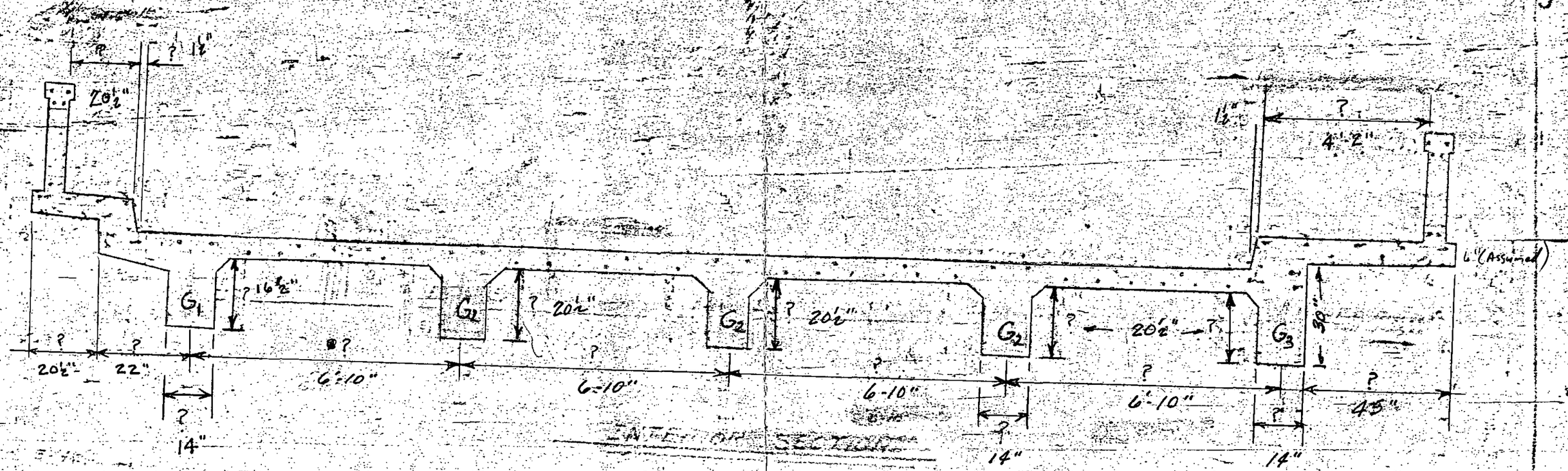
FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.
3	N.C.	[illegible]	[illegible]

F.A. Proj. F-[illegible]

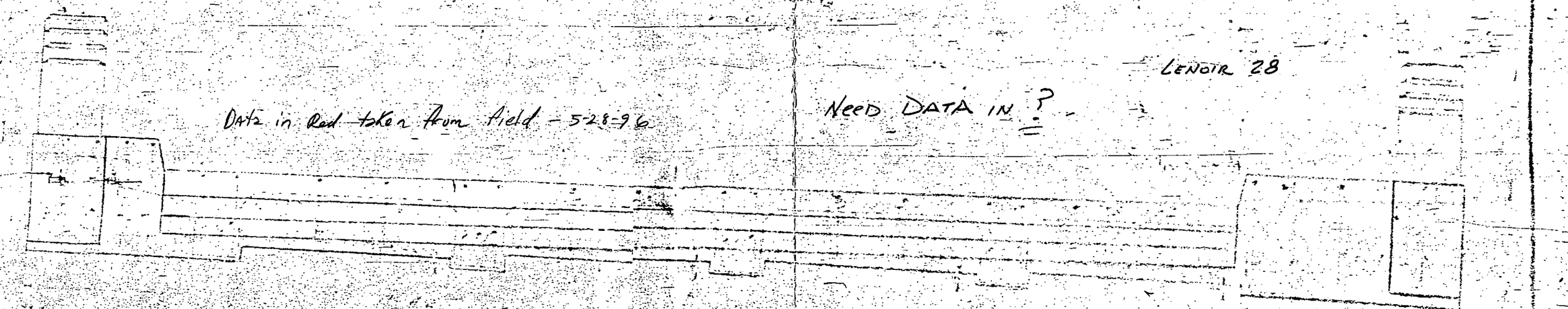


INTERIOR SECTION

LENOIR 28

Data in Red taken from field - 5-28-96

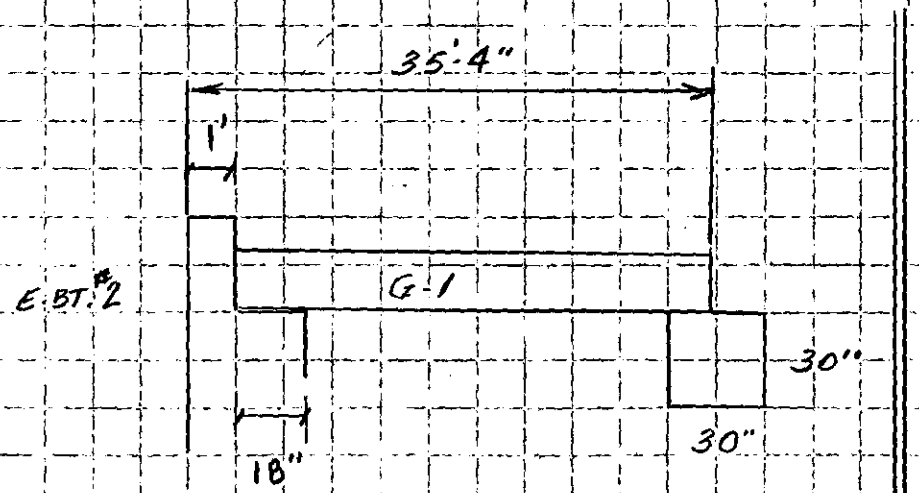
NEED DATA IN ?



END VIEW

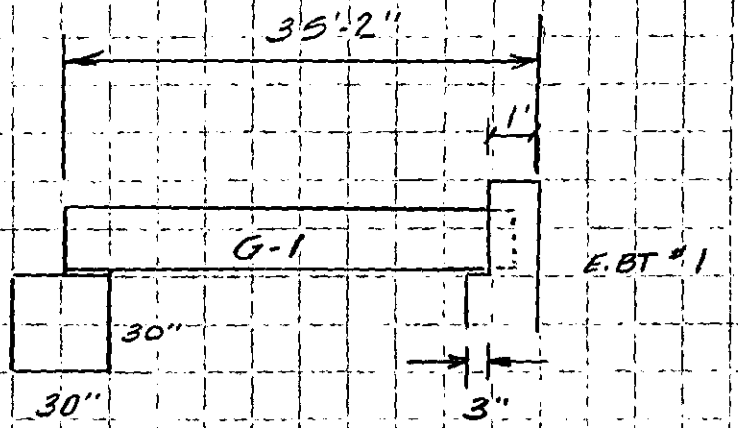
TOTAL BILL OF MATERIAL FOR [illegible]

#28 LENOIR



SPAN G

BENT 6

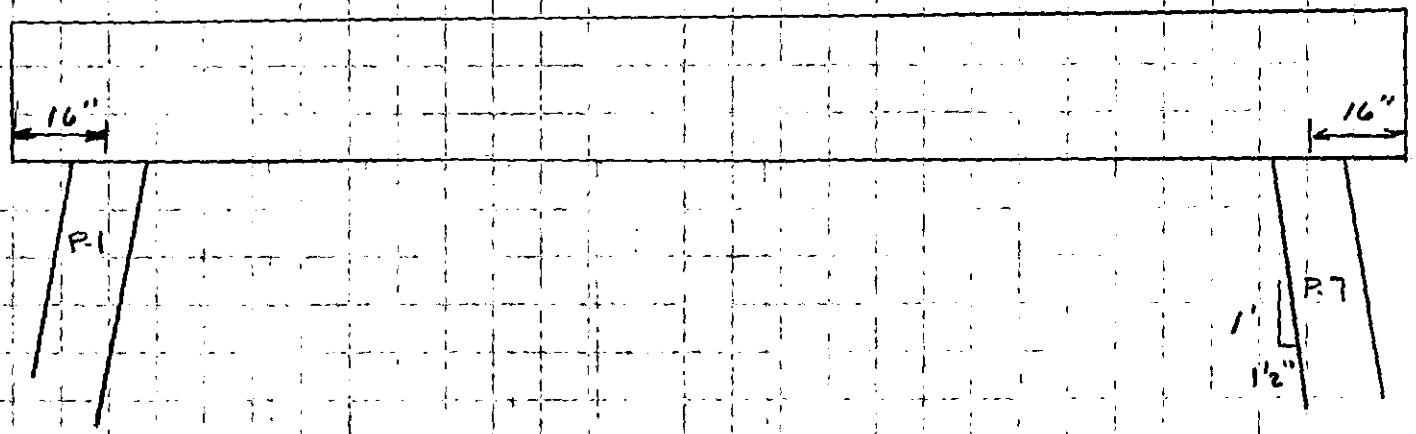


BENT 1

SPAN A

SPAN	LENGTHS	BRG. TO BRG.
A	35'-2"	33'-7"
B	35'-2"	32'-8"
C	35'-2"	32'-8"
D	35'-2"	32'-8"
E	35'-2"	32'-8"
F	35'-2"	32'-8"
G	35'-4"	33'-2"

#28 LENOIR



PILE SPACINGS

P-1 – P2	4'-9"
P-2 - P3	4'-11"
P3 - P4	4'-8½"
P4 - P5	4'-11½"
P5 - P6	4'-10"
P6 - P7	4'-9"

CAP 30" X 30" AT THE END

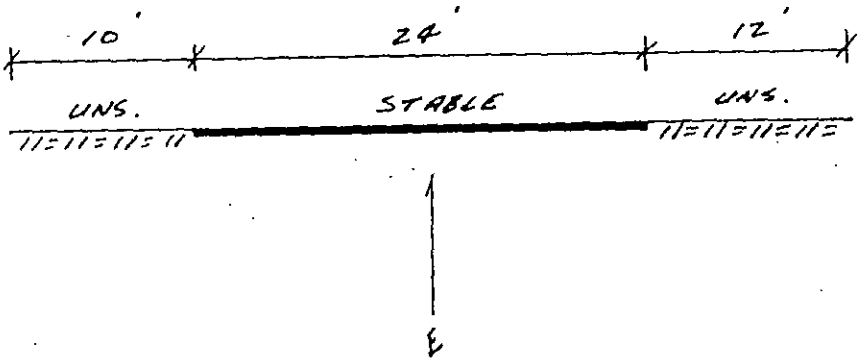
PILES 20" SQ.

MAINT. WORKSHEET 1-1-90

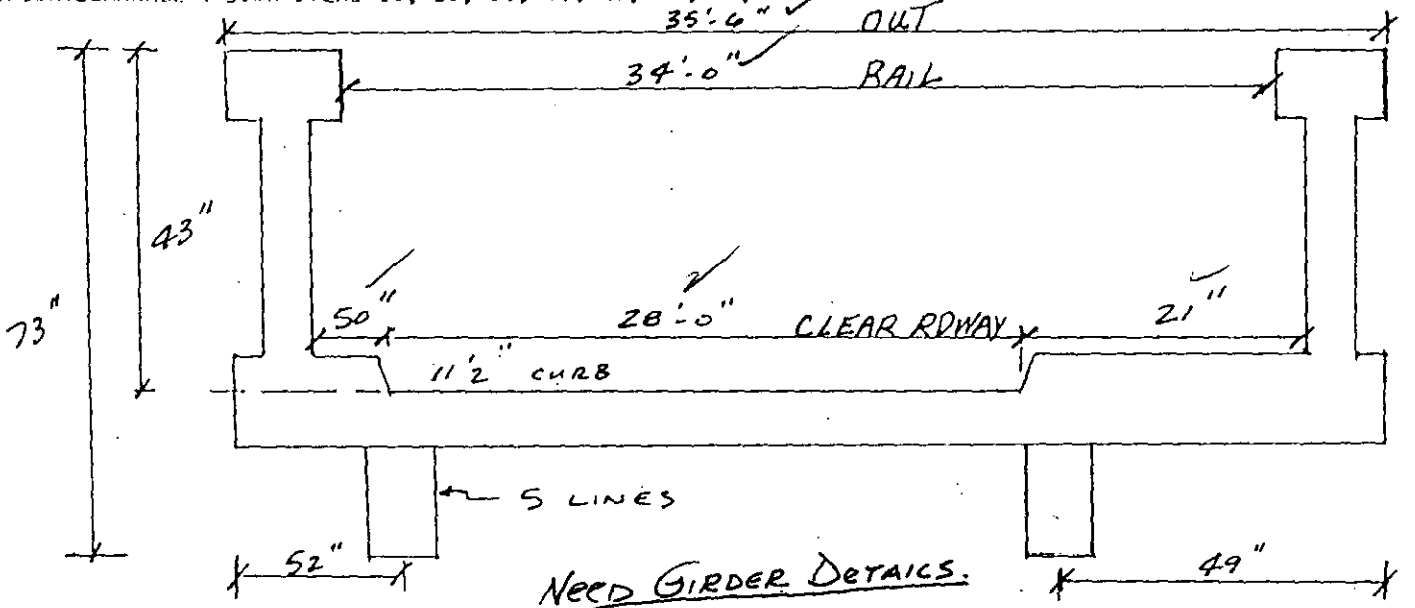
FIELD SKETCH FOR VERTICAL AND HORIZONTAL CLEARANCES

BRIDGE NO. 28 COUNTY LENOIR DATE 2-22-96 BY BGL

APPROACH ROADWAY WIDTH (SI&A ITEM 32)



UNDERCLEARANCE (SI&A ITEMS 10, 28, 38, 39, 40, 47, 54, 55 & 56)



Need Girder Details.

No Spacing on Plans.

SPAN	LENGTH	BRG. TO BRG.
A - G	35'-0" ✓	SEE PLANS
	245'-0"	Can not Read Plans. Measure

FED. ROAD DIST. NO.	STATE	STATE PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	N.C.	2627	1952	S-1	S-40
FA Proj. F-250(8)					

INDEX OF SHEETS

Title Sheet S-1
Structure Plans S-2 thru S-40

STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION

PLAN AND PROFILE OF PROPOSED STATE HIGHWAY

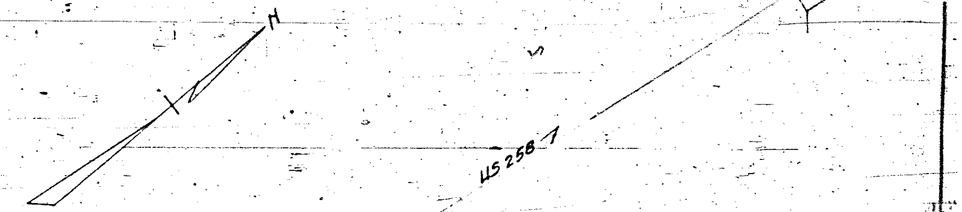
LENOIR COUNTY

Structures on U.S. 258 between the intersection of U.S. 258 and U.S. 70 and Kinston.

CONVENTIONAL SIGNS

- County Line
- Township Line
- City or Town Line
- Right of Way Line
- Survey Line
- Property Line
- Wire Fence
- Board Fence
- Present Traveled Road
- Railroad
- Grade Elevation — DATUM SEA
- Ground Elevation — DATUM MSL
- Pipe Culvert
- Box Culvert
- Woods
- Telephone or Telegraph Pole
- Tower Pole and Line
- Power Pole

SHIPPING POINT
KINSTON N.C.



Length structures FA Proj. F-250(8) = 0.154 mi.

Right of way for this Project { Station 1306+87.75 to Station 1322+00 = 120 ft.
Station 1322+00 to Station 1335+04.5 = 100 ft.

Prepared in Office of
STATE HIGHWAY AND PUBLIC WORKS COMMISSION
RALEIGH, N. C.

Surveyed by: C. R. E.
Plans Prepared by: R. S. H.
Date:

1946 State Standard Specifications,
Approved by Bureau Control,
July 11, 1947

APPROVED

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

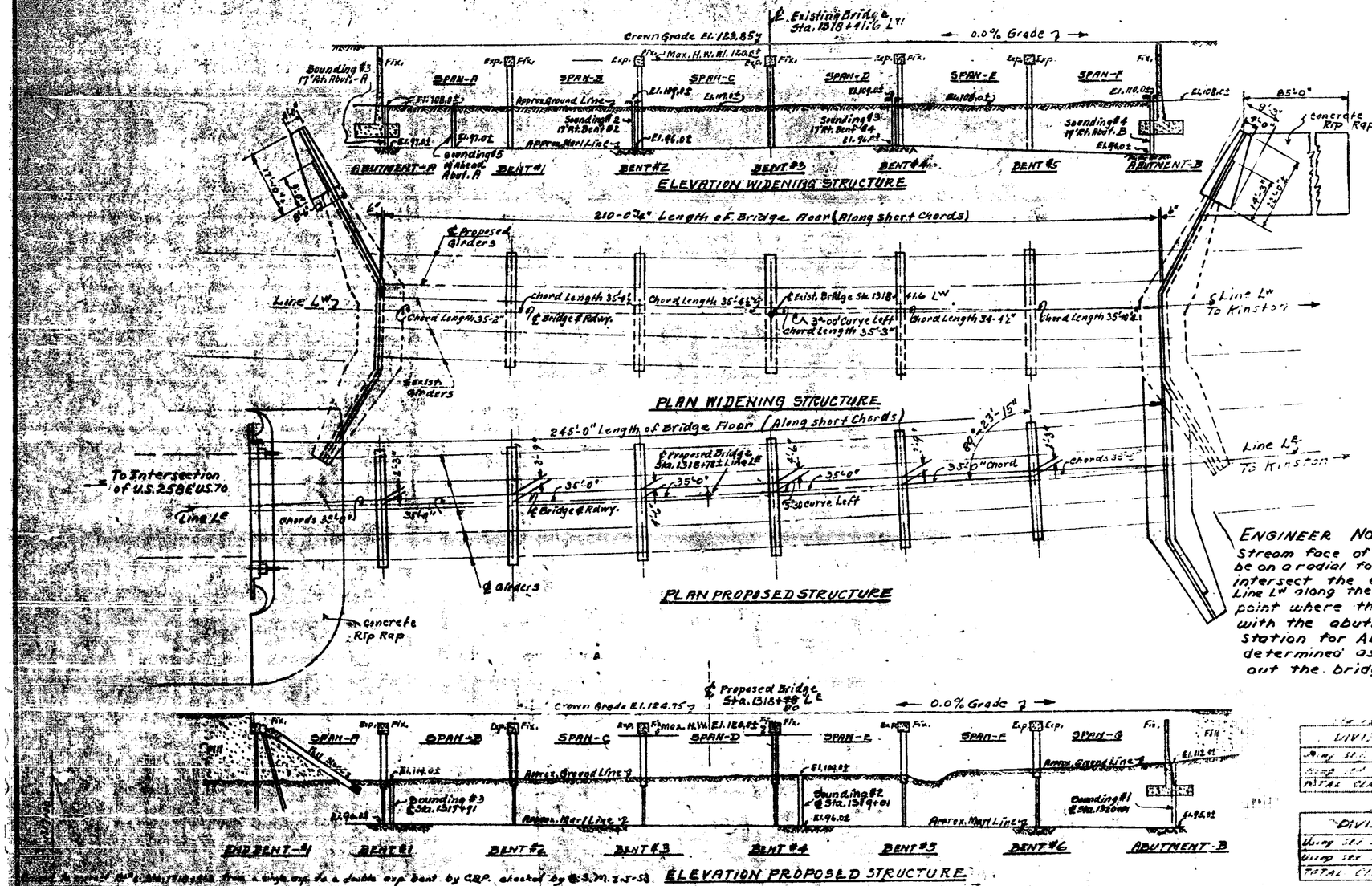
RECOMMENDED FOR APPROVAL:

DISTRICT ENGINEER DATE

APPROVED:

DIVISION ENGINEER DATE

FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
3	N.C.	2627	5	10
FA Proj. F-250(8)				



DESIGN DATA

Live Loads: Assumed Live Load = H15-S12-44
Reinforcing Steel in Tension: 20,000 Lbs. per sq. in.

Piles: Piles for Abutments & End Bent #1 units shall be driven to a minimum bearing capacity of 30 tons each.

Concrete: All concrete shall be air-entraining, see Special Provisions.

End Bent Piles: End Bent Piles shall be driven through the roadway fill.

Traffic: Traffic shall be maintained over existing structure (See Special Provisions).

For other "Design Data and General Notes" see Sheet #2.

The Contractor will be required to drive 2 test piles in the bridge at Sta. 1318+78 Line L^{E}. One 40' long test pile shall be driven at the upstream end of Bent No. 1 and Bent No. 6. Pile lengths of the bridge at Sta. 1318+41.6 Line L^{W} will also be determined from these test piles. Test piles will be paid for as Steel Piles. See Specifications.

Traffic: The bridge on Line L^{E} shall be constructed as the first part of work on the project. After its completion, traffic will be turned over this bridge. See Special Prov.

For surface finish requirements see Special Prov.

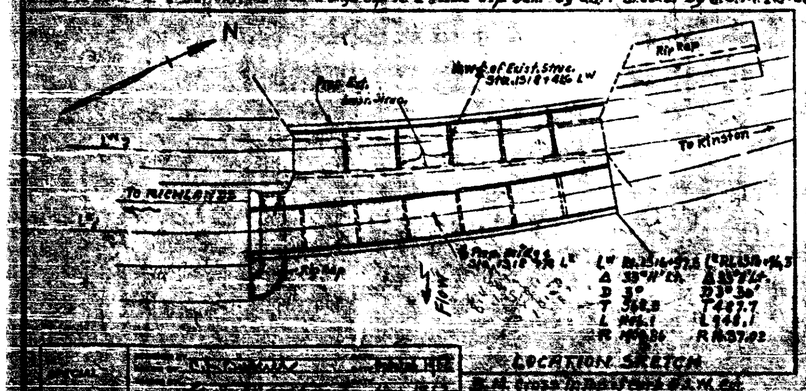
Excavation for pile encasement see Sheet #3.

ENGINEER NOTE:
Stream face of Abutment 'B' Line L^{E} shall be on a radial for 3°-30' curve and shall intersect the existing Abutment B on Line L^{W} along the stream face and at the point where the wing makes a 30° angle with the abutment. From this, the station for Abutment B shall be determined as the basis for staking out the bridge on Line L^{E}.

Built according to plans except as noted

DIVISION OF CLASS A CONCRETE	
Using Std. Size No. 4 Coarse Aggregate	31.5 Cu Yds
Using Std. Size No. 3 Coarse Aggregate	257.3 Cu Yds
TOTAL CLASS A CONCRETE	278.8 Cu Yds

DIVISION OF CLASS A CONCRETE	
Using Std. Size No. 4 Coarse Aggregate	24.2 Cu Yds
Using Std. Size No. 3 Coarse Aggregate	345.4 Cu Yds
TOTAL CLASS A CONCRETE	369.6 Cu Yds



TOTAL BILL OF MATERIAL FOR BRIDGE AT STA. 1318+41.6 L^{W}

For additional Concrete see Sheet No. 76	Class "A" Concrete Cu. Yds.	Reinforcing Steel Lbs.	Steel Piles 12" H BP 53# No.	Steel Piles 12" H BP 53# Lin. Ft.	Plates & Bolts Lbs.	Wearing Surface Tons	Method "A" Water Proof Sq. Yds.	Unclassified Struc. Excav. Cu. Yds.	Conc. Rip Rap Sq. Yds.
Span A	32.2	7063	—	—	451	13			
Span B	28.1	6106	—	—	—	12			
Span C	29.6	6246	—	—	—	11			
Span D	30.0	6347	—	—	—	10			
Span E	29.1	6251	—	—	—	10			
Span F	29.0	7907	—	—	—	10			
Abutment A	22.3	1786	5	140	—	—	40	40	—
Bent #1	6.2	621	3	105	—	—			
Bent #2	7.1	784	3	105	—	—			
Bent #3	7.2	886	3	105	—	—			
Bent #4	7.2	786	3	105	—	—			
Bent #5	7.2	786	3	105	—	—		5.5	
Abutment B	20.3	2196	7	100	40	—	9	30	200
Approach Work	1.4	25	—	—	—	—		—	—
TOTAL	369.6	121436	85	2485	1513	66	49	90	200

Steel Piling estimated & computed by the Kin Quay Contractor.

111.8 221.7

TOTAL BILL OF MATERIAL FOR BRIDGE AT STA. 1318+78.2 L^{E}

	Class "A" Concrete Cu. Yds.	Reinforcing Steel Lbs.	Steel Piles 12" H BP 53# No.	Steel Piles 12" H BP 53# Lin. Ft.	Plates & Bolts Lbs.	Conc. Rip Rap Sq. Yds.	Method "A" Water Proof Sq. Yds.	Unclassified Struc. Excav. Cu. Yds.
Superstructure	327.0	99730	—	—	1513	—		
End Bent #1	12.7	2270	7	245	—	260		
Bent #1	12.4	1507	7	245	—	—		
Bent #2	12.4	1507	7	245	—	—		
Bent #3	12.4	1507	7	245	—	—		
Bent #4	12.4	1507	7	245	—	—		
Bent #5	12.4	1507	7	245	—	—		
Bent #6	12.4	1427	7	245	—	—		
Abutment B	180.5	12689	36	726	—	—	24	200
Approach Work	5.0	187	—	—	—	—	—	—
TOTAL	569.6	121436	85	2485	1513	260	24	200

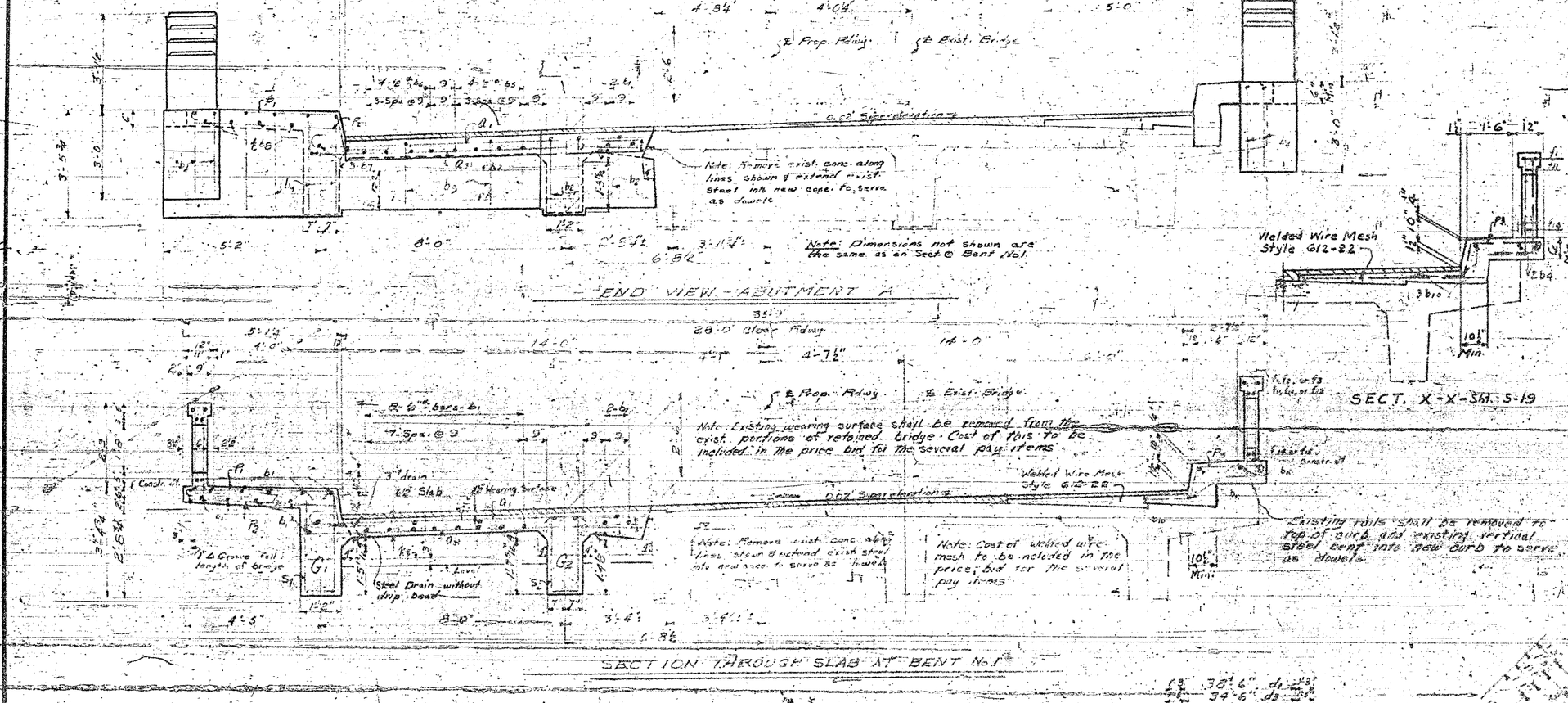
Revised to change pipeline for Approach Curbs. by DWH & LMC. 3/22/50
Revised to show 6 inches of Class 'A' Concrete and to correct Conc. quantities for Bent #6 on Curve of Line L^{E} by C.B.P. & S.M. 2-3-53
Revised to show 12" H.P. 53# Steel Piles in lieu of 12" H.P. 74# Steel Piles by C.B.P. & S.M. 2-3-53
Revised for relocation of ℄ Bridge. S.M. 2-10-53 & By C.B.P.

PROJECT NO. 2627
LENOIR COUNTY
STATION: 1318+41.6 L^{W} 1318+78.2 L^{E}

STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION
GENERAL DRAWING FOR BRIDGES OVER NEUSE RIVER ON PROJECT BETWEEN RICHLANDS AND KINSTON
OCTOBER 1949

[illegible]
[illegible]

FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
3	N. C.	2627	5-2A	40
FA Proj. F-250(8)				



BILL OF MATERIALS FOR STRUCTURE

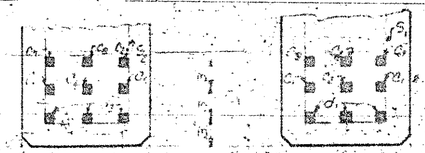
Bar	No.	Size	Type	Length	Weight	Bar	No.	Size	Type	Length	Weight
T_{22}	4	6	Str.	31'-0"	5	a_2	3	8		8"	73
T_{20}	12	6	Str.	31'-9"	30	a_3	1	8		8'-4"	5
T_{21}	2	6	Str.	6'-0"	2	a_4	1	8		8'-4"	5
T_{25}	2	6	Str.	31'-9"	11	a_5	1	6		5'-3"	3
T_{24}	1	6	6	5'-11"	3	a_6	1	8		2'-3"	2
T_{27}	1	6	9	5'-0"	3	a_7	30	8	6	11'-1"	347
T_{28}	1	6	6	2'-9"	1	a_{31}	9	6		1'-3"	7
T_{23}	7	6	9	6'-9"	10	a_{32}	1	6		2'-6"	2
						a_{33}	1	6	6	6'-4"	7
K_1	2	4	Str.	17'-6"	51	a_{34}	1	8	6	3'-3"	5
K_2	1	8	Str.	17'-6"	11	a_{35}	1	6	6	4'-3"	4
K_3	2	8	Str.	11'-3"	46	a_{36}	1	6	6	3'-2"	3
						a_{37}	1	8	6	2'-2"	2
P_1	79	8	2	7'-5"	391	a_{38}	30	6	6	11'-4"	355
P_2	19	6	Str.	4'-9"	60	b_1	31	5	6	4'-6"	364
P_3	18	6	2	4'-11"	59	b_2	3	5	6	20'-3"	47
						b_3	4	5	6	17'-2"	73
S_1	33	5	4	7'-6"	105						
S_2	41	5	5	5'-11"	142	c_1	3	12	10	41'-0"	27
S_3	2	5	3	3'-0"	03	c_2	6	5	7	1'-11"	26
						c_3	2	5	7	37'-4"	532
G_1	2	11	10	41'-0"	283						
G_1	1	11	10	39'-8"	137	d_1	14	6	6	4'-3"	40
G_2	2	11	10	34'-5"	234	d_2	32	6	6	3'-11"	380
G_1	2	13	10	37'-6"	358	e_1	1	5	Str.	5'-6"	12
G_1	1	13	10	36'-2"	172	e_2	1	5	Str.	5'-6"	15
G_2	2	13	10	32'-5"	344	e_3	1	5	Str.	5'-6"	6
G_2	1	13	10	29'-1"	138	f_1	9	5	Str.	4'-11"	46
						f_2	4	5	Str.	17'-3"	44
S_4	4	5	6	20'-6"	77	f_3	4	5	Str.	5'-3"	5
b_4	4	5	Str.	20'-0"	53	f_4	4	5	Str.	14'-11"	32
b_4	4	5	Str.	2'-3"	6	f_5	4	5	Str.	17'-8"	22
b_4	3	5	Str.	5'-9"	16	f_6	4	5	Str.	11'-3"	3
b_4	4	5	Str.	5'-2"	22	f_7	4	5	Str.	11'-3"	25
b_4	2	5	6	28'-6"	31	f_8	4	5	Str.	10'-2"	29
b_4	8	5	Str.	6'-5"	18						
						f_9	4	5	Str.	10'-2"	3
						f_{10}	4	5	Str.	2'-3"	6

Reinforcing Steel ..... Lbs.
Class "A" Concrete ..... Cu. Yds.
Welded Wire Fabric Style G12-22 ..... Sq. Yds.
Bearing Surface - Area ..... Sq. Ft.

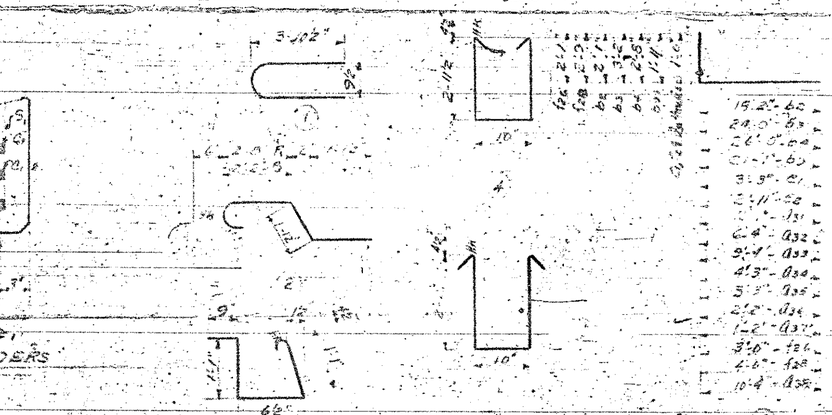
PROJECT NO. 2627
LENOIR COUNTY
STATION: 1515 ALONG L
SHEET No. 3 of 8

STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION
SUPERSTRUCTURE
SPAN A

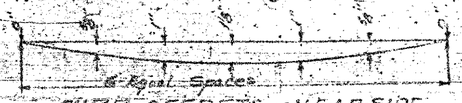
DESIGNED BY: JDK CHECKED:
DRAWN BY: JWR CHECKED:

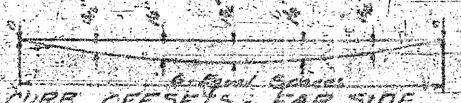


SECTION THROUGH GIRDERS



BAR TYPES


6 Equal Spaces
CURB OFFSETS - NEAR SIDE


6 Equal Spaces
CURB OFFSETS - FAR SIDE

Revised for relocation of ℄ Bridge (2-18-53) by C.B.R. & by G.S.M.

SPECIAL

DESIGNED BY: C. B. Richardson DATE:
DRAWN BY: DATE:
TRACED BY: DATE:
CHECKED BY: H. F. Rabenhorst DATE: Dec. 1952

FED. ROAD DIST. NO.	ST.	PROJECT NO.	SHEET NO.	TOTAL SHEETS
3	N. C.	2627	S 22	40

FAP Proj. F-250(3)

BILL OF MATERIAL FOR SPAN B

Bar	No.	Size	Detail	Length	Weight
a1	30	5/8" sq.	2	11'-9"	348
a2	30	5/8" sq.	5	12'-6"	375
a3	30	5/8" sq.	2	11'-5"	357
a4	29	5/8" sq.	3	11'-8"	353
b1	68	2" sq.	Str.	18'-5"	857
c1	2	1 3/8" o.	7	37'-3"	521
c2	1	1 3/8" o.	7	34'-3"	147
c3	2	1 3/8" o.	7	30'-6"	263
c4	1	1 3/8" o.	7	23'-6"	101
c5	1	1 3/8" o.	7	28'-5"	125
c6	2	1" o.	7	37'-2"	253
d1	3	1 1/4" o.	8	37'-5"	594
d2	8	3/4" sq.	1	8'-0"	96
d3	3	1 3/8" o.	8	36'-10"	476
K1	2	7/8" sq.	Str.	11'-6"	47
K2	2	7/8" sq.	Str.	12'-0"	49
e1	16	5/8" sq.	3	4'-5"	45
e2	216	5/8" sq.	3	3'-11"	306
f1	4	2" sq.	Str.	14'-5"	58
f2	4	2" sq.	Str.	14'-7"	59
f3	4	2" sq.	Str.	11'-9"	5
f6	4	2" sq.	Str.	18'-7"	22
f7	4	3/4" sq.	Str.	14'-5"	22
f10	4	2" sq.	Str.	11'-9"	5
f11	4	3/4" sq.	Str.	16'-0"	24
f12	4	3/4" sq.	Str.	16'-2"	24
P1	70	2" sq.	6	7'-5"	347
P2	18	2" sq.	Str.	4'-9"	57
P3	18	2" sq.	6	4'-11"	59
S1	31	2" sq.	4	7'-6"	155
S2	39	2" sq.	5	5'-11"	154
S3	18	2" sq.	9	3'-10"	46

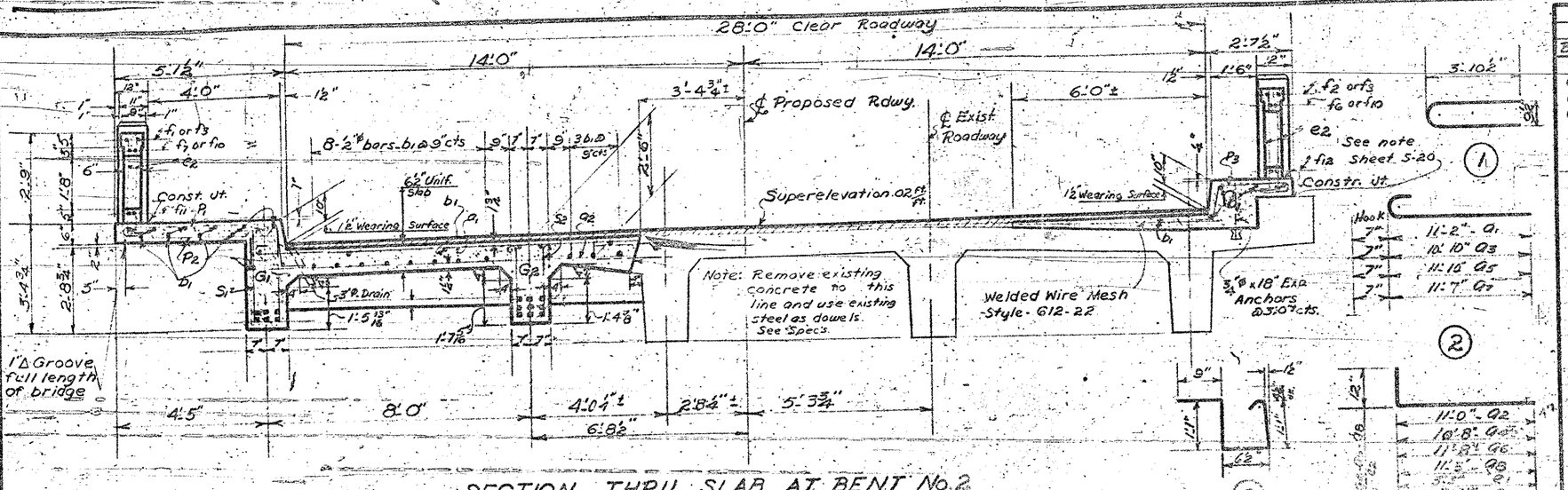
Reinforcing Steel. Lbs. 6106 #
Class 'A' Concrete - Cu Yds. 28.1
Welded Wire Mesh. 72" Wide. 525 Lin Ft. 1266 Sq Ft
Wearing Surface. 12 Tons

BILL OF MATERIAL FOR SPAN C

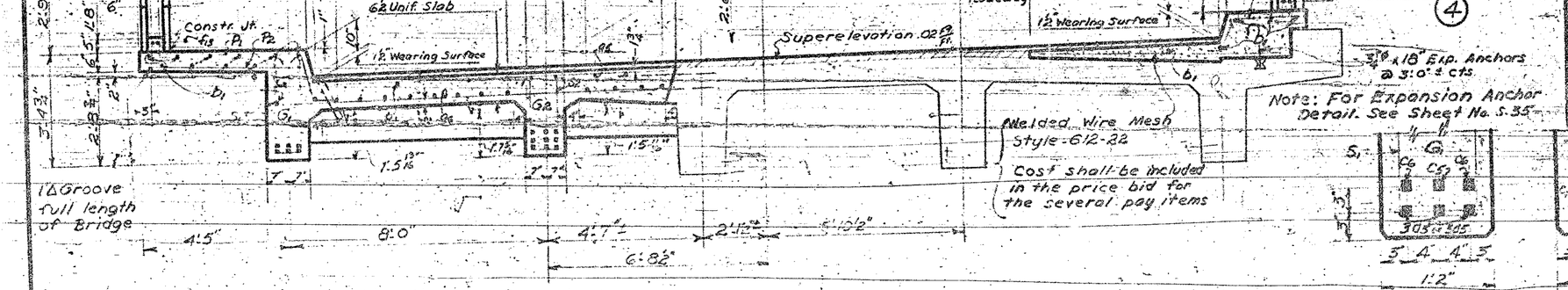
Bar	No.	Size	Detail	Length	Weight
a5	30	5/8" sq.	2	12'-5"	380
a6	30	5/8" sq.	3	12'-8"	396
a7	30	5/8" sq.	2	12'-2"	381
a8	29	5/8" sq.	3	12'-5"	376
b1	70	2" sq.	Str.	18'-5"	841
c1	2	1 3/8" o.	7	37'-3"	521
c2	1	1 3/8" o.	7	34'-3"	147
c3	2	1 3/8" o.	7	30'-6"	263
c4	1	1 3/8" o.	7	23'-6"	101
c5	2	1 3/8" o.	7	28'-5"	125
c6	2	1" o.	7	37'-2"	253
d2	8	3/4" sq.	1	8'-0"	96
d4	3	1 1/4" o.	8	37'-8"	600
d5	3	1 3/8" o.	8	37'-2"	480
e1	16	5/8" sq.	3	4'-5"	45
e2	216	5/8" sq.	3	3'-11"	318
f3	4	2" sq.	Str.	11'-9"	5
f4	4	2" sq.	Str.	14'-8"	33
f5	4	2" sq.	Str.	14'-5"	38
f8	4	3/4" sq.	Str.	14'-8"	22
f9	4	3/4" sq.	Str.	14'-5"	22
f10	4	2" sq.	Str.	11'-9"	5
f13	4	3/4" sq.	Str.	16'-2"	24
f14	4	3/4" sq.	Str.	16'-5"	25
K2	2	7/8" sq.	Str.	12'-0"	49
K3	2	7/8" sq.	Str.	12'-7"	51
P1	70	2" sq.	6	7'-5"	347
P2	18	2" sq.	Str.	4'-9"	57
P3	18	2" sq.	6	4'-11"	59
S1	31	2" sq.	4	7'-6"	155
S2	39	2" sq.	5	5'-11"	154
S3	18	2" sq.	9	3'-10"	46

Reinforcing Steel. Lbs. 6246
Class 'A' Concrete. Cu Yds 28.9
Welded Wire Mesh. 72" Wide. 525 Lin Ft. 1266 Sq Ft
Wearing Surface. 11 Tons

SECTION THRU SLAB AT BENT No.2

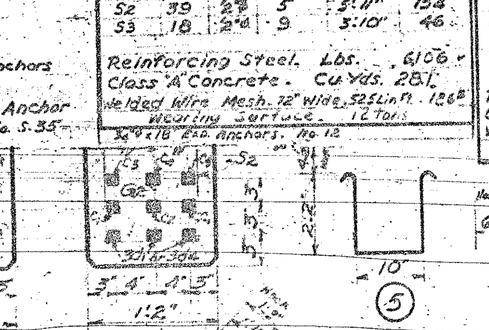


SECTION THRU SLAB AT BENT No.3



Note: Care shall be taken in placing slab steel in correct position.

SECTION THRU GIRDER G1-G2



CURB OFFSETS FOR N.S. & F.S. SPAN 'B' & 'C'

HALF SECTION GIRDER G2 - Span B or C

HALF SECTION GIRDER G1 - Span B or C

Revised for relocation of ℄ bridge (2-18-53) by C.B.F.V by G.S.M.

SPECIAL	DESIGNED BY	DATE
	DRAWN BY C.W. Thomas	DATE 1-8-52
	TRACED BY	DATE
	CHECKED BY A.K. Bennett	DATE Nov. 1952

PROJECT NO. 2627

I-440 R. COUNTY

STATION: 13+18 & 4+16 ℄

SPAN B & C

SHEET 1 OF 8

STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION
DIVISION

SUPERSTRUCTURE

OCTOBER 2, 1952

J.A. Lee, Jr. ENGINEER OF BRIDGES

W.H. Rogers, Jr. STATE BRIDGE ENGINEER

FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
3	N. C.	2627	S-21	10

FA Proj. F-150(8)

SECTION THRU SLAB AT BENT No. 4

Note: For "Expansion Anchor Detail" See Sheet S-35.

SECTION THRU SLAB AT BENT No. 5

HALF SECTION
GIRDER G2 SPAN "D" or "E"

HALF SECTION
GIRDER G1 SPAN "D" & "E"

GIRDER G2 GIRDER G1
SECTION THRU GIRDERS

CURB OFFSETS
NEAR SIDE & FAR SIDE OF SPANS D & E

Weight welded wire mesh style 612-22 .59 lbs per sq. ft.

BAR BENDING DETAILS
ALL DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL FOR SPAN "E"

Bar	No.	Size	Type	Length	Weight
a5	28	⅝"φ	1	13'-5"	392
a6	27	⅝"φ	2	13'-8"	385
a7	28	⅝"φ	1	13'-9"	402
a8	28	⅝"φ	2	14'-0"	409
b3	46	⅝"φ	str.	17'-7"	778
b4	10	⅝"φ	str.	17'-10"	[illegible]
c1	2	1"φ	3	36'-8"	249
c2	1	1⅛"φ	3	25'-6"	163
c4	2	1⅛"φ	3	36'-3"	310
c6	1	1⅛"φ	3	34'-3"	147
c7	2	1⅛"φ	3	[illegible]	263
c8	1	[illegible]	[illegible]	23'-6"	101
d1	3	1⅜"φ	5	[illegible]	[illegible]
d2	8	¾"φ	4	8'-0"	96
d4	3	1⅜"φ	5	36'-5"	468
e1	16	⅝"φ	2	4'-3"	45
e2	200	⅝"φ	2	13'-10"	45
f2	2	⅝"φ	str.	14'-8"	19
f6	2	⅝"φ	str.	14'-10"	19
f4	4	⅝"φ	str.	1'-9"	[illegible]
f5	2	⅝"φ	str.	14'-4"	11
f7	2	⅝"φ	str.	14'-0"	13
f8	2	⅝"φ	str.	14'-8"	[illegible]
f10	2	⅝"φ	str.	12'-10"	[illegible]
f12	2	⅝"φ	str.	1'-9"	5
f14	4	⅝"φ	str.	14'-4"	11
f15	2	⅝"φ	str.	14'-0"	11
f17	2	⅝"φ	str.	15'-10"	24
f20	4	⅝"φ	str.	15'-10"	24
f21	4	⅝"φ	str.	15'-8"	24
k4	6	⅝"φ	str.	13'-9"	56
p1	68	½"φ	6	7'-5"	337
p2	17	½"φ	str.	2'-9"	26
p3	17	½"φ	6	4'-11"	56
s1	29	½"φ	7	7'-6"	145
s2	37	½"φ	8	5'-11"	146
s3	27	½"φ	9	3'-10"	56

Reinforcing Steel Lbs. 6651
Class "A" Concrete Cu. Yds. 31.1
Bearing Plates Tons 10
Welded Wire Mesh (Sq. Ft.) Lbs. 185
¾"x18" Expansion Anchors No. 12

BILL OF MATERIAL FOR SPAN "D"

Bar	No.	Size	Type	Length	Weight
a1	30	⅝"φ	1	13'-8"	412
a2	[illegible]	⅝"φ	2	13'-5"	406
a3	30	⅝"φ	1	16'-11"	404
a4	30	⅝"φ	2	13'-6"	412
b1	62	⅝"φ	str.	15'-0"	745
b2	10	⅝"φ	str.	15'-5"	162
c1	2	1"φ	3	36'-8"	249
c2	1	1⅛"φ	3	25'-6"	323
c5	2	1⅛"φ	3	37'-3"	321
c6	1	1⅛"φ	3	34'-3"	147
c7	2	1"φ	3	30'-6"	263
c8	1	1⅛"φ	3	23'-6"	101
d2	8	¾"φ	4	8'-0"	96
d5	3	1⅜"φ	5	37'-2"	599
d6	3	1⅜"φ	5	37'-2"	400
e1	16	⅝"φ	2	[illegible]	45
e2	216	⅝"φ	2	[illegible]	318
f1	4	⅝"φ	str.	14'-0"	37
f2	2	⅝"φ	str.	13'-10"	19
f3	2	⅝"φ	str.	11'-11"	20
f4	4	⅝"φ	str.	1'-9"	15
f11	4	⅝"φ	str.	14'-0"	64
f12	2	⅝"φ	str.	13'-10"	[illegible]
f13	2	⅝"φ	str.	14'-11"	[illegible]
f14	4	⅝"φ	str.	1'-9"	[illegible]
f15	4	⅝"φ	str.	16'-8"	44
f19	4	⅝"φ	str.	16'-0"	44
k1	2	⅝"φ	str.	18'-4"	[illegible]
k2	[illegible]	⅝"φ	str.	13'-8"	28
p1	70	½"φ	6	[illegible]	347
p2	13	½"φ	str.	4'-9"	47
p3	18	½"φ	6	[illegible]	44
s1	31	½"φ	7	7'-6"	153
s2	41	½"φ	8	5'-11"	163
s3	17	½"φ	9	3'-10"	89

Reinforcing Steel Lbs. 8347
Class "A" Concrete Cu. Yds. 31.0
Bearing Plates Tons 10
Welded Wire Mesh (581 sq ft) Lbs. 170
¾"x18" Expansion Anchors No. 12

PROJECT No. 2627
LENOIR COUNTY
STATION: 12+18±.46 Line "L"
SHEET 1 of 2

STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION

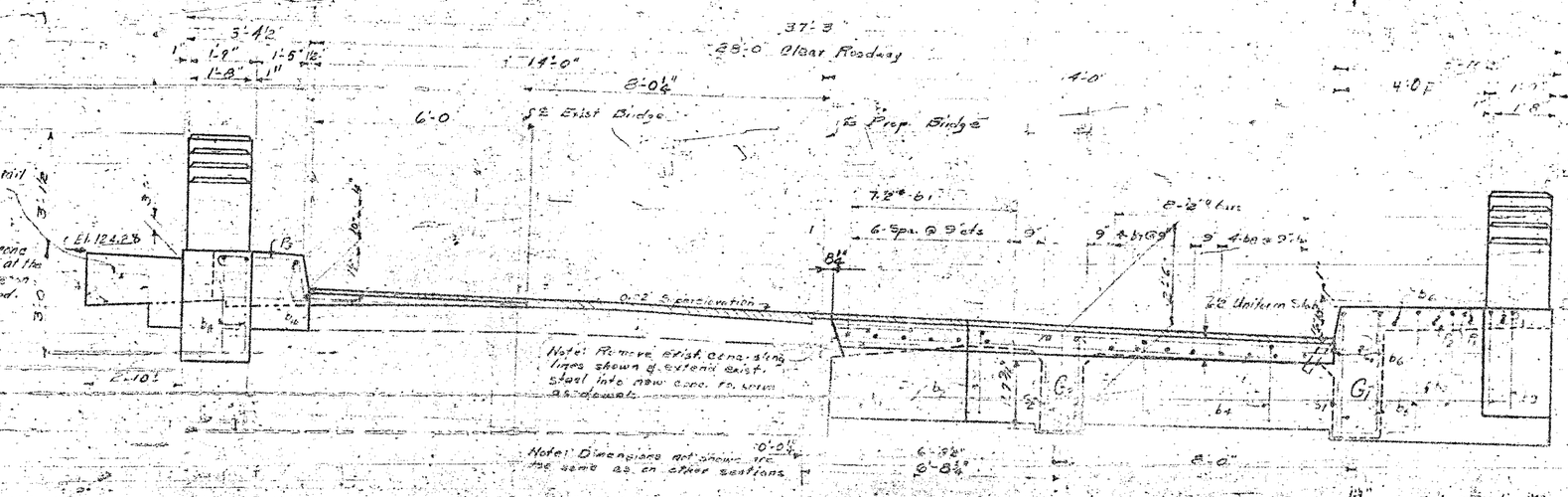
SUPERSTRUCTURE
SPAN "D" & "E"

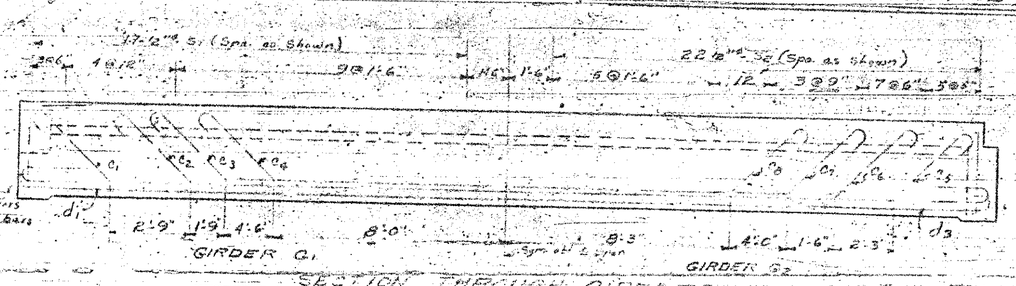
Nov. 1952

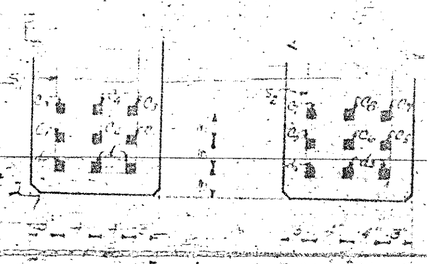
SPECIAL	DESIGNED BY	DATE Oct 1952
	DRAWN BY C.E. [illegible]	
	TRACED BY	DATE
	CHECKED BY A.L. Bennett	DATE Nov 1952

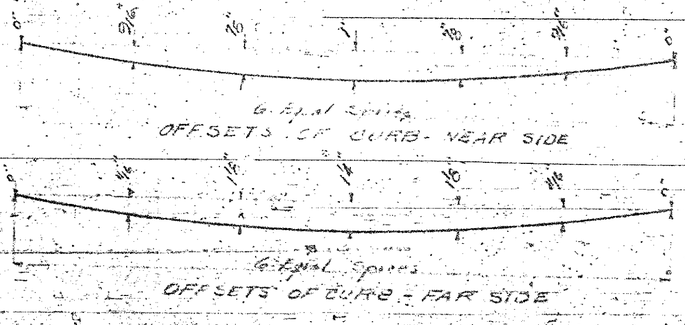
Revised for relocation of ℄ bridge (2-15-53) by C.B.P. & by G.S.M.

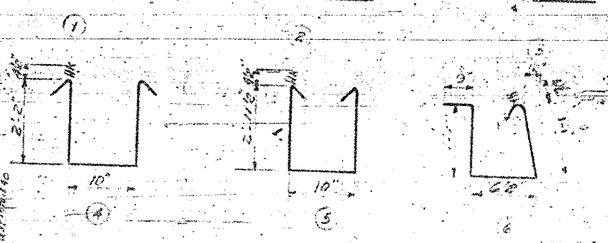
FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
9	N. C.	2627	5A	10
FA Proj.	F-250(8)			











BILL OF MATERIAL FOR SPAN B

Bar No.	No.	Size	Type	Length	Bar No.	No.	Size	Type	Length	Wt.
1	80	6"	8	14'1"	441					
2	1	7/8"	8	7'6"	10					
3	1	1"	8	6'6"	9					
4	1	1"	8	7'6"	8					
5	1	1"	8	1'2"	7					
6	1	1"	8	7'6"	6					
7	1	1"	8	4'7"	5					
8	1	1"	8	2'7"	4					
9	1	1"	8	2'7"	3					
10	31	5/8"	8	4'6"	140					
11	3	5/8"	7	14'4"	45					
12	1	5/8"	7	7'1"	9					
13	1	5/8"	7	7'7"	9					
14	1	5/8"	7	7'6"	8					
15	1	5/8"	7	7'6"	7					
16	1	5/8"	7	4'6"	5					
17	1	5/8"	7	5'6"	4					
18	50	5/8"	7	14'9"	462					
b	41	5/8"	7	5'6"	142					
b2	2	5/8"	7	5'6"	27					
b3	2	5/8"	7	5'6"	29					
b4	2	5/8"	7	24'11"	93					
b5	1	5/8"	7	24'7"	46					
b6	1	5/8"	7	5'3"	10					
b7	1	5/8"	7	21'6"	57					
b8	1	5/8"	7	23'0"	27					
b9	2	5/8"	7	28'9"	98					
b10	1	5/8"	7	18'9"	100					
b11	1	5/8"	7	35'3"	231					
c	1	1"		44'-0"	300					
c1	1	1"		19'-11"	131					
c2	1	1"		35'-3"	234					
d	1	1"	10	21'-6"	86					
d1	2	1"	10	38'-6"	407					
d2	1	1"	10	16'-0"	192					
d3	1	1"	10	30'-0"	346					
d4	1	1"	10	21'-3"	130					
e	1	1"	3	11'-0"	96					

3'-3"	- e_1	17'-6"	a_1
2'-11"	- e_2	17'-1"	a_2
13'-4"	- a_{31}	12'-6"	a_3
9'-7"	- a_{32}	8'-11"	a_4
8'-7"	- a_{33}	8'-1"	a_5
7'-6"	- a_{34}	7'-1"	a_6
6'-6"	- a_{35}	6'-1"	a_7
5'-6"	- a_{36}	5'-0"	a_8
4'-6"	- a_{37}	4'-0"	a_9
3'-6"	- a_{38}	3'-0"	a_{10}
2'-6"	- a_{39}	12'-0"	a_{11}
18'-6"	- b_2	13'-11"	a_{12}
9'-3"	- b_3		
23'-0"	- b_4		
11'-6"	- b_5		
20'-6"	- b_6		
3'-0"	- c_1		
13'-9"	d_{12}		
11'-6"	d_{13}		
23'-2"	b_{12}		

PROJECT NO. 2627
COUNTY
STATION:

STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION
SUBSTRUCTURE
SPAN B

SPECIAL	DESIGNED BY		DATE	
	DRAWN BY	D.C. Eaton	DATE	Jan 1956
	CHECKED BY	A.L. Bennett	DATE	Jan 1956

Revised for relocation of c bridge (2-10-56) by D.B.P. & G.S.M.

FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
3	N. C.	2627	22	1
FA Proj F-2508				

ELEVATION
WINGS SWUNG PARALLEL

PLAN

PART PLAN

SECTION A-A

SECT. X-X

SECT. B-B

NOTE: Alternate "A" Waterproofing to be placed at horizontal and vertical joint between Abutment and Superstructure and horizontal construction joint above Top of footing. The strips of waterproofing shall be 2'-0" wide and placed symmetrical about the joint. See Special Asphalt for mop coat shall conform to the requirements for Type "A" Asphalt of A.A.S.H.O. Specifications, M-115.

NOTE: For Details of Exp. Anchors. See Sheet No. S-28.

NOTE. For details of pile cup and spiral see Sheet No. S-10.
PILES: Pile shall be driven to a minimum bearing capacity of 30 Tons.

Revised for relocation of ℄ of Bridge, GSM-2-18-53. /by CBP.
Revised to show location of Exp. Anch. GSM. ckd by L.M.T. 12-16-52

SPECIAL
DESIGNED BY: G.S. Marchand DATE: Oct. 52
DRAWN BY:
TRACED BY: G.S. Marchand DATE: Oct. 52
CHECKED BY: P.G. Wilson DATE: Nov. 52

BILL OF MATERIAL

BAR	No.	SIZE	TYPE	LENGTH	WEIGHT	BAR	No.	SIZE	TYPE	LENGTH	WEIGHT
d1	4	1" ℄	Str.	5'-0"	32	V8	2	1" ℄	Str.	6'-3"	13
						V9	2	1" ℄	Str.	7'-0"	15
n1	3	1" ℄	Str.	17'-6	35	V10	4	1" ℄	Str.	7'-9"	32
n2	2	1" ℄	Str.	15'-0	20	V11	2	1" ℄	Str.	3'-0"	4
n3	2	1" ℄	Str.	12'-3"	16	V12	2	1" ℄	Str.	5'-6	7
h4	7	1" ℄	Str.	9'-6	44	V13	2	1" ℄	Str.	7'-9"	10
h5	3	1" ℄	Str.	18'-3"	37	V14	2	1" ℄	Str.	10'-0"	13
h6	2	1" ℄	Str.	6'-6	9	V15	1	1" ℄	Str.	12'-6"	8
h7	5	1" ℄	1	28'-0	210	V16	4	1" ℄	Str.	5'-6	15
h8	3	1" ℄	Str.	11'-0"	83	V17	3	1" ℄	Str.	7'-9"	16
h9	6	1" ℄	1	27'-6	248	V18	4	1" ℄	Str.	4'-5"	13
h10	1	1" ℄	Str.	8'-8	6	V19	8	1" ℄	Str.	3'-6"	19
h31	4	1" ℄	1	20'-9"	125	V31	14	1" ℄	Str.	2'-6"	23
h32	2	1" ℄	Str.	11'-0"	15	V32	6	1" ℄	Str.	2'-3"	9
h33	3	1" ℄	Str.	9'-6	19	V33	6	1" ℄	Str.	2'-0"	8
						n1	6	1" ℄	2	6'-4	25
t1	6	1" ℄	Str.	17'-6	70	n2	6	1" ℄	2	6'-8	42
t2	10	1" ℄	Str.	8'-6	57	n3	6	1" ℄	2	7'-4	66
t3	3	1" ℄	Str.	6'-0	12	n4	6	1" ℄	2	7'-8	94
t4	3	1" ℄	Str.	4'-0	8	Z1	6	1" ℄	2	4'-0	16
						Z2	6	1" ℄	3	5'-3"	21
V1	2	1" ℄	Str.	3'-0	4	Z3	6	1" ℄	3	6'-1"	41
V2	2	1" ℄	Str.	4'-0	5	Z4	6	1" ℄	3	7'-10"	71
V3	3	1" ℄	Str.	5'-3"	11	Reinforcing Steel - Lbs.					1756
V4	3	1" ℄	Str.	6'-6	13	Class "A" Concrete Cu.Yds.					22.3
V5	3	1" ℄	Str.	8'-3"	24	Steel Piles - 12 H 53 - No. 70 Ft.					140
V6	3	1" ℄	Str.	9'-9"	44	Exp. Anchors - ¾"x18" No.					17
V7	7	1" ℄	Str.	5'-6	26	Method A Waterproof. Sq.Yds.					10

PROJECT NO. 2627
LENOIR COUNTY
STATION: 1318+41.61 -L-
ABUTMENT "A"

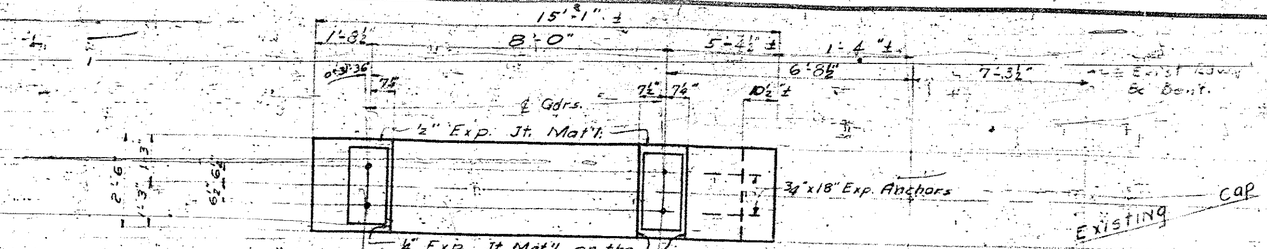
STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION
SUBSTRUCTURE
OCTOBER 1952

DESIGNED BY: J.A. Houston Jr.
CHECKED BY: W.H. Rogers Jr. DATE: 10-52

FED ROAD DIST NO	STATE	PROJECT NO	SHEET NO	TOTAL SHEETS
3	N.C.	2627	5	10

FA Proj "F-1501(8)"

PLAN OF BENT No. 5

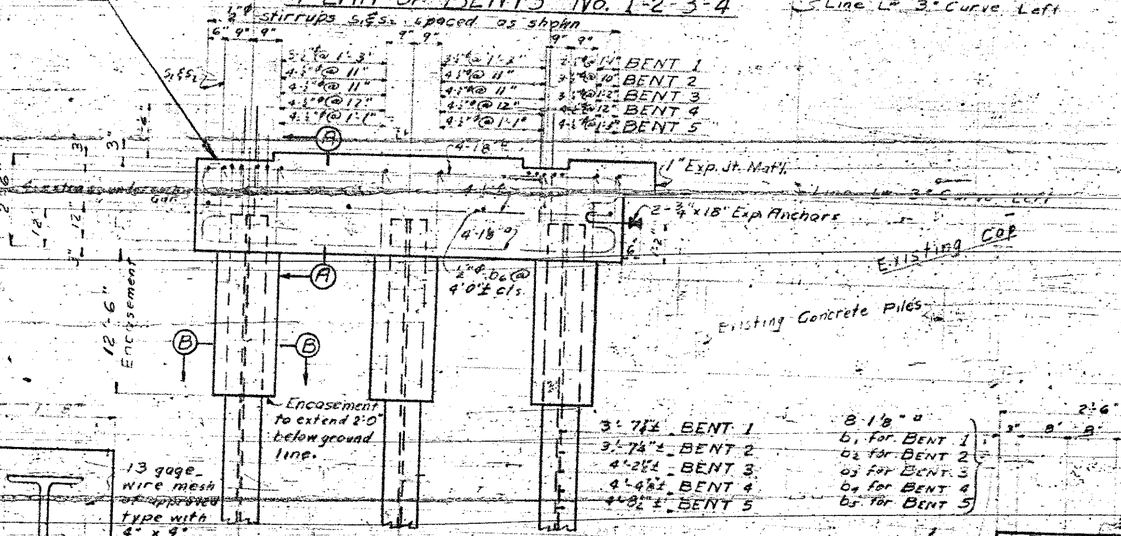


Line Lᵉ 3° Curve Left

BENT 1	12'-5¾" ±
BENT 2	12'-11¾" ±
BENT 3	13'-7" ±
BENT 4	14'-3½" ±

BENT 1	1'-9½"
BENT 2	1'-7"
BENT 3	1'-7"
BENT 4	1'-7½"

PLAN OF BENTS No. 1-2-3-4



4'-0"	4'-0"	6'-11¼"	BENT 1
4'-3"	4'-3"	6'-3½"	BENT 2
4'-3"	4'-3"	6'-4"	BENT 3
9'-6"	4'-6"	5'-10¾"	BENT 4
4'-9"	4'-9"	5'-5"	BENT 5

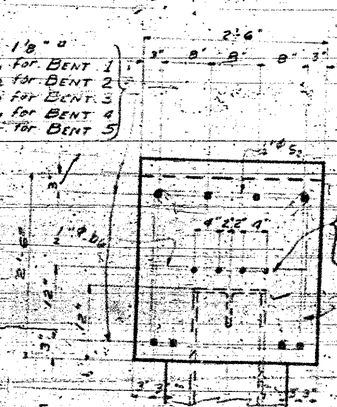
3'-7¼" ±	BENT 1
3'-7¾" ±	BENT 2
4'-2½" ±	BENT 3
4'-4½" ±	BENT 4
4'-8¾" ±	BENT 5

8-1⅛" ø
b₁ for BENT 1
b₂ for BENT 2
b₃ for BENT 3
b₄ for BENT 5

SECTION B-B

NOTE: No allowance will be made for wire mesh. The entire cost of same shall be included in the "Unit Price" bid for the several pay items.

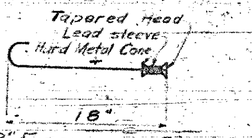
ELEVATION



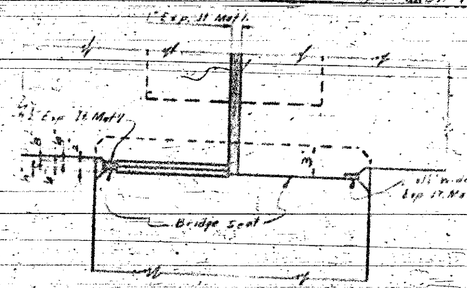
2'-3½" ±	BENT 1
3'-4½" ±	BENT 2
3'-11½" ±	BENT 3
4'-1½" ±	BENT 4

4'-6" ±
b₁ for BENT 1
b₂ for BENT 2
b₃ for BENT 3
b₄ for BENT 4
b₅ for BENT 5

SECTION A-A



¾"x18" EXPANSION ANCHOR



DETAIL AT SINGLE EXPANSION PIER SHOWING PLATES

DOUBLE EXPANSION PIER SIMILAR

Piece of 12 H 53 steel pile split and with web slotted to fit over pile web

PILE CAP DETAILS

NOTE: Cap shall be welded to pile after driving has been completed.

Revised (4-28-52) to correct bridge seat elev. by 0.2' ± on all Bents

Revised for relocation of ℄ Bridge (5-19-52) B.L.W. R.D.

BILL OF MATERIAL

Bar Details	Bar	Number 1	2	3	4	5	Tot.	Size	Type	Length	Wt.
1'-5" Length minus 1'-2" 2'-6" NA NK ①	b_{11}	8					8	18" ø	1	13'-8"	4
	b_{21}		8				8	1" ø	1	14'-1"	9
	b_{31}			8			8	1" ø	1	14'-10"	9
	b_{41}				8		8	1" ø	1	15'-6"	10
	b_{51}					8	8	1" ø	1	16'-3"	10
NK 4½" 2'-2" ② 2'-8" NK 4½" ③	b_{12}	4	4	4	4	4	22	½" ø	2	5'-0"	24
	b_{11}	4					4	½" ø	2	2'-2"	5
	b_{12}		4				4	½" ø	2	2'-10"	7
	b_{13}			4			4	½" ø	2	3'-6"	9
	b_{14}				4		4	½" ø	2	4'-2"	11
	b_{15}					4	4	½" ø	2	4'-10"	12
	d_1	4	4	4	4	—	16	½" ø	2	3'-6"	36
	S_1	10	13	13	14	14	64	½" ø	2	7'-3"	93
	S_2	18	24	24	22	22	110	½" ø	2	2'-11"	66

Reinforcing steel for Bent No. 1		lbs.
Reinforcing steel for Bent No. 2		lbs.
Reinforcing steel for Bent No. 3		lbs.
Reinforcing steel for Bent No. 4		lbs.
Reinforcing steel for Bent No. 5		lbs.
Class "A" concrete for Bent No. 1		C.Y.
Class "A" concrete for Bent No. 2		C.Y.
Class "A" concrete for Bent No. 3		C.Y.
Class "A" concrete for Bent No. 4		C.Y.
Class "A" concrete for Bent No. 5		C.Y.
12 H 53 steel piles for Bents No. 1, 2, 3, 4 and 5	No. 2	
¾" x 18" Expansion Anchors for Bents No.		

NOTE: Piles shall be driven to a minimum bearing capacity of 50 Tons per pile.

NOTE: For details of pile splice see Sheet No. 4

PROJECT NO. 2627

LENOIR COUNTY

STATION: 12+01.76 -L-

WIDEN BENTS No. 1-2-3-4-5

STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION
RALEIGH

SUBSTRUCTURE

OCTOBER 1952

SUBMITTED BY _____ BRIDGE ENGINEER

APPROVED BY _____ STATE HIGHWAY ENGR. DATE

DESIGNED BY J.S.C. DATE Oct. 1952
DRAWN BY J.S.C. DATE Oct. 1952
TRACED BY _____ DATE
CHECKED BY J.L.W. DATE Nov. 1952

PROJ. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
3	N. C.	2627	S-29	48
FA Proj. F-250(8)				72

Storm face Fill Face

Fill Face

Constr. Jt.

Bridge Seat El. 121.01

Extra hg

Extra h8

Extra h7

Extra h6

Extra h5

Extra h4

Extra h3

Extra h2

Extra h1

Extra h2

Constr. Jt.

Note: Remove exist. conc. along lines shown and extend exist. steel into new conc. to serve as dowels. See Gen. Notes, Sheet S-N.

Note: Method "A" waterproofing shall be placed over the fill side of joints above top of footing between substructure & superstructure and horizontal construction joint above top of footing. Strips of waterproofing shall be 24" wide & placed symm. about the joints.

Note: All piles shall be driven to a minimum bearing capacity of 30 tons each.

Note: For detail of pile cap and splice, see Sheet No. S-15 & S-38.

ELEVATION ABUTMENT "B"

Existing Abutment

Prop Rdwy & Fill Face

BAR TYPES

SECTION C-C

END OF WING

BILL OF MATERIAL

Bar	No	Size	Type	Length	Wt.
V20	3	2"	Str.	2'-9"	6
h1	5	3/4"	Str.	10'-6"	75
h2	4	6"	Str.	9'-0"	226
h3	3	6"	Str.	6'-0"	152
h4	3	6"	Str.	19'-0"	338
h5	2	6"	Str.	19'-6"	226
h6	5	6"	Str.	20'-0"	420
h7	1	6"	Str.	22'-0"	115
h8	2	5/8"	Str.	24'-3"	32
h9	2	6"	Str.	6'-9"	9
h10	5	3/4"	4	29'-3"	224
h11	8	3/4"	Str.	28'-0"	344
h12	7	6"	Str.	14'-0"	613
V19	2	6"	Str.	4'-6"	8
t1	6	6"	Str.	21'-6"	664
t2	9	6"	Str.	11'-0"	664
t3	1	8"	Str.	14'-3"	112
t4	1	6"	Str.	5'-6"	18
V1	5	6"	Str.	3'-0"	19
V2	4	6"	Str.	4'-9"	77
V3	8	6"	Str.	7'-0"	337
V4	8	6"	Str.	9'-0"	432
V5	6	6"	Str.	10'-3"	369
V6	1	6"	Str.	12'-0"	77
V7	4	6"	Str.	11'-6"	369
V8	4	6"	Str.	6'-6"	209
V9	5	6"	Str.	4'-6"	216
V10	2	6"	Str.	2'-10"	69
V11	2	6"	Str.	5'-6"	71
V12	2	6"	Str.	8'-0"	77
V13	2	6"	Str.	10'-3"	148
V14	3	6"	Str.	12'-6"	241
V15	1	6"	Str.	11'-0"	71
V16	1	6"	Str.	12'-0"	77
Z2	4	6"	3	5'-1"	66
Z3	6	10	3	7'-6"	73
Z4	6	6"	3	6'-7"	98
Z5	2	6"	3	5'-6"	18
Z6	2	6"	3	4'-0"	11
V17	2	3/4"	Str.		2
P1	4	6"	1	4'-6"	13
P2	5	6"	1	11'-5"	25
P3	10	3/4"	2	9'-6"	145
P4	2	3/4"	2	11'-5"	44
H7	12	3/4"	H	11'-6"	15
H1	4	1"	Str.	3'-0"	32
Reinforcing Steel - Lbs.					2296
Class A Concrete - C.Y.					28.3
Portland Cement Concrete Paving - Sq. Yds.					31
12" A.S.S. Pipe - Lin. Ft.					156

PROJECT NO. 2627

LENOIR COUNTY

STATION: 13+18.4 ℄ L-W

"ABUTMENT B"

STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION

SUBSTRUCTURE

NOVEMBER, 1952

DESIGNED BY ... DATE ...
DRAWN BY ... DATE Nov. 52
TRACED BY ... DATE ...
CHECKED BY ... DATE Nov. 52

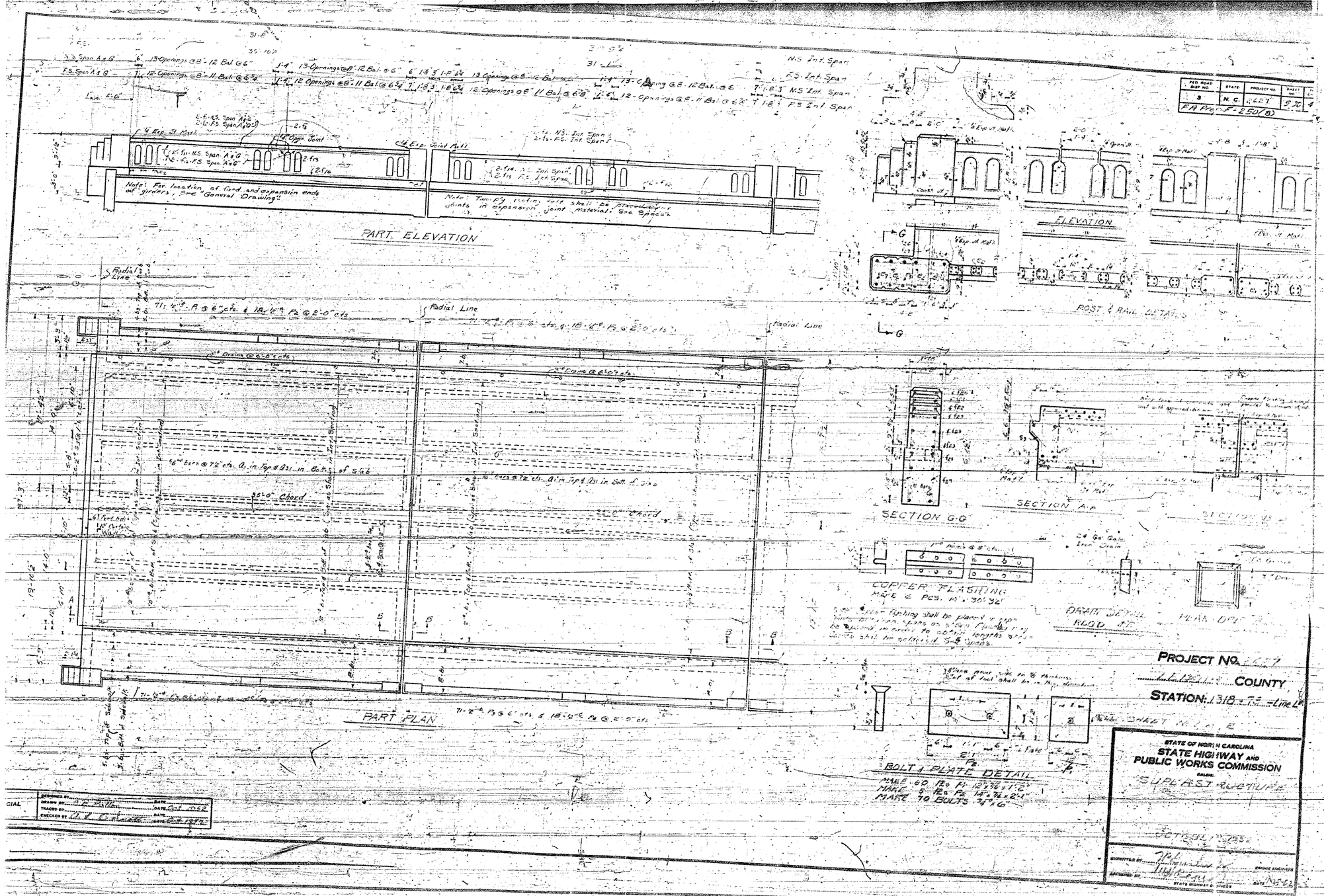
APPROVED BY ... STATE HIGHWAY ENGINEER

SPECIAL

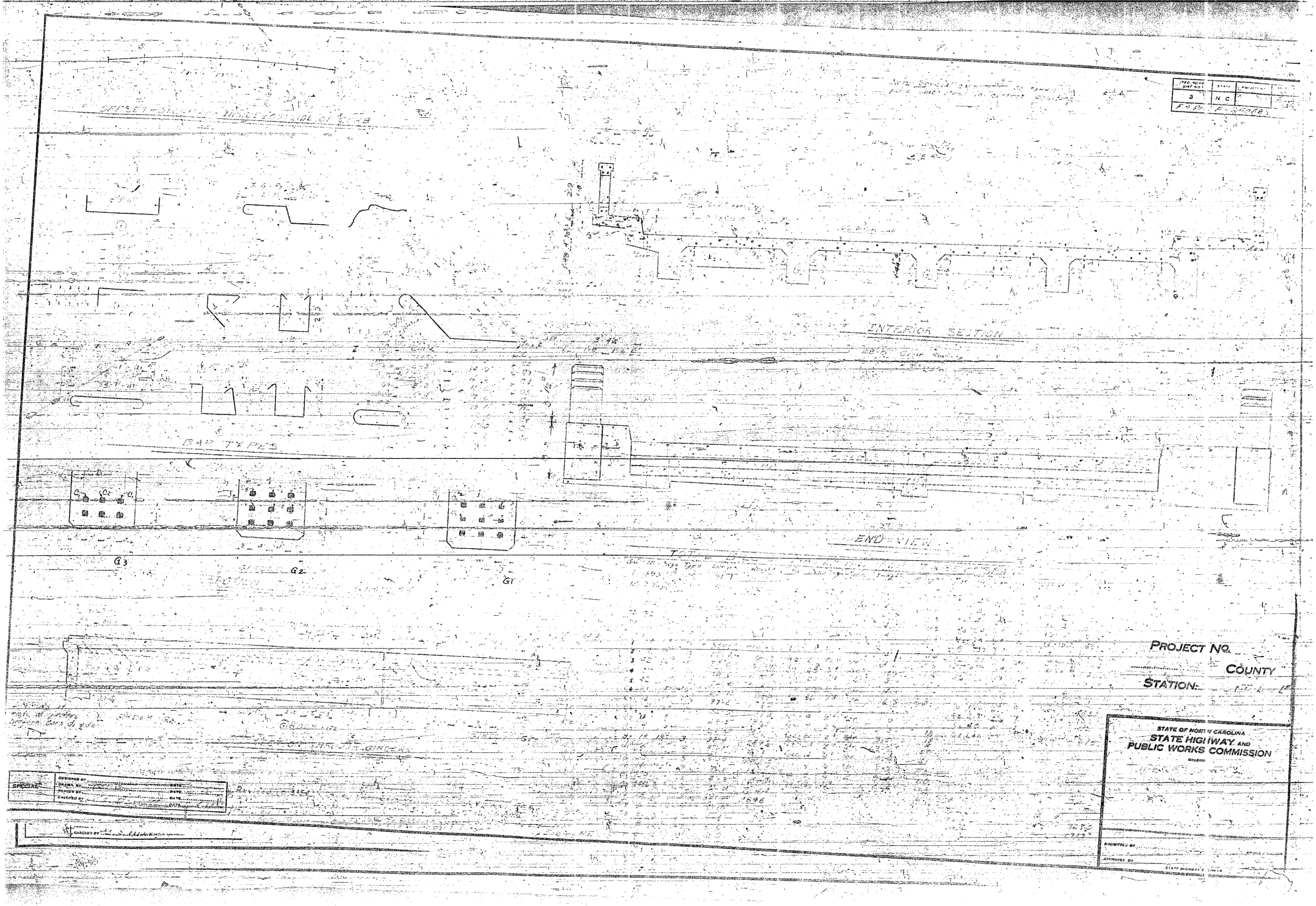
PLAN OF ABUTMENT B"

SECTION A-A

Revised for relocation of ℄ Bridge 65M. 2-18-53 / by C.B.R.

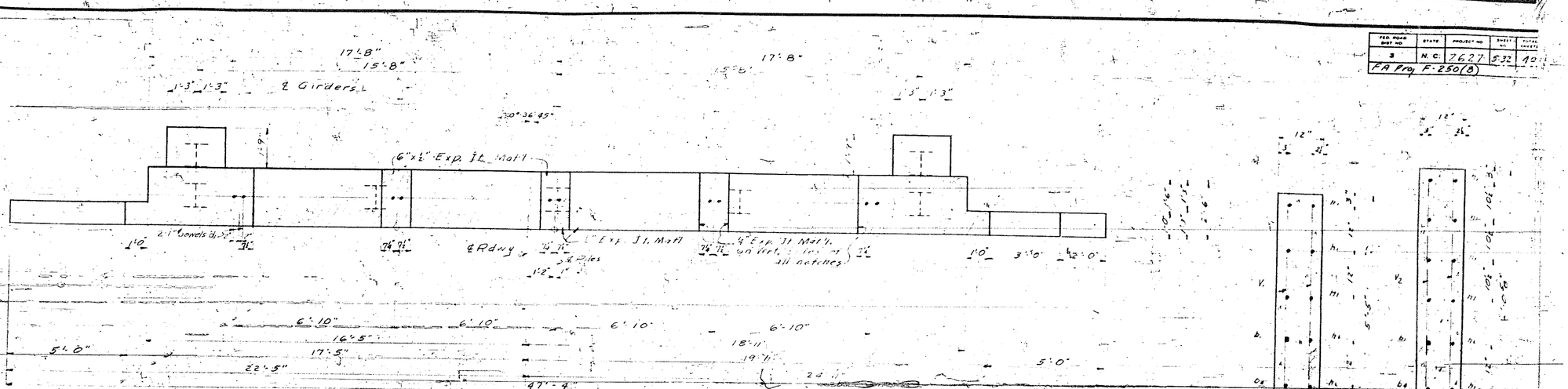


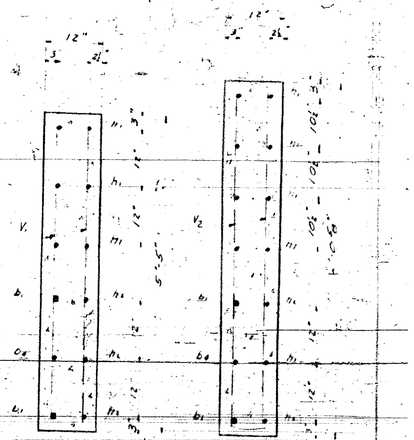
PART ELEVATION
ELEVATION
POST & RAIL DETAILS
SECTION G-G
SECTION A-A
COPPER FLASHING
DRAIN DETAIL
BOLT & PLATE DETAIL
PART PLAN
Radial Line
35'-0" Chord
PROJECT NO.
COUNTY
STATION: 1318 - 75 - Line L
STATE OF NORTH CAROLINA
STATE HIGHWAY AND
PUBLIC WORKS COMMISSION
SUPERSTRUCTURE



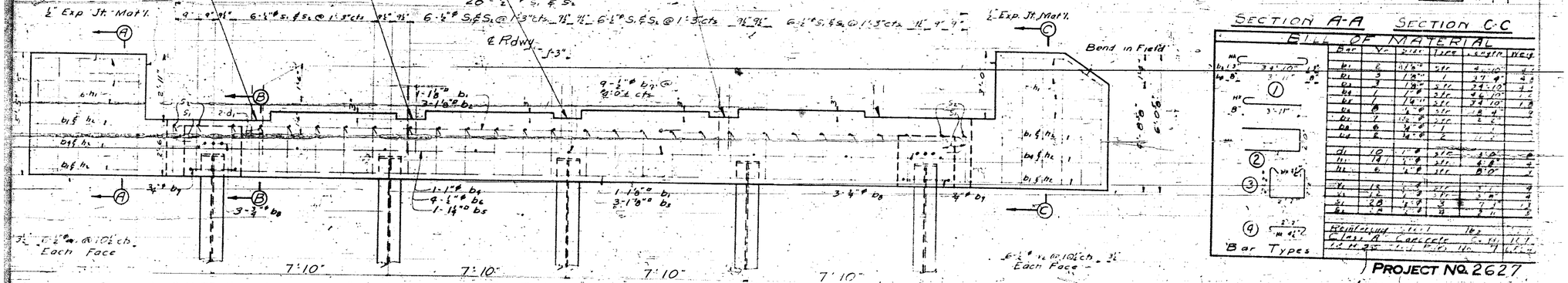
INTERIOR SECTION
BAR TYPES
END VIEW
G3
G2
G1
PROJECT NO.
COUNTY
STATION:
STATE OF NORTH CAROLINA
STATE HIGHWAY AND
PUBLIC WORKS COMMISSION
SPECIAL

FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
3	N.C.	7627	532	40
FA Proj. F-250(8)				





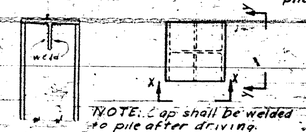
BRIDGE SEAT ELEVATIONS 122.17 122.31 122.44 122.58 122.72



Piece of 12 H 53 Steel Pile - Split and with web slotted to fit over pile web

NOTE: For detail of pile splice, see sheet No. S-15

NOTE: Piles to be driven to a min. bearing capacity of 30 Tons each.

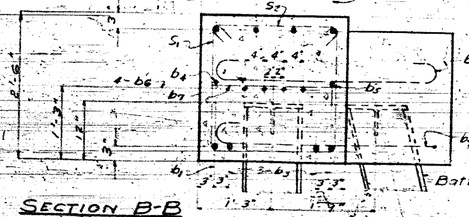


NOTE: Cap shall be welded to pile after driving.

SECTION X-X

PILE CAPS

SECTION Y-Y



SECTION B-B

Bar Types

BILL OF MATERIAL

Bar	No.	Size	Type	Length	Wt.
b1	2	1⅛" ø	str.	4'-10"	4
b2	3	1⅛" ø	1	27'-9"	4
b3	3	1⅛" ø	2 str.	24'-10"	4
b4	1	1" ø	2 str.	4'-10"	1
b5	1	1⅛" ø	2 str.	27'-10"	1
b6	8	¾" ø	str.	8'-4"	1
b7	7	½" ø	str.	8'-4"	1
b8	6	¾" ø	1		
b9	6	¾" ø	2		
d1	10	⅞" ø	str.	4'-0"	4
h1	14	⅞" ø	str.	4'-8"	4
m1	6	¾" ø	str.	8'-0"	1
v1	12	¾" ø	str.	4'-4"	3
v2	12	¾" ø	str.	4'-4"	3
s1	28	½" ø	str.	9'-0"	7
s2	2	½" ø	str.	9'-0"	½

Weight of Steel 1611 lbs.
Class A Concrete 64.4 C.Y.
1.0 lb. per C.Y. 40 lbs.

PROJECT NO. 2627
LENOIR COUNTY
STATION: 1318 + 72 Line

END BENT #1

STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION
RALEIGH

SUBSTRUCTURE

OCTOBER 1952

SUBMITTED BY _____ BRIDGE ENGINEER

APPROVED BY _____ STATE HIGHWAY ENGINEER

APPROVED BY _____ STATE HIGHWAY ENGINEER DATE

SPECIAL	DESIGNED BY J. L. Carmalt DATE Oct 1952
	DRAWN BY A. L. Cornett DATE Oct 1952
	TRACED BY
	CHECKED BY J. S. Blanchard DATE Nov. 1952

FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
3	N. C.	2627	5-B	15
FA Proj. F-250(8)				

Stream Face — Fill Face — El. 124.97 — El. 125.06 — 2" Exp. Mat'l. — Br. Seat El. 122.17 — Br. Seat El. 122.11 — SE Pile — 2-12" Vert. @ 2'-11" cts. — 4" Vert. @ 8'-0" cts. — 2-12" Vert. @ 2'-11" cts. — 26-3/4" Vs @ 8" cts. — 2-12" Vert. @ 2'-11" cts. — V21 Thru V26

6-BENTS REQUIRED

BILL OF MATERIAL FOR ONE BENT

Bar	No.	Size	Type	Length	Weight	
b_1	4	18 □	1	33'-6"	577	
b_2	4	18 □	Str.	31'-0"	534	
b_3	8	#4	Str.	16'-3"	87	
b_4	9	#4	Str.	2'-2"	15	
a_1	10	1"	Str.	3'-0"	80	Bars a_1, s_1 & s_2
s_1	26	#4	3	7'-3"	126	
s_2	46	#4	2	2'-11"	90	Bars #4 Vertical Corner Bent #5
Reinforcing Steel					1427	
Reinforcing Steel					1507	
Class "A" Concrete, Cu. yds.					17.1	

Steel in Pile Encasement 15

31'-6" — C 36'-45" — ℄ Roadway — 15'-9" — 6'-10" — 5'-8" — 1'-2" — ℄ Cap & Piles — 1" Exp. Jt. Material — 2'-1" — 7½" — 2'-6" — 1'-3" — ℄ Cap — 6'-6½" — 1" Exp. Jt. Mat'l. on sides of all vertical Notches. — 0°-36'-45" — PLAN OF CAP-BENT #6 — ½" Exp. Jt. Mat'l. — ℄ Girders

1"-ℓ bars @ 4" cts. — 16"x12" Exp. Jt. Mat'l. — PLAN OF CAPS-BENTS #1, 2, 3, 4 & 5

Dimensions not shown are the same as Bent #6.

½" stirrups S1 & S2 Space as Shown — 9" 9" 3-spaces @ 1'-1" 9" 9" — El. 122.17 — El. 122.31 — El. 122.44 — ℄ Rdwy. — 4-5/8" Extra S2 under each girder @ 4" cts. — 2-1" R.J. Jewels @ 4" cts. — 4-1⅛" □ b1 — ¼" # b4 @ 4'-0" cts. — 4-1⅛" □ b2 — 4-⅝" # b3 — 12" H Piles with encasement — 12" H @ 53# Piles — 12" Min. Batter — 2'-6" — 3" — 12'-6" — 1'-6" — 4'-9" — 1'-6" — Encasement shall extend 2'-0" below ground line — ELEVATION

Cap shall be welded to pile after driving has been completed. — Piece 12" pipe split with web slotted to fit over pile web — 12" H @ 53# Pile — PILE CAP DETAILS

2'-6" — 3" 8" 8" 8" 3" — S2 — 4-1⅛" □ b1 — S1 — b4 — 4-⅝" # b3 — 2'-6" — 12" — 3" — 4-1⅛" □ b2 — 3" 3" 3" 3" — 5" 5" — B B — 10" 10" — SECT. A-A

13 Gage wire mesh of approved type with 4"x4" opening. — 1'-8" — 1'-8" — NOTE: No allowance will be made for Wire Mesh, the entire cost of same shall be included in the "Unit Price" bid for the several pay items. — PILE ENCASEMENT SECT. B-B

1'-3" — 31'-0" — 1'-3" — ① — 4½" — 2'-2" — 4½" — ② — 4½" — 2'-2" — 2'-2" — ③

1" Exp. Jt. Mat'l. — ½" Exp. Jt. Mat'l. — Bridge Seat — DETAIL AT SINGLE EXPANSION BENT SHOWING PLATES — DOUBLE EXPANSION BENT SIMILAR

For details of pile splice see Sheet No. S-15.

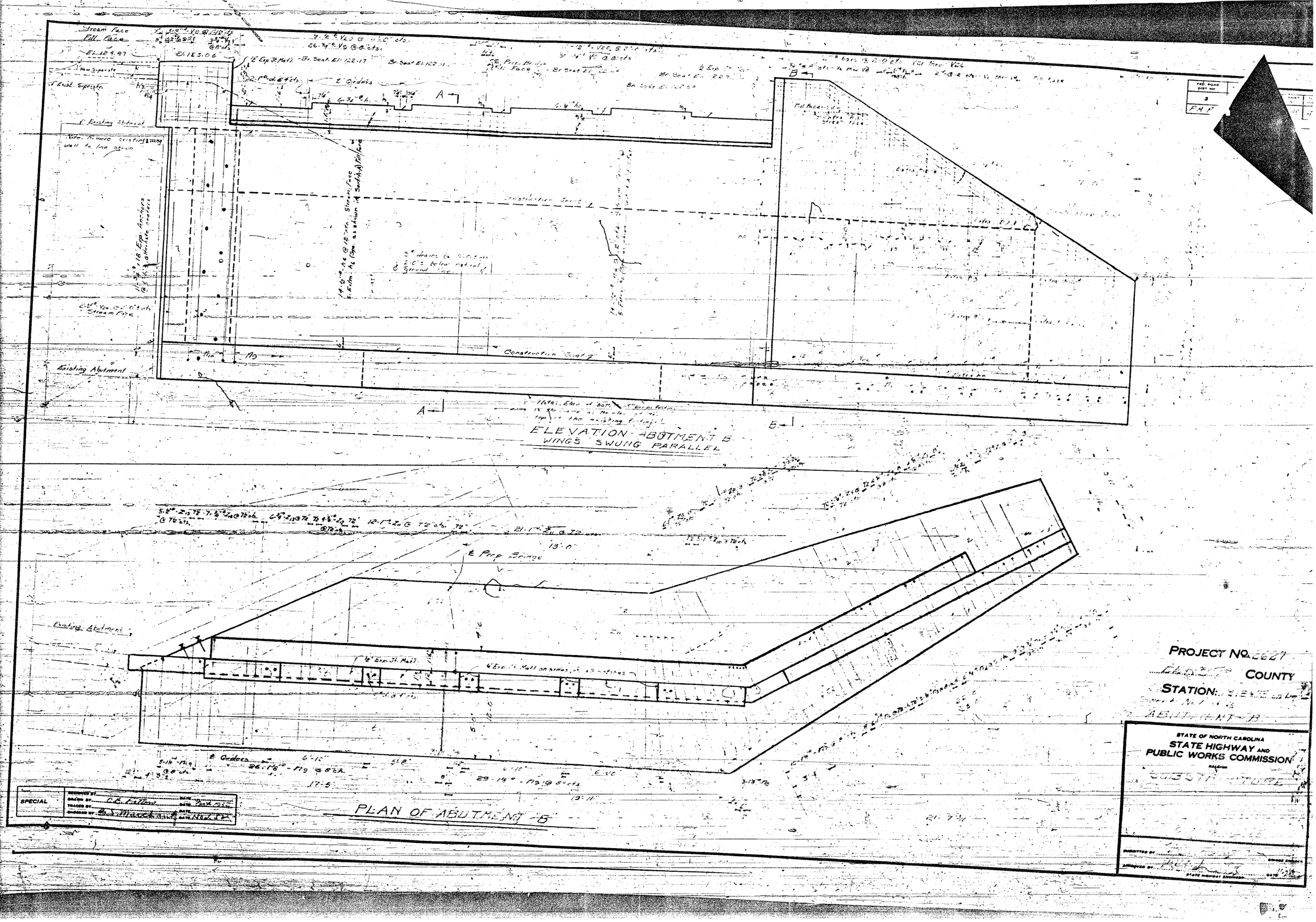
Note: Piles shall be driven to a minimum bearing of 50 tons per sq. inch.

PROJECT NO. 2627
LENOIR COUNTY
STATION: 1318+72 - Line L
BENTS 1, 2, 3, 4, 5 & 6

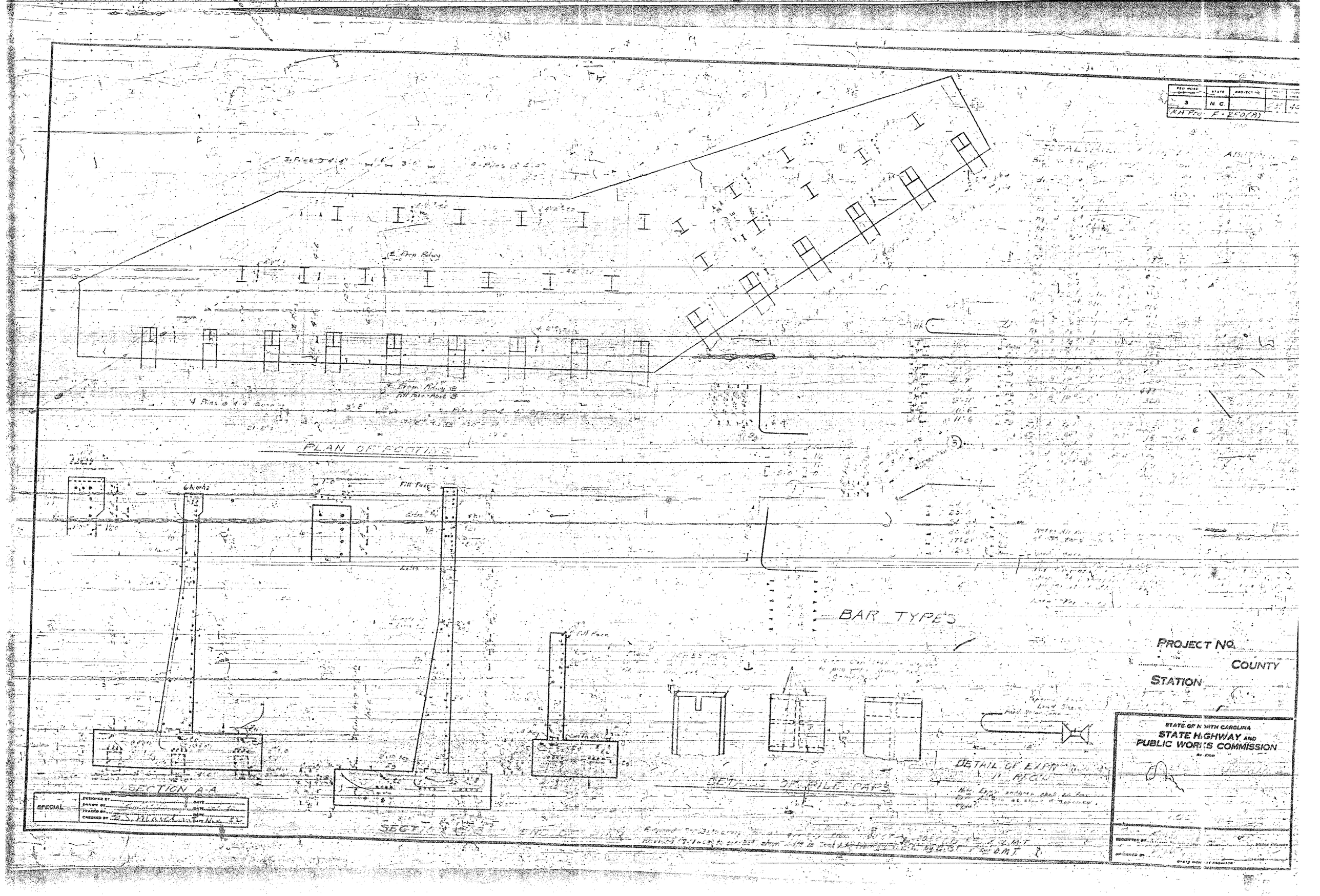
STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION
SUBSTRUCTURE
OCTOBER-1952

SPECIAL — DESIGNED BY ... DATE ... DRAWN BY C.P.M.W. DATE October 1952 — TRACED BY ... DATE ... CHECKED BY A.Z.B. DATE Oct. 1952

SUBMITTED BY ... DRAWN BY ... APPROVED BY ... STATE HIGHWAY ENGINEER ... 19...



Stream Face
Fill Face
El. 124.87
El. 125.06
New Superstr.
Exist. Superstr.
Existing Abutment
Note: Remove existing wing wall to line shown
Construction Joint
Existing Abutment
ELEVATION - ABUTMENT B
WINGS SWUNG PARALLEL
℄ Prop. Bridge
Existing Abutment
PLAN OF ABUTMENT B
PROJECT NO. 2627
COUNTY
STATION:
ABUTMENT B
STATE OF NORTH CAROLINA
STATE HIGHWAY AND
PUBLIC WORKS COMMISSION
SPECIAL



FED ROAD DESIGNATION
STATE
PROJECT NO.
3
N. C.
R.M. Proj. F-250(8)
PLAN OF FOOTING
BAR TYPES
SECTION A-A
DETAIL OF EXPR. JT. RECD.
DETAILS OF PILE CAPS
SECTION
PROJECT NO.
COUNTY
STATION
STATE OF NORTH CAROLINA
STATE HIGHWAY AND
PUBLIC WORKS COMMISSION
SPECIAL
DESIGNED BY
DRAWN BY
TRACED BY
CHECKED BY
DATE

STATION 1318+41 ℄ L ℄
PILE RECORD

FED. ROAD DIST. NO. | STATE | F.A. PROJ.

FINAL SURVEY: BENCHMARK ___ NOTE BOOK ___ PG ___

1318+41 ℄ L ℄

ABUTMENT "A"

See Book No. 4, Page 41

Pile No	Order Length	Total Cut-off	Splice	Pay Length	Pay Number Last Splice	Bearing Point	Rate in Tons	Date Driven	W.H.
1	42.0	4.0	4.0	34.0	3½"	15'	21.3	12-17-53	2630
2	25.0	4.0	4.0	17.0	3½"	15'	8.22	12-17-53	2630
3	23.0	4.0	4.0	15.0	3½"	15'	21.9	12-17-53	2630
4	29.0	4.5	4.0	20.5	3½"	15'	21.6	12-17-53	2630
5	40.0	4.7	4.0	32.3	3½"	15'	21.9	12-17-53	2630
6	25.0	4.0	4.0	17.0	3½"	15'	21.3	12-17-53	2630
7	23.0	4.0	4.0	15.0	3½"	15'	21.3	12-17-53	2630
TOTALS	169.0	24.2	24.0	154.8					

BENT #1

See Book No. 4, Page 41

1	44.0	4.0	4.0	36.0	3½"	15'	24.0	12-16-53	2632
2	44.0	4.0	4.0	36.0	3½"	15'	24.9	12-16-53	2632
3	44.0	4.0	4.0	36.0	3½"	15'	24.2	12-16-53	2630
TOTALS	132.0	12.0	12.0	108.0					

BENT #2

See Book No. 4, Page 41

1	44.0	4.5	4.0	36.5	3½"	15'	24.4	12-16-53	2630
2	44.0	4.0	4.0	36.0	3½"	15'	23.9	12-16-53	2630
3	44.0	4.0	4.0	36.0	3½"	15'	22.5	12-16-53	2630
TOTALS	132.0	12.5	12.0	108.5					

	Right	Order Length	Total Cut-off
	1	42.0	4.0
	2	40.0	4.0
	3	40.0	4.0
	TOTALS	122.0	12.0

BENT #3

See Book No. 4, Page 42

Splice	Pay Length	Number Last Splice	Bearing Point	Rate in Tons	Date Driven	W.H.
4.0	34.0	3½"	15'	22.8	12-16-53	2631
4.0	34.0	3½"	15'	22.1	12-16-53	2631
4.0	34.0	3½"	15'	21.5	12-16-53	2631
12.0	102.0					

BENT #4

See Book No. 4, Page 42

4.0	34.0	3½"	15'	22.5	12-16-53	2630
4.0	34.0	3½"	15'	23.9	12-16-53	2631
4.0	34.0	3½"	15'	23.2	12-16-53	2630
12.0	102.0					

BENT #5

See Book No. 4, Page 42

4.0	34.0	3½"	15'	22.5	12-16-53	2630
4.0	34.0	3½"	15'	23.9	12-16-53	2631
4.0	34.0	3½"	15'	23.2	12-16-53	2630
12.0	102.0					

ABUTMENT "B"

See Book No. 4, Page 43

Pile No	Order Length	Total Cut-off	Splice	Pay Length	Pay Number Last Splice	Bearing Point	Rate in Tons	Date Driven	W.H.
1	23.0	4.6	0.0	22.4	4½"	15'	20.2	12-8-53	2630
2	23.0	4.0	0.0	23.4	5½"	15'	19.2	12-8-53	2630
3	23.0	4.0	0.0	23.0	5½"	15'	19.2	12-8-53	2630
4	22.2	4.0	0.0	22.2	5½"	15'	19.2	12-8-53	2630
5	23.0	4.0	0.0	23.0	5"	15'	19.7	12-8-53	2630
6	23.0	4.0	0.0	23.0	4½"	15'	20.2	12-8-53	2630
7	23.4	4.0	0.0	23.4	5"	15'	19.7	12-8-53	2630
8	23.4	4.0	0.0	23.4	4½"	15'	20.2	12-8-53	2631
9	23.0	4.0	0.0	23.0	5"	15'	19.7	12-8-53	2630
TOTALS	207.0	37.6	0.0	203.6					

SUMMARY

See Book No. 4, Page 44

	Order Length	Total Cut-off	Splice	Pay Length	No. of Splices
ABUTMENT "A"	169.0	24.2	0.0	154.8	0
BENT # 1	120.0	0.0	0.0	120.0	0
BENT # 2	120.0	0.5	0.0	119.5	0
BENT # 3	120.0	0.0	0.0	120.0	0
BENT # 4	120.0	0.0	0.0	120.0	0
BENT # 5	120.0	0.0	0.0	120.0	0
ABUTMENT B	207.0	37.6	0.0	203.6	0
TOTAL FOR STATION 1318+41 ℄ L ℄	976.0	4.3	0.0	962.7	0

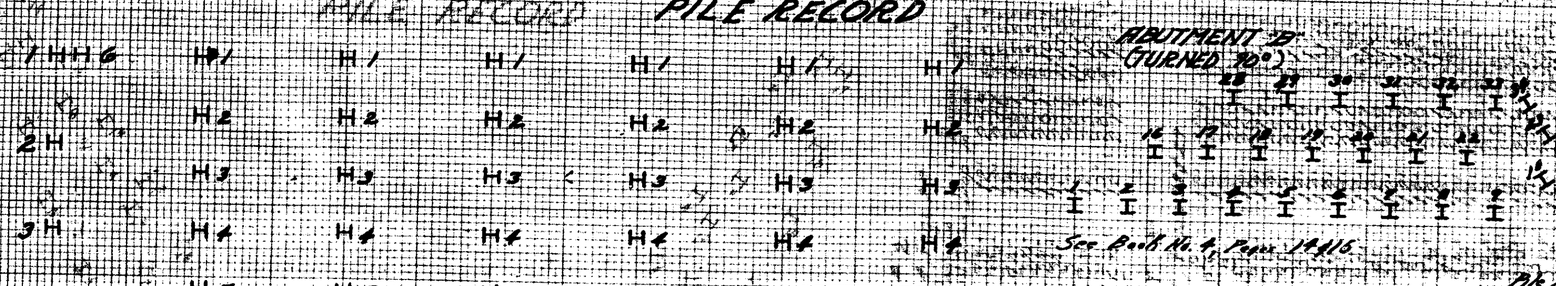
COMPUTED BY F.S. BOONE
CHECKED BY K.A. ROUSE

PLATE 3 CROSS SECTION OF PILE & FOOTING
OF PIER AND ABUTMENT
R. IRENE DIVISION

FED. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	N.C.	B6274(3)		65	66
F.A. Proj. F-250(8) 66					

STATION 1318+80 LF
PILE RECORD

STATION 1333+52
PILE RECORD



END BENT #1
See Book No. 4, Page 16

Pile No.	Order Length	Total Cut-Off	Splice	Pay Length	Penetration Last 5 Blows	Drop	Bearing in Tons	Date Driven	W.N.
1	40.0	0.0	0.0	40.0	6½"	12'	19.1	7-31-53	3590
2	40.0	0.0	0.0	40.0	4"	12'	23.9	7-31-53	3590
3	40.0	0.9	0.0	39.1	6"	12'	19.5	7-31-53	3590
4	40.0	0.0	0.0	40.0	5"	12'	21.5	7-31-53	3590
5	40.0	0.0	0.0	40.0	5"	12'	21.5	7-31-53	3590
6	40.0	0.9	0.0	39.1	5"	12'	21.5	7-31-53	3590
7	40.0	1.9	0.0	38.1	5"	12'	21.5	8-3-53	3590
TOTALS	280.0	3.7	0.0	276.3					

BENT #1
See Book No. 4, Page 12

1	40.0	0.0	0.0	40.0	6½"	15'	23.1	6-24-53	3590
2	55.0	4.2	0.0	50.8	——	15'	32.1	6-24-53	Tip of Pile Sheared off
3	40.0	3.0	0.0	37.0	——	15'	25.5	6-24-53	Tip of Pile Sheared off
4	52.0	6.6	0.0	45.4	——	15'	22.2	6-24-53	Tip of Pile Sheared off
5	40.0	0.0	0.0	40.0	6½"	15'	23.9	6-24-53	3590
6	40.0	4.3	0.0	35.7	5¾"	15'	25.0	6-24-53	3590
7	40.0	0.0	0.0	40.0	6½"	15'	23.6	6-24-53	3590
TOTALS	305.0	14.1	0.0	290.9					

BENT #2
See Book No. 4, Page 17

1 *	40.0	1.1	0.0	38.9	7⅛"	15'	21.8	6-23-53	3590
2	40.0	0.7	0.0	39.3	7"	15'	22.4	6-23-53	3590
3	40.0	0.0	0.0	40.0	5¾"	15'	26.3	6-23-53	3590
4	40.0	1.3	0.0	38.7	7⅛"	15'	21.5	6-23-53	3590
5	40.0	0.0	0.0	40.0	6½"	15'	23.4	6-19-53	3590
6	40.0	0.6	0.0	39.4	5¾"	15'	25.0	6-22-53	3590
7	40.0	2.0	0.0	38.0	6"	15'	24.5	6-23-53	3590
TOTALS	280.0	5.7	0.0	274.3					

* Pile No. 1 set 24 Hrs. Driving resumed with following results:
1st Blow ¾" = 45.3 Tons Bearing, 2nd Blow 3/16" = 45.3 Tons Bearing, 3rd, 4th & 5th Blow ⅛" per Blow = 32.2 Tons Bearing. 15" Drop Used

BENT #3
See Book No. 4, Page 17

Pile No.	Order Length	Total Cut-Off	Splice	Pay Length	Penetration Last 5 Blows	Drop	Bearing in Tons	Date Driven	W.N.
1	40.0	0.9	0.0	39.1	7⅛"	15'	22.2	6-20-53	3590
2	40.0	0.0	0.0	40.0	6¾"	15'	23.4	6-19-53	3590
3	40.0	1.0	0.0	39.0	6¾"	15'	23.4	6-22-53	3590
4	40.0	0.0	0.0	40.0	6"	15'	24.5	6-19-53	3590
5	40.0	1.0	0.0	39.0	6¼"	15'	23.9	6-19-53	3590
6	40.0	0.0	0.0	40.0	6¾"	15'	23.4	6-19-53	3590
7	40.0	0.6	0.0	39.4	5⅛"	15'	24.7	6-20-53	3590
TOTALS	280.0	3.5	0.0	276.5					

BENT #4
See Book No. 4, Page 18

1	40.0	0.3	0.0	39.7	5¾"	15'	25.0	6-18-53	3590
2	40.0	0.0	0.0	40.0	5"	15'	26.9	6-19-53	3590
3	40.0	0.0	0.0	40.0	5"	15'	26.9	6-19-53	3590
4	40.0	0.0	0.0	40.0	5⅛"	15'	25.6	6-19-53	3590
5	40.0	0.0	0.0	40.0	6¼"	15'	23.4	6-18-53	3590
6	40.0	1.3	0.0	38.7	5⅞"	15'	24.7	6-18-53	3590
7	40.0	0.0	0.0	40.0	6¼"	15'	23.4	6-18-53	3590
TOTALS	280.0	1.6	0.0	278.4					

BENT #5
See Book No. 4, Page 18

1	40.0	0.0	0.0	40.0	5¾"	15'	26.3	6-18-53	3590
2	40.0	0.0	0.0	40.0	6¼"	15'	23.4	6-18-53	3590
3	40.0	0.0	0.0	40.0	6⅞"	15'	23.6	6-18-53	3590
4	40.0	0.0	0.0	40.0	6¼"	15'	23.8	6-18-53	3590
5	40.0	0.0	0.0	40.0	7"	15'	22.4	6-16-53	3590
6	40.0	0.0	0.0	40.0	5¾"	15'	25.0	6-16-53	3590
7	40.0	0.0	0.0	40.0	5¾"	15'	25.6	6-17-53	3590
TOTALS	280.0	0.0	0.0	280.0					

BENT #6
See Book No. 4, Page 19

1	40.0	0.0	0.0	40.0	8"	15'	24.7	6-16-53	3590
2	40.0	5.9	14.0	48.1	——	15'	28.6	6-18-53	Tip of Pile Sheared off
3	40.0	0.0	0.0	40.0	8"	15'	24.7	6-16-53	3590
4	40.0	0.0	0.0	40.0	7⅛"	15'	24.9	6-16-53	3590
5	40.0	0.0	0.0	40.0	7¾"	15'	21.1	6-16-53	3590
6	40.0	0.7	0.0	39.3	8"	15'	24.7	6-16-53	3590
7	40.0	0.4	0.0	39.6	8"	15'	26.9	6-16-53	3590
TOTALS	280.0	7.0	14.0	283.0					

ABUTMENT "B"
See Book No. 4, Pages 19 & 20

Pile No.	Order Length	Total Cut-Off	Splice	Pay Length	Penetration Last 5 Blows	Drop	Bearing in Tons	Date Driven	W.N.
1	23.0	3.1	0.0	19.9	7¾"	15'	21.1	6-10-53	3590
2	23.0	0.7	0.0	22.3	7"	15'	22.4	6-10-53	3590
3	23.0	0.9	0.0	22.1	6¾"	15'	23.3	6-10-53	3590
4	23.0	0.8	0.0	22.2	6½"	15'	23.3	6-10-53	3590
5	23.0	0.0	0.0	23.0	6"	15'	24.5	6-10-53	3590
6	23.0	1.6	0.0	21.4	5⅝"	15'	25.1	6-10-53	3590
7	23.0	1.1	0.0	21.9	10"	15'	18.0	6-9-53	3590
8	23.0	1.2	0.0	21.8	6¾"	15'	22.9	6-9-53	3590
9	23.0	1.0	0.0	22.0	7"	15'	22.4	6-9-53	3590
10	23.0	0.2	0.0	22.8	7¼"	15'	21.5	6-9-53	3590
11	23.0	0.9	0.0	22.1	8⅛"	15'	19.6	6-8-53	3590
12	23.0	0.2	0.0	22.8	6¾"	15'	22.9	6-8-53	3590
13	23.0	0.6	0.0	22.4	6"	15'	24.5	6-8-53	3590
14	23.0	1.5	0.0	21.5	5⅜"	15'	25.1	6-8-53	3590
15	23.0	1.6	0.0	21.4	8"	15'	24.0	6-8-53	3590
16	23.0	0.0	0.0	23.0	7⅛"	15'	21.1	6-8-53	3590
17	23.0	0.0	0.0	23.0	7"	15'	22.4	6-8-53	3590
18	23.0	0.0	0.0	23.0	7¼"	15'	21.5	6-8-53	3590
19	23.0	0.0	0.0	23.0	6¾"	15'	22.9	6-8-53	3590
20	23.0	1.2	0.0	21.8	8"	15'	24.0	6-8-53	3590
21	23.0	0.0	0.0	23.0	8½"	15'	19.9	6-8-53	3590
22	23.0	0.0	0.0	23.0	7⅛"	15'	21.5	6-8-53	3590
23	23.0	1.6	0.0	21.4	5"	15'	26.9	6-8-53	3590
24	23.0	0.0	0.0	23.0	7¼"	15'	21.1	6-8-53	3590
25	23.0	0.2	0.0	22.8	7"	15'	22.4	6-5-53	3590
26	23.0	1.3	0.0	21.7	7⅛"	15'	21.5	6-5-53	3590
27	23.0	0.4	0.0	22.6	7"	15'	22.4	6-5-53	3590
28	23.0	0.0	0.0	23.0	7"	15'	22.4	6-5-53	3590
29	23.0	1.7	0.0	21.3	6¾"	15'	24.9	6-5-53	3590
30	23.0	0.0	0.0	23.0	8½"	15'	19.9	6-5-53	3590
31	23.0	0.0	0.0	23.0	7"	15'	22.4	6-5-53	3590
32	23.0	0.0	0.0	23.0	8½"	15'	19.6	6-5-53	3590
33	23.0	0.0	0.0	23.0	8½"	15'	20.3	6-5-53	3590
34	23.0	1.2	0.0	21.8	7¾"	15'	21.1	6-8-53	3590
35	23.0	0.8	0.0	22.2	8½"	15'	20.3	6-9-53	3590
36	23.0	0.6	0.0	22.4	7½"	15'	21.5	6-5-53	3590
TOTALS	828.0	24.4	0.0	803.6					

SUMMARY
See Book No. 4, Page 21

	Order Length	Total Cut-Off	Splice	Pay Length	No. Of Splices
END BENT #1	280.0	3.7	0.0	276.3	0
BENT #1	305.0	14.1	0.0	290.9	0
BENT #2	280.0	5.7	0.0	274.3	0
BENT #3	280.0	3.5	0.0	276.5	0
BENT #4	280.0	1.6	0.0	278.4	0
BENT #5	280.0	0.0	0.0	280.0	0
BENT #6	280.0	7.0	14.0	283.0	1
ABUTMENT "B"	828.0	24.4	0.0	803.6	0
TOTAL FOR STATION 1318+80 LF	2813.0	65.0*	14.0	2763.0	1

* 4 Lin. Ft. of the above Pile Cut-off used for Pile Caps, Leaving a total pay quantity of 56 Lin. Ft.

COMPUTED BY F.S. BOONE
CHECKED BY K.M. ROUSE

FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.
3	N. C.	2627	[illegible]
FA Proj F-253(8)			

ENGINEER NOTE:
Stream face of Abutment 'B' Line LE shall be on a radial for 3°-30' curve and shall intersect the existing Abutment B on Line Lw along the stream face and at the point where the wing makes a 30° angle with the abutment. From this, the station for Abutment B shall be determined as the basis for staking out the bridge on Line LE.

Revised to correct Bt #3 Sta. 1318+96.5 from a single exp. to a double exp. bent by C.B.P. checked by G.S.M. 2-5-53

DESIGN DATA

Live Loads: Assumed Live Load = H15-S12-44
Reinforcing Steel in Tension: 20,000 Lbs. per Sq. in.

Piles: Piles for Abutments End Bent & Bents shall be driven to a minimum bearing capacity of 30 Tons each.

Concrete: All concrete shall be air-entraining, see Special Provisions.

End Bent Piles: End Bent Piles shall be driven through the roadway fill.

Traffic: Traffic shall be maintained over existing Struct. (See Special Provisions).
For other "Design data and General Notes" See Sheet S-1

The Contractor will be required to drive 2 test piles in the bridge at Sta 1318+80 Line LE. One 40' long test pile shall be driven at the upstream end of Bent No. 1 and Bent No. 6. Pile lengths of the bridge at Sta. 1318+41.6 Line Lw will also be determined from these test piles. Test piles will be paid for as Steel Piles. See Specifications.

Traffic: The bridge on Line LE shall be constructed as the first part of work on the project. After its completion, traffic will be turned over this bridge. See Special Prov.

For surface finish requirements. See Special Prov.

Excavation for pile encasement. See Sheet S-2

Built according to plans except as noted

Sta. 1318+41.6 Lw

DIVISION OF CLASS A CONCRETE	
Using Std. Size No. 4 Coarse Aggregate	21.5 Cu.Yds.
Using Std. Size No. 3 Coarse Aggregate	257.3 Cu.Yds.
TOTAL CLASS A CONCRETE	278.8 Cu.Yds.

Sta. 1318+80 LE

DIVISION OF CLASS A CONCRETE	
Using Std. Size No. 4 Coarse Aggregate	24.2 Cu.Yds.
Using Std. Size No. 3 Coarse Aggregate	545.4 Cu.Yds.
TOTAL CLASS A CONCRETE	569.6 Cu.Yds.

TOTAL BILL OF MATERIAL FOR BRIDGE AT STA. 1318+41.6 Lw

For additional Concrete see Sheet No. 76	Class "A" Concrete Cu.Yds.	Reinforcing Steel Lbs.	Steel Piles 12" H@53# No.	Steel Piles Lin.Ft.	Plates & Bolts Lbs.	Wearing Surface Tons	Method "A" Water Proof. Sq.Yds.	Unclassified Struct. Exca. Cu.Yds.	Conc. Rip Rap Sq.Yds.
Span A	32.2	7063	—	—	451	13			
Span B	28.1	6106	—	—	—	12			
Span C	29.9	6246	—	—	—	11			
Span D	31.0	6347	—	—	—	10			
Span E	31.1	6251	—	—	—	10			
Span F	39.0	7907	—	—	—	10			
Abutment A	28.3	1766	7	140	—	—	10	40 56.5	—
Bent #1	6.9	621	3	105	—	—			
Bent #2	6.9	604	3	105	—	—			
Bent #3	7.1	686	3	105	—	—			
Bent #4	7.2	713	3	105	—	—			
Bent #5	7.5	713	3	105	—	—		57.5	
Abutment B	28.3	2296	9	180	60	—	9	59	200
Approach [illegible]	1.9	25	—	[illegible]	[illegible]				
TOTAL	[illegible]	47396	31	865	551	66	19	90	200

Wearing surface to be placed by Roadway Contractor.

TOTAL BILL OF MATERIAL FOR BRIDGE AT STA. 1318+80 LE

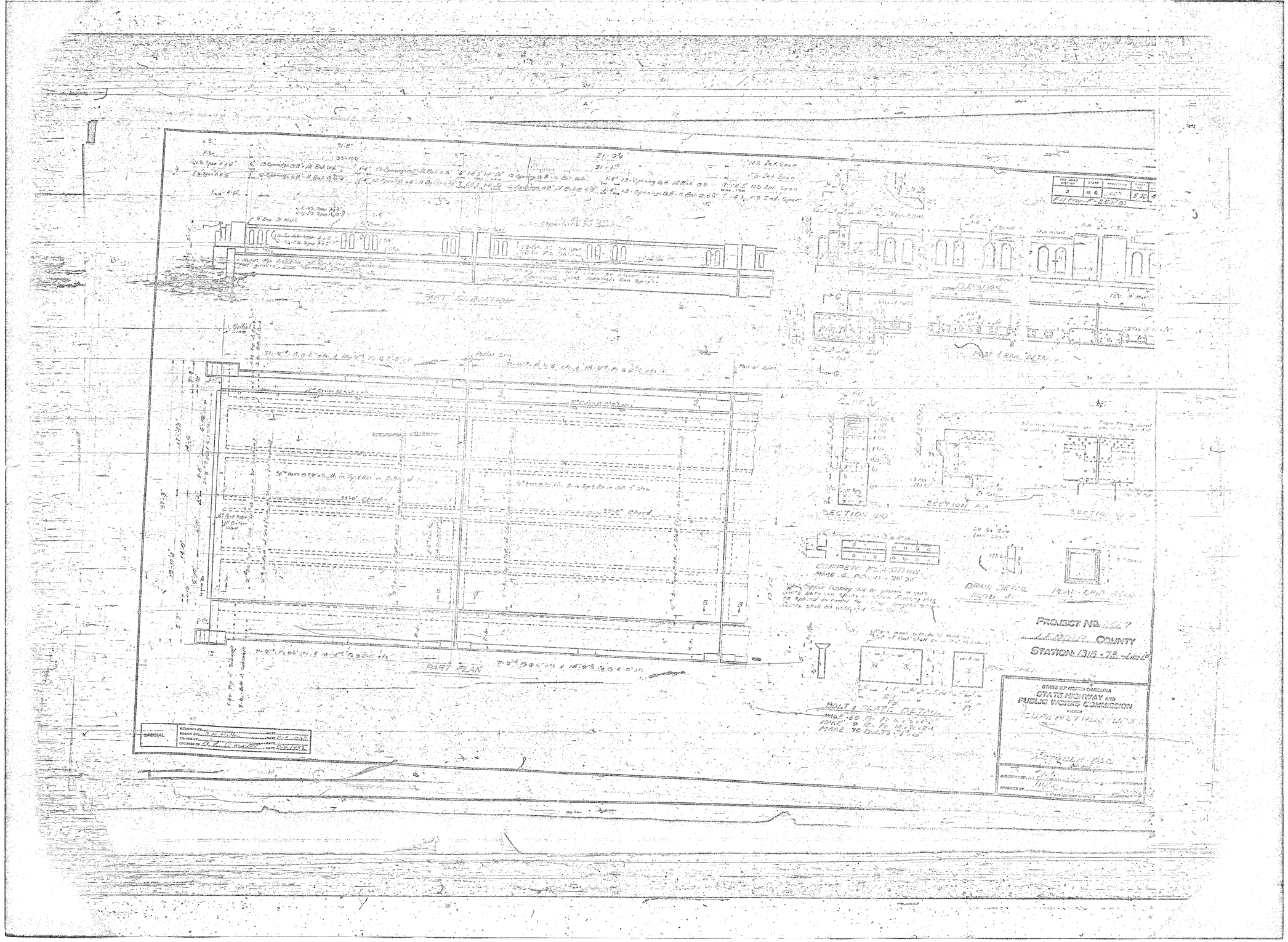
	Class "A" Concrete Cu.Yds.	Reinforcing Steel Lbs.	Steel Piles 12" H@53# No.	Steel Piles Lin.Ft.	Plates & Bolts Lbs.		Conc. Rip Rap Sq.Yds.	Method "A" Water Proof Sq.Yds.	Unclassified Struc. Exca. Cu.Yds.
Superstructure	327.0	97430	—	—	1313				
End Bent #1	12.7	2270	7	245	—		260		
Bent #1	17.4	1507	7	245	—		—		
Bent #2	17.4	1507	7	245	—		—		
Bent #3	17.4	1507	7	245	—		—		
Bent #4	17.4	1507	7	245	—		—		
Bent #5	17.4	1507	7	245	—		—		
Bent #6	17.4	1427	7	245	—		—		
Abutment B	120.5	12689	36	720	—		—	24	200
Approach Curb	5.0	87	—	—	—	C.O.	—	—	—
TOTAL	569.6	121438	65	2435	1313		260	24	200

Revised to change piles for Approach Curbs. By D.W. 3/22/54
Revised to show quantity of Class A Concrete and to correct Conc. quantity for Abut B
Revised to show 5° curve on line Lw and 3°30' curve on line LE by C.D.R. By G.S.M. 2-3-53
Revised for relocation of ℄ Bridge. GSM-2-18-53 By C.B.P.

Present Bridge El. 124.38

PROJECT NO. 8627
LENOIR COUNTY
STATION: 1318+41.6 Lw
1318+80 LE

STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION
GENERAL DRAWING FOR BRIDGES OVER NEUSE RIVER ON [illegible] BETWEEN RICHLANDS [illegible]
OCTOBER [illegible]


PART ELEVATION
ELEVATION
POST & RAIL DETAIL
SECTION G-G
SECTION A-A
COPPER FLASHING
DRAIN DETAIL
PLAN DRIP BOND
PART PLAN
BOLT & PLATE DETAIL
PROJECT NO.
COUNTY
STATION: 1318 + 73 - Line L
STATE OF NORTH CAROLINA
STATE HIGHWAY AND
PUBLIC WORKS COMMISSION
SPECIAL

PROJECT NO.

COUNTY

STATION

STATE OF NORTH CAROLINA
STATE HIGHWAY AND
PUBLIC WORKS COMMISSION

FED. ROAD DIV. NO.	STATE	STATE PROJECT NO.	F.A. NO.	SHEET NO.
9	N.C.	2627	STP	40
F.A. PROJ. F-250(8)				

Stream Flow

17'-8" 15'-8" 17'-8"

1'-3" 1'-3" 6 I Girders 1'-3" 1'-3"

6"x6" Exp. Jt. Mat'l.

Bond @

1'-0" 3'-0" 1'-0"

4" Exp. Jt. Mat'l. (3/4" on fort. sides of all notches)

6'-10" 6'-10" 6'-10" 6'-10"

5'-0" 16'-5" 18'-11" 19'-11" 5'-0"

28'-5" 24'-11"

47'-4"

PLAN

BRIDGE SEAT ELEVATIONS 122.17 122.31 122.44 122.58 122.72

2" Exp. Jt. Mat'l.

9 spaces @ 1'-9" = 15'-9" 6-#5 S.S. @ 1'-3" ctrs. 1'-9" 6-#5 S.S. @ 1'-3" ctrs. 1'-9" 6-#5 S.S. @ 1'-3" ctrs. 1'-9"

6 Piles

2" Exp. Jt. Mat'l.

Bend in Field

3½" 6-#7 v. @ 10½" ctrs. Each Face

7'-10" 7'-10" 7'-10" 7'-10"

6-#7 v. @ 10½" ctrs. Each Face

NOTE: Piles to be driven to a min. bearing capacity of 30 tons each.

ELEVATION

Piece of 12 H 53 Steel Pile - Split and with web slotted to fit over pile web

NOTE: For detail of pile splice, see sheet No. S-15.

Weld

NOTE: Cap shall be welded to pile after driving.

SECTION X-X SECTION Y-Y

PILE CAPS

2'-6" 1'-9" 3-b2 Batter 3" in 12"

SECTION B-B

SECTION A-A SECTION C-C

Bar Types

PROJECT No. 2627

LENOIR COUNTY

STATION: 13+38 & 72 Line

END BENT #1

STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION

SUBSTRUCTURE

OCTOBER 1952

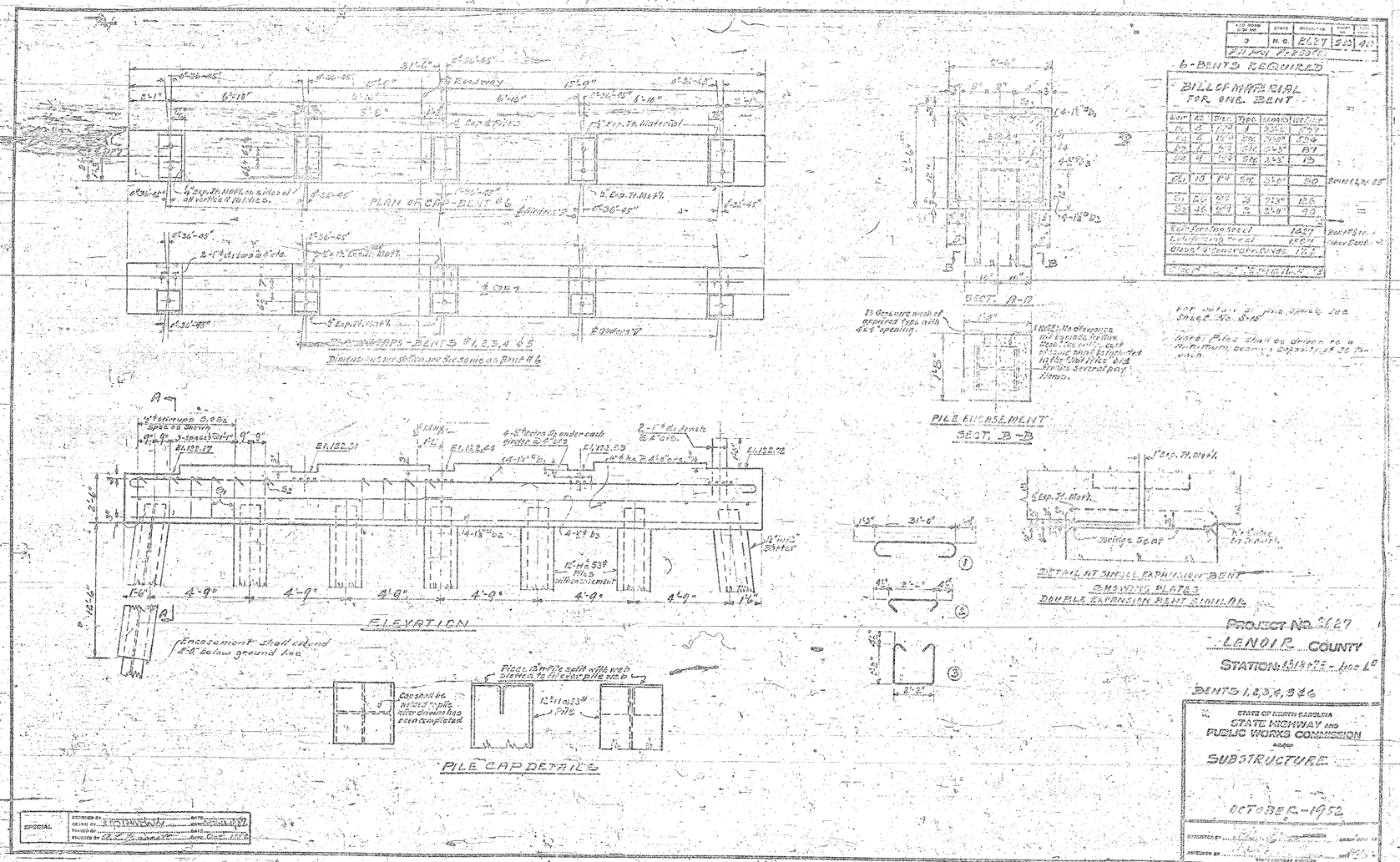
SPECIAL

DESIGNED BY ... DATE ... CHECKED ...

DRAWN BY ... DATE ... CHECKED ...

TRACED BY ... DATE ... CHECKED ...

APPROVED ... STATE HIGHWAY ENGINEER



FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
3	N.C.	2627	5-23	40

FA Proj. F-2507(1)

6-BENTS REQUIRED

BILL OF MATERIAL FOR ONE BENT

Item	No.	Size	Type	Length	Weight	
b_1	2	12"ϕ	1	33'-6"	597	
b_2	4	12"ϕ	Str.	31'-0"	534	
b_3	8	6"ϕ	Str.	4'-3"	87	
b_4	9	12"ϕ	Str.	2'-2"	13	
d_1	10	1"ϕ	Str.	3'-0"	80	Bents 1,2,3,4,5
S_1	26	6"ϕ	3	7'-3"	126	
S_2	16	6"ϕ	2	2'-11"	90	
Reinforcing Steel					1427	Bent #6 ea.
Reinforcing Steel					1507	Other Bent
Class "A" Concrete Cu. Yds.					17.7	

For detail of pile space see Sheet No. S-15

Note: Piles shall be driven to a minimum bearing capacity of 30 tons each.

PROJECT NO. 2627

LENOIR COUNTY

STATION: 1,318+75 - Line L

BENTS 1,2,3,4,5 & 6

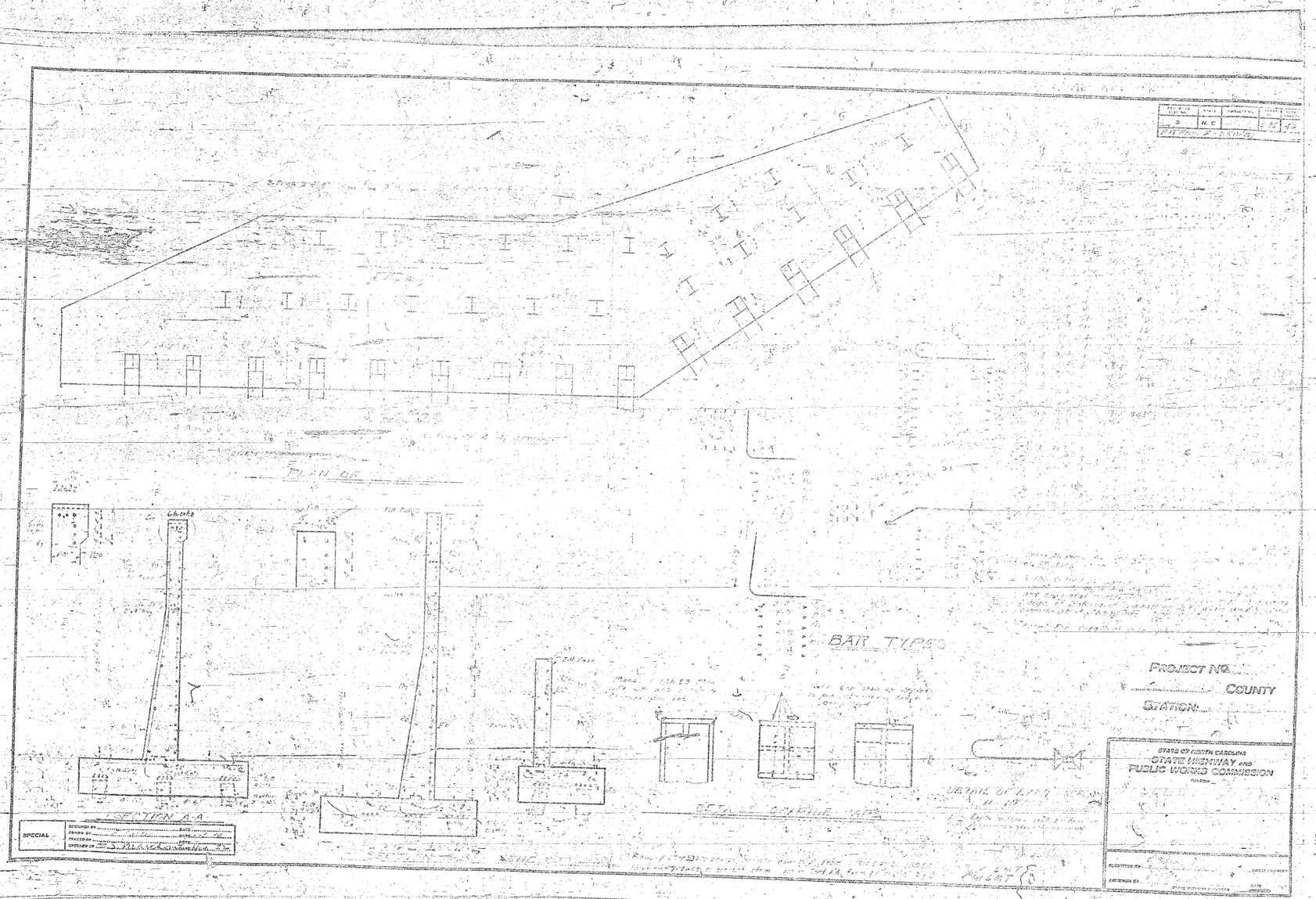
STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION
BRIDGE

SUBSTRUCTURE

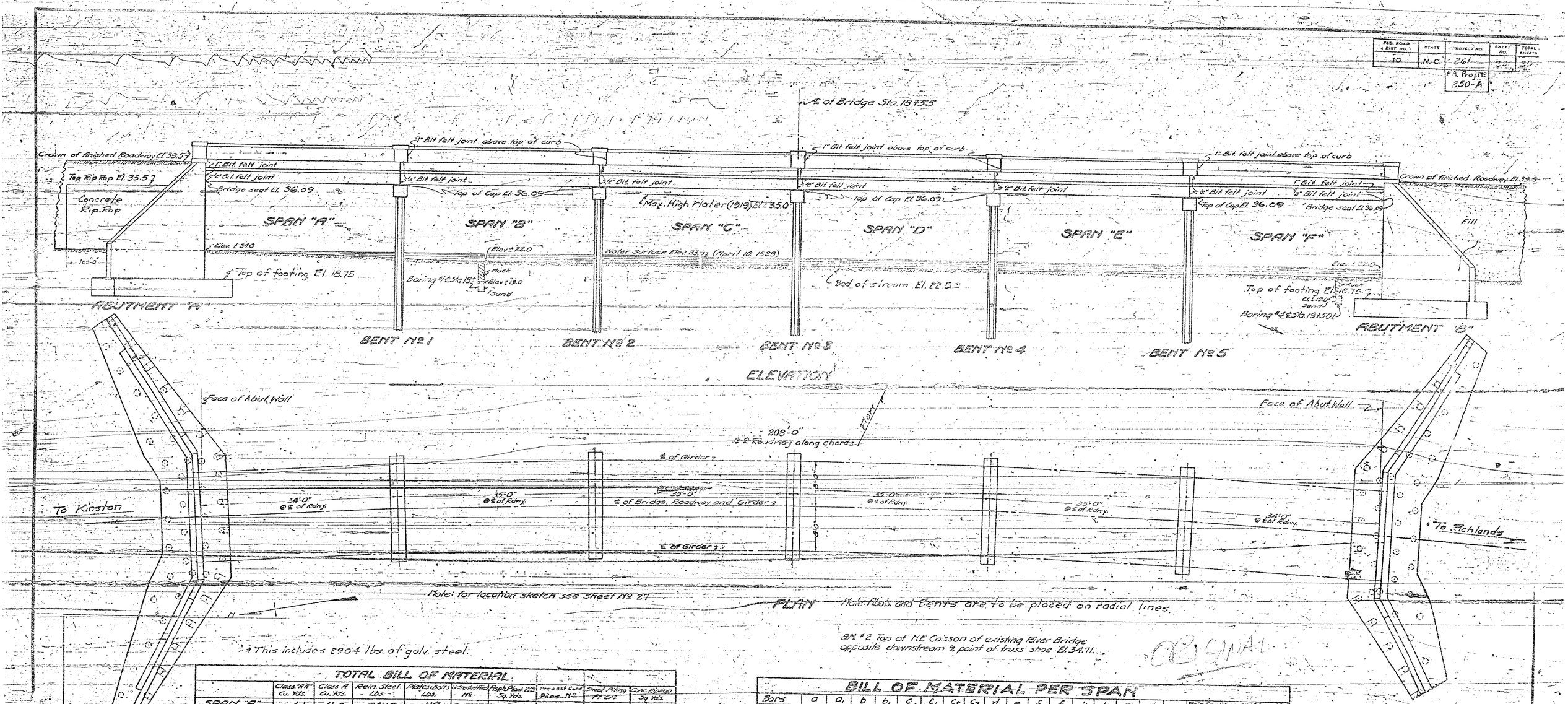
OCTOBER - 1952

SPECIAL

Stream Face
Fill Face
Existing Abutment
Note: Remove existing wall to line shown
Stream Face
Construction Joint
ELEVATION - ABUTMENT B
WINGS SWUNG PARALLEL
Prop. Bridge
Existing Abutment
PLAN OF ABUTMENT 'B'
SPECIAL
DESIGNED BY
DRAWN BY
TRACED BY
CHECKED BY
DATE
PROJECT NO. 2627
COUNTY
STATION
ABUTMENT 'B'
STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION
RALEIGH
SUBSTRUCTURE


PLAN OF
BAR TYPES
SECTION A-A
SPECIAL
PROJECT NO.
COUNTY
STATION:
STATE OF NORTH CAROLINA
STATE HIGHWAY AND
PUBLIC WORKS COMMISSION

FED. ROAD & DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
10	N.C.	261	22	30
		F.A. Proj. No 750-A		



Note: for location sketch see sheet No 27

Note: Abuts. and Bents are to be placed on radial lines.

BM #2 Top of NE Carson of existing River Bridge opposite downstream ℄ point of truss shoe El. 34.71.

* This includes 2904 lbs. of galv. steel.

TOTAL BILL OF MATERIAL

	Class "A" Cu. Yds.	Class A Cu. Yds.	Rein. Steel Lbs.	Piles & Bolts Lbs.	Untreated Timber M ft.	Rip Rap, Plain & Cut Sq. Yds.	Precast Conc. Piles No.	Sheet Piling Ft. B.M.	Conc. Rip Rap Sq. Yds.
SPAN "A"	4.1	41.0	9618	113	—	61.5	—		
SPAN "B"	3.5	40.4	9536	113	—	62.2	—		
SPAN "C"	3.5	40.4	9536	113	—	62.2	—		
SPAN "D"	3.5	40.4	9536	113	—	62.2	—		
SPAN "E"	3.5	40.4	9536	113	—	62.2	—		
SPAN "F"	3.5	41.0	9568	113	—	61.3	—		
BENT No. 1	—	3.7	341	114	—	—	4		
BENT No. 2	—	3.7	541	114	—	—	4		
BENT No. 3	—	3.7	541	114	—	—	4		
BENT No. 4	—	3.7	541	114	—	—	4		
BENT No. 5	—	3.7	541	114	—	—	4		
ABUT. "A"	—	152.0	14992	67	46	—	—		
ABUT. "B"	—	152.0	14992	67	46	—	—		
PRECAST PILES	—	—	9760	—	—	—	—		
TOTAL	21.6	566.1	99773	1382	92	371.4	20	5440	272

Untreated timber piles 1 in. ft. 1940 — Precast conc.

Note: A temporary crossing shall be provided at Station 18+55. The existing structure may be used as a temporary crossing and shall afterwards be removed See Specifications.

Revised for galvanized steel bars 6/25/30 by E.H.A. by J.S.W.

Concrete Rip Rap Upstream side only See Sheet No 18

BILL OF MATERIAL PER SPAN

Bars	a	a_1	b	b_1	c.	c_1	c_2	c_3	d.	e	f	f_1	k	k_1	m	s	s_1	Rein. Steel Lbs.	Conc. Cl. A Cu. Yds.	Conc. Cl. A Cu. Yds.
Span A	70	70	44	16	6	6	6	6	12	82	16	—	2	2	4	82	41	9618	41.0	4.1
Span B	70	70	48	12	6	6	6	6	12	68	—	16	—	4	4	82	41	9536	40.4	3.5
Span C	70	70	48	12	6	6	6	6	12	68	—	16	—	4	4	82	41	9536	40.4	3.5
Span D	70	70	48	12	6	6	6	6	12	68	—	16	—	4	4	82	41	9536	40.4	3.5
Span E	70	70	48	12	6	6	6	6	12	68	—	16	—	4	4	82	41	9536	40.4	3.5
Span F	70	70	44	16	6	6	6	6	12	74	—	16	2	2	—	82	41	9568	41.0	3.5
Totals	420	420	280	80	36	36	36	36	72	426	16	80	4	20	20	492	246	57324	243.6	21.6

GENERAL NOTE

Class "A" concrete to be used throughout except in handrails above top of curbs and in copings. Proportions 1:2:4
Class "A1" concrete to be used in handrails and in copings. Proportions 1:2:3. All exposed corners, to be chamfered 1" except on handrails above top of curbs and expansion joints. Corners of handrail coping and posts to be chamfered ¾". Expansion joints and corners of openings to be chamfered ¼".
All reinforcing steel to be deformed bars. All materials and workmanship as per specifications of the North Carolina State Highway Commission.
Foundation data as ... Surfaces given are believed to be correct and are furnished for the convenience of Bidders but the State Highway Commission assumes no responsibility for their guarantees as correct any of the information given. See "Instructions to Bidders" in Specifications.
* The wearing surface shall be Elastic Park as manufactured by the Philip Carey Co., or its equal.

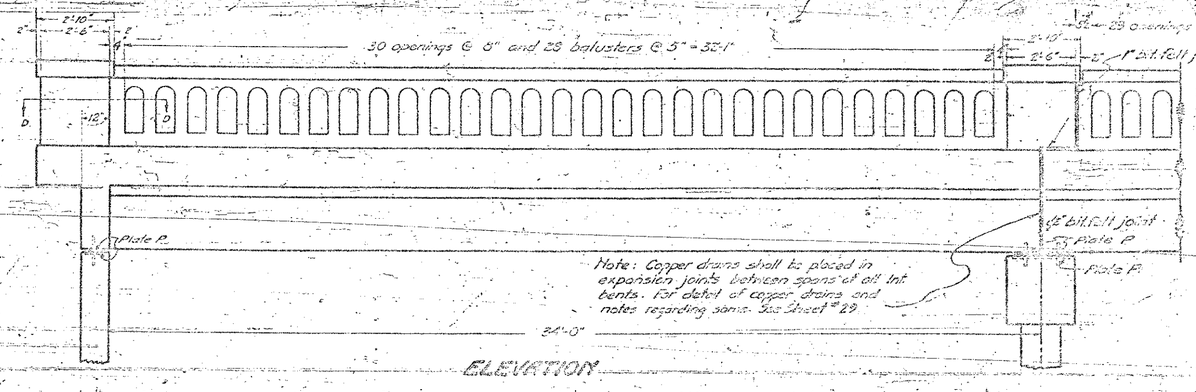
DRAWN BY ... 10 DATE Feb. 1930
TRACED BY ... 2.0 DATE Feb. 1930
CHECKED BY ... 0.5 DATE Feb. 1930

PROJECT No. 261
LENOIR COUNTY
STATION 18+55

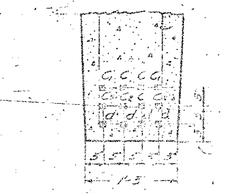
STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH
SPECIAL GENERAL DRAWING FOR OVERFLOW BRIDGE No. 2 ON NC
FEBRUARY 1930

SUBMITTED BY W. J. Cooper
APPROVED BY John H. Wolf
PLAN No. 2

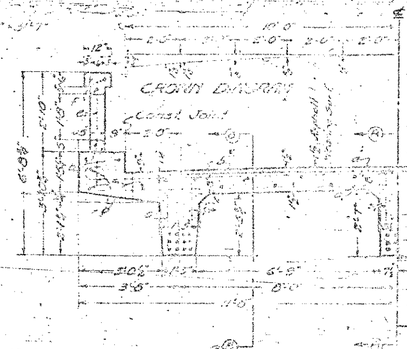
FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
10	N.C.	B61	23	32
		AASHO No. 23(4)		



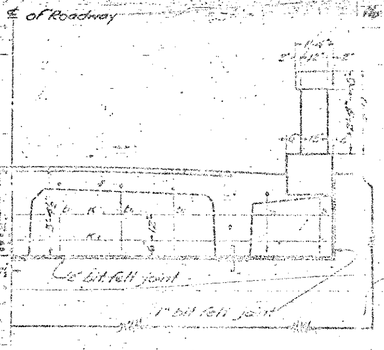
ELEVATION



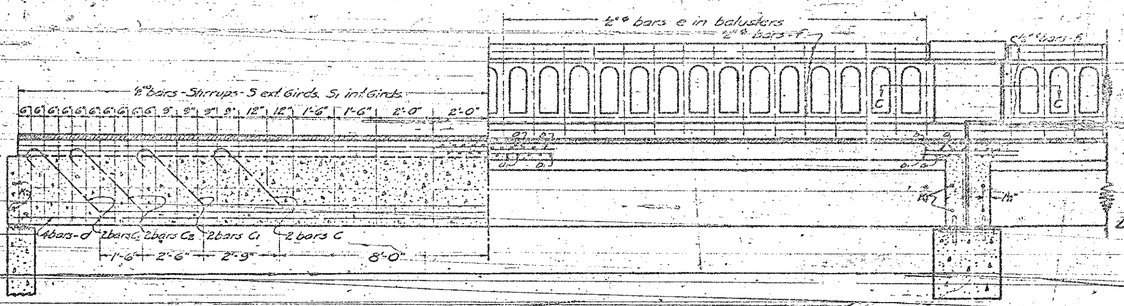
DETAIL OF GIRDER



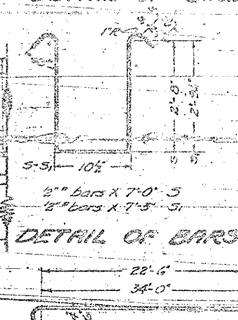
HALF INTERIOR SECTION



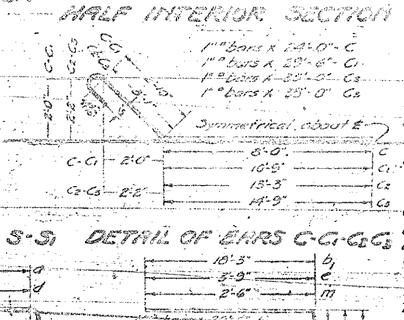
HALF END VIEW



SECTION C-C



DETAIL OF BARS S-S1



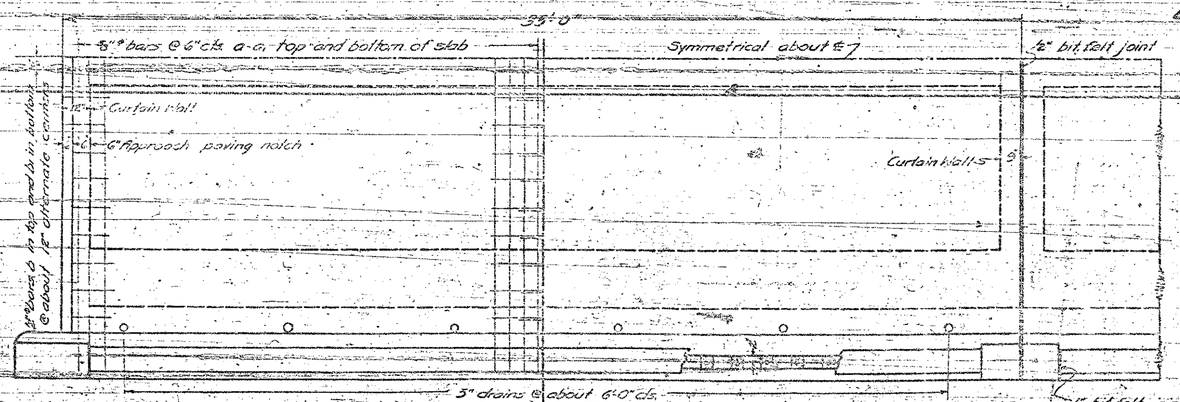
DETAIL OF BARS C-C1-C2-C3

DESIGN DATA

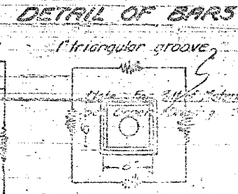
Specifications	N.C. State Highway Commission
Assumed Live Load	Loading H15 for Typical 15 Ton Truck
Impact Allowance	30% of Live Load

GENERAL NOTE:

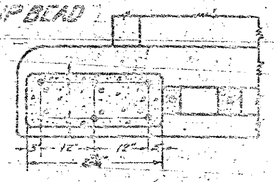
Class A concrete to be used throughout except in handrails above top of curbs. Proportions 1:2:4.
Class AA concrete to be used in handrails above top of curbs. Proportions 1:1½:3.
All reinforcing steel to be deformed bars.
The girders, slab and curbs must be poured in one operation, allowing no time for initial set to take place between them. Construction joints will not be permitted in curbs.
Two name plates shall be placed on the bridge, one at the inside of each of right hand post approaching traffic. All exposed corners to be chamfered 1", except on handrails and expansion joints. Corners of handrail capping and posts to be chamfered ¾". Expansion joints and balusters to be given ¾ chamfer. Unless otherwise specified under special provisions the wearing surface is to be placed by the Bridge Contractor.
All material and workmanship as per the specifications of the N.C. State Highway Commission.



HALF PLAN



PLAN OF DRIP BEAD



SECTION D-D

BILL OF MATERIAL

6 SPANS.

Bar	No.	Size	Length	Weight
a	420	⅝"	24'-0"	10512
a1	420	⅝"	23'-6"	10017
b	700	½"	18'-5"	3556
b1	70	½"	20'-6"	1094
c	36	1"	24'-0"	2940
c1	36	1"	23'-6"	2812
c2	36	1"	23'-0"	2804
c3	36	1"	38'-0"	4650
d	72	1"	36'-6"	8934
*e	426	¼"	5'-9"	1643
*f	16	½"	19'-9"	211
*h	60	½"	18'-4"	359
k	4	½"	22'-1"	59
m	20	½"	13'-9"	184
n	20	½"	9'-6"	127
s	732	½"	17'-0"	2671
s1	246	½"	7'-4"	386
Reinforcing Steel Lbs.				57154
Class "A" Concrete C.Y.				117
Class "AA" concrete C.Y.				18.1
Rail & Posts Lbs.				1179

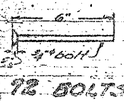
PROJECT NO. 261
LENOIR COUNTY
6 SPANS. NO. 3 ATION RIVER
OVERFLOW BRIDGE NO. 2

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

SPECIAL
DETAIL OF

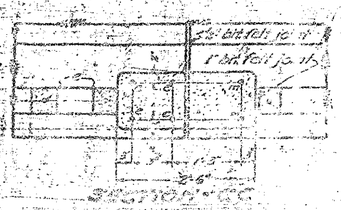
SHOWING REINFORCEMENT

SHOWING OUTLINES



MAKE 72 BOLTS

MAKE 18 PLATES-P

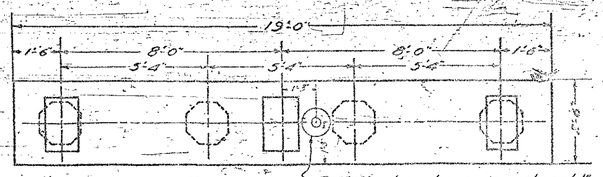


SPECIAL			
STANDARD			

E.W.A. by J.S.

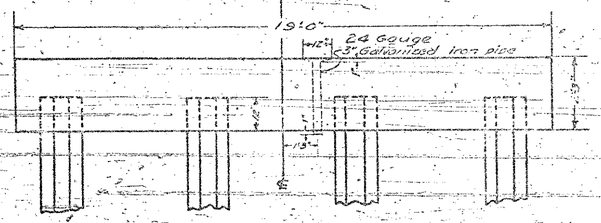
FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
10	N.C.	261	47	50

F. A. PROJ. U. P. PROJ.



12" Circular depression shaped 1" to pipe drain forming catch basin

PLAN



ELEVATION
SHOWING OUTLINES

END VIEW

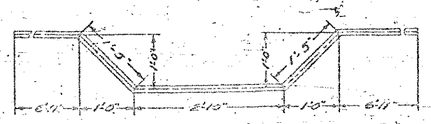
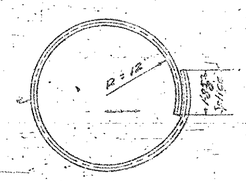


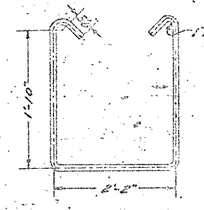
Plate P
¾" bar X 19'-6" b

DETAIL OF BARS - a, P



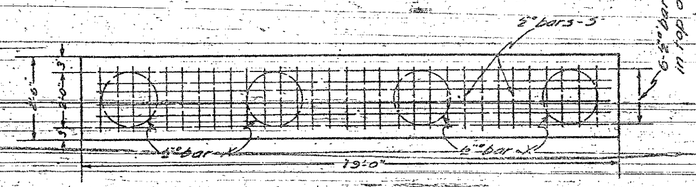
⅝" bar X 8'-0" X

DETAIL OF BARS - X

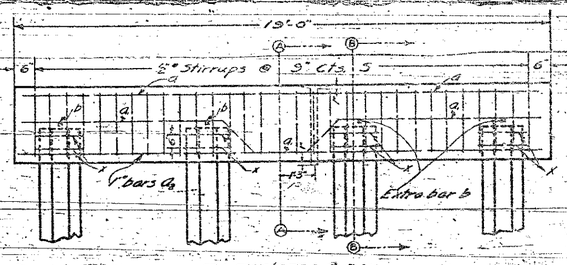


⅝" bar X 6'-9"-S

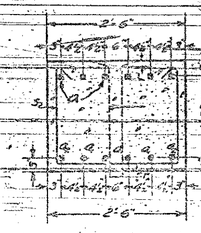
DETAIL OF BARS - S



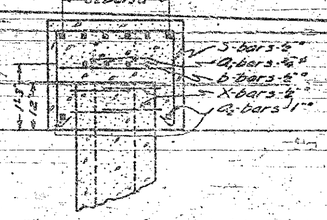
PLAN OF REINFORCEMENT



ELEVATION
SHOWING REINFORCEMENT



SECTION A-A



SECTION B-B

DESIGN DATA

Specifications: N.C. State Highway Commission.
Steel in tension: 16000 lbs. per sq. in.
Concrete in compression: 650 lbs. per sq. in.
Shear Class "A" concrete: 40 lbs. per sq. in.
This design is based on the net area of bars as follows. ¼" = 0.250 sq. in.
⅝" = 0.442 sq. in. 1" = 1.000 sq. in.

GENERAL NOTE

Class "A" concrete to be used throughout. Proportions 1:2:4.
All reinforcing steel shall be deformed bars. All dimensions relative to reinforcement are to centers of bars. No splices of bars will be permitted other than those shown on plans.
All reinforcing steel shall be secured in their correct position.
All materials and workmanship as per specifications of the North Carolina State Highway Commission.
All exposed corners to be chamfered 1".
The portion of the pile projecting into the cap shall be roughened, thoroughly cleaned and wetted previous to pouring the cap.

BILL OF MATERIAL FOR 5 CAPS				
Bars	No.	Size	Length	Weight
a	20	¼"	18'-6"	370
a	20	⅝"	19'-6"	875
a₂	10	1"	18'-6"	630
S	125	½"	6'-9"	715
X	40	½"	8'-0"	270
b	20	½"	2'-0"	35
Reinforcing Steel lbs.				2925
Concrete Class A Cu Yds.				13.5
Reinforced Precast Piles No.				20
Plates or Limit Pins				370
Plates & Bolts - lbs.				420

BILL OF MATERIAL FOR 1 CAP				
Bars	No.	Size	Length	Weight
a	6	¼"	18'-6"	94
a	4	⅝"	19'-6"	117
a₂	2	1"	18'-6"	126
S	25	½"	6'-9"	143
X	6	½"	8'-0"	34
b	4	½"	2'-0"	7
Reinforcing Steel lbs.				541
Concrete Class A Cu Yds.				3.7
Reinforced Precast Piles No.				4
Plates & Bolts - lbs.				

PROJECT No. 261
LENOIR COUNTY
STATION 18+56
BENTS No. 1-2-3-4-5

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
BASE OF SPECIAL
DETAIL OF INTERMEDIATE PILE BENT CAPS
FOR
[illegible]

SPECIAL	TRACED BY [illegible] DATE [illegible] 1930
	DESIGNED BY [illegible] DATE
	DRAWN BY [illegible] DATE
	CHECKED BY T.M. Bell Jr. DATE Aug. 1930
	APPROVED BY M.S. Lee, Jr. DATE Nov. 1930

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS	PROJECT NO.
10	N.C.	246	1	10	37

SHOWING REINFORCEMENT IN FRONT OF WALL AND TOP OF FOOTING

SHOWING REINFORCEMENT IN BACK OF WALL AND BOTTOM OF FOOTING

ELEVATION
WINGS SWUNG PARALLEL

SHOWING REINFORCEMENT IN FRONT OF WALL AND TOP OF FOOTING

SHOWING REINFORCEMENT IN BACK OF WALL AND BOTTOM OF FOOTING

PLAN

Crown of finished Roadway Elev. 99.50 — To vary according to type of surfacing used

SECTION E-E

SECTION F-F

SECTION A-A SHOWING PILES

SECTION AT END OF BATTER

SECTION A-A

DETAIL OF BARS h

DETAIL OF BARS h_1, h_6

DETAIL OF BARS h_2-h_5

DETAIL OF BARS Z-Z, c-c

END OF WING

DESIGN DATA

Specifications N.C. State Highway Commission
Equivalent fluid pressure 30 lbs. per cu ft.
Steel in tension 16000 lbs. per sq in.
Concrete in compression 650 lbs per sq in.
Shear Class A concrete 40 lbs per sq in.
This design is based on the net area of bars as follows: [illegible]
⅝" = 0.307 sq in. ¾" = 0.442 sq in. ⅞" = 0.601 sq in. 1" = 0.785 sq in. 1¼" = 1.227 sq in.
1½" = 1.563 sq in.

GENERAL NOTE

Class A concrete 1:2:4 to be used throughout. Proportions 1:2:4
Reinforcing steel shall be deformed bars square twisted bars not to be considered deformed bar.
All dimensions relative to reinforcement.
No splices of bars will be permitted other than shown.
3" drains to be placed at 10'-0" centers in rows and 1' above just above present ground line.
All material and workmanship to conform to the specifications of the N.C. State Highway Commission.
All reinforcing steel to be securely held in correct position by means of the following: [illegible]
All exposed corners to be chamfered.

BILL OF MATERIAL 2 ABUTS

BARS	NO.	SIZE	LENGTH	WEIGHT
V	98	⅝"	47'-0"	4616
h_1	24	1"	32'-0"	768
h_6	32	¾"	19'-5"	605
h_2	58	¾"	31'-3"	1837
h_3	22	¾"	11'-3"	182
h_4	54	¾"	6'-5"	287
h_5	28	¾"	21'-6"	226
h_6	20	¾"	7'-9"	109
h_7	22	¾"	5'-8"	87
h_8	16	¾"	3'-0"	41
h_9	16	¾"	6'-0"	82
h_{10}	12	⅝"	8'-9"	202
h_{11}	91	⅝"	6'-0"	98
h_{12}	26	¾"	28'-6"	650
h_{13}	8	¾"	30'-0"	318
h_{14}	12	¾"	30'-6"	330
h_{15}	8	¾"	23'-9"	356
h_{16}	8	¾"	7'-3"	69
h_{17}	120	¾"	11'-0"	1480
h_{18}	40	¾"	11'-0"	330
h_{19}	8	¾"	11'-0"	68
h_{20}	20	¾"	12'-9"	3387
h_{21}	28	¾"	10'-6"	1768
h_{22}	80	¾"	10'-3"	4200
h_{23}	80	¾"	3'-3"	1786
h_{24}	8	¾"	11'-0"	318
			2'-0"	31
			12'-0"	1214
			10'-0"	741
			5'-0"	618
			3'-0"	37
			7'-0"	74

Bents	No.	Size	Length	Weight
1 Pr.	20	5"	35'-0"	
Pile	16	5"	35'-0"	1120
1 Pr.	20	5"	35'-0"	1400
Tie	28	12"	12'-0"	1344

Where 5" H. pile cannot be driven to refusal, 6" H. pile will be used.

Note: Concrete in bents to be placed after piles are driven.

PROJECT NO. 246
LETTER [illegible]
STATION [illegible]
ABUTMENT [illegible]

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
STANDARD R.C. DETAIL

92

TOTAL BILL OF MATERIAL PROJECT NO. 261

(See also General Summary, Structure Book, Pg No 79)

Identification	Class "AA" Conc. Cu. Yds.	Class "A" Conc. Cu. Yds.	Rein. Steel Lbs.	Rein. Steel in Pile Cutoffs at ¾ Contract Price, Lbs.	Rein. Steel in Precast Conc. Piles, Lbs.	Creosoted Timber Piles, Lin. Ft.	Precast Conc. Piles, Lin. Ft.	Precast Conc. Pile Cut offs at ¾ Contract Price, Lin. Ft.	Untreat. Tim. Piles, Lin. Ft.	Unloaded Test Piles, No.	Sheet Piling M. Ft. B.M.	Structural Steel, Lbs.	Creo. Struc. Tim. M. Ft. B.M.	Asphaltic Plank W.S. Sq. Yds.	Masonry Lbs.
Overflow Bridge No. 1 Sta. 2+50 See Str. Book Pg. 11	11.1	387.2	63,656	60.6	1,987.4		239.9	7.1	2,389.8	1				184.8	
Overflow Bridge No. 2 Sta. 18+55 See Str. Book Pg. 24	21.6	566.1	99,773	503.5	4616.5		561.0	59.0	2,637.9	1	54.4			371.4	
Main Bridge over Neuse River Station 27+86 ± See Str. Book Pg. 65	29.0	806.3	158,412	2,545.2	61,510.1	875.4	3,498.4	140.6		3		176,255	46.801	803.2	26,783
6'x6' R.C. Box Culvert at Station 75+13 See Str. Book Pg. 68		43.7	6,075												
Southwest Creek Bridge over Southwest Creek Station 21+90 See Str. Book Pg. 78	12.7	46.6	3,155			479.3							17.445		
Totals	74.4	1,849.7	331,071	3,109.3	68,114.0	973.67	4,299.3	206.7	5,027.7	5	54.4	~~176,255~~ 176,255	64.246	1,359.4	~~26,783~~ 26,783

Removal of old Bridges, Lump Sum $2,500.00 (As per contract)

Extra Work { Extra Work order No. 2-249 $32.34 (see Str. Book Pg. 11)
" " " " 2-246 280.00 (See Str Book Pg. 78)

Extra Work Total $312.34

Computed by - Roy D. Franks
Checked by { R.A. Pollock
L.W. Jones

ENGINEER NOTE:
Stream face of Abutment 'B' Line LE shall be on a radial for 3°30' curve and shall intersect the existing Abutment B on Line LW along the stream face and at the point where the wing makes a 30° angle with the abutment. From this, the Station for Abutment B shall be determined as the basis for staking out the bridge on Line LE.

DESIGN DATA
Live Loads: [illegible]
Reinforcing Steel in Tension: [illegible]

Piles: Piles for Abutments [illegible] driven to a minimum [illegible] 30 Tons each.

Concrete: All concrete shall be air-entraining, see Special Provisions.

End Bent Piles: End Bent Piles shall be driven through the roadway fill.

Traffic: Traffic shall be maintained over existing Structure (See Special Provisions).

For other "Design data and General Notes" See Sheet [illegible]

The Contractor will be required to drive [illegible] test piles in the bridge at Sta. 1318+78 Line LE. One 40' long test pile shall be driven at the upstream end of Bent No. [illegible] and Bent No. 6. Pile lengths of the bridge at Sta. 1318+41.6 [illegible] will also be determined from these test piles. Test piles will be paid for as Steel Piles. See Specifications.

Traffic: The bridge on Line LE shall be constructed as the first part of work on the project. After its completion, traffic will be turned over this bridge. See Special Prov.

For surface finish requirements, See Special Prov.

Excavation for pile encasement see sheet [illegible]

Built according to plans except as noted

Revised Bent #5 Sta. 1318+78 from a single exp. to a double exp. bent by C.B.P. checked by G.S.M. 2-5-58

ELEVATION PROPOSED STRUCTURE

Sta. 1318+41.6 LW

DIVISION OF CLASS 'A' CONCRETE	
Using Std. Size No. 4 Coarse Aggregate	21.5 Cu.Yds.
Using Std. Size No. 5 Coarse Aggregate	257.3 Cu.Yds.
TOTAL CLASS 'A' CONCRETE	278.8 Cu.Yds.

Sta. 1318+78 (80)

DIVISION OF CLASS 'A' CONCRETE	
Using Std. Size No. 4 Coarse Aggregate	24.2 Cu.Yds.
Using Std. Size No. 5 Coarse Aggregate	545.4 Cu.Yds.
TOTAL CLASS 'A' CONCRETE	569.6 Cu.Yds.

TOTAL BILL OF MATERIAL FOR BRIDGE AT STA. 1318+41.6 LW

For additional Concrete see Sheet No. 7G	Class 'A' Concrete Cu.Yds.	Reinforcing Steel Lbs.	Steel Piles 12" HP 53# No.	Steel Piles Lin.Ft.	Plates & Bolts Lbs.	Wearing Surface Tons	Method 'A' Water Proof. Sq.Yds.	Unclassified Struct. Exca. Cu.Yds.	Conc. Rip Rap Sq.Yds.	
Span A	32.2	7063	—	—	451	13				
Span B	26.1	6106	—	—	—	12				
Span C	29.8	6246	—	—	—	11				
Span D	31.0	6347	—	—	—	10				
Span E	31.1	6251	—	—	—	10				
Span F	39.0	7907	—	—	—	10		3.5		
Abutment A	22.3	1756	7	140	—	—	40	40	—	
Bent #1	6.6	681	3	105	—	—				
Bent #2	6.9	664	3	105	—	—				
Bent #3	7.1	686	3	105	—	—				
Bent #4	7.2	715	3	105	—	—				
Bent #5	7.5	713	3	105	—	—		3.3		
Abutment B	26.3	2240	9	180	[illegible]	—	9	50	280	
Approach curb	1.6	25	—	[illegible]	—					
TOTAL	[illegible]	47396	31	840	451	66	49	90	280	

Wearing surface to be placed by the Roadway Contractor.

TOTAL BILL OF MATERIAL FOR BRIDGE AT STA. 1318+78 LE

	Class 'A' Concrete Cu.Yds.	Reinforcing Steel Lbs.	Steel Piles 12" HP 53# No.	Steel Piles Lin.Ft.	Plates & Bolts Lbs.		Conc. Rip Rap Sq.Yds.	Method 'A' Water Proof. Sq.Yds.	Unclassified Struct. Exca. Cu.Yds.	
Superstructure	327.0	97030	—	—	1313		—			
End Bent #1	12.7	2270	7	245	—		260			
Bent #1	17.4	1507	7	245	—		—			
Bent #2	17.4	1507	7	245	—		—			
Bent #3	17.4	1507	7	245	—		—			
Bent #4	17.4	1507	7	245	—		—			
Bent #5	17.4	1507	7	245	—		—			
Bent #6	17.4	1427	7	245	—		—			
Abutment B	120.5	12689	36	720	—		—	24	200	
Approach Curb	5.8	87	—	—	—	6.0	—	—	—	
TOTAL	569.6	121438	85	2455	1313	6.0	260	24	200	

1166.0 [illegible] 22.6 256

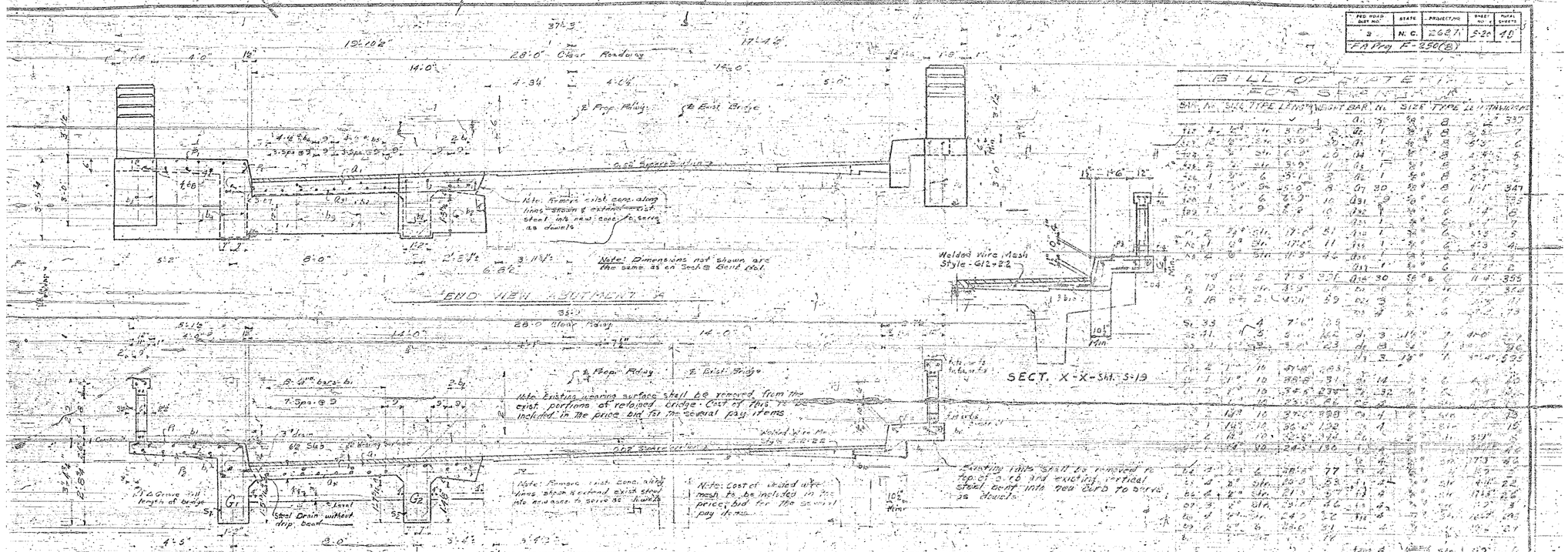
Revised to change quantities for Approach Curbs by [illegible] 3/22/54
Revised to show Division of Class 'A' Concrete and to correct Conc. quantities for Abut. B [illegible]
Revised to show 3° curve on line LW and 3°30' curve on line LE by C.B.P. & by G.S.M. 2-3-58
Revised for relocation of LE Bridge. G.S.M. 2-18-58 by C.B.P.

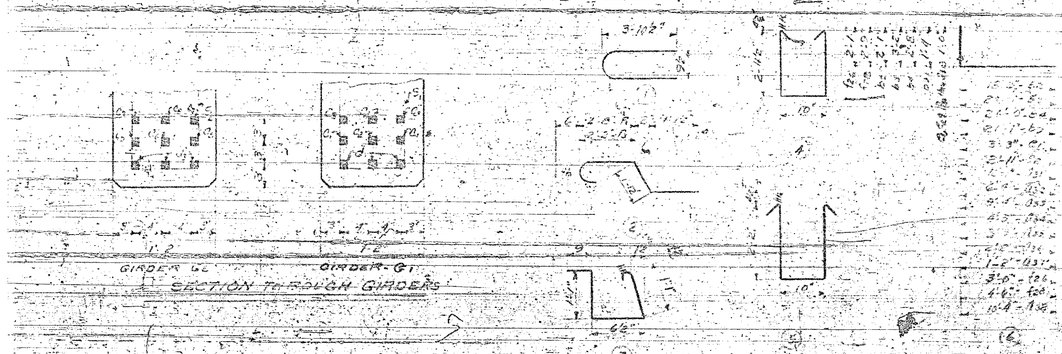
B.M. [illegible]
Present Bridge El. 124.38

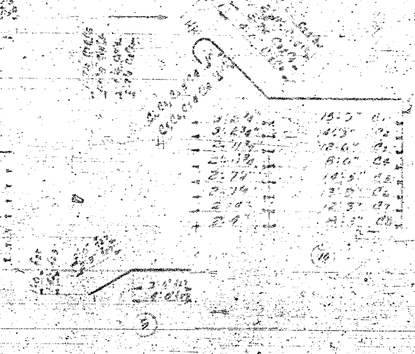
PROJECT NO. [illegible]
LENOIR COUNTY
STATION 1318+41.6 LW
1318+78 LE

STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION
RALEIGH
GENERAL DRAWING FOR BRIDGES OVER NEUSE RIVER OVERFLOW BETWEEN RICHLANDS AND KINSTON

FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
3	N. C.	2687	S-2a	10
FA Proj. F-250(6)				







BILL OF STEEL FOR SUPERSTRUCTURE

SHT. No.	SHT.	TYPE	LENGTH	WEIGHT	BAR. No.	SIZE	TYPE	LENGTH	WEIGHT
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	2				A2	5			
	3				A3	5			
	4				A4	5			
	5				A5	5			
	6				A6	5			
	7				A7	5			
	8				A8	5			
	9				A9	5			
S2	1				A10	5			
	2				A11	5			
S3	1				A12	5			
	2				A13	5			
	3				A14	5			
	4				A15	5			
S4	1				A16	5			
	2				A17	5			
	3				A18	5			
	4				A19	5			
S5	1				A20	5			
	2				A21	5			
	3				A22	5			
	4				A23	5			
S6	1				A24	5			
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	3				A26	5			
	4				A27	5			
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S137	1				A548	5			
	2				A549	5			
	3				A550	5			
	4				A551	5			
S138	1				A552	5			
	2				A553	5			
	3				A554	5			
	4				A555	5			
S139	1				A556	5			
	2				A557	5			
	3				A558	5			
	4				A559	5			
S140	1				A560	5			
	2				A561	5			
	3				A562	5			
	4				A563	5			
S141	1				A564	5			
	2				A565	5			
	3				A566	5			
	4				A567	5			
S142	1				A568	5			
	2				A569	5			
	3				A570	5			
	4				A571	5			
S143	1				A572	5			
	2				A573	5			
	3				A574	5			
	4				A575	5			
S144	1				A576	5			
	2				A577	5			
	3				A578	5			
	4				A579	5			
S145	1				A580	5			
	2				A581	5			
	3				A582	5			
	4				A583	5			
S146	1				A584	5			
	2				A585	5			
	3				A586	5			
	4				A587	5			
S147	1				A588	5			
	2				A589	5			
	3				A590	5			
	4				A591	5			
S148	1				A592	5			
	2				A593	5			
	3				A594	5			
	4				A595	5			
S149	1				A596	5			
	2				A597	5			
	3				A598	5			
	4				A599	5			
S150	1				A600	5			
	2				A601	5			
	3				A602	5			
	4				A603	5			
S151	1				A604	5			
	2				A605	5			
	3				A606	5			
	4				A607	5			
S152	1				A608	5			
	2				A609	5			
	3				A610	5			
	4				A611	5			
S153	1				A612	5			
	2				A613	5			
	3				A614	5			
	4				A615	5			
S154	1				A616	5			
	2				A617	5			
	3				A618	5			
	4				A619	5			
S155	1				A620	5			
	2				A621	5			
	3				A622	5			
	4				A623	5			
S156	1				A624	5			
	2				A625	5			
	3				A626	5			
	4				A627	5			
S157	1				A628	5			
	2				A629	5			
	3				A630	5			
	4				A631	5			
S158	1				A632	5			
	2				A633	5			
	3				A634	5			
	4				A635	5			
S159	1				A636	5			
	2				A637	5			
	3				A638	5			
	4				A639	5			
S160	1				A640	5			
	2				A641	5			
	3				A642	5			
	4				A643	5			
S161	1				A644	5			
	2				A645	5			
	3				A646	5			
	4				A647	5			
S162	1				A648	5			
	2				A649	5			
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S163	1				A652	5			
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S165	1				A660	5			
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S166	1				A664	5			
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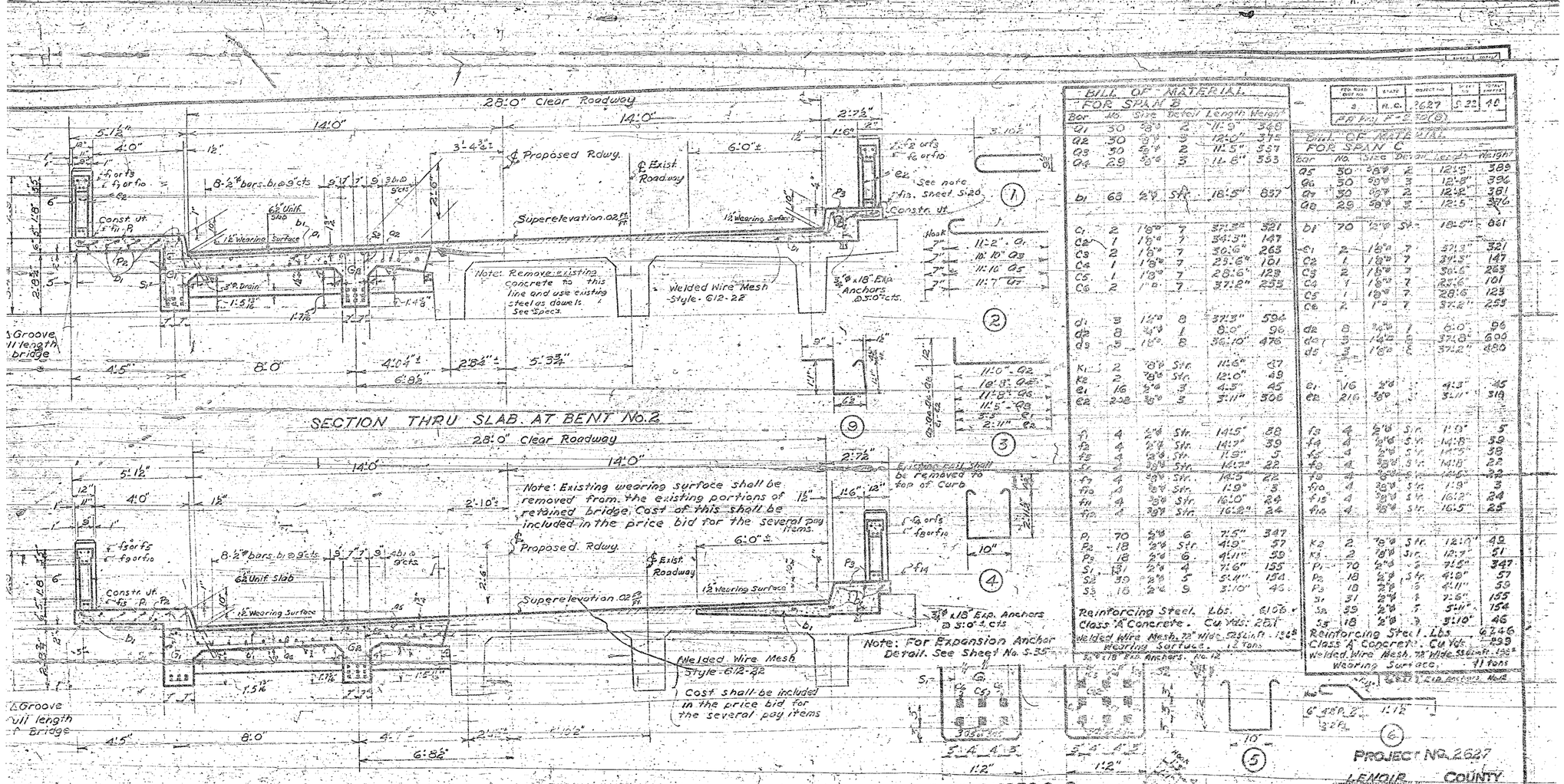
	4				A667	5			
S167	1				A668	5			
	2				A669	5			
	3				A670	5			
	4				A671	5			
S168	1				A672	5			
	2				A673	5			
	3				A674	5			
	4				A675	5			
S169	1				A676	5			
	2				A677	5			
	3				A678	5			
	4				A679	5			
S170	1				A680	5			
	2				A681	5			
	3				A682	5			
	4				A683	5			
S171	1				A684	5			
	2				A685	5			
	3				A686	5			
	4				A687	5			
S172	1				A688	5			
	2				A689	5			
	3				A690	5			
	4				A691	5			
S173	1				A692	5			
	2				A693	5			
	3				A694	5			
	4				A695	5			
S174	1				A696	5			
	2				A697	5			
	3				A698	5			
	4				A699	5



BILL OF MATERIAL FOR SPAN B

Bar	No.	Size	Detail	Length	Weight
G1	30	#9	2	11'-9"	368
G2	30	#9	3	12'-0"	376
G3	30	#9	2	11'-5"	357
G4	29	#8	3	11'-8"	353
b1	68	#9	St.	18'-5"	837
C1	2	#8	7	37'-2"	321
C2	1	#8	7	34'-3"	147
C3	2	#8	7	30'-6"	263
C4	1	#8	7	23'-6"	101
C5	1	#8	7	28'-6"	123
C6	2	#8	7	37'-2"	255
d1	8	#5	8	37'-3"	594
d2	8	#4	1	8'-0"	96
d3	5	#8	8	36'-10"	476
K1	2	#8	Str.	11'-6"	47
K2	2	#8	Str.	12'-0"	49
e1	16	#5	3	4'-5"	45
e2	238	#6	5	3'-11"	506
f1	4	#6	Str.	14'-5"	88
f2	4	#7	Str.	14'-7"	89
f3	4	#8	Str.	11'-9"	5
f4	4	#6	Str.	14'-2"	22
f5	4	#6	Str.	14'-5"	22
f6	4	#6	Str.	1'-9"	3
f7	4	#6	Str.	16'-0"	24
f8	4	#7	Str.	16'-8"	24
P1	70	#6	6	7'-5"	347
P2	18	#7	Str.	4'-9"	57
P3	18	#6	6	4'-11"	59
S1	31	#7	4	7'-6"	155
S2	30	#6	5	5'-11"	154
S3	16	#7	9	3'-10"	46

Reinforcing Steel. Lbs. 6106
Class "A" Concrete. Cu Yds. 28.1
Welded Wire Mesh. 72" Wide. 53 Lin Ft. 1.8 Tons
Wearing Surface. 1.2 Tons

BILL OF MATERIAL FOR SPAN C

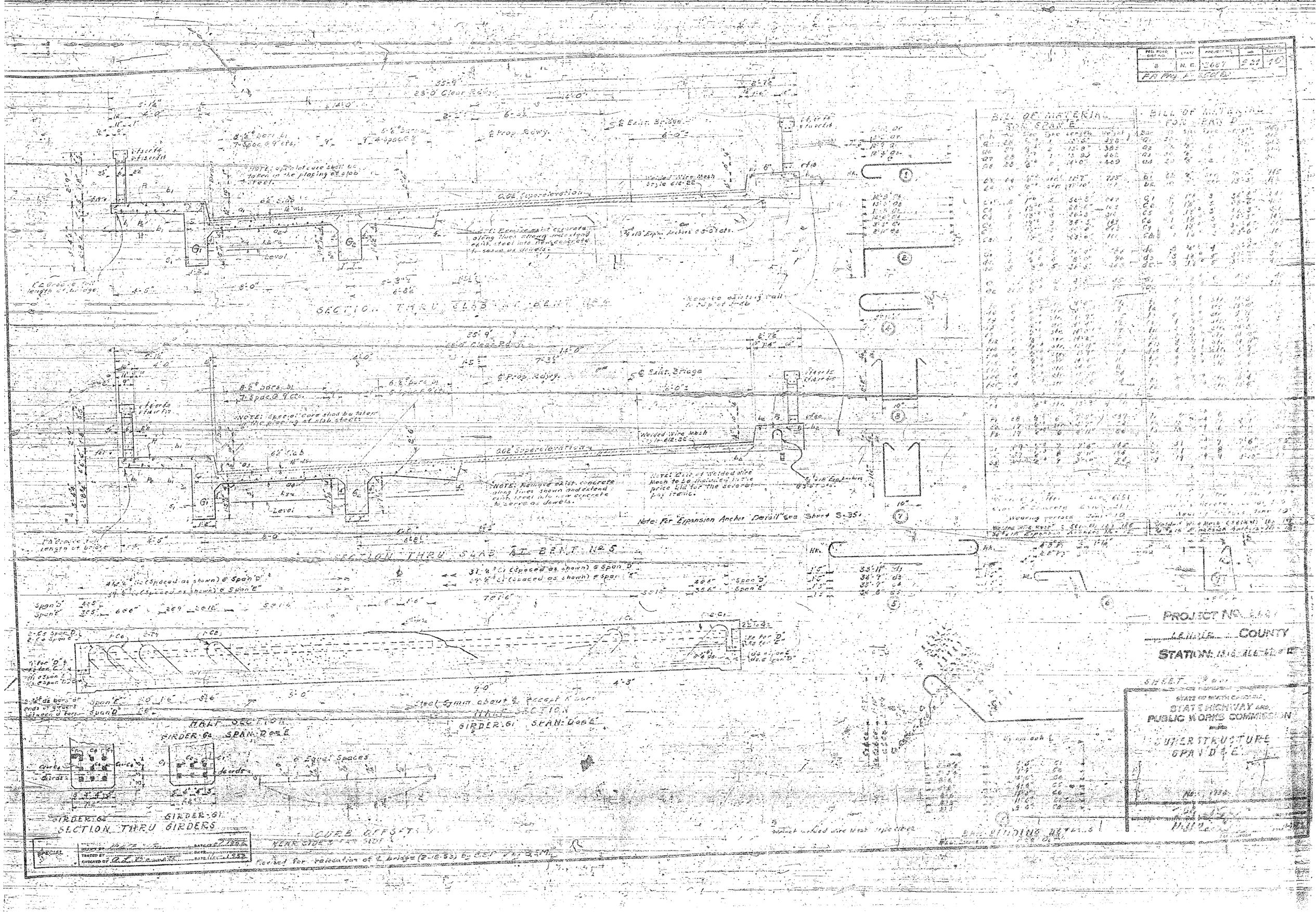
Bar	No.	Size	Detail	Length	Weight
G5	30	#9	2	12'-5"	389
G6	30	#9	3	12'-9"	396
G7	30	#9	2	12'-2"	381
G8	29	#8	3	12'-5"	376
b1	70	#9	St.	18'-5"	861
C1	2	#8	7	37'-3"	321
C2	1	#8	7	34'-3"	147
C3	2	#8	7	30'-6"	263
C4	1	#8	7	23'-6"	101
C5	1	#8	7	28'-6"	123
C6	2	#8	7	37'-2"	255
d2	8	#4	1	8'-0"	96
d4	3	#4	8	37'-8"	600
d5	3	#6	8	37'-2"	480
e1	16	#5	3	4'-3"	45
e2	216	#6	5	3'-11"	319
f3	4	#6	Str.	1'-9"	5
f4	4	#6	Str.	14'-8"	59
f5	4	#6	Str.	14'-5"	58
f6	4	#6	Str.	14'-8"	22
f7	4	#6	Str.	14'-5"	22
f8	4	#6	Str.	1'-9"	3
f9	4	#7	Str.	16'-2"	24
f10	4	#8	Str.	16'-5"	25
K2	2	#8	Str.	12'-0"	49
K3	2	#8	Str.	12'-7"	51
P1	70	#6	6	7'-5"	347
P2	18	#7	Str.	4'-9"	57
P3	18	#6	6	4'-11"	59
S1	31	#7	4	7'-6"	155
S2	30	#6	5	5'-11"	154
S3	18	#7	9	3'-10"	46

Reinforcing Steel. Lbs. 6246
Class "A" Concrete. Cu Yds. 29.9
Welded Wire Mesh. 78" Wide. 53 Lin Ft. 1.8 Tons
Wearing Surface. 1.1 Tons

FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHT. NO.	TOTAL SHTS.
3	N. C.	2627	S 25	40

PROJECT NO. 2627
LENOIR COUNTY
STATION 338+416.44
SPAN B & C
SHEET 4 OF 6

STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION
SUPERSTRUCTURE

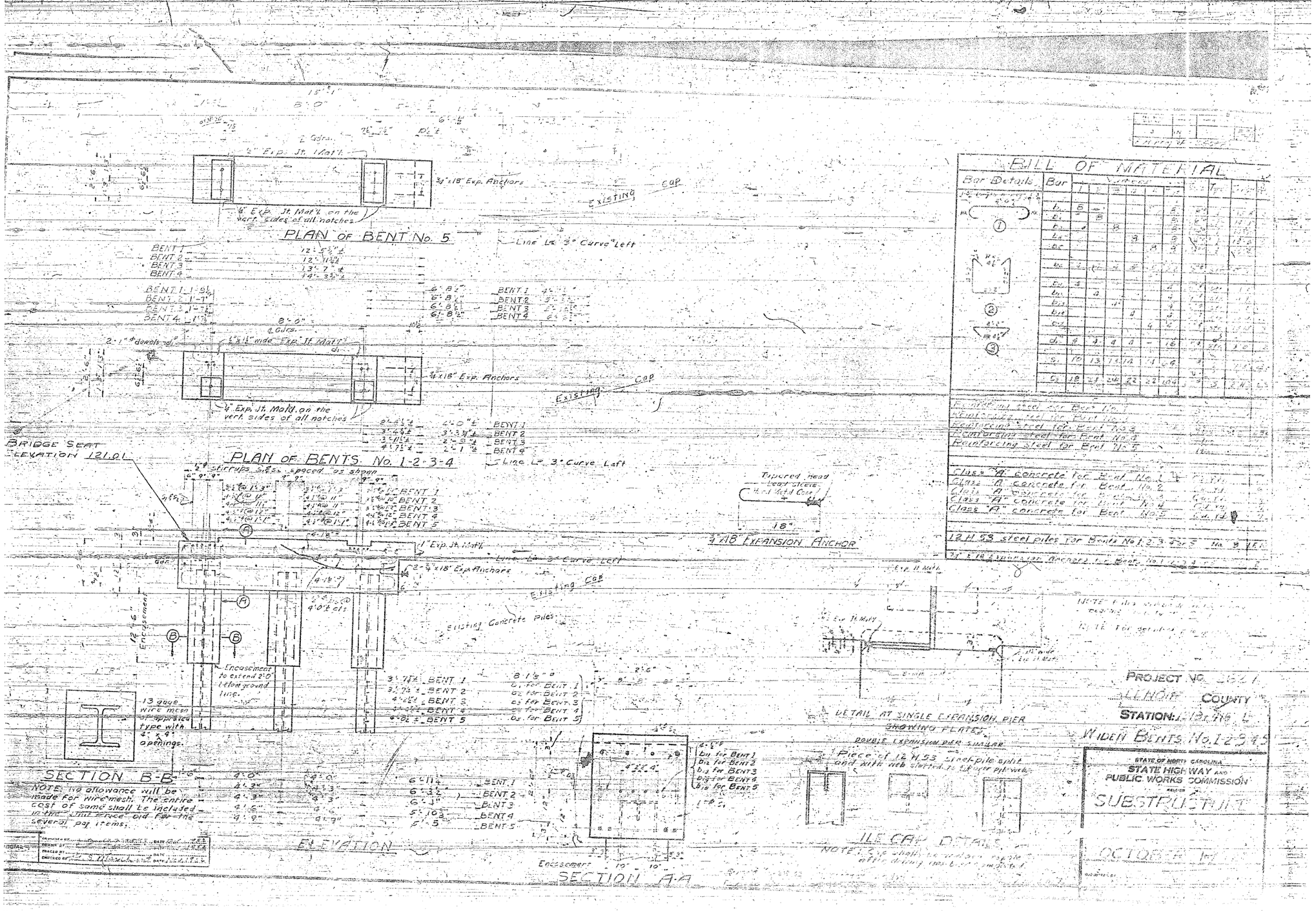


SECTION THRU SLAB AT BENT No 4
SECTION THRU SLAB AT BENT No 5
HALF SECTION
GIRDER G2 SPAN D & E
GIRDER G1 SPAN D & E
SECTION THRU GIRDERS
CURB OFFSETS
BILL OF MATERIAL FOR SPAN E
BILL OF MATERIAL FOR SPAN D
Note: For "Expansion Anchor Detail" see Sheet S-35
PROJECT No.
COUNTY
STATION:
STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION
SUPERSTRUCTURE SPAN D & E

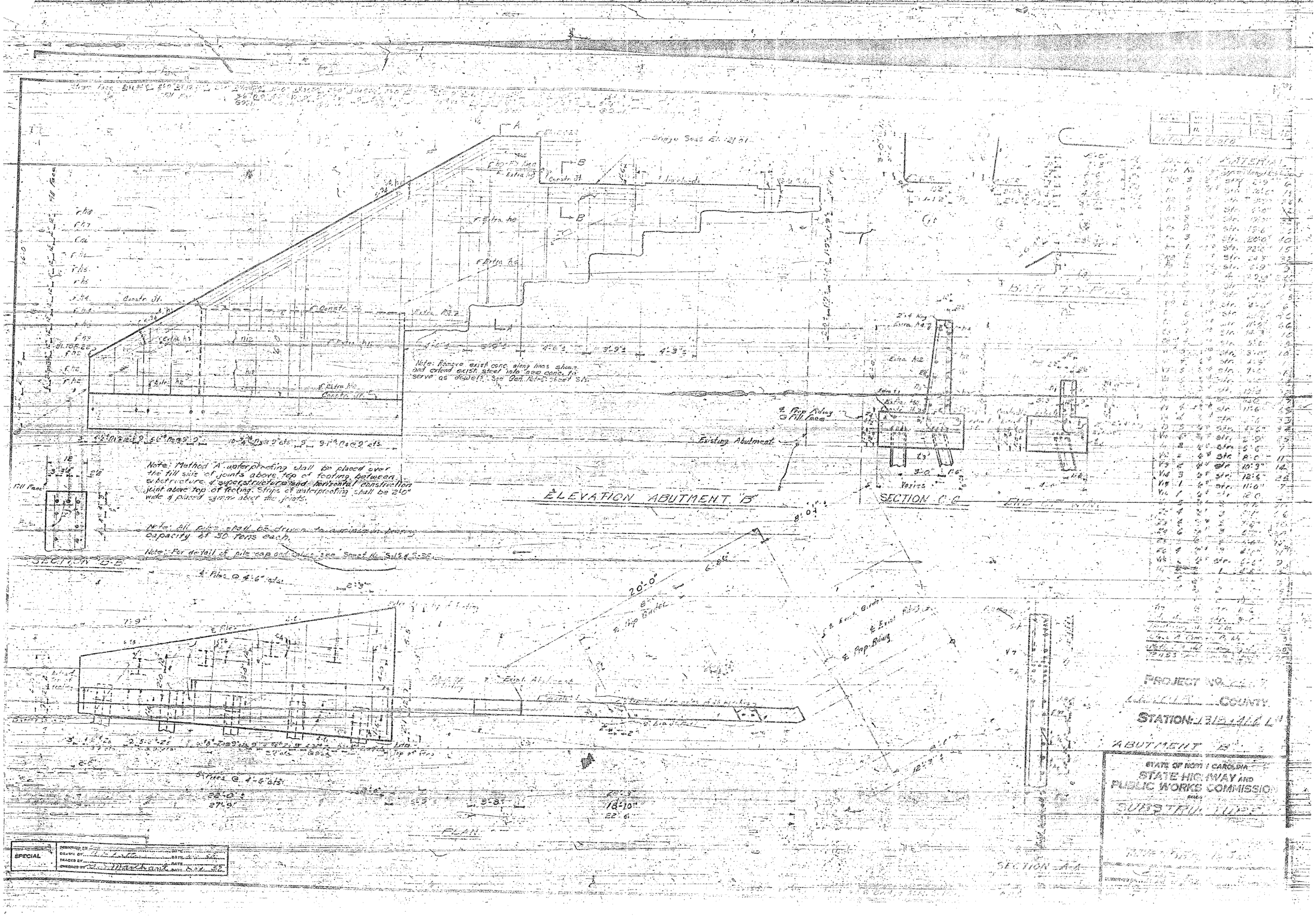
28'-0" Clear Roadway
℄ Exist. Bridge
℄ Prop. Bridge
Remove existing rail to top of curb
Note: This existing curb shall be repaired at the time the new bridge on Line "L" is constructed.
El. 124.85
Note: Remove exist. concrete lines shown & extend exist. steel into new conc. to serve as dowels.
Note: Dimensions not shown are the same as on other sections
END VIEW ABUTMENT "B"
17-1/2"⌀ S1 (Spa. as Shown)
23 1/2"⌀ S2 (Spa. as shown)
2-3/4" bars-d3 at ends of girders between d1 & d3 bars
GIRDER G1
GIRDER G2
SECTION THROUGH GIRDERS
6 Equal Spaces
OFFSETS OF CURB - NEAR SIDE
OFFSETS OF CURB - FAR SIDE
GIRDER G1
GIRDER G2
SECTION THROUGH GIRDERS
BILL OF MATERIAL
BAR TYPES
Revised for relocation of ℄ bridge (2-15-53) by C.B.P. by G.S.M.
SPECIAL
PROJECT NO.
COUNTY
STATION
STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION

BILL OF MATERIAL

BAR	No.	SIZE	TYPE	LENGTH	WEIGHT	BAR	No.	SIZE	TYPE	LENGTH	WEIGHT
d1	4	1"φ	Str.	3'-5"	32	v8	2	[illegible]	Str.	6'-3"	13
						v9	2	[illegible]	Str.	7'-0"	15
h1	3	[illegible]	Str.	17'-6"	35	v10	4	[illegible]	Str.	7'-9"	32
h2	2	[illegible]	Str.	15'-0"	20	v11	2	[illegible]	Str.	3'-6"	4
h3	2	[illegible]	Str.	12'-3"	16	v12	2	[illegible]	Str.	5'-6"	7
h4	7	[illegible]	Str.	9'-6"	44	v13	[illegible]	[illegible]	Str.	7'-9"	10
h5	2	[illegible]	Str.	18'-[illegible]	37	v14	[illegible]	[illegible]	Str.	10'-0"	13
h6	2	[illegible]	Str.	[illegible]	[illegible]	v15	1	[illegible]	Str.	12'-6"	8
h7	5	[illegible]	1	28'-0"	210	v16	4	[illegible]	Str.	5'-6"	15
h8	5	[illegible]	Str.	11'-6"	83	v17	3	[illegible]	Str.	7'-9"	16
h9	6	[illegible]	1	21'-5"	240	v18	4	[illegible]	Str.	4'-9"	13
h16	1	[illegible]	Str.	8'-0"	6	v19	8	[illegible]	Str.	3'-6"	19
h31	4	[illegible]	1	20'-5"	125	v31	14	[illegible]	Str.	7'-6"	123
h32	2	[illegible]	Str.	11'-6"	15	v32	6	[illegible]	Str.	2'-3"	9
h33	3	[illegible]	Str.	9'-6"	19	v33	6	[illegible]	Str.	2'-0"	8



PLAN OF BENT No. 5
PLAN OF BENTS No. 1-2-3-4
BRIDGE SEAT ELEVATION 121.01
Line L 3° Curve Left
Existing Cap
Existing Concrete Piles
Encasement to extend 2'-0" below ground line.
13 gage wire mesh of approved type with 4" x 4" openings.
SECTION B-B
NOTE: No allowance will be made for wire mesh. The entire cost of same shall be included in the unit price bid for the several pay items.
ELEVATION
SECTION A-A
DETAIL AT SINGLE EXPANSION PIER SHOWING PLATES
DOUBLE EXPANSION PIER SIMILAR
Piece of 12 H 53 steel pile split and with web slotted to fit over pile web.
ILE CAP DETAILS
BILL OF MATERIAL
Bar Details
Reinforcing steel for Bent No. 1
Reinforcing steel for Bent No. 2
Reinforcing steel for Bent No. 3
Reinforcing steel for Bent No. 4
Reinforcing steel for Bent No. 5
Class "A" concrete for Bent No. 1
Class "A" concrete for Bent No. 2
Class "A" concrete for Bent No. 3
Class "A" concrete for Bent No. 4
Class "A" concrete for Bent No. 5
12 H 53 steel piles for Bents No. 1, 2, 3, 4 or 5
PROJECT NO.
COUNTY
STATION:
WIDEN BENTS No. 1-2-3-4-5
STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION
SUBSTRUCTURE
OCTOBER



Note: Method "A" waterproofing shall be placed over the fill side of joints above top of footing between substructure & superstructure and horizontal construction joint above top of footing. Strips of waterproofing shall be 2'-0" wide & placed symm. about the joints.
Note: All piles shall be driven to a minimum bearing capacity of 30 tons each.
Note: For detail of pile cap and valve see Sheet No. S-15 & S-36.
Note: Remove exist. conc. along lines shown and extend exist. steel into new conc. to serve as dowels. See Gen. Notes Sheet S-1.
Existing Abutment
ELEVATION ABUTMENT "B"
SECTION C-C
SECTION D-D
SECTION A-A
PLAN
Constr. Jt.
Fill Face
Prop. Bldg.
Exist. Abutment
20'-0"
18'-10"
22'-6"
27'-9"
PROJECT NO.
COUNTY
STATION:
ABUTMENT "B"
STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION
SUBSTRUCTURE
SPECIAL

STATION 131+41.6 L℄
PILE RECORD

1H H3
2H H6
3H H1

ABUTMENT "A"

1H H8
2H H6
3H H7
4H H8
5H H9

ABUTMENT "B"

I 1
I 2
I 3

BENT #1

BENT #2

See Book No. 4, Pages 39 & 40

BENT #3

BENT #4

BENT #5

ABUTMENT "A"

See Book No. 4, Page 41

Pile No	Order Length	Total Cut-off	Splice	Pay Length	Penetration Last 5 Blows	Final	Bearing in Tons	Date Driven	W.H.
1	23.0	0.0	0.0	23.0	1/16"	15"	213	12-12-53	2630
2	23.0	0.0	0.0	23.0	3/16"	15"	222	12-11-53	2630
3	23.0	0.0	0.0	23.0	1/4"	15"	210	12-11-53	2630
4	23.0	0.5	0.0	22.5	1/16"	15"	216	12-11-53	2630
5	23.0	0.7	0.0	22.3	1/4"	15"	219	12-11-53	2630
6	23.0	0.0	0.0	23.0	1/16"	15"	213	12-11-53	2630
7	23.0	1.2	0.0	21.8	1/4"	15"	213	12-11-53	2630
TOTALS	161.0	2.4	0.0	158.6					

BENT #1

See Book No. 4, Page 41

1	40.0	0.0	0.0	40.0	3/16"	15"	240	12-10-53	2630
2	40.0	0.0	0.0	40.0	1/4"	15"	243	12-10-53	2630
3	40.0	0.0	0.0	40.0	3/16"	15"	244	12-10-53	2630
TOTALS	120.0	0.0	0.0	120.0					

BENT #2

See Book No. 4, Page 41

1	40.0	0.5	0.0	39.5	1/4"	15"	246	12-10-53	2630
2	40.0	0.0	0.0	40.0	3/16"	15"	253	12-10-53	2630
3	40.0	0.0	0.0	40.0	3/16"	15"	253	12-10-53	2630
TOTALS	120.0	0.5	0.0	119.5					

BENT #3

See Book No. 4, Page 42

1	40.0	0.0	0.0	40.0	3/16"	15"	225	12-9-53	2630
2	40.0	0.0	0.0	40.0	1/4"	15"	237	12-9-53	2630
3	40.0	0.0	0.0	40.0	3/16"	15"	232	12-9-53	2630
TOTALS	120.0	0.0	0.0	120.0					

BENT #4

See Book No. 4, Page 42

1	40.0	0.0	0.0	40.0	3/16"	15"	225	12-9-53	2630
2	40.0	0.0	0.0	40.0	1/4"	15"	237	12-9-53	2630
3	40.0	0.0	0.0	40.0	3/16"	15"	232	12-9-53	2630
TOTALS	120.0	0.0	0.0	120.0					

BENT #5

See Book No. 4, Page 42

1	40.0	0.0	0.0	40.0	1/4"	15"	240	12-9-53	2630
2	40.0	0.0	0.0	40.0	1/4"	15"	241	12-9-53	2630
3	40.0	0.0	0.0	40.0	3/16"	15"	240	12-9-53	2630
TOTALS	120.0	0.0	0.0	120.0					

ABUTMENT "B"

See Book No. 4, Page 43

Pile No	Order Length	Total Cut-off	Splice	Pay Length	Penetration Last 5 Blows	Final	Bearing in Tons	Date Driven	W.H.
1	23.0	0.6	0.0	22.4	1/4"	15"	202	12-8-53	2630
2	23.0	0.0	0.0	23.0	5/16"	15"	182	12-8-53	2630
3	23.0	0.0	0.0	23.0	5/16"	15"	182	12-8-53	2630
4	23.0	0.8	0.0	22.2	5/16"	15"	192	12-8-53	2630
5	23.0	0.0	0.0	23.0	1/2"	15"	182	12-8-53	2630
6	23.0	0.0	0.0	23.0	1/4"	15"	202	12-8-53	2630
7	23.0	0.0	0.0	23.0	5/16"	15"	182	12-8-53	2630
8	23.0	0.0	0.0	23.0	1/4"	15"	202	12-8-53	2630
9	23.0	0.0	0.0	23.0	5/16"	15"	182	12-8-53	2630
TOTALS	207.0	1.4	0.0	205.6					

SUMMARY

See Book No. 4, Page 44

	Order Length	Total Cut-off	Splice Length	Pay Length	No. of Splices
ABUTMENT "A"	161.0	2.4	0.0	158.6	0
BENT # 1	120.0	0.0	0.0	120.0	0
BENT # 2	120.0	0.5	0.0	119.5	0
BENT # 3	120.0	0.0	0.0	120.0	0
BENT # 4	120.0	0.0	0.0	120.0	0
BENT # 5	120.0	0.0	0.0	120.0	0
ABUTMENT "B"	207.0	1.4	0.0	205.6	0
TOTAL FOR STATION 131+41.6 L℄	968.0	4.3	0.0	963.7	0

COMPUTED BY F.S. BOONE
CHECKED BY K.A. ROUSE

131+41.6 L℄

FINAL SURVEY

ORIGINAL SURVEY