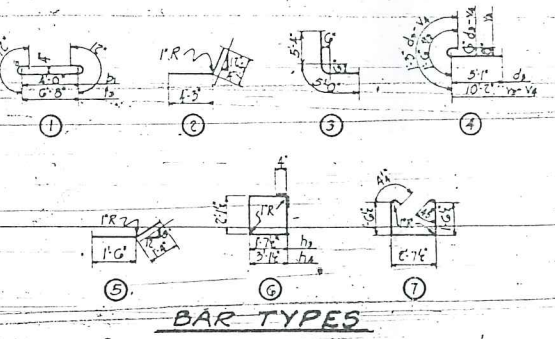


**BILL OF MATERIAL**  
ONE END BENT (END BENT #1 OR #2)

BAR	No.	SIZE	TYPE	LENGTH	WEIGHT
a <sub>1</sub>	4	2 1/2"	Str.	15'-2"	91
a <sub>2</sub>	4	"	"	11'-5"	69
a <sub>3</sub>	4	"	"	9'-2"	55
a <sub>4</sub>	4	"	"	5'-5"	33
b <sub>1</sub>	6	3/4"	"	6'-0"	38
b <sub>2</sub>	5	"	"	5'-0"	17
c <sub>1</sub>	4	1 1/2"	Str.	3'-0"	32
c <sub>2</sub>	6	1 1/2"	"	10'-4"	267
c <sub>3</sub>	6	1 1/2"	"	6'-4"	129
d <sub>1</sub>	4	1 1/2"	"	8'-10"	10
d <sub>2</sub>	12	"	Str.	2'-7"	26
d <sub>3</sub>	5	3/4"	"	8'-2"	15
e <sub>1</sub>	5	"	"	11'-2"	21
f <sub>1</sub>	12	1 1/2"	"	6'-5"	66
f <sub>2</sub>	10	"	Str.	4'-3"	36
f <sub>3</sub>	17	"	"	4'-8"	97
f <sub>4</sub>	20	3/4"	"	8'-8"	181
g <sub>1</sub>	17	1/2"	Str.	4'-11"	71
g <sub>2</sub>	4	"	"	4'-8"	16
h <sub>1</sub>	2	"	"	5'-0"	37
h <sub>2</sub>	6	1 1/2"	"	11'-0"	301
h <sub>3</sub>	6	1 1/2"	"	4'-5"	233



NOTE:  
For Design Data and General Note see General Plan.  
All piles shall be driven to the minimum bearing capacity of 15 tons.  
Concrete displaced by pile heads has been deducted.  
For detail of Expansion Anchors see Street No. 90.  
End Bent #2 is opposite hand to End Bent #1 except as shown.

PROJECT NO. 2910  
WAYNE-WILSON COUNTY  
STATION: 476+85.62  
END BENTS: #1 & #2

STATE OF NORTH CAROLINA  
STATE HIGHWAY AND  
PUBLIC WORKS COMMISSION

SUBSTRUCTURE DETAILS  
FOR  
OVERHEAD BRIDGE  
OVER  
A.C.L. RAILROAD  
AUGUST 1940

REINFORCING STEEL - Lbs. 1811  
CLASS A CONCRETE - CuYds 16.7  
CREOSOTED TIMBER PILES - No. 12  
1 1/2" x 1 1/2" EXPANSION ANCHORS - No. 12

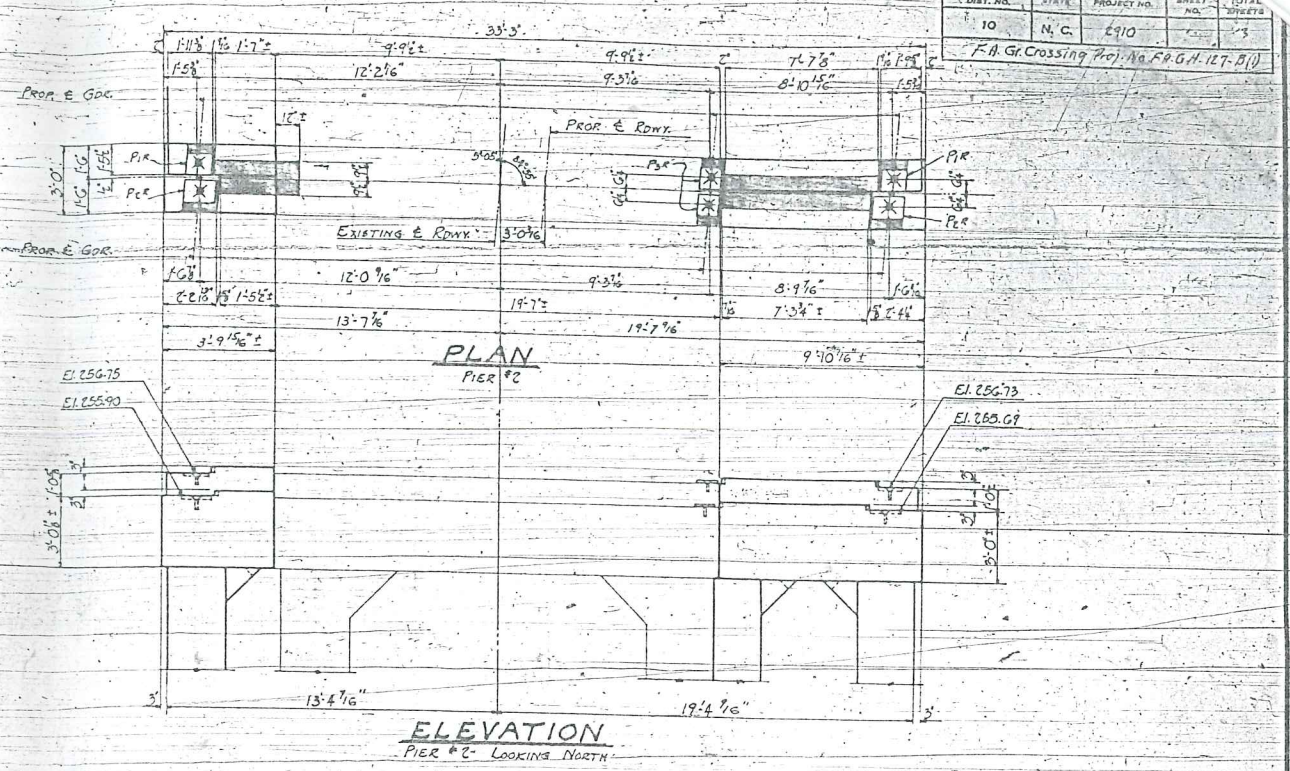
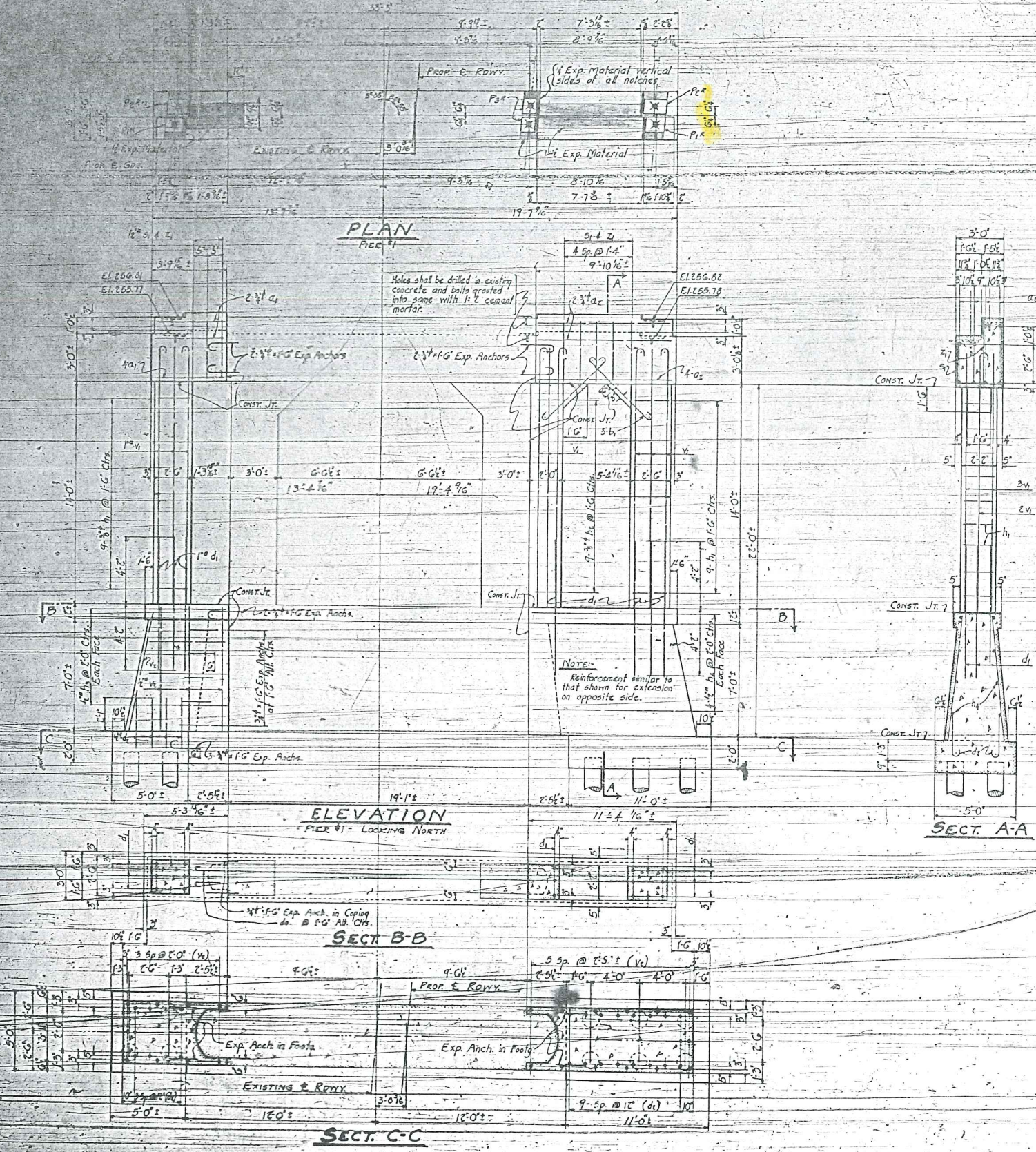
APPROVED BY: [Signature] DATE: [Date]  
STATE HIGHWAY ENGINEER

BRIDGE ENGR. [Signature]  
DATE: [Date]

PLAN NO. [Number]

Revised Oct. 25 1940 to correct  
of Prop. Rowy 1/2" to right  
By F.W.N. - 9711

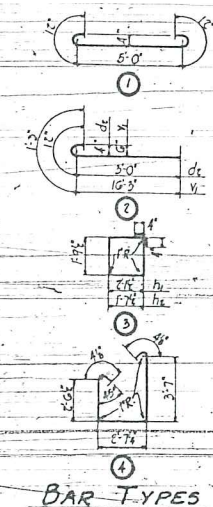




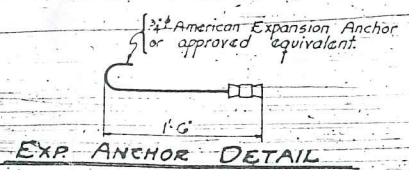
**BILL OF MATERIAL ONE PIER (PIER #1 OR #2)**

BAR	No.	SIZE	TYPE	LENGTH	WEIGHT
a1	8	3/4"	Str.	3'-1"	40
a2	8	"	"	9'-4"	112
b	6	5/8"	"	7'-0"	24
c1	18	1/2"	Str.	8'-4"	538
c2	30	1/2"	"	2'-0"	102
d1	10	3/8"	"	8'-0"	58
d2	9	"	"	7'-0"	25
e1	8	1/2"	Str.	5'-0"	34
e2	8	"	"	11'-0"	75
f	4	"	"	9'-5"	64
v	24	1/2"	"	17'-6"	1430
v2	12	1/2"	Str.	7'-9"	195
z1	8	"	"	3'-10"	16

REINFORCING STEEL - Lbs. 2691  
 CLASS 'A' CONCRETE - Cu. Yds. 34.2  
 CEMENTED TIMBER PILES - No. 10  
 - Lin. Ft. (Approx) 235  
 3/4" x 1/2" EXPANSION ANCHORS - No. 28



**NOTE:**  
 For Design Data and General Note see General Plan.  
 All piles shall be driven to the minimum bearing capacity of 18 tons.  
 Concrete displaced by pile heads has been deducted. Pier #2 same as Pier #1 except as shown.



PROJECT NO. 2910  
 WAYNE-WILSON COUNTY  
 STATION: 476+85.62  
 PIERS: #1 & #2

STATE OF NORTH CAROLINA  
 STATE HIGHWAY AND  
 PUBLIC WORKS COMMISSION  
 SUBSTRUCTURE DETAILS  
 FOR  
 OVERHEAD BRIDGE  
 OVER  
 A.C.L. RAILROAD  
 AUGUST 1940

DESIGNED BY: [Signature]  
 DATE: Aug. 28, 1940  
 CHECKED BY: [Signature]  
 DATE: [Signature]

Revised Oct 25 1940 to move to Prop. Rdwy. 1/2" to right. F.W.W. - full

SUBMITTED BY: [Signature] BRIDGE ENGR.  
 APPROVED BY: [Signature] STATE HIGHWAY ENGINEER

PLAN NO. 15



117-34-30 (WIDENING)



PLAN

**TOTAL BILL OF MATERIALS**

Item	Quantity	Unit	Notes
Reinforcing Steel	30,620	Lbs.	
Concrete	152.7	Cu. Yds.	
Superstructure	152.7		
End Bent No. 1	16.7		
End Bent No. 2	34.2		
Pier No. 1	34.2		
Pier No. 2	34.2		
<b>TOTAL</b>	<b>254.5</b>		

DRAWN BY: F. W. McInnes & Co.  
 CHECKED BY: F. W. McInnes & Co.  
 DATE: August 1940  
 SPECIAL:



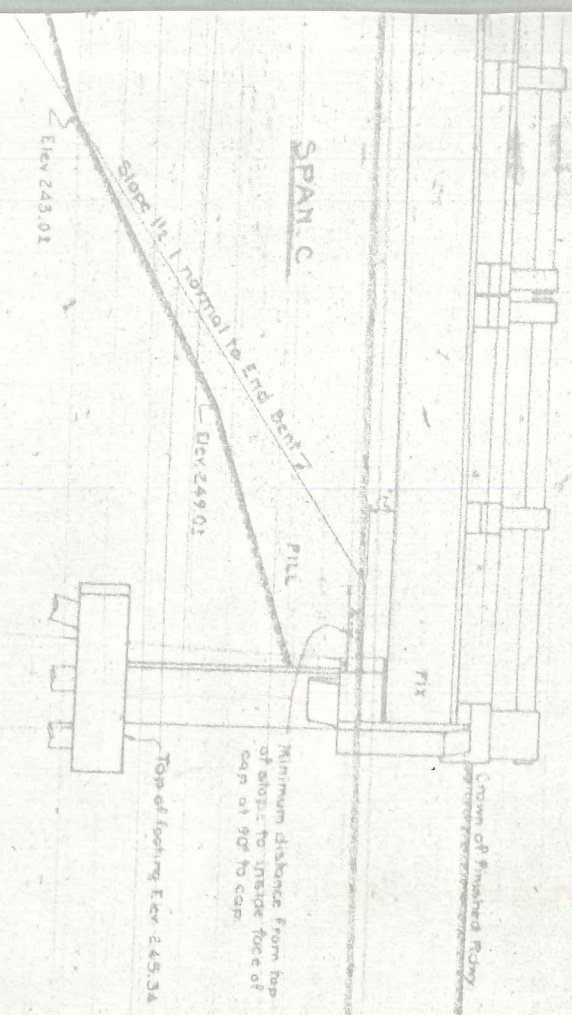




DATE	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
10	N.C.	2910	6	2

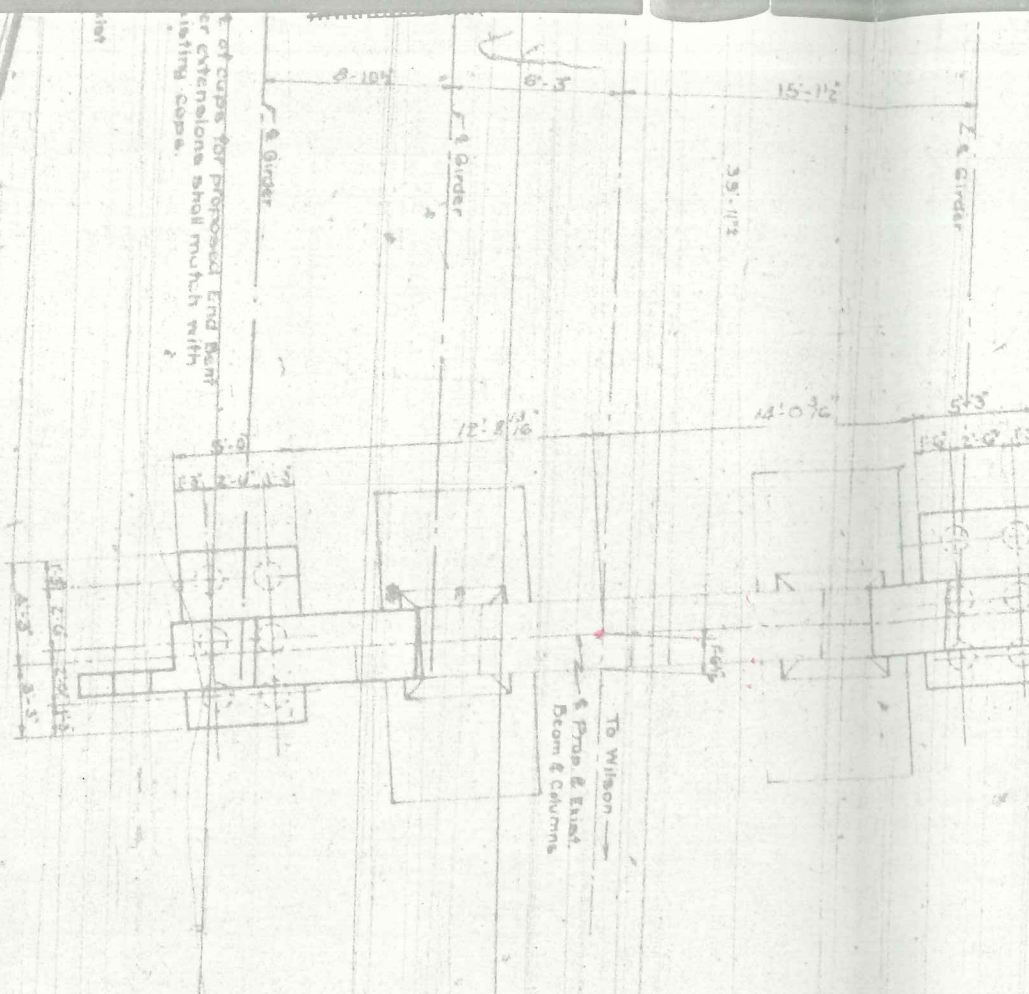
116 Gr. Crossing Proj. No. E.R.G.H. 177-B(1)

Note: Elevation shown are for crown of finished roadway.



A.R.C. Pipe to be extended the Roadway Contractor.

NOTE: Existing substructure is founded on piles approximately 25' long.



**DIVISION OF CLASS X CONCRETE**  
 Concrete Aggregate Standard Size No. 7, C. U. Yds. 2 7.0  
 Coarse Aggregate Standard Size No. 8, C. U. Yds. 2 247.5  
 Coarse Aggregate Standard Size No. 9, C. U. Yds. 2 544.5

Revised Oct 25 1940 to move & of proposed Rwy. 10' to right by A.W.W. L.M.D.

**TEMPORARY CLEARANCE:** The minimum temporary clearance for timber construction shall be as follows: 20'-0" vertical clearance above top of rail, 7'-6" horizontal from 3' of track unless clearance is obtained from the A.C.L.R.R. to reduce the clearance. Train speed of 85 M.P.H. to be maintained during construction. See special provisions.

**NOTE:** For Design Data and General Note regarding Concrete reinforcing steel, plates and bolts, Expansion and Foundation Data, Expansion Joint Material, Material and Workmanship See Street No. 68

**BONDING NEW CONCRETE TO OLD CONCRETE:**

Where new concrete is to be bonded to old concrete, the connecting surfaces of the old concrete shall be thoroughly roughened, cleaned of loose material, wetted and finished with 1:2 cement mortar immediately before pouring new concrete. Where dowels are used for on the piles holes shall be drilled into the old concrete, both embedded at least 1/2" and grouted into place with 1:2 cement mortar. The above operations are to be done by the contractor at his own expense and as the Engineer may direct.

**EXPANSION ANCHORS:** Expansion anchors shall be manufactured by the American Expansion Bolt and Manufacturing Co. or an approved equal. For the expansion anchors the diameter of hand drilled shall be 1/8" power star drill 1/2". The cost of the expansion anchors shall be included in the unit price bid for Class A Concrete.

**SURFACE FINISH:** Concrete surfaces shall be finished in accordance with the Specifications, except that the substructure concrete shall be given a class 2 surface finish.

**RAIL PLATE:** Two name plates shall be placed on the bridge, one on each right hand end post approaching the bridge.

**ROADWAY TRAFFIC:** Traffic to be maintained over existing bridge during construction. See Special Provisions.

**CREOSOTED TIMBER PILES:** Piles and treatment shall be in accordance with the Specifications. The piles shall retain 18 lbs. of creosote per cubic foot of material.

**REMOVING EXISTING STRUCTURE:** For methods to be used in removing existing structure refer to widening See Special Provisions.

**CONCRETE REPAIRING SURFACE:** Concrete wearing surface shall be in accordance with the Specifications except that it shall be reinforced with metal mesh and shall be paid for on a cubic yard basis.

**NOTE:** The new portion of the bridge is to be built on a center with bottom of interior girders which are to be flush and outside girders are to follow the center. The elevations shown do not include any allowance for settlement of individual spans which shall be provided for in addition to the elevations shown. After the finished for has been removed the finished structure shall have the elevations shown.

**ALTERATION OF EXISTING TIMBER RETAINING WALL & R.C. PIERS:** The existing concrete timber retaining walls of end of piers to be altered as necessary to accommodate proposed pier alterations. It may be necessary to remove and replace portions of existing R.C. Pipe. See Special Provisions.

**REVISION IN PLAN:** Plans for this structure may be revised to accommodate shifting the center line of roadway 5ft from center line of existing bridge instead of 2ft as shown, in which event quantities will be allowed on the basis of the revised plan and the contractor will be allowed no additional compensation on account of the change in plan.

PROJECT NO. 2910  
 WAYNE-WILSON COUNTY  
 STATION: 476+85.62

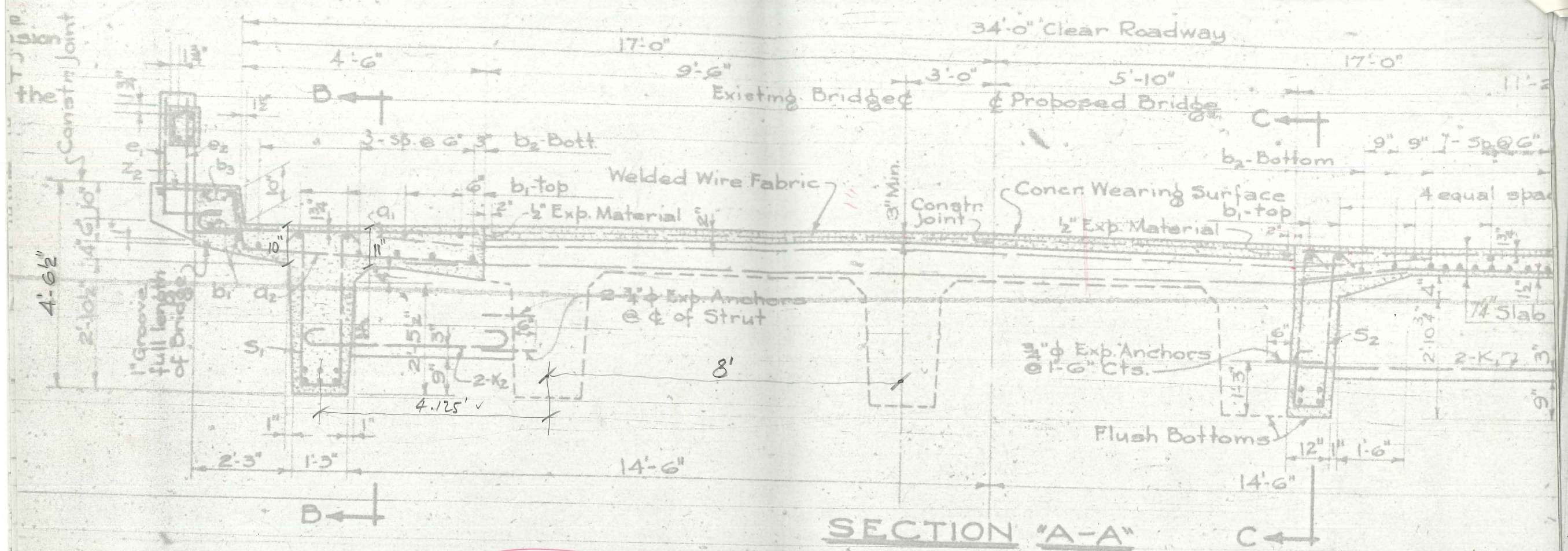
STATE OF NORTH CAROLINA  
 STATE HIGHWAY AND  
 PUBLIC WORKS COMMISSION  
 GENERAL PLAN  
 OVERHEAD BRIDGE  
 A.C.L. RAILROAD  
 ON U.S. 17 NEAR CONTENTNEA.  
 AUGUST 1940

DESIGNED BY: W.L. G...  
 PLAN

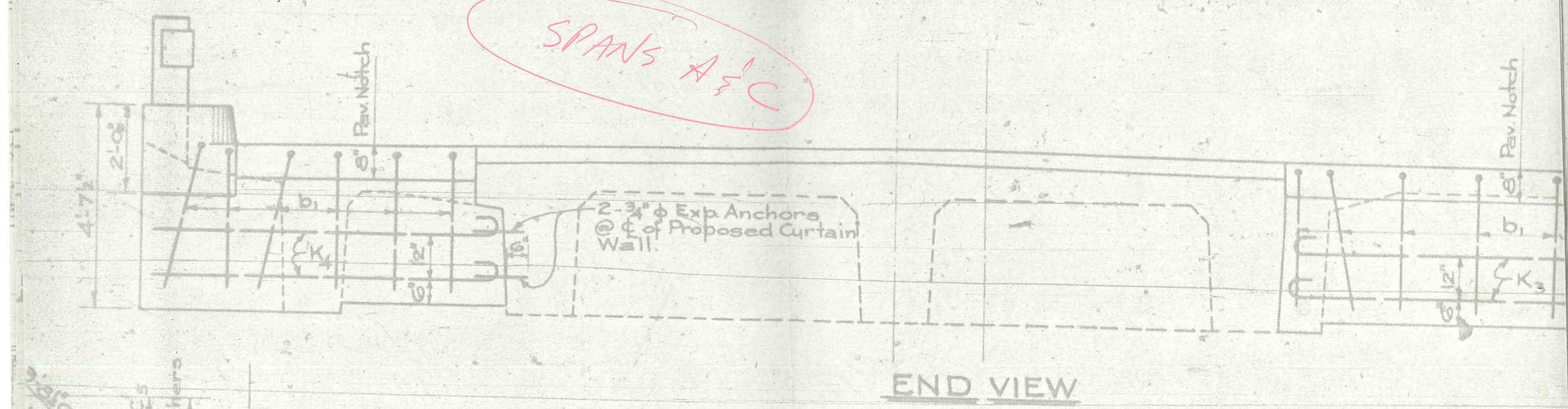








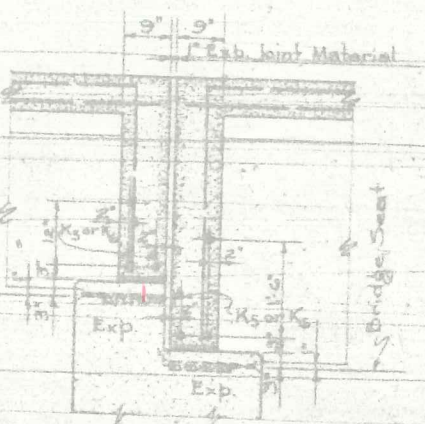
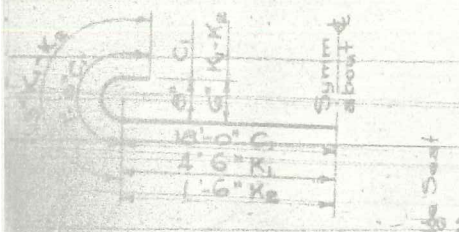
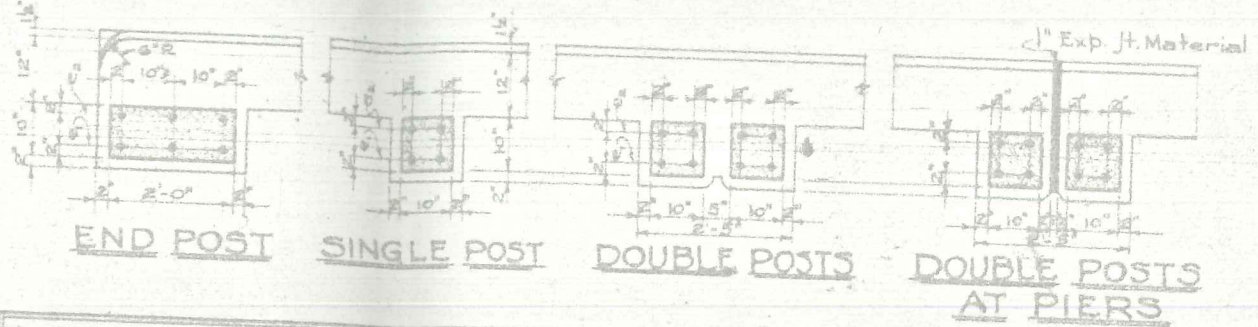
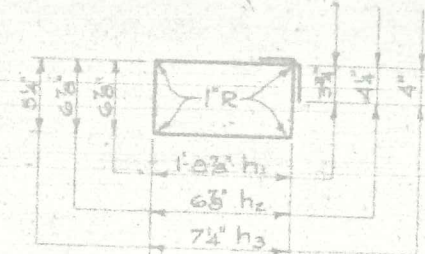
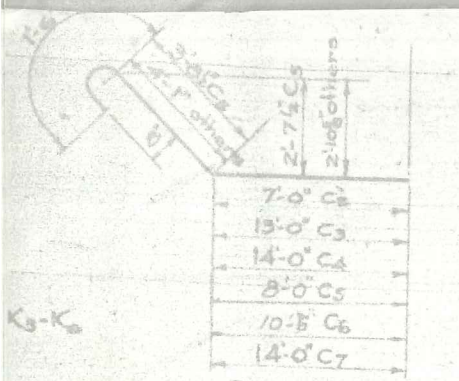
SPANS A & C





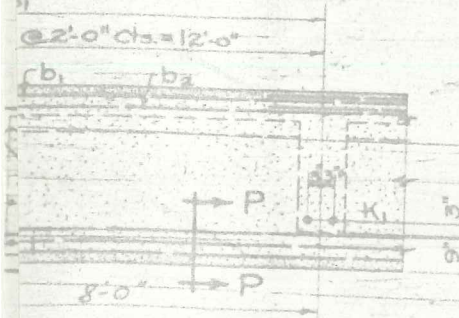
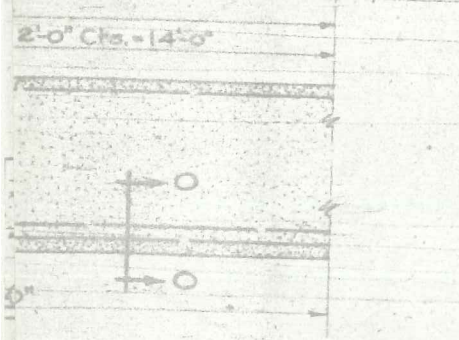
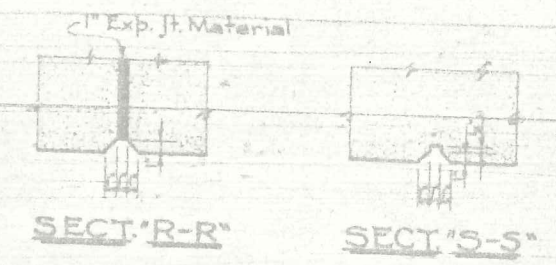






**BILL OF MATERIAL FOR SPANS A & C**

Bars	No	Size	Length	Weight	Bars Span A	Bars Span C
a1	150	5/8"	5'-0"	743	75	75
a2	150	5/8"	5'-4"	680	75	75
a3	162	5/8"	12'-6"	2112	81	81
a4	162	5/8"	12'-0"	2028	81	81
b	52	5/8"	22'-2"	980	26	26
b1	72	5/8"	19'-3"	1198	36	36
b2	24	5/8"	19'-9"	403	12	12
c1	16	1/4"	39'-0"	3315	8	8
c2	2	1/4"	23'-2"	217	1	1
c3	4	1/4"	37'-2"	790	2	2
c4	4	1/4"	39'-2"	832	2	2
c5	4	1/4"	26'-5"	359	2	2
c6	2	1/4"	32'-2"	298	1	1
c7	4	1/4"	39'-2"	674	2	2
e1	52	5/8"	4'-0"	139	26	26
e2	52	5/8"	4'-2"	145	26	26
f	16	1/4"	19'-0"	203	8	8
f2	16	1/4"	17'-10"	191	8	8
h1	4	3/8"	5'-3"	8	2	2
h2	20	3/8"	3'-0"	23	10	10
h3	152	1/4"	2'-9"	70	76	76
k1	4	3/8"	11'-6"	69	2	2
k2	4	3/8"	5'-6"	33	2	2
k3	4	1/2"	13'-6"	46	2	2
k4	4	1/2"	7'-6"	26	2	2
k5	6	1/2"	10'-3"	52	3	3
k6	6	1/2"	4'-3"	22	3	3
s	84	1/2"	8'-3"	589	42	42
s2	42	1/2"	8'-3"	295	21	21
z1	4	5/8"	7'-1"	30	2	2
z2	20	5/8"	5'-11"	123	10	10
Reinforcing Steel Lbs.					16653	
Class "A" Concrete Cu.Yds.					84.2	
3" x 11 1/2" Expansion Anchors					64	
Metal Mesh (Welded Wire Fabric) Lbs.					453	
Concrete Wearing Surface Cu.Yds.					168	



Revised Oct 25 1940 to move E of proposed Roadway 1'-0" to right. F.W.W. - G.W.

PROJECT NO. 2910  
WAYNE - WILSON COUNTIES  
STATION: 476+85.62

**SPANS A & C**

STATE OF NORTH CAROLINA  
STATE HIGHWAY AND  
PUBLIC WORKS COMMISSION

SPECIAL  
DETAILS FOR WIDENING  
R.C. DECK GIRDER BRIDGE  
OVER  
A.C.L. RAILROAD  
AUG. 1940

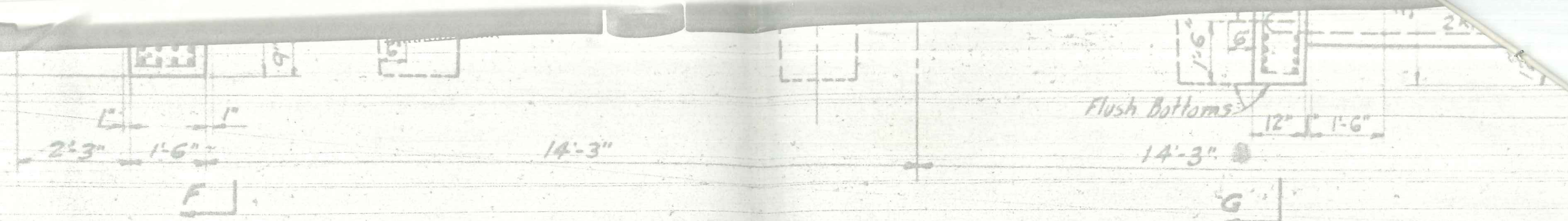
SUBMITTED BY: *W. W. ...* BRIDGE ENGINEER  
APPROVED BY: *W. W. ...* STATE HIGHWAY ENGINEER

PLAN NO.

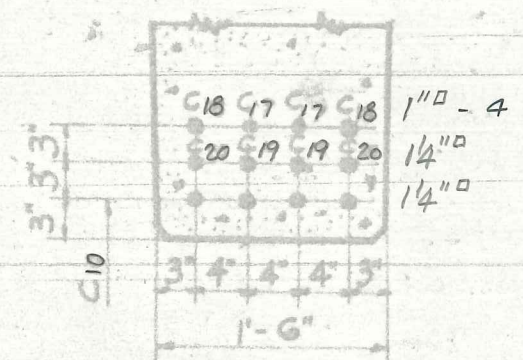
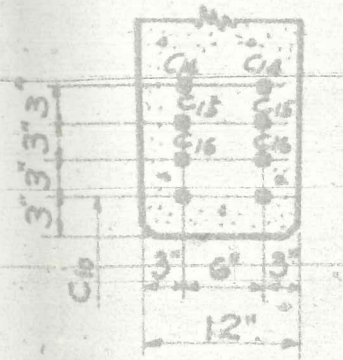
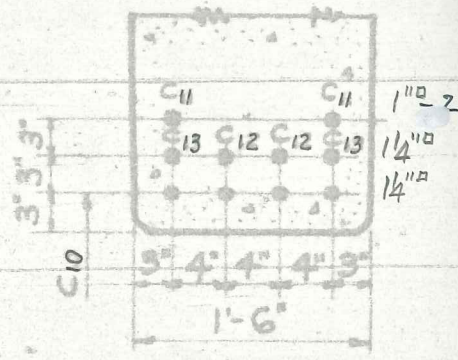
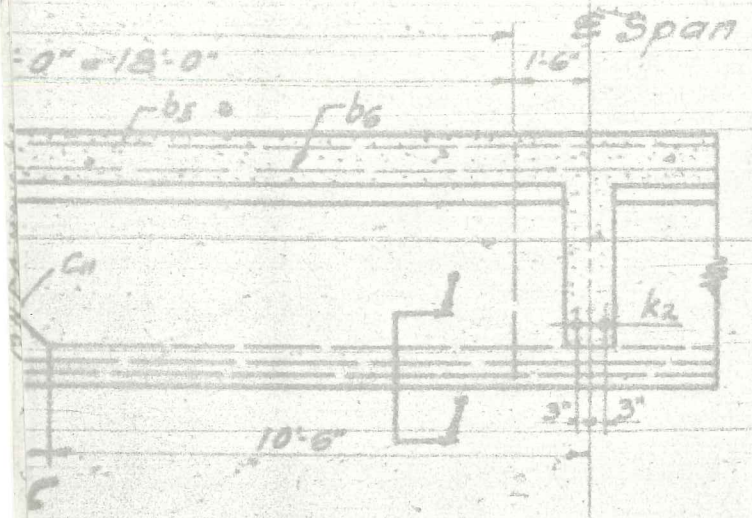








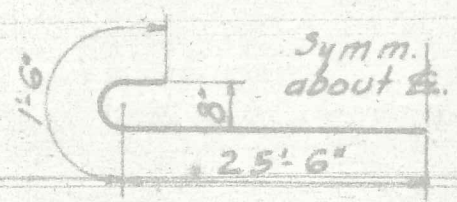
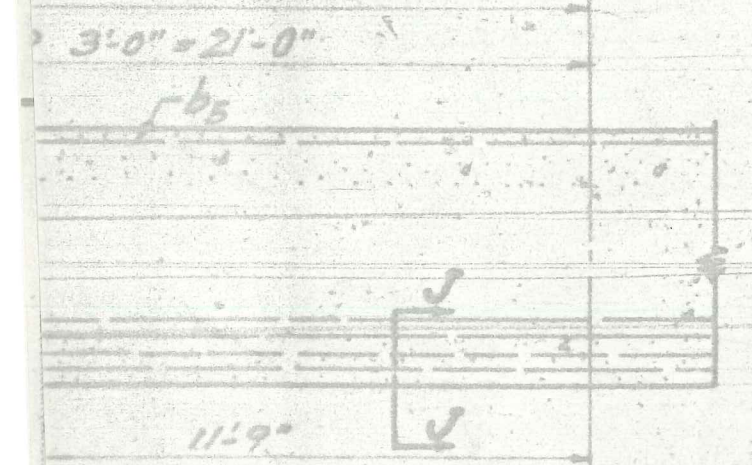
Sec. E-E



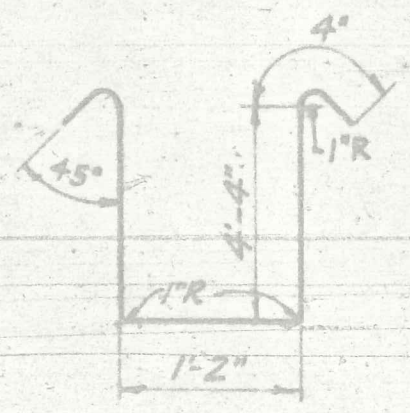
Sec. I-I

Sec. J-J

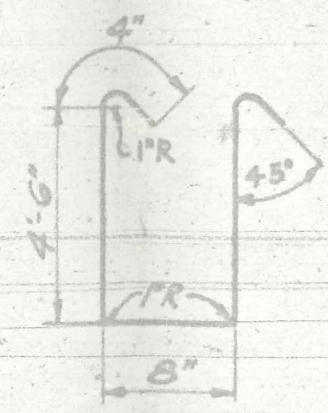
Sec. k-k



Bar C10



Bar S4



Bar S5

**SPAN B**



Note: For see Gener

Removal Note:  
shall be rem  
transverse re  
the concrete  
shall be be  
dowels.  
The existin  
surface shal  
The entire  
be included  
several pay

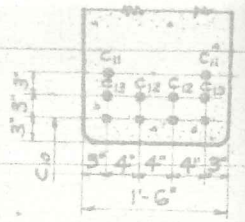
Note:- For Det  
b2-h3-k1-k2

Bill of Material				
Span "B"				
Bars	No.	Size	Length	Weight
a1	108	1/2"	5'-10"	520
a2	105	1/2"	5'-4"	476
a3	114	5/8"	12'-6"	1486
a4	114	5/8"	12'-0"	1427
b5	22	1/2"	30'-9"	575
b6	52	1/2"	27'-0"	1193
C10	10	1 1/4"	54'-0"	2869
C11	2	1 1/4"	2'-0"	

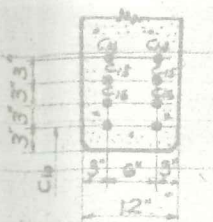




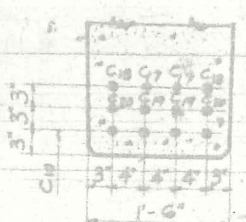
Sec. F-F



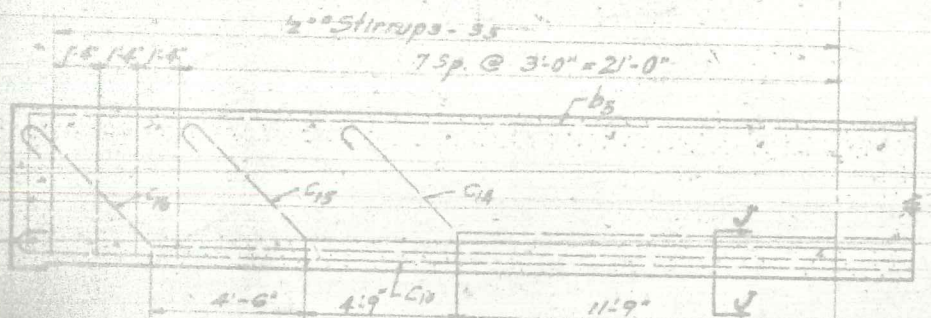
Sec. I-I



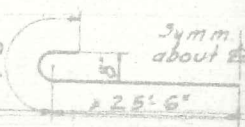
Sec. J-J



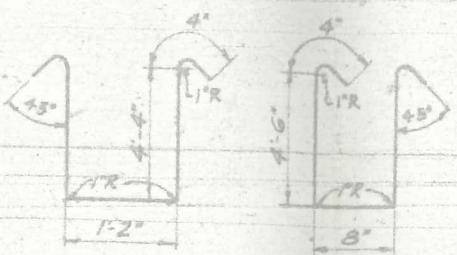
Sec. K-K



Sec. G-G

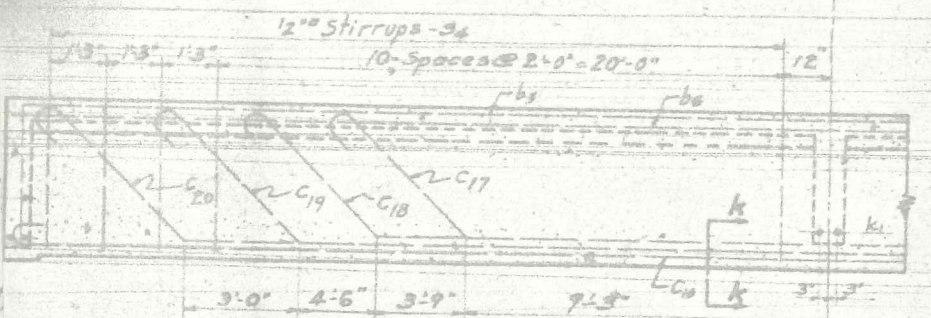


Bar C10



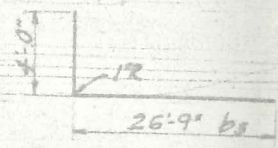
Bar 34

Bar 35

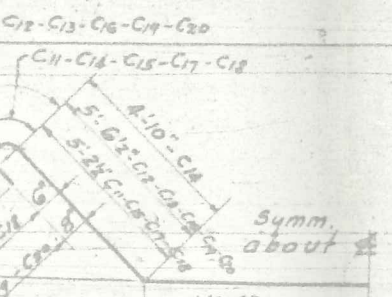
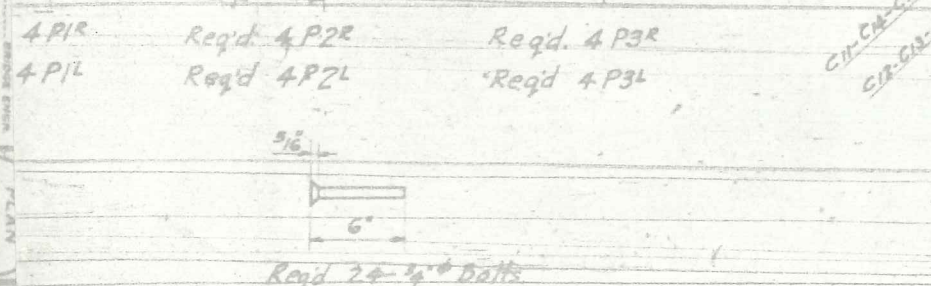
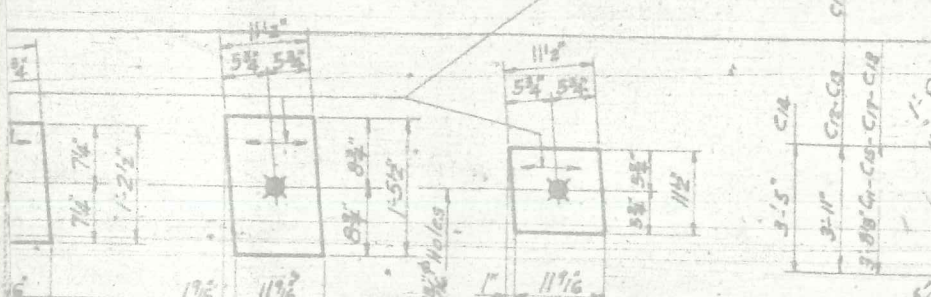


Sec. H-H

Plane Near side to 38'.  
In planing cut of foot shall  
be in this direction.



Bar bs



Bars C11 through C20

Revised Oct. 25 1940 to move  $\pm$  of proposed  
roadway 1'-0" to right. F.W.W. J.W.W.

Note: For "General Note" and "Design Data" see General Plan.

Removal Note: Portions of the existing bridge shall be removed as shown. The existing transverse reinforcing bars shall be freed from the concrete without damage; these bars shall be bent into new concrete to act as dowels. The existing 2"± of bituminous wearing surface shall be removed. The entire east of the above work shall be included in the unit price bid for the several pay items.

Note: For Details of Bars a1-a2-a3-a4-a5-a6-a7-a8-a9-a10-a11-a12-a13-a14-a15-a16-a17-a18-a19-a20-a21-a22-a23-a24-a25-a26-a27-a28-a29-a30-a31-a32-a33-a34-a35-a36-a37-a38-a39-a40-a41-a42-a43-a44-a45-a46-a47-a48-a49-a50-a51-a52-a53-a54-a55-a56-a57-a58-a59-a60-a61-a62-a63-a64-a65-a66-a67-a68-a69-a70-a71-a72-a73-a74-a75-a76-a77-a78-a79-a80-a81-a82-a83-a84-a85-a86-a87-a88-a89-a90-a91-a92-a93-a94-a95-a96-a97-a98-a99-a100 see sheet No. 87

Bill of Material  
Span "B"

Bars	No.	Size	Length	Weight
a1	188	1/2"	5'-10"	520
a2	185	1/2"	5'-6"	476
a3	114	3/4"	12'-6"	1486
a4	114	3/4"	12'-0"	1427
b5	22	1/2"	30'-9"	575
b6	52	1/2"	27'-0"	1193
C10	10	1/4"	54'-0"	2869
C11	2	1"	33'-11"	231
C12	2	1/4"	46'-1"	490
C13	2	1/4"	55'-1"	585
C14	2	1"	35'-8"	243
C15	2	1"	45'-11"	312
C16	2	1/4"	36'-1"	576
C17	2	1"	31'-5"	214
C18	2	1"	38'-11"	265
C19	2	1/4"	49'-1"	522
a1	36	1/2"	4'-0"	96
a2	36	1/2"	4'-2"	100
C20	2	1/4"	55'-1"	535
b1	24	1/2"	16'-11"	271
h2	18	3/4"	3'-0"	20
h3	108	1/2"	2'-9"	50
k1	2	3/4"	11'-6"	35
k2	2	3/4"	3'-6"	77
k3	6	1/2"	10'-3"	52
k4	6	1/2"	1'-3"	22
34	48	1/2"	10'-6"	428
35	21	1/2"	10'-4"	184
2a	18	3/4"	5'-11"	111
Reinforcing Steel Lbs.				13975
Class "A" Conc. Cu Yds.				68.5
Metal Mesh (Welded Wire Fabric) Lbs.				329
Concrete Wearing Surface (12")				120
3" x 1 1/2" Exp Anchors				39

PROJECT NO. 2910  
Wayne - Wilson COUNTY  
STATION: 476+85.62

Span "B"  
STATE OF NORTH CAROLINA  
STATE HIGHWAY AND  
PUBLIC WORKS COMMISSION  
RALEIGH  
Special  
Details For Widening  
R.C. Deck Girder Bridge  
OVER  
A.C.L. - Railroad  
Aug. 1940

SUBMITTED BY: [Signature]  
APPROVED BY: [Signature]  
STATE HIGHWAY ENGINEER

PLAN NO.