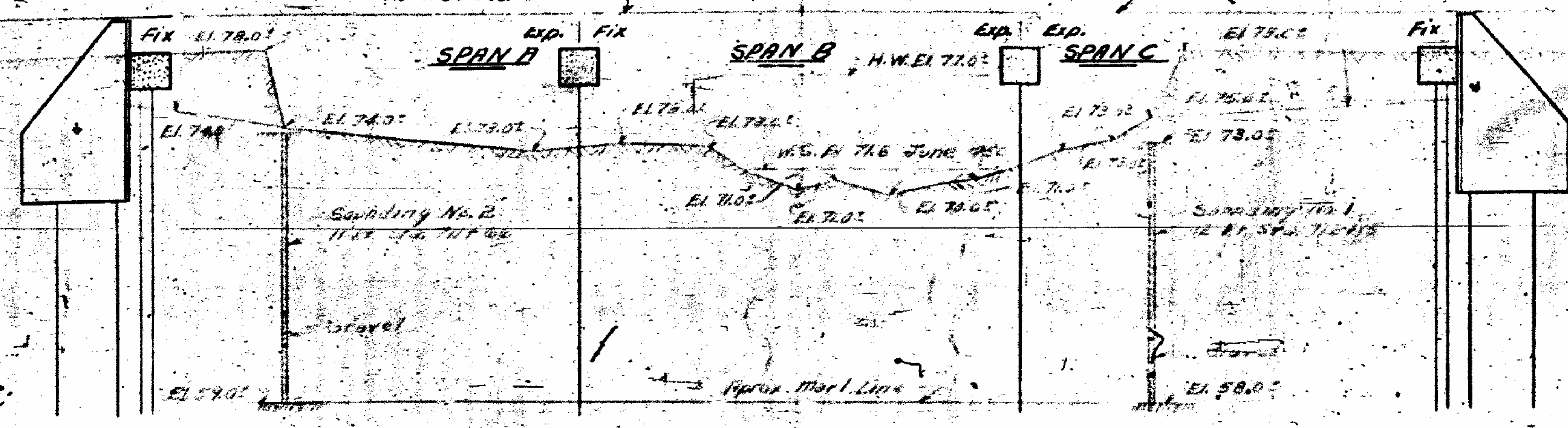
FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.
3	N.C.		

NOTE: For other design data and general notes see sheets S-2 & S-N.

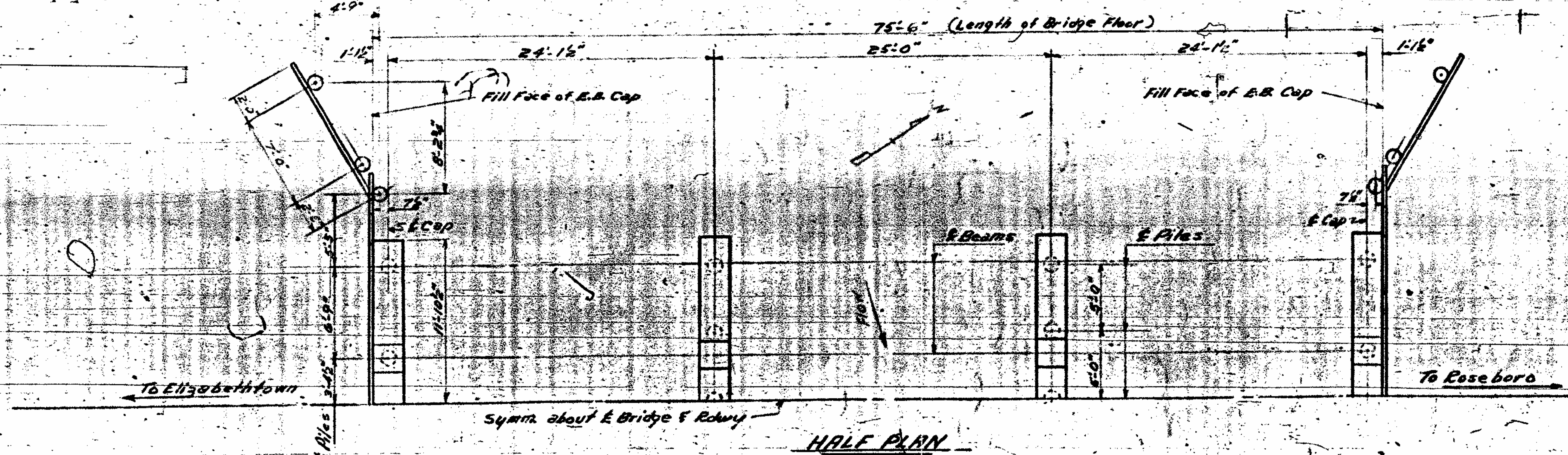
NOTE: All piles shall be driven to minimum bearing capacity of 15 tons in End Bents and 1? tons in Interior Bents.

NOTE: No Test Piles will be required. Order list for piles shall be based on 25' lengths.

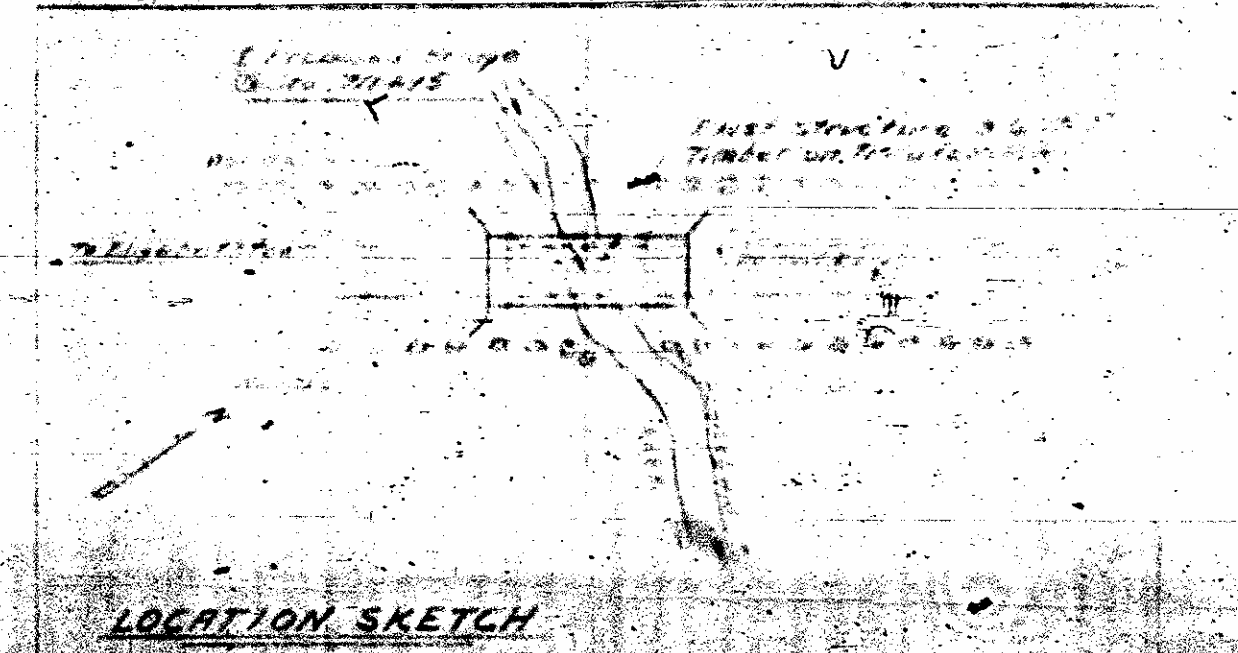


UNCLASSIFIED CHANNEL EXCAVATION: The Structure Contractor will be required to excavate the channel to the approximate elevation shown in section for a distance of approximately 25 ft. on each side of the ℄ of the proposed bridge. This work to be measured and paid for as "Unclassified Channel Excavation." See Specifications.

SECTION ALONG ℄ BRIDGE



HALF PLAN



LOCATION SKETCH

B.M. 3 Bent Nails in Pwr Pole ... Sta. 712+73 El. 79.75

Brg #25

PROJECT NO. 3465

CUMBERLAND **COUNTY**

STATION: 711+95

TOTAL BILL OF MATERIAL	Class "A" Concrete	Reinforcing Steel	Structural Steel	Creosoted Timber	Creosoted Tim. Piles		Hardware	Removal of Existing		Unclass. Chan. Excav.
	Cu. Yds.	Lbs.	Approx. Lbs.	Ft. B.M.	No.	Lin. Ft.	Lbs.	Structure		Cu. Yds.
Superstructure	52.9	11,453	19,000							[illegible]
Abutment A	3.9	684		1,456	[illegible]	[illegible]	99			
Bent No. 1	3.9	712				[illegible]				
Bent No. 2	3.9	712				[illegible]				
Abutment B	3.9	684		1,456	[illegible]	[illegible]	99			[illegible]
TOTAL	68.5	14,245	19,000	2,912	[illegible]	750	198	Lump Sum		[illegible]

Assembled by — DATE 1950

SPECIAL

DESIGNED BY — DATE

DRAWN BY G.E.C. — DATE Dec. 1950

TRACED BY — DATE

CHECKED BY W.J. Brown — DATE Dec. 1950

STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION
RALEIGH

GENERAL DRAWING FOR BRIDGE OVER BEAVERDAM CREEK

1950

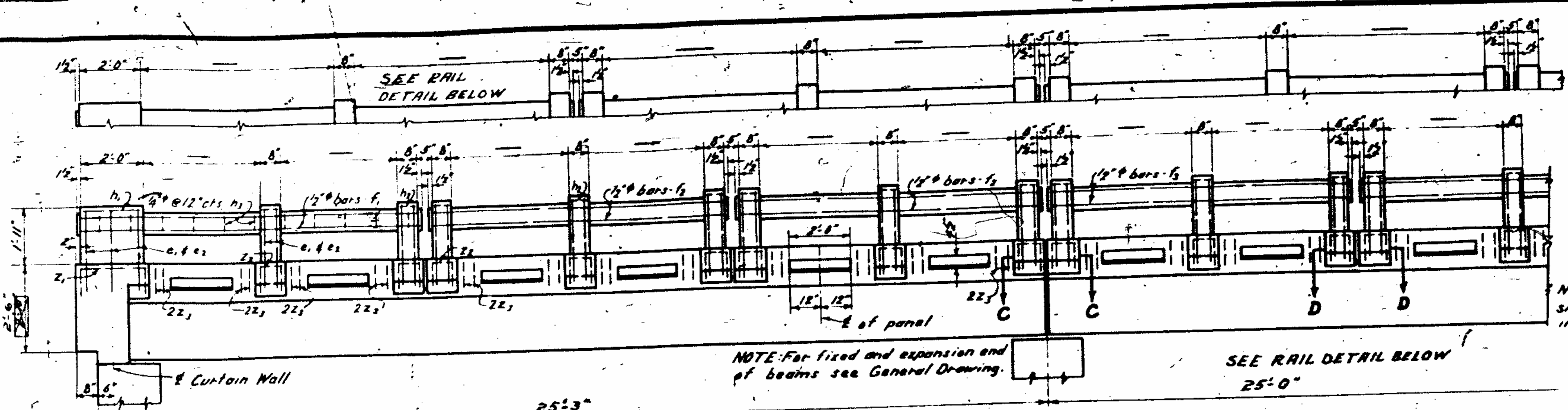
SUBMITTED BY — BRIDGE ENGINEER

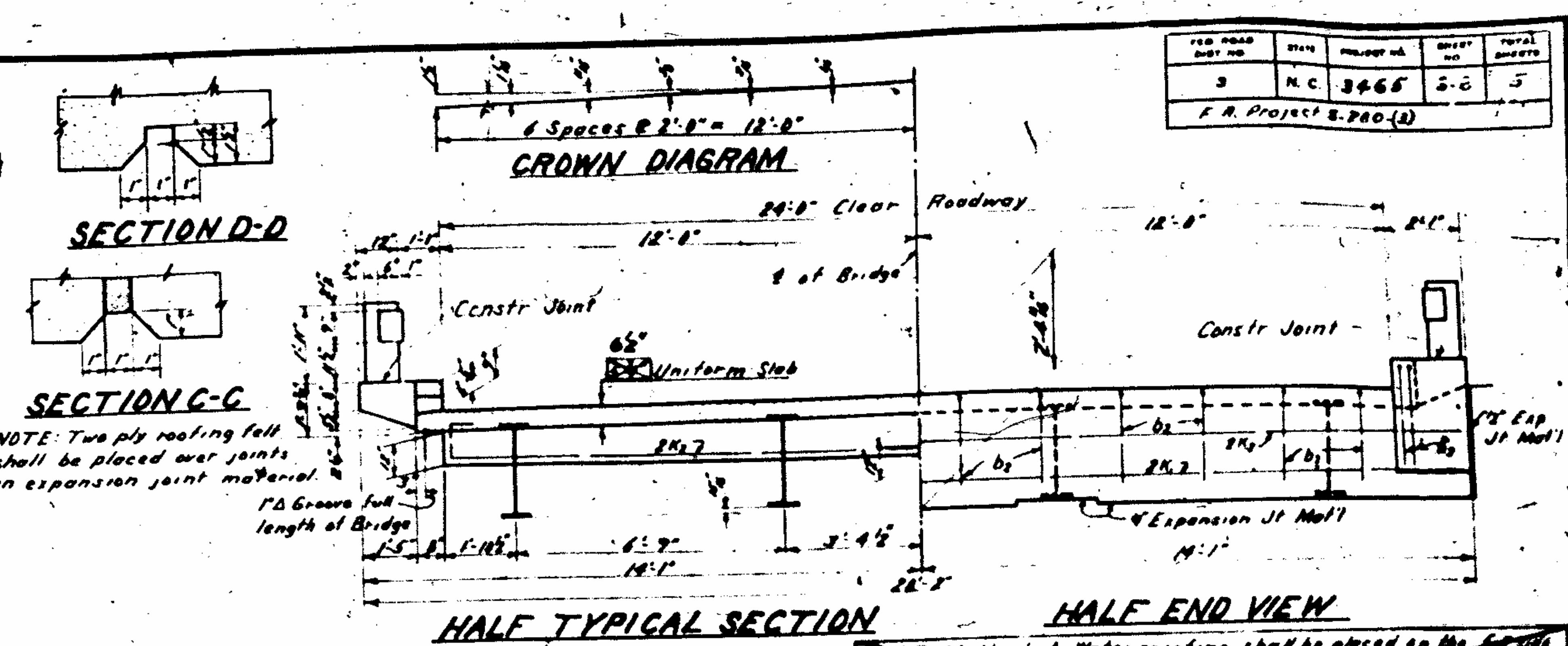
APPROVED BY — STATE HIGHWAY ENGINEER

GENERAL DRAWING 3465

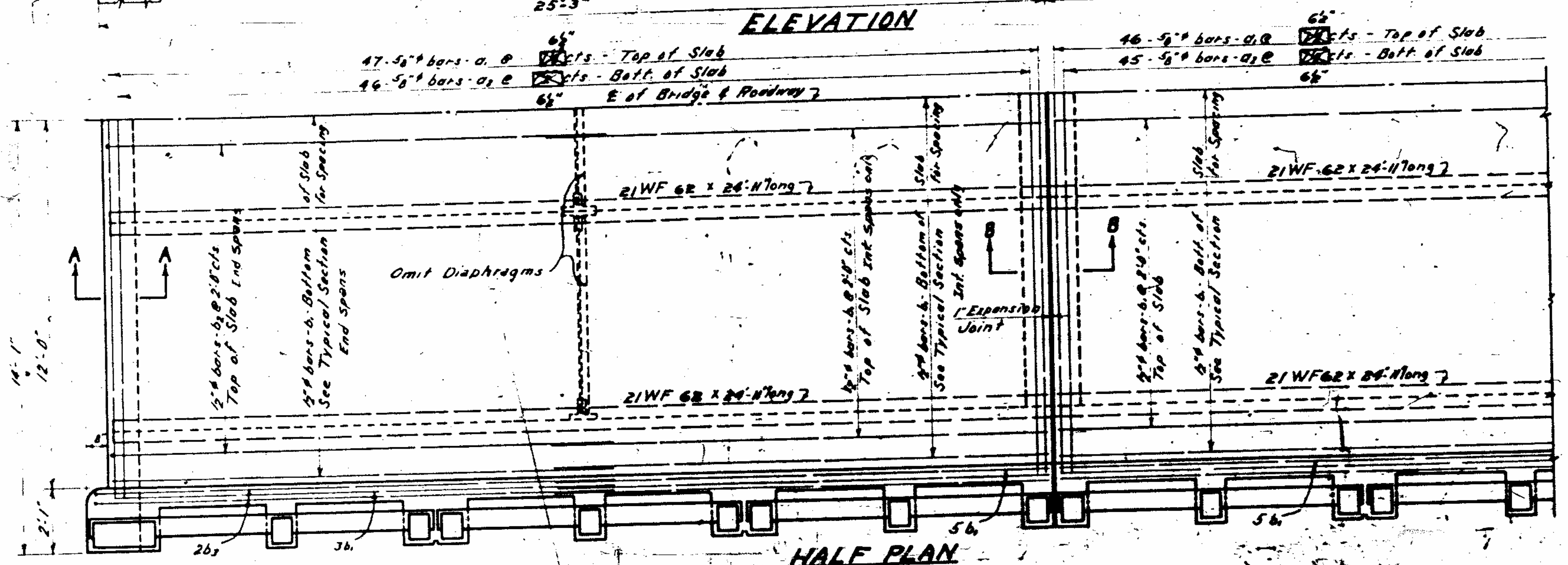
Fed. Road Dist. No.	State	Project No.	Sheet No.	Total Sheets
3	N.C.	3465	[illegible]	5

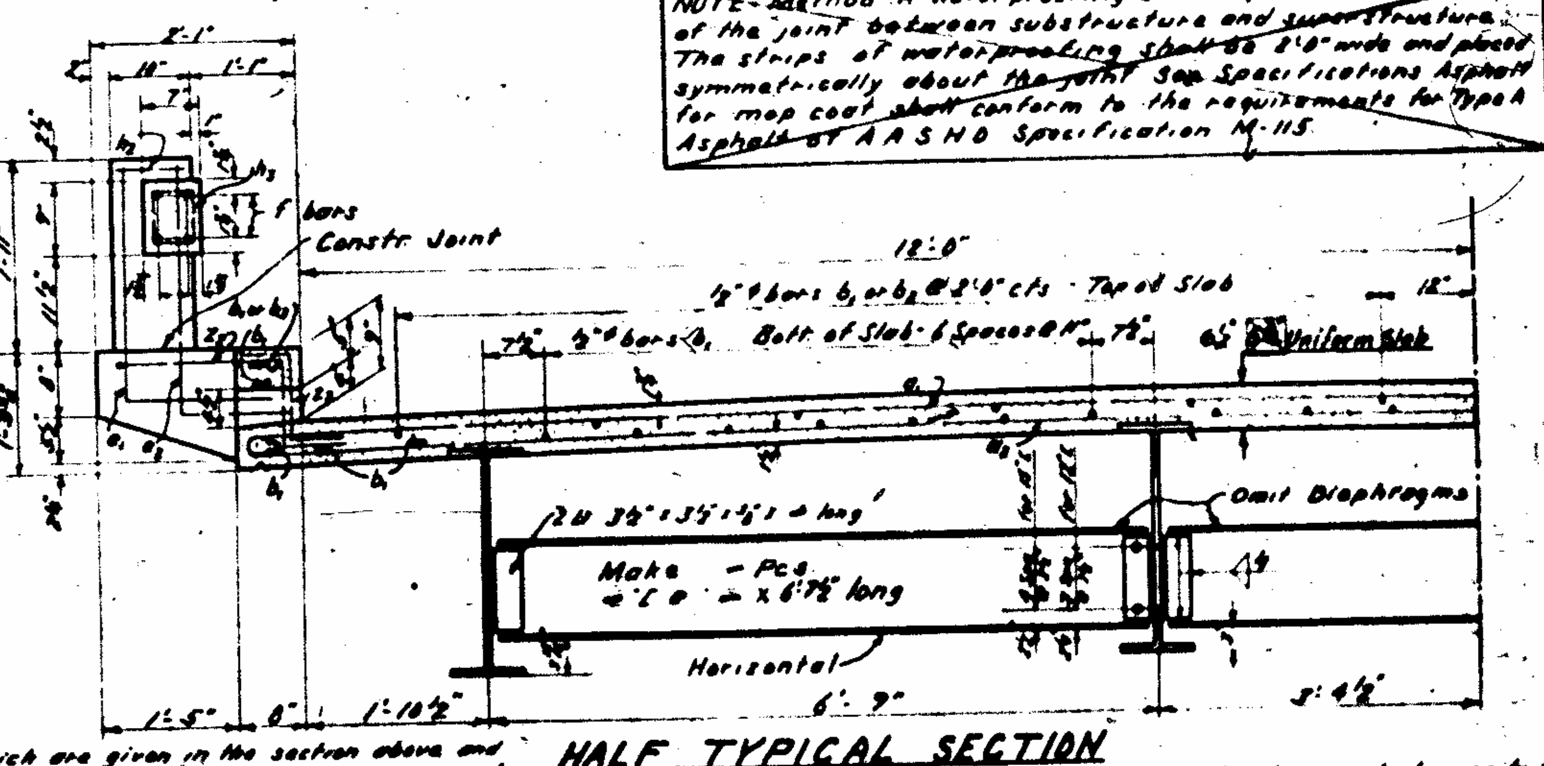
F. A. Project S-960(3)





NOTE - Method A Waterproofing shall be placed on the top side of the joint between substructure and superstructure. The strips of waterproofing shall be 2'-0" wide and placed symmetrically about the joint. See Specifications. Asphalt for mop coat shall conform to the requirements for Type A Asphalt of A.A.S.H.O. Specification M-115.

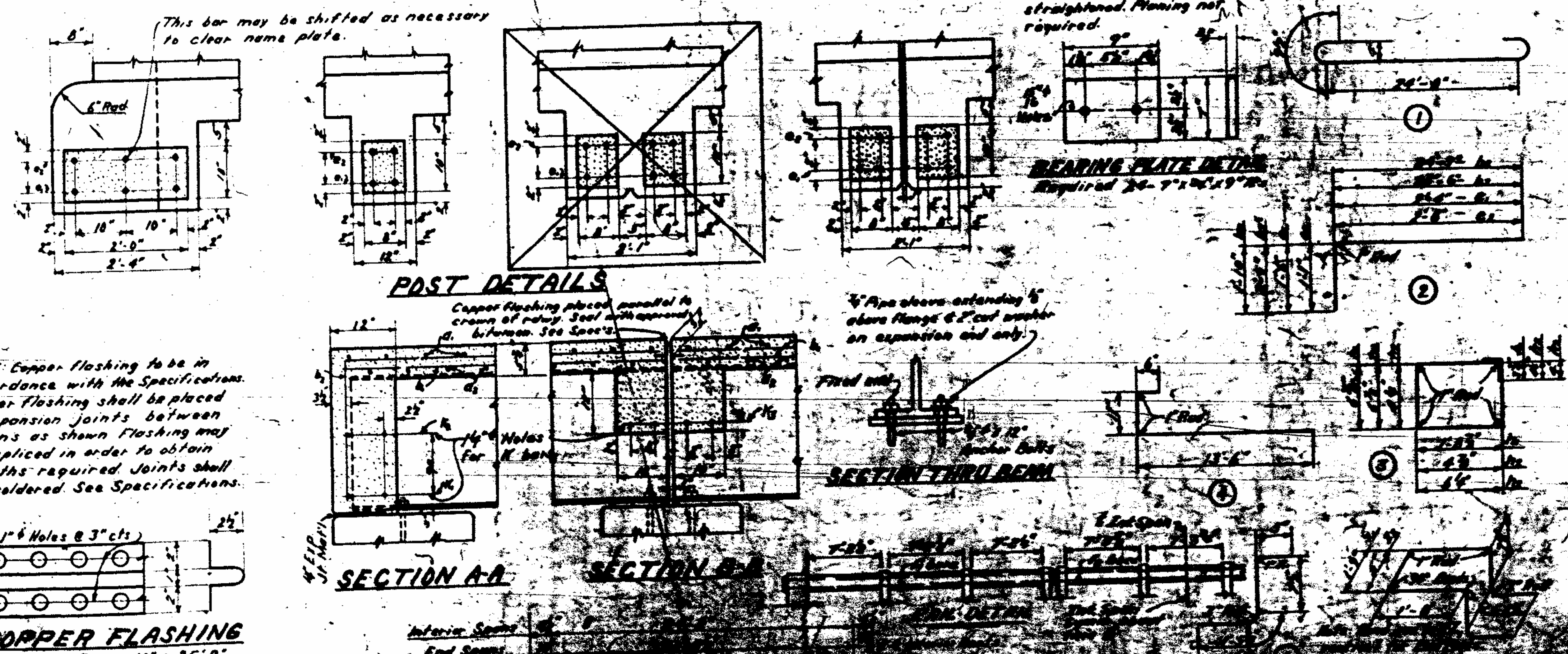




NOTE: All dimensions which are given in the section above and are affected by dead load deflections are dimensions at ℄ of bearings. Depth of slab between bearings shall be increased to compensate for dead load deflection. Maximum Dead Load Deflection: [illegible]

NOTE: At Contractor's option shop connection of channel to angles may be either welded or riveted using 3/4"φ rivets.

NOTE: Diaphragms to beams to be field connected using [illegible] bolts, Dardelet rivet bolts, or approved equal.



NOTE: Copper flashing to be in accordance with the Specifications. Copper flashing shall be placed in expansion joints between spans as shown. Flashing may be spliced in order to obtain lengths required. Joints shall be soldered. See Specifications.

COPPER FLASHING
Make 2 Pcs. 10" x 25'-8"

BILL OF MATERIAL FOR 3 @ 25'-0" SPANS					
Bar	No	Size	Type	Length	Weight
a_1	[illegible]	5/8"φ	1	25'-3"	[illegible]
a_2	[illegible]	5/8"φ	Str.	25'-0"	[illegible]
b_1	109	5/8"φ	Str.	[illegible]	[illegible]
b_2	24	5/8"φ	2	26'-7"	[illegible]
b_3	8	5/8"φ	2	27'-5"	[illegible]
e_1	52	1/2"φ	2	3'-10"	[illegible]
e_2	52	1/2"φ	2	3'-7"	[illegible]
f_1	[illegible]	5/8"φ	Str.	[illegible]	[illegible]
f_2	8	5/8"φ	Str.	[illegible]	[illegible]
f_3	-	5/8"φ	Str.	-	-
h_1	[illegible]	[illegible]	3	[illegible]	[illegible]
h_2	[illegible]	[illegible]	3	[illegible]	[illegible]
h_3	[illegible]	[illegible]	3	[illegible]	[illegible]
k_1	[illegible]	[illegible]	Str.	[illegible]	[illegible]
k_2	4	[illegible]	Str.	[illegible]	[illegible]
k_3	14	[illegible]	4	[illegible]	[illegible]
z_1	[illegible]	[illegible]	5	9'-3"	[illegible]
z_2	[illegible]	[illegible]	6	[illegible]	[illegible]
z_3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

GENERAL NOTE

CONCRETE: All concrete to be Class A Standard size No. 3 coarse aggregate to be used throughout. No construction joints will be permitted except as noted. All exposed corners of concrete unless otherwise noted shall be chamfered as follows: superstructure 3/4", expansion joints 1/2", substructure 1". All concrete except in handrails shall be compacted by "Mechanical Vibration".

REINFORCING STEEL: All reinforcing steel shall be deformed bars. All dimensions relative to reinforcing steel are to centers of bars. No splices other than those shown on plans will be permitted. All reinforcing steel shall be securely held in correct position.

EXPANSION JOINT MATERIAL: Expansion joint material may be either rubber compound or cork conforming to the requirements of A.A.S.H.O. Specification M-58.

STRUCTURAL STEEL: Structural steel shall meet all the requirements of the specifications and shall be given one shop coat and one field coat of red lead and lastly two field coats of aluminum paint. See Spec's. Detail drawings shall be submitted to the Bridge Engineer for approval. No unchecked drawings will be accepted.

NAME PLATES: Two name plates shall be provided for the bridge. One shall be placed on each right hand end post approaching the bridge.

MATERIAL AND WORKMANSHIP: All material and workmanship shall be in accordance with the Specifications of the N.C. State Highway and Public Works Commission. [illegible]

DESIGN DATA

Specifications	A.A.S.H.O. [illegible]
Assumed Live Load	H15-[illegible]
Impact Allowance	See Specifications
Stress in extreme fiber structural steel	[illegible]
Reinforcing steel in tension	18000 Lbs. [illegible]
Concrete in compression	1000 Lbs. [illegible]
Concrete in shear	[illegible] Lbs. [illegible]
Equivalent fluid pressure of earth	30 Lbs. [illegible]

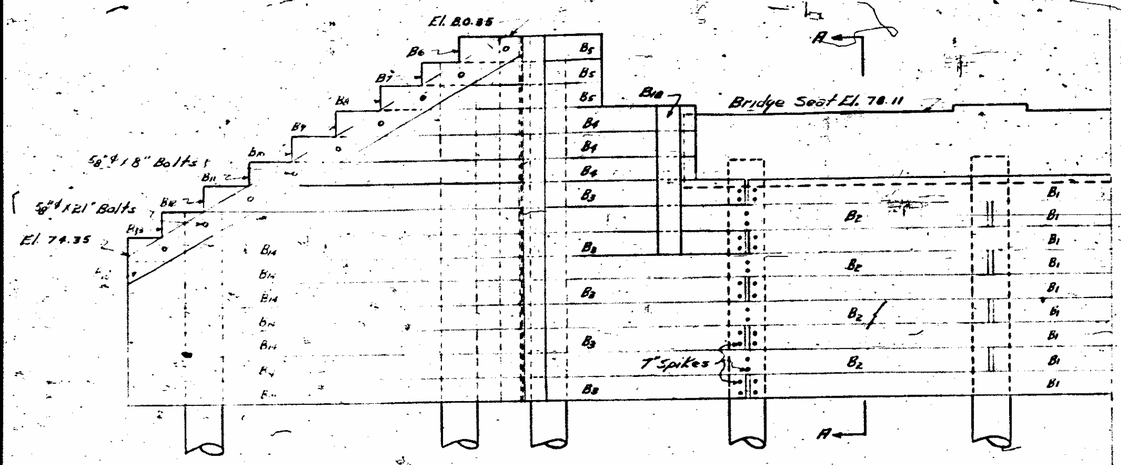
PROJECT No. [illegible]
CUMBERLAND COUNTY
STATION: [illegible]

STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION

STANDARD
I-BEAM SUPERSTRUCTURE WITH R.C. FLOOR AND RAIL
3 SINGLE 25'-0" SPAN
24' ROADWAY
APRIL 1949

SPECIAL	ASSEMBLED BY	C. G. Cook	DATE	Dec. 1950
	CHECKED BY	[illegible]	DATE	Dec. 1950
STANDARD	DESIGNED BY	[illegible]	DATE	Dec. 1950
	DRAWN BY	[illegible]	DATE	April 1949
	CHECKED BY	[illegible]	DATE	April 1949

FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
3	N.C.	3665	5-1	17
R.A. Project S 280 (3)				



HALF ELEVATION - FULL FACE
WING SWUNG PARALLEL
DETAILS OF ABUTMENTS A & B SIMILAR

NOTE: Bulkhead piles shall be fastened to piles at inside with 2-7" spikes at each pile. Outside piles shall be fastened to each bulkhead board with two 40d nails.

ONE ABUTMENT - 2 REQUIRED

BILL OF MATERIAL
CREOSOTED TIMBER

Item	Mark	No.	Size	Surface to	Length	Ft. B.M.
Bulkhead Board	B1	9	3"x8"	S1S1E to 2¾"x7¾"	13'-6"	243
do	B2	9	do	do	13'-6"	243
do	B3	9	do	do	6'-9"	122
do	B4	6	do	do	5'-5"	65
do	B5	6	do	do	2'-9"	33
do	B6	2	do	do	1'-8"	7
do	B7	2	do	do	2'-10"	11
do	B8	2	do	do	3'-11"	16
do	B9	2	do	do	5'-1"	20
do	B10	2	do	do	6'-3"	25
do	B11	2	do	do	7'-6"	30
do	B12	2	do	do	8'-8"	35
do	B13	2	do	do	9'-9"	39
do	B14	14	do	do	10'-10"	303
Slope Board	B15	2	3"x8"	S1S1E to 2¾"x7¾"	13'-0"	52
Nailer	B16	2	3"x8"	Rough	9'-9"	39
do	B17	2	3"x6"	do	9'-9"	29
do	B18	2	3"x8	do	4'-0"	16
do	B19	4	8"x8"	S1S to 7½"x8"	6'-0"	128
Total Creosoted Timber						Ft. B.M. 1,456

HARDWARE

Item	No.	Size	Length	Weight
Bolts	14	5/8"ø	8"	14
do	4	5/8"ø	21"	8
O.G. Washers	36	5/8"ø		23
Nails		40d		8
Spikes	280		7"	40
Boat Spikes	12	3/8"ø	12"	6
Total Hardware				Lbs. 99

REINFORCING STEEL

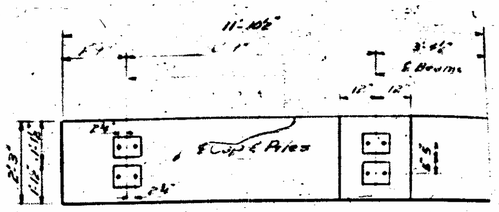
Bar	No.	Size	Type	Length	Weight
b1	4	1"ø	1	25'-3"	270
b2	2	1⅛"ø	Str.	23'-3"	247
b3	4	½"ø	Str.	23'-3"	62
b4	6	½"ø	Str.	1'-11"	8
S1	17	½"ø	2	5'-11"	67
S2	17	½"ø	3	2'-8"	30
Reinforcing Steel				Lbs.	684
"Class A" Concrete				Cu.yds.	3.9*
Creosoted Timber Piles				No.	10
Creosoted Timber Piles				Lin.Ft.	130

NOTE: Lengths of bolts shown are based on piles 12" in diameter and are approx. only.

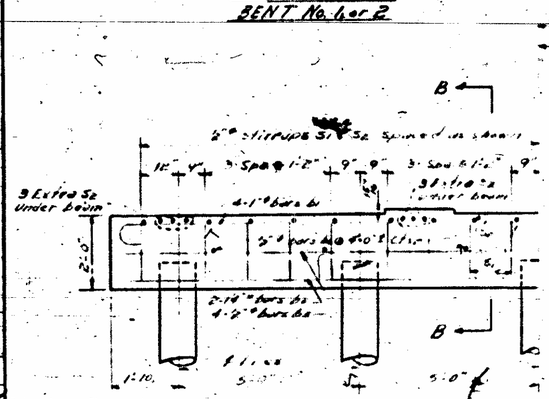
BILL OF MATERIAL
FOR BENT No. 1 or 2

Bar	No.	Size	Type	Length	Weight
b1	4	1"ø	1	25'-3"	270
b2	2	1⅛"ø	Str.	23'-3"	247
b3	4	½"ø	Str.	23'-3"	62
b4	6	½"ø	Str.	1'-11"	8
S1	18	½"ø	2	5'-11"	71
S2	30	½"ø	3	2'-8"	54
Reinforcing Steel				Lbs.	716
"Class A" Concrete				Cu.yds.	3.9*
Creosoted Timber Piles				No.	5
Creosoted Timber Piles				Lin.Ft.	105

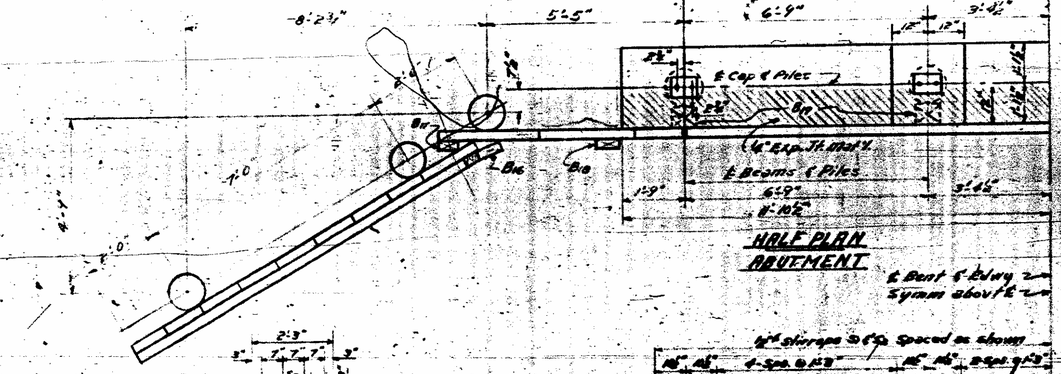
*Concrete displaced by piles has been deducted.



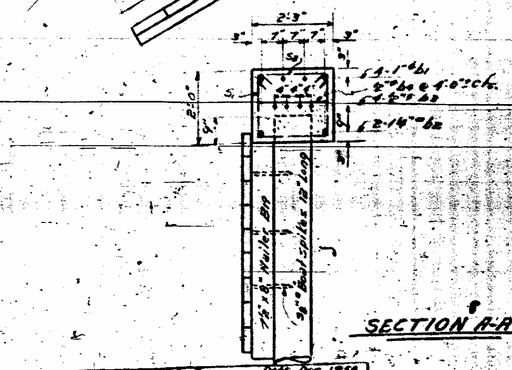
HALF PLAN - CAP
BENT No. 1 or 2



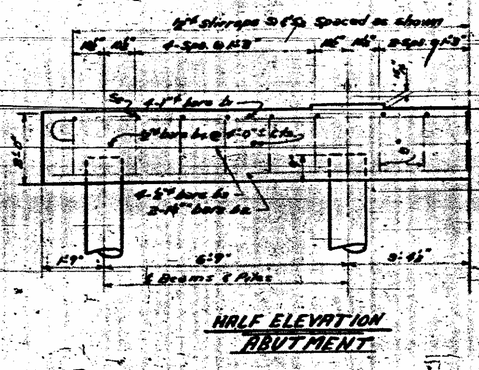
HALF ELEVATION - BENT No. 1 or 2



HALF PLAN
ABUTMENT

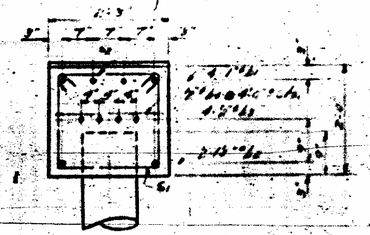


SECTION A-A



HALF ELEVATION
ABUTMENT

BAR TYPES



SECTION B-B

PROJECT No. 3665
CUMBERLAND COUNTY
STATION: 71+52

STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION
RALEIGH

SUBSTRUCTURE

DECEMBER 1950

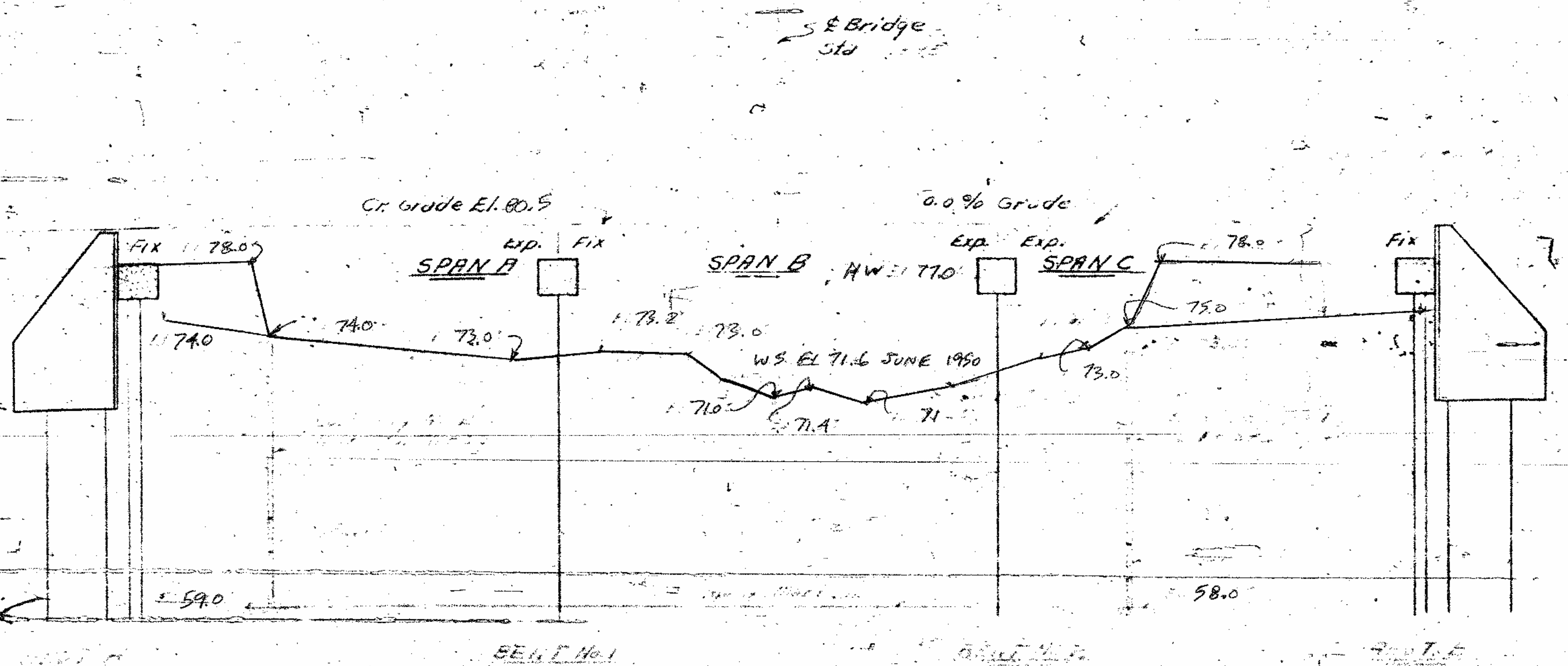
Assembled by C.E.Cox	Date Dec 1950
Revised by C.E.Cox	Date Dec. 1952
Revised by C.E.Cox	Date Dec. 1952
Traced by C.E.Cox	Date Dec. 1952
Checked by W.J. Brown	Date Dec. 1952
SPECIAL	

Fed. Road Dist. No.	State	Project No.	Sheet No.
3	N. C.		

NOTE: For other design data and general notes see sheets S-2 & S-N.

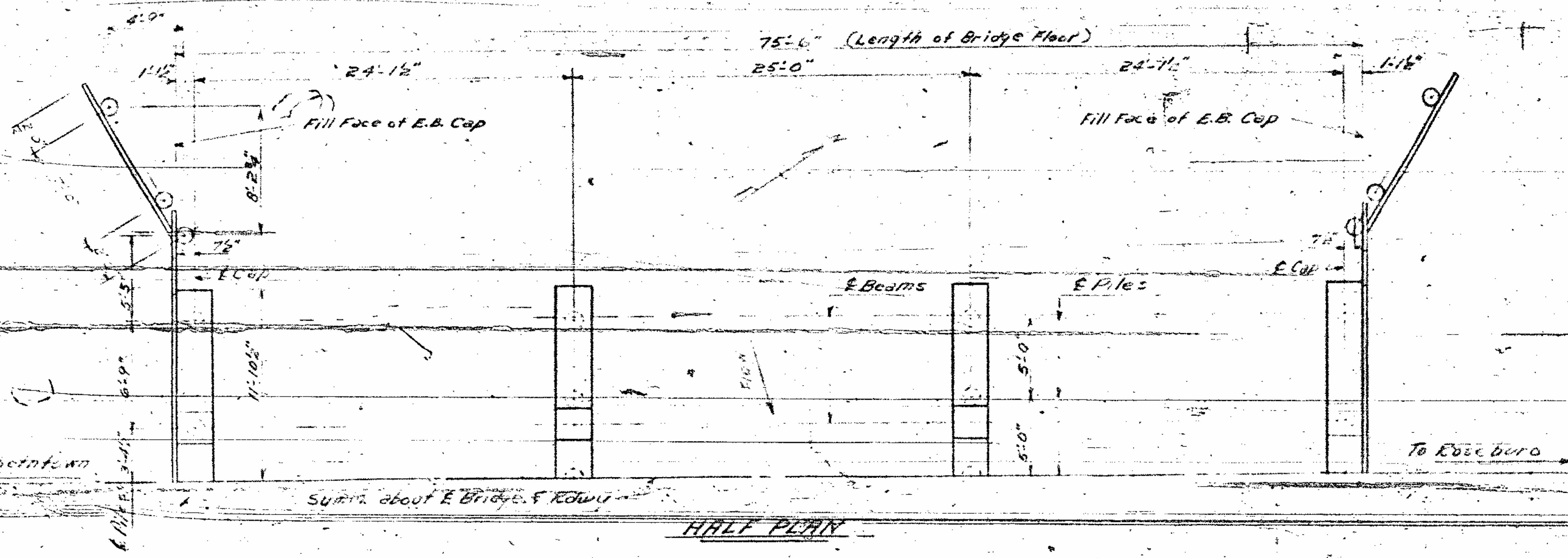
NOTE: All piles shall be driven to minimum bearing capacity of 15 tons in End Bents and [illegible] in [illegible] Bents.

NOTE: [illegible] Order list for piles shall be based on [illegible] lengths.



UNCLASSIFIED CHANNEL EXCAVATION! The Structure Contractor will be required to excavate the channel to the approximate elevation shown in section for a distance of approximately 25 ft. on each side of the ℄ of the proposed bridge. This work to be measured and paid for as "Unclassified Channel Excavation." See Specifications.

SECTION ALONG ℄ BRIDGE



HALF PLAN

PROJECT No.

COUNTY

STATION:

TOTAL BILL OF MATERIAL

	Class "A" Concrete	Reinforcing Steel	Structural Steel	Creosoted Timber	Creosoted Tim. Piles		Hardware	Removal of Existing		Unclass. Chan. Excav.
	Cu. Yds.	Lbs.	Approx. Lbs.	Ft. B.M.	No.	Lin. Ft.	Lbs.	Structure		Cu. Yds.
Superstructure	52.9	11,453	19,000			230.7				
Abutment A	3.9	684		1,456		118.2	99			
Bent No. 1	3.9	712				112.6				
Bent No. 2	3.9	712				218.3				
Abutment B	[illegible]	684		1,456			99			
TOTAL	68.5	[illegible]		[illegible]		679.8	198	Lump [illegible]		

STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION
RALEIGH

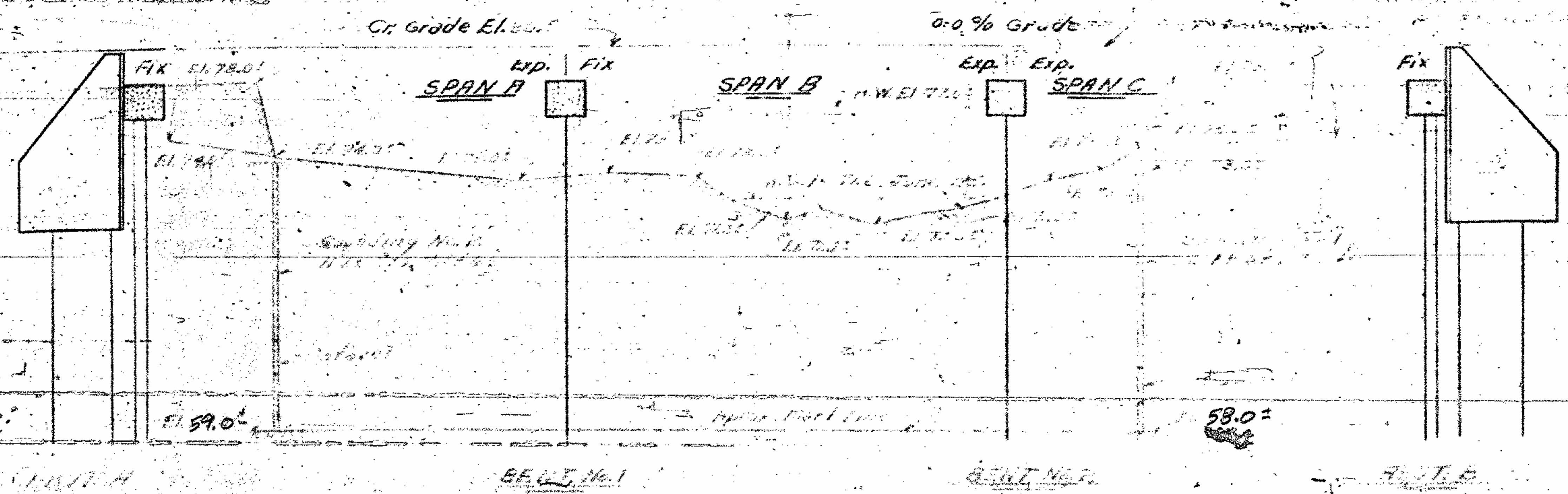
GENERAL DRAWING 3465

NOTE: For other design data and general notes see sheets S-2 & S-N.

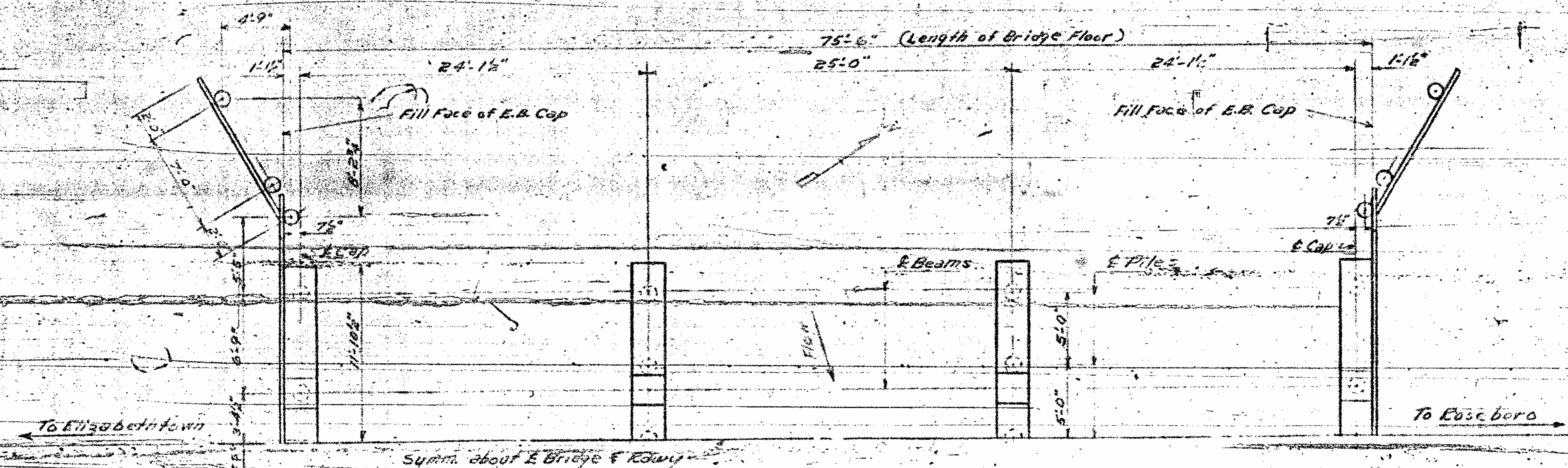
NOTE: All piles shall be driven to minimum bearing capacity of 15 tons in End Bents and [illegible] in Interior Bents.

NOTE: No Test Piles will be required. Order list for piles shall be based on [illegible] lengths.

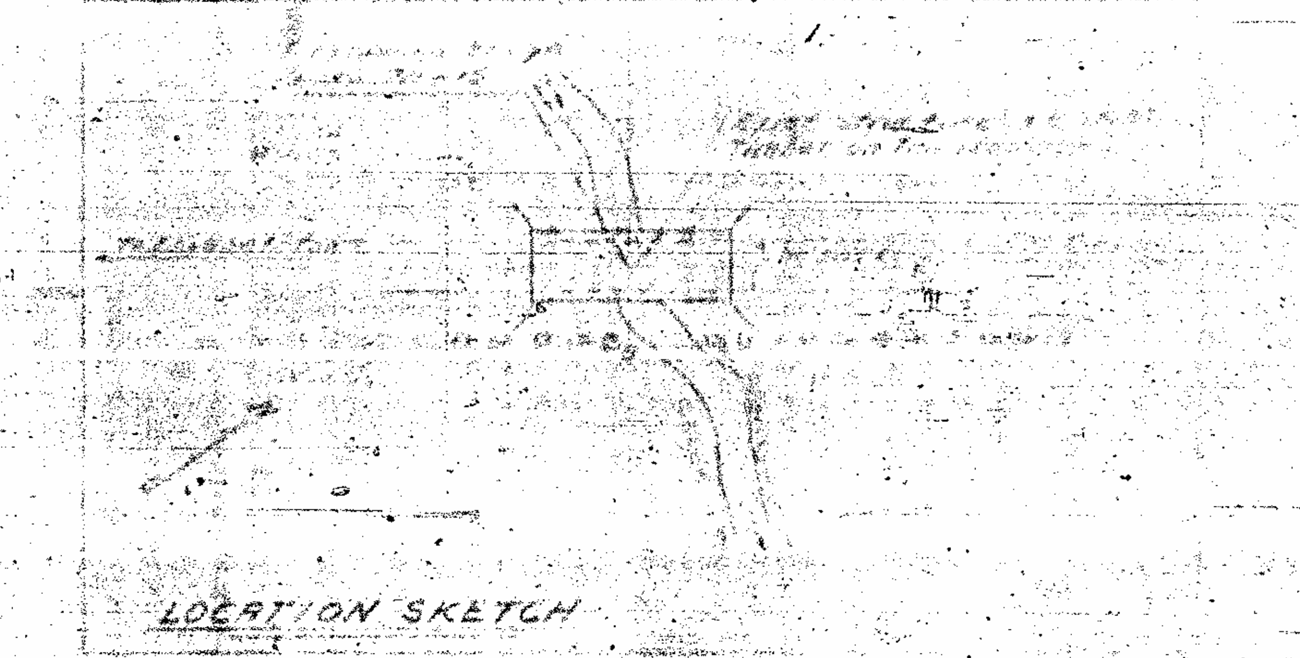
UNCLASSIFIED CHANNEL EXCAVATION! The Structure Contractor will be required to excavate the channel to the approximate elevation shown in section for a distance of approximately 25 ft. on each side of the ℄ of the proposed bridge. This work to be measured and paid for as "Unclassified Channel Excavation." See Specifications.



SECTION ALONG ℄ BRIDGE



HALF PLAN



LOCATION SKETCH

PROJECT No. [illegible]

[illegible] COUNTY

STATION: [illegible]

TOTAL BILL OF MATERIAL										
	Class "A" Concrete	Reinforcing Steel	Structural Steel	Creosoted Timber	Creosoted Tim. Piles		Hardware	Removal of Existing Structure		Unclass. Chan. Excav.
	Cu. Yds.	Lbs.	Approx. Lbs.	Ft. B.M.	No.	Lin. Ft.	Lbs.			Cu. Yds.
Superstructure	52.9	11,453	19,000							
Abutment A	3.9	684		1,456		[illegible]	99			
Bent No. 1	3.9	712				125				
Bent No. 2	3.9	712				125				
Abutment B	3.9	684		1,456		250	99			
TOTAL	68.5	14,245	19,000	2,912		[illegible]	198	Lump Sum		

Assembled by		Date
Designed by		Date
Drawn by	C. E. [illegible]	Date 1959
Traced by		Date
Checked by	[illegible]	Date 1959

STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION
RALEIGH

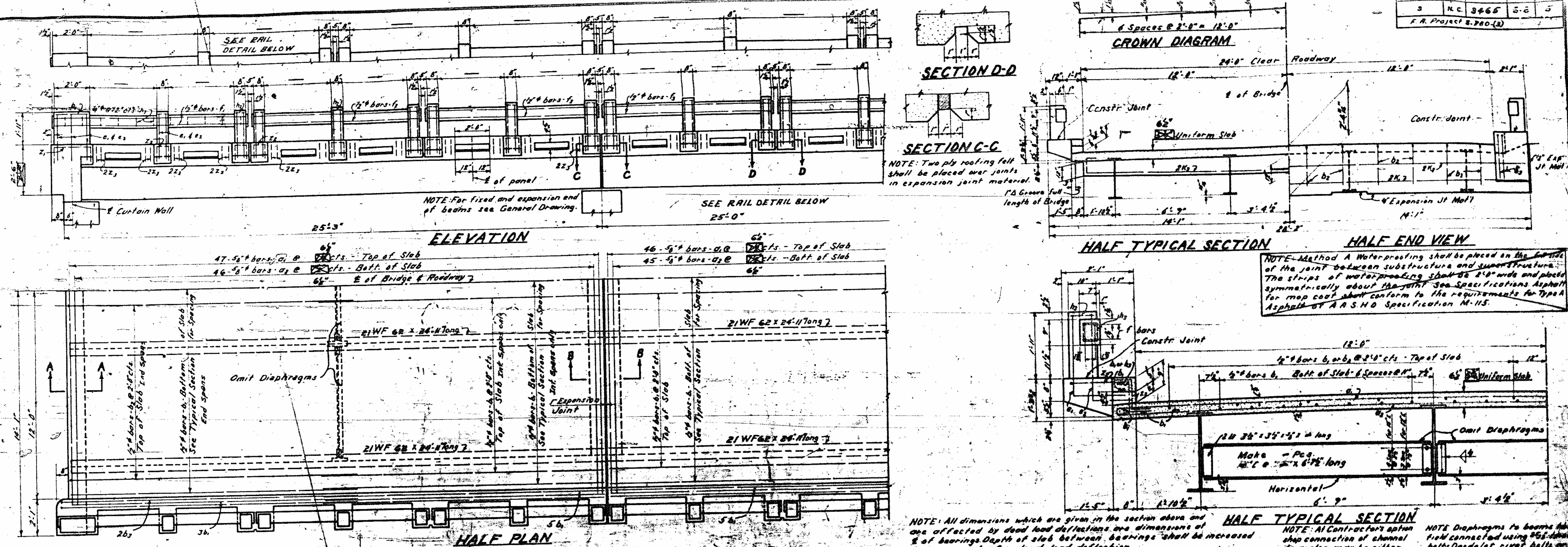
GENERAL DRAWING
[illegible]
BRIDGE OVER [illegible] CREEK

Submitted by [illegible] Bridge Engineer
Approved by [illegible] State Highway Engineer

GENERAL DRAWING 3465

Fed. Road Dist. No.	State	Project No.	Sheet No.	Total Sheets
3	N.C.	3465	S-3	5

F.A. Project S-760-(3)

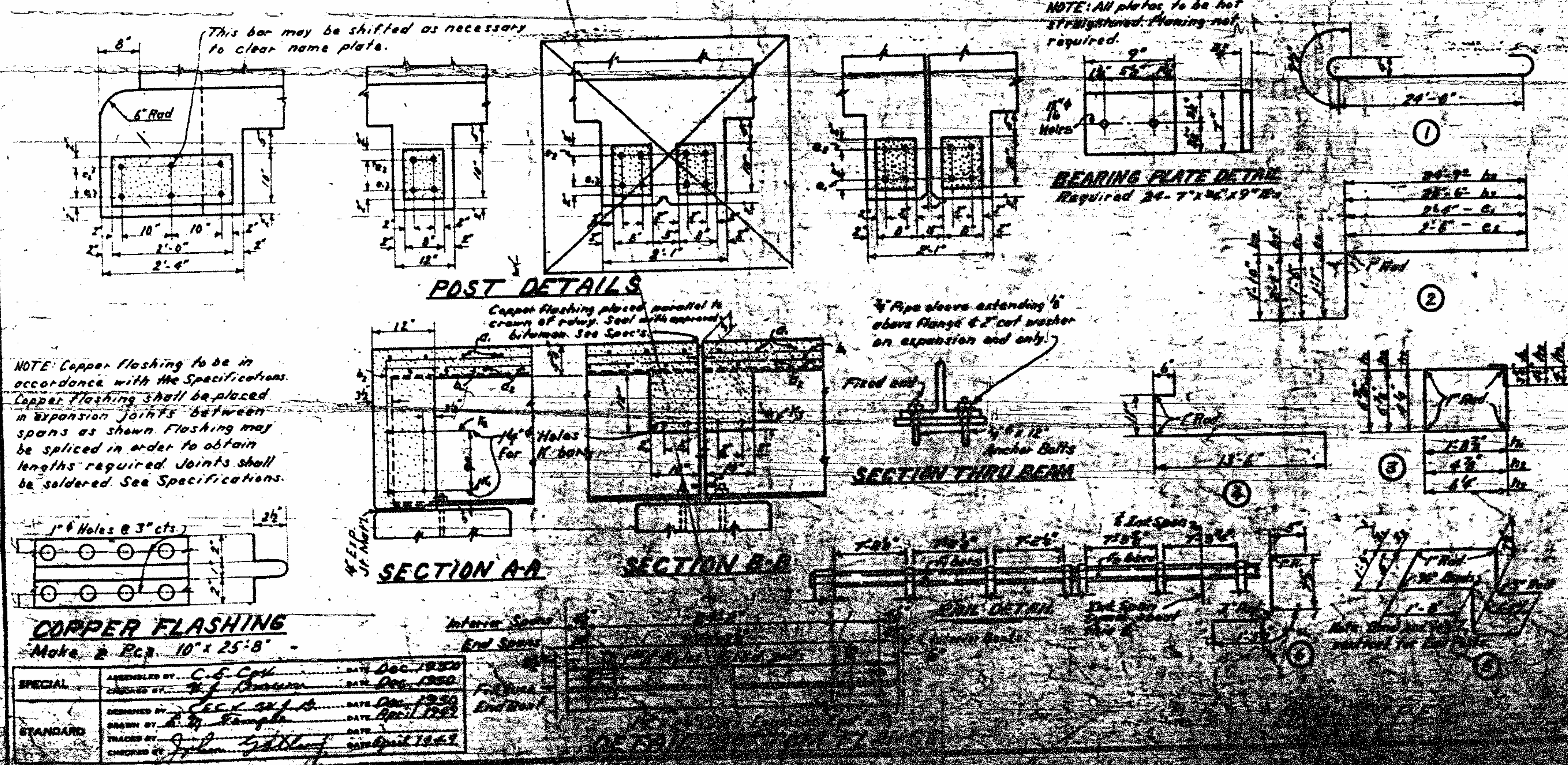


NOTE: Method A Waterproofing shall be placed on the outside of the joint between substructure and superstructure. The strips of waterproofing shall be 2'-0" wide and placed symmetrically about the joint. See Specifications. Asphalt for mop coat shall conform to the requirements for Type A Asphalt of A.A.S.H.O. Specification M-115.

NOTE: All dimensions which are given in the section above and are affected by dead load deflections are dimensions at ℄ of bearings. Depth of slab between bearings shall be increased to compensate for dead load deflection.
Maximum Dead Load Deflection: [illegible]

NOTE: At Contractor's option shop connection of channel to angles may be either welded or riveted using ¾"⌀ rivets.

NOTE: Diaphragms to beams to be field connected using ⅝"⌀ [illegible] bolts, Dardelet river bolts, or approved equal.



BILL OF MATERIAL

FOR 3 @ 25'-0" SPANS

Bar	No	Size	Type	Length	Weight
a_1	140	⅝"⌀	1	25'-3"	3832
a_2	137	⅝"⌀	Str.	25'-0"	3572
b_1	109	½"⌀	Str.	26'-9"	1802
b_2	24	½"⌀	2	26'-7"	426
b_3	8	½"⌀	2	27'-9"	147
e_1	52	½"⌀	2	3'-10"	133
e_2	52	½"⌀	2	3'-7"	124
f_1	26	½"⌀	Str.	25'-6"	272
f_2	8	½"⌀	Str.	24'-6"	131
f_3	[illegible]	½"⌀	Str.	—	—
h_1	4	⅜"⌀	3	5'-3"	8
h_2	20	⅜"⌀	3	2'-8"	20
h_3	156	⅜"⌀	3	2'-5"	66
K_1	4	⅝"⌀	Str.	27'-0"	160
K_2	4	⅜"⌀	Str.	27'-6"	74
K_3	16	⅝"⌀	4	14'-0"	239
Z_1	[illegible]	[illegible]	5	9'-3"	89
Z_2	[illegible]	[illegible]	5	7'-5"	165
Z_3	[illegible]	[illegible]	6	2'-6"	[illegible]

[illegible]

GENERAL NOTE

CONCRETE: All concrete to be Class A Standard size No. 3 coarse aggregate to be used throughout. No construction joints will permitted except as noted. All exposed corners of concrete unless otherwise noted shall be chamfered as follows: superstructure ¾", expansion joints ½", substructure 1". All concrete except in handrails shall be compacted by "Mechanical Vibration".

REINFORCING STEEL: All reinforcing steel shall be deformed bars. All dimensions relative to reinforcing steel are to centers of bars. No splices other than those shown on plans will be permitted. All reinforcing steel shall be securely held in correct position.

EXPANSION JOINT MATERIAL: Expansion joint material may be either rubber compound or cork conforming to the requirements of A.A.S.H.O. Specification M-58.

STRUCTURAL STEEL: Structural steel shall meet all the requirements of the specifications and shall be given one shop coat and one field coat of red lead and lastly two field coats of aluminum paint. See Spec's. Detail drawings shall be submitted to the Bridge Engineer for approval. No unchecked drawings will be accepted.

NAME PLATES: Two name plates shall be provided for the bridge. One shall be placed on each right hand end post approaching the bridge.

MATERIAL AND WORKMANSHIP: All material and workmanship shall be in accordance with the Specifications of the N.C. State Highway and Public Works Commission.

[illegible]

DESIGN DATA

Specifications	A.A.S.H.O. [illegible]
Assumed Live Load	H15-44 [illegible]
Impact Allowance	See Spec. [illegible]
Stress in extreme fiber struct. steel	18000 Lbs. [illegible]
Reinforcing steel in tension	18000 Lbs. [illegible]
Concrete in compression	1000 Lbs. [illegible]
Concrete in shear	90 Lbs. [illegible]
Equivalent fluid pressure of earth	30 Lbs. [illegible]

PROJECT No. 3465

CUMBERLAND COUNTY

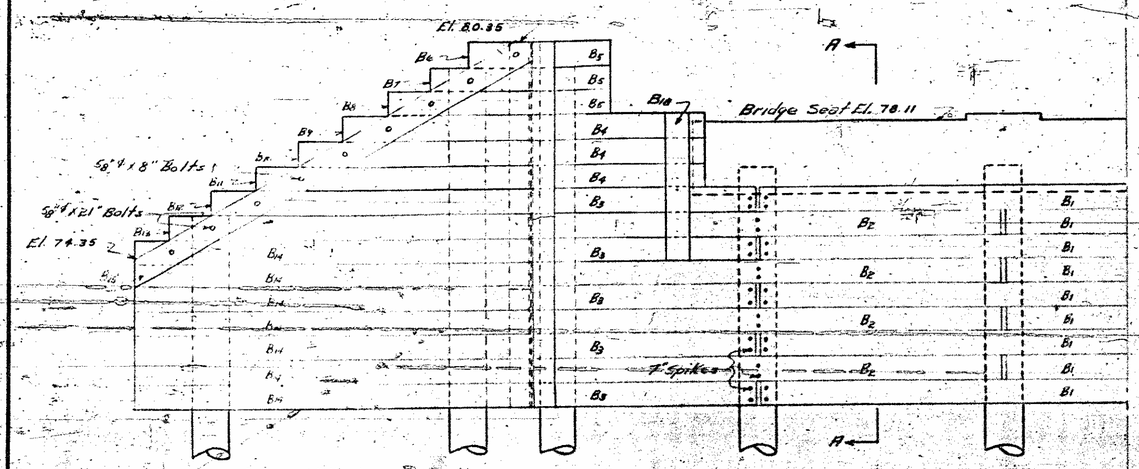
STATION: 711+96

STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION

STANDARD
I-BEAM SUPERSTRUCTURE WITH R.C. FLOOR AND RAIL
3 SINGLE 25'-0" SPAN
24' ROADWAY
APRIL 1949

FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
3	N.C.	3465	5-A	5

F.A. Project S 220 (9)



HALF ELEVATION - FILL FACE
WING SWUNG PARALLEL
DETAILS OF ABUTMENTS A & B SIMILAR

℄ Abutment & Rdwy
Symm. about ℄

NOTE: Bulkhead plank shall be fastened to piles or nailers with 2-7" spikes at each pile. Corner bolts bi6, bi7 and bi8 to be fastened to each bulkhead board with two 40d nails.

ONE ABUTMENT - 2 REQUIRED

BILL OF MATERIAL

CREOSOTED TIMBER

Item	Mark	No.	Size	Surface to	Length	Ft. B.M.
Bulkhead Board	B1	9	3"x12"	S1S1E to 2¾"x7½"	13'-6"	243
do	B2	9	do	do	13'6	243
do	B3	9	do	do	6'-9"	122
do	B4	6	do	do	5'-5"	65
do	B5	6	do	do	2'-9"	33
do	B6	2	do	do	1'-8"	7
do	B7	2	do	do	2'-10"	11
do	B8	2	do	do	3'-11"	16
do	B9	2	do	do	5'-1"	20
do	B10	2	do	do	6'-3"	25
do	B11	2	do	do	7'-6"	30
do	B12	2	do	do	8'-8"	35
do	B13	2	do	do	9'-9"	39
do	B14	M	do	do	10'-10"	303
Slope Board	B15	2	3"x8"	S1S1E to 2¾"x7½"	13'-0"	52
Nailer	B16	2	3"x8"	Rough	9'-9"	39
do	B17	2	3"x6"	do	9'-9"	39
do	B18	2	3"x8	do	4'-0"	16
do	B19	4	8"x8"	S1S to 7½"x8"	6'-0"	128
Total Creosoted Timber					Ft. B.M.	1,456

HARDWARE

Item	No.	Size	Length	Weight
Bolts	14	5/8"ϕ	8"	14
do	4	5/8"ϕ	21"	8
O.G. Washers	36	5/8"ϕ		23
Nails		40d		8
Spikes	280			40
Boat Spikes	12	½"ϕ	12"	6
Total Hardware			Lbs.	99

REINFORCING STEEL

Bar	No.	Size	Type	Length	Weight
b1	4	1"ϕ	1	25'-3"	270
b2	2	1¼"ϕ	Str.	23'-3"	247
b3	4	½"ϕ	Str.	23'-3"	62
b4	6	½"ϕ	Str.	1'-11"	8
S1	17	½"ϕ	2	5'-11"	67
S2	17	½"ϕ	3	2'-8"	30
Reinforcing Steel				Lbs.	684
*Class "A" Concrete				Cu.yds.	3.9
Creosoted Timber Piles				No.	10
Creosoted Timber Piles Lin.Ft.					250

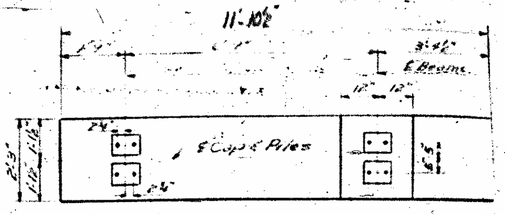
NOTE: Lengths of bolts shown are based on piles 13" in diameter and are approx. only.

BILL OF MATERIAL

FOR BENT No. 1 or 2

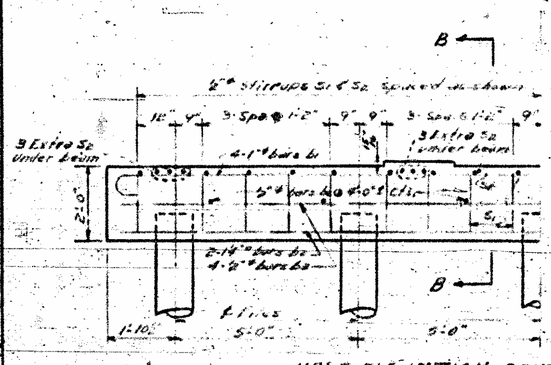
Bar	No.	Size	Type	Length	Weight
b1	4	1"ϕ	1	25'-3"	270
b2	2	1¼"ϕ	Str.	23'-3"	247
b3	4	½"ϕ	Str.	23'-3"	62
b4	6	½"ϕ	Str.	1'-11"	8
S1	18	½"ϕ	2	5'-11"	71
S2	30	½"ϕ	3	2'-8"	54
Reinforcing Steel				Lbs.	684
*Class "A" Concrete				Cu.yds.	3.9
Creosoted Timber Piles				No.	5
Creosoted Timber Piles				Lin. Ft.	125

*Concrete displaced by piles has been deducted.

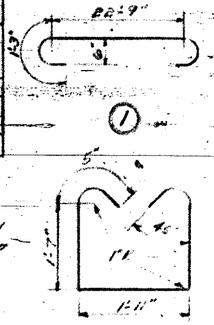


HALF PLAN - CAP
BENT No. 1 or 2

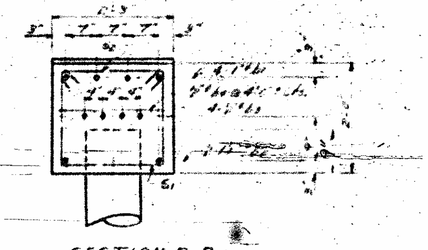
℄ Bent ℄ Rdwy
Symm about ℄



HALF ELEVATION - BENT No. 1 or 2

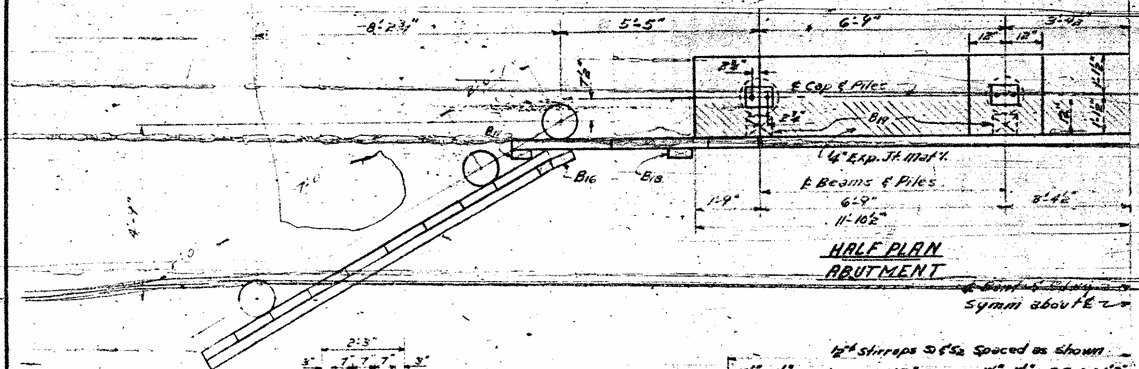


BAR TYPES



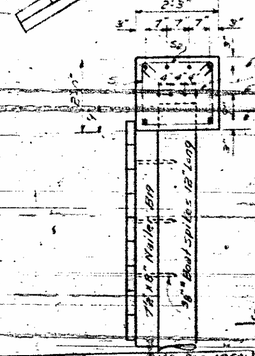
SECTION B-B

PROJECT NO. 3465
CUMBERLAND COUNTY
STATION: 711+95

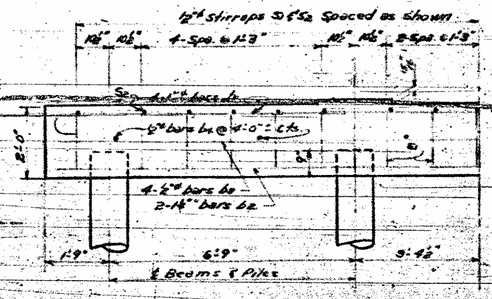


HALF PLAN
ABUTMENT

℄ Bent ℄ Rdwy
Symm about ℄



SECTION A-A



HALF ELEVATION
ABUTMENT

STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION
RALEIGH

SUBSTRUCTURE

DECEMBER 1950

SUBMITTED BY _____ DIVISION ENGINEER
APPROVED BY _____ STATE HIGHWAY ENGINEER

Assembled by C.S. Cox		Date Dec 1950
SPECIAL	Designed by C.E. Cox	Date Dec 1950
	Drawn by C.E. Cox	Date Dec 1950
	Traced by C.E. Cox	Date Dec 1950
	Checked by [illegible]	Date

STRUCTURE 3465