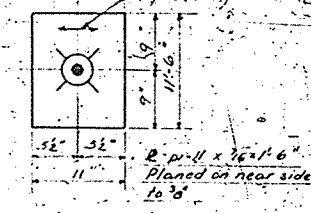


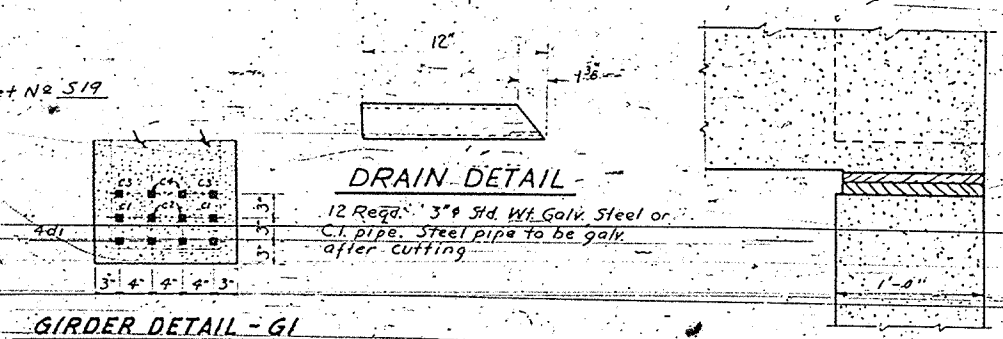
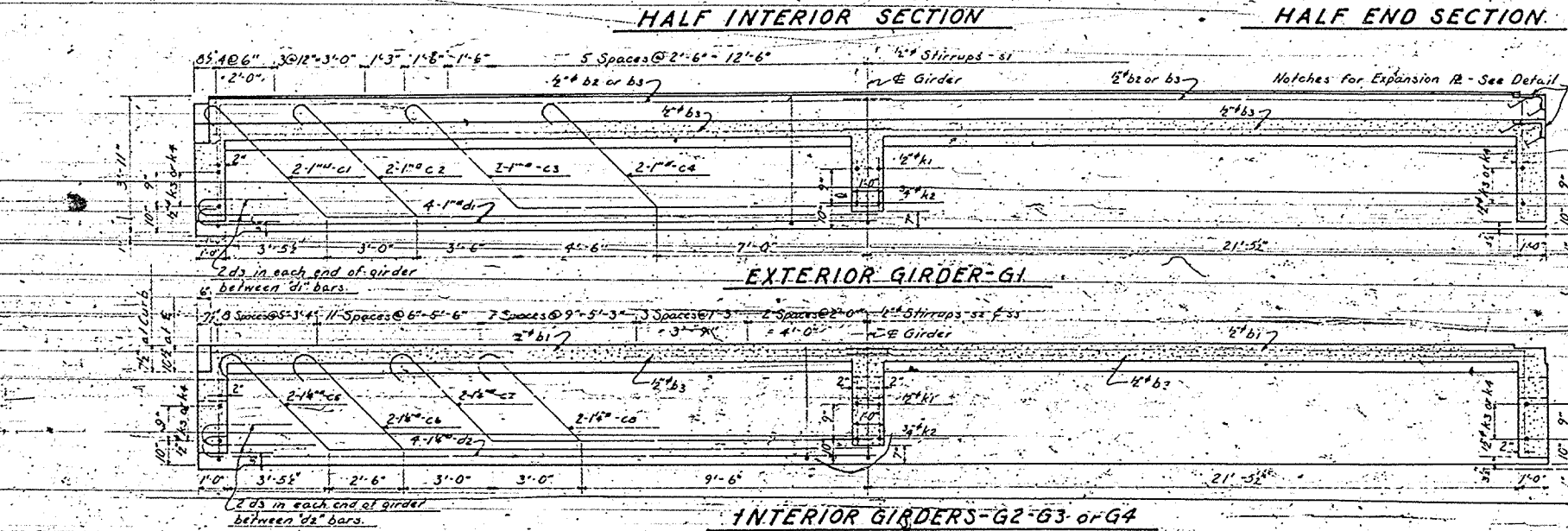
In planing cut of tool shall be in this direction.



MAKE 14 B. MARK PI.

MAKE 14 BOLTS.

Note: All bearing plates and bolts for same to be phosphor bronze or rolled copper alloy in accordance with the Specifications except that Grade D bronze may be used.

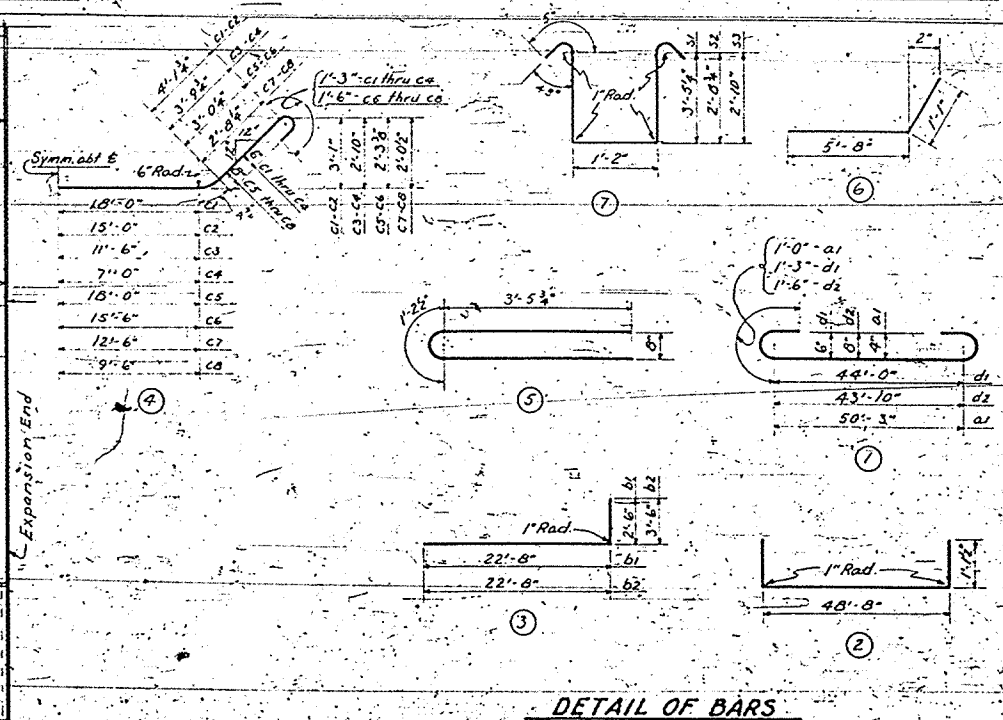
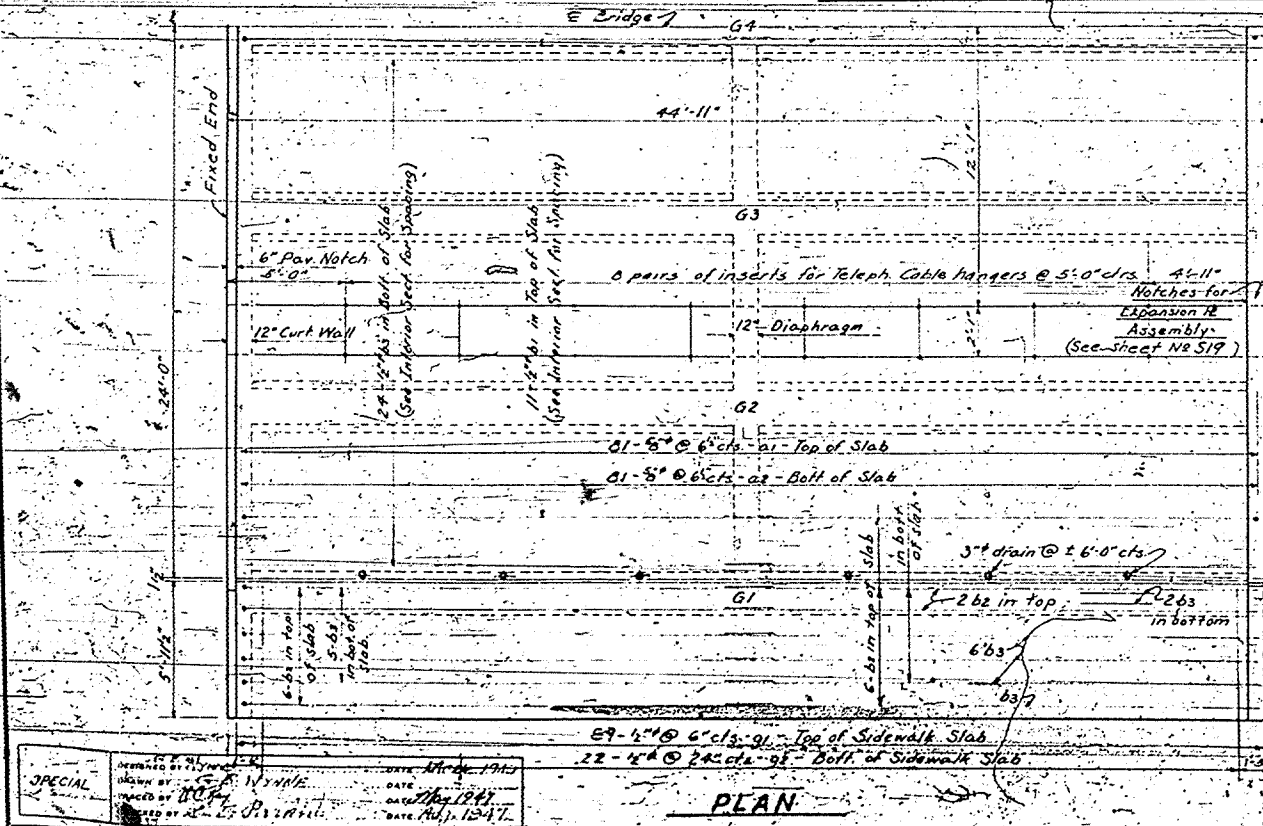


DRAIN DETAIL

BEARING DETAIL AT PIER #1

For Design Data and General Note see sheet No. 52.

For detail of Exp. Jt. between concrete & steel spans see sheet No. 519.



DETAIL OF BARS

BILL OF MATERIAL

BAR NO.	SIZE	TYPE	LENGTH	WEIGHT
a1	6"	①	52'-3"	4414
a2	8"	②	50'-11"	4302
b1	4"	③	25'-2"	740
b2	2"	③	26'-2"	420
b3	1/2"	Stk.	25'-0"	1782
c1	4"	④	47'-7"	647
c2	4"	④	41'-7"	565
c3	4"	④	33'-11"	461
c4	4"	④	23'-11"	339
c5	10"	④	45'-10"	2835
c6	10"	④	40'-10"	2169
c7	10"	④	38'-2"	1815
c8	10"	④	28'-2"	1497
d1	8"	⑦	46'-6"	1265
d2	2"	⑦	46'-10"	4976
d3	28"	⑥	8'-0"	336
e1	178"	⑥	6'-9"	802
e2	44"	⑥	5'-9"	169
k1	4"	Stk.	26'-3"	70
k2	4"	Stk.	26'-9"	161
k3	8"	Stk.	22'-0"	710
k4	4"	Stk.	18'-6"	49
s1	62"	⑦	9'-0"	373
s2	126"	⑦	7'-6"	634
s3	189"	⑦	7'-8"	968

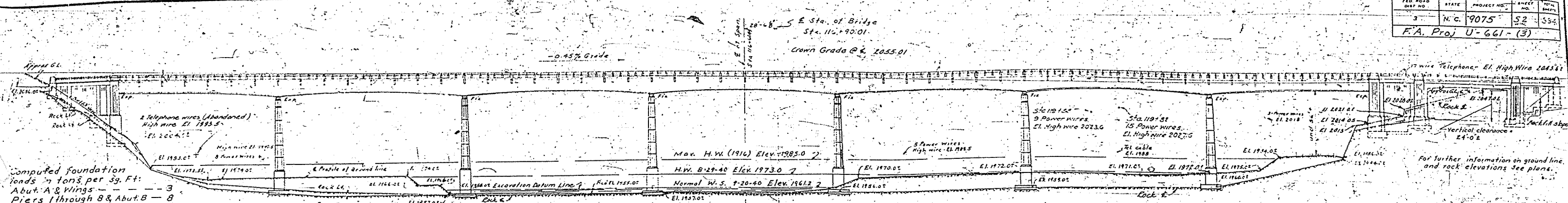
REINFORCING STEEL - LBS. 31878
 CLASS 'A' CONCRETE - CU. YDS. 118.3
 B. & BOLTS - LBS. (Phosphor Bronze) 368

PROJECT NO. 9075
 BUNCOMBE COUNTY
 STATION: 116 + 90.01

45'-4" APPROACH SPAN 'A'
 STATE OF NORTH CAROLINA
 STATE HIGHWAY AND
 PUBLIC WORKS COMMISSION
 SUPERSTRUCTURE DETAILS
 BRIDGE
 OVER FRENCH BROAD RIVER
 ASHEVILLE, N.C.
 JULY, 1947

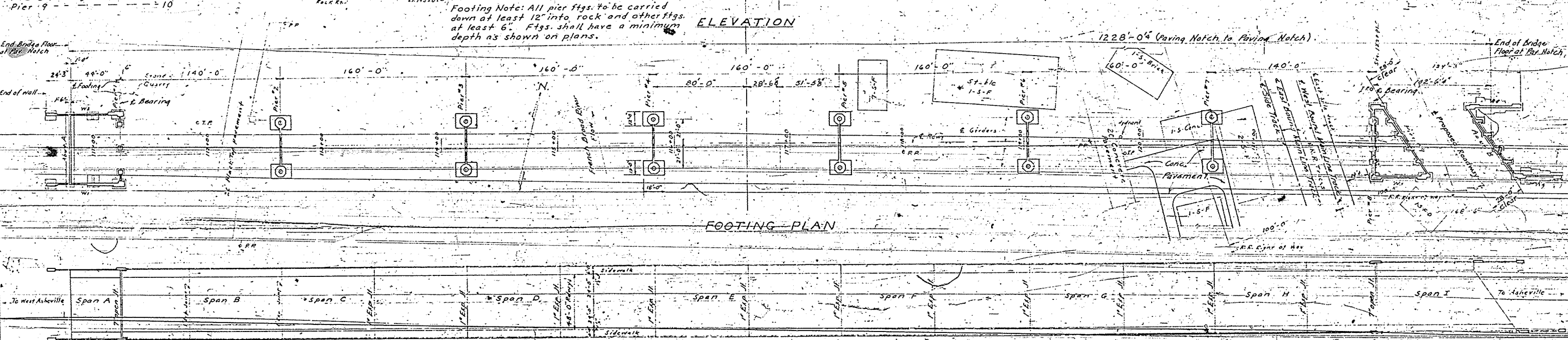
SPECIAL
 DRAWN BY: E. W. NYNNE
 CHECKED BY: J. W. HARRIS
 DATE: July 1947

PLAN

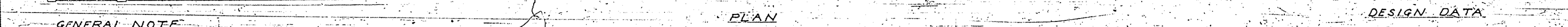


ELEVATION

Footings Note: All pier fgs. to be carried down at least 12" into rock and other fgs. at least 6". Fgs. shall have a minimum depth as shown on plans.



FOOTING PLAN



PLAN

GENERAL NOTE

MATERIAL AND WORKMANSHIP
 Except as otherwise specified on plans or in the special provisions all material and workmanship shall be in accordance with the Specifications of the North Carolina State Highway and Public Works Commission.

CONCRETE
 Class A Concrete shall be used throughout. Standard size No. 4 coarse aggregate shall be used in handrails above top of curbs. Standard size No. 3 shall be used in all other parts. No construction joints other than those shown on plans will be permitted. All concrete shall be compacted by mechanical vibration.

CHAMFERS
 Expansion joint corners shall be chamfered $\frac{1}{4}$ " and roadway edges of curbs shall be chamfered $\frac{1}{4}$ ". Bottom corners of interior concrete girders to be chamfered $\frac{1}{4}$ ". Unless otherwise stated on plans all other corners are not to be chamfered.

SURFACE FINISH
 All exposed surfaces of concrete, including the underneath surfaces of spans over the proposed roadway shall be given a class 1 surface finish in accordance with the Specifications. Care shall be taken to leave unchamfered corners square, straight edged, and neat in appearance.

REINFORCING STEEL
 All reinforcing steel shall be deformed bars. All dimensions relative to reinforcement are to centers of bars. No splicing of bars other than those shown on plans will be permitted. Where splicing of reinforcement is necessary bars are to be lapped 45 diameters. Reinforcing steel shall be securely held in correct position. See Specifications.

STRUCTURAL STEEL

Dimensions shown on structural steel drawings are U.S. Standard at 62°F. Rocker Bearings shall be adjusted so that they are vertical at normal temperature of 62°F. Girders shall be adjusted to grade and proper elevation before field splices are riveted. After field splices are riveted the nuts on the anchor bolts shall be pulled tight and anchor bolts grouted in place as shown on plans.

All rivets shall be $\frac{5}{8}$ " all open holes shall be $\frac{1}{8}$ " unless otherwise noted. Except as shown minimum spacing of rivets to be 3". Field connections shall be riveted unless otherwise shown. General reaming shall be done with connecting parts assembled. Field connections shall be match marked. Mark east end of each girder EAST. All welding shall be done in accordance with the requirements of the Specifications.

Bearing shoes shall be Cast Steel (Grade B). Detail drawings for structural steel shall be submitted to the Bridge Engineer for approval. No unchecked drawings will be accepted.

HANDRAIL
 Pipes for handrails shall be standard weight black pipe of the sizes shown on plans. No joints except at rail posts as specified will be permitted. Rail post castings shall be gray iron, class No. 30. See Specifications.

PAINT
 Structural steel and handrails shall be given one shop coat and one field coat of red lead. Handrails shall also be given two field coats of gray paint slightly darker than the finished concrete. See Specifications. Sample panels of the gray paint shall be submitted to the Bridge Engineer for approval. Structural steel shall also be given two field coats of aluminum paint.

EXPANSION JOINT MATERIAL
 Expansion joint material may be rubber compound or cork conforming to the requirements of the A. A. S. H. O. Specifications.

EXCAVATION AND FOUNDATION DATA
 The excavation and foundation data, and all elevations of ground line given are believed to be correct and are furnished for the convenience of bidders, but the State Hwy & Pub. Wks. Comm. assumes no responsibility for nor guarantees as correct any of the information given. See Specifications.

GRADE

This bridge shall be built on a 0.45% grade. The handrails, slabs, curbs and girders except as otherwise shown on plans shall conform to the grade. Handrail posts shall be built plumb. The elevations shown do not include any allowance for settlement or for permanent camber of concrete spans nor for deflection of steel spans which shall be provided for in addition to the elevations given. After the falsework has been removed the concrete spans shall have the elevations shown plus the allowance for permanent camber specified by the Engineer.

ALTERNATE RIVETED CONSTRUCTION
 At the contractor's option, he will be permitted to substitute riveted construction for the welded type on which the plans for the superstr. of the girder spans is based. The riveted design shall be in accordance with the Design Data show hereon and plans shall be submitted to the Bridge Engr. for approval. See Special Provisions.

For notes regarding work to be done for the Southern Bell Tel. & Tel. Co. notes regarding power lines, and for construction procedure, see Special Provisions.

Item	BILL OF MATERIAL				Excavation	
	Class A Concrete, Cu. Yds.	Reinforcing Steel, Lbs.	Structural Steel Method A, Lump Sum, \$1000's	Waterproofing, Sq. Yds.	Dry, Cu. Yds.	Wet, Cu. Yds.
Span A	118.3	31878				
Spans B & H	145.4	377080	2,530,000	2143		
Span C & E & F & G	578.0	101,114		1970		
Abut. A - Pier 1	523.0	1,27365		1170	24	
Pier # 2	312.2	55,551			350	50
Piers # 3 & 4 & 5	1211.3	123,552			70	320
Pier # 6	412.2	50,918			315	95
Pier # 7	370.7	57,730			315	70
Piers # 8 & 9 and Wing Wall Ws.	571.3				250	
Abut. B and Wing Wall Ws.	365.2	98,930			350	
Totals	6022.5	1,150,772	2,530,000	2516.0	77	360

Includes 127,370 Cu. Yds. Conc. in Handrails

DESIGN DATA

Specifications	A.A.S.H.O. (1944)
Assumed Live Load	H20 (1944)
Impact Allowance	See Specifications
Stress in extreme fiber of Struct. Steel	18,000 lbs. per sq. in.
Tension in Web reinforcement	16,000
Reinforcing steel in tension	18,000
Concrete in compression	1,000
Concrete in shear	90
Equivalent fluid pressure of earth	30

#323 PROJECT NO. 9075
 BUNCOMBE COUNTY

STATION: 116+90.01

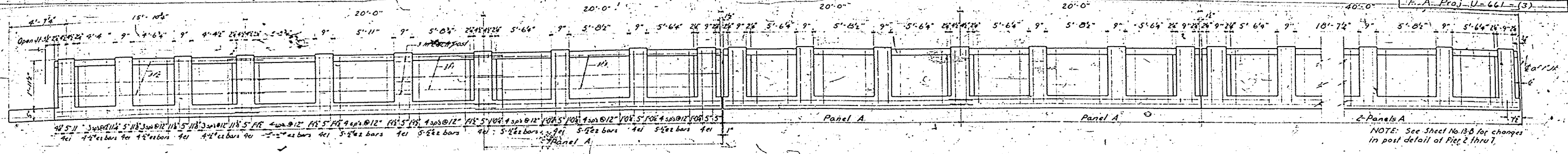
Separate or Combined Bid.
 The structure is divided into parts A and B.
 See Sheet No. 54.
 Bids will be received on either or both parts.
 See Special Provisions.

STATE OF NORTH CAROLINA
 STATE HIGHWAY AND
 PUBLIC WORKS COMMISSION

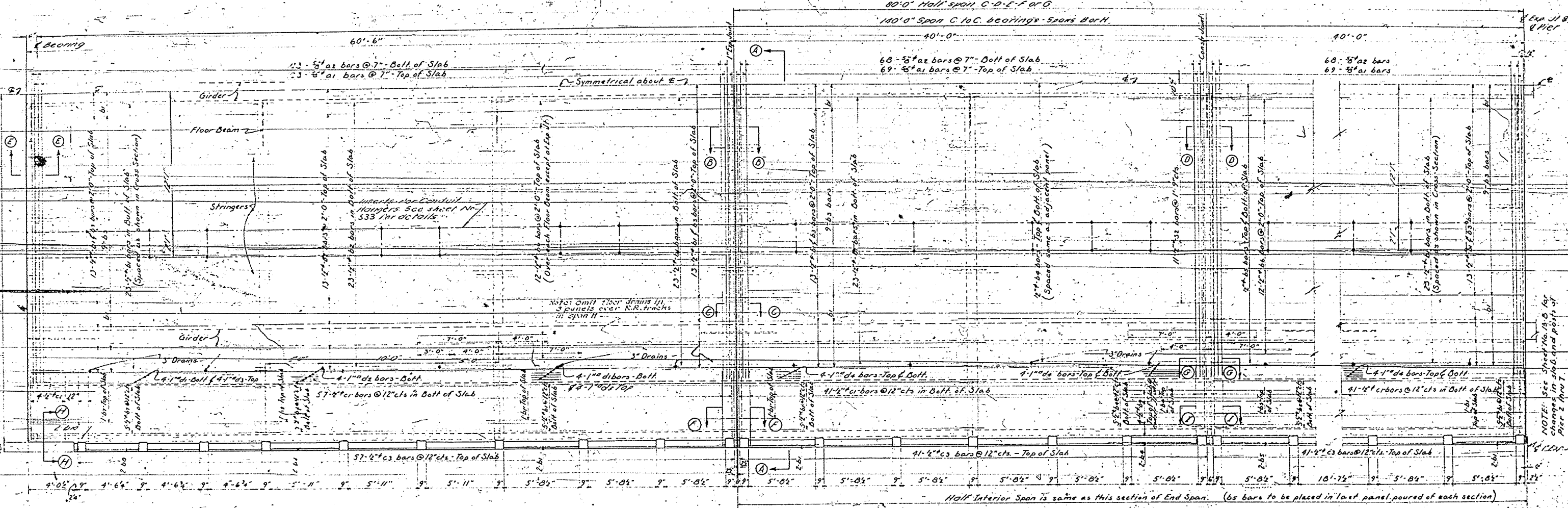
GENERAL DRAWING
 BRIDGE
 OVER FRENCH BROAD RIVER
 ASHEVILLE, N. C.
 JULY, 1947

DESIGNED BY: R. A. Shaw
 CHECKED BY: G. S. WYNNE
 DATE: 11/17/47
 B.M. - U.S. C & G - 5, 0732
 set in Rock Cut, 13-4"
 U.S. Sta. 121+36, El. 1987.916
 Point note revised, 2-23-50
 Revised to add bars 52 & 53 to Span I, April 20, 1948 by Mrs. W. B. J. P.

FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
3	N. C.	9075	513	534
F. A. Proj. U-661-(3)				

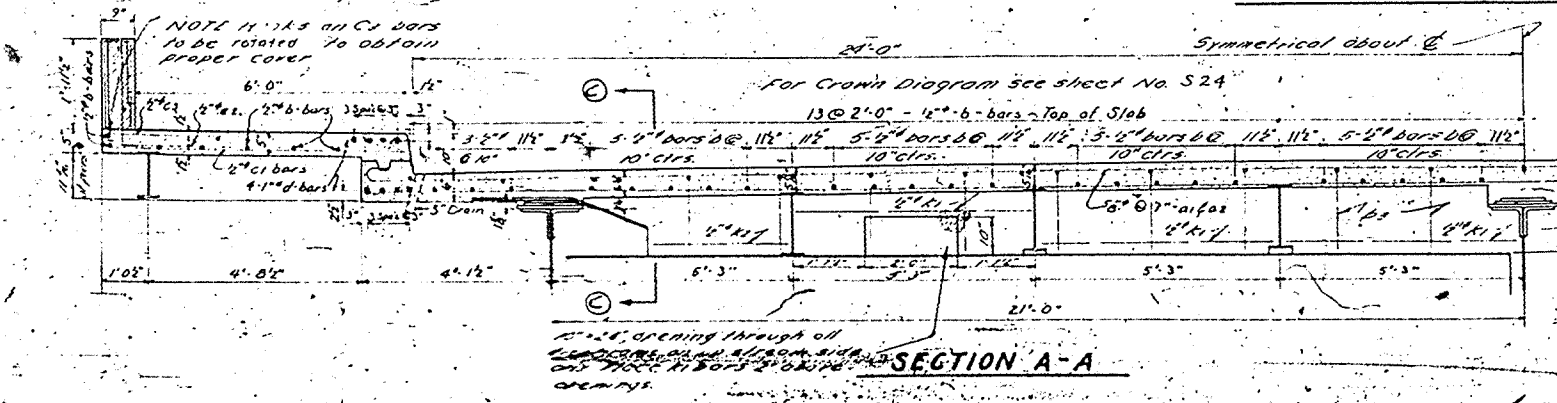


NOTE: See Sheet No. 138 for changes in post detail of Pier 2 thru 7.



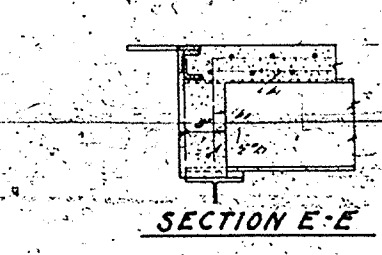
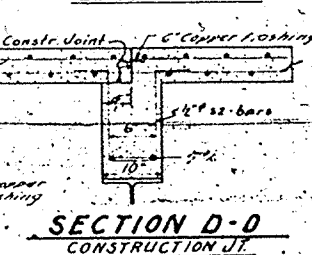
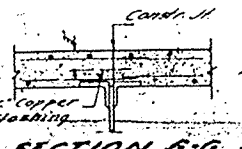
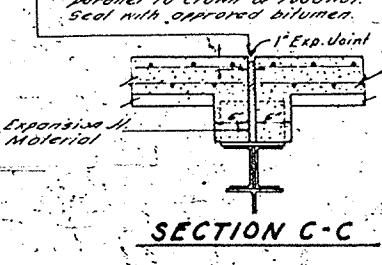
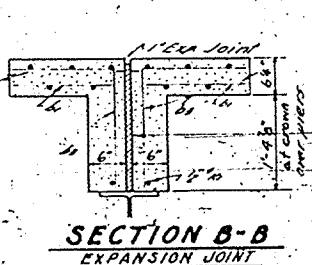
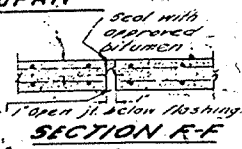
NOTE: See Sheet No. 138 for changes in slab and posts of Pier 2 thru 7.

HALF PLAN - END SPAN



NOTE: Vertical dimensions shown from structural steel to center of slab are for points over piers. For use in providing for difference in deflections and camber built in girders between piers.

NOTE: See sheet No. 524 for Sect. H-H for details of Copper Flashing and other details not shown on this sheet see sheet No. 514.



PROJECT NO. 9075
BUNCOMBE COUNTY
STATION: 116 + 90.01

END SPAN OF STEELING

STATE OF NORTH CAROLINA
STATE HIGHWAY AND
PUBLIC WORKS COMMISSION

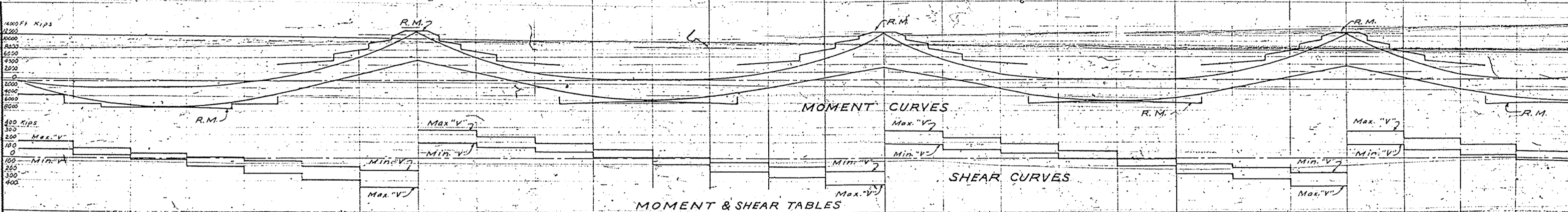
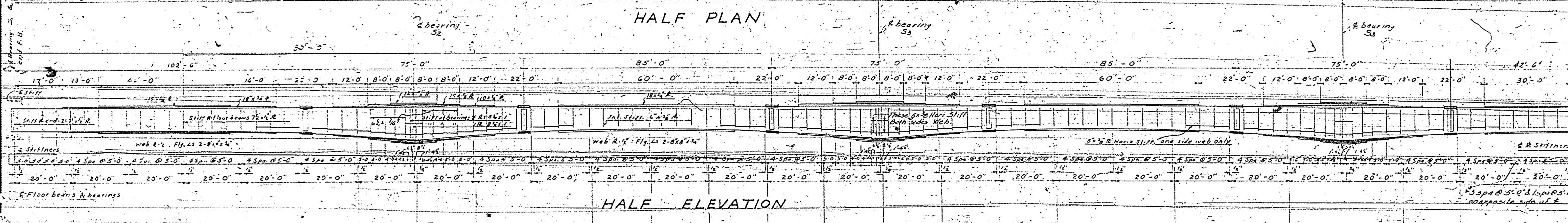
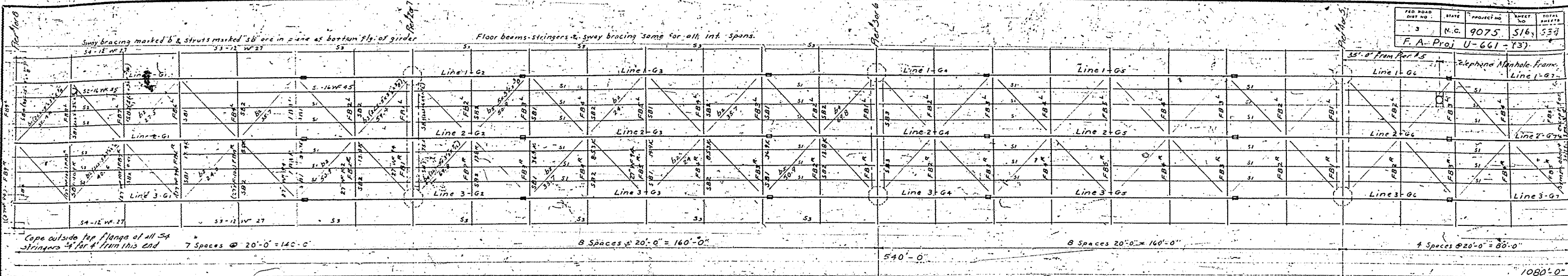
SUPERSTRUCTURE DETAILS
BRIDGE OVER
OVER FRENCH BROAD RIVER
ASHEVILLE, N.C.
JULY 1947

DESIGNED BY: J. B. ...
APPROVED BY: W. Vaic ...

DESIGNED BY: J. B. ...
DATE: May 1947
CHECKED BY: ...
DATE: May 1947

REVISIONS MADE FOR BRIDGE
LIGHTING AND WIND SYSTEM, J.H.C.
DATE: Oct. 1947

FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
3	N.C.	9075	516	554
F. A. Proj U-661-(73)				



MOMENT & SHEAR TABLES

DL.M.	-2459	+3700	+3689	+2639	-262	-3162	-7930	-3557	-508	+1451	+2183	+1773	+120	-2619	-6684	-2720	+332	+2102	+2557	+1992	+154	-2782	-7054	-2839	+57	+1865	+2369																											
SWLM	+517	-71	+504	-141	+549	-212	-541	-281	+377	-346	-515	+206	-940	+142	-417	+149	-304	+254	+457	-314	+527	-315	+407	-332	+352	-344	-533	+284	-974	+317	-522	+277	+344	-310	+523	-317	+571	-304	+524	-332	+342	-341	-538	+286	-885	+324	-504	+281	+344	-338	+521	-337	+366	-337
LZ.M.	1469	-218	+2327	515	+2493	-844	+2422	-1187	+1725	-532	-1834	+921	-3162	+682	-2134	+743	-1309	+1294	+2110	-1336	+2367	-1334	+2246	-1385	+1604	-1656	-2248	+1176	-4045	+1229	-2215	+1157	+1583	-1311	+2322	-1315	+2533	-1273	+2331	-1369	+1643	-1424	-2332	+1185	+205	+1353	-2351	+1169	+1584	-1433	+2294	-1393	+2316	-1393
Totl.M.	4245	+1352	+4533	+1854	+4451	+1476	+5602	+374	+2322	-729	-5511	-1086	-12832	-4607	-6188	-1598	-2121	+1192	+4018	-634	+5077	-121	+4446	-476	+12078	-1916	-5400	-373	-11723	-3133	-5457	-470	+2259	-1389	+4447	+161	+5641	+213	+4849	-307	+2159	-1657	-3672	-476	-12144	-324	-5754	-533	+1985	-1231	+4470	-426	+5457	-72
Max. V	221.7	131.8	50.5	114.2	205.2	-283.4	379.1	343.2	267.4	189.4	100.3	82.2	171.5	249.4	345.3	354.4	258.6	180.4	91.6	97.6	186.8	247.8	360.6	357.9	242.2	184.2	95.1																											
Min. V	103.5	42.6	-20.0	-5.8	46.1	-116.6	166.7	-175.3	129.5	74.9	10.0	-9.6	-55.3	109.9	175.7	179.7	113.9	59.3	-5.6	6.9	71.8	126.4	192.2	181.7	115.9	61.3	-3.6																											

PROJECT No. 9075
 BUNCOMBE COUNTY
 STATION 116+90.01

STATE OF NORTH CAROLINA
 STATE HIGHWAY AND
 PUBLIC WORKS COMMISSION

**STEEL LAYOUT & STRESS SHEET
 BRIDGE
 OVER FRENCH BROAD RIVER
 ASHEVILLE, N.C.**

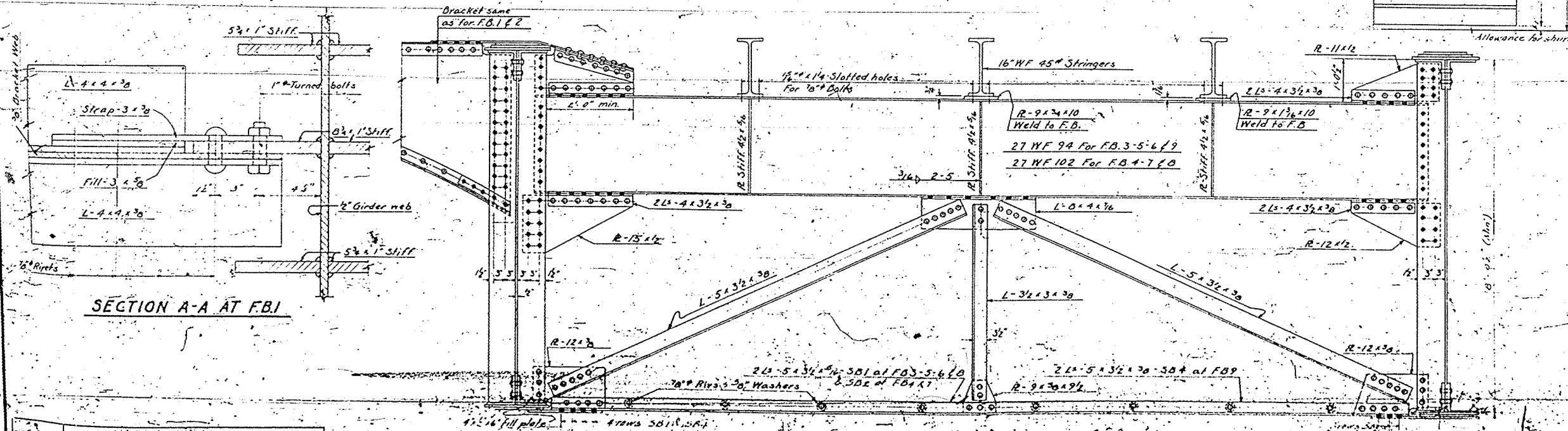
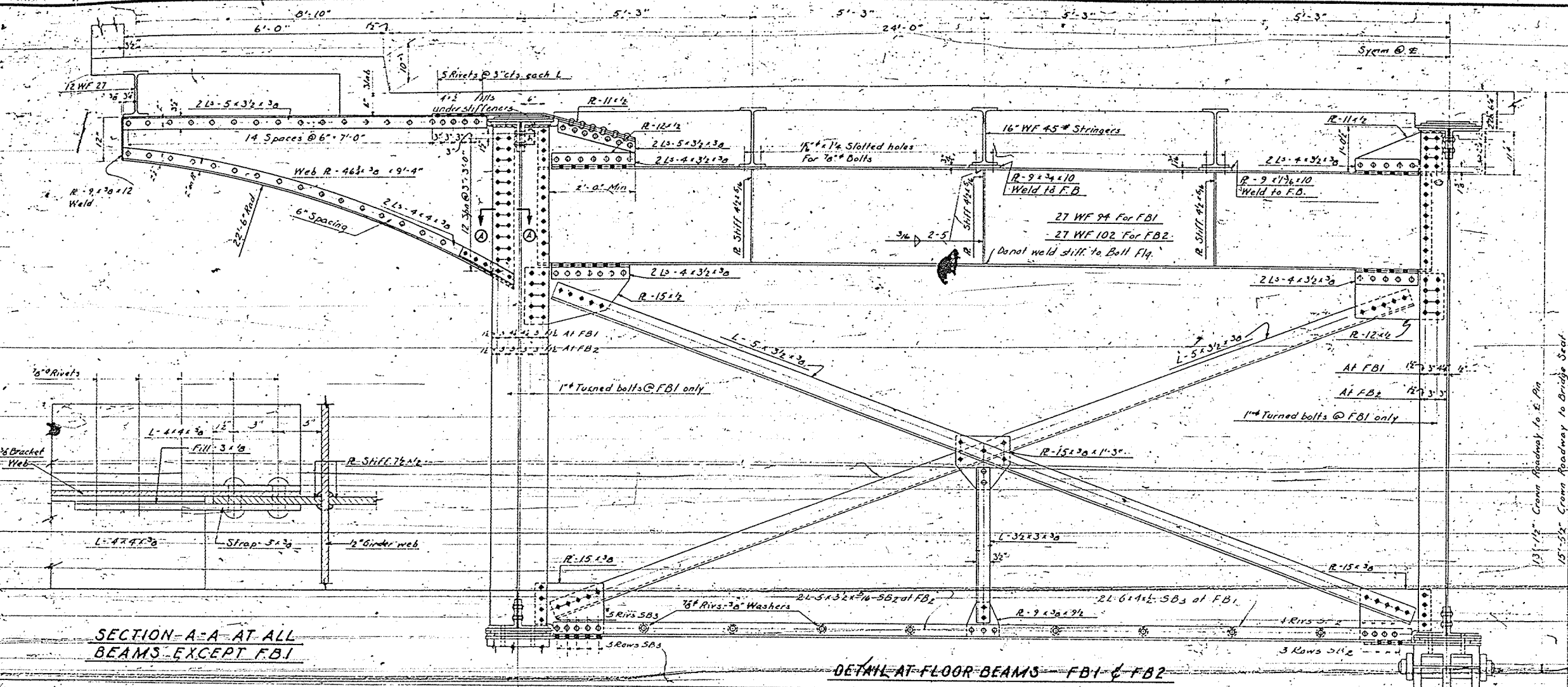
JULY 1947

DESIGNED BY: *W. Vance*
 APPROVED BY: *W. Vance*
 STATE HIGHWAY ENGINEER

DESIGNED BY: M. W. Sullivan, DATE: March 1947.
 CHECKED BY: G. A. Shaw, DATE: April 1947.
 APPROVED BY: M. W. Sullivan, DATE: Sept. 1947.

Note: For Design Data and General Notes see sheet No. 52

FED. ROAD DIST. NO.	STATE	PROJECT NO.	ARCH. NO.	STATION
3	N.C.	9075	517	339
F. A. Proj. U-641-(3)				



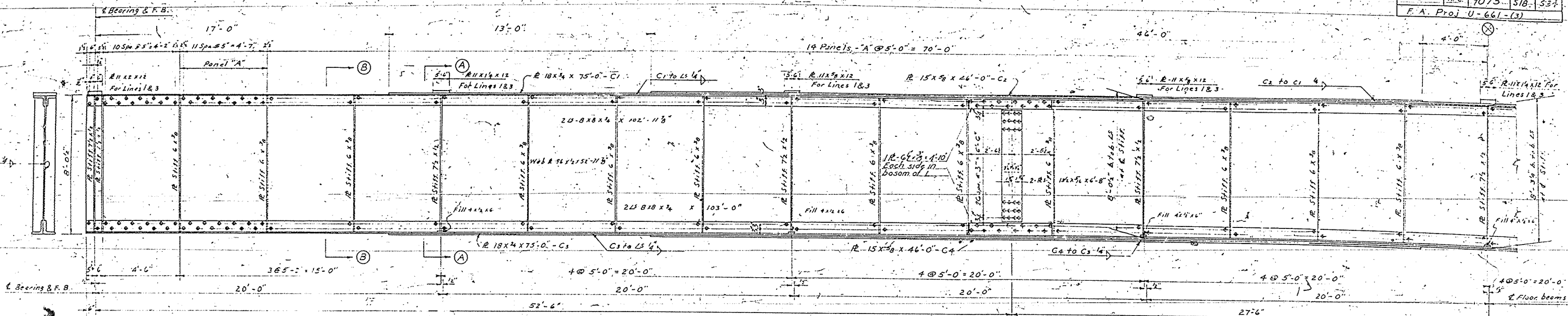
PROJECT NO. 9075
 BUNCOMBE COUNTY
 STATION: 116+90.01
 FLOOR BEAMS - FBI THRU FB9

STATE OF NORTH CAROLINA
 STATE HIGHWAY AND
 PUBLIC WORKS COMMISSION

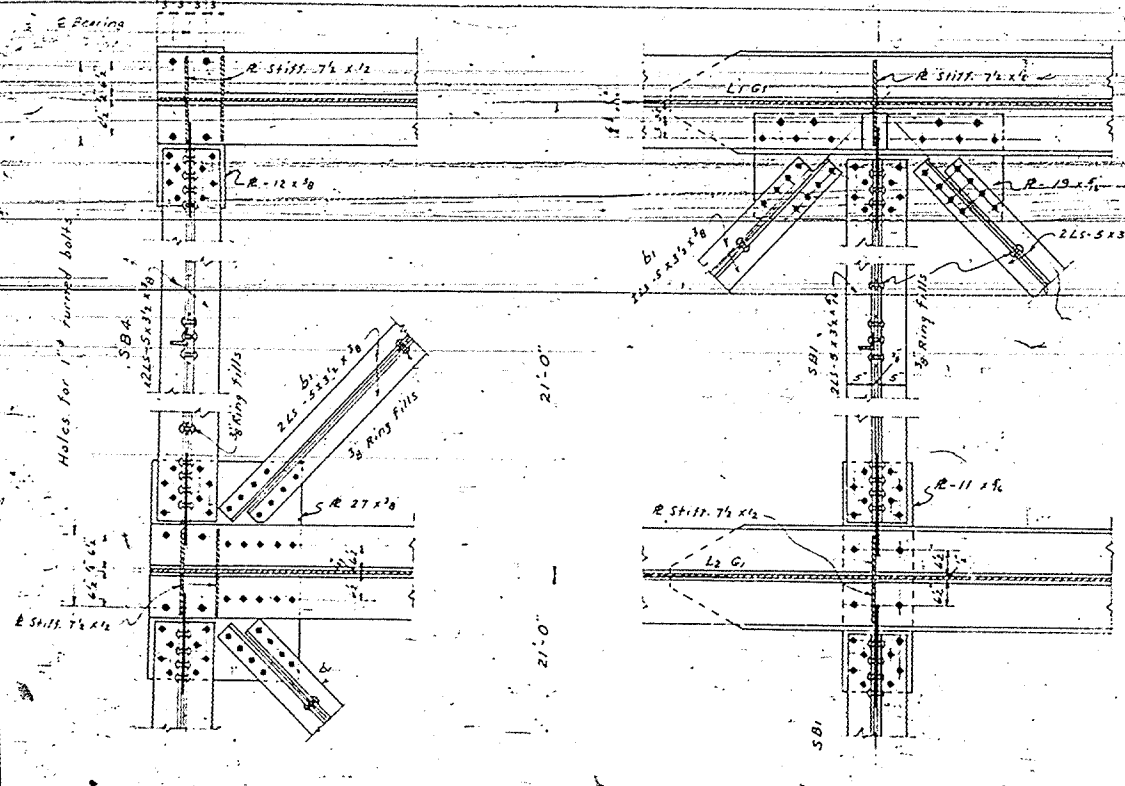
STEEL DETAILS
 BRIDGE
 OVER FRENCH BROAD RIVER
 ASHEVILLE, N. C.
 JULY, 1937

DESIGNED BY J. W. S. [Signature]
 CHECKED BY H. W. Shelton
 DATE [Date]
 SPECIAL [Text]

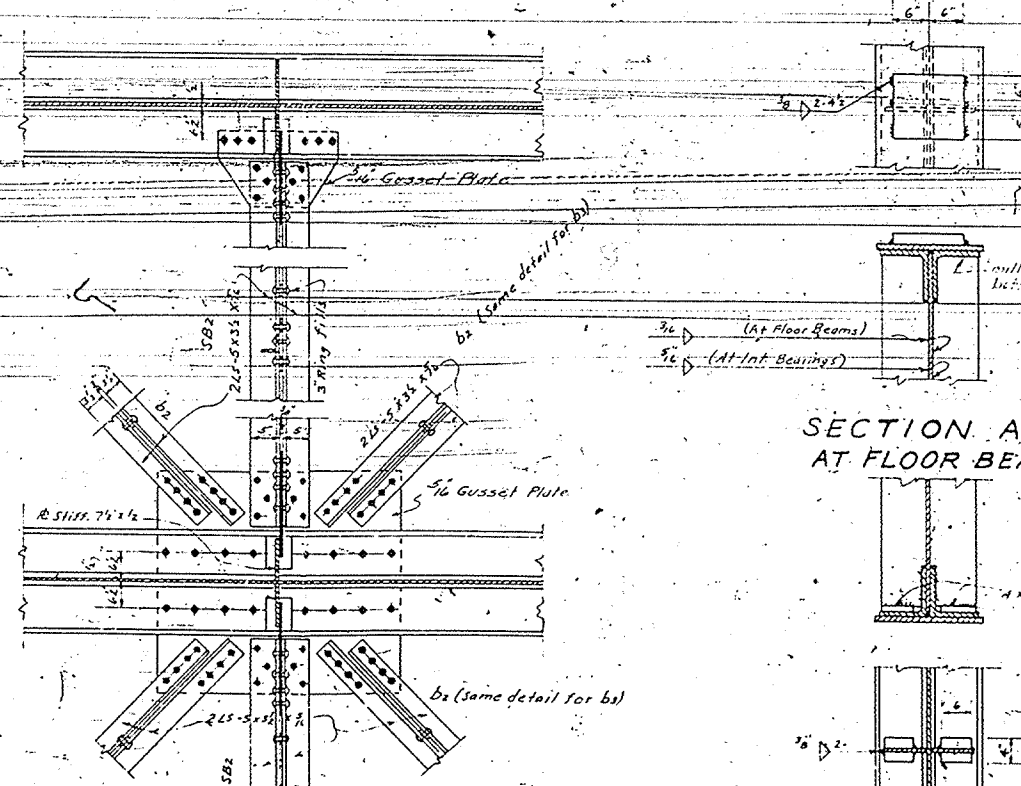
FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
3	N.C.	9075	518	534
F.A. Proj U-661-(3)				



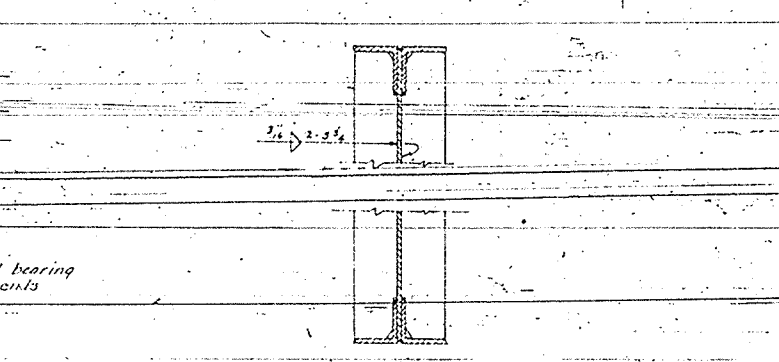
PART ELEVATION GIRDER G1 - LINES 1 or 2 or 3



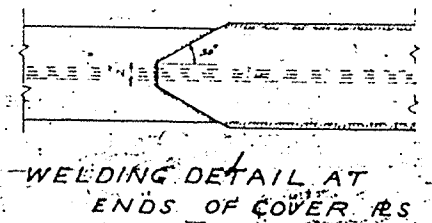
SECTION THRU GIRDER SHOWING BOTTOM LATERALS



SECTION A-A AT FLOOR BEAMS



SECTION B-B AT INT. STIFF



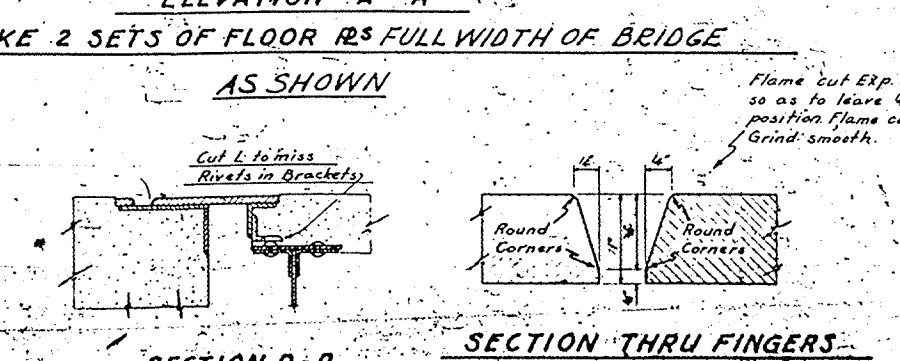
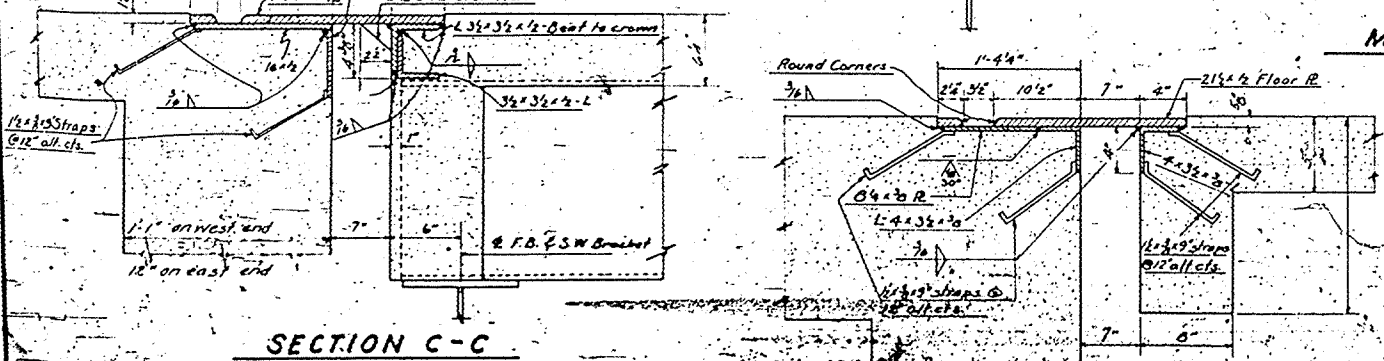
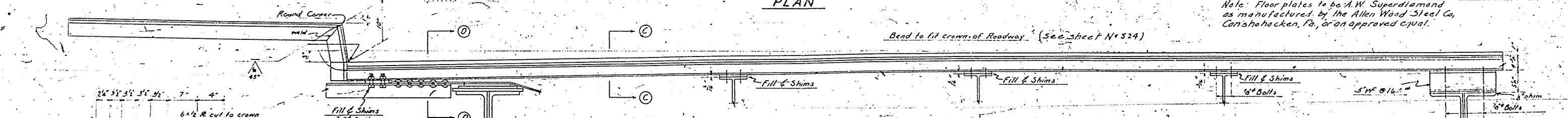
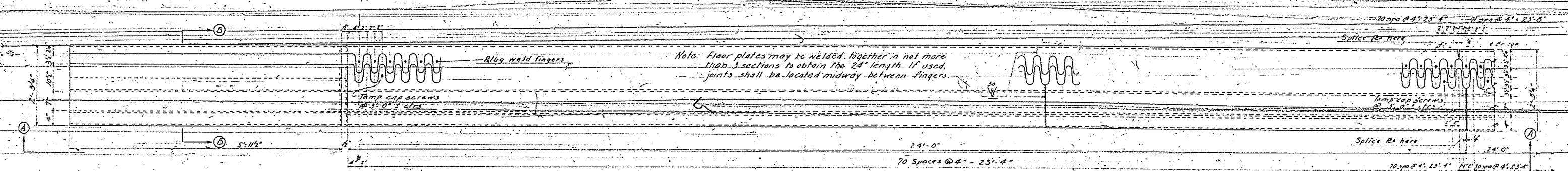
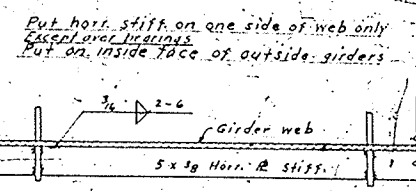
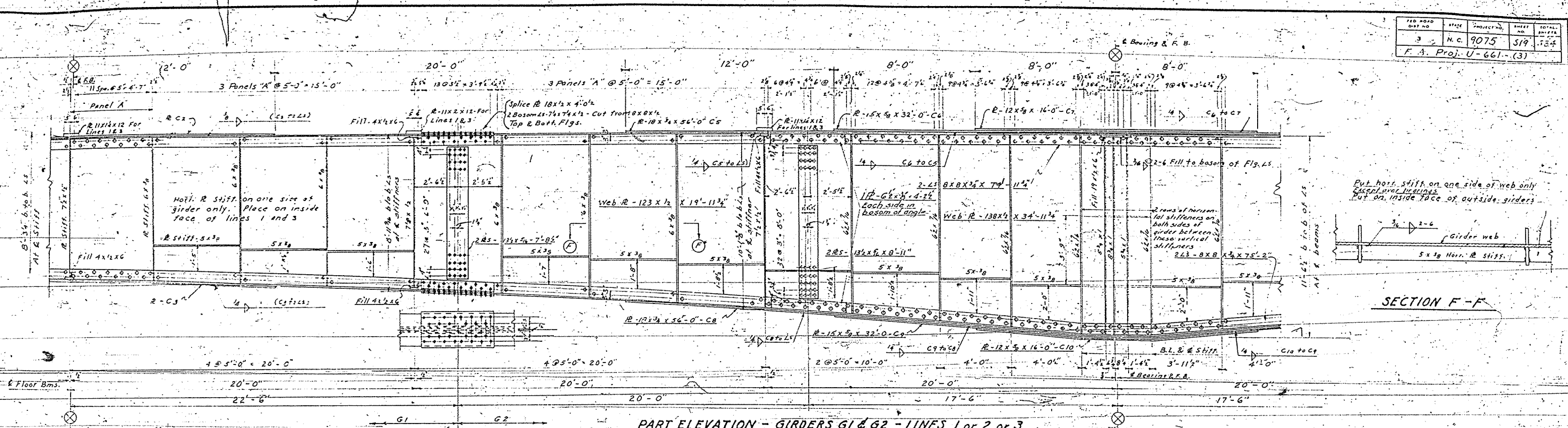
WELDING DETAIL AT ENDS OF COVER PLATES

PROJECT NO. 9075
 BUNCOMBE COUNTY
 STATION: 116 + 90.01
 GIRDER G1 - LINES 1 & 2 & 3

STATE OF NORTH CAROLINA
 STATE HIGHWAY AND
 PUBLIC WORKS COMMISSION
 STEEL DETAILS
 BRIDGE
 OVER FRENCH BROAD RIVER
 ASHEVILLE, N.C.
 JULY, 1947

Designed by Wm. Sheldon
 Checked by Wm. Sheldon
 Date: March 1947
 Date: Sept. 1947

FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
3	N. C.	9075	519	784
F. A. Proj. U-661-(3)				



PROJECT NO. 9075
 BUNCOMBE COUNTY
 STATION: 116 + 90.01

STATE OF NORTH CAROLINA
 STATE HIGHWAY AND
 PUBLIC WORKS COMMISSION

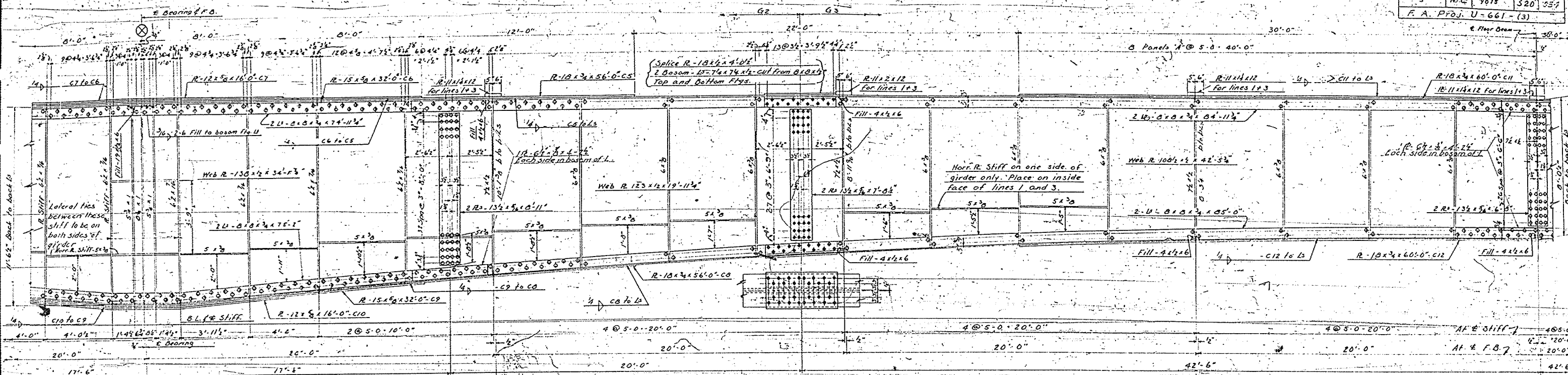
STEEL DETAILS
 BRIDGE
 OVER FRENCH BROAD RIVER
 ASHEVILLE, N. C.
 JULY 1947

DESIGNED BY: A. T. Swales
 DRAWN BY: J. E. ...
 DATE: June 1947

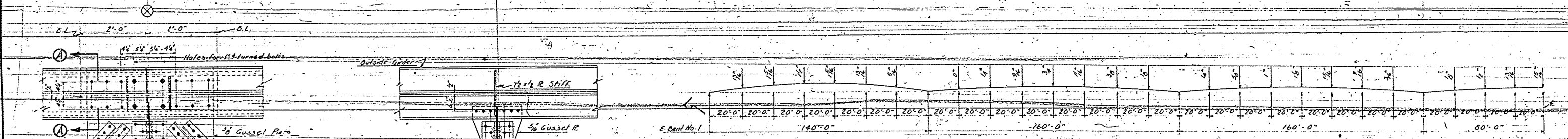
SECTION B-B
 SIDE-WALK EXPANSION R

GIRDERS-G1 & G2 -
 LINES 2 & 3 AND
 EXPANSION DETAILS

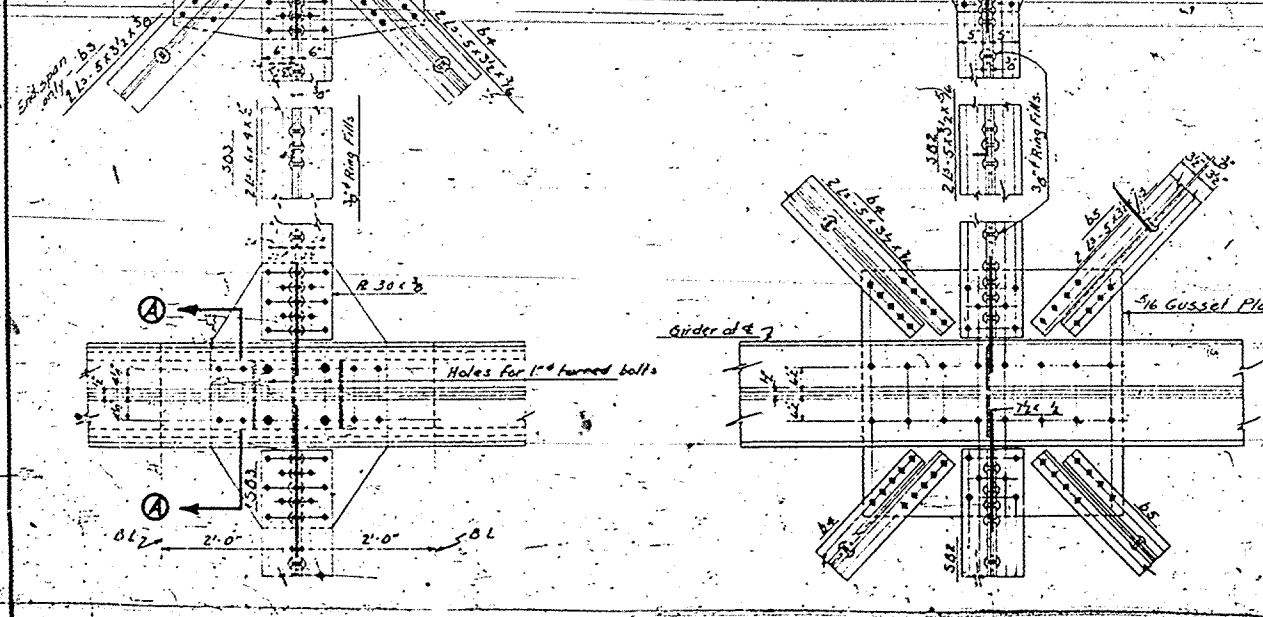
FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
3	N.C.	9075	520	557
F. A. Proj. U-661-(3)				



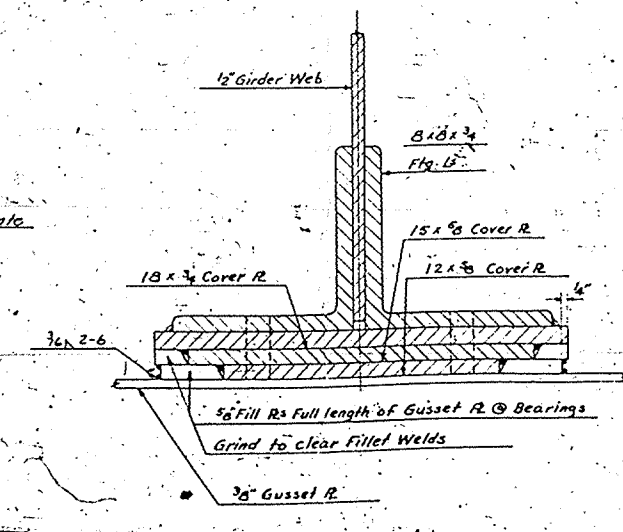
PART ELEVATION GIRDERS G2 & G3 LINES 1-2 or 3



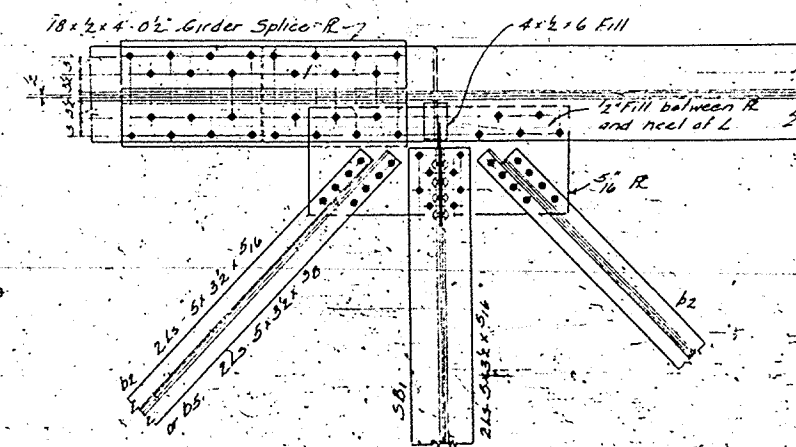
CAMBER DIAGRAM



SECTION THRU GIRDERS SHOWING BOTTOM LATERALS



SECTION A-A



LATERAL CONNECTIONS AT PANEL NEXT TO SPLICE

PROJECT NO. 9075
 BUNCOMBE COUNTY
 STATION: 116 + 90.01
 GIRDERS G2 & G3 - LINES 1 & 2 & 3

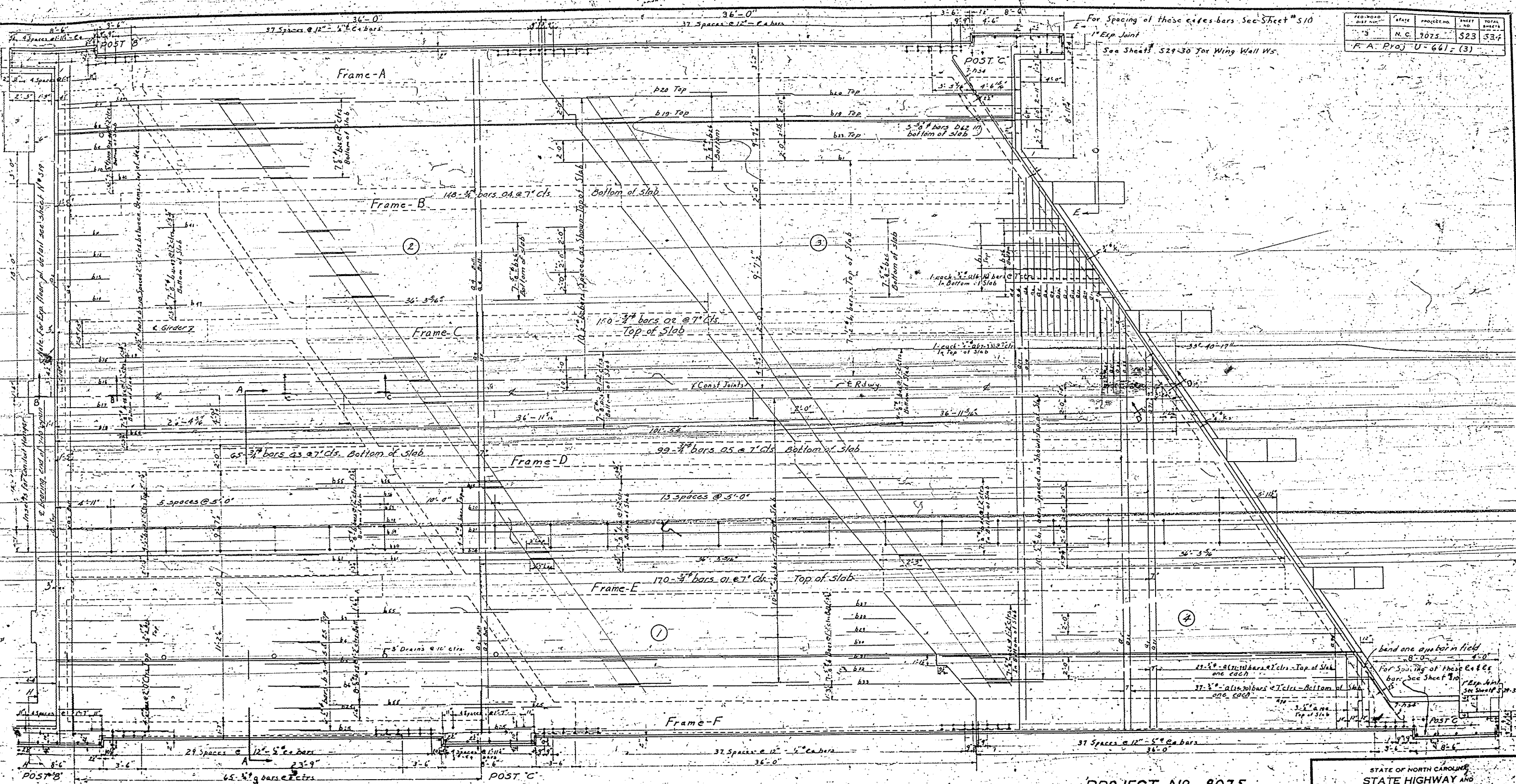
STATE OF NORTH CAROLINA
 STATE HIGHWAY AND
 PUBLIC WORKS COMMISSION
 STEEL DETAILS
 BRIDGE
 OVER FRENCH BROAD RIVER
 ASHEVILLE, N. C.
 JULY 1947

DESIGNED BY: J. P. SANDERSON
 CHECKED BY: G. D. WYNN
 DATE: JULY 1947

DESIGNED BY: J. P. SANDERSON
 CHECKED BY: G. D. WYNN
 DATE: JULY 1947

FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
3	N.C.	9075	523	537

F. A. Proj. U-661-(3)



Note: For Spacing of e-bars not Shown See enlarged Details on Sheet # 510

For sections see Sheet No 524
For details of Railing see Sheets No 510-11-15

Note: Span I shall be poured by sections in the order indicated by numbers in circles except that ① & ② may be reversed if the contractor so desires.

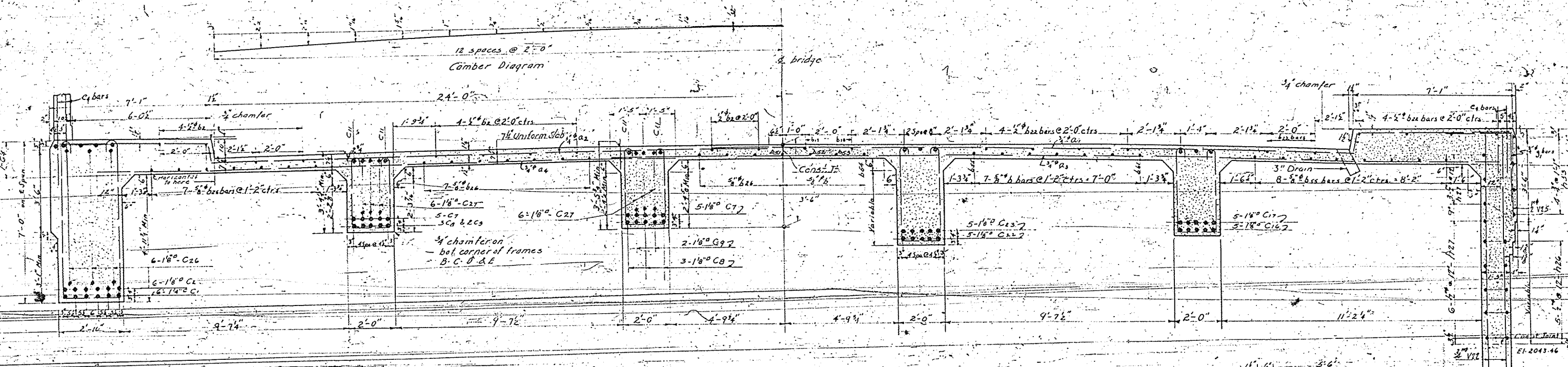
PROJECT No. 9075
BUNCOMBE COUNTY
STATION: 116 + 90.01

STATE OF NORTH CAROLINA
STATE HIGHWAY AND
PUBLIC WORKS COMMISSION
SUPERSTRUCTURE DETAIL
SPAN I
BRIDGE
OVER FRENCH BROAD RIVER,
ASHEVILLE, N.C.
AUGUST 1947

DESIGNED BY: J.P. S...
APPROVED BY: W. Vane...

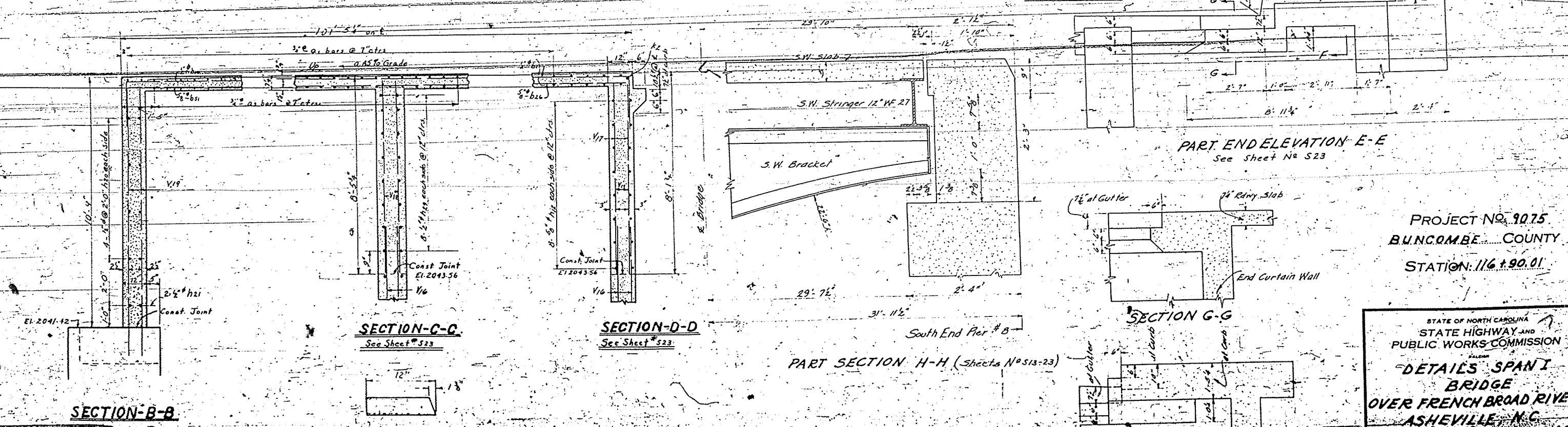
DESIGNED BY: J.P. S...	DATE: July, 1947
APPROVED BY: W. Vane...	DATE: July, 1947
TRACED BY: J. J. ...	DATE: July, 1947
CHECKED BY: J. J. ...	DATE: July, 1947

FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
3	N.C.	1075	524	554
F.A. Proj U-661-(3)				



HALF SECTION AT E SPAN

HALF SECTION-A-A
See Sheet # S23



SECTION-C-C
See Sheet # S23

SECTION-D-D
See Sheet # S23

PART END ELEVATION E-E
See Sheet # S23

SECTION G-G

SECTION F-F

PROJECT NO. 1075
BUNCOMBE COUNTY
STATION: 116 + 90.01

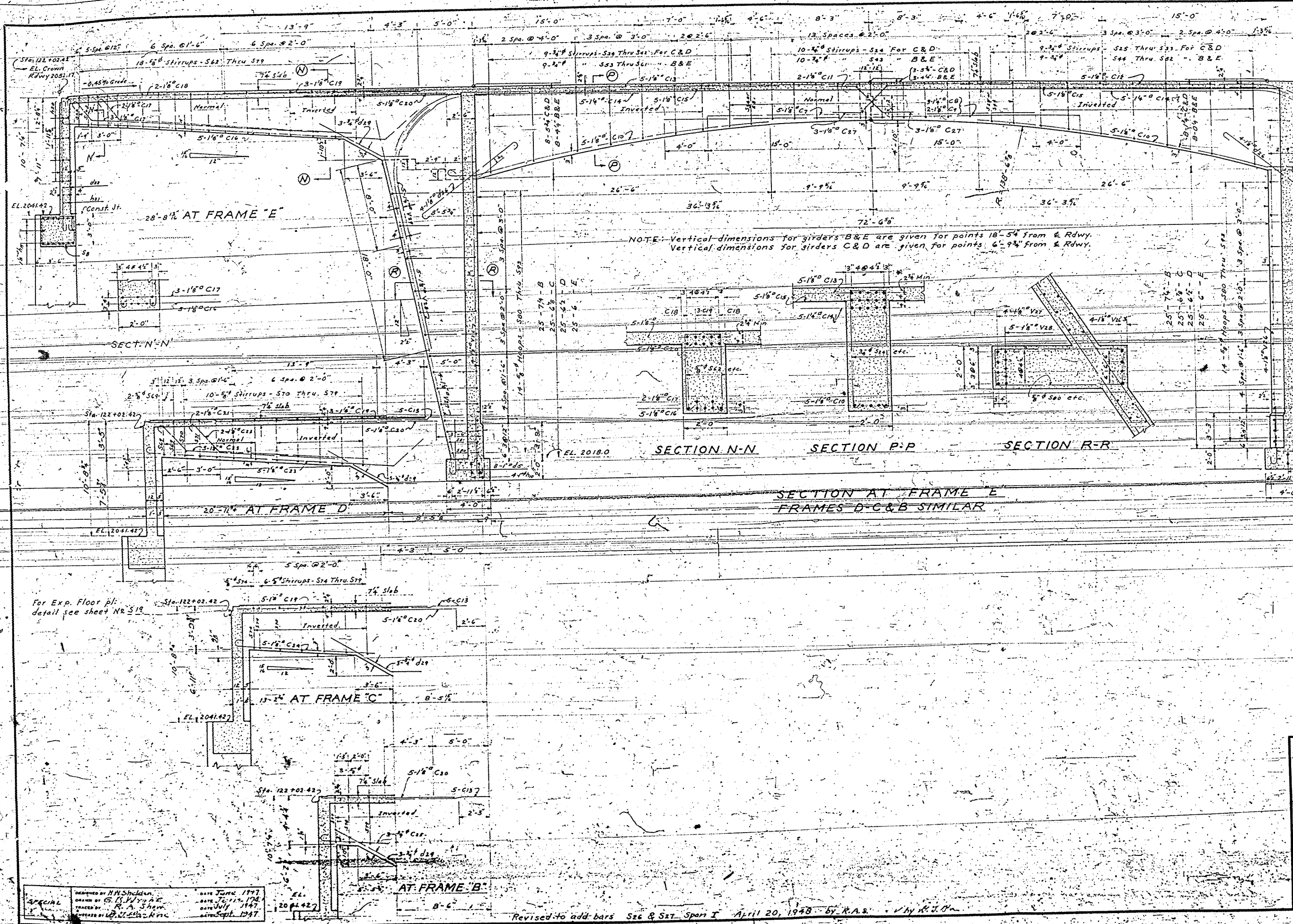
STATE OF NORTH CAROLINA
STATE HIGHWAY AND
PUBLIC WORKS COMMISSION
DESIGNED BY
**DETAILS SPAN I
BRIDGE
OVER FRENCH BROAD RIVER
ASHEVILLE, N.C.**
AUGUST 1947
SUBMITTED BY: J.P. Swain
APPROVED BY: W. Vance Brown

Designed by: H.W. Sheldon
Checked by: J.P. Swain
Drawn by: J.P. Swain
Date: July 1947

Revised to add bars See E Sect. Span I April 20 1948 by R.A.S. & J.P.

FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
3	N.C.	9075	526	537

F. A. Proj. U-661-(3)



NOTE: Vertical dimensions for girders B&E are given for points 18'-5 1/2" from E Rdwy. Vertical dimensions for girders C&D are given for points 6'-9 1/2" from E Rdwy.

NOTE: A layer of crushed stone or gravel of least 12" thick shall be placed back of Abut. B as indicated from top of fig. to within 2'-0" of the finished grade by the Structure Contractor. The entire cost of this work complete in place shall be included in contract price for dry excavation and no additional allowance will be made for same.

PROJECT NO. 9075
 BUNCOMBE COUNTY
 STATION: 116 + 90.01

STATE OF NORTH CAROLINA
 STATE HIGHWAY AND
 PUBLIC WORKS COMMISSION

FRAME DETAILS
 BRIDGE
 OVER FRENCH BROAD RIVER
 ASHEVILLE, N. C.
 AUG. 1947

DESIGNED BY: J. P. ...
 CHECKED BY: W. ...
 APPROVED BY: W. ...

DESIGNED BY: H. N. ...
 CHECKED BY: R. A. ...
 DATE: June, 1947
 DATE: July, 1947
 DATE: Sept. 1947

Revised to add bars S26 & S27 Span I April 20, 1948 by R.A.S. by K.J.M.