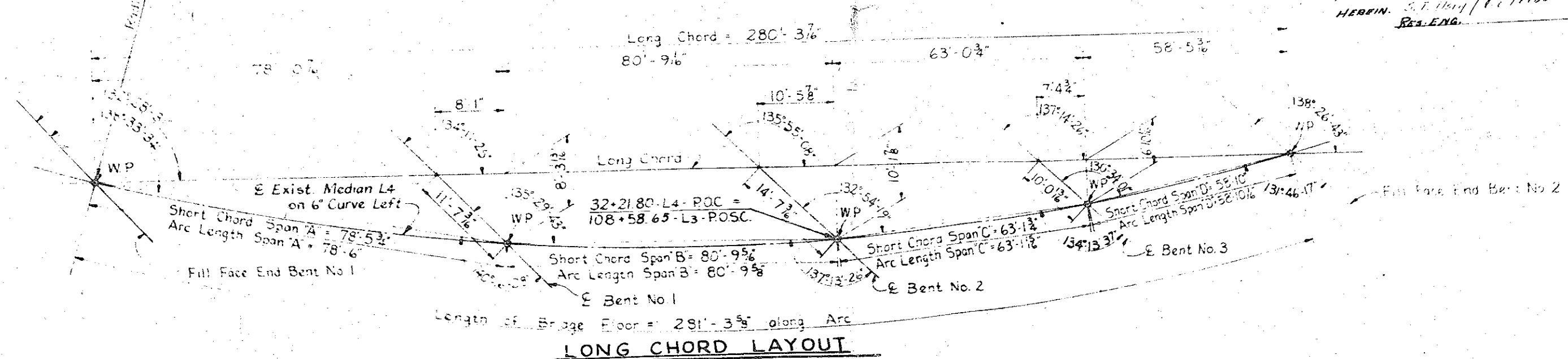


I HEREBY CERTIFY THAT THIS STRUCTURE WAS BUILT ACCORDING TO THIS PLAN EXCEPT AS NOTED HEREIN. *S. E. [Signature]*
RES. ENG.

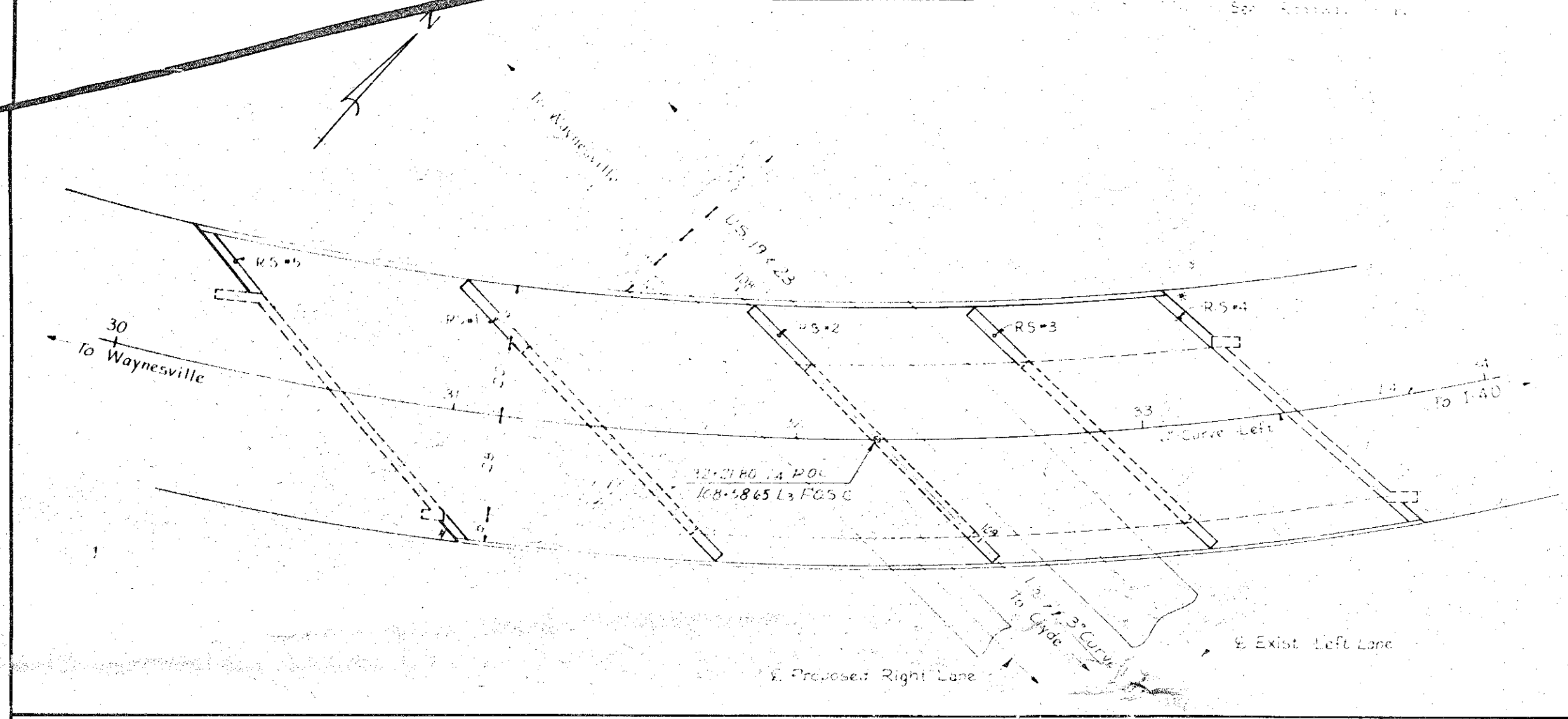


PROJECT NO. 8 3023206
HAYWOOD COUNTY
STATION: 32+21.80 L4

STATE OF NORTH CAROLINA					
STATE HIGHWAY COMMISSION					
RALEIGH					
GENERAL DRAWING FOR WIDENING BRIDGE OVER US 19 & 23 ON CONN. TO I-40 BETWEEN WAYNESVILLE & I-40					
MAY 1967					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			2		
2			3		
					TOTAL SHEETS 60

LOCATION SKETCH

NOTES



- Assumed Live Load = H20-S16(44) or alternate loading.
- For other design data and General Note see sheet S-N.
- Span lengths shall be checked by Resident Engineer as early as is practical in order to determine whether I-beam lengths as shown on plans are correct.
- Wearing surface to be placed by the Roadway Contractor.
- Computed foundation loads for End Bents 1 & 2 and Bents 1, 2 & 3 equals 25 tons per square foot.
- Unclassified structure excavation for Bents 1, 2 & 3 to be measured from surface of roadway cut.
- Traffic to be maintained on U.S. 19 & 23 See Special Provisions.
- Traffic to be maintained over existing structure during proposed widening of existing structure. See Special Provisions.
- Standard rail anchorage location
- Construction Elevations for setting deck forms and screeds will be furnished to the Resident Engineer by the Bridge Design Department before construction of the deck is begun.

B.M. Bridge Seat Left of End Bent No. 1 22' Left of Sta 30+35 Elevation 2682.45 M.S.L.

TOTAL BILL OF MATERIAL

	CLASS 'A' CONCRETE	REINF. STEEL	STRUCT. STEEL	CONCRETE POSTS & HANDRAILS	4" CONC. SLOPE PROTECT.	UNCLASS. STRUCT. EXCAV.	LINSEED OIL CONC. PROTECT.
	CU. YDS.	LBS.	APPR. LBS.	LIN. FT.	SQ. YDS.	CU. YDS.	GALLONS
SUPERSTRUCTURE	214.8	47,915	244,700	569.76			
END BENT No. 1	36.6	6,801					121.06
BENT No. 1	22.5	8,076					164.09
BENT No. 2	47.9	7,518					102.50
BENT No. 3	49.5	7,696		103.37			121.90
END BENT No. 2	27.7	5,507					111.39
TOTALS	431.88	83,513	244,700	569.76	130.27		622.94

DRAWN BY: Robert G. Gower DATE: May 1967
 CHECKED BY: DATE: May 1967

PROJECT No. 8.3023206
 HAYWOOD COUNTY
 STATION: 32+21.80 L4

Sheet 2 of 2

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
 RALEIGH

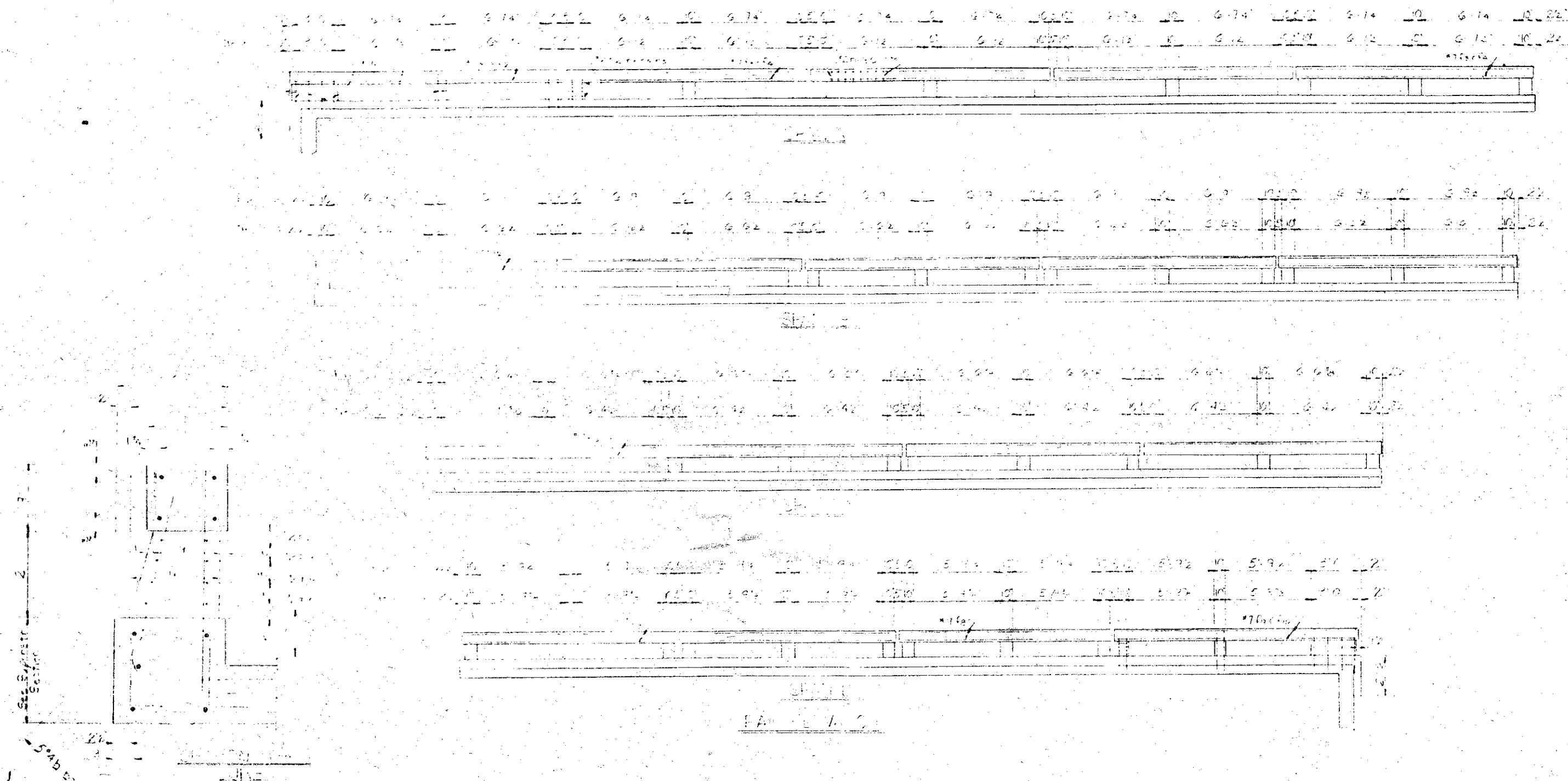
GENERAL DRAWING FOR WIDENING
 BRIDGE OVER U.S. 19 & 23
 ON CONN. TO I-40 BETWEEN
 WAYNESVILLE & I-40

MAY 1967

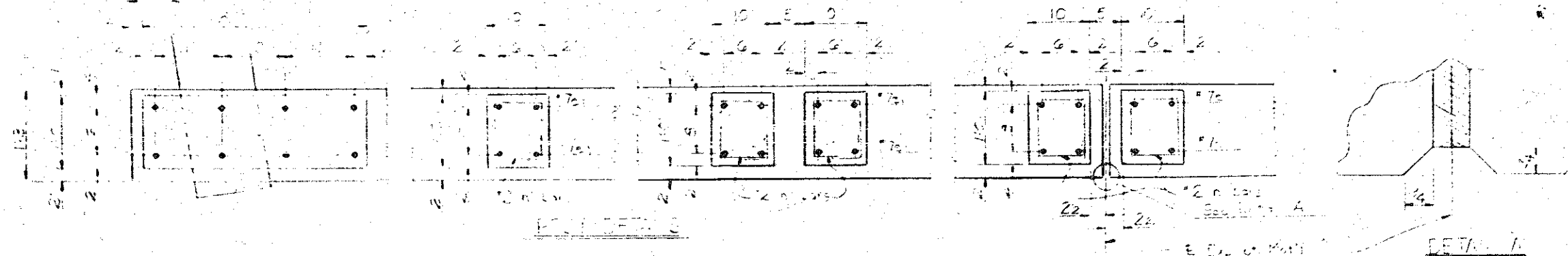
REVISIONS					CHECKED BY
NO.	BY	DATE	NO.	BY	
1			3		S-51
2			4		
TOTAL SHEETS					

STATE PROJECT NO.
 R.C. 53023206
 A.P.D. 12-2(15)

FED. RD. DIV. NO.
 3
 P. A. PROJ.



NO. QU. A. AW
 V. QU. A. 2.47
 W. QU. A. 1.81
 P. QU. A. 2.20



*For Measurement & Payment of Concrete, Measure as Shown. See General Provisions.

PAF LISTING

1	2	1.7
2	2	1.7
3	2	1.7
4	2	1.7
5	2	1.7
6	2	1.7
7	2	1.7

All Dimensions in Base Details are Out to Out

BILL OF MATERIALS FOR PAF

PAF NO.	QTY.	UNIT
1	448	YD
2	4	YD
3	4	YD
4	16	YD
5	16	YD
6	20	YD
7	36	YD
8	16	YD
9	24	YD
10	4	YD
11	4	YD
12	1157	YD
13	103	YD
14	109	YD
15	109	YD
16	104	YD

53023206
 COUNTY
 21.80 L4

MISSION
 TAILS

DATE	5-53
TOTAL SHEETS	248

DRAWN BY: [Signature] DATE: 5-53
 CHECKED BY: [Signature] DATE: 5-53

PROJECT NO.
 STATION:

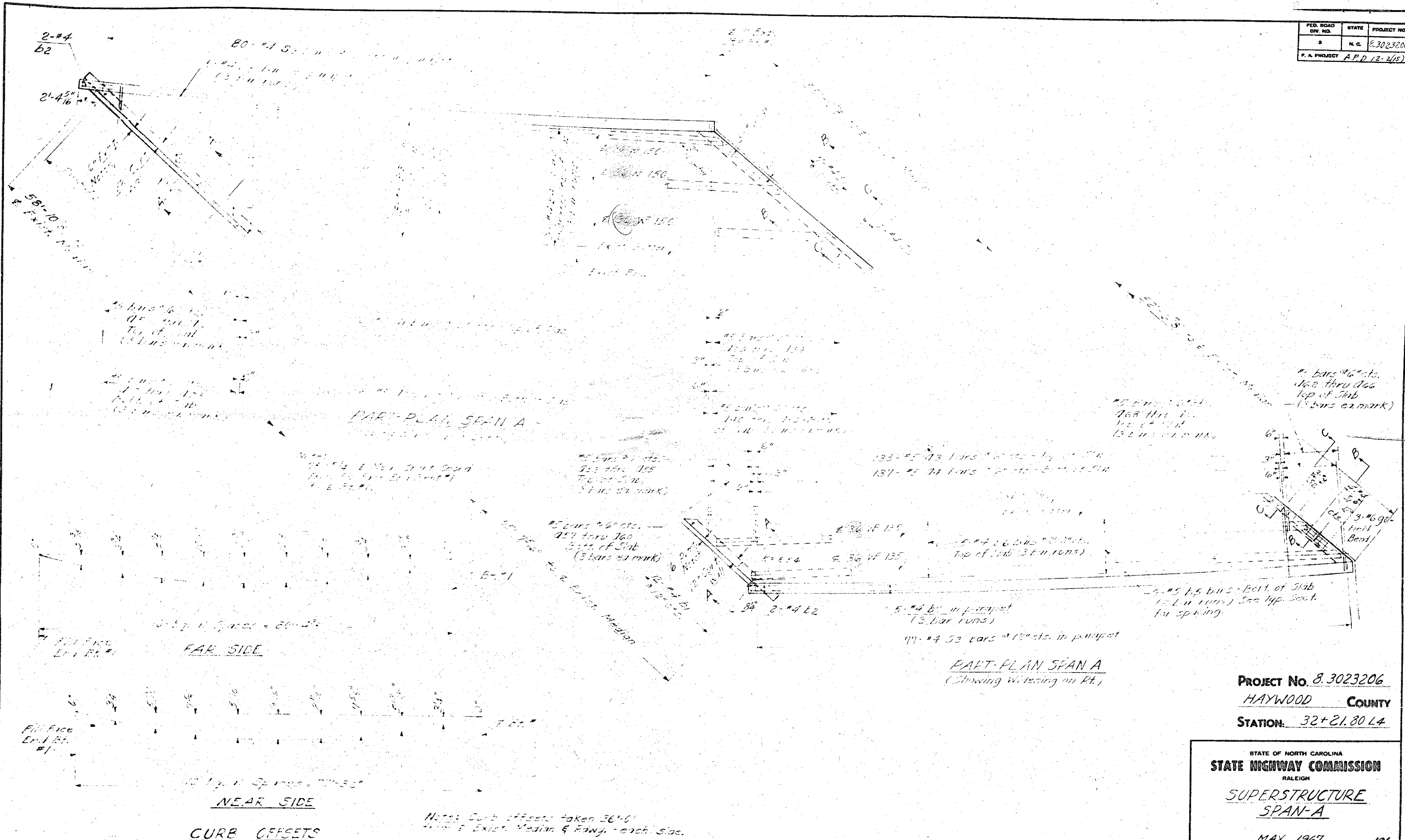
STATE OF NORTH CAROLINA
 STATE HIGHWAY COMMISSION
 RALEIGH

SUPPLEMENTAL PAFF LISTING

MAY

NO.	BY	DATE	NO.
1			3
2			4

FED. ROAD DIV. NO.	STATE	PROJECT NO.
8	N.C.	8.3023206
P. A. PROJECT		A.P.D. 12-2(15)



PROJECT No. 8.3023206
 HAYWOOD COUNTY
 STATION: 32+21.80 L4

STATE OF NORTH CAROLINA					
STATE HIGHWAY COMMISSION					
RALEIGH					
SUPERSTRUCTURE					
SPAN-A					
MAY, 1967					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		
				SHEET NO.	5-55
				TOTAL SHEETS	80-268

DRAWN BY: [Signature]
 CHECKED BY: [Signature] DATE: 5/12/67

Note: Curb offsets taken 36'-0"
 from E. Exist. Median & Rdwy. - each side.

BILL OF MATERIALS

BAR DETAILS

FRONT, APD 13-2-63

All Bar Dimensions Are Out to Out

SPAI		A'		BAR		A'		BAR		NO		SIZE		TYPE		LENGTH		WEIGHT	
NO	SIZE	TYPE	LENGTH	WEIGHT	NO	SIZE	TYPE	LENGTH	WEIGHT	NO	SIZE	TYPE	LENGTH	WEIGHT	NO	SIZE	TYPE	LENGTH	WEIGHT
0120	#5	1	17'-8"	2.211	011	#3	5	3'-9"	11	01	#5	Str	25'-0"	100	02	#5	Str	12'-0"	46
0121	#5	Str	17'-1"	2.120	012	#3	5	2'-5"	7	03	#5	Str	23'-5"	92	03	#5	Str	11'-5"	42
0122	#5	3	10'-4"	51	013	#3	4	5'-6"	145	04	#5	Str	10'-2"	38	04	#5	Str	1'-0"	46
0123	#5	1	15'-2"	41	014	#3	4	4'-2"	11	05	#5	Str	14'-8"	46	05	#5	Str	1'-0"	46
0124	#5	1	14'-0"	44	015	#3	3	4'-0"	15.39	06	#5	Str	13'-0"	42	06	#5	Str	1'-0"	46
0125	#5	1	12'-9"	40	016	#3	2	27'-7"	407	07	#5	Str	12'-2"	38	07	#5	Str	1'-0"	46
0126	#5	1	11'-7"	36	017	#3	1	5'-6"	42	08	#5	Str	10'-0"	34	08	#5	Str	7'-9"	32
0127	#5	1	10'-5"	32	018	#3	1	26'-7"	1245	09	#5	Str	9'-6"	30	09	#5	Str	5'-9"	24
0128	#5	1	9'-4"	29	019	#3	1	25'-6"	234	10	#5	Str	8'-3"	26	10	#5	Str	5'-5"	23
0129	#5	1	8'-2"	25	020	#3	1	23'-3"	233	11	#5	Str	6'-11"	22	11	#5	Str	5'-5"	23
0130	#5	1	7'-1"	22	021	#3	1	21'-1"	211	12	#5	Str	5'-7"	17	12	#5	Str	7'-10"	33
0131	#5	1	6'-0"	18	022	#3	1	19'-0"	189	13	#5	Str	4'-3"	13	13	#5	Str	6'-8"	23
0132	#5	1	4'-7"	14	023	#3	1	17'-0"	167	14	#5	Str	2'-11"	9	14	#5	Str	15'-10"	50
0133	#5	3	2'-5"	11	024	#3	1	15'-0"	145	15	#5	Str	14'-4"	48	15	#5	Str	12'-4"	41
0134	#5	1	16'-0"	56	025	#3	1	13'-0"	123	16	#5	Str	11'-10"	37	16	#5	Str	11'-10"	37
0135	#5	1	14'-0"	46	026	#3	1	11'-0"	101	17	#5	Str	10'-0"	34	17	#5	Str	9'-2"	29
0136	#5	1	12'-0"	36	027	#3	1	9'-0"	79	18	#5	Str	9'-2"	29	18	#5	Str	7'-10"	33
0137	#5	1	11'-0"	32	028	#3	1	7'-0"	57	19	#5	Str	7'-10"	33	19	#5	Str	6'-6"	23
0138	#5	1	10'-0"	28	029	#3	1	5'-0"	35	20	#5	Str	5'-2"	16	20	#5	Str	3'-5"	8
0139	#5	1	9'-0"	24	030	#3	1	3'-11"	2	21	#5	Str	3'-11"	2	21	#5	Str	5'-9"	38
0140	#5	1	8'-0"	20	031	#3	1	2'-7"	8	22	#5	Str	2'-7"	8	22	#5	Str	4'-2"	45
0141	#5	1	7'-0"	16	032	#3	1	1'-0"	4	23	#5	Str	14'-6"	48	23	#5	Str	14'-6"	48
0142	#5	1	6'-0"	12	033	#3	1	0'-0"	0	24	#5	Str	13'-2"	41	24	#5	Str	13'-2"	41
0143	#5	1	5'-0"	8	034	#3	1	0'-0"	0	25	#5	Str	12'-0"	38	25	#5	Str	12'-0"	38
0144	#5	1	4'-0"	4	035	#3	1	0'-0"	0	26	#5	Str	11'-0"	34	26	#5	Str	11'-0"	34
0145	#5	1	3'-0"	0	036	#3	1	0'-0"	0	27	#5	Str	10'-0"	30	27	#5	Str	10'-0"	30
0146	#5	1	2'-0"	0	037	#3	1	0'-0"	0	28	#5	Str	9'-0"	26	28	#5	Str	9'-0"	26
0147	#5	1	1'-0"	0	038	#3	1	0'-0"	0	29	#5	Str	8'-0"	22	29	#5	Str	8'-0"	22
0148	#5	1	0'-0"	0	039	#3	1	0'-0"	0	30	#5	Str	7'-0"	18	30	#5	Str	7'-0"	18
0149	#5	1	0'-0"	0	040	#3	1	0'-0"	0	31	#5	Str	6'-0"	14	31	#5	Str	6'-0"	14
0150	#5	1	0'-0"	0	041	#3	1	0'-0"	0	32	#5	Str	5'-0"	10	32	#5	Str	5'-0"	10
0151	#5	1	0'-0"	0	042	#3	1	0'-0"	0	33	#5	Str	4'-0"	6	33	#5	Str	4'-0"	6
0152	#5	1	0'-0"	0	043	#3	1	0'-0"	0	34	#5	Str	3'-0"	2	34	#5	Str	3'-0"	2
0153	#5	1	0'-0"	0	044	#3	1	0'-0"	0	35	#5	Str	2'-0"	0	35	#5	Str	2'-0"	0
0154	#5	1	0'-0"	0	045	#3	1	0'-0"	0	36	#5	Str	1'-0"	0	36	#5	Str	1'-0"	0
0155	#5	1	0'-0"	0	046	#3	1	0'-0"	0	37	#5	Str	0'-0"	0	37	#5	Str	0'-0"	0
0156	#5	1	0'-0"	0	047	#3	1	0'-0"	0	38	#5	Str	0'-0"	0	38	#5	Str	0'-0"	0
0157	#5	1	0'-0"	0	048	#3	1	0'-0"	0	39	#5	Str	0'-0"	0	39	#5	Str	0'-0"	0
0158	#5	1	0'-0"	0	049	#3	1	0'-0"	0	40	#5	Str	0'-0"	0	40	#5	Str	0'-0"	0
0159	#5	1	0'-0"	0	050	#3	1	0'-0"	0	41	#5	Str	0'-0"	0	41	#5	Str	0'-0"	0
0160	#5	1	0'-0"	0	051	#3	1	0'-0"	0	42	#5	Str	0'-0"	0	42	#5	Str	0'-0"	0
0161	#5	1	0'-0"	0	052	#3	1	0'-0"	0	43	#5	Str	0'-0"	0	43	#5	Str	0'-0"	0
0162	#5	1	0'-0"	0	053	#3	1	0'-0"	0	44	#5	Str	0'-0"	0	44	#5	Str	0'-0"	0
0163	#5	1	0'-0"	0	054	#3	1	0'-0"	0	45	#5	Str	0'-0"	0	45	#5	Str	0'-0"	0
0164	#5	1	0'-0"	0	055	#3	1	0'-0"	0	46	#5	Str	0'-0"	0	46	#5	Str	0'-0"	0
0165	#5	1	0'-0"	0	056	#3	1	0'-0"	0	47	#5	Str	0'-0"	0	47	#5	Str	0'-0"	0
0166	#5	1	0'-0"	0	057	#3	1	0'-0"	0	48	#5	Str	0'-0"	0	48	#5	Str	0'-0"	0
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0168	#5	1	0'-0"	0	059	#3	1	0'-0"	0	50	#5	Str	0'-0"	0	50	#5	Str	0'-0"	0
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0170	#5	1	0'-0"	0	061	#3	1	0'-0"	0	52	#5	Str	0'-0"	0	52	#5	Str	0'-0"	0
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0173	#5	1	0'-0"	0	064	#3	1	0'-0"	0	55	#5	Str	0'-0"	0	55	#5	Str	0'-0"	0
0174	#5	1	0'-0"	0	065	#3	1	0'-0"	0	56	#5	Str	0'-0"	0	56	#5	Str	0'-0"	0
0175	#5	1	0'-0"	0	066	#3	1	0'-0"	0	57	#5	Str	0'-0"	0	57	#5	Str	0'-0"	0
0176	#5	1	0'-0"	0	067	#3	1	0'-0"	0	58	#5	Str	0'-0"	0	58	#5	Str	0'-0"	0
0177	#5	1	0'-0"	0	068	#3	1	0'-0"	0	59	#5	Str	0'-0"	0	59	#5	Str	0'-0"	0
0178	#5	1	0'-0"	0	069	#3	1	0'-0"	0	60	#5	Str	0'-0"	0	60	#5	Str	0'-0"	0
0179	#5	1	0'-0"	0	070	#3	1	0'-0"	0	61	#5	Str	0'-0"	0	61	#5	Str	0'-0"	0
0180	#5	1	0'-0"	0	071	#3	1	0'-0"	0	62	#5	Str	0'-0"	0	62	#5	Str	0'-0"	0
0181	#5	1	0'-0"	0	072	#3	1	0'-0"	0	63	#5	Str	0'-0"	0	63	#5	Str	0'-0"	0
0182	#5	1	0'-0"	0	073	#3	1	0'-0"	0	64	#5	Str	0'-0"	0	64	#5	Str	0'-0"	0
0183	#5	1	0'-0"	0	074	#3	1	0'-0"	0	65	#5	Str	0'-0"	0	65	#5	Str	0'-0"	0
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0188	#5	1	0'-0"	0	079	#3	1	0'-0"	0	70	#5	Str	0'-0"	0	70	#5	Str	0'-0"	0
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0190	#5	1	0'-0"	0	081	#3	1	0'-0"	0	72	#5	Str	0'-0"	0	72	#5	Str	0'-0"	0
0191	#5	1	0'-0"	0	082	#3	1	0'-0"	0	73	#5	Str	0'-0"	0	73	#5	Str	0'-0"	0
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BILL OF MATERIAL

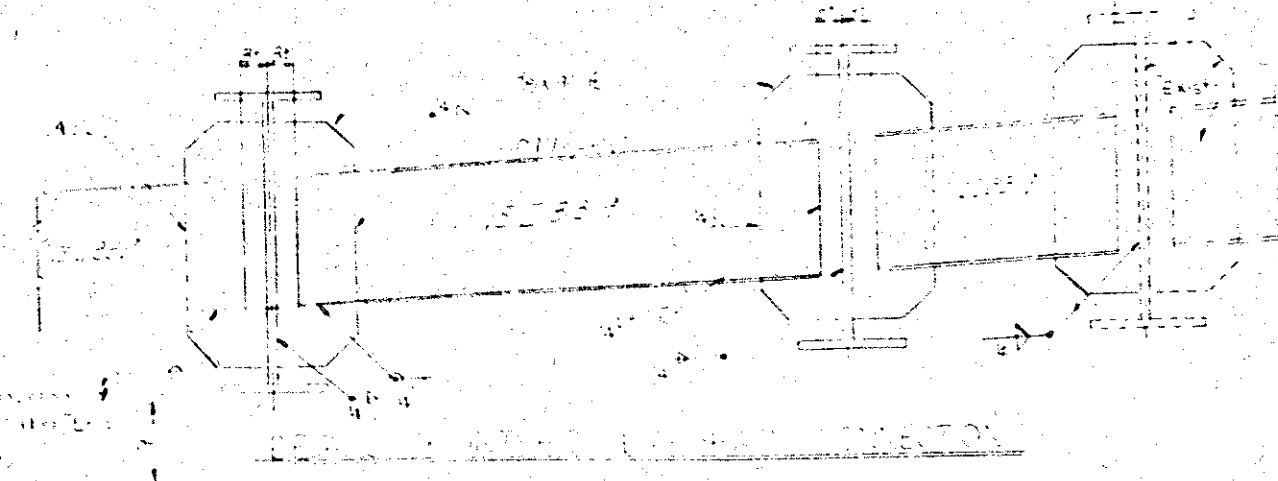
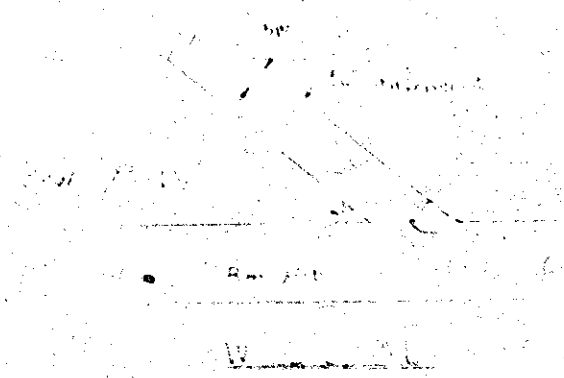
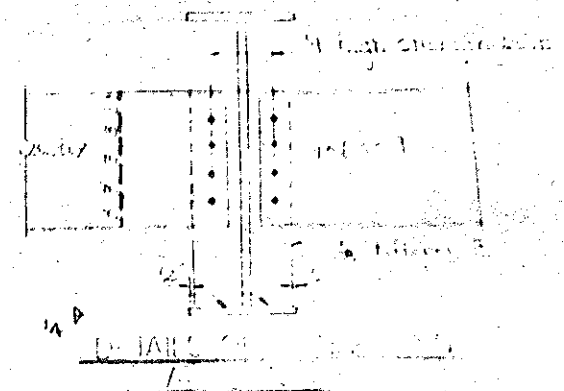
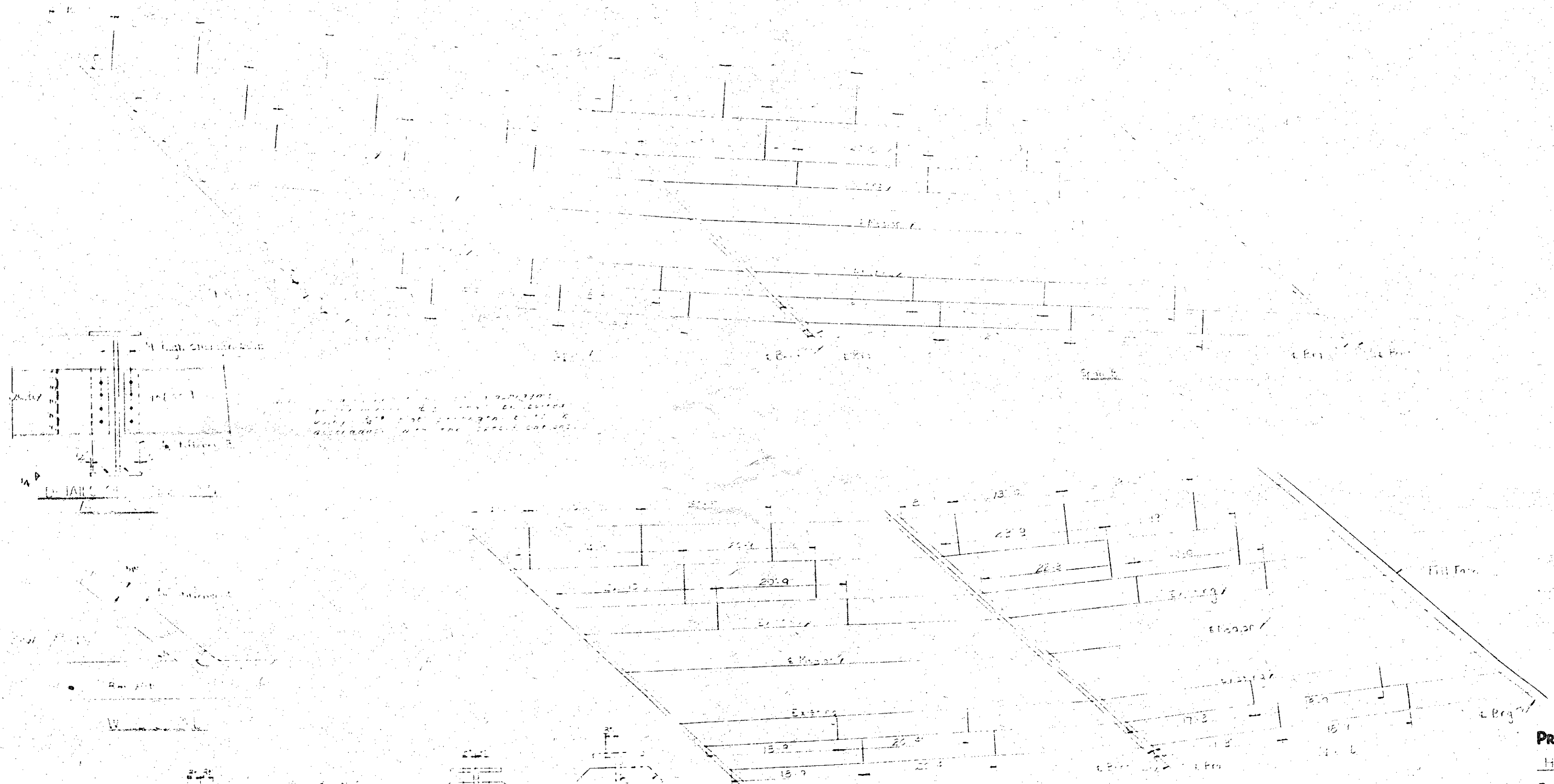
BAR DETAILS

FED. ROAD DIST. NO.	STATE	PROJECT NO.
3	N. C.	2312
Drawing APR 12-2-15		

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	NO.	SIZE	TYPE	LENGTH	WEIGHT
1	1	1/2"								
2	1	1/2"								
3	1	1/2"								
4	1	1/2"								
5	1	1/2"								
6	1	1/2"								
7	1	1/2"								
8	1	1/2"								
9	1	1/2"								
10	1	1/2"								
11	1	1/2"								
12	1	1/2"								
13	1	1/2"								
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17	1	1/2"								
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91	1	1/2"								
92	1	1/2"								
93	1	1/2"								
94	1	1/2"								
95	1	1/2"								
96	1	1/2"								
97	1	1/2"								
98	1	1/2"								
99	1	1/2"								
100	1	1/2"								

Bar	Quantity	Weight	Volume
1/2"	42.7	7.829	
3/4"			
1"			
1 1/4"			
1 1/2"			
2"			
2 1/2"			
3"			
3 1/2"			
4"			
4 1/2"			
5"			
5 1/2"			
6"			
6 1/2"			
7"			
7 1/2"			
8"			
8 1/2"			
9"			
9 1/2"			
10"			
10 1/2"			
11"			
11 1/2"			
12"			
12 1/2"			
13"			
13 1/2"			
14"			
14 1/2"			
15"			
15 1/2"			
16"			
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95 1/2"			

FED. ROAD DIV. NO.	STATE	PROJECT NO.
3	N.C.	
F. A. PROJECT APD 12-2(15)		



Note: The Contractor May At His Option But Without Change In The Contract Price Of Structural Steel Use Bolted End Plate Connections Between The Beams and Are Welded To The Chords. Connections In Lieu Of The Welded Plate Connections Or Diaphragm Connections Shown.

PROJECT No. 83023206
 HAYWOOD COUNTY
 STATION: 32+21.8-L

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
 RALEIGH

STEEL LAYOUT
 DETAILS

11/1

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

SHEET NO. 202
 1967
 TOTAL SHEETS 80
 265

DATE: 11/1/67
 CHECKED BY: [Signature]
 DRAWN BY: [Signature]

FED. ROAD DIV. NO.	STATE	PROJECT NO.
8	N. C.	83023206
P. A. PROJECT A.P.D. K-2(15)		

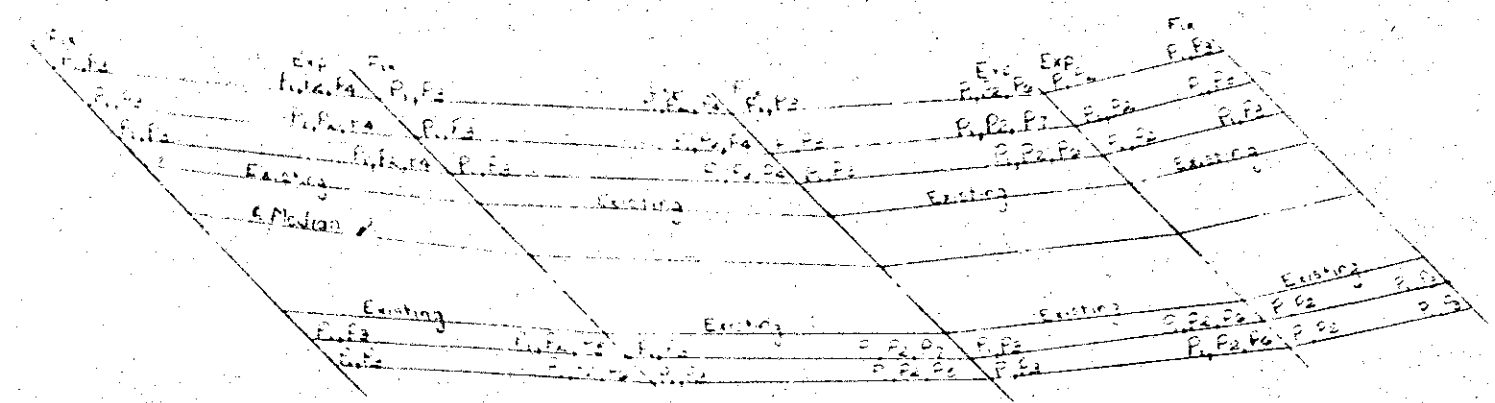
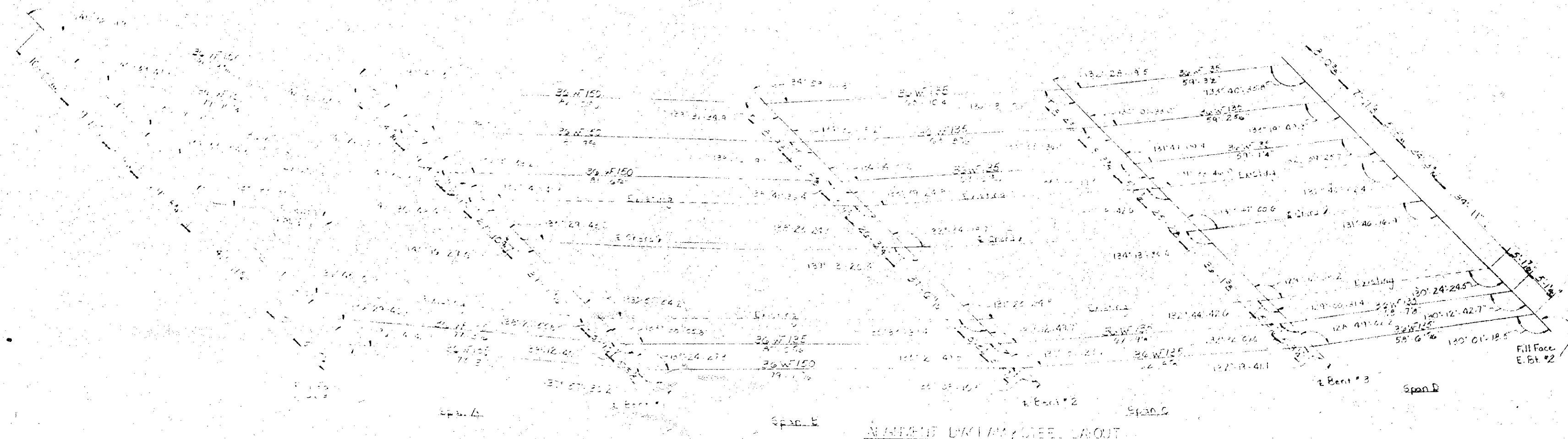
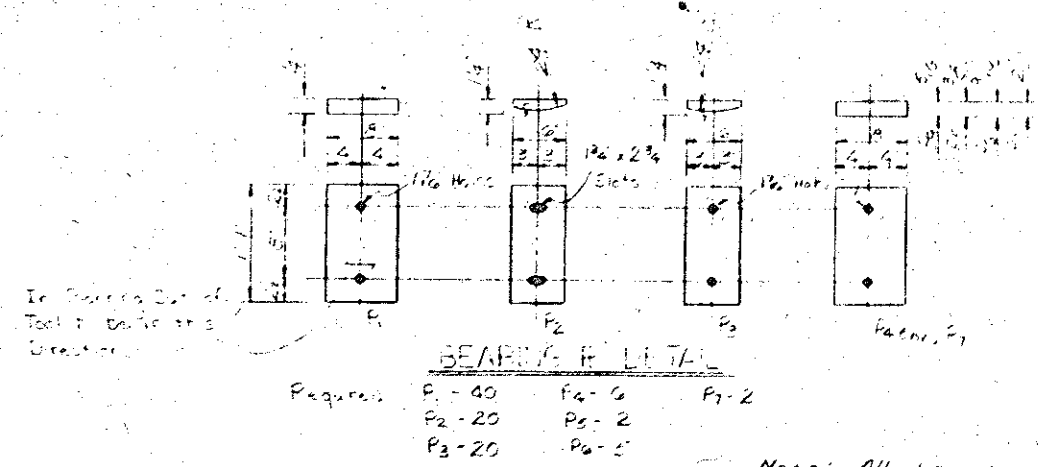


DIAGRAM SHOWING LOCATION OF PLATES

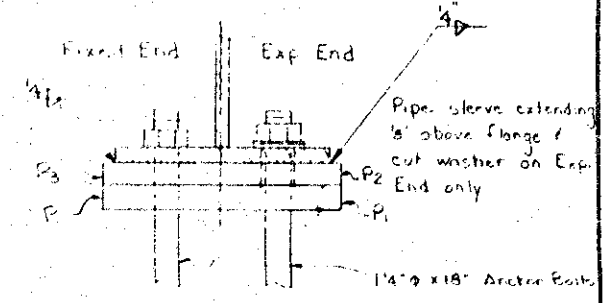


In Bearing Out of Total to be in as direction

BEARING PLATE

Requires P₁-40 P₂-6 P₃-2
P₄-20 P₅-2 P₆-2
P₃-20 P₄-2

Note: All beams and cover plates shall of ASTM A-36 grade structural steel. See sheet S-11



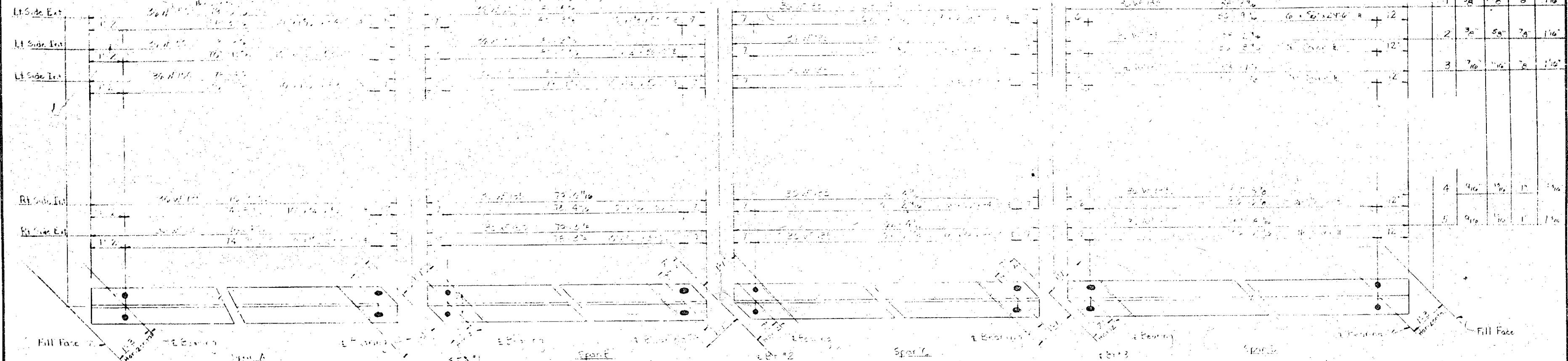
SECTION THRU BEAM

PROJECT No. 83023206
HAYWOOD COUNTY
STATION: 32+21.8-14

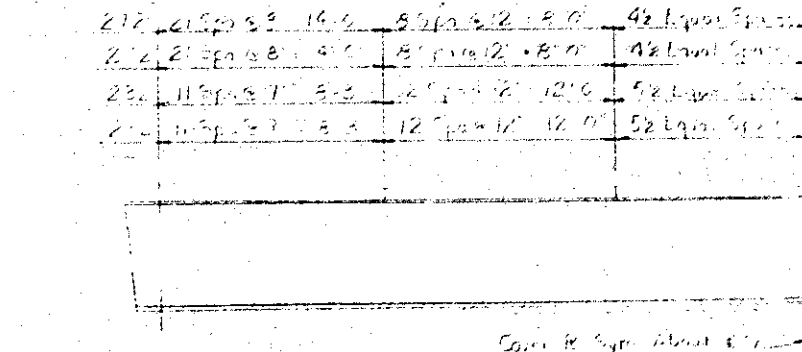
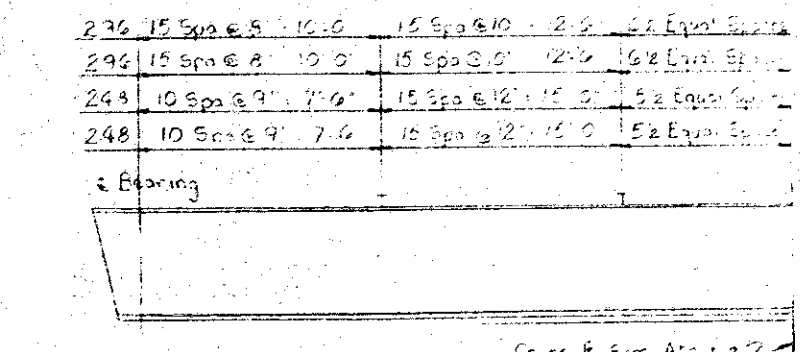
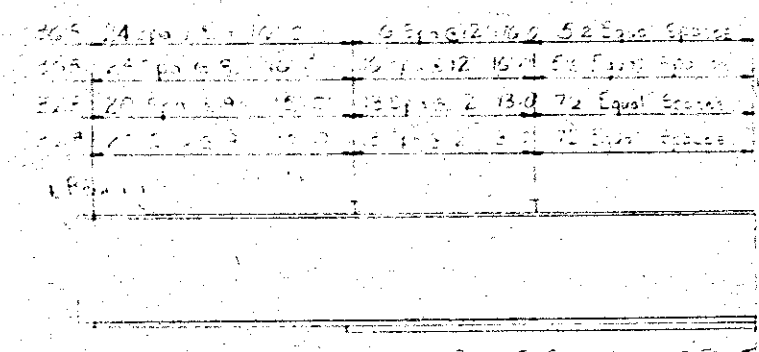
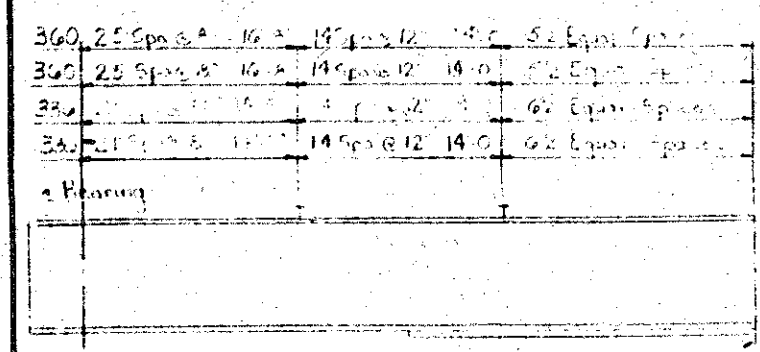
STATE OF NORTH CAROLINA					
STATE HIGHWAY COMMISSION					
RALEIGH					
STEEL LAYOUT					
ADDL 203					
967					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		
SHEET NO. 5-62					203
TOTAL SHEETS 80					268

DRAWN BY: [Signature] DATE: [Date]
CHECKED BY: [Signature] DATE: [Date]

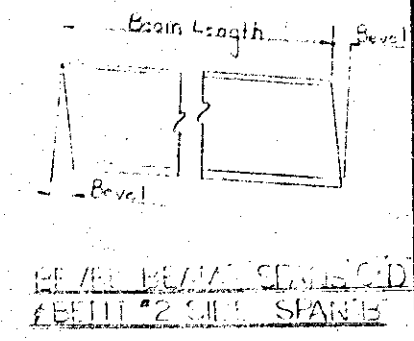
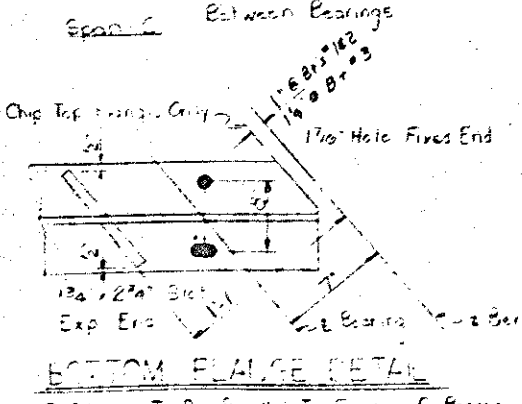
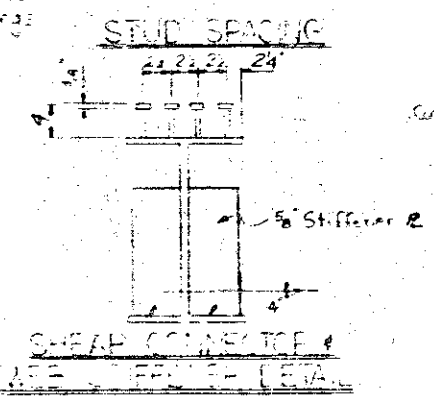
Span	Span A					Span B					Span C					Span D				
Beam	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Length of Span	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Number of Beams	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Number of Girders	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Number of Stiffeners	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Number of Brackets	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2



Bevel Spans	Bevel Spans			
	A	B	C	D
1	3'	5'	3'	11'
2	3'	5'	3'	11'
3	7'	11'	7'	11'
4	9'	13'	9'	13'
5	9'	13'	9'	13'



SEAM DETAIL
Length: Area Along Top of Beam



PROJECT No. 83023206
 HAYWOOD COUNTY
 STATION: 32+21.814

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
 RALEIGH

STEEL LAYOUT

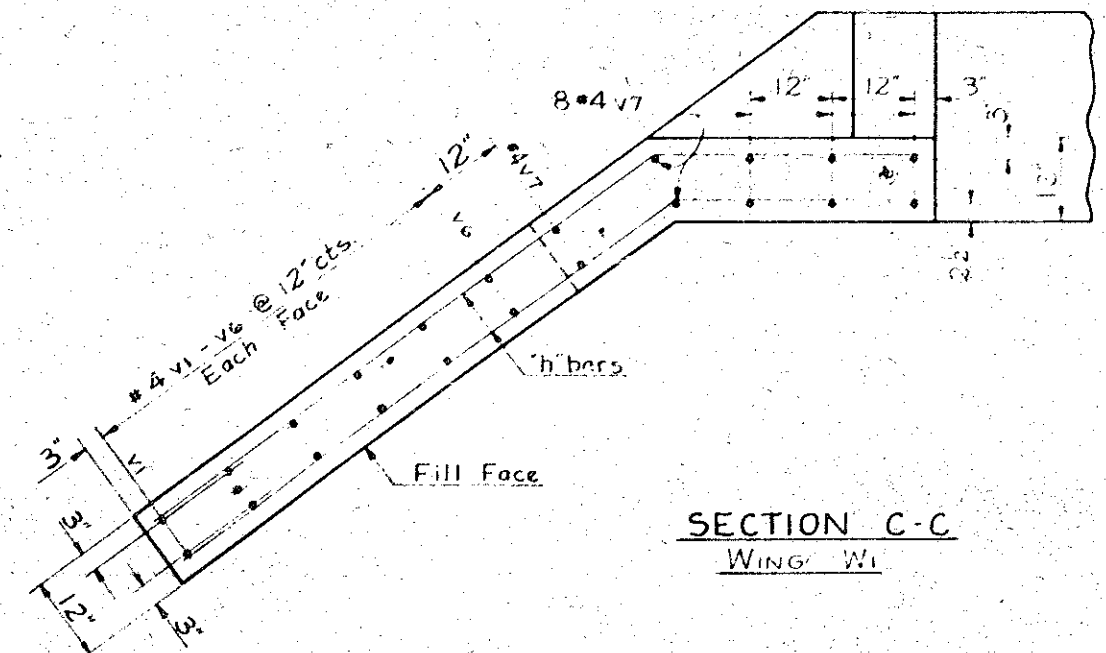
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			2			268
2			4			

DRAWN BY: [Name]
 CHECKED BY: [Name]
 DATE: [Date]

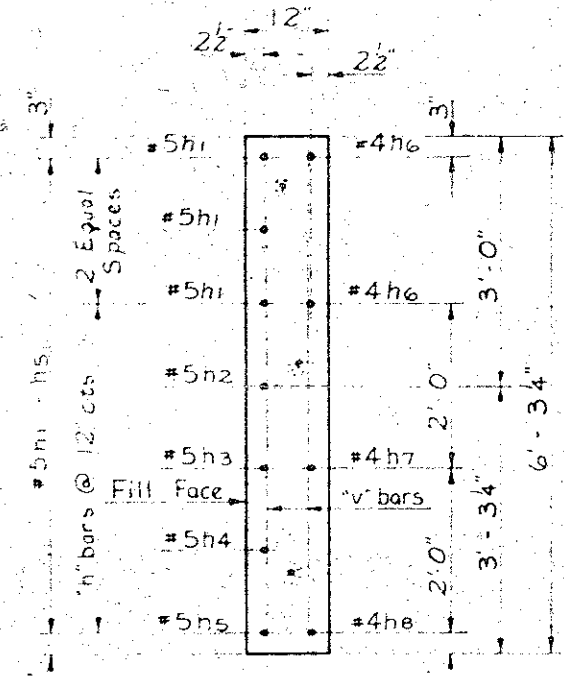
Note:
 In lieu of the welding procedure for shop and field welds indicated for the intermediate diaphragm connections, the Contractor may, at his option, shop weld the interior plates to the beam web and field weld the channel to the exterior plates. Spacing, size, and handling of beams shall be as shown on the drawings. The shop welds to the beam web.

At the Contractor's option any diaphragm or web cover plates indicated on the plans may be omitted if approved by the project engineer. Diaphragm plates may be omitted if the beams do not exceed a width equal to the flange width less 2" or 3" thickness and the flange plates are placed the size of the web for strength and shear flow and in accordance with the AWS Specifications.

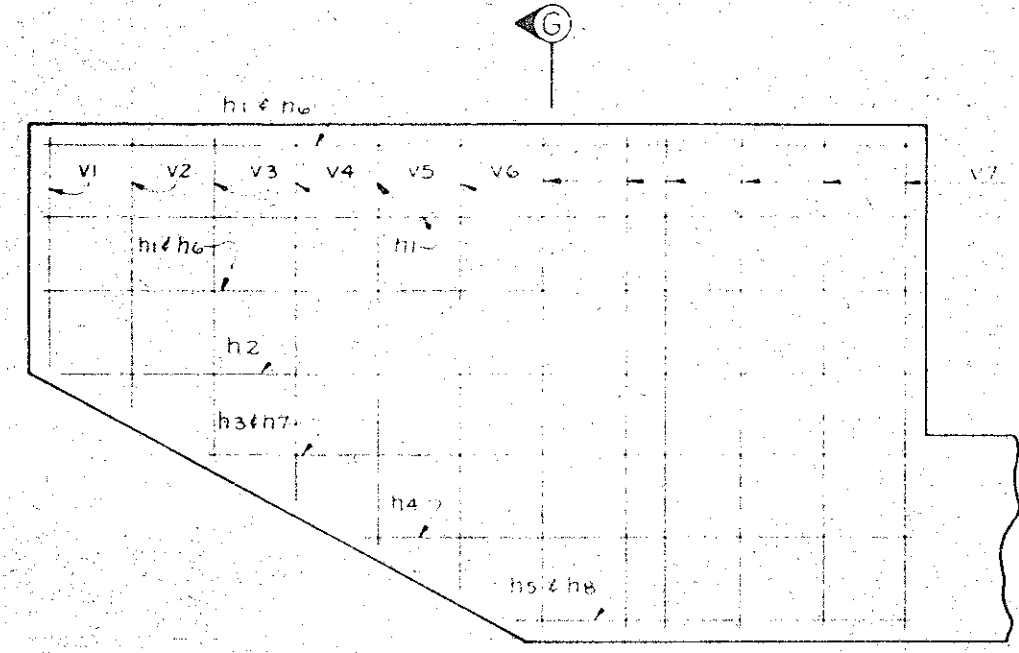
Web Stiffeners to Be Parallel to Ends of Beams. Stiffeners Are Not Required on the End Port End of Beams nor on the Outside of Exterior Beams nor on side of Beam adj. to 3x15" Str.



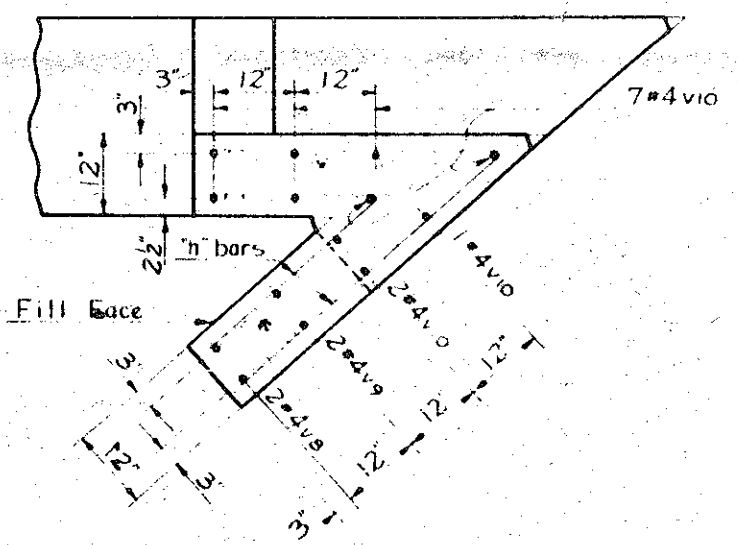
SECTION C-C
WING W1



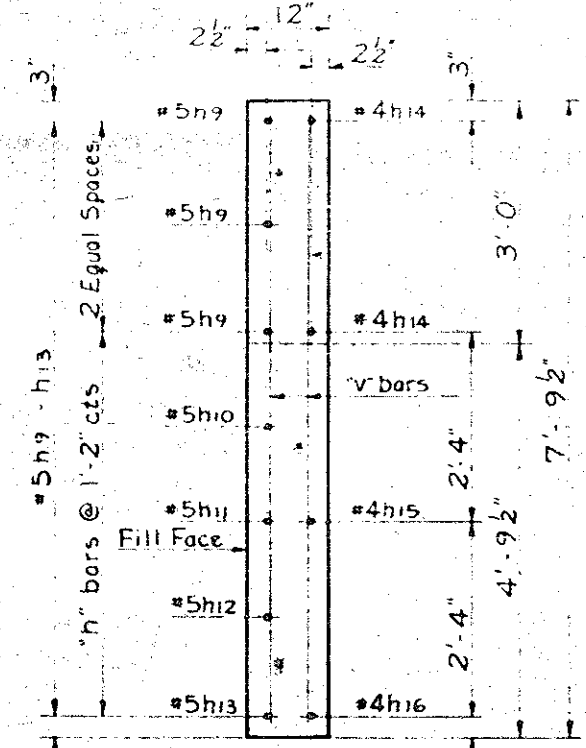
SECTION G-G
WING W1



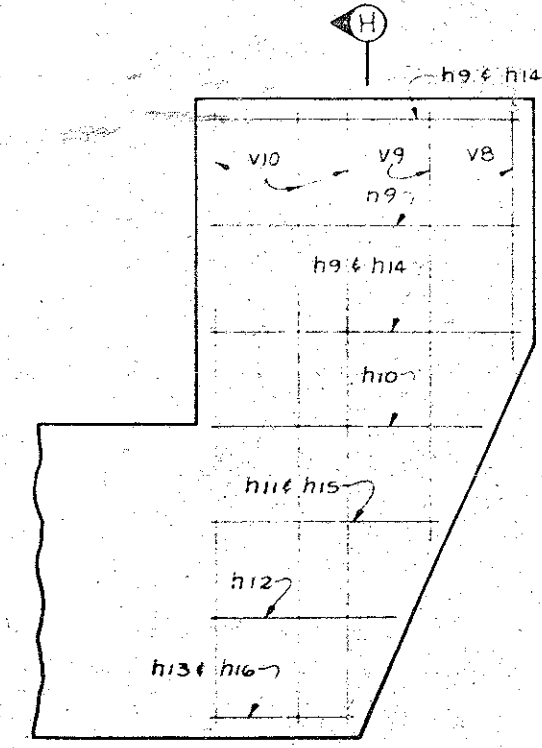
VIEW D-D
WING W1



SECTION E-E
WING W2



SECTION H-H
WING W2



VIEW F-F
WING W2

DIVISION OF CONCRETE		
Pour	Cu. Yds.	Cu. Yds.
1. Footings	9.7	4.3
2. Columns	2.1	2.3
3. Cap.	11.4	6.8
Total	23.2	13.4

BAR NO.	NO.	SIZE	TYPE	LENGTH	WEIGHT
v1	2	#4	Str.	2'-9"	4
v2	2	#4	Str.	3'-4"	4
v3	2	#4	Str.	3'-10"	5
v4	2	#4	Str.	4'-5"	6
v5	2	#4	Str.	4'-11"	7
v6	2	#4	Str.	5'-6"	7
v7	10	#4	Str.	5'-11"	40
v8	2	#4	Str.	3'-1"	4
v9	2	#4	Str.	5'-3"	7
v10	10	#4	Str.	7'-6"	50
m1	18	#9		7'-9"	1,265
m2	32	#9		9'-0"	979
s1	12	#4		7'-3"	58
s2	33	#4		2'-11"	64
s3	8	#4		7'-11"	42
s4	3	#4		8'-7"	17
s5	10	#4		9'-5"	63
t1	39	#7		8'-5"	671
t2	66	#5		6'-8"	459
t3	39	#5		7'-11"	322
t4	44	#5		4'-8"	214

Reinforcing Steel Lbs. 6801
Class 'A' Concrete Cu. Yds. 36.6

CLASS 'A' CONCRETE CU. YDS.	
Left Side Extension	23.2
Right Side Extension	13.4
Total	36.6

PROJECT NO. 8.3023206
HAYWOOD COUNTY
STATION: 32+21.80 L4
Sheet 2 of 2

STATE OF NORTH CAROLINA STATE HIGHWAY COMMISSION RALEIGH					
SUBSTRUCTURE END BENT NO. 1					
APRIL 1967					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

SHEET NO. 206
DATE 1967
TOTAL QUANTITY 80
268

Hk.	①
1'-7"	b1 22'-9"
1'-7"	b4 29'-0"
1'-7"	b5 29'-11"
1'-7"	b6 30'-10"
1'-7"	b7 31'-9"
1'-7"	b9 16'-9"
1'-7"	b10 16'-0"
1'-7"	b11 15'-3"
1'-7"	b12 14'-6"

Hk.	②	Hk.
7'	bs 5'-6"	7'
10'	t1 6'-9"	10'
7'	t2 5'-6"	7'
7'	t3 6'-9"	7'
7'	t4 3'-6"	7'

Hk.	③	Hk.
1'-3"	m1 6'-6"	1'-3"
1'-3"	m2 7'-9"	1'-3"
4 1/2"	s2 2'-2"	4 1/2"

Hk.	④	Hk.
4 1/2"	s1 2'-2"	4 1/2"
4 1/2"	s3 2'-6"	4 1/2"
4 1/2"	s4 2'-10"	4 1/2"
4 1/2"	s5 3'-3"	4 1/2"

Hk.	⑤	Hk.
2'-5 1/2"	h1-h5	2'-5 1/2"
2'-7 1/8"	h6-h8	2'-7 1/8"
1'-9 1/8"	h1-h5	1'-9 1/8"
1'-10 1/8"	h6-h8	1'-10 1/8"
7'-5"	h1	7'-5"
7'-3"	h2	7'-3"
5'-5"	h3	5'-5"
3'-6"	h4	3'-6"
1'-8"	h5	1'-8"
7'-6"	h6	7'-6"
5'-6"	h7	5'-6"
1'-9"	h8	1'-9"

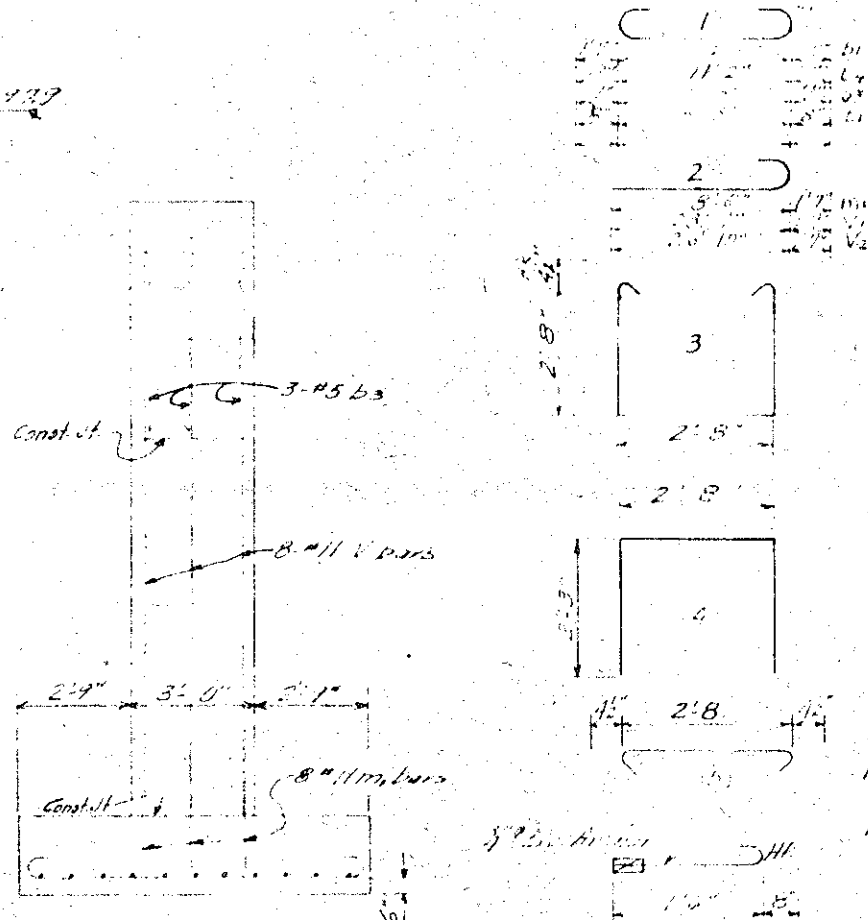
Hk.	⑥	Hk.
1'-6 3/8"	h9-h13	1'-6 3/8"
2'-8 1/8"	h14-h16	2'-8 1/8"
2'-9"	h9	2'-9"
2'-4"	h10	2'-4"
1'-10"	h11	1'-10"
1'-3"	h12	1'-3"
0'-9"	h13	0'-9"
4'-0"	h14	4'-0"
3'-3"	h15	3'-3"
2'-3"	h16	2'-3"

BILL OF MATERIAL

BAR	NO	SIZE	TYPE	LENGTH	WEIGHT
D1	6	#11	1	27.7'	372
D2	5	#11	5A	24.5'	642
D3	18	#5	1	6.5'	120
D4	5	#11	1	14.4'	381
D5	5	#9	1A	11.5'	190
V1	15	#11	2	25.2'	2127
V2	9	#11	2	28.8'	1208
Reinforcing Steel Lbs. 9074					
Class A Concrete Cu Yds. 517					
55.38					

BAR DETAILS

(All dimensions are out to out)



NOTES:
For expansion anchor requirements, see sheet 5N

EXPANSION ANCHOR
8 Required at each Bent

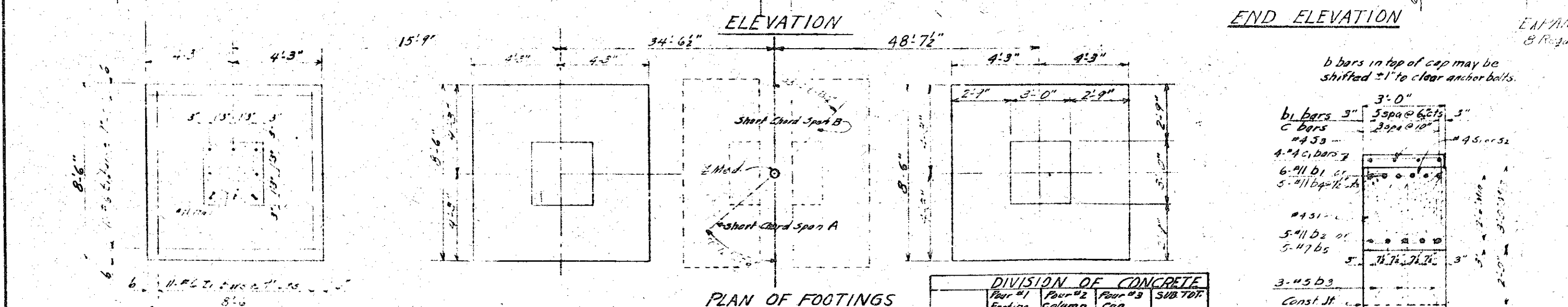
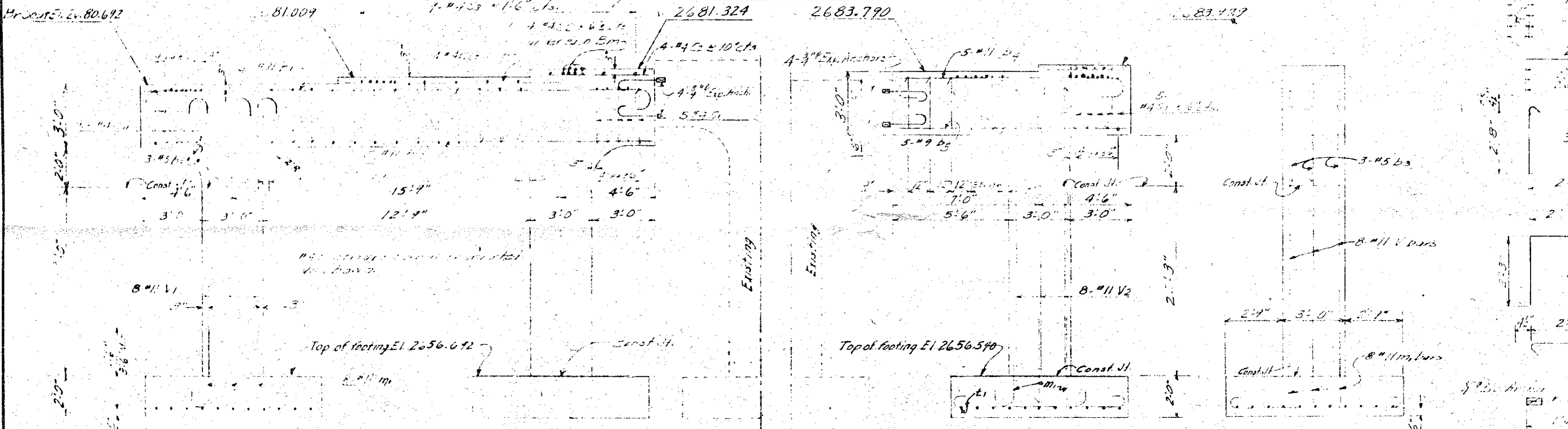
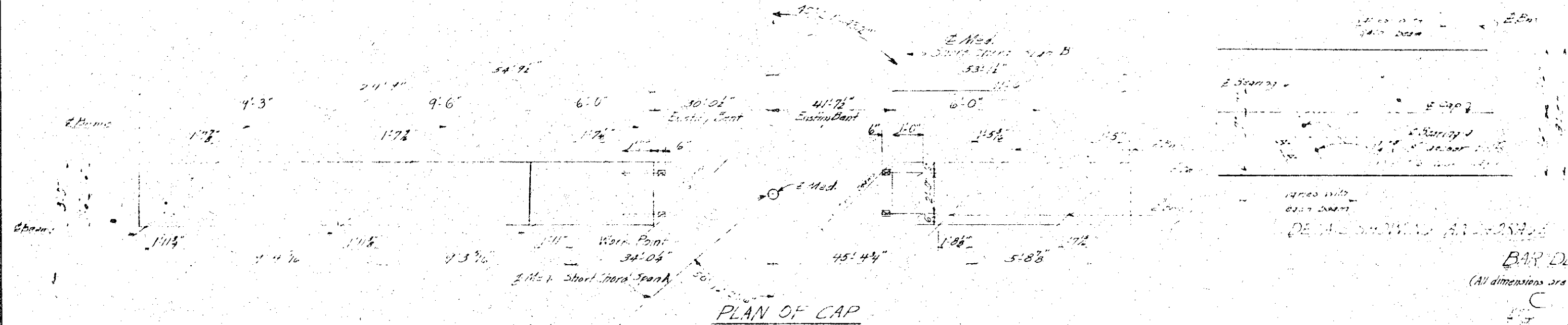
PROJECT No. 8.3023206
HAYWOOD COUNTY
STATION. 32+21.8 L4

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALIGH
SUBSTRUCTURE
BENT No 1

APRIL 1967 **207**

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

SHEET NO. **5-66**
TOTAL SHEETS **80**
268

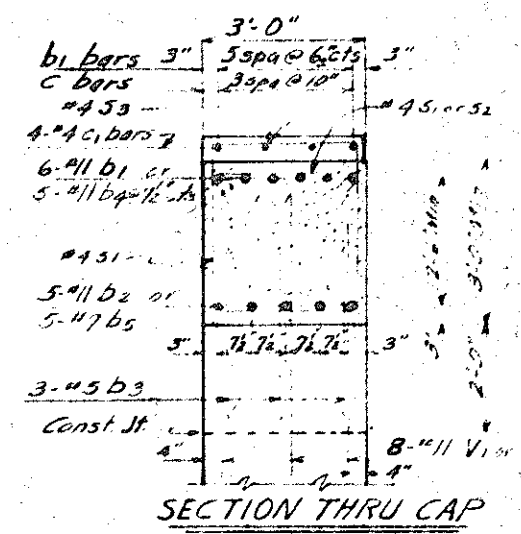


DIVISION OF CONCRETE

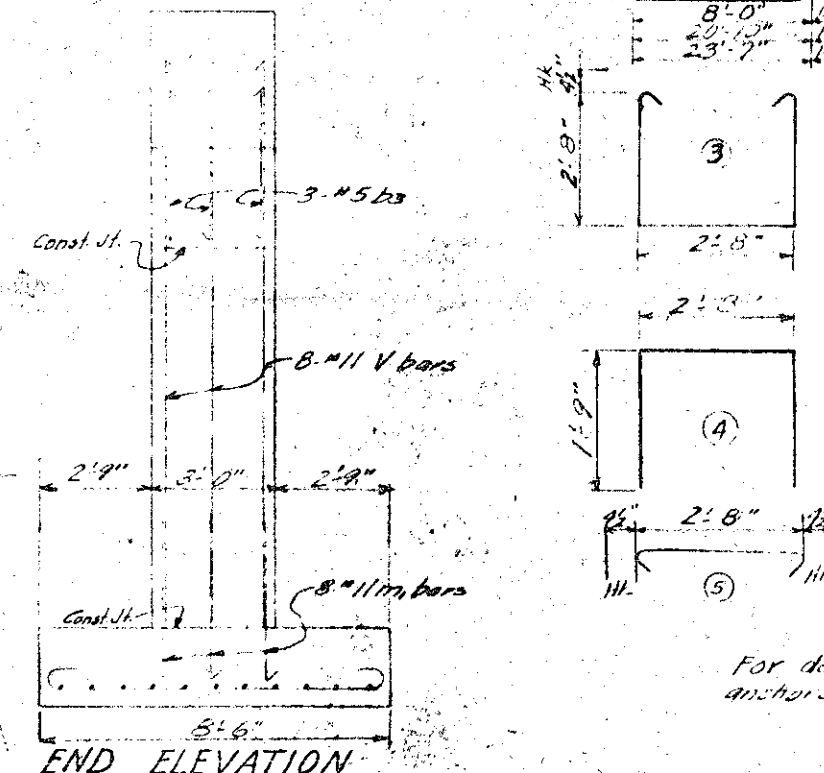
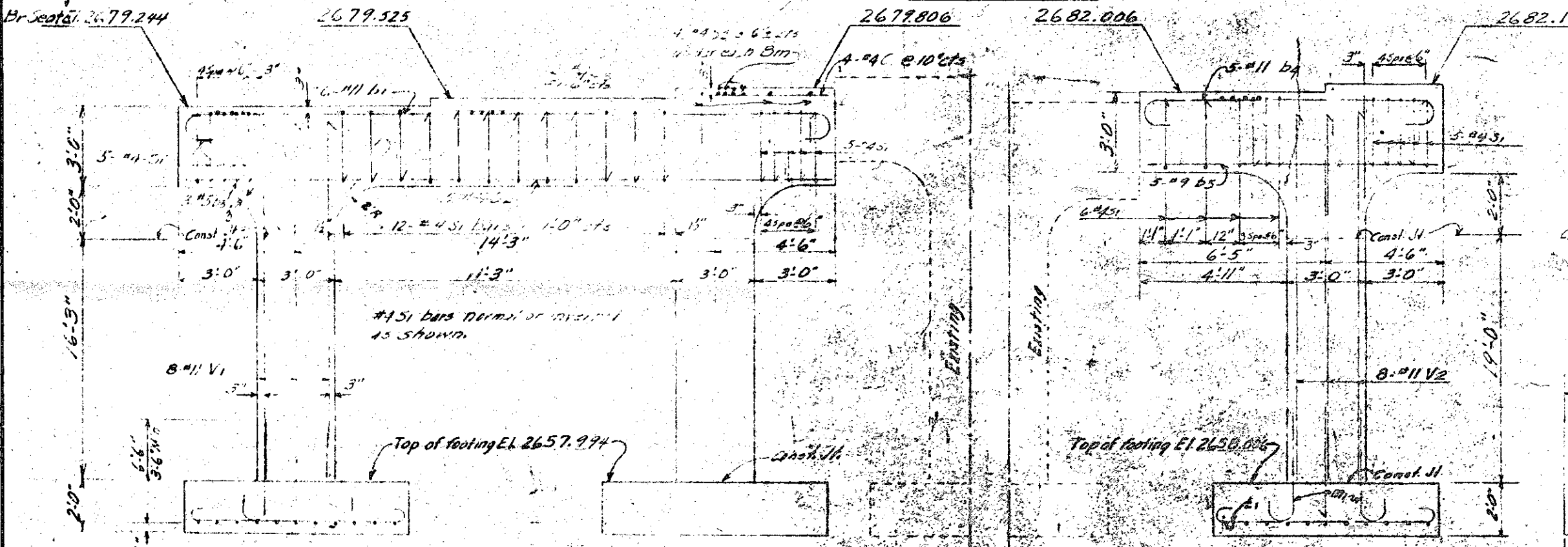
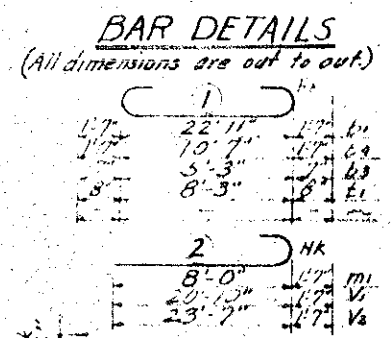
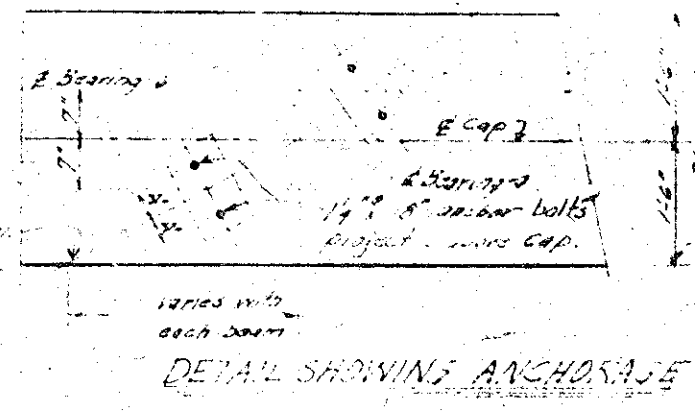
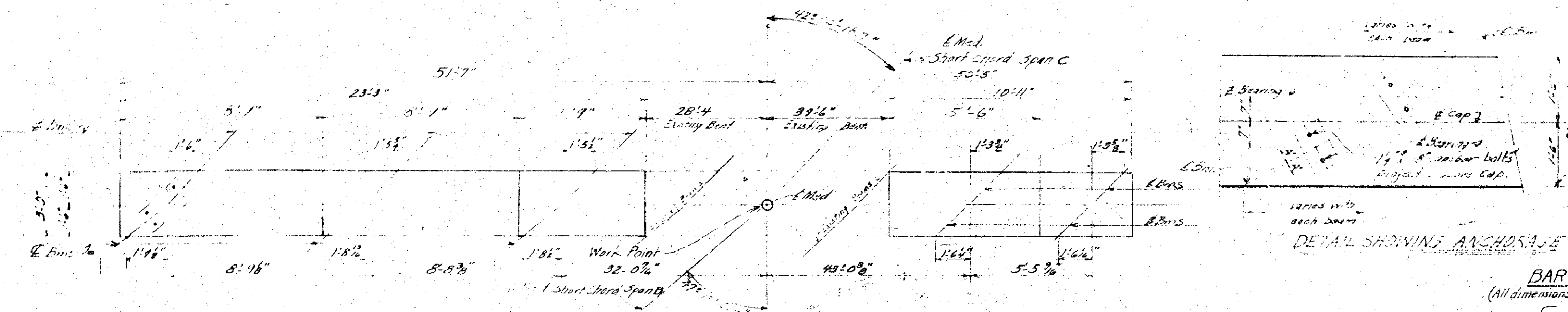
	Pair #1	Pair #2	Pair #3	SUB. TOP
Lt. Side	10.7	12.7	10.7	34.1
Rt. Side	5.4	7.2	4.8	17.6
Total	3.68			51.8

55.38

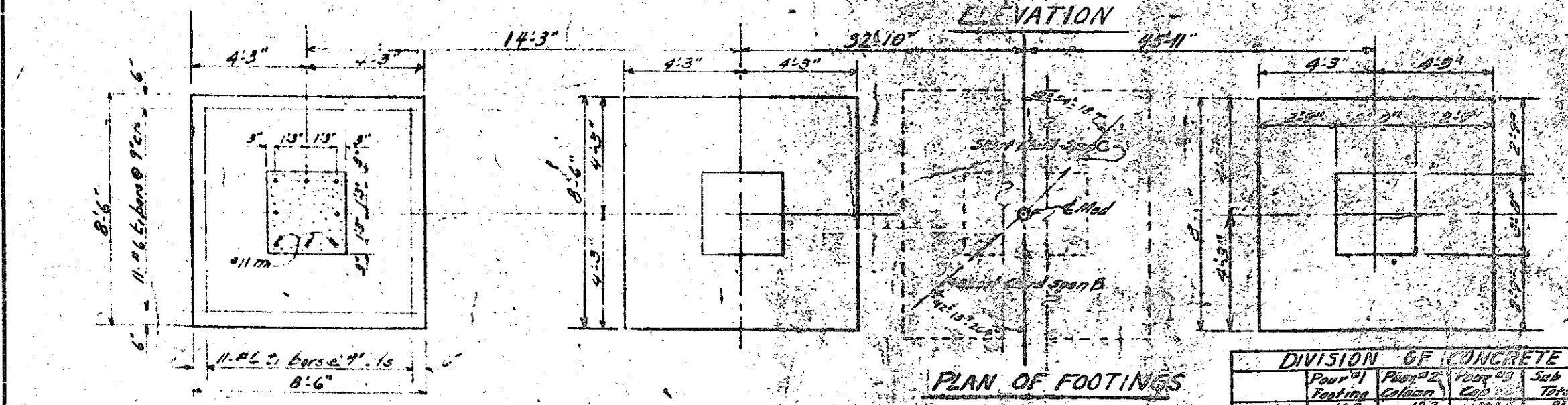
b bars in top of cap may be shifted ±1" to clear anchor bolts.



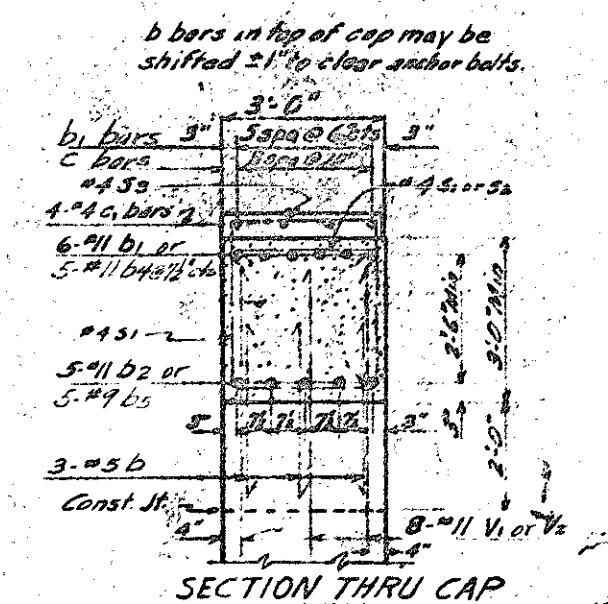
BILL OF MATERIAL					
BAR NO	SIZE	TYPE	LENGTH	WEIGHT	
b1	#11	1	26'-1"	831	
b2	#11	5	22'-11"	607	
b3	#5	1	6'-5"	120	
b4	#11	1	13'-9"	365	
b5	#7	5	10'-7"	180	
c1	#4	5	5'-5"	14	
m1	#11	2	9'-7"	122	
s1	#4	3	8'-9"	193	
s2	#4	5	3'-5"	16	
s3	#4	4	6'-2"	12	
v1	#11	2	22'-5"	1906	
v2	#11	2	25'-2"	1070	
v3	#11	1	1'-7"	950	
Reinforcing steel lbs					7518
Class A Concrete Cu.Yds.					479



For details and location of expansion anchors see Bent #1



DIVISION OF CONCRETE				
Four of Footing	Four of Cap	Four of Sub	Total	
14.5	10.7	10.7	35.9	
9.4	6.3	4.6	20.3	
Total			56.2	



PROJECT No. 8.3023206
HAYWOOD COUNTY
STATION 32+21.8 L4

STATE OF NORTH CAROLINA					
STATE HIGHWAY COMMISSION					
RALEIGH					
SUBSTRUCTURE					
BENT No 2					
APRIL 1967					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			2		
2			4		

DRAWN BY: [Signature] DATE: [Date]
CHECKED BY: [Signature] DATE: [Date]

DIVISION OF CONCRETE		
POUR NO.	CU YDS. LT. EXT.	CU YDS. RT. EXT.
1. FOOTINGS	6.4	4.3
2. COLUMNS	7.5	2.9
3. CAP	7.2	5.4
TOTAL	15.1	12.6

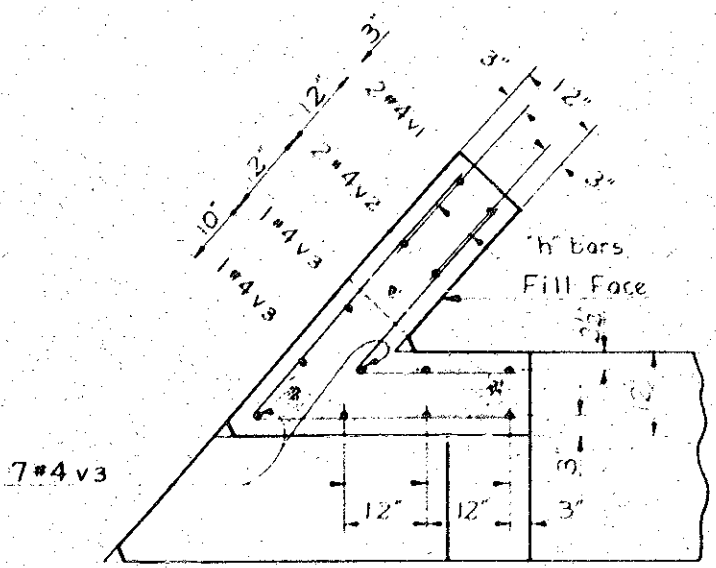
CLASS 'A' CONCRETE		CU. YDS.
Left Side Extension		15.1
Right Side Extension		12.6
Total		27.7

BILL OF MATERIAL
END BENT NO. 2

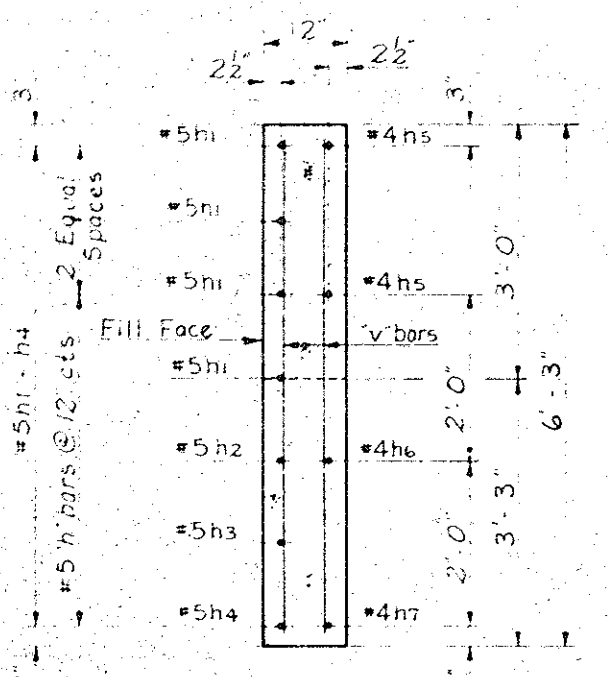
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
b1	2	#11		25'-2"	267
b2	2			25'-9"	274
b3	2			26'-4"	280
b4	2	#11		26'-11"	286
b5	4	#5	Str.	2'-4"	10
b7	18	#5	2	6'-8"	125
b8	2	#11		13'-8"	145
b9	2			14'-2"	151
b10	2			14'-8"	156
b11	2	#11		15'-2"	161
h1	4	#5	6	4'-6"	19
h2	1			3'-10"	4
h3	1			3'-3"	3
h4	1	#5		2'-7"	3
h5	2	#4		7'-0"	9
h6	1	#4		6'-4"	4
h7	1	#4	6	5'-2"	3
h8	3	#5	5	7'-3"	23
h9	1			6'-9"	7
h10	1			5'-7"	6
h11	1			4'-5"	5
h12	1	#5		3'-3"	3
h13	2	#4		7'-9"	10
h14	1	#4		6'-1"	4
h15	1	#4	5	3'-9"	3
m1	32	#9	7	8'-0"	870
m2	32	#9	7	9'-9"	1061
s1	28	#4	4	7'-3"	136
s2	4		4	8'-3"	22
s3	8		4	8'-5"	45
s4	11	#4	3	2'-11"	21
t1	30	#7	2	8'-5"	516
t2	44	#5		6'-8"	306
t3	30	#5		7'-11"	248
t4	44	#5	2	4'-8"	214

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
v1	2	#4	Str.	2'-11"	4
v2	2			4'-7"	6
v3	9			5'-11"	36
v4	2			2'-10"	4
v5	2			3'-9"	5
v6	2			4'-8"	6
v7	2			5'-7"	7
v8	9	#4	Str.	6'-6"	39

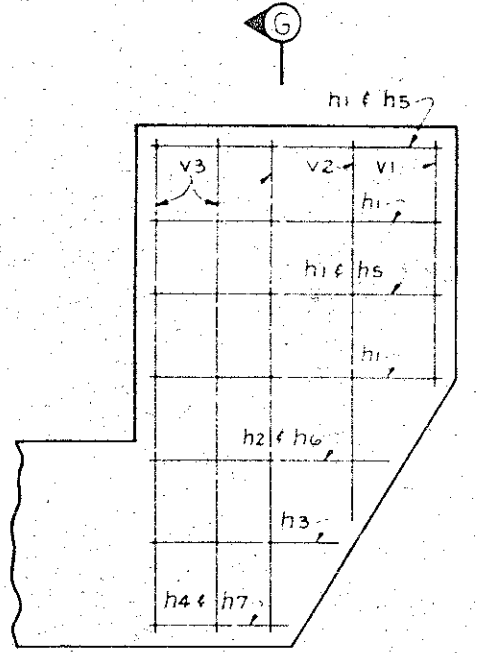
Reinforcing Steel Lbs. 5,507
Class 'A' Concrete Cu. Yds. 27.7



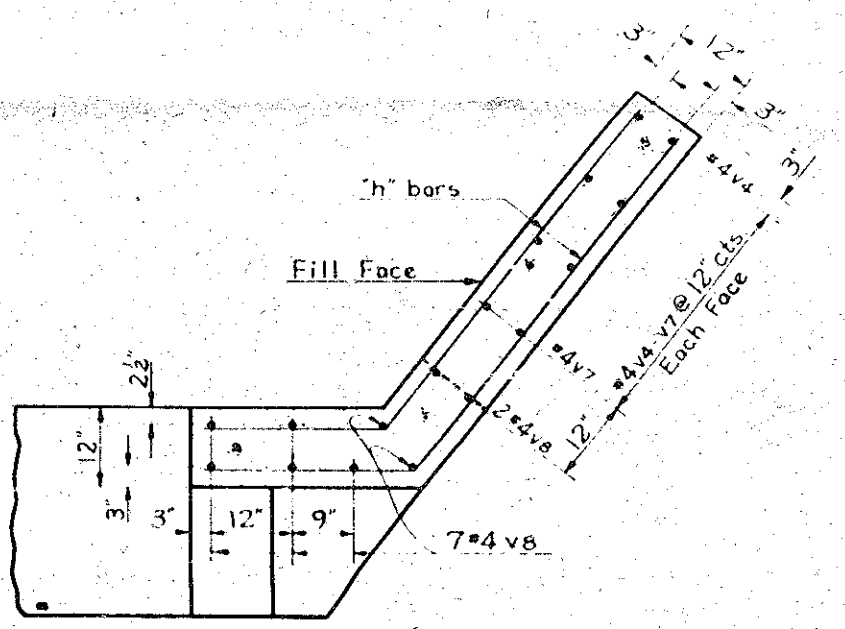
SECTION C-C
WING W1



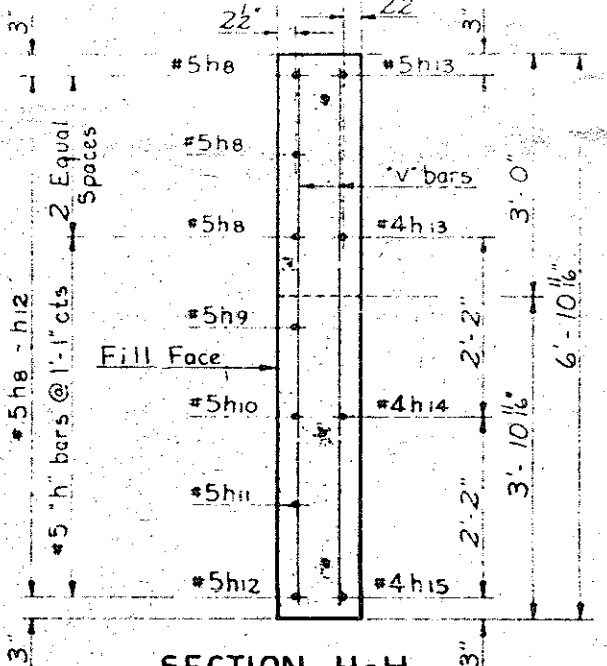
SECTION G-G
WING W1



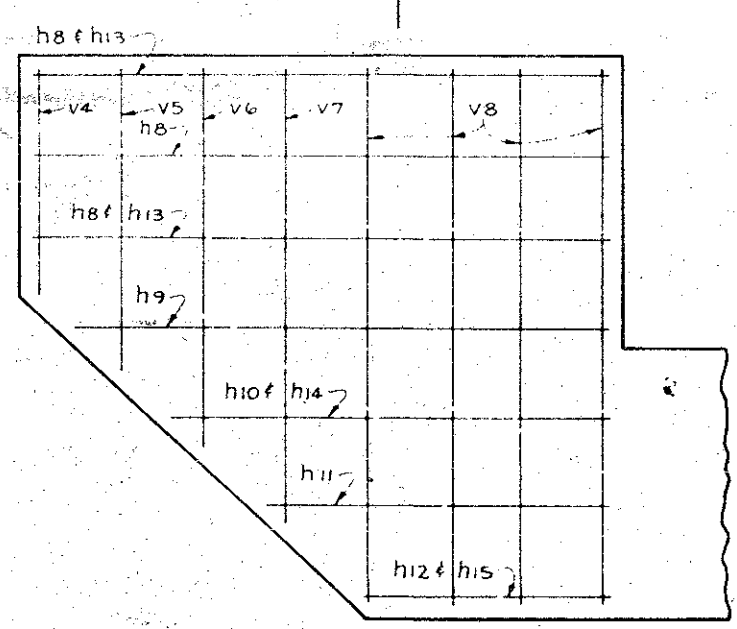
VIEW A-A
WING W1



SECTION D-D
WING W2

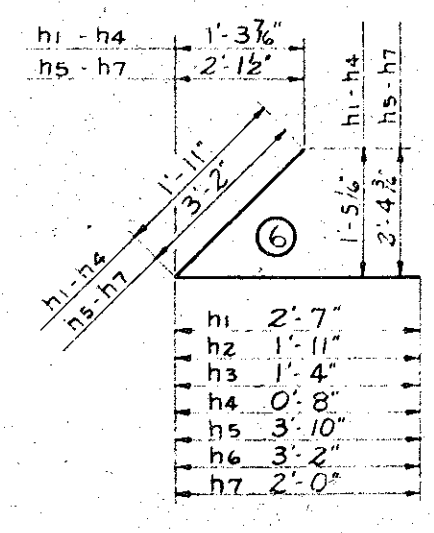
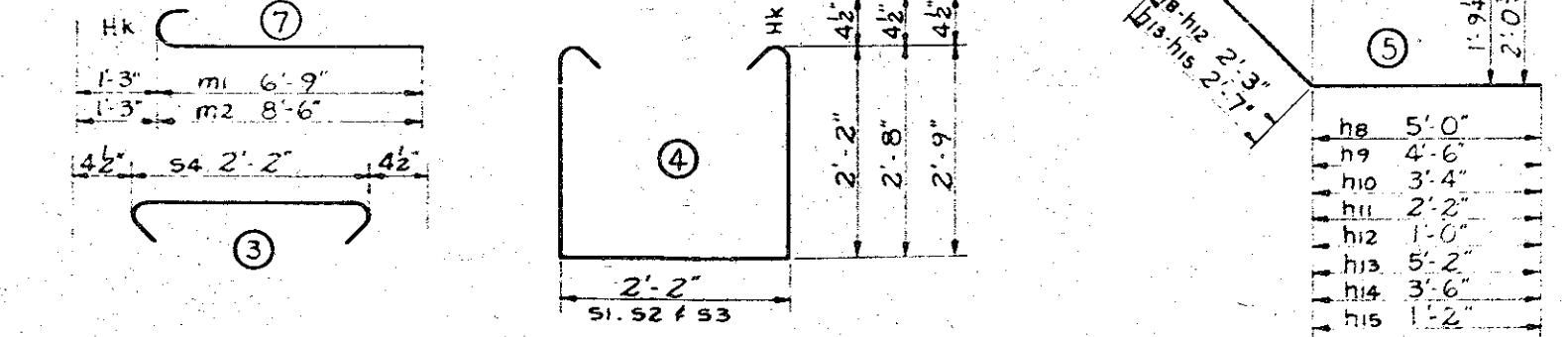


SECTION H-H
WING W2



VIEW B-B
WING W2

BAR DETAILS
All bar dimensions are out to out.



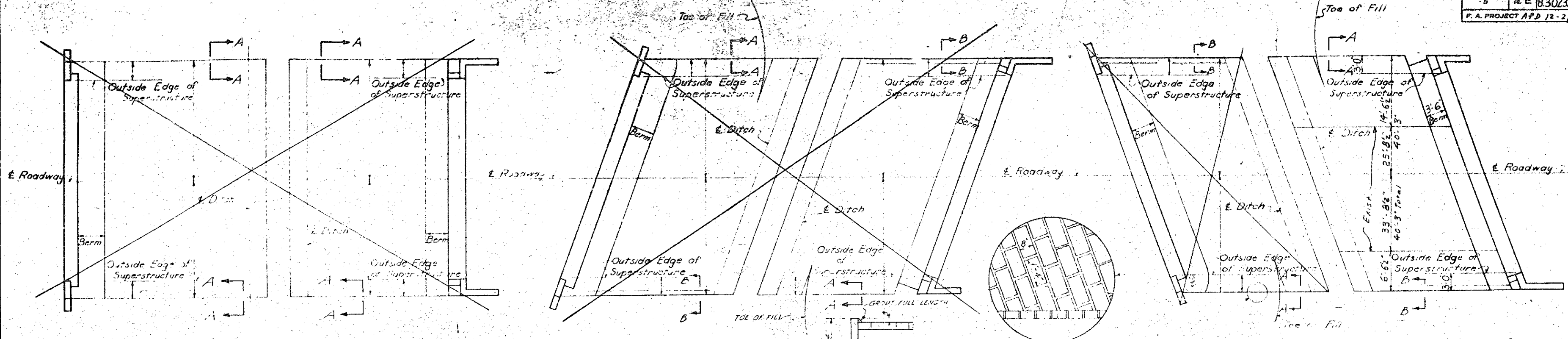
PROJECT No. 8.3023206
HAYWOOD COUNTY
STATION: 32+21.80 L4

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

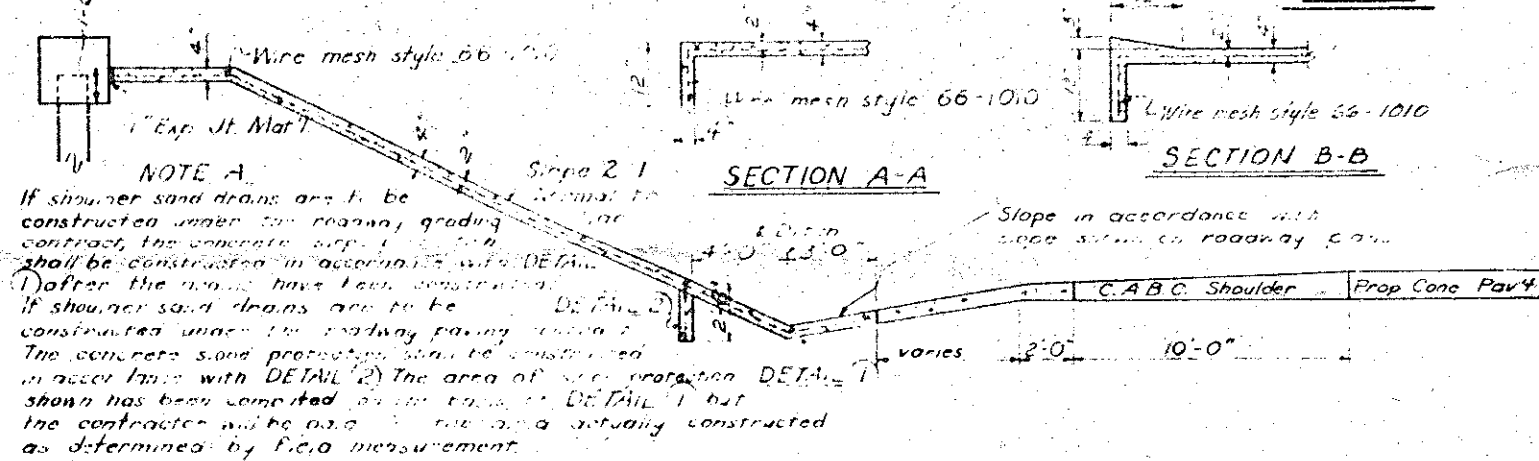
APRIL 1967

REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			2		
2			4		

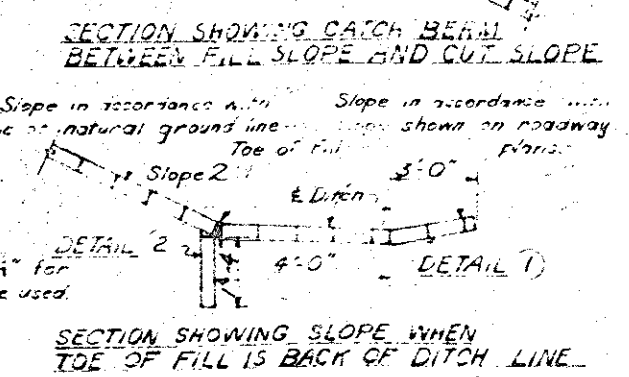
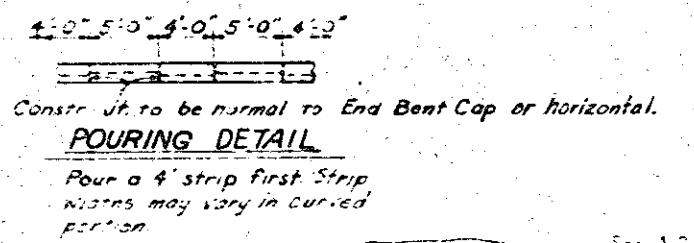
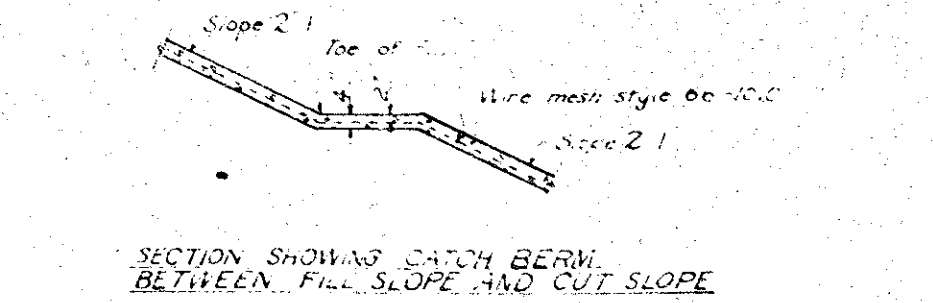
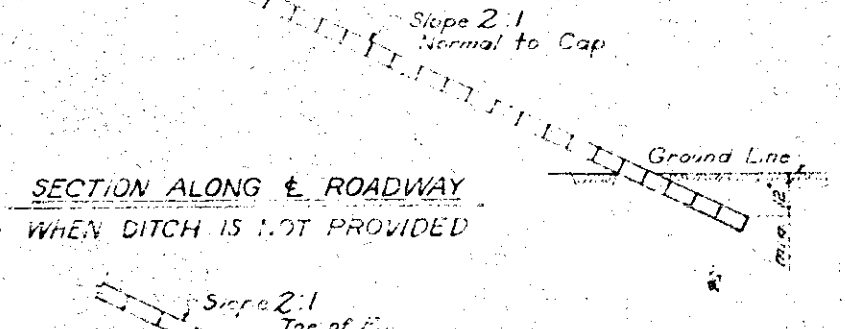
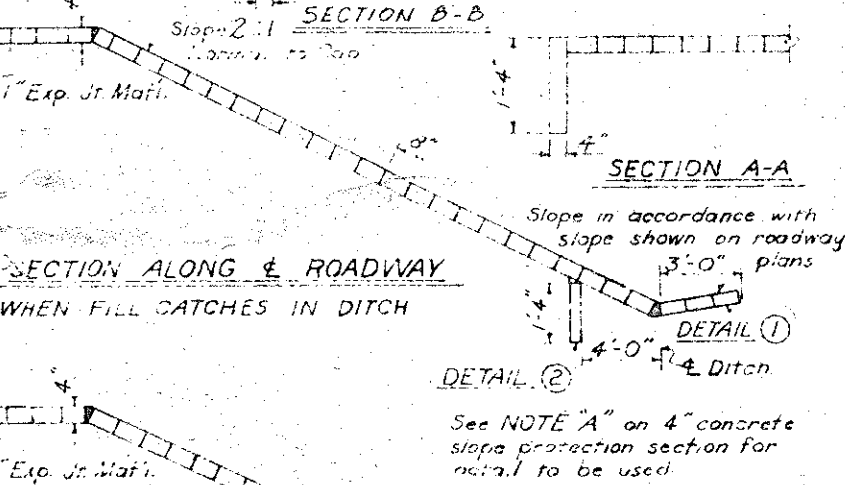
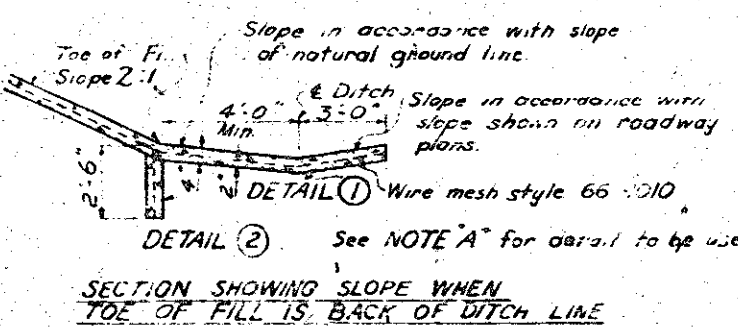
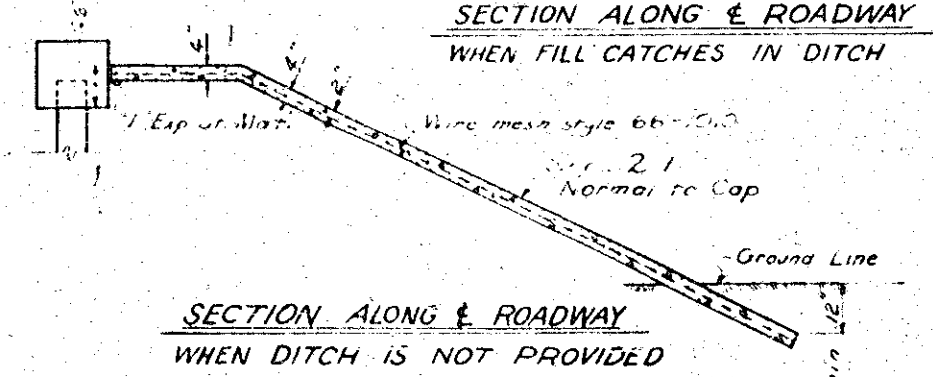
211
5-70
80
268



PLAN



NOTE A:
 If shoulder sand drains are to be constructed under the roadway paving contract, the concrete slope protection shall be constructed in accordance with DETAIL 1 after the drains have been constructed. If shoulder sand drains are to be constructed under the roadway paving contract, the concrete slope protection shall be constructed in accordance with DETAIL 2. The area of slope protection DETAIL 1 shown has been computed on the basis of DETAIL 1 but the contractor will be paid for the area actually constructed as determined by field measurement.



DETAILS FOR ALTERNATE "B"

NOTES:
 A 4" concrete slope protection paving shall be placed under the ends of the bridge limits of the protection shall be as shown in the details. The contractor, at his option, may place either type, Alternate "A" or "B", as described below immediately before placing the paving, the slope shall be properly shaped and firmly compacted so that it conforms to the lines and grades shown. The finished surface shall be reasonably smooth and uniform and shall not vary from lines, grades, and sections shown by more than 1/2" along a 10' straight edge.

ALTERNATE "A"
 Alternate "A" shall consist of 4" poured in place concrete paving as shown in details on this sheet. Concrete shall be Class B. The concrete surface shall be floated with a wooden float and finished. The quantity to be paid for under this item shall be the number of square yards of slope protection measured in place complete and accepted, including the area of the toe walls below 4" thickness of protection. (For example "B" paving for a 10' x 10' deep ditch.) The quantity measured as provided for above, shall be paid for at the contract unit price per square yard for mesh excavation, backfilling, preparation of slopes, and all materials, labor, equipment, tools and incidentals necessary to complete the work.

ALTERNATE "B"
 Alternate "B" shall consist of solid concrete blocks 4"x8"x16" laid in horizontal courses such that those in successive courses will break joints with units in the preceding one. Blocks are to be laid with their long axis parallel to the end bent cap with grouted joints preferably 3/4" but not less than 1/2" nor more than 1 1/4" wide between successive courses and ends of blocks. Joints shall be grouted by pouring a mixture of one part Portland cement to three parts sand mixed with sufficient water to acquire the mixture to be poured through a spout. The concrete blocks shall be cast to accurate dimensions, shall have uniform surface color and texture, and shall be manufactured of materials to produce a compressive strength of not less than 3,000 p.s.i. at age of 28 days. No broken blocks shall be used except in constructing a straight line along each side of the paving down the slope. Care shall be taken to break the blocks so as to give a uniform workmanlike joint and surface. Method of measurement and basis of payment shall be as prescribed above under Alternate "A".

ALTERNATE "A" wire mesh reinforcing to be style 66-1010 60" wide. Adjacent runs of wire mesh to lap at least 6". Slope Protection to be poured in alternate 4' x 5' strips as shown in Pouring Detail. The cost of wire mesh to be included in the contract unit price bid per square yard for 4" concrete slope protection. The same type of slope protection shall be used under both ends of any one bridge.

PROJECT NO. 8.3023206
 HAYWOOD COUNTY
 STATION: 32+21.80 L4

Rev. No. 4. To remove that portion of the contract unit price for concrete slope protection...

4" Concrete Slope Protection	Wire Mesh
E.B. 1 160	695
E.B. 2 155	
265.88	163.21

SHEET 1 of 2

STATE OF NORTH CAROLINA
 STATE HIGHWAY COMMISSION
 RALEIGH
STANDARD SLOPE PROTECTION PAVING DETAILS

March 1964 2/2

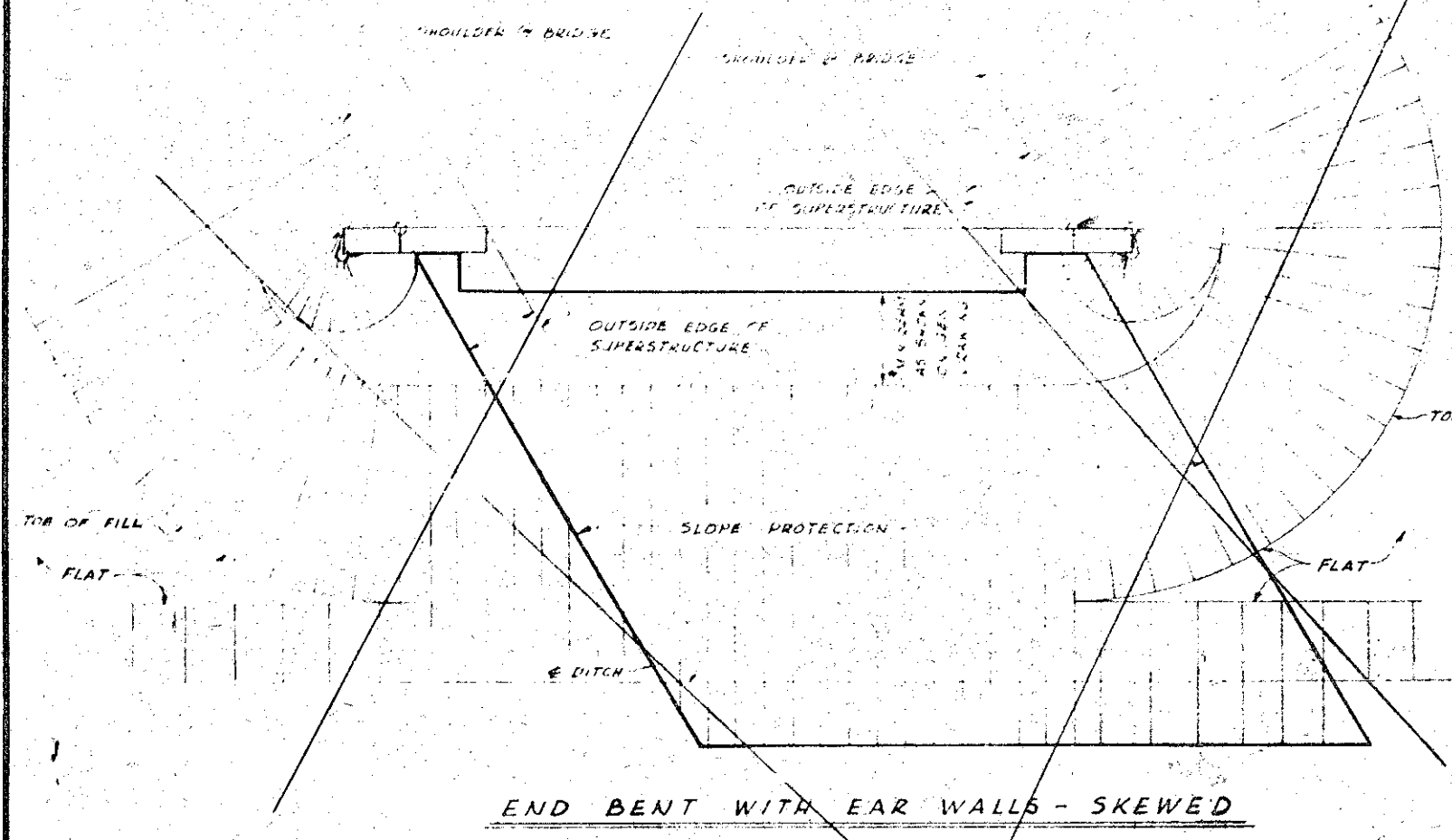
ASSEMBLED BY R.G. Gower DATE May, 1967
 CHECKED BY S.W. ... DATE May, 1967
 DRAWN BY H. ... DATE May, 1967
 CHECKED BY G.T. PHILLIPS DATE MAR 1964

DETAILS FOR ALTERNATE "A"

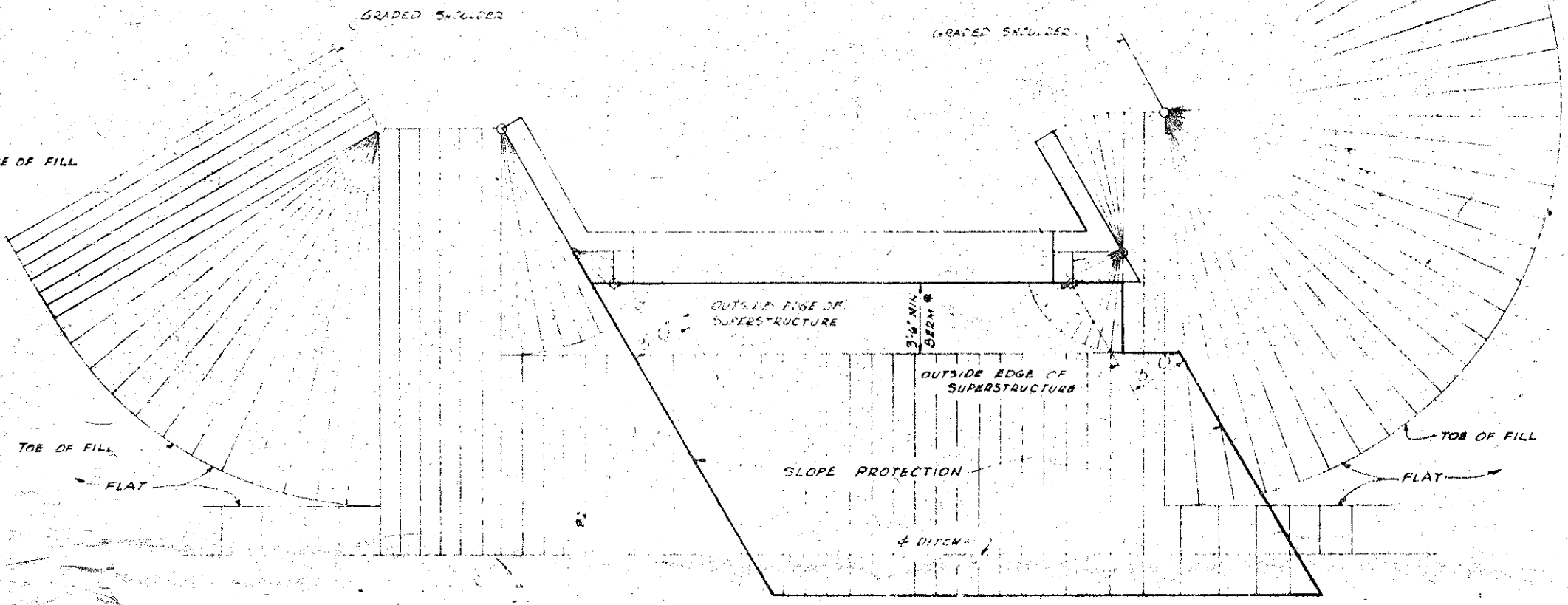
PLAN WHERE CONC. OR CONC. BLOCK SLOPE PROTECT. MUST BE PLACED AROUND A BENT COLUMN

TO TAKE OUT DIMENSIONS FROM OUTSIDE EDGE OF SUPERSTRUCTURE TO OUTSIDE SLOPE PROTECTION. SEE NOTE 1 TO EACH DRAWING ABOVE BOTTOM OF CAP & RAIL.

SHEET NO. 87
 TOTAL SHEETS 88
 268

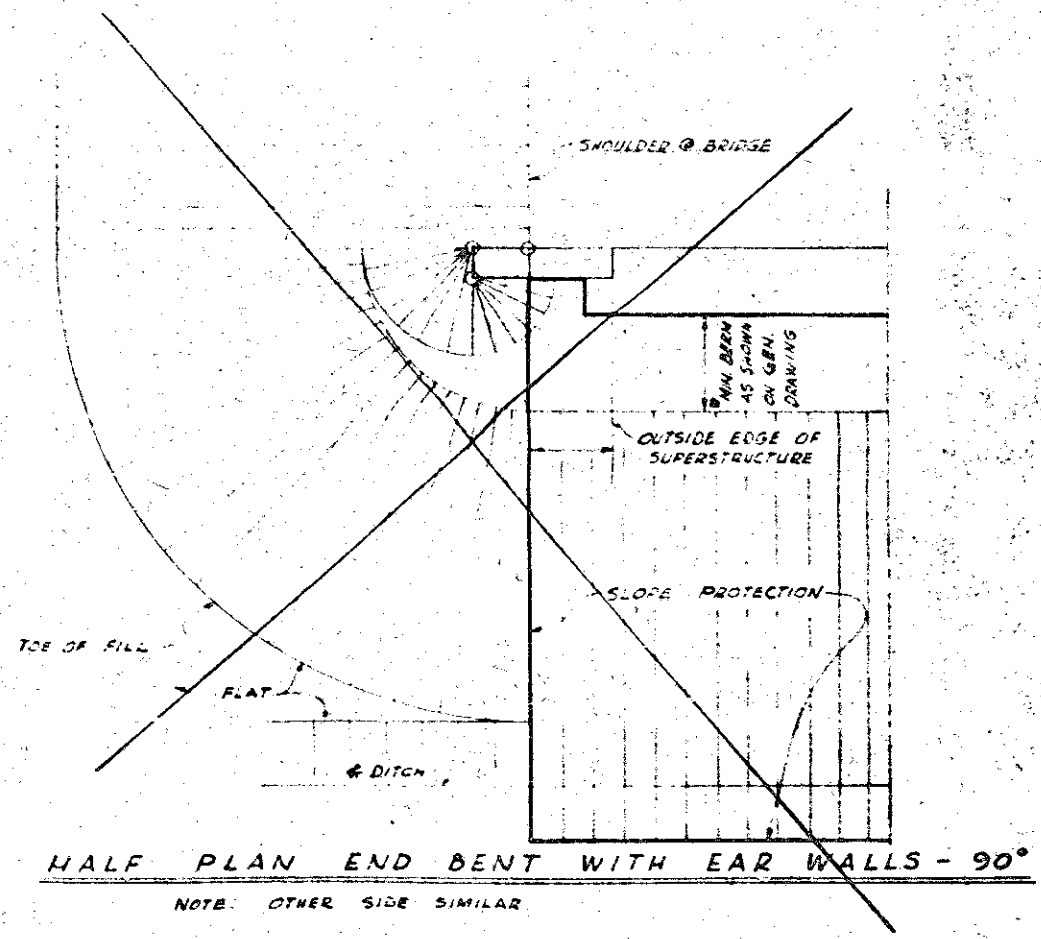


END BENT WITH EAR WALLS - SKEWED



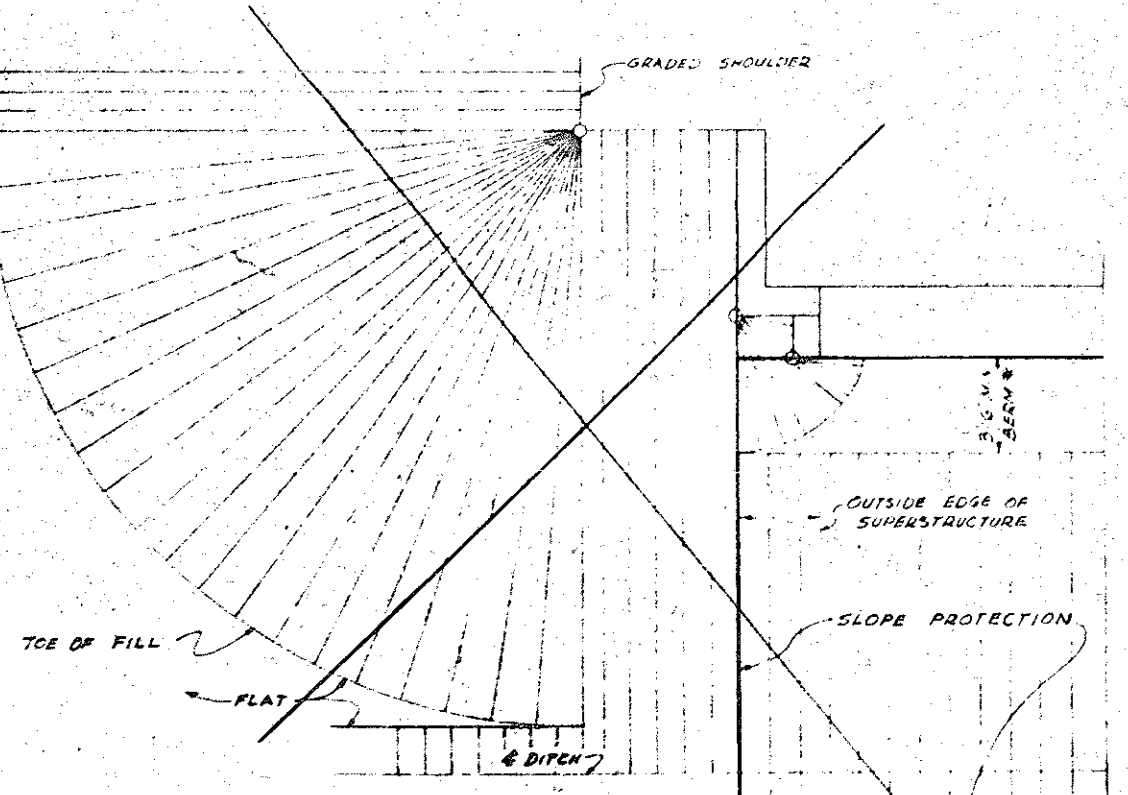
END BENT WITH SWEEP BACK WINGS - SKEWED

* NOTE: VARY BERM WIDTH AS NECESSARY TO FIT DITCH ALIGNMENT.



HALF PLAN END BENT WITH EAR WALLS - 90°

NOTE: OTHER SIDE SIMILAR



HALF PLAN END BENT WITH SWEEP BACK WINGS - 90°

NOTE: OTHER SIDE SIMILAR

PROJECT NO. 8.3023206
 HAYWOOD COUNTY
 STATION: 32+21.80 L4

SHEET 2 OF 2

STATE OF NORTH CAROLINA
 STATE HIGHWAY COMMISSION
 RALEIGH
 STANDARD
 SLOPE PROTECTION PAVING
 DETAILS
 FEBRUARY 1964

ASSEMBLED BY R.G. GOWER DATE May, 1967
 CHECKED BY S.W. White DATE May, 1967
 DRAWN BY ED ALFORD JR DATE 11/5/64
 CHECKED BY ST. PHILLIPS DATE 1/13/65

REV. 11/5/64 TO ELIMINATE 30° CHANGES AT TOE OF SLOPE FOR SKEWED BRIDGES. (G.T.P.)
 REV. 1/13/65 TO TAKE CUTS MEASUREMENTS FROM OUTSIDE EDGE OF SUPERSTRUCTURE TO OUTSIDE SLOPE PROTECTION.

213
 572
 80
 208