

ELEVATION ALONG E ROADWAY
BENTS AND END BENTS ON SECTION A-A

NOTES

Assumed Live Load H20-S16-44 or Alternates Loading

For other design data and general notes, see Sheet S-11

Piles for End Bent 1 and End Bent 2 to be driven to a minimum bearing capacity of 23 tons each.

Piles for Bent 1 and Bent 2 to be driven to a minimum bearing capacity of 30 tons each.

The Contractor will be required to drive one 45 ft. 12H53 steel test pile in place at End Bent 1 and one 30 ft. 12H53 steel test pile at Bent 2 at the locations shown on Plan. Order for test piles will be given after the test piles have been driven. The contractor will be paid for as linear feet of 12H53 steel piles.

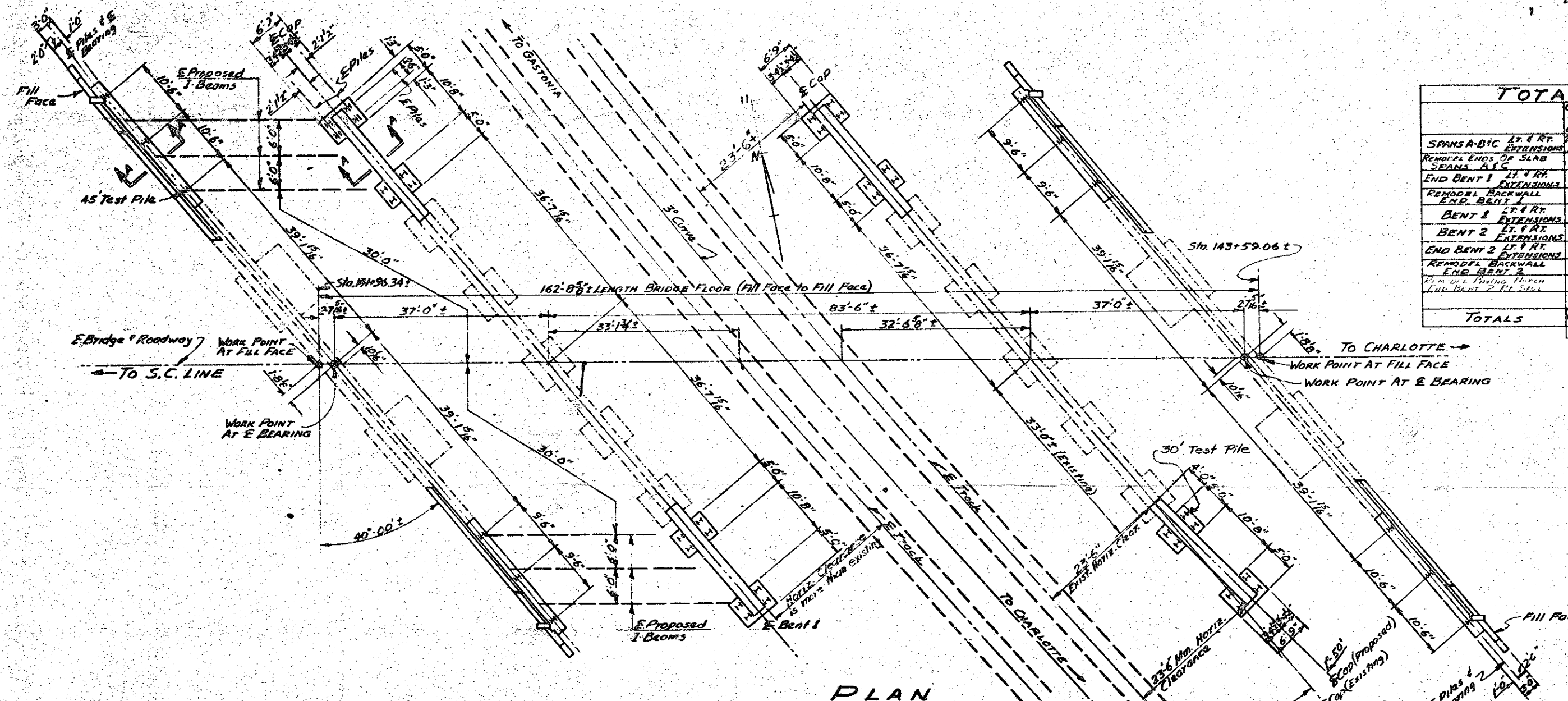
I-Beam lengths are subject to change to fit actual span lengths. Span lengths shall be checked by the Resident Engineer as early as is practical in order to determine whether I-Beam lengths as shown on plans are correct.

Traffic on U.S. 29+74 is to be maintained. See Special Provisions.

Railway traffic is to be maintained at all times. See Special Provisions.

Wearing Surface to be furnished and placed by the roadway contractor.

Bench Mark #14 - Nail in base 12" Gum 120' Rt. Sta. 141+70. EL 700.15



PLAN

TOTAL BILL OF MATERIAL

	Class of Conc.	Quantity	Structural Steel	Unclad Structural Steel	Aluminum	Other	Remarks
	CU YDS.	LBS.	APPROX. LBS.	CU YDS.	LB.		
SPANS A-B-C EXTENSIONS	2.3	55,699	172,040	-	-	-	
REMODEL ENDS OF SLAB SEAMS A-C	0.0	729	5,560	-	-	50	
END BENT 1 EXTENSIONS	2.7	4,264	-	-	-	8	
REMODEL BACKWALL END BENT 1	2.6	250	-	-	-	-	
BENT 1 EXTENSIONS	44.2	10,809	-	85	-	16	
BENT 2 EXTENSIONS	44.7	10,985	-	100	-	93	
REMODEL BACKWALL END BENT 2	2.6	250	-	-	-	-	
TOTALS	99.2	87,235	177,600	180	50	44	

* To be furnished and placed by the roadway contractor

Bridge # 29-81-30
 Project No. B.1635
 GASTON Co.
 Station 142+75
 Mile Post 593.27

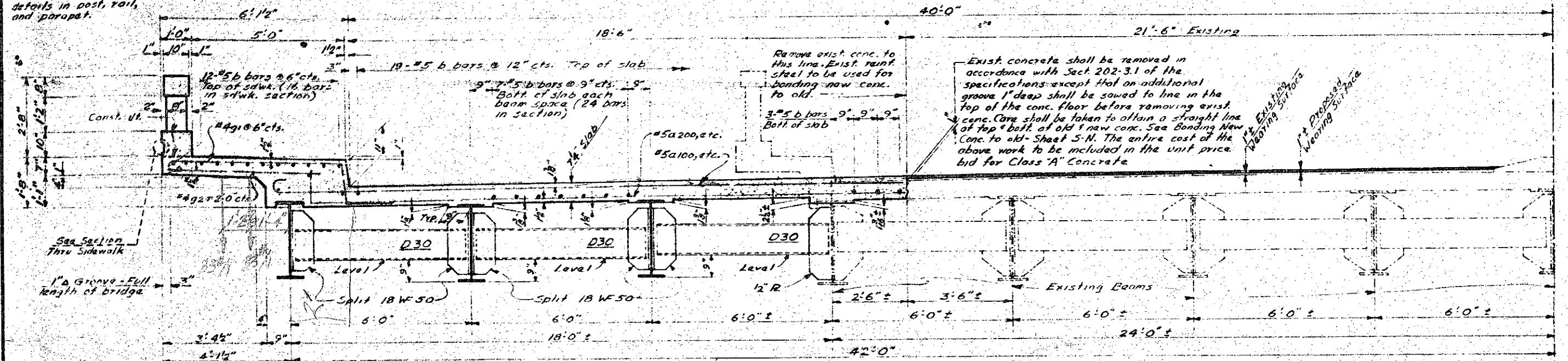
STATE OF NORTH CAROLINA
 STATE HIGHWAY COMMISSION
 GENERAL DRAWING
 WIDENING BRIDGE
 SOU. RAILWAY ON
 BETWEEN S.C. LINE

DATE: _____
 BY: _____
 CHECKED BY: _____
 DATE: _____

Note: See Section Thru Sidewalk for reinf. steel details in post, rail, and parapet.

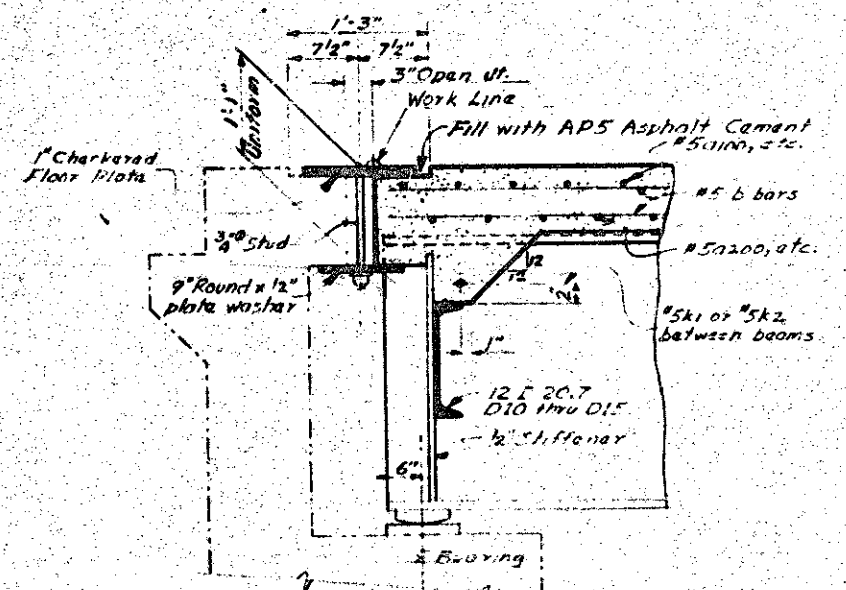
NOTE:
 Assumed Live Load H20-S16-44 or alternate
 Stress in Extreme Fiber of Structural Steel..... 20,000 psi
 Reinforcing Steel in Tension..... 20,000 psi
 Concrete in Compression..... 1,100 psi
 For other "Design Data" and "General Notes" see Sheet 1
 For bars indicated and no bar mark shown, see concrete plan of spans.

CROWN DIAGRAM

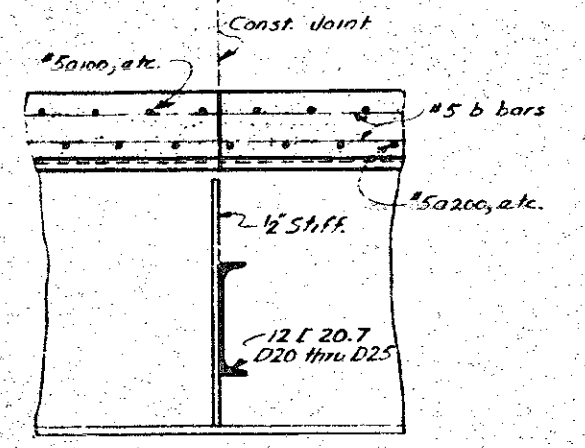


TYPICAL SECTION

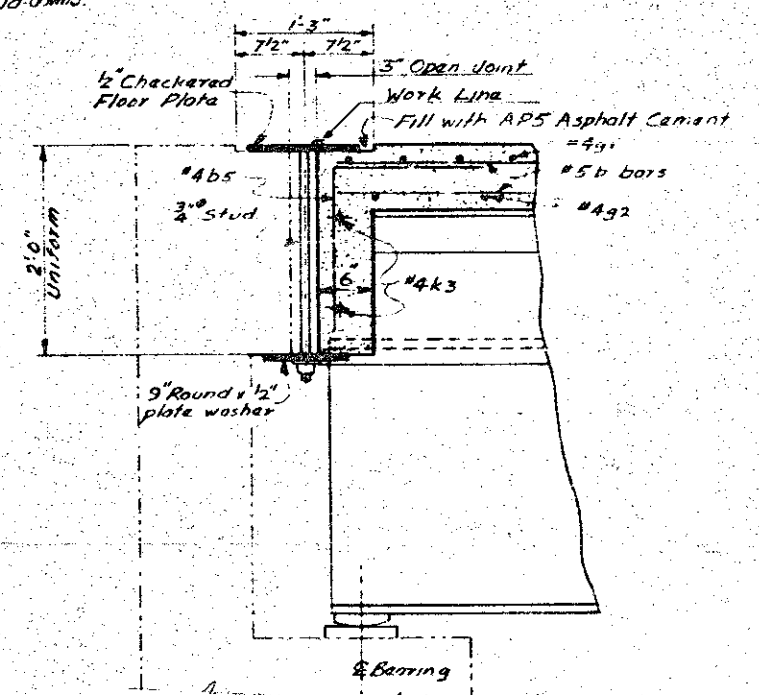
Note: Dimensions shown @ build-downs over beams are of bearing only. These dimensions will vary along the different spans. No chamfer required on corners of build-downs.



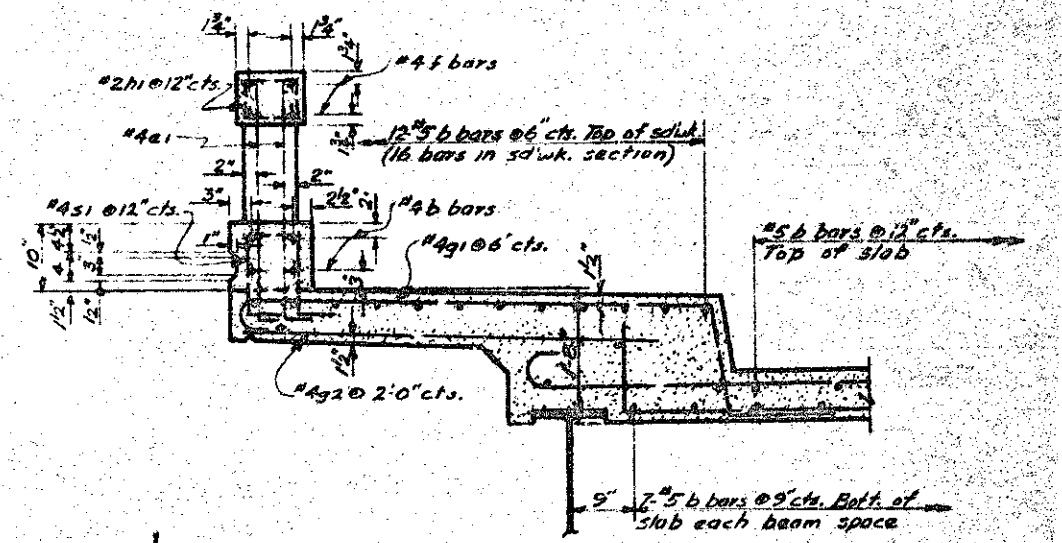
SECTION A-A



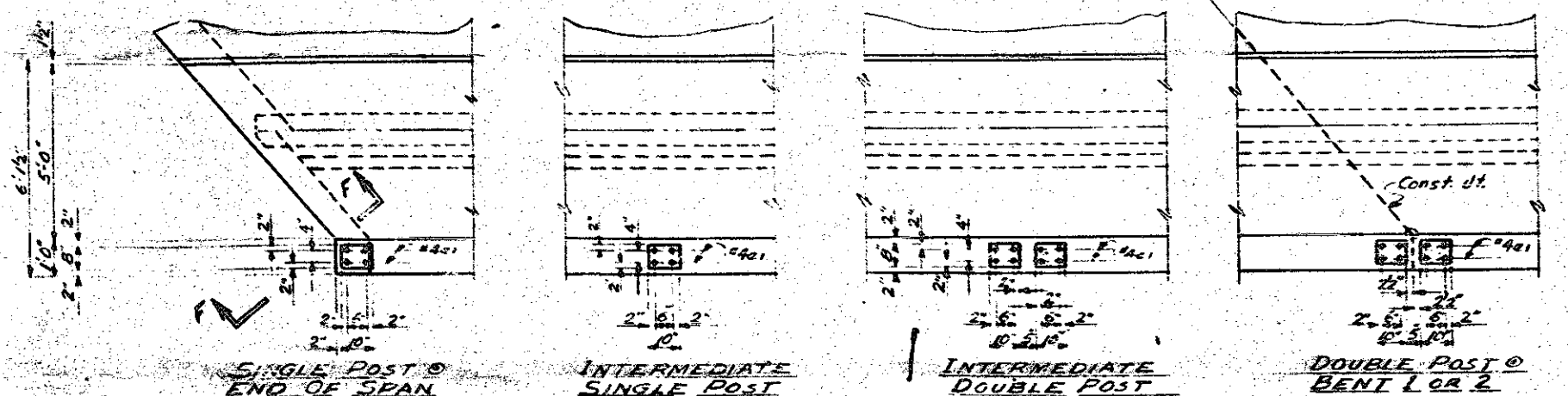
SECTION B-B



SECTION F-F
 Section F1-F1 Similar



SECTION THRU SIDEWALK



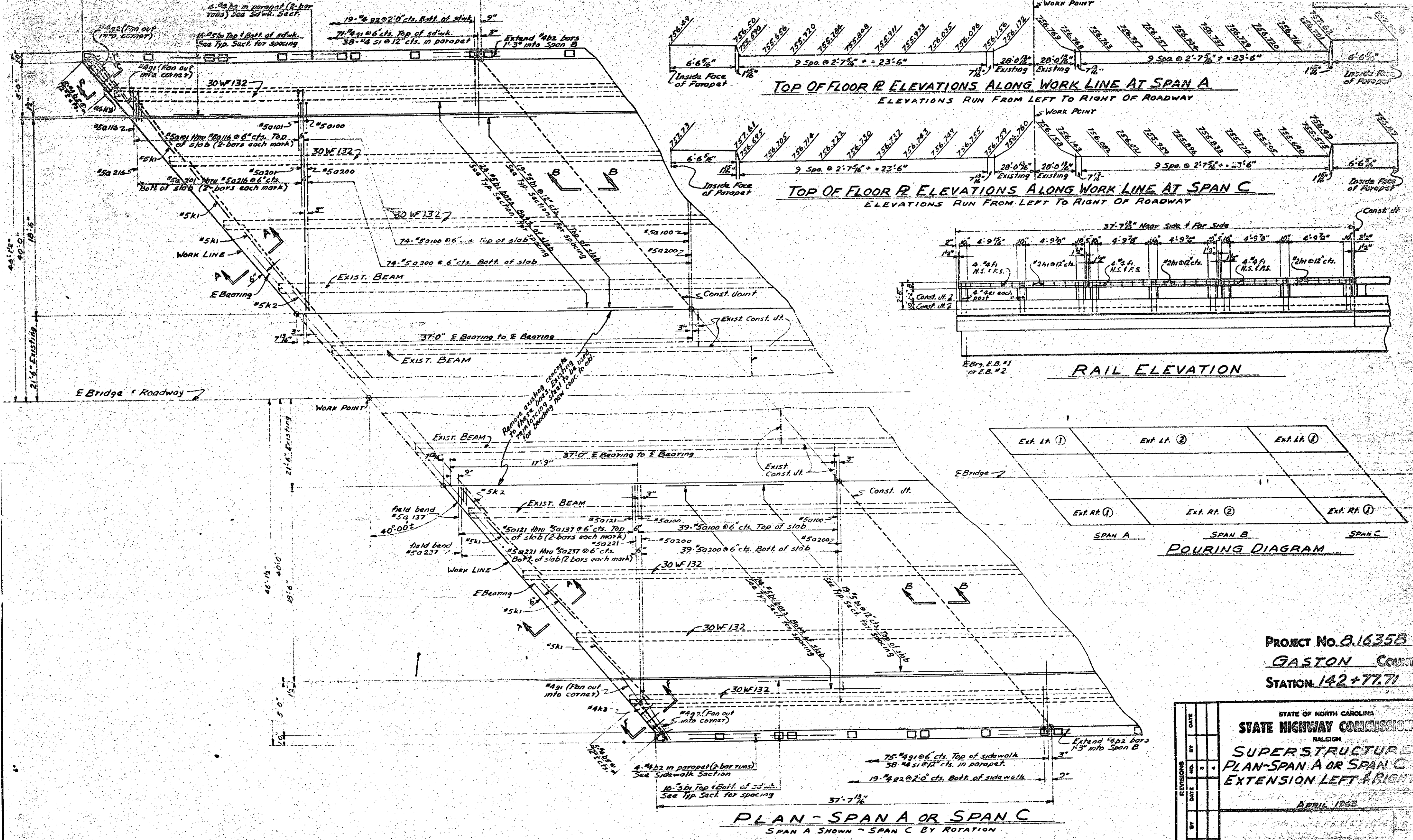
POST DETAILS

PROJECT No. 8.16358
 GASTON COUNTY
 STATION 142+77.71

REVISIONS		DATE	BY

STATE OF NORTH CAROLINA
 STATE HIGHWAY COMMISSION
 RALEIGH
 SUPERSTRUCTURE
 TYPICAL SECTIONS
 FOR EXTENSIONS LEFT OVER
 APRIL 1965

DRAWN BY Mark Underwood DATE April 1965
 CHECKED BY J. N. E. DATE May 1965

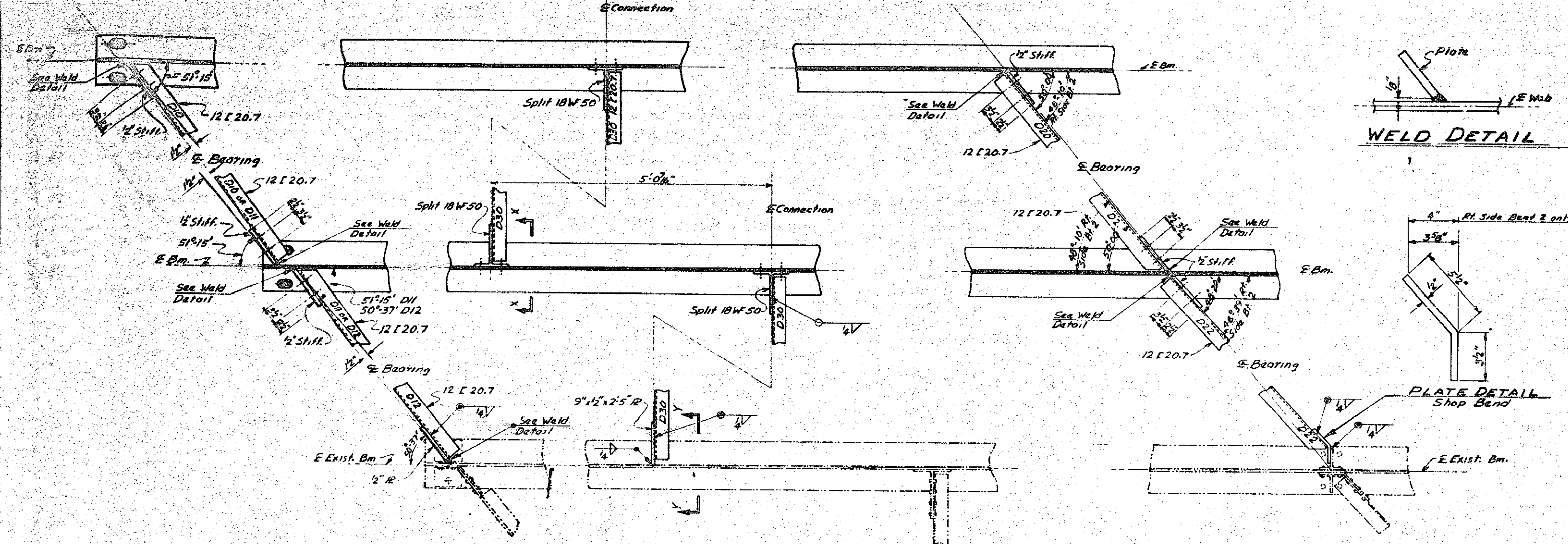


PLAN - SPAN A OR SPAN C
SPAN A SHOWN - SPAN C BY ROTATION

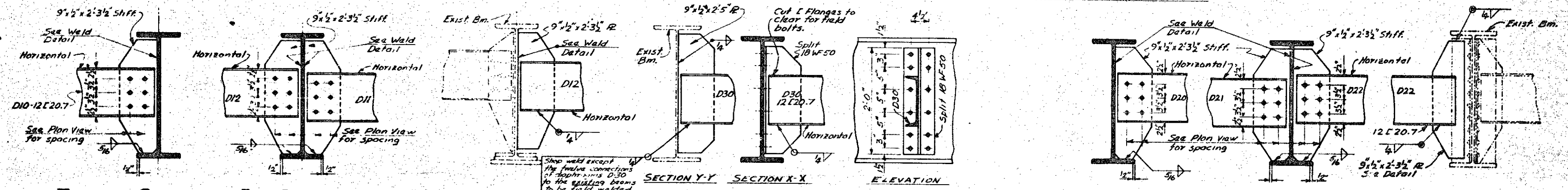
PROJECT No. 8.16358
GASTON COUNTY
 STATION: 142+77.71

REVISIONS		DATE	BY

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
 RALEIGH
SUPERSTRUCTURE
PLAN-SPAN A OR SPAN C
EXTENSION LEFT & RIGHT
 APRIL 1965



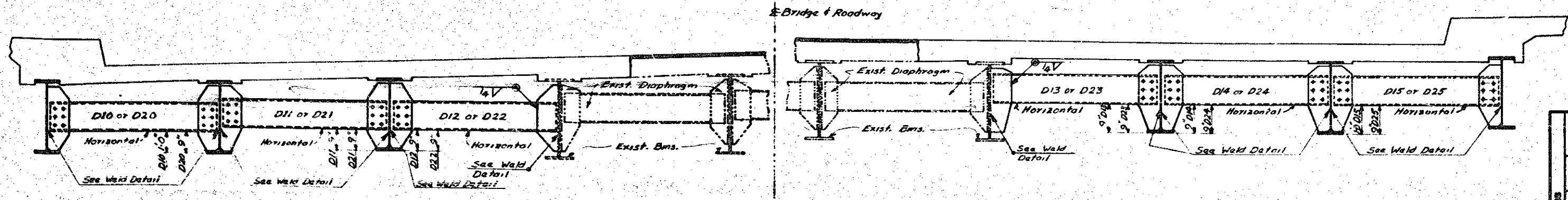
TYPICAL PLAN VIEWS FOR DIAPHRAGM CONNECTIONS



TYPICAL SECTIONS FOR CONNECTIONS D10 THRU D15

D30 DIAPHRAGM CONNECTION
See Typical Section Sheet for position of channel on beam

TYPICAL SECTIONS FOR CONNECTIONS D20 THRU D25



TYPICAL SECTION ALONG SKEW AT END BENT 1 OR BENT 1
ROTATE 180° FOR POSITION AT END BENT 2 OR BENT 2

Note: Diaphragms and connections as shown only at End Bents. Bent diaphragms and connections are similar.

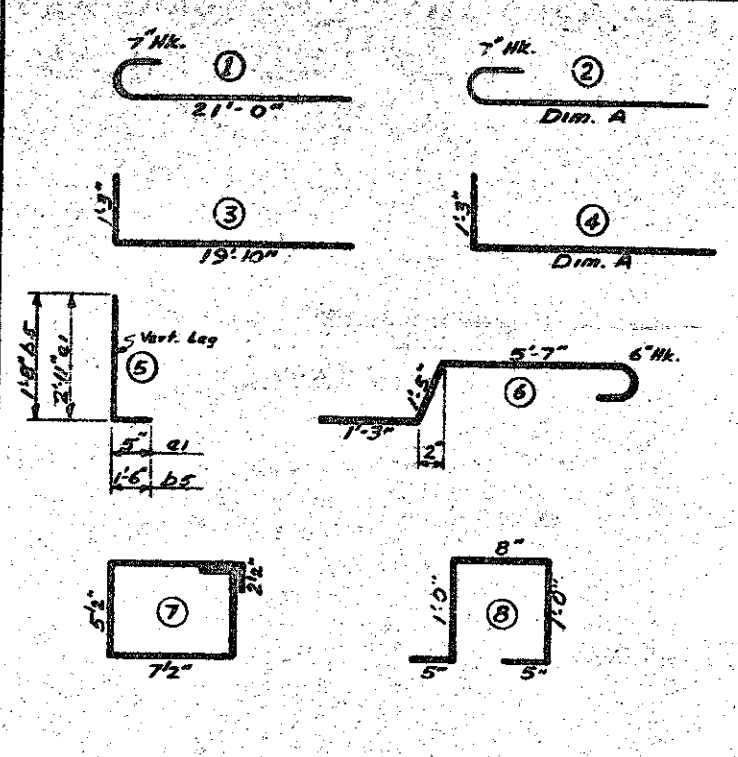
Rev. #1 - To show field weld at diaphragm connection D30 to existing beams. V.A.B.

PROJECT No. 8.1635
GASTON Co
STATION 142 + 77.7

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH
SUPERSTRUCTURE
DIAPHRAGM DETAIL
EXTENSION LEFT & RIGHT
MAY, 1963

REVISIONS	DATE
BY	DATE
BY	DATE
BY	DATE

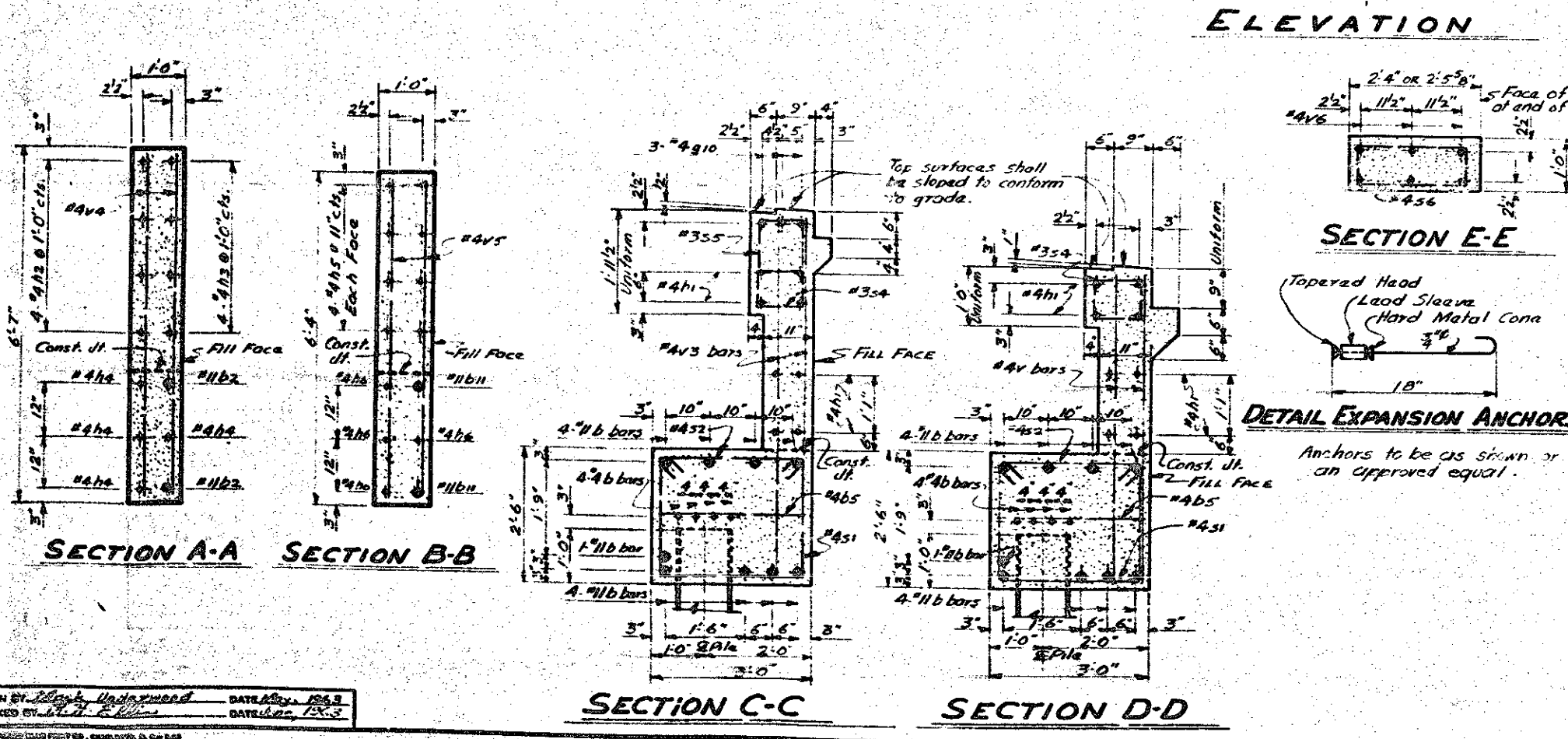
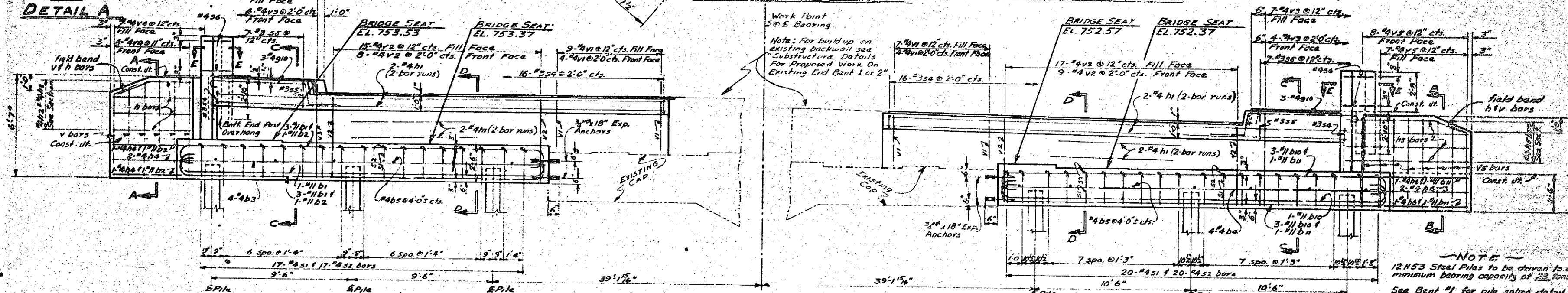
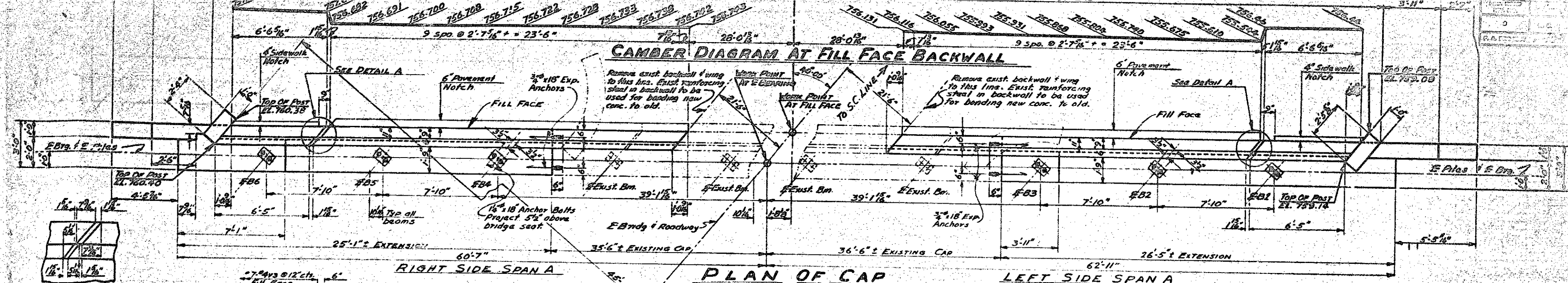
BILL OF MATERIAL FOR EXTENSIONS LEFT & RIGHT BAR TYPES



Bar dimensions are out to out.

Bar No.	Size	Type	Dim. A	Length	Weight	LBS PER FOOT			
						1/2"	3/4"	1"	1 1/4"
0100	#5	1	-	21'-0"	12606	12	12	12	12
0101	#5	2	20'-6"	21'-1"	88	2	2	2	2
0102	#5	2	19'-4"	19'-11"	89	2	2	2	2
0103	#5	2	18'-1"	18'-8"	78	2	2	2	2
0104	#5	2	16'-0"	17'-6"	73	2	2	2	2
0105	#5	2	15'-9"	16'-6"	68	2	2	2	2
0106	#5	2	14'-5"	15'-1"	63	2	2	2	2
0107	#5	2	13'-4"	14'-1"	59	2	2	2	2
0108	#5	2	12'-7"	13'-7"	53	2	2	2	2
0109	#5	2	10'-11"	11'-8"	48	2	2	2	2
0110	#5	2	9'-9"	10'-4"	43	2	2	2	2
0111	#5	2	8'-7"	9'-3"	38	2	2	2	2
0112	#5	2	7'-5"	8'-0"	33	2	2	2	2
0113	#5	2	6'-3"	6'-10"	29	2	2	2	2
0114	#5	2	5'-1"	5'-8"	24	2	2	2	2
0115	#5	2	3'-10"	4'-5"	19	2	2	2	2
0116	#5	2	2'-8"	3'-3"	14	2	2	2	2
0117	#5	3/4"	-	30'-5"	85	2	2	2	2
0122	#5	3/4"	-	19'-3"	50	2	2	2	2
0123	#5	3/4"	-	18'-0"	47	2	2	2	2
0124	#5	3/4"	-	16'-10"	40	2	2	2	2
0125	#5	3/4"	-	15'-8"	37	2	2	2	2
0126	#5	3/4"	-	14'-5"	34	2	2	2	2
0127	#5	3/4"	-	13'-3"	31	2	2	2	2
0128	#5	3/4"	-	12'-1"	28	2	2	2	2
0129	#5	3/4"	-	10'-10"	24	2	2	2	2
0130	#5	3/4"	-	9'-8"	21	2	2	2	2
0131	#5	3/4"	-	8'-6"	18	2	2	2	2
0132	#5	3/4"	-	7'-4"	15	2	2	2	2
0133	#5	3/4"	-	6'-1"	12	2	2	2	2
0134	#5	3/4"	-	4'-11"	11	2	2	2	2
0135	#5	3/4"	-	3'-9"	10	2	2	2	2
0136	#5	3/4"	-	2'-6"	7	2	2	2	2
0137	#5	3/4"	-	3'-8"	10	2	2	2	2
0138	#5	3/4"	-	3'-6"	9	2	2	2	2
0139	#5	3/4"	-	3'-4"	8	2	2	2	2
0140	#5	3/4"	-	3'-2"	7	2	2	2	2
0141	#5	3/4"	-	3'-0"	6	2	2	2	2
0142	#5	3/4"	-	2'-8"	5	2	2	2	2
0143	#5	3/4"	-	2'-6"	4	2	2	2	2
0144	#5	3/4"	-	2'-4"	3	2	2	2	2
0145	#5	3/4"	-	2'-2"	2	2	2	2	2
0146	#5	3/4"	-	2'-0"	1	2	2	2	2
0147	#5	3/4"	-	1'-8"	1	2	2	2	2
0148	#5	3/4"	-	1'-6"	1	2	2	2	2
0149	#5	3/4"	-	1'-4"	1	2	2	2	2
0150	#5	3/4"	-	1'-2"	1	2	2	2	2
0151	#5	3/4"	-	1'-0"	1	2	2	2	2
0152	#5	3/4"	-	0'-8"	1	2	2	2	2
0153	#5	3/4"	-	0'-6"	1	2	2	2	2
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0159	#5	3/4"	-	0'-0"	1	2	2	2	2
0160	#5	3/4"	-	0'-0"	1	2	2	2	2
0161	#5	3/4"	-	0'-0"	1	2	2	2	2
0162	#5	3/4"	-	0'-0"	1	2	2	2	2
0163	#5	3/4"	-	0'-0"	1	2	2	2	2
0164	#5	3/4"	-	0'-0"	1	2	2	2	2
0165	#5	3/4"	-	0'-0"	1	2	2	2	2
0166	#5	3/4"	-	0'-0"	1	2	2	2	2
0167	#5	3/4"	-	0'-0"	1	2	2	2	2
0168	#5	3/4"	-	0'-0"	1	2	2	2	2
0169	#5	3/4"	-	0'-0"	1	2	2	2	2
0170	#5	3/4"	-	0'-0"	1	2	2	2	2
0171	#5	3/4"	-	0'-0"	1	2	2	2	2
0172	#5	3/4"	-	0'-0"	1	2	2	2	2
0173	#5	3/4"	-	0'-0"	1	2	2	2	2
0174	#5	3/4"	-	0'-0"	1	2	2	2	2
0175	#5	3/4"	-	0'-0"	1	2	2	2	2
0176	#5	3/4"	-	0'-0"	1	2	2	2	2
0177	#5	3/4"	-	0'-0"	1	2	2	2	2
0178	#5	3/4"	-	0'-0"	1	2	2	2	2
0179	#5	3/4"	-	0'-0"	1	2	2	2	2
0180	#5	3/4"	-	0'-0"	1	2	2	2	2
0181	#5	3/4"	-	0'-0"	1	2	2	2	2
0182	#5	3/4"	-	0'-0"	1	2	2	2	2
0183	#5	3/4"	-	0'-0"	1	2	2	2	2
0184	#5	3/4"	-	0'-0"	1	2	2	2	2
0185	#5	3/4"	-	0'-0"	1	2	2	2	2
0186	#5	3/4"	-	0'-0"	1	2	2	2	2
0187	#5	3/4"	-	0'-0"	1	2	2	2	2
0188	#5	3/4"	-	0'-0"	1	2	2	2	2
0189	#5	3/4"	-	0'-0"	1	2	2	2	2
0190	#5	3/4"	-	0'-0"	1	2	2	2	2
0191	#5	3/4"	-	0'-0"	1	2	2	2	2
0192	#5	3/4"	-	0'-0"	1	2	2	2	2
0193	#5	3/4"	-	0'-0"	1	2	2	2	2
0194	#5	3/4"	-	0'-0"	1	2	2	2	2
0195	#5	3/4"	-	0'-0"	1	2	2	2	2
0196	#5	3/4"	-	0'-0"	1	2	2	2	2
0197	#5	3/4"	-	0'-0"	1	2	2	2	2
0198	#5	3/4"	-	0'-0"	1	2	2	2	2
0199	#5	3/4"	-	0'-0"	1	2	2	2	2
0200	#5	3/4"	-	0'-0"	1	2	2	2	2

Bar No.	Size	Type	Dim. A	Length	Weight	LBS PER FOOT			
						1/2"	3/4"	1"	1 1/4"
0201	#5	1	-	21'-0"	12606	12	12	12	12
0202	#5	2	20'-6"	21'-1"	88	2	2	2	2
0203	#5	2	19'-4"	19'-11"	89	2	2	2	2
0204	#5	2	18'-1"	18'-8"	78	2	2	2	2
0205	#5	2	16'-0"	17'-6"	73	2	2	2	2
0206	#5	2	15'-9"	16'-6"	68	2	2	2	2
0207	#5	2	14'-5"	15'-1"	63	2	2	2	2
0208	#5	2	13'-4"	14'-1"	59	2	2	2	2
0209	#5	2	12'-7"	13'-7"	53	2	2	2	2
0210	#5	2	10'-11"	11'-8"	48	2	2	2	2
0211	#5	2	9'-9"	10'-4"	43	2	2	2	2
0212	#5	2	8'-7"	9'-3"	38	2	2	2	2
0213	#5	2	7'-5"	8'-0"	33	2	2	2	2
0214	#5	2	6'-3"	6'-10"	29	2	2	2	2
0215	#5	2	5'-1"	5'-8"	24	2	2	2	2
0216	#5	2	3'-10"	4'-5"	19	2	2	2	2
0217	#5	2	2'-8"	3'-3"	14	2	2	2	2
0218	#5	3/4"	-	30'-5"	85	2	2	2	2
0219	#5	3/4"	-	19'-3"	50	2	2	2	2
0220	#5	3/4"	-	18'-0"	47	2	2	2	2
0221	#5	3/4"	-	16'-10"	40	2	2	2	2
0222	#5	3/4"	-	15'-8"	37	2	2	2	2
0223	#5	3/4"	-	14'-5"	34	2	2	2	2
0224	#5	3/4"	-	13'-3"	31	2	2	2	2
0225	#5	3/4"	-	12'-1"	28	2	2	2	2
0226	#5	3/4"	-	10'-10"	24	2	2	2	2
0227	#5	3/4"	-	9'-8"	21	2	2	2	2
0228	#5	3/4"	-	8'-6"	18	2	2	2	2
0229	#5	3/4"	-	7'-4"	15	2	2	2	2
0230	#5	3/4"	-	6'-1"	12	2	2	2	2
0231	#5	3/4"	-	4'-11"	11	2	2	2	2
0232	#5	3/4"	-	3'-9"	10	2	2	2	2
0233	#5	3/4"	-	2'-6"	7	2	2	2	2
0234	#5	3/4"	-	3'-8"	10	2	2	2	2
0235	#5	3/4"	-	3'-6"	9	2	2	2	2
0236	#5	3/4"	-	3'-4"	8	2	2	2	2
0237	#5	3/4"	-	3'-2"	7	2	2	2	2
0238	#5	3/4"	-	3'-0"	6	2	2	2	2
0239	#5	3/4"	-	2'-8"	5	2	2	2	2
0240	#5	3/4"	-	2'-6"	4	2	2	2	2
0241	#5	3/4"	-	2'-4"	3	2	2	2	2
0242	#5	3/4"	-	2'-2"	2	2	2	2	2
0243	#5	3/4"	-	2'-0"	1	2	2	2	2
0244	#5	3/4"	-	1'-8"	1	2	2	2	2
0245	#5	3/4"	-	1'-6"	1	2	2	2	2
0246	#5	3/4"	-	1'-4"	1	2	2	2	2
0247	#5	3/4"	-	1'-2"	1	2	2	2	2
0248	#5	3/4"	-	1'-0"	1	2	2	2	2
0249	#5	3/4"	-	0'-8"	1	2	2	2	2
0250	#5	3/4"	-	0'-6"	1	2	2	2	2
0251	#5	3/4"	-	0'-4"	1	2	2	2	2
0252	#5	3/4"	-	0'-2"	1	2	2	2	2
0253	#5	3/4"	-	0'-0"	1	2	2	2	2
0254	#5	3/4"	-	0'-0"	1	2	2	2	2
0255	#5	3/4"	-	0'-0"	1	2	2	2	2
0256	#5	3/4"	-	0'-0"	1	2	2	2	2
0257	#5	3/4"	-	0'-0"	1	2	2	2	2
0258	#5	3/4"	-	0'-0"	1	2	2	2	2
0259	#5	3/4"	-	0'-0"	1	2	2	2	2
0260	#5	3/4"	-	0'-0"	1	2	2	2	2
0261	#5	3/4"	-	0'-0"	1	2	2	2	2
0262	#5	3/4"	-	0'-0"	1	2	2	2	2
0263	#5	3/4"	-	0'-0"	1	2	2	2	2
0264	#5	3/4"	-	0'-0"	1	2	2	2	2
0265	#5	3/4"	-	0'-0"	1	2	2	2	2
0266	#5	3/4"	-	0'-0"	1	2	2	2	2
0267	#5	3							



BILL OF MATERIAL

REINFORCING STEEL	
BAR No.	SIZE TYPE LENGTH VARIANT
B1	7 #11 27'-11" 103B
B2	2 #11 str. 25'-2" 310
B10	7 #11 29'-3" 108B
B11	2 #11 str. 31'-5" 234
B3	4 #2 str. 24'-9" 66
B4	4 #4 str. 28'-1" 70
B5	13 #4 str. 2'-8" 23
G10	6 #6 6'-0" 37
G1	32 #4 str. 16'-6" 353
G2	4 #6 str. 4'-9" 13
G3	4 #6 str. 7'-2" 18
G4	4 #4 str. 5'-7" 15
G5	8 #6 str. 8'-6" 45
G6	4 #4 str. 6'-7" 18
S1	37 #4 3'-9" 172
S2	37 #4 4'-3" 84
S4	32 #3 5'-6" 42
S5	14 #3 5'-6" 23
S6	4 #4 6'-0" 16
V1	24 #4 str. 3'-4" 53
V2	49 #4 str. 6'-3" 172
V3	22 #4 str. 6'-2" 51
V4	13 #4 str. 6'-3" 54
V5	15 #4 str. 6'-0" 60
V6	12 #4 str. 5'-2" 47

Note: Bar dimensions are out to out.

NOTE
 12#53 Steel Piles to be driven to a minimum bearing capacity of 23 tons each.
 See Bent #1 for pile splice detail.

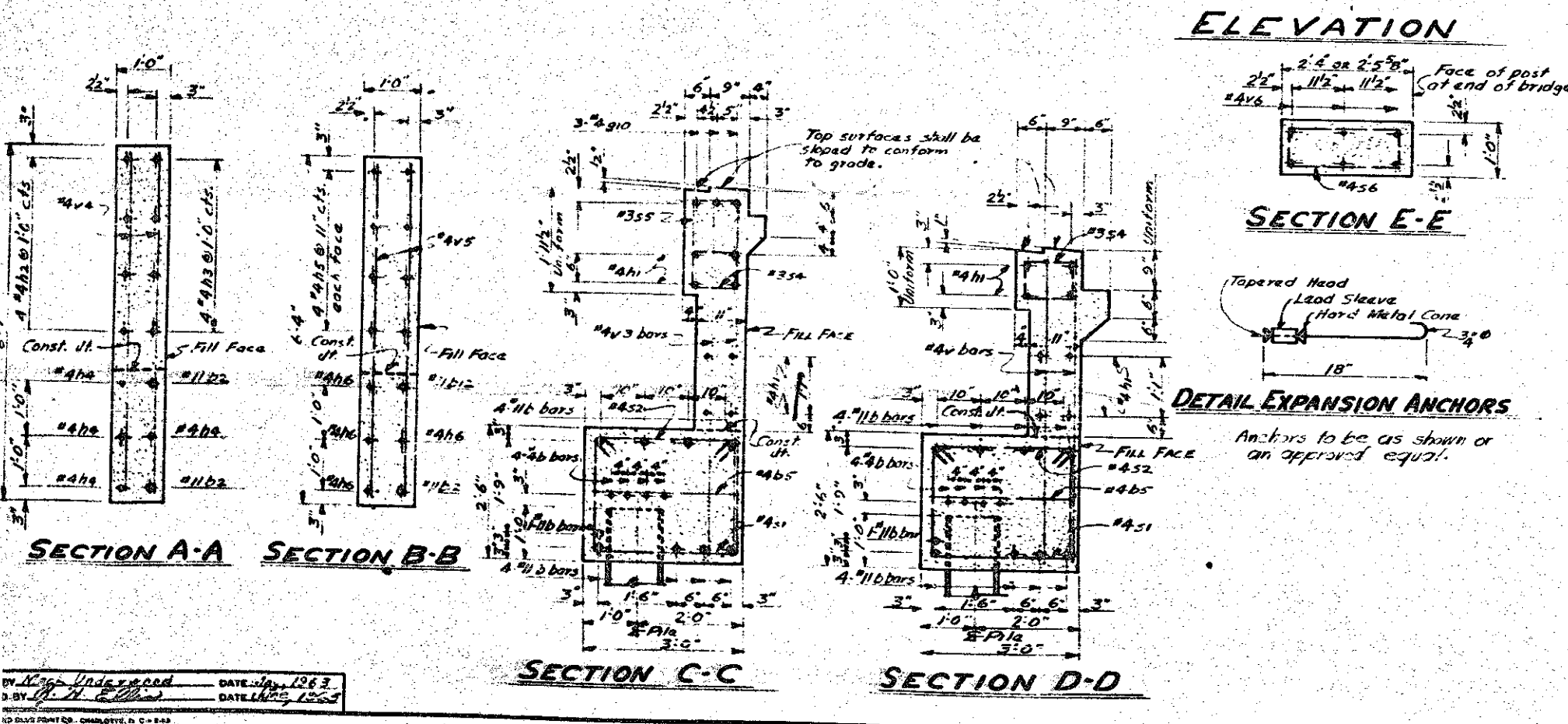
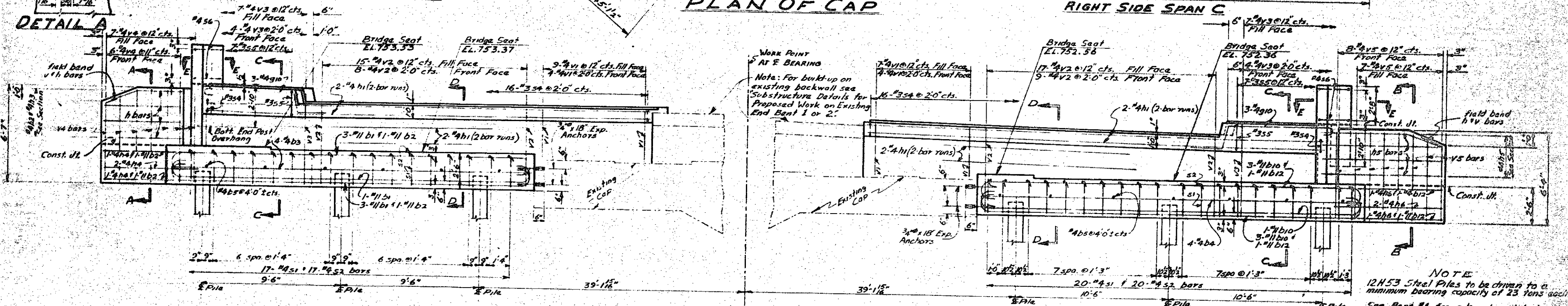
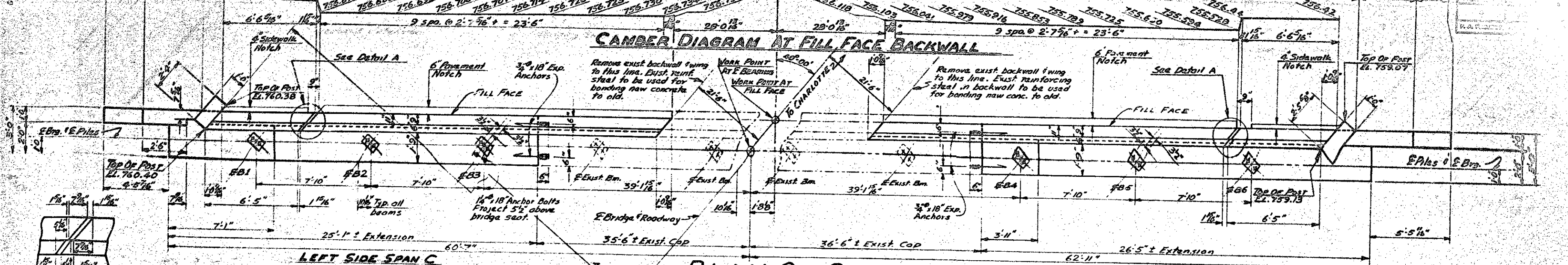
PROJECT No. 8.16356
 GASTON COUNTY
 STATION 142 + 77.71

STATE OF NORTH CAROLINA
 STATE HIGHWAY COMMISSION
 RALEIGH
 SUBSTRUCTURE
 END BENT #1

DRAWN BY: [Name]
 CHECKED BY: [Name]
 DATE: [Date]

240 L.F.

May, 1963



BILL OF MATERIAL

REINFORCING STEEL	
BAR	No. SIZE TYPE LENGTH WEIGHT
B1	7 #4 STR 29'2" 310
B2	2 #4 STR 29'2" 310
B10	7 #11 STR 31'5" 334
B12	2 #11 STR 31'5" 334
B7	4 #4 STR 24'8" 61
D	2 #4 STR 26'7" 70
D5	12 #4 STR 2'8" 23
G10	6 #4 STR 9'2" 37
H1	32 #4 STR 18'8" 353
H2	4 #4 STR 4'9" 13
H3	4 #4 STR 7'7" 20
H4	2 #4 STR 6'7" 15
H5	2 #4 STR 8'6" 25
H6	4 #4 STR 6'7" 18
S1	37 #4 STR 7'9" 192
S2	37 #4 STR 3'5" 84
S3	37 #4 STR 3'6" 82
S5	14 #4 STR 2'6" 29
S6	4 #4 STR 6'0" 16
V1	24 #4 STR 3'4" 53
V2	49 #4 STR 5'3" 172
V3	22 #4 STR 6'2" 81
V4	13 #4 STR 6'3" 54
V5	15 #4 STR 6'0" 60
V6	12 #4 STR 5'2" 41

BAR TYPES

NOTE
12H53 Steel Piles to be driven to a minimum bearing capacity of 23 tons each. See Bent #1 for pile splice detail.

PROJECT No. 8.16358
GASTON COUNTY
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STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH
SUBSTRUCTURE
END BENT 2

May 1963