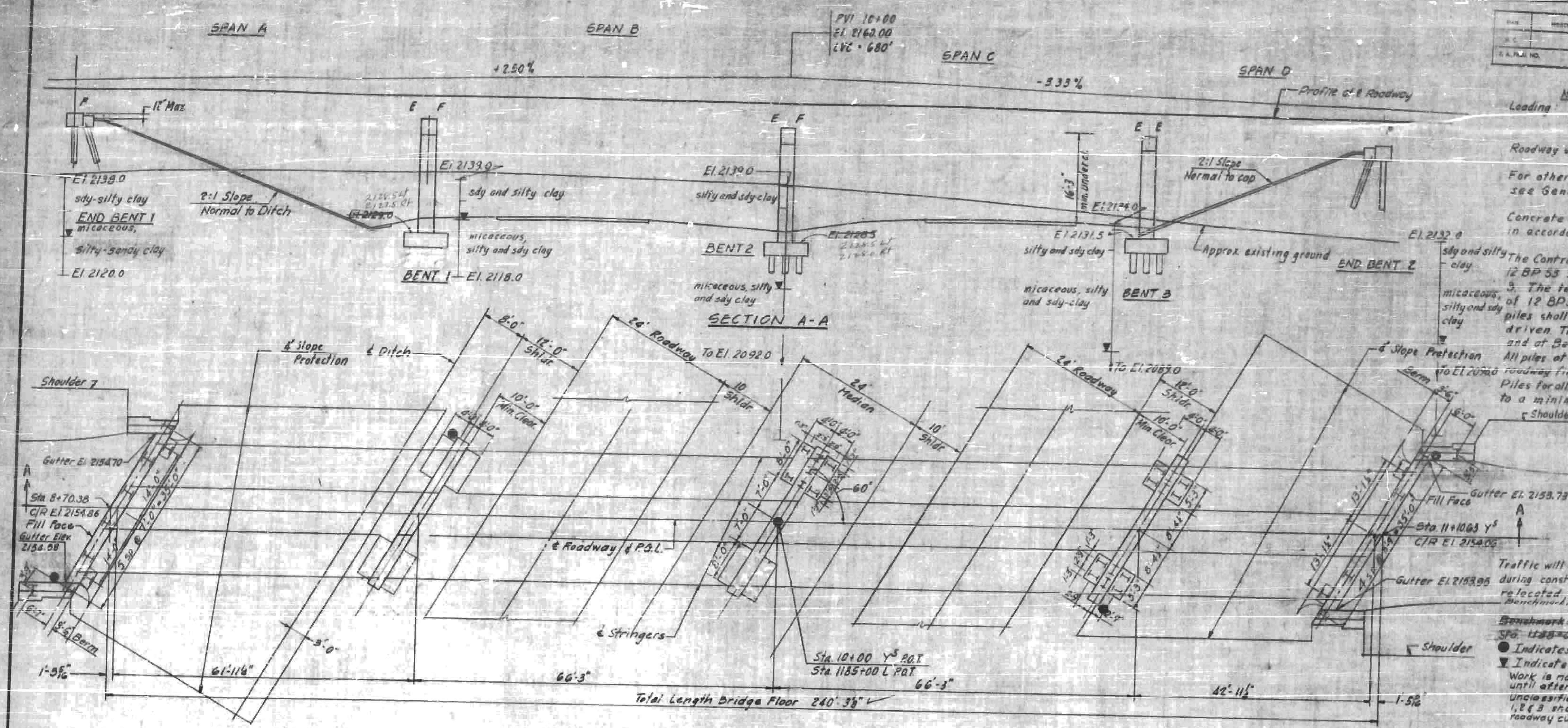
State	Project No.	Sheet No.	Total Sheets
N.C.		456	569

Fed. Aid Proj. I-26-1(15)16 — 8.18293



NOTES

Loading: AASHO H15-S12-44
20 lbs per sq ft future surfacing

Roadway width: 28'-0" curb to curb

For other design data and general notes see General Notes Sheet.

Concrete surfaces shall be given a surface finish in accordance with the specifications.

The Contractor will be required to drive one 12 BP 53 steel test pile in place at Bents 1 and 3. The test piles shall be paid for as linear feet of 12 BP53 Steel Piles. The order lengths for all piles shall be given after the test piles have been driven. The test pile at Bent 1 shall be 15' long and at Bent 3 shall be 55' long.

All piles at End Bents shall be driven through the roadway fill.

Piles for all Bents and End Bents shall be driven to a minimum bearing capacity of 30 tons.

Traffic will be maintained on existing Clear Creek Rd. during construction of the proposed structure on relocated Clear Creek Road.

Benchmark: Rod in power pole Lt. sdy Sta. ... Elev. ...

~~Benchmark: Std. N. C. Hwy. Marker. 30' Rt. of Sta. 1188+00. Elevation 2132.40~~

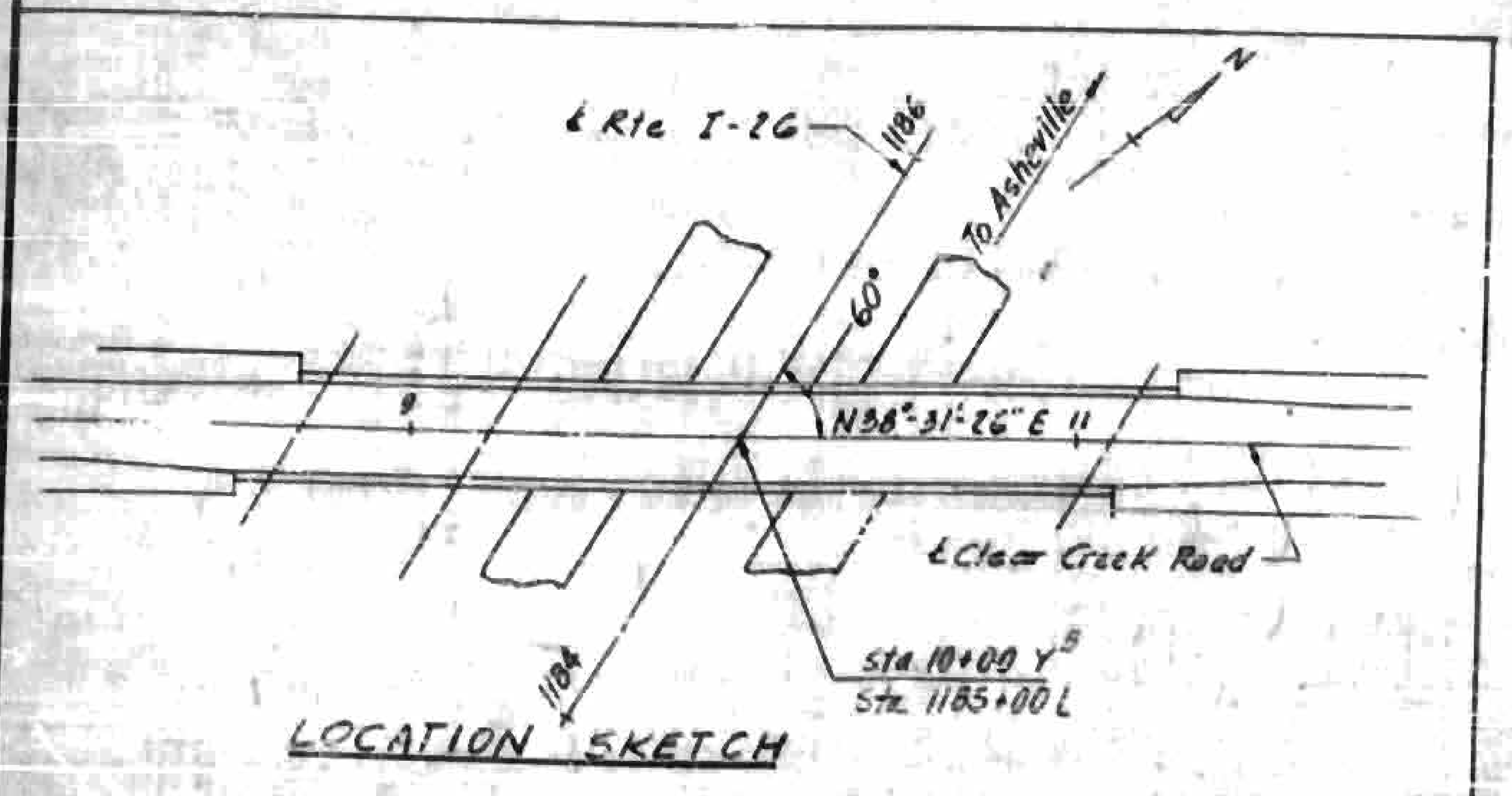
● Indicates boring location

▼ Indicates ground water

Work is not to be started on Bents No. 1, 2 & 3 until after the roadway section has been excavated. Unclassified Structure Excavation for Bents No. 1, 2 & 3 shall be measured from the surface of the roadway cut.

I certify that this Structure was built according to Plans except as noted.

RESIDENT ENGINEER



CROWN OF ROADWAY ELEVATIONS					
Station	Elevation	Station	Elevation	Station	Elevation
8+55	2154.75	9+55	2155.14	10+55	2154.69
	2154.79		2155.14		2154.64
	2154.82		2155.14		2154.59
	2154.86		2155.13		2154.54
	2154.89		2155.12		2154.49
	2154.93		2155.11		2154.44
	2154.96		2155.10		2154.38
	2154.98		2155.08		2154.32
5.00' Increments	2155.01	5.00' Increments	2155.06	5.00' Increments	2154.26
	2155.03		2155.05		2154.20
	2155.05		2155.02		2154.14
	2155.07		2155.00		2154.07
	2155.09		2154.97		2154.00
	2155.10		2154.94		2153.93
	2155.12		2154.91		2153.8[illegible]
	2155.13		2154.88		2153.78
	2155.13		2154.85		2153.70
	2155.14		2154.81		2153.62
	2155.14		2154.77		2153.54
9+50	2155.15	10+50	2154.73	11+50	2153.46

TOTAL BILL OF MATERIAL	Class "A" Concrete Cu. Yds.	Reinforcing Steel Lbs.	Structural Steel Approx. Lbs.	12BP53 Steel Piles No.	12BP53 Steel Piles Lin. Ft.	Unclass. Str. Excav. Cu. Yds.	4" Conc. Slope Protection Sq. Yds.	4" Conc. Block Slope Protection Sq. Yds.	Metal Rails Lin. Ft.
Superstructure	260.2	61,042	170,600		223'-10"		322.976		487.52
End Bent #1	10.3	8,227		5	~~258~~		~~301~~	~~301~~	
Bent #1	28.063 ~~27.6~~	5,714		1	9'-5"	~~67~~ 50.19	322.78		
Bent #2	30.216 ~~30.1~~	5,743		7	196'-0" ~~245~~	~~67~~ 62.74			
Bent #3	26.2	4,316		12	376'-[illegible] ~~376~~	~~49~~ 28.90	280.53		
End Bent #2	19.0	3,198		8	~~432~~		~~229~~	~~229~~	
Approach Curbs	3.2	76			336'-0"		280.639		
Totals	366.379 ~~365.8~~	73,316	170,600	36	1125'-6" ~~1602~~	141.83 ~~173~~	603.36 ~~603.675~~ ~~582~~	~~556~~	487.52

OR (4" Conc. Slope Protection / 4" Conc. Block Slope Protection)

12BP53 St. Piles Cut off Lin. Ft.: 5'-2", 5'-7", 17'-0", 9'-7", 0-0, 31'-6" Total

Note: See Extra Work Order #2, 76, #7

Revision No. 3: To eliminate all piles in Bt. #1 and in Rt. Sty. of Bt. #2
Revision No. 2: To change length of metal rail.
Revision No. 1: To change Reinforcing Steel Quantities

PROJECT NO. 8.18293

HENDERSON COUNTY

STATION 1185+00 L / 10+00 Y5

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

GENERAL DRAWING
BRIDGE OVER PROPOSED INTERSTATE ROUTE 26 ON CLEAR CREEK ROAD

SUBMITTED BY [signature]
APPROVED BY [signature]

Column ① bottom of overhang			Column ② top of curb			Column ③ ℄ of Beam			Column ④ ℄ of Roadway			Column ⑤ ℄ of Beam			Column ⑥ Top of curb			Column ⑦ Bottom of Overhang		
Dist.	Elev.		Dist.	Elev.		Dist.	Elev.		Dist.	Elev.		Dist.	Elev.		Dist.	Elev.		Dist.	Elev.	
	2154.044	Fill Face			Begin Curb			Fill Face		2154.582	Fill Face			Fill Face			Begin Curb		2153.324	Fill Face
1'-0½"	2154.050	8+60.00							9'-7⅝"	2154.585	8+60.00							8'-2⅝"	2153.985	8+70.00
10'-0"	.107								10'-0"	2154.988								10'-0"	2154.059	
10'-0"	.156								10'-0"	2155.031								10'-0"	.107	
10'-0"	.196								10'-0"	.071								10'-0"	.156	
10'-0"	.227								10'-0"	.102								10'-0"	.196	
10'-0"	.250								10'-0"	.125	9+30.00							10'-0"	.227	9+20.00
10'-0"	.266	9+40.00							3'-5"	.131	℄ Brg. 1							6'-1⅝"	.240	℄ Brg. 1
2'-4½"	.246	℄ Brg. 1							0'-3"	.129	9+40.00							6'-10½"	.250	9+30.00
7'-7⅝"	.270	9+50.00							10'-0"	.145								10'-0"	.256	
10'-0"	.267								10'-0"	.142								10'-0"	.270	
10'-0"	.256								10'-0"	.131								10'-0"	.267	
10'-0"	.236								10'-0"	.111								10'-0"	.256	
10'-0"	.207								10'-0"	.082	9+90.00							10'-0"	.236	
10'-0"	.170	10+00.00							10'-0"	2155.045	℄ Brg. 2							10'-0"	.207	9+90.00
8'-7⅛"	.131	℄ Brg. 2							10'-0"	2154.999	10+10.00							1'-4⅝"	.202	℄ Brg. 2
1'-4⅝"	.124	10+10.00							10'-0"	.944								8'-7⅛"	.170	10+00.00
10'-0"	.069								10'-0"	.882								10'-0"	.124	
10'-0"	2154.007								10'-0"	.810								10'-0"	.069	
10'-0"	2153.955								10'-0"	.730								10'-0"	2154.007	
10'-0"	.855								10'-0"	.642	10+60.00							10'-0"	2153.955	
10'-0"	.767								8'-3"	.562	℄ Brg. 3							10'-0"	.855	10+50.00
10'-0"	.669	10+70.00							3'-9"	.544	10+70.00							7'-7⅝"	.768	℄ Brg. 3
4'-10⅛"	.619	℄ Brg. 3							10'-0"	.438								2'-4½"	.767	10+60.00
5'-1⅛"	.563	10+80.00							10'-0"	.326								10'-0"	.669	
10'-0"	.449								10'-0"	.201								10'-0"	.563	
10'-0"	.326								10'-0"	.069	11+10.00							10'-0"	.449	
10'-0"	.196	11+10.00							0'-7⅝"	2154.061	Fill Face							10'-0"	.326	11+00.00
8'-2⅝"	2153.066	Fill Face																2'-0½"	2153.300	Fill Face

Assembled by Charles R. Crettier DATE Mar. 11, 1963
CHECKED BY [illegible] DATE Mar. 18, 1963

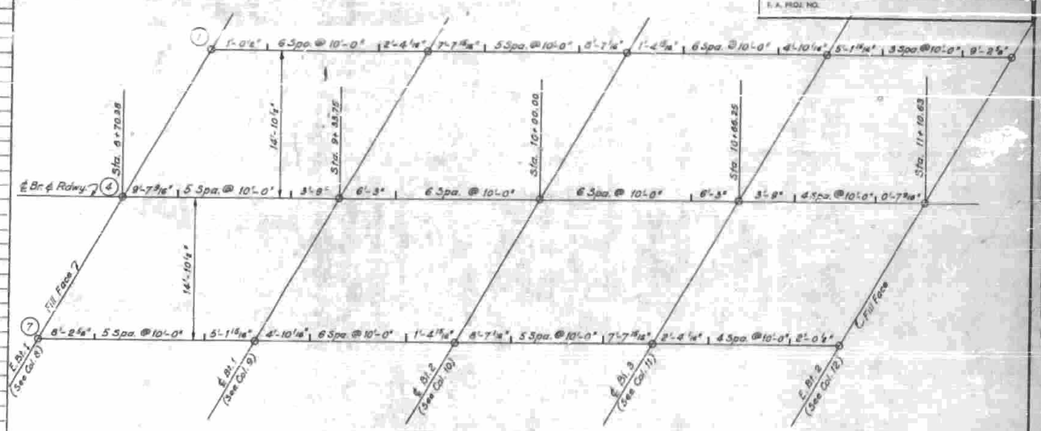
GRADE DATA

+2.50% -3.33⅓%

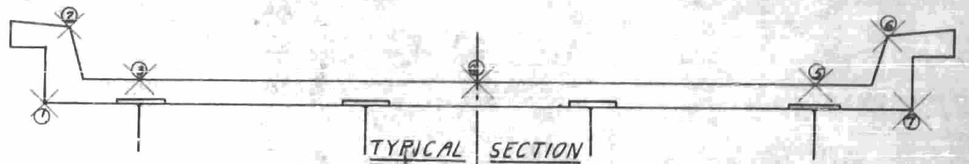
P.I. Sta. 10+00 Y5
P.I. Elev. 2160.00
Length of Curve 680'
G1 +2.50% G2 -3.33⅓%

FED. ROAD DIV. NO.	STATE	PROJECT NO.
8	N. C.	8.18293
F. A. PROJECT	I-26-1(5)12	

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		457	569
F. A. PROJ. NO.			



PLAN



TYPICAL SECTION

Elevations shown in these tables are final required elevations of the completed structure. In setting up form elevations and screed elevations, provisions must be made for deflections where required.

For columns 8 thru 12, points are at 2'-0" intervals, normal to ℄ of roadway, from left gutter line to right gutter line

HEADERS

Column 8 Fill Face of E.B. 1			Column 9 ℄ of Bent 1			Column 10 ℄ of Bent 2			Column 11 ℄ of Bent 3			Column 12 Fill Face E.B. 2		
Point	Elev.		Point	Elev.		Point	Elev.		Point	Elev.		Point	Elev.	
Lt. Gutter	2154.697		Lt. Gutter	2154.923		Lt. Gutter	2154.780		Lt. Gutter	2154.281		Lt. Gutter	2153.730	
	.721			.953			.837			.384			.777	
	.745			2154.963			.863			.387			.825	
	.769			2155.013			.900			.411			.872	
	.792			.993			.936			.453			.920	
@ 2'-3¾"	.816	@ 2'-3¾"		.072	@ 2'-3¾"		2154.973	@ 2'-3¾"		.496	@ 2'-3¾"		2155.967	
	.839			.102			2155.009			.539			2156.014	
℄	.862	℄		.131	℄		.045	℄		.582	℄		.061	
14 Spcs.	.823	14 Spcs.		.096	14 Spcs.		2155.016	14 Spcs.		.562	14 Spcs.		.046	
	.783			.065			2154.992			.542			.030	
	.744			2155.032			.965			.522			2154.014	
	.704			2154.999			.938			.501			2153.998	
	.665			.824			.911			.481			.982	
	.625			.931			.884			.461			.966	
Rt. Gutter	2154.585		Rt. Gutter	2154.898		Rt. Gutter	2154.857		Rt. Gutter	2154.440		Rt. Gutter	2153.950	

SUPERIMPOSED DEAD LOAD DEFLECTIONS (inches)

	SPAN	SPAN	SPAN	SPAN		
Int.						
Ext.						

Note: For Defl. see Struct. Steel Sheet 3-84

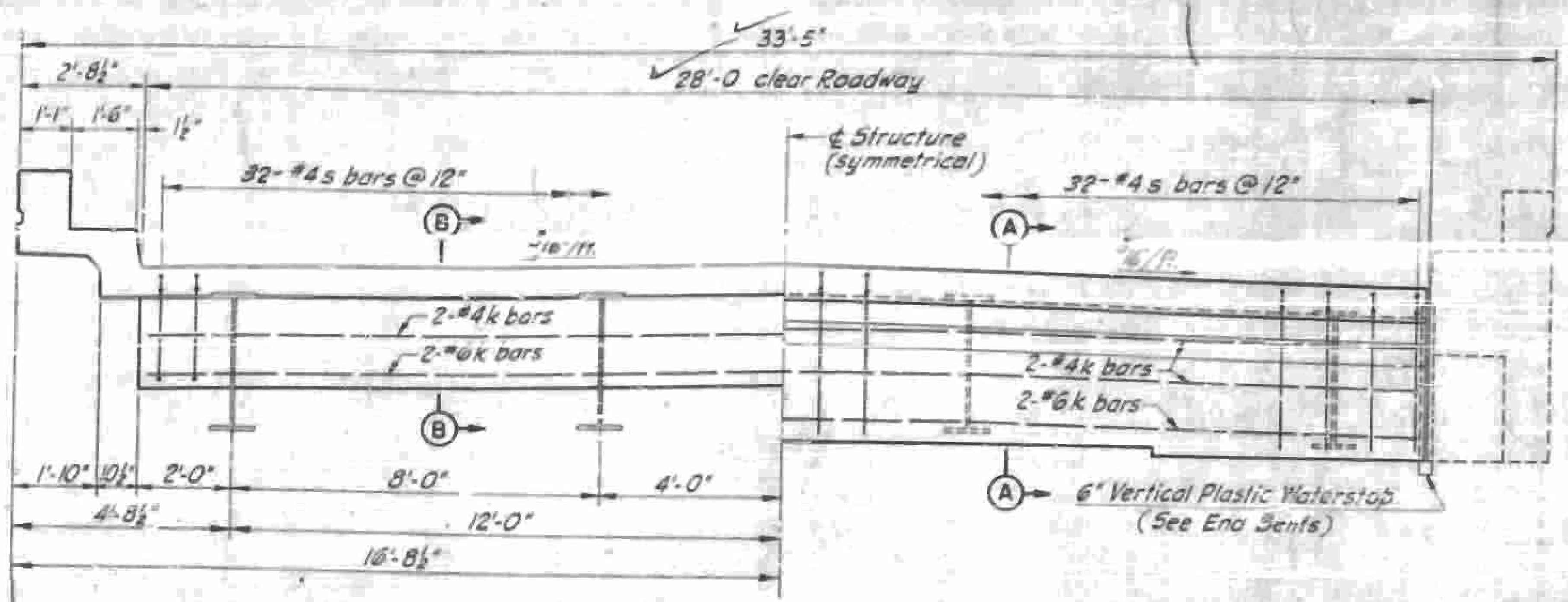
PROJECT No. 8.18293
Henderson COUNTY
STATION: 1185+00 L
10+00 Y5

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

ELEVATIONS FOR SETTING UP FORMS AND SCREEDS

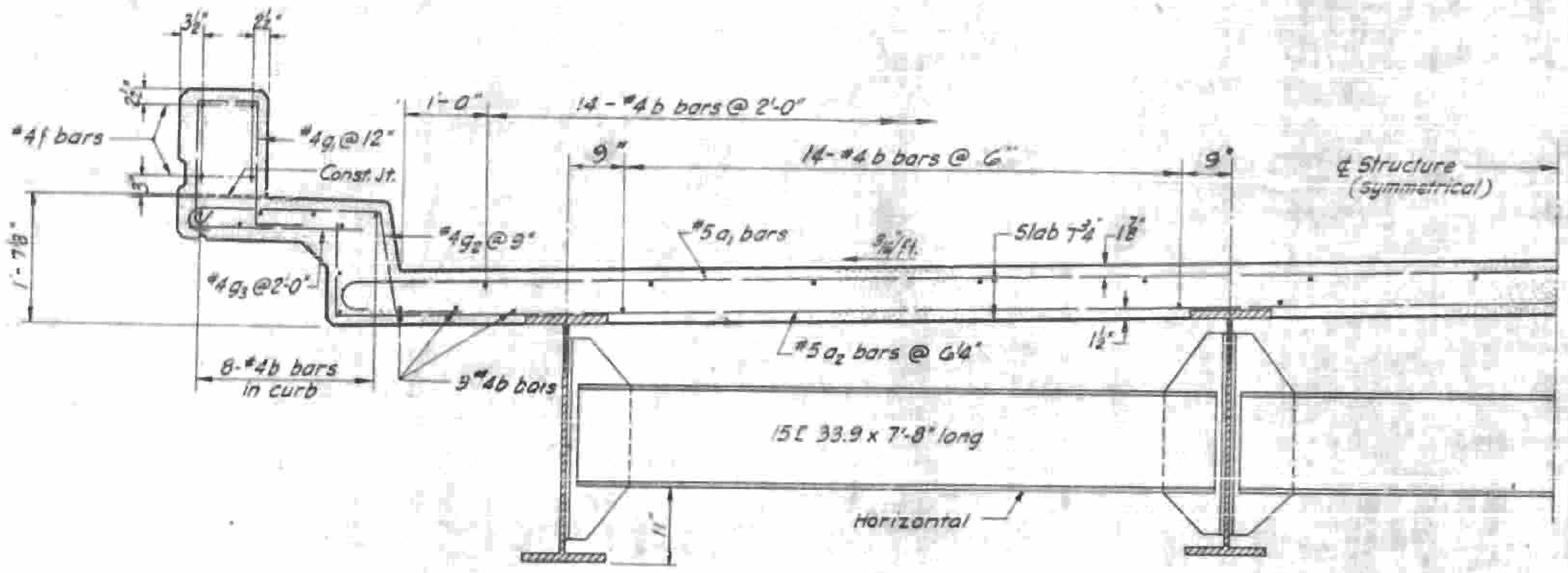
APRIL 1963

REVISIONS							
NO.	BY	DATE	NO.	BY	DATE	SHEET NO.	TOTAL SHEETS
1			3			3A	
2			4			161	



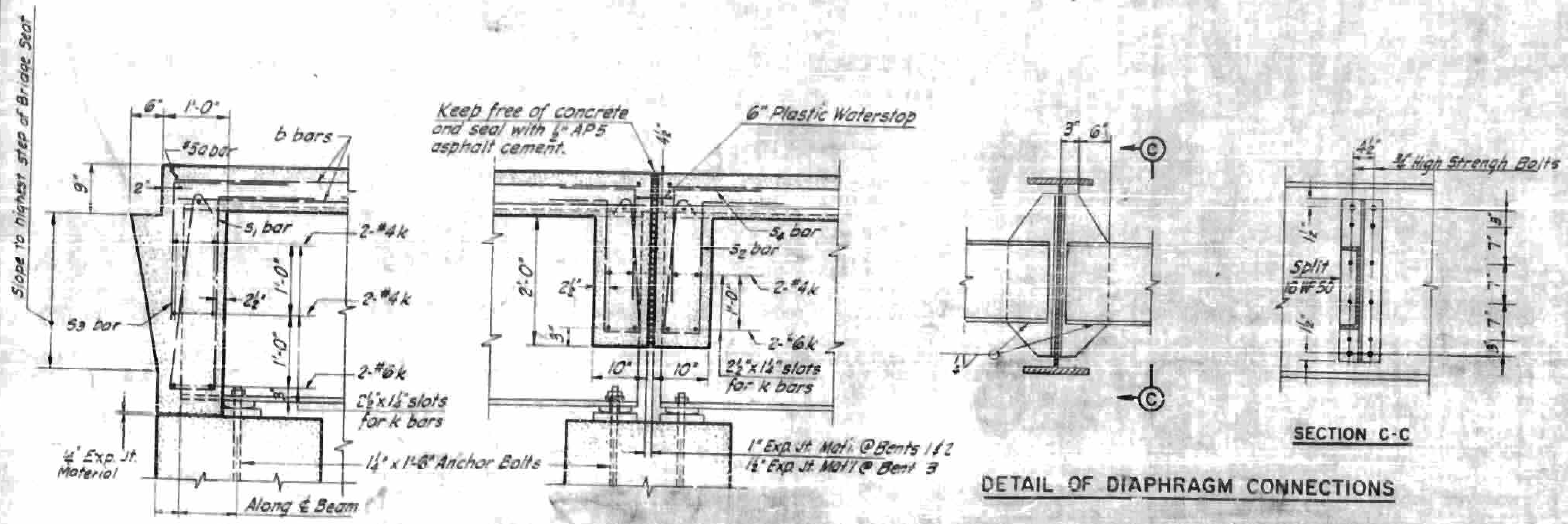
HALF SECTION AT INTERMEDIATE BENTS

HALF SECTION AT END BENTS



TYPICAL HALF SECTION

Showing Midspan Diaphragms



SECTION A-A

SECTION B-B

DETAIL OF DIAPHRAGM CONNECTIONS

SECTION C-C

BILL OF MATERIALS — 4 SPANS

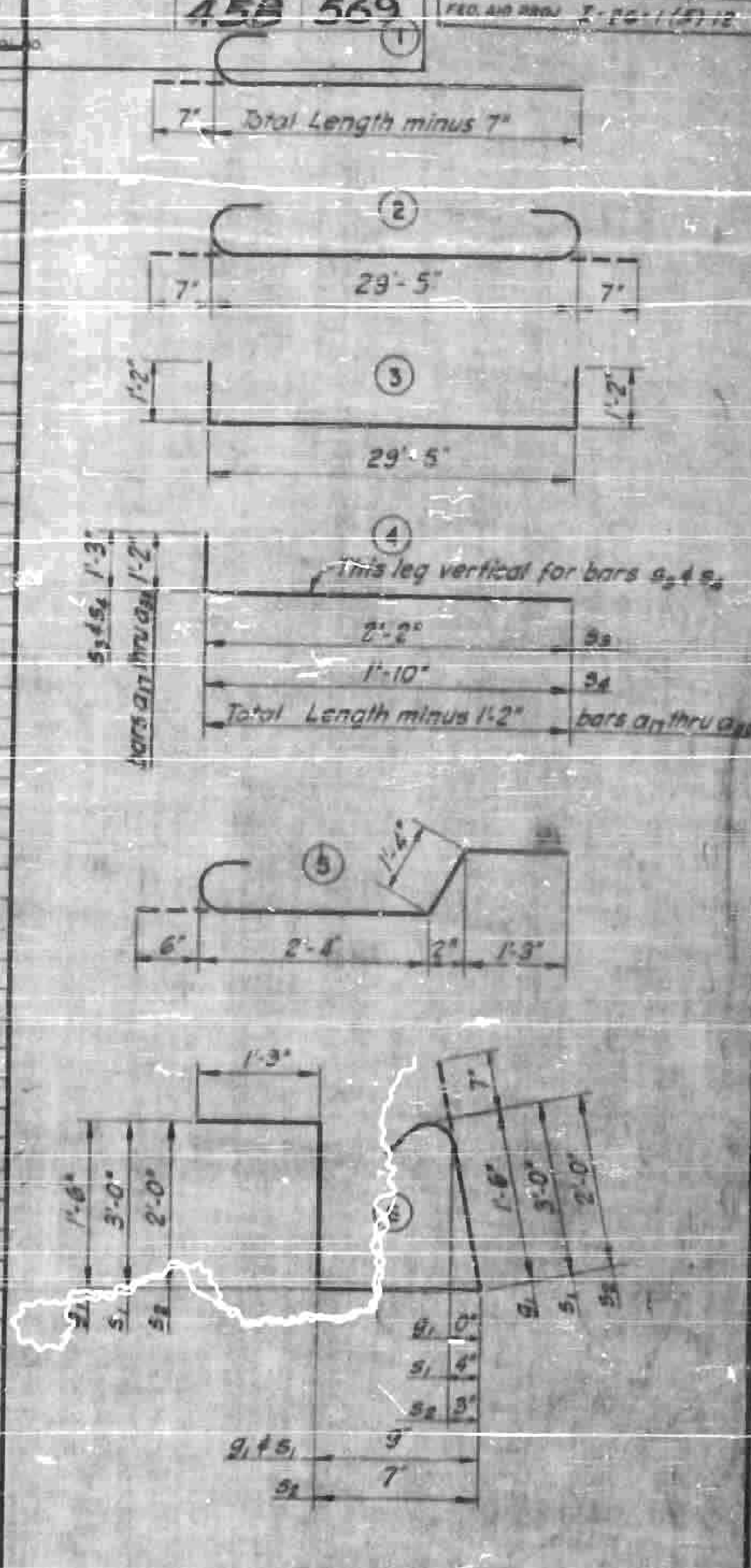
BAR	NUMBER OF BARS SPAN A	SPAN B	SPAN C	SPAN D	TOTAL	SIZE	TYPE	LENGTH	WEIGHT
a1	85	97	97	49	328	5	2	30 - 7	10,462
a2	84	96	96	48	324	5	3	31 - 9	10,729
a3	4	4	4	4	16	5	1	4 - 2	70
a4								6 - 0	100
a5								7 - 10	131
a6								9 - 8	161
a7								11 - 6	192
a8								13 - 4	223
a9								15 - 2	253
a10								17 - 0	284
a11								18 - 10	314
a12								20 - 8	346
a13								22 - 6	376
a14								24 - 4	406
a15								26 - 2	437
a16							1	28 - 0	467
a17							4	5 - 5	90
a18								7 - 3	121
a19								9 - 1	152
a20								10 - 11	182
a21								12 - 9	213
a22								14 - 7	243
a23								16 - 5	274
a24								18 - 3	305
a25								20 - 1	335
a26								21 - 11	366
a27								23 - 9	396
a28								25 - 7	427
a29								27 - 5	458
a30	4	4	4	4	16		4	29 - 3	488
a31	2	2	2	2	8		Str.	32 - 0	267
a32	2	4	4	2	12		Bent in Field	2 - 3	28
a33	5	—	—	5	10		1	29 - 3	305
a34	5	—	—	5	10	5	4	29 - 10	311
b1	124	—	—	—	124	4	Str.	32 - 2	2664
b2	32	—	—	—	32	4	Str.	31 - 5	672
b3	—	156	156	—	312	4	Str.	33 - 5	4985
b4	—	—	—	124	124	4	Str.	22 - 8	1878
b5	—	—	—	32	32	4	Str.	21 - 11	469
g1	124	132	132	87	476	4	6	5 - 7	1771
g2	166	182	182	117	647	4	5	5 - 5	2343
g3	63	68	68	44	243	4	Str.	2 - 4	379
f1	16	—	—	—	16	4	Str.	31 - 5	336
f2	—	16	16	—	32	4	Str.	33 - 5	714
f3	—	—	—	16	16	4	Str.	21 - 11	234
k1	6	4	4	6	20	4	Str.	32 - 0	428
k2	4	4	4	4	16	6	Str.	32 - 0	769
s1	26	—	—	26	52	4	6	8 - 7	298
s2	26	52	52	26	156	4	6	6 - 5	669
s3	32	—	—	32	64	4	4	3 - 5	146
s4	32	64	64	32	192	4	4	3 - 1	396

Reinforcing Steel 51,642 lbs. ✓

Class "A" Concrete 240.2 Cu. Yds. ✓

Structural Steel 170,600 lbs. ✓

Single Bar Metal Railing 487.52 Lin. Ft. ✓



BENT BAR TYPES

(All dimensions are out-to-out of bar)

PROJECT NO. 8.18293

HENDERSON COUNTY

STATION 1185 + 00 L

10 + 00 Y8

STATE OF NORTH CAROLINA

STATE HIGHWAY COMMISSION

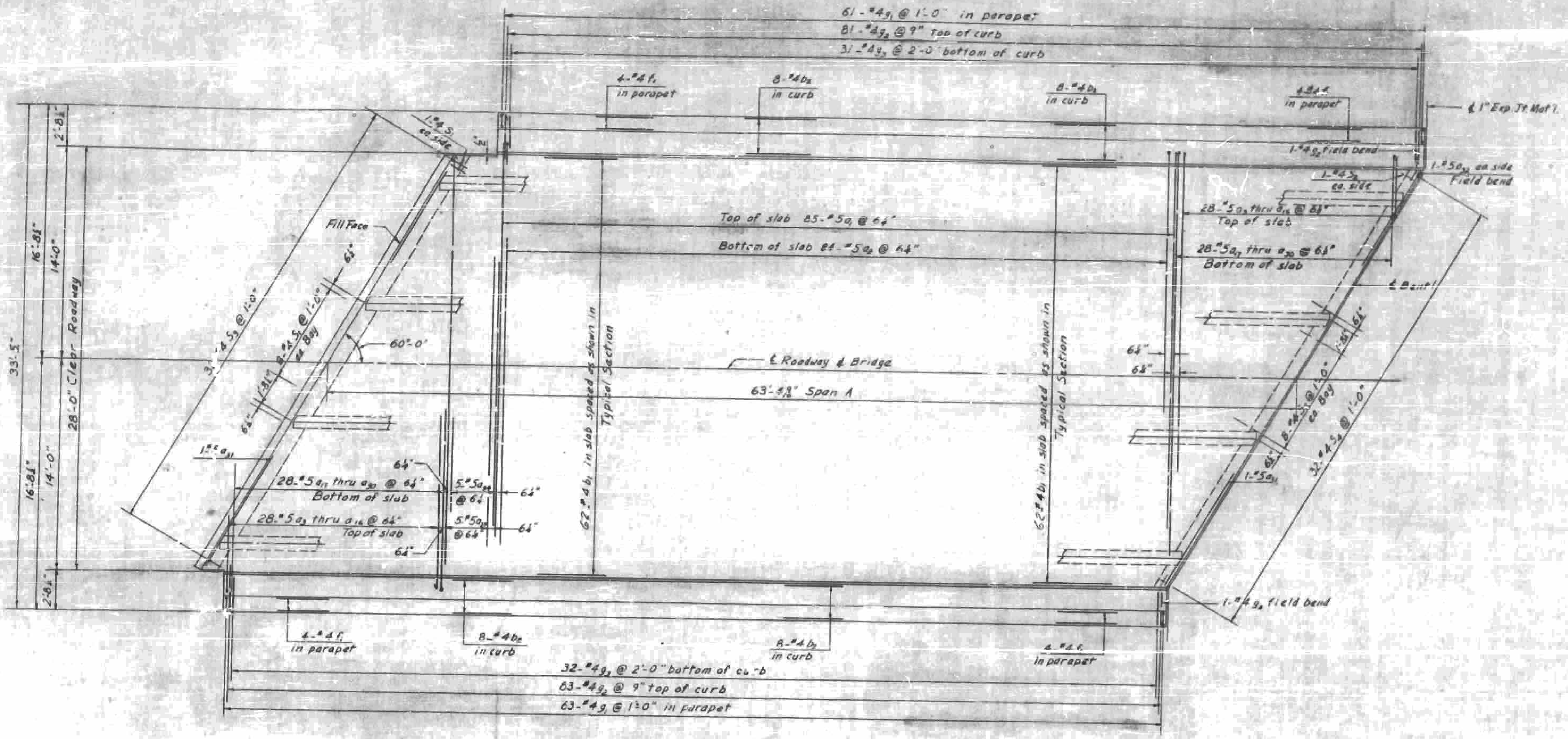
RALEIGH

SUPERSTRUCTURE

CROSS SECTIONS

Revision No. 2: To change length of metal rail.

Revision No. 1: To change b bars in bottom of slab



PLAN

PROJECT NO. 8.18293

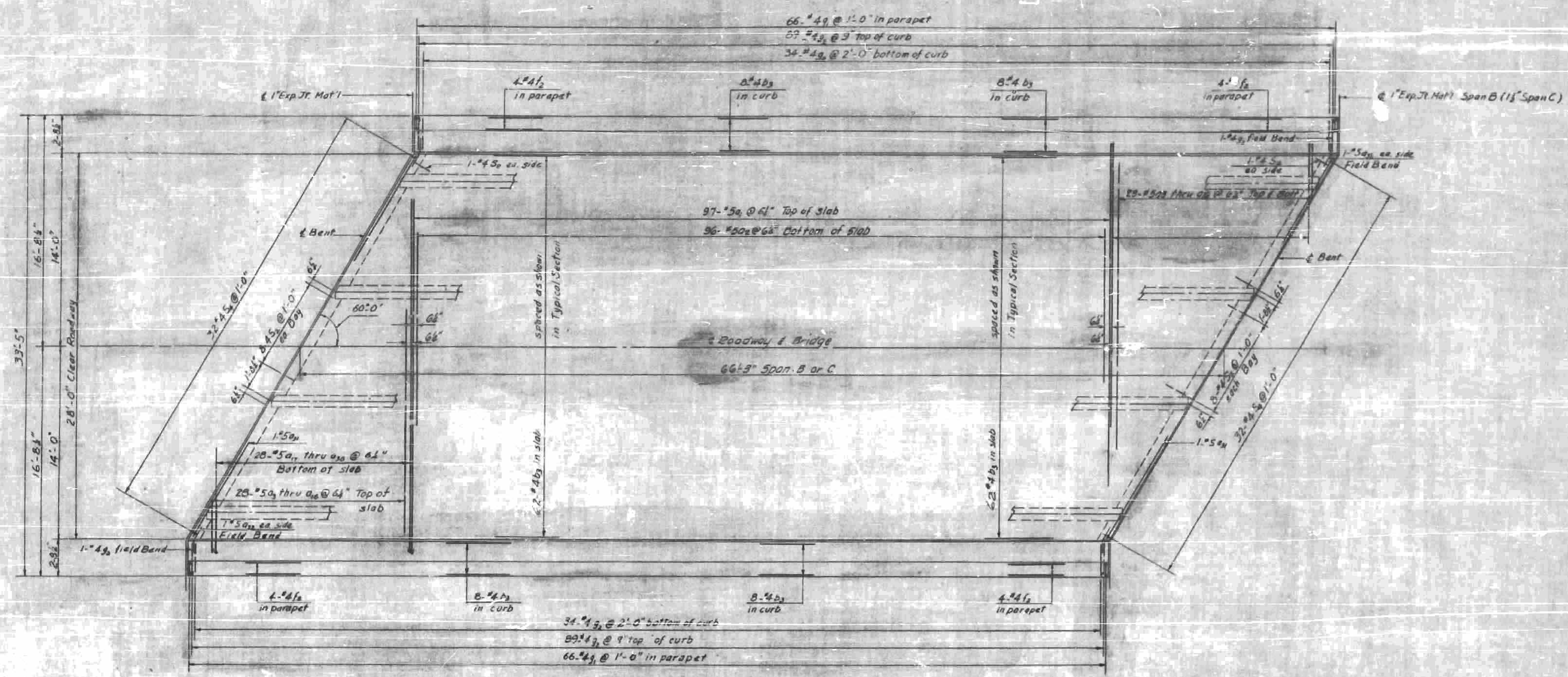
Henderson COUNTY

STATION 1185+00L
10+00Y5

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

SUPERSTRUCTURE
SPAN A

Revision No 1: To change "b" bars.



PLAN

PROJECT NO. 8.18293

Henderson COUNTY

STATION 1185+00L
10+00Y

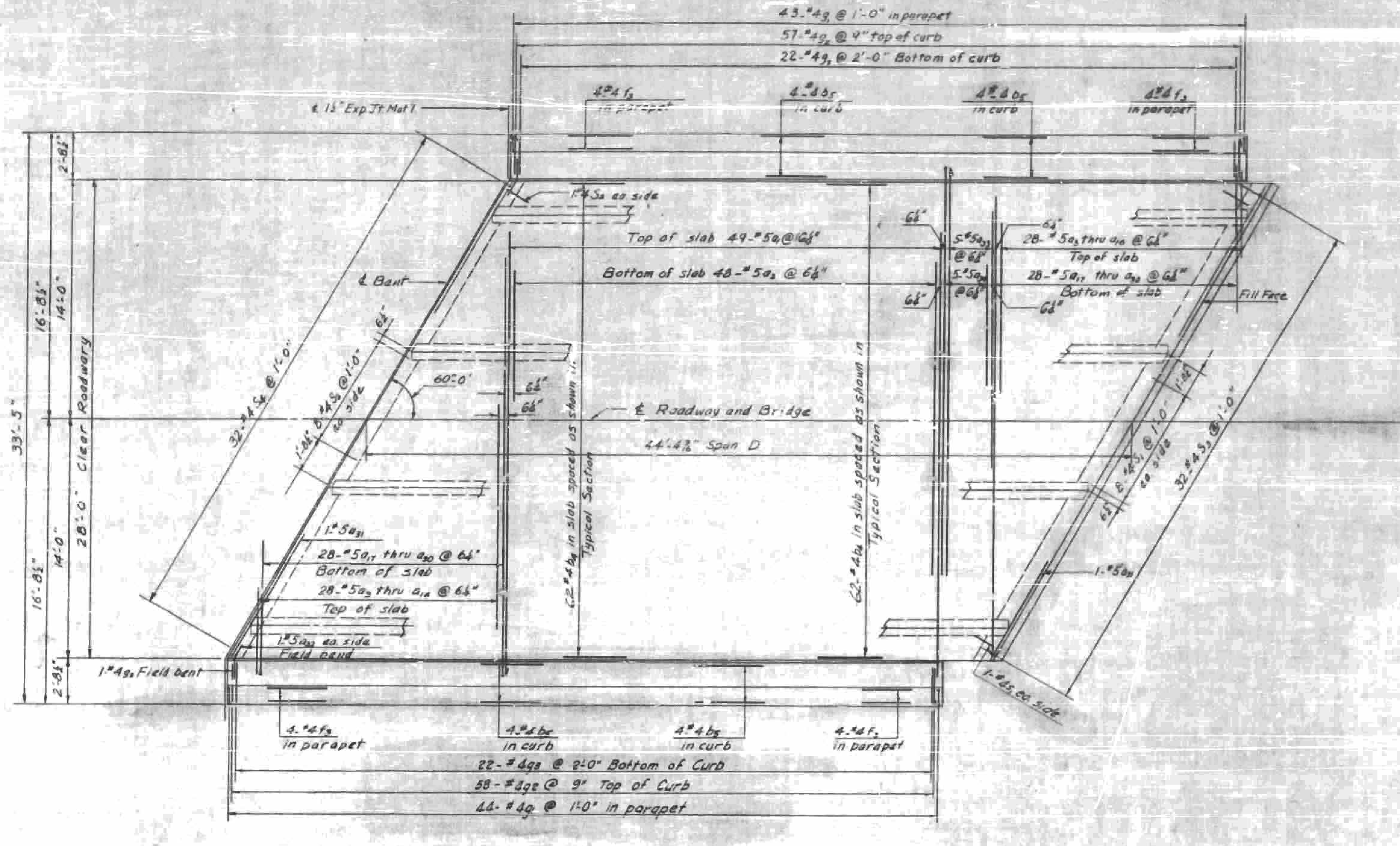
STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

SUPERSTRUCTURE
SPAN B OR C

Revision No 1: To change 'b' bars in slab

FED. ROAD DIST. NO.	STATE	PROJECT NO.
3	N. C.	8.18233
FED. AID PROJ.	I-26-1(6)12	

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N. C.		461	569



PLAN

PROJECT NO. 8.18293

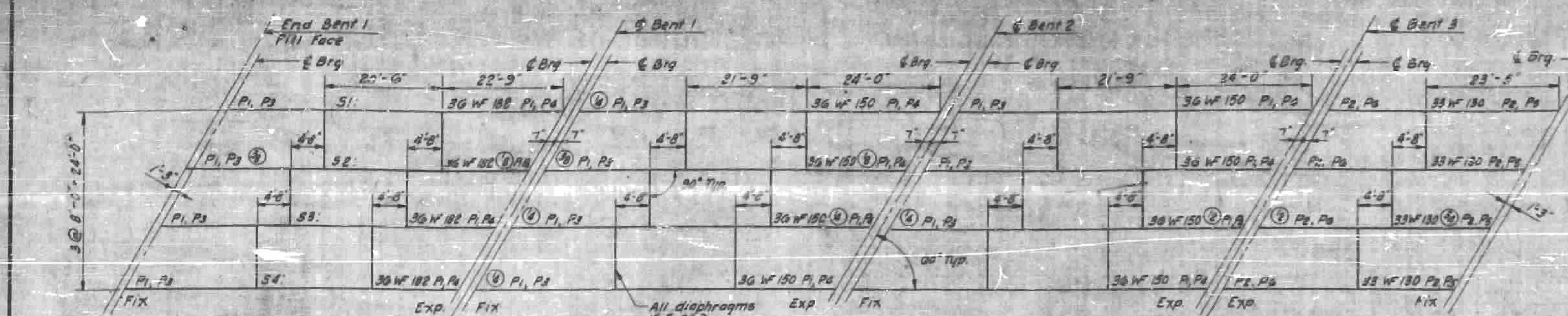
Henderson COUNTY

STATION 1185+00 L
10+00 Y

STATE OF NORTH CAROLINA STATE HIGHWAY COMMISSION RALEIGH
SUPERSTRUCTURE SPAN D

Revisions: 1 — 4-1-63

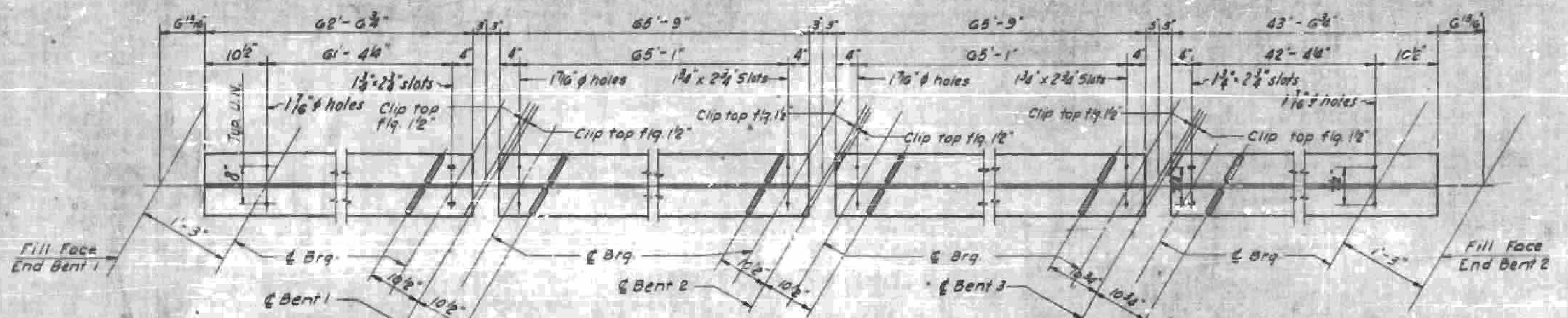
Revision No. 1: To change "5" bars in slab



SPAN A SPAN B SPAN C SPAN D

FRAMING PLAN

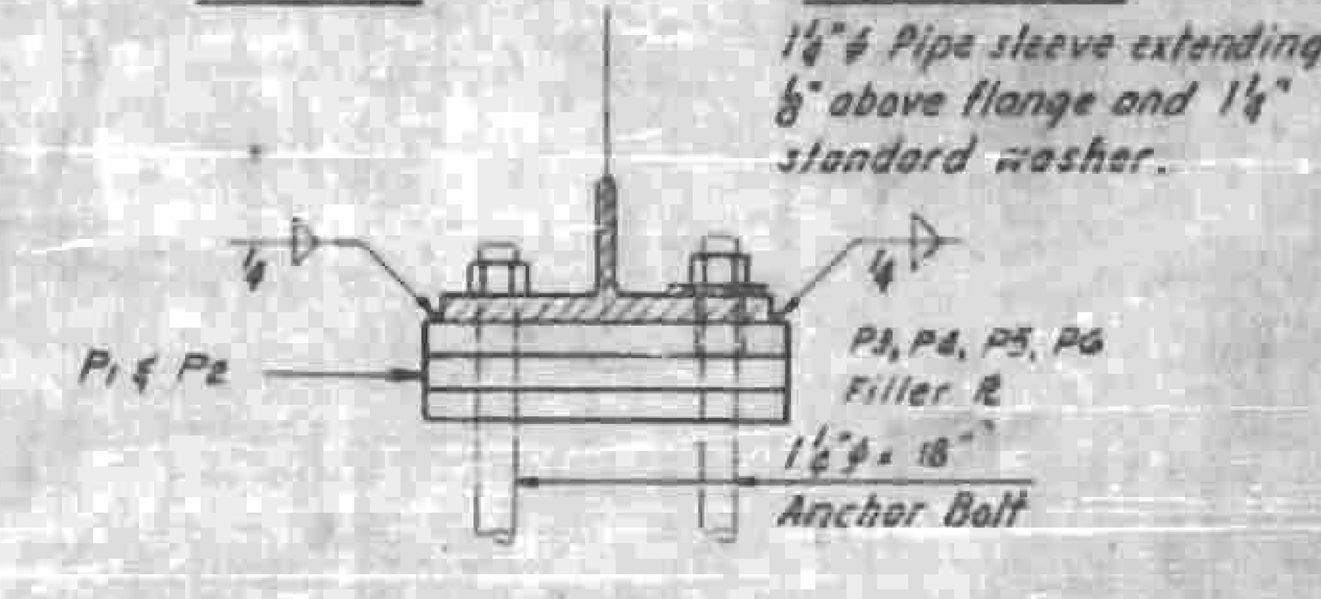
Note: Diaphragm spacing measured along Beam Grade
Ⓢ Indicates filler plate thickness.



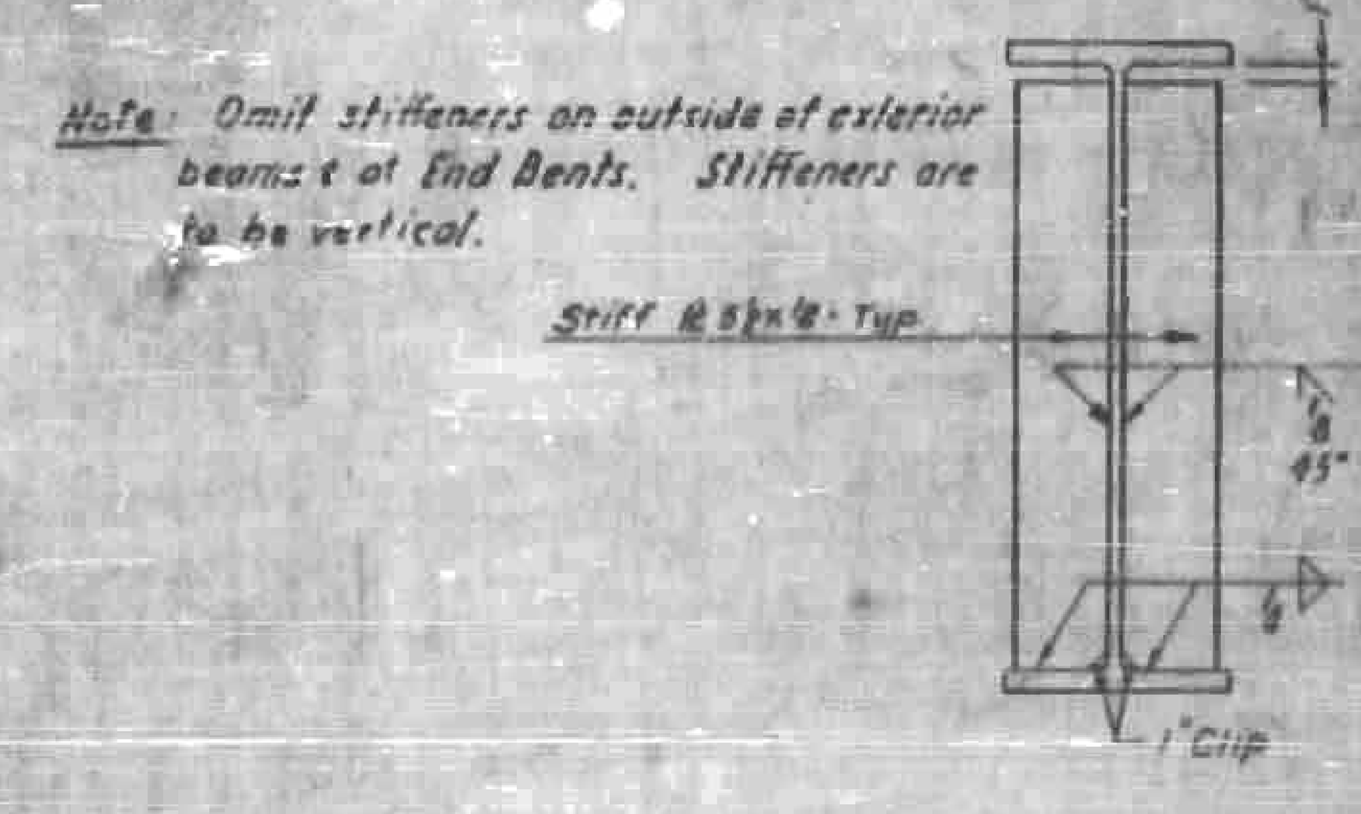
SPAN A SPAN B SPAN C SPAN D

PLAN OF BOTTOM FLANGE

Note: All dimensions are horizontal

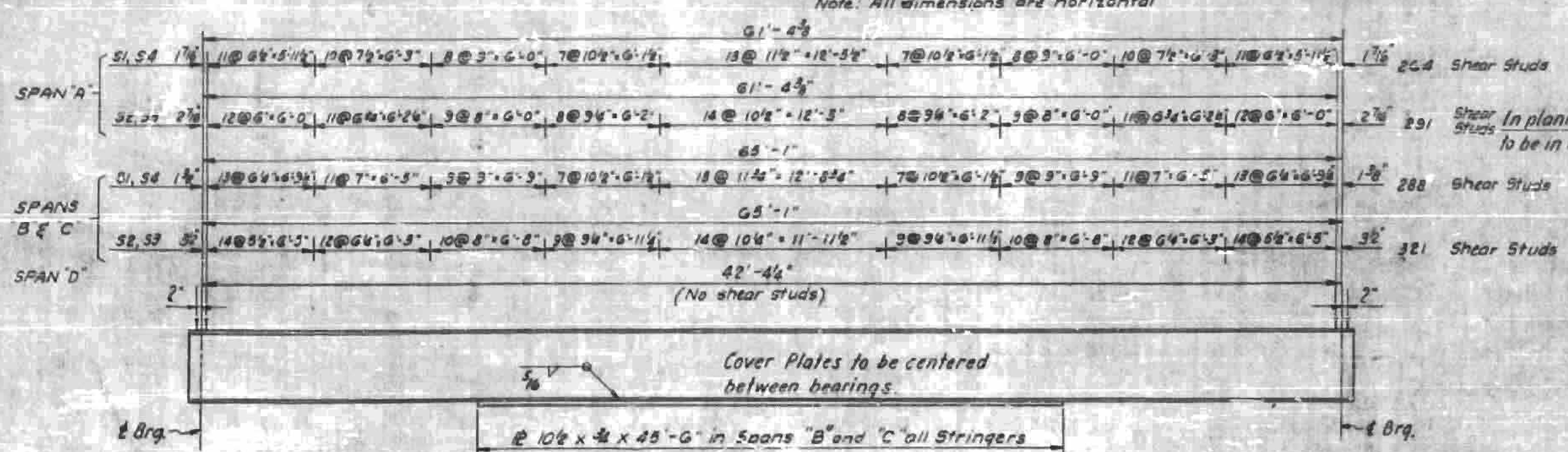


SECTION THRU BEARING



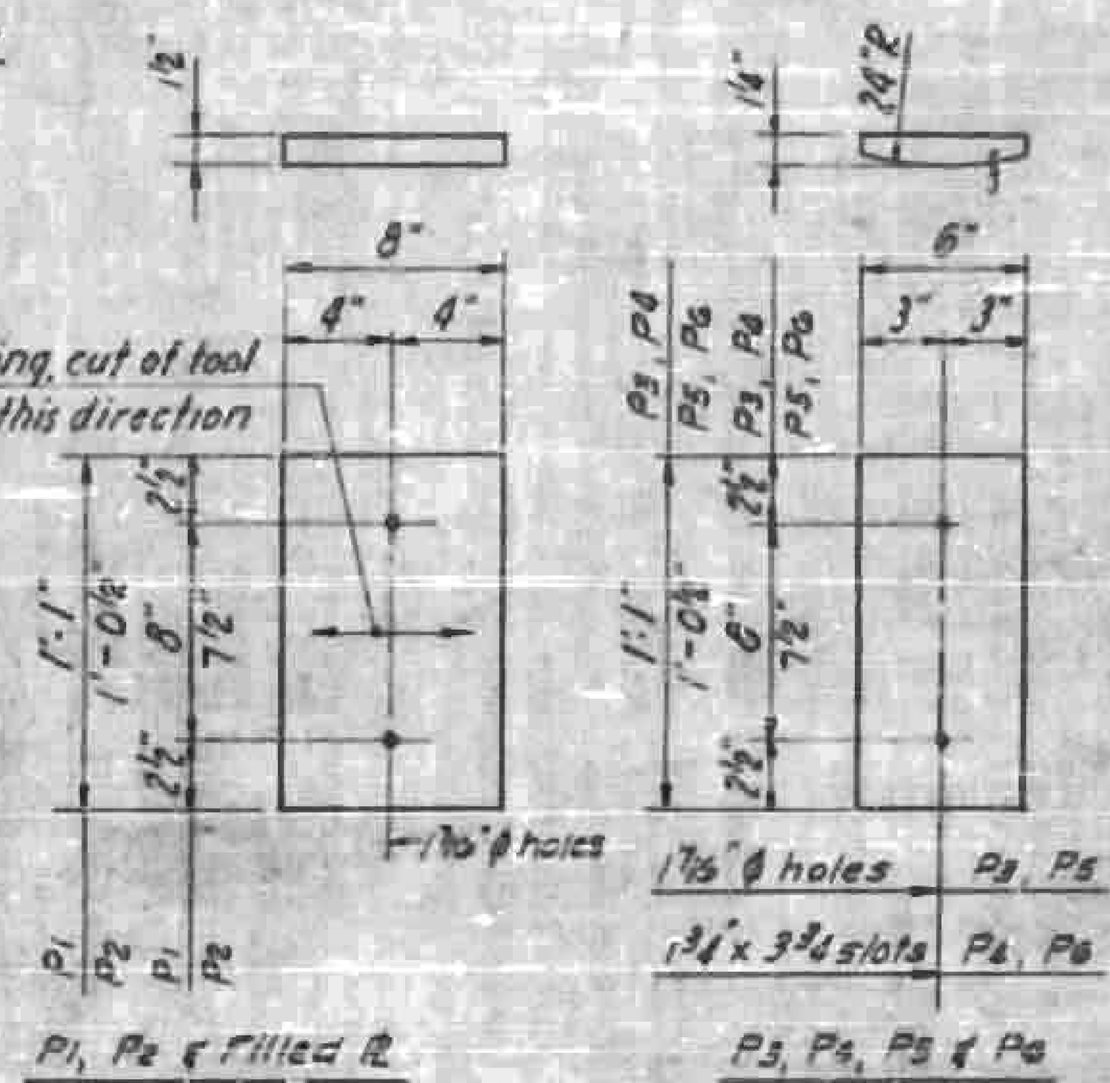
STIFFENER DETAIL

DEFLECTION TABLE								
	SPAN "A"		SPAN "B"		SPAN "C"		SPAN "D"	
	Ext. Bm	Int Bm	Ext Bm	Int Bm	Ext Bm	Int Bm	Ext Bm	Int Bm
Steel	3/16	3/16	1/4	1/4	1/4	1/4	1/16	1/16
Concrete	1 1/16	7/8	1 5/16	1 1/16	1 5/16	1 1/16	7/16	5/16
Total D.L. Defl.	1 1/4	1 1/16	1 9/16	1 5/16	1 9/16	1 5/16	1/2	3/8
Vertical Curve	1/2	1/2	9/16	9/16	5/16	5/16	1/8	1/4
Total Camber	1 3/4	1 9/16	2 1/8	1 7/8	2 1/8	1 7/8	3/4	5/8

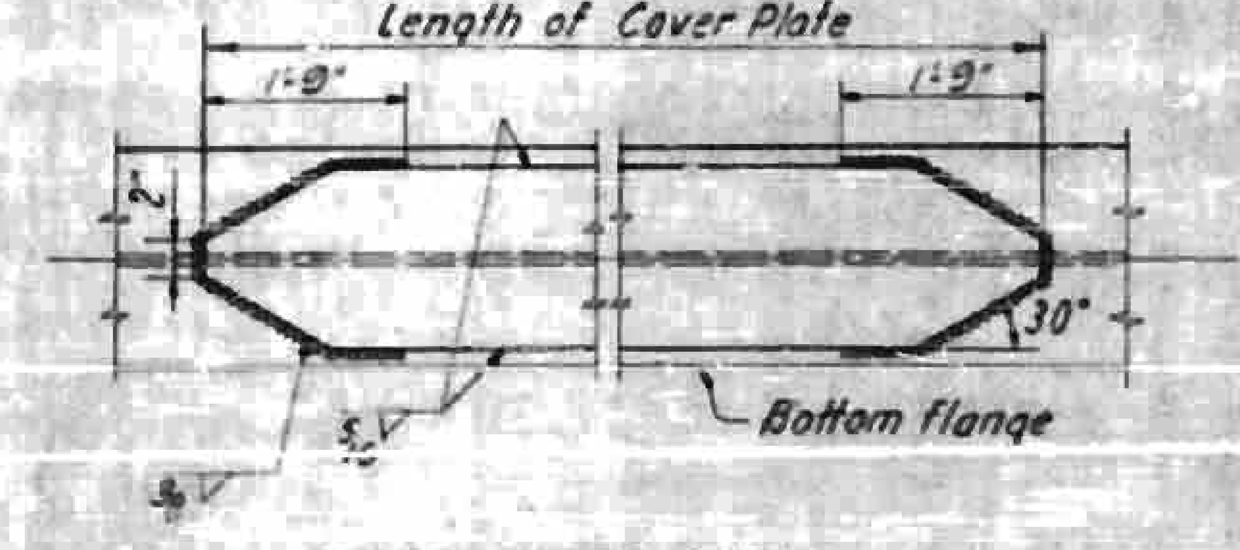


SHEAR STUD SPACING AND COVER PLATE LENGTH

Note: All dimensions along Beam Grade

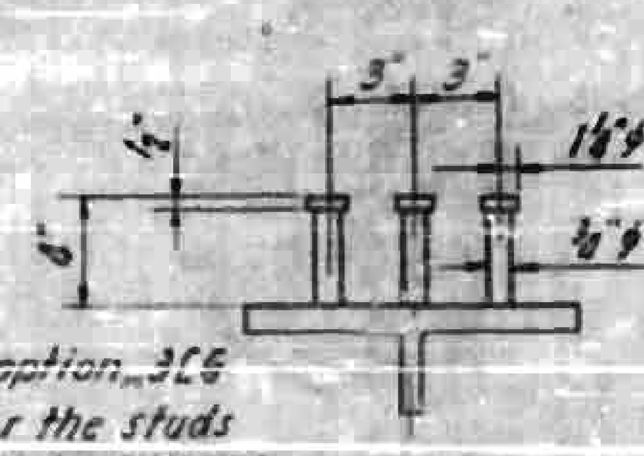


BEARING PLATE DETAILS



COVER PLATE DETAIL

Note:
At the Contractor's option, 3C6 may be substituted for the studs shown. See "Standard Notes" Sheet



SHEAR STUD DETAILS

NOTES:
All WF beams, cover plates and channel shear connectors on this sheet shall conform to ASTM-A36 specifications.
Allowable extreme fibre stress under this specification is 20,000 lbs. per sq. inch.

Revision No 1: Revised to change bearing plate for right ext. beam at E.B. No 2. 2-4-63 NGC

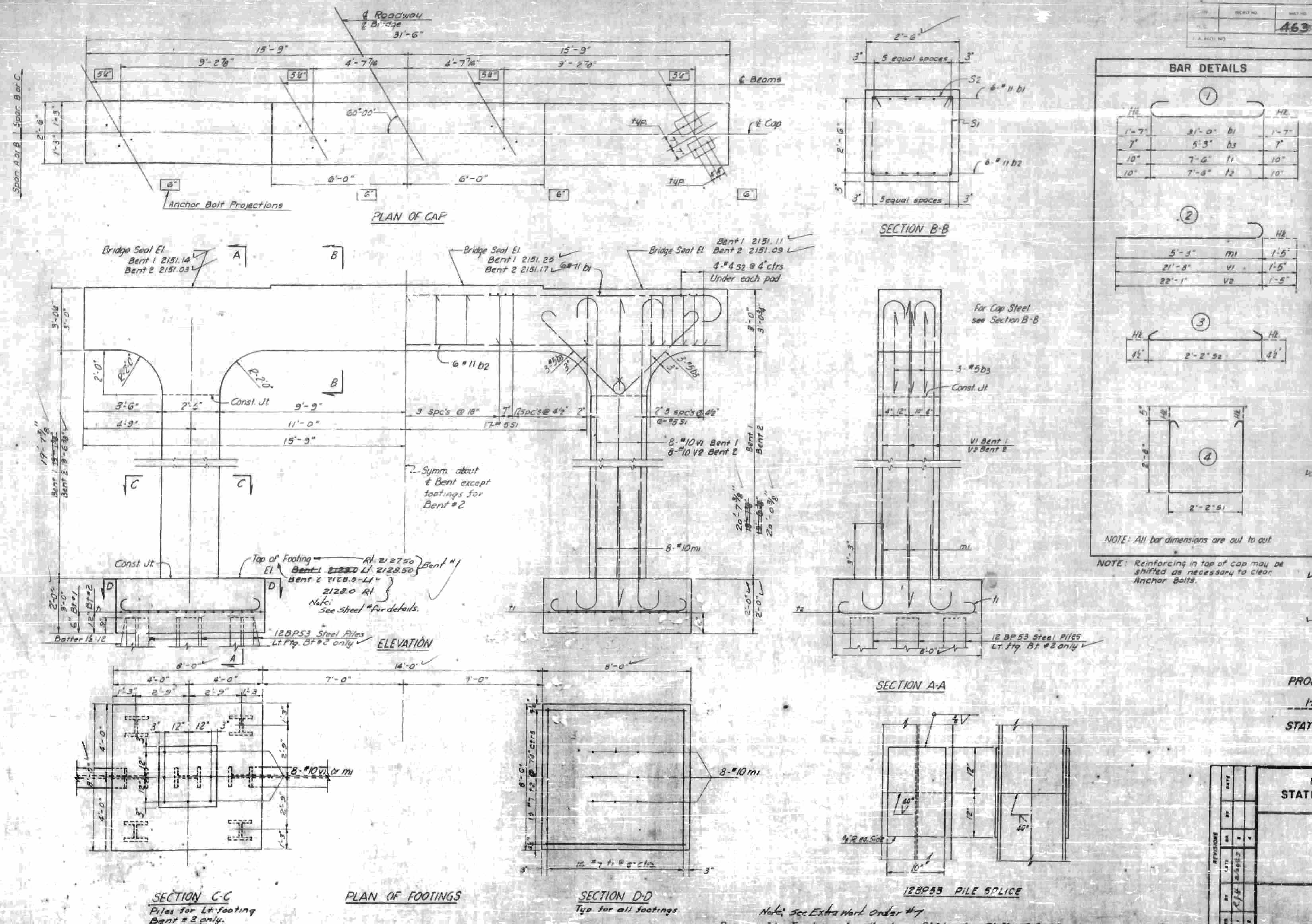
PROJECT NO. 8.18293

HENDERSON COUNTY

STATION 1185 + 00L
10 + 00 Y5

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

STRUCTURAL STEEL



BILL OF MATERIAL

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
b1	6	#11	1	34'-2"	1,082
b2	6	#11	Str.	31'-0"	988
b3	12	#5	1	6'-5"	80
m1	16	#10	2	6'-8"	459
S1	45	#5	4	8'-4"	391
S2	16	#4	3	2'-11"	31
t1	32	#7	1	9'-2"	600
t2	26	#7	1	9'-2"	487
v1	16	#10	2	23'-1"	1,589
v2	16	#10	2	23'-6"	1,618

Bent 1
Reinforcing Steel Lbs. 3,714
Class A Concrete Cu. Yds. ~~27.6~~ 28.069
12 BP 53 Steel Pile - 1
Lin. Ft. 9'-5"

Bent 2
Reinforcing Steel Lbs. 5,743
Class A Concrete Cu. Yds. ~~30.1~~ 30.216
12 BP 53 Steel Piles No. 7
12 BP 53 Steel Piles Lin. Ft. ~~245~~ 186'-0"

PROJECT NO. 8.18293
HENDERSON COUNTY
STATION 1185 + 00L
10 + 00 Y3

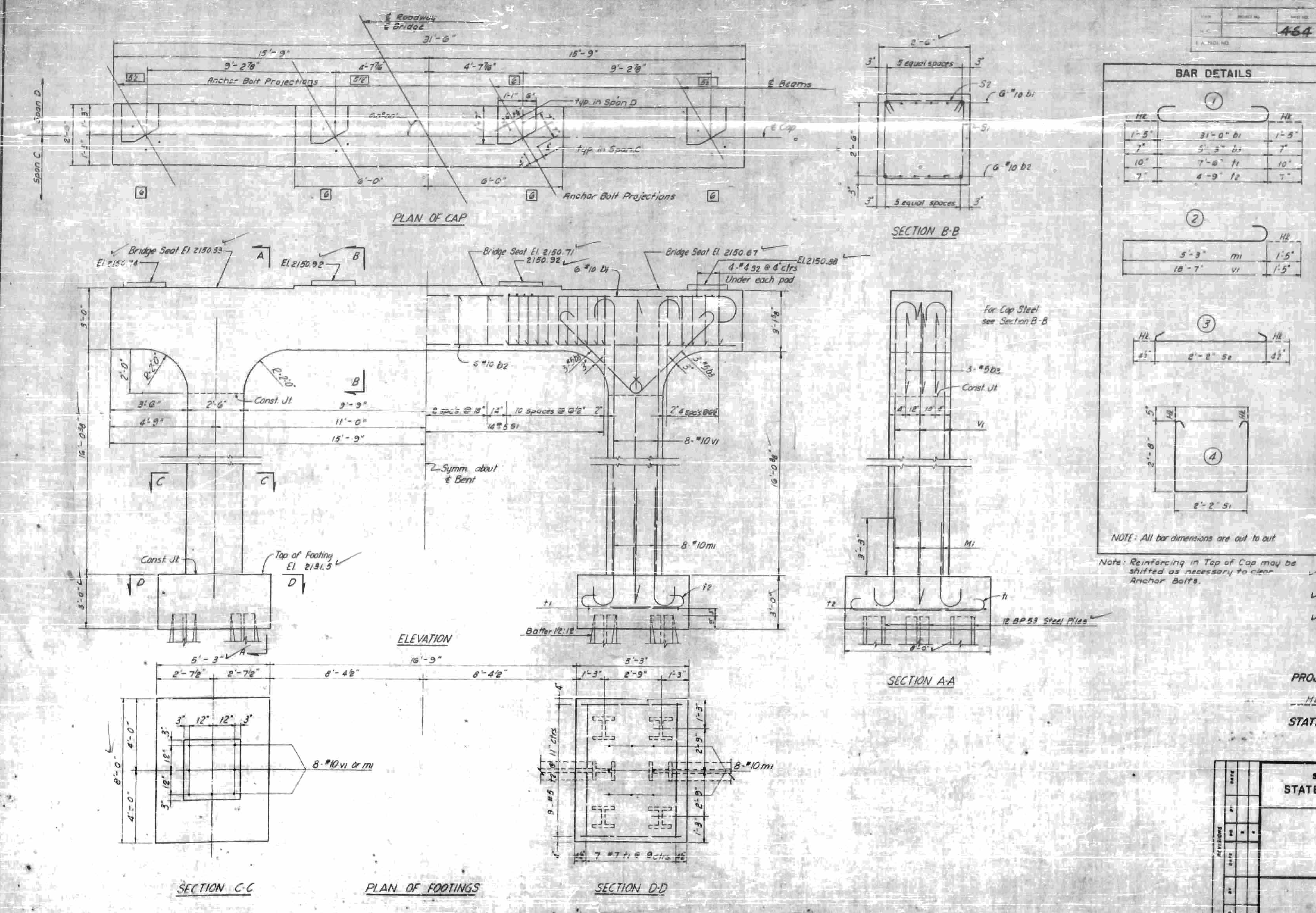
STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

BENTS 1 & 2

Note: See Extra Work Order #7
Revision #1 - To eliminate all piles in Bt #1 and in Rt. Ftg. of Bt. #2.

N.C.		464	569

8	N.C.	8 18293
FA Project I-26-1(5) 12		



BILL OF MATERIAL

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
b1	6	#10	1	33'-10"	874
b2	6	#10	Str.	31'-0"	800
b3	12	#5	1	6'-5"	80
m1	16	#10	2	6'-8"	459
s1	37	#5	4	8'-4"	322
s2	16	#4	3	2'-11"	31
t1	14	#7	1	9'-2"	262
t2	18	#6	1	5'-11"	111
v1	16	#10	2	20'-7"	1377

Reinforcing Steel Lbs	4316
Class A Concrete Cu.Yds.	26.2
12 BP 53 Steel Piles	No. 12
12 BP 53 Steel Piles Lin. Ft.	~~376~~ 370-3

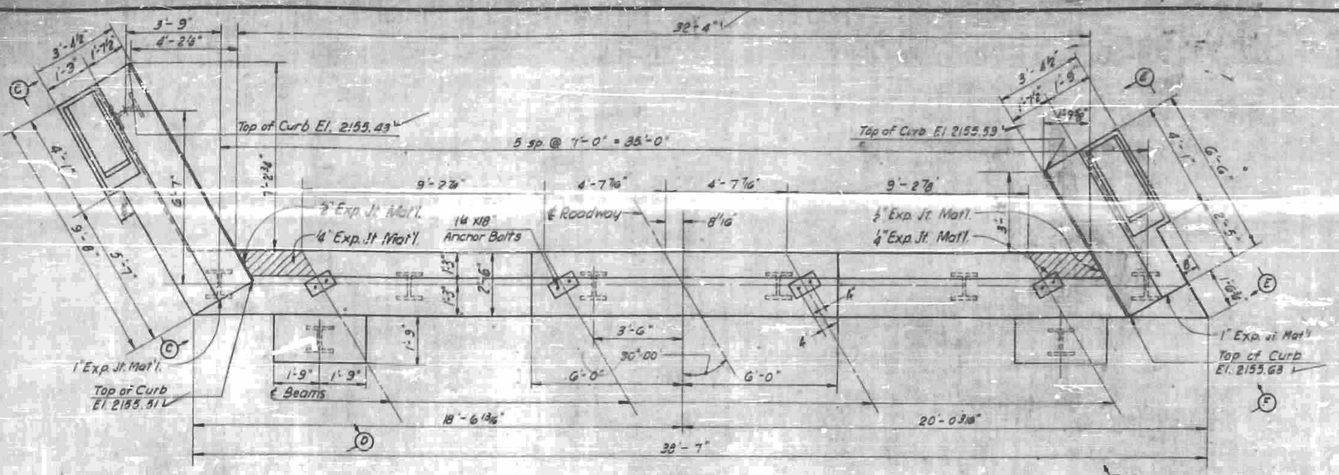
PROJECT NO. 8 18293

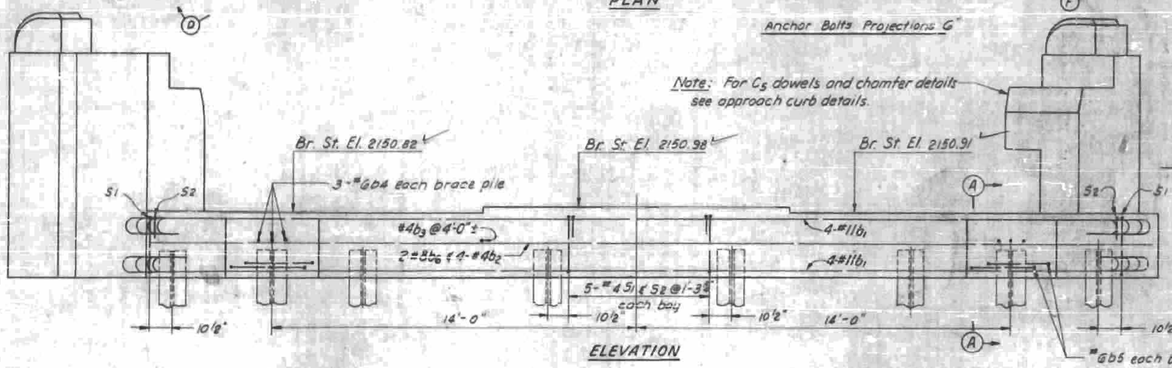
HENDERSON COUNTY

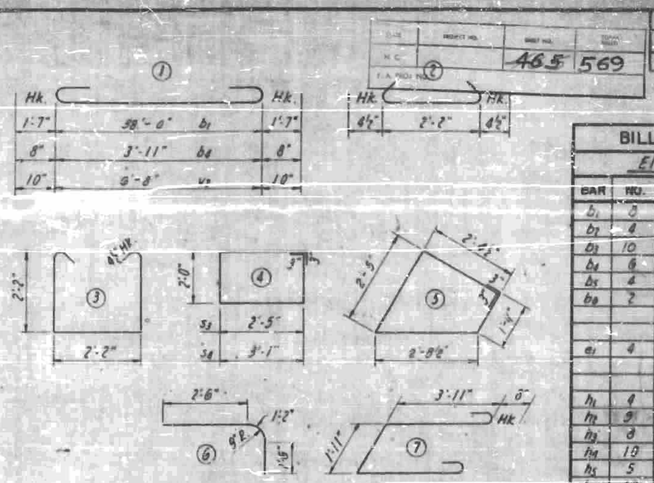
STATION 1185 + 00 L

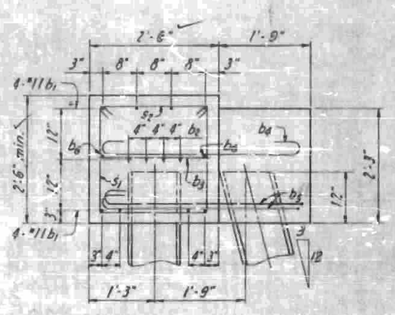
STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

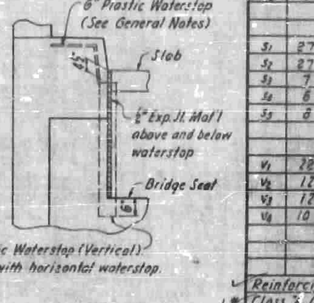
BENT 3

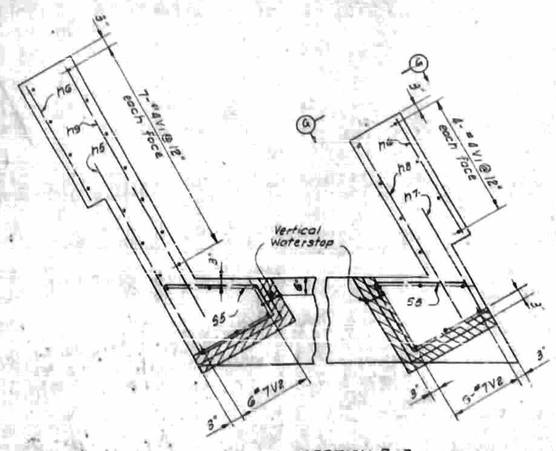


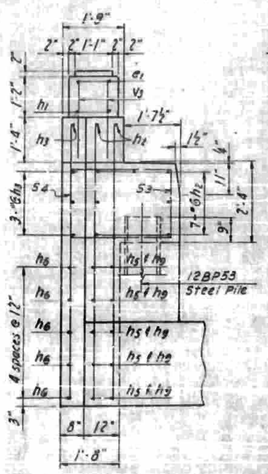


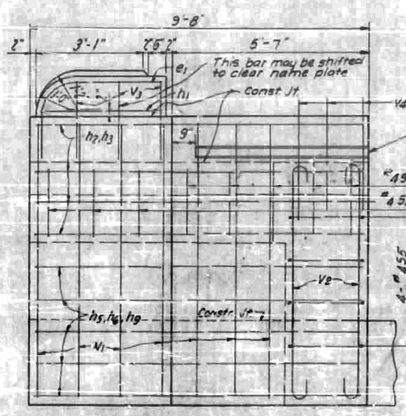


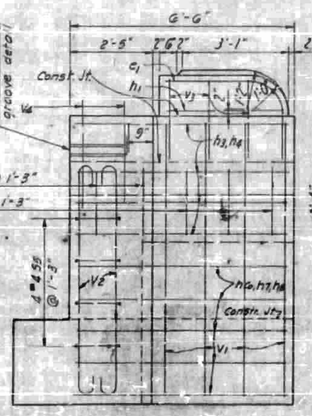


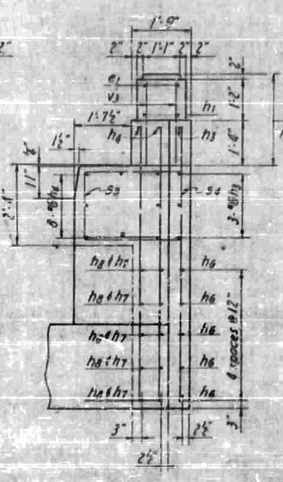












N.C.		~~465~~ 569		8	N.C.	8.18293
F.A. PROJ. NO. ②				FED. AID PROJ. I-26-1(5)12		

PLAN

Anchor Bolts Projections 6"

Note: For C5 dowels and chamfer details see approach curb details.

ELEVATION

BAR TYPES

All dimensions are out to out.

SECTION A-A

VIEW G-G

BILL OF MATERIAL					
END BENT #1					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
b1	8	#11	1	41'-2"	1750
b2	4	#4	str.	38'-0"	102
b3	10	#4	str.	2'-2"	14
b4	6	#6	1	5'-3"	47
b5	4	#6	7	11'-1"	67
b6	2	#8	str.	38'-0"	203
e1	4	#4	6	5'-2"	14
h1	4	#4	str.	3'-5"	9
h2	9	#6	str.	9'-4"	126
h3	8	#6	str.	3'-9"	45
h4	10	#6	str.	6'-2"	93
h5	5	#4	str.	6'-6"	22
h6	10	#6	str.	3'-5"	25
h7	5	#4	str.	9'-6"	12
h8	5	#4	str.	5'-9"	19
h9	5	#4	str.	8'-6"	28
S1	27	#4	3	7'-3"	131
S2	27	#6	2	2'-11"	53
S3	7	#4	4	9'-4"	43
S4	6	#4	4	10'-8"	43
S5	8	#4	5	9'-1"	49
v1	22	#4	str.	6'-4"	92
v2	12	#7	1	8'-6"	204
v3	12	#4	str.	2'-3"	18
v4	10	#4	str.	7'-6"	16

Reinforcing Steel	lbs. 3,227
* Class "A" Concrete	cu. yds. 19.5
12 BP53 Steel Piles	no. 9
12 BP53 Steel Piles	lin. ft. 223
	223'-10"

* Concrete displaced by pile heads has been deducted.

SECTION B-B

VIEW D-D

VIEW C-C

VIEW E-E

VIEW F-F

This portion may be poured with superstr.

PROJECT NO. 8.18293

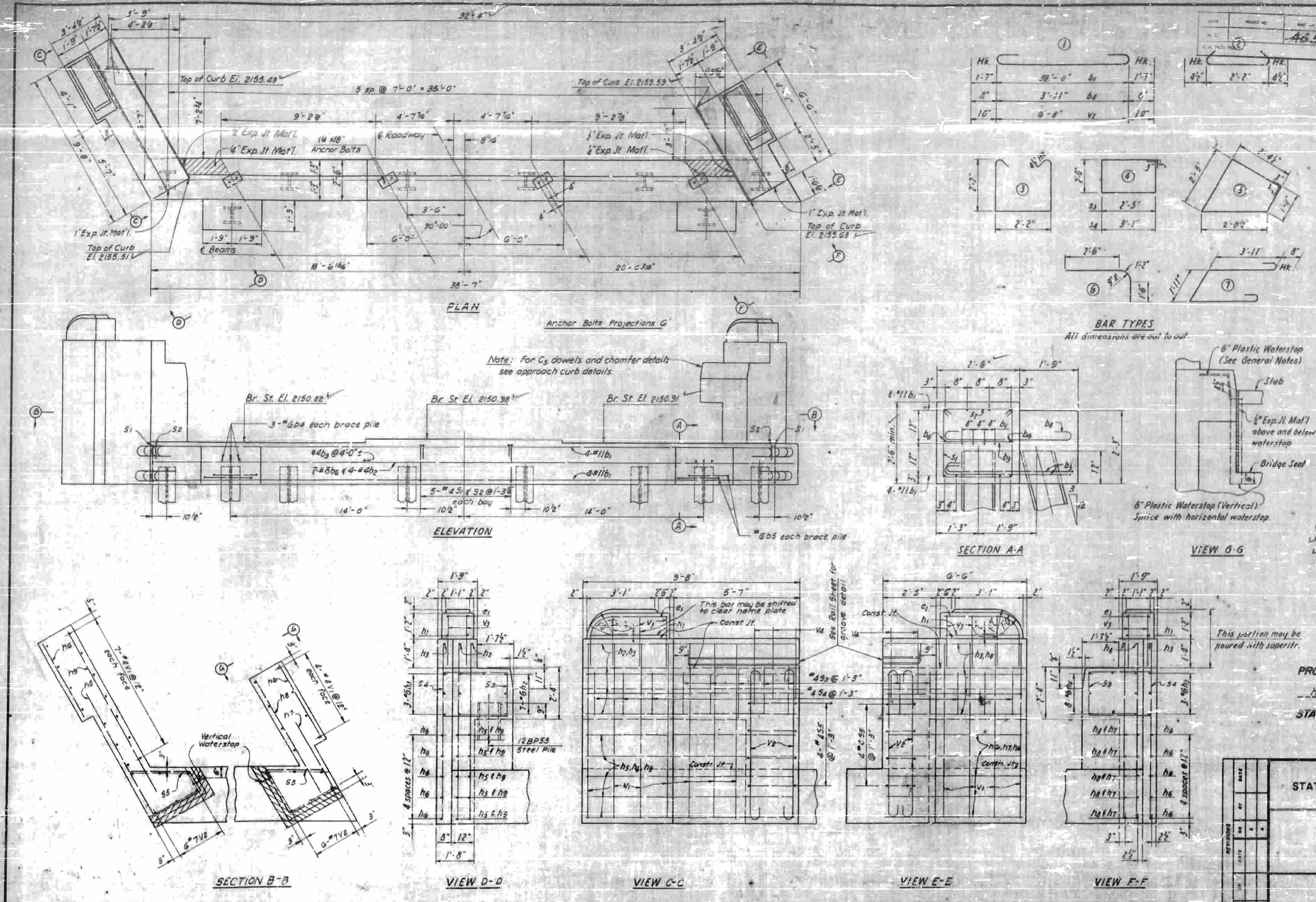
HENDERSON COUNTY

STATION 1185 + 00L
10 + 00Y5

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

END BENT 1

5-37
10



BILL OF MATERIAL

END BENT #1

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
b1	8	#11	1	41'-2"	[illegible]
b2	4	#4	str.	38'-0"	102
b3	10	#4	str.	2'-2"	14
b4	6	#6	1	5'-3"	47
b5	4	#6	7	11'-1"	[illegible]
b6	2	#8	str.	38'-0"	203
e1	4	#4	6	5'-2"	14
h1	4	#4	str.	3'-5"	9
h2	9	#6	str.	9'-4"	126
h3	8	#6	str.	3'-9"	45
h4	10	#5	str.	6'-2"	93
h5	5	#4	str.	6'-6"	22
h6	10	#4	str.	3'-9"	25
h7	5	#4	str.	3'-6"	12
h8	5	#4	str.	5'-9"	19
h9	5	#4	str.	8'-6"	28
s1	27	#4	3	7'-3"	131
s2	27	#4	2	2'-11"	53
s3	7	#4	8	9'-6"	44
s4	6	#4	4	10'-8"	43
s5	8	#4	5	9'-1"	49
v1	22	#4	str.	6'-4"	94
v2	12	#7	1	8'-4"	204
v3	12	#4	str.	2'-3"	18
v4	10	#4	str.	2'-6"	16

Reinforcing Steel	lbs.	3,227
Class "A" Concrete*	cu. yds.	19.5
12 BP53 Steel Piles	no.	9
12 BP53 Steel Piles	lin. ft.	~~[illegible]~~ 223'-10"

* Concrete displaced by pile heads has been deducted.

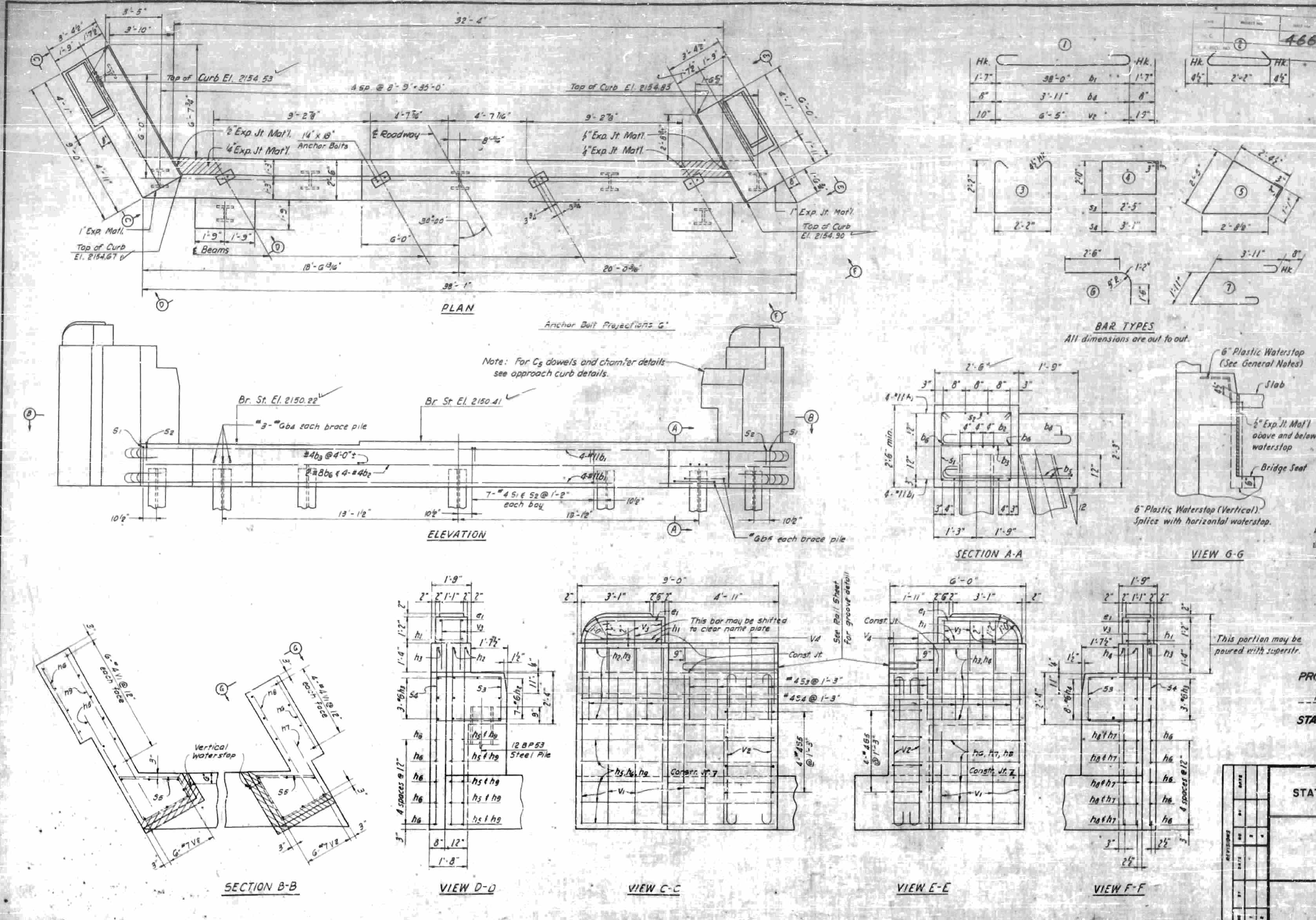
PROJECT NO. 8.18293

HENDERSON COUNTY

STATION 1183+00 L, 10+00 Y5

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

END BENT 1



466 569

FED AID PROJ. I-26-1(5)12 — 8.18293

BILL OF MATERIAL

END BENT #2

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
b_1	8	#11	1	41'-9"	1775
b_2	4	#4	str.	38'-0"	102
b_3	10	#4	str.	2'-2"	14
b_4	6	#6	1	5'-3"	47
b_5	4	#6	7	11'-1"	67
b_6	2	#8	str.	38'-0"	203
e_1	4	#4	6	5'-2"	14
h_1	4	#4	str.	3'-5"	9
h_2	9	#6	str.	8'-8"	117
h_3	8	#6	str.	3'-9"	45
h_4	10	#6	str.	5'-8"	85
h_5	5	#4	str.	6'-0"	20
h_6	10	#4	str.	3'-9"	25
h_7	5	#4	str.	3'-0"	10
h_8	5	#4	str.	5'-6"	18
h_9	5	#4	str.	7'-6"	25
s_1	30	#4	3	7'-3"	145
s_2	30	#4	2	2'-11"	59
s_3	6	#4	4	9'-4"	37
s_4	6	#4	4	10'-8"	43
s_5	8	#4	5	9'-1"	49
v_1	20	#4	str.	6'-1"	81
v_2	12	#7	1	8'-1"	198
v_3	12	#4	str.	2'-3"	18
v_4	10	#4	str.	7'-6"	77

Reinforcing Steel	lbs.	3,198
*Class "A" Concrete	cu. yds.	19.9
12 BP53 Steel Piles	no.	8
12 BP53 Steel Piles	lin. ft.	~~288~~ 336'-0"

* Concrete displaced by pile heads has been deducted.

PROJECT NO. 8.18293

HENDERSON **COUNTY**

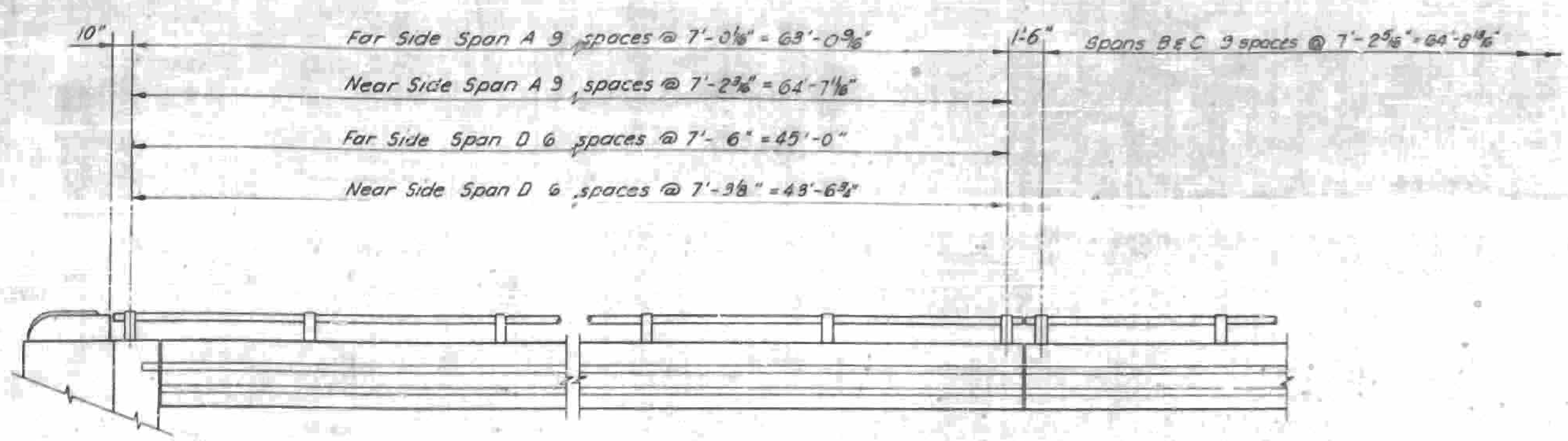
STATION 1185 + 00L
10 + 00Y5

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

END BENT 2

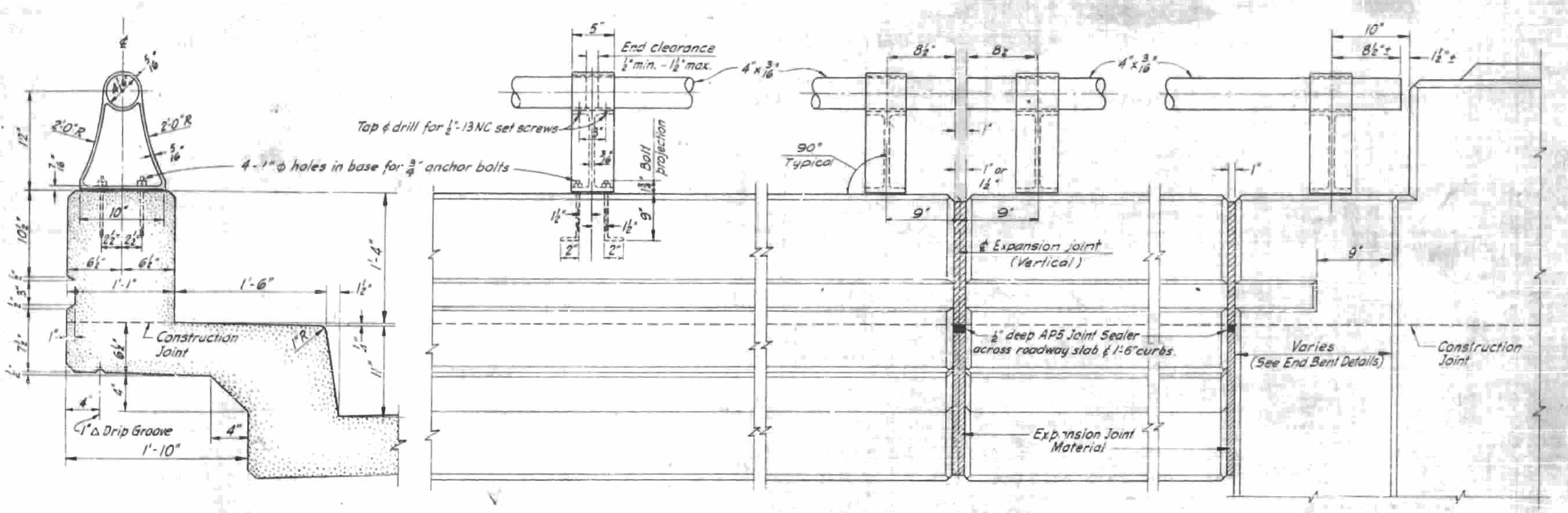
REVISIONS

SHEET NO. 5-B
TOTAL SHEETS 167



PARAPET AND RAILING ELEVATION

Note: Railing Post Spacing given at ℄ parapet.



PARAPET AND RAILING DETAILS

At the Contractor's option metal rail may be either Aluminum or Galvanized Steel in accordance with the requirements of the general notes and the following specifications for the alternate materials; however, the Contractor will be required to use the same rail material on all structures on the project for which metal rail is designated.

ALUMINUM RAILS

Aluminum alloys are to be as follows:

Cast Rail Posts	A356-T6
Round Tubular Rail	6061-T6 or 6062-T6
Set Screws	2024-T4
Closure Plates	6061-T6 or 6062-T6

Round Tubular Rails are to be of 4" O.D. with 1/8" minimum wall thickness.

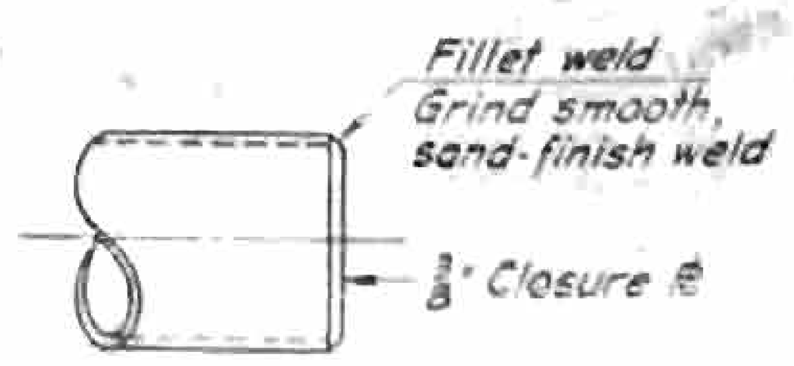
The base of rail posts, or any other aluminum surface in contract with concrete shall be thoroughly coated with an aluminum impregnated caulking compound of approved quality.

~~**GALVANIZED STEEL RAILS**~~

~~Material and galvanizing are to conform to the following specifications:~~

~~Cast Rail Post~~	~~Malleable cast iron, ASTM A47 Grade 35018, Galvanized to ASTM A-123~~
or	~~Cast Steel, AASHO M192-60 Class 70, Galvanized to ASTM A-123.~~
~~4" O.D. Rail~~	~~Standard 3 1/2" Steel Pipe, ASTM A53 (Galvanized)~~
~~Closure Plates & Shims~~	~~Steel, ASTM A-245 Grade C, Galvanized to ASTM A-123~~
~~Set Screws~~	~~Standard Steel Cap Screws, Galvanized to ASTM A-153.~~

~~The cut ends of galvanized pipe railing, the end closure plate weld after grinding smooth and areas adjacent to the weld where spelter coating has been burned by welding shall be thoroughly cleaned by wire brushing to remove all traces of welding flux and loose or cracked spelter after which these cleaned areas shall be given two coats of zinc paint meeting the requirements of Federal Specification MIL-P26915 (USAF) type I.~~



DETAIL END CLOSURE

FED. ROAD DIST. NO.	STATE	PROJECT NO.
2	N.C.	8.18293
FED. AID PROJ.	I-26-1(3)12	

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		467	569
F. A. PROJ. NO.			

NOTES:

Unless noted on the plans, maximum length of rail section to be two panels plus "stick thru".

End of rail to clear face of concrete End Post by 1 1/2".

For double panel runs of rail set screws shall be set tight at center post and snug at end to allow for expansion.
For single panel runs, set screw to be tight at one end and snug at other end.

3/4" ⌀ Anchor bolts-hex nuts and washers to be steel galvanized in accordance with ASTM A-153 and painted with 2 coat of aluminum paint after erection.

Cast posts to be as shown or an approved equal.

Certified Mill reports are required for rails and posts. Shop inspection is not required.

Metal Rail Posts to be set normal to curb grade.

Method of measurement for Metal Rails:
Unless otherwise stated, the length of Metal rails to be paid for shall be the continuous horizontal length measured from end to end of rail, excepting concrete posts but without deductions for spaces between rail sections.

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10 + 00 Y5

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PARAPET AND RAILING DETAILS