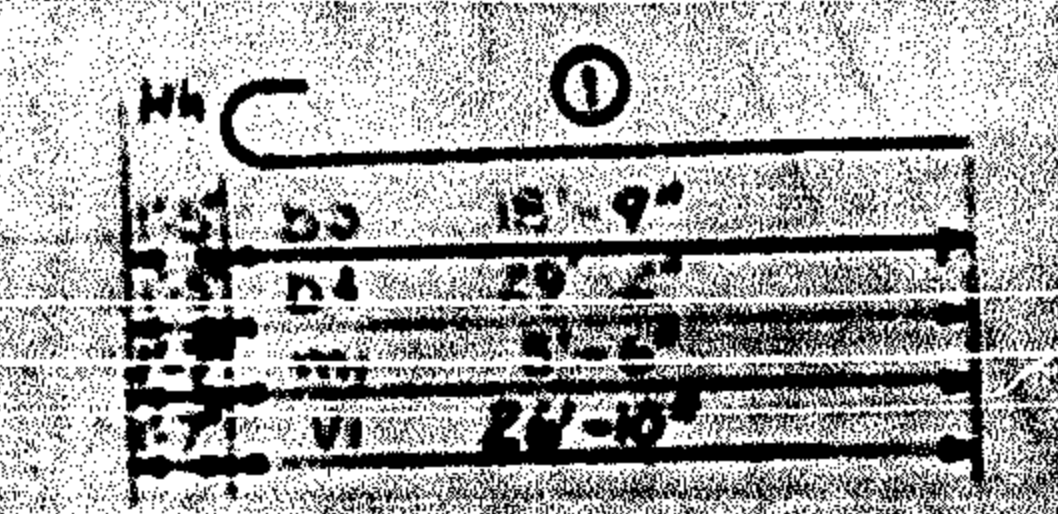


PLAN OF FOOTING

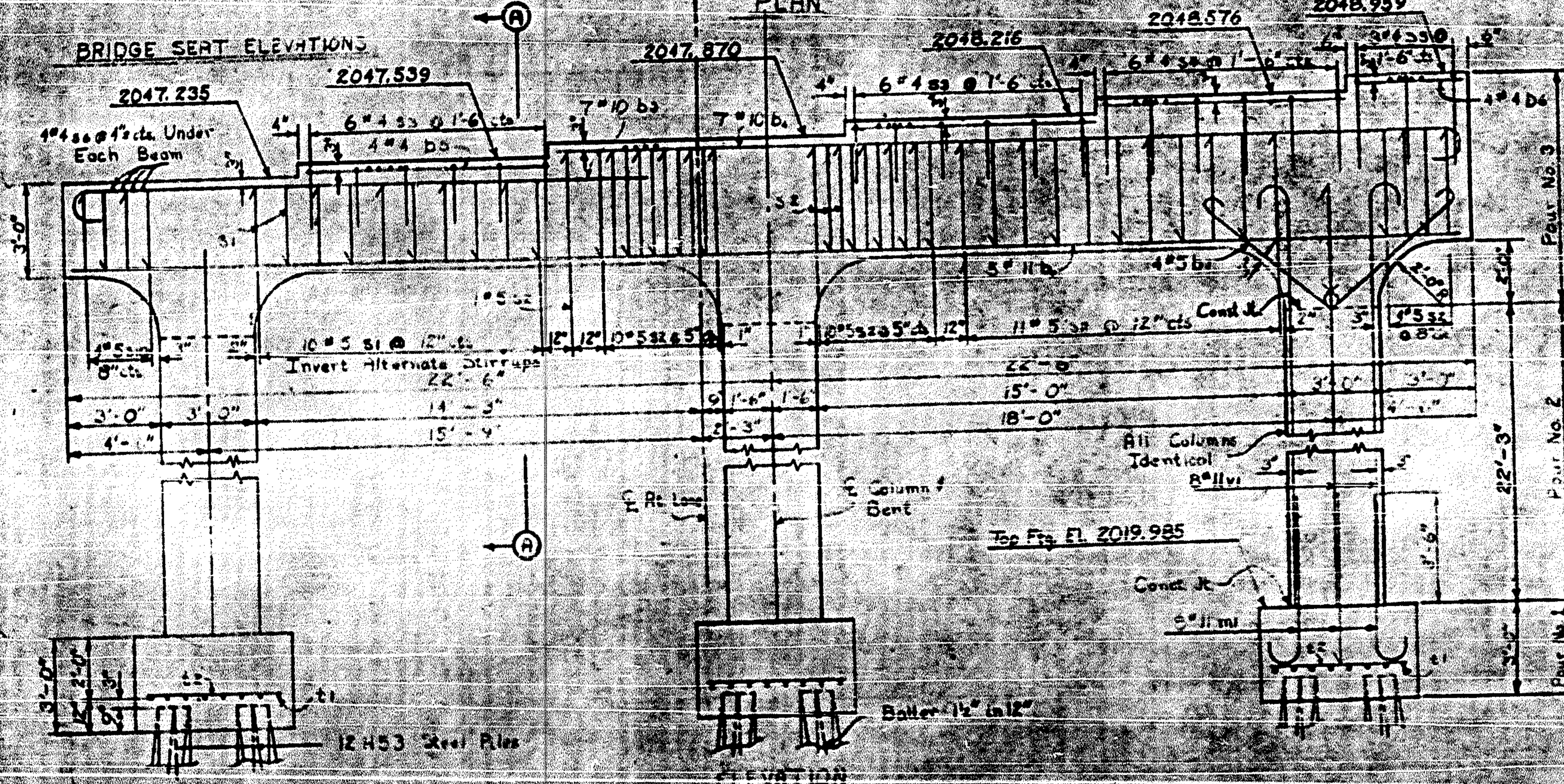


ANGLES	
O	64°-22'-269"
P	64°-25'-133"
Q	64°-28'-027"
R	64°-28'-441"
S	64°-30'-524"
T	64°-33'-559"
U	64°-36'-569"
V	65°-26'-033"
W	65°-30'-017"
X	65°-34'-029"
Y	65°-37'-398"
Z	65°-38'-074"
M	65°-42'-131"
N	65°-46'-223"

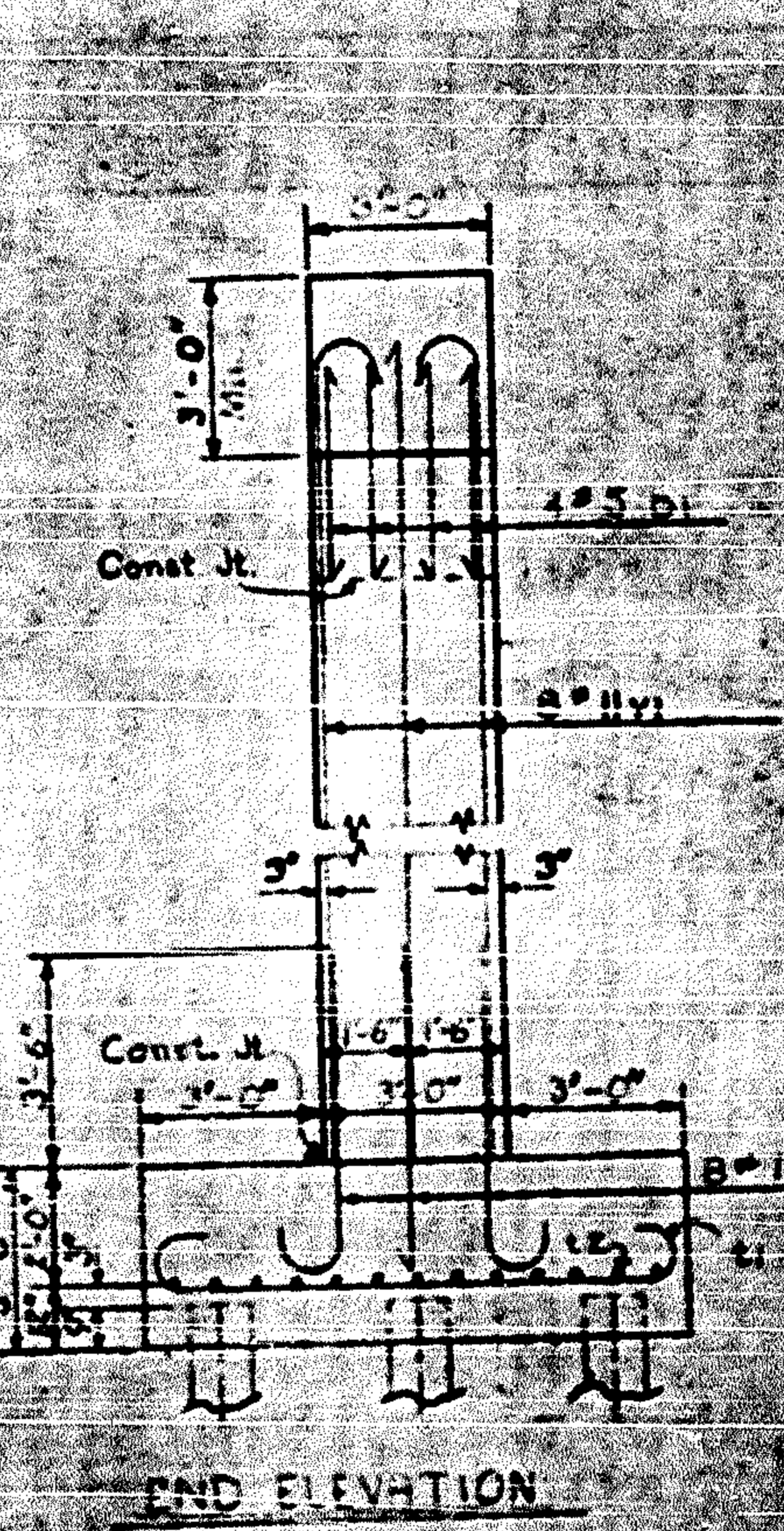
BAR DETAILS  
All bar dimensions are out to out



BRIDGE SEAT ELEVATIONS



SECTION A-A



DIVISION OF CONCRETE BENT NO. 2	
FOUR NO. 1 FOOTING	15.0
2 COLUMNS	22.3
3 CRP	21.3
TOTAL	58.6

NOTE: If pile space is required see detail on Bent No. 1 at left lane station 668+30.36

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	QTY.	REMARKS
D1	24	#4	17'-0"	1	
D2	24	#4	17'-0"	1	
D3	7	#4	17'-0"	1	
D4	12	#4	17'-0"	1	
D5	4	#4	17'-0"	1	
D6	24	#4	17'-0"	1	
D7	24	#4	17'-0"	1	
D8	24	#4	17'-0"	1	
D9	24	#4	17'-0"	1	
D10	24	#4	17'-0"	1	
D11	24	#4	17'-0"	1	
D12	24	#4	17'-0"	1	
D13	24	#4	17'-0"	1	
D14	24	#4	17'-0"	1	
D15	24	#4	17'-0"	1	
D16	24	#4	17'-0"	1	
D17	24	#4	17'-0"	1	
D18	24	#4	17'-0"	1	
D19	24	#4	17'-0"	1	
D20	24	#4	17'-0"	1	
D21	24	#4	17'-0"	1	
D22	24	#4	17'-0"	1	
D23	24	#4	17'-0"	1	
D24	24	#4	17'-0"	1	
D25	24	#4	17'-0"	1	
D26	24	#4	17'-0"	1	
D27	24	#4	17'-0"	1	
D28	24	#4	17'-0"	1	
D29	24	#4	17'-0"	1	
D30	24	#4	17'-0"	1	
D31	24	#4	17'-0"	1	
D32	24	#4	17'-0"	1	
D33	24	#4	17'-0"	1	
D34	24	#4	17'-0"	1	
D35	24	#4	17'-0"	1	
D36	24	#4	17'-0"	1	
D37	24	#4	17'-0"	1	
D38	24	#4	17'-0"	1	
D39	24	#4	17'-0"	1	
D40	24	#4	17'-0"	1	
D41	24	#4	17'-0"	1	
D42	24	#4	17'-0"	1	
D43	24	#4	17'-0"	1	
D44	24	#4	17'-0"	1	
D45	24	#4	17'-0"	1	
D46	24	#4	17'-0"	1	
D47	24	#4	17'-0"	1	
D48	24	#4	17'-0"	1	
D49	24	#4	17'-0"	1	
D50	24	#4	17'-0"	1	
D51	24	#4	17'-0"	1	
D52	24	#4	17'-0"	1	
D53	24	#4	17'-0"	1	
D54	24	#4	17'-0"	1	
D55	24	#4	17'-0"	1	
D56	24	#4	17'-0"	1	
D57	24	#4	17'-0"	1	
D58	24	#4	17'-0"	1	
D59	24	#4	17'-0"	1	
D60	24	#4	17'-0"	1	
D61	24	#4	17'-0"	1	
D62	24	#4	17'-0"	1	
D63	24	#4	17'-0"	1	
D64	24	#4	17'-0"	1	
D65	24	#4	17'-0"	1	
D66	24	#4	17'-0"	1	
D67	24	#4	17'-0"	1	
D68	24	#4	17'-0"	1	
D69	24	#4	17'-0"	1	
D70	24	#4	17'-0"	1	
D71	24	#4	17'-0"	1	
D72	24	#4	17'-0"	1	
D73	24	#4	17'-0"	1	
D74	24	#4	17'-0"	1	
D75	24	#4	17'-0"	1	
D76	24	#4	17'-0"	1	
D77	24	#4	17'-0"	1	
D78	24	#4	17'-0"	1	
D79	24	#4	17'-0"	1	
D80	24	#4	17'-0"	1	
D81	24	#4	17'-0"	1	
D82	24	#4	17'-0"	1	
D83	24	#4	17'-0"	1	
D84	24	#4	17'-0"	1	
D85	24	#4	17'-0"	1	
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D96	24	#4	17'-0"	1	
D97	24	#4	17'-0"	1	
D98	24	#4	17'-0"	1	
D99	24	#4	17'-0"	1	
D100	24	#4	17'-0"	1	

PROJECT NO. 618200  
POLK COUNTY  
STATION 668+30.36 T.M.S.

STATE HIGHWAY COMMISSION  
BENT NO. 2  
RIGHT LANE

